

To: Steve Gramm, SDDOT

From: Chase Cutler, PE, PTOE / Ben White, PE

Subject: SD Highway 38 - Future No-Build Traffic Operations and Safety Analysis (Draft)

Date: January 16, 2024

Introduction

The South Dakota Department of Transportation (SDDOT), City of Hartford, Town of Humboldt, City of Sioux Falls, Sioux Falls Metropolitan Planning Organization (MPO), Minnehaha County, and Federal Highway Administration (FHWA) initiated an assessment of approximately 14.2 miles of the SD Highway 38 (SD 38) corridor from the SD Highway 19 intersection in Humboldt, South Dakota to the Marion Road intersection in Sioux Falls, South Dakota. The study segment of SD 38 is predominantly a rural two-lane highway and located in a rapidly developing area and serves as a viable alternate route to Interstate-90. Development pressure is expected to impact the SD 38 corridor with higher traffic volumes, greater demand for multi-modal (bike and pedestrian) uses, and additional access management concerns.

Segments of the SD 38 corridor are expected to need major rehabilitation or reconstruction within the next 10 to 15 years. Primary concerns of this study are to ensure the roadway is reconstructed to meet future traffic volume demands.

The purpose of this technical memorandum is to document the future no-build traffic assessment in support of the study being completed along SD 38. This technical report will provide a future year conditions assessment of the two-lane highway and at 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 / 463rd 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 / 464th Avenue
SD Highway 38	Mickelson Road/260th Street
SD Highway 38	466th Avenue (North)
SD Highway 38	WB I-90 Exit 390
SD Highway 38	EB I-90 Exit 390
SD Highway 38	466th Avenue (South)
SD Highway 38	County Highway 141 / 468th Avenue
SD Highway 38	County Highway 139 / 469th Avenue
SD Highway 38	La Mesa Drive / 470 th Avenue
SD Highway 38	Marion Road

Existing Traffic Data

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. Event traffic data for the I-90 Speedway intersection was developed from 14-hour count data collected on May 27th, 2023 at the intersection of SD 38 & the I-90 Speedway Entrance. The count data included turning movements by approach in 15-minute intervals with composition of passenger vehicles and trucks. Review of the traffic volume data revealed the peak hour periods occurred between 7:15-8:15 AM and 4:45-5:45 PM. The daily traffic data was provided by SDDOT.

Traffic Forecast Methodology

In order to evaluate the existing infrastructure under future traffic conditions, the 2050 ADT volumes were collected from the Sioux Falls Metropolitan Planning Organization (SFMPO) Travel Demand Model (TDM). These forecasted volumes account for localized traffic growth, changes in traffic patterns, and any planned roadway improvements. To determine the traffic growth within the study area and estimate 2050 peak hour volumes, the 2018 base year ADT was referenced from the TDM. Additionally, the future year ADT was acquired from available SDDOT GIS data to account for portions of SD 38 that were outside the TDM boundaries. 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 peak hour volumes will be used for the traffic analysis to assess the level of operations for intersections within the study area.

Additional traffic characteristics such as the heavy vehicle percentages were established during the existing year traffic forecast development. The values established under existing year traffic are anticipated to remain relatively consistent through the future year traffic condition and were used during the 2050 design year analysis.

To develop the interim year traffic conditions, straight-line growth rates between the existing year ADT volumes and the estimated 2050 ADT volumes were calculated and the interim year traffic volumes were interpolated. Interim year 2029 and 2040 traffic forecasts were developed.

The estimated interim year 2029 and 2040 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. The peak hour volumes were used for the traffic analysis to assess the level of operations for intersections and highway segments within the study area.

Traffic Operations Methodology

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)

	Unsignalized	Traffic Signal
Level Of Service	Control Delay (sec/veh)	Control Delay (sec/veh)
А	≤ 10	≤ 10
В	> 10 and ≤ 15	> 10 and ≤ 20
С	> 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.

Table 3 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)

	Speed ≥ 50 mph	Speed < 50 mph			
Level Of Service	Follower Density (followers/mi/ln)	Follower Density (followers/mi/ln)			
А	≤ 2.0	≤ 2.5			
В	> 2.0 - 4.0	> 2.5 – 5.0			
С	> 4.0 - 8.0	> 5.0 - 10.0			
D	> 8.0 – 12.0	> 10.0 – 15.0			
Е	> 12.0	> 15.0			
F	Demand exceeds capacity				

Source: Highway Capacity Manual, 7th Edition.

Following SDDOT guidance, LOS C is the desired traffic operational goal for highways in rural environments (functional classification of collector) and LOS D is considered the minimal acceptable operations for highways in urban environments (functional classification of minor arterial). 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

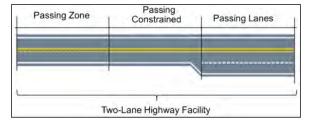
two-lane highway segments within the study area have a desired traffic operational goal of LOS C.

The highway was segmented according to the two-lane highway methodology presented in chapter 15 of HCM7, with segment breaks reflecting the passing zones. The segmentation for analysis can be seen in the Appendix.

The following analysis years/scenarios were evaluated for traffic operational analysis:

- Opening year 2029 No-Build.
- Interim year 2040 No-Build.
- Design year 2050 No-Build.

Operational analysis was completed for the AM and PM peak hour periods of each scenario.



Future Traffic Operations

Traffic operations analysis for the study area intersections included capacity evaluation using the Highway Capacity Manual (HCM) 7th Edition techniques thru 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 techniques through use of the Highway Capacity Software (HCS) 2022. The two-lane highway traffic operations analysis used existing highway geometry with planned improvements, future year traffic volumes and posted travel speeds. Planned improvements to the SD 38 corridor include the construction of eastbound and westbound left turn lanes at the SD 38 & 459th Avenue intersection as well as roadway widening of the SD 38 corridor between Railroad Street/ 464th Avenue to 465th Street to a three-lane cross section with center two-way left turn lane.

Output reports from the HCS2022 software are available in the Appendix.

Opening Year 2029

Opening Year 2029 traffic operations analysis used existing intersection geometry with planned improvements, future year traffic volumes and posted travel speeds. The results of the Opening Year 2029 intersection capacity analysis can be seen in **Figure 1** and **Table 4** below.

TABLE 4: HCM TRAFFIC INTERSECTION OPERATIONS - OPENING 2029

ID#	SD Hwy 38	Intersection	AM PEAK HOUR		PM PEAK HOUR	
10 #	Cross Street(s)	Control	Delay	LOS	Delay	LOS
1	SD Highway 19 / 457 th Avenue	TWSC	10.4	В	10.5	В
2	459 th Avenue	TWSC	10.4	В	11.8	В
3	I-90 Speedway Entrance	TWSC	0.0	Α	0.0	Α
4	Western Avenue / 463rd Avenue	TWSC	13.5	В	16.5	С
5	Main Avenue	TWSC	12.0	В	15.2	С
6	Vandemark Avenue	TWSC	12.6	В	12.7	В
7	2 nd Street	TWSC	16.6	С	18.5	С
8	West Central High School Entrance	TWSC	12.1	В	12.0	В
9	Railroad Street / 464th Avenue	TWSC	18.2	С	19.8	С
10	Mickelson Road / 260th Street	TWSC	24.8	С	54.5	F
11	466 th Avenue (North)	TWSC	19.5	С	20.3	С
12	WB I-90 Exit 390	TWSC	11.5	В	17.7	С
13	EB I-90 Exit 390	TWSC	12.3	В	15.4	С
14	466th Avenue (South)	TWSC	11.9	В	12.3	В
15	County Highway 141 / 468th Avenue	TWSC	13.5	В	14.5	В
16	County Highway 139 / 469th Avenue	TWSC	14.2	В	18.5	С
17	La Mesa Drive / 470 th Avenue	TWSC	17.0	С	21.7	С
18	Marion Road	Signal	16.2	В	20.6	С

Notes: Bold/Highlighted indicates a poor LOS

Under the Opening Year 2029 conditions, the traffic operations analysis showed acceptable operations at the majority of intersections within the study area, with intersections achieving LOS C or greater during both the AM and PM peak hours. The SD 38 & Mickelson Road/260th Street intersection which produced a LOS F during the PM peak hour which can be attributed to the additional development traffic demand at this intersection.

The results of the two-lane highway capacity analysis can be seen in Table 5 and Table 6.

TABLE 5: HCM TRAFFIC HIGHWAY OPERATIONS – OPENING 2029, EASTBOUND SD 38

ID#	Commont Type	AM PE	AK HOUR	PM PE	AK HOUR
יוט #	Segment Type	Density	LOS	Density	LOS
	SD Hiç	hway 38 l	Eastbound		
EB 1	Passing Zone	0.6	А	0.2	Α
EB 2	Passing Constrained	0.7	А	0.3	Α
EB 3	Passing Zone	0.5	Α	0.2	Α
EB 4	Passing Constrained	0.7	А	0.3	Α
EB 5	Passing Zone	0.5	Α	0.2	Α
EB 6	Passing Constrained	0.7	А	0.3	Α
EB 7	Passing Zone	0.6	Α	0.2	Α
EB 8	Passing Zone	0.5	Α	0.2	Α
EB 9	Passing Constrained	0.7	Α	0.3	Α
EB 10	Passing Zone	0.5	Α	0.2	Α
EB 11	Passing Zone	0.6	Α	0.3	Α
EB 12	Passing Constrained	0.7	Α	0.4	Α
EB 13	Passing Zone	0.6	А	0.3	Α
EB 14	Passing Constrained	1.3	А	0.7	А
EB 15	Passing Zone	3.7	В	1.8	Α
EB 16	Passing Constrained	4.1	С	1.9	Α
EB 17	Passing Zone	3.7	В	1.8	А
EB 18	Passing Zone	3.6	В	1.3	А
EB 19	Passing Constrained	3.6	В	1.3	Α
EB 20	Passing Constrained	3.8	В	1.4	Α
EB 21	Passing Constrained	4.0	С	1.7	Α
EB 22	Passing Constrained	1.2	А	1.0	Α
EB 23	Passing Constrained	1.3	А	1.0	Α
EB 24	Passing Zone	1.1	А	0.9	А
EB 25	Passing Constrained	1.2	А	1.0	Α
EB 26	Passing Zone	1.1	А	0.8	А
EB 27	Passing Constrained	1.3	А	1.0	А
EB 28	Passing Zone	1.1	А	0.9	А
EB 29	Passing Zone	1.5	А	1.2	А
EB 30	Passing Constrained	1.6	А	1.3	А
EB 31	Passing Zone	1.4	А	1.2	А
EB 32	Passing Constrained	1.6	А	1.3	А
EB 33	Passing Constrained	4.2	С	1.3	A
EB 34	Passing Zone	3.9	В	1.3	A
EB 35	Passing Constrained	4.0	С	1.2	A

TABLE 6: HCM TRAFFIC HIGHWAY OPERATIONS - OPENING 2029, WESTBOUND SD 38

ID#	Commont Type	AM PE	AK HOUR	РМ РЕ	AK HOUR
# עו	Segment Type	Density	LOS	Density	LOS
	SD High	way 38 W	/estbound		
WB 1	Passing Constrained	0.7	Α	4.4	С
WB 2	Passing Zone	0.7	Α	4.2	С
WB 3	Passing Constrained	0.8	Α	2.1	В
WB 4	Passing Zone	0.8	Α	2.1	В
WB 5	Passing Constrained	0.7	Α	2.0	Α
WB 6	Passing Zone	0.8	А	2.1	В
WB 7	Passing Constrained	0.6	Α	1.5	Α
WB 8	Passing Constrained	0.7	Α	1.7	Α
WB 9	Passing Zone	0.6	Α	1.4	Α
WB 10	Passing Constrained	0.7	Α	1.6	Α
WB 11	Passing Zone	0.6	Α	1.5	Α
WB 12	Passing Constrained	0.7	Α	1.7	А
WB 13	Passing Constrained	0.7	Α	1.7	А
WB 14	Passing Constrained	0.9	Α	2.1	В
WB 15	Passing Constrained	0.8	Α	1.7	А
WB 16	Passing Constrained	1.5	Α	5.1	С
WB 17	Passing Constrained	1.3	Α	4.9	С
WB 18	Passing Constrained	1.4	Α	5.1	С
WB 19	Passing Zone	1.3	Α	4.8	С
WB 20	Passing Constrained	1.4	Α	5.1	С
WB 21	Passing Constrained	1.9	Α	5.1	С
WB 22	Passing Zone	1.7	Α	4.1	С
WB 23	Passing Zone	0.3	Α	0.7	Α
WB 24	Passing Zone	0.3	Α	0.7	А
WB 25	Passing Zone	0.3	Α	0.6	А
WB 26	Passing Constrained	0.3	Α	0.8	А
WB 27	Passing Zone	0.3	Α	0.6	Α
WB 28	Passing Constrained	0.3	А	0.8	А
WB 29	Passing Constrained	0.3	А	0.8	А
WB 30	Passing Zone	0.3	А	0.6	А
WB 31	Passing Constrained	0.3	А	0.8	А
WB 32	Passing Zone	0.3	А	0.7	А
WB 33	Passing Constrained	0.3	А	0.8	А
WB 34	Passing Zone	0.3	А	0.7	А
WB 35	Passing Constrained	0.5	А	1.0	А

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

In general, the Opening Year 2029 condition traffic operations demonstrated acceptable performance measures throughout the majority of 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 with the exception of the Mickelson Road/260th Street intersection.

Interim Year 2040

Interim Year 2040 traffic operations analysis used future year traffic volumes and posted travel speeds. The SD 38 & Mickelson Road/260th Street intersection was analyzed under traffic signal control. The results of the Interim Year 2040 intersection capacity analysis can be seen in **Figure 2** and **Table 7** below.

TABLE 7: HCM TRAFFIC INTERSECTION OPERATIONS - INTERIM YEAR 2040

ID#	SD Hwy 38	Intersection	AM PEAK HOUR		PM PEAK HOUR	
יים או	Cross Street(s)	Control	Delay	LOS	Delay	LOS
1	SD Highway 19 / 457th Avenue	TWSC	11.1	В	11.2	В
2	459 th Avenue	TWSC	10.9	В	12.4	В
3	I-90 Speedway Entrance	TWSC	0.0	Α	0.0	Α
4	Western Avenue / 463rd Avenue	TWSC	15.9	С	23.2	С
5	Main Avenue	TWSC	13.1	В	19.0	С
6	Vandemark Avenue	TWSC	13.6	В	14.6	В
7	2 nd Street	TWSC	21.2	С	25.6	D
8	West Central High School Entrance	TWSC	13.5	В	13.2	В
9	Railroad Street / 464th Avenue	TWSC	25.3	D	26.2	D
10	Mickelson Road / 260th Street	Signal	30.1	С	29.6	С
11	466th Avenue (North)	TWSC	24.6	С	25.0	D
12	WB I-90 Exit 390	TWSC	13.1	В	27.0	D
13	EB I-90 Exit 390	TWSC	14.4	В	21.1	С
14	466th Avenue (South)	TWSC	12.6	В	13.6	В
15	County Highway 141 / 468th Avenue	TWSC	14.8	В	17.2	С
16	County Highway 139 / 469th Avenue	TWSC	21.3	С	56.2	F
17	La Mesa Drive / 470th Avenue	TWSC	23.3	С	33.0	D
18	Marion Road	Signal	17.2	В	26.5	С

Notes: Bold/Highlighted indicates a poor LOS

Under the Interim Year 2040 conditions, the traffic operations analysis showed acceptable operations at the majority of intersections within the study area, with intersections achieving LOS C or greater during both the AM and PM peak hours. The six study intersections of SD 38 & 2nd Street, SD 38 & Railroad Street/464th Avenue, SD 38 & 466th Avenue (North), SD 38 & WB I-90, SD 38 & County Highway 139/469th Avenue, and SD 38 & La Mesa Drive/470th Avenue all produced a LOS D during at least one peak hour which does not meet the LOS goal established by the SDDOT.

The results of the two-lane highway capacity analysis can be seen in Table 8 and Table 9.

TABLE 8: HCM TRAFFIC HIGHWAY OPERATIONS – INTERIM YEAR 2040, EASTBOUND SD 38

ID#	Commont Type	AM PE	AK HOUR	PM PE	AK HOUR
ID#	Segment Type	Density	LOS	Density	LOS
	SD Hig	ghway 38 I	Eastbound		
EB 1	Passing Zone	0.8	А	0.4	Α
EB 2	Passing Constrained	0.9	А	0.4	Α
EB 3	Passing Zone	8.0	Α	0.4	Α
EB 4	Passing Constrained	0.9	А	0.4	А
EB 5	Passing Zone	0.8	А	0.4	Α
EB 6	Passing Constrained	0.9	А	0.4	А
EB 7	Passing Zone	0.8	А	0.4	Α
EB 8	Passing Zone	0.8	Α	0.3	Α
EB 9	Passing Constrained	1.0	Α	0.5	Α
EB 10	Passing Zone	0.8	Α	0.4	Α
EB 11	Passing Zone	0.8	Α	0.4	Α
EB 12	Passing Constrained	1.0	А	0.5	Α
EB 13	Passing Zone	0.8	А	0.4	Α
EB 14	Passing Constrained	1.6	А	0.8	А
EB 15	Passing Zone	4.9	С	2.4	В
EB 16	Passing Constrained	5.3	С	2.6	В
EB 17	Passing Zone	4.9	С	2.4	В
EB 18	Passing Zone	5.2	С	2.1	В
EB 19	Passing Constrained	5.1	С	2.0	Α
EB 20	Passing Constrained	5.4	С	2.2	В
EB 21	Passing Constrained	5.8	С	2.6	В
EB 22	Passing Constrained	1.8	А	1.7	А
EB 23	Passing Constrained	1.7	А	1.3	Α
EB 24	Passing Zone	1.5	А	1.2	А
EB 25	Passing Constrained	1.7	А	1.3	А
EB 26	Passing Zone	1.5	А	1.2	А
EB 27	Passing Constrained	1.7	А	1.3	А
EB 28	Passing Zone	1.6	А	1.3	А
EB 29	Passing Zone	2.1	В	1.9	А
EB 30	Passing Constrained	2.3	В	1.9	А
EB 31	Passing Zone	2.0	А	1.8	А
EB 32	Passing Constrained	2.3	В	1.9	А
EB 33	Passing Constrained	5.6	С	1.9	A
EB 34	Passing Zone	5.3	С	1.8	A
EB 35	Passing Constrained	5.4	С	1.8	A

TABLE 9: HCM TRAFFIC HIGHWAY OPERATIONS - INTERIM YEAR 2040, WESTBOUND SD 38

ID#	Soamont Tune	AM PE	AK HOUR	PM PE	AK HOUR
ID#	Segment Type	Density	LOS	Density	LOS
	SD High	way 38 W	/estbound		
WB 1	Passing Constrained	1.0	А	6.0	С
WB 2	Passing Zone	1.0	Α	5.8	С
WB 3	Passing Constrained	1.2	Α	2.9	В
WB 4	Passing Zone	1.2	Α	3.0	В
WB 5	Passing Constrained	1.1	Α	2.8	В
WB 6	Passing Zone	1.2	А	3.0	В
WB 7	Passing Constrained	0.9	Α	2.0	Α
WB 8	Passing Constrained	1.0	А	2.2	В
WB 9	Passing Zone	8.0	Α	1.9	Α
WB 10	Passing Constrained	1.0	Α	2.2	В
WB 11	Passing Zone	0.9	Α	2.0	А
WB 12	Passing Constrained	1.0	Α	2.2	В
WB 13	Passing Constrained	1.0	Α	2.2	В
WB 14	Passing Constrained	1.4	А	3.2	В
WB 15	Passing Constrained	1.1	Α	2.6	В
WB 16	Passing Constrained	2.1	В	7.2	С
WB 17	Passing Constrained	1.9	А	6.8	С
WB 18	Passing Constrained	2.0	А	7.1	С
WB 19	Passing Zone	1.9	А	6.9	С
WB 20	Passing Constrained	2.0	А	7.1	С
WB 21	Passing Constrained	2.4	В	6.5	С
WB 22	Passing Zone	2.2	В	5.4	С
WB 23	Passing Zone	0.4	А	1.0	Α
WB 24	Passing Zone	0.4	А	1.0	А
WB 25	Passing Zone	0.4	А	0.9	А
WB 26	Passing Constrained	0.5	А	1.2	А
WB 27	Passing Zone	0.4	А	1.0	Α
WB 28	Passing Constrained	0.5	А	1.2	А
WB 29	Passing Constrained	0.5	А	1.1	А
WB 30	Passing Zone	0.4	Α	0.9	А
WB 31	Passing Constrained	0.5	А	1.1	А
WB 32	Passing Zone	0.5	А	1.0	А
WB 33	Passing Constrained	0.5	А	1.1	А
WB 34	Passing Zone	0.5	А	1.0	А
WB 35	Passing Constrained	0.7	А	1.5	А

Under the Interim Year 2040 conditions, the traffic operations analysis showed acceptable operations at all of the highway segments within the study area, with segments achieving LOS C or greater during both the AM and PM peak hours.

In general, the Interim Year 2040 condition traffic operations demonstrated acceptable performance measures throughout the majority of intersections and highway segments within the study area. The desired LOS was realized for the majority of intersections and highway segments during the AM and PM peak hours with the exception of five study intersections that had LOS D.

Design Year 2050

Design Year 2050 traffic operations analysis used future year traffic volumes and posted travel speeds. The SD 38 & Mickelson Road/260th Street intersection was analyzed under traffic signal control. The results of the Design Year 2050 intersection capacity analysis can be seen in **Figure 3** and **Table 10** below.

TABLE 10: HCM TRAFFIC INTERSECTION OPERATIONS - DESIGN YEAR 2050

ID#	SD Hwy 38	Intersection	AM PEAK HOUR		PM PEAK HOUR	
יים או	Cross Street(s)	Control	Delay	LOS	Delay	LOS
1	SD Highway 19 / 457th Avenue	TWSC	12.2	В	12.3	В
2	459 th Avenue	TWSC	11.6	В	13.5	В
3	I-90 Speedway Entrance	TWSC	0.0	Α	0.0	Α
4	Western Avenue / 463rd Avenue	TWSC	21.5	С	56.5	F
5	Main Avenue	TWSC	14.4	В	25.5	D
6	Vandemark Avenue	TWSC	15.4	С	16.8	С
7	2 nd Street	TWSC	31.1	С	38.3	Е
8	West Central High School Entrance	TWSC	15.4	С	14.8	В
9	Railroad Street / 464th Avenue	TWSC	41.4	Е	42.7	Е
10	Mickelson Road / 260th Street	Signal	19.2	В	21.3	С
11	466th Avenue (North)	TWSC	31.6	D	31.4	D
12	WB I-90 Exit 390	TWSC	14.9	В	66.1	F
13	EB I-90 Exit 390	TWSC	18.4	С	30.0	D
14	466th Avenue (South)	TWSC	13.9	В	15.7	С
15	County Highway 141 / 468th Avenue	TWSC	16.7	С	21.3	С
16	County Highway 139 / 469th Avenue	TWSC	42.5	Е	259.5	F
17	La Mesa Drive / 470th Avenue	TWSC	39.2	Е	81.5	F
18	Marion Road	Signal	19.1	В	32.1	С

Notes: Bold/Highlighted indicates a poor LOS

Under the Design Year 2050 conditions, the traffic operations analysis showed potential capacity constraints and inefficiencies at many intersections within the study area. The nine study intersections of SD 38 & Western Avenue/463rd Avenue, SD 38 & Main Avenue, SD 38 & 2nd Street, SD 38 & Railroad Street/464th Avenue, SD 38 & 466th Avenue (North), SD 38 & WB I-90, SD 38 & EB I-90, SD 38 & County Highway 139/469th Avenue, and SD 38 & La Mesa Drive/470th Avenue all produced a LOS D or worse during at least one peak hour which does not meet the LOS goal established by the SDDOT.

The results of the two-lane highway capacity analysis can be seen in Table 11 and Table 12.

TABLE 11: HCM TRAFFIC HIGHWAY OPERATIONS - DESIGN YEAR 2050, EASTBOUND SD 38

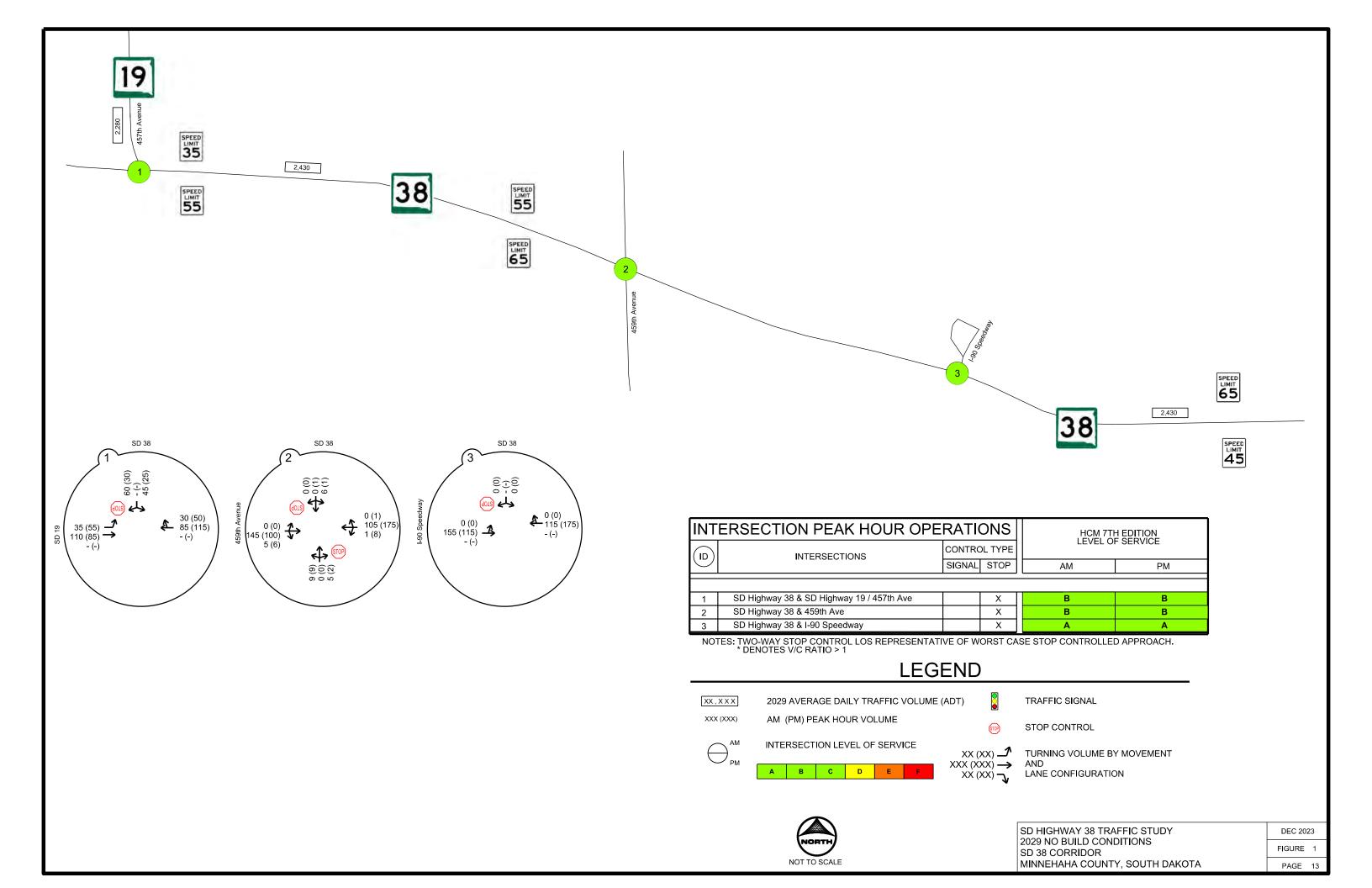
ID#	Sogmont Type	AM PE	AK HOUR	PM PE	AK HOUR
# טו	Segment Type	Density	LOS	Density	LOS
	SD Hig	ghway 38 I	Eastbound		
EB 1	Passing Zone	1.2	А	0.6	Α
EB 2	Passing Constrained	1.3	А	0.6	Α
EB 3	Passing Zone	1.1	Α	0.5	Α
EB 4	Passing Constrained	1.3	А	0.6	А
EB 5	Passing Zone	1.1	А	0.5	Α
EB 6	Passing Constrained	1.3	А	0.6	А
EB 7	Passing Zone	1.2	А	0.6	Α
EB 8	Passing Zone	1.1	Α	0.6	Α
EB 9	Passing Constrained	1.3	Α	0.7	Α
EB 10	Passing Zone	1.1	Α	0.5	Α
EB 11	Passing Zone	1.1	Α	0.5	Α
EB 12	Passing Constrained	1.3	А	0.7	Α
EB 13	Passing Zone	1.1	А	0.5	Α
EB 14	Passing Constrained	2.1	В	1.1	А
EB 15	Passing Zone	6.7	С	3.4	В
EB 16	Passing Constrained	7.1	С	3.5	В
EB 17	Passing Zone	6.7	С	3.4	В
EB 18	Passing Zone	8.1	D	3.3	В
EB 19	Passing Constrained	7.9	С	3.1	В
EB 20	Passing Constrained	8.3	D	3.4	В
EB 21	Passing Constrained	9.2	D	4.2	С
EB 22	Passing Constrained	3.2	В	2.9	В
EB 23	Passing Constrained	2.4	В	1.9	Α
EB 24	Passing Zone	2.2	В	1.8	А
EB 25	Passing Constrained	2.3	В	1.9	А
EB 26	Passing Zone	2.1	В	1.7	А
EB 27	Passing Constrained	2.4	В	1.9	А
EB 28	Passing Zone	2.2	В	1.8	А
EB 29	Passing Zone	3.3	В	2.8	В
EB 30	Passing Constrained	3.5	В	2.9	В
EB 31	Passing Zone	3.2	В	2.8	В
EB 32	Passing Constrained	3.5	В	2.9	В
EB 33	Passing Constrained	8.2	D	2.9	В
EB 34	Passing Zone	8.0	С	2.8	В
EB 35	Passing Constrained	8.0	С	2.7	В

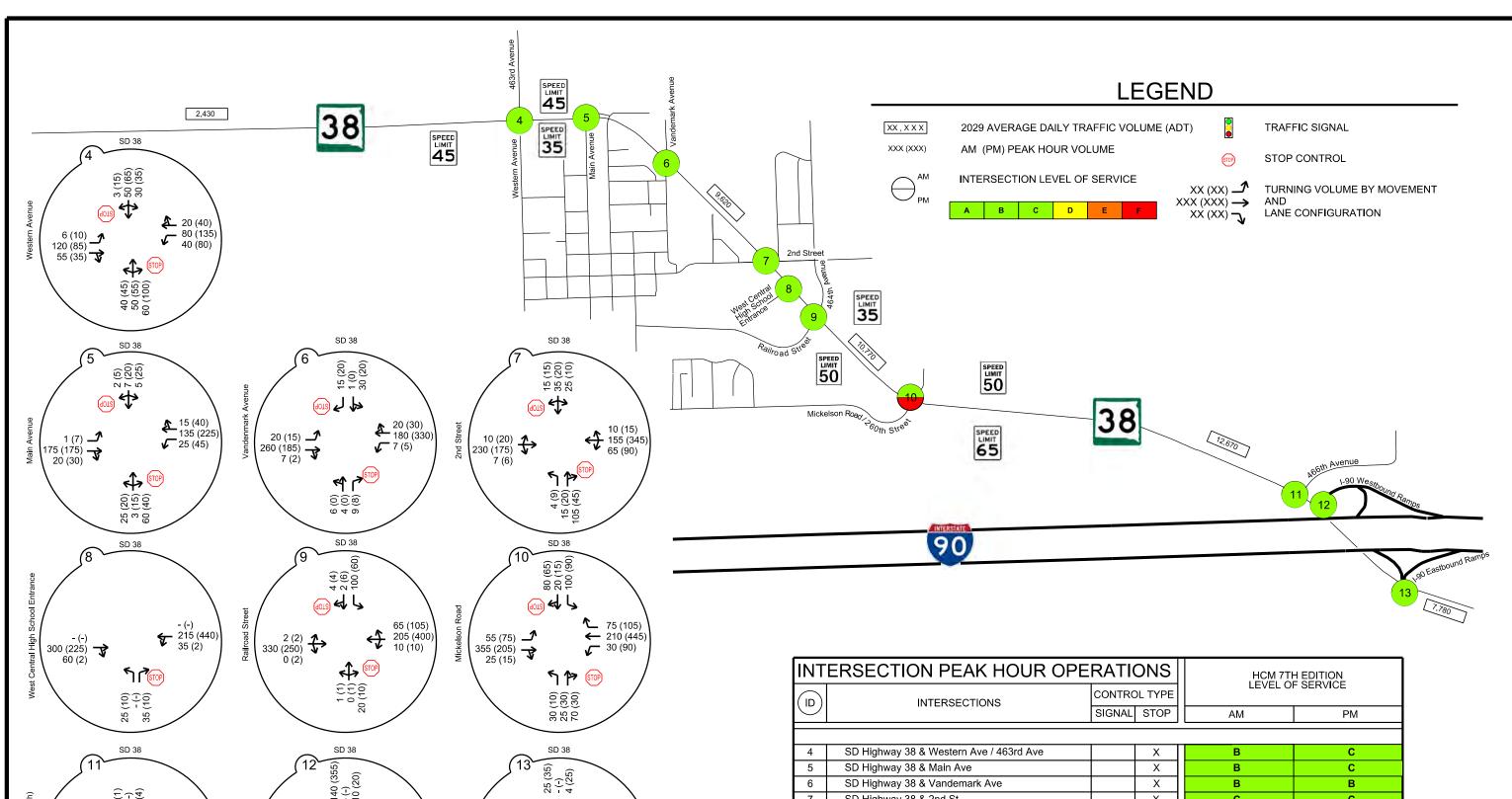
TABLE 12: HCM TRAFFIC HIGHWAY OPERATIONS - DESIGN YEAR 2050, WESTBOUND SD 38

ID#	Commont Tuno	AM PE	AK HOUR	PM PE	AK HOUR
ID#	Segment Type	Density	LOS	Density	LOS
	SD High	way 38 W	/estbound		
WB 1	Passing Constrained	1.6	А	8.7	D
WB 2	Passing Zone	1.5	А	8.5	D
WB 3	Passing Constrained	1.8	Α	4.4	С
WB 4	Passing Zone	1.8	Α	4.4	С
WB 5	Passing Constrained	1.7	Α	4.2	С
WB 6	Passing Zone	1.8	А	4.4	С
WB 7	Passing Constrained	1.3	Α	2.9	В
WB 8	Passing Constrained	1.4	Α	3.2	В
WB 9	Passing Zone	1.3	Α	2.8	В
WB 10	Passing Constrained	1.4	Α	3.1	В
WB 11	Passing Zone	1.3	Α	2.9	В
WB 12	Passing Constrained	1.4	А	3.2	В
WB 13	Passing Constrained	1.4	А	3.2	В
WB 14	Passing Constrained	2.4	В	5.4	С
WB 15	Passing Constrained	1.9	А	4.3	С
WB 16	Passing Constrained	3.3	В	10.9	D
WB 17	Passing Constrained	3.0	В	10.5	D
WB 18	Passing Constrained	3.2	В	10.8	D
WB 19	Passing Zone	3.1	В	10.7	D
WB 20	Passing Constrained	3.2	В	10.8	D
WB 21	Passing Constrained	3.3	В	8.7	D
WB 22	Passing Zone	3.1	В	7.4	С
WB 23	Passing Zone	0.6	Α	1.4	Α
WB 24	Passing Zone	0.6	Α	1.4	А
WB 25	Passing Zone	0.6	А	1.4	А
WB 26	Passing Constrained	0.7	А	1.7	А
WB 27	Passing Zone	0.6	А	1.4	Α
WB 28	Passing Constrained	0.7	А	1.7	А
WB 29	Passing Constrained	0.7	А	1.7	Α
WB 30	Passing Zone	0.6	А	1.4	А
WB 31	Passing Constrained	0.7	А	1.7	А
WB 32	Passing Zone	0.6	А	1.5	А
WB 33	Passing Constrained	0.7	А	1.7	А
WB 34	Passing Zone	0.6	А	1.5	А
WB 35	Passing Constrained	0.9	А	2.1	В

Under the Design Year 2050 conditions, the traffic operations analysis showed potential capacity constraints at some segments within the study area. There were four eastbound segments and eight westbound segments that resulted in LOS D during at least one of the peak hours. The segments represent areas of focus for potential capacity improvements.

Overall, the Design Year 2050 condition traffic operations demonstrated the areas within the study limits that could benefit most from potential improvements. The desired LOS was realized for the majority of intersections and highway segments during the AM and PM peak hours but there were notable exceptions that did not meet the LOS criteria goals. The recognition of issues at these locations will be used to guide future concepts.





15 (20) 170 (290)

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4 (1) 315 (650)) - (-)

1 (0) 520 (325)

35 (25) 515 (300)

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15 (25) 185 (300)

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305 (140) 220 (185)

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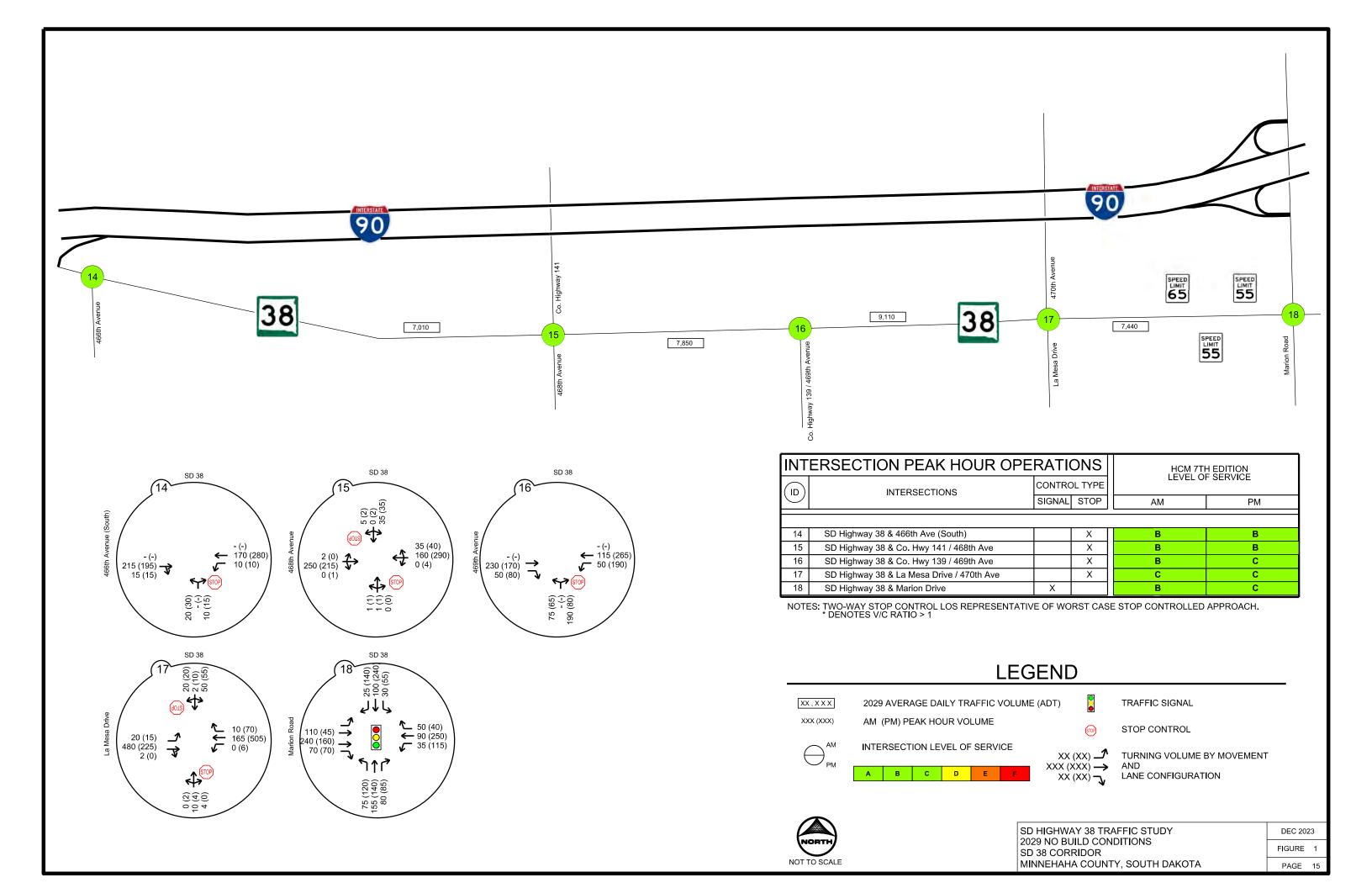
INT	ERSECTION PEAK HOUR OP	ERATI	ONS	HCM 7T	H EDITION
	INTERSECTIONS	CONTRO	OL TYPE	LEVELO	F SERVICE
	INTERSECTIONS	SIGNAL	STOP	AM	PM
4	SD Highway 38 & Western Ave / 463rd Ave		Х	В	С
5	SD Highway 38 & Main Ave		Х	В	С
6	SD Highway 38 & Vandemark Ave		Х	В	В
7	SD Highway 38 & 2nd St		Х	С	С
8	SD Highway 38 & West High School Entrance		Х	В	В
9	SD Highway 38 & Railroad St / 464th Ave		Х	С	С
10	SD Highway 38 & Mickelson Rd / 260th St		X	С	F
11	SD Highway 38 & 466th Ave (North)		Х	С	С
12	SD Highway 38 & Westbound Interstate-90		Х	В	С
13	SD Highway 38 & Eastbound Interstate-90		Х	В	С

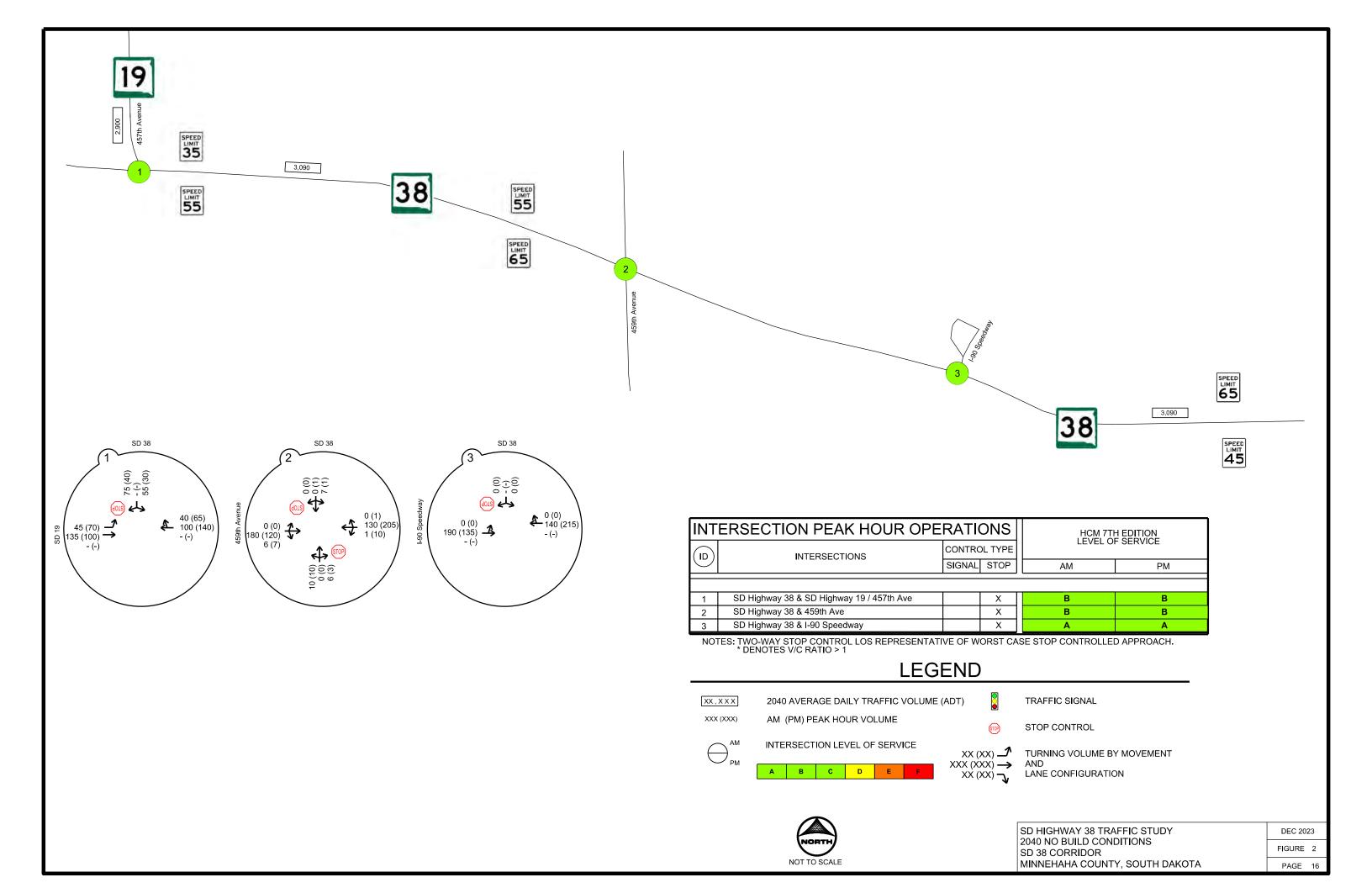
NOTES: TWO-WAY STOP CONTROL LOS REPRESENTATIVE OF WORST CASE STOP CONTROLLED APPROACH.
* DENOTES V/C RATIO > 1

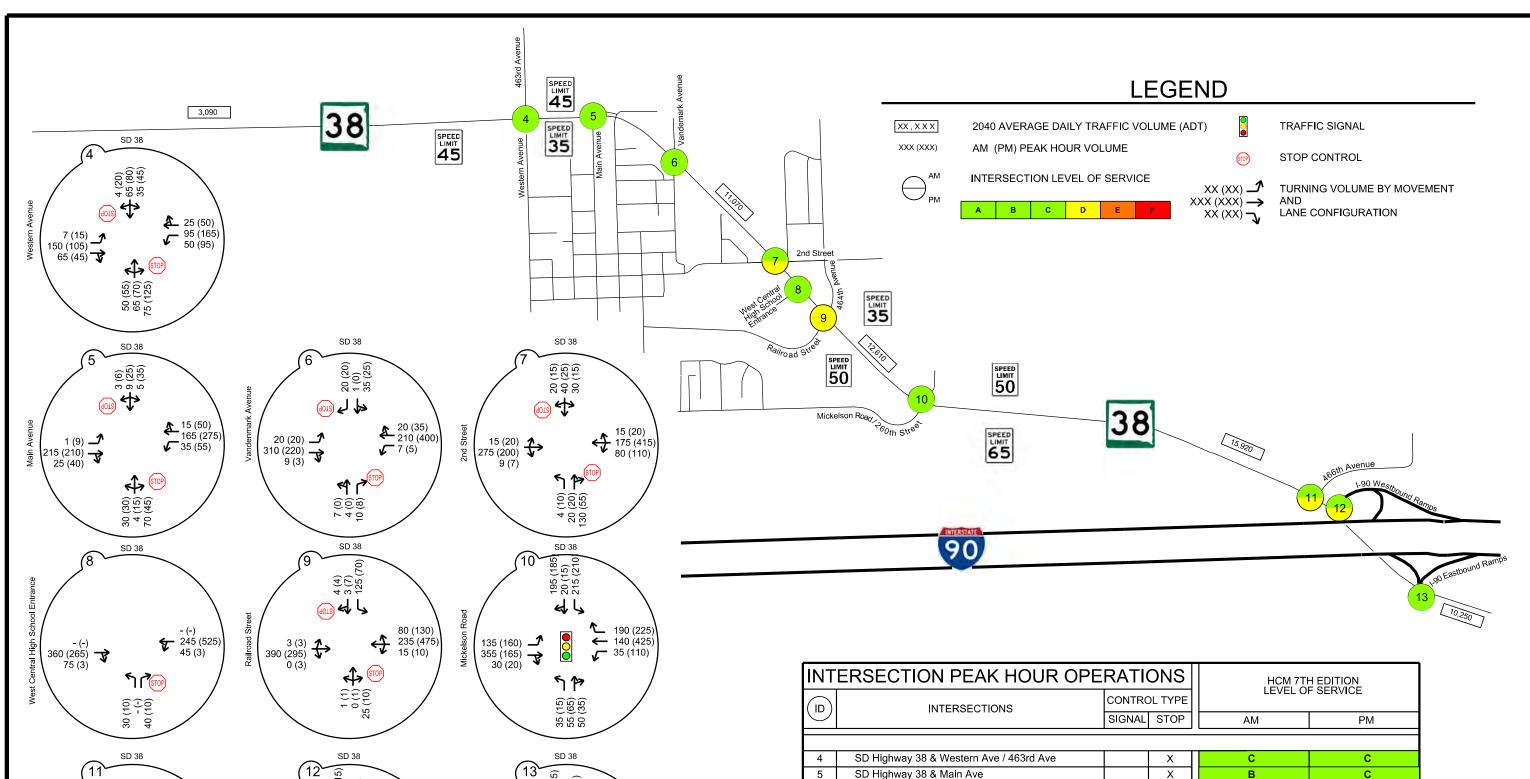


SD HIGHWAY 38 TRAFFIC STUDY 2029 NO BUILD CONDITIONS SD 38 CORRIDOR MINNEHAHA COUNTY, SOUTH DAKOTA

DEC 2023 FIGURE 1 PAGE 14







20 (25) 210 (355)

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4 (1) 370 (770) j - (-)

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365 (165) 265 (225)

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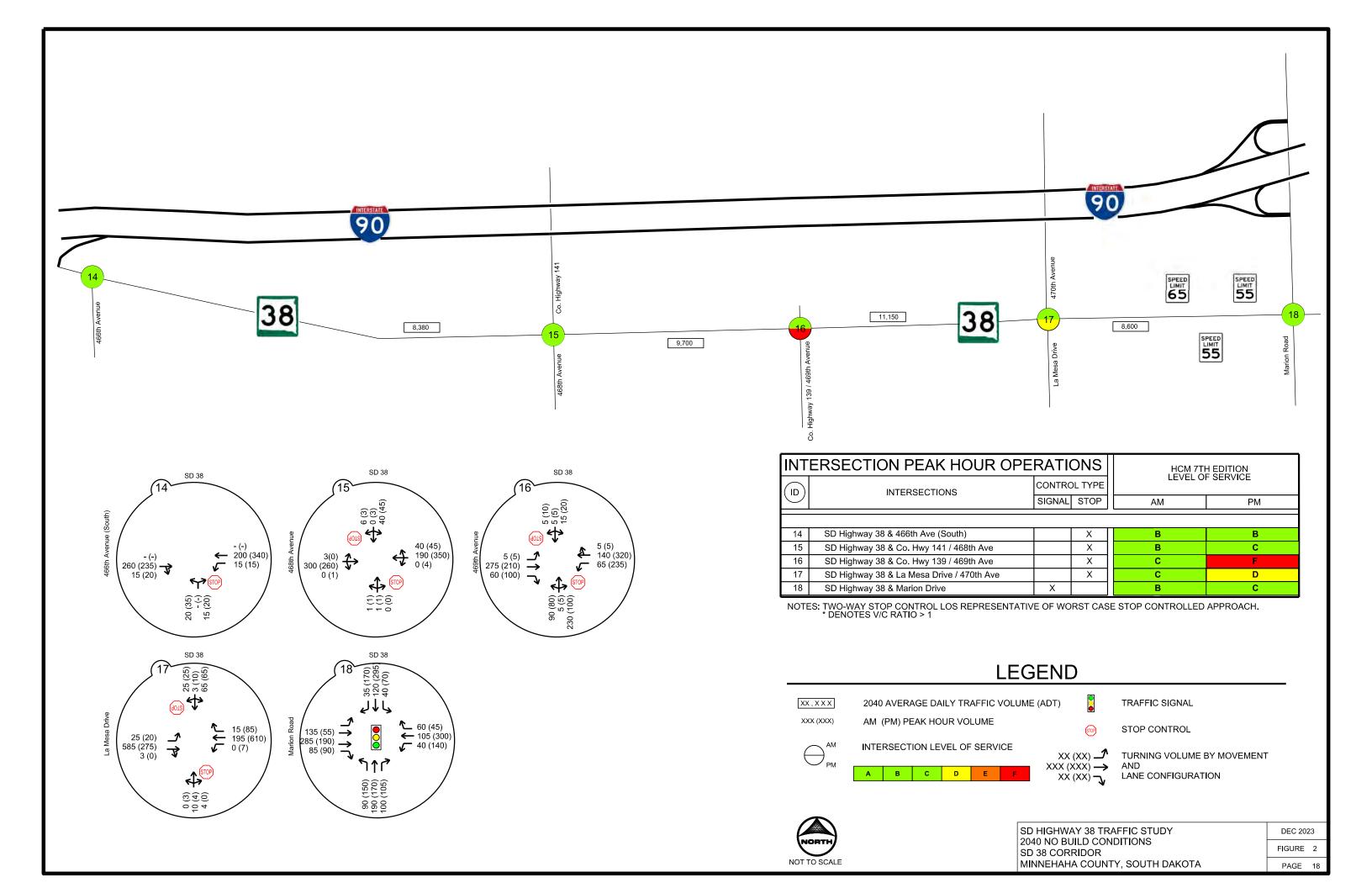
INT	ERSECTION PEAK HOUR OF	ERATI	ONS	HCM 7TH EDITION LEVEL OF SERVICE				
(ID)	INTERSECTIONS	CONTR	OL TYPE					
	INTERGEOTIONS	SIGNAL	. STOP	AM	PM			
4	SD Highway 38 & Western Ave / 463rd Ave		Х	С	С			
5	SD Highway 38 & Main Ave		Х	В	С			
6	SD Highway 38 & Vandemark Ave		Х	В	В			
7	SD Highway 38 & 2nd St		Х	С	D			
8	SD Highway 38 & West High School Entrance		X	В	В			
9	SD Highway 38 & Railroad St / 464th Ave		Х	D	D			
10	SD Highway 38 & Mickelson Rd / 260th St	Х		С	С			
11	SD Highway 38 & 466th Ave (North)		X	С	D			
12	SD Highway 38 & Westbound Interstate-90		Х	В	D			
13	SD Highway 38 & Eastbound Interstate-90		X	В	С			

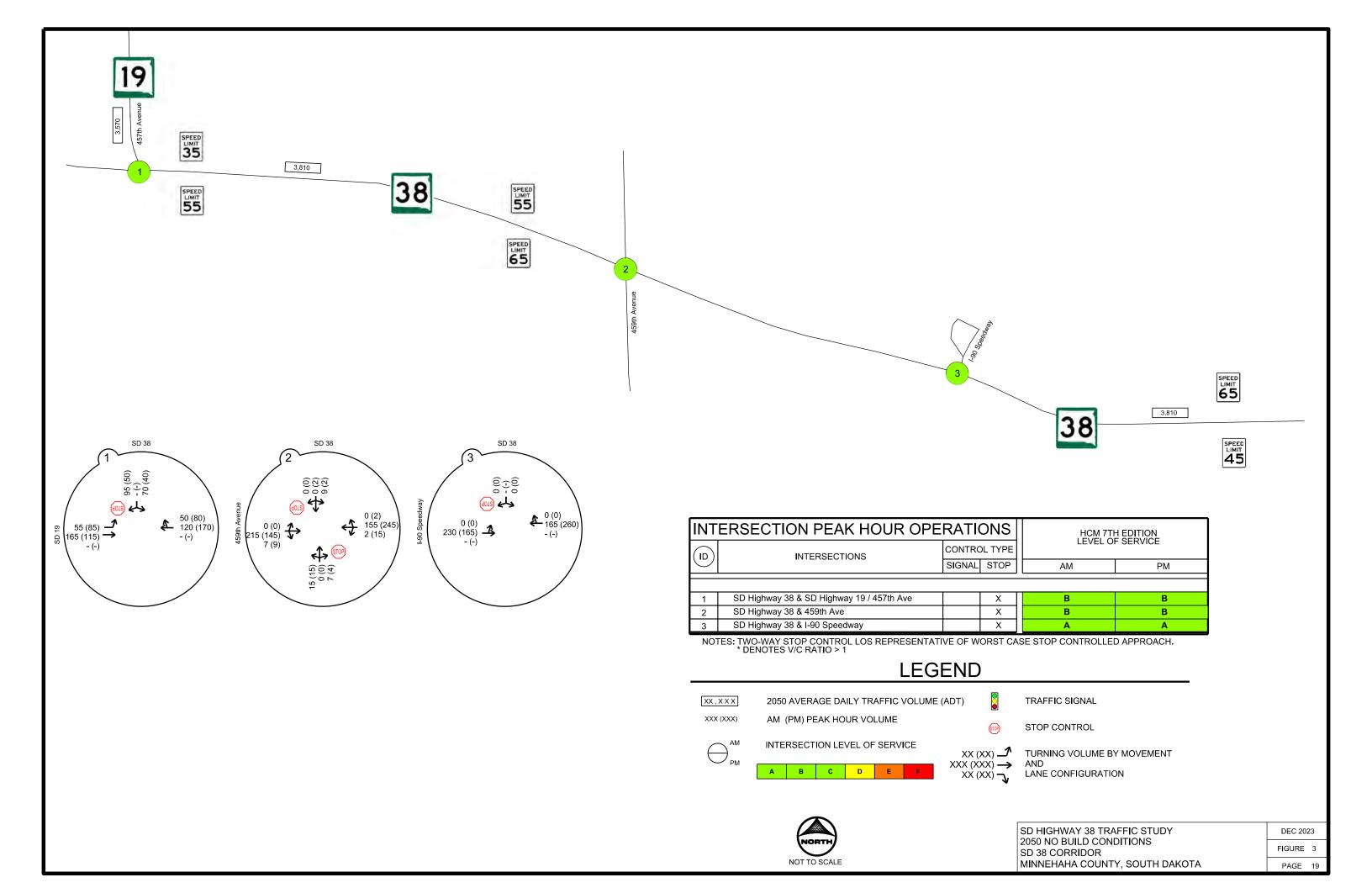
NOTES: TWO-WAY STOP CONTROL LOS REPRESENTATIVE OF WORST CASE STOP CONTROLLED APPROACH.

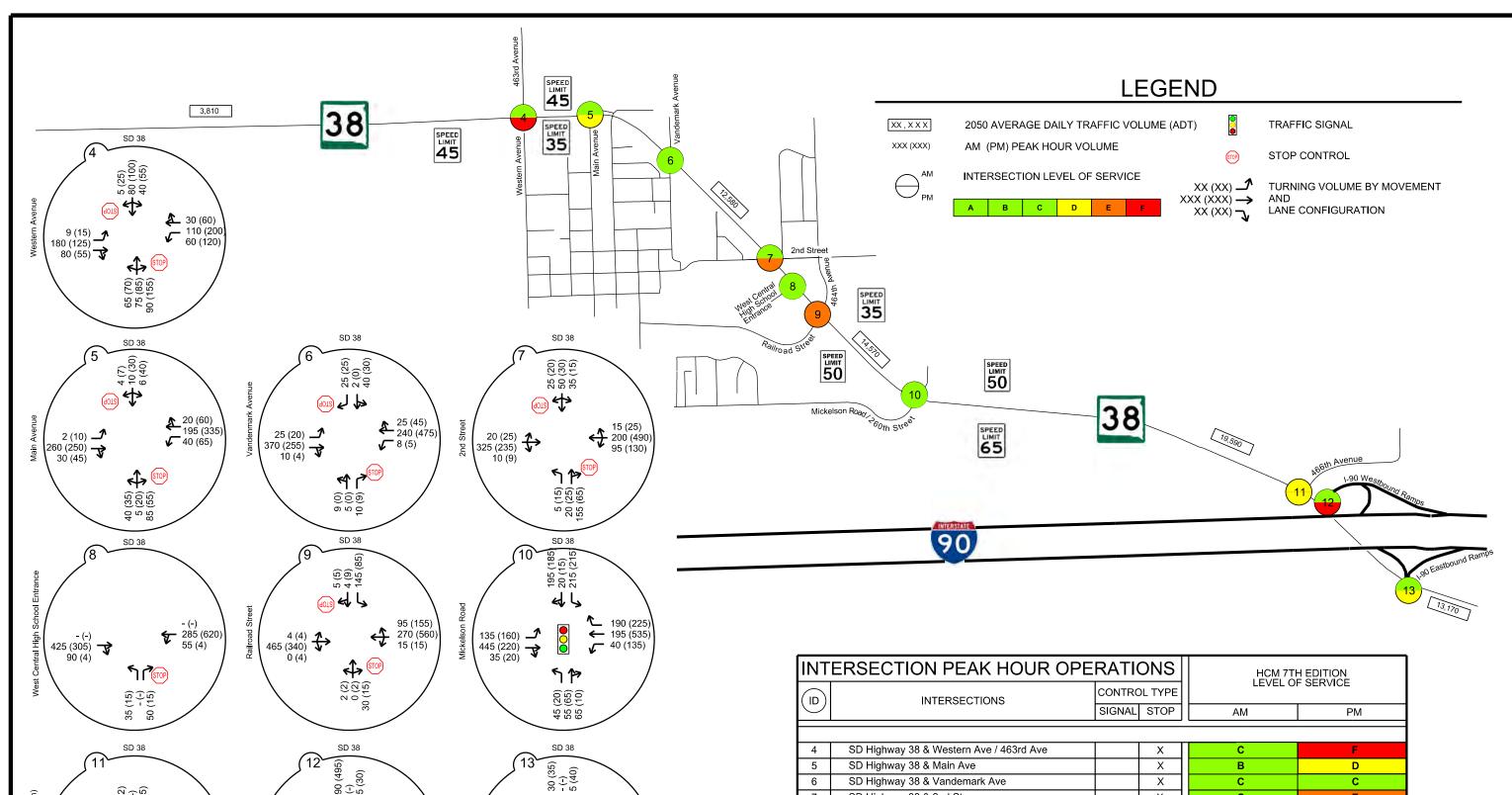
* DENOTES V/C RATIO > 1



SD HIGHWAY 38 TRAFFIC STUDY 2040 NO BUILD CONDITIONS SD 38 CORRIDOR MINNEHAHA COUNTY, SOUTH DAKOTA DEC 2023
FIGURE 2
PAGE 17







20 (30)

245 (420)

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5 (2) 430 (910)) - (-)

^{2 (0)}
765 (445)

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430 (190) 315 (265)

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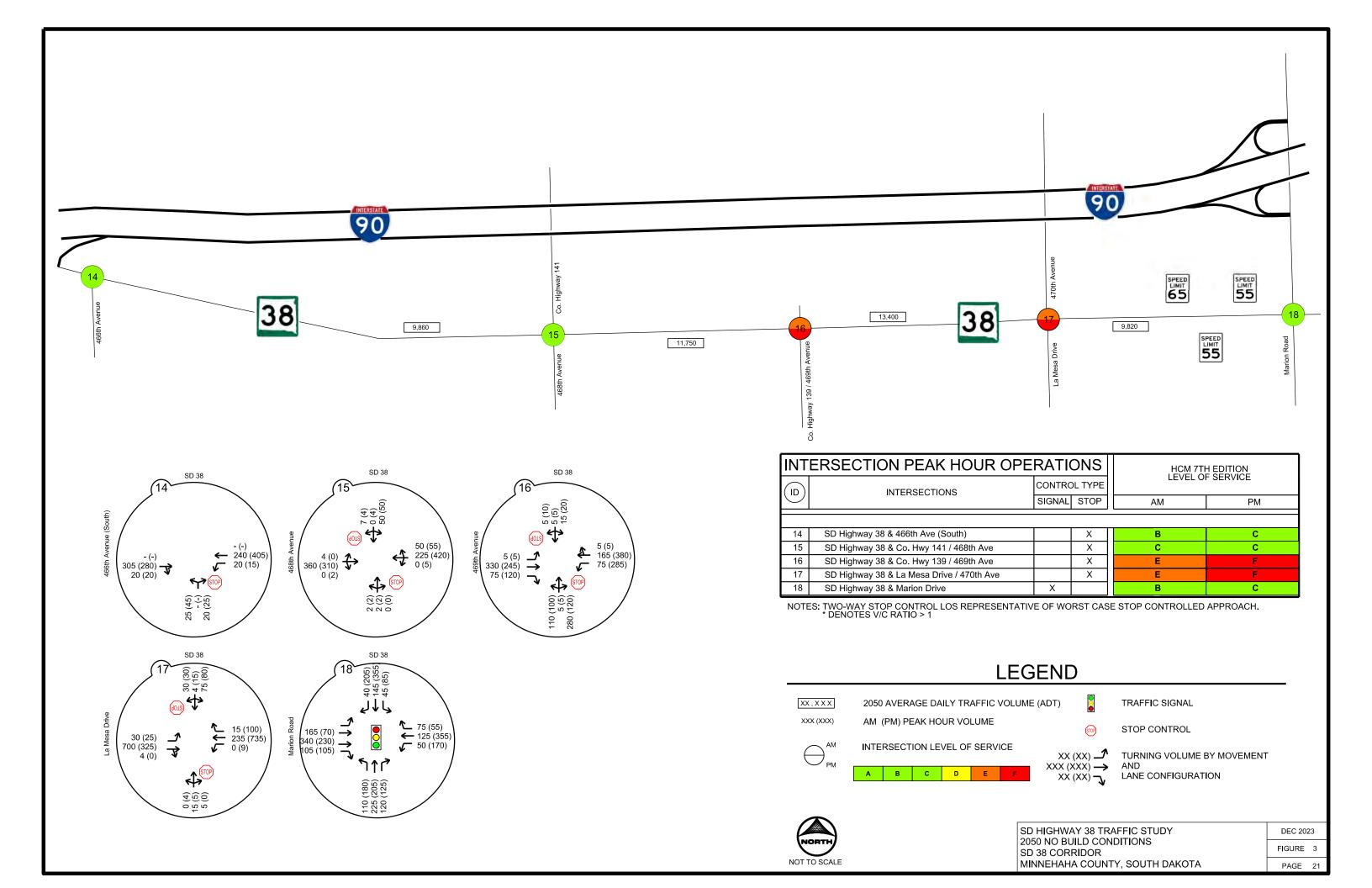
INT	ERSECTION PEAK HOUR OP	ERATI	ONS	HCM 7TH EDITION LEVEL OF SERVICE				
(ID)	INTERSECTIONS	CONTR	OL TYPE					
	INTENSECTIONS	SIGNAL	STOP	AM	PM			
4	SD Highway 38 & Western Ave / 463rd Ave		Х	С	F			
5	SD Highway 38 & Main Ave		Х	В	D			
6	SD Highway 38 & Vandemark Ave		Х	С	С			
7	SD Highway 38 & 2nd St		Х	С	Е			
8	SD Highway 38 & West High School Entrance		Х	С	В			
9	SD Highway 38 & Railroad St / 464th Ave		Х	E	E			
10	SD Highway 38 & Mickelson Rd / 260th St	Х		В	С			
11	SD Highway 38 & 466th Ave (North)		Х	D	D			
12	SD Highway 38 & Westbound Interstate-90		Х	В	F			
13	SD Highway 38 & Eastbound Interstate-90		X	С	D			

NOTES: TWO-WAY STOP CONTROL LOS REPRESENTATIVE OF WORST CASE STOP CONTROLLED APPROACH.
* DENOTES V/C RATIO > 1



SD HIGHWAY 38 TRAFFIC STUDY 2050 NO BUILD CONDITIONS SD 38 CORRIDOR MINNEHAHA COUNTY, SOUTH DAKOTA

DEC 2023 FIGURE 3 PAGE 20



Event Traffic Analysis

Traffic data was collected at the I-90 Speedway during a race event which occurred on May 27^{th} , 2023. The traffic data was collected for a 14-hour period between 1PM-3AM to ensure the entirety of the event traffic was recorded. Review of the traffic data revealed that the peak hours associated with the arrival of vehicles to the event and departure of vehicles from the event were 5:45-6:45PM and 12:15-1:15AM, respectively. The peak hour traffic volumes can be seen below in **Figure 4**.

FIGURE 4: EVENT TRAFFIC EXHIBIT



Existing Year 2022 traffic operations analysis used existing intersection geometry, event traffic volumes, and posted travel speeds. The results of the intersection capacity analysis can be seen in **Table 13** below.

TABLE 13: HCM TRAFFIC INTERSECTION OPERATIONS - EVENT TRAFFIC

SD Hwy 38	Control			ection y (sec/v	eh)	ЕВ	WB	SB	
Cross Street(s)	Type	Arrival		Departure		95% Queue Length (veh)	95% Queue Length (veh)	95% Queue Length (veh)	
I-90 Speedway Entrance	TWSC	12.7 B		16.5	С	0.2	0	5.9	

Notes: Bold/Highlighted indicates a poor LOS

Under the Existing Year 2022 conditions, the traffic operations analysis showed acceptable operations at the study intersection under the event traffic, with the intersection achieving LOS C or greater during the peak hours. There were no significant delays or vehicle queues produced during the HCM analysis. Observations from review of the video collected at this intersection, indicated that there was a maximum queue of 5 vehicles on the eastbound SD 38 approach. Additionally, there were several observed occurrences of westbound through vehicles utilizing the oncoming traffic lanes to pass slowing or turning vehicles that were entering the speedway.

Predictive Safety Analysis

Safety analysis of locations within the SD Highway 38 study corridor area of influence was completed for the design year 2050 No-Build scenario. Existing crash analysis was completed by summarizing recent historical crashes and reviewing crash trends and can be seen in the previously submitted Existing Traffic and Operations Analysis technical memo. 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.

Results of the IHSDM evaluation—which supports the Federal Highway Administration's (FHWA's) Data-Driven Safety Analysis (DDSA) initiative—will assist with identifying design features or segments along the roadway with the greatest potential for improvement and quantify its expected safety performance. This approach combined crash, roadway inventory, and traffic volume data to provide more reliable estimates of the proposed roadway's expected safety performance. Ultimately, these results could support agencies decision making in the highway design process and inform the public as to what safety benefits can be expected from the investment.

Design year 2050 crash analysis determined the expected crash frequency and predicted crash frequency within the SD Highway 38 area of influence resulting from the No-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, roadway characteristics, and general time trends, but does not consider the historical crash data. The expected crash frequency is the combination of observed and predicted crash frequencies using the Empirical Bayes (EB) method to compute a weighted average. Expected crash frequency accounts for changes in traffic volume, roadway characteristics, and general time trends, and considers the historical crash data. However, the expected crash frequency is not applicable when facility type changes. To account for the potential future roadway changes we have included both the predicted and expected crash results.

In addition to crash frequency, the expected crash severity was determined by IHSDM. Crash severity represents the highest level of injury of all vehicle occupants.

A summary of the expected and predicted crashes for the SD Highway 38 segments between SD Highway 19 and Marion Road are provided in **Table 14** and **Table 15**. Along the SD 38 segments, there were a several segments that produced a high number of crash incidents. The segments from 459th Ave to Western Avenue, Mickelson Road to 466th Avenue (North), and the three segments between 466th Avenue (South) to La Mesa Drive all indicated the potential for safety performance improvements. The expected crash type distribution for segments indicated that run-off road and rear-end crashes were the most frequent crash types.

A summary of the expected and predicted crashes for the SD Highway 38 intersections are provided in **Table 16** and **Table 17**. There were several intersections that demonstrated a high number of crash instances. The SD 38 intersections with Western Avenue/463rd Street, Main Avenue, 2nd Street, Railroad Street/464th Avenue, and Marion Road all indicated the potential for safety performance improvements. The expected crash type distribution for intersections indicated that angle crashes and rear-end crashes were the most frequent crash types.

TABLE 14: SD 38 SEGMENT CRASH FREQUENCY

				Expected	l Crashes		Predicted Crashes					
	Location	Segment Length (Miles)	Total Crashes	Total Crashes/Year	Fatal / Injury Crashes/Year	PDO Crashes/Year	Total Crashes	Total Crashes/Year	Fatal / Injury Crashes/Year	PDO Crashes/Year		
Segment 1:	SD Highway 19 to 459 th Avenue	2.05	43.44	1.67	0.50	1.16	47.76	1.83	0.58	1.24		
Segment 2:	459th Avenue to Western Avenue	4.08	104.94	4.03	1.51	2.52	94.87	3.64	1.17	2.47		
Segment 3:	Western Avenue to Main Avenue	0.24	7.61	0.29	0.11	0.17	18.36	0.70	0.22	0.47		
Segment 4:	Main Avenue to Vandemark Avenue	0.31	17.45	0.67	0.17	0.49	24.91	0.95	0.30	0.65		
Segment 5:	Vandemark Avenue to 2 nd Street	0.47	23.07	0.88	0.46	0.41	39.24	1.50	0.48	1.02		
Segment 7:	2 nd Street to West Central High School	0.06	20.20	0.77	0.38	0.38	20.20	0.22	0.07	0.15		
Segment 8:	West Central High School Entrance to Railroad Street	0.20	7.57	0.29	0.11	0.18	19.83	0.76	0.24	0.51		
Segment 9:	Railroad Street to Mickelson Road	0.45	39.15	1.50	0.55	0.94	50.88	1.95	0.62	1.32		
Segment 10:	Mickelson Road to 466th Avenue (North)	1.40	220.30	8.47	3.63	4.83	179.01	6.88	2.21	4.67		
Segment 11:	466th Avenue (North) to WB I-90 Ramps	0.07	2.68	0.10	0.04	0.06	7.75	0.29	0.09	0.20		
Segment 12:	WB I-90 Ramps to EB I-90 Ramps	0.28	8.86	0.34	0.12	0.20	23.11	0.88	0.28	0.60		
Segment 13:	EB I-90 Ramps to 466th Avenue (South)	0.07	2.51	0.09	0.03	0.05	7.02	0.27	0.08	0.18		
Segment 14:	466th Avenue (South) to County Highway 141	2.02	85.22	3.27	1.28	1.99	132.89	5.11	1.64	3.47		
Segment 15:	County Highway 141 to County Highway 139	1.00	63.35	2.43	0.99	1.44	71.03	2.73	0.87	1.85		
Segment 16:	County Highway 139 to La Mesa Drive	1.00	50.98	1.96	0.92	1.03	79.29	3.04	0.97	2.07		
Segment 17:	La Mesa Drive to Marion Road	0.97	36.81	1.41	0.57	0.82	58.75	2.25	0.71	1.53		
Total	All SD 38 Segments	14.67	734.14	28.17	11.37	16.67	874.90	33.00	10.53	22.40		

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

TABLE 15: EXPECTED SEGMENT MANNER OF CRASH

Manner of Crash	Total Crashes
Collision with Animal	87.57
Sideswipe - same direction	28.80
Run Off Road	376.14
Angle	62.28
Rear-end	110.11
Others	78.34
Total Crashes	743.24

TABLE 16: SD 38 INTERSECTION CRASH FREQUENCY

			Expected	l Crashes			Predicted Crashes						
	Location	Total Crashes	Total Crashes/Year	Fatal / Injury Crashes/Year	PDO Crashes/Year	Total Crashes	Total Crashes/Year	Fatal / Injury Crashes/Year	PDO Crashes/Year				
Internation 1	CD Highway 40 / 457th Avenue	40.20	0.70	0.40	0.50	24.44	0.01	0.22	0.47				
Intersection 1:	SD Highway 19 / 457 th Avenue	18.39 18.94	0.70	0.19	0.50	21.11	0.81 1.07	0.33					
Intersection 2:	459 th Avenue		0.72	0.29	0.43	27.93		0.46	0.61				
Intersection 3:	I-90 Speedway Entrance	NA 07.05	NA	NA 1.00	NA	NA 100, 10	NA 0.54	NA	NA				
Intersection 4:	Western Avenue / 463rd Avenue	87.65	3.37	1.60	1.76	169.48	6.51	2.80	3.70				
Intersection 5:	Main Avenue	42.11	1.61	0.67	0.94	132.77	5.10	2.20	2.90				
Intersection 6:	Vandemark Avenue	28.33	1.08	0.50	0.58	74.90	2.88	1.24	1.63				
Intersection 7:	2 nd Street	56.15	2.15	0.81	1.34	166.63	6.40	2.76	3.64				
Intersection 8:	West Central High School Entrance	18.93	0.72	0.33	0.38	73.62	2.83	1.17	1.65				
Intersection 9:	Railroad Street / 464th Avenue	53.57	2.06	1.17	0.88	137.23	5.27	2.27	3.00				
Intersection 10:	Mickelson Road/260th Street	38.24	1.47	0.68	0.78	160.99	6.19	2.56	3.62				
Intersection 11:	466th Avenue North	24.85	0.95	0.32	0.62	33.89	1.30	0.54	0.76				
Intersection 12:	WB I-90 Exit 390	20.00	0.76	0.41	0.35	15.08	0.58	0.19	0.38				
Intersection 13:	EB I-90 Exit 390	9.41	0.36	0.15	0.20	10.35	0.39	0.13	0.26				
Intersection 14:	466th Avenue South	29.18	1.12	0.40	0.71	75.53	2.90	1.20	1.69				
Intersection 15:	County Highway 141 / 468th Avenue	44.28	1.70	0.95	0.74	87.10	3.35	1.44	1.90				
Intersection 16:	County Highway 139 / 469th Avenue	32.02	1.23	0.57	0.66	57.44	2.20	0.91	1.29				
Intersection 17:	La Mesa Drive / 470 th Avenue	46.40	1.78	0.73	1.04	61.03	2.34	1.01	1.33				
Intersection 18:	Marion Road	114.94	4.42	1.53	2.88	50.33	1.93	0.63	1.30				
Total	All SD 38 Intersections	683.39	26.20	11.30	14.79	1,355.41	52.05	21.84	30.13				

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

TABLE 17: EXPECTED INTERSECTION MANNER OF CRASH

Manner of Crash	Total Crashes
Run Off Road	85.49
Angle	245.00
Sideswipe	59.86
Head-on	27.53
Rear-end	196.55
Others	67.73
Total Crashes	682.16

25

Summary

The purpose of this technical memorandum is to document the future no-build 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.

Future year 2050 traffic forecasts were constructed using traffic data supplied by the SFMPO and the SDDOT. This data was used to develop 2050 design year morning (AM) and afternoon (PM) peak hour volumes at study intersections. To develop the interim year traffic conditions, straight-line growth rates between the existing year ADT volumes and the estimated 2050 ADT volumes were calculated and the interim year traffic volumes were interpolated to develop interim year 2029 and 2040 traffic forecasts.

Using the established traffic volumes, the traffic operations at study intersections and along the two-lane highway were evaluated. The no-build conditions traffic assessment revealed that there are intersections and highway segments that will need capacity improvements within the design year timeframe.

The traffic operations analysis indicated that the following intersections and highway segments should be investigated for future capacity or operational improvements:

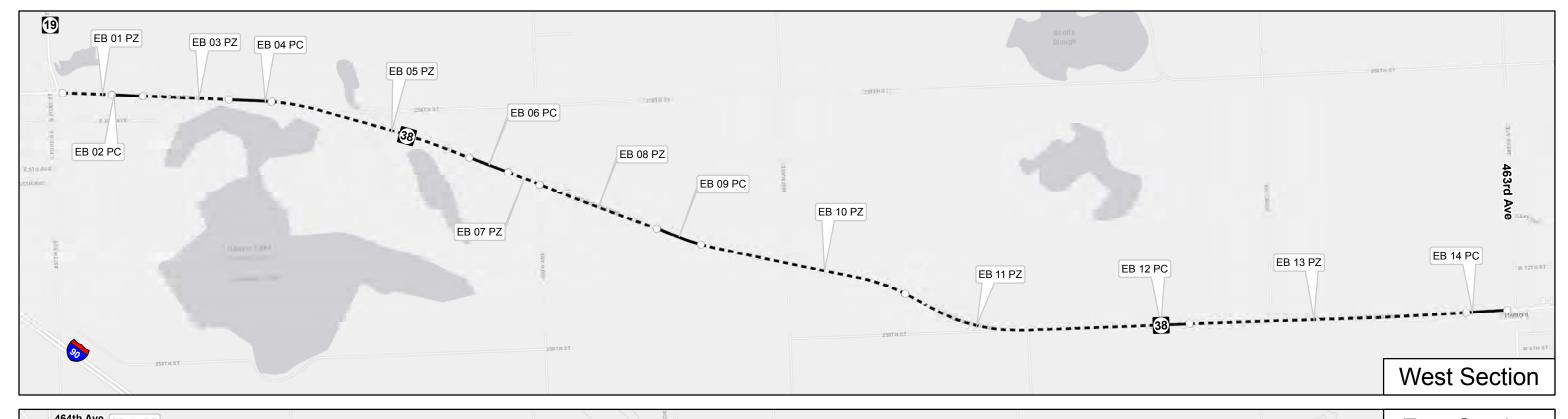
- SD Highway 38 & Western Avenue/463rd Avenue,
- SD Highway 38 & Main Avenue,
- SD Highway 38 & 2nd Street,
- SD Highway 38 & Railroad Street/464th Avenue,
- SD Highway 38 & 466th Avenue (North),
- SD Highway 38 & WB I-90 ramps,
- SD Highway 38 & EB I-90 ramps,
- SD Highway 38 & County Highway 139/469th Avenue, and
- SD Highway 38 & La Mesa Drive/470th Avenue,
- SD Highway 38 segment between Railroad Street/464th Street and EB I-90 ramps.
- SD Highway 38 segment between County Highway 139/469th Avenue and La Mesa Drive/470th Avenue.

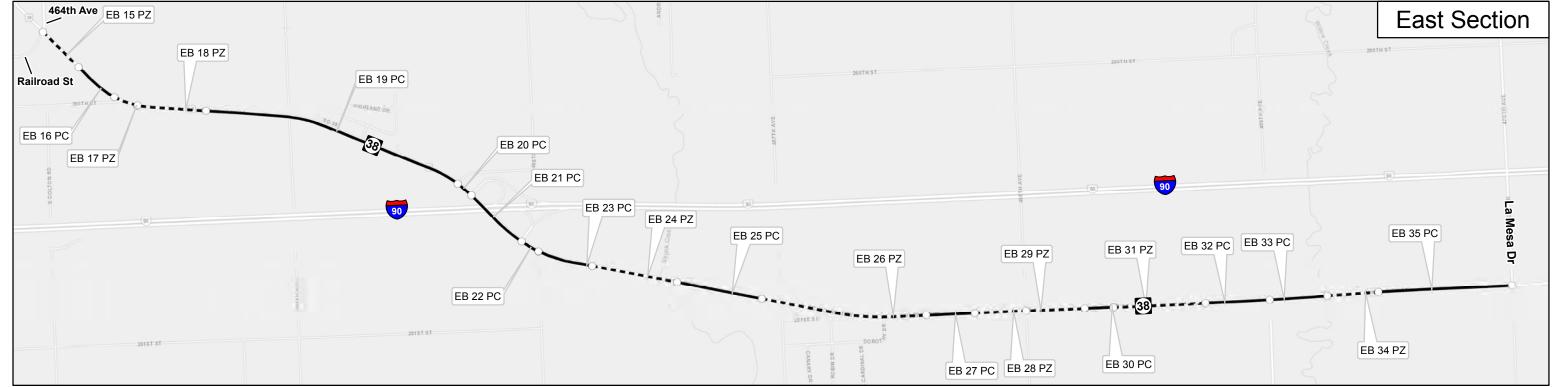
A predictive safety analysis of the SD Highway 38 study corridor was completed for the design year 2050 No-Build scenario. Along the SD 38 segments, there were a several intersections and highway segments that produced a high number of crash incidents that indicated a need for potential safety improvements.

The traffic safety analysis indicated that the following intersections and highway segments should be investigated for future safety improvements:

- SD Highway 38 & Western Avenue/463rd Avenue,
- SD Highway 38 & Main Avenue.
- SD Highway 38 & 2nd Street,
- SD Highway 38 & Railroad Street/464th Avenue,
- SD Highway 38 & Mickelson Road/260th Street, and
- SD Highway 38 & Marion Road.
- SD Highway 38 segment between 459th Street and Western Avenue/463rd Avenue,
- SD Highway 38 segment between Mickelson Road/260th Street and 466th Avenue (North),
- SD Highway 38 segment between 466th Avenue (South) and La Mesa Drive/470th Avenue.

Appendix A – Two-lane Highway Segmentation





Highway 38 Analysis Segments

Eastbound Lanes
FIGURE 6

Legend

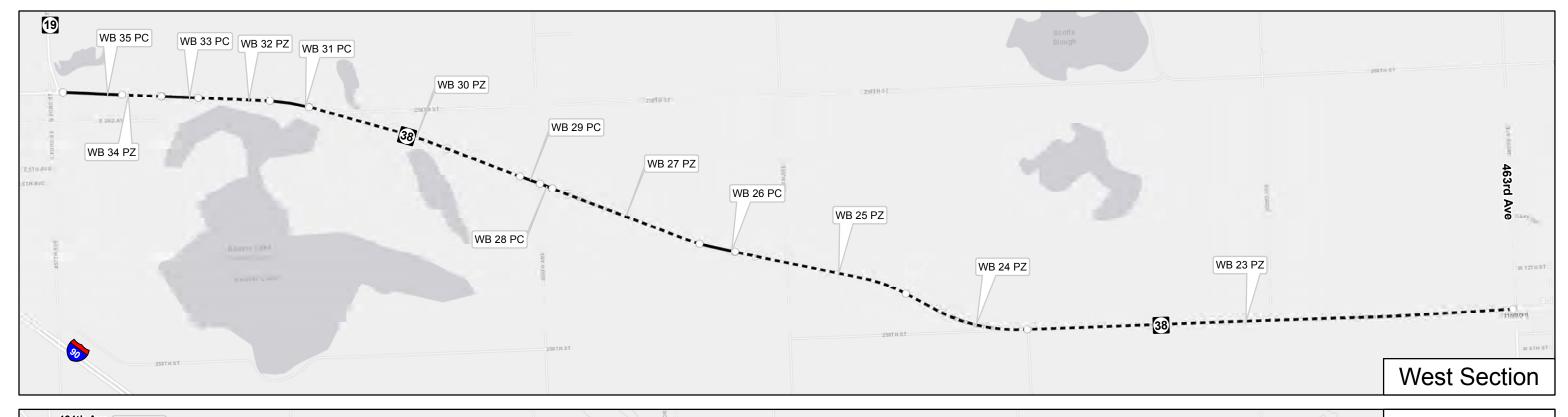
Analysis Segments

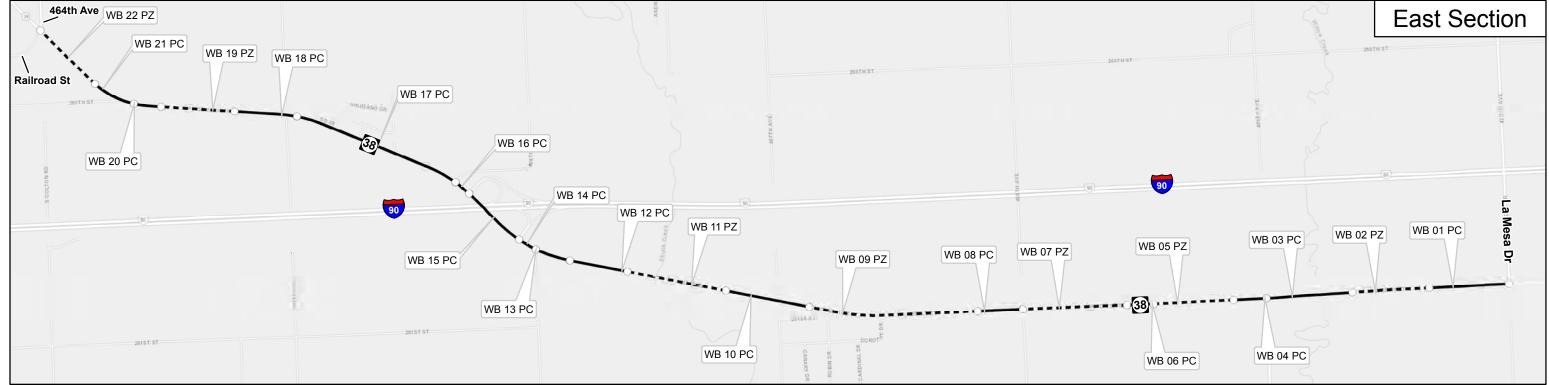
Passing ConstrainedPassing Zones











Highway 38 Analysis Segments

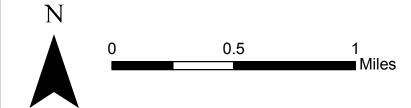
Westbound Lanes
FIGURE 6

Legend

Analysis Segments

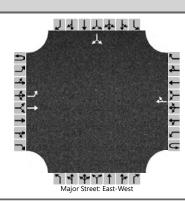
Passing ConstrainedPassing Zones





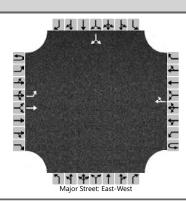


	HCS Two-Way Stop-Control Report											
General Information		Site Information										
Analyst	NM	Intersection	SD 38 & SD 19									
Agency/Co.	HRG	Jurisdiction	SDDOT									
Date Performed	5/4/2023	East/West Street	SD 38									
Analysis Year	2029	North/South Street	SD 19									
Time Analyzed	AM Peak	Peak Hour Factor	0.92									
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25									
Project Description	SD 38											



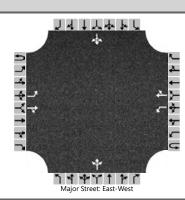
Vehicle Volumes and Adj	ustme	nts																
Approach		Eastb	ound			Westl	oound			North	bound			South	bound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R		
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12		
Number of Lanes	0	1	1	0	0	0	1	0		0	0	0		0	1	0		
Configuration		L	Т					TR							LR			
Volume (veh/h)		35	110				85	30						45		60		
Percent Heavy Vehicles (%)		30												9		11		
Proportion Time Blocked																		
Percent Grade (%)														0				
Right Turn Channelized																		
Median Type Storage				Undi	vided													
Critical and Follow-up H	eadwa	ys																
Base Critical Headway (sec)		4.1												7.1		6.2		
Critical Headway (sec)		4.40												6.49		6.31		
Base Follow-Up Headway (sec)		2.2												3.5		3.3		
Follow-Up Headway (sec)		2.47												3.58		3.40		
Delay, Queue Length, an	d Leve	l of S	ervice															
Flow Rate, v (veh/h)		38													114			
Capacity, c (veh/h)		1305													784			
v/c Ratio		0.03													0.15			
95% Queue Length, Q ₉₅ (veh)		0.1													0.5			
Control Delay (s/veh)		7.8													10.4			
Level of Service (LOS)		А													В			
Approach Delay (s/veh)		1	.9											10	0.4			
Approach LOS			A												В			

	HCS Two-Way Stop-Control Report											
General Information		Site Information										
Analyst	NM	Intersection	SD 38 & SD 19									
Agency/Co.	HRG	Jurisdiction	SDDOT									
Date Performed	5/4/2023	East/West Street	SD 38									
Analysis Year	2029	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											



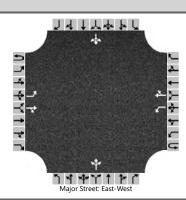
Vehicle Volumes and Ad	justme	nts															
Approach		Eastb	ound			Westl	bound			North	bound			South	bound		
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	1	1	0	0	0	1	0		0	0	0		0	1	0	
Configuration		L	T					TR							LR		
Volume (veh/h)		55	85				115	50						25		30	
Percent Heavy Vehicles (%)		2												10		14	
Proportion Time Blocked																	
Percent Grade (%)													0				
Right Turn Channelized																	
Median Type Storage				Undi	vided												
Critical and Follow-up H	eadwa	ys															
Base Critical Headway (sec)	T	4.1												7.1		6.2	
Critical Headway (sec)		4.12												6.50		6.34	
Base Follow-Up Headway (sec)		2.2												3.5		3.3	
Follow-Up Headway (sec)		2.22												3.59		3.43	
Delay, Queue Length, an	d Leve	l of Se	ervice														
Flow Rate, v (veh/h)	T	60													60		
Capacity, c (veh/h)		1396													715		
v/c Ratio		0.04													0.08		
95% Queue Length, Q ₉₅ (veh)		0.1													0.3		
Control Delay (s/veh)		7.7													10.5		
Level of Service (LOS)		А													В		
Approach Delay (s/veh)		3	.0							-			10.5				
Approach LOS		,	Д										В				

	HCS Two-Way Stop-Control Report												
General Information		Site Information											
Analyst	NM	Intersection	SD 38 & 459th										
Agency/Co.	HRG	Jurisdiction	SDDOT										
Date Performed	5/4/2023	East/West Street	SD 38										
Analysis Year	2029	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												



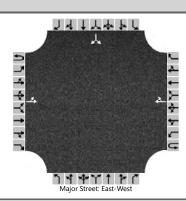
Vehicle Volumes and Adj	ustme	nts															
Approach		Eastb	ound			Westk	oound			North	bound			South	bound		
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0	
Configuration		L		TR		L		TR			LTR				LTR		
Volume (veh/h)		0	145	5		1	105	0		9	0	5		6	0	0	
Percent Heavy Vehicles (%)		3				3				13	0	0		0	0	0	
Proportion Time Blocked																	
Percent Grade (%)										()		0				
Right Turn Channelized																	
Median Type Storage		Undivided															
Critical and Follow-up He	eadwa	ys															
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	d Leve	l of Se	ervice														
Flow Rate, v (veh/h)		0				1					15				7		
Capacity, c (veh/h)		1469				1410					722				678		
v/c Ratio		0.00				0.00					0.02				0.01		
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.1				0.0		
Control Delay (s/veh)		7.5				7.6					10.1				10.4		
Level of Service (LOS)		Α				А					В				В		
Approach Delay (s/veh)		0	.0			0	.1			10).1			1().4		
Approach LOS		,	4			,	4				В			-	В		

HCS Two-Way Stop-Control Report												
General Information		Site Information										
Analyst	NM	Intersection	SD 38 & 459th									
Agency/Co.	HRG	Jurisdiction	SDDOT									
Date Performed	5/4/2023	East/West Street	SD 38									
Analysis Year	2029	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											



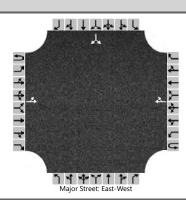
Vehicle Volumes and Adju	stme	nts																		
Approach		Eastb	ound			Westk	oound			North	bound			South	bound					
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R				
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12				
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0				
Configuration		L		TR		L		TR			LTR				LTR					
Volume (veh/h)		0	100	6		8	175	1		9	0	2		1	1	0				
Percent Heavy Vehicles (%)		0				0				13	0	0		0	100	0				
Proportion Time Blocked																				
Percent Grade (%)										()		0							
Right Turn Channelized																				
Median Type Storage		Undivided																		
Critical and Follow-up Hea	adwa	ys																		
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	Leve	of Se	ervice																	
Flow Rate, v (veh/h)		0				9					12				2					
Capacity, c (veh/h)		1394				1486					649				534					
v/c Ratio		0.00				0.01					0.02				0.00					
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.1				0.0					
Control Delay (s/veh)		7.6				7.4					10.6				11.8					
Level of Service (LOS)		А				Α					В				В					
Approach Delay (s/veh)		0	.0			0	.3			10).6		11.8							
Approach LOS		A	Α			A	Ą			E	3			[3	В				

HCS Two-Way Stop-Control Report												
General Information		Site Information										
Analyst	NM	Intersection	SD 38 & I-90 Expressway									
Agency/Co.	HRG	Jurisdiction	SDDOT									
Date Performed	5/4/2023	East/West Street	SD 38									
Analysis Year	2029	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											



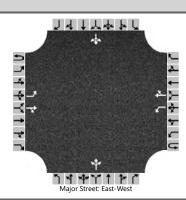
Approach		Eastb	ound			Westl	oound		Northbound				Southbound				
Movement	U	L	Т	R	U	L	T	R	U	L	Т	R	U	L	Т	R	
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0	
Configuration		LT						TR							LR		
Volume (veh/h)		0	155				115	0						0		0	
Percent Heavy Vehicles (%)		3												3		3	
Proportion Time Blocked																	
Percent Grade (%)													0				
Right Turn Channelized																	
Median Type Storage				Undi	vided												
Critical and Follow-up H	eadwa	ys															
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, an	d Leve	l of Se	ervice														
Flow Rate, v (veh/h)		0													0		
Capacity, c (veh/h)		1455													0		
v/c Ratio		0.00															
95% Queue Length, Q ₉₅ (veh)		0.0															
Control Delay (s/veh)		7.5	0.0														
Level of Service (LOS)		А	А														
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 Expressway									
Agency/Co.	HRG	Jurisdiction	SDDOT									
Date Performed	5/4/2023	East/West Street	SD 38									
Analysis Year	2029	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											



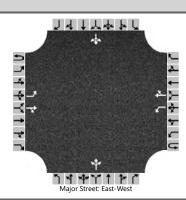
Vehicle Volumes and Adju	ıstme	nts																
Approach		Eastb	ound			Westl	oound			North	bound			South	bound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R		
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12		
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0		
Configuration		LT						TR							LR			
Volume (veh/h)		0	115				175	0						0		0		
Percent Heavy Vehicles (%)		3												3		3		
Proportion Time Blocked																		
Percent Grade (%)														(0			
Right Turn Channelized																		
Median Type Storage		Undivided																
Critical and Follow-up He	adwa	ys																
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	Leve	l of Se	ervice															
Flow Rate, v (veh/h)		0													0			
Capacity, c (veh/h)		1378													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)		Α	Α															
Approach Delay (s/veh)		0	.0															
Approach LOS			4															

	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	5/4/2023	East/West Street	SD 38										
Analysis Year	2029	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												



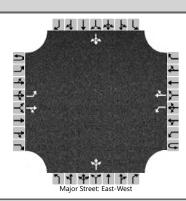
Vehicle Volumes and Adj	ustme	nts															
Approach		Eastb	ound			Westl	ound			North	bound			South	bound		
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0	
Configuration		L		TR		L		TR			LTR				LTR		
Volume (veh/h)		6	120	55		40	80	20		40	50	60		30	50	3	
Percent Heavy Vehicles (%)		3				3				14	2	6		0	7	33	
Proportion Time Blocked																	
Percent Grade (%)										(0		0				
Right Turn Channelized																	
Median Type Storage				Undi	vided												
Critical and Follow-up H	eadwa	ys															
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, an	d Leve	l of Se	ervice														
Flow Rate, v (veh/h)		7				43					163				90		
Capacity, c (veh/h)		1476				1378					615				514		
v/c Ratio		0.00				0.03					0.26				0.18		
95% Queue Length, Q ₉₅ (veh)		0.0				0.1					1.1				0.6		
Control Delay (s/veh)		7.5				7.7					12.9				13.5		
Level of Service (LOS)		А				Α					В				В		
Approach Delay (s/veh)		0.2 2.2								12	2.9		13.5				
Approach LOS		,	4			,	4		В В								

	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	5/4/2023	East/West Street	SD 38										
Analysis Year	2029	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												



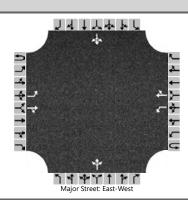
Vehicle Volumes and Adj	ustme	nts															
Approach		Eastb	ound			Westk	oound			North	bound			South	bound		
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0	
Configuration		L		TR		L		TR			LTR				LTR		
Volume (veh/h)		10	85	35		80	135	40		45	55	100		35	65	15	
Percent Heavy Vehicles (%)		22				3				0	11	4		0	4	0	
Proportion Time Blocked																	
Percent Grade (%)											0				0		
Right Turn Channelized																	
Median Type Storage				Undi	vided												
Critical and Follow-up Ho	eadwa	ys															
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	d Leve	l of Se	ervice														
Flow Rate, v (veh/h)		11				87					217				125		
Capacity, c (veh/h)		1272				1449					568				437		
v/c Ratio		0.01				0.06					0.38				0.29		
95% Queue Length, Q ₉₅ (veh)		0.0				0.2					1.8				1.2		
Control Delay (s/veh)		7.9				7.6					15.2				16.5		
Level of Service (LOS)		А				Α					С				С		
Approach Delay (s/veh)		0.6 2.4							15.2				16.5				
Approach LOS		A A							C C								

	HCS Two-Way Stop	-Control Report								
General Information		Site Information								
Analyst	NM	Intersection	SD 38 & Main Ave							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/4/2023	East/West Street	SD 38							
Analysis Year	2029	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									



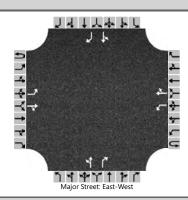
Vehicle Volumes and Ad	justme	nts														
Approach		Eastb	ound			Westk	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0
Configuration		L		TR		L		TR			LTR				LTR	
Volume (veh/h)		1	175	20		25	135	15		25	3	60		5	7	2
Percent Heavy Vehicles (%)		0				11				5	0	2		0	17	0
Proportion Time Blocked																
Percent Grade (%)										()				0	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
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, an	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)	Τ	1				27					96				15	
Capacity, c (veh/h)		1428				1307					706				529	
v/c Ratio		0.00				0.02					0.14				0.03	
95% Queue Length, Q ₉₅ (veh)		0.0				0.1					0.5				0.1	
Control Delay (s/veh)		7.5				7.8					10.9				12.0	
Level of Service (LOS)		А				Α					В				В	
Approach Delay (s/veh)		0.0 1.1								10).9		12.0			
Approach LOS		,	Д			,	4				В		В			

	HCS Two-Way Stop	-Control Report								
General Information		Site Information								
Analyst	NM	Intersection	SD 38 & Main Ave							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/4/2023	East/West Street	SD 38							
Analysis Year	2029	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									



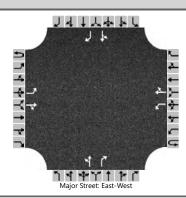
Vehicle Volumes and Adju	ustme	nts															
Approach		Eastb	ound			Westl	oound			North	bound			South	bound		
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0	
Configuration		L		TR		L		TR			LTR				LTR		
Volume (veh/h)		7	175	30		45	225	40		20	15	40		25	20	5	
Percent Heavy Vehicles (%)		0				0				5	0	0		0	0	0	
Proportion Time Blocked																	
Percent Grade (%)										()		0				
Right Turn Channelized																	
Median Type Storage				Undi	vided												
Critical and Follow-up He	eadwa	ys															
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	d Leve	l of Se	ervice														
Flow Rate, v (veh/h)		8				49					82				54		
Capacity, c (veh/h)		1286				1358					544				406		
v/c Ratio		0.01				0.04					0.15				0.13		
95% Queue Length, Q ₉₅ (veh)		0.0				0.1					0.5				0.5		
Control Delay (s/veh)		7.8				7.7					12.8				15.2		
Level of Service (LOS)		А				Α					В				С		
Approach Delay (s/veh)	0.3 1.1							12.8				15.2					
Approach LOS		A A							В					С			

	HCS Two-Way Stop	-Control Report								
General Information		Site Information								
Analyst	NM	Intersection	SD 38 & Vandemark Ave							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/4/2023	East/West Street	SD 38							
Analysis Year	2029	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									



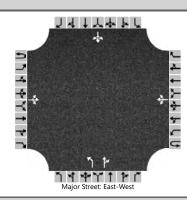
Vehicle Volumes and Adj	ustme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	1		0	1	1
Configuration		L		TR		L		TR		LT		R		LT		R
Volume (veh/h)		20	260	7		7	180	20		6	4	9		30	1	15
Percent Heavy Vehicles (%)		0				0				40	0	0		0	0	7
Proportion Time Blocked																
Percent Grade (%)										()			(0	
Right Turn Channelized										N	lo			Ν	lo	
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)	Т	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, an	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)	T	22				8				11		10		34		16
Capacity, c (veh/h)		1364				1283				399		757		429		821
v/c Ratio		0.02				0.01				0.03		0.01		0.08		0.02
95% Queue Length, Q ₉₅ (veh)		0.0				0.0				0.1		0.0		0.3		0.1
Control Delay (s/veh)		7.7				7.8				14.3		9.8		14.1		9.5
Level of Service (LOS)		А				А				В		А		В		А
Approach Delay (s/veh)	0.5 0.3				.3		12.2					12.6				
Approach LOS		A A							ВВВ				В			

	HCS Two-Way Stop	-Control Report								
General Information		Site Information								
Analyst	NM	Intersection	SD 38 & Vandemark Ave							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/4/2023	East/West Street	SD 38							
Analysis Year	2029	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		-							



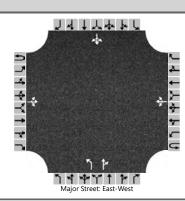
Vehicle Volumes and Ad	justme	nts														
Approach	Τ	Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	1		0	1	1
Configuration		L		TR		L		TR		LT		R		LT		R
Volume (veh/h)		15	185	2		5	330	30		0	0	8		20	0	20
Percent Heavy Vehicles (%)		0				0				0	0	100		0	0	7
Proportion Time Blocked																
Percent Grade (%)											0				0	
Right Turn Channelized										N	lo			Ν	lo	
Median Type Storage				Undi	ivided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)	Τ	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, an	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)	T	16				5				0		9		22		22
Capacity, c (veh/h)		1178				1381				0		642		391		660
v/c Ratio		0.01				0.00						0.01		0.06		0.03
95% Queue Length, Q ₉₅ (veh)		0.0				0.0						0.0		0.2		0.1
Control Delay (s/veh)		8.1				7.6						10.7		14.7		10.6
Level of Service (LOS)		А				А						В		В		В
Approach Delay (s/veh)	0.6 0.1 12.7									2.7	_					
Approach LOS		,	A				Ą							I	В	

	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	NM	Intersection	SD 38 & 2nd St
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	5/4/2023	East/West Street	SD 38
Analysis Year	2029	North/South Street	2nd St
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 Adj	ustme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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		1	1	0		0	1	0
Configuration			LTR				LTR			L		TR			LTR	
Volume (veh/h)		10	230	7		65	155	10		4	15	105		25	35	15
Percent Heavy Vehicles (%)		10				16				33	8	5		0	4	8
Proportion Time Blocked																
Percent Grade (%)										()			(0	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)	Т	4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.20				4.26				7.43	6.58	6.25		7.10	6.54	6.28
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)		2.29				2.34				3.80	4.07	3.35		3.50	4.04	3.37
Delay, Queue Length, an	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)	T	11				71				4		130			82	
Capacity, c (veh/h)		1323				1230				303		683			392	
v/c Ratio		0.01				0.06				0.01		0.19			0.21	
95% Queue Length, Q ₉₅ (veh)		0.0				0.2			Ì	0.0		0.7			0.8	
Control Delay (s/veh)		7.7	0.1	0.1		8.1	0.5	0.5		17.0		11.5			16.6	
Level of Service (LOS)		А	А	А		Α	Α	Α		С		В			С	
Approach Delay (s/veh)		0.4			2.7			11.7				16.6				
Approach LOS		А				1	4		В С							

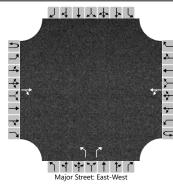
	HCS Two-Way Stop	p-Control Report							
General Information		Site Information							
Analyst	NM	Intersection	SD 38 & 2nd St						
Agency/Co.	HRG	Jurisdiction	SDDOT						
Date Performed	5/4/2023	East/West Street	SD 38						
Analysis Year	2029	North/South Street	2nd St						
Time Analyzed	PM Peak	Peak Hour Factor	0.92						
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25						
Project Description	SD 38								



Vehicle Volumes and Adj	ustme	nts														
Approach	T	Eastb	oound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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		1	1	0		0	1	0
Configuration			LTR				LTR			L		TR			LTR	
Volume (veh/h)		20	175	6		90	345	15		9	20	45		10	20	15
Percent Heavy Vehicles (%)		0				0				0	0	6		0	6	0
Proportion Time Blocked																
Percent Grade (%)										()				0	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
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	6.26		7.10	6.56	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	3.35		3.50	4.05	3.30
Delay, Queue Length, an	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)		22				98				10		71			49	
Capacity, c (veh/h)		1155				1388				238		508			315	
v/c Ratio		0.02				0.07				0.04		0.14			0.16	
95% Queue Length, Q ₉₅ (veh)		0.1				0.2				0.1		0.5			0.5	
Control Delay (s/veh)		8.2	0.2	0.2		7.8	0.7	0.7		20.7		13.2			18.5	
Level of Service (LOS)		А	А	Α		Α	Α	А		С		В			С	
Approach Delay (s/veh)		1	.0			2	.1			14	1.1			18	8.5	
Approach LOS		,	A			,	4				В			(C	

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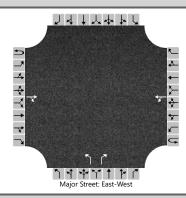
	HCS Two-Way Stop	p-Control Report								
General Information		Site Information								
Analyst	NM	Intersection	SD 38 & West Central HS Entrance							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/5/2023	East/West Street	SD 38							
Analysis Year	2029	North/South Street	West Central HS Entrance							
Time Analyzed	AM Peak	Peak Hour Factor	0.92							
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25							
Project Description	SD 38									



Vehicle Volumes and Ad	<u> </u>												Southbound					
Approach	<u> </u>	Eastb	ound			Westk	oound			North	bound			South	bound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
Priority	10	1	2	3	4U	4	5	6		7	8	9		10	11	12		
Number of Lanes	0	0	1	0	0	0	1	0		1	0	1		0	0	0		
Configuration				TR		LT				L		R						
Volume (veh/h)			300	60		35	215			25		35						
Percent Heavy Vehicles (%)						0				0		0						
Proportion Time Blocked																		
Percent Grade (%)										()							
Right Turn Channelized										N	lo							
Median Type Storage				Undi	vided													
Critical and Follow-up H	eadwa	ys																
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, an	d Leve	l of S	ervice															
Flow Rate, v (veh/h)						38				27		38						
Capacity, c (veh/h)						1178				410		690						
v/c Ratio						0.03				0.07		0.06						
95% Queue Length, Q ₉₅ (veh)						0.1				0.2		0.2						
Control Delay (s/veh)						8.2	0.3			14.4		10.5						
Level of Service (LOS)						А	Α			В		В						
Approach Delay (s/veh)						1.4				12.1								
Approach LOS						A	4			[3							

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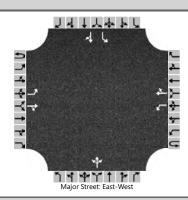
	HCS Two-Way Stop	p-Control Report							
General Information		Site Information							
Analyst	NM	Intersection	SD 38 & West Central HS Entrance						
Agency/Co.	HRG	Jurisdiction	SDDOT						
Date Performed	5/5/2023	East/West Street	SD 38						
Analysis Year	2029	North/South Street	West Central HS Entrance						
Time Analyzed	PM Peak	Peak Hour Factor	0.92						
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25						
Project Description	SD 38								



Vehicle Volumes and Adju	ustme	stments															
Approach		Eastb	ound			West	oound			North	bound			South	bound		
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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		1	0	1		0	0	0	
Configuration	1			TR		LT				L		R					
Volume (veh/h)	1		225	2		2	440			10		10					
Percent Heavy Vehicles (%)	1					0				0		0					
Proportion Time Blocked	1																
Percent Grade (%)	1									()						
Right Turn Channelized	1									Ν	lo						
Median Type Storage	1			Undi	vided												
Critical and Follow-up He	eadwa	ys															
Base Critical Headway (sec)	1					4.1				7.1		6.2					
Critical Headway (sec)						4.10				6.40		6.20					
Base Follow-Up Headway (sec)	1					2.2				3.5		3.3					
Follow-Up Headway (sec)	1					2.20				3.50		3.30					
Delay, Queue Length, and	d Leve	l of Se	ervice														
Flow Rate, v (veh/h)	1					2				11		11					
Capacity, c (veh/h)	1					1331				392		798					
v/c Ratio	1					0.00				0.03		0.01					
95% Queue Length, Q ₉₅ (veh)						0.0				0.1		0.0					
Control Delay (s/veh)						7.7	0.0			14.4		9.6					
Level of Service (LOS)						А	А			В		А					
Approach Delay (s/veh)						0.1				12.0							
Approach LOS	1					А				В							

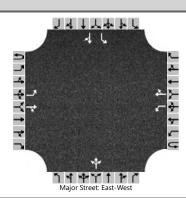
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	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	NM	Intersection	SD 38 & Railroad Street
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	5/4/2023	East/West Street	SD 38
Analysis Year	2029	North/South Street	Railroad St
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		



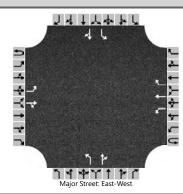
Vehicle Volumes and Adj	ustme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		1	1	0
Configuration		L		TR		L		TR			LTR			L		TR
Volume (veh/h)		2	330	0		10	205	65		1	0	20		100	2	4
Percent Heavy Vehicles (%)		0				0				0	0	15		0	0	0
Proportion Time Blocked																
Percent Grade (%)										()			()	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
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, an	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)		2				11					23			109		7
Capacity, c (veh/h)		1280				1211					638			372		587
v/c Ratio		0.00				0.01					0.04			0.29		0.01
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.1			1.2		0.0
Control Delay (s/veh)		7.8				8.0					10.9			18.6		11.2
Level of Service (LOS)		А				А					В			С		В
Approach Delay (s/veh)		0.0			0.3			10.9				18.2				
Approach LOS		A A						В					С			

	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	NM	Intersection	SD 38 & Railroad Street
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	5/4/2023	East/West Street	SD 38
Analysis Year	2029	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		



Vehicle Volumes and Adju	ıstme	nts														
Approach		Eastb	ound			Westk	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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)		2	250	2		10	400	105		1	1	10		60	6	4
Percent Heavy Vehicles (%)		0				40				0	0	15		5	0	0
Proportion Time Blocked																
Percent Grade (%)										()			(0	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
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	Leve	l of Se	ervice													
Flow Rate, v (veh/h)		2				11					13			65		11
Capacity, c (veh/h)		1031				1099					599			295		390
v/c Ratio		0.00				0.01					0.02			0.22		0.03
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.1			0.8		0.1
Control Delay (s/veh)		8.5				8.3					11.1			20.6		14.5
Level of Service (LOS)		Α				Α					В			С		В
Approach Delay (s/veh)	0.1 0.2					.2			11	1.1		19.8				
Approach LOS		A A							В С							

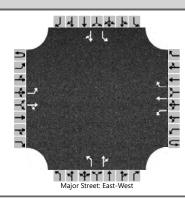
	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	NM	Intersection	SD 38 & 260th St (Mickelson Rd)
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	5/4/2023	East/West Street	SD 38
Analysis Year	2029	North/South Street	260th St (Mikelson Rd)
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		



Vehicle Volumes and Ad	justme	nts														
Approach		Eastb	oound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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		1	1	0		1	1	0
Configuration		L		TR		L	Т	R		L		TR		L		TR
Volume (veh/h)		55	355	25		30	210	75		30	25	70		100	20	80
Percent Heavy Vehicles (%)		3				26				4	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%))			. (0	
Right Turn Channelized						Ν	lo									
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)	Т	4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.36				7.14	6.53	6.23		7.13	6.53	6.23
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				2.43				3.54	4.03	3.33		3.53	4.03	3.33
Delay, Queue Length, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)	Т	60				33				33		103		109		109
Capacity, c (veh/h)		1245				1028				222		463		217		589
v/c Ratio		0.05				0.03				0.15		0.22		0.50		0.18
95% Queue Length, Q ₉₅ (veh)		0.2				0.1				0.5		0.8		2.5		0.7
Control Delay (s/veh)		8.0				8.6				24.0		15.0		37.1		12.5
Level of Service (LOS)		А				А				С		В		Е		В
Approach Delay (s/veh)		1	.0			0	.8	•		17	7.2			24	4.8	-
Approach LOS			A			,	4			(C			(С	

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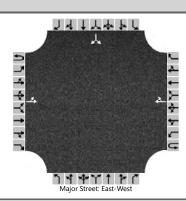
	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	NM	Intersection	SD 38 & 260th St (Mickelson Rd)
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	5/4/2023	East/West Street	SD 38
Analysis Year	2029	North/South Street	260th St (Mikelson Rd)
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		



Vehicle Volumes and Ad	justine															
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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		1	1	0		1	1	0
Configuration		L		TR		L	Т	R		L		TR		L		TR
Volume (veh/h)		75	205	15		90	445	105		10	30	30		90	15	65
Percent Heavy Vehicles (%)		3				1				0	3	0		3	3	3
Proportion Time Blocked																
Percent Grade (%)										()			(0	
Right Turn Channelized						Ν	lo									
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
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				4.11				7.10	6.53	6.20		7.13	6.53	6.23
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				2.21				3.50	4.03	3.30		3.53	4.03	3.33
Delay, Queue Length, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)	T	82				98				11		65		98		87
Capacity, c (veh/h)		974				1334				136		266		130		414
v/c Ratio		0.08				0.07				0.08		0.25		0.75		0.21
95% Queue Length, Q ₉₅ (veh)		0.3				0.2				0.3		0.9		4.4		0.8
Control Delay (s/veh)		9.0				7.9				33.8		22.9		88.8		16.0
Level of Service (LOS)		А				А				D		С		F		С
Approach Delay (s/veh)	2.3				1.1				24.4				54.5			
Approach LOS			Α				4			(F	

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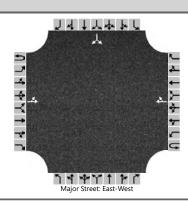
	HCS Two-Way Stop	-Control Report								
General Information		Site Information								
Analyst	NM	Intersection	SD38 & 466th Ave							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/4/2023	East/West Street	SD 38							
Analysis Year	2029	North/South Street	466th Ave							
Time Analyzed	AM Peak	Peak Hour Factor	0.92							
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25							
Project Description	SD 38									



Vehicle Volumes and Adj	justme	nts														
Approach		Eastb	ound			Westl	bound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		1	520				315	4						2		0
Percent Heavy Vehicles (%)		0												50		3
Proportion Time Blocked																
Percent Grade (%)														-	0	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.10												6.90		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												3.95		3.33
Delay, Queue Length, an	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)		1													2	
Capacity, c (veh/h)		1223													251	
v/c Ratio		0.00													0.01	
95% Queue Length, Q ₉₅ (veh)		0.0													0.0	
Control Delay (s/veh)		7.9	0.0												19.5	
Level of Service (LOS)		А	А												С	
Approach Delay (s/veh)		0.0												19.5		
Approach LOS		,	Ą												С	

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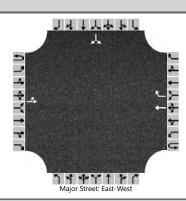
	HCS Two-Way Stop	-Control Report								
General Information		Site Information								
Analyst	NM	Intersection	SD38 & 466th Ave							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/4/2023	East/West Street	SD 38							
Analysis Year	2029	North/South Street	466th Ave							
Time Analyzed	PM Peak	Peak Hour Factor	0.92							
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25							
Project Description	SD 38									



Vehicle Volumes and Adj	justme	nts														
Approach		Eastk	oound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		0	325				650	1						4		1
Percent Heavy Vehicles (%)		0												33		0
Proportion Time Blocked																
Percent Grade (%)															0	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.10												6.73		6.20
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												3.80		3.30
Delay, Queue Length, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)		0													5	
Capacity, c (veh/h)		900													241	
v/c Ratio		0.00													0.02	
95% Queue Length, Q ₉₅ (veh)		0.0													0.1	
Control Delay (s/veh)		9.0	0.0												20.3	
Level of Service (LOS)		А	А												С	
Approach Delay (s/veh)		0.0						•					20.3			
Approach LOS		A												(С	

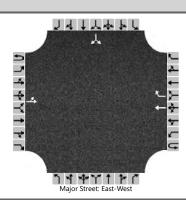
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	HCS Two-Way Stop	-Control Report								
General Information		Site Information								
Analyst	NM	Intersection	SD 38 & I-90 WB Terminal							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/4/2023	East/West Street	SD 38							
Analysis Year	2029	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									



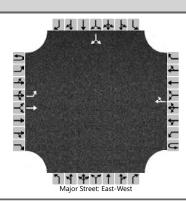
Vehicle Volumes and Adj	justme	nts														
Approach		Eastk	oound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	1		0	0	0		0	1	0
Configuration		LT					Т	R							LR	
Volume (veh/h)		35	515				185	15						10		140
Percent Heavy Vehicles (%)		0												56		12
Proportion Time Blocked																
Percent Grade (%)															0	
Right Turn Channelized						N	10									
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.10												6.96		6.32
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												4.00		3.41
Delay, Queue Length, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)		38													163	
Capacity, c (veh/h)		1364													715	
v/c Ratio		0.03													0.23	
95% Queue Length, Q ₉₅ (veh)		0.1													0.9	
Control Delay (s/veh)		7.7	0.3												11.5	
Level of Service (LOS)		А	А												В	
Approach Delay (s/veh)		C	.8										11.5			
Approach LOS			A										В			

	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	5/4/2023	East/West Street	SD 38							
Analysis Year	2029	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									



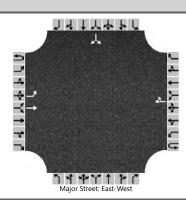
Vehicle Volumes and Adj	ustme	nts															
Approach		Eastb	ound			Westl	oound			North	bound			South	bound		
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	0	1	1		0	0	0		0	1	0	
Configuration		LT					Т	R							LR		
Volume (veh/h)		25	300				300	25						20		355	
Percent Heavy Vehicles (%)		0												6		2	
Proportion Time Blocked																	
Percent Grade (%)														(0		
Right Turn Channelized						Ν	lo										
Median Type Storage				Undi	vided												
Critical and Follow-up He	eadwa	ys															
Base Critical Headway (sec)		4.1												7.1		6.2	
Critical Headway (sec)		4.10												6.46		6.22	
Base Follow-Up Headway (sec)		2.2												3.5		3.3	
Follow-Up Headway (sec)		2.20												3.55		3.32	
Delay, Queue Length, and	d Leve	l of Se	ervice														
Flow Rate, v (veh/h)		27													408		
Capacity, c (veh/h)		1217													684		
v/c Ratio		0.02													0.60		
95% Queue Length, Q ₉₅ (veh)		0.1													4.0		
Control Delay (s/veh)		8.0	0.2												17.7		
Level of Service (LOS)		А	Α												С		
Approach Delay (s/veh)	0.8											17.7					
Approach LOS		А												С			

	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	5/4/2023	East/West Street	SD 38							
Analysis Year	2029	North/South Street	I-90 EB Ramp 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 Adj	justme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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	0		0	0	0		0	1	0
Configuration		L	Т					TR							LR	
Volume (veh/h)		305	220				170	15						4		25
Percent Heavy Vehicles (%)		1												33		3
Proportion Time Blocked																
Percent Grade (%)												-		-	0	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.11												6.73		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.21												3.80		3.33
Delay, Queue Length, an	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)		332													32	
Capacity, c (veh/h)		1377													527	
v/c Ratio		0.24													0.06	
95% Queue Length, Q ₉₅ (veh)		0.9													0.2	
Control Delay (s/veh)		8.4													12.3	
Level of Service (LOS)		А													В	
Approach Delay (s/veh)		4	.9							-				12	2.3	-
Approach LOS		,	A						Ì						В	

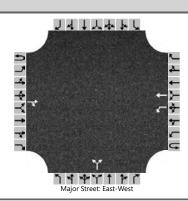
	HCS Two-Way Stop	-Control Report								
General Information		Site Information								
Analyst	NM	Intersection	SD 38 & I-90 EB Ramp Terminal							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/4/2023	East/West Street	SD 38							
Analysis Year	2029	North/South Street	I-90 EB Ramp Terminal							
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 Adj	justme	nts														
Approach		Eastb	ound			Westl	bound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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	0		0	0	0		0	1	0
Configuration		L	Т					TR							LR	
Volume (veh/h)		140	185				290	20						25		35
Percent Heavy Vehicles (%)		12												36		3
Proportion Time Blocked																
Percent Grade (%)												-		-	0	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)	T	4.1												7.1		6.2
Critical Headway (sec)		4.22												6.76		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.31												3.82		3.33
Delay, Queue Length, an	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)	T	152													65	
Capacity, c (veh/h)		1168													412	
v/c Ratio		0.13													0.16	
95% Queue Length, Q ₉₅ (veh)		0.4													0.6	
Control Delay (s/veh)		8.5													15.4	
Level of Service (LOS)		А													С	
Approach Delay (s/veh)	3.7 15.4									-						
Approach LOS		,	A											(С	

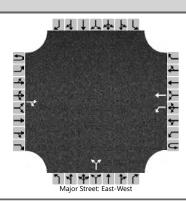
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	HCS Two-Way Stop	-Control Report								
General Information		Site Information								
Analyst	NM	Intersection	SD 38 & 466th Ave (South)							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/5/2023	East/West Street	SD 38							
Analysis Year	2029	North/South Street	466th Ave (South)							
Time Analyzed	AM Peak	Peak Hour Factor	0.92							
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25							
Project Description	SD 38									



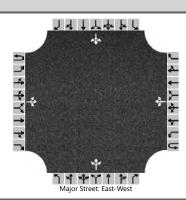
Vehicle Volumes and Adju	ıstme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	1	1	0		0	1	0		0	0	0
Configuration				TR		L	Т				LR					
Volume (veh/h)			215	15		10	170			20		10				
Percent Heavy Vehicles (%)						20				33		60				
Proportion Time Blocked																
Percent Grade (%)										()					
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.30				6.73		6.80				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.38				3.80		3.84				
Delay, Queue Length, and	l Leve	l of Se	ervice													
Flow Rate, v (veh/h)						11					33					
Capacity, c (veh/h)						1217					555					
v/c Ratio						0.01					0.06					
95% Queue Length, Q ₉₅ (veh)						0.0					0.2					
Control Delay (s/veh)						8.0					11.9					
Level of Service (LOS)						Α					В					
Approach Delay (s/veh)	0.4								11.9							
Approach LOS						,	4			E	3					

	HCS Two-Way Stop	-Control Report							
General Information		Site Information							
Analyst	NM	Intersection	SD 38 & 466th Ave (South)						
Agency/Co.	HRG	Jurisdiction	SDDOT						
Date Performed	5/5/2023	East/West Street	SD 38						
Analysis Year	2029	North/South Street	466th Ave (South)						
Time Analyzed	PM Peak	Peak Hour Factor	0.92						
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25						
Project Description	SD 38								



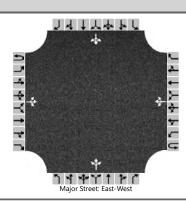
Vehicle Volumes and Adj	justme	nts														
Approach	Т	Eastk	oound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	1	1	0		0	1	0		0	0	0
Configuration	T			TR		L	Т				LR					
Volume (veh/h)			195	15		10	280			30		15				
Percent Heavy Vehicles (%)	T					11				20		0				
Proportion Time Blocked																
Percent Grade (%)	T									()					
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)	Т					4.1				7.1		6.2				
Critical Headway (sec)						4.21				6.60		6.20				
Base Follow-Up Headway (sec)	T					2.2				3.5		3.3				
Follow-Up Headway (sec)						2.30				3.68		3.30				
Delay, Queue Length, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)	Т					11					49					
Capacity, c (veh/h)						1289					544					
v/c Ratio	T					0.01					0.09					
95% Queue Length, Q ₉₅ (veh)						0.0					0.3					
Control Delay (s/veh)						7.8					12.3					
Level of Service (LOS)						Α					В					
Approach Delay (s/veh)		0.3								12.3						
Approach LOS							4		Î	ı	В					

	HCS Two-Way Stop	-Control Report								
General Information		Site Information								
Analyst	NM	Intersection	SD 38 & 468th Avenue							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/5/2023	East/West Street	SD 38							
Analysis Year	2029	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									



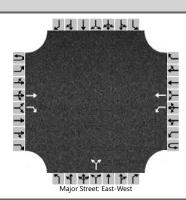
Vehicle Volumes and Adju	stme	nts														
Approach		Eastb	ound			Westk	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		2	250	0		0	160	35		1	1	0		35	0	5
Percent Heavy Vehicles (%)		0				0				0	100	0		4	0	50
Proportion Time Blocked																
Percent Grade (%)										()			()	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
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	Leve	of Se	ervice													
Flow Rate, v (veh/h)		2				0					2				43	
Capacity, c (veh/h)		1370				1303					427				520	
v/c Ratio		0.00				0.00					0.01				0.08	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.0				0.3	
Control Delay (s/veh)		7.6	0.0	0.0		7.8	0.0	0.0			13.5				12.6	
Level of Service (LOS)		А	Α	Α		Α	А	Α			В				В	
Approach Delay (s/veh)	0.1 0.0							13.5				12.6				
Approach LOS		A	4			A	4		ВВВ							

	HCS Two-Way Stop	-Control Report							
General Information		Site Information							
Analyst	NM	Intersection	SD 38 & 468th Avenue						
Agency/Co.	HRG	Jurisdiction	SDDOT						
Date Performed	5/5/2023	East/West Street	SD 38						
Analysis Year	2029	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								



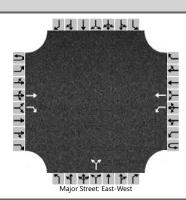
Vehicle Volumes and Adj	ustme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	215	1		4	290	40		1	1	0		35	2	2
Percent Heavy Vehicles (%)		0				0				0	0	0		4	100	50
Proportion Time Blocked																
Percent Grade (%)										()				0	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
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, an	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)		0				4					2				42	
Capacity, c (veh/h)		1211				1344					425				420	
v/c Ratio		0.00				0.00					0.01				0.10	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.0				0.3	
Control Delay (s/veh)		8.0	0.0	0.0		7.7	0.0	0.0			13.5				14.5	
Level of Service (LOS)		А	А	А		Α	Α	А			В				В	
Approach Delay (s/veh)		0	.0			0	.1			13	3.5			14	4.5	
Approach LOS		,	Ą				4				В				В	

HCS Two-Way Stop-Control Report										
General Information		Site Information								
Analyst	NM	Intersection	SD 38 & 469th Ave							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/5/2023	East/West Street	SD 38							
Analysis Year	2029	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									



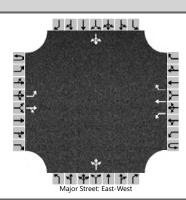
Vehicle Volumes and Ad	justme	nts														
Approach	T	Eastk	oound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	1	1	0		0	1	0		0	0	0
Configuration			T	R		L	Т				LR					
Volume (veh/h)			230	50		50	115			75		190				
Percent Heavy Vehicles (%)						5				13		3				
Proportion Time Blocked																
Percent Grade (%)										(0					
Right Turn Channelized		N	10													
Median Type Storage				Undi	ivided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.15				6.53		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.25				3.62		3.33				
Delay, Queue Length, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)	T					54					288					
Capacity, c (veh/h)						1240					676					
v/c Ratio						0.04					0.43					
95% Queue Length, Q ₉₅ (veh)						0.1					2.1					
Control Delay (s/veh)						8.0					14.2					
Level of Service (LOS)						Α					В					
Approach Delay (s/veh)						2.4		14.2								
Approach LOS						A					В					

HCS Two-Way Stop-Control Report										
General Information		Site Information								
Analyst	NM	Intersection	SD 38 & 469th Ave							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/5/2023	East/West Street	SD 38							
Analysis Year	2029	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									



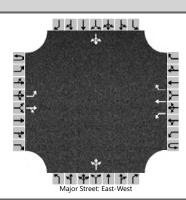
Vehicle Volumes and Ad	justme	nts														
Approach	T	Eastk	oound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	1	1	0		0	1	0		0	0	0
Configuration			Т	R		L	Т				LR					
Volume (veh/h)			170	80		190	265			65		80				
Percent Heavy Vehicles (%)						5				2		15				
Proportion Time Blocked																
Percent Grade (%))					
Right Turn Channelized		١	10													
Median Type Storage				Undi	ivided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.15				6.42		6.35				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.25				3.52		3.44				
Delay, Queue Length, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)	T					207					158					
Capacity, c (veh/h)						1274					423					
v/c Ratio						0.16					0.37					
95% Queue Length, Q ₉₅ (veh)						0.6					1.7					
Control Delay (s/veh)						8.4					18.5					
Level of Service (LOS)						А					С					
Approach Delay (s/veh)						3.5		18.5								
Approach LOS						A			С				Ì			

HCS Two-Way Stop-Control Report										
General Information		Site Information								
Analyst	NM	Intersection	SD 38 & La Mesa							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/5/2023	East/West Street	SD 38							
Analysis Year	2029	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									



Vehicle Volumes and Adju	ıstme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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		0	1	0
Configuration		L		TR		L	Т	R			LTR				LTR	
Volume (veh/h)		20	480	2		0	165	10		0	10	4		50	2	20
Percent Heavy Vehicles (%)		0				0				0	13	0		0	50	0
Proportion Time Blocked																
Percent Grade (%)										()		0			
Right Turn Channelized						Ν	lo									
Median Type Storage				Undi	vided											
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	6.63	6.20		7.10	7.00	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	4.12	3.30		3.50	4.45	3.30
Delay, Queue Length, and	Leve	of Se	ervice													
Flow Rate, v (veh/h)		22				0					15				78	
Capacity, c (veh/h)		1396				1053					364				378	
v/c Ratio		0.02				0.00					0.04				0.21	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.1				0.8	
Control Delay (s/veh)		7.6				8.4					15.3				17.0	
Level of Service (LOS)	A				A			С					С			
Approach Delay (s/veh)	0.3			0.0			15.3			17.0						
Approach LOS	А				А			С				С				

	HCS Two-Way Stop-Control Report										
General Information		Site Information									
Analyst	NM	Intersection	SD 38 & La Mesa								
Agency/Co.	HRG	Jurisdiction	SDDOT								
Date Performed	5/5/2023	East/West Street	SD 38								
Analysis Year	2029	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										



Vehicle Volumes and Adju	ıstme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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		0	1	0
Configuration		L		TR		L	Т	R			LTR				LTR	
Volume (veh/h)		15	225	0		6	505	70		2	4	0		55	10	20
Percent Heavy Vehicles (%)		0				0				0	0	0		9	0	0
Proportion Time Blocked																
Percent Grade (%)										()			()	
Right Turn Channelized						Ν	lo									
Median Type Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
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		7.19	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	3.30		3.58	4.00	3.30
Delay, Queue Length, and	Leve	of Se	ervice													
Flow Rate, v (veh/h)		16				7					7				92	
Capacity, c (veh/h)		966				1333					265				307	
v/c Ratio		0.02				0.00					0.02				0.30	
95% Queue Length, Q ₉₅ (veh)		0.1				0.0					0.1				1.2	
Control Delay (s/veh)		8.8				7.7					18.9				21.7	
Level of Service (LOS)	A				A			С					С			
Approach Delay (s/veh)	0.5			0.1			18.9			21.7						
Approach LOS	А					А			С			С				

HCS Signalized Intersection Results Summary Intersection Information **General Information** HRG Duration, h 0.250 Agency Analyst NM Analysis Date May 5, 2023 Area Type Other PHF Jurisdiction SDDOT Time Period AM Peak 0.92 **Urban Street** SD 38 Analysis Year 2029 **Analysis Period** 1> 7:15 SD 38 & Marion Street File Name (18) SD38&Marion AM.xus Intersection **Project Description** WB **Demand Information** EB NB SB Approach Movement L R L R L R L R 50 80 Demand (v), veh/h 110 240 70 35 90 75 155 30 100 25 **Signal Information** Cycle, s 50.0 Reference Phase 2 Offset, s 0 Reference Point End Green 2.1 2.4 16.2 1.8 1.6 10.0 Uncoordinated No Simult. Gap E/W On Yellow 4.0 0.0 4.0 4.0 0.0 4.0 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** 5 2 6 3 8 1 7 4 Case Number 2.0 3.0 1.1 4.0 2.0 3.0 2.0 3.0 Phase Duration, s 8.4 22.6 6.1 20.2 7.4 15.5 5.8 14.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 Change Period, (Y+Rc), s 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 5.4 2.7 4.4 6.3 3.0 4.6 Green Extension Time (g_e), s 0.0 0.0 0.0 0.0 0.0 0.4 0.0 0.4 Phase Call Probability 0.81 0.41 0.68 1.00 0.36 1.00 0.71 0.00 0.02 1.00 0.02 Max Out Probability 1.00 **Movement Group Results** EΒ WB NB SB Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 5 2 12 1 16 3 8 18 7 4 14 6 Adjusted Flow Rate (v), veh/h 120 261 76 38 77 75 82 168 87 33 109 27 Adjusted Saturation Flow Rate (s), veh/h/ln 1701 1674 1525 1714 1772 1567 1647 1674 1502 1554 1758 1466 3.4 2.7 0.7 2.4 4.3 2.4 1.0 2.6 8.0 Queue Service Time (g_s), s 1.6 1.5 1.7 Cycle Queue Clearance Time (q c), s 3.4 2.7 1.6 0.7 1.5 1.7 2.4 4.3 2.4 1.0 2.6 8.0 0.37 0.32 0.23 0.23 0.04 0.20 Green Ratio (g/C) 0.09 0.37 0.36 0.32 0.07 0.20 Capacity (c), veh/h 151 1244 567 531 574 507 112 386 347 57 351 292 Volume-to-Capacity Ratio (X) 0.791 0.210 0.134 0.072 0.135 0.147 0.730 0.436 0.251 0.576 0.310 0.093 Back of Queue (Q), ft/ln (95 th percentile) 56.9 33.9 20.4 8.5 23.5 26 40.9 61.8 28.7 18.1 38.7 9.4 Back of Queue (Q), veh/ln (95 th percentile) 2.3 1.3 8.0 0.3 0.9 0.9 1.6 2.3 1.1 0.7 1.5 0.4 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 22.3 10.7 10.4 10.4 12.0 12.0 22.9 16.4 15.7 23.7 17.1 16.3 Incremental Delay (d 2), s/veh 3.5 0.4 0.5 0.0 0.5 0.6 3.4 0.3 0.1 3.4 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 0.0 0.0 Control Delay (d), s/veh 25.8 11.1 10.9 10.4 12.4 12.6 26.3 16.7 15.8 27.1 17.3 16.4 Level of Service (LOS) С В В В В В С В В С В В 14.9 В 12.1 В В 19.0 Approach Delay, s/veh / LOS 18.8 В Intersection Delay, s/veh / LOS 16.2 В **Multimodal Results** ΕB WB NB Pedestrian LOS Score / LOS 2.08 В 2.09 В 2.27 2.42 В В Bicycle LOS Score / LOS 0.86 Α 0.64 Α 1.04 Α 0.77 Α

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HCS Signalized Intersection Results Summary Intersection Information **General Information** HRG Duration, h 0.250 Agency Analyst NM Analysis Date May 5, 2023 Area Type Other PHF Jurisdiction SDDOT Time Period PM Peak 0.90 **Urban Street** SD 38 Analysis Year 2029 **Analysis Period** 1> 16:45 SD 38 & Marion Street File Name (18) SD38&Marion PM.xus Intersection **Project Description** WB **Demand Information** EB NB SB Approach Movement L R L R L R L R 40 85 140 Demand (v), veh/h 45 160 70 115 250 120 140 55 240 **Signal Information** J. Cycle, s 50.0 Reference Phase 2 Offset, s 0 Reference Point End Green 2.5 2.0 2.3 14.3 2.9 10.0 Uncoordinated No Simult. Gap E/W On Yellow 4.0 0.0 4.0 4.0 0.0 4.0 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** 5 2 6 3 8 1 7 4 Case Number 2.0 3.0 2.0 3.0 2.0 3.0 2.0 3.0 Phase Duration, s 6.5 18.3 8.8 20.6 8.9 16.0 6.9 14.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 Change Period, (Y+Rc), s 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 3.7 5.7 5.8 5.7 3.8 9.1 Green Extension Time (g_e), s 0.0 0.0 0.0 0.0 0.0 0.9 0.0 0.4 Phase Call Probability 0.50 0.83 0.84 1.00 0.57 1.00 0.41 1.00 0.07 1.00 1.00 Max Out Probability 1.00 **Movement Group Results** EΒ WB NB SB Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 5 2 12 1 6 16 3 8 18 7 4 14 50 178 78 128 278 44 133 156 94 61 267 156 Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln 1474 1660 1490 1688 1772 1406 1714 1772 1478 1688 1772 1478 1.7 2.0 2.0 3.7 6.2 1.1 3.8 3.7 2.6 7.1 4.7 Queue Service Time (g_s), s 1.8 2.6 Cycle Queue Clearance Time (q c), s 1.7 2.0 2.0 3.7 6.2 1.1 3.8 3.7 1.8 7.1 4.7 0.29 0.29 0.33 0.24 0.24 0.20 Green Ratio (g/C) 0.05 0.10 0.33 0.10 0.06 0.20 74 426 Capacity (c), veh/h 953 428 161 588 467 168 356 97 354 296 Volume-to-Capacity Ratio (X) 0.678 0.187 0.182 0.796 0.472 0.095 0.795 0.365 0.266 0.633 0.753 0.526 Back of Queue (Q), ft/ln (95 th percentile) 28.6 28.3 27.3 65.8 99.2 14.3 89.7 52 31.3 29.5 125.7 59.5 Back of Queue (Q), veh/ln (95 th percentile) 1.0 1.1 1.1 2.6 3.9 0.5 3.6 2.0 1.2 1.2 4.9 2.3 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 23.4 Uniform Delay (d 1), s/veh 13.4 13.4 22.1 13.2 11.5 22.1 15.8 15.4 23.1 18.8 17.9 Incremental Delay (d 2), s/veh 4.0 0.4 0.9 5.8 2.7 0.4 16.3 0.2 0.1 2.5 5.2 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 0.0 0.0 0.0 0.0 Control Delay (d), s/veh 27.4 13.9 14.3 27.9 15.9 11.9 38.3 16.0 15.5 25.6 24.0 18.4 Level of Service (LOS) С В В С В В D В В С С В 16.2 В 18.9 В 23.7 С 22.4 С Approach Delay, s/veh / LOS Intersection Delay, s/veh / LOS 20.6 С **Multimodal Results** ΕB WB NB Pedestrian LOS Score / LOS 2.09 В 2.09 В 2.26 2.27 В В Bicycle LOS Score / LOS 0.74 Α 1.23 Α 1.12 Α 1.29

		HCS Two-La	ine	Highway Re	port	
Pro	oject Information		_			
Ana	lyst	MJV		Date		3/15/2023
Age	ncy	HRG		Analysis Year		2050 NB
Juri	sdiction	SDDOT	SDDOT			AM PEAK
Pro	ect Description	EB SD38 Corridor Stu	dy	Units		U.S. Customary
		S	egn	nent 1		
Ve	hicle Inputs					
Seg	ment Type	Passing Zone		Length, ft		1084
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	55.0
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	405		Opposing Deman	d Flow Rate, veh/h	245
Pea	k Hour Factor	0.88		Total Trucks, %		2.16
Seg	ment Capacity, veh/h	1700		Demand/Capacity	, (D/C)	0.24
Int	ermediate Results	<u>'</u>		'		
Segment Vertical Class 1				Free-Flow Speed,	mi/h	55.0
Spe	ed Slope Coefficient (m)	4.33465		Speed Power Coe	fficient (p)	0.52741
PF S	ilope Coefficient (m)	-1.33665		PF Power Coefficie	ent (p)	0.76555
In P	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	3.7
%ln	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data	<u>'</u>		,		
#	Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1084	1-		-	52.7
Ve	hicle Results					<u>'</u>
Ave	rage Speed, mi/h	52.7		Percent Followers	, %	48.8
Seg	ment Travel Time, minutes	0.23		Follower Density ((FD), followers/mi/ln	3.7
Veh	icle LOS	В				
Bio	cycle Results					
	ent Occupied Parking	0		Pavement Conditi	on Rating	4
	v Rate Outside Lane, veh/h	405		Bicycle Effective V		24
Bicycle LOS Score 2.75				Bicycle Effective S		4.62
	cle LOS	С				
		S	egn	nent 2		
Ve	hicle Inputs					
Segment Type Passing Constrained			Length, ft	507		
Measured FFS Measured				Free-Flow Speed,	55.0	
Wicasarca				1		

Demand and Capacity							
Directional Demand Flow Rate, veh/h	405		Opposing Doman	d Flow Rate, veh/h	-		
Peak Hour Factor			Total Trucks, %	d Flow Rate, ven/n			
Segment Capacity, veh/h	0.88			, (D,(C)	2.16		
	1700		Demand/Capacity (D/C) 0.24				
Intermediate Results							
Segment Vertical Class	1		Free-Flow Speed,	mi/h	55.0		
Speed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674		
PF Slope Coefficient (m)	-1.43973		PF Power Coefficion	ent (p)	0.72475		
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	4.1		
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0		
Subsegment Data							
# Segment Type	Length, ft	Rac	lius, ft	Superelevation, %	Average Speed, mi/h		
1 Tangent	507	-		-	52.2		
Vehicle Results							
Average Speed, mi/h	52.2		Percent Followers	, %	52.6		
Segment Travel Time, minutes	0.11		Follower Density	(FD), followers/mi/ln	4.1		
Vehicle LOS	С						
Bicycle Results	<u>'</u>						
Percent Occupied Parking	0		Pavement Conditi	on Rating	4		
Flow Rate Outside Lane, veh/h	405		Bicycle Effective V	Vidth, ft	24		
Bicycle LOS Score	2.75		Bicycle Effective S	peed Factor	4.62		
Bicycle LOS	С						
	9	Segn	nent 3				
Vehicle Inputs							
Segment Type	Passing Zone		Length, ft		535		
Measured FFS	Measured		Free-Flow Speed,	mi/h	55.0		
Demand and Capacity							
Directional Demand Flow Rate, veh/h	405		Opposing Deman	d Flow Rate, veh/h	245		
Peak Hour Factor	0.88		Total Trucks, %		2.16		
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.24		
Intermediate Results							
Segment Vertical Class	1		Free-Flow Speed,	mi/h	55.0		
Speed Slope Coefficient (m)	4.33465		Speed Power Coe	fficient (p)	0.52741		
PF Slope Coefficient (m)	-1.33665		PF Power Coeffici	ent (p)	0.76555		
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	3.7		
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0		
Subsegment Data							

#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	535	-		-	52.7
Vel	nicle Results					·
Aver	rage Speed, mi/h	52.7		Percent Followers	, %	48.8
Segr	ment Travel Time, minutes	0.12		Follower Density ((FD), followers/mi/ln	3.7
Vehi	cle LOS	В				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	405		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	2.75		Bicycle Effective S	peed Factor	4.62
Bicy	cle LOS	С				
			Segr	ment 4		
Vel	nicle Inputs					
Segr	ment Type	Passing Zone		Length, ft		1494
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	483		Opposing Deman	d Flow Rate, veh/h	256
Peak	Hour Factor	0.88		Total Trucks, %		1.63
Segr	nent Capacity, veh/h	1700		Demand/Capacity	' (D/C)	0.28
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.34129		Speed Power Coe	fficient (p)	0.52497
PF S	lope Coefficient (m)	-1.24091		PF Power Coefficie	ent (p)	0.80645
In Pa	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	3.6
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1494	-		-	67.4
Vel	nicle Results					
Aver	rage Speed, mi/h	67.4		Percent Followers	, %	49.8
Segr	ment Travel Time, minutes	0.25		Follower Density ((FD), followers/mi/ln	3.6
Vehicle LOS B						
Bic	ycle Results					
Percent Occupied Parking 0		Pavement Conditi	4			
Flow Rate Outside Lane, veh/h 483			Bicycle Effective Width, ft		24	
Bicycle LOS Score 2.84		Bicycle Effective Speed Factor		5.07		
Bicycle LOS C						

		S	egn	ment 5		
Ve	hicle Inputs					
Seg	ment Type	Passing Constrained		Length, ft		5762
Mea	asured FFS	Measured		Free-Flow Speed, mi/h		70.0
Demand and Capacity						
Dire	ectional Demand Flow Rate, veh/h	483		Opposing Deman	d Flow Rate, veh/h	-
Pea	k Hour Factor	0.88		Total Trucks, %		1.63
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.28
Int	ermediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.62977		Speed Power Coe	fficient (p)	0.41674
PF S	Slope Coefficient (m)	-1.20069		PF Power Coefficie	ent (p)	0.78591
In P	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	3.6
%In	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Rad	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5762	1-		-	66.9
Ve	hicle Results					
Ave	rage Speed, mi/h	66.9		Percent Followers,	. %	49.2
Seg	ment Travel Time, minutes	0.98		Follower Density (FD), followers/mi/ln		3.6
Veh	icle LOS	В				
Bio	cycle Results	·				
Perd	cent Occupied Parking	0		Pavement Condition	on Rating	4
Flov	v Rate Outside Lane, veh/h	483		Bicycle Effective W	/idth, ft	24
Вісу	rcle LOS Score	2.84		Bicycle Effective S	peed Factor	5.07
Вісу	rcle LOS	С				
		S	egn	nent 6		
Ve	hicle Inputs					
Seg	ment Type	Passing Constrained		Length, ft		383
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	488		Opposing Deman	d Flow Rate, veh/h	-
Pea	k Hour Factor	0.88		Total Trucks, %		1.89
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.29
Int	ermediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
		I		1 ' ''		1

Speed Slope Coefficient (m)	4.57372		Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)	-1.29361		PF Power Coefficient (p)		0.75772
In Passing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		3.8
%Improvement to Percent Followers	0.0		%Improvement to Speed		0.0
Subsegment Data					
# Segment Type	Length, ft Rad		lius, ft Superelevation, %		Average Speed, mi/h
1 Tangent	383 -		-		66.9
Vehicle Results					
Average Speed, mi/h	66.9		Percent Followers, %		52.8
Segment Travel Time, minutes	0.07		Follower Density (FD), followers/mi/ln		3.8
Vehicle LOS	В				
Bicycle Results					
Percent Occupied Parking	0		Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h	488		Bicycle Effective Width, ft		24
Bicycle LOS Score	2.91		Bicycle Effective Speed Factor		5.07
Bicycle LOS	С				
		Segn	nent 7		
Vehicle Inputs					
Segment Type	Passing Constrained		Length, ft		1485
Measured FFS	Measured		Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	505		Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor	0.88		Total Trucks, %		3.19
Segment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.30
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)	4.57684		Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)	-1.28453		PF Power Coefficient (p)		0.76145
In Passing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		4.0
%Improvement to Percent Followers	0.0		%Improvement to Speed		0.0
Subsegment Data					
# Segment Type	Length, ft Rad		dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1485 -		-		66.9
Vehicle Results					
Average Speed, mi/h 66.9		Percent Followers, %		53.4	
Segment Travel Time, minutes 0.25		Follower Density (FD), followers/mi/ln		4.0	
			-		-

Bicycle Results					
Percent Occupied Parking	0		Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h	505		Bicycle Effective Width, ft		24
Bicycle LOS Score	3.27		Bicycle Effective Speed Factor		5.07
Bicycle LOS	С				
	Se	egn	nent 8		
Vehicle Inputs					
Segment Type	Passing Constrained		Length, ft		426
Measured FFS	Measured		Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	231		Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor	0.88		Total Trucks, %		6.47
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)	-1.29307		PF Power Coefficient (p)		0.75839
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 Rac		lius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	426 -			-	68.0
Vehicle Results					
Average Speed, mi/h	68.0		Percent Followers, %		34.6
Segment Travel Time, minutes	0.07		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	231		Bicycle Effective Width, ft		24
Bicycle LOS Score	3.91		Bicycle Effective Speed Factor		5.07
Bicycle LOS	D				
	Se	egn	nent 9		
Vehicle Inputs					
Segment Type	Passing Constrained		Length, ft		1212
Measured FFS	Measured		Free-Flow Speed, mi/h		70.0
Demand and Capacity	casarea		The How Speed,	,	. 5.5

Dire	ctional Demand Flow Rate, veh/h	242		Opposing Demand	d Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %		5.26
Segr	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.14
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.57372		Speed Power Coef	fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.29321		PF Power Coefficie	ent (p)	0.75821
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.3
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	segment Data					
#	Segment Type	Length, ft	R	ladius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1212	-		-	68.0
Vel	nicle Results					
Aver	age Speed, mi/h	68.0		Percent Followers,	%	35.7
Segr	nent Travel Time, minutes	0.20		Follower Density (FD), followers/mi/ln	1.3
Vehicle LOS A						
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Condition	on Rating	4
Flow	Rate Outside Lane, veh/h	242		Bicycle Effective W	/idth, ft	24
Bicy	cle LOS Score	3.53		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	D				
			Segi	ment 10		
Vel	nicle Inputs					
Segr	ment Type	Passing Zone		Length, ft		1877
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	242		Opposing Demand	d Flow Rate, veh/h	172
Peak	Hour Factor	0.88		Total Trucks, %		5.26
Segr	nent Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.14
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)			Speed Power Coef	fficient (p)	0.54766
PF Slope Coefficient (m) -1.20625		PF Power Coefficie	ent (p)	0.82046		
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.1
%lm	provement to Percent Followers	0.0	%Improvement to Spe		Speed	0.0
Sul	osegment Data					
#	Segment Type	Length, ft	R	adius, ft	Superelevation, %	Average Speed, mi/h

1 Tangent	1877	-		-	68.5
Vehicle Results					
Average Speed, mi/h	68.5		Percent Followers	, %	31.4
Segment Travel Time, minutes	0.31		Follower Density	(FD), followers/mi/ln	1.1
Vehicle LOS	А				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	ion Rating	4
Flow Rate Outside Lane, veh/h	242		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	3.53		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	D				
		Seg	ment 11		
Vehicle Inputs					
Segment Type	Passing Constrain	ed	Length, ft		1872
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity					<u>'</u>
Directional Demand Flow Rate, veh/h	242	242		id Flow Rate, veh/h	-
Peak Hour Factor	0.88			<u> </u>	5.26
Segment Capacity, veh/h	1700		Demand/Capacity	/ (D/C)	0.14
Intermediate Results					<u>'</u>
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		1.2
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	R	tadius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1872	-		-	68.0
Vehicle Results					
Average Speed, mi/h	68.0		Percent Followers	, %	34.7
Segment Travel Time, minutes	0.31		Follower Density	(FD), followers/mi/ln	1.2
Vehicle LOS A					
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	ion Rating	4
Flow Rate Outside Lane, veh/h	242		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	3.53		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	D				
		Seg	ment 12		

Ve	ehicle Inputs					
Seg	gment Type	Passing Zone		Length, ft		3603
Me	easured FFS	Measured		Free-Flow Speed, mi/h		70.0
D	emand and Capacity			·		
Dir	rectional Demand Flow Rate, veh/h	242		Opposing Deman	d Flow Rate, veh/h	172
Pea	ak Hour Factor	0.88		Total Trucks, %		5.26
Se	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.14
In	termediate Results					
Se	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Sp	eed Slope Coefficient (m)	4.34159		Speed Power Coe	fficient (p)	0.54766
PF	Slope Coefficient (m)	-1.16323		PF Power Coefficie	ent (p)	0.83771
In I	Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.1
%lı	mprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sι	ıbsegment Data					
#	Segment Type	e Length, ft Rad		dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3603	-		-	68.5
Ve	ehicle Results					
Av	erage Speed, mi/h	68.5		Percent Followers,	%	29.8
Se	gment Travel Time, minutes	0.60		Follower Density (FD), followers/mi/ln	1.1
Vel	nicle LOS	А	А			
Bi	cycle Results					
Per	rcent Occupied Parking	0		Pavement Condition Rating		4
Flo	w Rate Outside Lane, veh/h	242	242		/idth, ft	24
Bic	ycle LOS Score	3.53		Bicycle Effective Speed Factor		5.07
Bic	ycle LOS	D				
		Se	gm	ent 13		
Ve	ehicle Inputs					
Se	gment Type	Passing Constrained		Length, ft		1053
Мє	easured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Do	emand and Capacity					
Dir	ectional Demand Flow Rate, veh/h	242		Opposing Deman	d Flow Rate, veh/h	-
Peak Hour Factor 0.88		Total Trucks, %		5.26		
Seg	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.14
ln	termediate Results					
Se	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Sp	eed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF	Slope Coefficient (m)	-1.29321		PF Power Coefficie	ent (p)	0.75821

In Passing Lane Effective Length?		No		Total Segment De	Total Segment Density, veh/mi/ln	
%Improvement to Percent Followers		0.0		%Improvement to Speed		0.0
Suk	osegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1053	-		-	68.0
Vel	nicle Results					
Aver	age Speed, mi/h	68.0		Percent Followers	, %	35.7
Segr	ment Travel Time, minutes	0.18		Follower Density	(FD), followers/mi/ln	1.3
Vehi	cle LOS	А				
Bic	ycle Results					<u>'</u>
Perce	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	242		Bicycle Effective V	Vidth, ft	24
Bicyc	cle LOS Score	3.53		Bicycle Effective S	peed Factor	5.07
Bicycle LOS D						
			Segn	nent 14		
Vel	nicle Inputs					
Segr	ment Type	Passing Zone		Length, ft		1120
Mea	sured FFS	Measured		Free-Flow Speed, mi/h		70.0
Der	mand and Capacity					•
Dire	ctional Demand Flow Rate, veh/h	242		Opposing Deman	d Flow Rate, veh/h	172
Peak	Hour Factor	0.88		Total Trucks, %		5.26
Segr	nent Capacity, veh/h	1700		Demand/Capacity	/ (D/C)	0.14
Inte	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spee	ed Slope Coefficient (m)	4.30804		Speed Power Coe	fficient (p)	0.54766
PF SI	lope Coefficient (m)	-1.23154		PF Power Coeffici	PF Power Coefficient (p)	
In Pa	ssing Lane Effective Length?	No		Total Segment De	Total Segment Density, veh/mi/ln	
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Suk	segment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1120	-		-	68.5
Vel	nicle Results					
Aver	age Speed, mi/h	68.5		Percent Followers	, %	32.3
Segr	ment Travel Time, minutes	0.19		Follower Density	(FD), followers/mi/ln	1.1
Vehi	cle LOS	A				
Bic	ycle Results					
Perce	ent Occupied Parking	0		Pavement Conditi	on Rating	4
		1		1	_	1

Elass	Pata Outrida Lana wal- /l-	242		Pigyalo Effortive M	lidth ft	24
	Rate Outside Lane, veh/h	242		Sicycle Effective W		24
_	tle LOS Score	3.53	В	Sicycle Effective Sp	peed Factor	5.07
Вісус	ele LOS	D				
		Se	gmei	nt 15		
Veh	icle Inputs					
Segn	nent Type	Passing Zone	Le	ength, ft		1272
Meas	sured FFS	Measured	Fi	ree-Flow Speed,	mi/h	70.0
Der	nand and Capacity					
Direc	tional Demand Flow Rate, veh/h	278	0	Opposing Demand	d Flow Rate, veh/h	188
Peak	Hour Factor	0.88	To	otal Trucks, %		5.09
Segn	nent Capacity, veh/h	1700	D	Demand/Capacity	(D/C)	0.16
Inte	ermediate Results					
Segn	nent Vertical Class	1	Fi	ree-Flow Speed,	mi/h	70.0
Spee	d Slope Coefficient (m)	4.31419	S	Speed Power Coef	ficient (p)	0.54284
PF SI	ope Coefficient (m)	-1.23547	P	PF Power Coefficient (p)		0.80786
In Pa	ssing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		1.5
%lm _l	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Sub	segment Data					
#	Segment Type	Length, ft	Radius	s, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1272	-		-	68.3
Veh	icle Results					
Aver	age Speed, mi/h	68.3	Po	Percent Followers,	%	35.6
Segn	nent Travel Time, minutes	0.21	F	Follower Density (FD), followers/mi/ln		1.5
Vehic	tle LOS	А				
Bic	ycle Results					'
Perce	ent Occupied Parking	0	Pa	Pavement Condition	on Rating	4
	ent Occupied Parking Rate Outside Lane, veh/h	0 278		Pavement Condition		24
Flow	Rate Outside Lane, veh/h		В	Pavement Condition Bicycle Effective Westige Sicycle Effective Specific Sp	/idth, ft	
Flow	Rate Outside Lane, veh/h	278	В	Bicycle Effective W	/idth, ft	24
Flow	Rate Outside Lane, veh/h	278 3.54 D	В	Bicycle Effective W	/idth, ft	24
Flow Bicyc	Rate Outside Lane, veh/h cle LOS Score	278 3.54 D	В	Bicycle Effective W	/idth, ft	24
Bicyc Bicyc	Rate Outside Lane, veh/h cle LOS Score cle LOS	278 3.54 D	B B egmei	Bicycle Effective W Bicycle Effective Sp nt 16	/idth, ft	5.07
Bicyc Bicyc Veh Segn	Rate Outside Lane, veh/h cle LOS Score cle LOS cle LOS cle LOS	278 3.54 D Se	gmei	Bicycle Effective W Bicycle Effective Sp nt 16 Length, ft	ridth, ft	24 5.07 625
Flow Bicyc Bicyc Veh Segn Meas	Rate Outside Lane, veh/h cle LOS Score cle LOS sicle Inputs ment Type sured FFS	278 3.54 D	gmei	Bicycle Effective W Bicycle Effective Sp nt 16	ridth, ft	5.07
Flow Bicyc Bicyc Veh Segn Meas	Rate Outside Lane, veh/h cle LOS Score cle LOS nicle Inputs nent Type sured FFS mand and Capacity	278 3.54 D Se Passing Constrained Measured	gmei	nt 16 ength, ft	ridth, ft peed Factor mi/h	24 5.07 625 70.0
Flow Bicyc Bicyc Veh Segn Meas Der	Rate Outside Lane, veh/h cle LOS Score cle LOS sicle Inputs ment Type sured FFS mand and Capacity ctional Demand Flow Rate, veh/h	278 3.54 D Se Passing Constrained Measured	B B B B B B B B B B B B B B B B B B B	nt 16 ength, ft free-Flow Speed, i	ridth, ft	24 5.07 625 70.0
Flow Bicyc Veh Segn Meas Der Direc Peak	Rate Outside Lane, veh/h cle LOS Score cle LOS nicle Inputs nent Type sured FFS mand and Capacity	278 3.54 D Se Passing Constrained Measured	egmei	nt 16 ength, ft	mi/h	24 5.07 625 70.0

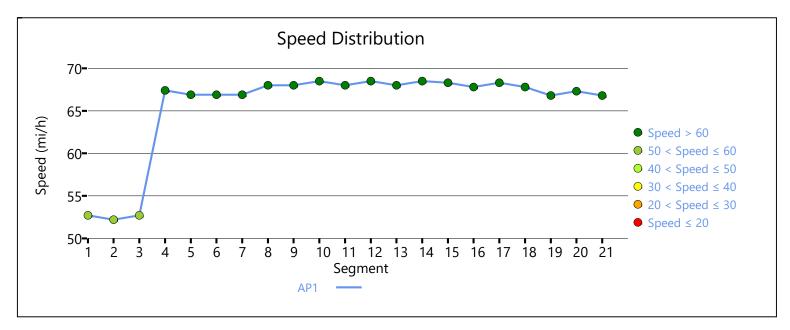
Int	ermediate Results					
Segi	ment Vertical Class	1		Free-Flow Speed, mi/h		70.0
Spe	ed Slope Coefficient (m)	4.57372		Speed Power Co	efficient (p)	0.41674
PF S	lope Coefficient (m)	-1.29323		PF Power Coeffic	cient (p)	0.75819
In Pa	assing Lane Effective Length?	No		Total Segment D	ensity, veh/mi/ln	1.6
%Improvement to Percent Followers 0.0			%Improvement	to Speed	0.0	
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	625	-		-	67.8
Vel	nicle Results					
Aver	rage Speed, mi/h	67.8		Percent Followe	rs, %	38.8
Segi	ment Travel Time, minutes	0.10		Follower Density	(FD), followers/mi/ln	1.6
Vehi	cle LOS	А				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Cond	tion Rating	4
Flow	Rate Outside Lane, veh/h	278		Bicycle Effective	Width, ft	24
Bicy	cle LOS Score	3.54		Bicycle Effective Speed Factor		5.07
Bicy	cle LOS	D				
			Segn	nent 17		·
Vel	nicle Inputs					
Segi	ment Type	Passing Zone		Length, ft		1995
	sured FFS	Measured		Free-Flow Speed, mi/h		70.0
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	278		Opposing Dema	nd Flow Rate, veh/h	188
	Hour Factor	0.88		Total Trucks, %		5.09
Segi	ment Capacity, veh/h	1700		Demand/Capaci	ty (D/C)	0.16
Int	ermediate Results					<u>'</u>
Segi	ment Vertical Class	1		Free-Flow Speed	 l, mi/h	70.0
	ed Slope Coefficient (m)	4.32599		Speed Power Co		0.54284
	lope Coefficient (m)	-1.20573		PF Power Coeffic	<u> </u>	0.82101
In Pa	assing Lane Effective Length?	No		Total Segment D	ensity, veh/mi/ln	1.4
%lm	provement to Percent Followers	0.0		%Improvement	to Speed	0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1995	-		1-	68.3
Vel	nicle Results					
	rage Speed, mi/h	68.3		Percent Followers, %		34.4

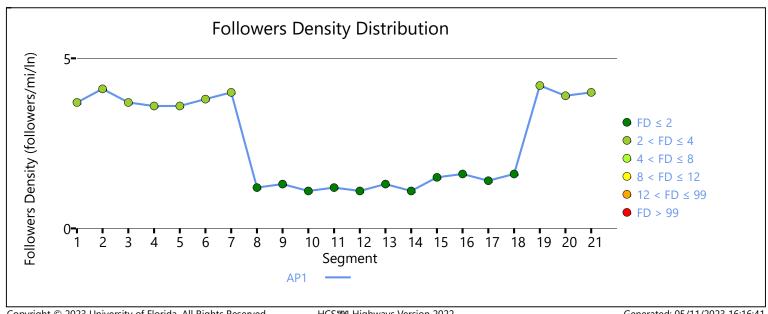
Community of The color	0.22		Falls as Daniel (TD) (-11/'/1-	1.4
Segment Travel Time, minutes Vehicle LOS	0.33		Follower Density (FD), followers/mi/ln	1.4
	A				
Bicycle Results					
Percent Occupied Parking	0		Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h	278		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	3.54		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	D				
		Segn	nent 18		
Vehicle Inputs					
Segment Type	Passing Constrai	ned	Length, ft		1399
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	n 278		Opposing Deman	d Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %		5.09
Segment Capacity, veh/h	1700	1700		(D/C)	0.16
Intermediate Results					
Segment Vertical Class 1		Free-Flow Speed,	mi/h	70.0	
Speed Slope Coefficient (m)	4.57524		Speed Power Coe	fficient (p)	0.41674
PF Slope Coefficient (m)	-1.28884		PF Power Coefficie	ent (p)	0.75993
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	Ra	dius, ft Superelevation, %		Average Speed, mi/h
1 Tangent	1399	-		-	67.8
Vehicle Results					
Average Speed, mi/h	67.8		Percent Followers	, %	38.6
Segment Travel Time, minutes	0.23		Follower Density (FD), followers/mi/ln	1.6
Vehicle LOS	А				
Bicycle Results	·				
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	278		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score 3.54		Bicycle Effective S	peed Factor	5.07	
Bicycle LOS	D				
	·	Segn	nent 19		
Vehicle Inputs					
Segment Type	Passing Constrai	ned	Length, ft		1254
Measured FFS	Measured		Free-Flow Speed, mi/h		70.0

Demand and Capacity					
	F16		Opposite to Day	d Claus Data and the	
Directional Demand Flow Rate, veh/h	516		Opposing Demand Flow Rate, veh/h		1 [1
Peak Hour Factor	0.88		Total Trucks, % Demand/Capacity (D/C)		0.30
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.30
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m) 4.57372 S		Speed Power Coe	fficient (p)	0.41674	
PF Slope Coefficient (m)	-1.29366		PF Power Coefficie	ent (p)	0.75766
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	4.2
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Radi	ius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1254	-		-	66.8
Vehicle Results					
Average Speed, mi/h	66.8		Percent Followers	, %	54.3
Segment Travel Time, minutes	0.21		Follower Density (FD), followers/mi/ln		4.2
Vehicle LOS	С				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	516		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	2.84		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	С				
	Se	egm	ent 20		
Vehicle Inputs					
Segment Type	Passing Zone		Length, ft		1108
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	516		Opposing Deman	d Flow Rate, veh/h	177
Peak Hour Factor	0.88		Total Trucks, %		1.51
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.30
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.31027		Speed Power Coe	fficient (p)	0.54591
PF Slope Coefficient (m)	-1.23339		PF Power Coefficie	ent (p)	0.80813
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	3.9
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					•

#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1108	-		-	67.3
Vel	nicle Results	<u>'</u>				
Aver	age Speed, mi/h	67.3	7.3		, %	51.4
Segr	ment Travel Time, minutes	0.19		Follower Density	(FD), followers/mi/ln	3.9
Vehi	cle LOS	В				
Bic	ycle Results					
Percent Occupied Parking 0		0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	516		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	2.84		Bicycle Effective S	peed Factor	5.07
Bicy	icycle LOS C					
			Segn	ment 21		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrai	ned	Length, ft		2901
Measured FFS Measured		Free-Flow Speed,	mi/h	70.0		
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	516		Opposing Deman	d Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %		1.51
Segr	ment Capacity, veh/h	1700	1700		' (D/C)	0.30
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed, mi/h		70.0
Spee	ed Slope Coefficient (m)	4.59854	4.59854		fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.23554		PF Power Coefficient (p)		0.77974
In Pa	assing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		4.0
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2901	-		-	66.8
Vel	nicle Results					
Aver	age Speed, mi/h	66.8		Percent Followers	, %	52.2
Segment Travel Time, minutes 0.49			Follower Density	(FD), followers/mi/ln	4.0	
Vehicle LOS C			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	516		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	2.84		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	С				

Facility	Facility Results								
Т	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS					
1	508	0.29	2.5	В					





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HCS™ Highways Version 2022 EB_38_EHartford_2029AM.xuf

		HCS Two-La	ne	Highway Re	port	
Pro	ject Information					
Anal	yst	MJV		Date		5/11/2023
Ager	ncy	HRG	HRG Ar			2029 NB
Juris	diction	SDDOT		Time Analyzed		PM PEAK
Proje	ct Description EB SD38 Corridor Study		Units		U.S. Customary	
		Se	egn	nent 1		
Veh	nicle Inputs					
Segn	nent Type	Passing Zone		Length, ft		1084
	sured FFS	Measured		Free-Flow Speed,	mi/h	55.0
Der	mand and Capacity					
Direc	ctional Demand Flow Rate, veh/h	249		Opposing Deman	d Flow Rate, veh/h	457
Peak	Hour Factor	0.90		Total Trucks, %		2.16
Segn	nent Capacity, veh/h	1700		Demand/Capacity	, (D/C)	0.15
Inte	ermediate Results					
Segment Vertical Class 1		1		Free-Flow Speed,	mi/h	55.0
	ed Slope Coefficient (m)	4.39377		Speed Power Coe	fficient (p)	0.48810
PF SI	ope Coefficient (m)	-1.37630	-1.37630		ent (p)	0.75567
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.8
%lm _l	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Sub	segment Data			•		
#	Segment Type	Length, ft	Rac	dius, ft Superelevation, %		Average Speed, mi/h
1	Tangent	1084	1-		-	53.3
Veh	nicle Results					
Aver	age Speed, mi/h	53.3		Percent Followers	, %	38.2
Segn	nent Travel Time, minutes	0.23		Follower Density ((FD), followers/mi/ln	1.8
Vehic	cle LOS	А				
Bic	ycle Results			<u>'</u>		
Perce	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	249		Bicycle Effective V	Vidth, ft	24
Bicyc	cle LOS Score	2.50		Bicycle Effective S	peed Factor	4.62
Bicyc	cle LOS	В				
		Se	egn	nent 2		
Veh	nicle Inputs					
Segn	nent Type	Passing Constrained		Length, ft		1014
	sured FFS	Measured		Free-Flow Speed,	mi/h	55.0

Demand	d and Capacity					
Directional	Demand Flow Rate, veh/h	249		Opposing Deman	d Flow Rate, veh/h	-
Peak Hour		0.90		Total Trucks, %		2.16
Segment C	apacity, veh/h	1700		Demand/Capacity	' (D/C)	0.15
Interme	ediate Results					
Segment V	ertical Class	1		Free-Flow Speed,	mi/h	55.0
	pe Coefficient (m)	4.57372		Speed Power Coe		0.41674
PF Slope Co	oefficient (m)	-1.43973		PF Power Coefficie	ent (p)	0.72475
In Passing I	Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.9
%Improver	ment to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegi	ment Data					
# Segn	nent Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tang	ent	507	-		-	52.9
2 Horiz	zontal Curve	507 3000		00	0.0	52.9
Vehicle	Results	<u>'</u>				<u>'</u>
Average Sp	peed, mi/h	52.9		Percent Followers	 , %	40.9
	ravel Time, minutes	0.22		Follower Density ((FD), followers/mi/ln	1.9
Vehicle LOS		A		,		
Bicycle	Results	<u>'</u>				<u>'</u>
Percent Oc	 cupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate 0	Outside Lane, veh/h	249		Bicycle Effective V	Vidth, ft	24
Bicycle LOS	S Score	2.50		Bicycle Effective Speed Factor		4.62
Bicycle LOS		В				
			Segr	ment 3		·
Vehicle	Inputs					
Segment Ty	ype	Passing Zone		Length, ft		535
Measured I		Measured		Free-Flow Speed,	mi/h	55.0
Demand	d and Capacity					
Directional	Demand Flow Rate, veh/h	249		Opposing Deman	d Flow Rate, veh/h	457
Peak Hour	Factor	0.90		Total Trucks, %		2.16
Segment Capacity, veh/h 1700		Demand/Capacity	(D/C)	0.15		
Interme	diate Results					
Segment V	ertical Class	1		Free-Flow Speed,	mi/h	55.0
Speed Slop	pe Coefficient (m)	4.39377		Speed Power Coe	fficient (p)	0.48810
PF Slope Co	oefficient (m)	-1.37630		PF Power Coefficie	ent (p)	0.75567
In Passing I	Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.8
	ment to Percent Followers	0.0		%Improvement to Speed		0.0

Suk	segment Data						
#	Segment Type	Length, ft		Radius, ft		Superelevation, %	Average Speed, mi/h
1	Tangent	535		-		-	53.3
Veł	nicle Results						
Aver	age Speed, mi/h	53.3		Percent Follow	wers,	%	38.2
Segr	ment Travel Time, minutes	0.11		Follower Dens	sity (FD), followers/mi/ln	1.8
Vehi	cle LOS	А					
Bic	ycle Results						
Perc	ent Occupied Parking	0		Pavement Cor	nditio	on Rating	4
Flow	Rate Outside Lane, veh/h	249		Bicycle Effecti	ve W	/idth, ft	24
Bicy	cle LOS Score	2.50		Bicycle Effecti	ve S	peed Factor	4.62
Bicyc	cle LOS	В					
			Se	gment 4			
Veł	nicle Inputs						
Segr	ment Type	Passing Zone	Passing Zone		Length, ft		1494
Mea	sured FFS	Measured		Free-Flow Spe	Free-Flow Speed, mi/h		70.0
Dei	mand and Capacity						
Dire	ctional Demand Flow Rate, veh/h	259		Opposing De	mano	d Flow Rate, veh/h	574
Peak	Hour Factor	0.90		Total Trucks, 9	%		1.63
Segr	ment Capacity, veh/h	1700		Demand/Capa	acity	(D/C)	0.15
Inte	ermediate Results						
Segr	ment Vertical Class	1		Free-Flow Spe	eed, i	mi/h	70.0
Spee	ed Slope Coefficient (m)	4.42398	4.42398		Speed Power Coefficient (p)		0.47280
PF S	lope Coefficient (m)	-1.27644	-1.27644		PF Power Coefficient (p)		0.79034
In Pa	assing Lane Effective Length?	No		Total Segmen	Total Segment Density, veh/mi/ln		1.3
%lm	provement to Percent Followers	0.0		%Improveme	nt to	0.0	
Suk	segment Data						
#	Segment Type	Length, ft		Radius, ft		Superelevation, %	Average Speed, mi/h
1	Tangent	1494		-		-	68.1
Vel	nicle Results						
Aver	age Speed, mi/h	68.1		Percent Follow	wers,	%	35.5
Segment Travel Time, minutes 0.25		0.25	0.25		Follower Density (FD), followers/mi/ln		1.3
Vehi	cle LOS	А					
Bic	ycle Results						
Perc	ent Occupied Parking	0		Pavement Cor	nditio	on Rating	4
Flow	Rate Outside Lane, veh/h	259		Bicycle Effecti	ve W	/idth, ft	24
Bicvo	cle LOS Score	2.52			Bicycle Effective Speed Factor		5.07

Bicycle LOS	С				
		Seg	ment 5		
Vehicle Inputs					
Segment Type	Passing Constra	ained	Length, ft		5762
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity	·		·		
Directional Demand Flow Rate, veh/h	259		Opposing Deman	d Flow Rate, veh/h	-
Peak Hour Factor	0.90		Total Trucks, %		1.63
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.15
Intermediate Results			·		
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.62977		Speed Power Coe	fficient (p)	0.41674
PF Slope Coefficient (m)	-1.20069		PF Power Coefficie	ent (p)	0.78591
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.3
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	R	adius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	5762	-		-	67.8
Vehicle Results					
Average Speed, mi/h	67.8		Percent Followers	, %	34.0
Segment Travel Time, minutes	0.97		Follower Density (FD), followers/mi/ln		1.3
Vehicle LOS	А				
Bicycle Results	<u>'</u>		·		
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	259		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	2.52		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	С				
		Seg	ment 6		
Vehicle Inputs					
Segment Type	Passing Constra	ained	Length, ft		383
Measured FFS Measured		Free-Flow Speed,	mi/h	70.0	
Demand and Capacity					
Directional Demand Flow Rate, veh/h	262		Opposing Deman	d Flow Rate, veh/h	-
Peak Hour Factor	0.90		Total Trucks, %		1.89
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.15
Intermediate Results					•

Segment Vertical Class	1		Free-Flow Speed	 d. mi/h	70.0
Speed Slope Coefficient (m)	4.57372			pefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29361	-1.29361		cient (p)	0.75772
In Passing Lane Effective Length?	No			Density, veh/mi/ln	1.4
%Improvement to Percent Followers	0.0	0.0		to Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Pa	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent		383 -		Superelevation, 76	67.9
	303			<u> </u>	07.3
Vehicle Results					
Average Speed, mi/h	67.9		Percent Followe	rs, %	37.4
Segment Travel Time, minutes	0.06		Follower Density	y (FD), followers/mi/ln	1.4
Vehicle LOS	A				
Bicycle Results					
Percent Occupied Parking	0		Pavement Cond	ition Rating	4
Flow Rate Outside Lane, veh/h	262		Bicycle Effective	Width, ft	24
Bicycle LOS Score	2.59		Bicycle Effective Speed Factor		5.07
Bicycle LOS	С				
		Segr	ment 7		
Vehicle Inputs					
Segment Type	Passing Constrain	ned	Length, ft		1485
Measured FFS	Measured		Free-Flow Speed	d, mi/h	70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	288		Opposing Dema	and Flow Rate, veh/h	-
Peak Hour Factor	0.90	.90			3.19
Segment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.17
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed	d, mi/h	70.0
Speed Slope Coefficient (m)	4.57684		Speed Power Co	pefficient (p)	0.41674
PF Slope Coefficient (m)	-1.28453		PF Power Coefficient (p)		0.76145
In Passing Lane Effective Length?	No		Total Segment D	Density, veh/mi/ln	1.7
%Improvement to Percent Followers	0.0		%Improvement	to Speed	0.0
Subsegment Data					
# Segment Type	Length, ft Rad		dius, ft	Superelevation, %	Average Speed, mi/h
3 71 3 7		-		-	67.7
1 Tangent	1				
-	1.00				
1 Tangent Vehicle Results Average Speed, mi/h	67.7		Percent Followe	rs. %	39.2

Vehi	icle LOS	А				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Condition	on Rating	4
Flov	v Rate Outside Lane, veh/h	288		Bicycle Effective W	/idth, ft	24
Bicy	cle LOS Score	2.99	2.99		peed Factor	5.07
Bicy	cle LOS	С				
			Segn	nent 8		
Vel	hicle Inputs					
Seg	ment Type	Passing Constrained	 	Length, ft		426
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	onal Demand Flow Rate, veh/h 214		Opposing Demand	d Flow Rate, veh/h	-
Peal	k Hour Factor	0.90		Total Trucks, %		6.47
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.13
Int	ermediate Results					
Segment Vertical Class 1		Free-Flow Speed,	mi/h	70.0		
Speed Slope Coefficient (m) 4.57372			Speed Power Coef	fficient (p)	0.41674	
PF S	ilope Coefficient (m)	-1.29307		PF Power Coefficie	ent (p)	0.75839
In Pa	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.0
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Sul	bsegment Data					
#	Segment Type	Length, ft	Rac	dius, ft Superelevation, %		Average Speed, mi/h
1	Tangent	426	1-	-		68.1
Vel	hicle Results					
Ave	rage Speed, mi/h	68.1		Percent Followers,	%	33.1
Seg	ment Travel Time, minutes	0.07		Follower Density (FD), followers/mi/ln	1.0
Vehi	icle LOS	A				
Bic	cycle Results					
Perc	ent Occupied Parking	0		Pavement Condition	on Rating	4
Flov	v Rate Outside Lane, veh/h	214		Bicycle Effective Width, ft		24
Bicy	cycle LOS Score 3.87		Bicycle Effective Speed Factor		5.07	
Bicy	cle LOS	D				
			Segn	nent 9		
Vel	hicle Inputs					
Seg	ment Type	Passing Constrained		Length, ft		1212
	asured FFS	Measured		Free-Flow Speed, mi/h		70.0

Demand and Capacity					
Directional Demand Flow Rate, veh/h	Demand Flow Rate, veh/h 208		Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor	0.90		Total Trucks, %		5.26
Segment Capacity, veh/h	1700	1700 [y (D/C)	0.12
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed	, mi/h	70.0
Speed Slope Coefficient (m)	4.57372		Speed Power Co	efficient (p)	0.41674
PF Slope Coefficient (m)	-1.29321		PF Power Coeffic	ient (p)	0.75821
In Passing Lane Effective Length?	No		Total Segment D	ensity, veh/mi/ln	1.0
%Improvement to Percent Followers	0.0		%Improvement t	o Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1212	-		-	68.2
Vehicle Results					
Average Speed, mi/h	68.2		Percent Follower	s, %	32.5
Segment Travel Time, minutes	0.20		Follower Density	(FD), followers/mi/ln	1.0
Vehicle LOS	А	А			
Bicycle Results					
Percent Occupied Parking	0		Pavement Condi	tion Rating	4
Flow Rate Outside Lane, veh/h	208		Bicycle Effective	Width, ft	24
Bicycle LOS Score	3.45		Bicycle Effective	Speed Factor	5.07
Bicycle LOS	С				
		Segn	nent 10		
Vehicle Inputs					
Segment Type	Passing Zone		Length, ft		1877
Measured FFS	Measured		Free-Flow Speed	, mi/h	70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	208		Opposing Demai	nd Flow Rate, veh/h	281
Peak Hour Factor	0.90		Total Trucks, %		5.26
Segment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.12
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed	, mi/h	70.0
Speed Slope Coefficient (m)	4.35595		Speed Power Co	efficient (p)	0.51922
PF Slope Coefficient (m)	-1.22813		PF Power Coeffic	ient (p)	0.81248
In Passing Lane Effective Length?	No		Total Segment D	ensity, veh/mi/ln	0.9
%Improvement to Percent Followers	0.0		%Improvement t	o Speed	0.0

#	Segment Type	Length, ft	Ra	ndius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1877	-		-	68.6
Veł	nicle Results		·			·
Aver	rage Speed, mi/h	68.6	68.6		, %	29.0
Segr	ment Travel Time, minutes	0.31		Follower Density ((FD), followers/mi/ln	0.9
Vehi	cle LOS	A				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	208		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	3.45		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	С				
			Segn	nent 11		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrai	ned	Length, ft		1872
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Dei	mand and Capacity					
Directional Demand Flow Rate, veh/h 208		208		Opposing Deman	d Flow Rate, veh/h	-
Peak	Hour Factor	0.90		Total Trucks, %		5.26
Segr	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.12
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spee	ed Slope Coefficient (m)	4.58354		Speed Power Coe	fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.26676	-1.26676		ent (p)	0.76864
In Pa	assing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		1.0
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	ndius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1872	-		-	68.2
Veł	nicle Results					
Aver	rage Speed, mi/h	68.2		Percent Followers	, %	31.5
Segr	ment Travel Time, minutes	0.31		Follower Density ((FD), followers/mi/ln	1.0
Vehicle LOS A						
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	208	Bicycle B		Vidth, ft	24
Bicy	cle LOS Score	3.45		Bicycle Effective S	peed Factor	5.07
Bicvo	cle LOS	С				

		S	egn	nent 12		
Ve	hicle Inputs					
Seg	ment Type	Passing Zone		Length, ft		3603
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	emand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	208		Opposing Deman	d Flow Rate, veh/h	281
Pea	k Hour Factor	0.90		Total Trucks, %		5.26
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.12
Int	termediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.37960		Speed Power Coe	fficient (p)	0.51922
PF S	Slope Coefficient (m)	-1.18421		PF Power Coefficie	ent (p)	0.82919
In P	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.8
%In	nprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3603	-		-	68.6
Ve	hicle Results					·
Ave	erage Speed, mi/h	68.6		Percent Followers,	. %	27.5
Seg	ment Travel Time, minutes	0.60		Follower Density (FD), followers/mi/ln	0.8
Veh	icle LOS	А				
Bio	cycle Results					
Per	cent Occupied Parking	0		Pavement Condition	on Rating	4
Flov	w Rate Outside Lane, veh/h	208		Bicycle Effective Width, ft		24
Bicy	/cle LOS Score	3.45		Bicycle Effective S	peed Factor	5.07
Bicy	/cle LOS	С				
		S	egn	nent 13		
Ve	hicle Inputs					
Seg	ment Type	Passing Constrained		Length, ft		1053
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	emand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	208		Opposing Deman	d Flow Rate, veh/h	-
Pea	k Hour Factor	0.90		Total Trucks, %		5.26
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.12
Int	termediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
				<u> </u>		

Speed Slope Coefficient (m)	4.57372			fficient (p)	0.41674
PF Slope Coefficient (m)	-1.29321		PF Power Coefficie	<u>.</u>	0.75821
In Passing Lane Effective Length?	No		Total Segment De		1.0
%Improvement to Percent Followers	0.0	0.0		Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1053	-		-	68.2
Vehicle Results					
Average Speed, mi/h	68.2		Percent Followers,	%	32.5
Segment Travel Time, minutes	0.18		Follower Density (FD), followers/mi/ln	1.0
Vehicle LOS	A				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	208		Bicycle Effective V	/idth, ft	24
Bicycle LOS Score	3.45		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	С				
	9	Segm	ent 14		
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	208		Opposing Deman	d Flow Rate, veh/h	281
Peak Hour Factor	0.90		Total Trucks, %		5.26
Segment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.12
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)	4.34605		Speed Power Coe	fficient (p)	0.51922
PF Slope Coefficient (m)	-1.25395		PF Power Coefficie	ent (p)	0.80148
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.9
%Improvement to Percent Followers	0.0		%Improvement to Speed		0.0
Subsegment Data					
# Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1120	-		-	68.6
Vehicle Results					
Average Speed, mi/h	68.6		Percent Followers	. %	29.9
Segment Travel Time, minutes	0.19		Follower Density (FD), followers/mi/ln		0.9
Vehicle LOS A					

Bicycle Results					
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	208		Bicycle Effective Width, ft		24
Bicycle LOS Score	3.45		Bicycle Effective Speed Factor		5.07
Bicycle LOS	С				
	Se	gm	ent 15		
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	250		Opposing Demand	d Flow Rate, veh/h	328
Peak Hour Factor	0.90		Total Trucks, %		5.09
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.15
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)	4.35992		Speed Power Coefficient (p)		0.50965
PF Slope Coefficient (m)	-1.26111		PF Power Coefficie	ent (p)	0.79874
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.2
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rad	lius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1272	-		-	68.3
Vehicle Results					
Average Speed, mi/h	68.3		Percent Followers,	%	34.1
Segment Travel Time, minutes	0.21		Follower Density (FD), followers/mi/ln		1.2
Vehicle LOS	Α				
Bicycle Results					
Percent Occupied Parking	0		Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h	250		Bicycle Effective W	/idth, ft	24
Bicycle LOS Score	3.49		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	С				
	Se	gm	ent 16		
Vehicle Inputs					
Segment Type	Passing Constrained		Length, ft		625
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity					

Dire	ctional Demand Flow Rate, veh/h	250		Opposing Demand	d Flow Rate, veh/h	-
	Hour Factor	0.90		Total Trucks, %		5.09
Segr	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.15
	ermediate Results			, ,		
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spee	ed Slope Coefficient (m)	4.57372		Speed Power Coef	ficient (p)	0.41674
PF S	lope Coefficient (m)	-1.29323		PF Power Coefficie	ent (p)	0.75819
In Pa	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.3
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	osegment Data	•				
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	625	-		-	67.9
Vel	nicle Results	•				·
Aver	age Speed, mi/h	67.9		Percent Followers,	%	36.4
Segr	ment Travel Time, minutes	0.10		Follower Density (FD), followers/mi/ln	1.3
Vehi	cle LOS	А				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Condition	on Rating	4
	Rate Outside Lane, veh/h	250		Bicycle Effective W	/idth, ft	24
Bicy	cle LOS Score	3.49		Bicycle Effective S _I	peed Factor	5.07
Bicy	cle LOS	С				
		·	Segn	ment 17		
Vel	nicle Inputs					
Segr	ment Type	Passing Zone		Length, ft		1995
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	250		Opposing Demand	d Flow Rate, veh/h	328
Peak	: Hour Factor	0.90		Total Trucks, %		5.09
Segr	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.15
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.37172		Speed Power Coef	ficient (p)	0.50965
PF S	lope Coefficient (m)	-1.23065		PF Power Coefficie	ent (p)	0.81147
In Pa	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.2
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h

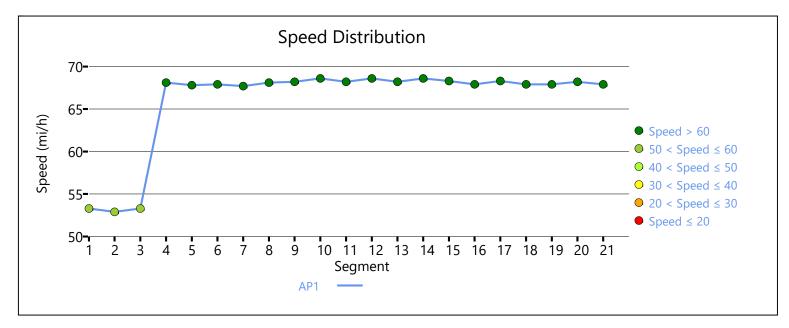
1 Tangent	1995	-		-	68.3
Vehicle Results					
Average Speed, mi/h	68.3		Percent Followers,	. %	32.9
Segment Travel Time, minutes	0.33		Follower Density (FD), followers/mi/ln	1.2
Vehicle LOS	А				
Bicycle Results					
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	250		Bicycle Effective W	/idth, ft	24
Bicycle LOS Score	3.49		Bicycle Effective S _I	peed Factor	5.07
Bicycle LOS	С				
	Se	egm	nent 18		
Vehicle Inputs					
Segment Type	Passing Constrained		Length, ft		1399
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity	<u>'</u>				
Directional Demand Flow Rate, veh/h	250		Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor	0.90		Total Trucks, %		5.09
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.15
Intermediate Results	<u>'</u>				
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		1.3
%Improvement to Percent Followers	0.0		%Improvement to Speed		0.0
Subsegment Data					
# Segment Type	Length, ft	Rad	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1399	-		-	67.9
Vehicle Results					
Average Speed, mi/h	67.9		Percent Followers,	. %	36.2
Segment Travel Time, minutes	0.23		Follower Density (FD), followers/mi/ln	1.3
Vehicle LOS	Α		, , , , , , , , , , , , , , , , , , , ,		
Bicycle Results	•				
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	250		Bicycle Effective W	/idth, ft	24
Bicycle LOS Score	3.49		Bicycle Effective S _I	peed Factor	5.07
Bicycle LOS	С				
	Se	egm	nent 19		

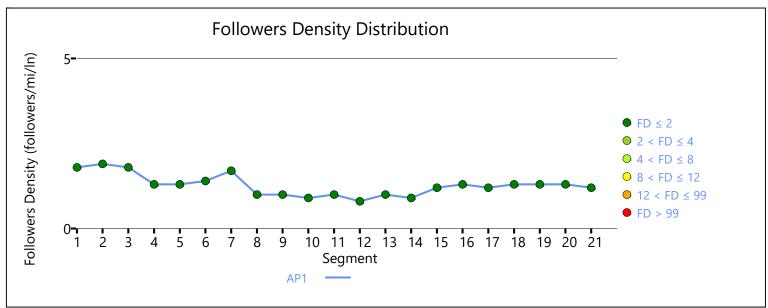
V	ehicle Inputs					
Se	egment Type	Passing Constrained	d	Length, ft		1254
Me	easured FFS	Measured		Free-Flow Speed,	mi/h	70.0
D	emand and Capacity					
Di	rectional Demand Flow Rate, veh/h	248		Opposing Deman	d Flow Rate, veh/h	-
Pe	ak Hour Factor	0.90		Total Trucks, %		1.51
Se	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.15
In	ntermediate Results					
Se	egment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Sp	peed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF	Slope Coefficient (m)	-1.29366		PF Power Coefficie	ent (p)	0.75766
ln	Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.3
%I	Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sı	ubsegment Data					
#	Segment Type	Length, ft	Rad	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1254	-		-	67.9
V	ehicle Results					
Av	verage Speed, mi/h	67.9		Percent Followers,	. %	36.2
Segment Travel Time, minutes		0.21		Follower Density (FD), followers/mi/ln	1.3
Ve	ehicle LOS	A				
Bi	icycle Results					
Pe	ercent Occupied Parking	0		Pavement Condition	on Rating	4
Flo	ow Rate Outside Lane, veh/h	248		Bicycle Effective W	/idth, ft	24
Bio	cycle LOS Score	2.47		Bicycle Effective Speed Factor		5.07
Bio	cycle LOS	В				
			Segm	nent 20		
V	ehicle Inputs					
Se	egment Type	Passing Zone		Length, ft		1108
М	easured FFS	Measured		Free-Flow Speed,	mi/h	70.0
D	emand and Capacity					
Di	rectional Demand Flow Rate, veh/h	248		Opposing Deman	d Flow Rate, veh/h	522
Peak Hour Factor 0.90		Total Trucks, %		1.51		
Se	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.15
In	ntermediate Results					
Se	egment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Sp	peed Slope Coefficient (m)	4.40913		Speed Power Coe	fficient (p)	0.47917
PF	Slope Coefficient (m)	-1.28208		PF Power Coefficie	ent (p)	0.78876

In Passing Lane Effective Length?		No	No		Total Segment Density, veh/mi/ln	
%Improvement to Percent Followers		0.0		%Improvement to	%Improvement to Speed	
Suk	osegment Data					
#	Segment Type	Length, ft Radi		ndius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1108	-		-	68.2
Vel	nicle Results					
Aver	age Speed, mi/h	68.2		Percent Followers	5, %	34.7
Segr	ment Travel Time, minutes	0.18		Follower Density	(FD), followers/mi/ln	1.3
Vehi	cle LOS	А				
Bic	ycle Results			<u>'</u>		
Perc	ent Occupied Parking	0		Pavement Condit	ion Rating	4
Flow	Rate Outside Lane, veh/h	248		Bicycle Effective \	Width, ft	24
Bicy	cle LOS Score	2.47		Bicycle Effective S	Speed Factor	5.07
Bicyo	cle LOS	В				
		•	Segn	nent 21		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrain	ned	Length, ft		2901
Mea	sured FFS	Measured		Free-Flow Speed,	Free-Flow Speed, mi/h	
Dei	mand and Capacity			<u>'</u>		
Dire	ctional Demand Flow Rate, veh/h	248		Opposing Demand Flow Rate, veh/h		-
Peak	Hour Factor	0.90		Total Trucks, %		1.51
Segr	nent Capacity, veh/h	1700		Demand/Capacit	y (D/C)	0.15
Inte	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spee	ed Slope Coefficient (m)	4.59854		Speed Power Coefficient (p)		0.41674
PF S	lope Coefficient (m)	-1.23554		PF Power Coeffic	ient (p)	0.77974
In Pa	ssing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		1.2
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Suk	osegment Data					
#	Segment Type	Length, ft	Ra	ndius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2901	-		-	67.9
Vel	nicle Results					
Aver	age Speed, mi/h	67.9		Percent Followers	5, %	34.1
Segr	ment Travel Time, minutes	0.49		Follower Density	(FD), followers/mi/ln	1.2
Vehi	cle LOS	А				
Bic	ycle Results					
	ent Occupied Parking	0		Pavement Condit	ion Rating	4
Percent Occupied Parking		<u></u> υ		1	<i>_</i>	1

Facility Results						
Bicycle LOS	В					
Bicycle LOS Score	2.47	Bicycle Effective Speed Factor	5.07			
Flow Rate Outside Lane, veh/h	248	Bicycle Effective Width, ft	24			

7	Т	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
-	1	341	0.14	1.2	А





		HCS Two-La	ane	Highway Re	port	
Pro	oject Information					
Ana	lyst	MJV		Date		5/11/2023
Age	ency	HRG		Analysis Year		2029 NB
Juri	sdiction	SDDOT		Time Analyzed		AM Peak
Pro	ect Description	SD 38 WB East of Ha	rtford	Units		U.S. Customary
		S	Segn	nent 1		
Ve	hicle Inputs					
Seg	ment Type	Passing Constrained		Length, ft		1727
	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	177		Opposing Deman	d Flow Rate, veh/h	-
Pea	k Hour Factor	0.88		Total Trucks, %		8.97
Seg	ment Capacity, veh/h	1700		Demand/Capacity	, (D/C)	0.10
	ermediate Results					
Seq	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
	ed Slope Coefficient (m)	4.58112		Speed Power Coe		0.41674
	Slope Coefficient (m)	-1.27241		PF Power Coefficie	·	0.76681
	assing Lane Effective Length?	No		Total Segment De	<u> </u>	0.7
%ln	nprovement to Percent Followers	0.0		%Improvement to Speed		0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1727	-		-	68.4
Ve	hicle Results					
Ave	rage Speed, mi/h	68.4		Percent Followers	 , %	28.7
	ment Travel Time, minutes	0.29			FD), followers/mi/ln	0.7
	icle LOS	A		2 2 2 2 2 2 2 2 2 3 2 3 2 3 2 3 2 3 2 3		
	cycle Results					
	cent Occupied Parking	0		Pavement Conditi	on Rating	4
	v Rate Outside Lane, veh/h	177		Bicycle Effective V		28
Bicycle LOS Score 3.69		Bicycle Effective S		5.07		
	rcle LOS	D		,		
			Sean	nent 2		
Ve	hicle Inputs		- 9-			
	ment Type	Passing Zone		Length, ft		1676
		Measured		Free-Flow Speed,	mi/h	70.0
Measured FFS Measured			Thee How speed,	. 0.0		

Domand and Canadity					
Demand and Capacity	1				1
Directional Demand Flow Rate, veh/h	177		Opposing Demand Flow Rate, veh/h		516
Peak Hour Factor	0.88		Total Trucks, %	(2.(5)	8.97
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)	4.41422		Speed Power Coe	fficient (p)	0.47998
PF Slope Coefficient (m)	-1.26276		PF Power Coefficie	ent (p)	0.79739
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.7
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rad	lius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1676	<u> </u>		-	68.7
Vehicle Results					
Average Speed, mi/h	68.7		Percent Followers	, %	27.2
Segment Travel Time, minutes	0.28		Follower Density (FD), followers/mi/ln		0.7
Vehicle LOS	А				
Bicycle Results	·				
Percent Occupied Parking	0	0		on Rating	4
Flow Rate Outside Lane, veh/h	177		Bicycle Effective Width, ft		28
Bicycle LOS Score	3.69		Bicycle Effective Speed Factor		5.07
Bicycle LOS	D				
	S	egn	nent 3		
Vehicle Inputs					
Segment Type	Passing Constrained		Length, ft		1864
Measured FFS	Measured		Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	188		Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor	0.88		Total Trucks, %		17.04
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.11
Intermediate Results					
Segment Vertical Class 1			Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m) 4.58341		Speed Power Coe	fficient (p)	0.41674	
PF Slope Coefficient (m)	-1.26572		PF Power Coefficie	ent (p)	0.77025
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.8
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					

#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1864 -			-	68.3
Veł	nicle Results	-				
Aver	rage Speed, mi/h	68.3		Percent Followers	, %	29.4
Segr	ment Travel Time, minutes	0.31		Follower Density ((FD), followers/mi/ln	0.8
Vehi	cle LOS	А				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	188		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	8.75		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	F				
		•	Segr	ment 4		
Veł	nicle Inputs					
Segr	ment Type	Passing Constrai	ned	Length, ft		718
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Dei	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	188		Opposing Deman	d Flow Rate, veh/h	-
Peak	Hour Factor	0.88	0.88			17.04
Segr	nent Capacity, veh/h	1700		Demand/Capacity	/ (D/C)	0.11
Int	ermediate Results					
Segr	ment Vertical Class	1	1		mi/h	70.0
Spe	ed Slope Coefficient (m)	4.57372	4.57372		fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.29182		PF Power Coefficient (p)		0.75993
In Pa	assing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		0.8
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	718	-		-	68.3
Vel	nicle Results					
Aver	rage Speed, mi/h	68.3		Percent Followers	, %	30.4
Segr	ment Travel Time, minutes	0.12		Follower Density ((FD), followers/mi/ln	0.8
Vehicle LOS A		A				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	188		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	8.75		Bicycle Effective S	peed Factor	5.07
·		F				

		S	egr	ment 5		
Ve	hicle Inputs					
Seg	ment Type	Passing Zone	Passing Zone L			1738
Mea	asured FFS	Measured	Measured		mi/h	70.0
De	mand and Capacity					·
Dire	ectional Demand Flow Rate, veh/h	188		Opposing Deman	d Flow Rate, veh/h	278
Pea	k Hour Factor	0.88		Total Trucks, %		17.04
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.11
Int	termediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.35280		Speed Power Coef	fficient (p)	0.51981
PF S	Slope Coefficient (m)	-1.23200		PF Power Coefficie	ent (p)	0.81205
In P	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.7
%In	nprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1738	-		-	68.8
Ve	hicle Results					•
Ave	rage Speed, mi/h	68.8		Percent Followers,	. %	27.1
Seg	ment Travel Time, minutes	0.29		Follower Density (FD), followers/mi/ln		0.7
Veh	icle LOS	А				
Bio	cycle Results					·
Per	cent Occupied Parking	0		Pavement Condition	on Rating	4
Flov	w Rate Outside Lane, veh/h	188		Bicycle Effective Width, ft		24
Bicy	vcle LOS Score	8.75		Bicycle Effective Speed Factor		5.07
Bicy	rcle LOS	F				
		S	egr	ment 6		
Ve	hicle Inputs					
	ment Type	Passing Constrained		Length, ft		579
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	188		Opposing Demand	d Flow Rate, veh/h	-
Pea	k Hour Factor	0.88		Total Trucks, %		17.04
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.11
Int	termediate Results					
Sea	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
		1		1		

Speed Slope Coefficient (m)			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 De	nsity, veh/mi/ln	0.8
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft Radiu		dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	579	-		-	68.3
Vehicle Results					
Average Speed, mi/h	68.3		Percent Followers,	, %	30.4
Segment Travel Time, minutes	0.10		Follower Density (FD), followers/mi/ln	0.8
Vehicle LOS	А				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	188		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	8.75		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	F				
		Segn	nent 7		
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	172		Opposing Deman	d Flow Rate, veh/h	242
Peak Hour Factor	0.88		Total Trucks, %		18.44
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)	4.34942		Speed Power Coefficient (p)		0.52824
PF Slope Coefficient (m)	-1.20658		PF Power Coefficie	ent (p)	0.82267
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	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent				-	68.9
Vehicle Results	•				·
Average Speed, mi/h	68.9		Percent Followers	, %	24.6
Segment Travel Time, minutes	0.37		Follower Density (FD), followers/mi/ln		0.6
Vehicle LOS A					

Bicycle Results					
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	172		Bicycle Effective W	/idth, ft	28
Bicycle LOS Score	8.50 I		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	F				
	S	egn	nent 8		
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	172		Opposing Demand	d Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %		18.44
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)	-1.29166		PF Power Coefficient (p)		0.76014
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	Rac	lius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	980	-		-	68.5
Vehicle Results					
Average Speed, mi/h	68.5		Percent Followers,	%	28.7
Segment Travel Time, minutes	0.16		Follower Density (FD), followers/mi/ln		0.7
Vehicle LOS	А		,		
Bicycle Results					
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	172		Bicycle Effective W	/idth, ft	28
Bicycle LOS Score	8.50		Bicycle Effective Speed Factor		5.07
Bicycle LOS	F				
	S	egn	nent 9		
Vehicle Inputs					
Segment Type	Passing Zone		Length, ft		3667
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity					

Dire	ctional Demand Flow Rate, veh/h	172		Opposing Demand	d Flow Rate, veh/h	242
Peak	Hour Factor	0.88		Total Trucks, %		18.44
Segr	ment Capacity, veh/h 1700		Demand/Capacity	(D/C)	0.10	
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spee	ed Slope Coefficient (m)	4.36783		Speed Power Coef	fficient (p)	0.52824
PF S	lope Coefficient (m)	-1.17532		PF Power Coefficie	ent (p)	0.83427
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.6
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	segment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3667	-		-	68.9
Veł	nicle Results					
Aver	age Speed, mi/h	68.9		Percent Followers,	. %	23.7
Segr	nent Travel Time, minutes	0.60		Follower Density (FD), followers/mi/ln	0.6
Vehi	cle LOS	A				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Condition	on Rating	4
Flow	Rate Outside Lane, veh/h	172		Bicycle Effective W	/idth, ft	28
Bicy	cle LOS Score	8.50		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	F				
			Segr	ment 10		
Vel	nicle Inputs					
Segr	ment Type	Passing Constraine	ed	Length, ft		1846
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Dei	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	172		Opposing Demand	d Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %		18.44
Segr	nent Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.10
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spee	ed Slope Coefficient (m)	4.58311		Speed Power Coef	fficient (p)	0.41674
PF Slope Coefficient (m) -1.26629		PF Power Coefficie	ent (p)	0.77017		
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.7
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	segment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h

1 Tangent	1846	-		-	68.5
Vehicle Results					
Average Speed, mi/h	68.5		Percent Follower	s, %	27.8
Segment Travel Time, minutes	0.31		Follower Density	(FD), followers/mi/ln	0.7
Vehicle LOS	А				
Bicycle Results	·				·
Percent Occupied Parking	0		Pavement Condi	tion Rating	4
Flow Rate Outside Lane, veh/h	172		Bicycle Effective	Width, ft	28
Bicycle LOS Score	8.50		Bicycle Effective	Speed Factor	5.07
Bicycle LOS	F				
	·	Seg	ment 11		
Vehicle Inputs					
Segment Type	Passing Zone		Length, ft		2174
Measured FFS	Measured		Free-Flow Speed	, mi/h	70.0
Demand and Capacity	<u>'</u>				
Directional Demand Flow Rate, veh/h	172		Opposing Dema	nd Flow Rate, veh/h	242
Peak Hour Factor	0.88		Total Trucks, %		18.44
Segment Capacity, veh/h	1700		Demand/Capacit	ry (D/C)	0.10
Intermediate Results	_				
Segment Vertical Class	1		Free-Flow Speed	, mi/h	70.0
Speed Slope Coefficient (m)	4.34810		Speed Power Co	efficient (p)	0.52824
PF Slope Coefficient (m)	-1.20938		PF Power Coeffic	ient (p)	0.82151
In Passing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		0.6
%Improvement to Percent Followers	0.0		%Improvement t	o Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	R	Radius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	2174	-		-	68.9
Vehicle Results					
Average Speed, mi/h	68.9		Percent Follower	s, %	24.7
Segment Travel Time, minutes	0.36		Follower Density	(FD), followers/mi/ln	0.6
Vehicle LOS A					
Bicycle Results					
Percent Occupied Parking	0		Pavement Condi	tion Rating	4
Flow Rate Outside Lane, veh/h	· ·		Bicycle Effective	Width, ft	28
Bicycle LOS Score	8.50		Bicycle Effective	Speed Factor	5.07
Bicycle LOS	F				
		Seg	ment 12		

V	ehicle Inputs					
Se	gment Type	Passing Constrair	ned	Length, ft		1277
Me	easured FFS	Measured		Free-Flow Speed,	mi/h	70.0
D	emand and Capacity					
Di	rectional Demand Flow Rate, veh/h	172		Opposing Deman	d Flow Rate, veh/h	-
Pe	ak Hour Factor	0.88		Total Trucks, %		18.44
Se	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.10
In	termediate Results					
Se	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Sp	eed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF	Slope Coefficient (m)	-1.29166		PF Power Coefficie	ent (p)	0.76014
ln	Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.7
%I	mprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sı	ubsegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1277	-		-	68.5
V	ehicle Results					
Av	verage Speed, mi/h	68.5		Percent Followers,	%	28.7
Se	gment Travel Time, minutes	0.21		Follower Density (FD), followers/mi/ln	0.7
Ve	hicle LOS	А				
Bi	icycle Results					
Pe	rcent Occupied Parking	0		Pavement Condition Rating		4
Flo	ow Rate Outside Lane, veh/h	172	172		/idth, ft	28
Bio	cycle LOS Score	8.50		Bicycle Effective Speed Factor		5.07
Bio	cycle LOS	F				
			Segn	nent 13		
V	ehicle Inputs					
Se	gment Type	Passing Constrair	ned	Length, ft		779
М	easured FFS	Measured		Free-Flow Speed,	mi/h	70.0
D	emand and Capacity					
Di	rectional Demand Flow Rate, veh/h	172		Opposing Deman	d Flow Rate, veh/h	-
Peak Hour Factor 0.88		0.88		Total Trucks, %		18.44
Se	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.10
In	termediate Results					
Se	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Sp	eed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF	Slope Coefficient (m)	-1.29166		PF Power Coefficie	ent (p)	0.76014

In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln		0.7
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Suk	osegment Data					
# Segment Type		Length, ft Rac		idius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	779 -			-	68.5
Vel	nicle Results					
Aver	age Speed, mi/h	68.5		Percent Followers	Percent Followers, %	
Segment Travel Time, minutes		0.13		Follower Density (FD), followers/mi/ln		0.7
Vehicle LOS		A				
Bic	ycle Results			<u> </u>		
Perc	ent Occupied Parking	0		Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		172		Bicycle Effective Width, ft		28
Bicy	cle LOS Score	8.50		Bicycle Effective Speed Factor		5.07
Bicycle LOS		F				
		•	Segn	nent 14		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrained		Length, ft		422
Measured FFS		Measured		Free-Flow Speed, mi/h		70.0
Dei	mand and Capacity					
Directional Demand Flow Rate, veh/h		192		Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88		Total Trucks, %		13.95
Segr	nent Capacity, veh/h	1700		Demand/Capacity (D/C)		0.11
Inte	ermediate Results					
Segment Vertical Class		1		Free-Flow Speed,	Free-Flow Speed, mi/h	
Speed Slope Coefficient (m)		4.57372		Speed Power Coe	Speed Power Coefficient (p)	
PF Slope Coefficient (m)		-1.29219		PF Power Coefficient (p)		0.75948
In Passing Lane Effective Length?		No		Total Segment De	Total Segment Density, veh/mi/ln	
%Improvement to Percent Followers		0.0		%Improvement to	%Improvement to Speed	
Suk	osegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	422	-		-	68.3
Vel	nicle Results					
Average Speed, mi/h		68.3		Percent Followers	Percent Followers, %	
Segment Travel Time, minutes		0.07		Follower Density (FD), followers/mi/ln		0.9
Vehi	cle LOS	А				
Bic	ycle Results					
	ent Occupied Parking	0		Pavement Condition Rating		4
	· -					

F! -	Data Outoida La caral d	103	D' L. Eff ·	- \A/: - + - f:	24
	Rate Outside Lane, veh/h	192	Bicycle Effectiv		24
_	le LOS Score	7.06	Bicycle Effectiv	e Speed Factor	5.07
Вісус	le LOS	F			
		Se	gment 15		
Veh	icle Inputs				
Segn	nent Type	Passing Constrained	Length, ft		1478
Meas	sured FFS	Measured	Free-Flow Spee	ed, mi/h	70.0
Der	nand and Capacity				
Direc	tional Demand Flow Rate, veh/h	177	Opposing Dem	nand Flow Rate, veh/h	-
Peak	Hour Factor	0.88	Total Trucks, %		19.53
Segm	nent Capacity, veh/h	1700	Demand/Capa	city (D/C)	0.10
Inte	ermediate Results				
Segn	nent Vertical Class	1	Free-Flow Spee	ed, mi/h	70.0
Spee	d Slope Coefficient (m)	4.57671	Speed Power C	Coefficient (p)	0.41674
PF SI	ope Coefficient (m)	-1.28298	PF Power Coef	ficient (p)	0.76370
In Pa	ssing Lane Effective Length?	No	Total Segment	Density, veh/mi/ln	0.8
%lmp	provement to Percent Followers	0.0	%Improvemen	t to Speed	0.0
Sub	segment Data				
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1478	-	-	68.4
Veh	icle Results				
Avera	age Speed, mi/h	68.4	Percent Follow	ers, %	29.0
Segn	nent Travel Time, minutes	0.25	Follower Densi	ty (FD), followers/mi/ln	0.8
Vehic	ile LOS	А			
D:					
RIC	cle Results				
	ycle Results ent Occupied Parking	0	Pavement Con-	dition Rating	4
Perce		0 177	Pavement Con-		4 28
Perce	ent Occupied Parking	1	Bicycle Effectiv		
Perce Flow Bicyc	ent Occupied Parking Rate Outside Lane, veh/h	177	Bicycle Effectiv	e Width, ft	28
Perce Flow Bicyc	ent Occupied Parking Rate Outside Lane, veh/h le LOS Score	177 9.19 F	Bicycle Effectiv	e Width, ft	28
Perce Flow Bicyc	ent Occupied Parking Rate Outside Lane, veh/h le LOS Score	177 9.19 F	Bicycle Effectiv	e Width, ft	28
Perce Flow Bicyc	ent Occupied Parking Rate Outside Lane, veh/h le LOS Score le LOS	177 9.19 F	Bicycle Effectiv	e Width, ft	28
Perce Flow Bicyc Bicyc	Rate Outside Lane, veh/h le LOS Score le LOS	177 9.19 F	Bicycle Effectiv Bicycle Effectiv gment 16	e Width, ft e Speed Factor	28 5.07
Perce Flow Bicyc Bicyc	Rate Outside Lane, veh/h le LOS Score le LOS	177 9.19 F Se	Bicycle Effectiv Bicycle Effectiv gment 16 Length, ft	e Width, ft e Speed Factor	28 5.07 384
Perce Flow Bicyc Bicyc	Rate Outside Lane, veh/h le LOS Score le LOS sicle Inputs ment Type sured FFS mand and Capacity	177 9.19 F Se	Bicycle Effectiv Bicycle Effectiv gment 16 Length, ft Free-Flow Spec	e Width, ft e Speed Factor ed, mi/h	28 5.07 384
Perce Flow Bicyc Bicyc Veh Segm Meas Den	Rate Outside Lane, veh/h le LOS Score le LOS icle Inputs nent Type sured FFS	177 9.19 F Se Passing Constrained Measured	Bicycle Effectiv Bicycle Effectiv gment 16 Length, ft Free-Flow Spec	e Width, ft e Speed Factor ed, mi/h and Flow Rate, veh/h	28 5.07 384 70.0

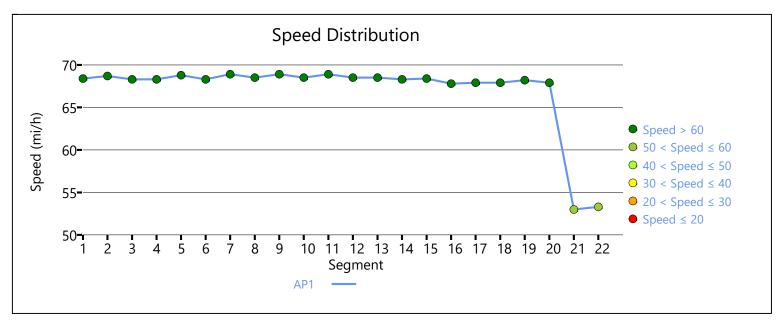
Int	termediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed	l, mi/h	70.0
Spe	ed Slope Coefficient (m)	4.57372	Speed Power Coe		efficient (p)	0.41674
PF :	Slope Coefficient (m)	-1.29233		PF Power Coeffic	cient (p)	0.75931
In F	assing Lane Effective Length?	No		Total Segment D	ensity, veh/mi/ln	1.5
%In	nprovement to Percent Followers	0.0		%Improvement	to Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Length, ft Radi		Superelevation, %	Average Speed, mi/h
1	Tangent	384	-		-	67.8
Ve	hicle Results				·	
Ave	rage Speed, mi/h	67.8		Percent Followe	rs, %	37.6
Seg	ment Travel Time, minutes	0.06		Follower Density	(FD), followers/mi/ln	1.5
Veh	icle LOS	А				
Bio	cycle Results					
Per	cent Occupied Parking	0		Pavement Cond	tion Rating	4
Flo	w Rate Outside Lane, veh/h	265		Bicycle Effective Width, ft		24
Bicy	vcle LOS Score	6.63		Bicycle Effective Speed Factor		5.07
Bicy	vcle LOS	F				
		•	Segn	nent 17		
Ve	hicle Inputs					
	ment Type	Passing Constraine	ed	Length, ft		3732
	asured FFS	Measured		Free-Flow Speed, mi/h		70.0
_	emand and Capacity			1 1 1 1	'	
	ectional Demand Flow Rate, veh/h	256		Opposing Dema	nd Flow Rate, veh/h	T_
	k Hour Factor	0.88		Total Trucks, %		12.21
	ment Capacity, veh/h	1700		Demand/Capaci	ty (D/C)	0.15
	termediate Results					
	ment Vertical Class	1		Free-Flow Speed	l mi/h	70.0
	ed Slope Coefficient (m)	4.60878		Speed Power Co		0.41674
	Slope Coefficient (m)	-1.21846		PF Power Coeffic	<u> </u>	0.78615
	Passing Lane Effective Length?	No			vensity, veh/mi/ln	1.3
	nprovement to Percent Followers	0.0		%Improvement		0.0
	bsegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3732	-		-	67.9
	hicle Results				1	
		67.9		Percent Followe	es %	34.1
AVE	rage Speed, mi/h	01.3		reiteiit rollowe	3, 70	34.1

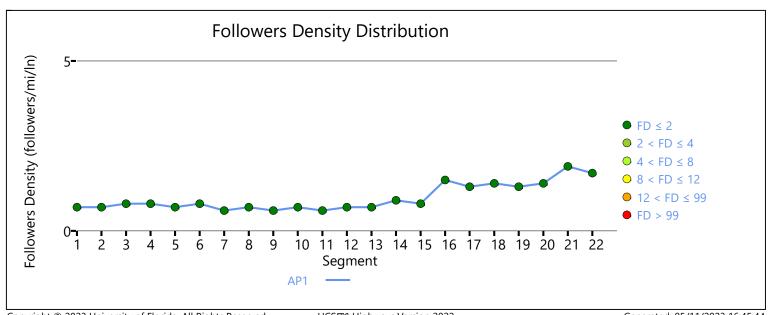
Segment Travel Time, minutes	0.62		Follower Density (FD), followers/mi/ln	1.3
Vehicle LOS	A		Tollower Delisity (1 D), Ioliowers/Illi/Ill	1.5
Bicycle Results					
Percent Occupied Parking	0		Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h	256			/idth, ft	24
Bicycle LOS Score	6.34		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	F				
		Segm	ent 18		
Vehicle Inputs					
Segment Type	Passing Constrain	ned	Length, ft		1360
Measured FFS	Measured	Measured		mi/h	70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/	h 256		Opposing Demand	d Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %		12.21
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.15
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.57450		Speed Power Coef	fficient (p)	0.41674
PF Slope Coefficient (m)	-1.29014		PF Power Coefficie	ent (p)	0.76012
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	Rad	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1360	-		-	67.9
Vehicle Results					
Average Speed, mi/h	67.9		Percent Followers,	%	36.7
Segment Travel Time, minutes	0.23		Follower Density (FD), followers/mi/ln	1.4
Vehicle LOS	А				
Bicycle Results					
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	256		Bicycle Effective W	/idth, ft	24
Bicycle LOS Score	6.34		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	F				
		Segm	ent 19		
Vehicle Inputs					
Segment Type	Passing Zone		Length, ft		1595
Measured FFS	Measured		Free-Flow Speed,	no : /la	70.0

Demand and Capacity					
Directional Demand Flow Rate, veh/h	256		Opposing Dem	and Flow Rate, veh/h	483
Peak Hour Factor	0.88		Total Trucks, %		12.21
Segment Capacity, veh/h	1700		Demand/Capac	ity (D/C)	0.15
Intermediate Results					<u>'</u>
Segment Vertical Class	1		Free-Flow Spee	d, mi/h	70.0
Speed Slope Coefficient (m)	4.40516		Speed Power Co	pefficient (p)	0.48439
PF Slope Coefficient (m)	-1.26342		PF Power Coeff	icient (p)	0.79785
In Passing Lane Effective Length?	No		Total Segment I	Density, veh/mi/ln	1.3
%Improvement to Percent Followers	0.0		%Improvement	to Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1595	-		-	68.2
Vehicle Results					
Average Speed, mi/h	68.2		Percent Followe	ers, %	34.7
Segment Travel Time, minutes	0.27		Follower Densit	y (FD), followers/mi/ln	1.3
Vehicle LOS	А				
Bicycle Results			•		
Percent Occupied Parking	0		Pavement Conc	lition Rating	4
Flow Rate Outside Lane, veh/h	256		Bicycle Effective Width, ft		24
Bicycle LOS Score	6.34		Bicycle Effective Speed Factor		5.07
Bicycle LOS	F				
		Segr	nent 20		
Vehicle Inputs					
Segment Type	Passing Constrair	ned	Length, ft		595
Measured FFS	Measured		Free-Flow Spee	d, mi/h	70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	256		Opposing Dem	and Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %		12.21
Segment Capacity, veh/h	1700		Demand/Capac	ity (D/C)	0.15
Intermediate Results					
Segment Vertical Class	1		Free-Flow Spee	d, mi/h	70.0
Speed Slope Coefficient (m)	4.57372		Speed Power Co	oefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29239		PF Power Coeff	icient (p)	0.75923
In Passing Lane Effective Length?	No		Total Segment I	Density, veh/mi/ln	1.4
%Improvement to Percent Followers	0.0		%Improvement	to Speed	0.0

#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	595	-		-	67.9
Veł	nicle Results		·			·
Aver	rage Speed, mi/h	67.9		Percent Followers	, %	36.8
Segr	ment Travel Time, minutes	0.10	0.10		(FD), followers/mi/ln	1.4
Vehi	cle LOS	A				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	256		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	6.34		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	F				
			Segn	ment 21		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrai	ned	Length, ft		958
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	55.0
Dei	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	245	245		d Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %		10.81
Segr	ment Capacity, veh/h	1700	1700		/ (D/C)	0.14
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	55.0
Spee	ed Slope Coefficient (m)	4.57372		Speed Power Coefficient (p)		0.41674
PF S	lope Coefficient (m)	-1.43859		PF Power Coefficient (p)		0.72596
In Pa	assing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		1.9
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Suk	osegment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	958	-		-	53.0
Veł	nicle Results					·
Aver	rage Speed, mi/h	53.0		Percent Followers	, %	40.5
Segment Travel Time, minutes 0.21			Follower Density	(FD), followers/mi/ln	1.9	
Vehi	cle LOS	A				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	245		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	5.27		Bicycle Effective S	peed Factor	4.62
Bicy	cle LOS	E				

		Se	egmer	nt 22		
Veh	icle Inputs					
Segm	ent Type	Passing Zone	Le	ength, ft		1659
Meas	ured FFS	Measured	Fr	ree-Flow Speed,	mi/h	55.0
Den	nand and Capacity					
Direc	tional Demand Flow Rate, veh/h	245	О	pposing Deman	d Flow Rate, veh/h	405
Peak	Hour Factor	0.88	To	otal Trucks, %		10.81
Segm	ent Capacity, veh/h	1700	D	emand/Capacity	/ (D/C)	0.14
Inte	rmediate Results					
Segm	ent Vertical Class	1	Fr	ree-Flow Speed,	mi/h	55.0
Speed	d Slope Coefficient (m)	4.38697	Sp	peed Power Coe	fficient (p)	0.49609
PF Slo	ope Coefficient (m)	-1.34857	PI	PF Power Coefficient (p)		0.76529
In Pas	ssing Lane Effective Length?	No	To	otal Segment De	nsity, veh/mi/ln	1.7
%lmp	provement to Percent Followers	0.0	0.0 %		Speed	0.0
Sub	segment Data					
#	Segment Type	Length, ft	Radius	, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1659	1-	-		53.3
Veh	icle Results					
Avera	ge Speed, mi/h	53.3	Pe	ercent Followers,	, %	36.9
Segm	ent Travel Time, minutes	0.35	Fo	Follower Density (FD), followers/mi/ln		1.7
Vehic	le LOS	А				
Bicy	cle Results					
Perce	nt Occupied Parking	0	Pa	avement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	245	Bi	Bicycle Effective Width, ft		24
Bicycl	le LOS Score	5.27	Bi	Bicycle Effective Speed Factor		4.62
Bicycl	le LOS	E				
Faci	lity Results					
т	VMT veh-mi/p	VHD veh-h/p			ensity, followers/ mi/ln	LOS
1	279	0.10			0.9	А





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		HCS Two-La	ne	Highway Re	port	
Proje	ect Information					
Analys	t	MJV		Date		5/11/2023
Agency	У	HRG		Analysis Year		2029 NB
Jurisdio	ction	SDDOT		Time Analyzed		PM Peak
Project	t Description	SD 38 WB East of Hart	ford	Units		U.S. Customary
		S	egn	nent 1		
Vehic	cle Inputs					
Segme	ent Type	Passing Constrained		Length, ft		1727
Measu	red FFS	Measured		Free-Flow Speed,	mi/h	70.0
Dem	and and Capacity					
Direction	onal Demand Flow Rate, veh/h	534		Opposing Deman	d Flow Rate, veh/h	-
Peak H	lour Factor	0.88		Total Trucks, %		8.97
Segme	ent Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.31
Inter	mediate Results			·		
Segme	ent Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed	Slope Coefficient (m)	4.58112	4.58112		fficient (p)	0.41674
PF Slop	pe Coefficient (m)	-1.27241		PF Power Coefficie	ent (p)	0.76681
In Pass	ing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		4.4
%lmpr	ovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subs	egment Data	•		•		
# 5	Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1 7	[angent	1727	1-		-	66.8
Vehic	cle Results					
Averag	je Speed, mi/h	66.8		Percent Followers,	%	54.5
Segme	ent Travel Time, minutes	0.29		Follower Density (FD), followers/mi/ln	4.4
Vehicle	LOS	С				
Bicyc	cle Results			<u>'</u>		
Percen	t Occupied Parking	0		Pavement Conditi	on Rating	4
Flow R	ate Outside Lane, veh/h	534		Bicycle Effective W	/idth, ft	24
Bicycle	LOS Score	5.29		Bicycle Effective S	peed Factor	5.07
Bicycle	LOS	E				
		S	egn	nent 2		
Vehic	cle Inputs					
	ent Type	Passing Zone		Length, ft		1676
	red FFS	Measured		Free-Flow Speed,	mi/h	70.0

Domand and Canadity					
Demand and Capacity	1				la-a
Directional Demand Flow Rate, veh/h	534		Opposing Demand Flow Rate, veh/h		253
Peak Hour Factor	0.88		Total Trucks, %		8.97
Segment Capacity, veh/h	1700	1700		r (D/C)	0.31
Intermediate Results					
Segment Vertical Class	1	1 F		mi/h	70.0
Speed Slope Coefficient (m)	4.34379		Speed Power Coe	fficient (p)	0.52551
PF Slope Coefficient (m)	-1.23127		PF Power Coefficie	ent (p)	0.81132
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	4.2
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Radio	us, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1676	-		-	67.2
Vehicle Results					
Average Speed, mi/h	67.2	П	Percent Followers,	, %	52.3
Segment Travel Time, minutes	0.28		Follower Density (FD), followers/mi/ln		4.2
Vehicle LOS	С				
Bicycle Results	•				
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	534		Bicycle Effective Width, ft		24
Bicycle LOS Score	5.29		Bicycle Effective Speed Factor		5.07
Bicycle LOS	E				
	S	egm	ent 3		
Vehicle Inputs					
Segment Type	Passing Constrained	П	Length, ft		1864
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity	·				
Directional Demand Flow Rate, veh/h	335		Opposing Deman	d Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %		17.04
Segment Capacity, veh/h	1700		Demand/Capacity	' (D/C)	0.20
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.58341		Speed Power Coe	fficient (p)	0.41674
PF Slope Coefficient (m)	-1.26572		PF Power Coefficie	ent (p)	0.77025
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	2.1
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					

#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1864	-		-	67.5
Vel	nicle Results		·			·
Aver	rage Speed, mi/h	67.5		Percent Followers	, %	42.0
Segr	ment Travel Time, minutes	0.31		Follower Density ((FD), followers/mi/ln	2.1
Vehi	cle LOS	В				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	335		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	9.04		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	F				
			Segr	ment 4		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrai	ned	Length, ft		718
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	335		Opposing Deman	d Flow Rate, veh/h	-
Peak	Hour Factor	0.88	3 Total Tr			17.04
Segr	nent Capacity, veh/h	1700	1700		' (D/C)	0.20
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.57372		Speed Power Coefficient (p)		0.41674
PF S	lope Coefficient (m)	-1.29182		PF Power Coefficient (p)		0.75993
In Pa	assing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		2.1
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	718	-		-	67.5
Vel	nicle Results					
Aver	rage Speed, mi/h	67.5		Percent Followers	, %	43.0
Segr	ment Travel Time, minutes	0.12		Follower Density ((FD), followers/mi/ln	2.1
Vehi	cle LOS	В				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	335		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	9.04		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	F				

		S	egr	ment 5		
Ve	hicle Inputs					
Seg	ment Type	Passing Zone		Length, ft		1738
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	335	335		d Flow Rate, veh/h	256
Pea	k Hour Factor	0.88	0.88			17.04
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.20
Int	termediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.34559		Speed Power Coe	fficient (p)	0.52497
PF S	Slope Coefficient (m)	-1.22813		PF Power Coefficie	ent (p)	0.81352
In P	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	2.0
%In	nprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1738	-		-	68.0
Ve	hicle Results					
Ave	rage Speed, mi/h	68.0		Percent Followers,	, %	39.6
Seg	ment Travel Time, minutes	0.29		Follower Density (FD), followers/mi/ln		2.0
Veh	icle LOS	А				
Bio	cycle Results					
Per	cent Occupied Parking	0		Pavement Conditi	on Rating	4
Flov	w Rate Outside Lane, veh/h	335		Bicycle Effective Width, ft		24
Bicy	/cle LOS Score	9.04		Bicycle Effective S	peed Factor	5.07
Bicy	rcle LOS	F				
		S	egr	ment 6		
Ve	hicle Inputs					
Seg	ment Type	Passing Constrained		Length, ft		579
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	335		Opposing Deman	d Flow Rate, veh/h	-
Pea	k Hour Factor	0.88		Total Trucks, %		17.04
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.20
Int	termediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
		1		<u> </u>		

Speed Slope Coefficient (m)	4.57372			fficient (p)	0.41674
PF Slope Coefficient (m)	-1.29182		PF Power Coefficient (p)		0.75993
In Passing Lane Effective Length?	No		Total Segment De		2.1
%Improvement to Percent Followers	0.0	0.0		Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	579	579 -		-	67.5
Vehicle Results					
Average Speed, mi/h	67.5		Percent Followers,	, %	43.0
Segment Travel Time, minutes	0.10		Follower Density (FD), followers/mi/ln	2.1
Vehicle LOS	В				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	335		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	9.04		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	F				
		Segn	nent 7		
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	288		Opposing Deman	d Flow Rate, veh/h	213
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)	4.33926		Speed Power Coe	fficient (p)	0.53581
PF Slope Coefficient (m)	-1.20084		PF Power Coefficie	ent (p)	0.82484
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.5
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	2262	-		-	68.2
Vehicle Results					
Average Speed, mi/h	68.2		Percent Followers	, %	34.9
Segment Travel Time, minutes	0.38			FD), followers/mi/ln	1.5
Vehicle LOS A		To nower bensity (1 b), followers/fin/fit			

Bicycle Results					
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	288		Bicycle Effective W	/idth, ft	24
Bicycle LOS Score	9.80		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	F				
	S	egn	nent 8		
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	288		Opposing Demand	d 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	Rac	lius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	980	1-		-	67.7
Vehicle Results		•			
Average Speed, mi/h	67.7		Percent Followers,	%	39.4
Segment Travel Time, minutes	0.16		Follower Density (FD), followers/mi/ln		1.7
Vehicle LOS	А				
Bicycle Results					
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	288		Bicycle Effective W	/idth, ft	24
Bicycle LOS Score	9.80		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	F				
	S	egn	nent 9		
Vehicle Inputs					
Segment Type	Passing Zone		Length, ft		3667
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity					

Dire	ctional Demand Flow Rate, veh/h	288		Opposing Demand	d Flow Rate, veh/h	213
Peak	Hour Factor	0.88		Total Trucks, %		18.44
Segr	nent Capacity, veh/h	t Capacity, veh/h 1700		Demand/Capacity	(D/C)	0.17
Int	ermediate Results					
Segr	nent Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.35766		Speed Power Coef	fficient (p)	0.53581
PF S	ope Coefficient (m)	-1.16975		PF Power Coefficie	ent (p)	0.83655
In Pa	ssing Lane Effective Length?	No		Total Segment De	Total Segment Density, veh/mi/ln	
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	segment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3667	-		-	68.2
Vel	nicle Results					
Aver	age Speed, mi/h	68.2		Percent Followers,	%	33.8
Segr	nent Travel Time, minutes	0.61		Follower Density (FD), followers/mi/ln	1.4
Vehi	cle LOS	A				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Condition	on Rating	4
Flow	Rate Outside Lane, veh/h	288		Bicycle Effective W	/idth, ft	24
Bicy	cle LOS Score	9.80		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	F				
			Segr	ment 10		
Vel	nicle Inputs					
Segr	nent Type	Passing Constrain	ed	Length, ft		1846
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	288		Opposing Demand	d Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %		18.44
Segr	nent Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.17
Int	ermediate Results					
Segr	nent Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.58311		Speed Power Coef	fficient (p)	0.41674
PF Slope Coefficient (m) -1.26629		PF Power Coefficie	ent (p)	0.77017		
In Passing Lane Effective Length? No		Total Segment De	nsity, veh/mi/ln	1.6		
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	segment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
	-					

1 Tangent	1846				67.7
	1040	-		-	07.7
Vehicle Results					
Average Speed, mi/h	67.7		Percent Followers	, %	38.4
Segment Travel Time, minutes	0.31	0.31		(FD), followers/mi/ln	1.6
Vehicle LOS	A				
Bicycle Results					
Percent Occupied Parking	0	0		on Rating	4
Flow Rate Outside Lane, veh/h	288		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	9.80		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	F				
		Segn	nent 11		
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/l	n 288		Opposing Deman	d Flow Rate, veh/h	213
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)	4.33794		Speed Power Coefficient (p)		0.53581
PF Slope Coefficient (m)	-1.20363		PF Power Coefficient (p)		0.82367
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	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	2174	-		-	68.2
Vehicle Results					
Average Speed, mi/h	68.2		Percent Followers	, %	35.0
Segment Travel Time, minutes	0.36		Follower Density	(FD), followers/mi/ln	1.5
Vehicle LOS	A				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	·		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	9.80		Bicycle Effective S	peed Factor	5.07
·			<u> </u>		
Bicycle LOS	F				

Ve	hicle Inputs					
Seg	gment Type	Passing Constrain	ed	Length, ft		1277
Me	asured FFS	Measured		Free-Flow Speed, mi/h		70.0
De	emand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	288	288 C		d Flow Rate, veh/h	-
Pea	ak Hour Factor	0.88		Total Trucks, %		18.44
Seg	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.17
Int	termediate Results					
Seg	gment Vertical Class	1		Free-Flow Speed, mi/h		70.0
Spe	eed Slope Coefficient (m)	4.57372		Speed Power Coef	ficient (p)	0.41674
PF :	Slope Coefficient (m)	-1.29166		PF Power Coefficie	ent (p)	0.76014
In F	Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.7
%lr	mprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Rad	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1277	-		-	67.7
Ve	hicle Results					
Ave	erage Speed, mi/h	67.7		Percent Followers,	%	39.4
Seg	gment Travel Time, minutes	0.21		Follower Density (FD), followers/mi/ln	1.7
Veh	nicle LOS	А				
Bio	cycle Results					
Per	cent Occupied Parking	0		Pavement Condition	Pavement Condition Rating	
Flo	w Rate Outside Lane, veh/h	288		Bicycle Effective Width, ft		24
Bic	ycle LOS Score	9.80		Bicycle Effective Speed Factor		5.07
Bic	ycle LOS	F				
			Segn	nent 13		
Ve	hicle Inputs					
Seg	gment Type	Passing Constrain	ed	Length, ft		779
Me	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	emand and Capacity					
Dir	ectional Demand Flow Rate, veh/h	288		Opposing Demand	d Flow Rate, veh/h	-
Pea	Peak Hour Factor 0.88		Total Trucks, %		18.44	
Segment Capacity, veh/h 1700			Demand/Capacity	(D/C)	0.17	
Int	termediate Results					
Seg	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	eed Slope Coefficient (m)	4.57372		Speed Power Coef	ficient (p)	0.41674
DE	Slope Coefficient (m)	-1.29166		PF Power Coefficie	ent (p)	0.76014

In Passing Lane Effective Length?		No		Total Segment De	nsity, veh/mi/ln 1.7		
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0	
Suk	osegment Data						
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h	
1	Tangent	779	-		-	67.7	
Vel	nicle Results	•					
Aver	age Speed, mi/h	67.7		Percent Followers	5, %	39.4	
Segr	nent Travel Time, minutes	0.13		Follower Density	(FD), followers/mi/ln	1.7	
Vehi	cle LOS	Α					
Bic	ycle Results					<u>'</u>	
	ent Occupied Parking	0		Pavement Condit	ion Rating	4	
Flow	Rate Outside Lane, veh/h	288		Bicycle Effective \	Width, ft	24	
Bicyc	cle LOS Score	9.80		Bicycle Effective S	Speed Factor	5.07	
Bicyc	cle LOS	F					
		•	Segn	nent 14		·	
Vel	nicle Inputs						
Segr	nent Type	Passing Constrair	ned	Length, ft		422	
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0	
Der	mand and Capacity					·	
Dire	ctional Demand Flow Rate, veh/h	327		Opposing Demar	nd Flow Rate, veh/h	-	
Peak	Hour Factor	0.88		Total Trucks, %	Total Trucks, %		
Segr	nent Capacity, veh/h	1700		Demand/Capacity (D/C)		0.19	
Inte	ermediate Results						
Segr	nent Vertical Class	1		Free-Flow Speed, mi/h		70.0	
Spee	ed Slope Coefficient (m)	4.57372		Speed Power Coe	efficient (p)	0.41674	
PF SI	ope Coefficient (m)	-1.29219		PF Power Coeffici	ent (p)	0.75948	
In Pa	ssing Lane Effective Length?	No		Total Segment De	ensity, veh/mi/ln	2.1	
%lm	provement to Percent Followers	0.0		%Improvement to	%Improvement to Speed		
Suk	segment Data						
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h	
1	Tangent	422	-		-	67.5	
Vel	nicle Results						
Aver	age Speed, mi/h	67.5		Percent Followers	5, %	42.5	
Segment Travel Time, minutes 0.07			Follower Density	(FD), followers/mi/ln	2.1		
Vehi	cle LOS	В					
Bic	ycle Results						
	ent Occupied Parking	0		Pavement Condit	ion Rating	4	
Percent Occupied Parking		L		1	_	1	

FI -	Date Outside Lana wall //	227		Diovolo Effection 14	lidth ft	24	
	Rate Outside Lane, veh/h	327		Bicycle Effective Width, ft Bicycle Effective Speed Factor		24	
_	le LOS Score	7.33	В	Bicycle Effective Sp	peed Factor	5.07	
Вісус	le LOS	F					
		Se	gme	nt 15			
Veh	icle Inputs						
Segn	nent Type	Passing Constrained	L	ength, ft		1478	
Meas	sured FFS	Measured	F	ree-Flow Speed,	mi/h	70.0	
Der	nand and Capacity						
Direc	tional Demand Flow Rate, veh/h	297	C	Opposing Demand	d Flow Rate, veh/h	-	
Peak	Hour Factor	0.88	T	Total Trucks, %		19.53	
Segn	nent Capacity, veh/h	1700	С	Demand/Capacity	(D/C)	0.17	
Inte	ermediate Results						
Segn	nent Vertical Class	1	F	Free-Flow Speed,	mi/h	70.0	
Spee	d Slope Coefficient (m)	4.57671	S	Speed Power Coef	ficient (p)	0.41674	
PF SI	ope Coefficient (m)	-1.28298	Р	PF Power Coefficie	ent (p)	0.76370	
In Pa	ssing Lane Effective Length?	No	T	Total Segment De	nsity, veh/mi/ln	1.7	
%lmp	provement to Percent Followers	0.0	%	%Improvement to	Speed	0.0	
Sub	segment Data						
#	Segment Type	Length, ft	Radius	s, ft	Superelevation, %	Average Speed, mi/h	
1	Tangent	1478	-	-		67.7	
Veh	icle Results						
Avera	age Speed, mi/h	67.7	Р	Percent Followers, % 39.8			
Segn	nent Travel Time, minutes	0.25	F	ollower Density (FD), followers/mi/ln	1.7	
Vehic	-		1.	•		1.7	
	cle LOS	A				1.7	
Bicy	cle LOS ycle Results					1.7	
				Pavement Condition	on Rating	4	
Perce	ycle Results	A	P	Pavement Condition			
Perce	ycle Results ent Occupied Parking	A 0	P		/idth, ft	4	
Perce Flow Bicyc	ycle Results ent Occupied Parking Rate Outside Lane, veh/h	0 297	P	Bicycle Effective W	/idth, ft	4 24	
Perce Flow Bicyc	ent Occupied Parking Rate Outside Lane, veh/h	0 297 10.50 F	P B B	Bicycle Effective W	/idth, ft	4 24	
Perce Flow Bicyc	ent Occupied Parking Rate Outside Lane, veh/h	0 297 10.50 F	P B B	Bicycle Effective W	/idth, ft	4 24	
Perce Flow Bicyc	rent Occupied Parking Rate Outside Lane, veh/h ele LOS Score ele LOS	0 297 10.50 F	P B B	Bicycle Effective W Bicycle Effective Sp nt 16	/idth, ft	4 24	
Perce Flow Bicyc Bicyc	ent Occupied Parking Rate Outside Lane, veh/h ele LOS Score	0 297 10.50 F	P B B egme	Bicycle Effective W	/idth, ft peed Factor	4 24 5.07	
Perce Flow Bicyc Bicyc	ent Occupied Parking Rate Outside Lane, veh/h ele LOS Score ele LOS sicle Inputs ment Type sured FFS	0 297 10.50 F Se	P B B egme	Bicycle Effective W Bicycle Effective Sp nt 16 Length, ft	/idth, ft peed Factor	4 24 5.07	
Perce Flow Bicyc Bicyc	rent Occupied Parking Rate Outside Lane, veh/h Rele LOS Score Rele LOS Ricle Inputs Rent Type Sured FFS Rand and Capacity	A 0 297 10.50 F Se Passing Constrained Measured	P B B	Bicycle Effective Wasicycle Effective Spanners The state of the state	/idth, ft peed Factor mi/h	4 24 5.07	
Perce Flow Bicyc Bicyc Veh Segm Meas Den	ent Occupied Parking Rate Outside Lane, veh/h ele LOS Score ele LOS sicle Inputs ment Type sured FFS	0 297 10.50 F Se	P B B B	Bicycle Effective Wasicycle Effective Spanners The state of the state	/idth, ft peed Factor	4 24 5.07 384 70.0	

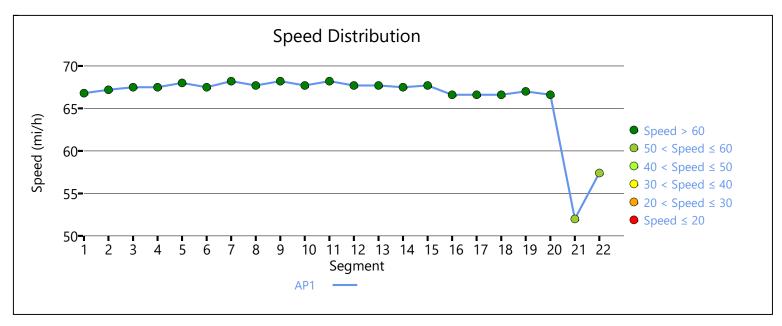
Int	ermediate Results						
Seg	ment Vertical Class	1		Free-Flow Speed	l, mi/h	70.0	
Spe	ed Slope Coefficient (m)	4.57372	4.57372		efficient (p)	0.41674	
PF S	ilope Coefficient (m)	-1.29233	-1.29233		ient (p)	0.75931	
In P	assing Lane Effective Length?	No	No To		ensity, veh/mi/ln	5.1	
%ln	provement to Percent Followers	0.0		%Improvement	to Speed	0.0	
Su	bsegment Data						
#	Segment Type	Length, ft	Length, ft Radi		Superelevation, %	Average Speed, mi/h	
1	Tangent	384	-		-	66.6	
Ve	hicle Results						
Ave	rage Speed, mi/h	66.6		Percent Followe	rs, %	57.7	
Seg	ment Travel Time, minutes	0.07		Follower Density	(FD), followers/mi/ln	5.1	
Veh	icle LOS	С					
Bio	cycle Results					,	
Perc	ent Occupied Parking	0		Pavement Cond	tion Rating	4	
	v Rate Outside Lane, veh/h	585		Bicycle Effective Width, ft		24	
Bicy	cle LOS Score	7.03		Bicycle Effective		5.07	
Bicy	cle LOS	F			·		
			Segn	nent 17		1	
Val	hicle Inputs						
	•	Descise Constant	1	Lead to G		2722	
	ment Type asured FFS	Passing Constraine	ea	Length, ft	l: /la	3732	
		Measured		Free-Flow Speed, mi/h 70.0			
De	mand and Capacity						
Dire	ctional Demand Flow Rate, veh/h	588		Opposing Demand Flow Rate, veh/h		-	
Peal	k Hour Factor	0.88		Total Trucks, %		12.21	
Seg	ment Capacity, veh/h	1700		Demand/Capaci	ty (D/C)	0.35	
Int	ermediate Results						
Seg	ment Vertical Class	1		Free-Flow Speed	l, mi/h	70.0	
Spe	ed Slope Coefficient (m)	4.60878		Speed Power Co	efficient (p)	0.41674	
PF S	Slope Coefficient (m)	-1.21846		PF Power Coeffic	cient (p)	0.78615	
In P	assing Lane Effective Length?	No		Total Segment D	ensity, veh/mi/ln	4.9	
%Improvement to Percent Followers 0.0		0.0		%Improvement	to Speed	0.0	
Su	bsegment Data						
#	Segment Type	Length, ft	Length, ft Rad		Superelevation, %	Average Speed, mi/h	
1	Tangent	3732	-		-	66.6	
Ve	hicle Results						
Δνρ	rage Speed, mi/h	66.6		Percent Followe	rs. %	55.2	

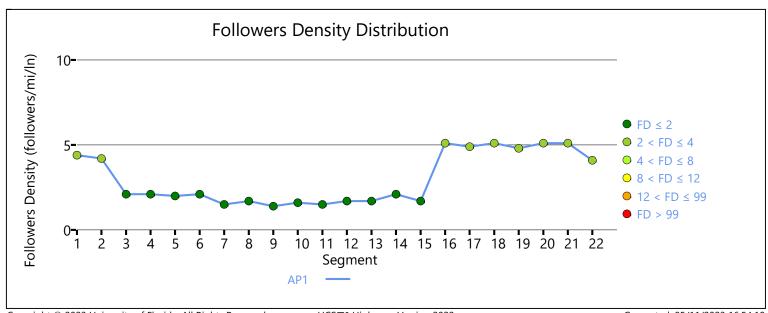
Segment Travel Time, minutes	0.64		Follower Density (FD), followers/mi/ln	4.9
Vehicle LOS	C		Tollower Delisity (1 D), IOIIOWEIS/IIII/III	4.3
	10				
Bicycle Results					
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	588		Bicycle Effective W	/idth, ft	24
Bicycle LOS Score	6.77	6.77		peed Factor	5.07
Bicycle LOS	F				
		Segm	nent 18		
Vehicle Inputs					
Segment Type	Passing Constrain	ned	Length, ft		1360
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/	h 588		Opposing Demand	d Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %		12.21
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.35
Intermediate Results	·				
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.57450		Speed Power Coef	fficient (p)	0.41674
PF Slope Coefficient (m)	-1.29014		PF Power Coefficie	ent (p)	0.76012
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	5.1
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rad	dius, ft Superelevation, %		Average Speed, mi/h
1 Tangent	1360	-		-	66.6
Vehicle Results					
Average Speed, mi/h	66.6		Percent Followers, %		57.7
Segment Travel Time, minutes	0.23		Follower Density (FD), followers/mi/ln	5.1
Vehicle LOS	С				
Bicycle Results					
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h 588		Bicycle Effective W	/idth, ft	24	
Bicycle LOS Score 6.77		Bicycle Effective S	peed Factor	5.07	
Bicycle LOS F					
		Segm	nent 19		
Vehicle Inputs					
Segment Type	Passing Zone		Length, ft		1595
Measured FFS	Measured		Free-Flow Speed, mi/h		70.0

Demand and Canacity					
Demand and Capacity	1500			LEL D.	200
Directional Demand Flow Rate, veh/h	588		., .	d Flow Rate, veh/h	265
Peak Hour Factor			Total Trucks, %	(2.12)	12.21
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.35
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.34603		Speed Power Coe	fficient (p)	0.52287
PF Slope Coefficient (m)	-1.23654		PF Power Coefficie	ent (p)	0.80951
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	4.8
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rad	lius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1595	-		-	67.0
Vehicle Results					
Average Speed, mi/h	67.0		Percent Followers	, %	55.2
Segment Travel Time, minutes	0.27		Follower Density (FD), followers/mi/ln		4.8
Vehicle LOS	С				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	588		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	6.77		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	F				
	Se	egm	ent 20		
Vehicle Inputs					
Segment Type	Passing Constrained		Length, ft		595
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	588		Opposing Deman	d Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %		12.21
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.35
Intermediate Results					
Segment Vertical Class 1		Free-Flow Speed,	mi/h	70.0	
Speed Slope Coefficient (m) 4.57372		Speed Power Coe	fficient (p)	0.41674	
PF Slope Coefficient (m) -1.29239		PF Power Coefficie	ent (p)	0.75923	
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	5.1
%Improvement to Percent Followers	0.0		%Improvement to Speed		0.0
Subsegment Data					
-					

#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	595	-		-	66.6
Veł	nicle Results	•				
Aver	age Speed, mi/h	66.6		Percent Followers	, %	57.8
Segr	ment Travel Time, minutes	0.10		Follower Density ((FD), followers/mi/ln	5.1
Vehi	cle LOS	С				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	588		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	6.77		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	F				
			Segn	nent 21		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrai	ned	Length, ft		958
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	55.0
Dei	mand and Capacity			<u>'</u>		
Dire	ctional Demand Flow Rate, veh/h	467		Opposing Deman	d Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %		10.81
Segr	ment Capacity, veh/h	1700		Demand/Capacity	/ (D/C)	0.27
Inte	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	55.0
Spee	ed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.43859		PF Power Coefficie	ent (p)	0.72596
In Pa	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	5.1
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Suk	osegment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	958	-		-	52.0
Vel	nicle Results					
Aver	age Speed, mi/h	52.0		Percent Followers	, %	56.3
Segment Travel Time, minutes 0.21			Follower Density ((FD), followers/mi/ln	5.1	
Vehi	Vehicle LOS C					
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
	Rate Outside Lane, veh/h	467		Bicycle Effective V		24
Bicyc	cle LOS Score	5.60		Bicycle Effective S		4.62
Bicycle LOS F						

		S	egme	nt 22		
Veh	icle Inputs					
Segm	nent Type	Passing Zone	L	Length, ft		1659
Meas	ured FFS	Measured		ree-Flow Speed,	mi/h	60.0
Den	nand and Capacity					
Direct	tional Demand Flow Rate, veh/h	467	C	Opposing Deman	d Flow Rate, veh/h	255
Peak	Hour Factor	0.88	Т	otal Trucks, %		10.81
Segm	nent Capacity, veh/h	1700	С	Demand/Capacity (D/C)		0.27
Inte	rmediate Results					
Segm	nent Vertical Class	1	F	Free-Flow Speed, mi/h		60.0
Speed	d Slope Coefficient (m)	4.34386	S	peed Power Coe	fficient (p)	0.52524
PF Slo	ope Coefficient (m)	-1.29711	Р	PF Power Coefficion	ent (p)	0.78647
In Pas	ssing Lane Effective Length?	No	T	otal Segment De	nsity, veh/mi/ln	4.1
%Improvement to Percent Followers		0.0	9	%Improvement to Speed		0.0
Sub	segment Data					
#	Segment Type	Length, ft	Radius	s, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1659	1-		-	57.4
Veh	icle Results					
Avera	ge Speed, mi/h	57.4	Р	Percent Followers	, %	51.0
Segm	nent Travel Time, minutes	0.33	F	ollower Density	(FD), followers/mi/ln	4.1
Vehic	le LOS	С				
Bicy	cle Results					
Perce	nt Occupied Parking	0	Р	avement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	467	В	Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score		5.60	В	Bicycle Effective S	peed Factor	4.62
Bicycle LOS F						
Faci	lity Results					
т	VMT veh-mi/p	VHD veh-h/p)		ensity, followers/ mi/ln	LOS
1	562	0.34			2.9	В





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Project Information			HCS Two-La	ne	Highway Re	port	
Analysis Year 2029 NB Jurisdiction 5DDOT Time Analyzed AM Peak Project Description West of Hartford SD 3	Project Inf	formation					
Mest of Hartford SD 38 E8	Analyst		MJV		Date		5/11/2023
Project Description Project Description	Agency		HRG		Analysis Year		2029 NB
Segment 1 Segment 2 Segment 3 Seg	Jurisdiction		SDDOT		Time Analyzed		AM Peak
Vehicle Inputs Segment Type Passing Zone Length, ft 1069 Measured FFS Measured Free-Flow Speed, m/h 70.0 Demand Flow Rate, veh/h 161 Opposing Demand Flow Rate, veh/h 111 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, m/h 70.0 Speed Slope Coefficient (m) 4.28164 Speed Power Coefficient (p) 0.56932 PF Slope Coefficient (m) 4.28164 Speed Power Coefficient (p) 0.56932 PF Slope Coefficient (m) 4.28164 Speed Power Coefficient (p) 0.56932 PF Power Coefficient (p) 0.56932 PF Power Coefficient (p) 0.56932 PF Power Coefficient (p) 0.6 National Segment Demand Flow Rate, veh/m/ln 0.6 Segment Type Length? Radius, ft Superelevation, %	Project Descrip	otion	West of Hartford SD 3	8 EB	Units		U.S. Customary
Measured Passing Zone Length, ft 1069 1009 10			Se	egn	nent 1		
Measured FFS Measured Free-Flow Speed, mi/h 70.0	Vehicle In	puts					
Derward and Capacity Directional Demand Flow Rate, veh/h 161 Opposing Demand Flow Rate, veh/h 111 Peak Hour Factor 0.88 Total Trucks, % 5.79 Segment Capacity, veh/h 1700 Demand/Capacity (D/C) 0.09 Demand/Capacity (D/C) Demand	Segment Type		Passing Zone		Length, ft		1069
Peak			-		_	mi/h	70.0
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) 4.28164 Speed Power Coefficient (p) 0.56932 PF Slope Coefficient (m) -1.21358 PF Power Coefficient (p) 0.81482 In Passing Lane Effective Length? No Total Segment Density, veh/mi/ln 0.6 Subsegment Data # Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 1 Tangent 1069 - 69.1 69.1 Vehicle Results Average Speed, mi/h 69.1 Percent Followers, % 24.0 Segment Travel Time, minutes 0.18 Follower Density (FD), followers/mi/h 0.6 Vehicle Los A Pavement Condition Rating 4 Provented Parking 0 Pavement Condit	Demand a	nd Capacity					
Segment Capacity, veh/h 1700 Demand/Capacity (D/C) 0.09	Directional De	mand Flow Rate, veh/h	161		Opposing Deman	d Flow Rate, veh/h	111
Intermediate Results Segment Vertical Class 1 Free-Flow Speed, mi/h 70.0 Speed Slope Coefficient (m) 4.28164 Speed Power Coefficient (p) 0.56932 PF Slope Coefficient (m) -1.21358 PF Power Coefficient (p) 0.81482 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 - 0.69.1 Vehicle Results Average Speed, mi/h 69.1 Percent Followers, 24.0 Segment Travel Time, minutes 0.18 Follower Density (FD), followers/mi/ln 0.6 Vehicle LOS A Follower Density (FD), followers/mi/ln 0.6 Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 161 Bicycle Effective Width, ft 29 Bicycle LOS Score 2.17 Bicycle Effective Speed Factor 5.07 Bicycle LOS B Segment 2	Peak Hour Fact	tor	0.88		Total Trucks, %		5.79
Segment Vertical Class 1 Free-Flow Speed, mi/h 70.0 Speed Slope Coefficient (m) 4.28164 Speed Power Coefficient (p) 0.56932 PF Slope Coefficient (m) -1.21358 PF Power Coefficient (p) 0.81482 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 Suppose Density, veh/mi/ln 0.6 Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 1 Tangent 1069 - 69.1 Percent Followers, % 24.0 Vehicle Results Average Speed, mi/h 69.1 Percent Followers, % 24.0 Segment Travel Time, minutes 0.18 Follower Density (FD), followers/mi/ln 0.6 Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 161 Bicycle Effective Width, ft 29 Bicycle LOS B Segment 2	Segment Capa	ncity, veh/h	1700		Demand/Capacity	, (D/C)	0.09
Speed Slope Coefficient (m) 4.28164 Speed Power Coefficient (p) 0.56932 PF Slope Coefficient (m) -1.21358 PF Power Coefficient (p) 0.81482 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 Superient Total Segment Density, veh/mi/ln 0.6 Segment Density Segment Total Segment Density, veh/mi/ln 0.6 Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 1 Tangent 1069 - 69.1 69.1 4.0 69.1 4.0 </td <td>Intermedia</td> <td>ate Results</td> <td></td> <td></td> <td></td> <td></td> <td></td>	Intermedia	ate Results					
Speed Slope Coefficient (m) 4.28164 Speed Power Coefficient (p) 0.56932 PF Slope Coefficient (m) -1.21358 PF Power Coefficient (p) 0.81482 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 Superient Total Segment Density, veh/mi/ln 0.6 Segment Density Segment Total Segment Density, veh/mi/ln 0.6 Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 1 Tangent 1069 - 69.1 69.1 4.0 69.1 4.0 </td <td>Segment Verti</td> <td>cal Class</td> <td>1</td> <td></td> <td>Free-Flow Speed,</td> <td>mi/h</td> <td>70.0</td>	Segment Verti	cal Class	1		Free-Flow Speed,	mi/h	70.0
In Passing Lane Effective Length? No Total Segment Density, veh/mi/In 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 - 69.1 Vehicle Results Average Speed, mi/h 69.1 Percent Followers, % 24.0 Segment Travel Time, minutes 0.18 Follower Density (FD), followers/mi/In 0.6 Sicycle Results Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h Bicycle LOS Score 2.17 Bicycle Effective Width, ft 29 Bicycle LOS Bicycle LOS Segment 2	Speed Slope C	oefficient (m)	4.28164		Speed Power Coe	fficient (p)	0.56932
%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 - 69.1 Vehicle Results Average Speed, mi/h 69.1 Percent Followers, % 24.0 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 161 Bicycle Effective Width, ft 29 Bicycle LOS Score 2.17 Bicycle Effective Speed Factor 5.07 Bicycle LOS Segment 2	PF Slope Coeff	ficient (m)	-1.21358		PF Power Coefficie	ent (p)	0.81482
Subsegment Data # Segment Type	In Passing Land	e Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.6
# Segment Type	%Improvemen	it to Percent Followers	0.0		%Improvement to	Speed	0.0
Tangent 1069 - 69.1 Vehicle Results Average Speed, mi/h 69.1 Percent Followers, % 24.0 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 161 Bicycle Effective Width, ft 29 Bicycle LOS Score 2.17 Bicycle Effective Speed Factor 5.07 Bicycle LOS Segment 2	Subsegme	ent Data					
Vehicle Results Average Speed, mi/h Segment Travel Time, minutes O.18 Follower Density (FD), followers/mi/ln O.6 Vehicle LOS A Bicycle Results Percent Occupied Parking O Pavement Condition Rating Flow Rate Outside Lane, veh/h Bicycle LOS Score 2.17 Bicycle Effective Width, ft 29 Bicycle LOS Bicycle LOS Segment 2	# Segmen	t Type	Length, ft	Rac	lius, ft Superelevation, %		Average Speed, mi/h
Average Speed, mi/h 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 Bicycle LOS Score 2.17 Bicycle Effective Width, ft 29 Segment 2 Segment 2	1 Tangent		1069	1-		-	69.1
Segment Travel Time, minutes O.18 Follower Density (FD), followers/mi/ln O.6 Vehicle LOS A Bicycle Results Percent Occupied Parking O Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h Bicycle Effective Width, ft 29 Bicycle LOS Score 2.17 Bicycle LOS B Segment 2	Vehicle Re	sults					
Vehicle LOS A Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 161 Bicycle Effective Width, ft 29 Bicycle LOS Score 2.17 Bicycle Effective Speed Factor 5.07 Bicycle LOS Segment 2	Average Speed	d, mi/h	69.1		Percent Followers,	, %	24.0
Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 161 Bicycle Effective Width, ft 29 Bicycle LOS Score 2.17 Bicycle Effective Speed Factor 5.07 Bicycle LOS Segment 2	Segment Trave	el Time, minutes	0.18		Follower Density ((FD), followers/mi/ln	0.6
Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 161 Bicycle Effective Width, ft 29 Bicycle LOS Score 2.17 Bicycle Effective Speed Factor 5.07 Bicycle LOS Segment 2	Vehicle LOS		А				
Flow Rate Outside Lane, veh/h Bicycle LOS Score 2.17 Bicycle Effective Width, ft 5.07 Bicycle LOS Bicycle LOS Segment 2	Bicycle Re	sults					
Bicycle LOS Score 2.17 Bicycle Effective Speed Factor 5.07 Bicycle LOS B Segment 2	Percent Occup	ied Parking	0		Pavement Conditi	on Rating	4
Bicycle LOS B Segment 2	· · ·			Bicycle Effective V	Vidth, ft	29	
Segment 2			Bicycle Effective S	peed Factor	5.07		
<u> </u>	Bicycle LOS		В				
<u> </u>			Se	egn	nent 2		
•	Vehicle Inj	puts					
Segment Type Passing Constrained Length, ft 664			Passing Constrained		Length, ft		664
Measured FFS Measured Free-Flow Speed, mi/h 70.0			-			mi/h	

Demand and Capacity					
	161		Onnacia a Davi	d Flour Data and the	
Directional Demand Flow Rate, veh/h			Opposing Demand Flow Rate, veh/h		
Peak Hour Factor 0.88			Total Trucks, %	· (D (C)	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 Coe	fficient (p)	0.41674
PF Slope Coefficient (m)	-1.29315		PF Power Coefficie	ent (p)	0.75829
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.7
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Radi	ius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	664	-		-	68.6
Vehicle Results					
Average Speed, mi/h	68.6		Percent Followers	, %	27.7
Segment Travel Time, minutes	0.11		Follower Density (FD), followers/mi/ln		0.7
Vehicle LOS	А				
Bicycle Results		'			
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	161		Bicycle Effective V	Vidth, ft	29
Bicycle LOS Score	2.17		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	В				
	S	Segm	nent 3		
Vehicle Inputs					
Segment Type	Passing Zone	П	Length, ft		1871
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	161		Opposing Deman	d Flow Rate, veh/h	111
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) 4.29144		Speed Power Coe	fficient (p)	0.56932	
PF Slope Coefficient (m) -1.18894			PF Power Coefficie	ent (p)	0.82627
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.5
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
•					

#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1871 -			-	69.1
Veł	nicle Results	-				
Aver	rage Speed, mi/h	69.1		Percent Followers	, %	23.2
Segr	ment Travel Time, minutes	0.31		Follower Density ((FD), followers/mi/ln	0.5
Vehi	cle LOS	A				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	161		Bicycle Effective V	Vidth, ft	29
Bicy	cle LOS Score	2.17		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	В				
			Segr	ment 4		
Veł	nicle Inputs					
Segr	ment Type	Passing Constrai	ined	Length, ft		925
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Dei	mand and Capacity	·				
Dire	ctional Demand Flow Rate, veh/h	161		Opposing Demand Flow Rate, veh/h		-
Peak	Hour Factor	0.88		Total Trucks, %		5.79
Segr	nent Capacity, veh/h	1700		Demand/Capacity	' (D/C)	0.09
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.29315		PF Power Coefficient (p)		0.75829
In Pa	assing Lane Effective Length?	No	No		nsity, veh/mi/ln	0.7
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	925	-		-	68.6
Veł	nicle Results					
Aver	rage Speed, mi/h	68.6		Percent Followers	, %	27.7
Segr	ment Travel Time, minutes	0.15		Follower Density (FD), followers/mi/ln		0.7
Vehicle LOS		A				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	161		Bicycle Effective V	Vidth, ft	29
Bicy	cle LOS Score	2.17		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	В				

		9	Segi	ment 5		
Ve	hicle Inputs					
Seg	ment Type	Passing Zone		Length, ft		4476
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	161		Opposing Demand	d Flow Rate, veh/h	111
Pea	k Hour Factor	0.88		Total Trucks, %		5.79
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.09
Int	ermediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.32493		Speed Power Coef	fficient (p)	0.56932
PF S	Slope Coefficient (m)	-1.13549		PF Power Coefficie	ent (p)	0.84699
In P	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.5
%In	nprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4476	1-		-	69.1
Ve	hicle Results					
Ave	rage Speed, mi/h	69.1		Percent Followers,	. %	21.5
Seg	ment Travel Time, minutes	0.74		Follower Density (FD), followers/mi/ln	0.5
Veh	icle LOS	A				
Bio	cycle Results					
Perd	cent Occupied Parking	0		Pavement Condition	on Rating	4
Flov	v Rate Outside Lane, veh/h	161		Bicycle Effective W	/idth, ft	29
Вісу	rcle LOS Score	2.17		Bicycle Effective Speed Factor		5.07
Вісу	rcle LOS	В				
		9	Segi	ment 6		
Ve	hicle Inputs					
Seg	ment Type	Passing Constrained		Length, ft		896
Mea	Measured FFS Measured		Free-Flow Speed,	mi/h	70.0	
De	mand and Capacity					
Directional Demand Flow Rate, veh/h 161		Opposing Demand	d Flow Rate, veh/h	-		
Peak Hour Factor 0.88		Total Trucks, %		5.79		
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.09
Int	ermediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
		1		<u> </u>		

Speed Slope Coefficient (m)	4.57372		Speed Power Coe		0.41674
PF Slope Coefficient (m)	-1.29315		PF Power Coefficie		0.75829
In Passing Lane Effective Length?	No		Total Segment De		0.7
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rac	lius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	896	-		-	68.6
Vehicle Results					
Average Speed, mi/h	68.6		Percent Followers	, %	27.7
Segment Travel Time, minutes	0.15		Follower Density (FD), followers/mi/ln	0.7
Vehicle LOS	А				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	161		Bicycle Effective V	Vidth, ft	29
Bicycle LOS Score	2.17		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	В				
	,	Segn	nent 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	161		Opposing Deman	d Flow Rate, veh/h	111
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)	4.28164		Speed Power Coefficient (p)		0.56932
PF Slope Coefficient (m)	-1.21358		PF Power Coefficient (p)		0.81482
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 Radi		lius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	743	-		-	69.1
Vehicle Results	•				·
Average Speed, mi/h	69.1		Percent Followers,	, %	24.0
Segment Travel Time, minutes	0.12		Follower Density (FD), followers/mi/ln		0.6
Vehicle LOS	A		9 (), 222,		

Bicycle Results					
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	161 I		Bicycle Effective Width, ft		29
Bicycle LOS Score	2.17		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	В				
	Se	egn	nent 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	163		Opposing Demand	d Flow Rate, veh/h	110
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)	4.30345		Speed Power Coefficient (p)		0.56980
PF Slope Coefficient (m)	-1.16341		PF Power Coefficient (p)		0.83725
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.5
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rad	lius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	2717	-		-	69.1
Vehicle Results					·
Average Speed, mi/h	69.1		Percent Followers, %		22.4
Segment Travel Time, minutes	0.45		Follower Density (FD), followers/mi/ln		0.5
Vehicle LOS	А				
Bicycle Results					
Percent Occupied Parking	0		Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h	162		Bicycle Effective W	/idth, ft	29
Bicycle LOS Score	1.40		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	А				
	Se	egn	nent 9		
Vehicle Inputs					
Segment Type	Passing Constrained		Length, ft		1013
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity	ivieasured		riee-riow Speed,	ШИ	70.0

Dire	ctional Demand Flow Rate, veh/h	163		Opposing Demand	Opposing Demand Flow Rate, veh/h	
Peak	Hour Factor	0.88		Total Trucks, %		3.28
Segr	gment Capacity, veh/h 1700 [Demand/Capacity	(D/C)	0.10	
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.57372		Speed Power Coef	fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.29345		PF Power Coefficie	ent (p)	0.75792
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.7
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	segment Data					
#	Segment Type	Length, ft	R	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1013	-		-	68.6
Vel	nicle Results					
Aver	age Speed, mi/h	68.6		Percent Followers,	%	27.8
Segr	nent Travel Time, minutes	0.17	0.17		FD), followers/mi/ln	0.7
Vehi	cle LOS	A				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Condition	on Rating	4
Flow	Rate Outside Lane, veh/h	162		Bicycle Effective W	/idth, ft	29
Bicy	cle LOS Score	1.40		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	A				
			Segi	ment 10		
Vel	nicle Inputs					
Segr	ment Type	Passing Zone		Length, ft		4569
Mea	sured FFS	Measured		Free-Flow Speed, mi/h		70.0
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	163		Opposing Demand	d Flow Rate, veh/h	110
Peak	Hour Factor	0.88		Total Trucks, %		3.28
Segr	nent Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.10
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.32535		Speed Power Coef	fficient (p)	0.56980
PF Slope Coefficient (m) -1.13449			PF Power Coefficie	ent (p)	0.84688	
In Passing Lane Effective Length?		No		Total Segment De	nsity, veh/mi/ln	0.5
%lm	provement to Percent Followers	0.0		%Improvement to	%Improvement to Speed 0.0	
Sul	segment Data					
#	Segment Type	Length, ft	R	adius, ft	Superelevation, %	Average Speed, mi/h
_						

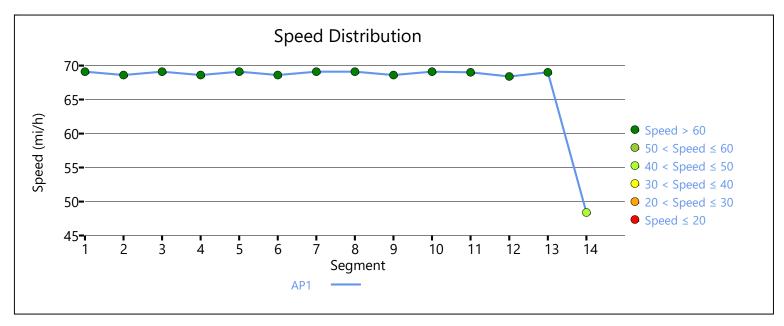
1 Tangent	4569	-		-	69.1
Vehicle Results					
Average Speed, mi/h	69.1		Percent Followers,	. %	21.6
Segment Travel Time, minutes	0.75		Follower Density (FD), followers/mi/ln	0.5
Vehicle LOS	А				
Bicycle Results					
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	162		Bicycle Effective W	/idth, ft	29
Bicycle LOS Score	1.40		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	А				
	S	Segm	nent 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	175		Opposing Demand Flow Rate, veh/h		110
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)	4.33632		Speed Power Coefficient (p)		0.56980
PF Slope Coefficient (m)	-1.12701		PF Power Coefficient (p)		0.84661
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	Rad	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	5676	-		-	69.0
Vehicle Results					
Average Speed, mi/h	69.0		Percent Followers, %		22.7
Segment Travel Time, minutes	0.93		Follower Density (FD), followers/mi/ln		0.6
Vehicle LOS A					
Bicycle Results					
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	175		Bicycle Effective W	/idth, ft	28
Bicycle LOS Score	1.59		Bicycle Effective S	peed Factor	5.07
	The second secon		1		+
Bicycle LOS	В				

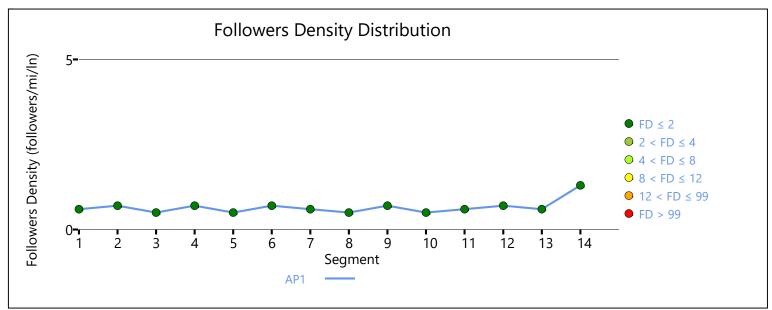
Ve	hicle Inputs						
Seg	gment Type	Passing Constrained		Length, ft		657	
Me	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0	
De	emand and Capacity						
Dir	ectional Demand Flow Rate, veh/h	175		Opposing Deman	d Flow Rate, veh/h	-	
Pea	ık Hour Factor	0.88		Total Trucks, %		2.82	
Seg	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.10	
ln [.]	termediate Results						
Seg	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0	
Spe	eed Slope Coefficient (m)	4.57372		Speed Power Coef	fficient (p)	0.41674	
PF	Slope Coefficient (m)	-1.29350		PF Power Coefficie	ent (p)	0.75785	
In F	Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.7	
%Ir	mprovement to Percent Followers	0.0		%Improvement to	Speed	0.0	
Su	bsegment Data						
#	Segment Type	Length, ft	Rad	dius, ft	Superelevation, %	Average Speed, mi/h	
1	Tangent	657	-	-		68.4	
Ve	hicle Results						
Ave	erage Speed, mi/h	68.4		Percent Followers,	. %	29.2	
Seg	gment Travel Time, minutes	0.11		Follower Density (FD), followers/mi/ln	0.7	
Veł	nicle LOS	A					
Bi	cycle Results						
Per	cent Occupied Parking	0		Pavement Condition	on Rating	4	
Flo	w Rate Outside Lane, veh/h	175		Bicycle Effective W	/idth, ft	28	
Bic	ycle LOS Score	1.59		Bicycle Effective S	peed Factor	5.07	
Bic	ycle LOS	В					
		S	egm	nent 13			
Ve	hicle Inputs						
Seg	gment Type	Passing Zone		Length, ft		6009	
Me	asured FFS	Measured		Free-Flow Speed, mi/h		70.0	
De	emand and Capacity						
Dir	irectional Demand Flow Rate, veh/h 175		Opposing Demand Flow Rate, veh/h		110		
Peak Hour Factor		0.88	0.88			2.82	
Seg	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.10	
In	termediate Results						
Seg	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0	
Spe	eed Slope Coefficient (m)	4.33941		Speed Power Coef	fficient (p)	0.56980	
PF	Slope Coefficient (m)	-1.12571		PF Power Coefficient (p)		0.84594	

In Passing Lane Effective Length? %Improvement to Percent Followers		No		Total Segment D	ensity, veh/mi/ln	0.6
		0.0		%Improvement	to Speed	0.0
Suk	osegment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6009	-		-	69.0
Vel	nicle Results					
Aver	age Speed, mi/h	69.0		Percent Follower	rs, %	22.7
Segr	ment Travel Time, minutes	0.99		Follower Density	(FD), followers/mi/ln	0.6
Vehi	cle LOS	А				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Condi	tion Rating	4
Flow	Rate Outside Lane, veh/h	175		Bicycle Effective	Width, ft	28
Bicy	cle LOS Score	1.59		Bicycle Effective	Speed Factor	5.07
Bicy	cle LOS	В				
			Segr	ment 14		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrained		Length, ft	Length, ft	
Mea	sured FFS	Measured		Free-Flow Speed	Free-Flow Speed, mi/h	
Dei	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	175		Opposing Dema	nd Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %		2.82
Segr	ment Capacity, veh/h	1700		Demand/Capaci	ty (D/C)	0.10
Into	ermediate Results					
Segr	ment Vertical Class	1	1		Free-Flow Speed, mi/h	
Spee	ed Slope Coefficient (m)	4.57372		Speed Power Coefficient (p)		0.41674
PF S	lope Coefficient (m)	-1.47375		PF Power Coefficient (p)		0.71164
In Pa	ssing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		1.3
%lm	provement to Percent Followers	0.0		%Improvement	%Improvement to Speed	
Suk	segment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	891	-		-	48.4
Veł	nicle Results					
Aver	age Speed, mi/h	48.4	48.4		Percent Followers, %	
Segr	ment Travel Time, minutes	0.21		Follower Density (FD), followers/mi/ln		1.3
Vehi	cle LOS	А				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Condi	tion Rating	4

Facility Results							
Bicycle LOS	A						
Bicycle LOS Score	1.38	Bicycle Effective Speed Factor	4.42				
Flow Rate Outside Lane, veh/h	175	Bicycle Effective Width, ft	28				

Т	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	224	0.05	0.6	А





		HCS Two-La	ne	Highway Re	port	
Pro	ject Information		_			
Anal	nalyst MJV		Date		5/11/2023	
Age	ncy	HRG		Analysis Year		2029 NB
Juris	diction	SDDOT		Time Analyzed		PM Peak
Proje	ect Description	West of Hartford SD 3	8 EB	Units		U.S. Customary
		Se	egn	nent 1		
Vel	nicle Inputs					
Segr	ment Type	Passing Zone		Length, ft		1069
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Dei	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	100		Opposing Deman	d Flow Rate, veh/h	184
Peak	Hour Factor	0.88		Total Trucks, %		5.79
Segr	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.06
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed, mi/h		70.0
Spe	ed Slope Coefficient (m)	4.31290		Speed Power Coe	fficient (p)	0.54385
PF Slope Coefficient (m)		-1.23457		PF Power Coefficie	ent (p)	0.80823
In Pa	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.2
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Rac	lius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1069	-		-	70.0
Vel	nicle Results					
Aver	rage Speed, mi/h	70.0		Percent Followers	, %	17.5
Segr	ment Travel Time, minutes	0.17		Follower Density (FD), followers/mi/ln		0.2
Vehi	cle LOS	А				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h		100		Bicycle Effective Width, ft		34
Bicycle LOS Score		0.35		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	А				
		Se	egn	nent 2		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrained		Length, ft		664
	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0

Damanda de la					
Demand and Capacity					
Directional Demand Flow Rate, veh/h	100		Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor	0.88		Total Trucks, %		5.79
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.06
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF Slope Coefficient (m)	-1.29315		PF Power Coefficie	ent (p)	0.75829
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.3
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Radi	us, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	664	-		-	70.0
Vehicle Results					
Average Speed, mi/h	70.0		Percent Followers, %		20.2
Segment Travel Time, minutes	0.11		Follower Density (FD), followers/mi/ln		0.3
Vehicle LOS	А				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	100		Bicycle Effective W	/idth, ft	34
Bicycle LOS Score	0.35		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	А				
	S	egm	ent 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	100		Opposing Demand Flow Rate, veh/h		184
Peak Hour Factor	0.88		Total Trucks, %		5.79
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.06
Intermediate Results					
Segment Vertical Class	Segment Vertical Class 1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m) 4.32270			Speed Power Coe	fficient (p)	0.54385
PF Slope Coefficient (m)	-1.20944		PF Power Coefficie	ent (p)	0.81940
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					

#	Segment Type	Length, ft	Ra	ndius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1871	-		-	70.0
Veł	nicle Results		·			·
Average Speed, mi/h 70.0				Percent Followers	, %	16.7
Segr	ment Travel Time, minutes	0.30		Follower Density	(FD), followers/mi/ln	0.2
Vehi	cle LOS	A				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	100		Bicycle Effective V	Vidth, ft	34
Bicy	cle LOS Score	0.35		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	A				
		·	Segi	ment 4		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrai	ned	Length, ft		925
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Dei	mand and Capacity					
Dire	Directional Demand Flow Rate, veh/h 100		Opposing Deman	d Flow Rate, veh/h	-	
Peak	Hour Factor	0.88		Total Trucks, %		5.79
Segr	ment Capacity, veh/h	1700		Demand/Capacity	/ (D/C)	0.06
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spee	ed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.29315		PF Power Coefficient (p)		0.75829
In Pa	assing Lane Effective Length?	No	No		nsity, veh/mi/ln	0.3
%lm	provement to Percent Followers	0.0	0.0		Speed	0.0
Suk	osegment Data					
#	Segment Type	Length, ft	Ra	ndius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	925	-		-	70.0
Veł	nicle Results					
Aver	rage Speed, mi/h	70.0		Percent Followers	, %	20.2
Segment Travel Time, minutes 0.15			Follower Density	(FD), followers/mi/ln	0.3	
Vehicle LOS A						
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	100		Bicycle Effective V	Vidth, ft	34
Bicy	cle LOS Score	0.35		Bicycle Effective S	peed Factor	5.07
Bicvo	cle LOS	А				

		S	egr	ment 5		
Ve	hicle Inputs					
Seg	ment Type	Passing Zone		Length, ft		4476
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	100		Opposing Deman	d Flow Rate, veh/h	184
Pea	k Hour Factor	0.88		Total Trucks, %		5.79
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.06
Int	ermediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.35619		Speed Power Coe	fficient (p)	0.54385
PF S	Slope Coefficient (m)	-1.15496		PF Power Coefficie	ent (p)	0.83947
In P	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.2
%In	nprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4476	1-	-		70.0
Ve	hicle Results					·
Ave	rage Speed, mi/h	70.0		Percent Followers,	. %	15.4
Seg	ment Travel Time, minutes	0.73		Follower Density (FD), followers/mi/ln	0.2
Veh	icle LOS	А				
Bio	cycle Results					·
Perd	cent Occupied Parking	0		Pavement Condition Rating		4
Flov	v Rate Outside Lane, veh/h	100		Bicycle Effective W	/idth, ft	34
Вісу	rcle LOS Score	0.35		Bicycle Effective Speed Factor		5.07
Bicy	rcle LOS	А				
		S	egr	ment 6		
Ve	hicle Inputs					
Seg	ment Type	Passing Constrained		Length, ft		896
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h			Opposing Deman	d Flow Rate, veh/h	-
Pea	k Hour Factor	0.88				5.79
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.06
Int	ermediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
		1		<u> </u>		

Speed Slope Coefficient (m)	4.57372	4.57372		fficient (p)	0.41674
PF Slope Coefficient (m)	-1.29315		PF Power Coefficie	ent (p)	0.75829
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.3
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rac	lius, ft Superelevation, %		Average Speed, mi/h
1 Tangent	896	-		-	70.0
Vehicle Results					
Average Speed, mi/h	70.0		Percent Followers	, %	20.2
Segment Travel Time, minutes	0.15		Follower Density ((FD), followers/mi/ln	0.3
Vehicle LOS	A				
Bicycle Results	·		<u> </u>		
Percent Occupied Parking	0		Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h	100		Bicycle Effective Width, ft		34
Bicycle LOS Score	0.35		Bicycle Effective Speed Factor		5.07
Bicycle LOS	A				
		Segn	nent 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	100		Opposing Deman	d Flow Rate, veh/h	184
Peak Hour Factor	0.88		Total Trucks, %		5.79
Segment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.06
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)	4.31290		Speed Power Coefficient (p)		0.54385
PF Slope Coefficient (m)	-1.23457		PF Power Coefficie	ent (p)	0.80823
In Passing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		0.2
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Length, ft Radi		Superelevation, %	Average Speed, mi/h
1 Tangent	743	-		-	70.0
Vehicle Results					
Average Speed, mi/h	70.0		Percent Followers, %		17.5
Segment Travel Time, minutes	0.12		Follower Density (FD), followers/mi/ln		0.2
Vehicle LOS A					

g 4 34 stor 5.07 2717 70.0 ate, veh/h 0 3.28 0.06 70.0 0.67576 0.86675
2717 70.0 ate, veh/h 0 3.28 0.06 70.0 0 0.67576
2717 70.0 ate, veh/h 0 3.28 0.06
70.0 ate, veh/h 0 3.28 0.06 70.0 0.67576
70.0 ate, veh/h 0 3.28 0.06 70.0 0.67576
70.0 ate, veh/h 0 3.28 0.06 70.0 0.67576
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n/mi/ln 0.2
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levation, % Average Speed, mi/h
69.9
14.1
owers/mi/ln 0.2
g 4
34
5.07
1013
_

Dire	ctional Demand Flow Rate, veh/h	105		Opposing Demand	Opposing Demand Flow Rate, veh/h	
Peak	Hour Factor	0.88		Total Trucks, %		3.28
Segr	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.06
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.57372		Speed Power Coef	fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.29345		PF Power Coefficie	ent (p)	0.75792
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.3
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	segment Data					
#	Segment Type	Length, ft	R	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1013	-		-	69.5
Vel	nicle Results					
Aver	age Speed, mi/h	69.5		Percent Followers,	%	20.8
Segr	nent Travel Time, minutes	0.17	0.17		FD), followers/mi/ln	0.3
Vehi	cle LOS	А				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Condition	on Rating	4
Flow	Rate Outside Lane, veh/h	105		Bicycle Effective W	/idth, ft	34
Bicy	cle LOS Score	0.00		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	А				
			Segi	ment 10		
Vel	nicle Inputs					
Segr	ment Type	Passing Zone		Length, ft		4569
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					·
Dire	ctional Demand Flow Rate, veh/h	105		Opposing Demand	d Flow Rate, veh/h	180
Peak	Hour Factor	0.88		Total Trucks, %		3.28
Segr	nent Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.06
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.35542		Speed Power Coef	fficient (p)	0.54521
PF Slope Coefficient (m) -1.15329		PF Power Coefficie	ent (p)	0.83962		
In Passing Lane Effective Length? No		No		Total Segment De	nsity, veh/mi/ln	0.2
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	segment Data					
#	Segment Type	Length, ft	R	adius, ft	Superelevation, %	Average Speed, mi/h

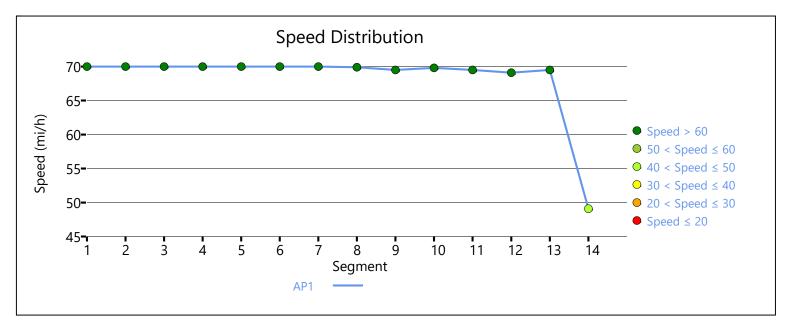
1 Tangent	4569	-		-	69.8
Vehicle Results					
Average Speed, mi/h	69.8		Percent Followers	, %	15.9
Segment Travel Time, minutes	0.74		Follower Density ((FD), followers/mi/ln	0.2
Vehicle LOS	А				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	105		Bicycle Effective V	Vidth, ft	34
Bicycle LOS Score	0.00		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	А				
	S	egm	nent 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	118		Opposing Deman	d Flow Rate, veh/h	189
Peak Hour Factor	0.88		Total Trucks, %		2.82
Segment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.07
Intermediate Results					<u>'</u>
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.36986		Speed Power Coefficient (p)		0.54251
PF Slope Coefficient (m)	-1.14767		PF Power Coefficient (p)		0.83845
In Passing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		0.3
%Improvement to Percent Followers	0.0		%Improvement to Speed		0.0
Subsegment Data					
# Segment Type	Length, ft	Rad	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	5676	-		-	69.5
Vehicle Results					
Average Speed, mi/h	69.5		Percent Followers	, %	17.4
Segment Travel Time, minutes	0.93		Follower Density (FD), followers/mi/ln		0.3
Vehicle LOS	A				
Bicycle Results					
Percent Occupied Parking 0		Pavement Conditi	on Rating	4	
Flow Rate Outside Lane, veh/h	-		Bicycle Effective V	Vidth, ft	33
Bicycle LOS Score	0.00		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	А				
	S	egm	nent 12		

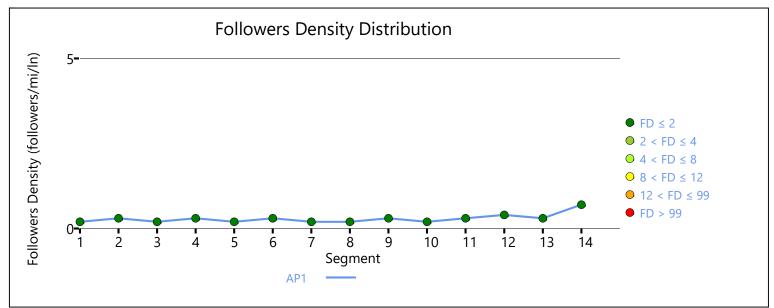
Ve	ehicle Inputs					
Se	gment Type	Passing Constrained		Length, ft		657
Me	easured FFS	Measured		Free-Flow Speed,	mi/h	70.0
D	emand and Capacity					
Dir	rectional Demand Flow Rate, veh/h	118		Opposing Deman	d Flow Rate, veh/h	-
Pe	ak Hour Factor	0.88		Total Trucks, %		2.82
Se	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.07
In	termediate Results					
Se	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Sp	eed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF	Slope Coefficient (m)	-1.29350		PF Power Coefficie	ent (p)	0.75785
ln	Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.4
%I	mprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sı	ubsegment Data					
#	Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	657	-		-	69.1
Ve	ehicle Results					
Av	rerage Speed, mi/h	69.1		Percent Followers,	. %	22.6
Se	gment Travel Time, minutes	0.11		Follower Density (FD), followers/mi/ln	0.4
Ve	hicle LOS	А	А			
Bi	icycle Results					
Pe	rcent Occupied Parking	0		Pavement Condition	on Rating	4
Flo	ow Rate Outside Lane, veh/h	118		Bicycle Effective W	/idth, ft	33
Bic	cycle LOS Score	0.00		Bicycle Effective Speed Factor		5.07
Bic	cycle LOS	A				
		S	egm	nent 13		
Ve	ehicle Inputs					
Se	gment Type	Passing Zone		Length, ft		6009
Ме	easured FFS	Measured		Free-Flow Speed,	mi/h	70.0
D	emand and Capacity					
Dir	Directional Demand Flow Rate, veh/h 118		Opposing Deman	d Flow Rate, veh/h	189	
Pe	Peak Hour Factor 0.88		Total Trucks, %		2.82	
Se	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.07
ln	termediate Results					
Se	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Sp	eed Slope Coefficient (m)	4.37295		Speed Power Coe	fficient (p)	0.54251
PF	Slope Coefficient (m)	-1.14633		PF Power Coefficie	ent (p)	0.83776

In Passing Lane Effective Length? %Improvement to Percent Followers		No	No		ensity, veh/mi/ln	0.3
		0.0		%Improvement	to Speed	0.0
Suk	osegment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6009	-		-	69.5
Vel	nicle Results					
Aver	age Speed, mi/h	69.5		Percent Follower	rs, %	17.4
Segr	ment Travel Time, minutes	0.98		Follower Density	(FD), followers/mi/ln	0.3
Vehi	cle LOS	А				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Condi	tion Rating	4
Flow	Rate Outside Lane, veh/h	118		Bicycle Effective	Width, ft	33
Bicy	cle LOS Score	0.00		Bicycle Effective	Speed Factor	5.07
Bicy	cle LOS	A	А			
			Segr	nent 14		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrair	ned	Length, ft		891
Mea	sured FFS	Measured		Free-Flow Speed	Free-Flow Speed, mi/h	
Dei	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	118		Opposing Dema	nd Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %	Total Trucks, %	
Segr	ment Capacity, veh/h	1700		Demand/Capaci	ty (D/C)	0.07
Inte	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed	Free-Flow Speed, mi/h	
Spee	ed Slope Coefficient (m)	4.57372		Speed Power Coefficient (p)		0.41674
PF S	lope Coefficient (m)	-1.47375		PF Power Coefficient (p)		0.71164
In Pa	ssing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		0.7
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Suk	segment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	891	-		-	49.1
Veł	nicle Results					
Average Speed, mi/h 49.1		49.1		Percent Follower	rs, %	27.6
Segment Travel Time, minutes		0.21	0.21		Follower Density (FD), followers/mi/ln	
Vehi	cle LOS	A				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Condition Rating		4
Tercent Occupied Farking						

Facility Results							
Bicycle LOS	А						
Bicycle LOS Score	0.00	Bicycle Effective Speed Factor	4.42				
Flow Rate Outside Lane, veh/h	118	Bicycle Effective Width, ft	33				

Т	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	146	0.01	0.3	А





		HCS Two-La	ne	Highway Re	port	
Project	Information		_			
Analyst		MJV		Date		5/17/2023
Agency		HRG		Analysis Year		2029 NB
Jurisdiction	1	SDDOT		Time Analyzed		AM Peak
Project Des	scription	WB 38 West of Hartfo	rd	Units		U.S. Customary
		S	egn	nent 1		
Vehicle	Inputs					
Segment T	ype	Passing Zone		Length, ft		10549
Measured	FFS	Measured		Free-Flow Speed,	mi/h	70.0
Deman	d and Capacity					
Directional	Demand Flow Rate, veh/h	110		Opposing Deman	d Flow Rate, veh/h	175
Peak Hour	Factor	0.88		Total Trucks, %		12.50
Segment C	Capacity, veh/h	1700		Demand/Capacity (D/C)		0.06
Interme	ediate Results	'		'		
Segment Vertical Class 1		Free-Flow Speed,	mi/h	70.0		
Speed Slop	Speed Slope Coefficient (m) 4.40338		Speed Power Coe	fficient (p)	0.54661	
PF Slope C	PF Slope Coefficient (m) -1.15301		PF Power Coefficie	ent (p)	0.81301	
In Passing Lane Effective Length?		No		Total Segment De	nsity, veh/mi/ln	0.3
%Improver	ment to Percent Followers	0.0	0.0		Speed	0.0
Subsegi	ment Data	<u>'</u>		<u>'</u>		
# Segn	nent Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tang	ent	10549	1-		-	69.6
Vehicle	Results					
Average Sp	peed, mi/h	69.6		Percent Followers	, %	17.5
	ravel Time, minutes	1.72		Follower Density (FD), followers/mi/ln		0.3
Vehicle LOS	S	А				
Bicycle	Results					
	cupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h 110		Bicycle Effective Width, ft		33		
Bicycle LOS Score 3.49		Bicycle Effective S		5.07		
Bicycle LOS		С				
		S	egn	nent 2		
Vehicle	Inputs					
Segment T	•	Passing Zone		Length, ft		2793
Measured	· ·	Measured		Free-Flow Speed,	mi/h	70.0
			ivieasureu			

Demand and Capacity					
	110		Opposite to Day	d Claus Data and the	175
Directional Demand Flow Rate, veh/h	110		Opposing Demand Flow Rate, veh/h Total Trucks, %		175
Peak Hour Factor	0.88			(D(C)	12.50
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.06
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.33277		Speed Power Coe	fficient (p)	0.54661
PF Slope Coefficient (m)	-1.17889		PF Power Coefficie	ent (p)	0.83286
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.3
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Radi	ius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	2793	-		-	69.6
Vehicle Results					
Average Speed, mi/h	69.6		Percent Followers,	, %	17.1
Segment Travel Time, minutes	0.46		Follower Density (FD), followers/mi/ln	0.3
Vehicle LOS	A				
Bicycle Results	•				
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	110		Bicycle Effective V	Vidth, ft	33
Bicycle LOS Score	3.49		Bicycle Effective Speed Factor		5.07
Bicycle LOS	С				
	S	egm	nent 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	110		Opposing Deman	d Flow Rate, veh/h	163
Peak Hour Factor	0.88		Total Trucks, %		2.40
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.06
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.34052		Speed Power Coe		0.55056
PF Slope Coefficient (m)	-1.15802			ent (p)	0.83912
In Passing Lane Effective Length?	No		Total Segment De	<u> </u>	0.3
%Improvement to Percent Followers	0.0		%Improvement to		0.0
Subsegment Data					
Jabbegineiit Data					

#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3825	-		-	69.7
Veł	nicle Results		•			·
Aver	rage Speed, mi/h	69.7		Percent Followers, %		16.6
Segr	ment Travel Time, minutes	0.62		Follower Density ((FD), followers/mi/ln	0.3
Vehi	cle LOS	A				
Bic	ycle Results					
Percent Occupied Parking 0		Pavement Conditi	on Rating	4		
Flow	Rate Outside Lane, veh/h	110		Bicycle Effective V	Vidth, ft	33
Bicy	cle LOS Score	0.00		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	A				
			Segr	ment 4		
Veł	nicle Inputs					
Segr	ment Type	Passing Constrai	ned	Length, ft		791
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Dei	mand and Capacity	•				
Dire	ctional Demand Flow Rate, veh/h	110		Opposing Deman	d Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %		2.40
Segr	ment Capacity, veh/h	1700		Demand/Capacity	/ (D/C)	0.06
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.29355		PF Power Coefficient (p)		0.75779
In Pa	assing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		0.3
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	791	-		-	69.3
Vel	nicle Results					
Aver	rage Speed, mi/h	69.3		Percent Followers	, %	21.6
Segr	Segment Travel Time, minutes 0.13		Follower Density ((FD), followers/mi/ln	0.3	
Vehicle LOS A						
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	110		Bicycle Effective V	Vidth, ft	33
Bicy	cle LOS Score	0.00		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	Α				

		S	egr	ment 5		
Ve	hicle Inputs					
Seg	ment Type	Passing Zone		Length, ft		3414
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	110	110		d Flow Rate, veh/h	163
Pea	k Hour Factor	0.88		Total Trucks, %		2.40
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.06
Int	termediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.33568		Speed Power Coef	fficient (p)	0.55056
PF S	Slope Coefficient (m)	-1.16442		PF Power Coefficie	ent (p)	0.83709
In P	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.3
%In	nprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Rad	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3414	-		-	69.7
Ve	hicle Results					
Ave	rage Speed, mi/h	69.7		Percent Followers,	. %	16.8
Seg	ment Travel Time, minutes	0.56		Follower Density (FD), followers/mi/ln	0.3
Veh	icle LOS	А				
Bio	cycle Results					
Per	cent Occupied Parking	0		Pavement Condition	on Rating	4
Flov	w Rate Outside Lane, veh/h	110		Bicycle Effective Width, ft		33
Bicy	vcle LOS Score	0.00		Bicycle Effective S	peed Factor	5.07
Bicy	rcle LOS	А				
		S	egr	ment 6		
Ve	hicle Inputs					
Seg	ment Type	Passing Constrained		Length, ft		286
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity	·				
Dire	ectional Demand Flow Rate, veh/h	110		Opposing Demand	d Flow Rate, veh/h	-
Pea	k Hour Factor	0.88		Total Trucks, %		2.40
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.06
Int	termediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
				1 ' '		

Speed Slope Coefficient (m)	4.57372		Speed Power Coe	<u> </u>	0.41674
PF Slope Coefficient (m)	-1.29355		PF Power Coefficient (p)		0.75779
In Passing Lane Effective Length?	No		Total Segment De	-	0.3
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	286	-		-	69.3
Vehicle Results					
Average Speed, mi/h	69.3		Percent Followers,	, %	21.6
Segment Travel Time, minutes	0.05		Follower Density (FD), followers/mi/ln	0.3
Vehicle LOS	А				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	110		Bicycle Effective V	vidth, ft	33
Bicycle LOS Score	0.00		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	А				
	9	Segn	nent 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	111		Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor	0.88		Total Trucks, %		2.60
Segment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.07
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF Slope Coefficient (m)	-1.29353		PF Power Coefficie	ent (p)	0.75782
In Passing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		0.3
%Improvement to Percent Followers	0.0		%Improvement to Speed		0.0
Subsegment Data					
# Segment Type	Length, ft	Length, ft Rad		Superelevation, %	Average Speed, mi/h
1 Tangent	463 -			-	69.3
Vehicle Results	•				·
Average Speed, mi/h	69.3		Percent Followers	, %	21.7
Segment Travel Time, minutes	0.08		Follower Density (FD), followers/mi/ln		0.3
Vehicle LOS A		1			

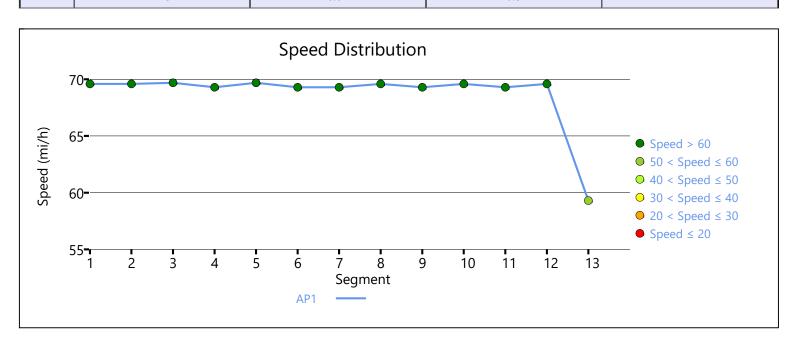
Bicycle Results					
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	111		Bicycle Effective Width, ft		33
Bicycle LOS Score	0.00		Bicycle Effective Speed Factor		5.07
Bicycle LOS	А				
	S	egn	nent 8		
Vehicle Inputs					
Segment Type	Passing Zone		Length, ft		4822
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity	<u>'</u>				
Directional Demand Flow Rate, veh/h	111		Opposing Deman	d Flow Rate, veh/h	161
Peak Hour Factor	0.88		Total Trucks, %		2.60
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.07
Intermediate Results	•		•		
Segment Vertical Class	1	1		mi/h	70.0
Speed Slope Coefficient (m)	4.35081		Speed Power Coe	fficient (p)	0.55093
PF Slope Coefficient (m)	-1.14681		PF Power Coefficie	ent (p)	0.84146
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.3
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data			<u> </u>		
# Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	4822	1-		-	69.6
Vehicle Results					
Average Speed, mi/h	69.6		Percent Followers,	. %	16.5
Segment Travel Time, minutes	0.79		Follower Density (FD), followers/mi/ln		0.3
Vehicle LOS	А				
Bicycle Results	·		•		
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	111		Bicycle Effective W	/idth, ft	33
Bicycle LOS Score	0.00		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	А				
	S	egn	nent 9		
Vehicle Inputs					
Segment Type	Passing Constrained		Length, ft		861
Measured FFS	Measured		Free-Flow Speed, mi/h		70.0
Demand and Capacity					

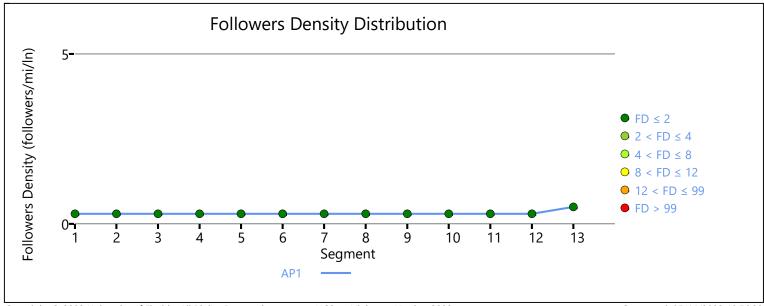
Dire	ctional Demand Flow Rate, veh/h	111		Opposing Demand	d Flow Rate, veh/h	-
	Hour Factor	0.88		Total Trucks, %		2.60
	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.07
	ermediate Results	11700		Demana, capacity	(5/ 5)	0.01
	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
	ed Slope Coefficient (m)	4.57372		Speed Power Coef		0.41674
	lope Coefficient (m)	-1.29353		PF Power Coefficie		0.41674
	assing Lane Effective Length?	-1.29353 No		Total Segment Dei	·	0.75782
	provement to Percent Followers	0.0		%Improvement to		0.0
	osegment Data	0.0		701111provenient to	<u> </u>	
#	Segment Type	Length, ft	D.	adius, ft	Superelevation, %	Average Speed, mi/h
1	3 77	861	No	adius, it	- Superelevation, 76	69.3
	Tangent	001				03.3
Veł	nicle Results					
Aver	rage Speed, mi/h	69.3		Percent Followers,	%	21.7
Segr	ment Travel Time, minutes	0.14		Follower Density (FD), followers/mi/ln	0.3
Vehi	cle LOS	A				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Condition	on Rating	4
Flow	Rate Outside Lane, veh/h	111		Bicycle Effective W	/idth, ft	33
Bicy	cle LOS Score	0.00		Bicycle Effective Sp	peed Factor	5.07
Bicy	cle LOS	А				
			Segr	ment 10		
Vel	nicle Inputs					
Segr	ment Type	Passing Zone		Length, ft		1556
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Dei	mand and Capacity					•
Dire	ctional Demand Flow Rate, veh/h	111		Opposing Demand	d Flow Rate, veh/h	161
Peak	Hour Factor	0.88		Total Trucks, %		2.60
Segr	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.07
Inte	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spee	ed Slope Coefficient (m)	4.30834		Speed Power Coef	ficient (p)	0.55093
PF S	Slope Coefficient (m) -1.21738		PF Power Coefficie	ent (p)	0.81494	
In Pa	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.3
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	osegment Data	•		·		
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
	1					

1 Tangent	1556		-	-	69.6
Vehicle Results					
Average Speed, mi/h	69.6		Percent Follower	s, %	18.4
Segment Travel Time, minutes	0.25		Follower Density	(FD), followers/mi/ln	0.3
Vehicle LOS	A				
Bicycle Results					
Percent Occupied Parking	0		Pavement Condi	tion Rating	4
Flow Rate Outside Lane, veh/h	111		Bicycle Effective	Width, ft	33
Bicycle LOS Score	0.00		Bicycle Effective	Speed Factor	5.07
Bicycle LOS	А				
	·	Seg	ment 11		
Vehicle Inputs					
Segment Type	Passing Constra	ined	Length, ft		799
Measured FFS	Measured	-		, mi/h	70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	111	111		nd Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %		2.60
Segment Capacity, veh/h	1700		Demand/Capacit	ry (D/C)	0.07
Intermediate Results					<u>'</u>
Segment Vertical Class	1		Free-Flow Speed	, mi/h	70.0
Speed Slope Coefficient (m)	4.57372		Speed Power Co	efficient (p)	0.41674
PF Slope Coefficient (m)	-1.29353		PF Power Coeffic	ient (p)	0.75782
In Passing Lane Effective Length?	No		Total Segment D	ensity, veh/mi/ln	0.3
%Improvement to Percent Followers	0.0		%Improvement t	o Speed	0.0
Subsegment Data					
# Segment Type	Length, ft		Radius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	799		-	-	69.3
Vehicle Results					
Average Speed, mi/h	69.3		Percent Follower	s, %	21.7
Segment Travel Time, minutes	0.13		Follower Density	(FD), followers/mi/ln	0.3
Vehicle LOS	А				
Bicycle Results					
Percent Occupied Parking	0		Pavement Condi	tion Rating	4
Flow Rate Outside Lane, veh/h	111			Width, ft	33
Bicycle LOS Score	0.00		Bicycle Effective	Speed Factor	5.07
Bicycle LOS	А				
		Sac	mont 12		
		seg	ment 12		

Ve	hicle Inputs					
Seg	gment Type	Passing Zone		Length, ft		857
Me	asured FFS	Measured		Free-Flow Speed,	Free-Flow Speed, mi/h	
De	emand and Capacity					
Dir	ectional Demand Flow Rate, veh/h	111		Opposing Demand	d Flow Rate, veh/h	161
Pea	ık Hour Factor	0.88		Total Trucks, %		2.60
Seg	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.07
ln [.]	termediate Results					
Seg	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	eed Slope Coefficient (m)	4.30393		Speed Power Coef	fficient (p)	0.55093
PF	Slope Coefficient (m)	-1.22917		PF Power Coefficie	ent (p)	0.80961
In F	Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.3
%Ir	mprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	857	-		-	69.6
Ve	hicle Results					
Ave	erage Speed, mi/h	69.6		Percent Followers,	%	18.8
Seg	gment Travel Time, minutes	0.14		Follower Density (FD), followers/mi/ln	0.3
Veł	nicle LOS	А				
Bi	cycle Results					·
Per	cent Occupied Parking	0		Pavement Condition	on Rating	4
Flo	w Rate Outside Lane, veh/h	111		Bicycle Effective Width, ft		33
Bic	ycle LOS Score	0.00		Bicycle Effective S	peed Factor	5.07
Bic	ycle LOS	А				
		9	Segm	ent 13		
Ve	hicle Inputs					
Seg	gment Type	Passing Constrained	d	Length, ft		1288
Me	asured FFS	Measured		Free-Flow Speed,	mi/h	60.0
De	emand and Capacity					
Dir	ectional Demand Flow Rate, veh/h	111		Opposing Demand	d Flow Rate, veh/h	-
Pea	ık Hour Factor	0.88		Total Trucks, %		2.60
Seg	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.07
ln ⁻	termediate Results					
Seg	gment Vertical Class	1		Free-Flow Speed,	mi/h	60.0
Spe	eed Slope Coefficient (m)	4.57372		Speed Power Coef	fficient (p)	0.41674
PF	Slope Coefficient (m)	-1.39677		PF Power Coefficie	ent (p)	0.73640

In Pa	ssing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		0.5
%lmp	provement to Percent Followers	0.0	·	%Improvement to Speed		0.0
Sub	segment Data					
#	Segment Type	Length, ft	Length, ft Radiu		Superelevation, %	Average Speed, mi/h
1	Tangent	1288	-		-	59.3
Veh	icle Results					
Avera	age Speed, mi/h	59.3	ı	Percent Followers, %		24.2
Segn	ment Travel Time, minutes 0.25		F	Follower Density ((FD), followers/mi/ln	0.5
Vehic	ile LOS	А	А			
Bicy	cle Results					
Perce	ent Occupied Parking	0	ı	Pavement Condition Rating		4
Flow	Rate Outside Lane, veh/h	111	E	Bicycle Effective V	Vidth, ft	33
Bicyc	le LOS Score	0.00	E	Bicycle Effective Speed Factor		4.79
Bicyc	le LOS	А				
Faci	ility Results					
Т	VMT veh-mi/p	VH veh-	_		ensity, followers/ mi/ln	LOS
1	149	0.0)1	0.3		A





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HCSTM Highways Version 2022 WB_38_WHartford_2029AM.xuf Generated: 05/11/2023 18:56:22

		HCS Two-La	ne	Highway Re	port	
Pro	pject Information		_			
Ana	lyst	MJV	MJV			5/11/2023
Age	ncy	HRG		Analysis Year		2029 NB
Juri	diction	SDDOT		Time Analyzed		PM Peak
Proj	ect Description	WB 38 West of Hartfo	rd	Units		U.S. Customary
		S	egn	nent 1		
Ve	nicle Inputs					
Seg	ment Type	Passing Zone		Length, ft		10549
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	189		Opposing Deman	d Flow Rate, veh/h	118
Pea	· Hour Factor	0.88		Total Trucks, %		1.94
Seg	ment Capacity, veh/h	1700		Demand/Capacity	, (D/C)	0.11
Int	ermediate Results	<u>'</u>		'		<u>'</u>
Segment Vertical Class 1		Free-Flow Speed,	mi/h	70.0		
Spe	ed Slope Coefficient (m)	4.37894		Speed Power Coe	fficient (p)	0.56653
PF S	lope Coefficient (m)	-1.13897		PF Power Coefficie	ent (p)	0.81724
In P	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.7
%ln	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data	<u>'</u>		•		
#	Segment Type	Length, ft	Rac	dius, ft Superelevation, %		Average Speed, mi/h
1	Tangent	10549	1-		-	68.9
Ve	nicle Results					<u>'</u>
Ave	rage Speed, mi/h	68.9		Percent Followers	, %	25.3
Seg	ment Travel Time, minutes	1.74		Follower Density ((FD), followers/mi/ln	0.7
Veh	cle LOS	А				
Bio	ycle Results	<u>'</u>				
Pero	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flov	r Rate Outside Lane, veh/h	189		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	2.44		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	В				
		S	egn	nent 2		
Ve	nicle Inputs					
	ment Type	Passing Zone		Length, ft		2793
	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
				,		

Domand and Consults					
Demand and Capacity					
Directional Demand Flow Rate, veh/h	189		Opposing Demand Flow Rate, veh/h		118
Peak Hour Factor	0.88		Total Trucks, %		1.94
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.11
Intermediate Results					
Segment Vertical Class	1	1		mi/h	70.0
Speed Slope Coefficient (m)	4.30833		Speed Power Coe	fficient (p)	0.56653
PF Slope Coefficient (m)	-1.16438		PF Power Coefficie	ent (p)	0.83687
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.7
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Radi	us, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	2793	-		-	68.9
Vehicle Results					
Average Speed, mi/h	68.9		Percent Followers	, %	25.0
Segment Travel Time, minutes	0.46		Follower Density (FD), followers/mi/ln		0.7
Vehicle LOS	А				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	189		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	2.44		Bicycle Effective Speed Factor		5.07
Bicycle LOS	В				
	S	egm	ent 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	180		Opposing Deman	d Flow Rate, veh/h	105
Peak Hour Factor	0.88		Total Trucks, %		2.19
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.11
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.31437		Speed Power Coe	fficient (p)	0.57223
PF Slope Coefficient (m)	-1.14124		PF Power Coefficie	ent (p)	0.84536
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.6
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					

#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3825	-		-	69.0
Vel	nicle Results		•			
Aver	rage Speed, mi/h	69.0		Percent Followers	, %	23.5
Segr	ment Travel Time, minutes	0.63		Follower Density ((FD), followers/mi/ln	0.6
Vehi	cle LOS	A				
Bic	ycle Results					
Percent Occupied Parking 0		Pavement Conditi	on Rating	4		
Flow	Rate Outside Lane, veh/h	180		Bicycle Effective V	Vidth, ft	28
Bicy	cle LOS Score	1.44		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	А				
			Segr	ment 4		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrai	ned	Length, ft		791
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	180		Opposing Deman	d Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %		2.19
Segr	nent Capacity, veh/h	1700		Demand/Capacity	, (D/C)	0.11
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.29358		PF Power Coefficient (p)		0.75776
In Pa	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.8
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	791	-		-	68.4
Vel	nicle Results					
Aver	rage Speed, mi/h	68.4		Percent Followers	, %	29.7
Segment Travel Time, minutes 0.13		Follower Density ((FD), followers/mi/ln	0.8		
Vehicle LOS A						
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	180		Bicycle Effective V	Vidth, ft	28
Bicy	cle LOS Score	1.44		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	Α				

		S	egr	ment 5		
Ve	hicle Inputs					
Seg	ment Type	Passing Zone		Length, ft		3414
Mea	Measured FFS Measured			Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	180		Opposing Deman	d Flow Rate, veh/h	105
Pea	k Hour Factor	0.88		Total Trucks, %		2.19
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.11
Int	termediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.30953		Speed Power Coe	fficient (p)	0.57223
PF S	Slope Coefficient (m)	-1.14753		PF Power Coefficie	ent (p)	0.84327
In P	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.6
%In	nprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3414	-		-	69.0
Ve	hicle Results					
Ave	rage Speed, mi/h	69.0	69.0		. %	23.6
Seg	ment Travel Time, minutes	0.56		Follower Density (FD), followers/mi/ln	0.6
Veh	icle LOS	А				
Bio	cycle Results					·
Per	cent Occupied Parking	0		Pavement Condition	on Rating	4
Flov	w Rate Outside Lane, veh/h	180		Bicycle Effective W	/idth, ft	28
Bicy	cle LOS Score	1.44		Bicycle Effective S	peed Factor	5.07
Bicy	rcle LOS	А				
		S	Segr	ment 6		
Ve	hicle Inputs					
Seg	ment Type	Passing Constrained		Length, ft		286
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity	•				
Dire	ectional Demand Flow Rate, veh/h	180		Opposing Deman	d Flow Rate, veh/h	-
Pea	k Hour Factor	0.88		Total Trucks, %		2.19
Seg	ment Capacity, veh/h	1700		Demand/Capacity	0.11	
Int	termediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
				1 '		

Speed Slope Coefficient (m)	· · · · · · · · · · · · · · · · · · ·			fficient (p)	0.41674			
PF Slope Coefficient (m)	-1.29358		PF Power Coefficie	<u>.</u>	0.75776			
In Passing Lane Effective Length?	No		Total Segment De		0.8			
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0			
Subsegment Data								
# Segment Type	Length, ft	Rac	lius, ft	Superelevation, %	Average Speed, mi/h			
1 Tangent	286	-		-	68.4			
Vehicle Results								
Average Speed, mi/h	68.4		Percent Followers,	%	29.7			
Segment Travel Time, minutes	0.05		Follower Density (FD), followers/mi/ln	0.8			
Vehicle LOS	A							
Bicycle Results								
Percent Occupied Parking	0		Pavement Condition	on Rating	4			
Flow Rate Outside Lane, veh/h	180		Bicycle Effective W	/idth, ft	28			
Bicycle LOS Score	1.44		Bicycle Effective S	peed Factor	5.07			
Bicycle LOS	A							
	;	Segn	ment 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	184		Opposing Deman	d Flow Rate, veh/h	-			
Peak Hour Factor	0.88		Total Trucks, %		3.08			
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.11			
Intermediate Results								
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0			
Speed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674			
PF Slope Coefficient (m)	-1.29347		PF Power Coefficie	ent (p)	0.75789			
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.8			
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0			
Subsegment Data								
# Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h			
1 Tangent	463	-	- 68.4					
Vehicle Results								
Average Speed, mi/h 68.4			Percent Followers,	%	30.1			
Segment Travel Time, minutes	0.08		Follower Density (FD), followers/mi/ln	0.8			
Vehicle LOS	A							

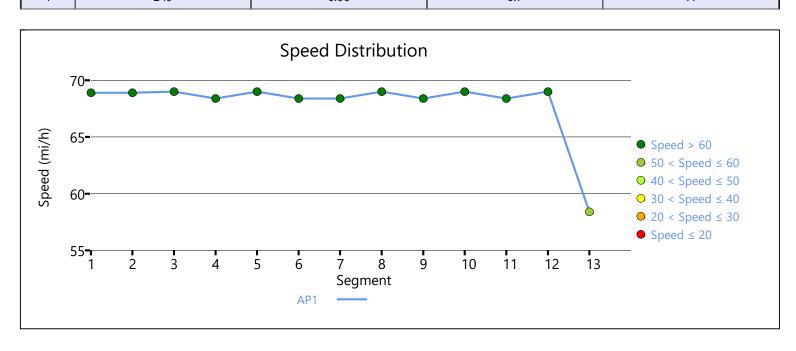
Bicycle Results						
Percent Occupied Parking	0		Pavement Condition	on Rating	4	
Flow Rate Outside Lane, veh/h	184		Bicycle Effective W	/idth, ft	24	
Bicycle LOS Score	2.73		Bicycle Effective S	peed Factor	5.07	
Bicycle LOS	С					
	Se	egn	nent 8		·	
Vehicle Inputs						
Segment Type	Passing Zone		Length, ft		4822	
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0	
Demand and Capacity						
Directional Demand Flow Rate, veh/h	184		Opposing Demand	d Flow Rate, veh/h	100	
Peak Hour Factor	0.88		Total Trucks, %		3.08	
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.11	
Intermediate Results						
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0	
Speed Slope Coefficient (m)			Speed Power Coef	fficient (p)	0.57423	
PF Slope Coefficient (m)	-1.12885		PF Power Coefficie	ent (p)	0.84841	
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.6	
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0	
Subsegment Data						
# Segment Type	Length, ft Rad		lius, ft	Superelevation, %	Average Speed, mi/h	
1 Tangent	4822	-		-	69.0	
Vehicle Results						
Average Speed, mi/h	69.0		Percent Followers,	%	23.6	
Segment Travel Time, minutes	0.79		Follower Density (FD), followers/mi/ln	0.6	
Vehicle LOS	Α					
Bicycle Results						
Percent Occupied Parking	0		Pavement Condition	on Rating	4	
Flow Rate Outside Lane, veh/h	184		Bicycle Effective W	/idth, ft	24	
Bicycle LOS Score	2.73		Bicycle Effective S	peed Factor	5.07	
Bicycle LOS	С					
	Se	egn	nent 9			
Vehicle Inputs						
Segment Type	Passing Constrained		Length, ft		861	
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0	
Demand and Capacity						

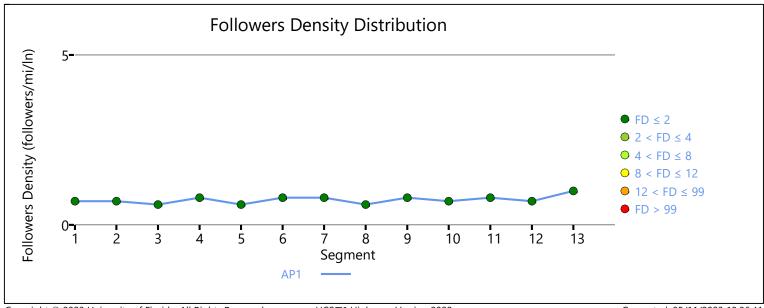
Dire	ctional Demand Flow Rate, veh/h	184		Opposing Demand	d Flow Rate, veh/h	-			
Peak	Hour Factor	0.88		Total Trucks, %		3.08			
Segr	ment Capacity, veh/h	1700		Demand/Capacity	Demand/Capacity (D/C) 0.1				
Int	ermediate Results								
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0			
Spe	ed Slope Coefficient (m)	4.57372		Speed Power Coef	fficient (p)	0.41674			
PF S	lope Coefficient (m)	-1.29347		PF Power Coefficie	ent (p)	0.75789			
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.8			
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0			
Sul	osegment Data								
#	Segment Type	Length, ft	R	adius, ft	Superelevation, %	Average Speed, mi/h			
1	Tangent	861	-		-	68.4			
Vel	nicle Results								
Aver	age Speed, mi/h	68.4		Percent Followers,	%	30.1			
Segr	nent Travel Time, minutes	0.14		Follower Density (FD), followers/mi/ln	0.8			
Vehi	cle LOS	А							
Bic	ycle Results								
Perc	ent Occupied Parking	0		Pavement Condition	on Rating	4			
Flow	Rate Outside Lane, veh/h	184		Bicycle Effective W	/idth, ft	24			
Bicy	cle LOS Score	2.73		Bicycle Effective S	peed Factor	5.07			
Bicy	cle LOS	С							
			Segi	ment 10					
Vel	nicle Inputs								
Segr	ment Type	Passing Zone		Length, ft		1556			
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0			
De	mand and Capacity					•			
Dire	ctional Demand Flow Rate, veh/h	184		Opposing Demand	d Flow Rate, veh/h	100			
Peak	Hour Factor	0.88		Total Trucks, %		3.08			
Segr	nent Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.11			
Int	ermediate Results								
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0			
Speed Slope Coefficient (m) 4.28032			Speed Power Coef	fficient (p)	0.57423				
PF Slope Coefficient (m) -1.19816			PF Power Coefficie	ent (p)	0.82111				
In Passing Lane Effective Length? No			Total Segment De	nsity, veh/mi/ln	0.7				
%Improvement to Percent Followers 0.0			%Improvement to	0.0					
Sul	segment Data								
#	Segment Type Length, ft Radi			adius, ft	Superelevation, %	Average Speed, mi/h			
3.7									

1 Tangent	1556	-		-	69.0	
Vehicle Results						
Average Speed, mi/h	69.0		Percent Followers,	, %	25.8	
Segment Travel Time, minutes	0.26		Follower Density (FD), followers/mi/ln	0.7	
Vehicle LOS	А		1			
Bicycle Results						
Percent Occupied Parking	0		Pavement Conditi	on Rating	4	
Flow Rate Outside Lane, veh/h	w Rate Outside Lane, veh/h 184			Vidth, ft	24	
Bicycle LOS Score	2.73		Bicycle Effective S	peed Factor	5.07	
Bicycle LOS	С					
	\$	Segn	nent 11			
Vehicle Inputs						
Segment Type	Passing Constrained	<u> </u>	Length, ft		799	
Measured FFS Measured			Free-Flow Speed,	mi/h	70.0	
Demand and Capacity						
Directional Demand Flow Rate, veh/h	184		Opposing Deman	d Flow Rate, veh/h	-	
Peak Hour Factor	0.88		Total Trucks, %		3.08	
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.11	
Intermediate Results						
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0	
Speed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674	
PF Slope Coefficient (m)	-1.29347		PF Power Coefficie	ent (p)	0.75789	
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.8	
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0	
Subsegment Data						
# Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h	
1 Tangent	799	-		-	68.4	
Vehicle Results						
Average Speed, mi/h	68.4		Percent Followers,	, %	30.1	
Segment Travel Time, minutes	0.13		Follower Density (FD), followers/mi/ln	0.8	
Vehicle LOS	А					
Bicycle Results						
Percent Occupied Parking	0		Pavement Condition	on Rating	4	
Flow Rate Outside Lane, veh/h	184		Bicycle Effective W	Vidth, ft	24	
Bicycle LOS Score	2.73		Bicycle Effective S	peed Factor	5.07	
Bicycle LOS	С					
	9	Segn	nent 12			

Ve	hicle Inputs						
Seg	gment Type	Passing Zone		Length, ft		857	
Me	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0	
De	emand and Capacity						
Dire	ectional Demand Flow Rate, veh/h	184		Opposing Demand	d Flow Rate, veh/h	100	
Pea	ık Hour Factor	0.88		Total Trucks, %		3.08	
Seg	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.11	
Int	termediate Results						
Seg	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0	
Spe	eed Slope Coefficient (m)	4.27591		Speed Power Coef	ficient (p)	0.57423	
PF :	Slope Coefficient (m)	-1.20974		PF Power Coefficie	ent (p)	0.81565	
In F	Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.7	
%lr	nprovement to Percent Followers	0.0		%Improvement to	Speed	0.0	
Su	bsegment Data						
#	Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h	
1	Tangent	857	-		-		
Ve	hicle Results						
Ave	erage Speed, mi/h	69.0		Percent Followers,	%	26.2	
Seg	gment Travel Time, minutes	0.14	0.14		FD), followers/mi/ln	0.7	
Veh	nicle LOS	А					
Bi	cycle Results						
Per	cent Occupied Parking	0		Pavement Condition	on Rating	4	
Flo	w Rate Outside Lane, veh/h	184		Bicycle Effective W	24		
Bic	ycle LOS Score	2.73		Bicycle Effective Sp	5.07		
Bic	ycle LOS	С					
		S	egm	ent 13			
Ve	hicle Inputs						
Seg	gment Type	Passing Constrained		Length, ft		1288	
Me	asured FFS	Measured		Free-Flow Speed,	mi/h	60.0	
De	emand and Capacity						
Dir	ectional Demand Flow Rate, veh/h	184		Opposing Demand	d Flow Rate, veh/h	-	
Pea	ık Hour Factor	0.88		Total Trucks, %		3.08	
Seg	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.11	
In	termediate Results						
Seg	gment Vertical Class	1		Free-Flow Speed,	mi/h	60.0	
Spe	eed Slope Coefficient (m)	4.57372		Speed Power Coef	0.41674		
DE	Slope Coefficient (m)	-1.39671		PF Power Coefficie	ent (p)	0.73647	

In Pa	ssing Lane Effective Length?	No		Total Segr	nent Density, veh/mi/ln	1.0		
%lm _l	provement to Percent Followers	0.0		%Improve	ment to Speed	0.0		
Sub	segment Data	_				,		
#	# Segment Type Length, ft Ra				Superelevation, %	Average Speed, mi/h		
1	Tangent	1288	-		-	58.4		
Veh	nicle Results							
Avera	age Speed, mi/h	58.4		Percent Fo	ollowers, %	33.1		
Segn	nent Travel Time, minutes	0.25	0.25		Density (FD), followers/mi/ln	1.0		
Vehic	cle LOS	А						
Bicy	ycle Results							
Perce	ent Occupied Parking	0		Pavement	Condition Rating	4		
Flow	Rate Outside Lane, veh/h	184		Bicycle Eff	ective Width, ft	24		
Bicyc	le LOS Score	2.63		Bicycle Eff	ective Speed Factor	4.79		
Bicyc	ile LOS	С						
Faci	ility Results							
Т	VMT veh-mi/p	VH veh-		Foll	ower Density, followers/ mi/ln	LOS		
1	1 249 0.06				0.7	A		



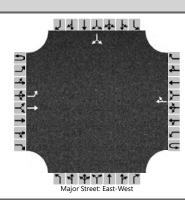


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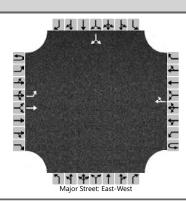
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HCS Two-Way Stop-Control Report											
General Information		Site Information									
Analyst	NM	Intersection	SD 38 & SD 19								
Agency/Co.	HRG	Jurisdiction	SDDOT								
Date Performed	5/5/2023	East/West Street	SD 38								
Analysis Year	2040	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										



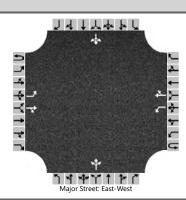
Vehicle Volumes and Adjustments																
Approach		Eastb	ound			Westk	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	T	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		L	T					TR							LR	
Volume (veh/h)		45	135				100	40						55		75
Percent Heavy Vehicles (%)		30												9		11
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage				Undi	vided	led										
Critical and Follow-up He	adwa	ys														
Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.40												6.49		6.31
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.47												3.58		3.40
Delay, Queue Length, and	l Leve	of Se	ervice													
Flow Rate, v (veh/h)		49													141	
Capacity, c (veh/h)		1274													734	
v/c Ratio		0.04													0.19	
95% Queue Length, Q ₉₅ (veh)		0.1													0.7	
Control Delay (s/veh)		7.9													11.1	
Level of Service (LOS)		Α													В	
Approach Delay (s/veh)		2	.0									11.1				
Approach LOS		A	4											-	В	

HCS Two-Way Stop-Control Report												
General Information		Site Information										
Analyst	NM	Intersection	SD 38 & SD 19									
Agency/Co.	HRG	Jurisdiction	SDDOT									
Date Performed	5/5/2023	East/West Street	SD 38									
Analysis Year	2040	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											



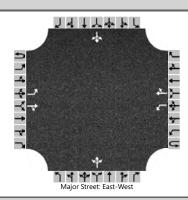
Vehicle Volumes and Adj	justme	nts														
Approach		Eastk	ound			Westl	bound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		L	Т					TR							LR	
Volume (veh/h)		70	100				140	65						30		40
Percent Heavy Vehicles (%)		2												10		14
Proportion Time Blocked																
Percent Grade (%)												-	0			
Right Turn Channelized																
Median Type Storage				Undi	ivided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)	T	4.1												7.1		6.2
Critical Headway (sec)		4.12												6.50		6.34
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.22												3.59		3.43
Delay, Queue Length, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)	T	76													76	
Capacity, c (veh/h)		1345													661	
v/c Ratio		0.06													0.12	
95% Queue Length, Q ₉₅ (veh)		0.2													0.4	
Control Delay (s/veh)		7.8													11.2	
Level of Service (LOS)		А													В	
Approach Delay (s/veh)		3	.2					-					11.2			
Approach LOS			A												В	

HCS Two-Way Stop-Control Report											
General Information		Site Information									
Analyst	NM	Intersection	SD 38 & 459th								
Agency/Co.	HRG	Jurisdiction	SDDOT								
Date Performed	5/5/2023	East/West Street	SD 38								
Analysis Year	2040	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										



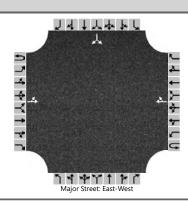
Vehicle Volumes and Adj	ıstme	nts																
Approach	Eastbound				Westbound			Northbound				Southbound						
Movement	U	L	Т	R	U	L	Т	R	U	L	T	R	U	L	Т	R		
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12		
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0		
Configuration		L		TR		L		TR			LTR				LTR			
Volume (veh/h)		0	180	6		1	130	0		10	0	6		7	0	0		
Percent Heavy Vehicles (%)		3				3				13	0	0		0	0	0		
Proportion Time Blocked																		
Percent Grade (%)										()		0					
Right Turn Channelized																		
Median Type Storage		Undivided																
Critical and Follow-up He	adwa	ys																
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	l Leve	l of Se	ervice															
Flow Rate, v (veh/h)		0				1					17				8			
Capacity, c (veh/h)		1436				1364					667				613			
v/c Ratio		0.00				0.00					0.03				0.01			
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.1				0.0			
Control Delay (s/veh)		7.5				7.6					10.5				10.9			
Level of Service (LOS)		А				Α					В				В			
Approach Delay (s/veh)	0.0				0.1			10.5				10.9						
Approach LOS	А				А			В				В						

HCS Two-Way Stop-Control Report										
General Information		Site Information								
Analyst	NM	Intersection	SD 38 & 459th							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/5/2023	East/West Street	SD 38							
Analysis Year	2040	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									



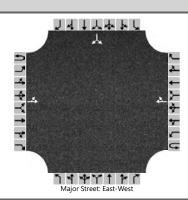
Vehicle Volumes and Adj	ustme	nts															
Approach	Eastbound			Westbound			Northbound				Southbound						
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0	
Configuration		L		TR		L		TR			LTR				LTR		
Volume (veh/h)		0	120	7		10	205	1		10	0	3		1	1	0	
Percent Heavy Vehicles (%)		0				0				13	0	0		0	100	0	
Proportion Time Blocked																	
Percent Grade (%)										()		0				
Right Turn Channelized																	
Median Type Storage		Undivided															
Critical and Follow-up Ho	eadwa	ys															
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	d Leve	l of Se	ervice														
Flow Rate, v (veh/h)		0				11					14				2		
Capacity, c (veh/h)		1357				1458					609				488		
v/c Ratio		0.00				0.01					0.02				0.00		
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.1				0.0		
Control Delay (s/veh)		7.7				7.5					11.0				12.4		
Level of Service (LOS)		А				Α					В				В		
Approach Delay (s/veh)		0.0				0.3			11.0				12.4				
Approach LOS		А				А			В				В				

	HCS Two-Way Stop	-Control Report									
General Information		Site Information									
Analyst	NM	Intersection	SD 38 & I-90 Expressway								
Agency/Co.	HRG	Jurisdiction	SDDOT								
Date Performed	5/5/2023	East/West Street	SD 38								
Analysis Year	2040	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										



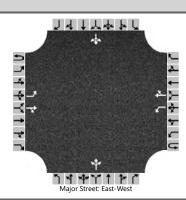
Vehicle Volumes and Adju	ıstme	nts															
Approach		Eastb	ound			Westk	oound			North	bound			South	bound		
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0	
Configuration		LT						TR							LR		
Volume (veh/h)		0	190				140	0						0		0	
Percent Heavy Vehicles (%)		3												3		3	
Proportion Time Blocked																	
Percent Grade (%)														(0		
Right Turn Channelized																	
Median Type Storage				Undi	vided												
Critical and Follow-up He	adwa	ys															
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	l Leve	l of Se	ervice														
Flow Rate, v (veh/h)		0													0		
Capacity, c (veh/h)		1422													0		
v/c Ratio		0.00															
95% Queue Length, Q ₉₅ (veh)		0.0															
Control Delay (s/veh)		7.5	0.0														
Level of Service (LOS)		А	А														
Approach Delay (s/veh)	0.0																
Approach LOS		А															

	HCS Two-Way Stop	-Control Report								
General Information		Site Information								
Analyst	NM	Intersection	SD 38 & I-90 Expressway							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/5/2023	East/West Street	SD 38							
Analysis Year	2040	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 Adj	ustme	nts															
Approach		Eastb	ound			Westl	oound			North	bound			South	bound		
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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	0	0		0	1	0	
Configuration		LT						TR							LR		
Volume (veh/h)		0	135				215	0						0		0	
Percent Heavy Vehicles (%)		3												3		3	
Proportion Time Blocked																	
Percent Grade (%)															0		
Right Turn Channelized																	
Median Type Storage				Undi	vided												
Critical and Follow-up He	eadwa	ys															
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	d Leve	l of Se	ervice														
Flow Rate, v (veh/h)		0													0		
Capacity, c (veh/h)		1328													0		
v/c Ratio		0.00															
95% Queue Length, Q ₉₅ (veh)		0.0															
Control Delay (s/veh)		7.7	0.0														
Level of Service (LOS)		А	Α														
Approach Delay (s/veh)		0.0															
Approach LOS		А															

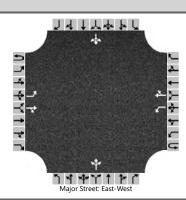
	HCS Two-Way Stop	-Control Report								
General Information		Site Information								
Analyst	NM	Intersection	SD 38 & 463rd Ave / Western Ave							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/5/2023	East/West Street	SD 38							
Analysis Year	2040	North/South Street	463rd Ave / Western Ave							
Time Analyzed	AM Peak	Peak Hour Factor	0.92							
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25							
Project Description	SD 38									



Vehicle Volumes and Adj	ustme	nts															
Approach		Eastb	ound			Westl	ound			North	bound			South	bound		
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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)		7	150	65		50	95	25		50	65	75		35	65	4	
Percent Heavy Vehicles (%)		3				3				14	2	6		0	7	33	
Proportion Time Blocked																	
Percent Grade (%)										()			(0		
Right Turn Channelized																	
Median Type Storage				Undi	vided												
Critical and Follow-up Ho	eadwa	ys															
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, an	d Leve	l of Se	ervice														
Flow Rate, v (veh/h)		8				54					207				113		
Capacity, c (veh/h)		1449				1328					541				442		
v/c Ratio		0.01				0.04					0.38				0.26		
95% Queue Length, Q ₉₅ (veh)		0.0				0.1					1.8				1.0		
Control Delay (s/veh)		7.5				7.8					15.7				15.9		
Level of Service (LOS)		А				Α					С				С		
Approach Delay (s/veh)		0.2 2.3							15.7				15.9				
Approach LOS		,	Ą			,	4		C C				С				

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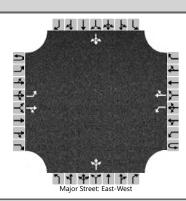
	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	NM	Intersection	SD 38 & 463rd Ave / Western Ave
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	5/5/2023	East/West Street	SD 38
Analysis Year	2040	North/South Street	463rd Ave / Western Ave
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		



Vehicle Volumes and Adj	ustme	nts															
Approach		Eastb	ound			Westl	oound			North	bound			South	bound		
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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)		15	105	45		95	165	50		55	70	125		45	80	20	
Percent Heavy Vehicles (%)		22				3				0	11	4		0	4	0	
Proportion Time Blocked																	
Percent Grade (%)										()		0				
Right Turn Channelized																	
Median Type Storage				Undi	vided												
Critical and Follow-up Ho	eadwa	ys															
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	d Leve	l of Se	ervice														
Flow Rate, v (veh/h)		16				103					272				158		
Capacity, c (veh/h)		1225				1410					480				353		
v/c Ratio		0.01				0.07					0.57				0.45		
95% Queue Length, Q ₉₅ (veh)		0.0				0.2					3.5				2.2		
Control Delay (s/veh)		8.0				7.8					21.9				23.2		
Level of Service (LOS)		А				Α					С				С		
Approach Delay (s/veh)		0.7 2.4						-	21.9				23.2				
Approach LOS		,	4			1	4			(C		С				

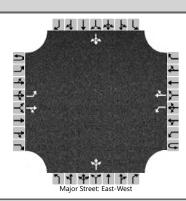
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	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	NM	Intersection	SD 38 & Main Ave
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	5/5/2023	East/West Street	SD 38
Analysis Year	2040	North/South Street	Main Ave (9th St)
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		



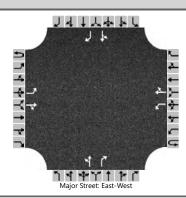
Vehicle Volumes and Adj	ustme	nts																
Approach		Eastb	oound			Westl	oound			North	bound			South	bound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R		
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12		
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0		
Configuration		L		TR		L		TR			LTR				LTR			
Volume (veh/h)		1	215	25		35	165	15		30	4	70		5	9	3		
Percent Heavy Vehicles (%)		0				11				5	0	2		0	17	0		
Proportion Time Blocked																		
Percent Grade (%)										()				0			
Right Turn Channelized																		
Median Type Storage				Undi	vided													
Critical and Follow-up H	eadwa	ys																
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, an	d Leve	l of Se	ervice															
Flow Rate, v (veh/h)		1				38					113				18			
Capacity, c (veh/h)		1389				1253					630				463			
v/c Ratio		0.00				0.03					0.18				0.04			
95% Queue Length, Q ₉₅ (veh)		0.0				0.1					0.6				0.1			
Control Delay (s/veh)		7.6				8.0					12.0				13.1			
Level of Service (LOS)		А				Α					В				В			
Approach Delay (s/veh)		0	.0		1.3				12.0				13.1					
Approach LOS	1	,	A			,	4				В		Ì		В			

	HCS Two-Way Stop	-Control Report								
General Information		Site Information								
Analyst	NM	Intersection	SD 38 & Main Ave							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/4/2023	East/West Street	SD 38							
Analysis Year	2040	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									



Vehicle Volumes and Adj	justme	nts															
Approach	Т	Eastb	oound			Westl	oound			North	bound			South	bound		
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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)		9	210	40		55	275	50		30	15	45		35	25	6	
Percent Heavy Vehicles (%)		0				0				5	0	0		0	0	0	
Proportion Time Blocked																	
Percent Grade (%)											0			-	0		
Right Turn Channelized																	
Median Type Storage				Undi	vided												
Critical and Follow-up H	eadwa	ys															
Base Critical Headway (sec)	Т	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, an	d Leve	l of Se	ervice														
Flow Rate, v (veh/h)	T	10				60					98				72		
Capacity, c (veh/h)		1217				1303					446				329		
v/c Ratio		0.01				0.05					0.22				0.22		
95% Queue Length, Q ₉₅ (veh)		0.0				0.1					0.8				0.8		
Control Delay (s/veh)		8.0				7.9					15.3				19.0		
Level of Service (LOS)		А				А					С				С		
Approach Delay (s/veh)		0	.3			1.1			15.3				19.0				
Approach LOS		A A C									С		Ì	(С		

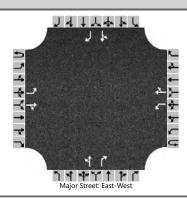
	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	NM	Intersection	SD 38 & Vandemark Ave
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	5/5/2023	East/West Street	SD 38
Analysis Year	2040	North/South Street	Vandemark Avenue
Time Analyzed	AM	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		



Vehicle Volumes and Ad	justme	nts														
Approach	Τ	Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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	310	9		7	210	20		7	4	10		35	1	20
Percent Heavy Vehicles (%)		0				0				40	0	0		0	0	7
Proportion Time Blocked																
Percent Grade (%))				0	
Right Turn Channelized										Ν	lo			Ν	lo	
Median Type Storage				Undi	ivided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)	Τ	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, an	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)	T	22				8				12		11		39		22
Capacity, c (veh/h)		1327				1223				345		705		374		788
v/c Ratio		0.02				0.01				0.03		0.02		0.10		0.03
95% Queue Length, Q ₉₅ (veh)		0.0				0.0				0.1		0.0		0.3		0.1
Control Delay (s/veh)		7.8				8.0				15.8		10.2		15.7		9.7
Level of Service (LOS)		А				А				С		В		С		Α
Approach Delay (s/veh)		0	.5			0	.2	•		13	3.1	-		13	3.6	_
Approach LOS		,	A				4				В			I	В	

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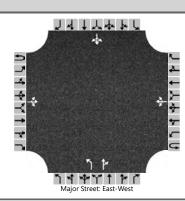
	HCS Two-Way Stop	-Control Report								
General Information		Site Information								
Analyst	NM	Intersection	SD 38 & Vandemark Ave							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/5/2023	East/West Street	SD 38							
Analysis Year	2040	North/South Street	Vandemark Avenue							
Time Analyzed	PM	Peak Hour Factor	0.92							
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25							
Project Description	SD 38									



Vehicle Volumes and Ad	justme	nts														
Approach	Τ	Eastb	oound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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	220	3		5	400	35		0	0	8		25	0	20
Percent Heavy Vehicles (%)		0				0				0	0	100		0	0	7
Proportion Time Blocked																
Percent Grade (%))				0	
Right Turn Channelized										N	lo			Ν	lo	
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)	Τ	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, an	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)	T	22				5				0		9		27		22
Capacity, c (veh/h)		1100				1336				0		607		319		596
v/c Ratio		0.02				0.00						0.01		0.09		0.04
95% Queue Length, Q ₉₅ (veh)		0.1				0.0						0.0		0.3		0.1
Control Delay (s/veh)		8.3				7.7						11.0		17.3		11.3
Level of Service (LOS)		А				А						В		С		В
Approach Delay (s/veh)		0	.7			0	.1	•				-		14	4.6	_
Approach LOS		,	A				4							I	В	

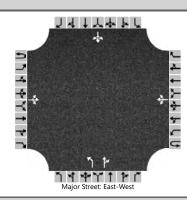
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	HCS Two-Way Stop	-Control Report							
General Information		Site Information							
Analyst	NM	Intersection	SD 38 & 2nd St						
Agency/Co.	HRG	Jurisdiction	SDDOT						
Date Performed	5/5/2023	East/West Street	SD 38						
Analysis Year	2040	North/South Street	2nd St						
Time Analyzed	AM Peak	Peak Hour Factor	0.92						
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25						
Project Description	SD 38								



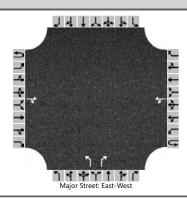
Vehicle Volumes and Adj	ustme	nts														
Approach		Eastb	oound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		1	1	0		0	1	0
Configuration			LTR				LTR			L		TR			LTR	
Volume (veh/h)		15	275	9		80	175	15		4	20	130		30	40	20
Percent Heavy Vehicles (%)		10				16				33	8	5		0	4	8
Proportion Time Blocked																
Percent Grade (%)										(0				0	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.20				4.26				7.43	6.58	6.25		7.10	6.54	6.28
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)		2.29				2.34				3.80	4.07	3.35		3.50	4.04	3.37
Delay, Queue Length, an	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)		16				87				4		163			98	
Capacity, c (veh/h)		1292				1177				234		616			320	
v/c Ratio		0.01				0.07				0.02		0.26			0.31	
95% Queue Length, Q ₉₅ (veh)		0.0				0.2				0.1		1.1			1.3	
Control Delay (s/veh)		7.8	0.1	0.1		8.3	0.7	0.7		20.7		12.9			21.2	
Level of Service (LOS)		А	А	Α		А	Α	А		С		В			С	
Approach Delay (s/veh)	0.5				2.9				13.1				21.2			
Approach LOS	A A B C									С						

	HCS Two-Way Stop	-Control Report							
General Information		Site Information							
Analyst	NM	Intersection	SD 38 & 2nd St						
Agency/Co.	HRG	Jurisdiction	SDDOT						
Date Performed	5/5/2023	East/West Street	SD 38						
Analysis Year	2040	North/South Street	2nd St						
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 Adj	ustme	nts														
Approach		Eastb	ound			Westl	ound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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		1	1	0		0	1	0
Configuration			LTR				LTR			L		TR			LTR	
Volume (veh/h)		20	200	7		110	415	20		10	20	55		15	25	15
Percent Heavy Vehicles (%)		0				0				0	0	6		0	6	0
Proportion Time Blocked																
Percent Grade (%)										()		0			
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
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	6.26		7.10	6.56	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	3.35		3.50	4.05	3.30
Delay, Queue Length, an	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)		22				120				11		82			60	
Capacity, c (veh/h)		1078				1356				174		462			234	
v/c Ratio		0.02				0.09				0.06		0.18			0.26	
95% Queue Length, Q ₉₅ (veh)		0.1				0.3				0.2		0.6			1.0	
Control Delay (s/veh)		8.4	0.2	0.2		7.9	0.9	0.9		27.1		14.5			25.6	
Level of Service (LOS)		А	А	А		Α	Α	Α		D		В			D	
Approach Delay (s/veh)		0.9 2.4							15.9				25.6			
Approach LOS		A A							C D							

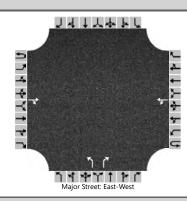
	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	NM	Intersection	SD 38 & West Central HS Entrance
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	5/8/2023	East/West Street	SD 38
Analysis Year	2040	North/South Street	West Central HS Entrance
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		



Vehicle Volumes and Ad	justme	nts														
Approach		Eastl	oound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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		1	0	1		0	0	0
Configuration				TR		LT				L		R				
Volume (veh/h)			360	75		45	245			30		40				
Percent Heavy Vehicles (%)						0				0		0				
Proportion Time Blocked																
Percent Grade (%)											0					
Right Turn Channelized										Ν	lo					
Median Type Storage				Undi	ivided											
Critical and Follow-up H	eadwa	ys														
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, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)	Т					49				33		43				
Capacity, c (veh/h)						1100				340		628				
v/c Ratio						0.04				0.10		0.07				
95% Queue Length, Q ₉₅ (veh)						0.1				0.3		0.2				
Control Delay (s/veh)						8.4	0.4			16.7		11.2				
Level of Service (LOS)						Α	Α			С		В				
Approach Delay (s/veh)						1	.7			13	3.5					
Approach LOS	1						4				В					

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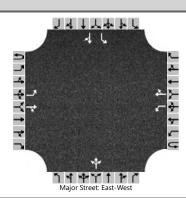
	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	NM	Intersection	SD 38 & West Central HS Entrance
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	5/8/2023	East/West Street	SD 38
Analysis Year	2040	North/South Street	West Central HS Entrance
Time Analyzed	PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		



Vehicle Volumes and Ad	justme	nts														
Approach	T	Eastk	oound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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		1	0	1		0	0	0
Configuration				TR		LT				L		R				
Volume (veh/h)			265	3		3	525			10		10				
Percent Heavy Vehicles (%)						0				0		0				
Proportion Time Blocked																
Percent Grade (%)										()					
Right Turn Channelized										Ν	lo					
Median Type Storage				Undi	ivided											
Critical and Follow-up H	leadwa	ys														
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, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)	T					3				11		11				
Capacity, c (veh/h)						1282				325		754				
v/c Ratio						0.00				0.03		0.01				
95% Queue Length, Q ₉₅ (veh)						0.0				0.1		0.0				
Control Delay (s/veh)						7.8	0.0			16.5		9.8				
Level of Service (LOS)						А	Α			С		А				
Approach Delay (s/veh)		0.1								13	3.2					
Approach LOS						,	Ą				В					

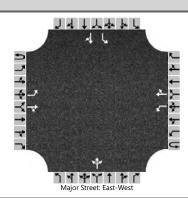
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	HCS Two-Way Stop	p-Control Report						
General Information		Site Information						
Analyst	NM	Intersection	SD 38 & Railroad Street					
Agency/Co.	HRG	Jurisdiction	SDDOT					
Date Performed	5/8/2023	East/West Street	SD 38					
Analysis Year	2040	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							



Vehicle Volumes and Adju	ustme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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)		3	390	0		15	235	80		1	0	25		125	3	4
Percent Heavy Vehicles (%)		0				0				0	0	15		0	0	0
Proportion Time Blocked																
Percent Grade (%)										()			(0	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
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	l Leve	l of Se	ervice													
Flow Rate, v (veh/h)		3				16					28			136		8
Capacity, c (veh/h)		1228				1146					585			304		485
v/c Ratio		0.00				0.01					0.05			0.45		0.02
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.2			2.2		0.0
Control Delay (s/veh)		7.9				8.2					11.5			26.0		12.5
Level of Service (LOS)		А				А					В			D		В
Approach Delay (s/veh)	0.1 0.4							11.5				25.3				
Approach LOS		A A						B D								

	HCS Two-Way Stop	op-Control Report								
General Information		Site Information								
Analyst	NM	Intersection	SD 38 & Railroad Street							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/5/2023	East/West Street	SD 38							
Analysis Year	2040	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									

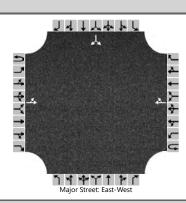


Vehicle Volumes and Adju	ıstme	nts														
Approach		Eastb	ound			Westk	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		1	1	0
Configuration		L		TR		L		TR			LTR			L		TR
Volume (veh/h)		3	295	3		10	475	130		1	1	10		70	7	4
Percent Heavy Vehicles (%)		0				40				0	0	15		5	0	0
Proportion Time Blocked																
Percent Grade (%)										()			(0	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
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	Leve	l of Se	ervice													
Flow Rate, v (veh/h)		3				11					13			76		12
Capacity, c (veh/h)		940				1050					533			234		319
v/c Ratio		0.00				0.01					0.02			0.33		0.04
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.1			1.4		0.1
Control Delay (s/veh)		8.8				8.5					11.9			27.6		16.7
Level of Service (LOS)		Α				Α					В			D		С
Approach Delay (s/veh)	0.1				0.1			11.9				26.2				
Approach LOS	A					-	4		В				D			

HCS Signalized Intersection Results Summary 144444 Intersection Information **General Information** HRG Duration, h 0.250 Agency Analyst NM Analysis Date May 8, 2023 Area Type Other PHF Jurisdiction SDDOT Time Period AM Peak 0.92 **Urban Street** SD 38 Analysis Year 2040 **Analysis Period** 1> 7:15 SD 38 & Mickelson Roa... File Name (10) SD38&Mickelson AM.xus Intersection **Project Description** WB **Demand Information** EB NB SB Approach Movement L R L R L R L R 140 190 Demand (v), veh/h 135 355 30 35 35 55 50 215 20 195 **Signal Information** \mathbb{H} وذلك Cycle, s 65.0 Reference Phase 2 542 Offset, s 0 Reference Point End Green 2.5 3.0 17.5 2.5 2.5 18.0 Uncoordinated No Simult. Gap E/W On Yellow 3.5 0.0 4.0 3.5 0.0 4.0 Force Mode Fixed Simult. Gap N/S On Red 1.0 0.0 1.0 1.0 0.0 1.0 **Timer Results EBL EBT WBL WBT** NBL **NBT** SBL SBT **Assigned Phase** 5 2 6 3 8 1 7 4 Case Number 1.1 4.0 1.1 3.0 1.1 4.0 1.1 4.0 Phase Duration, s 10.0 25.5 7.0 22.5 7.0 23.0 9.5 25.5 4.5 5.0 4.5 5.0 4.5 5.0 4.5 5.0 Change Period, (Y+Rc), s 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 6.0 3.0 3.0 20.0 7.0 22.5 Green Extension Time (g_e), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Phase Call Probability 0.93 0.50 0.50 1.00 0.99 1.00 1.00 1.00 1.00 1.00 Max Out Probability 1.00 1.00 **Movement Group Results** EΒ **WB** NB SB Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 5 2 12 1 6 16 3 8 18 7 4 14 Adjusted Flow Rate (v), veh/h 147 418 38 152 207 38 114 234 234 1688 1747 1688 1772 1688 1632 1688 1523 Adjusted Saturation Flow Rate (s), veh/h/ln 1323 4.0 14.0 1.0 4.5 1.0 8.1 Queue Service Time (g_s), s 8.8 3.5 5.0 Cycle Queue Clearance Time (q c), s 4.0 14.0 1.0 4.5 8.8 1.0 3.5 5.0 8.1 0.32 0.27 Green Ratio (g/C) 0.36 0.31 0.27 0.32 0.28 0.35 0.32 Capacity (c), veh/h 501 552 175 477 356 175 452 241 481 Volume-to-Capacity Ratio (X) 0.293 0.759 0.217 0.319 0.580 0.217 0.253 0.971 0.486 Back of Queue (Q), ft/ln (95 th percentile) Back of Queue (Q), veh/ln (95 th percentile) 2.4 10.7 0.7 3.4 5.6 0.7 2.2 9.5 4.7 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 Uniform Delay (d 1), s/veh 14.7 20.0 18.3 19.0 20.6 18.1 18.3 21.1 18.0 Incremental Delay (d 2), s/veh 0.1 9.4 0.2 1.8 6.7 0.2 0.1 49.6 0.3 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 14.8 29.5 18.5 20.7 27.3 18.3 18.4 70.7 18.3 Level of Service (LOS) В С В С С В В Ε В 25.7 С 23.9 С 18.4 44.5 Approach Delay, s/veh / LOS В D Intersection Delay, s/veh / LOS 30.1 С **Multimodal Results** ΕB WB NB Pedestrian LOS Score / LOS 1.91 В В 2.10 1.91 1.91 В В Bicycle LOS Score / LOS 1.42 Α 1.14 Α 0.74 Α 1.26 Α

HCS Signalized Intersection Results Summary 144444 Intersection Information **General Information** HRG Duration, h 0.250 Agency Analyst NM Analysis Date May 8, 2023 Area Type Other PHF Jurisdiction SDDOT Time Period AM Peak 0.92 **Urban Street** SD 38 Analysis Year 2040 **Analysis Period** 1> 7:15 SD 38 & Mickelson Roa... File Name (10) SD38&Mickelson PM.xus Intersection **Project Description** WB **Demand Information** EB NB SB Approach Movement L R L R L R L R 110 425 35 Demand (v), veh/h 160 165 20 225 15 65 210 15 185 **Signal Information** 111 وذلك Cycle, s 70.0 Reference Phase 2 542 Offset, s 0 Reference Point End 1.7 21.0 17.0 Green 4.8 1.4 0.6 Uncoordinated No Simult. Gap E/W On Yellow 3.5 0.0 4.0 3.5 3.5 4.0 Force Mode Fixed Simult. Gap N/S On 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 6 3 8 4 1 7 Case Number 1.1 4.0 1.1 3.0 1.1 4.0 1.1 4.0 Phase Duration, s 11.0 27.7 9.3 26.0 5.9 22.0 11.0 27.1 4.5 5.0 4.5 5.0 4.5 5.0 4.5 5.0 Change Period, (Y+Rc), s 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 6.9 5.4 2.5 19.0 8.5 24.1 Green Extension Time (g_e), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Phase Call Probability 0.97 0.90 0.27 1.00 0.99 1.00 1.00 1.00 1.00 1.00 Max Out Probability 1.00 1.00 **Movement Group Results** EΒ **WB** NB SB Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 5 2 12 1 6 16 3 8 18 7 4 14 Adjusted Flow Rate (v), veh/h 174 201 120 462 245 16 109 228 217 1688 1738 1688 1772 1323 1688 1667 1688 1519 Adjusted Saturation Flow Rate (s), veh/h/ln 4.9 6.2 3.4 17.3 0.5 8.0 Queue Service Time (g_s), s 11.1 3.7 6.5 Cycle Queue Clearance Time (q c), s 4.9 6.2 3.4 17.3 11.1 0.5 3.7 6.5 8.0 0.32 0.30 0.32 Green Ratio (g/C) 0.39 0.37 0.30 0.26 0.24 0.36 405 Capacity (c), veh/h 309 563 220 532 397 136 260 480 Volume-to-Capacity Ratio (X) 0.563 0.357 0.544 0.869 0.616 0.120 0.268 0.879 0.452 Back of Queue (Q), ft/ln (95 th percentile) Back of Queue (Q), veh/ln (95 th percentile) 3.2 4.6 2.2 14.1 7.0 0.3 2.5 7.8 4.7 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 Uniform Delay (d 1), s/veh 17.0 18.1 18.1 23.2 21.0 21.3 21.5 19.7 19.1 Incremental Delay (d 2), s/veh 1.5 1.8 0.9 17.4 7.0 0.1 0.1 26.4 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 18.5 19.9 19.1 40.6 28.0 21.4 21.6 46.2 19.3 Level of Service (LOS) В В В D С С С D В 19.2 В 33.7 С 21.6 С 33.1 С Approach Delay, s/veh / LOS Intersection Delay, s/veh / LOS 29.6 С **Multimodal Results** ΕB WB NB Pedestrian LOS Score / LOS 1.91 В В 1.91 1.91 2.11 В В Bicycle LOS Score / LOS 1.11 Α 1.85 0.69 Α 1.22

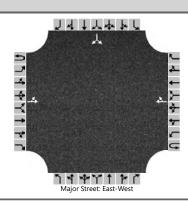
	HCS Two-Way Stop	-Control Report								
General Information		Site Information								
Analyst	NM	Intersection	SD38 & 466th Ave							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/8/2023	East/West Street	SD 38							
Analysis Year	2040	North/South Street	466th Ave							
Time Analyzed	AM Peak	Peak Hour Factor	0.92							
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25							
Project Description	SD 38									



Approach		Eastb	ound			West	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	T	R	U	L	Т	R	U	L	Т	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	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		1	650				370	4						3		0
Percent Heavy Vehicles (%)		0												50		3
Proportion Time Blocked																
Percent Grade (%)														(0	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.10												6.90		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												3.95		3.33
Delay, Queue Length, an	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)		1													3	
Capacity, c (veh/h)		1163													187	
v/c Ratio		0.00													0.02	
95% Queue Length, Q ₉₅ (veh)		0.0													0.1	
Control Delay (s/veh)		8.1	0.0												24.6	
Level of Service (LOS)		А	Α												С	
Approach Delay (s/veh)		0.0											24.6			
Approach LOS		A											С			

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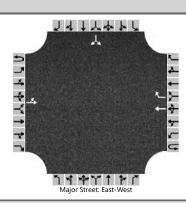
	HCS Two-Way Stop	-Control Report								
General Information		Site Information								
Analyst	NM	Intersection	SD38 & 466th Ave							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/8/2023	East/West Street	SD 38							
Analysis Year	2040	North/South Street	466th Ave							
Time Analyzed	PM Peak	Peak Hour Factor	0.92							
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25							
Project Description	SD 38									



Vehicle Volumes and Adju	ıstme	nts															
Approach		Eastb	ound			Westk	oound			North	bound			South	bound		
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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	0	0		0	1	0	
Configuration		LT						TR							LR		
Volume (veh/h)		0	380				770	1						4		1	
Percent Heavy Vehicles (%)		0												33		0	
Proportion Time Blocked																	
Percent Grade (%)														(0		
Right Turn Channelized																	
Median Type Storage				Undi	vided												
Critical and Follow-up He	adwa	ys															
Base Critical Headway (sec)		4.1												7.1		6.2	
Critical Headway (sec)		4.10												6.73		6.20	
Base Follow-Up Headway (sec)		2.2												3.5		3.3	
Follow-Up Headway (sec)		2.20												3.80		3.30	
Delay, Queue Length, and	l Leve	l of Se	ervice														
Flow Rate, v (veh/h)		0													5		
Capacity, c (veh/h)		805													185		
v/c Ratio		0.00													0.03		
95% Queue Length, Q ₉₅ (veh)		0.0													0.1		
Control Delay (s/veh)		9.5	0.0												25.0		
Level of Service (LOS)		А	А												D		
Approach Delay (s/veh)	0.0											25.0					
Approach LOS		Α												D			

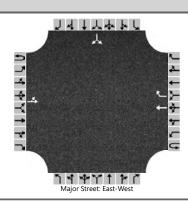
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	HCS Two-Way Stop	p-Control Report								
General Information		Site Information								
Analyst	NM	Intersection	SD 38 & I-90 WB Terminal							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/8/2023	East/West Street	SD 38							
Analysis Year	2040	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									



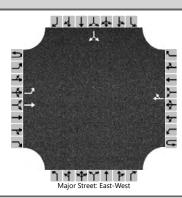
Vehicle Volumes and Adju	ıstme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	1		0	0	0		0	1	0
Configuration		LT					Т	R							LR	
Volume (veh/h)		35	615				215	15						15		165
Percent Heavy Vehicles (%)		0												56		12
Proportion Time Blocked																
Percent Grade (%)														(0	
Right Turn Channelized						Ν	lo									
Median Type Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.10												6.96		6.32
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												4.00		3.41
Delay, Queue Length, and	Leve	l of Se	ervice													
Flow Rate, v (veh/h)		38													196	
Capacity, c (veh/h)		1327													639	
v/c Ratio		0.03													0.31	
95% Queue Length, Q ₉₅ (veh)		0.1													1.3	
Control Delay (s/veh)		7.8	0.4												13.1	
Level of Service (LOS)		Α	Α												В	
Approach Delay (s/veh)	0.8											13.1				
Approach LOS		А												В		

	HCS Two-Way Stop	op-Control Report								
General Information		Site 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	2040	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									



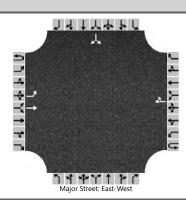
Vehicle Volumes and Adju	ıstme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	1		0	0	0		0	1	0
Configuration		LT					Т	R							LR	
Volume (veh/h)		25	355				355	30						25		415
Percent Heavy Vehicles (%)		0												6		2
Proportion Time Blocked																
Percent Grade (%)														(0	
Right Turn Channelized						Ν	lo									
Median Type Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.10												6.46		6.22
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												3.55		3.32
Delay, Queue Length, and	l Leve	l of Se	ervice													
Flow Rate, v (veh/h)		27													478	
Capacity, c (veh/h)		1151													625	
v/c Ratio		0.02													0.76	
95% Queue Length, Q ₉₅ (veh)		0.1													7.0	
Control Delay (s/veh)		8.2	0.2												27.0	
Level of Service (LOS)		Α	Α												D	
Approach Delay (s/veh)	0.8								-		27.0					
Approach LOS		А											D			

	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	5/8/2023	East/West Street	SD 38
Analysis Year	2040	North/South Street	I-90 EB Ramp Terminal
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		



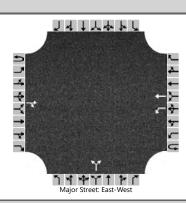
Approach		Eastb	ound			Westl	bound			North	bound			South	bound		
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	1	1	0	0	0	1	0		0	0	0		0	1	0	
Configuration		L	Т					TR							LR		
Volume (veh/h)		365	265				210	20						4		25	
Percent Heavy Vehicles (%)		1												33		3	
Proportion Time Blocked																	
Percent Grade (%)															0		
Right Turn Channelized																	
Median Type Storage				Undi	vided												
Critical and Follow-up H	eadwa	ys															
Base Critical Headway (sec)	T	4.1												7.1		6.2	
Critical Headway (sec)		4.11												6.73		6.23	
Base Follow-Up Headway (sec)		2.2												3.5		3.3	
Follow-Up Headway (sec)		2.21												3.80		3.33	
Delay, Queue Length, an	d Leve	l of Se	ervice														
Flow Rate, v (veh/h)		397													32		
Capacity, c (veh/h)		1321													416		
v/c Ratio		0.30													0.08		
95% Queue Length, Q ₉₅ (veh)		1.3													0.2		
Control Delay (s/veh)		8.9													14.4		
Level of Service (LOS)		А													В		
Approach Delay (s/veh)		5.1												14.4			
Approach LOS		A												В			

	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	5/8/2023	East/West Street	SD 38
Analysis Year	2040	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 Adju	ıstme	nts															
Approach		Eastb	ound			Westl	oound			North	bound			South	bound		
Movement	U	L	Т	R	U	L	Т	R	U	L	T	R	U	L	Т	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	0		0	0	0		0	1	0	
Configuration		L	Т					TR							LR		
Volume (veh/h)		165	225				355	25						35		35	
Percent Heavy Vehicles (%)		12												36		3	
Proportion Time Blocked																	
Percent Grade (%)														(0		
Right Turn Channelized																	
Median Type Storage				Undi	vided												
Critical and Follow-up He	adwa	ys															
Base Critical Headway (sec)		4.1												7.1		6.2	
Critical Headway (sec)		4.22												6.76		6.23	
Base Follow-Up Headway (sec)		2.2												3.5		3.3	
Follow-Up Headway (sec)		2.31												3.82		3.33	
Delay, Queue Length, and	l Leve	of Se	ervice														
Flow Rate, v (veh/h)		179													76		
Capacity, c (veh/h)		1094													299		
v/c Ratio		0.16													0.25		
95% Queue Length, Q ₉₅ (veh)		0.6													1.0		
Control Delay (s/veh)		8.9													21.1		
Level of Service (LOS)		А													С		
Approach Delay (s/veh)	3.8											21.1					
Approach LOS		А												С			

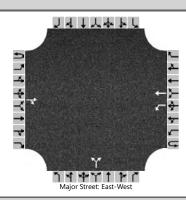
	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	NM	Intersection	SD 38 & 466th Ave (South)
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	5/8/2023	East/West Street	SD 38
Analysis Year	2040	North/South Street	466th Ave (South)
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		



Vehicle Volumes and Ad	justme	nts														
Approach		Eastb	oound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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		0	1	0		0	0	0
Configuration				TR		L	Т				LR					
Volume (veh/h)			260	15		15	200			20		15				
Percent Heavy Vehicles (%)						20				33		60				
Proportion Time Blocked																
Percent Grade (%)										()					
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.30				6.73		6.80				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.38				3.80		3.84				
Delay, Queue Length, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)						16					38					
Capacity, c (veh/h)						1166					510					
v/c Ratio						0.01					0.07					
95% Queue Length, Q ₉₅ (veh)						0.0					0.2					
Control Delay (s/veh)						8.1					12.6					
Level of Service (LOS)						А					В					
Approach Delay (s/veh)			-	-		0	.6	•		12	2.6			•	•	
Approach LOS						,	Ą				3					

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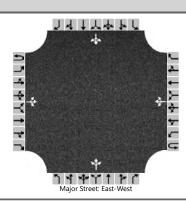
	HCS Two-Way Stop	-Control Report								
General Information		Site Information								
Analyst	NM	Intersection	SD 38 & 466th Ave (South)							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/8/2023	East/West Street	SD 38							
Analysis Year	2040	North/South Street	466th Ave (South)							
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 Ad	justme	nts														
Approach		Eastb	oound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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		0	1	0		0	0	0
Configuration				TR		L	Т				LR					
Volume (veh/h)			235	20		15	340			35		20				
Percent Heavy Vehicles (%)						11				20		0				
Proportion Time Blocked																
Percent Grade (%)										()					
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.21				6.60		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.30				3.68		3.30				
Delay, Queue Length, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)						16					60					
Capacity, c (veh/h)						1236					477					
v/c Ratio						0.01					0.13					
95% Queue Length, Q ₉₅ (veh)						0.0					0.4					
Control Delay (s/veh)						8.0					13.6					
Level of Service (LOS)						Α					В					
Approach Delay (s/veh)						0	.3			13	3.6					
Approach LOS						1	4				В					

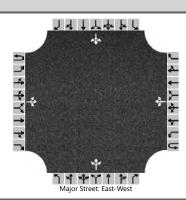
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	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	NM	Intersection	SD 38 & 468th Avenue
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	5/8/2023	East/West Street	SD 38
Analysis Year	2040	North/South Street	468th Ave / 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		



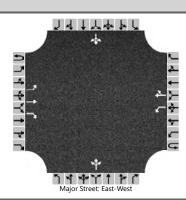
Vehicle Volumes and Adj	ustme	nts														
Approach		Eastb	oound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		3	300	0		0	190	40		1	1	0		40	0	6
Percent Heavy Vehicles (%)		0				0				0	100	0		4	0	50
Proportion Time Blocked																
Percent Grade (%)										()				0	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
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, an	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)		3				0					2				50	
Capacity, c (veh/h)		1327				1245					371				455	
v/c Ratio		0.00				0.00					0.01				0.11	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.0				0.4	
Control Delay (s/veh)		7.7	0.0	0.0		7.9	0.0	0.0			14.8				13.9	
Level of Service (LOS)		А	А	Α		Α	Α	А			В				В	
Approach Delay (s/veh)		0	.1	-		0	.0	•		14	1.8			13	3.9	-
Approach LOS		,	A			,	4				В		Ì		В	

	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	NM	Intersection	SD 38 & 468th Avenue
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	5/8/2023	East/West Street	SD 38
Analysis Year	2040	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		



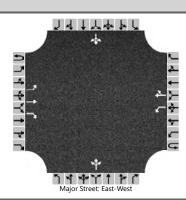
Vehicle Volumes and Adju	ıstme	nts														
Approach		Eastb	ound			Westk	ound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	260	1		4	350	45		1	1	0		45	3	3
Percent Heavy Vehicles (%)		0				0				0	0	0		4	100	50
Proportion Time Blocked																
Percent Grade (%)										()			(0	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
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	l Leve	l of Se	ervice													
Flow Rate, v (veh/h)		0				4					2				55	
Capacity, c (veh/h)		1141				1290					358				351	
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)		8.2	0.0	0.0		7.8	0.0	0.0			15.1				17.2	
Level of Service (LOS)		Α	Α	Α		Α	Α	Α			С				С	
Approach Delay (s/veh)	0.0 0.1						15.1				17.2					
Approach LOS		A A							ССС							

	HCS Two-Way Stop-Control Report										
General Information		Site Information									
Analyst	NM	Intersection	SD 38 & 469th Ave								
Agency/Co.	HRG	Jurisdiction	SDDOT								
Date Performed	5/8/2023	East/West Street	SD 38								
Analysis Year	2040	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										



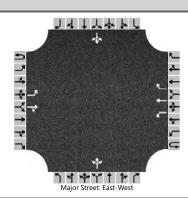
Vehicle Volumes and Adju	ıstme	nts															
Approach		Eastb	ound			Westk	oound		Northbound					South	bound		
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	1	1	1	0	1	1	0		0	1	0		0	1	0	
Configuration		L	Т	R		L		TR			LTR				LTR		
Volume (veh/h)		5	275	60		65	140	5		90	5	230		15	5	5	
Percent Heavy Vehicles (%)		3				5				13	3	3		3	3	3	
Proportion Time Blocked																	
Percent Grade (%)										()		0				
Right Turn Channelized		Ν	lo														
Median Type Storage				Undi	vided												
Critical and Follow-up He	adwa	ys															
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				4.15				7.23	6.53	6.23		7.13	6.53	6.23	
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				3.62	4.03	3.33		3.53	4.03	3.33	
Delay, Queue Length, and	Leve	of Se	ervice														
Flow Rate, v (veh/h)		5				71					353				27		
Capacity, c (veh/h)		1416				1178					566				311		
v/c Ratio		0.00				0.06					0.62				0.09		
95% Queue Length, Q ₉₅ (veh)		0.0				0.2					4.3				0.3		
Control Delay (s/veh)		7.6				8.3					21.3				17.7		
Level of Service (LOS)		Α				Α					С				С		
Approach Delay (s/veh)	0.1			2.6			21.3			17.7							
Approach LOS	А			А			С			С							

	HCS Two-Way Stop-Control Report										
General Information		Site Information									
Analyst	NM	Intersection	SD 38 & 469th Ave								
Agency/Co.	HRG	Jurisdiction	SDDOT								
Date Performed	5/8/2023	East/West Street	SD 38								
Analysis Year	2040	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										



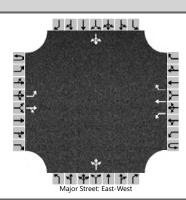
Vehicle Volumes and Adju	ıstme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	1	0	1	1	0		0	1	0		0	1	0
Configuration		L	Т	R		L		TR			LTR				LTR	
Volume (veh/h)		5	210	100		235	320	5		80	5	100		20	5	10
Percent Heavy Vehicles (%)		3				5				2	3	15		3	3	3
Proportion Time Blocked																
Percent Grade (%)										()			()	
Right Turn Channelized		Ν	lo													
Median Type Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
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				4.15				7.12	6.53	6.35		7.13	6.53	6.23
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	3.44		3.53	4.03	3.33
Delay, Queue Length, and	l Leve	l of Se	ervice													
Flow Rate, v (veh/h)		5				255					201				38	
Capacity, c (veh/h)		1200				1206					256				166	
v/c Ratio		0.00				0.21					0.79				0.23	
95% Queue Length, Q ₉₅ (veh)		0.0				0.8					5.9				0.8	
Control Delay (s/veh)		8.0				8.8					56.2				33.1	
Level of Service (LOS)		А				А					F				D	
Approach Delay (s/veh)	0.1			3.7			56.2			33.1						
Approach LOS	А					А			F				D			

	HCS Two-Way Stop-Control Report										
General Information											
Analyst	NM	Intersection	SD 38 & La Mesa								
Agency/Co.	HRG	Jurisdiction	SDDOT								
Date Performed	5/8/2023	East/West Street	SD 38								
Analysis Year	2040	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										



Vehicle Volumes and Adju	ustme	nts														
Approach		Eastb	ound			Westk	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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		0	1	0
Configuration		L		TR		L	Т	R			LTR				LTR	
Volume (veh/h)		25	585	3		0	195	15		0	10	4		65	3	25
Percent Heavy Vehicles (%)		0				0				0	13	0		0	50	0
Proportion Time Blocked																
Percent Grade (%)										()		0			
Right Turn Channelized						Ν	lo									
Median Type Storage				Undi	vided											
Critical and Follow-up He	ys															
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	6.63	6.20		7.10	7.00	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	4.12	3.30		3.50	4.45	3.30
Delay, Queue Length, and	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)		27				0					15				101	
Capacity, c (veh/h)		1352				955					294				297	
v/c Ratio		0.02				0.00					0.05				0.34	
95% Queue Length, Q ₉₅ (veh)		0.1				0.0					0.2				1.5	
Control Delay (s/veh)		7.7				8.8					17.9				23.3	
Level of Service (LOS)		А				А					С				С	
Approach Delay (s/veh)	0.3			0.0			17.9			23.3						
Approach LOS	А				А			С			С					

	HCS Two-Way Stop-Control Report										
General Information		Site Information									
Analyst	NM	Intersection	SD 38 & La Mesa								
Agency/Co.	HRG	Jurisdiction	SDDOT								
Date Performed	5/8/2023	East/West Street	SD 38								
Analysis Year	2040	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										



Vehicle Volumes and Adju	ıstme	nts														
Approach		Eastb	ound			Westl	oound			North	bound		Southbound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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		0	1	0
Configuration		L		TR		L	Т	R			LTR				LTR	
Volume (veh/h)		20	275	0		7	610	85		3	4	0		65	10	25
Percent Heavy Vehicles (%)		0				0				0	0	0		9	0	0
Proportion Time Blocked																
Percent Grade (%)										()			()	
Right Turn Channelized						Ν	lo									
Median Type Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
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		7.19	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	3.30		3.58	4.00	3.30
Delay, Queue Length, and	Leve	l of Se	ervice													
Flow Rate, v (veh/h)		22				8					8				109	
Capacity, c (veh/h)		864				1274					196				234	
v/c Ratio		0.03				0.01					0.04				0.46	
95% Queue Length, Q ₉₅ (veh)		0.1				0.0					0.1				2.3	
Control Delay (s/veh)		9.3				7.8					24.1				33.0	
Level of Service (LOS)		Α				Α					С				D	
Approach Delay (s/veh)	0.6			0.1			24.1			33.0						
Approach LOS	А					А			С			D				

Generated: 5/8/2023 8:51:20 AM

HCS Signalized Intersection Results Summary Intersection Information **General Information** HRG Duration, h 0.250 Agency Analyst NM Analysis Date May 8, 2023 Area Type Other PHF Jurisdiction SDDOT Time Period AM Peak 0.92 **Urban Street** SD 38 Analysis Year 2040 **Analysis Period** 1> 7:15 SD 38 & Marion Street File Name (18) SD38&Marion AM.xus Intersection **Project Description** WB **Demand Information** EB NB SB Approach Movement L R L R L R R 40 60 100 Demand (v), veh/h 135 285 85 105 90 190 40 120 35 **Signal Information** Cycle, s 50.0 Reference Phase 2 Offset, s 0 Reference Point End Green 2.3 3.2 14.9 2.3 1.4 10.0 Uncoordinated No Simult. Gap E/W On Yellow 4.0 0.0 4.0 4.0 0.0 4.0 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** 5 2 6 3 8 1 7 4 Case Number 2.0 3.0 1.1 4.0 2.0 3.0 2.0 3.0 Phase Duration, s 9.4 22.0 6.3 18.9 7.7 15.4 6.3 14.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 Change Period, (Y+Rc), s 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 6.2 2.9 4.9 7.4 3.4 5.2 Green Extension Time (g_e), s 0.0 0.0 0.0 0.0 0.0 0.5 0.0 0.5 Phase Call Probability 0.87 0.45 0.74 1.00 0.45 1.00 1.00 0.10 1.00 0.06 Max Out Probability 0.01 1.00 **Movement Group Results** EΒ **WB** NB SB Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 5 2 12 1 16 3 8 18 7 4 14 6 Adjusted Flow Rate (v), veh/h 147 310 92 43 92 88 98 207 109 43 130 38 1701 1674 1525 1714 1563 1647 1674 1502 1554 1758 1466 Adjusted Saturation Flow Rate (s), veh/h/ln 1772 4.2 3.3 2.1 0.9 2.1 2.9 5.4 3.0 1.4 3.2 1.1 Queue Service Time (g_s), s 1.9 4.2 Cycle Queue Clearance Time (q c), s 3.3 2.1 0.9 1.9 2.1 2.9 5.4 3.0 1.4 3.2 1.1 0.11 0.30 0.23 0.23 0.20 Green Ratio (g/C) 0.36 0.36 0.34 0.30 0.07 0.05 0.20 Capacity (c), veh/h 185 1207 550 499 526 464 122 383 344 70 351 293 Volume-to-Capacity Ratio (X) 0.794 0.257 0.168 0.087 0.174 0.189 0.799 0.539 0.316 0.617 0.371 0.130 Back of Queue (Q), ft/ln (95 th percentile) Back of Queue (Q), veh/ln (95 th percentile) 2.8 1.6 1.0 0.4 1.2 1.2 2.2 2.9 1.4 0.9 1.8 0.5 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 21.7 11.3 10.9 11.1 13.0 13.1 22.8 17.0 16.0 23.4 17.3 16.4 Incremental Delay (d 2), s/veh 4.2 0.5 0.7 0.0 0.7 0.9 8.2 0.4 0.2 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 0.0 0.0 Control Delay (d), s/veh 25.9 11.8 11.5 11.2 13.7 14.0 31.0 17.4 16.2 26.7 17.5 16.5 Level of Service (LOS) С В В В В В С В В С В В 15.5 В 13.3 В 20.3 С 19.2 Approach Delay, s/veh / LOS В Intersection Delay, s/veh / LOS 17.2 В **Multimodal Results** ΕB WB NB Pedestrian LOS Score / LOS 2.08 В 2.09 В 2.27 2.42 В В Bicycle LOS Score / LOS 0.94 Α 0.67 Α 1.17 Α 0.84 Α

HCS Signalized Intersection Results Summary 144444 Intersection Information **General Information** HRG Duration, h 0.250 Agency Analyst NM Analysis Date May 8, 2023 Area Type Other PHF Jurisdiction SDDOT Time Period PM Peak 0.90 **Urban Street** SD 38 Analysis Year 2040 **Analysis Period** 1> 16:45 SD 38 & Marion Street File Name (18) SD38&Marion PM.xus Intersection **Project Description** WB **Demand Information** EB NB SB Approach Movement L R L R L R R 140 300 45 Demand (v), veh/h 55 190 90 150 170 105 70 295 170 **Signal Information** J. Cycle, s 50.0 Reference Phase 2 Offset, s 0 Reference Point End Green 2.9 2.2 2.7 12.0 3.3 10.9 Uncoordinated No Simult. Gap E/W On Yellow 4.0 0.0 4.0 4.0 0.0 4.0 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** 5 2 6 3 8 1 7 4 Case Number 2.0 3.0 2.0 3.0 2.0 3.0 2.0 3.0 Phase Duration, s 16.0 9.6 18.7 9.5 17.1 7.3 14.9 6.9 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 Change Period, (Y+Rc), s 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 4.0 6.5 6.8 6.4 4.3 10.9 Green Extension Time (g_e), s 0.0 0.0 0.0 0.0 0.0 1.0 0.0 0.0 Phase Call Probability 0.57 0.88 0.90 1.00 0.66 1.00 1.00 0.18 1.00 1.00 Max Out Probability 1.00 1.00 **Movement Group Results** EΒ WB NB SB Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 5 2 12 1 6 16 3 8 18 7 4 14 Adjusted Flow Rate (v), veh/h 61 211 100 156 333 50 167 189 117 78 328 189 Adjusted Saturation Flow Rate (s), veh/h/ln 1474 1660 1490 1688 1772 1714 1772 1478 1688 1772 1478 1406 2.0 2.6 2.7 4.5 8.2 4.8 4.4 3.2 2.3 8.9 5.7 Queue Service Time (g_s), s 1.3 Cycle Queue Clearance Time (q c), s 2.0 2.6 2.7 4.5 8.2 1.3 4.8 4.4 3.2 2.3 8.9 5.7 0.24 0.29 0.29 0.26 0.26 0.22 Green Ratio (g/C) 0.06 0.24 0.11 0.11 0.07 0.22 464 Capacity (c), veh/h 84 797 358 189 522 414 189 387 111 387 322 Volume-to-Capacity Ratio (X) 0.725 0.265 0.280 0.824 0.638 0.121 0.884 0.407 0.301 0.698 0.848 0.586 Back of Queue (Q), ft/ln (95 th percentile) Back of Queue (Q), veh/ln (95 th percentile) 1.2 1.5 1.6 4.8 5.8 0.7 6.0 2.4 1.4 1.5 7.8 3.0 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 23.2 15.4 15.5 21.7 15.3 12.9 21.9 15.2 14.8 22.9 18.8 17.5 Incremental Delay (d 2), s/veh 4.4 8.0 1.9 23.3 5.9 0.6 34.4 0.2 0.2 2.9 15.1 1.8 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 27.5 16.2 17.4 45.0 21.2 13.5 56.4 15.5 14.9 25.8 33.8 19.3 Level of Service (LOS) С В В D С В Е В В С С В 18.4 В 27.4 С 29.8 С 28.2 С Approach Delay, s/veh / LOS Intersection Delay, s/veh / LOS 26.5 С **Multimodal Results** ΕB WB NB Pedestrian LOS Score / LOS 2.10 В 2.09 В 2.26 2.27 В В Bicycle LOS Score / LOS 0.79 Α 1.38 Α 1.27 Α 1.47

Project Information			HCS Two-L	ane	Highway Re	port		
Agen	Project Information							
DITATED Lange L	Analyst		MJV		Date		5/11/2023	
Project Description BB SD38 Corridor Study Units	Agency		HRG		Analysis Year		2040 NB	
Segment 1 Segment 1	Jurisdiction		SDDOT		Time Analyzed		AM PEAK	
Vehicle Inputs Segment Type Passing Zone Length, ft 1084 Measured FFS Measured Free-Flow Speed, mi/h 55.0 Demand and Capacity Directional Demand Flow Rate, veh/h 480 Opposing Demand Flow Rate, veh/h 289 Peak Hour Factor 0.88 Total Trucks, % 2.16 Segment Capacity, veh/h 1700 Demand/Capacity (D/C) 0.28 Intermediate Results Segment Vertical Class 1 Free-Flow Speed, mi/h 55.0 Speed Slope Coefficient (m) 4.34836 Speed Power Coefficient (p) 0.51760 PF Slope Coefficient (m) -1.34657 PF Power Coefficient (p) 0.76322 In Passing Lane Effective Length? No Total Segment Density, veh/mi/ln 4.9 Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 1 Tangent 1084 - - 52.4 Vehicle Results Average Speed, mi/h	Project Description		EB SD38 Corridor Stu	ıdy	Units		U.S. Customary	
Passing Zone Length, ft 1084				Segn	nent 1			
Neasured FFS Measured Free-Flow Speed, mi/h 55.0	Vehicle Inputs							
Demand and Capacity	Segment Type		Passing Zone		Length, ft		1084	
Directional Demand Flow Rate, veh/h 480 Copposing Demand Flow Rate, veh/h 289	Measured FFS					mi/h	55.0	
Peak Hour Factor 0.88	Demand and Capaci	ty						
Note	Directional Demand Flow Ra	te, veh/h	480		Opposing Deman	d Flow Rate, veh/h	289	
Net	Peak Hour Factor		0.88		Total Trucks, %		2.16	
Segment Vertical Class 1 Free-Flow Speed, mi/h 55.0 Speed Slope Coefficient (m) 4.34836 Speed Power Coefficient (p) 0.51760 PF Slope Coefficient (m) -1.34657 PF Power Coefficient (p) 0.76322 In Passing Lane Effective Length? No Total Segment Density, veh/mi/ln 4.9 Subseqment Density veh/mi/ln 4.9 Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 1 langent 1084 - 52.4 Segment Type 52.4 Segment Type 53.6 Segment Type 52.4 Percent Followers \$53.6 Segment Type 53.6 Segment Type 53.6 Segment Type 4.9 Segment Type 53.6 Segment Type Segment Type 53.6 Segment Type Segment	Segment Capacity, veh/h		1700		Demand/Capacity	, (D/C)	0.28	
Speed Slope Coefficient (m) 4.34836 Speed Power Coefficient (p) 0.51760 PF Slope Coefficient (m) -1.34657 PF Power Coefficient (p) 0.76322 In Passing Lane Effective Length? No Total Segment Density, veh/mi/In 4.9 %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 1084 - 52.4 Vehicle Results Average Speed, mi/h 52.4 Percent Followers, % 53.6 Segment Travel Time, minutes 0.24 Follower Density (FD), followers/mi/In 4.9 Vehicle Results Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 480 Bicycle Effective Width, ft 24 Bicycle LOS Score 2.84 Bicycle Effective Speed Factor 4.62 Bicycle LOS Segment 2	Intermediate Results	5						
Speed Slope Coefficient (m) 4.34836 Speed Power Coefficient (p) 0.51760	Segment Vertical Class		1		Free-Flow Speed,	mi/h	55.0	
In Passing Lane Effective Length? No Total Segment Density, veh/mi/ln 4.9 %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 1084 - 52.4 Vehicle Results Average Speed, mi/h 52.4 Percent Followers, % 53.6 Segment Travel Time, minutes 0.24 Follower Density (FD), followers/mi/ln 4.9 Vehicle LOS C Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 480 Bicycle Effective Width, ft 24 Bicycle LOS Score 2.84 Bicycle Effective Vidth, ft 24 Bicycle LOS Score 2.84 Bicycle Effective Speed Factor 4.62 Segment 2 Vehicle Inputs	-				Speed Power Coe	fficient (p)	0.51760	
Subsegment Data # Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 1 Tangent 1084 52.4 Vehicle Results Average Speed, mi/h 52.4 Percent Followers, % 53.6 Segment Travel Time, minutes 0.24 Follower Density (FD), followers/mi/ln 4.9 Vehicle LOS C Pavement Condition Rating 4 Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 480 Bicycle Effective Width, ft 24 Bicycle LOS Score 2.84 Bicycle Effective Speed Factor 4.62 Bicycle LOS C Segment 2 Vehicle Inputs	PF Slope Coefficient (m)				PF Power Coefficie	ent (p)	0.76322	
Subsegment Data # Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 1 Tangent 1084 - 52.4 Vehicle Results Average Speed, mi/h 52.4 Percent Followers, % 53.6 Segment Travel Time, minutes 0.24 Follower Density (FD), followers/mi/ln 4.9 Vehicle LOS C Follower Density (FD), followers/mi/ln 4.9 Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 480 Bicycle Effective Width, ft 24 Bicycle LOS Score 2.84 Bicycle Effective Speed Factor 4.62 Bicycle LOS Score 2.84 Bicycle Effective Speed Factor 4.62 Segment 2 Vehicle Inputs	In Passing Lane Effective Len	gth?	No		Total Segment De	nsity, veh/mi/ln	4.9	
# Segment Type	%Improvement to Percent Fo	ollowers	0.0		%Improvement to	Speed	0.0	
Tangent 1084 - 52.4 Vehicle Results Average Speed, mi/h 52.4 Percent Followers, % 53.6 Segment Travel Time, minutes 0.24 Follower Density (FD), followers/mi/ln 4.9 Vehicle LOS C Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 480 Bicycle Effective Width, ft 24 Bicycle LOS Score 2.84 Bicycle Effective Speed Factor 4.62 Segment 2 Vehicle Inputs	Subsegment Data							
Vehicle Results Average Speed, mi/h 52.4 Percent Followers, % 53.6 Segment Travel Time, minutes 0.24 Follower Density (FD), followers/mi/ln 4.9 Vehicle LOS C Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 480 Bicycle Effective Width, ft 24 Bicycle LOS Score 2.84 Bicycle Effective Speed Factor 4.62 Segment 2 Vehicle Inputs	# Segment Type		Length, ft	Rac	lius, ft	Superelevation, %	Average Speed, mi/h	
Average Speed, mi/h 52.4 Percent Followers, % 53.6 Segment Travel Time, minutes 0.24 Follower Density (FD), followers/mi/ln 4.9 Vehicle LOS C Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 480 Bicycle Effective Width, ft 24 Bicycle LOS Score 2.84 Bicycle Effective Speed Factor 4.62 Bicycle LOS Segment 2 Vehicle Inputs	1 Tangent		1084	-		-	52.4	
Segment Travel Time, minutes 0.24 Follower Density (FD), followers/mi/In 4.9 Vehicle LOS C Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 480 Bicycle Effective Width, ft 24 Bicycle LOS Score 2.84 Bicycle Effective Speed Factor 4.62 Segment 2 Vehicle Inputs	Vehicle Results							
Vehicle LOS Bicycle Results Percent Occupied Parking Percent Occupied Parking Flow Rate Outside Lane, veh/h Bicycle LOS Score 2.84 Bicycle Effective Speed Factor 4.62 Segment 2 Vehicle Inputs	Average Speed, mi/h		52.4		Percent Followers,	, %	53.6	
Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 480 Bicycle Effective Width, ft 24 Bicycle LOS Score 2.84 Bicycle Effective Speed Factor 4.62 Bicycle LOS C Segment 2 Vehicle Inputs	Segment Travel Time, minute	es .	0.24		Follower Density ((FD), followers/mi/ln	4.9	
Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 480 Bicycle Effective Width, ft 24 Bicycle LOS Score 2.84 Bicycle Effective Speed Factor 4.62 Bicycle LOS C Segment 2 Vehicle Inputs	Vehicle LOS		С					
Flow Rate Outside Lane, veh/h Bicycle LOS Score 2.84 Bicycle Effective Width, ft 4.62 Bicycle LOS C Segment 2 Vehicle Inputs	Bicycle Results							
Bicycle LOS Score 2.84 Bicycle Effective Speed Factor 4.62 Bicycle LOS C Segment 2 Vehicle Inputs	Percent Occupied Parking		0		Pavement Conditi	on Rating	4	
Bicycle LOS C Segment 2 Vehicle Inputs		/h	480				24	
Segment 2 Vehicle Inputs	Bicycle LOS Score 2.84				Bicycle Effective S	peed Factor	4.62	
Vehicle Inputs	Bicycle LOS		С					
Vehicle Inputs				Segn	nent 2			
•	Vehicle Inputs							
Segment Type Passing Constrained Length, ft 507	Segment Type Passing Constrained				Length, ft		507	
Measured FFS Measured Free-Flow Speed, mi/h 55.0		-						

Demand and Capacity								
	400		Onnosia a Davi	d Flour Data and the				
Directional Demand Flow Rate, veh/h	480			d Flow Rate, veh/h	-			
Peak Hour Factor	0.88		Total Trucks, %	· (D (C)	2.16			
Segment Capacity, veh/h	1700		Demand/Capacity (D/C) 0.28					
Intermediate Results								
Segment Vertical Class	1		Free-Flow Speed,	mi/h	55.0			
Speed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674			
PF Slope Coefficient (m)	-1.43973		PF Power Coefficie	ent (p)	0.72475			
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	5.3			
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0			
Subsegment Data								
# Segment Type	Length, ft	Radi	ius, ft	Superelevation, %	Average Speed, mi/h			
1 Tangent	507	-		-	51.9			
Vehicle Results								
Average Speed, mi/h	51.9		Percent Followers	, %	57.1			
Segment Travel Time, minutes	0.11		Follower Density ((FD), followers/mi/ln	5.3			
Vehicle LOS C								
Bicycle Results								
Percent Occupied Parking	0		Pavement Conditi	on Rating	4			
Flow Rate Outside Lane, veh/h	480		Bicycle Effective V	Vidth, ft	24			
Bicycle LOS Score	2.84		Bicycle Effective S	peed Factor	4.62			
Bicycle LOS	С							
	S	Segm	nent 3					
Vehicle Inputs								
Segment Type	Passing Zone		Length, ft		535			
Measured FFS	Measured		Free-Flow Speed,	mi/h	55.0			
Demand and Capacity								
Directional Demand Flow Rate, veh/h	480		Opposing Deman	d Flow Rate, veh/h	289			
Peak Hour Factor	0.88		Total Trucks, %		2.16			
Segment Capacity, veh/h	1700		Demand/Capacity	' (D/C)	0.28			
Intermediate Results								
Segment Vertical Class	1		Free-Flow Speed,	mi/h	55.0			
Speed Slope Coefficient (m)	4.34836		Speed Power Coe	fficient (p)	0.51760			
PF Slope Coefficient (m)	-1.34657		PF Power Coefficie	ent (p)	0.76322			
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	4.9			
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0			
Subsegment Data								
•								

#	Segment Type	Length, ft	Ra	dius, ft Superelevation, %		Average Speed, mi/h
1	Tangent	535	-		-	52.4
Vel	nicle Results					
Aver	rage Speed, mi/h	52.4		Percent Followers	, %	53.6
Segr	ment Travel Time, minutes	0.12		Follower Density ((FD), followers/mi/ln	4.9
Vehi	cle LOS	С				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h 480			Bicycle Effective V	Vidth, ft	24	
Bicy	cle LOS Score	2.84		Bicycle Effective S	peed Factor	4.62
Bicy	cle LOS	С				
			Segr	ment 4		
Vel	nicle Inputs					
Segr	ment Type	Passing Zone		Length, ft		1494
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity	•				
Dire	ctional Demand Flow Rate, veh/h	609		Opposing Deman	d Flow Rate, veh/h	323
Peak	Hour Factor	0.88		Total Trucks, %		1.63
Segr	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.36
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.36176		Speed Power Coe	fficient (p)	0.51063
PF S	lope Coefficient (m)	-1.25164		PF Power Coefficie	ent (p)	0.80237
In Pa	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	5.2
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1494	-		-	66.9
Vel	nicle Results					
Aver	rage Speed, mi/h	66.9		Percent Followers	, %	56.9
Segr	ment Travel Time, minutes	0.25		Follower Density ((FD), followers/mi/ln	5.2
Vehicle LOS C						
Bicycle Results						
Percent Occupied Parking 0			Pavement Conditi	4		
Flow Rate Outside Lane, veh/h 609			Bicycle Effective V	24		
Bicycle LOS Score 2.96		Bicycle Effective S	5.07			
Bicycle LOS C						

		S	egr	ment 5		
Ve	hicle Inputs					
Seg	ment Type	Passing Constrained		Length, ft		5762
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	609		Opposing Deman	d Flow Rate, veh/h	-
Pea	k Hour Factor	0.88		Total Trucks, %		1.63
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.36
Int	ermediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.62977		Speed Power Coe	fficient (p)	0.41674
PF S	Slope Coefficient (m)	-1.20069		PF Power Coefficie	ent (p)	0.78591
In P	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	5.1
%In	nprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Rad	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5762	1-		-	66.5
Ve	hicle Results					
Ave	rage Speed, mi/h	66.5		Percent Followers,	. %	55.7
Seg	ment Travel Time, minutes	0.98		Follower Density (FD), followers/mi/ln	5.1
Veh	icle LOS	С				
Bio	cycle Results					·
Per	cent Occupied Parking	0		Pavement Condition	on Rating	4
Flov	v Rate Outside Lane, veh/h	609		Bicycle Effective W	/idth, ft	24
Bicy	rcle LOS Score	2.96		Bicycle Effective S	peed Factor	5.07
Bicy	rcle LOS	С				
		S	egr	ment 6		
Ve	hicle Inputs					
Seg	ment Type	Passing Constrained		Length, ft		383
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity						
Dire	ectional Demand Flow Rate, veh/h	614		Opposing Deman	d Flow Rate, veh/h	-
Pea	k Hour Factor	0.88		Total Trucks, %		1.89
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.36
Int	ermediate Results					
Seg	Segment Vertical Class 1			Free-Flow Speed,	70.0	
segment vertical class				1 ' '		

Speed Slope Coefficient (m)	4.57372	4.57372		fficient (p)	0.41674
PF Slope Coefficient (m)	-1.29361	-1.29361		ent (p)	0.75772
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	5.4
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	383	-		-	66.5
Vehicle Results					
Average Speed, mi/h	66.5		Percent Followers,	. %	59.1
Segment Travel Time, minutes	0.07		Follower Density (FD), followers/mi/ln	5.4
Vehicle LOS	С				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	614		Bicycle Effective W	/idth, ft	24
Bicycle LOS Score	3.03		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	С				
		Segn	nent 7		
Vehicle Inputs					
Segment Type	Passing Constrain	ed	Length, ft		1485
Measured FFS	Measured		Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	642		Opposing Deman	d Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %		3.19
Segment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.38
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)	4.57684		Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)	-1.28453		PF Power Coefficie	ent (p)	0.76145
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	5.8
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1485	-		-	66.5
Vehicle Results					
Average Speed, mi/h	66.5		Percent Followers,	%	60.0
Segment Travel Time, minutes	0.25			FD), followers/mi/ln	5.8
Vehicle LOS C			, ,	·	1

2	Pavement Conditi	on Rating	1
			4
	Bicycle Effective V	/idth, ft	24
39	Bicycle Effective S	peed Factor	5.07
Seg	gment 8		
ssing Constrained	Length, ft		426
easured	Free-Flow Speed,	mi/h	70.0
 16	Opposing Deman	d Flow Rate, veh/h	-
38	Total Trucks, %		6.47
00	Demand/Capacity	(D/C)	0.18
	Free-Flow Speed,	mi/h	70.0
57372	Speed Power Coe	fficient (p)	0.41674
.29307	PF Power Coefficie	ent (p)	0.75839
)	Total Segment De	nsity, veh/mi/ln	1.8
)	%Improvement to	Speed	0.0
ngth, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
6		-	67.6
		-	
7.6	Percent Followers	. %	40.9
)7	Follower Density (FD), followers/mi/ln	1.8
	Pavement Conditi	on Rating	4
16	Bicycle Effective V	/idth, ft	24
06	Bicycle Effective S	peed Factor	5.07
Seg	gment 9		
ssing Constrained	Length, ft		1212
easured	Free-Flow Speed,	mi/h	70.0
n 6	easured 6 8 00 7372 29307 6 6 7 Security Constrained	Pree-Flow Speed, Opposing Demand Total Trucks, % Demand/Capacity Free-Flow Speed, Free-Flow Speed, Speed Power Coefficie Total Segment De %Improvement to speed Power Coefficie Total Segment De %Improvement to Segment Speed Percent Followers, Follower Density (Pavement Condities Bicycle Effective W Bicycle Effective Segment 9	Free-Flow Speed, mi/h Opposing Demand Flow Rate, veh/h Total Trucks, % Demand/Capacity (D/C) Free-Flow Speed, mi/h Speed Power Coefficient (p) Total Segment Density, veh/mi/ln %Improvement to Speed Angth, ft Radius, ft Superelevation, % Follower Density (FD), followers/mi/ln Pavement Condition Rating Bicycle Effective Width, ft Bicycle Effective Speed Factor Segment 9 Seising Constrained Length, ft

Dire	ctional Demand Flow Rate, veh/h	291		Opposing Demand	d Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %		5.26
Segi	nent Capacity, veh/h	/h 1700		Demand/Capacity	(D/C)	0.17
Int	ermediate Results					
Segi	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.57372		Speed Power Coef	fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.29321		PF Power Coefficie	ent (p)	0.75821
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.7
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	segment Data					
#	Segment Type	Length, ft	R	ladius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1212	-		-	67.7
Vel	nicle Results					
Aver	age Speed, mi/h	67.7		Percent Followers,	%	39.8
Segi	nent Travel Time, minutes	0.20		Follower Density (FD), followers/mi/ln	1.7
Vehi	cle LOS	А				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Condition	on Rating	4
Flow	Rate Outside Lane, veh/h	291		Bicycle Effective W	/idth, ft	24
Bicy	cle LOS Score	3.62		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	D				
			Seg	ment 10		
Vel	nicle Inputs					
Segi	ment Type	Passing Zone		Length, ft		1877
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	291		Opposing Demand	d Flow Rate, veh/h	207
Peak	Hour Factor	0.88		Total Trucks, %		5.26
Segi	nent Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.17
Int	ermediate Results					
Segi	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.33123		Speed Power Coef	fficient (p)	0.53735
PF S	ope Coefficient (m)	-1.21436		PF Power Coefficie	ent (p)	0.81762
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.5
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	segment Data					
#	Segment Type	Length, ft	R	ladius, ft	Superelevation, %	Average Speed, mi/h
_						

1 Tangent	1877	-		-	68.2
Vehicle Results					
Average Speed, mi/h	68.2		Percent Followers	s, %	35.8
Segment Travel Time, minutes	0.31	0.31		(FD), followers/mi/ln	1.5
Vehicle LOS	А				
Bicycle Results	<u>'</u>				
Percent Occupied Parking	0		Pavement Condit	tion Rating	4
Flow Rate Outside Lane, veh/h	291		Bicycle Effective	Width, ft	24
Bicycle LOS Score	3.62		Bicycle Effective S	Speed Factor	5.07
Bicycle LOS	D				
		Seg	ment 11		
Vehicle Inputs					
Segment Type	Passing Constrain	ed	Length, ft		1872
Measured FFS	Measured		Free-Flow Speed	, mi/h	70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	291		Opposing Demai	nd Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %		5.26
Segment Capacity, veh/h	1700		Demand/Capacit	y (D/C)	0.17
Intermediate Results	<u>'</u>				
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 Coeffic	ient (p)	0.76864
In Passing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		1.7
%Improvement to Percent Followers	0.0		%Improvement t	o Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	R	Radius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1872	-		-	67.7
Vehicle Results					
Average Speed, mi/h	67.7		Percent Followers	s, %	38.8
Segment Travel Time, minutes	0.31		Follower Density	(FD), followers/mi/ln	1.7
Vehicle LOS A					
Bicycle Results			<u>'</u>		
Percent Occupied Parking 0		Pavement Condit	tion Rating	4	
Flow Rate Outside Lane, veh/h	291		Bicycle Effective	Width, ft	24
Bicycle LOS Score	3.62		Bicycle Effective S	Speed Factor	5.07
Bicycle LOS	D				
		Seg	ment 12		

Ve	ehicle Inputs					
Se	gment Type	Passing Zone		Length, ft		3603
Me	Measured FFS Measured		Free-Flow Speed,	mi/h	70.0	
D	emand and Capacity					
Dir	rectional Demand Flow Rate, veh/h	291		Opposing Deman	d Flow Rate, veh/h	207
Pe	ak Hour Factor	0.88		Total Trucks, %		5.26
Se	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.17
In	termediate Results					
Se	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Sp	eed Slope Coefficient (m)	4.35488		Speed Power Coe	fficient (p)	0.53735
PF	Slope Coefficient (m)	-1.17100		PF Power Coefficie	ent (p)	0.83467
ln	Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.5
%I	mprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sı	ubsegment Data					
#	Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3603	-		-	68.2
Ve	ehicle Results					·
Av	verage Speed, mi/h	68.2		Percent Followers,	. %	34.2
Se	gment Travel Time, minutes	0.60		Follower Density (FD), followers/mi/ln	1.5
Ve	hicle LOS	А				
Bi	icycle Results					
Pe	rcent Occupied Parking	0	0		on Rating	4
Flo	ow Rate Outside Lane, veh/h	291		Bicycle Effective Width, ft		24
Bic	cycle LOS Score	3.62		Bicycle Effective Speed Factor		5.07
Bic	cycle LOS	D	D			
		S	egm	ent 13		
Ve	ehicle Inputs					
Se	gment Type	Passing Constrained		Length, ft		1053
Ме	easured FFS	Measured		Free-Flow Speed,	mi/h	70.0
D	emand and Capacity					
Directional Demand Flow Rate, veh/h 291		Opposing Deman	d Flow Rate, veh/h	-		
Peak Hour Factor 0.88		Total Trucks, %		5.26		
Se	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.17
ln	termediate Results					
Se	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Sp	eed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF	Slope Coefficient (m)	-1.29321		PF Power Coefficie	ent (p)	0.75821

g		No	No		ensity, veh/mi/ln	1.7
		0.0		%Improvement to	o Speed	0.0
Suk	osegment Data					
#	Segment Type	Length, ft Rad		adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1053	-		-	67.7
Vel	nicle Results					
Aver	age Speed, mi/h	67.7		Percent Followers	5, %	39.8
Segr	ment Travel Time, minutes	0.18		Follower Density	(FD), followers/mi/ln	1.7
Vehi	cle LOS	А				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Condit	ion Rating	4
Flow	Rate Outside Lane, veh/h	291		Bicycle Effective \	Width, ft	24
Bicy	cle LOS Score	3.62		Bicycle Effective S	Speed Factor	5.07
Bicy	cle LOS	D				
			Segn	nent 14		
Vel	nicle Inputs					
Segr	ment Type	Passing Zone		Length, ft		1120
Mea	sured FFS	Measured		Free-Flow Speed,	Free-Flow Speed, mi/h	
Dei	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	291	291 O		nd Flow Rate, veh/h	207
Peak	Hour Factor	0.88		Total Trucks, %	Total Trucks, %	
Segr	ment Capacity, veh/h	1700		Demand/Capacity	y (D/C)	0.17
Into	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed, mi/h		70.0
Spee	ed Slope Coefficient (m)	4.32132		Speed Power Coefficient (p)		0.53735
PF S	lope Coefficient (m)	-1.23984		PF Power Coefficient (p)		0.80643
In Pa	ssing Lane Effective Length?	No		Total Segment De	Total Segment Density, veh/mi/ln	
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Suk	segment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1120	-		-	68.2
Veł	nicle Results					
Aver	age Speed, mi/h	68.2		Percent Followers	5, %	36.7
Segr	ment Travel Time, minutes	0.19		Follower Density	(FD), followers/mi/ln	1.6
Vehi	cle LOS	A				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Condit	ion Rating	4
	• •					

El.	Data Outsida La caral d	201	Discola Eff.	\\/: - + - f+	24					
	Rate Outside Lane, veh/h	291	Bicycle Effective		24					
_	le LOS Score	3.62	Bicycle Effective	Speed Factor	5.07					
Bicyc	le LOS	D								
	Segment 15									
Veh	icle Inputs									
Segm	nent Type	Passing Zone	Length, ft		1272					
Meas	ured FFS	Measured	Free-Flow Speed	l, mi/h	70.0					
Den	nand and Capacity									
Direc	tional Demand Flow Rate, veh/h	347	Opposing Dema	nd Flow Rate, veh/h	233					
Peak	Hour Factor	0.88	Total Trucks, %		5.09					
Segm	nent Capacity, veh/h	1700	Demand/Capaci	ty (D/C)	0.20					
Inte	rmediate Results									
Segm	nent Vertical Class	1	Free-Flow Speed	l, mi/h	70.0					
Spee	d Slope Coefficient (m)	4.33046	Speed Power Co	efficient (p)	0.53049					
PF Slo	ope Coefficient (m)	-1.24528	PF Power Coeffic	cient (p)	0.80456					
In Pas	ssing Lane Effective Length?	No	Total Segment D	ensity, veh/mi/ln	2.1					
%lmr	provement to Percent Followers	0.0	%Improvement	to Speed	0.0					
Sub	segment Data									
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h					
1	Tangent	1272	-	-	67.9					
Veh	icle Results			•						
Avera	age Speed, mi/h	67.9	Percent Follower	rs, %	41.2					
Segm	nent Travel Time, minutes	0.21	Fallaman Danaita	(FD), followers/mi/ln						
		0.21	Follower Density	(ID), IOIIOWEIS/IIII/III	2.1					
	le LOS	В В	Follower Density	(1 D), Tollowers/Till/III	2.1					
Vehic			Follower Density	(I D), Iolioweis/Illi/Ill	2.1					
Vehic	le LOS		Pavement Condi		4					
Vehice Bicy Perce	rcle Results	В		tion Rating						
Vehice Bicy Perce Flow	rcle Results ent Occupied Parking	B 0	Pavement Condi	tion Rating Width, ft	4					
Perce Flow Bicycl	rcle Results ent Occupied Parking Rate Outside Lane, veh/h	0 347	Pavement Condi	tion Rating Width, ft	4 24					
Perce Flow Bicycl	rcle Results Int Occupied Parking Rate Outside Lane, veh/h le LOS Score	0 347 3.65 D	Pavement Condi	tion Rating Width, ft	4 24					
Vehico Bicy Perce Flow Bicycl Bicycl	rcle Results Int Occupied Parking Rate Outside Lane, veh/h le LOS Score	0 347 3.65 D	Pavement Condi Bicycle Effective Bicycle Effective	tion Rating Width, ft	4 24					
Vehico Bicy Perce Flow Bicycl Bicycl	rcle Results Int Occupied Parking Rate Outside Lane, veh/h Ile LOS Score	0 347 3.65 D	Pavement Condi Bicycle Effective Bicycle Effective	tion Rating Width, ft	4 24					
Vehice Bicy Perce Flow Bicycl Bicycl Veh Segm	rele LOS rele Results Int Occupied Parking Rate Outside Lane, veh/h Ile LOS Score Ile LOS	B 0 347 3.65 D Se	Pavement Condi Bicycle Effective Bicycle Effective gment 16	tion Rating Width, ft Speed Factor	4 24 5.07					
Vehico Bicyc Flow Bicyc Bicyc Veh Segm Meas	rele LOS rele Results Int Occupied Parking Rate Outside Lane, veh/h Ile LOS Score Ile LOS icle Inputs ment Type	B 0 347 3.65 D Se Passing Constrained	Pavement Condi Bicycle Effective Bicycle Effective gment 16 Length, ft	tion Rating Width, ft Speed Factor	4 24 5.07					
Vehice Bicycle Flow Bicycle Bicycle Veh Segm Meass Den	rele LOS rele Results Int Occupied Parking Rate Outside Lane, veh/h Ile LOS Score Ile LOS Icle Inputs Inent Type Foured FFS	B 0 347 3.65 D Se Passing Constrained	Pavement Condi Bicycle Effective Bicycle Effective gment 16 Length, ft Free-Flow Speed	tion Rating Width, ft Speed Factor	4 24 5.07					
Vehico Bicycl Flow Bicycl Bicycl Veh Segm Meas Den	rele LOS rele Results Int Occupied Parking Rate Outside Lane, veh/h Ile LOS Score Ile LOS Icle Inputs Inent Type Fured FFS Inand and Capacity	B 0 347 3.65 D Se Passing Constrained Measured	Pavement Condi Bicycle Effective Bicycle Effective gment 16 Length, ft Free-Flow Speed	tion Rating Width, ft Speed Factor	625 70.0					

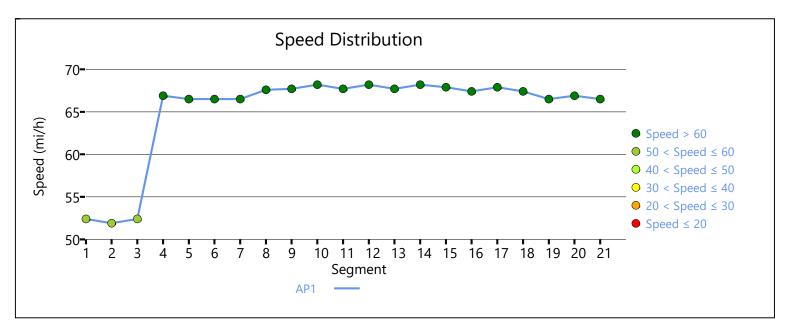
Int	ermediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed	l, mi/h	70.0
Spe	ed Slope Coefficient (m)	4.57372		Speed Power Co	efficient (p)	0.41674
PF S	lope Coefficient (m)	-1.29323		PF Power Coeffic	cient (p)	0.75819
In P	assing Lane Effective Length?	No		Total Segment D	ensity, veh/mi/ln	2.3
%ln	provement to Percent Followers	0.0		%Improvement	to Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Rad	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	625	-		-	67.4
Ve	hicle Results				<u> </u>	
Ave	rage Speed, mi/h	67.4		Percent Followe	rs, %	44.0
	ment Travel Time, minutes	0.11		Follower Density	(FD), followers/mi/ln	2.3
	icle LOS	В				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Cond	tion Rating	4
	v Rate Outside Lane, veh/h	347		Bicycle Effective Width, ft		24
Bicy	cle LOS Score	3.65		Bicycle Effective Speed Factor		5.07
Bicy	cle LOS	D				
			Segn	nent 17		<u>'</u>
Ve	hicle Inputs					
	ment Type	Passing Zone		Length, ft		1995
	isured FFS	Measured		Free-Flow Speed, mi/h		70.0
		Wedsarea		Tree flow speed	,,,,	76.5
	mand and Capacity					
	ctional Demand Flow Rate, veh/h	347		Opposing Demand Flow Rate, veh/h		233
	K Hour Factor	0.88		Total Trucks, %		5.09
Seg	ment Capacity, veh/h	1700		Demand/Capaci	ty (D/C)	0.20
Int	ermediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed	l, mi/h	70.0
Spe	ed Slope Coefficient (m)	4.34227		Speed Power Coefficient (p)		0.53049
PF S	lope Coefficient (m)	-1.21527		PF Power Coeffic	cient (p)	0.81755
In P	assing Lane Effective Length?	tive Length? No		Total Segment D	ensity, veh/mi/ln	2.0
%ln	provement to Percent Followers	0.0		%Improvement	to Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1995	-		-	67.9
Ve	hicle Results					
Ave	rage Speed, mi/h	67.9		Percent Followe	rs, %	40.0

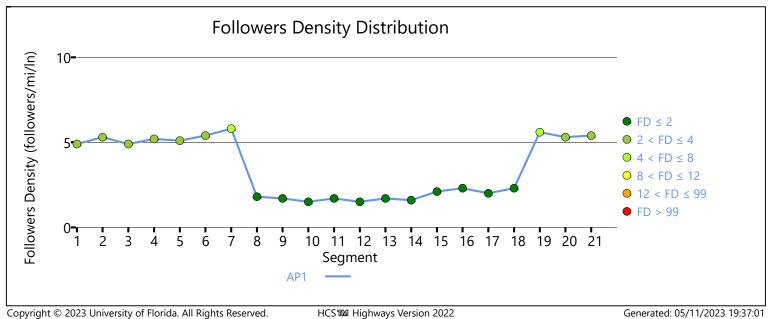
Segment Travel Time, minutes	0.33		Follower Density (FD), followers/mi/ln	2.0
Vehicle LOS	В			1 D), 10110WC13/1111/111	2.0
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Pating	4
Flow Rate Outside Lane, veh/h	347		Bicycle Effective V		24
Bicycle LOS Score	3.65		Bicycle Effective S		5.07
Bicycle LOS	D		bicycle Effective 3	peed Factor	3.07
bicycle LOS	D	Soam	ent 18		
Vehicle Inputs		Segin			
•					Line
Segment Type	Passing Constrai	ned	Length, ft		1399
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/	h 347		Opposing Deman	d Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %		5.09
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.20
Intermediate Results					
Segment Vertical Class 1		Free-Flow Speed,	mi/h	70.0	
Speed Slope Coefficient (m)	4.57524		Speed Power Coe	fficient (p)	0.41674
PF Slope Coefficient (m)	PF Slope Coefficient (m) -1.28884		PF Power Coefficie	ent (p)	0.75993
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	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1399	-		-	67.4
Vehicle Results	<u> </u>				
Average Speed, mi/h	67.4		Percent Followers,	, %	43.8
Segment Travel Time, minutes	0.24		Follower Density (FD), followers/mi/ln		2.3
Vehicle LOS	В		2		
Bicycle Results			<u>'</u>		
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h 347		Bicycle Effective V	Vidth, ft	24	
Bicycle LOS Score 3.65		Bicycle Effective S		5.07	
Bicycle LOS	D				
		Segm	ent 19		
Vehicle Inputs					
•	Passing Constrai	ned	Length, ft		1254
egment Type Passing Constrained					

Demand and Capacity					
Directional Demand Flow Rate, veh/h 625		Opposing Demar	nd Flow Rate, veh/h	-	
Peak Hour Factor	0.88		Total Trucks, %		1.51
Segment Capacity, veh/h	1700		Demand/Capacit	y (D/C)	0.37
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.57372		Speed Power Coe	efficient (p)	0.41674
PF Slope Coefficient (m)	-1.29366		PF Power Coeffic	ient (p)	0.75766
In Passing Lane Effective Length?	No		Total Segment De	ensity, veh/mi/ln	5.6
%Improvement to Percent Followers	0.0		%Improvement to	o Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1254	-		-	66.5
Vehicle Results					
Average Speed, mi/h	66.5		Percent Followers	5, %	59.6
Segment Travel Time, minutes	0.21		Follower Density (FD), followers/mi/ln		5.6
Vehicle LOS	С	С			
Bicycle Results					
Percent Occupied Parking	0	0		ion Rating	4
Flow Rate Outside Lane, veh/h	625		Bicycle Effective \	Width, ft	24
Bicycle LOS Score	2.94	94 Bicycle Effective Speed Factor		Speed Factor	5.07
Bicycle LOS	С				
		Segn	nent 20		
Vehicle Inputs					
Segment Type	Passing Zone		Length, ft		1108
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	625		Opposing Demand Flow Rate, veh/h		216
Peak Hour Factor	0.88		Total Trucks, %		1.51
Segment Capacity, veh/h	1700		Demand/Capacit	y (D/C)	0.37
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.32457		Speed Power Coe	efficient (p)	0.53490
PF Slope Coefficient (m)	-1.24221		PF Power Coeffici	ient (p)	0.80521
In Passing Lane Effective Length?	No		Total Segment De	ensity, veh/mi/ln	5.3
%Improvement to Percent Followers	0.0		%Improvement to	o Speed	0.0
Subsegment Data					

#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1108	-		-	66.9
Vel	nicle Results					
Aver	rage Speed, mi/h	66.9		Percent Followers	, %	57.3
Segr	ment Travel Time, minutes	0.19		Follower Density ((FD), followers/mi/ln	5.3
Vehi	cle LOS	С				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	625		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	2.94		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	С				
			Segn	nent 21		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrai	ned	Length, ft		2901
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	625		Opposing Demand Flow Rate, veh/h		-
Peak	Hour Factor	0.88		Total Trucks, %		1.51
Segr	ment Capacity, veh/h	1700		Demand/Capacity	' (D/C)	0.37
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed, mi/h		70.0
Spe	ed Slope Coefficient (m)	4.59854		Speed Power Coefficient (p)		0.41674
PF S	lope Coefficient (m)	-1.23554		PF Power Coefficient (p)		0.77974
In Pa	assing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		5.4
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2901	-		-	66.5
Vel	nicle Results					
Aver	rage Speed, mi/h	66.5		Percent Followers	, %	57.5
Segr	ment Travel Time, minutes	0.50		Follower Density ((FD), followers/mi/ln	5.4
Vehicle LOS C						
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	625		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	2.94		Bicycle Effective S	peed Factor	5.07
Bicycle LOS C						

Facilit	y Results			
Т	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	625	0.41	3.5	В





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HCS™ Highways Version 2022 EB_38_EHartford_2040AM.xuf

Project Information			HCS Two-La	ne	Highway Re	port	
Agency HRG Analysis Year 2040 NB Jurisdiction SDDOT Time Analyzed PM PEAK Project Description EB SD38 Corridor Study Units U.S. Customary ***Segment 1** Vehicle Inputs ***Segment Type Passing Zone Length, ft 1084 Measured FFS Measured Free Flow Speed, mi/h 55.0 **Demand and Capacity** Directional Demand Flow Rate, veh/h 299 Opposing Demand Flow Rate, veh/h 55.0 **Peak Hour Factor Demand Flow Rate, veh/h 1700 Demand/Capacity (D/C) 0.18 Intermediate Results Segment Vertical Class I Free-Flow Speed, mi/h 55.0 Speed Stope Coefficient (m) 4.41560 Speed Power Coefficient (p) 0.75207 In Passing Lane Effective Length? No Total Segment Demistry, veh/mi/ln 2.4 **Mimprovement to Percent Followers Do Wamprovement to Speed Do Demand Type Length? No Total Segment Demistry, veh/mi/ln 2.4 **Mimprovement to Percent Followers Do Wamprovement to Speed Do Demand Type Length? No Speed Power Coefficient (p) 0.33.0 **Superest Type Length? Radius, ft Superelevation, % Average Speed, mi/h 2.4 **Mimprovement to Percent Followers Do Demand Flow Radius, ft Superelevation, % Average Speed, mi/h 2.4 **Vehicle Results **Vehicle Results **Provement Coefficient (p) C.S. Superelevation, % Average Speed, mi/h 2.4 **Vehicle LOS Bo Percent Followers Do Demand Flow Radius, ft Superelevation, % Average Speed, mi/h 2.4 **Vehicle LOS Bo Bo Percent Followers Segment Demand Flow Radius, ft Superelevation, % Average Speed, mi/h 2.4 **Vehicle LOS Bo Bo Percent Followers Segment Demand Flow Radius Segment Demand Flow Radius Segment Demand Flow Radius Segment Condition Rating 4 **Recent Segment Co	Pro	ject Information					
Unrisdiction SDDOT Time Analyzed PM PEAK Project Description EB SD38 Carridor Study Units U.S. Customary Segment 1	Ana	lyst	MJV		Date		5/11/2023
Project Description EB SD38 Corridor Study	Age	ncy	HRG		Analysis Year		2040 NB
Segment 1	Juri	diction	SDDOT		Time Analyzed		PM PEAK
Vehicle Inputs Segment Type Passing Zone Length, ft 1084 Measured FFS Measured Free-Flow Speed, mi/h 55.0 Demand and Capacity Directional Demand Flow Rate, veh/h 299 Opposing Demand Flow Rate, veh/h 551 Peak Hour Factor 0.88 Total Trucks, % 2,16 Segment Capacity, veh/h 1700 Demand/Capacity (D/C) 0.18 Intermediate Results Segment Vertical Class 1 Free-Flow Speed, mi/h 55.0 Speed Slope Coefficient (m) 4.41560 Speed Power Coefficient (p) 0.47557 PF Slope Coefficient (m) -1.38878 PF Power Coefficient (p) 0.75207 In Passing Lane Effective Length? No Total Segment Density, veh/mi/ln 2.4 Wilmprovement to Percent Followers 0.0 % Improvement to Speed 0.0 Subsegment Data ** ** \$3.0 **Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h </td <td>Proj</td> <td>ect Description</td> <td>EB SD38 Corridor Stud</td> <td>y</td> <td>Units</td> <td></td> <td>U.S. Customary</td>	Proj	ect Description	EB SD38 Corridor Stud	y	Units		U.S. Customary
Passing Zone Length, ft 1084			Se	egn	nent 1		
Measured FFS Measured Free-Flow Speed, mi/h 55.0	Ve	nicle Inputs					
Demand and Capacity Directional Demand Flow Rate, velv/h Peak Hour Factor 0.88 Total Trucks, % 2.16 Segment Capacity, velv/h Intermediate Results Segment Vertical Class 1 Free-Flow Speed, mi/h Speed Slope Coefficient (m) 4.41560 Speed Power Coefficient (p) 0.75207 In Passing Lane Effective Length? No Total Segment Destity, velv/mi/ln 2.4 Sumprovement to Percent Followers # Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 1 Tangent 53.0 Percent Followers, % 42.9 Segment Travel Time, minutes 0.23 Percent Follower Density (FD), followers/mi/ln 2.4 Bicycle LOS B Bicycle LOS Bicycle LOS Score Bicycle LOS Score Capacity Segment 2 Segment 2 Vehicle Inputs Passing Constrained Length, ft Length	Seg	ment Type	Passing Zone		Length, ft		1084
Directional Demand Flow Rate, veh/h Peak Hour Factor 0.88 Total Trucks, % 2.16 Segment Capacity, veh/h 1700 Demand/Capacity (D/C) 0.18 Intermediate Results Segment Vertical Class 1 Free-Flow Speed, mi/h 55.0 Speed Slope Coefficient (m) 4.41560 Speed Power Coefficient (p) 0.75207 In Passing Lane Effective Length? No Total Segment Density, veh/mi/In 2.4 %Improvement to Percent Followers 0.0 Subsegment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 1 Tangent 1084 Percent Followers, % Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 1 Tangent 1084 Percent Followers, % Segment Travel Time, minutes 0.23 Follower Density (FD), followers/mi/In 2.4 Vehicle Results Bicycle Results Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Bicycle LOS Score Bicycle LOS Score Bicycle LOS C Bicycle Effective Width, ft 24 Bicycle LOS Score Bicycle Effective Width, ft 24 Bicycle LOS Score Bicycle Effective Width, ft 24 Bicycle LOS Score Bicycle Inputs Segment 7ype Passing Constrained Length, ft Length, ft 1014			-		_	mi/h	55.0
Peak Hour Factor 0.88	De	mand and Capacity					
Peak Hour Factor 0.88	Dire	ctional Demand Flow Rate, veh/h	299		Opposing Deman	d Flow Rate, veh/h	551
Segment Vertical Class 1	Pea	Hour Factor	0.88		Total Trucks, %		2.16
Segment Vertical Class \$ 1	Seg	ment Capacity, veh/h	1700		Demand/Capacity	, (D/C)	0.18
Speed Slope Coefficient (m) 4.41560 Speed Power Coefficient (p) 0.47557 PF Slope Coefficient (m) -1.38878 PF Power Coefficient (p) 0.75207 In Passing Lane Effective Length? No Total Segment Density, veh/mi/ln 2.4 %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 1084	Int	ermediate Results					
Speed Slope Coefficient (m) 4.41560 Speed Power Coefficient (p) 0.47557 PF Slope Coefficient (m) -1.38878 PF Power Coefficient (p) 0.75207 In Passing Lane Effective Length? No Total Segment Density, veh/mi/ln 2.4 %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 1084 - 53.0 Vehicle Results Average Speed, mi/h Segment Time, minutes 0.23 Follower Density (FD), followers/mi/ln 2.4 Vehicle LOS B Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h Bicycle LOS Bicycle LOS C Segment 2 Vehicle Inputs Segment Type Passing Constrained Length, ft 1014	Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	55.0
In Passing Lane Effective Length? No Total Segment Density, veh/mi/In 2.4 %Improvement to Percent Followers 0.0 %Improvement to Speed 0.0 Subsegment Data # Segment Type	Spe	ed Slope Coefficient (m)	4.41560		Speed Power Coe	fficient (p)	0.47557
Subsegment Data # Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 1 Tangent 1084 53.0 Vehicle Results Average Speed, mi/h 53.0 Percent Followers, % 42.9 Segment Travel Time, minutes 0.23 Follower Density (FD), followers/mi/ln 2.4 Vehicle LOS B	PF S	lope Coefficient (m)	-1.38878		PF Power Coefficie	ent (p)	0.75207
# Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 1 Tangent 1084 - - 53.0 Vehicle Results Average Speed, mi/h 53.0 Percent Followers, % 42.9 Segment Travel Time, minutes 0.23 Follower Density (FD), followers/mi/ln 2.4 Vehicle LOS B Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 299 Bicycle Effective Width, ft 24 Bicycle LOS Score 2.60 Bicycle Effective Speed Factor 4.62 Bicycle LOS Score 2.60 Bicycle Effective Speed Factor 4.62 Bicycle LOS C Segment 2 Vehicle Inputs Segment Type Passing Constrained Length, ft 1014	In P	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	2.4
# Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 1 Tangent 1084 -	%ln	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Tangent 1084 - 53.0 Vehicle Results Average Speed, mi/h 53.0 Percent Followers, % 42.9 Segment Travel Time, minutes 0.23 Follower Density (FD), followers/mi/ln 2.4 Vehicle LOS B Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 299 Bicycle Effective Width, ft 24 Bicycle LOS Score 2.60 Bicycle Effective Speed Factor 4.62 Bicycle LOS C Segment 2 Vehicle Inputs Segment Type Passing Constrained Length, ft 1014	Su	bsegment Data			<u>'</u>		
Vehicle Results Average Speed, mi/h 53.0 Percent Followers, % 42.9 Segment Travel Time, minutes 0.23 Follower Density (FD), followers/mi/ln 2.4 Vehicle LOS B	#	Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
Average Speed, mi/h 53.0 Percent Followers, % 42.9 Segment Travel Time, minutes 0.23 Follower Density (FD), followers/mi/ln 2.4 Vehicle LOS B	1	Tangent	1084	1-		-	53.0
Segment Travel Time, minutes 0.23 Follower Density (FD), followers/mi/ln 2.4 Vehicle LOS B Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 299 Bicycle Effective Width, ft 24 Bicycle LOS Score 2.60 Bicycle Effective Speed Factor 4.62 Bicycle LOS C Segment 2 Vehicle Inputs Segment Type Passing Constrained Length, ft 1014	Ve	nicle Results					
Vehicle LOS Bicycle Results Percent Occupied Parking Percent Outside Lane, veh/h Percent Occupied Parking Percent Outside Lane, veh/h Percent Outside Lane, veh/h Percent Outside Lane, veh/h Percent Occupied Parking Percent Occupied Parking Percent Condition Rating Perc	Ave	rage Speed, mi/h	53.0		Percent Followers	, %	42.9
Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 299 Bicycle Effective Width, ft 24 Bicycle LOS Score 2.60 Bicycle Effective Speed Factor 4.62 Bicycle LOS C Segment 2 Vehicle Inputs Segment Type Passing Constrained Length, ft 1014	Seg	ment Travel Time, minutes	0.23				2.4
Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 299 Bicycle Effective Width, ft 24 Bicycle LOS Score 2.60 Bicycle Effective Speed Factor 4.62 Bicycle LOS C Segment 2 Vehicle Inputs Segment Type Passing Constrained Length, ft 1014	Veh	cle LOS	В				
Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 299 Bicycle Effective Width, ft 24 Bicycle LOS Score 2.60 Bicycle Effective Speed Factor 4.62 Bicycle LOS C Segment 2 Vehicle Inputs Segment Type Passing Constrained Length, ft 1014	Bio	ycle Results			<u> </u>		
Bicycle LOS Score 2.60 Bicycle Effective Speed Factor 4.62 Bicycle LOS C Segment 2 Vehicle Inputs Segment Type Passing Constrained Length, ft 1014	Pero	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Bicycle LOS Score 2.60 Bicycle Effective Speed Factor 4.62 Bicycle LOS C Segment 2 Vehicle Inputs Segment Type Passing Constrained Length, ft 1014		<u> </u>					
Segment 2 Vehicle Inputs Segment Type Passing Constrained Length, ft 1014				,		4.62	
Vehicle Inputs Segment Type Passing Constrained Length, ft 1014	Bicy	cle LOS	С				
Vehicle Inputs Segment Type Passing Constrained Length, ft 1014			Se	egn	nent 2		
Segment Type Passing Constrained Length, ft 1014	Ve	nicle Inputs					
		-	Passing Constrained		Length, ft		1014
			-			mi/h	

Der	mand and Capacity						
Direc	ctional Demand Flow Rate, veh/h	299		Opposing Deman	Opposing Demand Flow Rate, veh/h -		
Peak	Hour Factor	0.88 Т		Total Trucks, %		2.16	
Segn	nent Capacity, veh/h	1700 E		Demand/Capacity	(D/C)	0.18	
Inte	ermediate Results					•	
Segn	nent Vertical Class	1		Free-Flow Speed,	mi/h	55.0	
Spee	d Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674	
PF SI	ope Coefficient (m)	-1.43973		PF Power Coefficie	ent (p)	0.72475	
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	2.6	
%lmp	provement to Percent Followers	0.0		%Improvement to	Speed	0.0	
Sub	segment Data						
#	Segment Type	Length, ft	Rad	dius, ft	Superelevation, %	Average Speed, mi/h	
1	Tangent	507	-		-	52.7	
2	Horizontal Curve	507	300	00	0.0	52.7	
Veh	icle Results						
Avera	age Speed, mi/h	52.7		Percent Followers, %		45.1	
Segn	nent Travel Time, minutes	0.22		Follower Density (FD), followers/mi/ln	2.6	
Vehic	cle LOS	В	В				
Bicy	ycle Results						
Perce	ent Occupied Parking	0		Pavement Conditi	on Rating	4	
Flow	Rate Outside Lane, veh/h	299		Bicycle Effective Width, ft		24	
Bicyc	cle LOS Score	2.60		Bicycle Effective S	peed Factor	4.62	
Bicyc	ile LOS	С					
			Segr	nent 3			
Veh	nicle Inputs						
Segn	nent Type	Passing Zone		Length, ft		535	
Meas	sured FFS	Measured		Free-Flow Speed,	mi/h	55.0	
Der	mand and Capacity						
Direc	ctional Demand Flow Rate, veh/h	299		Opposing Deman	d Flow Rate, veh/h	551	
Peak	eak Hour Factor 0.88		Total Trucks, %		2.16		
Segn	Segment Capacity, veh/h 1700		Demand/Capacity (D/C)		0.18		
Inte	ermediate Results						
Segn	nent Vertical Class	1		Free-Flow Speed,	mi/h	55.0	
Spee	ed Slope Coefficient (m)	4.41560		Speed Power Coefficient (p)		0.47557	
PF SI	ope Coefficient (m)	-1.38878		PF Power Coefficient (p)		0.75207	
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	2.4	
	provement to Percent Followers	0.0		%Improvement to Speed		0.0	

Suk	segment Data						
#	Segment Type	Length, ft		Radius, ft		Superelevation, %	Average Speed, mi/h
1	Tangent	535		-		-	53.0
Vel	nicle Results						
Aver	rage Speed, mi/h	53.0		Percent Follow	wers,	. %	42.9
Segr	ment Travel Time, minutes	0.11		Follower Dens	sity (FD), followers/mi/ln	2.4
Vehi	cle LOS	В					
Bic	ycle Results						
Perc	ent Occupied Parking	0		Pavement Cor	nditio	on Rating	4
Flow	Rate Outside Lane, veh/h	299		Bicycle Effecti	ive W	/idth, ft	24
Bicy	cle LOS Score	2.60		Bicycle Effecti	ive Sp	peed Factor	4.62
Bicy	cle LOS	С					
			Se	gment 4			
Veł	nicle Inputs						
Segr	ment Type	Passing Zone		Length, ft	Length, ft		1494
Mea	sured FFS	Measured		Free-Flow Spe	Free-Flow Speed, mi/h		70.0
Dei	mand and Capacity						
Dire	ctional Demand Flow Rate, veh/h	333		Opposing De	mano	d Flow Rate, veh/h	735
Peak	Hour Factor	0.88	0.88		Total Trucks, %		1.63
Segr	ment Capacity, veh/h	1700		Demand/Capa	acity	(D/C)	0.20
Int	ermediate Results						
Segr	ment Vertical Class	1		Free-Flow Spe	Free-Flow Speed, mi/h		70.0
Spee	ed Slope Coefficient (m)	4.45661		Speed Power	Speed Power Coefficient (p)		0.45644
PF S	lope Coefficient (m)	-1.28454		PF Power Coe	PF Power Coefficient (p)		0.78414
In Pa	assing Lane Effective Length?	No		Total Segmen	Total Segment Density, veh/mi/ln		2.1
%lm	provement to Percent Followers	0.0		%Improveme	%Improvement to Speed		0.0
Sul	osegment Data						
#	Segment Type	Length, ft		Radius, ft		Superelevation, %	Average Speed, mi/h
1	Tangent	1494		-		-	67.7
Vel	nicle Results	•					
Aver	rage Speed, mi/h	67.7		Percent Follow	wers,	%	41.9
Segment Travel Time, minutes 0.25			Follower Density (FD), followers/mi/ln		2.1		
Vehi	cle LOS	В					
Bic	ycle Results						
Perc	ent Occupied Parking	0		Pavement Cor	nditio	on Rating	4
Flow	Rate Outside Lane, veh/h	333		Bicycle Effecti	ive W	/idth, ft	24
Bicy	icycle LOS Score 2.65		Bicycle Effecti	ive S	5.07		

Bicycle LOS	С				
		Seg	ment 5		
Vehicle Inputs					
Segment Type	Passing Constra	ined	Length, ft		5762
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity	·				
Directional Demand Flow Rate, veh/h	333		Opposing Deman	d Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %		1.63
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.20
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.62977		Speed Power Coe	fficient (p)	0.41674
PF Slope Coefficient (m)	-1.20069		PF Power Coefficie	ent (p)	0.78591
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	2.0
%Improvement to Percent Followers	0.0	0.0		Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	R	adius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	5762	-		-	67.5
Vehicle Results	·				
Average Speed, mi/h	67.5		Percent Followers	, %	39.7
Segment Travel Time, minutes	0.97		Follower Density (FD), followers/mi/ln	2.0
Vehicle LOS	А				
Bicycle Results			<u>'</u>		
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	333		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	2.65		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	С				
		Seg	ment 6		
Vehicle Inputs					
Segment Type	Passing Constra	ined	Length, ft		383
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	340		Opposing Deman	d Flow Rate, veh/h	 -
Peak Hour Factor	0.88		Total Trucks, %		1.89
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.20
Intermediate Results	•				

Seam	Segment Vertical Class 1 F		Free-Flow Speed, mi/h 70.0			
	d Slope Coefficient (m)	4.57372				0.41674
	ope Coefficient (m)	-1.29361		Speed Power Coeffici	·	0.41674
	ssing Lane Effective Length?	No	+		ensity, veh/mi/ln	2.2
	provement to Percent Followers	0.0		%Improvement to		0.0
		0.0		78improvement to	o speed	0.0
Sub	segment Data					
#	Segment Type	Length, ft	Length, ft Radiu		Superelevation, %	Average Speed, mi/h
1	Tangent	383			-	67.5
Veh	icle Results					
Avera	nge Speed, mi/h	67.5		Percent Followers	5, %	43.5
Segm	nent Travel Time, minutes	0.06		Follower Density	(FD), followers/mi/ln	2.2
Vehic	le LOS	В				
Bicy	cle Results					•
Perce	nt Occupied Parking	0		Pavement Condit	ion Rating	4
Flow	Rate Outside Lane, veh/h	340		Bicycle Effective \	Width, ft	24
Bicyc	le LOS Score	2.73		Bicycle Effective S	Speed Factor	5.07
Bicyc	le LOS	С				
			Segi	ment 7		
Veh	icle Inputs					
Segm	nent Type	Passing Constrain	ed	Length, ft		1485
Meas	ured FFS	Measured	ured Free-Flow Speed, mi/h		70.0	
Den	nand and Capacity	·		·		·
Direc	tional Demand Flow Rate, veh/h	380		Opposing Demar	nd Flow Rate, veh/h	-
Peak	Hour Factor	0.88	0.88			3.19
Segm	nent Capacity, veh/h	1700	1700		y (D/C)	0.22
Inte	rmediate Results					
Segm	nent Vertical Class	1		Free-Flow Speed, mi/h		70.0
Spee	d Slope Coefficient (m)	4.57684		Speed Power Coefficient (p)		0.41674
PF Slo	ope Coefficient (m)	-1.28453		PF Power Coeffici	ent (p)	0.76145
In Pas	ssing Lane Effective Length?	No		Total Segment De	ensity, veh/mi/ln	2.6
%lmp	provement to Percent Followers	0.0		%Improvement to	o Speed	0.0
Sub	segment Data					
#	Segment Type	Length, ft Rad		dius, ft	Superelevation, %	Average Speed, mi/h
1			-		67.3	
Veh	icle Results	·				
Average Speed, mi/h 67.3				Percent Followers	5, %	45.9
Avera		0.25		Follower Density (FD), followers/mi/ln		

Vehi	icle LOS	В				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Condition	on Rating	4
Flov	v Rate Outside Lane, veh/h	380		Bicycle Effective W	/idth, ft	24
Bicy	cle LOS Score	3.13	3.13 B		peed Factor	5.07
Bicy	cle LOS	С				
		,	Segn	nent 8		
Vel	hicle Inputs					
Seg	ment Type	Passing Constrained		Length, ft		426
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	289		Opposing Demand	d Flow Rate, veh/h	-
Peal	k Hour Factor	0.88		Total Trucks, %		6.47
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.17
Int	ermediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.57372		Speed Power Coef	fficient (p)	0.41674
PF S	ilope Coefficient (m)	-1.29307		PF Power Coefficie	ent (p)	0.75839
In Pa	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.7
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Sul	bsegment Data					
#	Segment Type	Length, ft	Rac	lius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	426	1-	-		67.7
Vel	hicle Results					
Ave	rage Speed, mi/h	67.7		Percent Followers,	%	39.6
Seg	ment Travel Time, minutes	0.07		Follower Density (FD), followers/mi/ln	1.7
Vehi	icle LOS	А				
Bic	cycle Results					
Perc	ent Occupied Parking	0		Pavement Condition	on Rating	4
	v Rate Outside Lane, veh/h	289		Bicycle Effective W	/idth, ft	24
Bicycle LOS Score 4.03		Bicycle Effective Speed Factor		5.07		
Bicy	cle LOS	D				
			Segn	nent 9		
Vel	hicle Inputs					
Seg	ment Type	Passing Constrained		Length, ft		1212
	asured FFS	Measured		Free-Flow Speed, mi/h		70.0

Demand and Capacity					
Directional Demand Flow Rate, veh/h	ctional Demand Flow Rate, veh/h 251		Opposing Demai	nd Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %		5.26
Segment Capacity, veh/h	1700		Demand/Capacit	y (D/C)	0.15
Intermediate Results			<u>'</u>		
Segment Vertical Class	1		Free-Flow Speed	, mi/h	70.0
Speed Slope Coefficient (m)	4.57372		Speed Power Co	efficient (p)	0.41674
PF Slope Coefficient (m)	-1.29321		PF Power Coeffic	ient (p)	0.75821
In Passing Lane Effective Length?	No		Total Segment D	ensity, veh/mi/ln	1.3
%Improvement to Percent Followers	0.0		%Improvement t	o Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1212	-		-	67.9
Vehicle Results					
Average Speed, mi/h	67.9		Percent Follower	s, %	36.5
Segment Travel Time, minutes	0.20		Follower Density (FD), followers/mi/ln		1.3
Vehicle LOS	А	А			
Bicycle Results					
Percent Occupied Parking	0		Pavement Condi	tion Rating	4
Flow Rate Outside Lane, veh/h	251		Bicycle Effective	Width, ft	24
Bicycle LOS Score	3.55		Bicycle Effective	Speed Factor	5.07
Bicycle LOS	D				
		Segn	nent 10		
Vehicle Inputs					
Segment Type	Passing Zone		Length, ft		1877
Measured FFS	Measured		Free-Flow Speed	, mi/h	70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	251		Opposing Dema	nd Flow Rate, veh/h	344
Peak Hour Factor	0.88		Total Trucks, %		5.26
Segment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.15
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed	, mi/h	70.0
Speed Slope Coefficient (m) 4.37450		Speed Power Co	efficient (p)	0.50652	
PF Slope Coefficient (m)	-1.23731		PF Power Coeffic	ient (p)	0.80872
In Passing Lane Effective Length?	No		Total Segment D	ensity, veh/mi/ln	1.2
%Improvement to Percent Followers	0.0		%Improvement t	o Speed	0.0

#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1877	-		-	68.3
Veł	nicle Results					·
Aver	age Speed, mi/h	68.3		Percent Followers	, %	33.3
Segr	ment Travel Time, minutes	0.31		Follower Density (FD), followers/mi/ln	1.2
Vehi	cle LOS	A				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	251		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	3.55		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	D				
			Segn	nent 11		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrai	ned	Length, ft		1872
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Dei	mand and Capacity	•		•		
Dire	ctional Demand Flow Rate, veh/h	251		Opposing Deman	d Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %		5.26
Segr	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.15
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spee	ed Slope Coefficient (m)	4.58354		Speed Power Coe	fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.26676		PF Power Coefficient (p)		0.76864
In Pa	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.3
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Suk	osegment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1872	-		-	67.9
Veł	nicle Results					
Aver	age Speed, mi/h	67.9		Percent Followers	, %	35.5
Segment Travel Time, minutes		0.31		Follower Density (FD), followers/mi/ln		1.3
Vehicle LOS A		А				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
	Rate Outside Lane, veh/h	251		Bicycle Effective V		24
Bicy	cle LOS Score	3.55		Bicycle Effective S		5.07
Bicycle LOS D						

		Se	egn	nent 12		
Ve	hicle Inputs					
Seg	ment Type	Passing Zone	Passing Zone L			3603
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					·
Dire	ectional Demand Flow Rate, veh/h	251		Opposing Deman	d Flow Rate, veh/h	344
Pea	k Hour Factor	0.88		Total Trucks, %		5.26
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.15
Int	termediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.39815		Speed Power Coe	fficient (p)	0.50652
PF S	Slope Coefficient (m)	-1.19302		PF Power Coefficie	ent (p)	0.82521
In P	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.2
%In	nprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3603	1-		-	68.3
Ve	hicle Results		<u>'</u>			·
Ave	rage Speed, mi/h	68.3		Percent Followers,	, %	31.7
Seg	ment Travel Time, minutes	0.60		Follower Density (FD), followers/mi/ln		1.2
Veh	icle LOS	А				
Bio	cycle Results					·
Per	cent Occupied Parking	0		Pavement Condition	on Rating	4
Flov	w Rate Outside Lane, veh/h	251		Bicycle Effective W	Vidth, ft	24
Bicy	vcle LOS Score	3.55		Bicycle Effective Speed Factor		5.07
Bicy	rcle LOS	D				
		Se	egn	nent 13		·
Ve	hicle Inputs					
	ment Type	Passing Constrained		Length, ft		1053
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	251		Opposing Deman	d Flow Rate, veh/h	-
Pea	k Hour Factor	0.88		Total Trucks, %		5.26
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.15
Int	termediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
				1		

Speed Slope Coefficient (m)	4.57372			fficient (p)	0.41674
PF Slope Coefficient (m)	-1.29321	-1.29321 I		ent (p)	0.75821
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.3
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1053	-		-	67.9
Vehicle Results					
Average Speed, mi/h	67.9		Percent Followers	, %	36.5
Segment Travel Time, minutes	0.18		Follower Density (FD), followers/mi/ln	1.3
Vehicle LOS	A				
Bicycle Results	·				
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	251		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	3.55		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	D				
		Segm	ent 14		
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	251		Opposing Deman	d Flow Rate, veh/h	344
Peak Hour Factor	0.88		Total Trucks, %		5.26
Segment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.15
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.36460		Speed Power Coe	fficient (p)	0.50652
PF Slope Coefficient (m)	-1.26336		PF Power Coefficient (p)		0.79785
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 Radi		dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent 1120 -		-		-	68.3
Vehicle Results					
Average Speed, mi/h	68.3		Percent Followers	, %	34.3
Segment Travel Time, minutes	0.19		Follower Density (FD), followers/mi/ln		1.3
Vehicle LOS A			7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7		

ement Condition Rating //cle Effective Width, ft //cle Effective Speed Factor 5.07 t 15 gth, ft e-Flow Speed, mi/h posing Demand Flow Rate, veh/h al Trucks, % mand/Capacity (D/C) 1272 9.09 14 1272 1272 1272 1272 10.0 10.0 10.19 11.0 12.10
gth, ft 1272 e-Flow Speed, mi/h 70.0 posing Demand Flow Rate, veh/h 411 al Trucks, % 5.09 mand/Capacity (D/C) 0.19 e-Flow Speed, mi/h 70.0 e-Flow Speed, mi/h 70.0 ged Power Coefficient (p) 0.49499
gth, ft 1272 e-Flow Speed, mi/h 70.0 posing Demand Flow Rate, veh/h 411 al Trucks, % 5.09 mand/Capacity (D/C) 0.19 e-Flow Speed, mi/h 70.0 eed Power Coefficient (p) 0.49499
gth, ft 1272 e-Flow Speed, mi/h 70.0 posing Demand Flow Rate, veh/h 411 al Trucks, % 5.09 mand/Capacity (D/C) 0.19 e-Flow Speed, mi/h 70.0 peed Power Coefficient (p) 0.49499
gth, ft 1272 e-Flow Speed, mi/h 70.0 posing Demand Flow Rate, veh/h 411 al Trucks, % 5.09 mand/Capacity (D/C) 0.19 e-Flow Speed, mi/h 70.0 peed Power Coefficient (p) 0.49499
posing Demand Flow Rate, veh/h al Trucks, % mand/Capacity (D/C) e-Flow Speed, mi/h feed Power Coefficient (p) 70.0 70.0
posing Demand Flow Rate, veh/h al Trucks, % mand/Capacity (D/C) e-Flow Speed, mi/h feed Power Coefficient (p) 70.0 70.0
posing Demand Flow Rate, veh/h al Trucks, % mand/Capacity (D/C) e-Flow Speed, mi/h feed Power Coefficient (p) 70.0 70.0
al Trucks, % 5.09 mand/Capacity (D/C) 0.19 e-Flow Speed, mi/h red Power Coefficient (p) 0.49499
al Trucks, % 5.09 mand/Capacity (D/C) 0.19 e-Flow Speed, mi/h red Power Coefficient (p) 0.49499
e-Flow Speed, mi/h red Power Coefficient (p) 0.19 0.19 0.49499
e-Flow Speed, mi/h red Power Coefficient (p) 70.0 0.49499
eed Power Coefficient (p) 0.49499
eed Power Coefficient (p) 0.49499
<u> </u>
Power Coefficient (p) 0.79437
al Segment Density, veh/mi/ln 1.9
nprovement to Speed 0.0
Superelevation, % Average Speed, mi/h
- 67.9
cent Followers, % 39.9
ower Density (FD), followers/mi/ln 1.9
ement Condition Rating 4
cle Effective Width, ft 24
cle Effective Speed Factor 5.07
t 16
gth, ft 625
e-Flow Speed, mi/h 70.0
t t

Dire	ctional Demand Flow Rate, veh/h	316		Opposing Demand	d Flow Rate, veh/h	-
	Hour Factor			Total Trucks, %		5.09
	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.19
	ermediate Results	11700		Demana, capacity	(5/ 5)	0.13
	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
	ed Slope Coefficient (m)	4.57372		Speed Power Coef		0.41674
	lope Coefficient (m)	-1.29323		PF Power Coefficie		0.75819
	assing Lane Effective Length?	No		Total Segment De	·	1.9
	provement to Percent Followers	0.0		%Improvement to		0.0
		0.0		78IIIIproveillent to	Speed	0.0
	osegment Data	l				
#	Segment Type		Length, ft Radius		Superelevation, %	Average Speed, mi/h
1	Tangent	625	-		-	67.6
Veł	nicle Results					
Aver	rage Speed, mi/h	67.6		Percent Followers,	%	41.7
Segr	ment Travel Time, minutes	0.11		Follower Density (FD), followers/mi/ln	1.9
Vehi	cle LOS	А				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Condition	on Rating	4
Flow	Rate Outside Lane, veh/h	316		Bicycle Effective W	/idth, ft	24
Bicy	cle LOS Score	3.61		Bicycle Effective S _I	peed Factor	5.07
Bicy	cle LOS	D				
			Segr	ment 17		
Vel	nicle Inputs					
Segr	ment Type	Passing Zone		Length, ft		1995
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Dei	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	316		Opposing Demand	d Flow Rate, veh/h	411
Peak	Hour Factor	0.88		Total Trucks, %		5.09
Segr	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.19
Inte	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spee	eed Slope Coefficient (m) 4.39429		Speed Power Coef	ficient (p)	0.49499	
PF Slope Coefficient (m) -1.24073		PF Power Coefficie	ent (p)	0.80695		
In Pa	essing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.8
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	osegment Data	·		·		
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h

1 Tangent	1995	-		-	67.9
Vehicle Results					
	67.9		Percent Followers	0/	38.7
Average Speed, mi/h					1.8
Segment Travel Time, minutes Vehicle LOS	0.33		Follower Density ((FD), followers/mi/ln	1.0
	A				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi		4
Flow Rate Outside Lane, veh/h	316		Bicycle Effective V		24
Bicycle LOS Score	3.61		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	D				
		Segr	ment 18		
Vehicle Inputs					
Segment Type	Passing Constrai	ned	Length, ft		1399
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	316		Opposing Deman	d Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %		5.09
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)	4.57524		Speed Power Coe	Speed Power Coefficient (p)	
PF Slope Coefficient (m)	-1.28884		PF Power Coefficient (p)		0.75993
In Passing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		1.9
%Improvement to Percent Followers	0.0		%Improvement to Speed		0.0
Subsegment Data					
# Segment Type	Length, ft	R	adius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1399	-		-	67.6
Vehicle Results					·
Average Speed, mi/h	67.6		Percent Followers	, %	41.5
Segment Travel Time, minutes	0.24		Follower Density (FD), followers/mi/ln		1.9
Vehicle LOS	А			2.57 (.27, .2	
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	316		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	3.61		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	ا ا				

Ve	ehicle Inputs					
Se	gment Type	Passing Constrained		Length, ft		1254
Me	easured FFS	Measured		Free-Flow Speed, mi/h		70.0
D	emand and Capacity					
Dir	rectional Demand Flow Rate, veh/h	309		Opposing Deman	d Flow Rate, veh/h	-
Pe	ak Hour Factor	0.88		Total Trucks, %		1.51
Se	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.18
In	termediate Results					
Se	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Sp	eed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF	Slope Coefficient (m)	-1.29366		PF Power Coefficie	ent (p)	0.75766
ln	Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.9
%I	mprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sı	ubsegment Data					
#	Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1254	1-		-	67.6
Ve	ehicle Results					
Av	rerage Speed, mi/h	67.6	67.6		%	41.2
Se	gment Travel Time, minutes	0.21		Follower Density (FD), followers/mi/ln	1.9
Ve	hicle LOS	А				
Bi	icycle Results					
Pe	rcent Occupied Parking	0		Pavement Condition	on Rating	4
Flc	ow Rate Outside Lane, veh/h	309		Bicycle Effective Width, ft		24
Bic	cycle LOS Score	2.58		Bicycle Effective Speed Factor		5.07
Bic	cycle LOS	С				
		S	egm	ent 20		
Ve	ehicle Inputs					
Se	gment Type	Passing Zone		Length, ft		1108
Ме	easured FFS	Measured		Free-Flow Speed,	mi/h	70.0
D	emand and Capacity					
Dir	ctional Demand Flow Rate, veh/h 309		Opposing Deman	d Flow Rate, veh/h	659	
Pe	Peak Hour Factor 0.88		Total Trucks, %		1.51	
Se	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.18
ln	termediate Results					
Se	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Sp	eed Slope Coefficient (m)	4.43837		Speed Power Coe	fficient (p)	0.46364
PF	Slope Coefficient (m)	-1.29067		PF Power Coefficie	ent (p)	0.78323

In Passing Lane Effective Length? No		Total Segment Density, veh/mi/ln		1.8		
%Improvement to Percent Followers 0.0			%Improvement to	o Speed	0.0	
Suk	osegment Data					
#	Segment Type	Length, ft Radio		dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1108	-		-	67.9
Vel	nicle Results					
Aver	age Speed, mi/h	67.9		Percent Followers	5, %	40.2
Segr	ment Travel Time, minutes	0.19		Follower Density	(FD), followers/mi/ln	1.8
Vehi	cle LOS	А				
Bic	ycle Results					
Perce	ent Occupied Parking	0		Pavement Condit	ion Rating	4
Flow	Rate Outside Lane, veh/h	309		Bicycle Effective V	Vidth, ft	24
Bicyc	cle LOS Score	2.58		Bicycle Effective S	Speed Factor	5.07
Bicyc	cle LOS	С				
			Segn	nent 21		
Veh	nicle Inputs					
Segr	ment Type	Passing Constrain	ned	Length, ft		2901
Mea	sured FFS	Measured		Free-Flow Speed, mi/h		70.0
Der	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	309		Opposing Deman	Opposing Demand Flow Rate, veh/h	
Peak	Hour Factor	0.88		Total Trucks, %		1.51
Segr	ment Capacity, veh/h	1700		Demand/Capacity	y (D/C)	0.18
Inte	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spee	ed Slope Coefficient (m)	4.59854		Speed Power Coefficient (p)		0.41674
PF SI	lope Coefficient (m)	-1.23554		PF Power Coeffici	ent (p)	0.77974
In Pa	ssing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		1.8
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Suk	segment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2901	-		-	67.6
Vel	nicle Results					
Aver	age Speed, mi/h	67.6		Percent Followers	5, %	39.0
Segr	ment Travel Time, minutes	0.49		Follower Density	(FD), followers/mi/ln	1.8
Vehi	cle LOS	А				
Bic	ycle Results					
Perce	ent Occupied Parking	0		Pavement Conditi	ion Rating	4
Tereent Occupied Farking		<u>l</u> ~		Favement Condition Rating		1

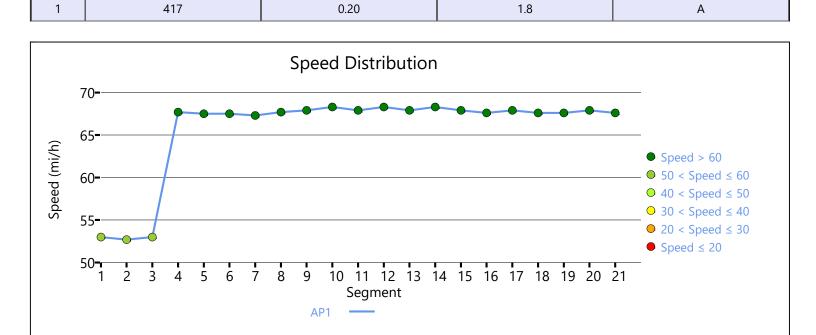
Flow Rate Outside Lane, veh/h	309	Bicycle Effective Width, ft	24				
Bicycle LOS Score	2.58	Bicycle Effective Speed Factor	5.07				
Bicycle LOS	С						
Facility Results	Facility Results						

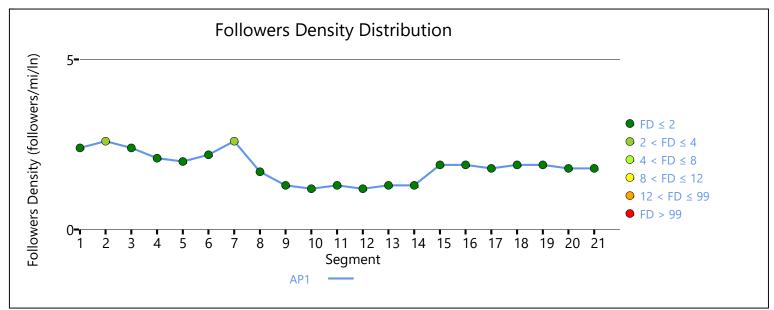
Follower Density, followers/

mi/ln

VHD

veh-h/p





T

VMT

veh-mi/p

LOS

		HCS Two-La	ine	Highway Re	port	
Pro	ject Information					
Anal	yst	MJV		Date		5/11/2023
Ager	ncy	HRG		Analysis Year		2040 NB
Juris	diction	SDDOT		Time Analyzed		AM Peak
Proje	ect Description	SD 38 WB East of Har	tford	Units		U.S. Customary
		S	egn	nent 1		
Veh	nicle Inputs					
Segn	nent Type	Passing Constrained		Length, ft		1727
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Der	mand and Capacity			<u>'</u>		
Direc	ctional Demand Flow Rate, veh/h	216		Opposing Deman	d Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %		8.97
Segn	nent Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.13
Inte	ermediate Results			'		
Segn	nent Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spee	ed Slope Coefficient (m)	4.58112		Speed Power Coe	fficient (p)	0.41674
PF SI	ope Coefficient (m)	-1.27241		PF Power Coefficie	ent (p)	0.76681
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.0
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Suk	segment Data			•		
#	Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1727	-		-	68.1
Veh	nicle Results	•				
Aver	age Speed, mi/h	68.1		Percent Followers	, %	32.5
Segn	nent Travel Time, minutes	0.29		Follower Density (FD), followers/mi/ln	1.0
Vehic	cle LOS	А				
Bic	ycle Results					
Perce	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	r Rate Outside Lane, veh/h 216		Bicycle Effective Width, ft		24	
Bicycle LOS Score 4.83		Bicycle Effective S	peed Factor	5.07		
Bicyc	cle LOS	E				
		S	egn	nent 2		
Veh	nicle Inputs					
	nent Type	Passing Zone		Length, ft		1676
	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0

Demand and Capacity					
	246			LEL D.	LCO5
Directional Demand Flow Rate, veh/h	216			d Flow Rate, veh/h	625
Peak Hour Factor	0.88			(D. (C)	8.97
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.13
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.43792		Speed Power Coe	fficient (p)	0.46717
PF Slope Coefficient (m)	-1.26992		PF Power Coefficie	ent (p)	0.79284
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.0
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rad	lius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1676	-		-	68.4
Vehicle Results					
Average Speed, mi/h	68.4		Percent Followers	, %	31.4
Segment Travel Time, minutes	0.28	0.28		(FD), followers/mi/ln	1.0
Vehicle LOS	А				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	216		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	4.83		Bicycle Effective Speed Factor		5.07
Bicycle LOS	E				
	S	egn	nent 3		
Vehicle Inputs					
Segment Type	Passing Constrained		Length, ft		1864
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity	·				
Directional Demand Flow Rate, veh/h	233		Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor	0.88		Total Trucks, %		17.04
Segment Capacity, veh/h	1700		Demand/Capacity	' (D/C)	0.14
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.58341		Speed Power Coe	fficient (p)	0.41674
PF Slope Coefficient (m)	-1.26572		PF Power Coefficie	ent (p)	0.77025
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.2
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					

#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1864 -		-		68.0
Veł	nicle Results					
Aver	age Speed, mi/h	68.0		Percent Followers	, %	33.8
Segr	ment Travel Time, minutes	0.31		Follower Density ((FD), followers/mi/ln	1.2
Vehi	cle LOS	А				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	233		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	8.85		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	F				
			Segr	ment 4		
Veł	nicle Inputs					
Segr	ment Type	Passing Constrai	ined	Length, ft		718
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Dei	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	233		Opposing Deman	d Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %		17.04
Segr	nent Capacity, veh/h	1700	Demand/Capacity (D/C)		/ (D/C)	0.14
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spee	ed Slope Coefficient (m)	4.57372	4.57372		fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.29182	-1.29182		ent (p)	0.75993
In Pa	assing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		1.2
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	718	-		-	68.0
Veł	nicle Results					
Aver	rage Speed, mi/h	68.0		Percent Followers	, %	34.8
Segment Travel Time, minutes 0.12		Follower Density (FD), followers/mi/ln		1.2		
Vehicle LOS A						
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	233		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	8.85		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	F				

		S	egr	ment 5		
Ve	hicle Inputs					
Seg	ment Type	Passing Zone		Length, ft		1738
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	233		Opposing Deman	d Flow Rate, veh/h	347
Pea	k Hour Factor	0.88		Total Trucks, %		17.04
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.14
Int	ermediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.37282		Speed Power Coe	fficient (p)	0.50610
PF S	Slope Coefficient (m)	-1.24196		PF Power Coefficie	ent (p)	0.80802
In P	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.1
%In	nprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Rad	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1738	-		-	68.4
Ve	hicle Results					•
Ave	rage Speed, mi/h	68.4		Percent Followers,	, %	31.8
Seg	ment Travel Time, minutes	0.29		Follower Density (FD), followers/mi/ln		1.1
Veh	icle LOS	А				
Bio	cycle Results					·
Pero	cent Occupied Parking	0		Pavement Condition	on Rating	4
Flov	v Rate Outside Lane, veh/h	233		Bicycle Effective Width, ft		24
Вісу	rcle LOS Score	8.85		Bicycle Effective Speed Factor		5.07
Вісу	rcle LOS	F				
		S	egr	ment 6		
Ve	hicle Inputs					
	ment Type	Passing Constrained		Length, ft		579
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					·
Dire	ectional Demand Flow Rate, veh/h	233		Opposing Deman	d Flow Rate, veh/h	-
Pea	k Hour Factor	0.88		Total Trucks, %		17.04
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.14
Int	ermediate Results					·
Seq	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
		1		1 2		

Speed Slope Coefficient (m)			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 De		1.2
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Length, ft Radiu		Superelevation, %	Average Speed, mi/h
1 Tangent	579	-		-	68.0
Vehicle Results					
Average Speed, mi/h	68.0		Percent Followers,	%	34.8
Segment Travel Time, minutes	0.10		Follower Density (FD), followers/mi/ln	1.2
Vehicle LOS	А				
Bicycle Results					
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	233		Bicycle Effective W	/idth, ft	24
Bicycle LOS Score	8.85		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	F				
		Segn	nent 7		
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	207		Opposing Deman	d Flow Rate, veh/h	291
Peak Hour Factor	0.88		Total Trucks, %		18.44
Segment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.12
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)	4.36495		Speed Power Coefficient (p)		0.51711
PF Slope Coefficient (m)	-1.21478		PF Power Coefficie	ent (p)	0.81940
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	Rac	lius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent				-	68.6
Vehicle Results	•				
Average Speed, mi/h	68.6		Percent Followers,	. %	28.4
Segment Travel Time, minutes	0.37			FD), followers/mi/ln	0.9
Vehicle LOS A		. S. over Bensity (19), followers, fini, iii		+	

Bicycle Results					
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	207		Bicycle Effective W	/idth, ft	24
Bicycle LOS Score	9.63		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	F				
	S	egn	nent 8		
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	207		Opposing Demand	d Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %		18.44
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.12
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 Coefficie	ent (p)	0.76014
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.0
%Improvement to Percent Followers	0.0			Speed	0.0
Subsegment Data			<u>'</u>		
# Segment Type	Length, ft	Rac	lius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	980	-		-	68.2
Vehicle Results					
Average Speed, mi/h	68.2		Percent Followers,	%	32.3
Segment Travel Time, minutes	0.16		Follower Density (FD), followers/mi/ln		1.0
Vehicle LOS	А				
Bicycle Results					
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	207		Bicycle Effective W	/idth, ft	24
Bicycle LOS Score 9.63		Bicycle Effective S	peed Factor	5.07	
Bicycle LOS F					
	S	egn	nent 9		
Vehicle Inputs					
Segment Type	Passing Zone		Length, ft		3667
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity					

Dire	ctional Demand Flow Rate, veh/h	207		Opposing Demand	d Flow Rate, veh/h	291
Peak	Hour Factor	0.88 T		Total Trucks, %		18.44
Segr	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.12
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.38336		Speed Power Coef	fficient (p)	0.51711
PF S	lope Coefficient (m)	-1.18328		PF Power Coefficie	ent (p)	0.83086
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.8
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	segment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3667	-		-	68.6
Vel	nicle Results					
Aver	age Speed, mi/h	68.6		Percent Followers,	%	27.3
Segr	ment Travel Time, minutes	0.61		Follower Density (FD), followers/mi/ln	0.8
Vehi	cle LOS	Α				
Bic	ycle Results					·
Perc	ent Occupied Parking	0		Pavement Condition	on Rating	4
Flow	Rate Outside Lane, veh/h	207		Bicycle Effective W	/idth, ft	24
Bicy	cle LOS Score	9.63		Bicycle Effective S _I	peed Factor	5.07
Bicy	cle LOS	F				
			Segr	ment 10		
Vel	nicle Inputs					
Segr	ment Type	Passing Constraine	ed	Length, ft		1846
	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Dei	mand and Capacity					
	ctional Demand Flow Rate, veh/h	207		Opposing Demand	d Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %		18.44
Segr	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.12
Int	ermediate Results					•
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
	ed Slope Coefficient (m)	4.58311		Speed Power Coef		0.41674
PF S	lope Coefficient (m)	·		PF Power Coefficie	ent (p)	0.77017
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.0
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	osegment Data			·		
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h

1 Tangent	1846	-		-	68.2
Vehicle Results					
Average Speed, mi/h	68.2		Percent Followers	s, %	31.4
Segment Travel Time, minutes	0.31	0.31		(FD), followers/mi/ln	1.0
Vehicle LOS	А				
Bicycle Results					
Percent Occupied Parking	0		Pavement Condit	ion Rating	4
Flow Rate Outside Lane, veh/h	207		Bicycle Effective \	Width, ft	24
Bicycle LOS Score	9.63		Bicycle Effective S	Speed Factor	5.07
Bicycle LOS	F				
		Seg	ment 11		
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	207		Opposing Demar	nd Flow Rate, veh/h	291
Peak Hour Factor	0.88		Total Trucks, %		18.44
Segment Capacity, veh/h	1700		Demand/Capacit	y (D/C)	0.12
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	, mi/h	70.0
Speed Slope Coefficient (m)	4.36363		Speed Power Coe	efficient (p)	0.51711
PF Slope Coefficient (m)	-1.21761		PF Power Coeffic	ient (p)	0.81825
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	·		<u> </u>		·
# Segment Type	Length, ft	F	Radius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	2174	-		-	68.6
Vehicle Results					
Average Speed, mi/h	68.6		Percent Followers	s, %	28.5
Segment Travel Time, minutes	0.36		Follower Density	(FD), followers/mi/ln	0.9
Vehicle LOS	А				
Bicycle Results					
Percent Occupied Parking	0		Pavement Condit	ion Rating	4
Flow Rate Outside Lane, veh/h	207		Bicycle Effective \	Width, ft	24
Bicycle LOS Score	9.63		Bicycle Effective S	Speed Factor	5.07
Bicycle LOS	F				
		Sac	mont 12		
		seg	ment 12		

Ve	ehicle Inputs					
Se	gment Type	Passing Constrained	d	Length, ft		1277
Me	easured FFS	Measured		Free-Flow Speed, mi/h		70.0
D	emand and Capacity					
Directional Demand Flow Rate, veh/h		207		Opposing Deman	d Flow Rate, veh/h	-
Pe	ak Hour Factor	0.88		Total Trucks, %		18.44
Se	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.12
In	termediate Results					
Se	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Sp	eed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF	Slope Coefficient (m)	-1.29166		PF Power Coefficie	ent (p)	0.76014
ln	Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.0
%I	mprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sı	ubsegment Data					
#	Segment Type	Length, ft	Rad	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1277	-		-	68.2
Ve	ehicle Results					
Av	rerage Speed, mi/h	68.2	68.2		. %	32.3
Se	gment Travel Time, minutes	0.21	0.21		FD), followers/mi/ln	1.0
Ve	hicle LOS	А	А			
Bi	icycle Results					
Pe	rcent Occupied Parking	0		Pavement Condition	on Rating	4
Flo	ow Rate Outside Lane, veh/h	207		Bicycle Effective Width, ft		24
Bio	cycle LOS Score	9.63		Bicycle Effective Speed Factor		5.07
Bio	cycle LOS	F				
		:	Segn	nent 13		
Ve	ehicle Inputs					
Se	gment Type	Passing Constrained	d	Length, ft		779
Me	easured FFS	Measured		Free-Flow Speed,	mi/h	70.0
D	emand and Capacity					
Directional Demand Flow Rate, veh/h 207		207		Opposing Deman	d Flow Rate, veh/h	-
Peak Hour Factor		0.88		Total Trucks, %		18.44
Se	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.12
In	termediate Results					
Se	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Sp	eed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF	Slope Coefficient (m)	-1.29166		PF Power Coefficie	ent (p)	0.76014

In Pa	ssing Lane Effective Length?	No		Total Segment De	Total Segment Density, veh/mi/ln	
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Suk	segment Data					
#	Segment Type	Length, ft	Ra	dius, ft	lius, ft Superelevation, %	
1	Tangent	779	-		-	68.2
Vel	nicle Results					
Aver	age Speed, mi/h	68.2		Percent Followers	5, %	32.3
Segr	nent Travel Time, minutes	0.13		Follower Density	(FD), followers/mi/ln	1.0
Vehi	cle LOS	A		1		
Bic	ycle Results			·		<u>'</u>
Perce	ent Occupied Parking	0		Pavement Condit	ion Rating	4
Flow	Rate Outside Lane, veh/h	207		Bicycle Effective V	Width, ft	24
Bicyc	cle LOS Score	9.63		Bicycle Effective S	Speed Factor	5.07
Bicyc	cle LOS	F				
		•	Segn	nent 14		
Vel	nicle Inputs					
Segr	nent Type	Passing Constrair	Passing Constrained Le			422
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Der	mand and Capacity					·
Dire	ctional Demand Flow Rate, veh/h	255		Opposing Demar	nd Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %		13.95
Segr	nent Capacity, veh/h	1700		Demand/Capacity	Demand/Capacity (D/C)	
Inte	ermediate Results					
Segr	nent Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spee	ed Slope Coefficient (m)	4.57372		Speed Power Coefficient (p)		0.41674
PF SI	ope Coefficient (m)	-1.29219		PF Power Coeffici	PF Power Coefficient (p)	
In Pa	ssing Lane Effective Length?	No		Total Segment De	ensity, veh/mi/ln	1.4
%lm	provement to Percent Followers	0.0		%Improvement to	o Speed	0.0
Suk	segment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	422	-		-	67.9
Vel	icle Results				•	,
Aver	age Speed, mi/h	67.9		Percent Followers	5, %	36.7
Segr	nent Travel Time, minutes	0.07		Follower Density	(FD), followers/mi/ln	1.4
Vehi	cle LOS	A				
Bic	ycle Results					
	ent Occupied Parking	0		Pavement Condit	ion Rating	4
	·	1		1		1

FI-	Data Outside Lana wat /h	255	F	Diouglo Effective M	lidth ft	24
	Rate Outside Lane, veh/h	255		Bicycle Effective W		24
_	le LOS Score	7.20	В	Bicycle Effective Sp	peed Factor	5.07
Вісус	le LOS	F				
		Se	gmei	nt 15		
Veh	icle Inputs					
Segn	nent Type	Passing Constrained	Le	ength, ft		1478
Meas	sured FFS	Measured	Fı	ree-Flow Speed,	mi/h	70.0
Der	nand and Capacity					
Direc	tional Demand Flow Rate, veh/h	224	0	Opposing Demand	d Flow Rate, veh/h	-
Peak	Hour Factor	0.88	To	otal Trucks, %		19.53
Segn	nent Capacity, veh/h	1700	D	Demand/Capacity	(D/C)	0.13
Inte	ermediate Results					
Segn	nent Vertical Class	1	Fr	ree-Flow Speed,	mi/h	70.0
Spee	d Slope Coefficient (m)	4.57671	Sı	Speed Power Coef	fficient (p)	0.41674
PF SI	ope Coefficient (m)	-1.28298	P	PF Power Coefficient (p)		0.76370
In Pa	ssing Lane Effective Length?	No		otal Segment De	nsity, veh/mi/ln	1.1
%lmţ	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sub	segment Data					
#	Segment Type	Length, ft	Radius	s, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1478	-		-	68.1
Veh	icle Results					·
Avera	age Speed, mi/h	68.1	Pe	Percent Followers,	%	33.6
Segn	nent Travel Time, minutes	0.25		Follower Density (FD), followers/mi/ln		+
Segment Travel Time, minutes		0.25	Fo	follower Density (FD), followers/mi/ln	1.1
Vehic	cle LOS	A A	Fo	follower Density (FD), followers/mi/ln	1.1
			Fo	Follower Density (FD), followers/mi/ln	1.1
Bicy	cle LOS			Pavement Condition		4
Bicy Perce	cle LOS ycle Results	A	Pa		on Rating	
Bicy Perce Flow	cle LOS ycle Results ent Occupied Parking	A 0	Pi Bi	Pavement Condition	on Rating /idth, ft	4
Perce Flow Bicyc	cle LOS ycle Results ent Occupied Parking Rate Outside Lane, veh/h	0 224	Pi Bi	Pavement Condition	on Rating /idth, ft	4 24
Perce Flow Bicyc	cle LOS ycle Results ent Occupied Parking Rate Outside Lane, veh/h cle LOS Score	0 224 10.35 F	Pi Bi	Pavement Condition Bicycle Effective Wallington	on Rating /idth, ft	4 24
Bicy Perce Flow Bicyc Bicyc	cle LOS ycle Results ent Occupied Parking Rate Outside Lane, veh/h cle LOS Score	0 224 10.35 F	Pa Bi	Pavement Condition Bicycle Effective Wallington	on Rating /idth, ft	4 24
Perce Flow Bicyc Bicyc	cle LOS ycle Results ent Occupied Parking Rate Outside Lane, veh/h ele LOS Score	0 224 10.35 F	Pa Bi Bi	Pavement Condition Bicycle Effective Wallington	on Rating /idth, ft	4 24
Perce Flow Bicyc Bicyc	cle LOS ycle Results ent Occupied Parking Rate Outside Lane, veh/h ele LOS Score ele LOS	0 224 10.35 F	Pa Bi Bi	Pavement Condition Bicycle Effective Westigned Spring 16	on Rating /idth, ft oeed Factor	4 24 5.07
Perce Flow Bicyc Bicyc	cle LOS ycle Results ent Occupied Parking Rate Outside Lane, veh/h ele LOS Score ele LOS sicle Inputs ment Type	A 0 224 10.35 F Se Passing Constrained	Pa Bi Bi	Pavement Condition Bicycle Effective We Bicycle Effective Sp nt 16 Length, ft	on Rating /idth, ft oeed Factor	4 24 5.07
Perce Flow Bicyc Bicyc	cle LOS ycle Results ent Occupied Parking Rate Outside Lane, veh/h cle LOS Score cle LOS clicle Inputs nent Type sured FFS mand and Capacity	A 0 224 10.35 F Se Passing Constrained Measured	Pa Bi Bi	Pavement Condition Bicycle Effective Wasicycle Effective Spanner The state of the	on Rating /idth, ft peed Factor mi/h	4 24 5.07
Perce Flow Bicyc Bicyc Veh Segm Meas Den	cle LOS ycle Results ent Occupied Parking Rate Outside Lane, veh/h ele LOS Score ele LOS nicle Inputs nent Type sured FFS	A 0 224 10.35 F Se Passing Constrained	Pa Bi Bi	Pavement Condition Bicycle Effective Wasicycle Effective Spanner The state of the	on Rating /idth, ft oeed Factor	4 24 5.07 384 70.0

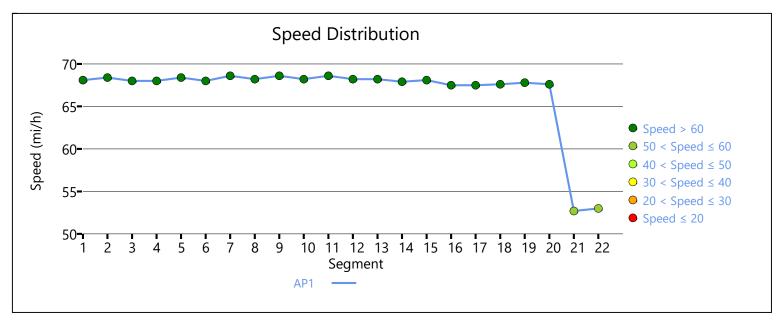
Int	ermediate Results						
Seg	ment Vertical Class	1		Free-Flow Spe	Free-Flow Speed, mi/h		70.0
Spe	ed Slope Coefficient (m)	4.57372	4.57372		Coefficient (p)		0.41674
PF S	ilope Coefficient (m)	-1.29233	-1.29233		ficient (p)		0.75931
In P	assing Lane Effective Length?	No		Total Segment	Density, veh/mi/ln		2.1
%ln	provement to Percent Followers	0.0		%Improvemer	t to Speed		0.0
Su	bsegment Data						
#	Segment Type	Length, ft	Length, ft Radiu		Superelevation	1, %	Average Speed, mi/h
1	Tangent	384	384 -		-		67.5
Ve	hicle Results						
Ave	rage Speed, mi/h	67.5		Percent Follow	vers, %	П	42.9
Seg	ment Travel Time, minutes	0.06		Follower Dens	ity (FD), followers/m	ni/ln	2.1
Veh	icle LOS	В					
Bio	cycle Results						
Perd	ent Occupied Parking	0		Pavement Condition Rating		П	4
Flov	v Rate Outside Lane, veh/h	333		Bicycle Effective	Bicycle Effective Width, ft		24
Bicy	cle LOS Score	6.74		Bicycle Effective Speed Factor			5.07
Вісу	cle LOS	F	F				
		•	Segn	nent 17			
Ve	hicle Inputs						
	ment Type	Passing Constraine	ed	Length, ft		Т	3732
	asured FFS	Measured		Free-Flow Speed, mi/h			70.0
_	mand and Capacity			<u>'</u>			
	ectional Demand Flow Rate, veh/h	323		Opposing Der	nand Flow Rate, veh	ı/h	_
	K Hour Factor	0.88		Total Trucks, %			12.21
	ment Capacity, veh/h	1700			Demand/Capacity (D/C)		0.19
	ermediate Results			<u> </u>	,		
	ment Vertical Class	1		Free-Flow Spe	ed mi/h		70.0
	ed Slope Coefficient (m)	4.60878		Speed Power			0.41674
	Slope Coefficient (m)	-1.21846		PF Power Coe	<u> </u>		0.78615
	assing Lane Effective Length?	No			Density, veh/mi/ln		1.9
	nprovement to Percent Followers	0.0		%Improvemer	-		0.0
	bsegment Data						
#	Segment Type	Length, ft	Ra	ndius, ft	Superelevation	1, %	Average Speed, mi/h
1	Tangent	3732	-		-		67.5
	hicle Results						
		67.5		Porcent Follow	uors %		30.4
Ave	rage Speed, mi/h	67.5		Percent Follow	vers, %		39.4

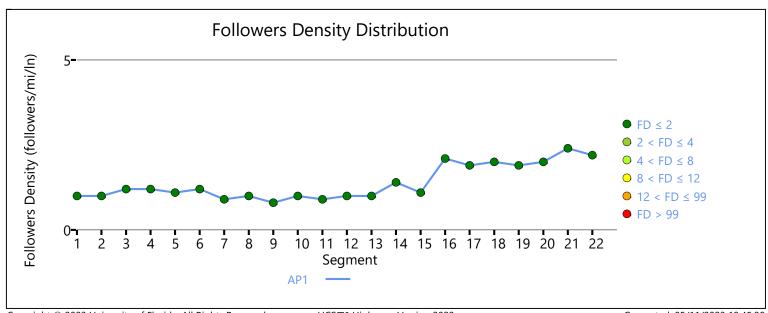
Segment Travel Time, minutes	0.63		Follower Density (FD), followers/mi/ln	1.9
Vehicle LOS	0.03		Tollower Delisity (D), Tollowers/Thl/III	1.3
Bicycle Results					
Percent Occupied Parking	0		Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h	323	323		/idth, ft	24
Bicycle LOS Score	6.46		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	F				
		Segm	ent 18		
Vehicle Inputs					
Segment Type	Passing Constrain	ned	Length, ft		1360
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/	h 323		Opposing Deman	d Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %		12.21
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)	4.57450		Speed Power Coe	ficient (p)	0.41674
PF Slope Coefficient (m)	-1.29014		PF Power Coefficie	ent (p)	0.76012
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	2.0
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rad	dius, ft Superelevation, %		Average Speed, mi/h
1 Tangent	1360	-		-	67.6
Vehicle Results					·
Average Speed, mi/h	67.6		Percent Followers,	%	42.1
Segment Travel Time, minutes	0.23		Follower Density (FD), followers/mi/ln	2.0
Vehicle LOS	В				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h 323			Bicycle Effective W	/idth, ft	24
Bicycle LOS Score 6.46		Bicycle Effective S	peed Factor	5.07	
Bicycle LOS	F				
		Segn	ent 19		
Vehicle Inputs					
Segment Type	Passing Zone		Length, ft		1595
Measured FFS	Measured		Free-Flow Speed, mi/h		70.0

Demand and Capacity					
Directional Demand Flow Rate, veh/h	323		Opposing Dem	and Flow Rate, veh/h	609
Peak Hour Factor	0.88		Total Trucks, %		12.21
Segment Capacity, veh/h	1700		Demand/Capa	city (D/C)	0.19
Intermediate Results					
Segment Vertical Class	1		Free-Flow Spee	ed, mi/h	70.0
Speed Slope Coefficient (m)	4.43319		Speed Power C	oefficient (p)	0.46889
PF Slope Coefficient (m)	-1.27240		PF Power Coeff	icient (p)	0.79247
In Passing Lane Effective Length?	No		Total Segment	Density, veh/mi/ln	1.9
%Improvement to Percent Followers	0.0		%Improvemen	t to Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1595	1595 -		-	67.8
Vehicle Results					
Average Speed, mi/h	67.8	67.8		ers, %	40.5
Segment Travel Time, minutes	0.27	0.27		ty (FD), followers/mi/ln	1.9
Vehicle LOS	А				
Bicycle Results	·				
Percent Occupied Parking	0	0		dition Rating	4
Flow Rate Outside Lane, veh/h	323		Bicycle Effective	e Width, ft	24
Bicycle LOS Score	6.46		Bicycle Effective	e Speed Factor	5.07
Bicycle LOS	F				
		Segr	ment 20		
Vehicle Inputs					
Segment Type	Passing Constrain	ied	Length, ft		595
Measured FFS	Measured		Free-Flow Spee	ed, mi/h	70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	323		Opposing Dem	and Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %		12.21
Segment Capacity, veh/h	1700		Demand/Capa	city (D/C)	0.19
Intermediate Results					
Segment Vertical Class	1		Free-Flow Spee	ed, mi/h	70.0
Speed Slope Coefficient (m)	4.57372		Speed Power C	oefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29239		PF Power Coeff	icient (p)	0.75923
In Passing Lane Effective Length?	No		Total Segment	Density, veh/mi/In	2.0
%Improvement to Percent Followers	0.0		%Improvemen	t to Speed	0.0

#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	595	-		-	67.6
Vel	nicle Results	•				
Aver	rage Speed, mi/h	67.6		Percent Followers	, %	42.2
Segr	ment Travel Time, minutes	0.10		Follower Density ((FD), followers/mi/ln	2.0
Vehi	cle LOS	В				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	323		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	6.46		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	F				
			Segn	nent 21		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrai	ned	Length, ft		958
Mea	sured FFS	Measured		Free-Flow Speed, mi/h		55.0
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	289		Opposing Deman	d Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %		10.81
Segr	ment Capacity, veh/h	1700		Demand/Capacity	r (D/C)	0.17
Int	ermediate Results					
Segr	ment Vertical Class	1	Free-Flow Speed		mi/h	55.0
Spe	ed Slope Coefficient (m)	4.57372		Speed Power Coefficient (p)		0.41674
PF S	lope Coefficient (m)	-1.43859		PF Power Coefficient (p)		0.72596
In Pa	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	2.4
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	958	-		-	52.7
Vel	nicle Results					
Aver	rage Speed, mi/h	52.7		Percent Followers	, %	44.2
Segr	ment Travel Time, minutes	0.21		Follower Density ((FD), followers/mi/ln	2.4
Vehicle LOS B						
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	289		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	5.35			peed Factor	4.62
Bicy	cle LOS	E				

		9	Segme	nt 22		
Veh	icle Inputs					
Segm	nent Type	Passing Zone	L	ength, ft		1659
Meas	ured FFS	Measured	F	ree-Flow Speed,	mi/h	55.0
Den	nand and Capacity					
Direc	tional Demand Flow Rate, veh/h	289	С	Opposing Deman	d Flow Rate, veh/h	480
Peak	Hour Factor	0.88	To	otal Trucks, %		10.81
Segm	nent Capacity, veh/h	1700	D	Demand/Capacity	/ (D/C)	0.17
Inte	rmediate Results					
Segm	nent Vertical Class	1	F	ree-Flow Speed,	mi/h	55.0
Speed	d Slope Coefficient (m)	4.40548	S	peed Power Coe	fficient (p)	0.48486
PF Slo	ope Coefficient (m)	-1.35962	Р	PF Power Coefficient (p)		0.76214
In Pas	ssing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		2.2
%lmp	provement to Percent Followers	0.0	%	6Improvement to	Speed	0.0
Sub	segment Data					
#	Segment Type	Length, ft	Radius	ius, ft Superelevation, %		Average Speed, mi/h
1	Tangent	1659	-		-	53.0
Veh	icle Results					
Avera	age Speed, mi/h	53.0	Р	ercent Followers	, %	41.0
Segm	nent Travel Time, minutes	0.36	F	Follower Density (FD), followers/mi/ln		2.2
Vehic	le LOS	В				
Bicy	cle Results					
Perce	nt Occupied Parking	0	P	Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	289	В	Bicycle Effective V	Vidth, ft	24
Bicyc	le LOS Score	5.35	В	Bicycle Effective S	peed Factor	4.62
Bicyc	le LOS	E				
Faci	lity Results					
Т	VMT veh-mi/p	VHD veh-h/ţ)		ensity, followers/ mi/ln	LOS
1	343	0.15			1.3	А





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HCSTM Highways Version 2022 WB_38_EHartford_2040AM.xuf

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HCS Two-I	Lane	Highway Re	port	
MJV		Date		5/11/2023
HRG		Analysis Year		2040 NB
SDDOT		Time Analyzed		PM Peak
SD 38 WB East of H	lartford	Units		U.S. Customary
	Segn	nent 1		
Passing Constraine	d	Length, ft		1727
Measured		_	mi/h	70.0
659		Opposing Deman	d Flow Rate, veh/h	-
0.88		Total Trucks, %		8.97
1700			(D/C)	0.39
		'		
1		Free-Flow Speed,	mi/h	70.0
4.58112		Speed Power Coe	fficient (p)	0.41674
-1.27241		PF Power Coefficie	ent (p)	0.76681
No		Total Segment De	nsity, veh/mi/ln	6.0
0.0		%Improvement to Speed		0.0
		<u>'</u>		
Length, ft	Rac	 dius, ft	Superelevation, %	Average Speed, mi/h
1727	-		-	66.4
				<u>'</u>
66.4		Percent Followers	. %	60.3
0.30		Follower Density (FD), followers/mi/ln	6.0
С				
0		Pavement Conditi	on Rating	4
, 3		Bicycle Effective W	/idth, ft	24
Bicycle LOS Score 5.39				5.07
E				
	Segn	nent 2		
Passing Zone		Length, ft		1676
+ -		Free-Flow Speed,		70.0
	MJV HRG SDDOT SD 38 WB East of F Passing Constraine Measured 659 0.88 1700 1 4.58112 -1.27241 No 0.0 Length, ft 1727 66.4 0.30 C 0 659 5.39	MJV HRG SDDOT SD 38 WB East of Hartford Segn Passing Constrained Measured 659 0.88 1700 1 4.58112 -1.27241 No 0.0 Length, ft Rac 1727 - 66.4 0.30 C 0 659 5.39 E Segn	MJV Date HRG Analysis Year SDDOT Time Analyzed SD 38 WB East of Hartford Units Segment 1 Passing Constrained Length, ft Measured Free-Flow Speed, 659 Opposing Demand 0.88 Total Trucks, % 1700 Demand/Capacity 1 Free-Flow Speed, 4.58112 Speed Power Coel -1.27241 PF Power Coefficie No Total Segment De 0.0 %Improvement to Length, ft Radius, ft 1727 - 66.4 Percent Followers, 0.30 Follower Density (C 0 Pavement Conditie 659 Bicycle Effective W 5.39 Bicycle Effective S E Segment 2	HRG SDDOT Time Analyzed SD 38 WB East of Hartford Units

Domand and Canadity					
Demand and Capacity	l cro			151 5	Lana
Directional Demand Flow Rate, veh/h	659		Opposing Demand Flow Rate, veh/h		309
Peak Hour Factor	0.88		Total Trucks, %		8.97
Segment Capacity, veh/h 1700			Demand/Capacity	(D/C)	0.39
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.36102		Speed Power Coe	fficient (p)	0.51334
PF Slope Coefficient (m)	-1.24034		PF Power Coefficie	ent (p)	0.80784
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	5.8
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Radi	ius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1676	-		-	66.8
Vehicle Results					
Average Speed, mi/h	66.8		Percent Followers,	, %	58.8
Segment Travel Time, minutes	0.29		Follower Density ((FD), followers/mi/ln	5.8
Vehicle LOS	С				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	659		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	5.39		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	E				
	S	egm	nent 3		
Vehicle Inputs					
Segment Type	Passing Constrained		Length, ft		1864
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	411		Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor	0.88		Total Trucks, %		17.04
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.24
Intermediate Results					
Segment Vertical Class 1			Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.58341		Speed Power Coe	fficient (p)	0.41674
PF Slope Coefficient (m)	-1.26572		PF Power Coefficie	ent (p)	0.77025
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	2.9
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
•					

#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1864	-		-	67.2
Veł	nicle Results		•			
Aver	rage Speed, mi/h	67.2		Percent Followers	, %	47.2
Segr	ment Travel Time, minutes	0.32	0.32		(FD), followers/mi/ln	2.9
Vehi	cle LOS	В				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	411		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	9.14		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	F				
			Segr	ment 4		
Veł	nicle Inputs					
Segr	ment Type	Passing Constrai	ned	Length, ft		718
Mea	sured FFS	Measured		Free-Flow Speed, mi/h		70.0
Dei	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	411		Opposing Deman	d Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %		17.04
Segr	ment Capacity, veh/h	1700		Demand/Capacity	γ (D/C)	0.24
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed, mi/h		70.0
Spe	ed Slope Coefficient (m)	4.57372		Speed Power Coefficient (p)		0.41674
PF S	lope Coefficient (m)	-1.29182		PF Power Coefficient (p)		0.75993
In Pa	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	3.0
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Suł	osegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	718	-		-	67.2
Veł	nicle Results					
Aver	rage Speed, mi/h	67.2		Percent Followers	, %	48.2
Segr	ment Travel Time, minutes	0.12		Follower Density ((FD), followers/mi/ln	3.0
Vehicle LOS B						
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	411		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	9.14		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	F				

		9	Segi	ment 5		
Ve	hicle Inputs					
Seg	ment Type	Passing Zone		Length, ft		1738
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	411		Opposing Deman	d Flow Rate, veh/h	316
Pea	k Hour Factor	0.88	0.88 T			17.04
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.24
Int	termediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.36408		Speed Power Coe	fficient (p)	0.51197
PF S	Slope Coefficient (m)	-1.23776		PF Power Coefficie	ent (p)	0.80977
In P	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	2.8
%In	nprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Ra	ndius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1738	-		-	67.6
Ve	hicle Results					
Ave	rage Speed, mi/h	67.6		Percent Followers,	, %	45.3
Seg	ment Travel Time, minutes	0.29	.29		FD), followers/mi/ln	2.8
Veh	icle LOS	В				
Bio	cycle Results					
Per	cent Occupied Parking	0		Pavement Conditi	on Rating	4
Flov	w Rate Outside Lane, veh/h	411		Bicycle Effective Width, ft		24
Bicy	vcle LOS Score	9.14		Bicycle Effective Speed Factor		5.07
Bicy	rcle LOS	F				
		9	Segi	ment 6		
Ve	hicle Inputs					
	ment Type	Passing Constrained		Length, ft		579
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity	,				
Dire	ectional Demand Flow Rate, veh/h	411		Opposing Deman	d Flow Rate, veh/h	-
Pea	k Hour Factor	0.88		Total Trucks, %		17.04
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.24
Int	termediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
				1		_1

	4.530-0				0.44674
Speed Slope Coefficient (m)	4.57372		Speed Power Coe		0.41674
PF Slope Coefficient (m)	-1.29182		PF Power Coefficient (p)		0.75993
In Passing Lane Effective Length?	No		Total Segment De		3.0
%Improvement to Percent Followers	0.0		%Improvement to Speed		0.0
Subsegment Data					
# Segment Type	Length, ft	Rac	ius, ft Superelevation, %		Average Speed, mi/h
1 Tangent	579	-		-	67.2
Vehicle Results					
Average Speed, mi/h	67.2		Percent Followers	, %	48.2
Segment Travel Time, minutes	0.10		Follower Density (FD), followers/mi/ln	3.0
Vehicle LOS	В				
Bicycle Results					·
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	411		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	9.14		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	F				
		Segn	nent 7		
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	344		Opposing Demand Flow Rate, veh/h		251
Peak Hour Factor	0.88		Total Trucks, %		18.44
Segment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.20
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.35242		Speed Power Coe	fficient (p)	0.52604
PF Slope Coefficient (m)	-1.20821		PF Power Coefficie	ent (p)	0.82203
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	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	2262	-		-	67.9
Vehicle Results					·
Average Speed, mi/h	67.9		Percent Followers	, %	39.5
Segment Travel Time, minutes	0.38		Follower Density (FD), followers/mi/ln		2.0
Vehicle LOS B					

- 1 - 1:					
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	344		Bicycle Effective Width, ft		24
Bicycle LOS Score	9.89		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	F				
		Segn	ment 8		
Vehicle Inputs					
Segment Type	Passing Constraine	d	Length, ft		980
Measured FFS	Measured FFS Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	344		Opposing Deman	d Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %		18.44
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.20
Intermediate Results			<u>'</u>		
Segment Vertical Class	1	1		mi/h	70.0
Speed Slope Coefficient (m)	4.57372	4.57372		fficient (p)	0.41674
PF Slope Coefficient (m)	-1.29166		PF Power Coefficie	ent (p)	0.76014
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	2.2
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	980	1-		-	67.5
Vehicle Results					<u>'</u>
Average Speed, mi/h	67.5		Percent Followers	 , %	43.7
Segment Travel Time, minutes	0.17		Follower Density (FD), followers/mi/ln		2.2
Vehicle LOS	В				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	344		Bicycle Effective V		24
Bicycle LOS Score	9.89		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	F				
		Segn	nent 9		
Vehicle Inputs					
Segment Type	Passing Zone		Length, ft		3667
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity					

Dire	ctional Demand Flow Rate, veh/h	344	344		d Flow Rate, veh/h	251
Peak	Hour Factor	0.88		Total Trucks, %		18.44
Segr	nent Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.20
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.37083		Speed Power Coef	fficient (p)	0.52604
PF S	lope Coefficient (m)	-1.17691		PF Power Coefficie	ent (p)	0.83360
In Passing Lane Effective Length?		Total Segment De	nsity, veh/mi/ln	1.9		
%Improvement to Percent Followers 0.0		%Improvement to	Speed	0.0		
Sul	segment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3667	3667 -		-	67.9
Vel	nicle Results					
Aver	age Speed, mi/h	67.9		Percent Followers,	%	38.4
Segment Travel Time, minutes 0.61		Follower Density (FD), followers/mi/ln	1.9		
Vehi	Vehicle LOS A					
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Condition	on Rating	4
Flow	Rate Outside Lane, veh/h	344		Bicycle Effective W	/idth, ft	24
Bicy	cle LOS Score	9.89		Bicycle Effective S _I	peed Factor	5.07
Bicy	cle LOS	F				
			Segr	ment 10		
Vel	nicle Inputs					
Segr	ment Type	Passing Constraine	ed	Length, ft		1846
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	344		Opposing Demand	d Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %		18.44
Segr	nent Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.20
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.58311		Speed Power Coef	fficient (p)	0.41674
PF S	ope Coefficient (m)	-1.26629		PF Power Coefficie	ent (p)	0.77017
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	2.2
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	segment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
_						

1 Tangent	1846	-		-	67.5
Vehicle Results					
Average Speed, mi/h	67.5		Percent Followers,	%	42.7
Segment Travel Time, minutes	0.31		Follower Density (FD), followers/mi/ln		2.2
Vehicle LOS	В				
Bicycle Results	<u>'</u>		'		
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	344		Bicycle Effective W	/idth, ft	24
Bicycle LOS Score	9.89		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	F				
	So	egm	ent 11		
Vehicle Inputs					
Segment Type	Passing Zone		Length, ft		2174
Measured FFS Measured		Free-Flow Speed,	mi/h	70.0	
Demand and Capacity			<u>'</u>		
Directional Demand Flow Rate, veh/h	344		Opposing Demand	d Flow Rate, veh/h	251
Peak Hour Factor	0.88		Total Trucks, %		18.44
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.20
Intermediate Results			'		
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.35110		Speed Power Coefficient (p)		0.52604
PF Slope Coefficient (m)	-1.21102		PF Power Coefficient (p)		0.82087
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	Rad	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	2174	-		-	67.9
Vehicle Results					
Average Speed, mi/h	67.9		Percent Followers,	. %	39.6
Segment Travel Time, minutes	0.36		Follower Density (FD), followers/mi/ln	2.0
Vehicle LOS B			7		
Bicycle Results	•		<u> </u>		
Percent Occupied Parking 0			Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	344		Bicycle Effective W	/idth, ft	24
Bicycle LOS Score	9.89		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	F				
	Se	egm	ent 12		

Ve	ehicle Inputs					
Se	gment Type	Passing Constrained	d	Length, ft		1277
Me	easured FFS	Measured		Free-Flow Speed, mi/h		70.0
D	emand and Capacity					
Dii	rectional Demand Flow Rate, veh/h	344		Opposing Deman	d Flow Rate, veh/h	-
Peak Hour Factor		0.88		Total Trucks, %		18.44
Se	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.20
In	termediate Results					
Se	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Sp	eed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF	Slope Coefficient (m)	-1.29166		PF Power Coefficie	ent (p)	0.76014
ln	Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	2.2
%I	mprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sı	ubsegment Data					
#	Segment Type	Length, ft Radi		dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1277	1277 -		-	67.5
Ve	ehicle Results					
Av	rerage Speed, mi/h	67.5	67.5		. %	43.7
Se	gment Travel Time, minutes	0.22		Follower Density (FD), followers/mi/ln	2.2
Ve	hicle LOS	В				
Bi	icycle Results					
Pe	rcent Occupied Parking	0		Pavement Condition	on Rating	4
Flo	ow Rate Outside Lane, veh/h	344		Bicycle Effective Width, ft		24
Bio	cycle LOS Score	9.89		Bicycle Effective Speed Factor		5.07
Bio	cycle LOS	F				
			Segm	nent 13		
Ve	ehicle Inputs					
Se	gment Type	Passing Constrained	d	Length, ft		779
Me	easured FFS	Measured		Free-Flow Speed,	mi/h	70.0
D	emand and Capacity					
Dii	rectional Demand Flow Rate, veh/h	344		Opposing Deman	d Flow Rate, veh/h	-
Pe	ak Hour Factor	0.88		Total Trucks, %		18.44
Se	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.20
In	termediate Results					
Se	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Sp	eed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF	Slope Coefficient (m)	-1.29166		PF Power Coefficie	ent (p)	0.76014

In Passing Lane Effective Length?		Total Segment De	Total Segment Density, veh/mi/ln				
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0	
Suk	segment Data						
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h	
1	Tangent	779	-		-	67.5	
Vel	nicle Results						
Aver	age Speed, mi/h	67.5		Percent Followers	5, %	43.7	
Segr	nent Travel Time, minutes	0.13		Follower Density	(FD), followers/mi/ln	2.2	
Vehi	cle LOS	В					
Bic	ycle Results						
Perce	ent Occupied Parking	0		Pavement Condit	ion Rating	4	
Flow	Rate Outside Lane, veh/h	344		Bicycle Effective \	Width, ft	24	
Bicyc	cle LOS Score	9.89		Bicycle Effective S	Speed Factor	5.07	
Bicyc	cle LOS	F					
		•	Segn	nent 14			
Vel	nicle Inputs						
Segr	nent Type	Passing Constrair	ned	Length, ft		422	
Mea	sured FFS	Measured		Free-Flow Speed,	Free-Flow Speed, mi/h		
Der	mand and Capacity						
Dire	ctional Demand Flow Rate, veh/h	430		Opposing Demar	Opposing Demand Flow Rate, veh/h		
Peak	Hour Factor	0.88		Total Trucks, %		13.95	
Segr	nent Capacity, veh/h	1700		Demand/Capacity (D/C)		0.25	
Inte	ermediate Results						
Segr	nent Vertical Class	1		Free-Flow Speed, mi/h		70.0	
Spee	ed Slope Coefficient (m)	4.57372		Speed Power Coe	Speed Power Coefficient (p)		
PF SI	ope Coefficient (m)	-1.29219		PF Power Coeffici	ent (p)	0.75948	
In Pa	ssing Lane Effective Length?	No		Total Segment De	ensity, veh/mi/ln	3.2	
%lm	provement to Percent Followers	0.0		%Improvement to	%Improvement to Speed		
Suk	segment Data						
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h	
1	Tangent	422	-		-	67.1	
Vel	icle Results				•		
Aver	age Speed, mi/h	67.1		Percent Followers	5, %	49.3	
Segr	nent Travel Time, minutes	0.07		Follower Density	(FD), followers/mi/ln	3.2	
Vehi	cle LOS	В					
Bic	ycle Results						
	ent Occupied Parking	0		Pavement Condit	ion Rating	4	
Percent Occupied Parking		1	Pavement Condition Rating				

Ela	Pata Outsida Lana wat //-	420		Picyclo Effortive 14	/id+b ft	24
	Rate Outside Lane, veh/h le LOS Score	7.47	_	Bicycle Effective W		5.07
_		7.47 F	- '	BICYCIE Effective S	beed Factor	5.07
ысус	le LOS					
		Se	gme	ent 15		
Veh	icle Inputs					
Segn	nent Type	Passing Constrained	ı	Length, ft		1478
Meas	sured FFS	Measured	l	Free-Flow Speed,	mi/h	70.0
Der	nand and Capacity					
Direc	tional Demand Flow Rate, veh/h	382	- (Opposing Demand	d Flow Rate, veh/h	-
Peak	Hour Factor	0.88	-	Total Trucks, %		19.53
Segn	nent Capacity, veh/h	1700	ı	Demand/Capacity	(D/C)	0.22
Inte	ermediate Results					
Segn	nent Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spee	d Slope Coefficient (m)	4.57671	:	Speed Power Coefficient (p)		0.41674
PF SI	ope Coefficient (m)	-1.28298	1	PF Power Coefficient (p)		0.76370
In Pa	ssing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		2.6
%lmp	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sub	segment Data					
#	Segment Type	Length, ft	Radiu	us, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1478	-	-		67.3
Veh	icle Results					
Avera	age Speed, mi/h	67.3	T	Percent Followers,	%	45.9
Segn	nent Travel Time, minutes	0.25	1	Follower Density (FD), followers/mi/ln		2.6
Vehic	ile LOS	В				
Bic	/cle Results					•
	reie nesures					
	ent Occupied Parking	0		Pavement Condition	on Rating	4
Perce		0 382		Pavement Condition		4 24
Perce	ent Occupied Parking		1		/idth, ft	
Perce Flow Bicyc	ent Occupied Parking Rate Outside Lane, veh/h	382	1	Bicycle Effective W	/idth, ft	24
Perce Flow Bicyc	ent Occupied Parking Rate Outside Lane, veh/h le LOS Score	382 10.62 F		Bicycle Effective W	/idth, ft	24
Perce Flow Bicyc	ent Occupied Parking Rate Outside Lane, veh/h le LOS Score	382 10.62 F		Bicycle Effective W Bicycle Effective S	/idth, ft	24
Perce Flow Bicyc	ent Occupied Parking Rate Outside Lane, veh/h le LOS Score le LOS	382 10.62 F	gme	Bicycle Effective W Bicycle Effective S	/idth, ft	24
Perce Flow Bicyc Bicyc	Rate Outside Lane, veh/h le LOS Score le LOS	382 10.62 F	gme	Bicycle Effective W Bicycle Effective S ent 16	/idth, ft peed Factor	24 5.07
Perce Flow Bicyc Bicyc	Rate Outside Lane, veh/h le LOS Score le LOS icle Inputs nent Type	382 10.62 F Se Passing Constrained	gme	Bicycle Effective W Bicycle Effective S ent 16 Length, ft	/idth, ft peed Factor	24 5.07 384
Perce Flow Bicyc Bicyc	Rate Outside Lane, veh/h le LOS Score le LOS icle Inputs ment Type sured FFS mand and Capacity	382 10.62 F Se Passing Constrained	gme	Bicycle Effective W Bicycle Effective S ent 16 Length, ft Free-Flow Speed,	/idth, ft peed Factor mi/h	24 5.07 384
Perce Flow Bicyc Bicyc Veh Segm Meas Der	Rate Outside Lane, veh/h le LOS Score le LOS icle Inputs nent Type sured FFS	382 10.62 F Se Passing Constrained Measured	gme	Bicycle Effective W Bicycle Effective S ent 16 Length, ft Free-Flow Speed,	/idth, ft peed Factor	24 5.07 384 70.0

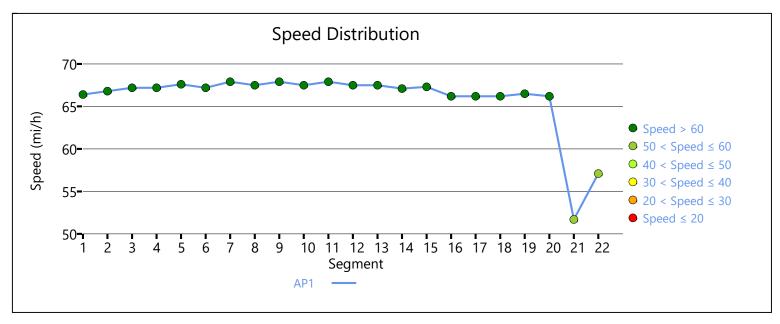
Int	termediate Results					
Seg	ment Vertical Class	1		Free-Flow Spee	d, mi/h	70.0
Spe	eed Slope Coefficient (m)	4.57372		Speed Power Co	pefficient (p)	0.41674
PF :	Slope Coefficient (m)	-1.29233		PF Power Coeff	cient (p)	0.75931
In F	assing Lane Effective Length?	No	No		Density, veh/mi/ln	7.2
%In	%Improvement to Percent Followers 0.0		%Improvement	to Speed	0.0	
Su	bsegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	384	384 -		-	66.2
Ve	hicle Results					
Ave	erage Speed, mi/h	66.2		Percent Followe	rs, %	64.2
Seg	ment Travel Time, minutes	0.07		Follower Densit	y (FD), followers/mi/ln	7.2
Veh	icle LOS	С				
Bio	cycle Results					•
Per	cent Occupied Parking	0		Pavement Conc	ition Rating	4
Flo	w Rate Outside Lane, veh/h	740		Bicycle Effective Width, ft		24
Bicy	ycle LOS Score	7.15		Bicycle Effective Speed Factor		5.07
Bicy	/cle LOS	F				
			Segn	nent 17		
Ve	hicle Inputs					
	ıment Type	Passing Constraine	ed	Length, ft		3732
	asured FFS	Measured		Free-Flow Speed, mi/h		70.0
	emand and Capacity			<u>'</u>	<u> </u>	1
	ectional Demand Flow Rate, veh/h	735		Opposing Dem	and Flow Rate, veh/h	-
	k Hour Factor	0.88		Total Trucks, %		12.21
	ment Capacity, veh/h	1700		Demand/Capac	ity (D/C)	0.43
_	termediate Results					
	ment Vertical Class	1		Free-Flow Spee	d mi/h	70.0
	eed Slope Coefficient (m)	4.60878		Speed Power Co		0.41674
	Slope Coefficient (m)	-1.21846		PF Power Coeff	•	0.78615
	Passing Lane Effective Length?	No.			Density, veh/mi/ln	6.8
	nprovement to Percent Followers	0.0		%Improvement	-	0.0
	bsegment Data			, 5 5 5 M S M	1	
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3732	-	aids, it	-	66.2
	hicle Results	5732				- OO.L
		66.2		Danes of E. II	O/	C1 C
Ave	erage Speed, mi/h	66.2		Percent Followe	rs, %	61.6

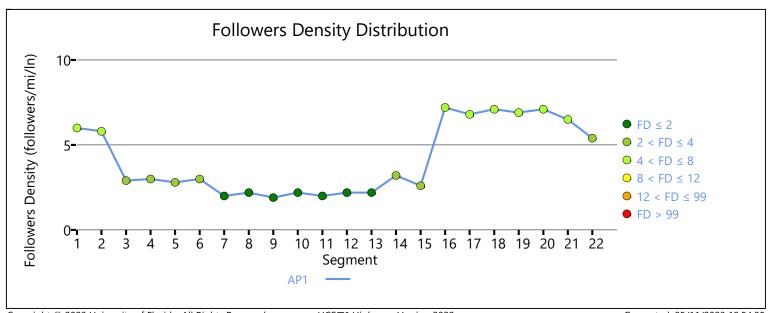
Segment Travel Time, minutes	0.64		Follower Density (FD), followers/mi/ln	6.8
Vehicle LOS	C		Tollower Berisity (1 D), 10110WC13,1111,111	0.0
Bicycle Results					1
Percent Occupied Parking	0		Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h	735		Bicycle Effective W		24
Bicycle LOS Score	6.88		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	F				
		Segm	nent 18		
Vehicle Inputs					
Segment Type	Passing Constrain	ned	Length, ft		1360
Measured FFS	Measured	Measured		mi/h	70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/	h 735		Opposing Demand	d Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %		12.21
Segment Capacity, veh/h	1700	1700		(D/C)	0.43
Intermediate Results					
Segment Vertical Class 1		Free-Flow Speed,	mi/h	70.0	
Speed Slope Coefficient (m)	4.57450	4.57450		fficient (p)	0.41674
PF Slope Coefficient (m)	-1.29014	-1.29014		ent (p)	0.76012
In Passing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		7.1
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rad	lius, ft Superelevation, %		Average Speed, mi/h
1 Tangent	1360	-		-	66.2
Vehicle Results	-	·			
Average Speed, mi/h	66.2		Percent Followers,	%	64.0
Segment Travel Time, minutes	0.23		Follower Density (FD), followers/mi/ln	7.1
Vehicle LOS	С				
Bicycle Results	<u> </u>		<u>'</u>		
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	735		Bicycle Effective W	/idth, ft	24
Bicycle LOS Score	6.88		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	F				
		Segm	nent 19		
Vehicle Inputs					
Segment Type	Passing Zone		Length, ft		1595
	1 -	Passing Zone			

Demand and Capacity					
	725		Onnada 5	d Flow Botton L (I	222
Directional Demand Flow Rate, veh/h	735		Opposing Demand Flow Rate, veh/h		333
Peak Hour Factor	0.88		Total Trucks, %		12.21
Segment Capacity, veh/h	1700		Demand/Capacity	/ (D/C)	0.43
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.36650	4.36650		fficient (p)	0.50865
PF Slope Coefficient (m)	-1.24703	-1.24703		ent (p)	0.80540
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	6.9
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Length, ft Radiu		Superelevation, %	Average Speed, mi/h
1 Tangent	1595]-		-	66.5
Vehicle Results					
Average Speed, mi/h	66.5		Percent Followers	, %	62.2
Segment Travel Time, minutes	0.27		Follower Density (FD), followers/mi/ln		6.9
Vehicle LOS	С				
Bicycle Results	<u>'</u>				
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	735		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	6.88		Bicycle Effective Speed Factor		5.07
Bicycle LOS	F				
	S	egm	ent 20		
Vehicle Inputs					
Segment Type	Passing Constrained		Length, ft		595
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	735		Opposing Deman	d Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %		12.21
Segment Capacity, veh/h	1700		Demand/Capacity	/ (D/C)	0.43
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.57372		Speed Power Coe		0.41674
PF Slope Coefficient (m)	-1.29239		PF Power Coefficie	ent (p)	0.75923
In Passing Lane Effective Length?	No		Total Segment De	<u> </u>	7.1
%Improvement to Percent Followers	0.0		%Improvement to	-	0.0
Subsegment Data	·				
Jabbeyinelit Bata					

#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	595	-		-	66.2
Vel	nicle Results	•				
Aver	age Speed, mi/h	66.2		Percent Followers	, %	64.1
Segr	ment Travel Time, minutes	0.10	0.10		(FD), followers/mi/ln	7.1
Vehi	cle LOS	С				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h 735		Bicycle Effective V	Vidth, ft	24		
Bicy	cle LOS Score	6.88		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	F				
			Segn	nent 21		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrai	ned	Length, ft		958
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	55.0
Dei	mand and Capacity			<u>'</u>		
Directional Demand Flow Rate, veh/h 551			Opposing Deman	d Flow Rate, veh/h	-	
Peak	Hour Factor	0.88		Total Trucks, %		10.81
Segr	ment Capacity, veh/h	1700		Demand/Capacity	/ (D/C)	0.32
Inte	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	55.0
Spee	ed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.43859		PF Power Coefficient (p)		0.72596
In Pa	assing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		6.5
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Suk	osegment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	958	-		-	51.7
Vel	nicle Results					
Aver	rage Speed, mi/h	51.7		Percent Followers	, %	60.7
Segr	Segment Travel Time, minutes 0.21		Follower Density	(FD), followers/mi/ln	6.5	
Vehicle LOS C						
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
	Rate Outside Lane, veh/h	551		Bicycle Effective V		24
Bicyc	cle LOS Score	5.68		Bicycle Effective S		4.62
Bicvo	cle LOS	F				

		Se	gmer	nt 22		
Veh	icle Inputs					
Segm	ent Type	Passing Zone	Le	Length, ft		1659
Meas	ured FFS	Measured	Fr	ee-Flow Speed,	mi/h	60.0
Den	nand and Capacity					
Direct	tional Demand Flow Rate, veh/h	551	O	pposing Deman	d Flow Rate, veh/h	299
Peak l	Hour Factor	0.88	To	otal Trucks, %		10.81
Segm	ent Capacity, veh/h	1700	De	emand/Capacity	' (D/C)	0.32
Inte	rmediate Results		·			·
Segm	ent Vertical Class	1	Fr	ee-Flow Speed,	mi/h	60.0
Speed	d Slope Coefficient (m)	4.35768	Sp	peed Power Coe	fficient (p)	0.51544
PF Slc	ppe Coefficient (m)	-1.30606	PF	Power Coeffici	ent (p)	0.78393
In Passing Lane Effective Length? No		To	otal Segment De	nsity, veh/mi/ln	5.4	
%Improvement to Percent Followers 0.0		%	Improvement to	Speed	0.0	
Sub	segment Data					
#	Segment Type	Length, ft	Radius,	s, ft Superelevation, %		Average Speed, mi/h
1	Tangent	1659	-	-		57.1
Vehi	icle Results					
Avera	ge Speed, mi/h	57.1	Pe	ercent Followers	, %	55.9
Segm	ent Travel Time, minutes	0.33	Fc	Follower Density (FD), followers/mi/ln		5.4
Vehic	le LOS	С				
Bicy	cle Results					
Perce	nt Occupied Parking	0	Pa	avement Conditi	on Rating	4
Flow I	Rate Outside Lane, veh/h	551	Bi	cycle Effective V	Vidth, ft	24
Bicycl	e LOS Score	5.68	Bi	cycle Effective S	peed Factor	4.62
Bicycl	e LOS	F				
Faci	lity Results					
т	VMT veh-mi/p	VHD veh-h/p			ensity, followers/ mi/ln	LOS
1	690	0.47			4.0	С





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		HCS Two-La	ne	Highway Re	port	
Pro	oject Information		_			
Ana	lyst	MJV		Date		5/11/2023
Age	ency	HRG		Analysis Year		2040 NB
Juri	sdiction	SDDOT		Time Analyzed		AM Peak
Proj	ect Description	West of Hartford SD 3	8 EB	Units		U.S. Customary
		S	egn	nent 1		·
Ve	hicle Inputs					
Seg	ment Type	Passing Zone		Length, ft		1069
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	202		Opposing Deman	d Flow Rate, veh/h	142
Pea	k Hour Factor	0.88		Total Trucks, %		5.79
Seg	ment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.12
Int	ermediate Results	-		'		-
Seg	ment Vertical Class	1	1		mi/h	70.0
Spe	ed Slope Coefficient (m)	4.29579		Speed Power Coe	fficient (p)	0.55752
PF S	Slope Coefficient (m)	-1.22341		PF Power Coefficie	ent (p)	0.81179
In P	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.8
%ln	nprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data			•		
#	Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1069	1-		-	68.8
Ve	hicle Results					<u>'</u>
Ave	rage Speed, mi/h	68.8		Percent Followers, %		28.4
Seg	ment Travel Time, minutes	0.18		Follower Density (FD), followers/mi/ln		0.8
Veh	icle LOS	А				
Bio	cycle Results					
Pero	cent Occupied Parking	0		Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h 202		202		Bicycle Effective Width, ft		24
Bicycle LOS Score 3		3.61		Bicycle Effective Speed Factor		5.07
Bicy	rcle LOS	D				
		S	egn	nent 2		
Ve	hicle Inputs					
	ment Type	Passing Constrained		Length, ft		664
	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Wedsured 113						

Demand and Capacity					
	202		Onnosia a Davi	d Flour Data and the	
Directional Demand Flow Rate, veh/h	202			d Flow Rate, veh/h	
Peak Hour Factor	0.88		Total Trucks, %	· (D (C)	5.79
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.12
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF Slope Coefficient (m)	-1.29315		PF Power Coefficie	ent (p)	0.75829
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.9
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Radi	ius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	664	-		-	68.2
Vehicle Results					
Average Speed, mi/h	68.2		Percent Followers, %		31.9
Segment Travel Time, minutes	0.11		Follower Density (FD), followers/mi/ln		0.9
Vehicle LOS	A				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	202		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	3.61		Bicycle Effective Speed Factor		5.07
Bicycle LOS	D				
	S	egm	nent 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	202		Opposing Deman	d Flow Rate, veh/h	142
Peak Hour Factor	0.88		Total Trucks, %		5.79
Segment Capacity, veh/h	1700		Demand/Capacity	' (D/C)	0.12
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.30560		Speed Power Coe		0.55752
PF Slope Coefficient (m)	-1.19854		PF Power Coefficie	•	0.82311
In Passing Lane Effective Length?	No		Total Segment De	·	0.8
%Improvement to Percent Followers	0.0		%Improvement to	-	0.0
Subsegment Data					
3					

#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1871	-		-	68.8
Veł	nicle Results					
Aver	rage Speed, mi/h	68.8	68.8		, %	27.5
Segr	ment Travel Time, minutes	0.31		Follower Density ((FD), followers/mi/ln	0.8
Vehi	cle LOS	A				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	202		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	3.61		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	D				
			Segr	ment 4		
Veł	nicle Inputs					
Segr	ment Type	Passing Constrai	ned	Length, ft		925
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Dei	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	202		Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88		Total Trucks, %		5.79
Segr	ment Capacity, veh/h	1700		Demand/Capacity	' (D/C)	0.12
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed, mi/h		70.0
Spe	ed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.29315		PF Power Coefficie	ent (p)	0.75829
In Pa	assing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		0.9
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	925	-		-	68.2
Vel	nicle Results					
Aver	rage Speed, mi/h	68.2		Percent Followers	, %	31.9
Segment Travel Time, minutes		0.15		Follower Density (FD), followers/mi/ln		0.9
Vehicle LOS		A				
Bic	ycle Results					
Percent Occupied Parking		0		Pavement Condition Rating		4
Flow	Rate Outside Lane, veh/h	202			Vidth, ft	24
Bicy	cle LOS Score	3.61			peed Factor	5.07
Bicy	cle LOS	D				

		S	egr	ment 5		
Ve	hicle Inputs					
Seg	ment Type	Passing Zone		Length, ft		4476
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	202		Opposing Deman	d Flow Rate, veh/h	142
Pea	k Hour Factor	0.88		Total Trucks, %		5.79
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.12
Int	ermediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.33909		Speed Power Coe	fficient (p)	0.55752
PF S	Slope Coefficient (m)	-1.14461		PF Power Coefficie	ent (p)	0.84352
In P	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.8
%In	nprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Rad	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4476	-		-	68.8
Ve	hicle Results					
Ave	rage Speed, mi/h	68.8		Percent Followers,	. %	25.7
Seg	ment Travel Time, minutes	0.74		Follower Density (FD), followers/mi/ln	0.8
Veh	icle LOS	А				
Bio	cycle Results					
Per	cent Occupied Parking	0	ı		on Rating	4
Flov	v Rate Outside Lane, veh/h	202	202		/idth, ft	24
Bicy	rcle LOS Score	3.61		Bicycle Effective Speed Factor		5.07
Bicy	rcle LOS	D				
		S	egr	ment 6		
Ve	hicle Inputs					
Seg	ment Type	Passing Constrained		Length, ft		896
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	202		Opposing Deman	d Flow Rate, veh/h	-
Pea	k Hour Factor	0.88		Total Trucks, %		5.79
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.12
Int	ermediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
				<u> </u>		

Speed Slope Coefficient (m)			Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)			PF Power Coefficie	<u> </u>	0.75829
In Passing Lane Effective Length?	No		Total Segment De		0.9
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	896	-		-	68.2
Vehicle Results					
Average Speed, mi/h	68.2		Percent Followers	, %	31.9
Segment Travel Time, minutes	0.15		Follower Density (FD), followers/mi/ln	0.9
Vehicle LOS	А				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	202		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	3.61		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	D				
		Segn	nent 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	202		Opposing Deman	d Flow Rate, veh/h	142
Peak Hour Factor	0.88		Total Trucks, %		5.79
Segment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.12
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)	4.29579		Speed Power Coefficient (p)		0.55752
PF Slope Coefficient (m)	-1.22341		PF Power Coefficient (p)		0.81179
In Passing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		0.8
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft Radi		dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent 743 -			-	68.8	
Vehicle Results					
Average Speed, mi/h	68.8	68.8		, %	28.4
Segment Travel Time, minutes	0.12		Percent Followers, % Follower Density (FD), followers/mi/In		0.8
Vehicle LOS	A		7		

Bicycle Results					
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	202 B		Bicycle Effective Width, ft		24
Bicycle LOS Score	3.61		Bicycle Effective S _I	peed Factor	5.07
Bicycle LOS	D				
	Se	gn	nent 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	203		Opposing Demand	d Flow Rate, veh/h	138
Peak Hour Factor	0.88		Total Trucks, %		3.28
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.12
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)	4.31617		Speed Power Coefficient (p)		0.55915
PF Slope Coefficient (m)	-1.17188		PF Power Coefficient (p)		0.83428
In Passing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		0.8
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rad	lius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	2717	-		-	68.8
Vehicle Results					·
Average Speed, mi/h	68.8		Percent Followers,	%	26.7
Segment Travel Time, minutes	0.45		Follower Density (FD), followers/mi/ln		0.8
Vehicle LOS	А				
Bicycle Results					·
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	203		Bicycle Effective Width, ft		24
Bicycle LOS Score	2.84		Bicycle Effective S _l	peed Factor	5.07
Bicycle LOS	С				
	Se	gn	nent 9		
Vehicle Inputs					
Segment Type	Passing Constrained		Length, ft		1013
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity	Measured		Free-Flow Speed,	mı/h	70.0

Dire	ctional Demand Flow Rate, veh/h	203		Opposing Demand	d Flow Rate, veh/h	-	
	: Hour Factor	0.88		Total Trucks, %	2.12, 10.1, 1.	3.28	
Segr	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.12	
	ermediate Results						
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0	
Spee	ed Slope Coefficient (m)	4.57372		Speed Power Coef	ficient (p)	0.41674	
PF S	lope Coefficient (m)	-1.29345		PF Power Coefficie	ent (p)	0.75792	
In Pa	assing Lane Effective Length?	No		Total Segment Der	nsity, veh/mi/ln	1.0	
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0	
Sul	osegment Data						
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h	
1	Tangent	1013	-		-	68.2	
Veł	nicle Results						
Aver	age Speed, mi/h	68.2		Percent Followers,	%	32.1	
Segr	ment Travel Time, minutes	0.17		Follower Density (FD), followers/mi/ln	1.0	
Vehi	cle LOS	А					
Bic	ycle Results						
Perc	ent Occupied Parking	0		Pavement Condition	on Rating	4	
Flow	Rate Outside Lane, veh/h	203		Bicycle Effective W	/idth, ft	24	
Bicy	cle LOS Score	2.84		Bicycle Effective Sp	peed Factor	5.07	
Bicy	cle LOS	С					
			Segn	nent 10			
Vel	nicle Inputs						
Segr	ment Type	Passing Zone		Length, ft		4569	
Mea	sured FFS	Measured		Free-Flow Speed, mi/h		70.0	
Dei	mand and Capacity						
Dire	ctional Demand Flow Rate, veh/h	203		Opposing Demand	d Flow Rate, veh/h	138	
Peak	Hour Factor	0.88		Total Trucks, %		3.28	
Segr	nent Capacity, veh/h	1700		Demand/Capacity (D/C)		0.12	
Int	ermediate Results						
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0	
Spee	ed Slope Coefficient (m)	4.33807		Speed Power Coef	ficient (p)	0.55915	
PF Slope Coefficient (m) -1.14272		PF Power Coefficie	ent (p)	0.84376			
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.8	
%lm	provement to Percent Followers	0.0		%Improvement to	0.0		
Suk	osegment Data						
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h	

Average Speed, mi/h 68.8 Percent Followers, % 25.8						
Average Speed, mi/h Segment Travel Time, minutes 0.75 Follower Density (FD), followers/mi/ln 0.8 Vehicle LOS A Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Follower Density (FD), followers/mi/ln 0.8 Percent Occupied Parking 0 Pavement Condition Rating 4 Follower Density (FD), followers/mi/ln 24 Bicycle Effective Width, ft 24 Bicycle Effective Speed Factor 5,07 Segment 11 Vehicle Inputs Segment Type Passing Zone Length, ft 5676 Measured FFS Measured FFS Measured FFS Measured FFS Measured FFS Measured FFS Demand and Capacity Directional Demand Flow Rate, veh/h 1700 Demand and Flow Rate, veh/h 1700 Demand Effective Logacity, veh/h 1700 Demand Flow Rate, veh/h 1700 Demand Fl	1 Tangent	4569		-	-	68.8
Segment Travel Time, minutes	Vehicle Results					
Percent Occupied Parking 0	Average Speed, mi/h	68.8	68.8		rs, %	25.8
Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, velv/h 203 Bicycle Effective Width, ft 24 Bicycle LOS Score 2,84 Bicycle Effective Speed Factor 5,07 Segment 11 Vehicle Inputs Segment Type Passing Zone Length, ft 5576 Measured FFS Measured Free-Flow Speed, mi/h 70,0 Demand and Capacity Directional Demand Flow Rate, velv/h 1700 Demand/Capacity (D/C) 0,12 Intermediate Results Segment Vertical Class 1 Free-Flow Speed, mi/h 70,0 Speed Slope Coefficient (m) 4,34904 Speed Power Coefficient (p) 0,59315 Sepment Slope Coefficient (m) - 1,13517 PF Power Coefficient (p) 0,84345 In Passing Lane Effective Length? No Total Segment Density, velv/mi/ln 0,8 Subsegment Data Segment Data Segment Data Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 1 Tangent 5676 688 Vehicle Results Normal Segment Data Segment Travel Time, minutes 0,94 Followers On 1 Segment Constitution Rating 4 Bicycle Effective Width, ft 24 Bicycle LOS Core 2,71 Bicycle Effective Speed Factor 5,07 Bicycle LOS Core Bicycle LOS Core 2,71 Bicycle Effective Speed Factor 5,07	Segment Travel Time, minutes	0.75		Follower Density	(FD), followers/mi/ln	0.8
Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 203 Bicycle Effective Width, ft 24 Bicycle LOS Score 2.84 Bicycle Effective Speed Factor 5.07 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 1700 Demand/Capacity (D/C) 0.12 Intermediate Results Segment Type National Demand Flow Rate, veh/h 1700 Demand/Capacity (D/C) 0.12 Intermediate Results Segment Vertical Class 1 Free-Flow Speed, mi/h 70.0 Speed Slope Coefficient (m) 4.34904 Speed Power Coefficient (p) 0.84345 In Passing Lane Effective Length? No Total Segment Density, veh/mi/n 0.8 Subsegment Data ## Segment Data ## Segment Data ## Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 68.8 Percent Followers, % 2.56 Segment Data ## Segment Data ## Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 68.8 Percent Followers, % 2.56 Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 68.8 Vehicle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Bicycle LOS Score 2.71 Bicycle Effective Speed Factor 5.07 Bicycle LOS Score 5.07	Vehicle LOS	А				
Bicycle LOS Score 2.84	Bicycle Results	•				
Bicycle LOS Score 2.84 Bicycle Effective Speed Factor 5.07	Percent Occupied Parking	0		Pavement Condi	tion Rating	4
Segment 11	Flow Rate Outside Lane, veh/h	203		Bicycle Effective	Width, ft	24
Segment 11	Bicycle LOS Score	2.84		Bicycle Effective	Speed Factor	5.07
New York Segment Type	Bicycle LOS	С				
Passing Zone Length, ft 5676			Seg	ment 11		
Measured FFS Measured Free-Flow Speed, mi/h 70.0	Vehicle Inputs					
Demand and Capacity Directional Demand Flow Rate, veh/h Peak Hour Factor 0.88 Total Trucks, % 2.82 Segment Capacity, veh/h 1700 Demand/Capacity (D/C) 0.12 Intermediate Results Segment Vertical Class 1 Free-Flow Speed, mi/h 70.0 Speed Slope Coefficient (m) 4.34904 Speed Power Coefficient (p) 0.55915 PF Slope Coefficient (m) -1.13517 PF Power Coefficient (p) 0.84345 In Passing Lane Effective Length? No Total Segment Density, veh/mi/ln 0.8 **/*Mmprovement to Percent Followers 0.0 **Subsegment Data** ** Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 1 Tangent 5676 68.8 Vehicle Results Average Speed, mi/h 68.8 Percent Followers, % 5.6 Segment Travel Time, minutes 0.94 Follower Density (FD), followers/mi/ln 0.8 Bicycle Results Percent Coccupied Parking 0 Pavement Condition Rating 4 Bicycle LOS Score 2.71 Bicycle Effective Speed Factor 5.07 Bicycle LOS Score 2.71 Bicycle Effective Speed Factor 5.07	Segment Type	Passing Zone		Length, ft		5676
Directional Demand Flow Rate, veh/h 203 Opposing Demand Flow Rate, veh/h 138 Peak Hour Factor O.88 Total Trucks, % 2.82 Segment Capacity, veh/h 1700 Demand/Capacity (D/C) O.12 Intermediate Results Segment Vertical Class 1 Free-Flow Speed, mi/h Speed Slope Coefficient (m) 4.34904 Speed Power Coefficient (p) O.55915 PF Slope Coefficient (m) -1.13517 PF Power Coefficient (p) O.84345 In Passing Lane Effective Length? No Total Segment Density, veh/mi/ln O.8 Wimprovement to Percent Followers O.0 Subsegment Data ## Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 1 Tangent Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 68.8 Percent Followers, % 25.6 Segment Travel Time, minutes O.94 Follower Density (FD), followers/mi/ln O.8 Bicycle Results Percent Occupied Parking O Pavement Condition Rating 4 Bicycle Effective Width, ft 24 Bicycle LOS Score 2.71 Bicycle Effective Speed Factor 5.07	Measured FFS	Measured		Free-Flow Speed	l, mi/h	70.0
Peak Hour Factor 0.88 Total Trucks, % 2.82 Segment Capacity, veh/h 1700 Demand/Capacity (D/C) 0.12 Intermediate Results Segment Vertical Class 1 Free-Flow Speed, mi/h 70.0 Speed Slope Coefficient (m) 4.34904 Speed Power Coefficient (p) 0.55915 PF Slope Coefficient (m) -1.13517 PF Power Coefficient (p) 0.84345 In Passing Lane Effective Length? No Total Segment Density, veh/mi/ln 0.8 Mimprovement to Percent Followers 0.0 %Improvement to Speed 0.0 Subsegment Data # Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 68.8 Vehicle Results Average Speed, mi/h 68.8 Percent Followers, % 25.6 Segment Travel Time, minutes 0.94 Follower Density (FD), followers/mi/ln 0.8 Wehicle LOS A Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Bicycle LOS Score 2.71 Bicycle Effective Speed Factor 5.07 Bicycle LOS C	Demand and Capacity					•
Intermediate Results Segment Vertical Class 1 Free-Flow Speed, mi/h 70.0 Speed Slope Coefficient (m) 4.34904 Speed Power Coefficient (p) 0.55915 PF Slope Coefficient (m) -1.13517 PF Power Coefficient (p) 0.84345 In Passing Lane Effective Length? No Total Segment Density, veh/mi/ln 0.8 Mimprovement 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 - 68.8 Vehicle Results Average Speed, mi/h 68.8 Percent Followers, % 25.6 Segment Travel Time, minutes 0.94 Follower Density (FD), followers/mi/ln 0.8 Wehicle LOS A Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 203 Bicycle Effective Width, ft 24 Bicycle LOS Score 2.71 Bicycle Effective Speed Factor 5.07 Bicycle LOS C	Directional Demand Flow Rate, veh/h	203		Opposing Dema	nd Flow Rate, veh/h	138
Intermediate Results Segment Vertical Class 1 Free-Flow Speed, mi/h 70.0 Speed Slope Coefficient (m) 4.34904 Speed Power Coefficient (p) 0.55915 PF Slope Coefficient (m) -1.13517 PF Power Coefficient (p) 0.84345 In Passing Lane Effective Length? No Total Segment Density, veh/mi/ln 0.8 %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 5676 - 68.8 Vehicle Results Average Speed, mi/h 68.8 Percent Followers, % 25.6 Segment Travel Time, minutes 0.94 Follower Density (FD), followers/mi/ln 0.8 Wehicle LOS A Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 203 Bicycle Effective Width, ft 24 Bicycle LOS Score 2.71 Bicycle Effective Speed Factor 5.07 Bicycle LOS	Peak Hour Factor	0.88		Total Trucks, %		2.82
Segment Vertical Class 1 Free-Flow Speed, mi/h 70.0 Speed Slope Coefficient (m) 4.34904 Speed Power Coefficient (p) 0.55915 PF Slope Coefficient (m) -1.13517 PF Power Coefficient (p) 0.84345 In Passing Lane Effective Length? No Total Segment Density, veh/mi/ln 0.8 %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 5676 - 68.8 Vehicle Results Average Speed, mi/h 68.8 Percent Followers, % 25.6 Segment Travel Time, minutes 0.94 Follower Density (FD), followers/mi/ln 0.8 Wehicle LOS A Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 203 Bicycle Effective Width, ft 24 Bicycle LOS Score 2.71 Bicycle Effective Speed Factor 5.07 Bicycle LOS	Segment Capacity, veh/h	1700		Demand/Capacit	ty (D/C)	0.12
Speed Slope Coefficient (m) 4.34904 Speed Power Coefficient (p) 0.55915 PF Slope Coefficient (m) -1.13517 PF Power Coefficient (p) 0.84345 In Passing Lane Effective Length? No Total Segment Density, veh/mi/ln 0.8 %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 Segment Type Percent Followers Average Speed, mi/h Segment Travel Time, minutes 0.94 Follower Density (FD), followers/mi/ln 0.8 Wehicle LOS A Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h Bicycle LOS Score 2.71 Bicycle Effective Width, ft 24 Bicycle LOS Score 5.07	Intermediate Results					
PF Slope Coefficient (m) -1.13517 PF Power Coefficient (p) 0.84345 In Passing Lane Effective Length? No Total Segment Density, veh/mi/In 0.8 Wimprovement to Percent Followers 0.0 Wimprovement to Speed 0.0 Subsegment Data # Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 1 Tangent 5676 - 68.8 Vehicle Results Average Speed, mi/h 68.8 Percent Followers, % 25.6 Segment Travel Time, minutes 0.94 Follower Density (FD), followers/mi/In 0.8 Wehicle LOS A Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 203 Bicycle Effective Width, ft 24 Bicycle LOS Score 2.71 Bicycle Effective Speed Factor 5.07 Bicycle LOS	Segment Vertical Class	1		Free-Flow Speed	l, mi/h	70.0
In Passing Lane Effective Length? No Total Segment Density, veh/mi/ln 0.8 %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 5676 - 68.8 Vehicle Results Average Speed, mi/h 68.8 Percent Followers, % 25.6 Segment Travel Time, minutes 0.94 Follower Density (FD), followers/mi/ln 0.8 Vehicle LOS A Follower Density (FD), followers/mi/ln 0.8 Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 203 Bicycle Effective Width, ft 24 Bicycle LOS Score 2.71 Bicycle Effective Speed Factor 5.07 Bicycle LOS	Speed Slope Coefficient (m)	4.34904		Speed Power Co	efficient (p)	0.55915
Subsegment Data # Segment Type	PF Slope Coefficient (m)	-1.13517		PF Power Coeffic	ient (p)	0.84345
# Segment Type	In Passing Lane Effective Length?	No		Total Segment D	ensity, veh/mi/ln	0.8
# Segment Type	%Improvement to Percent Followers	0.0		%Improvement t	to Speed	0.0
Tangent 5676 - 68.8 Vehicle Results Average Speed, mi/h 68.8 Percent Followers, % 25.6 Segment Travel Time, minutes 0.94 Follower Density (FD), followers/mi/ln 0.8 Vehicle LOS A Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 203 Bicycle Effective Width, ft 24 Bicycle LOS Score 2.71 Bicycle Effective Speed Factor 5.07 Bicycle LOS C	Subsegment Data					
Vehicle Results Average Speed, mi/h Segment Travel Time, minutes O.94 Percent Followers, % Follower Density (FD), followers/mi/ln O.8 Vehicle LOS A Bicycle Results Percent Occupied Parking O Pavement Condition Rating Flow Rate Outside Lane, veh/h Bicycle LOS Score 2.71 Bicycle Effective Width, ft Segment Travel Time, minutes O.94 Follower Density (FD), followers/mi/ln O.8 Bicycle Results Pavement Condition Rating 4 Bicycle Effective Width, ft Segment Travel Time, minutes O.8 Bicycle Results Percent Occupied Parking O Pavement Condition Rating Flow Rate Outside Lane, veh/h Bicycle Effective Width, ft Segment Travel Time, minutes O.8 Bicycle Effective Width, ft Segment Travel Time, minutes O.8 Bicycle Effective Width, ft Segment Travel Time, minutes O.8 Bicycle Effective Width, ft Segment Travel Time, minutes O.8 Segment Travel Time, minutes O.8 Bicycle Effective Width, ft Segment Travel Time, minutes O.8 Segment Travel Time, minutes O.9 Segment Travel Time, minutes O.	# Segment Type	Length, ft		Radius, ft	Superelevation, %	Average Speed, mi/h
Average Speed, mi/h Segment Travel Time, minutes 0.94 Follower Density (FD), followers/mi/ln 0.8 Vehicle LOS A Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h Bicycle LOS Score 2.71 Bicycle Effective Speed Factor 5.07 Bicycle LOS C	1 Tangent	5676		-	-	68.8
Segment Travel Time, minutes 0.94 Follower Density (FD), followers/mi/ln 0.8 Wehicle LOS A Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h Bicycle LOS Score 2.71 Bicycle Effective Width, ft 5.07 Bicycle LOS C	Vehicle Results	·				
Wehicle LOS Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h Bicycle LOS Score 2.71 Bicycle Effective Speed Factor 5.07 Bicycle LOS C	Average Speed, mi/h	68.8		Percent Follower	rs, %	25.6
Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 203 Bicycle Effective Width, ft 24 Bicycle LOS Score 2.71 Bicycle Effective Speed Factor 5.07 Bicycle LOS C	Segment Travel Time, minutes	3 1		Follower Density	(FD), followers/mi/ln	0.8
Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 203 Bicycle Effective Width, ft 24 Bicycle LOS Score 2.71 Bicycle Effective Speed Factor 5.07 Bicycle LOS C	Vehicle LOS	А				
Flow Rate Outside Lane, veh/h Bicycle Effective Width, ft 24 Bicycle LOS Score 2.71 Bicycle Effective Speed Factor 5.07 C	Bicycle Results					
Bicycle LOS Score 2.71 Bicycle Effective Speed Factor 5.07 Bicycle LOS C	Percent Occupied Parking	0		Pavement Condi	tion Rating	4
Bicycle LOS C	-		Bicycle Effective	Width, ft	24	
	Bicycle LOS Score	2.71		Bicycle Effective	Speed Factor	5.07
Segment 12	Bicycle LOS	С				
			Seg	ment 12		

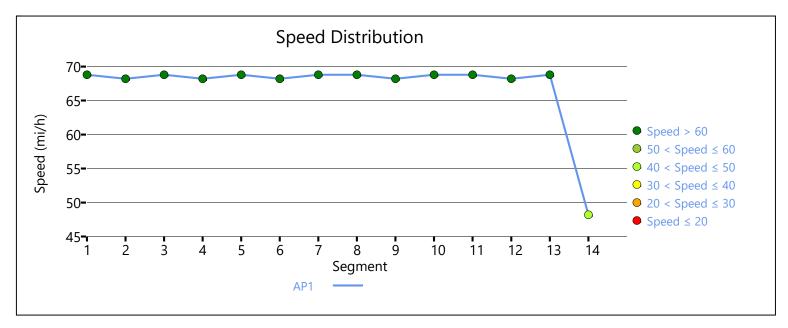
Ve	hicle Inputs					
Seg	gment Type	Passing Constrained		Length, ft		657
Me	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	emand and Capacity					
Dir	ectional Demand Flow Rate, veh/h	203		Opposing Demand	d Flow Rate, veh/h	-
Pea	ık Hour Factor	0.88		Total Trucks, %		2.82
Seg	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.12
In	termediate Results					
Seg	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	eed Slope Coefficient (m)	4.57372		Speed Power Coef	fficient (p)	0.41674
PF	Slope Coefficient (m)	-1.29350		PF Power Coefficie	ent (p)	0.75785
In F	Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.0
%Ir	mprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	657	-		-	68.2
Ve	hicle Results					
Ave	erage Speed, mi/h	68.2		Percent Followers,	Percent Followers, %	
Seg	gment Travel Time, minutes	0.11		Follower Density (FD), followers/mi/ln	1.0
Veł	nicle LOS	А				
Bi	cycle Results					
Per	cent Occupied Parking	0	0		on Rating	4
Flo	w Rate Outside Lane, veh/h	203		Bicycle Effective W	/idth, ft	24
Bic	ycle LOS Score	2.71		Bicycle Effective S	peed Factor	5.07
Bic	ycle LOS	С				
		S	egm	ent 13		
Ve	hicle Inputs					
Seg	gment Type	Passing Zone		Length, ft		6009
Me	asured FFS	Measured		Free-Flow Speed, mi/h		70.0
De	emand and Capacity					
Directional Demand Flow Rate, veh/h 203			Opposing Demand	d Flow Rate, veh/h	138	
Peak Hour Factor 0.88		0.88		Total Trucks, %		2.82
Seg	gment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.12
In	termediate Results					
Seg	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	eed Slope Coefficient (m)	4.35213		Speed Power Coef	fficient (p)	0.55915
PF	Slope Coefficient (m)	-1.13386		PF Power Coefficie	ent (p)	0.84277

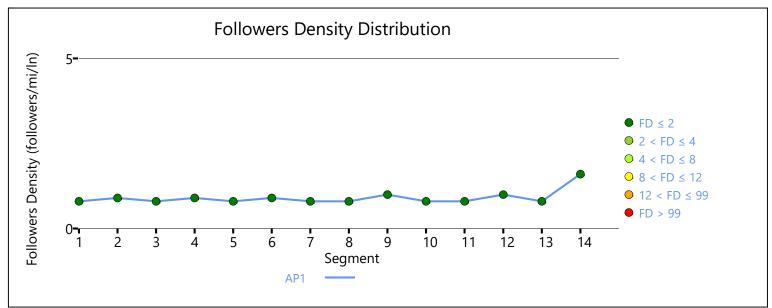
In Pa	ssing Lane Effective Length?	No		Total Segment D	ensity, veh/mi/ln	0.8
%Improvement to Percent Followers		0.0		%Improvement	to Speed	0.0
Suk	osegment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6009	-		-	68.8
Vel	nicle Results				-	
Aver	age Speed, mi/h	68.8		Percent Followe	rs, %	25.6
Segr	ment Travel Time, minutes	0.99		Follower Density	/ (FD), followers/mi/ln	0.8
Vehi	cle LOS	A		İ		
Bic	ycle Results					
Perce	ent Occupied Parking	0		Pavement Cond	ition Rating	4
Flow	Rate Outside Lane, veh/h	203		Bicycle Effective	Width, ft	24
Bicyc	cle LOS Score	2.71		Bicycle Effective	Speed Factor	5.07
Bicyc	cle LOS	С				
		•	Segr	nent 14		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrain	ned	Length, ft	Length, ft	
Mea	sured FFS	Measured		Free-Flow Speed, mi/h		50.0
Der	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	203		Opposing Dema	and Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %		2.82
Segr	ment Capacity, veh/h	1700		Demand/Capaci	ty (D/C)	0.12
Inte	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed	d, mi/h	50.0
Spee	ed Slope Coefficient (m)	4.57372	4.57372		Speed Power Coefficient (p)	
PF SI	lope Coefficient (m)	-1.47375	-1.47375		cient (p)	0.71164
In Pa	ssing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		1.6
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Suk	osegment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	891	-		-	48.2
Vel	nicle Results					
Average Speed, mi/h		48.2	48.2		Percent Followers, %	
Segment Travel Time, minutes		0.21		Follower Density (FD), followers/mi/ln		1.6
Vehi	cle LOS	A				
Bic	ycle Results					,
	ent Occupied Parking	0		Pavement Condition Rating		4
Percent Occupied Parking		<u> </u>			Tavement Condition Nating	

Facility December			
Bicycle LOS	В		
Bicycle LOS Score	2.49	Bicycle Effective Speed Factor	4.42
Flow Rate Outside Lane, veh/h	203	Bicycle Effective Width, ft	24

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	272	0.08	0.8	А





		HCS Two-La	ne	Highway Re	port	
Pro	oject Information					
Ana	ılyst	MJV		Date		5/11/2023
Age	ency	HRG		Analysis Year		2040 NB
Juri	sdiction	SDDOT		Time Analyzed		PM Peak
Pro	ject Description	West of Hartford SD 3	88 EB	Units		U.S. Customary
		S	egn	nent 1		
Ve	hicle Inputs					
Seg	ment Type	Passing Zone		Length, ft		1069
	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	emand and Capacity					
	ectional Demand Flow Rate, veh/h	127		Opposing Deman	d Flow Rate, veh/h	227
Pea	k Hour Factor	0.88		Total Trucks, %		5.79
Seq	ment Capacity, veh/h	1700		Demand/Capacity	/ (D/C)	0.07
	termediate Results					
Sec	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
	ed Slope Coefficient (m)	4.32852		Speed Power Coe		0.53193
-	Slope Coefficient (m)	-1.24407		PF Power Coefficie	·	0.80506
	Passing Lane Effective Length?	No		Total Segment De	<u> </u>	0.4
	nprovement to Percent Followers	0.0		%Improvement to		0.0
	bsegment Data				Эргэг	100
#	Segment Type	Length, ft	Rac	 dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1069	-		-	69.4
_	hicle Results	1.000	_			
	rage Speed, mi/h	69.4		Percent Followers	%	21.1
	ment Travel Time, minutes	0.18			(FD), followers/mi/ln	0.4
	icle LOS	Α				
	cycle Results	1				
	cent Occupied Parking	0		Pavement Conditi	on Rating	4
	w Rate Outside Lane, veh/h	127		Bicycle Effective V		32
Bicycle LOS Score 1.14			Bicycle Effective S		5.07	
	/cle LOS	A		,,		
			ean	nent 2		
Ve	hicle Inputs	<u> </u>	-9"			
	ment Type	Passing Constrained		Length, ft		664
	asured FFS	-		_	mi/h	70.0
ivie	asureu FFS	Measured		Free-Flow Speed, mi/h		70.0

Demand and Canacity					
Demand and Capacity	427			LEL D.	
Directional Demand Flow Rate, veh/h	127		Opposing Demand Flow Rate, veh/h Total Trucks, %		-
Peak Hour Factor				(2.(5)	5.79
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.07
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF Slope Coefficient (m)	-1.29315		PF Power Coefficie	ent (p)	0.75829
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.4
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rad	ius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	664	-		-	69.0
Vehicle Results					
Average Speed, mi/h	69.0		Percent Followers	, %	23.7
Segment Travel Time, minutes	0.11		Follower Density (FD), followers/mi/ln		0.4
Vehicle LOS	A				
Bicycle Results	<u>'</u>				
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	127		Bicycle Effective V	Vidth, ft	32
Bicycle LOS Score	1.14		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	A				
	S	egm	nent 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	127		Opposing Deman	d Flow Rate, veh/h	227
Peak Hour Factor	0.88		Total Trucks, %		5.79
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.07
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.33833		Speed Power Coe	fficient (p)	0.53193
PF Slope Coefficient (m)	-1.21872		PF Power Coefficie	ent (p)	0.81609
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.4
%Improvement to Percent Followers	0.0		%Improvement to	-	0.0
Subsegment Data					

#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1871	-		-	69.4
Vel	nicle Results	<u>'</u>				
Aver	rage Speed, mi/h	69.4		Percent Followers	, %	20.3
Segr	ment Travel Time, minutes	0.31		Follower Density (FD), followers/mi/ln	0.4
Vehi	cle LOS	А				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	127		Bicycle Effective V	Vidth, ft	32
Bicy	cle LOS Score	1.14		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	A				
			Segr	ment 4		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrai	ned	Length, ft		925
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	127		Opposing Deman	d Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %		5.79
Segr	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.07
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.29315	-1.29315		ent (p)	0.75829
In Pa	assing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		0.4
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	925	-		-	69.0
Vel	nicle Results					
Aver	rage Speed, mi/h	69.0		Percent Followers	, %	23.7
Segment Travel Time, minutes 0.15		Follower Density (FD), followers/mi/ln	0.4		
Vehicle LOS A						
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	127		Bicycle Effective V	Vidth, ft	32
Bicy	cle LOS Score	1.14		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	Α				

		S	egr	ment 5		
Ve	hicle Inputs					
Seg	ment Type	Passing Zone	Passing Zone			4476
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	139		Opposing Demand	d Flow Rate, veh/h	227
Pea	k Hour Factor	0.88		Total Trucks, %		5.79
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.08
Int	ermediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.37181		Speed Power Coef	fficient (p)	0.53193
PF S	Slope Coefficient (m)	-1.16375		PF Power Coefficie	ent (p)	0.83587
In P	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.4
%In	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4476	-		-	69.2
Ve	hicle Results					
Ave	rage Speed, mi/h	69.2		Percent Followers,	. %	20.0
Seg	ment Travel Time, minutes	0.73		Follower Density (FD), followers/mi/ln	0.4
Veh	icle LOS	А				
Bio	cycle Results	·				
Pero	cent Occupied Parking	0		Pavement Condition Rating		4
Flov	v Rate Outside Lane, veh/h	139		Bicycle Effective Width, ft		31
Вісу	rcle LOS Score	1.50		Bicycle Effective Speed Factor		5.07
Вісу	rcle LOS	А				
		S	egr	ment 6		
Ve	hicle Inputs					
	ment Type	Passing Constrained		Length, ft		896
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	127		Opposing Demand	d Flow Rate, veh/h	-
Pea	k Hour Factor	0.88		Total Trucks, %		5.79
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.07
Int	ermediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
		1		1 ' '		

Speed Slope Coefficient (m)	4.57372		Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)	-1.29315		PF Power Coefficie	<u> </u>	0.75829
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.4
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Length, ft Radiu		Superelevation, %	Average Speed, mi/h
1 Tangent	896	-		-	69.0
Vehicle Results					
Average Speed, mi/h	69.0		Percent Followers	, %	23.7
Segment Travel Time, minutes	0.15		Follower Density (FD), followers/mi/ln	0.4
Vehicle LOS	А				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	127		Bicycle Effective V	Vidth, ft	32
Bicycle LOS Score	1.14		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	А				
		Segn	nent 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	127		Opposing Deman	d Flow Rate, veh/h	227
Peak Hour Factor	0.88		Total Trucks, %		5.79
Segment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.07
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)	4.32852		Speed Power Coefficient (p)		0.53193
PF Slope Coefficient (m)	-1.24407		PF Power Coefficient (p)		0.80506
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.4
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Length, ft Radi		Superelevation, %	Average Speed, mi/h
1 Tangent	743 -			-	69.4
Vehicle Results					·
Average Speed, mi/h	69.4		Percent Followers,	, %	21.1
Segment Travel Time, minutes	0.12		Follower Density (FD), followers/mi/ln		0.4
Vehicle LOS	Α		9 (), 2		

Pavement Condition Rating Bicycle Effective Width, ft Bicycle Effective Speed Factor ment 8 Length, ft Free-Flow Speed, mi/h Opposing Demand Flow Rate, veh/h Total Trucks, % Demand/Capacity (D/C)	2717 70.0
Bicycle Effective Speed Factor ment 8 Length, ft Free-Flow Speed, mi/h Opposing Demand Flow Rate, veh/h Total Trucks, %	5.07 2717 70.0
Length, ft Free-Flow Speed, mi/h Opposing Demand Flow Rate, veh/h Total Trucks, %	2717 70.0
Length, ft Free-Flow Speed, mi/h Opposing Demand Flow Rate, veh/h Total Trucks, %	70.0
Length, ft Free-Flow Speed, mi/h Opposing Demand Flow Rate, veh/h Total Trucks, %	70.0
Free-Flow Speed, mi/h Opposing Demand Flow Rate, veh/h Total Trucks, %	70.0
Free-Flow Speed, mi/h Opposing Demand Flow Rate, veh/h Total Trucks, %	70.0
Free-Flow Speed, mi/h Opposing Demand Flow Rate, veh/h Total Trucks, %	0
Total Trucks, %	-
Total Trucks, %	-
	3.28
Demand/Capacity (D/C)	5.25
= 5a, 5p, (= / 5/	0.08
	·
Free-Flow Speed, mi/h	70.0
Speed Power Coefficient (p)	0.67576
PF Power Coefficient (p)	0.86675
Total Segment Density, veh/mi/ln	0.3
%Improvement to Speed	0.0
	·
dius, ft Superelevation, %	Average Speed, mi/h
-	69.6
Percent Followers, %	17.2
Follower Density (FD), followers/mi/ln	0.3
Pavement Condition Rating	4
Bicycle Effective Width, ft	31
Bicycle Effective Speed Factor	5.07
ment 9	
Length, ft	1013
Free-Flow Speed, mi/h	70.0
	Free-Flow Speed, mi/h Speed Power Coefficient (p) PF Power Coefficient (p) Total Segment Density, veh/mi/ln %Improvement to Speed dius, ft Superelevation, % - Percent Followers, % Follower Density (FD), followers/mi/ln Pavement Condition Rating Bicycle Effective Width, ft Bicycle Effective Speed Factor ment 9 Length, ft

Dire	ctional Demand Flow Rate, veh/h	134		Opposing Demand	d Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %		3.28
Segi	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.08
Int	ermediate Results					
Segi	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.57372		Speed Power Coef	fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.29345		PF Power Coefficie	ent (p)	0.75792
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.5
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	segment Data					
#	Segment Type	Length, ft	R	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1013	-		-	68.9
Vel	nicle Results					
Aver	age Speed, mi/h	68.9		Percent Followers,	. %	24.6
Segi	nent Travel Time, minutes	0.17		Follower Density (FD), followers/mi/ln	0.5
Vehi	cle LOS	А				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Condition	on Rating	4
Flow	Rate Outside Lane, veh/h	134		Bicycle Effective W	/idth, ft	31
Bicy	cle LOS Score	0.70		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	А				
			Segi	ment 10		
Vel	nicle Inputs					
Segi	ment Type	Passing Zone		Length, ft		4569
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	134		Opposing Demand	d Flow Rate, veh/h	230
Peak	Hour Factor	0.88		Total Trucks, %		3.28
Segi	nent Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.08
Int	ermediate Results					
Segi	ment Vertical Class	1	1		mi/h	70.0
Spe	ed Slope Coefficient (m)	4.37357		Speed Power Coef	fficient (p)	0.53135
PF S	lope Coefficient (m)	-1.16352		PF Power Coefficie	ent (p)	0.83544
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.4
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	segment Data					
#	Segment Type	Length, ft	R	adius, ft	Superelevation, %	Average Speed, mi/h
-						

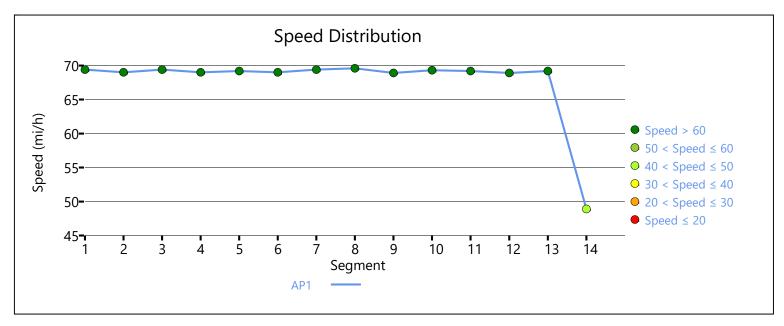
1 Tangent	4569	-		-	69.3
Vehicle Results					
Average Speed, mi/h	69.3	69.3		;, %	19.5
Segment Travel Time, minutes	0.75		Follower Density	(FD), followers/mi/ln	0.4
Vehicle LOS	А				
Bicycle Results					
Percent Occupied Parking	0		Pavement Condit	ion Rating	4
Flow Rate Outside Lane, veh/h	134		Bicycle Effective V	Vidth, ft	31
Bicycle LOS Score	0.70		Bicycle Effective S	Speed Factor	5.07
Bicycle LOS	А				
		Segi	ment 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	136		Opposing Demar	nd Flow Rate, veh/h	230
Peak Hour Factor	0.88		Total Trucks, %		2.82
Segment Capacity, veh/h	1700		Demand/Capacity	y (D/C)	0.08
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.38454		Speed Power Coe	efficient (p)	0.53135
PF Slope Coefficient (m)	-1.15581		PF Power Coeffici	ent (p)	0.83503
In Passing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		0.4
%Improvement to Percent Followers	0.0		%Improvement to	o Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	R	adius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	5676	-		-	69.2
Vehicle Results				<u> </u>	
Average Speed, mi/h	69.2		Percent Followers	5, %	19.7
Segment Travel Time, minutes	0.93		Follower Density	(FD), followers/mi/ln	0.4
Vehicle LOS	А				
Bicycle Results					
Percent Occupied Parking	0		Pavement Condit	ion Rating	4
Flow Rate Outside Lane, veh/h	136		Bicycle Effective V	Vidth, ft	31
Bicycle LOS Score	0.58		Bicycle Effective S	Speed Factor	5.07
Bicycle LOS	A				
		Segi	ment 12		

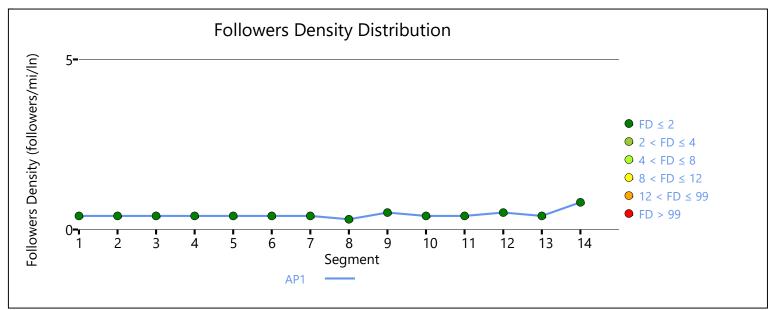
Ve	ehicle Inputs					
Seg	gment Type	Passing Constraine	d	Length, ft	Length, ft	
Me	easured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	emand and Capacity					
Dir	rectional Demand Flow Rate, veh/h	136		Opposing Demand	d Flow Rate, veh/h	-
Pea	ak Hour Factor	0.88		Total Trucks, %		2.82
Seg	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.08
ln	termediate Results					
Seg	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	eed Slope Coefficient (m)	4.57372		Speed Power Coef	fficient (p)	0.41674
PF	Slope Coefficient (m)	-1.29350		PF Power Coefficie	ent (p)	0.75785
ln l	Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.5
%lı	mprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sι	ıbsegment Data					
#	Segment Type	Length, ft	Rad	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	657	T-		-	68.9
Ve	hicle Results					
Αv	erage Speed, mi/h	68.9		Percent Followers,	. %	24.9
Seg	gment Travel Time, minutes	0.11		Follower Density (FD), followers/mi/ln	0.5
Vel	hicle LOS	А				
Bi	cycle Results					·
Per	cent Occupied Parking	0		Pavement Condition Rating		4
Flo	w Rate Outside Lane, veh/h	136		Bicycle Effective Width, ft		31
Bic	ycle LOS Score	0.58		Bicycle Effective Speed Factor		5.07
Bic	ycle LOS	А				
			Segm	nent 13		
Ve	ehicle Inputs					
Seg	gment Type	Passing Zone		Length, ft		6009
Me	easured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	emand and Capacity					
Dir	ectional Demand Flow Rate, veh/h	136		Opposing Demand	d Flow Rate, veh/h	230
Pea	ak Hour Factor	0.88		Total Trucks, %		2.82
Seg	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.08
ln	termediate Results					
Seg	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	eed Slope Coefficient (m)	4.38763		Speed Power Coef	fficient (p)	0.53135
DE	Slope Coefficient (m)	-1.15447		PF Power Coefficie	ent (p)	0.83434

In Passing Lane Effective Length?			Total Segment D	ensity, veh/mi/ln	0.4	
%Improvement to Percent Followers 0.0		%Improvement	o Speed	0.0		
Suk	segment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6009	-		-	69.2
Vel	nicle Results					
Aver	age Speed, mi/h	69.2		Percent Follower	s, %	19.7
Segr	nent Travel Time, minutes	0.99		Follower Density	(FD), followers/mi/ln	0.4
Vehi	cle LOS	Α		1		
Bic	ycle Results					
Perce	ent Occupied Parking	0		Pavement Condi	tion Rating	4
Flow	Rate Outside Lane, veh/h	136		Bicycle Effective	Width, ft	31
Bicyc	cle LOS Score	0.58		Bicycle Effective	Speed Factor	5.07
Bicyc	cle LOS	A				
			Segr	ment 14		
Vel	nicle Inputs					
Segr	nent Type	Passing Constrain	ned	Length, ft	Length, ft	
Mea	sured FFS	Measured		Free-Flow Speed, mi/h		50.0
Der	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	136		Opposing Dema	nd Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %	Total Trucks, %	
Segr	nent Capacity, veh/h	1700		Demand/Capaci	y (D/C)	0.08
Inte	ermediate Results					
Segr	nent Vertical Class	1	1		, mi/h	50.0
Spee	ed Slope Coefficient (m)	4.57372		Speed Power Coefficient (p)		0.41674
PF SI	ope Coefficient (m)	-1.47375		PF Power Coeffic	PF Power Coefficient (p)	
In Pa	ssing Lane Effective Length?	No		Total Segment D	ensity, veh/mi/ln	0.8
%lm	provement to Percent Followers	0.0		%Improvement	%Improvement to Speed	
Suk	segment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	891	-		-	48.9
Vel	nicle Results					
Aver	age Speed, mi/h	48.9		Percent Follower	s, %	30.0
Segr	nent Travel Time, minutes	0.21		Follower Density	(FD), followers/mi/ln	0.8
Vehi	cle LOS	A				
Bic	ycle Results					
Percent Occupied Parking 0		Pavement Condition Rating		4		
Percent Occupied Parking				1		

Facility Results			
Bicycle LOS	A		
Bicycle LOS Score	0.36	Bicycle Effective Speed Factor	4.42
Flow Rate Outside Lane, veh/h	136	Bicycle Effective Width, ft	31

Т	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	180	0.03	0.4	А





		HCS Two-La	ne	Highway Re	port	
Pro	oject Information		_			
Ana	lyst	MJV	MJV			5/11/2023
Age	ency	HRG		Analysis Year		2040 NB
Juri	sdiction	SDDOT		Time Analyzed		AM Peak
Pro	ect Description	WB 38 West of Hartfo	rd	Units		U.S. Customary
		S	egn	nent 1		
Ve	hicle Inputs					
Seg	ment Type	Passing Zone		Length, ft		10549
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	138		Opposing Deman	d Flow Rate, veh/h	203
Pea	k Hour Factor	0.88		Total Trucks, %		12.50
Seg	ment Capacity, veh/h	1700		Demand/Capacity	, (D/C)	0.08
Int	ermediate Results	•				
Segment Vertical Class 1			Free-Flow Speed,	mi/h	70.0	
	ed Slope Coefficient (m)	4.41409		Speed Power Coe		0.53829
PF S	Slope Coefficient (m)	-1.15918		PF Power Coefficie	ent (p)	0.81052
In P	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.4
%In	nprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data	<u>'</u>				
#	Segment Type	Length, ft	Rac	 dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	10549	1-		-	69.2
Ve	hicle Results					
Ave	rage Speed, mi/h	69.2		Percent Followers	 , %	20.7
	ment Travel Time, minutes	1.73		Follower Density (FD), followers/mi/ln		0.4
	icle LOS	А				
Bio	cycle Results					
	cent Occupied Parking	0		Pavement Conditi	on Rating	4
	v Rate Outside Lane, veh/h	138		Bicycle Effective V		31
	tycle LOS Score 4.24			Bicycle Effective S		5.07
	rcle LOS	D				
		S	egn	nent 2		
Ve	hicle Inputs					
	ment Type	Passing Zone		Length, ft		2793
	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
				The first speed,		

Damanda J.C					
Demand and Capacity					
Directional Demand Flow Rate, veh/h	138		Opposing Demand Flow Rate, veh/h		203
Peak Hour Factor	0.88		Total Trucks, %		12.50
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.08
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.34348		Speed Power Coe	fficient (p)	0.53829
PF Slope Coefficient (m)	-1.18524		PF Power Coefficie	ent (p)	0.83047
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.4
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Radi	us, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	2793	-		-	69.3
Vehicle Results					
Average Speed, mi/h	69.3		Percent Followers,	, %	20.4
Segment Travel Time, minutes	0.46		Follower Density (FD), followers/mi/ln		0.4
Vehicle LOS	А				
Bicycle Results					·
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	138		Bicycle Effective Width, ft		31
Bicycle LOS Score	4.24		Bicycle Effective Speed Factor		5.07
Bicycle LOS	D				
	S	egm	ent 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	138		Opposing Deman	d Flow Rate, veh/h	203
Peak Hour Factor	0.88		Total Trucks, %		2.40
Segment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.08
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.35622		Speed Power Coe	fficient (p)	0.53829
PF Slope Coefficient (m)	-1.16728		PF Power Coefficie	ent (p)	0.83549
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.4
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					

#	Segment Type	Length, ft	Ra	idius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3825	-		-	69.3
Veł	nicle Results					·
Aver	age Speed, mi/h	69.3	69.3		, %	19.9
Segr	ment Travel Time, minutes	0.63		Follower Density	(FD), followers/mi/ln	0.4
Vehi	cle LOS	A				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	138		Bicycle Effective V	Vidth, ft	31
Bicy	cle LOS Score	0.48		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	А				
			Segi	ment 4		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrai	ned	Length, ft		791
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Dei	mand and Capacity	•		•		
Dire	ctional Demand Flow Rate, veh/h	138		Opposing Deman	d Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %		2.40
Segr	ment Capacity, veh/h	1700	700 Demand/Ca		/ (D/C)	0.08
Int	ermediate Results			·		
Segr	ment Vertical Class	1	1		mi/h	70.0
Spee	ed Slope Coefficient (m)	4.57372	4.57372		fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.29355		PF Power Coefficient (p)		0.75779
In Pa	assing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		0.5
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Suk	osegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	791	-		-	68.8
Veł	nicle Results					
Aver	age Speed, mi/h	68.8		Percent Followers	, %	25.0
Segment Travel Time, minutes 0.13			Follower Density	(FD), followers/mi/ln	0.5	
Vehicle LOS A						
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
	Rate Outside Lane, veh/h	138		Bicycle Effective V		31
Bicy	cle LOS Score	0.48		Bicycle Effective S		5.07
Bicy	cle LOS	А				

		S	egr	ment 5		
Ve	hicle Inputs					
Seg	ment Type	Passing Zone		Length, ft		3414
Mea	asured FFS	Measured	Measured		mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	138		Opposing Deman	d Flow Rate, veh/h	203
Pea	k Hour Factor	0.88		Total Trucks, %		2.40
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.08
Int	ermediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.35138		Speed Power Coe	fficient (p)	0.53829
PF S	Slope Coefficient (m)	-1.17373		PF Power Coefficie	ent (p)	0.83350
In P	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.4
%In	nprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3414	-		-	69.3
Ve	hicle Results					
Ave	rage Speed, mi/h	69.3		Percent Followers,	. %	20.1
Seg	ment Travel Time, minutes	0.56		Follower Density (FD), followers/mi/ln		0.4
Veh	icle LOS	А				
Bio	cycle Results			·		
Perd	cent Occupied Parking	0		Pavement Condition	on Rating	4
Flov	v Rate Outside Lane, veh/h	138		Bicycle Effective Width, ft		31
Вісу	rcle LOS Score	0.48		Bicycle Effective Speed Factor		5.07
Вісу	rcle LOS	А				
		S	egr	ment 6		
Ve	hicle Inputs					
Seg	ment Type	Passing Constrained		Length, ft		286
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	138		Opposing Deman	d Flow Rate, veh/h	-
Pea	k Hour Factor	0.88		Total Trucks, %		2.40
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.08
Int	ermediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
		1		<u> </u>		

Speed Slope Coefficient (m)	4.57372	_		fficient (p)	0.41674
PF Slope Coefficient (m)	-1.29355			ent (p)	0.75779
In Passing Lane Effective Length?	No		Total Segment De		0.5
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Length, ft Radiu		Superelevation, %	Average Speed, mi/h
1 Tangent	286	-		-	68.8
Vehicle Results					
Average Speed, mi/h	68.8		Percent Followers,	%	25.0
Segment Travel Time, minutes	0.05		Follower Density (FD), followers/mi/ln	0.5
Vehicle LOS	А				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	138		Bicycle Effective V	/idth, ft	31
Bicycle LOS Score	0.48		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	А				
		Segn	nent 7		
Vehicle Inputs					
Segment Type	Passing Constrained	d k	Length, ft		463
Measured FFS	Measured		Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	142		Opposing Deman	d Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %		2.60
Segment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.08
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 Coefficie	ent (p)	0.75782
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.5
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	463	-		-	68.8
Vehicle Results					·
Average Speed, mi/h	68.8		Percent Followers	%	25.5
Segment Travel Time, minutes	0.08			FD), followers/mi/ln	0.5
			1 3.13 Wer Density (1 D), Tollowers/1111/111		+

0		Pavement Condition	on Rating	4	
142	142 I		/idth, ft	31	
0.54		Bicycle Effective Sp	peed Factor	5.07	
A					
S	egm	ent 8		·	
Passing Zone	T	Length, ft		4822	
Measured			mi/h	70.0	
•					
142		Opposing Demand	d Flow Rate, veh/h	202	
0.88		Total Trucks, %		2.60	
1700		Demand/Capacity	(D/C)	0.08	
				·	
1		Free-Flow Speed, mi/h		70.0	
4.36656		Speed Power Coefficient (p)		0.53861	
-1.15601		PF Power Coefficient (p)		0.83777	
No		Total Segment De	nsity, veh/mi/ln	0.4	
0.0	•	%Improvement to	Speed	0.0	
				·	
Length, ft	Radiu	us, ft	Superelevation, %	Average Speed, mi/h	
4822	1-		-	69.2	
69.2		Percent Followers,	%	20.2	
0.79		Follower Density (FD), followers/mi/ln		0.4	
А					
				·	
0		Pavement Condition	on Rating	4	
142		Bicycle Effective W	/idth, ft	31	
0.54		Bicycle Effective Sp	peed Factor	5.07	
A					
S	egm	ent 9			
Passing Constrained		Length, ft		861	
Segment Type Passing Constrained Measured FFS Measured			Free-Flow Speed, mi/h 70.0		
	142 0.54 A Passing Zone Measured 142 0.88 1700 1 4.36656 -1.15601 No 0.0 Length, ft 4822 69.2 0.79 A 0 142 0.54 A S	142	142 Bicycle Effective M	142 Bicycle Effective Width, ft	

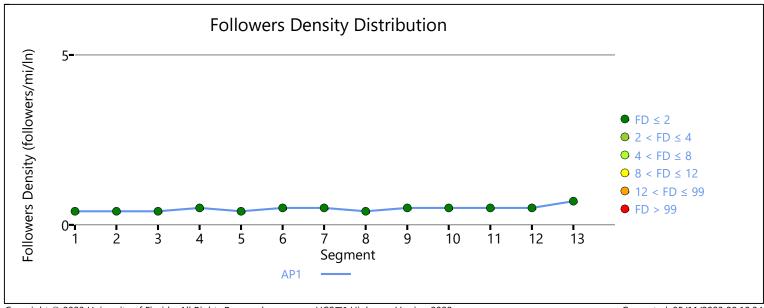
Dire	ctional Demand Flow Rate, veh/h	142		Opposing Demand	d Flow Rate, veh/h	-
	Hour Factor	0.88		Total Trucks, %	2.12, 1.0.1, 1.	2.60
Segr	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.08
	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
	ed Slope Coefficient (m)	4.57372		Speed Power Coef		0.41674
PF S	lope Coefficient (m)	-1.29353		PF Power Coefficie	ent (p)	0.75782
In Pa	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.5
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	osegment Data	<u>'</u>				
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	861	-		-	68.8
Vel	nicle Results					·
Aver	rage Speed, mi/h	68.8		Percent Followers,	%	25.5
Segr	ment Travel Time, minutes	0.14		Follower Density (FD), followers/mi/ln	0.5
Vehi	cle LOS	А				
Bic	ycle Results	•		•		
Perc	ent Occupied Parking	0		Pavement Condition	on Rating	4
Flow	Rate Outside Lane, veh/h	142		Bicycle Effective W	/idth, ft	31
Bicy	cle LOS Score	0.54		Bicycle Effective S _I	peed Factor	5.07
Bicy	cle LOS	А				
			Segn	ment 10		
Vel	nicle Inputs					
Segr	ment Type	Passing Zone		Length, ft		1556
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	142		Opposing Demand	d Flow Rate, veh/h	202
Peak	Hour Factor	0.88		Total Trucks, %		2.60
Segr	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.08
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.32409		Speed Power Coef	ficient (p)	0.53861
PF S	lope Coefficient (m)	-1.22723		PF Power Coefficie	ent (p)	0.81163
In Pa	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.5
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h

1 Tangent	1556	<u> </u>		-	69.2
Vehicle Results					
Average Speed, mi/h	69.2		Percent Followers,	, %	22.3
Segment Travel Time, minutes	0.26	0.26		FD), followers/mi/ln	0.5
Vehicle LOS	А				
Bicycle Results			<u> </u>		
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	142		Bicycle Effective W	Vidth, ft	31
Bicycle LOS Score	0.54		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	А				
	S	egm	ent 11		
Vehicle Inputs					
Segment Type	Passing Constrained		Length, ft		799
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity			<u>'</u>		
Directional Demand Flow Rate, veh/h	142		Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor	0.88		Total Trucks, %		2.60
Segment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.08
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 Coefficie	ent (p)	0.75782
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.5
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rad	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	799	-		-	68.8
Vehicle Results					
Average Speed, mi/h	68.8		Percent Followers,	, %	25.5
Segment Travel Time, minutes	0.13		Follower Density (FD), followers/mi/ln		0.5
Vehicle LOS	A				
Bicycle Results			<u>'</u>		
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	142		Bicycle Effective W	Vidth, ft	31
Bicycle LOS Score	0.54		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	А				
	S	egm	ent 12		

Ve	ehicle Inputs					
Seg	gment Type	Passing Zone		Length, ft		857
Me	asured FFS Measured		Free-Flow Speed, mi/h		70.0	
De	emand and Capacity					
Dir	rectional Demand Flow Rate, veh/h	142		Opposing Demand	d Flow Rate, veh/h	2026
Pea	ak Hour Factor	0.88		Total Trucks, %		2.60
Seg	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.08
ln	termediate Results					
Seg	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	eed Slope Coefficient (m)	4.63885		Speed Power Coef	fficient (p)	0.40883
PF	Slope Coefficient (m)	-1.27385		PF Power Coefficie	ent (p)	0.74571
ln l	Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.5
%lı	mprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sι	ıbsegment Data					
#	Segment Type	Length, ft	Rad	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	857	-		-	68.7
Ve	ehicle Results					
Ave	erage Speed, mi/h	68.7		Percent Followers,	. %	25.7
Seg	gment Travel Time, minutes	0.14		Follower Density (FD), followers/mi/ln	0.5
Vel	hicle LOS	А				
Bi	cycle Results					·
Per	cent Occupied Parking	0		Pavement Condition	on Rating	4
Flo	w Rate Outside Lane, veh/h	142		Bicycle Effective Width, ft		31
Bic	ycle LOS Score	0.54		Bicycle Effective Speed Factor		5.07
Bic	ycle LOS	А				
			Segm	nent 13		
Ve	ehicle Inputs					
Seg	gment Type	Passing Constraine	d	Length, ft		1288
Мє	easured FFS	Measured		Free-Flow Speed,	mi/h	60.0
De	emand and Capacity					
Dir	ectional Demand Flow Rate, veh/h	142		Opposing Demand	d Flow Rate, veh/h	-
Pea	ak Hour Factor	0.88		Total Trucks, %		2.60
Seg	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.08
ln	termediate Results					
Seg	gment Vertical Class	1		Free-Flow Speed,	mi/h	60.0
Spe	eed Slope Coefficient (m)	4.57372		Speed Power Coef	fficient (p)	0.41674
DE	Slope Coefficient (m)	-1.39677		PF Power Coefficie	ent (p)	0.73640

In Pa	ssing Lane Effective Length?	No	Т	Total Segment Density, veh/mi/ln		0.7
%lmp	provement to Percent Followers	0.0	9	%Improvement to	Speed	0.0
Sub	segment Data					
#	Segment Type	Length, ft	Radiu	s, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1288	-		-	58.8
Veh	icle Results					
Avera	age Speed, mi/h	58.8	F	Percent Followers, %		28.2
Segn	nent Travel Time, minutes	0.25	F	ollower Density (FD), followers/mi/ln	0.7
Vehic	cle LOS	А				
Bicy	ycle Results					·
Perce	ent Occupied Parking	0	F	Pavement Condition Rating		4
Flow	Rate Outside Lane, veh/h	142	E	Bicycle Effective Width, ft		31
Bicyc	le LOS Score	0.45	E	Bicycle Effective Speed Factor		4.79
Bicyc	le LOS	А				
Faci	ility Results					
Т	VMT veh-mi/p	VH veh-	_		ensity, followers/ mi/ln	LOS
1	187	0.0)3		0.4	А





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HCSTM Highways Version 2022 WB_38_WHartford_2040AM.xuf Generated: 05/11/2023 20:10:04

		HCS Two-La	ne	Highway Re	port	
Project	Information		_			
Analyst		MJV		Date		5/11/2023
Agency		HRG		Analysis Year		2040 NB
Jurisdiction	1	SDDOT		Time Analyzed		PM Peak
Project Des	scription	WB 38 West of Hartfo	rd	Units		U.S. Customary
		S	egn	nent 1		
Vehicle	Inputs					
Segment Ty	ype	Passing Zone		Length, ft		10549
Measured F	FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demano	d and Capacity					
Directional	Demand Flow Rate, veh/h	Flow Rate, veh/h 230			d Flow Rate, veh/h	136
Peak Hour	Factor	0.88		Total Trucks, %		1.94
Segment C	apacity, veh/h	1700		Demand/Capacity	(D/C)	0.14
Interme	diate Results	<u>'</u>				
Segment Vertical Class 1			Free-Flow Speed,	mi/h	70.0	
Speed Slop	pe Coefficient (m)	4.38729		Speed Power Coe	fficient (p)	0.55957
PF Slope Co	oefficient (m)	-1.14432		PF Power Coefficie	ent (p)	0.81520
In Passing L	Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.0
%Improven	ment to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegr	ment Data	,				
# Segm	nent Type	Length, ft	Rac	lius, ft	Superelevation, %	Average Speed, mi/h
1 Tange	ent	10549	1-		-	68.6
Vehicle	Results					<u>'</u>
Average Sp	peed, mi/h	68.6		Percent Followers	, %	29.2
Segment Tr	ravel Time, minutes	1.75		Follower Density (FD), followers/mi/ln	1.0
Vehicle LOS	5	А				
Bicycle	Results					
	 cupied Parking	0		Pavement Conditi	on Rating	4
	Outside Lane, veh/h	230		Bicycle Effective V		24
Bicycle LOS	S Score	2.54		Bicycle Effective S		5.07
Bicycle LOS C		С				
			egn	nent 2		
Vehicle	Inputs					
Segment Ty	•	Passing Zone		Length, ft		2793
Measured F	•	Measured		Free-Flow Speed,	mi/h	70.0
				1 2 2 3 4		

Demand and Capacity						
	220		masis = D	d Flour Data and the	126	
Directional Demand Flow Rate, veh/h	230		., -	d Flow Rate, veh/h	136	
Peak Hour Factor	0.88		otal Trucks, %	(D(C)	0.14	
Segment Capacity, veh/h	1700		emand/Capacity	(D/C)	0.14	
Intermediate Results						
Segment Vertical Class	1	Fr	ree-Flow Speed,	mi/h	70.0	
Speed Slope Coefficient (m)	4.31669	Sp	peed Power Coef	fficient (p)	0.55957	
PF Slope Coefficient (m)	-1.16990	PF	F Power Coefficie	ent (p)	0.83492	
In Passing Lane Effective Length?	No	To	otal Segment De	nsity, veh/mi/ln	1.0	
%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	2793	-		-	68.6	
Vehicle Results						
Average Speed, mi/h	68.6	Pe	ercent Followers,	%	29.0	
Segment Travel Time, minutes	0.46	Fc	ollower Density (FD), followers/mi/ln	1.0	
Vehicle LOS	А					
Bicycle Results						
Percent Occupied Parking	0	Pa	avement Condition	on Rating	4	
Flow Rate Outside Lane, veh/h	230	Bi	icycle Effective W	/idth, ft	24	
Bicycle LOS Score	2.54	Bi	icycle Effective S _I	peed Factor	5.07	
Bicycle LOS	С					
	S	egme	nt 3			
Vehicle Inputs						
Segment Type	Passing Zone	Le	ength, ft		3825	
Measured FFS	Measured	Fr	ree-Flow Speed,	mi/h	70.0	
Demand and Capacity						
Directional Demand Flow Rate, veh/h	230	0	pposing Demand	d Flow Rate, veh/h	134	
Peak Hour Factor	0.88	To	otal Trucks, %		2.19	
Segment Capacity, veh/h	1700	De	emand/Capacity	(D/C)	0.14	
Intermediate Results		,				
Segment Vertical Class	1	Fr	ree-Flow Speed,	mi/h	70.0	
Speed Slope Coefficient (m)	4.32842		peed Power Coef		0.56040	
PF Slope Coefficient (m)	-1.15048		F Power Coefficie	·	0.84195	
In Passing Lane Effective Length?	No		otal Segment De	<u> </u>	0.9	
%Improvement to Percent Followers	0.0		Improvement to		0.0	
Subsegment Data						
Jabseyment Data						

#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h	
1	Tangent	3825	-		-	68.6	
Vel	nicle Results	•					
Aver	rage Speed, mi/h	68.6		Percent Followers	, %	28.3	
Segr	ment Travel Time, minutes	0.63		Follower Density ((FD), followers/mi/ln	0.9	
Vehi	cle LOS	А					
Bic	ycle Results						
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4	
Flow	Rate Outside Lane, veh/h	230		Bicycle Effective V	Vidth, ft	24	
Bicy	cle LOS Score	2.61		Bicycle Effective S	peed Factor	5.07	
Bicy	cle LOS	С					
			Segr	ment 4			
Vel	nicle Inputs						
Segment Type Passing Constrained			Length, ft		791		
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0	
De	mand and Capacity						
Dire	ctional Demand Flow Rate, veh/h	230		Opposing Deman	d Flow Rate, veh/h	-	
Peak	Hour Factor	0.88		Total Trucks, %		2.19	
Segr	ment Capacity, veh/h	1700		Demand/Capacity	' (D/C)	0.14	
Int	ermediate Results						
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0	
Spe	ed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674	
PF S	lope Coefficient (m)	-1.29358		PF Power Coefficie	ent (p)	0.75776	
In Pa	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.2	
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0	
Sul	osegment Data						
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h	
1	Tangent	791	-		-	68.0	
Vel	nicle Results						
Aver	rage Speed, mi/h	68.0		Percent Followers	, %	34.6	
Segr	ment Travel Time, minutes	0.13		Follower Density ((FD), followers/mi/ln	1.2	
Vehi	cle LOS	A					
Bic	ycle Results						
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4	
Flow	Rate Outside Lane, veh/h	230		Bicycle Effective V	Vidth, ft	24	
Bicy	cle LOS Score	2.61		Bicycle Effective S	peed Factor	5.07	
Bicy	cle LOS	С					

		S	egr	ment 5			
Ve	hicle Inputs						
Seg	ment Type	Passing Zone		Length, ft		3414	
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0	
De	mand and Capacity						
Dire	ectional Demand Flow Rate, veh/h	230		Opposing Demand	d Flow Rate, veh/h	134	
Pea	k Hour Factor	0.88		Total Trucks, %		2.19	
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.14	
Int	termediate Results						
Segment Vertical Class 1				Free-Flow Speed,	mi/h	70.0	
Spe	ed Slope Coefficient (m)	4.32358		Speed Power Coef	fficient (p)	0.56040	
PF S	Slope Coefficient (m)	-1.15683		PF Power Coefficie	ent (p)	0.83989	
In P	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.0	
%In	nprovement to Percent Followers	0.0		%Improvement to	Speed	0.0	
Su	bsegment Data						
#	Segment Type	Length, ft	Rad	dius, ft	Superelevation, %	Average Speed, mi/h	
1	Tangent	3414	-		-	68.6	
Ve	hicle Results						
Ave	rage Speed, mi/h	68.6		Percent Followers,	. %	28.5	
Seg	ment Travel Time, minutes	0.57		Follower Density (FD), followers/mi/ln	1.0	
Veh	icle LOS	А					
Bio	cycle Results	·					
Per	cent Occupied Parking	0		Pavement Condition	on Rating	4	
Flov	w Rate Outside Lane, veh/h	230		Bicycle Effective W	/idth, ft	24	
Bicy	vcle LOS Score	2.61		Bicycle Effective S	peed Factor	5.07	
Bicy	rcle LOS	С					
		S	egr	ment 6			
Ve	hicle Inputs						
Seg	ment Type	Passing Constrained		Length, ft		286	
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0	
De	mand and Capacity						
Dire	ectional Demand Flow Rate, veh/h	230		Opposing Demand	d Flow Rate, veh/h	-	
Pea	k Hour Factor	0.88		Total Trucks, %		2.19	
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.14	
Int	termediate Results						
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0	
		1		<u> </u>		1	

Speed Slope Coefficient (m)	4.57372		Speed Power Coe	·	0.41674		
PF Slope Coefficient (m)	-1.29358		PF Power Coefficie	<u>.</u>	0.75776		
In Passing Lane Effective Length?	No		Total Segment De		1.2		
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0		
Subsegment Data							
# Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h		
1 Tangent	286	-		-	68.0		
Vehicle Results							
Average Speed, mi/h	68.0		Percent Followers,	%	34.6		
Segment Travel Time, minutes	0.05		Follower Density (FD), followers/mi/ln	1.2		
Vehicle LOS	A						
Bicycle Results							
Percent Occupied Parking	0		Pavement Conditi	on Rating	4		
Flow Rate Outside Lane, veh/h	230		Bicycle Effective V	/idth, ft	24		
Bicycle LOS Score	2.61		Bicycle Effective S	peed Factor	5.07		
Bicycle LOS	С						
		Segn	nent 7				
Vehicle Inputs							
Segment Type	Passing Constrained	d	Length, ft		463		
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0		
Demand and Capacity							
Directional Demand Flow Rate, veh/h	227		Opposing Deman	d Flow Rate, veh/h	-		
Peak Hour Factor	0.88		Total Trucks, %		3.08		
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.13		
Intermediate Results							
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0		
Speed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674		
PF Slope Coefficient (m)	-1.29347		PF Power Coefficie	ent (p)	0.75789		
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.1		
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0		
Subsegment Data							
# Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h		
1 Tangent	463	-		-	68.1		
Vehicle Results							
Average Speed, mi/h	68.1		Percent Followers,	. %	34.3		
Segment Travel Time, minutes 0.08		Follower Density (FD), followers/mi/ln	1.1			
Vehicle LOS	A						

Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	227		Bicycle Effective Width, ft		24
Bicycle LOS Score	2.84		Bicycle Effective Speed Factor		5.07
Bicycle LOS	С				
	S	egn	nent 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	227		Opposing Deman	d Flow Rate, veh/h	127
Peak Hour Factor	0.88		Total Trucks, %		3.08
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.13
Intermediate Results			<u>'</u>		
Segment Vertical Class	1	1		mi/h	70.0
Speed Slope Coefficient (m)	4.33608	4.33608		fficient (p)	0.56297
PF Slope Coefficient (m)	-1.13758		PF Power Coefficie	ent (p)	0.84510
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.9
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data	·		<u> </u>		
# Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	4822	-		-	68.6
Vehicle Results				•	
Average Speed, mi/h	68.6		Percent Followers	, %	27.8
Segment Travel Time, minutes	0.80		Follower Density (FD), followers/mi/ln	0.9
Vehicle LOS	А				
Bicycle Results	·				·
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	227		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	2.84		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	С				
	S	egn	nent 9		
Vehicle Inputs					
Segment Type	Passing Constrained		Length, ft		861
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Segment Type	Passing Constrained		Length, ft	mi/h	

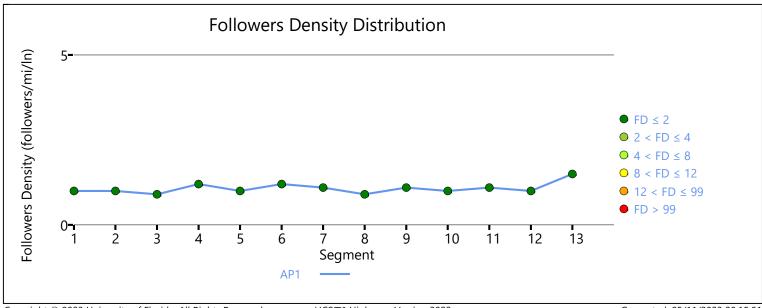
Dire	ctional Demand Flow Rate, veh/h	227		Opposing Demand	d Flow Rate, veh/h	-				
Peak	Hour Factor	0.88		Total Trucks, %		3.08				
Segr	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.13				
Int	ermediate Results									
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0				
Spee	ed Slope Coefficient (m)	4.57372		Speed Power Coef	fficient (p)	0.41674				
PF S	lope Coefficient (m)	-1.29347	-1.29347 P		ent (p)	0.75789				
In Pa	ssing Lane Effective Length?	No	No To		nsity, veh/mi/ln	1.1				
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0				
Sul	segment Data									
#	Segment Type	Length, ft	R	ladius, ft	Superelevation, %	Average Speed, mi/h				
1	Tangent	861	861 -		-	68.1				
Veł	nicle Results									
Average Speed, mi/h 68.1			Percent Followers,	%	34.3					
Segr	nent Travel Time, minutes	0.14		Follower Density (FD), followers/mi/ln	1.1				
Vehi	cle LOS	A								
Bic	ycle Results									
Perc	ent Occupied Parking	0		Pavement Condition	on Rating	4				
Flow	Rate Outside Lane, veh/h	227		Bicycle Effective W	/idth, ft	24				
Bicy	cle LOS Score	2.84		Bicycle Effective S	peed Factor	5.07				
Bicy	cle LOS	С								
			Segi	ment 10						
Vel	nicle Inputs									
Segr	ment Type	Passing Zone		Length, ft		1556				
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0				
Dei	mand and Capacity									
Dire	ctional Demand Flow Rate, veh/h	227		Opposing Demand	d Flow Rate, veh/h	127				
Peak	Hour Factor	0.88		Total Trucks, %		3.08				
Segr	nent Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.13				
Into	ermediate Results									
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0				
Spee	ed Slope Coefficient (m)	4.29360		Speed Power Coef	fficient (p)	0.56297				
PF S	ope Coefficient (m)	-1.20750		PF Power Coefficie	ent (p)	0.81818				
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.0				
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0				
Sul	segment Data									
#	Segment Type	Length, ft	R	ladius, ft	Superelevation, %	Average Speed, mi/h				
_										

1 Tangent	1556		-	-	68.7
Vehicle Results					
Average Speed, mi/h	68.7		Percent Followe	rs, %	30.2
Segment Travel Time, minutes	0.26		Follower Density	/ (FD), followers/mi/ln	1.0
Vehicle LOS	A				
Bicycle Results					
Percent Occupied Parking	0		Pavement Cond	ition Rating	4
Flow Rate Outside Lane, veh/h	227	227		Width, ft	24
Bicycle LOS Score	2.84		Bicycle Effective	Speed Factor	5.07
Bicycle LOS	С	С			
		Seg	ment 11		
Vehicle Inputs					
Segment Type	Passing Constra	Passing Constrained			799
Measured FFS	Measured		Free-Flow Speed	d, mi/h	70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	227	227		and Flow Rate, veh/h	T-
Peak Hour Factor	0.88		Total Trucks, %		3.08
Segment Capacity, veh/h	1700		Demand/Capaci	ty (D/C)	0.13
Intermediate Results					<u>'</u>
Segment Vertical Class	1		Free-Flow Speed	d, mi/h	70.0
Speed Slope Coefficient (m)	4.57372		Speed Power Co	pefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29347		PF Power Coeffi	cient (p)	0.75789
In Passing Lane Effective Length?	No		Total Segment D	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	799		-	-	68.1
Vehicle Results					
Average Speed, mi/h	68.1		Percent Followe	rs, %	34.3
Segment Travel Time, minutes	0.13		Follower Density	/ (FD), followers/mi/ln	1.1
Vehicle LOS	А				
Bicycle Results					
Percent Occupied Parking	0		Pavement Cond	ition Rating	4
Flow Rate Outside Lane, veh/h	227		Bicycle Effective	Width, ft	24
Bicycle LOS Score	2.84		Bicycle Effective	Speed Factor	5.07
Bicycle LOS	С				
		Sac	mont 12		
		seg	ment 12		

Ve	hicle Inputs						
Seg	gment Type	Passing Zone		Length, ft		857	
Me	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0	
De	emand and Capacity						
Dire	ectional Demand Flow Rate, veh/h	227		Opposing Deman	d Flow Rate, veh/h	127	
Pea	ık Hour Factor	0.88		Total Trucks, %		3.08	
Seg	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.13	
Int	termediate Results						
Seg	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0	
Spe	eed Slope Coefficient (m)	4.28919		Speed Power Coe	fficient (p)	0.56297	
PF :	Slope Coefficient (m)	-1.21919		PF Power Coefficie	ent (p)	0.81279	
In F	Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.0	
%lr	mprovement to Percent Followers	0.0		%Improvement to	Speed	0.0	
Su	bsegment Data						
#	Segment Type	Length, ft	Rad	dius, ft	Superelevation, %	Average Speed, mi/h	
1	Tangent	857	-		-	68.7	
Ve	hicle Results						
Ave	erage Speed, mi/h	68.7		Percent Followers,	. %	30.6	
Seg	gment Travel Time, minutes	0.14		Follower Density (FD), followers/mi/ln	1.0	
Veh	nicle LOS	А					
Bi	cycle Results						
Per	cent Occupied Parking	0		Pavement Condition	4		
Flo	w Rate Outside Lane, veh/h	227		Bicycle Effective W	24		
Bic	ycle LOS Score	2.84		Bicycle Effective S	peed Factor	5.07	
Bic	ycle LOS	С					
			Segm	nent 13			
Ve	hicle Inputs						
Seg	gment Type	Passing Constrained	d	Length, ft		1288	
Me	asured FFS	Measured		Free-Flow Speed,	mi/h	60.0	
De	emand and Capacity						
Dire	ectional Demand Flow Rate, veh/h	227		Opposing Deman	d Flow Rate, veh/h	-	
Pea	ak Hour Factor	0.88		Total Trucks, %		3.08	
Seg	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.13	
Int	termediate Results						
Seg	gment Vertical Class	1		Free-Flow Speed,	mi/h	60.0	
Spe	eed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674	
DE	Slope Coefficient (m)	-1.39671		PF Power Coefficie	ent (p)	0.73647	

	assing Lane Effective Length?	No		tal Segment Density, veh/mi,	
%Im	nprovement to Percent Followers	0.0	%	Improvement to Speed	0.0
Suk	bsegment Data				
#	Segment Type	Length, ft	Radius	ft Superelevat	ion, % Average Speed, mi/h
1	Tangent	1288	-	-	58.1
Vel	hicle Results				
Average Speed, mi/h		58.1	Pe	ercent Followers, %	37.4
Segr	ment Travel Time, minutes	0.25	Fo	ollower Density (FD), follower	s/mi/ln 1.5
Vehi	icle LOS	А			
Bic	cycle Results				
Perc	cent Occupied Parking	0	Pa	vement Condition Rating	4
Flow	v Rate Outside Lane, veh/h	227	Bi	cycle Effective Width, ft	24
Bicy	rcle LOS Score	2.74	Bi	cycle Effective Speed Factor	4.79
Bicy	rcle LOS	С			
Fac	cility Results				
1	T VMT veh-mi/p	VH veh-		Follower Density, follow	vers/ LOS
1	1 308	0.1	10	1.0	A





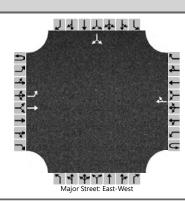
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HCS Two-Way Stop-Control Report									
General Information		Site Information							
Analyst	NM	Intersection	SD 38 & SD 19						
Agency/Co.	HRG	Jurisdiction	SDDOT						
Date Performed	5/8/2023	East/West Street	SD 38						
Analysis Year	2050	North/South 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								

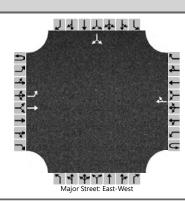
Lanes



Vehicle Volumes and Adj	ustme	nts														
Approach		Eastk	oound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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	0		0	0	0		0	1	0
Configuration		L	Т					TR							LR	
Volume (veh/h)		55	165				120	50						70		95
Percent Heavy Vehicles (%)		30												9		11
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage		Undivided														
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.40												6.49		6.31
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.47												3.58		3.40
Delay, Queue Length, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)		60													179	
Capacity, c (veh/h)		1238													677	
v/c Ratio		0.05													0.26	
95% Queue Length, Q ₉₅ (veh)		0.2													1.1	
Control Delay (s/veh)		8.1													12.2	
Level of Service (LOS)		А													В	
Approach Delay (s/veh)		2	0											12.2		
Approach LOS		,	A												В	

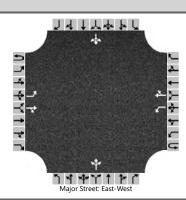
HCS Two-Way Stop-Control Report								
General Information		Site Information						
Analyst	NM	Intersection	SD 38 & SD 19					
Agency/Co.	HRG	Jurisdiction	SDDOT					
Date Performed	5/8/2023	East/West Street	SD 38					
Analysis Year	2050	North/South Street	SD 19					
Time Analyzed	PM Peak	Peak Hour Factor	0.92					
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25					
Project Description	SD 38							

Lanes



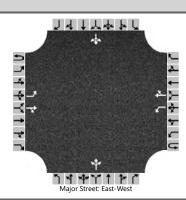
Vehicle Volumes and Adju	ıstme	nts														
Approach	Eastbound				Westbound			Northbound			Southbound					
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		L	Т					TR							LR	
Volume (veh/h)		85	115				170	80						40		50
Percent Heavy Vehicles (%)		2												10		14
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up He	adwa	ys														
Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.12												6.50		6.34
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.22												3.59		3.43
Delay, Queue Length, and	l Leve	l of Se	ervice													
Flow Rate, v (veh/h)		92													98	
Capacity, c (veh/h)		1291													593	
v/c Ratio		0.07													0.16	
95% Queue Length, Q ₉₅ (veh)		0.2													0.6	
Control Delay (s/veh)		8.0													12.3	
Level of Service (LOS)		А													В	
Approach Delay (s/veh)	3.4							12.3								
Approach LOS	A							В								

	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	NM	Intersection	SD 38 & 459th
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	5/8/2023	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		



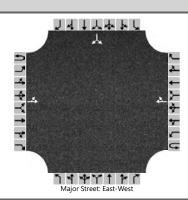
Vehicle Volumes and Adju	ıstme	nts															
Approach		Eastb	ound			Westk	oound			North	bound			South	bound		
Movement	U	L	Т	R	U	L	Т	R	U	L	T	R	U	L	Т	R	
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0	
Configuration		L		TR		L		TR			LTR				LTR		
Volume (veh/h)		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		
Right Turn Channelized																	
Median Type Storage				Undi	vided												
Critical and Follow-up He	adwa	ys															
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	l Leve	l of Se	ervice														
Flow Rate, v (veh/h)		0				2					24				10		
Capacity, c (veh/h)		1403				1319					596				552		
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				7.7					11.3				11.6		
Level of Service (LOS)		А				Α					В				В		
Approach Delay (s/veh)	0.0 0.1							11.3				11.6					
Approach LOS		A A							ВВВ								

	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	NM	Intersection	SD 38 & 459th
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	5/8/2023	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		



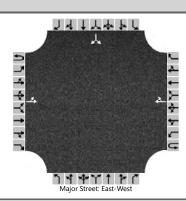
Vehicle Volumes and Adju	ıstme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0
Configuration		L		TR		L		TR			LTR				LTR	
Volume (veh/h)		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 (%)										()			()	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
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	Leve	l of Se	ervice													
Flow Rate, v (veh/h)		0				16					21				4	
Capacity, c (veh/h)		1307				1423					534				429	
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				7.6					12.0				13.5	
Level of Service (LOS)		А				А					В				В	
Approach Delay (s/veh)	0.0 0.4						12.0				13.5					
Approach LOS		A A							В В							

	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	5/8/2023	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		



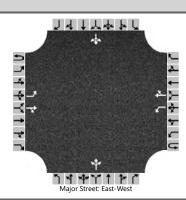
Vehicle Volumes and Adju	ıstme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		0	230				165	0						0		0
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)															0	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
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	l Leve	l of Se	ervice													
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)		Α	Α													
Approach Delay (s/veh)	0.0															
Approach LOS		А														

	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	5/8/2023	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		



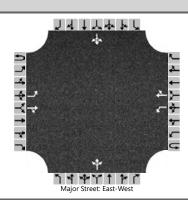
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority	_			_		_					_			-		
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		0	165				260	0						0		0
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)															0	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
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, an	d Leve	l of Se	ervice													
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)		А	А													
Approach Delay (s/veh)	0.0															
Approach LOS			Α													

	HCS Two-Way Sto	p-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	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		



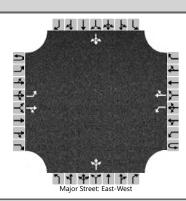
Vehicle Volumes and Adju	stme	nts														
Approach		Eastb	ound			Westk	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0
Configuration		L		TR		L		TR			LTR				LTR	
Volume (veh/h)		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 (%)										()			()	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up Hea	adwa	ys														
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	Leve	of Se	ervice													
Flow Rate, v (veh/h)		10				65					250				136	
Capacity, c (veh/h)		1422				1274					463				376	
v/c Ratio		0.01				0.05					0.54				0.36	
95% Queue Length, Q ₉₅ (veh)		0.0				0.2					3.2				1.6	
Control Delay (s/veh)		7.5				8.0					21.5				19.9	
Level of Service (LOS)		Α				А					С				С	
Approach Delay (s/veh)	0.3				2.4			21.5				19.9				
Approach LOS	A				A	A C			(С						

	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		



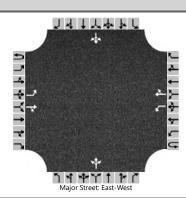
Vehicle Volumes and Adju	ıstme	nts														
Approach		Eastb	ound			Westk	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0
Configuration		L		TR		L		TR			LTR				LTR	
Volume (veh/h)		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 (%)										()			()	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
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	Leve	l of Se	ervice													
Flow Rate, v (veh/h)		16				130					337				196	
Capacity, c (veh/h)		1173				1371					378				268	
v/c Ratio		0.01				0.10					0.89				0.73	
95% Queue Length, Q ₉₅ (veh)		0.0				0.3					9.0				5.2	
Control Delay (s/veh)		8.1				7.9					56.5				47.6	
Level of Service (LOS)		А				Α					F				Е	
Approach Delay (s/veh)	0.6				2.5			56.5				47.6				
Approach LOS		А				А			F				E			

	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								



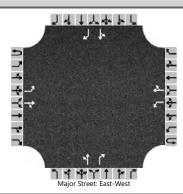
Vehicle Volumes and Adj	justme	nts														
Approach	Т	Eastb	oound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0
Configuration		L		TR		L		TR			LTR				LTR	
Volume (veh/h)		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				Undi	vided											
Critical and Follow-up H	eadwa	ys														
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, an	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)	T	2				43					141				22	
Capacity, c (veh/h)		1346				1196					555				403	
v/c Ratio		0.00				0.04					0.25				0.05	
95% Queue Length, Q ₉₅ (veh)		0.0				0.1					1.0				0.2	
Control Delay (s/veh)		7.7				8.1					13.7				14.4	
Level of Service (LOS)		А				Α					В				В	
Approach Delay (s/veh)		0	.1			1	.3	•		13	3.7	-		14	4.4	_
Approach LOS		,	A			,	4				В				В	

	HCS Two-Way Stop	o-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	PM Peak	Peak Hour Factor	0.92						
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25						
Project Description	SD 38								



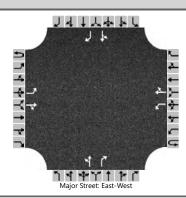
Vehicle Volumes and Adju	stme	nts														
Approach		Eastb	ound			Westk	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		0	1	0
Configuration		L		TR		L		TR			LTR				LTR	
Volume (veh/h)		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 (%)										()			()	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up Hea	adwa	ys														
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	Leve	of Se	ervice													
Flow Rate, v (veh/h)		11				71					120				84	
Capacity, c (veh/h)		1141				1251					366				258	
v/c Ratio		0.01				0.06					0.33				0.32	
95% Queue Length, Q ₉₅ (veh)		0.0				0.2					1.4				1.4	
Control Delay (s/veh)		8.2				8.1					19.5				25.5	
Level of Service (LOS)		А				А					С				D	
Approach Delay (s/veh)	0.3				1.1			19.5				25.5				
Approach LOS		A	Α			A	Ą		С				D			

	HCS Two-Way Stop	-Control Report								
General Information		Site Information								
Analyst	NM	Intersection	SD 38 & Vandemark Ave							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/8/2023	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									



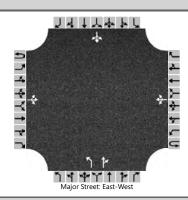
Vehicle Volumes and Ad	justme	nts														
Approach		Eastb	oound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	1		0	1	1
Configuration		L		TR		L		TR		LT		R		LT		R
Volume (veh/h)		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	
Right Turn Channelized										N	lo			N	lo	
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)	Т	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, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)	Т	27				9				15		11		46		27
Capacity, c (veh/h)		1286				1157				286		648		310		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				8.1				18.3		10.7		18.6		10.0
Level of Service (LOS)		А				А				С		В		С		А
Approach Delay (s/veh)		0).5			0	.2	•		1!	5.1	_		1!	5.4	
Approach LOS			A			,	4				C			(С	

	HCS Two-Way Stop	-Control Report								
General Information		Site Information								
Analyst	NM	Intersection	SD 38 & Vandemark Ave							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/8/2023	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									



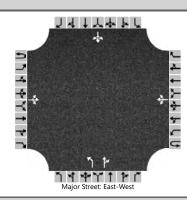
Vehicle Volumes and Ad	justme	nts														
Approach	Τ	Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	1		0	1	1
Configuration		L		TR		L		TR		LT		R		LT		R
Volume (veh/h)		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	
Right Turn Channelized										N	lo			Ν	lo	
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)	Τ	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, an	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)	Τ	22				5				0		10		33		27
Capacity, c (veh/h)		1017				1293				0		574		262		532
v/c Ratio		0.02				0.00						0.02		0.12		0.05
95% Queue Length, Q ₉₅ (veh)		0.1				0.0						0.1		0.4		0.2
Control Delay (s/veh)		8.6				7.8						11.4		20.7		12.1
Level of Service (LOS)		А				А						В		С		В
Approach Delay (s/veh)		0	0.6			0	.1	•				-		16	5.8	_
Approach LOS		,	A			,	4							(С	

	HCS Two-Way Stop	-Control Report								
General Information		Site Information								
Analyst	NM	Intersection	SD 38 & 2nd St							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/8/2023	East/West Street	SD 38							
Analysis Year	2050	North/South Street	2nd St							
Time Analyzed	AM Peak	Peak Hour Factor	0.92							
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25							
Project Description	SD 38									



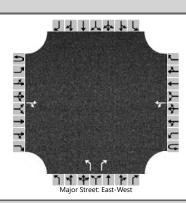
Vehicle Volumes and Adj	ustme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		1	1	0		0	1	0
Configuration			LTR				LTR			L		TR			LTR	
Volume (veh/h)		20	325	10		95	200	15		5	20	155		35	50	25
Percent Heavy Vehicles (%)		10				16				33	8	5		0	4	8
Proportion Time Blocked																
Percent Grade (%)										()			(0	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up He	eadwa	ys														
Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.20				4.26				7.43	6.58	6.25		7.10	6.54	6.28
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)		2.29				2.34				3.80	4.07	3.35		3.50	4.04	3.37
Delay, Queue Length, and	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)		22				103				5		190			120	
Capacity, c (veh/h)		1263				1121				169		568			255	
v/c Ratio		0.02				0.09				0.03		0.33			0.47	
95% Queue Length, Q ₉₅ (veh)		0.1				0.3				0.1		1.5			2.3	
Control Delay (s/veh)		7.9	0.2	0.2		8.5	0.9	0.9		27.0		14.5			31.1	
Level of Service (LOS)		А	Α	А		Α	Α	Α		D		В			D	
Approach Delay (s/veh)		0.6 3.2					-	14.8 31.1								
Approach LOS		,	4			1	4		В				D			

	HCS Two-Way Stop	-Control Report								
General Information		Site Information								
Analyst	NM	Intersection	SD 38 & 2nd St							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/8/2023	East/West Street	SD 38							
Analysis Year	2050	North/South Street	2nd St							
Time Analyzed	PM Peak	Peak Hour Factor	0.92							
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25							
Project Description	SD 38									



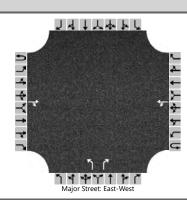
Vehicle Volumes and Adj	ustme	nts														
Approach		Eastb	ound			Westk	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		1	1	0		0	1	0
Configuration			LTR				LTR			L		TR			LTR	
Volume (veh/h)		25	235	9		130	490	25		15	25	65		15	30	20
Percent Heavy Vehicles (%)		0				0				0	0	6		0	6	0
Proportion Time Blocked																
Percent Grade (%)										()			(0	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
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	6.26		7.10	6.56	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	3.35		3.50	4.05	3.30
Delay, Queue Length, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)	Т	27				141				16		98			71	
Capacity, c (veh/h)		1001				1310				114		370			177	
v/c Ratio		0.03				0.11				0.14		0.26			0.40	
95% Queue Length, Q ₉₅ (veh)		0.1				0.4				0.5		1.0			1.8	
Control Delay (s/veh)		8.7	0.3	0.3		8.1	1.3	1.3		41.7		18.2			38.3	
Level of Service (LOS)		Α	А	А		А	А	А		Е		С			Е	
Approach Delay (s/veh)	1.1 2.						.6		21.6 38.3				3.3			
Approach LOS			A		A				С				E			

	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	5/8/2023	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		



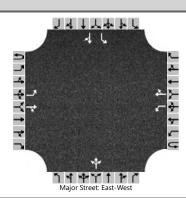
Vehicle Volumes and Ad	justme	nts														
Approach	T	Eastk	oound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		1	0	1		0	0	0
Configuration				TR		LT				L		R				
Volume (veh/h)			425	90		55	285			35		50				
Percent Heavy Vehicles (%)						0				0		0				
Proportion Time Blocked																
Percent Grade (%)										()					
Right Turn Channelized										Ν	lo					
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)	T					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, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)	T					60				38		54				
Capacity, c (veh/h)						1021				274		567				
v/c Ratio						0.06				0.14		0.10				
95% Queue Length, Q ₉₅ (veh)						0.2				0.5		0.3				
Control Delay (s/veh)						8.7	0.6			20.2		12.0				
Level of Service (LOS)						А	А			С		В				
Approach Delay (s/veh)			_	-		1	.9			15	5.4			•		-
Approach LOS						,	A			(C					

	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	5/8/2023	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		



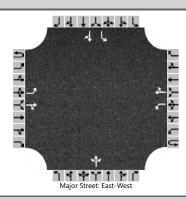
Vehicle Volumes and Adju	stme	nts														
Approach		Eastb	ound			Westk	ound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		1	0	1		0	0	0
Configuration				TR		LT				L		R				
Volume (veh/h)			305	4		4	620			15		15				
Percent Heavy Vehicles (%)						0				0		0				
Proportion Time Blocked																
Percent Grade (%)										()					
Right Turn Channelized										N	О					
Median Type Storage				Undi	vided											
Critical and Follow-up Hea	adwa	ys														
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	Leve	of Se	ervice													
Flow Rate, v (veh/h)						4				16		16				
Capacity, c (veh/h)						1235				264		713				
v/c Ratio						0.00				0.06		0.02				
95% Queue Length, Q ₉₅ (veh)						0.0				0.2		0.1				
Control Delay (s/veh)						7.9	0.0			19.5		10.2				
Level of Service (LOS)						Α	Α			С		В				
Approach Delay (s/veh)						0	.1			14	1.8					
Approach LOS						A	Ą			E	3					

	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	NM	Intersection	SD 38 & Railroad Street
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	5/8/2023	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		



Vehicle Volumes and Adju	ustme	nts														
Approach		Eastb	ound			Westk	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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)		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	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
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	Leve	l of Se	ervice													
Flow Rate, v (veh/h)		4				16					35			158		10
Capacity, c (veh/h)		1173				1070					511			244		419
v/c Ratio		0.00				0.02					0.07			0.65		0.02
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.2			4.0		0.1
Control Delay (s/veh)		8.1				8.4					12.6			43.1		13.8
Level of Service (LOS)		А				Α					В			Е		В
Approach Delay (s/veh)	0.1 0.3						12.6				41.4					
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	5/8/2023	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		

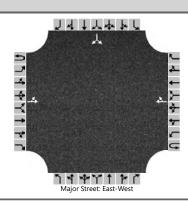


Vehicle Volumes and Adj	ustme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		0	1	0		1	1	0
Configuration		L		TR		L		TR			LTR			L		TR
Volume (veh/h)		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 (%))			()	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up Ho	eadwa	ys														
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	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)		4				16					21			92		15
Capacity, c (veh/h)		848				1004					431			175		256
v/c Ratio		0.01				0.02					0.05			0.53		0.06
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.2			2.7		0.2
Control Delay (s/veh)		9.3				8.6					13.8			46.5		19.9
Level of Service (LOS)		А				Α					В			E		С
Approach Delay (s/veh)		0	.1			0	.2			13	3.8			42	2.7	
Approach LOS		,	4			,	4				В				E	

HCS Signalized Intersection Results Summary 144444 Intersection Information **General Information** HRG Duration, h 0.250 Agency Analyst NM Analysis Date May 8, 2023 Area Type Other PHF Jurisdiction SDDOT Time Period AM Peak 0.92 **Urban Street** SD 38 Analysis Year 2050 **Analysis Period** 1> 7:15 SD 38 & Mickelson Roa... File Name (10) SD38&Mickelson AM.xus Intersection **Project Description** WB **Demand Information** EB NB SB Approach Movement L R L R L R L R 40 65 Demand (v), veh/h 135 445 35 195 190 45 55 215 20 195 **Signal Information** \mathbb{H} وذلك Cycle, s 70.0 Reference Phase 2 542 Offset, s 0 Reference Point End 2.1 Green 2.9 33.1 2.9 3.1 10.0 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** 5 2 6 3 8 4 1 7 Case Number 1.1 4.0 1.1 3.0 1.1 4.0 1.1 4.0 Phase Duration, s 8.9 39.1 6.9 37.1 7.1 14.0 10.0 16.9 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 Change Period, (Y+Rc), s 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 5.0 2.9 3.7 7.3 8.0 12.3 Green Extension Time (g_e), s 0.2 0.0 0.0 0.0 0.0 0.6 0.0 0.6 Phase Call Probability 0.94 0.57 0.61 1.00 0.99 1.00 0.00 0.00 0.00 1.00 0.01 Max Out Probability 1.00 **Movement Group Results** EΒ WB NB SB Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 5 2 12 1 6 16 3 8 18 7 4 14 Adjusted Flow Rate (v), veh/h 147 522 43 212 207 49 130 234 234 1688 1749 1688 1772 1688 1615 1688 1523 Adjusted Saturation Flow Rate (s), veh/h/ln 1323 3.0 14.8 0.9 5.0 1.7 5.3 Queue Service Time (g_s), s 6.8 6.0 10.3 Cycle Queue Clearance Time (q c), s 3.0 14.8 0.9 5.0 6.8 1.7 5.3 6.0 10.3 0.50 Green Ratio (g/C) 0.54 0.51 0.47 0.47 0.19 0.14 0.24 0.18 Capacity (c), veh/h 690 878 402 837 625 187 231 333 282 Volume-to-Capacity Ratio (X) 0.213 0.594 0.108 0.253 0.330 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) 1.7 9.5 0.5 3.4 3.6 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 Uniform Delay (d 1), s/veh 8.2 12.4 10.1 11.1 11.5 24.5 28.0 25.5 27.5 Incremental Delay (d 2), s/veh 0.1 3.0 0.0 0.7 1.4 0.3 8.0 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 Control Delay (d), s/veh 8.2 15.3 10.2 11.8 13.0 24.8 28.8 31.1 29.9 Level of Service (LOS) Α В В В В С С С С 13.8 12.2 В 27.7 С 30.5 С Approach Delay, s/veh / LOS В Intersection Delay, s/veh / LOS 19.2 В **Multimodal Results** ΕB WB NB Pedestrian LOS Score / LOS 1.88 В В 2.12 1.92 1.89 В В Bicycle LOS Score / LOS 1.59 В 1.25 Α 0.78 Α 1.26 Α

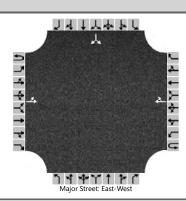
HCS Signalized Intersection Results Summary 144444 Intersection Information **General Information** HRG Duration, h 0.250 Agency Analyst NM Analysis Date May 8, 2023 Area Type Other PHF Jurisdiction SDDOT Time Period AM Peak 0.92 **Urban Street** SD 38 Analysis Year 2050 **Analysis Period** 1> 7:15 SD 38 & Mickelson Roa... File Name (10) SD38&Mickelson PM.xus Intersection **Project Description** WB **Demand Information** EB NB SB Approach Movement L R L R L R L R 535 10 Demand (v), veh/h 160 220 20 135 225 20 65 215 15 185 **Signal Information** وذلك Cycle, s 70.0 Reference Phase 2 Offset, s 0 Reference Point End 0.7 30.8 1.3 7.0 Green 5.0 Uncoordinated No Simult. Gap E/W On Yellow 3.5 0.0 4.0 3.5 3.5 4.0 Force Mode Fixed Simult. Gap N/S On 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 6 3 8 1 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 4.5 5.0 4.5 5.0 4.5 5.0 4.5 5.0 Change Period, (Y+Rc), s 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 1.00 0.63 1.00 1.00 Max Out Probability 1.00 1.00 **Movement Group Results** EΒ WB NB SB Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 5 2 12 1 6 16 3 8 18 7 4 14 Adjusted Flow Rate (v), veh/h 174 261 147 582 245 22 82 234 217 1688 1746 1688 1772 1323 1688 1730 1688 1519 Adjusted Saturation Flow Rate (s), veh/h/ln 3.8 6.8 3.3 19.2 8.0 7.5 9.6 Queue Service Time (g_s), s 8.9 3.1 Cycle Queue Clearance Time (q c), s 3.8 6.8 3.3 19.2 8.9 8.0 3.1 7.5 9.6 Green Ratio (g/C) 0.52 0.45 0.51 0.44 0.44 0.12 0.10 0.24 0.18 Capacity (c), veh/h 379 786 587 779 582 164 173 356 277 Volume-to-Capacity Ratio (X) 0.459 0.332 0.250 0.746 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 4.6 1.9 12.8 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 Uniform Delay (d 1), s/veh 12.2 12.4 9.7 16.3 13.5 27.4 29.8 24.6 27.3 Incremental Delay (d 2), s/veh 0.3 1.1 0.1 6.4 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 Control Delay (d), s/veh 12.6 13.6 9.8 22.8 15.7 27.6 30.5 28.0 36.2 Level of Service (LOS) В В Α С В С С С D 13.2 В 19.0 В 29.9 С 32.0 С Approach Delay, s/veh / LOS Intersection Delay, s/veh / LOS 21.3 С **Multimodal Results** ΕB WB NB Pedestrian LOS Score / LOS 1.89 В В 2.12 1.92 1.89 В В Bicycle LOS Score / LOS 1.20 Α 2.09 0.66 Α 1.23 Α

	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	NM	Intersection	SD38 & 466th Ave
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	5/8/2023	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		



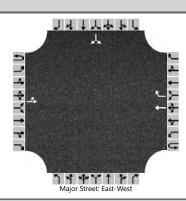
Vehicle Volumes and Adju	ıstme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	T	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		2	765				430	5						4		0
Percent Heavy Vehicles (%)		0												50		3
Proportion Time Blocked																
Percent Grade (%)														(0	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.10												6.90		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												3.95		3.33
Delay, Queue Length, and	l Leve	l of Se	ervice													
Flow Rate, v (veh/h)		2													4	
Capacity, c (veh/h)		1100													140	
v/c Ratio		0.00													0.03	
95% Queue Length, Q ₉₅ (veh)		0.0													0.1	
Control Delay (s/veh)		8.3	0.0												31.6	
Level of Service (LOS)		А	А												D	
Approach Delay (s/veh)	0.1											31.6				
Approach LOS		-	4											I	D	

	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	NM	Intersection	SD38 & 466th Ave
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	5/8/2023	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		



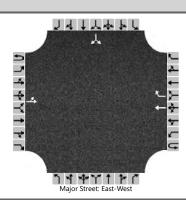
Vehicle Volumes and Adj	justme	nts														
Approach		Eastb	ound			Westl	bound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		0	445				910	2						5		2
Percent Heavy Vehicles (%)		0												33		0
Proportion Time Blocked																
Percent Grade (%)														-	0	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.10												6.73		6.20
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												3.80		3.30
Delay, Queue Length, an	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)		0													8	
Capacity, c (veh/h)		705													144	
v/c Ratio		0.00													0.05	
95% Queue Length, Q ₉₅ (veh)		0.0													0.2	
Control Delay (s/veh)		10.1	0.0												31.4	
Level of Service (LOS)		В	А												D	
Approach Delay (s/veh)		0.0											31.4			
Approach LOS		,	Ą											ı	D	

	HCS Two-Way Stop	pp-Control Report									
General Information		Site 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	AM Peak	Peak Hour Factor	0.92								
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25								
Project Description	SD 38										



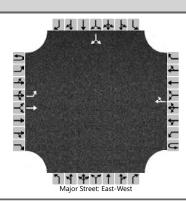
Vehicle Volumes and Adj	ustme	nts														
Approach	\top	Eastb	oound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	1		0	0	0		0	1	0
Configuration	T	LT					Т	R							LR	
Volume (veh/h)		40	730				255	20						15		190
Percent Heavy Vehicles (%)	T	0												56		12
Proportion Time Blocked																
Percent Grade (%)	T														0	
Right Turn Channelized						Ν	lo									
Median Type Storage	T			Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)	Т	4.1												7.1		6.2
Critical Headway (sec)		4.10												6.96		6.32
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												4.00		3.41
Delay, Queue Length, an	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)	\top	43													223	
Capacity, c (veh/h)		1274													584	
v/c Ratio		0.03													0.38	
95% Queue Length, Q ₉₅ (veh)		0.1													1.8	
Control Delay (s/veh)		7.9	0.5												14.9	
Level of Service (LOS)		А	А												В	
Approach Delay (s/veh)	T	0	.9										14.9			
Approach LOS		A B										В				

	HCS Two-Way Stop	o-Control Report								
General Information		Site 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									



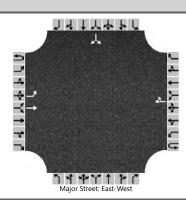
Vehicle Volumes and Adju	ıstme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	1		0	0	0		0	1	0
Configuration		LT					Т	R							LR	
Volume (veh/h)		25	420				415	35						30		495
Percent Heavy Vehicles (%)		0												6		2
Proportion Time Blocked																
Percent Grade (%)														(0	
Right Turn Channelized						Ν	lo									
Median Type Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.10												6.46		6.22
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												3.55		3.32
Delay, Queue Length, and	l Leve	l of Se	ervice													
Flow Rate, v (veh/h)		27													571	
Capacity, c (veh/h)		1085													568	
v/c Ratio		0.03													1.01	
95% Queue Length, Q ₉₅ (veh)		0.1													14.8	
Control Delay (s/veh)		8.4	0.3												66.1	
Level of Service (LOS)		А	А												F	
Approach Delay (s/veh)	0.7												66.1			
Approach LOS		А												F		

	HCS Two-Way Stop	op-Control Report								
General Information		Site Information								
Analyst	NM	Intersection	SD 38 & I-90 EB Ramp Terminal							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/8/2023	East/West Street	SD 38							
Analysis Year	2050	North/South Street	I-90 EB Ramp Terminal							
Time Analyzed	AM Peak	Peak Hour Factor	0.92							
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25							
Project Description	SD 38									



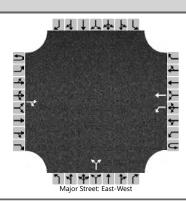
Vehicle Volumes and Adj	justme	nts															
Approach		Eastb	ound			Westl	oound			North	bound			South	bound		
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	1	1	0	0	0	1	0		0	0	0		0	1	0	
Configuration		L	Т					TR							LR		
Volume (veh/h)		430	315				245	20						5		30	
Percent Heavy Vehicles (%)		1												33		3	
Proportion Time Blocked																	
Percent Grade (%)														()		
Right Turn Channelized																	
Median Type Storage				Undi	vided												
Critical and Follow-up H	eadwa	ys															
Base Critical Headway (sec)		4.1												7.1		6.2	
Critical Headway (sec)		4.11												6.73		6.23	
Base Follow-Up Headway (sec)		2.2												3.5		3.3	
Follow-Up Headway (sec)		2.21												3.80		3.33	
Delay, Queue Length, an	d Leve	l of Se	ervice														
Flow Rate, v (veh/h)		467													38		
Capacity, c (veh/h)		1280													307		
v/c Ratio		0.37													0.12		
95% Queue Length, Q ₉₅ (veh)		1.7													0.4		
Control Delay (s/veh)		9.4													18.4		
Level of Service (LOS)		А													С		
Approach Delay (s/veh)	5.4												18.4				
Approach LOS		А												С			

	HCS Two-Way Stop	op-Control Report								
General Information		Site Information								
Analyst	NM	Intersection	SD 38 & I-90 EB Ramp Terminal							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/8/2023	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									



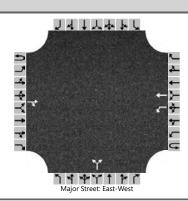
Vehicle Volumes and Adju	ıstme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		L	Т					TR							LR	
Volume (veh/h)		190	265				420	30						40		35
Percent Heavy Vehicles (%)		12												36		3
Proportion Time Blocked																
Percent Grade (%)														(0	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.22												6.76		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.31												3.82		3.33
Delay, Queue Length, and	Leve	l of Se	ervice													
Flow Rate, v (veh/h)		207													82	
Capacity, c (veh/h)		1024													224	
v/c Ratio		0.20													0.36	
95% Queue Length, Q ₉₅ (veh)		0.8													1.6	
Control Delay (s/veh)		9.4													30.0	
Level of Service (LOS)		Α													D	
Approach Delay (s/veh)	3.9											30.0				
Approach LOS		А												D		

	HCS Two-Way Stop	pp-Control Report								
General Information		Site Information								
Analyst	NM	Intersection	SD 38 & 466th Ave (South)							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/8/2023	East/West Street	SD 38							
Analysis Year	2050	North/South Street	466th Ave (South)							
Time Analyzed	AM Peak	Peak Hour Factor	0.92							
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25							
Project Description	SD 38									



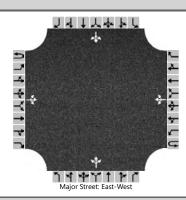
Vehicle Volumes and Ad	justme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	1	1	0		0	1	0		0	0	0
Configuration				TR		L	Т				LR					
Volume (veh/h)			305	20		20	240			25		20				
Percent Heavy Vehicles (%)						20				33		60				
Proportion Time Blocked																
Percent Grade (%)										()					
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.30				6.73		6.80				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.38				3.80		3.84				
Delay, Queue Length, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)	T					22					49					
Capacity, c (veh/h)						1112					453					
v/c Ratio						0.02					0.11					
95% Queue Length, Q ₉₅ (veh)						0.1					0.4					
Control Delay (s/veh)						8.3					13.9					
Level of Service (LOS)						Α					В					
Approach Delay (s/veh)						0	.6			13	3.9					
Approach LOS						1	4			ı	В					

	HCS Two-Way Stop	op-Control Report								
General Information		Site Information								
Analyst	NM	Intersection	SD 38 & 466th Ave (South)							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/8/2023	East/West Street	SD 38							
Analysis Year	2050	North/South Street	466th Ave (South)							
Time Analyzed	PM Peak	Peak Hour Factor	0.92							
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25							
Project Description	SD 38									



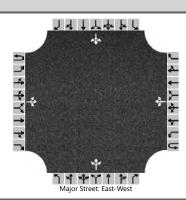
Vehicle Volumes and Adj	ustme	nts															
Approach		Eastb	ound			Westl	oound			North	bound			South	bound		
Movement	U	L	Т	R	U	L	Т	R	U	L	T	R	U	L	Т	R	
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	1	1	0		0	1	0		0	0	0	
Configuration				TR		L	Т				LR						
Volume (veh/h)			280	20		15	405			45		25					
Percent Heavy Vehicles (%)						11				20		0					
Proportion Time Blocked																	
Percent Grade (%)										()						
Right Turn Channelized																	
Median Type Storage				Undi	vided												
Critical and Follow-up Ho	eadwa	ys															
Base Critical Headway (sec)						4.1				7.1		6.2					
Critical Headway (sec)						4.21				6.60		6.20					
Base Follow-Up Headway (sec)						2.2				3.5		3.3					
Follow-Up Headway (sec)						2.30				3.68		3.30					
Delay, Queue Length, and	d Leve	l of S	ervice														
Flow Rate, v (veh/h)						16					76						
Capacity, c (veh/h)						1185					412						
v/c Ratio						0.01					0.18						
95% Queue Length, Q ₉₅ (veh)						0.0					0.7						
Control Delay (s/veh)						8.1					15.7						
Level of Service (LOS)						Α					С						
Approach Delay (s/veh)		0.3							15.7								
Approach LOS		A					4			(2						

	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	NM	Intersection	SD 38 & 468th Avenue
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	5/8/2023	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		



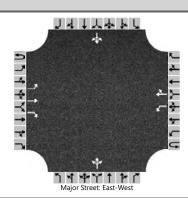
Vehicle Volumes and Adj	ustme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		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	
Right Turn Channelized																
Median Type Storage				Undi	vided											
Critical and Follow-up H	eadwa	ys														
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, an	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)		4				0					4				62	
Capacity, c (veh/h)		1274				1178					313				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			16.7				16.2	
Level of Service (LOS)		А	Α	Α		Α	Α	Α			С				С	
Approach Delay (s/veh)		0.1				0.0			16.7				16.2			
Approach LOS		A A						ССС								

	HCS Two-Way Stop	p-Control Report						
General Information		Site Information						
Analyst	NM	Intersection	SD 38 & 468th Avenue					
Agency/Co.	HRG	Jurisdiction	SDDOT					
Date Performed	5/8/2023	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							



Vehicle Volumes and Adju	ıstme	nts															
Approach		Eastb	ound			Westl	oound			North	bound			South	bound		
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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 (%)										()			()		
Right Turn Channelized																	
Median Type Storage				Undi	vided												
Critical and Follow-up He	adwa	ys															
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	l Leve	l of Se	ervice														
Flow Rate, v (veh/h)		0				5					4				63		
Capacity, c (veh/h)		1060				1231					292				283		
v/c Ratio		0.00				0.00					0.01				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			17.5				21.3		
Level of Service (LOS)		А	А	А		А	А	А			С				С		
Approach Delay (s/veh)	0.0				0.1			17.5				21.3					
Approach LOS		А				А				С				С			

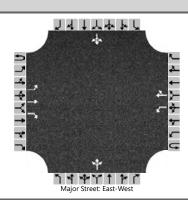
	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	NM	Intersection	SD 38 & 469th Ave
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	5/8/2023	East/West Street	SD 38
Analysis Year	2050	North/South Street	469th Ave / Co Hwy 139
Time Analyzed	AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	SD 38		



Vehicle Volumes and Adju	stme	nts														
Approach		Eastb	ound			Westk	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	1	0	1	1	0		0	1	0		0	1	0
Configuration		L	Т	R		L		TR			LTR				LTR	
Volume (veh/h)		5	330	75		75	165	5		110	5	280		15	5	5
Percent Heavy Vehicles (%)		3				5				13	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										()			()	
Right Turn Channelized		N	lo													
Median Type Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
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				4.15				7.23	6.53	6.23		7.13	6.53	6.23
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				3.62	4.03	3.33		3.53	4.03	3.33
Delay, Queue Length, and	Leve	l of Se	ervice													
Flow Rate, v (veh/h)		5				82					429				27	
Capacity, c (veh/h)		1384				1104					498				228	
v/c Ratio		0.00				0.07					0.86				0.12	
95% Queue Length, Q ₉₅ (veh)		0.0				0.2					9.1				0.4	
Control Delay (s/veh)		7.6				8.5					42.5				22.9	
Level of Service (LOS)		Α				Α					Е				С	
Approach Delay (s/veh)	0.1 2.6					.6		42.5				22.9				
Approach LOS	А				А			E				С				

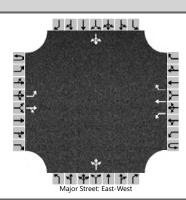
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	HCS Two-Way Stop	-Control Report	
General Information		Site Information	
Analyst	NM	Intersection	SD 38 & 469th Ave
Agency/Co.	HRG	Jurisdiction	SDDOT
Date Performed	5/8/2023	East/West Street	SD 38
Analysis Year	2050	North/South Street	469th Ave / Co 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		



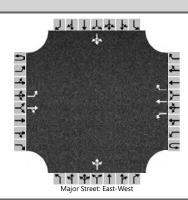
Vehicle Volumes and Adju	ustme	nts														
Approach		Eastb	ound			Westk	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	1	0	1	1	0		0	1	0		0	1	0
Configuration		L	Т	R		L		TR			LTR				LTR	
Volume (veh/h)		5	245	120		285	380	5		100	5	120		20	5	10
Percent Heavy Vehicles (%)		3				5				2	3	15		3	3	3
Proportion Time Blocked																
Percent Grade (%)										()				0	
Right Turn Channelized		Ν	lo													
Median Type Storage				Undi	vided											
Critical and Follow-up He	eadwa	ys														
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				4.15				7.12	6.53	6.35		7.13	6.53	6.23
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	3.44		3.53	4.03	3.33
Delay, Queue Length, and	d Leve	l of Se	ervice													
Flow Rate, v (veh/h)		5				310					245				38	
Capacity, c (veh/h)		1135				1146					175				107	
v/c Ratio		0.00				0.27					1.40				0.35	
95% Queue Length, Q ₉₅ (veh)		0.0				1.1					14.9				1.4	
Control Delay (s/veh)		8.2				9.3					259.5				55.9	
Level of Service (LOS)		Α				Α					F				F	
Approach Delay (s/veh)	0.1				4	.0		259.5				55.9				
Approach LOS		А				A			F				F			

	HCS Two-Way Stop	p-Control Report								
General Information		Site Information								
Analyst	NM	Intersection	SD 38 & La Mesa							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/8/2023	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									



Vehicle Volumes and Adju	ıstme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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		0	1	0
Configuration		L		TR		L	Т	R			LTR				LTR	
Volume (veh/h)		30	700	4		0	235	15		0	15	5		75	4	30
Percent Heavy Vehicles (%)		0				0				0	13	0		0	50	0
Proportion Time Blocked																
Percent Grade (%)										()			()	
Right Turn Channelized						Ν	lo									
Median Type Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
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	6.63	6.20		7.10	7.00	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	4.12	3.30		3.50	4.45	3.30
Delay, Queue Length, and	Leve	l of Se	ervice													
Flow Rate, v (veh/h)		33				0					22				118	
Capacity, c (veh/h)		1303				857					227				219	
v/c Ratio		0.03				0.00					0.10				0.54	
95% Queue Length, Q ₉₅ (veh)		0.1				0.0					0.3				2.9	
Control Delay (s/veh)		7.8				9.2					22.5				39.2	
Level of Service (LOS)		Α				Α					С				E	
Approach Delay (s/veh)	0.3 0.0							22.5				39.2				
Approach LOS		A A							C E							

	HCS Two-Way Stop	p-Control Report								
General Information		Site Information								
Analyst	NM	Intersection	SD 38 & La Mesa							
Agency/Co.	HRG	Jurisdiction	SDDOT							
Date Performed	5/8/2023	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									



Vehicle Volumes and Adju	stme	nts														
Approach		Eastb	ound			Westl	ound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	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		0	1	0
Configuration		L		TR		L	T	R			LTR				LTR	
Volume (veh/h)		25	325	0		9	735	100		4	5	0		80	15	30
Percent Heavy Vehicles (%)		0				0				0	0	0		9	0	0
Proportion Time Blocked																
Percent Grade (%)										()			()	
Right Turn Channelized						Ν	lo									
Median Type Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
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		7.19	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	3.30		3.58	4.00	3.30
Delay, Queue Length, and	Leve	l of Se	ervice													
Flow Rate, v (veh/h)		27				10					10				136	
Capacity, c (veh/h)		758				1217					136				168	
v/c Ratio		0.04				0.01					0.07				0.81	
95% Queue Length, Q ₉₅ (veh)		0.1				0.0					0.2				5.4	
Control Delay (s/veh)		9.9				8.0					33.5				81.5	
Level of Service (LOS)		А				А					D				F	
Approach Delay (s/veh)	0.7				0.1			33.5				81.5				
Approach LOS	А				А				D				F			

HCS Signalized Intersection Results Summary Intersection Information **General Information** HRG Duration, h 0.250 Agency Analyst NM Analysis Date May 8, 2023 Area Type Other PHF Jurisdiction SDDOT Time Period AM Peak 0.92 **Urban Street** SD 38 Analysis Year 2050 **Analysis Period** 1> 7:15 SD 38 & Marion Street File Name (18) SD38&Marion AM.xus Intersection **Project Description** WB **Demand Information** EB NB SB Approach Movement L R L R L R L R 40 Demand (v), veh/h 165 340 105 50 125 75 110 225 120 45 145 **Signal Information** JI. Cycle, s 50.0 Reference Phase 2 Offset, s 0 Reference Point End Green 2.6 3.9 12.9 2.5 2.0 10.0 Uncoordinated No Simult. Gap E/W On Yellow 4.0 0.0 4.0 4.0 0.0 4.0 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** 5 2 6 3 8 1 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 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 Change Period, (Y+Rc), s 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 1.00 0.04 0.21 1.00 Max Out Probability 1.00 0.15 **Movement Group Results** EΒ WB NB SB Approach Movement L Т R L Т R L Т R L Т 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 5.1 4.1 2.7 1.1 2.5 2.7 3.6 6.5 3.9 1.2 Queue Service Time (g_s), s 3.6 1.5 2.5 Cycle Queue Clearance Time (q c), s 5.1 4.1 2.7 1.1 2.7 3.6 6.5 3.6 1.5 3.9 1.2 0.34 0.26 0.24 0.24 0.20 Green Ratio (g/C) 0.13 0.34 0.31 0.26 0.09 0.05 0.20 403 Capacity (c), veh/h 223 1128 514 456 459 403 148 361 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 14.7 Uniform Delay (d 1), s/veh 21.1 12.4 11.9 12.3 14.7 22.3 16.9 15.8 23.3 17.6 16.5 Incremental Delay (d 2), s/veh 11.0 8.0 1.0 0.0 1.3 1.6 15.9 8.0 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) С В В В В В D В В С В В 18.2 В 15.4 В 22.2 С 19.4 Approach Delay, s/veh / LOS В Intersection Delay, s/veh / LOS 19.1 В **Multimodal Results** ΕB WB NB Pedestrian LOS Score / LOS 2.08 В 2.09 В 2.26 2.42 В В Bicycle LOS Score / LOS 1.03 Α 0.71 Α 1.30 Α 0.90 Α

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HCS Signalized Intersection Results Summary Intersection Information **General Information** HRG Duration, h 0.250 Agency Analyst NM Analysis Date May 8, 2023 Area Type Other PHF Jurisdiction SDDOT Time Period PM Peak 0.90 **Urban Street** SD 38 Analysis Year 2050 **Analysis Period** 1> 16:45 SD 38 & Marion Street File Name (18) SD38&Marion PM.xus Intersection **Project Description** WB **Demand Information** EB NB SB Approach Movement L R L R L R L R 55 Demand (v), veh/h 70 230 105 170 355 180 205 125 85 355 205 **Signal Information** J. Cycle, s 60.0 Reference Phase 2 Offset, s 0 Reference Point End Green 3.7 0.4 13.3 4.2 2.8 15.5 Uncoordinated No Simult. Gap E/W On Yellow 4.0 4.0 4.0 4.0 0.0 4.0 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** 5 2 6 3 8 1 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 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 Change Period, (Y+Rc), s 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 8.0 Phase Call Probability 0.73 0.96 0.96 1.00 0.79 1.00 0.55 0.03 1.00 Max Out Probability 1.00 1.00 0.89 **Movement Group Results** EΒ WB NB SB Approach Movement L Т R L Т R L Т R L Т 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 1714 1772 1478 1688 1772 1478 1406 3.1 3.9 6.5 12.1 7.0 6.1 4.3 3.3 8.1 Queue Service Time (g_s), s 4.0 1.9 12.7 Cycle Queue Clearance Time (q 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 0.22 0.22 0.30 Green Ratio (g/C) 0.06 0.14 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 С С D С В F В В D С С 23.9 С 32.0 С 42.5 D 29.0 С Approach Delay, s/veh / LOS Intersection Delay, s/veh / LOS 32.1 С **Multimodal Results** ΕB WB NB Pedestrian LOS Score / LOS 2.10 В 2.10 В 2.26 2.27 В В Bicycle LOS Score / LOS 0.86 Α 1.55 1.42 Α 1.67

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		HCS Two-La	ine	Highway Re	port					
Pro	oject Information		_							
Ana	alyst MJV			Date		5/11/2023				
Age	ency	HRG		Analysis Year		2050 NB				
Jurisdiction SDDOT			Time Analyzed		AM PEAK					
Project Description		EB SD38 Corridor Study		Units		U.S. Customary				
Segment 1										
Vehicle Inputs										
Segment Type		Passing Zone		Length, ft		1084				
Mea	asured FFS	Measured		Free-Flow Speed, mi/h		55.0				
De	mand and Capacity			<u> </u>						
Dire	ectional Demand Flow Rate, veh/h	585		Opposing Demand Flow Rate, veh/h		350				
Peak Hour Factor		0.88		Total Trucks, %		2.16				
Segment Capacity, veh/h		1700		Demand/Capacity (D/C)		0.34				
Int	ermediate Results			<u> </u>		•				
Seg	ment Vertical Class	1		Free-Flow Speed, mi/h		55.0				
Speed Slope Coefficient (m)		4.36618		Speed Power Coefficient (p)		0.50547				
PF Slope Coefficient (m)		-1.35882		PF Power Coefficient (p)		0.76024				
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln		6.7				
%Improvement to Percent Followers		0.0		%Improvement to Speed		0.0				
Su	bsegment Data			<u>'</u>		_				
#	Segment Type Length, ft Ra		Rac	dius, ft Superelevation, %		Average Speed, mi/h				
1	Tangent	1084	-		-	52.0				
Ve	hicle Results					_				
Average Speed, mi/h		52.0		Percent Followers, %		59.5				
Segment Travel Time, minutes		0.24		Follower Density (FD), followers/mi/ln		6.7				
Vehicle LOS		С								
Bio	cycle Results			<u> </u>		<u>'</u>				
Percent Occupied Parking		0		Pavement Condition Rating		4				
Flow Rate Outside Lane, veh/h		585		Bicycle Effective Width, ft		24				
Bicycle LOS Score		2.94		Bicycle Effective Speed Factor		4.62				
Bicycle LOS		С								
		S	Segn	nent 2						
Ve	hicle Inputs									
	ment Type	Passing Constrained		Length, ft		507				
		Measured	-		mi/h	55.0				
5354154 115		Ivicasureu		Free-Flow Speed, mi/h		35.0				

Demand and Capacity									
	F0F		Omnovius B	d Flour Botton L (I					
Directional Demand Flow Rate, veh/h	585		Opposing Demand Flow Rate, veh/h		-				
Peak Hour Factor	0.88		Total Trucks, %		2.16				
Segment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.34				
Intermediate Results									
Segment Vertical Class	1		Free-Flow Speed, mi/h		55.0				
Speed Slope Coefficient (m)	4.57372		Speed Power Coefficient (p)		0.41674				
PF Slope Coefficient (m)	-1.43973		PF Power Coefficient (p)		0.72475				
In Passing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		7.1				
%Improvement to Percent Followers	0.0		%Improvement to Speed		0.0				
Subsegment Data									
# Segment Type	Length, ft	Rac	lius, ft	Superelevation, %	Average Speed, mi/h				
1 Tangent	507	<u> </u>		-	51.6				
Vehicle Results									
Average Speed, mi/h	51.6		Percent Followers, %		62.3				
Segment Travel Time, minutes	0.11		Follower Density (FD), followers/mi/ln		7.1				
Vehicle LOS	С								
Bicycle Results	<u>'</u>								
Percent Occupied Parking	0		Pavement Condition Rating		4				
Flow Rate Outside Lane, veh/h	585		Bicycle Effective Width, ft		24				
Bicycle LOS Score	2.94		Bicycle Effective Speed Factor		4.62				
Bicycle LOS	С								
Segment 3									
Vehicle Inputs									
Segment Type	Passing Zone		Length, ft		535				
Measured FFS	Measured		Free-Flow Speed, mi/h		55.0				
Demand and Capacity									
Directional Demand Flow Rate, veh/h 585		Opposing Demand Flow Rate, veh/h		350					
Peak Hour Factor	0.88		Total Trucks, %		2.16				
Segment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.34				
Intermediate Results									
Segment Vertical Class	1		Free-Flow Speed, mi/h		55.0				
Speed Slope Coefficient (m)	4.36618		Speed Power Coefficient (p)		0.50547				
PF Slope Coefficient (m)	-1.35882		PF Power Coefficient (p)		0.76024				
In Passing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		6.7				
%Improvement to Percent Followers	0.0		%Improvement to Speed		0.0				
Subsegment Data									

#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	535	535 -		-	52.0
Veł	nicle Results					·
Aver	rage Speed, mi/h	52.0		Percent Followers	, %	59.5
Segr	ment Travel Time, minutes	0.12		Follower Density ((FD), followers/mi/ln	6.7
Vehi	Vehicle LOS C					
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	585		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	2.94		Bicycle Effective S	peed Factor	4.62
Bicy	cle LOS	С				
			Segr	ment 4		
Veł	nicle Inputs					
Segr	ment Type	Passing Zone		Length, ft		1494
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Dei	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	816		Opposing Deman	d Flow Rate, veh/h	434
Peak	Hour Factor	0.88		Total Trucks, %		1.63
Segr	nent Capacity, veh/h	1700		Demand/Capacity	' (D/C)	0.48
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.39151		Speed Power Coefficient (p)		0.49146
PF S	lope Coefficient (m)	-1.26499		PF Power Coefficient (p)		0.79656
In Pa	assing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		8.1
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1494	-		-	66.3
Veł	nicle Results					
Aver	rage Speed, mi/h	66.3		Percent Followers	, %	65.9
Segr	ment Travel Time, minutes	0.26		Follower Density ((FD), followers/mi/ln	8.1
Vehicle LOS D						
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	816		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	3.11		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	С				

		S	egr	ment 5		
Ve	hicle Inputs					
Seg	ment Type	Passing Constrained		Length, ft		5762
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	816	816		d Flow Rate, veh/h	-
Pea	k Hour Factor	0.88		Total Trucks, %		1.63
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.48
Int	ermediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.62977		Speed Power Coe	fficient (p)	0.41674
PF S	Slope Coefficient (m)	-1.20069		PF Power Coefficie	ent (p)	0.78591
In P	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	7.9
%In	nprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Rad	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5762	-		-	66.0
Ve	hicle Results					
Ave	rage Speed, mi/h	66.0		Percent Followers,	. %	64.1
Seg	ment Travel Time, minutes	0.99		Follower Density (FD), followers/mi/ln		7.9
Veh	icle LOS	С				
Bio	cycle Results					
Perd	cent Occupied Parking	0		Pavement Conditi	on Rating	4
Flov	v Rate Outside Lane, veh/h	816		Bicycle Effective Width, ft		24
Вісу	rcle LOS Score	3.11		Bicycle Effective Speed Factor		5.07
Bicy	rcle LOS	С				
		S	egr	ment 6		
Ve	hicle Inputs					
Seg	ment Type	Passing Constrained		Length, ft		383
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	816		Opposing Deman	d Flow Rate, veh/h	-
Pea	k Hour Factor	0.88		Total Trucks, %		1.89
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.48
Int	ermediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
				1 ' '		

Speed Slope Coefficient (m)			Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)	-1.29361		PF Power Coefficient (p)		0.75772
In Passing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		8.3
%Improvement to Percent Followers	0.0		%Improvement to Speed		0.0
Subsegment Data					
# Segment Type	Length, ft	Rac	ius, ft Superelevation, %		Average Speed, mi/h
1 Tangent	383	383 -		-	66.0
Vehicle Results					
Average Speed, mi/h	66.0		Percent Followers,	, %	67.0
Segment Travel Time, minutes	0.07		Follower Density ((FD), followers/mi/ln	8.3
Vehicle LOS	D				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	816		Bicycle Effective W	Vidth, ft	24
Bicycle LOS Score	3.17		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	С				
	S	Segn	nent 7		
Vehicle Inputs					
Segment Type	Passing Constrained		Length, ft		1485
Measured FFS	Measured		Free-Flow Speed, mi/h		70.0
Demand and Capacity					·
Directional Demand Flow Rate, veh/h	883		Opposing Deman	d Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %		3.19
Segment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.52
Intermediate Results					·
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.57684		Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)	-1.28453		PF Power Coefficient (p)		0.76145
In Passing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		9.2
%Improvement to Percent Followers	0.0		%Improvement to Speed		0.0
Subsegment Data					
# Segment Type	Length, ft	Rac	lius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1485	-		-	65.9
Vehicle Results					
Average Speed, mi/h	65.9		Percent Followers, %		68.9
		Follower Density (FD), followers/mi/ln			
Segment Travel Time, minutes	0.26		Follower Density ((FD), followers/mi/ln	9.2

Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	883		Bicycle Effective Width, ft		24
Bicycle LOS Score	3.56		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	D				
	S	egn	nent 8		<u> </u>
Vehicle Inputs					
Segment Type	Passing Constrained		Length, ft		426
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity	<u>'</u>				
Directional Demand Flow Rate, veh/h	430		Opposing Deman	d Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %		6.47
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	4.57372		fficient (p)	0.41674
PF Slope Coefficient (m)	-1.29307	-1.29307		ent (p)	0.75839
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	3.2
%Improvement to Percent Followers	0.0	0.0		Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	426	1-		-	67.1
Vehicle Results				•	
Average Speed, mi/h	67.1		Percent Followers	, %	49.4
Segment Travel Time, minutes	0.07		Follower Density (FD), followers/mi/ln		3.2
Vehicle LOS	В				
Bicycle Results	·				
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	430		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	4.23		Bicycle Effective S	peed Factor	5.07
Bicycle LOS D					
	S	egn	nent 9		
Vehicle Inputs					
Segment Type	Passing Constrained		Length, ft		1212
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
			_	mi/h	

Dire	ctional Demand Flow Rate, veh/h	360		Opposing Demand	d Flow Rate, veh/h	-
	Hour Factor	0.88		Total Trucks, %		5.26
Segr	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.21
	ermediate Results			, ,		
Segr	ment Vertical Class	al Class 1		Free-Flow Speed,	mi/h	70.0
Spee	ed Slope Coefficient (m)	4.57372 S		Speed Power Coef	fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.29321		PF Power Coefficie	ent (p)	0.75821
In Pa	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	2.4
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1212	-		-	67.4
Vel	nicle Results					
Aver	age Speed, mi/h	67.4		Percent Followers,	%	44.9
Segr	ment Travel Time, minutes	0.20		Follower Density (FD), followers/mi/ln	2.4
Vehi	cle LOS	В				
Bic	ycle Results	<u>'</u>				·
Perc	ent Occupied Parking	0		Pavement Condition	on Rating	4
Flow	Rate Outside Lane, veh/h	360		Bicycle Effective W	/idth, ft	24
Bicy	cle LOS Score	3.73		Bicycle Effective S _I	peed Factor	5.07
Bicy	cle LOS	D				
			Segn	ment 10		
Vel	nicle Inputs					
Segr	ment Type	Passing Zone		Length, ft		1877
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					•
Dire	ctional Demand Flow Rate, veh/h	360		Opposing Demand	d Flow Rate, veh/h	263
Peak	: Hour Factor	0.88		Total Trucks, %		5.26
Segr	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.21
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.35010		Speed Power Coef	fficient (p)	0.52339
PF S	lope Coefficient (m)	-1.22503		PF Power Coefficie	ent (p)	0.81368
In Pa	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	2.2
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h

1 Tangent	1877	-		-	67.8
Vehicle Results					
Average Speed, mi/h	67.8		Percent Follows	ers, %	41.4
Segment Travel Time, minutes	0.31		Follower Densit	y (FD), followers/mi/ln	2.2
Vehicle LOS	В	В			
Bicycle Results	•		·		
Percent Occupied Parking	0	0		lition Rating	4
Flow Rate Outside Lane, veh/h	360		Bicycle Effective	Width, ft	24
Bicycle LOS Score	3.73		Bicycle Effective	Speed Factor	5.07
Bicycle LOS	D				
	•	Seg	ment 11		
Vehicle Inputs					
Segment Type	Passing Constrai	ned	Length, ft		1872
Measured FFS	Measured	Measured		d, mi/h	70.0
Demand and Capacity					•
Directional Demand Flow Rate, veh/h	360		Opposing Dem	and Flow Rate, veh/h	-
Peak Hour Factor	0.88	0.88			5.26
Segment Capacity, veh/h	1700		Demand/Capac	ity (D/C)	0.21
Intermediate Results					
Segment Vertical Class	1		Free-Flow Spee	d, mi/h	70.0
Speed Slope Coefficient (m)	4.58354		Speed Power C	pefficient (p)	0.41674
PF Slope Coefficient (m)	-1.26676		PF Power Coeff	cient (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	F	Radius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1872	-		-	67.4
Vehicle Results					
Average Speed, mi/h	67.4		Percent Follows	ers, %	43.9
Segment Travel Time, minutes	0.32		Follower Densit	y (FD), followers/mi/ln	2.3
Vehicle LOS					
Bicycle Results					
Percent Occupied Parking	0		Pavement Cond	lition Rating	4
Flow Rate Outside Lane, veh/h	360		Bicycle Effective	Width, ft	24
Bicycle LOS Score	3.73		Bicycle Effective	Speed Factor	5.07
Bicycle LOS	D				
	·	Sea	ment 12		
		9			

Ve	ehicle Inputs					
Seg	gment Type	Passing Zone		Length, ft		3603
Me	easured FFS	Measured		Free-Flow Speed, mi/h		70.0
De	emand and Capacity					
Directional Demand Flow Rate, veh/h 360			Opposing Deman	d Flow Rate, veh/h	263	
Pea	ak Hour Factor	0.88		Total Trucks, %		5.26
Seg	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.21
ln [.]	termediate Results					
Seg	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	eed Slope Coefficient (m)	4.37375		Speed Power Coe	fficient (p)	0.52339
PF	Slope Coefficient (m)	-1.18124		PF Power Coefficie	ent (p)	0.83047
In F	Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	2.1
%Ir	mprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	ıbsegment Data					
#	Segment Type	Length, ft	Rad	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3603	-		-	67.8
Ve	hicle Results					
Ave	erage Speed, mi/h	67.8	67.8		%	39.7
Seg	gment Travel Time, minutes	0.60		Follower Density (FD), followers/mi/ln	2.1
Veł	nicle LOS	В				
Bi	cycle Results					
Per	cent Occupied Parking	0		Pavement Condition	on Rating	4
Flo	w Rate Outside Lane, veh/h	360		Bicycle Effective Width, ft		24
Bic	ycle LOS Score	3.73		Bicycle Effective Speed Factor		5.07
Bic	ycle LOS	D				
			Segm	nent 13		
Ve	chicle Inputs					
Seg	gment Type	Passing Constrained	d	Length, ft		1053
Me	easured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	emand and Capacity					
Dir	ectional Demand Flow Rate, veh/h	360		Opposing Deman	d Flow Rate, veh/h	-
Peak Hour Factor 0.88		Total Trucks, %		5.26		
Seg	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.21
ln	termediate Results					
Seg	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	eed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
DE	Slope Coefficient (m)	-1.29321		PF Power Coefficie	ent (p)	0.75821

In Passing Lane Effective Length?		Total Segment De	Total Segment Density, veh/mi/ln			
%Improvement to Percent Followers 0.0			%Improvement to	o Speed	0.0	
Suk	segment Data					
#	Segment Type	Length, ft Radi		dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1053 -			-	67.4
Vel	nicle Results					
Aver	age Speed, mi/h	67.4		Percent Followers	5, %	44.9
Segr	nent Travel Time, minutes	0.18		Follower Density	(FD), followers/mi/ln	2.4
Vehi	cle LOS	В				
Bic	ycle Results			•		<u>'</u>
Perce	ent Occupied Parking	0		Pavement Condit	ion Rating	4
Flow	Rate Outside Lane, veh/h	360		Bicycle Effective \	Vidth, ft	24
Bicyc	cle LOS Score	3.73		Bicycle Effective S	Speed Factor	5.07
Bicyc	cle LOS	D				
		•	Segn	nent 14		
Vel	nicle Inputs					
Segr	nent Type	Passing Zone		Length, ft		1120
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Der	mand and Capacity					·
Dire	ctional Demand Flow Rate, veh/h	360		Opposing Demar	nd Flow Rate, veh/h	263
Peak	Hour Factor	0.88		Total Trucks, %		5.26
Segr	nent Capacity, veh/h	1700		Demand/Capacity (D/C)		0.21
Inte	ermediate Results					
Segr	nent Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spee	ed Slope Coefficient (m)	4.34020		Speed Power Coefficient (p)		0.52339
PF SI	ope Coefficient (m)	-1.25077		PF Power Coeffici	PF Power Coefficient (p)	
In Pa	ssing Lane Effective Length?	No		Total Segment De	ensity, veh/mi/ln	2.2
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Suk	segment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1120	-		-	67.9
Vel	icle Results		,			,
Aver	age Speed, mi/h	67.9		Percent Followers	5, %	42.4
Segr	nent Travel Time, minutes	0.19		Follower Density	(FD), followers/mi/ln	2.2
Vehi	cle LOS	В				
Bic	ycle Results					
	ent Occupied Parking	0		Pavement Condit	ion Rating	4
	· J					

Ela	Pata Outsida Lana val- /h	260	Digualo Effection 1	Midth ft	24
	Rate Outside Lane, veh/h	360	Bicycle Effective V		24
_	le LOS Score	3.73	Bicycle Effective S	speed Factor	5.07
Вісус	le LOS	D			
		Se	gment 15		
Veh	icle Inputs				
Segn	nent Type	Passing Zone	Length, ft		1272
Meas	sured FFS	Measured	Free-Flow Speed,	mi/h	70.0
Der	nand and Capacity				
Direc	tional Demand Flow Rate, veh/h	456	Opposing Demar	nd Flow Rate, veh/h	306
Peak	Hour Factor	0.88	Total Trucks, %		5.09
Segn	nent Capacity, veh/h	1700	Demand/Capacity	y (D/C)	0.27
Inte	ermediate Results		·		
Segn	nent Vertical Class	1	Free-Flow Speed,	mi/h	70.0
Spee	d Slope Coefficient (m)	4.35349	Speed Power Coe	efficient (p)	0.51403
PF SI	ope Coefficient (m)	-1.25787	PF Power Coeffici	ent (p)	0.80000
In Pa	ssing Lane Effective Length?	No	Total Segment De	ensity, veh/mi/ln	3.3
%lmţ	provement to Percent Followers	0.0	%Improvement to	o Speed	0.0
Sub	segment Data				
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1272	-	-	67.4
Veh	icle Results				
Avera	age Speed, mi/h	67.4	Percent Followers	5, %	48.9
Segn	nent Travel Time, minutes	0.21	Fallaau Danaitu	(FD) fallaa.a./aa:/la	
17-11	· .		Follower Density	(FD), followers/mi/ln	3.3
venic	cle LOS	В В	Follower Density	(FD), followers/mi/in	3.3
			Follower Density	(FD), followers/mi/in	3.3
Bicy	cle LOS		Pavement Condit		3.3
Bicy Perce	cle LOS ycle Results	В		ion Rating	
Bicy Perce Flow	cle LOS ycle Results ent Occupied Parking	B 0	Pavement Condit	ion Rating Vidth, ft	4
Perce Flow Bicyc	ycle Results ent Occupied Parking Rate Outside Lane, veh/h	0 456	Pavement Condit Bicycle Effective V	ion Rating Vidth, ft	4 24
Perce Flow Bicyc	cle LOS ycle Results ent Occupied Parking Rate Outside Lane, veh/h cle LOS Score	0 456 3.79 D	Pavement Condit Bicycle Effective V	ion Rating Vidth, ft	4 24
Bicy Perce Flow Bicyc Bicyc	cle LOS ycle Results ent Occupied Parking Rate Outside Lane, veh/h cle LOS Score	0 456 3.79 D	Pavement Condit Bicycle Effective V Bicycle Effective S	ion Rating Vidth, ft	4 24
Perce Flow Bicyc Bicyc	cle LOS ycle Results ent Occupied Parking Rate Outside Lane, veh/h ele LOS Score	0 456 3.79 D	Pavement Condit Bicycle Effective V Bicycle Effective S	ion Rating Vidth, ft	4 24
Perce Flow Bicyc Bicyc	cle LOS ycle Results ent Occupied Parking Rate Outside Lane, veh/h ele LOS Score ele LOS	B 0 456 3.79 D	Pavement Condit Bicycle Effective V Bicycle Effective S gment 16	ion Rating Width, ft Speed Factor	4 24 5.07
Perce Flow Bicyc Bicyc	cle LOS ycle Results ent Occupied Parking Rate Outside Lane, veh/h ele LOS Score ele LOS sicle Inputs ment Type	B 0 456 3.79 D Se Passing Constrained	Pavement Condit Bicycle Effective V Bicycle Effective S gment 16 Length, ft	ion Rating Width, ft Speed Factor	4 24 5.07
Perce Flow Bicyc Bicyc	cle LOS ycle Results ent Occupied Parking Rate Outside Lane, veh/h cle LOS Score cle LOS nicle Inputs nent Type sured FFS mand and Capacity	B 0 456 3.79 D Se Passing Constrained Measured	Pavement Condit Bicycle Effective V Bicycle Effective S gment 16 Length, ft Free-Flow Speed,	ion Rating Width, ft Speed Factor	4 24 5.07
Perce Flow Bicyc Bicyc Veh Segm Meas Den	cle LOS ycle Results ent Occupied Parking Rate Outside Lane, veh/h ele LOS Score ele LOS nicle Inputs nent Type sured FFS	B 0 456 3.79 D Se Passing Constrained	Pavement Condit Bicycle Effective V Bicycle Effective S gment 16 Length, ft Free-Flow Speed,	ion Rating Width, ft Speed Factor	625 70.0

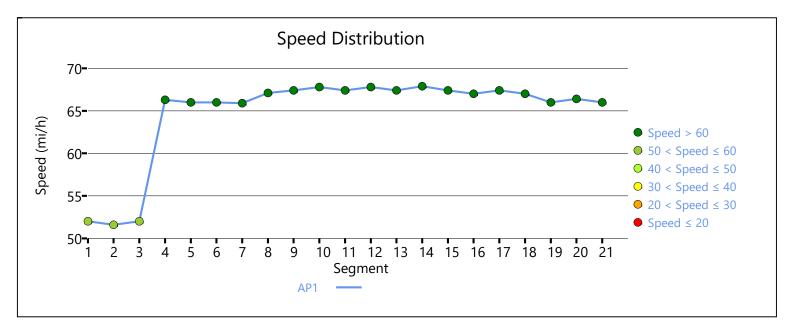
Int	termediate Results					
Seg	ment Vertical Class	1		Free-Flow Spe	ed, mi/h	70.0
Spe	ed Slope Coefficient (m)	4.57372		Speed Power	Coefficient (p)	0.41674
PF :	Slope Coefficient (m)	-1.29323		PF Power Coe	fficient (p)	0.75819
In F	assing Lane Effective Length?	No	No		t Density, veh/mi/ln	3.5
%In	nprovement to Percent Followers	0.0		%Improveme	nt to Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Length, ft Radiu		Superelevation, ^o	% Average Speed, mi/h
1	Tangent	625	-		-	67.0
Ve	hicle Results					
Ave	rage Speed, mi/h	67.0		Percent Follow	vers, %	51.0
Seg	ment Travel Time, minutes	0.11		Follower Dens	ity (FD), followers/mi/	/ln 3.5
Veh	icle LOS	В				
Bio	cycle Results					
Per	cent Occupied Parking	0		Pavement Cor	ndition Rating	4
Flov	w Rate Outside Lane, veh/h	456		Bicycle Effecti	ve Width, ft	24
Bicy	/cle LOS Score	3.79		Bicycle Effecti	ve Speed Factor	5.07
Bicy	vcle LOS	D				
			Segr	ment 17		
Ve	hicle Inputs					
	ment Type	Passing Zone		Length, ft		1995
	asured FFS	Measured		Free-Flow Speed, mi/h		70.0
_	emand and Capacity			<u>'</u>		
	ectional Demand Flow Rate, veh/h	456		Opposing De	mand Flow Rate, veh/l	h 306
	k Hour Factor	0.88		Total Trucks, %		5.09
	ment Capacity, veh/h	1700		Demand/Capa		0.27
	termediate Results	11.00				
	ment Vertical Class	1		Free-Flow Spe	and mith	70.0
	red Slope Coefficient (m)	4.36529		· ·	Coefficient (p)	0.51403
	Slope Coefficient (m)	-1.22751		PF Power Coe	<u> </u>	0.81278
	Passing Lane Effective Length?	No			·	3.2
	nprovement to Percent Followers			Total Segment Density, veh/mi/ln %Improvement to Speed		0.0
	bsegment Data	5.0		, sipi overilei		3.3
#	Segment Type	Length, ft	D.	adius, ft	Superelevation, ^o	% Average Speed, mi/h
1	Tangent	1995	r\c	adius, it	- Superelevation,	67.4
	hicle Results	1333				07.7
		LC7.4		D := "	04	47.7
Ave	erage Speed, mi/h	67.4		Percent Follow	vers, %	47.7

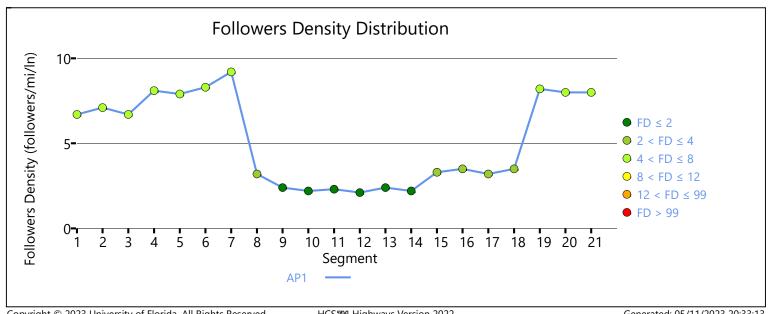
Segment Travel Time, minutes	0.34		Follower Density (FD), followers/mi/ln	3.2
Vehicle LOS	В		Tollower Delisity (1 D), 10110We13/1111/111	3.2
Bicycle Results					
Percent Occupied Parking	0		Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h	456	456		/idth, ft	24
Bicycle LOS Score	3.79			peed Factor	5.07
Bicycle LOS	D				
		Segm	ent 18		
Vehicle Inputs					
Segment Type	Passing Constrain	ned	Length, ft		1399
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/	h 456		Opposing Demand	d 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	ent Vertical Class 1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.57524		Speed Power Coef	fficient (p)	0.41674
PF Slope Coefficient (m)	-1.28884		PF Power Coefficie	ent (p)	0.75993
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	Rad	adius, ft Superelevation, %		Average Speed, mi/h
1 Tangent	1399	-		-	67.0
Vehicle Results					
Average Speed, mi/h	67.0		Percent Followers,	%	50.8
Segment Travel Time, minutes	0.24		Follower Density (FD), followers/mi/ln	3.5
Vehicle LOS	В				
Bicycle Results					
Percent Occupied Parking	0		Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h	456		Bicycle Effective W	/idth, ft	24
Bicycle LOS Score	Bicycle LOS Score 3.79		Bicycle Effective Speed Factor		5.07
Bicycle LOS	D				
		Segm	ent 19		
Vehicle Inputs					
Segment Type	Passing Constrain	ned	Length, ft		1254
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0

Demand and Capacity					
	011		Onnasia a Davi	d Claus Data and the	
Directional Demand Flow Rate, veh/h	811		Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor	0.88		Total Trucks, %		1.51
Segment Capacity, veh/h	1700		Demand/Capacity	· (D/C)	0.48
Intermediate Results					
Segment Vertical Class	1	1		mi/h	70.0
Speed Slope Coefficient (m)	4.57372	4.57372		fficient (p)	0.41674
PF Slope Coefficient (m)	-1.29366		PF Power Coefficie	ent (p)	0.75766
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	8.2
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Radi	ius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1254	-		-	66.0
Vehicle Results					
Average Speed, mi/h	66.0		Percent Followers	, %	66.9
Segment Travel Time, minutes	0.22		Follower Density (FD), followers/mi/ln	8.2
Vehicle LOS	D				
Bicycle Results	•				
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	811		Bicycle Effective Width, ft		24
Bicycle LOS Score	3.07		Bicycle Effective Speed Factor		5.07
Bicycle LOS	С				
	Se	egmo	ent 20		
Vehicle Inputs					
Segment Type	Passing Zone		Length, ft		1108
Measured FFS	Measured		Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	811		Opposing Deman	d Flow Rate, veh/h	280
Peak Hour Factor	0.88		Total Trucks, %		1.51
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.48
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.34556		Speed Power Coe	fficient (p)	0.51956
PF Slope Coefficient (m)	-1.25412		PF Power Coefficie	ent (p)	0.80102
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	8.0
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data	,				

#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1108	-		-	66.4
Vel	nicle Results					·
Aver	rage Speed, mi/h	66.4		Percent Followers	, %	65.4
Segr	ment Travel Time, minutes	0.19		Follower Density ((FD), followers/mi/ln	8.0
Vehi	cle LOS	С				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	811		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	3.07		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	С				
			Segn	nent 21		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrai	ned	Length, ft		2901
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	811		Opposing Deman	d Flow Rate, veh/h	-
Peak	Hour Factor	0.88	0.88			1.51
Segr	nent Capacity, veh/h	1700		Demand/Capacity	' (D/C)	0.48
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed, mi/h		70.0
Spe	ed Slope Coefficient (m)	4.59854		Speed Power Coe	fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.23554		PF Power Coefficient (p)		0.77974
In Pa	assing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		8.0
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	idius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2901	-		-	66.0
Vel	nicle Results					
Aver	rage Speed, mi/h	66.0		Percent Followers	, %	65.0
Segr	ment Travel Time, minutes	0.50		Follower Density ((FD), followers/mi/ln	8.0
Vehicle LOS C						
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	811		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	3.07		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	С				

Facility	Facility Results									
Т	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS						
1	813	0.62	5.3	С						





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HCS™ Highways Version 2022 EB_38_EHartford_2050AM.xuf

		HCS Two-La	ne	Highway Re	port	
Pro	ject Information					
Anal	yst	MJV		Date		5/11/2023
Agei	ncy	HRG		Analysis Year		2050 NB
Juris	diction	SDDOT		Time Analyzed		PM PEAK
Proje	ect Description	ect Description EB SD38 Corridor Study		Units		U.S. Customary
		Se	egn	nent 1		
Vel	nicle Inputs					
Segr	ment Type	Passing Zone		Length, ft		1084
H	sured FFS	Measured		Free-Flow Speed,	mi/h	55.0
Dei	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	368		Opposing Deman	d Flow Rate, veh/h	674
Peak	Hour Factor	0.88		Total Trucks, %		2.16
Segr	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.22
Inte	ermediate Results					
Segment Vertical Class 1				Free-Flow Speed,	mi/h	55.0
_	ed Slope Coefficient (m)	4.44134		Speed Power Coe	fficient (p)	0.46217
PF S	lope Coefficient (m)	-1.40189		PF Power Coefficie	ent (p)	0.74782
In Pa	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	3.4
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Rac	dius, ft Superelevation, %		Average Speed, mi/h
1	Tangent	1084	1-		-	52.6
Vel	nicle Results					<u>'</u>
Aver	rage Speed, mi/h	52.6		Percent Followers,	. %	48.5
Segr	ment Travel Time, minutes	0.23		Follower Density (FD), followers/mi/ln	3.4
Vehi	cle LOS	В				
Bic	ycle Results			'		
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h 368		368		Bicycle Effective V	/idth, ft	24
Bicycle LOS Score 2.70			Bicycle Effective S	peed Factor	4.62	
Bicy	cle LOS	С				
		Se	egn	nent 2		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrained		Length, ft		1014
	sured FFS	Measured		Free-Flow Speed,	mi/h	55.0

Der	nand and Capacity					
Directional Demand Flow Rate, veh/h 368		Opposing Deman	d Flow Rate, veh/h	-		
Peak	Hour Factor	0.88		Total Trucks, %		2.16
Segn	nent Capacity, veh/h	1700		Demand/Capacity	, (D/C)	0.22
Inte	ermediate Results					•
Segn	nent Vertical Class	1		Free-Flow Speed,	mi/h	55.0
Spee	d Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF SI	ope Coefficient (m)	-1.43973		PF Power Coefficie	ent (p)	0.72475
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	3.5
%lmp	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sub	segment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	507	-		-	52.4
2	Horizontal Curve	507	30	00	0.0	52.4
Veh	icle Results	•				
Avera	age Speed, mi/h	52.4		Percent Followers	, %	50.2
Segn	nent Travel Time, minutes	0.22		Follower Density ((FD), followers/mi/ln	3.5
Vehic	cle LOS	В				
Bicy	ycle Results	•				
Perce	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	368	368		Vidth, ft	24
Bicyc	le LOS Score	2.70		Bicycle Effective S	peed Factor	4.62
Bicyc	le LOS	С				
			Segr	ment 3		
Veh	icle Inputs					
Segn	nent Type	Passing Zone		Length, ft		535
Meas	sured FFS	Measured		Free-Flow Speed,	mi/h	55.0
Der	mand and Capacity					
Direc	tional Demand Flow Rate, veh/h	368		Opposing Deman	d Flow Rate, veh/h	674
Peak	Hour Factor	0.88		Total Trucks, %		2.16
Segn	nent Capacity, veh/h	1700		Demand/Capacity	' (D/C)	0.22
Inte	ermediate Results					
Segn	nent Vertical Class	1		Free-Flow Speed,	mi/h	55.0
Spee	d Slope Coefficient (m)	4.44134		Speed Power Coe	fficient (p)	0.46217
PF SI	ope Coefficient (m)	-1.40189		PF Power Coefficie	ent (p)	0.74782
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	3.4
%lmr	provement to Percent Followers	0.0		%Improvement to	Speed	0.0

Sul	bsegment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	535	35 -		-	52.6
Vel	nicle Results					
Aver	rage Speed, mi/h	52.6		Percent Followers	, %	48.5
Segr	ment Travel Time, minutes	0.12		Follower Density ((FD), followers/mi/ln	3.4
Vehi	cle LOS	В				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	/ Rate Outside Lane, veh/h	368		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	2.70		Bicycle Effective S	peed Factor	4.62
Bicycle LOS C						
			Segi	ment 4		
Vel	nicle Inputs					
Segr	ment Type	Passing Zone		Length, ft		1494
Mea	sured FFS	Measured		Free-Flow Speed, mi/h		70.0
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	445		Opposing Deman	d Flow Rate, veh/h	986
Peak	Hour Factor	0.88		Total Trucks, %		1.63
Segr	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.26
Int	ermediate Results					
Segr	ment Vertical Class	1	1		Free-Flow Speed, mi/h	
Spe	ed Slope Coefficient (m)	4.50109	4.50109		Speed Power Coefficient (p)	
PF S	lope Coefficient (m)	-1.28998		PF Power Coefficient (p)		0.77572
In Pa	assing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		3.3
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Sul	bsegment Data					
#	Segment Type	Length, ft	Ra	ndius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1494			-	67.2
Vel	nicle Results					
Average Speed, mi/h 67.2			Percent Followers	, %	49.8	
Segment Travel Time, minutes 0.25			Follower Density (FD), followers/mi/ln		3.3	
Vehi	cle LOS	В				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	445		Bicycle Effective V	Vidth, ft	24
Ricy	cle LOS Score	2.80		Bicycle Effective Speed Factor		5.07

Bicy	cle LOS	С				
			Seg	ment 5		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrain	ned	Length, ft		5762
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Dei	mand and Capacity	·				
Dire	ctional Demand Flow Rate, veh/h	445		Opposing Deman	d Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %		1.63
Segr	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.26
Inte	ermediate Results	·				·
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spee	ed Slope Coefficient (m)	4.62977		Speed Power Coe	fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.20069		PF Power Coefficie	ent (p)	0.78591
In Pa	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	3.1
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Suk	osegment Data					
#	Segment Type	Length, ft	R	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5762	-		-	67.0
Vel	nicle Results					
Aver	age Speed, mi/h	67.0		Percent Followers	, %	47.1
Segr	ment Travel Time, minutes	0.98		Follower Density (FD), followers/mi/ln		3.1
Vehi	cle LOS	В				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	445		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	2.80		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	С				
			Seg	ment 6		
Veł	nicle Inputs					
Segr	ment Type	Passing Constrain	ned	Length, ft		383
Measured FFS Measured		Free-Flow Speed,	mi/h	70.0		
Dei	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	453		Opposing Deman	d Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %		1.89
Segr	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.27
Inte	ermediate Results					

Segment Vertical Class	1	1		mi/h	70.0
Speed Slope Coefficient (m)	4.57372			efficient (p)	0.41674
PF Slope Coefficient (m)	-1.29361	-1.29361		ent (p)	0.75772
In Passing Lane Effective Length?	No			ensity, veh/mi/ln	3.4
%Improvement to Percent Followers	0.0	0.0		o Speed	0.0
Subsegment Data				·	
# Segment Type	Length, ft	Pa	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	383	- Nai	uius, it	Superelevation, 78	67.0
	303			1-	07.0
Vehicle Results					
Average Speed, mi/h	67.0		Percent Followers	5, %	50.9
Segment Travel Time, minutes	0.06		Follower Density	(FD), followers/mi/ln	3.4
Vehicle LOS	В				
Bicycle Results					
Percent Occupied Parking	0		Pavement Condit	ion Rating	4
Flow Rate Outside Lane, veh/h	453		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	2.87		Bicycle Effective Speed Factor		5.07
Bicycle LOS	С				
		Segr	ment 7		
Vehicle Inputs					
Segment Type	Passing Constrain	ied	Length, ft		1485
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	522		Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor	0.88		Total Trucks, %		3.19
Segment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.31
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.57684		Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)	-1.28453		PF Power Coeffici	ent (p)	0.76145
In Passing Lane Effective Length?	No		Total Segment De	ensity, veh/mi/ln	4.2
%Improvement to Percent Followers	0.0		%Improvement to	o Speed	0.0
Subsegment Data					·
# Segment Type			lius, ft Superelevation, %		Average Speed, mi/h
1 Tangent	1485	-		-	66.8
Vehicle Results					
			Percent Followers, %		
Average Speed, mi/h	66.8		Percent Followers	5, %	54.3

Vehi	icle LOS	С				
Bic	cycle Results					
Perc	cent Occupied Parking	0		Pavement Condition Rating		4
Flov	v Rate Outside Lane, veh/h	522		Bicycle Effective W	/idth, ft	24
Bicy	rcle LOS Score	3.29		Bicycle Effective S	peed Factor	5.07
Bicy	rcle LOS	С				
		S	Segn	nent 8		
Vel	hicle Inputs					
Seg	ment Type	Passing Constrained		Length, ft		426
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity	·				
Dire	ectional Demand Flow Rate, veh/h	407		Opposing Demand	d Flow Rate, veh/h	-
Peal	k Hour Factor	0.88		Total Trucks, %		6.47
Seg	ment Capacity, veh/h	pacity, veh/h 1700		Demand/Capacity	(D/C)	0.24
Int	ermediate Results					
Segment Vertical Class 1		Free-Flow Speed,	mi/h	70.0		
Speed Slope Coefficient (m) 4.57372			Speed Power Coef	fficient (p)	0.41674	
PF S	Slope Coefficient (m)	-1.29307		PF Power Coefficie	ent (p)	0.75839
In Pa	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	2.9
%lm	nprovement to Percent Followers	0.0		%Improvement to Speed		0.0
Sul	bsegment Data					
#	Segment Type	Length, ft	Rac	dius, ft Superelevation, %		Average Speed, mi/h
1	Tangent	426	-	-		67.2
Vel	hicle Results					
Ave	rage Speed, mi/h	67.2		Percent Followers,	. %	48.0
	ment Travel Time, minutes	0.07		Follower Density (FD), followers/mi/ln	2.9
Vehi	icle LOS	В				
Bic	cycle Results	<u>'</u>		<u>'</u>		
Perc	ent Occupied Parking	0		Pavement Condition	on Rating	4
	Flow Rate Outside Lane, veh/h 407		Bicycle Effective W	/idth, ft	24	
Bicy	Bicycle LOS Score 4.20		Bicycle Effective Speed Factor		5.07	
Bicycle LOS D		D		İ		
Bicy		·				<u>'</u>
Bicy		S	Segn	nent 9		
	hicle Inputs	S	Segn	nent 9		
Vel	hicle Inputs	Passing Constrained	Segn	Length, ft		1212

Demand and Capacity					
	214		Onnesian Desi	d Flour Data and the	
Directional Demand Flow Rate, veh/h	314		1	d Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %	· (D (C)	5.26 0.18
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)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF Slope Coefficient (m)	-1.29321		PF Power Coefficion	ent (p)	0.75821
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.9
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Length, ft Radiu		Superelevation, %	Average Speed, mi/h
1 Tangent	1212	-		-	67.6
Vehicle Results					
Average Speed, mi/h	67.6		Percent Followers	, %	41.5
Segment Travel Time, minutes	0.20	0.20		(FD), followers/mi/ln	1.9
Vehicle LOS	A				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	314		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	3.66		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	D				
	S	Segn	nent 10		
Vehicle Inputs					
Segment Type	Passing Zone		Length, ft		1877
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	314		Opposing Deman	d Flow Rate, veh/h	430
Peak Hour Factor	0.88		Total Trucks, %		5.26
Segment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.18
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.39699		Speed Power Coe		0.49215
PF Slope Coefficient (m)	-1.24708		PF Power Coefficion	·	0.80425
In Passing Lane Effective Length?	No		Total Segment De	<u> </u>	1.8
%Improvement to Percent Followers	0.0		%Improvement to	-	0.0
Subsegment Data					•

#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1877	-		-	67.9
Veł	nicle Results					·
Aver	rage Speed, mi/h	67.9		Percent Followers	, %	38.8
Segr	ment Travel Time, minutes	0.31		Follower Density	(FD), followers/mi/ln	1.8
Vehi	cle LOS	А				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	314		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	3.66		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	D				
			Segn	nent 11		
Veł	nicle Inputs					
Segr	ment Type	Passing Constrai	ned	Length, ft		1872
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Dei	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	314	314		d Flow Rate, veh/h	-
Peak	Hour Factor	0.88	0.88			5.26
Segr	ment Capacity, veh/h	1700		Demand/Capacity	/ (D/C)	0.18
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed, mi/h		70.0
Spe	ed Slope Coefficient (m)	4.58354		Speed Power Coe	fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.26676		PF Power Coefficient (p)		0.76864
In Pa	assing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		1.9
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Suk	osegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1872	-		-	67.6
Veł	nicle Results		·			
Aver	rage Speed, mi/h	67.6		Percent Followers	, %	40.5
Segr	ment Travel Time, minutes	0.31		Follower Density	(FD), followers/mi/ln	1.9
Vehicle LOS A						
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	314		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	3.66		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	D				

		S	egn	nent 12		
Ve	hicle Inputs					
Seg	ment Type	Passing Zone		Length, ft		3603
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					·
Dire	ectional Demand Flow Rate, veh/h	314	314		d Flow Rate, veh/h	430
Pea	k Hour Factor	0.88		Total Trucks, %		5.26
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.18
Int	termediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.42064		Speed Power Coe	fficient (p)	0.49215
PF S	Slope Coefficient (m)	-1.20239		PF Power Coefficie	ent (p)	0.82051
In P	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.7
%In	nprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Length, ft Radi		Superelevation, %	Average Speed, mi/h
1	Tangent	3603	-		-	67.9
Ve	hicle Results					·
Ave	rage Speed, mi/h	67.9		Percent Followers,	. %	37.1
Seg	ment Travel Time, minutes	0.60		Follower Density (FD), followers/mi/ln	1.7
Veh	icle LOS	А				
Bio	cycle Results					·
Per	cent Occupied Parking	0		Pavement Condition	on Rating	4
Flov	w Rate Outside Lane, veh/h	314		Bicycle Effective Width, ft		24
Bicy	vcle LOS Score	3.66		Bicycle Effective S	peed Factor	5.07
Bicy	rcle LOS	D				
		S	egn	nent 13		
Ve	hicle Inputs					
	ment Type	Passing Constrained		Length, ft		1053
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	314		Opposing Deman	d Flow Rate, veh/h	-
Pea	k Hour Factor	0.88		Total Trucks, %		5.26
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.18
Int	termediate Results	·				
Sea	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
				1		

Speed Slope Coefficient (m)	4.57372			fficient (p)	0.41674
PF Slope Coefficient (m)	-1.29321			ent (p)	0.75821
In Passing Lane Effective Length?	No			nsity, veh/mi/ln	1.9
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1053	-		-	67.6
Vehicle Results					
Average Speed, mi/h	67.6		Percent Followers	, %	41.5
Segment Travel Time, minutes	0.18		Follower Density ((FD), followers/mi/ln	1.9
Vehicle LOS	Α				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	314		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	3.66		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	D				
		Segm	ent 14		
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	314		Opposing Demand Flow Rate, veh/h		430
Peak Hour Factor	0.88		Total Trucks, %		5.26
Segment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.18
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed, mi/h		70.0
Speed Slope Coefficient (m)	4.38709		Speed Power Coe	fficient (p)	0.49215
PF Slope Coefficient (m)	-1.27337		PF Power Coefficient (p)		0.79352
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.8
%Improvement to Percent Followers	0.0		%Improvement to Speed		0.0
Subsegment Data					
# Segment Type	Length, ft	Length, ft Radi		Superelevation, %	Average Speed, mi/h
1 Tangent	1120	-		-	67.9
Vehicle Results					
Average Speed, mi/h	67.9		Percent Followers	, %	39.8
Segment Travel Time, minutes	0.19			(FD), followers/mi/ln	1.8
Vehicle LOS A		2 2 2 3 3 4 2 11 2 3 3 4 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4			

Bicycle Results					
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	314		Bicycle Effective W	/idth, ft	24
Bicycle LOS Score	3.66		Bicycle Effective S _I	peed Factor	5.07
Bicycle LOS	D				
	Se	gm	ent 15		
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	409		Opposing Demand	d Flow Rate, veh/h	536
Peak Hour Factor	0.88		Total Trucks, %		5.09
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)	4.41232		Speed Power Coefficient (p)		0.47739
PF Slope Coefficient (m)	-1.28274		PF Power Coefficie	ent (p)	0.78869
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	2.8
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rad	lius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1272	-		-	67.5
Vehicle Results					
Average Speed, mi/h	67.5		Percent Followers,	%	46.9
Segment Travel Time, minutes	0.21		Follower Density (FD), followers/mi/ln		2.8
Vehicle LOS	В				
Bicycle Results	·				
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	409		Bicycle Effective W	/idth, ft	24
Bicycle LOS Score	3.74		Bicycle Effective S _I	peed Factor	5.07
Bicycle LOS	D				
	Se	gm	ent 16		
Vehicle Inputs					
Segment Type	Passing Constrained		Length, ft		625
Measured FFS	Measured		Free-Flow Speed, mi/h		70.0
Demand and Capacity					

Dire	ctional Demand Flow Rate, veh/h	409		Opposing Demand	d Flow Rate, veh/h	-
Peal	Hour Factor	0.88		Total Trucks, %		5.09
Segi	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.24
Int	ermediate Results					
Segi	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.57372	4.57372 Spe		fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.29323		PF Power Coefficie	ent (p)	0.75819
In Pa	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	2.9
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	bsegment Data					
#	Segment Type	Length, ft	R	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	625	-		-	67.2
Vel	nicle Results					
Average Speed, mi/h 67.2		Percent Followers,	%	48.1		
Segi	ment Travel Time, minutes	0.11		Follower Density (FD), followers/mi/ln	2.9
Vehi	cle LOS	В				
Bic	ycle Results					
Perc	ent Occupied Parking	0	0 F		on Rating	4
Flow	r Rate Outside Lane, veh/h	409		Bicycle Effective W	/idth, ft	24
Bicy	cle LOS Score	3.74		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	D				
			Seg	ment 17		
Vel	nicle Inputs					
Segi	ment Type	Passing Zone		Length, ft		1995
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	409		Opposing Demand	d Flow Rate, veh/h	536
Peak	· Hour Factor	0.88		Total Trucks, %		5.09
Segi	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.24
Int	ermediate Results					
Segi	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.42412		Speed Power Coef	fficient (p)	0.47739
PF S	lope Coefficient (m)	-1.25168		PF Power Coefficie	ent (p)	0.80109
In Passing Lane Effective Length? No		Total Segment De	nsity, veh/mi/ln	2.8		
%lm	provement to Percent Followers	0.0		%Improvement to	%Improvement to Speed	
Sul	bsegment Data					
#	Segment Type	Length, ft	R	Radius, ft	Superelevation, %	Average Speed, mi/h

Average Speed, mi/h 67.5 Percent Followers, % 45.8						
Average Speed, mi/h Segment Travel Time, minutes 0.34 Follower Density (FD), followers/mi/ln 2.8 Welricle LOS Bicycle Results Fercent Occupied Parking 0 Pavement Condition Rating 4 Bicycle Effective Width, ft 24 Bicycle Effective Width, ft 24 Bicycle Effective Width, ft 24 Bicycle LOS Score 3.74 Bicycle Effective Speed Factor 5.07 Bicycle Inputs Segment 18 Welnicle Inputs Segment Type Passing Constrained Length, ft 1399 Measured FFS Measured FFS Measured Free-Flow Speed, mi/h 70.0 Demand and Capacity Directional Demand Flow Rate, veh/h 1700 Demand Flow Rate, veh/h 1700 Demand/Capacity (D/C) Despent Vertical Class 1 Free-Flow Speed, mi/h Speed Slope Coefficient (m) 4.57524 Speed Power Coefficient (p) 1.28884 PF Power Coefficient (p) 1.28884 PF Power Coefficient (p) 1.28884 PF Power Coefficient (p) 1.29 Shimprovement to Percent Followers 0.0 Subsegment Data W Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h Tono Subsegment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 1.29 Vehicle Results Average Speed, mi/h 1.29 Percent Tovel Time, minutes 0.24 Percent Followers, % 48.0 Percent Could Factor Segment Tovel Time, minutes 0.24 Percent Could Factor Segment Tovel Time, minutes 0.24 Percent Could Factor Segment Speed Factor 5.07 Percent Could Factor 5.07	1 Tangent	1995		-	-	67.5
Segment Travel Time, minutes 0.34 Follower Density (FD), followers/mi/In 2.8 Weblicle LOS B Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Filow Rate Outside Lane, velv/h 403 Bicycle Effective Width, ft 24 Bicycle LOS Score Bicycle LOS D Segment 18 Weblicle Inputs Segment Type Passing Constrained Free-Flow Speed, mi/h 70.0 Demand and Capacity Directional Demand Flow Rate, velv/h 1700 Demand Factor Segment Verical Class Segment Verical Class Segment Verical Class Segment Type Free-Flow Speed, mi/h Free-Flow Speed, mi/h 70.0 Inter-mediate Results Segment Verical Class Segment Tendent Input Segment Verical Class Segment Speed Coefficient (m) Speed Slope Coefficient (m) 128884 Free-Flow Speed, mi/h 70.0 Speed Slope Coefficient (m) 128884 Free-Flow Speed, mi/h 70.0 Subsegment Data Segment Type Length, ft Radius, ft Speed Power Coefficient (p) 0.75993 In Passing Lane Effective Length? No Total Segment Density, velv/mi/l 1 Tangent 1399 - Subrecurrent to Percent Followers 0.0 Subrecurrent Type 0.0 Subrecurrent Type 0.0 Subrecurrent Type 0.0 Subrecurrent Type 0.0 Subrecurrent Type 0.0 Subrecu	Vehicle Results					
Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 How Rata Outside Lane, veh/h 409 Bicycle Effective Width, ft 24 Bicycle LOS Score 3,74 Bicycle Effective Width, ft 24 Bicycle LOS Score 3,74 Bicycle Effective Speed Factor 5,07 Bicycle LOS Segment 18 Vehicle Inputs Segment Type Passing Constrained Length, ft 70,0 Demand and Capacity Directional Demand Flow Rate, veh/h 70,0 Demand How Rate, veh/h 1700 Demand Flow Rate, veh/h 1700 Demand/Capacity (D/C) 0,24 Interrmediate Results Segment Vertical Class 1 Free-Flow Speed, mi/h 70,0 In Passing Lane Effective Length? No 128884 PF Power Coefficient (p) 0,41674 PF Slope Coefficient (m) 4,57524 Speed Power Coefficient (p) 0,41674 In Passing Lane Effective Length? No 1048 Supprovement to Speed 0,0 Subsequent Data P Segment Data P Segment Data P Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 1700 Total Segment Density, veh/mi/ln 2,9 Response Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 1700 Total Segment Density, veh/mi/ln 2,9 Subsequent Data P Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 1700 Total Segment Density, veh/mi/ln 2,9 Response Travel Time, minutes 0,24 Followers, % 48,0 Segment Travel Time, minutes 0,24 Followers, % 48,0 Bicycle Results Percent Cocupied Parking 0 Pavement Condition Rating 4 Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Bicycle LOS Score 3,74 Bicycle Effective Speed Factor 5,07	Average Speed, mi/h	67.5		Percent Follow	ers, %	45.8
Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 409 Bicycle Effective Width, ft 24 Bicycle LOS Score 3.74 Bicycle Effective Speed Factor 5.07 Segment 18 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 409 Opposing Demand Flow Rate, veh/h - Passing House Feed Factor 10.8 Segment Type Demand Flow Rate, veh/h 1700 Demand/Capacity (D/C) 0.24 Intermediate Results 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) 4.57524 Speed Power Coefficient (p) 0.41674 PF Slope Coefficient (m) - 1.28884 PF Power Coefficient (p) 0.75993 In Passing Lane Effective Length? No 1014 Segment Density, veh/mi/ln 2.9 Subsegment Data # Segment 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, % Average Speed, mi/h 2.9 Vehicle Results Percent Cocupied Parking 0 Pavement Condition Rating 4 Follower Bensity Results Percent Occupied Parking 0 Pavement Condition Rating 4 Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Bicycle Results Percent Counside Lane, veh/h 409 Bicycle Effective Speed Factor 5.07 Bicycle LOS Score 3.74 Bicycle LOS Score 5.77	Segment Travel Time, minutes	0.34		Follower Densi	ty (FD), followers/mi/ln	2.8
Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 409 Bicycle Effective Width, ft 24 Bicycle LOS Score 3,74 Bicycle Effective Speed Factor 5,07 Segment 18 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 409 Opposing Demand Flow Rate, veh/h 70,0 Peak Hour Factor 0,88 Total Trucks, % 5,09 Segment Type Vehicle Results Segment Capacity, veh/h 1700 Demand/Capacity (D/C) 0,24 Intermediate Results Segment Certification (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 2,9 Subsegment Data ## Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 1 Tangent 1399 - 67,2 Vehicle Results North Radius, ft Superelevation, % Average Speed, mi/h 2,9 Vehicle Results Free-Flow Speed, mi/h 5,2 Subsegment Travel Time, minutes 0,24 Follower Density (FD), followers/mi/ln 2,9 Vehicle Results Free-Flow Speed Flower Density (FD), followers/mi/ln 2,9 Bicycle Results Free-Flow Speed Flower Density (FD), followers/mi/ln 2,9 Flower Radius, ft Superelevation, % Average Speed, mi/h 2,9 Vehicle Results Free-Flow Speed Flower Density (FD), followers/mi/ln 2,9 Flower Radius, ft Superelevation, % Average Speed, mi/h 2,9 Flower Results Free-Flow Speed Flowers, % 48,0 Flower Results Free-Flow Speed Flowers, % 48,0 Flower Results Free-Flow Speed Flowers, % 48,0 Flower Results Flower Results Free-Flow Speed Flowers, % 48,0 Flower Results Flower Result	Vehicle LOS	В				
Bicycle Effective Width, ft 24	Bicycle Results					
Segment 18 Segment 18 Segment 19 Segment 20 Seg	Percent Occupied Parking	0		Pavement Con	dition Rating	4
Segment 18 Segment 18	Flow Rate Outside Lane, veh/h	409		Bicycle Effectiv	e Width, ft	24
Segment 18	Bicycle LOS Score	3.74		Bicycle Effectiv	e Speed Factor	5.07
New York Segment Type	Bicycle LOS	D				
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 409 Opposing Demand Flow Rate, veh/h - Peak Hour Factor 0.88 Total Trucks, % 5.09 Segment Capacity, veh/h 1700 Demand/Capacity (D/C) 0.24 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 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 1399 - 67.2 Vehicle Results Average Speed, mi/h 67.2 Percent Followers, % 48.0 Segment Travel Time, minutes 0.24 Follower Density (FD), followers/mi/ln 2.9 Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 409 Bicycle Effective Speed Factor 5.07 Bicycle LOS Core 3.74 Bicycle Effective Speed Factor 5.07 Bicycle LOS Core Bicycle LOS Core Bicycle LOS Core 1.74 Bicycle LOS Core 1.74 Bicycle Effective Speed Factor 5.07			Seg	ment 18		
Measured FFS Measured Free-Flow Speed, mi/h 70.0	Vehicle Inputs					
Demand and Capacity Directional Demand Flow Rate, veh/h 409 Opposing Demand Flow Rate, veh/h - Peak Hour Factor 0.88 Total Trucks, % 5.09 Segment Capacity, veh/h 1700 Demand/Capacity (D/C) 0.24 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 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 1399 - 67.2 Vehicle Results Average Speed, mi/h 67.2 Percent Followers, % 48.0 Segment Travel Time, minutes 0.24 Follower Density (FD), followers/mi/ln 2.9 Wehicle LOS B Bicycle Results Percent Coccupied Parking 0 Pavement Condition Rating 4 Eloyde LOS Score 3.74 Bicycle Effective Speed Factor 5.07 Bicycle LOS Score 5.07	Segment Type	Passing Constrai	ined	Length, ft		1399
Directional Demand Flow Rate, veh/h Peak Hour Factor 0.88 Total Trucks, % 5.09 Segment Capacity, veh/h 1700 Demand/Capacity (D/C) 0.24 Intermediate Results Segment Vertical Class 1 Free-Flow Speed, mi/h Free-Flow Coefficient (p) 0.41674 PF Slope Coefficient (m) 4.57524 Speed Power Coefficient (p) 0.75993 In Passing Lane Effective Length? No Total Segment Density, veh/mi/ln 2.9 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, % 48.0 Segment Travel Time, minutes 0.24 Follower Density (FD), followers/mi/ln 2.9 Vehicle LOS B Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Bicycle LOS Score 3.74 Bicycle Effective Speed Factor 5.07 Bicycle LOS Bicycle Effective Speed Factor 5.07	Measured FFS	Measured		Free-Flow Spe	ed, mi/h	70.0
Peak Hour Factor 0.88 Total Trucks, % 5.09 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) 4.57524 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 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 67.2 Vehicle Results Average Speed, mi/h 67.2 Percent Followers, % 48.0 Segment Travel Time, minutes 0.24 Follower Density (FD), followers/mi/ln 2.9 Wehicle LOS B Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 409 Bicycle Effective Width, ft 24 Bicycle LOS Score 3.74 Bicycle Effective Speed Factor 5.07 Bicycle LOS	Demand and Capacity					
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/In 2.9 **Mimprovement to Percent Followers 0.0 **Mimprovement 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, **Average Speed, mi/h 2.9 **Wehicle LOS B **Bicycle Results** **Percent Occupied Parking 0 Pavement Condition Rating 4 **Flow Rate Outside Lane, veh/h 409 Bicycle Effective Width, ft 24 Bicycle LOS Score 3.74 Bicycle Effective Speed Factor 5.07 Bicycle LOS Seine 1 Single American Speed Factor 5.07 Bicycle LOS Sore 5.07	Directional Demand Flow Rate, veh/h	ow Rate, veh/h 409		Opposing Den	nand Flow Rate, veh/h	-
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 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 1399 - 67.2 Vehicle Results Average Speed, mi/h 67.2 Percent Followers, % 48.0 Segment Travel Time, minutes 0.24 Follower Density (FD), followers/mi/ln 2.9 Wehicle LOS B Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 409 Bicycle Effective Width, ft 24 Bicycle LOS Score 3.74 Bicycle Effective Speed Factor 5.07 Bicycle LOS	Peak Hour Factor	0.88	0.88			5.09
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 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 1399 - 67.2 Vehicle Results Average Speed, mi/h 67.2 Percent Followers, % 48.0 Segment Travel Time, minutes 0.24 Follower Density (FD), followers/mi/ln 2.9 Wehicle LOS B Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 409 Bicycle Effective Width, ft 24 Bicycle LOS Score 3.74 Bicycle Effective Speed Factor 5.07 Bicycle LOS Score 5.07	Segment Capacity, veh/h	1700	1700		city (D/C)	0.24
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 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 1399 - 67.2 Vehicle Results Average Speed, mi/h Segment Travel Time, minutes 0.24 Follower Density (FD), followers/mi/ln 2.9 Wehicle LOS B Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h Bicycle LOS Score 3.74 Bicycle Effective Speed Factor 5.07 Bicycle LOS Bicycle LOS D	Intermediate Results					
PF Slope Coefficient (m) -1.28884 PF Power Coefficient (p) 0.75993 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 1399 - 67.2 Vehicle Results Average Speed, mi/h 67.2 Percent Followers, % 48.0 Segment Travel Time, minutes 0.24 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 409 Bicycle Effective Width, ft 24 Bicycle LOS Score 3.74 Bicycle Effective Speed Factor 5.07 Bicycle LOS	Segment Vertical Class	1		Free-Flow Spe	ed, mi/h	70.0
In Passing Lane Effective Length? No Total Segment Density, veh/mi/In 2.9 %Improvement to Percent Followers 0.0 %Improvement to Speed 0.0 Subsegment Data ## Segment Type	Speed Slope Coefficient (m)	4.57524		Speed Power C	oefficient (p)	0.41674
Subsegment Data # Segment Type	PF Slope Coefficient (m)	-1.28884		PF Power Coef	ficient (p)	0.75993
Subsegment Data # Segment Type	In Passing Lane Effective Length?	No		Total Segment	Density, veh/mi/ln	2.9
# Segment Type Length, ft Radius, ft Superelevation, % Average Speed, mi/h 1 Tangent 1399 - 67.2 Wehicle Results Average Speed, mi/h 67.2 Percent Followers, % 48.0 Segment Travel Time, minutes 0.24 Follower Density (FD), followers/mi/ln 2.9 Wehicle LOS B Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 409 Bicycle Effective Width, ft 24 Bicycle LOS Score 3.74 Bicycle Effective Speed Factor 5.07 Bicycle LOS D	%Improvement to Percent Followers	0.0		%Improvement to Speed		0.0
Tangent 1399 - 67.2 Vehicle Results Average Speed, mi/h 67.2 Percent Followers, % 48.0 Segment Travel Time, minutes 0.24 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 409 Bicycle Effective Width, ft 24 Bicycle LOS Score 3.74 Bicycle Effective Speed Factor 5.07 Bicycle LOS	Subsegment Data	·		·		·
Vehicle Results Average Speed, mi/h 67.2 Percent Followers, % 48.0 Segment Travel Time, minutes 0.24 Follower Density (FD), followers/mi/ln 2.9 Vehicle LOS B Bicycle Results Percent Occupied Parking O Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h Bicycle Effective Width, ft 24 Bicycle LOS Score 3.74 Bicycle Effective Speed Factor 5.07 Bicycle LOS	# Segment Type	Length, ft		Radius, ft	Superelevation, %	Average Speed, mi/h
Average Speed, mi/h Segment Travel Time, minutes 0.24 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 Bicycle LOS Score 3.74 Bicycle Effective Speed Factor 5.07 Bicycle LOS D	1 Tangent	1399		-	-	67.2
Segment Travel Time, minutes 0.24 Follower Density (FD), followers/mi/ln 2.9 Wehicle LOS B Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h Bicycle Effective Width, ft 24 Bicycle LOS Score 3.74 Bicycle Effective Speed Factor 5.07 Bicycle LOS	Vehicle Results					
Wehicle LOS Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h Bicycle Effective Width, ft 24 Bicycle LOS Score 3.74 Bicycle Effective Speed Factor 5.07	Average Speed, mi/h	67.2		Percent Follow	ers, %	48.0
Bicycle Results Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 409 Bicycle Effective Width, ft 24 Bicycle LOS Score 3.74 Bicycle Effective Speed Factor 5.07 Bicycle LOS D				Follower Densi	ty (FD), followers/mi/ln	2.9
Percent Occupied Parking 0 Pavement Condition Rating 4 Flow Rate Outside Lane, veh/h 409 Bicycle Effective Width, ft 24 Bicycle LOS Score 3.74 Bicycle Effective Speed Factor 5.07 Bicycle LOS D	Vehicle LOS	В				
Flow Rate Outside Lane, veh/h Bicycle Effective Width, ft 24 Bicycle LOS Score 3.74 Bicycle Effective Speed Factor 5.07 Bicycle LOS	Bicycle Results					
Bicycle LOS Score 3.74 Bicycle Effective Speed Factor 5.07 Bicycle LOS D	Percent Occupied Parking	0		Pavement Con	dition Rating	4
Bicycle LOS D					e Width, ft	24
	Bicycle LOS Score	3.74		Bicycle Effectiv	e Speed Factor	5.07
Segment 19	Bicycle LOS	D				
			Seg	ment 19		

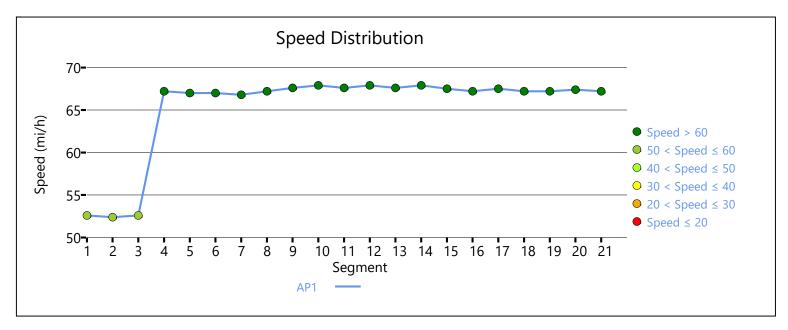
Ve	hicle Inputs					
Seg	gment Type	Passing Constrained		Length, ft		1254
Me	asured FFS	Measured		Free-Flow Speed, mi/h		70.0
De	emand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	402		Opposing Demand	d Flow Rate, veh/h	-
Pea	ık Hour Factor	0.88		Total Trucks, %		1.51
Seg	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.24
Int	termediate Results					
Seg	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	eed Slope Coefficient (m)	4.57372		Speed Power Coef	fficient (p)	0.41674
PF :	Slope Coefficient (m)	-1.29366		PF Power Coefficie	ent (p)	0.75766
In F	Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	2.9
%lr	mprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft Radiu		dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1254	-		-	67.2
Ve	hicle Results					
Ave	erage Speed, mi/h	67.2	7.2 Percent		. %	47.7
Seg	gment Travel Time, minutes	0.21		Follower Density (FD), followers/mi/ln	2.9
Veh	nicle LOS	В				
Bi	cycle Results					
Per	cent Occupied Parking	0		Pavement Condition	on Rating	4
Flo	w Rate Outside Lane, veh/h	402		Bicycle Effective Width, ft		24
Bic	ycle LOS Score	2.72		Bicycle Effective Speed Factor		5.07
Bic	ycle LOS	С				
		S	egm	nent 20		
Ve	hicle Inputs					
Seg	gment Type	Passing Zone		Length, ft	Length, ft	
Me	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	emand and Capacity					
Directional Demand Flow Rate, veh/h 402		Opposing Demand	d Flow Rate, veh/h	848		
Peak Hour Factor 0.88		Total Trucks, %		1.51		
Segment Capacity, veh/h 1700		Demand/Capacity	(D/C)	0.24		
Int	termediate Results					
Seg	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	eed Slope Coefficient (m)	4.47406		Speed Power Coef	fficient (p)	0.44728
DE	Slope Coefficient (m)	-1.29735		PF Power Coefficie	ent (p)	0.77650

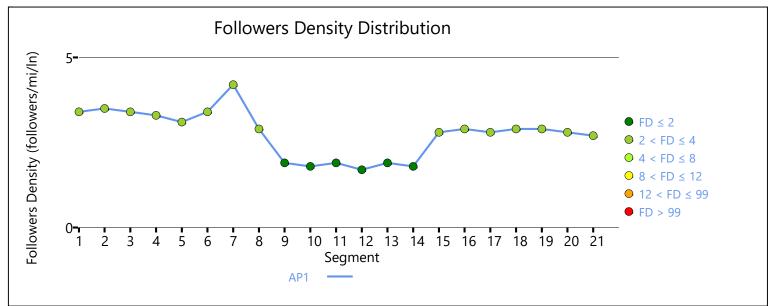
In Passing Lane Effective Length? No		No		Total Segment De	ensity, veh/mi/ln	2.8
%Improvement to Percent Followers 0.0			%Improvement to Speed		0.0	
Suk	osegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1108	1108 -		-	67.4
Vel	nicle Results					
Aver	age Speed, mi/h	67.4		Percent Followers	5, %	47.3
		Follower Density	(FD), followers/mi/ln	2.8		
Vehi	cle LOS	В				
Bic	ycle Results			<u> </u>		<u>'</u>
	ent Occupied Parking	0		Pavement Condit	ion Rating	4
Flow	Rate Outside Lane, veh/h	402			 Width, ft	24
Bicy	cle LOS Score	2.72		Bicycle Effective S	Speed Factor	5.07
Bicy	Bicycle LOS C					
		•	Segn	nent 21		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrain	ned	Length, ft		2901
Mea	sured FFS	Measured		Free-Flow Speed,	Free-Flow Speed, mi/h	
Dei	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	402		Opposing Demar	nd Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %	Total Trucks, %	
Segr	nent Capacity, veh/h	1700		Demand/Capacity	y (D/C)	0.24
Inte	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed, mi/h		70.0
Spee	ed Slope Coefficient (m)	4.59854		Speed Power Coefficient (p)		0.41674
PF S	lope Coefficient (m)	-1.23554		PF Power Coeffici	PF Power Coefficient (p)	
In Pa	ssing Lane Effective Length?	No		Total Segment De	Total Segment Density, veh/mi/ln	
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Suk	osegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2901	-		-	67.2
Vel	nicle Results				•	
Aver	age Speed, mi/h	67.2		Percent Followers	5, %	45.5
Segment Travel Time, minutes 0.49		Follower Density	Follower Density (FD), followers/mi/ln			
Vehi	cle LOS	В				
Bic	ycle Results					
	ent Occupied Parking	0		Pavement Condition Rating		4
Percent Occupied Parking 0		1		1 avenuent Condition Rating 4		1

m tite m te						
Bicycle LOS	С					
Bicycle LOS Score	2.72	Bicycle Effective Speed Factor	5.07			
Flow Rate Outside Lane, veh/h	402	Bicycle Effective Width, ft	24			

Facility Results

Т	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	541	0.32	2.7	В





		HCS Two-L	ane	Highway Re	port	
Pro	oject Information					
Ana	lyst	MJV		Date		5/11/2023
Age	ncy	HRG		Analysis Year		2050 NB
Juri	sdiction	SDDOT		Time Analyzed		AM Peak
Pro	ect Description	SD 38 WB East of Ha	rtford	Units		U.S. Customary
		· .	Segn	nent 1		
Ve	hicle Inputs					
Seg	ment Type	Passing Constrained		Length, ft		1727
	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	280		Opposing Deman	d Flow Rate, veh/h	-
Pea	k Hour Factor	0.88		Total Trucks, %		8.97
Segment Capacity, veh/h 1700		Demand/Capacity	, (D/C)	0.16		
Int	ermediate Results			<u> </u>		
Segment Vertical Class 1			Free-Flow Speed,	mi/h	70.0	
	ed Slope Coefficient (m)	4.58112	Speed Power Coefficient (p)			0.41674
PF S	Slope Coefficient (m)	-1.27241		PF Power Coefficie	ent (p)	0.76681
In P	assing Lane Effective Length?	No	lo		nsity, veh/mi/ln	1.6
%In	nprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data			<u> </u>		
#	Segment Type	Length, ft	Rac	dius, ft Superelevation, %		Average Speed, mi/h
1	Tangent	1727	-		-	67.8
Ve	hicle Results					
Ave	rage Speed, mi/h	67.8		Percent Followers	 , %	38.0
	ment Travel Time, minutes	0.29		Follower Density ((FD), followers/mi/ln	1.6
	icle LOS	A				
Bio	cycle Results					
	cent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h 280		Bicycle Effective Width, ft		24		
Bicycle LOS Score 4.96		Bicycle Effective S		5.07		
	rcle LOS	E		-		
			Segn	nent 2		
Ve	hicle Inputs					
	ment Type	Passing Zone		Length, ft		1676
	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
			rieasured			

Domand and Canadity					
Demand and Capacity	Lana			151 5	
Directional Demand Flow Rate, veh/h	280		Opposing Demand Flow Rate, veh/h		811
Peak Hour Factor	0.88		Total Trucks, %		8.97
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)	4.47404	4.47404 S ₁		fficient (p)	0.45007
PF Slope Coefficient (m)	-1.27736		PF Power Coefficion	ent (p)	0.78596
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.5
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Length, ft Radiu		Superelevation, %	Average Speed, mi/h
1 Tangent	1676	-		-	67.9
Vehicle Results					
Average Speed, mi/h 67.9			Percent Followers	, %	37.4
Segment Travel Time, minutes	0.28		Follower Density (FD), followers/mi/ln		1.5
Vehicle LOS	Α				
Bicycle Results					
Percent Occupied Parking 0			Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	280		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	4.96		Bicycle Effective Speed Factor		5.07
Bicycle LOS	E				
	S	egm	nent 3		
Vehicle Inputs					
Segment Type	Passing Constrained		Length, ft		1864
Measured FFS	Measured		Free-Flow Speed, mi/h		70.0
Demand and Capacity	·				
Directional Demand Flow Rate, veh/h	306		Opposing Deman	d Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %		17.04
Segment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.18
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.58341		Speed Power Coe	fficient (p)	0.41674
PF Slope Coefficient (m)	-1.26572		PF Power Coefficie	ent (p)	0.77025
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.8
%Improvement to Percent Followers	0.0		%Improvement to Speed 0.0		0.0
Subsegment Data					
•					

#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1864	1864 -		-	67.6
Veł	nicle Results					·
Aver	rage Speed, mi/h	67.6	67.6		, %	39.8
Segr	ment Travel Time, minutes	0.31		Follower Density ((FD), followers/mi/ln	1.8
Vehi	cle LOS	A				
Bic	ycle Results					
Percent Occupied Parking 0			Pavement Conditi	on Rating	4	
Flow	Rate Outside Lane, veh/h	306		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	8.99		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	F				
			Segr	ment 4		
Veł	nicle Inputs					
Segment Type Passing Constrained		Length, ft		718		
Measured FFS Measured		Free-Flow Speed,	mi/h	70.0		
Dei	mand and Capacity					
Directional Demand Flow Rate, veh/h 306			Opposing Deman	d Flow Rate, veh/h	-	
Peak	Hour Factor	0.88		Total Trucks, %		17.04
Segr	nent Capacity, veh/h	1700		Demand/Capacity	' (D/C)	0.18
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed, mi/h		70.0
Spe	ed Slope Coefficient (m)	4.57372		Speed Power Coefficient (p)		0.41674
PF S	lope Coefficient (m)	-1.29182		PF Power Coefficient (p)		0.75993
In Pa	assing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		1.8
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	718	-		-	67.6
Veł	nicle Results					
Aver	rage Speed, mi/h	67.6		Percent Followers	, %	40.8
Segment Travel Time, minutes 0.12		Follower Density ((FD), followers/mi/ln	1.8		
Vehicle LOS A						
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	306		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	8.99		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	F				

		S	Segi	ment 5		
Ve	hicle Inputs					
Seg	ment Type	Passing Zone		Length, ft		1738
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	306	306		d Flow Rate, veh/h	456
Pea	k Hour Factor	0.88		Total Trucks, %		17.04
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.18
Int	ermediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.40112		Speed Power Coe	fficient (p)	0.48825
PF S	Slope Coefficient (m)	-1.25400		PF Power Coefficie	ent (p)	0.80244
In P	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.7
%In	nprovement to Percent Followers	vement to Percent Followers 0.0		%Improvement to	Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Length, ft Radiu		Superelevation, %	Average Speed, mi/h
1	Tangent	1738	1-		-	68.0
Ve	hicle Results					
Ave	rage Speed, mi/h	68.0		Percent Followers,	, %	38.4
Seg	ment Travel Time, minutes	0.29		Follower Density (FD), followers/mi/ln		1.7
Veh	icle LOS	А				
Bio	cycle Results					
Perd	cent Occupied Parking	0		Pavement Conditi	on Rating	4
Flov	v Rate Outside Lane, veh/h	306		Bicycle Effective Width, ft		24
Вісу	rcle LOS Score	8.99		Bicycle Effective Speed Factor		5.07
Вісу	rcle LOS	F				
		S	Segi	ment 6		
Ve	hicle Inputs					
Seg	ment Type	Passing Constrained		Length, ft		579
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	306		Opposing Deman	d Flow Rate, veh/h	-
Pea	k Hour Factor	0.88		Total Trucks, %		17.04
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.18
Int	ermediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
		'		Tree now speed, mi, m		

					1
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 De		1.8
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	579	-		-	67.6
Vehicle Results					
Average Speed, mi/h 67.6		Percent Followers,	%	40.8	
Segment Travel Time, minutes	0.10		Follower Density (FD), followers/mi/ln	1.8
Vehicle LOS	A				
Bicycle Results					
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	306		Bicycle Effective W	/idth, ft	24
Bicycle LOS Score	8.99		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	F				
		Segn	nent 7		
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	263		Opposing Demand Flow Rate, veh/h		360
Peak Hour Factor	0.88		Total Trucks, %		18.44
Segment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.15
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.38489		Speed Power Coefficient (p)		0.50362
PF Slope Coefficient (m)	-1.22431		PF Power Coefficie	ent (p)	0.81530
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 Rad		dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	2262	-		-	68.2
Vehicle Results					
Average Speed, mi/h	68.2		Percent Followers, %		33.7
Segment Travel Time, minutes	0.38		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	262		Bicycle Effective Width, ft		24
Bicycle LOS Score	9.75		Bicycle Effective Speed Factor		5.07
Bicycle LOS	F				
		Segn	nent 8		
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	263		Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor	0.88		Total Trucks, %		18.44
Segment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.15
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		1.4
%Improvement to Percent Followers	0.0		%Improvement to Speed		0.0
Subsegment Data			<u>'</u>		
# Segment Type	Length, ft Rac		dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	980	1-		-	67.9
Vehicle Results					<u>'</u>
Average Speed, mi/h	67.9		Percent Followers, %		37.3
Segment Travel Time, minutes	0.16		Follower Density (FD), followers/mi/ln		1.4
Vehicle LOS	А				
Bicycle Results					
Percent Occupied Parking	0		Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h	262		Bicycle Effective Width, ft		24
Bicycle LOS Score	9.75		Bicycle Effective Speed Factor		5.07
Bicycle LOS	F				
		Segn	nent 9		
Vehicle Inputs					
Segment Type	Passing Zone		Length, ft		3667
Measured FFS	Measured		Free-Flow Speed, mi/h		70.0
Demand and Capacity					

Dire	ctional Demand Flow Rate, veh/h	263		Opposing Demand	d Flow Rate, veh/h	360
Peak	Hour Factor	0.88		Total Trucks, %		18.44
Segr	nent Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.15
Int	ermediate Results					
Segment Vertical Class		1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.40330		Speed Power Coef	fficient (p)	0.50362
PF S	lope Coefficient (m)	-1.19252		PF Power Coefficie	ent (p)	0.82659
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.3
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	segment Data					
# Segment Type		Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3667	-		-	68.2
Vel	nicle Results					
Aver	age Speed, mi/h	68.2		Percent Followers,	%	32.6
Segr	nent Travel Time, minutes	0.61	0.61		FD), followers/mi/ln	1.3
Vehi	cle LOS	A				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Condition	on Rating	4
Flow	Rate Outside Lane, veh/h	262		Bicycle Effective W	/idth, ft	24
Bicy	cle LOS Score	9.75		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	F				
			Segr	ment 10		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrain	ed	Length, ft		1846
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	263		Opposing Demand	d Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %		18.44
Segr	nent Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.15
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m) 4.58311		Speed Power Coef	fficient (p)	0.41674		
PF S	ope Coefficient (m)	-1.26629		PF Power Coefficie	ent (p)	0.77017
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.4
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	segment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h

1 Tangent	1846	1.		l.	67.9
	1040	-		-	07.3
Vehicle Results					
Average Speed, mi/h	67.9		Percent Followers	, %	36.4
Segment Travel Time, minutes	0.31		Follower Density	(FD), followers/mi/ln	1.4
Vehicle LOS	А	А			
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	262		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	9.75		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	F				
		Segn	nent 11		
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/	n 263		Opposing Deman	d Flow Rate, veh/h	360
Peak Hour Factor	0.88		Total Trucks, %		18.44
Segment Capacity, veh/h	1700		Demand/Capacity	/ (D/C)	0.15
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.38357		Speed Power Coefficient (p)		0.50362
PF Slope Coefficient (m)	-1.22716		PF Power Coefficient (p)		0.81417
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	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	2174	-		-	68.2
Vehicle Results					
Average Speed, mi/h	68.2		Percent Followers	, %	33.8
Segment Travel Time, minutes	0.36		Follower Density	(FD), followers/mi/ln	1.3
Vehicle LOS	A				
Bicycle Results					
Percent Occupied Parking			Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	262		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	9.75		Bicycle Effective S	peed Factor	5.07
·					+
Bicycle LOS	F				

Ve	ehicle Inputs					
Se	gment Type	Passing Constrained	l	Length, ft		1277
Me	easured FFS	Measured		Free-Flow Speed, mi/h		70.0
D	emand and Capacity					
Directional Demand Flow Rate, veh/h		263		Opposing Deman	d Flow Rate, veh/h	-
Pe	ak Hour Factor	0.88		Total Trucks, %		18.44
Se	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.15
In	termediate Results					
Se	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Sp	eed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF	Slope Coefficient (m)	-1.29166		PF Power Coefficie	ent (p)	0.76014
ln	Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.4
%I	mprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sı	ubsegment Data					
#	Segment Type	Length, ft	Rad	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1277	-		-	67.9
Ve	ehicle Results					
Av	rerage Speed, mi/h	67.9		Percent Followers,	. %	37.3
Se	gment Travel Time, minutes	0.21	0.21		FD), followers/mi/ln	1.4
Ve	hicle LOS	A	А			
Bi	icycle Results					
Pe	rcent Occupied Parking	0			on Rating	4
Flo	ow Rate Outside Lane, veh/h	262	262		/idth, ft	24
Bio	cycle LOS Score	9.75		Bicycle Effective Speed Factor		5.07
Bio	cycle LOS	F				
		9	Segm	nent 13		
Ve	ehicle Inputs					
Se	gment Type	Passing Constrained	l	Length, ft		779
М	easured FFS	Measured		Free-Flow Speed,	mi/h	70.0
D	emand and Capacity					
Dii	rectional Demand Flow Rate, veh/h	263		Opposing Deman	d Flow Rate, veh/h	-
		Total Trucks, %		18.44		
Se	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.15
In	termediate Results					
Se	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Sp	eed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF	Slope Coefficient (m)	-1.29166		PF Power Coefficie	ent (p)	0.76014

In Pa	ssing Lane Effective Length?	No		Total Segment De	ensity, veh/mi/ln	1.4
%Improvement to Percent Followers		0.0		%Improvement to	%Improvement to Speed	
Suk	segment Data					
#	Segment Type	Length, ft	Ra	idius, ft	lius, ft Superelevation, %	
1	Tangent	779	-		-	67.9
Vel	nicle Results					
Aver	age Speed, mi/h	67.9		Percent Followers	5, %	37.3
Segr	nent Travel Time, minutes	0.13		Follower Density	(FD), followers/mi/ln	1.4
Vehi	cle LOS	А				
Bic	ycle Results			<u>'</u>		
Perce	ent Occupied Parking	0		Pavement Condit	ion Rating	4
Flow	Rate Outside Lane, veh/h	262		Bicycle Effective \	Width, ft	24
Bicyc	cle LOS Score	9.75		Bicycle Effective S	Speed Factor	5.07
Bicyc	cle LOS	F				
		•	Segn	nent 14		
Vel	nicle Inputs					
Segr	nent Type	Passing Constrair	ned	Length, ft		422
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Der	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	358		Opposing Demar	nd Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %		13.95
Segr	nent Capacity, veh/h	1700		Demand/Capacit	y (D/C)	0.21
Inte	ermediate Results					
Segr	nent Vertical Class	1		Free-Flow Speed, mi/h		70.0
Spee	ed Slope Coefficient (m)	4.57372		Speed Power Coefficient (p)		0.41674
PF SI	ope Coefficient (m)	-1.29219		PF Power Coeffici	PF Power Coefficient (p)	
In Pa	ssing Lane Effective Length?	No		Total Segment De	Total Segment Density, veh/mi/ln	
%lm	provement to Percent Followers	0.0		%Improvement to	o Speed	0.0
Suk	segment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	422	-		-	67.4
Vel	nicle Results					
Aver	age Speed, mi/h	67.4		Percent Followers	5, %	44.7
Segr	nent Travel Time, minutes	0.07		Follower Density	(FD), followers/mi/ln	2.4
Vehi	cle LOS	В				
Bic	ycle Results					
	ent Occupied Parking	0		Pavement Condit	ion Rating	4
-	· J				<i>_</i>	1

F! -	Data Outsida Lasa al 1	250	Discolation of	Midule fr	24			
	Rate Outside Lane, veh/h	358	Bicycle Effective		24			
_	le LOS Score	7.38	Bicycle Effective S	Speed Factor	5.07			
Вісус	le LOS	F						
		Se	gment 15					
Veh	icle Inputs							
Segn	nent Type	Passing Constrained	Length, ft		1478			
Meas	sured FFS	Measured	Free-Flow Speed	, mi/h	70.0			
Der	nand and Capacity							
Directional Demand Flow Rate, veh/h 310 Opposing Demand Flow Rate, veh/h -								
Peak	Hour Factor	0.88	Total Trucks, %		19.53			
Segn	nent Capacity, veh/h	1700	Demand/Capacit	y (D/C)	0.18			
Inte	ermediate Results							
Segn	nent Vertical Class	1	Free-Flow Speed	, mi/h	70.0			
Spee	d Slope Coefficient (m)	4.57671	Speed Power Co	efficient (p)	0.41674			
PF SI	ope Coefficient (m)	-1.28298	PF Power Coeffic	ient (p)	0.76370			
In Pa	ssing Lane Effective Length?	No	Total Segment D	ensity, veh/mi/ln	1.9			
%lmp	provement to Percent Followers	0.0	%Improvement t	o Speed	0.0			
Sub	segment Data							
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h			
1	Tangent	1478	-	-	67.6			
Veh	icle Results	-		·	·			
Avera	age Speed, mi/h	67.6	Percent Follower	Percent Followers, % 40.8				
Segn	nent Travel Time, minutes	0.25	Follower Density	(FD), followers/mi/ln	1.9			
Vehic								
	le LOS	A						
Bicy	ycle Results	А						
		A 0	Pavement Condit	tion Rating	4			
Perce	ycle Results		Pavement Condit		4 24			
Perce	ycle Results ent Occupied Parking	0		Width, ft				
Perce Flow Bicyc	ycle Results ent Occupied Parking Rate Outside Lane, veh/h	0 310	Bicycle Effective \	Width, ft	24			
Perce Flow Bicyc	ent Occupied Parking Rate Outside Lane, veh/h	0 310 10.52 F	Bicycle Effective \	Width, ft	24			
Perce Flow Bicyc	ent Occupied Parking Rate Outside Lane, veh/h	0 310 10.52 F	Bicycle Effective S	Width, ft	24			
Perce Flow Bicyc	rent Occupied Parking Rate Outside Lane, veh/h ele LOS Score ele LOS	0 310 10.52 F	Bicycle Effective S Bicycle Effective S gment 16	Width, ft	24			
Perce Flow Bicyc Bicyc	ent Occupied Parking Rate Outside Lane, veh/h ele LOS Score	0 310 10.52 F	Bicycle Effective S	Width, ft Speed Factor	24 5.07			
Perce Flow Bicyc Bicyc	ent Occupied Parking Rate Outside Lane, veh/h ele LOS Score ele LOS sicle Inputs ment Type sured FFS	0 310 10.52 F Se	Bicycle Effective S Bicycle Effective S gment 16 Length, ft	Width, ft Speed Factor	24 5.07 384			
Perce Flow Bicyc Bicyc	rent Occupied Parking Rate Outside Lane, veh/h Rele LOS Score Rele LOS Ricle Inputs Rent Type Sured FFS Rand and Capacity	0 310 10.52 F Se Passing Constrained Measured	Bicycle Effective S Bicycle Effective S gment 16 Length, ft Free-Flow Speed	Width, ft Speed Factor , mi/h	24 5.07 384			
Perce Flow Bicyc Bicyc Veh Segm Meas Den	ent Occupied Parking Rate Outside Lane, veh/h ele LOS Score ele LOS sicle Inputs ment Type sured FFS	0 310 10.52 F Se	Bicycle Effective S Bicycle Effective S gment 16 Length, ft Free-Flow Speed	Width, ft Speed Factor	24 5.07 384 70.0			

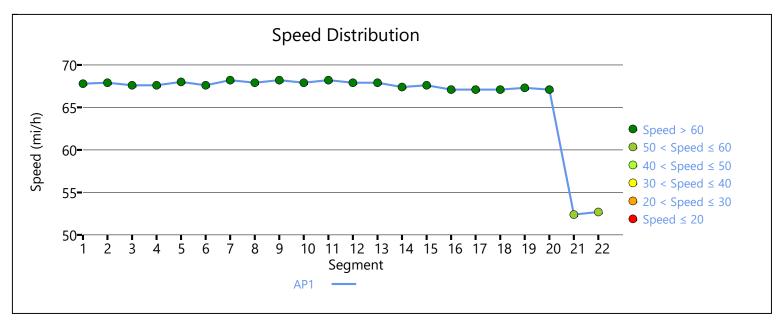
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed	, mi/h	70.0
Spee	ed Slope Coefficient (m)	4.57372	4.57372		efficient (p)	0.41674
PF S	lope Coefficient (m)	-1.29233	-1.29233		ient (p)	0.75931
In Pa	assing Lane Effective Length?	No		Total Segment D	ensity, veh/mi/ln	3.3
%lm	provement to Percent Followers	0.0	0.0		o Speed	0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Length, ft Radiu		Superelevation, %	Average Speed, mi/h
1	Tangent	384	-		-	67.1
Vel	nicle Results					
Aver	rage Speed, mi/h	67.1		Percent Follower	s, %	50.3
	ment Travel Time, minutes	0.07		Follower Density	(FD), followers/mi/ln	3.3
Vehi	cle LOS	В				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Condi	ion Rating	4
Flow	Rate Outside Lane, veh/h	445		Bicycle Effective Width, ft		24
Bicy	cle LOS Score	6.89		Bicycle Effective	Speed Factor	5.07
Bicy	cle LOS	F				
			Segm	nent 17		·
Vel	nicle Inputs					
Segr	ment Type	Passing Constraine	 ed	Length, ft		3732
	sured FFS	Measured		Free-Flow Speed, mi/h		70.0
Dei	mand and Capacity					
	ctional Demand Flow Rate, veh/h	434		Opposing Demai	nd Flow Rate, veh/h	-
	Hour Factor	0.88	-		,	12.21
Segr	ment Capacity, veh/h	1700		Total Trucks, % Demand/Capacity (D/C)		0.26
Int	ermediate Results					
Sear	ment Vertical Class	1		Free-Flow Speed	mi/h	70.0
	ed Slope Coefficient (m)	4.60878		Speed Power Co		0.41674
	lope Coefficient (m)	-1.21846		PF Power Coeffic	<u> </u>	0.78615
In Pa	assing Lane Effective Length?	No		Total Segment D	ensity, veh/mi/ln	3.0
%lm	provement to Percent Followers	0.0		%Improvement t	o Speed	0.0
Sul	osegment Data	1				
#	Segment Type	Length, ft	Rad	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3732	-		-	67.1
Vel	nicle Results					
Average Speed, mi/h 67.1				Percent Followers, %		46.9

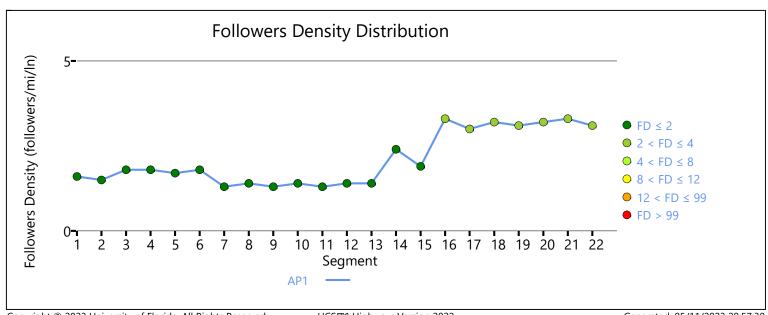
Segment Travel Time, minutes	0.63		Follower Density (FD), followers/mi/ln	3.0
Vehicle LOS	В		Tollower Delisity (Ely Tollowers, Thy III		3.0
Bicycle Results					
Percent Occupied Parking	0		Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h	434		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	6.61		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	F				
		Segm	ent 18		
Vehicle Inputs					
Segment Type	Passing Constrai	ned	Length, ft		1360
Measured FFS	Measured	Measured		mi/h	70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/l	n 434		Opposing Deman	d Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %		12.21
Segment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.26
Intermediate Results					
Segment Vertical Class 1		Free-Flow Speed,	mi/h	70.0	
Speed Slope Coefficient (m)	cient (m) 4.57450		Speed Power Coe	fficient (p)	0.41674
PF Slope Coefficient (m)	PF Slope Coefficient (m) -1.29014		PF Power Coefficie	ent (p)	0.76012
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	3.2
%Improvement to Percent Followers	0.0		%Improvement to Speed		0.0
Subsegment Data					
# Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1360	-		-	67.1
Vehicle Results					·
Average Speed, mi/h	67.1		Percent Followers	, %	49.5
Segment Travel Time, minutes	0.23		Follower Density (FD), followers/mi/ln	3.2
Vehicle LOS	В				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	434		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	6.61		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	F				
		Segm	ent 19		
Vehicle Inputs					
Segment Type	Passing Zone		Length, ft		1595
Measured FFS	Measured		Free-Flow Speed, mi/h		70.0

Demand and Capacity					
Directional Demand Flow Rate, veh/h	434		Onnosina Doman	d Flow Rate yeb/b	816
Peak Hour Factor	0.88		Opposing Demand Flow Rate, veh/h Total Trucks, %		12.21
Segment Capacity, veh/h			Demand/Capacity	(D/C)	0.26
	1700		Demand/Capacity	(D/C)	0.20
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.47345		Speed Power Coe	fficient (p)	0.44971
PF Slope Coefficient (m)	-1.28088		PF Power Coefficie	ent (p)	0.78481
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	3.1
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft Radio		us, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1595	-		-	67.3
Vehicle Results					
Average Speed, mi/h	67.3		Percent Followers, %		48.6
Segment Travel Time, minutes	0.27		Follower Density (FD), followers/mi/ln		3.1
Vehicle LOS	В				
Bicycle Results	<u>'</u>				
Percent Occupied Parking	0	П	Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	434		Bicycle Effective W	Vidth, ft	24
Bicycle LOS Score	6.61		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	F				
	Se	egme	ent 20		
Vehicle Inputs					
Segment Type	Passing Constrained	П	Length, ft		595
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	434		Opposing Deman	d Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %		12.21
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.26
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m) 4.57372			Speed Power Coe		0.41674
PF Slope Coefficient (m)	-1.29239		PF Power Coefficie	ent (p)	0.75923
In Passing Lane Effective Length?	No		Total Segment De	<u> </u>	3.2
%Improvement to Percent Followers	0.0		%Improvement to		0.0
Subsegment Data					
Jabseyment Data					

#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	595	-		-	67.1
Vel	nicle Results		·			·
Aver	rage Speed, mi/h	67.1		Percent Followers	, %	49.6
Segr	ment Travel Time, minutes	0.10	0.10		FD), followers/mi/ln	3.2
Vehi	cle LOS	В				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	434		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	6.61		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	F				
			Segn	nent 21		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrai	ned	Length, ft		958
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	55.0
De	mand and Capacity	·				
Dire	ctional Demand Flow Rate, veh/h	350		Opposing Deman	d Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %		10.81
Segr	nent Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.21
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed, mi/h		55.0
Spee	ed Slope Coefficient (m)	4.57372	4.57372		fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.43859		PF Power Coefficient (p)		0.72596
In Pa	assing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		3.3
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	958	-		-	52.4
Vel	nicle Results					
Aver	rage Speed, mi/h	52.4		Percent Followers	, %	48.9
Segr	ment Travel Time, minutes	0.21		Follower Density (FD), followers/mi/ln	3.3
Vehicle LOS B						
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	350		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	5.45		Bicycle Effective S	peed Factor	4.62
Bicy	cle LOS	E				

			Segm	ent	22		
Veh	icle Inputs						
Segm	nent Type	Passing Zone		Leng	gth, ft		1659
Meas	sured FFS	Measured		Free	-Flow Speed,	mi/h	55.0
Den	nand and Capacity						
Direc	Directional Demand Flow Rate, veh/h 350 C		Орр	osing Deman	d Flow Rate, veh/h	585	
Peak	Hour Factor	0.88		Tota	l Trucks, %		10.81
Segm	nent Capacity, veh/h	1700		Den	nand/Capacity	(D/C)	0.21
Inte	ermediate Results						
Segm	nent Vertical Class	1		Free	-Flow Speed,	mi/h	55.0
Speed	d Slope Coefficient (m)	4.42925		Spe	Speed Power Coefficient (p)		0.47156
PF Slo	ope Coefficient (m)	-1.37257	-1.37257		PF Power Coefficient (p)		0.75811
In Pas	ssing Lane Effective Length?	No		Tota	l Segment De	nsity, veh/mi/ln	3.1
%Improvement to Percent Followers		0.0	0.0		provement to	Speed	0.0
Sub	segment Data						
#	Segment Type	Length, ft	Rac	dius, ft	ius, ft Superelevation, %		Average Speed, mi/h
1	Tangent	1659	-		-		52.7
Veh	icle Results						
Avera	age Speed, mi/h	52.7		Perc	Percent Followers, %		46.2
Segm	nent Travel Time, minutes	0.36		Follower Density (FD), followers/mi/ln		FD), followers/mi/ln	3.1
Vehic	ile LOS	В					
Bicy	cle Results						
Perce	ent Occupied Parking	0		Pave	ement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	350		Bicy	cle Effective V	Vidth, ft	24
Bicyc	le LOS Score	5.45		Bicy	cle Effective S	peed Factor	4.62
Bicycl	le LOS	E					
Faci	ility Results						
т	VMT veh-mi/p	VHI veh-h			Follower Density, followers/ mi/ln		LOS
1	446	0.23	3			2.0	В





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		HCS Two-La	ane	Highway Re	port	
Pro	ject Information					
Analy	yst	MJV		Date		5/11/2023
Agen	ncy	HRG		Analysis Year		2050 NB
Juriso	diction	SDDOT		Time Analyzed		PM Peak
Proje	ect Description	SD 38 WB East of Ha	rtford	Units		U.S. Customary
		9	Segn	nent 1		
Veh	icle Inputs					
Segn	nent Type	Passing Constrained		Length, ft		1727
	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Der	mand and Capacity					
Direc	ctional Demand Flow Rate, veh/h	848		Opposing Deman	d Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %		8.97
Segn	nent Capacity, veh/h	1700		Demand/Capacity	, (D/C)	0.50
Inte	ermediate Results	<u>'</u>		'		<u>'</u>
Segn	nent Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spee	d Slope Coefficient (m)	4.58112	4.58112		fficient (p)	0.41674
PF SI	ope Coefficient (m)	-1.27241		PF Power Coefficie	ent (p)	0.76681
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	8.7
%lmp	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Sub	segment Data	<u>'</u>		,		
#	Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1727	-		-	65.9
Veh	icle Results					<u>'</u>
Avera	age Speed, mi/h	65.9		Percent Followers	, %	67.4
	nent Travel Time, minutes	0.30		Follower Density ((FD), followers/mi/ln	8.7
Vehic	cle LOS	D				
Bicy	ycle Results					
	ent Occupied Parking	0		Pavement Conditi	on Rating	4
	Rate Outside Lane, veh/h	848		Bicycle Effective V		24
Bicycle LOS Score 5.52		Bicycle Effective S		5.07		
	ile LOS	F		-		
		9	Segn	nent 2		
Veh	icle Inputs					
	nent Type	Passing Zone		Length, ft		1676
	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0

Demand and Canacity					
Demand and Capacity	1040		0 . 5	LEL D.	100
Directional Demand Flow Rate, veh/h	848		Opposing Demand Flow Rate, veh/h		402
Peak Hour Factor	0.88		Total Trucks, %		8.97
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.50
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.38668		Speed Power Coe	fficient (p)	0.49646
PF Slope Coefficient (m)	-1.25223		PF Power Coefficie	ent (p)	0.80275
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	8.5
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft Radi		us, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1676	-		-	66.2
Vehicle Results					
Average Speed, mi/h	66.2		Percent Followers, %		66.6
Segment Travel Time, minutes	0.29		Follower Density (FD), followers/mi/ln	8.5
Vehicle LOS	D				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	848		Bicycle Effective W	Vidth, ft	24
Bicycle LOS Score	5.52		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	F				
	S	egm	ent 3		
Vehicle Inputs					
Segment Type	Passing Constrained		Length, ft		1864
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	536		Opposing Deman	d Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %		17.04
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.32
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.58341		Speed Power Coe	fficient (p)	0.41674
PF Slope Coefficient (m)	-1.26572		PF Power Coefficie	ent (p)	0.77025
In Passing Lane Effective Length?	No	·	Total Segment De	nsity, veh/mi/ln	4.4
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					

#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1864	1864 -		-	66.8
Vel	nicle Results					·
Aver	rage Speed, mi/h	66.8		Percent Followers	, %	54.3
Segr	ment Travel Time, minutes	0.32		Follower Density ((FD), followers/mi/ln	4.4
Vehi	cle LOS	С				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	536		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	9.28		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	F				
			Segr	ment 4		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrai	ned	Length, ft		718
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	536	Opposing Dema		d Flow Rate, veh/h	-
Peak	Hour Factor	0.88	38 To			17.04
Segr	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.32
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.57372		Speed Power Coefficient (p)		0.41674
PF S	lope Coefficient (m)	-1.29182		PF Power Coefficient (p)		0.75993
In Pa	assing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		4.4
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	718	-		-	66.8
Vel	nicle Results		·			
Aver	rage Speed, mi/h	66.8		Percent Followers	, %	55.3
Segr	ment Travel Time, minutes	0.12		Follower Density (FD), followers/mi/ln		4.4
Vehicle LOS C						
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	536		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	9.28		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	F				

		9	Segi	ment 5		
Ve	hicle Inputs					
Seg	ment Type	Passing Zone		Length, ft		1738
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					·
Dire	ectional Demand Flow Rate, veh/h	536		Opposing Demand	d Flow Rate, veh/h	409
Pea	k Hour Factor	0.88	0.88			17.04
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.32
Int	termediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.38950		Speed Power Coef	fficient (p)	0.49536
PF S	Slope Coefficient (m)	-1.24935		PF Power Coefficie	ent (p)	0.80471
In P	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	4.2
%In	nprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1738	1-		-	67.1
Ve	hicle Results					
Ave	rage Speed, mi/h	67.1		Percent Followers,	. %	53.1
Seg	ment Travel Time, minutes	0.29		Follower Density (FD), followers/mi/ln		4.2
Veh	icle LOS	С				
Bio	cycle Results					·
Per	cent Occupied Parking	0		Pavement Condition	on Rating	4
Flov	w Rate Outside Lane, veh/h	536		Bicycle Effective Width, ft		24
Bicy	vcle LOS Score	9.28		Bicycle Effective S	peed Factor	5.07
Bicy	rcle LOS	F				
		9	Segi	ment 6		
Ve	hicle Inputs					
	ment Type	Passing Constrained		Length, ft		579
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	536		Opposing Demand	d Flow Rate, veh/h	-
Pea	k Hour Factor	0.88		Total Trucks, %		17.04
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.32
Int	termediate Results					
Sea	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
		1		1		

Speed Slope Coefficient (m)	4.57372			fficient (p)	0.41674
PF Slope Coefficient (m)	-1.29182		PF Power Coefficient (p)		0.75993
In Passing Lane Effective Length?	No		Total Segment De		4.4
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rac	ius, ft Superelevation, %		Average Speed, mi/h
1 Tangent	579	579 -		-	66.8
Vehicle Results					
Average Speed, mi/h	66.8		Percent Followers	, %	55.3
Segment Travel Time, minutes	0.10		Follower Density (FD), followers/mi/ln	4.4
Vehicle LOS	С				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	536		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	9.28		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	F				
		Segn	nent 7		
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	430		Opposing Deman	d Flow Rate, veh/h	314
Peak Hour Factor	0.88		Total Trucks, %		18.44
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)	4.37173		Speed Power Coefficient (p)		0.51243
PF Slope Coefficient (m)	-1.21815		PF Power Coefficie	ent (p)	0.81800
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	Rac	lius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	2262	-		-	67.5
Vehicle Results					
Average Speed, mi/h	67.5		Percent Followers,	, %	45.7
Segment Travel Time, minutes	0.38		Follower Density (FD), followers/mi/ln		2.9
Vehicle LOS B					

Bicycle Results					
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	430		Bicycle Effective W	/idth, ft	24
Bicycle LOS Score	10.00		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	F		İ		
	S	egn	nent 8		
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	430		Opposing Demand	d Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %		18.44
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)	-1.29166		PF Power Coefficie	ent (p)	0.76014
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	3.2
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data			•		
# Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	980	1-		-	67.1
Vehicle Results					
Average Speed, mi/h	67.1		Percent Followers,	%	49.3
Segment Travel Time, minutes	0.17		Follower Density (FD), followers/mi/ln		3.2
Vehicle LOS	В				
Bicycle Results					
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	430		Bicycle Effective W	/idth, ft	24
Bicycle LOS Score	10.00		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	F				
	S	egn	nent 9		
Vehicle Inputs					
Segment Type	Passing Zone		Length, ft		3667
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity					

Dire	ctional Demand Flow Rate, veh/h	430		Opposing Demand	d Flow Rate, veh/h	314
Peak	Hour Factor	0.88		Total Trucks, %		18.44
Segr	nent Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.25
Int	ermediate Results					
Segment Vertical Class 1			Free-Flow Speed,	mi/h	70.0	
Speed Slope Coefficient (m) 4.39013		Speed Power Coef	fficient (p)	0.51243		
PF S	lope Coefficient (m)	-1.18655		PF Power Coefficie	ent (p)	0.82939
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	2.8
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	segment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3667	-		-	67.5
Veł	nicle Results					
Aver	age Speed, mi/h	67.5		Percent Followers,	%	44.5
Segr	nent Travel Time, minutes	0.62		Follower Density (FD), followers/mi/ln	2.8
Vehi	cle LOS	В				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Condition	on Rating	4
Flow	Rate Outside Lane, veh/h	430		Bicycle Effective W	/idth, ft	24
Bicy	cle LOS Score	10.00		Bicycle Effective S _I	peed Factor	5.07
Bicy	cle LOS	F				
			Segr	ment 10		
Vel	nicle Inputs					
Segr	ment Type	Passing Constraine	ed	Length, ft		1846
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Dei	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	430		Opposing Demand	d Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %		18.44
Segr	nent Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.25
Inte	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spee	Speed Slope Coefficient (m) 4.58311		Speed Power Coef	fficient (p)	0.41674	
PF S	lope Coefficient (m)	-1.26629		PF Power Coefficie	ent (p)	0.77017
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	3.1
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h

1 Tangent	1846	-		-	67.1
Vehicle Results					
Average Speed, mi/h	67.1		Percent Followers	5, %	48.3
Segment Travel Time, minutes	0.31		Follower Density	(FD), followers/mi/ln	3.1
Vehicle LOS	В				
Bicycle Results					
Percent Occupied Parking	0		Pavement Condit	ion Rating	4
Flow Rate Outside Lane, veh/h	430	430		Vidth, ft	24
Bicycle LOS Score	10.00		Bicycle Effective S	Speed Factor	5.07
Bicycle LOS	F				
		Seg	ment 11		
Vehicle Inputs					
Segment Type	Passing Zone		Length, ft		2174
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity					<u>'</u>
Directional Demand Flow Rate, veh/h	430		Opposing Demar	nd Flow Rate, veh/h	314
Peak Hour Factor	0.88		Total Trucks, %		18.44
Segment Capacity, veh/h	1700		Demand/Capacity	y (D/C)	0.25
Intermediate Results	_				<u>'</u>
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.37041		Speed Power Coefficient (p)		0.51243
PF Slope Coefficient (m)	-1.22098		PF Power Coeffici	ent (p)	0.81685
In Passing Lane Effective Length?	No		Total Segment De	ensity, veh/mi/ln	2.9
%Improvement to Percent Followers	0.0		%Improvement to	o Speed	0.0
Subsegment Data	·		<u> </u>		·
# Segment Type	Length, ft	F	Radius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	2174	-		-	67.5
Vehicle Results					
Average Speed, mi/h	67.5		Percent Followers	5, %	45.8
Segment Travel Time, minutes	0.37		Follower Density	(FD), followers/mi/ln	2.9
Vehicle LOS	В				
Bicycle Results					
Percent Occupied Parking	0		Pavement Condit	ion Rating	4
Flow Rate Outside Lane, veh/h	430		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	10.00		Bicycle Effective S	Speed Factor	5.07
Bicycle LOS	F				
		Seg	ment 12		

Ve	hicle Inputs					
Seg	gment Type	Passing Constraine	d	Length, ft		1277
Me	asured FFS	Measured	Measured		Free-Flow Speed, mi/h	
De	emand and Capacity					
Directional Demand Flow Rate, veh/h		430		Opposing Demand	d Flow Rate, veh/h	-
Pea	ak Hour Factor	0.88		Total Trucks, %		18.44
Seg	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.25
ln [.]	termediate Results					
Seg	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	eed Slope Coefficient (m)	4.57372		Speed Power Coef	fficient (p)	0.41674
PF	Slope Coefficient (m)	-1.29166		PF Power Coefficie	ent (p)	0.76014
In F	Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	3.2
%Ir	mprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	ıbsegment Data					
#	Segment Type	Length, ft	Rad	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1277	-		-	67.1
Ve	hicle Results					
Ave	erage Speed, mi/h	67.1		Percent Followers,	%	49.3
Seg	gment Travel Time, minutes	0.22		Follower Density (FD), followers/mi/ln	3.2
Veł	nicle LOS	В				
Bi	cycle Results					
Per	cent Occupied Parking	0		Pavement Condition Rating		4
Flo	w Rate Outside Lane, veh/h	430	Bicycle Effective Width,		/idth, ft	24
Bic	ycle LOS Score	10.00		Bicycle Effective Speed Factor		5.07
Bic	ycle LOS	F				
			Segn	nent 13		
Ve	hicle Inputs					
Seg	gment Type	Passing Constraine	d	Length, ft		779
Me	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	emand and Capacity					
Directional Demand Flow Rate, veh/h 430		Opposing Demand	d Flow Rate, veh/h	-		
Peak Hour Factor 0.88			Total Trucks, %		18.44	
Seg	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.25
ln [.]	termediate Results					
Seg	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	eed Slope Coefficient (m)	4.57372		Speed Power Coef	fficient (p)	0.41674
PF	Slope Coefficient (m)	-1.29166		PF Power Coefficie	ent (p)	0.76014

In Passing Lane Effective Length?		No		Total Segment De	ensity, veh/mi/ln	3.2
%Improvement to Percent Followers		0.0		%Improvement to Speed		0.0
Suk	osegment Data					
#	Segment Type	Length, ft Rad		idius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	779 -			-	67.1
Vel	nicle Results					
Aver	age Speed, mi/h	67.1		Percent Followers	5, %	49.3
Segr	ment Travel Time, minutes	0.13		Follower Density	(FD), followers/mi/ln	3.2
Vehi	cle LOS	В				
Bic	ycle Results			•		
Perce	ent Occupied Parking	0		Pavement Condit	ion Rating	4
Flow	Rate Outside Lane, veh/h	430		Bicycle Effective \	Width, ft	24
Bicyc	cle LOS Score	10.00		Bicycle Effective S	Speed Factor	5.07
Bicyc	cle LOS	F				
		•	Segn	nent 14		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrain	ned	Length, ft		422
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Der	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	607		Opposing Demar	nd Flow Rate, veh/h	-
Peak	Hour Factor	0.88	0.88			13.95
Segr	ment Capacity, veh/h	1700		Demand/Capacit	Demand/Capacity (D/C)	
Inte	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spee	ed Slope Coefficient (m)	4.57372		Speed Power Coefficient (p)		0.41674
PF SI	lope Coefficient (m)	-1.29219		PF Power Coeffic	PF Power Coefficient (p)	
In Pa	ssing Lane Effective Length?	No		Total Segment De	Total Segment Density, veh/mi/ln	
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Suk	osegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	422	-		-	66.6
Vel	nicle Results				•	•
Aver	age Speed, mi/h	66.6		Percent Followers	5, %	58.7
Segr	ment Travel Time, minutes	0.07		Follower Density	(FD), followers/mi/ln	5.4
Vehi	cle LOS	С				
Bic	ycle Results					
	ent Occupied Parking	0		Pavement Condit	ion Rating	4
	· -			1		1

Elacc	Pata Outsida Lana wat //a	607	Diavals Effect	ivo Width ft	24
	Rate Outside Lane, veh/h	607	Bicycle Effecti		24
_	le LOS Score	7.64	Bicycle Effecti	ve Speed Factor	5.07
Вісус	le LOS	F			
		Se	gment 15		
Veh	icle Inputs				
Segn	Segment Type Passing Constrained		Length, ft		1478
Meas	sured FFS	Measured	Free-Flow Spe	eed, mi/h	70.0
Der	nand and Capacity				
Direc	tional Demand Flow Rate, veh/h	524	Opposing De	mand Flow Rate, veh/h	-
Peak	Hour Factor	0.88	Total Trucks, 9	%	19.53
Segn	nent Capacity, veh/h	1700	Demand/Cap	acity (D/C)	0.31
Inte	ermediate Results				
Segn	nent Vertical Class	1	Free-Flow Spe	eed, mi/h	70.0
Spee	d Slope Coefficient (m)	4.57671	Speed Power	Coefficient (p)	0.41674
PF SI	ope Coefficient (m)	-1.28298	PF Power Coe	efficient (p)	0.76370
In Pa	ssing Lane Effective Length?	No	Total Segmen	t Density, veh/mi/ln	4.3
%lmţ	provement to Percent Followers	0.0	%Improveme	nt to Speed	0.0
Sub	segment Data		·		
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1478	-	-	66.8
Veh	icle Results				·
Avera	age Speed, mi/h	66.8	Percent Follow	wers, %	54.3
Segn	nent Travel Time, minutes	0.25	Follower Dens	sity (FD), followers/mi/ln	4.3
Vehic	cle LOS	С			
Rico					
راحاد	cle Results				
	ycle Results ent Occupied Parking	0	Pavement Co	ndition Rating	4
Perce		0 524	Pavement Co		4 24
Perce	ent Occupied Parking		Bicycle Effecti		
Perce Flow Bicyc	ent Occupied Parking Rate Outside Lane, veh/h	524	Bicycle Effecti	ive Width, ft	24
Perce Flow Bicyc	ent Occupied Parking Rate Outside Lane, veh/h le LOS Score	524 10.78 F	Bicycle Effecti	ive Width, ft	24
Perce Flow Bicyc	ent Occupied Parking Rate Outside Lane, veh/h le LOS Score	524 10.78 F	Bicycle Effecti	ive Width, ft	24
Perce Flow Bicyc	ent Occupied Parking Rate Outside Lane, veh/h le LOS Score le LOS	524 10.78 F	Bicycle Effecti	ive Width, ft	24
Perce Flow Bicyc Bicyc	Rate Outside Lane, veh/h le LOS Score le LOS	524 10.78 F	Bicycle Effecti Bicycle Effecti gment 16	ive Width, ft	24 5.07
Perce Flow Bicyc Bicyc	Rate Outside Lane, veh/h le LOS Score le LOS	524 10.78 F Se Passing Constrained	Bicycle Effecti Bicycle Effecti gment 16 Length, ft	ive Width, ft	24 5.07 384
Perce Flow Bicyc Bicyc	Rate Outside Lane, veh/h le LOS Score le LOS icle Inputs nent Type sured FFS	524 10.78 F Se Passing Constrained	Bicycle Effecti Bicycle Effecti Gment 16 Length, ft Free-Flow Spe	ive Width, ft ive Speed Factor eed, mi/h	24 5.07 384
Perce Flow Bicyc Bicyc Veh Segm Meas Den	Rate Outside Lane, veh/h le LOS Score le LOS sicle Inputs ment Type sured FFS mand and Capacity	524 10.78 F Se Passing Constrained Measured	Bicycle Effecti Bicycle Effecti Gment 16 Length, ft Free-Flow Spe	eed, mi/h mand Flow Rate, veh/h	24 5.07 384 70.0

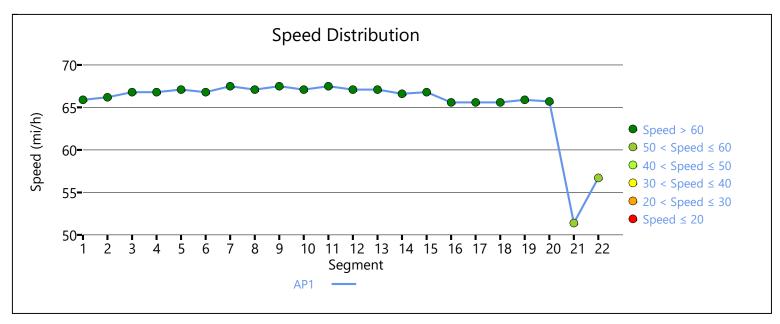
Int	ermediate Results					
Seg	ment Vertical Class	1		Free-Flow Spee	d, mi/h	70.0
Spe	ed Slope Coefficient (m)	4.57372	4.57372		pefficient (p)	0.41674
PF Slope Coefficient (m)		-1.29233	-1.29233		cient (p)	0.75931
In P	assing Lane Effective Length?	No		Total Segment I	Density, veh/mi/ln	10.9
%ln	provement to Percent Followers	0.0		%Improvement	to Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Length, ft Radiu		Superelevation, %	Average Speed, mi/h
1	Tangent	384	384 -		-	65.6
Ve	hicle Results					
Ave	rage Speed, mi/h	65.6		Percent Followe	rs, %	72.3
Seg	ment Travel Time, minutes	0.07		Follower Densit	y (FD), followers/mi/ln	10.9
Veh	icle LOS	D				
Bio	cycle Results					•
Perc	ent Occupied Parking	0		Pavement Conc	ition Rating	4
	v Rate Outside Lane, veh/h	990		Bicycle Effective Width, ft		24
Bicy	cle LOS Score	7.29		Bicycle Effective Speed Factor		5.07
Bicy	cle LOS	F				
			Sean	nent 17		
Val	hicle Inputs					
	•	Danie Carteia	1	Leads 6		2722
	ment Type asured FFS	Passing Constrain	ea	Length, ft Free-Flow Speed, mi/h		3732
		Measured		Free-Flow Spee	u, miyn	70.0
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	986		Opposing Dem	and Flow Rate, veh/h	-
Peal	k Hour Factor	0.88		Total Trucks, %		12.21
Seg	ment Capacity, veh/h	1700		Demand/Capac	ity (D/C)	0.58
Int	ermediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed, mi/h		70.0
Spe	ed Slope Coefficient (m)	4.60878		Speed Power Co	pefficient (p)	0.41674
PF S	ilope Coefficient (m)	-1.21846		PF Power Coeff	cient (p)	0.78615
In P	assing Lane Effective Length?	No		Total Segment I	Density, veh/mi/ln	10.5
%ln	provement to Percent Followers	0.0		%Improvement	to Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3732	-		-	65.6
Ve	hicle Results				<u>'</u>	
Δνα	rage Speed, mi/h	65.6		Percent Followers, %		70.0

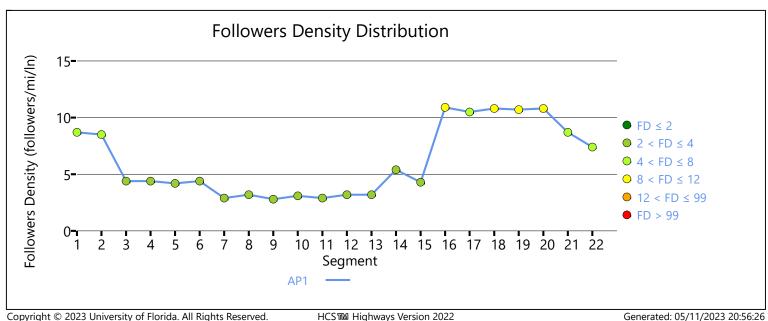
Segment Travel Time, minutes	0.65		Follower Density (FD), followers/mi/ln	10.5
Vehicle LOS	D D		Tollower Delisity (1 D), 10110Wers/1111/111	10.5
Bicycle Results					1
Percent Occupied Parking	0		Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h	986	986		/idth, ft	24
Bicycle LOS Score	7.03			peed Factor	5.07
Bicycle LOS	F				
		Segn	nent 18		
Vehicle Inputs					
Segment Type	Passing Constrain	ned	Length, ft		1360
Measured FFS	Measured	Measured		mi/h	70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/l	h 986		Opposing Demand	d Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %		12.21
Segment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.58
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.57450		Speed Power Coef	fficient (p)	0.41674
PF Slope Coefficient (m)	-1.29014		PF Power Coefficie	ent (p)	0.76012
In Passing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		10.8
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Ra	adius, ft Superelevation, %		Average Speed, mi/h
1 Tangent	1360	-		-	65.6
Vehicle Results		·			·
Average Speed, mi/h	65.6		Percent Followers,	%	72.1
Segment Travel Time, minutes	0.24		Follower Density (FD), followers/mi/ln	10.8
Vehicle LOS	D				
Bicycle Results					
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	986		Bicycle Effective W	/idth, ft	24
Bicycle LOS Score 7.03		Bicycle Effective S	peed Factor	5.07	
Bicycle LOS	F				
	·	Segn	nent 19		
Vehicle Inputs					
Segment Type	Passing Zone		Length, ft		1595
	1 -		Length, ft Free-Flow Speed, mi/h		1

Demand and Canacity					
Demand and Capacity	long			151 8: ::	145
Directional Demand Flow Rate, veh/h	986			d Flow Rate, veh/h	445
Peak Hour Factor	0.88		Total Trucks, %		12.21
Segment Capacity, veh/h 1700		Demand/Capacity	(D/C)	0.58	
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.39614		Speed Power Coe	fficient (p)	0.48975
PF Slope Coefficient (m)	-1.26001		PF Power Coefficie	ent (p)	0.79959
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	10.7
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rad	lius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	1595	-		-	65.9
Vehicle Results					
Average Speed, mi/h	65.9		Percent Followers	, %	71.2
Segment Travel Time, minutes	0.28		Follower Density (FD), followers/mi/ln		10.7
Vehicle LOS	D		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Bicycle Results	•				
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	986		Bicycle Effective Width, ft		24
Bicycle LOS Score	7.03		Bicycle Effective Speed Factor		5.07
Bicycle LOS	F				
	Se	egm	ent 20		
Vehicle Inputs					
Segment Type	Passing Constrained		Length, ft		595
Measured FFS	Measured		Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	986		Opposing Deman	d Flow Rate, veh/h	-
Peak Hour Factor	0.88		Total Trucks, %		12.21
Segment Capacity, veh/h	1700		Demand/Capacity	' (D/C)	0.58
Intermediate Results					
Segment Vertical Class 1		Free-Flow Speed,	mi/h	70.0	
Speed Slope Coefficient (m)	4.57372		Speed Power Coe		0.41674
PF Slope Coefficient (m)	-1.29239		PF Power Coefficie	ent (p)	0.75923
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	10.8
%Improvement to Percent Followers	0.0		%Improvement to	-	0.0
Subsegment Data	<u> </u>				
- Jabocyment Data					

#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	595 -			-	65.7
Vel	nicle Results					
Aver	rage Speed, mi/h	65.7		Percent Followers	, %	72.2
Segr	ment Travel Time, minutes	0.10		Follower Density ((FD), followers/mi/ln	10.8
Vehi	cle LOS	D				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	986		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	7.03		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	F				
			Segn	nent 21		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrai	ined	Length, ft		958
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	55.0
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	674		Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor 0.		0.88	0.88			10.81
Segr	ment Capacity, veh/h	1700	1700		r (D/C)	0.40
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	55.0
Spe	ed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.43859		PF Power Coefficie	ent (p)	0.72596
In Pa	assing Lane Effective Length?	No	No		nsity, veh/mi/ln	8.7
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	958	-		-	51.4
Vel	nicle Results					
Aver	rage Speed, mi/h	51.4		Percent Followers	, %	66.0
Segr	ment Travel Time, minutes	0.21		Follower Density ((FD), followers/mi/ln	8.7
Vehicle LOS D		D				
Bic	ycle Results					
Percent Occupied Parking 0		Pavement Condition Rating		4		
Flow Rate Outside Lane, veh/h 674			Bicycle Effective Width, ft		24	
Bicy	cle LOS Score	5.78		Bicycle Effective S	peed Factor	4.62
Bicy	cle LOS	F				

		Se	egme	nt 22		
Veh	icle Inputs					
Segment Type Passing Zone Lo		_ength, ft		1659		
Meas	ured FFS	Measured	F	ree-Flow Speed,	mi/h	60.0
Den	nand and Capacity					
Direct	tional Demand Flow Rate, veh/h	674	(Opposing Deman	d Flow Rate, veh/h	368
Peak	Hour Factor	0.88	7	Fotal Trucks, %		10.81
Segm	ent Capacity, veh/h	1700	[Demand/Capacity	' (D/C)	0.40
Inte	rmediate Results					·
Segm	ent Vertical Class	1	F	ree-Flow Speed,	mi/h	60.0
Speed	d Slope Coefficient (m)	4.37738	5	Speed Power Coe	fficient (p)	0.50221
PF Slo	ppe Coefficient (m)	-1.31799	F	PF Power Coefficient (p)		0.78037
In Pas	sing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		7.4
%lmp	rovement to Percent Followers	0.0		%Improvement to Speed		0.0
Sub	segment Data					
#	Segment Type	Length, ft	Radiu	lius, ft Superelevation, %		Average Speed, mi/h
1	Tangent	1659	-		-	56.7
Veh	icle Results	-				
Avera	ge Speed, mi/h	56.7		Percent Followers, %		62.0
Segm	ent Travel Time, minutes	0.33	F	ollower Density ((FD), followers/mi/ln	7.4
Vehic	le LOS	С				
Bicy	cle Results					
Perce	nt Occupied Parking	0	F	Pavement Condition Rating		4
Flow	Rate Outside Lane, veh/h	674	E	Bicycle Effective Width, ft		24
Bicycl	e LOS Score	5.78	E	Bicycle Effective S	peed Factor	4.62
Bicycle LOS F		F	F			
Faci	lity Results					
Т	VMT veh-mi/p	VHD veh-h/p		Follower Density, followers/ mi/ln		LOS
1	894	0.71			6.0	С





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		HCS Two-La	ne	Highway Re	port	
Pro	ject Information					
Anal	yst	MJV		Date		5/11/2023
Ager	ncy	HRG		Analysis Year		2050 NB
Juris	diction	SDDOT		Time Analyzed		AM Peak
Proje	ect Description	West of Hartford SD 38	8 EB	Units		U.S. Customary
		Se	egn	nent 1		
Veł	nicle Inputs					
Segr	ment Type	Passing Zone		Length, ft		1069
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Dei	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	243		Opposing Deman	d Flow Rate, veh/h	169
Peak	Hour Factor	0.88		Total Trucks, %		5.79
Segr	ment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.14
Inte	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed, mi/h		70.0
Spee	ed Slope Coefficient (m)	4.30713		Speed Power Coe	fficient (p)	0.54838
PF Slope Coefficient (m)		-1.23090		PF Power Coefficie	ent (p)	0.80942
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.2
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Suk	osegment Data					
#	Segment Type	Length, ft	Rac	dius, ft Superelevation, %		Average Speed, mi/h
1	Tangent	1069	-		-	68.5
Vel	nicle Results					
Aver	age Speed, mi/h	68.5		Percent Followers, %		32.4
Segr	ment Travel Time, minutes	0.18		Follower Density (FD), followers/mi/ln		1.2
Vehi	cle LOS	A				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Condition Rating		4
Flow Rate Outside Lane, veh/h 243		243		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score 3.		3.70		Bicycle Effective S	peed Factor	5.07
Bicyc	cle LOS	D				
		Se	egn	nent 2		
Veł	nicle Inputs					
Segr	ment Type	Passing Constrained		Length, ft		664
	sured FFS	Measured		Free-Flow Speed, mi/h		70.0

Demand and Capacity					
	1242			LEL D.	
Directional Demand Flow Rate, veh/h	243		Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor	0.88		Total Trucks, %	(2.(5)	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 Coe	fficient (p)	0.41674
PF Slope Coefficient (m)	-1.29315		PF Power Coefficie	ent (p)	0.75829
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.3
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Radi	ius, 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	А				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	243		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	3.70		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	D				
	S	egm	nent 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					
egment Vertical Class 1		Free-Flow Speed, mi/h		70.0	
		Speed Power Coe	fficient (p)	0.54838	
PF Slope Coefficient (m) -1.20586			PF Power Coefficient (p)		0.82063
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.1
%Improvement to Percent Followers	0.0		%Improvement to	-	0.0
Subsegment Data					

#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1871 -			-	68.5
Veł	nicle Results					·
Aver	rage Speed, mi/h	68.5		Percent Followers	, %	31.5
Segr	ment Travel Time, minutes	0.31		Follower Density ((FD), followers/mi/ln	1.1
Vehi	cle LOS	A				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	243		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	3.70		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	D				
			Segr	ment 4		
Veł	nicle Inputs					
Segr	ment Type	Passing Constrai	ned	Length, ft		925
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Dei	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	243	Opposing Dema		d Flow Rate, veh/h	-
Peak	Hour Factor	0.88	0.88			5.79
Segment Capacity, veh/h		1700		Demand/Capacity	(D/C)	0.14
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.29315		PF Power Coefficient (p)		0.75829
In Pa	assing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		1.3
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Suk	osegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	925	-		-	68.0
Veł	nicle Results		·			
Aver	rage Speed, mi/h	68.0		Percent Followers	, %	35.8
Segr	ment Travel Time, minutes	0.15		Follower Density (FD), followers/mi/ln		1.3
Vehicle LOS A		А				
Bic	ycle Results					
Percent Occupied Parking 0		Pavement Condition Rating		4		
Flow	Rate Outside Lane, veh/h	243		Bicycle Effective Width, ft		24
Bicy	cle LOS Score	3.70		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	D				

		S	Segi	ment 5		
Ve	hicle Inputs					
Seg	ment Type	Passing Zone		Length, ft		4476
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	243		Opposing Demand	d Flow Rate, veh/h	169
Pea	k Hour Factor	0.88		Total Trucks, %		5.79
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.14
Int	ermediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.35043		Speed Power Coef	fficient (p)	0.54838
PF S	Slope Coefficient (m)	-1.15155		PF Power Coefficie	ent (p)	0.84082
In P	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.1
%In	nprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4476	1-		-	68.5
Ve	hicle Results					
Ave	rage Speed, mi/h	68.5		Percent Followers,	. %	29.6
Seg	ment Travel Time, minutes	0.74	74		FD), followers/mi/ln	1.1
Veh	icle LOS	А				
Bio	cycle Results			·		
Per	cent Occupied Parking	0		Pavement Condition	on Rating	4
Flov	v Rate Outside Lane, veh/h	243		Bicycle Effective Width, ft		24
Bicy	rcle LOS Score	3.70		Bicycle Effective Speed Factor		5.07
Bicy	rcle LOS	D				
		S	Segi	ment 6		
Ve	hicle Inputs					
Seg	ment Type	Passing Constrained		Length, ft		896
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	Directional Demand Flow Rate, veh/h 243		Opposing Demand	d Flow Rate, veh/h	-	
Peak Hour Factor 0.88		Total Trucks, %		5.79		
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.14
Int	ermediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
		1		1		

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 De	nsity, veh/mi/ln	1.3	
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0	
Subsegment Data						
# Segment Type	Length, ft	Rac	lius, 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 Conditi	on Rating	4	
Flow Rate Outside Lane, veh/h	243		Bicycle Effective W	Vidth, ft	24	
Bicycle LOS Score	3.70		Bicycle Effective S	peed Factor	5.07	
Bicycle LOS	D					
		Segn	nent 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 Deman	d 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			<u>'</u>			
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	%Improvement to Speed 0.0		
Subsegment Data						
# Segment Type	Length, ft	Length, ft Radi		Superelevation, %	Average Speed, mi/h	
1 Tangent				-	68.5	
Vehicle Results	<u>'</u>					
Average Speed, mi/h 68.5			Percent Followers, %		32.4	
Segment Travel Time, minutes	0.12			FD), followers/mi/ln	1.2	
Vehicle LOS	A		To nower bensity (1 b), followers/fill/lif		·	

Bicycle Results					
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h			Bicycle Effective Width, ft		24
Bicycle LOS Score			Bicycle Effective S		5.07
Bicycle LOS	D				
	S	egn	nent 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 Deman	d 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 Coefficie	ent (p)	0.83165
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.1
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data			•		
# Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1 Tangent	2717	1-		-	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	А				
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 S	peed Factor	5.07
Bicycle LOS	С	С			
	S	egn	nent 9		
Vehicle Inputs					
Segment Type	Passing Constrained		Length, ft		1013
Measured FFS	Measured		Free-Flow Speed, mi/h		70.0
Demand and Capacity					

Dire	ctional Demand Flow Rate, veh/h	245		Opposing Demand	d Flow Rate, veh/h	-	
	: Hour Factor			Total Trucks, %		3.28	
Segr	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.14	
	ermediate Results			, ,			
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0	
Spee	ed Slope Coefficient (m)	4.57372		Speed Power Coef	ficient (p)	0.41674	
PF S	lope Coefficient (m)	-1.29345		PF Power Coefficie	ent (p)	0.75792	
In Pa	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.3	
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0	
Sul	osegment Data	•					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h	
1	Tangent	1013	-		-	68.0	
Vel	nicle Results					·	
Aver	rage Speed, mi/h	68.0		Percent Followers,	%	36.0	
Segr	ment Travel Time, minutes	0.17		Follower Density (FD), followers/mi/ln	1.3	
Vehi	cle LOS	А					
Bic	ycle Results	•					
Perc	ent Occupied Parking	0		Pavement Condition	on Rating	4	
Flow	Rate Outside Lane, veh/h	245		Bicycle Effective W	/idth, ft	24	
Bicy	cle LOS Score	2.93		Bicycle Effective S _I	peed Factor	5.07	
Bicy	cle LOS	С					
			Segr	ment 10			
Vel	nicle Inputs						
Segr	ment Type	Passing Zone		Length, ft		4569	
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0	
Dei	mand and Capacity						
Dire	ctional Demand Flow Rate, veh/h	245		Opposing Demand	d Flow Rate, veh/h	165	
Peak	Hour Factor	0.88		Total Trucks, %		3.28	
Segr	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.14	
Int	ermediate Results						
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0	
Spe	ed Slope Coefficient (m)	4.34958		Speed Power Coef	ficient (p)	0.54983	
		PF Power Coefficie	ent (p)	0.84100			
In Pa	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.1	
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0	
Sul	osegment Data						
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h	

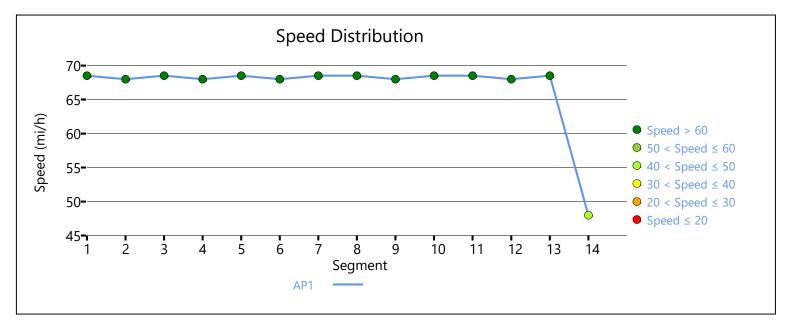
1 Tangent	4569	-		-	68.5
Vehicle Results					
Average Speed, mi/h	68.5		Percent Followers,	. %	29.7
Segment Travel Time, minutes	0.76		Follower Density (FD), followers/mi/ln	1.1
Vehicle LOS	А				
Bicycle Results					·
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	245		Bicycle Effective W	/idth, ft	24
Bicycle LOS Score	2.93		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	С				
	9	Segn	nent 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 Coe	fficient (p)	0.54983
PF Slope Coefficient (m)	-1.14222		PF Power Coefficie	ent (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	Ra	dius, 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	А	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 S	peed Factor	5.07
Bicycle LOS	С				
	9	Segn	nent 12		

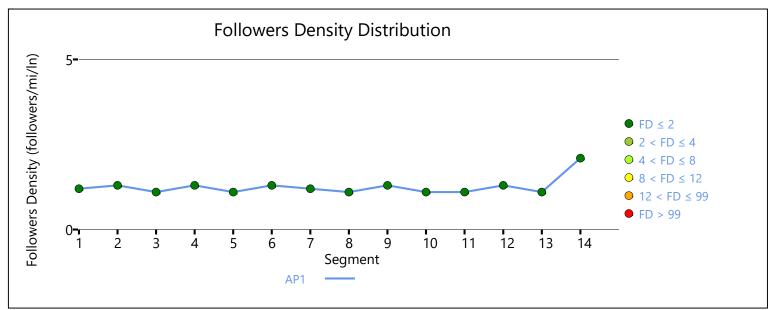
Ve	ehicle Inputs					
Se	gment Type	Passing Constrained		Length, ft		657
Me	easured FFS	Measured		Free-Flow Speed,	mi/h	70.0
D	emand and Capacity					
Dir	rectional Demand Flow Rate, veh/h	244		Opposing Deman	d Flow Rate, veh/h	-
Pe	ak Hour Factor	0.88		Total Trucks, %		2.82
Se	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.14
In	termediate Results					
Se	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Sp	eed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF	Slope Coefficient (m)	-1.29350		PF Power Coefficie	ent (p)	0.75785
ln	Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.3
%I	mprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sı	ubsegment Data					
#	Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	657	-		-	68.0
Ve	ehicle Results					
Av	rerage Speed, mi/h	68.0		Percent Followers,	. %	35.9
Se	gment Travel Time, minutes	0.11		Follower Density (FD), followers/mi/ln	1.3
Ve	hicle LOS	А				
Bi	icycle Results					
Pe	rcent Occupied Parking	0	0		on Rating	4
Flo	ow Rate Outside Lane, veh/h	244	244		/idth, ft	24
Bic	cycle LOS Score	2.80		Bicycle Effective Speed Factor		5.07
Bic	cycle LOS	С				
		S	egm	ent 13		
Ve	ehicle Inputs					
Se	gment Type	Passing Zone		Length, ft		6009
Ме	easured FFS	Measured		Free-Flow Speed,	mi/h	70.0
D	emand and Capacity					
Directional Demand Flow Rate, veh/h 244			Opposing Deman	d 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		
ln	termediate Results					
Se	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Sp	eed Slope Coefficient (m)	4.36364		Speed Power Coe	fficient (p)	0.54983
PF	Slope Coefficient (m)	-1.14089		PF Power Coefficie	ent (p)	0.83997

In Passing Lane Effective Length?		No		Total Segment D	Total Segment Density, veh/mi/ln	
%Improvement to Percent Followers		0.0		%Improvement	%Improvement to Speed	
Suk	osegment Data					
#	Segment Type	Length, ft Radio		adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6009	-		-	68.5
Vel	nicle Results					
Aver	age Speed, mi/h	68.5		Percent Follower	s, %	29.5
Segr	ment Travel Time, minutes	1.00		Follower Density	(FD), followers/mi/ln	1.1
Vehi	cle LOS	А		İ		
Bic	ycle Results					
Perce	ent Occupied Parking	0		Pavement Condi	tion Rating	4
Flow	Rate Outside Lane, veh/h	244		Bicycle Effective	Width, ft	24
Bicyc	cle LOS Score	2.80		Bicycle Effective	Speed Factor	5.07
Bicyc	cle LOS	С				
		•	Segr	nent 14		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrain	ned	Length, ft		891
Mea	sured FFS	Measured		Free-Flow Speed	, mi/h	50.0
Der	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	244		Opposing Dema	nd Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %	Total Trucks, %	
Segr	ment Capacity, veh/h	1700		Demand/Capaci	ry (D/C)	0.14
Inte	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed	, mi/h	50.0
Spee	ed Slope Coefficient (m)	4.57372		Speed Power Coefficient (p)		0.41674
PF SI	lope Coefficient (m)	-1.47375		PF Power Coeffic	PF Power Coefficient (p)	
In Pa	ssing Lane Effective Length?	No		Total Segment D	Total Segment Density, veh/mi/ln	
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Suk	osegment Data					
#	Segment Type	Length, ft	R	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	891	-		-	48.0
Vel	nicle Results					
Aver	age Speed, mi/h	48.0		Percent Follower	s, %	41.8
Segr	ment Travel Time, minutes	0.21		Follower Density	Follower Density (FD), followers/mi/ln	
Vehi	cle LOS	В				
Bic	ycle Results					
	ent Occupied Parking	0		Pavement Condi	tion Rating	4
Percent Occupied Parking		ľ				1

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

Т	Γ	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	1	327	0.11	1.1	А





		HCS Two-La	ne	Highway Re	port	
Pro	ject Information					
Anal	yst	MJV		Date		5/11/2023
Age	ncy	HRG		Analysis Year		2050 NB
Juris	diction	SDDOT		Time Analyzed		PM Peak
Proje	ect Description	West of Hartford SD 3	8 EB	Units		U.S. Customary
		Se	egn	nent 1		
Vel	nicle Inputs					
Segr	ment Type	Passing Zone		Length, ft		1069
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	157		Opposing Deman	d Flow Rate, veh/h	286
Peak	Hour Factor	0.88		Total Trucks, %		5.79
Segr	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.09
Int	ermediate Results					
Segr	ment Vertical Class	1	1		mi/h	70.0
Spe	ed Slope Coefficient (m)	4.34767		Speed Power Coefficient (p)		0.51808
PF S	lope Coefficient (m)	-1.25475		PF Power Coefficie	ent (p)	0.80124
In Pa	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.6
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Rac	lius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1069	-		-	69.0
Vel	nicle Results					
Aver	rage Speed, mi/h	69.0		Percent Followers	, %	24.8
Segr	ment Travel Time, minutes	0.18		Follower Density (FD), followers/mi/ln		0.6
Vehi	cle LOS	А				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h 157		Bicycle Effective Width, ft		30		
Bicycle LOS Score 1.86		Bicycle Effective S	peed Factor	5.07		
Bicy	cle LOS	В				
		Se	egn	nent 2		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrained		Length, ft		664
	sured FFS	Measured		Free-Flow Speed, mi/h		70.0

Domand and Canacity					
Demand and Capacity	4.5				
Directional Demand Flow Rate, veh/h	157		Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor	0.88		Il Trucks, %	(0.46)	5.79
Segment Capacity, veh/h	1700	Den	nand/Capacity	(D/C)	0.09
Intermediate Results					
Segment Vertical Class	1	Free	-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.57372	Spe	ed Power Coe	fficient (p)	0.41674
PF Slope Coefficient (m)	-1.29315	PF F	ower Coefficie	ent (p)	0.75829
In Passing Lane Effective Length?	No	Tota	l Segment De	nsity, veh/mi/ln	0.6
%Improvement to Percent Followers	0.0	%lm	provement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Radius, f	t	Superelevation, %	Average Speed, mi/h
1 Tangent	664	-		-	68.6
Vehicle Results					
Average Speed, mi/h	68.6	Perd	ent Followers	, %	27.2
Segment Travel Time, minutes	0.11	Foll	Follower Density (FD), followers/mi/ln		0.6
Vehicle LOS	А				
Bicycle Results		·			·
Percent Occupied Parking	0	Pave	ement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	157	Bicy	Bicycle Effective Width, ft		30
Bicycle LOS Score	1.86	Bicy	Bicycle Effective Speed Factor		5.07
Bicycle LOS	В				
	S	egmen	t 3		
Vehicle Inputs					
Segment Type	Passing Zone	Len	gth, ft		1871
Measured FFS	Measured	Free	Free-Flow Speed, mi/h		70.0
Demand and Capacity					
Directional Demand Flow Rate, veh/h	157	Орг	osing Deman	d Flow Rate, veh/h	286
Peak Hour Factor	0.88	Tota	Total Trucks, %		5.79
Segment Capacity, veh/h	1700	Den	Demand/Capacity (D/C)		0.09
Intermediate Results					
Segment Vertical Class	1	Free	e-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.35747	Spe	ed Power Coe	fficient (p)	0.51808
PF Slope Coefficient (m) -1.22915		PF F	ower Coefficie	ent (p)	0.81213
In Passing Lane Effective Length?	No	Tota	Total Segment Density, veh/mi/ln		0.5
%Improvement to Percent Followers	0.0	%In	provement to	Speed	0.0
Subsegment Data					

#	Segment Type	Length, ft	Ra	ndius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1871	1871 -		-	69.0
Veł	nicle Results					·
Aver	age Speed, mi/h	69.0		Percent Followers	, %	23.9
Segr	ment Travel Time, minutes	0.31		Follower Density ((FD), followers/mi/ln	0.5
Vehi	cle LOS	A				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	157		Bicycle Effective V	Vidth, ft	30
Bicy	cle LOS Score	1.86		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	В				
			Segi	ment 4		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrai	ned	Length, ft		925
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Dei	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	157		Opposing Deman	d Flow Rate, veh/h	-
Peak	Hour Factor	0.88	0.88			5.79
Segr	ment Capacity, veh/h	1700	1700		[,] (D/C)	0.09
Int	ermediate Results	·				
Segr	ment Vertical Class	1	Free-Flow Spe		mi/h	70.0
Spee	ed Slope Coefficient (m)	4.57372	4.57372		fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.29315		PF Power Coefficient (p)		0.75829
In Pa	assing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		0.6
%lm	provement to Percent Followers	0.0		%Improvement to Speed		0.0
Suk	osegment Data					
#	Segment Type	Length, ft	Ra	ndius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	925	-		-	68.6
Veł	nicle Results					
Aver	age Speed, mi/h	68.6		Percent Followers	, %	27.2
Segment Travel Time, minutes 0.15		0.15		Follower Density ((FD), followers/mi/ln	0.6
Vehicle LOS A						
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
	Rate Outside Lane, veh/h	157		Bicycle Effective V		30
Bicy	cle LOS Score	1.86		Bicycle Effective S		5.07
Bicycle LOS B						

		:	Seg	ment 5		
Ve	hicle Inputs					
Seg	ment Type	Passing Zone		Length, ft		4476
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	157		Opposing Demand	d Flow Rate, veh/h	286
Pea	k Hour Factor	0.88		Total Trucks, %		5.79
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.09
Int	termediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.39096		Speed Power Coef	fficient (p)	0.51808
PF S	Slope Coefficient (m)	-1.17364		PF Power Coefficie	ent (p)	0.83159
In P	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.5
%In	nprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Rá	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4476	-		-	69.0
Ve	hicle Results					
Ave	rage Speed, mi/h	69.0		Percent Followers,	. %	22.2
Seg	ment Travel Time, minutes	0.74		Follower Density (FD), followers/mi/ln	0.5
Veh	icle LOS	А				
Bio	cycle Results			•		·
Perd	cent Occupied Parking	0		Pavement Condition	on Rating	4
Flov	w Rate Outside Lane, veh/h	157		Bicycle Effective Width, ft		30
Вісу	vcle LOS Score	1.86		Bicycle Effective S	peed Factor	5.07
Bicy	rcle LOS	В				
			Seg	ment 6		
Ve	hicle Inputs					
	ment Type	Passing Constrained		Length, ft		896
Mea	Measured FFS Measured		Free-Flow Speed,	mi/h	70.0	
De	mand and Capacity			·		
Dire	ectional Demand Flow Rate, veh/h	157		Opposing Demand	d Flow Rate, veh/h	-
Pea	k Hour Factor	0.88		Total Trucks, %		5.79
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.09
Int	termediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
		1				

Speed Slope Coefficient (m)			Speed Power Coefficient (p)		0.41674
PF Slope Coefficient (m)			PF Power Coefficie		0.75829
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.6
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rac	dius, 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	А				
Bicycle Results					·
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	157		Bicycle Effective V	Vidth, ft	30
Bicycle LOS Score	1.86		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	В				
		Segn	nent 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 Deman	d 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 Coefficie	ent (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		0.0
Subsegment Data					
# Segment Type	Length, ft	Rac	dius, 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	on Rating	4
Flow Rate Outside Lane, veh/h	157	157 E		/idth, ft	30
Bicycle LOS Score	1.86 B		Bicycle Effective Speed Factor		5.07
Bicycle LOS	В				
	Se	egn	nent 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	d 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)			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 De	nsity, veh/mi/ln	0.6
%Improvement to Percent Followers	0.0		%Improvement to Speed		0.0
Subsegment Data					
# Segment Type	Length, ft	Rac	lius, 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	А				
Bicycle Results					
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	164		Bicycle Effective W	/idth, ft	29
Bicycle LOS Score	1.40		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	А				
	Se	egn	nent 9		
Vehicle Inputs					
Segment Type	Passing Constrained		Length, ft		1013
Measured FFS	Measured		Free-Flow Speed, mi/h		70.0
Demand and Capacity					

Dire	ctional Demand Flow Rate, veh/h	164		Opposing Demand	d Flow Rate, veh/h	-
	Hour Factor	0.88		Total Trucks, %		3.28
Segr	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.10
	ermediate Results			, ,		
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spee	ed Slope Coefficient (m)	4.57372		Speed Power Coef	ficient (p)	0.41674
PF S	lope Coefficient (m)	-1.29345		PF Power Coefficie	ent (p)	0.75792
In Pa	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.7
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1013	-		-	68.5
Vel	nicle Results					·
Aver	age Speed, mi/h	68.5		Percent Followers,	%	28.0
Segr	ment Travel Time, minutes	0.17		Follower Density (FD), followers/mi/ln	0.7
Vehi	cle LOS	А				
Bic	ycle Results					·
Perc	ent Occupied Parking	0		Pavement Condition	on Rating	4
Flow	Rate Outside Lane, veh/h	164		Bicycle Effective W	/idth, ft	29
Bicy	cle LOS Score	1.40		Bicycle Effective S _I	peed Factor	5.07
Bicy	cle LOS	А				
			Segn	ment 10		
Vel	nicle Inputs					
Segr	ment Type	Passing Zone		Length, ft		4569
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	164		Opposing Demand	d Flow Rate, veh/h	289
Peak	: Hour Factor	0.88		Total Trucks, %		3.28
Segr	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.10
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.39263		Speed Power Coef	ficient (p)	0.51760
PF Slope Coefficient (m) -1.17332		PF Power Coefficie	ent (p)	0.83118		
In Pa	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.5
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h

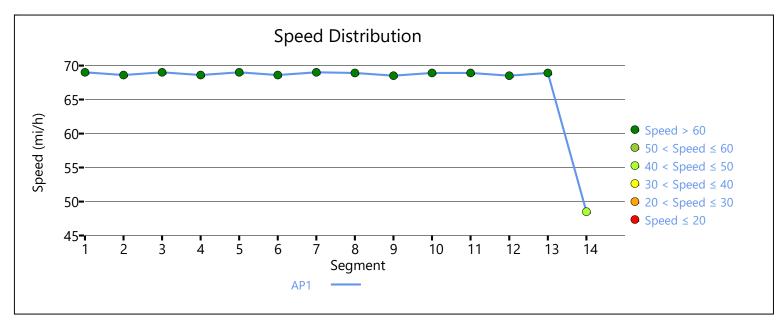
1 Tangent	4569	-		-	68.9
Vehicle Results					
Average Speed, mi/h	68.9		Percent Followers	, %	22.9
Segment Travel Time, minutes	0.75		Follower Density ((FD), followers/mi/ln	0.5
Vehicle LOS	А				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	164		Bicycle Effective V	Vidth, ft	29
Bicycle LOS Score	1.40		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	А				
		Segn	nent 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	Ra	adius, 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	А				
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	164		Bicycle Effective V	Vidth, ft	29
Bicycle LOS Score	1.28		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	A				
		Segn	nent 12		

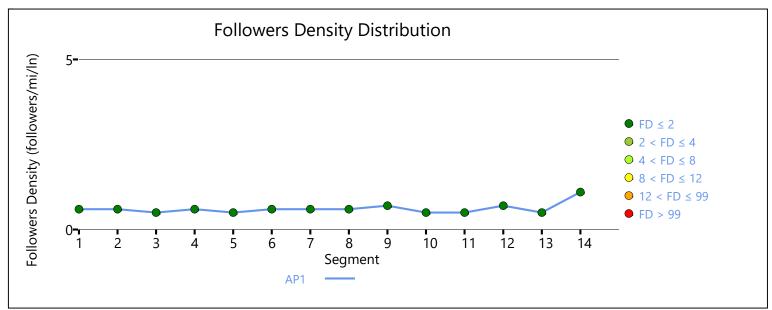
Ve	ehicle Inputs					
Se	gment Type	Passing Constrained		Length, ft		657
Me	easured FFS	Measured		Free-Flow Speed,	mi/h	70.0
D	emand and Capacity					
Dir	rectional Demand Flow Rate, veh/h	164	164		d Flow Rate, veh/h	-
Peak Hour Factor		0.88		Total Trucks, %		2.82
Se	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.10
In	termediate Results					
Se	gment Vertical Class	1	1		mi/h	70.0
Speed Slope Coefficient (m)		4.57372		Speed Power Coe	fficient (p)	0.41674
PF	Slope Coefficient (m)	-1.29350		PF Power Coefficient (p)		0.75785
ln	Passing Lane Effective Length?	No	No		nsity, veh/mi/ln	0.7
%l	mprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sı	ubsegment Data					
#	Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	657	-		-	68.5
Ve	ehicle Results					·
Av	rerage Speed, mi/h	68.5		Percent Followers,	. %	28.0
Segment Travel Time, minutes		0.11		Follower Density (FD), followers/mi/ln	0.7
Ve	hicle LOS	А				
Bi	icycle Results					
Pe	rcent Occupied Parking	0		Pavement Condition	on Rating	4
Flo	ow Rate Outside Lane, veh/h	164		Bicycle Effective W	/idth, ft	29
Bic	cycle LOS Score	1.28		Bicycle Effective Speed Factor		5.07
Bic	cycle LOS	A				
		S	egm	nent 13		
Ve	ehicle Inputs					
Se	gment Type	Passing Zone		Length, ft		6009
Ме	easured FFS	Measured		Free-Flow Speed,	mi/h	70.0
D	emand and Capacity					
Directional Demand Flow Rate, veh/h 164		Opposing Deman	d Flow Rate, veh/h	280		
Peak Hour Factor 0.88		Total Trucks, %		2.82		
Se	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.10
In	termediate Results					
Se	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Sp	eed Slope Coefficient (m)	4.40389		Speed Power Coe	fficient (p)	0.51956
PF	Slope Coefficient (m)	-1.16281		PF Power Coefficie	ent (p)	0.83065

In Passing Lane Effective Length? No		No		Total Segment D	Total Segment Density, veh/mi/ln	
%Improvement to Percent Followers		0.0		%Improvement	to Speed	0.0
Suk	segment Data					
#	Segment Type	Length, ft	R	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6009	-		-	68.9
Vel	nicle Results					
Aver	age Speed, mi/h	68.9		Percent Follower	rs, %	22.8
Segr	nent Travel Time, minutes	0.99		Follower Density	(FD), followers/mi/ln	0.5
Vehi	cle LOS	А		1		
Bic	ycle Results					
Perce	ent Occupied Parking	0		Pavement Condi	tion Rating	4
Flow	Rate Outside Lane, veh/h	164		Bicycle Effective	Width, ft	29
Bicyc	cle LOS Score	1.28	1.28		Bicycle Effective Speed Factor	
Bicyc	cle LOS	A				
			Segr	ment 14		
Vel	nicle Inputs					
Segr	nent Type	Passing Constrain	ned	Length, ft		891
Mea	sured FFS	Measured		Free-Flow Speed	Free-Flow Speed, mi/h	
Der	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	164		Opposing Dema	nd Flow Rate, veh/h	-
Peak	Hour Factor	0.88		Total Trucks, %		2.82
Segr	nent Capacity, veh/h	1700		Demand/Capaci	ty (D/C)	0.10
Inte	ermediate Results					
Segr	nent Vertical Class	1		Free-Flow Speed, mi/h		50.0
Spee	ed Slope Coefficient (m)	4.57372	4.57372		efficient (p)	0.41674
PF SI	ope Coefficient (m)	-1.47375		PF Power Coefficient (p)		0.71164
In Pa	ssing Lane Effective Length?	No		Total Segment D	ensity, veh/mi/ln	1.1
%lm	provement to Percent Followers	0.0		%Improvement	%Improvement to Speed	
Suk	segment Data					
#	Segment Type	Length, ft	R	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	891	-		-	48.5
Vel	icle Results					
Aver	age Speed, mi/h	48.5		Percent Follower	rs, %	33.4
Segr	nent Travel Time, minutes	0.21		Follower Density	(FD), followers/mi/ln	1.1
Vehi	cle LOS	A				
Bic	ycle Results					
	ent Occupied Parking	0		Pavement Condi	ition Rating	4
Percent Occupied Parking		U		1	<i>_</i>	1

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

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/In	LOS
1	216	0.05	0.6	А





		HCS Two-La	ine	Highway Re	port	
Pro	oject Information		_			
Ana	lyst	MJV		Date		5/11/2023
Age	ncy	HRG		Analysis Year		2050 NB
Juris	sdiction	SDDOT		Time Analyzed		AM Peak
Proj	ect Description	WB 38 West of Hartfo	ord	Units		U.S. Customary
		S	egn	nent 1		
Ve	hicle Inputs					
Seg	ment Type	Passing Zone		Length, ft		10549
Mea	asured FFS	Measured		Free-Flow Speed, mi/h		70.0
De	mand and Capacity			<u> </u>		
Directional Demand Flow Rate, veh/h 165			Opposing Deman	d Flow Rate, veh/h	244	
Peal	k Hour Factor	0.88		Total Trucks, %		12.50
Seg	ment Capacity, veh/h	1700		Demand/Capacity (D/C)		0.10
Int	ermediate Results			'		
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
_		4.42827	4.42827		fficient (p)	0.52768
PF Slope Coefficient (m)		-1.16689	-1.16689		ent (p)	0.80729
In Passing Lane Effective Length?		No		Total Segment De	nsity, veh/mi/ln	0.6
%Improvement to Percent Followers		0.0		%Improvement to	Speed	0.0
Su	bsegment Data			,		
#	Segment Type	Length, ft	Rac	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	10549	1-		-	69.0
Ve	hicle Results					<u>'</u>
Ave	rage Speed, mi/h	69.0		Percent Followers	, %	23.8
Seg	ment Travel Time, minutes	1.74		Follower Density (FD), followers/mi/ln		0.6
Veh	icle LOS	А		7		
Bic	cycle Results			<u> </u>		
	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h 165		Bicycle Effective V	Vidth, ft	29		
Bicycle LOS Score 4.94		4.94		Bicycle Effective S		5.07
	rcle LOS	E				
		S	egn	nent 2		
Ve	hicle Inputs					
	ment Type	Passing Zone		Length, ft		2793
	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Measured FF3				Tree-Flow Speed, IIII/II		

Demand and Capacity					
Directional Demand Flow Rate, veh/h	165		Opposing Doman	d Flow Rate, yeh/h	244
Peak Hour Factor	0.88		Opposing Demand Flow Rate, veh/h Total Trucks, %		12.50
Segment Capacity, veh/h	1700		Demand/Capacity	, (D/C)	0.10
	1700		Demand, Capacity	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0.10
Intermediate Results					
Segment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Speed Slope Coefficient (m)	4.35767		Speed Power Coe	fficient (p)	0.52768
PF Slope Coefficient (m)	-1.19319		PF Power Coefficie	ent (p)	0.82737
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.6
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rad	lius, 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	А	А			
Bicycle Results					
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	165		Bicycle Effective V	Vidth, ft	29
Bicycle LOS Score	4.94		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	E				
	S	Segn	nent 3		
Vehicle Inputs					
Segment Type	Passing Zone		Length, ft		3825
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity	<u>'</u>				•
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 Coe		0.52741
PF Slope Coefficient (m)	-1.17529		PF Power Coefficie	ent (p)	0.83222
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.6
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data	·				,

#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3825 -			-	69.0
Vel	nicle Results					·
Aver	rage Speed, mi/h	69.0		Percent Followers	, %	23.1
Segr	ment Travel Time, minutes	0.63		Follower Density ((FD), followers/mi/ln	0.6
Vehi	cle LOS	A				
Bic	ycle Results					
Percent Occupied Parking		0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	165	165		Vidth, ft	29
Bicy	cle LOS Score	1.17		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	А				
			Segr	ment 4		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrai	ned	Length, ft		791
Mea	sured FFS	Measured	Measured Free-Flow Speed,		mi/h	70.0
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	165		Opposing Demand Flow Rate, veh/h		-
Peak Hour Factor		0.88	0.88			2.40
Segment Capacity, veh/h		1700	1700		' (D/C)	0.10
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.29355		PF Power Coefficient (p)		0.75779
In Pa	assing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		0.7
%lm	provement to Percent Followers	0.0	0.0		Speed	0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	791	-		-	68.5
Vel	nicle Results					
Aver	rage Speed, mi/h	68.5		Percent Followers	, %	28.1
Segr	ment Travel Time, minutes	0.13		Follower Density ((FD), followers/mi/ln	0.7
Vehicle LOS A		А				
Bic	ycle Results					
Percent Occupied Parking 0			Pavement Conditi	on Rating	4	
Flow	Rate Outside Lane, veh/h	165		Bicycle Effective V	Vidth, ft	29
Bicy	cle LOS Score	1.17		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	А				

	Segment 5								
Ve	hicle Inputs								
Seg	ment Type	Passing Zone	Passing Zone			3414			
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0			
De	mand and Capacity								
Dire	ectional Demand Flow Rate, veh/h	165		Opposing Deman	d Flow Rate, veh/h	245			
Pea	k Hour Factor	0.88		Total Trucks, %		2.40			
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.10			
Int	ermediate Results								
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0			
Spe	ed Slope Coefficient (m)	4.36595	5595		fficient (p)	0.52741			
PF S	Slope Coefficient (m)	-1.18179		PF Power Coefficient (p)		0.83026			
In P	assing Lane Effective Length?	No		Total Segment Density, veh/mi/ln		0.6			
%ln	nprovement to Percent Followers	0.0		%Improvement to	Speed	0.0			
Su	bsegment Data								
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h			
1	Tangent	3414	1-	-		69.0			
Ve	hicle Results								
Ave	rage Speed, mi/h	69.0	69.0		. %	23.2			
Seg	ment Travel Time, minutes	0.56	0.56		FD), followers/mi/ln	0.6			
Veh	icle LOS	А							
Bio	cycle Results					·			
Perd	cent Occupied Parking	0		Pavement Condition Rating		4			
Flov	v Rate Outside Lane, veh/h	165		Bicycle Effective Width, ft		29			
Вісу	rcle LOS Score	1.17		Bicycle Effective S	peed Factor	5.07			
Вісу	rcle LOS	А							
		9	Segr	ment 6					
Ve	hicle Inputs								
Seg	ment Type	Passing Constrained		Length, ft		286			
Mea	Measured FFS Measured		Free-Flow Speed,	mi/h	70.0				
De	mand and Capacity								
Dire	ectional Demand Flow Rate, veh/h	165		Opposing Deman	d Flow Rate, veh/h	-			
Pea	k Hour Factor	0.88		Total Trucks, %		2.40			
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.10			
Int	ermediate Results								
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0			
		I		<u> </u>					

Speed Slope Coefficient (m)	4.57372	4.57372		fficient (p)	0.41674
PF Slope Coefficient (m)	-1.29355		PF Power Coefficie	<u>.</u>	0.75779
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.7
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rac	lius, ft Superelevation, %		Average Speed, mi/h
1 Tangent	286	286 -		-	68.5
Vehicle Results					
Average Speed, mi/h 68.5			Percent Followers,	%	28.1
Segment Travel Time, minutes	0.05	0.05		FD), followers/mi/ln	0.7
Vehicle LOS	А				
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				
		Segn	nent 7		
Vehicle Inputs					
Segment Type	Passing Constrained	Passing Constrained			463
Measured FFS	Measured		Free-Flow Speed, mi/h		70.0
Demand and Capacity	·				·
Directional Demand Flow Rate, veh/h	169		Opposing Deman	d 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 Coefficie	ent (p)	0.75782
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.7
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Length, ft Rad		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					

4 29 5.07 4822 70.0 243 2.60 0.10
5.07 4822 70.0 243 2.60 0.10
4822 70.0 243 2.60 0.10
70.0 243 2.60 0.10
70.0 243 2.60 0.10
70.0 243 2.60 0.10
70.0 243 2.60 0.10
243 2.60 0.10
2.60
2.60
0.10
70.0
0.52796
0.83451
0.6
0.0
Average Speed, mi/h
68.9
23.2
0.6
4
29
5.07
861

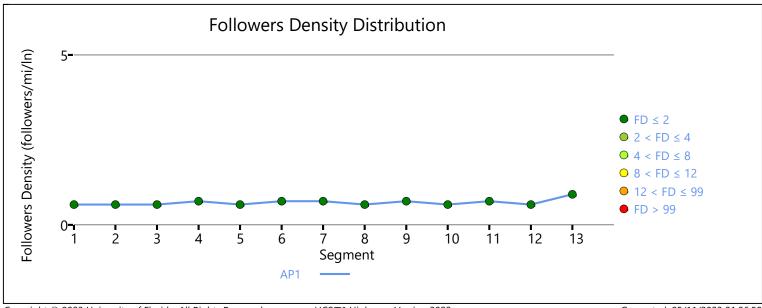
Dire	ctional Demand Flow Rate, veh/h	169		Opposing Demand	Opposing Demand Flow Rate, veh/h	
Peak	Hour Factor	0.88		Total Trucks, %		2.60
Segr	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.10
Int	ermediate Results					·
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.57372		Speed Power Coef	fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.29353		PF Power Coefficie	ent (p)	0.75782
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.7
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	segment Data					
#	Segment Type	Length, ft	R	adius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	861	-		-	68.5
Vel	nicle Results					
Aver	age Speed, mi/h	68.5		Percent Followers,	%	28.6
Segr	nent Travel Time, minutes	0.14		Follower Density (FD), followers/mi/ln	0.7
Vehi	cle LOS	А				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Condition	on Rating	4
Flow	Rate Outside Lane, veh/h	169		Bicycle Effective W	/idth, ft	29
Bicy	cle LOS Score	1.23		Bicycle Effective S _I	peed Factor	5.07
Bicy	cle LOS	A				
			Segi	ment 10		
Vel	nicle Inputs					
Segr	ment Type	Passing Zone		Length, ft		1556
Mea	sured FFS	Measured		Free-Flow Speed, mi/h		70.0
De	mand and Capacity					
Dire	ctional Demand Flow Rate, veh/h	169		Opposing Demand	d Flow Rate, veh/h	243
Peak	Hour Factor	0.88		Total Trucks, %		2.60
Segr	nent Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.10
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.33831		Speed Power Coef	fficient (p)	0.52796
PF S	lope Coefficient (m)	-1.23554		PF Power Coefficie	ent (p)	0.80871
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.6
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	segment Data					
#	Segment Type	Length, ft	R	adius, ft	Superelevation, %	Average Speed, mi/h
_						

1 Tangent	1556		-	-	68.9
Vehicle Results					
Average Speed, mi/h	68.9		Percent Followe	rs, %	25.5
Segment Travel Time, minutes	0.26		Follower Density	/ (FD), followers/mi/ln	0.6
Vehicle LOS	А				
Bicycle Results			•		
Percent Occupied Parking	0		Pavement Cond	ition Rating	4
Flow Rate Outside Lane, veh/h	169	169		Width, ft	29
Bicycle LOS Score	1.23		Bicycle Effective	Speed Factor	5.07
Bicycle LOS	А				
		Seg	gment 11		
Vehicle Inputs					
Segment Type	Passing Constra	Passing Constrained			799
Measured FFS	Measured		Free-Flow Speed	d, mi/h	70.0
Demand and Capacity					•
Directional Demand Flow Rate, veh/h	169	169		and Flow Rate, veh/h	-
Peak Hour Factor	0.88	0.88			2.60
Segment Capacity, veh/h	1700		Demand/Capaci	ty (D/C)	0.10
Intermediate Results					•
Segment Vertical Class	1		Free-Flow Speed	d, mi/h	70.0
Speed Slope Coefficient (m)	4.57372		Speed Power Co	pefficient (p)	0.41674
PF Slope Coefficient (m)	-1.29353		PF Power Coeffi	cient (p)	0.75782
In Passing Lane Effective Length?	No		Total Segment D	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 Followe	rs, %	28.6
Segment Travel Time, minutes	0.13		Follower Density	/ (FD), followers/mi/ln	0.7
Vehicle LOS					
Bicycle Results					<u>'</u>
Percent Occupied Parking 0		Pavement Cond	ition 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	А				
		Sac	amont 12		
		Seg	gment 12		

Ve	hicle Inputs					
Sec	gment Type	Passing Zone		Length, ft		857
Measured FFS Measured		Measured		Free-Flow Speed,	mi/h	70.0
De	emand and Capacity					
Dir	ectional Demand Flow Rate, veh/h	169		Opposing Deman	d Flow Rate, veh/h	243
Pea	ık Hour Factor	0.88		Total Trucks, %		2.60
Seg	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.10
In	termediate Results					
Sec	gment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	eed Slope Coefficient (m)	4.33390		Speed Power Coe	fficient (p)	0.52796
PF	Slope Coefficient (m)	-1.24754		PF Power Coefficie	ent (p)	0.80350
In F	Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	0.6
%lr	mprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	Rad	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	857	T-		-	
Ve	hicle 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		А				
Bi	cycle Results					
Per	cent Occupied Parking	0		Pavement Condition	on Rating	4
Flo	w Rate Outside Lane, veh/h	169		Bicycle Effective W	/idth, ft	29
Bic	ycle LOS Score	1.23	Вісус		peed Factor	5.07
Bic	ycle LOS	А				
			Segm	nent 13		
Ve	hicle Inputs					
Seg	gment Type	Passing Constraine	ed	Length, ft		1288
Me	asured FFS	Measured		Free-Flow Speed,	mi/h	60.0
De	emand and Capacity					
Dir	ectional Demand Flow Rate, veh/h	169		Opposing Deman	d Flow Rate, veh/h	-
Pea	ık Hour Factor	0.88		Total Trucks, %		2.60
Seg	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.10
In	termediate Results					
Sec	gment Vertical Class	1		Free-Flow Speed,	mi/h	60.0
Spe	eed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
DF	Slope Coefficient (m)	-1.39677		PF Power Coefficie	ent (p)	0.73640

In Pa	ssing Lane Effective Length?	No		Total Segment	Total Segment Density, veh/mi/ln 0.9		
%Improvement to Percent Followers 0.0				%Improvemen	t to Speed	0.0	
Sub	segment Data	<u>'</u>					
#	# Segment Type Length, ft Radiu		ius, ft	Superelevation, %	Average Speed, mi/h		
1	Tangent	1288	-		-	58.5	
Veh	nicle Results		·		·		
Aver	age Speed, mi/h	58.5		Percent Follow	ers, %	31.5	
Segment Travel Time, minutes		0.25		Follower Density (FD), followers/mi/ln		0.9	
Vehicle LOS		А					
Bic	ycle Results					·	
Perce	ent Occupied Parking	0		Pavement Con	dition Rating	4	
Flow	Rate Outside Lane, veh/h	169		Bicycle Effectiv	e Width, ft	29	
Bicyc	le LOS Score	1.14		Bicycle Effectiv	e Speed Factor	4.79	
Bicyc	ile LOS	А					
Fac	ility Results						
Т	VMT veh-mi/p	VHI veh-l		Followe	Density, followers/	LOS	
1	224	0.0	0.05		0.6	A	





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	HCS Two-	-Lane	Highway Re	port			
Project Information							
Analyst	MJV	MJV			5/11/2023		
Agency	HRG	HRG			2050 NB		
Jurisdiction	SDDOT		Time Analyzed		PM Peak		
Project Description	WB 38 West of Ha	artford	Units		U.S. Customary		
		Segn	nent 1				
Vehicle Inputs							
Segment Type	Passing Zone		Length, ft	Length, ft 10549			
Measured FFS	Measured	-		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 Coefficie	ent (p)	0.81244		
In Passing Lane Effective Length? No			Total Segment De	nsity, veh/mi/ln	1.4		
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0		
Subsegment Data			,				
# Segment Type	Length, ft	Rad	 dius, 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	А						
Bicycle Results			1				
Percent Occupied Parking	0		Pavement Conditi	on Rating	4		
Flow Rate Outside Lane, veh/h	280		Bicycle Effective V		24		
Bicycle LOS Score			Bicycle Effective S	peed Factor	5.07		
Bicycle LOS	С						
		Segn	nent 2				
Vehicle Inputs							
Segment Type	Passing Zone		Length, ft		2793		
- • •	1 -	Passing Zone					

Demand and Capacity					
	200		Opposite a David	d Flour Data and the	164
Directional Demand Flow Rate, veh/h	280		., .	d Flow Rate, veh/h	164
Peak Hour Factor	0.88		Total Trucks, %	, (D/C)	1.94 0.16
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)	4.32824		Speed Power Coe	fficient (p)	0.55020
PF Slope Coefficient (m)	-1.17723		PF Power Coefficie	ent (p)	0.83227
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.4
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Segment Type Length, ft Radio		lius, 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	А			
Bicycle Results	<u>'</u>				
Percent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow Rate Outside Lane, veh/h	280		Bicycle Effective V	Vidth, ft	24
Bicycle LOS Score	2.64		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	С				
	S	Segn	nent 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 Deman	d 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 Coe		0.55020
PF Slope Coefficient (m)	-1.15833		PF Power Coefficie	ent (p)	0.83897
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.4
%Improvement to Percent Followers	0.0		%Improvement to Speed		0.0
Subsegment Data	·				
Jabbeyinelit Bata					

#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3825	-		-	68.3
Vel	nicle Results					·
Aver	rage Speed, mi/h	68.3		Percent Followers	, %	33.5
Segr	ment Travel Time, minutes	0.64		Follower Density ((FD), followers/mi/ln	1.4
Vehi	cle LOS	A				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	289		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	2.72		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	С				
			Segr	ment 4		
Vel	nicle Inputs					
Segr	ment Type	Passing Constrai	ned	Length, ft		791
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Directional Demand Flow Rate, veh/h		289		Opposing Deman	d Flow Rate, veh/h	-
Peak Hour Factor		0.88		Total Trucks, %		2.19
Segment Capacity, veh/h		1700		Demand/Capacity	γ (D/C)	0.17
Int	ermediate Results					
Segr	ment Vertical Class	1		Free-Flow Speed, mi/h		70.0
Spe	ed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
PF S	lope Coefficient (m)	-1.29358		PF Power Coefficie	ent (p)	0.75776
In Pa	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.7
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sul	osegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	791	-		-	67.7
Vel	nicle Results					
Aver	rage Speed, mi/h	67.7		Percent Followers	, %	39.6
Segr	ment Travel Time, minutes	0.13		Follower Density ((FD), followers/mi/ln	1.7
Vehi	cle LOS	А				
Bic	ycle Results					
Perc	ent Occupied Parking	0		Pavement Conditi	on Rating	4
Flow	Rate Outside Lane, veh/h	289		Bicycle Effective V	Vidth, ft	24
Bicy	cle LOS Score	2.72		Bicycle Effective S	peed Factor	5.07
Bicy	cle LOS	С				

		9	Segi	ment 5		
Ve	hicle Inputs					
Seg	ment Type	Passing Zone		Length, ft		3414
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	289		Opposing Deman	d Flow Rate, veh/h	164
Pea	k Hour Factor	0.88		Total Trucks, %		2.19
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.17
Int	termediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
Spe	ed Slope Coefficient (m)	4.33614		Speed Power Coe	fficient (p)	0.55020
PF S	Slope Coefficient (m)	-1.16472		PF Power Coefficie	ent (p)	0.83695
In P	assing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.4
%In	nprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Su	bsegment Data					
#	Segment Type	Length, ft	ngth, ft Rac		Superelevation, %	Average Speed, mi/h
1	Tangent	3414	-		-	68.3
Ve	hicle Results					
Ave	rage Speed, mi/h	68.3		Percent Followers,	, %	33.7
Seg	ment Travel Time, minutes	0.57		Follower Density (FD), followers/mi/ln	1.4
Veh	icle LOS	А				
Bio	cycle Results					
Per	cent Occupied Parking	0		Pavement Conditi	on Rating	4
Flov	w Rate Outside Lane, veh/h	289		Bicycle Effective W	Vidth, ft	24
Bicy	/cle LOS Score	2.72		Bicycle Effective S	peed Factor	5.07
Bicy	rcle LOS	С				
		9	Segi	ment 6		
Ve	hicle Inputs					
Seg	ment Type	Passing Constrained		Length, ft		286
Mea	asured FFS	Measured		Free-Flow Speed,	mi/h	70.0
De	mand and Capacity					
Dire	ectional Demand Flow Rate, veh/h	289		Opposing Deman	d Flow Rate, veh/h	-
Pea	k Hour Factor	0.88		Total Trucks, %		2.19
Seg	ment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.17
Int	termediate Results					
Seg	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0
		1		1		

			1.		1
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 De		1.7
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rac	lius, 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	А				
Bicycle Results					
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	289	289 E		Vidth, ft	24
Bicycle LOS Score	2.72		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	С				
		Segn	nent 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 Coe	fficient (p)	0.41674
PF Slope Coefficient (m)	-1.29347		PF Power Coefficie	ent (p)	0.75789
In Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.7
%Improvement to Percent Followers	0.0		%Improvement to	Speed	0.0
Subsegment Data					
# Segment Type	Length, ft	Rac	dius, 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			FD), followers/mi/ln	1.7
			1		1

Bicycle Results					
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	286		Bicycle Effective Width, ft		24
Bicycle LOS Score	OS Score 2.95		Bicycle Effective Speed Factor		5.07
Bicycle LOS	С				
	Se	egn	nent 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	d 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	Rad	lius, 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	Α				
Bicycle Results					
Percent Occupied Parking	0		Pavement Condition	on Rating	4
Flow Rate Outside Lane, veh/h	286		Bicycle Effective W	/idth, ft	24
Bicycle LOS Score	2.95		Bicycle Effective S	peed Factor	5.07
Bicycle LOS	С				
	Se	egn	nent 9		
Vehicle Inputs					
Segment Type	Passing Constrained		Length, ft		861
Measured FFS	Measured		Free-Flow Speed,	mi/h	70.0
Demand and Capacity					

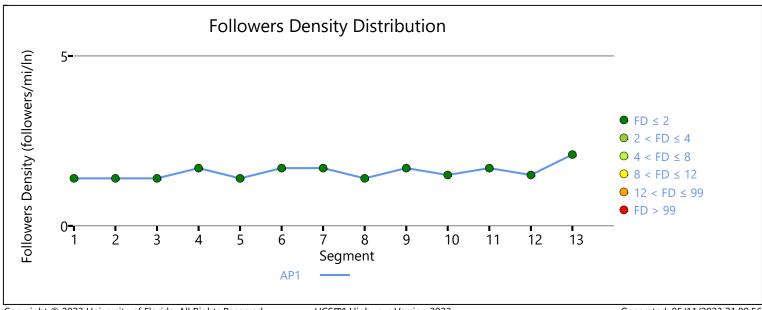
Dire	ctional Demand Flow Rate, veh/h	286	286		d Flow Rate, veh/h	-	
Peak	Hour Factor	0.88		Total Trucks, %		3.08	
Segi	ment Capacity, veh/h	pacity, veh/h 1700		Demand/Capacity	(D/C)	0.17	
Int	ermediate Results						
Segi	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0	
Spe	ed Slope Coefficient (m)	4.57372		Speed Power Coef	fficient (p)	0.41674	
PF S	lope Coefficient (m)	-1.29347		PF Power Coefficie	ent (p)	0.75789	
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.7	
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0	
Sul	segment Data						
#	Segment Type	Length, ft	Ra	adius, ft	Superelevation, %	Average Speed, mi/h	
1	Tangent	861	-		-	67.7	
Vel	nicle Results						
Average Speed, mi/h		67.7		Percent Followers,	%	39.4	
Segi	ment Travel Time, minutes	0.14		Follower Density (FD), followers/mi/ln	1.7	
Vehicle LOS		A					
Bic	ycle Results						
Perc	ercent Occupied Parking 0		Pavement Condition	on Rating	4		
Flow	Rate Outside Lane, veh/h			Bicycle Effective W	/idth, ft	24	
Bicy	cle LOS Score	2.95		Bicycle Effective S	peed Factor	5.07	
Bicy	cle LOS	С					
			Segr	ment 10			
Vel	nicle Inputs						
Segi	ment Type	Passing Zone		Length, ft		1556	
Mea	sured FFS	Measured		Free-Flow Speed,	mi/h	70.0	
De	mand and Capacity						
Dire	ctional Demand Flow Rate, veh/h	286		Opposing Demand	d Flow Rate, veh/h	157	
Peak	Hour Factor	0.88		Total Trucks, %		3.08	
Segi	nent Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.17	
Int	ermediate Results						
Segi	ment Vertical Class	1		Free-Flow Speed,	mi/h	70.0	
Spe	ed Slope Coefficient (m) 4.30647		Speed Power Coef	fficient (p)	0.55243		
PF S	lope Coefficient (m)	-1.21611		PF Power Coefficie	ent (p)	0.81541	
In Pa	ssing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.5	
%lm	provement to Percent Followers	0.0		%Improvement to	Speed	0.0	
Sul	segment Data						
#	Segment Type	Length, ft	Ra	adius, 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	А		İ			
Bicycle Results						
Percent Occupied Parking	Pavement Condition	Pavement Condition Rating 4				
Flow Rate Outside Lane, veh/h	286		Bicycle Effective W	Vidth, ft	24	
Bicycle LOS Score	2.95		Bicycle Effective S	peed Factor	5.07	
Bicycle LOS	С					
	S	Segn	nent 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 Deman	d Flow Rate, veh/h	-	
Peak Hour Factor			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 Coe	fficient (p)	0.41674	
PF Slope Coefficient (m)	-1.29347		PF Power Coefficie	ent (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	Ra	dius, 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	А					
Bicycle Results						
Percent Occupied Parking	0		Pavement Condition	on Rating	4	
Flow Rate Outside Lane, veh/h	286		Bicycle Effective W	Vidth, ft	24	
Bicycle LOS Score	2.95		Bicycle Effective S	peed Factor	5.07	
Bicycle LOS	С					
	S	Segn	nent 12			

Ve	ehicle Inputs					
Se	gment Type	Passing Zone		Length, ft		857
Me	easured FFS	Measured		Free-Flow Speed,	70.0	
D	emand and Capacity					
Dir	rectional Demand Flow Rate, veh/h	286		Opposing Deman	d Flow Rate, veh/h	157
Pea	ak Hour Factor	0.88		Total Trucks, %		3.08
Se	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.17
ln	termediate Results					
Se	gment Vertical Class	1	Free-Flow Speed, mi/h		70.0	
Sp	eed Slope Coefficient (m)	4.30206		Speed Power Coe	fficient (p)	0.55243
PF	Slope Coefficient (m)	-1.22789		PF Power Coefficie	ent (p)	0.81007
In I	Passing Lane Effective Length?	No		Total Segment De	nsity, veh/mi/ln	1.5
%lı	mprovement to Percent Followers	0.0		%Improvement to	Speed	0.0
Sι	ıbsegment Data					
#	Segment Type	Length, ft	Ra	dius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	857	-		-	68.3
Ve	ehicle Results					
Average Speed, mi/h 68.		68.3		Percent Followers,	%	36.0
Segment Travel Time, minutes		0.14		Follower Density (FD), followers/mi/ln	1.5
Vehicle LOS A		А				
Bi	cycle Results					
Pei	rcent Occupied Parking	0		Pavement Condition	on Rating	4
Flo	w Rate Outside Lane, veh/h	286		Bicycle Effective W	/idth, ft	24
Bic	cycle LOS Score	2.95		Bicycle Effective Speed Factor		5.07
Bic	ycle LOS	С				
			Segn	nent 13		
Ve	ehicle Inputs					
Se	gment Type	Passing Constraine	ed	Length, ft		1288
Мє	easured FFS	Measured		Free-Flow Speed,	mi/h	60.0
Do	emand and Capacity					
Dir	rectional Demand Flow Rate, veh/h	286		Opposing Deman	d Flow Rate, veh/h	-
Pea	eak Hour Factor 0.88		Total Trucks, %		3.08	
Se	gment Capacity, veh/h	1700		Demand/Capacity	(D/C)	0.17
ln	termediate Results					
Se	gment Vertical Class	1		Free-Flow Speed,	mi/h	60.0
Sp	eed Slope Coefficient (m)	4.57372		Speed Power Coe	fficient (p)	0.41674
DE	Slope Coefficient (m)	-1.39671		PF Power Coefficie	ent (p)	0.73647

Т	Г	VMT veh-mi/p	VH veh-	_			nsity, followers/ ni/ln	LOS
Fac	ility	Results						
Bicycle LOS			С					
Bicyc	cle LOS	S Score	2.86		Bicyc	le Effective Sp	eed Factor	4.79
Flow	v Rate (Outside Lane, veh/h	286		Bicyc	le Effective W	idth, ft	24
Perce	ent Oc	ccupied Parking	0		Pave	ment Conditic	on Rating	4
Bic	ycle	Results						
Vehicle LOS			В					
Segment Travel Time, minutes			0.25		Follower Density (FD), followers/mi/ln 2.1			2.1
Average Speed, mi/h			57.7		Perce	ent Followers,	%	42.7
Vel	hicle	Results						
1	Tang	gent	1288	-			-	57.7
#	Segr	ment Type	Length, ft	Length, ft Radius,			Superelevation, %	Average Speed, mi/h
Suk	bseg	ment Data						
%lm	prove	ment to Percent Followers	0.0		%lm _l	provement to	Speed	0.0
In Passing Lane Effective Length?		No		Total Segment Density, veh/mi/ln 2.1		2.1		





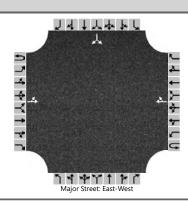
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HCS Two-Way Stop-Control Report											
General Information		Site Information									
Analyst	CEC	Intersection	SD 38 & I-90 Expressway								
Agency/Co.	HRG	Jurisdiction	SDDOT								
Date Performed	7/21/2023	East/West Street	SD 38								
Analysis Year	2023	North/South Street	I-90 Expressway								
Time Analyzed	Event Arrival	Peak Hour Factor	0.79								
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25								
Project Description	SD 38										

Lanes

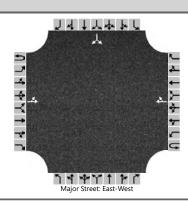


Vehicle Volumes and Adj	ustme	nts																
Approach	Eastbound			Westbound					North	bound		Southbound						
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R		
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12		
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0		
Configuration		LT						TR							LR			
Volume (veh/h)		62	77				96	240						7		0		
Percent Heavy Vehicles (%)		2												2		2		
Proportion Time Blocked																		
Percent Grade (%)													0					
Right Turn Channelized																		
Median Type Storage				Undi	vided													
Critical and Follow-up Ho	eadwa	ys																
Base Critical Headway (sec)		4.1												7.1		6.2		
Critical Headway (sec)		4.12												6.42		6.22		
Base Follow-Up Headway (sec)		2.2												3.5		3.3		
Follow-Up Headway (sec)		2.22												3.52		3.32		
Delay, Queue Length, and	d Leve	l of Se	ervice															
Flow Rate, v (veh/h)		78													9			
Capacity, c (veh/h)		1134													474			
v/c Ratio		0.07													0.02			
95% Queue Length, Q ₉₅ (veh)		0.2													0.1			
Control Delay (s/veh)		8.4	0.6												12.7			
Level of Service (LOS)		А	Α												В			
Approach Delay (s/veh)		4.1											12.7					
Approach LOS		A													В			

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HCS Two-Way Stop-Control Report											
General Information		Site Information									
Analyst	CEC	Intersection	SD 38 & I-90 Expressway								
Agency/Co.	HRG	Jurisdiction	SDDOT								
Date Performed	7/21/2023	East/West Street	SD 38								
Analysis Year	2023	North/South Street	I-90 Expressway								
Time Analyzed	Departure	Peak Hour Factor	0.71								
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25								
Project Description	SD 38										

Lanes



Vehicle Volumes and Adju	ıstme	nts															
Approach	Eastbound			Westbound					North	bound		Southbound					
Movement	U	L	Т	R	U	L	Т	R	U	L	T	R	U	L	Т	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	0	0		0	1	0	
Configuration		LT						TR							LR		
Volume (veh/h)		2	29				5	1						349		135	
Percent Heavy Vehicles (%)		2												2		2	
Proportion Time Blocked																	
Percent Grade (%)													0				
Right Turn Channelized																	
Median Type Storage		Undivided															
Critical and Follow-up He	adwa	ys															
Base Critical Headway (sec)		4.1												7.1		6.2	
Critical Headway (sec)		4.12												6.42		6.22	
Base Follow-Up Headway (sec)		2.2												3.5		3.3	
Follow-Up Headway (sec)		2.22												3.52		3.32	
Delay, Queue Length, and	l Leve	l of Se	ervice														
Flow Rate, v (veh/h)		3													682		
Capacity, c (veh/h)		1612													983		
v/c Ratio		0.00													0.69		
95% Queue Length, Q ₉₅ (veh)		0.0													5.9		
Control Delay (s/veh)		7.2	0.0												16.5		
Level of Service (LOS)		А	А												С		
Approach Delay (s/veh)	0.5											16.5					
Approach LOS	А												С				

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