



South Dakota Highway 38 Corridor Study

From Humboldt to Sioux Falls

Name: Joel Tunt

Telephone: _____

Address: 308 W 2nd
Humboldt SD

E-Mail: _____

Contact Info: Phil Gundvaldson, P.E.

271-5527 (office)

PhilG@InfrastructureDG.com

Comments / Questions:

Hwy 38 and 19 intersection is very dangerous.
Not sure what to do just an observation.

Project website: <http://https://www.sd38corridorstudy.com/>



Please place this comment/question form in the designated box on the way out of the meeting, mail to the address on the opposite side of this card, or email comments and questions to PhilG@InfrastructureDG.com by July 14th, 2023.

South Dakota Highway 38 Corridor Study

From Humboldt to Sioux Falls

Name: Red Kramm

Telephone: 605-770-9296

Address: 201 S CHILSON

E-Mail: _____

Contact Info: Phil Gundvaldson, P.E.
271-5527 (office)

PhilG@InfrastructureDG.com

Comments / Questions:

Should be a sign that cross traffic doesn't stop where Hwy 19
meets 38 by Friendlys in Humboldt

Project website: <http://https://www.sd38corridorstudy.com/>



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South Dakota Highway 38 Corridor Study

From Humboldt to Sioux Falls

Name: BRENT HOFFMAN

Telephone: 605.215.7014

Address: 2608 N. Canon Ave #213

E-Mail: Brent.Hoffman

Sioux Falls, SD 57107

Contact Info: Phil Gundvaldson, P.E.

271-5527 (office)

PhilG@InfrastructureDG.com

Comments / Questions:

Many residents feel the north end of the I-90/Hwy 38 interchange is inherently unsafe, largely due to vehicles pulling onto Hwy 38 from the off-ramp but there are also concerns about vehicles approaching from the east because of the line of sight. If the road could be widened and lowered through there, it would improve visibility. There are similar concerns about the Hwy 38 connection with Mickelson and some residents have suggested the roadway could be lowered and/or the curve smoothed-out. Thanks for the opportunity to comment. Sen. Hoffman (D-9)

Project website: <http://https://www.sd38corridorstudy.com/>



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South Dakota Highway 38 Corridor Study

From Humboldt to Sioux Falls

Name: Paul Dyke

Telephone: 605-528-3941

Address: 46572 257th St.

E-Mail: paul@locker1157.com

Hartford, SD 57033

Contact Info: Phil Gundvaldson, P.E.
271-5527 (office)
PhilG@InfrastructureDG.com

Comments / Questions:

Right turn lane needed (heading west) at 468th St.
intersection.

Project website: <http://https://www.sd38corridorstudy.com/>



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South Dakota Highway 38 Corridor Study

From Humboldt to Sioux Falls

Name: Peggy Hoogstraet
Address: 27575 462nd Ave
Chancellor, SD 57015

Telephone: 605-214-0623
E-Mail: garden.gal.peggy@gmail.com
Contact Info: Phil Gundvaldson, P.E.

271-5527 (office)
PhilG@InfrastructureDG.com

Comments / Questions:

I attended the June 8 meeting in Hartford and already left comments.
Later, I was told by my son, Matt, who travels the corridor more
than I, that a great concern for the neighborhood is the
traffic entering & leaving the race track. Safety for all is so
important.

Thank you for involving the communities.
Peggy

Project website: <http://https://www.sd38corridorstudy.com/>



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SD Department of Transportation
Public Meeting
March 13, 2024

NH 0042(80)371, Minnehaha County, PCN 06YP
SD38 – From Humboldt to W of Marion Road in Sioux Falls
Corridor Study

Individual stakeholder meetings followed a Public Meeting were held at West Central High School in Hartford, SD on March 13, 2024. A video was made available on the website to provide information and generate questions on design, environmental, right-of-way, and access management which are typical for most highway projects.

Comments were made to the Design Team by email, comment cards, website contact form, online survey, and online interactive map. Comments will be reviewed by the Design Team for consideration in the design process.

Overview of Interactive Map Comments Received

Comments were submitted through the comment map on the Corridor Study's website. Their main concerns are speed, amount of traffic and safety.

- Intersection of Highway 38 and 261st St
 - Submitted through interactive map (2/29/24)
 - “Enough people live in this neighborhood to make a turn lane a good option. It is difficult to wait to turn in or out with traffic moving at 65+.”

Overview of Comment Cards Received

Comments were from residents who attended the Public Meeting held on March 13, 2024 at West Central High School in Humboldt or watched the presentation on the project website. Their concerns are summarized as follows:

- a median stopping snow and having to make U-turns
- the need for turn lanes at the racetrack
- reducing the speed limit primarily from the high school east to the interchange
- intersection sight distance issues at the interchange
- keeping their existing driveway access and configuration

- concerns with a wider highway affecting private property, fencing, existing wells, farm operations, etc.
- concerns with property acquisition and/or reduction of property values, changes to access locations, medians restricting access, and affecting existing billboard's location or visibility

The handwritten comment cards have been re-written below.

- Jeanne Foster, 200 E. 5th Street, Crooks, SD 57020
 - "No Median – 3 lanes or 4 lanes ok along 38 between 468 Ave and Ellis Road. Need to be able to move farm equipment going both east and west on 38. There are a number of properties that would need to go east and west in this section. Median will stop snow on parts of this part of the road"
- Linda Hatle, 46735 SD Highway 38, Sioux Falls, SD 57107
 - "I'm not against a 4-lane road, just against not getting a turn lane to get into my driveway. Continuing to make a U-turn to me is going to be much more dangerous. In the winter when the plows have not cleared the roads good, I could possibly get stuck in the snow making a U-turn and get frost bitten trying to shovel any vehicle out of the snow. Also the snow will not be able to blow across due to a median and if there is a drift there will be no way to get around it. When pulling a long trailer into my yard, a U-turn will not be practical. I do not wish to drive further west to go home. I want and need a turn lane to my driveway! The state needs to consider property owners should have a right to have a lane to go home without driving further."
- Allan and Angelia Martens, 46061 SD Highway 38, Hartford, SD 57033
 - "Need a no passing zone between 460th & 461 Street. Also need a left and right turn lane for racetrack between 460 and 461st Street. Both for safety concerns."
- Mike and Jana Miles, 45570 258th St., Humboldt, SD 57035
 - We are landowners along Highway 38 on 45816 Hwy 38 which borders 258th Street near Humboldt, SD. I attended the afternoon meeting on March 13th in Sioux Falls and from what your plan shows you are wanting to take out our driveway access to Highway 38. We have managed this farm for 44 years and never had an issue with our access to Highway 38. We have been very grateful for this access because of the snow accumulation that this stretch of land creates in the winter. In the winter 258th street is not always plowed due to the extremely deep snow so this will create an issue if they were to merge our driveway to 258th street. We have a cattle operation that we need to access at least twice a day to monitor and feed cattle. Adding 500 feet to our driveway would be detrimental to our operation. I understand adding a curve on the gravel road on 258th would be a benefit for those traveling 258th street but extending our driveway to join it would not be a benefit to us. Our septic system runs right up to the edge of our property by the driveway and feedlot which would also create problems if disturbed. The best solution would be to leave the driveway access from 45816 Hwy 38 as is. Thank you, Mike and Jana Miles."

Overview of Comments from the Public Meeting

Some comments were written on the strip maps that were displayed at the Public Meeting held on March 13, 2024, at West Central High School in Humboldt and other comments were made verbally to the staff at the public meeting. Their main concerns are speed, amount of traffic and safety.

1. No medians
2. Signal at Ellis Road – dangerous
3. Can we reduce speed?
 - a. DOT will be doing a speed study soon on the portion of SD Highway 38 from the high school to the interchange
4. Accidents near Dorothy Ave
5. Property owner potentially ok with median if frontage road connects his and his neighbor's driveways to a median cut location – near 476th
6. Buffalo Ridge property owner concerned with median
 - a. Most of his business comes from the west so needs a median cut for entrance into his property – $\frac{3}{4}$ access shown in some options but not all
 - b. Does not want to lose any part of his land for interchange reconfiguration
7. City of Hartford
 - a. Sidewalk initiative planned for the next year
 - i. Discussion about timing of project through Hartford
 1. TA grant possibility to construct prior to project
 - a. Would help possibility of receiving a grant if city had a sidewalk plan in place
 - i. Working with SECOG to develop
 - ii. Would like to see a pedestrian connection from Humboldt to Hartford – especially for school
 1. Make it part of a plan and it will be easier to add to the project
 - b. Teresa Sidel will send pictures of new signage

- c. City of Hartford purchased land for new WWTP and does not want to give land up for interchange options
 - d. Concerns with access to City property on the north side of I-90 near the interchange
 - i. Existing access on west side of property – need to get across the creek to access the rest of the property
 - e. Mayor of Hartford does not favor roundabouts
 - f. Within Hartford, potentially shift the roadway north at the curve to avoid purchasing ROW for trail. Verify with final survey and ROW location.
8. Highway 19
- a. No proposed changes beyond the stop signs that were added last year. Still monitoring and adding additional signage as necessary.
9. Too many interchange options presented
10. Need a “No Passing Zone” between 460th and 461st Streets. Also need a left and right turn lane for the race track due to safety concerns.

Overview of Individual landowner/Stakeholder Meetings

Two individual meetings were held with individual landowners and stakeholders following the public meeting. The first meeting was held via Zoom on March 25, 2024 with Wyatt Haines who lives at 25973 466th Avenue, just north of the Exit 390 interchange. Wyatt was also representing his neighboring property owners, the Melin family, and Haase family. Ben White and Phil Gundvaldson participated in the call and presented an overview of the project. Wyatt was primarily interested in interchange and how it may affect properties, the adjacent roadway network, and modify access. Wyatt was appreciative of the presentation and would like himself and other area landowners to be kept informed as the project progresses.

The second meeting was held in person at Hartford City Hall on April 3, 2024, with the City of Hartford and the Hartford Area Development Foundation (HADF). Ben White and Phil Gundvaldson participated in the presentation and started by playing the recorded presentation from the website. The various options for the mainline and interchange were presented and

discussed. The questions received were like those mentioned by others at the public meeting. The group was appreciative of the presentation and would like to be kept informed as the project progresses, particularly phases through Hartford and the interchange.

STAKEHOLDER MEETING SIGN-IN
Wednesday, March 13, 2024
Project: HP 5596(25)P, Minnehaha County
Please Print

Name	Address	Phone #(s)	Own Property on Project (Yes or No)
1. Phil Gundwaldson	116 W. 69TH ST. SFSD 57108	605-271-5527	NO
2. Jana Miles	45570 258TH ST Numboldt SD	605-366-9437	Yes
3. CHUCK RUNGE	26731 465TH HARTFORD	605-366-2754	YES
4. Tom & Nancy Stoffregen	45938 SD Hwy 38 Numboldt, SD 57035	605-359-8834	Yes
5. Steve Gramm	700 E. Broadway Ave	605-773-3281	Yes
6. Katrina Erickson	700 E. Broadway Avenue	605-773-6661	Yes
7. Monica Foster	26109 S Robin Drive	701-330-6286	yes
8. Kristie Ellis	201 S Main St	605 363 3789	NO
9. Teresa Sidel	125 N Main Ave - Hartford, SD	605-528-6137	yes
10. Amy M. Fair	" "	605-528-3338	" "
11. Steve Coon	Minnehaha County Highway Dept		
12.			
13.			
14.			
15.			

STAKEHOLDER MEETING SIGN-IN
Wednesday, March 13, 2024
Project: HP 5596(25)P, Minnehaha County
Please Print

Name	Address	Phone #(s)	Own Property on Project (Yes or No)
1. Leslie Murphy	221 W Capitol Suite 103, Pierre, SD 57501	605.280.5430	No
2. BEN WHITE		605-221-2651	NO
3. Lynnae Redenius	45935 SD Hwy 38 Humboldt SD 57035	605-310-1505	Yes
4. Rex Steffen	315 N Ford St. Humboldt	605-346-0889	Yes
5. Larry Dean	700 E. Broadway Ave Pierre	605 713-3157	No
6. Tom Kloxin	46729 Dbl St SE	605 528-7462	Yes
7. Linda Hattie	46735 SD Highway 38	605-360-6375	YES
8. Kris Hume	24555 466th Ave Gltn, SD	605-359-3058	Yes
9. Krista May	116 W. 6th St. Ste 200 SFSD SHID	605-271-5527	NO
10. Arden Jones	508 PATRICK AVE HARTFORD, SD	605-310-4663	No
11.			
12.			
13.			
14.			
15.			

PUBLIC MEETING SIGN-IN
Wednesday, March 13, 2024
Project: HP 5596(25)P, Minnehaha County
Please Print

Name	Address	Phone #(s)	Own Property on Project (Yes or No)
1. Steve Gramm	700 E. Broadway Ave; Pierre	605-773-3281	No
2. Matthew Bru	1	605-221-2655	No
3. Katrina Erickson	1	605-773-6611	No
4. Leslie Murphy	221 W Capitol; Suite 103; Pierre, SD 57501	605-280-5930	No
5. David Tuch	P.O. Box 205 Hartford S.D.	605-261-0580	No
6. Eric Knyph	102 2nd St. Hartford SD	605-528-3217	School
7. Andy Wiczorek	46711 261 st St Sioux Falls	605-201-7682	Yes
8. Jeanne Foster	200 E 5th Street	605-359-1267	yes
9. Terese Sidel	125 N main Ave. Hartford (City)	605-528-6187	yes
10. Linda Lambeth	1302 E. North St. Humboldt, SD	605-363-3545	yes
11. Lyle + Dawn Howey	46068 SD 38 Hartford	605-691-3503 605-838-7460	Yes
12. Allan Martens	46061 SD 38 Hartford	605-380-5206 605-290-6464	yes
13. Ruth Celia Benson	26132 S. Robin Dr. Sioux Falls SD	701-212-3639	yes
14. Frank & Kay Hebert	25111 461 st Ave Hartford	605-528-3556	yes
15. Curt Hansen	5316 W 60 th St N Sioux Falls SD 57107	605-941-4481	No

PUBLIC MEETING SIGN-IN
Wednesday, March 13, 2024
Project: HP 5596(25)P, Minnehaha County
Please Print

Name	Address	Phone #(s)	Own Property on Project (Yes or No)
1. David Nolz	26153 466 Ave Hartford SD	605-310-3574	No
2. BRAD SONLSTAD	46638 Hwy 38 BUFFALO RIDGE	605-366-9794	YES
3. Ron Van Heerde	46896 Hwy 38 Sioux Falls	605-351-5590	YES
4.			
5.			
6.			
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14.			
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PUBLIC MEETING SIGN-IN
Wednesday, March 13, 2024
Project: HP 5596(25)P, Minnehaha County
Please Print

Name	Address	Phone #(s)	Own Property on Project (Yes or No)
1. CARYCLELAND	5316 W 60 TH ST N	367-5680	No
2. Krista May	116 W. 69 th Street Suite 200	605-271-5527	No
3. Harry Johnston	5316 W 60 th St N SF SD	605-360-6053	NO
4. Steve Crowe	46689 S.D. Hwy. 38 SF SD		YES
5. Thomas Spisak	46370 263rd ST Hartford SD	605 940 9349	YES
6. Sean Heygi	500 N Veston Ave Sioux Falls SD	605-681-8176	No
7. Trow3 Dresson	5316 W. 60 th St, North, SF, SD	605-940-1165	No
8. Londa Pajintun	46727 261 st St Sioux Falls SD	605-261-7422	Yes
9. K. Michael Dineen	25244 46 th JADL Hartford S.D.	605-366-9332	Yes
10. Janet Foster	2904 W 33 rd St #135 SF SD	605-610-5553	Yes
11. Michael Rodenburg	1561 - City of Hartford Engineers		NO
12. Angeles McMartin	46535 Jeannine Dr Hartford	605-518-3433	Yes
13.			
14.			
15.			

AGENCY, STAKEHOLDER, AND PUBLIC MEETING SUMMARY

DATE	March 13, 2024
LOCATION	SDDOT Area Office; 5316 W 60 th Street N; Sioux Falls, SD 57107 (1-4 PM) West Central High School; 705 E 2 nd Street; Hartford, SD 57033 (5:30-7:30 PM)
PROJECT	SD 38 Corridor Study

Stakeholder/Agency/Public Comments

[SAT Member Comment](#)

Common Questions/Concerns:

1. **Timing of Project**
2. **Impairment of access to residences/businesses with mainline improvements**
3. **Safety Improvements – speed limits, hill re-grading**
4. **Roundabouts**
5. **Property Encroachments**

SDDOT Area Office; 5316 W 60th Street N; Sioux Falls, SD 57107 (1-4 PM)

Questions were asked concerning the timing of the project.

- [SDDOT has a placeholder in 2031 for projects derived from this study](#)

Individual residing in the Songbird Development between Sioux Falls and Hartford

- Concerned with encroachment of land if the roadway widens to a 4-lane
- Safety – there are adjacent houses to the road already; these will become closer to the roadway if widened to a 4-lane
- Speed limit – should be 55mph for the entire route
- Why the changes to access points and the side roads?
 - o [Squaring up intersections for safety and truck traffic. Entry points preferred perpendicular to the roadway.](#)

Will there be a traffic signal on Tea/Ellis Road?

- o [Nothing is warranted for the near future, but this may need re-evaluation as traffic volumes increase](#)
- o [The City of Sioux Falls' long-term plan for Tea/Ellis Road is a 4-lane all the way through](#)

Center turn lane vs. concrete barrier median:

- Center turn lane would be preferred
 - o [Building a median would set the stage for future development and access points by limiting connections to SD 38. This would increase safety and reduce accidents.](#)

[Changes since the first 2023 agency/stakeholder/landowner meeting:](#)

- [Traffic analysis is complete](#)

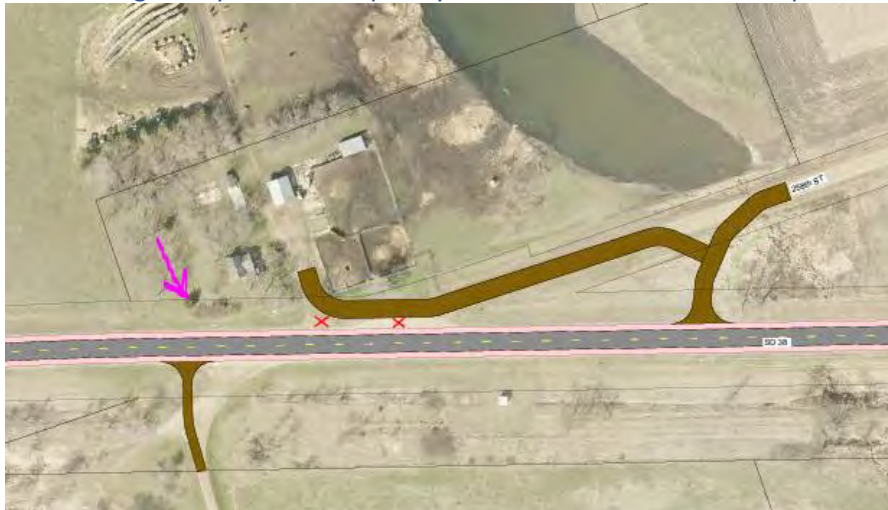
- Alternatives are complete; next step will be to select a preferred alternative

Will there be any cut and fill to hillsides to improve vision?

- Likely yes, especially if we know there are problematic locations.

Property owner at 258th Street intersection, east of Humboldt

- Questioning the road realignment of 258th Street
 - o Moving landowner to one point of access and changing alignment of 258th to allow for a better vantagepoint when entering SD 38.
- Currently the property is used for an Air B&B (she does not reside there, but does have cattle there and farmground)
- Will 258th stay gravel? Yes.
- Cattle lot has been moved back from the ROW already; fence is guardrail
- Hill (pink arrow) to the west of the house blocks snow; would not mind it being graded down
 - o A 7:1 backslope could be considered to the hill. Take the hill out to the ROW, provide more snow storage. May need a temporary easement to cut the backslope.



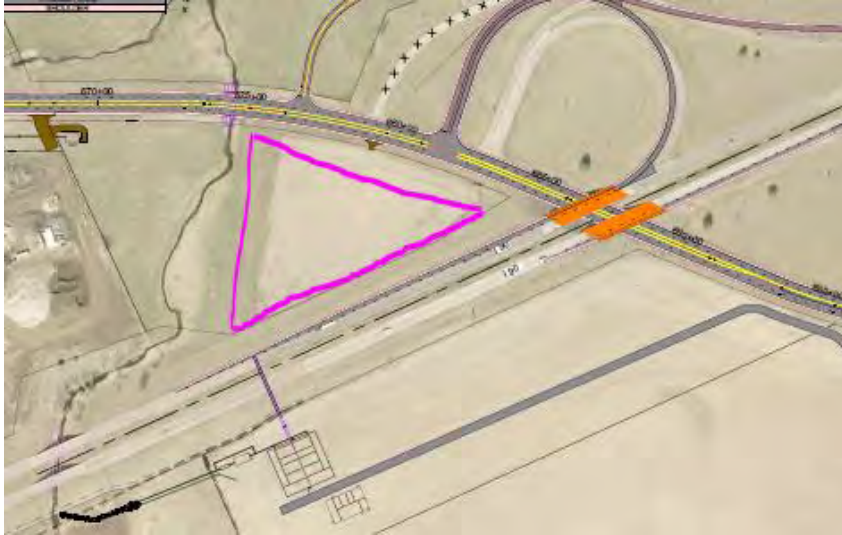
- Eagle nest to the west of her property.
 - o Banner confirmed. Approximate lat/long 43.646921, -97.053676. Two adults, potential eaglets in nest.

Property owners at 45938 SD 38:

- Shed to the east of the house is also theirs, used by Nortec Seeds
- No change to access; no concerns.

City of Hartford –

- Liked Interchange Options 1 and 9 the best.
- Bike Trail in Hartford on south side of road – becomes very close to roadway along one stretch
 - o North side of SD 38 has more room, but also more access points to deal with
- Owns triangle piece south of 38, west of I90 (pink polygon below)



- Do not prefer alternatives that cut the triangle parcel off
- They would like to sell this parcel, but access becomes problematic with the interchange improvements – a roundabout design would work, but they don't like roundabouts.
 - For access to this parcel off the interchange, it would need FHWA approval and has to be a public roadway; cannot be private. Anything that would tie to the ramp cannot be a private road.
- Likely would use approach access to parcel coming from the west across the creek.
- Have plans to expand the WWTP to the east, so avoid doing any improvements/alternatives that would affect that area.
- Bike path timing?
 - If DOT would do a path in conjunction with a SD 38 project, the City would have to wait for that project to come along. If they decide to do it before a SD 38 project, they could apply for TAP funding and use those funds to construct the path. If the road project would impact an existing bike path, SDDOT would replace the path.
- In recent years, have been annexing more land to the east.
- Pedestrian usage at the High School crossings – does this area need a light?
 - would warrant a light at 2nd Street.
 - Also would be a good spot for a roundabout since the road is skewed.
- City overall would like to see:
 - Avoidance of City-owned land
 - Reduced speeds east of town
 - Incorporation of bike trail on south side, sidewalk on the north side
 - Median



West Central High School; 705 E 2nd Street; Hartford, SD 57033 (5:30-7:30 PM)

Resident along the route:

- With a raised median (18-20 feet wide), a person could end up going to the next mile marker to turn around
- Concern with lack of breaks to turn around and driving farther to do so in rural cross sections.
 - o Raised medians will reduce turning vehicle accidents.

Resident near Hartford:

- What about roundabouts for kids going to school? That seems dangerous.
 - o Younger generations actually navigate roundabouts better than older generations.
- Concern about impacts to existing trees and shelterbelts.

Resident on Middle Drive:

- Concern of how access will be provided to residences during construction.

Resident adjacent to SD 38:

- (Husband) Sometimes there is no passing right now due to traffic and sight restrictions and there is no median
- (Wife) Likes the 4-lanes, dislikes the median.
- Concerns with maneuvering horse trailer or hay loads from their house (south of SD 38) across the road to their pasture north of SD 38.
- Safety concerns with riding horses across 4-lanes and a median.
- With the reconfiguration of the access road, they like the idea of the whole development not driving in front of their house.

Make sure culvert drainages are adequate.

Make a 4-way stop on Western / SD 38 – funnel traffic to the interstate.

Property owner near Pheasant Run Avenue – realignment on south side of the road

- Would like more turn-around locations
- Heavy farm equipment – have to go to turn around at Ellis Road – already heavy traffic there
- If they turn to the west, there's a hill; line of sight isn't good
- Would prefer center turn lane as opposed to median.

Brad Songstad – likes Option 1 and 3 for Mainline for his business

- Option 4, no driveway to his parcel south of SD 38
- Utility easement present
- Current striping in front of his business on the north side of SD 38 confuses customers
- If there was a raised median, no one would get into his business. 99% of his business comes from WB I-90, no place to turn in. He needs a median break.
- Aerial backgrounds are old; there is development in the lots east of his parcel south of 38

Landowner on Tea Ellis Road – northwest corner of intersection – consolidate to one access point.

- Concern with median

Social Pinpoint Comments - March 26, 2024

Created on	Type	Threads	Comment	Up Votes	Email	Phone	Postcode	Firstname	Lastname	Device Type	Region	City
5/31/2023 18:15	Safety	Safety-01	Event traffic is a challenge for congestion	0	tthoreen@hrgreen.com	6513989333	55104	Timothy	Thoreen	Desktop	Illinois	Chicago
6/1/2023 11:06	Safety	Safety-02	I have safety concern	1	tthoreen@hrgreen.com	6513989333	55104	Timothy	Thoreen	Desktop	Illinois	Chicago
6/1/2023 11:08	Other	Other-1	Other comment option	0	tthoreen@hrgreen.com	6513989333	55104	Timothy	Thoreen	Desktop	Illinois	Chicago
6/5/2023 11:26	Safety	Safety-03	This four-lane section of hwy 38 is poorly lit up to the Marion Rd. intersection. This, combined with high speeds and a straight stretch of road all the way to the interstate makes the road ideal for racers and speeders. Many times I've witnessed cars blowing the red light at night, sometimes without headlights on or smoked-out headlights, making them difficult to see when making a legal crossing of hwy 38.	0	anyhoo@gmail.com					Mobile		
6/5/2023 11:36	Traffic	Traffic-1	Seeing cars coming east-bound (from Hartford) when exiting off the off-ramp into Hwy 38 is difficult.	2	anyhoo@gmail.com					Mobile		
6/5/2023 11:37	Traffic	Traffic-2	Traffic backs up here sometimes when cars are trying to enter I-90	0	anyhoo@gmail.com					Mobile		
6/5/2023 11:40	Safety	Safety-04	Stoplights are badly needed here. It's a large intersection and with development now north of Hwy 38. Vehicles tend to drive over 50mph on this road, so crossing hwy 38 is dangerous.	3	anyhoo@gmail.com					Mobile		
6/5/2023 11:44	Safety	Safety-05	Very difficult to see north-bound drivers on Marion Rd when trying to turn into Marion Rd from N 54th Street. There's a hill just south of Marion/N 54th that creates a very short sight-line. Perhaps a stop light is needed here?	3	anyhoo@gmail.com					Mobile		
6/7/2023 12:27	Safety	Safety-06	Need to slow the speed down through town to 35 all the way west to 19	0	siemonsmaelectric@yahoo.com					Mobile	South Dakota	Winner
6/7/2023 14:06	Safety	Safety-02-child	This intersection is very dangerous, especially for students attempting to turn west going to school at the same time commuters are driving east at 65+ mph. It will only get more difficult when the high density apartments are full. This is also dangerous when driving west on 38 from SF attempting to turn onto Mickelson. I feel like a sitting duck stopped on 38 hoping traffic behind me doesn't rear end me at full speed.	2	mark.heath@sanfordhealth.org					Desktop	South Dakota	Sioux Falls
6/15/2023 10:28	Traffic	Traffic-3	Traffic does not slow down coming into Hartford, making it difficult for multi-modal traffic to enter, 2 exit, or cross Highway 38 at Western Avenue.	2	mr.atlasboy@gmail.com					Desktop		
6/15/2023 10:29	Traffic	Traffic-4	The speed limit of 65 MPH feels too fast for this stretch of Highway 38 near Hartford Heights, especially with the number and spacing of access points and the bike trail along the highway.	0	mr.atlasboy@gmail.com					Desktop		
6/15/2023 10:34	Safety	Safety-07	The 90-degree-angle correction greatly improved safety at this intersection, but traffic on Highway 38 still creates safety concerns for cross traffic. Consider a traffic signal, roundabout, or other traffic calming technique at this intersection.	3	mr.atlasboy@gmail.com					Desktop		

6/15/2023 10:38	Safety	Safety-08	As development around this intersection continues to blossom, consider a traffic signal, roundabout, or other traffic calming technique to improve safety.	2	mr.atlasboy@gmail.com					Desktop		
6/15/2023 10:40	Safety	Safety-09	Due to traffic coming from multiple directions at this intersection, consider an all-way stop, roundabout, or other traffic calming technique to improve safety.	2	mr.atlasboy@gmail.com					Desktop		
6/26/2023 6:30	Safety	Safety-10	Flatten road so it is easier to see traffic heading East when turning off mesa.	1	alysia.boysen@gmail.com					Mobile	Nebraska	Omaha
6/26/2023 6:31	Safety	Safety-11	Add excretion lanes at Ellis road so that traffic can safely merge onto hwy 38	1	alysia.boysen@gmail.com					Mobile	Nebraska	Omaha
3/13/2024 14:26	Traffic	Traffic-5	Enough people live in this neighborhood to make a turn lane a good option. It is difficult to wait to turn in or out with traffic moving at 65+	1	kristen.foster88@gmail.com	7013309738	57107	Kristen	Hall	Mobile	South Dakota	Sioux Falls
3/24/2024 9:17	Traffic	Traffic-3-child	add a roundabout	0	bud7997@gmail.com					Desktop	South Dakota	Hartford
3/24/2024 9:18	Safety	Safety-07-child	looks like a great place for a roundabout	0	bud7997@gmail.com					Desktop	South Dakota	Hartford
3/24/2024 9:25	Safety	Safety-08-child	this intersection is a tricky one from both directions on 38. The cars turning into and from Mickleson, and add the fact that its a curve and a hill. Great spot for a roundabout	0	bud7997@gmail.com					Desktop	South Dakota	Hartford
3/24/2024 9:33	Traffic	Traffic-2-child	hard to see W bound 38 traffic when getting off W bound 90. I like Option 6 of the interchange plan. Roundabouts will at least slow the flow but keep things moving.	0	bud7997@gmail.com					Desktop	South Dakota	Hartford
3/24/2024 9:41	Safety	Safety-11-child	N bound Ellis Road traffic turning East on 38 could use a turning lane onto an acceleration lane. I'm a W bound turner myself, not sure if there could be a left turning acceleration lane	0	bud7997@gmail.com					Desktop	South Dakota	Hartford
3/26/2024 11:12	Traffic	Traffic-2-child	Strongly recommend a right turn lane, coming off the interstate exit, with no stop sign (maybe a yield sign) which extends past the service road to allow merging vehicles to get up to speed and to allow easier commute to Hartford and also reducing traffic that backs up at the exit.	0	wwhaines@icloud.com					Mobile	Arizona	Phoenix

Philip Gundvaldson

From: White, Ben <bwhite@hrgreen.com>
Sent: Friday, March 22, 2024 8:59 AM
To: Philip Gundvaldson
Subject: FW: SD38 Corridor Study Comment

Follow Up Flag: Follow up
Flag Status: Flagged

FYI

Ben White, PE, LS

Senior Project Manager | Regional Director - Transportation
HR Green® | Building Communities. Improving Lives.



431 N. Phillips Avenue | Suite 400 | Sioux Falls, SD 57104-5933

Direct 605.221.2651 | **Cell** 605.400.4947

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From: SD38 Corridor Study Webflow Forms <no-reply-forms@webflow.com>
Sent: Thursday, March 21, 2024 7:44 PM
To: Whitver, Heidi <hwhitver@hrgreen.com>; Thoreen, Timothy <tthoreen@hrgreen.com>; White, Ben <bwhite@hrgreen.com>; steve.gramm@state.sd.us
Subject: SD38 Corridor Study Comment

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Form

Contact Form

Site

SD38 Corridor Study

Submitted content

Name: Mike and Jana Miles

Email: jmiles@siouxvalley.net

Comments: We are land owners along Highway 38 on 45816 Hwy 38 which borders 258th street near Humboldt SD. I attended the afternoon meeting on March 13th in Sioux Falls and from what your plan

shows you are wanting to take out our driveway access to Highway 38. We have managed this farm for 44 years and never had an issue with our access to Highway 38. We have been very grateful for this access because of the snow accumulation that this stretch of land creates in the winter. In the winter 258th street is not always plowed due to the extremely deep snow so this will create an issue if they were to merge our driveway to 258th street. We have a cattle operation that we need to access at least twice a day to monitor and feed cattle. Adding 500 feet to our driveway would be detrimental to our operation. I understand adding a curve on the gravel road on 258th would be a benefit for those traveling 258th street but extending our driveway to join it would not be a benefit to us. Our septic system runs right up to the edge of our property by the driveway and feedlot which would also create problems if disturbed. The best solution would be to leave the driveway access from 45816 Hwy 38 as is. Thank you, Mike and Jana Miles

Number of submissions received

7/500 this month

March 1st – March 31st

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Philip Gundvaldson

From: SD38 Corridor Study Webflow Forms <no-reply-forms@webflow.com>
Sent: Wednesday, March 13, 2024 8:48 PM
To: Whitver, Heidi; Thoreen, Timothy; White, Ben; steve.gramm@state.sd.us
Subject: SD38 Corridor Study Comment

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Form

Contact Form

Site

SD38 Corridor Study

Submitted content

Name: Kristen Hall

Email: kristen.hall88@outlook.com

Comments: Hello, I live at the house right at the junction of 261st and Highway 38. I was concerned that the meeting tonight only discussed closing our access to the highway. Visibility to enter 38 is much worse at 467th Ave and many people in the neighborhood use the 261st access for this reason. I am also concerned about how the larger road will affect our well that we share with two other houses. The access to the neighborhood is also beneficial due to large vehicles such as buses or trucks being able to use 261st to safely turn around if needing to go back in the other direction. As someone very much affected by this decision, I feel our best outcome would be a four lane road past the neighborhood with an optional turn lane to 261st St. If there seems to be no way around closing 261st, then it would be beneficial to at least have 467th paved down to 12th St.

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4/500 this month

March 1st – March 31st

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The map displays an aerial view of a region in South Dakota, centered on Highway 38. A green line highlights a specific corridor along the highway, starting from the west and extending east towards Sioux Falls. Within this highlighted area, there are several green 'S' icons, indicating safety concerns, and purple car icons, indicating traffic. The map also shows a grid of streets, including 25th St, 26th St, 27th St, 28th St, 29th St, 30th St, 31st St, 32nd St, 33rd St, 34th St, 35th St, 36th St, 37th St, 38th St, 39th St, 40th St, 41st St, 42nd St, 43rd St, 44th St, 45th St, 46th St, 47th St, 48th St, 49th St, 50th St, 51st St, 52nd St, 53rd St, 54th St, 55th St, 56th St, 57th St, 58th St, 59th St, 60th St, 61st St, 62nd St, 63rd St, 64th St, 65th St, 66th St, 67th St, 68th St, 69th St, 70th St, 71st St, 72nd St, 73rd St, 74th St, 75th St, 76th St, 77th St, 78th St, 79th St, 80th St, 81st St, 82nd St, 83rd St, 84th St, 85th St, 86th St, 87th St, 88th St, 89th St, 90th St, 91st St, 92nd St, 93rd St, 94th St, 95th St, 96th St, 97th St, 98th St, 99th St, 100th St. The map includes a legend in the bottom right corner, a scale bar in the top right corner, and a north arrow in the top right corner.

Legend

- Traffic
- Safety
- Other

Philip Gundvaldson

From: SD38 Corridor Study Webflow Forms <no-reply-forms@webflow.com>
Sent: Wednesday, March 13, 2024 2:06 PM
To: Whitver, Heidi; Thoreen, Timothy; White, Ben; steve.gramm@state.sd.us
Subject: SD38 Corridor Study Comment

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Form

Contact Form

Site

SD38 Corridor Study

Submitted content

Name: Peggy Hoogestraat

Email: gardengalpeggy@gmail.com

Comments: Today, March 13, 2024, I listened to the prerecorded presentation for the project. Please note that on the traffic volume projections map, the I-90 speedway entrance and the 459th Ave are marked incorrectly. I discovered that when reviewing where my own property is along Hwy 38. From what I understand, there will be no additional changes from Humboldt to Hartford's Western Avenue as a result of this study. Please let me know if that is correct. I will not be able to attend the open house tonight. Thank you

Number of submissions received

3/500 this month

March 1st – March 31st

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Philip Gundvaldson

From: SD38 Corridor Study Webflow Forms <no-reply-forms@webflow.com>
Sent: Wednesday, March 6, 2024 5:53 PM
To: Whitver, Heidi; Thoreen, Timothy; White, Ben; steve.gramm@state.sd.us
Subject: SD38 Corridor Study Comment

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Form

Contact Form

Site

SD38 Corridor Study

Submitted content

Name: Kristi Nimick

Email: usnimicks@yahoo.com

Comments: your flyer you sent out says the meeting is on Wednesday March 13, this web page says the 14th? Which is correct?

Number of submissions received

1/500 this month

March 1st – March 31st

Need more submissions?

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South Dakota Highway 38 Corridor Study

From Humboldt to Sioux Falls

Name: Jeanne Foster

Address: 200 E 5th Street

Crooks, SD 57020

Telephone: 605-359-1267

E-Mail: ~~200f~~ 200f.jeanne@gmail.com

Contact Info: Phil Gundvaldson, P.E.

605-271-5527 (office)

PhilG@InfrastructureDG.com

Comments / Questions:

No median - 3 lanes or 4 lanes OK along 38 between
468 Ave and Ellis Road.

Need to be able to move farm equipment going both
east and west on 38.

There are a number of properties that would need to go east & west in ^{this} section
Median with stop ~~snow~~ snow on parts of this part of the
Road.

Project website: <https://www.sd38corridorstudy.com/>



Please place this comment/question form in the designated box on the way out of the meeting, mail to the address on the opposite side of this card, or email comments and questions to PhilG@InfrastructureDG.com by April 19th, 2024.

South Dakota Highway 38 Corridor Study From Humboldt to Sioux Falls

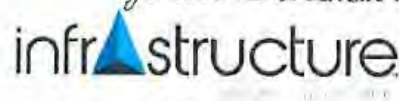
Name: Linda Hatle
Address: 46735 SD Highway 38
Sioux Falls, South Dakota 57107

Telephone: 605/360-6375
E-Mail: Hatlelinda@gmail.com
Contact Info: Phil Gundvaldson, P.E.
605-271-5527 (office)
PhilG@InfrastructureDG.com

Comments / Questions:

I'm not against a 4 lane road, just against not getting a turn lane to get into my driveway. Continuing on to make a U-turn to me is going to be much more dangerous. In the winter when the plows have not cleared the roads good, I could possibly get stuck in the snow making a U-turn and get frost bitten trying to shovel my vehicle out of the snow. Also the snow will not be able to blow across due to a median and if there is a drift, there will be ~~no~~ no way to get around it. When pulling a long trailer into my yard, a U-turn will not be practical. I do not wish to drive further west to go home. I want and need a turn lane to my driveway! The state needs to consider property owners should have a right to have a lane to go home without driving further.

Project website: <https://www.sd38corridorstudy.com/>



Please place this comment/question form in the designated box on the way out of the meeting, mail to the address on the opposite side of this card, or email comments and questions to PhilG@InfrastructureDG.com by April 19th, 2024.

South Dakota Highway 38 Corridor Study

From Humboldt to Sioux Falls

Allan and Angelia Martens
46061 SD HWY 38
Hartford SD 57033

Telephone: _____

E-Mail: _____

Contact Info: Phil Gundvaldson, P.E.
605-271-5527 (office)
PhilG@InfrastructureDG.com

Comments / Questions:

*Need a N passing zone between 460th & 461 street.
Also need a left & Right turn lane for race track
between 460 & 461st street. Both for safety concerns*

Project website: <https://www.sd38corridorstudy.com/>



Please place this comment/question form in the designated box on the way out of the meeting, mail to the address on the opposite side of this card, or email comments and questions to PhilG@InfrastructureDG.com by April 19th, 2024.

Miles Properties Inc. 11

South Dakota Highway 38 Corridor Study From Humboldt to Sioux Falls

Name: Mike & Jana Miles
Address: 4557 W 258th St
Humboldt SD 57035

Telephone: 605-366-9437 or 366-5320
E-Mail: smiles@siouxvalley.net
Contact Info: Phil Gundvaldson, P.E.
605-271-5527 (office)
PhilG@InfrastructureDG.com

Comments / Questions:

We are land owners along Highway 38 on 45816 Hwy 38 which borders 258th street near Humboldt SD. I attended the afternoon meeting on March 13th in Sioux Falls and from what your plan shows you are wanting to take out our driveway access to Highway 38. We have managed this farm for 44 years and never had an issue with our access to Highway 38. We have been very grateful for this access because of the snow accumulation that this stretch of land creates in the winter. In the winter 258th street is not always plowed due to the extremely deep snow so this will create an issue if they were to merge our driveway to 258th street. We have a cattle operation that we need to access at least twice a day to monitor and feed cattle. Adding 500 feet to our driveway would be detrimental to our operation. I understand adding a curve on the gravel road on 258th would be a benefit for those traveling 258th street but extending our driveway to join it would not be a benefit to us. Our septic system runs right up to the edge of our property by the driveway and feedlot which would also create problems if disturbed. The best solution would be to leave the driveway access from 45816 Hwy 38 as is. Thank you, Mike and Jana Miles

Project website: <https://www.southdakohighway38study.com/>



Place this comment/question form in the designated box on the way out of the meeting, mail to the address on the back of this form to PhilG@InfrastructureDG.com by April 19th, 2024.

Buffalo Ridge Corporation

46614 Hwy 38-Buffalo Ridge, SD 57107

(605)528-3931 (605)366-9794 cell

17 April 24

Steve Gramm

SDDOT

Greetings,

It was a pleasure meeting everyone at the SD38 Corridor Study public open house at West Central High School. It is always nice meeting fellow SDSU Civil Engineering graduates.

We own properties adjacent to the SE corner of the I-90/SD38 interchange. The main property being north and south of I-90, bound to the south by SD38, and to the west by the east-bound ramp right-of-way (depicted as A). A smaller six-acre parcel adjacent to the SE corner of the SD38/466th Ave intersection rights-of-way (depicted as B).

We paid a premium for these properties due to their location adjacent to their intersection rights-of way. The six-acre lot was purchased at auction over twenty years ago. It sold for more than ten times per acre than the adjacent property south and east, resulting from its intersection location.

We support planned options that mitigate reduction of our property values. Several planned options show relocations of right-of-way for the interstate, highway, and 466th Ave. To mitigate reduction in property value, our property lines common to existing rights-of-way must remain common to any relocated rights-of-way. Such scenarios are depicted as hatched areas south of the interstate on the attached aerial photographs.

We support options that least affect our property, including but not limited to land, structures, billboards/signs, utilities, fences etc. We would expect to be compensated/reimbursed for any loss or relocation of any such property. Transfer of state-owned land would be considered as depicted by hatched areas north of the interstate.

Options least affecting our properties include options 5, 8 and 9, with 5 being most desirable. Option 3.2 could be considered if slightly modified. The lot adjacent east of parcel B is owned by ANCO. The proposed alignment of 466th Ave runs through the newly

constructed ANCO building. Cemcast is adjacent to parcel B to the south and southeast. Cemcast would probably be agreeable to swap their NW triangular corner for an equal SE corner of parcel B, squaring off both lots. 466th Ave could then be aligned dividing parcel B roughly into equal parcels, depicted on option 3.2 and attached Figure A. Again, we would expect compensation to relocate any billboards, structures, utilities, fences etc. We would consider a land transfer of state-owned land for compensation of land lost (hatched area across interstate).

Options 1, 2, 3, 4, 6 & 7 have a much more drastic effect on our properties. We oppose moving 466th Ave unless our existing common property line is moved along with relocated 466th Ave right-of-way. These options also affect significantly more of our land, billboards, structures, utilities and fence etc. Again, state-owned land across interstate could be considered for compensation.

We do not support any medians, raised or painted, prohibiting customers entering or leaving our properties. Several years ago, a painted median prohibiting eastbound traffic from accessing our business was created along SD38. Almost all of our customers exit off I-90 arriving at our business eastbound on SD38. This has resulted in a very negative impact not only on our business but a major inconvenience for our customers.

Most drive past our driveway slowly, prohibited by the painted median. Most find a place to turn around anywhere from 0.1 to 3.0 miles down the highway. Some drive all the way to Marion Road back to I-90W. Many of our customers are big RVs, trailers of all kinds, including campers and semi-trucks, which are difficult to U-turn. We were dumbfounded that not only did nobody ask for our input, but we were also never informed of it beforehand.

Of the three mainline options, we prefer option one, painted, not raised medians. We support a center turn lane allowing both right and left turns similar to the center turn lane just across I-90 along Hartford Heights, a stone's throw away. They have similar driveways and intersections with a center two-way turn lane, approved with a higher traffic count.

In addition, for years the directional guide sign just before the stop sign on the east bound off ramp indicated gas 1.0 mile to the left, when it is 0.1-0.2 miles. Recently the 1.0 mile has been changed to 0.4 mile. This also causes gas customers to drive past only to inconveniently search for a place to turn around without running out of gas.

And last, we do not support the removal of the residential driveway to the east. Both residences each have their own separate driveway. The centerline of the west driveway is thirty feet west of the common property line. If the east property driveway is removed, the

west driveway will have to be moved thirty feet east to straddle the property line (Fig. B). A tree or two would also have to be removed.

In summary, our first preference would be to leave existing conditions unchanged with the exception of the painted median prohibiting access to our business driveway and correcting the directional guide sign at the off ramp.

Our next preference would be options 5, 8 & 9. We expect our property lines common with existing rights-of-way will move along with the new rights-of-way depicted as hatched area west of parcel A. Driveway shown across SD38 from 466th intersection. Hatched area west of B and state-owned land across I-90 could be considered for transfer as compensation for property loss. Option 3.2 may be ok with a revised alignment due to the existing building.

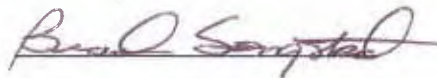
Options 1, 3, 4 & 6 are preferred least unless parcel B property line commonly shared with the existing right-of-way will move along with new right-of-way. Not doing so would greatly reduce the value of parcel B. The smaller hatched area further west and state-owned land across I-90 could be considered for transfer to compensate for property loss. Parcel B may also have to have driveway access to SD38.

A SD38 painted center turning lane allowing both right and left turns similar to the other side of the I-90 bridge along Hartford Heights is preferred. It is permitted with a higher traffic count with similar driveways and street intersections.

Last, we prefer the existing driveway not to be removed, requiring relocation of the other driveway to straddle the property line and tree removal.

Please feel free to contact me to discuss further.

Best Regards,

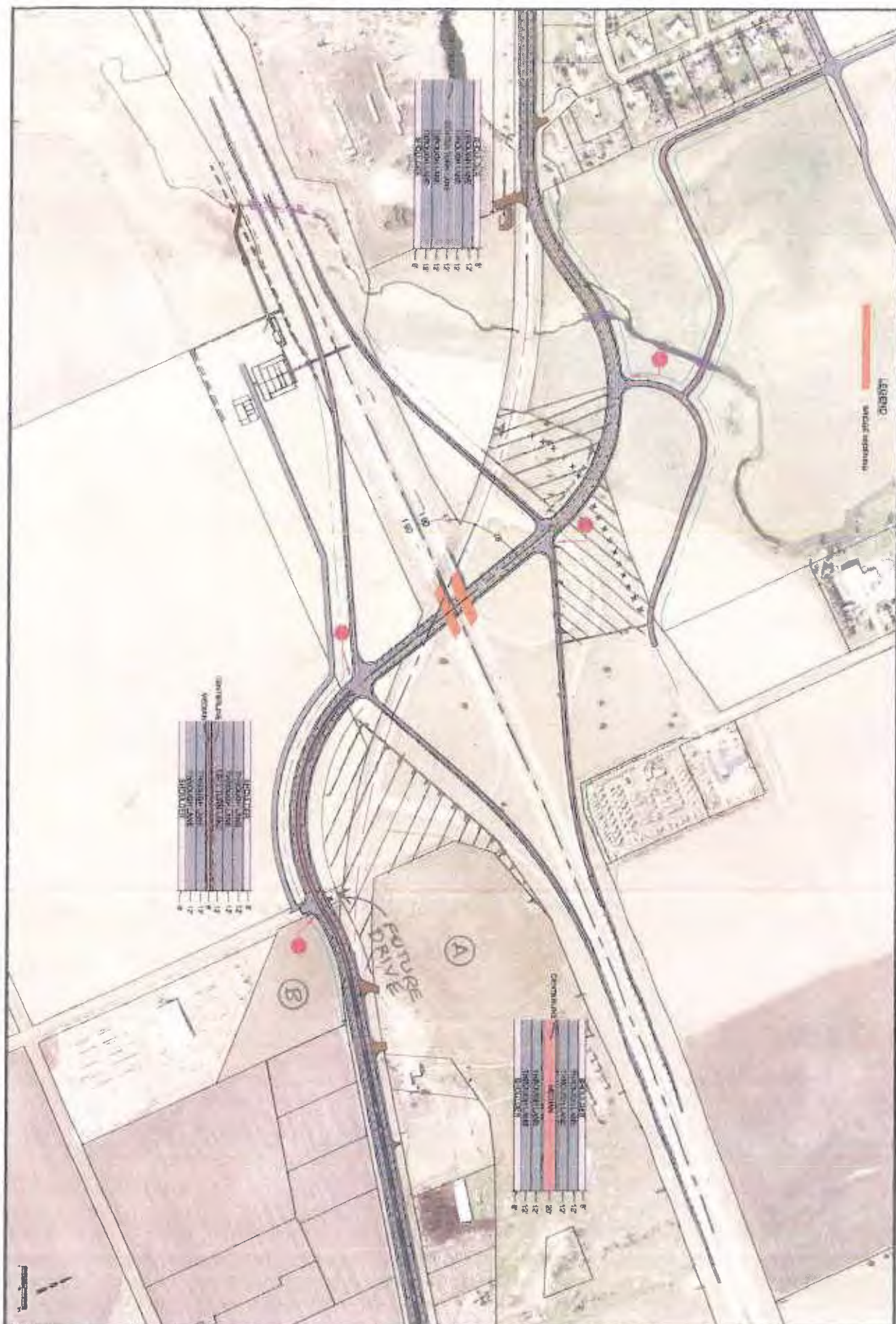
A handwritten signature in dark ink, appearing to read "Brad Songstad", written over a horizontal line.

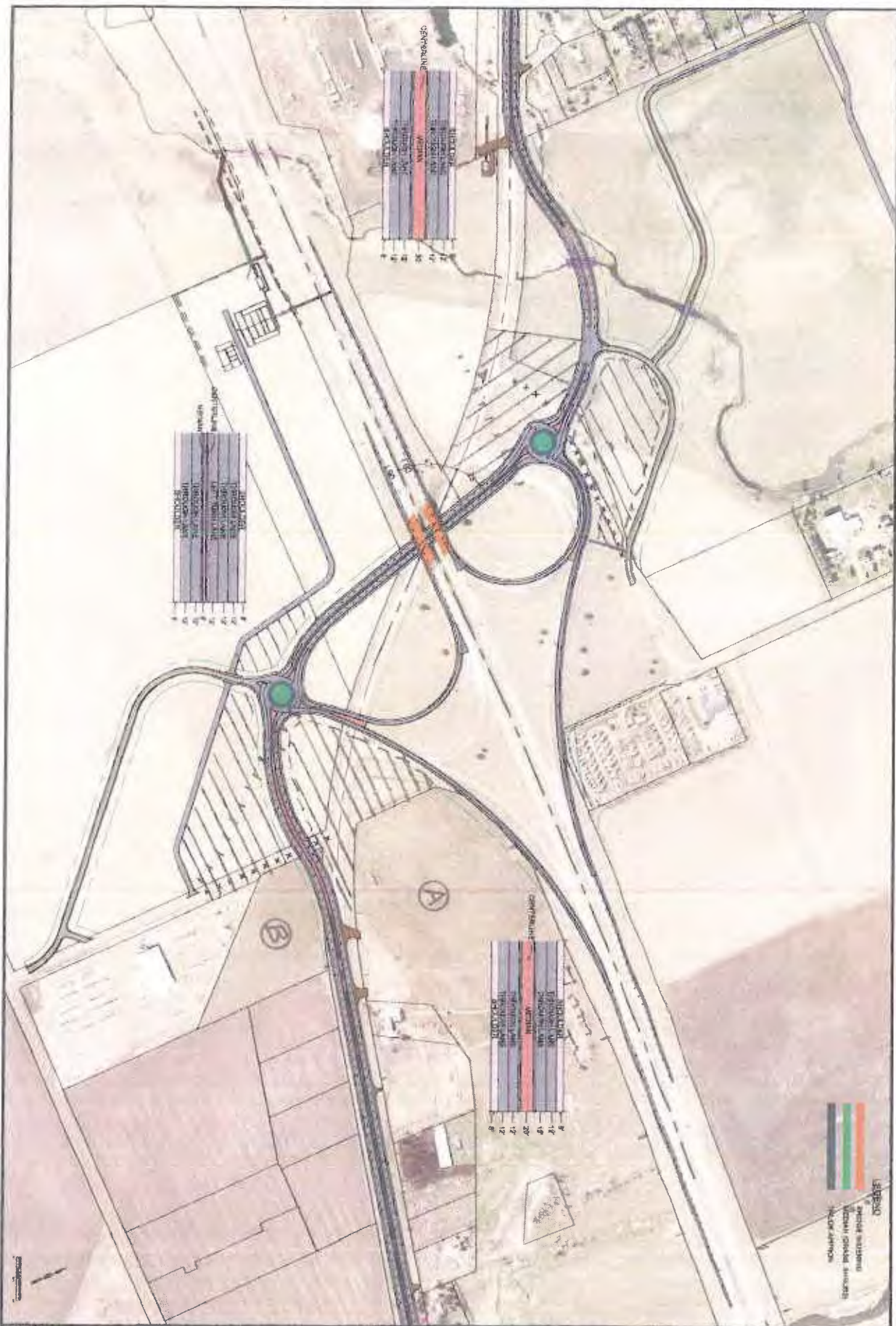
Brad Songstad, PE

Cc: Michael Paulson-Christopherson, Anderson, Paulson & Fideler

Clint Sargent-Meierhenry Sargent







007

EXHIBIT SHEET
SD 38 - 190 INTERCHANGE

OPTION 6 - FOLDED DIAMOND -
ROUNDBOUT

SOUTH DAKOTA
HIGHWAY 38 CORRIDOR STUDY

Philip Gundvaldson

From: noreply@socialpinpoint.com
Sent: Sunday, March 3, 2024 1:58 PM
To: Thoreen, Timothy; White, Ben
Subject: New response for survey: SD 38 Corridor Study on project: SD 38 Corridor Study

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The following response on survey: SD 38 Corridor Study from an unknown stakeholder was submitted regarding the project: SD 38 Corridor Study

5/4 Complete

1. Tell us about how you relate to the corridor (check all that apply):

I live near Highway 38

I rely on Highway 38 for my daily commute to Sioux Falls

2.How often do you travel on Highway 38?

Daily

3. What would you like improved on Highway 38? Please rank based on high priority and low priority.

Safety on Highway 38:

1 (high)

Traffic Flow:

4

Pedestrian crossin:

5 (low)

Bike options:

5 (low)

Access to or from Interstate 90:

1 (high)

Access to adjacent land use:

2

Safety at intersections:

1 (high)

4.If I could fix one thing about the Highway 38 corridor, it would be:

Morning commute is busy with buses and trucks. Entry to the highway from intersections is an important need, especially when visibility is limited.

Review the Survey response now

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Philip Gundvaldson

From: noreply@socialpinpoint.com
Sent: Wednesday, March 13, 2024 2:22 PM
To: Thoreen, Timothy; White, Ben
Subject: New response for survey: SD 38 Corridor Study on project: SD 38 Corridor Study

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The following response on survey: SD 38 Corridor Study from an unknown stakeholder was submitted regarding the project: SD 38 Corridor Study

5/4 Complete

1. Tell us about how you relate to the corridor (check all that apply):

I rely on Highway 38 for my daily commute to Sioux Falls

I live near Highway 38

2. How often do you travel on Highway 38?

Daily

3. What would you like improved on Highway 38? Please rank based on high priority and low priority.

Safety on Highway 38:

2

Traffic Flow:

1 (high)

Pedestrian crossin:

5 (low)

Bike options:

5 (low)

Access to or from Interstate 90:

2

Access to adjacent land use:

5 (low)

Safety at intersections:

3

4.If I could fix one thing about the Highway 38 corridor, it would be:

Better turn lane options or more lanes between Marion and Ellis Rd

Review the Survey response now

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APPENDIX D: FUTURE BUILD CONCEPT TRAFFIC OPERATIONS AND SAFETY ANALYSIS

SD38 Corridor Study



To: Steve Gramm, SDDOT

From: Brian Willham, PE, PTOE / Ben White, PE

Subject: SD Highway 38 – Future Build Concept Traffic Operations and Safety Analysis

Date: July 19, 2024

Introduction

The purpose of this technical memorandum is to document the future build concept traffic assessment in support of the study being completed along SD 38. This technical report will provide a future year conditions assessment of the highway and each of the study intersections. **Table 1** depicts the eighteen study intersections reviewed as part of the existing conditions assessment and traffic data review.

TABLE 1: SD 38 STUDY INTERSECTIONS

Main Line	Cross Street(s)
SD Highway 38	SD Highway 19 / 457 th Avenue
SD Highway 38	459 th Avenue
SD Highway 38	I-90 Speedway Entrance
SD Highway 38	Western Avenue / 463 rd Avenue
SD Highway 38	Main Avenue
SD Highway 38	Vandemark Avenue
SD Highway 38	2 nd Street
SD Highway 38	West Central High School Entrance
SD Highway 38	Railroad Street / 464 th Avenue
SD Highway 38	Mickelson Road / 260 th Street
SD Highway 38	466 th Avenue (North)
SD Highway 38	WB I-90 Exit 390
SD Highway 38	EB I-90 Exit 390
SD Highway 38	466 th Avenue (South)
SD Highway 38	County Highway 141 / 468 th Avenue
SD Highway 38	County Highway 139 / 469 th Avenue
SD Highway 38	La Mesa Drive / 470 th Avenue
SD Highway 38	Marion Road

Traffic Forecasting

The existing traffic volume data for the SD 38 corridor was developed from 12-hour count data collected on November 2, 2022, for 17 intersections. To develop future traffic conditions, the Sioux Falls Metropolitan Planning Organization (SFMPO) Travel Demand Model (TDM) and SDDOT GIS data was used to establish the 2050 ADT. Available development site plans were sourced and any planned development trips that had not been included in the TDM were incorporated into the future year forecasted volumes. The growth calculated from the ADT values were used to develop 2050 design year morning (AM) and afternoon (PM) peak hour volumes at study intersections. The estimated interim year 2029 morning (AM) and afternoon (PM) peak hour volumes were developed by process of interpolation using straight-line growth assumptions based on the existing year and future year 2050 traffic volumes. Any adjustments that were necessary to relocate traffic due to intersection modifications within concepts were completed manually. The peak hour volumes were previously used to evaluate the existing condition and

future no-build traffic operations for intersections and highway segments within the study area and the same forecasts will be utilized to evaluate the future build concept conditions.

Traffic Operations Methodology

Intersections

Intersection level of service (LOS) is primarily a function of peak hour turning movement volumes, intersection lane configuration, and traffic control. For intersection analysis, the Highway Capacity Manual (HCM) defines LOS in terms of the average control delay at the intersection in seconds per vehicle. The results of a HCM analysis are typically presented in the form of a letter grade (A-F) that provides a qualitative estimate of the operational efficiency or effectiveness of the corridor. Much like an academic report card, LOS A represents the best range of operating conditions (i.e., motorists experiencing little delay or congestion) and LOS F represents the worst (i.e., extreme delay or severe congestion).

Table 2 defines the control delay range corresponding to each LOS for unsignalized and signalized intersection locations. At intersections, LOS E is considered to be at capacity and typically represents a scenario in which significant queuing is present or traffic signal cycle failure is evident. For unsignalized intersections, the intersection LOS is given by the worst approach LOS. For instance, an intersection with LOS D on one approach and LOS B on the rest would result in LOS D for the intersection.

TABLE 2: LEVEL OF SERVICE FOR CONTROL DELAY (INTERSECTIONS)

Level Of Service	Unsignalized	Traffic Signal
	Control Delay (sec/veh)	Control Delay (sec/veh)
A	≤ 10	≤ 10
B	> 10 and ≤ 15	> 10 and ≤ 20
C	> 15 and ≤ 25	> 20 and ≤ 35
D	> 25 and ≤ 35	> 35 and ≤ 55
E	> 35 and ≤ 50	> 55 and ≤ 80
F	> 50	> 80

Source: Highway Capacity Manual, 7th Edition.

Following SDDOT guidance, LOS C is the desired minimum traffic operational goal for intersections in rural environments while LOS D is an acceptable operational goal for intersections in dense urban environments. The intersections within the study area have a desired traffic operational goal of LOS C.

Highways

Two-lane highway LOS is defined by follower density which relates directly to the passing opportunities available to motorists. In two-lane highway analysis, the highway is segmented according to whether passing zones are present or whether passing is prohibited or otherwise unavailable due to geometric limitations. Multilane highway LOS is defined by density which relates to the ability of a motorist to maneuver freely within the traffic stream. For multilane highway analysis, the highway is segmented anywhere that the uniformity of the traffic or roadway conditions change.

Error! Reference source not found. defines the follower density range corresponding to each LOS for two-lane highway segments. On two-lane highways, LOS E is considered to be at capacity. For two-lane highway segments, a LOS B would represent a scenario where some platooning is present with the potential passing demand and passing opportunities balanced while a LOS D would represent a scenario where significant platooning is present and passing demand far exceeds passing opportunities.

TABLE 3: LEVEL OF SERVICE FOR FOLLOWER DENSITY (TWO-LANE HIGHWAYS)

Level Of Service	Speed \geq 50 mph	Speed $<$ 50 mph
	Follower Density (followers/mi/ln)	Follower Density (followers/mi/ln)
A	≤ 2.0	≤ 2.5
B	$> 2.0 - 4.0$	$> 2.5 - 5.0$
C	$> 4.0 - 8.0$	$> 5.0 - 10.0$
D	$> 8.0 - 12.0$	$> 10.0 - 15.0$
E	> 12.0	> 15.0
F	Demand exceeds capacity	

Source: Highway Capacity Manual, 7th Edition.

Table 4 defines the follower density range corresponding to each LOS for multilane highway segments. On multi-lane highways, LOS E is considered to be at capacity. For multilane highway segments, a LOS B represents a reasonably free-flowing condition with minimal maneuvering restrictions while a LOS D would represent a scenario where speeds begin to decline and freedom to maneuver is limited.

TABLE 4: LEVEL OF SERVICE FOR FOLLOWER DENSITY (MULTILANE HIGHWAYS)

Level Of Service	Free-Flow Speed (mph)	Density (passenger cars/mi/ln)
A		≤ 11.0
B		$> 11.0 - 18.0$
C		$> 18.0 - 26.0$
D		$> 26.0 - 35.0$
E	60	$> 35.0 - 40.0$
	55	$> 35.0 - 41.0$
	50	$> 35.0 - 43.0$
	45	$> 35.0 - 45.0$
F	60	> 43.0
	55	> 45.0
	50	> 43.0
	45	> 45.0

Source: Highway Capacity Manual, 7th Edition.

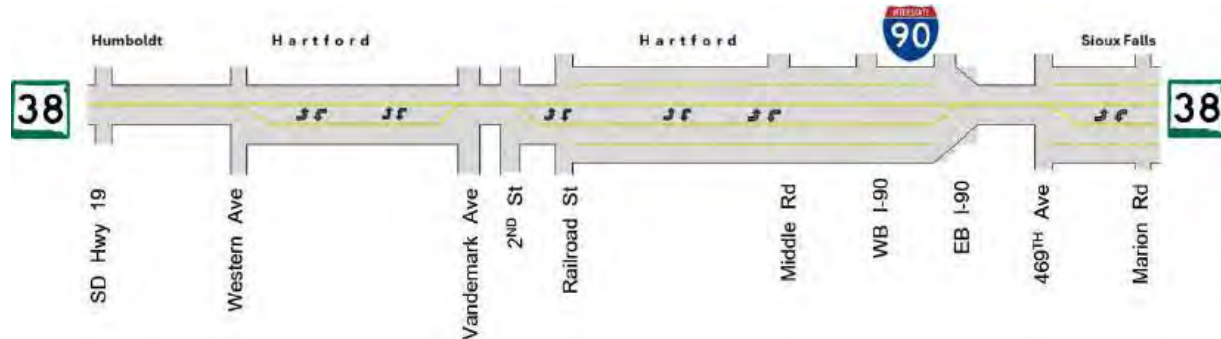
Following SDDOT guidance, LOS C is the desired traffic operational goal for highways in rural environments and LOS D is considered the minimal acceptable operations for highways in urban environments. The SD 38 highway segments within the study area are categorized as rural with federal functional classification of collector between Humboldt to Hartford and categorized as urban with federal functional classification of minor arterial between Hartford to Sioux Falls. The highway segments within the study area have a desired traffic operational goal of LOS C with minimum allowable LOS D between Hartford to Sioux Falls.

Future Build Corridor Concepts

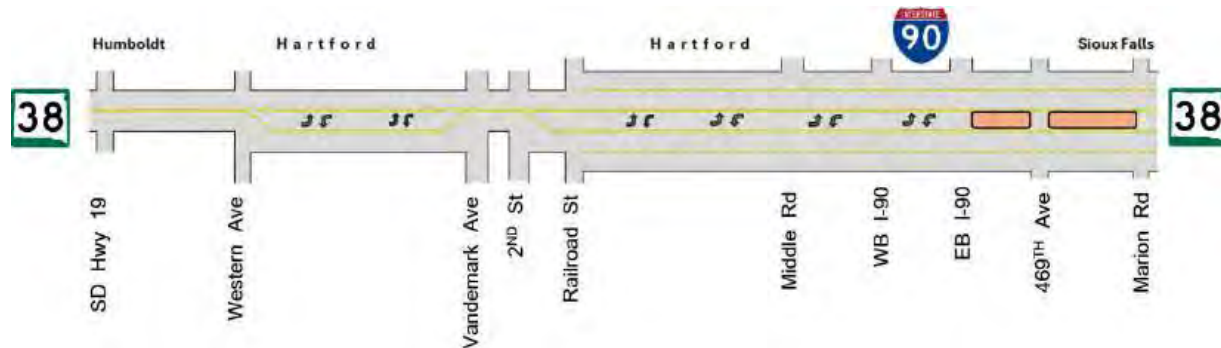
Opening Year 2029 and Design Year 2050 traffic volume forecasts were used to evaluate the traffic operations of intersections and the highway corridor under the build concepts. Operational analysis was completed for the AM and PM peak hour periods of each scenario. Build concept plans are available under separate cover.

The following 3 Build condition scenarios were evaluated:

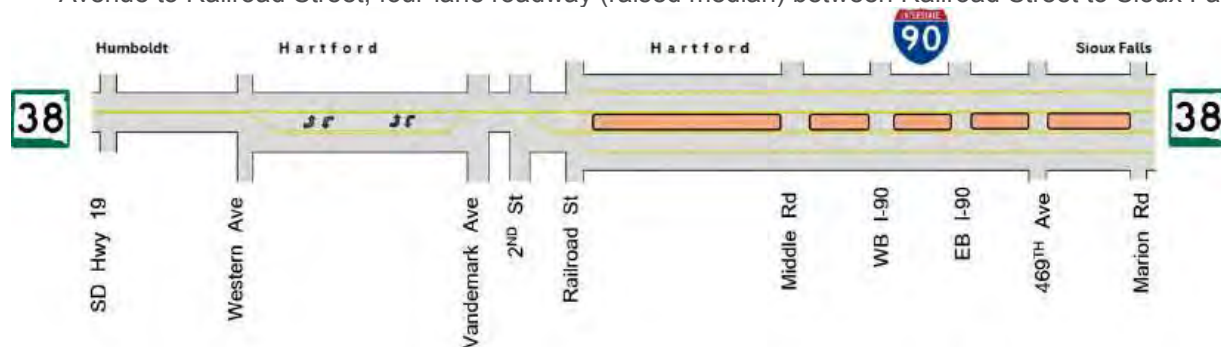
- Alternative 1** – two-lane highway from Humboldt to Hartford (as existing), three-lane roadway from Western Avenue to Railroad Street, five-lane roadway (center TWLTL) between Railroad Street to the I-90 Exit 390 interchange, two-lane highway from the I-90 interchange to 469th Ave/County Highway 139, and five-lane roadway (center TWLTL) from 460th Ave/County Highway 139 to Sioux Falls.



- Alternative 2** – two-lane highway from Humboldt to Hartford (as existing), three-lane roadway from Western Avenue to Railroad Street, five-lane roadway (center TWLTL) between Railroad Street to the I-90 Exit 390 interchange, four-lane highway (raised median) from the I-90 interchange to Sioux Falls.



- Alternative 3** - two-lane highway from Humboldt to Hartford (as existing), three-lane roadway from Western Avenue to Railroad Street, four-lane roadway (raised median) between Railroad Street to Sioux Falls.



Future Traffic Operations

Traffic operations analysis for the study area intersections included capacity evaluation using the Highway Capacity Manual (HCM) 7th Edition two-lane highway and multilane highway methodologies through use of the Highway Capacity Software (HCS) 2022. Output reports from the HCS2022 software are available in the Appendix.

Traffic operations analysis for the study area SD Highway 38 corridor included capacity evaluation using the Highway Capacity Manual (HCM) 7th Edition two-lane highway and multilane highway methodologies through use of the Highway Capacity Software (HCS) 2022. The highway traffic operations analysis used conceptual highway geometry, future year traffic volumes, and design speeds.

The future year traffic operations analyses does not include a comparison of concepts for the interchange ramp terminal intersections due to that portion of the corridor being removed from this study for inclusion in a future study to document the potential changes to interstate access.

Opening Year 2029

The results of the Opening Year 2029 intersection capacity analyses can be seen in **Table 5**. The results of the two-lane highway and multilane highway corridor capacity analyses can be seen in **Table 6** and **Table 7**.

Under the Opening Year 2029 conditions, the traffic operations analyses showed acceptable operations at all intersections within the study area, under all alternative scenarios, with intersections achieving LOS C or greater during both the AM and PM peak hours.

Under the Opening Year 2029 conditions, the traffic operations analyses showed acceptable operations at all of the highway segments within the study area, under all alternative scenarios, with all segments achieving LOS B or greater during both the AM and PM peak hours.

In general, the Opening Year 2029 condition traffic operations demonstrated acceptable performance measures at all intersections and highway segments within the study area. The desired LOS was realized for all intersections and highway segments during the AM and PM peak hours for all concepts.



TABLE 5: HCM TRAFFIC INTERSECTION OPERATIONS – OPENING 2029

ID #	SD Hwy 38 Cross Street(s)	Intersection Control		NO-BUILD				ALTERNATIVE 1				ALTERNATIVE 2				ALTERNATIVE 3			
				AM PEAK HOUR		PM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR	
		No Build	Build	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	SD Highway 19 / 457 th Avenue	TWSC	TWSC	10.4	B	10.5	B	10.6	B	10.8	B	10.6	B	10.8	B	10.6	B	10.8	B
2	459 th Avenue	TWSC	TWSC	10.4	B	11.8	B	7.6	A	11.8	B	7.6	A	11.8	B	7.6	A	11.8	B
3	I-90 Speedway Entrance	TWSC	TWSC	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A
4	Western Avenue / 463 rd Avenue	TWSC	TWSC	13.5	B	16.5	C	13.0	B	15.2	C	13.0	B	15.2	C	13.0	B	15.2	C
5	Main Avenue	TWSC	TWSC	12.0	B	15.2	C	11.3	B	12.9	B	11.3	B	12.9	B	11.3	B	12.9	B
6	Vandemark Avenue	TWSC	TWSC	12.6	B	12.7	B	12.7	B	12.7	B	12.7	B	12.7	B	12.7	B	12.7	B
7	2 nd Street	TWSC	Signal	16.6	C	18.5	C	6.4	A	6.4	A	6.4	A	6.4	A	6.4	A	6.4	A
8	West Central High School Entrance	TWSC	TWSC	12.1	B	12.0	B	10.5	B	10.2	B	10.5	B	10.2	B	10.5	B	10.2	B
9	Railroad Street / 464 th Avenue	TWSC	TWSC	18.2	C	19.8	C	17.5	C	18.4	C	17.5	C	18.4	C	17.5	B	18.4	B
10	Mickelson Road / 260 th Street	TWSC	Signal	24.8	C	54.5	F	11.9	B	11.2	B	11.9	B	11.2	B	11.9	B	11.2	B
11	466 th Avenue (North)	TWSC	TWSC	19.5	C	20.3	C	11.6	B	13.9	B	11.6	B	13.9	B	16.3	C	18.8	C
12	WB I-90 Exit 390	TWSC	NA	11.5	B	17.7	C	NA	-	NA	-	NA	-	NA	-	NA	-	NA	-
13	EB I-90 Exit 390	TWSC	NA	12.3	B	15.4	C	NA	-	NA	-	NA	-	NA	-	NA	-	NA	-
14	466 th Avenue (South)	TWSC	NA	11.9	B	12.3	B	NA	-	NA	-	NA	-	NA	-	NA	-	NA	-
15	County Highway 141 / 468 th Avenue	TWSC	TWSC	13.5	B	14.5	B	13.5	B	14.5	B	14.1	B	13.6	B	14.1	B	13.6	B
16	County Highway 139 / 469 th Avenue	TWSC	TWSC	14.2	B	18.5	C	11.8	B	14.9	B	11.4	B	15.4	B	11.4	B	15.4	B
17	La Mesa Drive / 470 th Avenue	TWSC	TWSC	17.0	C	21.7	C	15.1	C	17.8	C	15.1	B	17.8	B	15.1	B	17.8	B
18	Marion Road	Signal	Signal	16.2	B	20.6	C	16.2	B	20.6	C	16.2	B	20.6	C	16.2	B	20.6	C

Notes: Bold/Highlighted Color indicates a poor LOS



TABLE 6: HCM TRAFFIC HIGHWAY OPERATIONS – OPENING 2029, EASTBOUND SD 38

ID #	Segment Type		NO BUILD				ALTERNATIVE 1				ALTERNATIVE 2				ALTERNATIVE 3			
			AM PEAK HOUR		PM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR	
	No Build	Build	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS
EB 1	Passing Zone	Passing Zone	0.6	A	0.2	A	0.6	A	0.2	A	0.6	A	0.2	A	0.6	A	0.2	A
EB 2	Passing Constrained	Passing Constrained	0.7	A	0.3	A	0.7	A	0.3	A	0.7	A	0.3	A	0.7	A	0.3	A
EB 3	Passing Zone	Passing Zone	0.5	A	0.2	A	0.5	A	0.2	A	0.5	A	0.2	A	0.5	A	0.2	A
EB 4	Passing Constrained	Passing Constrained	0.7	A	0.3	A	0.7	A	0.3	A	0.7	A	0.3	A	0.7	A	0.3	A
EB 5	Passing Zone	Passing Zone	0.5	A	0.2	A	0.5	A	0.2	A	0.5	A	0.2	A	0.5	A	0.2	A
EB 6	Passing Constrained	Passing Constrained	0.7	A	0.3	A	0.7	A	0.3	A	0.7	A	0.3	A	0.7	A	0.3	A
EB 7	Passing Zone	Passing Zone	0.6	A	0.2	A	0.6	A	0.2	A	0.6	A	0.2	A	0.6	A	0.2	A
EB 8	Passing Zone	Passing Zone	0.5	A	0.2	A	0.5	A	0.2	A	0.5	A	0.2	A	0.5	A	0.2	A
EB 9	Passing Constrained	Passing Constrained	0.7	A	0.3	A	0.7	A	0.3	A	0.7	A	0.3	A	0.7	A	0.3	A
EB 10	Passing Zone	Passing Zone	0.5	A	0.2	A	0.5	A	0.2	A	0.5	A	0.2	A	0.5	A	0.2	A
EB 11	Passing Zone	Passing Zone	0.6	A	0.3	A	0.6	A	0.3	A	0.6	A	0.3	A	0.6	A	0.3	A
EB 12	Passing Constrained	Passing Constrained	0.7	A	0.4	A	0.7	A	0.4	A	0.7	A	0.4	A	0.7	A	0.4	A
EB 13	Passing Zone	Passing Zone	0.6	A	0.3	A	0.6	A	0.3	A	0.6	A	0.3	A	0.6	A	0.3	A
EB 14	Passing Constrained	Passing Constrained	1.3	A	0.7	A	1.3	A	0.7	A	1.3	A	0.7	A	1.3	A	0.7	A
EB 15	Passing Zone	Multilane	3.7	B	1.8	A	4.7	A	3.5	A	4.7	A	3.5	A	4.7	A	3.5	A
EB 16	Passing Constrained		4.1	C	1.9	A												
EB 17	Passing Zone		3.7	B	1.8	A												
EB 18	Passing Zone	Multilane	3.6	B	1.3	A	4.3	A	2.9	A	4.3	A	2.9	A	4.3	A	2.9	A
EB 19	Passing Constrained		3.6	B	1.3	A												
EB 20	Passing Constrained	Multilane	3.8	B	1.4	A	4.6	A	2.9	A	4.6	A	2.9	A	4.6	A	2.9	A
EB 21	Passing Constrained	Multilane	4.0	C	1.7	A	4.4	A	2.8	A	4.4	A	2.8	A	4.4	A	2.8	A
EB 22	Passing Constrained	NA	1.2	A	1.0	A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EB 23	Passing Constrained	Multilane ^{2,3}	1.3	A	1.0	A	1.3	A	1.0	A	2.3	A	2.0	A	2.3	A	2.0	A
EB 24	Passing Zone		1.1	A	0.9	A	1.1	A	0.9	A								
EB 25	Passing Constrained		1.2	A	1.0	A	1.2	A	1.0	A								
EB 26	Passing Zone		1.1	A	0.8	A	1.1	A	0.8	A								
EB 27	Passing Constrained		1.3	A	1.0	A	1.3	A	1.0	A								
EB 28	Passing Zone		1.1	A	0.9	A	1.1	A	0.9	A								
EB 29	Passing Zone	Multilane ^{2,3}	1.5	A	1.2	A	1.5	A	1.2	A	2.4	A	2.2	A	2.4	A	2.2	A
EB 30	Passing Constrained		1.6	A	1.3	A	1.6	A	1.3	A								
EB 31	Passing Zone		1.4	A	1.2	A	1.4	A	1.2	A								
EB 32	Passing Constrained		1.6	A	1.3	A	1.6	A	1.3	A								
EB 33	Passing Constrained	Multilane	4.2	C	1.3	A	3.6	A	2.2	A	3.6	A	2.2	A	3.6	A	2.2	A
EB 34	Passing Zone		3.9	B	1.3	A												
EB 35	Passing Constrained		4.0	C	1.2	A												

Notes: Bold indicates Multilane Highway
Highlighted Color indicates a poor LOS
NA indicates Segment Removed for Build Conditions
Multilane^{2,3} indicates segment type for Alternative 2 and 3



TABLE 7: HCM TRAFFIC HIGHWAY OPERATIONS – OPENING 2029, WESTBOUND SD 38

ID #	Segment Type		NO BUILD				ALTERNATIVE 1				ALTERNATIVE 2				ALTERNATIVE 3			
			AM PEAK HOUR		PM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR	
	No Build	Build	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS
WB 1	Passing Constrained	Multilane	0.7	A	4.4	C	1.6	A	3.8	A	1.6	A	3.8	A	1.6	A	3.8	A
WB 2	Passing Zone		0.7	A	4.2	C												
WB 3	Passing Constrained		0.8	A	2.1	B												
WB 4	Passing Zone	Multilane ^{2,3}	0.8	A	2.1	B	0.8	A	2.1	B	1.9	A	2.8	A	1.9	A	2.8	A
WB 5	Passing Constrained		0.7	A	2.0	A	0.7	A	2.0	A								
WB 6	Passing Zone		0.8	A	2.1	B	0.8	A	2.1	B								
WB 7	Passing Constrained		0.6	A	1.5	A	0.6	A	1.5	A								
WB 8	Passing Constrained	Multilane ^{2,3}	0.7	A	1.7	A	0.7	A	1.7	A	1.7	A	2.7	A	1.6	A	2.5	A
WB 9	Passing Zone		0.6	A	1.4	A	0.6	A	1.4	A								
WB 10	Passing Constrained		0.7	A	1.6	A	0.7	A	1.6	A								
WB 11	Passing Zone		0.6	A	1.5	A	0.6	A	1.5	A								
WB 12	Passing Constrained		0.7	A	1.7	A	0.7	A	1.7	A								
WB 13	Passing Constrained		0.7	A	1.7	A	0.7	A	1.7	A								
WB 14	Passing Constrained	NA	0.9	A	2.1	B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WB 15	Passing Constrained	Multilane	0.8	A	1.7	A	1.8	A	3.0	A	1.8	A	3.0	A	1.8	A	3.0	A
WB 16	Passing Constrained	Multilane	1.5	A	5.1	C	3.1	A	5.5	A	3.1	A	5.5	A	3.1	A	5.5	A
WB 17	Passing Constrained	Multilane	1.3	A	4.9	C	2.9	A	5.3	A	2.9	A	5.3	A	2.9	A	5.3	A
WB 18	Passing Constrained		1.4	A	5.1	C												
WB 19	Passing Zone		1.3	A	4.8	C												
WB 20	Passing Constrained		1.4	A	5.1	C												
WB 21	Passing Constrained	Multilane	1.9	A	5.1	C	3.4	A	5.6	A	3.4	A	5.6	A	3.4	A	5.6	A
WB 22	Passing Zone		1.7	A	4.1	C												
WB 23	Passing Zone	Passing Zone	0.3	A	0.7	A	0.3	A	0.7	A	0.3	A	0.7	A	0.3	A	0.7	A
WB 24	Passing Constrained	Passing Constrained	0.3	A	0.7	A	0.3	A	0.7	A	0.3	A	0.7	A	0.3	A	0.7	A
WB 25	Passing Constrained	Passing Constrained	0.3	A	0.6	A	0.3	A	0.6	A	0.3	A	0.6	A	0.3	A	0.6	A
WB 26	Passing Zone	Passing Zone	0.3	A	0.8	A	0.3	A	0.8	A	0.3	A	0.8	A	0.3	A	0.8	A
WB 27	Passing Zone	Passing Zone	0.3	A	0.6	A	0.3	A	0.6	A	0.3	A	0.6	A	0.3	A	0.6	A
WB 28	Passing Zone	Passing Zone	0.3	A	0.8	A	0.3	A	0.8	A	0.3	A	0.8	A	0.3	A	0.8	A
WB 29	Passing Zone	Passing Zone	0.3	A	0.8	A	0.3	A	0.8	A	0.3	A	0.8	A	0.3	A	0.8	A
WB 30	Passing Constrained	Passing Constrained	0.3	A	0.6	A	0.3	A	0.6	A	0.3	A	0.6	A	0.3	A	0.6	A
WB 31	Passing Zone	Passing Zone	0.3	A	0.8	A	0.3	A	0.8	A	0.3	A	0.8	A	0.3	A	0.8	A
WB 32	Passing Constrained	Passing Constrained	0.3	A	0.7	A	0.3	A	0.7	A	0.3	A	0.7	A	0.3	A	0.7	A
WB 33	Passing Constrained	Passing Constrained	0.3	A	0.8	A	0.3	A	0.8	A	0.3	A	0.8	A	0.3	A	0.8	A
WB 34	Passing Zone	Passing Zone	0.3	A	0.7	A	0.3	A	0.7	A	0.3	A	0.7	A	0.3	A	0.7	A
WB 35	Passing Constrained	Passing Constrained	0.5	A	1.0	A	0.5	A	1.0	A	0.5	A	1.0	A	0.5	A	1.0	A

Notes: Bold indicates Multilane Highway
Highlighted Color indicates a poor LOS
NA indicates Segment Removed for Build Conditions
Multilane^{2,3} indicates segment type for Alternative 2 and 3

Design Year 2050

The results of the Design Year 2050 intersection capacity analyses can be seen in **Table 8**. The results of the two-lane highway and multilane highway corridor capacity analyses can be seen in **Table 9** and **Notes**: Bold indicates Multilane Highway

Highlighted Color indicates a poor LOS
 NA indicates Segment Removed for Build Conditions
 Multilane2,3 indicates segment type for Alternative 2 and 3

Table 10.

Under the Design Year 2050 conditions, the traffic operations analyses showed acceptable operations at all intersections within the study area, with intersections achieving LOS C or greater during both the AM and PM peak hours. To achieve LOS C goals, it was necessary to convert several intersections from two-way stop control to signalized operations. The following intersections were analyzed under traffic signal control:

- SD 38 & Western Avenue/463rd Avenue
- SD 38 & 2nd Street
- SD 38 & Railroad Street/464th Avenue
- SD 38 & Mickelson Road/260th Street
- SD 38 & County Highway 139/469th Avenue
- SD 38 & La Mesa Drive/470th Avenue

Under the Design Year 2050 conditions, the traffic operations analyses showed acceptable operations at all of the highway segments within the study area, under all alternative scenarios, with all segments achieving LOS C or greater during both the AM and PM peak hours.

In general, the Design Year 2050 condition traffic operations demonstrated acceptable performance measures at all intersections and highway segments within the study area. The desired LOS was realized for all intersections and highway segments during the AM and PM peak hours for all concepts.



TABLE 8: HCM TRAFFIC INTERSECTION OPERATIONS – DESIGN 2050

ID #	SD Hwy 38 Cross Street(s)	Intersection Control		NO BUILD				ALTERNATIVE 1				ALTERNATIVE 2				ALTERNATIVE 3			
				AM PEAK HOUR		PM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR	
		No Build	Build	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	SD Highway 19 / 457 th Avenue	TWSC	TWSC	12.2	B	12.3	B	12.2	B	12.6	B	12.2	B	12.6	B	12.2	B	12.6	B
2	459 th Avenue	TWSC	TWSC	11.6	B	13.5	B	11.7	B	13.5	B	11.7	B	13.5	B	11.7	B	13.5	B
3	I-90 Speedway Entrance	TWSC	TWSC	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A	0.0	A
4	Western Avenue / 463 rd Avenue	TWSC	Signal	21.5	C	63.1	F	11.4	B	12.1	B	11.4	B	12.1	B	11.4	B	12.1	B
5	Main Avenue	TWSC	TWSC	14.4	B	25.5	D	13.2	B	17.6	C	13.2	B	17.6	C	13.2	B	17.6	C
6	Vandemark Avenue	TWSC	TWSC	15.4	C	16.8	C	15.5	C	16.9	C	15.5	C	16.9	C	15.5	C	16.9	C
7	2 nd Street	TWSC	Signal	31.1	C	38.3	E	8.8	A	7.2	A	8.8	A	7.2	A	8.8	A	7.2	A
8	West Central High School Entrance	TWSC	TWSC	15.4	C	14.8	B	11.9	B	11.3	B	11.9	B	11.3	B	11.9	B	11.3	B
9	Railroad Street / 464 th Avenue	TWSC	Signal	43.6	E	43.8	E	11.1	B	8.4	A	11.1	B	8.4	A	11.1	B	8.4	A
10	Mickelson Road / 260 th Street	TWSC	Signal	19.2	B	21.3	C	16.7	B	18.2	B	16.7	B	18.2	B	16.7	B	18.2	B
11	466 th Avenue (North)	TWSC	TWSC	31.6	D	31.4	D	12.9	B	17.3	C	12.9	B	17.3	C	12.9	B	17.3	C
12	WB I-90 Exit 390	-	-	14.9	B	66.1	F	-	-	-	-	-	-	-	-	-	-	-	-
13	EB I-90 Exit 390	-	-	18.4	C	30.0	D	-	-	-	-	-	-	-	-	-	-	-	-
14	466 th Avenue (South)	-	-	13.9	B	15.7	C	-	-	-	-	-	-	-	-	-	-	-	-
15	County Highway 141 / 468 th Avenue	TWSC	TWSC	16.7	C	21.3	C	16.9	C	21.3	C	17.9	C	18.8	C	17.9	C	18.8	C
16	County Highway 139 / 469 th Avenue	TWSC	Signal	43.1	E	266.3	F	19.5	B	13.7	B	17.6	B	10.8	B	17.6	B	10.8	B
17	La Mesa Drive / 470 th Avenue	TWSC	Signal	39.2	E	81.5	F	10.6	B	16.8	B	10.6	B	16.8	B	10.6	B	16.8	B
18	Marion Road	TWSC	Signal	19.1	B	32.1	C	19.1	B	32.1	C	19.1	B	32.1	C	19.1	B	32.1	C

Notes: Bold/Highlighted Color indicates a poor LOS



TABLE 9: HCM TRAFFIC HIGHWAY OPERATIONS – DESIGN 2050, EASTBOUND SD 38

ID #	Segment Type		NO BUILD				ALTERNATIVE 1				ALTERNATIVE 2				ALTERNATIVE 3			
			AM PEAK HOUR		PM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR	
	No Build	Build	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS
EB 1	Passing Zone	Passing Zone	1.2	A	0.6	A	1.2	A	0.6	A	1.2	A	0.6	A	1.2	A	0.6	A
EB 2	Passing Constrained	Passing Constrained	1.3	A	0.6	A	1.3	A	0.6	A	1.3	A	0.6	A	1.3	A	0.6	A
EB 3	Passing Zone	Passing Zone	1.1	A	0.5	A	1.1	A	0.5	A	1.1	A	0.5	A	1.1	A	0.5	A
EB 4	Passing Constrained	Passing Constrained	1.3	A	0.6	A	1.3	A	0.6	A	1.3	A	0.6	A	1.3	A	0.6	A
EB 5	Passing Zone	Passing Zone	1.1	A	0.5	A	1.1	A	0.5	A	1.1	A	0.5	A	1.1	A	0.5	A
EB 6	Passing Constrained	Passing Constrained	1.3	A	0.6	A	1.3	A	0.6	A	1.3	A	0.6	A	1.3	A	0.6	A
EB 7	Passing Zone	Passing Zone	1.2	A	0.6	A	1.2	A	0.6	A	1.2	A	0.6	A	1.2	A	0.6	A
EB 8	Passing Zone	Passing Zone	1.1	A	0.6	A	1.1	A	0.6	A	1.1	A	0.6	A	1.1	A	0.6	A
EB 9	Passing Constrained	Passing Constrained	1.3	A	0.7	A	1.3	A	0.7	A	1.3	A	0.7	A	1.3	A	0.7	A
EB 10	Passing Zone	Passing Zone	1.1	A	0.5	A	1.1	A	0.5	A	1.1	A	0.5	A	1.1	A	0.5	A
EB 11	Passing Zone	Passing Zone	1.1	A	0.5	A	1.1	A	0.5	A	1.1	A	0.5	A	1.1	A	0.5	A
EB 12	Passing Constrained	Passing Constrained	1.3	A	0.7	A	1.3	A	0.7	A	1.3	A	0.7	A	1.3	A	0.7	A
EB 13	Passing Zone	Passing Zone	1.1	A	0.5	A	1.1	A	0.5	A	1.1	A	0.5	A	1.1	A	0.5	A
EB 14	Passing Constrained	Passing Constrained	2.1	B	1.1	A	2.1	B	1.1	A	2.1	B	1.1	A	2.1	B	1.1	A
EB 15	Passing Zone	Multilane Highway	6.7	C	3.4	B	6.7	A	4.8	A	6.7	A	4.8	A	6.7	A	4.8	A
EB 16	Passing Constrained		7.1	C	3.5	B												
EB 17	Passing Zone		6.7	C	3.4	B												
EB 18	Passing Zone	Multilane Highway	8.1	D	3.3	B	6.0	A	4.0	A	6.0	A	4.0	A	6.0	A	4.0	A
EB 19	Passing Constrained		7.9	C	3.1	B												
EB 20	Passing Constrained	Multilane Highway	8.3	D	3.4	B	6.4	A	4.0	A	6.4	A	4.0	A	6.4	A	4.0	A
EB 21	Passing Constrained	Multilane Highway	9.2	D	4.2	C	6.2	A	4.0	A	6.2	A	4.0	A	6.2	A	4.0	A
EB 22	Passing Constrained	NA	3.2	B	2.9	B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EB 23	Passing Constrained	Multilane Highway ^{2,3}	2.4	B	1.9	A	3.0	B	2.3	B	3.2	A	2.8	A	3.2	A	2.8	A
EB 24	Passing Zone		2.2	B	1.8	A	2.8	B	2.2	B								
EB 25	Passing Constrained		2.3	B	1.9	A	2.9	B	2.3	B								
EB 26	Passing Zone		2.1	B	1.7	A	2.7	B	2.1	B								
EB 27	Passing Constrained		2.4	B	1.9	A	3.0	B	2.3	B								
EB 28	Passing Zone		2.2	B	1.8	A	2.8	B	2.2	B								
EB 29	Passing Zone	Multilane Highway ^{2,3}	3.3	B	2.8	B	3.4	B	3.0	B	3.5	A	3.2	A	3.5	A	3.2	A
EB 30	Passing Constrained		3.5	B	2.9	B	3.6	B	3.1	B								
EB 31	Passing Zone		3.2	B	2.8	B	3.3	B	2.9	B								
EB 32	Passing Constrained		3.5	B	2.9	B	3.6	B	3.0	B								
EB 33	Passing Constrained	Multilane Highway	8.2	D	2.9	B	6.2	A	3.1	A	6.2	A	3.1	A	6.2	A	3.1	A
EB 34	Passing Zone		8.0	C	2.8	B												
EB 35	Passing Constrained		8.0	C	2.7	B												

Notes: Bold indicates Multilane Highway
Highlighted Color indicates a poor LOS
NA indicates Segment Removed for Build Conditions
Multilane^{2,3} indicates segment type for Alternative 2 and 3



TABLE 10: HCM TRAFFIC HIGHWAY OPERATIONS – DESIGN 2050, WESTBOUND SD 38

ID #	Segment Type		NO BUILD				ALTERNATIVE 1				ALTERNATIVE 2				ALTERNATIVE 3			
			AM PEAK HOUR		PM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR	
	No Build	Build	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS
WB 1	Passing Constrained	Multilane	1.6	A	8.7	D	2.4	A	5.6	A	2.4	A	5.6	A	2.4	A	5.6	A
WB 2	Passing Zone		1.5	A	8.5	D												
WB 3	Passing Constrained		1.8	A	4.4	C												
WB 4	Passing Zone	Multilane ^{2,3}	1.8	A	4.4	C	2.0	A	4.7	C	2.7	A	4.1	A	2.7	A	4.1	A
WB 5	Passing Constrained		1.7	A	4.2	C	1.8	A	4.5	C								
WB 6	Passing Zone		1.8	A	4.4	C	2.0	A	4.7	C								
WB 7	Passing Constrained		1.3	A	2.9	B	1.8	A	4.4	C								
WB 8	Passing Constrained	Multilane ^{2,3}	1.4	A	3.2	B	1.7	A	3.7	B	2.4	A	3.7	A	2.4	A	3.7	A
WB 9	Passing Zone		1.3	A	2.8	B	1.5	A	3.4	B								
WB 10	Passing Constrained		1.4	A	3.1	B	1.7	A	3.6	B								
WB 11	Passing Zone		1.3	A	2.9	B	1.6	A	3.5	B								
WB 12	Passing Constrained		1.4	A	3.2	B	1.7	A	3.7	B								
WB 13	Passing Constrained		1.4	A	3.2	B	1.7	A	3.7	B								
WB 14	Passing Constrained	NA	2.4	B	5.4	C	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WB 15	Passing Constrained	Multilane	1.9	A	4.3	C	2.5	A	4.2	A	2.5	A	4.2	A	2.5	A	4.2	A
WB 16	Passing Constrained	Multilane	3.3	B	10.9	D	4.3	A	7.6	A	4.3	A	7.6	A	4.3	A	7.6	A
WB 17	Passing Constrained	Multilane	3.0	B	10.5	D	3.9	A	7.6	A	3.9	A	7.6	A	3.9	A	7.6	A
WB 18	Passing Constrained		3.2	B	10.8	D												
WB 19	Passing Zone		3.1	B	10.7	D												
WB 20	Passing Constrained		3.2	B	10.8	D												
WB 21	Passing Constrained	Multilane	3.3	B	8.7	D	4.6	A	7.9	A	4.6	A	7.9	A	4.6	A	7.9	A
WB 22	Passing Zone		3.1	B	7.4	C												
WB 23	Passing Zone	Passing Zone	0.6	A	1.4	A	0.6	A	1.4	A	0.6	A	1.4	A	0.6	A	1.4	A
WB 24	Passing Constrained	Passing Constrained	0.6	A	1.4	A	0.6	A	1.4	A	0.6	A	1.4	A	0.6	A	1.4	A
WB 25	Passing Constrained	Passing Constrained	0.6	A	1.4	A	0.6	A	1.4	A	0.6	A	1.4	A	0.6	A	1.4	A
WB 26	Passing Zone	Passing Zone	0.7	A	1.7	A	0.7	A	1.7	A	0.7	A	1.7	A	0.7	A	1.7	A
WB 27	Passing Zone	Passing Zone	0.6	A	1.4	A	0.6	A	1.4	A	0.6	A	1.4	A	0.6	A	1.4	A
WB 28	Passing Zone	Passing Zone	0.7	A	1.7	A	0.7	A	1.7	A	0.7	A	1.7	A	0.7	A	1.7	A
WB 29	Passing Zone	Passing Zone	0.7	A	1.7	A	0.7	A	1.7	A	0.7	A	1.7	A	0.7	A	1.7	A
WB 30	Passing Constrained	Passing Constrained	0.6	A	1.4	A	0.6	A	1.4	A	0.6	A	1.4	A	0.6	A	1.4	A
WB 31	Passing Zone	Passing Zone	0.7	A	1.7	A	0.7	A	1.7	A	0.7	A	1.7	A	0.7	A	1.7	A
WB 32	Passing Constrained	Passing Constrained	0.6	A	1.5	A	0.6	A	1.5	A	0.6	A	1.5	A	0.6	A	1.5	A
WB 33	Passing Constrained	Passing Constrained	0.7	A	1.7	A	0.7	A	1.7	A	0.7	A	1.7	A	0.7	A	1.7	A
WB 34	Passing Zone	Passing Zone	0.6	A	1.5	A	0.6	A	1.5	A	0.6	A	1.5	A	0.6	A	1.5	A
WB 35	Passing Constrained	Passing Constrained	0.9	A	2.1	B	0.9	A	2.1	B	0.9	A	2.1	B	0.9	A	2.1	B

Notes: Bold indicates Multilane Highway
Highlighted Color indicates a poor LOS
NA indicates Segment Removed for Build Conditions
Multilane^{2,3} indicates segment type for Alternative 2 and 3

Predictive Safety Analysis

Safety analysis of locations within the SD Highway 38 study corridor area of influence was completed for the Build scenarios. Predictive crash analysis was completed using the Interactive Highway Safety Design Model (IHSDM) Crash Prediction analysis tool to evaluate the safety effects and predict the expected change in crashes between design year scenarios. IHSDM reports are available in the Appendix.

The crash analysis determined the predicted crash frequency within the SD Highway 38 area of influence resulting from the Build roadway conditions. Predicted crash frequency is a measure of safety performance based on segments or intersections of a common facility type. Predictive crash frequency accounts for changes in traffic volume, and roadway characteristics, and is appropriate for comparing the variations in crash frequency that may result from added travel lanes or other geometric modifications.

A summary of the predicted crashes for the SD Highway 38 segments between the intersections with SD Highway 19 and Marion Road are provided in **Table 11**. The predicted crash analysis showed a significant reduction in crashes for build scenarios compared to the no-build scenario (two-lane highway). The addition of lanes, wider shoulder widths, median, and decrease in density are some of the factors causing the reduction in crashes for the build scenarios. The predicted frequency of crashes between build scenarios is consistent between the SD Highway 19 and Railroad Street segments, where there were no major geometric changes, with noticeable differences between the Railroad Street to Marion Road segments where the Build scenarios represented changes to the number of lanes, shoulder width and/or median type.

Furthermore, Alternative 3 would be safer compared to Alternatives 1 and 2. With higher volumes of opposing traffic, raised medians limit left turn movements to certain concentrated points, thereby reducing conflicting movements between vehicles. The predicted crash analysis demonstrated the potential for crash reductions in Alternative 3 with a raised median from Railroad Street to Marion Road with a reduction of 194.7 total segment crashes compared to Alternative 1 with TWLTL and a two-lane cross section between Railroad Street and Marion Road. The predictive crash analysis also showed that Alternative 2 with a TWLTL and raised median cross section between Railroad Street and Marion Road would result in a reduction of 160.34 total segment crashes compared to Alternative 1.

A summary of the predicted crashes for the SD Highway 38 intersections are provided in **Table 12**. At study intersections, the predicted crash frequency was consistent from SD Highway 19 to Railroad Street, where no differences between the corridor or intersection geometrics existed. There were noticeable changes in the predicted crash frequency at the County Highway 141/468th Avenue intersection and the County Highway 139/469th Avenue where the influence of the corridor can be seen to also have an effect on the safety at these intersections resulting in a reduction of 89.9 total crashes with the five-lane cross section.

TABLE 11: SD 38 SEGMENT CRASH FREQUENCY

Location		Segment Length (Miles)	No Build Predicted Crashes (2025-2050)				Alternative 1 Predicted Crashes (2025-2050)				Alternative 2 Predicted Crashes (2025-2050)				Alternative 3 Predicted Crashes (2025-2050)			
			Total Crashes	Total Crashes/ Year	FI Crashes/ Year	PDO Crashes/ Year	Total Crashes	Total Crashes/ Year	FI Crashes/ Year	PDO Crashes/ Year	Total Crashes	Total Crashes/ Year	FI Crashes/ Year	PDO Crashes/ Year	Total Crashes	Total Crashes/ Year	FI Crashes/ Year	PDO Crashes/ Year
Segment 1:	SD Highway 19 to 459 th Avenue	2.05	47.76	1.83	0.58	1.24	42.37	1.62	0.52	1.10	42.37	1.62	0.52	1.10	42.37	1.62	0.52	1.10
Segment 2:	459 th Avenue to Western Avenue	4.08	94.87	3.64	1.17	2.47	84.92	3.26	1.04	2.21	84.92	3.26	1.04	2.21	84.92	3.26	1.04	2.21
Segment 3:	Western Avenue to Main Avenue	0.24	18.36	0.70	0.22	0.47	18.09	0.69	0.22	0.47	18.09	0.69	0.22	0.47	18.09	0.69	0.22	0.47
Segment 4:	Main Avenue to Vandemark Avenue	0.31	24.91	0.95	0.30	0.65	24.71	0.95	0.30	0.65	24.71	0.95	0.30	0.65	24.71	0.95	0.30	0.65
Segment 5:	Vandemark Avenue to 2 nd Street	0.47	39.24	1.50	0.48	1.02	32.72	1.25	0.41	0.85	32.72	1.25	0.41	0.85	32.72	1.25	0.41	0.85
Segment 7:	2 nd Street to West Central High School	0.06	5.85	0.22	0.07	0.15	5.62	0.22	0.07	0.15	5.62	0.22	0.07	0.15	5.62	0.22	0.07	0.15
Segment 8:	West Central High School Entrance to Railroad Street	0.20	18.27	0.70	0.22	0.47	15.41	0.59	0.19	0.41	15.41	0.59	0.19	0.41	15.41	0.59	0.19	0.41
Segment 9:	Railroad Street to Mickelson Road	0.45	65.00	2.50	0.80	1.69	41.66	1.60	0.94	0.66	32.96	1.27	0.74	0.52	24.80	0.96	0.49	0.46
Segment 10:	Mickelson Road to 466 th Avenue (North)	1.40	165.99	6.38	2.04	4.33	175.21	6.73	3.89	2.84	130.47	5.00	2.90	2.11	106.78	4.10	2.08	2.01
Segment 11:	466 th Avenue (North) to WB I-90 Ramps	0.07	7.14	0.27	0.08	0.18	13.54	0.52	0.16	0.35	6.68	0.25	0.15	0.10	3.97	0.15	0.07	0.07
Segment 12:	WB I-90 Ramps to EB I-90 Ramps	0.28	21.29	0.81	0.26	0.55	22.97	0.88	0.28	0.60	17.65	0.67	0.40	0.27	18.13	0.69	0.37	0.33
Segment 13:	EB I-90 Ramps to 466 th Avenue (South)	0.07	6.62	0.25	0.08	0.17	-	-	-	-	-	-	-	-	-	-	-	-
Segment 14:	466 th Avenue (South) to County Highway 141	2.02	132.89	5.11	1.64	3.47	117.62	4.52	1.45	3.07	84.92	3.26	1.75	1.51	84.92	3.26	1.75	1.51
Segment 15:	County Highway 141 to County Highway 139	1.00	71.03	2.73	0.87	1.85	60.22	2.31	0.74	1.57	46.21	1.77	0.95	0.85	46.21	1.77	0.93	0.84
Segment 16:	County Highway 139 to La Mesa Drive	1.00	79.29	3.04	0.97	2.07	87.56	3.36	1.99	1.37	54.71	2.10	1.11	1.00	54.58	2.09	1.10	0.99
Segment 17:	La Mesa Drive to Marion Road	0.97	58.75	2.25	0.71	1.53	60.34	2.32	1.18	1.13	45.18	1.74	0.75	0.98	45.00	1.73	0.74	0.98
Total	All SD 38 Segments	14.67	857.26	32.88	10.49	22.31	802.96	30.82	13.38	17.43	642.62	24.64	11.50	13.18	608.23	23.33	10.28	13.03

Source: Interactive Highway Safety Design Model (IHSDM) 2021 Release, v17.0.0, HR Green, 2023.



TABLE 12: SD 38 INTERSECTION CRASH FREQUENCY

Location		No Build Predicted Crashes (2025-2050)				Alternative 1 Predicted Crashes (2025-2050)				Alternative 2 Predicted Crashes (2025-2050)				Alternative 3 Predicted Crashes (2025-2050)			
		Total Crashes	Total Crashes/Year	FI Crashes/Year	PDO Crashes/Year	Total Crashes	Total Crashes/Year	FI Crashes/Year	PDO Crashes/Year	Total Crashes	Total Crashes/Year	FI Crashes/Year	PDO Crashes/Year	Total Crashes	Total Crashes/Year	FI Crashes/Year	PDO Crashes/Year
Intersection 1:	SD Highway 19 / 457th Avenue	21.11	0.81	0.33	0.47	41.06	1.57	0.68	0.89	41.06	1.57	0.68	0.89	41.06	1.57	0.68	0.89
Intersection 2:	459th Avenue	27.93	1.07	0.46	0.61	12.69	0.48	0.21	0.27	12.69	0.48	0.21	0.27	12.69	0.48	0.21	0.27
Intersection 3:	I-90 Speedway Entrance	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Intersection 4:	Western Avenue / 463rd Avenue	169.48	6.51	2.80	3.70	94.91	3.65	1.57	2.07	94.91	3.65	1.57	2.07	94.91	3.65	1.57	2.07
Intersection 5:	Main Avenue	132.77	5.10	2.20	2.90	132.77	5.10	2.20	2.90	132.77	5.10	2.20	2.90	132.77	5.10	2.20	2.90
Intersection 6:	Vandemark Avenue	74.90	2.88	1.24	1.63	74.90	2.88	1.24	1.63	74.90	2.88	1.24	1.63	74.90	2.88	1.24	1.63
Intersection 7:	2nd Street	166.63	6.40	2.76	3.64	67.18	2.58	1.11	1.47	67.18	2.58	1.11	1.47	67.18	2.58	1.11	1.47
Intersection 8:	West Central High School Entrance	73.62	2.83	1.17	1.65	73.62	2.83	1.17	1.65	73.62	2.83	1.17	1.65	73.62	2.83	1.17	1.65
Intersection 9:	Railroad Street / 464th Avenue	137.23	5.27	2.27	3.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Intersection 10:	Mickelson Road/260th Street	168.08	6.46	2.19	4.26	54.28	2.08	0.98	1.10	54.28	2.08	0.98	1.10	54.28	2.08	0.98	1.10
Intersection 11:	466th Avenue North	33.89	1.30	0.54	0.76	37.74	1.45	0.64	0.80	36.85	1.41	0.62	0.79	36.85	1.41	0.62	0.79
Intersection 12:	WB I-90 Exit 390	15.08	0.58	0.19	0.38	15.32	0.58	0.20	0.38	15.23	0.58	0.19	0.38	11.67	0.44	0.14	0.30
Intersection 13:	EB I-90 Exit 390	58.66	2.25	0.93	1.31	75.51	2.90	1.25	1.65	59.52	2.28	1.21	1.07	59.52	2.28	1.21	1.07
Intersection 14:	466th Avenue South	75.53	2.90	1.20	1.69	-	-	-	-	-	-	-	-	-	-	-	-
Intersection 15:	County Highway 141 / 468th Avenue	87.10	3.35	1.44	1.90	87.10	3.35	1.44	1.90	45.50	1.75	0.83	0.91	45.50	1.75	0.83	0.91
Intersection 16:	County Highway 139 / 469th Avenue	57.44	2.20	0.91	1.29	97.65	3.76	1.62	2.13	50.17	1.93	1.02	0.91	50.17	1.93	1.02	0.91
Intersection 17:	La Mesa Drive / 470th Avenue	61.03	2.34	1.01	1.33	46.79	1.80	1.01	0.78	46.79	1.80	1.01	0.78	46.79	1.80	1.01	0.78
Intersection 18:	Marion Road	55.22	2.12	0.69	1.42	49.96	1.92	0.63	1.29	49.96	1.92	0.63	1.29	49.96	1.92	0.63	1.29
Total	All SD 38 Intersections	1415.70	54.37	22.33	31.94	961.48	36.92	15.95	20.91	855.43	32.83	14.67	18.10	851.87	32.69	14.62	18.02

Source: Interactive Highway Safety Design Model (IHSDM) 2021 Release, v17.0.0, HR Green, 2023.

Summary

The purpose of this technical memorandum is to document the future build concept traffic assessment at the eighteen study intersections and associated highway corridor segments along the SD Highway 38 corridor, from the SD Highway 19 intersection in Humboldt, South Dakota to the Marion Road intersection in Sioux Falls, South Dakota.

Using the Future year 2050 traffic forecasts, the traffic operations at study intersections and along the highway were evaluated for the three build corridor concepts.

- **Alternative 1** – two-lane highway from Humboldt to Hartford (as existing), three-lane roadway from Western Avenue to Railroad Street, five-lane roadway (center TWLTL) between Railroad Street to the I-90 Exit 390 interchange, two-lane highway from the I-90 interchange to 469th Ave/County Highway 139, and five-lane roadway (center TWLTL) from 460th Ave/County Highway 139 to Sioux Falls.
- **Alternative 2** – two-lane highway from Humboldt to Hartford (as existing), three-lane roadway from Western Avenue to Railroad Street, five-lane roadway (center TWLTL) between Railroad Street to the I-90 Exit 390 interchange, four-lane highway (raised median) from the I-90 interchange to Sioux Falls.
- **Alternative 3** – two-lane highway from Humboldt to Hartford (as existing), three-lane roadway from Western Avenue to Railroad Street, four-lane roadway (raised median) between Railroad Street and Sioux Falls.

Under the Opening Year 2029 conditions, the traffic operations analyses showed acceptable operations at all intersections within the study area, under all alternative scenarios, with intersections achieving LOS C or greater during both the AM and PM peak hours. The traffic operations analyses showed acceptable operations at all of the highway segments within the study area, under all alternative scenarios, with all segments achieving LOS B or greater during both the AM and PM peak hours. The desired LOS was realized for all intersections and highway segments during the AM and PM peak hours for all concepts

Under the Design Year 2050 conditions, the traffic operations analyses showed acceptable operations at all intersections within the study area, with intersections achieving LOS C or greater during both the AM and PM peak hours. To achieve LOS C goals, it was necessary to convert several intersections from two-way stop control to signalized operations. The traffic operations analyses showed acceptable operations at all of the highway segments within the study area, under all alternative scenarios, with all segments achieving LOS C or greater during both the AM and PM peak hours. The desired LOS was realized for all intersections and highway segments during the AM and PM peak hours for all concepts.

The predictive safety analysis of the SD Highway 38 study corridor revealed the potential for crash reductions in segments that contained a raised median with a reduction of 194.7 total crashes in segments with a raised median compared to without a raised median. The predictive safety analysis of the study intersections showed that there were noticeable changes in the predicted crash frequency at the intersections where the two-lane highway was maintained compared to the concepts with a five-lane cross section with a reduction of 89.9 total crashes with the five-lane cross section.

Recommendations

Based on the evaluations and conclusions documented for this corridor study, it is recommended to modify the existing SD 38 corridor as seen in Alternative 3. This alternative provides sufficient capacity to handle future traffic demand while increasing the overall safety of the corridor. Intersections along the study corridor should be monitored for traffic demand changes and plan for future capacity improvements or installation of traffic signal controls, if warranted.

Appendix A – HCS Output

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	2/27/2023
Agency	HR Green	Analysis Year	2050 Build
Jurisdiction	SD 38 Build Option 1	Time Analyzed	AM
Project Description	464th_MickelsonRd_2050_AM	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	0.0
Median Type	TWLT	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	55.0	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	638	Heavy Vehicle Adjustment Factor (fHV)	0.980
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	370
Total Trucks, %	2.00	Capacity (c), pc/h/ln	2100
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2100
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.18

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	55.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	6.7
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	362	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.66
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	8.0
Median Type	TWLTL	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	53.0	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	380	Heavy Vehicle Adjustment Factor (fhv)	0.885
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	244
Total Trucks, %	13.00	Capacity (c), pc/h/ln	2060
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2060
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.12
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	53.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	2.0		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	216	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	6.14
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	F

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	2/27/2023
Agency	HR Green	Analysis Year	2050
Jurisdiction	SD38 Build Option 1	Time Analyzed	PM
Project Description	464th_MickelsonRd_PM	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	0.0
Median Type	TWLT	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	55.0	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	441	Heavy Vehicle Adjustment Factor (fHV)	0.943
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	266
Total Trucks, %	6.00	Capacity (c), pc/h/ln	2100
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2100
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.13

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	55.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.8
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	251	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	3.56
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	D

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	8.0
Median Type	TWLT	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	53.0	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	730	Heavy Vehicle Adjustment Factor (fHV)	0.990
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	419
Total Trucks, %	1.00	Capacity (c), pc/h/ln	2060
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2060
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.20
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	53.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	7.9
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	2.0		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	415	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.50
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

HCS Two-Lane Highway Report

Project Information

Analyst	MJV	Date	2/27/2024
Agency	HRG	Analysis Year	2050
Jurisdiction	SDDOT	Time Analyzed	AM
Project Description	SD 38_466th_469th_EB Build Option 1	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1331
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	414	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	5.26
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.24

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.57394	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29259	PF Power Coefficient (p)	0.75846
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1331	-	-	67.2

Vehicle Results

Average Speed, mi/h	67.2	Percent Followers, %	48.4
Segment Travel Time, minutes	0.23	Follower Density (FD), followers/mi/ln	3.0
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	414	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.80	Bicycle Effective Speed Factor	5.07
Bicycle LOS	D		

Segment 2

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1877
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Measured FFS		Measured		Free-Flow Speed, mi/h		70.0	
Demand and Capacity							
Directional Demand Flow Rate, veh/h		414		Opposing Demand Flow Rate, veh/h		295	
Peak Hour Factor		0.88		Total Trucks, %		5.26	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)		0.24	
Intermediate Results							
Segment Vertical Class		1		Free-Flow Speed, mi/h		70.0	
Speed Slope Coefficient (m)		4.36033		Speed Power Coefficient (p)		0.51615	
PF Slope Coefficient (m)		-1.23039		PF Power Coefficient (p)		0.81159	
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln		2.8	
%Improvement to Percent Followers		0.0		%Improvement to Speed		0.0	
Subsegment Data							
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h		
1	Tangent	1877	-	-	67.6		
Vehicle Results							
Average Speed, mi/h		67.6		Percent Followers, %		45.2	
Segment Travel Time, minutes		0.32		Follower Density (FD), followers/mi/ln		2.8	
Vehicle LOS		B					
Bicycle Results							
Percent Occupied Parking		0		Pavement Condition Rating		4	
Flow Rate Outside Lane, veh/h		414		Bicycle Effective Width, ft		24	
Bicycle LOS Score		3.80		Bicycle Effective Speed Factor		5.07	
Bicycle LOS		D					
Segment 3							
Vehicle Inputs							
Segment Type		Passing Constrained		Length, ft		1872	
Measured FFS		Measured		Free-Flow Speed, mi/h		70.0	
Demand and Capacity							
Directional Demand Flow Rate, veh/h		414		Opposing Demand Flow Rate, veh/h		-	
Peak Hour Factor		0.88		Total Trucks, %		5.26	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)		0.24	
Intermediate Results							
Segment Vertical Class		1		Free-Flow Speed, mi/h		70.0	
Speed Slope Coefficient (m)		4.58354		Speed Power Coefficient (p)		0.41674	
PF Slope Coefficient (m)		-1.26676		PF Power Coefficient (p)		0.76864	
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln		2.9	
%Improvement to Percent Followers		0.0		%Improvement to Speed		0.0	

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1872	-	-	67.2

Vehicle Results			
Average Speed, mi/h	67.2	Percent Followers, %	47.4
Segment Travel Time, minutes	0.32	Follower Density (FD), followers/mi/ln	2.9
Vehicle LOS	B		

Bicycle Results			
Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	414	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.80	Bicycle Effective Speed Factor	5.07
Bicycle LOS	D		

Segment 4

Vehicle Inputs			
Segment Type	Passing Zone	Length, ft	3603
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity			
Directional Demand Flow Rate, veh/h	414	Opposing Demand Flow Rate, veh/h	295
Peak Hour Factor	0.88	Total Trucks, %	5.26
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.24

Intermediate Results			
Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.38398	Speed Power Coefficient (p)	0.51615
PF Slope Coefficient (m)	-1.18638	PF Power Coefficient (p)	0.82825
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.7
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3603	-	-	67.6

Vehicle Results			
Average Speed, mi/h	67.6	Percent Followers, %	43.5
Segment Travel Time, minutes	0.61	Follower Density (FD), followers/mi/ln	2.7
Vehicle LOS	B		

Bicycle Results			
Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	414	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.80	Bicycle Effective Speed Factor	5.07

Bicycle LOS		D			
Segment 5					
Vehicle Inputs					
Segment Type		Passing Constrained		Length, ft	
Measured FFS		Measured		Free-Flow Speed, mi/h	
				1053	
				70.0	
Demand and Capacity					
Directional Demand Flow Rate, veh/h		414		Opposing Demand Flow Rate, veh/h	
				-	
Peak Hour Factor		0.88		Total Trucks, %	
				5.26	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)	
				0.24	
Intermediate Results					
Segment Vertical Class		1		Free-Flow Speed, mi/h	
				70.0	
Speed Slope Coefficient (m)		4.57372		Speed Power Coefficient (p)	
				0.41674	
PF Slope Coefficient (m)		-1.29321		PF Power Coefficient (p)	
				0.75821	
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln	
				3.0	
%Improvement to Percent Followers		0.0		%Improvement to Speed	
				0.0	
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1053	-	-	67.2
Vehicle Results					
Average Speed, mi/h		67.2		Percent Followers, %	
				48.4	
Segment Travel Time, minutes		0.18		Follower Density (FD), followers/mi/ln	
				3.0	
Vehicle LOS		B			
Bicycle Results					
Percent Occupied Parking		0		Pavement Condition Rating	
				4	
Flow Rate Outside Lane, veh/h		414		Bicycle Effective Width, ft	
				24	
Bicycle LOS Score		3.80		Bicycle Effective Speed Factor	
				5.07	
Bicycle LOS		D			
Segment 6					
Vehicle Inputs					
Segment Type		Passing Zone		Length, ft	
				1120	
Measured FFS		Measured		Free-Flow Speed, mi/h	
				70.0	
Demand and Capacity					
Directional Demand Flow Rate, veh/h		414		Opposing Demand Flow Rate, veh/h	
				244	
Peak Hour Factor		0.88		Total Trucks, %	
				5.26	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)	
				0.24	
Intermediate Results					

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.33428	Speed Power Coefficient (p)	0.52768
PF Slope Coefficient (m)	-1.24745	PF Power Coefficient (p)	0.80382
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.8
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1120	-	-	67.6

Vehicle Results			
Average Speed, mi/h	67.6	Percent Followers, %	45.9
Segment Travel Time, minutes	0.19	Follower Density (FD), followers/mi/ln	2.8
Vehicle LOS	B		

Bicycle Results			
Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	414	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.80	Bicycle Effective Speed Factor	5.07
Bicycle LOS	D		

Segment 7

Vehicle Inputs			
Segment Type	Passing Zone	Length, ft	1272
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity			
Directional Demand Flow Rate, veh/h	466	Opposing Demand Flow Rate, veh/h	318
Peak Hour Factor	0.88	Total Trucks, %	5.09
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.27

Intermediate Results			
Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.35715	Speed Power Coefficient (p)	0.51152
PF Slope Coefficient (m)	-1.25973	PF Power Coefficient (p)	0.79928
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.4
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1272	-	-	67.4

Vehicle Results			
Average Speed, mi/h	67.4	Percent Followers, %	49.5
Segment Travel Time, minutes	0.21	Follower Density (FD), followers/mi/ln	3.4

Vehicle LOS		B					
Bicycle Results							
Percent Occupied Parking		0		Pavement Condition Rating		4	
Flow Rate Outside Lane, veh/h		466		Bicycle Effective Width, ft		24	
Bicycle LOS Score		3.80		Bicycle Effective Speed Factor		5.07	
Bicycle LOS		D					
Segment 8							
Vehicle Inputs							
Segment Type		Passing Constrained		Length, ft		625	
Measured FFS		Measured		Free-Flow Speed, mi/h		70.0	
Demand and Capacity							
Directional Demand Flow Rate, veh/h		466		Opposing Demand Flow Rate, veh/h		-	
Peak Hour Factor		0.88		Total Trucks, %		5.09	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)		0.27	
Intermediate Results							
Segment Vertical Class		1		Free-Flow Speed, mi/h		70.0	
Speed Slope Coefficient (m)		4.57372		Speed Power Coefficient (p)		0.41674	
PF Slope Coefficient (m)		-1.29323		PF Power Coefficient (p)		0.75819	
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln		3.6	
%Improvement to Percent Followers		0.0		%Improvement to Speed		0.0	
Subsegment Data							
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h		
1	Tangent	625	-	-	67.0		
Vehicle Results							
Average Speed, mi/h		67.0		Percent Followers, %		51.6	
Segment Travel Time, minutes		0.11		Follower Density (FD), followers/mi/ln		3.6	
Vehicle LOS		B					
Bicycle Results							
Percent Occupied Parking		0		Pavement Condition Rating		4	
Flow Rate Outside Lane, veh/h		466		Bicycle Effective Width, ft		24	
Bicycle LOS Score		3.80		Bicycle Effective Speed Factor		5.07	
Bicycle LOS		D					
Segment 9							
Vehicle Inputs							
Segment Type		Passing Zone		Length, ft		1995	
Measured FFS		Measured		Free-Flow Speed, mi/h		70.0	

Demand and Capacity							
Directional Demand Flow Rate, veh/h		466		Opposing Demand Flow Rate, veh/h		318	
Peak Hour Factor		0.88		Total Trucks, %		5.09	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)		0.27	
Intermediate Results							
Segment Vertical Class		1		Free-Flow Speed, mi/h		70.0	
Speed Slope Coefficient (m)		4.36896		Speed Power Coefficient (p)		0.51152	
PF Slope Coefficient (m)		-1.22932		PF Power Coefficient (p)		0.81204	
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln		3.3	
%Improvement to Percent Followers		0.0		%Improvement to Speed		0.0	
Subsegment Data							
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h		
1	Tangent	1995	-	-	67.4		
Vehicle Results							
Average Speed, mi/h		67.4		Percent Followers, %		48.4	
Segment Travel Time, minutes		0.34		Follower Density (FD), followers/mi/ln		3.3	
Vehicle LOS		B					
Bicycle Results							
Percent Occupied Parking		0		Pavement Condition Rating		4	
Flow Rate Outside Lane, veh/h		466		Bicycle Effective Width, ft		24	
Bicycle LOS Score		3.80		Bicycle Effective Speed Factor		5.07	
Bicycle LOS		D					
Segment 10							
Vehicle Inputs							
Segment Type		Passing Constrained		Length, ft		1399	
Measured FFS		Measured		Free-Flow Speed, mi/h		70.0	
Demand and Capacity							
Directional Demand Flow Rate, veh/h		466		Opposing Demand Flow Rate, veh/h		-	
Peak Hour Factor		0.88		Total Trucks, %		5.09	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)		0.27	
Intermediate Results							
Segment Vertical Class		1		Free-Flow Speed, mi/h		70.0	
Speed Slope Coefficient (m)		4.57524		Speed Power Coefficient (p)		0.41674	
PF Slope Coefficient (m)		-1.28884		PF Power Coefficient (p)		0.75993	
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln		3.6	
%Improvement to Percent Followers		0.0		%Improvement to Speed		0.0	
Subsegment Data							

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1399	-	-	67.0

Vehicle Results

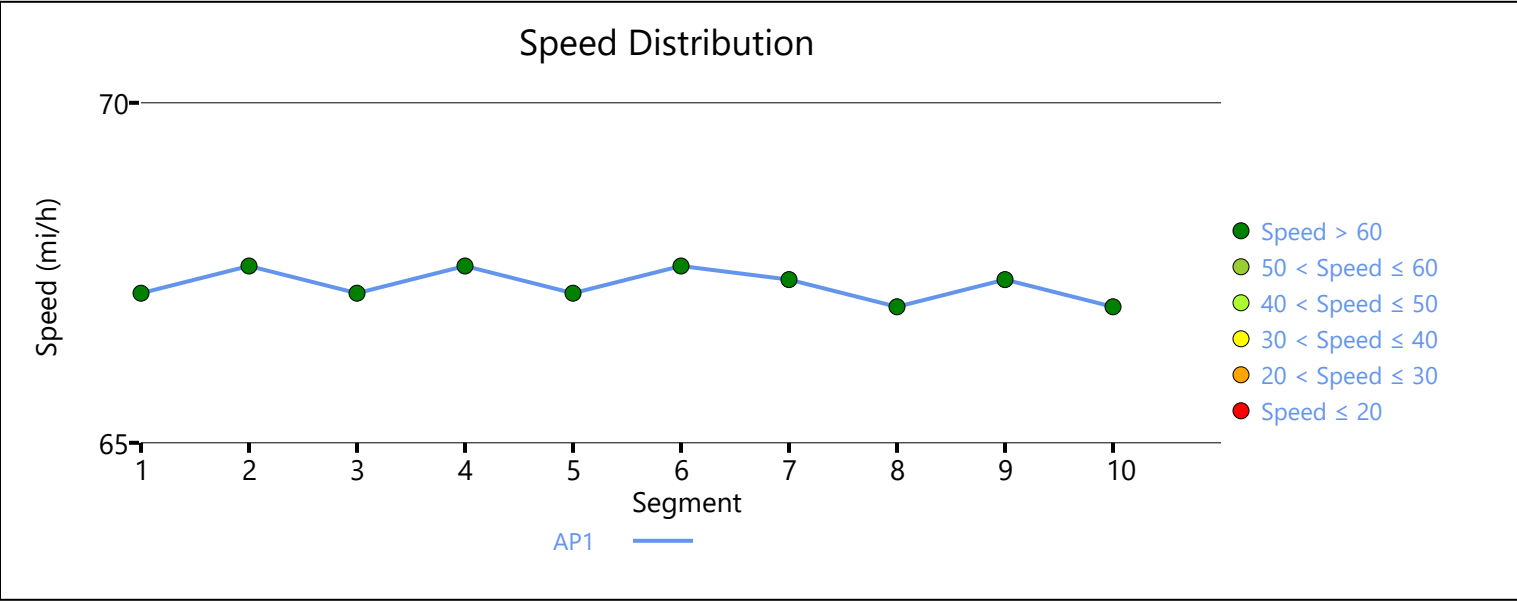
Average Speed, mi/h	67.0	Percent Followers, %	51.4
Segment Travel Time, minutes	0.24	Follower Density (FD), followers/mi/ln	3.6
Vehicle LOS	B		

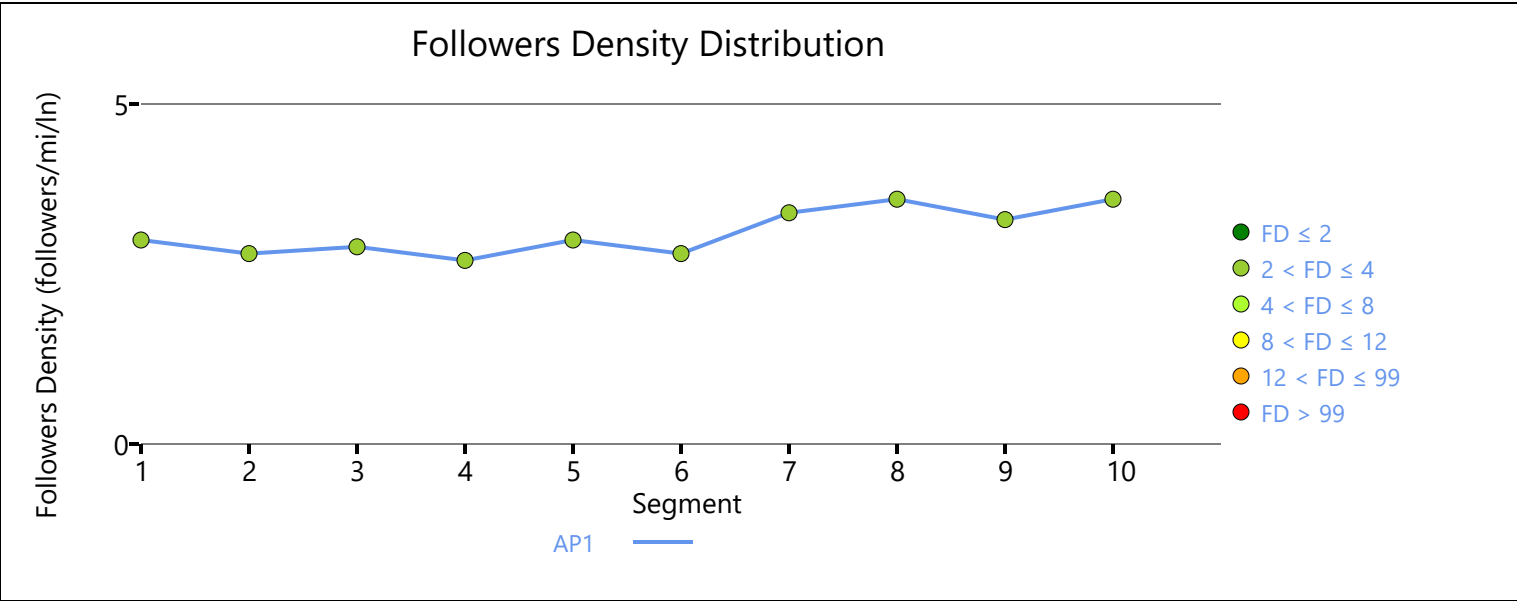
Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	466	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.80	Bicycle Effective Speed Factor	5.07
Bicycle LOS	D		

Facility Results

T	VMT veh-mi/AP	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	290	0.16	3.0	B





HCS Two-Lane Highway Report

Project Information

Analyst	MJV	Date	2/27/2024
Agency	HRG	Analysis Year	2050
Jurisdiction	SDDOT	Time Analyzed	PM
Project Description	466th_469th_EB Build Option 1	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1331
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	355	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	5.26
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.21

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.57394	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29259	PF Power Coefficient (p)	0.75846
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1331	-	-	67.4

Vehicle Results

Average Speed, mi/h	67.4	Percent Followers, %	44.5
Segment Travel Time, minutes	0.22	Follower Density (FD), followers/mi/ln	2.3
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	355	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.72	Bicycle Effective Speed Factor	5.07
Bicycle LOS	D		

Segment 2

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1877
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Measured FFS		Measured		Free-Flow Speed, mi/h		70.0	
Demand and Capacity							
Directional Demand Flow Rate, veh/h		355		Opposing Demand Flow Rate, veh/h		477	
Peak Hour Factor		0.88		Total Trucks, %		5.26	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)		0.21	
Intermediate Results							
Segment Vertical Class		1		Free-Flow Speed, mi/h		70.0	
Speed Slope Coefficient (m)		4.40861		Speed Power Coefficient (p)		0.48517	
PF Slope Coefficient (m)		-1.25153		PF Power Coefficient (p)		0.80198	
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln		2.2	
%Improvement to Percent Followers		0.0		%Improvement to Speed		0.0	
Subsegment Data							
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h		
1	Tangent	1877	-	-	67.7		
Vehicle Results							
Average Speed, mi/h		67.7		Percent Followers, %		42.0	
Segment Travel Time, minutes		0.31		Follower Density (FD), followers/mi/ln		2.2	
Vehicle LOS		B					
Bicycle Results							
Percent Occupied Parking		0		Pavement Condition Rating		4	
Flow Rate Outside Lane, veh/h		355		Bicycle Effective Width, ft		24	
Bicycle LOS Score		3.72		Bicycle Effective Speed Factor		5.07	
Bicycle LOS		D					
Segment 3							
Vehicle Inputs							
Segment Type		Passing Constrained		Length, ft		1872	
Measured FFS		Measured		Free-Flow Speed, mi/h		70.0	
Demand and Capacity							
Directional Demand Flow Rate, veh/h		355		Opposing Demand Flow Rate, veh/h		-	
Peak Hour Factor		0.88		Total Trucks, %		5.26	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)		0.21	
Intermediate Results							
Segment Vertical Class		1		Free-Flow Speed, mi/h		70.0	
Speed Slope Coefficient (m)		4.58354		Speed Power Coefficient (p)		0.41674	
PF Slope Coefficient (m)		-1.26676		PF Power Coefficient (p)		0.76864	
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln		2.3	
%Improvement to Percent Followers		0.0		%Improvement to Speed		0.0	

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1872	-	-	67.4

Vehicle Results			
Average Speed, mi/h	67.4	Percent Followers, %	43.5
Segment Travel Time, minutes	0.32	Follower Density (FD), followers/mi/ln	2.3
Vehicle LOS	B		

Bicycle Results			
Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	355	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.72	Bicycle Effective Speed Factor	5.07
Bicycle LOS	D		

Segment 4			
Vehicle Inputs			
Segment Type	Passing Zone	Length, ft	3603
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity			
Directional Demand Flow Rate, veh/h	355	Opposing Demand Flow Rate, veh/h	477
Peak Hour Factor	0.88	Total Trucks, %	5.26
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.21

Intermediate Results			
Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.43226	Speed Power Coefficient (p)	0.48517
PF Slope Coefficient (m)	-1.20666	PF Power Coefficient (p)	0.81813
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3603	-	-	67.7

Vehicle Results			
Average Speed, mi/h	67.7	Percent Followers, %	40.3
Segment Travel Time, minutes	0.60	Follower Density (FD), followers/mi/ln	2.1
Vehicle LOS	B		

Bicycle Results			
Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	355	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.72	Bicycle Effective Speed Factor	5.07

Bicycle LOS		D			
Segment 5					
Vehicle Inputs					
Segment Type		Passing Constrained		Length, ft	
Measured FFS		Measured		Free-Flow Speed, mi/h	
				1053	
				70.0	
Demand and Capacity					
Directional Demand Flow Rate, veh/h		355		Opposing Demand Flow Rate, veh/h	
				-	
Peak Hour Factor		0.88		Total Trucks, %	
				5.26	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)	
				0.21	
Intermediate Results					
Segment Vertical Class		1		Free-Flow Speed, mi/h	
				70.0	
Speed Slope Coefficient (m)		4.57372		Speed Power Coefficient (p)	
				0.41674	
PF Slope Coefficient (m)		-1.29321		PF Power Coefficient (p)	
				0.75821	
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln	
				2.3	
%Improvement to Percent Followers		0.0		%Improvement to Speed	
				0.0	
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1053	-	-	67.4
Vehicle Results					
Average Speed, mi/h		67.4		Percent Followers, %	
				44.5	
Segment Travel Time, minutes		0.18		Follower Density (FD), followers/mi/ln	
				2.3	
Vehicle LOS		B			
Bicycle Results					
Percent Occupied Parking		0		Pavement Condition Rating	
				4	
Flow Rate Outside Lane, veh/h		355		Bicycle Effective Width, ft	
				24	
Bicycle LOS Score		3.72		Bicycle Effective Speed Factor	
				5.07	
Bicycle LOS		D			
Segment 6					
Vehicle Inputs					
Segment Type		Passing Zone		Length, ft	
				1120	
Measured FFS		Measured		Free-Flow Speed, mi/h	
				70.0	
Demand and Capacity					
Directional Demand Flow Rate, veh/h		355		Opposing Demand Flow Rate, veh/h	
				403	
Peak Hour Factor		0.88		Total Trucks, %	
				5.26	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)	
				0.21	
Intermediate Results					

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.38045	Speed Power Coefficient (p)	0.49627
PF Slope Coefficient (m)	-1.27058	PF Power Coefficient (p)	0.79479
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1120	-	-	67.8

Vehicle Results			
Average Speed, mi/h	67.8	Percent Followers, %	42.7
Segment Travel Time, minutes	0.19	Follower Density (FD), followers/mi/ln	2.2
Vehicle LOS	B		

Bicycle Results			
Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	355	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.72	Bicycle Effective Speed Factor	5.07
Bicycle LOS	D		

Segment 7

Vehicle Inputs			
Segment Type	Passing Zone	Length, ft	1272
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity			
Directional Demand Flow Rate, veh/h	420	Opposing Demand Flow Rate, veh/h	557
Peak Hour Factor	0.88	Total Trucks, %	5.09
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.25

Intermediate Results			
Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.41686	Speed Power Coefficient (p)	0.47488
PF Slope Coefficient (m)	-1.28420	PF Power Coefficient (p)	0.78783
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1272	-	-	67.4

Vehicle Results			
Average Speed, mi/h	67.4	Percent Followers, %	47.7
Segment Travel Time, minutes	0.21	Follower Density (FD), followers/mi/ln	3.0

Vehicle LOS		B			
Bicycle Results					
Percent Occupied Parking	0	Pavement Condition Rating	4		
Flow Rate Outside Lane, veh/h	420	Bicycle Effective Width, ft	24		
Bicycle LOS Score	3.75	Bicycle Effective Speed Factor	5.07		
Bicycle LOS	D				
Segment 8					
Vehicle Inputs					
Segment Type	Passing Constrained	Length, ft	625		
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0		
Demand and Capacity					
Directional Demand Flow Rate, veh/h	420	Opposing Demand Flow Rate, veh/h	-		
Peak Hour Factor	0.88	Total Trucks, %	5.09		
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.25		
Intermediate Results					
Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0		
Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674		
PF Slope Coefficient (m)	-1.29323	PF Power Coefficient (p)	0.75819		
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.1		
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0		
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	625	-	-	67.2
Vehicle Results					
Average Speed, mi/h	67.2	Percent Followers, %	48.9		
Segment Travel Time, minutes	0.11	Follower Density (FD), followers/mi/ln	3.1		
Vehicle LOS	B				
Bicycle Results					
Percent Occupied Parking	0	Pavement Condition Rating	4		
Flow Rate Outside Lane, veh/h	420	Bicycle Effective Width, ft	24		
Bicycle LOS Score	3.75	Bicycle Effective Speed Factor	5.07		
Bicycle LOS	D				
Segment 9					
Vehicle Inputs					
Segment Type	Passing Zone	Length, ft	1995		
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0		

Demand and Capacity							
Directional Demand Flow Rate, veh/h		420		Opposing Demand Flow Rate, veh/h		557	
Peak Hour Factor		0.88		Total Trucks, %		5.09	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)		0.25	
Intermediate Results							
Segment Vertical Class		1		Free-Flow Speed, mi/h		70.0	
Speed Slope Coefficient (m)		4.42866		Speed Power Coefficient (p)		0.47488	
PF Slope Coefficient (m)		-1.25311		PF Power Coefficient (p)		0.80020	
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln		2.9	
%Improvement to Percent Followers		0.0		%Improvement to Speed		0.0	
Subsegment Data							
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h		
1	Tangent	1995	-	-	67.4		
Vehicle Results							
Average Speed, mi/h		67.4		Percent Followers, %		46.6	
Segment Travel Time, minutes		0.34		Follower Density (FD), followers/mi/ln		2.9	
Vehicle LOS		B					
Bicycle Results							
Percent Occupied Parking		0		Pavement Condition Rating		4	
Flow Rate Outside Lane, veh/h		420		Bicycle Effective Width, ft		24	
Bicycle LOS Score		3.75		Bicycle Effective Speed Factor		5.07	
Bicycle LOS		D					
Segment 10							
Vehicle Inputs							
Segment Type		Passing Constrained		Length, ft		1399	
Measured FFS		Measured		Free-Flow Speed, mi/h		70.0	
Demand and Capacity							
Directional Demand Flow Rate, veh/h		420		Opposing Demand Flow Rate, veh/h		-	
Peak Hour Factor		0.88		Total Trucks, %		5.09	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)		0.25	
Intermediate Results							
Segment Vertical Class		1		Free-Flow Speed, mi/h		70.0	
Speed Slope Coefficient (m)		4.57524		Speed Power Coefficient (p)		0.41674	
PF Slope Coefficient (m)		-1.28884		PF Power Coefficient (p)		0.75993	
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln		3.0	
%Improvement to Percent Followers		0.0		%Improvement to Speed		0.0	
Subsegment Data							

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1399	-	-	67.2

Vehicle Results

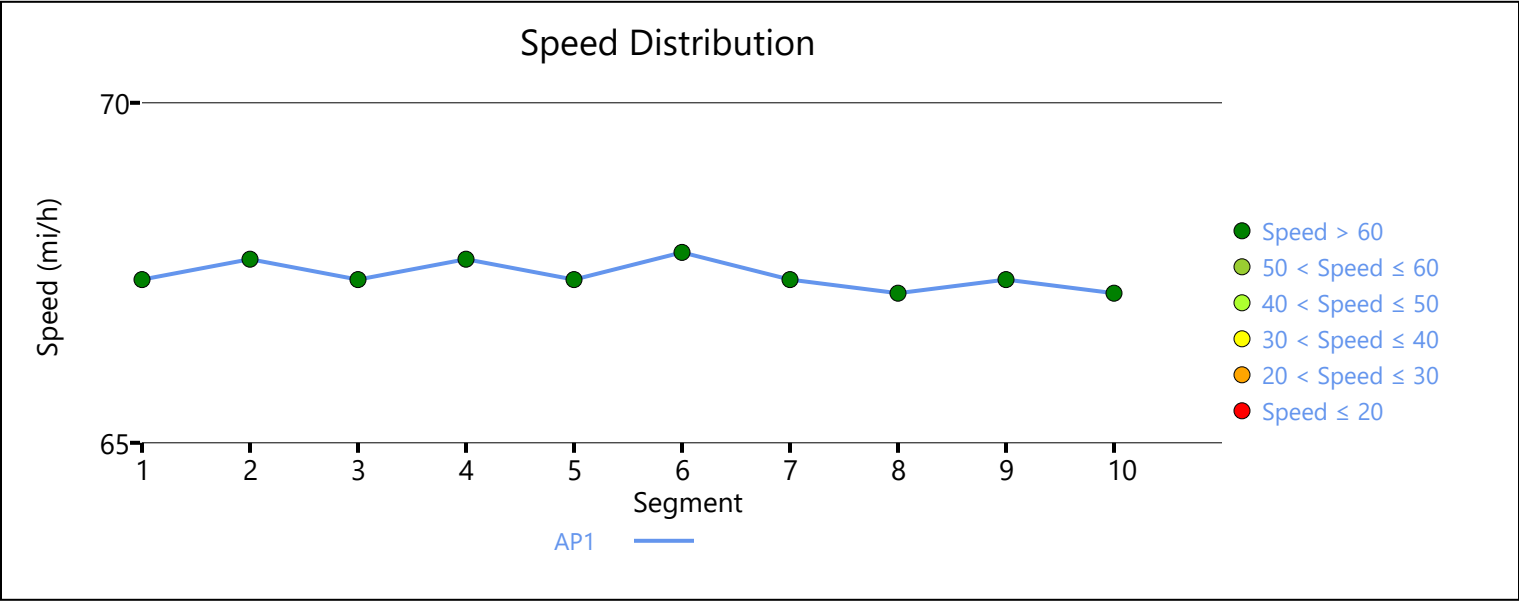
Average Speed, mi/h	67.2	Percent Followers, %	48.7
Segment Travel Time, minutes	0.24	Follower Density (FD), followers/mi/ln	3.0
Vehicle LOS	B		

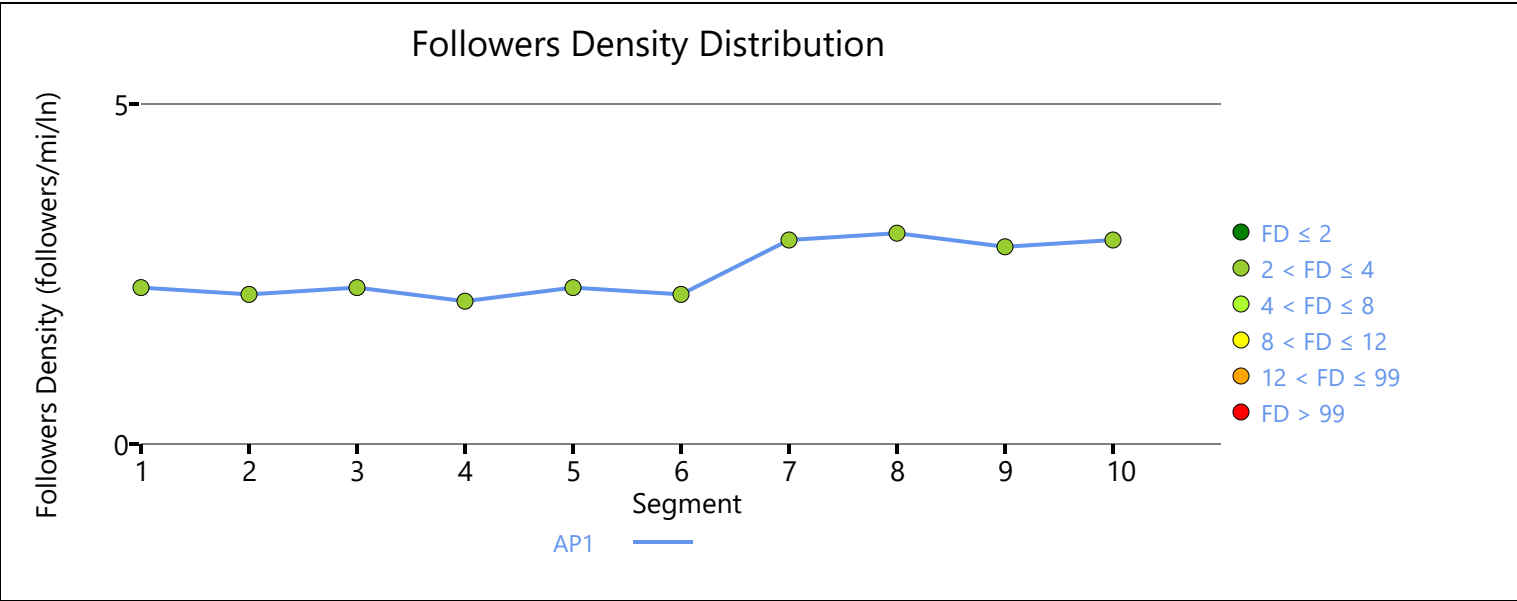
Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	420	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.75	Bicycle Effective Speed Factor	5.07
Bicycle LOS	D		

Facility Results

T	VMT veh-mi/AP	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	253	0.13	2.5	B





HCS Two-Lane Highway Report

Project Information

Analyst	MJV	Date	11/2/2023
Agency	HRG	Analysis Year	2050
Jurisdiction	SDDOT	Time Analyzed	AM
Project Description	466th_469th_AM_WB_Build_Option1	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	718
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	318	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	17.04
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.19

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29182	PF Power Coefficient (p)	0.75993
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	718	-	-	67.6

Vehicle Results

Average Speed, mi/h	67.6	Percent Followers, %	41.8
Segment Travel Time, minutes	0.12	Follower Density (FD), followers/mi/ln	2.0
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	318	Bicycle Effective Width, ft	24
Bicycle LOS Score	9.01	Bicycle Effective Speed Factor	5.07
Bicycle LOS	F		

Segment 2

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1738
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Measured FFS		Measured		Free-Flow Speed, mi/h		70.0	
Demand and Capacity							
Directional Demand Flow Rate, veh/h		318		Opposing Demand Flow Rate, veh/h		466	
Peak Hour Factor		0.88		Total Trucks, %		17.04	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)		0.19	
Intermediate Results							
Segment Vertical Class		1		Free-Flow Speed, mi/h		70.0	
Speed Slope Coefficient (m)		4.40359		Speed Power Coefficient (p)		0.48677	
PF Slope Coefficient (m)		-1.25494		PF Power Coefficient (p)		0.80196	
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln		1.8	
%Improvement to Percent Followers		0.0		%Improvement to Speed		0.0	
Subsegment Data							
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h		
1	Tangent	1738	-	-	67.9		
Vehicle Results							
Average Speed, mi/h		67.9		Percent Followers, %		39.4	
Segment Travel Time, minutes		0.29		Follower Density (FD), followers/mi/ln		1.8	
Vehicle LOS		A					
Bicycle Results							
Percent Occupied Parking		0		Pavement Condition Rating		4	
Flow Rate Outside Lane, veh/h		318		Bicycle Effective Width, ft		24	
Bicycle LOS Score		9.01		Bicycle Effective Speed Factor		5.07	
Bicycle LOS		F					
Segment 3							
Vehicle Inputs							
Segment Type		Passing Constrained		Length, ft		579	
Measured FFS		Measured		Free-Flow Speed, mi/h		70.0	
Demand and Capacity							
Directional Demand Flow Rate, veh/h		318		Opposing Demand Flow Rate, veh/h		-	
Peak Hour Factor		0.88		Total Trucks, %		17.04	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)		0.19	
Intermediate Results							
Segment Vertical Class		1		Free-Flow Speed, mi/h		70.0	
Speed Slope Coefficient (m)		4.57372		Speed Power Coefficient (p)		0.41674	
PF Slope Coefficient (m)		-1.29182		PF Power Coefficient (p)		0.75993	
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln		2.0	
%Improvement to Percent Followers		0.0		%Improvement to Speed		0.0	

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	579	-	-	67.6

Vehicle Results			
Average Speed, mi/h	67.6	Percent Followers, %	41.8
Segment Travel Time, minutes	0.10	Follower Density (FD), followers/mi/ln	2.0
Vehicle LOS	A		

Bicycle Results			
Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	318	Bicycle Effective Width, ft	24
Bicycle LOS Score	9.01	Bicycle Effective Speed Factor	5.07
Bicycle LOS	F		

Segment 4

Vehicle Inputs			
Segment Type	Passing Zone	Length, ft	2262
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity			
Directional Demand Flow Rate, veh/h	318	Opposing Demand Flow Rate, veh/h	466
Peak Hour Factor	0.88	Total Trucks, %	18.44
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.19

Intermediate Results			
Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.41190	Speed Power Coefficient (p)	0.48677
PF Slope Coefficient (m)	-1.23534	PF Power Coefficient (p)	0.80987
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.8
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2262	-	-	67.9

Vehicle Results			
Average Speed, mi/h	67.9	Percent Followers, %	38.7
Segment Travel Time, minutes	0.38	Follower Density (FD), followers/mi/ln	1.8
Vehicle LOS	A		

Bicycle Results			
Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	318	Bicycle Effective Width, ft	24
Bicycle LOS Score	9.85	Bicycle Effective Speed Factor	5.07

Bicycle LOS		F			
Segment 5					
Vehicle Inputs					
Segment Type		Passing Constrained		Length, ft	
				980	
Measured FFS		Measured		Free-Flow Speed, mi/h	
				70.0	
Demand and Capacity					
Directional Demand Flow Rate, veh/h		295		Opposing Demand Flow Rate, veh/h	
				-	
Peak Hour Factor		0.88		Total Trucks, %	
				18.44	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)	
				0.17	
Intermediate Results					
Segment Vertical Class		1		Free-Flow Speed, mi/h	
				70.0	
Speed Slope Coefficient (m)		4.57372		Speed Power Coefficient (p)	
				0.41674	
PF Slope Coefficient (m)		-1.29166		PF Power Coefficient (p)	
				0.76014	
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln	
				1.7	
%Improvement to Percent Followers		0.0		%Improvement to Speed	
				0.0	
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	980	-	-	67.7
Vehicle Results					
Average Speed, mi/h		67.7		Percent Followers, %	
				40.0	
Segment Travel Time, minutes		0.16		Follower Density (FD), followers/mi/ln	
				1.7	
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0		Pavement Condition Rating	
				4	
Flow Rate Outside Lane, veh/h		295		Bicycle Effective Width, ft	
				24	
Bicycle LOS Score		9.81		Bicycle Effective Speed Factor	
				5.07	
Bicycle LOS		F			
Segment 6					
Vehicle Inputs					
Segment Type		Passing Zone		Length, ft	
				3667	
Measured FFS		Measured		Free-Flow Speed, mi/h	
				70.0	
Demand and Capacity					
Directional Demand Flow Rate, veh/h		295		Opposing Demand Flow Rate, veh/h	
				414	
Peak Hour Factor		0.88		Total Trucks, %	
				18.44	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)	
				0.17	
Intermediate Results					

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.41738	Speed Power Coefficient (p)	0.49463
PF Slope Coefficient (m)	-1.19837	PF Power Coefficient (p)	0.82363
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.5
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3667	-	-	68.0

Vehicle Results

Average Speed, mi/h	68.0	Percent Followers, %	35.5
Segment Travel Time, minutes	0.61	Follower Density (FD), followers/mi/ln	1.5
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	295	Bicycle Effective Width, ft	24
Bicycle LOS Score	9.81	Bicycle Effective Speed Factor	5.07
Bicycle LOS	F		

Segment 7

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1846
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	295	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	18.44
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.17

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.58311	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.26629	PF Power Coefficient (p)	0.77017
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.7
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1846	-	-	67.7

Vehicle Results

Average Speed, mi/h	67.7	Percent Followers, %	39.1
Segment Travel Time, minutes	0.31	Follower Density (FD), followers/mi/ln	1.7

Vehicle LOS		A					
Bicycle Results							
Percent Occupied Parking		0		Pavement Condition Rating		4	
Flow Rate Outside Lane, veh/h		295		Bicycle Effective Width, ft		24	
Bicycle LOS Score		9.81		Bicycle Effective Speed Factor		5.07	
Bicycle LOS		F					
Segment 8							
Vehicle Inputs							
Segment Type		Passing Zone		Length, ft		2174	
Measured FFS		Measured		Free-Flow Speed, mi/h		70.0	
Demand and Capacity							
Directional Demand Flow Rate, veh/h		295		Opposing Demand Flow Rate, veh/h		414	
Peak Hour Factor		0.88		Total Trucks, %		18.44	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)		0.17	
Intermediate Results							
Segment Vertical Class		1		Free-Flow Speed, mi/h		70.0	
Speed Slope Coefficient (m)		4.39765		Speed Power Coefficient (p)		0.49463	
PF Slope Coefficient (m)		-1.23320		PF Power Coefficient (p)		0.81133	
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln		1.6	
%Improvement to Percent Followers		0.0		%Improvement to Speed		0.0	
Subsegment Data							
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h		
1	Tangent	2174	-	-	68.0		
Vehicle Results							
Average Speed, mi/h		68.0		Percent Followers, %		36.8	
Segment Travel Time, minutes		0.36		Follower Density (FD), followers/mi/ln		1.6	
Vehicle LOS		A					
Bicycle Results							
Percent Occupied Parking		0		Pavement Condition Rating		4	
Flow Rate Outside Lane, veh/h		295		Bicycle Effective Width, ft		24	
Bicycle LOS Score		9.81		Bicycle Effective Speed Factor		5.07	
Bicycle LOS		F					
Segment 9							
Vehicle Inputs							
Segment Type		Passing Constrained		Length, ft		1277	
Measured FFS		Measured		Free-Flow Speed, mi/h		70.0	

Demand and Capacity							
Directional Demand Flow Rate, veh/h		295		Opposing Demand Flow Rate, veh/h		-	
Peak Hour Factor		0.88		Total Trucks, %		18.44	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)		0.17	
Intermediate Results							
Segment Vertical Class		1		Free-Flow Speed, mi/h		70.0	
Speed Slope Coefficient (m)		4.57372		Speed Power Coefficient (p)		0.41674	
PF Slope Coefficient (m)		-1.29166		PF Power Coefficient (p)		0.76014	
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln		1.7	
%Improvement to Percent Followers		0.0		%Improvement to Speed		0.0	
Subsegment Data							
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h		
1	Tangent	1277	-	-	67.7		
Vehicle Results							
Average Speed, mi/h		67.7		Percent Followers, %		40.0	
Segment Travel Time, minutes		0.21		Follower Density (FD), followers/mi/ln		1.7	
Vehicle LOS		A					
Bicycle Results							
Percent Occupied Parking		0		Pavement Condition Rating		4	
Flow Rate Outside Lane, veh/h		295		Bicycle Effective Width, ft		24	
Bicycle LOS Score		9.81		Bicycle Effective Speed Factor		5.07	
Bicycle LOS		F					
Segment 10							
Vehicle Inputs							
Segment Type		Passing Constrained		Length, ft		898	
Measured FFS		Measured		Free-Flow Speed, mi/h		70.0	
Demand and Capacity							
Directional Demand Flow Rate, veh/h		295		Opposing Demand Flow Rate, veh/h		-	
Peak Hour Factor		0.88		Total Trucks, %		18.44	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)		0.17	
Intermediate Results							
Segment Vertical Class		1		Free-Flow Speed, mi/h		70.0	
Speed Slope Coefficient (m)		4.57372		Speed Power Coefficient (p)		0.41674	
PF Slope Coefficient (m)		-1.29166		PF Power Coefficient (p)		0.76014	
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln		1.7	
%Improvement to Percent Followers		0.0		%Improvement to Speed		0.0	
Subsegment Data							

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	779	-	-	67.7

Vehicle Results

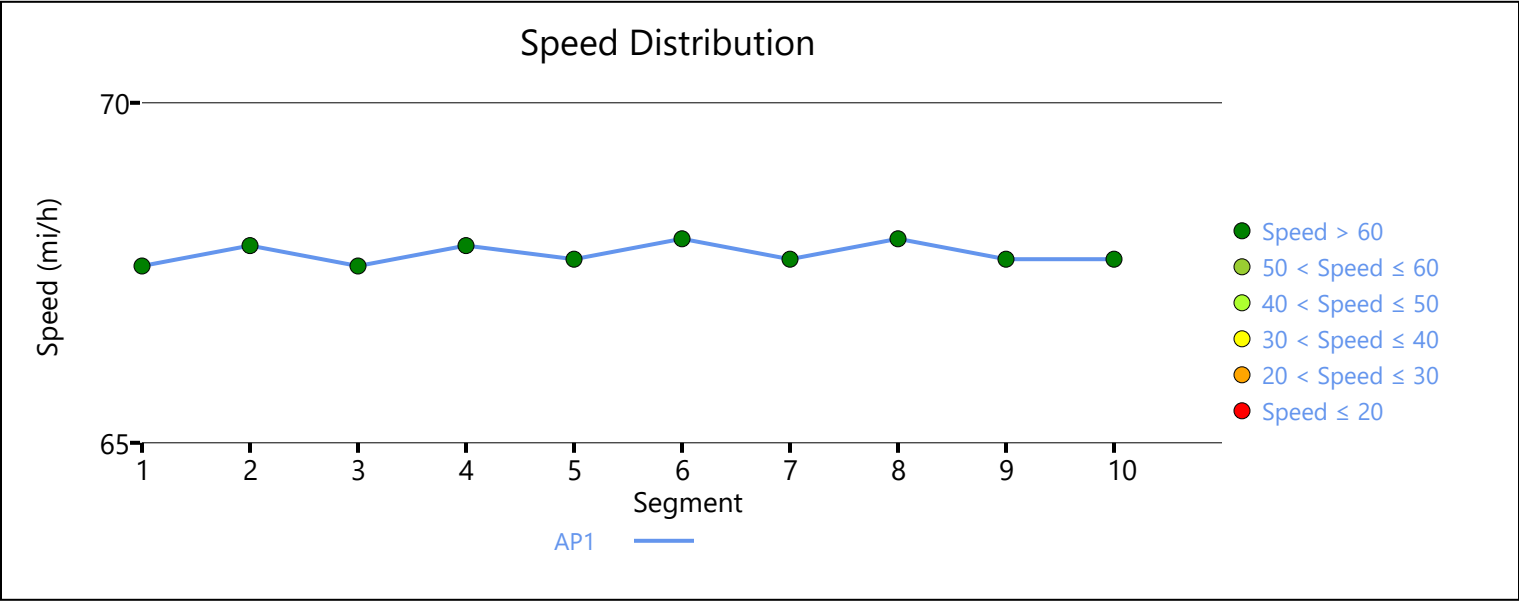
Average Speed, mi/h	67.7	Percent Followers, %	40.0
Segment Travel Time, minutes	0.15	Follower Density (FD), followers/mi/ln	1.7
Vehicle LOS	A		

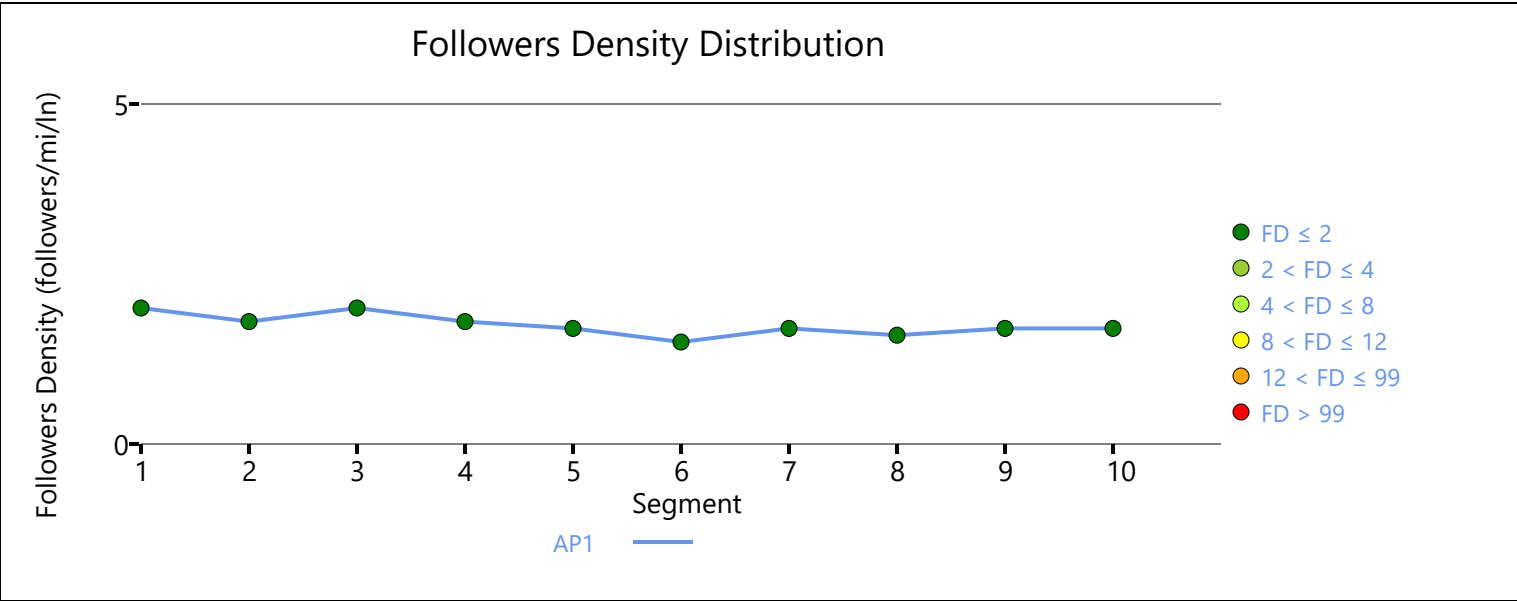
Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	295	Bicycle Effective Width, ft	24
Bicycle LOS Score	9.81	Bicycle Effective Speed Factor	5.07
Bicycle LOS	F		

Facility Results

T	VMT veh-mi/AP	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	204	0.09	1.7	A





HCS Two-Lane Highway Report

Project Information

Analyst	MJV	Date	2/27/2024
Agency	HRG	Analysis Year	2050
Jurisdiction	SDDOT	Time Analyzed	PM
Project Description	466th_469th_PM_WB_Build_Option1	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	718
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	557	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	17.04
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.33

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29182	PF Power Coefficient (p)	0.75993
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	4.7
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	718	-	-	66.7

Vehicle Results

Average Speed, mi/h	66.7	Percent Followers, %	56.3
Segment Travel Time, minutes	0.12	Follower Density (FD), followers/mi/ln	4.7
Vehicle LOS	C		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	557	Bicycle Effective Width, ft	24
Bicycle LOS Score	9.30	Bicycle Effective Speed Factor	5.07
Bicycle LOS	F		

Segment 2

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1738
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Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		557	Opposing Demand Flow Rate, veh/h		420
Peak Hour Factor		0.88	Total Trucks, %		17.04
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.33
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.39239	Speed Power Coefficient (p)		0.49356
PF Slope Coefficient (m)		-1.25055	PF Power Coefficient (p)		0.80414
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		4.5
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1738	-	-	67.0
Vehicle Results					
Average Speed, mi/h		67.0	Percent Followers, %		54.2
Segment Travel Time, minutes		0.29	Follower Density (FD), followers/mi/ln		4.5
Vehicle LOS		C			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		557	Bicycle Effective Width, ft		24
Bicycle LOS Score		9.30	Bicycle Effective Speed Factor		5.07
Bicycle LOS		F			
Segment 3					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		579
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		557	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		17.04
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.33
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.29182	PF Power Coefficient (p)		0.75993
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		4.7
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	579	-	-	66.7

Vehicle Results			
Average Speed, mi/h	66.7	Percent Followers, %	56.3
Segment Travel Time, minutes	0.10	Follower Density (FD), followers/mi/ln	4.7
Vehicle LOS	C		

Bicycle Results			
Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	557	Bicycle Effective Width, ft	24
Bicycle LOS Score	9.30	Bicycle Effective Speed Factor	5.07
Bicycle LOS	F		

Segment 4			
Vehicle Inputs			
Segment Type	Passing Zone	Length, ft	2262
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity			
Directional Demand Flow Rate, veh/h	557	Opposing Demand Flow Rate, veh/h	420
Peak Hour Factor	0.88	Total Trucks, %	18.44
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.33

Intermediate Results			
Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.40070	Speed Power Coefficient (p)	0.49356
PF Slope Coefficient (m)	-1.23103	PF Power Coefficient (p)	0.81211
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	4.4
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2262	-	-	67.0

Vehicle Results			
Average Speed, mi/h	67.0	Percent Followers, %	53.5
Segment Travel Time, minutes	0.38	Follower Density (FD), followers/mi/ln	4.4
Vehicle LOS	C		

Bicycle Results			
Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	557	Bicycle Effective Width, ft	24
Bicycle LOS Score	10.13	Bicycle Effective Speed Factor	5.07

Bicycle LOS		F			
Segment 5					
Vehicle Inputs					
Segment Type		Passing Constrained		Length, ft	
Measured FFS		Measured		Free-Flow Speed, mi/h	
				980	
				70.0	
Demand and Capacity					
Directional Demand Flow Rate, veh/h		477		Opposing Demand Flow Rate, veh/h	
				-	
Peak Hour Factor		0.88		Total Trucks, %	
				18.44	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)	
				0.28	
Intermediate Results					
Segment Vertical Class		1		Free-Flow Speed, mi/h	
				70.0	
Speed Slope Coefficient (m)		4.57372		Speed Power Coefficient (p)	
				0.41674	
PF Slope Coefficient (m)		-1.29166		PF Power Coefficient (p)	
				0.76014	
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln	
				3.7	
%Improvement to Percent Followers		0.0		%Improvement to Speed	
				0.0	
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	980	-	-	67.0
Vehicle Results					
Average Speed, mi/h		67.0		Percent Followers, %	
				52.1	
Segment Travel Time, minutes		0.17		Follower Density (FD), followers/mi/ln	
				3.7	
Vehicle LOS		B			
Bicycle Results					
Percent Occupied Parking		0		Pavement Condition Rating	
				4	
Flow Rate Outside Lane, veh/h		477		Bicycle Effective Width, ft	
				24	
Bicycle LOS Score		10.05		Bicycle Effective Speed Factor	
				5.07	
Bicycle LOS		F			
Segment 6					
Vehicle Inputs					
Segment Type		Passing Zone		Length, ft	
				3667	
Measured FFS		Measured		Free-Flow Speed, mi/h	
				70.0	
Demand and Capacity					
Directional Demand Flow Rate, veh/h		477		Opposing Demand Flow Rate, veh/h	
				355	
Peak Hour Factor		0.88		Total Trucks, %	
				18.44	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)	
				0.28	
Intermediate Results					

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.40174	Speed Power Coefficient (p)	0.50464
PF Slope Coefficient (m)	-1.19184	PF Power Coefficient (p)	0.82692
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.4
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3667	-	-	67.3

Vehicle Results

Average Speed, mi/h	67.3	Percent Followers, %	47.6
Segment Travel Time, minutes	0.62	Follower Density (FD), followers/mi/ln	3.4
Vehicle LOS	B		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	477	Bicycle Effective Width, ft	24
Bicycle LOS Score	10.05	Bicycle Effective Speed Factor	5.07
Bicycle LOS	F		

Segment 7

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1846
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	477	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	18.44
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.28

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.58311	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.26629	PF Power Coefficient (p)	0.77017
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.6
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1846	-	-	66.9

Vehicle Results

Average Speed, mi/h	66.9	Percent Followers, %	51.1
Segment Travel Time, minutes	0.31	Follower Density (FD), followers/mi/ln	3.6

Vehicle LOS		B				
Bicycle Results						
Percent Occupied Parking		0		Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		477		Bicycle Effective Width, ft		24
Bicycle LOS Score		10.05		Bicycle Effective Speed Factor		5.07
Bicycle LOS		F				
Segment 8						
Vehicle Inputs						
Segment Type		Passing Zone		Length, ft		2174
Measured FFS		Measured		Free-Flow Speed, mi/h		70.0
Demand and Capacity						
Directional Demand Flow Rate, veh/h		477		Opposing Demand Flow Rate, veh/h		355
Peak Hour Factor		0.88		Total Trucks, %		18.44
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)		0.28
Intermediate Results						
Segment Vertical Class		1		Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.38201		Speed Power Coefficient (p)		0.50464
PF Slope Coefficient (m)		-1.22645		PF Power Coefficient (p)		0.81448
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln		3.5
%Improvement to Percent Followers		0.0		%Improvement to Speed		0.0
Subsegment Data						
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h	
1	Tangent	2174	-	-	67.3	
Vehicle Results						
Average Speed, mi/h		67.3		Percent Followers, %		48.9
Segment Travel Time, minutes		0.37		Follower Density (FD), followers/mi/ln		3.5
Vehicle LOS		B				
Bicycle Results						
Percent Occupied Parking		0		Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		477		Bicycle Effective Width, ft		24
Bicycle LOS Score		10.05		Bicycle Effective Speed Factor		5.07
Bicycle LOS		F				
Segment 9						
Vehicle Inputs						
Segment Type		Passing Constrained		Length, ft		1277
Measured FFS		Measured		Free-Flow Speed, mi/h		70.0

Demand and Capacity							
Directional Demand Flow Rate, veh/h		477		Opposing Demand Flow Rate, veh/h		-	
Peak Hour Factor		0.88		Total Trucks, %		18.44	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)		0.28	
Intermediate Results							
Segment Vertical Class		1		Free-Flow Speed, mi/h		70.0	
Speed Slope Coefficient (m)		4.57372		Speed Power Coefficient (p)		0.41674	
PF Slope Coefficient (m)		-1.29166		PF Power Coefficient (p)		0.76014	
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln		3.7	
%Improvement to Percent Followers		0.0		%Improvement to Speed		0.0	
Subsegment Data							
#	Segment Type		Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h	
1	Tangent		1277	-	-	67.0	
Vehicle Results							
Average Speed, mi/h		67.0		Percent Followers, %		52.1	
Segment Travel Time, minutes		0.22		Follower Density (FD), followers/mi/ln		3.7	
Vehicle LOS		B					
Bicycle Results							
Percent Occupied Parking		0		Pavement Condition Rating		4	
Flow Rate Outside Lane, veh/h		477		Bicycle Effective Width, ft		24	
Bicycle LOS Score		10.05		Bicycle Effective Speed Factor		5.07	
Bicycle LOS		F					
Segment 10							
Vehicle Inputs							
Segment Type		Passing Constrained		Length, ft		898	
Measured FFS		Measured		Free-Flow Speed, mi/h		70.0	
Demand and Capacity							
Directional Demand Flow Rate, veh/h		477		Opposing Demand Flow Rate, veh/h		-	
Peak Hour Factor		0.88		Total Trucks, %		18.44	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)		0.28	
Intermediate Results							
Segment Vertical Class		1		Free-Flow Speed, mi/h		70.0	
Speed Slope Coefficient (m)		4.57372		Speed Power Coefficient (p)		0.41674	
PF Slope Coefficient (m)		-1.29166		PF Power Coefficient (p)		0.76014	
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln		3.7	
%Improvement to Percent Followers		0.0		%Improvement to Speed		0.0	
Subsegment Data							

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	779	-	-	67.0

Vehicle Results

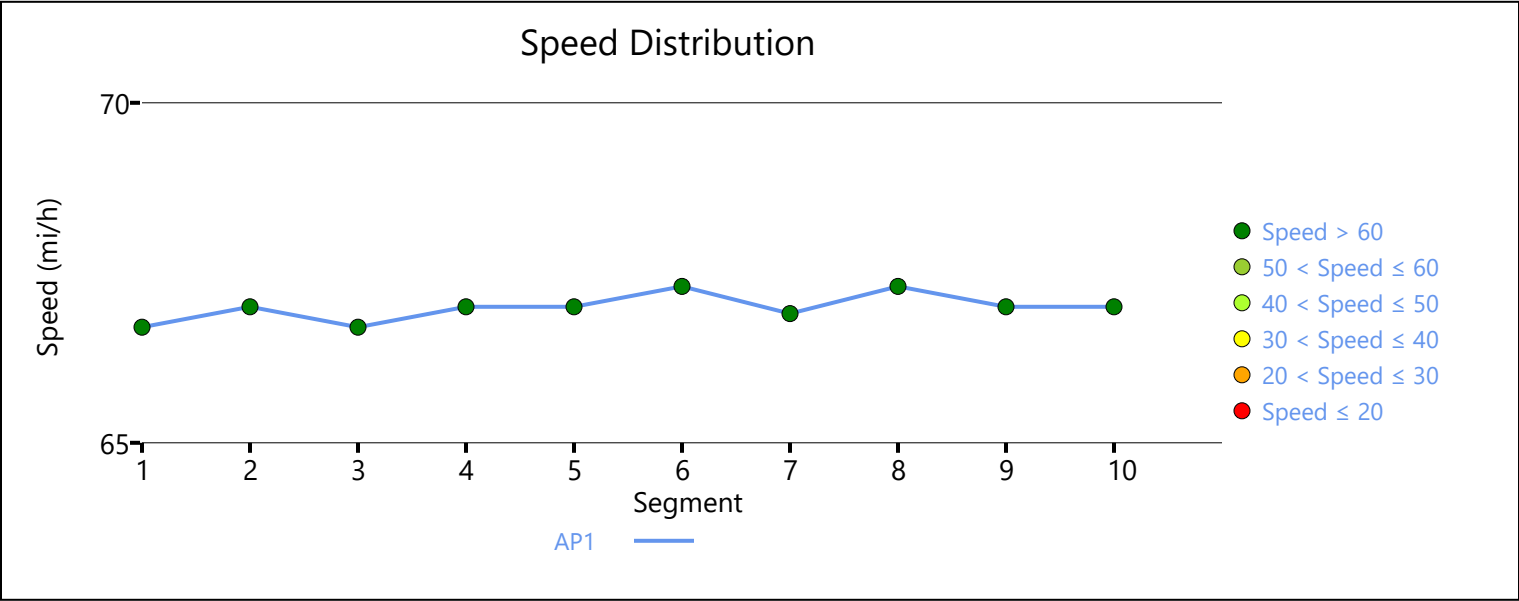
Average Speed, mi/h	67.0	Percent Followers, %	52.1
Segment Travel Time, minutes	0.15	Follower Density (FD), followers/mi/ln	3.7
Vehicle LOS	B		

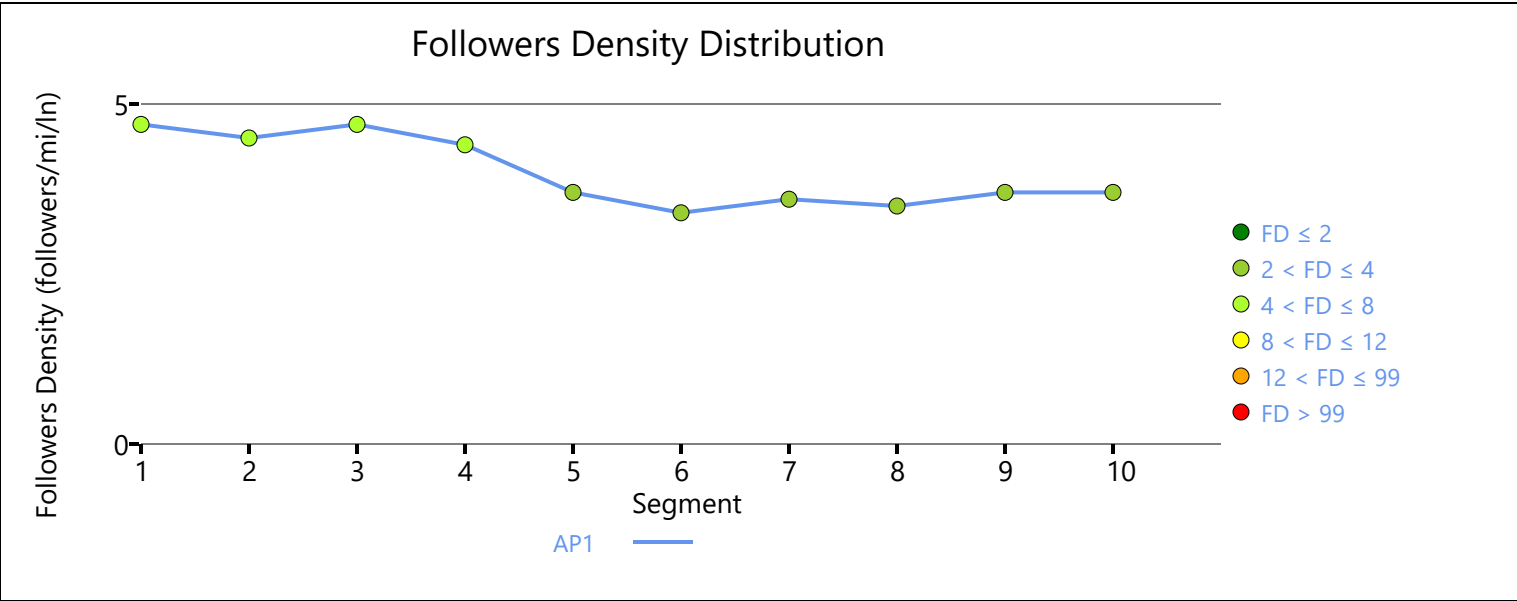
Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	477	Bicycle Effective Width, ft	24
Bicycle LOS Score	10.05	Bicycle Effective Speed Factor	5.07
Bicycle LOS	F		

Facility Results

T	VMT veh-mi/AP	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	339	0.21	3.9	B





HCS Multilane Highway Report

Project Information

Analyst	NM	Date	3/7/2024
Agency	HR Green	Analysis Year	2050
Jurisdiction	SD38 Build Option 1	Time Analyzed	AM
Project Description	466th St to I90 WB Ramps	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	0.0
Median Type	TWLT	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	70.0	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	769	Heavy Vehicle Adjustment Factor (fHV)	0.980
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	446
Total Trucks, %	2.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.19

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	70.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	6.4
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	437	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.88
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	0.0
Median Type	TWLTl	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	70.0	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	436	Heavy Vehicle Adjustment Factor (fhv)	0.833
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	298
Total Trucks, %	20.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.13
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	70.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.3
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	248	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	10.71
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	F

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	3/7/2024
Agency	HR Green	Analysis Year	2050
Jurisdiction	SD38 Build Option 1	Time Analyzed	PM
Project Description	466th St to I90 WB Ramps	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	0.0
Median Type	TWLT	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	70.0	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	450	Heavy Vehicle Adjustment Factor (fhv)	0.917
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	279
Total Trucks, %	9.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.12

Direction 1 Speed and Density

Lane Width Adjustment (flw)	0.0	Average Speed (S), mi/h	70.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.0
Median Type Adjustment (fm)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fa)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	256	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	4.92
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	E

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	0.0
Median Type	TWLT	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	70.0	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	910	Heavy Vehicle Adjustment Factor (fhv)	0.971
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	532
Total Trucks, %	3.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.23
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	70.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	7.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	517	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	3.23
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	2/27/2024
Agency	HR Green	Analysis Year	2050
Jurisdiction	SD38 Build Option 1	Time Analyzed	AM
Project Description	469th to LaMesa	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	2.0
Median Type	TWLT	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.5	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	610	Heavy Vehicle Adjustment Factor (fHV)	0.962
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	360
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.16

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.5
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	5.2
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	347	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	3.32
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	1.0
Median Type	TWLT	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.8	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	240	Heavy Vehicle Adjustment Factor (fHV)	0.820
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	166
Total Trucks, %	22.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.07
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.8
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.4
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.3		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	136	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	11.74
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	F

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	2/27/2024
Agency	HR Green	Analysis Year	2050
Jurisdiction	SD38 Build Option1	Time Analyzed	PM
Project Description	469th to LaMesa	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	2.0
Median Type	TWLT	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.5	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	366	Heavy Vehicle Adjustment Factor (fHV)	0.917
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	227
Total Trucks, %	9.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.10

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.5
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.3
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	208	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	4.82
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	E

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	1.0
Median Type	TWLT	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.8	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	666	Heavy Vehicle Adjustment Factor (fHV)	0.971
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	390
Total Trucks, %	3.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.17
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.8
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	5.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.3		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	378	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	3.07
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	3/7/2024
Agency	HR Green	Analysis Year	2050
Jurisdiction	SD38 Build Option 1	Time Analyzed	AM
Project Description	I90 WB Ramps to I90 EB Ramps	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	0.0
Median Type	TWLTL	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	70.0	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	745	Heavy Vehicle Adjustment Factor (fHV)	0.971
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	436
Total Trucks, %	3.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.19

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	70.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	6.2
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	423	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	3.13
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	0.0
Median Type	TWLTL	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	70.0	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	273	Heavy Vehicle Adjustment Factor (fhv)	0.877
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	177
Total Trucks, %	14.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.08
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	70.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.5
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	155	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	6.98
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	F

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	3/7/2024
Agency	HR Green	Analysis Year	2050
Jurisdiction	SD38 Build Option 1	Time Analyzed	PM
Project Description	I90 WB Ramps to I90 EB Ramps	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	0.0
Median Type	TWLTL	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	70.0	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	451	Heavy Vehicle Adjustment Factor (fHV)	0.917
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	280
Total Trucks, %	9.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.12

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	70.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.0
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	256	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	4.92
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	E

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	0.0
Median Type	TWLTL	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	70.0	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	455	Heavy Vehicle Adjustment Factor (fhv)	0.877
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	295
Total Trucks, %	14.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.13
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	70.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.2
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	259	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	7.24
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	F

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	3/7/2024
Agency	HR Green	Analysis Year	2050
Jurisdiction	SD38 Build Option 1	Time Analyzed	AM
Project Description	Mickelson Rd to 466th St	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	1.5
Median Type	TWLT	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.6	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	725	Heavy Vehicle Adjustment Factor (fHV)	0.990
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	416
Total Trucks, %	1.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.18

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.6
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	6.0
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.4		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	412	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.61
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	2.2
Median Type	TWLT	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.5	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	425	Heavy Vehicle Adjustment Factor (fhv)	0.885
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	273
Total Trucks, %	13.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.12
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.4
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.9
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.6		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	241	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	6.70
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	F

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	3/7/2024
Agency	HR Green	Analysis Year	2050
Jurisdiction	SD38 Build Option 1	Time Analyzed	PM
Project Description	Mickelson Rd to 466th St	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	1.5
Median Type	TWLT	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.6	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	445	Heavy Vehicle Adjustment Factor (fHV)	0.901
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	280
Total Trucks, %	11.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.12

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.6
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.0
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.4		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	253	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	5.78
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	F

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	2.2
Median Type	TWLTL	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.5	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	913	Heavy Vehicle Adjustment Factor (fhv)	0.980
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	530
Total Trucks, %	2.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.23
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.4
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	7.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.6		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	519	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.97
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

HCS Two-Lane Highway Report

Project Information

Analyst	MJV	Date	5/2/2024
Agency	HRG	Analysis Year	2050 Build Option 1
Jurisdiction	SDDOT	Time Analyzed	AM Peak
Project Description	West of Hartford SD 38 EB	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1069
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	243	Opposing Demand Flow Rate, veh/h	169
Peak Hour Factor	0.88	Total Trucks, %	5.79
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.14

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.30713	Speed Power Coefficient (p)	0.54838
PF Slope Coefficient (m)	-1.23090	PF Power Coefficient (p)	0.80942
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1069	-	-	68.5

Vehicle Results

Average Speed, mi/h	68.5	Percent Followers, %	32.4
Segment Travel Time, minutes	0.18	Follower Density (FD), followers/mi/ln	1.2
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	243	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.70	Bicycle Effective Speed Factor	5.07
Bicycle LOS	D		

Segment 2

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	664
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity					
Directional Demand Flow Rate, veh/h		243	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		5.79
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.14
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.29315	PF Power Coefficient (p)		0.75829
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.3
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	664	-	-	68.0
Vehicle Results					
Average Speed, mi/h		68.0	Percent Followers, %		35.8
Segment Travel Time, minutes		0.11	Follower Density (FD), followers/mi/ln		1.3
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		243	Bicycle Effective Width, ft		24
Bicycle LOS Score		3.70	Bicycle Effective Speed Factor		5.07
Bicycle LOS		D			
Segment 3					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		1871
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		243	Opposing Demand Flow Rate, veh/h		169
Peak Hour Factor		0.88	Total Trucks, %		5.79
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.14
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.31694	Speed Power Coefficient (p)		0.54838
PF Slope Coefficient (m)		-1.20586	PF Power Coefficient (p)		0.82063
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.1
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1871	-	-	68.5

Vehicle Results

Average Speed, mi/h	68.5	Percent Followers, %	31.5
Segment Travel Time, minutes	0.31	Follower Density (FD), followers/mi/ln	1.1
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	243	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.70	Bicycle Effective Speed Factor	5.07
Bicycle LOS	D		

Segment 4

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	925
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	243	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	5.79
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.14

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29315	PF Power Coefficient (p)	0.75829
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	925	-	-	68.0

Vehicle Results

Average Speed, mi/h	68.0	Percent Followers, %	35.8
Segment Travel Time, minutes	0.15	Follower Density (FD), followers/mi/ln	1.3
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	243	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.70	Bicycle Effective Speed Factor	5.07
Bicycle LOS	D		

Segment 5					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		4476
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		243	Opposing Demand Flow Rate, veh/h		169
Peak Hour Factor		0.88	Total Trucks, %		5.79
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.14
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.35043	Speed Power Coefficient (p)		0.54838
PF Slope Coefficient (m)		-1.15155	PF Power Coefficient (p)		0.84082
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.1
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4476	-	-	68.5
Vehicle Results					
Average Speed, mi/h		68.5	Percent Followers, %		29.6
Segment Travel Time, minutes		0.74	Follower Density (FD), followers/mi/ln		1.1
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		243	Bicycle Effective Width, ft		24
Bicycle LOS Score		3.70	Bicycle Effective Speed Factor		5.07
Bicycle LOS		D			
Segment 6					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		896
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		243	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		5.79
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.14
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0

Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29315	PF Power Coefficient (p)	0.75829
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	896	-	-	68.0

Vehicle Results

Average Speed, mi/h	68.0	Percent Followers, %	35.8
Segment Travel Time, minutes	0.15	Follower Density (FD), followers/mi/ln	1.3
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	243	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.70	Bicycle Effective Speed Factor	5.07
Bicycle LOS	D		

Segment 7

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	743
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	243	Opposing Demand Flow Rate, veh/h	169
Peak Hour Factor	0.88	Total Trucks, %	5.79
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.14

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.30713	Speed Power Coefficient (p)	0.54838
PF Slope Coefficient (m)	-1.23090	PF Power Coefficient (p)	0.80942
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	743	-	-	68.5

Vehicle Results

Average Speed, mi/h	68.5	Percent Followers, %	32.4
Segment Travel Time, minutes	0.12	Follower Density (FD), followers/mi/ln	1.2
Vehicle LOS	A		

Bicycle Results					
Percent Occupied Parking	0	Pavement Condition Rating	4		
Flow Rate Outside Lane, veh/h	243	Bicycle Effective Width, ft	24		
Bicycle LOS Score	3.70	Bicycle Effective Speed Factor	5.07		
Bicycle LOS	D				
Segment 8					
Vehicle Inputs					
Segment Type	Passing Zone	Length, ft	2717		
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0		
Demand and Capacity					
Directional Demand Flow Rate, veh/h	245	Opposing Demand Flow Rate, veh/h	165		
Peak Hour Factor	0.88	Total Trucks, %	3.28		
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.14		
Intermediate Results					
Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0		
Speed Slope Coefficient (m)	4.32768	Speed Power Coefficient (p)	0.54983		
PF Slope Coefficient (m)	-1.17918	PF Power Coefficient (p)	0.83165		
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.1		
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0		
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2717	-	-	68.5
Vehicle Results					
Average Speed, mi/h	68.5	Percent Followers, %	30.7		
Segment Travel Time, minutes	0.45	Follower Density (FD), followers/mi/ln	1.1		
Vehicle LOS	A				
Bicycle Results					
Percent Occupied Parking	0	Pavement Condition Rating	4		
Flow Rate Outside Lane, veh/h	245	Bicycle Effective Width, ft	24		
Bicycle LOS Score	2.93	Bicycle Effective Speed Factor	5.07		
Bicycle LOS	C				
Segment 9					
Vehicle Inputs					
Segment Type	Passing Constrained	Length, ft	1013		
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0		
Demand and Capacity					

Directional Demand Flow Rate, veh/h		245	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		3.28
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.14
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.29345	PF Power Coefficient (p)		0.75792
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.3
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1013	-	-	68.0
Vehicle Results					
Average Speed, mi/h		68.0	Percent Followers, %		36.0
Segment Travel Time, minutes		0.17	Follower Density (FD), followers/mi/ln		1.3
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		245	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.93	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 10					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		4569
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		245	Opposing Demand Flow Rate, veh/h		165
Peak Hour Factor		0.88	Total Trucks, %		3.28
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.14
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.34958	Speed Power Coefficient (p)		0.54983
PF Slope Coefficient (m)		-1.14981	PF Power Coefficient (p)		0.84100
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.1
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h

1	Tangent	4569	-	-	68.5
Vehicle Results					
Average Speed, mi/h		68.5	Percent Followers, %		29.7
Segment Travel Time, minutes		0.76	Follower Density (FD), followers/mi/ln		1.1
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		245	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.93	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 11					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		5676
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		244	Opposing Demand Flow Rate, veh/h		165
Peak Hour Factor		0.88	Total Trucks, %		2.82
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.14
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.36055	Speed Power Coefficient (p)		0.54983
PF Slope Coefficient (m)		-1.14222	PF Power Coefficient (p)		0.84066
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.1
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5676	-	-	68.5
Vehicle Results					
Average Speed, mi/h		68.5	Percent Followers, %		29.5
Segment Travel Time, minutes		0.94	Follower Density (FD), followers/mi/ln		1.1
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		244	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.80	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 12					

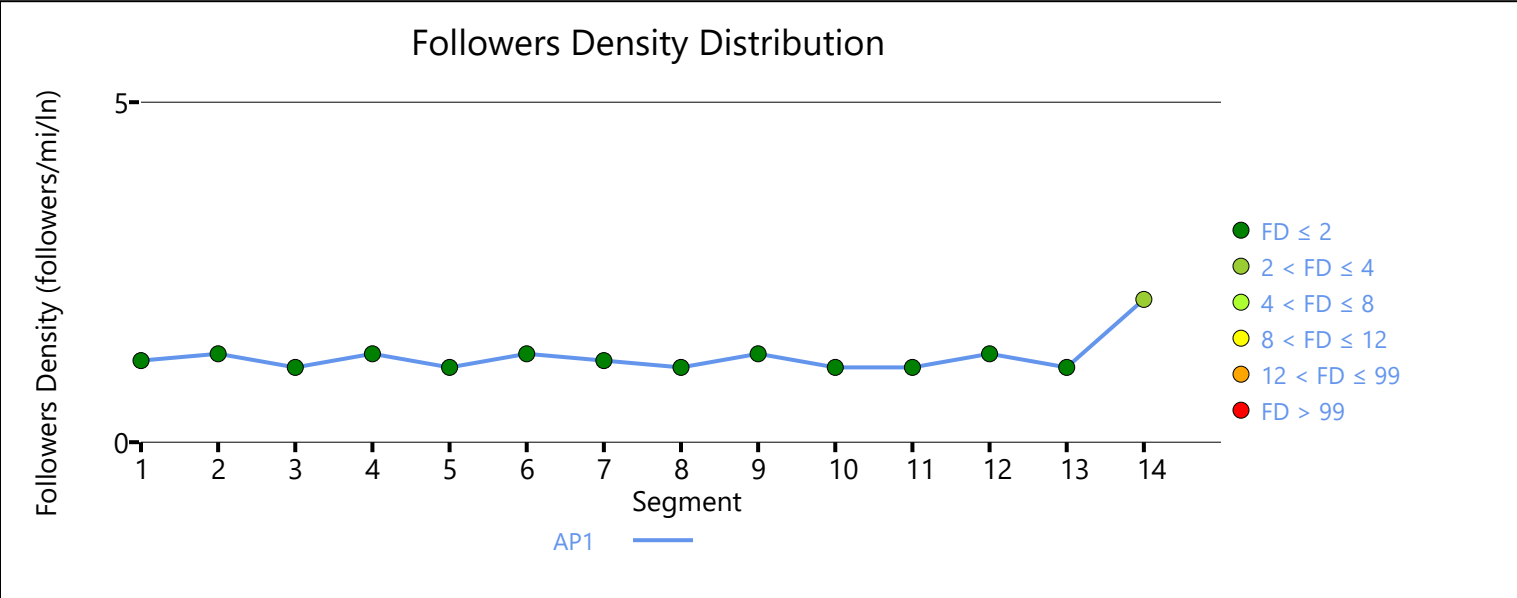
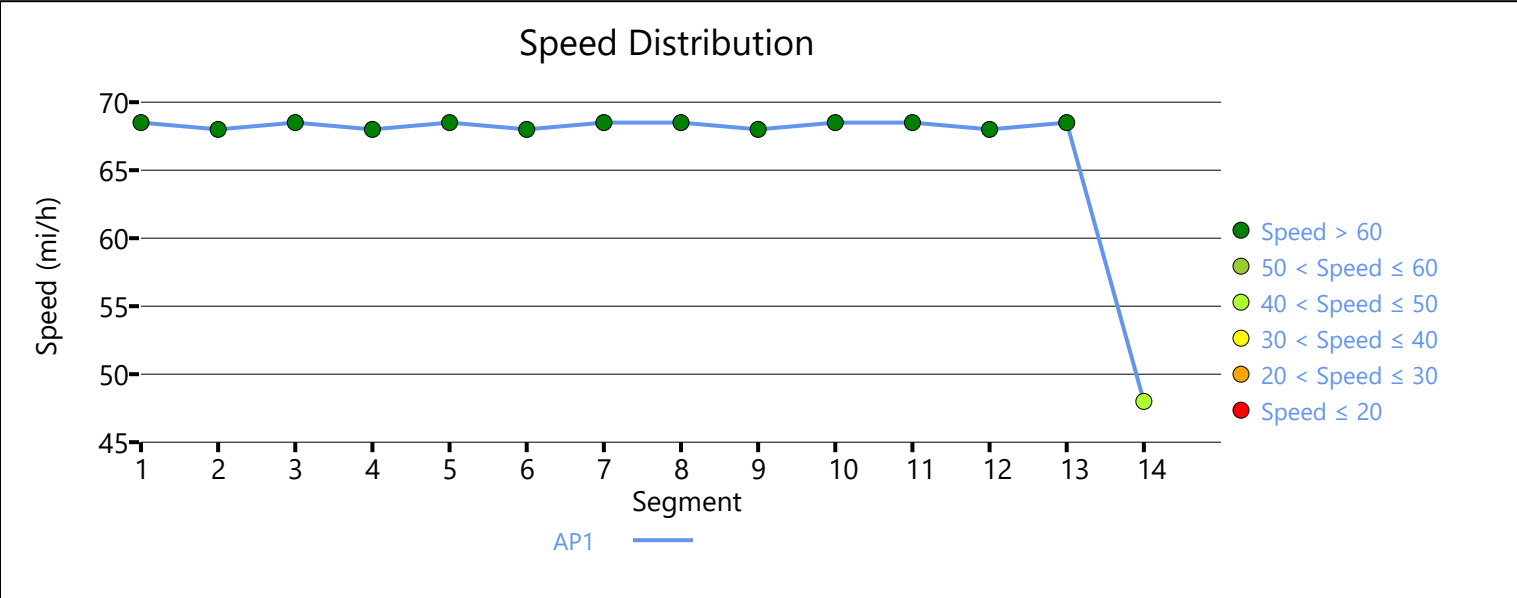
Vehicle Inputs					
Segment Type		Passing Constrained		Length, ft	
Measured FFS		Measured		Free-Flow Speed, mi/h	
				657	
				70.0	
Demand and Capacity					
Directional Demand Flow Rate, veh/h		244		Opposing Demand Flow Rate, veh/h	
Peak Hour Factor		0.88		Total Trucks, %	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)	
				0.14	
Intermediate Results					
Segment Vertical Class		1		Free-Flow Speed, mi/h	
Speed Slope Coefficient (m)		4.57372		Speed Power Coefficient (p)	
PF Slope Coefficient (m)		-1.29350		PF Power Coefficient (p)	
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln	
%Improvement to Percent Followers		0.0		%Improvement to Speed	
				0.0	
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	657	-	-	68.0
Vehicle Results					
Average Speed, mi/h		68.0		Percent Followers, %	
Segment Travel Time, minutes		0.11		Follower Density (FD), followers/mi/ln	
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0		Pavement Condition Rating	
Flow Rate Outside Lane, veh/h		244		Bicycle Effective Width, ft	
Bicycle LOS Score		2.80		Bicycle Effective Speed Factor	
Bicycle LOS		C			
Segment 13					
Vehicle Inputs					
Segment Type		Passing Zone		Length, ft	
Measured FFS		Measured		Free-Flow Speed, mi/h	
				6009	
				70.0	
Demand and Capacity					
Directional Demand Flow Rate, veh/h		244		Opposing Demand Flow Rate, veh/h	
Peak Hour Factor		0.88		Total Trucks, %	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)	
				0.14	
Intermediate Results					
Segment Vertical Class		1		Free-Flow Speed, mi/h	
Speed Slope Coefficient (m)		4.36364		Speed Power Coefficient (p)	
PF Slope Coefficient (m)		-1.14089		PF Power Coefficient (p)	
				0.83997	

In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.1
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6009	-	-	68.5
Vehicle Results					
Average Speed, mi/h		68.5	Percent Followers, %		29.5
Segment Travel Time, minutes		1.00	Follower Density (FD), followers/mi/ln		1.1
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		244	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.80	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 14					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		891
Measured FFS		Measured	Free-Flow Speed, mi/h		50.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		244	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		2.82
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.14
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		50.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.47375	PF Power Coefficient (p)		0.71164
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		2.1
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	891	-	-	48.0
Vehicle Results					
Average Speed, mi/h		48.0	Percent Followers, %		41.8
Segment Travel Time, minutes		0.21	Follower Density (FD), followers/mi/ln		2.1
Vehicle LOS		B			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4

Flow Rate Outside Lane, veh/h	244	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.59	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

Facility Results				
T	VMT veh-mi/AP	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	327	0.11	1.1	A



HCS Two-Lane Highway Report

Project Information

Analyst	MJV	Date	5/2/2024
Agency	HRG	Analysis Year	2050 Build Option 1
Jurisdiction	SDDOT	Time Analyzed	PM Peak
Project Description	West of Hartford SD 38 EB	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1069
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	157	Opposing Demand Flow Rate, veh/h	286
Peak Hour Factor	0.88	Total Trucks, %	5.79
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.09

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.34767	Speed Power Coefficient (p)	0.51808
PF Slope Coefficient (m)	-1.25475	PF Power Coefficient (p)	0.80124
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.6
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1069	-	-	69.0

Vehicle Results

Average Speed, mi/h	69.0	Percent Followers, %	24.8
Segment Travel Time, minutes	0.18	Follower Density (FD), followers/mi/ln	0.6
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	157	Bicycle Effective Width, ft	30
Bicycle LOS Score	1.86	Bicycle Effective Speed Factor	5.07
Bicycle LOS	B		

Segment 2

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	664
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity					
Directional Demand Flow Rate, veh/h		157	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		5.79
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.09
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.29315	PF Power Coefficient (p)		0.75829
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.6
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	664	-	-	68.6
Vehicle Results					
Average Speed, mi/h		68.6	Percent Followers, %		27.2
Segment Travel Time, minutes		0.11	Follower Density (FD), followers/mi/ln		0.6
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		157	Bicycle Effective Width, ft		30
Bicycle LOS Score		1.86	Bicycle Effective Speed Factor		5.07
Bicycle LOS		B			
Segment 3					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		1871
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		157	Opposing Demand Flow Rate, veh/h		286
Peak Hour Factor		0.88	Total Trucks, %		5.79
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.09
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.35747	Speed Power Coefficient (p)		0.51808
PF Slope Coefficient (m)		-1.22915	PF Power Coefficient (p)		0.81213
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.5
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1871	-	-	69.0

Vehicle Results

Average Speed, mi/h	69.0	Percent Followers, %	23.9
Segment Travel Time, minutes	0.31	Follower Density (FD), followers/mi/ln	0.5
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	157	Bicycle Effective Width, ft	30
Bicycle LOS Score	1.86	Bicycle Effective Speed Factor	5.07
Bicycle LOS	B		

Segment 4

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	925
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	157	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	5.79
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.09

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29315	PF Power Coefficient (p)	0.75829
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.6
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	925	-	-	68.6

Vehicle Results

Average Speed, mi/h	68.6	Percent Followers, %	27.2
Segment Travel Time, minutes	0.15	Follower Density (FD), followers/mi/ln	0.6
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	157	Bicycle Effective Width, ft	30
Bicycle LOS Score	1.86	Bicycle Effective Speed Factor	5.07
Bicycle LOS	B		

Segment 5					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		4476
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		157	Opposing Demand Flow Rate, veh/h		286
Peak Hour Factor		0.88	Total Trucks, %		5.79
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.09
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.39096	Speed Power Coefficient (p)		0.51808
PF Slope Coefficient (m)		-1.17364	PF Power Coefficient (p)		0.83159
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.5
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4476	-	-	69.0
Vehicle Results					
Average Speed, mi/h		69.0	Percent Followers, %		22.2
Segment Travel Time, minutes		0.74	Follower Density (FD), followers/mi/ln		0.5
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		157	Bicycle Effective Width, ft		30
Bicycle LOS Score		1.86	Bicycle Effective Speed Factor		5.07
Bicycle LOS		B			
Segment 6					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		896
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		157	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		5.79
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.09
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0

Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29315	PF Power Coefficient (p)	0.75829
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.6
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	896	-	-	68.6

Vehicle Results

Average Speed, mi/h	68.6	Percent Followers, %	27.2
Segment Travel Time, minutes	0.15	Follower Density (FD), followers/mi/ln	0.6
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	157	Bicycle Effective Width, ft	30
Bicycle LOS Score	1.86	Bicycle Effective Speed Factor	5.07
Bicycle LOS	B		

Segment 7

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	743
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	157	Opposing Demand Flow Rate, veh/h	286
Peak Hour Factor	0.88	Total Trucks, %	5.79
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.09

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.34767	Speed Power Coefficient (p)	0.51808
PF Slope Coefficient (m)	-1.25475	PF Power Coefficient (p)	0.80124
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.6
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	743	-	-	69.0

Vehicle Results

Average Speed, mi/h	69.0	Percent Followers, %	24.8
Segment Travel Time, minutes	0.12	Follower Density (FD), followers/mi/ln	0.6
Vehicle LOS	A		

Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		157	Bicycle Effective Width, ft		30
Bicycle LOS Score		1.86	Bicycle Effective Speed Factor		5.07
Bicycle LOS		B			
Segment 8					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		2717
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		164	Opposing Demand Flow Rate, veh/h		289
Peak Hour Factor		0.88	Total Trucks, %		3.28
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.37072	Speed Power Coefficient (p)		0.51760
PF Slope Coefficient (m)		-1.20338	PF Power Coefficient (p)		0.82225
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.6
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2717	-	-	68.9
Vehicle Results					
Average Speed, mi/h		68.9	Percent Followers, %		23.8
Segment Travel Time, minutes		0.45	Follower Density (FD), followers/mi/ln		0.6
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		164	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.40	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 9					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		1013
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					

Directional Demand Flow Rate, veh/h	164	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	3.28
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.10

Intermediate Results			
Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29345	PF Power Coefficient (p)	0.75792
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.7
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1013	-	-	68.5

Vehicle Results			
Average Speed, mi/h	68.5	Percent Followers, %	28.0
Segment Travel Time, minutes	0.17	Follower Density (FD), followers/mi/ln	0.7
Vehicle LOS	A		

Bicycle Results			
Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	164	Bicycle Effective Width, ft	29
Bicycle LOS Score	1.40	Bicycle Effective Speed Factor	5.07
Bicycle LOS	A		

Segment 10

Vehicle Inputs			
Segment Type	Passing Zone	Length, ft	4569
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity			
Directional Demand Flow Rate, veh/h	164	Opposing Demand Flow Rate, veh/h	289
Peak Hour Factor	0.88	Total Trucks, %	3.28
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.10

Intermediate Results			
Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.39263	Speed Power Coefficient (p)	0.51760
PF Slope Coefficient (m)	-1.17332	PF Power Coefficient (p)	0.83118
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.5
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h

1	Tangent	4569	-	-	68.9
Vehicle Results					
Average Speed, mi/h		68.9	Percent Followers, %		22.9
Segment Travel Time, minutes		0.75	Follower Density (FD), followers/mi/ln		0.5
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		164	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.40	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 11					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		5676
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		164	Opposing Demand Flow Rate, veh/h		280
Peak Hour Factor		0.88	Total Trucks, %		2.82
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.40080	Speed Power Coefficient (p)		0.51956
PF Slope Coefficient (m)		-1.16417	PF Power Coefficient (p)		0.83135
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.5
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5676	-	-	68.9
Vehicle Results					
Average Speed, mi/h		68.9	Percent Followers, %		22.8
Segment Travel Time, minutes		0.94	Follower Density (FD), followers/mi/ln		0.5
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		164	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.28	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 12					

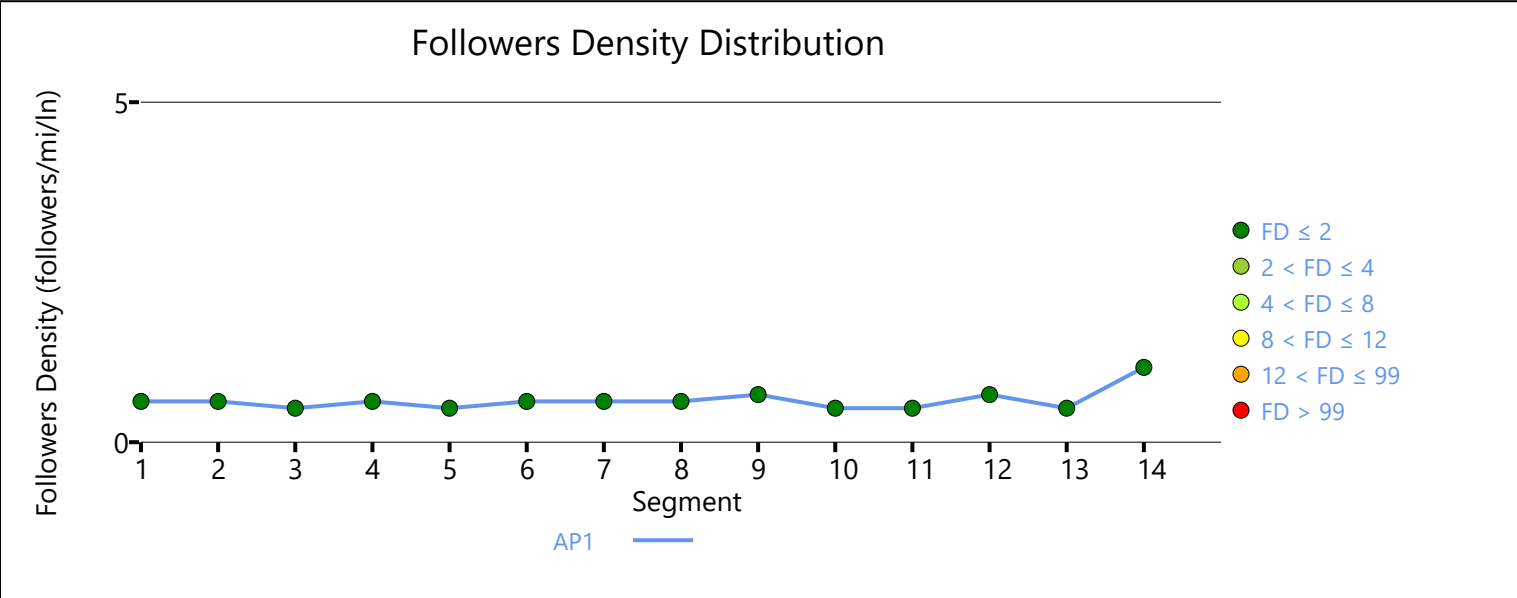
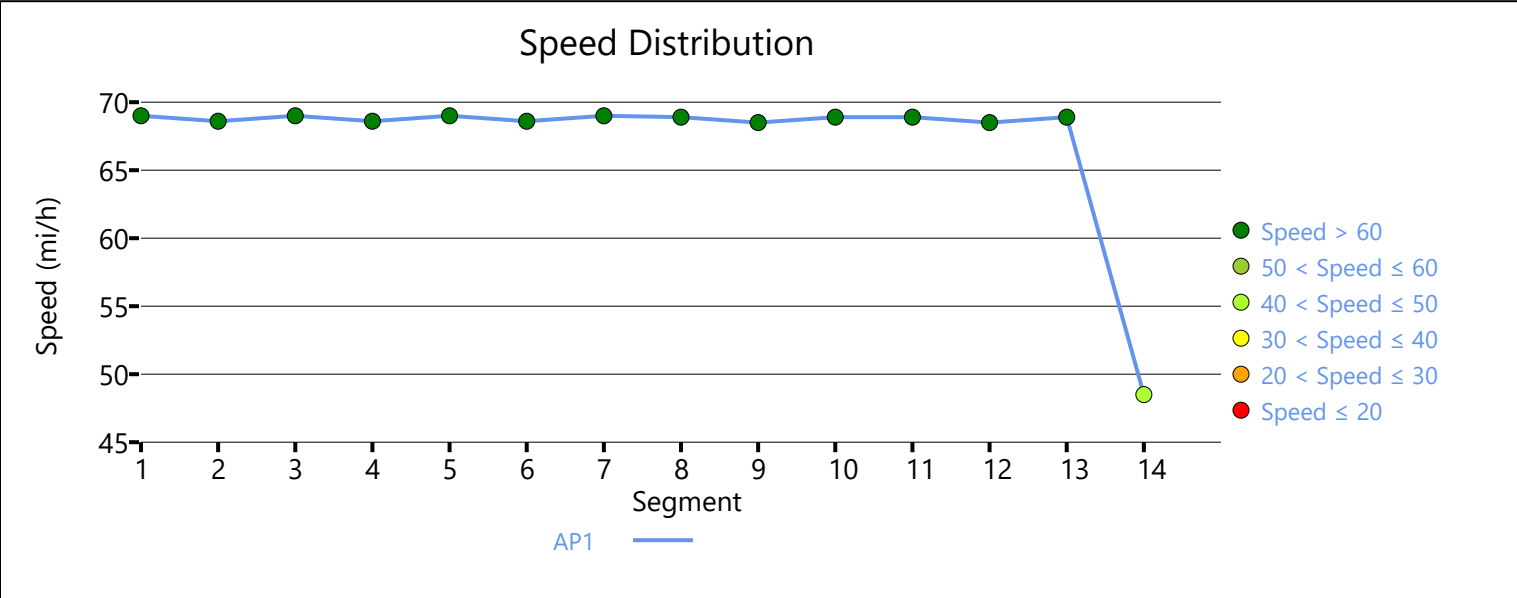
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		657
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		164	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		2.82
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.29350	PF Power Coefficient (p)		0.75785
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.7
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	657	-	-	68.5
Vehicle Results					
Average Speed, mi/h		68.5	Percent Followers, %		28.0
Segment Travel Time, minutes		0.11	Follower Density (FD), followers/mi/ln		0.7
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		164	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.28	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 13					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		6009
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		164	Opposing Demand Flow Rate, veh/h		280
Peak Hour Factor		0.88	Total Trucks, %		2.82
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.40389	Speed Power Coefficient (p)		0.51956
PF Slope Coefficient (m)		-1.16281	PF Power Coefficient (p)		0.83065

In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.5
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6009	-	-	68.9
Vehicle Results					
Average Speed, mi/h		68.9	Percent Followers, %		22.8
Segment Travel Time, minutes		0.99	Follower Density (FD), followers/mi/ln		0.5
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		164	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.28	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 14					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		891
Measured FFS		Measured	Free-Flow Speed, mi/h		50.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		164	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		2.82
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		50.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.47375	PF Power Coefficient (p)		0.71164
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.1
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	891	-	-	48.5
Vehicle Results					
Average Speed, mi/h		48.5	Percent Followers, %		33.4
Segment Travel Time, minutes		0.21	Follower Density (FD), followers/mi/ln		1.1
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4

Flow Rate Outside Lane, veh/h	164	Bicycle Effective Width, ft	29
Bicycle LOS Score	1.06	Bicycle Effective Speed Factor	4.42
Bicycle LOS	A		

Facility Results				
T	VMT veh-mi/AP	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	216	0.05	0.6	A



HCS Two-Lane Highway Report

Project Information

Analyst	MJV	Date	5/2/2024
Agency	HRG	Analysis Year	2050 Build Option 1
Jurisdiction	SDDOT	Time Analyzed	AM Peak
Project Description	WB 38 West of Hartford	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	10549
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	165	Opposing Demand Flow Rate, veh/h	244
Peak Hour Factor	0.88	Total Trucks, %	12.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.10

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.42827	Speed Power Coefficient (p)	0.52768
PF Slope Coefficient (m)	-1.16689	PF Power Coefficient (p)	0.80729
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.6
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	10549	-	-	69.0

Vehicle Results

Average Speed, mi/h	69.0	Percent Followers, %	23.8
Segment Travel Time, minutes	1.74	Follower Density (FD), followers/mi/ln	0.6
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	165	Bicycle Effective Width, ft	29
Bicycle LOS Score	4.94	Bicycle Effective Speed Factor	5.07
Bicycle LOS	E		

Segment 2

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2793
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity					
Directional Demand Flow Rate, veh/h		165	Opposing Demand Flow Rate, veh/h		244
Peak Hour Factor		0.88	Total Trucks, %		12.50
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.35767	Speed Power Coefficient (p)		0.52768
PF Slope Coefficient (m)		-1.19319	PF Power Coefficient (p)		0.82737
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.6
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2793	-	-	69.0
Vehicle Results					
Average Speed, mi/h		69.0	Percent Followers, %		23.5
Segment Travel Time, minutes		0.46	Follower Density (FD), followers/mi/ln		0.6
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		165	Bicycle Effective Width, ft		29
Bicycle LOS Score		4.94	Bicycle Effective Speed Factor		5.07
Bicycle LOS		E			
Segment 3					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		3825
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		165	Opposing Demand Flow Rate, veh/h		245
Peak Hour Factor		0.88	Total Trucks, %		2.40
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.37079	Speed Power Coefficient (p)		0.52741
PF Slope Coefficient (m)		-1.17529	PF Power Coefficient (p)		0.83222
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.6
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3825	-	-	69.0
Vehicle Results					
Average Speed, mi/h		69.0	Percent Followers, %		23.1
Segment Travel Time, minutes		0.63	Follower Density (FD), followers/mi/ln		0.6
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		165	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.17	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 4					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		791
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		165	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		2.40
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.29355	PF Power Coefficient (p)		0.75779
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.7
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	791	-	-	68.5
Vehicle Results					
Average Speed, mi/h		68.5	Percent Followers, %		28.1
Segment Travel Time, minutes		0.13	Follower Density (FD), followers/mi/ln		0.7
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		165	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.17	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			

Segment 5					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		3414
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		165	Opposing Demand Flow Rate, veh/h		245
Peak Hour Factor		0.88	Total Trucks, %		2.40
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.36595	Speed Power Coefficient (p)		0.52741
PF Slope Coefficient (m)		-1.18179	PF Power Coefficient (p)		0.83026
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.6
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3414	-	-	69.0
Vehicle Results					
Average Speed, mi/h		69.0	Percent Followers, %		23.2
Segment Travel Time, minutes		0.56	Follower Density (FD), followers/mi/ln		0.6
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		165	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.17	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 6					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		286
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		165	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		2.40
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0

Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29355	PF Power Coefficient (p)	0.75779
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.7
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	286	-	-	68.5

Vehicle Results

Average Speed, mi/h	68.5	Percent Followers, %	28.1
Segment Travel Time, minutes	0.05	Follower Density (FD), followers/mi/ln	0.7
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	165	Bicycle Effective Width, ft	29
Bicycle LOS Score	1.17	Bicycle Effective Speed Factor	5.07
Bicycle LOS	A		

Segment 7

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	463
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	169	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	2.60
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.10

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29353	PF Power Coefficient (p)	0.75782
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.7
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	463	-	-	68.5

Vehicle Results

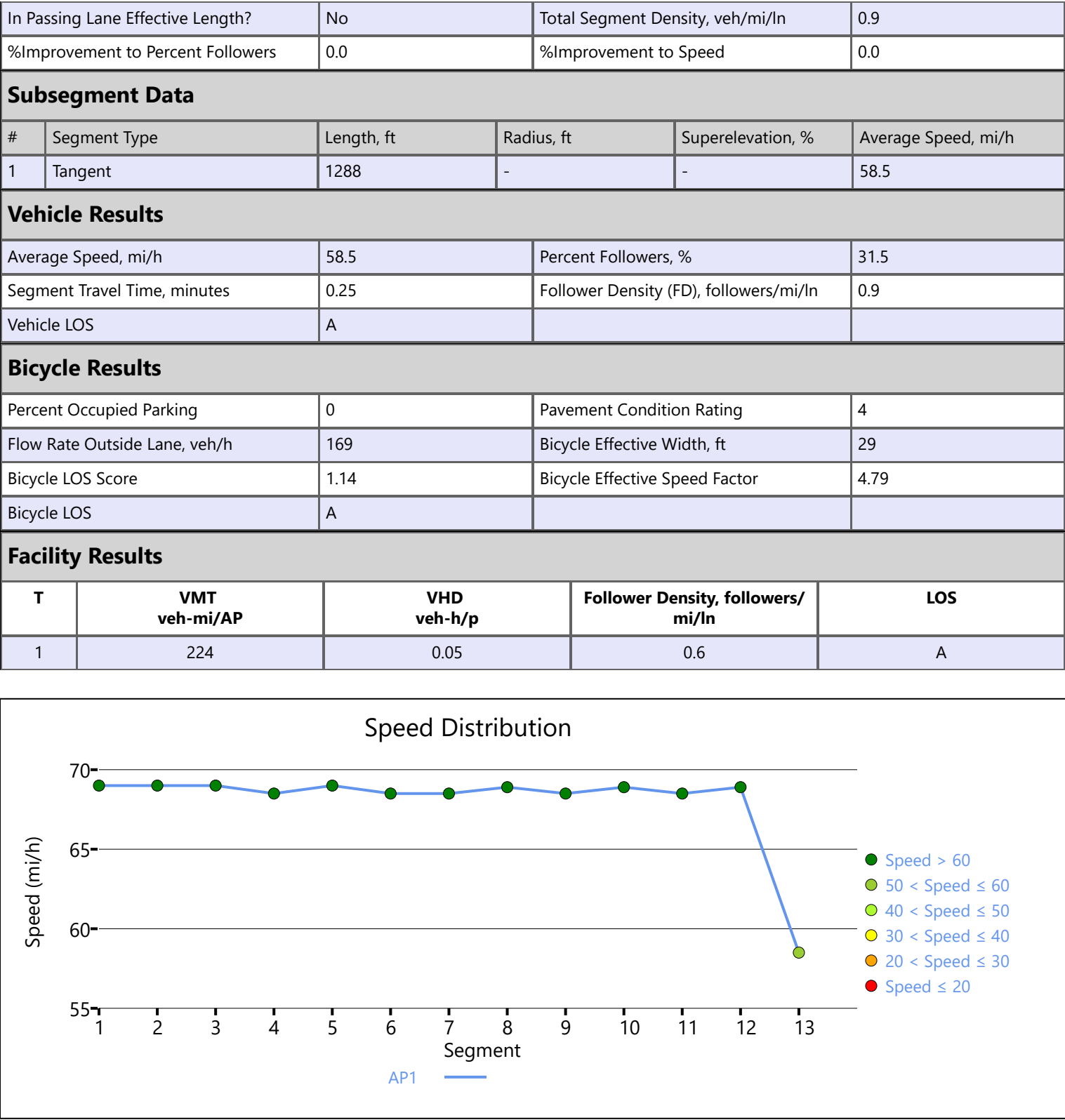
Average Speed, mi/h	68.5	Percent Followers, %	28.6
Segment Travel Time, minutes	0.08	Follower Density (FD), followers/mi/ln	0.7
Vehicle LOS	A		

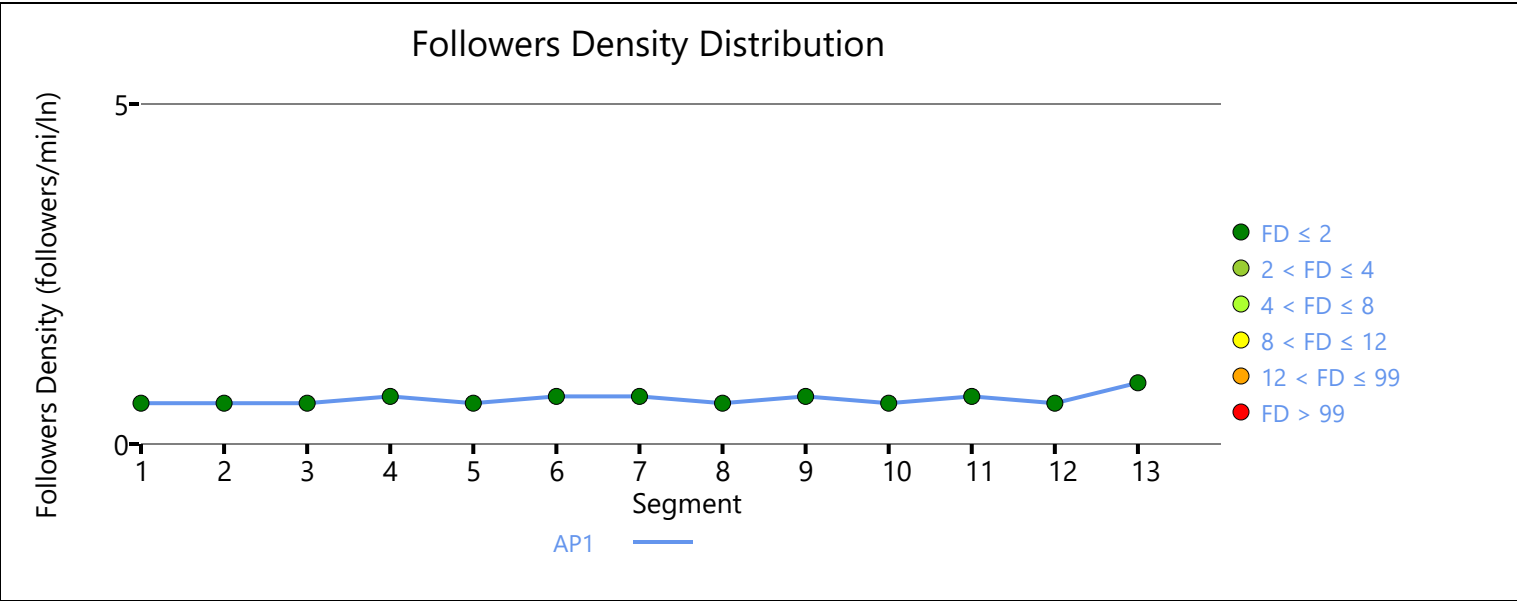
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		169	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.23	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 8					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		4822
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		169	Opposing Demand Flow Rate, veh/h		243
Peak Hour Factor		0.88	Total Trucks, %		2.60
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.38079	Speed Power Coefficient (p)		0.52796
PF Slope Coefficient (m)		-1.16377	PF Power Coefficient (p)		0.83451
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.6
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4822	-	-	68.9
Vehicle Results					
Average Speed, mi/h		68.9	Percent Followers, %		23.2
Segment Travel Time, minutes		0.79	Follower Density (FD), followers/mi/ln		0.6
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		169	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.23	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 9					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		861
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					

Directional Demand Flow Rate, veh/h		169	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		2.60
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.29353	PF Power Coefficient (p)		0.75782
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.7
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	861	-	-	68.5
Vehicle Results					
Average Speed, mi/h		68.5	Percent Followers, %		28.6
Segment Travel Time, minutes		0.14	Follower Density (FD), followers/mi/ln		0.7
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		169	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.23	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 10					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		1556
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		169	Opposing Demand Flow Rate, veh/h		243
Peak Hour Factor		0.88	Total Trucks, %		2.60
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.33831	Speed Power Coefficient (p)		0.52796
PF Slope Coefficient (m)		-1.23554	PF Power Coefficient (p)		0.80871
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.6
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h

1	Tangent	1556	-	-	68.9
Vehicle Results					
Average Speed, mi/h		68.9	Percent Followers, %		25.5
Segment Travel Time, minutes		0.26	Follower Density (FD), followers/mi/ln		0.6
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		169	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.23	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 11					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		799
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		169	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		2.60
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.29353	PF Power Coefficient (p)		0.75782
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.7
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	799	-	-	68.5
Vehicle Results					
Average Speed, mi/h		68.5	Percent Followers, %		28.6
Segment Travel Time, minutes		0.13	Follower Density (FD), followers/mi/ln		0.7
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		169	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.23	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 12					

Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		857
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		169	Opposing Demand Flow Rate, veh/h		243
Peak Hour Factor		0.88	Total Trucks, %		2.60
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.33390	Speed Power Coefficient (p)		0.52796
PF Slope Coefficient (m)		-1.24754	PF Power Coefficient (p)		0.80350
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.6
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	857	-	-	68.9
Vehicle Results					
Average Speed, mi/h		68.9	Percent Followers, %		25.9
Segment Travel Time, minutes		0.14	Follower Density (FD), followers/mi/ln		0.6
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		169	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.23	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 13					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		1288
Measured FFS		Measured	Free-Flow Speed, mi/h		60.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		169	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		2.60
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		60.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.39677	PF Power Coefficient (p)		0.73640





HCS Two-Lane Highway Report

Project Information

Analyst	MJV	Date	5/2/2024
Agency	HRG	Analysis Year	2050 Build Option 1
Jurisdiction	SDDOT	Time Analyzed	PM Peak
Project Description	WB 38 West of Hartford	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	10549
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	280	Opposing Demand Flow Rate, veh/h	164
Peak Hour Factor	0.88	Total Trucks, %	1.94
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.16

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.39885	Speed Power Coefficient (p)	0.55020
PF Slope Coefficient (m)	-1.15143	PF Power Coefficient (p)	0.81244
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.4
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	10549	-	-	68.3

Vehicle Results

Average Speed, mi/h	68.3	Percent Followers, %	33.6
Segment Travel Time, minutes	1.76	Follower Density (FD), followers/mi/ln	1.4
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	280	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.64	Bicycle Effective Speed Factor	5.07
Bicycle LOS	C		

Segment 2

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2793
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity					
Directional Demand Flow Rate, veh/h		280	Opposing Demand Flow Rate, veh/h		164
Peak Hour Factor		0.88	Total Trucks, %		1.94
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.16
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.32824	Speed Power Coefficient (p)		0.55020
PF Slope Coefficient (m)		-1.17723	PF Power Coefficient (p)		0.83227
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.4
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2793	-	-	68.3
Vehicle Results					
Average Speed, mi/h		68.3	Percent Followers, %		33.5
Segment Travel Time, minutes		0.46	Follower Density (FD), followers/mi/ln		1.4
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		280	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.64	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 3					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		3825
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		289	Opposing Demand Flow Rate, veh/h		164
Peak Hour Factor		0.88	Total Trucks, %		2.19
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.17
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.34098	Speed Power Coefficient (p)		0.55020
PF Slope Coefficient (m)		-1.15833	PF Power Coefficient (p)		0.83897
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.4
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3825	-	-	68.3

Vehicle Results

Average Speed, mi/h	68.3	Percent Followers, %	33.5
Segment Travel Time, minutes	0.64	Follower Density (FD), followers/mi/ln	1.4
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	289	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.72	Bicycle Effective Speed Factor	5.07
Bicycle LOS	C		

Segment 4

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	791
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	289	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	2.19
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.17

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29358	PF Power Coefficient (p)	0.75776
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.7
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	791	-	-	67.7

Vehicle Results

Average Speed, mi/h	67.7	Percent Followers, %	39.6
Segment Travel Time, minutes	0.13	Follower Density (FD), followers/mi/ln	1.7
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	289	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.72	Bicycle Effective Speed Factor	5.07
Bicycle LOS	C		

Segment 5					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		3414
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		289	Opposing Demand Flow Rate, veh/h		164
Peak Hour Factor		0.88	Total Trucks, %		2.19
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.17
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.33614	Speed Power Coefficient (p)		0.55020
PF Slope Coefficient (m)		-1.16472	PF Power Coefficient (p)		0.83695
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.4
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3414	-	-	68.3
Vehicle Results					
Average Speed, mi/h		68.3	Percent Followers, %		33.7
Segment Travel Time, minutes		0.57	Follower Density (FD), followers/mi/ln		1.4
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		289	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.72	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 6					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		286
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		289	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		2.19
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.17
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0

Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29358	PF Power Coefficient (p)	0.75776
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.7
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	286	-	-	67.7

Vehicle Results

Average Speed, mi/h	67.7	Percent Followers, %	39.6
Segment Travel Time, minutes	0.05	Follower Density (FD), followers/mi/ln	1.7
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	289	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.72	Bicycle Effective Speed Factor	5.07
Bicycle LOS	C		

Segment 7

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	463
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	286	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	3.08
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.17

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29347	PF Power Coefficient (p)	0.75789
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.7
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	463	-	-	67.7

Vehicle Results

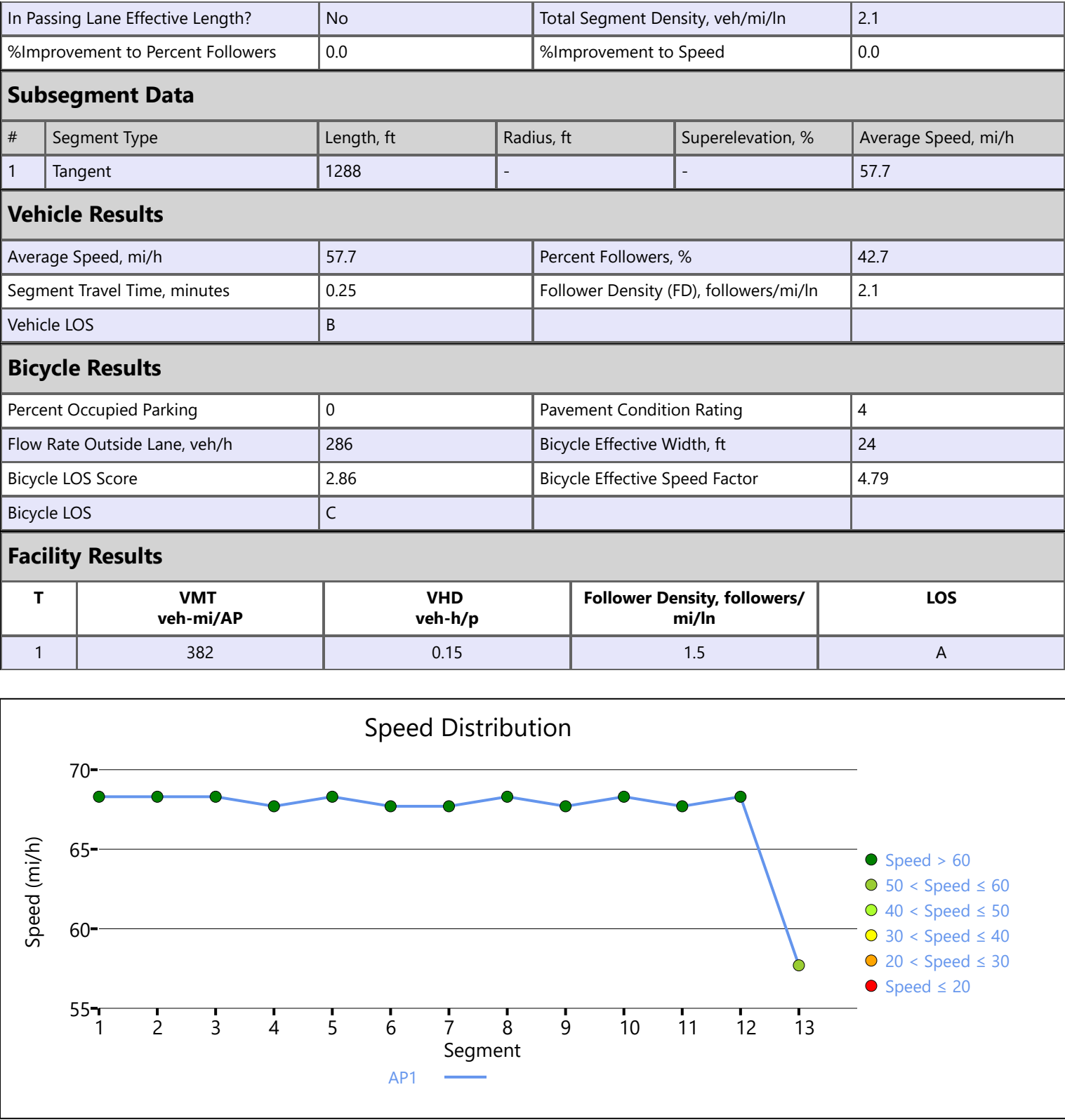
Average Speed, mi/h	67.7	Percent Followers, %	39.4
Segment Travel Time, minutes	0.08	Follower Density (FD), followers/mi/ln	1.7
Vehicle LOS	A		

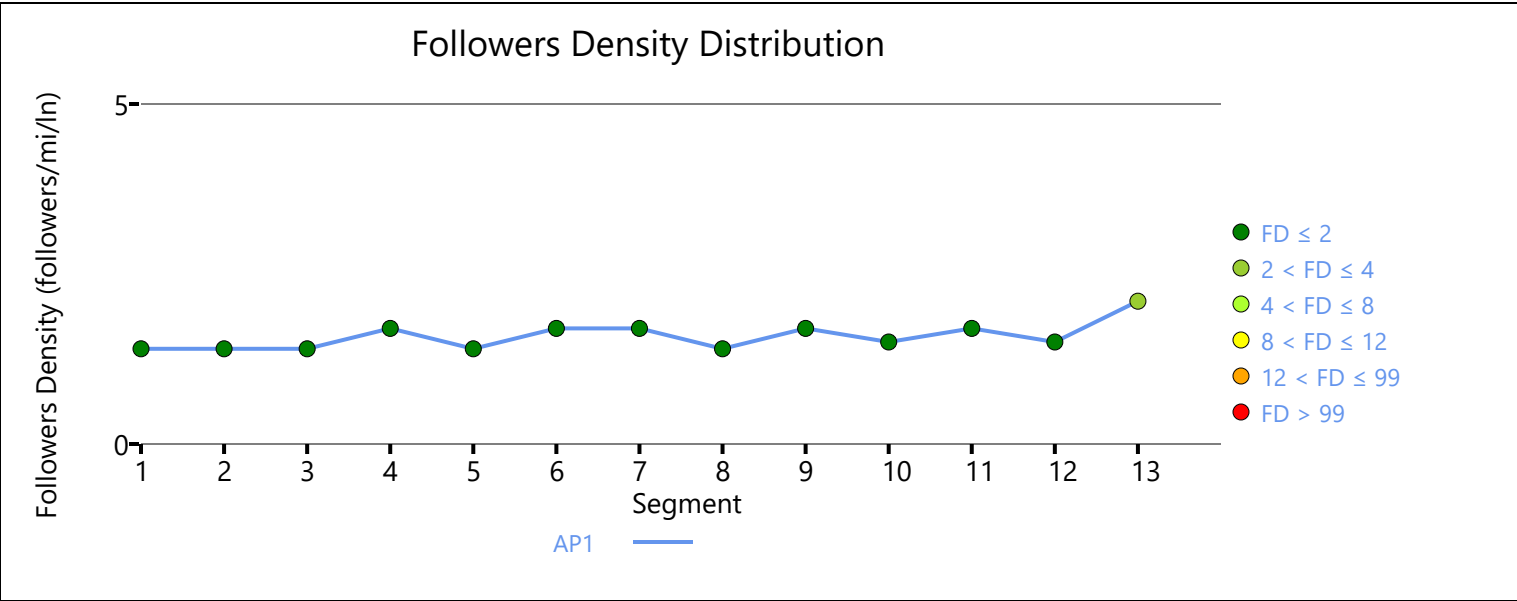
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		286	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.95	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 8					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		4822
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		286	Opposing Demand Flow Rate, veh/h		157
Peak Hour Factor		0.88	Total Trucks, %		3.08
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.17
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.34895	Speed Power Coefficient (p)		0.55243
PF Slope Coefficient (m)		-1.14563	PF Power Coefficient (p)		0.84199
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.4
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4822	-	-	68.3
Vehicle Results					
Average Speed, mi/h		68.3	Percent Followers, %		33.0
Segment Travel Time, minutes		0.80	Follower Density (FD), followers/mi/ln		1.4
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		286	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.95	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 9					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		861
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					

Directional Demand Flow Rate, veh/h		286	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		3.08
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.17
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.29347	PF Power Coefficient (p)		0.75789
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.7
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	861	-	-	67.7
Vehicle Results					
Average Speed, mi/h		67.7	Percent Followers, %		39.4
Segment Travel Time, minutes		0.14	Follower Density (FD), followers/mi/ln		1.7
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		286	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.95	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 10					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		1556
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		286	Opposing Demand Flow Rate, veh/h		157
Peak Hour Factor		0.88	Total Trucks, %		3.08
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.17
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.30647	Speed Power Coefficient (p)		0.55243
PF Slope Coefficient (m)		-1.21611	PF Power Coefficient (p)		0.81541
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.5
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h

1	Tangent	1556	-	-	68.3
Vehicle Results					
Average Speed, mi/h		68.3	Percent Followers, %		35.5
Segment Travel Time, minutes		0.26	Follower Density (FD), followers/mi/ln		1.5
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		286	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.95	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 11					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		799
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		286	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		3.08
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.17
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.29347	PF Power Coefficient (p)		0.75789
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.7
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	799	-	-	67.7
Vehicle Results					
Average Speed, mi/h		67.7	Percent Followers, %		39.4
Segment Travel Time, minutes		0.13	Follower Density (FD), followers/mi/ln		1.7
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		286	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.95	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 12					

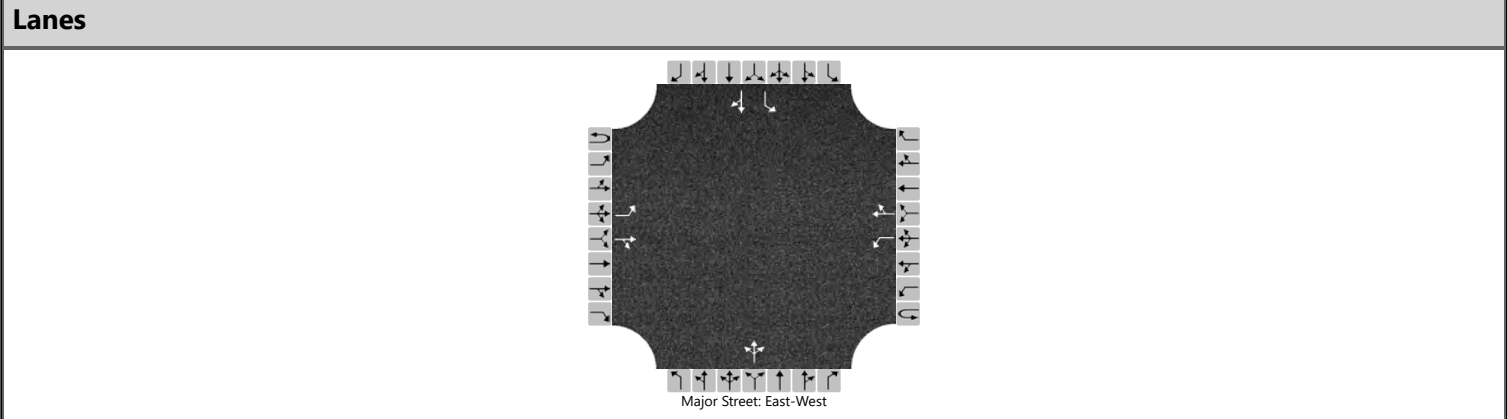
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		857
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		286	Opposing Demand Flow Rate, veh/h		157
Peak Hour Factor		0.88	Total Trucks, %		3.08
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.17
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.30206	Speed Power Coefficient (p)		0.55243
PF Slope Coefficient (m)		-1.22789	PF Power Coefficient (p)		0.81007
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.5
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	857	-	-	68.3
Vehicle Results					
Average Speed, mi/h		68.3	Percent Followers, %		36.0
Segment Travel Time, minutes		0.14	Follower Density (FD), followers/mi/ln		1.5
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		286	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.95	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 13					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		1288
Measured FFS		Measured	Free-Flow Speed, mi/h		60.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		286	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		3.08
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.17
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		60.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.39671	PF Power Coefficient (p)		0.73647





HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & SD 19
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	SD 19
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38 Build Option 1		



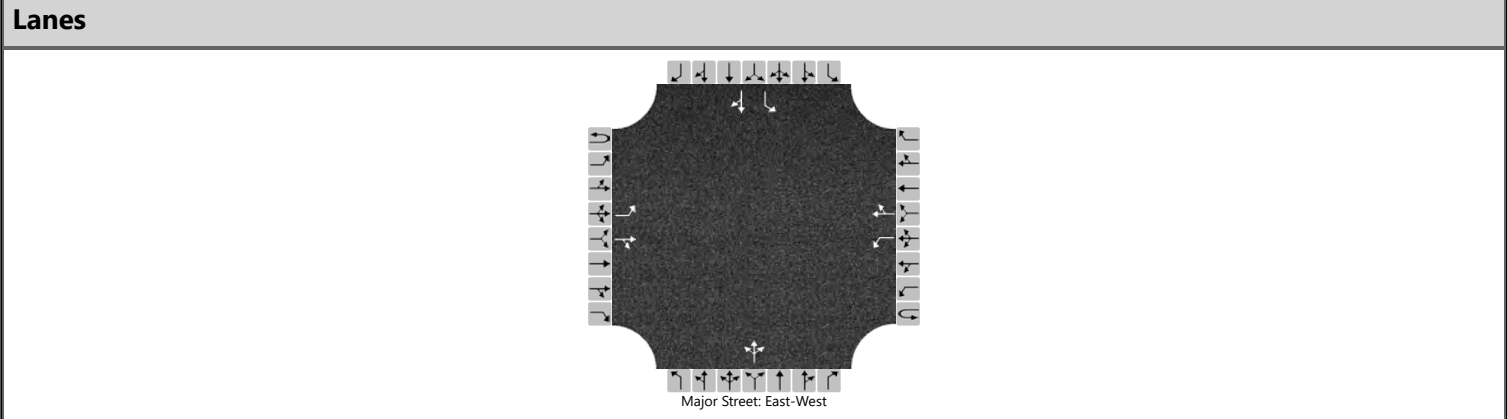
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		1	1	0
Configuration		L		TR		L		TR			LTR			L		TR
Volume (veh/h)		55	165	0		0	120	50		10	5	10		70	0	95
Percent Heavy Vehicles (%)		30				3				3	3	3		9	3	11
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.40				4.13				7.13	6.53	6.23		7.19	6.53	6.31
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.47				2.23				3.53	4.03	3.33		3.58	4.03	3.40

Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		60				0					27			76		103
Capacity, c (veh/h)		1238				1390					524			461		865
v/c Ratio		0.05				0.00					0.05			0.16		0.12
95% Queue Length, Q ₉₅ (veh)		0.2				0.0					0.2			0.6		0.4
Control Delay (s/veh)		8.1	0.2	0.2		7.6	0.0	0.0			12.2			14.3		9.7
Level of Service (LOS)		A	A	A		A	A	A			B			B		A
Approach Delay (s/veh)		2.2				0.0				12.2				11.7		
Approach LOS		A				A				B				B		

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & SD 19
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	SD 19
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38 Build Option 1		



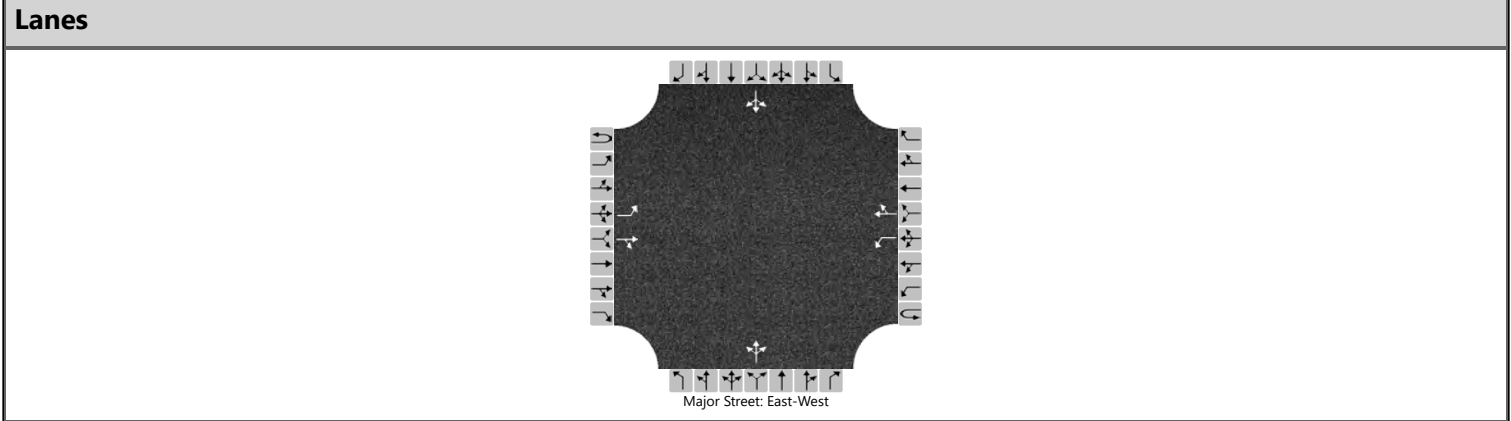
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		1	1	0
Configuration		L		TR		L		TR			LTR			L		TR
Volume (veh/h)		85	115	0		0	170	80		10	5	10		40	0	50
Percent Heavy Vehicles (%)		2				3				3	3	3		10	3	14
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.13				7.13	6.53	6.23		7.20	6.53	6.34
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.23				3.53	4.03	3.33		3.59	4.03	3.43

Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		92				0					27			43		54
Capacity, c (veh/h)		1291				1455					498			395		782
v/c Ratio		0.07				0.00					0.05			0.11		0.07
95% Queue Length, Q ₉₅ (veh)		0.2				0.0					0.2			0.4		0.2
Control Delay (s/veh)		8.0	0.2	0.2		7.5	0.0	0.0			12.6			15.2		9.9
Level of Service (LOS)		A	A	A		A	A	A			B			C		A
Approach Delay (s/veh)		3.5				0.0				12.6				12.3		
Approach LOS		A				A				B				B		

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & 459th
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	459th Ave
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38 Build Option 1		



Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0
Configuration		L		TR		L		TR			LTR				LTR	
Volume (veh/h)		0	215	7		2	155	0		15	0	7		9	0	0
Percent Heavy Vehicles (%)		3				3				13	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

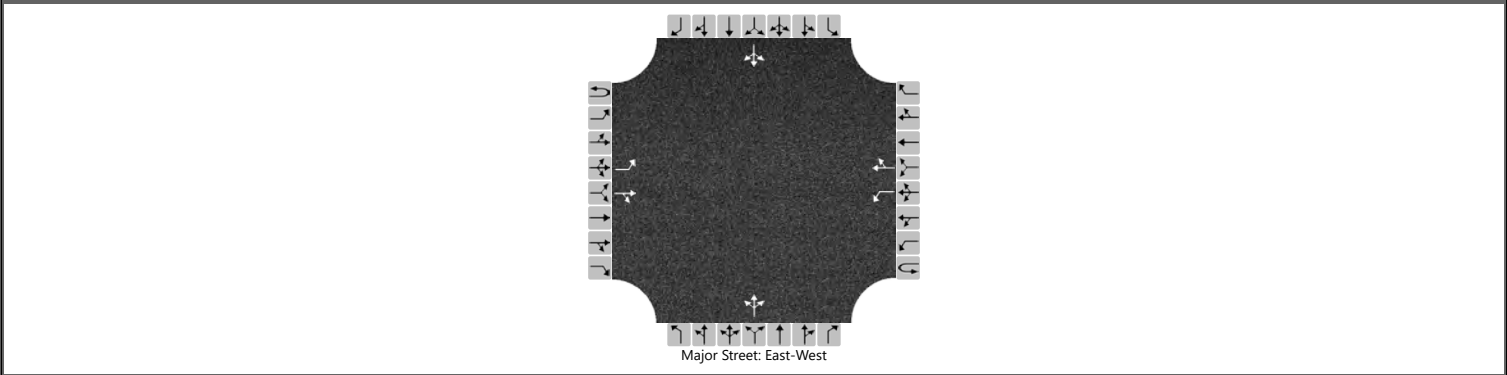
Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.23	6.50	6.20		7.10	6.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.62	4.00	3.30		3.50	4.00	3.30

Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		0				2					24				10	
Capacity, c (veh/h)		1403				1319					596				546	
v/c Ratio		0.00				0.00					0.04				0.02	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.1				0.1	
Control Delay (s/veh)		7.6	0.0	0.0		7.7	0.0	0.0			11.3				11.7	
Level of Service (LOS)		A	A	A		A	A	A			B				B	
Approach Delay (s/veh)	0.0				0.1				11.3				11.7			
Approach LOS	A				A				B				B			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & 459th
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	459th Ave
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38 Build Option 1		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0
Configuration		L		TR		L		TR			LTR				LTR	
Volume (veh/h)		0	145	9		15	245	2		15	0	4		2	2	0
Percent Heavy Vehicles (%)		0				0				13	0	0		0	100	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

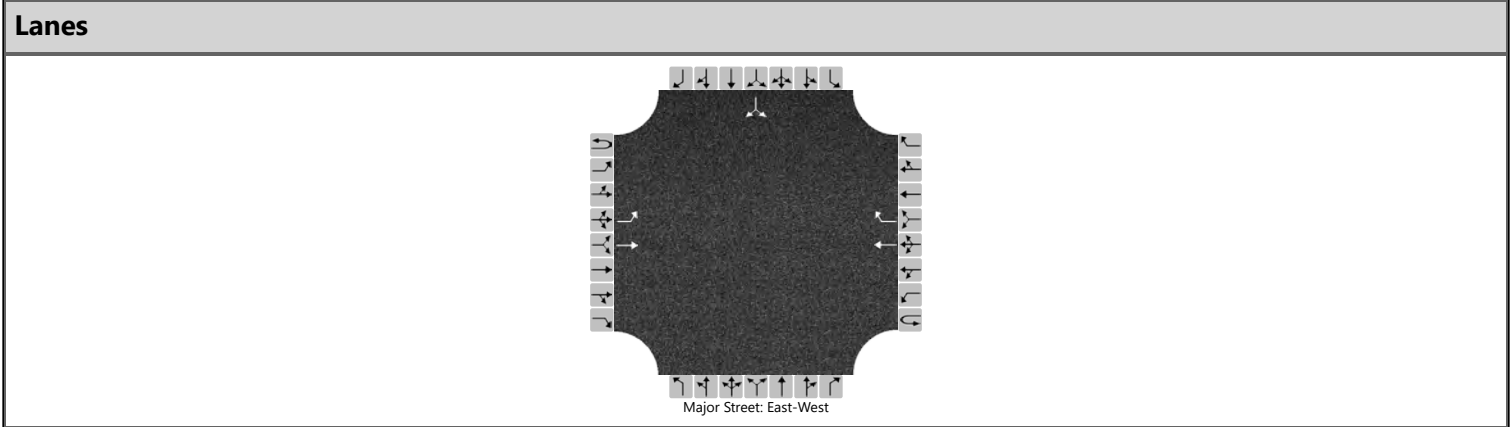
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.23	6.50	6.20		7.10	7.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.62	4.00	3.30		3.50	4.90	3.30

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				16					21				4	
Capacity, c (veh/h)		1307				1423					534				427	
v/c Ratio		0.00				0.01					0.04				0.01	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.1				0.0	
Control Delay (s/veh)		7.8	0.0	0.0		7.6	0.1	0.1			12.0				13.5	
Level of Service (LOS)		A	A	A		A	A	A			B				B	
Approach Delay (s/veh)		0.0				0.5				12.0				13.5		
Approach LOS		A				A				B				B		

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & I-90 Speedway
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	I-90 Expressway
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38 Build Option 1		



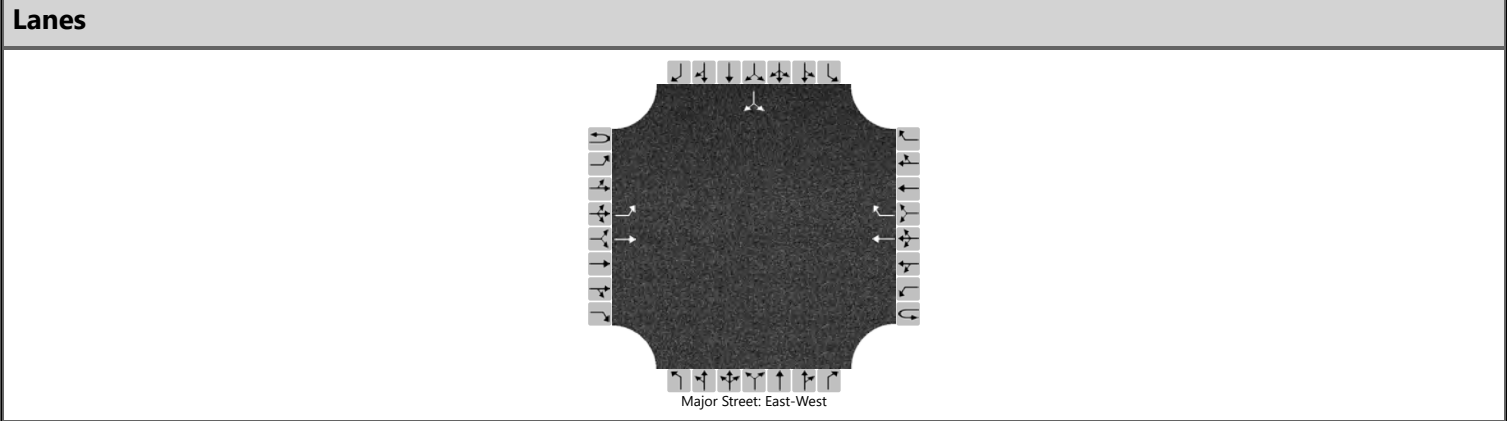
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	1		0	0	0		0	1	0
Configuration		L	T				T	R							LR	
Volume (veh/h)		0	230				165	0						0		0
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized					No											
Median Type Storage	Undivided															

Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		0													0	
Capacity, c (veh/h)		1390													0	
v/c Ratio		0.00														
95% Queue Length, Q ₉₅ (veh)		0.0														
Control Delay (s/veh)		7.6	0.0													
Level of Service (LOS)		A	A													
Approach Delay (s/veh)		0.0														
Approach LOS		A														

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & I-90 Speedway
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	I-90 Expressway
Time Analyzed	AM Peak - Event Traffic	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38 Build Option 1		



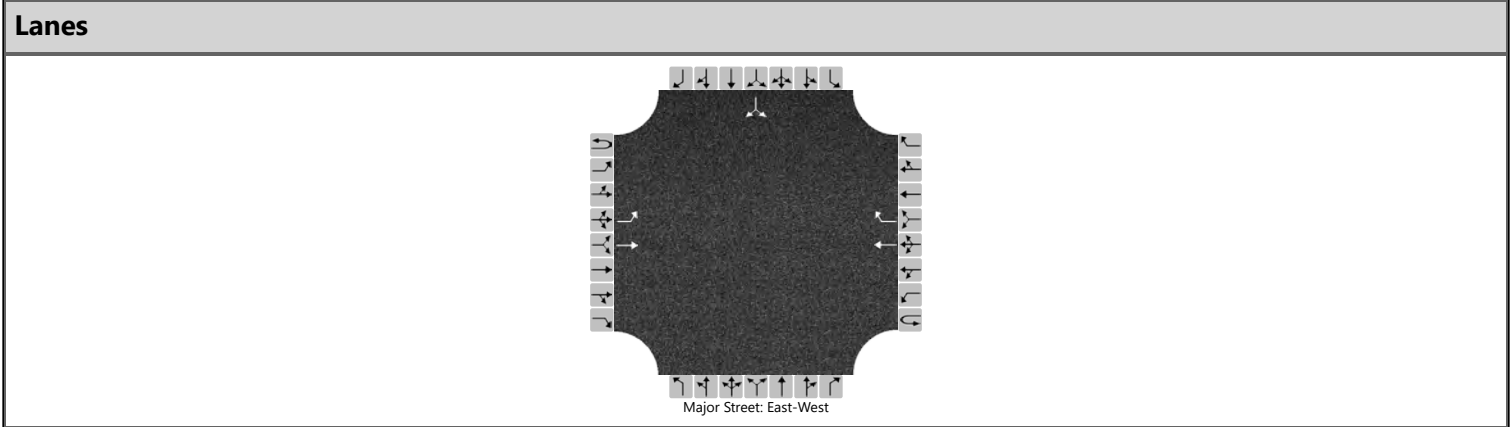
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	1		0	0	0		0	1	0
Configuration		L	T				T	R							LR	
Volume (veh/h)		0	412				295	0						0		0
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized					No											
Median Type Storage	Undivided															

Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		0													0	
Capacity, c (veh/h)		1234													0	
v/c Ratio		0.00														
95% Queue Length, Q ₉₅ (veh)		0.0														
Control Delay (s/veh)		7.9	0.0													
Level of Service (LOS)		A	A													
Approach Delay (s/veh)		0.0														
Approach LOS		A														

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & I-90 Speedway
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	I-90 Expressway
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38 Build Option 1		



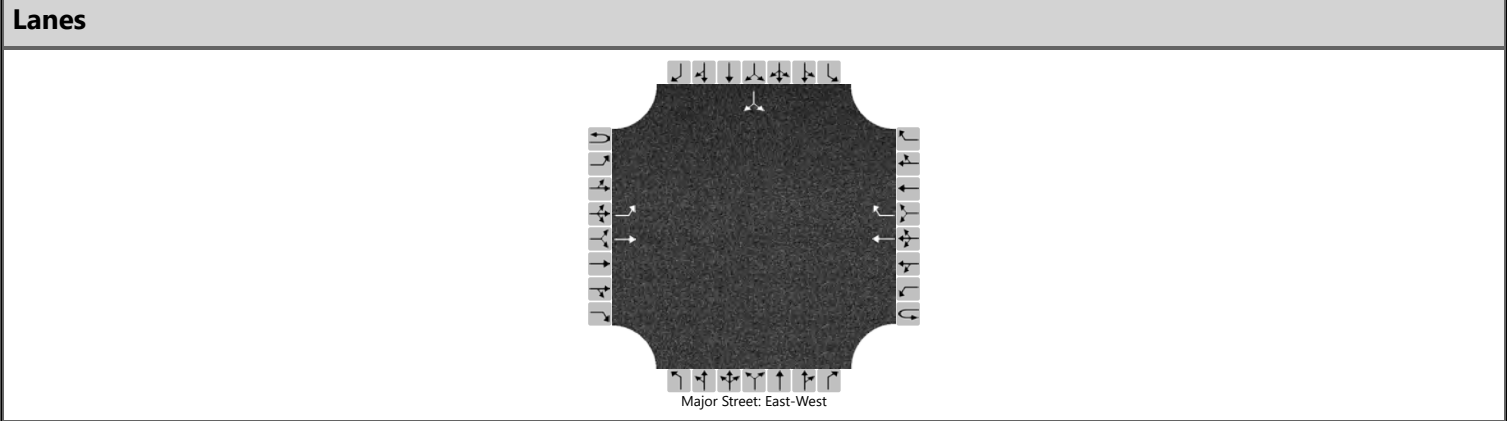
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	1		0	0	0		0	1	0
Configuration		L	T				T	R							LR	
Volume (veh/h)		0	165				260	0						0		0
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized					No											
Median Type Storage	Undivided															

Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		0													0	
Capacity, c (veh/h)		1274													0	
v/c Ratio		0.00														
95% Queue Length, Q ₉₅ (veh)		0.0														
Control Delay (s/veh)		7.8	0.0													
Level of Service (LOS)		A	A													
Approach Delay (s/veh)	0.0															
Approach LOS	A															

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & I-90 Speedway
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	I-90 Expressway
Time Analyzed	PM Peak - Event Traffic	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38 Build Option 1		



Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	1		0	0	0		0	1	0
Configuration		L	T				T	R							LR	
Volume (veh/h)		0	295				465	0						0		0
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized					No											
Median Type Storage	Undivided															

Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

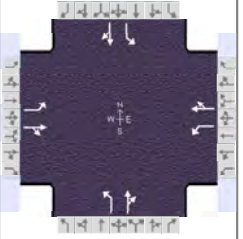
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		0													0	
Capacity, c (veh/h)		1054													0	
v/c Ratio		0.00														
95% Queue Length, Q ₉₅ (veh)		0.0														
Control Delay (s/veh)		8.4	0.0													
Level of Service (LOS)		A	A													
Approach Delay (s/veh)		0.0														
Approach LOS		A														

HCS Signalized Intersection Results Summary

General Information

Agency	HRG		
Analyst	CEC	Analysis Date	May 8, 2023
Jurisdiction	SDDOT	Time Period	AM Peak
Urban Street	SD 38	Analysis Year	2050
Intersection	SD 38 & Western Ave	File Name	(4) SD38&463Wes
Project Description			

Intersection Information



Demand Information

	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	9	180	80	60	110	30	65	75	90	40	80	5

Signal Information

Cycle, s	50.0	Reference Phase	6								
Offset, s	0	Reference Point	End								
Uncoordinated	No	Simult. Gap E/W	On	Green	30.3	9.7	0.0	0.0	0.0	0.0	
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	4.0	0.0	0.0	0.0	0.0	
				Red	1.0	1.0	0.0	0.0	0.0	0.0	

Timer Results

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		6.0		6.0		6.0		6.0
Phase Duration, s		35.3		35.3		14.7		14.7
Change Period, ($Y+R_c$), s		5.0		5.0		5.0		5.0
Max Allow Headway (MAH), s		0.0		0.0		4.3		4.3
Queue Clearance Time (g_s), s						7.0		8.7
Green Extension Time (g_e), s		0.0		0.0		1.2		1.1
Phase Call Probability						1.00		1.00
Max Out Probability						0.03		0.07

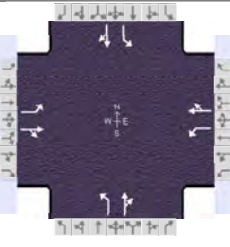
Movement Group Results

	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	10	283		65	152		71	179		43	92	
Adjusted Saturation Flow Rate (s), veh/h/ln	1225	1666		1088	1693		1180	1614		1205	1684	
Queue Service Time (g_s), s	0.2	4.0		1.5	2.0		2.7	5.0		1.7	2.3	
Cycle Queue Clearance Time (g_c), s	2.2	4.0		5.6	2.0		5.0	5.0		6.7	2.3	
Green Ratio (g/C)	0.61	0.61		0.61	0.61		0.19	0.19		0.19	0.19	
Capacity (c), veh/h	836	1007		713	1023		320	315		259	329	
Volume-to-Capacity Ratio (X)	0.012	0.281		0.092	0.149		0.220	0.569		0.168	0.281	
Back of Queue (Q), ft/ln (95 th percentile)	1.6	46.2		13.6	22.3		34.3	80.9		20.5	39.4	
Back of Queue (Q), veh/ln (95 th percentile)	0.1	1.8		0.5	0.9		1.2	3.2		0.8	1.5	
Queue Storage Ratio (RQ) (95 th percentile)	0.01	0.00		0.05	0.00		0.14	0.00		0.08	0.00	
Uniform Delay (d_1), s/veh	4.8	4.7		6.1	4.3		19.2	18.2		21.2	17.1	
Incremental Delay (d_2), s/veh	0.0	0.7		0.3	0.3		0.3	1.6		0.3	0.5	
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	4.8	5.4		6.3	4.6		19.6	19.8		21.5	17.6	
Level of Service (LOS)	A	A		A	A		B	B		C	B	
Approach Delay, s/veh / LOS	5.4		A	5.1		A	19.7		B	18.8		B
Intersection Delay, s/veh / LOS	11.4						B					

Multimodal Results

	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.85	B	1.85	B	1.91	B	1.91	B
Bicycle LOS Score / LOS	0.97	A	0.85	A	0.90	A	0.71	A

HCS Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	HRG			Duration, h	0.250	
Analyst	CEC	Analysis Date	May 8, 2023	Area Type	Other	
Jurisdiction	SDDOT	Time Period	PM Peak	PHF	0.92	
Urban Street	SD 38	Analysis Year	2050	Analysis Period	1> 7:15	
Intersection	SD 38 & Western Ave	File Name	(4) SD38&463WesternAve_PM.xus			
Project Description						

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	15	125	55	120	200	60	70	85	155	55	100	25

Signal Information											
Cycle, s	50.0	Reference Phase	6		26.5	13.5	0.0	0.0	0.0	0.0	
Offset, s	0	Reference Point	End								
Uncoordinated	No	Simult. Gap E/W	On								
Force Mode	Fixed	Simult. Gap N/S	On								
				Green	26.5	13.5	0.0	0.0	0.0	0.0	
				Yellow	4.0	4.0	0.0	0.0	0.0	0.0	
				Red	1.0	1.0	0.0	0.0	0.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		6.0		6.0		6.0		6.0
Phase Duration, s		31.5		31.5		18.5		18.5
Change Period, ($Y+R_c$), s		5.0		5.0		5.0		5.0
Max Allow Headway (MAH), s		0.0		0.0		4.3		4.3
Queue Clearance Time (g_s), s						9.8		12.3
Green Extension Time (g_e), s		0.0		0.0		1.5		1.2
Phase Call Probability						1.00		1.00
Max Out Probability						0.18		0.43

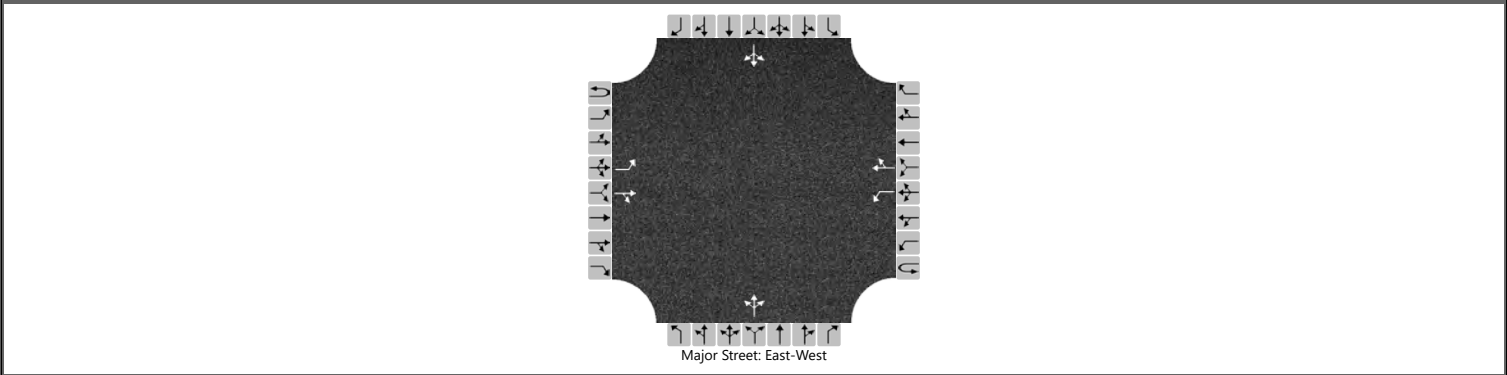
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	16	196		130	283		76	261		60	136	
Adjusted Saturation Flow Rate (s), veh/h/ln	923	1680		1178	1701		1253	1474		1119	1683	
Queue Service Time (g_s), s	0.5	3.1		3.3	4.7		2.6	7.8		2.5	3.2	
Cycle Queue Clearance Time (g_c), s	5.3	3.1		6.5	4.7		5.7	7.8		10.3	3.2	
Green Ratio (g/C)	0.53	0.53		0.53	0.53		0.27	0.27		0.27	0.27	
Capacity (c), veh/h	545	889		693	901		404	399		272	455	
Volume-to-Capacity Ratio (X)	0.030	0.220		0.188	0.314		0.188	0.654		0.219	0.298	
Back of Queue (Q), ft/ln (95 th percentile)	5	41.2		34.4	63.5		30.4	118.8		27.9	50.3	
Back of Queue (Q), veh/ln (95 th percentile)	0.2	1.6		1.3	2.5		1.2	4.4		1.1	2.0	
Queue Storage Ratio (RQ) (95 th percentile)	0.02	0.00		0.14	0.00		0.12	0.00		0.11	0.00	
Uniform Delay (d_1), s/veh	8.1	6.3		8.0	6.6		16.7	16.2		20.7	14.5	
Incremental Delay (d_2), s/veh	0.1	0.6		0.6	0.9		0.2	1.8		0.4	0.4	
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	8.2	6.8		8.6	7.5		16.9	18.0		21.1	14.8	
Level of Service (LOS)	A	A		A	A		B	B		C	B	
Approach Delay, s/veh / LOS	6.9	A		7.9	A		17.8	B		16.8	B	
Intersection Delay, s/veh / LOS	12.1						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.87	B	1.87	B	1.90	B	1.90	B
Bicycle LOS Score / LOS	0.84	A	1.17	A	1.04	A	0.81	A

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & Main Ave
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	Main Ave (9th St)
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38 Build Option 1		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0
Configuration		L		TR		L		TR			LTR				LTR	
Volume (veh/h)		2	260	30		40	195	20		40	5	85		6	10	4
Percent Heavy Vehicles (%)		0				11				5	0	2		0	17	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Left Only								9							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.21				7.15	6.50	6.22		7.10	6.67	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.30				3.55	4.00	3.32		3.50	4.15	3.30

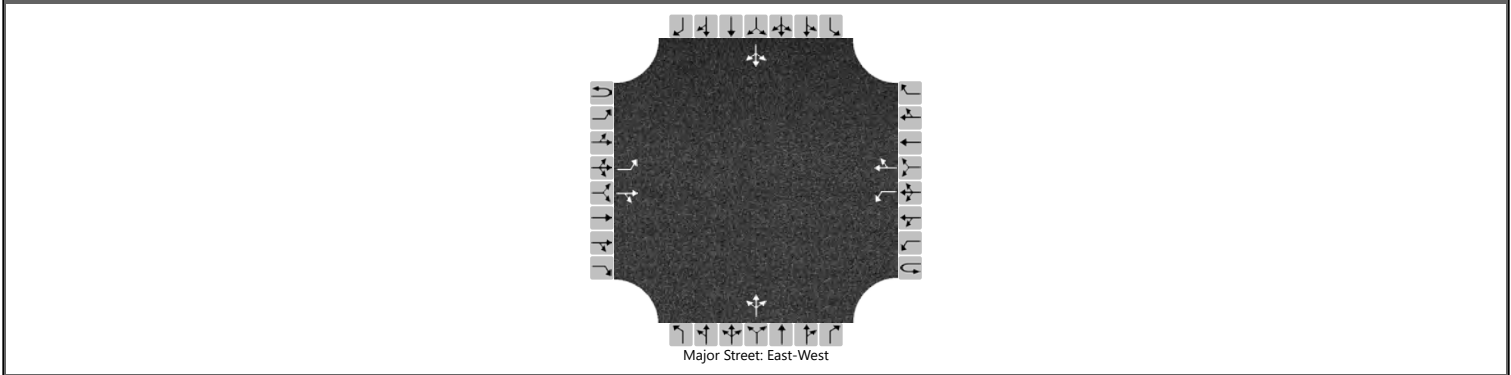
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		2				43					141				22	
Capacity, c (veh/h)		1346				1196					678				459	
v/c Ratio		0.00				0.04					0.21				0.05	
95% Queue Length, Q ₉₅ (veh)		0.0				0.1					0.8				0.1	
Control Delay (s/veh)		7.7				8.1					11.7				13.2	
Level of Service (LOS)		A				A					B				B	
Approach Delay (s/veh)	0.1				1.3				11.7				13.2			
Approach LOS	A				A				B				B			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & Main Ave
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	Main Ave (9th St)
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38 Build Option 1		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0
Configuration		L		TR		L		TR			LTR				LTR	
Volume (veh/h)		10	250	45		65	335	60		35	20	55		40	30	7
Percent Heavy Vehicles (%)		0				0				5	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Left Only								9							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.15	6.50	6.20		7.10	6.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.55	4.00	3.30		3.50	4.00	3.30

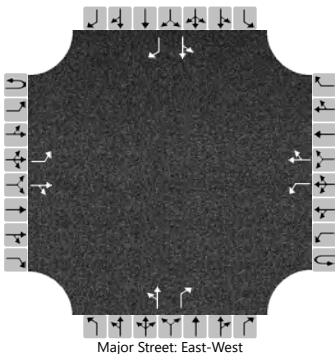
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		11				71					120				84	
Capacity, c (veh/h)		1141				1251					467				368	
v/c Ratio		0.01				0.06					0.26				0.23	
95% Queue Length, Q ₉₅ (veh)		0.0				0.2					1.0				0.9	
Control Delay (s/veh)		8.2				8.1					15.3				17.6	
Level of Service (LOS)		A				A					C				C	
Approach Delay (s/veh)	0.3				1.1				15.3				17.6			
Approach LOS	A				A				C				C			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & Vandemark Ave
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	Vandemark Avenue
Time Analyzed	AM	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38 Build Option 1		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	1		0	1	1
Configuration		L		TR		L		TR		LT		R		LT		R
Volume (veh/h)		25	370	10		8	240	25		9	5	10		40	2	25
Percent Heavy Vehicles (%)		0				0				40	0	0		0	0	7
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized									No				No			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.50	6.50	6.20		7.10	6.50	6.27
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.86	4.00	3.30		3.50	4.00	3.36

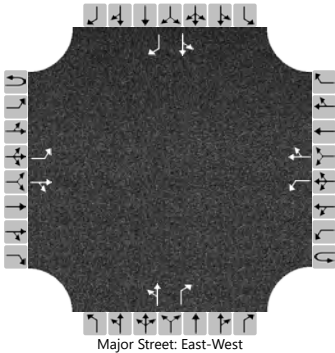
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		27				9				15		11		46		27
Capacity, c (veh/h)		1286				1157				278		648		306		752
v/c Ratio		0.02				0.01				0.05		0.02		0.15		0.04
95% Queue Length, Q ₉₅ (veh)		0.1				0.0				0.2		0.1		0.5		0.1
Control Delay (s/veh)		7.9	0.1	0.1		8.1	0.1	0.1		18.7		10.7		18.8		10.0
Level of Service (LOS)		A	A	A		A	A	A		C		B		C		A
Approach Delay (s/veh)		0.6				0.3				15.4				15.5		
Approach LOS		A				A				C				C		

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & Vandemark Ave
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	Vandemark Avenue
Time Analyzed	PM	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38 Build Option 1		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	1		0	1	1
Configuration		L		TR		L		TR		LT		R		LT		R
Volume (veh/h)		20	255	4		5	475	45		0	0	9		30	0	25
Percent Heavy Vehicles (%)		0				0				0	0	100		0	0	7
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized									No				No			
Median Type Storage	Undivided															

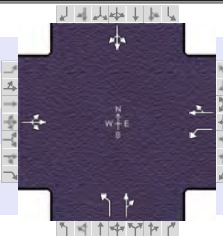
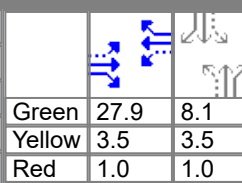
Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.10	6.50	7.20		7.10	6.50	6.27
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.00	4.20		3.50	4.00	3.36

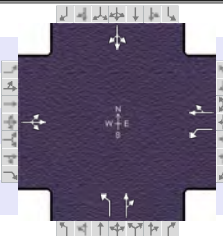
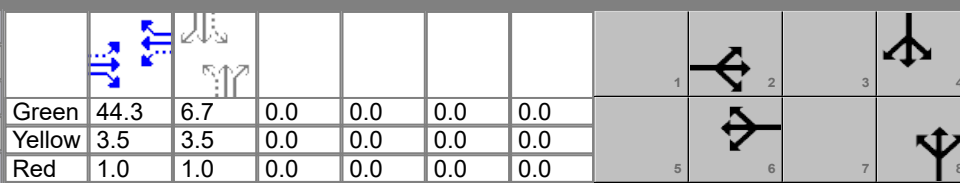
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		22				5				0		10		33		27
Capacity, c (veh/h)		1017				1293				0		574		259		532
v/c Ratio		0.02				0.00						0.02		0.13		0.05
95% Queue Length, Q ₉₅ (veh)		0.1				0.0						0.1		0.4		0.2
Control Delay (s/veh)		8.6	0.2	0.2		7.8	0.0	0.0				11.4		20.9		12.1
Level of Service (LOS)		A	A	A		A	A	A				B		C		B
Approach Delay (s/veh)		0.8				0.1								16.9		
Approach LOS		A				A								C		

HCS Signalized Intersection Results Summary

General Information						Intersection Information													
Agency		HRG				Duration, h		0.250											
Analyst		NM		Analysis Date		May 8, 2023		Area Type						Other					
Jurisdiction		SDDOT		Time Period		AM Peak		PHF						0.92					
Urban Street		SD 38		Analysis Year		2050		Analysis Period						1> 7:15					
Intersection		SD 38 & 2nd Street		File Name		(7) SD38&2nd_AM.xus													
Project Description																			
Demand Information				EB			WB			NB			SB						
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R				
Demand (ν), veh/h				20	325	10	95	200	15	5	20	155	35	50	25				
Signal Information																			
Cycle, s	45.0	Reference Phase	6																
Offset, s	0	Reference Point	End																
Uncoordinated	No	Simult. Gap E/W	On																
Force Mode	Fixed	Simult. Gap N/S	On																
				Green	27.9	8.1	0.0	0.0	0.0	0.0			1	2	3	4			
				Yellow	3.5	3.5	0.0	0.0	0.0	0.0									
				Red	1.0	1.0	0.0	0.0	0.0	0.0			5	6	7	8			
Timer Results				EBL		EBT		WBL		WBT		NBL		NBT		SBL		SBT	
Assigned Phase						2				6				8				4	
Case Number						8.0				6.0				6.0				8.0	
Phase Duration, s						32.4				32.4				12.6				12.6	
Change Period, ($Y+R_c$), s						4.5				4.5				4.5				4.5	
Max Allow Headway (MAH), s						0.0				0.0				3.3				3.3	
Queue Clearance Time (g_s), s														7.8				7.5	
Green Extension Time (g_e), s						0.0				0.0				0.5				0.5	
Phase Call Probability														0.98				0.98	
Max Out Probability														0.01				0.00	
Movement Group Results				EB			WB			NB			SB						
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R				
Assigned Movement				5	2	12	1	6	16	3	8	18	7	4	14				
Adjusted Flow Rate (ν), veh/h					386		103	234		5	190			120					
Adjusted Saturation Flow Rate (s), veh/h/ln					1743		1018	1750		1317	1528			1105					
Queue Service Time (g_s), s					0.0		2.5	2.6		0.2	5.2			0.2					
Cycle Queue Clearance Time (g_c), s					4.8		7.3	2.6		5.8	5.2			5.5					
Green Ratio (g/C)					0.62		0.62	0.62		0.18	0.18			0.18					
Capacity (c), veh/h					1162		681	1082		236	278			306					
Volume-to-Capacity Ratio (X)					0.332		0.152	0.216		0.023	0.685			0.391					
Back of Queue (Q), ft/ln (95 th percentile)																			
Back of Queue (Q), veh/ln (95 th percentile)					1.9		0.8	1.1		0.1	2.9			1.7					
Queue Storage Ratio (RQ) (95 th percentile)					0.00		0.08	0.00		0.02	0.00			0.00					
Uniform Delay (d_1), s/veh					4.2		6.0	3.8		20.1	17.2			16.3					
Incremental Delay (d_2), s/veh					0.8		0.5	0.5		0.0	1.1			0.3					
Initial Queue Delay (d_3), s/veh					0.0		0.0	0.0		0.0	0.0			0.0					
Control Delay (d), s/veh					5.0		6.4	4.2		20.1	18.3			16.6					
Level of Service (LOS)					A		A	A		C	B			B					
Approach Delay, s/veh / LOS				5.0	A	4.9	A	18.4	B	16.6	B								
Intersection Delay, s/veh / LOS				8.8						A									
Multimodal Results				EB			WB			NB			SB						
Pedestrian LOS Score / LOS				1.84	B	1.62	B	1.91	B	1.68	B								
Bicycle LOS Score / LOS				1.12	A	1.04	A	0.81	A	0.68	A								

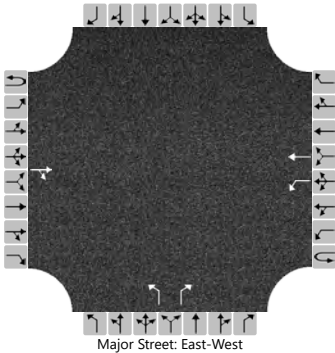
HCS Signalized Intersection Results Summary

General Information						Intersection Information									
Agency	HRG					Duration, h	0.250								
Analyst	NM		Analysis Date	May 8, 2023		Area Type	Other								
Jurisdiction	SDDOT		Time Period	PM Peak		PHF	0.92								
Urban Street	SD 38		Analysis Year	2050		Analysis Period	1> 7:15								
Intersection	SD 38 & 2nd Street		File Name	(7) SD38&2nd_PM.xus											
Project Description															
Demand Information															
				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				25	235	9	130	490	25	15	25	65	15	30	20
Signal Information															
Cycle, s	60.0	Reference Phase	2												
Offset, s	0	Reference Point	End												
Uncoordinated	No	Simult. Gap E/W	On		Green	44.3	6.7	0.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On		Yellow	3.5	3.5	0.0	0.0	0.0	0.0				
				Red	1.0	1.0	0.0	0.0	0.0	0.0					
Timer Results				EBL	EBT		WBL	WBT		NBL	NBT		SBL	SBT	
Assigned Phase					2			6			8			4	
Case Number					8.0			6.0			6.0			8.0	
Phase Duration, s					48.8			48.8			11.2			11.2	
Change Period, ($Y+R_c$), s					4.5			4.5			4.5			4.5	
Max Allow Headway (MAH), s					0.0			0.0			3.2			3.2	
Queue Clearance Time (g_s), s											6.2			5.6	
Green Extension Time (g_e), s					0.0			0.0			0.3			0.3	
Phase Call Probability											0.95			0.95	
Max Out Probability											0.00			0.00	
Movement Group Results				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h					292		141	560		16	98			71	
Adjusted Saturation Flow Rate (s), veh/h/ln					1663		1114	1757		1350	1568			1377	
Queue Service Time (g_s), s					0.0		2.7	7.3		0.7	3.5			0.0	
Cycle Queue Clearance Time (g_c), s					3.1		5.9	7.3		4.2	3.5			3.6	
Green Ratio (g/C)					0.74		0.74	0.74		0.11	0.11			0.11	
Capacity (c), veh/h					1294		885	1298		190	175			227	
Volume-to-Capacity Ratio (X)					0.226		0.160	0.431		0.086	0.560			0.311	
Back of Queue (Q), ft/ln (95 th percentile)															
Back of Queue (Q), veh/ln (95 th percentile)					1.0		0.8	2.5		0.4	2.3			1.6	
Queue Storage Ratio (RQ) (95 th percentile)					0.00		0.08	0.00		0.07	0.00			0.00	
Uniform Delay (d_1), s/veh					2.5		3.4	3.0		27.3	25.3			24.7	
Incremental Delay (d_2), s/veh					0.4		0.4	1.0		0.1	1.0			0.3	
Initial Queue Delay (d_3), s/veh					0.0		0.0	0.0		0.0	0.0			0.0	
Control Delay (d), s/veh					2.9		3.8	4.1		27.4	26.3			25.0	
Level of Service (LOS)					A		A	A		C	C			C	
Approach Delay, s/veh / LOS				2.9	A		4.0	A		26.5	C		25.0	C	
Intersection Delay, s/veh / LOS				7.2						A					
Multimodal Results				EB			WB			NB			SB		
Pedestrian LOS Score / LOS				1.83	B		1.60	B		1.92	B		1.70	B	
Bicycle LOS Score / LOS				0.97	A		1.64	B		0.68	A		0.60	A	

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & West Central HS Entrance
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	West Central HS Entrance
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38 Build Option 1		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	1	1	0		1	0	1		0	0	0
Configuration				TR		L	T			L		R				
Volume (veh/h)			425	90		55	285			35		50				
Percent Heavy Vehicles (%)						0				0		0				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized									No							
Median Type Storage	Left Only								9							

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.10				6.40		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.50		3.30				

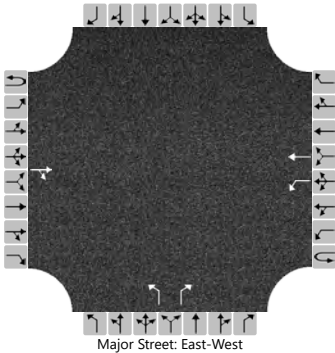
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						60				38		54				
Capacity, c (veh/h)						1021				576		567				
v/c Ratio						0.06				0.07		0.10				
95% Queue Length, Q ₉₅ (veh)						0.2				0.2		0.3				
Control Delay (s/veh)						8.7				11.7		12.0				
Level of Service (LOS)						A				B		B				
Approach Delay (s/veh)						1.4				11.9						
Approach LOS						A				B						

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & West Central HS Entrance
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	West Central HS Entrance
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38 Build Option 1		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	1	1	0		1	0	1		0	0	0
Configuration				TR		L	T			L		R				
Volume (veh/h)			305	4		4	620			15		15				
Percent Heavy Vehicles (%)						0				0		0				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized									No							
Median Type Storage	Left Only								9							

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.10				6.40		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.50		3.30				

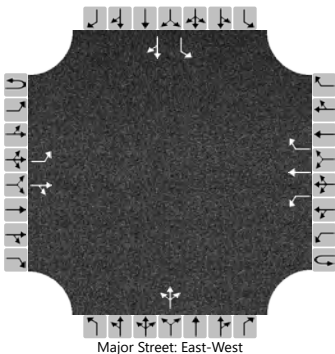
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						4				16		16				
Capacity, c (veh/h)						1235				500		713				
v/c Ratio						0.00				0.03		0.02				
95% Queue Length, Q ₉₅ (veh)						0.0				0.1		0.1				
Control Delay (s/veh)						7.9				12.4		10.2				
Level of Service (LOS)						A				B		B				
Approach Delay (s/veh)						0.1				11.3						
Approach LOS						A				B						

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & Railroad Street
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	Railroad St
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38 Build Option 1		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	1		0	1	0		1	1	0
Configuration		L		TR		L	T	R			LTR			L		TR
Volume (veh/h)		4	465	0		15	270	95		2	0	30		145	4	5
Percent Heavy Vehicles (%)		0				0				0	0	15		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized					No											
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.10	6.50	6.35		7.10	6.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.00	3.44		3.50	4.00	3.30

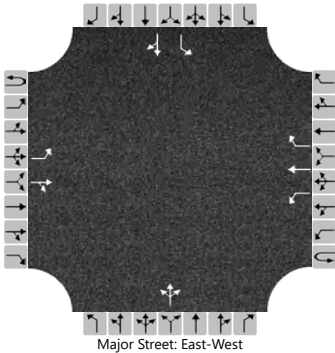
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		4				16					35			158		10
Capacity, c (veh/h)		1173				1070					505			258		448
v/c Ratio		0.00				0.02					0.07			0.61		0.02
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.2			3.6		0.1
Control Delay (s/veh)		8.1	0.0	0.0		8.4	0.1				12.6			38.6		13.2
Level of Service (LOS)		A	A	A		A	A				B			E		B
Approach Delay (s/veh)		0.1				0.4				12.6				37.1		
Approach LOS		A				A				B				E		

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & Railroad Street
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/29/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	Railroad St
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38 Build Option 1		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	1		0	1	0		1	1	0
Configuration		L		TR		L	T	R			LTR			L		TR
Volume (veh/h)		4	340	4		15	560	155		2	2	15		85	9	5
Percent Heavy Vehicles (%)		0				40				0	0	15		5	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized					No											
Median Type Storage	Undivided															

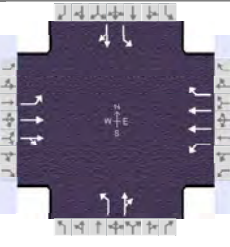
Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.50				7.10	6.50	6.35		7.15	6.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.56				3.50	4.00	3.44		3.55	4.00	3.30

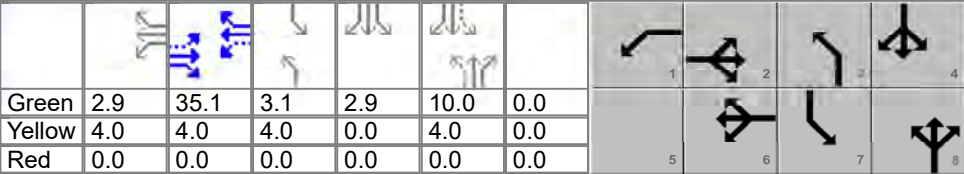
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		4				16					21			92		15
Capacity, c (veh/h)		848				1004					417			197		287
v/c Ratio		0.01				0.02					0.05			0.47		0.05
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.2			2.3		0.2
Control Delay (s/veh)		9.3	0.0	0.0		8.6	0.1				14.1			38.5		18.2
Level of Service (LOS)		A	A	A		A	A				B			E		C
Approach Delay (s/veh)		0.2				0.3				14.1				35.7		
Approach LOS		A				A				B				E		

HCS Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	HRG			Duration, h	0.250	
Analyst	NM	Analysis Date	May 8, 2023	Area Type	Other	
Jurisdiction	SDDOT	Time Period	AM Peak	PHF	0.92	
Urban Street	SD 38	Analysis Year	2050	Analysis Period	1> 7:15	
Intersection	SD 38 & Mickelson Roa...	File Name	(10) SD38&Mickelson_AM.xus			
Project Description						

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	135	445	35	40	195	190	45	55	65	215	20	195

Signal Information												
Cycle, s	70.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
				Green	2.9	35.1	3.1	2.9	10.0	0.0		
				Yellow	4.0	4.0	4.0	0.0	4.0	0.0		
				Red	0.0	0.0	0.0	0.0	0.0	0.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6	3	8	7	4
Case Number		6.3	1.0	3.0	1.1	4.0	1.1	4.0
Phase Duration, s		39.1	6.9	46.0	7.1	14.0	10.0	16.9
Change Period, ($Y+R_c$), s		4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Allow Headway (MAH), s		0.0	3.1	0.0	3.1	3.3	3.1	3.3
Queue Clearance Time (g_s), s			2.8		3.7	7.3	8.0	12.3
Green Extension Time (g_e), s		0.0	0.0	0.0	0.0	0.5	0.0	0.6
Phase Call Probability			0.57		0.61	1.00	0.99	1.00
Max Out Probability			0.00		1.00	0.03	1.00	0.01

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	147	264	258	43	212	207	49	130		234	234	
Adjusted Saturation Flow Rate (s), veh/h/ln	1170	1772	1726	1688	1687	1323	1688	1615		1688	1523	
Queue Service Time (g_s), s	5.0	6.1	6.1	0.8	1.9	5.2	1.7	5.3		6.0	10.3	
Cycle Queue Clearance Time (g_c), s	5.0	6.1	6.1	0.8	1.9	5.2	1.7	5.3		6.0	10.3	
Green Ratio (g/C)	0.50	0.50	0.50	0.57	0.60	0.60	0.19	0.14		0.24	0.18	
Capacity (c), veh/h	690	890	867	536	2024	794	187	231		333	282	
Volume-to-Capacity Ratio (X)	0.213	0.296	0.298	0.081	0.105	0.260	0.262	0.565		0.702	0.830	
Back of Queue (Q), ft/ln (95 th percentile)												
Back of Queue (Q), veh/ln (95 th percentile)	2.2	4.0	4.0	0.4	1.0	2.4	1.2	3.5		2.5	6.7	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d_1), s/veh	9.9	10.2	10.2	7.1	6.0	6.6	24.5	28.0		25.5	27.5	
Incremental Delay (d_2), s/veh	0.7	0.8	0.9	0.0	0.1	0.8	0.3	0.8		5.5	2.4	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	10.6	11.0	11.1	7.1	6.1	7.4	24.8	28.8		31.1	29.9	
Level of Service (LOS)	B	B	B	A	A	A	C	C		C	C	
Approach Delay, s/veh / LOS	11.0	B		6.8	A		27.7	C		30.5	C	
Intersection Delay, s/veh / LOS	16.7						B					

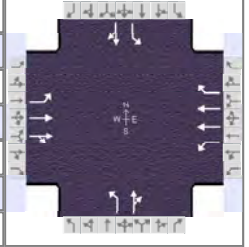
Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.88	B	1.87	B	2.44	B	2.28	B
Bicycle LOS Score / LOS	1.04	A	0.87	A	0.78	A	1.26	A

HCS Signalized Intersection Results Summary

General Information

Agency	HRG		
Analyst	NM	Analysis Date	May 8, 2023
Jurisdiction	SDDOT	Time Period	AM Peak
Urban Street	SD 38	Analysis Year	2050
Intersection	SD 38 & Mickelson Roa...	File Name	(10) SD38&Mickelson
Project Description			

Intersection Information



Demand Information

	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	160	220	20	135	535	225	20	65	10	215	15	185

Signal Information

Cycle, s	70.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On	Green	5.0	0.7	30.8	1.7	1.3	7.0		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	0.0	4.0	3.5	3.5	4.0		
				Red	1.0	0.0	1.0	1.0	1.0	1.0		

Timer Results

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	4.0	1.1	3.0	1.1	4.0	1.1	4.0
Phase Duration, s	10.2	36.5	9.5	35.8	6.2	12.0	12.0	17.8
Change Period, (Y+R _c), s	4.5	5.0	4.5	5.0	4.5	5.0	4.5	5.0
Max Allow Headway (MAH), s	3.1	0.0	3.1	0.0	3.1	3.3	3.1	3.3
Queue Clearance Time (g _s), s	5.8		5.3		2.8	5.1	9.5	11.6
Green Extension Time (g _e), s	0.1	0.0	0.1	0.0	0.0	0.3	0.0	0.2
Phase Call Probability	0.97		0.94		0.34	1.00	0.99	1.00
Max Out Probability	1.00		1.00		1.00	0.63	1.00	1.00

Movement Group Results

Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	174	131	130	147	582	245	22	82		234	217	
Adjusted Saturation Flow Rate (s), veh/h/ln	1688	1772	1720	1688	1687	1323	1688	1730		1688	1519	
Queue Service Time (g_s), s	3.8	3.1	3.1	3.3	8.2	8.9	0.8	3.1		7.5	9.6	
Cycle Queue Clearance Time (g_c), s	3.8	3.1	3.1	3.3	8.2	8.9	0.8	3.1		7.5	9.6	
Green Ratio (g/C)	0.52	0.45	0.45	0.51	0.44	0.44	0.12	0.10		0.24	0.18	
Capacity (c), veh/h	510	798	774	645	1484	582	164	173		356	277	
Volume-to-Capacity Ratio (X)	0.341	0.165	0.167	0.228	0.392	0.420	0.132	0.472		0.656	0.785	
Back of Queue (Q), ft/ln (95 th percentile)												
Back of Queue (Q), veh/ln (95 th percentile)	2.2	2.1	2.1	1.9	5.2	4.8	0.6	2.3		6.3	7.1	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d_1), s/veh	9.5	11.4	11.4	9.3	13.3	13.5	27.4	29.8		24.6	27.3	
Incremental Delay (d_2), s/veh	0.1	0.4	0.5	0.1	0.8	2.2	0.1	0.7		3.4	8.9	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	9.7	11.9	11.9	9.4	14.0	15.7	27.6	30.5		28.0	36.2	
Level of Service (LOS)	A	B	B	A	B	B	C	C		C	D	
Approach Delay, s/veh / LOS	11.0	B		13.8	B		29.9	C		32.0	C	
Intersection Delay, s/veh / LOS	18.2						B					

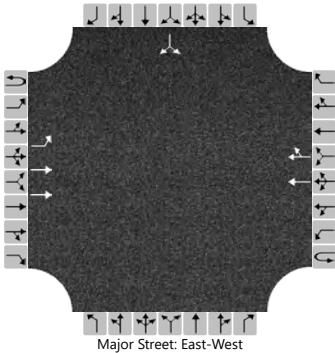
Multimodal Results

	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	1.89	B		1.89	B		2.44	B		2.28	B	
Bicycle LOS Score / LOS	0.85	A		1.29	A		0.66	A		1.23	A	

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD38 & 466th Ave
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	466th Ave
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38 Build Option 1		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		0	1	0
Configuration		L	T				T	TR							LR	
Volume (veh/h)	0	2	765				430	5						4		0
Percent Heavy Vehicles (%)	3	0												50		3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage	Left Only								9							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.10												7.80		6.96
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												4.00		3.33

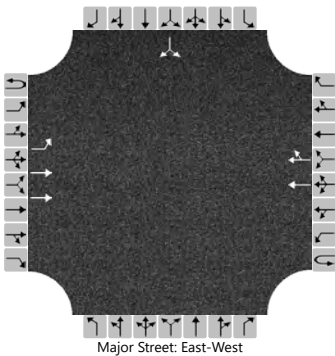
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		2													4	
Capacity, c (veh/h)		1100													457	
v/c Ratio		0.00													0.01	
95% Queue Length, Q ₉₅ (veh)		0.0													0.0	
Control Delay (s/veh)		8.3													12.9	
Level of Service (LOS)		A													B	
Approach Delay (s/veh)		0.0												12.9		
Approach LOS		A												B		

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD38 & 466th Ave
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	466th Ave
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38 Build Option 1		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		0	1	0
Configuration		L	T				T	TR							LR	
Volume (veh/h)	0	0	445				910	2						5		2
Percent Heavy Vehicles (%)	3	0												33		0
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage	Left Only								9							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.10												7.46		6.90
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												3.83		3.30

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0													8	
Capacity, c (veh/h)		705													299	
v/c Ratio		0.00													0.03	
95% Queue Length, Q ₉₅ (veh)		0.0													0.1	
Control Delay (s/veh)		10.1													17.3	
Level of Service (LOS)		B													C	
Approach Delay (s/veh)		0.0												17.3		
Approach LOS		A												C		

HCS Two-Way Stop-Control Report

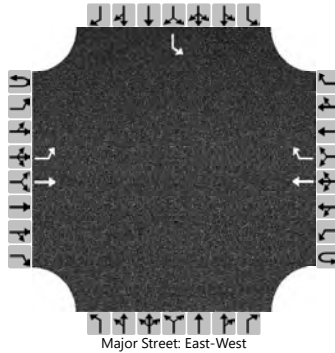
General Information

Analyst	NM
Agency/Co.	HRG
Date Performed	12/12/2023
Analysis Year	2050
Time Analyzed	AM Peak
Intersection Orientation	East-West
Project Description	SD 38

Site Information

Intersection	SD 38 & I-90 WB Terminal
Jurisdiction	SDDOT
East/West Street	SD 38
North/South Street	I-90 WB Terminal
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	1		0	0	0		1	0	0
Configuration		L	T				T	R						L		
Volume (veh/h)		40	730				255	20						15		
Percent Heavy Vehicles (%)		0												56		
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized					No											
Median Type Storage	Left Only								9							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		
Critical Headway (sec)		4.10												6.96		
Base Follow-Up Headway (sec)		2.2												3.5		
Follow-Up Headway (sec)		2.20												4.00		

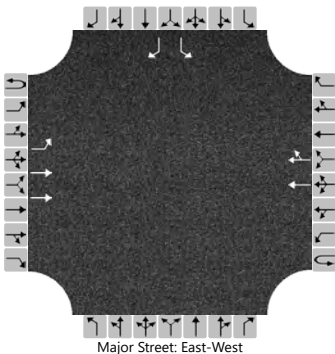
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		43												16		
Capacity, c (veh/h)		1274												315		
v/c Ratio		0.03												0.05		
95% Queue Length, Q ₉₅ (veh)		0.1												0.2		
Control Delay (s/veh)		7.9	0.2											17.1		
Level of Service (LOS)		A	A											C		
Approach Delay (s/veh)	0.6												17.1			
Approach LOS	A												C			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	CEC	Intersection	SD 38 & I-90 WB Terminal
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	I-90 WB Terminal
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38 Build Option 1		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		1	0	1
Configuration		L	T				T	TR						L		R
Volume (veh/h)	0	40	730				255	20						15		190
Percent Heavy Vehicles (%)	3	0												56		12
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized													No			
Median Type Storage	Left Only								9							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.10												7.92		7.14
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												4.06		3.42

Delay, Queue Length, and Level of Service

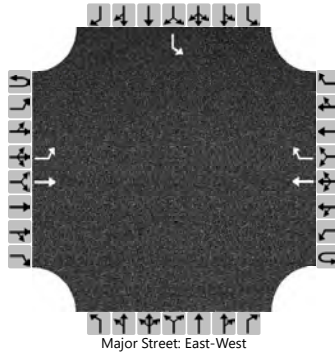
Flow Rate, v (veh/h)		43												16		207
Capacity, c (veh/h)		1274												435		839
v/c Ratio		0.03												0.04		0.25
95% Queue Length, Q ₉₅ (veh)		0.1												0.1		1.0
Control Delay (s/veh)		7.9												13.6		10.7
Level of Service (LOS)		A												B		B
Approach Delay (s/veh)		0.4												10.9		
Approach LOS		A												B		

HCS Two-Way Stop-Control Report

General Information

Analyst	NM	Intersection	SD 38 & I-90 WB Terminal
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	5/8/2023	East/West Street	SD 38
Analysis Year	2050	North/South Street	I-90 WB Terminal
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	1		0	0	0		1	0	0
Configuration		L	T				T	R						L		
Volume (veh/h)		25	420				415	35						30		
Percent Heavy Vehicles (%)		0												6		
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized					No											
Median Type Storage	Left Only								9							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		
Critical Headway (sec)		4.10												6.46		
Base Follow-Up Headway (sec)		2.2												3.5		
Follow-Up Headway (sec)		2.20												3.55		

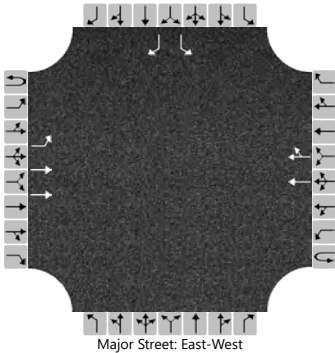
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		27												33		
Capacity, c (veh/h)		1085												562		
v/c Ratio		0.03												0.06		
95% Queue Length, Q ₉₅ (veh)		0.1												0.2		
Control Delay (s/veh)		8.4	0.2											11.8		
Level of Service (LOS)		A	A											B		
Approach Delay (s/veh)	0.6												11.8			
Approach LOS	A												B			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & I-90 WB Terminal
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	I-90 WB Terminal
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38 Build Option 1		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		1	0	1
Configuration		L	T				T	TR						L		R
Volume (veh/h)	0	25	420				415	35						30		495
Percent Heavy Vehicles (%)	3	0												6		2
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized													No			
Median Type Storage	Left Only								9							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.10												6.92		6.94
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												3.56		3.32

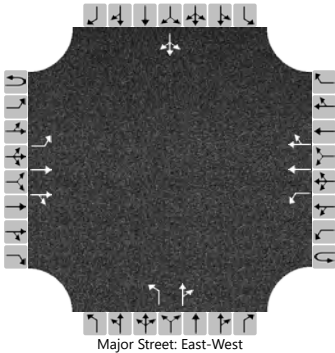
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		27												33		538
Capacity, c (veh/h)		1085												578		756
v/c Ratio		0.03												0.06		0.71
95% Queue Length, Q ₉₅ (veh)		0.1												0.2		6.1
Control Delay (s/veh)		8.4												11.6		20.6
Level of Service (LOS)		A												B		C
Approach Delay (s/veh)		0.5												20.1		
Approach LOS		A												C		

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & I-90 EB Ramp Terminal
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	I-90 EB Ramp Terminal
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38 Build Option 1		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		1	1	0		0	1	0
Configuration		L	T	TR		L	T	TR		L		TR			LTR	
Volume (veh/h)	0	190	265	20	0	15	420	30		30	15	25		30	10	35
Percent Heavy Vehicles (%)	3	10			3	11				20	20	0		8	3	3
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

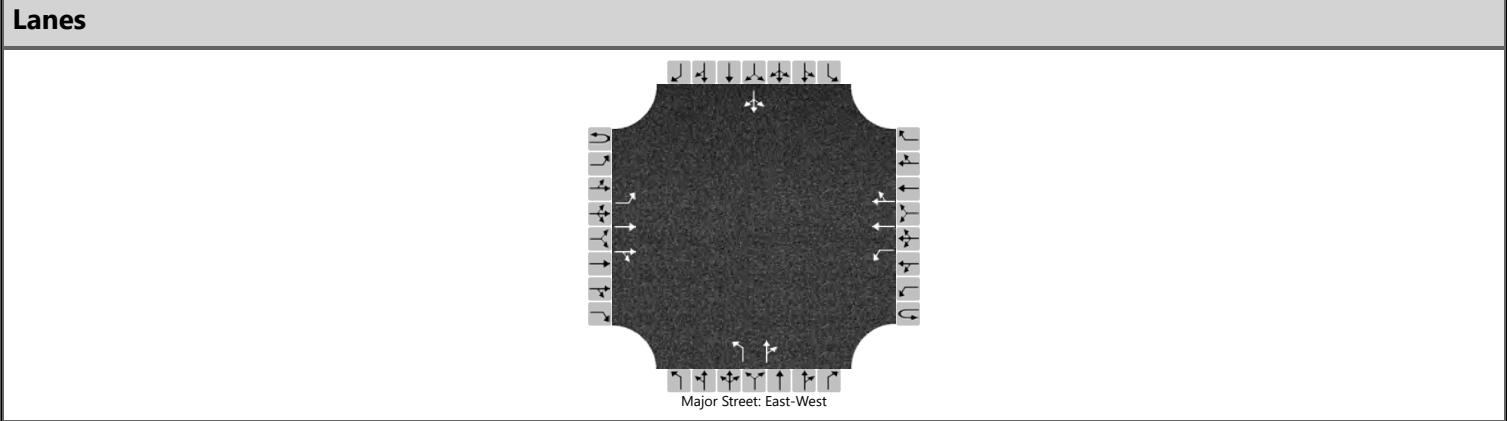
Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.30				4.32				7.90	6.90	6.90		7.66	6.56	6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.30				2.31				3.70	4.20	3.30		3.58	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		207				16				33		43				82	
Capacity, c (veh/h)		1016				1185				122		259				193	
v/c Ratio		0.20				0.01				0.27		0.17				0.42	
95% Queue Length, Q ₉₅ (veh)		0.8				0.0				1.0		0.6				1.9	
Control Delay (s/veh)		9.4	0.6			8.1	0.1			44.7		21.7				36.6	
Level of Service (LOS)		A	A			A	A			E		C				E	
Approach Delay (s/veh)	4.1				0.4				31.6				36.6				
Approach LOS	A				A				D				E				

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD38/I-90 EB Ramp Terminal/466th St
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	I-90 EB Ramp Terminal/466th Street
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38 Build Option 1		



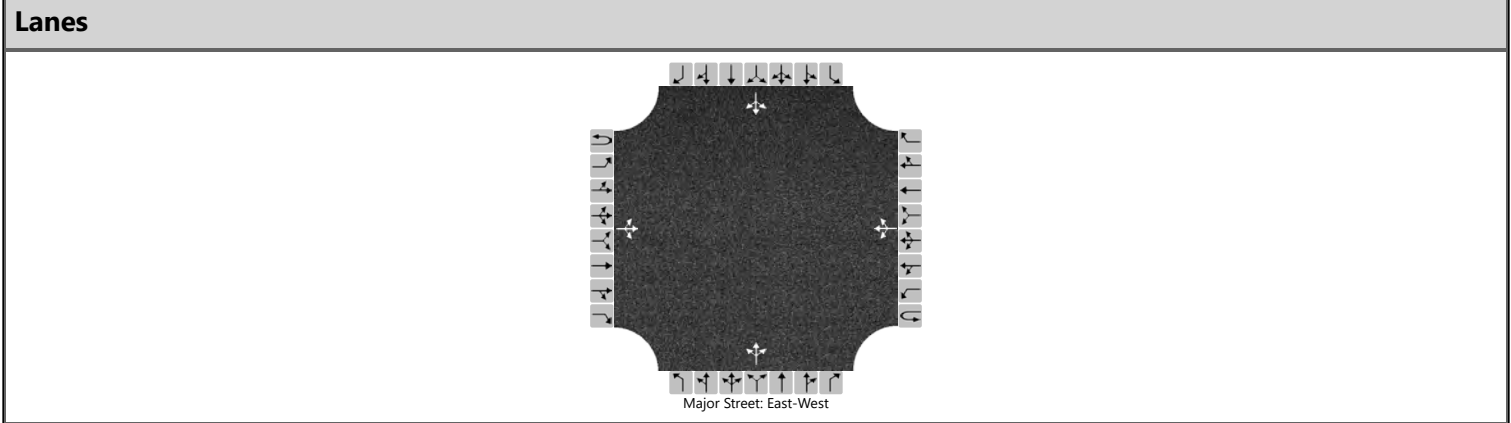
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		1	1	0		0	1	0
Configuration		L	T	TR		L	T	TR		L		TR			LTR	
Volume (veh/h)	0	430	300	15	0	20	240	20		15	10	20		3	2	28
Percent Heavy Vehicles (%)	3	2			3	20				33	33	60		33	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.14				4.50				8.16	7.16	8.10		8.16	6.50	6.90
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.40				3.83	4.33	3.90		3.83	4.00	3.30

Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		467				22				16		33			36	
Capacity, c (veh/h)		1277				1094				40		128			231	
v/c Ratio		0.37				0.02				0.41		0.25			0.16	
95% Queue Length, Q ₉₅ (veh)		1.7				0.1				1.4		1.0			0.5	
Control Delay (s/veh)		9.4	0.6			8.4	0.1			146.1		42.5			23.4	
Level of Service (LOS)		A	A			A	A			F		E			C	
Approach Delay (s/veh)	5.7				0.7				77.0				23.4			
Approach LOS	A				A				F				C			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & 468th Avenue
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	468th Ave / County Highway 141
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38 Build Option 1		



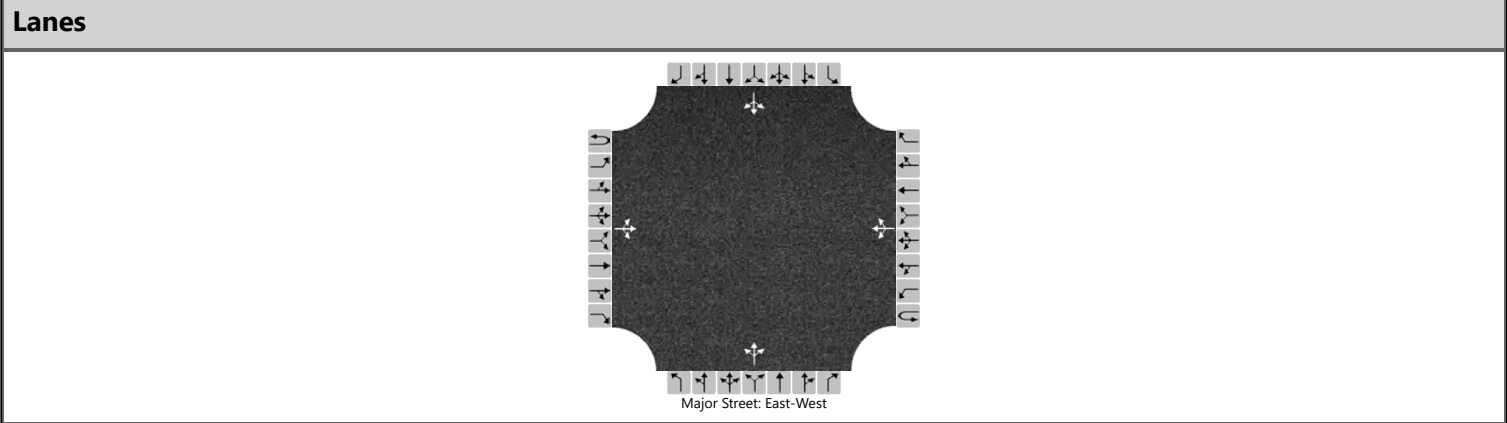
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		4	360	0		0	225	50		2	2	0		50	0	7
Percent Heavy Vehicles (%)		0				0				0	100	0		4	0	50
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.10	7.50	6.20		7.14	6.50	6.70
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.90	3.30		3.54	4.00	3.75

Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		4				0					4				62	
Capacity, c (veh/h)		1274				1178					306				383	
v/c Ratio		0.00				0.00					0.01				0.16	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.0				0.6	
Control Delay (s/veh)		7.8	0.0	0.0		8.1	0.0	0.0			16.9				16.2	
Level of Service (LOS)		A	A	A		A	A	A			C				C	
Approach Delay (s/veh)		0.1				0.0				16.9				16.2		
Approach LOS		A				A				C				C		

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & 468th Avenue
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	468th Ave / County Highway 141
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38 Build Option 1		



Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	310	2		5	420	55		2	2	0		50	4	4
Percent Heavy Vehicles (%)		0				0				0	0	0		4	100	50
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.10	6.50	6.20		7.14	7.50	6.70
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.00	3.30		3.54	4.90	3.75

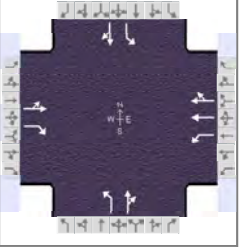
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		0				5					4				63	
Capacity, c (veh/h)		1060				1231					285				283	
v/c Ratio		0.00				0.00					0.02				0.22	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.0				0.8	
Control Delay (s/veh)		8.4	0.0	0.0		7.9	0.0	0.0			17.8				21.3	
Level of Service (LOS)		A	A	A		A	A	A			C				C	
Approach Delay (s/veh)		0.0				0.1				17.8				21.3		
Approach LOS		A				A				C				C		

HCS Signalized Intersection Results Summary

General Information

Agency	HRG		
Analyst	CEC	Analysis Date	May 8, 2023
Jurisdiction	SDDOT	Time Period	AM Peak
Urban Street	SD 38	Analysis Year	2050
Intersection	SD 38 & 469th Ave	File Name	(16) SD38&469_A
Project Description			

Intersection Information



Demand Information

	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	5	330	75	75	165	5	110	5	280	15	5	5

Signal Information

Cycle, s	60.0	Reference Phase	2								
Offset, s	0	Reference Point	End								
Uncoordinated	No	Simult. Gap E/W	On	Green	3.7	26.1	15.7	0.0	0.0	0.0	
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	4.0	4.0	0.0	0.0	0.0	
				Red	1.0	1.0	1.0	0.0	0.0	0.0	

Timer Results

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6		8		4
Case Number		7.3	1.0	4.0		6.0		6.0
Phase Duration, s		31.1	8.2	39.3		20.7		20.7
Change Period, ($Y+R_c$), s		5.0	4.5	5.0		5.0		5.0
Max Allow Headway (MAH), s		0.0	3.9	0.0		4.1		4.1
Queue Clearance Time (g_s), s			3.5			14.9		15.7
Green Extension Time (g_e), s		0.0	0.1	0.0		0.0		0.0
Phase Call Probability			0.74			1.00		1.00
Max Out Probability			0.20			1.00		1.00

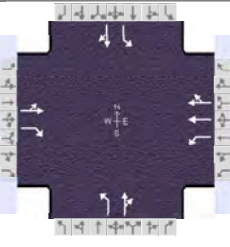
Movement Group Results

Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R	
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14	
Adjusted Flow Rate (v), veh/h		364	82	82	93	92	120	310		16	11		
Adjusted Saturation Flow Rate (s), veh/h/ln		1755	1490	1647	1730	1712	1426	1374		1061	1613		
Queue Service Time (g_s), s		0.0	2.0	1.5	1.5	1.5	4.1	12.9		0.9	0.3		
Cycle Queue Clearance Time (g_c), s		8.9	2.0	1.5	1.5	1.5	4.3	12.9		13.7	0.3		
Green Ratio (g/C)		0.43	0.43	0.53	0.57	0.57	0.26	0.26		0.26	0.26		
Capacity (c), veh/h		823	647	507	988	978	488	360		172	423		
Volume-to-Capacity Ratio (X)		0.442	0.126	0.161	0.094	0.094	0.245	0.860		0.095	0.026		
Back of Queue (Q), ft/ln (95 th percentile)		122.6	22.9	14.2	14.6	14.5	50.6	245.6		9.5	4.3		
Back of Queue (Q), veh/ln (95 th percentile)		4.8	0.9	0.5	0.6	0.6	2.0	8.9		0.4	0.2		
Queue Storage Ratio (RQ) (95 th percentile)		0.00	0.00	0.06	0.00	0.00	0.20	0.00		0.04	0.00		
Uniform Delay (d_1), s/veh		12.1	10.2	8.1	5.8	5.8	18.0	21.1		27.6	16.4		
Incremental Delay (d_2), s/veh		1.7	0.4	0.1	0.2	0.2	0.3	18.5		0.2	0.0		
Initial Queue Delay (d_3), s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		
Control Delay (d), s/veh		13.8	10.6	8.2	6.0	6.0	18.3	39.5		27.8	16.5		
Level of Service (LOS)		B	B	A	A	A	B	D		C	B		
Approach Delay, s/veh / LOS	13.2	B		6.7		A		33.6	C		23.3	C	
Intersection Delay, s/veh / LOS	19.5						B						

Multimodal Results

	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.89	B	1.87	B	2.10	B	2.10	B
Bicycle LOS Score / LOS	1.22	A	0.71	A	1.20	A	0.53	A

HCS Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	HRG			Duration, h	0.250	
Analyst	CEC	Analysis Date	May 8, 2023	Area Type	Other	
Jurisdiction	SDDOT	Time Period	AM Peak	PHF	0.92	
Urban Street	SD 38	Analysis Year	2050	Analysis Period	1> 7:15	
Intersection	SD 38 & 469th Ave	File Name	(16) SD38&469_PM.xus			
Project Description						

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	5	245	120	285	380	5	100	5	120	15	5	10

Signal Information											
Cycle, s	60.0	Reference Phase	2								
Offset, s	0	Reference Point	End								
Uncoordinated	No	Simult. Gap E/W	On								
Force Mode	Fixed	Simult. Gap N/S	On								
				Green	9.1	28.0	8.5	0.0	0.0	0.0	
				Yellow	3.5	4.0	4.0	0.0	0.0	0.0	
				Red	1.0	1.0	1.0	0.0	0.0	0.0	

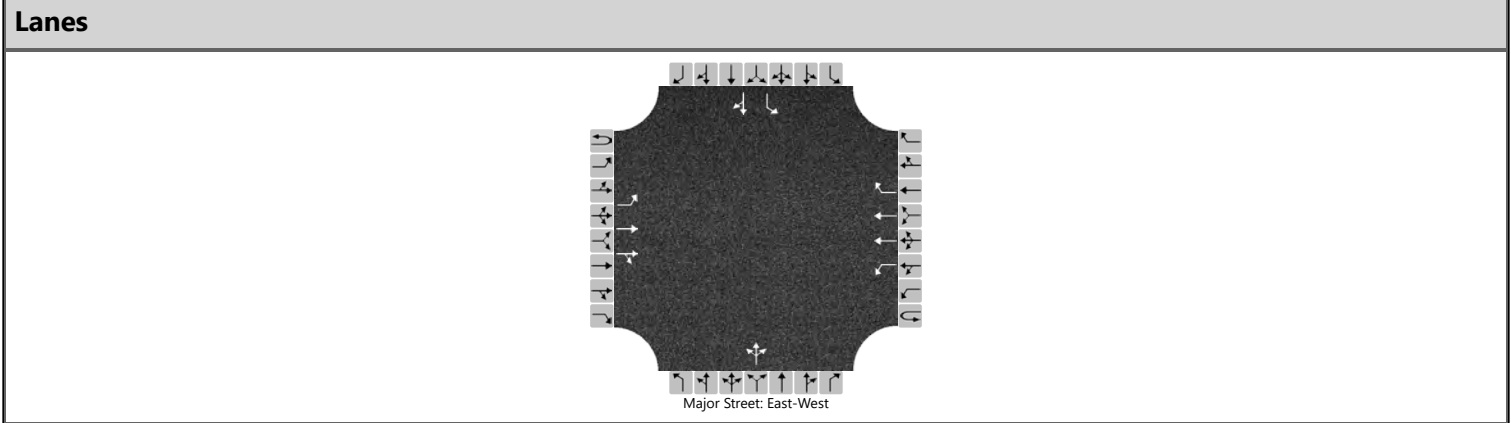
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6		8		4
Case Number		7.3	1.0	4.0		6.0		6.0
Phase Duration, s		33.0	13.6	46.5		13.5		13.5
Change Period, ($Y+R_c$), s		5.0	4.5	5.0		5.0		5.0
Max Allow Headway (MAH), s		0.0	3.9	0.0		4.1		4.1
Queue Clearance Time (g_s), s			8.4			7.1		7.9
Green Extension Time (g_e), s		0.0	0.7	0.0		0.5		0.6
Phase Call Probability			0.99			0.99		0.99
Max Out Probability			0.02			0.25		0.03

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h		272	130	310	210	209	109	136		16	16	
Adjusted Saturation Flow Rate (s), veh/h/ln		1752	1490	1647	1730	1722	1397	1499		1244	1570	
Queue Service Time (g_s), s		0.0	3.1	6.4	2.6	2.6	4.4	5.1		0.8	0.5	
Cycle Queue Clearance Time (g_c), s		5.9	3.1	6.4	2.6	2.6	4.9	5.1		5.9	0.5	
Green Ratio (g/C)		0.47	0.47	0.65	0.69	0.69	0.14	0.14		0.14	0.14	
Capacity (c), veh/h		877	693	369	1196	1191	305	212		190	222	
Volume-to-Capacity Ratio (X)		0.310	0.188	0.839	0.175	0.175	0.356	0.640		0.086	0.073	
Back of Queue (Q), ft/ln (95 th percentile)		75.7	34.4	81.4	12.3	12.3	58.9	79.5		9.4	8.2	
Back of Queue (Q), veh/ln (95 th percentile)		3.0	1.3	3.1	0.5	0.5	2.3	3.1		0.4	0.3	
Queue Storage Ratio (RQ) (95 th percentile)		0.00	0.00	0.33	0.00	0.00	0.24	0.00		0.04	0.00	
Uniform Delay (d_1), s/veh		10.1	9.4	14.9	3.2	3.2	24.5	24.3		27.1	22.3	
Incremental Delay (d_2), s/veh		0.9	0.6	5.1	0.3	0.3	0.7	3.2		0.2	0.1	
Initial Queue Delay (d_3), s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh		11.1	10.0	20.1	3.6	3.6	25.2	27.5		27.3	22.5	
Level of Service (LOS)		B	A	C	A	A	C	C		C	C	
Approach Delay, s/veh / LOS	10.7	B		10.6	B		26.5	C		24.9	C	
Intersection Delay, s/veh / LOS	13.7						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.88	B	1.84	B	2.11	B	2.11	B
Bicycle LOS Score / LOS	1.15	A	1.09	A	0.89	A	0.54	A

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & La Mesa
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/29/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	La Mesa
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38 Build Option 1		



Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	1		0	1	0		1	1	0
Configuration		L	T	TR		L	T	R			LTR			L		TR
Volume (veh/h)	0	30	700	4	0	0	235	15		0	15	5		75	4	30
Percent Heavy Vehicles (%)	3	0			3	0				0	13	0		0	50	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized					No											
Median Type Storage	Undivided															

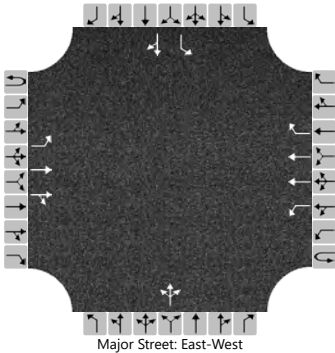
Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.10				4.10				7.50	6.76	6.90		7.50	7.50	6.90
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.13	3.30		3.50	4.50	3.30

Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		33				0					22			82		37
Capacity, c (veh/h)		1303				857					229			287		566
v/c Ratio		0.03				0.00					0.09			0.28		0.07
95% Queue Length, Q ₉₅ (veh)		0.1				0.0					0.3			1.1		0.2
Control Delay (s/veh)		7.8	0.2			9.2	0.0				22.3			22.5		11.8
Level of Service (LOS)		A	A			A	A				C			C		B
Approach Delay (s/veh)		0.5				0.0				22.3				19.2		
Approach LOS		A				A				C				C		

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & La Mesa
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/29/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	La Mesa
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38 Option 1		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	1		0	1	0		1	1	0
Configuration		L	T	TR		L	T	R			LTR			L		TR
Volume (veh/h)	0	25	325	0	0	9	735	100		4	5	0		80	15	30
Percent Heavy Vehicles (%)	3	0			3	0				0	0	0		9	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized					No											
Median Type Storage	Undivided															

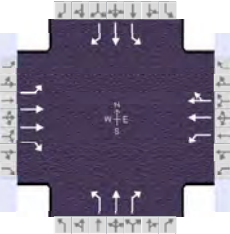
Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.10				4.10				7.50	6.50	6.90		7.68	6.50	6.90
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.00	3.30		3.59	4.00	3.30

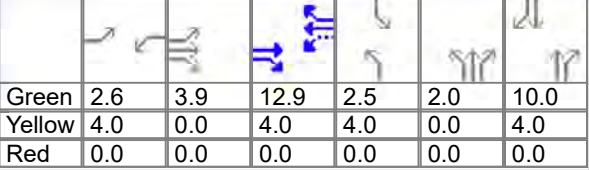
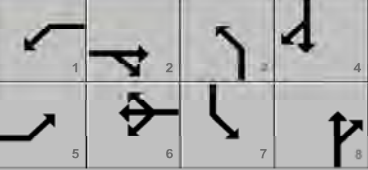
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		27				10				10				87		49
Capacity, c (veh/h)		758				1217				167				158		329
v/c Ratio		0.04				0.01				0.06				0.55		0.15
95% Queue Length, Q ₉₅ (veh)		0.1				0.0				0.2				2.8		0.5
Control Delay (s/veh)		9.9	0.3			8.0	0.1			27.9				52.4		17.8
Level of Service (LOS)		A	A			A	A			D				F		C
Approach Delay (s/veh)		1.0				0.1				27.9				40.0		
Approach LOS		A				A				D				E		

HCS Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	HRG			Duration, h	0.250	
Analyst	NM	Analysis Date	May 8, 2023	Area Type	Other	
Jurisdiction	SDDOT	Time Period	AM Peak	PHF	0.92	
Urban Street	SD 38	Analysis Year	2050	Analysis Period	1> 7:15	
Intersection	SD 38 & Marion Street	File Name	(18) SD38&Marion_AM.xus			
Project Description						

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	165	340	105	50	125	75	110	225	120	45	145	40

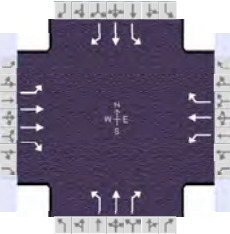
Signal Information											
Cycle, s	50.0	Reference Phase	2		2.6	3.9	12.9	2.5	2.0	10.0	
Offset, s	0	Reference Point	End								
Uncoordinated	No	Simult. Gap E/W	On								
Force Mode	Fixed	Simult. Gap N/S	On								

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	1.1	4.0	2.0	3.0	2.0	3.0
Phase Duration, s	10.6	20.8	6.6	16.9	8.5	16.0	6.5	14.0
Change Period, ($Y+R_c$), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Allow Headway (MAH), s	2.9	0.0	2.9	0.0	2.9	2.9	2.9	2.9
Queue Clearance Time (g_s), s	7.1		3.1		5.6	8.5	3.5	5.9
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.6
Phase Call Probability	0.92		0.53		0.81	1.00	0.49	1.00
Max Out Probability	1.00		0.04		1.00	0.21	1.00	0.15

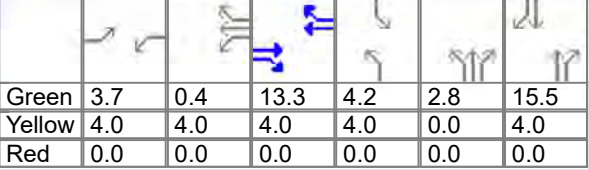
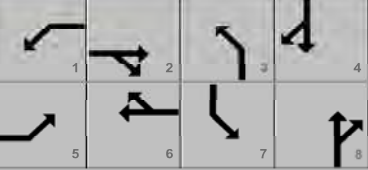
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	179	370	114	54	112	106	120	245	130	49	158	43
Adjusted Saturation Flow Rate (s), veh/h/ln	1701	1674	1525	1714	1772	1556	1647	1674	1502	1554	1758	1466
Queue Service Time (g_s), s	5.1	4.1	2.7	1.1	2.5	2.7	3.6	6.5	3.6	1.5	3.9	1.2
Cycle Queue Clearance Time (g_c), s	5.1	4.1	2.7	1.1	2.5	2.7	3.6	6.5	3.6	1.5	3.9	1.2
Green Ratio (g/C)	0.13	0.34	0.34	0.31	0.26	0.26	0.09	0.24	0.24	0.05	0.20	0.20
Capacity (c), veh/h	223	1128	514	456	459	403	148	403	361	77	352	293
Volume-to-Capacity Ratio (X)	0.804	0.328	0.222	0.119	0.243	0.263	0.806	0.607	0.361	0.638	0.448	0.148
Back of Queue (Q), ft/ln (95 th percentile)												
Back of Queue (Q), veh/ln (95 th percentile)	4.1	2.2	1.4	0.6	1.6	1.6	3.2	3.5	1.7	1.0	2.3	0.6
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	21.1	12.4	11.9	12.3	14.7	14.7	22.3	16.9	15.8	23.3	17.6	16.5
Incremental Delay (d_2), s/veh	11.0	0.8	1.0	0.0	1.3	1.6	15.9	0.8	0.2	3.3	0.3	0.1
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	32.1	13.1	12.9	12.3	15.9	16.3	38.2	17.7	16.0	26.6	17.9	16.6
Level of Service (LOS)	C	B	B	B	B	B	D	B	B	C	B	B
Approach Delay, s/veh / LOS	18.2	B		15.4	B		22.2	C		19.4	B	
Intersection Delay, s/veh / LOS	19.1						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.08	B	2.09	B	2.26	B	2.42	B
Bicycle LOS Score / LOS	1.03	A	0.71	A	1.30	A	0.90	A

HCS Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	HRG			Duration, h	0.250	
Analyst	NM	Analysis Date	May 8, 2023	Area Type	Other	
Jurisdiction	SDDOT	Time Period	PM Peak	PHF	0.90	
Urban Street	SD 38	Analysis Year	2050	Analysis Period	1> 16:45	
Intersection	SD 38 & Marion Street	File Name	(18) SD38&Marion_PM.xus			
Project Description						

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	70	230	105	170	355	55	180	205	125	85	355	205

Signal Information											
Cycle, s	60.0	Reference Phase	2		3.7	0.4	13.3	4.2	2.8	15.5	
Offset, s	0	Reference Point	End								
Uncoordinated	No	Simult. Gap E/W	On								
Force Mode	Fixed	Simult. Gap N/S	On								
Green				Green	3.7	0.4	13.3	4.2	2.8	15.5	
Yellow				Yellow	4.0	4.0	4.0	4.0	0.0	4.0	
Red				Red	0.0	0.0	0.0	0.0	0.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	7.7	17.3	12.2	21.7	11.0	22.3	8.2	19.5
Change Period, ($Y+R_c$), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Allow Headway (MAH), s	2.9	0.0	2.9	0.0	2.9	3.0	2.9	3.0
Queue Clearance Time (g_s), s	5.1		8.5		9.0	8.1	5.3	14.7
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.8
Phase Call Probability	0.73		0.96		0.96	1.00	0.79	1.00
Max Out Probability	0.55		1.00		1.00	0.03	1.00	0.89

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	78	256	117	189	394	61	200	228	139	94	394	228
Adjusted Saturation Flow Rate (s), veh/h/ln	1474	1660	1490	1688	1772	1406	1714	1772	1478	1688	1772	1478
Queue Service Time (g_s), s	3.1	3.9	4.0	6.5	12.1	1.9	7.0	6.1	4.3	3.3	12.7	8.1
Cycle Queue Clearance Time (g_c), s	3.1	3.9	4.0	6.5	12.1	1.9	7.0	6.1	4.3	3.3	12.7	8.1
Green Ratio (g/C)	0.06	0.22	0.22	0.14	0.30	0.30	0.12	0.31	0.31	0.07	0.26	0.26
Capacity (c), veh/h	92	735	330	230	523	415	200	541	451	119	459	383
Volume-to-Capacity Ratio (X)	0.845	0.347	0.354	0.822	0.754	0.147	1.000	0.421	0.308	0.797	0.859	0.595
Back of Queue (Q), ft/ln (95 th percentile)												
Back of Queue (Q), veh/ln (95 th percentile)	2.1	2.5	2.5	6.1	9.1	1.0	10.0	3.6	2.1	2.7	9.5	4.2
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	27.8	19.7	19.7	25.2	19.2	15.6	26.5	16.6	16.0	27.5	21.2	19.5
Incremental Delay (d_2), s/veh	7.7	1.3	3.0	18.3	9.7	0.7	63.6	0.2	0.1	10.2	10.8	0.7
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	35.6	21.0	22.7	43.5	28.9	16.3	90.1	16.8	16.1	37.7	31.9	20.2
Level of Service (LOS)	D	C	C	D	C	B	F	B	B	D	C	C
Approach Delay, s/veh / LOS	23.9	C		32.0	C		42.5	D		29.0	C	
Intersection Delay, s/veh / LOS	32.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	2.26	B	2.27	B
Bicycle LOS Score / LOS	0.86	A	1.55	B	1.42	A	1.67	B

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	2/27/2023
Agency	HR Green	Analysis Year	2050
Jurisdiction	SD 38 Build	Time Analyzed	AM
Project Description	464th_MickelsonRd_2050_AM	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	0.0
Median Type	TWLT	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	55.0	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	638	Heavy Vehicle Adjustment Factor (fHV)	0.980
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	370
Total Trucks, %	2.00	Capacity (c), pc/h/ln	2100
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2100
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.18

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	55.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	6.7
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	362	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.66
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	8.0
Median Type	TWLTL	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	53.0	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	380	Heavy Vehicle Adjustment Factor (fhv)	0.885
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	244
Total Trucks, %	13.00	Capacity (c), pc/h/ln	2060
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2060
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.12
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	53.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	2.0		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	216	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	6.14
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	F

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	2/27/2023
Agency	HR Green	Analysis Year	2050
Jurisdiction	SD38 Build	Time Analyzed	PM
Project Description	464th_MickelsonRd_PM	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	0.0
Median Type	TWLT	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	55.0	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	441	Heavy Vehicle Adjustment Factor (fhv)	0.943
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	266
Total Trucks, %	6.00	Capacity (c), pc/h/ln	2100
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2100
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.13

Direction 1 Speed and Density

Lane Width Adjustment (flw)	0.0	Average Speed (S), mi/h	55.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.8
Median Type Adjustment (fm)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fa)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	251	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	3.56
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	D

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	8.0
Median Type	TWLT	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	53.0	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	730	Heavy Vehicle Adjustment Factor (fHV)	0.990
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	419
Total Trucks, %	1.00	Capacity (c), pc/h/ln	2060
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2060
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.20
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	53.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	7.9
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	2.0		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	415	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.50
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	2/27/2024
Agency	HR GREEN INC	Analysis Year	2050
Jurisdiction	SD 38	Time Analyzed	PM
Project Description	2050 Build Analysis - 468th St to 469th St	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	1.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.8	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	410	Heavy Vehicle Adjustment Factor (fHV)	0.952
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	244
Total Trucks, %	5.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.11

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.8
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.5
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	233	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	3.42
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	5.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	68.8	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	280	Heavy Vehicle Adjustment Factor (fhv)	0.862
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	184
Total Trucks, %	16.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.08
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	68.8
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.7
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	1.3		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	159	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	8.07
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	F

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	2/27/2024
Agency	HR GREEN INC	Analysis Year	2050
Jurisdiction	SD 38	Time Analyzed	PM
Project Description	2050 Build Analysis - 468th St to 469th St	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	1.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.8	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	370	Heavy Vehicle Adjustment Factor (fHV)	0.935
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	225
Total Trucks, %	7.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.10

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.8
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.2
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	210	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	4.05
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	D

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	5.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	68.8	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	490	Heavy Vehicle Adjustment Factor (fhv)	0.980
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	284
Total Trucks, %	2.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.12
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	68.8
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.1
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	1.3		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	278	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.65
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	2/27/2024
Agency	HR Green	Analysis Year	2050
Jurisdiction	SD38 Build	Time Analyzed	AM
Project Description	469th to LaMesa	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	2.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.5	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	610	Heavy Vehicle Adjustment Factor (fhv)	0.962
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	360
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.16

Direction 1 Speed and Density

Lane Width Adjustment (flw)	0.0	Average Speed (S), mi/h	69.5
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	5.2
Median Type Adjustment (fm)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fa)	0.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	347	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	3.32
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	1.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.8	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	240	Heavy Vehicle Adjustment Factor (fhv)	0.820
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	166
Total Trucks, %	22.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.07
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.8
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.4
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.3		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	136	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	11.74
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	F

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	2/27/2024
Agency	HR Green	Analysis Year	2050
Jurisdiction	SD38 Build	Time Analyzed	PM
Project Description	469th to LaMesa	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	2.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.5	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	351	Heavy Vehicle Adjustment Factor (fHV)	0.917
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	218
Total Trucks, %	9.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.09

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.5
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.1
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	199	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	4.80
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	E

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	1.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.8	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	666	Heavy Vehicle Adjustment Factor (fhv)	0.971
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	390
Total Trucks, %	3.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.17
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.8
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	5.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.3		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	378	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	3.07
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	2/27/2024
Agency	HR GREEN INC	Analysis Year	2050
Jurisdiction	SD 38	Time Analyzed	AM
Project Description	2050 Build Analysis - 466th Avenue S/EB Exit Ramp to 468th St	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	4.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.0	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	364	Heavy Vehicle Adjustment Factor (fHV)	0.935
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	221
Total Trucks, %	7.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.10

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.2
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	1.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	207	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	4.05
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	D

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	2.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.5	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	260	Heavy Vehicle Adjustment Factor (fhv)	0.901
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	164
Total Trucks, %	11.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.07
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.5
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.4
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.5		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	148	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	5.50
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	E

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	2/27/2024
Agency	HR GREEN INC	Analysis Year	2050
Jurisdiction	SD 38	Time Analyzed	PM
Project Description	2050 Build Analysis - 466th Avenue S/EB Exit Ramp to 468th St	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	4.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.0	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	312	Heavy Vehicle Adjustment Factor (fHV)	0.909
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	195
Total Trucks, %	10.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.08

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.8
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	1.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	177	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	5.16
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	E

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	2.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.5	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	420	Heavy Vehicle Adjustment Factor (fhv)	0.935
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	255
Total Trucks, %	7.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.11
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.5
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.7
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.5		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	239	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	4.12
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	D

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	2/27/2024
Agency	HR Green	Analysis Year	2050
Jurisdiction	SD38 Build	Time Analyzed	AM
Project Description	I90 WB Ramps to I90 EB Ramps	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	0.0
Median Type	TWLT	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	70.0	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	745	Heavy Vehicle Adjustment Factor (fHV)	0.971
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	436
Total Trucks, %	3.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.19

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	70.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	6.2
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	423	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	3.13
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	0.0
Median Type	TWLTL	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	70.0	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	273	Heavy Vehicle Adjustment Factor (fhv)	0.877
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	177
Total Trucks, %	14.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.08
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	70.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.5
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	155	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	6.98
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	F

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	2/27/2024
Agency	HR Green	Analysis Year	2050
Jurisdiction	SD38 Build	Time Analyzed	PM
Project Description	I90 WB Ramps to I90 EB Ramps	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	0.0
Median Type	TWLT	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	70.0	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	451	Heavy Vehicle Adjustment Factor (fHV)	0.917
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	280
Total Trucks, %	9.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.12

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	70.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.0
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	256	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	4.92
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	E

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	0.0
Median Type	TWLTL	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	70.0	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	455	Heavy Vehicle Adjustment Factor (fhv)	0.877
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	295
Total Trucks, %	14.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.13
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	70.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.2
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	259	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	7.24
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	F

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	2/27/2024
Agency	HR Green	Analysis Year	2050
Jurisdiction	SD38 Build	Time Analyzed	AM
Project Description	Mickelson Rd to 466th St	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	1.5
Median Type	TWLT	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.6	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	725	Heavy Vehicle Adjustment Factor (fHV)	0.990
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	416
Total Trucks, %	1.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.18

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.6
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	6.0
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.4		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	412	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.61
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	2.2
Median Type	TWLT	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.5	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	425	Heavy Vehicle Adjustment Factor (fHV)	0.885
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	273
Total Trucks, %	13.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.12
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.4
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.9
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.6		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	241	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	6.70
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	F

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	2/27/2024
Agency	HR Green	Analysis Year	2050
Jurisdiction	SD38 Build	Time Analyzed	PM
Project Description	Mickelson Rd to 466th St	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	1.5
Median Type	TWLT	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.6	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	445	Heavy Vehicle Adjustment Factor (fhv)	0.901
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	280
Total Trucks, %	11.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.12

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.6
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.0
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.4		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	253	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	5.78
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	F

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	2.2
Median Type	TWLTL	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.5	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	913	Heavy Vehicle Adjustment Factor (fhv)	0.980
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	530
Total Trucks, %	2.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.23
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.4
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	7.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.6		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	519	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.97
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	2/27/2024
Agency	HR Green	Analysis Year	2050
Jurisdiction	SD38 Build	Time Analyzed	AM
Project Description	466th St to I90 WB Ramps	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	0.0
Median Type	TWLTl	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	70.0	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	769	Heavy Vehicle Adjustment Factor (fHV)	0.980
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	446
Total Trucks, %	2.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.19

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	70.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	6.4
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	437	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.88
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	0.0
Median Type	TWLTl	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	70.0	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	436	Heavy Vehicle Adjustment Factor (fhv)	0.833
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	298
Total Trucks, %	20.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.13
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	70.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.3
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	248	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	10.71
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	F

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	2/27/2024
Agency	HR Green	Analysis Year	2050
Jurisdiction	SD38 Build	Time Analyzed	PM
Project Description	466th St to I90 WB Ramps	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	0.0
Median Type	TWLT	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	70.0	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	450	Heavy Vehicle Adjustment Factor (fHV)	0.917
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	279
Total Trucks, %	9.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.12

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	70.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.0
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	256	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	4.92
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	E

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	0.0
Median Type	TWLT	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	70.0	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	910	Heavy Vehicle Adjustment Factor (fHV)	0.971
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	532
Total Trucks, %	3.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.23
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	70.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	7.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	517	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	3.23
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

HCS Two-Lane Highway Report

Project Information

Analyst	MJV	Date	5/11/2023
Agency	HRG	Analysis Year	2050 NB
Jurisdiction	SDDOT	Time Analyzed	AM Peak
Project Description	West of Hartford SD 38 EB	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1069
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	243	Opposing Demand Flow Rate, veh/h	169
Peak Hour Factor	0.88	Total Trucks, %	5.79
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.14

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.30713	Speed Power Coefficient (p)	0.54838
PF Slope Coefficient (m)	-1.23090	PF Power Coefficient (p)	0.80942
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1069	-	-	68.5

Vehicle Results

Average Speed, mi/h	68.5	Percent Followers, %	32.4
Segment Travel Time, minutes	0.18	Follower Density (FD), followers/mi/ln	1.2
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	243	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.70	Bicycle Effective Speed Factor	5.07
Bicycle LOS	D		

Segment 2

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	664
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity					
Directional Demand Flow Rate, veh/h		243	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		5.79
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.14
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.29315	PF Power Coefficient (p)		0.75829
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.3
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	664	-	-	68.0
Vehicle Results					
Average Speed, mi/h		68.0	Percent Followers, %		35.8
Segment Travel Time, minutes		0.11	Follower Density (FD), followers/mi/ln		1.3
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		243	Bicycle Effective Width, ft		24
Bicycle LOS Score		3.70	Bicycle Effective Speed Factor		5.07
Bicycle LOS		D			
Segment 3					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		1871
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		243	Opposing Demand Flow Rate, veh/h		169
Peak Hour Factor		0.88	Total Trucks, %		5.79
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.14
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.31694	Speed Power Coefficient (p)		0.54838
PF Slope Coefficient (m)		-1.20586	PF Power Coefficient (p)		0.82063
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.1
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1871	-	-	68.5

Vehicle Results

Average Speed, mi/h	68.5	Percent Followers, %	31.5
Segment Travel Time, minutes	0.31	Follower Density (FD), followers/mi/ln	1.1
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	243	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.70	Bicycle Effective Speed Factor	5.07
Bicycle LOS	D		

Segment 4

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	925
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	243	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	5.79
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.14

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29315	PF Power Coefficient (p)	0.75829
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	925	-	-	68.0

Vehicle Results

Average Speed, mi/h	68.0	Percent Followers, %	35.8
Segment Travel Time, minutes	0.15	Follower Density (FD), followers/mi/ln	1.3
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	243	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.70	Bicycle Effective Speed Factor	5.07
Bicycle LOS	D		

Segment 5					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		4476
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		243	Opposing Demand Flow Rate, veh/h		169
Peak Hour Factor		0.88	Total Trucks, %		5.79
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.14
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.35043	Speed Power Coefficient (p)		0.54838
PF Slope Coefficient (m)		-1.15155	PF Power Coefficient (p)		0.84082
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.1
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4476	-	-	68.5
Vehicle Results					
Average Speed, mi/h		68.5	Percent Followers, %		29.6
Segment Travel Time, minutes		0.74	Follower Density (FD), followers/mi/ln		1.1
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		243	Bicycle Effective Width, ft		24
Bicycle LOS Score		3.70	Bicycle Effective Speed Factor		5.07
Bicycle LOS		D			
Segment 6					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		896
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		243	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		5.79
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.14
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0

Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29315	PF Power Coefficient (p)	0.75829
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	896	-	-	68.0

Vehicle Results

Average Speed, mi/h	68.0	Percent Followers, %	35.8
Segment Travel Time, minutes	0.15	Follower Density (FD), followers/mi/ln	1.3
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	243	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.70	Bicycle Effective Speed Factor	5.07
Bicycle LOS	D		

Segment 7

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	743
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	243	Opposing Demand Flow Rate, veh/h	169
Peak Hour Factor	0.88	Total Trucks, %	5.79
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.14

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.30713	Speed Power Coefficient (p)	0.54838
PF Slope Coefficient (m)	-1.23090	PF Power Coefficient (p)	0.80942
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	743	-	-	68.5

Vehicle Results

Average Speed, mi/h	68.5	Percent Followers, %	32.4
Segment Travel Time, minutes	0.12	Follower Density (FD), followers/mi/ln	1.2
Vehicle LOS	A		

Bicycle Results											
Percent Occupied Parking		0		Pavement Condition Rating		4					
Flow Rate Outside Lane, veh/h		243		Bicycle Effective Width, ft		24					
Bicycle LOS Score		3.70		Bicycle Effective Speed Factor		5.07					
Bicycle LOS		D									
Segment 8											
Vehicle Inputs											
Segment Type		Passing Zone		Length, ft		2717					
Measured FFS		Measured		Free-Flow Speed, mi/h		70.0					
Demand and Capacity											
Directional Demand Flow Rate, veh/h		245		Opposing Demand Flow Rate, veh/h		165					
Peak Hour Factor		0.88		Total Trucks, %		3.28					
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)		0.14					
Intermediate Results											
Segment Vertical Class		1		Free-Flow Speed, mi/h		70.0					
Speed Slope Coefficient (m)		4.32768		Speed Power Coefficient (p)		0.54983					
PF Slope Coefficient (m)		-1.17918		PF Power Coefficient (p)		0.83165					
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln		1.1					
%Improvement to Percent Followers		0.0		%Improvement to Speed		0.0					
Subsegment Data											
#	Segment Type		Length, ft		Radius, ft		Superelevation, %		Average Speed, mi/h		
1	Tangent		2717		-		-		68.5		
Vehicle Results											
Average Speed, mi/h			68.5			Percent Followers, %			30.7		
Segment Travel Time, minutes			0.45			Follower Density (FD), followers/mi/ln			1.1		
Vehicle LOS			A								
Bicycle Results											
Percent Occupied Parking			0			Pavement Condition Rating			4		
Flow Rate Outside Lane, veh/h			245			Bicycle Effective Width, ft			24		
Bicycle LOS Score			2.93			Bicycle Effective Speed Factor			5.07		
Bicycle LOS			C								
Segment 9											
Vehicle Inputs											
Segment Type			Passing Constrained			Length, ft			1013		
Measured FFS			Measured			Free-Flow Speed, mi/h			70.0		
Demand and Capacity											

Directional Demand Flow Rate, veh/h		245	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		3.28
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.14
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.29345	PF Power Coefficient (p)		0.75792
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.3
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1013	-	-	68.0
Vehicle Results					
Average Speed, mi/h		68.0	Percent Followers, %		36.0
Segment Travel Time, minutes		0.17	Follower Density (FD), followers/mi/ln		1.3
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		245	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.93	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 10					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		4569
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		245	Opposing Demand Flow Rate, veh/h		165
Peak Hour Factor		0.88	Total Trucks, %		3.28
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.14
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.34958	Speed Power Coefficient (p)		0.54983
PF Slope Coefficient (m)		-1.14981	PF Power Coefficient (p)		0.84100
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.1
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h

1	Tangent	4569	-	-	68.5
Vehicle Results					
Average Speed, mi/h		68.5	Percent Followers, %		29.7
Segment Travel Time, minutes		0.76	Follower Density (FD), followers/mi/ln		1.1
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		245	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.93	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 11					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		5676
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		244	Opposing Demand Flow Rate, veh/h		165
Peak Hour Factor		0.88	Total Trucks, %		2.82
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.14
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.36055	Speed Power Coefficient (p)		0.54983
PF Slope Coefficient (m)		-1.14222	PF Power Coefficient (p)		0.84066
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.1
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5676	-	-	68.5
Vehicle Results					
Average Speed, mi/h		68.5	Percent Followers, %		29.5
Segment Travel Time, minutes		0.94	Follower Density (FD), followers/mi/ln		1.1
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		244	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.80	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 12					

Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		657
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		244	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		2.82
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.14
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.29350	PF Power Coefficient (p)		0.75785
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.3
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	657	-	-	68.0
Vehicle Results					
Average Speed, mi/h		68.0	Percent Followers, %		35.9
Segment Travel Time, minutes		0.11	Follower Density (FD), followers/mi/ln		1.3
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		244	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.80	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 13					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		6009
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		244	Opposing Demand Flow Rate, veh/h		165
Peak Hour Factor		0.88	Total Trucks, %		2.82
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.14
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.36364	Speed Power Coefficient (p)		0.54983
PF Slope Coefficient (m)		-1.14089	PF Power Coefficient (p)		0.83997

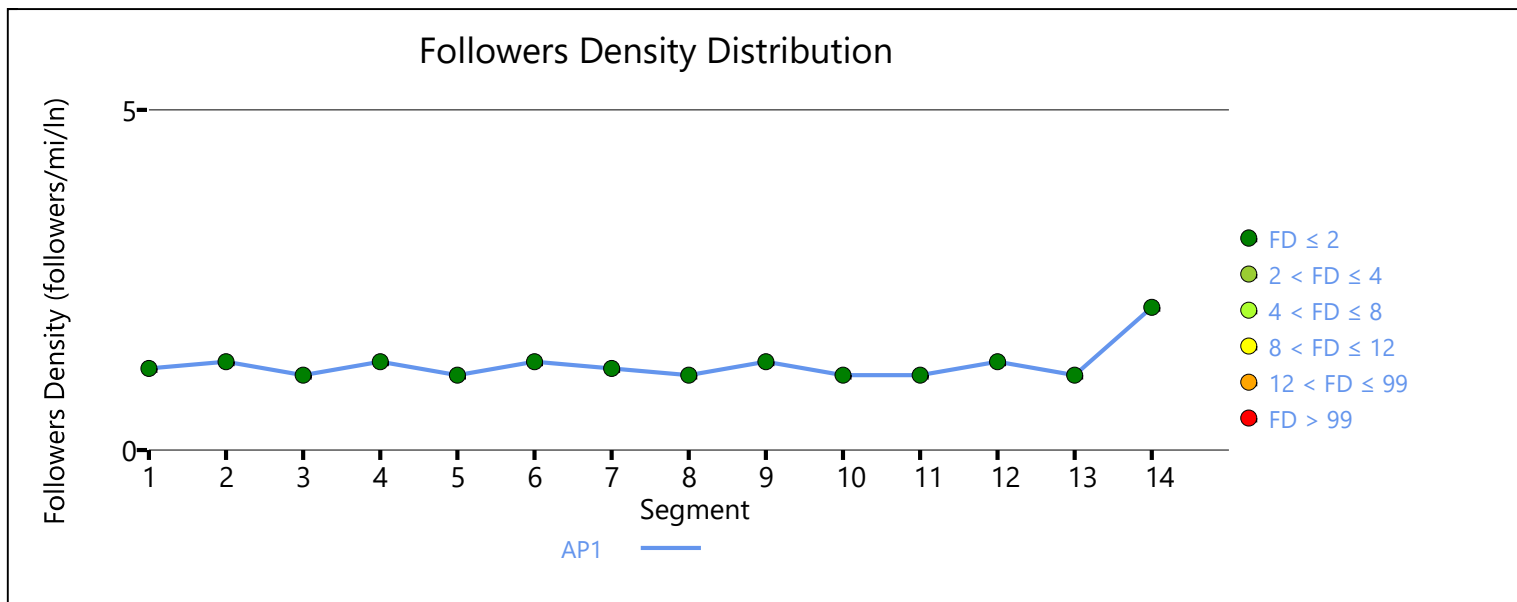
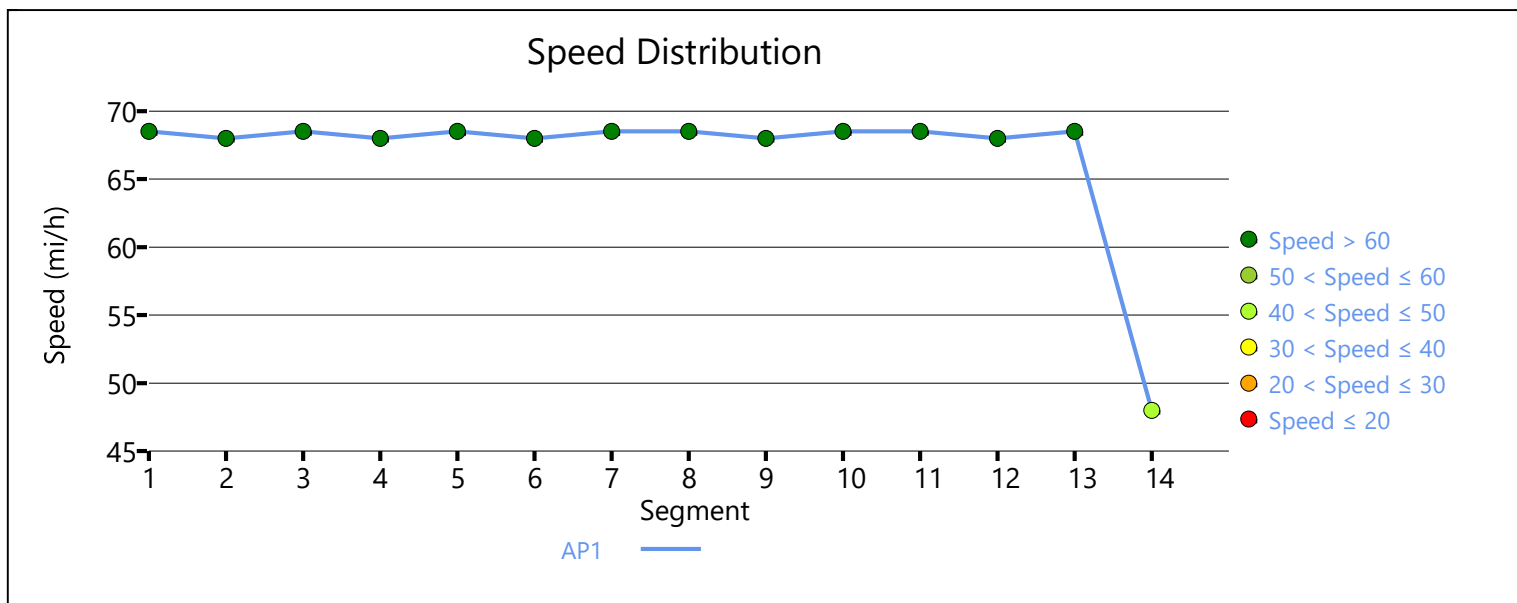
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.1
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6009	-	-	68.5
Vehicle Results					
Average Speed, mi/h		68.5	Percent Followers, %		29.5
Segment Travel Time, minutes		1.00	Follower Density (FD), followers/mi/ln		1.1
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		244	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.80	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 14					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		891
Measured FFS		Measured	Free-Flow Speed, mi/h		50.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		244	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		2.82
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.14
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		50.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.47375	PF Power Coefficient (p)		0.71164
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		2.1
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	891	-	-	48.0
Vehicle Results					
Average Speed, mi/h		48.0	Percent Followers, %		41.8
Segment Travel Time, minutes		0.21	Follower Density (FD), followers/mi/ln		2.1
Vehicle LOS		B			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4

Flow Rate Outside Lane, veh/h	244	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.59	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	327	0.11	1.1	A



HCS Two-Lane Highway Report

Project Information

Analyst	MJV	Date	5/11/2023
Agency	HRG	Analysis Year	2050 NB
Jurisdiction	SDDOT	Time Analyzed	PM Peak
Project Description	West of Hartford SD 38 EB	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1069
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	157	Opposing Demand Flow Rate, veh/h	286
Peak Hour Factor	0.88	Total Trucks, %	5.79
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.09

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.34767	Speed Power Coefficient (p)	0.51808
PF Slope Coefficient (m)	-1.25475	PF Power Coefficient (p)	0.80124
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.6
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1069	-	-	69.0

Vehicle Results

Average Speed, mi/h	69.0	Percent Followers, %	24.8
Segment Travel Time, minutes	0.18	Follower Density (FD), followers/mi/ln	0.6
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	157	Bicycle Effective Width, ft	30
Bicycle LOS Score	1.86	Bicycle Effective Speed Factor	5.07
Bicycle LOS	B		

Segment 2

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	664
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity					
Directional Demand Flow Rate, veh/h		157	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		5.79
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.09
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.29315	PF Power Coefficient (p)		0.75829
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.6
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	664	-	-	68.6
Vehicle Results					
Average Speed, mi/h		68.6	Percent Followers, %		27.2
Segment Travel Time, minutes		0.11	Follower Density (FD), followers/mi/ln		0.6
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		157	Bicycle Effective Width, ft		30
Bicycle LOS Score		1.86	Bicycle Effective Speed Factor		5.07
Bicycle LOS		B			
Segment 3					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		1871
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		157	Opposing Demand Flow Rate, veh/h		286
Peak Hour Factor		0.88	Total Trucks, %		5.79
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.09
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.35747	Speed Power Coefficient (p)		0.51808
PF Slope Coefficient (m)		-1.22915	PF Power Coefficient (p)		0.81213
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.5
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1871	-	-	69.0

Vehicle Results

Average Speed, mi/h	69.0	Percent Followers, %	23.9
Segment Travel Time, minutes	0.31	Follower Density (FD), followers/mi/ln	0.5
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	157	Bicycle Effective Width, ft	30
Bicycle LOS Score	1.86	Bicycle Effective Speed Factor	5.07
Bicycle LOS	B		

Segment 4

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	925
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	157	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	5.79
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.09

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29315	PF Power Coefficient (p)	0.75829
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.6
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	925	-	-	68.6

Vehicle Results

Average Speed, mi/h	68.6	Percent Followers, %	27.2
Segment Travel Time, minutes	0.15	Follower Density (FD), followers/mi/ln	0.6
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	157	Bicycle Effective Width, ft	30
Bicycle LOS Score	1.86	Bicycle Effective Speed Factor	5.07
Bicycle LOS	B		

Segment 5					
Vehicle Inputs					
Segment Type		Passing Zone		Length, ft	
Measured FFS		Measured		Free-Flow Speed, mi/h	
				4476	
				70.0	
Demand and Capacity					
Directional Demand Flow Rate, veh/h		157		Opposing Demand Flow Rate, veh/h	
Peak Hour Factor		0.88		Total Trucks, %	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)	
				0.09	
Intermediate Results					
Segment Vertical Class		1		Free-Flow Speed, mi/h	
Speed Slope Coefficient (m)		4.39096		Speed Power Coefficient (p)	
PF Slope Coefficient (m)		-1.17364		PF Power Coefficient (p)	
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln	
%Improvement to Percent Followers		0.0		%Improvement to Speed	
				0.0	
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4476	-	-	69.0
Vehicle Results					
Average Speed, mi/h		69.0		Percent Followers, %	
Segment Travel Time, minutes		0.74		Follower Density (FD), followers/mi/ln	
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0		Pavement Condition Rating	
Flow Rate Outside Lane, veh/h		157		Bicycle Effective Width, ft	
Bicycle LOS Score		1.86		Bicycle Effective Speed Factor	
Bicycle LOS		B			
Segment 6					
Vehicle Inputs					
Segment Type		Passing Constrained		Length, ft	
Measured FFS		Measured		Free-Flow Speed, mi/h	
				896	
				70.0	
Demand and Capacity					
Directional Demand Flow Rate, veh/h		157		Opposing Demand Flow Rate, veh/h	
Peak Hour Factor		0.88		Total Trucks, %	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)	
				0.09	
Intermediate Results					
Segment Vertical Class		1		Free-Flow Speed, mi/h	
				70.0	

Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29315	PF Power Coefficient (p)	0.75829
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.6
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	896	-	-	68.6

Vehicle Results			
Average Speed, mi/h	68.6	Percent Followers, %	27.2
Segment Travel Time, minutes	0.15	Follower Density (FD), followers/mi/ln	0.6
Vehicle LOS	A		

Bicycle Results			
Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	157	Bicycle Effective Width, ft	30
Bicycle LOS Score	1.86	Bicycle Effective Speed Factor	5.07
Bicycle LOS	B		

Segment 7

Vehicle Inputs			
Segment Type	Passing Zone	Length, ft	743
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity			
Directional Demand Flow Rate, veh/h	157	Opposing Demand Flow Rate, veh/h	286
Peak Hour Factor	0.88	Total Trucks, %	5.79
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.09

Intermediate Results			
Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.34767	Speed Power Coefficient (p)	0.51808
PF Slope Coefficient (m)	-1.25475	PF Power Coefficient (p)	0.80124
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.6
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	743	-	-	69.0

Vehicle Results			
Average Speed, mi/h	69.0	Percent Followers, %	24.8
Segment Travel Time, minutes	0.12	Follower Density (FD), followers/mi/ln	0.6
Vehicle LOS	A		

Bicycle Results					
Percent Occupied Parking	0	Pavement Condition Rating	4		
Flow Rate Outside Lane, veh/h	157	Bicycle Effective Width, ft	30		
Bicycle LOS Score	1.86	Bicycle Effective Speed Factor	5.07		
Bicycle LOS	B				
Segment 8					
Vehicle Inputs					
Segment Type	Passing Zone	Length, ft	2717		
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0		
Demand and Capacity					
Directional Demand Flow Rate, veh/h	164	Opposing Demand Flow Rate, veh/h	289		
Peak Hour Factor	0.88	Total Trucks, %	3.28		
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.10		
Intermediate Results					
Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0		
Speed Slope Coefficient (m)	4.37072	Speed Power Coefficient (p)	0.51760		
PF Slope Coefficient (m)	-1.20338	PF Power Coefficient (p)	0.82225		
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.6		
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0		
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2717	-	-	68.9
Vehicle Results					
Average Speed, mi/h	68.9	Percent Followers, %	23.8		
Segment Travel Time, minutes	0.45	Follower Density (FD), followers/mi/ln	0.6		
Vehicle LOS	A				
Bicycle Results					
Percent Occupied Parking	0	Pavement Condition Rating	4		
Flow Rate Outside Lane, veh/h	164	Bicycle Effective Width, ft	29		
Bicycle LOS Score	1.40	Bicycle Effective Speed Factor	5.07		
Bicycle LOS	A				
Segment 9					
Vehicle Inputs					
Segment Type	Passing Constrained	Length, ft	1013		
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0		
Demand and Capacity					

Directional Demand Flow Rate, veh/h		164	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		3.28
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.29345	PF Power Coefficient (p)		0.75792
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.7
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1013	-	-	68.5
Vehicle Results					
Average Speed, mi/h		68.5	Percent Followers, %		28.0
Segment Travel Time, minutes		0.17	Follower Density (FD), followers/mi/ln		0.7
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		164	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.40	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 10					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		4569
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		164	Opposing Demand Flow Rate, veh/h		289
Peak Hour Factor		0.88	Total Trucks, %		3.28
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.39263	Speed Power Coefficient (p)		0.51760
PF Slope Coefficient (m)		-1.17332	PF Power Coefficient (p)		0.83118
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.5
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h

1	Tangent	4569	-	-	68.9
Vehicle Results					
Average Speed, mi/h		68.9	Percent Followers, %		22.9
Segment Travel Time, minutes		0.75	Follower Density (FD), followers/mi/ln		0.5
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		164	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.40	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 11					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		5676
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		164	Opposing Demand Flow Rate, veh/h		280
Peak Hour Factor		0.88	Total Trucks, %		2.82
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.40080	Speed Power Coefficient (p)		0.51956
PF Slope Coefficient (m)		-1.16417	PF Power Coefficient (p)		0.83135
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.5
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5676	-	-	68.9
Vehicle Results					
Average Speed, mi/h		68.9	Percent Followers, %		22.8
Segment Travel Time, minutes		0.94	Follower Density (FD), followers/mi/ln		0.5
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		164	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.28	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 12					

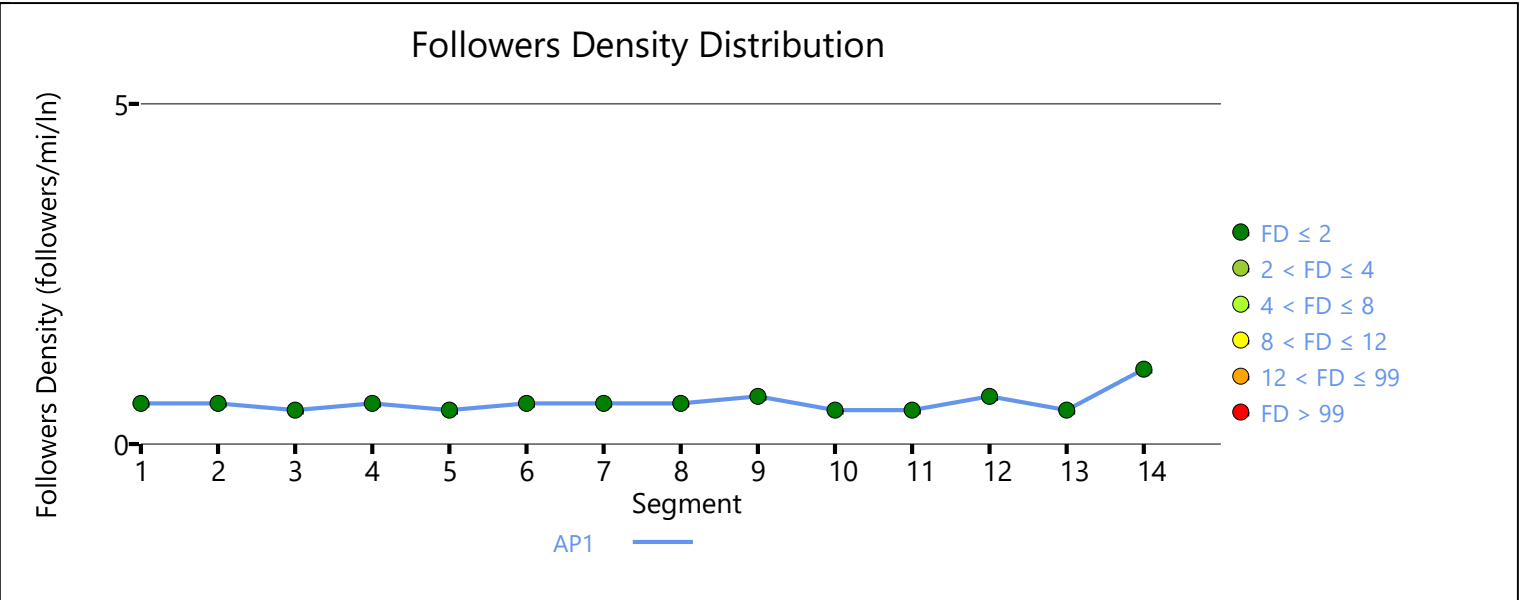
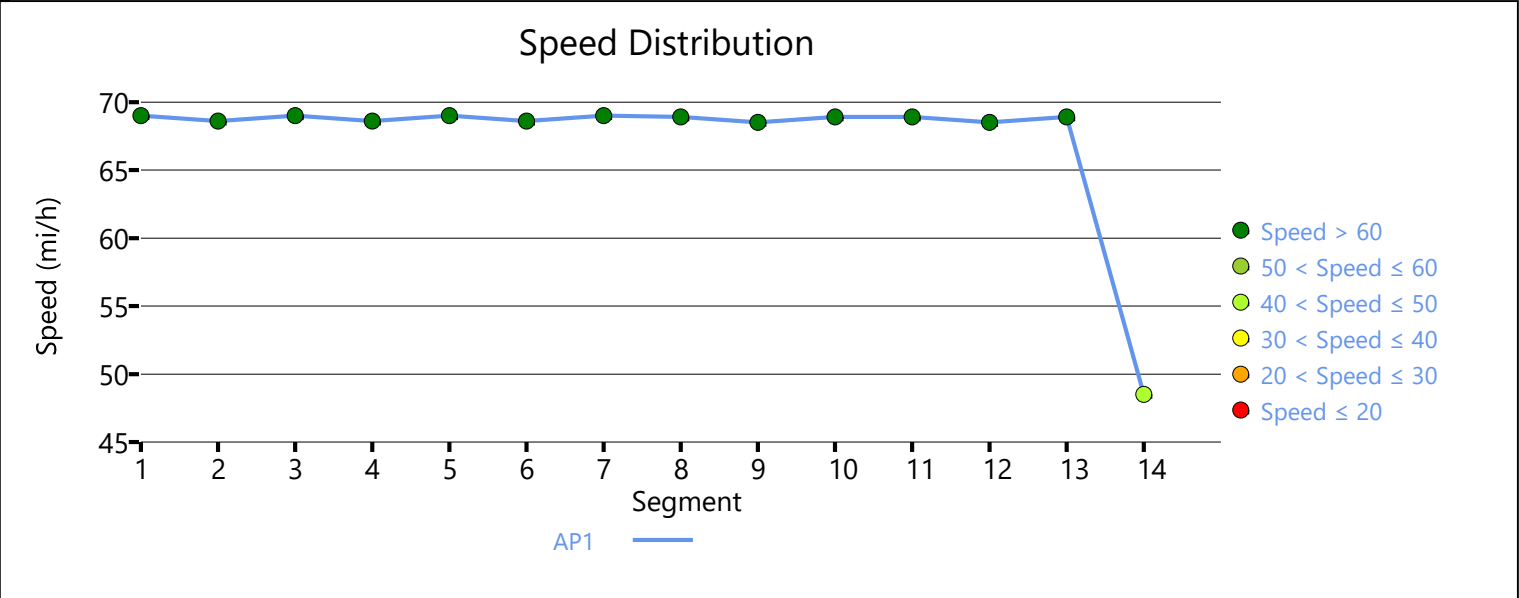
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		657
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		164	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		2.82
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.29350	PF Power Coefficient (p)		0.75785
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.7
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	657	-	-	68.5
Vehicle Results					
Average Speed, mi/h		68.5	Percent Followers, %		28.0
Segment Travel Time, minutes		0.11	Follower Density (FD), followers/mi/ln		0.7
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		164	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.28	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 13					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		6009
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		164	Opposing Demand Flow Rate, veh/h		280
Peak Hour Factor		0.88	Total Trucks, %		2.82
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.40389	Speed Power Coefficient (p)		0.51956
PF Slope Coefficient (m)		-1.16281	PF Power Coefficient (p)		0.83065

In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.5
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6009	-	-	68.9
Vehicle Results					
Average Speed, mi/h		68.9	Percent Followers, %		22.8
Segment Travel Time, minutes		0.99	Follower Density (FD), followers/mi/ln		0.5
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		164	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.28	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 14					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		891
Measured FFS		Measured	Free-Flow Speed, mi/h		50.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		164	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		2.82
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		50.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.47375	PF Power Coefficient (p)		0.71164
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.1
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	891	-	-	48.5
Vehicle Results					
Average Speed, mi/h		48.5	Percent Followers, %		33.4
Segment Travel Time, minutes		0.21	Follower Density (FD), followers/mi/ln		1.1
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4

Flow Rate Outside Lane, veh/h	164	Bicycle Effective Width, ft	29
Bicycle LOS Score	1.06	Bicycle Effective Speed Factor	4.42
Bicycle LOS	A		

Facility Results				
T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	216	0.05	0.6	A



HCS Two-Lane Highway Report

Project Information

Analyst	MJV	Date	5/11/2023
Agency	HRG	Analysis Year	2050 NB
Jurisdiction	SDDOT	Time Analyzed	AM Peak
Project Description	WB 38 West of Hartford	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	10549
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	165	Opposing Demand Flow Rate, veh/h	244
Peak Hour Factor	0.88	Total Trucks, %	12.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.10

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.42827	Speed Power Coefficient (p)	0.52768
PF Slope Coefficient (m)	-1.16689	PF Power Coefficient (p)	0.80729
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.6
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	10549	-	-	69.0

Vehicle Results

Average Speed, mi/h	69.0	Percent Followers, %	23.8
Segment Travel Time, minutes	1.74	Follower Density (FD), followers/mi/ln	0.6
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	165	Bicycle Effective Width, ft	29
Bicycle LOS Score	4.94	Bicycle Effective Speed Factor	5.07
Bicycle LOS	E		

Segment 2

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2793
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity					
Directional Demand Flow Rate, veh/h		165	Opposing Demand Flow Rate, veh/h		244
Peak Hour Factor		0.88	Total Trucks, %		12.50
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.35767	Speed Power Coefficient (p)		0.52768
PF Slope Coefficient (m)		-1.19319	PF Power Coefficient (p)		0.82737
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.6
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2793	-	-	69.0
Vehicle Results					
Average Speed, mi/h		69.0	Percent Followers, %		23.5
Segment Travel Time, minutes		0.46	Follower Density (FD), followers/mi/ln		0.6
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		165	Bicycle Effective Width, ft		29
Bicycle LOS Score		4.94	Bicycle Effective Speed Factor		5.07
Bicycle LOS		E			
Segment 3					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		3825
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		165	Opposing Demand Flow Rate, veh/h		245
Peak Hour Factor		0.88	Total Trucks, %		2.40
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.37079	Speed Power Coefficient (p)		0.52741
PF Slope Coefficient (m)		-1.17529	PF Power Coefficient (p)		0.83222
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.6
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3825	-	-	69.0

Vehicle Results

Average Speed, mi/h	69.0	Percent Followers, %	23.1
Segment Travel Time, minutes	0.63	Follower Density (FD), followers/mi/ln	0.6
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	165	Bicycle Effective Width, ft	29
Bicycle LOS Score	1.17	Bicycle Effective Speed Factor	5.07
Bicycle LOS	A		

Segment 4

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	791
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	165	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	2.40
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.10

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29355	PF Power Coefficient (p)	0.75779
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.7
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	791	-	-	68.5

Vehicle Results

Average Speed, mi/h	68.5	Percent Followers, %	28.1
Segment Travel Time, minutes	0.13	Follower Density (FD), followers/mi/ln	0.7
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	165	Bicycle Effective Width, ft	29
Bicycle LOS Score	1.17	Bicycle Effective Speed Factor	5.07
Bicycle LOS	A		

Segment 5					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		3414
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		165	Opposing Demand Flow Rate, veh/h		245
Peak Hour Factor		0.88	Total Trucks, %		2.40
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.36595	Speed Power Coefficient (p)		0.52741
PF Slope Coefficient (m)		-1.18179	PF Power Coefficient (p)		0.83026
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.6
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3414	-	-	69.0
Vehicle Results					
Average Speed, mi/h		69.0	Percent Followers, %		23.2
Segment Travel Time, minutes		0.56	Follower Density (FD), followers/mi/ln		0.6
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		165	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.17	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 6					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		286
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		165	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		2.40
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0

Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29355	PF Power Coefficient (p)	0.75779
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.7
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	286	-	-	68.5

Vehicle Results			
Average Speed, mi/h	68.5	Percent Followers, %	28.1
Segment Travel Time, minutes	0.05	Follower Density (FD), followers/mi/ln	0.7
Vehicle LOS	A		

Bicycle Results			
Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	165	Bicycle Effective Width, ft	29
Bicycle LOS Score	1.17	Bicycle Effective Speed Factor	5.07
Bicycle LOS	A		

Segment 7			
Vehicle Inputs			
Segment Type	Passing Constrained	Length, ft	463
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity			
Directional Demand Flow Rate, veh/h	169	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	2.60
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.10

Intermediate Results			
Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29353	PF Power Coefficient (p)	0.75782
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.7
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	463	-	-	68.5

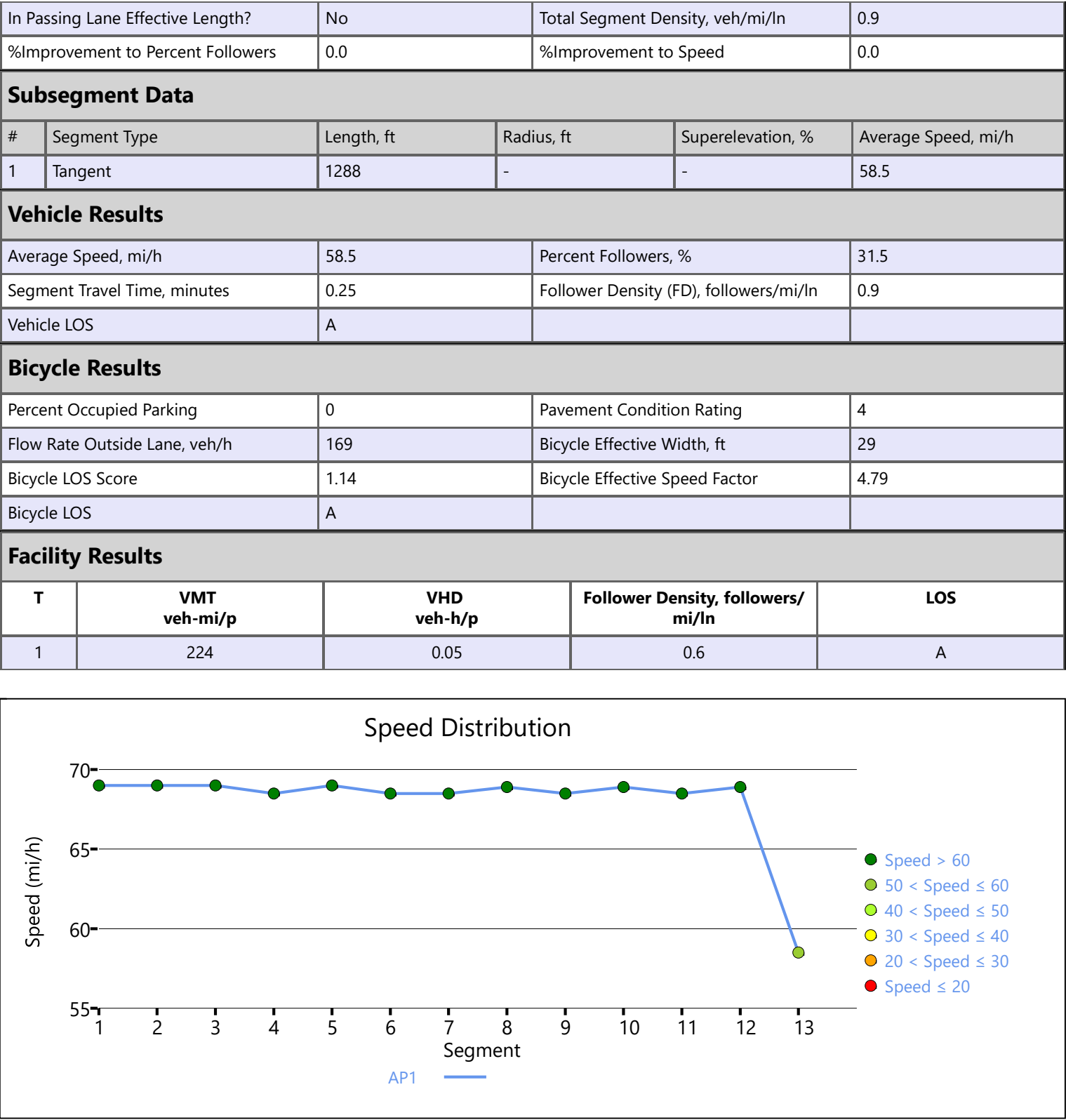
Vehicle Results			
Average Speed, mi/h	68.5	Percent Followers, %	28.6
Segment Travel Time, minutes	0.08	Follower Density (FD), followers/mi/ln	0.7
Vehicle LOS	A		

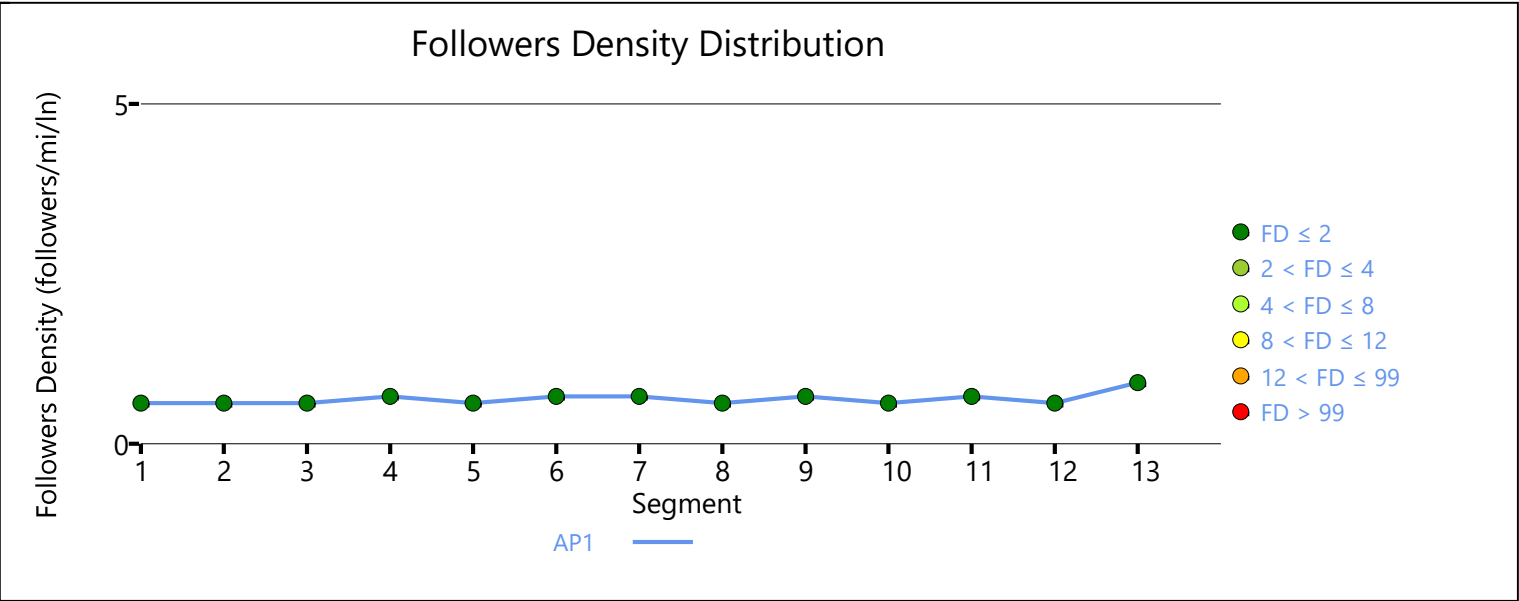
Bicycle Results					
Percent Occupied Parking	0	Pavement Condition Rating	4		
Flow Rate Outside Lane, veh/h	169	Bicycle Effective Width, ft	29		
Bicycle LOS Score	1.23	Bicycle Effective Speed Factor	5.07		
Bicycle LOS	A				
Segment 8					
Vehicle Inputs					
Segment Type	Passing Zone	Length, ft	4822		
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0		
Demand and Capacity					
Directional Demand Flow Rate, veh/h	169	Opposing Demand Flow Rate, veh/h	243		
Peak Hour Factor	0.88	Total Trucks, %	2.60		
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.10		
Intermediate Results					
Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0		
Speed Slope Coefficient (m)	4.38079	Speed Power Coefficient (p)	0.52796		
PF Slope Coefficient (m)	-1.16377	PF Power Coefficient (p)	0.83451		
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.6		
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0		
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4822	-	-	68.9
Vehicle Results					
Average Speed, mi/h	68.9	Percent Followers, %	23.2		
Segment Travel Time, minutes	0.79	Follower Density (FD), followers/mi/ln	0.6		
Vehicle LOS	A				
Bicycle Results					
Percent Occupied Parking	0	Pavement Condition Rating	4		
Flow Rate Outside Lane, veh/h	169	Bicycle Effective Width, ft	29		
Bicycle LOS Score	1.23	Bicycle Effective Speed Factor	5.07		
Bicycle LOS	A				
Segment 9					
Vehicle Inputs					
Segment Type	Passing Constrained	Length, ft	861		
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0		
Demand and Capacity					

Directional Demand Flow Rate, veh/h		169	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		2.60
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.29353	PF Power Coefficient (p)		0.75782
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.7
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	861	-	-	68.5
Vehicle Results					
Average Speed, mi/h		68.5	Percent Followers, %		28.6
Segment Travel Time, minutes		0.14	Follower Density (FD), followers/mi/ln		0.7
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		169	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.23	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 10					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		1556
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		169	Opposing Demand Flow Rate, veh/h		243
Peak Hour Factor		0.88	Total Trucks, %		2.60
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.33831	Speed Power Coefficient (p)		0.52796
PF Slope Coefficient (m)		-1.23554	PF Power Coefficient (p)		0.80871
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.6
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h

1	Tangent	1556	-	-	68.9
Vehicle Results					
Average Speed, mi/h		68.9	Percent Followers, %		25.5
Segment Travel Time, minutes		0.26	Follower Density (FD), followers/mi/ln		0.6
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		169	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.23	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 11					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		799
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		169	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		2.60
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.29353	PF Power Coefficient (p)		0.75782
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.7
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	799	-	-	68.5
Vehicle Results					
Average Speed, mi/h		68.5	Percent Followers, %		28.6
Segment Travel Time, minutes		0.13	Follower Density (FD), followers/mi/ln		0.7
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		169	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.23	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 12					

Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		857
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		169	Opposing Demand Flow Rate, veh/h		243
Peak Hour Factor		0.88	Total Trucks, %		2.60
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.33390	Speed Power Coefficient (p)		0.52796
PF Slope Coefficient (m)		-1.24754	PF Power Coefficient (p)		0.80350
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.6
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	857	-	-	68.9
Vehicle Results					
Average Speed, mi/h		68.9	Percent Followers, %		25.9
Segment Travel Time, minutes		0.14	Follower Density (FD), followers/mi/ln		0.6
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		169	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.23	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 13					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		1288
Measured FFS		Measured	Free-Flow Speed, mi/h		60.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		169	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		2.60
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		60.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.39677	PF Power Coefficient (p)		0.73640





HCS Two-Lane Highway Report

Project Information

Analyst	MJV	Date	5/11/2023
Agency	HRG	Analysis Year	2050 NB
Jurisdiction	SDDOT	Time Analyzed	PM Peak
Project Description	WB 38 West of Hartford	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	10549
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	280	Opposing Demand Flow Rate, veh/h	164
Peak Hour Factor	0.88	Total Trucks, %	1.94
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.16

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.39885	Speed Power Coefficient (p)	0.55020
PF Slope Coefficient (m)	-1.15143	PF Power Coefficient (p)	0.81244
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.4
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	10549	-	-	68.3

Vehicle Results

Average Speed, mi/h	68.3	Percent Followers, %	33.6
Segment Travel Time, minutes	1.76	Follower Density (FD), followers/mi/ln	1.4
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	280	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.64	Bicycle Effective Speed Factor	5.07
Bicycle LOS	C		

Segment 2

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2793
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity							
Directional Demand Flow Rate, veh/h		280		Opposing Demand Flow Rate, veh/h		164	
Peak Hour Factor		0.88		Total Trucks, %		1.94	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)		0.16	
Intermediate Results							
Segment Vertical Class		1		Free-Flow Speed, mi/h		70.0	
Speed Slope Coefficient (m)		4.32824		Speed Power Coefficient (p)		0.55020	
PF Slope Coefficient (m)		-1.17723		PF Power Coefficient (p)		0.83227	
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln		1.4	
%Improvement to Percent Followers		0.0		%Improvement to Speed		0.0	
Subsegment Data							
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h		
1	Tangent	2793	-	-	68.3		
Vehicle Results							
Average Speed, mi/h		68.3		Percent Followers, %		33.5	
Segment Travel Time, minutes		0.46		Follower Density (FD), followers/mi/ln		1.4	
Vehicle LOS		A					
Bicycle Results							
Percent Occupied Parking		0		Pavement Condition Rating		4	
Flow Rate Outside Lane, veh/h		280		Bicycle Effective Width, ft		24	
Bicycle LOS Score		2.64		Bicycle Effective Speed Factor		5.07	
Bicycle LOS		C					
Segment 3							
Vehicle Inputs							
Segment Type		Passing Zone		Length, ft		3825	
Measured FFS		Measured		Free-Flow Speed, mi/h		70.0	
Demand and Capacity							
Directional Demand Flow Rate, veh/h		289		Opposing Demand Flow Rate, veh/h		164	
Peak Hour Factor		0.88		Total Trucks, %		2.19	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)		0.17	
Intermediate Results							
Segment Vertical Class		1		Free-Flow Speed, mi/h		70.0	
Speed Slope Coefficient (m)		4.34098		Speed Power Coefficient (p)		0.55020	
PF Slope Coefficient (m)		-1.15833		PF Power Coefficient (p)		0.83897	
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln		1.4	
%Improvement to Percent Followers		0.0		%Improvement to Speed		0.0	
Subsegment Data							

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3825	-	-	68.3

Vehicle Results

Average Speed, mi/h	68.3	Percent Followers, %	33.5
Segment Travel Time, minutes	0.64	Follower Density (FD), followers/mi/ln	1.4
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	289	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.72	Bicycle Effective Speed Factor	5.07
Bicycle LOS	C		

Segment 4

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	791
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	289	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	2.19
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.17

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29358	PF Power Coefficient (p)	0.75776
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.7
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	791	-	-	67.7

Vehicle Results

Average Speed, mi/h	67.7	Percent Followers, %	39.6
Segment Travel Time, minutes	0.13	Follower Density (FD), followers/mi/ln	1.7
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	289	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.72	Bicycle Effective Speed Factor	5.07
Bicycle LOS	C		

Segment 5					
Vehicle Inputs					
Segment Type		Passing Zone		Length, ft	
Measured FFS		Measured		Free-Flow Speed, mi/h	
3414		70.0			
Demand and Capacity					
Directional Demand Flow Rate, veh/h		289		Opposing Demand Flow Rate, veh/h	
Peak Hour Factor		0.88		Total Trucks, %	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)	
				0.17	
Intermediate Results					
Segment Vertical Class		1		Free-Flow Speed, mi/h	
Speed Slope Coefficient (m)		4.33614		Speed Power Coefficient (p)	
PF Slope Coefficient (m)		-1.16472		PF Power Coefficient (p)	
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln	
%Improvement to Percent Followers		0.0		%Improvement to Speed	
				0.0	
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3414	-	-	68.3
Vehicle Results					
Average Speed, mi/h		68.3		Percent Followers, %	
Segment Travel Time, minutes		0.57		Follower Density (FD), followers/mi/ln	
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0		Pavement Condition Rating	
Flow Rate Outside Lane, veh/h		289		Bicycle Effective Width, ft	
Bicycle LOS Score		2.72		Bicycle Effective Speed Factor	
Bicycle LOS		C			
Segment 6					
Vehicle Inputs					
Segment Type		Passing Constrained		Length, ft	
Measured FFS		Measured		Free-Flow Speed, mi/h	
				70.0	
Demand and Capacity					
Directional Demand Flow Rate, veh/h		289		Opposing Demand Flow Rate, veh/h	
Peak Hour Factor		0.88		Total Trucks, %	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)	
				0.17	
Intermediate Results					
Segment Vertical Class		1		Free-Flow Speed, mi/h	
				70.0	

Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29358	PF Power Coefficient (p)	0.75776
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.7
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	286	-	-	67.7

Vehicle Results			
Average Speed, mi/h	67.7	Percent Followers, %	39.6
Segment Travel Time, minutes	0.05	Follower Density (FD), followers/mi/ln	1.7
Vehicle LOS	A		

Bicycle Results			
Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	289	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.72	Bicycle Effective Speed Factor	5.07
Bicycle LOS	C		

Segment 7

Vehicle Inputs			
Segment Type	Passing Constrained	Length, ft	463
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity			
Directional Demand Flow Rate, veh/h	286	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	3.08
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.17

Intermediate Results			
Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29347	PF Power Coefficient (p)	0.75789
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.7
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	463	-	-	67.7

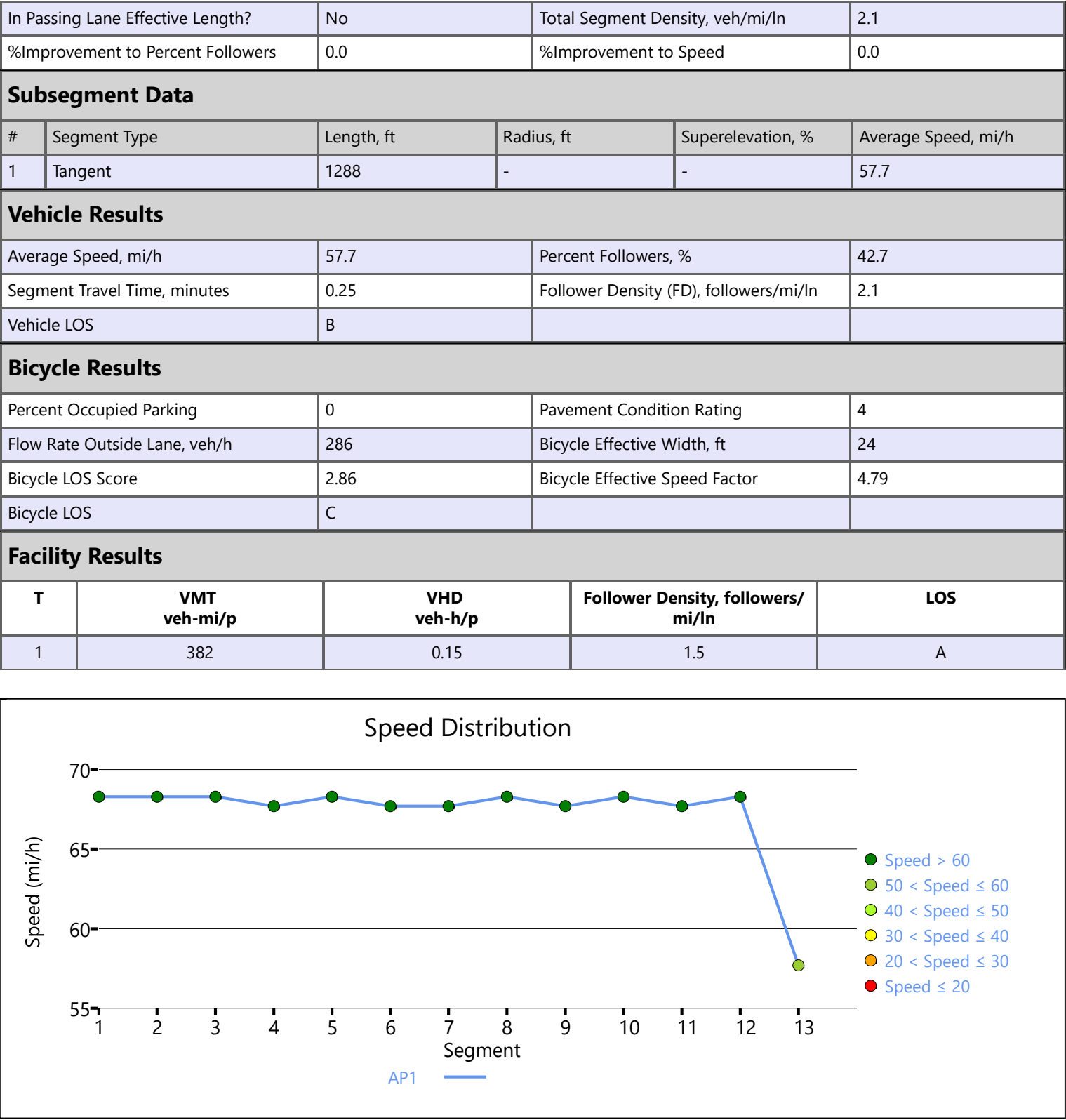
Vehicle Results			
Average Speed, mi/h	67.7	Percent Followers, %	39.4
Segment Travel Time, minutes	0.08	Follower Density (FD), followers/mi/ln	1.7
Vehicle LOS	A		

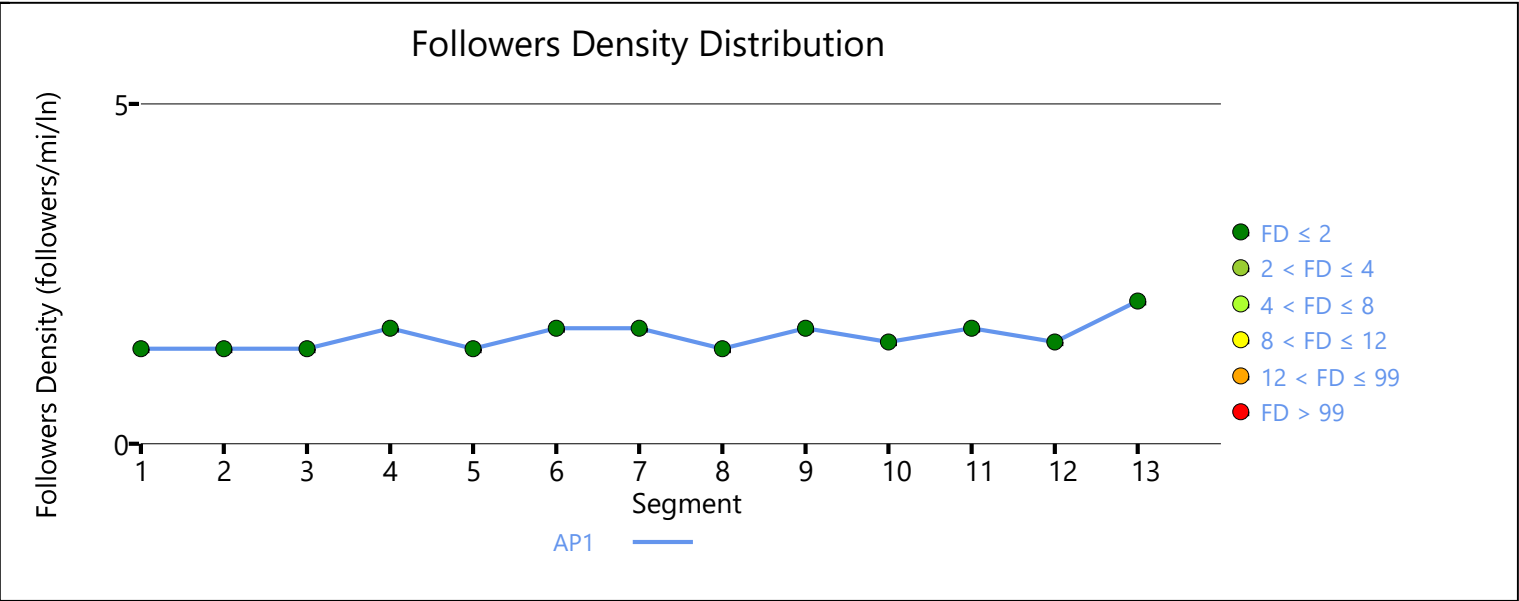
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		286	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.95	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 8					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		4822
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		286	Opposing Demand Flow Rate, veh/h		157
Peak Hour Factor		0.88	Total Trucks, %		3.08
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.17
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.34895	Speed Power Coefficient (p)		0.55243
PF Slope Coefficient (m)		-1.14563	PF Power Coefficient (p)		0.84199
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.4
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4822	-	-	68.3
Vehicle Results					
Average Speed, mi/h		68.3	Percent Followers, %		33.0
Segment Travel Time, minutes		0.80	Follower Density (FD), followers/mi/ln		1.4
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		286	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.95	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 9					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		861
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					

Directional Demand Flow Rate, veh/h		286	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		3.08
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.17
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.29347	PF Power Coefficient (p)		0.75789
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.7
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	861	-	-	67.7
Vehicle Results					
Average Speed, mi/h		67.7	Percent Followers, %		39.4
Segment Travel Time, minutes		0.14	Follower Density (FD), followers/mi/ln		1.7
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		286	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.95	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 10					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		1556
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		286	Opposing Demand Flow Rate, veh/h		157
Peak Hour Factor		0.88	Total Trucks, %		3.08
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.17
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.30647	Speed Power Coefficient (p)		0.55243
PF Slope Coefficient (m)		-1.21611	PF Power Coefficient (p)		0.81541
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.5
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h

1	Tangent	1556	-	-	68.3
Vehicle Results					
Average Speed, mi/h		68.3	Percent Followers, %		35.5
Segment Travel Time, minutes		0.26	Follower Density (FD), followers/mi/ln		1.5
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		286	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.95	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 11					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		799
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		286	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		3.08
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.17
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.29347	PF Power Coefficient (p)		0.75789
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.7
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	799	-	-	67.7
Vehicle Results					
Average Speed, mi/h		67.7	Percent Followers, %		39.4
Segment Travel Time, minutes		0.13	Follower Density (FD), followers/mi/ln		1.7
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		286	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.95	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 12					

Vehicle Inputs					
Segment Type		Passing Zone		Length, ft	
Measured FFS		Measured		Free-Flow Speed, mi/h	
				857	
				70.0	
Demand and Capacity					
Directional Demand Flow Rate, veh/h		286		Opposing Demand Flow Rate, veh/h	
Peak Hour Factor		0.88		Total Trucks, %	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)	
				0.17	
Intermediate Results					
Segment Vertical Class		1		Free-Flow Speed, mi/h	
Speed Slope Coefficient (m)		4.30206		Speed Power Coefficient (p)	
PF Slope Coefficient (m)		-1.22789		PF Power Coefficient (p)	
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln	
%Improvement to Percent Followers		0.0		%Improvement to Speed	
				0.0	
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	857	-	-	68.3
Vehicle Results					
Average Speed, mi/h		68.3		Percent Followers, %	
Segment Travel Time, minutes		0.14		Follower Density (FD), followers/mi/ln	
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0		Pavement Condition Rating	
Flow Rate Outside Lane, veh/h		286		Bicycle Effective Width, ft	
Bicycle LOS Score		2.95		Bicycle Effective Speed Factor	
Bicycle LOS		C			
Segment 13					
Vehicle Inputs					
Segment Type		Passing Constrained		Length, ft	
Measured FFS		Measured		Free-Flow Speed, mi/h	
				1288	
				60.0	
Demand and Capacity					
Directional Demand Flow Rate, veh/h		286		Opposing Demand Flow Rate, veh/h	
Peak Hour Factor		0.88		Total Trucks, %	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)	
				0.17	
Intermediate Results					
Segment Vertical Class		1		Free-Flow Speed, mi/h	
Speed Slope Coefficient (m)		4.57372		Speed Power Coefficient (p)	
PF Slope Coefficient (m)		-1.39671		PF Power Coefficient (p)	
				0.73647	

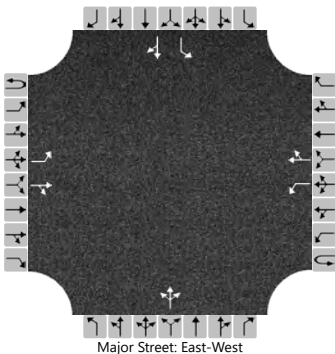




HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & SD 19
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	SD 19
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		1	1	0
Configuration		L		TR		L		TR			LTR			L		TR
Volume (veh/h)		55	165	0		0	120	50		10	5	10		70	0	95
Percent Heavy Vehicles (%)		30				3				3	3	3		9	3	11
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.40				4.13				7.13	6.53	6.23		7.19	6.53	6.31
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.47				2.23				3.53	4.03	3.33		3.58	4.03	3.40

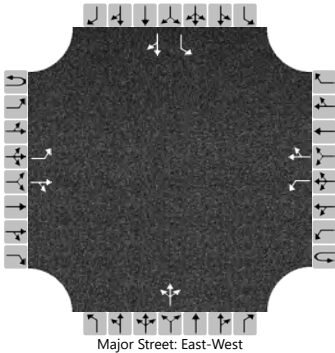
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		60				0					27			76		103
Capacity, c (veh/h)		1238				1390					524			461		865
v/c Ratio		0.05				0.00					0.05			0.16		0.12
95% Queue Length, Q ₉₅ (veh)		0.2				0.0					0.2			0.6		0.4
Control Delay (s/veh)		8.1	0.2	0.2		7.6	0.0	0.0			12.2			14.3		9.7
Level of Service (LOS)		A	A	A		A	A	A			B			B		A
Approach Delay (s/veh)	2.2				0.0				12.2				11.7			
Approach LOS	A				A				B				B			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & SD 19
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	SD 19
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		1	1	0
Configuration		L		TR		L		TR			LTR			L		TR
Volume (veh/h)		85	115	0		0	170	80		10	5	10		40	0	50
Percent Heavy Vehicles (%)		2				3				3	3	3		10	3	14
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.13				7.13	6.53	6.23		7.20	6.53	6.34
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.23				3.53	4.03	3.33		3.59	4.03	3.43

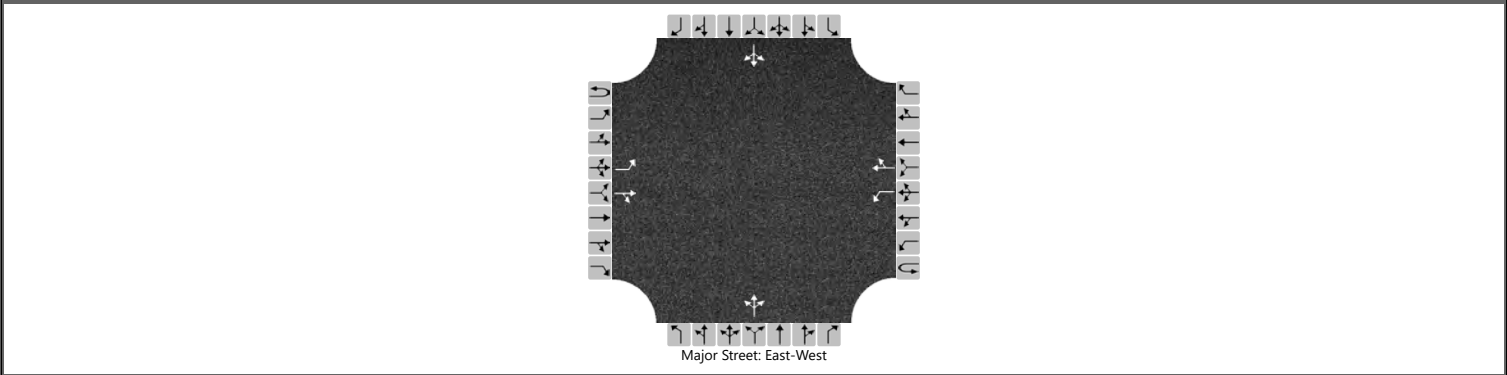
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		92				0					27			43		54
Capacity, c (veh/h)		1291				1455					498			395		782
v/c Ratio		0.07				0.00					0.05			0.11		0.07
95% Queue Length, Q ₉₅ (veh)		0.2				0.0					0.2			0.4		0.2
Control Delay (s/veh)		8.0	0.2	0.2		7.5	0.0	0.0			12.6			15.2		9.9
Level of Service (LOS)		A	A	A		A	A	A			B			C		A
Approach Delay (s/veh)		3.5				0.0				12.6				12.3		
Approach LOS		A				A				B				B		

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & 459th
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	459th Ave
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0
Configuration		L		TR		L		TR			LTR				LTR	
Volume (veh/h)		0	215	7		2	155	0		15	0	7		9	0	0
Percent Heavy Vehicles (%)		3				3				13	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.23	6.50	6.20		7.10	6.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.62	4.00	3.30		3.50	4.00	3.30

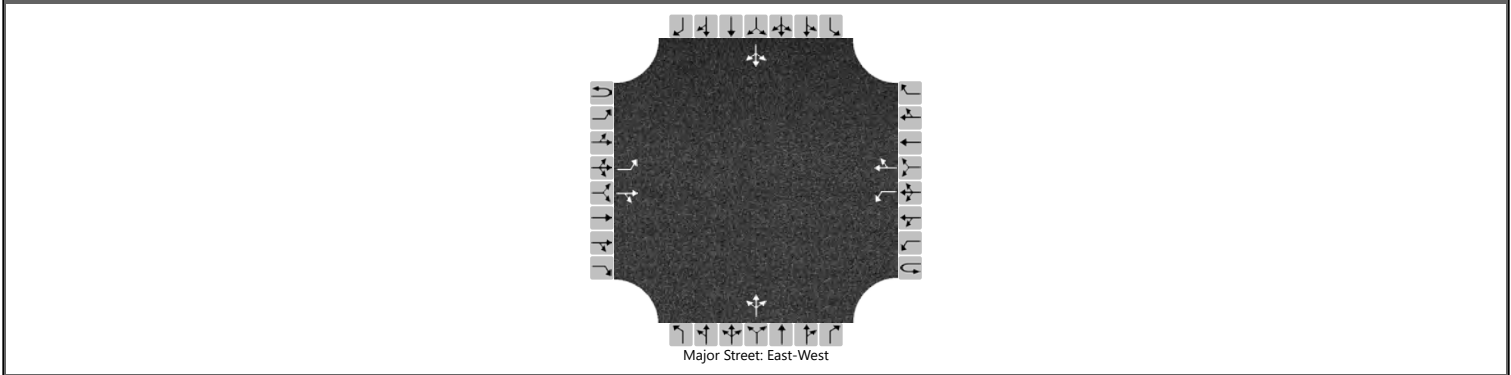
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				2					24				10	
Capacity, c (veh/h)		1403				1319					596				546	
v/c Ratio		0.00				0.00					0.04				0.02	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.1				0.1	
Control Delay (s/veh)		7.6	0.0	0.0		7.7	0.0	0.0			11.3				11.7	
Level of Service (LOS)		A	A	A		A	A	A			B				B	
Approach Delay (s/veh)	0.0				0.1				11.3				11.7			
Approach LOS	A				A				B				B			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & 459th
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	459th Ave
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0
Configuration		L		TR		L		TR			LTR				LTR	
Volume (veh/h)		0	145	9		15	245	2		15	0	4		2	2	0
Percent Heavy Vehicles (%)		0				0				13	0	0		0	100	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

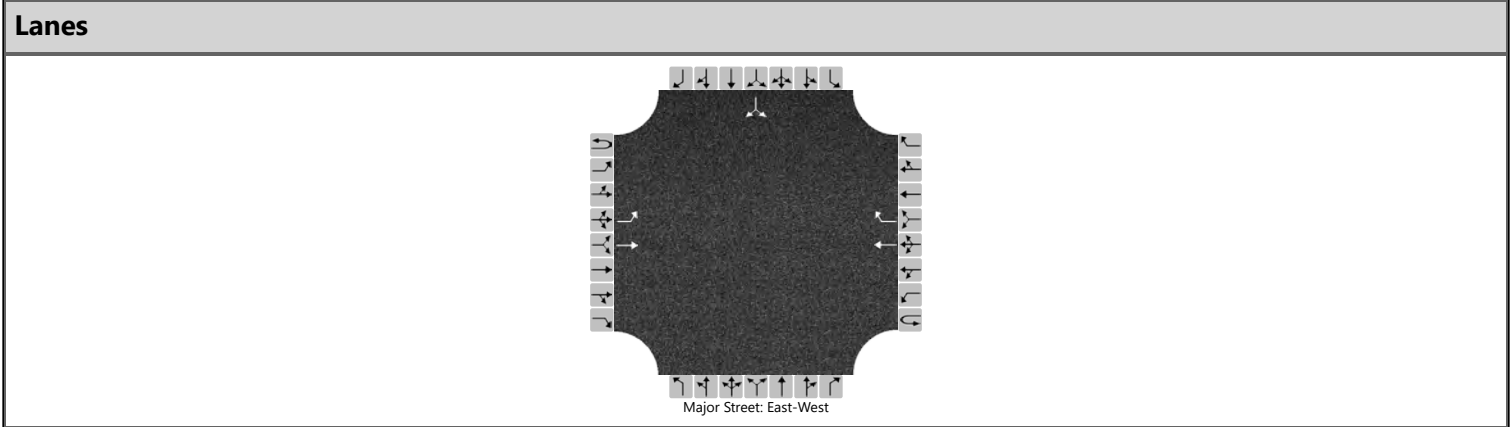
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.23	6.50	6.20		7.10	7.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.62	4.00	3.30		3.50	4.90	3.30

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				16					21				4		
Capacity, c (veh/h)		1307				1423					534				427		
v/c Ratio		0.00				0.01					0.04				0.01		
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.1				0.0		
Control Delay (s/veh)		7.8	0.0	0.0		7.6	0.1	0.1			12.0				13.5		
Level of Service (LOS)		A	A	A		A	A	A			B				B		
Approach Delay (s/veh)		0.0				0.5				12.0				13.5			
Approach LOS		A				A				B				B			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & I-90 Speedway
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	I-90 Expressway
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		



Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	1		0	0	0		0	1	0
Configuration		L	T				T	R							LR	
Volume (veh/h)		0	230				165	0						0		0
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized					No											
Median Type Storage	Undivided															

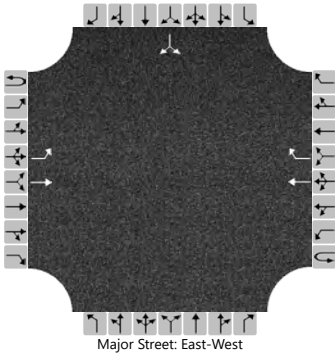
Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		0													0	
Capacity, c (veh/h)		1390													0	
v/c Ratio		0.00														
95% Queue Length, Q ₉₅ (veh)		0.0														
Control Delay (s/veh)		7.6	0.0													
Level of Service (LOS)		A	A													
Approach Delay (s/veh)		0.0														
Approach LOS		A														

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & I-90 Speedway
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	I-90 Expressway
Time Analyzed	AM Peak - Event Traffic	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	1		0	0	0		0	1	0
Configuration		L	T				T	R							LR	
Volume (veh/h)		0	412				295	0						0		0
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized					No											
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

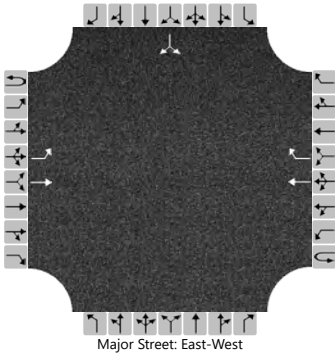
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0													0	
Capacity, c (veh/h)		1234													0	
v/c Ratio		0.00														
95% Queue Length, Q ₉₅ (veh)		0.0														
Control Delay (s/veh)		7.9	0.0													
Level of Service (LOS)		A	A													
Approach Delay (s/veh)		0.0														
Approach LOS		A														

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & I-90 Speedway
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	I-90 Expressway
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	1		0	0	0		0	1	0
Configuration		L	T				T	R							LR	
Volume (veh/h)		0	165				260	0						0		0
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized					No											
Median Type Storage					Undivided											

Critical and Follow-up Headways

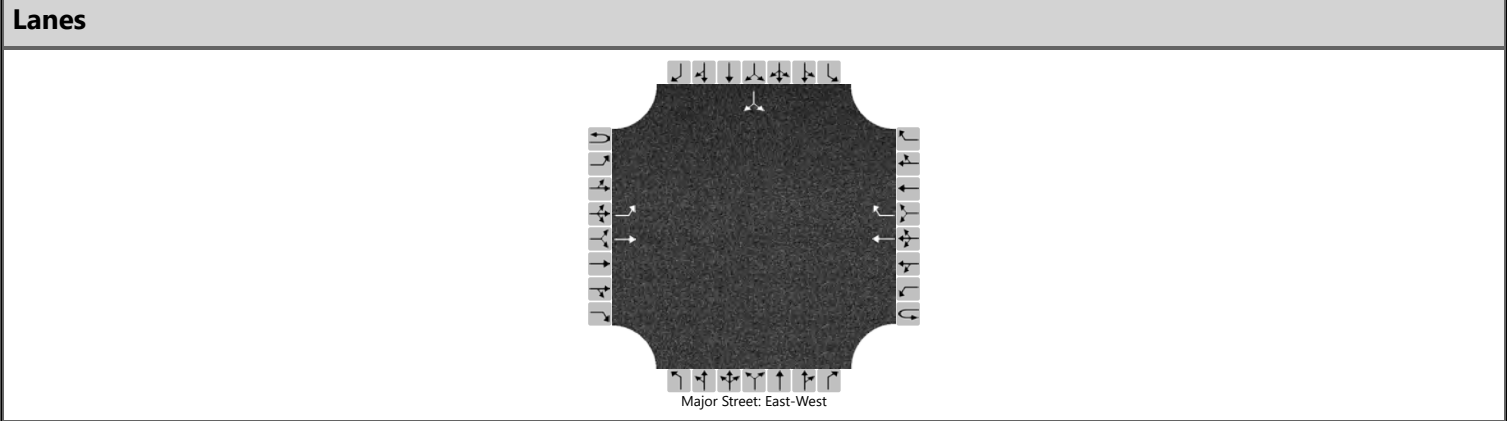
Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0													0	
Capacity, c (veh/h)		1274													0	
v/c Ratio		0.00														
95% Queue Length, Q ₉₅ (veh)		0.0														
Control Delay (s/veh)		7.8	0.0													
Level of Service (LOS)		A	A													
Approach Delay (s/veh)		0.0														
Approach LOS		A														

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & I-90 Speedway
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	I-90 Expressway
Time Analyzed	PM Peak - Event Traffic	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		



Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	1		0	0	0		0	1	0
Configuration		L	T				T	R							LR	
Volume (veh/h)		0	295				465	0						0		0
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized					No											
Median Type Storage	Undivided															

Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

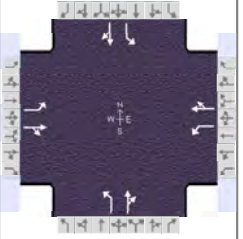
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		0													0	
Capacity, c (veh/h)		1054													0	
v/c Ratio		0.00														
95% Queue Length, Q ₉₅ (veh)		0.0														
Control Delay (s/veh)		8.4	0.0													
Level of Service (LOS)		A	A													
Approach Delay (s/veh)		0.0														
Approach LOS		A														

HCS Signalized Intersection Results Summary

General Information

Agency	HRG		
Analyst	CEC	Analysis Date	May 8, 2023
Jurisdiction	SDDOT	Time Period	AM Peak
Urban Street	SD 38	Analysis Year	2050
Intersection	SD 38 & Western Ave	File Name	(4) SD38&463Wes
Project Description			

Intersection Information



Demand Information

	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	9	180	80	60	110	30	65	75	90	40	80	5

Signal Information

Cycle, s	50.0	Reference Phase	6								
Offset, s	0	Reference Point	End								
Uncoordinated	No	Simult. Gap E/W	On	Green	30.3	9.7	0.0	0.0	0.0	0.0	
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	4.0	0.0	0.0	0.0	0.0	
				Red	1.0	1.0	0.0	0.0	0.0	0.0	

Timer Results

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		6.0		6.0		6.0		6.0
Phase Duration, s		35.3		35.3		14.7		14.7
Change Period, ($Y+R_c$), s		5.0		5.0		5.0		5.0
Max Allow Headway (MAH), s		0.0		0.0		4.3		4.3
Queue Clearance Time (g_s), s						7.0		8.7
Green Extension Time (g_e), s		0.0		0.0		1.2		1.1
Phase Call Probability						1.00		1.00
Max Out Probability						0.03		0.07

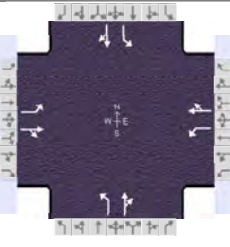
Movement Group Results

	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	10	283		65	152		71	179		43	92	
Adjusted Saturation Flow Rate (s), veh/h/ln	1225	1666		1088	1693		1180	1614		1205	1684	
Queue Service Time (g_s), s	0.2	4.0		1.5	2.0		2.7	5.0		1.7	2.3	
Cycle Queue Clearance Time (g_c), s	2.2	4.0		5.6	2.0		5.0	5.0		6.7	2.3	
Green Ratio (g/C)	0.61	0.61		0.61	0.61		0.19	0.19		0.19	0.19	
Capacity (c), veh/h	836	1007		713	1023		320	315		259	329	
Volume-to-Capacity Ratio (X)	0.012	0.281		0.092	0.149		0.220	0.569		0.168	0.281	
Back of Queue (Q), ft/ln (95 th percentile)	1.6	46.2		13.6	22.3		34.3	80.9		20.5	39.4	
Back of Queue (Q), veh/ln (95 th percentile)	0.1	1.8		0.5	0.9		1.2	3.2		0.8	1.5	
Queue Storage Ratio (RQ) (95 th percentile)	0.01	0.00		0.05	0.00		0.14	0.00		0.08	0.00	
Uniform Delay (d_1), s/veh	4.8	4.7		6.1	4.3		19.2	18.2		21.2	17.1	
Incremental Delay (d_2), s/veh	0.0	0.7		0.3	0.3		0.3	1.6		0.3	0.5	
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	4.8	5.4		6.3	4.6		19.6	19.8		21.5	17.6	
Level of Service (LOS)	A	A		A	A		B	B		C	B	
Approach Delay, s/veh / LOS	5.4		A	5.1		A	19.7		B	18.8		B
Intersection Delay, s/veh / LOS	11.4						B					

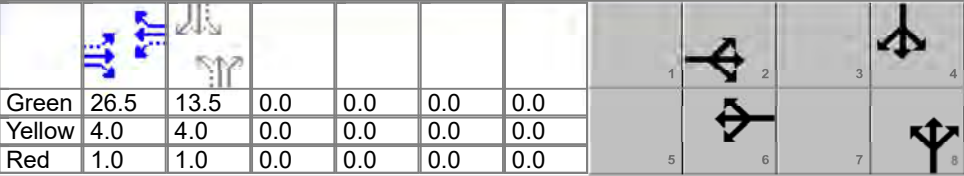
Multimodal Results

	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.85	B	1.85	B	1.91	B	1.91	B
Bicycle LOS Score / LOS	0.97	A	0.85	A	0.90	A	0.71	A

HCS Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	HRG			Duration, h	0.250	
Analyst	CEC	Analysis Date	May 8, 2023	Area Type	Other	
Jurisdiction	SDDOT	Time Period	PM Peak	PHF	0.92	
Urban Street	SD 38	Analysis Year	2050	Analysis Period	1> 7:15	
Intersection	SD 38 & Western Ave	File Name	(4) SD38&463WesternAve_PM.xus			
Project Description						

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	15	125	55	120	200	60	70	85	155	55	100	25

Signal Information											
Cycle, s	50.0	Reference Phase	6								
Offset, s	0	Reference Point	End								
Uncoordinated	No	Simult. Gap E/W	On								
Force Mode	Fixed	Simult. Gap N/S	On	Green	26.5	13.5	0.0	0.0	0.0	0.0	
				Yellow	4.0	4.0	0.0	0.0	0.0	0.0	
				Red	1.0	1.0	0.0	0.0	0.0	0.0	

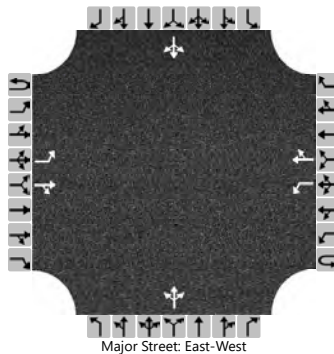
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		6.0		6.0		6.0		6.0
Phase Duration, s		31.5		31.5		18.5		18.5
Change Period, ($Y+R_c$), s		5.0		5.0		5.0		5.0
Max Allow Headway (MAH), s		0.0		0.0		4.3		4.3
Queue Clearance Time (g_s), s						9.8		12.3
Green Extension Time (g_e), s		0.0		0.0		1.5		1.2
Phase Call Probability						1.00		1.00
Max Out Probability						0.18		0.43

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	16	196		130	283		76	261		60	136	
Adjusted Saturation Flow Rate (s), veh/h/ln	923	1680		1178	1701		1253	1474		1119	1683	
Queue Service Time (g_s), s	0.5	3.1		3.3	4.7		2.6	7.8		2.5	3.2	
Cycle Queue Clearance Time (g_c), s	5.3	3.1		6.5	4.7		5.7	7.8		10.3	3.2	
Green Ratio (g/C)	0.53	0.53		0.53	0.53		0.27	0.27		0.27	0.27	
Capacity (c), veh/h	545	889		693	901		404	399		272	455	
Volume-to-Capacity Ratio (X)	0.030	0.220		0.188	0.314		0.188	0.654		0.219	0.298	
Back of Queue (Q), ft/ln (95 th percentile)	5	41.2		34.4	63.5		30.4	118.8		27.9	50.3	
Back of Queue (Q), veh/ln (95 th percentile)	0.2	1.6		1.3	2.5		1.2	4.4		1.1	2.0	
Queue Storage Ratio (RQ) (95 th percentile)	0.02	0.00		0.14	0.00		0.12	0.00		0.11	0.00	
Uniform Delay (d_1), s/veh	8.1	6.3		8.0	6.6		16.7	16.2		20.7	14.5	
Incremental Delay (d_2), s/veh	0.1	0.6		0.6	0.9		0.2	1.8		0.4	0.4	
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	8.2	6.8		8.6	7.5		16.9	18.0		21.1	14.8	
Level of Service (LOS)	A	A		A	A		B	B		C	B	
Approach Delay, s/veh / LOS	6.9	A		7.9	A		17.8	B		16.8	B	
Intersection Delay, s/veh / LOS	12.1						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.87	B	1.87	B	1.90	B	1.90	B
Bicycle LOS Score / LOS	0.84	A	1.17	A	1.04	A	0.81	A

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & Main Ave
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	5/8/2023	East/West Street	SD 38
Analysis Year	2050	North/South Street	Main Ave (9th St)
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0
Configuration		L		TR		L		TR			LTR				LTR	
Volume (veh/h)		2	260	30		40	195	20		40	5	85		6	10	4
Percent Heavy Vehicles (%)		0				11				5	0	2		0	17	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Left Only								9							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.21				7.15	6.50	6.22		7.10	6.67	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.30				3.55	4.00	3.32		3.50	4.15	3.30

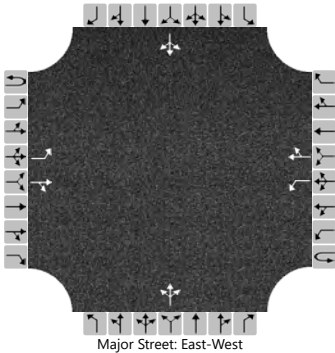
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		2				43					141				22	
Capacity, c (veh/h)		1346				1196					678				459	
v/c Ratio		0.00				0.04					0.21				0.05	
95% Queue Length, Q_{95} (veh)		0.0				0.1					0.8				0.1	
Control Delay (s/veh)		7.7				8.1					11.7				13.2	
Level of Service (LOS)		A				A					B				B	
Approach Delay (s/veh)		0.1				1.3				11.7				13.2		
Approach LOS		A				A				B				B		

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & Main Ave
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	Main Ave (9th St)
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0
Configuration		L		TR		L		TR			LTR				LTR	
Volume (veh/h)		10	250	45		65	335	60		35	20	55		40	30	7
Percent Heavy Vehicles (%)		0				0				5	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage					Left Only								9			

Critical and Follow-up Headways

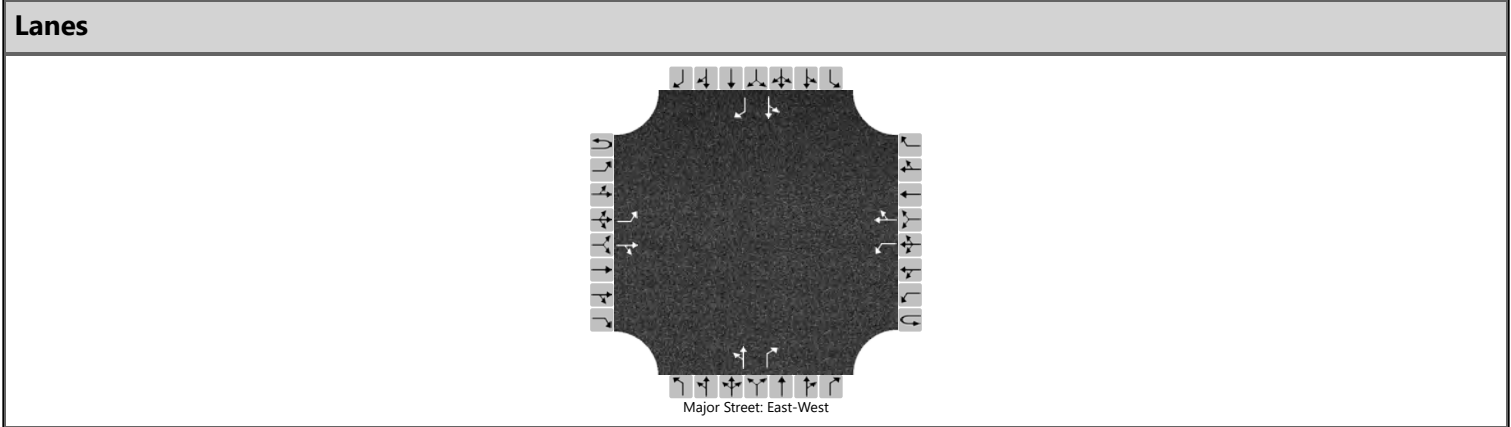
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.15	6.50	6.20		7.10	6.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.55	4.00	3.30		3.50	4.00	3.30

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		11			71					120				84		
Capacity, c (veh/h)		1141			1251					467				368		
v/c Ratio		0.01			0.06					0.26				0.23		
95% Queue Length, Q ₉₅ (veh)		0.0			0.2					1.0				0.9		
Control Delay (s/veh)		8.2			8.1					15.3				17.6		
Level of Service (LOS)		A			A					C				C		
Approach Delay (s/veh)	0.3				1.1				15.3				17.6			
Approach LOS	A				A				C				C			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & Vandemark Ave
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	Vandemark Avenue
Time Analyzed	AM	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		



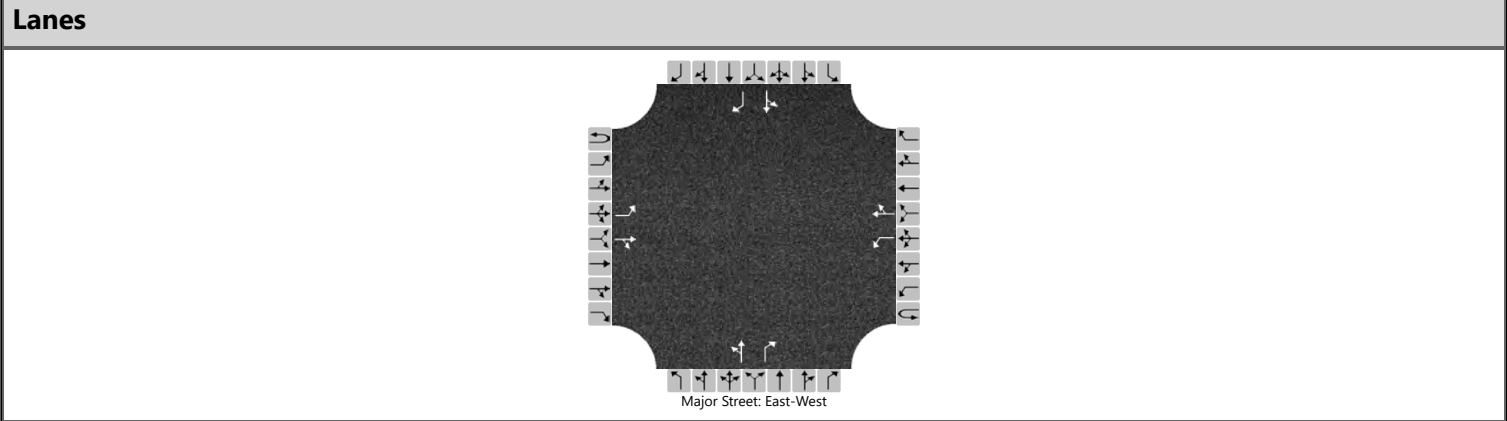
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	1		0	1	1
Configuration		L		TR		L		TR		LT		R		LT		R
Volume (veh/h)		25	370	10		8	240	25		9	5	10		40	2	25
Percent Heavy Vehicles (%)		0				0				40	0	0		0	0	7
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized									No				No			
Median Type Storage	Undivided															

Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.50	6.50	6.20		7.10	6.50	6.27
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.86	4.00	3.30		3.50	4.00	3.36

Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		27				9				15		11		46		27
Capacity, c (veh/h)		1286				1157				278		648		306		752
v/c Ratio		0.02				0.01				0.05		0.02		0.15		0.04
95% Queue Length, Q ₉₅ (veh)		0.1				0.0				0.2		0.1		0.5		0.1
Control Delay (s/veh)		7.9	0.1	0.1		8.1	0.1	0.1		18.7		10.7		18.8		10.0
Level of Service (LOS)		A	A	A		A	A	A		C		B		C		A
Approach Delay (s/veh)	0.6				0.3				15.4				15.5			
Approach LOS	A				A				C				C			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & Vandemark Ave
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	Vandemark Avenue
Time Analyzed	PM	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

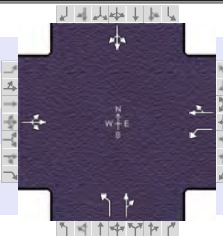
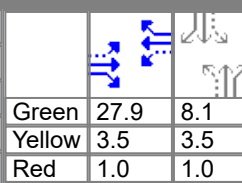
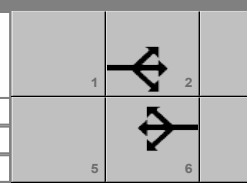
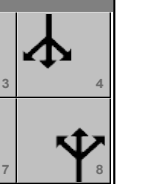


Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	1		0	1	1
Configuration		L		TR		L		TR		LT		R		LT		R
Volume (veh/h)		20	255	4		5	475	45		0	0	9		30	0	25
Percent Heavy Vehicles (%)		0				0				0	0	100		0	0	7
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized									No				No			
Median Type Storage	Undivided															

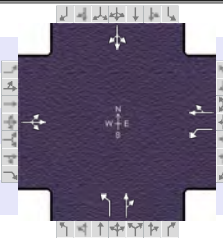
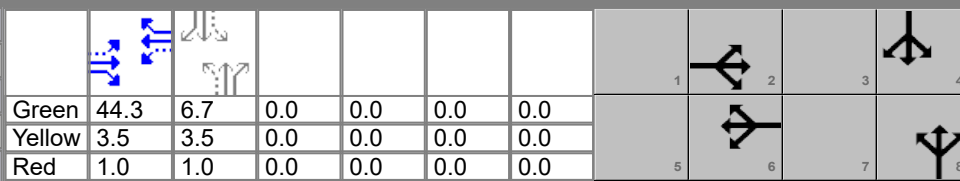
Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.10	6.50	7.20		7.10	6.50	6.27
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.00	4.20		3.50	4.00	3.36

Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		22				5				0		10		33		27
Capacity, c (veh/h)		1017				1293				0		574		259		532
v/c Ratio		0.02				0.00						0.02		0.13		0.05
95% Queue Length, Q ₉₅ (veh)		0.1				0.0						0.1		0.4		0.2
Control Delay (s/veh)		8.6	0.2	0.2		7.8	0.0	0.0				11.4		20.9		12.1
Level of Service (LOS)		A	A	A		A	A	A				B		C		B
Approach Delay (s/veh)	0.8				0.1								16.9			
Approach LOS	A				A								C			

HCS Signalized Intersection Results Summary

General Information						Intersection Information																																	
Agency		HRG				Duration, h		0.250																															
Analyst		NM		Analysis Date		May 8, 2023		Area Type		Other																													
Jurisdiction		SDDOT		Time Period		AM Peak		PHF		0.92																													
Urban Street		SD 38		Analysis Year		2050		Analysis Period		1> 7:15																													
Intersection		SD 38 & 2nd Street		File Name		(7) SD38&2nd_AM.xus																																	
Project Description																																							
Demand Information																																							
Approach Movement				L			T			R			L			T			R																				
Demand (v), veh/h				20			325			10			95			200			15			5			20			155			35			50			25		
Signal Information																																							
Cycle, s		45.0																				Reference Phase		6															
Offset, s		0																				Reference Point		End															
Uncoordinated		No																				Simult. Gap E/W		On															
Force Mode		Fixed																				Simult. Gap N/S		On															
Green		27.9		8.1		0.0		0.0		0.0		0.0		0.0		0.0																							
Yellow		3.5		3.5		0.0		0.0		0.0		0.0		0.0		0.0																							
Red		1.0		1.0		0.0		0.0		0.0		0.0		0.0		0.0																							
Timer Results				EBL			EBT			WBL			WBT			NBL			NBT			SBL			SBT														
Assigned Phase							2						6						8						4														
Case Number							8.0						6.0						6.0						8.0														
Phase Duration, s							32.4						32.4						12.6						12.6														
Change Period, (Y+R c), s							4.5						4.5						4.5						4.5														
Max Allow Headway (MAH), s							0.0						0.0						3.3						3.3														
Queue Clearance Time (g s), s																			7.8						7.5														
Green Extension Time (g e), s							0.0						0.0						0.5						0.5														
Phase Call Probability																			0.98						0.98														
Max Out Probability																			0.01						0.00														
Movement Group Results				EB			WB			NB			SB																										
Approach Movement				L			T			R			L			T			R			L			T			R											
Assigned Movement				5			2			12			1			6			16			3			8			18			7			4			14		
Adjusted Flow Rate (v), veh/h							386						103			234						5			190									120					
Adjusted Saturation Flow Rate (s), veh/h/ln							1743						1018			1750						1317			1528									1105					
Queue Service Time (g s), s							0.0						2.5			2.6						0.2			5.2									0.2					
Cycle Queue Clearance Time (g c), s							4.8						7.3			2.6						5.8			5.2									5.5					
Green Ratio (g/C)							0.62						0.62			0.62						0.18			0.18									0.18					
Capacity (c), veh/h							1162						681			1082						236			278									306					
Volume-to-Capacity Ratio (X)							0.332						0.152			0.216						0.023			0.685									0.391					
Back of Queue (Q), ft/ln (95 th percentile)																																							
Back of Queue (Q), veh/ln (95 th percentile)							1.9						0.8			1.1						0.1			2.9									1.7					
Queue Storage Ratio (RQ) (95 th percentile)							0.00						0.08			0.00						0.02			0.00									0.00					
Uniform Delay (d 1), s/veh							4.2						6.0			3.8						20.1			17.2									16.3					
Incremental Delay (d 2), s/veh							0.8						0.5			0.5						0.0			1.1									0.3					
Initial Queue Delay (d 3), s/veh							0.0						0.0			0.0						0.0			0.0									0.0					
Control Delay (d), s/veh							5.0						6.4			4.2						20.1			18.3									16.6					
Level of Service (LOS)							A						A			A						C			B									B					
Approach Delay, s/veh / LOS				5.0			A			4.9			A			18.4			B			16.6			B														
Intersection Delay, s/veh / LOS				8.8										A																									
Multimodal Results				EB			WB			NB			SB																										
Pedestrian LOS Score / LOS				1.84			B			1.62			B			1.91			B			1.68			B														
Bicycle LOS Score / LOS				1.12			A			1.04			A			0.81			A			0.68			A														

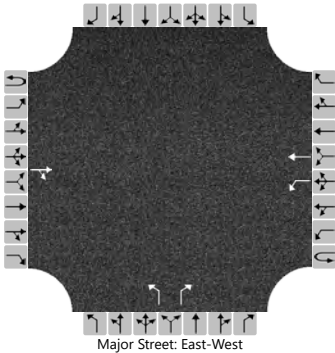
HCS Signalized Intersection Results Summary

General Information						Intersection Information													
Agency		HRG				Duration, h		0.250											
Analyst		NM		Analysis Date		May 8, 2023		Area Type								Other			
Jurisdiction		SDDOT		Time Period		PM Peak		PHF								0.92			
Urban Street		SD 38		Analysis Year		2050		Analysis Period								1> 7:15			
Intersection		SD 38 & 2nd Street		File Name		(7) SD38&2nd_PM.xus													
Project Description																			
Demand Information				EB			WB			NB			SB						
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R				
Demand (v), veh/h				25	235	9	130	490	25	15	25	65	15	30	20				
Signal Information																			
Cycle, s	60.0	Reference Phase	2																
Offset, s	0	Reference Point	End																
Uncoordinated	No	Simult. Gap E/W	On																
Force Mode	Fixed	Simult. Gap N/S	On																
				Green	44.3	6.7	0.0	0.0	0.0	0.0									
				Yellow	3.5	3.5	0.0	0.0	0.0	0.0									
				Red	1.0	1.0	0.0	0.0	0.0	0.0									
Timer Results				EBL		EBT		WBL		WBT		NBL		NBT		SBL		SBT	
Assigned Phase						2				6				8				4	
Case Number						8.0				6.0				6.0				8.0	
Phase Duration, s						48.8				48.8				11.2				11.2	
Change Period, (Y+R c), s						4.5				4.5				4.5				4.5	
Max Allow Headway (MAH), s						0.0				0.0				3.2				3.2	
Queue Clearance Time (g s), s														6.2				5.6	
Green Extension Time (g e), s						0.0				0.0				0.3				0.3	
Phase Call Probability														0.95				0.95	
Max Out Probability														0.00				0.00	
Movement Group Results				EB			WB			NB			SB						
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R				
Assigned Movement				5	2	12	1	6	16	3	8	18	7	4	14				
Adjusted Flow Rate (v), veh/h				292			141 560			16 98			71						
Adjusted Saturation Flow Rate (s), veh/h/ln				1663			1114 1757			1350 1568			1377						
Queue Service Time (g s), s				0.0			2.7 7.3			0.7 3.5			0.0						
Cycle Queue Clearance Time (g c), s				3.1			5.9 7.3			4.2 3.5			3.6						
Green Ratio (g/C)				0.74			0.74 0.74			0.11 0.11			0.11						
Capacity (c), veh/h				1294			885 1298			190 175			227						
Volume-to-Capacity Ratio (X)				0.226			0.160 0.431			0.086 0.560			0.311						
Back of Queue (Q), ft/ln (95 th percentile)																			
Back of Queue (Q), veh/ln (95 th percentile)				1.0			0.8 2.5			0.4 2.3			1.6						
Queue Storage Ratio (RQ) (95 th percentile)				0.00			0.08 0.00			0.07 0.00			0.00						
Uniform Delay (d 1), s/veh				2.5			3.4 3.0			27.3 25.3			24.7						
Incremental Delay (d 2), s/veh				0.4			0.4 1.0			0.1 1.0			0.3						
Initial Queue Delay (d 3), s/veh				0.0			0.0 0.0			0.0 0.0			0.0						
Control Delay (d), s/veh				2.9			3.8 4.1			27.4 26.3			25.0						
Level of Service (LOS)				A			A A			C C			C						
Approach Delay, s/veh / LOS				2.9		A		4.0		A		26.5		C		25.0		C	
Intersection Delay, s/veh / LOS				7.2						A									
Multimodal Results				EB			WB			NB			SB						
Pedestrian LOS Score / LOS				1.83			B			1.92			B						
Bicycle LOS Score / LOS				0.97			A			1.64			B						

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & West Central HS Entrance
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	West Central HS Entrance
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	1	1	0		1	0	1		0	0	0
Configuration				TR		L	T			L		R				
Volume (veh/h)			425	90		55	285			35		50				
Percent Heavy Vehicles (%)						0				0		0				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized									No							
Median Type Storage					Left Only								9			

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.10				6.40		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.50		3.30				

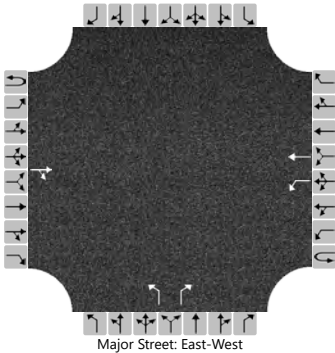
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						60				38		54				
Capacity, c (veh/h)						1021				576		567				
v/c Ratio						0.06				0.07		0.10				
95% Queue Length, Q ₉₅ (veh)						0.2				0.2		0.3				
Control Delay (s/veh)						8.7				11.7		12.0				
Level of Service (LOS)						A				B		B				
Approach Delay (s/veh)					1.4				11.9							
Approach LOS					A				B							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & West Central HS Entrance
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	West Central HS Entrance
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	1	1	0		1	0	1		0	0	0
Configuration				TR		L	T			L		R				
Volume (veh/h)			305	4		4	620			15		15				
Percent Heavy Vehicles (%)						0				0		0				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized									No							
Median Type Storage					Left Only								9			

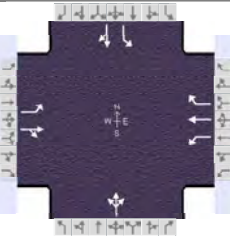
Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.10				6.40		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.50		3.30				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						4				16		16				
Capacity, c (veh/h)						1235				500		713				
v/c Ratio						0.00				0.03		0.02				
95% Queue Length, Q ₉₅ (veh)						0.0				0.1		0.1				
Control Delay (s/veh)						7.9				12.4		10.2				
Level of Service (LOS)						A				B		B				
Approach Delay (s/veh)					0.1				11.3							
Approach LOS					A				B							

HCS Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	HRG			Duration, h	0.250	
Analyst	CEC	Analysis Date	May 8, 2023	Area Type	Other	
Jurisdiction	SDDOT	Time Period	AM Peak	PHF	0.92	
Urban Street	SD 38	Analysis Year	2050	Analysis Period	1> 7:15	
Intersection	SD 38 & Railroad Street	File Name	(9) SD38&Railroad_AM.xus			
Project Description						

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	4	465	0	15	270	95	2	0	30	145	4	5

Signal Information												
Cycle, s	60.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On	Green	0.3	0.8	34.5	9.8	0.0	0.0		
				Yellow	3.5	0.0	4.0	4.0	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0	1.0	1.0	0.0	0.0		

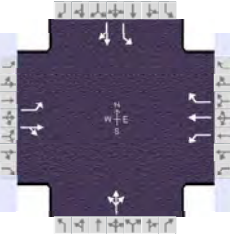
1	2	3	4
5	6	7	8

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	4.0	1.1	3.0		8.0		6.0
Phase Duration, s	4.8	39.5	5.7	40.3		14.8		14.8
Change Period, ($Y+R_c$), s	4.5	5.0	4.5	5.0		5.0		5.0
Max Allow Headway (MAH), s	4.1	0.0	4.1	0.0		4.2		4.2
Queue Clearance Time (g_s), s	2.1		2.2			3.2		9.8
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0		0.5		0.4
Phase Call Probability	0.07		0.24			0.97		0.97
Max Out Probability	0.00		0.00			0.00		0.13

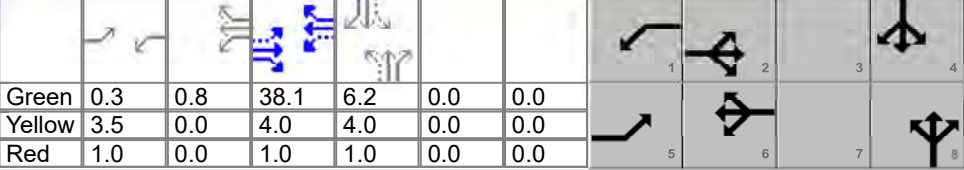
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	4	0		16	293	103		35		158	10	
Adjusted Saturation Flow Rate (s), veh/h/ln	1688	1750		1688	1772	1502		1510		1376	1611	
Queue Service Time (g_s), s	0.1	0.0		0.2	4.9	1.8		0.0		6.6	0.3	
Cycle Queue Clearance Time (g_c), s	0.1	0.0		0.2	4.9	1.8		1.2		7.8	0.3	
Green Ratio (g/C)	0.58	0.43		0.59	0.59	0.59		0.16		0.16	0.16	
Capacity (c), veh/h	643			514	1042	883		312		319	265	
Volume-to-Capacity Ratio (X)	0.007	0.000		0.032	0.282	0.117		0.112		0.493	0.037	
Back of Queue (Q), ft/ln (95 th percentile)	0.8	0		2.9	69.3	22.2		18.2		95.5	5.1	
Back of Queue (Q), veh/ln (95 th percentile)	0.0	0.0		0.1	2.7	0.9		0.7		3.8	0.2	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00		0.01	0.00	0.00		0.00		0.38	0.00	
Uniform Delay (d_1), s/veh	5.6			5.9	6.1	5.5		21.4		24.8	21.1	
Incremental Delay (d_2), s/veh	0.0	0.0		0.0	0.7	0.3		0.2		1.2	0.1	
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Control Delay (d), s/veh	5.6			5.9	6.8	5.7		21.6		26.0	21.1	
Level of Service (LOS)	A			A	A	A		C		C	C	
Approach Delay, s/veh / LOS	9.3		A	6.5		A		21.6		C		C
Intersection Delay, s/veh / LOS	11.1						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.64	B	1.86	B	2.11	B	1.92	B
Bicycle LOS Score / LOS	1.33	A	1.17	A	0.54	A	0.76	A

HCS Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	HRG			Duration, h	0.250	
Analyst	CEC	Analysis Date	May 8, 2023	Area Type	Other	
Jurisdiction	SDDOT	Time Period	PM Peak	PHF	0.92	
Urban Street	SD 38	Analysis Year	2050	Analysis Period	1> 7:15	
Intersection	SD 38 & Railroad Street	File Name	(9) SD38&Railroad_PM.xus			
Project Description						

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	4	340	4	15	560	155	2	2	15	85	9	5

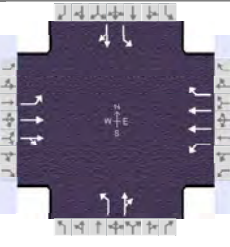
Signal Information											
Cycle, s	60.0	Reference Phase	2								
Offset, s	0	Reference Point	End								
Uncoordinated	No	Simult. Gap E/W	On								
Force Mode	Fixed	Simult. Gap N/S	On	Green	0.3	0.8	38.1	6.2	0.0	0.0	
				Yellow	3.5	0.0	4.0	4.0	0.0	0.0	
				Red	1.0	0.0	1.0	1.0	0.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	4.0	1.1	3.0		8.0		6.0
Phase Duration, s	4.8	43.1	5.7	44.0		11.2		11.2
Change Period, ($Y+R_c$), s	4.5	5.0	4.5	5.0		5.0		5.0
Max Allow Headway (MAH), s	4.1	0.0	4.1	0.0		4.2		4.2
Queue Clearance Time (g_s), s	2.1		2.3			2.7		6.7
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0		0.3		0.3
Phase Call Probability	0.07		0.24			0.88		0.88
Max Out Probability	0.00		0.00			0.00		0.00

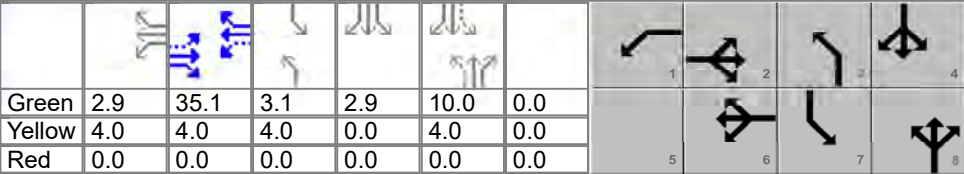









Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	4	374		16	609	168		21		92	15	
Adjusted Saturation Flow Rate (s), veh/h/ln	1688	1768		1179	1772	1502		1536		1361	1665	
Queue Service Time (g_s), s	0.1	5.9		0.3	11.0	2.7		0.0		4.0	0.5	
Cycle Queue Clearance Time (g_c), s	0.1	5.9		0.3	11.0	2.7		0.7		4.7	0.5	
Green Ratio (g/C)	0.64	0.64		0.66	0.65	0.65		0.10		0.10	0.10	
Capacity (c), veh/h	481	1124		522	1151	975		224		244	171	
Volume-to-Capacity Ratio (X)	0.009	0.333		0.031	0.529	0.173		0.092		0.379	0.089	
Back of Queue (Q), ft/ln (95 th percentile)	0.6	75.5		2.8	141.4	28.5		11.8		58.9	8.8	
Back of Queue (Q), veh/ln (95 th percentile)	0.0	3.0		0.1	5.6	1.1		0.5		2.3	0.3	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00		0.01	0.00	0.00		0.00		0.24	0.00	
Uniform Delay (d_1), s/veh	5.1	5.1		3.9	5.6	4.1		24.5		26.6	24.4	
Incremental Delay (d_2), s/veh	0.0	0.8		0.0	1.7	0.4		0.2		1.0	0.2	
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Control Delay (d), s/veh	5.1	5.8		3.9	7.4	4.5		24.6		27.6	24.6	
Level of Service (LOS)	A	A		A	A	A		C		C	C	
Approach Delay, s/veh / LOS	5.8		A	6.7		A	24.6		C	27.1		C
Intersection Delay, s/veh / LOS	8.4						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.63	B	1.85	B	2.12	B	1.93	B
Bicycle LOS Score / LOS	1.11	A	1.80	B	0.52	A	0.67	A

HCS Signalized Intersection Results Summary

General Information						Intersection Information		
Agency	HRG					Duration, h	0.250	
Analyst	NM	Analysis Date	May 8, 2023			Area Type	Other	
Jurisdiction	SDDOT	Time Period	AM Peak			PHF	0.92	
Urban Street	SD 38	Analysis Year	2050			Analysis Period	1> 7:15	
Intersection	SD 38 & Mickelson Roa...	File Name	(10) SD38&Mickelson_AM.xus					
Project Description								

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	135	445	35	40	195	190	45	55	65	215	20	195

Signal Information												
Cycle, s	70.0	Reference Phase	2									
Offset, s	0	Reference Point	End	Green	2.9	35.1	3.1	2.9	10.0	0.0		
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.0	4.0	4.0	0.0	4.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Red	0.0	0.0	0.0	0.0	0.0	0.0		
												

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6	3	8	7	4
Case Number		6.3	1.0	3.0	1.1	4.0	1.1	4.0
Phase Duration, s		39.1	6.9	46.0	7.1	14.0	10.0	16.9
Change Period, ($Y+R_c$), s		4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Allow Headway (MAH), s		0.0	3.1	0.0	3.1	3.3	3.1	3.3
Queue Clearance Time (g_s), s			2.8		3.7	7.3	8.0	12.3
Green Extension Time (g_e), s		0.0	0.0	0.0	0.0	0.5	0.0	0.6
Phase Call Probability			0.57		0.61	1.00	0.99	1.00
Max Out Probability			0.00		1.00	0.03	1.00	0.01

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	147	264	258	43	212	207	49	130		234	234	
Adjusted Saturation Flow Rate (s), veh/h/ln	1170	1772	1726	1688	1687	1323	1688	1615		1688	1523	
Queue Service Time (g_s), s	5.0	6.1	6.1	0.8	1.9	5.2	1.7	5.3		6.0	10.3	
Cycle Queue Clearance Time (g_c), s	5.0	6.1	6.1	0.8	1.9	5.2	1.7	5.3		6.0	10.3	
Green Ratio (g/C)	0.50	0.50	0.50	0.57	0.60	0.60	0.19	0.14		0.24	0.18	
Capacity (c), veh/h	690	890	867	536	2024	794	187	231		333	282	
Volume-to-Capacity Ratio (X)	0.213	0.296	0.298	0.081	0.105	0.260	0.262	0.565		0.702	0.830	
Back of Queue (Q), ft/ln (95 th percentile)												
Back of Queue (Q), veh/ln (95 th percentile)	2.2	4.0	4.0	0.4	1.0	2.4	1.2	3.5		2.5	6.7	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d_1), s/veh	9.9	10.2	10.2	7.1	6.0	6.6	24.5	28.0		25.5	27.5	
Incremental Delay (d_2), s/veh	0.7	0.8	0.9	0.0	0.1	0.8	0.3	0.8		5.5	2.4	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	10.6	11.0	11.1	7.1	6.1	7.4	24.8	28.8		31.1	29.9	
Level of Service (LOS)	B	B	B	A	A	A	C	C		C	C	
Approach Delay, s/veh / LOS	11.0	B		6.8	A		27.7	C		30.5	C	
Intersection Delay, s/veh / LOS	16.7						B					

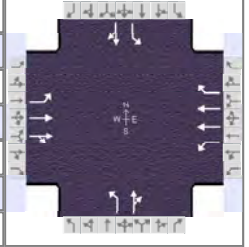
Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.88	B	1.87	B	2.44	B	2.28	B
Bicycle LOS Score / LOS	1.04	A	0.87	A	0.78	A	1.26	A

HCS Signalized Intersection Results Summary

General Information

Agency	HRG		
Analyst	NM	Analysis Date	May 8, 2023
Jurisdiction	SDDOT	Time Period	AM Peak
Urban Street	SD 38	Analysis Year	2050
Intersection	SD 38 & Mickelson Roa...	File Name	(10) SD38&Mickelson
Project Description			

Intersection Information

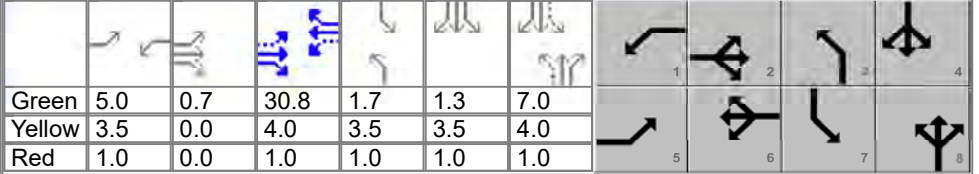


Demand Information

	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	160	220	20	135	535	225	20	65	10	215	15	185

Signal Information

Cycle, s	70.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Timer Results

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	4.0	1.1	3.0	1.1	4.0	1.1	4.0
Phase Duration, s	10.2	36.5	9.5	35.8	6.2	12.0	12.0	17.8
Change Period, (Y+R _c), s	4.5	5.0	4.5	5.0	4.5	5.0	4.5	5.0
Max Allow Headway (MAH), s	3.1	0.0	3.1	0.0	3.1	3.3	3.1	3.3
Queue Clearance Time (g _s), s	5.8		5.3		2.8	5.1	9.5	11.6
Green Extension Time (g _e), s	0.1	0.0	0.1	0.0	0.0	0.3	0.0	0.2
Phase Call Probability	0.97		0.94		0.34	1.00	0.99	1.00
Max Out Probability	1.00		1.00		1.00	0.63	1.00	1.00

Movement Group Results

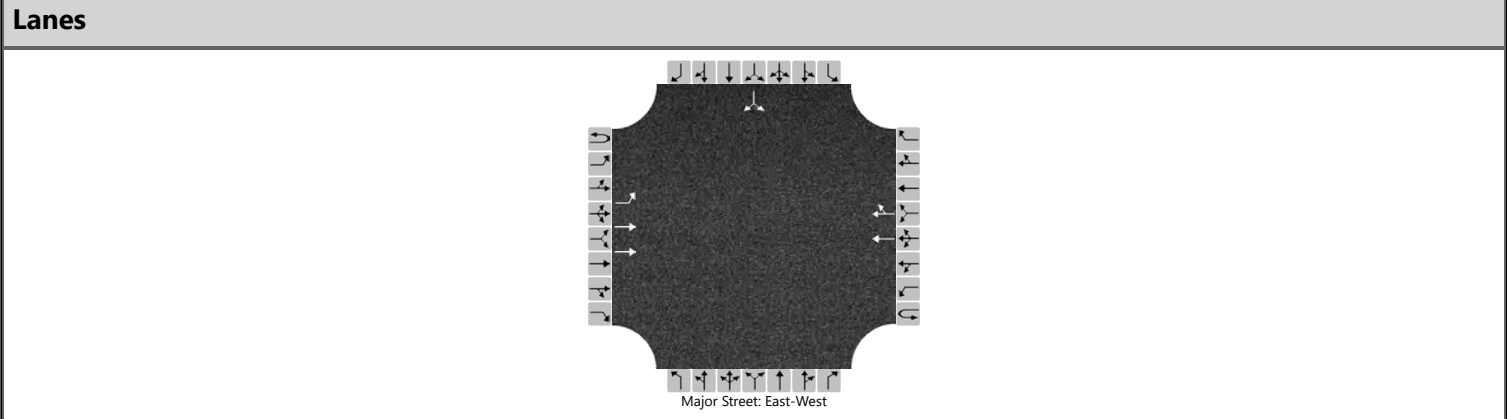
	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	174	131	130	147	582	245	22	82		234	217	
Adjusted Saturation Flow Rate (s), veh/h/ln	1688	1772	1720	1688	1687	1323	1688	1730		1688	1519	
Queue Service Time (g _s), s	3.8	3.1	3.1	3.3	8.2	8.9	0.8	3.1		7.5	9.6	
Cycle Queue Clearance Time (g _c), s	3.8	3.1	3.1	3.3	8.2	8.9	0.8	3.1		7.5	9.6	
Green Ratio (g/C)	0.52	0.45	0.45	0.51	0.44	0.44	0.12	0.10		0.24	0.18	
Capacity (c), veh/h	510	798	774	645	1484	582	164	173		356	277	
Volume-to-Capacity Ratio (X)	0.341	0.165	0.167	0.228	0.392	0.420	0.132	0.472		0.656	0.785	
Back of Queue (Q), ft/ln (95 th percentile)												
Back of Queue (Q), veh/ln (95 th percentile)	2.2	2.1	2.1	1.9	5.2	4.8	0.6	2.3		6.3	7.1	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d ₁), s/veh	9.5	11.4	11.4	9.3	13.3	13.5	27.4	29.8		24.6	27.3	
Incremental Delay (d ₂), s/veh	0.1	0.4	0.5	0.1	0.8	2.2	0.1	0.7		3.4	8.9	
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	9.7	11.9	11.9	9.4	14.0	15.7	27.6	30.5		28.0	36.2	
Level of Service (LOS)	A	B	B	A	B	B	C	C		C	D	
Approach Delay, s/veh / LOS	11.0		B	13.8		B	29.9		C	32.0		C
Intersection Delay, s/veh / LOS	18.2						B					

Multimodal Results

	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	1.89		B	1.89		B	2.44		B	2.28		B
Bicycle LOS Score / LOS	0.85		A	1.29		A	0.66		A	1.23		A

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD38 & 466th Ave
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	466th Ave
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		



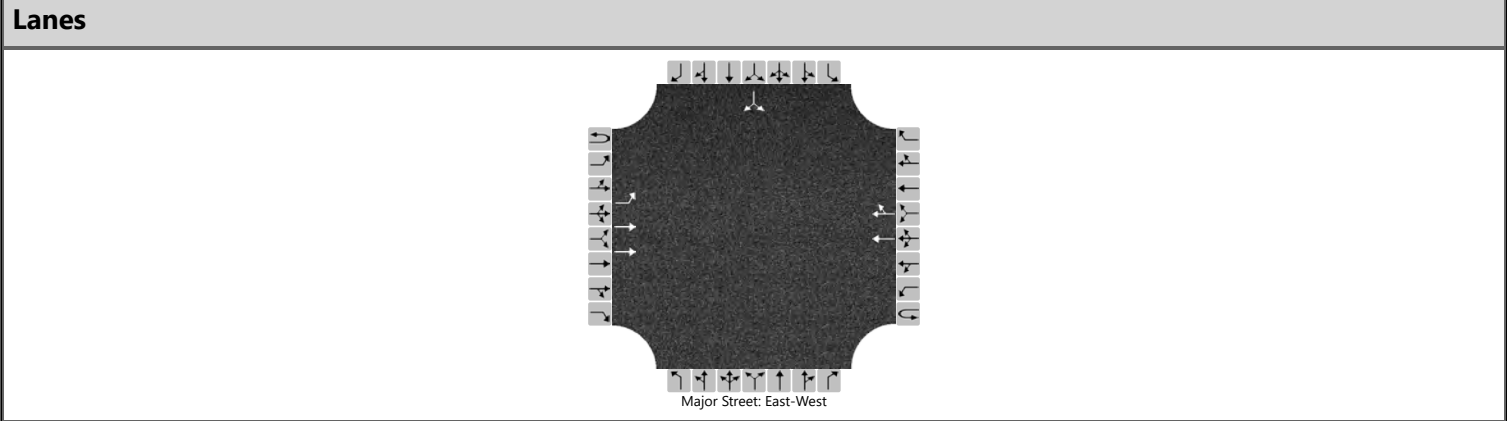
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		0	1	0
Configuration		L	T				T	TR							LR	
Volume (veh/h)	0	2	765				430	5						4		0
Percent Heavy Vehicles (%)	3	0												50		3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage					Left Only								9			

Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.10												7.80		6.96
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												4.00		3.33

Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		2													4	
Capacity, c (veh/h)		1100													457	
v/c Ratio		0.00													0.01	
95% Queue Length, Q ₉₅ (veh)		0.0													0.0	
Control Delay (s/veh)		8.3													12.9	
Level of Service (LOS)		A													B	
Approach Delay (s/veh)		0.0												12.9		
Approach LOS		A												B		

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD38 & 466th Ave
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	466th Ave
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		



Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		0	1	0
Configuration		L	T				T	TR							LR	
Volume (veh/h)	0	0	445				910	2						5		2
Percent Heavy Vehicles (%)	3	0												33		0
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage					Left Only								9			

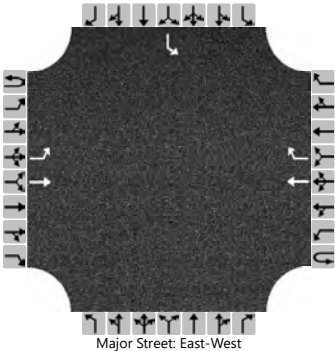
Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.10												7.46		6.90
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												3.83		3.30

Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		0													8	
Capacity, c (veh/h)		705													299	
v/c Ratio		0.00													0.03	
95% Queue Length, Q ₉₅ (veh)		0.0													0.1	
Control Delay (s/veh)		10.1													17.3	
Level of Service (LOS)		B													C	
Approach Delay (s/veh)		0.0												17.3		
Approach LOS		A												C		

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & I-90 WB Terminal
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	12/12/2023	East/West Street	SD 38
Analysis Year	2050	North/South Street	I-90 WB Terminal
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	1		0	0	0		1	0	0
Configuration		L	T				T	R						L		
Volume (veh/h)		40	730				255	20						15		
Percent Heavy Vehicles (%)		0												56		
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized					No											
Median Type Storage	Left Only								9							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		
Critical Headway (sec)		4.10												6.96		
Base Follow-Up Headway (sec)		2.2												3.5		
Follow-Up Headway (sec)		2.20												4.00		

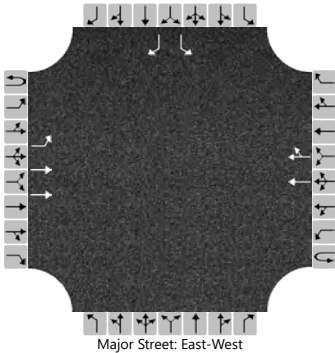
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		43												16		
Capacity, c (veh/h)		1274												315		
v/c Ratio		0.03												0.05		
95% Queue Length, Q ₉₅ (veh)		0.1												0.2		
Control Delay (s/veh)		7.9	0.2											17.1		
Level of Service (LOS)		A	A											C		
Approach Delay (s/veh)	0.6												17.1			
Approach LOS	A												C			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	CEC	Intersection	SD 38 & I-90 WB Terminal
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	I-90 WB Terminal
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		1	0	1
Configuration		L	T				T	TR						L		R
Volume (veh/h)	0	40	730				255	20						15		190
Percent Heavy Vehicles (%)	3	0												56		12
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized													No			
Median Type Storage					Left Only								9			

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.10												7.92		7.14
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												4.06		3.42

Delay, Queue Length, and Level of Service

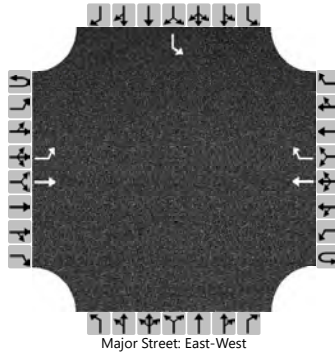
Flow Rate, v (veh/h)		43												16		207
Capacity, c (veh/h)		1274												435		839
v/c Ratio		0.03												0.04		0.25
95% Queue Length, Q ₉₅ (veh)		0.1												0.1		1.0
Control Delay (s/veh)		7.9												13.6		10.7
Level of Service (LOS)		A												B		B
Approach Delay (s/veh)		0.4												10.9		
Approach LOS		A												B		

HCS Two-Way Stop-Control Report

General Information

Analyst	NM	Intersection	SD 38 & I-90 WB Terminal
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	5/8/2023	East/West Street	SD 38
Analysis Year	2050	North/South Street	I-90 WB Terminal
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	1		0	0	0		1	0	0
Configuration		L	T				T	R						L		
Volume (veh/h)		25	420				415	35						30		
Percent Heavy Vehicles (%)		0												6		
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized					No											
Median Type Storage	Left Only								9							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		
Critical Headway (sec)		4.10												6.46		
Base Follow-Up Headway (sec)		2.2												3.5		
Follow-Up Headway (sec)		2.20												3.55		

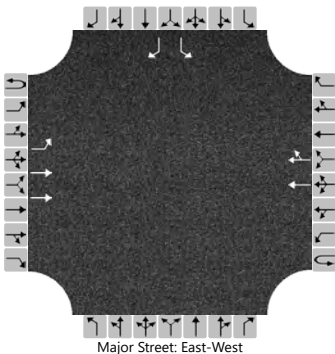
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		27												33		
Capacity, c (veh/h)		1085												562		
v/c Ratio		0.03												0.06		
95% Queue Length, Q ₉₅ (veh)		0.1												0.2		
Control Delay (s/veh)		8.4	0.2											11.8		
Level of Service (LOS)		A	A											B		
Approach Delay (s/veh)	0.6												11.8			
Approach LOS	A												B			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & I-90 WB Terminal
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	I-90 WB Terminal
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		1	0	1
Configuration		L	T				T	TR						L		R
Volume (veh/h)	0	25	420				415	35						30		495
Percent Heavy Vehicles (%)	3	0												6		2
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized													No			
Median Type Storage					Left Only								9			

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.10												6.92		6.94
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												3.56		3.32

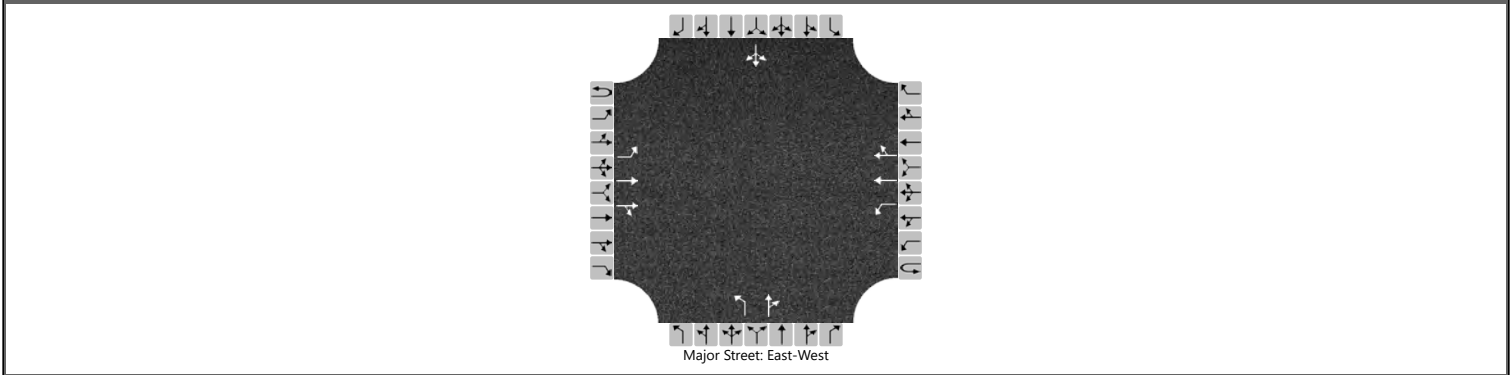
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		27												33		538
Capacity, c (veh/h)		1085												578		756
v/c Ratio		0.03												0.06		0.71
95% Queue Length, Q ₉₅ (veh)		0.1												0.2		6.1
Control Delay (s/veh)		8.4												11.6		20.6
Level of Service (LOS)		A												B		C
Approach Delay (s/veh)		0.5												20.1		
Approach LOS		A												C		

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & I-90 EB Ramp Terminal
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	I-90 EB Ramp Terminal
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		1	1	0		0	1	0
Configuration		L	T	TR		L	T	TR		L		TR			LTR	
Volume (veh/h)	0	190	265	20	0	15	420	30		30	15	25		30	10	35
Percent Heavy Vehicles (%)	3	10			3	11				20	20	0		8	3	3
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.30				4.32				7.90	6.90	6.90		7.66	6.56	6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.30				2.31				3.70	4.20	3.30		3.58	4.03	3.33

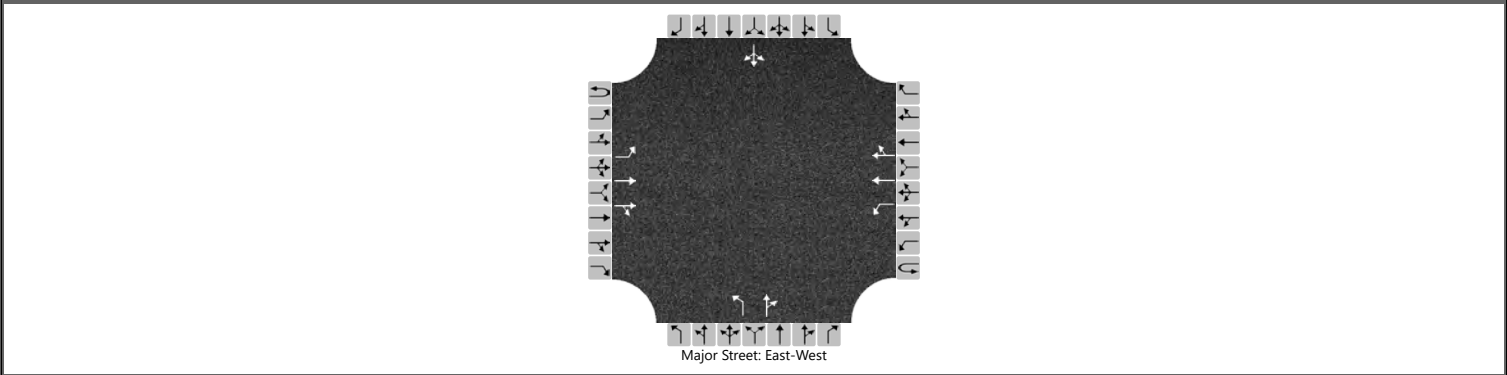
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		207				16				33		43			82	
Capacity, c (veh/h)		1016				1185				122		259			193	
v/c Ratio		0.20				0.01				0.27		0.17			0.42	
95% Queue Length, Q ₉₅ (veh)		0.8				0.0				1.0		0.6			1.9	
Control Delay (s/veh)		9.4	0.6			8.1	0.1			44.7		21.7			36.6	
Level of Service (LOS)		A	A			A	A			E		C			E	
Approach Delay (s/veh)	4.1				0.4				31.6				36.6			
Approach LOS	A				A				D				E			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD38/I-90 EB Ramp Terminal/466th St
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	I-90 EB Ramp Terminal/466th Street
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		1	1	0		0	1	0
Configuration		L	T	TR		L	T	TR		L		TR			LTR	
Volume (veh/h)	0	430	300	15	0	20	240	20		15	10	20		3	2	28
Percent Heavy Vehicles (%)	3	2			3	20				33	33	60		33	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.14				4.50				8.16	7.16	8.10		8.16	6.50	6.90
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.40				3.83	4.33	3.90		3.83	4.00	3.30

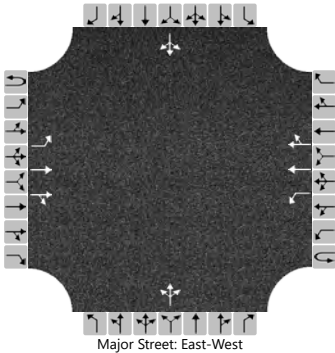
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		467				22				16		33			36	
Capacity, c (veh/h)		1277				1094				40		128			231	
v/c Ratio		0.37				0.02				0.41		0.25			0.16	
95% Queue Length, Q ₉₅ (veh)		1.7				0.1				1.4		1.0			0.5	
Control Delay (s/veh)		9.4	0.6			8.4	0.1			146.1		42.5			23.4	
Level of Service (LOS)		A	A			A	A			F		E			C	
Approach Delay (s/veh)	5.7				0.7				77.0				23.4			
Approach LOS	A				A				F				C			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & 468th Avenue
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	468th Ave / County Highway 141
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		0	1	0		0	1	0
Configuration		L	T	TR		L	T	TR			LTR				LTR	
Volume (veh/h)	0	4	360	0	0	0	225	50		2	2	0		50	0	7
Percent Heavy Vehicles (%)	3	0			3	0				0	100	0		4	0	50
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.10				4.10				7.50	8.50	6.90		7.58	6.50	7.90
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	5.00	3.30		3.54	4.00	3.80

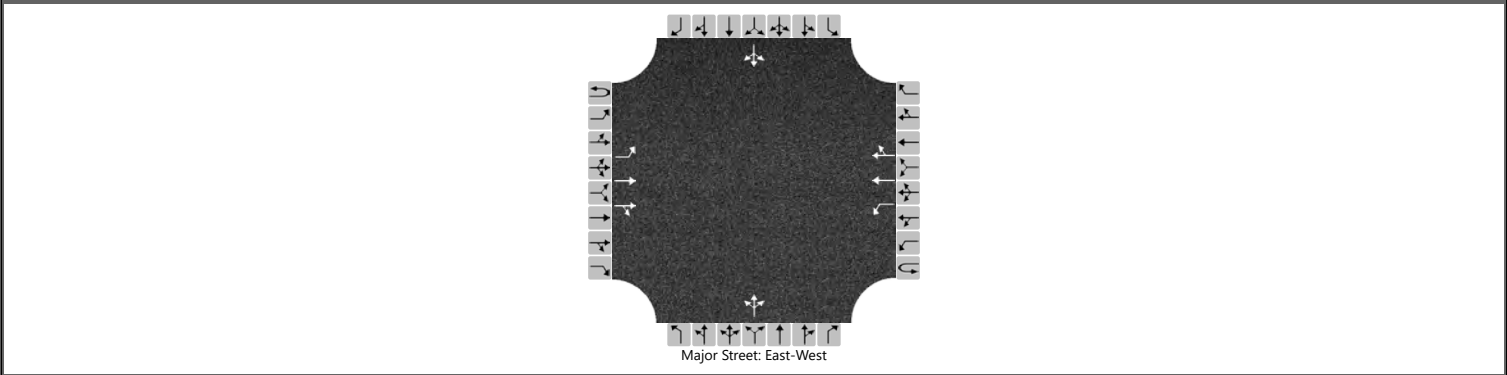
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		4				0					4				62	
Capacity, c (veh/h)		1274				1178					284				483	
v/c Ratio		0.00				0.00					0.02				0.13	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.0				0.4	
Control Delay (s/veh)		7.8	0.0			8.1	0.0				17.9				13.6	
Level of Service (LOS)		A	A			A	A				C				B	
Approach Delay (s/veh)	0.1				0.0				17.9				13.6			
Approach LOS	A				A				C				B			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & 468th Avenue
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	468th Ave / County Highway 141
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		0	1	0		0	1	0
Configuration		L	T	TR		L	T	TR			LTR				LTR	
Volume (veh/h)	0	0	310	2	0	5	420	55		2	2	0		50	4	4
Percent Heavy Vehicles (%)	3	0			3	0				0	0	0		4	100	50
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

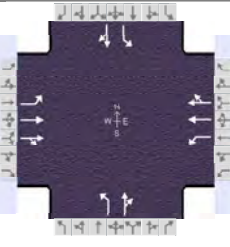
Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.10				4.10				7.50	6.50	6.90		7.58	8.50	7.90
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.00	3.30		3.54	5.00	3.80

Delay, Queue Length, and Level of Service









Flow Rate, v (veh/h)		0				5					4				63	
Capacity, c (veh/h)		1060				1231					326				324	
v/c Ratio		0.00				0.00					0.01				0.19	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.0				0.7	
Control Delay (s/veh)		8.4	0.0			7.9	0.0				16.2				18.8	
Level of Service (LOS)		A	A			A	A				C				C	
Approach Delay (s/veh)	0.0				0.1				16.2				18.8			
Approach LOS	A				A				C				C			

HCS Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	HRG			Duration, h	0.250	
Analyst	CEC	Analysis Date	May 8, 2023	Area Type	Other	
Jurisdiction	SDDOT	Time Period	AM Peak	PHF	0.92	
Urban Street	SD 38	Analysis Year	2050	Analysis Period	1> 7:15	
Intersection	SD 38 & 469th Ave	File Name	(17) SD38&469_AM.xus			
Project Description						

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	5	330	75	75	165	5	110	5	280	15	5	5

Signal Information												
Cycle, s	60.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On	Green	0.4	3.3	25.6	16.2	0.0	0.0		
				Yellow	3.5	0.0	4.0	4.0	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0	1.0	1.0	0.0	0.0		

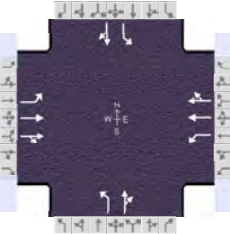
			
			

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	4.0	1.1	4.0		6.0		6.0
Phase Duration, s	4.9	30.6	8.2	33.9		21.2		21.2
Change Period, ($Y+R_c$), s	4.5	5.0	4.5	5.0		5.0		5.0
Max Allow Headway (MAH), s	3.9	0.0	3.9	0.0		4.1		4.1
Queue Clearance Time (g_s), s	2.1		3.6			14.7		15.6
Green Extension Time (g_e), s	0.0	0.0	0.1	0.0		0.7		0.6
Phase Call Probability	0.09		0.74			1.00		1.00
Max Out Probability	0.01		0.38			0.95		1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	5	225	215	82	93	92	120	310		16	11	
Adjusted Saturation Flow Rate (s), veh/h/ln	1674	1758	1646	1647	1730	1712	1426	1374		1061	1613	
Queue Service Time (g_s), s	0.1	5.1	5.2	1.6	1.8	1.8	4.0	12.7		0.9	0.3	
Cycle Queue Clearance Time (g_c), s	0.1	5.1	5.2	1.6	1.8	1.8	4.3	12.7		13.6	0.3	
Green Ratio (g/C)	0.43	0.43	0.43	0.50	0.48	0.48	0.27	0.27		0.27	0.27	
Capacity (c), veh/h	629	750	702	537	832	824	498	371		182	435	
Volume-to-Capacity Ratio (X)	0.009	0.300	0.306	0.152	0.111	0.112	0.240	0.835		0.090	0.025	
Back of Queue (Q), ft/ln (95 th percentile)	1.3	70.1	67.9	16.1	21.9	21.9	49.8	219		9.4	4.3	
Back of Queue (Q), veh/ln (95 th percentile)	0.0	2.7	2.7	0.6	0.8	0.8	2.0	7.9		0.4	0.2	
Queue Storage Ratio (RQ) (95 th percentile)	0.01	0.00	0.00	0.06	0.00	0.00	0.20	0.00		0.04	0.00	
Uniform Delay (d_1), s/veh	9.7	11.3	11.4	8.2	8.5	8.5	17.7	20.6		27.0	16.1	
Incremental Delay (d_2), s/veh	0.0	1.0	1.1	0.1	0.3	0.3	0.2	11.6		0.2	0.0	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	9.7	12.3	12.5	8.3	8.8	8.8	17.9	32.3		27.2	16.1	
Level of Service (LOS)	A	B	B	A	A	A	B	C		C	B	
Approach Delay, s/veh / LOS	12.4	B		8.7	A		28.3	C		22.8	C	
Intersection Delay, s/veh / LOS	17.6						B					











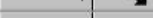

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.89	B	1.88	B	2.27	B	2.27	B
Bicycle LOS Score / LOS	0.86	A	0.71	A	1.20	A	0.53	A

HCS Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	HRG			Duration, h	0.250	
Analyst	CEC	Analysis Date	May 8, 2023	Area Type	Other	
Jurisdiction	SDDOT	Time Period	AM Peak	PHF	0.92	
Urban Street	SD 38	Analysis Year	2050	Analysis Period	1> 7:15	
Intersection	SD 38 & 469th Ave	File Name	(17) SD38&469_PM.xus			
Project Description						

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	5	245	120	285	380	5	100	5	120	15	5	10

Signal Information												
Cycle, s	60.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On	Green	0.4	2.7	29.4	8.5	0.0	0.0		
				Yellow	3.5	3.5	4.0	4.0	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	1.0	1.0	0.0	0.0		

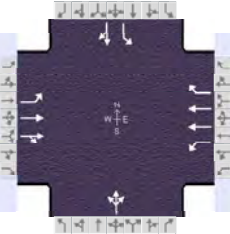
					
					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	4.0	1.1	4.0		6.0		6.0
Phase Duration, s	4.9	34.4	12.1	41.6		13.5		13.5
Change Period, ($Y+R_c$), s	4.5	5.0	4.5	5.0		5.0		5.0
Max Allow Headway (MAH), s	3.9	0.0	3.9	0.0		4.1		4.1
Queue Clearance Time (g_s), s	2.1		6.9			7.1		7.9
Green Extension Time (g_e), s	0.0	0.0	0.8	0.0		0.7		0.6
Phase Call Probability	0.09		0.99			0.99		0.99
Max Out Probability	0.00		0.01			0.02		0.03

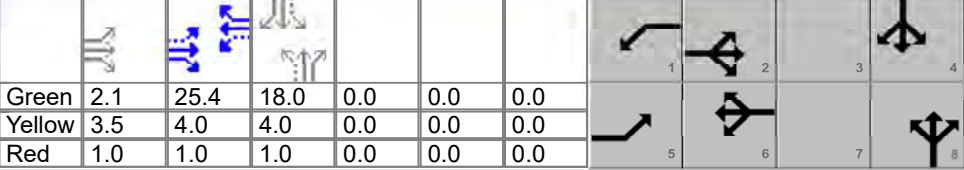
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	5	206	191	310	210	209	109	136		16	16	
Adjusted Saturation Flow Rate (s), veh/h/ln	1674	1758	1565	1647	1730	1722	1397	1499		1244	1570	
Queue Service Time (g_s), s	0.1	4.1	4.2	4.9	3.2	3.2	4.4	5.1		0.8	0.5	
Cycle Queue Clearance Time (g_c), s	0.1	4.1	4.2	4.9	3.2	3.2	4.9	5.1		5.9	0.5	
Green Ratio (g/C)	0.50	0.49	0.49	0.65	0.61	0.61	0.14	0.14		0.14	0.14	
Capacity (c), veh/h	603	862	767	733	1054	1049	305	212		190	222	
Volume-to-Capacity Ratio (X)	0.009	0.239	0.249	0.423	0.199	0.199	0.356	0.640		0.086	0.073	
Back of Queue (Q), ft/ln (95 th percentile)	1	50.2	47.4	26.7	28.4	28.4	58.9	79.5		9.4	8.2	
Back of Queue (Q), veh/ln (95 th percentile)	0.0	2.0	1.9	1.0	1.1	1.1	2.3	3.1		0.4	0.3	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.11	0.00	0.00	0.24	0.00		0.04	0.00	
Uniform Delay (d_1), s/veh	7.6	8.8	8.9	5.0	5.2	5.2	24.5	24.3		27.1	22.3	
Incremental Delay (d_2), s/veh	0.0	0.7	0.8	0.4	0.4	0.4	0.7	3.2		0.2	0.1	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	7.6	9.5	9.7	5.4	5.6	5.6	25.2	27.5		27.3	22.5	
Level of Service (LOS)	A	A	A	A	A	A	C	C		C	C	
Approach Delay, s/veh / LOS	9.5	A		5.5	A		26.5	C		24.9	C	
Intersection Delay, s/veh / LOS	10.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.88	B	1.86	B	2.28	B	2.28	B
Bicycle LOS Score / LOS	0.82	A	1.09	A	0.89	A	0.54	A

HCS Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	HRG			Duration, h	0.250	
Analyst	CEC	Analysis Date	May 8, 2023	Area Type	Other	
Jurisdiction	SDDOT	Time Period	AM Peak	PHF	0.92	
Urban Street	SD 38	Analysis Year	2050	Analysis Period	1> 7:15	
Intersection	SD 38 & La Mesa Drive	File Name	(17) SD38&LaMesa_AM.xus			
Project Description						

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	30	700	4	0	235	15	0	15	5	75	4	30

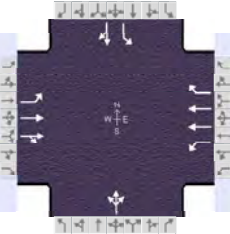
Signal Information											
Cycle, s	60.0	Reference Phase	2								
Offset, s	0	Reference Point	End								
Uncoordinated	No	Simult. Gap E/W	On								
Force Mode	Fixed	Simult. Gap N/S	On	Green	2.1	25.4	18.0	0.0	0.0	0.0	
				Yellow	3.5	4.0	4.0	0.0	0.0	0.0	
				Red	1.0	1.0	1.0	0.0	0.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	4.0	1.1	3.0		8.0		6.0
Phase Duration, s	6.6	37.0	0.0	30.4		23.0		23.0
Change Period, ($Y+R_c$), s	4.5	5.0	5.0	5.0		5.0		5.0
Max Allow Headway (MAH), s	3.9	0.0	0.0	0.0		4.0		4.0
Queue Clearance Time (g_s), s	2.6					2.6		20.0
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0		0.3		0.0
Phase Call Probability	0.42					0.90		0.90
Max Out Probability	1.00					0.00		1.00

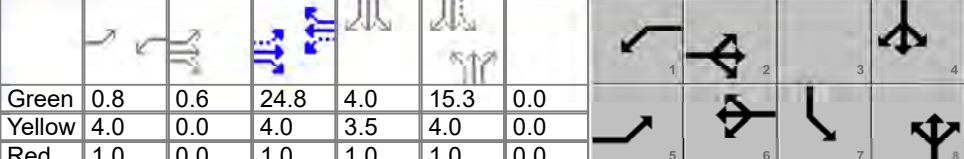
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	33	383	382	0	255	16		0		82	37	
Adjusted Saturation Flow Rate (s), veh/h/ln	1674	1758	1754	1674	1674	1323		1434		1412	948	
Queue Service Time (g_s), s	0.6	7.8	7.8	0.0	2.9	0.4		0.0		2.6	1.7	
Cycle Queue Clearance Time (g_c), s	0.6	7.8	7.8	0.0	2.9	0.4		0.0		3.2	1.7	
Green Ratio (g/C)	0.49	0.53	0.53	0.34	0.42	0.42		0.10		0.30	0.30	
Capacity (c), veh/h	598	938	936	380	1417	560				530	284	
Volume-to-Capacity Ratio (X)	0.055	0.409	0.409	0.000	0.180	0.029		0.000		0.154	0.130	
Back of Queue (Q), ft/ln (95 th percentile)	6.3	90.3	90.2	0	35.1	5.1		0		31.4	19.6	
Back of Queue (Q), veh/ln (95 th percentile)	0.2	3.5	3.5	0.0	1.4	0.2		0.0		1.3	0.6	
Queue Storage Ratio (RQ) (95 th percentile)	0.03	0.00	0.00	0.00	0.00	0.02		0.00		0.13	0.00	
Uniform Delay (d_1), s/veh	8.1	8.4	8.4	0.0	10.8	10.1				16.0	15.3	
Incremental Delay (d_2), s/veh	0.0	1.3	1.3	0.0	0.3	0.1		0.0		0.1	0.2	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Control Delay (d), s/veh	8.1	9.7	9.7	0.0	11.1	10.2				16.2	15.5	
Level of Service (LOS)	A	A	A		B	B				B	B	
Approach Delay, s/veh / LOS	9.6		A	11.0		B	15.0		B	16.0		B
Intersection Delay, s/veh / LOS	10.6						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.65	B	1.89	B	2.42	B	2.26	B
Bicycle LOS Score / LOS	1.15	A	0.71	A	0.52	A	0.68	A

HCS Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	HRG			Duration, h	0.250	
Analyst	CEC	Analysis Date	May 8, 2023	Area Type	Other	
Jurisdiction	SDDOT	Time Period	PM Peak	PHF	0.92	
Urban Street	SD 38	Analysis Year	2050	Analysis Period	1> 7:15	
Intersection	SD 38 & La Mesa Drive	File Name	(17) SD38&LaMesa_PM.xus			
Project Description						

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	25	325	0	9	735	100	4	5	0	80	15	30

Signal Information														
Cycle, s	65.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	0.8	0.6	24.8	4.0	15.3	0.0				
				Yellow	4.0	0.0	4.0	3.5	4.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0	1.0	1.0	1.0	0.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8	7	4
Case Number	1.1	4.0	1.1	3.0		8.3	1.0	4.0
Phase Duration, s	6.4	30.4	5.8	29.8		20.3	8.5	28.7
Change Period, ($Y+R_c$), s	4.5	5.0	5.0	5.0		5.0	4.5	5.0
Max Allow Headway (MAH), s	3.9	0.0	3.9	0.0		4.0	3.9	4.0
Queue Clearance Time (g_s), s	2.6		2.2			17.2	4.5	25.7
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Phase Call Probability	0.39		0.16			0.65	0.79	0.93
Max Out Probability	0.02		0.01			1.00	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	27	353	0	10	799	109		10		87	49	
Adjusted Saturation Flow Rate (s), veh/h/ln	1674	1758	1490	1674	1674	1323		297		1594	1582	
Queue Service Time (g_s), s	0.6	4.4	0.0	0.2	12.6	3.6		0.1		2.5	1.3	
Cycle Queue Clearance Time (g_c), s	0.6	4.4	0.0	0.2	12.6	3.6		15.2		2.5	1.3	
Green Ratio (g/C)	0.41	0.39	0.53	0.40	0.38	0.38		0.24		0.33	0.37	
Capacity (c), veh/h	290	1381		433	1282	507		149		210	576	
Volume-to-Capacity Ratio (X)	0.094	0.256	0.000	0.023	0.623	0.214		0.065		0.413	0.085	
Back of Queue (Q), ft/ln (95 th percentile)	8.2	62.5	0	3	179.9	47.1		4.8		39.7	17.7	
Back of Queue (Q), veh/ln (95 th percentile)	0.3	2.4	0.0	0.1	7.0	1.7		0.2		1.5	0.7	
Queue Storage Ratio (RQ) (95 th percentile)	0.03	0.00	0.00	0.01	0.00	0.19		0.00		0.16	0.00	
Uniform Delay (d_1), s/veh	12.6	13.3		12.2	16.2	13.5		20.4		17.9	13.6	
Incremental Delay (d_2), s/veh	0.1	0.4	0.0	0.0	2.3	1.0		0.2		1.3	0.1	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Control Delay (d), s/veh	12.8	13.8		12.2	18.5	14.4		20.6		19.2	13.6	
Level of Service (LOS)	B	B		B	B	B		C		B	B	
Approach Delay, s/veh / LOS	13.7		B	18.0		B	20.6		C	17.2		B
Intersection Delay, s/veh / LOS	16.8						B					

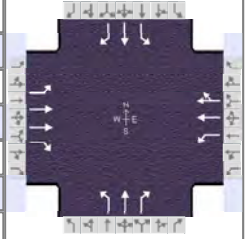
Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.67	B	1.90	B	2.43	B	2.26	B
Bicycle LOS Score / LOS	0.80	A	1.24	A	0.50	A	0.71	A

HCS Signalized Intersection Results Summary

General Information

Agency	HRG		
Analyst	NM	Analysis Date	May 8, 2023
Jurisdiction	SDDOT	Time Period	AM Peak
Urban Street	SD 38	Analysis Year	2050
Intersection	SD 38 & Marion Street	File Name	(18) SD38&Marion
Project Description			

Intersection Information



Demand Information

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	165	340	105	50	125	75	110	225	120	45	145	40

Signal Information

Cycle, s	50.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
				Green	2.6	3.9	12.9	2.5	2.0	10.0		
				Yellow	4.0	0.0	4.0	4.0	0.0	4.0		
				Red	0.0	0.0	0.0	0.0	0.0	0.0		

Timer Results

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	1.1	4.0	2.0	3.0	2.0	3.0
Phase Duration, s	10.6	20.8	6.6	16.9	8.5	16.0	6.5	14.0
Change Period, ($Y+R_c$), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Allow Headway (MAH), s	2.9	0.0	2.9	0.0	2.9	2.9	2.9	2.9
Queue Clearance Time (g_s), s	7.1		3.1		5.6	8.5	3.5	5.9
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.6
Phase Call Probability	0.92		0.53		0.81	1.00	0.49	1.00
Max Out Probability	1.00		0.04		1.00	0.21	1.00	0.15

Movement Group Results

Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R	
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14	
Adjusted Flow Rate (v), veh/h	179	370	114	54	112	106	120	245	130	49	158	43	
Adjusted Saturation Flow Rate (s), veh/h/ln	1701	1674	1525	1714	1772	1556	1647	1674	1502	1554	1758	1466	
Queue Service Time (g_s), s	5.1	4.1	2.7	1.1	2.5	2.7	3.6	6.5	3.6	1.5	3.9	1.2	
Cycle Queue Clearance Time (g_c), s	5.1	4.1	2.7	1.1	2.5	2.7	3.6	6.5	3.6	1.5	3.9	1.2	
Green Ratio (g/C)	0.13	0.34	0.34	0.31	0.26	0.26	0.09	0.24	0.24	0.05	0.20	0.20	
Capacity (c), veh/h	223	1128	514	456	459	403	148	403	361	77	352	293	
Volume-to-Capacity Ratio (X)	0.804	0.328	0.222	0.119	0.243	0.263	0.806	0.607	0.361	0.638	0.448	0.148	
Back of Queue (Q), ft/ln (95 th percentile)													
Back of Queue (Q), veh/ln (95 th percentile)	4.1	2.2	1.4	0.6	1.6	1.6	3.2	3.5	1.7	1.0	2.3	0.6	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh	21.1	12.4	11.9	12.3	14.7	14.7	22.3	16.9	15.8	23.3	17.6	16.5	
Incremental Delay (d_2), s/veh	11.0	0.8	1.0	0.0	1.3	1.6	15.9	0.8	0.2	3.3	0.3	0.1	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh	32.1	13.1	12.9	12.3	15.9	16.3	38.2	17.7	16.0	26.6	17.9	16.6	
Level of Service (LOS)	C	B	B	B	B	B	D	B	B	C	B	B	
Approach Delay, s/veh / LOS	18.2	B		15.4		B		22.2	C		19.4	B	
Intersection Delay, s/veh / LOS	19.1						B						

Multimodal Results

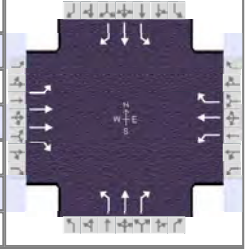
	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.08	B		2.09	B		2.26	B		2.42	B	
Bicycle LOS Score / LOS	1.03	A		0.71	A		1.30	A		0.90	A	

HCS Signalized Intersection Results Summary

General Information

Agency	HRG		
Analyst	NM	Analysis Date	May 8, 2023
Jurisdiction	SDDOT	Time Period	PM Peak
Urban Street	SD 38	Analysis Year	2050
Intersection	SD 38 & Marion Street	File Name	(18) SD38&Marion
Project Description			

Intersection Information



Demand Information

	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	70	230	105	170	355	55	180	205	125	85	355	205

Signal Information

Cycle, s	60.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On	Green	3.7	0.4	13.3	4.2	2.8	15.5		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	4.0	4.0	4.0	0.0	4.0		
				Red	0.0	0.0	0.0	0.0	0.0	0.0		

Timer Results

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	7.7	17.3	12.2	21.7	11.0	22.3	8.2	19.5
Change Period, (Y+R _c), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Allow Headway (MAH), s	2.9	0.0	2.9	0.0	2.9	3.0	2.9	3.0
Queue Clearance Time (g _s), s	5.1		8.5		9.0	8.1	5.3	14.7
Green Extension Time (g _e), s	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.8
Phase Call Probability	0.73		0.96		0.96	1.00	0.79	1.00
Max Out Probability	0.55		1.00		1.00	0.03	1.00	0.89

Movement Group Results

Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	78	256	117	189	394	61	200	228	139	94	394	228
Adjusted Saturation Flow Rate (s), veh/h/ln	1474	1660	1490	1688	1772	1406	1714	1772	1478	1688	1772	1478
Queue Service Time (g_s), s	3.1	3.9	4.0	6.5	12.1	1.9	7.0	6.1	4.3	3.3	12.7	8.1
Cycle Queue Clearance Time (g_c), s	3.1	3.9	4.0	6.5	12.1	1.9	7.0	6.1	4.3	3.3	12.7	8.1
Green Ratio (g/C)	0.06	0.22	0.22	0.14	0.30	0.30	0.12	0.31	0.31	0.07	0.26	0.26
Capacity (c), veh/h	92	735	330	230	523	415	200	541	451	119	459	383
Volume-to-Capacity Ratio (X)	0.845	0.347	0.354	0.822	0.754	0.147	1.000	0.421	0.308	0.797	0.859	0.595
Back of Queue (Q), ft/ln (95 th percentile)												
Back of Queue (Q), veh/ln (95 th percentile)	2.1	2.5	2.5	6.1	9.1	1.0	10.0	3.6	2.1	2.7	9.5	4.2
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	27.8	19.7	19.7	25.2	19.2	15.6	26.5	16.6	16.0	27.5	21.2	19.5
Incremental Delay (d_2), s/veh	7.7	1.3	3.0	18.3	9.7	0.7	63.6	0.2	0.1	10.2	10.8	0.7
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	35.6	21.0	22.7	43.5	28.9	16.3	90.1	16.8	16.1	37.7	31.9	20.2
Level of Service (LOS)	D	C	C	D	C	B	F	B	B	D	C	C
Approach Delay, s/veh / LOS	23.9	C		32.0	C		42.5	D		29.0	C	
Intersection Delay, s/veh / LOS	32.1						C					

Multimodal Results

	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.10	B		2.10	B		2.26	B		2.27	B	
Bicycle LOS Score / LOS	0.86	A		1.55	B		1.42	A		1.67	B	

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	10/17/2023
Agency	HR Green	Analysis Year	2050
Jurisdiction	SD 38 Build	Time Analyzed	2050
Project Description	464th_MickelsonRd_2050_AM	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	0.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	55.0	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	638	Heavy Vehicle Adjustment Factor (fHV)	0.980
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	370
Total Trucks, %	2.00	Capacity (c), pc/h/ln	2100
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2100
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.18

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	55.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	6.7
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	362	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.66
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	8.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	53.0	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	380	Heavy Vehicle Adjustment Factor (fhv)	0.885
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	244
Total Trucks, %	13.00	Capacity (c), pc/h/ln	2060
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2060
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.12
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	53.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	2.0		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	216	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	6.14
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	F

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	10/17/2023
Agency	HR Green	Analysis Year	2050
Jurisdiction	SD38 Build	Time Analyzed	PM
Project Description	464th_MickelsonRd_PM	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	0.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	55.0	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	441	Heavy Vehicle Adjustment Factor (fhv)	0.943
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	266
Total Trucks, %	6.00	Capacity (c), pc/h/ln	2100
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2100
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.13

Direction 1 Speed and Density

Lane Width Adjustment (flw)	0.0	Average Speed (S), mi/h	55.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.8
Median Type Adjustment (fm)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fa)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	251	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	3.56
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	D

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	55.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	8.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	53.0	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	730	Heavy Vehicle Adjustment Factor (fhv)	0.990
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	419
Total Trucks, %	1.00	Capacity (c), pc/h/ln	2060
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2060
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.20
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	53.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	7.9
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	2.0		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	415	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.50
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	2/27/2024
Agency	HR GREEN INC	Analysis Year	2050
Jurisdiction	SD 38	Time Analyzed	PM
Project Description	2050 Build Analysis - 468th St to 469th St	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	1.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.8	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	410	Heavy Vehicle Adjustment Factor (fHV)	0.952
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	244
Total Trucks, %	5.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.11

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.8
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.5
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	233	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	3.42
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	5.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	68.8	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	280	Heavy Vehicle Adjustment Factor (fhv)	0.862
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	184
Total Trucks, %	16.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.08
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	68.8
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.7
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	1.3		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	159	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	8.07
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	F

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	2/27/2024
Agency	HR GREEN INC	Analysis Year	2050
Jurisdiction	SD 38	Time Analyzed	PM
Project Description	2050 Build Analysis - 468th St to 469th St	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	1.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.8	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	370	Heavy Vehicle Adjustment Factor (fHV)	0.935
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	225
Total Trucks, %	7.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.10

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.8
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.2
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.3		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	210	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	4.05
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	D

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	5.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	68.8	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	490	Heavy Vehicle Adjustment Factor (fhv)	0.980
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	284
Total Trucks, %	2.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.12
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	68.8
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.1
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	1.3		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	278	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.65
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	2/27/2024
Agency	HR Green	Analysis Year	2050
Jurisdiction	SD38 Build	Time Analyzed	AM
Project Description	469th to LaMesa	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	2.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.5	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	734	Heavy Vehicle Adjustment Factor (fhv)	0.962
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	434
Total Trucks, %	4.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.19

Direction 1 Speed and Density

Lane Width Adjustment (flw)	0.0	Average Speed (S), mi/h	69.5
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	6.2
Median Type Adjustment (fm)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fa)	0.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	417	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	3.41
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	1.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.8	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	240	Heavy Vehicle Adjustment Factor (fhv)	0.820
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	166
Total Trucks, %	22.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.07
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.8
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.4
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.3		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	136	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	11.74
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	F

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	2/27/2024
Agency	HR Green	Analysis Year	2050
Jurisdiction	SD38 Build	Time Analyzed	PM
Project Description	469th to LaMesa	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	2.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.5	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	351	Heavy Vehicle Adjustment Factor (fHV)	0.917
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	218
Total Trucks, %	9.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.09

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.5
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.1
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.5		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	199	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	4.80
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	E

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	1.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.8	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	666	Heavy Vehicle Adjustment Factor (fhv)	0.971
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	390
Total Trucks, %	3.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.17
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.8
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	5.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.3		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	378	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	3.07
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	2/27/2024
Agency	HR GREEN INC	Analysis Year	2050
Jurisdiction	SD 38	Time Analyzed	AM
Project Description	2050 Build Analysis - 466th Avenue S/EB Exit Ramp to 468th St	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	4.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.0	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	364	Heavy Vehicle Adjustment Factor (fHV)	0.935
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	221
Total Trucks, %	7.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.10

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.2
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	1.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	207	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	4.05
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	D

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	2.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.5	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	260	Heavy Vehicle Adjustment Factor (fhv)	0.901
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	164
Total Trucks, %	11.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.07
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.5
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.4
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.5		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	148	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	5.50
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	E

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	2/27/2024
Agency	HR GREEN INC	Analysis Year	2050
Jurisdiction	SD 38	Time Analyzed	PM
Project Description	2050 Build Analysis - 466th Avenue S/EB Exit Ramp to 468th St	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	4.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.0	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	312	Heavy Vehicle Adjustment Factor (fHV)	0.909
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	195
Total Trucks, %	10.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.08

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.8
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	1.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	177	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	5.16
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	E

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	2.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.5	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	420	Heavy Vehicle Adjustment Factor (fhv)	0.935
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	255
Total Trucks, %	7.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.11
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.5
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.7
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.5		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	239	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	4.12
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	D

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	2/27/2024
Agency	HR Green	Analysis Year	2050
Jurisdiction	SD38 Build	Time Analyzed	AM
Project Description	I90 WB Ramps to I90 EB Ramps	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	0.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	70.0	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	745	Heavy Vehicle Adjustment Factor (fHV)	0.971
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	436
Total Trucks, %	3.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.19

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	70.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	6.2
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	423	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	3.13
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	0.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	70.0	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	273	Heavy Vehicle Adjustment Factor (fhv)	0.877
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	177
Total Trucks, %	14.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.08
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	70.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.5
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	155	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	6.98
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	F

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	2/27/2024
Agency	HR Green	Analysis Year	2050
Jurisdiction	SD38 Build	Time Analyzed	PM
Project Description	I90 WB Ramps to I90 EB Ramps	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	0.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	70.0	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	451	Heavy Vehicle Adjustment Factor (fHV)	0.917
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	280
Total Trucks, %	9.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.12

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	70.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.0
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	256	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	4.92
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	E

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	0.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	70.0	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	455	Heavy Vehicle Adjustment Factor (fhv)	0.877
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	295
Total Trucks, %	14.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.13
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	70.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.2
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	259	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	7.24
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	F

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	2/27/2024
Agency	HR Green	Analysis Year	2050
Jurisdiction	SD38 Build	Time Analyzed	AM
Project Description	Mickelson Rd to 466th St	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	1.5
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.6	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	725	Heavy Vehicle Adjustment Factor (fHV)	0.990
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	416
Total Trucks, %	1.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.18

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.6
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	6.0
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.4		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	412	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.61
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	2.2
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.5	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	425	Heavy Vehicle Adjustment Factor (fhv)	0.885
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	273
Total Trucks, %	13.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.12
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.4
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.9
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.6		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	241	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	6.70
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	F

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	2/27/2024
Agency	HR Green	Analysis Year	2050
Jurisdiction	SD38 Build	Time Analyzed	PM
Project Description	Mickelson Rd to 466th St	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	1.5
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.6	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	445	Heavy Vehicle Adjustment Factor (fhv)	0.901
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	280
Total Trucks, %	11.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.12

Direction 1 Speed and Density

Lane Width Adjustment (flw)	0.0	Average Speed (S), mi/h	69.6
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.0
Median Type Adjustment (fm)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fa)	0.4		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	253	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	5.78
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	F

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	2.2
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	69.5	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	913	Heavy Vehicle Adjustment Factor (fhv)	0.980
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	530
Total Trucks, %	2.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.23
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	69.4
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	7.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.6		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	519	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.97
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	2/27/2024
Agency	HR Green	Analysis Year	2050
Jurisdiction	SD38 Build	Time Analyzed	AM
Project Description	466th St to I90 WB Ramps	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	0.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	70.0	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	769	Heavy Vehicle Adjustment Factor (fHV)	0.980
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	446
Total Trucks, %	2.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.19

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	70.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	6.4
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	437	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	2.88
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	0.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	70.0	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	436	Heavy Vehicle Adjustment Factor (fhv)	0.833
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	298
Total Trucks, %	20.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.13
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	70.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.3
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	248	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	10.71
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	F

HCS Multilane Highway Report

Project Information

Analyst	NM	Date	2/27/2024
Agency	HR Green	Analysis Year	2050
Jurisdiction	SD38 Build	Time Analyzed	PM
Project Description	466th St to I90 WB Ramps	Units	U.S. Customary

Direction 1 Geometric Data

Direction 1	EB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	0.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	70.0	Total Lateral Clearance (TLC), ft	12

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume (V) veh/h	450	Heavy Vehicle Adjustment Factor (fhv)	0.917
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	279
Total Trucks, %	9.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.12

Direction 1 Speed and Density

Lane Width Adjustment (flw)	0.0	Average Speed (S), mi/h	70.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	4.0
Median Type Adjustment (fm)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fa)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (VOL), veh/h	256	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	4.92
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	E

Direction 2 Geometric Data			
Direction 2	WB		
Number of Lanes (N), ln	2	Terrain Type	Level
Measured or Base Free-Flow Speed	Base	Percent Grade, %	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Grade Length, mi	-
Lane Width, ft	12	Access Point Density, pts/mi	0.0
Median Type	Divided	Left-Side Lateral Clearance (LCR), ft	6
Free-Flow Speed (FFS), mi/h	70.0	Total Lateral Clearance (TLC), ft	12
Direction 2 Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		
Direction 2 Demand and Capacity			
Volume (V) veh/h	910	Heavy Vehicle Adjustment Factor (fhv)	0.971
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	532
Total Trucks, %	3.00	Capacity (c), pc/h/ln	2300
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2300
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.23
Direction 2 Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	70.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	7.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		
Direction 2 Bicycle LOS			
Flow Rate in Outside Lane (vOL), veh/h	517	Effective Speed Factor (St)	5.07
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	3.23
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	C

HCS Two-Lane Highway Report

Project Information

Analyst	MJV	Date	5/11/2023
Agency	HRG	Analysis Year	2050 NB
Jurisdiction	SDDOT	Time Analyzed	AM Peak
Project Description	West of Hartford SD 38 EB	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1069
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	243	Opposing Demand Flow Rate, veh/h	169
Peak Hour Factor	0.88	Total Trucks, %	5.79
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.14

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.30713	Speed Power Coefficient (p)	0.54838
PF Slope Coefficient (m)	-1.23090	PF Power Coefficient (p)	0.80942
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1069	-	-	68.5

Vehicle Results

Average Speed, mi/h	68.5	Percent Followers, %	32.4
Segment Travel Time, minutes	0.18	Follower Density (FD), followers/mi/ln	1.2
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	243	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.70	Bicycle Effective Speed Factor	5.07
Bicycle LOS	D		

Segment 2

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	664
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity					
Directional Demand Flow Rate, veh/h		243	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		5.79
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.14
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.29315	PF Power Coefficient (p)		0.75829
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.3
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	664	-	-	68.0
Vehicle Results					
Average Speed, mi/h		68.0	Percent Followers, %		35.8
Segment Travel Time, minutes		0.11	Follower Density (FD), followers/mi/ln		1.3
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		243	Bicycle Effective Width, ft		24
Bicycle LOS Score		3.70	Bicycle Effective Speed Factor		5.07
Bicycle LOS		D			
Segment 3					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		1871
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		243	Opposing Demand Flow Rate, veh/h		169
Peak Hour Factor		0.88	Total Trucks, %		5.79
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.14
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.31694	Speed Power Coefficient (p)		0.54838
PF Slope Coefficient (m)		-1.20586	PF Power Coefficient (p)		0.82063
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.1
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1871	-	-	68.5

Vehicle Results

Average Speed, mi/h	68.5	Percent Followers, %	31.5
Segment Travel Time, minutes	0.31	Follower Density (FD), followers/mi/ln	1.1
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	243	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.70	Bicycle Effective Speed Factor	5.07
Bicycle LOS	D		

Segment 4

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	925
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	243	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	5.79
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.14

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29315	PF Power Coefficient (p)	0.75829
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	925	-	-	68.0

Vehicle Results

Average Speed, mi/h	68.0	Percent Followers, %	35.8
Segment Travel Time, minutes	0.15	Follower Density (FD), followers/mi/ln	1.3
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	243	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.70	Bicycle Effective Speed Factor	5.07
Bicycle LOS	D		

Segment 5					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		4476
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		243	Opposing Demand Flow Rate, veh/h		169
Peak Hour Factor		0.88	Total Trucks, %		5.79
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.14
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.35043	Speed Power Coefficient (p)		0.54838
PF Slope Coefficient (m)		-1.15155	PF Power Coefficient (p)		0.84082
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.1
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4476	-	-	68.5
Vehicle Results					
Average Speed, mi/h		68.5	Percent Followers, %		29.6
Segment Travel Time, minutes		0.74	Follower Density (FD), followers/mi/ln		1.1
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		243	Bicycle Effective Width, ft		24
Bicycle LOS Score		3.70	Bicycle Effective Speed Factor		5.07
Bicycle LOS		D			
Segment 6					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		896
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		243	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		5.79
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.14
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0

Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29315	PF Power Coefficient (p)	0.75829
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	896	-	-	68.0

Vehicle Results			
Average Speed, mi/h	68.0	Percent Followers, %	35.8
Segment Travel Time, minutes	0.15	Follower Density (FD), followers/mi/ln	1.3
Vehicle LOS	A		

Bicycle Results			
Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	243	Bicycle Effective Width, ft	24
Bicycle LOS Score	3.70	Bicycle Effective Speed Factor	5.07
Bicycle LOS	D		

Segment 7

Vehicle Inputs			
Segment Type	Passing Zone	Length, ft	743
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity			
Directional Demand Flow Rate, veh/h	243	Opposing Demand Flow Rate, veh/h	169
Peak Hour Factor	0.88	Total Trucks, %	5.79
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.14

Intermediate Results			
Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.30713	Speed Power Coefficient (p)	0.54838
PF Slope Coefficient (m)	-1.23090	PF Power Coefficient (p)	0.80942
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	743	-	-	68.5

Vehicle Results			
Average Speed, mi/h	68.5	Percent Followers, %	32.4
Segment Travel Time, minutes	0.12	Follower Density (FD), followers/mi/ln	1.2
Vehicle LOS	A		

Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		243	Bicycle Effective Width, ft		24
Bicycle LOS Score		3.70	Bicycle Effective Speed Factor		5.07
Bicycle LOS		D			
Segment 8					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		2717
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		245	Opposing Demand Flow Rate, veh/h		165
Peak Hour Factor		0.88	Total Trucks, %		3.28
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.14
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.32768	Speed Power Coefficient (p)		0.54983
PF Slope Coefficient (m)		-1.17918	PF Power Coefficient (p)		0.83165
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.1
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2717	-	-	68.5
Vehicle Results					
Average Speed, mi/h		68.5	Percent Followers, %		30.7
Segment Travel Time, minutes		0.45	Follower Density (FD), followers/mi/ln		1.1
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		245	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.93	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 9					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		1013
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					

Directional Demand Flow Rate, veh/h		245	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		3.28
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.14
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.29345	PF Power Coefficient (p)		0.75792
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.3
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1013	-	-	68.0
Vehicle Results					
Average Speed, mi/h		68.0	Percent Followers, %		36.0
Segment Travel Time, minutes		0.17	Follower Density (FD), followers/mi/ln		1.3
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		245	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.93	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 10					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		4569
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		245	Opposing Demand Flow Rate, veh/h		165
Peak Hour Factor		0.88	Total Trucks, %		3.28
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.14
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.34958	Speed Power Coefficient (p)		0.54983
PF Slope Coefficient (m)		-1.14981	PF Power Coefficient (p)		0.84100
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.1
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h

1	Tangent	4569	-	-	68.5
Vehicle Results					
Average Speed, mi/h		68.5	Percent Followers, %		29.7
Segment Travel Time, minutes		0.76	Follower Density (FD), followers/mi/ln		1.1
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		245	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.93	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 11					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		5676
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		244	Opposing Demand Flow Rate, veh/h		165
Peak Hour Factor		0.88	Total Trucks, %		2.82
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.14
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.36055	Speed Power Coefficient (p)		0.54983
PF Slope Coefficient (m)		-1.14222	PF Power Coefficient (p)		0.84066
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.1
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5676	-	-	68.5
Vehicle Results					
Average Speed, mi/h		68.5	Percent Followers, %		29.5
Segment Travel Time, minutes		0.94	Follower Density (FD), followers/mi/ln		1.1
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		244	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.80	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 12					

Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		657
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		244	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		2.82
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.14
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.29350	PF Power Coefficient (p)		0.75785
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.3
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	657	-	-	68.0
Vehicle Results					
Average Speed, mi/h		68.0	Percent Followers, %		35.9
Segment Travel Time, minutes		0.11	Follower Density (FD), followers/mi/ln		1.3
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		244	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.80	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 13					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		6009
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		244	Opposing Demand Flow Rate, veh/h		165
Peak Hour Factor		0.88	Total Trucks, %		2.82
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.14
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.36364	Speed Power Coefficient (p)		0.54983
PF Slope Coefficient (m)		-1.14089	PF Power Coefficient (p)		0.83997

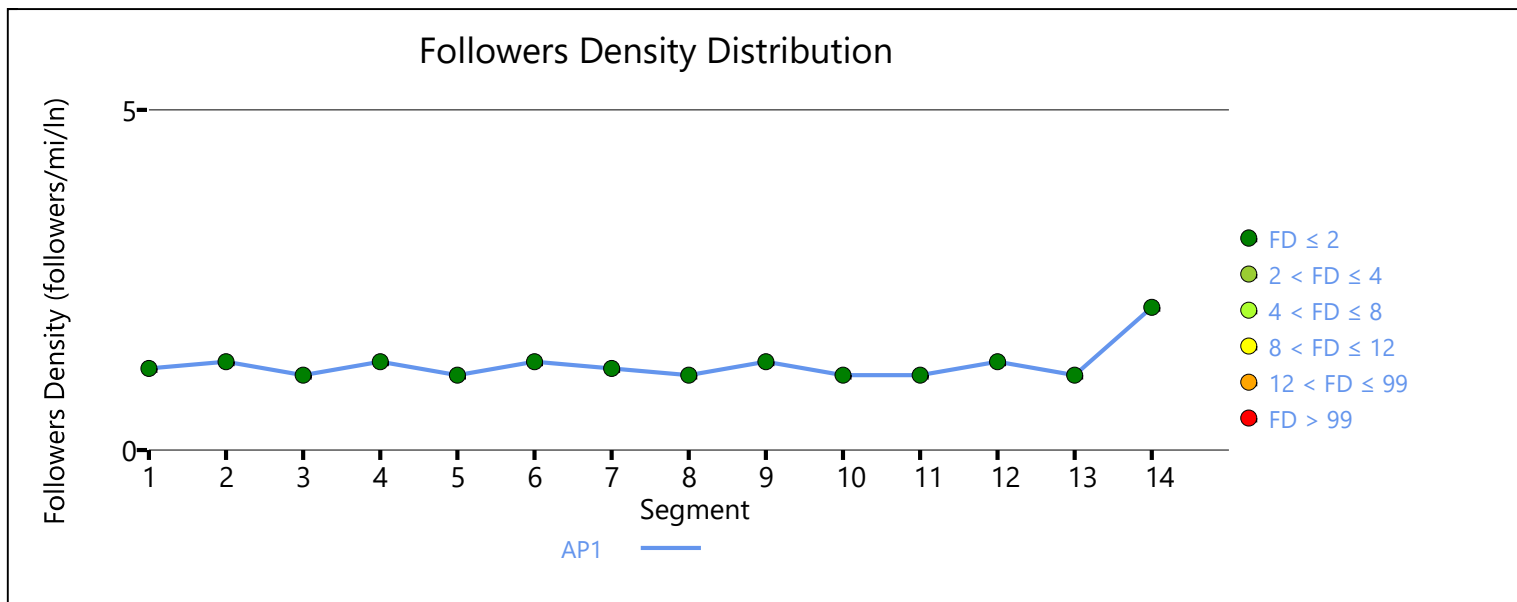
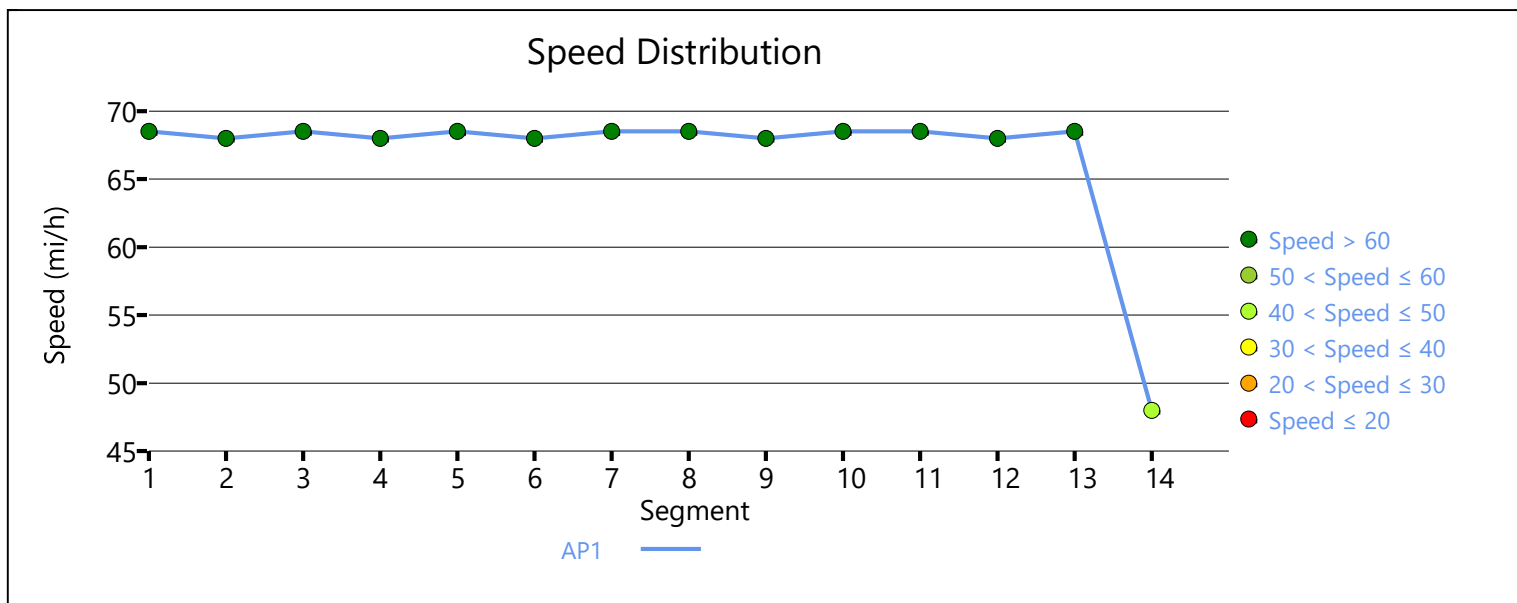
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.1
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6009	-	-	68.5
Vehicle Results					
Average Speed, mi/h		68.5	Percent Followers, %		29.5
Segment Travel Time, minutes		1.00	Follower Density (FD), followers/mi/ln		1.1
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		244	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.80	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 14					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		891
Measured FFS		Measured	Free-Flow Speed, mi/h		50.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		244	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		2.82
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.14
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		50.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.47375	PF Power Coefficient (p)		0.71164
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		2.1
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	891	-	-	48.0
Vehicle Results					
Average Speed, mi/h		48.0	Percent Followers, %		41.8
Segment Travel Time, minutes		0.21	Follower Density (FD), followers/mi/ln		2.1
Vehicle LOS		B			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4

Flow Rate Outside Lane, veh/h	244	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.59	Bicycle Effective Speed Factor	4.42
Bicycle LOS	C		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	327	0.11	1.1	A



HCS Two-Lane Highway Report

Project Information

Analyst	MJV	Date	5/11/2023
Agency	HRG	Analysis Year	2050 NB
Jurisdiction	SDDOT	Time Analyzed	PM Peak
Project Description	West of Hartford SD 38 EB	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1069
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	157	Opposing Demand Flow Rate, veh/h	286
Peak Hour Factor	0.88	Total Trucks, %	5.79
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.09

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.34767	Speed Power Coefficient (p)	0.51808
PF Slope Coefficient (m)	-1.25475	PF Power Coefficient (p)	0.80124
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.6
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1069	-	-	69.0

Vehicle Results

Average Speed, mi/h	69.0	Percent Followers, %	24.8
Segment Travel Time, minutes	0.18	Follower Density (FD), followers/mi/ln	0.6
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	157	Bicycle Effective Width, ft	30
Bicycle LOS Score	1.86	Bicycle Effective Speed Factor	5.07
Bicycle LOS	B		

Segment 2

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	664
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity					
Directional Demand Flow Rate, veh/h		157	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		5.79
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.09
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.29315	PF Power Coefficient (p)		0.75829
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.6
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	664	-	-	68.6
Vehicle Results					
Average Speed, mi/h		68.6	Percent Followers, %		27.2
Segment Travel Time, minutes		0.11	Follower Density (FD), followers/mi/ln		0.6
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		157	Bicycle Effective Width, ft		30
Bicycle LOS Score		1.86	Bicycle Effective Speed Factor		5.07
Bicycle LOS		B			
Segment 3					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		1871
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		157	Opposing Demand Flow Rate, veh/h		286
Peak Hour Factor		0.88	Total Trucks, %		5.79
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.09
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.35747	Speed Power Coefficient (p)		0.51808
PF Slope Coefficient (m)		-1.22915	PF Power Coefficient (p)		0.81213
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.5
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1871	-	-	69.0

Vehicle Results

Average Speed, mi/h	69.0	Percent Followers, %	23.9
Segment Travel Time, minutes	0.31	Follower Density (FD), followers/mi/ln	0.5
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	157	Bicycle Effective Width, ft	30
Bicycle LOS Score	1.86	Bicycle Effective Speed Factor	5.07
Bicycle LOS	B		

Segment 4

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	925
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	157	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	5.79
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.09

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29315	PF Power Coefficient (p)	0.75829
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.6
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	925	-	-	68.6

Vehicle Results

Average Speed, mi/h	68.6	Percent Followers, %	27.2
Segment Travel Time, minutes	0.15	Follower Density (FD), followers/mi/ln	0.6
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	157	Bicycle Effective Width, ft	30
Bicycle LOS Score	1.86	Bicycle Effective Speed Factor	5.07
Bicycle LOS	B		

Segment 5					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		4476
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		157	Opposing Demand Flow Rate, veh/h		286
Peak Hour Factor		0.88	Total Trucks, %		5.79
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.09
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.39096	Speed Power Coefficient (p)		0.51808
PF Slope Coefficient (m)		-1.17364	PF Power Coefficient (p)		0.83159
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.5
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4476	-	-	69.0
Vehicle Results					
Average Speed, mi/h		69.0	Percent Followers, %		22.2
Segment Travel Time, minutes		0.74	Follower Density (FD), followers/mi/ln		0.5
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		157	Bicycle Effective Width, ft		30
Bicycle LOS Score		1.86	Bicycle Effective Speed Factor		5.07
Bicycle LOS		B			
Segment 6					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		896
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		157	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		5.79
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.09
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0

Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29315	PF Power Coefficient (p)	0.75829
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.6
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	896	-	-	68.6

Vehicle Results			
Average Speed, mi/h	68.6	Percent Followers, %	27.2
Segment Travel Time, minutes	0.15	Follower Density (FD), followers/mi/ln	0.6
Vehicle LOS	A		

Bicycle Results			
Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	157	Bicycle Effective Width, ft	30
Bicycle LOS Score	1.86	Bicycle Effective Speed Factor	5.07
Bicycle LOS	B		

Segment 7

Vehicle Inputs			
Segment Type	Passing Zone	Length, ft	743
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity			
Directional Demand Flow Rate, veh/h	157	Opposing Demand Flow Rate, veh/h	286
Peak Hour Factor	0.88	Total Trucks, %	5.79
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.09

Intermediate Results			
Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.34767	Speed Power Coefficient (p)	0.51808
PF Slope Coefficient (m)	-1.25475	PF Power Coefficient (p)	0.80124
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.6
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	743	-	-	69.0

Vehicle Results			
Average Speed, mi/h	69.0	Percent Followers, %	24.8
Segment Travel Time, minutes	0.12	Follower Density (FD), followers/mi/ln	0.6
Vehicle LOS	A		

Bicycle Results					
Percent Occupied Parking	0	Pavement Condition Rating	4		
Flow Rate Outside Lane, veh/h	157	Bicycle Effective Width, ft	30		
Bicycle LOS Score	1.86	Bicycle Effective Speed Factor	5.07		
Bicycle LOS	B				
Segment 8					
Vehicle Inputs					
Segment Type	Passing Zone	Length, ft	2717		
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0		
Demand and Capacity					
Directional Demand Flow Rate, veh/h	164	Opposing Demand Flow Rate, veh/h	289		
Peak Hour Factor	0.88	Total Trucks, %	3.28		
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.10		
Intermediate Results					
Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0		
Speed Slope Coefficient (m)	4.37072	Speed Power Coefficient (p)	0.51760		
PF Slope Coefficient (m)	-1.20338	PF Power Coefficient (p)	0.82225		
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.6		
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0		
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2717	-	-	68.9
Vehicle Results					
Average Speed, mi/h	68.9	Percent Followers, %	23.8		
Segment Travel Time, minutes	0.45	Follower Density (FD), followers/mi/ln	0.6		
Vehicle LOS	A				
Bicycle Results					
Percent Occupied Parking	0	Pavement Condition Rating	4		
Flow Rate Outside Lane, veh/h	164	Bicycle Effective Width, ft	29		
Bicycle LOS Score	1.40	Bicycle Effective Speed Factor	5.07		
Bicycle LOS	A				
Segment 9					
Vehicle Inputs					
Segment Type	Passing Constrained	Length, ft	1013		
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0		
Demand and Capacity					

Directional Demand Flow Rate, veh/h		164	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		3.28
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.29345	PF Power Coefficient (p)		0.75792
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.7
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1013	-	-	68.5
Vehicle Results					
Average Speed, mi/h		68.5	Percent Followers, %		28.0
Segment Travel Time, minutes		0.17	Follower Density (FD), followers/mi/ln		0.7
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		164	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.40	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 10					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		4569
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		164	Opposing Demand Flow Rate, veh/h		289
Peak Hour Factor		0.88	Total Trucks, %		3.28
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.39263	Speed Power Coefficient (p)		0.51760
PF Slope Coefficient (m)		-1.17332	PF Power Coefficient (p)		0.83118
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.5
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h

1	Tangent	4569	-	-	68.9
Vehicle Results					
Average Speed, mi/h		68.9	Percent Followers, %		22.9
Segment Travel Time, minutes		0.75	Follower Density (FD), followers/mi/ln		0.5
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		164	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.40	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 11					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		5676
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		164	Opposing Demand Flow Rate, veh/h		280
Peak Hour Factor		0.88	Total Trucks, %		2.82
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.40080	Speed Power Coefficient (p)		0.51956
PF Slope Coefficient (m)		-1.16417	PF Power Coefficient (p)		0.83135
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.5
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5676	-	-	68.9
Vehicle Results					
Average Speed, mi/h		68.9	Percent Followers, %		22.8
Segment Travel Time, minutes		0.94	Follower Density (FD), followers/mi/ln		0.5
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		164	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.28	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 12					

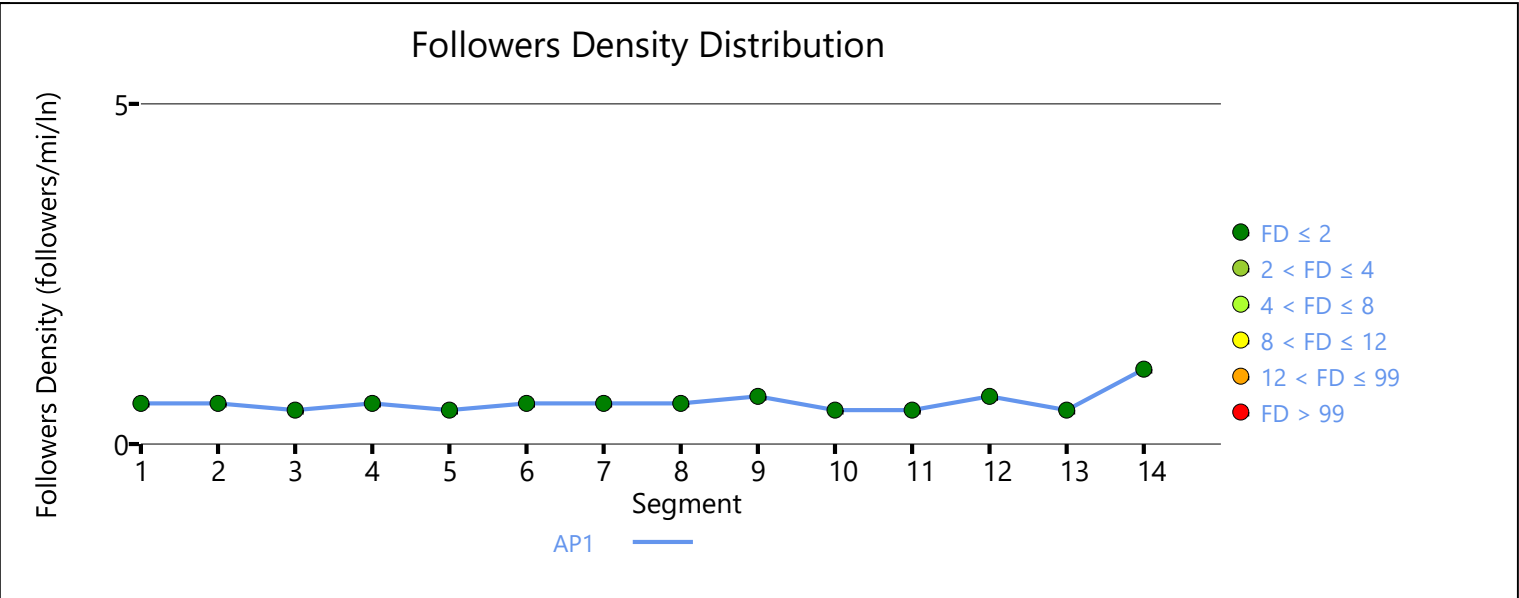
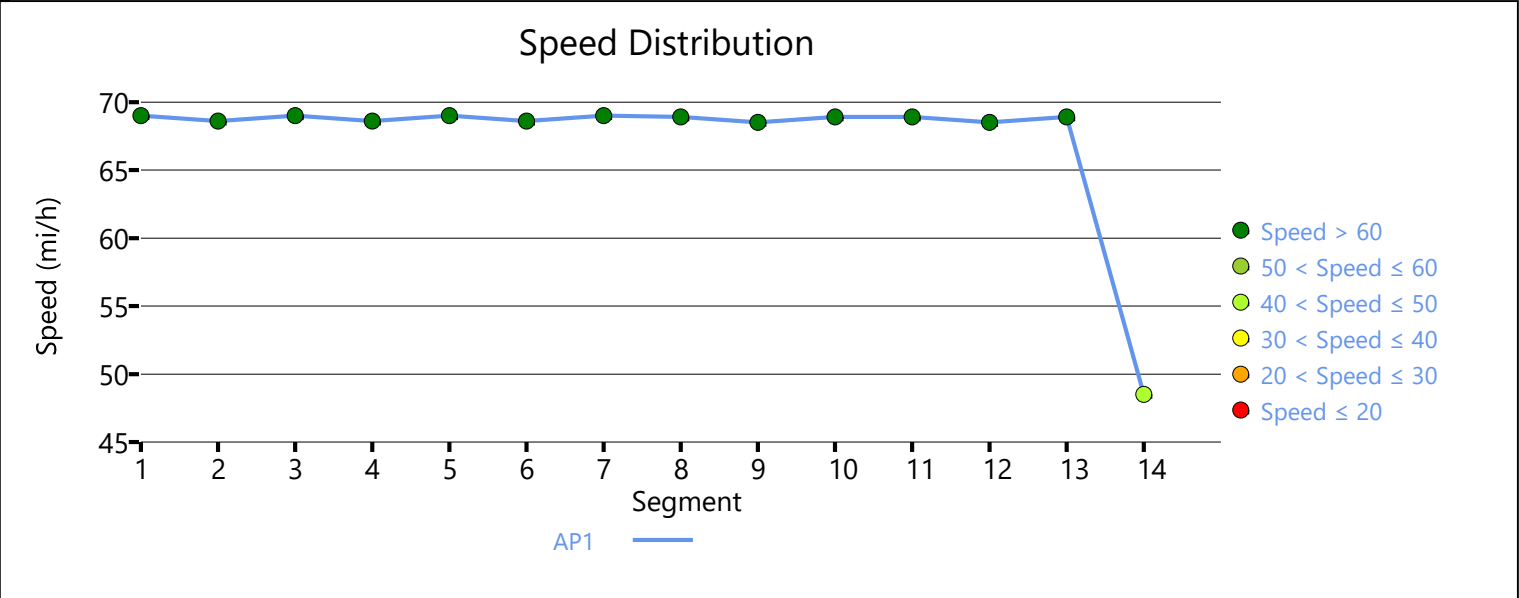
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		657
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		164	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		2.82
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.29350	PF Power Coefficient (p)		0.75785
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.7
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	657	-	-	68.5
Vehicle Results					
Average Speed, mi/h		68.5	Percent Followers, %		28.0
Segment Travel Time, minutes		0.11	Follower Density (FD), followers/mi/ln		0.7
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		164	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.28	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 13					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		6009
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		164	Opposing Demand Flow Rate, veh/h		280
Peak Hour Factor		0.88	Total Trucks, %		2.82
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.40389	Speed Power Coefficient (p)		0.51956
PF Slope Coefficient (m)		-1.16281	PF Power Coefficient (p)		0.83065

In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.5
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6009	-	-	68.9
Vehicle Results					
Average Speed, mi/h		68.9	Percent Followers, %		22.8
Segment Travel Time, minutes		0.99	Follower Density (FD), followers/mi/ln		0.5
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		164	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.28	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 14					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		891
Measured FFS		Measured	Free-Flow Speed, mi/h		50.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		164	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		2.82
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		50.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.47375	PF Power Coefficient (p)		0.71164
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.1
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	891	-	-	48.5
Vehicle Results					
Average Speed, mi/h		48.5	Percent Followers, %		33.4
Segment Travel Time, minutes		0.21	Follower Density (FD), followers/mi/ln		1.1
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4

Flow Rate Outside Lane, veh/h	164	Bicycle Effective Width, ft	29
Bicycle LOS Score	1.06	Bicycle Effective Speed Factor	4.42
Bicycle LOS	A		

Facility Results				
T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	216	0.05	0.6	A



HCS Two-Lane Highway Report

Project Information

Analyst	MJV	Date	5/11/2023
Agency	HRG	Analysis Year	2050 NB
Jurisdiction	SDDOT	Time Analyzed	AM Peak
Project Description	WB 38 West of Hartford	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	10549
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	165	Opposing Demand Flow Rate, veh/h	244
Peak Hour Factor	0.88	Total Trucks, %	12.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.10

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.42827	Speed Power Coefficient (p)	0.52768
PF Slope Coefficient (m)	-1.16689	PF Power Coefficient (p)	0.80729
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.6
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	10549	-	-	69.0

Vehicle Results

Average Speed, mi/h	69.0	Percent Followers, %	23.8
Segment Travel Time, minutes	1.74	Follower Density (FD), followers/mi/ln	0.6
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	165	Bicycle Effective Width, ft	29
Bicycle LOS Score	4.94	Bicycle Effective Speed Factor	5.07
Bicycle LOS	E		

Segment 2

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2793
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity					
Directional Demand Flow Rate, veh/h		165	Opposing Demand Flow Rate, veh/h		244
Peak Hour Factor		0.88	Total Trucks, %		12.50
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.35767	Speed Power Coefficient (p)		0.52768
PF Slope Coefficient (m)		-1.19319	PF Power Coefficient (p)		0.82737
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.6
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2793	-	-	69.0
Vehicle Results					
Average Speed, mi/h		69.0	Percent Followers, %		23.5
Segment Travel Time, minutes		0.46	Follower Density (FD), followers/mi/ln		0.6
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		165	Bicycle Effective Width, ft		29
Bicycle LOS Score		4.94	Bicycle Effective Speed Factor		5.07
Bicycle LOS		E			
Segment 3					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		3825
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		165	Opposing Demand Flow Rate, veh/h		245
Peak Hour Factor		0.88	Total Trucks, %		2.40
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.37079	Speed Power Coefficient (p)		0.52741
PF Slope Coefficient (m)		-1.17529	PF Power Coefficient (p)		0.83222
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.6
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3825	-	-	69.0

Vehicle Results

Average Speed, mi/h	69.0	Percent Followers, %	23.1
Segment Travel Time, minutes	0.63	Follower Density (FD), followers/mi/ln	0.6
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	165	Bicycle Effective Width, ft	29
Bicycle LOS Score	1.17	Bicycle Effective Speed Factor	5.07
Bicycle LOS	A		

Segment 4

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	791
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	165	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	2.40
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.10

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29355	PF Power Coefficient (p)	0.75779
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.7
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	791	-	-	68.5

Vehicle Results

Average Speed, mi/h	68.5	Percent Followers, %	28.1
Segment Travel Time, minutes	0.13	Follower Density (FD), followers/mi/ln	0.7
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	165	Bicycle Effective Width, ft	29
Bicycle LOS Score	1.17	Bicycle Effective Speed Factor	5.07
Bicycle LOS	A		

Segment 5					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		3414
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		165	Opposing Demand Flow Rate, veh/h		245
Peak Hour Factor		0.88	Total Trucks, %		2.40
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.36595	Speed Power Coefficient (p)		0.52741
PF Slope Coefficient (m)		-1.18179	PF Power Coefficient (p)		0.83026
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.6
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3414	-	-	69.0
Vehicle Results					
Average Speed, mi/h		69.0	Percent Followers, %		23.2
Segment Travel Time, minutes		0.56	Follower Density (FD), followers/mi/ln		0.6
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		165	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.17	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 6					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		286
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		165	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		2.40
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0

Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29355	PF Power Coefficient (p)	0.75779
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.7
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	286	-	-	68.5

Vehicle Results

Average Speed, mi/h	68.5	Percent Followers, %	28.1
Segment Travel Time, minutes	0.05	Follower Density (FD), followers/mi/ln	0.7
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	165	Bicycle Effective Width, ft	29
Bicycle LOS Score	1.17	Bicycle Effective Speed Factor	5.07
Bicycle LOS	A		

Segment 7

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	463
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	169	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	2.60
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.10

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29353	PF Power Coefficient (p)	0.75782
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.7
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	463	-	-	68.5

Vehicle Results

Average Speed, mi/h	68.5	Percent Followers, %	28.6
Segment Travel Time, minutes	0.08	Follower Density (FD), followers/mi/ln	0.7
Vehicle LOS	A		

Bicycle Results					
Percent Occupied Parking	0	Pavement Condition Rating	4		
Flow Rate Outside Lane, veh/h	169	Bicycle Effective Width, ft	29		
Bicycle LOS Score	1.23	Bicycle Effective Speed Factor	5.07		
Bicycle LOS	A				
Segment 8					
Vehicle Inputs					
Segment Type	Passing Zone	Length, ft	4822		
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0		
Demand and Capacity					
Directional Demand Flow Rate, veh/h	169	Opposing Demand Flow Rate, veh/h	243		
Peak Hour Factor	0.88	Total Trucks, %	2.60		
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.10		
Intermediate Results					
Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0		
Speed Slope Coefficient (m)	4.38079	Speed Power Coefficient (p)	0.52796		
PF Slope Coefficient (m)	-1.16377	PF Power Coefficient (p)	0.83451		
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.6		
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0		
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4822	-	-	68.9
Vehicle Results					
Average Speed, mi/h	68.9	Percent Followers, %	23.2		
Segment Travel Time, minutes	0.79	Follower Density (FD), followers/mi/ln	0.6		
Vehicle LOS	A				
Bicycle Results					
Percent Occupied Parking	0	Pavement Condition Rating	4		
Flow Rate Outside Lane, veh/h	169	Bicycle Effective Width, ft	29		
Bicycle LOS Score	1.23	Bicycle Effective Speed Factor	5.07		
Bicycle LOS	A				
Segment 9					
Vehicle Inputs					
Segment Type	Passing Constrained	Length, ft	861		
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0		
Demand and Capacity					

Directional Demand Flow Rate, veh/h		169	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		2.60
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.29353	PF Power Coefficient (p)		0.75782
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.7
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	861	-	-	68.5
Vehicle Results					
Average Speed, mi/h		68.5	Percent Followers, %		28.6
Segment Travel Time, minutes		0.14	Follower Density (FD), followers/mi/ln		0.7
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		169	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.23	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 10					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		1556
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		169	Opposing Demand Flow Rate, veh/h		243
Peak Hour Factor		0.88	Total Trucks, %		2.60
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.33831	Speed Power Coefficient (p)		0.52796
PF Slope Coefficient (m)		-1.23554	PF Power Coefficient (p)		0.80871
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.6
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h

1	Tangent	1556	-	-	68.9
Vehicle Results					
Average Speed, mi/h		68.9	Percent Followers, %		25.5
Segment Travel Time, minutes		0.26	Follower Density (FD), followers/mi/ln		0.6
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		169	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.23	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 11					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		799
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		169	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		2.60
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.29353	PF Power Coefficient (p)		0.75782
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.7
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	799	-	-	68.5
Vehicle Results					
Average Speed, mi/h		68.5	Percent Followers, %		28.6
Segment Travel Time, minutes		0.13	Follower Density (FD), followers/mi/ln		0.7
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		169	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.23	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 12					

Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		857
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		169	Opposing Demand Flow Rate, veh/h		243
Peak Hour Factor		0.88	Total Trucks, %		2.60
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.33390	Speed Power Coefficient (p)		0.52796
PF Slope Coefficient (m)		-1.24754	PF Power Coefficient (p)		0.80350
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		0.6
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	857	-	-	68.9
Vehicle Results					
Average Speed, mi/h		68.9	Percent Followers, %		25.9
Segment Travel Time, minutes		0.14	Follower Density (FD), followers/mi/ln		0.6
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		169	Bicycle Effective Width, ft		29
Bicycle LOS Score		1.23	Bicycle Effective Speed Factor		5.07
Bicycle LOS		A			
Segment 13					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		1288
Measured FFS		Measured	Free-Flow Speed, mi/h		60.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		169	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		2.60
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.10
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		60.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.39677	PF Power Coefficient (p)		0.73640

In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.9
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1288	-	-	58.5

Vehicle Results

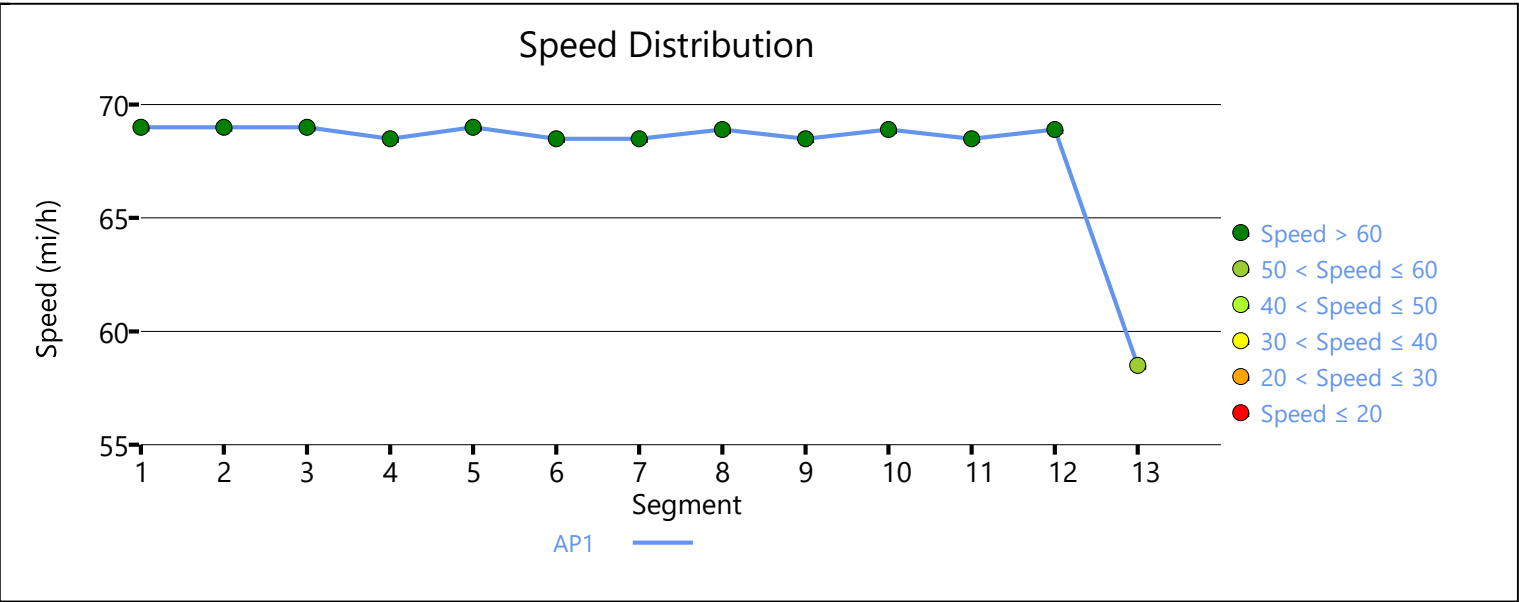
Average Speed, mi/h	58.5	Percent Followers, %	31.5
Segment Travel Time, minutes	0.25	Follower Density (FD), followers/mi/ln	0.9
Vehicle LOS	A		

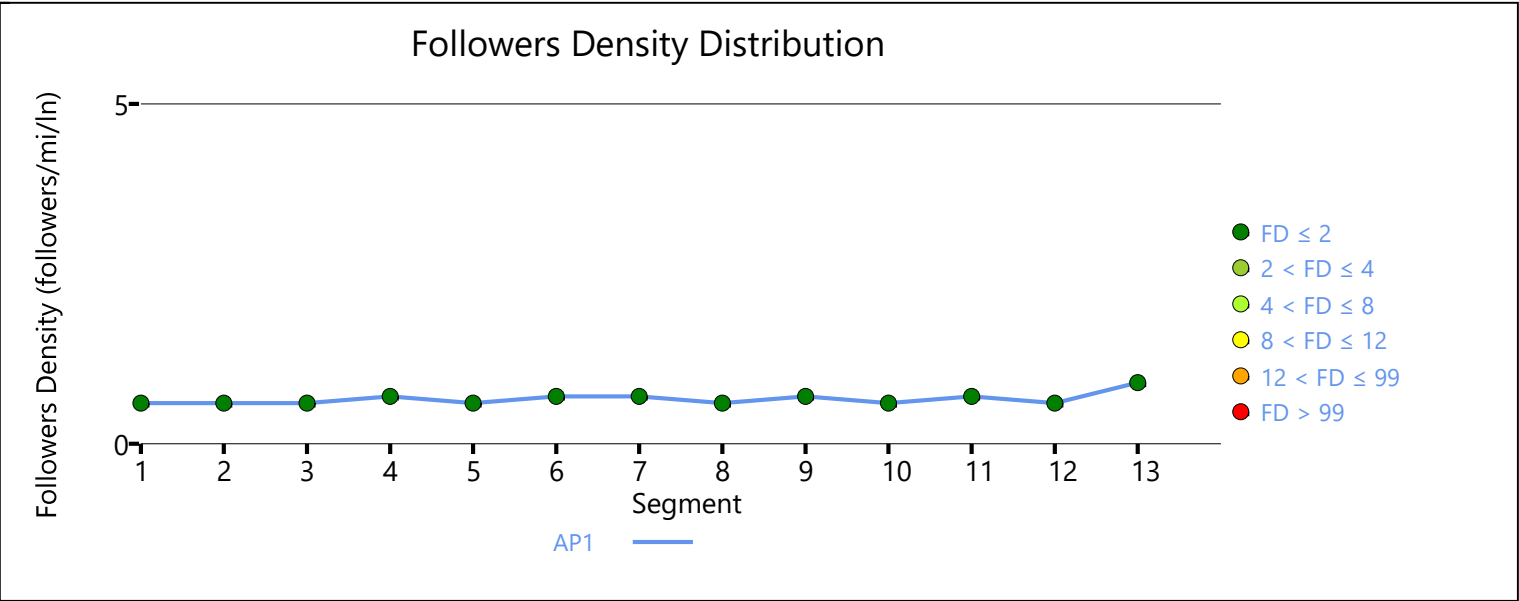
Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	169	Bicycle Effective Width, ft	29
Bicycle LOS Score	1.14	Bicycle Effective Speed Factor	4.79
Bicycle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	224	0.05	0.6	A





HCS Two-Lane Highway Report

Project Information

Analyst	MJV	Date	5/11/2023
Agency	HRG	Analysis Year	2050 NB
Jurisdiction	SDDOT	Time Analyzed	PM Peak
Project Description	WB 38 West of Hartford	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	10549
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	280	Opposing Demand Flow Rate, veh/h	164
Peak Hour Factor	0.88	Total Trucks, %	1.94
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.16

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.39885	Speed Power Coefficient (p)	0.55020
PF Slope Coefficient (m)	-1.15143	PF Power Coefficient (p)	0.81244
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.4
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	10549	-	-	68.3

Vehicle Results

Average Speed, mi/h	68.3	Percent Followers, %	33.6
Segment Travel Time, minutes	1.76	Follower Density (FD), followers/mi/ln	1.4
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	280	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.64	Bicycle Effective Speed Factor	5.07
Bicycle LOS	C		

Segment 2

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2793
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity							
Directional Demand Flow Rate, veh/h		280		Opposing Demand Flow Rate, veh/h		164	
Peak Hour Factor		0.88		Total Trucks, %		1.94	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)		0.16	
Intermediate Results							
Segment Vertical Class		1		Free-Flow Speed, mi/h		70.0	
Speed Slope Coefficient (m)		4.32824		Speed Power Coefficient (p)		0.55020	
PF Slope Coefficient (m)		-1.17723		PF Power Coefficient (p)		0.83227	
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln		1.4	
%Improvement to Percent Followers		0.0		%Improvement to Speed		0.0	
Subsegment Data							
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h		
1	Tangent	2793	-	-	68.3		
Vehicle Results							
Average Speed, mi/h		68.3		Percent Followers, %		33.5	
Segment Travel Time, minutes		0.46		Follower Density (FD), followers/mi/ln		1.4	
Vehicle LOS		A					
Bicycle Results							
Percent Occupied Parking		0		Pavement Condition Rating		4	
Flow Rate Outside Lane, veh/h		280		Bicycle Effective Width, ft		24	
Bicycle LOS Score		2.64		Bicycle Effective Speed Factor		5.07	
Bicycle LOS		C					
Segment 3							
Vehicle Inputs							
Segment Type		Passing Zone		Length, ft		3825	
Measured FFS		Measured		Free-Flow Speed, mi/h		70.0	
Demand and Capacity							
Directional Demand Flow Rate, veh/h		289		Opposing Demand Flow Rate, veh/h		164	
Peak Hour Factor		0.88		Total Trucks, %		2.19	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)		0.17	
Intermediate Results							
Segment Vertical Class		1		Free-Flow Speed, mi/h		70.0	
Speed Slope Coefficient (m)		4.34098		Speed Power Coefficient (p)		0.55020	
PF Slope Coefficient (m)		-1.15833		PF Power Coefficient (p)		0.83897	
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln		1.4	
%Improvement to Percent Followers		0.0		%Improvement to Speed		0.0	
Subsegment Data							

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3825	-	-	68.3

Vehicle Results

Average Speed, mi/h	68.3	Percent Followers, %	33.5
Segment Travel Time, minutes	0.64	Follower Density (FD), followers/mi/ln	1.4
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	289	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.72	Bicycle Effective Speed Factor	5.07
Bicycle LOS	C		

Segment 4

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	791
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	289	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	2.19
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.17

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29358	PF Power Coefficient (p)	0.75776
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.7
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	791	-	-	67.7

Vehicle Results

Average Speed, mi/h	67.7	Percent Followers, %	39.6
Segment Travel Time, minutes	0.13	Follower Density (FD), followers/mi/ln	1.7
Vehicle LOS	A		

Bicycle Results

Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	289	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.72	Bicycle Effective Speed Factor	5.07
Bicycle LOS	C		

Segment 5					
Vehicle Inputs					
Segment Type		Passing Zone		Length, ft	
Measured FFS		Measured		Free-Flow Speed, mi/h	
				3414	
				70.0	
Demand and Capacity					
Directional Demand Flow Rate, veh/h		289		Opposing Demand Flow Rate, veh/h	
Peak Hour Factor		0.88		Total Trucks, %	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)	
				0.17	
Intermediate Results					
Segment Vertical Class		1		Free-Flow Speed, mi/h	
Speed Slope Coefficient (m)		4.33614		Speed Power Coefficient (p)	
PF Slope Coefficient (m)		-1.16472		PF Power Coefficient (p)	
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln	
%Improvement to Percent Followers		0.0		%Improvement to Speed	
				0.0	
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3414	-	-	68.3
Vehicle Results					
Average Speed, mi/h		68.3		Percent Followers, %	
Segment Travel Time, minutes		0.57		Follower Density (FD), followers/mi/ln	
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0		Pavement Condition Rating	
Flow Rate Outside Lane, veh/h		289		Bicycle Effective Width, ft	
Bicycle LOS Score		2.72		Bicycle Effective Speed Factor	
Bicycle LOS		C			
Segment 6					
Vehicle Inputs					
Segment Type		Passing Constrained		Length, ft	
Measured FFS		Measured		Free-Flow Speed, mi/h	
				286	
				70.0	
Demand and Capacity					
Directional Demand Flow Rate, veh/h		289		Opposing Demand Flow Rate, veh/h	
Peak Hour Factor		0.88		Total Trucks, %	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)	
				0.17	
Intermediate Results					
Segment Vertical Class		1		Free-Flow Speed, mi/h	
				70.0	

Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29358	PF Power Coefficient (p)	0.75776
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.7
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	286	-	-	67.7

Vehicle Results			
Average Speed, mi/h	67.7	Percent Followers, %	39.6
Segment Travel Time, minutes	0.05	Follower Density (FD), followers/mi/ln	1.7
Vehicle LOS	A		

Bicycle Results			
Percent Occupied Parking	0	Pavement Condition Rating	4
Flow Rate Outside Lane, veh/h	289	Bicycle Effective Width, ft	24
Bicycle LOS Score	2.72	Bicycle Effective Speed Factor	5.07
Bicycle LOS	C		

Segment 7

Vehicle Inputs			
Segment Type	Passing Constrained	Length, ft	463
Measured FFS	Measured	Free-Flow Speed, mi/h	70.0

Demand and Capacity			
Directional Demand Flow Rate, veh/h	286	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.88	Total Trucks, %	3.08
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.17

Intermediate Results			
Segment Vertical Class	1	Free-Flow Speed, mi/h	70.0
Speed Slope Coefficient (m)	4.57372	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29347	PF Power Coefficient (p)	0.75789
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.7
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	463	-	-	67.7

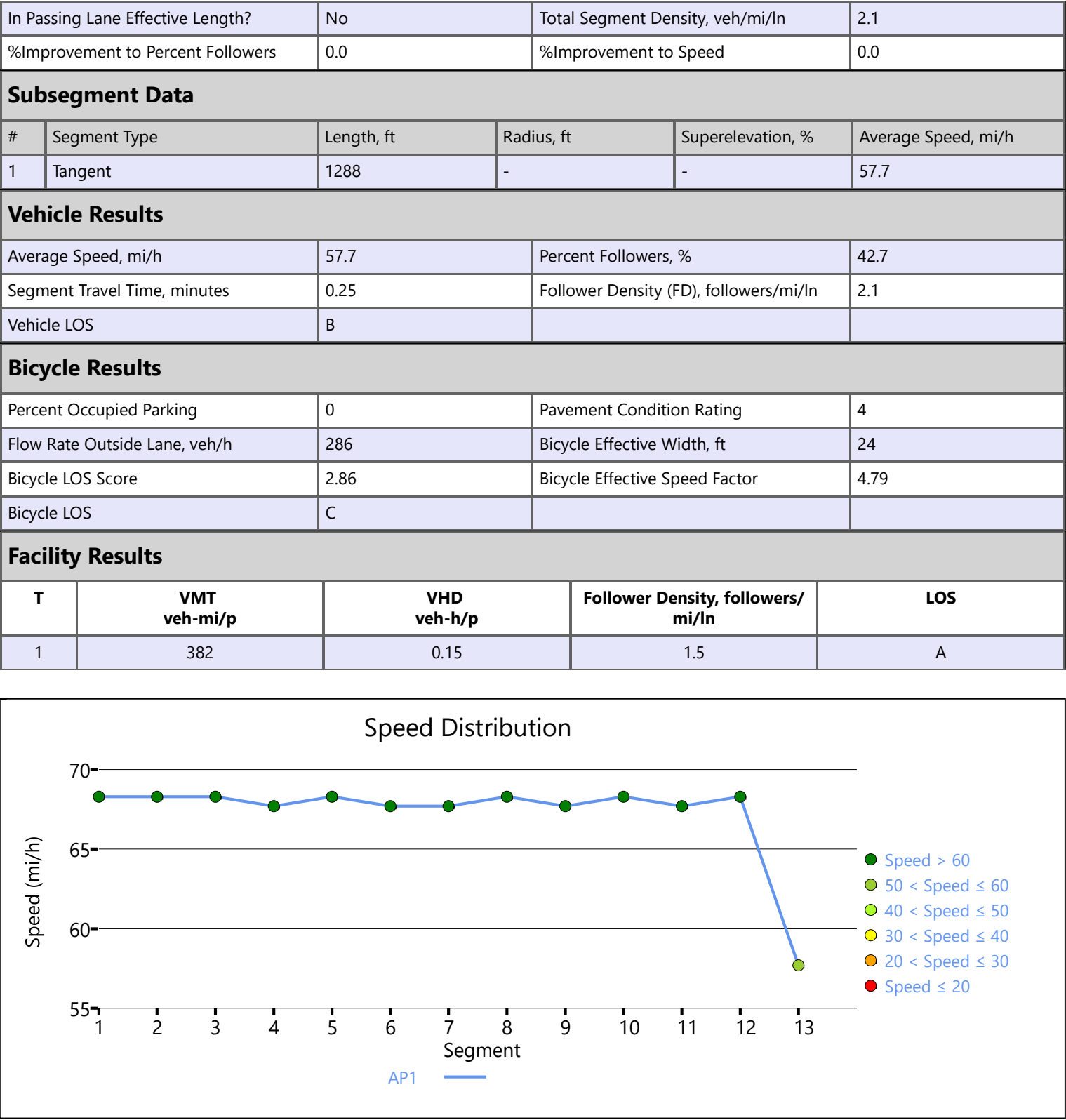
Vehicle Results			
Average Speed, mi/h	67.7	Percent Followers, %	39.4
Segment Travel Time, minutes	0.08	Follower Density (FD), followers/mi/ln	1.7
Vehicle LOS	A		

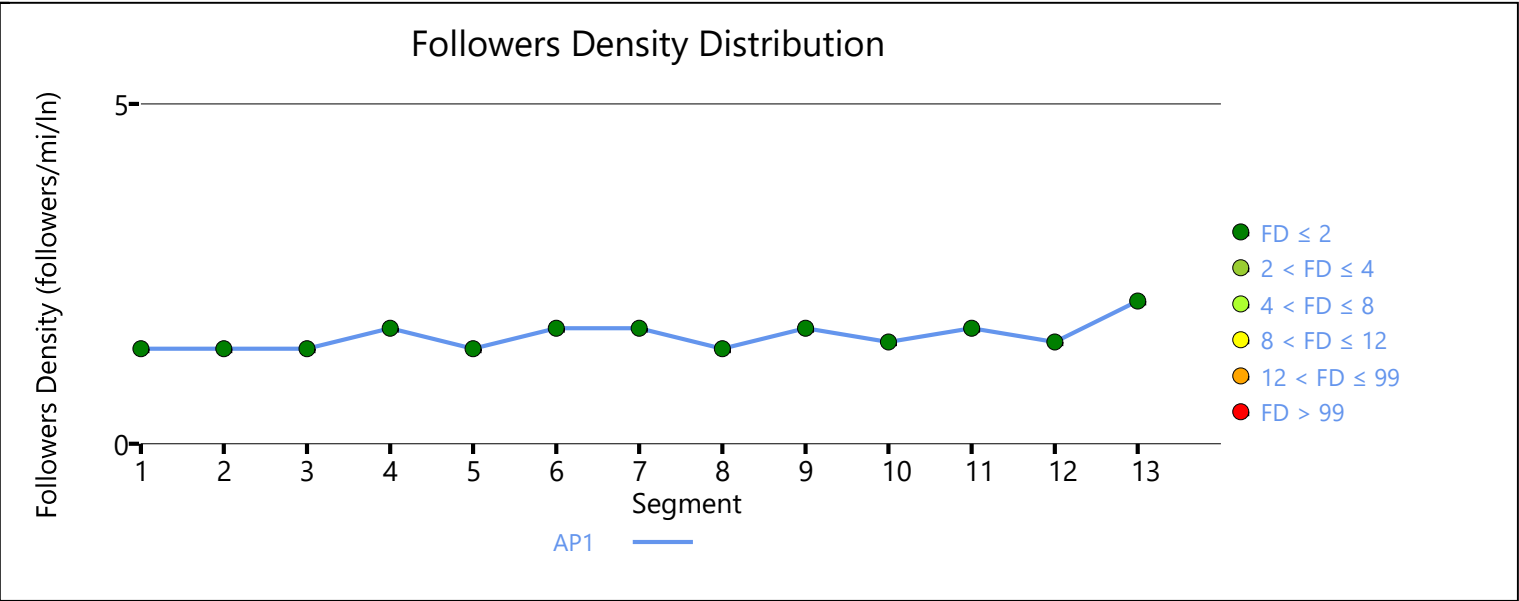
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		286	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.95	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 8					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		4822
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		286	Opposing Demand Flow Rate, veh/h		157
Peak Hour Factor		0.88	Total Trucks, %		3.08
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.17
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.34895	Speed Power Coefficient (p)		0.55243
PF Slope Coefficient (m)		-1.14563	PF Power Coefficient (p)		0.84199
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.4
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4822	-	-	68.3
Vehicle Results					
Average Speed, mi/h		68.3	Percent Followers, %		33.0
Segment Travel Time, minutes		0.80	Follower Density (FD), followers/mi/ln		1.4
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		286	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.95	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 9					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		861
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					

Directional Demand Flow Rate, veh/h		286	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		3.08
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.17
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.29347	PF Power Coefficient (p)		0.75789
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.7
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	861	-	-	67.7
Vehicle Results					
Average Speed, mi/h		67.7	Percent Followers, %		39.4
Segment Travel Time, minutes		0.14	Follower Density (FD), followers/mi/ln		1.7
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		286	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.95	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 10					
Vehicle Inputs					
Segment Type		Passing Zone	Length, ft		1556
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		286	Opposing Demand Flow Rate, veh/h		157
Peak Hour Factor		0.88	Total Trucks, %		3.08
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.17
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.30647	Speed Power Coefficient (p)		0.55243
PF Slope Coefficient (m)		-1.21611	PF Power Coefficient (p)		0.81541
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.5
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h

1	Tangent	1556	-	-	68.3
Vehicle Results					
Average Speed, mi/h		68.3	Percent Followers, %		35.5
Segment Travel Time, minutes		0.26	Follower Density (FD), followers/mi/ln		1.5
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		286	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.95	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 11					
Vehicle Inputs					
Segment Type		Passing Constrained	Length, ft		799
Measured FFS		Measured	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h		286	Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	Total Trucks, %		3.08
Segment Capacity, veh/h		1700	Demand/Capacity (D/C)		0.17
Intermediate Results					
Segment Vertical Class		1	Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)		4.57372	Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)		-1.29347	PF Power Coefficient (p)		0.75789
In Passing Lane Effective Length?		No	Total Segment Density, veh/mi/ln		1.7
%Improvement to Percent Followers		0.0	%Improvement to Speed		0.0
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	799	-	-	67.7
Vehicle Results					
Average Speed, mi/h		67.7	Percent Followers, %		39.4
Segment Travel Time, minutes		0.13	Follower Density (FD), followers/mi/ln		1.7
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0	Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		286	Bicycle Effective Width, ft		24
Bicycle LOS Score		2.95	Bicycle Effective Speed Factor		5.07
Bicycle LOS		C			
Segment 12					

Vehicle Inputs					
Segment Type		Passing Zone		Length, ft	
Measured FFS		Measured		Free-Flow Speed, mi/h	
				857	
				70.0	
Demand and Capacity					
Directional Demand Flow Rate, veh/h		286		Opposing Demand Flow Rate, veh/h	
Peak Hour Factor		0.88		Total Trucks, %	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)	
				0.17	
Intermediate Results					
Segment Vertical Class		1		Free-Flow Speed, mi/h	
Speed Slope Coefficient (m)		4.30206		Speed Power Coefficient (p)	
PF Slope Coefficient (m)		-1.22789		PF Power Coefficient (p)	
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln	
%Improvement to Percent Followers		0.0		%Improvement to Speed	
				0.0	
Subsegment Data					
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	857	-	-	68.3
Vehicle Results					
Average Speed, mi/h		68.3		Percent Followers, %	
Segment Travel Time, minutes		0.14		Follower Density (FD), followers/mi/ln	
Vehicle LOS		A			
Bicycle Results					
Percent Occupied Parking		0		Pavement Condition Rating	
Flow Rate Outside Lane, veh/h		286		Bicycle Effective Width, ft	
Bicycle LOS Score		2.95		Bicycle Effective Speed Factor	
Bicycle LOS		C			
Segment 13					
Vehicle Inputs					
Segment Type		Passing Constrained		Length, ft	
Measured FFS		Measured		Free-Flow Speed, mi/h	
				1288	
				60.0	
Demand and Capacity					
Directional Demand Flow Rate, veh/h		286		Opposing Demand Flow Rate, veh/h	
Peak Hour Factor		0.88		Total Trucks, %	
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)	
				0.17	
Intermediate Results					
Segment Vertical Class		1		Free-Flow Speed, mi/h	
Speed Slope Coefficient (m)		4.57372		Speed Power Coefficient (p)	
PF Slope Coefficient (m)		-1.39671		PF Power Coefficient (p)	
				0.73647	

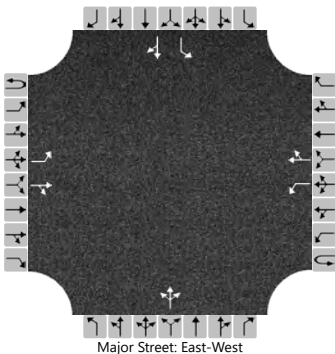




HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & SD 19
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	SD 19
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		1	1	0
Configuration		L		TR		L		TR			LTR			L		TR
Volume (veh/h)		55	165	0		0	120	50		10	5	10		70	0	95
Percent Heavy Vehicles (%)		30				3				3	3	3		9	3	11
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage					Undivided											

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.40				4.13				7.13	6.53	6.23		7.19	6.53	6.31
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.47				2.23				3.53	4.03	3.33		3.58	4.03	3.40

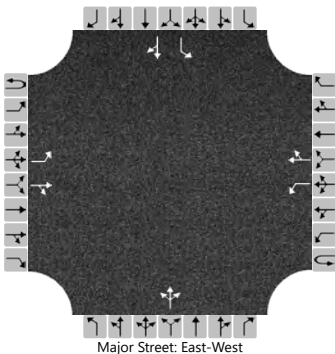
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		60				0					27			76		103	
Capacity, c (veh/h)		1238				1390					524			461		865	
v/c Ratio		0.05				0.00					0.05			0.16		0.12	
95% Queue Length, Q ₉₅ (veh)		0.2				0.0					0.2			0.6		0.4	
Control Delay (s/veh)		8.1	0.2	0.2		7.6	0.0	0.0			12.2			14.3		9.7	
Level of Service (LOS)		A	A	A		A	A	A			B			B		A	
Approach Delay (s/veh)		2.2				0.0				12.2				11.7			
Approach LOS		A				A				B				B			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & SD 19
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	SD 19
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		1	1	0
Configuration		L		TR		L		TR			LTR			L		TR
Volume (veh/h)		85	115	0		0	170	80		10	5	10		40	0	50
Percent Heavy Vehicles (%)		2				3				3	3	3		10	3	14
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage					Undivided											

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.13				7.13	6.53	6.23		7.20	6.53	6.34
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.23				3.53	4.03	3.33		3.59	4.03	3.43

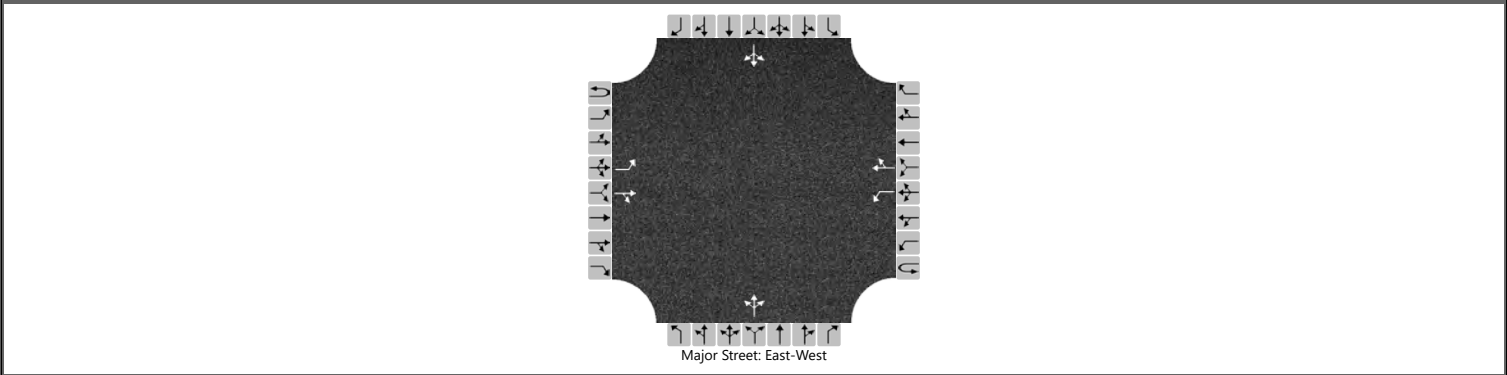
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		92				0					27			43		54
Capacity, c (veh/h)		1291				1455					498			395		782
v/c Ratio		0.07				0.00					0.05			0.11		0.07
95% Queue Length, Q ₉₅ (veh)		0.2				0.0					0.2			0.4		0.2
Control Delay (s/veh)		8.0	0.2	0.2		7.5	0.0	0.0			12.6			15.2		9.9
Level of Service (LOS)		A	A	A		A	A	A			B			C		A
Approach Delay (s/veh)	3.5				0.0				12.6				12.3			
Approach LOS	A				A				B				B			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & 459th
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	459th Ave
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0
Configuration		L		TR		L		TR			LTR				LTR	
Volume (veh/h)		0	215	7		2	155	0		15	0	7		9	0	0
Percent Heavy Vehicles (%)		3				3				13	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.23	6.50	6.20		7.10	6.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.62	4.00	3.30		3.50	4.00	3.30

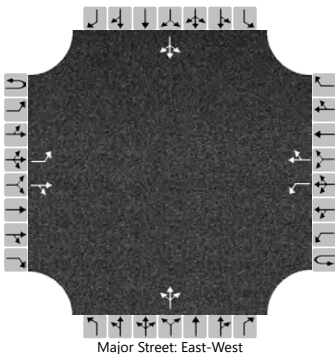
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				2					24				10	
Capacity, c (veh/h)		1403				1319					596				546	
v/c Ratio		0.00				0.00					0.04				0.02	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.1				0.1	
Control Delay (s/veh)		7.6	0.0	0.0		7.7	0.0	0.0			11.3				11.7	
Level of Service (LOS)		A	A	A		A	A	A			B				B	
Approach Delay (s/veh)	0.0				0.1				11.3				11.7			
Approach LOS	A				A				B				B			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & 459th
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	459th Ave
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0
Configuration		L		TR		L		TR			LTR				LTR	
Volume (veh/h)		0	145	9		15	245	2		15	0	4		2	2	0
Percent Heavy Vehicles (%)		0				0				13	0	0		0	100	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.23	6.50	6.20		7.10	7.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.62	4.00	3.30		3.50	4.90	3.30

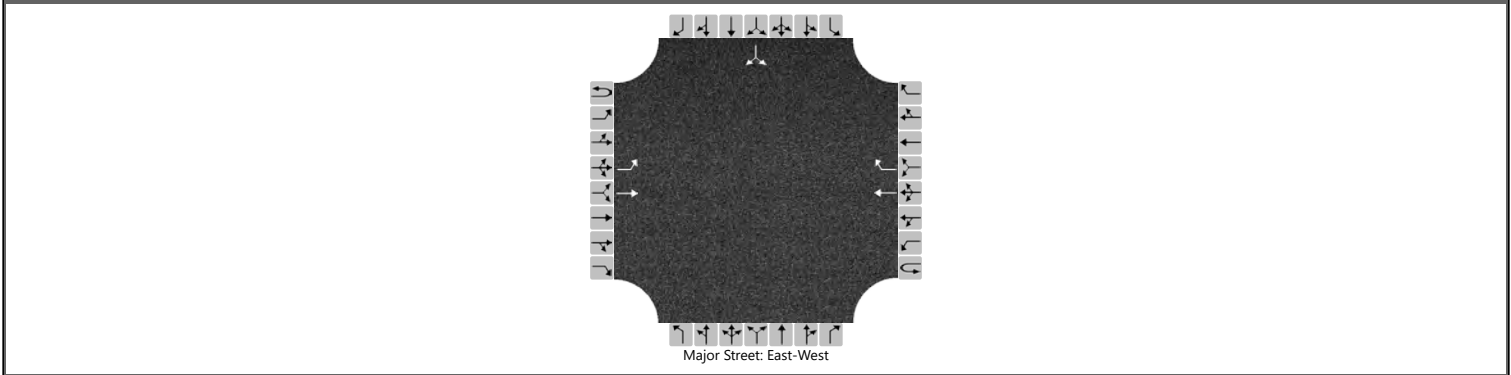
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				16					21				4		
Capacity, c (veh/h)		1307				1423					534				427		
v/c Ratio		0.00				0.01					0.04				0.01		
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.1				0.0		
Control Delay (s/veh)		7.8	0.0	0.0		7.6	0.1	0.1			12.0				13.5		
Level of Service (LOS)		A	A	A		A	A	A			B				B		
Approach Delay (s/veh)		0.0				0.5				12.0				13.5			
Approach LOS		A				A				B				B			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & I-90 Speedway
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	I-90 Expressway
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	1		0	0	0		0	1	0
Configuration		L	T				T	R							LR	
Volume (veh/h)		0	230				165	0						0		0
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized					No											
Median Type Storage					Undivided											

Critical and Follow-up Headways

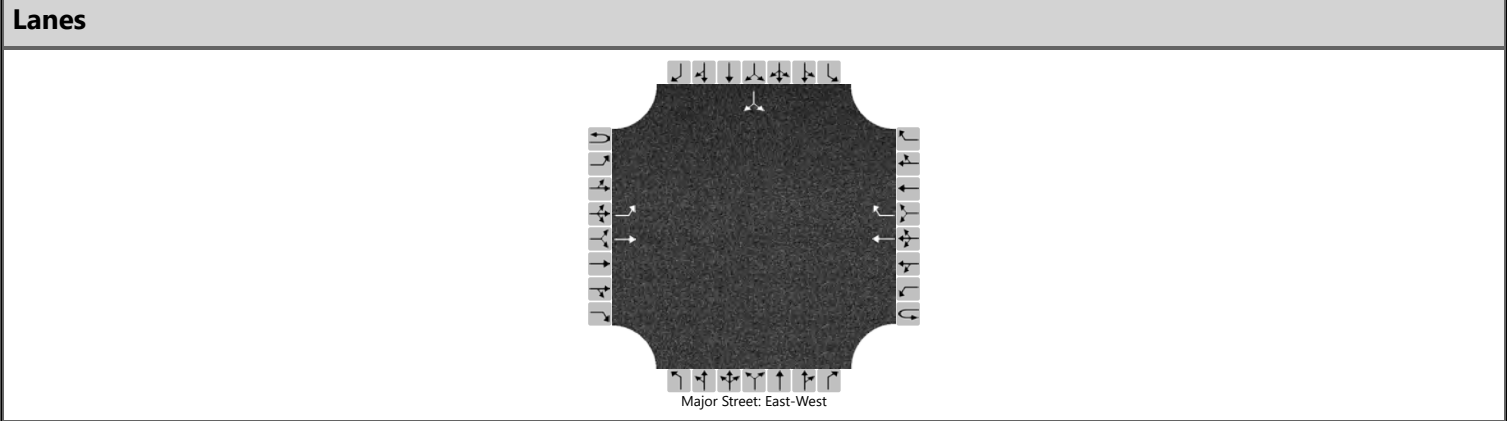
Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0													0	
Capacity, c (veh/h)		1390													0	
v/c Ratio		0.00														
95% Queue Length, Q ₉₅ (veh)		0.0														
Control Delay (s/veh)		7.6	0.0													
Level of Service (LOS)		A	A													
Approach Delay (s/veh)		0.0														
Approach LOS		A														

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & I-90 Speedway
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	I-90 Expressway
Time Analyzed	AM Peak - Event Traffic	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		



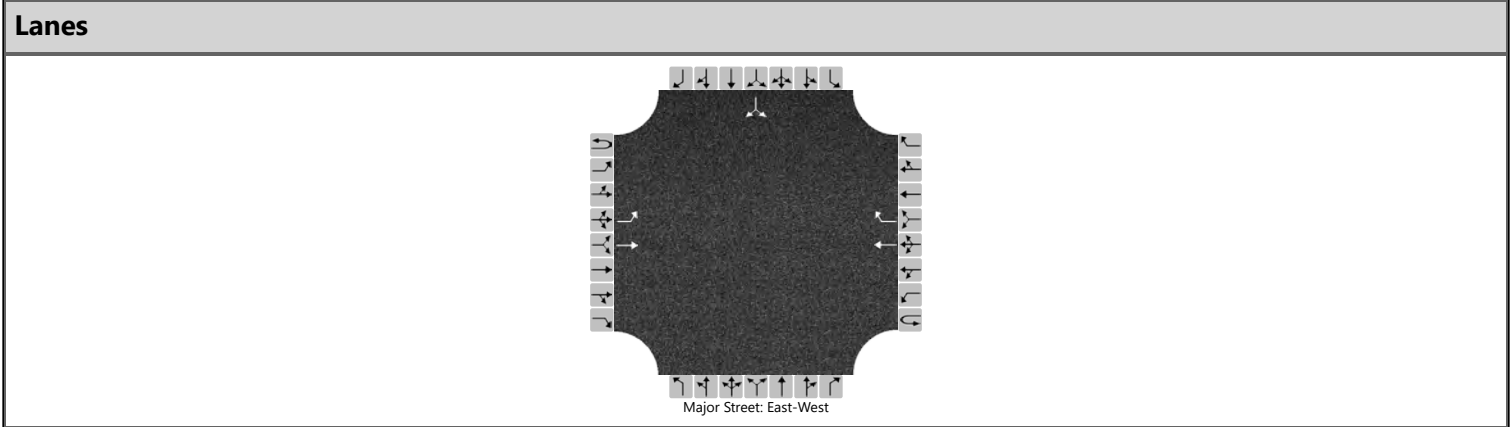
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	1		0	0	0		0	1	0
Configuration		L	T				T	R							LR	
Volume (veh/h)		0	412				295	0						0		0
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized					No											
Median Type Storage	Undivided															

Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		0													0	
Capacity, c (veh/h)		1234													0	
v/c Ratio		0.00														
95% Queue Length, Q ₉₅ (veh)		0.0														
Control Delay (s/veh)		7.9	0.0													
Level of Service (LOS)		A	A													
Approach Delay (s/veh)		0.0														
Approach LOS		A														

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & I-90 Speedway
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	I-90 Expressway
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		



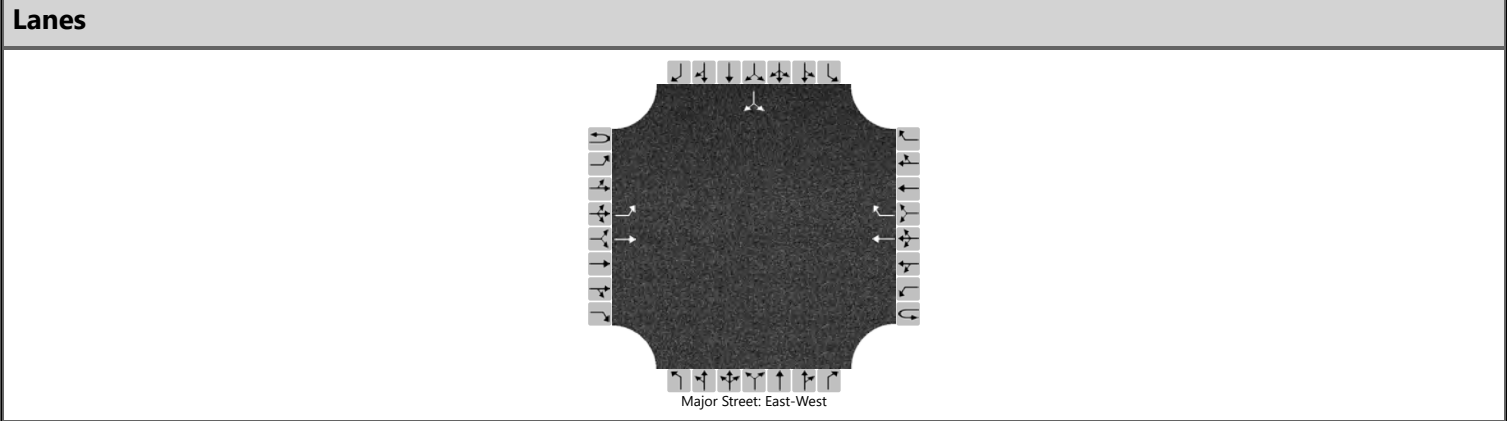
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	1		0	0	0		0	1	0
Configuration		L	T				T	R							LR	
Volume (veh/h)		0	165				260	0						0		0
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized					No											
Median Type Storage	Undivided															

Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		0													0	
Capacity, c (veh/h)		1274													0	
v/c Ratio		0.00														
95% Queue Length, Q ₉₅ (veh)		0.0														
Control Delay (s/veh)		7.8	0.0													
Level of Service (LOS)		A	A													
Approach Delay (s/veh)		0.0														
Approach LOS		A														

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & I-90 Speedway
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	I-90 Expressway
Time Analyzed	PM Peak - Event Traffic	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		



Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	1		0	0	0		0	1	0
Configuration		L	T				T	R							LR	
Volume (veh/h)		0	295				465	0						0		0
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized					No											
Median Type Storage					Undivided											

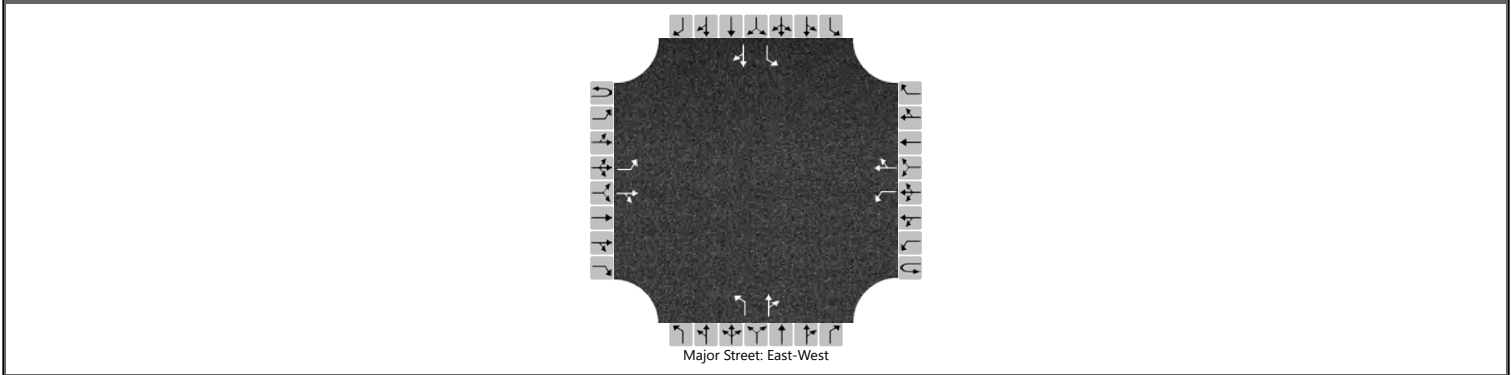
Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		0													0	
Capacity, c (veh/h)		1054													0	
v/c Ratio		0.00														
95% Queue Length, Q ₉₅ (veh)		0.0														
Control Delay (s/veh)		8.4	0.0													
Level of Service (LOS)		A	A													
Approach Delay (s/veh)	0.0															
Approach LOS	A															

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & 463rd Ave / Western Ave
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/29/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	463rd Ave / Western Ave
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

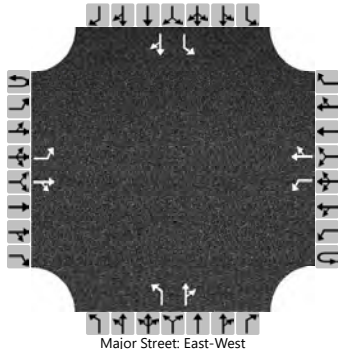
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		1	1	0		1	1	0
Configuration		L		TR		L		TR		L		TR		L		TR
Volume (veh/h)		9	180	80		60	110	30		65	75	90		40	80	5
Percent Heavy Vehicles (%)		3				3				14	2	6		0	7	33
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage					Undivided											

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.24	6.52	6.26		7.10	6.57	6.53
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.63	4.02	3.35		3.50	4.06	3.60

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		10				65				71		179		43		92
Capacity, c (veh/h)		1422				1274				307		566		274		414
v/c Ratio		0.01				0.05				0.23		0.32		0.16		0.22
95% Queue Length, Q ₉₅ (veh)		0.0				0.2				0.9		1.4		0.6		0.8
Control Delay (s/veh)		7.5	0.0	0.0		8.0	0.2	0.2		20.2		14.3		20.6		16.2
Level of Service (LOS)		A	A	A		A	A	A		C		B		C		C
Approach Delay (s/veh)		0.3				2.5				16.0				17.6		
Approach LOS		A				A				C				C		

HCS Two-Way Stop-Control Report			
General Information		Site Information	
Analyst	NM	Intersection	SD 38 & 463rd Ave / Western Ave
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	5/8/2023	East/West Street	SD 38
Analysis Year	2050	North/South Street	463rd Ave / Western Ave
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		
Lanes			
<div> Major Street: East-West</div>			

Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		1	1	0		1	1	0
Configuration		L		TR		L		TR		L		TR		L		TR
Volume (veh/h)		15	125	55		120	200	60		70	85	155		55	100	25
Percent Heavy Vehicles (%)		22				3				0	11	4		0	4	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

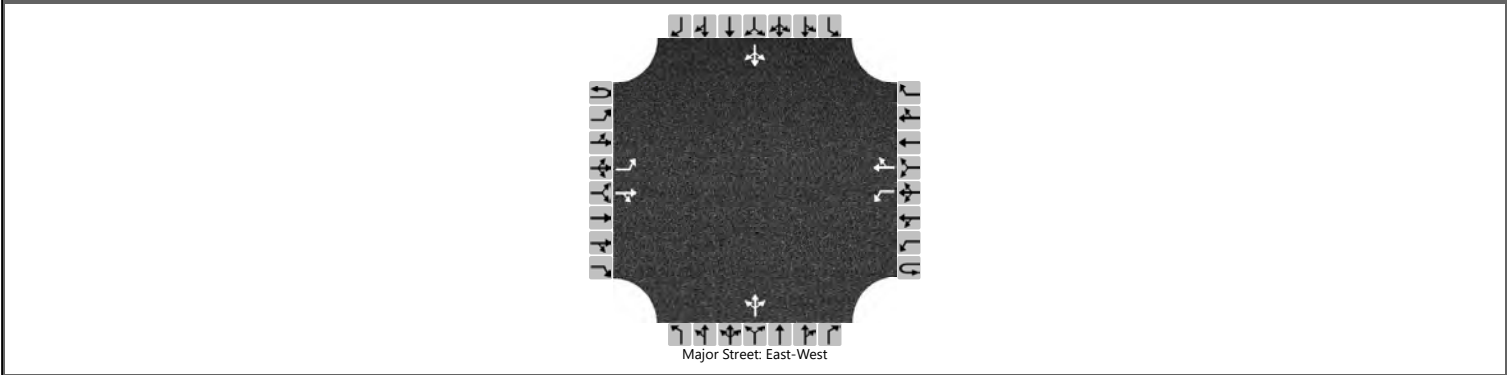
Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.32				4.13				7.10	6.61	6.24		7.10	6.54	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.40				2.23				3.50	4.10	3.34		3.50	4.04	3.30

Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		16				130				76		261		60		136
Capacity, c (veh/h)		1173				1371				183		518		148		349
v/c Ratio		0.01				0.10				0.42		0.50		0.41		0.39
95% Queue Length, Q ₉₅ (veh)		0.0				0.3				1.9		2.8		1.8		1.8
Control Delay (s/veh)		8.1	0.1	0.1		7.9	0.3	0.3		38.1		18.8		45.1		21.8
Level of Service (LOS)		A	A	A		A	A	A		E		C		E		C
Approach Delay (s/veh)	0.7				2.7				23.1				28.9			
Approach LOS	A				A				C				D			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & Main Ave
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	5/8/2023	East/West Street	SD 38
Analysis Year	2050	North/South Street	Main Ave (9th St)
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0
Configuration		L		TR		L		TR			LTR				LTR	
Volume (veh/h)		2	260	30		40	195	20		40	5	85		6	10	4
Percent Heavy Vehicles (%)		0				11				5	0	2		0	17	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Left Only								9							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.21				7.15	6.50	6.22		7.10	6.67	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.30				3.55	4.00	3.32		3.50	4.15	3.30

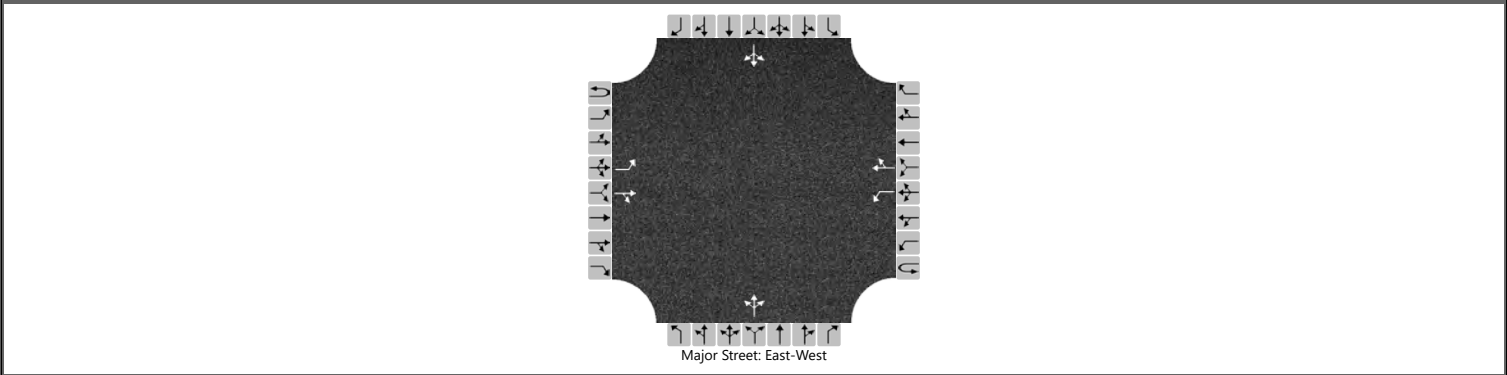
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		2				43					141				22	
Capacity, c (veh/h)		1346				1196					678				459	
v/c Ratio		0.00				0.04					0.21				0.05	
95% Queue Length, Q ₉₅ (veh)		0.0				0.1					0.8				0.1	
Control Delay (s/veh)		7.7				8.1					11.7				13.2	
Level of Service (LOS)		A				A					B				B	
Approach Delay (s/veh)	0.1				1.3				11.7				13.2			
Approach LOS	A				A				B				B			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & Main Ave
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	Main Ave (9th St)
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0
Configuration		L		TR		L		TR			LTR				LTR	
Volume (veh/h)		10	250	45		65	335	60		35	20	55		40	30	7
Percent Heavy Vehicles (%)		0				0				5	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage					Left Only								9			

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.15	6.50	6.20		7.10	6.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.55	4.00	3.30		3.50	4.00	3.30

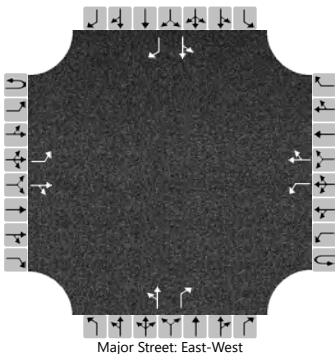
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		11				71					120				84	
Capacity, c (veh/h)		1141				1251					467				368	
v/c Ratio		0.01				0.06					0.26				0.23	
95% Queue Length, Q ₉₅ (veh)		0.0				0.2					1.0				0.9	
Control Delay (s/veh)		8.2				8.1					15.3				17.6	
Level of Service (LOS)		A				A					C				C	
Approach Delay (s/veh)	0.3				1.1				15.3				17.6			
Approach LOS	A				A				C				C			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & Vandemark Ave
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	Vandemark Avenue
Time Analyzed	AM	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	1		0	1	1
Configuration		L		TR		L		TR		LT		R		LT		R
Volume (veh/h)		25	370	10		8	240	25		9	5	10		40	2	25
Percent Heavy Vehicles (%)		0				0				40	0	0		0	0	7
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized									No				No			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.50	6.50	6.20		7.10	6.50	6.27
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.86	4.00	3.30		3.50	4.00	3.36

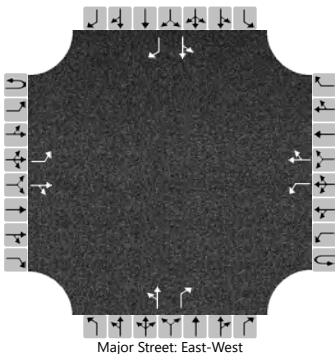
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		27				9				15		11		46		27
Capacity, c (veh/h)		1286				1157				278		648		306		752
v/c Ratio		0.02				0.01				0.05		0.02		0.15		0.04
95% Queue Length, Q ₉₅ (veh)		0.1				0.0				0.2		0.1		0.5		0.1
Control Delay (s/veh)		7.9	0.1	0.1		8.1	0.1	0.1		18.7		10.7		18.8		10.0
Level of Service (LOS)		A	A	A		A	A	A		C		B		C		A
Approach Delay (s/veh)		0.6				0.3				15.4				15.5		
Approach LOS		A				A				C				C		

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & Vandemark Ave
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	Vandemark Avenue
Time Analyzed	PM	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	1		0	1	1
Configuration		L		TR		L		TR		LT		R		LT		R
Volume (veh/h)		20	255	4		5	475	45		0	0	9		30	0	25
Percent Heavy Vehicles (%)		0				0				0	0	100		0	0	7
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized									No				No			
Median Type Storage	Undivided															

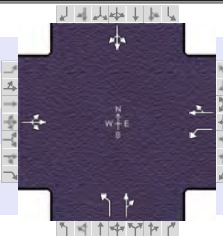
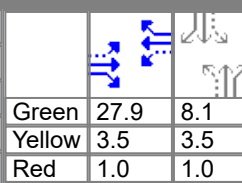
Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.10	6.50	7.20		7.10	6.50	6.27
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.00	4.20		3.50	4.00	3.36

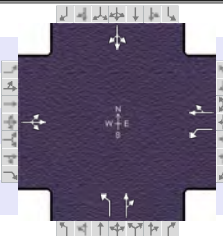
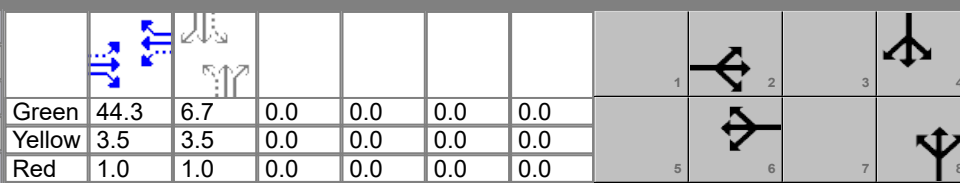
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		22				5				0		10		33		27
Capacity, c (veh/h)		1017				1293				0		574		259		532
v/c Ratio		0.02				0.00						0.02		0.13		0.05
95% Queue Length, Q ₉₅ (veh)		0.1				0.0						0.1		0.4		0.2
Control Delay (s/veh)		8.6	0.2	0.2		7.8	0.0	0.0				11.4		20.9		12.1
Level of Service (LOS)		A	A	A		A	A	A				B		C		B
Approach Delay (s/veh)		0.8				0.1								16.9		
Approach LOS		A				A								C		

HCS Signalized Intersection Results Summary

General Information						Intersection Information													
Agency	HRG					Duration, h	0.250												
Analyst	NM		Analysis Date	May 8, 2023		Area Type	Other												
Jurisdiction	SDDOT		Time Period	AM Peak		PHF	0.92												
Urban Street	SD 38		Analysis Year	2050		Analysis Period	1> 7:15												
Intersection	SD 38 & 2nd Street		File Name	(7) SD38&2nd_AM.xus															
Project Description																			
Demand Information																			
Approach Movement				EB			WB			NB			SB						
				L	T	R	L	T	R	L	T	R	L	T	R				
Demand (ν), veh/h				20	325	10	95	200	15	5	20	155	35	50	25				
Signal Information																			
Cycle, s	45.0	Reference Phase	6																
Offset, s	0	Reference Point	End																
Uncoordinated	No	Simult. Gap E/W	On																
Force Mode	Fixed	Simult. Gap N/S	On																
				Green	27.9	8.1	0.0	0.0	0.0	0.0									
				Yellow	3.5	3.5	0.0	0.0	0.0	0.0									
				Red	1.0	1.0	0.0	0.0	0.0	0.0									
Timer Results				EBL		EBT		WBL		WBT		NBL		NBT		SBL		SBT	
Assigned Phase						2				6				8				4	
Case Number						8.0				6.0				6.0				8.0	
Phase Duration, s						32.4				32.4				12.6				12.6	
Change Period, ($Y+R_c$), s						4.5				4.5				4.5				4.5	
Max Allow Headway (MAH), s						0.0				0.0				3.3				3.3	
Queue Clearance Time (g_s), s														7.8				7.5	
Green Extension Time (g_e), s						0.0				0.0				0.5				0.5	
Phase Call Probability														0.98				0.98	
Max Out Probability														0.01				0.00	
Movement Group Results				EB			WB			NB			SB						
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R				
Assigned Movement				5	2	12	1	6	16	3	8	18	7	4	14				
Adjusted Flow Rate (ν), veh/h					386		103	234		5	190			120					
Adjusted Saturation Flow Rate (s), veh/h/ln					1743		1018	1750		1317	1528			1105					
Queue Service Time (g_s), s					0.0		2.5	2.6		0.2	5.2			0.2					
Cycle Queue Clearance Time (g_c), s					4.8		7.3	2.6		5.8	5.2			5.5					
Green Ratio (g/C)					0.62		0.62	0.62		0.18	0.18			0.18					
Capacity (c), veh/h					1162		681	1082		236	278			306					
Volume-to-Capacity Ratio (X)					0.332		0.152	0.216		0.023	0.685			0.391					
Back of Queue (Q), ft/ln (95 th percentile)																			
Back of Queue (Q), veh/ln (95 th percentile)					1.9		0.8	1.1		0.1	2.9			1.7					
Queue Storage Ratio (RQ) (95 th percentile)					0.00		0.08	0.00		0.02	0.00			0.00					
Uniform Delay (d_1), s/veh					4.2		6.0	3.8		20.1	17.2			16.3					
Incremental Delay (d_2), s/veh					0.8		0.5	0.5		0.0	1.1			0.3					
Initial Queue Delay (d_3), s/veh					0.0		0.0	0.0		0.0	0.0			0.0					
Control Delay (d), s/veh					5.0		6.4	4.2		20.1	18.3			16.6					
Level of Service (LOS)					A		A	A		C	B			B					
Approach Delay, s/veh / LOS				5.0	A	4.9	A	18.4	B	16.6	B								
Intersection Delay, s/veh / LOS				8.8					A										
Multimodal Results				EB			WB			NB			SB						
Pedestrian LOS Score / LOS				1.84	B	1.62	B	1.91	B	1.68	B								
Bicycle LOS Score / LOS				1.12	A	1.04	A	0.81	A	0.68	A								

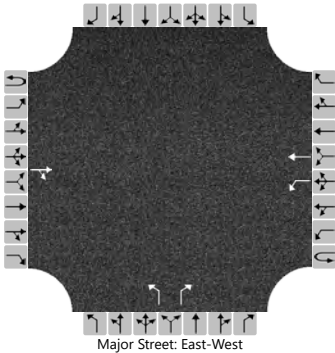
HCS Signalized Intersection Results Summary

General Information						Intersection Information													
Agency		HRG						Duration, h		0.250									
Analyst		NM		Analysis Date		May 8, 2023		Area Type		Other									
Jurisdiction		SDDOT		Time Period		PM Peak		PHF		0.92									
Urban Street		SD 38		Analysis Year		2050		Analysis Period		1> 7:15									
Intersection		SD 38 & 2nd Street		File Name		(7) SD38&2nd_PM.xus													
Project Description																			
Demand Information				EB			WB			NB			SB						
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R				
Demand (v), veh/h				25	235	9	130	490	25	15	25	65	15	30	20				
Signal Information																			
Cycle, s	60.0	Reference Phase	2																
Offset, s	0	Reference Point	End																
Uncoordinated	No	Simult. Gap E/W	On																
Force Mode	Fixed	Simult. Gap N/S	On																
				Green	44.3	6.7	0.0	0.0	0.0	0.0									
				Yellow	3.5	3.5	0.0	0.0	0.0	0.0									
				Red	1.0	1.0	0.0	0.0	0.0	0.0									
Timer Results				EBL		EBT		WBL		WBT		NBL		NBT		SBL		SBT	
Assigned Phase						2				6				8				4	
Case Number						8.0				6.0				6.0				8.0	
Phase Duration, s						48.8				48.8				11.2				11.2	
Change Period, (Y+R c), s						4.5				4.5				4.5				4.5	
Max Allow Headway (MAH), s						0.0				0.0				3.2				3.2	
Queue Clearance Time (g s), s														6.2				5.6	
Green Extension Time (g e), s						0.0				0.0				0.3				0.3	
Phase Call Probability												0.95						0.95	
Max Out Probability												0.00						0.00	
Movement Group Results				EB			WB			NB			SB						
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R				
Assigned Movement				5	2	12	1	6	16	3	8	18	7	4	14				
Adjusted Flow Rate (v), veh/h				292			141 560			16 98			71						
Adjusted Saturation Flow Rate (s), veh/h/ln				1663			1114 1757			1350 1568			1377						
Queue Service Time (g s), s				0.0			2.7 7.3			0.7 3.5			0.0						
Cycle Queue Clearance Time (g c), s				3.1			5.9 7.3			4.2 3.5			3.6						
Green Ratio (g/C)				0.74			0.74 0.74			0.11 0.11			0.11						
Capacity (c), veh/h				1294			885 1298			190 175			227						
Volume-to-Capacity Ratio (X)				0.226			0.160 0.431			0.086 0.560			0.311						
Back of Queue (Q), ft/ln (95 th percentile)																			
Back of Queue (Q), veh/ln (95 th percentile)				1.0			0.8 2.5			0.4 2.3			1.6						
Queue Storage Ratio (RQ) (95 th percentile)				0.00			0.08 0.00			0.07 0.00			0.00						
Uniform Delay (d 1), s/veh				2.5			3.4 3.0			27.3 25.3			24.7						
Incremental Delay (d 2), s/veh				0.4			0.4 1.0			0.1 1.0			0.3						
Initial Queue Delay (d 3), s/veh				0.0			0.0 0.0			0.0 0.0			0.0						
Control Delay (d), s/veh				2.9			3.8 4.1			27.4 26.3			25.0						
Level of Service (LOS)				A			A A			C C			C						
Approach Delay, s/veh / LOS				2.9		A		4.0		A		26.5		C		25.0		C	
Intersection Delay, s/veh / LOS				7.2						A									
Multimodal Results				EB			WB			NB			SB						
Pedestrian LOS Score / LOS				1.83		B		1.60		B		1.92		B		1.70		B	
Bicycle LOS Score / LOS				0.97		A		1.64		B		0.68		A		0.60		A	

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & West Central HS Entrance
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	West Central HS Entrance
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	1	1	0		1	0	1		0	0	0
Configuration				TR		L	T			L		R				
Volume (veh/h)			425	90		55	285			35		50				
Percent Heavy Vehicles (%)						0				0		0				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized									No							
Median Type Storage					Left Only								9			

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.10				6.40		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.50		3.30				

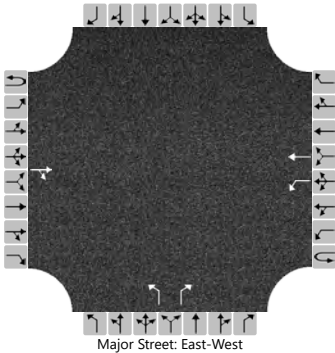
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						60				38		54				
Capacity, c (veh/h)						1021				576		567				
v/c Ratio						0.06				0.07		0.10				
95% Queue Length, Q ₉₅ (veh)						0.2				0.2		0.3				
Control Delay (s/veh)						8.7				11.7		12.0				
Level of Service (LOS)						A				B		B				
Approach Delay (s/veh)					1.4				11.9							
Approach LOS					A				B							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & West Central HS Entrance
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	West Central HS Entrance
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	1	1	0		1	0	1		0	0	0
Configuration				TR		L	T			L		R				
Volume (veh/h)			305	4		4	620			15		15				
Percent Heavy Vehicles (%)						0				0		0				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized									No							
Median Type Storage					Left Only								9			

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.10				6.40		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.50		3.30				

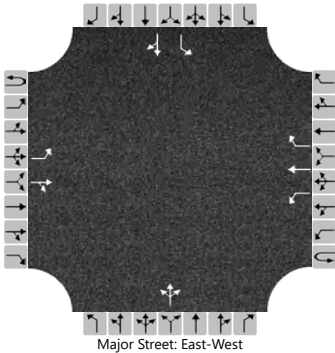
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						4				16		16				
Capacity, c (veh/h)						1235				500		713				
v/c Ratio						0.00				0.03		0.02				
95% Queue Length, Q ₉₅ (veh)						0.0				0.1		0.1				
Control Delay (s/veh)						7.9				12.4		10.2				
Level of Service (LOS)						A				B		B				
Approach Delay (s/veh)					0.1				11.3							
Approach LOS					A				B							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & Railroad Street
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	Railroad St
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	1		0	1	0		1	1	0
Configuration		L		TR		L	T	R			LTR			L		TR
Volume (veh/h)		4	465	0		15	270	95		2	0	30		145	4	5
Percent Heavy Vehicles (%)		0				0				0	0	15		0	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized					No											
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.10				7.10	6.50	6.35		7.10	6.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.00	3.44		3.50	4.00	3.30

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		4				16					35			158		10
Capacity, c (veh/h)		1173				1070					505			258		448
v/c Ratio		0.00				0.02					0.07			0.61		0.02
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.2			3.6		0.1
Control Delay (s/veh)		8.1	0.0	0.0		8.4	0.1				12.6			38.6		13.2
Level of Service (LOS)		A	A	A		A	A				B			E		B
Approach Delay (s/veh)		0.1				0.4				12.6				37.1		
Approach LOS		A				A				B				E		

HCS Two-Way Stop-Control Report

General Information

Analyst

NM

Agency/Co.

HRG

Date Performed

4/29/2024

Analysis Year

2050

Time Analyzed

PM Peak

Intersection Orientation

East-West

Project Description

SD 38

Site Information

Intersection

SD 38 & Railroad Street

Jurisdiction

SDDOT

East/West Street

SD 38

North/South Street

Railroad St

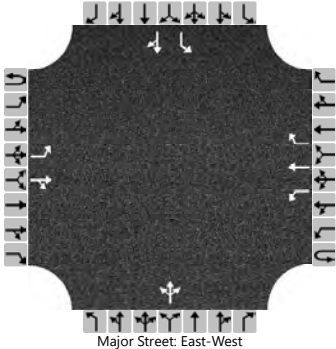
Peak Hour Factor

0.92

Analysis Time Period (hrs)

0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	1		0	1	0		1	1	0
Configuration		L		TR		L	T	R			LTR			L		TR
Volume (veh/h)		4	340	4		15	560	155		2	2	15		85	9	5
Percent Heavy Vehicles (%)		0				40				0	0	15		5	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized					No											
Median Type Storage	Undivided															

Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.10				4.50				7.10	6.50	6.35		7.15	6.50	6.20
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.56				3.50	4.00	3.44		3.55	4.00	3.30

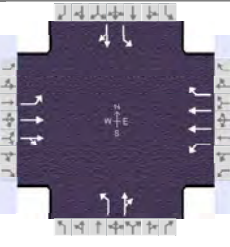
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		4				16					21			92		15
Capacity, c (veh/h)		848				1004					417			197		287
v/c Ratio		0.01				0.02					0.05			0.47		0.05
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.2			2.3		0.2
Control Delay (s/veh)		9.3	0.0	0.0		8.6	0.1				14.1			38.5		18.2
Level of Service (LOS)		A	A	A		A	A				B			E		C
Approach Delay (s/veh)	0.2				0.3				14.1				35.7			
Approach LOS	A				A				B				E			

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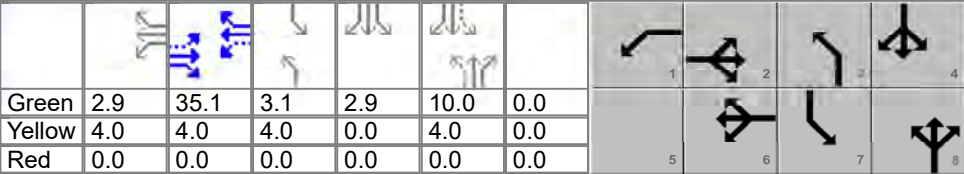
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(9) SD38&RailroadSt_PM.xtw

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HCS Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	HRG			Duration, h	0.250	
Analyst	NM	Analysis Date	May 8, 2023	Area Type	Other	
Jurisdiction	SDDOT	Time Period	AM Peak	PHF	0.92	
Urban Street	SD 38	Analysis Year	2050	Analysis Period	1> 7:15	
Intersection	SD 38 & Mickelson Roa...	File Name	(10) SD38&Mickelson_AM.xus			
Project Description						

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	135	445	35	40	195	190	45	55	65	215	20	195

Signal Information												
Cycle, s	70.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
				Green	2.9	35.1	3.1	2.9	10.0	0.0		
				Yellow	4.0	4.0	4.0	0.0	4.0	0.0		
				Red	0.0	0.0	0.0	0.0	0.0	0.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6	3	8	7	4
Case Number		6.3	1.0	3.0	1.1	4.0	1.1	4.0
Phase Duration, s		39.1	6.9	46.0	7.1	14.0	10.0	16.9
Change Period, ($Y+R_c$), s		4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Allow Headway (MAH), s		0.0	3.1	0.0	3.1	3.3	3.1	3.3
Queue Clearance Time (g_s), s			2.8		3.7	7.3	8.0	12.3
Green Extension Time (g_e), s		0.0	0.0	0.0	0.0	0.5	0.0	0.6
Phase Call Probability			0.57		0.61	1.00	0.99	1.00
Max Out Probability			0.00		1.00	0.03	1.00	0.01

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	147	264	258	43	212	207	49	130		234	234	
Adjusted Saturation Flow Rate (s), veh/h/ln	1170	1772	1726	1688	1687	1323	1688	1615		1688	1523	
Queue Service Time (g_s), s	5.0	6.1	6.1	0.8	1.9	5.2	1.7	5.3		6.0	10.3	
Cycle Queue Clearance Time (g_c), s	5.0	6.1	6.1	0.8	1.9	5.2	1.7	5.3		6.0	10.3	
Green Ratio (g/C)	0.50	0.50	0.50	0.57	0.60	0.60	0.19	0.14		0.24	0.18	
Capacity (c), veh/h	690	890	867	536	2024	794	187	231		333	282	
Volume-to-Capacity Ratio (X)	0.213	0.296	0.298	0.081	0.105	0.260	0.262	0.565		0.702	0.830	
Back of Queue (Q), ft/ln (95 th percentile)												
Back of Queue (Q), veh/ln (95 th percentile)	2.2	4.0	4.0	0.4	1.0	2.4	1.2	3.5		2.5	6.7	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d_1), s/veh	9.9	10.2	10.2	7.1	6.0	6.6	24.5	28.0		25.5	27.5	
Incremental Delay (d_2), s/veh	0.7	0.8	0.9	0.0	0.1	0.8	0.3	0.8		5.5	2.4	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	10.6	11.0	11.1	7.1	6.1	7.4	24.8	28.8		31.1	29.9	
Level of Service (LOS)	B	B	B	A	A	A	C	C		C	C	
Approach Delay, s/veh / LOS	11.0	B		6.8	A		27.7	C		30.5	C	
Intersection Delay, s/veh / LOS	16.7						B					

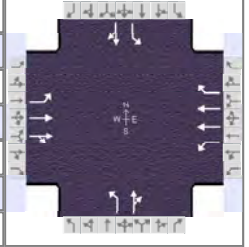
Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.88	B	1.87	B	2.44	B	2.28	B
Bicycle LOS Score / LOS	1.04	A	0.87	A	0.78	A	1.26	A

HCS Signalized Intersection Results Summary

General Information

Agency	HRG		
Analyst	NM	Analysis Date	May 8, 2023
Jurisdiction	SDDOT	Time Period	AM Peak
Urban Street	SD 38	Analysis Year	2050
Intersection	SD 38 & Mickelson Roa...	File Name	(10) SD38&Mickelson
Project Description			

Intersection Information



Demand Information

	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	160	220	20	135	535	225	20	65	10	215	15	185

Signal Information

Cycle, s	70.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On	Green	5.0	0.7	30.8	1.7	1.3	7.0		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	0.0	4.0	3.5	3.5	4.0		
				Red	1.0	0.0	1.0	1.0	1.0	1.0		

Timer Results

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	4.0	1.1	3.0	1.1	4.0	1.1	4.0
Phase Duration, s	10.2	36.5	9.5	35.8	6.2	12.0	12.0	17.8
Change Period, (Y+R _c), s	4.5	5.0	4.5	5.0	4.5	5.0	4.5	5.0
Max Allow Headway (MAH), s	3.1	0.0	3.1	0.0	3.1	3.3	3.1	3.3
Queue Clearance Time (g _s), s	5.8		5.3		2.8	5.1	9.5	11.6
Green Extension Time (g _e), s	0.1	0.0	0.1	0.0	0.0	0.3	0.0	0.2
Phase Call Probability	0.97		0.94		0.34	1.00	0.99	1.00
Max Out Probability	1.00		1.00		1.00	0.63	1.00	1.00

Movement Group Results

Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	174	131	130	147	582	245	22	82		234	217	
Adjusted Saturation Flow Rate (s), veh/h/ln	1688	1772	1720	1688	1687	1323	1688	1730		1688	1519	
Queue Service Time (g_s), s	3.8	3.1	3.1	3.3	8.2	8.9	0.8	3.1		7.5	9.6	
Cycle Queue Clearance Time (g_c), s	3.8	3.1	3.1	3.3	8.2	8.9	0.8	3.1		7.5	9.6	
Green Ratio (g/C)	0.52	0.45	0.45	0.51	0.44	0.44	0.12	0.10		0.24	0.18	
Capacity (c), veh/h	510	798	774	645	1484	582	164	173		356	277	
Volume-to-Capacity Ratio (X)	0.341	0.165	0.167	0.228	0.392	0.420	0.132	0.472		0.656	0.785	
Back of Queue (Q), ft/ln (95 th percentile)												
Back of Queue (Q), veh/ln (95 th percentile)	2.2	2.1	2.1	1.9	5.2	4.8	0.6	2.3		6.3	7.1	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d_1), s/veh	9.5	11.4	11.4	9.3	13.3	13.5	27.4	29.8		24.6	27.3	
Incremental Delay (d_2), s/veh	0.1	0.4	0.5	0.1	0.8	2.2	0.1	0.7		3.4	8.9	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	9.7	11.9	11.9	9.4	14.0	15.7	27.6	30.5		28.0	36.2	
Level of Service (LOS)	A	B	B	A	B	B	C	C		C	D	
Approach Delay, s/veh / LOS	11.0	B		13.8	B		29.9	C		32.0	C	
Intersection Delay, s/veh / LOS	18.2						B					

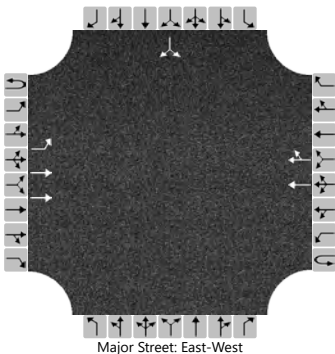
Multimodal Results

	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	1.89	B		1.89	B		2.44	B		2.28	B	
Bicycle LOS Score / LOS	0.85	A		1.29	A		0.66	A		1.23	A	

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD38 & 466th Ave
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	466th Ave
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		0	1	0
Configuration		L	T				T	TR							LR	
Volume (veh/h)	0	2	765				430	5						4		0
Percent Heavy Vehicles (%)	3	0												50		3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage					Undivided											

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.10												7.80		6.96
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												4.00		3.33

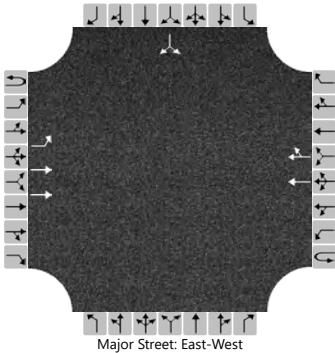
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		2													4	
Capacity, c (veh/h)		1100													206	
v/c Ratio		0.00													0.02	
95% Queue Length, Q ₉₅ (veh)		0.0													0.1	
Control Delay (s/veh)		8.3	0.0												22.9	
Level of Service (LOS)		A	A												C	
Approach Delay (s/veh)		0.0												22.9		
Approach LOS		A												C		

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD38 & 466th Ave
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	466th Ave
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		0	1	0
Configuration		L	T				T	TR							LR	
Volume (veh/h)	0	0	445				910	2						5		2
Percent Heavy Vehicles (%)	3	0												33		0
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage					Undivided											

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.10												7.46		6.90
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												3.83		3.30

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0													8	
Capacity, c (veh/h)		705													167	
v/c Ratio		0.00													0.05	
95% Queue Length, Q ₉₅ (veh)		0.0													0.1	
Control Delay (s/veh)		10.1	0.0												27.6	
Level of Service (LOS)		B	A												D	
Approach Delay (s/veh)		0.0												27.6		
Approach LOS		A												D		

HCS Two-Way Stop-Control Report

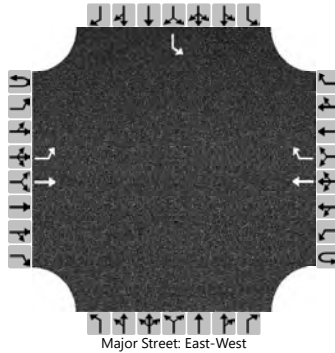
General Information

Analyst	NM
Agency/Co.	HRG
Date Performed	12/12/2023
Analysis Year	2050
Time Analyzed	AM Peak
Intersection Orientation	East-West
Project Description	SD 38

Site Information

Intersection	SD 38 & I-90 WB Terminal
Jurisdiction	SDDOT
East/West Street	SD 38
North/South Street	I-90 WB Terminal
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	1		0	0	0		1	0	0
Configuration		L	T				T	R						L		
Volume (veh/h)		40	730				255	20						15		
Percent Heavy Vehicles (%)		0												56		
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized					No											
Median Type Storage	Left Only								9							

Critical and Follow-up Headways

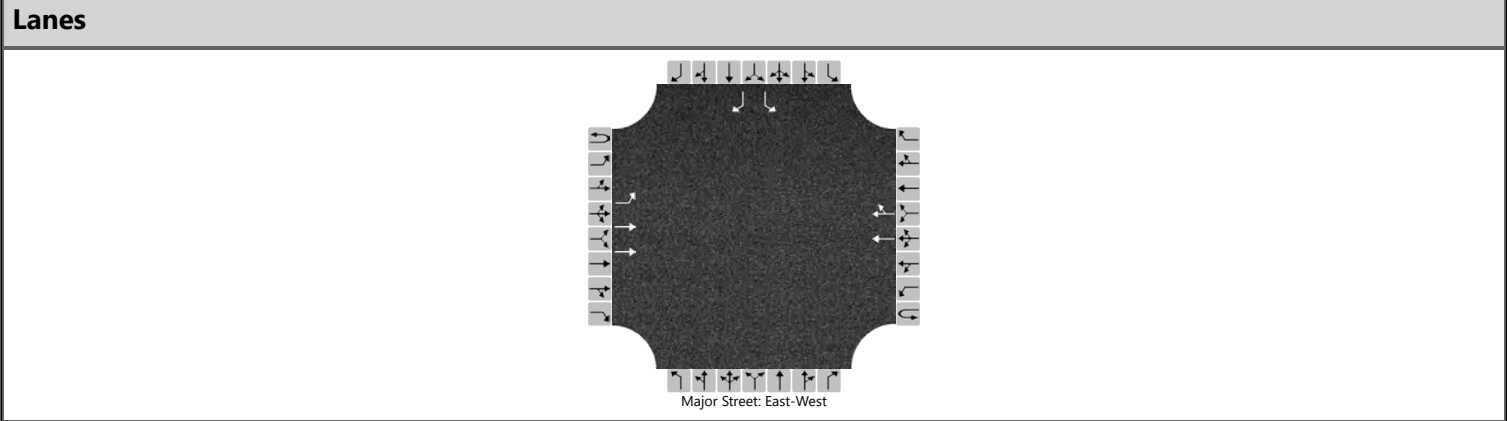
Base Critical Headway (sec)		4.1												7.1		
Critical Headway (sec)		4.10												6.96		
Base Follow-Up Headway (sec)		2.2												3.5		
Follow-Up Headway (sec)		2.20												4.00		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		43												16		
Capacity, c (veh/h)		1274												315		
v/c Ratio		0.03												0.05		
95% Queue Length, Q ₉₅ (veh)		0.1												0.2		
Control Delay (s/veh)		7.9	0.2											17.1		
Level of Service (LOS)		A	A											C		
Approach Delay (s/veh)	0.6												17.1			
Approach LOS	A												C			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	CEC	Intersection	SD 38 & I-90 WB Terminal
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	I-90 WB Terminal
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		



Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		1	0	1
Configuration		L	T				T	TR						L		R
Volume (veh/h)	0	40	730				255	20						15		190
Percent Heavy Vehicles (%)	3	0												56		12
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized													No			
Median Type Storage	Undivided															

Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.10												7.92		7.14
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												4.06		3.42

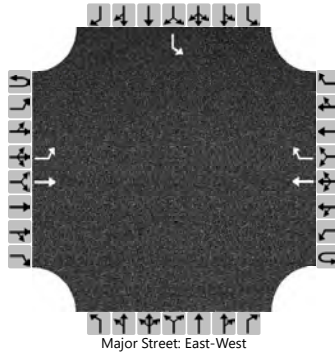
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		43												16		207
Capacity, c (veh/h)		1274												235		839
v/c Ratio		0.03												0.07		0.25
95% Queue Length, Q ₉₅ (veh)		0.1												0.2		1.0
Control Delay (s/veh)		7.9	0.2											21.5		10.7
Level of Service (LOS)		A	A											C		B
Approach Delay (s/veh)		0.6												11.5		
Approach LOS		A												B		

HCS Two-Way Stop-Control Report

General Information

Analyst	NM	Intersection	SD 38 & I-90 WB Terminal
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	5/8/2023	East/West Street	SD 38
Analysis Year	2050	North/South Street	I-90 WB Terminal
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	1		0	0	0		1	0	0
Configuration		L	T				T	R						L		
Volume (veh/h)		25	420				415	35						30		
Percent Heavy Vehicles (%)		0												6		
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized					No											
Median Type Storage	Left Only								9							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		
Critical Headway (sec)		4.10												6.46		
Base Follow-Up Headway (sec)		2.2												3.5		
Follow-Up Headway (sec)		2.20												3.55		

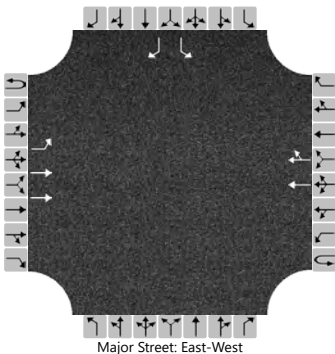
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		27												33		
Capacity, c (veh/h)		1085												562		
v/c Ratio		0.03												0.06		
95% Queue Length, Q ₉₅ (veh)		0.1												0.2		
Control Delay (s/veh)		8.4	0.2											11.8		
Level of Service (LOS)		A	A											B		
Approach Delay (s/veh)	0.6												11.8			
Approach LOS	A												B			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & I-90 WB Terminal
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	I-90 WB Terminal
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		1	0	1
Configuration		L	T				T	TR						L		R
Volume (veh/h)	0	25	420				415	35						30		495
Percent Heavy Vehicles (%)	3	0												6		2
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized													No			
Median Type Storage	Undivided															

Critical and Follow-up Headways

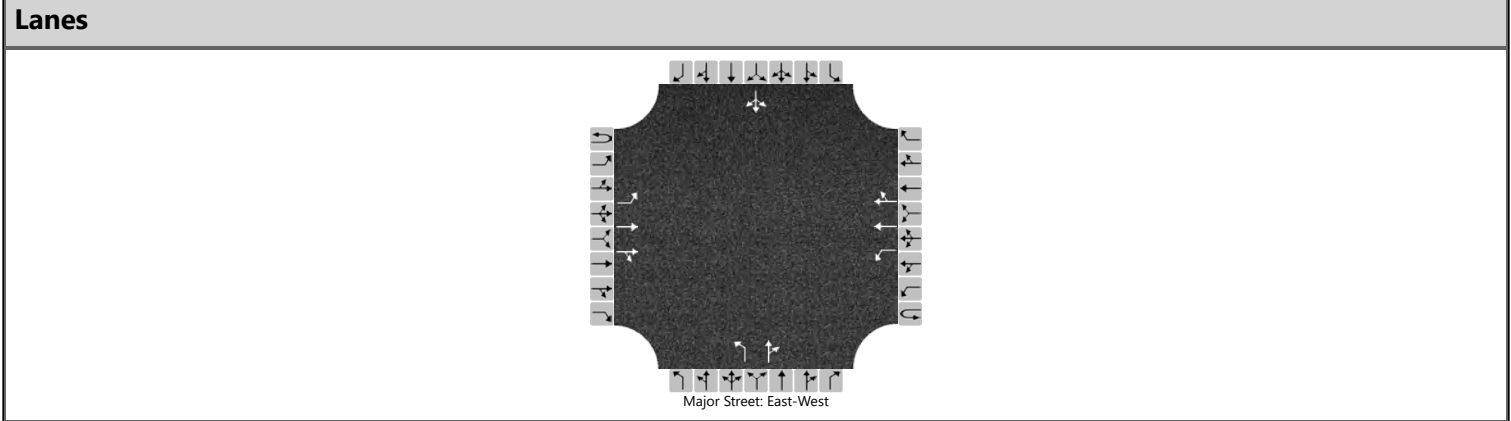
Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.10												6.92		6.94
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												3.56		3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		27												33		538
Capacity, c (veh/h)		1085												329		756
v/c Ratio		0.03												0.10		0.71
95% Queue Length, Q ₉₅ (veh)		0.1												0.3		6.1
Control Delay (s/veh)		8.4	0.2											17.1		20.6
Level of Service (LOS)		A	A											C		C
Approach Delay (s/veh)		0.6												20.4		
Approach LOS		A												C		

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & I-90 EB Ramp Terminal
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	I-90 EB Ramp Terminal
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		



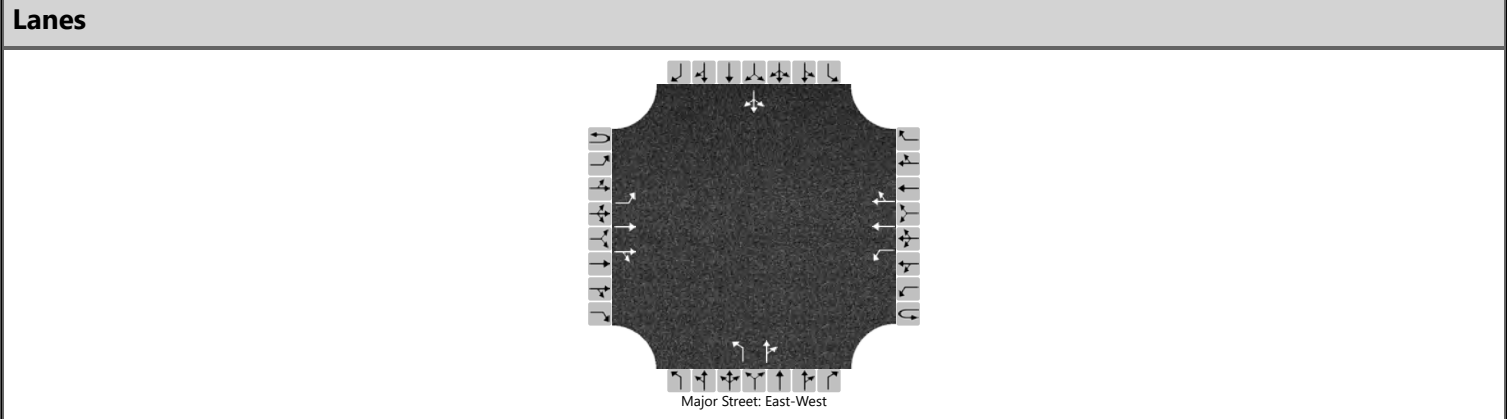
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		1	1	0		0	1	0
Configuration		L	T	TR		L	T	TR		L		TR			LTR	
Volume (veh/h)	0	190	265	20	0	15	420	30		30	15	25		30	10	35
Percent Heavy Vehicles (%)	3	10			3	11				20	20	0		8	3	3
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage					Undivided											

Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.30				4.32				7.90	6.90	6.90		7.66	6.56	6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.30				2.31				3.70	4.20	3.30		3.58	4.03	3.33

Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		207				16				33		43			82	
Capacity, c (veh/h)		1016				1185				122		259			193	
v/c Ratio		0.20				0.01				0.27		0.17			0.42	
95% Queue Length, Q ₉₅ (veh)		0.8				0.0				1.0		0.6			1.9	
Control Delay (s/veh)		9.4	0.6			8.1	0.1			44.7		21.7			36.6	
Level of Service (LOS)		A	A			A	A			E		C			E	
Approach Delay (s/veh)	4.1				0.4				31.6				36.6			
Approach LOS	A				A				D				E			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD38/I-90 EB Ramp Terminal/466th St
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	I-90 EB Ramp Terminal/466th Street
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		



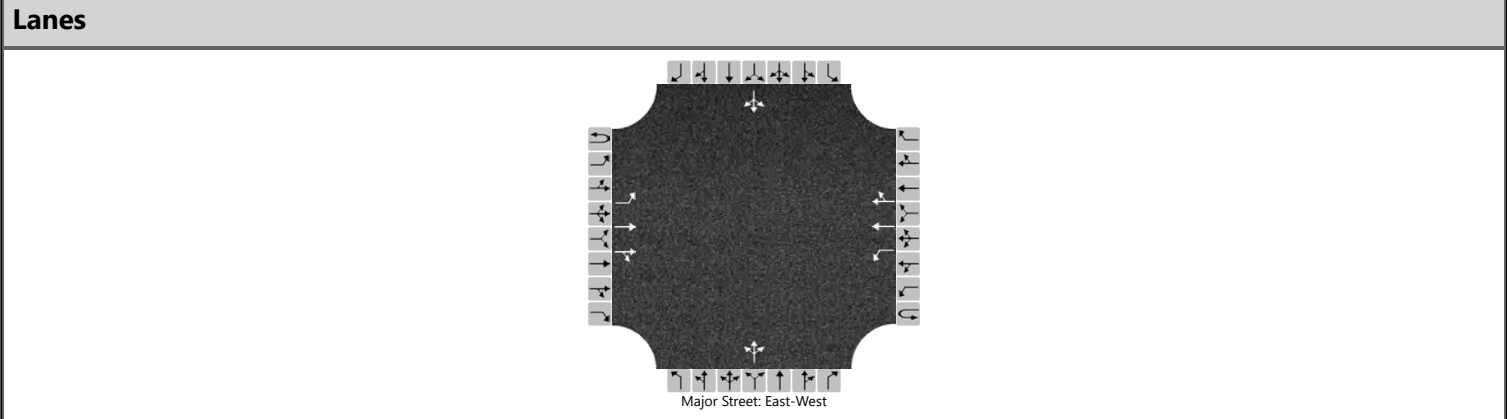
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		1	1	0		0	1	0
Configuration		L	T	TR		L	T	TR		L		TR			LTR	
Volume (veh/h)	0	430	300	15	0	20	240	20		15	10	20		3	2	28
Percent Heavy Vehicles (%)	3	2			3	20				33	33	60		33	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage					Undivided											

Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.14				4.50				8.16	7.16	8.10		8.16	6.50	6.90
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.40				3.83	4.33	3.90		3.83	4.00	3.30

Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		467				22				16		33			36	
Capacity, c (veh/h)		1277				1094				40		128			231	
v/c Ratio		0.37				0.02				0.41		0.25			0.16	
95% Queue Length, Q ₉₅ (veh)		1.7				0.1				1.4		1.0			0.5	
Control Delay (s/veh)		9.4	0.6			8.4	0.1			146.1		42.5			23.4	
Level of Service (LOS)		A	A			A	A			F		E			C	
Approach Delay (s/veh)	5.7				0.7				77.0				23.4			
Approach LOS	A				A				F				C			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & 468th Avenue
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	468th Ave / County Highway 141
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		



Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		0	1	0		0	1	0
Configuration		L	T	TR		L	T	TR			LTR				LTR	
Volume (veh/h)	0	4	360	0	0	0	225	50		2	2	0		50	0	7
Percent Heavy Vehicles (%)	3	0			3	0				0	100	0		4	0	50
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

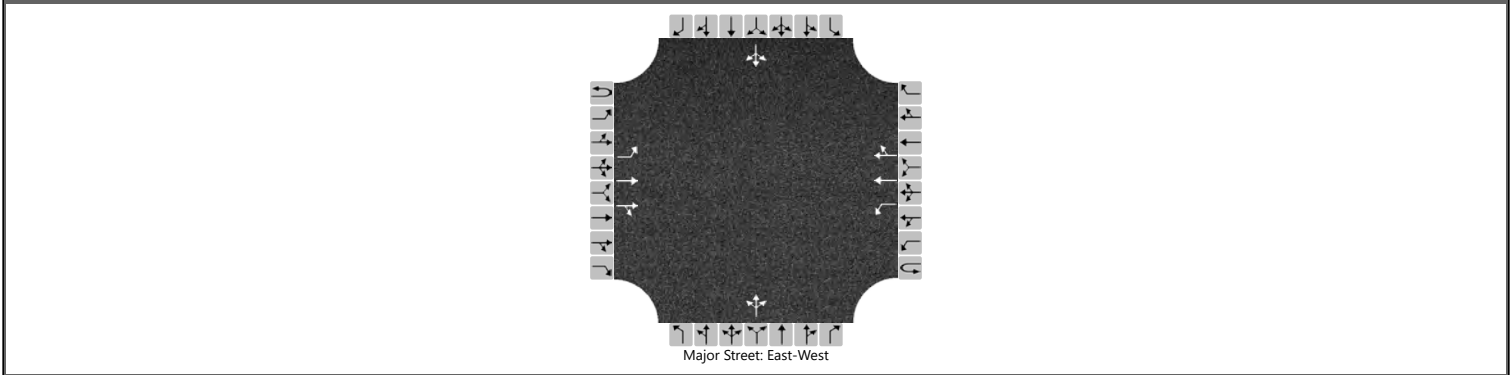
Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.10				4.10				7.50	8.50	6.90		7.58	6.50	7.90
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	5.00	3.30		3.54	4.00	3.80

Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		4				0					4				62	
Capacity, c (veh/h)		1274				1178					284				483	
v/c Ratio		0.00				0.00					0.02				0.13	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.0				0.4	
Control Delay (s/veh)		7.8	0.0			8.1	0.0				17.9				13.6	
Level of Service (LOS)		A	A			A	A				C				B	
Approach Delay (s/veh)		0.1				0.0				17.9				13.6		
Approach LOS		A				A				C				B		

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & 468th Avenue
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/30/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	468th Ave / County Highway 141
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		0	1	0		0	1	0
Configuration		L	T	TR		L	T	TR			LTR				LTR	
Volume (veh/h)	0	0	310	2	0	5	420	55		2	2	0		50	4	4
Percent Heavy Vehicles (%)	3	0			3	0				0	0	0		4	100	50
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.10				4.10				7.50	6.50	6.90		7.58	8.50	7.90
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.00	3.30		3.54	5.00	3.80

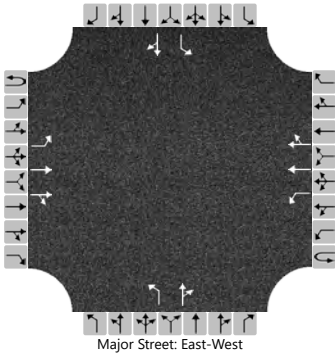
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				5					4				63		
Capacity, c (veh/h)		1060				1231					326				324		
v/c Ratio		0.00				0.00					0.01				0.19		
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.0				0.7		
Control Delay (s/veh)		8.4	0.0			7.9	0.0				16.2				18.8		
Level of Service (LOS)		A	A			A	A				C				C		
Approach Delay (s/veh)		0.0				0.1				16.2				18.8			
Approach LOS		A				A				C				C			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & 469th Ave
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/26/2023	East/West Street	SD 38
Analysis Year	2050	North/South Street	469th Ave / Co Hwy 139
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		1	1	0		1	1	0
Configuration		L	T	TR		L	T	TR		L		TR		L		TR
Volume (veh/h)	0	5	330	75	0	75	165	5		110	5	280		15	5	5
Percent Heavy Vehicles (%)	3	3			3	5				13	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.16				4.20				7.76	6.56	6.96		7.56	6.56	6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.25				3.63	4.03	3.33		3.53	4.03	3.33

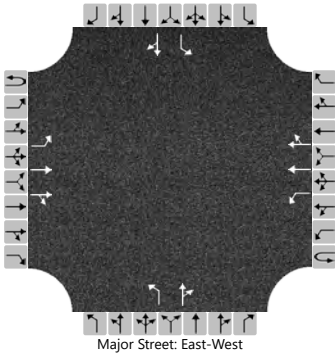
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		5				82				120		310		16		11
Capacity, c (veh/h)		1380				1095				291		760		219		446
v/c Ratio		0.00				0.07				0.41		0.41		0.07		0.02
95% Queue Length, Q ₉₅ (veh)		0.0				0.2				1.9		2.0		0.2		0.1
Control Delay (s/veh)		7.6	0.0			8.6	0.3			25.8		13.0		22.7		13.3
Level of Service (LOS)		A	A			A	A			D		B		C		B
Approach Delay (s/veh)		0.1				2.8				16.5				19.0		
Approach LOS		A				A				C				C		

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & 469th Ave
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/26/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	469th Ave / Co Hwy 139
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		1	1	0		1	1	0
Configuration		L	T	TR		L	T	TR		L		TR		L		TR
Volume (veh/h)	0	5	245	120	0	285	380	5		100	5	120		15	5	10
Percent Heavy Vehicles (%)	3	3			3	5				2	3	15		3	3	3
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.16				4.20				7.54	6.56	7.20		7.56	6.56	6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.25				3.52	4.03	3.45		3.53	4.03	3.33

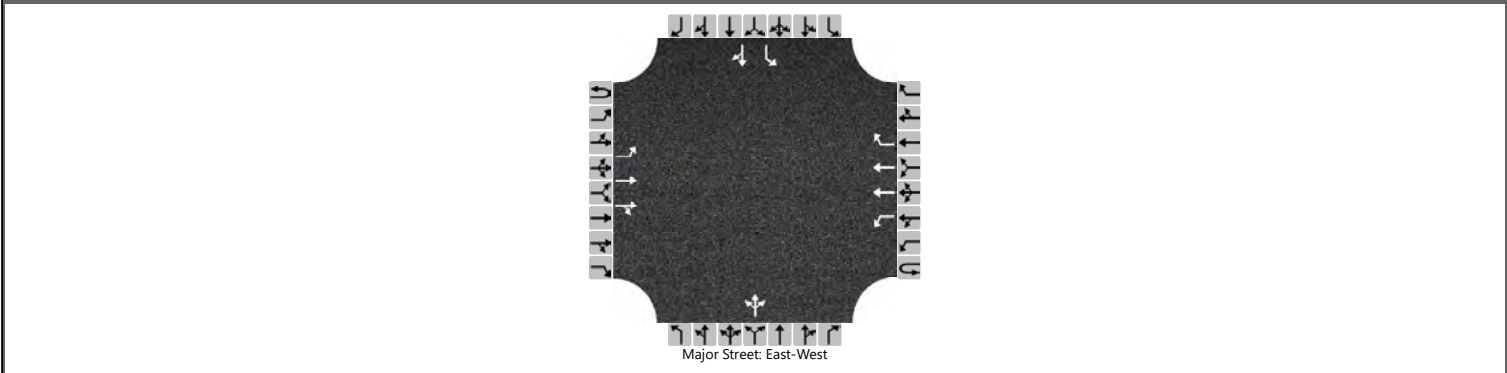
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		5				310				109		136		16		16
Capacity, c (veh/h)		1130				1137				101		611		74		228
v/c Ratio		0.00				0.27				1.08		0.22		0.22		0.07
95% Queue Length, Q ₉₅ (veh)		0.0				1.1				6.9		0.8		0.8		0.2
Control Delay (s/veh)		8.2	0.0			9.3	0.8			192.1		12.6		66.4		22.0
Level of Service (LOS)		A	A			A	A			F		B		F		C
Approach Delay (s/veh)	0.1				4.4				92.3				44.2			
Approach LOS	A				A				F				E			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & La Mesa
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/29/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	La Mesa
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	1		0	1	0		1	1	0
Configuration		L	T	TR		L	T	R			LTR			L		TR
Volume (veh/h)	0	30	700	4	0	0	235	15		0	15	5		75	4	30
Percent Heavy Vehicles (%)	3	0			3	0				0	13	0		0	50	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized					No											
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.10				4.10				7.50	6.76	6.90		7.50	7.50	6.90
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.13	3.30		3.50	4.50	3.30

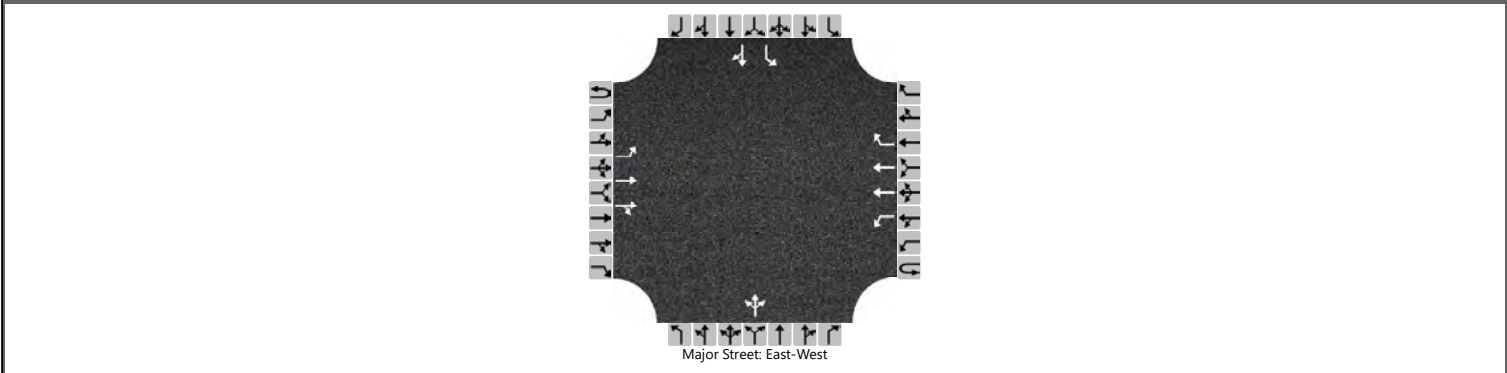
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		33				0					22				82		37
Capacity, c (veh/h)		1303				857					229				287		566
v/c Ratio		0.03				0.00					0.09				0.28		0.07
95% Queue Length, Q ₉₅ (veh)		0.1				0.0					0.3				1.1		0.2
Control Delay (s/veh)		7.8	0.2			9.2	0.0				22.3				22.5		11.8
Level of Service (LOS)		A	A			A	A				C				C		B
Approach Delay (s/veh)	0.5				0.0				22.3				19.2				
Approach LOS	A				A				C				C				

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	NM	Intersection	SD 38 & La Mesa
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	4/29/2024	East/West Street	SD 38
Analysis Year	2050	North/South Street	La Mesa
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	1		0	1	0		1	1	0
Configuration		L	T	TR		L	T	R			LTR			L		TR
Volume (veh/h)	0	25	325	0	0	9	735	100		4	5	0		80	15	30
Percent Heavy Vehicles (%)	3	0			3	0				0	0	0		9	0	0
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized					No											
Median Type Storage	Undivided															

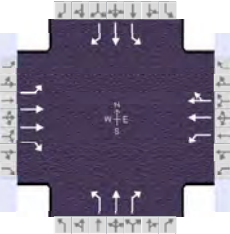
Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.9		7.5	6.5	6.9
Critical Headway (sec)		4.10				4.10				7.50	6.50	6.90		7.68	6.50	6.90
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.20				2.20				3.50	4.00	3.30		3.59	4.00	3.30

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		27				10					10				87		49
Capacity, c (veh/h)		758				1217					167				158		329
v/c Ratio		0.04				0.01					0.06				0.55		0.15
95% Queue Length, Q ₉₅ (veh)		0.1				0.0					0.2				2.8		0.5
Control Delay (s/veh)		9.9	0.3			8.0	0.1				27.9				52.4		17.8
Level of Service (LOS)		A	A			A	A				D				F		C
Approach Delay (s/veh)	1.0				0.1				27.9				40.0				
Approach LOS	A				A				D				E				

HCS Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	HRG			Duration, h	0.250	
Analyst	NM	Analysis Date	May 8, 2023	Area Type	Other	
Jurisdiction	SDDOT	Time Period	AM Peak	PHF	0.92	
Urban Street	SD 38	Analysis Year	2050	Analysis Period	1> 7:15	
Intersection	SD 38 & Marion Street	File Name	(18) SD38&Marion_AM.xus			
Project Description						

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	165	340	105	50	125	75	110	225	120	45	145	40

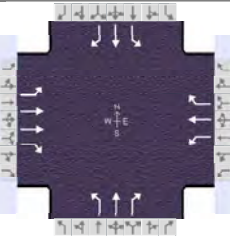
Signal Information												
Cycle, s	50.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
				Green	2.6	3.9	12.9	2.5	2.0	10.0		
				Yellow	4.0	0.0	4.0	4.0	0.0	4.0		
				Red	0.0	0.0	0.0	0.0	0.0	0.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	1.1	4.0	2.0	3.0	2.0	3.0
Phase Duration, s	10.6	20.8	6.6	16.9	8.5	16.0	6.5	14.0
Change Period, ($Y+R_c$), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Allow Headway (MAH), s	2.9	0.0	2.9	0.0	2.9	2.9	2.9	2.9
Queue Clearance Time (g_s), s	7.1		3.1		5.6	8.5	3.5	5.9
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.6
Phase Call Probability	0.92		0.53		0.81	1.00	0.49	1.00
Max Out Probability	1.00		0.04		1.00	0.21	1.00	0.15

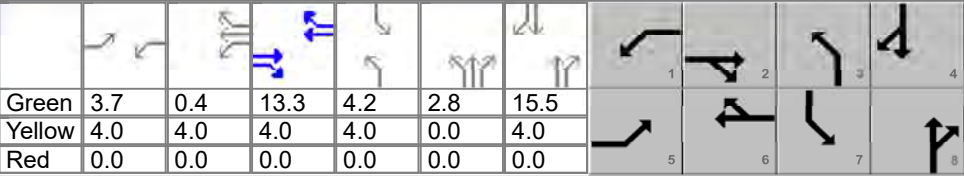
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	179	370	114	54	112	106	120	245	130	49	158	43
Adjusted Saturation Flow Rate (s), veh/h/ln	1701	1674	1525	1714	1772	1556	1647	1674	1502	1554	1758	1466
Queue Service Time (g_s), s	5.1	4.1	2.7	1.1	2.5	2.7	3.6	6.5	3.6	1.5	3.9	1.2
Cycle Queue Clearance Time (g_c), s	5.1	4.1	2.7	1.1	2.5	2.7	3.6	6.5	3.6	1.5	3.9	1.2
Green Ratio (g/C)	0.13	0.34	0.34	0.31	0.26	0.26	0.09	0.24	0.24	0.05	0.20	0.20
Capacity (c), veh/h	223	1128	514	456	459	403	148	403	361	77	352	293
Volume-to-Capacity Ratio (X)	0.804	0.328	0.222	0.119	0.243	0.263	0.806	0.607	0.361	0.638	0.448	0.148
Back of Queue (Q), ft/ln (95 th percentile)												
Back of Queue (Q), veh/ln (95 th percentile)	4.1	2.2	1.4	0.6	1.6	1.6	3.2	3.5	1.7	1.0	2.3	0.6
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	21.1	12.4	11.9	12.3	14.7	14.7	22.3	16.9	15.8	23.3	17.6	16.5
Incremental Delay (d_2), s/veh	11.0	0.8	1.0	0.0	1.3	1.6	15.9	0.8	0.2	3.3	0.3	0.1
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	32.1	13.1	12.9	12.3	15.9	16.3	38.2	17.7	16.0	26.6	17.9	16.6
Level of Service (LOS)	C	B	B	B	B	B	D	B	B	C	B	B
Approach Delay, s/veh / LOS	18.2	B		15.4	B		22.2	C		19.4	B	
Intersection Delay, s/veh / LOS	19.1						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.08	B	2.09	B	2.26	B	2.42	B
Bicycle LOS Score / LOS	1.03	A	0.71	A	1.30	A	0.90	A

HCS Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	HRG			Duration, h	0.250	
Analyst	NM	Analysis Date	May 8, 2023	Area Type	Other	
Jurisdiction	SDDOT	Time Period	PM Peak	PHF	0.90	
Urban Street	SD 38	Analysis Year	2050	Analysis Period	1> 16:45	
Intersection	SD 38 & Marion Street	File Name	(18) SD38&Marion_PM.xus			
Project Description						

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	70	230	105	170	355	55	180	205	125	85	355	205

Signal Information											
Cycle, s	60.0	Reference Phase	2								
Offset, s	0	Reference Point	End								
Uncoordinated	No	Simult. Gap E/W	On								
Force Mode	Fixed	Simult. Gap N/S	On	Green	3.7	0.4	13.3	4.2	2.8	15.5	
				Yellow	4.0	4.0	4.0	4.0	0.0	4.0	
				Red	0.0	0.0	0.0	0.0	0.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	7.7	17.3	12.2	21.7	11.0	22.3	8.2	19.5
Change Period, ($Y+R_c$), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Allow Headway (MAH), s	2.9	0.0	2.9	0.0	2.9	3.0	2.9	3.0
Queue Clearance Time (g_s), s	5.1		8.5		9.0	8.1	5.3	14.7
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.8
Phase Call Probability	0.73		0.96		0.96	1.00	0.79	1.00
Max Out Probability	0.55		1.00		1.00	0.03	1.00	0.89

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	78	256	117	189	394	61	200	228	139	94	394	228
Adjusted Saturation Flow Rate (s), veh/h/ln	1474	1660	1490	1688	1772	1406	1714	1772	1478	1688	1772	1478
Queue Service Time (g_s), s	3.1	3.9	4.0	6.5	12.1	1.9	7.0	6.1	4.3	3.3	12.7	8.1
Cycle Queue Clearance Time (g_c), s	3.1	3.9	4.0	6.5	12.1	1.9	7.0	6.1	4.3	3.3	12.7	8.1
Green Ratio (g/C)	0.06	0.22	0.22	0.14	0.30	0.30	0.12	0.31	0.31	0.07	0.26	0.26
Capacity (c), veh/h	92	735	330	230	523	415	200	541	451	119	459	383
Volume-to-Capacity Ratio (X)	0.845	0.347	0.354	0.822	0.754	0.147	1.000	0.421	0.308	0.797	0.859	0.595
Back of Queue (Q), ft/ln (95 th percentile)												
Back of Queue (Q), veh/ln (95 th percentile)	2.1	2.5	2.5	6.1	9.1	1.0	10.0	3.6	2.1	2.7	9.5	4.2
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh	27.8	19.7	19.7	25.2	19.2	15.6	26.5	16.6	16.0	27.5	21.2	19.5
Incremental Delay (d_2), s/veh	7.7	1.3	3.0	18.3	9.7	0.7	63.6	0.2	0.1	10.2	10.8	0.7
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	35.6	21.0	22.7	43.5	28.9	16.3	90.1	16.8	16.1	37.7	31.9	20.2
Level of Service (LOS)	D	C	C	D	C	B	F	B	B	D	C	C
Approach Delay, s/veh / LOS	23.9	C		32.0	C		42.5	D		29.0	C	
Intersection Delay, s/veh / LOS	32.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	2.26	B	2.27	B
Bicycle LOS Score / LOS	0.86	A	1.55	B	1.42	A	1.67	B



Appendix B – IHSDM Output

Interactive Highway Safety Design Model

Crash Prediction Evaluation Report

June 1, 2024

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Report Overview

Report Generated: Jun 1, 2024 3:23 PM

Report Template: System: Single Page, 508 Compliant [System] (mlcpm5, Dec 5, 2019 2:16 PM)

Evaluation Date: Sat Jun 01 15:07:09 CDT 2024

IHSDM Version: v17.0.0 (Sep 22, 2021)

Crash Prediction Module: v12.0.0 (Sep 22, 2021)

User Name: naveen.mallipaddi

Organization Name:

Phone:

E-Mail:

Project Title: SD-38_Build_Option1_I90EBRamp_I

Project Comment: Created Mon Mar 27 16:47:43 CDT 2023

Project Unit System: U.S. Customary

Highway Title: SD-38

Highway Comment: Created Mon Mar 27 16:49:47 CDT 2023

Highway Version: 22

Evaluation Title: Evaluation 56

Evaluation Comment: Created Sat Jun 01 15:06:37 CDT 2024

Minimum Location: 171+44.000

Maximum Location: 580+10.000

Policy for Superelevation: AASHTO 2011 U.S. Customary

Calibration: HSM Configuration

Crash Distribution: HSM Configuration

Model/CMF: HSM Configuration

First Year of Analysis: 2025

Last Year of Analysis: 2050

Empirical-Bayes Analysis: Site-Specific

Highway with Crash History: SD-38

Highway with Crash History Comment: Created Mon Mar 27 16:49:47 CDT 2023

Highway with Crash History Version: 22

First Year of Observed Crashes: 2019

Last Year of Observed Crashes: 2023

Disclaimer Regarding Crash Prediction Method

IMPORTANT NOTICE ABOUT COMPARING RESULTS FROM HIGHWAY SAFETY MANUAL FIRST EDITION (2010) MODELS TO RESULTS FROM NEW MODELS DEVELOPED UNDER NCHRP PROJECTS 17-70, 17-58, AND 17-68

Since the publication of the Highway Safety Manual - First Edition (HSM-1), in 2010 by the American Association of State Highway and Transportation Officials (AASHTO), multiple research efforts have been undertaken through the National Cooperative Highway Research Program (NCHRP) to develop safety performance models for road segment and intersection facility types that were not initially reflected in the HSM-1, in order to expand the breadth and depth of the HSM in the future.

The IHSDM Crash Prediction Module (CPM) is intended as a faithful implementation of HSM Part C predictive methods. As NCHRP projects to develop new predictive methods for the HSM are completed, FHWA works to incorporate the new methods into IHSDM, sometimes in advance of publication in the HSM. The following new crash predictive methods have been accepted by NCHRP project panels and incorporated into IHSDM, while pending AASHTO's approval for incorporation into a future edition of the HSM:

- Roundabouts: completed in 2018 under NCHRP Project 17-70, the new methods will provide improved outcomes for the safety analysis of roundabouts.
- 6+ lane and one-way urban/suburban arterials (including models for segments and intersections): completed under NCHRP Project 17-58.
- Intersection crash prediction methods for some intersection configurations and traffic control types not currently addressed in the HSM (e.g., all-way stop; rural 3-leg signalized; 3-leg stop-controlled where the major leg turns; urban 5-leg signalized; urban high-speed intersections): completed in 2021 under NCHRP Project 17-68.

However, in the absence of local calibration factors (see HSM-1 Part C, Appendix A for guidance on calibration of the predictive models), it is neither appropriate nor advisable to directly compare the results from new models (from NCHRP Projects 17-58, 17-68, and 17-70) to results from HSM-1 models, as the models were not calibrated to the same base state data sets, and consequently can produce unexpected results. If local calibration factors are available and applied to both new models and HSM-1 models, then it may be appropriate to directly compare the results. *[Note: Work being performed under NCHRP Project 17-72 (Update of Crash Modification Factors for the Highway Safety Manual) is expected to re-calibrate many of the old (HSM-1) and new (e.g., NCHRP 17-70) models to data from a single (or small number of) states, that would allow results from all models to be directly compared.]*

The models produced for NCHRP Project 17-70 have independent value in terms of informing the design of a roundabout and assessing the effects of different design characteristics on the expected safety performance of a roundabout.

The HSM-1 interim method previously included in IHSDM for evaluating roundabouts on urban/suburban arterials (i.e., evaluating an existing intersection and then applying a Crash Modification Factor for replacing the existing intersection with a roundabout) has been deactivated in IHSDM, to minimize any confusion with the new roundabout methodology.

Section Types

Section 1 Evaluation

Section: Section 1

Evaluation Start Location: 171+44.000

Evaluation End Location: 580+10.000

Area Type: Rural

Functional Class: Arterial

Type of Alignment: Undivided, Two Lane

Model Category: Rural, Two Lane

Calibration Factor: 2U=1.0; 3ST=1.0; 4ST=1.0;

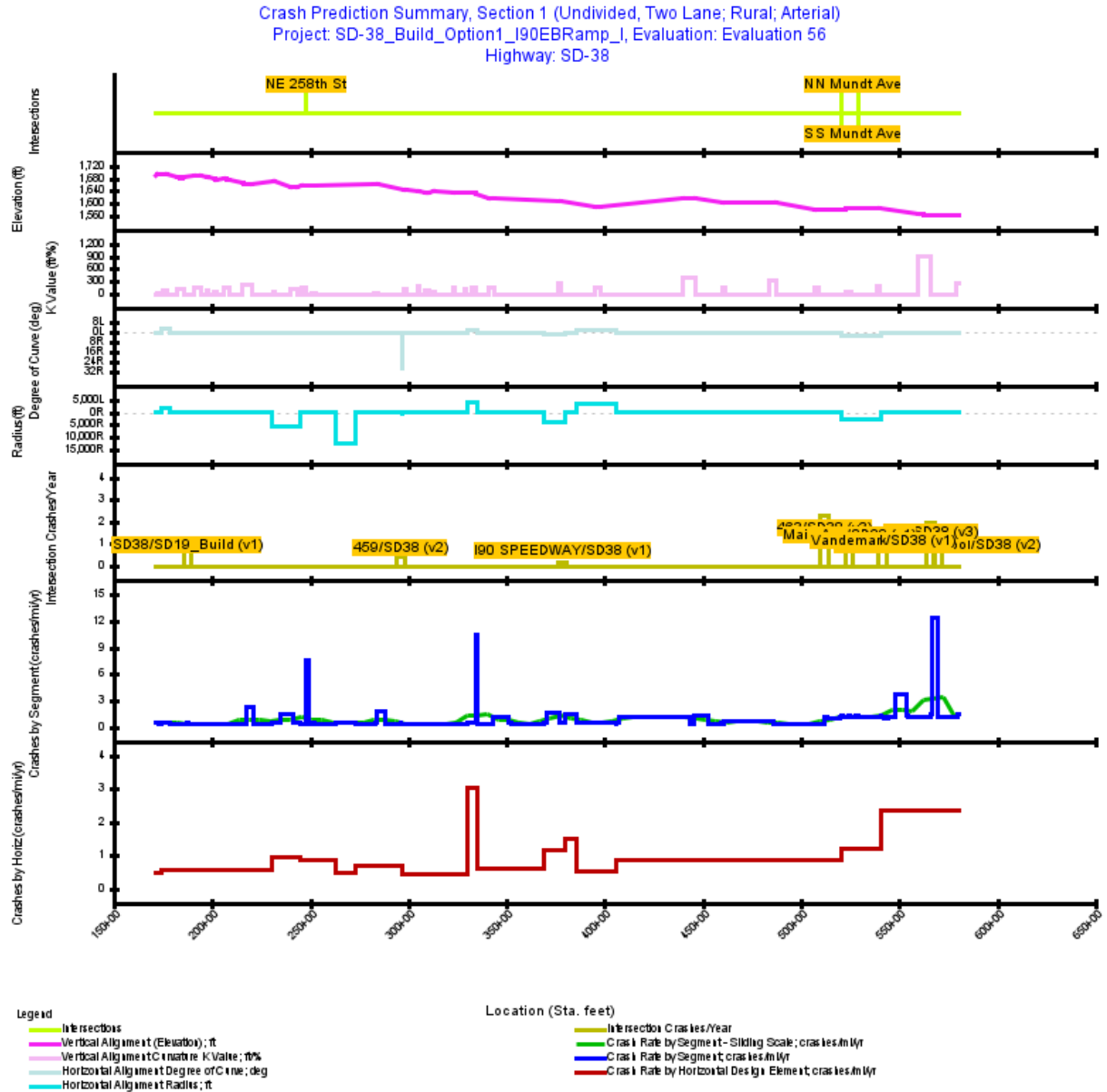


Figure 1. Crash Prediction Summary (Section 1)

Table 1. Observed Crashes Used in the Evaluation (Section 1)

Year	Observed Crashes	Total Crashes Used	FI Crashes	FI no/C Crashes	PDO Crashes
2019	5	4	1	0	3
2020	9	9	5	1	4
2021	8	7	3	1	4
2022	6	6	3	1	3
2023	0	0	0	0	0
All Years	28 ^[1]	26	12	3	14

Footnotes

^[1] Note: Observed crash data that does not comply with the associated CPM model requirements may not be used in EB processing.

Table 2. Evaluation Highway - Homogeneous Segments (Section 1)

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
1	Rural Two-Lane Segment Two-lane Undivided	171+44.000	172+42.000	98.00	0.0186	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	4.25	6.2	3	false	0	false	false	false				
2	Rural Two-Lane Segment Two-lane Undivided	172+42.000	174+52.690	210.69	0.0399	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.17	6.2	3	false	0	false	false	false				
3	Rural Two-Lane Segment Two-lane Undivided	174+52.690	176+25.000	172.31	0.0326	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.17	6.2	3	false	0	false	false	false	2,074.80	2.0	true	40
4	Rural Two-Lane Segment Two-lane Undivided	176+25.000	178+85.250	260.25	0.0493	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.88	6.2	3	false	0	false	false	false	2,074.80	2.0	true	40
5	Rural Two-Lane Segment Two-lane Undivided	178+85.250	183+75.370	490.12	0.0928	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.88	6.2	3	false	0	false	false	false				
6	Rural Two-Lane Segment Two-lane Undivided	183+75.370	184+00.000	24.63	0.0047	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
7	Rural Two-Lane Segment Two-lane Undivided	184+00.000	184+45.000	45.00	0.0085	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
8	Rural Two-Lane Segment Two-lane Undivided	184+45.000	185+20.000	75.00	0.0142	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
9	Rural Two-Lane Segment Two-lane Undivided	185+20.000	186+60.000	140.00	0.0265	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
10	Rural Two-Lane Segment Two-lane Undivided	186+60.000	187+20.000	60.00	0.0114	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
11	Rural Two-Lane Segment Two-lane Undivided	187+20.000	187+60.000	40.00	0.0076	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	0.00	1.13	6.2	3	false	0	false	false	false				
12	Rural Two-Lane Segment Two-lane Undivided	187+60.000	190+00.000	240.00	0.0455	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
13	Rural Two-Lane Segment Two-lane Undivided	190+00.000	192+00.000	200.00	0.0379	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
14	Rural Two-Lane Segment Two-lane Undivided	192+00.000	192+39.270	39.27	0.0074	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				

Seg No.	Type	Start Locatio n (Sta. ft)	End Locatio n (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
15	Rural Two-Lane Segment Two-lane Undivided	192+39. 270	193+60. 000	120.7 3	0.022 9	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	- 0.94	6.2	3	false	0	false	false	false				
16	Rural Two-Lane Segment Two-lane Undivided	193+60. 000	197+65. 000	405.0 0	0.076 7	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	- 0.94	6.2	3	false	0	false	false	false				
17	Rural Two-Lane Segment Two-lane Undivided	197+65. 000	199+00. 000	135.0 0	0.025 6	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	- 1.94	6.2	3	false	0	false	false	false				
18	Rural Two-Lane Segment Two-lane Undivided	199+00. 000	201+63. 750	263.7 5	0.050 0	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	- 1.94	6.2	3	false	0	false	false	false				
19	Rural Two-Lane Segment Two-lane Undivided	201+63. 750	202+00. 000	36.25 9	0.006 9	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	0.13	6.2	3	false	0	false	false	false				
20	Rural Two-Lane Segment Two-lane Undivided	202+00. 000	207+00. 000	500.0 0	0.094 7	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	0.13	6.2	3	false	0	false	false	false				
21	Rural Two-Lane Segment Two-lane Undivided	207+00. 000	207+49. 760	49.76 4	0.009 4	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	0.13	6.2	3	false	0	false	false	false				
22	Rural Two-Lane Segment Two-lane Undivided	207+49. 760	217+74. 250	1,024. 49	0.194 0	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	- 1.70	6.2	3	false	0	false	false	false				
23	Rural Two-Lane Segment Two-lane Undivided	217+74. 250	221+00. 000	325.7 5	0.061 7	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	0.77	6.2	3	false	0	false	false	false				
24	Rural Two-Lane Segment Two-lane Undivided	221+00. 000	226+00. 000	500.0 0	0.094 7	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	0.77	6.2	3	false	0	false	false	false				
25	Rural Two-Lane Segment Two-lane Undivided	226+00. 000	230+66. 250	466.2 5	0.088 3	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	0.77	6.2	3	false	0	false	false	false				
26	Rural Two-Lane Segment Two-lane Undivided	230+66. 250	231+39. 700	73.45 9	0.013 9	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	0.77	6.2	3	false	0	false	false	false	5,644. 64	2.0	true	70
27	Rural Two-Lane Segment Two-lane Undivided	231+39. 700	235+00. 000	360.3 0	0.068 2	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	- 2.00	6.2	3	false	0	false	false	false	5,644. 64	2.0	true	70
28	Rural Two-Lane Segment Two-lane Undivided	235+00. 000	241+61. 390	661.3 9	0.125 3	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	- 2.00	6.2	3	false	0	false	false	false	5,644. 64	2.0	true	70
29	Rural Two-Lane Segment Two-lane Undivided	241+61. 390	242+00. 000	38.61 3	0.007 3	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	1.16	6.2	3	false	0	false	false	false	5,644. 64	2.0	true	70

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	ADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
30	Rural Two-Lane Segment Two-lane Undivided	242+00.000	245+14.280	314.28	0.0595	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.16	6.2	3	false	0	false	false	false	5,644.64	2.0	true	70
31	Rural Two-Lane Segment Two-lane Undivided	245+14.280	246+55.100	140.82	0.0267	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.16	6.2	3	false	0	false	false	false				
32	Rural Two-Lane Segment Two-lane Undivided	246+55.100	248+00.000	144.90	0.0274	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.42	6.2	3	false	0	false	false	false				
33	Rural Two-Lane Segment Two-lane Undivided	248+00.000	249+00.000	100.00	0.0189	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	0.00	-0.42	6.2	3	false	0	false	false	false				
34	Rural Two-Lane Segment Two-lane Undivided	249+00.000	251+21.980	221.98	0.0428	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.42	6.2	3	false	0	false	false	false				
35	Rural Two-Lane Segment Two-lane Undivided	251+21.980	252+40.240	118.26	0.0224	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	3.43	6.2	3	false	0	false	false	false				
36	Rural Two-Lane Segment Two-lane Undivided	252+40.240	263+22.600	1,082.36	0.2050	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.02	6.2	3	false	0	false	false	false				
37	Rural Two-Lane Segment Two-lane Undivided	263+22.600	272+66.740	944.14	0.1788	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.02	6.2	3	false	0	false	false	false	12,237.00	2.0	true	70
38	Rural Two-Lane Segment Two-lane Undivided	272+66.740	280+00.000	733.26	0.1389	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.02	6.2	3	false	0	false	false	false				
39	Rural Two-Lane Segment Two-lane Undivided	280+00.000	283+15.050	315.05	0.0597	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.02	6.2	3	false	0	false	false	false				
40	Rural Two-Lane Segment Two-lane Undivided	283+15.050	284+08.540	93.49	0.0177	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	4.47	6.2	3	false	0	false	false	false				
41	Rural Two-Lane Segment Two-lane Undivided	284+08.540	288+50.000	441.46	0.0836	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.47	6.2	3	false	0	false	false	false				
42	Rural Two-Lane Segment Two-lane Undivided	288+50.000	289+00.000	50.00	0.0095	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.47	6.2	3	false	0	false	false	false				
43	Rural Two-Lane Segment Two-lane Undivided	289+00.000	295+90.000	690.00	0.1307	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.47	6.2	3	false	0	false	false	false				
44	Rural Two-Lane Segment Two-lane Undivided	295+90.000	296+00.000	10.00	0.0019	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	0.00	-1.47	6.2	3	false	0	false	false	false				

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AAADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
45	Rural Two-Lane Segment Two-lane Undivided	296+00.000	296+10.000	10.00	0.0019	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	0.00	-1.47	6.2	3	false	0	false	false	false				
46	Rural Two-Lane Segment Two-lane Undivided	296+10.000	296+96.520	86.52	0.0164	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.47	6.2	3	false	0	false	false	false				
47	Rural Two-Lane Segment Two-lane Undivided	296+96.520	298+33.660	137.14	0.0260	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.47	6.2	3	false	0	false	false	false				
48	Rural Two-Lane Segment Two-lane Undivided	298+33.660	303+50.000	516.34	0.00978	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.61	6.2	3	false	0	false	false	false				
49	Rural Two-Lane Segment Two-lane Undivided	303+50.000	304+50.000	100.00	0.0189	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.61	6.2	3	false	0	false	false	false				
50	Rural Two-Lane Segment Two-lane Undivided	304+50.000	305+02.039	52.04	0.0099	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.61	6.2	3	false	0	false	false	false				
51	Rural Two-Lane Segment Two-lane Undivided	305+02.039	309+35.490	433.45	0.00821	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.15	6.2	3	false	0	false	false	false				
52	Rural Two-Lane Segment Two-lane Undivided	309+35.490	311+70.000	234.51	0.0044	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.24	6.2	3	false	0	false	false	false				
53	Rural Two-Lane Segment Two-lane Undivided	311+70.000	313+25.000	155.00	0.00294	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.24	6.2	3	false	0	false	false	false				
54	Rural Two-Lane Segment Two-lane Undivided	313+25.000	323+00.000	975.00	0.1847	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.33	6.2	3	false	0	false	false	false				
55	Rural Two-Lane Segment Two-lane Undivided	323+00.000	323+26.980	26.98	0.00051	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.33	6.2	3	false	0	false	false	false				
56	Rural Two-Lane Segment Two-lane Undivided	323+26.980	328+89.230	562.25	0.1065	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.26	6.2	3	false	0	false	false	false				
57	Rural Two-Lane Segment Two-lane Undivided	328+89.230	329+81.740	92.51	0.0175	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.52	6.2	3	false	0	false	false	false				
58	Rural Two-Lane Segment Two-lane Undivided	329+81.740	333+24.920	343.18	0.00658	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.52	6.2	3	false	0	false	false	false	4,010.13	2.0	true	70
59	Rural Two-Lane Segment Two-lane Undivided	333+24.920	334+00.000	75.08	0.0142	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-2.17	6.2	3	false	0	false	false	false	4,010.13	2.0	true	70

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
60	Rural Two-Lane Segment Two-lane Undivided	334+00.000	335+39.960	139.96	0.0265	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-2.17	6.2	3	false	0	false	false	false	4,010.13	2.0	true	70
61	Rural Two-Lane Segment Two-lane Undivided	335+39.960	342+39.000	699.04	0.1324	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-2.17	6.2	3	false	0	false	false	false				
62	Rural Two-Lane Segment Two-lane Undivided	342+39.000	343+00.000	61.00	0.0116	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false				
63	Rural Two-Lane Segment Two-lane Undivided	343+00.000	351+20.000	820.00	0.1553	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false				
64	Rural Two-Lane Segment Two-lane Undivided	351+20.000	352+00.000	80.00	0.0152	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	0.00	-0.24	6.2	3	false	0	false	false	false				
65	Rural Two-Lane Segment Two-lane Undivided	352+00.000	352+20.000	20.00	0.0038	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	0.00	-0.24	6.2	3	false	0	false	false	false				
66	Rural Two-Lane Segment Two-lane Undivided	352+20.000	362+50.000	1,030.00	0.1951	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false				
67	Rural Two-Lane Segment Two-lane Undivided	362+50.000	369+14.990	664.99	0.1259	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false				
68	Rural Two-Lane Segment Two-lane Undivided	369+14.990	370+30.000	115.01	0.0218	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
69	Rural Two-Lane Segment Two-lane Undivided	370+30.000	370+60.000	30.00	0.0057	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
70	Rural Two-Lane Segment Two-lane Undivided	370+60.000	376+83.610	623.61	0.1181	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
71	Rural Two-Lane Segment Two-lane Undivided	376+83.610	378+00.000	116.39	0.0220	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
72	Rural Two-Lane Segment Two-lane Undivided	378+00.000	378+40.000	40.00	0.0076	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	8.00	-1.04	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
73	Rural Two-Lane Segment Two-lane Undivided	378+40.000	378+60.000	20.00	0.0038	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	8.00	-1.04	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
74	Rural Two-Lane Segment Two-lane Undivided	378+60.000	379+00.000	40.00	0.0076	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	8.00	-1.04	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
75	Rural Two-Lane Segment Two-lane Undivided	379+00.000	379+62.690	62.69	0.0119	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
76	Rural Two-Lane Segment Two-lane Undivided	379+62.690	385+22.970	560.28	0.1061	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false				
77	Rural Two-Lane Segment Two-lane Undivided	385+22.970	386+60.000	137.03	0.0260	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
78	Rural Two-Lane Segment Two-lane Undivided	386+60.000	389+50.000	290.00	0.0549	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
79	Rural Two-Lane Segment Two-lane Undivided	389+50.000	394+00.000	450.00	0.0852	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
80	Rural Two-Lane Segment Two-lane Undivided	394+00.000	396+46.150	246.15	0.0466	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
81	Rural Two-Lane Segment Two-lane Undivided	396+46.150	397+00.000	53.85	0.0102	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.72	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
82	Rural Two-Lane Segment Two-lane Undivided	397+00.000	399+00.000	200.00	0.0379	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	8.00	0.72	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
83	Rural Two-Lane Segment Two-lane Undivided	399+00.000	405+75.410	675.41	0.1279	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.72	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
84	Rural Two-Lane Segment Two-lane Undivided	405+75.410	406+00.000	24.59	0.0047	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.72	6.2	3	false	0	false	false	false				
85	Rural Two-Lane Segment Two-lane Undivided	406+00.000	407+00.000	100.00	0.0189	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	8.00	0.72	6.2	3	false	0	false	false	false				
86	Rural Two-Lane Segment Two-lane Undivided	407+00.000	443+25.000	3,625.00	0.6866	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.72	6.2	3	false	0	false	false	false				
87	Rural Two-Lane Segment Two-lane Undivided	443+25.000	445+50.000	225.00	0.0426	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
88	Rural Two-Lane Segment Two-lane Undivided	445+50.000	452+50.000	700.00	0.1326	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
89	Rural Two-Lane Segment Two-lane Undivided	452+50.000	459+00.000	650.00	0.1231	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AAADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
90	Rural Two-Lane Segment Two-lane Undivided	459+00.000	460+00.000	100.00	0.0189	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	0.00	-0.96	6.2	3	false	0	false	false	false				
91	Rural Two-Lane Segment Two-lane Undivided	460+00.000	460+58.580	58.58	0.0111	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
92	Rural Two-Lane Segment Two-lane Undivided	460+58.580	485+61.230	2,502.65	0.4740	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.01	6.2	3	false	0	false	false	false				
93	Rural Two-Lane Segment Two-lane Undivided	485+61.230	503+00.000	1,738.77	0.3293	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.07	6.2	3	false	0	false	false	false				
94	Rural Two-Lane Segment Two-lane Undivided	503+00.000	507+00.000	400.00	0.0758	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.07	6.2	3	false	0	false	false	false				
95	Rural Two-Lane Segment Two-lane Undivided	507+00.000	508+00.000	100.00	0.0189	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.07	6.2	3	false	0	false	true	false				
96	Rural Two-Lane Segment Two-lane Undivided	508+00.000	508+08.240	8.24	0.0016	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.07	6.2	3	false	0	false	true	false				
97	Rural Two-Lane Segment Two-lane Undivided	508+08.240	510+30.000	221.76	0.0420	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.21	6.2	3	false	0	false	true	false				
98	Rural Two-Lane Segment Two-lane Undivided	510+30.000	512+00.000	170.00	0.0322	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.21	6.2	3	false	0	false	false	false				
99	Rural Two-Lane Segment Two-lane Undivided	512+00.000	513+00.000	100.00	0.0189	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	0.21	6.2	3	false	0	false	true	false				
100	Rural Two-Lane Segment Two-lane Undivided	513+00.000	515+00.000	200.00	0.0379	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	0.21	6.2	3	false	0	false	true	false				
101	Rural Two-Lane Segment Two-lane Undivided	515+00.000	520+00.000	500.00	0.0947	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	0.21	6.2	3	false	0	true	true	false				
102	Rural Two-Lane Segment Two-lane Undivided	520+00.000	520+49.150	49.15	0.0093	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	0.21	6.2	3	false	0	false	true	false				

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
103	Rural Two-Lane Segment Two-lane Undivided	520+49.150	521+00.000	50.85	0.0096	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	0.21	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
104	Rural Two-Lane Segment Two-lane Undivided	521+00.000	523+38.600	238.60	0.0452	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	0.21	6.2	3	false	0	true	true	false	2,458.49	2.0	true	45
105	Rural Two-Lane Segment Two-lane Undivided	523+38.600	524+00.000	61.40	0.0116	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	1.90	6.2	3	false	0	true	true	false	2,458.49	2.0	true	45
106	Rural Two-Lane Segment Two-lane Undivided	524+00.000	525+00.000	100.00	0.0189	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	1.90	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
107	Rural Two-Lane Segment Two-lane Undivided	525+00.000	525+18.580	18.58	0.0035	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	1.90	6.2	3	false	0	true	true	false	2,458.49	2.0	true	45
108	Rural Two-Lane Segment Two-lane Undivided	525+18.580	528+00.000	281.42	0.0533	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.02	6.2	3	false	0	true	true	false	2,458.49	2.0	true	45
109	Rural Two-Lane Segment Two-lane Undivided	528+00.000	529+00.000	100.00	0.0189	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	-0.02	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
110	Rural Two-Lane Segment Two-lane Undivided	529+00.000	539+00.000	1,000.00	0.1894	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.02	6.2	3	false	0	true	true	false	2,458.49	2.0	true	45
111	Rural Two-Lane Segment Two-lane Undivided	539+00.000	539+50.000	50.00	0.0095	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.02	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
112	Rural Two-Lane Segment Two-lane Undivided	539+50.000	540+00.000	50.00	0.0095	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
113	Rural Two-Lane Segment Two-lane Undivided	540+00.000	540+50.000	50.00	0.0095	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
114	Rural Two-Lane Segment Two-lane Undivided	540+50.000	540+74.370	24.37	0.0046	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
115	Rural Two-Lane Segment Two-lane Undivided	540+74.370	541+00.000	25.63	0.0049	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	true	false				
116	Rural Two-Lane Segment Two-lane Undivided	541+00.000	541+50.000	50.00	0.0095	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	true	false				
117	Rural Two-Lane Segment Two-lane Undivided	541+50.000	541+70.000	20.00	0.0038	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	true	false				
118	Rural Two-Lane Segment Two-lane Undivided	541+70.000	542+30.000	60.00	0.0114	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	true	false				
119	Rural Two-Lane Segment Two-lane Undivided	542+30.000	542+64.000	34.00	0.0064	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	true	false				
120	Rural Two-Lane Segment Two-lane Undivided	542+64.000	543+34.000	70.00	0.0133	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	true	false				
121	Rural Two-Lane Segment Two-lane Undivided	543+34.000	544+00.000	66.00	0.0125	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	true	false				
122	Rural Two-Lane Segment Two-lane Undivided	544+00.000	545+00.000	100.00	0.0189	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
123	Rural Two-Lane Segment Two-lane Undivided	545+00.000	548+23.000	323.00	0.0612	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
124	Rural Two-Lane Segment Two-lane Undivided	548+23.000	553+70.000	547.00	0.1036	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
125	Rural Two-Lane Segment Two-lane Undivided	553+70.000	554+00.000	30.00	0.0057	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	false	false				
126	Rural Two-Lane Segment Two-lane Undivided	554+00.000	554+20.000	20.00	0.0038	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	false	false				

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
127	Rural Two-Lane Segment Two-lane Undivided	554+20.000	560+00.000	580.00	0.1098	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
128	Rural Two-Lane Segment Two-lane Undivided	560+00.000	562+58.560	258.56	0.0490	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
129	Rural Two-Lane Segment Two-lane Undivided	562+58.560	564+00.000	141.44	0.0268	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
130	Rural Two-Lane Segment Two-lane Undivided	564+00.000	565+00.000	100.00	0.0189	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
131	Rural Two-Lane Segment Two-lane Undivided	565+00.000	565+77.000	77.00	0.0146	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 11,221; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
132	Rural Two-Lane Segment Two-lane Undivided	565+77.000	566+10.000	33.00	0.0063	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	0.00	0.00	-0.20	6.2	3	false	0	false	false	false				
133	Rural Two-Lane Segment Two-lane Undivided	566+10.000	566+50.000	40.00	0.0076	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	0.00	0.00	-0.20	6.2	3	false	0	false	false	false				
134	Rural Two-Lane Segment Two-lane Undivided	566+50.000	569+37.000	287.00	0.0544	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
135	Rural Two-Lane Segment Two-lane Undivided	569+37.000	569+70.000	33.00	0.0063	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	0.00	-0.20	6.2	3	false	0	false	false	false				
136	Rural Two-Lane Segment Two-lane Undivided	569+70.000	570+00.000	30.00	0.0057	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
137	Rural Two-Lane Segment Two-lane Undivided	570+00.000	575+00.000	500.00	0.0947	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	true	false	false				
138	Rural Two-Lane Segment Two-lane Undivided	575+00.000	579+50.000	450.00	0.0852	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
139	Rural Two-Lane Segment Two-lane Undivided	579+50.000	579+70.000	20.00	0.0038	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	0.00	0.00	-0.20	6.2	3	false	0	false	false	false				
140	Rural Two-Lane Segment Two-lane Undivided	579+70.000	580+10.000	40.00	0.0076	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	0.00	0.00	-0.20	6.2	3	false	0	false	false	false				

Table 3. Crash History Highway - Homogeneous Segments (Section 1)

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TWL T Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
1	Rural Two-Lane Segment Two-lane Undivided	171+44.00 0	172+42.00 0	98.00	0.0186	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	4.25	6.2	3	false	0	false	false	false				
2	Rural Two-Lane Segment Two-lane Undivided	172+42.00 0	174+52.69 0	210.69	0.0399	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	0.17	6.2	3	false	0	false	false	false				
3	Rural Two-Lane Segment Two-lane Undivided	174+52.69 0	176+25.00 0	172.31	0.0326	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	0.17	6.2	3	false	0	false	false	false	2,074.80	2.0	true	40
4	Rural Two-Lane Segment Two-lane Undivided	176+25.00 0	178+85.25 0	260.25	0.0493	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-1.88	6.2	3	false	0	false	false	false	2,074.80	2.0	true	40
5	Rural Two-Lane Segment Two-lane Undivided	178+85.25 0	183+75.37 0	490.12	0.0928	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-1.88	6.2	3	false	0	false	false	false				
6	Rural Two-Lane Segment Two-lane Undivided	183+75.37 0	184+00.00 0	24.63	0.0047	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
7	Rural Two-Lane Segment Two-lane Undivided	184+00.00 0	184+45.00 0	45.00	0.0085	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
8	Rural Two-Lane Segment Two-lane Undivided	184+45.00 0	185+20.00 0	75.00	0.0142	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
9	Rural Two-Lane Segment Two-lane Undivided	185+20.00 0	186+60.00 0	140.00	0.0265	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
10	Rural Two-Lane Segment Two-lane Undivided	186+60.00 0	187+20.00 0	60.00	0.0114	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
11	Rural Two-Lane Segment Two-lane Undivided	187+20.00 0	187+60.00 0	40.00	0.0076	2019-2022: 2,085; 2023: 2,134	12.00	12.00	0.00	0.00	1.13	6.2	3	false	0	false	false	false				
12	Rural Two-Lane Segment Two-lane Undivided	187+60.00 0	190+00.00 0	240.00	0.0455	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
13	Rural Two-Lane Segment Two-lane Undivided	190+00.00 0	192+00.00 0	200.00	0.0379	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
14	Rural Two-Lane Segment Two-lane Undivided	192+00.00 0	192+39.27 0	39.27	0.0074	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
15	Rural Two-Lane Segment Two-lane Undivided	192+39.27 0	193+60.00 0	120.73	0.0229	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-0.94	6.2	3	false	0	false	false	false				
16	Rural Two-Lane Segment Two-lane Undivided	193+60.00 0	197+65.00 0	405.00	0.0767	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-0.94	6.2	3	false	0	false	false	false				
17	Rural Two-Lane Segment Two-lane Undivided	197+65.00 0	199+00.00 0	135.00	0.0256	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-1.94	6.2	3	false	0	false	false	false				
18	Rural Two-Lane Segment Two-lane Undivided	199+00.00 0	201+63.75 0	263.75	0.0500	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-1.94	6.2	3	false	0	false	false	false				
19	Rural Two-Lane Segment Two-lane Undivided	201+63.75 0	202+00.00 0	36.25	0.0069	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	0.13	6.2	3	false	0	false	false	false				
20	Rural Two-Lane Segment Two-lane Undivided	202+00.00 0	207+00.00 0	500.00	0.0947	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	0.13	6.2	3	false	0	false	false	false				
21	Rural Two-Lane Segment Two-lane Undivided	207+00.00 0	207+49.76 0	49.76	0.0094	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	0.13	6.2	3	false	0	false	false	false				
22	Rural Two-Lane Segment Two-lane Undivided	207+49.76 0	217+74.25 0	1,024.49	0.1940	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-1.70	6.2	3	false	0	false	false	false				
23	Rural Two-Lane Segment Two-lane Undivided	217+74.25 0	221+00.00 0	325.75	0.0617	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	0.77	6.2	3	false	0	false	false	false				
24	Rural Two-Lane Segment Two-lane Undivided	221+00.00 0	226+00.00 0	500.00	0.0947	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	0.77	6.2	3	false	0	false	false	false				
25	Rural Two-Lane Segment Two-lane Undivided	226+00.00 0	230+66.25 0	466.25	0.0883	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	0.77	6.2	3	false	0	false	false	false				

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TWT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
26	Rural Two-Lane Segment Two-lane Undivided	230+66.250	231+39.700	73.45	0.0139	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	0.77	6.2	3	false	0	false	false	false	5,644.64	2.0	true	70
27	Rural Two-Lane Segment Two-lane Undivided	231+39.700	235+00.000	360.30	0.0682	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-2.00	6.2	3	false	0	false	false	false	5,644.64	2.0	true	70
28	Rural Two-Lane Segment Two-lane Undivided	235+00.000	241+61.390	661.39	0.1253	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-2.00	6.2	3	false	0	false	false	false	5,644.64	2.0	true	70
29	Rural Two-Lane Segment Two-lane Undivided	241+61.390	242+00.000	38.61	0.0073	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	1.16	6.2	3	false	0	false	false	false	5,644.64	2.0	true	70
30	Rural Two-Lane Segment Two-lane Undivided	242+00.000	245+14.280	314.28	0.0595	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	1.16	6.2	3	false	0	false	false	false	5,644.64	2.0	true	70
31	Rural Two-Lane Segment Two-lane Undivided	245+14.280	246+55.100	140.82	0.0267	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	1.16	6.2	3	false	0	false	false	false				
32	Rural Two-Lane Segment Two-lane Undivided	246+55.100	248+00.000	144.90	0.0274	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-0.42	6.2	3	false	0	false	false	false				
33	Rural Two-Lane Segment Two-lane Undivided	248+00.000	249+00.000	100.00	0.0189	2019-2022: 2,085; 2023: 2,134	12.00	12.00	0.00	0.00	-0.42	6.2	3	false	0	false	false	false				
34	Rural Two-Lane Segment Two-lane Undivided	249+00.000	251+21.980	221.98	0.0420	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-0.42	6.2	3	false	0	false	false	false				
35	Rural Two-Lane Segment Two-lane Undivided	251+21.980	252+40.240	118.26	0.0224	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	3.43	6.2	3	false	0	false	false	false				
36	Rural Two-Lane Segment Two-lane Undivided	252+40.240	263+22.600	1,082.36	0.2050	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	0.02	6.2	3	false	0	false	false	false				
37	Rural Two-Lane Segment Two-lane Undivided	263+22.600	272+66.740	944.14	0.1788	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	0.02	6.2	3	false	0	false	false	false	12,237.00	2.0	true	70
38	Rural Two-Lane Segment Two-lane Undivided	272+66.740	280+00.000	733.26	0.1389	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	0.02	6.2	3	false	0	false	false	false				
39	Rural Two-Lane Segment Two-lane Undivided	280+00.000	283+15.050	315.05	0.0597	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	0.02	6.2	3	false	0	false	false	false				
40	Rural Two-Lane Segment Two-lane Undivided	283+15.050	284+08.540	93.49	0.0177	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	4.47	6.2	3	false	0	false	false	false				
41	Rural Two-Lane Segment Two-lane Undivided	284+08.540	288+50.000	441.46	0.0836	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-1.47	6.2	3	false	0	false	false	false				
42	Rural Two-Lane Segment Two-lane Undivided	288+50.000	289+00.000	50.00	0.0095	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-1.47	6.2	3	false	0	false	false	false				
43	Rural Two-Lane Segment Two-lane Undivided	289+00.000	295+90.000	690.00	0.1307	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-1.47	6.2	3	false	0	false	false	false				
44	Rural Two-Lane Segment Two-lane Undivided	295+90.000	296+00.000	10.00	0.0019	2019-2022: 2,085; 2023: 2,134	12.00	12.00	0.00	0.00	-1.47	6.2	3	false	0	false	false	false				
45	Rural Two-Lane Segment Two-lane Undivided	296+00.000	296+10.000	10.00	0.0019	2019-2022: 2,085; 2023: 2,134	12.00	12.00	0.00	0.00	-1.47	6.2	3	false	0	false	false	false				
46	Rural Two-Lane Segment Two-lane Undivided	296+10.000	296+96.520	86.52	0.0164	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-1.47	6.2	3	false	0	false	false	false				
47	Rural Two-Lane Segment Two-lane Undivided	296+96.520	298+33.660	137.14	0.0260	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-1.47	6.2	3	false	0	false	false	false				
48	Rural Two-Lane Segment Two-lane Undivided	298+33.660	303+50.000	516.34	0.0978	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-0.61	6.2	3	false	0	false	false	false				
49	Rural Two-Lane Segment Two-lane Undivided	303+50.000	304+50.000	100.00	0.0189	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-0.61	6.2	3	false	0	false	false	false				
50	Rural Two-Lane Segment Two-lane Undivided	304+50.000	305+02.039	52.04	0.0099	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-0.61	6.2	3	false	0	false	false	false				
51	Rural Two-Lane Segment Two-lane Undivided	305+02.039	309+35.490	433.45	0.0821	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-1.15	6.2	3	false	0	false	false	false				
52	Rural Two-Lane Segment Two-lane Undivided	309+35.490	311+70.000	234.51	0.0444	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	1.24	6.2	3	false	0	false	false	false				

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TWT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
53	Rural Two-Lane Segment Two-lane Undivided	311+70.00	313+25.00	155.00	0.0294	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	1.24	6.2	3	false	0	false	false	false				
54	Rural Two-Lane Segment Two-lane Undivided	313+25.00	323+00.00	975.00	0.1847	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-0.33	6.2	3	false	0	false	false	false				
55	Rural Two-Lane Segment Two-lane Undivided	323+00.00	323+26.98	26.98	0.0051	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-0.33	6.2	3	false	0	false	false	false				
56	Rural Two-Lane Segment Two-lane Undivided	323+26.98	328+89.23	562.25	0.1065	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	0.26	6.2	3	false	0	false	false	false				
57	Rural Two-Lane Segment Two-lane Undivided	328+89.23	329+81.74	92.51	0.0175	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-0.52	6.2	3	false	0	false	false	false				
58	Rural Two-Lane Segment Two-lane Undivided	329+81.74	333+24.92	343.18	0.0650	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-0.52	6.2	3	false	0	false	false	false	4,010.13	2.0	true	70
59	Rural Two-Lane Segment Two-lane Undivided	333+24.92	334+00.00	75.08	0.0142	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-2.17	6.2	3	false	0	false	false	false	4,010.13	2.0	true	70
60	Rural Two-Lane Segment Two-lane Undivided	334+00.00	335+39.96	139.96	0.0265	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-2.17	6.2	3	false	0	false	false	false	4,010.13	2.0	true	70
61	Rural Two-Lane Segment Two-lane Undivided	335+39.96	342+39.00	699.04	0.1324	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-2.17	6.2	3	false	0	false	false	false				
62	Rural Two-Lane Segment Two-lane Undivided	342+39.00	343+00.00	61.00	0.0116	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false				
63	Rural Two-Lane Segment Two-lane Undivided	343+00.00	351+20.00	820.00	0.1553	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false				
64	Rural Two-Lane Segment Two-lane Undivided	351+20.00	352+00.00	80.00	0.0152	2019-2022: 2,085; 2023: 2,134	12.00	12.00	0.00	0.00	-0.24	6.2	3	false	0	false	false	false				
65	Rural Two-Lane Segment Two-lane Undivided	352+00.00	352+20.00	20.00	0.0038	2019-2022: 2,085; 2023: 2,134	12.00	12.00	0.00	0.00	-0.24	6.2	3	false	0	false	false	false				
66	Rural Two-Lane Segment Two-lane Undivided	352+20.00	362+50.00	1,030.00	0.1951	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false				
67	Rural Two-Lane Segment Two-lane Undivided	362+50.00	369+14.99	664.99	0.1259	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false				
68	Rural Two-Lane Segment Two-lane Undivided	369+14.99	370+30.00	115.01	0.0218	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
69	Rural Two-Lane Segment Two-lane Undivided	370+30.00	370+60.00	30.00	0.0057	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
70	Rural Two-Lane Segment Two-lane Undivided	370+60.00	376+83.61	623.61	0.1181	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
71	Rural Two-Lane Segment Two-lane Undivided	376+83.61	378+00.00	116.39	0.0220	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
72	Rural Two-Lane Segment Two-lane Undivided	378+00.00	378+40.00	40.00	0.0076	2019-2022: 2,085; 2023: 2,134	12.00	12.00	0.00	8.00	-1.04	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
73	Rural Two-Lane Segment Two-lane Undivided	378+40.00	378+60.00	20.00	0.0038	2019-2022: 2,085; 2023: 2,134	12.00	12.00	0.00	8.00	-1.04	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
74	Rural Two-Lane Segment Two-lane Undivided	378+60.00	379+00.00	40.00	0.0076	2019-2022: 2,085; 2023: 2,134	12.00	12.00	0.00	8.00	-1.04	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
75	Rural Two-Lane Segment Two-lane Undivided	379+00.00	379+62.69	62.69	0.0119	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
76	Rural Two-Lane Segment Two-lane Undivided	379+62.69	385+22.97	560.28	0.1061	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false				
77	Rural Two-Lane Segment Two-lane Undivided	385+22.97	386+60.00	137.03	0.0260	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
78	Rural Two-Lane Segment Two-lane Undivided	386+60.00	389+50.00	290.00	0.0549	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
79	Rural Two-Lane Segment Two-lane Undivided	389+50.00	394+00.00	450.00	0.0852	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TWT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
80	Rural Two-Lane Segment Two-lane Undivided	394+00.00	396+46.15	246.15	0.0466	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
81	Rural Two-Lane Segment Two-lane Undivided	396+46.15	397+00.00	53.85	0.0102	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	0.72	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
82	Rural Two-Lane Segment Two-lane Undivided	397+00.00	399+00.00	200.00	0.0379	2019-2022: 2,085; 2023: 2,134	12.00	12.00	0.00	8.00	0.72	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
83	Rural Two-Lane Segment Two-lane Undivided	399+00.00	405+75.41	675.41	0.1279	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	0.72	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
84	Rural Two-Lane Segment Two-lane Undivided	405+75.41	406+00.00	24.59	0.0047	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	0.72	6.2	3	false	0	false	false	false				
85	Rural Two-Lane Segment Two-lane Undivided	406+00.00	407+00.00	100.00	0.0189	2019-2022: 2,085; 2023: 2,134	12.00	12.00	0.00	8.00	0.72	6.2	3	false	0	false	false	false				
86	Rural Two-Lane Segment Two-lane Undivided	407+00.00	443+25.00	3,625.00	0.6866	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	0.72	6.2	3	false	0	false	false	false				
87	Rural Two-Lane Segment Two-lane Undivided	443+25.00	445+50.00	225.00	0.0426	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
88	Rural Two-Lane Segment Two-lane Undivided	445+50.00	452+50.00	700.00	0.1326	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
89	Rural Two-Lane Segment Two-lane Undivided	452+50.00	459+00.00	650.00	0.1231	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
90	Rural Two-Lane Segment Two-lane Undivided	459+00.00	460+00.00	100.00	0.0189	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	0.00	-0.96	6.2	3	false	0	false	false	false				
91	Rural Two-Lane Segment Two-lane Undivided	460+00.00	460+58.58	58.58	0.0111	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
92	Rural Two-Lane Segment Two-lane Undivided	460+58.58	485+61.23	2,502.65	0.4740	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-0.01	6.2	3	false	0	false	false	false				
93	Rural Two-Lane Segment Two-lane Undivided	485+61.23	503+00.00	1,738.77	0.3293	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-1.07	6.2	3	false	0	false	false	false				
94	Rural Two-Lane Segment Two-lane Undivided	503+00.00	507+00.00	400.00	0.0758	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-1.07	6.2	3	false	0	false	false	false				
95	Rural Two-Lane Segment Two-lane Undivided	507+00.00	508+00.00	100.00	0.0189	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-1.07	6.2	3	false	0	false	true	false				
96	Rural Two-Lane Segment Two-lane Undivided	508+00.00	508+08.24	8.24	0.0016	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	-1.07	6.2	3	false	0	false	true	false				
97	Rural Two-Lane Segment Two-lane Undivided	508+08.24	510+30.00	221.76	0.0420	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	0.21	6.2	3	false	0	false	true	false				
98	Rural Two-Lane Segment Two-lane Undivided	510+30.00	512+00.00	170.00	0.0322	2019-2022: 2,085; 2023: 2,134	12.00	12.00	8.00	8.00	0.21	6.2	3	false	0	false	false	false				
99	Rural Two-Lane Segment Two-lane Undivided	512+00.00	513+00.00	100.00	0.0189	2019-2022: 4,325; 2023: 5,081	12.00	12.00	0.00	0.00	0.21	6.2	3	false	0	false	true	false				
100	Rural Two-Lane Segment Two-lane Undivided	513+00.00	515+00.00	200.00	0.0379	2019-2022: 4,325; 2023: 5,081	12.00	12.00	8.00	8.00	0.21	6.2	3	false	0	false	true	false				
101	Rural Two-Lane Segment Two-lane Undivided	515+00.00	520+00.00	500.00	0.0947	2019-2022: 4,325; 2023: 5,081	12.00	12.00	8.00	8.00	0.21	6.2	3	false	0	true	true	false				
102	Rural Two-Lane Segment Two-lane Undivided	520+00.00	520+49.15	49.15	0.0093	2019-2022: 4,325; 2023: 5,081	12.00	12.00	0.00	0.00	0.21	6.2	3	false	0	false	true	false				
103	Rural Two-Lane Segment Two-lane Undivided	520+49.15	521+00.00	50.85	0.0096	2019-2022: 4,325; 2023: 5,081	12.00	12.00	0.00	0.00	0.21	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
104	Rural Two-Lane Segment Two-lane Undivided	521+00.00	523+38.60	238.60	0.0452	2019-2022: 4,325; 2023: 5,081	12.00	12.00	8.00	8.00	0.21	6.2	3	false	0	true	true	false	2,458.49	2.0	true	45
105	Rural Two-Lane Segment Two-lane Undivided	523+38.60	524+00.00	61.40	0.0116	2019-2022: 4,325; 2023: 5,081	12.00	12.00	8.00	8.00	1.90	6.2	3	false	0	true	true	false	2,458.49	2.0	true	45
106	Rural Two-Lane Segment Two-lane Undivided	524+00.00	525+00.00	100.00	0.0189	2019-2022: 4,325; 2023: 5,081	12.00	12.00	0.00	0.00	1.90	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TWT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
107	Rural Two-Lane Segment Two-lane Undivided	525+00.00	525+18.58	18.58	0.0035	2019-2022: 4,325; 2023: 5,081	12.00	12.00	8.00	8.00	1.90	6.2	3	false	0	true	true	false	2,458.49	2.0	true	45
108	Rural Two-Lane Segment Two-lane Undivided	525+18.58	528+00.00	281.42	0.0533	2019-2022: 4,325; 2023: 5,081	12.00	12.00	8.00	8.00	-0.02	6.2	3	false	0	true	true	false	2,458.49	2.0	true	45
109	Rural Two-Lane Segment Two-lane Undivided	528+00.00	529+00.00	100.00	0.0189	2019-2022: 4,325; 2023: 5,081	12.00	12.00	0.00	0.00	-0.02	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
110	Rural Two-Lane Segment Two-lane Undivided	529+00.00	539+00.00	1,000.00	0.1894	2019-2022: 4,325; 2023: 5,081	12.00	12.00	8.00	8.00	-0.02	6.2	3	false	0	true	true	false	2,458.49	2.0	true	45
111	Rural Two-Lane Segment Two-lane Undivided	539+00.00	539+50.00	50.00	0.0095	2019-2022: 4,325; 2023: 5,081	12.00	12.00	8.00	8.00	-0.02	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
112	Rural Two-Lane Segment Two-lane Undivided	539+50.00	540+00.00	50.00	0.0095	2019-2022: 4,325; 2023: 5,081	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
113	Rural Two-Lane Segment Two-lane Undivided	540+00.00	540+50.00	50.00	0.0095	2019-2022: 4,325; 2023: 5,081	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
114	Rural Two-Lane Segment Two-lane Undivided	540+50.00	540+74.37	24.37	0.0046	2019-2022: 4,325; 2023: 5,081	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
115	Rural Two-Lane Segment Two-lane Undivided	540+74.37	541+00.00	25.63	0.0049	2019-2022: 4,325; 2023: 5,081	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	true	false				
116	Rural Two-Lane Segment Two-lane Undivided	541+00.00	541+50.00	50.00	0.0095	2019-2022: 4,325; 2023: 5,081	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	true	false				
117	Rural Two-Lane Segment Two-lane Undivided	541+50.00	541+70.00	20.00	0.0038	2019-2022: 4,325; 2023: 5,081	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	true	false				
118	Rural Two-Lane Segment Two-lane Undivided	541+70.00	542+30.00	60.00	0.0114	2019-2022: 4,325; 2023: 5,081	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	true	false				
119	Rural Two-Lane Segment Two-lane Undivided	542+30.00	542+64.00	34.00	0.0064	2019-2022: 4,325; 2023: 5,081	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	true	false				
120	Rural Two-Lane Segment Two-lane Undivided	542+64.00	543+34.00	70.00	0.0133	2019-2022: 4,325; 2023: 5,081	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	true	false				
121	Rural Two-Lane Segment Two-lane Undivided	543+34.00	544+00.00	66.00	0.0125	2019-2022: 4,325; 2023: 5,081	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	true	false				
122	Rural Two-Lane Segment Two-lane Undivided	544+00.00	545+00.00	100.00	0.0189	2019-2022: 4,325; 2023: 5,081	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
123	Rural Two-Lane Segment Two-lane Undivided	545+00.00	548+23.00	323.00	0.0612	2019-2022: 4,325; 2023: 5,081	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
124	Rural Two-Lane Segment Two-lane Undivided	548+23.00	553+70.00	547.00	0.1036	2019-2022: 4,325; 2023: 5,081	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
125	Rural Two-Lane Segment Two-lane Undivided	553+70.00	554+00.00	30.00	0.0057	2019-2022: 4,325; 2023: 5,081	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	false	false				
126	Rural Two-Lane Segment Two-lane Undivided	554+00.00	554+20.00	20.00	0.0038	2019-2022: 4,325; 2023: 5,081	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	false	false				
127	Rural Two-Lane Segment Two-lane Undivided	554+20.00	560+00.00	580.00	0.1098	2019-2022: 4,325; 2023: 5,081	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
128	Rural Two-Lane Segment Two-lane Undivided	560+00.00	562+58.56	258.56	0.0490	2019-2022: 4,325; 2023: 5,081	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
129	Rural Two-Lane Segment Two-lane Undivided	562+58.56	564+00.00	141.44	0.0268	2019-2022: 4,325; 2023: 5,081	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
130	Rural Two-Lane Segment Two-lane Undivided	564+00.00	565+00.00	100.00	0.0189	2019-2022: 4,325; 2023: 5,081	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
131	Rural Two-Lane Segment Two-lane Undivided	565+00.00	565+77.00	77.00	0.0146	2019-2022: 4,325; 2023: 5,245	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
132	Rural Two-Lane Segment Two-lane Undivided	565+77.00	566+10.00	33.00	0.0063	2019-2022: 4,325; 2023: 5,245	12.00	12.00	0.00	0.00	-0.20	6.2	3	false	0	false	false	false				
133	Rural Two-Lane Segment Two-lane Undivided	566+10.00	566+50.00	40.00	0.0076	2019-2022: 4,325; 2023: 5,245	12.00	12.00	0.00	0.00	-0.20	6.2	3	false	0	false	false	false				

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TWT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
134	Rural Two-Lane Segment Two-lane Undivided	566+50.00 0	569+37.00 0	287.00	0.0544	2019-2022: 4,325; 2023: 5,245	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
135	Rural Two-Lane Segment Two-lane Undivided	569+37.00 0	569+70.00 0	33.00	0.0063	2019-2022: 4,325; 2023: 5,245	12.00	12.00	8.00	0.00	-0.20	6.2	3	false	0	false	false	false				
136	Rural Two-Lane Segment Two-lane Undivided	569+70.00 0	570+00.00 0	30.00	0.0057	2019-2022: 4,325; 2023: 5,245	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
137	Rural Two-Lane Segment Two-lane Undivided	570+00.00 0	575+00.00 0	500.00	0.0947	2019-2022: 4,325; 2023: 5,245	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	true	false	false				
138	Rural Two-Lane Segment Two-lane Undivided	575+00.00 0	579+50.00 0	450.00	0.0852	2019-2022: 4,325; 2023: 5,245	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
139	Rural Two-Lane Segment Two-lane Undivided	579+50.00 0	579+70.00 0	20.00	0.0038	2019-2022: 4,325; 2023: 5,245	12.00	12.00	0.00	0.00	-0.20	6.2	3	false	0	false	false	false				
140	Rural Two-Lane Segment Two-lane Undivided	579+70.00 0	580+10.00 0	40.00	0.0076	2019-2022: 4,325; 2023: 5,245	12.00	12.00	0.00	0.00	-0.20	6.2	3	false	0	false	false	false				

Table 4. Evaluation Intersection - Section 1

Inter. No.	Title	Type	Location (Sta. ft)	Major AADT	Minor AADT	Legs	Traffic Control	Major road approaches w/Left Turn Lanes	Major road approaches w/Right Turn Lanes	Skew1	Skew2	Lighted at Night
1	West Central School/SD38 (v2)	Rural Two-Lane Intersection Three-Legged w/STOP control	569+50.000	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	2025: 912; 2026: 932; 2027: 951; 2028: 970; 2029: 990; 2030: 1,013; 2031: 1,036; 2032: 1,059; 2033: 1,082; 2034: 1,105; 2035: 1,129; 2036: 1,152; 2037: 1,175; 2038: 1,198; 2039: 1,221; 2040: 1,245; 2041: 1,273; 2042: 1,302; 2043: 1,330; 2044: 1,359; 2045: 1,387; 2046: 1,416; 2047: 1,444; 2048: 1,473; 2049: 1,501; 2050: 1,530	3	Stop-Controlled	0	0	1.37		false
2	2nd/SD38 (v3)	Rural Two-Lane Intersection Four-Legged w/STOP control	566+00.000	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	2025: 1,338; 2026: 1,366; 2027: 1,394; 2028: 1,422; 2029: 1,450; 2030: 1,484; 2031: 1,518; 2032: 1,552; 2033: 1,586; 2034: 1,620; 2035: 1,654; 2036: 1,688; 2037: 1,722; 2038: 1,756; 2039: 1,790; 2040: 1,825; 2041: 1,867; 2042: 1,909; 2043: 1,951; 2044: 1,993; 2045: 2,035; 2046: 2,077; 2047: 2,119; 2048: 2,161; 2049: 2,203; 2050: 2,245	4	Stop-Controlled	1	0	41.37	41.37	false
4	459/SD38 (v2)	Rural Two-Lane Intersection Four-Legged w/STOP control	296+00.000	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	2025: 320; 2026: 329; 2027: 337; 2028: 346; 2029: 355; 2030: 363; 2031: 371; 2032: 379; 2033: 387; 2034: 395; 2035: 404; 2036: 412; 2037: 420; 2038: 428; 2039: 436; 2040: 445; 2041: 455; 2042: 465; 2043: 475; 2044: 485; 2045: 495; 2046: 505; 2047: 515; 2048: 525; 2049: 535; 2050: 545	4	Stop-Controlled	2	0	0.04	0.04	false
5	SD38/SD19_Build (v1)	Rural Two-Lane Intersection Four-Legged w/STOP control	187+50.000	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	2025: 2,094; 2026: 2,140; 2027: 2,187; 2028: 2,233; 2029: 2,280; 2030: 2,336; 2031: 2,392; 2032: 2,449; 2033: 2,505; 2034: 2,561; 2035: 2,618; 2036: 2,674; 2037: 2,730; 2038: 2,787; 2039: 2,843; 2040: 2,900; 2041: 2,967; 2042: 3,034; 2043: 3,101; 2044: 3,168; 2045: 3,235; 2046: 3,302; 2047: 3,369; 2048: 3,436; 2049: 3,503; 2050: 3,570	4	Stop-Controlled	2	0	5.84	5.84	false
6	I90 SPEEDWAY/SD38 (v1)	Rural Two-Lane Intersection Three-Legged w/STOP control	378+50.000	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	2025: 260; 2026: 264; 2027: 267; 2028: 271; 2029: 275; 2030: 281; 2031: 288; 2032: 295; 2033: 302; 2034: 309; 2035: 315; 2036: 322; 2037: 329; 2038: 336; 2039: 343; 2040: 350; 2041: 372; 2042: 395; 2043: 417; 2044: 440; 2045: 462; 2046: 485; 2047: 507; 2048: 530; 2049: 552; 2050: 575	3	Stop-Controlled	1	1	5.46		false
7	463/SD38 (v3)	Rural Two-Lane Intersection Four-Legged w/STOP control	512+00.000	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	2025: 3,802; 2026: 3,882; 2027: 3,963; 2028: 4,044; 2029: 4,125; 2030: 4,221; 2031: 4,318; 2032: 4,415; 2033: 4,512; 2034: 4,609; 2035: 4,705; 2036: 4,802; 2037: 4,899; 2038: 4,996; 2039: 5,093; 2040: 5,190; 2041: 5,308; 2042: 5,427; 2043: 5,545; 2044: 5,664; 2045: 5,782; 2046: 5,901; 2047: 6,019; 2048: 6,138; 2049: 6,256; 2050: 6,375	4	Stop-Controlled	1	0	1.43	1.43	true
8	Main Ave/SD38 (v1)	Rural Two-Lane Intersection Four-Legged w/STOP control	524+50.000	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	2025: 1,367; 2026: 1,397; 2027: 1,426; 2028: 1,455; 2029: 1,485; 2030: 1,520; 2031: 1,555; 2032: 1,590; 2033: 1,625; 2034: 1,660; 2035: 1,695; 2036: 1,730; 2037: 1,765; 2038: 1,800; 2039: 1,835; 2040: 1,870; 2041: 1,912; 2042: 1,955; 2043: 1,997; 2044: 2,040; 2045: 2,082; 2046: 2,125; 2047: 2,167; 2048: 2,210; 2049: 2,252; 2050: 2,295	4	Stop-Controlled	0	0	11.00	10.54	false
9	Vandemark/SD38 (v1)	Rural Two-Lane Intersection Four-Legged w/STOP control	541+50.000	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	2025: 657; 2026: 672; 2027: 686; 2028: 700; 2029: 715; 2030: 731; 2031: 747; 2032: 764; 2033: 780; 2034: 796; 2035: 813; 2036: 829; 2037: 845; 2038: 862; 2039: 878; 2040: 895; 2041: 915; 2042: 936; 2043: 956; 2044: 977; 2045: 997; 2046: 1,018; 2047: 1,038; 2048: 1,059; 2049: 1,079; 2050: 1,100	4	Stop-Controlled	1	0	48.63	48.63	false

Table 5. Crash History Intersection - Section 1

Inter. No.	Title	Type	Location (Sta. ft)	Major AADT	Minor AADT	Legs	Traffic Control	Major road approaches w/Left Turn Lanes	Major road approaches w/Right Turn Lanes	Skew1	Skew2	Lighted at Night
1	West Central School/SD38 (v2)	Rural Two-Lane Intersection Three-Legged w/STOP control	569+50.000	2019-2022: 4,325; 2023: 5,245	2019-2022: 855; 2023: 874	3	Stop-Controlled	0	0	1.37		false
2	2nd/SD38 (v3)	Rural Two-Lane Intersection Four-Legged w/STOP control	566+00.000	2019-2022: 4,325; 2023: 5,245	2019-2022: 1,255; 2023: 1,282	4	Stop-Controlled	1	0	41.37	41.37	false
4	459/SD38 (v2)	Rural Two-Lane Intersection Four-Legged w/STOP control	296+00.000	2019-2022: 2,085; 2023: 2,134	2019-2022: 295; 2023: 303	4	Stop-Controlled	2	0	0.04	0.04	false
5	SD38/SD19_Build (v1)	Rural Two-Lane Intersection Four-Legged w/STOP control	187+50.000	2019-2022: 2,085; 2023: 2,134	2019-2022: 1,955; 2023: 2,001	4	Stop-Controlled	2	0	5.84	5.84	false
6	I90 SPEEDWAY/SD38 (v1)	Rural Two-Lane Intersection Three-Legged w/STOP control	378+50.000	2019-2022: 2,085; 2023: 2,134	2019-2022: 250; 2023: 253	3	Stop-Controlled	1	1	5.46		false
7	463/SD38 (v3)	Rural Two-Lane Intersection Four-Legged w/STOP control	512+00.000	2019-2022: 4,325; 2023: 5,081	2019-2022: 3,560; 2023: 3,640	4	Stop-Controlled	1	0	1.43	1.43	true
8	Main Ave/SD38 (v1)	Rural Two-Lane Intersection Four-Legged w/STOP control	524+50.000	2019-2022: 4,325; 2023: 5,081	2019-2022: 1,280; 2023: 1,309	4	Stop-Controlled	0	0	11.00	10.54	false
9	Vandemark/SD38 (v1)	Rural Two-Lane Intersection Four-Legged w/STOP control	541+50.000	2019-2022: 4,325; 2023: 5,081	2019-2022: 615; 2023: 629	4	Stop-Controlled	1	0	48.63	48.63	false

Table 6. Expected Highway Crash Rates and Frequencies Summary (Section 1)

First Year of Analysis	2025
Last Year of Analysis	2050
Evaluated Length (mi)	7.7398
Average Future Road AADT (vpd)	4,284
Expected Crashes	
Total Crashes	422.63
Fatal and Injury Crashes	177.58
Property-Damage-Only Crashes	245.06
Percent of Total Expected Crashes	
Percent Fatal and Injury Crashes (%)	42
Percent Property-Damage-Only Crashes (%)	58
Expected Crash Rate	
Crash Rate (crashes/mi/yr)	2.1002
FI Crash Rate (crashes/mi/yr)	0.8824
PDO Crash Rate (crashes/mi/yr)	1.2178
Expected Travel Crash Rate	
Total Travel (million veh-mi)	314.63
Travel Crash Rate (crashes/million veh-mi)	1.34
Travel FI Crash Rate (crashes/million veh-mi)	0.56
Travel PDO Crash Rate (crashes/million veh-mi)	0.78

Table 7. Expected Crash Frequencies and Rates by Highway Segment/Intersection (Section 1)

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/mi/1000 veh-mi)	Expected Intersection Travel Crash Rate (crashes/million veh)
1	171+44.000	172+42.000	0.0186	0.237	0.402	0.0091	0.0033	0.0058	0.0155	0.0050	0.0105	-0.0064	-0.0017	-0.0047	0.4911	0.45	
2	172+42.000	174+52.690	0.0399	0.481	0.786	0.0185	0.0067	0.0118	0.0302	0.0097	0.0205	-0.0117	-0.0030	-0.0087	0.4638	0.43	
3	174+52.690	176+25.000	0.0326	0.498	0.980	0.0192	0.0072	0.0120	0.0377	0.0121	0.0256	-0.0185	-0.0049	-0.0136	0.5873	0.54	
4	176+25.000	178+85.250	0.0493	0.753	1.479	0.0289	0.0108	0.0181	0.0569	0.0183	0.0386	-0.0280	-0.0074	-0.0205	0.5873	0.54	
5	178+85.250	183+75.370	0.0928	1.119	1.829	0.0431	0.0155	0.0276	0.0703	0.0226	0.0478	-0.0273	-0.0071	-0.0202	0.4638	0.43	
6	183+75.370	184+00.000	0.0047	0.056	0.092	0.0022	0.0008	0.0014	0.0035	0.0011	0.0024	-0.0014	-0.0004	-0.0010	0.4638	0.43	
7	184+00.000	184+45.000	0.0085	0.103	0.168	0.0040	0.0014	0.0025	0.0065	0.0021	0.0044	-0.0025	-0.0007	-0.0019	0.4638	0.43	
8	184+45.000	185+20.000	0.0142	0.171	0.280	0.0066	0.0024	0.0042	0.0108	0.0035	0.0073	-0.0042	-0.0011	-0.0031	0.4638	0.43	
9	185+20.000	186+60.000	0.0265	0.320	0.522	0.0123	0.0044	0.0079	0.0201	0.0064	0.0136	-0.0078	-0.0020	-0.0058	0.4638	0.43	
10	186+60.000	187+20.000	0.0114	0.137	0.224	0.0053	0.0019	0.0034	0.0086	0.0028	0.0058	-0.0033	-0.0009	-0.0025	0.4638	0.43	
11	187+20.000	187+60.000	0.0076	0.110	0.208	0.0042	0.0016	0.0027	0.0080	0.0026	0.0054	-0.0037	-0.0010	-0.0028	0.5601	0.52	
SD38/SD19_Build (v1)	187+50.000			18.347	41.067	0.7056	0.3225	0.3831	1.5795	0.6808	0.8987	-0.8739	-0.3582	-0.5156			0.34
12	187+60.000	190+00.000	0.0455	0.548	0.895	0.0211	0.0076	0.0135	0.0344	0.0111	0.0234	-0.0134	-0.0035	-0.0099	0.4638	0.43	
13	190+00.000	192+00.000	0.0379	0.457	0.746	0.0176	0.0063	0.0112	0.0287	0.0092	0.0195	-0.0111	-0.0029	-0.0082	0.4638	0.43	
14	192+00.000	192+39.270	0.0074	0.090	0.146	0.0034	0.0012	0.0022	0.0056	0.0018	0.0038	-0.0022	-0.0006	-0.0016	0.4638	0.43	
15	192+39.270	193+60.000	0.0229	0.276	0.451	0.0106	0.0038	0.0068	0.0173	0.0056	0.0118	-0.0067	-0.0017	-0.0050	0.4638	0.43	
16	193+60.000	197+65.000	0.0767	0.925	1.511	0.0356	0.0128	0.0228	0.0581	0.0187	0.0395	-0.0225	-0.0059	-0.0167	0.4638	0.43	
17	197+65.000	199+00.000	0.0256	0.308	0.504	0.0119	0.0043	0.0076	0.0194	0.0062	0.0132	-0.0075	-0.0020	-0.0056	0.4638	0.43	
18	199+00.000	201+63.750	0.0500	0.602	0.984	0.0232	0.0083	0.0148	0.0379	0.0121	0.0257	-0.0147	-0.0038	-0.0109	0.4638	0.43	
19	201+63.750	202+00.000	0.0069	0.083	0.135	0.0032	0.0011	0.0020	0.0052	0.0017	0.0035	-0.0020	-0.0005	-0.0015	0.4638	0.43	
20	202+00.000	207+00.000	0.0947	1.142	1.866	0.0439	0.0158	0.0281	0.0718	0.0230	0.0487	-0.0278	-0.0072	-0.0206	0.4638	0.43	
21	207+00.000	207+49.760	0.0094	0.114	0.186	0.0044	0.0016	0.0028	0.0071	0.0023	0.0048	-0.0028	-0.0007	-0.0021	0.4638	0.43	
22	207+49.760	217+74.250	0.1940	2.340	3.823	0.0900	0.0324	0.0576	0.1470	0.0472	0.0998	-0.0570	-0.0148	-0.0422	0.4638	0.43	
23	217+74.250	221+00.000	0.0617	3.590	1.215	0.1381	0.0144	0.1237	0.0467	0.0150	0.0317	0.0913	-0.0006	0.0919	2.2379	2.06	
24	221+00.000	226+00.000	0.0947	1.142	1.866	0.0439	0.0158	0.0281	0.0718	0.0230	0.0487	-0.0278	-0.0072	-0.0206	0.4638	0.43	
25	226+00.000	230+66.250	0.0883	1.065	1.740	0.0410	0.0147	0.0262	0.0669	0.0215	0.0454	-0.0260	-0.0067	-0.0192	0.4638	0.43	
26	230+66.250	231+39.700	0.0139	0.188	0.333	0.0072	0.0026	0.0046	0.0128	0.0041	0.0087	-0.0056	-0.0015	-0.0041	0.5197	0.48	
27	231+39.700	235+00.000	0.0682	0.922	1.631	0.0355	0.0130	0.0225	0.0627	0.0201	0.0426	-0.0273	-0.0072	-0.0201	0.5197	0.48	
28	235+00.000	241+61.390	0.1253	4.881	2.994	0.1877	0.1173	0.0705	0.1152	0.0370	0.0782	0.0726	0.0803	-0.0077	1.4988	1.38	
29	241+61.390	242+00.000	0.0073	0.099	0.175	0.0038	0.0014	0.0024	0.0067	0.0022	0.0046	-0.0029	-0.0008	-0.0022	0.5197	0.48	
30	242+00.000	245+14.280	0.0595	0.804	1.423	0.0309	0.0113	0.0196	0.0547	0.0176	0.0372	-0.0238	-0.0062	-0.0175	0.5197	0.48	
31	245+14.280	246+55.100	0.0267	0.322	0.525	0.0124	0.0044	0.0079	0.0202	0.0065	0.0137	-0.0078	-0.0020	-0.0058	0.4638	0.43	
32	246+55.100	248+00.000	0.0274	0.331	0.541	0.0127	0.0046	0.0081	0.0208	0.0067	0.0141	-0.0081	-0.0021	-0.0060	0.4638	0.43	
33	248+00.000	249+00.000	0.0189	3.713	0.519	0.1428	0.0060	0.1368	0.0200	0.0064	0.0136	0.1228	-0.0004	0.1233	7.5395	6.96	
34	249+00.000	251+21.980	0.0420	0.507	0.828	0.0195	0.0070	0.0125	0.0319	0.0102	0.0216	-0.0124	-0.0032	-0.0091	0.4638	0.43	
35	251+21.980	252+40.240	0.0224	0.286	0.485	0.0110	0.0040	0.0070	0.0187	0.0060	0.0127	-0.0077	-0.0020	-0.0057	0.4911	0.45	
36	252+40.240	263+22.600	0.2050	2.472	4.038	0.0951	0.0342	0.0609	0.1553	0.0499	0.1055	-0.0603	-0.0157	-0.0446	0.4638	0.43	
37	263+22.600	272+66.740	0.1788	2.346	4.061	0.0902	0.0329	0.0574	0.1562	0.0501	0.1060	-0.0659	-0.0173	-0.0487	0.5047	0.47	
38	272+66.740	280+00.000	0.1389	1.675	2.736	0.0644	0.0232	0.0412	0.1052	0.0338	0.0715	-0.0408	-0.0106	-0.0302	0.4638	0.43	

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/mi/1000 veh-mi)	Expected Intersection Travel Crash Rate (crashes/million veh)
39	280+00.000	283+15.050	0.0597	0.720	1.175	0.0277	0.0100	0.0177	0.0452	0.0145	0.0307	-0.0175	-0.0046	-0.0130	0.4638	0.43	
40	283+15.050	284+08.540	0.0177	0.226	0.384	0.0087	0.0032	0.0055	0.0148	0.0047	0.0100	-0.0061	-0.0016	-0.0045	0.4911	0.45	
41	284+08.540	288+50.000	0.0836	3.854	1.647	0.1482	0.0190	0.1292	0.0634	0.0203	0.0430	0.0849	-0.0013	0.0862	1.7729	1.64	
42	288+50.000	289+00.000	0.0095	0.114	0.187	0.0044	0.0016	0.0028	0.0072	0.0023	0.0049	-0.0028	-0.0007	-0.0021	0.4638	0.43	
43	289+00.000	295+90.000	0.1307	1.576	2.575	0.0606	0.0218	0.0388	0.0990	0.0318	0.0672	-0.0384	-0.0100	-0.0284	0.4638	0.43	
44	295+90.000	296+00.000	0.0019	0.028	0.052	0.0011	0.0004	0.0007	0.0020	0.0006	0.0014	-0.0009	-0.0002	-0.0007	0.5601	0.52	
459/SD38 (v2)	296+00.000			11.417	12.695	0.4391	0.1711	0.2680	0.4883	0.2104	0.2778	-0.0492	-0.0394	-0.0098			0.37
45	296+00.000	296+10.000	0.0019	0.028	0.052	0.0011	0.0004	0.0007	0.0020	0.0006	0.0014	-0.0009	-0.0002	-0.0007	0.5601	0.52	
46	296+10.000	296+96.520	0.0164	0.198	0.323	0.0076	0.0027	0.0049	0.0124	0.0040	0.0084	-0.0048	-0.0013	-0.0036	0.4638	0.43	
47	296+96.520	298+33.660	0.0260	0.313	0.512	0.0120	0.0043	0.0077	0.0197	0.0063	0.0134	-0.0076	-0.0020	-0.0057	0.4638	0.43	
48	298+33.660	303+50.000	0.0978	1.179	1.927	0.0454	0.0163	0.0290	0.0741	0.0238	0.0503	-0.0287	-0.0075	-0.0213	0.4638	0.43	
49	303+50.000	304+50.000	0.0189	0.228	0.373	0.0088	0.0032	0.0056	0.0144	0.0046	0.0097	-0.0056	-0.0014	-0.0041	0.4638	0.43	
50	304+50.000	305+02.039	0.0099	0.119	0.194	0.0046	0.0016	0.0029	0.0075	0.0024	0.0051	-0.0029	-0.0008	-0.0021	0.4638	0.43	
51	305+02.039	309+35.490	0.0821	0.990	1.617	0.0381	0.0137	0.0244	0.0622	0.0200	0.0422	-0.0241	-0.0063	-0.0179	0.4638	0.43	
52	309+35.490	311+70.000	0.0444	0.536	0.875	0.0206	0.0074	0.0132	0.0337	0.0108	0.0229	-0.0131	-0.0034	-0.0097	0.4638	0.43	
53	311+70.000	313+25.000	0.0294	0.354	0.578	0.0136	0.0049	0.0087	0.0222	0.0071	0.0151	-0.0086	-0.0022	-0.0064	0.4638	0.43	
54	313+25.000	323+00.000	0.1847	2.227	3.638	0.0856	0.0308	0.0548	0.1399	0.0449	0.0950	-0.0543	-0.0141	-0.0402	0.4638	0.43	
55	323+00.000	323+26.980	0.0051	0.062	0.101	0.0024	0.0009	0.0015	0.0039	0.0012	0.0026	-0.0015	-0.0004	-0.0011	0.4638	0.43	
56	323+26.980	328+89.230	0.1065	1.284	2.098	0.0494	0.0178	0.0316	0.0807	0.0259	0.0548	-0.0313	-0.0081	-0.0232	0.4638	0.43	
57	328+89.230	329+81.740	0.0175	0.211	0.345	0.0081	0.0029	0.0052	0.0133	0.0043	0.0090	-0.0052	-0.0013	-0.0038	0.4638	0.43	
58	329+81.740	333+24.920	0.0650	0.934	1.738	0.0359	0.0133	0.0226	0.0669	0.0215	0.0454	-0.0309	-0.0082	-0.0228	0.5529	0.51	
59	333+24.920	334+00.000	0.0142	0.204	0.380	0.0079	0.0029	0.0050	0.0146	0.0047	0.0099	-0.0068	-0.0018	-0.0050	0.5529	0.51	
60	334+00.000	335+39.960	0.0265	7.167	0.709	0.2756	0.0083	0.2673	0.0273	0.0088	0.0185	0.2484	-0.0004	0.2488	10.3988	9.59	
61	335+39.960	342+39.000	0.1324	1.597	2.608	0.0614	0.0221	0.0393	0.1003	0.0322	0.0681	-0.0389	-0.0101	-0.0288	0.4638	0.43	
62	342+39.000	343+00.000	0.0116	0.139	0.228	0.0054	0.0019	0.0034	0.0088	0.0028	0.0059	-0.0034	-0.0009	-0.0025	0.4638	0.43	
63	343+00.000	351+20.000	0.1553	4.718	3.060	0.1815	0.1064	0.0751	0.1177	0.0378	0.0799	0.0638	0.0686	-0.0048	1.1686	1.08	
64	351+20.000	352+00.000	0.0152	0.221	0.415	0.0085	0.0031	0.0053	0.0160	0.0051	0.0108	-0.0075	-0.0020	-0.0055	0.5601	0.52	
65	352+00.000	352+20.000	0.0038	0.055	0.104	0.0021	0.0008	0.0013	0.0040	0.0013	0.0027	-0.0019	-0.0005	-0.0014	0.5601	0.52	
66	352+20.000	362+50.000	0.1951	2.352	3.843	0.0905	0.0325	0.0579	0.1478	0.0474	0.1004	-0.0573	-0.0149	-0.0424	0.4638	0.43	
67	362+50.000	369+14.990	0.1259	1.519	2.481	0.0584	0.0210	0.0374	0.0954	0.0306	0.0648	-0.0370	-0.0096	-0.0274	0.4638	0.43	
68	369+14.990	370+30.000	0.0218	0.304	0.553	0.0117	0.0043	0.0074	0.0213	0.0068	0.0144	-0.0096	-0.0025	-0.0070	0.5374	0.50	
69	370+30.000	370+60.000	0.0057	0.079	0.144	0.0031	0.0011	0.0019	0.0055	0.0018	0.0038	-0.0025	-0.0007	-0.0018	0.5374	0.50	
70	370+60.000	376+83.610	0.1181	4.948	2.998	0.1903	0.1210	0.0693	0.1153	0.0370	0.0783	0.0750	0.0840	-0.0090	1.6113	1.49	
71	376+83.610	378+00.000	0.0220	0.308	0.559	0.0118	0.0044	0.0075	0.0215	0.0069	0.0146	-0.0097	-0.0025	-0.0071	0.5374	0.50	
72	378+00.000	378+40.000	0.0076	0.116	0.230	0.0045	0.0017	0.0028	0.0088	0.0028	0.0060	-0.0044	-0.0012	-0.0032	0.5906	0.55	
73	378+40.000	378+60.000	0.0038	0.058	0.115	0.0022	0.0008	0.0014	0.0044	0.0014	0.0030	-0.0022	-0.0006	-0.0016	0.5906	0.55	
I90 SPEEDWAY/SD38 (v1)	378+50.000			4.676	6.719	0.1798	0.0773	0.1025	0.2584	0.1073	0.1512	-0.0786	-0.0299	-0.0487			0.16
74	378+60.000	379+00.000	0.0076	0.116	0.230	0.0045	0.0017	0.0028	0.0088	0.0028	0.0060	-0.0044	-0.0012	-0.0032	0.5906	0.55	
75	379+00.000	379+62.690	0.0119	0.166	0.301	0.0064	0.0023	0.0040	0.0116	0.0037	0.0079	-0.0052	-0.0014	-0.0038	0.5374	0.50	
76	379+62.690	385+22.970	0.1061	4.125	2.091	0.1587	0.1022	0.0564	0.0804	0.0258	0.0546	0.0783	0.0764	0.0018	1.4952	1.38	
77	385+22.970	386+60.000	0.0260	0.358	0.643	0.0138	0.0051	0.0087	0.0247	0.0079	0.0168	-0.0110	-0.0029	-0.0081	0.5303	0.49	
78	386+60.000	389+50.000	0.0549	0.757	1.361	0.0291	0.0107	0.0184	0.0524	0.0168	0.0355	-0.0232	-0.0061	-0.0171	0.5303	0.49	

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/mi/llion veh-mi)	Expected Intersection Travel Crash Rate (crashes/million veh)
79	389+50.000	394+00.000	0.0852	1.175	2.112	0.0452	0.0166	0.0286	0.0812	0.0261	0.0552	-0.0360	-0.0095	-0.0266	0.5303	0.49	
80	394+00.000	396+46.150	0.0466	0.643	1.155	0.0247	0.0091	0.0156	0.0444	0.0143	0.0302	-0.0197	-0.0052	-0.0145	0.5303	0.49	
81	396+46.150	397+00.000	0.0102	0.141	0.253	0.0054	0.0020	0.0034	0.0097	0.0031	0.0066	-0.0043	-0.0011	-0.0032	0.5303	0.49	
82	397+00.000	399+00.000	0.0379	0.575	1.122	0.0221	0.0083	0.0138	0.0432	0.0139	0.0293	-0.0211	-0.0056	-0.0155	0.5834	0.54	
83	399+00.000	405+75.410	0.1279	1.764	3.170	0.0678	0.0249	0.0429	0.1219	0.0391	0.0828	-0.0541	-0.0142	-0.0399	0.5303	0.49	
84	405+75.410	406+00.000	0.0047	0.056	0.092	0.0022	0.0008	0.0014	0.0035	0.0011	0.0024	-0.0014	-0.0004	-0.0010	0.4638	0.43	
85	406+00.000	407+00.000	0.0189	0.254	0.446	0.0098	0.0036	0.0062	0.0172	0.0055	0.0116	-0.0074	-0.0019	-0.0055	0.5153	0.47	
86	407+00.000	443+25.000	0.6866	22.508	13.526	0.8657	0.3493	0.5164	0.5202	0.1670	0.3532	0.3455	0.1823	0.1632	1.2609	1.16	
87	443+25.000	445+50.000	0.0426	0.514	0.840	0.0198	0.0071	0.0127	0.0323	0.0104	0.0219	-0.0125	-0.0033	-0.0093	0.4638	0.43	
88	445+50.000	452+50.000	0.1326	4.444	2.612	0.1709	0.1042	0.0667	0.1005	0.0322	0.0682	0.0705	0.0720	-0.0015	1.2894	1.19	
89	452+50.000	459+00.000	0.1231	1.484	2.425	0.0571	0.0205	0.0366	0.0933	0.0299	0.0633	-0.0362	-0.0094	-0.0268	0.4638	0.43	
90	459+00.000	460+00.000	0.0189	0.254	0.446	0.0098	0.0036	0.0062	0.0172	0.0055	0.0116	-0.0074	-0.0019	-0.0055	0.5153	0.47	
91	460+00.000	460+58.580	0.0111	0.134	0.219	0.0051	0.0019	0.0033	0.0084	0.0027	0.0057	-0.0033	-0.0008	-0.0024	0.4638	0.43	
92	460+58.580	485+61.230	0.4740	8.561	9.338	0.3293	0.0898	0.2395	0.3592	0.1153	0.2439	-0.0299	-0.0255	-0.0044	0.6947	0.64	
93	485+61.230	503+00.000	0.3293	3.971	6.488	0.1527	0.0549	0.0978	0.2495	0.0801	0.1694	-0.0968	-0.0252	-0.0716	0.4638	0.43	
94	503+00.000	507+00.000	0.0758	0.913	1.492	0.0351	0.0126	0.0225	0.0574	0.0184	0.0390	-0.0223	-0.0058	-0.0165	0.4638	0.43	
95	507+00.000	508+00.000	0.0189	0.217	0.344	0.0083	0.0030	0.0054	0.0132	0.0042	0.0090	-0.0049	-0.0013	-0.0036	0.4408	0.41	
96	508+00.000	508+08.240	0.0016	0.018	0.028	0.0007	0.0002	0.0004	0.0011	0.0003	0.0007	-0.0004	-0.0001	-0.0003	0.4408	0.41	
97	508+08.240	510+30.000	0.0420	0.481	0.762	0.0185	0.0066	0.0119	0.0293	0.0094	0.0199	-0.0108	-0.0028	-0.0080	0.4408	0.41	
98	510+30.000	512+00.000	0.0322	0.388	0.634	0.0149	0.0054	0.0096	0.0244	0.0078	0.0166	-0.0095	-0.0025	-0.0070	0.4638	0.43	
463/SD38 (v3)	512+00.000			59.412	153.769	2.2851	1.1850	1.1001	5.9142	2.5490	3.3652	-3.6291	-1.3640	-2.2651			0.60
99	512+00.000	513+00.000	0.0189	0.613	1.666	0.0236	0.0094	0.0142	0.0641	0.0206	0.0435	-0.0405	-0.0112	-0.0293	1.2446	0.32	
100	513+00.000	515+00.000	0.0379	1.072	2.395	0.0412	0.0158	0.0254	0.0921	0.0296	0.0626	-0.0509	-0.0138	-0.0372	1.0882	0.28	
101	515+00.000	520+00.000	0.0947	2.640	5.796	0.1015	0.0388	0.0627	0.2229	0.0716	0.1514	-0.1214	-0.0327	-0.0886	1.0722	0.28	
102	520+00.000	520+49.150	0.0093	0.301	0.819	0.0116	0.0046	0.0070	0.0315	0.0101	0.0214	-0.0199	-0.0055	-0.0144	1.2446	0.32	
103	520+49.150	521+00.000	0.0096	0.335	1.049	0.0129	0.0053	0.0076	0.0403	0.0130	0.0274	-0.0274	-0.0077	-0.0197	1.3395	0.35	
104	521+00.000	523+38.600	0.0452	1.381	3.425	0.0531	0.0208	0.0323	0.1317	0.0423	0.0895	-0.0786	-0.0215	-0.0571	1.1753	0.30	
105	523+38.600	524+00.000	0.0116	0.355	0.881	0.0137	0.0053	0.0083	0.0339	0.0109	0.0230	-0.0202	-0.0055	-0.0147	1.1753	0.30	
106	524+00.000	525+00.000	0.0189	0.660	2.063	0.0254	0.0103	0.0150	0.0793	0.0255	0.0539	-0.0540	-0.0151	-0.0388	1.3395	0.35	
Main Ave/SD38 (v1)	524+50.000			41.391	132.778	1.5920	0.6668	0.9251	5.1069	2.2011	2.9058	-3.5149	-1.5342	-1.9807			0.37
107	525+00.000	525+18.580	0.0035	0.107	0.267	0.0041	0.0016	0.0025	0.0103	0.0033	0.0070	-0.0061	-0.0017	-0.0044	1.1753	0.30	
108	525+18.580	528+00.000	0.0533	1.629	4.040	0.0626	0.0245	0.0381	0.1554	0.0499	0.1055	-0.0927	-0.0254	-0.0674	1.1753	0.30	
109	528+00.000	529+00.000	0.0189	0.660	2.063	0.0254	0.0103	0.0150	0.0793	0.0255	0.0539	-0.0540	-0.0151	-0.0388	1.3395	0.35	
110	529+00.000	539+00.000	0.1894	5.787	14.355	0.2226	0.0871	0.1355	0.5521	0.1772	0.3749	-0.3295	-0.0902	-0.2394	1.1753	0.30	
111	539+00.000	539+50.000	0.0095	0.293	0.742	0.0113	0.0044	0.0068	0.0285	0.0092	0.0194	-0.0172	-0.0047	-0.0125	1.1907	0.31	
112	539+50.000	540+00.000	0.0095	0.293	0.742	0.0113	0.0044	0.0068	0.0285	0.0092	0.0194	-0.0172	-0.0047	-0.0125	1.1907	0.31	
113	540+00.000	540+50.000	0.0095	0.293	0.742	0.0113	0.0044	0.0068	0.0285	0.0092	0.0194	-0.0172	-0.0047	-0.0125	1.1907	0.31	
114	540+50.000	540+74.370	0.0046	0.161	0.503	0.0062	0.0025	0.0037	0.0193	0.0062	0.0131	-0.0132	-0.0037	-0.0095	1.3395	0.35	
115	540+74.370	541+00.000	0.0049	0.157	0.427	0.0060	0.0024	0.0036	0.0164	0.0053	0.0111	-0.0104	-0.0029	-0.0075	1.2446	0.32	
116	541+00.000	541+50.000	0.0095	0.306	0.833	0.0118	0.0047	0.0071	0.0320	0.0103	0.0218	-0.0202	-0.0056	-0.0147	1.2446	0.32	
Vandemark/SD38 (v1)	541+50.000			27.929	74.904	1.0742	0.4965	0.5777	2.8809	1.2417	1.6393	-1.8068	-0.7452	-1.0616			0.27
117	541+50.000	541+70.000	0.0038	0.123	0.333	0.0047	0.0019	0.0028	0.0128	0.0041	0.0087	-0.0081	-0.0022	-0.0059	1.2446	0.32	

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/mi/llion veh-mi)	Expected Intersection Travel Crash Rate (crashes/million veh)
118	541+70.000	542+30.000	0.0114	0.368	1.000	0.0141	0.0056	0.0085	0.0384	0.0123	0.0261	-0.0243	-0.0067	-0.0176	1.2446	0.32	
119	542+30.000	542+64.000	0.0064	0.182	0.407	0.0070	0.0027	0.0043	0.0157	0.0050	0.0106	-0.0087	-0.0023	-0.0063	1.0882	0.28	
120	542+64.000	543+34.000	0.0133	0.375	0.838	0.0144	0.0055	0.0089	0.0322	0.0104	0.0219	-0.0178	-0.0048	-0.0130	1.0882	0.28	
121	543+34.000	544+00.000	0.0125	0.354	0.790	0.0136	0.0052	0.0084	0.0304	0.0098	0.0206	-0.0168	-0.0045	-0.0123	1.0882	0.28	
122	544+00.000	545+00.000	0.0189	0.555	1.300	0.0214	0.0083	0.0131	0.0500	0.0160	0.0339	-0.0286	-0.0078	-0.0208	1.1278	0.29	
123	545+00.000	548+23.000	0.0612	1.794	4.198	0.0690	0.0267	0.0423	0.1615	0.0518	0.1096	-0.0925	-0.0251	-0.0673	1.1278	0.29	
124	548+23.000	553+70.000	0.1036	9.958	7.109	0.3830	0.2582	0.1248	0.2734	0.0878	0.1857	0.1096	0.1704	-0.0609	3.6968	0.96	
125	553+70.000	554+00.000	0.0057	0.189	0.542	0.0073	0.0029	0.0044	0.0209	0.0067	0.0142	-0.0136	-0.0038	-0.0098	1.2816	0.33	
126	554+00.000	554+20.000	0.0038	0.126	0.361	0.0049	0.0019	0.0029	0.0139	0.0045	0.0094	-0.0090	-0.0025	-0.0065	1.2816	0.33	
127	554+20.000	560+00.000	0.1098	3.221	7.538	0.1239	0.0479	0.0759	0.2899	0.0931	0.1969	-0.1660	-0.0451	-0.1209	1.1278	0.29	
128	560+00.000	562+58.560	0.0490	1.436	3.360	0.0552	0.0214	0.0339	0.1292	0.0415	0.0878	-0.0740	-0.0201	-0.0539	1.1278	0.29	
129	562+58.560	564+00.000	0.0268	0.785	1.838	0.0302	0.0117	0.0185	0.0707	0.0227	0.0480	-0.0405	-0.0110	-0.0295	1.1278	0.29	
130	564+00.000	565+00.000	0.0189	0.555	1.300	0.0214	0.0083	0.0131	0.0500	0.0160	0.0339	-0.0286	-0.0078	-0.0208	1.1278	0.29	
131	565+00.000	565+77.000	0.0146	0.482	1.133	0.0185	0.0072	0.0114	0.0436	0.0140	0.0296	-0.0250	-0.0068	-0.0182	1.2719	0.29	
132	565+77.000	566+10.000	0.0063	0.235	0.675	0.0090	0.0036	0.0054	0.0260	0.0083	0.0176	-0.0170	-0.0047	-0.0122	1.4446	0.33	
2nd/SD38 (v3)	566+00.000			50.602	119.976	1.9462	0.7275	1.2187	4.6145	1.9888	2.6256	-2.6682	-1.2613	-1.4069			0.40
133	566+10.000	566+50.000	0.0076	0.284	0.819	0.0109	0.0044	0.0065	0.0315	0.0101	0.0214	-0.0205	-0.0057	-0.0148	1.4446	0.33	
134	566+50.000	569+37.000	0.0544	17.406	4.224	0.6695	0.2593	0.4102	0.1625	0.0522	0.1103	0.5070	0.2071	0.2999	12.3164	2.82	
135	569+37.000	569+70.000	0.0063	0.222	0.581	0.0085	0.0034	0.0052	0.0223	0.0072	0.0152	-0.0138	-0.0038	-0.0100	1.3670	0.31	
West Central School/SD38 (v2)	569+50.000			18.448	73.624	0.7095	0.3302	0.3794	2.8317	1.1752	1.6565	-2.1222	-0.8450	-1.2772			0.15
136	569+70.000	570+00.000	0.0057	0.188	0.442	0.0072	0.0028	0.0044	0.0170	0.0055	0.0115	-0.0098	-0.0027	-0.0071	1.2719	0.29	
137	570+00.000	575+00.000	0.0947	3.088	7.122	0.1188	0.0458	0.0729	0.2739	0.0879	0.1860	-0.1552	-0.0421	-0.1131	1.2542	0.29	
138	575+00.000	579+50.000	0.0852	2.818	6.623	0.1084	0.0420	0.0664	0.2547	0.0818	0.1730	-0.1463	-0.0398	-0.1066	1.2719	0.29	
139	579+50.000	579+70.000	0.0038	0.142	0.409	0.0055	0.0022	0.0033	0.0157	0.0051	0.0107	-0.0103	-0.0029	-0.0074	1.4446	0.33	
140	579+70.000	580+10.000	0.0076	0.284	0.819	0.0109	0.0044	0.0065	0.0315	0.0101	0.0214	-0.0205	-0.0057	-0.0148	1.4446	0.33	
All Segments			7.7398	190.411	230.845	7.3235	2.8529	4.4706	8.8786	2.8500	6.0286	-1.5551	0.0029	-1.5580	0.9462	0.60	
All Intersections				232.221	615.534	8.9316	3.9769	4.9547	23.6744	10.1542	13.5202	-14.7428	-6.1773	-8.5655			0.34
Total			7.7398	422.632	846.378	16.2551	6.8299	9.4252	32.5530	13.0043	19.5488	-16.2979	-6.1744	-10.1235	2.1002		

Table 8. Expected Crash Frequencies and Rates by Horizontal Design Element (Section 1)

Title	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/mi/llion veh-mi)
Tangent	171+44.000	174+52.690	0.0585	0.718	1.188	0.0276	0.0100	0.0177	0.0457	0.0147	0.0310	-0.0181	-0.0047	-0.0134	0.4725	0.44
Simple Curve 1	174+52.690	178+85.250	0.0819	1.251	2.459	0.0481	0.0180	0.0301	0.0946	0.0304	0.0642	-0.0465	-0.0124	-0.0341	0.5873	0.54
Tangent	178+85.250	230+66.250	0.9812	14.697	19.390	0.5653	0.1681	0.3971	0.7458	0.2394	0.5064	-0.1805	-0.0713	-0.1092	0.5761	0.53
Simple Curve 2	230+66.250	245+14.280	0.2742	6.894	6.555	0.2652	0.1456	0.1196	0.2521	0.0809	0.1712	0.0131	0.0647	-0.0516	0.9669	0.89
Tangent	245+14.280	263+22.600	0.3425	7.630	6.937	0.2935	0.0602	0.2332	0.2668	0.0856	0.1812	0.0266	-0.0254	0.0521	0.8569	0.79
Simple Curve 3	263+22.600	272+66.740	0.1788	2.346	4.061	0.0902	0.0329	0.0574	0.1562	0.0501	0.1060	-0.0659	-0.0173	-0.0487	0.5047	0.47
Tangent	272+66.740	296+96.470	0.4602	8.417	9.130	0.3237	0.0822	0.2415	0.3511	0.1127	0.2384	-0.0274	-0.0305	0.0031	0.7035	0.65
Simple Curve 4	296+96.470	296+96.520	0.0000	0.000	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000	-0.0000	-0.0000	0.4638	0.43
Tangent	296+96.520	329+81.740	0.6222	7.503	12.258	0.2886	0.1038	0.1848	0.4715	0.1513	0.3201	-0.1829	-0.0475	-0.1354	0.4638	0.43
Simple Curve 5	329+81.740	335+39.960	0.1057	8.306	2.828	0.3194	0.0245	0.2949	0.1088	0.0349	0.0738	0.2107	-0.0104	0.2211	3.0215	2.79
Tangent	335+39.960	369+14.990	0.6392	10.601	12.739	0.4077	0.1879	0.2199	0.4900	0.1573	0.3327	-0.0822	0.0306	-0.1128	0.6379	0.59
Simple Curve 6	369+14.990	379+62.690	0.1984	6.096	5.131	0.2345	0.1373	0.0972	0.1973	0.0633	0.1340	0.0371	0.0740	-0.0368	1.1817	1.09
Tangent	379+62.690	385+22.970	0.1061	4.125	2.091	0.1587	0.1022	0.0564	0.0804	0.0258	0.0546	0.0783	0.0764	0.0018	1.4952	1.38
Simple Curve 7	385+22.970	405+75.410	0.3887	5.412	9.817	0.2082	0.0766	0.1316	0.3776	0.1212	0.2564	-0.1694	-0.0446	-0.1248	0.5355	0.49
Tangent	405+75.410	520+49.150	2.1731	48.824	50.368	1.8778	0.7321	1.1457	1.9372	0.6218	1.3154	-0.0594	0.1103	-0.1697	0.8641	0.74
Simple Curve 8	520+49.150	540+74.370	0.3836	11.955	30.871	0.4598	0.1810	0.2788	1.1874	0.3811	0.8062	-0.7276	-0.2001	-0.5275	1.1988	0.31
Tangent	540+74.370	580+10.000	0.7454	45.636	55.023	1.7552	0.7904	0.9648	2.1163	0.6793	1.4370	-0.3611	0.1111	-0.4722	2.3548	0.57

Table 9. Predicted Crash Frequencies by Year (Section 1)

Year	Total Crashes	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)
2025	21.17	8.41	39.738	12.76	60.262
2026	22.73	9.04	39.783	13.69	60.217
2027	24.27	9.67	39.821	14.61	60.179
2028	25.80	10.28	39.854	15.52	60.146
2029	27.32	10.90	39.881	16.43	60.119
2030	27.93	11.14	39.889	16.79	60.111
2031	28.55	11.39	39.897	17.16	60.103
2032	29.17	11.64	39.905	17.53	60.095
2033	29.79	11.89	39.912	17.90	60.088
2034	30.41	12.14	39.920	18.27	60.080
2035	31.03	12.39	39.927	18.64	60.073
2036	31.65	12.64	39.934	19.01	60.066
2037	32.28	12.89	39.941	19.39	60.059
2038	32.91	13.14	39.948	19.76	60.052
2039	33.53	13.40	39.955	20.13	60.045
2040	34.17	13.65	39.962	20.51	60.038
2041	34.92	13.96	39.970	20.96	60.030
2042	35.69	14.27	39.978	21.42	60.022
2043	36.44	14.57	39.986	21.87	60.014
2044	37.21	14.88	39.994	22.33	60.006
2045	37.97	15.19	40.002	22.78	59.998
2046	38.74	15.50	40.010	23.24	59.990
2047	39.51	15.81	40.017	23.70	59.983
2048	40.29	16.12	40.024	24.16	59.976
2049	41.06	16.43	40.031	24.62	59.969
2050	41.83	16.75	40.038	25.08	59.962
Total	846.38	338.11	39.948	508.27	60.052
Average	32.55	13.00	39.948	19.55	60.052

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 10. Expected Crash Frequencies by Year (Section 1)

Year	Total Crashes	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)
2025	10.57	4.42	41.795	6.15	58.186
2026	11.35	4.75	41.844	6.60	58.142
2027	12.12	5.08	41.884	7.04	58.105
2028	12.88	5.40	41.917	7.48	58.074
2029	13.64	5.72	41.947	7.92	58.048
2030	13.95	5.85	41.955	8.10	58.040
2031	14.26	5.98	41.963	8.27	58.032
2032	14.56	6.11	41.971	8.45	58.025
2033	14.87	6.24	41.979	8.63	58.018
2034	15.18	6.38	41.987	8.81	58.011
2035	15.49	6.51	41.995	8.99	58.003
2036	15.80	6.64	42.002	9.17	57.997
2037	16.12	6.77	42.009	9.35	57.990
2038	16.43	6.90	42.017	9.53	57.983
2039	16.74	7.04	42.024	9.71	57.977
2040	17.06	7.17	42.031	9.89	57.970
2041	17.44	7.33	42.040	10.11	57.962
2042	17.82	7.49	42.049	10.33	57.954
2043	18.20	7.65	42.057	10.54	57.946
2044	18.58	7.82	42.066	10.77	57.938
2045	18.96	7.98	42.073	10.98	57.931
2046	19.35	8.14	42.081	11.21	57.924
2047	19.73	8.30	42.089	11.43	57.917
2048	20.12	8.47	42.097	11.65	57.910
2049	20.50	8.63	42.104	11.87	57.903
2050	20.89	8.80	42.112	12.09	57.896
Total	422.63	177.58	42.017	245.06	57.983
Average	16.25	6.83	42.017	9.43	57.983

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 11. Comparing Predicted and Expected Crashes for the Evaluation Period (Section 1)

Scope	Total Crashes	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)
Predicted	846.38	338.11	39.948	508.27	60.052
Expected	422.63	177.58	42.017	245.06	57.983
Expected - Predicted	-423.75	-160.53		-263.21	
Percent Difference	-100.26	-90.40		-107.41	

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 12. Expected Crash Type Distribution (Section 1)

Element Type	Crash Type	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)	Total Crashes	Percent Total (%)
Highway Segment	Collision with Animal	2.82	0.7	21.39	5.1	23.04	5.5
Highway Segment	Collision with Bicycle	0.30	0.1	0.12	0.0	0.38	0.1
Highway Segment	Other Single-vehicle Collision	0.52	0.1	3.37	0.8	4.00	0.9
Highway Segment	Overtaken	2.75	0.7	1.74	0.4	4.76	1.1
Highway Segment	Collision with Pedestrian	0.52	0.1	0.12	0.0	0.57	0.1
Highway Segment	Run Off Road	40.43	9.6	58.70	13.9	99.20	23.5
Highway Segment	Total Single Vehicle Crashes	47.33	11.2	85.43	20.2	131.96	31.2
Highway Segment	Angle Collision	7.49	1.8	8.37	2.0	16.18	3.8
Highway Segment	Head-on Collision	2.52	0.6	0.35	0.1	3.05	0.7
Highway Segment	Other Multiple-vehicle Collision	1.93	0.5	3.49	0.8	5.14	1.2
Highway Segment	Rear-end Collision	12.24	2.9	14.18	3.4	27.04	6.4
Highway Segment	Sideswipe	2.82	0.7	4.42	1.0	7.04	1.7
Highway Segment	Total Multiple Vehicle Crashes	27.00	6.4	30.80	7.3	58.46	13.8
Highway Segment	Total Highway Segment Crashes	74.33	17.6	116.23	27.5	190.41	45.1
Intersection	Collision with Animal	0.64	0.2	1.95	0.5	2.53	0.6
Intersection	Collision with Bicycle	0.10	0.0	0.13	0.0	0.23	0.1
Intersection	Other Single-vehicle Collision	0.49	0.1	1.41	0.3	1.86	0.4
Intersection	Overtaken	0.79	0.2	0.55	0.1	1.35	0.3
Intersection	Collision with Pedestrian	0.10	0.0	0.13	0.0	0.23	0.1
Intersection	Run Off Road	11.27	2.7	19.84	4.7	31.15	7.4
Intersection	Total Single Vehicle Crashes	13.39	3.2	24.02	5.7	37.35	8.8
Intersection	Angle Collision	52.29	12.4	43.80	10.4	95.60	22.6
Intersection	Head-on Collision	6.43	1.5	3.31	0.8	9.57	2.3
Intersection	Other Multiple-vehicle Collision	4.43	1.0	4.72	1.1	9.13	2.2
Intersection	Rear-end Collision	22.24	5.3	34.59	8.2	57.03	13.5
Intersection	Sideswipe	4.62	1.1	18.39	4.4	23.36	5.5
Intersection	Total Multiple Vehicle Crashes	90.01	21.3	104.80	24.8	194.69	46.1
Intersection	Total Intersection Crashes	103.40	24.5	128.82	30.5	232.04	54.9
	Total Crashes	177.72	42.1	245.06	58.0	422.45	100.0

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 13. Evaluation Message

Start Location (Sta. ft)	End Location (Sta. ft)	Message
580+00.000	580+00.000	Warning: for intersection #3 (580+00.000 to 580+00.000), SE SD-38 at 580+00.000 has more than one lane exiting. No intersection crash prediction computed.
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (3,560 vpd) for 2019 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (3,560 vpd) for 2020 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (3,560 vpd) for 2021 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (3,560 vpd) for 2022 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (3,640 vpd) for 2023 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
580+00.000	580+00.000	Warning: for intersection #3 (580+00.000 to 580+00.000), SE SD-38 at 580+00.000 has more than one lane exiting. No intersection crash prediction computed.
187+50.000	187+50.000	Warning: for intersection #5 (187+50.000 to 187+50.000), minor road traffic volume (3,503 vpd) for 2049 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
187+50.000	187+50.000	Warning: for intersection #5 (187+50.000 to 187+50.000), minor road traffic volume (3,570 vpd) for 2050 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (3,802 vpd) for 2025 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (3,882 vpd) for 2026 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (3,963 vpd) for 2027 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,044 vpd) for 2028 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,125 vpd) for 2029 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,221 vpd) for 2030 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,318 vpd) for 2031 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,415 vpd) for 2032 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,512 vpd) for 2033 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST

Start Location (Sta. ft)	End Location (Sta. ft)	Message
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,609 vpd) for 2034 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,705 vpd) for 2035 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,802 vpd) for 2036 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,899 vpd) for 2037 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,996 vpd) for 2038 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (5,093 vpd) for 2039 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (5,190 vpd) for 2040 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (5,308 vpd) for 2041 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (5,427 vpd) for 2042 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (5,545 vpd) for 2043 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (5,664 vpd) for 2044 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (5,782 vpd) for 2045 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (5,901 vpd) for 2046 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (6,019 vpd) for 2047 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (6,138 vpd) for 2048 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (6,256 vpd) for 2049 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (6,375 vpd) for 2050 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST

Interactive Highway Safety Design Model

Crash Prediction Evaluation Report

June 1, 2024

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Report Overview

Report Generated: Jun 1, 2024 2:26 PM

Report Template: System: Single Page, 508 Compliant [System] (mlcpm5, Dec 5, 2019 2:16 PM)

Evaluation Date: Sat Jun 01 14:21:35 CDT 2024

IHSDM Version: v17.0.0 (Sep 22, 2021)

Crash Prediction Module: v12.0.0 (Sep 22, 2021)

User Name: naveen.mallipaddi

Organization Name:

Phone:

E-Mail:

Project Title: SD-38_Build_Option1_I90EBRamp_I

Project Comment: Created Mon Mar 27 16:47:43 CDT 2023

Project Unit System: U.S. Customary

Highway Title: SD-38

Highway Comment: Created Mon Mar 27 16:49:47 CDT 2023

Highway Version: 22

Evaluation Title: Evaluation 55

Evaluation Comment: Created Sat Jun 01 14:16:24 CDT 2024

Minimum Location: 585+00.000

Maximum Location: 974+11.000

Policy for Superelevation: AASHTO 2011 U.S. Customary

Calibration: HSM Configuration

Crash Distribution: HSM Configuration

Model/CMF: HSM Configuration

First Year of Analysis: 2025

Last Year of Analysis: 2050

Empirical-Bayes Analysis: Site-Specific

Highway with Crash History: SD-38

Highway with Crash History Comment: Created Mon Mar 27 16:49:47 CDT 2023

Highway with Crash History Version: 22

First Year of Observed Crashes: 2018

Last Year of Observed Crashes: 2022

Disclaimer Regarding Crash Prediction Method

IMPORTANT NOTICE ABOUT COMPARING RESULTS FROM HIGHWAY SAFETY MANUAL FIRST EDITION (2010) MODELS TO RESULTS FROM NEW MODELS DEVELOPED UNDER NCHRP PROJECTS 17-70, 17-58, AND 17-68

Since the publication of the Highway Safety Manual - First Edition (HSM-1), in 2010 by the American Association of State Highway and Transportation Officials (AASHTO), multiple research efforts have been undertaken through the National Cooperative Highway Research Program (NCHRP) to develop safety performance models for road segment and intersection facility types that were not initially reflected in the HSM-1, in order to expand the breadth and depth of the HSM in the future.

The IHSDM Crash Prediction Module (CPM) is intended as a faithful implementation of HSM Part C predictive methods. As NCHRP projects to develop new predictive methods for the HSM are completed, FHWA works to incorporate the new methods into IHSDM, sometimes in advance of publication in the HSM. The following new crash predictive methods have been accepted by NCHRP project panels and incorporated into IHSDM, while pending AASHTO's approval for incorporation into a future edition of the HSM:

- Roundabouts: completed in 2018 under NCHRP Project 17-70, the new methods will provide improved outcomes for the safety analysis of roundabouts.
- 6+ lane and one-way urban/suburban arterials (including models for segments and intersections): completed under NCHRP Project 17-58.
- Intersection crash prediction methods for some intersection configurations and traffic control types not currently addressed in the HSM (e.g., all-way stop; rural 3-leg signalized; 3-leg stop-controlled where the major leg turns; urban 5-leg signalized; urban high-speed intersections): completed in 2021 under NCHRP Project 17-68.

However, in the absence of local calibration factors (see HSM-1 Part C, Appendix A for guidance on calibration of the predictive models), it is neither appropriate nor advisable to directly compare the results from new models (from NCHRP Projects 17-58, 17-68, and 17-70) to results from HSM-1 models, as the models were not calibrated to the same base state data sets, and consequently can produce unexpected results. If local calibration factors are available and applied to both new models and HSM-1 models, then it may be appropriate to directly compare the results. *[Note: Work being performed under NCHRP Project 17-72 (Update of Crash Modification Factors for the Highway Safety Manual) is expected to re-calibrate many of the old (HSM-1) and new (e.g., NCHRP 17-70) models to data from a single (or small number of) states, that would allow results from all models to be directly compared.]*

The models produced for NCHRP Project 17-70 have independent value in terms of informing the design of a roundabout and assessing the effects of different design characteristics on the expected safety performance of a roundabout.

The HSM-1 interim method previously included in IHSDM for evaluating roundabouts on urban/suburban arterials (i.e., evaluating an existing intersection and then applying a Crash Modification Factor for replacing the existing intersection with a roundabout) has been deactivated in IHSDM, to minimize any confusion with the new roundabout methodology.

Section Types

Section 4 Evaluation

Section: Section 4

Evaluation Start Location: 676+00.000

Evaluation End Location: 862+60.000

Area Type: Rural

Functional Class: Arterial

Type of Alignment: Undivided, Two Lane

Model Category: Rural, Two Lane

Calibration Factor: 2U=1.0; 3ST=1.0; 4ST=1.0; RT_ST_FI=1.0; RT_ST_PDO=1.0;

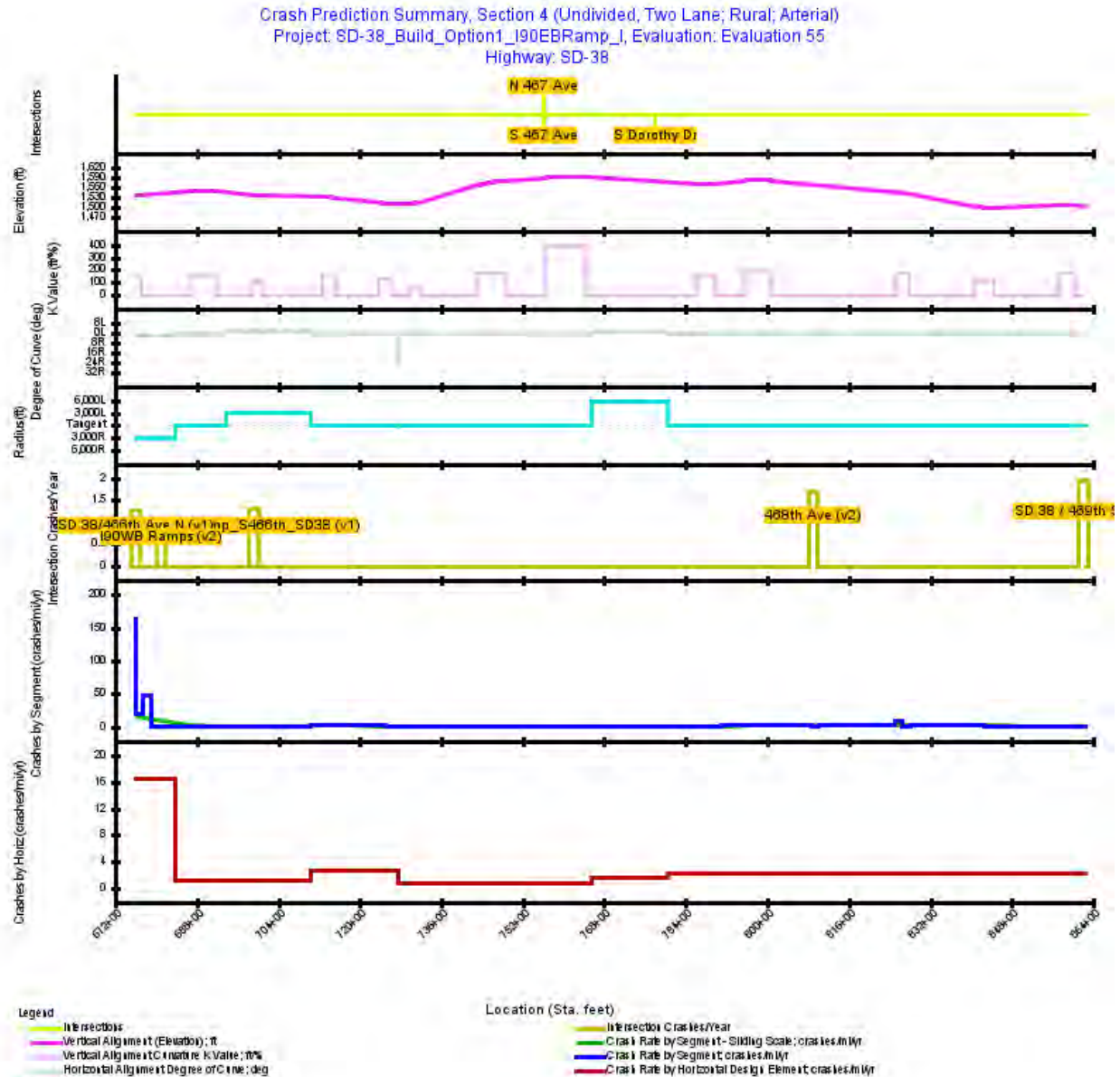


Figure 1. Crash Prediction Summary (Section 4)

Table 1. Observed Crashes Used in the Evaluation (Section 4)

Year	Observed Crashes	Total Crashes Used	FI Crashes	FI no/C Crashes	PDO Crashes
2018	6	6	5	5	1
2019	7	7	3	0	4
2020	3	3	1	0	2
2021	4	4	2	1	2
2022	7	7	4	0	3
All Years	27 ^[1]	27	15	6	12

Footnotes

^[1] Note: Observed crash data that does not comply with the associated CPM model requirements may not be used in EB processing.

Table 2. Evaluation Highway - Homogeneous Segments (Section 4)

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AAADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
22	Rural Two-Lane Segment Two-lane Undivided	676+00.000	676+15.090	15.09	0.0029	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	0.00	8.00	2.61	4.0	3	false	0	false	false	false	3,101.89	2.0	true	70
23	Rural Two-Lane Segment Two-lane Undivided	676+15.090	677+50.000	134.91	0.0256	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	0.00	8.00	1.34	4.0	3	false	0	false	false	false	3,101.89	2.0	true	70
24	Rural Two-Lane Segment Two-lane Undivided	677+50.000	679+00.000	150.00	0.0284	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	1.34	4.0	3	false	0	false	false	false	3,101.89	2.0	true	70
25	Rural Two-Lane Segment Two-lane Undivided	679+00.000	680+80.000	180.00	0.0341	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	8.00	8.00	1.34	4.0	3	false	0	false	false	false	3,101.89	2.0	true	70
26	Rural Two-Lane Segment Two-lane Undivided	680+80.000	680+90.000	10.00	0.0019	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	0.00	8.00	1.34	4.0	3	false	0	false	false	false	3,101.89	2.0	true	70
27	Rural Two-Lane Segment Two-lane Undivided	680+90.000	682+20.000	130.00	0.0246	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	0.00	8.00	1.34	4.0	3	false	0	false	false	false	3,101.89	2.0	true	70
28	Rural Two-Lane Segment Two-lane Undivided	682+20.000	682+30.000	10.00	0.0019	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	8.00	8.00	1.34	4.0	3	false	0	false	false	false	3,101.89	2.0	true	70
29	Rural Two-Lane Segment Two-lane Undivided	682+30.000	683+82.710	152.71	0.0289	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	8.00	8.00	1.34	4.0	3	false	0	false	false	false	3,101.89	2.0	true	70
30	Rural Two-Lane Segment Two-lane Undivided	683+82.710	689+36.990	554.28	0.1050	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	8.00	8.00	1.34	4.0	3	false	0	false	false	false				
31	Rural Two-Lane Segment Two-lane Undivided	689+36.990	691+50.000	213.01	0.0403	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	8.00	8.00	1.67	4.0	3	false	0	false	false	false				
32	Rural Two-Lane Segment Two-lane Undivided	691+50.000	692+70.000	120.00	0.0227	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	8.00	8.00	1.67	4.0	3	false	0	false	false	false				

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
33	Rural Two-Lane Segment Two-lane Undivided	692+70.000	693+85.010	115.01	0.0218	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	8.00	8.00	-1.67	4.0	3	false	0	false	false	false				
34	Rural Two-Lane Segment Two-lane Undivided	693+85.010	698+70.000	484.99	0.0919	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	8.00	8.00	-1.67	4.0	3	false	0	false	false	false	3,038.64	2.0	true	70
35	Rural Two-Lane Segment Two-lane Undivided	698+70.000	699+00.000	30.00	0.0057	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	0.00	8.00	-1.67	4.0	3	false	0	false	false	false	3,038.64	2.0	true	70
36	Rural Two-Lane Segment Two-lane Undivided	699+00.000	699+20.000	20.00	0.0038	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	0.00	0.00	-1.67	4.0	3	false	0	false	false	false	3,038.64	2.0	true	70
37	Rural Two-Lane Segment Two-lane Undivided	699+20.000	699+73.960	53.96	0.0102	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	0.00	0.00	-1.67	4.0	3	false	0	false	false	false	3,038.64	2.0	true	70
38	Rural Two-Lane Segment Two-lane Undivided	699+73.960	700+50.000	76.04	0.0144	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	0.00	0.00	-0.29	4.0	3	false	0	false	false	false	3,038.64	2.0	true	70
39	Rural Two-Lane Segment Two-lane Undivided	700+50.000	702+00.000	150.00	0.0284	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	8.00	0.00	-0.29	4.0	3	false	0	false	false	false	3,038.64	2.0	true	70
40	Rural Two-Lane Segment Two-lane Undivided	702+00.000	702+50.000	50.00	0.0095	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	0.00	-0.29	4.0	3	false	0	false	false	false	3,038.64	2.0	true	70
41	Rural Two-Lane Segment Two-lane Undivided	702+50.000	710+47.850	797.85	0.0151	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	-0.29	4.0	3	false	0	false	false	false	3,038.64	2.0	true	70
42	Rural Two-Lane Segment Two-lane Undivided	710+47.850	713+88.360	340.51	0.0645	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	-0.29	4.0	3	false	0	false	false	false				
43	Rural Two-Lane Segment Two-lane Undivided	713+88.360	725+01.220	1,112.86	0.2108	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	-1.80	4.0	3	false	0	false	false	false				
44	Rural Two-Lane Segment Two-lane Undivided	725+01.220	727+00.000	198.78	0.0376	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	0.06	4.0	3	false	0	false	false	false				
45	Rural Two-Lane Segment Two-lane Undivided	727+00.000	727+52.350	52.35	0.0099	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	0.06	4.0	3	false	0	false	false	false				

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AAADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
46	Rural Two-Lane Segment Two-lane Undivided	727+52.350	730+90.510	338.16	0.0640	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	0.06	4.0	3	false	0	false	false	false				
47	Rural Two-Lane Segment Two-lane Undivided	730+90.510	735+00.000	409.49	0.0776	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	4.47	4.0	3	false	0	false	false	false				
48	Rural Two-Lane Segment Two-lane Undivided	735+00.000	739+00.000	400.00	0.0758	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	4.47	4.0	3	false	0	false	false	false				
49	Rural Two-Lane Segment Two-lane Undivided	739+00.000	744+50.000	550.00	0.1042	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	4.47	4.0	3	false	0	false	false	false				
50	Rural Two-Lane Segment Two-lane Undivided	744+50.000	745+69.220	119.22	0.0226	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	4.47	4.0	3	false	0	false	false	false				
51	Rural Two-Lane Segment Two-lane Undivided	745+69.220	751+00.000	530.78	0.1005	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	1.12	4.0	3	false	0	false	false	false				
52	Rural Two-Lane Segment Two-lane Undivided	751+00.000	760+50.000	950.00	0.1799	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	1.12	4.0	3	false	0	false	false	false				
53	Rural Two-Lane Segment Two-lane Undivided	760+50.000	765+52.550	502.55	0.0952	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	-0.88	4.0	3	false	0	false	false	false				
54	Rural Two-Lane Segment Two-lane Undivided	765+52.550	767+00.000	147.45	0.0279	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	-0.88	4.0	3	false	0	false	false	false	5,888.09	2.0	true	70
55	Rural Two-Lane Segment Two-lane Undivided	767+00.000	780+45.930	1,345.93	0.2549	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	-0.88	4.0	3	false	0	false	false	false	5,888.09	2.0	true	70
56	Rural Two-Lane Segment Two-lane Undivided	780+45.930	787+93.440	747.51	0.1416	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	-0.88	4.0	3	false	0	false	false	false				
57	Rural Two-Lane Segment Two-lane Undivided	787+93.440	791+00.000	306.56	0.0581	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	1.46	4.0	3	false	0	false	false	false				
58	Rural Two-Lane Segment Two-lane Undivided	791+00.000	791+10.000	10.00	0.0019	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	1.46	4.0	3	false	0	false	false	false				
59	Rural Two-Lane Segment Two-lane Undivided	791+10.000	798+12.000	702.00	0.1330	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	1.46	4.0	3	false	0	false	false	false				
60	Rural Two-Lane Segment Two-lane Undivided	798+12.000	808+80.000	1,068.00	0.2023	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	-1.46	4.0	3	false	0	false	false	false				

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
61	Rural Two-Lane Segment Two-lane Undivided	808+80.000	809+00.000	20.00	0.0038	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	-1.46	4.0	3	false	0	false	false	false				
62	Rural Two-Lane Segment Two-lane Undivided	809+00.000	810+00.000	100.00	0.0189	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	0.00	0.00	-1.46	4.0	3	false	0	false	false	false				
63	Rural Two-Lane Segment Two-lane Undivided	810+00.000	825+00.000	1,500.00	0.2841	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	8.00	-1.46	4.0	3	false	0	false	false	false				
64	Rural Two-Lane Segment Two-lane Undivided	825+00.000	826+54.070	154.07	0.0292	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	8.00	-1.46	4.0	3	false	0	false	false	false				
65	Rural Two-Lane Segment Two-lane Undivided	826+54.070	828+00.000	145.93	0.0276	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	8.00	-2.84	4.0	3	false	0	false	false	false				
66	Rural Two-Lane Segment Two-lane Undivided	828+00.000	842+53.930	1,453.93	0.2754	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	8.00	-2.84	4.0	3	false	0	false	false	false				
67	Rural Two-Lane Segment Two-lane Undivided	842+53.930	854+00.000	1,146.07	0.2171	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	8.00	0.59	4.0	3	false	0	false	false	false				
68	Rural Two-Lane Segment Two-lane Undivided	854+00.000	854+70.000	70.00	0.0133	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	8.00	0.59	4.0	3	false	0	false	false	false				
69	Rural Two-Lane Segment Two-lane Undivided	854+70.000	855+80.000	110.00	0.0208	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	8.00	0.59	4.0	3	false	0	false	false	false				
70	Rural Two-Lane Segment Two-lane Undivided	855+80.000	858+75.120	295.12	0.0559	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	8.00	0.59	4.0	3	false	0	false	false	false				
71	Rural Two-Lane Segment Two-lane Undivided	858+75.120	861+85.000	309.88	0.0587	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	8.00	-1.07	4.0	3	false	0	false	false	false				
72	Rural Two-Lane Segment Two-lane Undivided	861+85.000	862+00.000	15.00	0.0028	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	0.00	-1.07	4.0	3	false	0	false	false	false				

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TWLT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
73	Rural Two-Lane Segment Two-lane Undivided	862+00.000	862+50.000	50.00	0.0095	2025: 6,704; 2026: 7,305; 2027: 7,907; 2028: 8,508; 2029: 9,110; 2030: 9,295; 2031: 9,480; 2032: 9,666; 2033: 9,851; 2034: 10,037; 2035: 10,222; 2036: 10,408; 2037: 10,593; 2038: 10,779; 2039: 10,964; 2040: 11,150; 2041: 11,375; 2042: 11,600; 2043: 11,825; 2044: 12,050; 2045: 12,275; 2046: 12,500; 2047: 12,725; 2048: 12,950; 2049: 13,175; 2050: 13,400	12.00	12.00	8.00	0.00	-1.07	4.0	3	false	0	false	false	false				
74	Rural Two-Lane Segment Two-lane Undivided	862+50.000	862+60.000	10.00	0.0019	2025: 6,704; 2026: 7,305; 2027: 7,907; 2028: 8,508; 2029: 9,110; 2030: 9,295; 2031: 9,480; 2032: 9,666; 2033: 9,851; 2034: 10,037; 2035: 10,222; 2036: 10,408; 2037: 10,593; 2038: 10,779; 2039: 10,964; 2040: 11,150; 2041: 11,375; 2042: 11,600; 2043: 11,825; 2044: 12,050; 2045: 12,275; 2046: 12,500; 2047: 12,725; 2048: 12,950; 2049: 13,175; 2050: 13,400	12.00	12.00	8.00	8.00	-1.07	4.0	3	false	0	false	false	false				

Table 3. User Defined CMF Used in the Eval Segment CPM Evaluation (Section 4)

Name	Description	Start Loc. (Sta. ft)	End Loc. (Sta. ft)	Start CMF Year	End CMF Year	Severity	CMF Value
1	TWLTL	676+00.000	680+90.000	2025	2025	Total	0.6900

Table 4. Crash History Highway - Homogeneous Segments (Section 4)

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TWL T Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
22	Rural Two-Lane Segment Two-lane Undivided	676+00.00	676+15.09	15.09	0.0029	2018-2022: 4,325	12.00	12.00	0.00	8.00	2.61	4.0	3	false	0	false	false	false	3,101.89	2.0	true	70
23	Rural Two-Lane Segment Two-lane Undivided	676+15.09	677+50.00	134.91	0.0256	2018-2022: 4,325	12.00	12.00	0.00	8.00	1.34	4.0	3	false	0	false	false	false	3,101.89	2.0	true	70
24	Rural Two-Lane Segment Two-lane Undivided	677+50.00	679+00.00	150.00	0.0284	2018-2022: 4,325	12.00	12.00	8.00	8.00	1.34	4.0	3	false	0	false	false	false	3,101.89	2.0	true	70
25	Rural Two-Lane Segment Two-lane Undivided	679+00.00	680+80.00	180.00	0.0341	2018-2022: 4,150	12.00	12.00	8.00	8.00	1.34	4.0	3	false	0	false	false	false	3,101.89	2.0	true	70
26	Rural Two-Lane Segment Two-lane Undivided	680+80.00	680+90.00	10.00	0.0019	2018-2022: 4,150	12.00	12.00	0.00	8.00	1.34	4.0	3	false	0	false	false	false	3,101.89	2.0	true	70
27	Rural Two-Lane Segment Two-lane Undivided	680+90.00	682+20.00	130.00	0.0246	2018-2022: 4,150	12.00	12.00	0.00	8.00	1.34	4.0	3	false	0	false	false	false	3,101.89	2.0	true	70
28	Rural Two-Lane Segment Two-lane Undivided	682+20.00	682+30.00	10.00	0.0019	2018-2022: 4,150	12.00	12.00	8.00	8.00	1.34	4.0	3	false	0	false	false	false	3,101.89	2.0	true	70
29	Rural Two-Lane Segment Two-lane Undivided	682+30.00	683+82.71	152.71	0.0289	2018-2022: 4,150	12.00	12.00	8.00	8.00	1.34	4.0	3	false	0	false	false	false	3,101.89	2.0	true	70
30	Rural Two-Lane Segment Two-lane Undivided	683+82.71	689+36.99	554.28	0.1050	2018-2022: 4,150	12.00	12.00	8.00	8.00	1.34	4.0	3	false	0	false	false	false				
31	Rural Two-Lane Segment Two-lane Undivided	689+36.99	691+50.00	213.01	0.0403	2018-2022: 4,150	12.00	12.00	8.00	8.00	-1.67	4.0	3	false	0	false	false	false				
32	Rural Two-Lane Segment Two-lane Undivided	691+50.00	692+70.00	120.00	0.0227	2018-2022: 4,150	12.00	12.00	8.00	8.00	-1.67	4.0	3	false	0	false	false	false				
33	Rural Two-Lane Segment Two-lane Undivided	692+70.00	693+85.01	115.01	0.0218	2018-2022: 4,150	12.00	12.00	8.00	8.00	-1.67	4.0	3	false	0	false	false	false				
34	Rural Two-Lane Segment Two-lane Undivided	693+85.01	698+70.00	484.99	0.0919	2018-2022: 4,150	12.00	12.00	8.00	8.00	-1.67	4.0	3	false	0	false	false	false	3,038.64	2.0	true	70
35	Rural Two-Lane Segment Two-lane Undivided	698+70.00	699+00.00	30.00	0.0057	2018-2022: 4,150	12.00	12.00	0.00	8.00	-1.67	4.0	3	false	0	false	false	false	3,038.64	2.0	true	70
36	Rural Two-Lane Segment Two-lane Undivided	699+00.00	699+20.00	20.00	0.0038	2018-2022: 4,150	12.00	12.00	0.00	0.00	-1.67	4.0	3	false	0	false	false	false	3,038.64	2.0	true	70
37	Rural Two-Lane Segment Two-lane Undivided	699+20.00	699+73.96	53.96	0.0102	2018-2022: 4,150	12.00	12.00	0.00	0.00	-1.67	4.0	3	false	0	false	false	false	3,038.64	2.0	true	70
38	Rural Two-Lane Segment Two-lane Undivided	699+73.96	700+50.00	76.04	0.0144	2018-2022: 4,150	12.00	12.00	0.00	0.00	-0.29	4.0	3	false	0	false	false	false	3,038.64	2.0	true	70
39	Rural Two-Lane Segment Two-lane Undivided	700+50.00	702+00.00	150.00	0.0284	2018-2022: 4,150	12.00	12.00	8.00	0.00	-0.29	4.0	3	false	0	false	false	false	3,038.64	2.0	true	70
40	Rural Two-Lane Segment Two-lane Undivided	702+00.00	702+50.00	50.00	0.0095	2018-2022: 4,900	12.00	12.00	8.00	0.00	-0.29	4.0	3	false	0	false	false	false	3,038.64	2.0	true	70
41	Rural Two-Lane Segment Two-lane Undivided	702+50.00	710+47.85	797.85	0.1511	2018-2022: 4,900	12.00	12.00	8.00	8.00	-0.29	4.0	3	false	0	false	false	false	3,038.64	2.0	true	70
42	Rural Two-Lane Segment Two-lane Undivided	710+47.85	713+88.36	340.51	0.0645	2018-2022: 4,900	12.00	12.00	8.00	8.00	-0.29	4.0	3	false	0	false	false	false				
43	Rural Two-Lane Segment Two-lane Undivided	713+88.36	725+01.22	1,112.86	0.2108	2018-2022: 4,900	12.00	12.00	8.00	8.00	-1.80	4.0	3	false	0	false	false	false				
44	Rural Two-Lane Segment Two-lane Undivided	725+01.22	727+00.00	198.78	0.0376	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.06	4.0	3	false	0	false	false	false				
45	Rural Two-Lane Segment Two-lane Undivided	727+00.00	727+52.35	52.35	0.0099	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.06	4.0	3	false	0	false	false	false				
46	Rural Two-Lane Segment Two-lane Undivided	727+52.35	730+90.51	338.16	0.0640	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.06	4.0	3	false	0	false	false	false				

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TWL T Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
47	Rural Two-Lane Segment Two-lane Undivided	730+90.510	735+00.000	409.49	0.0776	2018-2022: 4,900	12.00	12.00	8.00	8.00	4.47	4.0	3	false	0	false	false	false				
48	Rural Two-Lane Segment Two-lane Undivided	735+00.000	739+00.000	400.00	0.0758	2018-2022: 4,900	12.00	12.00	8.00	8.00	4.47	4.0	3	false	0	false	false	false				
49	Rural Two-Lane Segment Two-lane Undivided	739+00.000	744+50.000	550.00	0.1042	2018-2022: 4,900	12.00	12.00	8.00	8.00	4.47	4.0	3	false	0	false	false	false				
50	Rural Two-Lane Segment Two-lane Undivided	744+50.000	745+69.220	119.22	0.0226	2018-2022: 4,900	12.00	12.00	8.00	8.00	4.47	4.0	3	false	0	false	false	false				
51	Rural Two-Lane Segment Two-lane Undivided	745+69.220	751+00.000	530.78	0.1005	2018-2022: 4,900	12.00	12.00	8.00	8.00	1.12	4.0	3	false	0	false	false	false				
52	Rural Two-Lane Segment Two-lane Undivided	751+00.000	760+50.000	950.00	0.1799	2018-2022: 4,900	12.00	12.00	8.00	8.00	1.12	4.0	3	false	0	false	false	false				
53	Rural Two-Lane Segment Two-lane Undivided	760+50.000	765+52.550	502.55	0.0952	2018-2022: 4,900	12.00	12.00	8.00	8.00	-0.88	4.0	3	false	0	false	false	false				
54	Rural Two-Lane Segment Two-lane Undivided	765+52.550	767+00.000	147.45	0.0279	2018-2022: 4,900	12.00	12.00	8.00	8.00	-0.88	4.0	3	false	0	false	false	false	5,888.09	2.0	true	70
55	Rural Two-Lane Segment Two-lane Undivided	767+00.000	780+45.930	1,345.93	0.2549	2018-2022: 4,900	12.00	12.00	8.00	8.00	-0.88	4.0	3	false	0	false	false	false	5,888.09	2.0	true	70
56	Rural Two-Lane Segment Two-lane Undivided	780+45.930	787+93.440	747.51	0.1416	2018-2022: 4,900	12.00	12.00	8.00	8.00	-0.88	4.0	3	false	0	false	false	false				
57	Rural Two-Lane Segment Two-lane Undivided	787+93.440	791+00.000	306.56	0.0581	2018-2022: 4,900	12.00	12.00	8.00	8.00	1.46	4.0	3	false	0	false	false	false				
58	Rural Two-Lane Segment Two-lane Undivided	791+00.000	791+10.000	10.00	0.0019	2018-2022: 4,900	12.00	12.00	8.00	8.00	1.46	4.0	3	false	0	false	false	false				
59	Rural Two-Lane Segment Two-lane Undivided	791+10.000	798+12.000	702.00	0.1330	2018-2022: 4,900	12.00	12.00	8.00	8.00	1.46	4.0	3	false	0	false	false	false				
60	Rural Two-Lane Segment Two-lane Undivided	798+12.000	808+80.000	1,068.00	0.2023	2018-2022: 4,900	12.00	12.00	8.00	8.00	-1.46	4.0	3	false	0	false	false	false				
61	Rural Two-Lane Segment Two-lane Undivided	808+80.000	809+00.000	20.00	0.0038	2018-2022: 4,900	12.00	12.00	8.00	8.00	-1.46	4.0	3	false	0	false	false	false				
62	Rural Two-Lane Segment Two-lane Undivided	809+00.000	810+00.000	100.00	0.0189	2018-2022: 4,900	12.00	12.00	0.00	0.00	-1.46	4.0	3	false	0	false	false	false				
63	Rural Two-Lane Segment Two-lane Undivided	810+00.000	825+00.000	1,500.00	0.2841	2018-2022: 4,900	12.00	12.00	8.00	8.00	-1.46	4.0	3	false	0	false	false	false				
64	Rural Two-Lane Segment Two-lane Undivided	825+00.000	826+54.070	154.07	0.0292	2018-2022: 4,900	12.00	12.00	8.00	8.00	-1.46	4.0	3	false	0	false	false	false				
65	Rural Two-Lane Segment Two-lane Undivided	826+54.070	828+00.000	145.93	0.0276	2018-2022: 4,900	12.00	12.00	8.00	8.00	-2.84	4.0	3	false	0	false	false	false				
66	Rural Two-Lane Segment Two-lane Undivided	828+00.000	842+53.930	1,453.93	0.2754	2018-2022: 4,900	12.00	12.00	8.00	8.00	-2.84	4.0	3	false	0	false	false	false				
67	Rural Two-Lane Segment Two-lane Undivided	842+53.930	854+00.000	1,146.07	0.2171	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.59	4.0	3	false	0	false	false	false				
68	Rural Two-Lane Segment Two-lane Undivided	854+00.000	854+70.000	70.00	0.0133	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.59	4.0	3	false	0	false	false	false				
69	Rural Two-Lane Segment Two-lane Undivided	854+70.000	855+80.000	110.00	0.0208	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.59	4.0	3	false	0	false	false	false				
70	Rural Two-Lane Segment Two-lane Undivided	855+80.000	858+75.120	295.12	0.0559	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.59	4.0	3	false	0	false	false	false				
71	Rural Two-Lane Segment Two-lane Undivided	858+75.120	861+85.000	309.88	0.0587	2018-2022: 4,900	12.00	12.00	8.00	8.00	-1.07	4.0	3	false	0	false	false	false				
72	Rural Two-Lane Segment Two-lane Undivided	861+85.000	862+00.000	15.00	0.0028	2018-2022: 4,900	12.00	12.00	8.00	0.00	-1.07	4.0	3	false	0	false	false	false				
73	Rural Two-Lane Segment Two-lane Undivided	862+00.000	862+50.000	50.00	0.0095	2018-2022: 4,900	12.00	12.00	8.00	0.00	-1.07	4.0	3	false	0	false	false	false				

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW T Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
74	Rural Two-Lane Segment Two-lane Undivided	862+50.00 0	862+60.00 0	10.00	0.0019	2018-2022: 4,900	12.00	12.00	8.00	8.00	-1.07	4.0	3	false	0	false	false	false				

Table 5. Evaluation Intersection - Section 4

Inter. No.	Title	Type	Location (Sta. ft)	Major AADT	Minor AADT	Legs	Traffic Control	Major road approaches w/Left Turn Lanes	Major road approaches w/Right Turn Lanes	Skew1	Skew2	Lighted at Night
2	I90EBRamp_S466th_SD38 (v1)	Rural Two-Lane Intersection Four-Legged w/STOP control	699+20.000	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	2025: 630; 2026: 644; 2027: 657; 2028: 671; 2029: 685; 2030: 700; 2031: 716; 2032: 732; 2033: 748; 2034: 764; 2035: 780; 2036: 796; 2037: 812; 2038: 828; 2039: 844; 2040: 860; 2041: 1,166; 2042: 1,473; 2043: 1,779; 2044: 2,086; 2045: 2,392; 2046: 2,699; 2047: 3,005; 2048: 3,312; 2049: 3,618; 2050: 3,925	4	Stop-Controlled	1	0	4.64	4.27	false

Table 6. Evaluation Intersection - Section 4

Inter. No.	Title	Type	Location (Sta. ft)	Major AADT	Minor AADT	Legs	Traffic Control	Major road approaches w/Left Turn Lanes	Major road approaches w/Right Turn Lanes	Skew1	Skew2	Lighted at Night
5	468th Ave (v2)	Rural Two-Lane Intersection Four-Legged w/STOP control	809+00.000	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	2025: 667; 2026: 682; 2027: 696; 2028: 710; 2029: 725; 2030: 741; 2031: 758; 2032: 775; 2033: 792; 2034: 809; 2035: 825; 2036: 842; 2037: 859; 2038: 876; 2039: 893; 2040: 910; 2041: 1,052; 2042: 1,195; 2043: 1,337; 2044: 1,480; 2045: 1,622; 2046: 1,765; 2047: 1,907; 2048: 2,050; 2049: 2,192; 2050: 2,335	4	Stop-Controlled	0	0	0.00	0.00	false
6	SD 38 / 469th St (v1)	Rural Two-Lane Intersection Four-Legged w/STOP control	862+00.000	2025: 6,704; 2026: 7,305; 2027: 7,907; 2028: 8,508; 2029: 9,110; 2030: 9,295; 2031: 9,480; 2032: 9,666; 2033: 9,851; 2034: 10,037; 2035: 10,222; 2036: 10,408; 2037: 10,593; 2038: 10,779; 2039: 10,964; 2040: 11,150; 2041: 11,375; 2042: 11,600; 2043: 11,825; 2044: 12,050; 2045: 12,275; 2046: 12,500; 2047: 12,725; 2048: 12,950; 2049: 13,175; 2050: 13,400	2025: 2,990; 2026: 3,054; 2027: 3,117; 2028: 3,181; 2029: 3,245; 2030: 3,321; 2031: 3,397; 2032: 3,474; 2033: 3,550; 2034: 3,626; 2035: 3,703; 2036: 3,779; 2037: 3,855; 2038: 3,932; 2039: 4,008; 2040: 4,085; 2041: 4,178; 2042: 4,271; 2043: 4,364; 2044: 4,457; 2045: 4,550; 2046: 4,643; 2047: 4,736; 2048: 4,829; 2049: 4,922; 2050: 5,015	4	Stop-Controlled	0	1	0.00	0.00	false

Table 7. Evaluation Intersection (Section 4)

Inter. No.	Title	Type	Location (Sta. ft)	Major AADT	Minor AADT	Legs	Traffic Control	Major road approaches w/Left Turn Lanes	Major road approaches w/Right Turn Lanes	Skew1	Skew2	Lighted at Night
3	SD 38/466th Ave N (v1)	Rural Multi-Lane Intersection Three-Legged w/STOP control	676+00.000	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	2025: 118; 2026: 121; 2027: 124; 2028: 127; 2029: 130; 2030: 133; 2031: 136; 2032: 139; 2033: 142; 2034: 145; 2035: 149; 2036: 152; 2037: 155; 2038: 158; 2039: 161; 2040: 165; 2041: 168; 2042: 172; 2043: 175; 2044: 179; 2045: 182; 2046: 186; 2047: 189; 2048: 193; 2049: 196; 2050: 200	3	Stop-Controlled	0	0	8.65	false	

Table 8. Evaluation Ramp Terminal - Site (Section 4)

Inter. No.	Title	Type	Area Type	Legs	Location (Sta. ft)	Traffic Control	AADT
4	I90WB Ramps (v2)	Freeway Ramp Terminal A2 - Three-Leg at Two-Quadrant Parclo A	Rural	4	681+00.000	Stop-Controlled	Inside: 2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170; Outside: 2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170 :: Entrance: 2025: 856; 2026: 875; 2027: 893; 2028: 911; 2029: 930; 2030: 951; 2031: 973; 2032: 995; 2033: 1,017; 2034: 1,039; 2035: 1,060; 2036: 1,082; 2037: 1,104; 2038: 1,126; 2039: 1,148; 2040: 1,170; 2041: 1,339; 2042: 1,508; 2043: 1,677; 2044: 1,846; 2045: 2,015; 2046: 2,184; 2047: 2,353; 2048: 2,522; 2049: 2,691; 2050: 2,860

Table 9. Crash History Intersection - Section 4

Inter. No.	Title	Type	Location (Sta. ft)	Major AADT	Minor AADT	Legs	Traffic Control	Major road approaches w/Left Turn Lanes	Major road approaches w/Right Turn Lanes	Skew1	Skew2	Lighted at Night
2	I90EBRamp_S466th_SD38 (v1)	Rural Two-Lane Intersection Four-Legged w/STOP control	699+20.000	2018-2022: 4,150	2018-2022: 590	4	Stop-Controlled	1	0	4.64	4.27	false

Table 10. Crash History Intersection - Section 4

Inter. No.	Title	Type	Location (Sta. ft)	Major AADT	Minor AADT	Legs	Traffic Control	Major road approaches w/Left Turn Lanes	Major road approaches w/Right Turn Lanes	Skew1	Skew2	Lighted at Night
5	468th Ave (v2)	Rural Two-Lane Intersection Four-Legged w/STOP control	809+00.000	2018-2022: 4,900	2018-2022: 625	4	Stop-Controlled	0	0	0.00	0.00	false
6	SD 38 / 469th St (v1)	Rural Two-Lane Intersection Four-Legged w/STOP control	862+00.000	2018-2022: 4,900	2018-2022: 2,800	4	Stop-Controlled	0	1	0.00	0.00	false

Table 11. Crash History Intersection (Section 4)

Inter. No.	Title	Type	Location (Sta. ft)	Major AADT	Minor AADT	Legs	Traffic Control	Major road approaches w/Left Turn Lanes	Major road approaches w/Right Turn Lanes	Skew1	Skew2	Lighted at Night
3	SD 38/466th Ave N (v1)	Rural Multi-Lane Intersection Three-Legged w/STOP control	676+00.000	2018-2022: 4,325	2018-2022: 110	3	Stop-Controlled	0	0	8.65		false

Table 12. Crash Highway Ramp Terminal - Site (Highway with Crash History)

Inter. No.	Title	Type	Area Type	Legs	Location (Sta. ft)	Traffic Control	AADT
4	190WB Ramps (v2)	Freeway Ramp Terminal A2 - Three-Leg at Two-Quadrant Parclo A	Rural	4	681+00.000	Stop-Controlled	Inside: 2018-2022: 4,150; Outside: 2018-2022: 4,150 :: Entrance: 2018-2022: 802

Table 13. Expected Highway Crash Rates and Frequencies Summary (Section 4)

First Year of Analysis	2025
Last Year of Analysis	2050
Evaluated Length (mi)	3,5341
Average Future Road AADT (vpd)	8,719
Expected Crashes	
Total Crashes	395.38
Fatal and Injury Crashes	180.11
Fatal and Serious Injury Crashes	9.32
Property-Damage-Only Crashes	215.27
Percent of Total Expected Crashes	
Percent Fatal and Injury Crashes (%)	46
Percent Fatal and Serious Injury Crashes (%)	2
Percent Property-Damage-Only Crashes (%)	54
Expected Crash Rate	
Crash Rate (crashes/mi/yr)	4.3029
FI Crash Rate (crashes/mi/yr)	1.9602
FI no/C Crash Rate (crashes/mi/yr)	0.1015
PDO Crash Rate (crashes/mi/yr)	2.3428
Expected Travel Crash Rate	
Total Travel (million veh-mi)	292.42
Travel Crash Rate (crashes/million veh-mi)	1.35
Travel FI Crash Rate (crashes/million veh-mi)	0.62
Travel FI no/C Crash Rate (crashes/million veh-mi)	0.03
Travel PDO Crash Rate (crashes/million veh-mi)	0.74

Table 14. Expected Crash Frequencies and Rates by Highway Segment/Intersection (Section 4)

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected FI no/C Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted FI no/C Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) FI no/C Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/million veh-mi)	Expected Intersection Travel Crash Rate (crashes/million veh)
SD 38/466th Ave N (v1)	676+00.000			32.818	37.742	1.2622	0.4932	0.3585	0.7690	1.4516	0.6469	0.4102	0.8047	-0.1894	-0.1537	-0.0517	-0.0357			0.23
22	676+00.000	676+15.090	0.0029	12.143	0.440	0.4670	0.4590		0.0081	0.0169	0.0054		0.0115	0.4501	0.4535		-0.0034	163.4115	29.87	
23	676+15.090	677+50.000	0.0256	13.296	3.936	0.5114	0.4472		0.0642	0.1514	0.0486		0.1028	0.3600	0.3986		-0.0386	20.0145	3.66	
24	677+50.000	679+00.000	0.0284	35.169	3.661	1.3526	0.3493		1.0034	0.1408	0.0452		0.0956	1.2118	0.3041		0.9078	47.6127	8.70	
25	679+00.000	680+80.000	0.0341	1.083	2.846	0.0416	0.0165		0.0252	0.1095	0.0351		0.0743	-0.0678	-0.0187		-0.0492	1.2212	0.34	
26	680+80.000	680+90.000	0.0019	0.064	0.189	0.0025	0.0010		0.0015	0.0073	0.0023		0.0049	-0.0048	-0.0013		-0.0035	1.3022	0.37	
27	680+90.000	682+20.000	0.0246	0.840	2.475	0.0323	0.0130		0.0193	0.0952	0.0306		0.0646	-0.0629	-0.0175		-0.0454	1.3113	0.37	
190WB Ramps (v2)	681+00.000			20.354	15.321	0.7828	0.4306		0.3522	0.5893	0.2002		0.3891	0.1936	0.2305		-0.0369			0.21
28	682+20.000	682+30.000	0.0019	0.061	0.159	0.0023	0.0009		0.0014	0.0061	0.0020		0.0042	-0.0038	-0.0010		-0.0028	1.2298	0.35	
29	682+30.000	683+82.710	0.0289	0.925	2.432	0.0356	0.0141		0.0215	0.0935	0.0300		0.0635	-0.0580	-0.0160		-0.0420	1.2298	0.35	
30	683+82.710	689+36.990	0.1050	2.966	6.558	0.1141	0.0437		0.0704	0.2522	0.0810		0.1713	-0.1381	-0.0373		-0.1008	1.0868	0.31	
31	689+36.990	691+50.000	0.0403	1.140	2.520	0.0438	0.0168		0.0271	0.0969	0.0311		0.0658	-0.0531	-0.0143		-0.0388	1.0868	0.31	
32	691+50.000	692+70.000	0.0227	0.642	1.420	0.0247	0.0095		0.0152	0.0546	0.0175		0.0371	-0.0299	-0.0081		-0.0218	1.0868	0.31	
33	692+70.000	693+85.010	0.0218	0.616	1.361	0.0237	0.0091		0.0146	0.0523	0.0168		0.0355	-0.0287	-0.0077		-0.0209	1.0868	0.31	
34	693+85.010	698+70.000	0.0919	2.910	7.536	0.1119	0.0441		0.0678	0.2899	0.0930		0.1968	-0.1779	-0.0489		-0.1290	1.2183	0.34	
35	698+70.000	699+00.000	0.0057	0.192	0.557	0.0074	0.0030		0.0044	0.0214	0.0069		0.0146	-0.0140	-0.0039		-0.0101	1.3004	0.37	
36	699+00.000	699+20.000	0.0038	0.135	0.432	0.0052	0.0021		0.0031	0.0166	0.0053		0.0113	-0.0114	-0.0032		-0.0082	1.3665	0.39	
190EBRamp_S466th_SD38 (v1)	699+20.000			33.839	75.514	1.3015	0.5948		0.7067	2.9044	1.2518		1.6526	-1.6029	-0.6570		-0.9459			0.32
37	699+20.000	699+73.960	0.0102	0.363	1.166	0.0140	0.0057		0.0083	0.0449	0.0144		0.0305	-0.0309	-0.0087		-0.0222	1.3665	0.39	
38	699+73.960	700+50.000	0.0144	0.512	1.643	0.0197	0.0080		0.0116	0.0632	0.0203		0.0429	-0.0435	-0.0122		-0.0313	1.3665	0.39	
39	700+50.000	702+00.000	0.0284	0.961	2.786	0.0369	0.0149		0.0221	0.1072	0.0344		0.0728	-0.0702	-0.0195		-0.0507	1.3004	0.37	
40	702+00.000	702+50.000	0.0095	0.237	0.769	0.0091	0.0037		0.0054	0.0296	0.0095		0.0201	-0.0205	-0.0058		-0.0147	0.9631	0.33	
41	702+50.000	710+47.850	0.1511	3.569	10.270	0.1373	0.0551		0.0821	0.3950	0.1268		0.2682	-0.2577	-0.0717		-0.1860	0.9084	0.31	
42	710+47.850	713+88.360	0.0645	6.400	3.337	0.2462	0.0297		0.2165	0.1284	0.0412		0.0872	0.1178	-0.0115		0.1293	3.8170	1.30	
43	713+88.360	725+01.220	0.2108	14.542	10.906	0.5593	0.2180		0.3413	0.4195	0.1347		0.2848	0.1398	0.0833		0.0565	2.6537	0.90	
44	725+01.220	727+00.000	0.0376	0.802	1.948	0.0308	0.0120		0.0188	0.0749	0.0241		0.0509	-0.0441	-0.0120		-0.0321	0.8192	0.28	
45	727+00.000	727+52.350	0.0099	0.211	0.513	0.0081	0.0032		0.0050	0.0197	0.0063		0.0134	-0.0116	-0.0032		-0.0084	0.8192	0.28	
46	727+52.350	730+90.510	0.0640	1.364	3.314	0.0525	0.0204		0.0320	0.1275	0.0409		0.0865	-0.0750	-0.0205		-0.0545	0.8192	0.28	
47	730+90.510	735+00.000	0.0776	1.716	4.415	0.0660	0.0260		0.0400	0.1698	0.0545		0.1153	-0.1038	-0.0285		-0.0753	0.8510	0.29	
48	735+00.000	739+00.000	0.0758	1.676	4.312	0.0645	0.0254		0.0391	0.1659	0.0532		0.1126	-0.1014	-0.0278		-0.0735	0.8510	0.29	
49	739+00.000	744+50.000	0.1042	2.305	5.929	0.0886	0.0349		0.0537	0.2280	0.0732		0.1548	-0.1394	-0.0383		-0.1011	0.8510	0.29	
50	744+50.000	745+69.220	0.0226	0.500	1.285	0.0192	0.0076		0.0116	0.0494	0.0159		0.0336	-0.0302	-0.0083		-0.0219	0.8510	0.29	
51	745+69.220	751+00.000	0.1005	2.141	5.202	0.0824	0.0321		0.0503	0.2001	0.0642		0.1358	-0.1177	-0.0321		-0.0856	0.8192	0.28	
52	751+00.000	760+50.000	0.1799	3.832	9.310	0.1474	0.0574		0.0900	0.3581	0.1149		0.2431	-0.2107	-0.0575		-0.1532	0.8192	0.28	
53	760+50.000	765+52.550	0.0952	2.027	4.925	0.0780	0.0304		0.0476	0.1894	0.0608		0.1286	-0.1115	-0.0304		-0.0810	0.8192	0.28	
54	765+52.550	767+00.000	0.0279	0.639	1.740	0.0246	0.0098		0.0148	0.0669	0.0215		0.0454	-0.0423	-0.0117		-0.0306	0.8807	0.30	
55	767+00.000	780+45.930	0.2549	11.241	15.885	0.4323	0.1104		0.3219	0.6110	0.1961		0.4149	-0.1786	-0.0857		-0.0929	1.6960	0.58	
56	780+45.930	787+93.440	0.1416	3.015	7.326	0.1160	0.0452		0.0708	0.2818	0.0904		0.1913	-0.1658	-0.0452		-0.1205	0.8192	0.28	
57	787+93.440	791+00.000	0.0581	1.237	3.004	0.0476	0.0185		0.0290	0.1156	0.0371		0.0785	-0.0680	-0.0186		-0.0494	0.8192	0.28	

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected FI no/C Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted FI no/C Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) FI no/C Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/million veh-mi)	Expected Intersection Travel Crash Rate (crashes/million veh)
58	791+00.000	791+10.000	0.0019	0.040	0.098	0.0016	0.0006		0.0009	0.0038	0.0012		0.0026	-0.0022	-0.0006		-0.0016	0.8192	0.28	
59	791+10.000	798+12.000	0.1330	7.858	6.880	0.3022	0.0565		0.2457	0.2646	0.0849		0.1797	0.0376	-0.0284		0.0660	2.2733	0.77	
60	798+12.000	808+80.000	0.2023	14.361	10.467	0.5524	0.3758		0.1765	0.4026	0.1292		0.2733	0.1498	0.2466		-0.0968	2.7308	0.93	
61	808+80.000	809+00.000	0.0038	0.081	0.196	0.0031	0.0012		0.0019	0.0075	0.0024		0.0051	-0.0044	-0.0012		-0.0032	0.8192	0.28	
468th Ave (v2)	809+00.000			44.287	87.103	1.7033	0.9573		0.7460	3.3501	1.4439		1.9062	-1.6468	-0.4866		-1.1602			0.50
62	809+00.000	810+00.000	0.0189	0.525	1.568	0.0202	0.0082		0.0120	0.0603	0.0194		0.0409	-0.0401	-0.0112		-0.0289	1.0655	0.32	
63	810+00.000	825+00.000	0.2841	18.524	16.910	0.7125	0.2777		0.4348	0.6504	0.2088		0.4416	0.0621	0.0689		-0.0068	2.5079	0.74	
64	825+00.000	826+54.070	0.0292	6.497	1.737	0.2499	0.0164		0.2335	0.0668	0.0214		0.0454	0.1831	-0.0050		0.1881	8.5634	2.53	
65	826+54.070	828+00.000	0.0276	0.677	1.645	0.0260	0.0101		0.0159	0.0633	0.0203		0.0430	-0.0372	-0.0102		-0.0271	0.9423	0.28	
66	828+00.000	842+53.930	0.2754	18.310	16.391	0.7042	0.2745		0.4298	0.6304	0.2024		0.4280	0.0738	0.0721		0.0017	2.5575	0.76	
67	842+53.930	854+00.000	0.2171	11.100	12.920	0.4269	0.2439		0.1830	0.4969	0.1595		0.3374	-0.0700	0.0844		-0.1544	1.9668	0.58	
68	854+00.000	854+70.000	0.0133	0.325	0.789	0.0125	0.0049		0.0076	0.0304	0.0097		0.0206	-0.0179	-0.0049		-0.0130	0.9423	0.28	
69	854+70.000	855+80.000	0.0208	0.510	1.240	0.0196	0.0077		0.0120	0.0477	0.0153		0.0324	-0.0281	-0.0077		-0.0204	0.9423	0.28	
70	855+80.000	858+75.120	0.0559	1.369	3.327	0.0527	0.0205		0.0321	0.1280	0.0411		0.0869	-0.0753	-0.0205		-0.0547	0.9423	0.28	
71	858+75.120	861+85.000	0.0587	1.438	3.493	0.0553	0.0216		0.0338	0.1344	0.0431		0.0912	-0.0791	-0.0216		-0.0575	0.9423	0.28	
72	861+85.000	862+00.000	0.0028	0.075	0.202	0.0029	0.0011		0.0017	0.0078	0.0025		0.0053	-0.0049	-0.0014		-0.0035	1.0103	0.30	
SD 38 / 469th St (v1)	862+00.000			50.584	174.380	1.9455	0.9282		1.0173	6.7069	2.8907		3.8162	-4.7614	-1.9625		-2.7989			0.38
73	862+00.000	862+50.000	0.0095	0.285	0.772	0.0110	0.0044		0.0066	0.0297	0.0095		0.0202	-0.0187	-0.0052		-0.0136	1.1576	0.30	
74	862+50.000	862+60.000	0.0019	0.053	0.129	0.0020	0.0008		0.0012	0.0050	0.0016		0.0034	-0.0029	-0.0008		-0.0021	1.0797	0.28	
All Segments			3.5341	213.499	215.276	8.2115	3.5234		4.6881	8.2798	2.6578		5.6220	-0.0683	0.8655		-0.9339	2.3235	0.73	
All Intersections				181.881	390.059	6.9954	3.4041		3.5914	15.0023	6.4334		8.5689	-8.0069	-3.0294		-4.9775			0.32
Total			3.5341	395.380	605.335	15.2069	6.9274		8.2795	23.2821	9.0912		14.1909	-8.0752	-2.1638		-5.9114	4.3029		

Table 15. Expected Crash Frequencies and Rates by Horizontal Design Element (Section 4)

Title	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/mi llion veh-mi)
Simple Curve 1	676+00.000	683+82.710	0.1482	63.579	16.139	2.4453	1.3009	1.1444	0.6207	0.1993	0.4215	1.8246	1.1016	0.7230	16.4957	3.09
Tangent	683+82.710	693+85.010	0.1898	5.364	11.858	0.2063	0.0790	0.1273	0.4561	0.1464	0.3097	-0.2498	-0.0674	-0.1824	1.0868	0.31
Simple Curve 2	693+85.010	710+47.850	0.3149	8.878	25.160	0.3414	0.1367	0.2048	0.9677	0.3106	0.6571	-0.6263	-0.1740	-0.4523	1.0842	0.33
Tangent	710+47.850	727+51.450	0.3227	21.952	16.696	0.8443	0.2628	0.5815	0.6422	0.2061	0.4360	0.2021	0.0566	0.1455	2.6168	0.89
Simple Curve 3	727+51.450	727+52.350	0.0002	0.004	0.009	0.0001	0.0001	0.0001	0.0003	0.0001	0.0002	-0.0002	-0.0001	-0.0001	0.8192	0.28
Tangent	727+52.350	765+52.550	0.7197	15.562	38.693	0.5985	0.2342	0.3643	1.4882	0.4777	1.0105	-0.8897	-0.2435	-0.6462	0.8316	0.28
Simple Curve 4	765+52.550	780+45.930	0.2828	11.880	17.626	0.4569	0.1202	0.3367	0.6779	0.2176	0.4603	-0.2210	-0.0974	-0.1236	1.6155	0.55
Tangent	780+45.930	862+60.000	1.5557	86.281	89.095	3.3185	1.3896	1.9290	3.4267	1.1000	2.3267	-0.1082	0.2896	-0.3978	2.1331	0.66

Table 16. Predicted Crash Frequencies by Year (Section 4)

Year	Total Crashes	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)
2025	13.90	5.40	38.844	8.50	61.156
2026	14.96	5.80	38.801	9.15	61.199
2027	15.93	6.18	38.789	9.75	61.211
2028	16.91	6.56	38.776	10.35	61.224
2029	17.90	6.94	38.762	10.96	61.238
2030	18.35	7.11	38.771	11.23	61.229
2031	18.81	7.29	38.780	11.51	61.220
2032	19.27	7.47	38.790	11.79	61.210
2033	19.73	7.65	38.798	12.07	61.202
2034	20.19	7.83	38.806	12.35	61.194
2035	20.65	8.02	38.815	12.64	61.185
2036	21.12	8.20	38.823	12.92	61.177
2037	21.59	8.38	38.829	13.21	61.171
2038	22.06	8.57	38.836	13.49	61.164
2039	22.53	8.75	38.843	13.78	61.157
2040	23.00	8.94	38.850	14.07	61.150
2041	24.31	9.47	38.965	14.84	61.035
2042	25.58	9.99	39.062	15.59	60.938
2043	26.82	10.50	39.143	16.32	60.857
2044	28.06	11.00	39.215	17.05	60.785
2045	29.27	11.50	39.276	17.77	60.724
2046	30.48	11.99	39.331	18.49	60.669
2047	31.68	12.48	39.379	19.21	60.621
2048	32.88	12.96	39.422	19.92	60.578
2049	34.08	13.45	39.460	20.63	60.540
2050	35.28	13.93	39.495	21.34	60.505
Total	605.34	236.37	39.048	368.96	60.952
Average	23.28	9.09	39.048	14.19	60.952

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 17. Expected Crash Frequencies by Year (Section 4)

Year	Total Crashes	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)
2025	9.08	4.12	45.316	4.96	54.628
2026	9.77	4.42	45.266	5.34	54.666
2027	10.41	4.71	45.252	5.69	54.677
2028	11.05	5.00	45.237	6.04	54.689
2029	11.69	5.29	45.220	6.39	54.701
2030	11.98	5.42	45.231	6.55	54.693
2031	12.28	5.56	45.242	6.72	54.685
2032	12.58	5.69	45.253	6.88	54.676
2033	12.88	5.83	45.263	7.04	54.669
2034	13.19	5.97	45.272	7.21	54.662
2035	13.49	6.11	45.282	7.37	54.654
2036	13.79	6.25	45.291	7.54	54.647
2037	14.10	6.39	45.299	7.70	54.641
2038	14.41	6.53	45.307	7.87	54.635
2039	14.71	6.67	45.315	8.04	54.629
2040	15.03	6.81	45.323	8.21	54.623
2041	15.88	7.22	45.457	8.66	54.520
2042	16.71	7.61	45.570	9.10	54.433
2043	17.52	8.00	45.665	9.52	54.361
2044	18.32	8.38	45.749	9.95	54.297
2045	19.12	8.76	45.820	10.37	54.242
2046	19.91	9.14	45.885	10.79	54.193
2047	20.70	9.51	45.940	11.21	54.150
2048	21.48	9.88	45.991	11.62	54.111
2049	22.26	10.25	46.035	12.04	54.078
2050	23.04	10.62	46.076	12.45	54.047
Total	395.38	180.11	45.554	215.27	54.446
Average	15.21	6.93	45.554	8.28	54.446

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 18. Comparing Predicted and Expected Crashes for the Evaluation Period (Section 4)

Scope	Total Crashes	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)
Predicted	605.34	236.37	39.048	368.96	60.952
Expected	395.38	180.11	45.554	215.27	54.446
Expected - Predicted	-209.96	-56.26		-153.70	
Percent Difference	-53.10	-31.24		-71.40	

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 19. Expected Crash Severity by Ramp Terminal or Roundabout (Section 4)

Seg. No.	Type	Fatal (K) Crashes (crashes)	Incapacitating Injury (A) Crashes (crashes)	Non-Incapacitating Injury (B) Crashes (crashes)	Possible Injury (C) Crashes (crashes)	No Injury (O) Crashes (crashes)
4	FRE Ramp Terminal	0.1324	0.6953	2.3001	8.0684	9.1576

Table 20. Expected Crash Type Distribution (Section 4)

Element Type	Crash Type	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)	Total Crashes	Percent Total (%)
Highway Segment	Collision with Animal	3.48	0.9	22.43	5.7	25.83	6.5
Highway Segment	Collision with Bicycle	0.37	0.1	0.12	0.0	0.43	0.1
Highway Segment	Other Single-vehicle Collision	0.64	0.2	3.54	0.9	4.48	1.1
Highway Segment	Overturned	3.39	0.9	1.83	0.5	5.34	1.4
Highway Segment	Collision with Pedestrian	0.64	0.2	0.12	0.0	0.64	0.2
Highway Segment	Run Off Road	49.93	12.6	61.55	15.6	111.23	28.1
Highway Segment	Total Single Vehicle Crashes	58.45	14.8	89.59	22.7	147.96	37.4
Highway Segment	Angle Collision	9.25	2.3	8.78	2.2	18.15	4.6
Highway Segment	Head-on Collision	3.12	0.8	0.37	0.1	3.42	0.9
Highway Segment	Other Multiple-vehicle Collision	2.38	0.6	3.66	0.9	5.76	1.5
Highway Segment	Rear-end Collision	15.12	3.8	14.87	3.8	30.32	7.7
Highway Segment	Sideswipe	3.48	0.9	4.63	1.2	7.90	2.0
Highway Segment	Total Multiple Vehicle Crashes	33.34	8.4	32.30	8.2	65.54	16.6
Highway Segment	Total Highway Segment Crashes	91.79	23.2	121.89	30.8	213.50	54.0
Intersection	Collision with Animal	0.39	0.1	0.90	0.2	1.29	0.3
Intersection	Collision with Bicycle	0.06	0.0	0.06	0.0	0.13	0.0
Intersection	Other Single-vehicle Collision	0.26	0.1	0.64	0.2	1.03	0.3
Intersection	Overturned	0.39	0.1	0.26	0.1	0.64	0.2
Intersection	Collision with Pedestrian	0.06	0.0	0.06	0.0	0.13	0.0
Intersection	Run Off Road	6.06	1.5	9.25	2.3	15.70	4.0
Intersection	Single	2.81	0.7	4.88	1.2	7.68	1.9
Intersection	Total Single Vehicle Crashes	10.03	2.5	16.05	4.1	26.60	6.7
Intersection	Angle Collision	39.04	9.9	26.69	6.8	64.11	16.2
Intersection	Head-on Collision	4.42	1.1	2.00	0.5	6.10	1.5
Intersection	Other Multiple-vehicle Collision	2.71	0.7	2.38	0.6	5.02	1.3
Intersection	Rear-end Collision	16.71	4.2	23.38	5.9	40.63	10.3
Intersection	Sideswipe	3.58	0.9	12.63	3.2	17.36	4.4
Intersection	Total Multiple Vehicle Crashes	66.46	16.8	67.08	17.0	133.22	33.7
Intersection	Total Intersection Crashes	77.31	19.6	84.02	21.2	161.53	40.9
Intersection	Other Collision	0.82	0.2	0.88	0.2	1.71	0.4
Ramp Terminal	Collision with Animal	0.00	0.0	0.00	0.0	0.00	0.0
Ramp Terminal	Collision with Fixed Object	0.87	0.2	1.45	0.4	2.32	0.6
Ramp Terminal	Collision with Other Object	0.00	0.0	0.05	0.0	0.05	0.0
Ramp Terminal	Other Single-vehicle Collision	0.73	0.2	0.24	0.1	0.97	0.2
Ramp Terminal	Collision with Parked Vehicle	0.08	0.0	0.14	0.0	0.22	0.1
Ramp Terminal	Total Single Vehicle Crashes	1.68	0.4	1.87	0.5	3.55	0.9
Ramp Terminal	Angle Collision	5.84	1.5	3.41	0.9	9.25	2.3
Ramp Terminal	Head-on Collision	0.22	0.1	0.14	0.0	0.36	0.1
Ramp Terminal	Other Multiple-vehicle Collision	0.15	0.0	0.24	0.1	0.38	0.1
Ramp Terminal	Rear-end Collision	3.08	0.8	2.53	0.6	5.61	1.4
Ramp Terminal	Sideswipe, Same Direction Collision	0.22	0.1	0.98	0.2	1.20	0.3
Ramp Terminal	Total Multiple Vehicle Crashes	9.52	2.4	7.29	1.8	16.81	4.3
Ramp Terminal	Total Ramp Terminal Crashes	11.20	2.8	9.16	2.3	20.35	5.1
	Total Crashes	180.30	45.6	215.07	54.4	395.38	100.0

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 21. Evaluation Message

[illegible]

Start Location (Sta. ft)	End Location (Sta. ft)	Message
862+00.000	862+00.000	Warning: for intersection #6 (862+00.000 to 862+00.000), minor road traffic volume (4,178 vpd) for 2041 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
862+00.000	862+00.000	Warning: for intersection #6 (862+00.000 to 862+00.000), minor road traffic volume (4,271 vpd) for 2042 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
862+00.000	862+00.000	Warning: for intersection #6 (862+00.000 to 862+00.000), minor road traffic volume (4,364 vpd) for 2043 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
862+00.000	862+00.000	Warning: for intersection #6 (862+00.000 to 862+00.000), minor road traffic volume (4,457 vpd) for 2044 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
862+00.000	862+00.000	Warning: for intersection #6 (862+00.000 to 862+00.000), minor road traffic volume (4,550 vpd) for 2045 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
862+00.000	862+00.000	Warning: for intersection #6 (862+00.000 to 862+00.000), minor road traffic volume (4,643 vpd) for 2046 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
862+00.000	862+00.000	Warning: for intersection #6 (862+00.000 to 862+00.000), minor road traffic volume (4,736 vpd) for 2047 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
862+00.000	862+00.000	Warning: for intersection #6 (862+00.000 to 862+00.000), minor road traffic volume (4,829 vpd) for 2048 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
862+00.000	862+00.000	Warning: for intersection #6 (862+00.000 to 862+00.000), minor road traffic volume (4,922 vpd) for 2049 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
862+00.000	862+00.000	Warning: for intersection #6 (862+00.000 to 862+00.000), minor road traffic volume (5,015 vpd) for 2050 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST

Section 3 Evaluation

Section: Section 3

Evaluation Start Location: 585+00.000

Evaluation End Location: 676+00.000

Area Type: Rural

Functional Class: Arterial

Type of Alignment: Undivided, Multilane

Model Category: Rural, Multilane

Calibration Factor: 4ST=1.0; 4U=1.0;

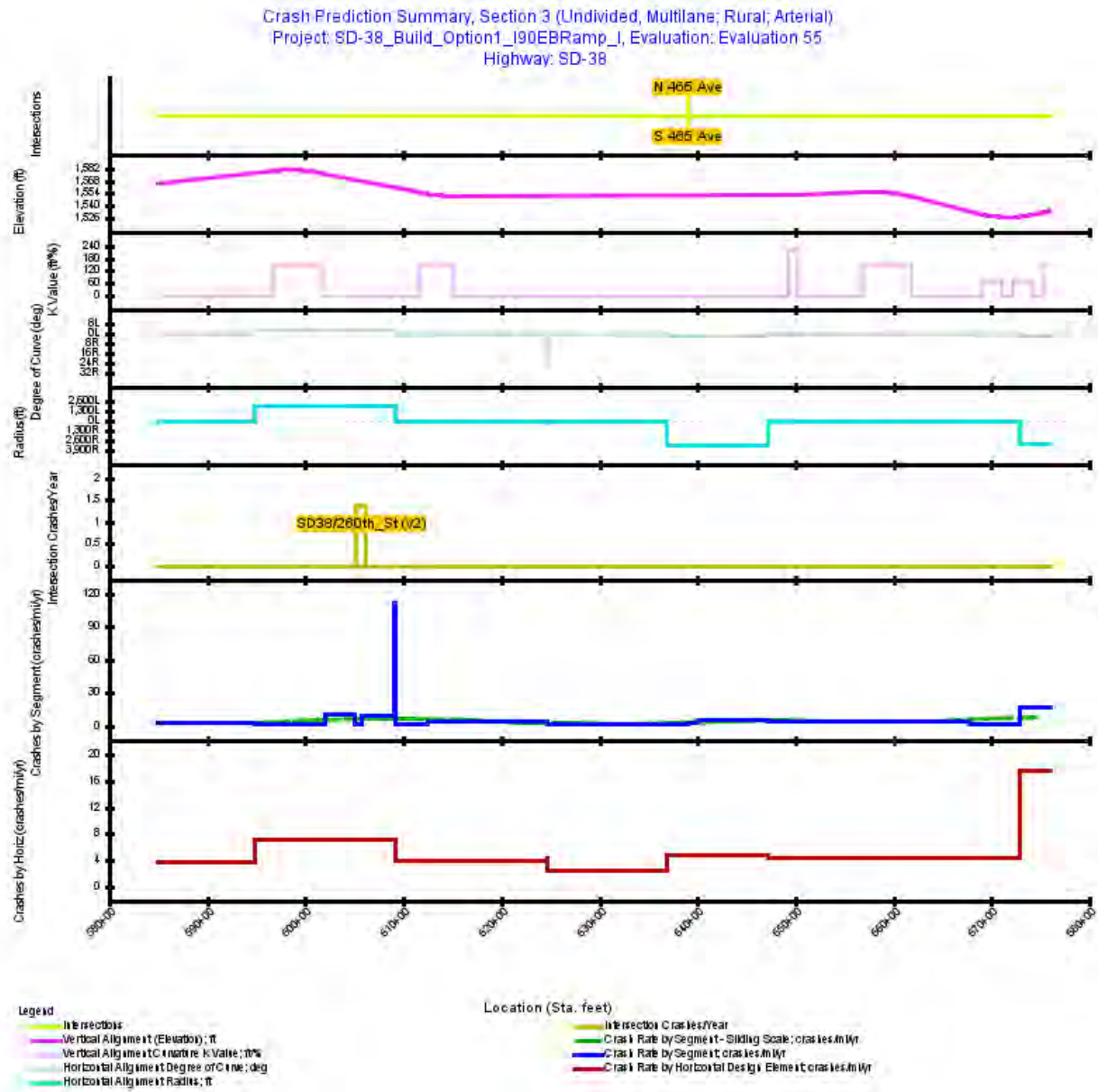


Figure 2. Crash Prediction Summary (Section 3)

Table 22. Observed Crashes Used in the Evaluation (Section 3)

Year	Observed Crashes	Total Crashes Used	FI Crashes	FI no/C Crashes	PDO Crashes
2018	1	1	1	0	0
2019	3	3	1	0	2
2020	3	2	0	0	2
2021	3	3	2	0	1
2022	1	1	0	0	1
All Years	11 ^[1]	10	4	0	6

Footnotes

^[1] Note: Observed crash data that does not comply with the associated CPM model requirements may not be used in EB processing.

Table 23. Evaluation Highway - Homogeneous Segments (Section 3)

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Median Width (ft)	Median Type	Effective Median Width (ft)	Lighting	Automated Speed Enforcement	Left Side Slope	Right Side Slope
1	Rural Multi-Lane Segment Four-lane Undivided	585+00.000	594+84.940	984.94	0.1865	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
2	Rural Multi-Lane Segment Four-lane Undivided	594+84.940	600+00.000	515.06	0.0975	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
3	Rural Multi-Lane Segment Four-lane Undivided	600+00.000	601+00.000	100.00	0.0189	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
4	Rural Multi-Lane Segment Four-lane Undivided	601+00.000	602+00.000	100.00	0.0189	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
5	Rural Multi-Lane Segment Four-lane Undivided	602+00.000	605+00.000	300.00	0.0568	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
6	Rural Multi-Lane Segment Four-lane Undivided	605+00.000	605+60.000	60.00	0.0114	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	0.00	0.00	None	0.00	false	false	0:1	0:1
7	Rural Multi-Lane Segment Four-lane Undivided	605+60.000	605+70.000	10.00	0.0019	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
8	Rural Multi-Lane Segment Four-lane Undivided	605+70.000	605+75.000	5.00	0.0009	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
9	Rural Multi-Lane Segment Four-lane Undivided	605+75.000	609+00.000	325.00	0.0616	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
10	Rural Multi-Lane Segment Four-lane Undivided	609+00.000	609+21.930	21.93	0.0042	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
11	Rural Multi-Lane Segment Four-lane Undivided	609+21.930	611+40.000	218.07	0.0413	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
12	Rural Multi-Lane Segment Four-lane Undivided	611+40.000	612+50.000	110.00	0.0208	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
13	Rural Multi-Lane Segment Four-lane Undivided	612+50.000	624+64.530	1,214.53	0.2300	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
14	Rural Multi-Lane Segment Four-lane Undivided	624+64.530	636+92.820	1,228.29	0.2326	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Median Width (ft)	Median Type	Effective Median Width (ft)	Lighting	Automated Speed Enforcement	Left Side Slope	Right Side Slope
15	Rural Multi-Lane Segment Four-lane Undivided	636+92.820	639+00.000	207.18	0.0392	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
16	Rural Multi-Lane Segment Four-lane Undivided	639+00.000	640+00.000	100.00	0.0189	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	0.00	0.00	0.00	None	0.00	false	false	0:1	0:1
17	Rural Multi-Lane Segment Four-lane Undivided	640+00.000	647+26.050	726.05	0.1375	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
18	Rural Multi-Lane Segment Four-lane Undivided	647+26.050	667+80.000	2,053.95	0.3890	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
19	Rural Multi-Lane Segment Four-lane Undivided	667+80.000	668+80.000	100.00	0.0189	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	0.00	0.00	None	0.00	false	false	0:1	0:1
20	Rural Multi-Lane Segment Four-lane Undivided	668+80.000	672+86.110	406.11	0.0769	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
21	Rural Multi-Lane Segment Four-lane Undivided	672+86.110	676+00.000	313.89	0.0594	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1

Table 24. User Defined CMF Used in the Eval Segment CPM Evaluation (Section 3)

Name	Description	Start Loc. (Sta. ft)	End Loc. (Sta. ft)	Start CMF Year	End CMF Year	Severity	CMF Value
1	TWLTL	585+00.000	600+00.000	2025	2025	Total	0.6900
1	TWLTL	612+50.000	639+00.000	2025	2025	Total	0.6900
1	TWLTL	640+00.000	676+00.000	2025	2025	Total	0.6900

Table 25. Crash History Highway - Homogeneous Segments (Section 3)

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Median Width (ft)	Median Type	Effective Median Width (ft)	Lighting	Automated Speed Enforcement	Left Side Slope	Right Side Slope
1	Rural Multi-Lane Segment Four-lane Undivided	585+00.00	594+84.94	984.94	0.1865	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
2	Rural Multi-Lane Segment Four-lane Undivided	594+84.94	600+00.00	515.06	0.0975	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
3	Rural Multi-Lane Segment Four-lane Undivided	600+00.00	601+00.00	100.00	0.0189	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
4	Rural Multi-Lane Segment Four-lane Undivided	601+00.00	602+00.00	100.00	0.0189	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
5	Rural Multi-Lane Segment Four-lane Undivided	602+00.00	605+00.00	300.00	0.0568	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
6	Rural Multi-Lane Segment Four-lane Undivided	605+00.00	605+60.00	60.00	0.0114	2018-2022: 4,325	12.00	12.00	8.00	0.00	0.00	None	0.00	false	false	0:1	0:1
7	Rural Multi-Lane Segment Four-lane Undivided	605+60.00	605+70.00	10.00	0.0019	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
8	Rural Multi-Lane Segment Four-lane Undivided	605+70.00	605+75.00	5.00	0.0009	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
9	Rural Multi-Lane Segment Four-lane Undivided	605+75.00	609+00.00	325.00	0.0616	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
10	Rural Multi-Lane Segment Four-lane Undivided	609+00.00	609+21.93	21.93	0.0042	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
11	Rural Multi-Lane Segment Four-lane Undivided	609+21.93	611+40.00	218.07	0.0413	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
12	Rural Multi-Lane Segment Four-lane Undivided	611+40.00	612+50.00	110.00	0.0208	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
13	Rural Multi-Lane Segment Four-lane Undivided	612+50.00	624+64.53	1,214.53	0.2300	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
14	Rural Multi-Lane Segment Four-lane Undivided	624+64.53	636+92.82	1,228.29	0.2326	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
15	Rural Multi-Lane Segment Four-lane Undivided	636+92.82	639+00.00	207.18	0.0392	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
16	Rural Multi-Lane Segment Four-lane Undivided	639+00.00	640+00.00	100.00	0.0189	2018-2022: 4,325	12.00	12.00	0.00	0.00	0.00	None	0.00	false	false	0:1	0:1
17	Rural Multi-Lane Segment Four-lane Undivided	640+00.00	647+26.05	726.05	0.1375	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
18	Rural Multi-Lane Segment Four-lane Undivided	647+26.05	667+80.00	2,053.95	0.3890	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
19	Rural Multi-Lane Segment Four-lane Undivided	667+80.00	668+80.00	100.00	0.0189	2018-2022: 4,325	12.00	12.00	8.00	0.00	0.00	None	0.00	false	false	0:1	0:1
20	Rural Multi-Lane Segment Four-lane Undivided	668+80.00	672+86.11	406.11	0.0769	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
21	Rural Multi-Lane Segment Four-lane Undivided	672+86.11	676+00.00	313.89	0.0594	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1

Table 26. Evaluation Intersection (Section 3)

Inter. No.	Title	Type	Location (Sta. ft)	Major AADT	Minor AADT	Legs	Traffic Control	Major road approaches w/Left Turn Lanes	Major road approaches w/Right Turn Lanes	Skew1	Skew2	Lighted at Night
1	SD38/260th_St (v2)	Rural Multi-Lane Intersection Four-Legged w/STOP control	605+70.000	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	2025: 1,508; 2026: 1,706; 2027: 1,904; 2028: 2,102; 2029: 2,300; 2030: 2,472; 2031: 2,645; 2032: 2,818; 2033: 2,990; 2034: 3,163; 2035: 3,336; 2036: 3,509; 2037: 3,681; 2038: 3,854; 2039: 4,027; 2040: 4,200; 2041: 4,260; 2042: 4,320; 2043: 4,380; 2044: 4,440; 2045: 4,500; 2046: 4,560; 2047: 4,620; 2048: 4,680; 2049: 4,740; 2050: 4,800	4	Stop-Controlled	2	1	16.83	13.71	false

Table 27. Crash History Intersection (Section 3)

Inter. No.	Title	Type	Location (Sta. ft)	Major AADT	Minor AADT	Legs	Traffic Control	Major road approaches w/Left Turn Lanes	Major road approaches w/Right Turn Lanes	Skew1	Skew2	Lighted at Night
1	SD38/260th_St (v2)	Rural Multi-Lane Intersection Four-Legged w/STOP control	605+70.000	2018-2022: 4,325	2018-2022: 915	4	Stop-Controlled	2	1	16.83	13.71	false

Table 28. Expected Highway Crash Rates and Frequencies Summary (Section 3)

First Year of Analysis	2025
Last Year of Analysis	2050
Evaluated Length (mi)	1.7235
Average Future Road AADT (vpd)	14,422
Expected Crashes	
Total Crashes	253.20
Fatal and Injury Crashes	132.44
Fatal and Serious Injury Crashes	82.70
Property-Damage-Only Crashes	120.76
Percent of Total Expected Crashes	
Percent Fatal and Injury Crashes (%)	52
Percent Fatal and Serious Injury Crashes (%)	33
Percent Property-Damage-Only Crashes (%)	48
Expected Crash Rate	
Crash Rate (crashes/mi/yr)	5.6505
FI Crash Rate (crashes/mi/yr)	2.9555
FI no/C Crash Rate (crashes/mi/yr)	1.8456
PDO Crash Rate (crashes/mi/yr)	2.6950
Expected Travel Crash Rate	
Total Travel (million veh-mi)	235.89
Travel Crash Rate (crashes/million veh-mi)	1.07
Travel FI Crash Rate (crashes/million veh-mi)	0.56
Travel FI no/C Crash Rate (crashes/million veh-mi)	0.35
Travel PDO Crash Rate (crashes/million veh-mi)	0.51

Table 29. Expected Crash Frequencies and Rates by Highway Segment/Intersection (Section 3)

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected FI no/C Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted FI no/C Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) FI no/C Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/million veh-mi)	Expected Intersection Travel Crash Rate (crashes/million veh)
1	585+00.000	594+84.940	0.1865	17.884	18.701	0.6878	0.5117	0.3188	0.1762	0.7193	0.4240	0.2248	0.2953	-0.0314	0.0877	0.0940	-0.1191	3.6873	0.84	
2	594+84.940	600+00.000	0.0975	4.666	9.779	0.1795	0.1087	0.0678	0.0707	0.3761	0.2217	0.1176	0.1544	-0.1967	-0.1130	-0.0498	-0.0837	1.8399	0.42	
3	600+00.000	601+00.000	0.0189	0.912	1.911	0.0351	0.0212	0.0132	0.0138	0.0735	0.0433	0.0230	0.0302	-0.0384	-0.0221	-0.0098	-0.0163	1.8518	0.42	
4	601+00.000	602+00.000	0.0189	0.912	1.911	0.0351	0.0212	0.0132	0.0138	0.0735	0.0433	0.0230	0.0302	-0.0384	-0.0221	-0.0098	-0.0163	1.8518	0.42	
5	602+00.000	605+00.000	0.0568	15.348	7.486	0.5903	0.1555	0.0969	0.4348	0.2879	0.1665	0.0852	0.1214	0.3024	-0.0110	0.0117	0.3134	10.3895	1.90	
6	605+00.000	605+60.000	0.0114	0.743	1.629	0.0286	0.0173	0.0108	0.0113	0.0627	0.0362	0.0185	0.0264	-0.0341	-0.0190	-0.0078	-0.0151	2.5153	0.46	
7	605+60.000	605+70.000	0.0019	0.119	0.249	0.0046	0.0028	0.0017	0.0018	0.0096	0.0056	0.0028	0.0040	-0.0050	-0.0028	-0.0011	-0.0022	2.4181	0.44	
SD38/260th_St (v2)	605+70.000			35.375	96.924	1.3606	0.5456	0.3469	0.8150	3.7279	1.7583	0.8841	1.9696	-2.3673	-1.2127	-0.5372	-1.1546			0.20
8	605+70.000	605+75.000	0.0009	0.059	0.125	0.0023	0.0014	0.0009	0.0009	0.0048	0.0028	0.0014	0.0020	-0.0025	-0.0014	-0.0006	-0.0011	2.4181	0.44	
9	605+75.000	609+00.000	0.0616	15.646	8.110	0.6018	0.5117	0.3188	0.0901	0.3119	0.1804	0.0923	0.1315	0.2898	0.3313	0.2266	-0.0415	9.7763	1.79	
10	609+00.000	609+21.930	0.0042	12.037	0.547	0.4630	0.0149	0.0093	0.4480	0.0210	0.0122	0.0062	0.0089	0.4419	0.0028	0.0031	0.4392	111.4663	20.38	
11	609+21.930	611+40.000	0.0413	2.597	5.442	0.0999	0.0605	0.0377	0.0394	0.2093	0.1210	0.0619	0.0883	-0.1094	-0.0605	-0.0242	-0.0489	2.4181	0.44	
12	611+40.000	612+50.000	0.0208	1.310	2.745	0.0504	0.0305	0.0190	0.0199	0.1056	0.0611	0.0312	0.0445	-0.0552	-0.0305	-0.0122	-0.0247	2.4181	0.44	
13	612+50.000	624+64.530	0.2300	26.091	30.137	1.0035	0.4602	0.2868	0.5433	1.1591	0.6701	0.3426	0.4890	-0.1556	-0.2099	-0.0558	0.0543	4.3625	0.80	
14	624+64.530	636+92.820	0.2326	14.544	30.479	0.5594	0.3389	0.2112	0.2205	1.1723	0.6777	0.3465	0.4945	-0.6129	-0.3388	-0.1353	-0.2740	2.4045	0.44	
15	636+92.820	639+00.000	0.0392	2.453	5.141	0.0944	0.0572	0.0356	0.0372	0.1977	0.1143	0.0584	0.0834	-0.1034	-0.0572	-0.0228	-0.0462	2.4045	0.44	
16	639+00.000	640+00.000	0.0189	1.282	2.935	0.0493	0.0297	0.0185	0.0196	0.1129	0.0653	0.0334	0.0476	-0.0636	-0.0356	-0.0149	-0.0280	2.6043	0.48	
17	640+00.000	647+26.050	0.1375	20.307	18.016	0.7810	0.3079	0.1918	0.4732	0.6929	0.4006	0.2048	0.2923	0.0881	-0.0927	-0.0130	0.1808	5.6799	1.04	
18	647+26.050	667+80.000	0.3890	47.740	50.967	1.8362	0.8064	0.5024	1.0298	1.9603	1.1333	0.5793	0.8269	-0.1241	-0.3270	-0.0769	0.2029	4.7201	0.86	
19	667+80.000	668+80.000	0.0189	1.232	2.700	0.0474	0.0286	0.0178	0.0188	0.1039	0.0600	0.0307	0.0438	-0.0565	-0.0314	-0.0129	-0.0250	2.5012	0.46	
20	668+80.000	672+86.110	0.0769	4.809	10.077	0.1849	0.1120	0.0698	0.0729	0.3876	0.2241	0.1145	0.1635	-0.2026	-0.1120	-0.0447	-0.0906	2.4045	0.44	
21	672+86.110	676+00.000	0.0594	27.137	7.789	1.0437	0.9499	0.5919	0.0939	0.2996	0.1732	0.0885	0.1264	0.7442	0.7767	0.5033	-0.0325	17.5567	3.21	
All Segments			1.7235	217.827	216.876	8.3780	4.5482	2.8340	3.8297	8.3414	4.8368	2.4867	3.5046	0.0366	-0.2886	0.3472	0.3252	4.8611	0.92	
All Intersections				35.375	96.924	1.3606	0.5456	0.3469	0.8150	3.7279	1.7583	0.8841	1.9696	-2.3673	-1.2127	-0.5372	-1.1546			0.20
Total			1.7235	253.202	313.801	9.7385	5.0938	3.1808	4.6448	12.0693	6.5951	3.3708	5.4742	-2.3307	-1.5013	-0.1900	-0.8294	5.6505		

Table 30. Expected Crash Frequencies and Rates by Horizontal Design Element (Section 3)

Title	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected FI no/C Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted FI no/C Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) FI no/C Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/mi billion veh-mi)
Tangent	585+00.000	594+84.940	0.1865	17.884	18.701	0.6878	0.5117	0.3188	0.1762	0.7193	0.4240	0.2248	0.2953	-0.0314	0.0877	0.0940	-0.1191	3.6873	0.84
Simple Curve 1	594+84.940	609+21.930	0.2722	50.443	31.748	1.9401	0.8548	0.5326	1.0853	1.2211	0.7120	0.3700	0.5090	0.7190	0.1428	0.1626	0.5762	7.1286	1.35
Tangent	609+21.930	624+64.300	0.2921	29.992	38.318	1.1535	0.5512	0.3434	0.6024	1.4738	0.8521	0.4357	0.6217	-0.3202	-0.3009	-0.0922	-0.0193	3.9489	0.72
Simple Curve 2	624+64.300	624+64.530	0.0000	0.005	0.006	0.0002	0.0001	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	-0.0000	-0.0000	-0.0000	0.0000	4.3625	0.80
Tangent	624+64.530	636+92.820	0.2326	14.544	30.479	0.5594	0.3389	0.2112	0.2205	1.1723	0.6777	0.3465	0.4945	-0.6129	-0.3388	-0.1353	-0.2740	2.4045	0.44
Simple Curve 3	636+92.820	647+26.050	0.1957	24.043	26.092	0.9247	0.3947	0.2460	0.5300	1.0036	0.5802	0.2966	0.4233	-0.0788	-0.1855	-0.0507	0.1067	4.7254	0.86
Tangent	647+26.050	672+86.110	0.4849	53.780	63.744	2.0685	0.9470	0.5901	1.1215	2.4517	1.4174	0.7246	1.0343	-0.3832	-0.4704	-0.1345	0.0872	4.2661	0.78
Simple Curve 4	672+86.110	676+00.000	0.0594	27.137	7.789	1.0437	0.9499	0.5919	0.0939	0.2996	0.1732	0.0885	0.1264	0.7442	0.7767	0.5033	-0.0325	17.5567	3.21

Table 31. Predicted Crash Frequencies by Year (Section 3)

Year	Total Crashes	FI Crashes	Percent FI (%)	FI/no C Crashes	Percent FI/no C (%)	PDO Crashes	Percent PDO (%)
2025	4.43	2.44	55.091	1.40	31.489	1.99	44.909
2026	6.47	3.62	55.893	2.02	31.235	2.85	44.107
2027	7.48	4.16	55.579	2.28	30.476	3.32	44.421
2028	8.52	4.71	55.309	2.54	29.817	3.81	44.691
2029	9.58	5.28	55.073	2.80	29.238	4.30	44.927
2030	9.90	5.45	55.007	2.88	29.064	4.45	44.993
2031	10.22	5.62	54.946	2.95	28.898	4.61	45.054
2032	10.54	5.79	54.891	3.03	28.738	4.76	45.109
2033	10.87	5.96	54.840	3.11	28.585	4.91	45.160
2034	11.19	6.13	54.794	3.18	28.438	5.06	45.206
2035	11.52	6.31	54.752	3.26	28.296	5.21	45.248
2036	11.84	6.48	54.712	3.33	28.160	5.36	45.288
2037	12.17	6.65	54.676	3.41	28.029	5.52	45.324
2038	12.50	6.83	54.643	3.49	27.901	5.67	45.357
2039	12.83	7.01	54.612	3.56	27.779	5.82	45.388
2040	13.16	7.18	54.583	3.64	27.659	5.98	45.417
2041	13.50	7.36	54.542	3.72	27.547	6.14	45.458
2042	13.84	7.54	54.503	3.80	27.438	6.30	45.497
2043	14.19	7.73	54.465	3.88	27.331	6.46	45.535
2044	14.53	7.91	54.427	3.96	27.227	6.62	45.573
2045	14.88	8.09	54.391	4.04	27.126	6.79	45.609
2046	15.23	8.28	54.356	4.12	27.027	6.95	45.644
2047	15.57	8.46	54.321	4.19	26.930	7.12	45.679
2048	15.93	8.65	54.287	4.27	26.836	7.28	45.713
2049	16.28	8.83	54.255	4.35	26.743	7.45	45.745
2050	16.63	9.02	54.222	4.43	26.653	7.61	45.778
Total	313.80	171.47	54.644	87.64	27.929	142.33	45.356
Average	12.07	6.59	54.644	3.37	27.929	5.47	45.356

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 32. Expected Crash Frequencies by Year (Section 3)

Year	Total Crashes	FI Crashes	Percent FI (%)	FI/no C Crashes	Percent FI/no C (%)	PDO Crashes	Percent PDO (%)
2025	3.57	1.89	52.734	1.32	36.826	1.69	47.224
2026	5.22	2.79	53.501	1.91	36.529	2.42	46.381
2027	6.04	3.21	53.201	2.15	35.641	2.82	46.711
2028	6.87	3.64	52.942	2.40	34.871	3.23	46.995
2029	7.73	4.07	52.716	2.64	34.194	3.65	47.243
2030	7.99	4.21	52.653	2.71	33.990	3.78	47.313
2031	8.25	4.34	52.595	2.79	33.795	3.91	47.377
2032	8.51	4.47	52.542	2.86	33.609	4.04	47.435
2033	8.77	4.60	52.494	2.93	33.430	4.16	47.488
2034	9.03	4.74	52.449	3.00	33.258	4.29	47.536
2035	9.29	4.87	52.409	3.08	33.092	4.42	47.581
2036	9.56	5.00	52.371	3.15	32.933	4.55	47.623
2037	9.82	5.14	52.336	3.22	32.779	4.68	47.660
2038	10.09	5.28	52.304	3.29	32.630	4.81	47.696
2039	10.35	5.41	52.275	3.36	32.487	4.94	47.728
2040	10.62	5.55	52.247	3.44	32.347	5.07	47.758
2041	10.89	5.69	52.209	3.51	32.216	5.21	47.801
2042	11.17	5.83	52.171	3.58	32.089	5.34	47.843
2043	11.45	5.97	52.134	3.66	31.964	5.48	47.883
2044	11.72	6.11	52.098	3.73	31.842	5.62	47.922
2045	12.01	6.25	52.064	3.81	31.724	5.76	47.960
2046	12.29	6.39	52.030	3.88	31.608	5.90	47.998
2047	12.57	6.54	51.997	3.96	31.495	6.04	48.034
2048	12.85	6.68	51.964	4.03	31.384	6.18	48.069
2049	13.13	6.82	51.933	4.11	31.276	6.32	48.104
2050	13.42	6.96	51.902	4.18	31.170	6.46	48.138
Total	253.20	132.44	52.305	82.70	32.662	120.76	47.695
Average	9.74	5.09	52.305	3.18	32.662	4.64	47.695

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 33. Comparing Predicted and Expected Crashes for the Evaluation Period (Section 3)

Scope	Total Crashes	FI Crashes	Percent FI (%)	FI/no C Crashes	Percent FI/no C (%)	PDO Crashes	Percent PDO (%)
Predicted	313.80	171.47	54.644	87.64	27.929	142.33	45.356
Expected	253.20	132.44	52.305	82.70	32.662	120.76	47.695
Expected - Predicted	-60.60	-39.03		-4.94		-21.57	
Percent Difference	-23.93	-29.47		-5.97		-17.86	

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 34. Expected Crash Type Distribution (Section 3)

Element Type	Crash Type	FI Crashes	Percent FI (%)	FI/no C Crashes	Percent FI/no C (%)	PDO Crashes	Percent PDO (%)	Total Crashes	Percent Total (%)
Highway Segment	Single	28.14	11.1	22.40	8.8	23.60	9.3	51.84	20.5
Highway Segment	Total Single Vehicle Crashes	28.14	11.1	22.40	8.8	23.60	9.3	51.84	20.5
Highway Segment	Angle Collision	41.62	16.4	25.64	10.1	35.65	14.1	77.55	30.6
Highway Segment	Head-on Collision	3.43	1.4	3.17	1.3	0.10	0.0	1.96	0.8
Highway Segment	Rear-end Collision	36.07	14.2	15.99	6.3	21.91	8.7	53.59	21.2
Highway Segment	Sideswipe	5.68	2.2	3.24	1.3	11.95	4.7	21.35	8.4
Highway Segment	Total Multiple Vehicle Crashes	86.80	34.3	48.04	19.0	69.60	27.5	154.44	61.0
Highway Segment	Total Highway Segment Crashes	118.25	46.7	73.68	29.1	99.57	39.3	217.83	86.0
Highway Segment	Other Collision	3.31	1.3	3.24	1.3	6.37	2.5	11.54	4.6
Intersection	Single	2.10	0.8	1.79	0.7	5.15	2.0	7.15	2.8
Intersection	Total Single Vehicle Crashes	2.10	0.8	1.79	0.7	5.15	2.0	7.15	2.8
Intersection	Angle Collision	7.57	3.0	5.15	2.0	6.19	2.4	13.97	5.5
Intersection	Head-on Collision	0.26	0.1	0.21	0.1	0.32	0.1	0.57	0.2
Intersection	Rear-end Collision	3.02	1.2	0.97	0.4	5.09	2.0	8.07	3.2
Intersection	Sideswipe	0.60	0.2	0.36	0.1	3.31	1.3	3.79	1.5
Intersection	Total Multiple Vehicle Crashes	11.45	4.5	6.69	2.6	14.90	5.9	26.39	10.4
Intersection	Total Intersection Crashes	14.20	5.6	9.02	3.6	21.21	8.4	35.34	14.0
Intersection	Other Collision	0.65	0.3	0.53	0.2	1.17	0.5	1.80	0.7
	Total Crashes	132.45	52.3	82.70	32.7	120.78	47.7	253.17	100.0

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 35. Evaluation Message

Start Location (Sta. ft)	End Location (Sta. ft)	Message
585+00.000	594+84.940	Warning: for segment #1 (585+00.000 to 594+84.940), no foreslope data available for left side of road for use by AFM3ru, using 1.0
585+00.000	594+84.940	Warning: for segment #1 (585+00.000 to 594+84.940), no foreslope data available for right side of road for use by AFM3ru, using 1.0
594+84.940	600+00.000	Warning: for segment #2 (594+84.940 to 600+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
594+84.940	600+00.000	Warning: for segment #2 (594+84.940 to 600+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
600+00.000	601+00.000	Warning: for segment #3 (600+00.000 to 601+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
600+00.000	601+00.000	Warning: for segment #3 (600+00.000 to 601+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
601+00.000	602+00.000	Warning: for segment #4 (601+00.000 to 602+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
601+00.000	602+00.000	Warning: for segment #4 (601+00.000 to 602+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
602+00.000	605+00.000	Warning: for segment #5 (602+00.000 to 605+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
602+00.000	605+00.000	Warning: for segment #5 (602+00.000 to 605+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
605+00.000	605+60.000	Warning: for segment #6 (605+00.000 to 605+60.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
605+00.000	605+60.000	Warning: for segment #6 (605+00.000 to 605+60.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
605+60.000	605+70.000	Warning: for segment #7 (605+60.000 to 605+70.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
605+60.000	605+70.000	Warning: for segment #7 (605+60.000 to 605+70.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
605+70.000	605+75.000	Warning: for segment #8 (605+70.000 to 605+75.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
605+70.000	605+75.000	Warning: for segment #8 (605+70.000 to 605+75.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
605+75.000	609+00.000	Warning: for segment #9 (605+75.000 to 609+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
605+75.000	609+00.000	Warning: for segment #9 (605+75.000 to 609+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
609+00.000	609+21.930	Warning: for segment #10 (609+00.000 to 609+21.930), no foreslope data available for left side of road for use by AFM3ru, using 1.0
609+00.000	609+21.930	Warning: for segment #10 (609+00.000 to 609+21.930), no foreslope data available for right side of road for use by AFM3ru, using 1.0
609+21.930	611+40.000	Warning: for segment #11 (609+21.930 to 611+40.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
609+21.930	611+40.000	Warning: for segment #11 (609+21.930 to 611+40.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
611+40.000	612+50.000	Warning: for segment #12 (611+40.000 to 612+50.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
611+40.000	612+50.000	Warning: for segment #12 (611+40.000 to 612+50.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
612+50.000	624+64.530	Warning: for segment #13 (612+50.000 to 624+64.530), no foreslope data available for left side of road for use by AFM3ru, using 1.0
612+50.000	624+64.530	Warning: for segment #13 (612+50.000 to 624+64.530), no foreslope data available for right side of road for use by AFM3ru, using 1.0
624+64.530	636+92.820	Warning: for segment #14 (624+64.530 to 636+92.820), no foreslope data available for left side of road for use by AFM3ru, using 1.0
624+64.530	636+92.820	Warning: for segment #14 (624+64.530 to 636+92.820), no foreslope data available for right side of road for use by AFM3ru, using 1.0
636+92.820	639+00.000	Warning: for segment #15 (636+92.820 to 639+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
636+92.820	639+00.000	Warning: for segment #15 (636+92.820 to 639+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0

Start Location (Sta. ft)	End Location (Sta. ft)	Message
639+00.000	640+00.000	Warning: for segment #16 (639+00.000 to 640+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
639+00.000	640+00.000	Warning: for segment #16 (639+00.000 to 640+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
640+00.000	647+26.050	Warning: for segment #17 (640+00.000 to 647+26.050), no foreslope data available for left side of road for use by AFM3ru, using 1.0
640+00.000	647+26.050	Warning: for segment #17 (640+00.000 to 647+26.050), no foreslope data available for right side of road for use by AFM3ru, using 1.0
647+26.050	667+80.000	Warning: for segment #18 (647+26.050 to 667+80.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
647+26.050	667+80.000	Warning: for segment #18 (647+26.050 to 667+80.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
667+80.000	668+80.000	Warning: for segment #19 (667+80.000 to 668+80.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
667+80.000	668+80.000	Warning: for segment #19 (667+80.000 to 668+80.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
668+80.000	672+86.110	Warning: for segment #20 (668+80.000 to 672+86.110), no foreslope data available for left side of road for use by AFM3ru, using 1.0
668+80.000	672+86.110	Warning: for segment #20 (668+80.000 to 672+86.110), no foreslope data available for right side of road for use by AFM3ru, using 1.0
672+86.110	676+00.000	Warning: for segment #21 (672+86.110 to 676+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
672+86.110	676+00.000	Warning: for segment #21 (672+86.110 to 676+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
585+00.000	594+84.940	Warning: for segment #1 (585+00.000 to 594+84.940), no foreslope data available for left side of road for use by AFM3ru, using 1.0
585+00.000	594+84.940	Warning: for segment #1 (585+00.000 to 594+84.940), no foreslope data available for right side of road for use by AFM3ru, using 1.0
594+84.940	600+00.000	Warning: for segment #2 (594+84.940 to 600+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
594+84.940	600+00.000	Warning: for segment #2 (594+84.940 to 600+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
600+00.000	601+00.000	Warning: for segment #3 (600+00.000 to 601+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
600+00.000	601+00.000	Warning: for segment #3 (600+00.000 to 601+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
601+00.000	602+00.000	Warning: for segment #4 (601+00.000 to 602+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
601+00.000	602+00.000	Warning: for segment #4 (601+00.000 to 602+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
602+00.000	605+00.000	Warning: for segment #5 (602+00.000 to 605+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
602+00.000	605+00.000	Warning: for segment #5 (602+00.000 to 605+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
605+00.000	605+60.000	Warning: for segment #6 (605+00.000 to 605+60.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
605+00.000	605+60.000	Warning: for segment #6 (605+00.000 to 605+60.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
605+60.000	605+70.000	Warning: for segment #7 (605+60.000 to 605+70.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
605+60.000	605+70.000	Warning: for segment #7 (605+60.000 to 605+70.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
605+70.000	605+75.000	Warning: for segment #8 (605+70.000 to 605+75.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
605+70.000	605+75.000	Warning: for segment #8 (605+70.000 to 605+75.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
605+75.000	609+00.000	Warning: for segment #9 (605+75.000 to 609+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
605+75.000	609+00.000	Warning: for segment #9 (605+75.000 to 609+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
609+00.000	609+21.930	Warning: for segment #10 (609+00.000 to 609+21.930), no foreslope data available for left side of road for use by AFM3ru, using 1.0
609+00.000	609+21.930	Warning: for segment #10 (609+00.000 to 609+21.930), no foreslope data available for right side of road for use by AFM3ru, using 1.0

Start Location (Sta. ft)	End Location (Sta. ft)	Message
609+21.930	611+40.000	Warning: for segment #11 (609+21.930 to 611+40.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
609+21.930	611+40.000	Warning: for segment #11 (609+21.930 to 611+40.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
611+40.000	612+50.000	Warning: for segment #12 (611+40.000 to 612+50.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
611+40.000	612+50.000	Warning: for segment #12 (611+40.000 to 612+50.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
612+50.000	624+64.530	Warning: for segment #13 (612+50.000 to 624+64.530), no foreslope data available for left side of road for use by AFM3ru, using 1.0
612+50.000	624+64.530	Warning: for segment #13 (612+50.000 to 624+64.530), no foreslope data available for right side of road for use by AFM3ru, using 1.0
624+64.530	636+92.820	Warning: for segment #14 (624+64.530 to 636+92.820), no foreslope data available for left side of road for use by AFM3ru, using 1.0
624+64.530	636+92.820	Warning: for segment #14 (624+64.530 to 636+92.820), no foreslope data available for right side of road for use by AFM3ru, using 1.0
636+92.820	639+00.000	Warning: for segment #15 (636+92.820 to 639+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
636+92.820	639+00.000	Warning: for segment #15 (636+92.820 to 639+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
639+00.000	640+00.000	Warning: for segment #16 (639+00.000 to 640+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
639+00.000	640+00.000	Warning: for segment #16 (639+00.000 to 640+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
640+00.000	647+26.050	Warning: for segment #17 (640+00.000 to 647+26.050), no foreslope data available for left side of road for use by AFM3ru, using 1.0
640+00.000	647+26.050	Warning: for segment #17 (640+00.000 to 647+26.050), no foreslope data available for right side of road for use by AFM3ru, using 1.0
647+26.050	667+80.000	Warning: for segment #18 (647+26.050 to 667+80.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
647+26.050	667+80.000	Warning: for segment #18 (647+26.050 to 667+80.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
667+80.000	668+80.000	Warning: for segment #19 (667+80.000 to 668+80.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
667+80.000	668+80.000	Warning: for segment #19 (667+80.000 to 668+80.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
668+80.000	672+86.110	Warning: for segment #20 (668+80.000 to 672+86.110), no foreslope data available for left side of road for use by AFM3ru, using 1.0
668+80.000	672+86.110	Warning: for segment #20 (668+80.000 to 672+86.110), no foreslope data available for right side of road for use by AFM3ru, using 1.0
672+86.110	676+00.000	Warning: for segment #21 (672+86.110 to 676+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
672+86.110	676+00.000	Warning: for segment #21 (672+86.110 to 676+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0

Section 5 Evaluation

Section: Section 5

Evaluation Start Location: 862+60.000

Evaluation End Location: 948+50.000

Area Type: Rural

Functional Class: Arterial

Type of Alignment: Undivided, Multilane

Model Category: Rural, Multilane

Calibration Factor: 4ST=1.0; 4U=1.0;

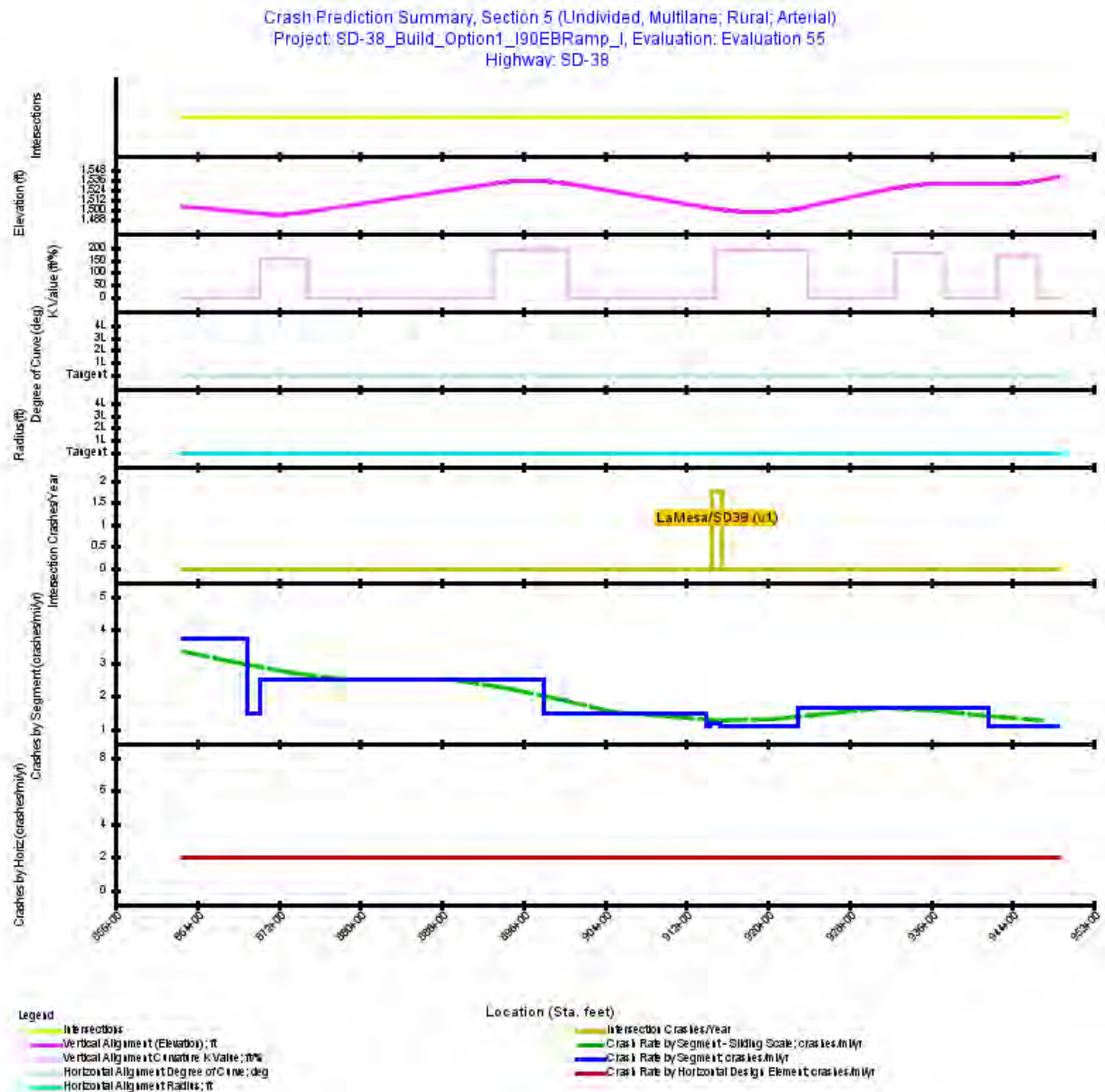


Figure 3. Crash Prediction Summary (Section 5)

Table 36. Observed Crashes Used in the Evaluation (Section 5)

Year	Observed Crashes	Total Crashes Used	FI Crashes	FI no/C Crashes	PDO Crashes
2018	1	1	0	0	1
2019	0	0	0	0	0
2020	3	3	2	2	1
2021	2	2	1	1	1
2022	1	1	1	1	0
All Years	7 ^[1]	7	4	4	3

Footnotes

^[1] Note: Observed crash data that does not comply with the associated CPM model requirements may not be used in EB processing.

Table 37. Evaluation Highway - Homogeneous Segments (Section 5)

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Median Width (ft)	Median Type	Effective Median Width (ft)	Lighting	Automated Speed Enforcement	Left Side Slope	Right Side Slope
75	Rural Multi-Lane Segment Four-lane Undivided	862+60.000	869+00.000	640.00	0.1212	2025: 6,704; 2026: 7,305; 2027: 7,907; 2028: 8,508; 2029: 9,110; 2030: 9,295; 2031: 9,480; 2032: 9,666; 2033: 9,851; 2034: 10,037; 2035: 10,222; 2036: 10,408; 2037: 10,593; 2038: 10,779; 2039: 10,964; 2040: 11,150; 2041: 11,375; 2042: 11,600; 2043: 11,825; 2044: 12,050; 2045: 12,275; 2046: 12,500; 2047: 12,725; 2048: 12,950; 2049: 13,175; 2050: 13,400	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
76	Rural Multi-Lane Segment Four-lane Undivided	869+00.000	870+20.000	120.00	0.0227	2025: 6,704; 2026: 7,305; 2027: 7,907; 2028: 8,508; 2029: 9,110; 2030: 9,295; 2031: 9,480; 2032: 9,666; 2033: 9,851; 2034: 10,037; 2035: 10,222; 2036: 10,408; 2037: 10,593; 2038: 10,779; 2039: 10,964; 2040: 11,150; 2041: 11,375; 2042: 11,600; 2043: 11,825; 2044: 12,050; 2045: 12,275; 2046: 12,500; 2047: 12,725; 2048: 12,950; 2049: 13,175; 2050: 13,400	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
77	Rural Multi-Lane Segment Four-lane Undivided	870+20.000	898+00.000	2,780.00	0.5265	2025: 6,704; 2026: 7,305; 2027: 7,907; 2028: 8,508; 2029: 9,110; 2030: 9,295; 2031: 9,480; 2032: 9,666; 2033: 9,851; 2034: 10,037; 2035: 10,222; 2036: 10,408; 2037: 10,593; 2038: 10,779; 2039: 10,964; 2040: 11,150; 2041: 11,375; 2042: 11,600; 2043: 11,825; 2044: 12,050; 2045: 12,275; 2046: 12,500; 2047: 12,725; 2048: 12,950; 2049: 13,175; 2050: 13,400	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
78	Rural Multi-Lane Segment Four-lane Undivided	898+00.000	906+70.000	870.00	0.1648	2025: 6,704; 2026: 7,305; 2027: 7,907; 2028: 8,508; 2029: 9,110; 2030: 9,295; 2031: 9,480; 2032: 9,666; 2033: 9,851; 2034: 10,037; 2035: 10,222; 2036: 10,408; 2037: 10,593; 2038: 10,779; 2039: 10,964; 2040: 11,150; 2041: 11,375; 2042: 11,600; 2043: 11,825; 2044: 12,050; 2045: 12,275; 2046: 12,500; 2047: 12,725; 2048: 12,950; 2049: 13,175; 2050: 13,400	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
79	Rural Multi-Lane Segment Four-lane Undivided	906+70.000	907+80.000	110.00	0.0208	2025: 6,704; 2026: 7,305; 2027: 7,907; 2028: 8,508; 2029: 9,110; 2030: 9,295; 2031: 9,480; 2032: 9,666; 2033: 9,851; 2034: 10,037; 2035: 10,222; 2036: 10,408; 2037: 10,593; 2038: 10,779; 2039: 10,964; 2040: 11,150; 2041: 11,375; 2042: 11,600; 2043: 11,825; 2044: 12,050; 2045: 12,275; 2046: 12,500; 2047: 12,725; 2048: 12,950; 2049: 13,175; 2050: 13,400	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
80	Rural Multi-Lane Segment Four-lane Undivided	907+80.000	914+00.000	620.00	0.1174	2025: 6,704; 2026: 7,305; 2027: 7,907; 2028: 8,508; 2029: 9,110; 2030: 9,295; 2031: 9,480; 2032: 9,666; 2033: 9,851; 2034: 10,037; 2035: 10,222; 2036: 10,408; 2037: 10,593; 2038: 10,779; 2039: 10,964; 2040: 11,150; 2041: 11,375; 2042: 11,600; 2043: 11,825; 2044: 12,050; 2045: 12,275; 2046: 12,500; 2047: 12,725; 2048: 12,950; 2049: 13,175; 2050: 13,400	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
81	Rural Multi-Lane Segment Four-lane Undivided	914+00.000	914+30.000	30.00	0.0057	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
82	Rural Multi-Lane Segment Four-lane Undivided	914+30.000	914+40.000	10.00	0.0019	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
83	Rural Multi-Lane Segment Four-lane Undivided	914+40.000	915+40.000	100.00	0.0189	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	12.00	12.00	0.00	0.00	0.00	None	0.00	false	false	0:1	0:1
84	Rural Multi-Lane Segment Four-lane Undivided	915+40.000	921+00.000	560.00	0.1061	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
85	Rural Multi-Lane Segment Four-lane Undivided	921+00.000	921+90.000	90.00	0.0170	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
86	Rural Multi-Lane Segment Four-lane Undivided	921+90.000	923+00.000	110.00	0.0208	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
87	Rural Multi-Lane Segment Four-lane Undivided	923+00.000	941+70.000	1,870.00	0.3542	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
88	Rural Multi-Lane Segment Four-lane Undivided	941+70.000	948+00.000	630.00	0.1193	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Median Width (ft)	Median Type	Effective Median Width (ft)	Lighting	Automated Speed Enforcement	Left Side Slope	Right Side Slope
89	Rural Multi-Lane Segment Four-lane Undivided	948+00.000	948+50.000	50.00	0.0095	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1

Table 38. User Defined CMF Used in the Eval Segment CPM Evaluation (Section 5)

Name	Description	Start Loc. (Sta. ft)	End Loc. (Sta. ft)	Start CMF Year	End CMF Year	Severity	CMF Value
1	TWLTL	862+60.000	948+50.000	2025	2025	Total	0.6900

Table 39. Crash History Highway - Homogeneous Segments (Section 5)

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Median Width (ft)	Median Type	Effective Median Width (ft)	Lighting	Automated Speed Enforcement	Left Side Slope	Right Side Slope
75	Rural Multi-Lane Segment Four-lane Undivided	862+60.000	869+00.000	640.00	0.1212	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
76	Rural Multi-Lane Segment Four-lane Undivided	869+00.000	870+20.000	120.00	0.0227	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
77	Rural Multi-Lane Segment Four-lane Undivided	870+20.000	898+00.000	2,780.00	0.5265	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
78	Rural Multi-Lane Segment Four-lane Undivided	898+00.000	906+70.000	870.00	0.1648	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
79	Rural Multi-Lane Segment Four-lane Undivided	906+70.000	907+80.000	110.00	0.0208	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
80	Rural Multi-Lane Segment Four-lane Undivided	907+80.000	914+00.000	620.00	0.1174	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
81	Rural Multi-Lane Segment Four-lane Undivided	914+00.000	914+30.000	30.00	0.0057	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
82	Rural Multi-Lane Segment Four-lane Undivided	914+30.000	914+40.000	10.00	0.0019	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
83	Rural Multi-Lane Segment Four-lane Undivided	914+40.000	915+40.000	100.00	0.0189	2018-2022: 4,900	12.00	12.00	0.00	0.00	0.00	None	0.00	false	false	0:1	0:1
84	Rural Multi-Lane Segment Four-lane Undivided	915+40.000	921+00.000	560.00	0.1061	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
85	Rural Multi-Lane Segment Four-lane Undivided	921+00.000	921+90.000	90.00	0.0170	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
86	Rural Multi-Lane Segment Four-lane Undivided	921+90.000	923+00.000	110.00	0.0208	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
87	Rural Multi-Lane Segment Four-lane Undivided	923+00.000	941+70.000	1,870.00	0.3542	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
88	Rural Multi-Lane Segment Four-lane Undivided	941+70.000	948+00.000	630.00	0.1193	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
89	Rural Multi-Lane Segment Four-lane Undivided	948+00.000	948+50.000	50.00	0.0095	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1

Table 40. Evaluation Intersection (Section 5)

Inter. No.	Title	Type	Location (Sta. ft)	Major AADT	Minor AADT	Legs	Traffic Control	Major road approaches w/Left Turn Lanes	Major road approaches w/Right Turn Lanes	Skew1	Skew2	Lighted at Night
7	LaMesa/SD 38 (v1)	Rural Multi-Lane Intersection Four-Legged w/STOP control	915+00.000	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	2025: 1,266; 2026: 1,293; 2027: 1,320; 2028: 1,347; 2029: 1,375; 2030: 1,407; 2031: 1,439; 2032: 1,471; 2033: 1,504; 2034: 1,536; 2035: 1,568; 2036: 1,725; 2037: 1,949; 2038: 2,172; 2039: 2,396; 2040: 2,620; 2041: 2,940; 2042: 3,261; 2043: 3,581; 2044: 3,902; 2045: 4,222; 2046: 4,543; 2047: 4,863; 2048: 5,184; 2049: 5,504; 2050: 5,825	4	Stop-Controlled	0	0	0.00	0.00	false

Table 41. Crash History Intersection (Section 5)

Inter. No.	Title	Type	Location (Sta. ft)	Major AADT	Minor AADT	Legs	Traffic Control	Major road approaches w/Left Turn Lanes	Major road approaches w/Right Turn Lanes	Skew1	Skew2	Lighted at Night
7	LaMesa/SD38 (v1)	Rural Multi-Lane Intersection Four-Legged w/STOP control	915+00.000	2018-2022: 4,900	2018-2022: 1,185	4	Stop-Controlled	0	0	0.00	0.00	false

Table 42. Expected Highway Crash Rates and Frequencies Summary (Section 5)

First Year of Analysis	2025
Last Year of Analysis	2050
Evaluated Length (mi)	1.6269
Average Future Road AADT (vpd)	9,671
Expected Crashes	
Total Crashes	128.33
Fatal and Injury Crashes	70.35
Fatal and Serious Injury Crashes	43.02
Property-Damage-Only Crashes	57.98
Percent of Total Expected Crashes	
Percent Fatal and Injury Crashes (%)	55
Percent Fatal and Serious Injury Crashes (%)	34
Percent Property-Damage-Only Crashes (%)	45
Expected Crash Rate	
Crash Rate (crashes/mi/yr)	3.0339
FI Crash Rate (crashes/mi/yr)	1.6632
FI no/C Crash Rate (crashes/mi/yr)	1.0171
PDO Crash Rate (crashes/mi/yr)	1.3707
Expected Travel Crash Rate	
Total Travel (million veh-mi)	149.31
Travel Crash Rate (crashes/million veh-mi)	0.86
Travel FI Crash Rate (crashes/million veh-mi)	0.47
Travel FI no/C Crash Rate (crashes/million veh-mi)	0.29
Travel PDO Crash Rate (crashes/million veh-mi)	0.39

Table 43. Expected Crash Frequencies and Rates by Highway Segment/Intersection (Section 5)

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected FI no/C Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted FI no/C Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) FI no/C Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/million veh-mi)	Expected Intersection Travel Crash Rate (crashes/million veh)
75	862+60.000	869+00.000	0.1212	11.835	10.550	0.4552	0.1678	0.1025	0.2874	0.4058	0.2415	0.1305	0.1643	0.0494	-0.0737	-0.0279	0.1231	3.7553	0.97	
76	869+00.000	870+20.000	0.0227	0.872	1.978	0.0335	0.0200	0.0122	0.0135	0.0761	0.0453	0.0245	0.0308	-0.0425	-0.0252	-0.0122	-0.0173	1.4754	0.38	
77	870+20.000	898+00.000	0.5265	34.568	45.826	1.3295	0.9411	0.5751	0.3884	1.7625	1.0491	0.5667	0.7135	-0.4330	-0.1079	0.0085	-0.3251	2.5252	0.65	
78	898+00.000	906+70.000	0.1648	6.321	14.341	0.2431	0.1453	0.0888	0.0978	0.5516	0.3283	0.1773	0.2233	-0.3085	-0.1830	-0.0885	-0.1255	1.4754	0.38	
79	906+70.000	907+80.000	0.0208	0.799	1.813	0.0307	0.0184	0.0112	0.0124	0.0697	0.0415	0.0224	0.0282	-0.0390	-0.0231	-0.0112	-0.0159	1.4754	0.38	
80	907+80.000	914+00.000	0.1174	4.504	10.220	0.1732	0.1036	0.0633	0.0697	0.3931	0.2340	0.1264	0.1591	-0.2198	-0.1304	-0.0631	-0.0894	1.4754	0.38	
81	914+00.000	914+30.000	0.0057	0.162	0.368	0.0062	0.0037	0.0023	0.0025	0.0142	0.0086	0.0048	0.0056	-0.0079	-0.0049	-0.0026	-0.0030	1.0982	0.36	
82	914+30.000	914+40.000	0.0019	0.054	0.123	0.0021	0.0012	0.0008	0.0008	0.0047	0.0029	0.0016	0.0019	-0.0026	-0.0016	-0.0009	-0.0010	1.0982	0.36	
83	914+40.000	915+40.000	0.0189	0.579	1.443	0.0223	0.0132	0.0081	0.0090	0.0555	0.0337	0.0190	0.0218	-0.0332	-0.0205	-0.0109	-0.0127	1.1758	0.39	
LaMesa/SD38 (v1)	915+00.000			45.389	83.561	1.7457	0.7046	0.4318	1.0411	3.2139	1.8143	0.9753	1.3996	-1.4682	-1.1097	-0.5434	-0.3585			0.47
84	915+40.000	921+00.000	0.1061	3.028	6.871	0.1165	0.0696	0.0425	0.0468	0.2643	0.1607	0.0903	0.1036	-0.1478	-0.0910	-0.0478	-0.0568	1.0982	0.36	
85	921+00.000	921+90.000	0.0170	0.487	1.104	0.0187	0.0112	0.0068	0.0075	0.0425	0.0258	0.0145	0.0167	-0.0238	-0.0146	-0.0077	-0.0091	1.0982	0.36	
86	921+90.000	923+00.000	0.0208	0.595	1.350	0.0229	0.0137	0.0084	0.0092	0.0519	0.0316	0.0177	0.0204	-0.0290	-0.0179	-0.0094	-0.0111	1.0982	0.36	
87	923+00.000	941+70.000	0.3542	15.460	22.944	0.5946	0.4078	0.2492	0.1868	0.8825	0.5365	0.3016	0.3460	-0.2878	-0.1287	-0.0524	-0.1592	1.6789	0.56	
88	941+70.000	948+00.000	0.1193	3.407	7.730	0.1310	0.0783	0.0479	0.0527	0.2973	0.1807	0.1016	0.1166	-0.1663	-0.1024	-0.0537	-0.0639	1.0982	0.36	
89	948+00.000	948+50.000	0.0095	0.270	0.614	0.0104	0.0062	0.0038	0.0042	0.0236	0.0143	0.0081	0.0093	-0.0132	-0.0081	-0.0043	-0.0051	1.0982	0.36	
All Segments			1.6269	82.941	127.275	3.1901	2.0012	1.2229	1.1888	4.8952	2.9344	1.6070	1.9607	-1.7051	-0.9332	-0.3840	-0.7719	1.9608	0.56	
All Intersections				45.389	83.561	1.7457	0.7046	0.4318	1.0411	3.2139	1.8143	0.9753	1.3996	-1.4682	-1.1097	-0.5434	-0.3585			0.47
Total			1.6269	128.331	210.836	4.9358	2.7058	1.6548	2.2300	8.1091	4.7487	2.5822	3.3604	-3.1733	-2.0429	-0.9275	-1.1304	3.0339		

Table 44. Expected Crash Frequencies and Rates by Horizontal Design Element (Section 5)

Title	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected FI no/C Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted FI no/C Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) FI no/C Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/ yr)	Expected Travel Crash Rate (crashes/mil lion veh-mi)
Tangent	862+60.000	948+50.000	1.6269	82.941	127.275	3.1901	2.0012	1.2229	1.1888	4.8952	2.9344	1.6070	1.9607	-1.7051	-0.9332	-0.3840	-0.7719	1.9608	0.55

Table 45. Predicted Crash Frequencies by Year (Section 5)

Year	Total Crashes	FI Crashes	Percent FI (%)	FI/no C Crashes	Percent FI/no C (%)	PDO Crashes	Percent PDO (%)
2025	3.86	2.22	57.635	1.32	34.127	1.63	42.365
2026	5.19	3.03	58.409	1.77	34.162	2.16	41.591
2027	5.58	3.26	58.303	1.89	33.779	2.33	41.697
2028	5.99	3.48	58.200	2.00	33.421	2.50	41.800
2029	6.39	3.71	58.099	2.11	33.082	2.68	41.901
2030	6.53	3.79	58.080	2.15	32.973	2.74	41.920
2031	6.67	3.87	58.062	2.19	32.866	2.80	41.938
2032	6.81	3.95	58.044	2.23	32.760	2.86	41.956
2033	6.95	4.03	58.027	2.27	32.657	2.92	41.973
2034	7.09	4.11	58.010	2.31	32.557	2.98	41.990
2035	7.23	4.20	57.993	2.35	32.459	3.04	42.007
2036	7.46	4.33	58.041	2.41	32.316	3.13	41.959
2037	7.73	4.50	58.123	2.49	32.159	3.24	41.877
2038	8.00	4.66	58.206	2.56	32.012	3.34	41.794
2039	8.26	4.81	58.289	2.63	31.873	3.44	41.711
2040	8.52	4.97	58.371	2.70	31.741	3.54	41.629
2041	8.85	5.17	58.493	2.79	31.579	3.67	41.507
2042	9.17	5.37	58.611	2.88	31.428	3.79	41.389
2043	9.49	5.57	58.727	2.97	31.286	3.92	41.273
2044	9.80	5.77	58.839	3.05	31.151	4.03	41.161
2045	10.11	5.96	58.947	3.14	31.023	4.15	41.053
2046	10.42	6.16	59.053	3.22	30.901	4.27	40.947
2047	10.73	6.35	59.156	3.30	30.784	4.38	40.844
2048	11.03	6.54	59.255	3.38	30.672	4.50	40.745
2049	11.34	6.73	59.352	3.46	30.565	4.61	40.648
2050	11.64	6.92	59.446	3.54	30.462	4.72	40.554
Total	210.84	123.47	58.560	67.14	31.844	87.37	41.440
Average	8.11	4.75	58.560	2.58	31.844	3.36	41.440

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 46. Expected Crash Frequencies by Year (Section 5)

Year	Total Crashes	FI Crashes	Percent FI (%)	FI/no C Crashes	Percent FI/no C (%)	PDO Crashes	Percent PDO (%)
2025	2.35	1.27	53.954	0.84	35.929	1.08	46.189
2026	3.16	1.73	54.679	1.14	35.966	1.43	45.344
2027	3.40	1.85	54.580	1.21	35.563	1.54	45.459
2028	3.64	1.99	54.483	1.28	35.186	1.66	45.572
2029	3.89	2.12	54.389	1.35	34.829	1.78	45.683
2030	3.97	2.16	54.371	1.38	34.714	1.82	45.703
2031	4.06	2.21	54.354	1.40	34.601	1.86	45.723
2032	4.14	2.25	54.337	1.43	34.490	1.90	45.742
2033	4.23	2.30	54.321	1.46	34.382	1.94	45.761
2034	4.32	2.34	54.305	1.48	34.276	1.98	45.779
2035	4.40	2.39	54.290	1.50	34.173	2.02	45.797
2036	4.54	2.47	54.334	1.55	34.023	2.08	45.746
2037	4.71	2.56	54.411	1.59	33.857	2.15	45.656
2038	4.87	2.65	54.489	1.64	33.702	2.22	45.566
2039	5.03	2.74	54.566	1.69	33.556	2.29	45.475
2040	5.18	2.83	54.643	1.73	33.417	2.35	45.386
2041	5.38	2.95	54.757	1.79	33.247	2.44	45.253
2042	5.58	3.06	54.869	1.85	33.088	2.52	45.123
2043	5.77	3.17	54.976	1.90	32.938	2.60	44.998
2044	5.97	3.29	55.081	1.96	32.796	2.68	44.876
2045	6.16	3.40	55.183	2.01	32.661	2.75	44.757
2046	6.34	3.51	55.282	2.06	32.533	2.83	44.642
2047	6.53	3.62	55.378	2.12	32.410	2.91	44.531
2048	6.72	3.73	55.471	2.17	32.292	2.98	44.422
2049	6.90	3.83	55.562	2.22	32.179	3.06	44.316
2050	7.08	3.94	55.650	2.27	32.071	3.13	44.214
Total	128.33	70.35	54.821	43.02	33.526	57.98	45.179
Average	4.94	2.71	54.821	1.66	33.526	2.23	45.179

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 47. Comparing Predicted and Expected Crashes for the Evaluation Period (Section 5)

Scope	Total Crashes	FI Crashes	Percent FI (%)	FI/no C Crashes	Percent FI/no C (%)	PDO Crashes	Percent PDO (%)
Predicted	210.84	123.47	58.560	67.14	31.844	87.37	41.440
Expected	128.33	70.35	54.821	43.02	33.526	57.98	45.179
Expected - Predicted	-82.50	-53.12		-24.11		-29.39	
Percent Difference	-64.29	-75.50		-56.05		-50.69	

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 48. Expected Crash Type Distribution (Section 5)

Element Type	Crash Type	FI Crashes	Percent FI (%)	FI/no C Crashes	Percent FI/no C (%)	PDO Crashes	Percent PDO (%)	Total Crashes	Percent Total (%)
Highway Segment	Single	12.38	9.7	9.67	7.5	7.33	5.7	19.74	15.4
Highway Segment	Total Single Vehicle Crashes	12.38	9.7	9.67	7.5	7.33	5.7	19.74	15.4
Highway Segment	Angle Collision	18.32	14.3	11.06	8.6	11.06	8.6	29.53	23.0
Highway Segment	Head-on Collision	1.51	1.2	1.37	1.1	0.03	0.0	0.75	0.6
Highway Segment	Rear-end Collision	15.87	12.4	6.90	5.4	6.80	5.3	20.40	15.9
Highway Segment	Sideswipe	2.50	1.9	1.40	1.1	3.71	2.9	8.13	6.3
Highway Segment	Total Multiple Vehicle Crashes	38.19	29.8	20.73	16.2	21.61	16.8	58.80	45.8
Highway Segment	Total Highway Segment Crashes	52.03	40.6	31.80	24.8	30.91	24.1	82.94	64.7
Highway Segment	Other Collision	1.46	1.1	1.40	1.1	1.98	1.5	4.40	3.4
Intersection	Single	2.71	2.1	2.23	1.7	6.58	5.1	9.17	7.1
Intersection	Total Single Vehicle Crashes	2.71	2.1	2.23	1.7	6.58	5.1	9.17	7.1
Intersection	Angle Collision	9.78	7.6	6.41	5.0	7.90	6.2	17.93	14.0
Intersection	Head-on Collision	0.33	0.3	0.26	0.2	0.41	0.3	0.73	0.6
Intersection	Rear-end Collision	3.90	3.0	1.21	0.9	6.50	5.1	10.35	8.1
Intersection	Sideswipe	0.77	0.6	0.45	0.3	4.22	3.3	4.86	3.8
Intersection	Total Multiple Vehicle Crashes	14.78	11.5	8.33	6.5	19.03	14.8	33.86	26.4
Intersection	Total Intersection Crashes	18.34	14.3	11.23	8.8	27.10	21.1	45.34	35.3
Intersection	Other Collision	0.84	0.7	0.66	0.5	1.49	1.2	2.31	1.8
	Total Crashes	70.37	54.9	43.02	33.5	58.01	45.2	128.28	100.0

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 49. Evaluation Message

Start Location (Sta. ft)	End Location (Sta. ft)	Message
862+60.000	869+00.000	Warning: for segment #75 (862+60.000 to 869+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
862+60.000	869+00.000	Warning: for segment #75 (862+60.000 to 869+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
869+00.000	870+20.000	Warning: for segment #76 (869+00.000 to 870+20.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
869+00.000	870+20.000	Warning: for segment #76 (869+00.000 to 870+20.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
870+20.000	898+00.000	Warning: for segment #77 (870+20.000 to 898+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
870+20.000	898+00.000	Warning: for segment #77 (870+20.000 to 898+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
898+00.000	906+70.000	Warning: for segment #78 (898+00.000 to 906+70.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
898+00.000	906+70.000	Warning: for segment #78 (898+00.000 to 906+70.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
906+70.000	907+80.000	Warning: for segment #79 (906+70.000 to 907+80.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
906+70.000	907+80.000	Warning: for segment #79 (906+70.000 to 907+80.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
907+80.000	914+00.000	Warning: for segment #80 (907+80.000 to 914+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
907+80.000	914+00.000	Warning: for segment #80 (907+80.000 to 914+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
914+00.000	914+30.000	Warning: for segment #81 (914+00.000 to 914+30.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
914+00.000	914+30.000	Warning: for segment #81 (914+00.000 to 914+30.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
914+30.000	914+40.000	Warning: for segment #82 (914+30.000 to 914+40.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
914+30.000	914+40.000	Warning: for segment #82 (914+30.000 to 914+40.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
914+40.000	915+40.000	Warning: for segment #83 (914+40.000 to 915+40.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
914+40.000	915+40.000	Warning: for segment #83 (914+40.000 to 915+40.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
915+40.000	921+00.000	Warning: for segment #84 (915+40.000 to 921+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
915+40.000	921+00.000	Warning: for segment #84 (915+40.000 to 921+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
921+00.000	921+90.000	Warning: for segment #85 (921+00.000 to 921+90.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
921+00.000	921+90.000	Warning: for segment #85 (921+00.000 to 921+90.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
921+90.000	923+00.000	Warning: for segment #86 (921+90.000 to 923+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
921+90.000	923+00.000	Warning: for segment #86 (921+90.000 to 923+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
923+00.000	941+70.000	Warning: for segment #87 (923+00.000 to 941+70.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
923+00.000	941+70.000	Warning: for segment #87 (923+00.000 to 941+70.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
941+70.000	948+00.000	Warning: for segment #88 (941+70.000 to 948+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
941+70.000	948+00.000	Warning: for segment #88 (941+70.000 to 948+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
948+00.000	948+50.000	Warning: for segment #89 (948+00.000 to 948+50.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
948+00.000	948+50.000	Warning: for segment #89 (948+00.000 to 948+50.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0

Start Location (Sta. ft)	End Location (Sta. ft)	Message
862+60.000	869+00.000	Warning: for segment #75 (862+60.000 to 869+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
862+60.000	869+00.000	Warning: for segment #75 (862+60.000 to 869+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
869+00.000	870+20.000	Warning: for segment #76 (869+00.000 to 870+20.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
869+00.000	870+20.000	Warning: for segment #76 (869+00.000 to 870+20.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
870+20.000	898+00.000	Warning: for segment #77 (870+20.000 to 898+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
870+20.000	898+00.000	Warning: for segment #77 (870+20.000 to 898+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
898+00.000	906+70.000	Warning: for segment #78 (898+00.000 to 906+70.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
898+00.000	906+70.000	Warning: for segment #78 (898+00.000 to 906+70.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
906+70.000	907+80.000	Warning: for segment #79 (906+70.000 to 907+80.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
906+70.000	907+80.000	Warning: for segment #79 (906+70.000 to 907+80.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
907+80.000	914+00.000	Warning: for segment #80 (907+80.000 to 914+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
907+80.000	914+00.000	Warning: for segment #80 (907+80.000 to 914+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
914+00.000	914+30.000	Warning: for segment #81 (914+00.000 to 914+30.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
914+00.000	914+30.000	Warning: for segment #81 (914+00.000 to 914+30.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
914+30.000	914+40.000	Warning: for segment #82 (914+30.000 to 914+40.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
914+30.000	914+40.000	Warning: for segment #82 (914+30.000 to 914+40.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
914+40.000	915+40.000	Warning: for segment #83 (914+40.000 to 915+40.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
914+40.000	915+40.000	Warning: for segment #83 (914+40.000 to 915+40.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
915+40.000	921+00.000	Warning: for segment #84 (915+40.000 to 921+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
915+40.000	921+00.000	Warning: for segment #84 (915+40.000 to 921+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
921+00.000	921+90.000	Warning: for segment #85 (921+00.000 to 921+90.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
921+00.000	921+90.000	Warning: for segment #85 (921+00.000 to 921+90.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
921+90.000	923+00.000	Warning: for segment #86 (921+90.000 to 923+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
921+90.000	923+00.000	Warning: for segment #86 (921+90.000 to 923+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
923+00.000	941+70.000	Warning: for segment #87 (923+00.000 to 941+70.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
923+00.000	941+70.000	Warning: for segment #87 (923+00.000 to 941+70.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
941+70.000	948+00.000	Warning: for segment #88 (941+70.000 to 948+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
941+70.000	948+00.000	Warning: for segment #88 (941+70.000 to 948+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
948+00.000	948+50.000	Warning: for segment #89 (948+00.000 to 948+50.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
948+00.000	948+50.000	Warning: for segment #89 (948+00.000 to 948+50.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0

Section 6 Evaluation

Section: Section 6

Evaluation Start Location: 948+50.000

Evaluation End Location: 974+11.000

Area Type: Urban

Functional Class: Arterial

Type of Alignment: Undivided, Multilane

Model Category: Urban/Suburban Arterial

Calibration Factor: 4D=1.0; 4SG=1.0; 4U=1.0;

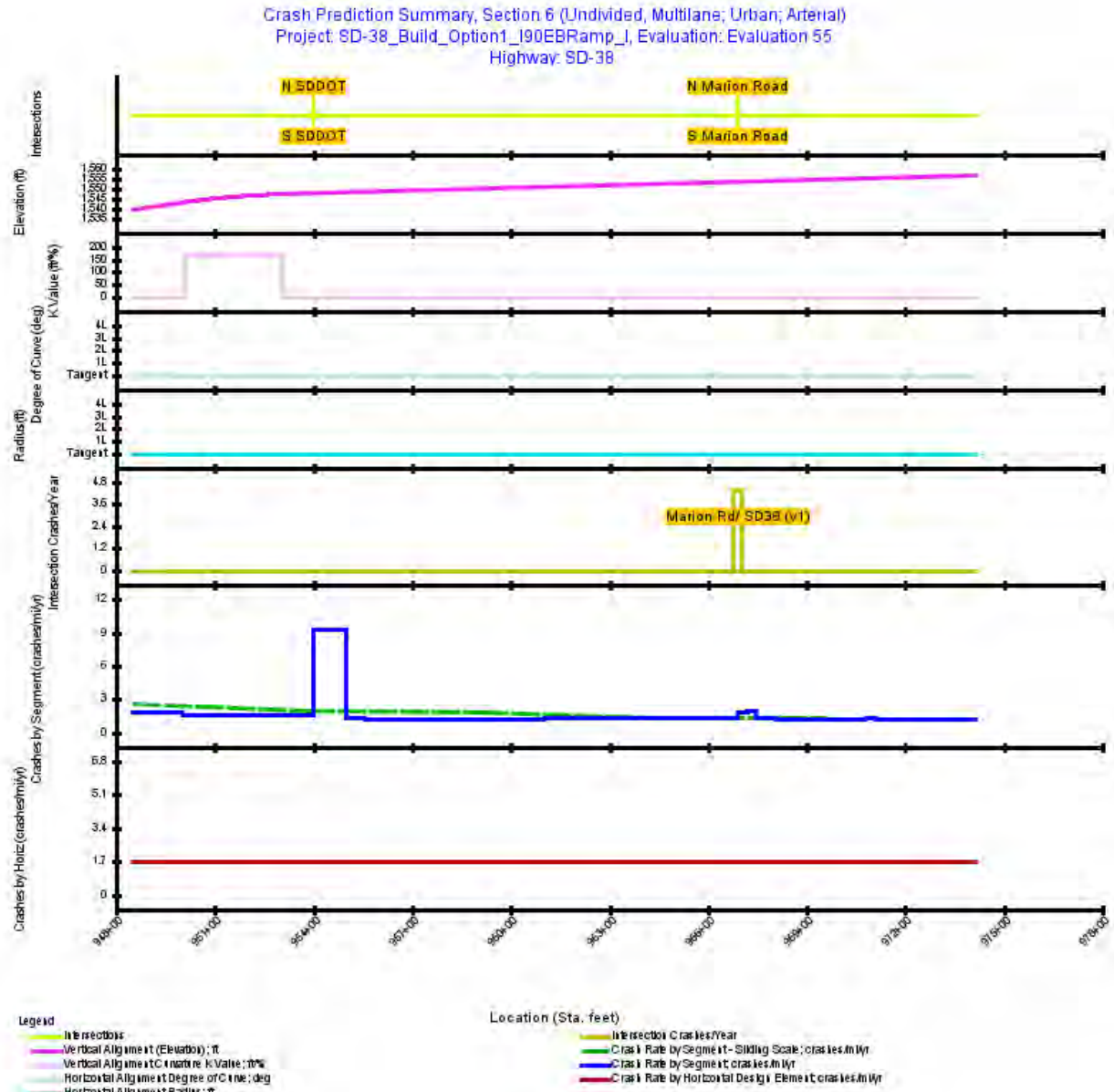


Figure 4. Crash Prediction Summary (Section 6)

Table 50. Observed Crashes Used in the Evaluation (Section 6)

Year	Observed Crashes	Total Crashes Used	FI Crashes	FI no/C Crashes	PDO Crashes
2018	5	5	4	0	1
2019	1	1	0	0	1
2020	2	2	0	0	2
2021	2	2	2	0	0
2022	2	2	0	0	2
All Years	12 ^[1]	12	6	0	6

Footnotes

^[1] Note: Observed crash data that does not comply with the associated CPM model requirements may not be used in EB processing.

Table 51. Evaluation Highway - Homogeneous Segments (Section 6)

Segment No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Number Major Commercial Driveways	Number Minor Commercial Driveways	Number Major Industrial/Institutional	Number Minor Industrial/Institutional	Number Major Residential Driveways	Number Minor Residential Driveways	Number Other Driveways	Lighting	Automated Speed Enforcement	Density (fixed objects/mi)	Median Width (ft)	Type	Effective Median Width (ft)	Speed Level	Number Rail Highway Crossings	Average Shoulder Width (ft)	Average Lane Width (ft)	
90	Urban/Suburban Arterial Segment Four-lane Undivided	948+5 0.000	950+0 0.000	150.00	0.0284	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	0	false	false	0.0	0.00	None	0.00	Intermediate/High	0	8.00	11.50
91	Urban/Suburban Arterial Segment Four-lane Undivided	950+0 0.000	954+0 0.000	400.00	0.0758	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	0	false	false	0.0	0.00	None	0.00	Intermediate/High	0	8.00	11.50
92	Urban/Suburban Arterial Segment Four-lane Undivided	954+0 0.000	955+0 0.000	100.00	0.0189	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	2	0	0	0	0	0	false	false	0.0	0.00	None	0.00	Intermediate/High	0	4.00	11.50
93	Urban/Suburban Arterial Segment Four-lane Divided	955+0 0.000	955+5 5.000	55.00	0.0104	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	0	false	false	0.0	4.01	Non-Traversable Median	4.01	Intermediate/High	0	8.00	11.50
94	Urban/Suburban Arterial Segment Four-lane Divided	955+5 5.000	958+2 8.000	273.00	0.0517	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	0	false	false	0.0	10.02	Non-Traversable Median	10.02	Intermediate/High	0	8.00	11.50
95	Urban/Suburban Arterial Segment Four-lane Divided	958+2 8.000	961+0 1.000	273.00	0.0517	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	0	false	false	0.0	20.03	Non-Traversable Median	19.99	Intermediate/High	0	8.00	11.50
96	Urban/Suburban Arterial Segment Four-lane Divided	961+0 1.000	962+0 0.000	99.00	0.0187	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	0	false	false	0.0	23.12	Traversable Median	23.12	Intermediate/High	0	8.00	11.50
97	Urban/Suburban Arterial Segment Four-lane Divided	962+0 0.000	963+6 9.000	169.00	0.0320	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	0	false	false	0.0	18.13	Traversable Median	30.13	Intermediate/High	0	8.00	11.50
98	Urban/Suburban Arterial Segment Four-lane Divided	963+6 9.000	965+0 0.000	131.00	0.0248	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	0	false	false	0.0	12.55	Traversable Median	24.55	Intermediate/High	0	8.00	11.50
99	Urban/Suburban Arterial Segment Four-lane Divided	965+0 0.000	966+3 8.000	138.00	0.0261	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	0	false	false	0.0	7.54	Traversable Median	19.54	Intermediate/High	0	4.00	11.50
100	Urban/Suburban Arterial Segment Four-lane Divided	966+3 8.000	966+7 0.000	32.00	0.0061	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	0	false	false	0.0	4.38	Traversable Median	16.38	Intermediate/High	0	4.00	11.50

Se g. No.	Type	Start Locati on (Sta. ft)	End Locati on (Sta. ft)	Len gth (ft)	Len gth (mi)	AADT	Number Major Commer cial Drivewa ys	Number Minor Commer cial Drivewa ys	Number Major Industrial/ Institutional	Number Minor Industrial/ Institutional	Number Major Resident ial Drivewa ys	Number Minor Resident ial Drivewa ys	Number Other Drivewa ys	Lighti ng	Automat ed Speed Enforce ment	Dens ity (fixe d objec ts/mi)	Med ian Wid th (ft)	Type	Effecti ve Media n Width (ft)	Speed Level	Numbe r Rail Highw ay Crossi ngs	Avera ge Shoul der Width (ft)	Aver age Lane Width (ft)
10 1	Urban/Suburban Arterial Segment Four-lane Divided	966+7 0.000	966+9 1.000	21.0 0	0.00 40	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	false	false	0.0	3.39	Traversable Median	15.39	Intermediate/High	0	0.00	11.50
10 2	Urban/Suburban Arterial Segment Four-lane Undivided	966+9 1.000	967+1 4.000	23.0 0	0.00 44	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	true	false	0.0	0.00	None	0.00	Intermediate/High	0	0.00	11.50
10 3	Urban/Suburban Arterial Segment Four-lane Undivided	967+1 4.000	967+2 0.000	6.00 0	0.00 11	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	true	false	0.0	0.00	None	0.00	Intermediate/High	0	8.00	11.50
10 4	Urban/Suburban Arterial Segment Four-lane Undivided	967+2 0.000	967+4 5.000	25.0 0	0.00 47	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	false	false	0.0	0.00	None	0.00	Intermediate/High	0	8.00	11.50
10 5	Urban/Suburban Arterial Segment Four-lane Divided	967+4 5.000	968+0 6.000	61.0 0	0.01 16	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	false	false	0.0	4.01	Non- Traversable Median	18.01	Intermediate/High	0	8.00	11.50
10 6	Urban/Suburban Arterial Segment Four-lane Divided	968+0 6.000	970+7 9.000	273. 00	0.05 17	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	false	false	0.0	9.52	Non- Traversable Median	23.52	Intermediate/High	0	8.00	11.50
10 7	Urban/Suburban Arterial Segment Four-lane Divided	970+7 9.000	971+0 9.000	30.0 0	0.00 57	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	false	false	0.0	14.53	Non- Traversable Median	14.53	Intermediate/High	0	8.00	11.50
10 8	Urban/Suburban Arterial Segment Four-lane Divided	971+0 9.000	974+1 1.000	302. 00	0.05 72	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	false	false	0.0	20.01	Non- Traversable Median	20.01	Intermediate/High	0	8.00	11.50

Table 52. Crash Highway Highway - Homogeneous Segments (Section 6)

Se g. No.	Type	Start Locatio n (Sta. ft)	End Locatio n (Sta. ft)	Length (ft)	Length (mi)	AADT	Number Major Commercial Driveways	Number Minor Commercial Driveways	Number Major Industrial/Inst itutional	Number Minor Industrial/Inst itutional	Number Major Residential Driveways	Number Minor Residential Driveways	Number Other Driveways	Lightin g	Automated Speed Enforceme nt	Densit y (fixed object s/m)	Medi an Widt h (ft)	Type	Effective Median Width (ft)	Speed Level	Number Rail Highwa y Cross ings	Averag e Shoul der Width (ft)	Averag e Lane Width (ft)
90	Urban/Suburban Arterial Segment Four-lane Undivided	948+50.000	950+00.000	150.00	0.0284	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	0.00	None	0.00	Intermediate/High	0	8.00	11.50
91	Urban/Suburban Arterial Segment Four-lane Undivided	950+00.000	954+00.000	400.00	0.0758	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	0.00	None	0.00	Intermediate/High	0	8.00	11.50
92	Urban/Suburban Arterial Segment Four-lane Undivided	954+00.000	955+00.000	100.00	0.0189	2018-2022: 4,900	0	0	2	0	0	0	0	false	false	0.0	0.00	None	0.00	Intermediate/High	0	4.00	11.50
93	Urban/Suburban Arterial Segment Four-lane Divided	955+00.000	955+55.000	55.00	0.0104	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	4.01	Non-Traversable Median	4.01	Intermediate/High	0	8.00	11.50
94	Urban/Suburban Arterial Segment Four-lane Divided	955+55.000	958+28.000	273.00	0.0517	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	10.02	Non-Traversable Median	10.02	Intermediate/High	0	8.00	11.50
95	Urban/Suburban Arterial Segment Four-lane Divided	958+28.000	961+01.000	273.00	0.0517	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	20.03	Non-Traversable Median	19.99	Intermediate/High	0	8.00	11.50
96	Urban/Suburban Arterial Segment Four-lane Divided	961+01.000	962+00.000	99.00	0.0187	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	23.12	Traversable Median	23.12	Intermediate/High	0	8.00	11.50
97	Urban/Suburban Arterial Segment Four-lane Divided	962+00.000	963+69.000	169.00	0.0320	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	18.13	Traversable Median	30.13	Intermediate/High	0	8.00	11.50
98	Urban/Suburban Arterial Segment Four-lane Divided	963+69.000	965+00.000	131.00	0.0248	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	12.55	Traversable Median	24.55	Intermediate/High	0	8.00	11.50
99	Urban/Suburban Arterial Segment Four-lane Divided	965+00.000	966+38.000	138.00	0.0261	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	7.54	Traversable Median	19.54	Intermediate/High	0	4.00	11.50
100	Urban/Suburban Arterial Segment Four-lane Divided	966+38.000	966+70.000	32.00	0.0061	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	4.38	Traversable Median	16.38	Intermediate/High	0	4.00	11.50
101	Urban/Suburban Arterial Segment Four-lane Divided	966+70.000	966+91.000	21.00	0.0040	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	3.39	Traversable Median	15.39	Intermediate/High	0	0.00	11.50
102	Urban/Suburban Arterial Segment Four-lane Undivided	966+91.000	967+14.000	23.00	0.0044	2018-2022: 4,900	0	0	0	0	0	0	0	true	false	0.0	0.00	None	0.00	Intermediate/High	0	0.00	11.50
103	Urban/Suburban Arterial Segment Four-lane Undivided	967+14.000	967+20.000	6.00	0.0011	2018-2022: 4,900	0	0	0	0	0	0	0	true	false	0.0	0.00	None	0.00	Intermediate/High	0	8.00	11.50
104	Urban/Suburban Arterial Segment Four-lane Undivided	967+20.000	967+45.000	25.00	0.0047	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	0.00	None	0.00	Intermediate/High	0	8.00	11.50
105	Urban/Suburban Arterial Segment Four-lane Divided	967+45.000	968+06.000	61.00	0.0116	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	4.01	Non-Traversable Median	18.01	Intermediate/High	0	8.00	11.50
106	Urban/Suburban Arterial Segment Four-lane Divided	968+06.000	970+79.000	273.00	0.0517	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	9.52	Non-Traversable Median	23.52	Intermediate/High	0	8.00	11.50
107	Urban/Suburban Arterial Segment Four-lane Divided	970+79.000	971+09.000	30.00	0.0057	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	14.53	Non-Traversable Median	14.53	Intermediate/High	0	8.00	11.50
108	Urban/Suburban Arterial Segment Four-lane Divided	971+09.000	974+11.000	302.00	0.0572	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	20.01	Non-Traversable Median	20.01	Intermediate/High	0	8.00	11.50

Table 53. Evaluation Intersection (Section 6)

Inter. No.	Title	Type	Location (Sta. ft)	Major AADT	Minor AADT	Legs	Traffic Control	Approaches w/Left Turn Lanes	Approaches w/Right Turn Lanes	Approaches w/o Right Turn on Red	Pedestrian Volume (crossings/day)	Lighted at Night	Red Light Camera	School Nearby	Number of Bus Stops	Number of Alcohol Sales Establishments	Max Lanes Crossed
8	Marion Rd/SD38 (v1)	Urban/Suburban Arterial Intersection Four-Legged Signalized	966+91.000	2025: 5,766; 2026: 5,888; 2027: 6,010; 2028: 6,132; 2029: 6,255; 2030: 6,660; 2031: 7,065; 2032: 7,470; 2033: 7,875; 2034: 8,280; 2035: 8,685; 2036: 9,090; 2037: 9,495; 2038: 9,900; 2039: 10,305; 2040: 10,710; 2041: 11,861; 2042: 13,012; 2043: 14,163; 2044: 15,314; 2045: 16,465; 2046: 17,616; 2047: 18,767; 2048: 19,918; 2049: 21,069; 2050: 22,220	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	4	Signalized	4	3	0	20	false	false	false	0	0	6

Table 54. Crash History Intersection (Section 6)

Inter. No.	Title	Type	Location (Sta. ft)	Major AADT	Minor AADT	Legs	Traffic Control	Approaches w/Left Turn Lanes	Approaches w/Right Turn Lanes	Approaches w/o Right Turn on Red	Pedestrian Volume (crossings/day)	Lighted at Night	Red Light Camera	School Nearby	Number of Bus Stops	Number of Alcohol Sales Establishments	Max Lanes Crossed
8	Marion Rd/ SD38 (v1)	Urban/Suburban Arterial Intersection Four-Legged Signalized	966+91.000	2018-2022: 5,400	2018-2022: 4,900	4	Signalized	4	3	0	20	false	false	false	0	0	6

Table 55. Expected Highway Crash Rates and Frequencies Summary (Section 6)

First Year of Analysis	2025
Last Year of Analysis	2050
Evaluated Length (mi)	0.4850
Average Future Road AADT (vpd)	8,272
Expected Crashes	
Total Crashes	135.85
Fatal and Injury Crashes	46.51
Property-Damage-Only Crashes	89.34
Percent of Total Expected Crashes	
Percent Fatal and Injury Crashes (%)	34
Percent Property-Damage-Only Crashes (%)	66
Expected Crash Rate	
Crash Rate (crashes/mi/yr)	10.7725
FI Crash Rate (crashes/mi/yr)	3.6878
PDO Crash Rate (crashes/mi/yr)	7.0847
Expected Travel Crash Rate	
Total Travel (million veh-mi)	38.08
Travel Crash Rate (crashes/million veh-mi)	3.57
Travel FI Crash Rate (crashes/million veh-mi)	1.22
Travel PDO Crash Rate (crashes/million veh-mi)	2.35

Table 56. Expected Crash Frequencies and Rates by Highway Segment/Intersection (Section 6)

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/million veh-mi)	Expected Intersection Travel Crash Rate (crashes/million veh)
90	948+50.000	950+00.000	0.0284	1.343	1.459	0.0517	0.0179	0.0337	0.0561	0.0181	0.0380	-0.0044	-0.0001	-0.0043	1.8184	0.60	
91	950+00.000	954+00.000	0.0758	3.172	3.889	0.1220	0.0437	0.0783	0.1496	0.0481	0.1014	-0.0276	-0.0044	-0.0232	1.6103	0.53	
92	954+00.000	955+00.000	0.0189	4.560	6.162	0.1754	0.0651	0.1103	0.2370	0.0817	0.1553	-0.0616	-0.0167	-0.0449	9.2608	3.07	
93	955+00.000	955+55.000	0.0104	0.373	0.382	0.0143	0.0039	0.0104	0.0147	0.0039	0.0108	-0.0004	-0.0000	-0.0003	1.3757	0.46	
94	955+55.000	958+28.000	0.0517	1.685	1.897	0.0648	0.0182	0.0466	0.0730	0.0195	0.0535	-0.0082	-0.0013	-0.0069	1.2532	0.42	
95	958+28.000	961+01.000	0.0517	1.685	1.897	0.0648	0.0182	0.0466	0.0730	0.0195	0.0535	-0.0082	-0.0013	-0.0069	1.2532	0.42	
96	961+01.000	962+00.000	0.0187	0.651	0.681	0.0251	0.0069	0.0182	0.0262	0.0070	0.0192	-0.0011	-0.0001	-0.0010	1.3360	0.44	
97	962+00.000	963+69.000	0.0320	1.069	1.151	0.0411	0.0114	0.0297	0.0443	0.0118	0.0325	-0.0032	-0.0004	-0.0027	1.2842	0.42	
98	963+69.000	965+00.000	0.0248	0.850	0.901	0.0327	0.0090	0.0237	0.0347	0.0092	0.0254	-0.0020	-0.0002	-0.0017	1.3176	0.44	
99	965+00.000	966+38.000	0.0261	0.893	0.949	0.0343	0.0095	0.0249	0.0365	0.0097	0.0268	-0.0022	-0.0003	-0.0019	1.3136	0.43	
100	966+38.000	966+70.000	0.0061	0.217	0.220	0.0083	0.0023	0.0061	0.0085	0.0023	0.0062	-0.0001	0.0000	-0.0001	1.3765	0.46	
101	966+70.000	966+91.000	0.0040	0.143	0.144	0.0055	0.0015	0.0040	0.0056	0.0015	0.0041	-0.0001	0.0000	-0.0001	1.3834	0.46	
Marion Rd/ SD38 (v1)	966+91.000			114.572	49.969	4.4066	1.5303	2.8763	1.9219	0.6310	1.2909	2.4847	0.8993	1.5854			0.65
102	966+91.000	967+14.000	0.0044	0.203	0.205	0.0078	0.0027	0.0051	0.0079	0.0025	0.0054	-0.0001	0.0001	-0.0002	1.7894	0.59	
103	967+14.000	967+20.000	0.0011	0.053	0.053	0.0021	0.0007	0.0014	0.0021	0.0007	0.0014	-0.0000	0.0000	-0.0000	1.8054	0.60	
104	967+20.000	967+45.000	0.0047	0.240	0.243	0.0092	0.0031	0.0061	0.0093	0.0030	0.0063	-0.0001	0.0001	-0.0003	1.9466	0.65	
105	967+45.000	968+06.000	0.0116	0.412	0.424	0.0159	0.0043	0.0115	0.0163	0.0043	0.0120	-0.0005	-0.0000	-0.0004	1.3720	0.45	
106	968+06.000	970+79.000	0.0517	1.685	1.897	0.0648	0.0182	0.0466	0.0730	0.0195	0.0535	-0.0082	-0.0013	-0.0069	1.2532	0.42	
107	970+79.000	971+09.000	0.0057	0.206	0.208	0.0079	0.0021	0.0058	0.0080	0.0021	0.0059	-0.0001	0.0000	-0.0001	1.3915	0.46	
108	971+09.000	974+11.000	0.0572	1.842	2.098	0.0708	0.0199	0.0509	0.0807	0.0215	0.0592	-0.0099	-0.0016	-0.0083	1.2387	0.41	
All Segments			0.4850	21.280	24.862	0.8185	0.2585	0.5600	0.9562	0.2860	0.6702	-0.1378	-0.0275	-0.1102	1.6874	0.56	
All Intersections				114.572	49.969	4.4066	1.5303	2.8763	1.9219	0.6310	1.2909	2.4847	0.8993	1.5854			0.65
Total			0.4850	135.852	74.831	5.2251	1.7887	3.4363	2.8781	0.9170	1.9611	2.3470	0.8718	1.4752	10.7725		

Table 57. Expected Crash Frequencies and Rates by Horizontal Design Element (Section 6)

Title	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/mi llion veh-mi)
Tangent	948+50.000	974+11.000	0.4850	21.280	24.862	0.8185	0.2585	0.5600	0.9562	0.2860	0.6702	-0.1378	-0.0275	-0.1102	1.6874	0.56

Table 58. Predicted Crash Frequencies by Year (Section 6)

Year	Total Crashes	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)
2025	1.54	0.47	30.768	1.07	69.232
2026	1.62	0.50	30.791	1.12	69.209
2027	1.69	0.52	30.812	1.17	69.188
2028	1.77	0.55	30.830	1.22	69.170
2029	1.85	0.57	30.847	1.28	69.153
2030	1.93	0.60	30.902	1.33	69.098
2031	2.01	0.62	30.960	1.39	69.040
2032	2.10	0.65	31.018	1.45	68.982
2033	2.18	0.68	31.078	1.50	68.922
2034	2.27	0.71	31.139	1.56	68.862
2035	2.35	0.73	31.199	1.62	68.801
2036	2.44	0.76	31.260	1.68	68.740
2037	2.53	0.79	31.321	1.74	68.679
2038	2.61	0.82	31.381	1.79	68.618
2039	2.70	0.85	31.442	1.85	68.558
2040	2.79	0.88	31.502	1.91	68.498
2041	3.01	0.95	31.680	2.06	68.320
2042	3.24	1.03	31.854	2.21	68.146
2043	3.46	1.11	32.026	2.35	67.975
2044	3.69	1.19	32.192	2.50	67.808
2045	3.92	1.27	32.354	2.65	67.646
2046	4.15	1.35	32.511	2.80	67.489
2047	4.39	1.43	32.664	2.95	67.336
2048	4.62	1.52	32.811	3.11	67.189
2049	4.86	1.60	32.954	3.26	67.046
2050	5.10	1.69	33.093	3.41	66.907
Total	74.83	23.84	31.860	50.99	68.140
Average	2.88	0.92	31.860	1.96	68.140

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 59. Expected Crash Frequencies by Year (Section 6)

Year	Total Crashes	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)
2025	2.80	0.93	33.060	1.87	66.820
2026	2.94	0.97	33.085	1.96	66.798
2027	3.07	1.02	33.107	2.05	66.778
2028	3.21	1.06	33.127	2.15	66.760
2029	3.35	1.11	33.145	2.24	66.744
2030	3.50	1.16	33.205	2.34	66.691
2031	3.65	1.22	33.266	2.44	66.635
2032	3.81	1.27	33.329	2.54	66.579
2033	3.96	1.32	33.394	2.63	66.521
2034	4.12	1.38	33.458	2.74	66.463
2035	4.27	1.43	33.524	2.84	66.404
2036	4.43	1.49	33.589	2.94	66.346
2037	4.59	1.54	33.654	3.04	66.287
2038	4.75	1.60	33.719	3.14	66.228
2039	4.91	1.66	33.784	3.25	66.170
2040	5.07	1.72	33.849	3.35	66.112
2041	5.47	1.86	34.040	3.61	65.941
2042	5.88	2.01	34.228	3.86	65.772
2043	6.29	2.16	34.411	4.12	65.607
2044	6.70	2.32	34.590	4.38	65.446
2045	7.12	2.47	34.765	4.65	65.289
2046	7.54	2.63	34.934	4.91	65.138
2047	7.96	2.79	35.097	5.18	64.991
2048	8.39	2.96	35.256	5.44	64.848
2049	8.82	3.12	35.409	5.71	64.710
2050	9.26	3.29	35.558	5.98	64.577
Total	135.85	46.51	34.234	89.34	65.766
Average	5.22	1.79	34.234	3.44	65.766

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 60. Comparing Predicted and Expected Crashes for the Evaluation Period (Section 6)

Scope	Total Crashes	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)
Predicted	74.83	23.84	31.860	50.99	68.140
Expected	135.85	46.51	34.234	89.34	65.766
Expected - Predicted	61.02	22.67		38.35	
Percent Difference	44.92	48.74		42.93	

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 61. Expected Five Lane or Fewer Crash Type Distribution (Section 6)

Element Type	Crash Type	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)	Total Crashes	Percent Total (%)
Highway Segment	Collision with Animal	0.00	0.0	0.21	0.2	0.21	0.2
Highway Segment	Collision with Bicycle	0.09	0.1	0.00	0.0	0.09	0.1
Highway Segment	Collision with Fixed Object	0.57	0.4	3.57	2.6	4.14	3.0
Highway Segment	Collision with Other Object	0.03	0.0	0.09	0.1	0.11	0.1
Highway Segment	Other Single-vehicle Collision	0.43	0.3	0.53	0.4	0.97	0.7
Highway Segment	Collision with Pedestrian	0.34	0.3	0.00	0.0	0.34	0.3
Highway Segment	Total Single Vehicle Crashes	1.47	1.1	4.39	3.2	5.86	4.3
Highway Segment	Angle Collision	0.37	0.3	0.54	0.4	0.91	0.7
Highway Segment	Driveway-related Collision	1.32	1.0	2.27	1.7	3.58	2.6
Highway Segment	Head-on Collision	0.17	0.1	0.05	0.0	0.21	0.2
Highway Segment	Other Multi-vehicle Collision	0.20	0.1	0.58	0.4	0.79	0.6
Highway Segment	Rear-end Collision	2.79	2.1	4.80	3.5	7.59	5.6
Highway Segment	Sideswipe, Opposite Direction Collision	0.15	0.1	0.09	0.1	0.24	0.2
Highway Segment	Sideswipe, Same Direction Collision	0.26	0.2	1.83	1.3	2.09	1.5
Highway Segment	Total Multiple Vehicle Crashes	5.25	3.9	10.16	7.5	15.42	11.3
Highway Segment	Total Highway Segment Crashes	6.72	4.9	14.56	10.7	21.28	15.7
Intersection	Collision with Animal	0.00	0.0	0.00	0.0	0.01	0.0
Intersection	Collision with Bicycle	0.73	0.5	0.00	0.0	0.73	0.5
Intersection	Collision with Fixed Object	0.90	0.7	1.71	1.3	2.61	1.9
Intersection	Non-Collision	0.17	0.1	0.07	0.0	0.24	0.2
Intersection	Collision with Other Object	0.09	0.1	0.14	0.1	0.23	0.2
Intersection	Other Single-vehicle Collision	0.05	0.0	0.04	0.0	0.09	0.1
Intersection	Collision with Parked Vehicle	0.00	0.0	0.00	0.0	0.00	0.0
Intersection	Collision with Pedestrian	0.44	0.3	0.00	0.0	0.44	0.3
Intersection	Total Intersection Single Vehicle Crashes	2.38	1.7	1.97	1.4	4.34	3.2
Intersection	Angle Collision	12.98	9.6	17.77	13.1	30.75	22.6
Intersection	Head-on Collision	1.83	1.3	2.18	1.6	4.02	3.0
Intersection	Other Multi-vehicle Collision	2.06	1.5	15.36	11.3	17.42	12.8
Intersection	Rear-end Collision	16.84	12.4	35.17	25.9	52.01	38.3
Intersection	Sideswipe	3.70	2.7	2.33	1.7	6.03	4.4
Intersection	Total Intersection Multiple Vehicle Crashes	37.41	27.5	72.82	53.6	110.23	81.1
Intersection	Total Intersection Crashes	39.79	29.3	74.78	55.0	114.57	84.3
	Total Crashes	46.51	34.2	89.34	65.8	135.85	100.0

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Interactive Highway Safety Design Model

Crash Prediction Evaluation Report

June 10, 2024

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Report Overview

Report Generated: Jun 10, 2024 9:10 AM

Report Template: System: Single Page, 508 Compliant [System] (mlcpm5, Dec 5, 2019 2:16 PM)

Evaluation Date: Mon Jun 10 09:08:16 CDT 2024

IHSDM Version: v17.0.0 (Sep 22, 2021)

Crash Prediction Module: v12.0.0 (Sep 22, 2021)

User Name: naveen.mallipaddi

Organization Name:

Phone:

E-Mail:

Project Title: SD-38_Build_Option2_I90EBRamp_I

Project Comment: Created Mon Mar 27 16:47:43 CDT 2023

Project Unit System: U.S. Customary

Highway Title: SD-38

Highway Comment: Created Mon Mar 27 16:49:47 CDT 2023

Highway Version: 20

Evaluation Title: Evaluation 53

Evaluation Comment: Created Mon Jun 10 09:07:26 CDT 2024

Minimum Location: 171+44.000

Maximum Location: 580+10.000

Policy for Superelevation: AASHTO 2011 U.S. Customary

Calibration: HSM Configuration

Crash Distribution: HSM Configuration

Model/CMF: HSM Configuration

First Year of Analysis: 2025

Last Year of Analysis: 2050

Empirical-Bayes Analysis: Site-Specific

Highway with Crash History: SD-38

Highway with Crash History Comment: Created Mon Mar 27 16:49:47 CDT 2023

Highway with Crash History Version: 20

First Year of Observed Crashes: 2018

Last Year of Observed Crashes: 2022

Disclaimer Regarding Crash Prediction Method

IMPORTANT NOTICE ABOUT COMPARING RESULTS FROM HIGHWAY SAFETY MANUAL FIRST EDITION (2010) MODELS TO RESULTS FROM NEW MODELS DEVELOPED UNDER NCHRP PROJECTS 17-70, 17-58, AND 17-68

Since the publication of the Highway Safety Manual - First Edition (HSM-1), in 2010 by the American Association of State Highway and Transportation Officials (AASHTO), multiple research efforts have been undertaken through the National Cooperative Highway Research Program (NCHRP) to develop safety performance models for road segment and intersection facility types that were not initially reflected in the HSM-1, in order to expand the breadth and depth of the HSM in the future.

The IHSDM Crash Prediction Module (CPM) is intended as a faithful implementation of HSM Part C predictive methods. As NCHRP projects to develop new predictive methods for the HSM are completed, FHWA works to incorporate the new methods into IHSDM, sometimes in advance of publication in the HSM. The following new crash predictive methods have been accepted by NCHRP project panels and incorporated into IHSDM, while pending AASHTO's approval for incorporation into a future edition of the HSM:

- Roundabouts: completed in 2018 under NCHRP Project 17-70, the new methods will provide improved outcomes for the safety analysis of roundabouts.
- 6+ lane and one-way urban/suburban arterials (including models for segments and intersections): completed under NCHRP Project 17-58.
- Intersection crash prediction methods for some intersection configurations and traffic control types not currently addressed in the HSM (e.g., all-way stop; rural 3-leg signalized; 3-leg stop-controlled where the major leg turns; urban 5-leg signalized; urban high-speed intersections): completed in 2021 under NCHRP Project 17-68.

However, in the absence of local calibration factors (see HSM-1 Part C, Appendix A for guidance on calibration of the predictive models), it is neither appropriate nor advisable to directly compare the results from new models (from NCHRP Projects 17-58, 17-68, and 17-70) to results from HSM-1 models, as the models were not calibrated to the same base state data sets, and consequently can produce unexpected results. If local calibration factors are available and applied to both new models and HSM-1 models, then it may be appropriate to directly compare the results. *[Note: Work being performed under NCHRP Project 17-72 (Update of Crash Modification Factors for the Highway Safety Manual) is expected to re-calibrate many of the old (HSM-1) and new (e.g., NCHRP 17-70) models to data from a single (or small number of) states, that would allow results from all models to be directly compared.]*

The models produced for NCHRP Project 17-70 have independent value in terms of informing the design of a roundabout and assessing the effects of different design characteristics on the expected safety performance of a roundabout.

The HSM-1 interim method previously included in IHSDM for evaluating roundabouts on urban/suburban arterials (i.e., evaluating an existing intersection and then applying a Crash Modification Factor for replacing the existing intersection with a roundabout) has been deactivated in IHSDM, to minimize any confusion with the new roundabout methodology.

Section Types

Section 1 Evaluation

Section: Section 1

Evaluation Start Location: 171+44.000

Evaluation End Location: 580+10.000

Area Type: Rural

Functional Class: Arterial

Type of Alignment: Undivided, Two Lane

Model Category: Rural, Two Lane

Calibration Factor: 2U=1.0; 3ST=1.0; 4ST=1.0;

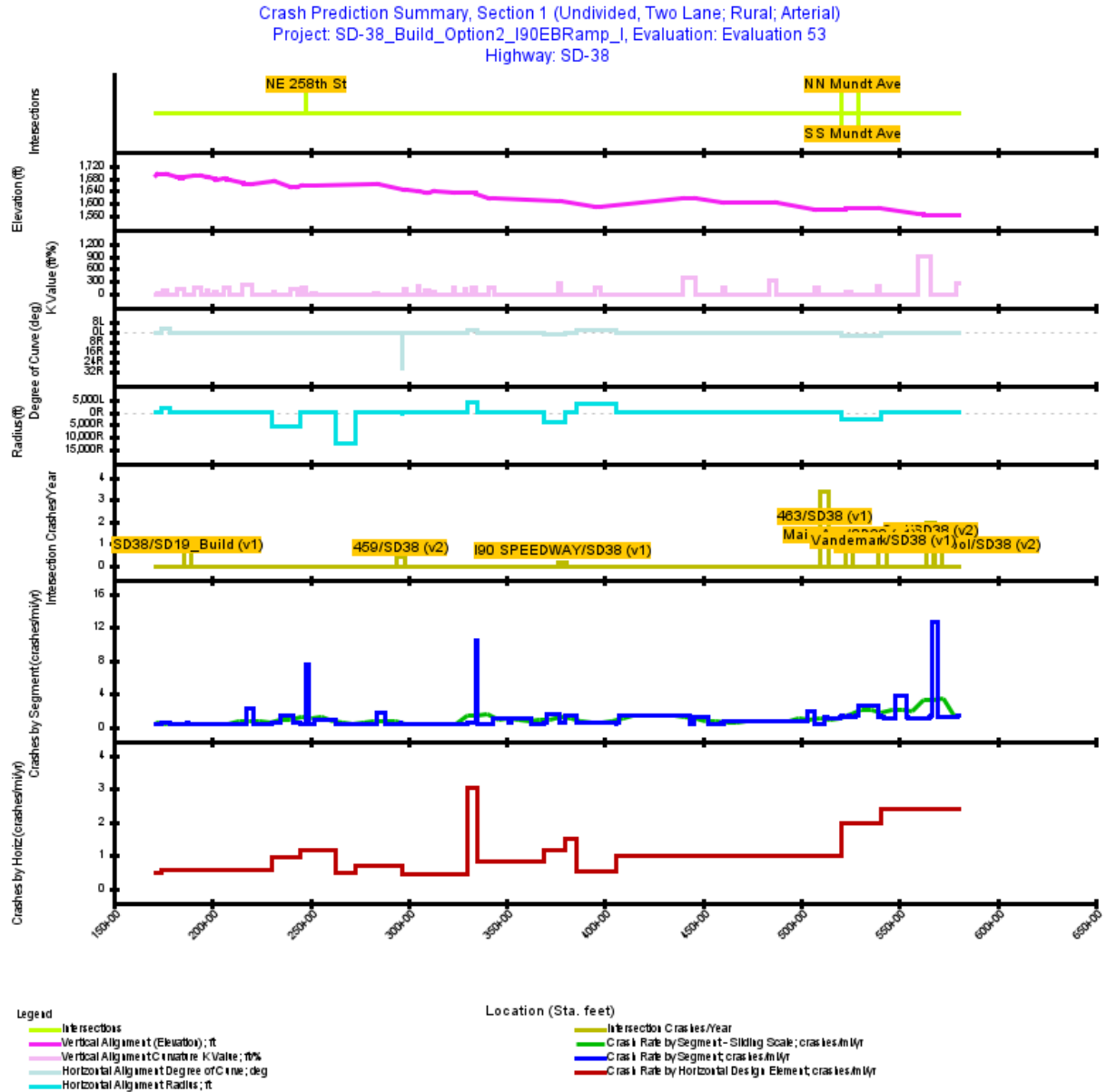


Figure 1. Crash Prediction Summary (Section 1)

Table 1. Observed Crashes Used in the Evaluation (Section 1)

Year	Observed Crashes	Total Crashes Used	FI Crashes	FI no/C Crashes	PDO Crashes
2018	9	9	2	1	7
2019	5	4	1	0	3
2020	9	9	5	1	4
2021	8	7	3	1	4
2022	6	6	3	1	3
All Years	37 ^[1]	35	14	4	21

Footnotes

^[1] Note: Observed crash data that does not comply with the associated CPM model requirements may not be used in EB processing.

Table 2. Evaluation Highway - Homogeneous Segments (Section 1)

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AAADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
1	Rural Two-Lane Segment Two-lane Undivided	171+44.000	172+42.000	98.00	0.0186	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	4.25	6.2	3	false	0	false	false	false				
2	Rural Two-Lane Segment Two-lane Undivided	172+42.000	174+52.690	210.69	0.0399	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.17	6.2	3	false	0	false	false	false				
3	Rural Two-Lane Segment Two-lane Undivided	174+52.690	176+25.000	172.31	0.0326	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.17	6.2	3	false	0	false	false	false	2,074.80	2.0	true	40
4	Rural Two-Lane Segment Two-lane Undivided	176+25.000	178+85.250	260.25	0.0493	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.88	6.2	3	false	0	false	false	false	2,074.80	2.0	true	40
5	Rural Two-Lane Segment Two-lane Undivided	178+85.250	183+75.370	490.12	0.0928	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.88	6.2	3	false	0	false	false	false				
6	Rural Two-Lane Segment Two-lane Undivided	183+75.370	184+00.000	24.63	0.0047	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
7	Rural Two-Lane Segment Two-lane Undivided	184+00.000	184+45.000	45.00	0.0085	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
8	Rural Two-Lane Segment Two-lane Undivided	184+45.000	185+20.000	75.00	0.0142	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
9	Rural Two-Lane Segment Two-lane Undivided	185+20.000	186+60.000	140.00	0.0265	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
10	Rural Two-Lane Segment Two-lane Undivided	186+60.000	187+20.000	60.00	0.0114	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
11	Rural Two-Lane Segment Two-lane Undivided	187+20.000	187+60.000	40.00	0.0076	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	0.00	1.13	6.2	3	false	0	false	false	false				
12	Rural Two-Lane Segment Two-lane Undivided	187+60.000	190+00.000	240.00	0.0455	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
13	Rural Two-Lane Segment Two-lane Undivided	190+00.000	192+00.000	200.00	0.0379	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
14	Rural Two-Lane Segment Two-lane Undivided	192+00.000	192+39.270	39.27	0.0074	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				

Seg No.	Type	Start Locatio n (Sta. ft)	End Locatio n (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
15	Rural Two-Lane Segment Two-lane Undivided	192+39. 270	193+60. 000	120.7 3	0.022 9	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	- 0.94	6.2	3	false	0	false	false	false				
16	Rural Two-Lane Segment Two-lane Undivided	193+60. 000	197+65. 000	405.0 0	0.076 7	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	- 0.94	6.2	3	false	0	false	false	false				
17	Rural Two-Lane Segment Two-lane Undivided	197+65. 000	199+00. 000	135.0 0	0.025 6	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	- 1.94	6.2	3	false	0	false	false	false				
18	Rural Two-Lane Segment Two-lane Undivided	199+00. 000	201+63. 750	263.7 5	0.050 0	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	- 1.94	6.2	3	false	0	false	false	false				
19	Rural Two-Lane Segment Two-lane Undivided	201+63. 750	202+00. 000	36.25 9	0.006 9	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	0.13	6.2	3	false	0	false	false	false				
20	Rural Two-Lane Segment Two-lane Undivided	202+00. 000	207+00. 000	500.0 0	0.094 7	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	0.13	6.2	3	false	0	false	false	false				
21	Rural Two-Lane Segment Two-lane Undivided	207+00. 000	207+49. 760	49.76 4	0.009 4	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	0.13	6.2	3	false	0	false	false	false				
22	Rural Two-Lane Segment Two-lane Undivided	207+49. 760	217+74. 250	1,024. 49	0.194 0	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	- 1.70	6.2	3	false	0	false	false	false				
23	Rural Two-Lane Segment Two-lane Undivided	217+74. 250	221+00. 000	325.7 5	0.061 7	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	0.77	6.2	3	false	0	false	false	false				
24	Rural Two-Lane Segment Two-lane Undivided	221+00. 000	226+00. 000	500.0 0	0.094 7	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	0.77	6.2	3	false	0	false	false	false				
25	Rural Two-Lane Segment Two-lane Undivided	226+00. 000	230+66. 250	466.2 5	0.088 3	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	0.77	6.2	3	false	0	false	false	false				
26	Rural Two-Lane Segment Two-lane Undivided	230+66. 250	231+39. 700	73.45 9	0.013 9	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	0.77	6.2	3	false	0	false	false	false	5,644. 64	2.0	true	70
27	Rural Two-Lane Segment Two-lane Undivided	231+39. 700	235+00. 000	360.3 0	0.068 2	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	- 2.00	6.2	3	false	0	false	false	false	5,644. 64	2.0	true	70
28	Rural Two-Lane Segment Two-lane Undivided	235+00. 000	241+61. 390	661.3 9	0.125 3	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	- 2.00	6.2	3	false	0	false	false	false	5,644. 64	2.0	true	70
29	Rural Two-Lane Segment Two-lane Undivided	241+61. 390	242+00. 000	38.61 3	0.007 3	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	1.16	6.2	3	false	0	false	false	false	5,644. 64	2.0	true	70

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
30	Rural Two-Lane Segment Two-lane Undivided	242+00.000	245+14.280	314.28	0.0595	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.16	6.2	3	false	0	false	false	false	5,644.64	2.0	true	70
31	Rural Two-Lane Segment Two-lane Undivided	245+14.280	246+55.100	140.82	0.0267	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.16	6.2	3	false	0	false	false	false				
32	Rural Two-Lane Segment Two-lane Undivided	246+55.100	248+00.000	144.90	0.0274	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.42	6.2	3	false	0	false	false	false				
33	Rural Two-Lane Segment Two-lane Undivided	248+00.000	249+00.000	100.00	0.0189	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	0.00	-0.42	6.2	3	false	0	false	false	false				
34	Rural Two-Lane Segment Two-lane Undivided	249+00.000	251+21.980	221.98	0.0428	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.42	6.2	3	false	0	false	false	false				
35	Rural Two-Lane Segment Two-lane Undivided	251+21.980	252+40.240	118.26	0.0224	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	3.43	6.2	3	false	0	false	false	false				
36	Rural Two-Lane Segment Two-lane Undivided	252+40.240	263+22.600	1,082.36	0.2050	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.02	6.2	3	false	0	false	false	false				
37	Rural Two-Lane Segment Two-lane Undivided	263+22.600	272+66.740	944.14	0.1788	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.02	6.2	3	false	0	false	false	false	12,237.00	2.0	true	70
38	Rural Two-Lane Segment Two-lane Undivided	272+66.740	280+00.000	733.26	0.1389	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.02	6.2	3	false	0	false	false	false				
39	Rural Two-Lane Segment Two-lane Undivided	280+00.000	283+15.050	315.05	0.0597	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.02	6.2	3	false	0	false	false	false				
40	Rural Two-Lane Segment Two-lane Undivided	283+15.050	284+08.540	93.49	0.0177	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	4.47	6.2	3	false	0	false	false	false				
41	Rural Two-Lane Segment Two-lane Undivided	284+08.540	288+50.000	441.46	0.0836	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.47	6.2	3	false	0	false	false	false				
42	Rural Two-Lane Segment Two-lane Undivided	288+50.000	289+00.000	50.00	0.0095	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.47	6.2	3	false	0	false	false	false				
43	Rural Two-Lane Segment Two-lane Undivided	289+00.000	295+90.000	690.00	0.1307	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.47	6.2	3	false	0	false	false	false				
44	Rural Two-Lane Segment Two-lane Undivided	295+90.000	296+00.000	10.00	0.0019	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	0.00	-1.47	6.2	3	false	0	false	false	false				

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AAADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
45	Rural Two-Lane Segment Two-lane Undivided	296+00.000	296+10.000	10.00	0.0019	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	0.00	-1.47	6.2	3	false	0	false	false	false				
46	Rural Two-Lane Segment Two-lane Undivided	296+10.000	296+96.520	86.52	0.0164	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.47	6.2	3	false	0	false	false	false				
47	Rural Two-Lane Segment Two-lane Undivided	296+96.520	298+33.660	137.14	0.0260	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.47	6.2	3	false	0	false	false	false				
48	Rural Two-Lane Segment Two-lane Undivided	298+33.660	303+50.000	516.34	0.00978	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.61	6.2	3	false	0	false	false	false				
49	Rural Two-Lane Segment Two-lane Undivided	303+50.000	304+50.000	100.00	0.0189	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.61	6.2	3	false	0	false	false	false				
50	Rural Two-Lane Segment Two-lane Undivided	304+50.000	305+02.039	52.04	0.0099	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.61	6.2	3	false	0	false	false	false				
51	Rural Two-Lane Segment Two-lane Undivided	305+02.039	309+35.490	433.45	0.00821	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.15	6.2	3	false	0	false	false	false				
52	Rural Two-Lane Segment Two-lane Undivided	309+35.490	311+70.000	234.51	0.0044	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.24	6.2	3	false	0	false	false	false				
53	Rural Two-Lane Segment Two-lane Undivided	311+70.000	313+25.000	155.00	0.00294	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.24	6.2	3	false	0	false	false	false				
54	Rural Two-Lane Segment Two-lane Undivided	313+25.000	323+00.000	975.00	0.01847	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.33	6.2	3	false	0	false	false	false				
55	Rural Two-Lane Segment Two-lane Undivided	323+00.000	323+26.980	26.98	0.00051	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.33	6.2	3	false	0	false	false	false				
56	Rural Two-Lane Segment Two-lane Undivided	323+26.980	328+89.230	562.25	0.01065	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.26	6.2	3	false	0	false	false	false				
57	Rural Two-Lane Segment Two-lane Undivided	328+89.230	329+81.740	92.51	0.00175	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.52	6.2	3	false	0	false	false	false				
58	Rural Two-Lane Segment Two-lane Undivided	329+81.740	333+24.920	343.18	0.00658	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.52	6.2	3	false	0	false	false	false	4,010.13	2.0	true	70
59	Rural Two-Lane Segment Two-lane Undivided	333+24.920	334+00.000	75.08	0.00142	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-2.17	6.2	3	false	0	false	false	false	4,010.13	2.0	true	70

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
60	Rural Two-Lane Segment Two-lane Undivided	334+00.000	335+39.960	139.96	0.0265	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-2.17	6.2	3	false	0	false	false	false	4,010.13	2.0	true	70
61	Rural Two-Lane Segment Two-lane Undivided	335+39.960	342+39.000	699.04	0.1324	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-2.17	6.2	3	false	0	false	false	false				
62	Rural Two-Lane Segment Two-lane Undivided	342+39.000	343+00.000	61.00	0.0116	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false				
63	Rural Two-Lane Segment Two-lane Undivided	343+00.000	351+20.000	820.00	0.1553	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false				
64	Rural Two-Lane Segment Two-lane Undivided	351+20.000	352+00.000	80.00	0.0152	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	0.00	-0.24	6.2	3	false	0	false	false	false				
65	Rural Two-Lane Segment Two-lane Undivided	352+00.000	352+20.000	20.00	0.0038	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	0.00	-0.24	6.2	3	false	0	false	false	false				
66	Rural Two-Lane Segment Two-lane Undivided	352+20.000	362+50.000	1,030.00	0.1951	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false				
67	Rural Two-Lane Segment Two-lane Undivided	362+50.000	369+14.990	664.99	0.1259	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false				
68	Rural Two-Lane Segment Two-lane Undivided	369+14.990	370+30.000	115.01	0.0218	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
69	Rural Two-Lane Segment Two-lane Undivided	370+30.000	370+60.000	30.00	0.0057	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
70	Rural Two-Lane Segment Two-lane Undivided	370+60.000	376+83.610	623.61	0.1181	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
71	Rural Two-Lane Segment Two-lane Undivided	376+83.610	378+00.000	116.39	0.0220	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
72	Rural Two-Lane Segment Two-lane Undivided	378+00.000	378+40.000	40.00	0.0076	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	8.00	-1.04	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
73	Rural Two-Lane Segment Two-lane Undivided	378+40.000	378+60.000	20.00	0.0038	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	8.00	-1.04	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
74	Rural Two-Lane Segment Two-lane Undivided	378+60.000	379+00.000	40.00	0.0076	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	8.00	-1.04	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
75	Rural Two-Lane Segment Two-lane Undivided	379+00.000	379+62.690	62.69	0.0119	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
76	Rural Two-Lane Segment Two-lane Undivided	379+62.690	385+22.970	560.28	0.1061	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false				
77	Rural Two-Lane Segment Two-lane Undivided	385+22.970	386+60.000	137.03	0.0260	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
78	Rural Two-Lane Segment Two-lane Undivided	386+60.000	389+50.000	290.00	0.0549	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
79	Rural Two-Lane Segment Two-lane Undivided	389+50.000	394+00.000	450.00	0.0852	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
80	Rural Two-Lane Segment Two-lane Undivided	394+00.000	396+46.150	246.15	0.0466	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
81	Rural Two-Lane Segment Two-lane Undivided	396+46.150	397+00.000	53.85	0.0102	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.72	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
82	Rural Two-Lane Segment Two-lane Undivided	397+00.000	399+00.000	200.00	0.0379	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	8.00	0.72	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
83	Rural Two-Lane Segment Two-lane Undivided	399+00.000	405+75.410	675.41	0.1279	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.72	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
84	Rural Two-Lane Segment Two-lane Undivided	405+75.410	406+00.000	24.59	0.0047	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.72	6.2	3	false	0	false	false	false				
85	Rural Two-Lane Segment Two-lane Undivided	406+00.000	407+00.000	100.00	0.0189	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	8.00	0.72	6.2	3	false	0	false	false	false				
86	Rural Two-Lane Segment Two-lane Undivided	407+00.000	443+25.000	3,625.00	0.6866	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.72	6.2	3	false	0	false	false	false				
87	Rural Two-Lane Segment Two-lane Undivided	443+25.000	445+50.000	225.00	0.0426	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
88	Rural Two-Lane Segment Two-lane Undivided	445+50.000	452+50.000	700.00	0.1326	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
89	Rural Two-Lane Segment Two-lane Undivided	452+50.000	459+00.000	650.00	0.1231	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AAADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
90	Rural Two-Lane Segment Two-lane Undivided	459+00.000	460+00.000	100.00	0.0189	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	0.00	-0.96	6.2	3	false	0	false	false	false				
91	Rural Two-Lane Segment Two-lane Undivided	460+00.000	460+58.580	58.58	0.0111	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
92	Rural Two-Lane Segment Two-lane Undivided	460+58.580	485+61.230	2,502.65	0.4740	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.01	6.2	3	false	0	false	false	false				
93	Rural Two-Lane Segment Two-lane Undivided	485+61.230	503+00.000	1,738.77	0.3293	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.07	6.2	3	false	0	false	false	false				
94	Rural Two-Lane Segment Two-lane Undivided	503+00.000	507+00.000	400.00	0.0758	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.07	6.2	3	false	0	false	false	false				
95	Rural Two-Lane Segment Two-lane Undivided	507+00.000	508+00.000	100.00	0.0189	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.07	6.2	3	false	0	false	true	false				
96	Rural Two-Lane Segment Two-lane Undivided	508+00.000	508+08.240	8.24	0.0016	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.07	6.2	3	false	0	false	true	false				
97	Rural Two-Lane Segment Two-lane Undivided	508+08.240	510+30.000	221.76	0.0420	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.21	6.2	3	false	0	false	true	false				
98	Rural Two-Lane Segment Two-lane Undivided	510+30.000	512+00.000	170.00	0.0322	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.21	6.2	3	false	0	false	false	false				
99	Rural Two-Lane Segment Two-lane Undivided	512+00.000	513+00.000	100.00	0.0189	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	0.21	6.2	3	false	0	false	true	false				
100	Rural Two-Lane Segment Two-lane Undivided	513+00.000	515+00.000	200.00	0.0379	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	0.21	6.2	3	false	0	false	true	false				
101	Rural Two-Lane Segment Two-lane Undivided	515+00.000	520+00.000	500.00	0.0947	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	0.21	6.2	3	false	0	true	true	false				
102	Rural Two-Lane Segment Two-lane Undivided	520+00.000	520+49.150	49.15	0.0093	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	0.21	6.2	3	false	0	false	true	false				

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
103	Rural Two-Lane Segment Two-lane Undivided	520+49.150	521+00.000	50.85	0.0096	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	0.21	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
104	Rural Two-Lane Segment Two-lane Undivided	521+00.000	523+38.600	238.60	0.0452	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	0.21	6.2	3	false	0	true	true	false	2,458.49	2.0	true	45
105	Rural Two-Lane Segment Two-lane Undivided	523+38.600	524+00.000	61.40	0.0116	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	1.90	6.2	3	false	0	true	true	false	2,458.49	2.0	true	45
106	Rural Two-Lane Segment Two-lane Undivided	524+00.000	525+00.000	100.00	0.0189	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	1.90	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
107	Rural Two-Lane Segment Two-lane Undivided	525+00.000	525+18.580	18.58	0.0035	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	1.90	6.2	3	false	0	true	true	false	2,458.49	2.0	true	45
108	Rural Two-Lane Segment Two-lane Undivided	525+18.580	528+00.000	281.42	0.0533	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.02	6.2	3	false	0	true	true	false	2,458.49	2.0	true	45
109	Rural Two-Lane Segment Two-lane Undivided	528+00.000	529+00.000	100.00	0.0189	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	-0.02	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
110	Rural Two-Lane Segment Two-lane Undivided	529+00.000	539+00.000	1,000.00	0.1894	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.02	6.2	3	false	0	true	true	false	2,458.49	2.0	true	45
111	Rural Two-Lane Segment Two-lane Undivided	539+00.000	539+50.000	50.00	0.0095	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.02	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
112	Rural Two-Lane Segment Two-lane Undivided	539+50.000	540+00.000	50.00	0.0095	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
113	Rural Two-Lane Segment Two-lane Undivided	540+00.000	540+50.000	50.00	0.0095	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
114	Rural Two-Lane Segment Two-lane Undivided	540+50.000	540+74.370	24.37	0.0046	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
115	Rural Two-Lane Segment Two-lane Undivided	540+74.370	541+00.000	25.63	0.0049	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	true	false				
116	Rural Two-Lane Segment Two-lane Undivided	541+00.000	541+50.000	50.00	0.0095	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	true	false				
117	Rural Two-Lane Segment Two-lane Undivided	541+50.000	541+70.000	20.00	0.0038	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	true	false				
118	Rural Two-Lane Segment Two-lane Undivided	541+70.000	542+30.000	60.00	0.0114	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	true	false				
119	Rural Two-Lane Segment Two-lane Undivided	542+30.000	542+64.000	34.00	0.0064	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	true	false				
120	Rural Two-Lane Segment Two-lane Undivided	542+64.000	543+34.000	70.00	0.0133	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	true	false				
121	Rural Two-Lane Segment Two-lane Undivided	543+34.000	544+00.000	66.00	0.0125	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	true	false				
122	Rural Two-Lane Segment Two-lane Undivided	544+00.000	545+00.000	100.00	0.0189	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
123	Rural Two-Lane Segment Two-lane Undivided	545+00.000	548+23.000	323.00	0.0612	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
124	Rural Two-Lane Segment Two-lane Undivided	548+23.000	553+70.000	547.00	0.1036	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
125	Rural Two-Lane Segment Two-lane Undivided	553+70.000	554+00.000	30.00	0.0057	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	false	false				
126	Rural Two-Lane Segment Two-lane Undivided	554+00.000	554+20.000	20.00	0.0038	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	false	false				

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
127	Rural Two-Lane Segment Two-lane Undivided	554+20.000	560+00.000	580.00	0.1098	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
128	Rural Two-Lane Segment Two-lane Undivided	560+00.000	562+58.560	258.56	0.0490	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
129	Rural Two-Lane Segment Two-lane Undivided	562+58.560	564+00.000	141.44	0.0268	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
130	Rural Two-Lane Segment Two-lane Undivided	564+00.000	565+00.000	100.00	0.0189	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
131	Rural Two-Lane Segment Two-lane Undivided	565+00.000	565+77.000	77.00	0.0146	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 11,221; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
132	Rural Two-Lane Segment Two-lane Undivided	565+77.000	566+10.000	33.00	0.0063	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	0.00	0.00	-0.20	6.2	3	false	0	false	false	false				
133	Rural Two-Lane Segment Two-lane Undivided	566+10.000	566+50.000	40.00	0.0076	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	0.00	0.00	-0.20	6.2	3	false	0	false	false	false				
134	Rural Two-Lane Segment Two-lane Undivided	566+50.000	569+37.000	287.00	0.0544	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
135	Rural Two-Lane Segment Two-lane Undivided	569+37.000	569+70.000	33.00	0.0063	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	0.00	-0.20	6.2	3	false	0	false	false	false				
136	Rural Two-Lane Segment Two-lane Undivided	569+70.000	570+00.000	30.00	0.0057	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
137	Rural Two-Lane Segment Two-lane Undivided	570+00.000	575+00.000	500.00	0.0947	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	true	false	false				
138	Rural Two-Lane Segment Two-lane Undivided	575+00.000	579+50.000	450.00	0.0852	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
139	Rural Two-Lane Segment Two-lane Undivided	579+50.000	579+70.000	20.00	0.0038	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	0.00	0.00	-0.20	6.2	3	false	0	false	false	false				
140	Rural Two-Lane Segment Two-lane Undivided	579+70.000	580+10.000	40.00	0.0076	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	0.00	0.00	-0.20	6.2	3	false	0	false	false	false				

Table 3. Crash History Highway - Homogeneous Segments (Section 1)

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TWL T Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
1	Rural Two-Lane Segment Two-lane Undivided	171+44.00 0	172+42.00 0	98.00	0.0186	2018-2022: 2,085	12.00	12.00	8.00	8.00	4.25	6.2	3	false	0	false	false	false				
2	Rural Two-Lane Segment Two-lane Undivided	172+42.00 0	174+52.69 0	210.69	0.0399	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.17	6.2	3	false	0	false	false	false				
3	Rural Two-Lane Segment Two-lane Undivided	174+52.69 0	176+25.00 0	172.31	0.0326	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.17	6.2	3	false	0	false	false	false	2,074.80	2.0	true	40
4	Rural Two-Lane Segment Two-lane Undivided	176+25.00 0	178+85.25 0	260.25	0.0493	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.88	6.2	3	false	0	false	false	false	2,074.80	2.0	true	40
5	Rural Two-Lane Segment Two-lane Undivided	178+85.25 0	183+75.37 0	490.12	0.0928	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.88	6.2	3	false	0	false	false	false				
6	Rural Two-Lane Segment Two-lane Undivided	183+75.37 0	184+00.00 0	24.63	0.0047	2018-2022: 2,085	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
7	Rural Two-Lane Segment Two-lane Undivided	184+00.00 0	184+45.00 0	45.00	0.0085	2018-2022: 2,085	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
8	Rural Two-Lane Segment Two-lane Undivided	184+45.00 0	185+20.00 0	75.00	0.0142	2018-2022: 2,085	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
9	Rural Two-Lane Segment Two-lane Undivided	185+20.00 0	186+60.00 0	140.00	0.0265	2018-2022: 2,085	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
10	Rural Two-Lane Segment Two-lane Undivided	186+60.00 0	187+20.00 0	60.00	0.0114	2018-2022: 2,085	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
11	Rural Two-Lane Segment Two-lane Undivided	187+20.00 0	187+60.00 0	40.00	0.0076	2018-2022: 2,085	12.00	12.00	0.00	0.00	1.13	6.2	3	false	0	false	false	false				
12	Rural Two-Lane Segment Two-lane Undivided	187+60.00 0	190+00.00 0	240.00	0.0455	2018-2022: 2,085	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
13	Rural Two-Lane Segment Two-lane Undivided	190+00.00 0	192+00.00 0	200.00	0.0379	2018-2022: 2,085	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
14	Rural Two-Lane Segment Two-lane Undivided	192+00.00 0	192+39.27 0	39.27	0.0074	2018-2022: 2,085	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
15	Rural Two-Lane Segment Two-lane Undivided	192+39.27 0	193+60.00 0	120.73	0.0229	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.94	6.2	3	false	0	false	false	false				
16	Rural Two-Lane Segment Two-lane Undivided	193+60.00 0	197+65.00 0	405.00	0.0767	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.94	6.2	3	false	0	false	false	false				
17	Rural Two-Lane Segment Two-lane Undivided	197+65.00 0	199+00.00 0	135.00	0.0256	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.94	6.2	3	false	0	false	false	false				
18	Rural Two-Lane Segment Two-lane Undivided	199+00.00 0	201+63.75 0	263.75	0.0500	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.94	6.2	3	false	0	false	false	false				
19	Rural Two-Lane Segment Two-lane Undivided	201+63.75 0	202+00.00 0	36.25	0.0069	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.13	6.2	3	false	0	false	false	false				
20	Rural Two-Lane Segment Two-lane Undivided	202+00.00 0	207+00.00 0	500.00	0.0947	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.13	6.2	3	false	0	false	false	false				
21	Rural Two-Lane Segment Two-lane Undivided	207+00.00 0	207+49.76 0	49.76	0.0094	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.13	6.2	3	false	0	false	false	false				
22	Rural Two-Lane Segment Two-lane Undivided	207+49.76 0	217+74.25 0	1,024.49	0.1940	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.70	6.2	3	false	0	false	false	false				
23	Rural Two-Lane Segment Two-lane Undivided	217+74.25 0	221+00.00 0	325.75	0.0617	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.77	6.2	3	false	0	false	false	false				
24	Rural Two-Lane Segment Two-lane Undivided	221+00.00 0	226+00.00 0	500.00	0.0947	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.77	6.2	3	false	0	false	false	false				
25	Rural Two-Lane Segment Two-lane Undivided	226+00.00 0	230+66.25 0	466.25	0.0883	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.77	6.2	3	false	0	false	false	false				

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TWL T Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
26	Rural Two-Lane Segment Two-lane Undivided	230+66.25 0	231+39.70 0	73.45	0.0139	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.77	6.2	3	false	0	false	false	false	5,644.64	2.0	true	70
27	Rural Two-Lane Segment Two-lane Undivided	231+39.70 0	235+00.00 0	360.30	0.0682	2018-2022: 2,085	12.00	12.00	8.00	8.00	-2.00	6.2	3	false	0	false	false	false	5,644.64	2.0	true	70
28	Rural Two-Lane Segment Two-lane Undivided	235+00.00 0	241+61.39 0	661.39	0.1253	2018-2022: 2,085	12.00	12.00	8.00	8.00	-2.00	6.2	3	false	0	false	false	false	5,644.64	2.0	true	70
29	Rural Two-Lane Segment Two-lane Undivided	241+61.39 0	242+00.00 0	38.61	0.0073	2018-2022: 2,085	12.00	12.00	8.00	8.00	1.16	6.2	3	false	0	false	false	false	5,644.64	2.0	true	70
30	Rural Two-Lane Segment Two-lane Undivided	242+00.00 0	245+14.28 0	314.28	0.0595	2018-2022: 2,085	12.00	12.00	8.00	8.00	1.16	6.2	3	false	0	false	false	false	5,644.64	2.0	true	70
31	Rural Two-Lane Segment Two-lane Undivided	245+14.28 0	246+55.10 0	140.82	0.0267	2018-2022: 2,085	12.00	12.00	8.00	8.00	1.16	6.2	3	false	0	false	false	false				
32	Rural Two-Lane Segment Two-lane Undivided	246+55.10 0	248+00.00 0	144.90	0.0274	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.42	6.2	3	false	0	false	false	false				
33	Rural Two-Lane Segment Two-lane Undivided	248+00.00 0	249+00.00 0	100.00	0.0189	2018-2022: 2,085	12.00	12.00	0.00	0.00	-0.42	6.2	3	false	0	false	false	false				
34	Rural Two-Lane Segment Two-lane Undivided	249+00.00 0	251+21.98 0	221.98	0.0420	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.42	6.2	3	false	0	false	false	false				
35	Rural Two-Lane Segment Two-lane Undivided	251+21.98 0	252+40.24 0	118.26	0.0224	2018-2022: 2,085	12.00	12.00	8.00	8.00	3.43	6.2	3	false	0	false	false	false				
36	Rural Two-Lane Segment Two-lane Undivided	252+40.24 0	263+22.60 0	1,082.36	0.2050	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.02	6.2	3	false	0	false	false	false				
37	Rural Two-Lane Segment Two-lane Undivided	263+22.60 0	272+66.74 0	944.14	0.1788	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.02	6.2	3	false	0	false	false	false	12,237.00	2.0	true	70
38	Rural Two-Lane Segment Two-lane Undivided	272+66.74 0	280+00.00 0	733.26	0.1389	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.02	6.2	3	false	0	false	false	false				
39	Rural Two-Lane Segment Two-lane Undivided	280+00.00 0	283+15.05 0	315.05	0.0597	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.02	6.2	3	false	0	false	false	false				
40	Rural Two-Lane Segment Two-lane Undivided	283+15.05 0	284+08.54 0	93.49	0.0177	2018-2022: 2,085	12.00	12.00	8.00	8.00	4.47	6.2	3	false	0	false	false	false				
41	Rural Two-Lane Segment Two-lane Undivided	284+08.54 0	288+50.00 0	441.46	0.0836	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.47	6.2	3	false	0	false	false	false				
42	Rural Two-Lane Segment Two-lane Undivided	288+50.00 0	289+00.00 0	50.00	0.0095	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.47	6.2	3	false	0	false	false	false				
43	Rural Two-Lane Segment Two-lane Undivided	289+00.00 0	295+90.00 0	690.00	0.1307	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.47	6.2	3	false	0	false	false	false				
44	Rural Two-Lane Segment Two-lane Undivided	295+90.00 0	296+00.00 0	10.00	0.0019	2018-2022: 2,085	12.00	12.00	0.00	0.00	-1.47	6.2	3	false	0	false	false	false				
45	Rural Two-Lane Segment Two-lane Undivided	296+00.00 0	296+10.00 0	10.00	0.0019	2018-2022: 2,085	12.00	12.00	0.00	0.00	-1.47	6.2	3	false	0	false	false	false				
46	Rural Two-Lane Segment Two-lane Undivided	296+10.00 0	296+96.52 0	86.52	0.0164	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.47	6.2	3	false	0	false	false	false				
47	Rural Two-Lane Segment Two-lane Undivided	296+96.52 0	298+33.66 0	137.14	0.0260	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.47	6.2	3	false	0	false	false	false				
48	Rural Two-Lane Segment Two-lane Undivided	298+33.66 0	303+50.00 0	516.34	0.0978	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.61	6.2	3	false	0	false	false	false				
49	Rural Two-Lane Segment Two-lane Undivided	303+50.00 0	304+50.00 0	100.00	0.0189	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.61	6.2	3	false	0	false	false	false				
50	Rural Two-Lane Segment Two-lane Undivided	304+50.00 0	305+02.03 9	52.04	0.0099	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.61	6.2	3	false	0	false	false	false				
51	Rural Two-Lane Segment Two-lane Undivided	305+02.03 9	309+35.49 0	433.45	0.0821	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.15	6.2	3	false	0	false	false	false				
52	Rural Two-Lane Segment Two-lane Undivided	309+35.49 0	311+70.00 0	234.51	0.0444	2018-2022: 2,085	12.00	12.00	8.00	8.00	1.24	6.2	3	false	0	false	false	false				

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TWT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
53	Rural Two-Lane Segment Two-lane Undivided	311+70.00 0	313+25.00 0	155.00	0.0294	2018-2022: 2,085	12.00	12.00	8.00	8.00	1.24	6.2	3	false	0	false	false	false				
54	Rural Two-Lane Segment Two-lane Undivided	313+25.00 0	323+00.00 0	975.00	0.1847	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.33	6.2	3	false	0	false	false	false				
55	Rural Two-Lane Segment Two-lane Undivided	323+00.00 0	323+26.98 0	26.98	0.0051	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.33	6.2	3	false	0	false	false	false				
56	Rural Two-Lane Segment Two-lane Undivided	323+26.98 0	328+89.23 0	562.25	0.1065	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.26	6.2	3	false	0	false	false	false				
57	Rural Two-Lane Segment Two-lane Undivided	328+89.23 0	329+81.74 0	92.51	0.0175	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.52	6.2	3	false	0	false	false	false				
58	Rural Two-Lane Segment Two-lane Undivided	329+81.74 0	333+24.92 0	343.18	0.0650	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.52	6.2	3	false	0	false	false	false	4,010.13	2.0	true	70
59	Rural Two-Lane Segment Two-lane Undivided	333+24.92 0	334+00.00 0	75.08	0.0142	2018-2022: 2,085	12.00	12.00	8.00	8.00	-2.17	6.2	3	false	0	false	false	false	4,010.13	2.0	true	70
60	Rural Two-Lane Segment Two-lane Undivided	334+00.00 0	335+39.96 0	139.96	0.0265	2018-2022: 2,085	12.00	12.00	8.00	8.00	-2.17	6.2	3	false	0	false	false	false	4,010.13	2.0	true	70
61	Rural Two-Lane Segment Two-lane Undivided	335+39.96 0	342+39.00 0	699.04	0.1324	2018-2022: 2,085	12.00	12.00	8.00	8.00	-2.17	6.2	3	false	0	false	false	false				
62	Rural Two-Lane Segment Two-lane Undivided	342+39.00 0	343+00.00 0	61.00	0.0116	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false				
63	Rural Two-Lane Segment Two-lane Undivided	343+00.00 0	351+20.00 0	820.00	0.1553	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false				
64	Rural Two-Lane Segment Two-lane Undivided	351+20.00 0	352+00.00 0	80.00	0.0152	2018-2022: 2,085	12.00	12.00	0.00	0.00	-0.24	6.2	3	false	0	false	false	false				
65	Rural Two-Lane Segment Two-lane Undivided	352+00.00 0	352+20.00 0	20.00	0.0038	2018-2022: 2,085	12.00	12.00	0.00	0.00	-0.24	6.2	3	false	0	false	false	false				
66	Rural Two-Lane Segment Two-lane Undivided	352+20.00 0	362+50.00 0	1,030.00	0.1951	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false				
67	Rural Two-Lane Segment Two-lane Undivided	362+50.00 0	369+14.99 0	664.99	0.1259	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false				
68	Rural Two-Lane Segment Two-lane Undivided	369+14.99 0	370+30.00 0	115.01	0.0218	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
69	Rural Two-Lane Segment Two-lane Undivided	370+30.00 0	370+60.00 0	30.00	0.0057	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
70	Rural Two-Lane Segment Two-lane Undivided	370+60.00 0	376+83.61 0	623.61	0.1181	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
71	Rural Two-Lane Segment Two-lane Undivided	376+83.61 0	378+00.00 0	116.39	0.0220	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
72	Rural Two-Lane Segment Two-lane Undivided	378+00.00 0	378+40.00 0	40.00	0.0076	2018-2022: 2,085	12.00	12.00	0.00	8.00	-1.04	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
73	Rural Two-Lane Segment Two-lane Undivided	378+40.00 0	378+60.00 0	20.00	0.0038	2018-2022: 2,085	12.00	12.00	0.00	8.00	-1.04	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
74	Rural Two-Lane Segment Two-lane Undivided	378+60.00 0	379+00.00 0	40.00	0.0076	2018-2022: 2,085	12.00	12.00	0.00	8.00	-1.04	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
75	Rural Two-Lane Segment Two-lane Undivided	379+00.00 0	379+62.69 0	62.69	0.0119	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
76	Rural Two-Lane Segment Two-lane Undivided	379+62.69 0	385+22.97 0	560.28	0.1061	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false				
77	Rural Two-Lane Segment Two-lane Undivided	385+22.97 0	386+60.00 0	137.03	0.0260	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
78	Rural Two-Lane Segment Two-lane Undivided	386+60.00 0	389+50.00 0	290.00	0.0549	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
79	Rural Two-Lane Segment Two-lane Undivided	389+50.00 0	394+00.00 0	450.00	0.0852	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TWL T Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
80	Rural Two-Lane Segment Two-lane Undivided	394+00.00 0	396+46.15 0	246.15	0.0466	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
81	Rural Two-Lane Segment Two-lane Undivided	396+46.15 0	397+00.00 0	53.85	0.0102	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.72	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
82	Rural Two-Lane Segment Two-lane Undivided	397+00.00 0	399+00.00 0	200.00	0.0379	2018-2022: 2,085	12.00	12.00	0.00	8.00	0.72	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
83	Rural Two-Lane Segment Two-lane Undivided	399+00.00 0	405+75.41 0	675.41	0.1279	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.72	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
84	Rural Two-Lane Segment Two-lane Undivided	405+75.41 0	406+00.00 0	24.59	0.0047	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.72	6.2	3	false	0	false	false	false				
85	Rural Two-Lane Segment Two-lane Undivided	406+00.00 0	407+00.00 0	100.00	0.0189	2018-2022: 2,085	12.00	12.00	0.00	8.00	0.72	6.2	3	false	0	false	false	false				
86	Rural Two-Lane Segment Two-lane Undivided	407+00.00 0	443+25.00 0	3,625.00	0.6866	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.72	6.2	3	false	0	false	false	false				
87	Rural Two-Lane Segment Two-lane Undivided	443+25.00 0	445+50.00 0	225.00	0.0426	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
88	Rural Two-Lane Segment Two-lane Undivided	445+50.00 0	452+50.00 0	700.00	0.1326	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
89	Rural Two-Lane Segment Two-lane Undivided	452+50.00 0	459+00.00 0	650.00	0.1231	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
90	Rural Two-Lane Segment Two-lane Undivided	459+00.00 0	460+00.00 0	100.00	0.0189	2018-2022: 2,085	12.00	12.00	8.00	0.00	-0.96	6.2	3	false	0	false	false	false				
91	Rural Two-Lane Segment Two-lane Undivided	460+00.00 0	460+58.58 0	58.58	0.0111	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
92	Rural Two-Lane Segment Two-lane Undivided	460+58.58 0	485+61.23 0	2,502.65	0.4740	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.01	6.2	3	false	0	false	false	false				
93	Rural Two-Lane Segment Two-lane Undivided	485+61.23 0	503+00.00 0	1,738.77	0.3293	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.07	6.2	3	false	0	false	false	false				
94	Rural Two-Lane Segment Two-lane Undivided	503+00.00 0	507+00.00 0	400.00	0.0758	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.07	6.2	3	false	0	false	false	false				
95	Rural Two-Lane Segment Two-lane Undivided	507+00.00 0	508+00.00 0	100.00	0.0189	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.07	6.2	3	false	0	false	true	false				
96	Rural Two-Lane Segment Two-lane Undivided	508+00.00 0	508+08.24 0	8.24	0.0016	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.07	6.2	3	false	0	false	true	false				
97	Rural Two-Lane Segment Two-lane Undivided	508+08.24 0	510+30.00 0	221.76	0.0420	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.21	6.2	3	false	0	false	true	false				
98	Rural Two-Lane Segment Two-lane Undivided	510+30.00 0	512+00.00 0	170.00	0.0322	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.21	6.2	3	false	0	false	false	false				
99	Rural Two-Lane Segment Two-lane Undivided	512+00.00 0	513+00.00 0	100.00	0.0189	2018-2022: 4,325	12.00	12.00	0.00	0.00	0.21	6.2	3	false	0	false	true	false				
100	Rural Two-Lane Segment Two-lane Undivided	513+00.00 0	515+00.00 0	200.00	0.0379	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.21	6.2	3	false	0	false	true	false				
101	Rural Two-Lane Segment Two-lane Undivided	515+00.00 0	520+00.00 0	500.00	0.0947	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.21	6.2	3	false	0	true	true	false				
102	Rural Two-Lane Segment Two-lane Undivided	520+00.00 0	520+49.15 0	49.15	0.0093	2018-2022: 4,325	12.00	12.00	0.00	0.00	0.21	6.2	3	false	0	false	true	false				
103	Rural Two-Lane Segment Two-lane Undivided	520+49.15 0	521+00.00 0	50.85	0.0096	2018-2022: 4,325	12.00	12.00	0.00	0.00	0.21	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
104	Rural Two-Lane Segment Two-lane Undivided	521+00.00 0	523+38.60 0	238.60	0.0452	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.21	6.2	3	false	0	true	true	false	2,458.49	2.0	true	45
105	Rural Two-Lane Segment Two-lane Undivided	523+38.60 0	524+00.00 0	61.40	0.0116	2018-2022: 4,325	12.00	12.00	8.00	8.00	1.90	6.2	3	false	0	true	true	false	2,458.49	2.0	true	45
106	Rural Two-Lane Segment Two-lane Undivided	524+00.00 0	525+00.00 0	100.00	0.0189	2018-2022: 4,325	12.00	12.00	0.00	0.00	1.90	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TWL T Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
107	Rural Two-Lane Segment Two-lane Undivided	525+00.00	525+18.58	18.58	0.0035	2018-2022: 4,325	12.00	12.00	8.00	8.00	1.90	6.2	3	false	0	true	true	false	2,458.49	2.0	true	45
108	Rural Two-Lane Segment Two-lane Undivided	525+18.58	528+00.00	281.42	0.0533	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.02	6.2	3	false	0	true	true	false	2,458.49	2.0	true	45
109	Rural Two-Lane Segment Two-lane Undivided	528+00.00	529+00.00	100.00	0.0189	2018-2022: 4,325	12.00	12.00	0.00	0.00	-0.02	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
110	Rural Two-Lane Segment Two-lane Undivided	529+00.00	539+00.00	1,000.00	0.1894	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.02	6.2	3	false	0	true	true	false	2,458.49	2.0	true	45
111	Rural Two-Lane Segment Two-lane Undivided	539+00.00	539+50.00	50.00	0.0095	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.02	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
112	Rural Two-Lane Segment Two-lane Undivided	539+50.00	540+00.00	50.00	0.0095	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
113	Rural Two-Lane Segment Two-lane Undivided	540+00.00	540+50.00	50.00	0.0095	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
114	Rural Two-Lane Segment Two-lane Undivided	540+50.00	540+74.37	24.37	0.0046	2018-2022: 4,325	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
115	Rural Two-Lane Segment Two-lane Undivided	540+74.37	541+00.00	25.63	0.0049	2018-2022: 4,325	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	true	false				
116	Rural Two-Lane Segment Two-lane Undivided	541+00.00	541+50.00	50.00	0.0095	2018-2022: 4,325	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	true	false				
117	Rural Two-Lane Segment Two-lane Undivided	541+50.00	541+70.00	20.00	0.0038	2018-2022: 4,325	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	true	false				
118	Rural Two-Lane Segment Two-lane Undivided	541+70.00	542+30.00	60.00	0.0114	2018-2022: 4,325	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	true	false				
119	Rural Two-Lane Segment Two-lane Undivided	542+30.00	542+64.00	34.00	0.0064	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	true	false				
120	Rural Two-Lane Segment Two-lane Undivided	542+64.00	543+34.00	70.00	0.0133	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	true	false				
121	Rural Two-Lane Segment Two-lane Undivided	543+34.00	544+00.00	66.00	0.0125	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	true	false				
122	Rural Two-Lane Segment Two-lane Undivided	544+00.00	545+00.00	100.00	0.0189	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
123	Rural Two-Lane Segment Two-lane Undivided	545+00.00	548+23.00	323.00	0.0612	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
124	Rural Two-Lane Segment Two-lane Undivided	548+23.00	553+70.00	547.00	0.1036	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
125	Rural Two-Lane Segment Two-lane Undivided	553+70.00	554+00.00	30.00	0.0057	2018-2022: 4,325	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	false	false				
126	Rural Two-Lane Segment Two-lane Undivided	554+00.00	554+20.00	20.00	0.0038	2018-2022: 4,325	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	false	false				
127	Rural Two-Lane Segment Two-lane Undivided	554+20.00	560+00.00	580.00	0.1098	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
128	Rural Two-Lane Segment Two-lane Undivided	560+00.00	562+58.56	258.56	0.0490	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
129	Rural Two-Lane Segment Two-lane Undivided	562+58.56	564+00.00	141.44	0.0268	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
130	Rural Two-Lane Segment Two-lane Undivided	564+00.00	565+00.00	100.00	0.0189	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
131	Rural Two-Lane Segment Two-lane Undivided	565+00.00	565+77.00	77.00	0.0146	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
132	Rural Two-Lane Segment Two-lane Undivided	565+77.00	566+10.00	33.00	0.0063	2018-2022: 4,325	12.00	12.00	0.00	0.00	-0.20	6.2	3	false	0	false	false	false				
133	Rural Two-Lane Segment Two-lane Undivided	566+10.00	566+50.00	40.00	0.0076	2018-2022: 4,325	12.00	12.00	0.00	0.00	-0.20	6.2	3	false	0	false	false	false				

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TWL T Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
134	Rural Two-Lane Segment Two-lane Undivided	566+50.00 0	569+37.00 0	287.00	0.0544	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
135	Rural Two-Lane Segment Two-lane Undivided	569+37.00 0	569+70.00 0	33.00	0.0063	2018-2022: 4,325	12.00	12.00	8.00	0.00	-0.20	6.2	3	false	0	false	false	false				
136	Rural Two-Lane Segment Two-lane Undivided	569+70.00 0	570+00.00 0	30.00	0.0057	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
137	Rural Two-Lane Segment Two-lane Undivided	570+00.00 0	575+00.00 0	500.00	0.0947	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	true	false	false				
138	Rural Two-Lane Segment Two-lane Undivided	575+00.00 0	579+50.00 0	450.00	0.0852	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
139	Rural Two-Lane Segment Two-lane Undivided	579+50.00 0	579+70.00 0	20.00	0.0038	2018-2022: 4,325	12.00	12.00	0.00	0.00	-0.20	6.2	3	false	0	false	false	false				
140	Rural Two-Lane Segment Two-lane Undivided	579+70.00 0	580+10.00 0	40.00	0.0076	2018-2022: 4,325	12.00	12.00	0.00	0.00	-0.20	6.2	3	false	0	false	false	false				

Table 4. Evaluation Intersection - Section 1

Inter. No.	Title	Type	Location (Sta. ft)	Major AADT	Minor AADT	Legs	Traffic Control	Major road approaches w/Left Turn Lanes	Major road approaches w/Right Turn Lanes	Skew1	Skew2	Lighted at Night
1	West Central School/SD38 (v2)	Rural Two-Lane Intersection Three-Legged w/STOP control	569+50.000	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	2025: 912; 2026: 932; 2027: 951; 2028: 970; 2029: 990; 2030: 1,013; 2031: 1,036; 2032: 1,059; 2033: 1,082; 2034: 1,105; 2035: 1,129; 2036: 1,152; 2037: 1,175; 2038: 1,198; 2039: 1,221; 2040: 1,245; 2041: 1,273; 2042: 1,302; 2043: 1,330; 2044: 1,359; 2045: 1,387; 2046: 1,416; 2047: 1,444; 2048: 1,473; 2049: 1,501; 2050: 1,530	3	Stop-Controlled	0	0	1.37		false
2	2nd/SD38 (v2)	Rural Two-Lane Intersection Four-Legged w/STOP control	566+00.000	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	2025: 1,338; 2026: 1,366; 2027: 1,394; 2028: 1,422; 2029: 1,450; 2030: 1,484; 2031: 1,518; 2032: 1,552; 2033: 1,586; 2034: 1,620; 2035: 1,654; 2036: 1,688; 2037: 1,722; 2038: 1,756; 2039: 1,790; 2040: 1,825; 2041: 1,867; 2042: 1,909; 2043: 1,951; 2044: 1,993; 2045: 2,035; 2046: 2,077; 2047: 2,119; 2048: 2,161; 2049: 2,203; 2050: 2,245	4	Stop-Controlled	1	0	41.37	41.37	false
4	459/SD38 (v2)	Rural Two-Lane Intersection Four-Legged w/STOP control	296+00.000	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	2025: 320; 2026: 329; 2027: 337; 2028: 346; 2029: 355; 2030: 363; 2031: 371; 2032: 379; 2033: 387; 2034: 395; 2035: 404; 2036: 412; 2037: 420; 2038: 428; 2039: 436; 2040: 445; 2041: 455; 2042: 465; 2043: 475; 2044: 485; 2045: 495; 2046: 505; 2047: 515; 2048: 525; 2049: 535; 2050: 545	4	Stop-Controlled	2	0	0.04	0.04	false
5	SD38/SD19_Build (v1)	Rural Two-Lane Intersection Four-Legged w/STOP control	187+50.000	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	2025: 2,094; 2026: 2,140; 2027: 2,187; 2028: 2,233; 2029: 2,280; 2030: 2,336; 2031: 2,392; 2032: 2,449; 2033: 2,505; 2034: 2,561; 2035: 2,618; 2036: 2,674; 2037: 2,730; 2038: 2,787; 2039: 2,843; 2040: 2,900; 2041: 2,967; 2042: 3,034; 2043: 3,101; 2044: 3,168; 2045: 3,235; 2046: 3,302; 2047: 3,369; 2048: 3,436; 2049: 3,503; 2050: 3,570	4	Stop-Controlled	2	0	5.84	5.84	false
6	I90 SPEEDWAY/SD38 (v1)	Rural Two-Lane Intersection Three-Legged w/STOP control	378+50.000	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	2025: 260; 2026: 264; 2027: 267; 2028: 271; 2029: 275; 2030: 281; 2031: 288; 2032: 295; 2033: 302; 2034: 309; 2035: 315; 2036: 322; 2037: 329; 2038: 336; 2039: 343; 2040: 350; 2041: 372; 2042: 395; 2043: 417; 2044: 440; 2045: 462; 2046: 485; 2047: 507; 2048: 530; 2049: 552; 2050: 575	3	Stop-Controlled	1	1	5.46		false
7	463/SD38 (v1)	Rural Two-Lane Intersection Four-Legged w/STOP control	512+00.000	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	2025: 3,802; 2026: 3,882; 2027: 3,963; 2028: 4,044; 2029: 4,125; 2030: 4,221; 2031: 4,318; 2032: 4,415; 2033: 4,512; 2034: 4,609; 2035: 4,705; 2036: 4,802; 2037: 4,899; 2038: 4,996; 2039: 5,093; 2040: 5,190; 2041: 5,308; 2042: 5,427; 2043: 5,545; 2044: 5,664; 2045: 5,782; 2046: 5,901; 2047: 6,019; 2048: 6,138; 2049: 6,256; 2050: 6,375	4	Stop-Controlled	1	0	1.43	1.43	false
8	Main Ave/SD38 (v1)	Rural Two-Lane Intersection Four-Legged w/STOP control	524+50.000	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	2025: 1,367; 2026: 1,397; 2027: 1,426; 2028: 1,455; 2029: 1,485; 2030: 1,520; 2031: 1,555; 2032: 1,590; 2033: 1,625; 2034: 1,660; 2035: 1,695; 2036: 1,730; 2037: 1,765; 2038: 1,800; 2039: 1,835; 2040: 1,870; 2041: 1,912; 2042: 1,955; 2043: 1,997; 2044: 2,040; 2045: 2,082; 2046: 2,125; 2047: 2,167; 2048: 2,210; 2049: 2,252; 2050: 2,295	4	Stop-Controlled	0	0	11.00	10.54	false
9	Vandemark/SD38 (v1)	Rural Two-Lane Intersection Four-Legged w/STOP control	541+50.000	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	2025: 657; 2026: 672; 2027: 686; 2028: 700; 2029: 715; 2030: 731; 2031: 747; 2032: 764; 2033: 780; 2034: 796; 2035: 813; 2036: 829; 2037: 845; 2038: 862; 2039: 878; 2040: 895; 2041: 915; 2042: 936; 2043: 956; 2044: 977; 2045: 997; 2046: 1,018; 2047: 1,038; 2048: 1,059; 2049: 1,079; 2050: 1,100	4	Stop-Controlled	1	0	48.63	48.63	false

Table 5. Crash History Intersection - Section 1

Inter. No.	Title	Type	Location (Sta. ft)	Major AADT	Minor AADT	Legs	Traffic Control	Major road approaches w/Left Turn Lanes	Major road approaches w/Right Turn Lanes	Skew1	Skew2	Lighted at Night
1	West Central School/SD38 (v2)	Rural Two-Lane Intersection Three-Legged w/STOP control	569+50.000	2018-2022: 4,325	2018-2022: 855	3	Stop-Controlled	0	0	1.37		false
2	2nd/SD38 (v2)	Rural Two-Lane Intersection Four-Legged w/STOP control	566+00.000	2018-2022: 4,325	2018-2022: 1,255	4	Stop-Controlled	1	0	41.37	41.37	false
4	459/SD38 (v2)	Rural Two-Lane Intersection Four-Legged w/STOP control	296+00.000	2018-2022: 2,085	2018-2022: 295	4	Stop-Controlled	2	0	0.04	0.04	false
5	SD38/SD19_Build (v1)	Rural Two-Lane Intersection Four-Legged w/STOP control	187+50.000	2018-2022: 2,085	2018-2022: 1,955	4	Stop-Controlled	2	0	5.84	5.84	false
6	I90 SPEEDWAY/SD38 (v1)	Rural Two-Lane Intersection Three-Legged w/STOP control	378+50.000	2018-2022: 2,085	2018-2022: 250	3	Stop-Controlled	1	1	5.46		false
7	463/SD38 (v1)	Rural Two-Lane Intersection Four-Legged w/STOP control	512+00.000	2018-2022: 4,325	2018-2022: 3,560	4	Stop-Controlled	1	0	1.43	1.43	false
8	Main Ave/SD38 (v1)	Rural Two-Lane Intersection Four-Legged w/STOP control	524+50.000	2018-2022: 4,325	2018-2022: 1,280	4	Stop-Controlled	0	0	11.00	10.54	false
9	Vandemark/SD38 (v1)	Rural Two-Lane Intersection Four-Legged w/STOP control	541+50.000	2018-2022: 4,325	2018-2022: 615	4	Stop-Controlled	1	0	48.63	48.63	false

Table 6. Expected Highway Crash Rates and Frequencies Summary (Section 1)

First Year of Analysis	2025
Last Year of Analysis	2050
Evaluated Length (mi)	7.7398
Average Future Road AADT (vpd)	4,284
Expected Crashes	
Total Crashes	476.74
Fatal and Injury Crashes	193.60
Property-Damage-Only Crashes	283.14
Percent of Total Expected Crashes	
Percent Fatal and Injury Crashes (%)	41
Percent Property-Damage-Only Crashes (%)	59
Expected Crash Rate	
Crash Rate (crashes/mi/yr)	2.3691
FI Crash Rate (crashes/mi/yr)	0.9621
PDO Crash Rate (crashes/mi/yr)	1.4070
Expected Travel Crash Rate	
Total Travel (million veh-mi)	314.63
Travel Crash Rate (crashes/million veh-mi)	1.51
Travel FI Crash Rate (crashes/million veh-mi)	0.61
Travel PDO Crash Rate (crashes/million veh-mi)	0.90

Table 7. Expected Crash Frequencies and Rates by Highway Segment/Intersection (Section 1)

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/mi/1000 veh-mi)	Expected Intersection Travel Crash Rate (crashes/million veh)
1	171+44.000	172+42.000	0.0186	0.237	0.402	0.0091	0.0033	0.0058	0.0155	0.0050	0.0105	-0.0063	-0.0017	-0.0047	0.4920	0.45	
2	172+42.000	174+52.690	0.0399	0.482	0.786	0.0185	0.0067	0.0119	0.0302	0.0097	0.0205	-0.0117	-0.0030	-0.0087	0.4646	0.43	
3	174+52.690	176+25.000	0.0326	0.499	0.980	0.0192	0.0072	0.0120	0.0377	0.0121	0.0256	-0.0185	-0.0049	-0.0136	0.5886	0.54	
4	176+25.000	178+85.250	0.0493	0.754	1.479	0.0290	0.0108	0.0182	0.0569	0.0183	0.0386	-0.0279	-0.0074	-0.0205	0.5886	0.54	
5	178+85.250	183+75.370	0.0928	1.121	1.829	0.0431	0.0155	0.0276	0.0703	0.0226	0.0478	-0.0272	-0.0071	-0.0201	0.4646	0.43	
6	183+75.370	184+00.000	0.0047	0.056	0.092	0.0022	0.0008	0.0014	0.0035	0.0011	0.0024	-0.0014	-0.0004	-0.0010	0.4646	0.43	
7	184+00.000	184+45.000	0.0085	0.103	0.168	0.0040	0.0014	0.0025	0.0065	0.0021	0.0044	-0.0025	-0.0006	-0.0018	0.4646	0.43	
8	184+45.000	185+20.000	0.0142	0.172	0.280	0.0066	0.0024	0.0042	0.0108	0.0035	0.0073	-0.0042	-0.0011	-0.0031	0.4646	0.43	
9	185+20.000	186+60.000	0.0265	0.320	0.522	0.0123	0.0044	0.0079	0.0201	0.0064	0.0136	-0.0078	-0.0020	-0.0058	0.4646	0.43	
10	186+60.000	187+20.000	0.0114	0.137	0.224	0.0053	0.0019	0.0034	0.0086	0.0028	0.0058	-0.0033	-0.0009	-0.0025	0.4646	0.43	
11	187+20.000	187+60.000	0.0076	0.111	0.208	0.0043	0.0016	0.0027	0.0080	0.0026	0.0054	-0.0037	-0.0010	-0.0027	0.5613	0.52	
SD38/SD19_Build (v1)	187+50.000			18.404	41.067	0.7079	0.3235	0.3844	1.5795	0.6808	0.8987	-0.8716	-0.3573	-0.5144			0.34
12	187+60.000	190+00.000	0.0455	0.549	0.895	0.0211	0.0076	0.0135	0.0344	0.0111	0.0234	-0.0133	-0.0035	-0.0099	0.4646	0.43	
13	190+00.000	192+00.000	0.0379	0.458	0.746	0.0176	0.0063	0.0113	0.0287	0.0092	0.0195	-0.0111	-0.0029	-0.0082	0.4646	0.43	
14	192+00.000	192+39.270	0.0074	0.090	0.146	0.0035	0.0012	0.0022	0.0056	0.0018	0.0038	-0.0022	-0.0006	-0.0016	0.4646	0.43	
15	192+39.270	193+60.000	0.0229	0.276	0.451	0.0106	0.0038	0.0068	0.0173	0.0056	0.0118	-0.0067	-0.0017	-0.0050	0.4646	0.43	
16	193+60.000	197+65.000	0.0767	0.927	1.511	0.0356	0.0128	0.0228	0.0581	0.0187	0.0395	-0.0225	-0.0058	-0.0166	0.4646	0.43	
17	197+65.000	199+00.000	0.0256	0.309	0.504	0.0119	0.0043	0.0076	0.0194	0.0062	0.0132	-0.0075	-0.0019	-0.0055	0.4646	0.43	
18	199+00.000	201+63.750	0.0500	0.603	0.984	0.0232	0.0083	0.0149	0.0379	0.0121	0.0257	-0.0146	-0.0038	-0.0108	0.4646	0.43	
19	201+63.750	202+00.000	0.0069	0.083	0.135	0.0032	0.0011	0.0020	0.0052	0.0017	0.0035	-0.0020	-0.0005	-0.0015	0.4646	0.43	
20	202+00.000	207+00.000	0.0947	1.144	1.866	0.0440	0.0158	0.0282	0.0718	0.0230	0.0487	-0.0278	-0.0072	-0.0205	0.4646	0.43	
21	207+00.000	207+49.760	0.0094	0.114	0.186	0.0044	0.0016	0.0028	0.0071	0.0023	0.0048	-0.0028	-0.0007	-0.0020	0.4646	0.43	
22	207+49.760	217+74.250	0.1940	2.344	3.823	0.0902	0.0324	0.0577	0.1470	0.0472	0.0998	-0.0569	-0.0148	-0.0421	0.4646	0.43	
23	217+74.250	221+00.000	0.0617	3.596	1.215	0.1383	0.0144	0.1239	0.0467	0.0150	0.0317	0.0916	-0.0006	0.0922	2.2419	2.07	
24	221+00.000	226+00.000	0.0947	1.144	1.866	0.0440	0.0158	0.0282	0.0718	0.0230	0.0487	-0.0278	-0.0072	-0.0205	0.4646	0.43	
25	226+00.000	230+66.250	0.0883	1.067	1.740	0.0410	0.0148	0.0263	0.0669	0.0215	0.0454	-0.0259	-0.0067	-0.0192	0.4646	0.43	
26	230+66.250	231+39.700	0.0139	0.188	0.333	0.0072	0.0026	0.0046	0.0128	0.0041	0.0087	-0.0055	-0.0015	-0.0041	0.5207	0.48	
27	231+39.700	235+00.000	0.0682	0.924	1.631	0.0355	0.0130	0.0225	0.0627	0.0201	0.0426	-0.0272	-0.0071	-0.0201	0.5207	0.48	
28	235+00.000	241+61.390	0.1253	4.891	2.994	0.1881	0.1175	0.0706	0.1152	0.0370	0.0782	0.0730	0.0805	-0.0076	1.5018	1.39	
29	241+61.390	242+00.000	0.0073	0.099	0.175	0.0038	0.0014	0.0024	0.0067	0.0022	0.0046	-0.0029	-0.0008	-0.0021	0.5207	0.48	
30	242+00.000	245+14.280	0.0595	0.806	1.423	0.0310	0.0113	0.0197	0.0547	0.0176	0.0372	-0.0237	-0.0062	-0.0175	0.5207	0.48	
31	245+14.280	246+55.100	0.0267	0.322	0.525	0.0124	0.0045	0.0079	0.0202	0.0065	0.0137	-0.0078	-0.0020	-0.0058	0.4646	0.43	
32	246+55.100	248+00.000	0.0274	0.332	0.541	0.0128	0.0046	0.0082	0.0208	0.0067	0.0141	-0.0080	-0.0021	-0.0060	0.4646	0.43	
33	248+00.000	249+00.000	0.0189	3.721	0.519	0.1431	0.0060	0.1371	0.0200	0.0064	0.0136	0.1231	-0.0004	0.1236	7.5559	6.97	
34	249+00.000	251+21.980	0.0420	0.508	0.828	0.0195	0.0070	0.0125	0.0319	0.0102	0.0216	-0.0123	-0.0032	-0.0091	0.4646	0.43	
35	251+21.980	252+40.240	0.0224	0.286	0.485	0.0110	0.0040	0.0070	0.0187	0.0060	0.0127	-0.0076	-0.0020	-0.0057	0.4920	0.45	
36	252+40.240	263+22.600	0.2050	5.327	4.038	0.2049	0.0424	0.1625	0.1553	0.0499	0.1055	0.0496	-0.0074	0.0570	0.9995	0.92	
37	263+22.600	272+66.740	0.1788	2.351	4.061	0.0904	0.0329	0.0575	0.1562	0.0501	0.1060	-0.0657	-0.0172	-0.0485	0.5057	0.47	
38	272+66.740	280+00.000	0.1389	1.678	2.736	0.0645	0.0232	0.0413	0.1052	0.0338	0.0715	-0.0407	-0.0106	-0.0301	0.4646	0.43	

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/mi/1000 veh-mi)	Expected Intersection Travel Crash Rate (crashes/million veh)
39	280+00.000	283+15.050	0.0597	0.721	1.175	0.0277	0.0100	0.0178	0.0452	0.0145	0.0307	-0.0175	-0.0045	-0.0129	0.4646	0.43	
40	283+15.050	284+08.540	0.0177	0.227	0.384	0.0087	0.0032	0.0056	0.0148	0.0047	0.0100	-0.0060	-0.0016	-0.0045	0.4920	0.45	
41	284+08.540	288+50.000	0.0836	3.861	1.647	0.1485	0.0190	0.1295	0.0634	0.0203	0.0430	0.0851	-0.0013	0.0865	1.7761	1.64	
42	288+50.000	289+00.000	0.0095	0.114	0.187	0.0044	0.0016	0.0028	0.0072	0.0023	0.0049	-0.0028	-0.0007	-0.0021	0.4646	0.43	
43	289+00.000	295+90.000	0.1307	1.579	2.575	0.0607	0.0218	0.0389	0.0990	0.0318	0.0672	-0.0383	-0.0100	-0.0284	0.4646	0.43	
44	295+90.000	296+00.000	0.0019	0.028	0.052	0.0011	0.0004	0.0007	0.0020	0.0006	0.0014	-0.0009	-0.0002	-0.0007	0.5613	0.52	
459/SD38 (v2)	296+00.000			11.436	12.695	0.4399	0.1714	0.2685	0.4883	0.2104	0.2778	-0.0484	-0.0391	-0.0093			0.37
45	296+00.000	296+10.000	0.0019	0.028	0.052	0.0011	0.0004	0.0007	0.0020	0.0006	0.0014	-0.0009	-0.0002	-0.0007	0.5613	0.52	
46	296+10.000	296+96.520	0.0164	0.198	0.323	0.0076	0.0027	0.0049	0.0124	0.0040	0.0084	-0.0048	-0.0012	-0.0036	0.4646	0.43	
47	296+96.520	298+33.660	0.0260	0.314	0.512	0.0121	0.0043	0.0077	0.0197	0.0063	0.0134	-0.0076	-0.0020	-0.0056	0.4646	0.43	
48	298+33.660	303+50.000	0.0978	1.181	1.927	0.0454	0.0163	0.0291	0.0741	0.0238	0.0503	-0.0287	-0.0074	-0.0212	0.4646	0.43	
49	303+50.000	304+50.000	0.0189	0.229	0.373	0.0088	0.0032	0.0056	0.0144	0.0046	0.0097	-0.0056	-0.0014	-0.0041	0.4646	0.43	
50	304+50.000	305+02.039	0.0099	0.119	0.194	0.0046	0.0016	0.0029	0.0075	0.0024	0.0051	-0.0029	-0.0008	-0.0021	0.4646	0.43	
51	305+02.039	309+35.490	0.0821	0.992	1.617	0.0381	0.0137	0.0244	0.0622	0.0200	0.0422	-0.0241	-0.0063	-0.0178	0.4646	0.43	
52	309+35.490	311+70.000	0.0444	0.536	0.875	0.0206	0.0074	0.0132	0.0337	0.0108	0.0229	-0.0130	-0.0034	-0.0096	0.4646	0.43	
53	311+70.000	313+25.000	0.0294	0.355	0.578	0.0136	0.0049	0.0087	0.0222	0.0071	0.0151	-0.0086	-0.0022	-0.0064	0.4646	0.43	
54	313+25.000	323+00.000	0.1847	2.231	3.638	0.0858	0.0309	0.0549	0.1399	0.0449	0.0950	-0.0541	-0.0141	-0.0401	0.4646	0.43	
55	323+00.000	323+26.980	0.0051	0.062	0.101	0.0024	0.0009	0.0015	0.0039	0.0012	0.0026	-0.0015	-0.0004	-0.0011	0.4646	0.43	
56	323+26.980	328+89.230	0.1065	1.286	2.098	0.0495	0.0178	0.0317	0.0807	0.0259	0.0548	-0.0312	-0.0081	-0.0231	0.4646	0.43	
57	328+89.230	329+81.740	0.0175	0.212	0.345	0.0081	0.0029	0.0052	0.0133	0.0043	0.0090	-0.0051	-0.0013	-0.0038	0.4646	0.43	
58	329+81.740	333+24.920	0.0650	0.936	1.738	0.0360	0.0133	0.0227	0.0669	0.0215	0.0454	-0.0308	-0.0081	-0.0227	0.5541	0.51	
59	333+24.920	334+00.000	0.0142	0.205	0.380	0.0079	0.0029	0.0050	0.0146	0.0047	0.0099	-0.0067	-0.0018	-0.0050	0.5541	0.51	
60	334+00.000	335+39.960	0.0265	7.182	0.709	0.2762	0.0084	0.2679	0.0273	0.0088	0.0185	0.2490	-0.0004	0.2494	10.4210	9.62	
61	335+39.960	342+39.000	0.1324	1.599	2.608	0.0615	0.0221	0.0394	0.1003	0.0322	0.0681	-0.0388	-0.0101	-0.0287	0.4646	0.43	
62	342+39.000	343+00.000	0.0116	0.140	0.228	0.0054	0.0019	0.0034	0.0088	0.0028	0.0059	-0.0034	-0.0009	-0.0025	0.4646	0.43	
63	343+00.000	351+20.000	0.1553	4.727	3.060	0.1818	0.1065	0.0753	0.1177	0.0378	0.0799	0.0641	0.0687	-0.0046	1.1706	1.08	
64	351+20.000	352+00.000	0.0152	0.221	0.415	0.0085	0.0032	0.0054	0.0160	0.0051	0.0108	-0.0075	-0.0020	-0.0055	0.5613	0.52	
65	352+00.000	352+20.000	0.0038	0.055	0.104	0.0021	0.0008	0.0013	0.0040	0.0013	0.0027	-0.0019	-0.0005	-0.0014	0.5613	0.52	
66	352+20.000	362+50.000	0.1951	5.207	3.843	0.2003	0.0406	0.1597	0.1478	0.0474	0.1004	0.0525	-0.0069	0.0593	1.0267	0.95	
67	362+50.000	369+14.990	0.1259	1.521	2.481	0.0585	0.0210	0.0375	0.0954	0.0306	0.0648	-0.0369	-0.0096	-0.0273	0.4646	0.43	
68	369+14.990	370+30.000	0.0218	0.305	0.553	0.0117	0.0043	0.0074	0.0213	0.0068	0.0144	-0.0095	-0.0025	-0.0070	0.5385	0.50	
69	370+30.000	370+60.000	0.0057	0.080	0.144	0.0031	0.0011	0.0019	0.0055	0.0018	0.0038	-0.0025	-0.0007	-0.0018	0.5385	0.50	
70	370+60.000	376+83.610	0.1181	4.958	2.998	0.1907	0.1212	0.0695	0.1153	0.0370	0.0783	0.0754	0.0842	-0.0088	1.6146	1.49	
71	376+83.610	378+00.000	0.0220	0.309	0.559	0.0119	0.0044	0.0075	0.0215	0.0069	0.0146	-0.0096	-0.0025	-0.0071	0.5385	0.50	
72	378+00.000	378+40.000	0.0076	0.117	0.230	0.0045	0.0017	0.0028	0.0088	0.0028	0.0060	-0.0044	-0.0012	-0.0032	0.5919	0.55	
73	378+40.000	378+60.000	0.0038	0.058	0.115	0.0022	0.0008	0.0014	0.0044	0.0014	0.0030	-0.0022	-0.0006	-0.0016	0.5919	0.55	
I90 SPEEDWAY/SD38 (v1)	378+50.000			4.683	6.719	0.1801	0.0774	0.1027	0.2584	0.1073	0.1512	-0.0783	-0.0298	-0.0485			0.16
74	378+60.000	379+00.000	0.0076	0.117	0.230	0.0045	0.0017	0.0028	0.0088	0.0028	0.0060	-0.0044	-0.0012	-0.0032	0.5919	0.55	
75	379+00.000	379+62.690	0.0119	0.166	0.301	0.0064	0.0024	0.0040	0.0116	0.0037	0.0079	-0.0052	-0.0014	-0.0038	0.5385	0.50	
76	379+62.690	385+22.970	0.1061	4.133	2.091	0.1590	0.1024	0.0566	0.0804	0.0258	0.0546	0.0785	0.0766	0.0020	1.4979	1.38	
77	385+22.970	386+60.000	0.0260	0.359	0.643	0.0138	0.0051	0.0087	0.0247	0.0079	0.0168	-0.0109	-0.0029	-0.0081	0.5314	0.49	
78	386+60.000	389+50.000	0.0549	0.759	1.361	0.0292	0.0107	0.0185	0.0524	0.0168	0.0355	-0.0232	-0.0061	-0.0171	0.5314	0.49	

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/mi/llion veh-mi)	Expected Intersection Travel Crash Rate (crashes/million veh)
79	389+50.000	394+00.000	0.0852	1.178	2.112	0.0453	0.0166	0.0287	0.0812	0.0261	0.0552	-0.0359	-0.0095	-0.0265	0.5314	0.49	
80	394+00.000	396+46.150	0.0466	0.644	1.155	0.0248	0.0091	0.0157	0.0444	0.0143	0.0302	-0.0197	-0.0052	-0.0145	0.5314	0.49	
81	396+46.150	397+00.000	0.0102	0.141	0.253	0.0054	0.0020	0.0034	0.0097	0.0031	0.0066	-0.0043	-0.0011	-0.0032	0.5314	0.49	
82	397+00.000	399+00.000	0.0379	0.576	1.122	0.0221	0.0083	0.0139	0.0432	0.0139	0.0293	-0.0210	-0.0056	-0.0154	0.5847	0.54	
83	399+00.000	405+75.410	0.1279	1.768	3.170	0.0680	0.0249	0.0430	0.1219	0.0391	0.0828	-0.0539	-0.0142	-0.0398	0.5314	0.49	
84	405+75.410	406+00.000	0.0047	0.056	0.092	0.0022	0.0008	0.0014	0.0035	0.0011	0.0024	-0.0014	-0.0004	-0.0010	0.4646	0.43	
85	406+00.000	407+00.000	0.0189	0.254	0.446	0.0098	0.0036	0.0062	0.0172	0.0055	0.0116	-0.0074	-0.0019	-0.0054	0.5164	0.48	
86	407+00.000	443+25.000	0.6866	25.399	13.526	0.9769	0.4312	0.5456	0.5202	0.1670	0.3532	0.4567	0.2642	0.1924	1.4229	1.31	
87	443+25.000	445+50.000	0.0426	0.515	0.840	0.0198	0.0071	0.0127	0.0323	0.0104	0.0219	-0.0125	-0.0032	-0.0092	0.4646	0.43	
88	445+50.000	452+50.000	0.1326	4.452	2.612	0.1712	0.1044	0.0669	0.1005	0.0322	0.0682	0.0708	0.0721	-0.0013	1.2917	1.19	
89	452+50.000	459+00.000	0.1231	1.487	2.425	0.0572	0.0206	0.0366	0.0933	0.0299	0.0633	-0.0361	-0.0094	-0.0267	0.4646	0.43	
90	459+00.000	460+00.000	0.0189	0.254	0.446	0.0098	0.0036	0.0062	0.0172	0.0055	0.0116	-0.0074	-0.0019	-0.0054	0.5164	0.48	
91	460+00.000	460+58.580	0.0111	0.134	0.219	0.0052	0.0019	0.0033	0.0084	0.0027	0.0057	-0.0033	-0.0008	-0.0024	0.4646	0.43	
92	460+58.580	485+61.230	0.4740	8.577	9.338	0.3299	0.0899	0.2399	0.3592	0.1153	0.2439	-0.0293	-0.0253	-0.0039	0.6959	0.64	
93	485+61.230	503+00.000	0.3293	6.829	6.488	0.2627	0.0647	0.1979	0.2495	0.0801	0.1694	0.0131	-0.0154	0.0285	0.7976	0.74	
94	503+00.000	507+00.000	0.0758	3.766	1.492	0.1448	0.0174	0.1275	0.0574	0.0184	0.0390	0.0874	-0.0010	0.0885	1.9120	1.76	
95	507+00.000	508+00.000	0.0189	0.217	0.344	0.0084	0.0030	0.0054	0.0132	0.0042	0.0090	-0.0049	-0.0013	-0.0036	0.4416	0.41	
96	508+00.000	508+08.240	0.0016	0.018	0.028	0.0007	0.0002	0.0004	0.0011	0.0003	0.0007	-0.0004	-0.0001	-0.0003	0.4416	0.41	
97	508+08.240	510+30.000	0.0420	0.482	0.762	0.0185	0.0066	0.0119	0.0293	0.0094	0.0199	-0.0108	-0.0028	-0.0080	0.4416	0.41	
98	510+30.000	512+00.000	0.0322	0.389	0.634	0.0150	0.0054	0.0096	0.0244	0.0078	0.0166	-0.0094	-0.0025	-0.0070	0.4646	0.43	
463/SD38 (v1)	512+00.000			87.655	169.483	3.3714	1.6033	1.7681	6.5186	2.8095	3.7091	-3.1472	-1.2062	-1.9410			0.88
99	512+00.000	513+00.000	0.0189	0.626	1.666	0.0241	0.0095	0.0145	0.0641	0.0206	0.0435	-0.0400	-0.0110	-0.0290	1.2714	0.33	
100	513+00.000	515+00.000	0.0379	1.092	2.395	0.0420	0.0161	0.0259	0.0921	0.0296	0.0626	-0.0501	-0.0135	-0.0366	1.1086	0.29	
101	515+00.000	520+00.000	0.0947	2.689	5.796	0.1034	0.0394	0.0640	0.2229	0.0716	0.1514	-0.1195	-0.0322	-0.0873	1.0920	0.28	
102	520+00.000	520+49.150	0.0093	0.308	0.819	0.0118	0.0047	0.0071	0.0315	0.0101	0.0214	-0.0197	-0.0054	-0.0142	1.2714	0.33	
103	520+49.150	521+00.000	0.0096	0.343	1.049	0.0132	0.0054	0.0078	0.0403	0.0130	0.0274	-0.0271	-0.0076	-0.0195	1.3705	0.36	
104	521+00.000	523+38.600	0.0452	1.409	3.425	0.0542	0.0211	0.0331	0.1317	0.0423	0.0895	-0.0776	-0.0212	-0.0564	1.1991	0.31	
105	523+38.600	524+00.000	0.0116	0.362	0.881	0.0139	0.0054	0.0085	0.0339	0.0109	0.0230	-0.0200	-0.0054	-0.0145	1.1991	0.31	
106	524+00.000	525+00.000	0.0189	0.675	2.063	0.0260	0.0105	0.0154	0.0793	0.0255	0.0539	-0.0534	-0.0149	-0.0384	1.3705	0.36	
Main Ave/SD38 (v1)	524+50.000			42.110	132.778	1.6196	0.6778	0.9418	5.1069	2.2011	2.9058	-3.4872	-1.5232	-1.9640			0.37
107	525+00.000	525+18.580	0.0035	0.110	0.267	0.0042	0.0016	0.0026	0.0103	0.0033	0.0070	-0.0060	-0.0016	-0.0044	1.1991	0.31	
108	525+18.580	528+00.000	0.0533	1.662	4.040	0.0639	0.0249	0.0390	0.1554	0.0499	0.1055	-0.0915	-0.0250	-0.0665	1.1991	0.31	
109	528+00.000	529+00.000	0.0189	0.675	2.063	0.0260	0.0105	0.0154	0.0793	0.0255	0.0539	-0.0534	-0.0149	-0.0384	1.3705	0.36	
110	529+00.000	539+00.000	0.1894	13.262	14.355	0.5101	0.1129	0.3971	0.5521	0.1772	0.3749	-0.0420	-0.0643	0.0223	2.6933	0.70	
111	539+00.000	539+50.000	0.0095	0.299	0.742	0.0115	0.0045	0.0070	0.0285	0.0092	0.0194	-0.0170	-0.0047	-0.0124	1.2152	0.32	
112	539+50.000	540+00.000	0.0095	0.299	0.742	0.0115	0.0045	0.0070	0.0285	0.0092	0.0194	-0.0170	-0.0047	-0.0124	1.2152	0.32	
113	540+00.000	540+50.000	0.0095	0.299	0.742	0.0115	0.0045	0.0070	0.0285	0.0092	0.0194	-0.0170	-0.0047	-0.0124	1.2152	0.32	
114	540+50.000	540+74.370	0.0046	0.165	0.503	0.0063	0.0026	0.0038	0.0193	0.0062	0.0131	-0.0130	-0.0036	-0.0094	1.3705	0.36	
115	540+74.370	541+00.000	0.0049	0.161	0.427	0.0062	0.0024	0.0037	0.0164	0.0053	0.0111	-0.0102	-0.0028	-0.0074	1.2714	0.33	
116	541+00.000	541+50.000	0.0095	0.313	0.833	0.0120	0.0048	0.0073	0.0320	0.0103	0.0218	-0.0200	-0.0055	-0.0145	1.2714	0.33	
Vandemark/SD38 (v1)	541+50.000			28.334	74.904	1.0898	0.5033	0.5865	2.8809	1.2417	1.6393	-1.7912	-0.7384	-1.0527			0.27
117	541+50.000	541+70.000	0.0038	0.125	0.333	0.0048	0.0019	0.0029	0.0128	0.0041	0.0087	-0.0080	-0.0022	-0.0058	1.2714	0.33	

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/mi/llion veh-mi)	Expected Intersection Travel Crash Rate (crashes/million veh)
118	541+70.000	542+30.000	0.0114	0.376	1.000	0.0144	0.0057	0.0087	0.0384	0.0123	0.0261	-0.0240	-0.0066	-0.0174	1.2714	0.33	
119	542+30.000	542+64.000	0.0064	0.186	0.407	0.0071	0.0027	0.0044	0.0157	0.0050	0.0106	-0.0085	-0.0023	-0.0062	1.1086	0.29	
120	542+64.000	543+34.000	0.0133	0.382	0.838	0.0147	0.0056	0.0091	0.0322	0.0104	0.0219	-0.0175	-0.0047	-0.0128	1.1086	0.29	
121	543+34.000	544+00.000	0.0125	0.360	0.790	0.0139	0.0053	0.0086	0.0304	0.0098	0.0206	-0.0165	-0.0045	-0.0121	1.1086	0.29	
122	544+00.000	545+00.000	0.0189	0.566	1.300	0.0218	0.0084	0.0134	0.0500	0.0160	0.0339	-0.0282	-0.0076	-0.0206	1.1497	0.30	
123	545+00.000	548+23.000	0.0612	1.829	4.198	0.0703	0.0271	0.0432	0.1615	0.0518	0.1096	-0.0911	-0.0247	-0.0664	1.1497	0.30	
124	548+23.000	553+70.000	0.1036	10.151	7.109	0.3904	0.2627	0.1277	0.2734	0.0878	0.1857	0.1170	0.1750	-0.0580	3.7686	0.98	
125	553+70.000	554+00.000	0.0057	0.194	0.542	0.0074	0.0030	0.0045	0.0209	0.0067	0.0142	-0.0134	-0.0037	-0.0097	1.3100	0.34	
126	554+00.000	554+20.000	0.0038	0.129	0.361	0.0050	0.0020	0.0030	0.0139	0.0045	0.0094	-0.0089	-0.0025	-0.0065	1.3100	0.34	
127	554+20.000	560+00.000	0.1098	3.284	7.538	0.1263	0.0487	0.0776	0.2899	0.0931	0.1969	-0.1636	-0.0444	-0.1193	1.1497	0.30	
128	560+00.000	562+58.560	0.0490	1.464	3.360	0.0563	0.0217	0.0346	0.1292	0.0415	0.0878	-0.0729	-0.0198	-0.0532	1.1497	0.30	
129	562+58.560	564+00.000	0.0268	0.801	1.838	0.0308	0.0119	0.0189	0.0707	0.0227	0.0480	-0.0399	-0.0108	-0.0291	1.1497	0.30	
130	564+00.000	565+00.000	0.0189	0.566	1.300	0.0218	0.0084	0.0134	0.0500	0.0160	0.0339	-0.0282	-0.0076	-0.0206	1.1497	0.30	
131	565+00.000	565+77.000	0.0146	0.494	1.133	0.0190	0.0073	0.0117	0.0436	0.0140	0.0296	-0.0246	-0.0067	-0.0179	1.3020	0.30	
132	565+77.000	566+10.000	0.0063	0.241	0.675	0.0093	0.0037	0.0056	0.0260	0.0083	0.0176	-0.0167	-0.0046	-0.0121	1.4835	0.34	
2nd/SD38 (v2)	566+00.000			51.588	119.976	1.9842	0.7408	1.2433	4.6145	1.9888	2.6256	-2.6303	-1.2480	-1.3823			0.41
133	566+10.000	566+50.000	0.0076	0.292	0.819	0.0112	0.0045	0.0067	0.0315	0.0101	0.0214	-0.0203	-0.0056	-0.0146	1.4835	0.34	
134	566+50.000	569+37.000	0.0544	17.818	4.224	0.6853	0.2643	0.4210	0.1625	0.0522	0.1103	0.5228	0.2121	0.3107	12.6074	2.89	
135	569+37.000	569+70.000	0.0063	0.228	0.581	0.0088	0.0034	0.0053	0.0223	0.0072	0.0152	-0.0136	-0.0037	-0.0098	1.4018	0.32	
West Central School/SD38 (v2)	569+50.000			18.933	73.624	0.7282	0.3383	0.3899	2.8317	1.1752	1.6565	-2.1035	-0.8368	-1.2667			0.16
136	569+70.000	570+00.000	0.0057	0.192	0.442	0.0074	0.0029	0.0045	0.0170	0.0055	0.0115	-0.0096	-0.0026	-0.0070	1.3020	0.30	
137	570+00.000	575+00.000	0.0947	3.160	7.122	0.1215	0.0467	0.0748	0.2739	0.0879	0.1860	-0.1524	-0.0412	-0.1112	1.2834	0.29	
138	575+00.000	579+50.000	0.0852	2.885	6.623	0.1110	0.0428	0.0682	0.2547	0.0818	0.1730	-0.1438	-0.0390	-0.1048	1.3020	0.30	
139	579+50.000	579+70.000	0.0038	0.146	0.409	0.0056	0.0022	0.0034	0.0157	0.0051	0.0107	-0.0101	-0.0028	-0.0073	1.4835	0.34	
140	579+70.000	580+10.000	0.0076	0.292	0.819	0.0112	0.0045	0.0067	0.0315	0.0101	0.0214	-0.0203	-0.0056	-0.0146	1.4835	0.34	
All Segments			7.7398	213.597	230.845	8.2153	3.0105	5.2047	8.8786	2.8500	6.0286	-0.6634	0.1605	-0.8239	1.0614	0.68	
All Intersections				263.144	631.248	10.1209	4.4358	5.6852	24.2788	10.4147	13.8641	-14.1579	-5.9790	-8.1789			0.39
Total			7.7398	476.741	862.093	18.3362	7.4463	10.8899	33.1574	13.2648	19.8927	-14.8212	-5.8185	-9.0028	2.3691		

Table 8. Expected Crash Frequencies and Rates by Horizontal Design Element (Section 1)

Title	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/mi llion veh-mi)
Tangent	171+44.000	174+52.690	0.0585	0.720	1.188	0.0277	0.0100	0.0177	0.0457	0.0147	0.0310	-0.0180	-0.0047	-0.0133	0.4733	0.44
Simple Curve 1	174+52.690	178+85.250	0.0819	1.254	2.459	0.0482	0.0180	0.0302	0.0946	0.0304	0.0642	-0.0464	-0.0123	-0.0340	0.5886	0.54
Tangent	178+85.250	230+66.250	0.9812	14.723	19.390	0.5663	0.1684	0.3979	0.7458	0.2394	0.5064	-0.1795	-0.0710	-0.1085	0.5771	0.53
Simple Curve 2	230+66.250	245+14.280	0.2742	6.908	6.555	0.2657	0.1459	0.1198	0.2521	0.0809	0.1712	0.0136	0.0649	-0.0513	0.9688	0.89
Tangent	245+14.280	263+22.600	0.3425	10.496	6.937	0.4037	0.0685	0.3352	0.2668	0.0856	0.1812	0.1369	-0.0172	0.1541	1.1787	1.09
Simple Curve 3	263+22.600	272+66.740	0.1788	2.351	4.061	0.0904	0.0329	0.0575	0.1562	0.0501	0.1060	-0.0657	-0.0172	-0.0485	0.5057	0.47
Tangent	272+66.740	296+96.470	0.4602	8.432	9.130	0.3243	0.0823	0.2420	0.3511	0.1127	0.2384	-0.0268	-0.0304	0.0036	0.7047	0.65
Simple Curve 4	296+96.470	296+96.520	0.0000	0.000	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000	-0.0000	-0.0000	0.4646	0.43
Tangent	296+96.520	329+81.740	0.6222	7.516	12.258	0.2891	0.1040	0.1851	0.4715	0.1513	0.3201	-0.1824	-0.0474	-0.1350	0.4646	0.43
Simple Curve 5	329+81.740	335+39.960	0.1057	8.323	2.828	0.3201	0.0246	0.2956	0.1088	0.0349	0.0738	0.2114	-0.0103	0.2217	3.0280	2.79
Tangent	335+39.960	369+14.990	0.6392	13.471	12.739	0.5181	0.1961	0.3220	0.4900	0.1573	0.3327	0.0282	0.0389	-0.0107	0.8106	0.75
Simple Curve 6	369+14.990	379+62.690	0.1984	6.109	5.131	0.2350	0.1376	0.0974	0.1973	0.0633	0.1340	0.0376	0.0742	-0.0366	1.1841	1.09
Tangent	379+62.690	385+22.970	0.1061	4.133	2.091	0.1590	0.1024	0.0566	0.0804	0.0258	0.0546	0.0785	0.0766	0.0020	1.4979	1.38
Simple Curve 7	385+22.970	405+75.410	0.3887	5.424	9.817	0.2086	0.0767	0.1319	0.3776	0.1212	0.2564	-0.1690	-0.0445	-0.1245	0.5366	0.50
Tangent	405+75.410	520+49.150	2.1731	57.544	50.368	2.2132	0.8301	1.3832	1.9372	0.6218	1.3154	0.2760	0.2082	0.0678	1.0185	0.88
Simple Curve 8	520+49.150	540+74.370	0.3836	19.560	30.871	0.7523	0.2085	0.5438	1.1874	0.3811	0.8062	-0.4350	-0.1726	-0.2624	1.9614	0.51
Tangent	540+74.370	580+10.000	0.7454	46.632	55.023	1.7936	0.8047	0.9889	2.1163	0.6793	1.4370	-0.3227	0.1253	-0.4481	2.4062	0.58

Table 9. Predicted Crash Frequencies by Year (Section 1)

Year	Total Crashes	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)
2025	21.56	8.58	39.798	12.98	60.202
2026	23.15	9.22	39.843	13.93	60.157
2027	24.72	9.86	39.881	14.86	60.119
2028	26.28	10.49	39.913	15.79	60.087
2029	27.83	11.12	39.940	16.71	60.060
2030	28.45	11.37	39.948	17.09	60.052
2031	29.08	11.62	39.955	17.46	60.045
2032	29.71	11.87	39.963	17.84	60.037
2033	30.34	12.13	39.971	18.21	60.029
2034	30.97	12.38	39.978	18.59	60.022
2035	31.61	12.64	39.985	18.97	60.015
2036	32.24	12.89	39.992	19.35	60.008
2037	32.88	13.15	39.999	19.73	60.001
2038	33.52	13.41	40.006	20.11	59.994
2039	34.16	13.67	40.012	20.49	59.988
2040	34.80	13.93	40.019	20.87	59.981
2041	35.57	14.24	40.027	21.33	59.973
2042	36.35	14.55	40.035	21.80	59.965
2043	37.12	14.87	40.043	22.26	59.957
2044	37.90	15.18	40.051	22.72	59.949
2045	38.68	15.49	40.058	23.19	59.942
2046	39.47	15.81	40.066	23.65	59.934
2047	40.25	16.13	40.073	24.12	59.927
2048	41.03	16.45	40.080	24.59	59.920
2049	41.82	16.76	40.087	25.05	59.913
2050	42.61	17.09	40.094	25.53	59.906
Total	862.09	344.88	40.005	517.21	59.995
Average	33.16	13.27	40.005	19.89	59.995

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 10. Expected Crash Frequencies by Year (Section 1)

Year	Total Crashes	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)
2025	11.92	4.82	40.399	7.11	59.596
2026	12.80	5.18	40.445	7.62	59.551
2027	13.67	5.53	40.483	8.14	59.514
2028	14.53	5.89	40.516	8.64	59.482
2029	15.39	6.24	40.543	9.15	59.455
2030	15.73	6.38	40.551	9.35	59.447
2031	16.08	6.52	40.559	9.56	59.440
2032	16.43	6.67	40.567	9.77	59.432
2033	16.78	6.81	40.574	9.97	59.425
2034	17.13	6.95	40.582	10.18	59.418
2035	17.48	7.09	40.589	10.38	59.410
2036	17.83	7.24	40.596	10.59	59.404
2037	18.18	7.38	40.603	10.80	59.397
2038	18.54	7.53	40.610	11.01	59.390
2039	18.89	7.67	40.617	11.22	59.384
2040	19.25	7.82	40.624	11.43	59.377
2041	19.67	7.99	40.632	11.68	59.369
2042	20.10	8.17	40.640	11.93	59.361
2043	20.53	8.34	40.648	12.18	59.353
2044	20.96	8.52	40.656	12.44	59.345
2045	21.39	8.70	40.664	12.69	59.338
2046	21.82	8.88	40.671	12.95	59.330
2047	22.26	9.05	40.678	13.20	59.323
2048	22.69	9.23	40.686	13.46	59.316
2049	23.13	9.41	40.693	13.72	59.309
2050	23.56	9.59	40.700	13.97	59.302
Total	476.74	193.60	40.610	283.14	59.390
Average	18.34	7.45	40.610	10.89	59.390

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 11. Comparing Predicted and Expected Crashes for the Evaluation Period (Section 1)

Scope	Total Crashes	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)
Predicted	862.09	344.88	40.005	517.21	59.995
Expected	476.74	193.60	40.610	283.14	59.390
Expected - Predicted	-385.35	-151.28		-234.07	
Percent Difference	-80.83	-78.14		-82.67	

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 12. Expected Crash Type Distribution (Section 1)

Element Type	Crash Type	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)	Total Crashes	Percent Total (%)
Highway Segment	Collision with Animal	2.97	0.6	24.90	5.2	25.84	5.4
Highway Segment	Collision with Bicycle	0.31	0.1	0.14	0.0	0.43	0.1
Highway Segment	Other Single-vehicle Collision	0.55	0.1	3.92	0.8	4.49	0.9
Highway Segment	Overtaken	2.90	0.6	2.03	0.4	5.34	1.1
Highway Segment	Collision with Pedestrian	0.55	0.1	0.14	0.0	0.64	0.1
Highway Segment	Run Off Road	42.66	9.0	68.34	14.3	111.28	23.4
Highway Segment	Total Single Vehicle Crashes	49.94	10.5	99.46	20.9	148.02	31.1
Highway Segment	Angle Collision	7.91	1.7	9.74	2.0	18.16	3.8
Highway Segment	Head-on Collision	2.66	0.6	0.41	0.1	3.42	0.7
Highway Segment	Other Multiple-vehicle Collision	2.04	0.4	4.06	0.9	5.77	1.2
Highway Segment	Rear-end Collision	12.91	2.7	16.51	3.5	30.33	6.4
Highway Segment	Sideswipe	2.97	0.6	5.14	1.1	7.90	1.7
Highway Segment	Total Multiple Vehicle Crashes	28.49	6.0	35.86	7.5	65.57	13.8
Highway Segment	Total Highway Segment Crashes	78.43	16.5	135.32	28.4	213.60	44.8
Intersection	Collision with Animal	0.71	0.1	2.22	0.5	2.84	0.6
Intersection	Collision with Bicycle	0.12	0.0	0.15	0.0	0.26	0.1
Intersection	Other Single-vehicle Collision	0.54	0.1	1.61	0.3	2.10	0.4
Intersection	Overtaken	0.86	0.2	0.63	0.1	1.50	0.3
Intersection	Collision with Pedestrian	0.12	0.0	0.15	0.0	0.26	0.1
Intersection	Run Off Road	12.42	2.6	22.60	4.7	34.98	7.3
Intersection	Total Single Vehicle Crashes	14.77	3.1	27.36	5.7	41.97	8.8
Intersection	Angle Collision	58.58	12.3	50.48	10.6	108.83	22.8
Intersection	Head-on Collision	7.15	1.5	3.79	0.8	10.81	2.3
Intersection	Other Multiple-vehicle Collision	4.93	1.0	5.42	1.1	10.33	2.2
Intersection	Rear-end Collision	24.76	5.2	39.65	8.3	64.53	13.5
Intersection	Sideswipe	5.15	1.1	21.12	4.4	26.48	5.6
Intersection	Total Multiple Vehicle Crashes	100.56	21.1	120.46	25.3	220.99	46.4
Intersection	Total Intersection Crashes	115.33	24.2	147.81	31.0	262.95	55.2
	Total Crashes	193.76	40.7	283.14	59.4	476.55	100.0

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 13. Evaluation Message

Start Location (Sta. ft)	End Location (Sta. ft)	Message
580+00.000	580+00.000	Warning: for intersection #3 (580+00.000 to 580+00.000), SE SD-38 at 580+00.000 has more than one lane exiting. No intersection crash prediction computed.
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (3,560 vpd) for 2018 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (3,560 vpd) for 2019 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (3,560 vpd) for 2020 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (3,560 vpd) for 2021 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (3,560 vpd) for 2022 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
580+00.000	580+00.000	Warning: for intersection #3 (580+00.000 to 580+00.000), SE SD-38 at 580+00.000 has more than one lane exiting. No intersection crash prediction computed.
187+50.000	187+50.000	Warning: for intersection #5 (187+50.000 to 187+50.000), minor road traffic volume (3,503 vpd) for 2049 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
187+50.000	187+50.000	Warning: for intersection #5 (187+50.000 to 187+50.000), minor road traffic volume (3,570 vpd) for 2050 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (3,802 vpd) for 2025 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (3,882 vpd) for 2026 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (3,963 vpd) for 2027 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,044 vpd) for 2028 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,125 vpd) for 2029 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,221 vpd) for 2030 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,318 vpd) for 2031 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,415 vpd) for 2032 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,512 vpd) for 2033 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST

Start Location (Sta. ft)	End Location (Sta. ft)	Message
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,609 vpd) for 2034 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,705 vpd) for 2035 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,802 vpd) for 2036 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,899 vpd) for 2037 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,996 vpd) for 2038 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (5,093 vpd) for 2039 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (5,190 vpd) for 2040 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (5,308 vpd) for 2041 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (5,427 vpd) for 2042 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (5,545 vpd) for 2043 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (5,664 vpd) for 2044 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (5,782 vpd) for 2045 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (5,901 vpd) for 2046 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (6,019 vpd) for 2047 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (6,138 vpd) for 2048 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (6,256 vpd) for 2049 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (6,375 vpd) for 2050 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST

Interactive Highway Safety Design Model

Crash Prediction Evaluation Report

June 10, 2024

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Report Overview

Report Generated: Jun 10, 2024 9:25 AM

Report Template: System: Single Page, 508 Compliant [System] (mlcpm5, Dec 5, 2019 2:16 PM)

Evaluation Date: Mon Jun 10 09:24:09 CDT 2024

IHSDM Version: v17.0.0 (Sep 22, 2021)

Crash Prediction Module: v12.0.0 (Sep 22, 2021)

User Name: naveen.mallipaddi

Organization Name:

Phone:

E-Mail:

Project Title: SD-38_Build_Option2_I90EBRamp_I

Project Comment: Created Mon Mar 27 16:47:43 CDT 2023

Project Unit System: U.S. Customary

Highway Title: SD-38

Highway Comment: Created Mon Mar 27 16:49:47 CDT 2023

Highway Version: 20

Evaluation Title: Evaluation 55

Evaluation Comment: Created Mon Jun 10 09:16:50 CDT 2024

Minimum Location: 585+00.000

Maximum Location: 974+11.000

Policy for Superelevation: AASHTO 2011 U.S. Customary

Calibration: HSM Configuration

Crash Distribution: HSM Configuration

Model/CMF: HSM Configuration

First Year of Analysis: 2025

Last Year of Analysis: 2050

Empirical-Bayes Analysis: Site-Specific

Highway with Crash History: SD-38

Highway with Crash History Comment: Created Mon Mar 27 16:49:47 CDT 2023

Highway with Crash History Version: 20

First Year of Observed Crashes: 2018

Last Year of Observed Crashes: 2022

Disclaimer Regarding Crash Prediction Method

IMPORTANT NOTICE ABOUT COMPARING RESULTS FROM HIGHWAY SAFETY MANUAL FIRST EDITION (2010) MODELS TO RESULTS FROM NEW MODELS DEVELOPED UNDER NCHRP PROJECTS 17-70, 17-58, AND 17-68

Since the publication of the Highway Safety Manual - First Edition (HSM-1), in 2010 by the American Association of State Highway and Transportation Officials (AASHTO), multiple research efforts have been undertaken through the National Cooperative Highway Research Program (NCHRP) to develop safety performance models for road segment and intersection facility types that were not initially reflected in the HSM-1, in order to expand the breadth and depth of the HSM in the future.

The IHSDM Crash Prediction Module (CPM) is intended as a faithful implementation of HSM Part C predictive methods. As NCHRP projects to develop new predictive methods for the HSM are completed, FHWA works to incorporate the new methods into IHSDM, sometimes in advance of publication in the HSM. The following new crash predictive methods have been accepted by NCHRP project panels and incorporated into IHSDM, while pending AASHTO's approval for incorporation into a future edition of the HSM:

- Roundabouts: completed in 2018 under NCHRP Project 17-70, the new methods will provide improved outcomes for the safety analysis of roundabouts.
- 6+ lane and one-way urban/suburban arterials (including models for segments and intersections): completed under NCHRP Project 17-58.
- Intersection crash prediction methods for some intersection configurations and traffic control types not currently addressed in the HSM (e.g., all-way stop; rural 3-leg signalized; 3-leg stop-controlled where the major leg turns; urban 5-leg signalized; urban high-speed intersections): completed in 2021 under NCHRP Project 17-68.

However, in the absence of local calibration factors (see HSM-1 Part C, Appendix A for guidance on calibration of the predictive models), it is neither appropriate nor advisable to directly compare the results from new models (from NCHRP Projects 17-58, 17-68, and 17-70) to results from HSM-1 models, as the models were not calibrated to the same base state data sets, and consequently can produce unexpected results. If local calibration factors are available and applied to both new models and HSM-1 models, then it may be appropriate to directly compare the results. *[Note: Work being performed under NCHRP Project 17-72 (Update of Crash Modification Factors for the Highway Safety Manual) is expected to re-calibrate many of the old (HSM-1) and new (e.g., NCHRP 17-70) models to data from a single (or small number of) states, that would allow results from all models to be directly compared.]*

The models produced for NCHRP Project 17-70 have independent value in terms of informing the design of a roundabout and assessing the effects of different design characteristics on the expected safety performance of a roundabout.

The HSM-1 interim method previously included in IHSDM for evaluating roundabouts on urban/suburban arterials (i.e., evaluating an existing intersection and then applying a Crash Modification Factor for replacing the existing intersection with a roundabout) has been deactivated in IHSDM, to minimize any confusion with the new roundabout methodology.

Section Types

Section 3 Evaluation

Section: Section 3

Evaluation Start Location: 585+00.000

Evaluation End Location: 948+50.000

Area Type: Rural

Functional Class: Arterial

Type of Alignment: Undivided/Divided Multilane

Model Category: Rural, Multilane

Calibration Factor: 3ST=1.0; 4D=1.0; 4ST=1.0; 4U=1.0; RT_ST_FI=1.0; RT_ST_PDO=1.0;

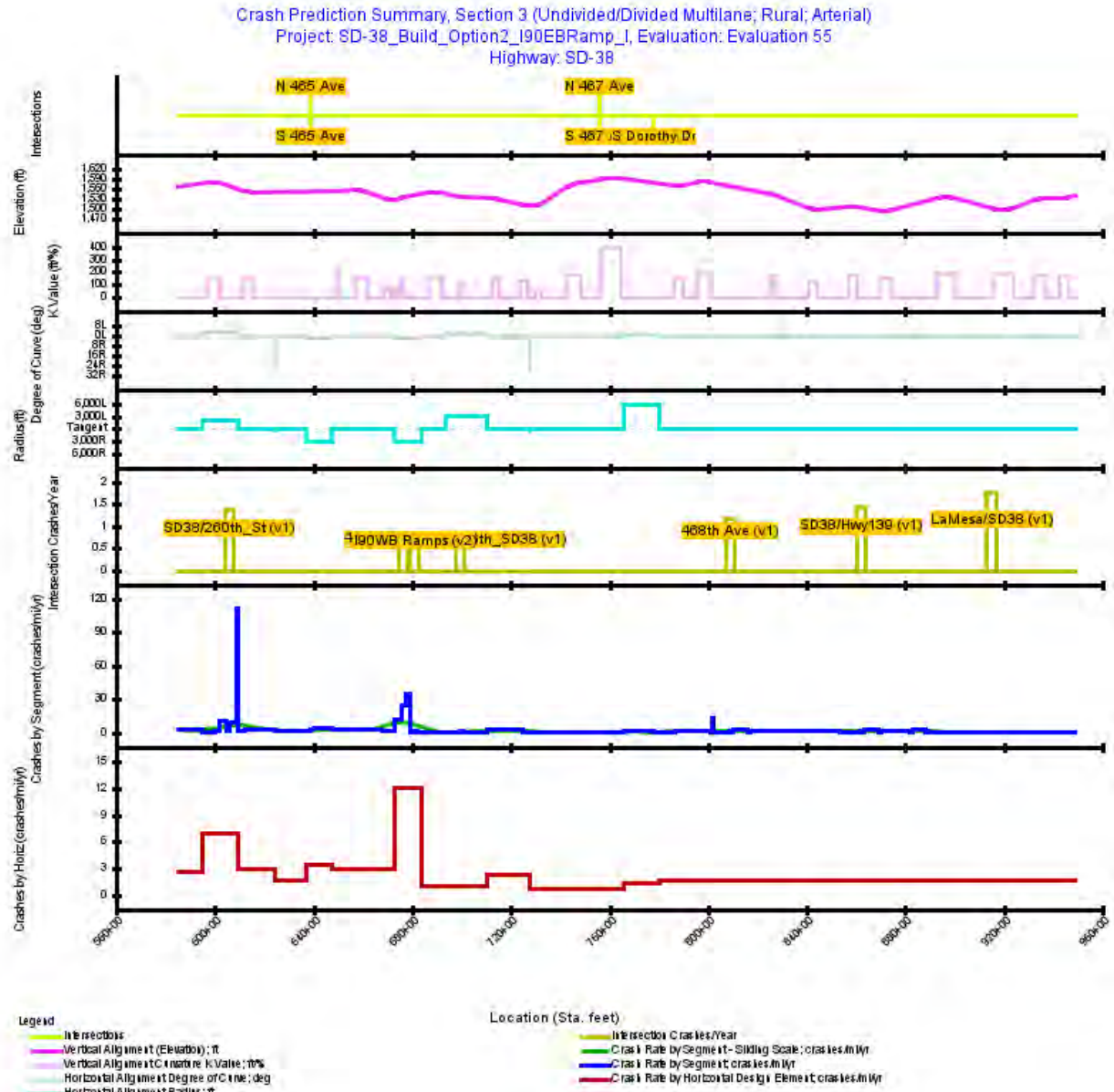


Figure 1. Crash Prediction Summary (Section 3)

Table 1. Observed Crashes Used in the Evaluation (Section 3)

Year	Observed Crashes	Total Crashes Used	FI Crashes	FI no/C Crashes	PDO Crashes
2018	8	8	6	5	2
2019	10	10	4	0	6
2020	7	7	3	2	4
2021	9	9	5	2	4
2022	9	9	5	1	4
All Years	43 ^[1]	43	23	10	20

Footnotes

^[1] Note: Observed crash data that does not comply with the associated CPM model requirements may not be used in EB processing.

Table 2. Evaluation Highway - Homogeneous Segments (Section 3)

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Median Width (ft)	Median Type	Effective Median Width (ft)	Lighting	Automated Speed Enforcement	Left Side Slope	Right Side Slope
1	Rural Multi-Lane Segment Four-lane Undivided	585+00.00	594+84.94	984.94	0.1865	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
2	Rural Multi-Lane Segment Four-lane Undivided	594+84.94	600+00.00	515.06	0.0975	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
3	Rural Multi-Lane Segment Four-lane Undivided	600+00.00	601+00.00	100.00	0.0189	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
4	Rural Multi-Lane Segment Four-lane Undivided	601+00.00	602+00.00	100.00	0.0189	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
5	Rural Multi-Lane Segment Four-lane Undivided	602+00.00	605+00.00	300.00	0.0568	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
6	Rural Multi-Lane Segment Four-lane Undivided	605+00.00	605+60.00	60.00	0.0114	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	0.00	0.00	None	0.00	false	false	0:1	0:1
7	Rural Multi-Lane Segment Four-lane Undivided	605+60.00	605+70.00	10.00	0.0019	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
8	Rural Multi-Lane Segment Four-lane Undivided	605+70.00	605+75.00	5.00	0.0009	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
9	Rural Multi-Lane Segment Four-lane Undivided	605+75.00	609+00.00	325.00	0.0616	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
10	Rural Multi-Lane Segment Four-lane Undivided	609+00.00	609+21.93	21.93	0.0042	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
11	Rural Multi-Lane Segment Four-lane Undivided	609+21.93	611+40.00	218.07	0.0413	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
12	Rural Multi-Lane Segment Four-lane Undivided	611+40.00	612+50.00	110.00	0.0208	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
13	Rural Multi-Lane Segment Four-lane Undivided	612+50.00	624+64.53	1,214.53	0.2300	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
14	Rural Multi-Lane Segment Four-lane Undivided	624+64.53	636+92.82	1,228.29	0.2326	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Median Width (ft)	Median Type	Effective Median Width (ft)	Lighting	Automated Speed Enforcement	Left Side Slope	Right Side Slope
15	Rural Multi-Lane Segment Four-lane Undivided	636+92.82 0	639+00.00 0	207.18	0.0392	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
16	Rural Multi-Lane Segment Four-lane Undivided	639+00.00 0	640+00.00 0	100.00	0.0189	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	0.00	0.00	0.00	None	0.00	false	false	0:1	0:1
17	Rural Multi-Lane Segment Four-lane Undivided	640+00.00 0	647+26.05 0	726.05	0.1375	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
18	Rural Multi-Lane Segment Four-lane Undivided	647+26.05 0	667+80.00 0	2,053.95	0.3890	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
19	Rural Multi-Lane Segment Four-lane Undivided	667+80.00 0	668+80.00 0	100.00	0.0189	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	0.00	0.00	None	0.00	false	false	0:1	0:1
20	Rural Multi-Lane Segment Four-lane Undivided	668+80.00 0	672+86.11 0	406.11	0.0769	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
21	Rural Multi-Lane Segment Four-lane Undivided	672+86.11 0	676+00.00 0	313.89	0.0594	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
22	Rural Multi-Lane Segment Four-lane Undivided	676+00.00 0	677+50.00 0	150.00	0.0284	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	0.00	8.00	0.00	None	0.00	false	false	0:1	0:1
23	Rural Multi-Lane Segment Four-lane Undivided	677+50.00 0	679+00.00 0	150.00	0.0284	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
24	Rural Multi-Lane Segment Four-lane Undivided	679+00.00 0	680+80.00 0	180.00	0.0341	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
25	Rural Multi-Lane Segment Four-lane Undivided	680+80.00 0	680+90.00 0	10.00	0.0019	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	0.00	8.00	0.00	None	0.00	false	false	0:1	0:1
26	Rural Multi-Lane Segment Four-lane Undivided	680+90.00 0	682+20.00 0	130.00	0.0246	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	0.00	8.00	0.00	None	0.00	false	false	0:1	0:1
27	Rural Multi-Lane Segment Four-lane Undivided	682+20.00 0	683+82.71 0	162.71	0.0308	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
28	Rural Multi-Lane Segment Four-lane Undivided	683+82.71 0	691+50.00 0	767.29	0.1453	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
29	Rural Multi-Lane Segment Four-lane Undivided	691+50.00 0	692+70.00 0	120.00	0.0227	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Median Width (ft)	Median Type	Effective Median Width (ft)	Lighting	Automated Speed Enforcement	Left Side Slope	Right Side Slope
30	Rural Multi-Lane Segment Four-lane Undivided	692+70.00 0	693+85.01 0	115.01	0.0218	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
31	Rural Multi-Lane Segment Four-lane Undivided	693+85.01 0	698+70.00 0	484.99	0.0919	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
32	Rural Multi-Lane Segment Four-lane Undivided	698+70.00 0	699+00.00 0	30.00	0.0057	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	0.00	8.00	0.00	None	0.00	false	false	0:1	0:1
33	Rural Multi-Lane Segment Four-lane Undivided	699+00.00 0	699+20.00 0	20.00	0.0038	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	0.00	0.00	0.00	None	0.00	false	false	0:1	0:1
34	Rural Multi-Lane Segment Four-lane Undivided	699+20.00 0	700+40.00 0	120.00	0.0227	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	0.00	0.00	0.00	None	0.00	false	false	0:1	0:1
35	Rural Multi-Lane Segment Four-lane Divided	700+40.00 0	700+50.00 0	10.00	0.0019	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	0.00	0.00	8.00	Traversable Median	8.00	false	false		
36	Rural Multi-Lane Segment Four-lane Divided	700+50.00 0	701+10.00 0	60.00	0.0114	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	8.00	0.00	8.00	Traversable Median	8.00	false	false		
37	Rural Multi-Lane Segment Four-lane Divided	701+10.00 0	702+00.00 0	90.00	0.0170	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	8.00	0.00	8.00	Non-Traversable Median	8.00	false	false		
38	Rural Multi-Lane Segment Four-lane Divided	702+00.00 0	702+50.00 0	50.00	0.0095	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	0.00	8.00	Non-Traversable Median	8.00	false	false		
39	Rural Multi-Lane Segment Four-lane Divided	702+50.00 0	707+00.00 0	450.00	0.0852	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	8.00	false	false		
40	Rural Multi-Lane Segment Four-lane Divided	707+00.00 0	708+00.00 0	100.00	0.0189	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	8.00	false	false		
41	Rural Multi-Lane Segment Four-lane Divided	708+00.00 0	708+80.00 0	80.00	0.0152	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
42	Rural Multi-Lane Segment Four-lane Divided	708+80.00 0	709+00.00 0	20.00	0.0038	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
43	Rural Multi-Lane Segment Four-lane Undivided	709+00.00 0	710+30.00 0	130.00	0.0246	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
44	Rural Multi-Lane Segment Four-lane Divided	710+30.00 0	710+47.85 0	17.85	0.0034	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Median Width (ft)	Median Type	Effective Median Width (ft)	Lighting	Automated Speed Enforcement	Left Side Slope	Right Side Slope
45	Rural Multi-Lane Segment Four-lane Divided	710+47.85 0	725+00.00 0	1,452.15	0.2750	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
46	Rural Multi-Lane Segment Four-lane Divided	725+00.00 0	727+52.35 0	252.35	0.0478	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
47	Rural Multi-Lane Segment Four-lane Divided	727+52.35 0	735+00.00 0	747.65	0.1416	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
48	Rural Multi-Lane Segment Four-lane Divided	735+00.00 0	755+50.00 0	2,050.00	0.3883	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
49	Rural Multi-Lane Segment Four-lane Undivided	755+50.00 0	756+90.00 0	140.00	0.0265	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
50	Rural Multi-Lane Segment Four-lane Divided	756+90.00 0	757+00.00 0	10.00	0.0019	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
51	Rural Multi-Lane Segment Four-lane Divided	757+00.00 0	763+30.00 0	630.00	0.1193	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
52	Rural Multi-Lane Segment Four-lane Divided	763+30.00 0	764+00.00 0	70.00	0.0133	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	11.50	Non-Traversable Median	11.50	false	false		
53	Rural Multi-Lane Segment Four-lane Divided	764+00.00 0	764+50.00 0	50.00	0.0095	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	17.50	Non-Traversable Median	17.50	false	false		
54	Rural Multi-Lane Segment Four-lane Divided	764+50.00 0	765+52.55 0	102.55	0.0194	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
55	Rural Multi-Lane Segment Four-lane Divided	765+52.55 0	777+80.00 0	1,227.45	0.2325	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
56	Rural Multi-Lane Segment Four-lane Undivided	777+80.00 0	778+80.00 0	100.00	0.0189	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
57	Rural Multi-Lane Segment Four-lane Divided	778+80.00 0	779+00.00 0	20.00	0.0038	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
58	Rural Multi-Lane Segment Four-lane Divided	779+00.00 0	780+45.93 0	145.93	0.0276	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
59	Rural Multi-Lane Segment Four-lane Divided	780+45.93 0	785+40.00 0	494.07	0.0936	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Median Width (ft)	Median Type	Effective Median Width (ft)	Lighting	Automated Speed Enforcement	Left Side Slope	Right Side Slope
60	Rural Multi-Lane Segment Four-lane Divided	785+40.00 0	785+50.00 0	10.00	0.0019	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	8.00	false	false		
61	Rural Multi-Lane Segment Four-lane Divided	785+50.00 0	786+09.00 0	59.00	0.0112	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	11.54	Non-Traversable Median	11.54	false	false		
62	Rural Multi-Lane Segment Four-lane Divided	786+09.00 0	786+50.00 0	41.00	0.0078	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	17.54	Non-Traversable Median	17.54	false	false		
63	Rural Multi-Lane Segment Four-lane Divided	786+50.00 0	801+10.00 0	1,460.0 0	0.2765	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
64	Rural Multi-Lane Segment Four-lane Divided	801+10.00 0	801+61.00 0	51.00	0.0097	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	17.45	Non-Traversable Median	17.45	false	false		
65	Rural Multi-Lane Segment Four-lane Divided	801+61.00 0	802+30.00 0	69.00	0.0131	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	11.45	Non-Traversable Median	11.45	false	false		
66	Rural Multi-Lane Segment Four-lane Divided	802+30.00 0	802+40.00 0	10.00	0.0019	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	8.00	false	false		
67	Rural Multi-Lane Segment Four-lane Divided	802+40.00 0	808+30.00 0	590.00	0.1117	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
68	Rural Multi-Lane Segment Four-lane Divided	808+30.00 0	808+80.00 0	50.00	0.0095	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
69	Rural Multi-Lane Segment Four-lane Undivided	808+80.00 0	809+00.00 0	20.00	0.0038	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
70	Rural Multi-Lane Segment Four-lane Undivided	809+00.00 0	809+60.00 0	60.00	0.0114	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	0.00	0.00	0.00	None	0.00	false	false	0:1	0:1
71	Rural Multi-Lane Segment Four-lane Divided	809+60.00 0	810+00.00 0	40.00	0.0076	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	0.00	0.00	8.00	Traversable Median	20.00	false	false		
72	Rural Multi-Lane Segment Four-lane Divided	810+00.00 0	810+20.00 0	20.00	0.0038	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
73	Rural Multi-Lane Segment Four-lane Divided	810+20.00 0	816+00.00 0	580.00	0.1098	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
74	Rural Multi-Lane Segment Four-lane Divided	816+00.00 0	816+70.00 0	70.00	0.0133	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	8.00	11.50	Non-Traversable Median	11.50	false	false		

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Median Width (ft)	Median Type	Effective Median Width (ft)	Lighting	Automated Speed Enforcement	Left Side Slope	Right Side Slope
75	Rural Multi-Lane Segment Four-lane Divided	816+70.00 0	817+20.00 0	50.00	0.0095	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	8.00	17.50	Non-Traversable Median	17.50	false	false		
76	Rural Multi-Lane Segment Four-lane Divided	817+20.00 0	853+70.00 0	3,650.0 0	0.6913	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
77	Rural Multi-Lane Segment Four-lane Divided	853+70.00 0	854+00.00 0	30.00	0.0057	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	8.00	18.36	Non-Traversable Median	18.36	false	false		
78	Rural Multi-Lane Segment Four-lane Divided	854+00.00 0	854+16.00 0	16.00	0.0030	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	8.00	15.85	Non-Traversable Median	15.85	false	false		
79	Rural Multi-Lane Segment Four-lane Divided	854+16.00 0	854+80.00 0	64.00	0.0121	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	8.00	11.49	Non-Traversable Median	11.49	false	false		
80	Rural Multi-Lane Segment Four-lane Divided	854+80.00 0	860+90.00 0	610.00	0.1155	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
81	Rural Multi-Lane Segment Four-lane Divided	860+90.00 0	861+85.00 0	95.00	0.0180	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
82	Rural Multi-Lane Segment Four-lane Undivided	861+85.00 0	862+00.00 0	15.00	0.0028	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	0.00	0.00	None	0.00	false	false	0:1	0:1
83	Rural Multi-Lane Segment Four-lane Undivided	862+00.00 0	862+50.00 0	50.00	0.0095	2025: 6,704; 2026: 7,305; 2027: 7,907; 2028: 8,508; 2029: 9,110; 2030: 9,295; 2031: 9,480; 2032: 9,666; 2033: 9,851; 2034: 10,037; 2035: 10,222; 2036: 10,408; 2037: 10,593; 2038: 10,779; 2039: 10,964; 2040: 11,150; 2041: 11,375; 2042: 11,600; 2043: 11,825; 2044: 12,050; 2045: 12,275; 2046: 12,500; 2047: 12,725; 2048: 12,950; 2049: 13,175; 2050: 13,400	12.00	12.00	8.00	0.00	0.00	None	0.00	false	false	0:1	0:1
84	Rural Multi-Lane Segment Four-lane Undivided	862+50.00 0	862+60.00 0	10.00	0.0019	2025: 6,704; 2026: 7,305; 2027: 7,907; 2028: 8,508; 2029: 9,110; 2030: 9,295; 2031: 9,480; 2032: 9,666; 2033: 9,851; 2034: 10,037; 2035: 10,222; 2036: 10,408; 2037: 10,593; 2038: 10,779; 2039: 10,964; 2040: 11,150; 2041: 11,375; 2042: 11,600; 2043: 11,825; 2044: 12,050; 2045: 12,275; 2046: 12,500; 2047: 12,725; 2048: 12,950; 2049: 13,175; 2050: 13,400	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
85	Rural Multi-Lane Segment Four-lane Divided	862+60.00 0	863+10.00 0	50.00	0.0095	2025: 6,704; 2026: 7,305; 2027: 7,907; 2028: 8,508; 2029: 9,110; 2030: 9,295; 2031: 9,480; 2032: 9,666; 2033: 9,851; 2034: 10,037; 2035: 10,222; 2036: 10,408; 2037: 10,593; 2038: 10,779; 2039: 10,964; 2040: 11,150; 2041: 11,375; 2042: 11,600; 2043: 11,825; 2044: 12,050; 2045: 12,275; 2046: 12,500; 2047: 12,725; 2048: 12,950; 2049: 13,175; 2050: 13,400	12.00	12.00	8.00	8.00	8.00	Traversable Median	19.00	false	false		
86	Rural Multi-Lane Segment Four-lane Divided	863+10.00 0	869+00.00 0	590.00	0.1117	2025: 6,704; 2026: 7,305; 2027: 7,907; 2028: 8,508; 2029: 9,110; 2030: 9,295; 2031: 9,480; 2032: 9,666; 2033: 9,851; 2034: 10,037; 2035: 10,222; 2036: 10,408; 2037: 10,593; 2038: 10,779; 2039: 10,964; 2040: 11,150; 2041: 11,375; 2042: 11,600; 2043: 11,825; 2044: 12,050; 2045: 12,275; 2046: 12,500; 2047: 12,725; 2048: 12,950; 2049: 13,175; 2050: 13,400	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	19.00	false	false		
87	Rural Multi-Lane Segment Four-lane Divided	869+00.00 0	869+70.00 0	70.00	0.0133	2025: 6,704; 2026: 7,305; 2027: 7,907; 2028: 8,508; 2029: 9,110; 2030: 9,295; 2031: 9,480; 2032: 9,666; 2033: 9,851; 2034: 10,037; 2035: 10,222; 2036: 10,408; 2037: 10,593; 2038: 10,779; 2039: 10,964; 2040: 11,150; 2041: 11,375; 2042: 11,600; 2043: 11,825; 2044: 12,050; 2045: 12,275; 2046: 12,500; 2047: 12,725; 2048: 12,950; 2049: 13,175; 2050: 13,400	12.00	12.00	8.00	8.00	11.50	Non-Traversable Median	11.50	false	false		
88	Rural Multi-Lane Segment Four-lane Divided	869+70.00 0	870+20.00 0	50.00	0.0095	2025: 6,704; 2026: 7,305; 2027: 7,907; 2028: 8,508; 2029: 9,110; 2030: 9,295; 2031: 9,480; 2032: 9,666; 2033: 9,851; 2034: 10,037; 2035: 10,222; 2036: 10,408; 2037: 10,593; 2038: 10,779; 2039: 10,964; 2040: 11,150; 2041: 11,375; 2042: 11,600; 2043: 11,825; 2044: 12,050; 2045: 12,275; 2046: 12,500; 2047: 12,725; 2048: 12,950; 2049: 13,175; 2050: 13,400	12.00	12.00	8.00	8.00	17.50	Non-Traversable Median	17.50	false	false		
89	Rural Multi-Lane Segment Four-lane Divided	870+20.00 0	881+80.00 0	1,160.0 0	0.2197	2025: 6,704; 2026: 7,305; 2027: 7,907; 2028: 8,508; 2029: 9,110; 2030: 9,295; 2031: 9,480; 2032: 9,666; 2033: 9,851; 2034: 10,037; 2035: 10,222; 2036: 10,408; 2037: 10,593; 2038: 10,779; 2039: 10,964; 2040: 11,150; 2041: 11,375; 2042: 11,600; 2043: 11,825; 2044: 12,050; 2045: 12,275; 2046: 12,500; 2047: 12,725; 2048: 12,950; 2049: 13,175; 2050: 13,400	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Median Width (ft)	Median Type	Effective Median Width (ft)	Lighting	Automated Speed Enforcement	Left Side Slope	Right Side Slope
105	Rural Multi-Lane Segment Four-lane Divided	913+70.00 0	914+00.00 0	30.00	0.0057	2025: 6,704; 2026: 7,305; 2027: 7,907; 2028: 8,508; 2029: 9,110; 2030: 9,295; 2031: 9,480; 2032: 9,666; 2033: 9,851; 2034: 10,037; 2035: 10,222; 2036: 10,408; 2037: 10,593; 2038: 10,779; 2039: 10,964; 2040: 11,150; 2041: 11,375; 2042: 11,600; 2043: 11,825; 2044: 12,050; 2045: 12,275; 2046: 12,500; 2047: 12,725; 2048: 12,950; 2049: 13,175; 2050: 13,400	11.50	11.50	8.00	8.00	8.00	Traversable Median	19.00	false	false		
106	Rural Multi-Lane Segment Four-lane Divided	914+00.00 0	914+30.00 0	30.00	0.0057	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	11.50	11.50	8.00	8.00	8.00	Traversable Median	19.00	false	false		
107	Rural Multi-Lane Segment Four-lane Undivided	914+30.00 0	914+40.00 0	10.00	0.0019	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	11.50	11.50	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
108	Rural Multi-Lane Segment Four-lane Undivided	914+40.00 0	915+40.00 0	100.00	0.0189	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	11.50	11.50	0.00	0.00	0.00	None	0.00	false	false	0:1	0:1
109	Rural Multi-Lane Segment Four-lane Divided	915+40.00 0	916+00.00 0	60.00	0.0114	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	11.50	11.50	8.00	8.00	8.00	Traversable Median	19.00	false	false		
110	Rural Multi-Lane Segment Four-lane Divided	916+00.00 0	921+00.00 0	500.00	0.0947	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	11.50	11.50	8.00	8.00	8.00	Non-Traversable Median	19.00	false	false		
111	Rural Multi-Lane Segment Four-lane Divided	921+00.00 0	921+90.00 0	90.00	0.0170	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	11.50	11.50	8.00	8.00	8.00	Non-Traversable Median	19.00	false	false		
112	Rural Multi-Lane Segment Four-lane Divided	921+90.00 0	922+00.00 0	10.00	0.0019	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	11.50	11.50	8.00	8.00	8.00	Non-Traversable Median	8.00	false	false		
113	Rural Multi-Lane Segment Four-lane Divided	922+00.00 0	922+59.00 0	59.00	0.0112	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	11.50	11.50	8.00	8.00	11.54	Non-Traversable Median	11.54	false	false		
114	Rural Multi-Lane Segment Four-lane Divided	922+59.00 0	923+00.00 0	41.00	0.0078	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	11.50	11.50	8.00	8.00	17.54	Non-Traversable Median	17.54	false	false		
115	Rural Multi-Lane Segment Four-lane Divided	923+00.00 0	941+70.00 0	1,870.0 0	0.3542	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	11.50	11.50	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
116	Rural Multi-Lane Segment Four-lane Divided	941+70.00 0	948+50.00 0	680.00	0.1288	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	11.50	11.50	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		

Table 3. User Defined CMF Used in the Eval Segment CPM Evaluation (Section 3)

Name	Description	Start Loc. (Sta. ft)	End Loc. (Sta. ft)	Start CMF Year	End CMF Year	Severity	CMF Value
1	TWLTL	585+00.000	600+00.000	2025	2050	Total	0.6900
1	TWLTL	612+50.000	639+00.000	2025	2050	Total	0.6900
1	TWLTL	640+00.000	680+90.000	2025	2050	Total	0.6900
1	TWLTL	682+20.000	699+20.000	2025	2050	Total	0.6900

Table 4. Crash History Highway - Homogeneous Segments (Section 3)

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Median Width (ft)	Median Type	Effective Median Width (ft)	Lighting	Automated Speed Enforcement	Left Side Slope	Right Side Slope
1	Rural Multi-Lane Segment Four-lane Undivided	585+00.000	594+84.940	984.94	0.1865	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
2	Rural Multi-Lane Segment Four-lane Undivided	594+84.940	600+00.000	515.06	0.0975	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
3	Rural Multi-Lane Segment Four-lane Undivided	600+00.000	601+00.000	100.00	0.0189	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
4	Rural Multi-Lane Segment Four-lane Undivided	601+00.000	602+00.000	100.00	0.0189	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
5	Rural Multi-Lane Segment Four-lane Undivided	602+00.000	605+00.000	300.00	0.0568	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
6	Rural Multi-Lane Segment Four-lane Undivided	605+00.000	605+60.000	60.00	0.0114	2018-2022: 4,325	12.00	12.00	8.00	0.00	0.00	None	0.00	false	false	0:1	0:1
7	Rural Multi-Lane Segment Four-lane Undivided	605+60.000	605+70.000	10.00	0.0019	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
8	Rural Multi-Lane Segment Four-lane Undivided	605+70.000	605+75.000	5.00	0.0009	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
9	Rural Multi-Lane Segment Four-lane Undivided	605+75.000	609+00.000	325.00	0.0616	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
10	Rural Multi-Lane Segment Four-lane Undivided	609+00.000	609+21.930	21.93	0.0042	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
11	Rural Multi-Lane Segment Four-lane Undivided	609+21.930	611+40.000	218.07	0.0413	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
12	Rural Multi-Lane Segment Four-lane Undivided	611+40.000	612+50.000	110.00	0.0208	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
13	Rural Multi-Lane Segment Four-lane Undivided	612+50.000	624+64.530	1,214.53	0.2300	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
14	Rural Multi-Lane Segment Four-lane Undivided	624+64.530	636+92.820	1,228.29	0.2326	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
15	Rural Multi-Lane Segment Four-lane Undivided	636+92.820	639+00.000	207.18	0.0392	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
16	Rural Multi-Lane Segment Four-lane Undivided	639+00.000	640+00.000	100.00	0.0189	2018-2022: 4,325	12.00	12.00	0.00	0.00	0.00	None	0.00	false	false	0:1	0:1
17	Rural Multi-Lane Segment Four-lane Undivided	640+00.000	647+26.050	726.05	0.1375	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
18	Rural Multi-Lane Segment Four-lane Undivided	647+26.050	667+80.000	2,053.95	0.3890	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
19	Rural Multi-Lane Segment Four-lane Undivided	667+80.000	668+80.000	100.00	0.0189	2018-2022: 4,325	12.00	12.00	8.00	0.00	0.00	None	0.00	false	false	0:1	0:1
20	Rural Multi-Lane Segment Four-lane Undivided	668+80.000	672+86.110	406.11	0.0769	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
21	Rural Multi-Lane Segment Four-lane Undivided	672+86.110	676+00.000	313.89	0.0594	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
22	Rural Multi-Lane Segment Four-lane Undivided	676+00.000	677+50.000	150.00	0.0284	2018-2022: 4,325	12.00	12.00	0.00	8.00	0.00	None	0.00	false	false	0:1	0:1
23	Rural Multi-Lane Segment Four-lane Undivided	677+50.000	679+00.000	150.00	0.0284	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
24	Rural Multi-Lane Segment Four-lane Undivided	679+00.000	680+80.000	180.00	0.0341	2018-2022: 4,150	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
25	Rural Multi-Lane Segment Four-lane Undivided	680+80.000	680+90.000	10.00	0.0019	2018-2022: 4,150	12.00	12.00	0.00	8.00	0.00	None	0.00	false	false	0:1	0:1
26	Rural Multi-Lane Segment Four-lane Undivided	680+90.000	682+20.000	130.00	0.0246	2018-2022: 4,150	12.00	12.00	0.00	8.00	0.00	None	0.00	false	false	0:1	0:1
27	Rural Multi-Lane Segment Four-lane Undivided	682+20.000	683+82.710	162.71	0.0308	2018-2022: 4,150	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
28	Rural Multi-Lane Segment Four-lane Undivided	683+82.710	691+50.000	767.29	0.1453	2018-2022: 4,150	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
29	Rural Multi-Lane Segment Four-lane Undivided	691+50.000	692+70.000	120.00	0.0227	2018-2022: 4,150	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
30	Rural Multi-Lane Segment Four-lane Undivided	692+70.000	693+85.010	115.01	0.0218	2018-2022: 4,150	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
31	Rural Multi-Lane Segment Four-lane Undivided	693+85.010	698+70.000	484.99	0.0919	2018-2022: 4,150	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
32	Rural Multi-Lane Segment Four-lane Undivided	698+70.000	699+00.000	30.00	0.0057	2018-2022: 4,150	12.00	12.00	0.00	8.00	0.00	None	0.00	false	false	0:1	0:1
33	Rural Multi-Lane Segment Four-lane Undivided	699+00.000	699+20.000	20.00	0.0038	2018-2022: 4,150	12.00	12.00	0.00	0.00	0.00	None	0.00	false	false	0:1	0:1
34	Rural Multi-Lane Segment Four-lane Undivided	699+20.000	700+40.000	120.00	0.0227	2018-2022: 4,150	12.00	12.00	0.00	0.00	0.00	None	0.00	false	false	0:1	0:1
35	Rural Multi-Lane Segment Four-lane Divided	700+40.000	700+50.000	10.00	0.0019	2018-2022: 4,150	12.00	12.00	0.00	0.00	8.00	Traversable Median	8.00	false	false		
36	Rural Multi-Lane Segment Four-lane Divided	700+50.000	701+10.000	60.00	0.0114	2018-2022: 4,150	12.00	12.00	8.00	0.00	8.00	Traversable Median	8.00	false	false		
37	Rural Multi-Lane Segment Four-lane Divided	701+10.000	702+00.000	90.00	0.0170	2018-2022: 4,150	12.00	12.00	8.00	0.00	8.00	Non-Traversable Median	8.00	false	false		
38	Rural Multi-Lane Segment Four-lane Divided	702+00.000	702+50.000	50.00	0.0095	2018-2022: 4,900	12.00	12.00	8.00	0.00	8.00	Non-Traversable Median	8.00	false	false		
39	Rural Multi-Lane Segment Four-lane Divided	702+50.000	707+00.000	450.00	0.0852	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	8.00	false	false		
40	Rural Multi-Lane Segment Four-lane Divided	707+00.000	708+00.000	100.00	0.0189	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	8.00	false	false		

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Median Width (ft)	Median Type	Effective Median Width (ft)	Lighting	Automated Speed Enforcement	Left Side Slope	Right Side Slope
41	Rural Multi-Lane Segment Four-lane Divided	708+00.000	708+80.000	80.00	0.0152	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
42	Rural Multi-Lane Segment Four-lane Divided	708+80.000	709+00.000	20.00	0.0038	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
43	Rural Multi-Lane Segment Four-lane Undivided	709+00.000	710+30.000	130.00	0.0246	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
44	Rural Multi-Lane Segment Four-lane Divided	710+30.000	710+47.850	17.85	0.0034	2018-2022: 4,900	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
45	Rural Multi-Lane Segment Four-lane Divided	710+47.850	725+00.000	1,452.15	0.2750	2018-2022: 4,900	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
46	Rural Multi-Lane Segment Four-lane Divided	725+00.000	727+52.350	252.35	0.0478	2018-2022: 4,900	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
47	Rural Multi-Lane Segment Four-lane Divided	727+52.350	735+00.000	747.65	0.1416	2018-2022: 4,900	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
48	Rural Multi-Lane Segment Four-lane Divided	735+00.000	755+50.000	2,050.00	0.3883	2018-2022: 4,900	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
49	Rural Multi-Lane Segment Four-lane Undivided	755+50.000	756+90.000	140.00	0.0265	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
50	Rural Multi-Lane Segment Four-lane Divided	756+90.000	757+00.000	10.00	0.0019	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
51	Rural Multi-Lane Segment Four-lane Divided	757+00.000	763+30.000	630.00	0.1193	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
52	Rural Multi-Lane Segment Four-lane Divided	763+30.000	764+00.000	70.00	0.0133	2018-2022: 4,900	12.00	12.00	8.00	8.00	11.50	Non-Traversable Median	11.50	false	false		
53	Rural Multi-Lane Segment Four-lane Divided	764+00.000	764+50.000	50.00	0.0095	2018-2022: 4,900	12.00	12.00	8.00	8.00	17.50	Non-Traversable Median	17.50	false	false		
54	Rural Multi-Lane Segment Four-lane Divided	764+50.000	765+52.550	102.55	0.0194	2018-2022: 4,900	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
55	Rural Multi-Lane Segment Four-lane Divided	765+52.550	777+80.000	1,227.45	0.2325	2018-2022: 4,900	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
56	Rural Multi-Lane Segment Four-lane Undivided	777+80.000	778+80.000	100.00	0.0189	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
57	Rural Multi-Lane Segment Four-lane Divided	778+80.000	779+00.000	20.00	0.0038	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
58	Rural Multi-Lane Segment Four-lane Divided	779+00.000	780+45.930	145.93	0.0276	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
59	Rural Multi-Lane Segment Four-lane Divided	780+45.930	785+40.000	494.07	0.0936	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
60	Rural Multi-Lane Segment Four-lane Divided	785+40.000	785+50.000	10.00	0.0019	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	8.00	false	false		
61	Rural Multi-Lane Segment Four-lane Divided	785+50.000	786+09.000	59.00	0.0112	2018-2022: 4,900	12.00	12.00	8.00	8.00	11.54	Non-Traversable Median	11.54	false	false		
62	Rural Multi-Lane Segment Four-lane Divided	786+09.000	786+50.000	41.00	0.0078	2018-2022: 4,900	12.00	12.00	8.00	8.00	17.54	Non-Traversable Median	17.54	false	false		
63	Rural Multi-Lane Segment Four-lane Divided	786+50.000	801+10.000	1,460.00	0.2765	2018-2022: 4,900	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
64	Rural Multi-Lane Segment Four-lane Divided	801+10.000	801+61.000	51.00	0.0097	2018-2022: 4,900	12.00	12.00	8.00	8.00	17.45	Non-Traversable Median	17.45	false	false		
65	Rural Multi-Lane Segment Four-lane Divided	801+61.000	802+30.000	69.00	0.0131	2018-2022: 4,900	12.00	12.00	8.00	8.00	11.45	Non-Traversable Median	11.45	false	false		
66	Rural Multi-Lane Segment Four-lane Divided	802+30.000	802+40.000	10.00	0.0019	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	8.00	false	false		
67	Rural Multi-Lane Segment Four-lane Divided	802+40.000	808+30.000	590.00	0.1117	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
68	Rural Multi-Lane Segment Four-lane Divided	808+30.000	808+80.000	50.00	0.0095	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
69	Rural Multi-Lane Segment Four-lane Undivided	808+80.000	809+00.000	20.00	0.0038	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
70	Rural Multi-Lane Segment Four-lane Undivided	809+00.000	809+60.000	60.00	0.0114	2018-2022: 4,900	12.00	12.00	0.00	0.00	0.00	None	0.00	false	false	0:1	0:1
71	Rural Multi-Lane Segment Four-lane Divided	809+60.000	810+00.000	40.00	0.0076	2018-2022: 4,900	12.00	12.00	0.00	0.00	8.00	Traversable Median	20.00	false	false		
72	Rural Multi-Lane Segment Four-lane Divided	810+00.000	810+20.000	20.00	0.0038	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
73	Rural Multi-Lane Segment Four-lane Divided	810+20.000	816+00.000	580.00	0.1098	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
74	Rural Multi-Lane Segment Four-lane Divided	816+00.000	816+70.000	70.00	0.0133	2018-2022: 4,900	12.00	12.00	8.00	8.00	11.50	Non-Traversable Median	11.50	false	false		
75	Rural Multi-Lane Segment Four-lane Divided	816+70.000	817+20.000	50.00	0.0095	2018-2022: 4,900	12.00	12.00	8.00	8.00	17.50	Non-Traversable Median	17.50	false	false		
76	Rural Multi-Lane Segment Four-lane Divided	817+20.000	853+70.000	3,650.00	0.6913	2018-2022: 4,900	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
77	Rural Multi-Lane Segment Four-lane Divided	853+70.000	854+00.000	30.00	0.0057	2018-2022: 4,900	12.00	12.00	8.00	8.00	18.36	Non-Traversable Median	18.36	false	false		
78	Rural Multi-Lane Segment Four-lane Divided	854+00.000	854+16.000	16.00	0.0030	2018-2022: 4,900	12.00	12.00	8.00	8.00	15.85	Non-Traversable Median	15.85	false	false		
79	Rural Multi-Lane Segment Four-lane Divided	854+16.000	854+80.000	64.00	0.0121	2018-2022: 4,900	12.00	12.00	8.00	8.00	11.49	Non-Traversable Median	11.49	false	false		
80	Rural Multi-Lane Segment Four-lane Divided	854+80.000	860+90.000	610.00	0.1155	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
81	Rural Multi-Lane Segment Four-lane Divided	860+90.000	861+85.000	95.00	0.0180	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
82	Rural Multi-Lane Segment Four-lane Undivided	861+85.000	862+00.000	15.00	0.0028	2018-2022: 4,900	12.00	12.00	8.00	0.00	0.00	None	0.00	false	false	0:1	0:1
83	Rural Multi-Lane Segment Four-lane Undivided	862+00.000	862+50.000	50.00	0.0095	2018-2022: 4,900	12.00	12.00	8.00	0.00	0.00	None	0.00	false	false	0:1	0:1

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Median Width (ft)	Median Type	Effective Median Width (ft)	Lighting	Automated Speed Enforcement	Left Side Slope	Right Side Slope
84	Rural Multi-Lane Segment Four-lane Undivided	862+50.000	862+60.000	10.00	0.0019	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
85	Rural Multi-Lane Segment Four-lane Divided	862+60.000	863+10.000	50.00	0.0095	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Traversable Median	19.00	false	false		
86	Rural Multi-Lane Segment Four-lane Divided	863+10.000	869+00.000	590.00	0.1117	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	19.00	false	false		
87	Rural Multi-Lane Segment Four-lane Divided	869+00.000	869+70.000	70.00	0.0133	2018-2022: 4,900	12.00	12.00	8.00	8.00	11.50	Non-Traversable Median	11.50	false	false		
88	Rural Multi-Lane Segment Four-lane Divided	869+70.000	870+20.000	50.00	0.0095	2018-2022: 4,900	12.00	12.00	8.00	8.00	17.50	Non-Traversable Median	17.50	false	false		
89	Rural Multi-Lane Segment Four-lane Divided	870+20.000	881+80.000	1,160.00	0.2197	2018-2022: 4,900	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
90	Rural Multi-Lane Segment Four-lane Divided	881+80.000	882+31.000	51.00	0.0097	2018-2022: 4,900	12.00	12.00	8.00	8.00	17.45	Non-Traversable Median	17.45	false	false		
91	Rural Multi-Lane Segment Four-lane Divided	882+31.000	883+00.000	69.00	0.0131	2018-2022: 4,900	12.00	12.00	8.00	8.00	11.45	Non-Traversable Median	11.45	false	false		
92	Rural Multi-Lane Segment Four-lane Divided	883+00.000	887+90.000	490.00	0.0928	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
93	Rural Multi-Lane Segment Four-lane Divided	887+90.000	888+20.000	30.00	0.0057	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
94	Rural Multi-Lane Segment Four-lane Undivided	888+20.000	889+30.000	110.00	0.0208	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
95	Rural Multi-Lane Segment Four-lane Divided	889+30.000	889+50.000	20.00	0.0038	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
96	Rural Multi-Lane Segment Four-lane Divided	889+50.000	894+50.000	500.00	0.0947	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
97	Rural Multi-Lane Segment Four-lane Divided	894+50.000	895+15.000	65.00	0.0123	2018-2022: 4,900	12.00	12.00	8.00	8.00	11.55	Non-Traversable Median	11.55	false	false		
98	Rural Multi-Lane Segment Four-lane Divided	895+15.000	895+60.000	45.00	0.0085	2018-2022: 4,900	12.00	12.00	8.00	8.00	17.55	Non-Traversable Median	17.55	false	false		
99	Rural Multi-Lane Segment Four-lane Divided	895+60.000	898+00.000	240.00	0.0455	2018-2022: 4,900	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
100	Rural Multi-Lane Segment Four-lane Divided	898+00.000	906+70.000	870.00	0.1648	2018-2022: 4,900	11.50	11.50	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
101	Rural Multi-Lane Segment Four-lane Divided	906+70.000	907+21.000	51.00	0.0097	2018-2022: 4,900	11.50	11.50	8.00	8.00	17.45	Non-Traversable Median	17.45	false	false		
102	Rural Multi-Lane Segment Four-lane Divided	907+21.000	907+80.000	59.00	0.0112	2018-2022: 4,900	11.50	11.50	8.00	8.00	11.95	Non-Traversable Median	11.95	false	false		
103	Rural Multi-Lane Segment Four-lane Divided	907+80.000	907+90.000	10.00	0.0019	2018-2022: 4,900	11.50	11.50	8.00	8.00	8.50	Non-Traversable Median	19.50	false	false		
104	Rural Multi-Lane Segment Four-lane Divided	907+90.000	913+70.000	580.00	0.1098	2018-2022: 4,900	11.50	11.50	8.00	8.00	8.00	Non-Traversable Median	19.00	false	false		
105	Rural Multi-Lane Segment Four-lane Divided	913+70.000	914+00.000	30.00	0.0057	2018-2022: 4,900	11.50	11.50	8.00	8.00	8.00	Traversable Median	19.00	false	false		
106	Rural Multi-Lane Segment Four-lane Divided	914+00.000	914+30.000	30.00	0.0057	2018-2022: 4,900	11.50	11.50	8.00	8.00	8.00	Traversable Median	19.00	false	false		
107	Rural Multi-Lane Segment Four-lane Undivided	914+30.000	914+40.000	10.00	0.0019	2018-2022: 4,900	11.50	11.50	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
108	Rural Multi-Lane Segment Four-lane Undivided	914+40.000	915+40.000	100.00	0.0189	2018-2022: 4,900	11.50	11.50	0.00	0.00	0.00	None	0.00	false	false	0:1	0:1
109	Rural Multi-Lane Segment Four-lane Divided	915+40.000	916+00.000	60.00	0.0114	2018-2022: 4,900	11.50	11.50	8.00	8.00	8.00	Traversable Median	19.00	false	false		
110	Rural Multi-Lane Segment Four-lane Divided	916+00.000	921+00.000	500.00	0.0947	2018-2022: 4,900	11.50	11.50	8.00	8.00	8.00	Non-Traversable Median	19.00	false	false		
111	Rural Multi-Lane Segment Four-lane Divided	921+00.000	921+90.000	90.00	0.0170	2018-2022: 4,900	11.50	11.50	8.00	8.00	8.00	Non-Traversable Median	19.00	false	false		
112	Rural Multi-Lane Segment Four-lane Divided	921+90.000	922+00.000	10.00	0.0019	2018-2022: 4,900	11.50	11.50	8.00	8.00	8.00	Non-Traversable Median	8.00	false	false		
113	Rural Multi-Lane Segment Four-lane Divided	922+00.000	922+59.000	59.00	0.0112	2018-2022: 4,900	11.50	11.50	8.00	8.00	11.54	Non-Traversable Median	11.54	false	false		
114	Rural Multi-Lane Segment Four-lane Divided	922+59.000	923+00.000	41.00	0.0078	2018-2022: 4,900	11.50	11.50	8.00	8.00	17.54	Non-Traversable Median	17.54	false	false		
115	Rural Multi-Lane Segment Four-lane Divided	923+00.000	941+70.000	1,870.00	0.3542	2018-2022: 4,900	11.50	11.50	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
116	Rural Multi-Lane Segment Four-lane Divided	941+70.000	948+50.000	680.00	0.1288	2018-2022: 4,900	11.50	11.50	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		

Table 5. Evaluation Intersection (Section 3)

Inter. No.	Title	Type	Location (Sta. ft)	Major AADT	Minor AADT	Legs	Traffic Control	Major road approaches w/Left Turn Lanes	Major road approaches w/Right Turn Lanes	Skew1	Skew2	Lighted at Night
1	I90EBRamp_S466th_SD38 (v1)	Rural Multi-Lane Intersection Four-Legged w/STOP control	699+20.000	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	2025: 630; 2026: 644; 2027: 657; 2028: 671; 2029: 685; 2030: 700; 2031: 716; 2032: 732; 2033: 748; 2034: 764; 2035: 780; 2036: 796; 2037: 812; 2038: 828; 2039: 844; 2040: 860; 2041: 1,166; 2042: 1,473; 2043: 1,779; 2044: 2,086; 2045: 2,392; 2046: 2,699; 2047: 3,005; 2048: 3,312; 2049: 3,618; 2050: 3,925	4	Stop-Controlled	1	0	4.64	4.27	false
2	SD38/260th_St (v1)	Rural Multi-Lane Intersection Four-Legged w/STOP control	605+70.000	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	2025: 1,508; 2026: 1,706; 2027: 1,904; 2028: 2,102; 2029: 2,300; 2030: 2,472; 2031: 2,645; 2032: 2,818; 2033: 2,990; 2034: 3,163; 2035: 3,336; 2036: 3,509; 2037: 3,681; 2038: 3,854; 2039: 4,027; 2040: 4,200; 2041: 4,260; 2042: 4,320; 2043: 4,380; 2044: 4,440; 2045: 4,500; 2046: 4,560; 2047: 4,620; 2048: 4,680; 2049: 4,740; 2050: 4,800	4	Stop-Controlled	2	1	16.83	13.71	false
3	466thN/SD38 (v1)	Rural Multi-Lane Intersection Three-Legged w/STOP control	676+50.000	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	2025: 118; 2026: 121; 2027: 124; 2028: 127; 2029: 130; 2030: 133; 2031: 136; 2032: 139; 2033: 142; 2034: 145; 2035: 149; 2036: 152; 2037: 155; 2038: 158; 2039: 161; 2040: 165; 2041: 168; 2042: 172; 2043: 175; 2044: 179; 2045: 182; 2046: 186; 2047: 189; 2048: 193; 2049: 196; 2050: 200	3	Stop-Controlled	0	0	6.61		false

Table 6. Evaluation Intersection (Section 3)

Inter. No.	Title	Type	Location (Sta. ft)	Major AADT	Minor AADT	Legs	Traffic Control	Major road approaches w/Left Turn Lanes	Major road approaches w/Right Turn Lanes	Skew1	Skew2	Lighted at Night
5	468th Ave (v1)	Rural Multi-Lane Intersection Four-Legged w/STOP control	809+00.000	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	2025: 667; 2026: 682; 2027: 696; 2028: 710; 2029: 725; 2030: 741; 2031: 758; 2032: 775; 2033: 792; 2034: 809; 2035: 825; 2036: 842; 2037: 859; 2038: 876; 2039: 893; 2040: 910; 2041: 1,052; 2042: 1,195; 2043: 1,337; 2044: 1,480; 2045: 1,622; 2046: 1,765; 2047: 1,907; 2048: 2,050; 2049: 2,192; 2050: 2,335	4	Stop-Controlled	1	0	0.00	0.00	false
6	SD38/Hwy 139 (v1)	Rural Multi-Lane Intersection Four-Legged w/STOP control	862+00.000	2025: 6,704; 2026: 7,305; 2027: 7,907; 2028: 8,508; 2029: 9,110; 2030: 9,295; 2031: 9,480; 2032: 9,666; 2033: 9,851; 2034: 10,037; 2035: 10,222; 2036: 10,408; 2037: 10,593; 2038: 10,779; 2039: 10,964; 2040: 11,150; 2041: 11,375; 2042: 11,600; 2043: 11,825; 2044: 12,050; 2045: 12,275; 2046: 12,500; 2047: 12,725; 2048: 12,950; 2049: 13,175; 2050: 13,400	2025: 2,990; 2026: 3,054; 2027: 3,117; 2028: 3,181; 2029: 3,245; 2030: 3,321; 2031: 3,397; 2032: 3,474; 2033: 3,550; 2034: 3,626; 2035: 3,703; 2036: 3,779; 2037: 3,855; 2038: 3,932; 2039: 4,008; 2040: 4,085; 2041: 4,178; 2042: 4,271; 2043: 4,364; 2044: 4,457; 2045: 4,550; 2046: 4,643; 2047: 4,736; 2048: 4,829; 2049: 4,922; 2050: 5,015	4	Stop-Controlled	1	0	0.00	0.00	false
7	LaMesa/SD 38 (v1)	Rural Multi-Lane Intersection Four-Legged w/STOP control	915+00.000	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	2025: 1,266; 2026: 1,293; 2027: 1,320; 2028: 1,347; 2029: 1,375; 2030: 1,407; 2031: 1,439; 2032: 1,471; 2033: 1,504; 2034: 1,536; 2035: 1,568; 2036: 1,725; 2037: 1,949; 2038: 2,172; 2039: 2,396; 2040: 2,620; 2041: 2,940; 2042: 3,261; 2043: 3,581; 2044: 3,902; 2045: 4,222; 2046: 4,543; 2047: 4,863; 2048: 5,184; 2049: 5,504; 2050: 5,825	4	Stop-Controlled	0	0	0.00	0.00	false

Table 7. Evaluation Ramp Terminal - Site (Section 3)

Inter. No.	Title	Type	Area Type	Legs	Location (Sta. ft)	Traffic Control	AADT
4	I90WB Ramps (v2)	Freeway Ramp Terminal A2 - Three-Leg at Two-Quadrant Parcel A	Rural	4	681+00.000	Stop-Controlled	Inside: 2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170; Outside: 2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170 :: Entrance: 2025: 856; 2026: 875; 2027: 893; 2028: 911; 2029: 930; 2030: 951; 2031: 973; 2032: 995; 2033: 1,017; 2034: 1,039; 2035: 1,060; 2036: 1,082; 2037: 1,104; 2038: 1,126; 2039: 1,148; 2040: 1,170; 2041: 1,339; 2042: 1,508; 2043: 1,677; 2044: 1,846; 2045: 2,015; 2046: 2,184; 2047: 2,353; 2048: 2,522; 2049: 2,691; 2050: 2,860

Table 8. Crash History Intersection (Section 3)

Inter. No.	Title	Type	Location (Sta. ft)	Major AADT	Minor AADT	Legs	Traffic Control	Major road approaches w/Left Turn Lanes	Major road approaches w/Right Turn Lanes	Skew1	Skew2	Lighted at Night
1	I90EBRamp_S466th_SD38 (v1)	Rural Multi-Lane Intersection Four-Legged w/STOP control	699+20.000	2018-2022: 4,150	2018-2022: 590	4	Stop-Controlled	1	0	4.64	4.27	false
2	SD38/260th_St (v1)	Rural Multi-Lane Intersection Four-Legged w/STOP control	605+70.000	2018-2022: 4,325	2018-2022: 915	4	Stop-Controlled	2	1	16.83	13.71	false
3	466thN/SD38 (v1)	Rural Multi-Lane Intersection Three-Legged w/STOP control	676+50.000	2018-2022: 4,325	2018-2022: 110	3	Stop-Controlled	0	0	6.61		false

Table 9. Crash History Intersection (Section 3)

Inter. No.	Title	Type	Location (Sta. ft)	Major AADT	Minor AADT	Legs	Traffic Control	Major road approaches w/Left Turn Lanes	Major road approaches w/Right Turn Lanes	Skew1	Skew2	Lighted at Night
5	468th Ave (v1)	Rural Multi-Lane Intersection Four-Legged w/STOP control	809+00.000	2018-2022: 4,900	2018-2022: 625	4	Stop-Controlled	1	0	0.00	0.00	false
6	SD38/Hwy139 (v1)	Rural Multi-Lane Intersection Four-Legged w/STOP control	862+00.000	2018-2022: 4,900	2018-2022: 2,800	4	Stop-Controlled	1	0	0.00	0.00	false
7	LaMesa/SD38 (v1)	Rural Multi-Lane Intersection Four-Legged w/STOP control	915+00.000	2018-2022: 4,900	2018-2022: 1,185	4	Stop-Controlled	0	0	0.00	0.00	false

Table 10. Crash Highway Ramp Terminal - Site (Highway with Crash History)

Inter. No.	Title	Type	Area Type	Legs	Location (Sta. ft)	Traffic Control	AADT
4	190WB Ramps (v2)	Freeway Ramp Terminal A2 - Three-Leg at Two-Quadrant Parclo A	Rural	4	681+00.000	Stop-Controlled	Inside: 2018-2022: 4,150; Outside: 2018-2022: 4,150 :: Entrance: 2018-2022: 802

Table 11. Expected Highway Crash Rates and Frequencies Summary (Section 3)

First Year of Analysis	2025
Last Year of Analysis	2050
Evaluated Length (mi)	6.8845
Average Future Road AADT (vpd)	10,372
Expected Crashes	
Total Crashes	621.51
Fatal and Injury Crashes	327.86
Fatal and Serious Injury Crashes	204.46
Property-Damage-Only Crashes	293.65
Percent of Total Expected Crashes	
Percent Fatal and Injury Crashes (%)	53
Percent Fatal and Serious Injury Crashes (%)	33
Percent Property-Damage-Only Crashes (%)	47
Expected Crash Rate	
Crash Rate (crashes/mi/yr)	3.4722
FI Crash Rate (crashes/mi/yr)	1.8316
FI no/C Crash Rate (crashes/mi/yr)	1.1422
PDO Crash Rate (crashes/mi/yr)	1.6405
Expected Travel Crash Rate	
Total Travel (million veh-mi)	677.62
Travel Crash Rate (crashes/million veh-mi)	0.92
Travel FI Crash Rate (crashes/million veh-mi)	0.48
Travel FI no/C Crash Rate (crashes/million veh-mi)	0.30
Travel PDO Crash Rate (crashes/million veh-mi)	0.43

Table 12. Expected Crash Frequencies and Rates by Highway Segment/Intersection (Section 3)

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected FI no/C Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted FI no/C Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) FI no/C Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/million veh-mi)	Expected Intersection Travel Crash Rate (crashes/million veh)
1	585+00.000	594+84.940	0.1865	12.419	12.987	0.4777	0.3553	0.2214	0.1223	0.4995	0.2945	0.1563	0.2050	-0.0218	0.0608	0.0652	-0.0826	2.5607	0.59	
2	594+84.940	600+00.000	0.0975	3.241	6.791	0.1246	0.0755	0.0471	0.0491	0.2612	0.1540	0.0817	0.1072	-0.1366	-0.0785	-0.0347	-0.0581	1.2777	0.29	
3	600+00.000	601+00.000	0.0189	0.912	1.911	0.0351	0.0212	0.0132	0.0138	0.0735	0.0433	0.0230	0.0302	-0.0384	-0.0221	-0.0098	-0.0163	1.8518	0.42	
4	601+00.000	602+00.000	0.0189	0.912	1.911	0.0351	0.0212	0.0132	0.0138	0.0735	0.0433	0.0230	0.0302	-0.0384	-0.0221	-0.0098	-0.0163	1.8518	0.42	
5	602+00.000	605+00.000	0.0568	15.348	7.486	0.5903	0.1555	0.0969	0.4348	0.2879	0.1665	0.0852	0.1214	0.3024	-0.0110	0.0117	0.3134	10.3895	1.90	
6	605+00.000	605+60.000	0.0114	0.743	1.629	0.0286	0.0173	0.0108	0.0113	0.0627	0.0362	0.0185	0.0264	-0.0341	-0.0190	-0.0078	-0.0151	2.5153	0.46	
7	605+60.000	605+70.000	0.0019	0.119	0.249	0.0046	0.0028	0.0017	0.0018	0.0096	0.0056	0.0028	0.0040	-0.0050	-0.0028	-0.0011	-0.0022	2.4181	0.44	
SD38/260th_St (v1)	605+70.000			35.375	96.924	1.3606	0.5456	0.3469	0.8150	3.7279	1.7583	0.8841	1.9696	-2.3673	-1.2127	-0.5372	-1.1546			0.20
8	605+70.000	605+75.000	0.0009	0.059	0.125	0.0023	0.0014	0.0009	0.0009	0.0048	0.0028	0.0014	0.0020	-0.0025	-0.0014	-0.0006	-0.0011	2.4181	0.44	
9	605+75.000	609+00.000	0.0616	15.646	8.110	0.6018	0.5117	0.3188	0.0901	0.3119	0.1804	0.0923	0.1315	0.2898	0.3313	0.2266	-0.0415	9.7763	1.79	
10	609+00.000	609+21.930	0.0042	12.037	0.547	0.4630	0.0149	0.0093	0.4480	0.0210	0.0122	0.0062	0.0089	0.4419	0.0028	0.0031	0.4392	111.4663	20.38	
11	609+21.930	611+40.000	0.0413	2.597	5.442	0.0999	0.0605	0.0377	0.0394	0.2093	0.1210	0.0619	0.0883	-0.1094	-0.0605	-0.0242	-0.0489	2.4181	0.44	
12	611+40.000	612+50.000	0.0208	1.310	2.745	0.0504	0.0305	0.0190	0.0199	0.1056	0.0611	0.0312	0.0445	-0.0552	-0.0305	-0.0122	-0.0247	2.4181	0.44	
13	612+50.000	624+64.530	0.2300	18.104	20.912	0.6963	0.3194	0.1990	0.3770	0.8043	0.4651	0.2379	0.3391	-0.1080	-0.1458	-0.0389	0.0378	3.0271	0.55	
14	624+64.530	636+92.820	0.2326	10.091	21.149	0.3881	0.2351	0.1465	0.1530	0.8134	0.4704	0.2406	0.3430	-0.4253	-0.2353	-0.0941	-0.1900	1.6685	0.30	
15	636+92.820	639+00.000	0.0392	1.702	3.567	0.0655	0.0397	0.0247	0.0258	0.1372	0.0793	0.0406	0.0579	-0.0717	-0.0397	-0.0159	-0.0320	1.6685	0.30	
16	639+00.000	640+00.000	0.0189	1.282	2.935	0.0493	0.0297	0.0185	0.0196	0.1129	0.0653	0.0334	0.0476	-0.0636	-0.0356	-0.0149	-0.0280	2.6043	0.48	
17	640+00.000	647+26.050	0.1375	14.091	12.501	0.5419	0.2136	0.1331	0.3283	0.4808	0.2781	0.1422	0.2027	0.0611	-0.0644	-0.0091	0.1256	3.9411	0.72	
18	647+26.050	667+80.000	0.3890	33.126	35.365	1.2741	0.5595	0.3486	0.7146	1.3602	0.7866	0.4024	0.5735	-0.0861	-0.2271	-0.0538	0.1410	3.2752	0.60	
19	667+80.000	668+80.000	0.0189	0.855	1.874	0.0329	0.0198	0.0124	0.0130	0.0721	0.0417	0.0213	0.0304	-0.0392	-0.0218	-0.0090	-0.0174	1.7355	0.32	
20	668+80.000	672+86.110	0.0769	3.337	6.992	0.1283	0.0777	0.0484	0.0506	0.2689	0.1555	0.0796	0.1134	-0.1406	-0.0778	-0.0311	-0.0628	1.6685	0.30	
21	672+86.110	676+00.000	0.0594	18.830	5.404	0.7242	0.6591	0.4107	0.0651	0.2079	0.1202	0.0615	0.0877	0.5164	0.5389	0.3492	-0.0225	12.1822	2.23	
22	676+00.000	677+50.000	0.0284	18.186	2.810	0.6995	0.6651	0.4144	0.0344	0.1081	0.0625	0.0320	0.0456	0.5914	0.6025	0.3824	-0.0112	24.6213	4.50	
466thN/SD38 (v1)	676+50.000			22.161	36.857	0.8523	0.4087	0.2971	0.4437	1.4176	0.6242	0.3958	0.7934	-0.5652	-0.2155	-0.0987	-0.3497			0.15
23	677+50.000	679+00.000	0.0284	25.609	2.583	0.9849	0.4193	0.2613	0.5656	0.0993	0.0574	0.0294	0.0419	0.8856	0.3619	0.2319	0.5238	34.6702	6.34	
24	679+00.000	680+80.000	0.0341	0.911	1.863	0.0351	0.0213	0.0134	0.0137	0.0716	0.0429	0.0235	0.0287	-0.0366	-0.0216	-0.0101	-0.0150	1.0282	0.29	
25	680+80.000	680+90.000	0.0019	0.053	0.113	0.0020	0.0012	0.0008	0.0008	0.0043	0.0026	0.0014	0.0017	-0.0023	-0.0014	-0.0006	-0.0009	1.0706	0.30	
26	680+90.000	682+20.000	0.0246	0.993	2.121	0.0382	0.0232	0.0145	0.0150	0.0816	0.0489	0.0267	0.0327	-0.0434	-0.0257	-0.0122	-0.0177	1.5517	0.44	
190WB Ramps (v2)	681+00.000			20.225	15.236	0.7779	0.4251		0.3528	0.5860	0.1969		0.3891	0.1919	0.2282		-0.0363			0.20
27	682+20.000	683+82.710	0.0308	0.824	1.684	0.0317	0.0193	0.0121	0.0124	0.0648	0.0388	0.0212	0.0260	-0.0331	-0.0195	-0.0091	-0.0136	1.0282	0.29	
28	683+82.710	691+50.000	0.1453	3.885	7.940	0.1494	0.0909	0.0570	0.0585	0.3054	0.1830	0.1001	0.1224	-0.1560	-0.0920	-0.0431	-0.0639	1.0282	0.29	
29	691+50.000	692+70.000	0.0227	0.608	1.242	0.0234	0.0142	0.0089	0.0091	0.0478	0.0286	0.0157	0.0191	-0.0244	-0.0144	-0.0067	-0.0100	1.0282	0.29	
30	692+70.000	693+85.010	0.0218	0.582	1.190	0.0224	0.0136	0.0085	0.0088	0.0458	0.0274	0.0150	0.0183	-0.0234	-0.0138	-0.0065	-0.0096	1.0282	0.29	
31	693+85.010	698+70.000	0.0919	2.456	5.019	0.0944	0.0575	0.0360	0.0370	0.1930	0.1156	0.0633	0.0774	-0.0986	-0.0582	-0.0272	-0.0404	1.0282	0.29	
32	698+70.000	699+00.000	0.0057	0.158	0.338	0.0061	0.0037	0.0023	0.0024	0.0130	0.0078	0.0043	0.0052	-0.0069	-0.0041	-0.0019	-0.0028	1.0706	0.30	
33	699+00.000	699+20.000	0.0038	0.109	0.243	0.0042	0.0025	0.0016	0.0017	0.0094	0.0056	0.0031	0.0038	-0.0052	-0.0031	-0.0015	-0.0021	1.1096	0.31	
190EBRamp_S466th_SD38 (v1)	699+20.000			20.777	59.524	0.7991	0.3462	0.2319	0.4529	2.2894	1.2112	0.6869	1.0782	-1.4903	-0.8649	-0.4550	-0.6253			0.20
34	699+20.000	700+40.000	0.0227	0.950	2.117	0.0365	0.0221	0.0139	0.0145	0.0814	0.0488	0.0267	0.0326	-0.0449	-0.0267	-0.0128	-0.0182	1.6081	0.45	
35	700+40.000	700+50.000	0.0019	0.056	0.111	0.0022	0.0012	0.0008	0.0010	0.0043	0.0022	0.0014	0.0020	-0.0021	-0.0010	-0.0006	-0.0011	1.1385	0.32	

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected FI no/C Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted FI no/C Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) FI no/C Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/million veh-mi)	Expected Intersection Travel Crash Rate (crashes/million veh)
36	700+50.000	701+10.000	0.0114	0.323	0.615	0.0124	0.0069	0.0048	0.0055	0.0237	0.0124	0.0079	0.0113	-0.0112	-0.0054	-0.0032	-0.0058	1.0929	0.31	
37	701+10.000	702+00.000	0.0170	0.474	0.887	0.0182	0.0102	0.0070	0.0081	0.0341	0.0178	0.0115	0.0163	-0.0159	-0.0077	-0.0044	-0.0082	1.0704	0.30	
38	702+00.000	702+50.000	0.0095	0.199	0.404	0.0076	0.0042	0.0029	0.0034	0.0155	0.0083	0.0054	0.0073	-0.0079	-0.0041	-0.0025	-0.0038	0.8065	0.27	
39	702+50.000	707+00.000	0.0852	1.712	3.338	0.0658	0.0362	0.0247	0.0296	0.1284	0.0683	0.0447	0.0601	-0.0625	-0.0321	-0.0200	-0.0305	0.7724	0.26	
40	707+00.000	708+00.000	0.0189	0.380	0.742	0.0146	0.0080	0.0055	0.0066	0.0285	0.0152	0.0099	0.0134	-0.0139	-0.0071	-0.0044	-0.0068	0.7724	0.26	
41	708+00.000	708+80.000	0.0152	0.304	0.593	0.0117	0.0064	0.0044	0.0053	0.0228	0.0121	0.0079	0.0107	-0.0111	-0.0057	-0.0035	-0.0054	0.7724	0.26	
42	708+80.000	709+00.000	0.0038	0.077	0.151	0.0030	0.0016	0.0011	0.0013	0.0058	0.0031	0.0020	0.0027	-0.0029	-0.0015	-0.0009	-0.0014	0.7802	0.27	
43	709+00.000	710+30.000	0.0246	0.687	1.558	0.0264	0.0158	0.0096	0.0106	0.0599	0.0365	0.0206	0.0234	-0.0335	-0.0207	-0.0110	-0.0128	1.0727	0.36	
44	710+30.000	710+47.850	0.0034	0.068	0.132	0.0026	0.0014	0.0010	0.0012	0.0051	0.0027	0.0018	0.0024	-0.0025	-0.0013	-0.0008	-0.0012	0.7724	0.26	
45	710+47.850	725+00.000	0.2750	18.323	10.771	0.7047	0.3140	0.2144	0.3907	0.4143	0.2203	0.1442	0.1939	0.2905	0.0937	0.0702	0.1968	2.5624	0.87	
46	725+00.000	727+52.350	0.0478	0.960	1.872	0.0369	0.0203	0.0139	0.0166	0.0720	0.0383	0.0251	0.0337	-0.0351	-0.0180	-0.0112	-0.0171	0.7724	0.26	
47	727+52.350	735+00.000	0.1416	2.844	5.545	0.1094	0.0602	0.0411	0.0492	0.2133	0.1134	0.0742	0.0998	-0.1039	-0.0533	-0.0332	-0.0506	0.7724	0.26	
48	735+00.000	755+50.000	0.3883	7.797	15.205	0.2999	0.1650	0.1126	0.1349	0.5848	0.3111	0.2035	0.2737	-0.2849	-0.1461	-0.0909	-0.1388	0.7724	0.26	
49	755+50.000	756+90.000	0.0265	0.740	1.678	0.0284	0.0170	0.0104	0.0114	0.0645	0.0393	0.0222	0.0252	-0.0361	-0.0223	-0.0118	-0.0138	1.0727	0.36	
50	756+90.000	757+00.000	0.0019	0.038	0.076	0.0015	0.0008	0.0006	0.0007	0.0029	0.0015	0.0010	0.0014	-0.0014	-0.0007	-0.0005	-0.0007	0.7802	0.27	
51	757+00.000	763+30.000	0.1193	2.396	4.673	0.0922	0.0507	0.0346	0.0415	0.1797	0.0956	0.0626	0.0841	-0.0876	-0.0449	-0.0279	-0.0427	0.7724	0.26	
52	763+30.000	764+00.000	0.0133	0.266	0.519	0.0102	0.0056	0.0038	0.0046	0.0200	0.0106	0.0070	0.0093	-0.0097	-0.0050	-0.0031	-0.0047	0.7724	0.26	
53	764+00.000	764+50.000	0.0095	0.190	0.371	0.0073	0.0040	0.0027	0.0033	0.0143	0.0076	0.0050	0.0067	-0.0069	-0.0036	-0.0022	-0.0034	0.7724	0.26	
54	764+50.000	765+52.550	0.0194	0.390	0.761	0.0150	0.0083	0.0056	0.0067	0.0293	0.0156	0.0102	0.0137	-0.0143	-0.0073	-0.0045	-0.0069	0.7724	0.26	
55	765+52.550	777+80.000	0.2325	8.935	9.104	0.3437	0.1340	0.0915	0.2097	0.3502	0.1862	0.1219	0.1639	-0.0065	-0.0523	-0.0304	0.0458	1.4783	0.50	
56	777+80.000	778+80.000	0.0189	0.528	1.198	0.0203	0.0121	0.0074	0.0082	0.0461	0.0281	0.0159	0.0180	-0.0258	-0.0159	-0.0084	-0.0098	1.0727	0.36	
57	778+80.000	779+00.000	0.0038	0.077	0.151	0.0030	0.0016	0.0011	0.0013	0.0058	0.0031	0.0020	0.0027	-0.0029	-0.0015	-0.0009	-0.0014	0.7802	0.27	
58	779+00.000	780+45.930	0.0276	0.555	1.082	0.0213	0.0117	0.0080	0.0096	0.0416	0.0221	0.0145	0.0195	-0.0203	-0.0104	-0.0065	-0.0099	0.7724	0.26	
59	780+45.930	785+40.000	0.0936	1.879	3.664	0.0723	0.0398	0.0271	0.0325	0.1409	0.0750	0.0491	0.0660	-0.0687	-0.0352	-0.0219	-0.0335	0.7724	0.26	
60	785+40.000	785+50.000	0.0019	0.038	0.074	0.0015	0.0008	0.0005	0.0007	0.0029	0.0015	0.0010	0.0013	-0.0014	-0.0007	-0.0004	-0.0007	0.7724	0.26	
61	785+50.000	786+09.000	0.0112	0.224	0.438	0.0086	0.0047	0.0032	0.0039	0.0168	0.0090	0.0059	0.0079	-0.0082	-0.0042	-0.0026	-0.0040	0.7724	0.26	
62	786+09.000	786+50.000	0.0078	0.156	0.304	0.0060	0.0033	0.0023	0.0027	0.0117	0.0062	0.0041	0.0055	-0.0057	-0.0029	-0.0018	-0.0028	0.7724	0.26	
63	786+50.000	801+10.000	0.2765	14.086	10.829	0.5418	0.2903	0.1982	0.2515	0.4165	0.2215	0.1450	0.1950	0.1253	0.0688	0.0532	0.0565	1.9593	0.67	
64	801+10.000	801+61.000	0.0097	0.194	0.378	0.0075	0.0041	0.0028	0.0034	0.0145	0.0077	0.0051	0.0068	-0.0071	-0.0036	-0.0023	-0.0035	0.7724	0.26	
65	801+61.000	802+30.000	0.0131	4.529	0.512	0.1742	0.1653	0.1128	0.0089	0.0197	0.0105	0.0069	0.0092	0.1545	0.1548	0.1060	-0.0003	13.3297	4.54	
66	802+30.000	802+40.000	0.0019	0.038	0.074	0.0015	0.0008	0.0005	0.0007	0.0029	0.0015	0.0010	0.0013	-0.0014	-0.0007	-0.0004	-0.0007	0.7724	0.26	
67	802+40.000	808+30.000	0.1117	2.244	4.376	0.0863	0.0475	0.0324	0.0388	0.1683	0.0895	0.0586	0.0788	-0.0820	-0.0420	-0.0262	-0.0400	0.7724	0.26	
68	808+30.000	808+80.000	0.0095	0.192	0.378	0.0074	0.0041	0.0028	0.0033	0.0145	0.0077	0.0051	0.0068	-0.0072	-0.0037	-0.0023	-0.0035	0.7802	0.27	
69	808+80.000	809+00.000	0.0038	0.106	0.240	0.0041	0.0024	0.0015	0.0016	0.0092	0.0056	0.0032	0.0036	-0.0052	-0.0032	-0.0017	-0.0020	1.0727	0.36	
468th Ave (v1)	809+00.000			30.877	45.501	1.1876	0.7630	0.5027	0.4246	1.7500	0.8386	0.4933	0.9115	-0.5624	-0.0756	0.0094	-0.4869			0.35
70	809+00.000	809+60.000	0.0114	0.400	0.998	0.0154	0.0091	0.0056	0.0063	0.0384	0.0231	0.0128	0.0153	-0.0230	-0.0140	-0.0072	-0.0090	1.3553	0.40	
71	809+60.000	810+00.000	0.0076	0.193	0.414	0.0074	0.0041	0.0028	0.0033	0.0159	0.0084	0.0054	0.0076	-0.0085	-0.0043	-0.0026	-0.0042	0.9798	0.29	
72	810+00.000	810+20.000	0.0038	0.089	0.175	0.0034	0.0019	0.0013	0.0015	0.0067	0.0035	0.0023	0.0032	-0.0033	-0.0017	-0.0010	-0.0017	0.9039	0.27	
73	810+20.000	816+00.000	0.1098	7.498	4.984	0.2884	0.0848	0.0579	0.2036	0.1917	0.1006	0.0651	0.0910	0.0967	-0.0158	-0.0071	0.1125	2.6254	0.78	
74	816+00.000	816+70.000	0.0133	0.308	0.602	0.0119	0.0065	0.0045	0.0053	0.0231	0.0121	0.0079	0.0110	-0.0113	-0.0056	-0.0034	-0.0057	0.8948	0.27	
75	816+70.000	817+20.000	0.0095	0.220	0.430	0.0085	0.0047	0.0032	0.0038	0.0165	0.0087	0.0056	0.0078	-0.0081	-0.0040	-0.0024	-0.0040	0.8948	0.27	

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected FI no/C Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted FI no/C Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) FI no/C Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/million veh-mi)	Expected Intersection Travel Crash Rate (crashes/million veh)
76	817+20.000	853+70.000	0.6913	40.796	31.361	1.5691	0.9058	0.6183	0.6633	1.2062	0.6332	0.4094	0.5730	0.3629	0.2725	0.2089	0.0903	2.2698	0.67	
77	853+70.000	854+00.000	0.0057	0.132	0.258	0.0051	0.0028	0.0019	0.0023	0.0099	0.0052	0.0034	0.0047	-0.0048	-0.0024	-0.0015	-0.0024	0.8948	0.27	
78	854+00.000	854+16.000	0.0030	0.070	0.138	0.0027	0.0015	0.0010	0.0012	0.0053	0.0028	0.0018	0.0025	-0.0026	-0.0013	-0.0008	-0.0013	0.8948	0.27	
79	854+16.000	854+80.000	0.0121	0.282	0.550	0.0108	0.0060	0.0041	0.0049	0.0211	0.0111	0.0072	0.0100	-0.0103	-0.0051	-0.0031	-0.0052	0.8948	0.27	
80	854+80.000	860+90.000	0.1155	2.688	5.241	0.1034	0.0569	0.0388	0.0465	0.2016	0.1058	0.0684	0.0958	-0.0982	-0.0490	-0.0296	-0.0493	0.8948	0.27	
81	860+90.000	861+85.000	0.0180	0.423	0.833	0.0163	0.0089	0.0061	0.0073	0.0320	0.0168	0.0109	0.0152	-0.0158	-0.0079	-0.0048	-0.0079	0.9039	0.27	
82	861+85.000	862+00.000	0.0028	0.097	0.231	0.0037	0.0022	0.0014	0.0015	0.0089	0.0053	0.0030	0.0035	-0.0051	-0.0031	-0.0016	-0.0020	1.3127	0.39	
SD38/Hwy139 (v1)	862+00.000			37.280	89.593	1.4338	0.6694	0.3723	0.7644	3.4459	1.8214	0.9272	1.6245	-2.0120	-1.1520	-0.5549	-0.8600			0.28
83	862+00.000	862+50.000	0.0095	0.379	0.903	0.0146	0.0087	0.0053	0.0059	0.0347	0.0207	0.0112	0.0141	-0.0201	-0.0120	-0.0059	-0.0082	1.5407	0.40	
84	862+50.000	862+60.000	0.0019	0.073	0.166	0.0028	0.0017	0.0010	0.0011	0.0064	0.0038	0.0021	0.0026	-0.0036	-0.0021	-0.0010	-0.0015	1.4857	0.38	
85	862+60.000	863+10.000	0.0095	0.257	0.505	0.0099	0.0054	0.0037	0.0044	0.0194	0.0101	0.0064	0.0094	-0.0096	-0.0046	-0.0027	-0.0049	1.0426	0.27	
86	863+10.000	869+00.000	0.1117	8.700	5.848	0.3346	0.0992	0.0677	0.2354	0.2249	0.1166	0.0745	0.1083	0.1097	-0.0174	-0.0068	0.1271	2.9945	0.77	
87	869+00.000	869+70.000	0.0133	0.356	0.694	0.0137	0.0075	0.0051	0.0062	0.0267	0.0138	0.0088	0.0128	-0.0130	-0.0063	-0.0037	-0.0067	1.0321	0.27	
88	869+70.000	870+20.000	0.0095	0.254	0.495	0.0098	0.0054	0.0037	0.0044	0.0191	0.0099	0.0063	0.0092	-0.0093	-0.0045	-0.0026	-0.0048	1.0321	0.27	
89	870+20.000	881+80.000	0.2197	11.597	11.497	0.4460	0.3089	0.2109	0.1371	0.4422	0.2293	0.1465	0.2129	0.0039	0.0796	0.0644	-0.0758	2.0302	0.52	
90	881+80.000	882+31.000	0.0097	0.259	0.505	0.0100	0.0055	0.0037	0.0045	0.0194	0.0101	0.0064	0.0094	-0.0095	-0.0046	-0.0027	-0.0049	1.0321	0.27	
91	882+31.000	883+00.000	0.0131	0.351	0.684	0.0135	0.0074	0.0051	0.0061	0.0263	0.0136	0.0087	0.0127	-0.0128	-0.0062	-0.0037	-0.0066	1.0321	0.27	
92	883+00.000	887+90.000	0.0928	8.192	4.856	0.3151	0.2475	0.1689	0.0676	0.1868	0.0968	0.0619	0.0899	0.1283	0.1506	0.1070	-0.0223	3.3950	0.88	
93	887+90.000	888+20.000	0.0057	0.154	0.303	0.0059	0.0033	0.0022	0.0027	0.0117	0.0060	0.0039	0.0056	-0.0057	-0.0028	-0.0016	-0.0030	1.0426	0.27	
94	888+20.000	889+30.000	0.0208	0.805	1.826	0.0310	0.0185	0.0113	0.0124	0.0702	0.0418	0.0226	0.0284	-0.0393	-0.0233	-0.0113	-0.0160	1.4857	0.38	
95	889+30.000	889+50.000	0.0038	0.103	0.202	0.0039	0.0022	0.0015	0.0018	0.0078	0.0040	0.0026	0.0037	-0.0038	-0.0019	-0.0011	-0.0020	1.0426	0.27	
96	889+50.000	894+50.000	0.0947	2.541	4.955	0.0977	0.0538	0.0367	0.0440	0.1906	0.0988	0.0632	0.0918	-0.0929	-0.0451	-0.0265	-0.0478	1.0321	0.27	
97	894+50.000	895+15.000	0.0123	0.330	0.644	0.0127	0.0070	0.0048	0.0057	0.0248	0.0128	0.0082	0.0119	-0.0121	-0.0059	-0.0034	-0.0062	1.0321	0.27	
98	895+15.000	895+60.000	0.0085	0.229	0.446	0.0088	0.0048	0.0033	0.0040	0.0172	0.0089	0.0057	0.0083	-0.0084	-0.0041	-0.0024	-0.0043	1.0321	0.27	
99	895+60.000	898+00.000	0.0455	1.220	2.379	0.0469	0.0258	0.0176	0.0211	0.0915	0.0474	0.0303	0.0441	-0.0446	-0.0216	-0.0127	-0.0229	1.0321	0.27	
100	898+00.000	906+70.000	0.1648	4.439	8.687	0.1707	0.0939	0.0641	0.0768	0.3341	0.1732	0.1107	0.1609	-0.1634	-0.0793	-0.0466	-0.0841	1.0361	0.27	
101	906+70.000	907+21.000	0.0097	0.260	0.509	0.0100	0.0055	0.0038	0.0045	0.0196	0.0102	0.0065	0.0094	-0.0096	-0.0047	-0.0027	-0.0049	1.0361	0.27	
102	907+21.000	907+80.000	0.0112	0.301	0.589	0.0116	0.0064	0.0043	0.0052	0.0227	0.0117	0.0075	0.0109	-0.0111	-0.0054	-0.0032	-0.0057	1.0361	0.27	
103	907+80.000	907+90.000	0.0019	0.051	0.100	0.0020	0.0011	0.0007	0.0009	0.0038	0.0020	0.0013	0.0018	-0.0019	-0.0009	-0.0005	-0.0010	1.0361	0.27	
104	907+90.000	913+70.000	0.1098	2.959	5.792	0.1138	0.0626	0.0427	0.0512	0.2227	0.1155	0.0738	0.1073	-0.1089	-0.0529	-0.0311	-0.0561	1.0361	0.27	
105	913+70.000	914+00.000	0.0057	0.155	0.306	0.0059	0.0033	0.0022	0.0027	0.0118	0.0061	0.0039	0.0057	-0.0058	-0.0028	-0.0017	-0.0030	1.0466	0.27	
106	914+00.000	914+30.000	0.0057	0.119	0.235	0.0046	0.0025	0.0017	0.0021	0.0090	0.0048	0.0031	0.0042	-0.0045	-0.0023	-0.0014	-0.0022	0.8058	0.27	
107	914+30.000	914+40.000	0.0019	0.055	0.124	0.0021	0.0013	0.0008	0.0008	0.0048	0.0029	0.0016	0.0019	-0.0027	-0.0017	-0.0009	-0.0010	1.1098	0.37	
108	914+40.000	915+40.000	0.0189	0.585	1.463	0.0225	0.0134	0.0082	0.0091	0.0563	0.0342	0.0192	0.0221	-0.0338	-0.0209	-0.0111	-0.0129	1.1880	0.39	
LaMesa/SD38 (v1)	915+00.000			45.389	83.561	1.7457	0.7046	0.4318	1.0411	3.2139	1.8143	0.9753	1.3996	-1.4682	-1.1097	-0.5434	-0.3585			0.47
109	915+40.000	916+00.000	0.0114	0.238	0.470	0.0092	0.0050	0.0034	0.0041	0.0181	0.0096	0.0063	0.0085	-0.0089	-0.0046	-0.0028	-0.0044	0.8058	0.27	
110	916+00.000	921+00.000	0.0947	1.964	3.844	0.0755	0.0416	0.0284	0.0340	0.1479	0.0785	0.0512	0.0694	-0.0723	-0.0369	-0.0229	-0.0354	0.7977	0.26	
111	921+00.000	921+90.000	0.0170	0.353	0.692	0.0136	0.0075	0.0051	0.0061	0.0266	0.0141	0.0092	0.0125	-0.0130	-0.0066	-0.0041	-0.0064	0.7977	0.26	
112	921+90.000	922+00.000	0.0019	0.039	0.077	0.0015	0.0008	0.0006	0.0007	0.0030	0.0016	0.0010	0.0014	-0.0014	-0.0007	-0.0005	-0.0007	0.7977	0.26	
113	922+00.000	922+59.000	0.0112	0.232	0.454	0.0089	0.0049	0.0033	0.0040	0.0174	0.0093	0.0060	0.0082	-0.0085	-0.0044	-0.0027	-0.0042	0.7977	0.26	
114	922+59.000	923+00.000	0.0078	0.161	0.315	0.0062	0.0034	0.0023	0.0028	0.0121	0.0064	0.0042	0.0057	-0.0059	-0.0030	-0.0019	-0.0029	0.7977	0.26	

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected FI no/C Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted FI no/C Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) FI no/C Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/million veh-mi)	Expected Intersection Travel Crash Rate (crashes/million veh)
115	923+00.000	941+70.000	0.3542	11.752	14.377	0.4520	0.2940	0.2007	0.1580	0.5530	0.2935	0.1916	0.2595	-0.1009	0.0006	0.0091	-0.1015	1.2763	0.42	
116	941+70.000	948+50.000	0.1288	2.671	5.228	0.1027	0.0565	0.0386	0.0462	0.2011	0.1067	0.0697	0.0944	-0.0983	-0.0502	-0.0311	-0.0481	0.7977	0.26	
All Segments			6.8845	409.421	399.083	15.7469	8.7474	5.6810	6.9996	15.3493	8.5222	4.9517	6.8271	0.3976	0.2252	0.7293	0.1724	2.2873	0.60	
All Intersections				212.085	427.197	8.1571	3.8625	2.1827	4.2946	16.4306	8.2648	4.3625	8.1659	-8.2735	-4.4022	-2.1798	-3.8713			0.25
Total			6.8845	621.506	826.279	23.9041	12.6099	7.8637	11.2942	31.7800	16.7869	9.3142	14.9930	-7.8759	-4.1770	-1.4505	-3.6989	3.4722		

Table 13. Expected Crash Frequencies and Rates by Horizontal Design Element (Section 3)

Title	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected FI no/C Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted FI no/C Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) FI no/C Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/mi million veh-mi)
Tangent	585+00.000	594+84.940	0.1865	12.419	12.987	0.4777	0.3553	0.2214	0.1223	0.4995	0.2945	0.1563	0.2050	-0.0218	0.0608	0.0652	-0.0826	2.5607	0.59
Simple Curve 1	594+84.940	609+21.930	0.2722	49.017	28.760	1.8853	0.8216	0.5119	1.0637	1.1062	0.6443	0.3342	0.4618	0.7791	0.1773	0.1778	0.6019	6.9271	1.30
Tangent	609+21.930	624+64.300	0.2921	22.007	29.094	0.8464	0.4103	0.2557	0.4361	1.1190	0.6472	0.3310	0.4719	-0.2726	-0.2368	-0.0754	-0.0358	2.8975	0.53
Simple Curve 2	624+64.300	624+64.530	0.0000	0.003	0.004	0.0001	0.0001	0.0000	0.0001	0.0002	0.0001	0.0000	0.0001	-0.0000	-0.0000	-0.0000	0.0000	3.0271	0.55
Tangent	624+64.530	636+92.820	0.2326	10.091	21.149	0.3881	0.2351	0.1465	0.1530	0.8134	0.4704	0.2406	0.3430	-0.4253	-0.2353	-0.0941	-0.1900	1.6685	0.30
Simple Curve 3	636+92.820	647+26.050	0.1957	17.075	19.003	0.6567	0.2830	0.1763	0.3738	0.7309	0.4227	0.2162	0.3082	-0.0742	-0.1397	-0.0399	0.0656	3.3560	0.61
Tangent	647+26.050	672+86.110	0.4849	37.317	44.231	1.4353	0.6571	0.4094	0.7782	1.7012	0.9838	0.5033	0.7173	-0.2659	-0.3267	-0.0938	0.0608	2.9602	0.54
Simple Curve 4	672+86.110	683+82.710	0.2077	65.406	16.578	2.5156	1.8085	1.1271	0.7071	0.6376	0.3734	0.1957	0.2642	1.8780	1.4351	0.9314	0.4429	12.1123	2.27
Tangent	683+82.710	693+85.010	0.1898	5.075	10.371	0.1952	0.1188	0.0745	0.0764	0.3989	0.2390	0.1308	0.1599	-0.2037	-0.1202	-0.0563	-0.0835	1.0282	0.29
Simple Curve 5	693+85.010	710+47.850	0.3149	7.953	16.248	0.3059	0.1778	0.1157	0.1281	0.6249	0.3564	0.2105	0.2685	-0.3191	-0.1786	-0.0949	-0.1405	0.9712	0.30
Tangent	710+47.850	727+51.450	0.3227	19.279	12.636	0.7415	0.3343	0.2282	0.4072	0.4860	0.2585	0.1691	0.2275	0.2555	0.0758	0.0590	0.1798	2.2982	0.78
Simple Curve 6	727+51.450	727+52.350	0.0002	0.003	0.007	0.0001	0.0001	0.0000	0.0001	0.0003	0.0001	0.0001	0.0001	-0.0001	-0.0001	-0.0000	-0.0001	0.7724	0.26
Tangent	727+52.350	765+52.550	0.7197	14.661	28.827	0.5639	0.3116	0.2115	0.2523	1.1087	0.5947	0.3856	0.5140	-0.5448	-0.2832	-0.1742	-0.2617	0.7835	0.27
Simple Curve 7	765+52.550	780+45.930	0.2828	10.095	11.536	0.3883	0.1595	0.1080	0.2288	0.4437	0.2396	0.1542	0.2041	-0.0554	-0.0801	-0.0462	0.0247	1.3728	0.47
Tangent	780+45.930	948+50.000	3.1826	139.017	147.652	5.3468	3.0744	2.0947	2.2724	5.6789	2.9974	1.9239	2.6815	-0.3321	0.0770	0.1708	-0.4091	1.6800	0.50

Table 14. Predicted Crash Frequencies by Year (Section 3)

Year	Total Crashes	FI Crashes	Percent FI (%)	FI/no C Crashes	Percent FI/no C (%)	PDO Crashes	Percent PDO (%)
2025	17.10	9.05	52.953	5.50	32.182	8.04	47.047
2026	18.92	9.99	52.834	6.00	31.718	8.92	47.166
2027	20.77	10.95	52.723	6.50	31.292	9.82	47.277
2028	22.64	11.91	52.621	7.00	30.897	10.73	47.379
2029	24.55	12.90	52.526	7.50	30.531	11.66	47.474
2030	25.25	13.26	52.510	7.68	30.401	11.99	47.490
2031	25.95	13.62	52.496	7.86	30.274	12.33	47.504
2032	26.66	13.99	52.483	8.04	30.152	12.67	47.517
2033	27.37	14.36	52.473	8.22	30.033	13.01	47.527
2034	28.08	14.73	52.463	8.40	29.919	13.35	47.537
2035	28.79	15.10	52.455	8.58	29.808	13.69	47.545
2036	29.60	15.53	52.480	8.79	29.696	14.06	47.520
2037	30.44	15.99	52.522	9.01	29.586	14.45	47.478
2038	31.29	16.45	52.563	9.22	29.480	14.84	47.437
2039	32.13	16.90	52.602	9.44	29.377	15.23	47.398
2040	32.97	17.36	52.641	9.65	29.277	15.61	47.359
2041	34.37	18.12	52.725	10.01	29.109	16.25	47.275
2042	35.74	18.88	52.809	10.35	28.949	16.87	47.191
2043	37.09	19.62	52.889	10.68	28.796	17.47	47.111
2044	38.42	20.35	52.968	11.01	28.651	18.07	47.032
2045	39.74	21.08	53.043	11.33	28.511	18.66	46.957
2046	41.06	21.81	53.116	11.65	28.377	19.25	46.884
2047	42.37	22.54	53.186	11.97	28.248	19.84	46.814
2048	43.69	23.26	53.253	12.29	28.124	20.42	46.747
2049	44.99	23.99	53.319	12.60	28.005	21.00	46.681
2050	46.30	24.72	53.382	12.91	27.889	21.59	46.618
Total	826.28	436.46	52.822	242.17	29.308	389.82	47.178
Average	31.78	16.79	52.822	9.31	29.308	14.99	47.178

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 15. Expected Crash Frequencies by Year (Section 3)

Year	Total Crashes	FI Crashes	Percent FI (%)	FI/no C Crashes	Percent FI/no C (%)	PDO Crashes	Percent PDO (%)
2025	12.86	6.80	52.883	4.64	36.123	6.06	47.117
2026	14.23	7.51	52.764	5.07	35.602	6.72	47.236
2027	15.62	8.22	52.653	5.49	35.123	7.39	47.347
2028	17.03	8.95	52.551	5.91	34.680	8.08	47.450
2029	18.47	9.69	52.457	6.33	34.269	8.78	47.544
2030	18.99	9.96	52.440	6.48	34.123	9.03	47.561
2031	19.52	10.23	52.426	6.63	33.981	9.29	47.575
2032	20.05	10.51	52.414	6.79	33.843	9.54	47.587
2033	20.59	10.79	52.403	6.94	33.711	9.80	47.598
2034	21.12	11.06	52.393	7.09	33.582	10.05	47.608
2035	21.66	11.35	52.385	7.25	33.457	10.31	47.616
2036	22.26	11.67	52.410	7.42	33.332	10.59	47.590
2037	22.90	12.01	52.452	7.60	33.209	10.89	47.549
2038	23.53	12.35	52.493	7.79	33.089	11.18	47.508
2039	24.16	12.69	52.532	7.97	32.974	11.47	47.468
2040	24.80	13.04	52.571	8.15	32.862	11.76	47.429
2041	25.85	13.61	52.655	8.45	32.673	12.24	47.345
2042	26.89	14.18	52.739	8.74	32.493	12.71	47.261
2043	27.90	14.73	52.819	9.02	32.322	13.16	47.181
2044	28.90	15.29	52.897	9.29	32.158	13.61	47.102
2045	29.89	15.84	52.972	9.57	32.002	14.06	47.027
2046	30.89	16.38	53.045	9.84	31.852	14.50	46.954
2047	31.87	16.93	53.115	10.11	31.707	14.94	46.884
2048	32.86	17.48	53.183	10.37	31.568	15.38	46.816
2049	33.84	18.02	53.248	10.64	31.434	15.82	46.751
2050	34.83	18.57	53.311	10.90	31.304	16.26	46.687
Total	621.51	327.86	52.752	204.46	32.897	293.65	47.248
Average	23.90	12.61	52.752	7.86	32.897	11.29	47.248

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 16. Comparing Predicted and Expected Crashes for the Evaluation Period (Section 3)

Scope	Total Crashes	FI Crashes	Percent FI (%)	FI/no C Crashes	Percent FI/no C (%)	PDO Crashes	Percent PDO (%)
Predicted	826.28	436.46	52.822	242.17	29.308	389.82	47.178
Expected	621.51	327.86	52.752	204.46	32.897	293.65	47.248
Expected - Predicted	-204.77	-108.60		-37.71		-96.17	
Percent Difference	-32.95	-33.12		-18.45		-32.75	

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 17. Expected Crash Severity by Ramp Terminal or Roundabout (Section 3)

Seg. No.	Type	Fatal (K) Crashes (crashes)	Incapacitating Injury (A) Crashes (crashes)	Non-Incapacitating Injury (B) Crashes (crashes)	Possible Injury (C) Crashes (crashes)	No Injury (O) Crashes (crashes)
4	FRERampTerminal	0.1307	0.6864	2.2706	7.9648	9.1729

Table 18. Expected Crash Type Distribution (Section 3)

Element Type	Crash Type	FI Crashes	Percent FI (%)	FI/no C Crashes	Percent FI/no C (%)	PDO Crashes	Percent PDO (%)	Total Crashes	Percent Total (%)
Highway Segment	Single	103.33	16.6	77.46	12.5	88.79	14.3	194.37	31.3
Highway Segment	Total Single Vehicle Crashes	103.33	16.6	77.46	12.5	88.79	14.3	194.37	31.3
Highway Segment	Angle Collision	49.47	8.0	30.59	4.9	39.07	6.3	88.51	14.2
Highway Segment	Head-on Collision	4.99	0.8	4.63	0.7	0.26	0.0	3.14	0.5
Highway Segment	Rear-end Collision	55.08	8.9	24.98	4.0	29.18	4.7	76.94	12.4
Highway Segment	Sideswipe	8.80	1.4	4.99	0.8	16.33	2.6	30.07	4.8
Highway Segment	Total Multiple Vehicle Crashes	118.34	19.0	65.19	10.5	84.84	13.7	198.66	32.0
Highway Segment	Total Highway Segment Crashes	227.43	36.6	147.71	23.8	181.99	29.3	409.42	65.9
Highway Segment	Other Collision	5.76	0.9	5.06	0.8	8.36	1.3	16.40	2.6
Intersection	Single	13.98	2.2	11.95	1.9	24.92	4.0	39.47	6.4
Intersection	Total Single Vehicle Crashes	13.98	2.2	11.95	1.9	24.92	4.0	39.47	6.4
Intersection	Angle Collision	45.97	7.4	30.94	5.0	28.84	4.6	72.86	11.7
Intersection	Head-on Collision	1.87	0.3	1.53	0.2	1.59	0.3	3.36	0.5
Intersection	Rear-end Collision	19.40	3.1	6.39	1.0	25.46	4.1	45.10	7.3
Intersection	Sideswipe	3.92	0.6	2.40	0.4	16.14	2.6	21.11	3.4
Intersection	Total Multiple Vehicle Crashes	71.17	11.5	41.26	6.6	72.04	11.6	142.42	22.9
Intersection	Total Intersection Crashes	89.45	14.4	56.75	9.1	102.46	16.5	191.69	30.9
Intersection	Other Collision	4.30	0.7	3.54	0.6	5.51	0.9	9.81	1.6
Ramp Terminal	Collision with Animal	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0
Ramp Terminal	Collision with Fixed Object	0.86	0.1	0.00	0.0	1.45	0.2	2.31	0.4
Ramp Terminal	Collision with Other Object	0.00	0.0	0.00	0.0	0.05	0.0	0.05	0.0
Ramp Terminal	Other Single-vehicle Collision	0.72	0.1	0.00	0.0	0.24	0.0	0.96	0.2
Ramp Terminal	Collision with Parked Vehicle	0.08	0.0	0.00	0.0	0.14	0.0	0.21	0.0
Ramp Terminal	Total Single Vehicle Crashes	1.66	0.3	0.00	0.0	1.87	0.3	3.53	0.6
Ramp Terminal	Angle Collision	5.77	0.9	0.00	0.0	3.41	0.5	9.18	1.5

Element Type	Crash Type	FI Crashes	Percent FI (%)	FI/no C Crashes	Percent FI/no C (%)	PDO Crashes	Percent PDO (%)	Total Crashes	Percent Total (%)
Ramp Terminal	Head-on Collision	0.22	0.0	0.00	0.0	0.14	0.0	0.36	0.1
Ramp Terminal	Other Multiple-vehicle Collision	0.14	0.0	0.00	0.0	0.24	0.0	0.38	0.1
Ramp Terminal	Rear-end Collision	3.04	0.5	0.00	0.0	2.53	0.4	5.57	0.9
Ramp Terminal	Sideswipe, Same Direction Collision	0.22	0.0	0.00	0.0	0.98	0.2	1.20	0.2
Ramp Terminal	Total Multiple Vehicle Crashes	9.39	1.5	0.00	0.0	7.30	1.2	16.70	2.7
Ramp Terminal	Total Ramp Terminal Crashes	11.05	1.8	0.00	0.0	9.17	1.5	20.23	3.3
	Total Crashes	327.94	52.8	204.46	32.9	293.62	47.3	621.34	100.0

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 19. Evaluation Message

Start Location (Sta. ft)	End Location (Sta. ft)	Message
585+00.000	594+84.940	Warning: for segment #1 (585+00.000 to 594+84.940), no foreslope data available for left side of road for use by AFM3ru, using 1.0
585+00.000	594+84.940	Warning: for segment #1 (585+00.000 to 594+84.940), no foreslope data available for right side of road for use by AFM3ru, using 1.0
594+84.940	600+00.000	Warning: for segment #2 (594+84.940 to 600+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
594+84.940	600+00.000	Warning: for segment #2 (594+84.940 to 600+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
600+00.000	601+00.000	Warning: for segment #3 (600+00.000 to 601+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
600+00.000	601+00.000	Warning: for segment #3 (600+00.000 to 601+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
601+00.000	602+00.000	Warning: for segment #4 (601+00.000 to 602+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
601+00.000	602+00.000	Warning: for segment #4 (601+00.000 to 602+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
602+00.000	605+00.000	Warning: for segment #5 (602+00.000 to 605+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
602+00.000	605+00.000	Warning: for segment #5 (602+00.000 to 605+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
605+00.000	605+60.000	Warning: for segment #6 (605+00.000 to 605+60.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
605+00.000	605+60.000	Warning: for segment #6 (605+00.000 to 605+60.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
605+60.000	605+70.000	Warning: for segment #7 (605+60.000 to 605+70.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
605+60.000	605+70.000	Warning: for segment #7 (605+60.000 to 605+70.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
605+70.000	605+75.000	Warning: for segment #8 (605+70.000 to 605+75.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
605+70.000	605+75.000	Warning: for segment #8 (605+70.000 to 605+75.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
605+75.000	609+00.000	Warning: for segment #9 (605+75.000 to 609+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
605+75.000	609+00.000	Warning: for segment #9 (605+75.000 to 609+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
609+00.000	609+21.930	Warning: for segment #10 (609+00.000 to 609+21.930), no foreslope data available for left side of road for use by AFM3ru, using 1.0
609+00.000	609+21.930	Warning: for segment #10 (609+00.000 to 609+21.930), no foreslope data available for right side of road for use by AFM3ru, using 1.0
609+21.930	611+40.000	Warning: for segment #11 (609+21.930 to 611+40.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
609+21.930	611+40.000	Warning: for segment #11 (609+21.930 to 611+40.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
611+40.000	612+50.000	Warning: for segment #12 (611+40.000 to 612+50.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
611+40.000	612+50.000	Warning: for segment #12 (611+40.000 to 612+50.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
612+50.000	624+64.530	Warning: for segment #13 (612+50.000 to 624+64.530), no foreslope data available for left side of road for use by AFM3ru, using 1.0
612+50.000	624+64.530	Warning: for segment #13 (612+50.000 to 624+64.530), no foreslope data available for right side of road for use by AFM3ru, using 1.0
624+64.530	636+92.820	Warning: for segment #14 (624+64.530 to 636+92.820), no foreslope data available for left side of road for use by AFM3ru, using 1.0
624+64.530	636+92.820	Warning: for segment #14 (624+64.530 to 636+92.820), no foreslope data available for right side of road for use by AFM3ru, using 1.0
636+92.820	639+00.000	Warning: for segment #15 (636+92.820 to 639+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
636+92.820	639+00.000	Warning: for segment #15 (636+92.820 to 639+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0

Start Location (Sta. ft)	End Location (Sta. ft)	Message
639+00.000	640+00.000	Warning: for segment #16 (639+00.000 to 640+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
639+00.000	640+00.000	Warning: for segment #16 (639+00.000 to 640+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
640+00.000	647+26.050	Warning: for segment #17 (640+00.000 to 647+26.050), no foreslope data available for left side of road for use by AFM3ru, using 1.0
640+00.000	647+26.050	Warning: for segment #17 (640+00.000 to 647+26.050), no foreslope data available for right side of road for use by AFM3ru, using 1.0
647+26.050	667+80.000	Warning: for segment #18 (647+26.050 to 667+80.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
647+26.050	667+80.000	Warning: for segment #18 (647+26.050 to 667+80.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
667+80.000	668+80.000	Warning: for segment #19 (667+80.000 to 668+80.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
667+80.000	668+80.000	Warning: for segment #19 (667+80.000 to 668+80.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
668+80.000	672+86.110	Warning: for segment #20 (668+80.000 to 672+86.110), no foreslope data available for left side of road for use by AFM3ru, using 1.0
668+80.000	672+86.110	Warning: for segment #20 (668+80.000 to 672+86.110), no foreslope data available for right side of road for use by AFM3ru, using 1.0
672+86.110	676+00.000	Warning: for segment #21 (672+86.110 to 676+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
672+86.110	676+00.000	Warning: for segment #21 (672+86.110 to 676+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
676+00.000	677+50.000	Warning: for segment #22 (676+00.000 to 677+50.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
676+00.000	677+50.000	Warning: for segment #22 (676+00.000 to 677+50.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
677+50.000	679+00.000	Warning: for segment #23 (677+50.000 to 679+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
677+50.000	679+00.000	Warning: for segment #23 (677+50.000 to 679+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
679+00.000	680+80.000	Warning: for segment #24 (679+00.000 to 680+80.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
679+00.000	680+80.000	Warning: for segment #24 (679+00.000 to 680+80.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
680+80.000	680+90.000	Warning: for segment #25 (680+80.000 to 680+90.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
680+80.000	680+90.000	Warning: for segment #25 (680+80.000 to 680+90.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
680+90.000	682+20.000	Warning: for segment #26 (680+90.000 to 682+20.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
680+90.000	682+20.000	Warning: for segment #26 (680+90.000 to 682+20.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
682+20.000	683+82.710	Warning: for segment #27 (682+20.000 to 683+82.710), no foreslope data available for left side of road for use by AFM3ru, using 1.0
682+20.000	683+82.710	Warning: for segment #27 (682+20.000 to 683+82.710), no foreslope data available for right side of road for use by AFM3ru, using 1.0
683+82.710	691+50.000	Warning: for segment #28 (683+82.710 to 691+50.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
683+82.710	691+50.000	Warning: for segment #28 (683+82.710 to 691+50.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
691+50.000	692+70.000	Warning: for segment #29 (691+50.000 to 692+70.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
691+50.000	692+70.000	Warning: for segment #29 (691+50.000 to 692+70.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
692+70.000	693+85.010	Warning: for segment #30 (692+70.000 to 693+85.010), no foreslope data available for left side of road for use by AFM3ru, using 1.0
692+70.000	693+85.010	Warning: for segment #30 (692+70.000 to 693+85.010), no foreslope data available for right side of road for use by AFM3ru, using 1.0
693+85.010	698+70.000	Warning: for segment #31 (693+85.010 to 698+70.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
693+85.010	698+70.000	Warning: for segment #31 (693+85.010 to 698+70.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0

Start Location (Sta. ft)	End Location (Sta. ft)	Message
698+70.000	699+00.000	Warning: for segment #32 (698+70.000 to 699+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
698+70.000	699+00.000	Warning: for segment #32 (698+70.000 to 699+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
699+00.000	699+20.000	Warning: for segment #33 (699+00.000 to 699+20.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
699+00.000	699+20.000	Warning: for segment #33 (699+00.000 to 699+20.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
699+20.000	700+40.000	Warning: for segment #34 (699+20.000 to 700+40.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
699+20.000	700+40.000	Warning: for segment #34 (699+20.000 to 700+40.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
709+00.000	710+30.000	Warning: for segment #43 (709+00.000 to 710+30.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
709+00.000	710+30.000	Warning: for segment #43 (709+00.000 to 710+30.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
755+50.000	756+90.000	Warning: for segment #49 (755+50.000 to 756+90.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
755+50.000	756+90.000	Warning: for segment #49 (755+50.000 to 756+90.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
777+80.000	778+80.000	Warning: for segment #56 (777+80.000 to 778+80.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
777+80.000	778+80.000	Warning: for segment #56 (777+80.000 to 778+80.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
808+80.000	809+00.000	Warning: for segment #69 (808+80.000 to 809+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
808+80.000	809+00.000	Warning: for segment #69 (808+80.000 to 809+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
809+00.000	809+60.000	Warning: for segment #70 (809+00.000 to 809+60.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
809+00.000	809+60.000	Warning: for segment #70 (809+00.000 to 809+60.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
861+85.000	862+00.000	Warning: for segment #82 (861+85.000 to 862+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
861+85.000	862+00.000	Warning: for segment #82 (861+85.000 to 862+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
862+00.000	862+50.000	Warning: for segment #83 (862+00.000 to 862+50.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
862+00.000	862+50.000	Warning: for segment #83 (862+00.000 to 862+50.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
862+50.000	862+60.000	Warning: for segment #84 (862+50.000 to 862+60.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
862+50.000	862+60.000	Warning: for segment #84 (862+50.000 to 862+60.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
888+20.000	889+30.000	Warning: for segment #94 (888+20.000 to 889+30.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
888+20.000	889+30.000	Warning: for segment #94 (888+20.000 to 889+30.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
914+30.000	914+40.000	Warning: for segment #107 (914+30.000 to 914+40.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
914+30.000	914+40.000	Warning: for segment #107 (914+30.000 to 914+40.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
914+40.000	915+40.000	Warning: for segment #108 (914+40.000 to 915+40.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
914+40.000	915+40.000	Warning: for segment #108 (914+40.000 to 915+40.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
585+00.000	594+84.940	Warning: for segment #1 (585+00.000 to 594+84.940), no foreslope data available for left side of road for use by AFM3ru, using 1.0
585+00.000	594+84.940	Warning: for segment #1 (585+00.000 to 594+84.940), no foreslope data available for right side of road for use by AFM3ru, using 1.0
594+84.940	600+00.000	Warning: for segment #2 (594+84.940 to 600+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
594+84.940	600+00.000	Warning: for segment #2 (594+84.940 to 600+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0

Start Location (Sta. ft)	End Location (Sta. ft)	Message
600+00.000	601+00.000	Warning: for segment #3 (600+00.000 to 601+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
600+00.000	601+00.000	Warning: for segment #3 (600+00.000 to 601+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
601+00.000	602+00.000	Warning: for segment #4 (601+00.000 to 602+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
601+00.000	602+00.000	Warning: for segment #4 (601+00.000 to 602+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
602+00.000	605+00.000	Warning: for segment #5 (602+00.000 to 605+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
602+00.000	605+00.000	Warning: for segment #5 (602+00.000 to 605+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
605+00.000	605+60.000	Warning: for segment #6 (605+00.000 to 605+60.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
605+00.000	605+60.000	Warning: for segment #6 (605+00.000 to 605+60.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
605+60.000	605+70.000	Warning: for segment #7 (605+60.000 to 605+70.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
605+60.000	605+70.000	Warning: for segment #7 (605+60.000 to 605+70.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
605+70.000	605+75.000	Warning: for segment #8 (605+70.000 to 605+75.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
605+70.000	605+75.000	Warning: for segment #8 (605+70.000 to 605+75.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
605+75.000	609+00.000	Warning: for segment #9 (605+75.000 to 609+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
605+75.000	609+00.000	Warning: for segment #9 (605+75.000 to 609+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
609+00.000	609+21.930	Warning: for segment #10 (609+00.000 to 609+21.930), no foreslope data available for left side of road for use by AFM3ru, using 1.0
609+00.000	609+21.930	Warning: for segment #10 (609+00.000 to 609+21.930), no foreslope data available for right side of road for use by AFM3ru, using 1.0
609+21.930	611+40.000	Warning: for segment #11 (609+21.930 to 611+40.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
609+21.930	611+40.000	Warning: for segment #11 (609+21.930 to 611+40.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
611+40.000	612+50.000	Warning: for segment #12 (611+40.000 to 612+50.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
611+40.000	612+50.000	Warning: for segment #12 (611+40.000 to 612+50.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
612+50.000	624+64.530	Warning: for segment #13 (612+50.000 to 624+64.530), no foreslope data available for left side of road for use by AFM3ru, using 1.0
612+50.000	624+64.530	Warning: for segment #13 (612+50.000 to 624+64.530), no foreslope data available for right side of road for use by AFM3ru, using 1.0
624+64.530	636+92.820	Warning: for segment #14 (624+64.530 to 636+92.820), no foreslope data available for left side of road for use by AFM3ru, using 1.0
624+64.530	636+92.820	Warning: for segment #14 (624+64.530 to 636+92.820), no foreslope data available for right side of road for use by AFM3ru, using 1.0
636+92.820	639+00.000	Warning: for segment #15 (636+92.820 to 639+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
636+92.820	639+00.000	Warning: for segment #15 (636+92.820 to 639+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
639+00.000	640+00.000	Warning: for segment #16 (639+00.000 to 640+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
639+00.000	640+00.000	Warning: for segment #16 (639+00.000 to 640+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
640+00.000	647+26.050	Warning: for segment #17 (640+00.000 to 647+26.050), no foreslope data available for left side of road for use by AFM3ru, using 1.0
640+00.000	647+26.050	Warning: for segment #17 (640+00.000 to 647+26.050), no foreslope data available for right side of road for use by AFM3ru, using 1.0
647+26.050	667+80.000	Warning: for segment #18 (647+26.050 to 667+80.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
647+26.050	667+80.000	Warning: for segment #18 (647+26.050 to 667+80.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0

Start Location (Sta. ft)	End Location (Sta. ft)	Message
667+80.000	668+80.000	Warning: for segment #19 (667+80.000 to 668+80.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
667+80.000	668+80.000	Warning: for segment #19 (667+80.000 to 668+80.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
668+80.000	672+86.110	Warning: for segment #20 (668+80.000 to 672+86.110), no foreslope data available for left side of road for use by AFM3ru, using 1.0
668+80.000	672+86.110	Warning: for segment #20 (668+80.000 to 672+86.110), no foreslope data available for right side of road for use by AFM3ru, using 1.0
672+86.110	676+00.000	Warning: for segment #21 (672+86.110 to 676+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
672+86.110	676+00.000	Warning: for segment #21 (672+86.110 to 676+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
676+00.000	677+50.000	Warning: for segment #22 (676+00.000 to 677+50.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
676+00.000	677+50.000	Warning: for segment #22 (676+00.000 to 677+50.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
677+50.000	679+00.000	Warning: for segment #23 (677+50.000 to 679+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
677+50.000	679+00.000	Warning: for segment #23 (677+50.000 to 679+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
679+00.000	680+80.000	Warning: for segment #24 (679+00.000 to 680+80.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
679+00.000	680+80.000	Warning: for segment #24 (679+00.000 to 680+80.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
680+80.000	680+90.000	Warning: for segment #25 (680+80.000 to 680+90.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
680+80.000	680+90.000	Warning: for segment #25 (680+80.000 to 680+90.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
680+90.000	682+20.000	Warning: for segment #26 (680+90.000 to 682+20.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
680+90.000	682+20.000	Warning: for segment #26 (680+90.000 to 682+20.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
682+20.000	683+82.710	Warning: for segment #27 (682+20.000 to 683+82.710), no foreslope data available for left side of road for use by AFM3ru, using 1.0
682+20.000	683+82.710	Warning: for segment #27 (682+20.000 to 683+82.710), no foreslope data available for right side of road for use by AFM3ru, using 1.0
683+82.710	691+50.000	Warning: for segment #28 (683+82.710 to 691+50.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
683+82.710	691+50.000	Warning: for segment #28 (683+82.710 to 691+50.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
691+50.000	692+70.000	Warning: for segment #29 (691+50.000 to 692+70.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
691+50.000	692+70.000	Warning: for segment #29 (691+50.000 to 692+70.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
692+70.000	693+85.010	Warning: for segment #30 (692+70.000 to 693+85.010), no foreslope data available for left side of road for use by AFM3ru, using 1.0
692+70.000	693+85.010	Warning: for segment #30 (692+70.000 to 693+85.010), no foreslope data available for right side of road for use by AFM3ru, using 1.0
693+85.010	698+70.000	Warning: for segment #31 (693+85.010 to 698+70.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
693+85.010	698+70.000	Warning: for segment #31 (693+85.010 to 698+70.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
698+70.000	699+00.000	Warning: for segment #32 (698+70.000 to 699+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
698+70.000	699+00.000	Warning: for segment #32 (698+70.000 to 699+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
699+00.000	699+20.000	Warning: for segment #33 (699+00.000 to 699+20.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
699+00.000	699+20.000	Warning: for segment #33 (699+00.000 to 699+20.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
699+20.000	700+40.000	Warning: for segment #34 (699+20.000 to 700+40.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
699+20.000	700+40.000	Warning: for segment #34 (699+20.000 to 700+40.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0

Start Location (Sta. ft)	End Location (Sta. ft)	Message
709+00.000	710+30.000	Warning: for segment #43 (709+00.000 to 710+30.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
709+00.000	710+30.000	Warning: for segment #43 (709+00.000 to 710+30.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
755+50.000	756+90.000	Warning: for segment #49 (755+50.000 to 756+90.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
755+50.000	756+90.000	Warning: for segment #49 (755+50.000 to 756+90.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
777+80.000	778+80.000	Warning: for segment #56 (777+80.000 to 778+80.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
777+80.000	778+80.000	Warning: for segment #56 (777+80.000 to 778+80.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
808+80.000	809+00.000	Warning: for segment #69 (808+80.000 to 809+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
808+80.000	809+00.000	Warning: for segment #69 (808+80.000 to 809+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
809+00.000	809+60.000	Warning: for segment #70 (809+00.000 to 809+60.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
809+00.000	809+60.000	Warning: for segment #70 (809+00.000 to 809+60.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
861+85.000	862+00.000	Warning: for segment #82 (861+85.000 to 862+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
861+85.000	862+00.000	Warning: for segment #82 (861+85.000 to 862+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
862+00.000	862+50.000	Warning: for segment #83 (862+00.000 to 862+50.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
862+00.000	862+50.000	Warning: for segment #83 (862+00.000 to 862+50.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
862+50.000	862+60.000	Warning: for segment #84 (862+50.000 to 862+60.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
862+50.000	862+60.000	Warning: for segment #84 (862+50.000 to 862+60.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
888+20.000	889+30.000	Warning: for segment #94 (888+20.000 to 889+30.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
888+20.000	889+30.000	Warning: for segment #94 (888+20.000 to 889+30.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
914+30.000	914+40.000	Warning: for segment #107 (914+30.000 to 914+40.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
914+30.000	914+40.000	Warning: for segment #107 (914+30.000 to 914+40.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
914+40.000	915+40.000	Warning: for segment #108 (914+40.000 to 915+40.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
914+40.000	915+40.000	Warning: for segment #108 (914+40.000 to 915+40.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0

Section 4 Evaluation

Section: Section 4

Evaluation Start Location: 948+50.000

Evaluation End Location: 974+11.000

Area Type: Urban

Functional Class: Arterial

Type of Alignment: Undivided, Multilane

Model Category: Urban/Suburban Arterial

Calibration Factor: 4D=1.0; 4SG=1.0; 4U=1.0;

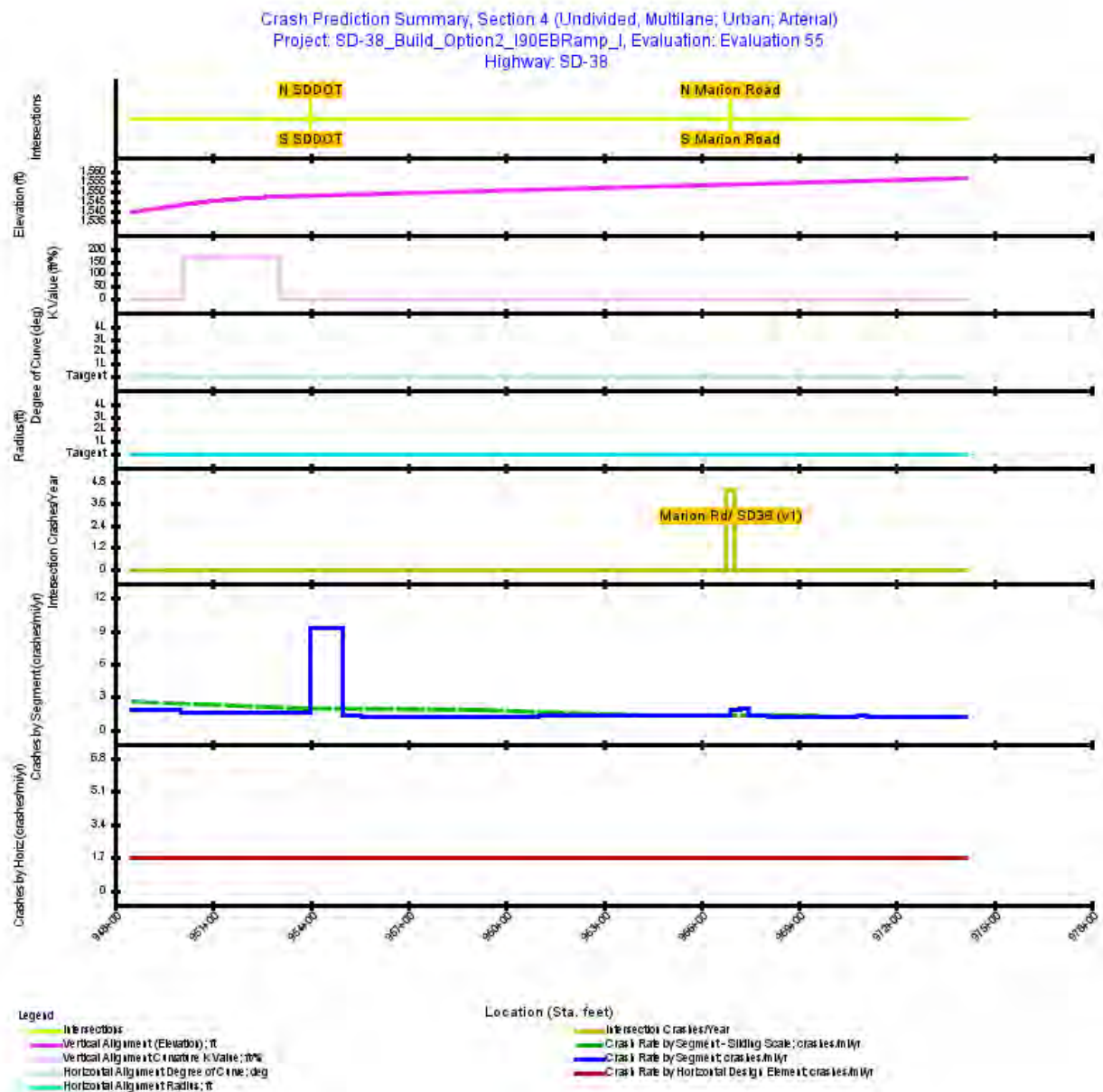


Figure 2. Crash Prediction Summary (Section 4)

Table 20. Observed Crashes Used in the Evaluation (Section 4)

Year	Observed Crashes	Total Crashes Used	FI Crashes	FI no/C Crashes	PDO Crashes
2018	5	5	4	0	1
2019	1	1	0	0	1
2020	2	2	0	0	2
2021	2	2	2	0	0
2022	2	2	0	0	2
All Years	12 ^[1]	12	6	0	6

Footnotes

^[1] Note: Observed crash data that does not comply with the associated CPM model requirements may not be used in EB processing.

Table 21. Evaluation Highway - Homogeneous Segments (Section 4)

Segment No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Number Major Commercial Driveways	Number Minor Commercial Driveways	Number Major Industrial/Institutional	Number Minor Industrial/Institutional	Number Major Residential Driveways	Number Minor Residential Driveways	Number Other Driveways	Lighting	Automated Speed Enforcement	Density (fixed objects/mi)	Median Width (ft)	Type	Effective Median Width (ft)	Speed Level	Number Rail Highway Crossings	Average Shoulder Width (ft)	Average Lane Width (ft)	
117	Urban/Suburban Arterial Segment Four-lane Undivided	948+5.000	950+0.000	150.00	0.0284	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	0	false	false	0.0	0.00	None	0.00	Intermediate/High	0	8.00	11.00
118	Urban/Suburban Arterial Segment Four-lane Undivided	950+0.000	954+0.000	400.00	0.0758	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	0	false	false	0.0	0.00	None	0.00	Intermediate/High	0	8.00	11.00
119	Urban/Suburban Arterial Segment Four-lane Undivided	954+0.000	955+0.000	100.00	0.0189	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	2	0	0	0	0	0	false	false	0.0	0.00	None	0.00	Intermediate/High	0	4.00	11.00
120	Urban/Suburban Arterial Segment Four-lane Divided	955+0.000	955+5.000	55.00	0.0104	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	0	false	false	0.0	4.01	Non-Traversable Median	4.01	Intermediate/High	0	8.00	11.00
121	Urban/Suburban Arterial Segment Four-lane Divided	955+5.000	958+2.800	273.00	0.0517	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	0	false	false	0.0	10.02	Non-Traversable Median	10.02	Intermediate/High	0	8.00	11.00
122	Urban/Suburban Arterial Segment Four-lane Divided	958+2.800	961+0.000	273.00	0.0517	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	0	false	false	0.0	20.03	Non-Traversable Median	19.99	Intermediate/High	0	8.00	11.00
123	Urban/Suburban Arterial Segment Four-lane Divided	961+0.000	962+0.000	99.00	0.0187	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	0	false	false	0.0	23.12	Traversable Median	23.12	Intermediate/High	0	8.00	11.00
124	Urban/Suburban Arterial Segment Four-lane Divided	962+0.000	963+6.900	169.00	0.0320	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	0	false	false	0.0	18.13	Traversable Median	30.13	Intermediate/High	0	8.00	11.00
125	Urban/Suburban Arterial Segment Four-lane Divided	963+6.900	965+0.000	131.00	0.0248	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	0	false	false	0.0	12.55	Traversable Median	24.55	Intermediate/High	0	8.00	11.00
126	Urban/Suburban Arterial Segment Four-lane Divided	965+0.000	966+3.800	138.00	0.0261	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	0	false	false	0.0	7.54	Traversable Median	19.54	Intermediate/High	0	4.00	11.00
127	Urban/Suburban Arterial Segment Four-lane Divided	966+3.800	966+7.000	32.00	0.0061	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	0	false	false	0.0	4.38	Traversable Median	16.38	Intermediate/High	0	4.00	11.00

Se g. No.	Type	Start Locati on (Sta. ft)	End Locati on (Sta. ft)	Len gth (ft)	Len gth (mi)	AADT	Number Major Commer cial Drivewa ys	Number Minor Commer cial Drivewa ys	Number Major Industrial/I nstitutional	Number Minor Industrial/I nstitutional	Number Major Resident ial Drivewa ys	Number Minor Resident ial Drivewa ys	Number Other Drivewa ys	Lighti ng	Automat ed Speed Enforce ment	Dens ity (fixe d objec ts/mi)	Med ian Wid th (ft)	Type	Effecti ve Media n Width (ft)	Speed Level	Numbe r Rail Highw ay Crossi ngs	Avera ge Shoul der Width (ft)	Aver age Lane Width (ft)
12 8	Urban/Suburban Arterial Segment Four-lane Divided	966+7 0.000	966+9 1.000	21.0 0	0.00 40	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	false	false	0.0	3.39	Traversable Median	15.39	Intermediate/High	0	0.00	11.00
12 9	Urban/Suburban Arterial Segment Four-lane Undivided	966+9 1.000	967+1 4.000	23.0 0	0.00 44	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	true	false	0.0	0.00	None	0.00	Intermediate/High	0	0.00	11.00
13 0	Urban/Suburban Arterial Segment Four-lane Undivided	967+1 4.000	967+2 0.000	6.00 0	0.00 11	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	true	false	0.0	0.00	None	0.00	Intermediate/High	0	8.00	11.00
13 1	Urban/Suburban Arterial Segment Four-lane Undivided	967+2 0.000	967+4 5.000	25.0 0	0.00 47	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	false	false	0.0	0.00	None	0.00	Intermediate/High	0	8.00	11.00
13 2	Urban/Suburban Arterial Segment Four-lane Divided	967+4 5.000	968+0 6.000	61.0 0	0.01 16	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	false	false	0.0	4.01	Non- Traversable Median	18.01	Intermediate/High	0	8.00	11.00
13 3	Urban/Suburban Arterial Segment Four-lane Divided	968+0 6.000	970+7 9.000	273. 00	0.05 17	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	false	false	0.0	9.52	Non- Traversable Median	23.52	Intermediate/High	0	8.00	11.00
13 4	Urban/Suburban Arterial Segment Four-lane Divided	970+7 9.000	971+0 9.000	30.0 0	0.00 57	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	false	false	0.0	14.53	Non- Traversable Median	14.53	Intermediate/High	0	8.00	11.00
13 5	Urban/Suburban Arterial Segment Four-lane Divided	971+0 9.000	974+1 1.000	302. 00	0.05 72	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	false	false	0.0	20.01	Non- Traversable Median	20.01	Intermediate/High	0	8.00	11.00

Table 22. Crash Highway Highway - Homogeneous Segments (Section 4)

Se g. No.	Type	Start Locatio n (Sta. ft)	End Locatio n (Sta. ft)	Length (ft)	Length (mi)	AADT	Number Major Commercial Driveways	Number Minor Commercial Driveways	Number Major Industrial/Inst itutional	Number Minor Industrial/Inst itutional	Number Major Residential Driveways	Number Minor Residential Driveways	Number Other Driveways	Lightin g	Automated Speed Enforceme nt	Densit y (fixed object s/m)	Medi an Width h (ft)	Type	Effective Median Width (ft)	Speed Level	Number Rail Highwa y Crossing s	Averag e Should er Width (ft)	Avera ge Lane Width (ft)
11 7	Urban/Suburban Arterial Segment Four-lane Undivided	948+50.000	950+00.000	150.00	0.0284	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	0.00	None	0.00	Intermediate/High	0	8.00	11.00
11 8	Urban/Suburban Arterial Segment Four-lane Undivided	950+00.000	954+00.000	400.00	0.0758	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	0.00	None	0.00	Intermediate/High	0	8.00	11.00
11 9	Urban/Suburban Arterial Segment Four-lane Undivided	954+00.000	955+00.000	100.00	0.0189	2018-2022: 4,900	0	0	2	0	0	0	0	false	false	0.0	0.00	None	0.00	Intermediate/High	0	4.00	11.00
12 0	Urban/Suburban Arterial Segment Four-lane Divided	955+00.000	955+55.000	55.00	0.0104	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	4.01	Non-Traversable Median	4.01	Intermediate/High	0	8.00	11.00
12 1	Urban/Suburban Arterial Segment Four-lane Divided	955+55.000	958+28.000	273.00	0.0517	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	10.02	Non-Traversable Median	10.02	Intermediate/High	0	8.00	11.00
12 2	Urban/Suburban Arterial Segment Four-lane Divided	958+28.000	961+01.000	273.00	0.0517	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	20.03	Non-Traversable Median	19.99	Intermediate/High	0	8.00	11.00
12 3	Urban/Suburban Arterial Segment Four-lane Divided	961+01.000	962+00.000	99.00	0.0187	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	23.12	Traversable Median	23.12	Intermediate/High	0	8.00	11.00
12 4	Urban/Suburban Arterial Segment Four-lane Divided	962+00.000	963+69.000	169.00	0.0320	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	18.13	Traversable Median	30.13	Intermediate/High	0	8.00	11.00
12 5	Urban/Suburban Arterial Segment Four-lane Divided	963+69.000	965+00.000	131.00	0.0248	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	12.55	Traversable Median	24.55	Intermediate/High	0	8.00	11.00
12 6	Urban/Suburban Arterial Segment Four-lane Divided	965+00.000	966+38.000	138.00	0.0261	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	7.54	Traversable Median	19.54	Intermediate/High	0	4.00	11.00
12 7	Urban/Suburban Arterial Segment Four-lane Divided	966+38.000	966+70.000	32.00	0.0061	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	4.38	Traversable Median	16.38	Intermediate/High	0	4.00	11.00
12 8	Urban/Suburban Arterial Segment Four-lane Divided	966+70.000	966+91.000	21.00	0.0040	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	3.39	Traversable Median	15.39	Intermediate/High	0	0.00	11.00
12 9	Urban/Suburban Arterial Segment Four-lane Undivided	966+91.000	967+14.000	23.00	0.0044	2018-2022: 4,900	0	0	0	0	0	0	0	true	false	0.0	0.00	None	0.00	Intermediate/High	0	0.00	11.00
13 0	Urban/Suburban Arterial Segment Four-lane Undivided	967+14.000	967+20.000	6.00	0.0011	2018-2022: 4,900	0	0	0	0	0	0	0	true	false	0.0	0.00	None	0.00	Intermediate/High	0	8.00	11.00
13 1	Urban/Suburban Arterial Segment Four-lane Undivided	967+20.000	967+45.000	25.00	0.0047	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	0.00	None	0.00	Intermediate/High	0	8.00	11.00
13 2	Urban/Suburban Arterial Segment Four-lane Divided	967+45.000	968+06.000	61.00	0.0116	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	4.01	Non-Traversable Median	18.01	Intermediate/High	0	8.00	11.00
13 3	Urban/Suburban Arterial Segment Four-lane Divided	968+06.000	970+79.000	273.00	0.0517	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	9.52	Non-Traversable Median	23.52	Intermediate/High	0	8.00	11.00
13 4	Urban/Suburban Arterial Segment Four-lane Divided	970+79.000	971+09.000	30.00	0.0057	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	14.53	Non-Traversable Median	14.53	Intermediate/High	0	8.00	11.00
13 5	Urban/Suburban Arterial Segment Four-lane Divided	971+09.000	974+11.000	302.00	0.0572	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	20.01	Non-Traversable Median	20.01	Intermediate/High	0	8.00	11.00

Table 23. Evaluation Intersection (Section 4)

Inter. No.	Title	Type	Location (Sta. ft)	Major AADT	Minor AADT	Legs	Traffic Control	Approaches w/Left Turn Lanes	Approaches w/Right Turn Lanes	Approaches w/o Right Turn on Red	Pedestrian Volume (crossings/day)	Lighted at Night	Red Light Camera	School Near by	Number of Bus Stops	Number of Alcohol Sales Establishments	Max Lanes Crossed
8	Marion Rd/SD38 (v1)	Urban/Suburban Arterial Intersection Four-Legged Signalized	966+91.000	2025: 5,766; 2026: 5,888; 2027: 6,010; 2028: 6,132; 2029: 6,255; 2030: 6,660; 2031: 7,065; 2032: 7,470; 2033: 7,875; 2034: 8,280; 2035: 8,685; 2036: 9,090; 2037: 9,495; 2038: 9,900; 2039: 10,305; 2040: 10,710; 2041: 11,861; 2042: 13,012; 2043: 14,163; 2044: 15,314; 2045: 16,465; 2046: 17,616; 2047: 18,767; 2048: 19,918; 2049: 21,069; 2050: 22,220	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	4	Signalized	4	3	0	20	false	false	false	0	0	6

Table 24. Crash History Intersection (Section 4)

Inter. No.	Title	Type	Location (Sta. ft)	Major AADT	Minor AADT	Legs	Traffic Control	Approaches w/Left Turn Lanes	Approaches w/Right Turn Lanes	Approaches w/o Right Turn on Red	Pedestrian Volume (crossings/day)	Lighted at Night	Red Light Camera	School Nearby	Number of Bus Stops	Number of Alcohol Sales Establishments	Max Lanes Crossed
8	Marion Rd/ SD38 (v1)	Urban/Suburban Arterial Intersection Four-Legged Signalized	966+91.000	2018-2022: 5,400	2018-2022: 4,900	4	Signalized	4	3	0	20	false	false	false	0	0	6

Table 25. Expected Highway Crash Rates and Frequencies Summary (Section 4)

First Year of Analysis	2025
Last Year of Analysis	2050
Evaluated Length (mi)	0.4850
Average Future Road AADT (vpd)	8,272
Expected Crashes	
Total Crashes	135.85
Fatal and Injury Crashes	46.51
Property-Damage-Only Crashes	89.34
Percent of Total Expected Crashes	
Percent Fatal and Injury Crashes (%)	34
Percent Property-Damage-Only Crashes (%)	66
Expected Crash Rate	
Crash Rate (crashes/mi/yr)	10.7725
FI Crash Rate (crashes/mi/yr)	3.6878
PDO Crash Rate (crashes/mi/yr)	7.0847
Expected Travel Crash Rate	
Total Travel (million veh-mi)	38.08
Travel Crash Rate (crashes/million veh-mi)	3.57
Travel FI Crash Rate (crashes/million veh-mi)	1.22
Travel PDO Crash Rate (crashes/million veh-mi)	2.35

Table 26. Expected Crash Frequencies and Rates by Highway Segment/Intersection (Section 4)

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/million veh-mi)	Expected Intersection Travel Crash Rate (crashes/million veh)
117	948+50.000	950+00.000	0.0284	1.343	1.459	0.0517	0.0179	0.0337	0.0561	0.0181	0.0380	-0.0044	-0.0001	-0.0043	1.8184	0.60	
118	950+00.000	954+00.000	0.0758	3.172	3.889	0.1220	0.0437	0.0783	0.1496	0.0481	0.1014	-0.0276	-0.0044	-0.0232	1.6103	0.53	
119	954+00.000	955+00.000	0.0189	4.560	6.162	0.1754	0.0651	0.1103	0.2370	0.0817	0.1553	-0.0616	-0.0167	-0.0449	9.2608	3.07	
120	955+00.000	955+55.000	0.0104	0.373	0.382	0.0143	0.0039	0.0104	0.0147	0.0039	0.0108	-0.0004	-0.0000	-0.0003	1.3757	0.46	
121	955+55.000	958+28.000	0.0517	1.685	1.897	0.0648	0.0182	0.0466	0.0730	0.0195	0.0535	-0.0082	-0.0013	-0.0069	1.2532	0.42	
122	958+28.000	961+01.000	0.0517	1.685	1.897	0.0648	0.0182	0.0466	0.0730	0.0195	0.0535	-0.0082	-0.0013	-0.0069	1.2532	0.42	
123	961+01.000	962+00.000	0.0187	0.651	0.681	0.0251	0.0069	0.0182	0.0262	0.0070	0.0192	-0.0011	-0.0001	-0.0010	1.3360	0.44	
124	962+00.000	963+69.000	0.0320	1.069	1.151	0.0411	0.0114	0.0297	0.0443	0.0118	0.0325	-0.0032	-0.0004	-0.0027	1.2842	0.42	
125	963+69.000	965+00.000	0.0248	0.850	0.901	0.0327	0.0090	0.0237	0.0347	0.0092	0.0254	-0.0020	-0.0002	-0.0017	1.3176	0.44	
126	965+00.000	966+38.000	0.0261	0.893	0.949	0.0343	0.0095	0.0249	0.0365	0.0097	0.0268	-0.0022	-0.0003	-0.0019	1.3136	0.43	
127	966+38.000	966+70.000	0.0061	0.217	0.220	0.0083	0.0023	0.0061	0.0085	0.0023	0.0062	-0.0001	0.0000	-0.0001	1.3765	0.46	
128	966+70.000	966+91.000	0.0040	0.143	0.144	0.0055	0.0015	0.0040	0.0056	0.0015	0.0041	-0.0001	0.0000	-0.0001	1.3834	0.46	
Marion Rd/ SD38 (v1)	966+91.000			114.572	49.969	4.4066	1.5303	2.8763	1.9219	0.6310	1.2909	2.4847	0.8993	1.5854			0.65
129	966+91.000	967+14.000	0.0044	0.203	0.205	0.0078	0.0027	0.0051	0.0079	0.0025	0.0054	-0.0001	0.0001	-0.0002	1.7894	0.59	
130	967+14.000	967+20.000	0.0011	0.053	0.053	0.0021	0.0007	0.0014	0.0021	0.0007	0.0014	-0.0000	0.0000	-0.0000	1.8054	0.60	
131	967+20.000	967+45.000	0.0047	0.240	0.243	0.0092	0.0031	0.0061	0.0093	0.0030	0.0063	-0.0001	0.0001	-0.0003	1.9466	0.65	
132	967+45.000	968+06.000	0.0116	0.412	0.424	0.0159	0.0043	0.0115	0.0163	0.0043	0.0120	-0.0005	-0.0000	-0.0004	1.3720	0.45	
133	968+06.000	970+79.000	0.0517	1.685	1.897	0.0648	0.0182	0.0466	0.0730	0.0195	0.0535	-0.0082	-0.0013	-0.0069	1.2532	0.42	
134	970+79.000	971+09.000	0.0057	0.206	0.208	0.0079	0.0021	0.0058	0.0080	0.0021	0.0059	-0.0001	0.0000	-0.0001	1.3915	0.46	
135	971+09.000	974+11.000	0.0572	1.842	2.098	0.0708	0.0199	0.0509	0.0807	0.0215	0.0592	-0.0099	-0.0016	-0.0083	1.2387	0.41	
All Segments			0.4850	21.280	24.862	0.8185	0.2585	0.5600	0.9562	0.2860	0.6702	-0.1378	-0.0275	-0.1102	1.6874	0.56	
All Intersections				114.572	49.969	4.4066	1.5303	2.8763	1.9219	0.6310	1.2909	2.4847	0.8993	1.5854			0.65
Total			0.4850	135.852	74.831	5.2251	1.7887	3.4363	2.8781	0.9170	1.9611	2.3470	0.8718	1.4752	10.7725		

Table 27. Expected Crash Frequencies and Rates by Horizontal Design Element (Section 4)

Title	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/million veh-mi)
Tangent	948+50.000	974+11.000	0.4850	21.280	24.862	0.8185	0.2585	0.5600	0.9562	0.2860	0.6702	-0.1378	-0.0275	-0.1102	1.6874	0.56

Table 28. Predicted Crash Frequencies by Year (Section 4)

Year	Total Crashes	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)
2025	1.54	0.47	30.768	1.07	69.232
2026	1.62	0.50	30.791	1.12	69.209
2027	1.69	0.52	30.812	1.17	69.188
2028	1.77	0.55	30.830	1.22	69.170
2029	1.85	0.57	30.847	1.28	69.153
2030	1.93	0.60	30.902	1.33	69.098
2031	2.01	0.62	30.960	1.39	69.040
2032	2.10	0.65	31.018	1.45	68.982
2033	2.18	0.68	31.078	1.50	68.922
2034	2.27	0.71	31.139	1.56	68.862
2035	2.35	0.73	31.199	1.62	68.801
2036	2.44	0.76	31.260	1.68	68.740
2037	2.53	0.79	31.321	1.74	68.679
2038	2.61	0.82	31.381	1.79	68.618
2039	2.70	0.85	31.442	1.85	68.558
2040	2.79	0.88	31.502	1.91	68.498
2041	3.01	0.95	31.680	2.06	68.320
2042	3.24	1.03	31.854	2.21	68.146
2043	3.46	1.11	32.026	2.35	67.975
2044	3.69	1.19	32.192	2.50	67.808
2045	3.92	1.27	32.354	2.65	67.646
2046	4.15	1.35	32.511	2.80	67.489
2047	4.39	1.43	32.664	2.95	67.336
2048	4.62	1.52	32.811	3.11	67.189
2049	4.86	1.60	32.954	3.26	67.046
2050	5.10	1.69	33.093	3.41	66.907
Total	74.83	23.84	31.860	50.99	68.140
Average	2.88	0.92	31.860	1.96	68.140

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 29. Expected Crash Frequencies by Year (Section 4)

Year	Total Crashes	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)
2025	2.80	0.93	33.060	1.87	66.820
2026	2.94	0.97	33.085	1.96	66.798
2027	3.07	1.02	33.107	2.05	66.778
2028	3.21	1.06	33.127	2.15	66.760
2029	3.35	1.11	33.145	2.24	66.744
2030	3.50	1.16	33.205	2.34	66.691
2031	3.65	1.22	33.266	2.44	66.635
2032	3.81	1.27	33.329	2.54	66.579
2033	3.96	1.32	33.394	2.63	66.521
2034	4.12	1.38	33.458	2.74	66.463
2035	4.27	1.43	33.524	2.84	66.404
2036	4.43	1.49	33.589	2.94	66.346
2037	4.59	1.54	33.654	3.04	66.287
2038	4.75	1.60	33.719	3.14	66.228
2039	4.91	1.66	33.784	3.25	66.170
2040	5.07	1.72	33.849	3.35	66.112
2041	5.47	1.86	34.040	3.61	65.941
2042	5.88	2.01	34.228	3.86	65.772
2043	6.29	2.16	34.411	4.12	65.607
2044	6.70	2.32	34.590	4.38	65.446
2045	7.12	2.47	34.765	4.65	65.289
2046	7.54	2.63	34.934	4.91	65.138
2047	7.96	2.79	35.097	5.18	64.991
2048	8.39	2.96	35.256	5.44	64.848
2049	8.82	3.12	35.409	5.71	64.710
2050	9.26	3.29	35.558	5.98	64.577
Total	135.85	46.51	34.234	89.34	65.766
Average	5.22	1.79	34.234	3.44	65.766

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 30. Comparing Predicted and Expected Crashes for the Evaluation Period (Section 4)

Scope	Total Crashes	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)
Predicted	74.83	23.84	31.860	50.99	68.140
Expected	135.85	46.51	34.234	89.34	65.766
Expected - Predicted	61.02	22.67		38.35	
Percent Difference	44.92	48.74		42.93	

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 31. Expected Five Lane or Fewer Crash Type Distribution (Section 4)

Element Type	Crash Type	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)	Total Crashes	Percent Total (%)
Highway Segment	Collision with Animal	0.00	0.0	0.21	0.2	0.21	0.2
Highway Segment	Collision with Bicycle	0.09	0.1	0.00	0.0	0.09	0.1
Highway Segment	Collision with Fixed Object	0.57	0.4	3.57	2.6	4.14	3.0
Highway Segment	Collision with Other Object	0.03	0.0	0.09	0.1	0.11	0.1
Highway Segment	Other Single-vehicle Collision	0.43	0.3	0.53	0.4	0.97	0.7
Highway Segment	Collision with Pedestrian	0.34	0.3	0.00	0.0	0.34	0.3
Highway Segment	Total Single Vehicle Crashes	1.47	1.1	4.39	3.2	5.86	4.3
Highway Segment	Angle Collision	0.37	0.3	0.54	0.4	0.91	0.7
Highway Segment	Driveway-related Collision	1.32	1.0	2.27	1.7	3.58	2.6
Highway Segment	Head-on Collision	0.17	0.1	0.05	0.0	0.21	0.2
Highway Segment	Other Multi-vehicle Collision	0.20	0.1	0.58	0.4	0.79	0.6
Highway Segment	Rear-end Collision	2.79	2.1	4.80	3.5	7.59	5.6
Highway Segment	Sideswipe, Opposite Direction Collision	0.15	0.1	0.09	0.1	0.24	0.2
Highway Segment	Sideswipe, Same Direction Collision	0.26	0.2	1.83	1.3	2.09	1.5
Highway Segment	Total Multiple Vehicle Crashes	5.25	3.9	10.16	7.5	15.42	11.3
Highway Segment	Total Highway Segment Crashes	6.72	4.9	14.56	10.7	21.28	15.7
Intersection	Collision with Animal	0.00	0.0	0.00	0.0	0.01	0.0
Intersection	Collision with Bicycle	0.73	0.5	0.00	0.0	0.73	0.5
Intersection	Collision with Fixed Object	0.90	0.7	1.71	1.3	2.61	1.9
Intersection	Non-Collision	0.17	0.1	0.07	0.0	0.24	0.2
Intersection	Collision with Other Object	0.09	0.1	0.14	0.1	0.23	0.2
Intersection	Other Single-vehicle Collision	0.05	0.0	0.04	0.0	0.09	0.1
Intersection	Collision with Parked Vehicle	0.00	0.0	0.00	0.0	0.00	0.0
Intersection	Collision with Pedestrian	0.44	0.3	0.00	0.0	0.44	0.3
Intersection	Total Intersection Single Vehicle Crashes	2.38	1.7	1.97	1.4	4.34	3.2
Intersection	Angle Collision	12.98	9.6	17.77	13.1	30.75	22.6
Intersection	Head-on Collision	1.83	1.3	2.18	1.6	4.02	3.0
Intersection	Other Multi-vehicle Collision	2.06	1.5	15.36	11.3	17.42	12.8
Intersection	Rear-end Collision	16.84	12.4	35.17	25.9	52.01	38.3
Intersection	Sideswipe	3.70	2.7	2.33	1.7	6.03	4.4
Intersection	Total Intersection Multiple Vehicle Crashes	37.41	27.5	72.82	53.6	110.23	81.1
Intersection	Total Intersection Crashes	39.79	29.3	74.78	55.0	114.57	84.3
	Total Crashes	46.51	34.2	89.34	65.8	135.85	100.0

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Interactive Highway Safety Design Model

Crash Prediction Evaluation Report

June 10, 2024

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Report Overview

Report Generated: Jun 10, 2024 10:00 AM

Report Template: System: Single Page, 508 Compliant [System] (mlcpm5, Dec 5, 2019 2:16 PM)

Evaluation Date: Mon Jun 10 10:00:02 CDT 2024

IHSDM Version: v17.0.0 (Sep 22, 2021)

Crash Prediction Module: v12.0.0 (Sep 22, 2021)

User Name: naveen.mallipaddi

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Phone:

E-Mail:

Project Title: SD-38_Build_Option3_I90EBRamp_I

Project Comment: Created Mon Mar 27 16:47:43 CDT 2023

Project Unit System: U.S. Customary

Highway Title: SD-38

Highway Comment: Created Mon Mar 27 16:49:47 CDT 2023

Highway Version: 17

Evaluation Title: Option3_SD19_4644th

Evaluation Comment: Created Mon Jun 10 09:58:59 CDT 2024

Minimum Location: 171+44.000

Maximum Location: 580+10.000

Policy for Superelevation: AASHTO 2011 U.S. Customary

Calibration: HSM Configuration

Crash Distribution: HSM Configuration

Model/CMF: HSM Configuration

First Year of Analysis: 2025

Last Year of Analysis: 2050

Empirical-Bayes Analysis: Site-Specific

Highway with Crash History: SD-38

Highway with Crash History Comment: Created Mon Mar 27 16:49:47 CDT 2023

Highway with Crash History Version: 17

First Year of Observed Crashes: 2018

Last Year of Observed Crashes: 2022

Disclaimer Regarding Crash Prediction Method

IMPORTANT NOTICE ABOUT COMPARING RESULTS FROM HIGHWAY SAFETY MANUAL FIRST EDITION (2010) MODELS TO RESULTS FROM NEW MODELS DEVELOPED UNDER NCHRP PROJECTS 17-70, 17-58, AND 17-68

Since the publication of the Highway Safety Manual - First Edition (HSM-1), in 2010 by the American Association of State Highway and Transportation Officials (AASHTO), multiple research efforts have been undertaken through the National Cooperative Highway Research Program (NCHRP) to develop safety performance models for road segment and intersection facility types that were not initially reflected in the HSM-1, in order to expand the breadth and depth of the HSM in the future.

The IHSDM Crash Prediction Module (CPM) is intended as a faithful implementation of HSM Part C predictive methods. As NCHRP projects to develop new predictive methods for the HSM are completed, FHWA works to incorporate the new methods into IHSDM, sometimes in advance of publication in the HSM. The following new crash predictive methods have been accepted by NCHRP project panels and incorporated into IHSDM, while pending AASHTO's approval for incorporation into a future edition of the HSM:

- Roundabouts: completed in 2018 under NCHRP Project 17-70, the new methods will provide improved outcomes for the safety analysis of roundabouts.
- 6+ lane and one-way urban/suburban arterials (including models for segments and intersections): completed under NCHRP Project 17-58.
- Intersection crash prediction methods for some intersection configurations and traffic control types not currently addressed in the HSM (e.g., all-way stop; rural 3-leg signalized; 3-leg stop-controlled where the major leg turns; urban 5-leg signalized; urban high-speed intersections): completed in 2021 under NCHRP Project 17-68.

However, in the absence of local calibration factors (see HSM-1 Part C, Appendix A for guidance on calibration of the predictive models), it is neither appropriate nor advisable to directly compare the results from new models (from NCHRP Projects 17-58, 17-68, and 17-70) to results from HSM-1 models, as the models were not calibrated to the same base state data sets, and consequently can produce unexpected results. If local calibration factors are available and applied to both new models and HSM-1 models, then it may be appropriate to directly compare the results. *[Note: Work being performed under NCHRP Project 17-72 (Update of Crash Modification Factors for the Highway Safety Manual) is expected to re-calibrate many of the old (HSM-1) and new (e.g., NCHRP 17-70) models to data from a single (or small number of) states, that would allow results from all models to be directly compared.]*

The models produced for NCHRP Project 17-70 have independent value in terms of informing the design of a roundabout and assessing the effects of different design characteristics on the expected safety performance of a roundabout.

The HSM-1 interim method previously included in IHSDM for evaluating roundabouts on urban/suburban arterials (i.e., evaluating an existing intersection and then applying a Crash Modification Factor for replacing the existing intersection with a roundabout) has been deactivated in IHSDM, to minimize any confusion with the new roundabout methodology.

Section Types

Section 1 Evaluation

Section: Section 1

Evaluation Start Location: 171+44.000

Evaluation End Location: 580+10.000

Area Type: Rural

Functional Class: Arterial

Type of Alignment: Undivided, Two Lane

Model Category: Rural, Two Lane

Calibration Factor: 2U=1.0; 3ST=1.0; 4ST=1.0;

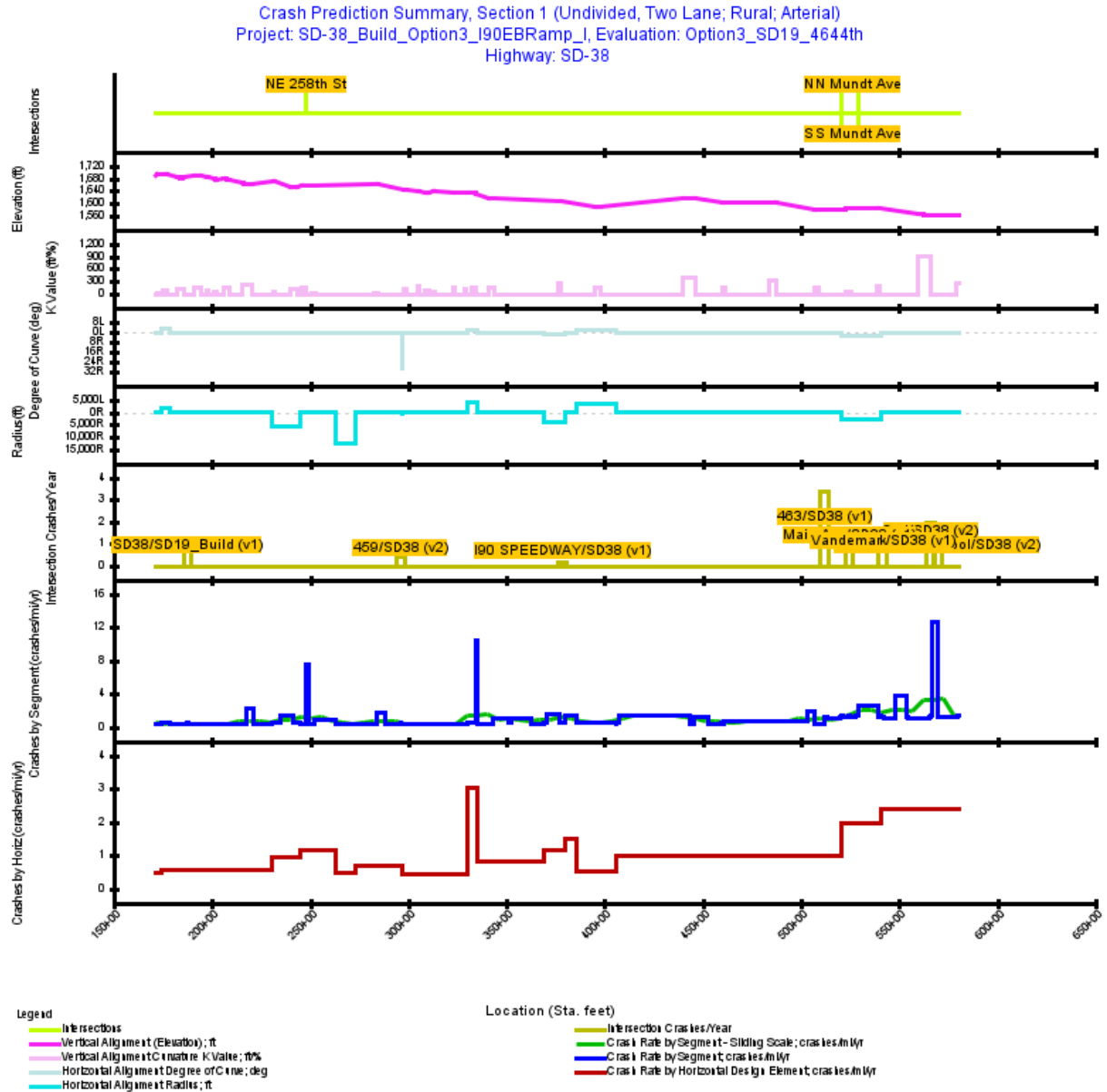


Figure 1. Crash Prediction Summary (Section 1)

Table 1. Observed Crashes Used in the Evaluation (Section 1)

Year	Observed Crashes	Total Crashes Used	FI Crashes	FI no/C Crashes	PDO Crashes
2018	9	9	2	1	7
2019	5	4	1	0	3
2020	9	9	5	1	4
2021	8	7	3	1	4
2022	6	6	3	1	3
All Years	37 ^[1]	35	14	4	21

Footnotes

^[1] Note: Observed crash data that does not comply with the associated CPM model requirements may not be used in EB processing.

Table 2. Evaluation Highway - Homogeneous Segments (Section 1)

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
1	Rural Two-Lane Segment Two-lane Undivided	171+44.000	172+42.000	98.00	0.0186	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	4.25	6.2	3	false	0	false	false	false				
2	Rural Two-Lane Segment Two-lane Undivided	172+42.000	174+52.690	210.69	0.0399	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.17	6.2	3	false	0	false	false	false				
3	Rural Two-Lane Segment Two-lane Undivided	174+52.690	176+25.000	172.31	0.0326	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.17	6.2	3	false	0	false	false	false	2,074.80	2.0	true	40
4	Rural Two-Lane Segment Two-lane Undivided	176+25.000	178+85.250	260.25	0.0493	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.88	6.2	3	false	0	false	false	false	2,074.80	2.0	true	40
5	Rural Two-Lane Segment Two-lane Undivided	178+85.250	183+75.370	490.12	0.0928	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.88	6.2	3	false	0	false	false	false				
6	Rural Two-Lane Segment Two-lane Undivided	183+75.370	184+00.000	24.63	0.0047	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
7	Rural Two-Lane Segment Two-lane Undivided	184+00.000	184+45.000	45.00	0.0085	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
8	Rural Two-Lane Segment Two-lane Undivided	184+45.000	185+20.000	75.00	0.0142	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
9	Rural Two-Lane Segment Two-lane Undivided	185+20.000	186+60.000	140.00	0.0265	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
10	Rural Two-Lane Segment Two-lane Undivided	186+60.000	187+20.000	60.00	0.0114	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
11	Rural Two-Lane Segment Two-lane Undivided	187+20.000	187+60.000	40.00	0.0076	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	0.00	1.13	6.2	3	false	0	false	false	false				
12	Rural Two-Lane Segment Two-lane Undivided	187+60.000	190+00.000	240.00	0.0455	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
13	Rural Two-Lane Segment Two-lane Undivided	190+00.000	192+00.000	200.00	0.0379	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
14	Rural Two-Lane Segment Two-lane Undivided	192+00.000	192+39.270	39.27	0.0074	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				

Seg No.	Type	Start Locatio n (Sta. ft)	End Locatio n (Sta. ft)	Length (ft)	Length (mi)	AAADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
15	Rural Two-Lane Segment Two-lane Undivided	192+39. 270	193+60. 000	120.7 3	0.022 9	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	- 0.94	6.2	3	false	0	false	false	false				
16	Rural Two-Lane Segment Two-lane Undivided	193+60. 000	197+65. 000	405.0 0	0.076 7	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	- 0.94	6.2	3	false	0	false	false	false				
17	Rural Two-Lane Segment Two-lane Undivided	197+65. 000	199+00. 000	135.0 0	0.025 6	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	- 1.94	6.2	3	false	0	false	false	false				
18	Rural Two-Lane Segment Two-lane Undivided	199+00. 000	201+63. 750	263.7 5	0.050 0	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	- 1.94	6.2	3	false	0	false	false	false				
19	Rural Two-Lane Segment Two-lane Undivided	201+63. 750	202+00. 000	36.25 0	0.006 9	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	0.13	6.2	3	false	0	false	false	false				
20	Rural Two-Lane Segment Two-lane Undivided	202+00. 000	207+00. 000	500.0 0	0.094 7	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	0.13	6.2	3	false	0	false	false	false				
21	Rural Two-Lane Segment Two-lane Undivided	207+00. 000	207+49. 760	49.76 4	0.009 4	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	0.13	6.2	3	false	0	false	false	false				
22	Rural Two-Lane Segment Two-lane Undivided	207+49. 760	217+74. 250	1,024. 49	0.194 0	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	- 1.70	6.2	3	false	0	false	false	false				
23	Rural Two-Lane Segment Two-lane Undivided	217+74. 250	221+00. 000	325.7 5	0.061 7	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	0.77	6.2	3	false	0	false	false	false				
24	Rural Two-Lane Segment Two-lane Undivided	221+00. 000	226+00. 000	500.0 0	0.094 7	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	0.77	6.2	3	false	0	false	false	false				
25	Rural Two-Lane Segment Two-lane Undivided	226+00. 000	230+66. 250	466.2 5	0.088 3	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	0.77	6.2	3	false	0	false	false	false				
26	Rural Two-Lane Segment Two-lane Undivided	230+66. 250	231+39. 700	73.45 9	0.013 9	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	0.77	6.2	3	false	0	false	false	false	5,644. 64	2.0	true	70
27	Rural Two-Lane Segment Two-lane Undivided	231+39. 700	235+00. 000	360.3 0	0.068 2	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	- 2.00	6.2	3	false	0	false	false	false	5,644. 64	2.0	true	70
28	Rural Two-Lane Segment Two-lane Undivided	235+00. 000	241+61. 390	661.3 9	0.125 3	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	- 2.00	6.2	3	false	0	false	false	false	5,644. 64	2.0	true	70
29	Rural Two-Lane Segment Two-lane Undivided	241+61. 390	242+00. 000	38.61 3	0.007 3	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.0 0	12.0 0	8.00	8.00	1.16	6.2	3	false	0	false	false	false	5,644. 64	2.0	true	70

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
30	Rural Two-Lane Segment Two-lane Undivided	242+00.000	245+14.280	314.28	0.0595	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.16	6.2	3	false	0	false	false	false	5,644.64	2.0	true	70
31	Rural Two-Lane Segment Two-lane Undivided	245+14.280	246+55.100	140.82	0.0267	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.16	6.2	3	false	0	false	false	false				
32	Rural Two-Lane Segment Two-lane Undivided	246+55.100	248+00.000	144.90	0.0274	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.42	6.2	3	false	0	false	false	false				
33	Rural Two-Lane Segment Two-lane Undivided	248+00.000	249+00.000	100.00	0.0189	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	0.00	-0.42	6.2	3	false	0	false	false	false				
34	Rural Two-Lane Segment Two-lane Undivided	249+00.000	251+21.980	221.98	0.0428	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.42	6.2	3	false	0	false	false	false				
35	Rural Two-Lane Segment Two-lane Undivided	251+21.980	252+40.240	118.26	0.0224	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	3.43	6.2	3	false	0	false	false	false				
36	Rural Two-Lane Segment Two-lane Undivided	252+40.240	263+22.600	1,082.36	0.2050	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.02	6.2	3	false	0	false	false	false				
37	Rural Two-Lane Segment Two-lane Undivided	263+22.600	272+66.740	944.14	0.1788	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.02	6.2	3	false	0	false	false	false	12,237.00	2.0	true	70
38	Rural Two-Lane Segment Two-lane Undivided	272+66.740	280+00.000	733.26	0.1389	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.02	6.2	3	false	0	false	false	false				
39	Rural Two-Lane Segment Two-lane Undivided	280+00.000	283+15.050	315.05	0.0597	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.02	6.2	3	false	0	false	false	false				
40	Rural Two-Lane Segment Two-lane Undivided	283+15.050	284+08.540	93.49	0.0177	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	4.47	6.2	3	false	0	false	false	false				
41	Rural Two-Lane Segment Two-lane Undivided	284+08.540	288+50.000	441.46	0.0836	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.47	6.2	3	false	0	false	false	false				
42	Rural Two-Lane Segment Two-lane Undivided	288+50.000	289+00.000	50.00	0.0095	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.47	6.2	3	false	0	false	false	false				
43	Rural Two-Lane Segment Two-lane Undivided	289+00.000	295+90.000	690.00	0.1307	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.47	6.2	3	false	0	false	false	false				
44	Rural Two-Lane Segment Two-lane Undivided	295+90.000	296+00.000	10.00	0.0019	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	0.00	-1.47	6.2	3	false	0	false	false	false				

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AAADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
45	Rural Two-Lane Segment Two-lane Undivided	296+00.000	296+10.000	10.00	0.0019	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	0.00	-1.47	6.2	3	false	0	false	false	false				
46	Rural Two-Lane Segment Two-lane Undivided	296+10.000	296+96.520	86.52	0.0164	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.47	6.2	3	false	0	false	false	false				
47	Rural Two-Lane Segment Two-lane Undivided	296+96.520	298+33.660	137.14	0.0260	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.47	6.2	3	false	0	false	false	false				
48	Rural Two-Lane Segment Two-lane Undivided	298+33.660	303+50.000	516.34	0.00978	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.61	6.2	3	false	0	false	false	false				
49	Rural Two-Lane Segment Two-lane Undivided	303+50.000	304+50.000	100.00	0.0189	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.61	6.2	3	false	0	false	false	false				
50	Rural Two-Lane Segment Two-lane Undivided	304+50.000	305+02.039	52.04	0.0099	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.61	6.2	3	false	0	false	false	false				
51	Rural Two-Lane Segment Two-lane Undivided	305+02.039	309+35.490	433.45	0.00821	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.15	6.2	3	false	0	false	false	false				
52	Rural Two-Lane Segment Two-lane Undivided	309+35.490	311+70.000	234.51	0.0044	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.24	6.2	3	false	0	false	false	false				
53	Rural Two-Lane Segment Two-lane Undivided	311+70.000	313+25.000	155.00	0.00294	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	1.24	6.2	3	false	0	false	false	false				
54	Rural Two-Lane Segment Two-lane Undivided	313+25.000	323+00.000	975.00	0.01847	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.33	6.2	3	false	0	false	false	false				
55	Rural Two-Lane Segment Two-lane Undivided	323+00.000	323+26.980	26.98	0.00051	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.33	6.2	3	false	0	false	false	false				
56	Rural Two-Lane Segment Two-lane Undivided	323+26.980	328+89.230	562.25	0.01065	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.26	6.2	3	false	0	false	false	false				
57	Rural Two-Lane Segment Two-lane Undivided	328+89.230	329+81.740	92.51	0.00175	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.52	6.2	3	false	0	false	false	false				
58	Rural Two-Lane Segment Two-lane Undivided	329+81.740	333+24.920	343.18	0.00658	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.52	6.2	3	false	0	false	false	false	4,010.13	2.0	true	70
59	Rural Two-Lane Segment Two-lane Undivided	333+24.920	334+00.000	75.08	0.00142	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-2.17	6.2	3	false	0	false	false	false	4,010.13	2.0	true	70

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
60	Rural Two-Lane Segment Two-lane Undivided	334+00.000	335+39.960	139.96	0.0265	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-2.17	6.2	3	false	0	false	false	false	4,010.13	2.0	true	70
61	Rural Two-Lane Segment Two-lane Undivided	335+39.960	342+39.000	699.04	0.1324	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-2.17	6.2	3	false	0	false	false	false				
62	Rural Two-Lane Segment Two-lane Undivided	342+39.000	343+00.000	61.00	0.0116	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false				
63	Rural Two-Lane Segment Two-lane Undivided	343+00.000	351+20.000	820.00	0.1553	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false				
64	Rural Two-Lane Segment Two-lane Undivided	351+20.000	352+00.000	80.00	0.0152	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	0.00	-0.24	6.2	3	false	0	false	false	false				
65	Rural Two-Lane Segment Two-lane Undivided	352+00.000	352+20.000	20.00	0.0038	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	0.00	-0.24	6.2	3	false	0	false	false	false				
66	Rural Two-Lane Segment Two-lane Undivided	352+20.000	362+50.000	1,030.00	0.1951	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false				
67	Rural Two-Lane Segment Two-lane Undivided	362+50.000	369+14.990	664.99	0.1259	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false				
68	Rural Two-Lane Segment Two-lane Undivided	369+14.990	370+30.000	115.01	0.0218	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
69	Rural Two-Lane Segment Two-lane Undivided	370+30.000	370+60.000	30.00	0.0057	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
70	Rural Two-Lane Segment Two-lane Undivided	370+60.000	376+83.610	623.61	0.1181	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
71	Rural Two-Lane Segment Two-lane Undivided	376+83.610	378+00.000	116.39	0.0220	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
72	Rural Two-Lane Segment Two-lane Undivided	378+00.000	378+40.000	40.00	0.0076	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	8.00	-1.04	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
73	Rural Two-Lane Segment Two-lane Undivided	378+40.000	378+60.000	20.00	0.0038	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	8.00	-1.04	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
74	Rural Two-Lane Segment Two-lane Undivided	378+60.000	379+00.000	40.00	0.0076	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	8.00	-1.04	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
75	Rural Two-Lane Segment Two-lane Undivided	379+00.000	379+62.690	62.69	0.0119	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
76	Rural Two-Lane Segment Two-lane Undivided	379+62.690	385+22.970	560.28	0.1061	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false				
77	Rural Two-Lane Segment Two-lane Undivided	385+22.970	386+60.000	137.03	0.0260	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
78	Rural Two-Lane Segment Two-lane Undivided	386+60.000	389+50.000	290.00	0.0549	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
79	Rural Two-Lane Segment Two-lane Undivided	389+50.000	394+00.000	450.00	0.0852	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
80	Rural Two-Lane Segment Two-lane Undivided	394+00.000	396+46.150	246.15	0.0466	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
81	Rural Two-Lane Segment Two-lane Undivided	396+46.150	397+00.000	53.85	0.0102	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.72	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
82	Rural Two-Lane Segment Two-lane Undivided	397+00.000	399+00.000	200.00	0.0379	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	8.00	0.72	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
83	Rural Two-Lane Segment Two-lane Undivided	399+00.000	405+75.410	675.41	0.1279	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.72	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
84	Rural Two-Lane Segment Two-lane Undivided	405+75.410	406+00.000	24.59	0.0047	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.72	6.2	3	false	0	false	false	false				
85	Rural Two-Lane Segment Two-lane Undivided	406+00.000	407+00.000	100.00	0.0189	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	0.00	8.00	0.72	6.2	3	false	0	false	false	false				
86	Rural Two-Lane Segment Two-lane Undivided	407+00.000	443+25.000	3,625.00	0.6866	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.72	6.2	3	false	0	false	false	false				
87	Rural Two-Lane Segment Two-lane Undivided	443+25.000	445+50.000	225.00	0.0426	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
88	Rural Two-Lane Segment Two-lane Undivided	445+50.000	452+50.000	700.00	0.1326	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
89	Rural Two-Lane Segment Two-lane Undivided	452+50.000	459+00.000	650.00	0.1231	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AAADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
90	Rural Two-Lane Segment Two-lane Undivided	459+00.000	460+00.000	100.00	0.0189	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	0.00	-0.96	6.2	3	false	0	false	false	false				
91	Rural Two-Lane Segment Two-lane Undivided	460+00.000	460+58.580	58.58	0.0111	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
92	Rural Two-Lane Segment Two-lane Undivided	460+58.580	485+61.230	2,502.65	0.4740	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-0.01	6.2	3	false	0	false	false	false				
93	Rural Two-Lane Segment Two-lane Undivided	485+61.230	503+00.000	1,738.77	0.3293	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.07	6.2	3	false	0	false	false	false				
94	Rural Two-Lane Segment Two-lane Undivided	503+00.000	507+00.000	400.00	0.0758	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.07	6.2	3	false	0	false	false	false				
95	Rural Two-Lane Segment Two-lane Undivided	507+00.000	508+00.000	100.00	0.0189	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.07	6.2	3	false	0	false	true	false				
96	Rural Two-Lane Segment Two-lane Undivided	508+00.000	508+08.240	8.24	0.0016	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	-1.07	6.2	3	false	0	false	true	false				
97	Rural Two-Lane Segment Two-lane Undivided	508+08.240	510+30.000	221.76	0.0420	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.21	6.2	3	false	0	false	true	false				
98	Rural Two-Lane Segment Two-lane Undivided	510+30.000	512+00.000	170.00	0.0322	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	12.00	12.00	8.00	8.00	0.21	6.2	3	false	0	false	false	false				
99	Rural Two-Lane Segment Two-lane Undivided	512+00.000	513+00.000	100.00	0.0189	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	0.21	6.2	3	false	0	false	true	false				
100	Rural Two-Lane Segment Two-lane Undivided	513+00.000	515+00.000	200.00	0.0379	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	0.21	6.2	3	false	0	false	true	false				
101	Rural Two-Lane Segment Two-lane Undivided	515+00.000	520+00.000	500.00	0.0947	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	0.21	6.2	3	false	0	true	true	false				
102	Rural Two-Lane Segment Two-lane Undivided	520+00.000	520+49.150	49.15	0.0093	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	0.21	6.2	3	false	0	false	true	false				

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
103	Rural Two-Lane Segment Two-lane Undivided	520+49.150	521+00.000	50.85	0.0096	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	0.21	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
104	Rural Two-Lane Segment Two-lane Undivided	521+00.000	523+38.600	238.60	0.0452	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	0.21	6.2	3	false	0	true	true	false	2,458.49	2.0	true	45
105	Rural Two-Lane Segment Two-lane Undivided	523+38.600	524+00.000	61.40	0.0116	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	1.90	6.2	3	false	0	true	true	false	2,458.49	2.0	true	45
106	Rural Two-Lane Segment Two-lane Undivided	524+00.000	525+00.000	100.00	0.0189	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	1.90	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
107	Rural Two-Lane Segment Two-lane Undivided	525+00.000	525+18.580	18.58	0.0035	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	1.90	6.2	3	false	0	true	true	false	2,458.49	2.0	true	45
108	Rural Two-Lane Segment Two-lane Undivided	525+18.580	528+00.000	281.42	0.0533	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.02	6.2	3	false	0	true	true	false	2,458.49	2.0	true	45
109	Rural Two-Lane Segment Two-lane Undivided	528+00.000	529+00.000	100.00	0.0189	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	-0.02	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
110	Rural Two-Lane Segment Two-lane Undivided	529+00.000	539+00.000	1,000.00	0.1894	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.02	6.2	3	false	0	true	true	false	2,458.49	2.0	true	45
111	Rural Two-Lane Segment Two-lane Undivided	539+00.000	539+50.000	50.00	0.0095	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.02	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
112	Rural Two-Lane Segment Two-lane Undivided	539+50.000	540+00.000	50.00	0.0095	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
113	Rural Two-Lane Segment Two-lane Undivided	540+00.000	540+50.000	50.00	0.0095	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
114	Rural Two-Lane Segment Two-lane Undivided	540+50.000	540+74.370	24.37	0.0046	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
115	Rural Two-Lane Segment Two-lane Undivided	540+74.370	541+00.000	25.63	0.0049	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	true	false				
116	Rural Two-Lane Segment Two-lane Undivided	541+00.000	541+50.000	50.00	0.0095	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	true	false				
117	Rural Two-Lane Segment Two-lane Undivided	541+50.000	541+70.000	20.00	0.0038	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	true	false				
118	Rural Two-Lane Segment Two-lane Undivided	541+70.000	542+30.000	60.00	0.0114	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	true	false				
119	Rural Two-Lane Segment Two-lane Undivided	542+30.000	542+64.000	34.00	0.0064	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	true	false				
120	Rural Two-Lane Segment Two-lane Undivided	542+64.000	543+34.000	70.00	0.0133	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	true	false				
121	Rural Two-Lane Segment Two-lane Undivided	543+34.000	544+00.000	66.00	0.0125	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	true	false				
122	Rural Two-Lane Segment Two-lane Undivided	544+00.000	545+00.000	100.00	0.0189	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
123	Rural Two-Lane Segment Two-lane Undivided	545+00.000	548+23.000	323.00	0.0612	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
124	Rural Two-Lane Segment Two-lane Undivided	548+23.000	553+70.000	547.00	0.1036	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
125	Rural Two-Lane Segment Two-lane Undivided	553+70.000	554+00.000	30.00	0.0057	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	false	false				
126	Rural Two-Lane Segment Two-lane Undivided	554+00.000	554+20.000	20.00	0.0038	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	false	false				

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
127	Rural Two-Lane Segment Two-lane Undivided	554+20.000	560+00.000	580.00	0.1098	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
128	Rural Two-Lane Segment Two-lane Undivided	560+00.000	562+58.560	258.56	0.0490	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
129	Rural Two-Lane Segment Two-lane Undivided	562+58.560	564+00.000	141.44	0.0268	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
130	Rural Two-Lane Segment Two-lane Undivided	564+00.000	565+00.000	100.00	0.0189	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
131	Rural Two-Lane Segment Two-lane Undivided	565+00.000	565+77.000	77.00	0.0146	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 11,221; 2042: 11,372; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
132	Rural Two-Lane Segment Two-lane Undivided	565+77.000	566+10.000	33.00	0.0063	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	0.00	0.00	-0.20	6.2	3	false	0	false	false	false				
133	Rural Two-Lane Segment Two-lane Undivided	566+10.000	566+50.000	40.00	0.0076	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	0.00	0.00	-0.20	6.2	3	false	0	false	false	false				
134	Rural Two-Lane Segment Two-lane Undivided	566+50.000	569+37.000	287.00	0.0544	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
135	Rural Two-Lane Segment Two-lane Undivided	569+37.000	569+70.000	33.00	0.0063	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	0.00	-0.20	6.2	3	false	0	false	false	false				
136	Rural Two-Lane Segment Two-lane Undivided	569+70.000	570+00.000	30.00	0.0057	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
137	Rural Two-Lane Segment Two-lane Undivided	570+00.000	575+00.000	500.00	0.0947	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	true	false	false				
138	Rural Two-Lane Segment Two-lane Undivided	575+00.000	579+50.000	450.00	0.0852	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				

Seg No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TW LT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
139	Rural Two-Lane Segment Two-lane Undivided	579+50.000	579+70.000	20.00	0.0038	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	0.00	0.00	-0.20	6.2	3	false	0	false	false	false				
140	Rural Two-Lane Segment Two-lane Undivided	579+70.000	580+10.000	40.00	0.0076	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	0.00	0.00	-0.20	6.2	3	false	0	false	false	false				

Table 3. Crash History Highway - Homogeneous Segments (Section 1)

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TWL T Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
1	Rural Two-Lane Segment Two-lane Undivided	171+44.00 0	172+42.00 0	98.00	0.0186	2018-2022: 2,085	12.00	12.00	8.00	8.00	4.25	6.2	3	false	0	false	false	false				
2	Rural Two-Lane Segment Two-lane Undivided	172+42.00 0	174+52.69 0	210.69	0.0399	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.17	6.2	3	false	0	false	false	false				
3	Rural Two-Lane Segment Two-lane Undivided	174+52.69 0	176+25.00 0	172.31	0.0326	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.17	6.2	3	false	0	false	false	false	2,074.80	2.0	true	40
4	Rural Two-Lane Segment Two-lane Undivided	176+25.00 0	178+85.25 0	260.25	0.0493	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.88	6.2	3	false	0	false	false	false	2,074.80	2.0	true	40
5	Rural Two-Lane Segment Two-lane Undivided	178+85.25 0	183+75.37 0	490.12	0.0928	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.88	6.2	3	false	0	false	false	false				
6	Rural Two-Lane Segment Two-lane Undivided	183+75.37 0	184+00.00 0	24.63	0.0047	2018-2022: 2,085	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
7	Rural Two-Lane Segment Two-lane Undivided	184+00.00 0	184+45.00 0	45.00	0.0085	2018-2022: 2,085	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
8	Rural Two-Lane Segment Two-lane Undivided	184+45.00 0	185+20.00 0	75.00	0.0142	2018-2022: 2,085	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
9	Rural Two-Lane Segment Two-lane Undivided	185+20.00 0	186+60.00 0	140.00	0.0265	2018-2022: 2,085	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
10	Rural Two-Lane Segment Two-lane Undivided	186+60.00 0	187+20.00 0	60.00	0.0114	2018-2022: 2,085	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
11	Rural Two-Lane Segment Two-lane Undivided	187+20.00 0	187+60.00 0	40.00	0.0076	2018-2022: 2,085	12.00	12.00	0.00	0.00	1.13	6.2	3	false	0	false	false	false				
12	Rural Two-Lane Segment Two-lane Undivided	187+60.00 0	190+00.00 0	240.00	0.0455	2018-2022: 2,085	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
13	Rural Two-Lane Segment Two-lane Undivided	190+00.00 0	192+00.00 0	200.00	0.0379	2018-2022: 2,085	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
14	Rural Two-Lane Segment Two-lane Undivided	192+00.00 0	192+39.27 0	39.27	0.0074	2018-2022: 2,085	12.00	12.00	8.00	8.00	1.13	6.2	3	false	0	false	false	false				
15	Rural Two-Lane Segment Two-lane Undivided	192+39.27 0	193+60.00 0	120.73	0.0229	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.94	6.2	3	false	0	false	false	false				
16	Rural Two-Lane Segment Two-lane Undivided	193+60.00 0	197+65.00 0	405.00	0.0767	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.94	6.2	3	false	0	false	false	false				
17	Rural Two-Lane Segment Two-lane Undivided	197+65.00 0	199+00.00 0	135.00	0.0256	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.94	6.2	3	false	0	false	false	false				
18	Rural Two-Lane Segment Two-lane Undivided	199+00.00 0	201+63.75 0	263.75	0.0500	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.94	6.2	3	false	0	false	false	false				
19	Rural Two-Lane Segment Two-lane Undivided	201+63.75 0	202+00.00 0	36.25	0.0069	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.13	6.2	3	false	0	false	false	false				
20	Rural Two-Lane Segment Two-lane Undivided	202+00.00 0	207+00.00 0	500.00	0.0947	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.13	6.2	3	false	0	false	false	false				
21	Rural Two-Lane Segment Two-lane Undivided	207+00.00 0	207+49.76 0	49.76	0.0094	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.13	6.2	3	false	0	false	false	false				
22	Rural Two-Lane Segment Two-lane Undivided	207+49.76 0	217+74.25 0	1,024.49	0.1940	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.70	6.2	3	false	0	false	false	false				
23	Rural Two-Lane Segment Two-lane Undivided	217+74.25 0	221+00.00 0	325.75	0.0617	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.77	6.2	3	false	0	false	false	false				
24	Rural Two-Lane Segment Two-lane Undivided	221+00.00 0	226+00.00 0	500.00	0.0947	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.77	6.2	3	false	0	false	false	false				
25	Rural Two-Lane Segment Two-lane Undivided	226+00.00 0	230+66.25 0	466.25	0.0883	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.77	6.2	3	false	0	false	false	false				

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TWL T Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
26	Rural Two-Lane Segment Two-lane Undivided	230+66.25 0	231+39.70 0	73.45	0.0139	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.77	6.2	3	false	0	false	false	false	5,644.64	2.0	true	70
27	Rural Two-Lane Segment Two-lane Undivided	231+39.70 0	235+00.00 0	360.30	0.0682	2018-2022: 2,085	12.00	12.00	8.00	8.00	-2.00	6.2	3	false	0	false	false	false	5,644.64	2.0	true	70
28	Rural Two-Lane Segment Two-lane Undivided	235+00.00 0	241+61.39 0	661.39	0.1253	2018-2022: 2,085	12.00	12.00	8.00	8.00	-2.00	6.2	3	false	0	false	false	false	5,644.64	2.0	true	70
29	Rural Two-Lane Segment Two-lane Undivided	241+61.39 0	242+00.00 0	38.61	0.0073	2018-2022: 2,085	12.00	12.00	8.00	8.00	1.16	6.2	3	false	0	false	false	false	5,644.64	2.0	true	70
30	Rural Two-Lane Segment Two-lane Undivided	242+00.00 0	245+14.28 0	314.28	0.0595	2018-2022: 2,085	12.00	12.00	8.00	8.00	1.16	6.2	3	false	0	false	false	false	5,644.64	2.0	true	70
31	Rural Two-Lane Segment Two-lane Undivided	245+14.28 0	246+55.10 0	140.82	0.0267	2018-2022: 2,085	12.00	12.00	8.00	8.00	1.16	6.2	3	false	0	false	false	false				
32	Rural Two-Lane Segment Two-lane Undivided	246+55.10 0	248+00.00 0	144.90	0.0274	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.42	6.2	3	false	0	false	false	false				
33	Rural Two-Lane Segment Two-lane Undivided	248+00.00 0	249+00.00 0	100.00	0.0189	2018-2022: 2,085	12.00	12.00	0.00	0.00	-0.42	6.2	3	false	0	false	false	false				
34	Rural Two-Lane Segment Two-lane Undivided	249+00.00 0	251+21.98 0	221.98	0.0420	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.42	6.2	3	false	0	false	false	false				
35	Rural Two-Lane Segment Two-lane Undivided	251+21.98 0	252+40.24 0	118.26	0.0224	2018-2022: 2,085	12.00	12.00	8.00	8.00	3.43	6.2	3	false	0	false	false	false				
36	Rural Two-Lane Segment Two-lane Undivided	252+40.24 0	263+22.60 0	1,082.36	0.2050	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.02	6.2	3	false	0	false	false	false				
37	Rural Two-Lane Segment Two-lane Undivided	263+22.60 0	272+66.74 0	944.14	0.1788	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.02	6.2	3	false	0	false	false	false	12,237.00	2.0	true	70
38	Rural Two-Lane Segment Two-lane Undivided	272+66.74 0	280+00.00 0	733.26	0.1389	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.02	6.2	3	false	0	false	false	false				
39	Rural Two-Lane Segment Two-lane Undivided	280+00.00 0	283+15.05 0	315.05	0.0597	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.02	6.2	3	false	0	false	false	false				
40	Rural Two-Lane Segment Two-lane Undivided	283+15.05 0	284+08.54 0	93.49	0.0177	2018-2022: 2,085	12.00	12.00	8.00	8.00	4.47	6.2	3	false	0	false	false	false				
41	Rural Two-Lane Segment Two-lane Undivided	284+08.54 0	288+50.00 0	441.46	0.0836	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.47	6.2	3	false	0	false	false	false				
42	Rural Two-Lane Segment Two-lane Undivided	288+50.00 0	289+00.00 0	50.00	0.0095	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.47	6.2	3	false	0	false	false	false				
43	Rural Two-Lane Segment Two-lane Undivided	289+00.00 0	295+90.00 0	690.00	0.1307	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.47	6.2	3	false	0	false	false	false				
44	Rural Two-Lane Segment Two-lane Undivided	295+90.00 0	296+00.00 0	10.00	0.0019	2018-2022: 2,085	12.00	12.00	0.00	0.00	-1.47	6.2	3	false	0	false	false	false				
45	Rural Two-Lane Segment Two-lane Undivided	296+00.00 0	296+10.00 0	10.00	0.0019	2018-2022: 2,085	12.00	12.00	0.00	0.00	-1.47	6.2	3	false	0	false	false	false				
46	Rural Two-Lane Segment Two-lane Undivided	296+10.00 0	296+96.52 0	86.52	0.0164	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.47	6.2	3	false	0	false	false	false				
47	Rural Two-Lane Segment Two-lane Undivided	296+96.52 0	298+33.66 0	137.14	0.0260	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.47	6.2	3	false	0	false	false	false				
48	Rural Two-Lane Segment Two-lane Undivided	298+33.66 0	303+50.00 0	516.34	0.0978	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.61	6.2	3	false	0	false	false	false				
49	Rural Two-Lane Segment Two-lane Undivided	303+50.00 0	304+50.00 0	100.00	0.0189	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.61	6.2	3	false	0	false	false	false				
50	Rural Two-Lane Segment Two-lane Undivided	304+50.00 0	305+02.03 9	52.04	0.0099	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.61	6.2	3	false	0	false	false	false				
51	Rural Two-Lane Segment Two-lane Undivided	305+02.03 9	309+35.49 0	433.45	0.0821	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.15	6.2	3	false	0	false	false	false				
52	Rural Two-Lane Segment Two-lane Undivided	309+35.49 0	311+70.00 0	234.51	0.0444	2018-2022: 2,085	12.00	12.00	8.00	8.00	1.24	6.2	3	false	0	false	false	false				

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TWT Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
53	Rural Two-Lane Segment Two-lane Undivided	311+70.00 0	313+25.00 0	155.00	0.0294	2018-2022: 2,085	12.00	12.00	8.00	8.00	1.24	6.2	3	false	0	false	false	false				
54	Rural Two-Lane Segment Two-lane Undivided	313+25.00 0	323+00.00 0	975.00	0.1847	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.33	6.2	3	false	0	false	false	false				
55	Rural Two-Lane Segment Two-lane Undivided	323+00.00 0	323+26.98 0	26.98	0.0051	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.33	6.2	3	false	0	false	false	false				
56	Rural Two-Lane Segment Two-lane Undivided	323+26.98 0	328+89.23 0	562.25	0.1065	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.26	6.2	3	false	0	false	false	false				
57	Rural Two-Lane Segment Two-lane Undivided	328+89.23 0	329+81.74 0	92.51	0.0175	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.52	6.2	3	false	0	false	false	false				
58	Rural Two-Lane Segment Two-lane Undivided	329+81.74 0	333+24.92 0	343.18	0.0650	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.52	6.2	3	false	0	false	false	false	4,010.13	2.0	true	70
59	Rural Two-Lane Segment Two-lane Undivided	333+24.92 0	334+00.00 0	75.08	0.0142	2018-2022: 2,085	12.00	12.00	8.00	8.00	-2.17	6.2	3	false	0	false	false	false	4,010.13	2.0	true	70
60	Rural Two-Lane Segment Two-lane Undivided	334+00.00 0	335+39.96 0	139.96	0.0265	2018-2022: 2,085	12.00	12.00	8.00	8.00	-2.17	6.2	3	false	0	false	false	false	4,010.13	2.0	true	70
61	Rural Two-Lane Segment Two-lane Undivided	335+39.96 0	342+39.00 0	699.04	0.1324	2018-2022: 2,085	12.00	12.00	8.00	8.00	-2.17	6.2	3	false	0	false	false	false				
62	Rural Two-Lane Segment Two-lane Undivided	342+39.00 0	343+00.00 0	61.00	0.0116	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false				
63	Rural Two-Lane Segment Two-lane Undivided	343+00.00 0	351+20.00 0	820.00	0.1553	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false				
64	Rural Two-Lane Segment Two-lane Undivided	351+20.00 0	352+00.00 0	80.00	0.0152	2018-2022: 2,085	12.00	12.00	0.00	0.00	-0.24	6.2	3	false	0	false	false	false				
65	Rural Two-Lane Segment Two-lane Undivided	352+00.00 0	352+20.00 0	20.00	0.0038	2018-2022: 2,085	12.00	12.00	0.00	0.00	-0.24	6.2	3	false	0	false	false	false				
66	Rural Two-Lane Segment Two-lane Undivided	352+20.00 0	362+50.00 0	1,030.00	0.1951	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false				
67	Rural Two-Lane Segment Two-lane Undivided	362+50.00 0	369+14.99 0	664.99	0.1259	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false				
68	Rural Two-Lane Segment Two-lane Undivided	369+14.99 0	370+30.00 0	115.01	0.0218	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
69	Rural Two-Lane Segment Two-lane Undivided	370+30.00 0	370+60.00 0	30.00	0.0057	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
70	Rural Two-Lane Segment Two-lane Undivided	370+60.00 0	376+83.61 0	623.61	0.1181	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.24	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
71	Rural Two-Lane Segment Two-lane Undivided	376+83.61 0	378+00.00 0	116.39	0.0220	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
72	Rural Two-Lane Segment Two-lane Undivided	378+00.00 0	378+40.00 0	40.00	0.0076	2018-2022: 2,085	12.00	12.00	0.00	8.00	-1.04	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
73	Rural Two-Lane Segment Two-lane Undivided	378+40.00 0	378+60.00 0	20.00	0.0038	2018-2022: 2,085	12.00	12.00	0.00	8.00	-1.04	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
74	Rural Two-Lane Segment Two-lane Undivided	378+60.00 0	379+00.00 0	40.00	0.0076	2018-2022: 2,085	12.00	12.00	0.00	8.00	-1.04	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
75	Rural Two-Lane Segment Two-lane Undivided	379+00.00 0	379+62.69 0	62.69	0.0119	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	4,023.18	2.0	true	70
76	Rural Two-Lane Segment Two-lane Undivided	379+62.69 0	385+22.97 0	560.28	0.1061	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false				
77	Rural Two-Lane Segment Two-lane Undivided	385+22.97 0	386+60.00 0	137.03	0.0260	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
78	Rural Two-Lane Segment Two-lane Undivided	386+60.00 0	389+50.00 0	290.00	0.0549	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
79	Rural Two-Lane Segment Two-lane Undivided	389+50.00 0	394+00.00 0	450.00	0.0852	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TWL T Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
80	Rural Two-Lane Segment Two-lane Undivided	394+00.00 0	396+46.15 0	246.15	0.0466	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.04	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
81	Rural Two-Lane Segment Two-lane Undivided	396+46.15 0	397+00.00 0	53.85	0.0102	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.72	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
82	Rural Two-Lane Segment Two-lane Undivided	397+00.00 0	399+00.00 0	200.00	0.0379	2018-2022: 2,085	12.00	12.00	0.00	8.00	0.72	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
83	Rural Two-Lane Segment Two-lane Undivided	399+00.00 0	405+75.41 0	675.41	0.1279	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.72	6.2	3	false	0	false	false	false	3,856.89	2.0	true	70
84	Rural Two-Lane Segment Two-lane Undivided	405+75.41 0	406+00.00 0	24.59	0.0047	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.72	6.2	3	false	0	false	false	false				
85	Rural Two-Lane Segment Two-lane Undivided	406+00.00 0	407+00.00 0	100.00	0.0189	2018-2022: 2,085	12.00	12.00	0.00	8.00	0.72	6.2	3	false	0	false	false	false				
86	Rural Two-Lane Segment Two-lane Undivided	407+00.00 0	443+25.00 0	3,625.00	0.6866	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.72	6.2	3	false	0	false	false	false				
87	Rural Two-Lane Segment Two-lane Undivided	443+25.00 0	445+50.00 0	225.00	0.0426	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
88	Rural Two-Lane Segment Two-lane Undivided	445+50.00 0	452+50.00 0	700.00	0.1326	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
89	Rural Two-Lane Segment Two-lane Undivided	452+50.00 0	459+00.00 0	650.00	0.1231	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
90	Rural Two-Lane Segment Two-lane Undivided	459+00.00 0	460+00.00 0	100.00	0.0189	2018-2022: 2,085	12.00	12.00	8.00	0.00	-0.96	6.2	3	false	0	false	false	false				
91	Rural Two-Lane Segment Two-lane Undivided	460+00.00 0	460+58.58 0	58.58	0.0111	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
92	Rural Two-Lane Segment Two-lane Undivided	460+58.58 0	485+61.23 0	2,502.65	0.4740	2018-2022: 2,085	12.00	12.00	8.00	8.00	-0.01	6.2	3	false	0	false	false	false				
93	Rural Two-Lane Segment Two-lane Undivided	485+61.23 0	503+00.00 0	1,738.77	0.3293	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.07	6.2	3	false	0	false	false	false				
94	Rural Two-Lane Segment Two-lane Undivided	503+00.00 0	507+00.00 0	400.00	0.0758	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.07	6.2	3	false	0	false	false	false				
95	Rural Two-Lane Segment Two-lane Undivided	507+00.00 0	508+00.00 0	100.00	0.0189	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.07	6.2	3	false	0	false	true	false				
96	Rural Two-Lane Segment Two-lane Undivided	508+00.00 0	508+08.24 0	8.24	0.0016	2018-2022: 2,085	12.00	12.00	8.00	8.00	-1.07	6.2	3	false	0	false	true	false				
97	Rural Two-Lane Segment Two-lane Undivided	508+08.24 0	510+30.00 0	221.76	0.0420	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.21	6.2	3	false	0	false	true	false				
98	Rural Two-Lane Segment Two-lane Undivided	510+30.00 0	512+00.00 0	170.00	0.0322	2018-2022: 2,085	12.00	12.00	8.00	8.00	0.21	6.2	3	false	0	false	false	false				
99	Rural Two-Lane Segment Two-lane Undivided	512+00.00 0	513+00.00 0	100.00	0.0189	2018-2022: 4,325	12.00	12.00	0.00	0.00	0.21	6.2	3	false	0	false	true	false				
100	Rural Two-Lane Segment Two-lane Undivided	513+00.00 0	515+00.00 0	200.00	0.0379	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.21	6.2	3	false	0	false	true	false				
101	Rural Two-Lane Segment Two-lane Undivided	515+00.00 0	520+00.00 0	500.00	0.0947	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.21	6.2	3	false	0	true	true	false				
102	Rural Two-Lane Segment Two-lane Undivided	520+00.00 0	520+49.15 0	49.15	0.0093	2018-2022: 4,325	12.00	12.00	0.00	0.00	0.21	6.2	3	false	0	false	true	false				
103	Rural Two-Lane Segment Two-lane Undivided	520+49.15 0	521+00.00 0	50.85	0.0096	2018-2022: 4,325	12.00	12.00	0.00	0.00	0.21	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
104	Rural Two-Lane Segment Two-lane Undivided	521+00.00 0	523+38.60 0	238.60	0.0452	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.21	6.2	3	false	0	true	true	false	2,458.49	2.0	true	45
105	Rural Two-Lane Segment Two-lane Undivided	523+38.60 0	524+00.00 0	61.40	0.0116	2018-2022: 4,325	12.00	12.00	8.00	8.00	1.90	6.2	3	false	0	true	true	false	2,458.49	2.0	true	45
106	Rural Two-Lane Segment Two-lane Undivided	524+00.00 0	525+00.00 0	100.00	0.0189	2018-2022: 4,325	12.00	12.00	0.00	0.00	1.90	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TWL T Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
107	Rural Two-Lane Segment Two-lane Undivided	525+00.00 0	525+18.58 0	18.58	0.0035	2018-2022: 4,325	12.00	12.00	8.00	8.00	1.90	6.2	3	false	0	true	true	false	2,458.49	2.0	true	45
108	Rural Two-Lane Segment Two-lane Undivided	525+18.58 0	528+00.00 0	281.42	0.0533	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.02	6.2	3	false	0	true	true	false	2,458.49	2.0	true	45
109	Rural Two-Lane Segment Two-lane Undivided	528+00.00 0	529+00.00 0	100.00	0.0189	2018-2022: 4,325	12.00	12.00	0.00	0.00	-0.02	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
110	Rural Two-Lane Segment Two-lane Undivided	529+00.00 0	539+00.00 0	1,000.00	0.1894	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.02	6.2	3	false	0	true	true	false	2,458.49	2.0	true	45
111	Rural Two-Lane Segment Two-lane Undivided	539+00.00 0	539+50.00 0	50.00	0.0095	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.02	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
112	Rural Two-Lane Segment Two-lane Undivided	539+50.00 0	540+00.00 0	50.00	0.0095	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
113	Rural Two-Lane Segment Two-lane Undivided	540+00.00 0	540+50.00 0	50.00	0.0095	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
114	Rural Two-Lane Segment Two-lane Undivided	540+50.00 0	540+74.37 0	24.37	0.0046	2018-2022: 4,325	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	true	false	2,458.49	2.0	true	45
115	Rural Two-Lane Segment Two-lane Undivided	540+74.37 0	541+00.00 0	25.63	0.0049	2018-2022: 4,325	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	true	false				
116	Rural Two-Lane Segment Two-lane Undivided	541+00.00 0	541+50.00 0	50.00	0.0095	2018-2022: 4,325	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	true	false				
117	Rural Two-Lane Segment Two-lane Undivided	541+50.00 0	541+70.00 0	20.00	0.0038	2018-2022: 4,325	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	true	false				
118	Rural Two-Lane Segment Two-lane Undivided	541+70.00 0	542+30.00 0	60.00	0.0114	2018-2022: 4,325	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	true	false				
119	Rural Two-Lane Segment Two-lane Undivided	542+30.00 0	542+64.00 0	34.00	0.0064	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	true	false				
120	Rural Two-Lane Segment Two-lane Undivided	542+64.00 0	543+34.00 0	70.00	0.0133	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	true	false				
121	Rural Two-Lane Segment Two-lane Undivided	543+34.00 0	544+00.00 0	66.00	0.0125	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	true	false				
122	Rural Two-Lane Segment Two-lane Undivided	544+00.00 0	545+00.00 0	100.00	0.0189	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
123	Rural Two-Lane Segment Two-lane Undivided	545+00.00 0	548+23.00 0	323.00	0.0612	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
124	Rural Two-Lane Segment Two-lane Undivided	548+23.00 0	553+70.00 0	547.00	0.1036	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
125	Rural Two-Lane Segment Two-lane Undivided	553+70.00 0	554+00.00 0	30.00	0.0057	2018-2022: 4,325	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	false	false				
126	Rural Two-Lane Segment Two-lane Undivided	554+00.00 0	554+20.00 0	20.00	0.0038	2018-2022: 4,325	12.00	12.00	0.00	0.00	-0.96	6.2	3	false	0	false	false	false				
127	Rural Two-Lane Segment Two-lane Undivided	554+20.00 0	560+00.00 0	580.00	0.1098	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
128	Rural Two-Lane Segment Two-lane Undivided	560+00.00 0	562+58.56 0	258.56	0.0490	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.96	6.2	3	false	0	false	false	false				
129	Rural Two-Lane Segment Two-lane Undivided	562+58.56 0	564+00.00 0	141.44	0.0268	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
130	Rural Two-Lane Segment Two-lane Undivided	564+00.00 0	565+00.00 0	100.00	0.0189	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
131	Rural Two-Lane Segment Two-lane Undivided	565+00.00 0	565+77.00 0	77.00	0.0146	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
132	Rural Two-Lane Segment Two-lane Undivided	565+77.00 0	566+10.00 0	33.00	0.0063	2018-2022: 4,325	12.00	12.00	0.00	0.00	-0.20	6.2	3	false	0	false	false	false				
133	Rural Two-Lane Segment Two-lane Undivided	566+10.00 0	566+50.00 0	40.00	0.0076	2018-2022: 4,325	12.00	12.00	0.00	0.00	-0.20	6.2	3	false	0	false	false	false				

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Grade (%)	Driveway Density (driveways/mi)	Hazard Rating	Centerline Rumble Strip	Passing Lanes	TWL T Lane	Lighting	Automated Speed Enforcement	Radius (ft)	Superelevation (%)	Adverse	Design Speed (mph)
134	Rural Two-Lane Segment Two-lane Undivided	566+50.00 0	569+37.00 0	287.00	0.0544	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
135	Rural Two-Lane Segment Two-lane Undivided	569+37.00 0	569+70.00 0	33.00	0.0063	2018-2022: 4,325	12.00	12.00	8.00	0.00	-0.20	6.2	3	false	0	false	false	false				
136	Rural Two-Lane Segment Two-lane Undivided	569+70.00 0	570+00.00 0	30.00	0.0057	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
137	Rural Two-Lane Segment Two-lane Undivided	570+00.00 0	575+00.00 0	500.00	0.0947	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	true	false	false				
138	Rural Two-Lane Segment Two-lane Undivided	575+00.00 0	579+50.00 0	450.00	0.0852	2018-2022: 4,325	12.00	12.00	8.00	8.00	-0.20	6.2	3	false	0	false	false	false				
139	Rural Two-Lane Segment Two-lane Undivided	579+50.00 0	579+70.00 0	20.00	0.0038	2018-2022: 4,325	12.00	12.00	0.00	0.00	-0.20	6.2	3	false	0	false	false	false				
140	Rural Two-Lane Segment Two-lane Undivided	579+70.00 0	580+10.00 0	40.00	0.0076	2018-2022: 4,325	12.00	12.00	0.00	0.00	-0.20	6.2	3	false	0	false	false	false				

Table 4. Evaluation Intersection - Section 1

Inter. No.	Title	Type	Location (Sta. ft)	Major AADT	Minor AADT	Legs	Traffic Control	Major road approaches w/Left Turn Lanes	Major road approaches w/Right Turn Lanes	Skew1	Skew2	Lighted at Night
1	West Central School/SD38 (v2)	Rural Two-Lane Intersection Three-Legged w/STOP control	569+50.000	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	2025: 912; 2026: 932; 2027: 951; 2028: 970; 2029: 990; 2030: 1,013; 2031: 1,036; 2032: 1,059; 2033: 1,082; 2034: 1,105; 2035: 1,129; 2036: 1,152; 2037: 1,175; 2038: 1,198; 2039: 1,221; 2040: 1,245; 2041: 1,273; 2042: 1,302; 2043: 1,330; 2044: 1,359; 2045: 1,387; 2046: 1,416; 2047: 1,444; 2048: 1,473; 2049: 1,501; 2050: 1,530	3	Stop-Controlled	0	0	1.37		false
2	2nd/SD38 (v2)	Rural Two-Lane Intersection Four-Legged w/STOP control	566+00.000	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	2025: 1,338; 2026: 1,366; 2027: 1,394; 2028: 1,422; 2029: 1,450; 2030: 1,484; 2031: 1,518; 2032: 1,552; 2033: 1,586; 2034: 1,620; 2035: 1,654; 2036: 1,688; 2037: 1,722; 2038: 1,756; 2039: 1,790; 2040: 1,825; 2041: 1,867; 2042: 1,909; 2043: 1,951; 2044: 1,993; 2045: 2,035; 2046: 2,077; 2047: 2,119; 2048: 2,161; 2049: 2,203; 2050: 2,245	4	Stop-Controlled	1	0	41.37	41.37	false
4	459/SD38 (v2)	Rural Two-Lane Intersection Four-Legged w/STOP control	296+00.000	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	2025: 320; 2026: 329; 2027: 337; 2028: 346; 2029: 355; 2030: 363; 2031: 371; 2032: 379; 2033: 387; 2034: 395; 2035: 404; 2036: 412; 2037: 420; 2038: 428; 2039: 436; 2040: 445; 2041: 455; 2042: 465; 2043: 475; 2044: 485; 2045: 495; 2046: 505; 2047: 515; 2048: 525; 2049: 535; 2050: 545	4	Stop-Controlled	2	0	0.04	0.04	false
5	SD38/SD19_Build (v1)	Rural Two-Lane Intersection Four-Legged w/STOP control	187+50.000	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	2025: 2,094; 2026: 2,140; 2027: 2,187; 2028: 2,233; 2029: 2,280; 2030: 2,336; 2031: 2,392; 2032: 2,449; 2033: 2,505; 2034: 2,561; 2035: 2,618; 2036: 2,674; 2037: 2,730; 2038: 2,787; 2039: 2,843; 2040: 2,900; 2041: 2,967; 2042: 3,034; 2043: 3,101; 2044: 3,168; 2045: 3,235; 2046: 3,302; 2047: 3,369; 2048: 3,436; 2049: 3,503; 2050: 3,570	4	Stop-Controlled	2	0	5.84	5.84	false
6	I90 SPEEDWAY/SD38 (v1)	Rural Two-Lane Intersection Three-Legged w/STOP control	378+50.000	2025: 2,232; 2026: 2,282; 2027: 2,331; 2028: 2,380; 2029: 2,430; 2030: 2,490; 2031: 2,550; 2032: 2,610; 2033: 2,670; 2034: 2,730; 2035: 2,790; 2036: 2,850; 2037: 2,910; 2038: 2,970; 2039: 3,030; 2040: 3,090; 2041: 3,162; 2042: 3,234; 2043: 3,306; 2044: 3,378; 2045: 3,450; 2046: 3,522; 2047: 3,594; 2048: 3,666; 2049: 3,738; 2050: 3,810	2025: 260; 2026: 264; 2027: 267; 2028: 271; 2029: 275; 2030: 281; 2031: 288; 2032: 295; 2033: 302; 2034: 309; 2035: 315; 2036: 322; 2037: 329; 2038: 336; 2039: 343; 2040: 350; 2041: 372; 2042: 395; 2043: 417; 2044: 440; 2045: 462; 2046: 485; 2047: 507; 2048: 530; 2049: 552; 2050: 575	3	Stop-Controlled	1	1	5.46		false
7	463/SD38 (v1)	Rural Two-Lane Intersection Four-Legged w/STOP control	512+00.000	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	2025: 3,802; 2026: 3,882; 2027: 3,963; 2028: 4,044; 2029: 4,125; 2030: 4,221; 2031: 4,318; 2032: 4,415; 2033: 4,512; 2034: 4,609; 2035: 4,705; 2036: 4,802; 2037: 4,899; 2038: 4,996; 2039: 5,093; 2040: 5,190; 2041: 5,308; 2042: 5,427; 2043: 5,545; 2044: 5,664; 2045: 5,782; 2046: 5,901; 2047: 6,019; 2048: 6,138; 2049: 6,256; 2050: 6,375	4	Stop-Controlled	1	0	1.43	1.43	false
8	Main Ave/SD38 (v1)	Rural Two-Lane Intersection Four-Legged w/STOP control	524+50.000	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	2025: 1,367; 2026: 1,397; 2027: 1,426; 2028: 1,455; 2029: 1,485; 2030: 1,520; 2031: 1,555; 2032: 1,590; 2033: 1,625; 2034: 1,660; 2035: 1,695; 2036: 1,730; 2037: 1,765; 2038: 1,800; 2039: 1,835; 2040: 1,870; 2041: 1,912; 2042: 1,955; 2043: 1,997; 2044: 2,040; 2045: 2,082; 2046: 2,125; 2047: 2,167; 2048: 2,210; 2049: 2,252; 2050: 2,295	4	Stop-Controlled	0	0	11.00	10.54	false
9	Vandemark/SD38 (v1)	Rural Two-Lane Intersection Four-Legged w/STOP control	541+50.000	2025: 6,594; 2026: 7,350; 2027: 8,107; 2028: 8,863; 2029: 9,620; 2030: 9,751; 2031: 9,883; 2032: 10,015; 2033: 10,147; 2034: 10,279; 2035: 10,410; 2036: 10,542; 2037: 10,674; 2038: 10,806; 2039: 10,938; 2040: 11,070; 2041: 11,221; 2042: 11,372; 2043: 11,523; 2044: 11,674; 2045: 11,825; 2046: 11,976; 2047: 12,127; 2048: 12,278; 2049: 12,429; 2050: 12,580	2025: 657; 2026: 672; 2027: 686; 2028: 700; 2029: 715; 2030: 731; 2031: 747; 2032: 764; 2033: 780; 2034: 796; 2035: 813; 2036: 829; 2037: 845; 2038: 862; 2039: 878; 2040: 895; 2041: 915; 2042: 936; 2043: 956; 2044: 977; 2045: 997; 2046: 1,018; 2047: 1,038; 2048: 1,059; 2049: 1,079; 2050: 1,100	4	Stop-Controlled	1	0	48.63	48.63	false

Table 5. Crash History Intersection - Section 1

Inter. No.	Title	Type	Location (Sta. ft)	Major AADT	Minor AADT	Legs	Traffic Control	Major road approaches w/Left Turn Lanes	Major road approaches w/Right Turn Lanes	Skew1	Skew2	Lighted at Night
1	West Central School/SD38 (v2)	Rural Two-Lane Intersection Three-Legged w/STOP control	569+50.000	2018-2022: 4,325	2018-2022: 855	3	Stop-Controlled	0	0	1.37		false
2	2nd/SD38 (v2)	Rural Two-Lane Intersection Four-Legged w/STOP control	566+00.000	2018-2022: 4,325	2018-2022: 1,255	4	Stop-Controlled	1	0	41.37	41.37	false
4	459/SD38 (v2)	Rural Two-Lane Intersection Four-Legged w/STOP control	296+00.000	2018-2022: 2,085	2018-2022: 295	4	Stop-Controlled	2	0	0.04	0.04	false
5	SD38/SD19_Build (v1)	Rural Two-Lane Intersection Four-Legged w/STOP control	187+50.000	2018-2022: 2,085	2018-2022: 1,955	4	Stop-Controlled	2	0	5.84	5.84	false
6	I90 SPEEDWAY/SD38 (v1)	Rural Two-Lane Intersection Three-Legged w/STOP control	378+50.000	2018-2022: 2,085	2018-2022: 250	3	Stop-Controlled	1	1	5.46		false
7	463/SD38 (v1)	Rural Two-Lane Intersection Four-Legged w/STOP control	512+00.000	2018-2022: 4,325	2018-2022: 3,560	4	Stop-Controlled	1	0	1.43	1.43	false
8	Main Ave/SD38 (v1)	Rural Two-Lane Intersection Four-Legged w/STOP control	524+50.000	2018-2022: 4,325	2018-2022: 1,280	4	Stop-Controlled	0	0	11.00	10.54	false
9	Vandemark/SD38 (v1)	Rural Two-Lane Intersection Four-Legged w/STOP control	541+50.000	2018-2022: 4,325	2018-2022: 615	4	Stop-Controlled	1	0	48.63	48.63	false

Table 6. Expected Highway Crash Rates and Frequencies Summary (Section 1)

First Year of Analysis	2025
Last Year of Analysis	2050
Evaluated Length (mi)	7.7398
Average Future Road AADT (vpd)	4,284
Expected Crashes	
Total Crashes	476.74
Fatal and Injury Crashes	193.60
Property-Damage-Only Crashes	283.14
Percent of Total Expected Crashes	
Percent Fatal and Injury Crashes (%)	41
Percent Property-Damage-Only Crashes (%)	59
Expected Crash Rate	
Crash Rate (crashes/mi/yr)	2.3691
FI Crash Rate (crashes/mi/yr)	0.9621
PDO Crash Rate (crashes/mi/yr)	1.4070
Expected Travel Crash Rate	
Total Travel (million veh-mi)	314.63
Travel Crash Rate (crashes/million veh-mi)	1.51
Travel FI Crash Rate (crashes/million veh-mi)	0.61
Travel PDO Crash Rate (crashes/million veh-mi)	0.90

Table 7. Expected Crash Frequencies and Rates by Highway Segment/Intersection (Section 1)

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/mi/1000 veh-mi)	Expected Intersection Travel Crash Rate (crashes/million veh)
1	171+44.000	172+42.000	0.0186	0.237	0.402	0.0091	0.0033	0.0058	0.0155	0.0050	0.0105	-0.0063	-0.0017	-0.0047	0.4920	0.45	
2	172+42.000	174+52.690	0.0399	0.482	0.786	0.0185	0.0067	0.0119	0.0302	0.0097	0.0205	-0.0117	-0.0030	-0.0087	0.4646	0.43	
3	174+52.690	176+25.000	0.0326	0.499	0.980	0.0192	0.0072	0.0120	0.0377	0.0121	0.0256	-0.0185	-0.0049	-0.0136	0.5886	0.54	
4	176+25.000	178+85.250	0.0493	0.754	1.479	0.0290	0.0108	0.0182	0.0569	0.0183	0.0386	-0.0279	-0.0074	-0.0205	0.5886	0.54	
5	178+85.250	183+75.370	0.0928	1.121	1.829	0.0431	0.0155	0.0276	0.0703	0.0226	0.0478	-0.0272	-0.0071	-0.0201	0.4646	0.43	
6	183+75.370	184+00.000	0.0047	0.056	0.092	0.0022	0.0008	0.0014	0.0035	0.0011	0.0024	-0.0014	-0.0004	-0.0010	0.4646	0.43	
7	184+00.000	184+45.000	0.0085	0.103	0.168	0.0040	0.0014	0.0025	0.0065	0.0021	0.0044	-0.0025	-0.0006	-0.0018	0.4646	0.43	
8	184+45.000	185+20.000	0.0142	0.172	0.280	0.0066	0.0024	0.0042	0.0108	0.0035	0.0073	-0.0042	-0.0011	-0.0031	0.4646	0.43	
9	185+20.000	186+60.000	0.0265	0.320	0.522	0.0123	0.0044	0.0079	0.0201	0.0064	0.0136	-0.0078	-0.0020	-0.0058	0.4646	0.43	
10	186+60.000	187+20.000	0.0114	0.137	0.224	0.0053	0.0019	0.0034	0.0086	0.0028	0.0058	-0.0033	-0.0009	-0.0025	0.4646	0.43	
11	187+20.000	187+60.000	0.0076	0.111	0.208	0.0043	0.0016	0.0027	0.0080	0.0026	0.0054	-0.0037	-0.0010	-0.0027	0.5613	0.52	
SD38/SD19_Build (v1)	187+50.000			18.404	41.067	0.7079	0.3235	0.3844	1.5795	0.6808	0.8987	-0.8716	-0.3573	-0.5144			0.34
12	187+60.000	190+00.000	0.0455	0.549	0.895	0.0211	0.0076	0.0135	0.0344	0.0111	0.0234	-0.0133	-0.0035	-0.0099	0.4646	0.43	
13	190+00.000	192+00.000	0.0379	0.458	0.746	0.0176	0.0063	0.0113	0.0287	0.0092	0.0195	-0.0111	-0.0029	-0.0082	0.4646	0.43	
14	192+00.000	192+39.270	0.0074	0.090	0.146	0.0035	0.0012	0.0022	0.0056	0.0018	0.0038	-0.0022	-0.0006	-0.0016	0.4646	0.43	
15	192+39.270	193+60.000	0.0229	0.276	0.451	0.0106	0.0038	0.0068	0.0173	0.0056	0.0118	-0.0067	-0.0017	-0.0050	0.4646	0.43	
16	193+60.000	197+65.000	0.0767	0.927	1.511	0.0356	0.0128	0.0228	0.0581	0.0187	0.0395	-0.0225	-0.0058	-0.0166	0.4646	0.43	
17	197+65.000	199+00.000	0.0256	0.309	0.504	0.0119	0.0043	0.0076	0.0194	0.0062	0.0132	-0.0075	-0.0019	-0.0055	0.4646	0.43	
18	199+00.000	201+63.750	0.0500	0.603	0.984	0.0232	0.0083	0.0149	0.0379	0.0121	0.0257	-0.0146	-0.0038	-0.0108	0.4646	0.43	
19	201+63.750	202+00.000	0.0069	0.083	0.135	0.0032	0.0011	0.0020	0.0052	0.0017	0.0035	-0.0020	-0.0005	-0.0015	0.4646	0.43	
20	202+00.000	207+00.000	0.0947	1.144	1.866	0.0440	0.0158	0.0282	0.0718	0.0230	0.0487	-0.0278	-0.0072	-0.0205	0.4646	0.43	
21	207+00.000	207+49.760	0.0094	0.114	0.186	0.0044	0.0016	0.0028	0.0071	0.0023	0.0048	-0.0028	-0.0007	-0.0020	0.4646	0.43	
22	207+49.760	217+74.250	0.1940	2.344	3.823	0.0902	0.0324	0.0577	0.1470	0.0472	0.0998	-0.0569	-0.0148	-0.0421	0.4646	0.43	
23	217+74.250	221+00.000	0.0617	3.596	1.215	0.1383	0.0144	0.1239	0.0467	0.0150	0.0317	0.0916	-0.0006	0.0922	2.2419	2.07	
24	221+00.000	226+00.000	0.0947	1.144	1.866	0.0440	0.0158	0.0282	0.0718	0.0230	0.0487	-0.0278	-0.0072	-0.0205	0.4646	0.43	
25	226+00.000	230+66.250	0.0883	1.067	1.740	0.0410	0.0148	0.0263	0.0669	0.0215	0.0454	-0.0259	-0.0067	-0.0192	0.4646	0.43	
26	230+66.250	231+39.700	0.0139	0.188	0.333	0.0072	0.0026	0.0046	0.0128	0.0041	0.0087	-0.0055	-0.0015	-0.0041	0.5207	0.48	
27	231+39.700	235+00.000	0.0682	0.924	1.631	0.0355	0.0130	0.0225	0.0627	0.0201	0.0426	-0.0272	-0.0071	-0.0201	0.5207	0.48	
28	235+00.000	241+61.390	0.1253	4.891	2.994	0.1881	0.1175	0.0706	0.1152	0.0370	0.0782	0.0730	0.0805	-0.0076	1.5018	1.39	
29	241+61.390	242+00.000	0.0073	0.099	0.175	0.0038	0.0014	0.0024	0.0067	0.0022	0.0046	-0.0029	-0.0008	-0.0021	0.5207	0.48	
30	242+00.000	245+14.280	0.0595	0.806	1.423	0.0310	0.0113	0.0197	0.0547	0.0176	0.0372	-0.0237	-0.0062	-0.0175	0.5207	0.48	
31	245+14.280	246+55.100	0.0267	0.322	0.525	0.0124	0.0045	0.0079	0.0202	0.0065	0.0137	-0.0078	-0.0020	-0.0058	0.4646	0.43	
32	246+55.100	248+00.000	0.0274	0.332	0.541	0.0128	0.0046	0.0082	0.0208	0.0067	0.0141	-0.0080	-0.0021	-0.0060	0.4646	0.43	
33	248+00.000	249+00.000	0.0189	3.721	0.519	0.1431	0.0060	0.1371	0.0200	0.0064	0.0136	0.1231	-0.0004	0.1236	7.5559	6.97	
34	249+00.000	251+21.980	0.0420	0.508	0.828	0.0195	0.0070	0.0125	0.0319	0.0102	0.0216	-0.0123	-0.0032	-0.0091	0.4646	0.43	
35	251+21.980	252+40.240	0.0224	0.286	0.485	0.0110	0.0040	0.0070	0.0187	0.0060	0.0127	-0.0076	-0.0020	-0.0057	0.4920	0.45	
36	252+40.240	263+22.600	0.2050	5.327	4.038	0.2049	0.0424	0.1625	0.1553	0.0499	0.1055	0.0496	-0.0074	0.0570	0.9995	0.92	
37	263+22.600	272+66.740	0.1788	2.351	4.061	0.0904	0.0329	0.0575	0.1562	0.0501	0.1060	-0.0657	-0.0172	-0.0485	0.5057	0.47	
38	272+66.740	280+00.000	0.1389	1.678	2.736	0.0645	0.0232	0.0413	0.1052	0.0338	0.0715	-0.0407	-0.0106	-0.0301	0.4646	0.43	

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/mi/1000 veh-mi)	Expected Intersection Travel Crash Rate (crashes/million veh)
39	280+00.000	283+15.050	0.0597	0.721	1.175	0.0277	0.0100	0.0178	0.0452	0.0145	0.0307	-0.0175	-0.0045	-0.0129	0.4646	0.43	
40	283+15.050	284+08.540	0.0177	0.227	0.384	0.0087	0.0032	0.0056	0.0148	0.0047	0.0100	-0.0060	-0.0016	-0.0045	0.4920	0.45	
41	284+08.540	288+50.000	0.0836	3.861	1.647	0.1485	0.0190	0.1295	0.0634	0.0203	0.0430	0.0851	-0.0013	0.0865	1.7761	1.64	
42	288+50.000	289+00.000	0.0095	0.114	0.187	0.0044	0.0016	0.0028	0.0072	0.0023	0.0049	-0.0028	-0.0007	-0.0021	0.4646	0.43	
43	289+00.000	295+90.000	0.1307	1.579	2.575	0.0607	0.0218	0.0389	0.0990	0.0318	0.0672	-0.0383	-0.0100	-0.0284	0.4646	0.43	
44	295+90.000	296+00.000	0.0019	0.028	0.052	0.0011	0.0004	0.0007	0.0020	0.0006	0.0014	-0.0009	-0.0002	-0.0007	0.5613	0.52	
459/SD38 (v2)	296+00.000			11.436	12.695	0.4399	0.1714	0.2685	0.4883	0.2104	0.2778	-0.0484	-0.0391	-0.0093			0.37
45	296+00.000	296+10.000	0.0019	0.028	0.052	0.0011	0.0004	0.0007	0.0020	0.0006	0.0014	-0.0009	-0.0002	-0.0007	0.5613	0.52	
46	296+10.000	296+96.520	0.0164	0.198	0.323	0.0076	0.0027	0.0049	0.0124	0.0040	0.0084	-0.0048	-0.0012	-0.0036	0.4646	0.43	
47	296+96.520	298+33.660	0.0260	0.314	0.512	0.0121	0.0043	0.0077	0.0197	0.0063	0.0134	-0.0076	-0.0020	-0.0056	0.4646	0.43	
48	298+33.660	303+50.000	0.0978	1.181	1.927	0.0454	0.0163	0.0291	0.0741	0.0238	0.0503	-0.0287	-0.0074	-0.0212	0.4646	0.43	
49	303+50.000	304+50.000	0.0189	0.229	0.373	0.0088	0.0032	0.0056	0.0144	0.0046	0.0097	-0.0056	-0.0014	-0.0041	0.4646	0.43	
50	304+50.000	305+02.039	0.0099	0.119	0.194	0.0046	0.0016	0.0029	0.0075	0.0024	0.0051	-0.0029	-0.0008	-0.0021	0.4646	0.43	
51	305+02.039	309+35.490	0.0821	0.992	1.617	0.0381	0.0137	0.0244	0.0622	0.0200	0.0422	-0.0241	-0.0063	-0.0178	0.4646	0.43	
52	309+35.490	311+70.000	0.0444	0.536	0.875	0.0206	0.0074	0.0132	0.0337	0.0108	0.0229	-0.0130	-0.0034	-0.0096	0.4646	0.43	
53	311+70.000	313+25.000	0.0294	0.355	0.578	0.0136	0.0049	0.0087	0.0222	0.0071	0.0151	-0.0086	-0.0022	-0.0064	0.4646	0.43	
54	313+25.000	323+00.000	0.1847	2.231	3.638	0.0858	0.0309	0.0549	0.1399	0.0449	0.0950	-0.0541	-0.0141	-0.0401	0.4646	0.43	
55	323+00.000	323+26.980	0.0051	0.062	0.101	0.0024	0.0009	0.0015	0.0039	0.0012	0.0026	-0.0015	-0.0004	-0.0011	0.4646	0.43	
56	323+26.980	328+89.230	0.1065	1.286	2.098	0.0495	0.0178	0.0317	0.0807	0.0259	0.0548	-0.0312	-0.0081	-0.0231	0.4646	0.43	
57	328+89.230	329+81.740	0.0175	0.212	0.345	0.0081	0.0029	0.0052	0.0133	0.0043	0.0090	-0.0051	-0.0013	-0.0038	0.4646	0.43	
58	329+81.740	333+24.920	0.0650	0.936	1.738	0.0360	0.0133	0.0227	0.0669	0.0215	0.0454	-0.0308	-0.0081	-0.0227	0.5541	0.51	
59	333+24.920	334+00.000	0.0142	0.205	0.380	0.0079	0.0029	0.0050	0.0146	0.0047	0.0099	-0.0067	-0.0018	-0.0050	0.5541	0.51	
60	334+00.000	335+39.960	0.0265	7.182	0.709	0.2762	0.0084	0.2679	0.0273	0.0088	0.0185	0.2490	-0.0004	0.2494	10.4210	9.62	
61	335+39.960	342+39.000	0.1324	1.599	2.608	0.0615	0.0221	0.0394	0.1003	0.0322	0.0681	-0.0388	-0.0101	-0.0287	0.4646	0.43	
62	342+39.000	343+00.000	0.0116	0.140	0.228	0.0054	0.0019	0.0034	0.0088	0.0028	0.0059	-0.0034	-0.0009	-0.0025	0.4646	0.43	
63	343+00.000	351+20.000	0.1553	4.727	3.060	0.1818	0.1065	0.0753	0.1177	0.0378	0.0799	0.0641	0.0687	-0.0046	1.1706	1.08	
64	351+20.000	352+00.000	0.0152	0.221	0.415	0.0085	0.0032	0.0054	0.0160	0.0051	0.0108	-0.0075	-0.0020	-0.0055	0.5613	0.52	
65	352+00.000	352+20.000	0.0038	0.055	0.104	0.0021	0.0008	0.0013	0.0040	0.0013	0.0027	-0.0019	-0.0005	-0.0014	0.5613	0.52	
66	352+20.000	362+50.000	0.1951	5.207	3.843	0.2003	0.0406	0.1597	0.1478	0.0474	0.1004	0.0525	-0.0069	0.0593	1.0267	0.95	
67	362+50.000	369+14.990	0.1259	1.521	2.481	0.0585	0.0210	0.0375	0.0954	0.0306	0.0648	-0.0369	-0.0096	-0.0273	0.4646	0.43	
68	369+14.990	370+30.000	0.0218	0.305	0.553	0.0117	0.0043	0.0074	0.0213	0.0068	0.0144	-0.0095	-0.0025	-0.0070	0.5385	0.50	
69	370+30.000	370+60.000	0.0057	0.080	0.144	0.0031	0.0011	0.0019	0.0055	0.0018	0.0038	-0.0025	-0.0007	-0.0018	0.5385	0.50	
70	370+60.000	376+83.610	0.1181	4.958	2.998	0.1907	0.1212	0.0695	0.1153	0.0370	0.0783	0.0754	0.0842	-0.0088	1.6146	1.49	
71	376+83.610	378+00.000	0.0220	0.309	0.559	0.0119	0.0044	0.0075	0.0215	0.0069	0.0146	-0.0096	-0.0025	-0.0071	0.5385	0.50	
72	378+00.000	378+40.000	0.0076	0.117	0.230	0.0045	0.0017	0.0028	0.0088	0.0028	0.0060	-0.0044	-0.0012	-0.0032	0.5919	0.55	
73	378+40.000	378+60.000	0.0038	0.058	0.115	0.0022	0.0008	0.0014	0.0044	0.0014	0.0030	-0.0022	-0.0006	-0.0016	0.5919	0.55	
I90 SPEEDWAY/SD38 (v1)	378+50.000			4.683	6.719	0.1801	0.0774	0.1027	0.2584	0.1073	0.1512	-0.0783	-0.0298	-0.0485			0.16
74	378+60.000	379+00.000	0.0076	0.117	0.230	0.0045	0.0017	0.0028	0.0088	0.0028	0.0060	-0.0044	-0.0012	-0.0032	0.5919	0.55	
75	379+00.000	379+62.690	0.0119	0.166	0.301	0.0064	0.0024	0.0040	0.0116	0.0037	0.0079	-0.0052	-0.0014	-0.0038	0.5385	0.50	
76	379+62.690	385+22.970	0.1061	4.133	2.091	0.1590	0.1024	0.0566	0.0804	0.0258	0.0546	0.0785	0.0766	0.0020	1.4979	1.38	
77	385+22.970	386+60.000	0.0260	0.359	0.643	0.0138	0.0051	0.0087	0.0247	0.0079	0.0168	-0.0109	-0.0029	-0.0081	0.5314	0.49	
78	386+60.000	389+50.000	0.0549	0.759	1.361	0.0292	0.0107	0.0185	0.0524	0.0168	0.0355	-0.0232	-0.0061	-0.0171	0.5314	0.49	

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/mi/llion veh-mi)	Expected Intersection Travel Crash Rate (crashes/million veh)
79	389+50.000	394+00.000	0.0852	1.178	2.112	0.0453	0.0166	0.0287	0.0812	0.0261	0.0552	-0.0359	-0.0095	-0.0265	0.5314	0.49	
80	394+00.000	396+46.150	0.0466	0.644	1.155	0.0248	0.0091	0.0157	0.0444	0.0143	0.0302	-0.0197	-0.0052	-0.0145	0.5314	0.49	
81	396+46.150	397+00.000	0.0102	0.141	0.253	0.0054	0.0020	0.0034	0.0097	0.0031	0.0066	-0.0043	-0.0011	-0.0032	0.5314	0.49	
82	397+00.000	399+00.000	0.0379	0.576	1.122	0.0221	0.0083	0.0139	0.0432	0.0139	0.0293	-0.0210	-0.0056	-0.0154	0.5847	0.54	
83	399+00.000	405+75.410	0.1279	1.768	3.170	0.0680	0.0249	0.0430	0.1219	0.0391	0.0828	-0.0539	-0.0142	-0.0398	0.5314	0.49	
84	405+75.410	406+00.000	0.0047	0.056	0.092	0.0022	0.0008	0.0014	0.0035	0.0011	0.0024	-0.0014	-0.0004	-0.0010	0.4646	0.43	
85	406+00.000	407+00.000	0.0189	0.254	0.446	0.0098	0.0036	0.0062	0.0172	0.0055	0.0116	-0.0074	-0.0019	-0.0054	0.5164	0.48	
86	407+00.000	443+25.000	0.6866	25.399	13.526	0.9769	0.4312	0.5456	0.5202	0.1670	0.3532	0.4567	0.2642	0.1924	1.4229	1.31	
87	443+25.000	445+50.000	0.0426	0.515	0.840	0.0198	0.0071	0.0127	0.0323	0.0104	0.0219	-0.0125	-0.0032	-0.0092	0.4646	0.43	
88	445+50.000	452+50.000	0.1326	4.452	2.612	0.1712	0.1044	0.0669	0.1005	0.0322	0.0682	0.0708	0.0721	-0.0013	1.2917	1.19	
89	452+50.000	459+00.000	0.1231	1.487	2.425	0.0572	0.0206	0.0366	0.0933	0.0299	0.0633	-0.0361	-0.0094	-0.0267	0.4646	0.43	
90	459+00.000	460+00.000	0.0189	0.254	0.446	0.0098	0.0036	0.0062	0.0172	0.0055	0.0116	-0.0074	-0.0019	-0.0054	0.5164	0.48	
91	460+00.000	460+58.580	0.0111	0.134	0.219	0.0052	0.0019	0.0033	0.0084	0.0027	0.0057	-0.0033	-0.0008	-0.0024	0.4646	0.43	
92	460+58.580	485+61.230	0.4740	8.577	9.338	0.3299	0.0899	0.2399	0.3592	0.1153	0.2439	-0.0293	-0.0253	-0.0039	0.6959	0.64	
93	485+61.230	503+00.000	0.3293	6.829	6.488	0.2627	0.0647	0.1979	0.2495	0.0801	0.1694	0.0131	-0.0154	0.0285	0.7976	0.74	
94	503+00.000	507+00.000	0.0758	3.766	1.492	0.1448	0.0174	0.1275	0.0574	0.0184	0.0390	0.0874	-0.0010	0.0885	1.9120	1.76	
95	507+00.000	508+00.000	0.0189	0.217	0.344	0.0084	0.0030	0.0054	0.0132	0.0042	0.0090	-0.0049	-0.0013	-0.0036	0.4416	0.41	
96	508+00.000	508+08.240	0.0016	0.018	0.028	0.0007	0.0002	0.0004	0.0011	0.0003	0.0007	-0.0004	-0.0001	-0.0003	0.4416	0.41	
97	508+08.240	510+30.000	0.0420	0.482	0.762	0.0185	0.0066	0.0119	0.0293	0.0094	0.0199	-0.0108	-0.0028	-0.0080	0.4416	0.41	
98	510+30.000	512+00.000	0.0322	0.389	0.634	0.0150	0.0054	0.0096	0.0244	0.0078	0.0166	-0.0094	-0.0025	-0.0070	0.4646	0.43	
463/SD38 (v1)	512+00.000			87.655	169.483	3.3714	1.6033	1.7681	6.5186	2.8095	3.7091	-3.1472	-1.2062	-1.9410			0.88
99	512+00.000	513+00.000	0.0189	0.626	1.666	0.0241	0.0095	0.0145	0.0641	0.0206	0.0435	-0.0400	-0.0110	-0.0290	1.2714	0.33	
100	513+00.000	515+00.000	0.0379	1.092	2.395	0.0420	0.0161	0.0259	0.0921	0.0296	0.0626	-0.0501	-0.0135	-0.0366	1.1086	0.29	
101	515+00.000	520+00.000	0.0947	2.689	5.796	0.1034	0.0394	0.0640	0.2229	0.0716	0.1514	-0.1195	-0.0322	-0.0873	1.0920	0.28	
102	520+00.000	520+49.150	0.0093	0.308	0.819	0.0118	0.0047	0.0071	0.0315	0.0101	0.0214	-0.0197	-0.0054	-0.0142	1.2714	0.33	
103	520+49.150	521+00.000	0.0096	0.343	1.049	0.0132	0.0054	0.0078	0.0403	0.0130	0.0274	-0.0271	-0.0076	-0.0195	1.3705	0.36	
104	521+00.000	523+38.600	0.0452	1.409	3.425	0.0542	0.0211	0.0331	0.1317	0.0423	0.0895	-0.0776	-0.0212	-0.0564	1.1991	0.31	
105	523+38.600	524+00.000	0.0116	0.362	0.881	0.0139	0.0054	0.0085	0.0339	0.0109	0.0230	-0.0200	-0.0054	-0.0145	1.1991	0.31	
106	524+00.000	525+00.000	0.0189	0.675	2.063	0.0260	0.0105	0.0154	0.0793	0.0255	0.0539	-0.0534	-0.0149	-0.0384	1.3705	0.36	
Main Ave/SD38 (v1)	524+50.000			42.110	132.778	1.6196	0.6778	0.9418	5.1069	2.2011	2.9058	-3.4872	-1.5232	-1.9640			0.37
107	525+00.000	525+18.580	0.0035	0.110	0.267	0.0042	0.0016	0.0026	0.0103	0.0033	0.0070	-0.0060	-0.0016	-0.0044	1.1991	0.31	
108	525+18.580	528+00.000	0.0533	1.662	4.040	0.0639	0.0249	0.0390	0.1554	0.0499	0.1055	-0.0915	-0.0250	-0.0665	1.1991	0.31	
109	528+00.000	529+00.000	0.0189	0.675	2.063	0.0260	0.0105	0.0154	0.0793	0.0255	0.0539	-0.0534	-0.0149	-0.0384	1.3705	0.36	
110	529+00.000	539+00.000	0.1894	13.262	14.355	0.5101	0.1129	0.3971	0.5521	0.1772	0.3749	-0.0420	-0.0643	0.0223	2.6933	0.70	
111	539+00.000	539+50.000	0.0095	0.299	0.742	0.0115	0.0045	0.0070	0.0285	0.0092	0.0194	-0.0170	-0.0047	-0.0124	1.2152	0.32	
112	539+50.000	540+00.000	0.0095	0.299	0.742	0.0115	0.0045	0.0070	0.0285	0.0092	0.0194	-0.0170	-0.0047	-0.0124	1.2152	0.32	
113	540+00.000	540+50.000	0.0095	0.299	0.742	0.0115	0.0045	0.0070	0.0285	0.0092	0.0194	-0.0170	-0.0047	-0.0124	1.2152	0.32	
114	540+50.000	540+74.370	0.0046	0.165	0.503	0.0063	0.0026	0.0038	0.0193	0.0062	0.0131	-0.0130	-0.0036	-0.0094	1.3705	0.36	
115	540+74.370	541+00.000	0.0049	0.161	0.427	0.0062	0.0024	0.0037	0.0164	0.0053	0.0111	-0.0102	-0.0028	-0.0074	1.2714	0.33	
116	541+00.000	541+50.000	0.0095	0.313	0.833	0.0120	0.0048	0.0073	0.0320	0.0103	0.0218	-0.0200	-0.0055	-0.0145	1.2714	0.33	
Vandemark/SD38 (v1)	541+50.000			28.334	74.904	1.0898	0.5033	0.5865	2.8809	1.2417	1.6393	-1.7912	-0.7384	-1.0527			0.27
117	541+50.000	541+70.000	0.0038	0.125	0.333	0.0048	0.0019	0.0029	0.0128	0.0041	0.0087	-0.0080	-0.0022	-0.0058	1.2714	0.33	

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/mi/llion veh-mi)	Expected Intersection Travel Crash Rate (crashes/million veh)
118	541+70.000	542+30.000	0.0114	0.376	1.000	0.0144	0.0057	0.0087	0.0384	0.0123	0.0261	-0.0240	-0.0066	-0.0174	1.2714	0.33	
119	542+30.000	542+64.000	0.0064	0.186	0.407	0.0071	0.0027	0.0044	0.0157	0.0050	0.0106	-0.0085	-0.0023	-0.0062	1.1086	0.29	
120	542+64.000	543+34.000	0.0133	0.382	0.838	0.0147	0.0056	0.0091	0.0322	0.0104	0.0219	-0.0175	-0.0047	-0.0128	1.1086	0.29	
121	543+34.000	544+00.000	0.0125	0.360	0.790	0.0139	0.0053	0.0086	0.0304	0.0098	0.0206	-0.0165	-0.0045	-0.0121	1.1086	0.29	
122	544+00.000	545+00.000	0.0189	0.566	1.300	0.0218	0.0084	0.0134	0.0500	0.0160	0.0339	-0.0282	-0.0076	-0.0206	1.1497	0.30	
123	545+00.000	548+23.000	0.0612	1.829	4.198	0.0703	0.0271	0.0432	0.1615	0.0518	0.1096	-0.0911	-0.0247	-0.0664	1.1497	0.30	
124	548+23.000	553+70.000	0.1036	10.151	7.109	0.3904	0.2627	0.1277	0.2734	0.0878	0.1857	0.1170	0.1750	-0.0580	3.7686	0.98	
125	553+70.000	554+00.000	0.0057	0.194	0.542	0.0074	0.0030	0.0045	0.0209	0.0067	0.0142	-0.0134	-0.0037	-0.0097	1.3100	0.34	
126	554+00.000	554+20.000	0.0038	0.129	0.361	0.0050	0.0020	0.0030	0.0139	0.0045	0.0094	-0.0089	-0.0025	-0.0065	1.3100	0.34	
127	554+20.000	560+00.000	0.1098	3.284	7.538	0.1263	0.0487	0.0776	0.2899	0.0931	0.1969	-0.1636	-0.0444	-0.1193	1.1497	0.30	
128	560+00.000	562+58.560	0.0490	1.464	3.360	0.0563	0.0217	0.0346	0.1292	0.0415	0.0878	-0.0729	-0.0198	-0.0532	1.1497	0.30	
129	562+58.560	564+00.000	0.0268	0.801	1.838	0.0308	0.0119	0.0189	0.0707	0.0227	0.0480	-0.0399	-0.0108	-0.0291	1.1497	0.30	
130	564+00.000	565+00.000	0.0189	0.566	1.300	0.0218	0.0084	0.0134	0.0500	0.0160	0.0339	-0.0282	-0.0076	-0.0206	1.1497	0.30	
131	565+00.000	565+77.000	0.0146	0.494	1.133	0.0190	0.0073	0.0117	0.0436	0.0140	0.0296	-0.0246	-0.0067	-0.0179	1.3020	0.30	
132	565+77.000	566+10.000	0.0063	0.241	0.675	0.0093	0.0037	0.0056	0.0260	0.0083	0.0176	-0.0167	-0.0046	-0.0121	1.4835	0.34	
2nd/SD38 (v2)	566+00.000			51.588	119.976	1.9842	0.7408	1.2433	4.6145	1.9888	2.6256	-2.6303	-1.2480	-1.3823			0.41
133	566+10.000	566+50.000	0.0076	0.292	0.819	0.0112	0.0045	0.0067	0.0315	0.0101	0.0214	-0.0203	-0.0056	-0.0146	1.4835	0.34	
134	566+50.000	569+37.000	0.0544	17.818	4.224	0.6853	0.2643	0.4210	0.1625	0.0522	0.1103	0.5228	0.2121	0.3107	12.6074	2.89	
135	569+37.000	569+70.000	0.0063	0.228	0.581	0.0088	0.0034	0.0053	0.0223	0.0072	0.0152	-0.0136	-0.0037	-0.0098	1.4018	0.32	
West Central School/SD38 (v2)	569+50.000			18.933	73.624	0.7282	0.3383	0.3899	2.8317	1.1752	1.6565	-2.1035	-0.8368	-1.2667			0.16
136	569+70.000	570+00.000	0.0057	0.192	0.442	0.0074	0.0029	0.0045	0.0170	0.0055	0.0115	-0.0096	-0.0026	-0.0070	1.3020	0.30	
137	570+00.000	575+00.000	0.0947	3.160	7.122	0.1215	0.0467	0.0748	0.2739	0.0879	0.1860	-0.1524	-0.0412	-0.1112	1.2834	0.29	
138	575+00.000	579+50.000	0.0852	2.885	6.623	0.1110	0.0428	0.0682	0.2547	0.0818	0.1730	-0.1438	-0.0390	-0.1048	1.3020	0.30	
139	579+50.000	579+70.000	0.0038	0.146	0.409	0.0056	0.0022	0.0034	0.0157	0.0051	0.0107	-0.0101	-0.0028	-0.0073	1.4835	0.34	
140	579+70.000	580+10.000	0.0076	0.292	0.819	0.0112	0.0045	0.0067	0.0315	0.0101	0.0214	-0.0203	-0.0056	-0.0146	1.4835	0.34	
All Segments			7.7398	213.597	230.845	8.2153	3.0105	5.2047	8.8786	2.8500	6.0286	-0.6634	0.1605	-0.8239	1.0614	0.68	
All Intersections				263.144	631.248	10.1209	4.4358	5.6852	24.2788	10.4147	13.8641	-14.1579	-5.9790	-8.1789			0.39
Total			7.7398	476.741	862.093	18.3362	7.4463	10.8899	33.1574	13.2648	19.8927	-14.8212	-5.8185	-9.0028	2.3691		

Table 8. Expected Crash Frequencies and Rates by Horizontal Design Element (Section 1)

Title	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/mi llion veh-mi)
Tangent	171+44.000	174+52.690	0.0585	0.720	1.188	0.0277	0.0100	0.0177	0.0457	0.0147	0.0310	-0.0180	-0.0047	-0.0133	0.4733	0.44
Simple Curve 1	174+52.690	178+85.250	0.0819	1.254	2.459	0.0482	0.0180	0.0302	0.0946	0.0304	0.0642	-0.0464	-0.0123	-0.0340	0.5886	0.54
Tangent	178+85.250	230+66.250	0.9812	14.723	19.390	0.5663	0.1684	0.3979	0.7458	0.2394	0.5064	-0.1795	-0.0710	-0.1085	0.5771	0.53
Simple Curve 2	230+66.250	245+14.280	0.2742	6.908	6.555	0.2657	0.1459	0.1198	0.2521	0.0809	0.1712	0.0136	0.0649	-0.0513	0.9688	0.89
Tangent	245+14.280	263+22.600	0.3425	10.496	6.937	0.4037	0.0685	0.3352	0.2668	0.0856	0.1812	0.1369	-0.0172	0.1541	1.1787	1.09
Simple Curve 3	263+22.600	272+66.740	0.1788	2.351	4.061	0.0904	0.0329	0.0575	0.1562	0.0501	0.1060	-0.0657	-0.0172	-0.0485	0.5057	0.47
Tangent	272+66.740	296+96.470	0.4602	8.432	9.130	0.3243	0.0823	0.2420	0.3511	0.1127	0.2384	-0.0268	-0.0304	0.0036	0.7047	0.65
Simple Curve 4	296+96.470	296+96.520	0.0000	0.000	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	-0.0000	-0.0000	-0.0000	0.4646	0.43
Tangent	296+96.520	329+81.740	0.6222	7.516	12.258	0.2891	0.1040	0.1851	0.4715	0.1513	0.3201	-0.1824	-0.0474	-0.1350	0.4646	0.43
Simple Curve 5	329+81.740	335+39.960	0.1057	8.323	2.828	0.3201	0.0246	0.2956	0.1088	0.0349	0.0738	0.2114	-0.0103	0.2217	3.0280	2.79
Tangent	335+39.960	369+14.990	0.6392	13.471	12.739	0.5181	0.1961	0.3220	0.4900	0.1573	0.3327	0.0282	0.0389	-0.0107	0.8106	0.75
Simple Curve 6	369+14.990	379+62.690	0.1984	6.109	5.131	0.2350	0.1376	0.0974	0.1973	0.0633	0.1340	0.0376	0.0742	-0.0366	1.1841	1.09
Tangent	379+62.690	385+22.970	0.1061	4.133	2.091	0.1590	0.1024	0.0566	0.0804	0.0258	0.0546	0.0785	0.0766	0.0020	1.4979	1.38
Simple Curve 7	385+22.970	405+75.410	0.3887	5.424	9.817	0.2086	0.0767	0.1319	0.3776	0.1212	0.2564	-0.1690	-0.0445	-0.1245	0.5366	0.50
Tangent	405+75.410	520+49.150	2.1731	57.544	50.368	2.2132	0.8301	1.3832	1.9372	0.6218	1.3154	0.2760	0.2082	0.0678	1.0185	0.88
Simple Curve 8	520+49.150	540+74.370	0.3836	19.560	30.871	0.7523	0.2085	0.5438	1.1874	0.3811	0.8062	-0.4350	-0.1726	-0.2624	1.9614	0.51
Tangent	540+74.370	580+10.000	0.7454	46.632	55.023	1.7936	0.8047	0.9889	2.1163	0.6793	1.4370	-0.3227	0.1253	-0.4481	2.4062	0.58

Table 9. Predicted Crash Frequencies by Year (Section 1)

Year	Total Crashes	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)
2025	21.56	8.58	39.798	12.98	60.202
2026	23.15	9.22	39.843	13.93	60.157
2027	24.72	9.86	39.881	14.86	60.119
2028	26.28	10.49	39.913	15.79	60.087
2029	27.83	11.12	39.940	16.71	60.060
2030	28.45	11.37	39.948	17.09	60.052
2031	29.08	11.62	39.955	17.46	60.045
2032	29.71	11.87	39.963	17.84	60.037
2033	30.34	12.13	39.971	18.21	60.029
2034	30.97	12.38	39.978	18.59	60.022
2035	31.61	12.64	39.985	18.97	60.015
2036	32.24	12.89	39.992	19.35	60.008
2037	32.88	13.15	39.999	19.73	60.001
2038	33.52	13.41	40.006	20.11	59.994
2039	34.16	13.67	40.012	20.49	59.988
2040	34.80	13.93	40.019	20.87	59.981
2041	35.57	14.24	40.027	21.33	59.973
2042	36.35	14.55	40.035	21.80	59.965
2043	37.12	14.87	40.043	22.26	59.957
2044	37.90	15.18	40.051	22.72	59.949
2045	38.68	15.49	40.058	23.19	59.942
2046	39.47	15.81	40.066	23.65	59.934
2047	40.25	16.13	40.073	24.12	59.927
2048	41.03	16.45	40.080	24.59	59.920
2049	41.82	16.76	40.087	25.05	59.913
2050	42.61	17.09	40.094	25.53	59.906
Total	862.09	344.88	40.005	517.21	59.995
Average	33.16	13.27	40.005	19.89	59.995

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 10. Expected Crash Frequencies by Year (Section 1)

Year	Total Crashes	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)
2025	11.92	4.82	40.399	7.11	59.596
2026	12.80	5.18	40.445	7.62	59.551
2027	13.67	5.53	40.483	8.14	59.514
2028	14.53	5.89	40.516	8.64	59.482
2029	15.39	6.24	40.543	9.15	59.455
2030	15.73	6.38	40.551	9.35	59.447
2031	16.08	6.52	40.559	9.56	59.440
2032	16.43	6.67	40.567	9.77	59.432
2033	16.78	6.81	40.574	9.97	59.425
2034	17.13	6.95	40.582	10.18	59.418
2035	17.48	7.09	40.589	10.38	59.410
2036	17.83	7.24	40.596	10.59	59.404
2037	18.18	7.38	40.603	10.80	59.397
2038	18.54	7.53	40.610	11.01	59.390
2039	18.89	7.67	40.617	11.22	59.384
2040	19.25	7.82	40.624	11.43	59.377
2041	19.67	7.99	40.632	11.68	59.369
2042	20.10	8.17	40.640	11.93	59.361
2043	20.53	8.34	40.648	12.18	59.353
2044	20.96	8.52	40.656	12.44	59.345
2045	21.39	8.70	40.664	12.69	59.338
2046	21.82	8.88	40.671	12.95	59.330
2047	22.26	9.05	40.678	13.20	59.323
2048	22.69	9.23	40.686	13.46	59.316
2049	23.13	9.41	40.693	13.72	59.309
2050	23.56	9.59	40.700	13.97	59.302
Total	476.74	193.60	40.610	283.14	59.390
Average	18.34	7.45	40.610	10.89	59.390

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 11. Comparing Predicted and Expected Crashes for the Evaluation Period (Section 1)

Scope	Total Crashes	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)
Predicted	862.09	344.88	40.005	517.21	59.995
Expected	476.74	193.60	40.610	283.14	59.390
Expected - Predicted	-385.35	-151.28		-234.07	
Percent Difference	-80.83	-78.14		-82.67	

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 12. Expected Crash Type Distribution (Section 1)

Element Type	Crash Type	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)	Total Crashes	Percent Total (%)
Highway Segment	Collision with Animal	2.97	0.6	24.90	5.2	25.84	5.4
Highway Segment	Collision with Bicycle	0.31	0.1	0.14	0.0	0.43	0.1
Highway Segment	Other Single-vehicle Collision	0.55	0.1	3.92	0.8	4.49	0.9
Highway Segment	Overtaken	2.90	0.6	2.03	0.4	5.34	1.1
Highway Segment	Collision with Pedestrian	0.55	0.1	0.14	0.0	0.64	0.1
Highway Segment	Run Off Road	42.66	9.0	68.34	14.3	111.28	23.4
Highway Segment	Total Single Vehicle Crashes	49.94	10.5	99.46	20.9	148.02	31.1
Highway Segment	Angle Collision	7.91	1.7	9.74	2.0	18.16	3.8
Highway Segment	Head-on Collision	2.66	0.6	0.41	0.1	3.42	0.7
Highway Segment	Other Multiple-vehicle Collision	2.04	0.4	4.06	0.9	5.77	1.2
Highway Segment	Rear-end Collision	12.91	2.7	16.51	3.5	30.33	6.4
Highway Segment	Sideswipe	2.97	0.6	5.14	1.1	7.90	1.7
Highway Segment	Total Multiple Vehicle Crashes	28.49	6.0	35.86	7.5	65.57	13.8
Highway Segment	Total Highway Segment Crashes	78.43	16.5	135.32	28.4	213.60	44.8
Intersection	Collision with Animal	0.71	0.1	2.22	0.5	2.84	0.6
Intersection	Collision with Bicycle	0.12	0.0	0.15	0.0	0.26	0.1
Intersection	Other Single-vehicle Collision	0.54	0.1	1.61	0.3	2.10	0.4
Intersection	Overtaken	0.86	0.2	0.63	0.1	1.50	0.3
Intersection	Collision with Pedestrian	0.12	0.0	0.15	0.0	0.26	0.1
Intersection	Run Off Road	12.42	2.6	22.60	4.7	34.98	7.3
Intersection	Total Single Vehicle Crashes	14.77	3.1	27.36	5.7	41.97	8.8
Intersection	Angle Collision	58.58	12.3	50.48	10.6	108.83	22.8
Intersection	Head-on Collision	7.15	1.5	3.79	0.8	10.81	2.3
Intersection	Other Multiple-vehicle Collision	4.93	1.0	5.42	1.1	10.33	2.2
Intersection	Rear-end Collision	24.76	5.2	39.65	8.3	64.53	13.5
Intersection	Sideswipe	5.15	1.1	21.12	4.4	26.48	5.6
Intersection	Total Multiple Vehicle Crashes	100.56	21.1	120.46	25.3	220.99	46.4
Intersection	Total Intersection Crashes	115.33	24.2	147.81	31.0	262.95	55.2
	Total Crashes	193.76	40.7	283.14	59.4	476.55	100.0

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 13. Evaluation Message

Start Location (Sta. ft)	End Location (Sta. ft)	Message
580+00.000	580+00.000	Warning: for intersection #3 (580+00.000 to 580+00.000), SE SD-38 at 580+00.000 has more than one lane exiting. No intersection crash prediction computed.
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (3,560 vpd) for 2018 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (3,560 vpd) for 2019 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (3,560 vpd) for 2020 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (3,560 vpd) for 2021 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (3,560 vpd) for 2022 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
580+00.000	580+00.000	Warning: for intersection #3 (580+00.000 to 580+00.000), SE SD-38 at 580+00.000 has more than one lane exiting. No intersection crash prediction computed.
187+50.000	187+50.000	Warning: for intersection #5 (187+50.000 to 187+50.000), minor road traffic volume (3,503 vpd) for 2049 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
187+50.000	187+50.000	Warning: for intersection #5 (187+50.000 to 187+50.000), minor road traffic volume (3,570 vpd) for 2050 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (3,802 vpd) for 2025 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (3,882 vpd) for 2026 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (3,963 vpd) for 2027 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,044 vpd) for 2028 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,125 vpd) for 2029 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,221 vpd) for 2030 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,318 vpd) for 2031 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,415 vpd) for 2032 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,512 vpd) for 2033 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST

Start Location (Sta. ft)	End Location (Sta. ft)	Message
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,609 vpd) for 2034 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,705 vpd) for 2035 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,802 vpd) for 2036 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,899 vpd) for 2037 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (4,996 vpd) for 2038 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (5,093 vpd) for 2039 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (5,190 vpd) for 2040 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (5,308 vpd) for 2041 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (5,427 vpd) for 2042 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (5,545 vpd) for 2043 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (5,664 vpd) for 2044 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (5,782 vpd) for 2045 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (5,901 vpd) for 2046 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (6,019 vpd) for 2047 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (6,138 vpd) for 2048 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (6,256 vpd) for 2049 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST
512+00.000	512+00.000	Warning: for intersection #7 (512+00.000 to 512+00.000), minor road traffic volume (6,375 vpd) for 2050 is not within the model limit (3,500 vpd) for reliable results for intersection type 4ST

Interactive Highway Safety Design Model

Crash Prediction Evaluation Report

June 10, 2024

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Report Overview

Report Generated: Jun 10, 2024 10:07 AM

Report Template: System: Single Page, 508 Compliant [System] (mlcpm5, Dec 5, 2019 2:16 PM)

Evaluation Date: Mon Jun 10 10:05:34 CDT 2024

IHSDM Version: v17.0.0 (Sep 22, 2021)

Crash Prediction Module: v12.0.0 (Sep 22, 2021)

User Name: naveen.mallipaddi

Organization Name:

Phone:

E-Mail:

Project Title: SD-38_Build_Option3_I90EBRamp_I

Project Comment: Created Mon Mar 27 16:47:43 CDT 2023

Project Unit System: U.S. Customary

Highway Title: SD-38

Highway Comment: Created Mon Mar 27 16:49:47 CDT 2023

Highway Version: 17

Evaluation Title: Evaluation 51

Evaluation Comment: Created Mon Jun 10 10:01:57 CDT 2024

Minimum Location: 585+00.000

Maximum Location: 974+11.000

Policy for Superelevation: AASHTO 2011 U.S. Customary

Calibration: HSM Configuration

Crash Distribution: HSM Configuration

Model/CMF: HSM Configuration

First Year of Analysis: 2025

Last Year of Analysis: 2050

Empirical-Bayes Analysis: Site-Specific

Highway with Crash History: SD-38

Highway with Crash History Comment: Created Mon Mar 27 16:49:47 CDT 2023

Highway with Crash History Version: 17

First Year of Observed Crashes: 2018

Last Year of Observed Crashes: 2022

Disclaimer Regarding Crash Prediction Method

IMPORTANT NOTICE ABOUT COMPARING RESULTS FROM HIGHWAY SAFETY MANUAL FIRST EDITION (2010) MODELS TO RESULTS FROM NEW MODELS DEVELOPED UNDER NCHRP PROJECTS 17-70, 17-58, AND 17-68

Since the publication of the Highway Safety Manual - First Edition (HSM-1), in 2010 by the American Association of State Highway and Transportation Officials (AASHTO), multiple research efforts have been undertaken through the National Cooperative Highway Research Program (NCHRP) to develop safety performance models for road segment and intersection facility types that were not initially reflected in the HSM-1, in order to expand the breadth and depth of the HSM in the future.

The IHSDM Crash Prediction Module (CPM) is intended as a faithful implementation of HSM Part C predictive methods. As NCHRP projects to develop new predictive methods for the HSM are completed, FHWA works to incorporate the new methods into IHSDM, sometimes in advance of publication in the HSM. The following new crash predictive methods have been accepted by NCHRP project panels and incorporated into IHSDM, while pending AASHTO's approval for incorporation into a future edition of the HSM:

- Roundabouts: completed in 2018 under NCHRP Project 17-70, the new methods will provide improved outcomes for the safety analysis of roundabouts.
- 6+ lane and one-way urban/suburban arterials (including models for segments and intersections): completed under NCHRP Project 17-58.
- Intersection crash prediction methods for some intersection configurations and traffic control types not currently addressed in the HSM (e.g., all-way stop; rural 3-leg signalized; 3-leg stop-controlled where the major leg turns; urban 5-leg signalized; urban high-speed intersections): completed in 2021 under NCHRP Project 17-68.

However, in the absence of local calibration factors (see HSM-1 Part C, Appendix A for guidance on calibration of the predictive models), it is neither appropriate nor advisable to directly compare the results from new models (from NCHRP Projects 17-58, 17-68, and 17-70) to results from HSM-1 models, as the models were not calibrated to the same base state data sets, and consequently can produce unexpected results. If local calibration factors are available and applied to both new models and HSM-1 models, then it may be appropriate to directly compare the results. *[Note: Work being performed under NCHRP Project 17-72 (Update of Crash Modification Factors for the Highway Safety Manual) is expected to re-calibrate many of the old (HSM-1) and new (e.g., NCHRP 17-70) models to data from a single (or small number of) states, that would allow results from all models to be directly compared.]*

The models produced for NCHRP Project 17-70 have independent value in terms of informing the design of a roundabout and assessing the effects of different design characteristics on the expected safety performance of a roundabout.

The HSM-1 interim method previously included in IHSDM for evaluating roundabouts on urban/suburban arterials (i.e., evaluating an existing intersection and then applying a Crash Modification Factor for replacing the existing intersection with a roundabout) has been deactivated in IHSDM, to minimize any confusion with the new roundabout methodology.

Section Types

Section 3 Evaluation

Section: Section 3

Evaluation Start Location: 585+00.000

Evaluation End Location: 948+50.000

Area Type: Rural

Functional Class: Arterial

Type of Alignment: Undivided/Divided Multilane

Model Category: Rural, Multilane

Calibration Factor: 3ST=1.0; 4D=1.0; 4ST=1.0; 4U=1.0; RT_ST_FI=1.0; RT_ST_PDO=1.0;

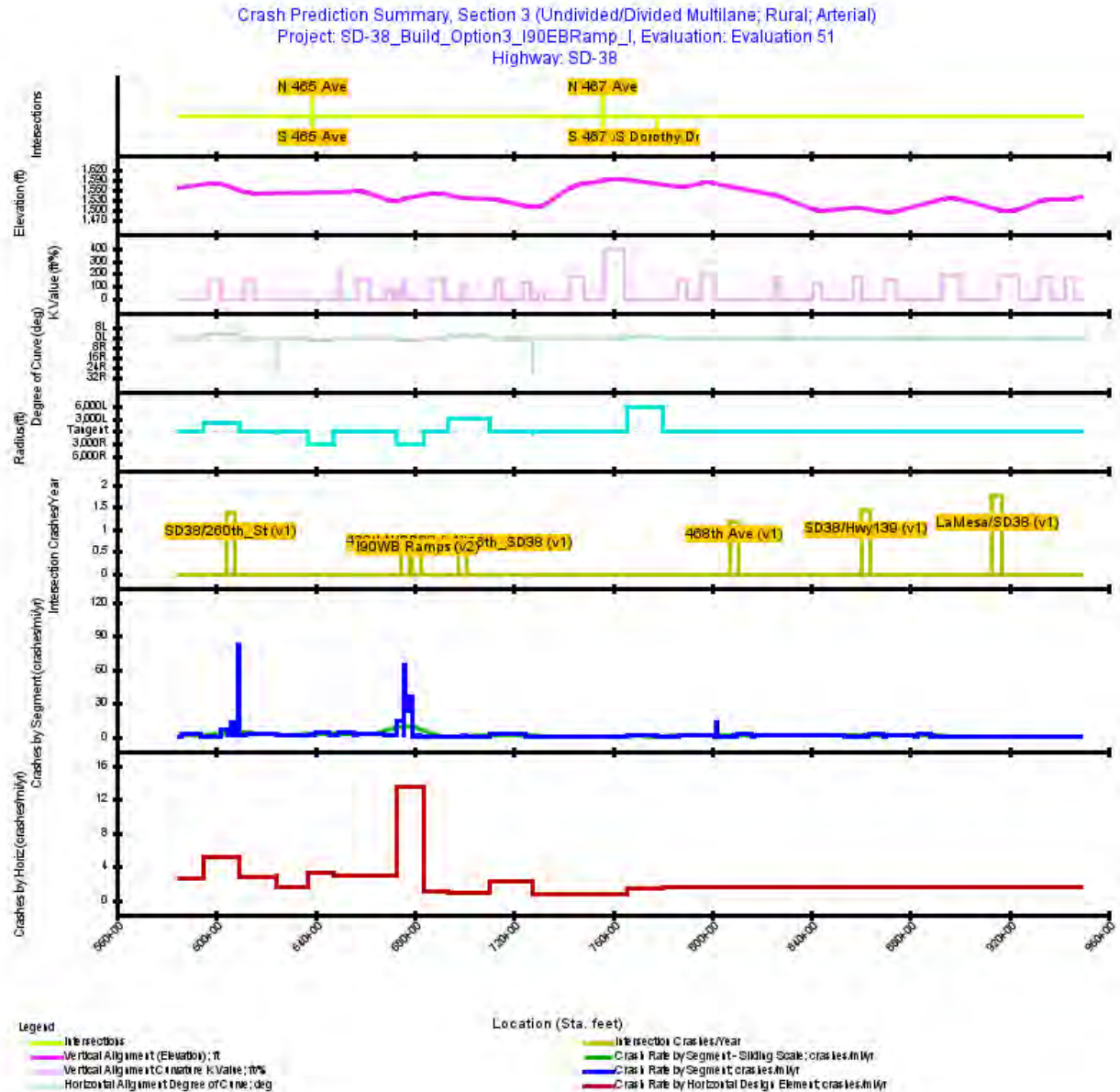


Figure 1. Crash Prediction Summary (Section 3)

Table 1. Observed Crashes Used in the Evaluation (Section 3)

Year	Observed Crashes	Total Crashes Used	FI Crashes	FI no/C Crashes	PDO Crashes
2018	8	8	6	5	2
2019	10	10	4	0	6
2020	7	7	3	2	4
2021	9	9	5	2	4
2022	9	9	5	1	4
All Years	43 ^[1]	43	23	10	20

Footnotes

^[1] Note: Observed crash data that does not comply with the associated CPM model requirements may not be used in EB processing.

Table 2. Evaluation Highway - Homogeneous Segments (Section 3)

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width h (ft)	Right Lane Width h (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Median Width (ft)	Median Type	Effective Median Width (ft)	Lighting	Automated Speed Enforcement	Left Side Slope	Right Side Slope
1	Rural Multi-Lane Segment Four-lane Divided	585+00.00	586+00.00	100.00	0.0189	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	8.00	8.40	Non-Traversable Median	8.40	false	false		
2	Rural Multi-Lane Segment Four-lane Divided	586+00.00	593+75.00	775.00	0.1468	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	8.00	11.90	Non-Traversable Median	11.90	false	false		
3	Rural Multi-Lane Segment Four-lane Divided	593+75.00	594+84.94	109.94	0.0208	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	8.00	15.44	Non-Traversable Median	15.44	false	false		
4	Rural Multi-Lane Segment Four-lane Divided	594+84.94	600+00.00	515.06	0.0975	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	8.00	17.94	Non-Traversable Median	17.94	false	false		
5	Rural Multi-Lane Segment Four-lane Divided	600+00.00	600+42.00	42.00	0.0080	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	8.00	17.48	Non-Traversable Median	17.48	false	false		
6	Rural Multi-Lane Segment Four-lane Divided	600+42.00	601+00.00	58.00	0.0110	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	8.00	11.48	Non-Traversable Median	11.48	false	false		
7	Rural Multi-Lane Segment Four-lane Divided	601+00.00	602+00.00	100.00	0.0189	2025: 7,087; 2026: 8,007; 2027: 8,928; 2028: 9,849; 2029: 10,770; 2030: 10,937; 2031: 11,104; 2032: 11,271; 2033: 11,439; 2034: 11,606; 2035: 11,773; 2036: 11,940; 2037: 12,108; 2038: 12,275; 2039: 12,442; 2040: 12,610; 2041: 12,806; 2042: 13,002; 2043: 13,198; 2044: 13,394; 2045: 13,590; 2046: 13,786; 2047: 13,982; 2048: 14,178; 2049: 14,374; 2050: 14,570	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
8	Rural Multi-Lane Segment Four-lane Divided	602+00.00	605+00.00	300.00	0.0568	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
9	Rural Multi-Lane Segment Four-lane Divided	605+00.00	605+10.00	10.00	0.0019	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	0.00	8.00	Non-Traversable Median	20.00	false	false		
10	Rural Multi-Lane Segment Four-lane Divided	605+10.00	605+40.00	30.00	0.0057	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	0.00	8.00	Traversable Median	20.00	false	false		
11	Rural Multi-Lane Segment Four-lane Undivided	605+40.00	605+60.00	20.00	0.0038	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	0.00	0.00	None	0.00	false	false	0:1	0:1
12	Rural Multi-Lane Segment Four-lane Undivided	605+60.00	605+70.00	10.00	0.0019	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
13	Rural Multi-Lane Segment Four-lane Undivided	605+70.00	605+75.00	5.00	0.0009	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
14	Rural Multi-Lane Segment Four-lane Undivided	605+75.00	606+00.00	25.00	0.0047	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1

Interactive Highway Safety Design Model
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Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Median Width (ft)	Median Type	Effective Median Width (ft)	Lighting	Automated Speed Enforcement	Left Side Slope	Right Side Slope
45	Rural Multi-Lane Segment Four-lane Divided	668+50.00 0	668+80.00 0	30.00	0.0057	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	0.00	18.62	Non-Traversable Median	18.62	false	false		
46	Rural Multi-Lane Segment Four-lane Divided	668+80.00 0	669+05.00 0	25.00	0.0047	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	16.08	Non-Traversable Median	16.08	false	false		
47	Rural Multi-Lane Segment Four-lane Divided	669+05.00 0	669+80.00 0	75.00	0.0142	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	11.46	Non-Traversable Median	11.46	false	false		
48	Rural Multi-Lane Segment Four-lane Divided	669+80.00 0	672+86.11 0	306.11	0.0580	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	8.00	false	false		
49	Rural Multi-Lane Segment Four-lane Divided	672+86.11 0	675+50.00 0	263.89	0.0500	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	8.00	false	false		
50	Rural Multi-Lane Segment Four-lane Divided	675+50.00 0	676+00.00 0	50.00	0.0095	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	8.00	Traversable Median	8.00	false	false		
51	Rural Multi-Lane Segment Four-lane Divided	676+00.00 0	676+30.00 0	30.00	0.0057	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	0.00	8.00	8.00	Traversable Median	8.00	false	false		
52	Rural Multi-Lane Segment Four-lane Undivided	676+30.00 0	677+50.00 0	120.00	0.0227	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	0.00	8.00	0.00	None	0.00	false	false	0:1	0:1
53	Rural Multi-Lane Segment Four-lane Divided	677+50.00 0	679+00.00 0	150.00	0.0284	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
54	Rural Multi-Lane Segment Four-lane Divided	679+00.00 0	680+20.00 0	120.00	0.0227	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
55	Rural Multi-Lane Segment Four-lane Divided	680+20.00 0	680+80.00 0	60.00	0.0114	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
56	Rural Multi-Lane Segment Four-lane Divided	680+80.00 0	681+00.00 0	20.00	0.0038	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	0.00	8.00	8.00	Traversable Median	20.00	false	false		
57	Rural Multi-Lane Segment Four-lane Undivided	681+00.00 0	682+20.00 0	120.00	0.0227	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	0.00	8.00	0.00	None	0.00	false	false	0:1	0:1
58	Rural Multi-Lane Segment Four-lane Divided	682+20.00 0	683+82.71 0	162.71	0.0308	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
59	Rural Multi-Lane Segment Four-lane Divided	683+82.71 0	690+00.00 0	617.29	0.1169	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Median Width (ft)	Median Type	Effective Median Width (ft)	Lighting	Automated Speed Enforcement	Left Side Slope	Right Side Slope
60	Rural Multi-Lane Segment Four-lane Divided	690+00.00	691+50.00	150.00	0.0284	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	8.00	0.00	20.00	Non-Traversable Median	20.00	false	false		
61	Rural Multi-Lane Segment Four-lane Divided	691+50.00	692+01.00	51.00	0.0097	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	8.00	0.00	17.45	Non-Traversable Median	17.45	false	false		
62	Rural Multi-Lane Segment Four-lane Divided	692+01.00	692+70.00	69.00	0.0131	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	8.00	0.00	11.45	Non-Traversable Median	11.45	false	false		
63	Rural Multi-Lane Segment Four-lane Divided	692+70.00	693+85.01	115.01	0.0218	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	8.00	0.00	8.00	Non-Traversable Median	19.00	false	false		
64	Rural Multi-Lane Segment Four-lane Divided	693+85.01	698+50.00	464.99	0.0881	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	8.00	0.00	8.00	Non-Traversable Median	19.00	false	false		
65	Rural Multi-Lane Segment Four-lane Divided	698+50.00	698+70.00	20.00	0.0038	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	8.00	0.00	8.00	Traversable Median	19.00	false	false		
66	Rural Multi-Lane Segment Four-lane Divided	698+70.00	699+20.00	50.00	0.0095	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	0.00	0.00	8.00	Traversable Median	19.00	false	false		
67	Rural Multi-Lane Segment Four-lane Undivided	699+20.00	700+40.00	120.00	0.0227	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	0.00	0.00	0.00	None	0.00	false	false	0:1	0:1
68	Rural Multi-Lane Segment Four-lane Divided	700+40.00	700+50.00	10.00	0.0019	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	0.00	0.00	8.00	Traversable Median	8.00	false	false		
69	Rural Multi-Lane Segment Four-lane Divided	700+50.00	701+10.00	60.00	0.0114	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	8.00	0.00	8.00	Traversable Median	8.00	false	false		
70	Rural Multi-Lane Segment Four-lane Divided	701+10.00	702+00.00	90.00	0.0170	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	12.00	12.00	8.00	0.00	8.00	Non-Traversable Median	8.00	false	false		
71	Rural Multi-Lane Segment Four-lane Divided	702+00.00	702+50.00	50.00	0.0095	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	0.00	8.00	Non-Traversable Median	8.00	false	false		
72	Rural Multi-Lane Segment Four-lane Divided	702+50.00	707+00.00	450.00	0.0852	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	8.00	false	false		
73	Rural Multi-Lane Segment Four-lane Divided	707+00.00	708+00.00	100.00	0.0189	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	8.00	false	false		
74	Rural Multi-Lane Segment Four-lane Divided	708+00.00	708+80.00	80.00	0.0152	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Median Width (ft)	Median Type	Effective Median Width (ft)	Lighting	Automated Speed Enforcement	Left Side Slope	Right Side Slope
75	Rural Multi-Lane Segment Four-lane Divided	708+80.00 0	709+00.00 0	20.00	0.0038	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
76	Rural Multi-Lane Segment Four-lane Undivided	709+00.00 0	710+30.00 0	130.00	0.0246	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
77	Rural Multi-Lane Segment Four-lane Divided	710+30.00 0	710+47.85 0	17.85	0.0034	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
78	Rural Multi-Lane Segment Four-lane Divided	710+47.85 0	725+00.00 0	1,452.15	0.2750	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
79	Rural Multi-Lane Segment Four-lane Divided	725+00.00 0	727+52.35 0	252.35	0.0478	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
80	Rural Multi-Lane Segment Four-lane Divided	727+52.35 0	735+00.00 0	747.65	0.1416	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
81	Rural Multi-Lane Segment Four-lane Divided	735+00.00 0	755+50.00 0	2,050.00	0.3883	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
82	Rural Multi-Lane Segment Four-lane Undivided	755+50.00 0	756+90.00 0	140.00	0.0265	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
83	Rural Multi-Lane Segment Four-lane Divided	756+90.00 0	757+00.00 0	10.00	0.0019	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
84	Rural Multi-Lane Segment Four-lane Divided	757+00.00 0	763+30.00 0	630.00	0.1193	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
85	Rural Multi-Lane Segment Four-lane Divided	763+30.00 0	764+00.00 0	70.00	0.0133	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	11.50	Non-Traversable Median	11.50	false	false		
86	Rural Multi-Lane Segment Four-lane Divided	764+00.00 0	764+50.00 0	50.00	0.0095	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	17.50	Non-Traversable Median	17.50	false	false		
87	Rural Multi-Lane Segment Four-lane Divided	764+50.00 0	765+52.55 0	102.55	0.0194	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
88	Rural Multi-Lane Segment Four-lane Divided	765+52.55 0	777+80.00 0	1,227.45	0.2325	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
89	Rural Multi-Lane Segment Four-lane Undivided	777+80.00 0	778+80.00 0	100.00	0.0189	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Median Width (ft)	Median Type	Effective Median Width (ft)	Lighting	Automated Speed Enforcement	Left Side Slope	Right Side Slope
90	Rural Multi-Lane Segment Four-lane Divided	778+80.00 0	779+00.00 0	20.00	0.0038	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
91	Rural Multi-Lane Segment Four-lane Divided	779+00.00 0	780+45.93 0	145.93	0.0276	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
92	Rural Multi-Lane Segment Four-lane Divided	780+45.93 0	785+40.00 0	494.07	0.0936	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
93	Rural Multi-Lane Segment Four-lane Divided	785+40.00 0	785+50.00 0	10.00	0.0019	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	8.00	false	false		
94	Rural Multi-Lane Segment Four-lane Divided	785+50.00 0	786+09.00 0	59.00	0.0112	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	11.54	Non-Traversable Median	11.54	false	false		
95	Rural Multi-Lane Segment Four-lane Divided	786+09.00 0	786+50.00 0	41.00	0.0078	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	17.54	Non-Traversable Median	17.54	false	false		
96	Rural Multi-Lane Segment Four-lane Divided	786+50.00 0	801+10.00 0	1,460.00	0.2765	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
97	Rural Multi-Lane Segment Four-lane Divided	801+10.00 0	801+61.00 0	51.00	0.0097	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	17.45	Non-Traversable Median	17.45	false	false		
98	Rural Multi-Lane Segment Four-lane Divided	801+61.00 0	802+30.00 0	69.00	0.0131	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	11.45	Non-Traversable Median	11.45	false	false		
99	Rural Multi-Lane Segment Four-lane Divided	802+30.00 0	802+40.00 0	10.00	0.0019	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	8.00	false	false		
100	Rural Multi-Lane Segment Four-lane Divided	802+40.00 0	808+30.00 0	590.00	0.1117	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
101	Rural Multi-Lane Segment Four-lane Divided	808+30.00 0	808+80.00 0	50.00	0.0095	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
102	Rural Multi-Lane Segment Four-lane Undivided	808+80.00 0	809+00.00 0	20.00	0.0038	2025: 5,804; 2026: 6,105; 2027: 6,407; 2028: 6,708; 2029: 7,010; 2030: 7,134; 2031: 7,259; 2032: 7,383; 2033: 7,508; 2034: 7,632; 2035: 7,757; 2036: 7,881; 2037: 8,006; 2038: 8,130; 2039: 8,255; 2040: 8,380; 2041: 8,528; 2042: 8,676; 2043: 8,824; 2044: 8,972; 2045: 9,120; 2046: 9,268; 2047: 9,416; 2048: 9,564; 2049: 9,712; 2050: 9,860	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
103	Rural Multi-Lane Segment Four-lane Undivided	809+00.00 0	809+60.00 0	60.00	0.0114	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	0.00	0.00	0.00	None	0.00	false	false	0:1	0:1
104	Rural Multi-Lane Segment Four-lane Divided	809+60.00 0	810+00.00 0	40.00	0.0076	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	0.00	0.00	8.00	Traversable Median	20.00	false	false		

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Median Width (ft)	Median Type	Effective Median Width (ft)	Lighting	Automated Speed Enforcement	Left Side Slope	Right Side Slope
105	Rural Multi-Lane Segment Four-lane Divided	810+00.00	810+20.00	20.00	0.0038	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
106	Rural Multi-Lane Segment Four-lane Divided	810+20.00	816+00.00	580.00	0.1098	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
107	Rural Multi-Lane Segment Four-lane Divided	816+00.00	816+70.00	70.00	0.0133	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	8.00	11.50	Non-Traversable Median	11.50	false	false		
108	Rural Multi-Lane Segment Four-lane Divided	816+70.00	817+20.00	50.00	0.0095	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	8.00	17.50	Non-Traversable Median	17.50	false	false		
109	Rural Multi-Lane Segment Four-lane Divided	817+20.00	853+70.00	3,650.00	0.6913	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
110	Rural Multi-Lane Segment Four-lane Divided	853+70.00	854+00.00	30.00	0.0057	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	8.00	18.36	Non-Traversable Median	18.36	false	false		
111	Rural Multi-Lane Segment Four-lane Divided	854+00.00	854+16.00	16.00	0.0030	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	8.00	15.85	Non-Traversable Median	15.85	false	false		
112	Rural Multi-Lane Segment Four-lane Divided	854+16.00	854+80.00	64.00	0.0121	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	8.00	11.49	Non-Traversable Median	11.49	false	false		
113	Rural Multi-Lane Segment Four-lane Divided	854+80.00	860+90.00	610.00	0.1155	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
114	Rural Multi-Lane Segment Four-lane Divided	860+90.00	861+85.00	95.00	0.0180	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
115	Rural Multi-Lane Segment Four-lane Undivided	861+85.00	862+00.00	15.00	0.0028	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	12.00	12.00	8.00	0.00	0.00	None	0.00	false	false	0:1	0:1
116	Rural Multi-Lane Segment Four-lane Undivided	862+00.00	862+50.00	50.00	0.0095	2025: 6,704; 2026: 7,305; 2027: 7,907; 2028: 8,508; 2029: 9,110; 2030: 9,295; 2031: 9,480; 2032: 9,666; 2033: 9,851; 2034: 10,037; 2035: 10,222; 2036: 10,408; 2037: 10,593; 2038: 10,779; 2039: 10,964; 2040: 11,150; 2041: 11,375; 2042: 11,600; 2043: 11,825; 2044: 12,050; 2045: 12,275; 2046: 12,500; 2047: 12,725; 2048: 12,950; 2049: 13,175; 2050: 13,400	12.00	12.00	8.00	0.00	0.00	None	0.00	false	false	0:1	0:1
117	Rural Multi-Lane Segment Four-lane Undivided	862+50.00	862+60.00	10.00	0.0019	2025: 6,704; 2026: 7,305; 2027: 7,907; 2028: 8,508; 2029: 9,110; 2030: 9,295; 2031: 9,480; 2032: 9,666; 2033: 9,851; 2034: 10,037; 2035: 10,222; 2036: 10,408; 2037: 10,593; 2038: 10,779; 2039: 10,964; 2040: 11,150; 2041: 11,375; 2042: 11,600; 2043: 11,825; 2044: 12,050; 2045: 12,275; 2046: 12,500; 2047: 12,725; 2048: 12,950; 2049: 13,175; 2050: 13,400	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
118	Rural Multi-Lane Segment Four-lane Divided	862+60.00	863+10.00	50.00	0.0095	2025: 6,704; 2026: 7,305; 2027: 7,907; 2028: 8,508; 2029: 9,110; 2030: 9,295; 2031: 9,480; 2032: 9,666; 2033: 9,851; 2034: 10,037; 2035: 10,222; 2036: 10,408; 2037: 10,593; 2038: 10,779; 2039: 10,964; 2040: 11,150; 2041: 11,375; 2042: 11,600; 2043: 11,825; 2044: 12,050; 2045: 12,275; 2046: 12,500; 2047: 12,725; 2048: 12,950; 2049: 13,175; 2050: 13,400	12.00	12.00	8.00	8.00	8.00	Traversable Median	19.00	false	false		
119	Rural Multi-Lane Segment Four-lane Divided	863+10.00	869+00.00	590.00	0.1117	2025: 6,704; 2026: 7,305; 2027: 7,907; 2028: 8,508; 2029: 9,110; 2030: 9,295; 2031: 9,480; 2032: 9,666; 2033: 9,851; 2034: 10,037; 2035: 10,222; 2036: 10,408; 2037: 10,593; 2038: 10,779; 2039: 10,964; 2040: 11,150; 2041: 11,375; 2042: 11,600; 2043: 11,825; 2044: 12,050; 2045: 12,275; 2046: 12,500; 2047: 12,725; 2048: 12,950; 2049: 13,175; 2050: 13,400	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	19.00	false	false		

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Median Width (ft)	Median Type	Effective Median Width (ft)	Lighting	Automated Speed Enforcement	Left Side Slope	Right Side Slope
135	Rural Multi-Lane Segment Four-lane Divided	907+21.00 0	907+80.00 0	59.00	0.0112	2025: 6,704; 2026: 7,305; 2027: 7,907; 2028: 8,508; 2029: 9,110; 2030: 9,295; 2031: 9,480; 2032: 9,666; 2033: 9,851; 2034: 10,037; 2035: 10,222; 2036: 10,408; 2037: 10,593; 2038: 10,779; 2039: 10,964; 2040: 11,150; 2041: 11,375; 2042: 11,600; 2043: 11,825; 2044: 12,050; 2045: 12,275; 2046: 12,500; 2047: 12,725; 2048: 12,950; 2049: 13,175; 2050: 13,400	12.00	12.00	8.00	8.00	11.95	Non-Traversable Median	11.95	false	false		
136	Rural Multi-Lane Segment Four-lane Divided	907+80.00 0	907+90.00 0	10.00	0.0019	2025: 6,704; 2026: 7,305; 2027: 7,907; 2028: 8,508; 2029: 9,110; 2030: 9,295; 2031: 9,480; 2032: 9,666; 2033: 9,851; 2034: 10,037; 2035: 10,222; 2036: 10,408; 2037: 10,593; 2038: 10,779; 2039: 10,964; 2040: 11,150; 2041: 11,375; 2042: 11,600; 2043: 11,825; 2044: 12,050; 2045: 12,275; 2046: 12,500; 2047: 12,725; 2048: 12,950; 2049: 13,175; 2050: 13,400	12.00	12.00	8.00	8.00	8.50	Non-Traversable Median	19.50	false	false		
137	Rural Multi-Lane Segment Four-lane Divided	907+90.00 0	913+70.00 0	580.00	0.1098	2025: 6,704; 2026: 7,305; 2027: 7,907; 2028: 8,508; 2029: 9,110; 2030: 9,295; 2031: 9,480; 2032: 9,666; 2033: 9,851; 2034: 10,037; 2035: 10,222; 2036: 10,408; 2037: 10,593; 2038: 10,779; 2039: 10,964; 2040: 11,150; 2041: 11,375; 2042: 11,600; 2043: 11,825; 2044: 12,050; 2045: 12,275; 2046: 12,500; 2047: 12,725; 2048: 12,950; 2049: 13,175; 2050: 13,400	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	19.00	false	false		
138	Rural Multi-Lane Segment Four-lane Divided	913+70.00 0	914+00.00 0	30.00	0.0057	2025: 6,704; 2026: 7,305; 2027: 7,907; 2028: 8,508; 2029: 9,110; 2030: 9,295; 2031: 9,480; 2032: 9,666; 2033: 9,851; 2034: 10,037; 2035: 10,222; 2036: 10,408; 2037: 10,593; 2038: 10,779; 2039: 10,964; 2040: 11,150; 2041: 11,375; 2042: 11,600; 2043: 11,825; 2044: 12,050; 2045: 12,275; 2046: 12,500; 2047: 12,725; 2048: 12,950; 2049: 13,175; 2050: 13,400	12.00	12.00	8.00	8.00	8.00	Traversable Median	19.00	false	false		
139	Rural Multi-Lane Segment Four-lane Divided	914+00.00 0	914+30.00 0	30.00	0.0057	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	12.00	12.00	8.00	8.00	8.00	Traversable Median	19.00	false	false		
140	Rural Multi-Lane Segment Four-lane Undivided	914+30.00 0	914+40.00 0	10.00	0.0019	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
141	Rural Multi-Lane Segment Four-lane Undivided	914+40.00 0	915+40.00 0	100.00	0.0189	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	12.00	12.00	0.00	0.00	0.00	None	0.00	false	false	0:1	0:1
142	Rural Multi-Lane Segment Four-lane Divided	915+40.00 0	916+00.00 0	60.00	0.0114	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	12.00	12.00	8.00	8.00	8.00	Traversable Median	19.00	false	false		
143	Rural Multi-Lane Segment Four-lane Divided	916+00.00 0	921+00.00 0	500.00	0.0947	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	19.00	false	false		
144	Rural Multi-Lane Segment Four-lane Divided	921+00.00 0	921+90.00 0	90.00	0.0170	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	19.00	false	false		
145	Rural Multi-Lane Segment Four-lane Divided	921+90.00 0	922+00.00 0	10.00	0.0019	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	8.00	false	false		
146	Rural Multi-Lane Segment Four-lane Divided	922+00.00 0	922+59.00 0	59.00	0.0112	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	12.00	12.00	8.00	8.00	11.54	Non-Traversable Median	11.54	false	false		
147	Rural Multi-Lane Segment Four-lane Divided	922+59.00 0	923+00.00 0	41.00	0.0078	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	12.00	12.00	8.00	8.00	17.54	Non-Traversable Median	17.54	false	false		
148	Rural Multi-Lane Segment Four-lane Divided	923+00.00 0	941+70.00 0	1,870.00	0.3542	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
149	Rural Multi-Lane Segment Four-lane Divided	941+70.00 0	948+50.00 0	680.00	0.1288	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		

Table 3. Crash History Highway - Homogeneous Segments (Section 3)

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Median Width (ft)	Median Type	Effective Median Width (ft)	Lighting	Automated Speed Enforcement	Left Side Slope	Right Side Slope
1	Rural Multi-Lane Segment Four-lane Divided	585+00.000	586+00.000	100.00	0.0189	2018-2022: 4,325	12.00	12.00	8.00	8.00	8.40	Non-Traversable Median	8.40	false	false		
2	Rural Multi-Lane Segment Four-lane Divided	586+00.000	593+75.000	775.00	0.1468	2018-2022: 4,325	12.00	12.00	8.00	8.00	11.90	Non-Traversable Median	11.90	false	false		
3	Rural Multi-Lane Segment Four-lane Divided	593+75.000	594+84.940	109.94	0.0208	2018-2022: 4,325	12.00	12.00	8.00	8.00	15.44	Non-Traversable Median	15.44	false	false		
4	Rural Multi-Lane Segment Four-lane Divided	594+84.940	600+00.000	515.06	0.0975	2018-2022: 4,325	12.00	12.00	8.00	8.00	17.94	Non-Traversable Median	17.94	false	false		
5	Rural Multi-Lane Segment Four-lane Divided	600+00.000	600+42.000	42.00	0.0080	2018-2022: 4,325	12.00	12.00	8.00	8.00	17.48	Non-Traversable Median	17.48	false	false		
6	Rural Multi-Lane Segment Four-lane Divided	600+42.000	601+00.000	58.00	0.0110	2018-2022: 4,325	12.00	12.00	8.00	8.00	11.48	Non-Traversable Median	11.48	false	false		
7	Rural Multi-Lane Segment Four-lane Divided	601+00.000	602+00.000	100.00	0.0189	2018-2022: 4,325	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
8	Rural Multi-Lane Segment Four-lane Divided	602+00.000	605+00.000	300.00	0.0568	2018-2022: 4,325	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
9	Rural Multi-Lane Segment Four-lane Divided	605+00.000	605+10.000	10.00	0.0019	2018-2022: 4,325	12.00	12.00	8.00	0.00	8.00	Non-Traversable Median	20.00	false	false		
10	Rural Multi-Lane Segment Four-lane Divided	605+10.000	605+40.000	30.00	0.0057	2018-2022: 4,325	12.00	12.00	8.00	0.00	8.00	Traversable Median	20.00	false	false		
11	Rural Multi-Lane Segment Four-lane Undivided	605+40.000	605+60.000	20.00	0.0038	2018-2022: 4,325	12.00	12.00	8.00	0.00	0.00	None	0.00	false	false	0:1	0:1
12	Rural Multi-Lane Segment Four-lane Undivided	605+60.000	605+70.000	10.00	0.0019	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
13	Rural Multi-Lane Segment Four-lane Undivided	605+70.000	605+75.000	5.00	0.0009	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
14	Rural Multi-Lane Segment Four-lane Undivided	605+75.000	606+00.000	25.00	0.0047	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
15	Rural Multi-Lane Segment Four-lane Divided	606+00.000	607+50.000	150.00	0.0284	2018-2022: 4,325	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
16	Rural Multi-Lane Segment Four-lane Divided	607+50.000	609+00.000	150.00	0.0284	2018-2022: 4,325	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
17	Rural Multi-Lane Segment Four-lane Divided	609+00.000	609+21.930	21.93	0.0042	2018-2022: 4,325	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
18	Rural Multi-Lane Segment Four-lane Divided	609+21.930	611+40.000	218.07	0.0413	2018-2022: 4,325	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
19	Rural Multi-Lane Segment Four-lane Divided	611+40.000	611+50.000	10.00	0.0019	2018-2022: 4,325	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	8.00	false	false		
20	Rural Multi-Lane Segment Four-lane Divided	611+50.000	612+09.000	59.00	0.0112	2018-2022: 4,325	12.00	12.00	8.00	8.00	11.54	Non-Traversable Median	11.54	false	false		
21	Rural Multi-Lane Segment Four-lane Divided	612+09.000	612+50.000	41.00	0.0078	2018-2022: 4,325	12.00	12.00	8.00	8.00	17.54	Non-Traversable Median	17.54	false	false		
22	Rural Multi-Lane Segment Four-lane Divided	612+50.000	624+64.530	1,214.53	0.2300	2018-2022: 4,325	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
23	Rural Multi-Lane Segment Four-lane Divided	624+64.530	631+30.000	665.47	0.1260	2018-2022: 4,325	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
24	Rural Multi-Lane Segment Four-lane Divided	631+30.000	631+81.000	51.00	0.0097	2018-2022: 4,325	12.00	12.00	8.00	8.00	17.45	Non-Traversable Median	17.45	false	false		
25	Rural Multi-Lane Segment Four-lane Divided	631+81.000	632+50.000	69.00	0.0131	2018-2022: 4,325	12.00	12.00	8.00	8.00	11.45	Non-Traversable Median	11.45	false	false		
26	Rural Multi-Lane Segment Four-lane Divided	632+50.000	636+92.820	442.82	0.0839	2018-2022: 4,325	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
27	Rural Multi-Lane Segment Four-lane Divided	636+92.820	638+80.000	187.18	0.0355	2018-2022: 4,325	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
28	Rural Multi-Lane Segment Four-lane Divided	638+80.000	639+00.000	20.00	0.0038	2018-2022: 4,325	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
29	Rural Multi-Lane Segment Four-lane Undivided	639+00.000	640+00.000	100.00	0.0189	2018-2022: 4,325	12.00	12.00	0.00	0.00	0.00	None	0.00	false	false	0:1	0:1
30	Rural Multi-Lane Segment Four-lane Divided	640+00.000	640+20.000	20.00	0.0038	2018-2022: 4,325	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
31	Rural Multi-Lane Segment Four-lane Divided	640+20.000	645+50.000	530.00	0.1004	2018-2022: 4,325	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
32	Rural Multi-Lane Segment Four-lane Divided	645+50.000	646+30.000	80.00	0.0152	2018-2022: 4,325	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	8.00	false	false		
33	Rural Multi-Lane Segment Four-lane Divided	646+30.000	647+00.000	70.00	0.0133	2018-2022: 4,325	12.00	12.00	8.00	8.00	11.50	Non-Traversable Median	11.50	false	false		
34	Rural Multi-Lane Segment Four-lane Divided	647+00.000	647+26.050	26.05	0.0049	2018-2022: 4,325	12.00	12.00	8.00	8.00	16.30	Non-Traversable Median	16.30	false	false		
35	Rural Multi-Lane Segment Four-lane Divided	647+26.050	647+50.000	23.95	0.0045	2018-2022: 4,325	12.00	12.00	8.00	8.00	18.80	Non-Traversable Median	18.80	false	false		
36	Rural Multi-Lane Segment Four-lane Divided	647+50.000	648+00.000	50.00	0.0095	2018-2022: 4,325	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
37	Rural Multi-Lane Segment Four-lane Divided	648+00.000	648+42.000	42.00	0.0080	2018-2022: 4,325	12.00	12.00	8.00	8.00	17.48	Non-Traversable Median	17.48	false	false		
38	Rural Multi-Lane Segment Four-lane Divided	648+42.000	649+00.000	58.00	0.0110	2018-2022: 4,325	12.00	12.00	8.00	8.00	11.48	Non-Traversable Median	11.48	false	false		
39	Rural Multi-Lane Segment Four-lane Divided	649+00.000	649+20.000	20.00	0.0038	2018-2022: 4,325	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	8.00	false	false		
40	Rural Multi-Lane Segment Four-lane Divided	649+20.000	655+50.000	630.00	0.1193	2018-2022: 4,325	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Median Width (ft)	Median Type	Effective Median Width (ft)	Lighting	Automated Speed Enforcement	Left Side Slope	Right Side Slope
41	Rural Multi-Lane Segment Four-lane Divided	655+50.000	655+70.000	20.00	0.0038	2018-2022: 4,325	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
42	Rural Multi-Lane Segment Four-lane Undivided	655+70.000	656+50.000	80.00	0.0152	2018-2022: 4,325	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
43	Rural Multi-Lane Segment Four-lane Divided	656+50.000	667+80.000	1,130.00	0.2140	2018-2022: 4,325	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
44	Rural Multi-Lane Segment Four-lane Divided	667+80.000	668+50.000	70.00	0.0133	2018-2022: 4,325	12.00	12.00	8.00	0.00	20.00	Non-Traversable Median	20.00	false	false		
45	Rural Multi-Lane Segment Four-lane Divided	668+50.000	668+80.000	30.00	0.0057	2018-2022: 4,325	12.00	12.00	8.00	0.00	18.62	Non-Traversable Median	18.62	false	false		
46	Rural Multi-Lane Segment Four-lane Divided	668+80.000	669+05.000	25.00	0.0047	2018-2022: 4,325	12.00	12.00	8.00	8.00	16.08	Non-Traversable Median	16.08	false	false		
47	Rural Multi-Lane Segment Four-lane Divided	669+05.000	669+80.000	75.00	0.0142	2018-2022: 4,325	12.00	12.00	8.00	8.00	11.46	Non-Traversable Median	11.46	false	false		
48	Rural Multi-Lane Segment Four-lane Divided	669+80.000	672+86.110	306.11	0.0580	2018-2022: 4,325	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	8.00	false	false		
49	Rural Multi-Lane Segment Four-lane Divided	672+86.110	675+50.000	263.89	0.0500	2018-2022: 4,325	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	8.00	false	false		
50	Rural Multi-Lane Segment Four-lane Divided	675+50.000	676+00.000	50.00	0.0095	2018-2022: 4,325	12.00	12.00	8.00	8.00	8.00	Traversable Median	8.00	false	false		
51	Rural Multi-Lane Segment Four-lane Divided	676+00.000	676+30.000	30.00	0.0057	2018-2022: 4,325	12.00	12.00	0.00	8.00	8.00	Traversable Median	8.00	false	false		
52	Rural Multi-Lane Segment Four-lane Undivided	676+30.000	677+50.000	120.00	0.0227	2018-2022: 4,325	12.00	12.00	0.00	8.00	0.00	None	0.00	false	false	0:1	0:1
53	Rural Multi-Lane Segment Four-lane Divided	677+50.000	679+00.000	150.00	0.0284	2018-2022: 4,325	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
54	Rural Multi-Lane Segment Four-lane Divided	679+00.000	680+20.000	120.00	0.0227	2018-2022: 4,150	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
55	Rural Multi-Lane Segment Four-lane Divided	680+20.000	680+80.000	60.00	0.0114	2018-2022: 4,150	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
56	Rural Multi-Lane Segment Four-lane Divided	680+80.000	681+00.000	20.00	0.0038	2018-2022: 4,150	12.00	12.00	0.00	8.00	8.00	Traversable Median	20.00	false	false		
57	Rural Multi-Lane Segment Four-lane Undivided	681+00.000	682+20.000	120.00	0.0227	2018-2022: 4,150	12.00	12.00	0.00	8.00	0.00	None	0.00	false	false	0:1	0:1
58	Rural Multi-Lane Segment Four-lane Divided	682+20.000	683+82.710	162.71	0.0308	2018-2022: 4,150	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
59	Rural Multi-Lane Segment Four-lane Divided	683+82.710	690+00.000	617.29	0.1169	2018-2022: 4,150	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
60	Rural Multi-Lane Segment Four-lane Divided	690+00.000	691+50.000	150.00	0.0284	2018-2022: 4,150	12.00	12.00	8.00	0.00	20.00	Non-Traversable Median	20.00	false	false		
61	Rural Multi-Lane Segment Four-lane Divided	691+50.000	692+01.000	51.00	0.0097	2018-2022: 4,150	12.00	12.00	8.00	0.00	17.45	Non-Traversable Median	17.45	false	false		
62	Rural Multi-Lane Segment Four-lane Divided	692+01.000	692+70.000	69.00	0.0131	2018-2022: 4,150	12.00	12.00	8.00	0.00	11.45	Non-Traversable Median	11.45	false	false		
63	Rural Multi-Lane Segment Four-lane Divided	692+70.000	693+85.010	115.01	0.0218	2018-2022: 4,150	12.00	12.00	8.00	0.00	8.00	Non-Traversable Median	19.00	false	false		
64	Rural Multi-Lane Segment Four-lane Divided	693+85.010	698+50.000	464.99	0.0881	2018-2022: 4,150	12.00	12.00	8.00	0.00	8.00	Non-Traversable Median	19.00	false	false		
65	Rural Multi-Lane Segment Four-lane Divided	698+50.000	698+70.000	20.00	0.0038	2018-2022: 4,150	12.00	12.00	8.00	0.00	8.00	Traversable Median	19.00	false	false		
66	Rural Multi-Lane Segment Four-lane Divided	698+70.000	699+20.000	50.00	0.0095	2018-2022: 4,150	12.00	12.00	0.00	0.00	8.00	Traversable Median	19.00	false	false		
67	Rural Multi-Lane Segment Four-lane Undivided	699+20.000	700+40.000	120.00	0.0227	2018-2022: 4,150	12.00	12.00	0.00	0.00	0.00	None	0.00	false	false	0:1	0:1
68	Rural Multi-Lane Segment Four-lane Divided	700+40.000	700+50.000	10.00	0.0019	2018-2022: 4,150	12.00	12.00	0.00	0.00	8.00	Traversable Median	8.00	false	false		
69	Rural Multi-Lane Segment Four-lane Divided	700+50.000	701+10.000	60.00	0.0114	2018-2022: 4,150	12.00	12.00	8.00	0.00	8.00	Traversable Median	8.00	false	false		
70	Rural Multi-Lane Segment Four-lane Divided	701+10.000	702+00.000	90.00	0.0170	2018-2022: 4,150	12.00	12.00	8.00	0.00	8.00	Non-Traversable Median	8.00	false	false		
71	Rural Multi-Lane Segment Four-lane Divided	702+00.000	702+50.000	50.00	0.0095	2018-2022: 4,900	12.00	12.00	8.00	0.00	8.00	Non-Traversable Median	8.00	false	false		
72	Rural Multi-Lane Segment Four-lane Divided	702+50.000	707+00.000	450.00	0.0852	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	8.00	false	false		
73	Rural Multi-Lane Segment Four-lane Divided	707+00.000	708+00.000	100.00	0.0189	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	8.00	false	false		
74	Rural Multi-Lane Segment Four-lane Divided	708+00.000	708+80.000	80.00	0.0152	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
75	Rural Multi-Lane Segment Four-lane Divided	708+80.000	709+00.000	20.00	0.0038	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
76	Rural Multi-Lane Segment Four-lane Undivided	709+00.000	710+30.000	130.00	0.0246	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
77	Rural Multi-Lane Segment Four-lane Divided	710+30.000	710+47.850	17.85	0.0034	2018-2022: 4,900	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
78	Rural Multi-Lane Segment Four-lane Divided	710+47.850	725+00.000	1,452.15	0.2750	2018-2022: 4,900	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
79	Rural Multi-Lane Segment Four-lane Divided	725+00.000	727+52.350	252.35	0.0478	2018-2022: 4,900	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
80	Rural Multi-Lane Segment Four-lane Divided	727+52.350	735+00.000	747.65	0.1416	2018-2022: 4,900	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
81	Rural Multi-Lane Segment Four-lane Divided	735+00.000	755+50.000	2,050.00	0.3883	2018-2022: 4,900	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
82	Rural Multi-Lane Segment Four-lane Undivided	755+50.000	756+90.000	140.00	0.0265	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
83	Rural Multi-Lane Segment Four-lane Divided	756+90.000	757+00.000	10.00	0.0019	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Median Width (ft)	Median Type	Effective Median Width (ft)	Lighting	Automated Speed Enforcement	Left Side Slope	Right Side Slope
84	Rural Multi-Lane Segment Four-lane Divided	757+00.000	763+30.000	630.00	0.1193	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
85	Rural Multi-Lane Segment Four-lane Divided	763+30.000	764+00.000	70.00	0.0133	2018-2022: 4,900	12.00	12.00	8.00	8.00	11.50	Non-Traversable Median	11.50	false	false		
86	Rural Multi-Lane Segment Four-lane Divided	764+00.000	764+50.000	50.00	0.0095	2018-2022: 4,900	12.00	12.00	8.00	8.00	17.50	Non-Traversable Median	17.50	false	false		
87	Rural Multi-Lane Segment Four-lane Divided	764+50.000	765+52.550	102.55	0.0194	2018-2022: 4,900	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
88	Rural Multi-Lane Segment Four-lane Divided	765+52.550	777+80.000	1,227.45	0.2325	2018-2022: 4,900	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
89	Rural Multi-Lane Segment Four-lane Undivided	777+80.000	778+80.000	100.00	0.0189	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
90	Rural Multi-Lane Segment Four-lane Divided	778+80.000	779+00.000	20.00	0.0038	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
91	Rural Multi-Lane Segment Four-lane Divided	779+00.000	780+45.930	145.93	0.0276	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
92	Rural Multi-Lane Segment Four-lane Divided	780+45.930	785+40.000	494.07	0.0936	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
93	Rural Multi-Lane Segment Four-lane Divided	785+40.000	785+50.000	10.00	0.0019	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	8.00	false	false		
94	Rural Multi-Lane Segment Four-lane Divided	785+50.000	786+09.000	59.00	0.0112	2018-2022: 4,900	12.00	12.00	8.00	8.00	11.54	Non-Traversable Median	11.54	false	false		
95	Rural Multi-Lane Segment Four-lane Divided	786+09.000	786+50.000	41.00	0.0078	2018-2022: 4,900	12.00	12.00	8.00	8.00	17.54	Non-Traversable Median	17.54	false	false		
96	Rural Multi-Lane Segment Four-lane Divided	786+50.000	801+10.000	1,460.00	0.2765	2018-2022: 4,900	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
97	Rural Multi-Lane Segment Four-lane Divided	801+10.000	801+61.000	51.00	0.0097	2018-2022: 4,900	12.00	12.00	8.00	8.00	17.45	Non-Traversable Median	17.45	false	false		
98	Rural Multi-Lane Segment Four-lane Divided	801+61.000	802+30.000	69.00	0.0131	2018-2022: 4,900	12.00	12.00	8.00	8.00	11.45	Non-Traversable Median	11.45	false	false		
99	Rural Multi-Lane Segment Four-lane Divided	802+30.000	802+40.000	10.00	0.0019	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	8.00	false	false		
100	Rural Multi-Lane Segment Four-lane Divided	802+40.000	808+30.000	590.00	0.1117	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
101	Rural Multi-Lane Segment Four-lane Divided	808+30.000	808+80.000	50.00	0.0095	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
102	Rural Multi-Lane Segment Four-lane Undivided	808+80.000	809+00.000	20.00	0.0038	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
103	Rural Multi-Lane Segment Four-lane Undivided	809+00.000	809+60.000	60.00	0.0114	2018-2022: 4,900	12.00	12.00	0.00	0.00	0.00	None	0.00	false	false	0:1	0:1
104	Rural Multi-Lane Segment Four-lane Divided	809+60.000	810+00.000	40.00	0.0076	2018-2022: 4,900	12.00	12.00	0.00	0.00	8.00	Traversable Median	20.00	false	false		
105	Rural Multi-Lane Segment Four-lane Divided	810+00.000	810+20.000	20.00	0.0038	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
106	Rural Multi-Lane Segment Four-lane Divided	810+20.000	816+00.000	580.00	0.1098	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
107	Rural Multi-Lane Segment Four-lane Divided	816+00.000	816+70.000	70.00	0.0133	2018-2022: 4,900	12.00	12.00	8.00	8.00	11.50	Non-Traversable Median	11.50	false	false		
108	Rural Multi-Lane Segment Four-lane Divided	816+70.000	817+20.000	50.00	0.0095	2018-2022: 4,900	12.00	12.00	8.00	8.00	17.50	Non-Traversable Median	17.50	false	false		
109	Rural Multi-Lane Segment Four-lane Divided	817+20.000	853+70.000	3,650.00	0.6913	2018-2022: 4,900	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
110	Rural Multi-Lane Segment Four-lane Divided	853+70.000	854+00.000	30.00	0.0057	2018-2022: 4,900	12.00	12.00	8.00	8.00	18.36	Non-Traversable Median	18.36	false	false		
111	Rural Multi-Lane Segment Four-lane Divided	854+00.000	854+16.000	16.00	0.0030	2018-2022: 4,900	12.00	12.00	8.00	8.00	15.85	Non-Traversable Median	15.85	false	false		
112	Rural Multi-Lane Segment Four-lane Divided	854+16.000	854+80.000	64.00	0.0121	2018-2022: 4,900	12.00	12.00	8.00	8.00	11.49	Non-Traversable Median	11.49	false	false		
113	Rural Multi-Lane Segment Four-lane Divided	854+80.000	860+90.000	610.00	0.1155	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
114	Rural Multi-Lane Segment Four-lane Divided	860+90.000	861+85.000	95.00	0.0180	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
115	Rural Multi-Lane Segment Four-lane Undivided	861+85.000	862+00.000	15.00	0.0028	2018-2022: 4,900	12.00	12.00	8.00	0.00	0.00	None	0.00	false	false	0:1	0:1
116	Rural Multi-Lane Segment Four-lane Undivided	862+00.000	862+50.000	50.00	0.0095	2018-2022: 4,900	12.00	12.00	8.00	0.00	0.00	None	0.00	false	false	0:1	0:1
117	Rural Multi-Lane Segment Four-lane Undivided	862+50.000	862+60.000	10.00	0.0019	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
118	Rural Multi-Lane Segment Four-lane Divided	862+60.000	863+10.000	50.00	0.0095	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Traversable Median	19.00	false	false		
119	Rural Multi-Lane Segment Four-lane Divided	863+10.000	869+00.000	590.00	0.1117	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	19.00	false	false		
120	Rural Multi-Lane Segment Four-lane Divided	869+00.000	869+70.000	70.00	0.0133	2018-2022: 4,900	12.00	12.00	8.00	8.00	11.50	Non-Traversable Median	11.50	false	false		
121	Rural Multi-Lane Segment Four-lane Divided	869+70.000	870+20.000	50.00	0.0095	2018-2022: 4,900	12.00	12.00	8.00	8.00	17.50	Non-Traversable Median	17.50	false	false		
122	Rural Multi-Lane Segment Four-lane Divided	870+20.000	881+80.000	1,160.00	0.2197	2018-2022: 4,900	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
123	Rural Multi-Lane Segment Four-lane Divided	881+80.000	882+31.000	51.00	0.0097	2018-2022: 4,900	12.00	12.00	8.00	8.00	17.45	Non-Traversable Median	17.45	false	false		
124	Rural Multi-Lane Segment Four-lane Divided	882+31.000	883+00.000	69.00	0.0131	2018-2022: 4,900	12.00	12.00	8.00	8.00	11.45	Non-Traversable Median	11.45	false	false		
125	Rural Multi-Lane Segment Four-lane Divided	883+00.000	887+90.000	490.00	0.0928	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
126	Rural Multi-Lane Segment Four-lane Divided	887+90.000	888+20.000	30.00	0.0057	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		

Seg. No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Left Lane Width (ft)	Right Lane Width (ft)	Left Shoulder Width (ft)	Right Shoulder Width (ft)	Median Width (ft)	Median Type	Effective Median Width (ft)	Lighting	Automated Speed Enforcement	Left Side Slope	Right Side Slope
127	Rural Multi-Lane Segment Four-lane Undivided	888+20.000	889+30.000	110.00	0.0208	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
128	Rural Multi-Lane Segment Four-lane Divided	889+30.000	889+50.000	20.00	0.0038	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Traversable Median	20.00	false	false		
129	Rural Multi-Lane Segment Four-lane Divided	889+50.000	894+50.000	500.00	0.0947	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	20.00	false	false		
130	Rural Multi-Lane Segment Four-lane Divided	894+50.000	895+15.000	65.00	0.0123	2018-2022: 4,900	12.00	12.00	8.00	8.00	11.55	Non-Traversable Median	11.55	false	false		
131	Rural Multi-Lane Segment Four-lane Divided	895+15.000	895+60.000	45.00	0.0085	2018-2022: 4,900	12.00	12.00	8.00	8.00	17.55	Non-Traversable Median	17.55	false	false		
132	Rural Multi-Lane Segment Four-lane Divided	895+60.000	898+00.000	240.00	0.0455	2018-2022: 4,900	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
133	Rural Multi-Lane Segment Four-lane Divided	898+00.000	906+70.000	870.00	0.1648	2018-2022: 4,900	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
134	Rural Multi-Lane Segment Four-lane Divided	906+70.000	907+21.000	51.00	0.0097	2018-2022: 4,900	12.00	12.00	8.00	8.00	17.45	Non-Traversable Median	17.45	false	false		
135	Rural Multi-Lane Segment Four-lane Divided	907+21.000	907+80.000	59.00	0.0112	2018-2022: 4,900	12.00	12.00	8.00	8.00	11.95	Non-Traversable Median	11.95	false	false		
136	Rural Multi-Lane Segment Four-lane Divided	907+80.000	907+90.000	10.00	0.0019	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.50	Non-Traversable Median	19.50	false	false		
137	Rural Multi-Lane Segment Four-lane Divided	907+90.000	913+70.000	580.00	0.1098	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	19.00	false	false		
138	Rural Multi-Lane Segment Four-lane Divided	913+70.000	914+00.000	30.00	0.0057	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Traversable Median	19.00	false	false		
139	Rural Multi-Lane Segment Four-lane Divided	914+00.000	914+30.000	30.00	0.0057	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Traversable Median	19.00	false	false		
140	Rural Multi-Lane Segment Four-lane Undivided	914+30.000	914+40.000	10.00	0.0019	2018-2022: 4,900	12.00	12.00	8.00	8.00	0.00	None	0.00	false	false	0:1	0:1
141	Rural Multi-Lane Segment Four-lane Undivided	914+40.000	915+40.000	100.00	0.0189	2018-2022: 4,900	12.00	12.00	0.00	0.00	0.00	None	0.00	false	false	0:1	0:1
142	Rural Multi-Lane Segment Four-lane Divided	915+40.000	916+00.000	60.00	0.0114	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Traversable Median	19.00	false	false		
143	Rural Multi-Lane Segment Four-lane Divided	916+00.000	921+00.000	500.00	0.0947	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	19.00	false	false		
144	Rural Multi-Lane Segment Four-lane Divided	921+00.000	921+90.000	90.00	0.0170	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	19.00	false	false		
145	Rural Multi-Lane Segment Four-lane Divided	921+90.000	922+00.000	10.00	0.0019	2018-2022: 4,900	12.00	12.00	8.00	8.00	8.00	Non-Traversable Median	8.00	false	false		
146	Rural Multi-Lane Segment Four-lane Divided	922+00.000	922+59.000	59.00	0.0112	2018-2022: 4,900	12.00	12.00	8.00	8.00	11.54	Non-Traversable Median	11.54	false	false		
147	Rural Multi-Lane Segment Four-lane Divided	922+59.000	923+00.000	41.00	0.0078	2018-2022: 4,900	12.00	12.00	8.00	8.00	17.54	Non-Traversable Median	17.54	false	false		
148	Rural Multi-Lane Segment Four-lane Divided	923+00.000	941+70.000	1,870.00	0.3542	2018-2022: 4,900	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		
149	Rural Multi-Lane Segment Four-lane Divided	941+70.000	948+50.000	680.00	0.1288	2018-2022: 4,900	12.00	12.00	8.00	8.00	20.00	Non-Traversable Median	20.00	false	false		

Table 4. Evaluation Intersection (Section 3)

Inter. No.	Title	Type	Location (Sta. ft)	Major AADT	Minor AADT	Legs	Traffic Control	Major road approaches w/Left Turn Lanes	Major road approaches w/Right Turn Lanes	Skew1	Skew2	Lighted at Night
1	I90EBRamps_SD466th_SD38 (v1)	Rural Multi-Lane Intersection Four-Legged w/STOP control	699+20.000	2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170	2025: 630; 2026: 644; 2027: 657; 2028: 671; 2029: 685; 2030: 700; 2031: 716; 2032: 732; 2033: 748; 2034: 764; 2035: 780; 2036: 796; 2037: 812; 2038: 828; 2039: 844; 2040: 860; 2041: 1,166; 2042: 1,473; 2043: 1,779; 2044: 2,086; 2045: 2,392; 2046: 2,699; 2047: 3,005; 2048: 3,312; 2049: 3,618; 2050: 3,925	4	Stop-Controlled	1	0	4.64	4.27	false
2	SD38/260th_St (v1)	Rural Multi-Lane Intersection Four-Legged w/STOP control	605+70.000	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	2025: 1,508; 2026: 1,706; 2027: 1,904; 2028: 2,102; 2029: 2,300; 2030: 2,472; 2031: 2,645; 2032: 2,818; 2033: 2,990; 2034: 3,163; 2035: 3,336; 2036: 3,509; 2037: 3,681; 2038: 3,854; 2039: 4,027; 2040: 4,200; 2041: 4,260; 2042: 4,320; 2043: 4,380; 2044: 4,440; 2045: 4,500; 2046: 4,560; 2047: 4,620; 2048: 4,680; 2049: 4,740; 2050: 4,800	4	Stop-Controlled	2	1	16.83	13.71	false
3	466thN/SD38 (v1)	Rural Multi-Lane Intersection Three-Legged w/STOP control	676+50.000	2025: 7,901; 2026: 9,093; 2027: 10,285; 2028: 11,477; 2029: 12,670; 2030: 12,965; 2031: 13,260; 2032: 13,556; 2033: 13,851; 2034: 14,147; 2035: 14,442; 2036: 14,738; 2037: 15,033; 2038: 15,329; 2039: 15,624; 2040: 15,920; 2041: 16,287; 2042: 16,654; 2043: 17,021; 2044: 17,388; 2045: 17,755; 2046: 18,122; 2047: 18,489; 2048: 18,856; 2049: 19,223; 2050: 19,590	2025: 118; 2026: 121; 2027: 124; 2028: 127; 2029: 130; 2030: 133; 2031: 136; 2032: 139; 2033: 142; 2034: 145; 2035: 149; 2036: 152; 2037: 155; 2038: 158; 2039: 161; 2040: 165; 2041: 168; 2042: 172; 2043: 175; 2044: 179; 2045: 182; 2046: 186; 2047: 189; 2048: 193; 2049: 196; 2050: 200	3	Stop-Controlled	0	0	6.61		false

Table 5. Evaluation Intersection (Section 3)

Inter. No.	Title	Type	Location (Sta. ft)	Major AADT	Minor AADT	Legs	Traffic Control	Major road approaches w/Left Turn Lanes	Major road approaches w/Right Turn Lanes	Skew1	Skew2	Lighted at Night
5	468th Ave (v1)	Rural Multi-Lane Intersection Four-Legged w/STOP control	809+00.000	2025: 6,164; 2026: 6,585; 2027: 7,007; 2028: 7,428; 2029: 7,850; 2030: 8,018; 2031: 8,186; 2032: 8,354; 2033: 8,522; 2034: 8,690; 2035: 8,859; 2036: 9,027; 2037: 9,195; 2038: 9,363; 2039: 9,531; 2040: 9,700; 2041: 9,905; 2042: 10,110; 2043: 10,315; 2044: 10,520; 2045: 10,725; 2046: 10,930; 2047: 11,135; 2048: 11,340; 2049: 11,545; 2050: 11,750	2025: 667; 2026: 682; 2027: 696; 2028: 710; 2029: 725; 2030: 741; 2031: 758; 2032: 775; 2033: 792; 2034: 809; 2035: 825; 2036: 842; 2037: 859; 2038: 876; 2039: 893; 2040: 910; 2041: 1,052; 2042: 1,195; 2043: 1,337; 2044: 1,480; 2045: 1,622; 2046: 1,765; 2047: 1,907; 2048: 2,050; 2049: 2,192; 2050: 2,335	4	Stop-Controlled	1	0	0.00	0.00	false
6	SD38/Hwy 139 (v1)	Rural Multi-Lane Intersection Four-Legged w/STOP control	862+00.000	2025: 6,704; 2026: 7,305; 2027: 7,907; 2028: 8,508; 2029: 9,110; 2030: 9,295; 2031: 9,480; 2032: 9,666; 2033: 9,851; 2034: 10,037; 2035: 10,222; 2036: 10,408; 2037: 10,593; 2038: 10,779; 2039: 10,964; 2040: 11,150; 2041: 11,375; 2042: 11,600; 2043: 11,825; 2044: 12,050; 2045: 12,275; 2046: 12,500; 2047: 12,725; 2048: 12,950; 2049: 13,175; 2050: 13,400	2025: 2,990; 2026: 3,054; 2027: 3,117; 2028: 3,181; 2029: 3,245; 2030: 3,321; 2031: 3,397; 2032: 3,474; 2033: 3,550; 2034: 3,626; 2035: 3,703; 2036: 3,779; 2037: 3,855; 2038: 3,932; 2039: 4,008; 2040: 4,085; 2041: 4,178; 2042: 4,271; 2043: 4,364; 2044: 4,457; 2045: 4,550; 2046: 4,643; 2047: 4,736; 2048: 4,829; 2049: 4,922; 2050: 5,015	4	Stop-Controlled	1	0	0.00	0.00	false
7	LaMesa/SD 38 (v1)	Rural Multi-Lane Intersection Four-Legged w/STOP control	915+00.000	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	2025: 1,266; 2026: 1,293; 2027: 1,320; 2028: 1,347; 2029: 1,375; 2030: 1,407; 2031: 1,439; 2032: 1,471; 2033: 1,504; 2034: 1,536; 2035: 1,568; 2036: 1,725; 2037: 1,949; 2038: 2,172; 2039: 2,396; 2040: 2,620; 2041: 2,940; 2042: 3,261; 2043: 3,581; 2044: 3,902; 2045: 4,222; 2046: 4,543; 2047: 4,863; 2048: 5,184; 2049: 5,504; 2050: 5,825	4	Stop-Controlled	0	0	0.00	0.00	false

Table 6. Evaluation Ramp Terminal - Site (Section 3)

Inter. No.	Title	Type	Area Type	Legs	Location (Sta. ft)	Traffic Control	AADT
4	I90WB Ramps (v2)	Freeway Ramp Terminal A2 - Three-Leg at Two-Quadrant Parcel A	Rural	4	681+00.000	Stop-Controlled	Inside: 2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170; Outside: 2025: 5,705; 2026: 6,224; 2027: 6,742; 2028: 7,261; 2029: 7,780; 2030: 8,004; 2031: 8,229; 2032: 8,453; 2033: 8,678; 2034: 8,902; 2035: 9,127; 2036: 9,351; 2037: 9,576; 2038: 9,800; 2039: 10,025; 2040: 10,250; 2041: 10,542; 2042: 10,834; 2043: 11,126; 2044: 11,418; 2045: 11,710; 2046: 12,002; 2047: 12,294; 2048: 12,586; 2049: 12,878; 2050: 13,170 :: Entrance: 2025: 856; 2026: 875; 2027: 893; 2028: 911; 2029: 930; 2030: 951; 2031: 973; 2032: 995; 2033: 1,017; 2034: 1,039; 2035: 1,060; 2036: 1,082; 2037: 1,104; 2038: 1,126; 2039: 1,148; 2040: 1,170; 2041: 1,339; 2042: 1,508; 2043: 1,677; 2044: 1,846; 2045: 2,015; 2046: 2,184; 2047: 2,353; 2048: 2,522; 2049: 2,691; 2050: 2,860

Table 7. Crash History Intersection (Section 3)

Inter. No.	Title	Type	Location (Sta. ft)	Major AADT	Minor AADT	Legs	Traffic Control	Major road approaches w/Left Turn Lanes	Major road approaches w/Right Turn Lanes	Skew1	Skew2	Lighted at Night
1	I90EBRamps_S466th_SD38 (v1)	Rural Multi-Lane Intersection Four-Legged w/STOP control	699+20.000	2018-2022: 4,150	2018-2022: 590	4	Stop-Controlled	1	0	4.64	4.27	false
2	SD38/260th_St (v1)	Rural Multi-Lane Intersection Four-Legged w/STOP control	605+70.000	2018-2022: 4,325	2018-2022: 915	4	Stop-Controlled	2	1	16.83	13.71	false
3	466thN/SD38 (v1)	Rural Multi-Lane Intersection Three-Legged w/STOP control	676+50.000	2018-2022: 4,325	2018-2022: 110	3	Stop-Controlled	0	0	6.61		false

Table 8. Crash History Intersection (Section 3)

Inter. No.	Title	Type	Location (Sta. ft)	Major AADT	Minor AADT	Legs	Traffic Control	Major road approaches w/Left Turn Lanes	Major road approaches w/Right Turn Lanes	Skew1	Skew2	Lighted at Night
5	468th Ave (v1)	Rural Multi-Lane Intersection Four-Legged w/STOP control	809+00.000	2018-2022: 4,900	2018-2022: 625	4	Stop-Controlled	1	0	0.00	0.00	false
6	SD38/Hwy139 (v1)	Rural Multi-Lane Intersection Four-Legged w/STOP control	862+00.000	2018-2022: 4,900	2018-2022: 2,800	4	Stop-Controlled	1	0	0.00	0.00	false
7	LaMesa/SD38 (v1)	Rural Multi-Lane Intersection Four-Legged w/STOP control	915+00.000	2018-2022: 4,900	2018-2022: 1,185	4	Stop-Controlled	0	0	0.00	0.00	false

Table 9. Crash Highway Ramp Terminal - Site (Highway with Crash History)

Inter. No.	Title	Type	Area Type	Legs	Location (Sta. ft)	Traffic Control	AADT
4	190WB Ramps (v2)	Freeway Ramp Terminal A2 - Three-Leg at Two-Quadrant Parclo A	Rural	4	681+00.000	Stop-Controlled	Inside: 2018-2022: 4,150; Outside: 2018-2022: 4,150 :: Entrance: 2018-2022: 802

Table 10. Expected Highway Crash Rates and Frequencies Summary (Section 3)

First Year of Analysis	2025
Last Year of Analysis	2050
Evaluated Length (mi)	6.8845
Average Future Road AADT (vpd)	10,372
Expected Crashes	
Total Crashes	611.54
Fatal and Injury Crashes	316.56
Fatal and Serious Injury Crashes	206.04
Property-Damage-Only Crashes	294.99
Percent of Total Expected Crashes	
Percent Fatal and Injury Crashes (%)	52
Percent Fatal and Serious Injury Crashes (%)	34
Percent Property-Damage-Only Crashes (%)	48
Expected Crash Rate	
Crash Rate (crashes/mi/yr)	3.4165
FI Crash Rate (crashes/mi/yr)	1.7685
FI no/C Crash Rate (crashes/mi/yr)	1.1511
PDO Crash Rate (crashes/mi/yr)	1.6480
Expected Travel Crash Rate	
Total Travel (million veh-mi)	677.62
Travel Crash Rate (crashes/million veh-mi)	0.90
Travel FI Crash Rate (crashes/million veh-mi)	0.47
Travel FI no/C Crash Rate (crashes/million veh-mi)	0.30
Travel PDO Crash Rate (crashes/million veh-mi)	0.43

Table 11. Expected Crash Frequencies and Rates by Highway Segment/Intersection (Section 3)

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected FI no/C Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted FI no/C Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) FI no/C Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/million veh-mi)	Expected Intersection Travel Crash Rate (crashes/million veh)
1	585+00.000	586+00.000	0.0189	0.613	1.124	0.0236	0.0131	0.0090	0.0105	0.0432	0.0222	0.0140	0.0211	-0.0197	-0.0091	-0.0050	-0.0106	1.2449	0.28	
2	586+00.000	593+75.000	0.1468	11.628	8.711	0.4472	0.3303	0.2278	0.1170	0.3350	0.1718	0.1087	0.1632	0.1122	0.1584	0.1191	-0.0462	3.0469	0.70	
3	593+75.000	594+84.940	0.0208	0.674	1.236	0.0259	0.0144	0.0099	0.0115	0.0475	0.0244	0.0154	0.0231	-0.0216	-0.0100	-0.0055	-0.0116	1.2449	0.28	
4	594+84.940	600+00.000	0.0975	3.158	5.789	0.1214	0.0674	0.0465	0.0540	0.2227	0.1142	0.0723	0.1085	-0.1012	-0.0468	-0.0257	-0.0545	1.2449	0.28	
5	600+00.000	600+42.000	0.0080	0.258	0.472	0.0099	0.0055	0.0038	0.0044	0.0182	0.0093	0.0059	0.0088	-0.0083	-0.0038	-0.0021	-0.0044	1.2449	0.28	
6	600+42.000	601+00.000	0.0110	0.356	0.652	0.0137	0.0076	0.0052	0.0061	0.0251	0.0129	0.0081	0.0122	-0.0114	-0.0053	-0.0029	-0.0061	1.2449	0.28	
7	601+00.000	602+00.000	0.0189	0.613	1.124	0.0236	0.0131	0.0090	0.0105	0.0432	0.0222	0.0140	0.0211	-0.0197	-0.0091	-0.0050	-0.0106	1.2449	0.28	
8	602+00.000	605+00.000	0.0568	11.046	4.273	0.4249	0.0886	0.0611	0.3362	0.1644	0.0825	0.0512	0.0818	0.2605	0.0061	0.0099	0.2544	7.4774	1.37	
9	605+00.000	605+10.000	0.0019	0.081	0.155	0.0031	0.0017	0.0012	0.0014	0.0060	0.0030	0.0019	0.0030	-0.0028	-0.0013	-0.0007	-0.0016	1.6521	0.30	
10	605+10.000	605+40.000	0.0057	0.247	0.475	0.0095	0.0053	0.0036	0.0042	0.0183	0.0092	0.0057	0.0091	-0.0088	-0.0039	-0.0021	-0.0049	1.6693	0.30	
11	605+40.000	605+60.000	0.0038	0.248	0.543	0.0095	0.0058	0.0036	0.0038	0.0209	0.0121	0.0062	0.0088	-0.0114	-0.0063	-0.0026	-0.0050	2.5153	0.46	
12	605+60.000	605+70.000	0.0019	0.119	0.249	0.0046	0.0028	0.0017	0.0018	0.0096	0.0056	0.0028	0.0040	-0.0050	-0.0028	-0.0011	-0.0022	2.4181	0.44	
SD38/260th_St (v1)	605+70.000			35.375	96.924	1.3606	0.5456	0.3469	0.8150	3.7279	1.7583	0.8841	1.9696	-2.3673	-1.2127	-0.5372	-1.1546			0.20
13	605+70.000	605+75.000	0.0009	0.059	0.125	0.0023	0.0014	0.0009	0.0009	0.0048	0.0028	0.0014	0.0020	-0.0025	-0.0014	-0.0006	-0.0011	2.4181	0.44	
14	605+75.000	606+00.000	0.0047	0.298	0.624	0.0114	0.0069	0.0043	0.0045	0.0240	0.0139	0.0071	0.0101	-0.0125	-0.0069	-0.0028	-0.0056	2.4181	0.44	
15	606+00.000	607+50.000	0.0284	9.988	2.179	0.3841	0.3471	0.2395	0.0370	0.0838	0.0421	0.0261	0.0417	0.3003	0.3050	0.2134	-0.0047	13.5216	2.47	
16	607+50.000	609+00.000	0.0284	1.165	2.137	0.0448	0.0249	0.0172	0.0199	0.0822	0.0413	0.0256	0.0409	-0.0374	-0.0164	-0.0084	-0.0210	1.5777	0.29	
17	609+00.000	609+21.930	0.0042	8.886	0.312	0.3418	0.0080	0.0055	0.3338	0.0120	0.0060	0.0037	0.0060	0.3297	0.0020	0.0018	0.3278	82.2842	15.04	
18	609+21.930	611+40.000	0.0413	1.694	3.106	0.0652	0.0362	0.0250	0.0290	0.1195	0.0600	0.0372	0.0595	-0.0543	-0.0238	-0.0123	-0.0305	1.5777	0.29	
19	611+40.000	611+50.000	0.0019	0.078	0.142	0.0030	0.0017	0.0011	0.0013	0.0055	0.0028	0.0017	0.0027	-0.0025	-0.0011	-0.0006	-0.0014	1.5777	0.29	
20	611+50.000	612+09.000	0.0112	0.458	0.840	0.0176	0.0098	0.0068	0.0078	0.0323	0.0162	0.0101	0.0161	-0.0147	-0.0064	-0.0033	-0.0083	1.5777	0.29	
21	612+09.000	612+50.000	0.0078	0.319	0.584	0.0123	0.0068	0.0047	0.0054	0.0225	0.0113	0.0070	0.0112	-0.0102	-0.0045	-0.0023	-0.0057	1.5777	0.29	
22	612+50.000	624+64.530	0.2300	18.151	17.300	0.6981	0.2748	0.1896	0.4233	0.6654	0.3341	0.2073	0.3313	0.0327	-0.0593	-0.0177	0.0920	3.0350	0.56	
23	624+64.530	631+30.000	0.1260	5.170	9.479	0.1989	0.1104	0.0762	0.0884	0.3646	0.1831	0.1136	0.1815	-0.1657	-0.0726	-0.0374	-0.0931	1.5777	0.29	
24	631+30.000	631+81.000	0.0097	0.396	0.727	0.0152	0.0085	0.0058	0.0068	0.0279	0.0140	0.0087	0.0139	-0.0127	-0.0056	-0.0029	-0.0071	1.5777	0.29	
25	631+81.000	632+50.000	0.0131	0.536	0.983	0.0206	0.0114	0.0079	0.0092	0.0378	0.0190	0.0118	0.0188	-0.0172	-0.0075	-0.0039	-0.0097	1.5777	0.29	
26	632+50.000	636+92.820	0.0839	3.440	6.308	0.1323	0.0735	0.0507	0.0588	0.2426	0.1218	0.0756	0.1208	-0.1103	-0.0483	-0.0249	-0.0620	1.5777	0.29	
27	636+92.820	638+80.000	0.0355	1.454	2.666	0.0559	0.0311	0.0214	0.0249	0.1025	0.0515	0.0320	0.0511	-0.0466	-0.0204	-0.0105	-0.0262	1.5777	0.29	
28	638+80.000	639+00.000	0.0038	0.157	0.291	0.0060	0.0034	0.0023	0.0027	0.0112	0.0056	0.0035	0.0056	-0.0051	-0.0023	-0.0012	-0.0029	1.5948	0.29	
29	639+00.000	640+00.000	0.0189	1.282	2.935	0.0493	0.0297	0.0185	0.0196	0.1129	0.0653	0.0334	0.0476	-0.0636	-0.0356	-0.0149	-0.0280	2.6043	0.48	
30	640+00.000	640+20.000	0.0038	0.157	0.291	0.0060	0.0034	0.0023	0.0027	0.0112	0.0056	0.0035	0.0056	-0.0051	-0.0023	-0.0012	-0.0029	1.5948	0.29	
31	640+20.000	645+50.000	0.1004	12.833	7.550	0.4936	0.1412	0.0974	0.3524	0.2904	0.1458	0.0905	0.1446	0.2032	-0.0046	0.0069	0.2078	4.9172	0.90	
32	645+50.000	646+30.000	0.0152	0.622	1.140	0.0239	0.0133	0.0092	0.0106	0.0438	0.0220	0.0137	0.0218	-0.0199	-0.0087	-0.0045	-0.0112	1.5777	0.29	
33	646+30.000	647+00.000	0.0133	0.544	0.997	0.0209	0.0116	0.0080	0.0093	0.0384	0.0193	0.0119	0.0191	-0.0174	-0.0076	-0.0039	-0.0098	1.5777	0.29	
34	647+00.000	647+26.050	0.0049	0.202	0.371	0.0078	0.0043	0.0030	0.0035	0.0143	0.0072	0.0044	0.0071	-0.0065	-0.0028	-0.0015	-0.0036	1.5777	0.29	
35	647+26.050	647+50.000	0.0045	0.186	0.341	0.0072	0.0040	0.0027	0.0032	0.0131	0.0066	0.0041	0.0065	-0.0060	-0.0026	-0.0013	-0.0034	1.5777	0.29	
36	647+50.000	648+00.000	0.0095	0.389	0.712	0.0149	0.0083	0.0057	0.0066	0.0274	0.0138	0.0085	0.0136	-0.0125	-0.0055	-0.0028	-0.0070	1.5777	0.29	
37	648+00.000	648+42.000	0.0080	0.326	0.598	0.0126	0.0070	0.0048	0.0056	0.0230	0.0116	0.0072	0.0115	-0.0105	-0.0046	-0.0024	-0.0059	1.5777	0.29	
38	648+42.000	649+00.000	0.0110	0.451	0.826	0.0173	0.0096	0.0066	0.0077	0.0318	0.0160	0.0099	0.0158	-0.0144	-0.0063	-0.0033	-0.0081	1.5777	0.29	

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected FI no/C Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted FI no/C Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) FI no/C Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/million veh-mi)	Expected Intersection Travel Crash Rate (crashes/million veh)
39	649+00.000	649+20.000	0.0038	0.155	0.285	0.0060	0.0033	0.0023	0.0027	0.0110	0.0055	0.0034	0.0055	-0.0050	-0.0022	-0.0011	-0.0028	1.5777	0.29	
40	649+20.000	655+50.000	0.1193	13.610	8.974	0.5235	0.1622	0.1119	0.3612	0.3452	0.1733	0.1075	0.1718	0.1783	-0.0111	0.0044	0.1894	4.3871	0.80	
41	655+50.000	655+70.000	0.0038	0.157	0.291	0.0060	0.0034	0.0023	0.0027	0.0112	0.0056	0.0035	0.0056	-0.0051	-0.0023	-0.0012	-0.0029	1.5948	0.29	
42	655+70.000	656+50.000	0.0152	0.953	1.996	0.0366	0.0222	0.0138	0.0144	0.0768	0.0444	0.0227	0.0324	-0.0401	-0.0222	-0.0089	-0.0179	2.4181	0.44	
43	656+50.000	667+80.000	0.2140	17.494	16.096	0.6729	0.2592	0.1788	0.4136	0.6191	0.3109	0.1929	0.3082	0.0538	-0.0516	-0.0141	0.1054	3.1440	0.57	
44	667+80.000	668+50.000	0.0133	0.570	1.087	0.0219	0.0122	0.0084	0.0098	0.0418	0.0210	0.0130	0.0208	-0.0199	-0.0088	-0.0046	-0.0111	1.6521	0.30	
45	668+50.000	668+80.000	0.0057	0.244	0.466	0.0094	0.0052	0.0036	0.0042	0.0179	0.0090	0.0056	0.0089	-0.0085	-0.0038	-0.0020	-0.0047	1.6521	0.30	
46	668+80.000	669+05.000	0.0047	0.194	0.356	0.0075	0.0041	0.0029	0.0033	0.0137	0.0069	0.0043	0.0068	-0.0062	-0.0027	-0.0014	-0.0035	1.5777	0.29	
47	669+05.000	669+80.000	0.0142	0.583	1.068	0.0224	0.0124	0.0086	0.0100	0.0411	0.0206	0.0128	0.0205	-0.0187	-0.0082	-0.0042	-0.0105	1.5777	0.29	
48	669+80.000	672+86.110	0.0580	2.378	4.360	0.0915	0.0508	0.0350	0.0407	0.1677	0.0842	0.0523	0.0835	-0.0762	-0.0334	-0.0172	-0.0428	1.5777	0.29	
49	672+86.110	675+50.000	0.0500	19.481	3.759	0.7493	0.6841	0.4719	0.0652	0.1446	0.0726	0.0450	0.0720	0.6047	0.6115	0.4269	-0.0068	14.9916	2.74	
50	675+50.000	676+00.000	0.0095	0.397	0.741	0.0153	0.0085	0.0058	0.0068	0.0285	0.0143	0.0089	0.0142	-0.0132	-0.0058	-0.0030	-0.0074	1.6115	0.29	
51	676+00.000	676+30.000	0.0057	9.563	0.484	0.3678	0.3592	0.2478	0.0086	0.0186	0.0094	0.0058	0.0093	0.3492	0.3499	0.2420	-0.0007	64.7353	11.83	
52	676+30.000	677+50.000	0.0227	13.736	3.258	0.5283	0.4896	0.3051	0.0387	0.1253	0.0725	0.0371	0.0528	0.4030	0.4171	0.2680	-0.0141	23.2451	4.25	
466thN/SD38 (v1)	676+50.000			22.161	36.857	0.8523	0.4087	0.2971	0.4437	1.4176	0.6242	0.3958	0.7934	-0.5652	-0.2155	-0.0987	-0.3497			0.15
53	677+50.000	679+00.000	0.0284	27.311	2.137	1.0504	0.3890	0.2684	0.6614	0.0822	0.0413	0.0256	0.0409	0.9683	0.3477	0.2428	0.6205	36.9756	6.76	
54	679+00.000	680+20.000	0.0227	0.604	1.085	0.0232	0.0129	0.0090	0.0103	0.0417	0.0218	0.0140	0.0199	-0.0185	-0.0089	-0.0051	-0.0097	1.0213	0.29	
55	680+20.000	680+80.000	0.0114	0.305	0.553	0.0117	0.0065	0.0045	0.0052	0.0213	0.0111	0.0072	0.0102	-0.0096	-0.0046	-0.0026	-0.0050	1.0325	0.29	
56	680+80.000	681+00.000	0.0038	0.106	0.201	0.0041	0.0023	0.0016	0.0018	0.0077	0.0040	0.0026	0.0037	-0.0036	-0.0018	-0.0010	-0.0019	1.0818	0.30	
I90WB Ramps (v2)	681+00.000			15.671	11.679	0.6027	0.3058		0.2969	0.4492	0.1413		0.3079	0.1535	0.1646		-0.0111			0.16
57	681+00.000	682+20.000	0.0227	0.917	1.958	0.0353	0.0214	0.0134	0.0139	0.0753	0.0451	0.0247	0.0302	-0.0401	-0.0237	-0.0113	-0.0163	1.5517	0.44	
58	682+20.000	683+82.710	0.0308	0.818	1.471	0.0315	0.0175	0.0121	0.0139	0.0566	0.0296	0.0190	0.0270	-0.0251	-0.0120	-0.0069	-0.0131	1.0213	0.29	
59	683+82.710	690+00.000	0.1169	3.104	5.582	0.1194	0.0665	0.0461	0.0529	0.2147	0.1121	0.0721	0.1026	-0.0953	-0.0456	-0.0261	-0.0497	1.0213	0.29	
60	690+00.000	691+50.000	0.0284	0.791	1.478	0.0304	0.0169	0.0117	0.0135	0.0569	0.0297	0.0191	0.0272	-0.0265	-0.0128	-0.0074	-0.0137	1.0704	0.30	
61	691+50.000	692+01.000	0.0097	0.269	0.503	0.0103	0.0058	0.0040	0.0046	0.0193	0.0101	0.0065	0.0092	-0.0090	-0.0043	-0.0025	-0.0047	1.0704	0.30	
62	692+01.000	692+70.000	0.0131	0.364	0.680	0.0140	0.0078	0.0054	0.0062	0.0262	0.0137	0.0088	0.0125	-0.0122	-0.0059	-0.0034	-0.0063	1.0704	0.30	
63	692+70.000	693+85.010	0.0218	0.606	1.134	0.0233	0.0130	0.0090	0.0103	0.0436	0.0228	0.0147	0.0208	-0.0203	-0.0098	-0.0057	-0.0105	1.0704	0.30	
64	693+85.010	698+50.000	0.0881	2.451	4.583	0.0943	0.0525	0.0363	0.0418	0.1763	0.0921	0.0592	0.0842	-0.0820	-0.0396	-0.0229	-0.0424	1.0704	0.30	
65	698+50.000	698+70.000	0.0038	0.106	0.201	0.0041	0.0023	0.0016	0.0018	0.0077	0.0040	0.0026	0.0037	-0.0036	-0.0018	-0.0010	-0.0019	1.0818	0.30	
66	698+70.000	699+20.000	0.0095	0.278	0.544	0.0107	0.0059	0.0041	0.0047	0.0209	0.0109	0.0070	0.0100	-0.0103	-0.0050	-0.0029	-0.0053	1.1273	0.32	
I90EBRamps_S466th_SD38 (v1)	699+20.000			20.777	59.524	0.7991	0.3462	0.2319	0.4529	2.2894	1.2112	0.6869	1.0782	-1.4903	-0.8649	-0.4550	-0.6253			0.20
67	699+20.000	700+40.000	0.0227	0.950	2.117	0.0365	0.0221	0.0139	0.0145	0.0814	0.0488	0.0267	0.0326	-0.0449	-0.0267	-0.0128	-0.0182	1.6081	0.45	
68	700+40.000	700+50.000	0.0019	0.056	0.111	0.0022	0.0012	0.0008	0.0010	0.0043	0.0022	0.0014	0.0020	-0.0021	-0.0010	-0.0006	-0.0011	1.1385	0.32	
69	700+50.000	701+10.000	0.0114	0.323	0.615	0.0124	0.0069	0.0048	0.0055	0.0237	0.0124	0.0079	0.0113	-0.0112	-0.0054	-0.0032	-0.0058	1.0929	0.31	
70	701+10.000	702+00.000	0.0170	0.474	0.887	0.0182	0.0102	0.0070	0.0081	0.0341	0.0178	0.0115	0.0163	-0.0159	-0.0077	-0.0044	-0.0082	1.0704	0.30	
71	702+00.000	702+50.000	0.0095	0.199	0.404	0.0076	0.0042	0.0029	0.0034	0.0155	0.0083	0.0054	0.0073	-0.0079	-0.0041	-0.0025	-0.0038	0.8065	0.27	
72	702+50.000	707+00.000	0.0852	1.712	3.338	0.0658	0.0362	0.0247	0.0296	0.1284	0.0683	0.0447	0.0601	-0.0625	-0.0321	-0.0200	-0.0305	0.7724	0.26	
73	707+00.000	708+00.000	0.0189	0.380	0.742	0.0146	0.0080	0.0055	0.0066	0.0285	0.0152	0.0099	0.0134	-0.0139	-0.0071	-0.0044	-0.0068	0.7724	0.26	
74	708+00.000	708+80.000	0.0152	0.304	0.593	0.0117	0.0064	0.0044	0.0053	0.0228	0.0121	0.0079	0.0107	-0.0111	-0.0057	-0.0035	-0.0054	0.7724	0.26	
75	708+80.000	709+00.000	0.0038	0.077	0.151	0.0030	0.0016	0.0011	0.0013	0.0058	0.0031	0.0020	0.0027	-0.0029	-0.0015	-0.0009	-0.0014	0.7802	0.27	
76	709+00.000	710+30.000	0.0246	0.687	1.558	0.0264	0.0158	0.0096	0.0106	0.0599	0.0365	0.0206	0.0234	-0.0335	-0.0207	-0.0110	-0.0128	1.0727	0.36	

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected FI no/C Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted FI no/C Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) FI no/C Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/million veh-mi)	Expected Intersection Travel Crash Rate (crashes/million veh)
77	710+30.000	710+47.850	0.0034	0.068	0.132	0.0026	0.0014	0.0010	0.0012	0.0051	0.0027	0.0018	0.0024	-0.0025	-0.0013	-0.0008	-0.0012	0.7724	0.26	
78	710+47.850	725+00.000	0.2750	18.323	10.771	0.7047	0.3140	0.2144	0.3907	0.4143	0.2203	0.1442	0.1939	0.2905	0.0937	0.0702	0.1968	2.5624	0.87	
79	725+00.000	727+52.350	0.0478	0.960	1.872	0.0369	0.0203	0.0139	0.0166	0.0720	0.0383	0.0251	0.0337	-0.0351	-0.0180	-0.0112	-0.0171	0.7724	0.26	
80	727+52.350	735+00.000	0.1416	2.844	5.545	0.1094	0.0602	0.0411	0.0492	0.2133	0.1134	0.0742	0.0998	-0.1039	-0.0533	-0.0332	-0.0506	0.7724	0.26	
81	735+00.000	755+50.000	0.3883	7.797	15.205	0.2999	0.1650	0.1126	0.1349	0.5848	0.3111	0.2035	0.2737	-0.2849	-0.1461	-0.0909	-0.1388	0.7724	0.26	
82	755+50.000	756+90.000	0.0265	0.740	1.678	0.0284	0.0170	0.0104	0.0114	0.0645	0.0393	0.0222	0.0252	-0.0361	-0.0223	-0.0118	-0.0138	1.0727	0.36	
83	756+90.000	757+00.000	0.0019	0.038	0.076	0.0015	0.0008	0.0006	0.0007	0.0029	0.0015	0.0010	0.0014	-0.0014	-0.0007	-0.0005	-0.0007	0.7802	0.27	
84	757+00.000	763+30.000	0.1193	2.396	4.673	0.0922	0.0507	0.0346	0.0415	0.1797	0.0956	0.0626	0.0841	-0.0876	-0.0449	-0.0279	-0.0427	0.7724	0.26	
85	763+30.000	764+00.000	0.0133	0.266	0.519	0.0102	0.0056	0.0038	0.0046	0.0200	0.0106	0.0070	0.0093	-0.0097	-0.0050	-0.0031	-0.0047	0.7724	0.26	
86	764+00.000	764+50.000	0.0095	0.190	0.371	0.0073	0.0040	0.0027	0.0033	0.0143	0.0076	0.0050	0.0067	-0.0069	-0.0036	-0.0022	-0.0034	0.7724	0.26	
87	764+50.000	765+52.550	0.0194	0.390	0.761	0.0150	0.0083	0.0056	0.0067	0.0293	0.0156	0.0102	0.0137	-0.0143	-0.0073	-0.0045	-0.0069	0.7724	0.26	
88	765+52.550	777+80.000	0.2325	8.935	9.104	0.3437	0.1340	0.0915	0.2097	0.3502	0.1862	0.1219	0.1639	-0.0065	-0.0523	-0.0304	0.0458	1.4783	0.50	
89	777+80.000	778+80.000	0.0189	0.528	1.198	0.0203	0.0121	0.0074	0.0082	0.0461	0.0281	0.0159	0.0180	-0.0258	-0.0159	-0.0084	-0.0098	1.0727	0.36	
90	778+80.000	779+00.000	0.0038	0.077	0.151	0.0030	0.0016	0.0011	0.0013	0.0058	0.0031	0.0020	0.0027	-0.0029	-0.0015	-0.0009	-0.0014	0.7802	0.27	
91	779+00.000	780+45.930	0.0276	0.555	1.082	0.0213	0.0117	0.0080	0.0096	0.0416	0.0221	0.0145	0.0195	-0.0203	-0.0104	-0.0065	-0.0099	0.7724	0.26	
92	780+45.930	785+40.000	0.0936	1.879	3.664	0.0723	0.0398	0.0271	0.0325	0.1409	0.0750	0.0491	0.0660	-0.0687	-0.0352	-0.0219	-0.0335	0.7724	0.26	
93	785+40.000	785+50.000	0.0019	0.038	0.074	0.0015	0.0008	0.0005	0.0007	0.0029	0.0015	0.0010	0.0013	-0.0014	-0.0007	-0.0004	-0.0007	0.7724	0.26	
94	785+50.000	786+09.000	0.0112	0.224	0.438	0.0086	0.0047	0.0032	0.0039	0.0168	0.0090	0.0059	0.0079	-0.0082	-0.0042	-0.0026	-0.0040	0.7724	0.26	
95	786+09.000	786+50.000	0.0078	0.156	0.304	0.0060	0.0033	0.0023	0.0027	0.0117	0.0062	0.0041	0.0055	-0.0057	-0.0029	-0.0018	-0.0028	0.7724	0.26	
96	786+50.000	801+10.000	0.2765	14.086	10.829	0.5418	0.2903	0.1982	0.2515	0.4165	0.2215	0.1450	0.1950	0.1253	0.0688	0.0532	0.0565	1.9593	0.67	
97	801+10.000	801+61.000	0.0097	0.194	0.378	0.0075	0.0041	0.0028	0.0034	0.0145	0.0077	0.0051	0.0068	-0.0071	-0.0036	-0.0023	-0.0035	0.7724	0.26	
98	801+61.000	802+30.000	0.0131	4.529	0.512	0.1742	0.1653	0.1128	0.0089	0.0197	0.0105	0.0069	0.0092	0.1545	0.1548	0.1060	-0.0003	13.3297	4.54	
99	802+30.000	802+40.000	0.0019	0.038	0.074	0.0015	0.0008	0.0005	0.0007	0.0029	0.0015	0.0010	0.0013	-0.0014	-0.0007	-0.0004	-0.0007	0.7724	0.26	
100	802+40.000	808+30.000	0.1117	2.244	4.376	0.0863	0.0475	0.0324	0.0388	0.1683	0.0895	0.0586	0.0788	-0.0820	-0.0420	-0.0262	-0.0400	0.7724	0.26	
101	808+30.000	808+80.000	0.0095	0.192	0.378	0.0074	0.0041	0.0028	0.0033	0.0145	0.0077	0.0051	0.0068	-0.0072	-0.0037	-0.0023	-0.0035	0.7802	0.27	
102	808+80.000	809+00.000	0.0038	0.106	0.240	0.0041	0.0024	0.0015	0.0016	0.0092	0.0056	0.0032	0.0036	-0.0052	-0.0032	-0.0017	-0.0020	1.0727	0.36	
468th Ave (v1)	809+00.000			30.877	45.501	1.1876	0.7630	0.5027	0.4246	1.7500	0.8386	0.4933	0.9115	-0.5624	-0.0756	0.0094	-0.4869			0.35
103	809+00.000	809+60.000	0.0114	0.400	0.998	0.0154	0.0091	0.0056	0.0063	0.0384	0.0231	0.0128	0.0153	-0.0230	-0.0140	-0.0072	-0.0090	1.3553	0.40	
104	809+60.000	810+00.000	0.0076	0.193	0.414	0.0074	0.0041	0.0028	0.0033	0.0159	0.0084	0.0054	0.0076	-0.0085	-0.0043	-0.0026	-0.0042	0.9798	0.29	
105	810+00.000	810+20.000	0.0038	0.089	0.175	0.0034	0.0019	0.0013	0.0015	0.0067	0.0035	0.0023	0.0032	-0.0033	-0.0017	-0.0010	-0.0017	0.9039	0.27	
106	810+20.000	816+00.000	0.1098	7.498	4.984	0.2884	0.0848	0.0579	0.2036	0.1917	0.1006	0.0651	0.0910	0.0967	-0.0158	-0.0071	0.1125	2.6254	0.78	
107	816+00.000	816+70.000	0.0133	0.308	0.602	0.0119	0.0065	0.0045	0.0053	0.0231	0.0121	0.0079	0.0110	-0.0113	-0.0056	-0.0034	-0.0057	0.8948	0.27	
108	816+70.000	817+20.000	0.0095	0.220	0.430	0.0085	0.0047	0.0032	0.0038	0.0165	0.0087	0.0056	0.0078	-0.0081	-0.0040	-0.0024	-0.0040	0.8948	0.27	
109	817+20.000	853+70.000	0.6913	40.796	31.361	1.5691	0.9058	0.6183	0.6633	1.2062	0.6332	0.4094	0.5730	0.3629	0.2725	0.2089	0.0903	2.2698	0.67	
110	853+70.000	854+00.000	0.0057	0.132	0.258	0.0051	0.0028	0.0019	0.0023	0.0099	0.0052	0.0034	0.0047	-0.0048	-0.0024	-0.0015	-0.0024	0.8948	0.27	
111	854+00.000	854+16.000	0.0030	0.070	0.138	0.0027	0.0015	0.0010	0.0012	0.0053	0.0028	0.0018	0.0025	-0.0026	-0.0013	-0.0008	-0.0013	0.8948	0.27	
112	854+16.000	854+80.000	0.0121	0.282	0.550	0.0108	0.0060	0.0041	0.0049	0.0211	0.0111	0.0072	0.0100	-0.0103	-0.0051	-0.0031	-0.0052	0.8948	0.27	
113	854+80.000	860+90.000	0.1155	2.688	5.241	0.1034	0.0569	0.0388	0.0465	0.2016	0.1058	0.0684	0.0958	-0.0982	-0.0490	-0.0296	-0.0493	0.8948	0.27	
114	860+90.000	861+85.000	0.0180	0.423	0.833	0.0163	0.0089	0.0061	0.0073	0.0320	0.0168	0.0109	0.0152	-0.0158	-0.0079	-0.0048	-0.0079	0.9039	0.27	
115	861+85.000	862+00.000	0.0028	0.097	0.231	0.0037	0.0022	0.0014	0.0015	0.0089	0.0053	0.0030	0.0035	-0.0051	-0.0031	-0.0016	-0.0020	1.3127	0.39	
SD38/Hwy139 (v1)	862+00.000			37.280	89.593	1.4338	0.6694	0.3723	0.7644	3.4459	1.8214	0.9272	1.6245	-2.0120	-1.1520	-0.5549	-0.8600			0.28

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected FI no/C Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted FI no/C Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) FI no/C Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/million veh-mi)	Expected Intersection Travel Crash Rate (crashes/million veh)
116	862+00.000	862+50.000	0.0095	0.379	0.903	0.0146	0.0087	0.0053	0.0059	0.0347	0.0207	0.0112	0.0141	-0.0201	-0.0120	-0.0059	-0.0082	1.5407	0.40	
117	862+50.000	862+60.000	0.0019	0.073	0.166	0.0028	0.0017	0.0010	0.0011	0.0064	0.0038	0.0021	0.0026	-0.0036	-0.0021	-0.0010	-0.0015	1.4857	0.38	
118	862+60.000	863+10.000	0.0095	0.257	0.505	0.0099	0.0054	0.0037	0.0044	0.0194	0.0101	0.0064	0.0094	-0.0096	-0.0046	-0.0027	-0.0049	1.0426	0.27	
119	863+10.000	869+00.000	0.1117	8.700	5.848	0.3346	0.0992	0.0677	0.2354	0.2249	0.1166	0.0745	0.1083	0.1097	-0.0174	-0.0068	0.1271	2.9945	0.77	
120	869+00.000	869+70.000	0.0133	0.356	0.694	0.0137	0.0075	0.0051	0.0062	0.0267	0.0138	0.0088	0.0128	-0.0130	-0.0063	-0.0037	-0.0067	1.0321	0.27	
121	869+70.000	870+20.000	0.0095	0.254	0.495	0.0098	0.0054	0.0037	0.0044	0.0191	0.0099	0.0063	0.0092	-0.0093	-0.0045	-0.0026	-0.0048	1.0321	0.27	
122	870+20.000	881+80.000	0.2197	11.597	11.497	0.4460	0.3089	0.2109	0.1371	0.4422	0.2293	0.1465	0.2129	0.0039	0.0796	0.0644	-0.0758	2.0302	0.52	
123	881+80.000	882+31.000	0.0097	0.259	0.505	0.0100	0.0055	0.0037	0.0045	0.0194	0.0101	0.0064	0.0094	-0.0095	-0.0046	-0.0027	-0.0049	1.0321	0.27	
124	882+31.000	883+00.000	0.0131	0.351	0.684	0.0135	0.0074	0.0051	0.0061	0.0263	0.0136	0.0087	0.0127	-0.0128	-0.0062	-0.0037	-0.0066	1.0321	0.27	
125	883+00.000	887+90.000	0.0928	8.192	4.856	0.3151	0.2475	0.1689	0.0676	0.1868	0.0968	0.0619	0.0899	0.1283	0.1506	0.1070	-0.0223	3.3950	0.88	
126	887+90.000	888+20.000	0.0057	0.154	0.303	0.0059	0.0033	0.0022	0.0027	0.0117	0.0060	0.0039	0.0056	-0.0057	-0.0028	-0.0016	-0.0030	1.0426	0.27	
127	888+20.000	889+30.000	0.0208	0.805	1.826	0.0310	0.0185	0.0113	0.0124	0.0702	0.0418	0.0226	0.0284	-0.0393	-0.0233	-0.0113	-0.0160	1.4857	0.38	
128	889+30.000	889+50.000	0.0038	0.103	0.202	0.0039	0.0022	0.0015	0.0018	0.0078	0.0040	0.0026	0.0037	-0.0038	-0.0019	-0.0011	-0.0020	1.0426	0.27	
129	889+50.000	894+50.000	0.0947	2.541	4.955	0.0977	0.0538	0.0367	0.0440	0.1906	0.0988	0.0632	0.0918	-0.0929	-0.0451	-0.0265	-0.0478	1.0321	0.27	
130	894+50.000	895+15.000	0.0123	0.330	0.644	0.0127	0.0070	0.0048	0.0057	0.0248	0.0128	0.0082	0.0119	-0.0121	-0.0059	-0.0034	-0.0062	1.0321	0.27	
131	895+15.000	895+60.000	0.0085	0.229	0.446	0.0088	0.0048	0.0033	0.0040	0.0172	0.0089	0.0057	0.0083	-0.0084	-0.0041	-0.0024	-0.0043	1.0321	0.27	
132	895+60.000	898+00.000	0.0455	1.220	2.379	0.0469	0.0258	0.0176	0.0211	0.0915	0.0474	0.0303	0.0441	-0.0446	-0.0216	-0.0127	-0.0229	1.0321	0.27	
133	898+00.000	906+70.000	0.1648	4.422	8.623	0.1701	0.0936	0.0639	0.0765	0.3316	0.1719	0.1099	0.1597	-0.1616	-0.0784	-0.0460	-0.0832	1.0321	0.27	
134	906+70.000	907+21.000	0.0097	0.259	0.505	0.0100	0.0055	0.0037	0.0045	0.0194	0.0101	0.0064	0.0094	-0.0095	-0.0046	-0.0027	-0.0049	1.0321	0.27	
135	907+21.000	907+80.000	0.0112	0.300	0.585	0.0115	0.0063	0.0043	0.0052	0.0225	0.0117	0.0075	0.0108	-0.0110	-0.0053	-0.0031	-0.0056	1.0321	0.27	
136	907+80.000	907+90.000	0.0019	0.051	0.099	0.0020	0.0011	0.0007	0.0009	0.0038	0.0020	0.0013	0.0018	-0.0019	-0.0009	-0.0005	-0.0010	1.0321	0.27	
137	907+90.000	913+70.000	0.1098	2.948	5.748	0.1134	0.0624	0.0426	0.0510	0.2211	0.1146	0.0733	0.1065	-0.1077	-0.0523	-0.0307	-0.0555	1.0321	0.27	
138	913+70.000	914+00.000	0.0057	0.154	0.303	0.0059	0.0033	0.0022	0.0027	0.0117	0.0060	0.0039	0.0056	-0.0057	-0.0028	-0.0016	-0.0030	1.0426	0.27	
139	914+00.000	914+30.000	0.0057	0.119	0.234	0.0046	0.0025	0.0017	0.0021	0.0090	0.0048	0.0031	0.0042	-0.0044	-0.0023	-0.0014	-0.0022	0.8027	0.27	
140	914+30.000	914+40.000	0.0019	0.054	0.124	0.0021	0.0013	0.0008	0.0008	0.0048	0.0029	0.0016	0.0019	-0.0027	-0.0016	-0.0009	-0.0010	1.1072	0.37	
141	914+40.000	915+40.000	0.0189	0.584	1.455	0.0225	0.0133	0.0081	0.0091	0.0560	0.0340	0.0191	0.0219	-0.0335	-0.0207	-0.0110	-0.0128	1.1855	0.39	
LaMesa/SD38 (v1)	915+00.000			45.389	83.561	1.7457	0.7046	0.4318	1.0411	3.2139	1.8143	0.9753	1.3996	-1.4682	-1.1097	-0.5434	-0.3585			0.47
142	915+40.000	916+00.000	0.0114	0.237	0.467	0.0091	0.0050	0.0034	0.0041	0.0180	0.0095	0.0062	0.0084	-0.0088	-0.0045	-0.0028	-0.0043	0.8027	0.27	
143	916+00.000	921+00.000	0.0947	1.957	3.816	0.0753	0.0414	0.0283	0.0339	0.1467	0.0779	0.0509	0.0689	-0.0715	-0.0365	-0.0226	-0.0350	0.7947	0.26	
144	921+00.000	921+90.000	0.0170	0.352	0.687	0.0135	0.0075	0.0051	0.0061	0.0264	0.0140	0.0092	0.0124	-0.0129	-0.0066	-0.0041	-0.0063	0.7947	0.26	
145	921+90.000	922+00.000	0.0019	0.039	0.076	0.0015	0.0008	0.0006	0.0007	0.0029	0.0016	0.0010	0.0014	-0.0014	-0.0007	-0.0005	-0.0007	0.7947	0.26	
146	922+00.000	922+59.000	0.0112	0.231	0.450	0.0089	0.0049	0.0033	0.0040	0.0173	0.0092	0.0060	0.0081	-0.0084	-0.0043	-0.0027	-0.0041	0.7947	0.26	
147	922+59.000	923+00.000	0.0078	0.160	0.313	0.0062	0.0034	0.0023	0.0028	0.0120	0.0064	0.0042	0.0056	-0.0059	-0.0030	-0.0019	-0.0029	0.7947	0.26	
148	923+00.000	941+70.000	0.3542	11.707	14.270	0.4503	0.2929	0.2000	0.1573	0.5488	0.2913	0.1902	0.2576	-0.0986	0.0017	0.0098	-0.1002	1.2714	0.42	
149	941+70.000	948+50.000	0.1288	2.661	5.189	0.1023	0.0563	0.0384	0.0460	0.1996	0.1059	0.0692	0.0937	-0.0972	-0.0496	-0.0307	-0.0476	0.7947	0.26	
All Segments			6.8845	404.014	364.690	15.5390	8.4321	5.7418	7.1069	14.0265	7.3373	4.6326	6.6892	1.5125	1.0948	1.1092	0.4176	2.2571	0.60	
All Intersections				207.530	423.640	7.9819	3.7433	2.1827	4.2387	16.2938	8.2091	4.3625	8.0847	-8.3119	-4.4659	-2.1798	-3.8461			0.25
Total			6.8845	611.544	788.330	23.5209	12.1754	7.9245	11.3456	30.3204	15.5464	8.9951	14.7740	-6.7994	-3.3710	-1.0706	-3.4284	3.4165		

Table 12. Expected Crash Frequencies and Rates by Horizontal Design Element (Section 3)

Title	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected FI no/C Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted FI no/C Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) FI no/C Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/mi million veh-mi)
Tangent	585+00.000	594+84.940	0.1865	12.915	11.070	0.4967	0.3578	0.2468	0.1390	0.4258	0.2184	0.1382	0.2074	0.0709	0.1394	0.1086	-0.0684	2.6628	0.61
Simple Curve 1	594+84.940	609+21.930	0.2722	36.520	19.110	1.4046	0.5861	0.4032	0.8185	0.7350	0.3769	0.2321	0.3581	0.6696	0.2092	0.1711	0.4604	5.1611	0.97
Tangent	609+21.930	624+64.300	0.2921	20.697	21.970	0.7960	0.3292	0.2271	0.4668	0.8450	0.4243	0.2633	0.4207	-0.0490	-0.0951	-0.0362	0.0461	2.7250	0.50
Simple Curve 2	624+64.300	624+64.530	0.0000	0.003	0.003	0.0001	0.0001	0.0000	0.0001	0.0001	0.0001	0.0000	0.0001	0.0000	-0.0000	-0.0000	0.0000	3.0350	0.56
Tangent	624+64.530	636+92.820	0.2326	9.543	17.496	0.3670	0.2038	0.1406	0.1632	0.6729	0.3379	0.2097	0.3350	-0.3059	-0.1341	-0.0691	-0.1718	1.5777	0.29
Simple Curve 3	636+92.820	647+26.050	0.1957	17.252	16.240	0.6635	0.2379	0.1621	0.4257	0.6246	0.3222	0.1928	0.3024	0.0389	-0.0844	-0.0307	0.1233	3.3907	0.62
Tangent	647+26.050	672+86.110	0.4849	37.690	37.458	1.4496	0.5640	0.3876	0.8857	1.4407	0.7292	0.4477	0.7114	0.0089	-0.1653	-0.0601	0.1742	2.9897	0.55
Simple Curve 4	672+86.110	683+82.710	0.2077	73.238	15.648	2.8169	1.9911	1.3396	0.8258	0.6019	0.3216	0.1899	0.2802	2.2150	1.6694	1.1497	0.5456	13.5629	2.53
Tangent	683+82.710	693+85.010	0.1898	5.134	9.377	0.1975	0.1100	0.0761	0.0875	0.3607	0.1883	0.1212	0.1723	-0.1632	-0.0784	-0.0451	-0.0848	1.0402	0.29
Simple Curve 5	693+85.010	710+47.850	0.3149	8.065	15.977	0.3102	0.1748	0.1177	0.1354	0.6145	0.3344	0.2088	0.2801	-0.3043	-0.1596	-0.0911	-0.1447	0.9849	0.30
Tangent	710+47.850	727+51.450	0.3227	19.279	12.636	0.7415	0.3343	0.2282	0.4072	0.4860	0.2585	0.1691	0.2275	0.2555	0.0758	0.0590	0.1798	2.2982	0.78
Simple Curve 6	727+51.450	727+52.350	0.0002	0.003	0.007	0.0001	0.0001	0.0000	0.0001	0.0003	0.0001	0.0001	0.0001	-0.0001	-0.0001	-0.0000	-0.0001	0.7724	0.26
Tangent	727+52.350	765+52.550	0.7197	14.661	28.827	0.5639	0.3116	0.2115	0.2523	1.1087	0.5947	0.3856	0.5140	-0.5448	-0.2832	-0.1742	-0.2617	0.7835	0.27
Simple Curve 7	765+52.550	780+45.930	0.2828	10.095	11.536	0.3883	0.1595	0.1080	0.2288	0.4437	0.2396	0.1542	0.2041	-0.0554	-0.0801	-0.0462	0.0247	1.3728	0.47
Tangent	780+45.930	948+50.000	3.1826	138.918	147.333	5.3430	3.0722	2.0932	2.2708	5.6667	2.9909	1.9197	2.6757	-0.3237	0.0812	0.1734	-0.4049	1.6788	0.50

Table 13. Predicted Crash Frequencies by Year (Section 3)

Year	Total Crashes	FI Crashes	Percent FI (%)	FI/no C Crashes	Percent FI/no C (%)	PDO Crashes	Percent PDO (%)
2025	16.61	8.54	51.412	5.36	32.278	8.07	48.588
2026	18.30	9.37	51.224	5.83	31.866	8.93	48.776
2027	20.01	10.22	51.059	6.30	31.488	9.79	48.941
2028	21.74	11.07	50.913	6.77	31.141	10.67	49.087
2029	23.49	11.93	50.784	7.24	30.818	11.56	49.216
2030	24.14	12.26	50.776	7.41	30.696	11.88	49.224
2031	24.80	12.59	50.771	7.58	30.578	12.21	49.229
2032	25.47	12.93	50.767	7.76	30.463	12.54	49.233
2033	26.13	13.27	50.765	7.93	30.352	12.87	49.235
2034	26.80	13.60	50.764	8.11	30.245	13.19	49.236
2035	27.47	13.94	50.765	8.28	30.141	13.52	49.235
2036	28.23	14.34	50.805	8.48	30.035	13.89	49.195
2037	29.03	14.77	50.865	8.69	29.930	14.26	49.135
2038	29.82	15.19	50.922	8.90	29.828	14.64	49.078
2039	30.62	15.61	50.978	9.10	29.731	15.01	49.022
2040	31.42	16.03	51.033	9.31	29.636	15.38	48.967
2041	32.75	16.75	51.158	9.65	29.478	15.99	48.842
2042	34.05	17.46	51.279	9.98	29.327	16.59	48.721
2043	35.32	18.15	51.394	10.31	29.185	17.17	48.606
2044	36.58	18.84	51.504	10.63	29.048	17.74	48.496
2045	37.83	19.52	51.609	10.94	28.918	18.31	48.391
2046	39.08	20.21	51.711	11.25	28.792	18.87	48.289
2047	40.31	20.89	51.808	11.56	28.672	19.43	48.192
2048	41.55	21.57	51.903	11.86	28.555	19.98	48.097
2049	42.78	22.24	51.993	12.17	28.443	20.54	48.007
2050	44.01	22.92	52.081	12.47	28.335	21.09	47.919
Total	788.33	404.21	51.274	233.87	29.667	384.12	48.726
Average	30.32	15.55	51.274	8.99	29.667	14.77	48.726

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 14. Expected Crash Frequencies by Year (Section 3)

Year	Total Crashes	FI Crashes	Percent FI (%)	FI/no C Crashes	Percent FI/no C (%)	PDO Crashes	Percent PDO (%)
2025	12.89	6.69	51.904	4.72	36.657	6.20	48.099
2026	14.20	7.34	51.714	5.14	36.189	6.86	48.285
2027	15.52	8.00	51.547	5.55	35.760	7.52	48.449
2028	16.86	8.67	51.400	5.96	35.365	8.19	48.593
2029	18.22	9.34	51.269	6.38	34.999	8.88	48.721
2030	18.73	9.60	51.262	6.53	34.860	9.13	48.729
2031	19.24	9.86	51.256	6.68	34.726	9.38	48.734
2032	19.76	10.12	51.252	6.83	34.595	9.63	48.738
2033	20.27	10.39	51.250	6.99	34.469	9.88	48.740
2034	20.79	10.65	51.249	7.14	34.347	10.13	48.740
2035	21.31	10.92	51.250	7.29	34.229	10.39	48.740
2036	21.90	11.23	51.291	7.47	34.109	10.66	48.700
2037	22.52	11.56	51.351	7.65	33.990	10.95	48.641
2038	23.14	11.89	51.409	7.84	33.875	11.24	48.584
2039	23.75	12.22	51.466	8.02	33.764	11.53	48.528
2040	24.37	12.56	51.520	8.20	33.656	11.81	48.475
2041	25.40	13.12	51.647	8.50	33.476	12.28	48.351
2042	26.41	13.67	51.769	8.80	33.306	12.74	48.231
2043	27.40	14.22	51.885	9.08	33.144	13.18	48.117
2044	28.38	14.76	51.996	9.36	32.989	13.62	48.008
2045	29.35	15.29	52.103	9.64	32.840	14.06	47.904
2046	30.31	15.82	52.205	9.91	32.698	14.49	47.803
2047	31.27	16.36	52.304	10.18	32.561	14.92	47.707
2048	32.23	16.89	52.399	10.45	32.429	15.35	47.614
2049	33.19	17.42	52.490	10.72	32.302	15.77	47.524
2050	34.14	17.95	52.579	10.99	32.179	16.20	47.437
Total	611.54	316.56	51.764	206.04	33.691	294.99	48.236
Average	23.52	12.18	51.764	7.92	33.691	11.35	48.236

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 15. Comparing Predicted and Expected Crashes for the Evaluation Period (Section 3)

Scope	Total Crashes	FI Crashes	Percent FI (%)	FI/no C Crashes	Percent FI/no C (%)	PDO Crashes	Percent PDO (%)
Predicted	788.33	404.21	51.274	233.87	29.667	384.12	48.726
Expected	611.54	316.56	51.764	206.04	33.691	294.99	48.236
Expected - Predicted	-176.78	-87.65		-27.84		-89.14	
Percent Difference	-28.91	-27.69		-13.51		-30.22	

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 16. Expected Crash Severity by Ramp Terminal or Roundabout (Section 3)

Seg. No.	Type	Fatal (K) Crashes (crashes)	Incapacitating Injury (A) Crashes (crashes)	Non-Incapacitating Injury (B) Crashes (crashes)	Possible Injury (C) Crashes (crashes)	No Injury (O) Crashes (crashes)
4	FRERampTerminal	0.0941	0.4938	1.6335	5.7300	7.7191

Table 17. Expected Crash Type Distribution (Section 3)

Element Type	Crash Type	FI Crashes	Percent FI (%)	FI/no C Crashes	Percent FI/no C (%)	PDO Crashes	Percent PDO (%)	Total Crashes	Percent Total (%)
Highway Segment	Single	150.43	24.6	110.75	18.1	143.73	23.5	298.08	48.8
Highway Segment	Total Single Vehicle Crashes	150.43	24.6	110.75	18.1	143.73	23.5	298.08	48.8
Highway Segment	Angle Collision	16.09	2.6	10.16	1.7	9.07	1.5	24.58	4.0
Highway Segment	Head-on Collision	3.14	0.5	2.97	0.5	0.36	0.1	2.49	0.4
Highway Segment	Rear-end Collision	38.33	6.3	18.19	3.0	16.88	2.8	49.86	8.2
Highway Segment	Sideswipe	6.30	1.0	3.54	0.6	10.11	1.7	18.64	3.0
Highway Segment	Total Multiple Vehicle Crashes	63.87	10.4	34.86	5.7	36.42	6.0	95.56	15.6
Highway Segment	Total Highway Segment Crashes	219.24	35.9	149.29	24.4	184.78	30.2	404.01	66.1
Highway Segment	Other Collision	4.93	0.8	3.67	0.6	4.62	0.8	10.36	1.7
Intersection	Single	13.98	2.3	11.95	2.0	24.92	4.1	39.47	6.5
Intersection	Total Single Vehicle Crashes	13.98	2.3	11.95	2.0	24.92	4.1	39.47	6.5
Intersection	Angle Collision	45.97	7.5	30.94	5.1	28.84	4.7	72.86	11.9
Intersection	Head-on Collision	1.87	0.3	1.53	0.2	1.59	0.3	3.36	0.5
Intersection	Rear-end Collision	19.40	3.2	6.39	1.0	25.46	4.2	45.10	7.4
Intersection	Sideswipe	3.92	0.6	2.40	0.4	16.14	2.6	21.11	3.5
Intersection	Total Multiple Vehicle Crashes	71.17	11.6	41.26	6.7	72.04	11.8	142.42	23.3
Intersection	Total Intersection Crashes	89.45	14.6	56.75	9.3	102.46	16.8	191.69	31.4
Intersection	Other Collision	4.30	0.7	3.54	0.6	5.51	0.9	9.81	1.6
Ramp Terminal	Collision with Animal	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0
Ramp Terminal	Collision with Fixed Object	0.62	0.1	0.00	0.0	1.22	0.2	1.84	0.3
Ramp Terminal	Collision with Other Object	0.00	0.0	0.00	0.0	0.04	0.0	0.04	0.0
Ramp Terminal	Other Single-vehicle Collision	0.52	0.1	0.00	0.0	0.20	0.0	0.72	0.1
Ramp Terminal	Collision with Parked Vehicle	0.06	0.0	0.00	0.0	0.12	0.0	0.17	0.0
Ramp Terminal	Total Single Vehicle Crashes	1.19	0.2	0.00	0.0	1.57	0.3	2.77	0.5
Ramp Terminal	Angle Collision	4.15	0.7	0.00	0.0	2.87	0.5	7.02	1.1

Element Type	Crash Type	FI Crashes	Percent FI (%)	FI/no C Crashes	Percent FI/no C (%)	PDO Crashes	Percent PDO (%)	Total Crashes	Percent Total (%)
Ramp Terminal	Head-on Collision	0.16	0.0	0.00	0.0	0.12	0.0	0.28	0.0
Ramp Terminal	Other Multiple-vehicle Collision	0.10	0.0	0.00	0.0	0.20	0.0	0.30	0.1
Ramp Terminal	Rear-end Collision	2.19	0.4	0.00	0.0	2.13	0.3	4.32	0.7
Ramp Terminal	Sideswipe, Same Direction Collision	0.16	0.0	0.00	0.0	0.83	0.1	0.98	0.2
Ramp Terminal	Total Multiple Vehicle Crashes	6.76	1.1	0.00	0.0	6.14	1.0	12.90	2.1
Ramp Terminal	Total Ramp Terminal Crashes	7.95	1.3	0.00	0.0	7.72	1.3	15.67	2.6
	Total Crashes	316.64	51.8	206.04	33.7	294.96	48.2	611.37	100.0

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 18. Evaluation Message

Start Location (Sta. ft)	End Location (Sta. ft)	Message
605+40.000	605+60.000	Warning: for segment #11 (605+40.000 to 605+60.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
605+40.000	605+60.000	Warning: for segment #11 (605+40.000 to 605+60.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
605+60.000	605+70.000	Warning: for segment #12 (605+60.000 to 605+70.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
605+60.000	605+70.000	Warning: for segment #12 (605+60.000 to 605+70.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
605+70.000	605+75.000	Warning: for segment #13 (605+70.000 to 605+75.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
605+70.000	605+75.000	Warning: for segment #13 (605+70.000 to 605+75.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
605+75.000	606+00.000	Warning: for segment #14 (605+75.000 to 606+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
605+75.000	606+00.000	Warning: for segment #14 (605+75.000 to 606+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
639+00.000	640+00.000	Warning: for segment #29 (639+00.000 to 640+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
639+00.000	640+00.000	Warning: for segment #29 (639+00.000 to 640+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
655+70.000	656+50.000	Warning: for segment #42 (655+70.000 to 656+50.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
655+70.000	656+50.000	Warning: for segment #42 (655+70.000 to 656+50.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
676+30.000	677+50.000	Warning: for segment #52 (676+30.000 to 677+50.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
676+30.000	677+50.000	Warning: for segment #52 (676+30.000 to 677+50.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
681+00.000	682+20.000	Warning: for segment #57 (681+00.000 to 682+20.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
681+00.000	682+20.000	Warning: for segment #57 (681+00.000 to 682+20.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
699+20.000	700+40.000	Warning: for segment #67 (699+20.000 to 700+40.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
699+20.000	700+40.000	Warning: for segment #67 (699+20.000 to 700+40.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
709+00.000	710+30.000	Warning: for segment #76 (709+00.000 to 710+30.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
709+00.000	710+30.000	Warning: for segment #76 (709+00.000 to 710+30.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
755+50.000	756+90.000	Warning: for segment #82 (755+50.000 to 756+90.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
755+50.000	756+90.000	Warning: for segment #82 (755+50.000 to 756+90.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
777+80.000	778+80.000	Warning: for segment #89 (777+80.000 to 778+80.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
777+80.000	778+80.000	Warning: for segment #89 (777+80.000 to 778+80.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
808+80.000	809+00.000	Warning: for segment #102 (808+80.000 to 809+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
808+80.000	809+00.000	Warning: for segment #102 (808+80.000 to 809+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
809+00.000	809+60.000	Warning: for segment #103 (809+00.000 to 809+60.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
809+00.000	809+60.000	Warning: for segment #103 (809+00.000 to 809+60.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
861+85.000	862+00.000	Warning: for segment #115 (861+85.000 to 862+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
861+85.000	862+00.000	Warning: for segment #115 (861+85.000 to 862+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0

Start Location (Sta. ft)	End Location (Sta. ft)	Message
862+00.000	862+50.000	Warning: for segment #116 (862+00.000 to 862+50.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
862+00.000	862+50.000	Warning: for segment #116 (862+00.000 to 862+50.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
862+50.000	862+60.000	Warning: for segment #117 (862+50.000 to 862+60.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
862+50.000	862+60.000	Warning: for segment #117 (862+50.000 to 862+60.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
888+20.000	889+30.000	Warning: for segment #127 (888+20.000 to 889+30.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
888+20.000	889+30.000	Warning: for segment #127 (888+20.000 to 889+30.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
914+30.000	914+40.000	Warning: for segment #140 (914+30.000 to 914+40.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
914+30.000	914+40.000	Warning: for segment #140 (914+30.000 to 914+40.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
914+40.000	915+40.000	Warning: for segment #141 (914+40.000 to 915+40.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
914+40.000	915+40.000	Warning: for segment #141 (914+40.000 to 915+40.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
605+40.000	605+60.000	Warning: for segment #11 (605+40.000 to 605+60.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
605+40.000	605+60.000	Warning: for segment #11 (605+40.000 to 605+60.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
605+60.000	605+70.000	Warning: for segment #12 (605+60.000 to 605+70.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
605+60.000	605+70.000	Warning: for segment #12 (605+60.000 to 605+70.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
605+70.000	605+75.000	Warning: for segment #13 (605+70.000 to 605+75.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
605+70.000	605+75.000	Warning: for segment #13 (605+70.000 to 605+75.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
605+75.000	606+00.000	Warning: for segment #14 (605+75.000 to 606+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
605+75.000	606+00.000	Warning: for segment #14 (605+75.000 to 606+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
639+00.000	640+00.000	Warning: for segment #29 (639+00.000 to 640+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
639+00.000	640+00.000	Warning: for segment #29 (639+00.000 to 640+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
655+70.000	656+50.000	Warning: for segment #42 (655+70.000 to 656+50.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
655+70.000	656+50.000	Warning: for segment #42 (655+70.000 to 656+50.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
676+30.000	677+50.000	Warning: for segment #52 (676+30.000 to 677+50.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
676+30.000	677+50.000	Warning: for segment #52 (676+30.000 to 677+50.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
681+00.000	682+20.000	Warning: for segment #57 (681+00.000 to 682+20.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
681+00.000	682+20.000	Warning: for segment #57 (681+00.000 to 682+20.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
699+20.000	700+40.000	Warning: for segment #67 (699+20.000 to 700+40.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
699+20.000	700+40.000	Warning: for segment #67 (699+20.000 to 700+40.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
709+00.000	710+30.000	Warning: for segment #76 (709+00.000 to 710+30.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
709+00.000	710+30.000	Warning: for segment #76 (709+00.000 to 710+30.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
755+50.000	756+90.000	Warning: for segment #82 (755+50.000 to 756+90.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
755+50.000	756+90.000	Warning: for segment #82 (755+50.000 to 756+90.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0

Start Location (Sta. ft)	End Location (Sta. ft)	Message
777+80.000	778+80.000	Warning: for segment #89 (777+80.000 to 778+80.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
777+80.000	778+80.000	Warning: for segment #89 (777+80.000 to 778+80.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
808+80.000	809+00.000	Warning: for segment #102 (808+80.000 to 809+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
808+80.000	809+00.000	Warning: for segment #102 (808+80.000 to 809+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
809+00.000	809+60.000	Warning: for segment #103 (809+00.000 to 809+60.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
809+00.000	809+60.000	Warning: for segment #103 (809+00.000 to 809+60.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
861+85.000	862+00.000	Warning: for segment #115 (861+85.000 to 862+00.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
861+85.000	862+00.000	Warning: for segment #115 (861+85.000 to 862+00.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
862+00.000	862+50.000	Warning: for segment #116 (862+00.000 to 862+50.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
862+00.000	862+50.000	Warning: for segment #116 (862+00.000 to 862+50.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
862+50.000	862+60.000	Warning: for segment #117 (862+50.000 to 862+60.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
862+50.000	862+60.000	Warning: for segment #117 (862+50.000 to 862+60.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
888+20.000	889+30.000	Warning: for segment #127 (888+20.000 to 889+30.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
888+20.000	889+30.000	Warning: for segment #127 (888+20.000 to 889+30.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
914+30.000	914+40.000	Warning: for segment #140 (914+30.000 to 914+40.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
914+30.000	914+40.000	Warning: for segment #140 (914+30.000 to 914+40.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0
914+40.000	915+40.000	Warning: for segment #141 (914+40.000 to 915+40.000), no foreslope data available for left side of road for use by AFM3ru, using 1.0
914+40.000	915+40.000	Warning: for segment #141 (914+40.000 to 915+40.000), no foreslope data available for right side of road for use by AFM3ru, using 1.0

Section 4 Evaluation

Section: Section 4

Evaluation Start Location: 948+50.000

Evaluation End Location: 974+11.000

Area Type: Urban

Functional Class: Arterial

Type of Alignment: Undivided, Multilane

Model Category: Urban/Suburban Arterial

Calibration Factor: 4D=1.0; 4SG=1.0; 4U=1.0;

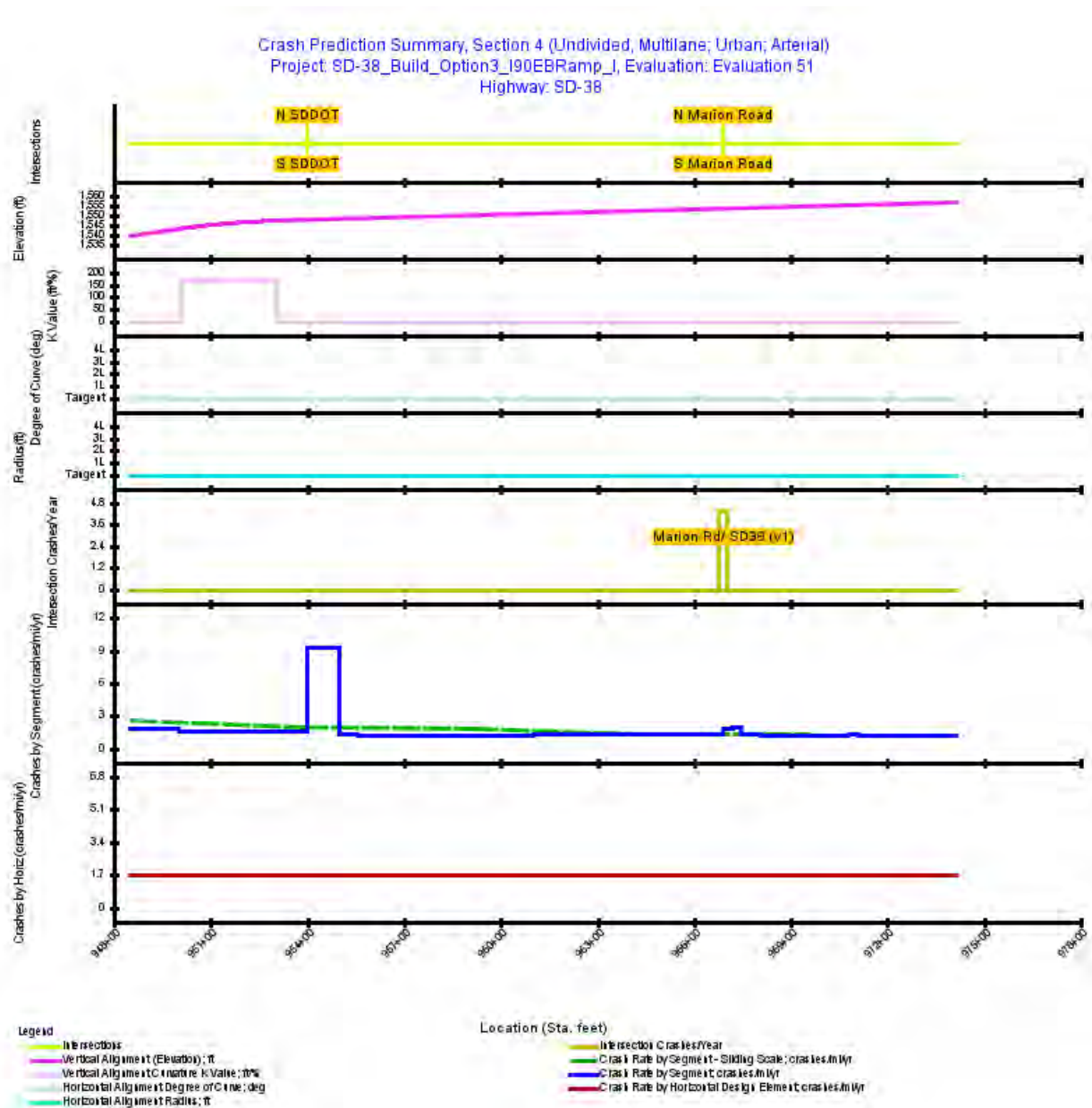


Figure 2. Crash Prediction Summary (Section 4)

Table 19. Observed Crashes Used in the Evaluation (Section 4)

Year	Observed Crashes	Total Crashes Used	FI Crashes	FI no/C Crashes	PDO Crashes
2018	5	5	4	0	1
2019	1	1	0	0	1
2020	2	2	0	0	2
2021	2	2	2	0	0
2022	2	2	0	0	2
All Years	12 ^[1]	12	6	0	6

Footnotes

^[1] Note: Observed crash data that does not comply with the associated CPM model requirements may not be used in EB processing.

Table 20. Evaluation Highway - Homogeneous Segments (Section 4)

Segment No.	Type	Start Location (Sta. ft)	End Location (Sta. ft)	Length (ft)	Length (mi)	AADT	Number Major Commercial Driveways	Number Minor Commercial Driveways	Number Major Industrial/Institutional	Number Minor Industrial/Institutional	Number Major Residential Driveways	Number Minor Residential Driveways	Number Other Driveways	Lighting	Automated Speed Enforcement	Density (fixed objects/mi)	Median Width (ft)	Type	Effective Median Width (ft)	Speed Level	Number Railway Crossings	Average Shoulder Width (ft)	Average Lane Width (ft)	
150	Urban/Suburban Arterial Segment Four-lane Undivided	948+5.0000	950+0.0000	150.00	0.0284	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	0	false	false	0.0	0.00	None	0.00	Intermediate/High	0	8.00	12.00
151	Urban/Suburban Arterial Segment Four-lane Undivided	950+0.0000	954+0.0000	400.00	0.0758	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	0	false	false	0.0	0.00	None	0.00	Intermediate/High	0	8.00	12.00
152	Urban/Suburban Arterial Segment Four-lane Undivided	954+0.0000	955+0.0000	100.00	0.0189	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	2	0	0	0	0	0	false	false	0.0	0.00	None	0.00	Intermediate/High	0	4.00	12.00
153	Urban/Suburban Arterial Segment Four-lane Divided	955+0.0000	955+5.0000	55.00	0.0104	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	0	false	false	0.0	4.01	Non-Traversable Median	4.01	Intermediate/High	0	8.00	12.00
154	Urban/Suburban Arterial Segment Four-lane Divided	955+5.0000	958+2.0000	273.00	0.0517	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	0	false	false	0.0	10.02	Non-Traversable Median	10.02	Intermediate/High	0	8.00	12.00
155	Urban/Suburban Arterial Segment Four-lane Divided	958+2.0000	961+0.0000	273.00	0.0517	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	0	false	false	0.0	20.03	Non-Traversable Median	19.99	Intermediate/High	0	8.00	12.00
156	Urban/Suburban Arterial Segment Four-lane Divided	961+0.0000	962+0.0000	99.00	0.0187	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	0	false	false	0.0	23.12	Traversable Median	23.12	Intermediate/High	0	8.00	12.00
157	Urban/Suburban Arterial Segment Four-lane Divided	962+0.0000	963+6.0000	169.00	0.0320	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	0	false	false	0.0	18.13	Traversable Median	30.13	Intermediate/High	0	8.00	12.00
158	Urban/Suburban Arterial Segment Four-lane Divided	963+6.0000	965+0.0000	131.00	0.0248	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	0	false	false	0.0	12.55	Traversable Median	24.55	Intermediate/High	0	8.00	12.00
159	Urban/Suburban Arterial Segment Four-lane Divided	965+0.0000	966+3.0000	138.00	0.0261	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	0	false	false	0.0	7.54	Traversable Median	19.54	Intermediate/High	0	4.00	12.00
160	Urban/Suburban Arterial Segment Four-lane Divided	966+3.0000	966+7.0000	32.00	0.0061	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	0	false	false	0.0	4.38	Traversable Median	16.38	Intermediate/High	0	4.00	12.00

Se g. No.	Type	Start Locati on (Sta. ft)	End Locati on (Sta. ft)	Len gth (ft)	Len gth (mi)	AADT	Number Major Commer cial Drivewa ys	Number Minor Commer cial Drivewa ys	Number Major Industrial/I nstitutiona l	Number Minor Industrial/I nstitutiona l	Number Major Resident ial Drivewa ys	Number Minor Resident ial Drivewa ys	Numbe r Other Drivewa ys	Lighti ng	Automat ed Speed Enforce ment	Dens ity (fixe d objec ts/mi)	Med ian Wid th (ft)	Type	Effecti ve Media n Width (ft)	Speed Level	Numbe r Rail Highw ay Crossi ngs	Avera ge Shoul der Width (ft)	Aver age Lane Width (ft)
16 1	Urban/Suburban Arterial Segment Four-lane Divided	966+7 0.000	966+9 1.000	21.0 0	0.00 40	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	false	false	0.0	3.39	Traversable Median	15.39	Intermediate/High	0	0.00	12.00
16 2	Urban/Suburban Arterial Segment Four-lane Undivided	966+9 1.000	967+1 4.000	23.0 0	0.00 44	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	true	false	0.0	0.00	None	0.00	Intermediate/High	0	0.00	12.00
16 3	Urban/Suburban Arterial Segment Four-lane Undivided	967+1 4.000	967+2 0.000	6.00 0	0.00 11	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	true	false	0.0	0.00	None	0.00	Intermediate/High	0	8.00	12.00
16 4	Urban/Suburban Arterial Segment Four-lane Undivided	967+2 0.000	967+4 5.000	25.0 0	0.00 47	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	false	false	0.0	0.00	None	0.00	Intermediate/High	0	8.00	12.00
16 5	Urban/Suburban Arterial Segment Four-lane Divided	967+4 5.000	968+0 6.000	61.0 0	0.01 16	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	false	false	0.0	4.01	Non- Traversable Median	18.01	Intermediate/High	0	8.00	12.00
16 6	Urban/Suburban Arterial Segment Four-lane Divided	968+0 6.000	970+7 9.000	273. 00	0.05 17	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	false	false	0.0	9.52	Non- Traversable Median	23.52	Intermediate/High	0	8.00	12.00
16 7	Urban/Suburban Arterial Segment Four-lane Divided	970+7 9.000	971+0 9.000	30.0 0	0.00 57	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	false	false	0.0	14.53	Non- Traversable Median	14.53	Intermediate/High	0	8.00	12.00
16 8	Urban/Suburban Arterial Segment Four-lane Divided	971+0 9.000	974+1 1.000	302. 00	0.05 72	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	0	0	0	0	0	0	0	false	false	0.0	20.01	Non- Traversable Median	20.01	Intermediate/High	0	8.00	12.00

Table 21. Crash Highway Highway - Homogeneous Segments (Section 4)

Se g. No.	Type	Start Locatio n (Sta. ft)	End Locatio n (Sta. ft)	Length (ft)	Length (mi)	AADT	Number Major Commercial Driveways	Number Minor Commercial Driveways	Number Major Industrial/Inst itutional	Number Minor Industrial/Inst itutional	Number Major Residential Driveways	Number Minor Residential Driveways	Number Other Driveways	Lightin g	Automated Speed Enforceme nt	Densit y (fixed object s/m)	Medi an Width h (ft)	Type	Effective Median Width (ft)	Speed Level	Number Rail Highwa y Crossing s	Averag e Should er Width (ft)	Avera ge Lane Width (ft)
150	Urban/Suburban Arterial Segment Four-lane Undivided	948+50.000	950+00.000	150.00	0.0284	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	0.00	None	0.00	Intermediate/High	0	8.00	12.00
151	Urban/Suburban Arterial Segment Four-lane Undivided	950+00.000	954+00.000	400.00	0.0758	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	0.00	None	0.00	Intermediate/High	0	8.00	12.00
152	Urban/Suburban Arterial Segment Four-lane Undivided	954+00.000	955+00.000	100.00	0.0189	2018-2022: 4,900	0	0	2	0	0	0	0	false	false	0.0	0.00	None	0.00	Intermediate/High	0	4.00	12.00
153	Urban/Suburban Arterial Segment Four-lane Divided	955+00.000	955+55.000	55.00	0.0104	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	4.01	Non-Traversable Median	4.01	Intermediate/High	0	8.00	12.00
154	Urban/Suburban Arterial Segment Four-lane Divided	955+55.000	958+28.000	273.00	0.0517	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	10.02	Non-Traversable Median	10.02	Intermediate/High	0	8.00	12.00
155	Urban/Suburban Arterial Segment Four-lane Divided	958+28.000	961+01.000	273.00	0.0517	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	20.03	Non-Traversable Median	19.99	Intermediate/High	0	8.00	12.00
156	Urban/Suburban Arterial Segment Four-lane Divided	961+01.000	962+00.000	99.00	0.0187	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	23.12	Traversable Median	23.12	Intermediate/High	0	8.00	12.00
157	Urban/Suburban Arterial Segment Four-lane Divided	962+00.000	963+69.000	169.00	0.0320	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	18.13	Traversable Median	30.13	Intermediate/High	0	8.00	12.00
158	Urban/Suburban Arterial Segment Four-lane Divided	963+69.000	965+00.000	131.00	0.0248	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	12.55	Traversable Median	24.55	Intermediate/High	0	8.00	12.00
159	Urban/Suburban Arterial Segment Four-lane Divided	965+00.000	966+38.000	138.00	0.0261	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	7.54	Traversable Median	19.54	Intermediate/High	0	4.00	12.00
160	Urban/Suburban Arterial Segment Four-lane Divided	966+38.000	966+70.000	32.00	0.0061	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	4.38	Traversable Median	16.38	Intermediate/High	0	4.00	12.00
161	Urban/Suburban Arterial Segment Four-lane Divided	966+70.000	966+91.000	21.00	0.0040	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	3.39	Traversable Median	15.39	Intermediate/High	0	0.00	12.00
162	Urban/Suburban Arterial Segment Four-lane Undivided	966+91.000	967+14.000	23.00	0.0044	2018-2022: 4,900	0	0	0	0	0	0	0	true	false	0.0	0.00	None	0.00	Intermediate/High	0	0.00	12.00
163	Urban/Suburban Arterial Segment Four-lane Undivided	967+14.000	967+20.000	6.00	0.0011	2018-2022: 4,900	0	0	0	0	0	0	0	true	false	0.0	0.00	None	0.00	Intermediate/High	0	8.00	12.00
164	Urban/Suburban Arterial Segment Four-lane Undivided	967+20.000	967+45.000	25.00	0.0047	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	0.00	None	0.00	Intermediate/High	0	8.00	12.00
165	Urban/Suburban Arterial Segment Four-lane Divided	967+45.000	968+06.000	61.00	0.0116	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	4.01	Non-Traversable Median	18.01	Intermediate/High	0	8.00	12.00
166	Urban/Suburban Arterial Segment Four-lane Divided	968+06.000	970+79.000	273.00	0.0517	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	9.52	Non-Traversable Median	23.52	Intermediate/High	0	8.00	12.00
167	Urban/Suburban Arterial Segment Four-lane Divided	970+79.000	971+09.000	30.00	0.0057	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	14.53	Non-Traversable Median	14.53	Intermediate/High	0	8.00	12.00
168	Urban/Suburban Arterial Segment Four-lane Divided	971+09.000	974+11.000	302.00	0.0572	2018-2022: 4,900	0	0	0	0	0	0	0	false	false	0.0	20.01	Non-Traversable Median	20.01	Intermediate/High	0	8.00	12.00

Table 22. Evaluation Intersection (Section 4)

Inter. No.	Title	Type	Location (Sta. ft)	Major AADT	Minor AADT	Legs	Traffic Control	Approaches w/Left Turn Lanes	Approaches w/Right Turn Lanes	Approaches w/o Right Turn on Red	Pedestrian Volume (crossings/day)	Lighted at Night	Red Light Camera	School Nearby	Number of Bus Stops	Number of Alcohol Sales Establishments	Max Lanes Crossed
8	Marion Rd/SD38 (v1)	Urban/Suburban Arterial Intersection Four-Legged Signalized	966+91.000	2025: 5,766; 2026: 5,888; 2027: 6,010; 2028: 6,132; 2029: 6,255; 2030: 6,660; 2031: 7,065; 2032: 7,470; 2033: 7,875; 2034: 8,280; 2035: 8,685; 2036: 9,090; 2037: 9,495; 2038: 9,900; 2039: 10,305; 2040: 10,710; 2041: 11,861; 2042: 13,012; 2043: 14,163; 2044: 15,314; 2045: 16,465; 2046: 17,616; 2047: 18,767; 2048: 19,918; 2049: 21,069; 2050: 22,220	2025: 5,988; 2026: 6,351; 2027: 6,714; 2028: 7,077; 2029: 7,440; 2030: 7,545; 2031: 7,650; 2032: 7,756; 2033: 7,861; 2034: 7,967; 2035: 8,072; 2036: 8,178; 2037: 8,283; 2038: 8,389; 2039: 8,494; 2040: 8,600; 2041: 8,722; 2042: 8,844; 2043: 8,966; 2044: 9,088; 2045: 9,210; 2046: 9,332; 2047: 9,454; 2048: 9,576; 2049: 9,698; 2050: 9,820	4	Signalized	4	3	0	20	false	false	false	0	0	6

Table 23. Crash History Intersection (Section 4)

Inter. No.	Title	Type	Location (Sta. ft)	Major AADT	Minor AADT	Legs	Traffic Control	Approaches w/Left Turn Lanes	Approaches w/Right Turn Lanes	Approaches w/o Right Turn on Red	Pedestrian Volume (crossings/day)	Lighted at Night	Red Light Camera	School Nearby	Number of Bus Stops	Number of Alcohol Sales Establishments	Max Lanes Crossed
8	Marion Rd/ SD38 (v1)	Urban/Suburban Arterial Intersection Four-Legged Signalized	966+91.000	2018-2022: 5,400	2018-2022: 4,900	4	Signalized	4	3	0	20	false	false	false	0	0	6

Table 24. Expected Highway Crash Rates and Frequencies Summary (Section 4)

First Year of Analysis	2025
Last Year of Analysis	2050
Evaluated Length (mi)	0.4850
Average Future Road AADT (vpd)	8,272
Expected Crashes	
Total Crashes	135.85
Fatal and Injury Crashes	46.51
Property-Damage-Only Crashes	89.34
Percent of Total Expected Crashes	
Percent Fatal and Injury Crashes (%)	34
Percent Property-Damage-Only Crashes (%)	66
Expected Crash Rate	
Crash Rate (crashes/mi/yr)	10.7725
FI Crash Rate (crashes/mi/yr)	3.6878
PDO Crash Rate (crashes/mi/yr)	7.0847
Expected Travel Crash Rate	
Total Travel (million veh-mi)	38.08
Travel Crash Rate (crashes/million veh-mi)	3.57
Travel FI Crash Rate (crashes/million veh-mi)	1.22
Travel PDO Crash Rate (crashes/million veh-mi)	2.35

Table 25. Expected Crash Frequencies and Rates by Highway Segment/Intersection (Section 4)

Segment Number/Intersection Name/Cross Road	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/million veh-mi)	Expected Intersection Travel Crash Rate (crashes/million veh)
150	948+50.000	950+00.000	0.0284	1.343	1.459	0.0517	0.0179	0.0337	0.0561	0.0181	0.0380	-0.0044	-0.0001	-0.0043	1.8184	0.60	
151	950+00.000	954+00.000	0.0758	3.172	3.889	0.1220	0.0437	0.0783	0.1496	0.0481	0.1014	-0.0276	-0.0044	-0.0232	1.6103	0.53	
152	954+00.000	955+00.000	0.0189	4.560	6.162	0.1754	0.0651	0.1103	0.2370	0.0817	0.1553	-0.0616	-0.0167	-0.0449	9.2608	3.07	
153	955+00.000	955+55.000	0.0104	0.373	0.382	0.0143	0.0039	0.0104	0.0147	0.0039	0.0108	-0.0004	-0.0000	-0.0003	1.3757	0.46	
154	955+55.000	958+28.000	0.0517	1.685	1.897	0.0648	0.0182	0.0466	0.0730	0.0195	0.0535	-0.0082	-0.0013	-0.0069	1.2532	0.42	
155	958+28.000	961+01.000	0.0517	1.685	1.897	0.0648	0.0182	0.0466	0.0730	0.0195	0.0535	-0.0082	-0.0013	-0.0069	1.2532	0.42	
156	961+01.000	962+00.000	0.0187	0.651	0.681	0.0251	0.0069	0.0182	0.0262	0.0070	0.0192	-0.0011	-0.0001	-0.0010	1.3360	0.44	
157	962+00.000	963+69.000	0.0320	1.069	1.151	0.0411	0.0114	0.0297	0.0443	0.0118	0.0325	-0.0032	-0.0004	-0.0027	1.2842	0.42	
158	963+69.000	965+00.000	0.0248	0.850	0.901	0.0327	0.0090	0.0237	0.0347	0.0092	0.0254	-0.0020	-0.0002	-0.0017	1.3176	0.44	
159	965+00.000	966+38.000	0.0261	0.893	0.949	0.0343	0.0095	0.0249	0.0365	0.0097	0.0268	-0.0022	-0.0003	-0.0019	1.3136	0.43	
160	966+38.000	966+70.000	0.0061	0.217	0.220	0.0083	0.0023	0.0061	0.0085	0.0023	0.0062	-0.0001	0.0000	-0.0001	1.3765	0.46	
161	966+70.000	966+91.000	0.0040	0.143	0.144	0.0055	0.0015	0.0040	0.0056	0.0015	0.0041	-0.0001	0.0000	-0.0001	1.3834	0.46	
Marion Rd/ SD38 (v1)	966+91.000			114.572	49.969	4.4066	1.5303	2.8763	1.9219	0.6310	1.2909	2.4847	0.8993	1.5854			0.65
162	966+91.000	967+14.000	0.0044	0.203	0.205	0.0078	0.0027	0.0051	0.0079	0.0025	0.0054	-0.0001	0.0001	-0.0002	1.7894	0.59	
163	967+14.000	967+20.000	0.0011	0.053	0.053	0.0021	0.0007	0.0014	0.0021	0.0007	0.0014	-0.0000	0.0000	-0.0000	1.8054	0.60	
164	967+20.000	967+45.000	0.0047	0.240	0.243	0.0092	0.0031	0.0061	0.0093	0.0030	0.0063	-0.0001	0.0001	-0.0003	1.9466	0.65	
165	967+45.000	968+06.000	0.0116	0.412	0.424	0.0159	0.0043	0.0115	0.0163	0.0043	0.0120	-0.0005	-0.0000	-0.0004	1.3720	0.45	
166	968+06.000	970+79.000	0.0517	1.685	1.897	0.0648	0.0182	0.0466	0.0730	0.0195	0.0535	-0.0082	-0.0013	-0.0069	1.2532	0.42	
167	970+79.000	971+09.000	0.0057	0.206	0.208	0.0079	0.0021	0.0058	0.0080	0.0021	0.0059	-0.0001	0.0000	-0.0001	1.3915	0.46	
168	971+09.000	974+11.000	0.0572	1.842	2.098	0.0708	0.0199	0.0509	0.0807	0.0215	0.0592	-0.0099	-0.0016	-0.0083	1.2387	0.41	
All Segments			0.4850	21.280	24.862	0.8185	0.2585	0.5600	0.9562	0.2860	0.6702	-0.1378	-0.0275	-0.1102	1.6874	0.56	
All Intersections				114.572	49.969	4.4066	1.5303	2.8763	1.9219	0.6310	1.2909	2.4847	0.8993	1.5854			0.65
Total			0.4850	135.852	74.831	5.2251	1.7887	3.4363	2.8781	0.9170	1.9611	2.3470	0.8718	1.4752	10.7725		

Table 26. Expected Crash Frequencies and Rates by Horizontal Design Element (Section 4)

Title	Start Location (Sta. ft)	End Location (Sta. ft)	Length (mi)	Total Expected Crashes for Evaluation Period	Total Predicted Crashes for Evaluation Period	Expected Total Crash Frequency (crashes/yr)	Expected FI Crash Frequency (crashes/yr)	Expected PDO Crash Frequency (crashes/yr)	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	(Expected - Predicted) Total Crash Frequency (crashes/yr)	(Expected - Predicted) FI Crash Frequency (crashes/yr)	(Expected - Predicted) PDO Crash Frequency (crashes/yr)	Expected Crash Rate (crashes/mi/yr)	Expected Travel Crash Rate (crashes/mi llion veh-mi)
Tangent	948+50.000	974+11.000	0.4850	21.280	24.862	0.8185	0.2585	0.5600	0.9562	0.2860	0.6702	-0.1378	-0.0275	-0.1102	1.6874	0.56

Table 27. Predicted Crash Frequencies by Year (Section 4)

Year	Total Crashes	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)
2025	1.54	0.47	30.768	1.07	69.232
2026	1.62	0.50	30.791	1.12	69.209
2027	1.69	0.52	30.812	1.17	69.188
2028	1.77	0.55	30.830	1.22	69.170
2029	1.85	0.57	30.847	1.28	69.153
2030	1.93	0.60	30.902	1.33	69.098
2031	2.01	0.62	30.960	1.39	69.040
2032	2.10	0.65	31.018	1.45	68.982
2033	2.18	0.68	31.078	1.50	68.922
2034	2.27	0.71	31.139	1.56	68.862
2035	2.35	0.73	31.199	1.62	68.801
2036	2.44	0.76	31.260	1.68	68.740
2037	2.53	0.79	31.321	1.74	68.679
2038	2.61	0.82	31.381	1.79	68.618
2039	2.70	0.85	31.442	1.85	68.558
2040	2.79	0.88	31.502	1.91	68.498
2041	3.01	0.95	31.680	2.06	68.320
2042	3.24	1.03	31.854	2.21	68.146
2043	3.46	1.11	32.026	2.35	67.975
2044	3.69	1.19	32.192	2.50	67.808
2045	3.92	1.27	32.354	2.65	67.646
2046	4.15	1.35	32.511	2.80	67.489
2047	4.39	1.43	32.664	2.95	67.336
2048	4.62	1.52	32.811	3.11	67.189
2049	4.86	1.60	32.954	3.26	67.046
2050	5.10	1.69	33.093	3.41	66.907
Total	74.83	23.84	31.860	50.99	68.140
Average	2.88	0.92	31.860	1.96	68.140

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 28. Expected Crash Frequencies by Year (Section 4)

Year	Total Crashes	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)
2025	2.80	0.93	33.060	1.87	66.820
2026	2.94	0.97	33.085	1.96	66.798
2027	3.07	1.02	33.107	2.05	66.778
2028	3.21	1.06	33.127	2.15	66.760
2029	3.35	1.11	33.145	2.24	66.744
2030	3.50	1.16	33.205	2.34	66.691
2031	3.65	1.22	33.266	2.44	66.635
2032	3.81	1.27	33.329	2.54	66.579
2033	3.96	1.32	33.394	2.63	66.521
2034	4.12	1.38	33.458	2.74	66.463
2035	4.27	1.43	33.524	2.84	66.404
2036	4.43	1.49	33.589	2.94	66.346
2037	4.59	1.54	33.654	3.04	66.287
2038	4.75	1.60	33.719	3.14	66.228
2039	4.91	1.66	33.784	3.25	66.170
2040	5.07	1.72	33.849	3.35	66.112
2041	5.47	1.86	34.040	3.61	65.941
2042	5.88	2.01	34.228	3.86	65.772
2043	6.29	2.16	34.411	4.12	65.607
2044	6.70	2.32	34.590	4.38	65.446
2045	7.12	2.47	34.765	4.65	65.289
2046	7.54	2.63	34.934	4.91	65.138
2047	7.96	2.79	35.097	5.18	64.991
2048	8.39	2.96	35.256	5.44	64.848
2049	8.82	3.12	35.409	5.71	64.710
2050	9.26	3.29	35.558	5.98	64.577
Total	135.85	46.51	34.234	89.34	65.766
Average	5.22	1.79	34.234	3.44	65.766

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 29. Comparing Predicted and Expected Crashes for the Evaluation Period (Section 4)

Scope	Total Crashes	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)
Predicted	74.83	23.84	31.860	50.99	68.140
Expected	135.85	46.51	34.234	89.34	65.766
Expected - Predicted	61.02	22.67		38.35	
Percent Difference	44.92	48.74		42.93	

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 30. Expected Five Lane or Fewer Crash Type Distribution (Section 4)

Element Type	Crash Type	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)	Total Crashes	Percent Total (%)
Highway Segment	Collision with Animal	0.00	0.0	0.21	0.2	0.21	0.2
Highway Segment	Collision with Bicycle	0.09	0.1	0.00	0.0	0.09	0.1
Highway Segment	Collision with Fixed Object	0.57	0.4	3.57	2.6	4.14	3.0
Highway Segment	Collision with Other Object	0.03	0.0	0.09	0.1	0.11	0.1
Highway Segment	Other Single-vehicle Collision	0.43	0.3	0.53	0.4	0.97	0.7
Highway Segment	Collision with Pedestrian	0.34	0.3	0.00	0.0	0.34	0.3
Highway Segment	Total Single Vehicle Crashes	1.47	1.1	4.39	3.2	5.86	4.3
Highway Segment	Angle Collision	0.37	0.3	0.54	0.4	0.91	0.7
Highway Segment	Driveway-related Collision	1.32	1.0	2.27	1.7	3.58	2.6
Highway Segment	Head-on Collision	0.17	0.1	0.05	0.0	0.21	0.2
Highway Segment	Other Multi-vehicle Collision	0.20	0.1	0.58	0.4	0.79	0.6
Highway Segment	Rear-end Collision	2.79	2.1	4.80	3.5	7.59	5.6
Highway Segment	Sideswipe, Opposite Direction Collision	0.15	0.1	0.09	0.1	0.24	0.2
Highway Segment	Sideswipe, Same Direction Collision	0.26	0.2	1.83	1.3	2.09	1.5
Highway Segment	Total Multiple Vehicle Crashes	5.25	3.9	10.16	7.5	15.42	11.3
Highway Segment	Total Highway Segment Crashes	6.72	4.9	14.56	10.7	21.28	15.7
Intersection	Collision with Animal	0.00	0.0	0.00	0.0	0.01	0.0
Intersection	Collision with Bicycle	0.73	0.5	0.00	0.0	0.73	0.5
Intersection	Collision with Fixed Object	0.90	0.7	1.71	1.3	2.61	1.9
Intersection	Non-Collision	0.17	0.1	0.07	0.0	0.24	0.2
Intersection	Collision with Other Object	0.09	0.1	0.14	0.1	0.23	0.2
Intersection	Other Single-vehicle Collision	0.05	0.0	0.04	0.0	0.09	0.1
Intersection	Collision with Parked Vehicle	0.00	0.0	0.00	0.0	0.00	0.0
Intersection	Collision with Pedestrian	0.44	0.3	0.00	0.0	0.44	0.3
Intersection	Total Intersection Single Vehicle Crashes	2.38	1.7	1.97	1.4	4.34	3.2
Intersection	Angle Collision	12.98	9.6	17.77	13.1	30.75	22.6
Intersection	Head-on Collision	1.83	1.3	2.18	1.6	4.02	3.0
Intersection	Other Multi-vehicle Collision	2.06	1.5	15.36	11.3	17.42	12.8
Intersection	Rear-end Collision	16.84	12.4	35.17	25.9	52.01	38.3
Intersection	Sideswipe	3.70	2.7	2.33	1.7	6.03	4.4
Intersection	Total Intersection Multiple Vehicle Crashes	37.41	27.5	72.82	53.6	110.23	81.1
Intersection	Total Intersection Crashes	39.79	29.3	74.78	55.0	114.57	84.3
	Total Crashes	46.51	34.2	89.34	65.8	135.85	100.0

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.



Appendix C – Study Intersections

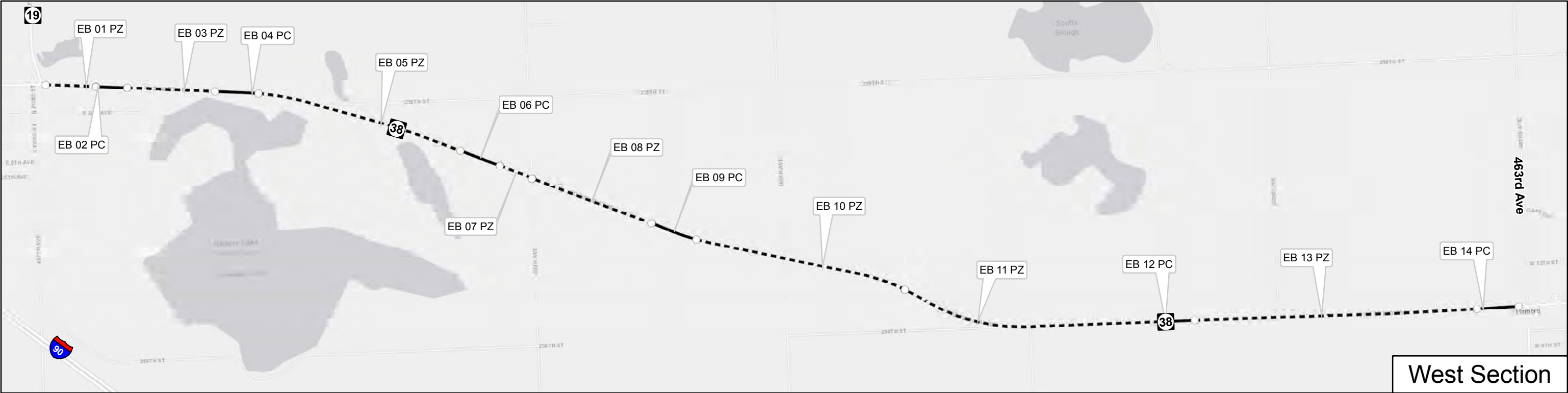




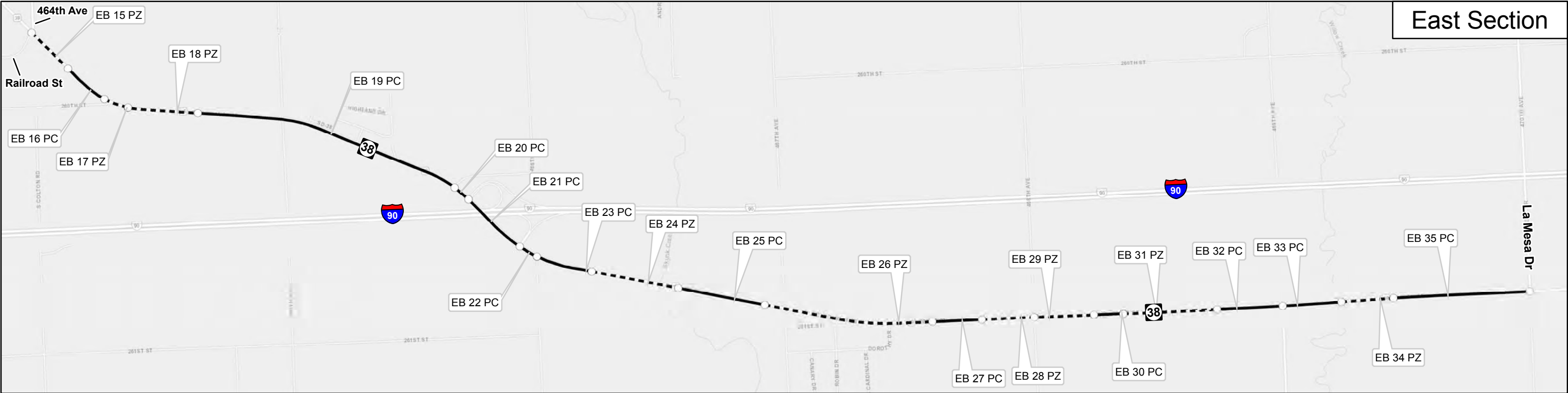
Appendix D – Study Segments

SD Highway 38

Build Concept Traffic and Operations Analysis



West Section



East Section

Highway 38 Analysis Segments

Eastbound Lanes

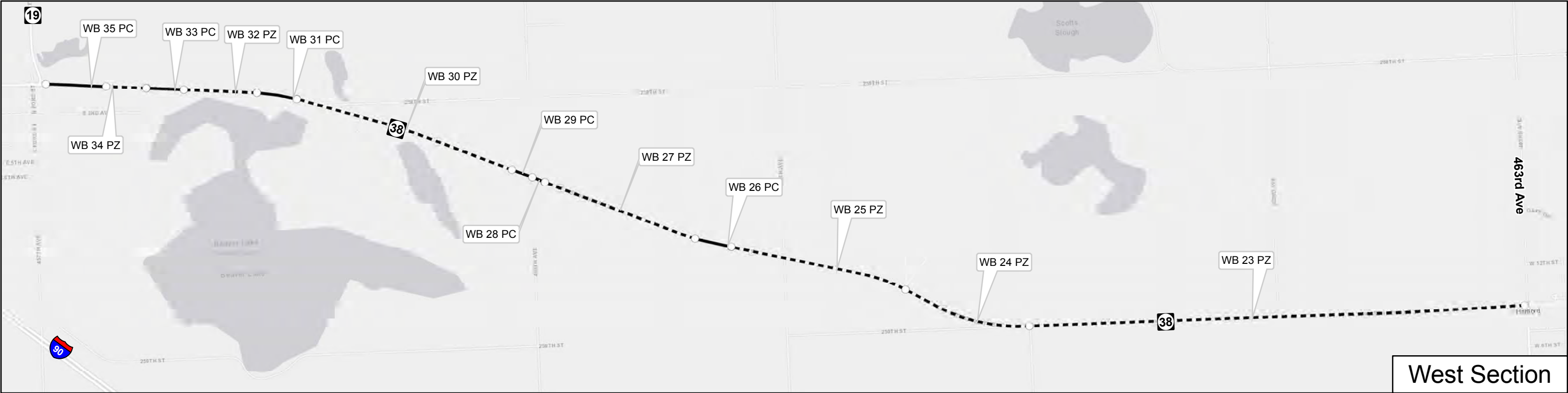
Legend

- Analysis Segments**
- Passing Constrained
 - - - - - Passing Zones

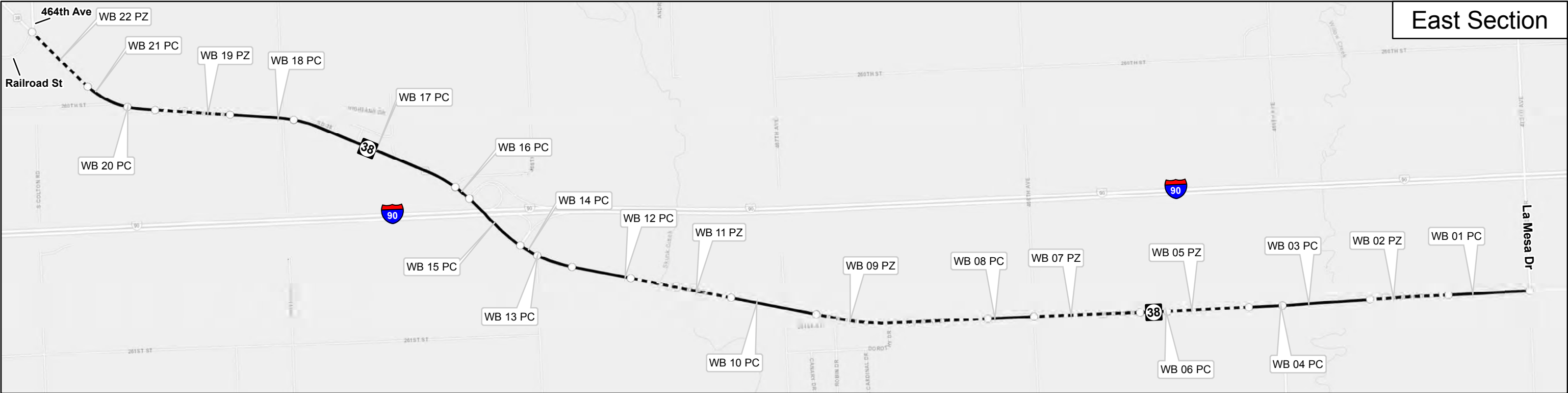


0 0.5 1 Miles





West Section



East Section

Highway 38 Analysis Segments

Westbound Lanes

Legend

- Analysis Segments**
- Passing Constrained
 - - - - - Passing Zones



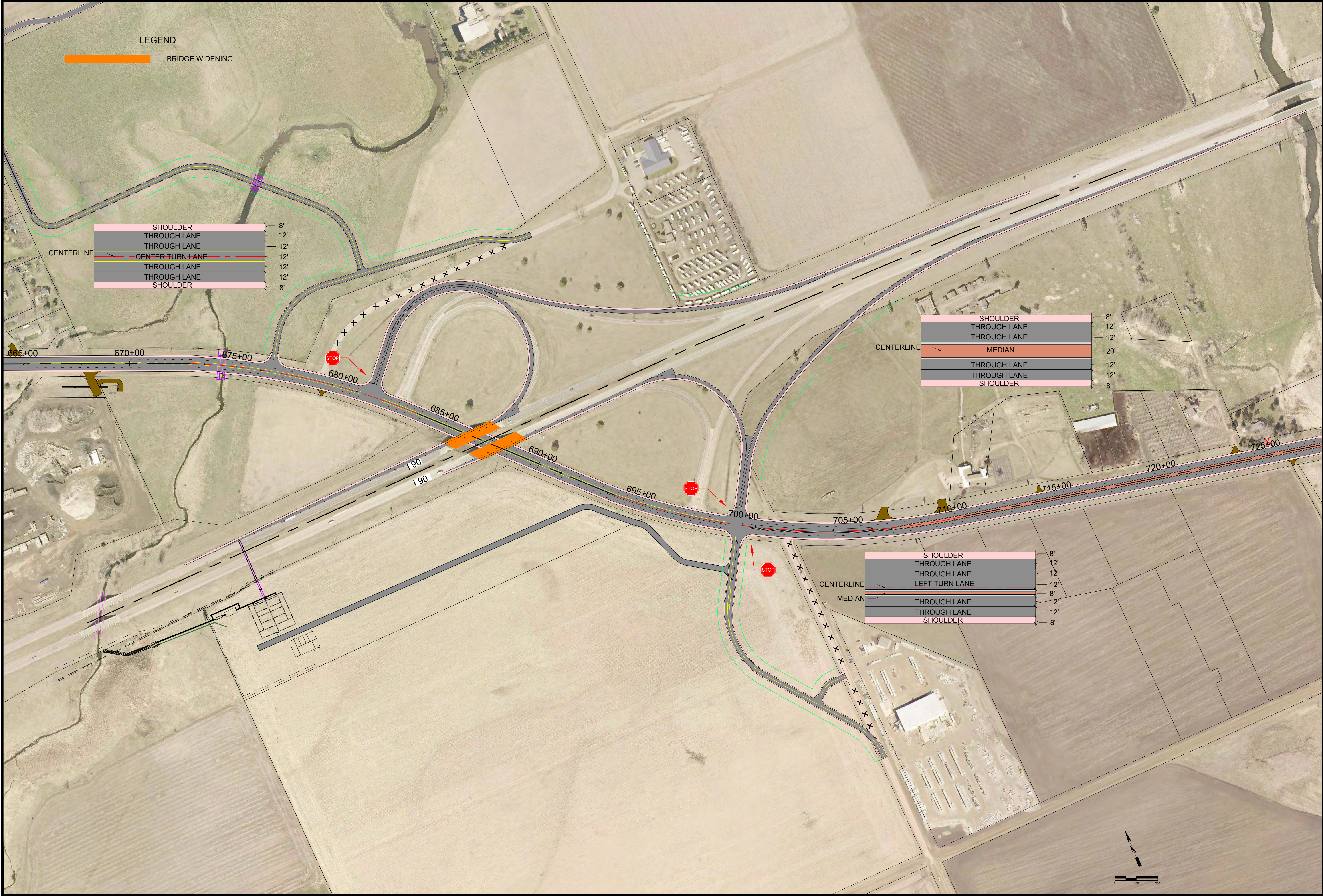
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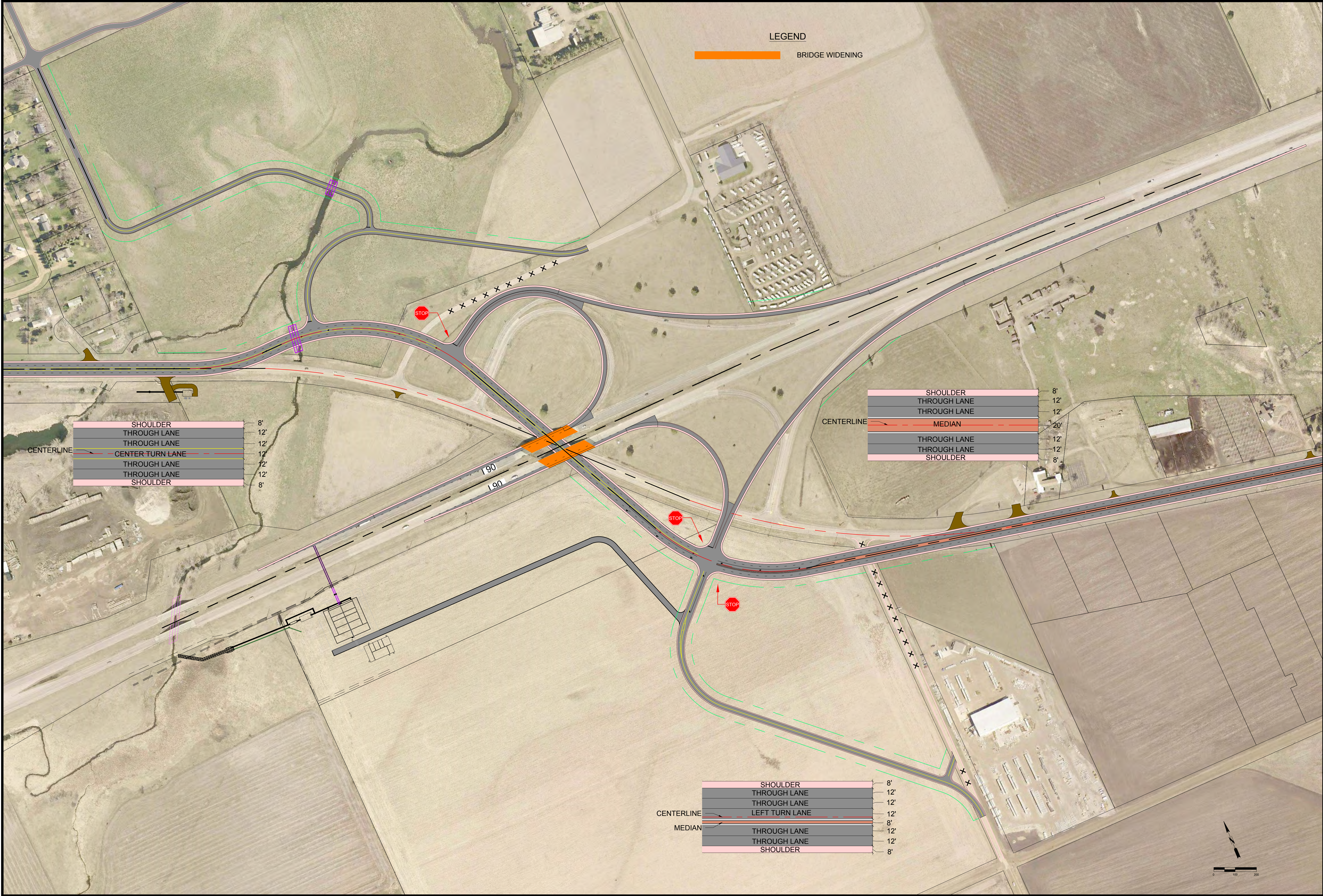


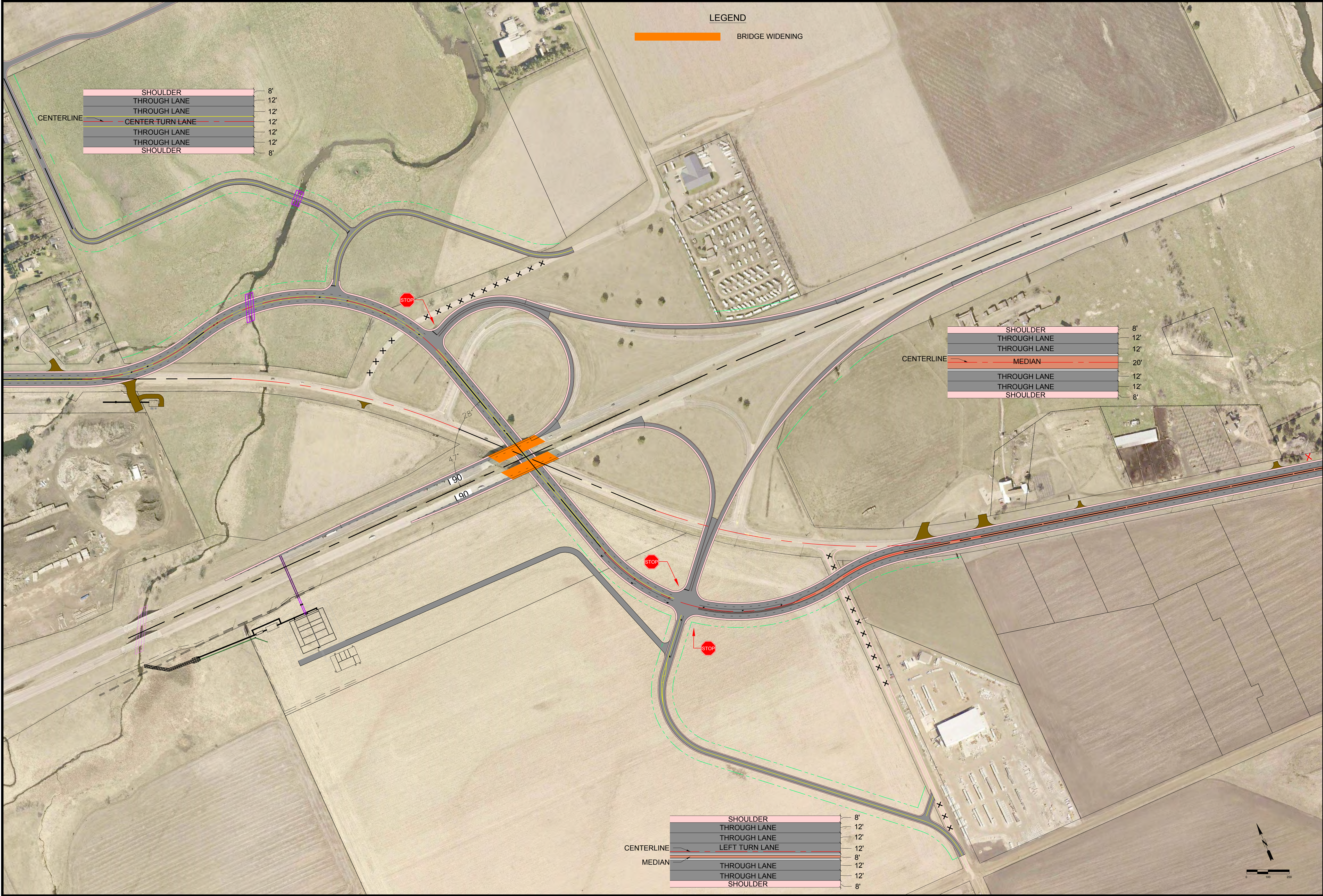
APPENDIX E: I-90 EXIT 390 INTERCHANGE BUILD ALTERNATIVES

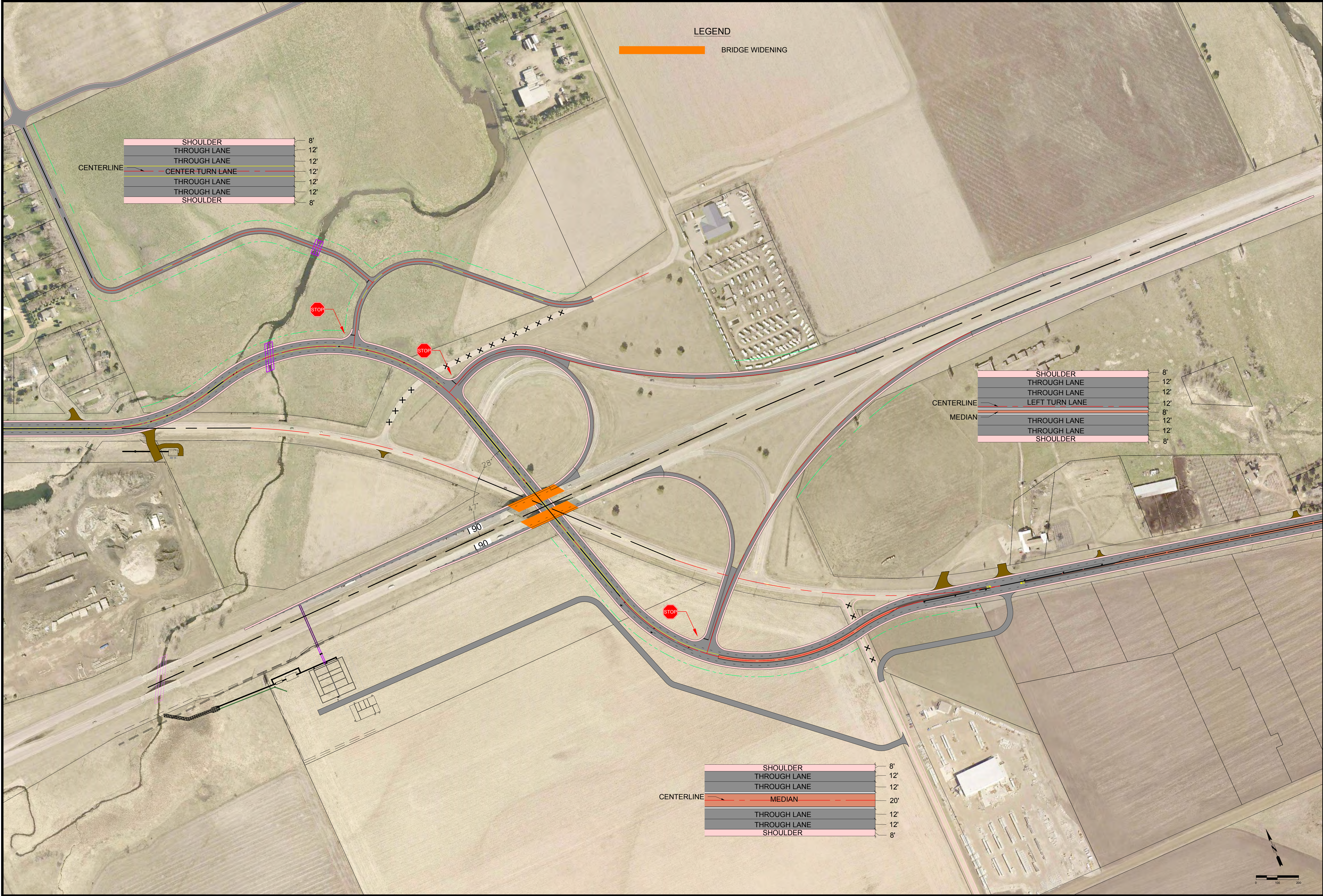
SD38 Corridor Study











SHOULDER	8'
THROUGH LANE	12'
THROUGH LANE	12'
CENTER TURN LANE	12'
THROUGH LANE	12'
THROUGH LANE	12'
SHOULDER	8'

LEGEND

BRIDGE WIDENING

SHOULDER	8'
THROUGH LANE	12'
THROUGH LANE	12'
LEFT TURN LANE	12'
CENTERLINE	8'
MEDIAN	12'
THROUGH LANE	12'
THROUGH LANE	12'
SHOULDER	8'

SHOULDER	8'
THROUGH LANE	12'
THROUGH LANE	12'
MEDIAN	20'
THROUGH LANE	12'
THROUGH LANE	12'
SHOULDER	8'

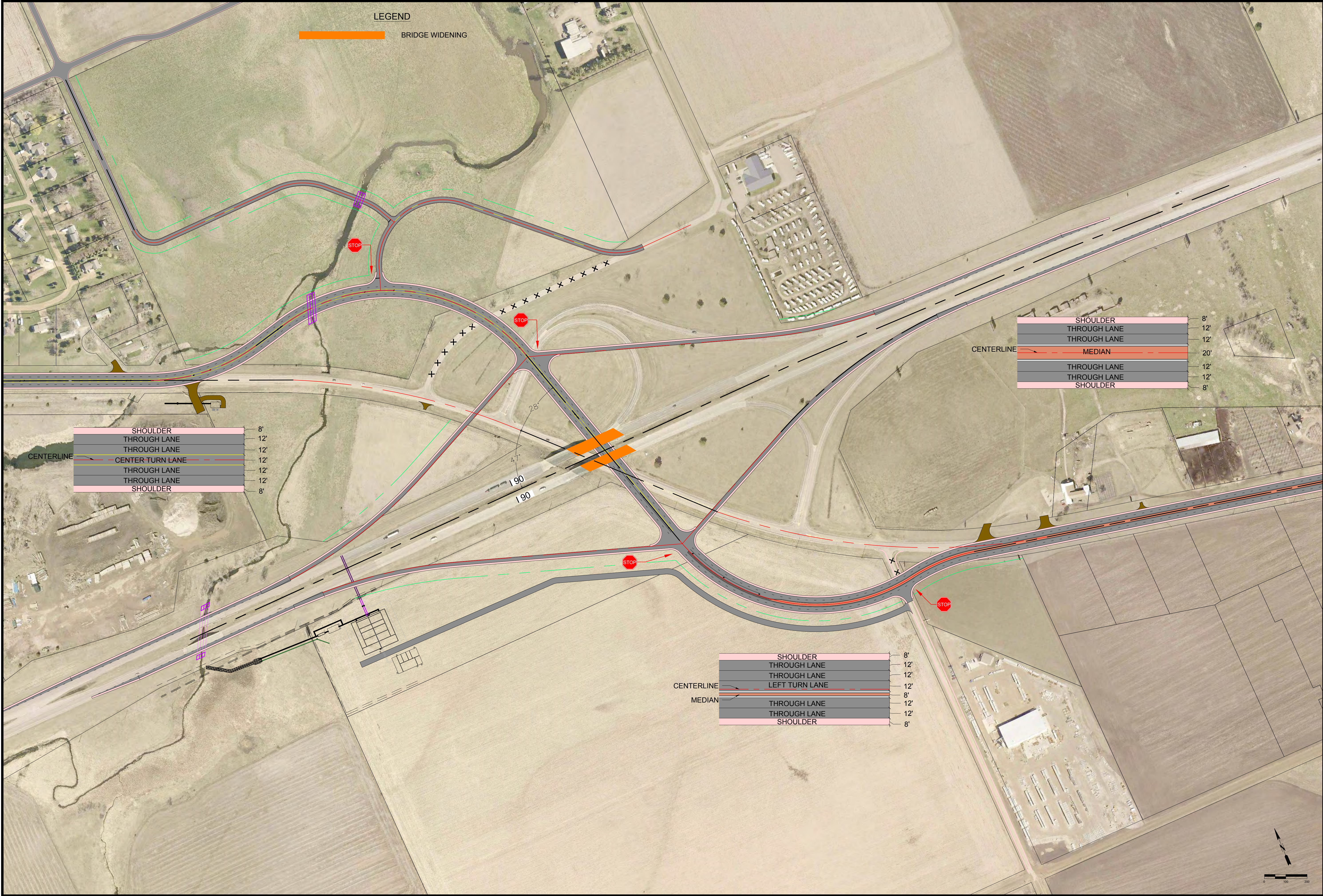


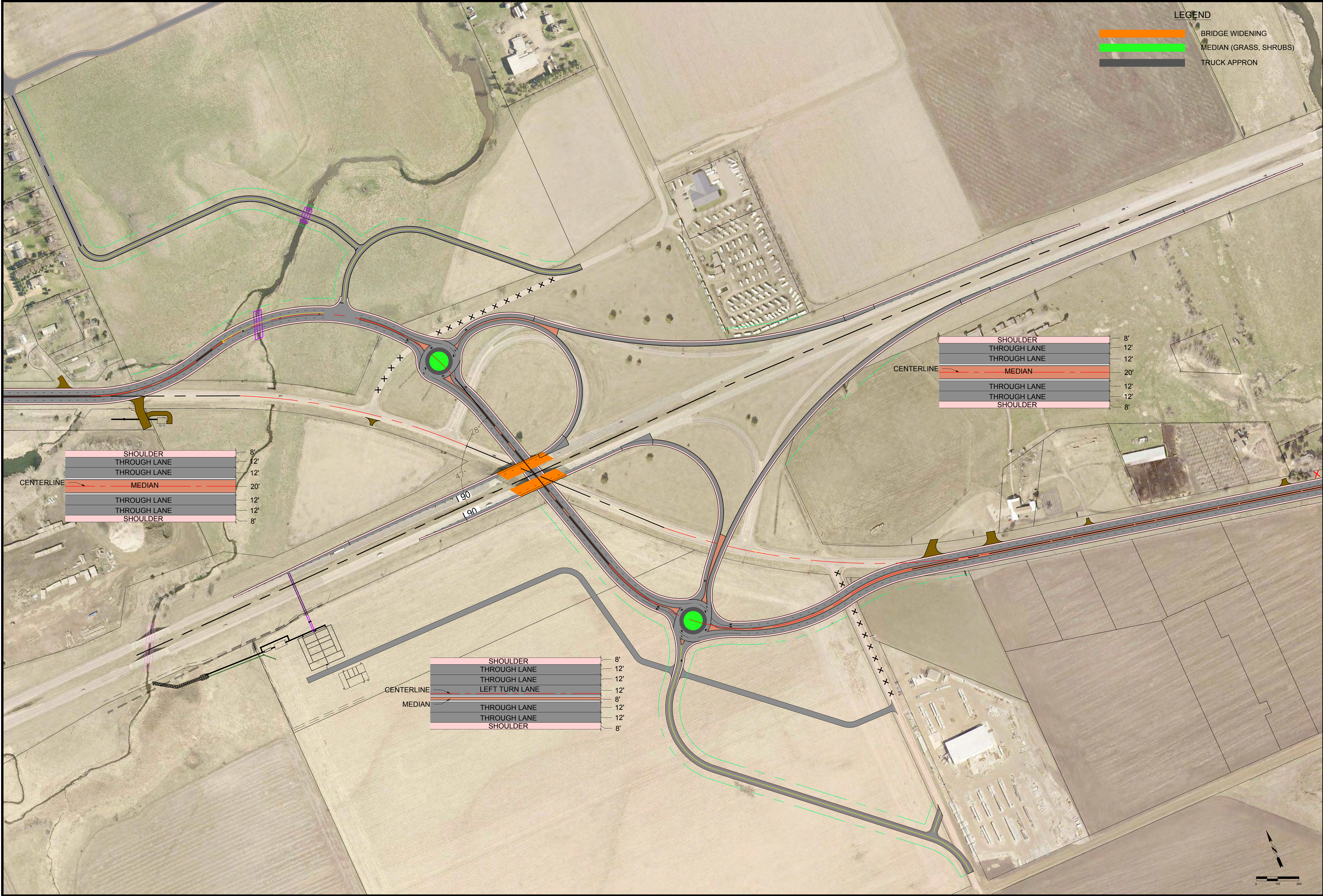
LEGEND
BRIDGE WIDENING

SHOULDER
THROUGH LANE
THROUGH LANE
CENTER TURN LANE
THROUGH LANE
THROUGH LANE
SHOULDER

SHOULDER
THROUGH LANE
THROUGH LANE
LEFT TURN LANE
THROUGH LANE
THROUGH LANE
SHOULDER







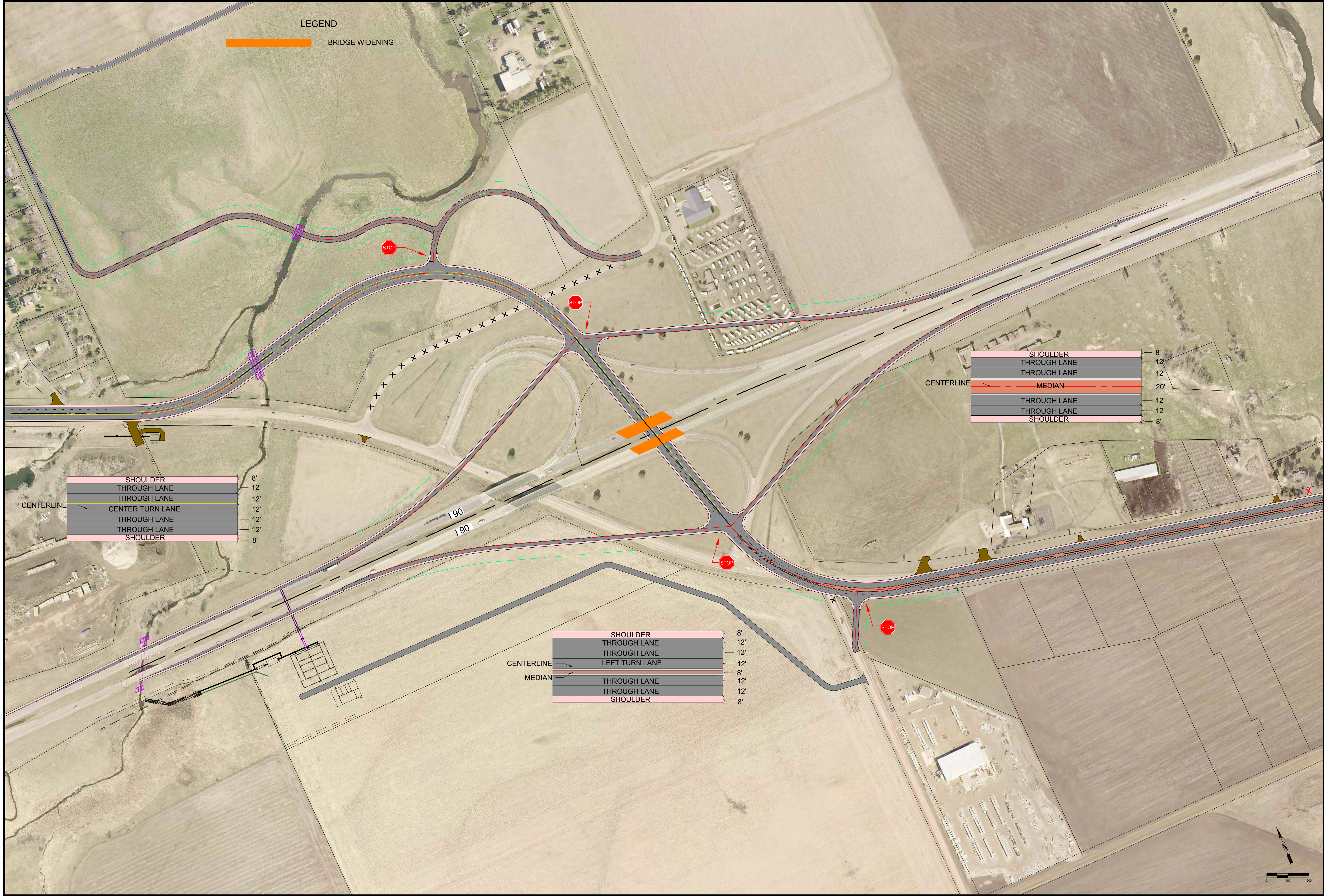
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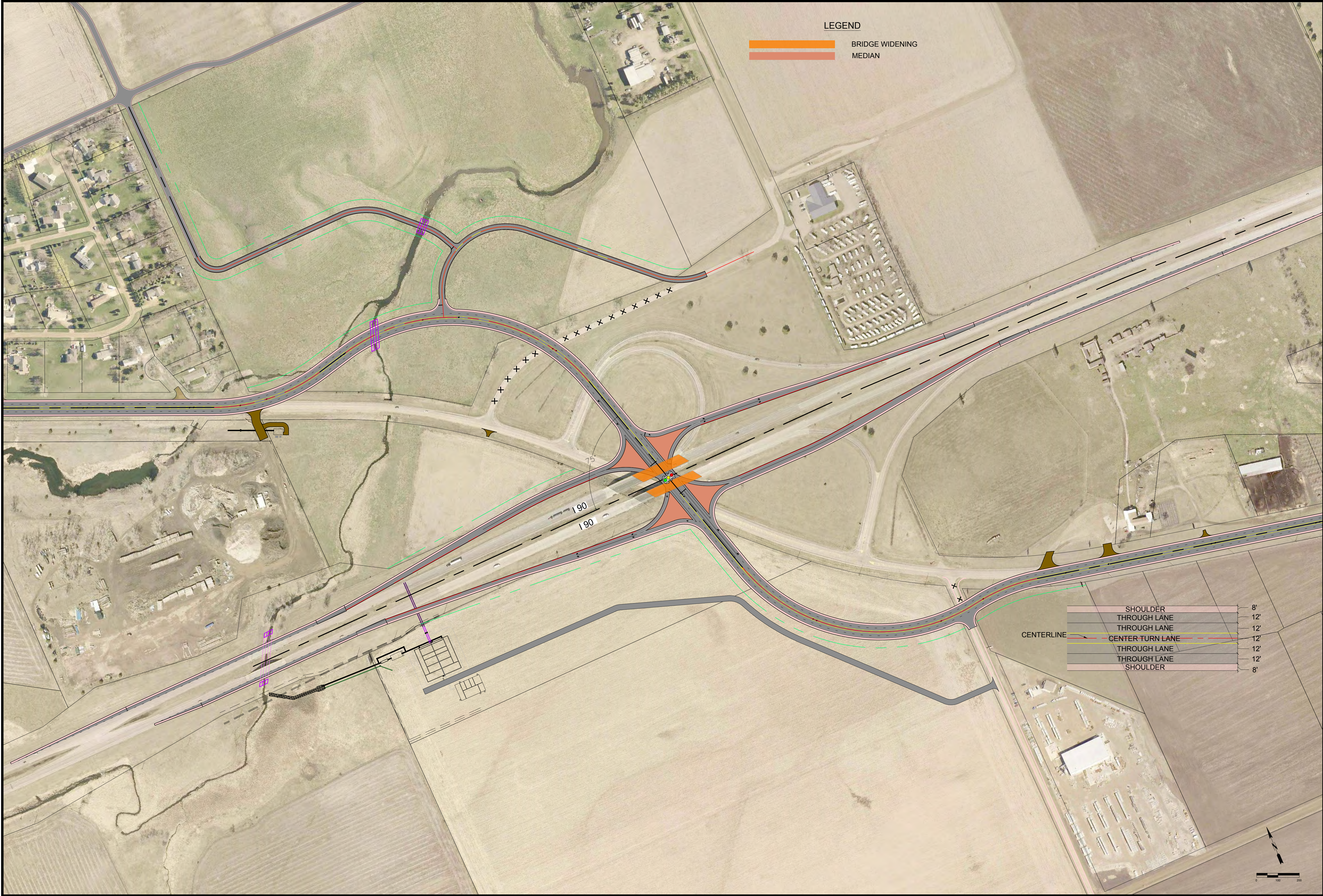
- BRIDGE WIDENING
- MEDIAN (GRASS, SHRUBS)
- TRUCK APRON

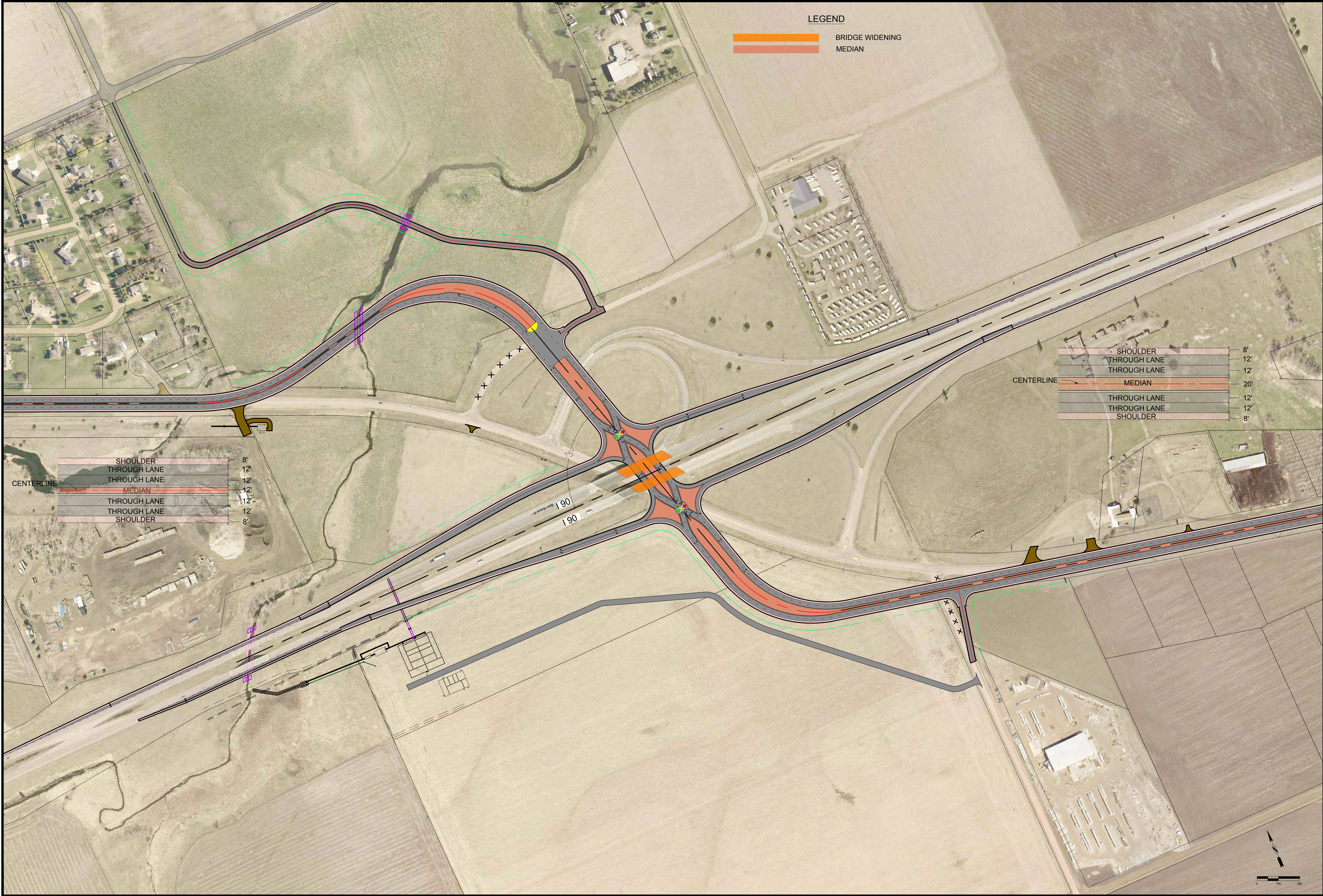
SHOULDER	8'
THROUGH LANE	12'
THROUGH LANE	12'
MEDIAN	20'
THROUGH LANE	12'
THROUGH LANE	12'
SHOULDER	8'

SHOULDER	8'
THROUGH LANE	12'
THROUGH LANE	12'
MEDIAN	20'
THROUGH LANE	12'
THROUGH LANE	12'
SHOULDER	8'

SHOULDER	8'
THROUGH LANE	12'
THROUGH LANE	12'
LEFT TURN LANE	12'
MEDIAN	8'
THROUGH LANE	12'
THROUGH LANE	12'
SHOULDER	8'







LEGEND

- BRIDGE WIDENING
- MEDIAN

CENTERLINE	8'
SHOULDER	12'
THROUGH LANE	12'
THROUGH LANE	12'
MEDIAN	12'
THROUGH LANE	12'
THROUGH LANE	12'
SHOULDER	8'

SHOULDER	8'
THROUGH LANE	12'
THROUGH LANE	12'
MEDIAN	20'
THROUGH LANE	12'
THROUGH LANE	12'
SHOULDER	8'

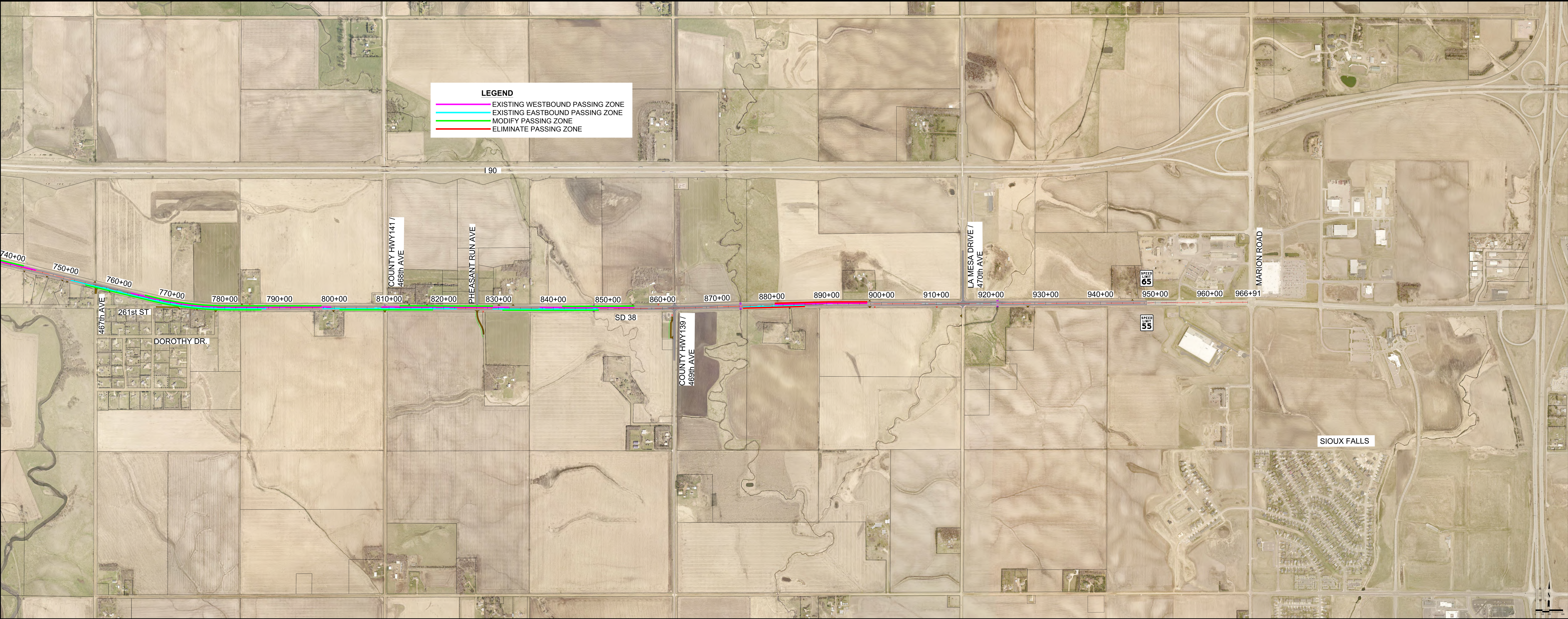
APPENDIX F: SHORT-TERM IMPROVEMENTS

SD38 Corridor Study

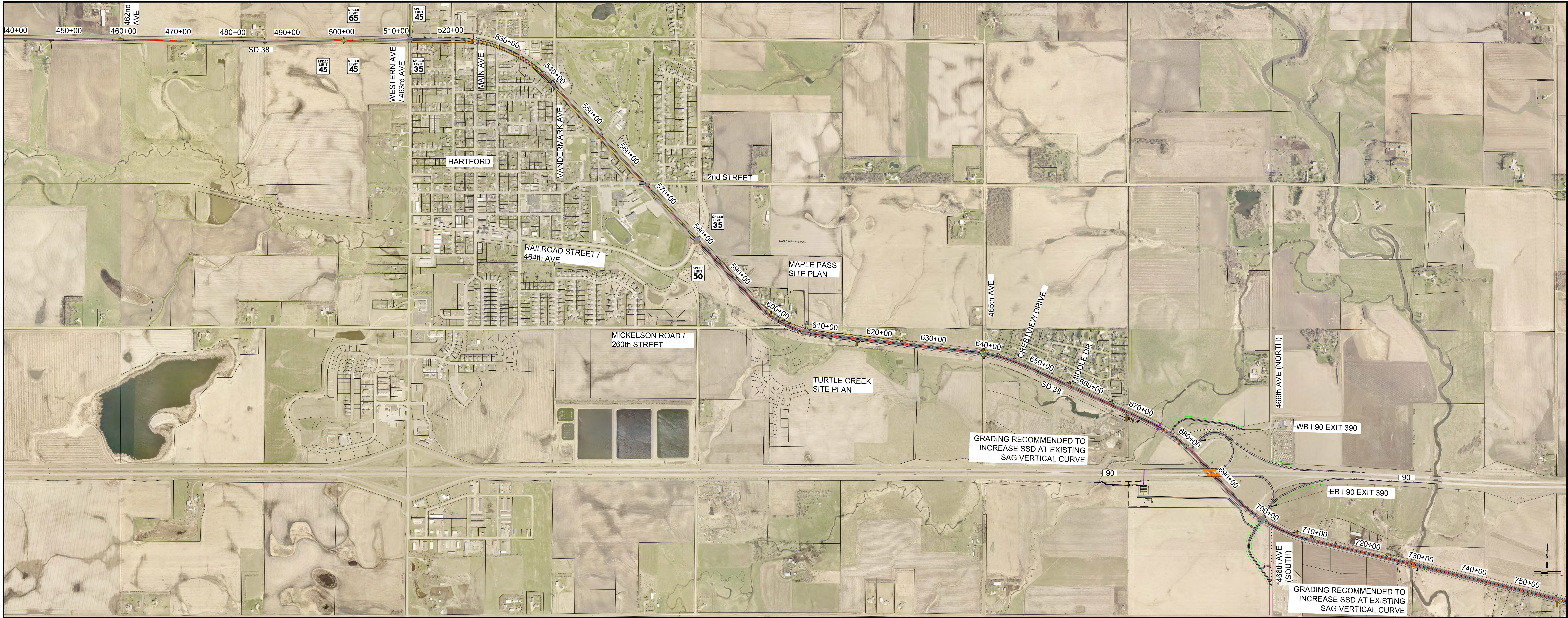






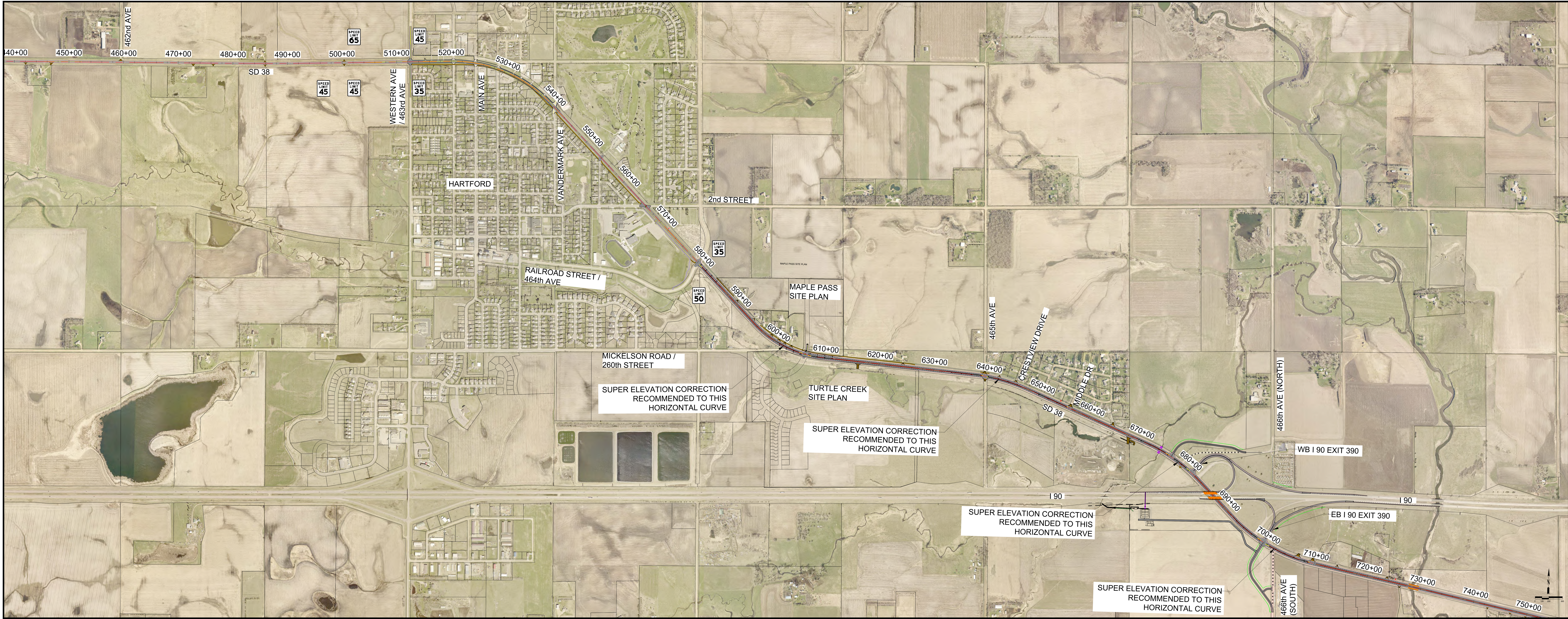














APPENDIX G: COST ESTIMATES FOR PROJECT SEGMENTS

SD38 Corridor Study



