Interchange Justification Report

I-95 Trafton Road Interchange Project Waterville, Maine

Prepared for MaineDOT on behalf of Trafton Realty LLC. by Eaton Peabody Consulting Group, LLC and Gorrill-Palmer Consulting Engineers, Inc.

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Executive Summary

Trafton Realty, LLC. successor-in-interest to Trafton Properties, Inc. (hereinafter "Trafton") in cooperation with the City of Waterville and the Town of Sidney seek to establish a new I-95 interchange at or in the vicinity of Trafton Road near the Waterville-Sidney municipal boundary. An I-95 interchange proposal was previously considered and approved by MaineDOT and FHWA as of January 1987. The project did not proceed at that time. The current proposal reconsiders that prior project but represents a new application governed by the existing joint agreement of MaineDOT and FHWA for interstate access modification.

Working through a I-95 Access Project Advisory Committee established by the City of Waterville in cooperation with the Town of Sidney, the Town of Oakland and Trafton a statement of project purpose and need was drafted by this Committee, reviewed by MaineDOT and approved by the Waterville City Council. The project purpose is to:

- 1. Improve regional mobility
- 2. Sustain a level of service on Kennedy Memorial Drive (KMD) sufficient to support existing and planned uses along the corridor
- 3. Reduce transportation impediments to planned development south of KMD
- 4. Expand freight and passenger transportation connectivity

The existing access to I-95 in southern Waterville at Kennedy Memorial Drive is forecast to reach unacceptable levels of service before the 2022 design year. There are significant economic development assets in place in the southern Waterville, northern Sidney region that cannot be fully utilized given the current access to I-95. The no build scenario negates the development assets of large tracts of available land with access to public water, sewer and three phase power as well as access to natural gas planned for the future. A no-build scenario also frustrates opportunities to achieve enhanced system connectivity and a more balanced distribution of traffic.

Trafton has assumed the cost of preparation of this IJR and is prepared to finance the cost of securing all permits to proceed to construction. Assuming all permits are secured, then construction of the proposed interchange would be pursued consistent with the terms of a Traffic Movement Permit issued by MaineDOT on November 15, 2011. That permit prescribes the construction of the interchange as one of two alternative mitigation options to be implemented if Trafton adds 225,000 additional square feet of light industrial space on its property.

This IJR addresses the eight policy points prescribed by FHWA/MaineDOT and lays the basis for approval of this request to allow a new I-95 access point at or in the vicinity of Trafton Road.

Introduction

An Interchange Justification Report (IJR) is required to document how a proposed interstate access modification addresses the eight policy points prescribed by the Federal Highway Administration (FHWA) and adhered to by the Maine Department of Transportation (MaineDOT) as most recently enumerated in 74 Federal Register 20679 (August 27, 2009). The eight policy points listed in FHWA's "Interstate System Access Informational Guide" of August 2010 are:

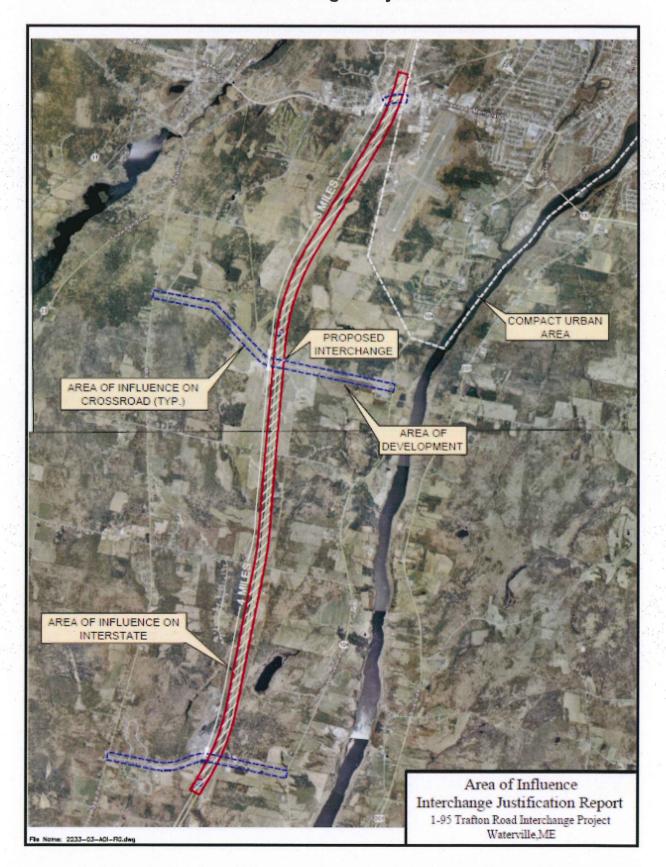
Policy Point 1 – Need for Access Point Policy Point 2 – Reasonable Alternatives Policy Point 3 – Operational and Safety Analysis Policy Point 4 – Access Connections and Design Policy Point 5 – Land Use and Transportation Plans Policy Point 6 – Future Interchanges Policy Point 7 – Transportation System Improvement Coordination Policy Point 8 – Environmental Review

The proposed full access Trafton Road I-95 Interchange would be located in proximity to the Waterville-Sidney municipal boundary. There is an adjacent interchange 3 miles to the north of the proposed interchange that intersects Kennedy Memorial Drive at milepost 127 and 4 miles to the south there is an interchange intersecting the Lyons Road at milepost 120. Trafton Road itself is approximately 25 feet in width and is a local street, providing a connection between State Collectors Route 104 (West River Road) to the east and Middle Road to the west. It currently carries about 600 vehicles per day. I-95 has about 14,000 vehicles per day in each direction under Trafton Road.

Under the preferred alternative, the proposed interchange would utilize the existing twolane Trafton Road Bridge crossing I-95. That bridge is similar to the Lyons Road Bridge in use at the Lyons Road I-95 interchange. The preferred ramp design for this alternative is a partial cloverleaf occupying the southern quadrants. The year 2036 was selected as the Design Year for this project which is a 20 year horizon from the forecast opening of the project.

This project was originally developed by the City of Waterville and MaineDOT in the mid 1980's with FHWA approval provided in January 1987 and funding provided in MaineDOT's 1988-1989 Biennial Transportation Improvement Plan. In September of 1997, MaineDOT made the project contingent upon development prospects in the vicinity of the proposed interchange. Today, project planning is being financed by the private sector in coordination with the City, MaineDOT and FHWA.

The figure which follows shows the area of Influence for the proposed I-95 Trafton Road Interchange.



I-95 Trafton Road Interchange Project Area of Influence

Methodology and Assumptions

Three different analysis tools were utilized to forecast the operations of the proposed interchange; HCS, SYNCHRO, and SIMTRAFFIC. The Highway Capacity Software (HCS) was utilized for the merge/diverge analysis and the freeway segments along the interstate. HCS was developed by McTrans and implements the procedures in the Highway Capacity Manual (HCM) 2010 Edition. SYNCHRO AND SIMTRAFFIC were utilized to determine the level of service and stacking requirements for intersections.

The following assumptions were used in the report:

- A base free flow speed of 70 mph was used in the analysis which is the posted speed limit for this segment of the Interstate. The ramp free flow speed was 35 mph.
- A peak hour factor (PHF) of 0.94 was utilized along the I-95 mainline for the current and 2036 conditions. The phf utilized on the ramp was 0.90.
- Percent heavy vehicles based on existing truck percentages for Existing Conditions, as well as based on 30 percent trucks in background development traffic (i.e. industrial/distribution facilities).
- 2011 traffic count data was adjusted to represent peak seasonal conditions from the raw counts by 5 percent along Lyons Road and Trafton Road.
- SimTraffic analyses were based on an average of five 60-minute runs.
- Trip assignments for the projected development were based on prior traffic impact studies completed in the area, and were adjusted as necessary to reflect proposed changes in the roadway network.
- Existing traffic volumes were redistributed for the Trafton Road Interchange build option based on the redistribution methodology used in the Traffic Impact Study for the Trafton Properties development project.
- Level terrain was utilized in the I-95 mainline analysis
- A side clearance value of 6 feet was utilized along the mainline
- Twelve foot lane widths were utilized along the interstate

As Lyons Road, Trafton Road, and Kennedy Memorial Drive are all corridors in their own right, it is important to provide analysis based on these areas as part of the transportation network, as opposed to isolated intersections. An HCM analysis may portray a better or worse picture than actual field operations under congested conditions because this analysis methodology does not take into consideration upstream or downstream effects. Therefore, while the results for delay utilized HCM thresholds, the analyses were completed with the Synchro/SimTraffic analysis program.

The Synchro/SimTraffic program models all vehicles traveling through a roadway network by simulating individual vehicle traffic flow. Inputs to the model include roadway geometrics, lane use, intersection control operation, intersection turning movements, and system traffic volume. As the model runs, the location of each vehicle in the model network is tracked for each second of time. With this location and time data compiled for each vehicle, the model then computes a variety of measures-of-

effectiveness (MOE's) for each intersection approach by lane and traffic movement. This comprehensive list of MOE's includes delay per vehicle, along with, 50th percentile, 95th percentile and maximum queue lengths by lane.

The primary benefit of SimTraffic is that it allows the analyst to view traffic simulation flows in real time. This allows the analysis of the effects of different alternatives to be compared and contrasted more easily than with mathematical analysis alone. The model results reported for each alternative are based on an average of results from five random simulations of that alternative.

Capacity is defined as the "maximum sustainable flow rate at which vehicles or persons reasonably can be expected to traverse a point or uniform segment of a lane or roadway during a specific time period under given roadway, geometric, traffic, environmental, and control conditions". Conditions or factors that affect capacity include the number of travel lanes, lane and shoulder width, lateral clearances, alignment, the characteristics of vehicles in the traffic stream, and traffic control and regulations in existence.

Level of Service (LOS) is a qualitative measure describing operational conditions within a traffic stream taking into account a number of variables such as speed and travel time, vehicles maneuverability, traffic interruptions, comfort, and convenience. There are six levels of service from LOS "A" to LOS "F", with LOS "A" representing the best operational condition and LOS "F" representing the worst, often when traffic demands exceed capacity. Each level of service represents a range of operating conditions and the driver's perception of those conditions.

With the exception of the Kennedy Memorial Drive corridor, Gorrill Palmer Consulting Engineers, Inc. collected the traffic counts for the major intersections in the area of influence on May 31, 2011 and June 1, 2011 from 4:00 – 6:00 PM and 7:00 – 9:00 AM respectively. Design hour volumes for 2010 were obtained from VHB from their signal coordination study for the Kennedy Memorial Drive corridor. A summary of the AM and PM peak hour volumes are shown in the Appendix. Truck percentages used in this analysis were obtained from these same counts and these same percentages were utilized in the 2036 analysis. A uniform growth rate of 1.5% has been utilized to forecast the volumes during the analysis year of 2036. This growth rate was based on the Interstate as well as the local roadway system which should be conservative (high) based on the following information:

- Toll revenue growth forecasts for the Maine Turnpike Authority which directly relate to traffic volumes are projected to decline steadily from 1.6% annual growth in 2012 to 1% in 2025 and remaining steady thereafter.
- Dr. Charles Colgan, an economics professor from the University of Southern Maine and a former State Economist, forecasts a return to 2007 levels of employment late in this decade.
- Anticipated rises in motor fuel prices are expected to dampen traffic growth further.

 The availability of passenger transportation shuttles offered through Kennebec Valley Transit between Waterville and Augusta will reduce vehicle volume growth.

Several measures of effectiveness (MOE) were used to compare results between the scenarios. The MOE's used to evaluate operations at a particular intersection include: Level of Service (LOS), Delay, Degree of Saturation (v/c), and queue length. The MOEs used to evaluate operations along the interstate include: LOS, v/c, Density, and Speed.

The proposed interchange is being designed to meet AASHTO and MaineDOT geometric standards.

Finally, in conformity with the Highway Capacity Manual, each of the software programs applies the same LOS criteria based on control delay as shown in the Tables below.

Level of Service	Control Delay per Vehicle (sec)				
A	Up to 10.0				
B	10.1 to 15.0				
$\mathbf{r}_{\mathbf{r}} \mathbf{C}_{\mathbf{r}}$ is a second secon	15.1 to 25.0				
D	25.1 to 35.0				
E	35.1 to 50.0				
<u>• F</u>	Greater than 50.0				

Level of Service Criteria for Un-signalized Intersections

Level of Service Criteria for Signalized Intersections

Level of Service	Control Delay per Vehicle (sec)
A	Up to 10.0
В	10.1 to 20.0
С	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	Greater than 80.0

Level of Service Criteria for Freeway Facilities

Level of Service	Density (pass cars/mi/lane)
A B C D E F	 ≤11 >11 to 18 >18 to 26 >26 to 35 >35 to 45 >45 or any component vd/c ratio > 1.00

Level of Service Criteria for Freeway Merge and Diverge Segments

LOS	Density (pass cars/mi/lane)	Comments
A	≤ 10	Unrestricted Operations
В	> 10-20	Merge/diverge maneuvers noticeable to drivers
С	> 20-28	Influence area speeds begin to decline
D	> 28-35	Influence area turbulence becomes intrusive
E	> 35	Turbulence felt by virtually all drivers
. F	Demand Exceeds Capacity	Ramp and freeway queues form

Policy Point 1 – Need for Access Point

An Interchange Justification Report (IJR) is required to document how a proposed interstate access modification addresses the eight policy points prescribed by the Federal Highway Administration (FHWA) and adhered to by the Maine Department of Transportation (MaineDOT) as most recently enumerated in 74 Federal Register 20679 (August 27, 2009). This section addresses the first of the eight policy points listed in FHWA's "Interstate System Access Informational Guide" of August 2010.

The purpose of the project is derived from a purpose and need statement developed in coordination with MaineDOT and FHWA and adopted by the Waterville City Council (1/18/11) based upon the recommendation of the I-95 Access Project Advisory Committee. The purpose of the proposed project is to:

- Improve regional mobility
- Sustain a level of service on Kennedy Memorial Drive (KMD) sufficient to support existing and planned uses along the corridor
- Reduce transportation impediments to planned development south of KMD
- Expand freight and passenger transportation connectivity

The effectiveness of the no build alternative is measured against the proposed alternative favored by the Waterville City Council (1/18/11) as recommended to them by the I-95 Access Project Advisory Committee. This alternative was developed in coordination with MaineDOT and the FHWA within a broader consideration of alternatives. Effectiveness is judged based upon the following need criteria:

- A traffic choke point is forecasted at the I-95/KMD interchange
- Traffic choke points are forecasted on KMD at the intersections with Cool, Colette, West River Road and Carter Memorial
- I-95 access for south Waterville and north Sidney is inadequate to support desired manufacturing, distribution and warehousing employment growth
- Connectivity and balance of area traffic is not optimized
- Emergency response times are not minimized
- Truck freight traffic on Interstate is not maximized
- Waterville Airport, the adjacent Foreign Trade Zone and business park lack sufficient market attraction to realize the potential of these sites
- Reuse of environmentally degraded City Property at the former solid waste facility off Webb Road and the brown field site off West River Road

KMD capacity constraints – Previous traffic projections for KMD indicated that this road would be at capacity by 2015 during the weekday PM peak hour at the I-95 ramps and at the Cool/Colette, West River Road, and Carter Memorial Drive signalized intersections. Those forecasts now extend out to 2021 due to signalization improvements made on KMD. Given differing views on KMD capacity constraints arising from the preparation of this report, KMD capacity forecasts will be revisited including, if necessary, the purpose and need statement as part of future NEPA and

ACOE reviews. Future development out to the design year at and south of KMD may be at risk if that development adds traffic to roads that are at capacity unless capacity limits are addressed. The history of transportation system management on KMD is such that all practical options to mitigate capacity constraints have now been exercised.

Maximizing value of development assets - With the support of the federal government through HUD, public water service was extended to Trafton Road in the 1970's signaling an intent to support economic growth in southern Waterville and in particular the relocated Wyandotte Mill complex. The current owners of the mill complex hold over 900 acres in this vicinity and have recently secured a Maine Traffic Movement permit to double the facility space located on Trafton Road. Recently, sewer service became accessible to southern Waterville, again with federal support, when the Oakland service was connected to the Waterville system along Webb Road. Three phase power is also available at Trafton Road to support current and planned manufacturing businesses located there. These services do not extend further south into the Town of Sidney nor are they available in proximity to the Lyons Road I-95 interchange. The value of these services and available land for development is diminished under the no-build scenario by lack of proximity to an interstate access. Further, the Waterville Airport, the Waterville Airport Business Park and the co-located Foreign Trade Zone all rely exclusively on access to the interstate through KMD. Public access to these development assets from the south, while achievable, is not being pursued under the no-build scenario due to the lack of a proximate interstate connection.

Connectivity and traffic distribution - The value of the relatively new Donald Carter Bridge for balancing traffic distribution and promoting system connectivity remains underutilized in the no-build scenario due to the distance to an alternative to KMD I-95 access. A no-build scenario fails to extend the capacity of KMD or improve connections to I-95 in Winslow and points east. The no-build scenario will not reduce freight travel times and distances from Winslow and points east and similarly will not add value for this area with transit times and distances to the new MaineGeneral hospital now under construction in Augusta. Under Policy Point 3 further information is provided on the current traffic conditions and function of both the Lyons Road interchange in Sidney and the KMD interchange in Waterville.

Policy Point 1 Finding

The existing access to I-95 in southern Waterville is inadequate under the no-build scenario to ease choke points on KMD forecasted to reach unacceptable levels of service before the 2022 design year. The no build scenario negates the myriad assets now present to support development in southern Waterville and northern Sidney. The no-build scenario frustrates opportunities to enhance system connectivity and a more balanced distribution of traffic.

Policy Point 2 – Reasonable Alternatives

The discussion of gaining access to I-95 in southern Waterville has taken place over decades. In the last three years the topic was revisited in a coordinated manner involving the City of Waterville, area communities, MaineDOT and FHWA. In addition to examining the no-build alternative, the following build alternatives were also considered and rejected:

Upgrades to KMD and the KMD I-95 interchange would entail extensive and costly takings of property including existing commercial establishments without material additional improvement to the development prospects of southern Waterville. KMD has received considerable attention and investment in recent years involving the implementation of a series of transportation system management actions, most recently a signalization project. Potential further TSM actions are not apparent.

A Webb Road interchange, while proposed in the 1990's was dismissed as inconsistent with FHWA rural interchange spacing guidelines.

A Town Farm Road interchange in Sidney was deemed to be relatively removed from development assets including land available for development, posed greater road improvement costs to the host community and impacted relatively more property owners and residences. The Town of Sidney was not a proponent of this alternative.

An initial interchange concept between Town Farm Road and Trafton Road, was rejected due to design inconsistencies with other area I-95 interchanges. This concept did not include a new bridge. It was not favored by Waterville or Sidney.

A diamond interchange at Trafton Road was considered and rejected since the preliminary opinion of probable cost slightly exceeded that of the preferred alternative principally due to the ramp lengths being slightly longer. This alternative also required an added cost of property acquisition not required under the preferred alternative and it created greater disruption to area residences. The preliminary opinion of cost was set at \$8.06 million which included the same improvements to Trafton Road east of the ramps to Route 104 as included in the opinion of probable cost for the preferred alternative set at \$7.94 million. The opinion of cost figures are based on 2012 construction costs and do not include costs for right of way, utility relocations, environmental mitigation, etc.

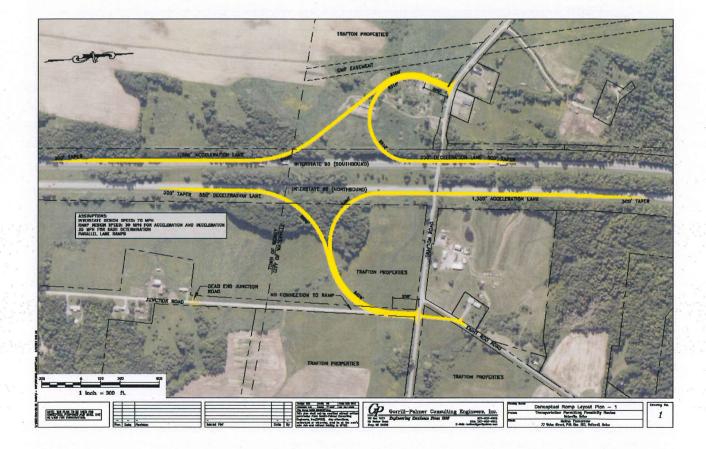
A roundabout design at Trafton Road at the terminus of partial clover leaf ramps was considered and rejected as incompatible with MaineDOT desires to locate the interchange in such a way as to accommodate the future relocation of the Trafton Road Bridge to the south of the existing Bridge.

A preferred option selected to advance to the IJR was an interchange at Trafton Road with a partial cloverleaf design occupying the southern quadrants. This preference reflects a consensus of the stakeholders with the understanding that a full alternatives analysis must be completed under NEPA before a final IJR can be concluded.

An alternative to this preferred option that will be carried up through NEPA review involves a diamond interchange located entirely on property owned by Trafton near the Waterville-Sidney municipal boundary. It entails a new bridge crossing over I-95. If the two communities, MaineDOT and Trafton determine that this option, while more costly, offers overriding long term operational and economic development benefits and comparable environmental impacts, it may become the preferred alternative.

Policy Point 2 Finding

Through extensive collaboration at the local level over the course of decades, most recently coordinated with MaineDOT and FHWA, the proposed Trafton Road partial clover leaf interchange (pending a full NEPA review) reflects a consensus determination that it is the best option to fulfill the purpose and need of the project.



Proposed Preferred Alternative for IJR Review

Policy Point 3 – Operational and Collision Analysis

An examination of the expected operational characteristics of the proposed interchange and the existing collision history follows.

The proposed Trafton Road interchange would be located approximately 4 miles to the north of the Lyons Road interchange in Sidney, and approximately 3 miles south of the Kennedy Memorial Drive interchange in Waterville. Trafton Road itself is approximately 25 feet in width and is a local street, providing a connection between State Collectors Route 104 (West River Road) to the east and Middle Road to the west. It currently carries about 600 vehicles per day. I-95 carries about 14,000 vehicles per day in each direction under Trafton Road.

Study Area Intersections for Operational Analysis - Critical to the interchange justification process is the evaluation of operating conditions within the study area relative to future traffic mobility. To assess mobility, capacity and level of service (LOS), analyses were conducted for the intersections listed below.

Lyons Road at I-95 SB Ramps Lyons Road at I-95 NB Ramps Lyons Road at West River Road Trafton Road at Middle Road Trafton Road at I-95 SB Ramps (proposed) Trafton Road at I-95 NB Ramps (proposed) Trafton Road at Eight Rod Road Trafton Road at West River Road Kennedy Memorial Drive at First Park Drive Kennedy Memorial Drive at I-95 SB Ramps Kennedy Memorial Drive at I-95 NB Ramps Kennedy Memorial Drive at Washington Street

Development Traffic- A Traffic Movement Permit was issued by the MaineDOT on November 15, 2011 for 225,000 square feet of light industrial space on the property of Trafton that is zoned Industrial. The project is forecast to generate the following additional traffic:

Time Period	Enter	Exit	Total
Weekday	1,630	1,630	3,260
AM Peak Hour	376	66	442
PM Peak Hour	72	408	480

Trip Generation Summary – Land Use Code 110, General Light Industrial

This additional traffic has been added to the 2016 AM and PM peak hour volumes shown in the appendices as Figures 4A, 4B ,5A and 5B respectively and the resultant volumes are shown in Figures 8A through 9B for 2016 and10A through 11B respectively and are also included in the Appendix. A copy of the MaineDOT Traffic Movement Permit is also included in the Appendix.

Analysis Periods - The operational performance was analyzed for the weekday AM and PM peak hours for 2036 without the Trafton Road interchange (no-build) and for 2036 with the Trafton Road interchange. Without the interchange the volumes used for this condition are shown graphically on Figures 10A and 11A for the weekday AM and PM peak hours again in the appendices. The analysis without the interchange also includes the following improvements specified through the Traffic Movement Permit:

- 1. A 100-foot right-turn lane from West River Road southbound to Lyons Road
- 2. A 100-foot left-turn lane from West River Road northbound to Trafton Road
- 3. A 100-foot right-turn lane on West River Road southbound to Trafton Road
- 4. A separate 100-foot right-turn lane on Trafton Road eastbound to West River Road
- 5. Separate left and right turn lanes from the proposed driveway northbound onto Trafton Road

With the Interchange the volumes used for this condition are shown graphically in the Appendices as Figures 10B and 11B for the weekday AM and PM peak hours respectively. In addition to consideration of the operational performance of the proposed interchange, the analysis considers intersection improvements at Trafton Road / West River Road as specified through Trafton's MaineDOT Traffic Movement Permit available under separate cover. It provides a 2016 analysis. The only additional improvements considered in the analysis include:

- 1. A 100-foot right-turn lane on West River Road southbound to Trafton Road
- 2. A separate 100-foot right-turn lane on Trafton Road eastbound to West River Road
- 3. Separate left and right turn lanes from the proposed driveway northbound onto Trafton Road

Capacity and Queuing - The following summary tables compare 2036 analysis with and without the interchange for both the weekday AM and PM peak hour conditions.

Approach	No Interchange			Interchange			
·	Delay (sec)	LOS	95% Queue (ft)	Delay (sec)	LOS	95% Queue (ft)	
Lyons EB	7	A	100	4	A	50	
W. River NB	2	A	25	1	A	25	
W. River SB	4	A	25	1	A	0	

Lyons Road at West River Road (Un-signalized): 2036 AM Peak Hour

Approach	No Interchange			Interchange		
	Delay (sec)	LOS	95% Queue (ft)	Delay (sec)	LOS	95% Queue (ft)
Lyons EB W. River NB W. River SB	8 2 5	A A A	100 25 25	5 1 1	A A A	50 25 0

The summary tables show the potential interchange results in a minor reduction in delay at the Lyons Road / West River Road intersection.

	ps (Un-signalized): 2036 AM Peak Hour
I VONE ROAD AT LUS NE RAM	ne lin-eignailzegi. Jukh AM Paak Hour
	1031011-310110112-001.2000 AM L Call 1001

Approach	No Interchange			Interchange		
	Delay (sec)	LOS	95% Queue (ft)	Delay (sec)	LOS	95% Queue (ft)
Lyons EB	2	A	50	1	A	25
Lyons WB	1	A	25	1	A	0
Con Way NB	6	A	25	6	A	25
I-95 NB	7	А	125	3	А	75

Lyons Road at I-95 NB Ramps (Un-signalized): 2036 PM Peak Hour

Approach	No Interchange			Interchange		
	Delay (sec)	LOS	95% Queue (ft)	Delay (sec)	LOS	95% Queue (ft)
Lyons EB	1	A	25	1	A	25
Lyons WB	1	A	0	1	A	0
Con Way NB	6	A	50	6	A	50
I-95 SB	7	А	125	5	A	75

The summary tables show the potential interchange results in a minor reduction in delay at the Lyons Road / I-95 NB ramp intersection.

Approach	No Interchange			Interchange		
	Delay (sec)	LOS	95% Queue (ft)	Delay (sec)	LOS	95% Queue (ft)
Lyons EB Lyons WB I-95 NB Pike SB	2 3 5 5	A A A A	25 50 75 50	1 2 4 6	A A A A	0 50 50 75

Lyons Road at I-95 SB Ramps (Un-signalized): 2036 AM Peak Hour

Lyons Road at I-95 SB Ramps (Un-signalized): 2036 PM Peak Hour

Approach	No Interchange			Interchange		
	Delay (sec)	LOS	95% Queue (ft)	Delay (sec)	LOS	95% Queue (ft)
Lyons EB	1	А	0	1	A	0.
Lyons WB	3	A	50	1	A	22
I-95 NB	7	A	75	4	A	50
Pike SB	5	A	50	4	A	25

The summary tables show the potential interchange results in a minor reduction in delay at the Lyons Road / I-95 SB Ramp intersection.

$T_{i} = f_{i} = 0$	(Un-signalized): 2036 AM Peak Hour
- I ration Road at West River Road	

Approach	No Interchange			Interchange		
	Delay (sec)	LOS	95% Queue (ft)	Delay (sec)	LOS	95% Queue (ft)
Trafton EB W. River NB	10 3	A A	100 100	10 2	A A	100 50
W. River SB	3	A	25	4	A	0

Approach	No Interchange			Interchange		
	Delay (sec)	LOS	95% Queue (ft)	Delay (sec)	LOS	95% Queue (ft)
Trafton EB	13	В	175	12	В	125
W. River NB	2	A	50	2	A	25
W. River SB	2	A	0	4	A	0

Trafton Road at West River Road (Un-signalized): 2036 PM Peak Hour

The summary tables show the potential interchange will increase the activity at the Trafton Road / West River Road intersection; however, the intersection is still forecast to operate at high levels of service.

Trafton Road at I-95 SB Ramps (Un-signalized): 2036 AM Peak Hour

Approach	No Int	No Interchange			Interchange		
	V/C	Delay (sec)	LOS	95% Queue (ft)	Delay (sec)	LOS	95% Queue (ft)
Trafton EB	NA	NA	NA	NA	1	A	0
Trafton WB	NA	NA	NA	NA	2	A	25
I-95 NB	NA	NA	NA	NA	4	A	50

Trafton Road at I-95 SB Ramps (Un-signalized): 2036 PM Peak Hour

Approach	No Interchange			Interchange			
	V/C	Delay (sec)	LOS	95% Queue (ft)	Delay (sec)	LOS	95% Queue (ft)
Trafton EB	NA	NA	NA	NÁ	1	A	0
Trafton WB	NA	NA	NA	NA	1	A	25
I-95 NB	NA	NA	NA	NA	4	A	25

The summary tables show the potential interchange at the SB ramps is forecast to operate at high levels of service.

Approach	No Interchange			No Interchange			Interchange		
	Delay (sec)	LOS	95% Queue (ft)	Delay (sec)	LOS	95% Queue (ft)			
Trafton EB	1	A	25	2	A	0			
Trafton WB	1	A	0	2	A	25			
Junction/I-95 NB	1	A	25	5	A	75			
8 Rod SB	3	A	25	7	A	25			

Trafton Road at 8-Rod/I-95 NB Ramps (Un-signalized): 2036 AM Peak Hour

Trafton Road at 8-Rod/I-95 NB Ramps (Un-signalized): 2036 PM Peak Hour

Approach	No Interchange			Interchange		
	Delay (sec)	LOS	95% Queue (ft)	Delay (sec)	LOS	95% Queue (ft)
Trafton EB	1	А	0	1	A	0
Trafton WB	1	A	0	4	A	50
Junction/I-95 NB	4	A	25	4	A	75
8 Rod SB	3	A	25	3	A	25

The summary tables show the potential interchange at the NB ramps is forecast to operate at high levels of service.

Trafton Road at Middle Road (Un-signalized): 2036 AM Peak Hour

Approach	No Interchange			Interchange		
	Delay (sec)	LOS	95% Queue (ft)	Delay (sec)	LOS	95% Queue (ft)
Trafton WB	5	A	100	5	A	75
Middle NB Middle SB	1 2	A A	0 25	12	A A	0 50

Approach	No Interchange		Interchange			
	Delay (sec)	LOS	95% Queue (ft)	Delay (sec)	LOS	95% Queue (ft)
Trafton WB	5	A	100	5	A	75
Middle NB	1	A	0	1	A	0
Middle SB	1	A	25	2	A	50

Trafton Road at Middle Road (Un-signalized): 2036 PM Peak Hour

The summary tables show the potential interchange will increase the activity at the Trafton Road / Middle Road intersection; however, the intersection is still forecast to operate at high levels of service.

Kennedy Memorial Drive at First Park Drive (Signalized): 2036 AM Peak Hour

Approach	No Interchange			Interchange		
	Delay (sec)	LOS	95% Queue (ft)	Delay (sec)	LOS	95% Queue (ft)
KMD EB LT/TH	3	A	125	2	A	125
KMD WB TH/RT	2	A	125	2	A	40
First Park SB RT	32	С	100	28	С	50
Overall	4	Α		3	Α	

Kennedy Memorial Drive at First Park Drive (Signalized): 2036 PM Peak Hour

Approach	No Interchange			Interchange		
	Delay (sec)	LOS	95% Queue (ft)	Delay (sec)	LOS	95% Queue (ft)
KMD EB LT/TH	5	A	150	5	A	125
KMD WB TH/RT	4	A	125	4	A	125
First Park SB RT	22	С	100	22	C	100
Overall	5	A		5	A	

The summary tables show the potential interchange will not affect the operation of the KMD / First Park Drive intersection.

Approach	No Interchange			Interchange		
	Delay (sec)	LOS	95% Queue (ft)	Delay (sec)	LOS	95% Queue (ft)
KMD EB	7	A	150	6	A	150
KMD WB	2	A	75	1 1 1	A	50
I-95 SB	30	С	325	30	C	275
Overall	12	В		10	Α	

Kennedy Memorial Drive at I-95 SB RAMPS (Signalized): 2036 AM Peak Hour

Kennedy Memorial Drive at I-95 SB RAMPS Node 41 (Signalized): 2036 AM Peak Hour

Approach	No Interchange			Interchange		
	Delay (sec)	LOS	95% Queue (ft)	Delay (sec)	LOS	95% Queue (ft)
KMD EB	2	A	125	2	А	50
KMD WB	6	A	75	6	А	50
I-95 SB	0	A	50	0	С	0
Overall	4	Α		3	Α	

Kennedy Memorial Drive at I-95 SB RAMPS (Signalized)Node 66: 2036 AM Peak Hour

Approach	No Interchange			Interchange		
	Delay (sec)	LOS	95% Queue (ft)	Delay (sec)	LOS	95% Queue (ft)
KMD EB	1	A	25	1	A	0
KMD WB	2	A	0	1	A	0
I-95 SB	0	A	0	0	A	0
Overall	1	Α		1	Α	

Kennedy Memorial Drive at I-95 SB Ramps (Signalized): 2036 PM Peak Hour

Approach	No Interchange			Interchange		
	Delay (sec)	LOS	95% Queue (ft)	Delay (sec)	LOS	95% Queue (ft)
KMD EB	6	A	125	5	A	125
KMD WB	4	A	125	3	A	125
I-95 SB	18	В	250	17	В	200
Overall	10	A		7	A	

Kennedy Memorial Drive at I-95 SB RAMPS (Signalized) Node 41: 2036 PM Peak Hour

Approach	No Interchange			Interchange		
	Delay (sec)	LOS	95% Queue (ft)	Delay (sec)	LOS	95% Queue (ft)
KMD EB	2	A	50	2	A	50
KMD WB	4	A	150	4	A	100
I-95 SB	0	С	0	0	A	0
Overall	3	Α		3	A	

Kennedy Memorial Drive at I-95 SB RAMPS (Signalized): Node 66: 2036 PM Peak Hour

Approach	No Interchange			Interchange		
	Delay (sec)	LOS	95% Queue (ft)	Delay (sec)	LOS	95% Queue (ft)
KMD EB	2	A	70	1	А	25
KMD WB	2	A	0	2	A	25
I-95 SB	0	А	0	0	A	0
Overall	2	Α		2	Α	

The summary tables show the potential interchange results in a minor reduction in delay on the KMD / I-95 SB Ramp intersection.

Kennedy Memorial Drive at I-95 NB RAMPS (Signalized): 2036 AM Peak Hour

Approach	No Interchange			Interchange		
	Delay (sec)	LOS	95% Queue (ft)	Delay (sec)	LOS	95% Queue (ft)
KMD EB LT KMD WB RT I-95 NB RT	10 16 24	B B C	250 250 150	7 10 25	A A C	175 175 125
Overall	14	В		11	В	

Approach	No Interchange			Interchange		
	Delay (sec)	LOS	95% Queue (ft)	Delay (sec)	LOS	95% Queue (ft)
KMD EB LT	15	В	275	9	А	200
KMD WB RT	24	С	400	20	С	325
I-95 NB RT	22	С	200	24	С	175
Overall	21	С		17	С	

Kennedy Memorial Drive at I-95 NB RAMPS (Signalized): 2036 PM Peak Hour

The summary tables show the potential interchange results in a reduction in delay on the KMD / I-95 NB Ramp intersection.

Kennedy Memorial Drive at Washington Street (Signalized): 2036 AM Peak Hour

Approach	No Interchange			Interchange		
	Delay (sec)	LOS	95% Queue (ft)	Delay (sec)	LOS	95% Queue (ft)
KMD EB	10	A	175	12	В	225
KMD WB	22	С	300	20	В	250
Washington NB	30	C	150	35	D	150
Washington SB	31	С	200	30	С	200
Overall	17	B		18	В	

Kennedy Memorial Drive at Washington Street (Signalized): 2036 PM Peak Hour

Approach	No Interchange			Interchange		
	Delay (sec)	LOS	95% Queue (ft)	Delay (sec)	LOS	95% Queue (ft)
KMD EB	17	В	275	17	С	275
KMD WB	26	С	425	25	С	400
Washington NB	33	С	200	31	D	200
Washington SB	32	С	225	30	С	175
Overall	30	С		23	С	

The summary tables show the potential interchange results in a reduction in delay on the at the KMD / Washington Street intersection during the PM peak hour.

I-95 Mainline Analysis - In addition to the capacity analysis, the I-95 mainline was analyzed using the HCS 2010, version 6.1 software for both the northbound and southbound direction and included the roadway segments adjacent and just south of the

Lyons Road interchange to just north of the Kennedy Memorial Drive interchange and including the Trafton Road interchange. The analyses were completed for the following conditions:

- Condition A-2016 AM and PM peak hours without the interchange and without any traffic from the proposed Trafton Road development
- Condition B-2036AM and PM peak hours without the interchange but with traffic from the proposed Trafton Road development
- Condition C-2036 AM and PM peak hours both with the interchange and with traffic from the proposed Trafton Road development

Freeway Segment Analyses

The analyses for the freeway segments were completed based on the following conditions:

- Twelve foot lane widths
- Lateral clearance of 6 feet
- Level terrain

A summary of the results is presented below and the detailed printouts are included in the appendices to this report.

	Cond A- 2016	Cond A- 2016	Cond B- 2036	Cond B- 2036	Cond C- 2036	Cond C- 2036
Freeway Segment	AM	PM	AM	PM	AM	PM
S of Lyons-NB	A	В	В	В	В	В
N of Lyons-NB	A	В	A	В	В	В
N of Trafton-NB	NA	NA	NA	NA	A	В
N of KMD-NB	A	В	B	В	В	В
S of Lyons-SB	A	A	A	В	A	В
N of Lyons-SB	A	A	A	В	A	В
N of KMD-SB	А	A	A	В	A	В

The analyses show that all the freeway segments will operate with little delay and that the proposed Trafton Road interchange will not have a significant impact on the upstream or downstream segments.

Merge and Diverge Analysis

The results of the merge and diverge analyses between the freeway segments listed above are summarized in the following table. Detailed printouts are included in the appendices to this report.

	Cond A- 2016	Cond A- 2016	Cond B- 2036	Cond B- 2036	Cond C- 2036	Cond C- 2036
Ramp Location	AM	РМ	AM	РМ	AM	РМ
Lyons-NB off	В	В	В	С	В	С
Lyons-NB on	В	В	В	В	В	C
Lyons-SB off	В	В	В	В	В	C
Lyons-SB on	В	В	В	В	В	В
Trafton Rd-NB off	NA	NA	NA	NA	В	В
Trafton Rd-NB on	NA	NA	NA	NA	A	В
Trafton Rd-SB off	NA	NA	NA	NA	В	В
Trafton Rd-SB on	NA	NA	NA	NA	A	A
KMD NB off	B	В	В	В	В	В
KMD NB on	В	В	В	С	В	C
KMD SB off	В	В	В	В	В	В
KMD SB on (north)	В	В	В	В	В	В
KMD SB on(south)	В	В	В	В	В	В

The analyses show that all the ramps will all operate at an acceptable level of service through 2036 and that the Trafton Road ramp will not have a significant upstream or downstream impact.

Collision Analysis - The most recent crash data for the area of influence is obtained from MaineDOT for the period of 2008-2010. In order to evaluate whether a location has a crash problem, Maine DOT uses two criteria to define High Crash Location (HCL). First, there must be a critical rate factor of 1.00 or more for a three-year period. A Critical Rate Factor {CRF} compares the actual crash rate to the rate for similar intersections in the state. Second, there must be a minimum of eight crashes over a three-year period.

Based on the published history, only I-95 southbound at KMD is classified as a High Crash Location. The crash history is included in the Appendix. The portion of I-95 southbound north of the KMD WB southbound off-ramp is an HCL, with 9 collisions and a CRF of 2.27. A review of MaineDOT collision reports indicates that three vehicles lost control due to driver error and went off the roadway. Two vehicles lost control due to snow, and one due to ice. One truck went off the road due to mechanical failure, and one driver went off the road due to illegal drug usage. The remaining collision occurred when a driver struck a deer crossing the roadway. Based on the reports, it appears that while the curvature of the road may influence the loss of control in poor weather, the drivers were often traveling too quickly. Based on this information, it is not expected that the proposed interchange will impact operations here, as it does not appear that the current interchange is impacting the collision pattern at this HCL.

Along Kennedy Memorial Drive, the overall traffic volumes (based upon peak hour data) are expected to decrease which may result in fewer collisions. Along Trafton Road, the overall traffic volumes (based upon peak hour data) are expected to increase which may result in additional collisions. As any increase in the potential number of crashes is distributed along Trafton Road, it is unlikely that any one area would experience enough

of an increase in collisions to be considered a high crash location. Along Lyons Road, the overall traffic volumes (based upon peak hour data) are expected to decrease which may result in fewer collisions. The Lyons Road and Kennedy Memorial Drive interchanges are forecast to see a reduction in volumes (based upon peak hour data) which may result in fewer collisions. As the proposed Trafton Road interchange would be similar to the Lyons Road interchange, it would likely have a similar crash rate.

Other than the construction of the proposed Trafton Road interchange, geometric and signalization changes are not anticipated in the area of influence. As such, the severity of the collisions is not expected to change within the area of influence.

Policy Point 3 Finding

The proposed interchange will operate with little delay and will not significantly affect the upstream or downstream traffic flow in either direction. The proposed interchange will not only allow for convenient and direct access to surrounding land zoned as industrial, but will provide additional local transportation options and connectivity. The proposed interchange is forecast to reduce the traffic utilizing the Lyons Road and Kennedy Memorial Drive interchanges by approximately 5% thus reducing the potential for crashes over what exists today along the corridors served by those interchanges.

Policy Point 4 – Access Connections and Design

The preferred proposed interchange design would utilize the existing two-lane Trafton Road Bridge crossing I-95. That bridge is similar to the Lyons Road Bridge in use at the Lyons Road interchange. The preferred ramp design is a partial cloverleaf occupying the southern quadrants as shown in the concept plan included in this report. There is an adjacent interchange 3 miles to the north of the proposed interchange that intersects Kennedy Memorial Drive at milepost 127 and 4 miles to the south there is an interchange intersecting the Lyons Road at milepost 120.

The new interchange is proposed to utilize typical parallel single lane entrance and exit ramps meeting the requirements in Chapter 9 of the MaineDOT Design Guide. The following assumptions were made:

- A main line interstate design speed of 70 MPH
- A main line assumed to be level
- A ramp design speed for acceleration and deceleration of 30 MPH with the required deceleration length 550' (Table 9-1) and the required acceleration length 1,350' (Table 9-4)
- A ramp minimum radii design speed of 35 MPH with the required minimum radii of 310' (Table 9-7)

Ramp	Туре	Number of Lanes	Proposed Ramp Radii	Proposed Accel/Decel Length	Taper Length	Meets requirement?
NB Off	Parallel	1	600'/476'	550'	300'(25:1)	Yes
NB On	Parallel	1	400'/476'	1,350'	300'(25:1)	Yes
SB Off	Parallel	1	310'	550'	300'(25:1)	Yes
SB On	Parallel	1	358'	1,350'	300'(25:1)	Yes

• A taper length of 15:1 minimum, 25:1 desirable (Figure 9-7, 9-9)

The existing speed limit on Trafton Road is 45 MPH which is anticipated to be lowered in the vicinity of the intersections with the proposed ramps due to the additional turning traffic at the ramps and at the development driveways along Trafton Road. The ramps were located as far away from the bridge crest as practicable to maximize sight lines. The intersection sight distance for the southbound ramps is 650 feet to the right and approximately 1,000 feet to the left. The sight distance at the northbound ramps is 1,000 feet in both directions. Thus the sight lines available at each ramp exceed the MaineDOT standards with the existing 45 MPH speed limit.

The existing Trafton Road Bridge over Interstate 95 has a curb to curb width of 24 feet.

For I-95 northbound and southbound there is approximately 17 feet between the edge of the existing travel way and the face of the existing bridge columns. It is anticipated that the northbound acceleration lane and southbound deceleration lanes can be constructed within this 17 foot area with barrier construction to sufficiently protect the bridge columns. A cross section of the proposed I-95 roadway section under the ramps is included in the Appendix. The proposed interchange signage will be designed in conformance to the Manual on Uniform Traffic Control Devices (MUTCD) and be similar to the Lyons Road and KMD I-95 interchanges.

Policy Point 4 Finding

The proposed interchange design meets current MaineDOT geometric design criteria with the exception of the shoulder width which will be reduced to 3 feet under the bridge and therefore require a design exception. The partial clover leaf configuration will accommodate all traffic movements and allow for a complete, fully functional interchange and will not significantly impact traffic flow on I-95. MaineDOT has requested that the interchange be located in a manner that will accommodate the location of a replacement to the Trafton Road Bridge in the future to the south of the existing bridge.

Policy Point 5 – Land Use and Transportation Plans

This project was originally developed by the City of Waterville and MaineDOT in the mid 1980's with FHWA approval provided in January 1987 and funding provided in MaineDOT's 1988-1989 Biennial Transportation Improvement Plan. In September of 1997, MaineDOT made the project contingent upon development prospects in the vicinity of the proposed interchange. Today, project planning is being financed by Trafton in coordination with the City, MaineDOT and FHWA.

In revisiting this proposed project in 2009, the City of Waterville requested input from the Mid-Maine Chamber of Commerce, the Central Maine Economic Growth Council and the Waterville Development Corporation. Each organization considered the need for the project and each responded back to the City in writing in March of 2010 urging the City to support a new I-95 access to Trafton Road.

The Town of Sidney Board of Selectmen convened on this topic on two occasions including a meeting open to the public to gather their input. The Town of Sidney Board of Selectmen voted to support further project planning for a new access to the interstate at Trafton Road and designated a representative of the community to serve as a liaison with the City of Waterville. A letter of support was sent on March 29, 2010.

Coordination also occurred with the Towns of Oakland and Winslow.

Following these developments, the Waterville City Council voted unanimously, on April 6, 2010, to support project planning and meetings with MaineDOT and FHWA. On September 7, 2010, the Waterville City Council voted unanimously to support the formation of an I-95 Access Project Advisory Committee. That Committee met on three occasions to draft a purpose and need statement and review build and no-build alternatives. The development of the purpose and need statement and the consideration of alternatives occurred in coordination with MaineDOT and FHWA. The Committee concluded its initial work with a recommendation back to the City Council. The City held a public hearing (with public notice) on the Committee's recommendations on January 11, 2011 and on January 18, 2011 voted to "…accept the recommendations of the I-95 Access Advisory Committee regarding a Purpose and Need statement and Alternatives Analysis and further said recommendations to the Maine Department of Transportation to serve as a basis for further study of the project." The purpose and need and preferred alternative accepted by the City are advanced in this IJR.

With these endorsements, Trafton proceeded to prepare and submit to the MaineDOT a Traffic Movement Permit for a doubling of their facility space on Trafton Road for light manufacturing, distribution and warehousing. A public meeting with public notice to abutters was held at Waterville City Hall on May 24, 2011 to receive public input and comment on the scope of work to be undertaken to complete a traffic movement study to file with MaineDOT. On November 15, 2011 MaineDOT issued a traffic movement permit (ID # 02-00068A-N) approving the expansion conditioned on either the upgrade of existing roads or the creation of a new I-95 interchange access to Trafton Road. The permit is included in the Appendix of this report.

The proposed interchange is recognized in the City of Waterville's Comprehensive Plan. Chapter 13, (Goals, Policies, Strategies), Policy 2 (Promotion), includes strategy "I" which reads:

Trafton Road Interchange. Work with State DOT to construct an I-95 Interchange at Trafton Road to assist the development of the industrial and commercially zoned areas on and adjacent to Trafton Road

The proposed interchange is recognized in the most recent Kennebec Valley Council of Governments Corridor Management Plan for the Lower Kennebec/Rte 201 Corridor. Page 12 of the Plan lists the following additional strategy for Waterville:

Add I-95 interchange at Trafton Road, improve Trafton Road, and extend Airport Road to link with Webb Road, in conjunction with rezoning and redevelopment in the area.

The project appears on page 207 of the MaineDOT Statewide Transportation Improvement Program for Federal Fiscal Years 2012-2013-2014-2015 with a PIN of 018129.00. Previously, the project appeared in MaineDOT's plan Connecting Maine Statewide Long Range Transportation Plan released July 2010.

Waterville City officials were provided a briefing on June 28, 2012. The Sidney Board of Selectmen was provided an update on the project on July 9, 2012. The Oakland Town Manager received an update on July 13, 2012.

Related to all of this activity is the financial plan for the project. That plan is as follows:

- 1. Transportation planning work for the project in cooperation with the City of Waterville, the Town of Sidney, MaineDOT and FHWA including the preparation of the IJR is and will continue to be the financial responsibility of Trafton .
- 2. Project approvals, including environmental permits and design plan submissions to MaineDOT and FHWA, are the financial responsibility of Trafton.
- 3. Right of way will be provided by Trafton. This offer assumes that the preferred alternative emerging from NEPA review and approval is for an interchange design located just south of Trafton Road on the property of Trafton.
- 4. The City of Waterville will assume financial responsibility for the upgrade of Trafton Road from the ramps to Route 104, the West River Road, to a design standard comparable to Lyons Road in Sidney interchanging with I-95. This commitment is contingent upon the attraction of development consistent with the "Light Industrial Development" proposed in the Traffic Movement Permit previously cited or as that permit may be amended in the future with the City's concurrence.
- 5. The current design advancing through the IJR review is for a partial clover leaf located in the southern two quadrants of the proposed interchange. Based upon discussions with MaineDOT, this design will accommodate the future replacement of the Trafton Road Bridge over I-95 allowing it to be located south

of the existing bridge. However, given the remaining useful life of the existing bridge, it will serve as is for the foreseeable future. The cost of its replacement and ramp realignment under this scenario will be a MaineDOT financial responsibility.

- 6. Given the position of the City of Waterville (see item 4 above), it is likely that investments in interchange construction will proceed only when development prospects have been secured with sufficient certainty to warrant such investment. Trafton, Waterville, Sidney and MaineDOT reserve their options to consider alternate financial arrangements depending on the scale of economic development investment expected. Furthermore, all financial partners to this initiative reserve the option to secure financing through HUD, EDA and other federal, state and local sources should there not be sufficient initial development secured to warrant the up-front investment in whole or in part.
- 7. Trafton, MaineDOT, the City of Waterville and the Town of Sidney may mutually agree to build the alternative design concept of a diamond interchange all on Trafton property to the south of Trafton Road with a new bridge replacing both the existing Trafton Road and Town Farm Road bridges accompanied by realignments of Trafton Road and Town Farm Roads to enable connections to the new I-95 bridge.

Policy Point 5 Finding

The process supporting the development of the Trafton Road I-95 access proposal for this IJR provided numerous opportunities for public input. Public participation records are included in the appendices of this Report. The proposed access to I-95 is fully consistent with the applicable adopted land use and transportation plans.

Policy Point 6 – Future Interchanges

There are no planned interchanges in the vicinity of the proposed Trafton Road interchange. In consultation with the transportation planner for the Kennebec Valley Council of Governments and through a review of plans under consideration by MaineDOT, there is no proposal anticipated for a further interchange between I-95 exits 113 in Augusta and 138 in Clinton out to 2032. Additionally, letters to this effect from the City of Waterville and the Town of Sidney are included in the appendices of this report. Therefore, a system analysis anticipating future additional interchanges is not warranted.

Policy Point 6 Finding

There are no future interchanges in the vicinity of the proposed Trafton Road interchange. The proposed interchange is compatible with existing interchanges and connections.

Policy Point 7 – Coordination

The proposed Trafton Road interchange does not require any non-interstate or local roadway improvements for it to operate appropriately. The City of Waterville may upgrade Trafton Road between the I-95 overpass and River Road. Noted in the finding of Policy Point 4 is the intent to coordinate the placement of the partial clover leaf option to accommodate the ultimate replacement of the Trafton Road Bridge by MaineDOT.

Policy Point 7 Finding

There are no other roadway improvements required for the I-95 Trafton Road interchange to function appropriately.

Policy Point 8 – Environmental Process

Final IJR review and approval is conditioned on the completion of the NEPA process including further alternatives analysis. Based upon an initial review of alternatives presented under Policy Point 2 the design option advanced here is an interchange at Trafton Road with a partial clover leaf design occupying the southern quadrants. A preliminary environmental site review based upon this design concept was conducted in the fall of 2011 and a report was issued on January 3, 2012 by A. E. Hodsdon Consulting Engineers. The objective of the preliminary environmental review was to determine if the selected design was likely to pose insurmountable impacts.

Based upon this initial review the proposed design is expected to have minimal environmental impacts. Depending on final alignment, the project could affect 1.65 to 2.2 acres of wetland, wet areas or drainage. Approximately two thirds of the affected areas are on the west side of the interstate and one third of the affected areas are on the east side. One stream with associated wetlands currently crossed by the interstate and Junction Road would be crossed by the ramps.

There are no coastal zones or dunes, fragile mountain areas or wild and scenic rivers near the project site. Noise levels are expected to remain unchanged once the project is completed. No permanent negative effects on water or air quality are anticipated once the project is completed. There are no natural landmarks affected. There are no known endangered species in the immediate area. The proposed project is not located in a documented flood plain. A manure pit and building debris from a demolished barn once on the site would be removed.

There are no residences, businesses or buildings on the site. Land required for the project is under the control and ownership of Trafton and will be donated to the MaineDOT should the project proceed as proposed.

Policy Point 8 Finding

Based upon a preliminary environmental review the likely impacts from the project are deemed minimal and manageable. A conditional approval of this IJR submittal is requested with the understanding that final approval will depend upon satisfactory completion of the NEPA process for the proposed interchange. Trafton will commence the NEPA process once a conditional approval of the IJR is issued by MaineDOT and FHWA.

Summary Findings

Trafton Realty, LLC. in cooperation with the City of Waterville and the Town of Sidney seeks to establish a new I-95 interchange at or in the vicinity of Trafton Road near the Waterville-Sidney municipal boundary. In such a circumstance, an Interchange Justification Report (IJR) is required to document how a proposed interstate access modification addresses eight policy points identified by FHWA and adhered to by MaineDOT. This IJR addresses the eight policy points and establishes the basis for the approval requested of MaineDOT and FHWA.

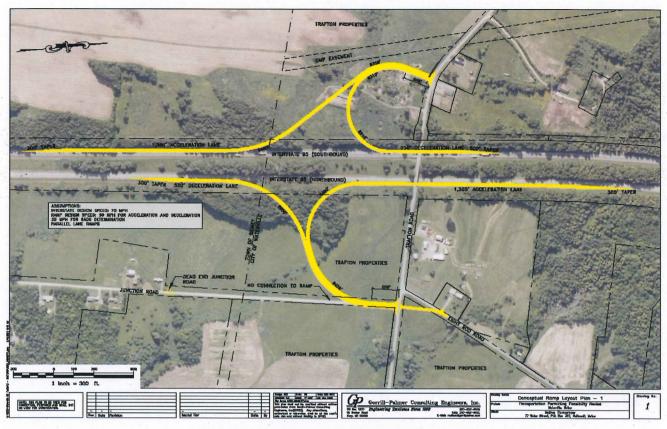
Working through an I-95 Access Project Advisory Committee established by the City of Waterville in cooperation with the Town of Sidney, the Town of Oakland and Trafton a statement of project purpose and need was drafted by this Committee, reviewed by MaineDOT and approved by the Waterville City Council. The project purpose is to:

- 1. Improve regional mobility
- 2. Sustain a level of service on Kennedy Memorial Drive (KMD) sufficient to support existing and planned uses along the corridor
- 3. Reduce transportation impediments to planned development south of KMD
- 4. Expand freight and passenger transportation connectivity

The effectiveness of no build and build alternatives is judged based upon the following project need criteria:

- 1. A traffic choke point is forecasted at the I-95/KMD interchange
- 2. Traffic choke points are forecasted on KMD at the intersections with Cool, Colette, West River Road and Carter Memorial Drive
- 3. I-95 access for south Waterville and north Sidney is inadequate to support desired manufacturing, distribution and warehousing employment growth
- 4. Connectivity and balance of area traffic is not optimized
- 5. Emergency response times are not minimized
- 6. Truck freight traffic on Interstate is not maximized
- 7. Waterville Airport, the adjacent Foreign Trade Zone and business park lack sufficient market attraction to realize the potential of these sites
- 8. Reuse of environmentally degraded City Property at the former solid waste facility off Webb Road and the brown field site off West River Road

The proposed build alternative favored by the Waterville City Council as recommended to them by the I-95 Access Project Advisory Committee was developed in coordination with MaineDOT and the FHWA within a broader consideration of alternatives. The preferred alternative locates an interchange at Trafton Road which uses the existing two-lane Trafton Road Bridge crossing I-95. The ramp design is a partial cloverleaf occupying the southern quadrants. The year 2036 was selected as the Design Year for this project which is a 20 year horizon from the forecast opening by Trafton of 225,000 square feet of light industrial space on Trafton Road.



Proposed Preferred Alternative for IJR Review

Eight Policy Point Findings

Need for Access Point: The existing access to I-95 in southern Waterville is inadequate under the no-build scenario to ease choke points on KMD forecasted to reach unacceptable levels of service before the 2022 design year. The no build scenario negates the myriad assets now present to support development in southern Waterville and northern Sidney. The no-build scenario frustrates opportunities to enhance system connectivity and a more balanced distribution of traffic.

Reasonable Alternatives: Through extensive collaboration at the local level over the course of decades, most recently coordinated with MaineDOT and FHWA, the proposed Trafton Road partial clover leaf interchange (pending a full NEPA review) reflects a consensus determination that it is the best option to fulfill the purpose and need of the project.

Operational and Collision Analysis: The proposed interchange will operate with little delay and will not significantly affect the upstream or downstream traffic flow in either direction. The proposed interchange will not only allow for convenient and direct access to surrounding land zoned as industrial, but will provide additional local transportation options and connectivity. The proposed interchange is forecast to reduce the traffic utilizing the Lyons Road and Kennedy Memorial Drive interchanges by approximately

5% thus reducing the potential for crashes over what exists today along the corridors served by those interchanges.

Access Connections and Design: The proposed interchange design meets current MaineDOT geometric design criteria with the exception of the shoulder width which will be reduced to 3 feet under the bridge and therefore require a design exception. The partial clover leaf configuration will accommodate all traffic movements and allow for a complete, fully functional interchange and will not significantly impact traffic flow on I-95. MaineDOT has requested that the interchange be located in a manner that will accommodate the location of a replacement to the Trafton Road Bridge in the future to the south of the existing bridge.

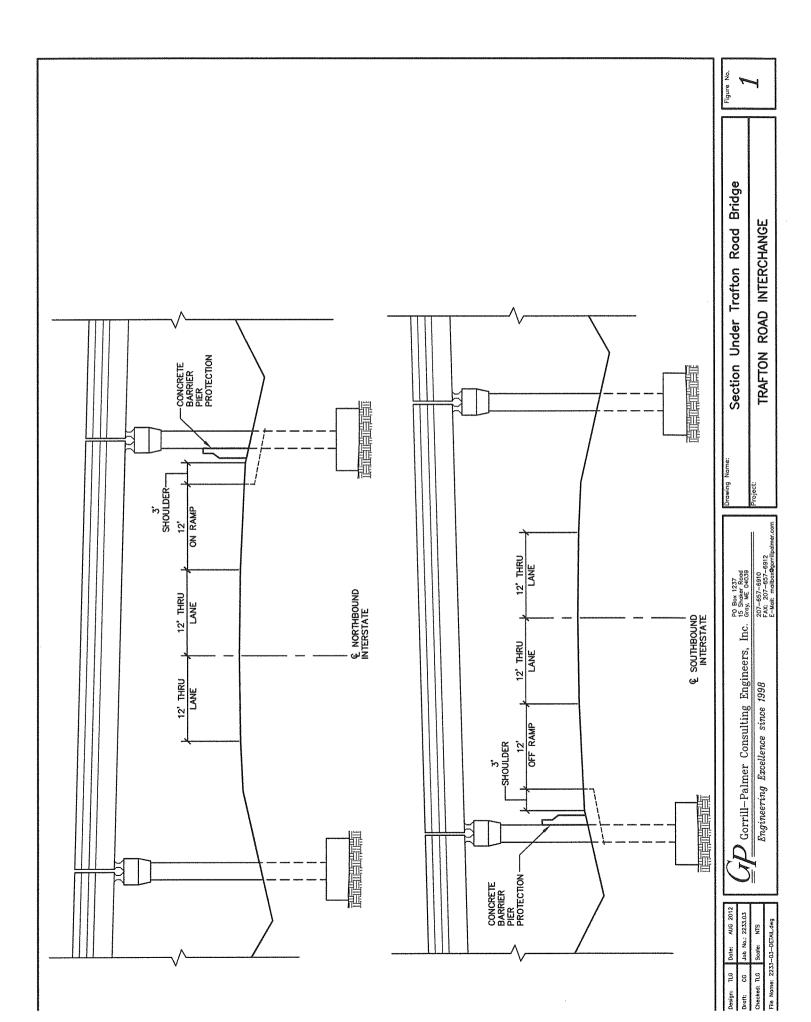
Land Use and Transportation Plans: The process supporting the development of the Trafton Road I-95 access proposal for this IJR provided numerous opportunities for public input. Public participation records are included in the appendices of this Report. The proposed access to I-95 is fully consistent with the applicable adopted land use and transportation plans.

Future Interchanges: There are no future interchanges in the vicinity of the proposed Trafton Road interchange. The proposed interchange is compatible with existing interchanges and connections.

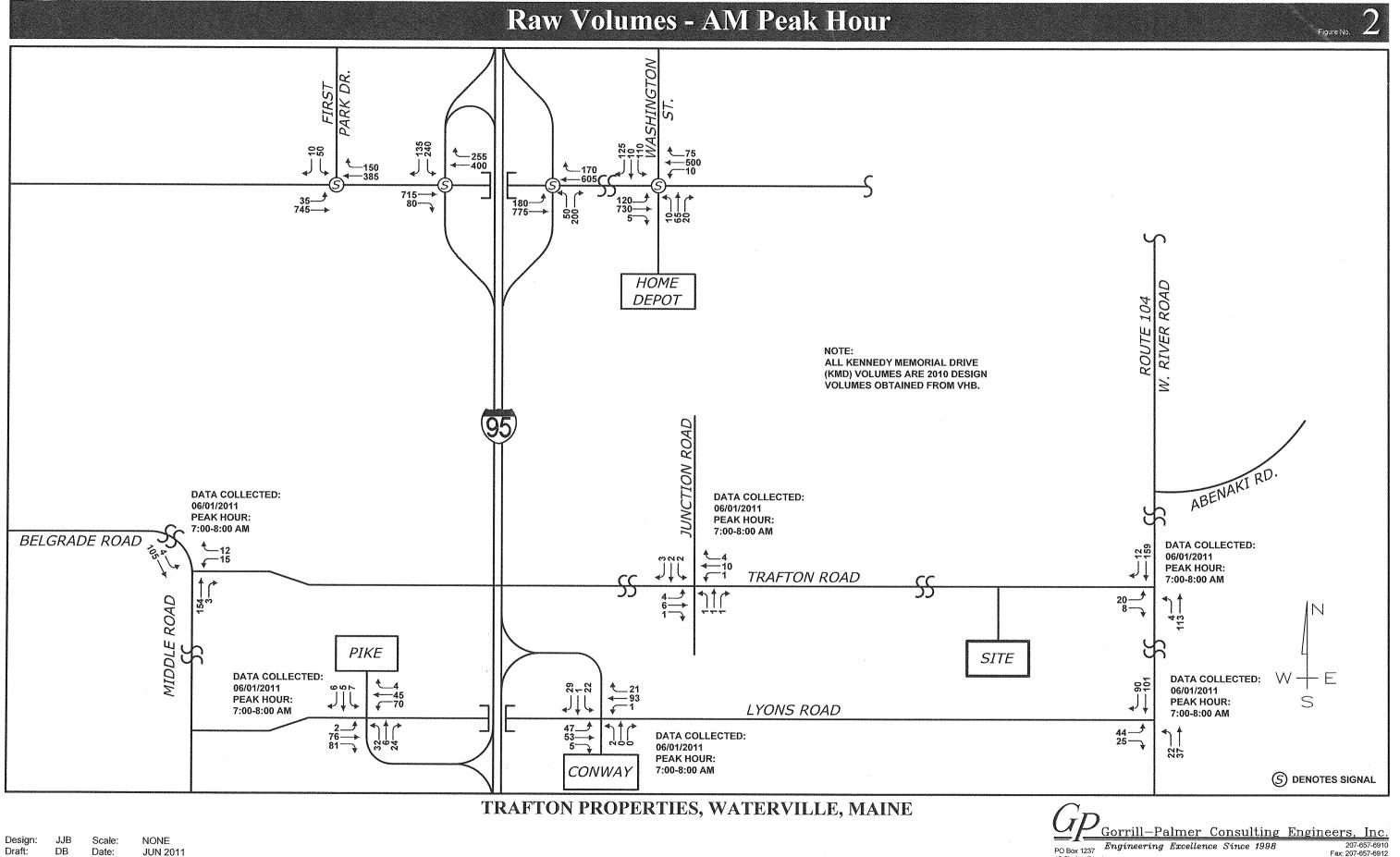
Coordination: There are no other roadway improvements required for the I-95 Trafton Road interchange to function appropriately.

Environmental Process: Based upon a preliminary environmental review the likely impacts from the project are deemed minimal and manageable. A conditional approval of this IJR submittal is requested with the understanding that final approval will depend upon satisfactory completion of the NEPA process for the proposed interchange. The NEPA process will commence once a conditional approval of the IJR is issued by MaineDOT and FHWA.

SECTION UNDER TRAFTON ROAD

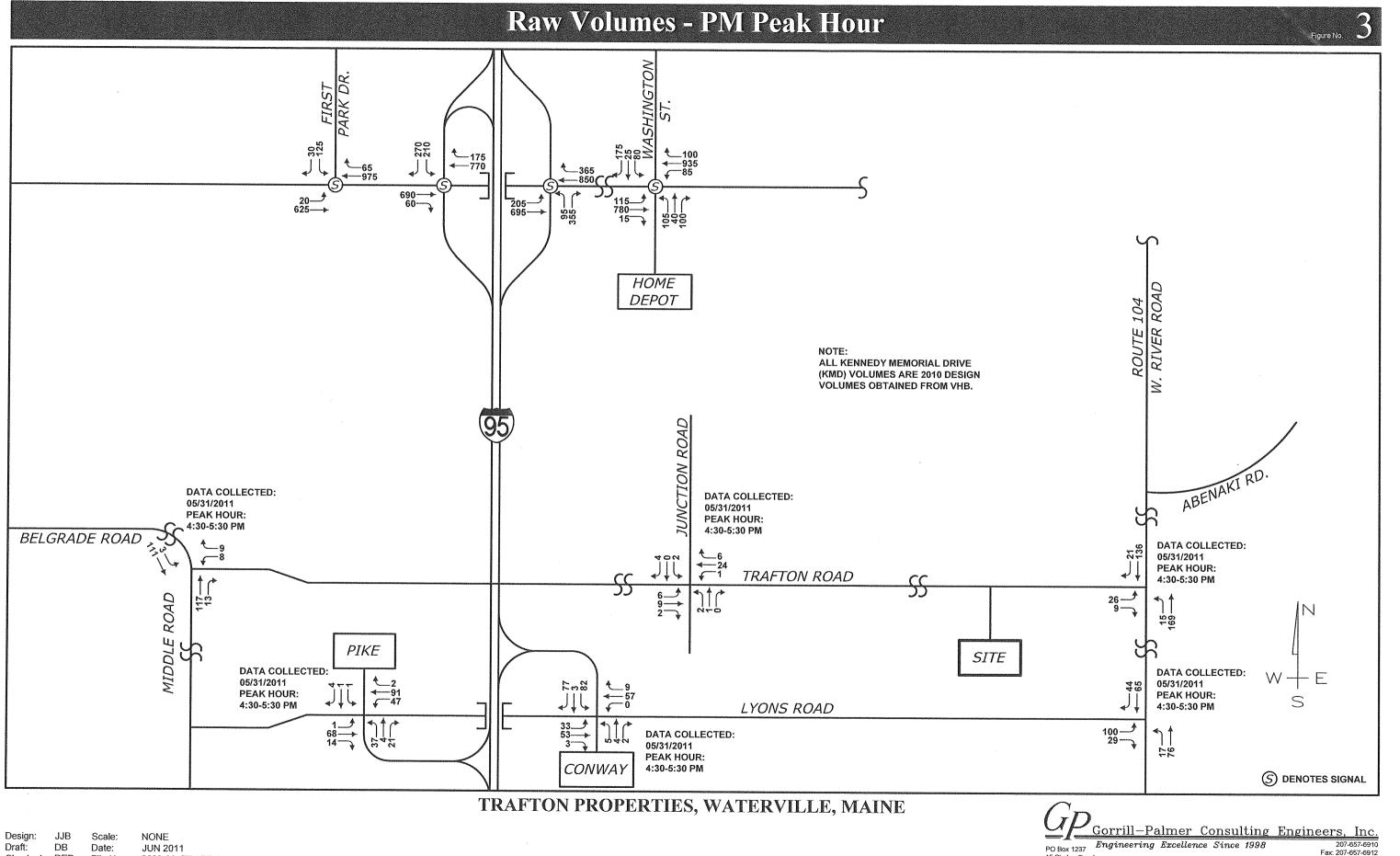


TURNING MOVEMENT DIAGRAMS



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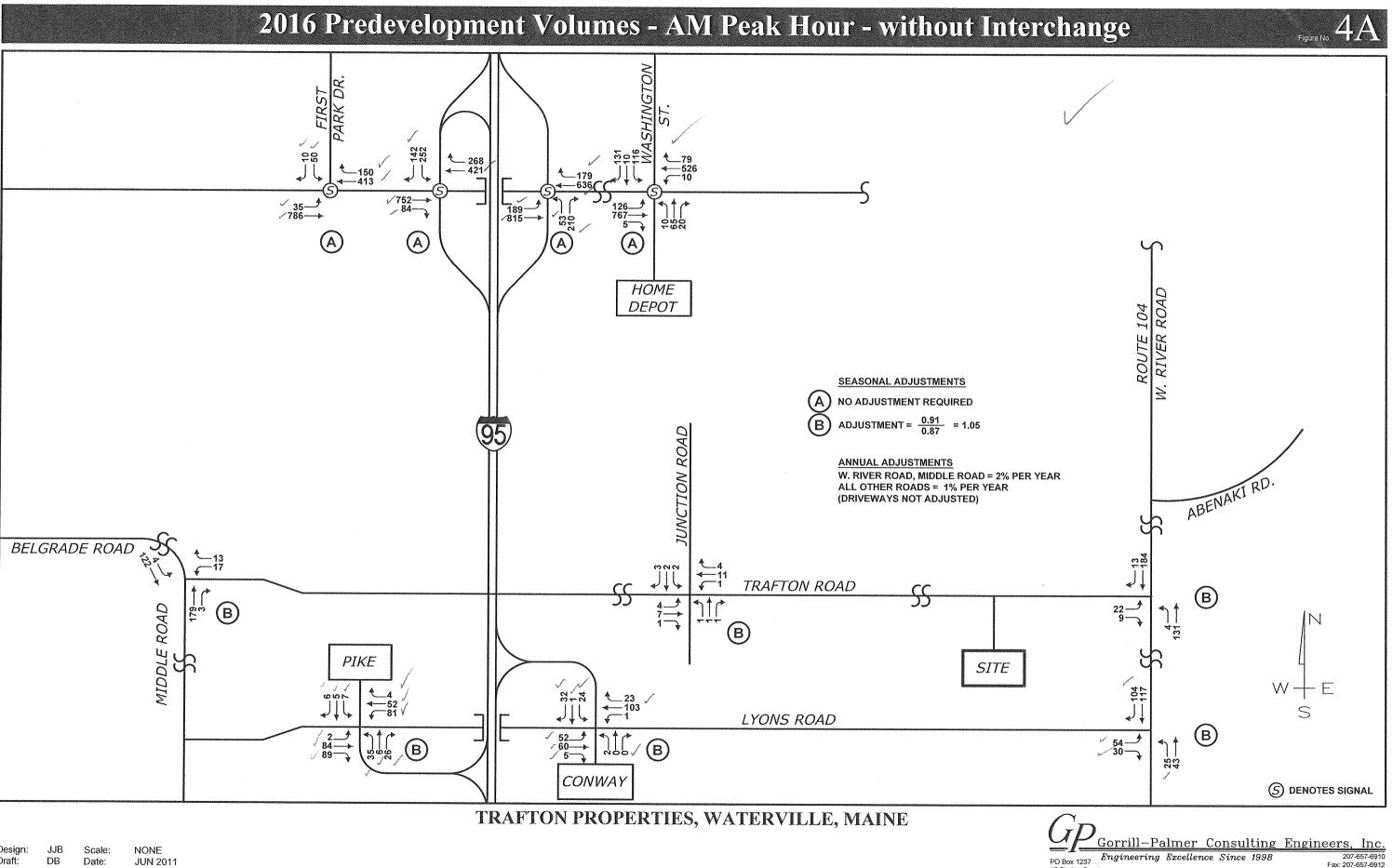
15 Shaker Road Gray, ME 04039



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15 Shaker Road Gray, ME 04039

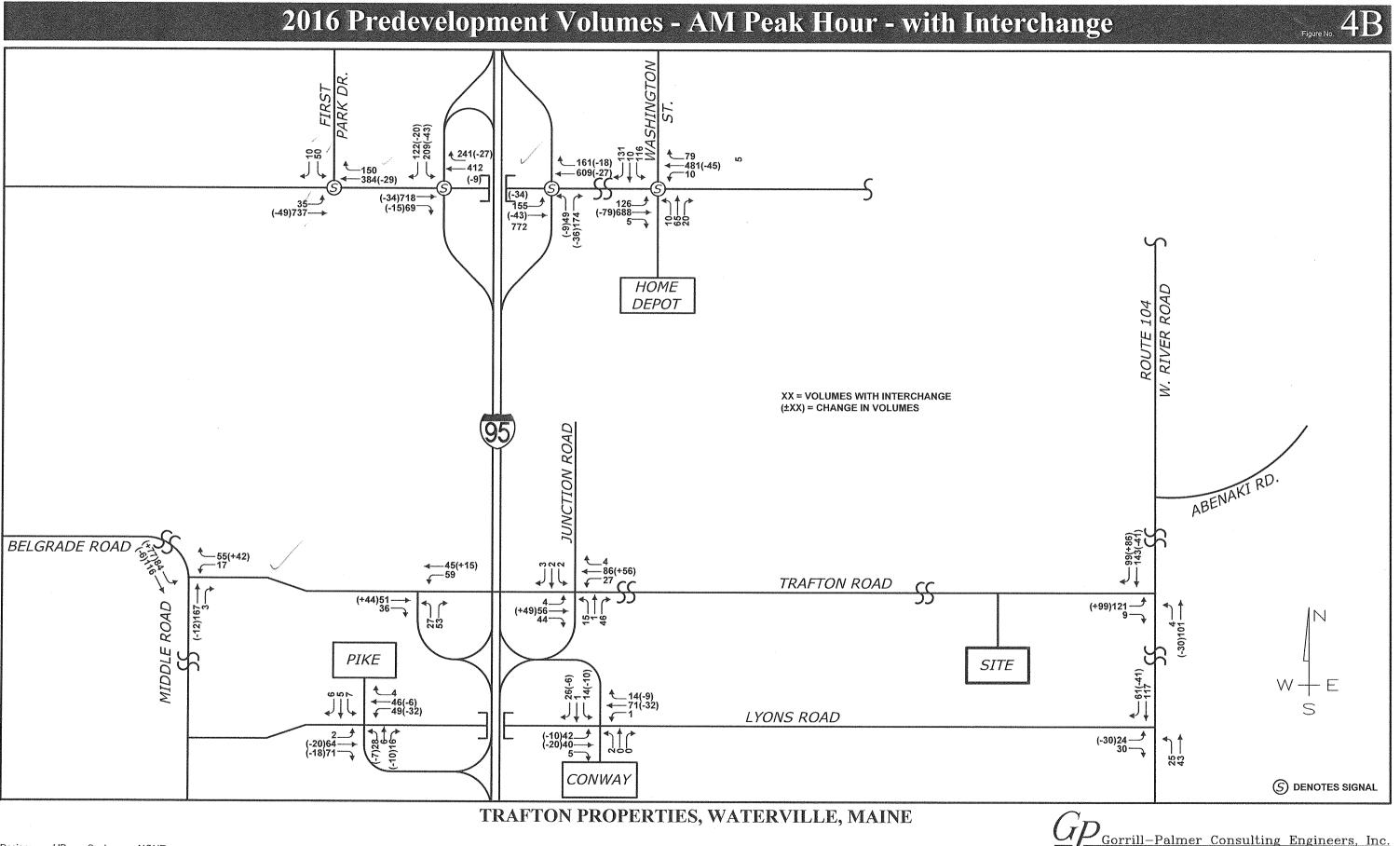
nailbox@gorrillpalmer.com www.gorrillpalmer.com



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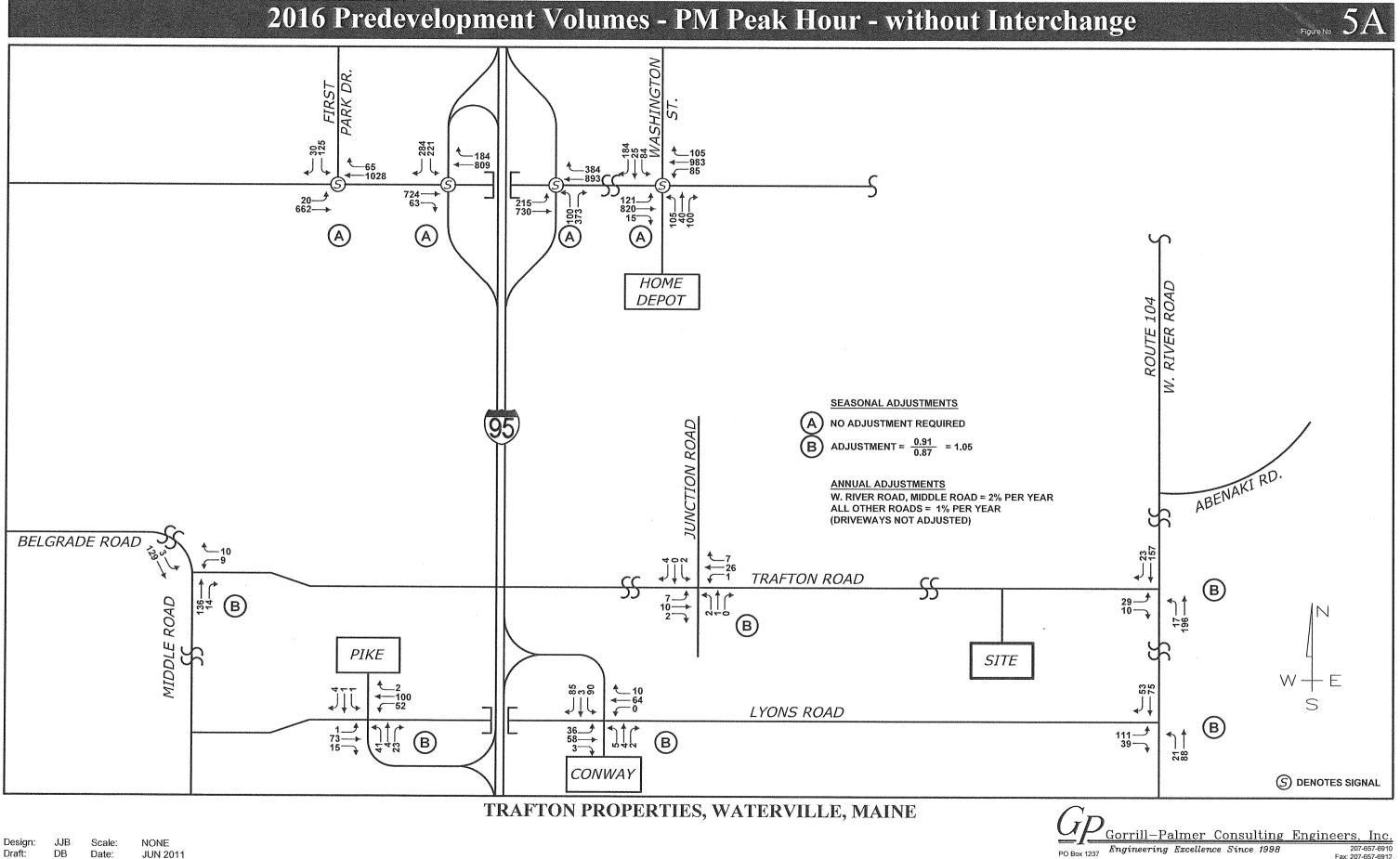
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mailbox@gorrillpalmer.com www.gorrillpalmer.com



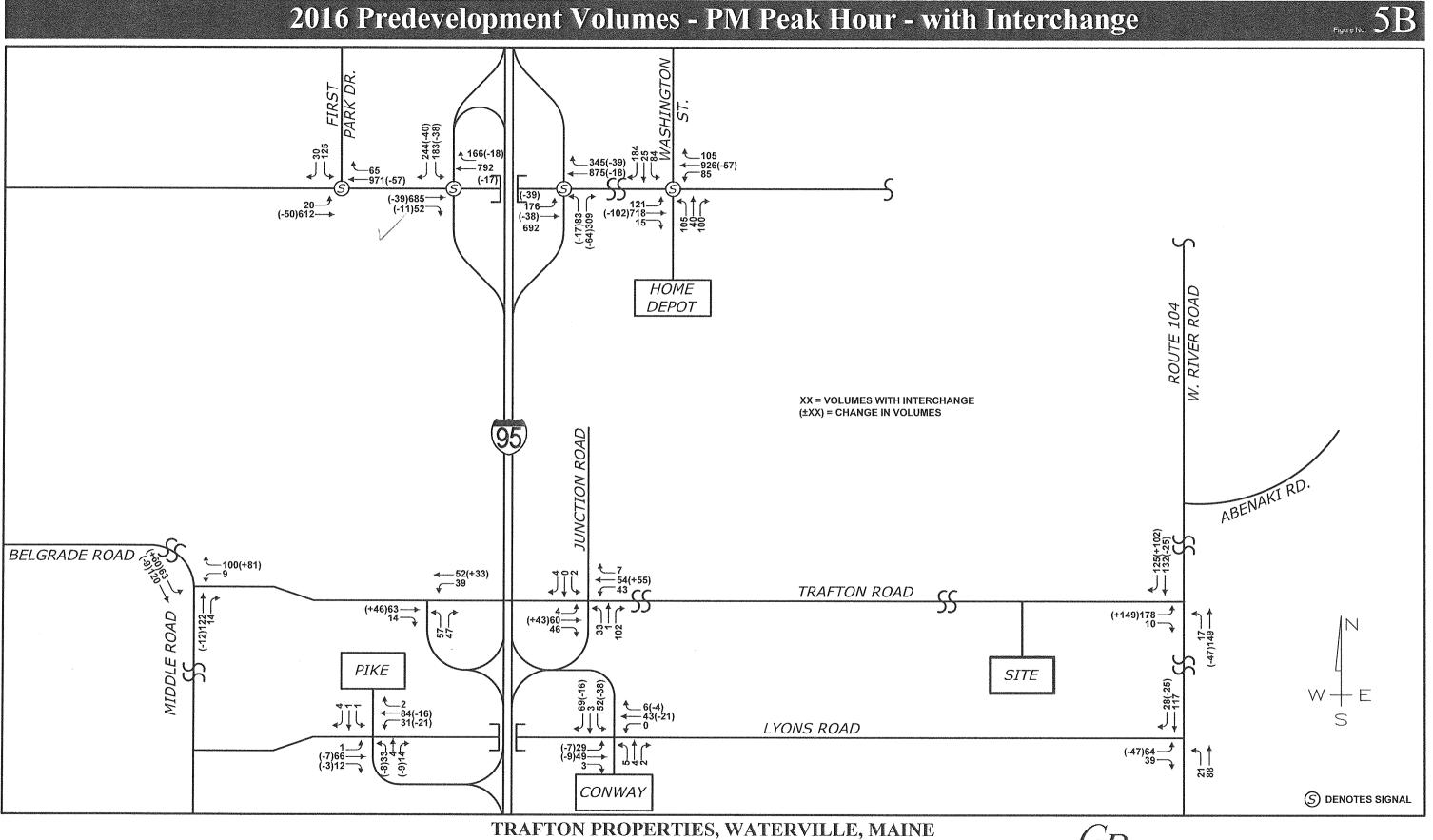
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PO Box 1237 Engineering Excellence Since 1998 15 Shaker Road Gray, ME 04039



Date: JUN 2011 Checked: RED File Name: 2233-03_TRAFF.dwg

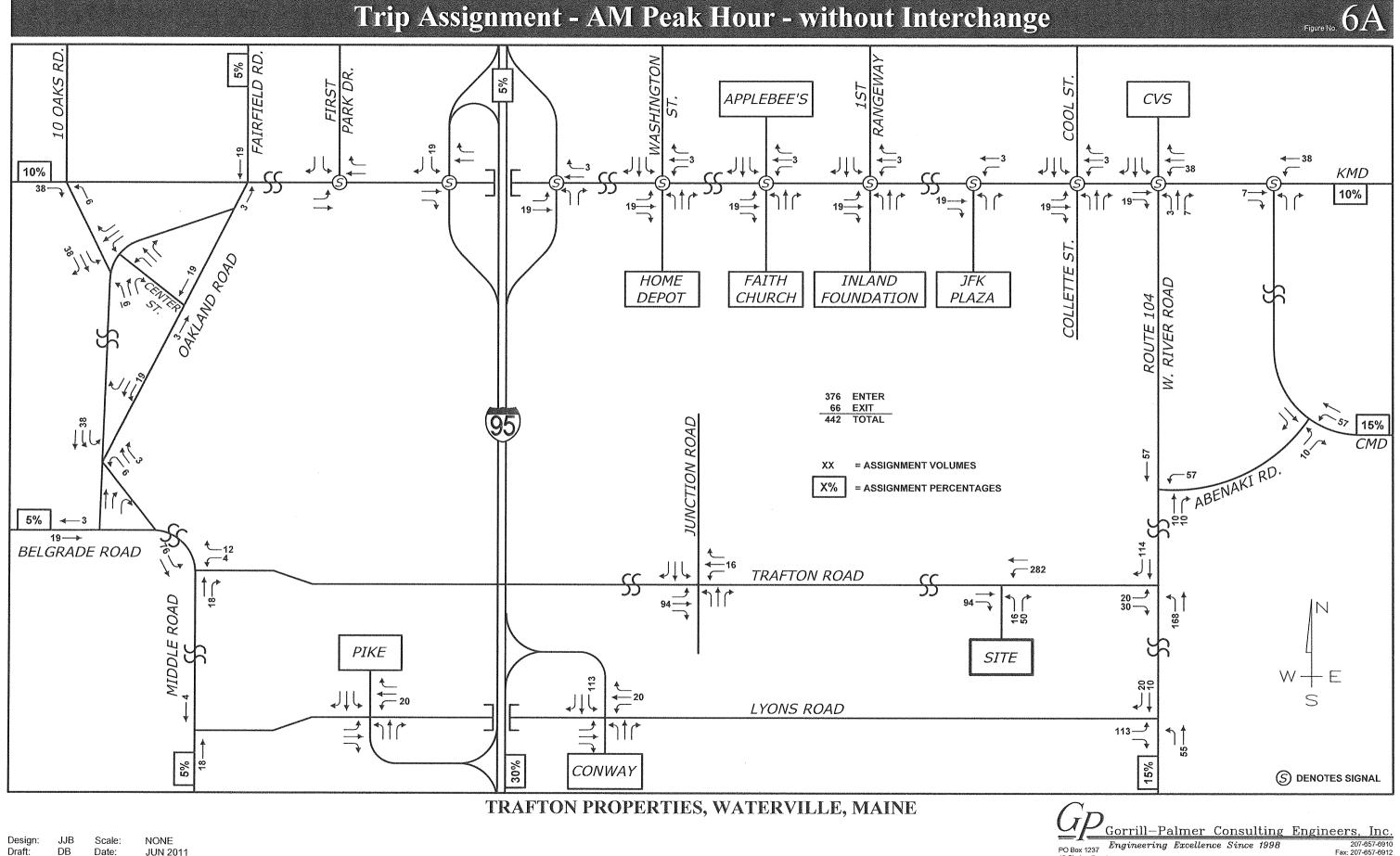
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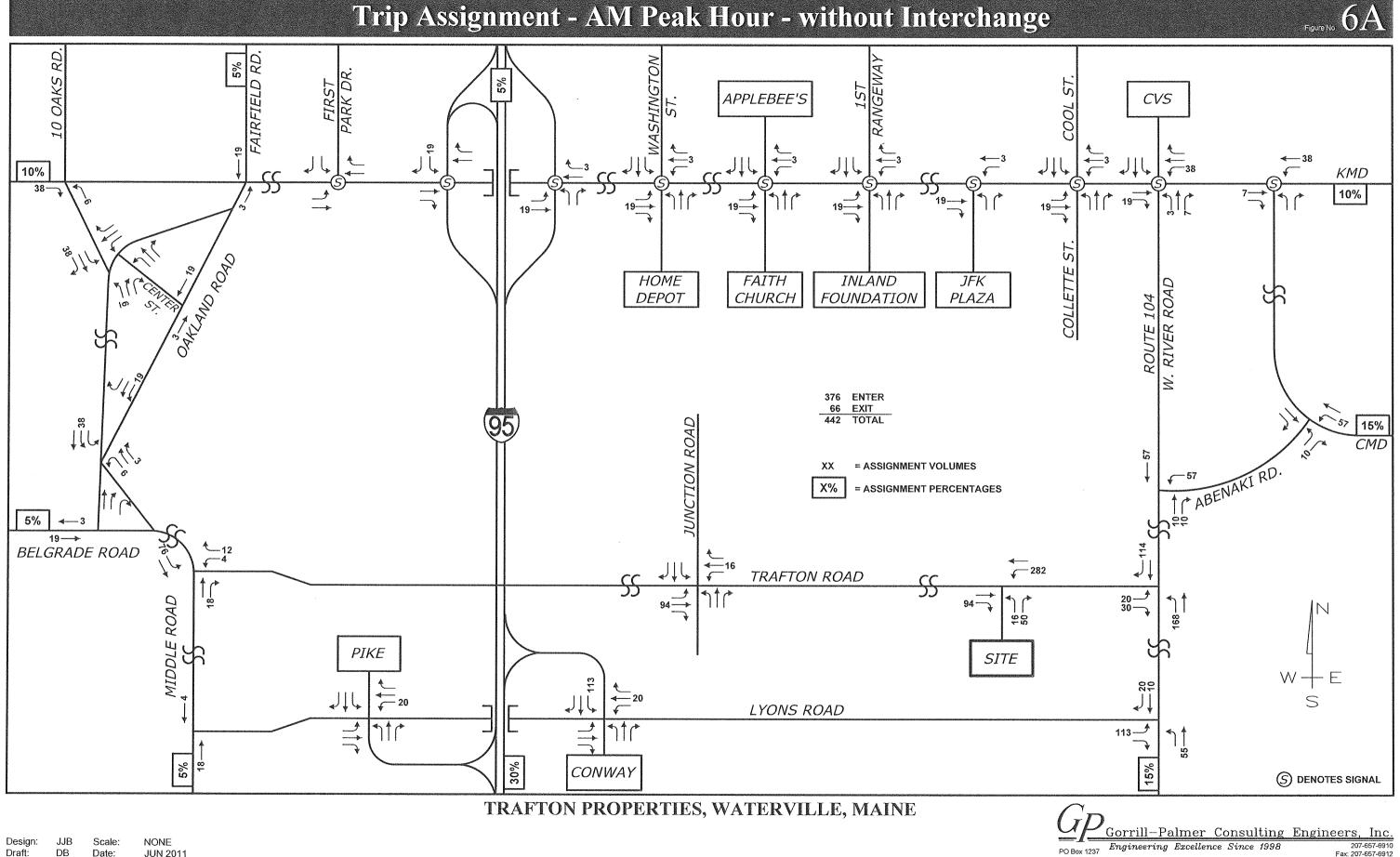
Gorrill-Palmer Consulting Engineers, Inc. PO Box 1237 Engineering Excellence Since 1998 -207-657-6910 Fax: 207-657-6912 15 Shaker Road Gray, ME 04039 mailbox@gorrillpalmer.com www.gorrillpalmer.com



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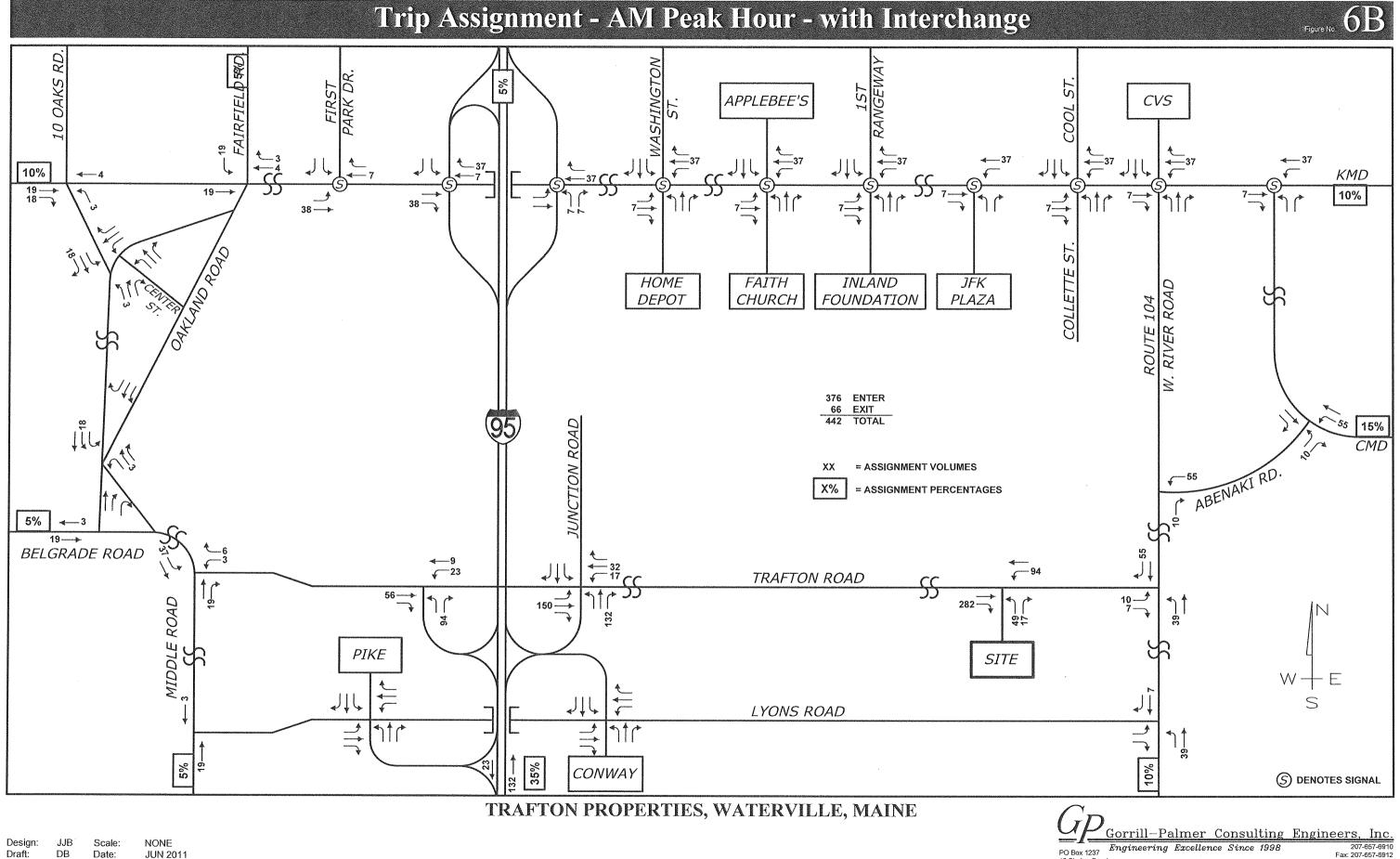
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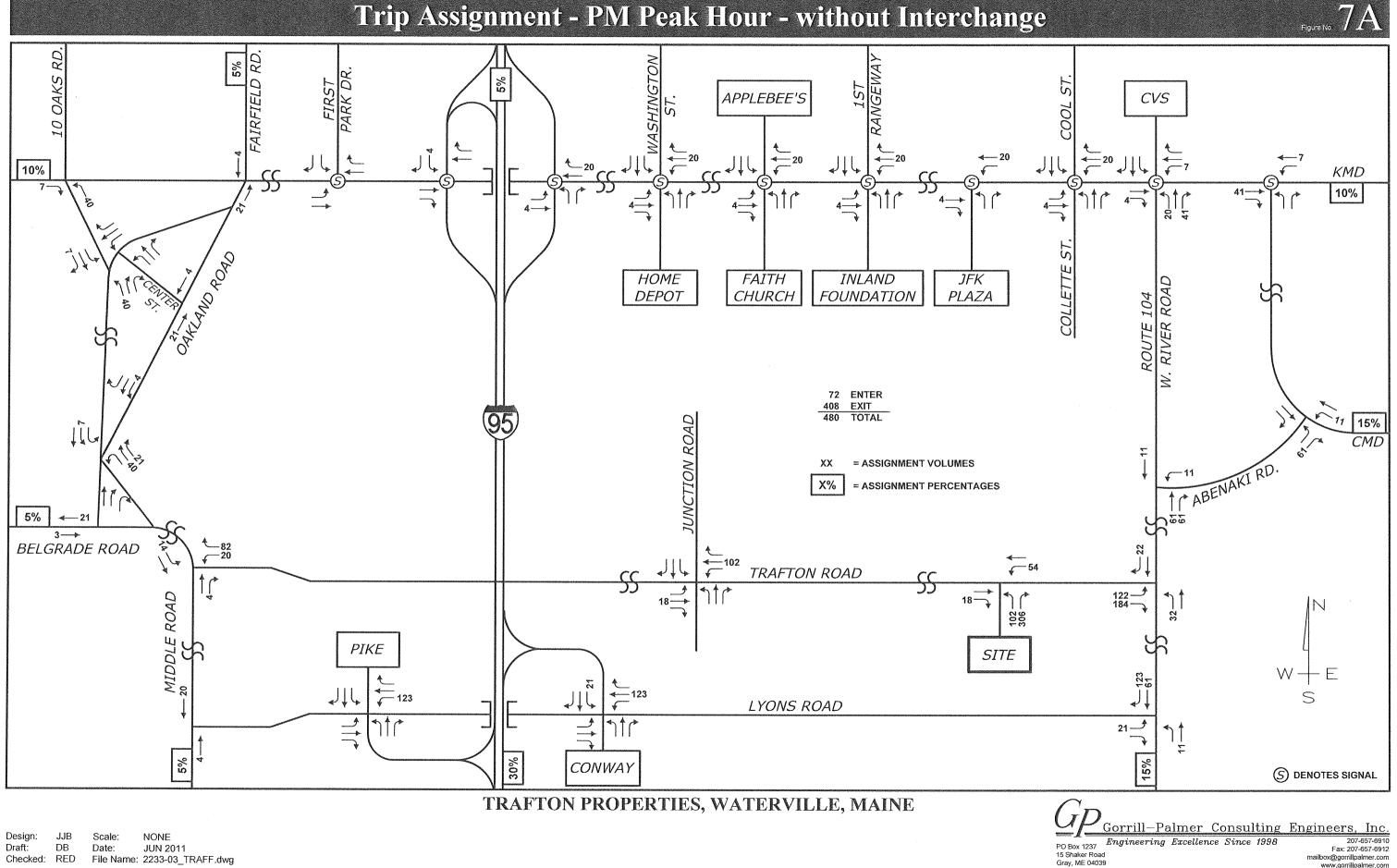
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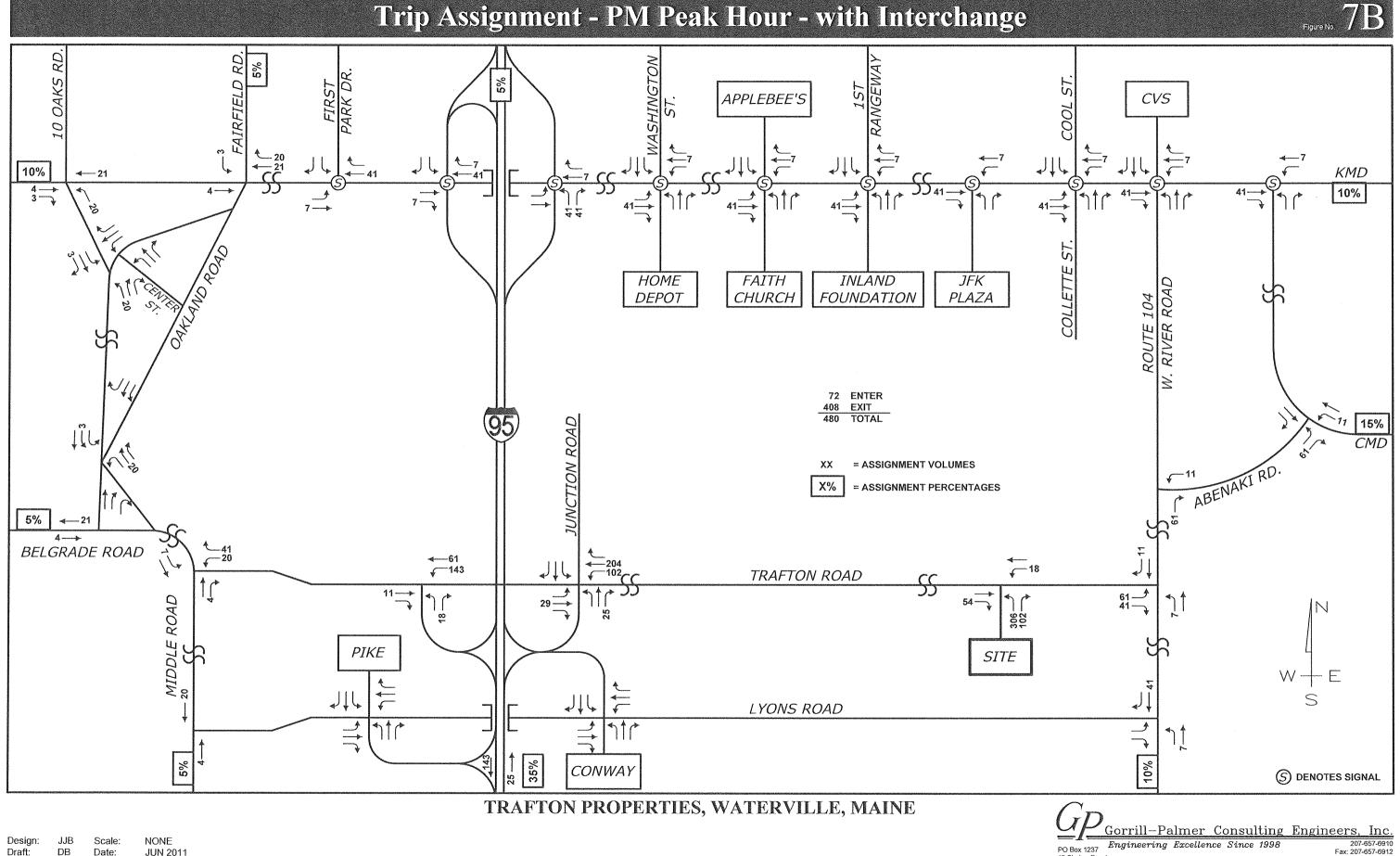
15 Shaker Road Gray, ME 04039

mailbox@gorrillpalmer.com www.gorrillpalmer.com



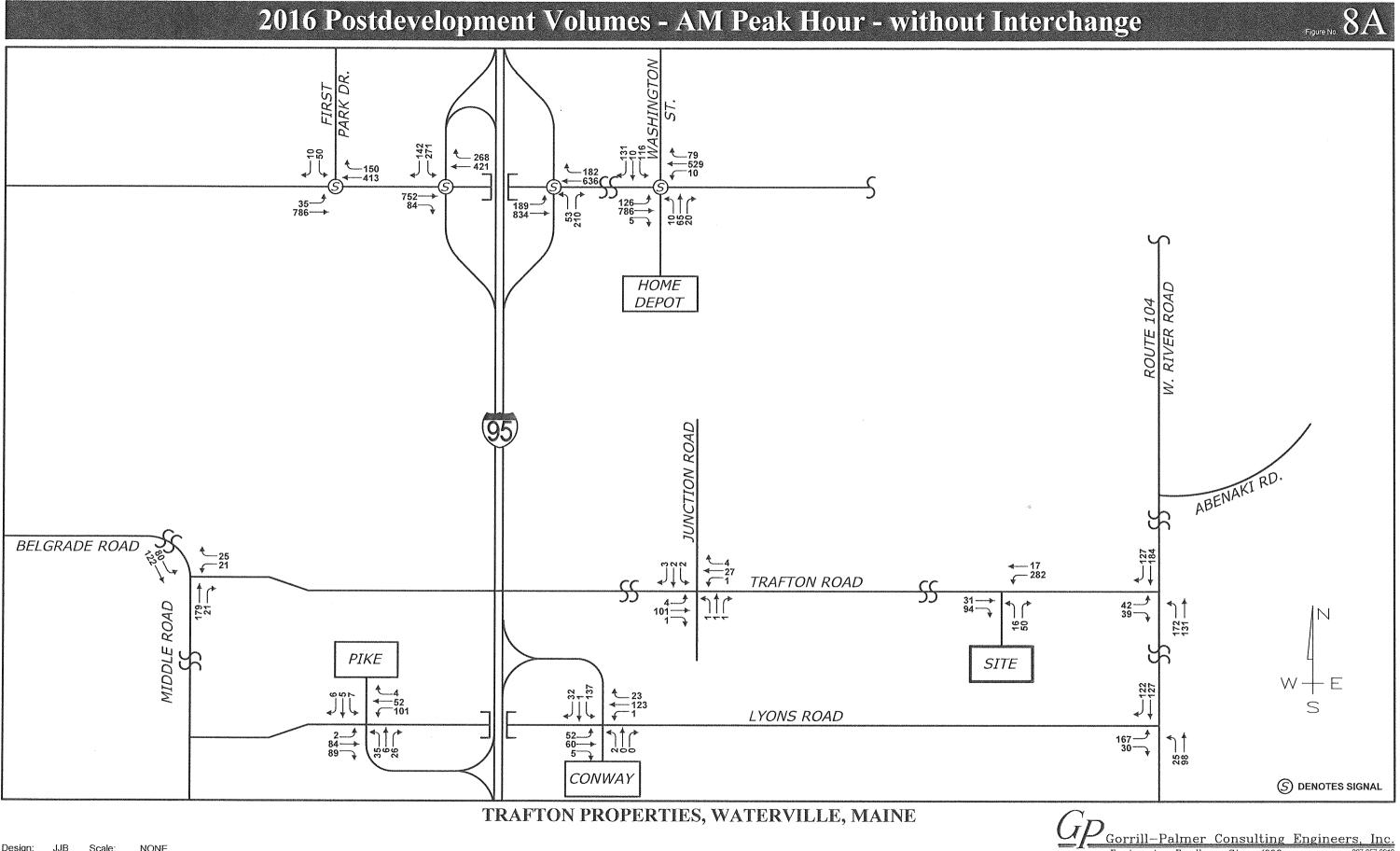
www.gorrillpalmer.com

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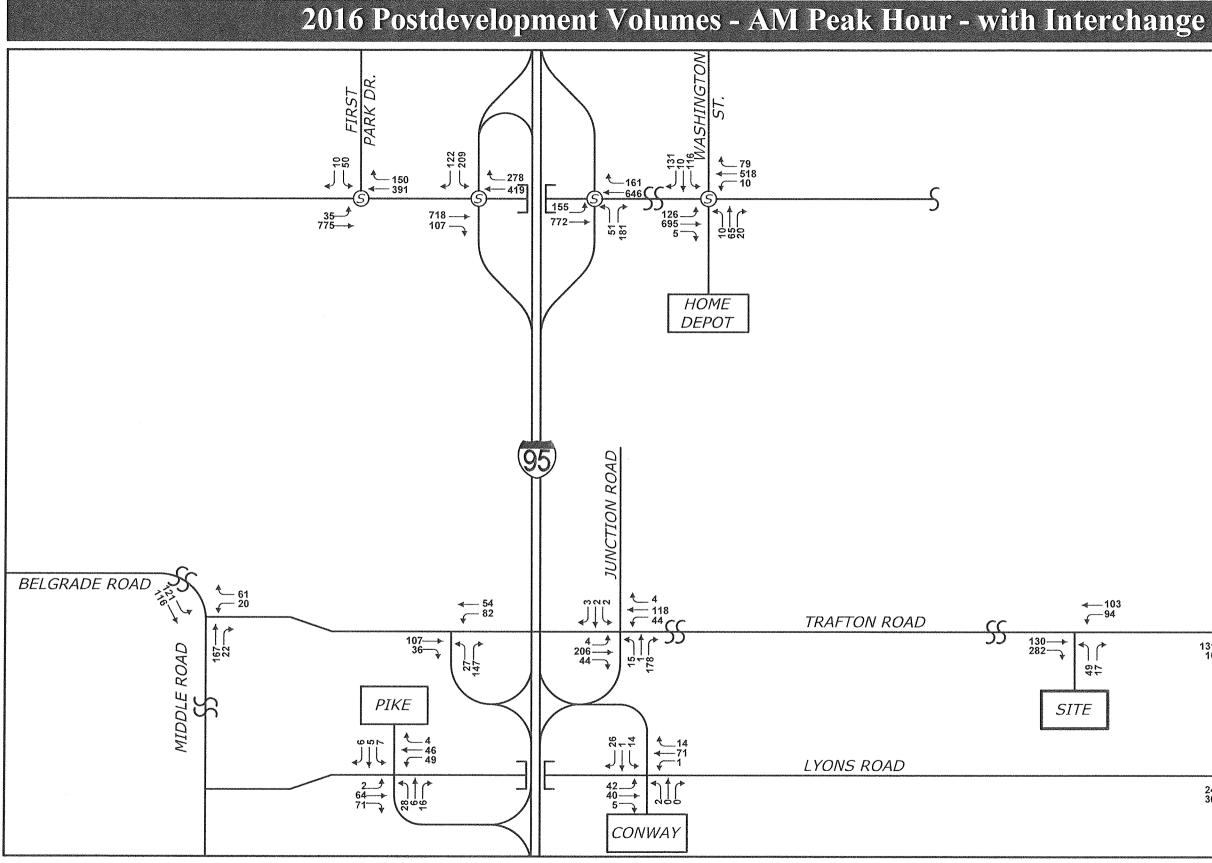
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15 Shaker Road Gray, ME 04039 mailbox@gorrillpalmer.com www.gorrillpalmer.com



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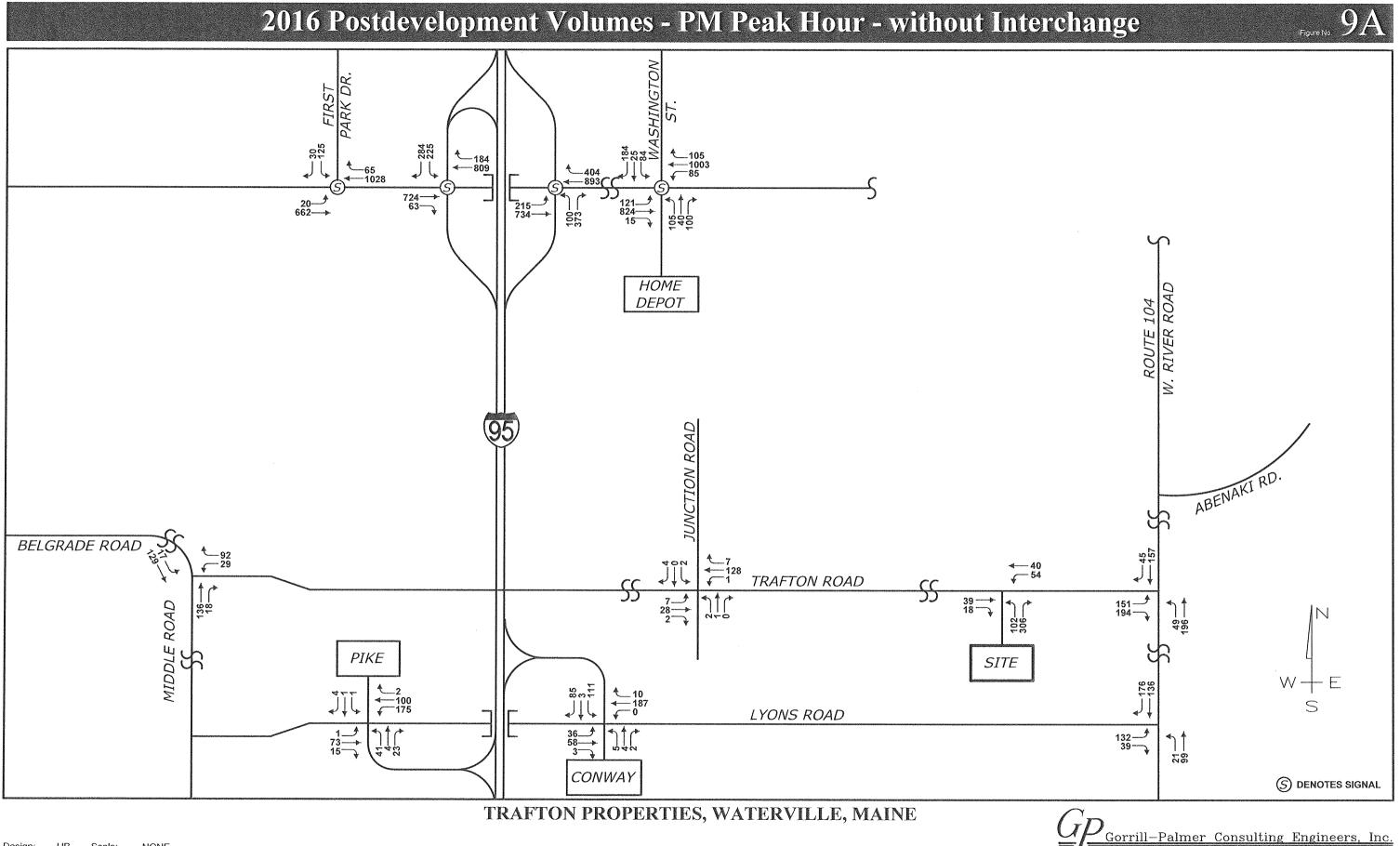


TRAFTON PROPERTIES, WATERVILLE, MAINE

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Figure No. 8B S RIVER ROA 94 ROU V. ABENAKI RD. -154 -143 FG J. 131-16-IN 643 W E S 24 30 82 82 S DENOTES SIGNAL Gorrill-Palmer Consulting Engineers, Inc.

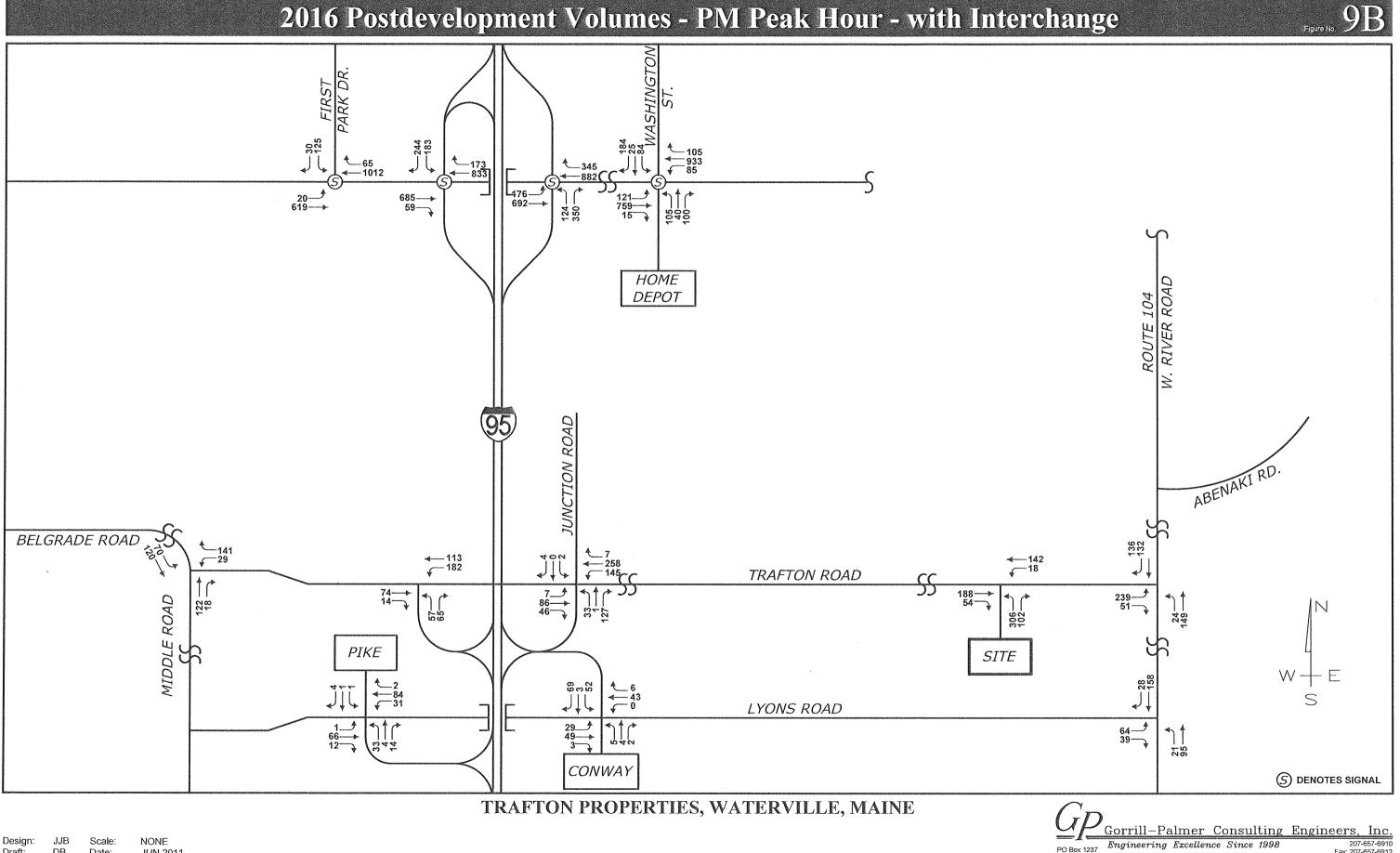
PO Box 1237 Engineering Excellence Since 1998 15 Shaker Road Gray, ME 04039



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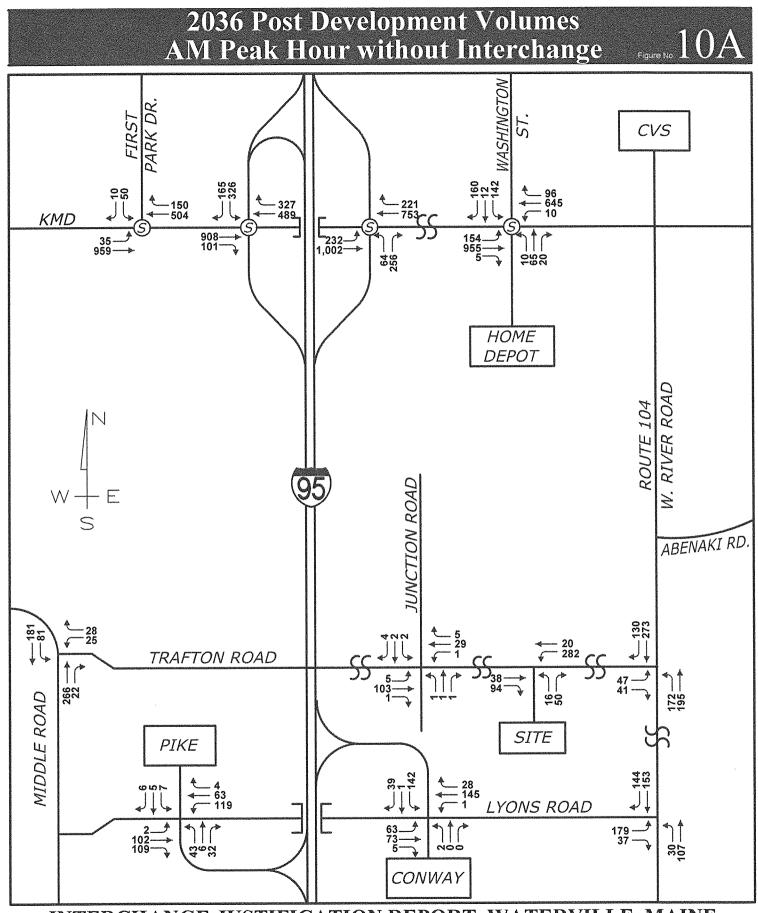
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PO Box 1237 Engineering Excellence Since 1998 15 Shaker Road Gray, ME 04039



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15 Shaker Road Gray, ME 04039



INTERCHANGE JUSTIFICATION REPORT, WATERVILLE, MAINE

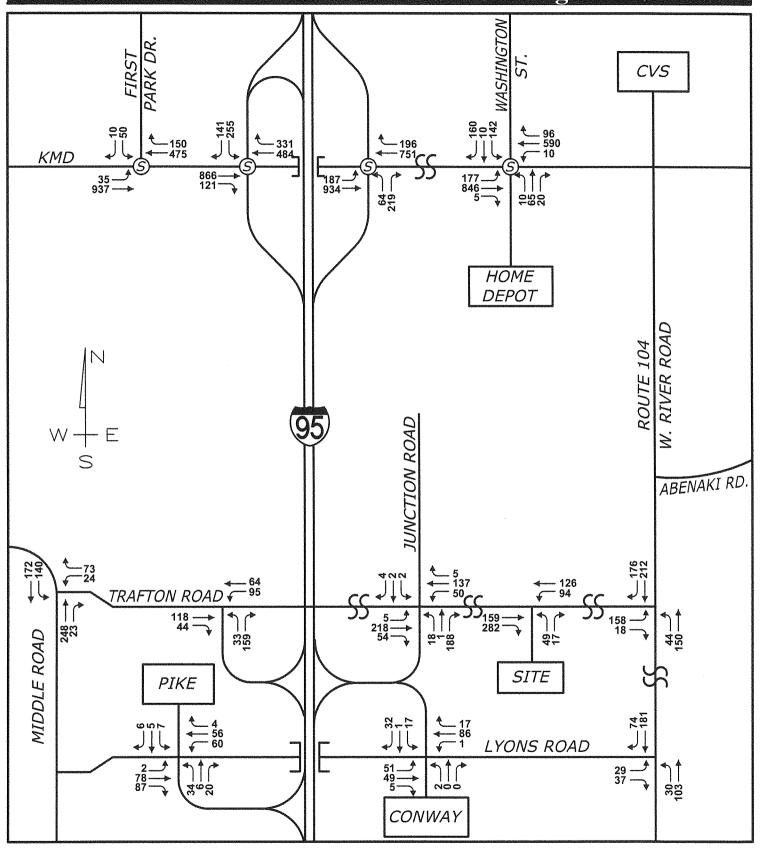
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2036 Post Development Volumes AM Peak Hour with Interchange

10B

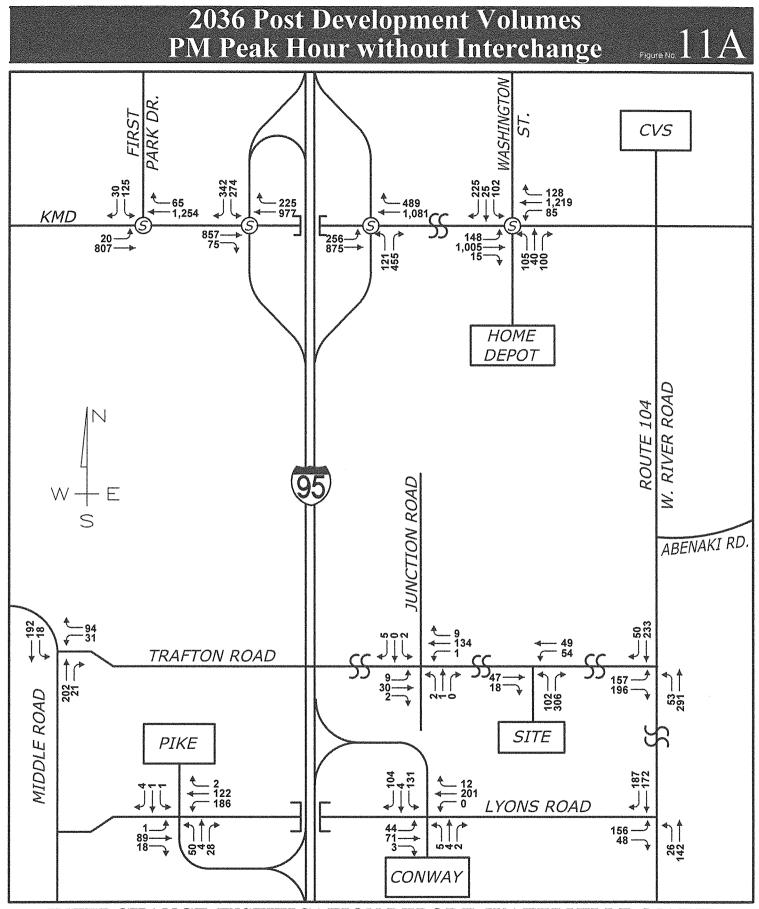
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INTERCHANGE JUSTIFICATION REPORT, WATERVILLE, MAINE

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INTERCHANGE JUSTIFICATION REPORT, WATERVILLE, MAINE

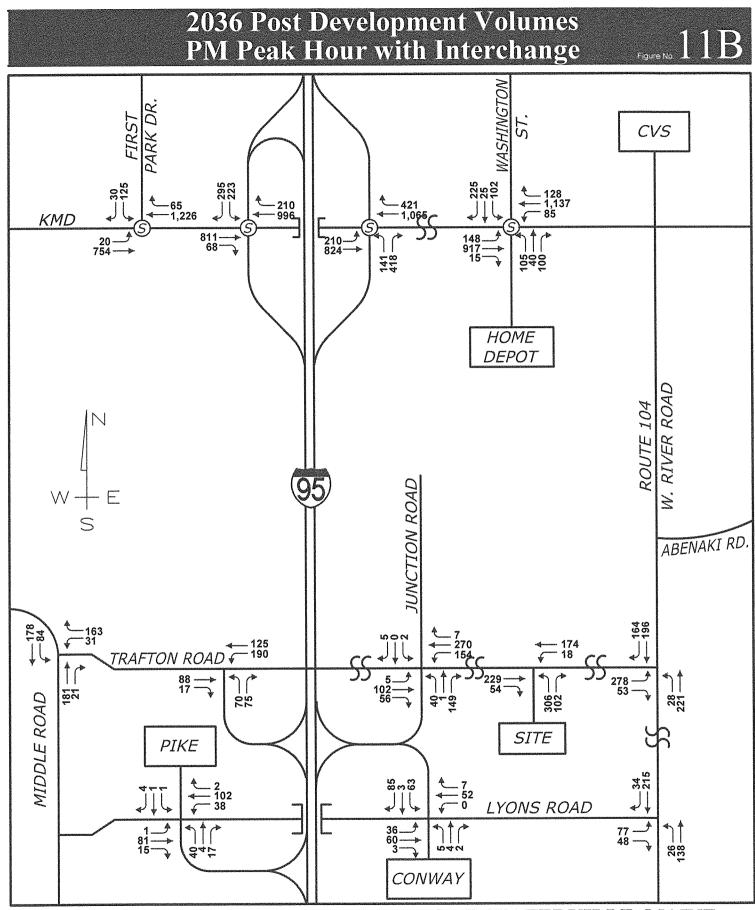
15 Shaker Road

Gray, ME 04039

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mailbox@gorrillpalmer.com www.gorrillpalmer.com



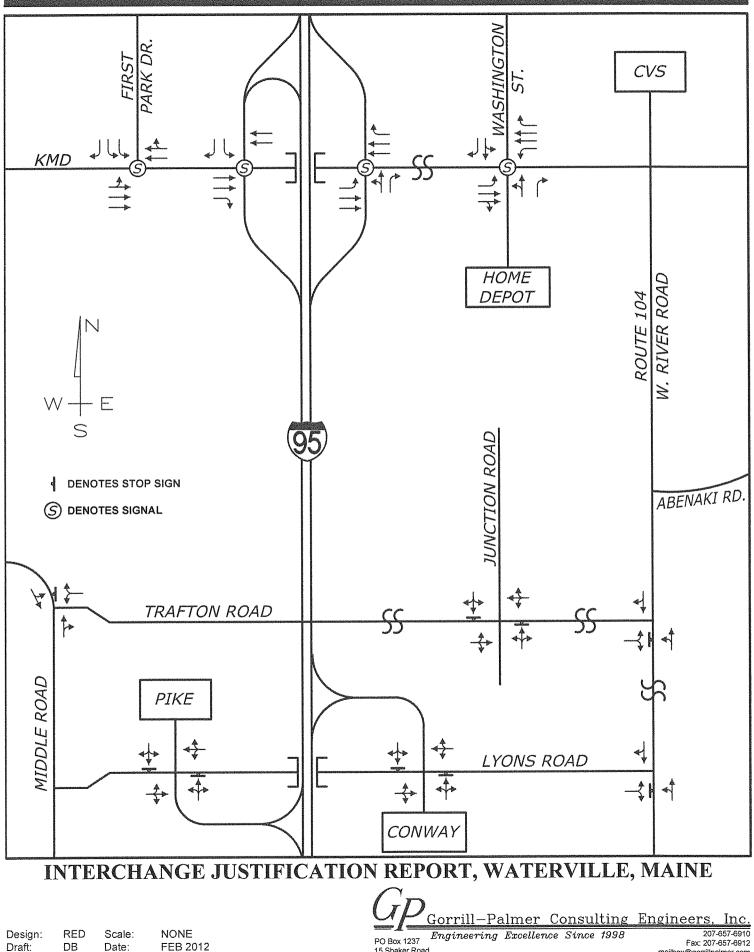
INTERCHANGE JUSTIFICATION REPORT, WATERVILLE, MAINE

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PO Box 1237 Engineering Ex 15 Shaker Road Gray, ME 04039

Lane Use - without Interchange



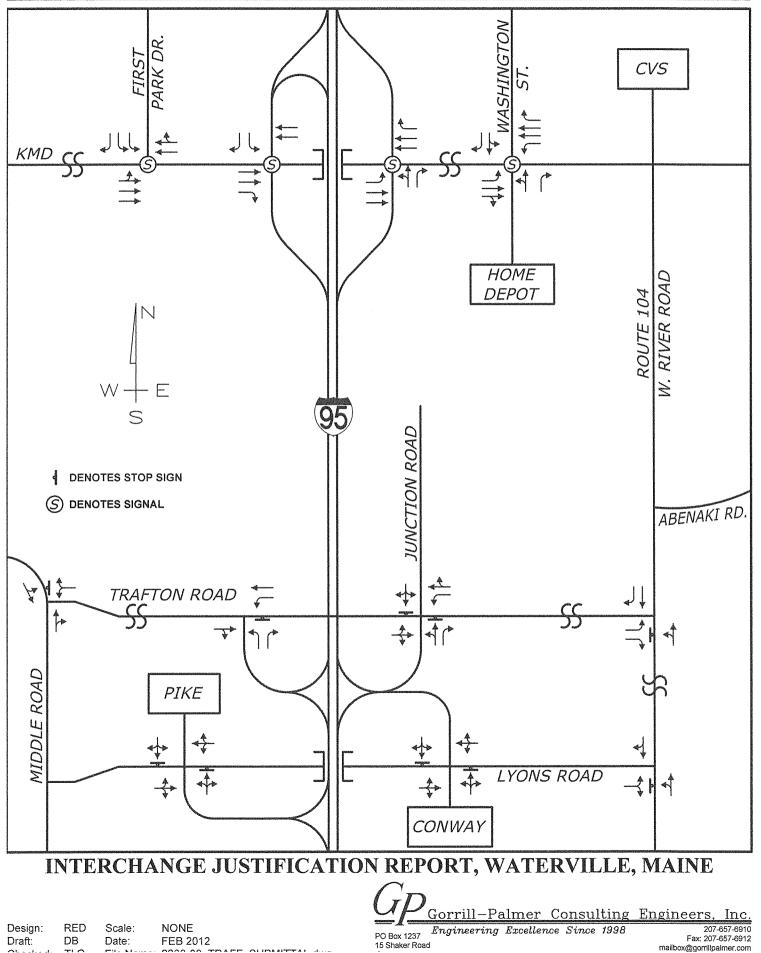
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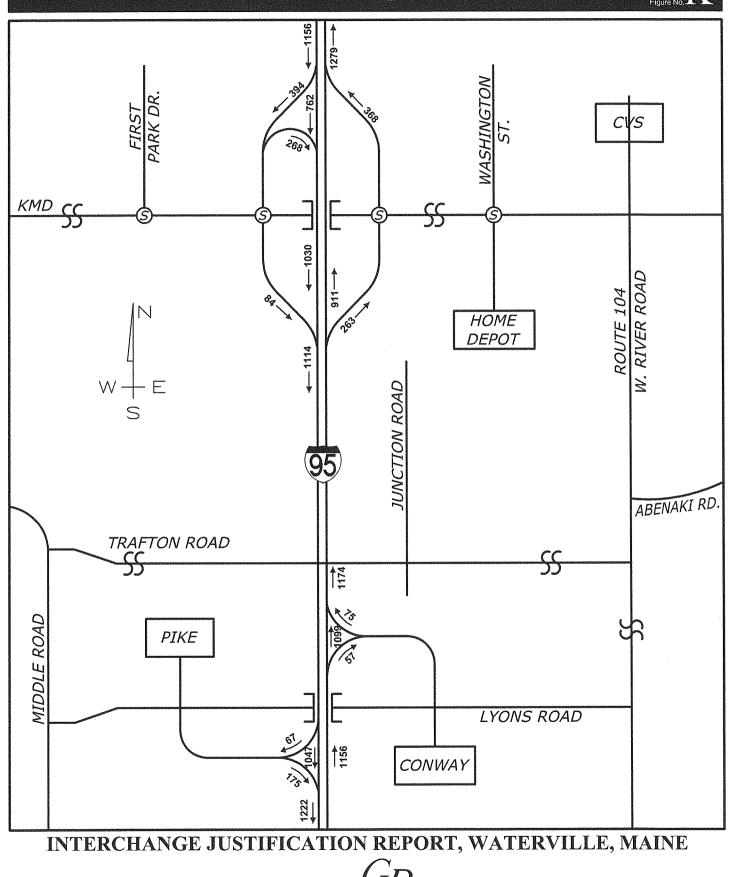
PO Box 1237 15 Shaker Road

Lane Use - with Interchange





2016 AM Peak Hour Predevelopment without Interchange



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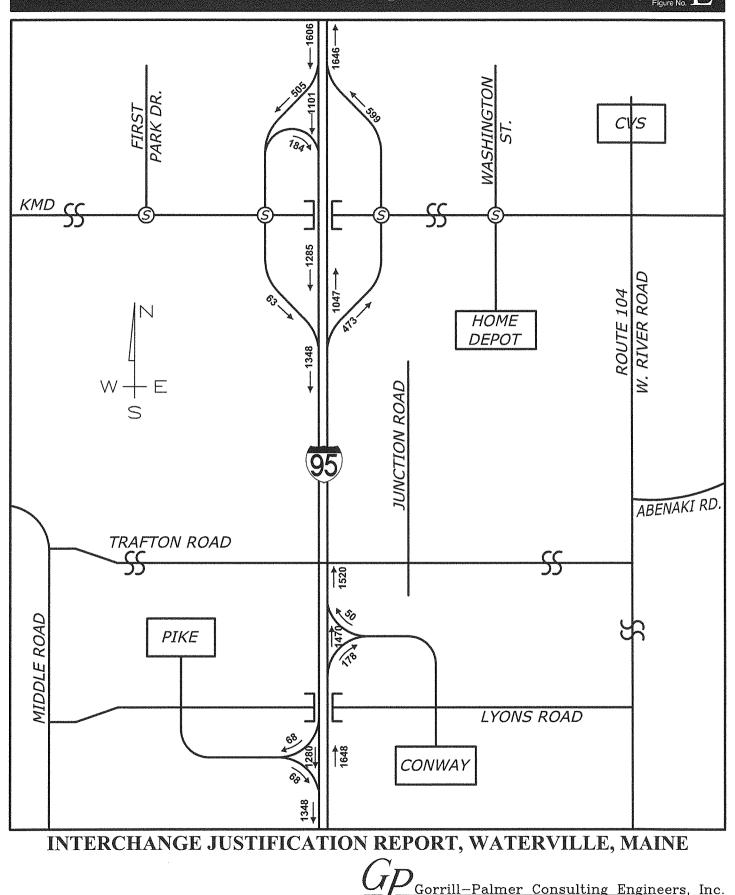
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Gray, ME 04039

207-657-6910 Fax: 207-657-6912 mailbox@gorrilipaimer.com www.gorrilipaimer.com

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2016 PM Peak Hour Predevelopment without Interchange



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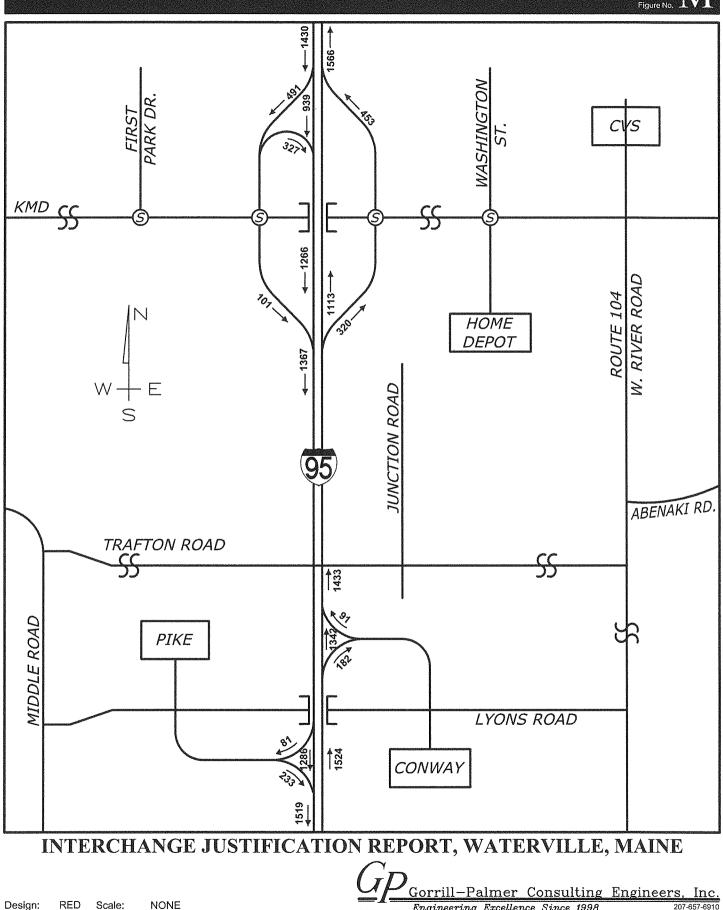
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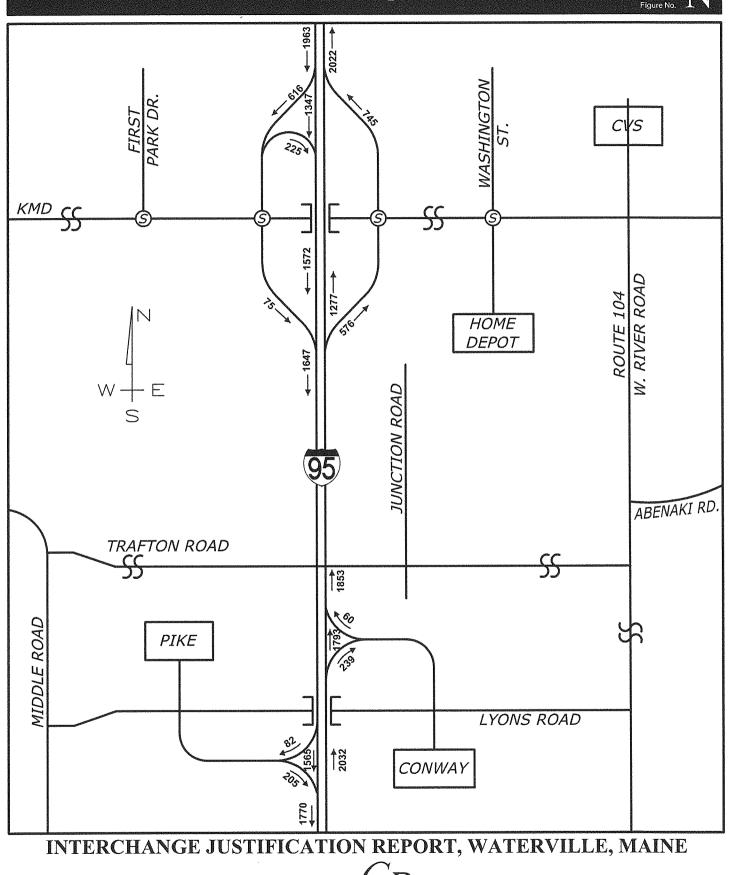
PO Box 1237 Engineering E 15 Shaker Road Gray, ME 04039

2036 AM Peak Hour Postdevelopment without Interchange



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2036 PM Peak Hour Postdevelopment without Interchange



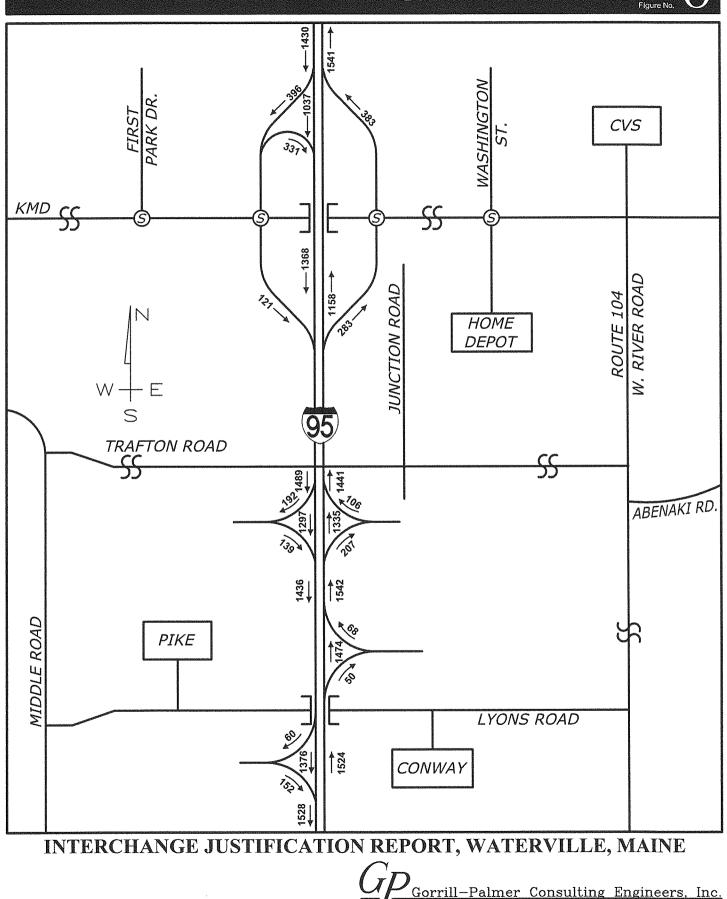
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Gray, ME 04039

207-657-6910 Fax: 207-657-6912 mailbox@gorrillpalmer.com www.gorrillpalmer.com

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2036 AM Peak Hour Postdevelopment with Interchange



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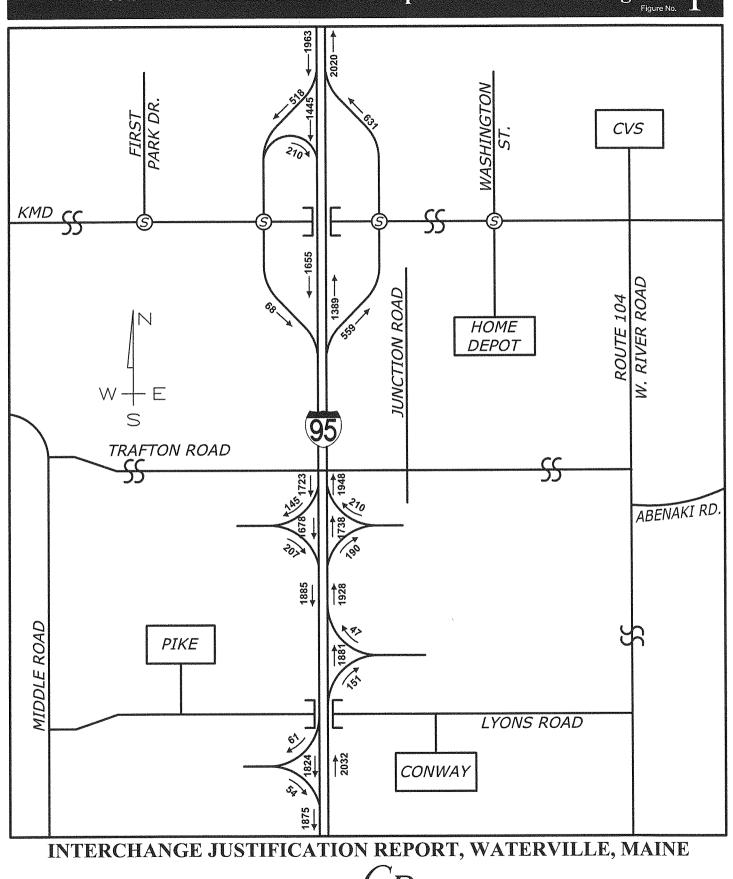
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2036 PM Peak Hour Postdevelopment with Interchange





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TRAFFIC MOVEMENT PERMIT



Paul R. LePage GOVERNOR STATE OF MAINE Department of Transportation 16 STATE HOUSE STATION AUGUSTA, MAINE 04333-0016

David Bernhardt

Trafton Properties
Southern side of the Trafton Road, Waterville
Waterville Tax Map 2, Lot 40
Light Industrial Development
Reg. 02-00068A-N
200+ PCE
Gorrill-Palmer Consulting Engineers, Inc.
Attn: Thomas L Gorrill, PE, PTOE
P.O. Box 1237
15 Shaker Rd.
Gray, Maine 04039
(207) 657-6910

Pursuant to the provision of 23 M.R.S.A. § 704-A and Chapter 305 of MaineDOT's Regulations, the Department of Transportation has considered the application of Trafton Properties with supportive data, agency review and other related materials on file.

PROJECT DESCRIPTION

The applicant proposes 450,000 square feet of light industrial development on the 69.50 acre parcel. The site would be access by a 30 foot wide full movement entrance on Trafton Road and would also be interconnected with the existing adjacent warehouse/shipping facility and its entrances on both the West River Road and Trafton Road. The development is expected to generate 442 AM and 480 PM weekday peak hour trip ends.

Findings

Based on a review of the files and related information, MaineDOT approves the Traffic Movement Permit Application of Trafton Properties subject to the following conditions:

MITIGATION

The following mitigation shall be constructed or implemented to MaineDOT's satisfaction prior to the opening of the facility, unless otherwise approved.

On-Site Mitigation

- A. A single full-movement driveway with a single entrance lane, and separate right turn and left turn exit lanes. Install a "Stop" sign, and stop line.
- B. Overhead lighting shall be provided at the driveway, if not existing, to illuminate the entrances / intersections. Overhead lighting shall have the average of 0.6 to 1.0 foot candles, with the

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Waterville - Trafton Properties

Reg. 02-00068-A-N

Page 2 of 3

maximum to minimum lighting ratio of not more than 10:1 and an average to minimum light level of not more than 4:1.

Off-Site Mitigation

- A. Construct a 12 foot wide, 100 foot long right turn from Trafton Road onto the West River Road with associated taper. This must also include all necessary signs and pavement marking to meet Department and City standards.
- B. Construct a 12 foot wide, 100 foot long right turn from West River Road onto the Trafton Road with associated taper. This must also include all necessary signs and pavement marking to meet Department standards.
- C. Construct either;
 - a. A full access interchange from Trafton Road to Interstate 95. The permittee would be responsible for developing all necessary plans, and reports for all federal and state approvals needed for such an interchange, or:
 - b. Construct the following turn lanes
 - 1. A 12 foot wide, 100 foot long right turn from southbound West River Road onto the Lyons Road with associated taper. This must also include all necessary signs and pavement marking to meet Department standards.
 - 2. A 12 foot wide, 100 foot long left turn from northbound West River Road onto the Trafton Road with associated taper and islands. This must also include all necessary signs and pavement marking to meet Department standards.
 - 3. Construct a 12 foot wide, 100 foot long left turn from West River Road onto the existing industrial driveway, with associated taper and islands. This must also include all necessary signs and pavement marking to meet Department standards.

<u>Overall</u>

A. Provide all necessary auxiliary signs, striping and pavement markings to implement the improvements described herein according to State of Maine and/or National standards.

B. All plantings and signs (existing and/or proposed; permanent and/or temporary) shall be placed and maintained such that they do not block available sight distances and do not violate the State's "Installations and Obstructions" law. No signage or plantings shall be allowed within the "clear zone" if they constitute a deadly fixed object as determined by MaineDOT. All signs shall meet MRSA Title 23, Chapter 21, Section 1914: "On-Premise Signs".

C. If the specific uses identified in this permit are revised or the number of permitted uses is exceeded, the applicant shall request in writing from the department a decision of what impacts those changes will have on the permit. The applicant will then be required to submit those changes for review and approval and additional mitigation as a result of those changes may be required at the expense of the applicant. If the permitted uses are determined to generate less traffic than the permitted traffic, the applicant may request the required mitigation be reevaluated and potentially reduced in size and scope.

D. Because the proposed project affects the state highway and drainage systems and requires improvement to that system, the applicant must obtain approval of the design plans and coordinate work through MaineDOT's State Traffic Engineer, who can be reached at (207)-624-3620 in Augusta.

Waterville – Trafton Properties Reg. 02-00068-A-N Page 3 of 3

By:

<u>Stephen Landry, P.E.</u> Assistant State Traffic Engineer

Date: 11/15/11

COLLISION HISTORY

	Maine Department Of Tr O	Transportation - Traffic Engineering, Crash Summary Report	Crash Records Section	e v v v v v v v v v trouver e v v v v v v
	٣	Report Selections and Input Parameters	² arameters	
KEPOKI SELECTIONS	Section Detail	Crash Summary II	1320 Included	
REPORT DESCRIPTION 95N				
<u>REPORT PARAMETERS</u> Year 2008, Start Month 1 thr Route: 0095X	REPORT PARAMETERS Year 2008, Start Month 1 through Year 2010 End Month: 12 Route: 0095X Start Node: 28800 End Node: 28913	2 Start Offset: 0 End Offset: 0	Exclude First Node	
11/29/2011 12:25:08 PM				

Maine Department Of Transportation - Traffic Engineering, Crash Records Section Crash Summary I

	Nodes	es									
Node Route - MP Node Description	U/R	Total		Injury Crashes	Crasl	les	Percent	ent Annual M Crash		Critical	CRF
	Ŭ	Crashes	¥	4	ш	υ	PD Injury	Ent-Veh	Rate	Rate	
28800 0095X - 117,65 Non-Int I 95 NB	-	0	0	0	0	0	0	0.0 5.431 Statewide Crash Rate:	0.00	0.14	0.00
28802 0095X - 119.16 Int of 195 NB, RAMP OFF TO LYONS RD	~~	0	0	0	0	0	0	0.0 5.431 Statewide Crash Rate:	0.00	0.14	0.00
28803 0095X - 119.30 Int of 195 NB, RAMP ON FROM LYONS RD	~~	0	0	0	0	0	0	0.0 5.194 Statewide Crash Rate:	0.00	0.14	0.00
28804 0095X - 121.03 BRG 5784, I 95 NB under DRUMMOND RD	~~	0	0	0	0	0	0	0.0 5.194 Statewide Crash Rate:	0.00	0.14	0.00
28805 0095X - 122.13 BRG 5785,195 NB under TOWN FARM RD	~	0	0	0	0	0	0	0.0 5.194 Statewide Crash Rate:	0.00	0.14	0.00
28806 0095X - 122.76 TL - Sidney, Waterville	~	0	0	0	0	0	0	0.0 5.194 Statewide Crash Rate:	0.00	0.14	0.00
28807 0095X - 122.99 BRG 5812, I 95 NB under TRAFTON RD	←	0	0	0	0	0	0	0.0 5.194 Statewide Crash Rate:	0.00	0.14	0.00
28886 0095X - 123.92 Non-Int I 95 NB	~	0	0	0	0	0	0	0.0 5.194 Statewide Crash Rate:	0.00	0.14	0.00
28808 0095X - 124.20 BRG 5813, I 95 NB over WEBB RD	-	0	0	0	0	0	0	0.0 5.194 Statewide Crash Rate:	0.00	0.14	0.00
28587 0095X - 125.19 Non-Int I 95 NB	~~	0	0	0	0	0	0	0.0 5.194 Statewide Crash Rate:	0.00 0.04	0.14	0.00
28809 0095X - 125.62 Int of 195 NB, RAMP OFF TO KENNEDY MEM DR	~~		0	0	Ō	0	-	0.0 5.194 Statewide Crash Rate:	0.06	0.14	0.00
28811 0095X - 126.07 Int of 195 NB, RAMP ON FROM KENNEDY MEM DR		2	0	0	~ -	0	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	0.0 6.114 Statewide Crash Rate:	0.11	0.13	0.00
28913 0095X - 126.19 TL - Oakland, Waterville	~~	0	0	0	0	0	0	0.0 6.114 Statewide Crash Rate:	0.00	0.13	0.00
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Node No	Node		Begin - End		Length		Crashes	KA	B	ပ	PD	Injury	HMVW			
28800 28802 2656331 Non-Int I 95 NB	8802	2656331	0 - 1.51	0095X - 117.65 INT 95 NB	1.51 1	~~	13 (0	~	 .	10	23.1 Statew	23.1 0.08201 Statewide Crash Rate:	52.84 61.32	99.96	0.00
28802 28803 2656289 0 - 0.14 Int of 195 NB, RAMP OFF TO LYONS RD	8803 24MP OI	2656289 FF TO LYON	s RD 0.14	0095X - 119.16 INT 95 NB	0.14 1		-	0	0	0	~	0.0 Statew	0.0 0.00691 Statewide Crash Rate:		177.28	0.00
28803 28804 2656303 0 - 1.73 Int of 1 95 NB, RAMP ON FROM LYONS RD	8804 34MP 0	2656303 N FROM LYC	0 - 1.73 NNS RD	0095X - 119.30 INT 95 NB	1.73 1	~	12 (0	0	~~ .	~	8.3 Statew	8.3 0.08986 Statewide Crash Rate:	44.52 61.32	98.32	0.00
28804 28805 206248 0 - 1.10 BRG 5784, I 95 NB under DRUMMOND RD	8805 5 NB und	206248 er DRUMMO	0-1.10 ND RD	0095X - 121.03 INT 95 NB	1.10 1	~	10	0	2	-	7	30.0 Statew	.0 0.05713 Statewide Crash Rate:	58.34 61.32	107.13	0.00
28805 28806 2656295 0 - 0.63 BRG 5785, I 95 NB under TOWIN FARM RD	8806 3 NB und	2656295 er TOWN FA	0 - 0.63 RM RD	0095X - 122.13 INT 95 NB	0.63 1	~	8	0	2	0	Q	37.5 Statew	37.5 0.03272 Statewide Crash Rate:	81.49 61.32	120.61	0.00
28806 28807 2656311 TL - Sidney, Waterville	8807 aterville	2656311	0 - 0.23	0095X - 122.76 INT 95 NB	0.23 1		20	0	-	0	~~	50.0 Statew	50.0 0.01195 Statewide Crash Rate:	55.81 61.32	153.92	00.00
28807 28886 206251 0 - 0.93 BRG 5812, 195 NB under TRAFTON RD	8886 5 NB und	206251 er TRAFTON	0 - 0.93 IRD	0095X - 122.99 INT 95 NB	0.93 1	Ŷ	9	0	0	0	Q	16.7 Statew	16.7 0.04830 Statewide Crash Rate:	41.40	110.86	0.00
28808 28886 206252 BRG 5813, 1 95 NB over WEBB RD	8886 5 NB ove	206252 r WEBB RD	0 - 0.28	0095X - 123.92 INT 95 NB	0.28 1	Y	0 0	0		0	Q	16.7 Statew	16.7 0.01454 Statewide Crash Rate:	137.52 61.32	146.43	0.00
28587 28808 2656321 Non-Int I 95 NB	8808	2656321	0 - 0.99	0095X - 124.20 INT 95 NB	0.99 1) ~	0	0	0	7	0.0 Statew	0.0 0.05142 Statewide Crash Rate:	45.38 61.32	109.44	0.00
28587 28809 Non-Int 95 NB	8809	206105	0 - 0.43	0095X - 125.19 INT 95 NB	0.43 1	1-). 2	0	~	0	Q	14.3 Statew	14.3 0.02233 Statewide Crash Rate:	104.47	131.79	0.00
28809 28811 2656271 0 - 0.45 Int of I 95 NB, RAMP OFF TO KENNEDY MEM DR	8811 RAMP OI	2656271 FF TO KENN	0 - 0.45 EDY MEM	0095X - 125.62 INT 95 NB	0.45 1	.	е С	0	0	0	ი	0.0 Statew	0.0 0.01680 Statewide Crash Rate:	59.51 61.32	141.25	0.00
28811 28913 2656333 0 - 0.12 Int of 1 95 NB, RAMP ON FROM KENNEDY MEM DR	8913 RAMP OI	2656333 N FROM KEN	0 - 0.12 NEDY MEM	0095X - 126.07 INT 95 NB	0.12 1		5	0	0	0	2	0.0 Statew	0.0 0.00734 Statewide Crash Rate:	90.87 61.32	174.57	0.00
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				Grand Totals:	8.54	ω	80 (0	0	ო	65	18.8	0.44132	60.42	84.20	0.72

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Crash Summary I

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		Crash Date	01/28/2008	11/30/2008	06/13/2008	12/23/2009	02/10/2008	08/16/2010	08/09/2009	01/02/2010	01/02/2010	01/18/2010	11/28/2010	05/02/2009	08/05/2008	06/26/2009	12/29/2009	05/16/2008	11/19/2010	01/01/2010	02/17/2008	12/24/2009	11/12/2008	02/20/2009	09/08/2010	12/21/2008
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5		Total Crashes	13													~	12									
		Route - MP	0095X - 117.65													0095X - 119.16	0095X - 119.30									
		Offset Begin - End	0 - 1.51													0 - 0.14	0 - 1.73									
a and the second se		Element	2656331													2656289	2656303									
		End Node	28802													28803	28804									
		Start Node	28800													28802	28803									

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04 04

120.94 121

09/28/2008 08/10/2010

2008-23816 2010-16634

	Injury Degree	ЪО	PD	Dd	മ	O	Dd	DD	ЪD	ß	PD	മ	Dd	A	മ	ЪD	ЪD	Dd	DA	മ	PD	DG	ЪО	РО	ЪО	Dd	A	DD	Q	മ	DA	Dd	PD
	Crash Mile Point	121.28	121.53	121.53	121.59	121.63	121.63	121.63	121.78	121.93	121.93	122.14	122.15	122.39	122.43	122.43	122.43	122.45	122.46	122.89	122.98	123.28	123.44	123.69	123.72	123.79	123.82	123.97	124	124.10	124.10	124.10	124.12
	Crash Date	03/15/2009	12/29/2009	02/08/2008	02/07/2009	01/02/2008	02/11/2008	02/08/2008	11/23/2008	11/06/2008	10/18/2008	10/24/2010	01/02/2010	05/25/2010	02/11/2008	01/19/2010	11/04/2008	06/23/2010	12/07/2010	04/25/2008	12/06/2010	05/26/2010	10/29/2009	02/22/2009	12/07/2009	01/02/2010	09/30/2010	07/05/2010	03/28/2008	05/23/2008	12/20/2009	10/29/2009	05/22/2010
	Crash Report	2009-5919	2009-30764	2008-4045	2009-2970	2008-938	2008-3170	2008-3007	2008-29253	2008-27757	2008-26445	2010-23310	2010-33	2010-10685	2008-3046	2010-824	2008-27762	2010-12717	2010-27692	2008-11833	2010-27737	2010-10689	2009-23941	2009-4272	2009-28690	2010-38	2010-20932	2010-13764	2008-8524	2008-13454	2009-29669	2009-25410	2010-10793
	DA	7										ß								~~		ъ						Q					
	shes C											0								0		0						0					
	n Details Injury Crashes A B C	2										2								~~		0											
Crash Summary	Section Details Injury Ct K A B	0										~~								0		~~						0					
S		0										0								0		0						0					
5	Total Crashes	10										ω								2		9						9					
	Route - MP	0095X - 121.03										0095X - 122.13								0095X - 122.76		0095X - 122.99						0095X - 123.92					
	Offset Begin - End	0 - 1.10										0 - 0.63								0 - 0.23		0 - 0.93						0 - 0.28					
	Element	206248										2656295								2656311		206251						206252					
:	End Node	28805										28806								28807		28886						28886					
	Start Node	28804										28805								28806		28807						28808					

A second s

ri e ri di e e																							
		Injury	Degree	DD	PD	PD	Dd	Dd	Dd	БО	Dd	Ы	PD	Dd	മ	Dd	DD	DD	Dd	DD	Dd	PD	
**************************************		Crash	Mile Point	124.26	124.40	124.46	124.59	124.59	124.68	124.77	125.22	125.29	125.37	125.39	125.42	125.59	125.61	125.72	125.72	125.89	126.13	126.17	
		Crash Date		10/26/2008	12/08/2010	11/10/2008	10/15/2010	12/09/2008	11/28/2008	01/19/2010	06/17/2009	10/18/2008	11/22/2010	02/08/2008	10/04/2010	05/07/2008	01/28/2010	06/28/2009	03/28/2008	02/07/2008	10/14/2009	12/22/2010	
10 Ma 10 Ma 10 A		Crash Report		2008-25960	2010-27449	2008-27758	2010-22221	2008-31058	2008-29285	2010-825	2009-13429	2008-26447	2010-25558	2008-3005	2010-21541	2008-12069	2010-1795	2009-16743	2008-8521	2008-2761	2009-29337	2010-28558	
			DD	2							ი							ო			2		63
Š		ashes	ပ	0							0							0			0		3
E	etails	Injury Crashes	œ	0														0			0		ω
Crash Summary	Section Details	Į,	<	0							0							0			0		e
as B D	Sec		×	0							0							0			0		0
Ċ		Total	urasnes	7							7							ო			2		22
		Route - MP		0095X - 124.20							0095X - 125.19							0095X - 125.62			0095X - 126.07		Totals:
'		Offset	Begin - End	0 - 0.99							0 - 0.43							0 - 0.45			0 - 0.12		
-		Element		2656321							206105							2656271			28913 2656333		
5)		End	NOUG	28808							28809							28811			28913		
		Start	anon	28587							28587							28809			28811		

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Maine Department Of Transportation - Traffic Engineering, Crash Records Section Crash Summary II - Characteristics

a share a strategy and a strategy an

Crash Summary II - Characteristics Crashes by Day and Hour

					-	AM					ĭ	Hour of Day	Day					Md							
Day Of Week	12	Kana	2	e	4	S	မ	7	ω	6	10		12	6an	2 3	3 4	1 5	9	7	ω	თ	10	ر س هم	n N	Tot
SUNDAY	0	0	0	0	0	0	0	0	-	0	-	0	0	5	1	0) 2	-	۲	-	-	0	-	0	14
MONDAY	0	2	0	0	0	0	~			~-		2	0	-	0	0	0	0	0	~~	0	0	0	0	1
TUESDAY	2	0	0	0	0	~~	0	0	0	0	~~	7-	0	0	0 2	~	0		0	.	*	0	0	0	2
WEDNESDAY	~~	0	0	~	0	~~		0	~	0	0	v	0	0	0	0	£	~	0	***	***	~	~-	0	12
THURSDAY	0	0	0	0	0	0			0	~~	0	0	0	0	0	0	~	2	0	0	~	0	0	0	7
FRIDAY	0	0	0	0	0	0	0	0	~		0	~~	0	ò	0	~	T	0	С	~~	4	2	0	0	16
SATURDAY	0	0		0	0	0	0	2	0	0	~			5	0	0	0	~~	0	0	0	0	0	0	о О
Totals	3	2	-	-	0	5	3	4	4	e	4	9	-	2	2	5	2	0	4	5	ω	e	2	0	80
	Irash	es by	Crashes by Year and Month	and l	llonth										Veŀ	jīcle (counts	s by T	уре						

Unit Type () 1-2 Door 2-4 Door			-
1-2 Door 2-4 Door	a	Ĕ	
	 32-3 Axle Tractor with Tandem Axle Semi 33-3 Axle Tractor with Tridem Axle Semi 	emi 6 mi 0	
3-Convertible	0 35-3 Axle Tractor with Single Axle Serni & 2	ni & 2 1	
4Station Wagon	4 Axle Trailer - 38 3 Avia Trador vith Tradam Avia Sami &	e a second	
5-Van 6-Pickup Truck	8 20-5 AXIE HACKUI WILL LANGER AXIE 1 19 AXIE Trailer		
7-SUV	25 37-5 Axle Semi; Split Trailer Tandem	0 0	
10-Truck Tractor Only (Bobtail)	0 38-6 Axle Semi; Split Trailer Landem with Center Axle	NIIN O	
12-School Bus 13-Motor Home	0 39-6 Axle; Standard Trailer Tandem with Center 0 Axle	ith Center 0	
14-Motorcycle	0 40-4 Axle Single Unit	0	
15-Moped	0 42-4 Axle Tractor with Tandem Axle Semi	emi 0	
16-Motor Bike	0 50-Any Other Axle Configuration	0	
17-Bicycle	0 60-Other Unit	0	
18-Snowmobile	0 70-ATV	0	
20-2 Axle Single Unit with Dual Tires	1 81-2 Axle Bus	0	
21-2 Axle Tractor with Single Axle Semi	0 82-3 Axle Bus	0	
22-2 Axle Tractor with Tandem Axle Semi	0 98-Farm Vehicles / Tractors	0	
25-2 Axle Tractor with Single Axle Semi & 2	0 99-Unknown	0	1
Axie i taiter 30-3 Axie Single Unit 31-3 Axle Tractor with Single Axle Semi	0 0	101	I
X 2 2 2 5	25-2 Axie Tractor with Single Axie Semi & 2 Axie Trailer 30-3 Axie Single Unit 31-3 Axie Tractor with Single Axie Semi	0 00	0 00

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Crashes by Apparent Contributing Factor	nt Cont	ributir	g Fac	tor An	i Drive	H.		Crashes by Apparent Physical Condition And Drive	lby App	arent	Physic	al Con	dition /	And Dr	ver	
Apparent Contributing Factor	Dr.1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total	Apparent Physical Condition		Dr.1	Dr 2 D	Dr3 D	Dr 4 Dr	5 Other	r Total	·
								Normal		75	21	0	0	0	96	
No Improper Action	27	15	0	0	0	0	42	Under the Influence	nce	0	0	0	0	0	0	
Failure to Yield Right of Way	~	~	0	0	0	0	7	Had Been Drinking	ing	-	0	0	0	0	~	
Illegal Unsafe Speed	27	ę	0	0	0	0	30	Had Been Using Drugs	Drugs	0	0	0	0	0	0	
Following Too Close	ი	۰	0	0	0	0	4	Asleep		2	0	0	0		2	
Disregard Traffic Control Device	0	0	0	0	0	0	0	Fatigued	•	,	0	0	0		٢	
Driving Left of Center Not Passing	0	0	0	0	0	0	0	11		0	0	0	0		0	
Improper Passing, Overtaking	0	0	0	0	0	0	0	Handicapped		0	0	0	000		0	
Improper Unsafe Lane Change	ო	0	0	0	0	0	ი	Other		~~	0	0	0	0	-	
Improper Parking Start, Stop	0	0	0	0	0	0	0	Vertra des versensers sons en								
Improper Turn	0	0	0	0	0	0	0	Total		80	21	0	0	0	101	
Unsafe Backing	0	0	0	0	0	0	0									
No Signal or Improper Signal	0	0	0	0	0	0	0		μŐ	ver Ac	Driver Age by Uni	Init Ty	pe			
Impeding Traffic	0	0	0	0	0	0	0)	
Driver Inattention, Distraction	6	0	0	0	0	0	ი	Age Driver	Bicycle	• •	SnowMobile	Pedestrian	strian	ATV	Total	
Driver Inexperience	0	0	0	0	0	0	0		c		¢			c	Ċ	
Pedestrian Violation Error	0	0	0	0	0	0	0	laer) (5 0		5 6	5 C	5 C	
Physical Impairment	~~	0	0	0	0	0) (5 0		-	5 0	5 0	
Vision Obscured, Windshield Glass	0	0	0	0	0	0	0	15-19 9 20.24 4-1	5 0		5 0	20	~ ~	5 0	י מ	
Vision Obscured, Sun, Headlights	0	0	0	0	0	0	0		5 0		5 0		5 0	. .	2 9	
Other Vision Obscurement	0	0	0	0	0	0	0		с (5 0			5 0	5 8	
Other Human Violation Factor	9	~	0	0	0	0	7		5 0		5 0		5 0	5 0	ζ. Π. Ι.	
Hit and Run	0	0	0	0	0	0	0	40-49 10	ci c		5 0			, , ,	<u>0</u> 4	
Defective Brakes	0	0	0	0	0	0	0		о с		o c		5 0	o c	2 2	
Defective Tire, Tire Failure	0	0	0	0	0	0	2		5 C		5 C		, c	o c	~ ~	
Defective Lights	0	0	0	0	0	0	0		-		2 0		-	5 0	- c	
Defective Suspension	a	0	0	0	0	0	0	su-Over U	2 0		2 0		5 0	5 0	<u></u> с	
Defective Steering	0	0	0	0	0	0	0	UNKNOWN U	0		0)	D	0	
Other Vehicle Defect or Factor	~~	0	0	0	0	0	~~	Total 101	0		0	0	_	0	101	
Unknown	0	0	0	0	0	0	0									
Total	80	21	0	0	0	0	101		÷.							

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Maine Department Of Transportation - Traffic Engineering, Crash Records Section

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Total 67 5 7 7 7 7 7 7 7 0 0 80

		Traffic Control Davices	rol Devices	Pood Character
Fixed Object Struck	Total	Traffic Control Device	ol Device Total	
1-Construction, Barricades Equipment, etc.	0	1-Traffic Signals (Stop & Go)		1-Level Straight
2-Traffic Signal	0	2-Traffic Flashing	2	2-Level Curved
3-R.R. Crossing Device	0	3-Overhead Flashers	0	3-On Grade Straight
4-Light Pole	0	4-Stop Signs - All Approaches	0 Se	4-On Grade Curved
5-Utility Pole (Tel. Electrical)	0	5-Stop Signs - Other	0	5-Top of Hill Straight
6-Sign Structure Post	0	6-Yield Sign	5	6-Top of Hill Curved
7-Mail Boxes or Posts	0	7-Curve Warning Sign	0	7-Bottom of Hill Straight
8-Other Poles, posts or supports	~	8-Officer, Flagman, School Patrol	atrol 0	8-Bottom of Hill Curved
9-Fire Hydrant/Parking Meter	0	9-School Bus Stop Arm	0	9-Other
10-Tree or Shrubbery	4	10-School Zone Sign	0	Total
11-Crash Cushion	0	11-R.R. Crossing Device	0	
12-Median Safety Barrier	0	12-No Passing Zone	0	
13-Bridge Piers (including protective guard	0	13-None	50	
rails)		14-Other	26	
14-Other Guardrails	14	Total		
15-Fencing (not median barrier)	0	10(4)	80	
16-Culvert Headwall	0			
17-Embankment, Ditch, Curb	14			
18-Building, Wall	0			
19-Rock Outcrops or Ledge	0	Severity Code C	Injury Number Crashes Of Injuries	1-Dawn (Morning)
20-Other	2	×		2-Daylight
21-Gate or Cable	0	<	о С	3-Dusk (Evening)
22-Pressure Ridge	0	m	9 16	4-Dark (Street Lights On)
Total	35	C	с С	5-Dark (No Street Lights)
		PD	65 0	6-Dark (Street Lights Off)
		Total	80 22	/-Uther

1 38 38 37 37 80 80

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Maine Department Of Transportation - Traffic Engineering, Crash Records Section

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Crash Summary II - Characteristics

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	一一方言語のないの思い
	こう うちゃう しょう ほう
	一日、「「日本」「日本」「日本」「日本」
	「ころ」でした。「「「」」の「「」」の「「」」の「」」の「」」の「」」の「」」の「」」の「」」
	「ことの際」などの思いであった。
	こうで、「「「「「」」」」
	「ころ」の語言でしていた。このでは、「「」
	二日本語 万七 ちゃくのたけ
	いいのことも、このです。
	いいのないでした。
	いいところにいいいでは、
	いい 一方に いいたけ 二方
	いいることで見ていたい。
	いいたことでいった。このないころと
	でした際一方にいていたがにったと
	いいのことでいったいことと
	「「「「「「「」」」」」」」」」」」」」」」」」」」」」」」」」」」」」」」
	たいところにいたかにしたという
	たいところにいたが、これという
	たいところにいたがたっている
	たいところにいったかにしたとう

Crash Type	Straight Road	Curved Road	Three Leg Intersection	Four Leg Intersection	Five Leg Intersection	Driveways	Bridges	Interchanges	Other	Total
Object in Road	16	0	0	0	0	0	0	-	0	17
Rear End / Sideswipe	14	-	0	0	0	0	0	2	0	17
Head-on / Sideswipe	0	0	0	0	0	0	0	0	0	0
Intersection Movement	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	0	0	0	0	0	0
Train	0	0	0	0	0	0	0	0	0	0
Ran Off Road	21		0	0	0	0	0	0	0	52
All Other Animal	0	o	0	0	0	0	0	٥	0	0
Bike	0	0	0	0	0	0	0	0	0	0
Other		~~	0	0	0	0	0	0	0	2
Jackknife	0	0	0	0	0	0	0	0	0	0
Rollover	0	0	0	0	0	0	0	0	0	0
Fire	0	0	0	0	0	0	0	0	0	0
Submersion	a	0	0	0	0	0	0	0	0	0
Rock Thrown	0	0	0	0	0	0	0	0	0	0
Bear	0	0	0	0	0	0	0	0	0	0
Deer	20	2	0	0	0	0	0	0	0	22
Moose	0	0	0	0	0	0	0	0	0	0
Total	72	5	0	0	0	0	0	3	0	80

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			Crashes b	y Weather, Ligh	Con	Weather, Light Condition and Road Surface	ad Surface				
Weather Light	Debris	Dry	Ice, Packed Snow, Not Sanded	lce, Packed Snow, Sanded	Muddy	Oily	Other	Snow Slush, Not Sanded	Snow, Slush, Sanded	Wet	Total
Blowing Sand or Dust						•					
Dark (No Street Lights)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights Off)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights On)	0	0	0	0	0	0	0	0	0	0	0
Dawn (Morning)	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0
Dusk (Evening)	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Clear											
Dark (No Street Lights)	0	14	2	0	0	0	0	0	0	0	16
Dark (Street Lights Off)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights On)	0	0	0	0	0	0	0	0	0	0	0
Dawn (Morning)	0	0	٥	0	0	0	0	0	0	0	0
Daylight	0	15	0		0	0	0	0	0	0	16
Dusk (Evening)	0	-	0	0	0	0	0	0	0	0	
Other	0	0	0	0	0	0	0	0	0	0	0
Cloudy											
Dark (No Street Lights)	0	4			0	0	0	0	0	0	9
Dark (Street Lights Off)	0	0		0	0	0	0	0	0	0	0
Dark (Street Lights On)	0	0	0	0	0	0	0	0	0	-	٣-
Dawn (Morning)	0	~~	0	0	0	0	0	0	0	0	
Daylight	0	5	٣	0	0	0	0	0	*	0	7
Dusk (Evening)	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Fog, Smog, Smoke											
Dark (No Street Lights)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights Off)	0	0	0	0	0	0	0	0	0	o	0
Dark (Street Lights On)	0	0	0	0	0	0	ò	0	0	0	0
Dawn (Morning)	o	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0
Dusk (Evening)	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	o	0	0

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Crash Summary II - Characteristics

Weather Light	Debris	Dry	lce, Packed Snow, Not	lce, Packed Snow,	Muđđý	Oily	Other	Snow Slush, Not Sanded	Snow, Slush, Sandod	Wet	Total
Other			Sanded	Sanded					3		
Dark (No Street Lights)	0	0	0	0	0		0	0	0	0	0
Dark (Street Lights Off)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights On)	0	0	0	0	0	0	0	0	0	0	0
Dawn (Morning)	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0
Dusk (Evening)	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Rain											
Dark (No Street Lights)	0	0	0	0	0	0	0	0	0	5	Ş
Dark (Street Lights Off)	0	0	0	0	0	0	o	0		0	0
Dark (Street Lights On)	0	0	-	0	0	0	0	0	0	0	-
Dawn (Morning)	٥	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	ю	3
Dusk (Evening)	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Severe Cross Winds											
Dark (No Street Lights)	0	0	0	0	0	0	o	0	0	0	0
Dark (Street Lights Off)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights On)	0	0	0	0	0	0	Ō	0	0	0	0
Dawn (Morning)	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0
Dusk (Evening)	0	0	ο	٥	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Sleet, Hail, Freezing Rain											
Dark (No Street Lights)	0	0	۲	0	0	0	0	0	0	0	t
Dark (Street Lights Off)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights On)	0	0	0	0	0	0	0	0	0	o	0
Dawn (Morning)	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	~~	0	0	0	0	0	o	~~
Dusk (Evening)	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0

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			orasnes p	Watreenuel Cur	ight condit	by Weather, Light Condition and Road Surface	ad Sturface				
Weather Light	Debris	Dry	Ice, Packed Snow, Not Sanded	lce, Packed Snow, Sanded	Muddy	Oily	Other	Snow Slush, Not Sanded	Snow, Slush, Sanded	Wet	Total
Snow											
Dark (No Street Lights)	0	0	5	1	0	0	0	3	0	0	6
Dark (Street Lights Off)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights On)	0	0		0	0	0	0	0	0	0	*
Dawn (Morning)	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	4	0	0	0	0		Q	0	÷ ÷
Dusk (Evening)	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	ο	0	0
TOTAL	0	40	16	4	0	0	0	4	7	6	80

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Section Detail
REPORT DESCRIPTION KMD KMD KMD REPORT PARAMETERS Year 2008, Start Month 1 through Year 2010 Fourte: 0011X Start Node: Zend Node: 28062 Find Node: 28765 Find Node: 28765 Route: 0011X Start Node: 28765 End Node: 28765 Route: 0011S Start Node: 28765 End Node: 28765 Route: 0011S Start Node: 28863 Route: 0011S Start Node: 28810 Route: 0011S Start Node: 2631 Route: 0011S Start Node: 2640 Offset: Conde: 2604 Offset: Route: 0011S Start Node: 2604 Offset: Route: 0011S Start Offset: 0 Start Offset: 0 Start Offset: 0 Start Offset: 0 Start Off
through Year 2010 End Month: 12 Start Node: 28062 Start Offset: 0 End Node: 28765 End Offset: 0 Start Node: 28863 Start Offset: 0 End Node: 60481 End Offset: 0
through Year 2010 End Month: 12 Start Node: 28062 End Node: 28765
through Year 2010 End Month: 12

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Maine Department Of Transportation - Traffic Engineering, Crash Records Section Crash Summary I

			Video Vodes	Nodes		-								
Node	Route - MP	Node Description		U/R Total	tal	E	jury C	Injury Crashes	s	Percent	Annual M Crash		Critical C	CRF
				Cra	Crashes	¥	A	с в	PD	lnjury	Ent-Veh Ra	Rate	Rate	
28062	0011X - 144.33	28062 0011X - 144.33 Int of KENNEDY MEM DR, SECOND RANG	EWAY	0 0	ω	0	0	0 2	9	25.0 State	5.0 7.126 Statewide Crash Rate:	0.37 0.63	1.05	0.00
28864	0011X - 144.35	28864 0011X - 144.35 Int of KENNEDY MEM DR, RAMP ON FROM KENNEDY MEM	A KENNEDY MEM	-	0	0	0	0	0	0.0 State	0.0 6.895 Statewide Crash Rate:	0.00	0.13	0.00
60481	0011X - 144.36	60481 0011X - 144.36 int of KENNEDY MEM DR, KENNEDY MEM	ORIAL DR		0	0	0	0	0	0.0 State	0.0 7.864 Statewide Crash Rate:	0.00	0.25	0.00
28863	0011X - 144.38	28863 0011X - 144.38 Int of KENNEDY MEM DR, KENNEDY MEM	ORIAL DR, RAMF	თ	10	0	0	с С	2	30.0 State	0,0 8.221 Statewide Crash Rate:	0.41 0.63	1.02	0.00
28865	0011X - 144.44	28865 0011X - 144.44 BRG 1460, KENNEDY MEM DR under 195 9	SB		~	0	0	0	<u>.</u>	0.0 State	0.0 4.024 Statewide Crash Rate:	0.08 0.10	0.29	0.00
28810	0011X - 144.50	28810 0011X - 144.50 Int of KENNEDY MEM DR, KENNEDY MEM	orial dr, ramf	თ	4	0	~	2	10	CN CN	18.6 10.362 Statewide Crash Rate:	0.45 0.63	0.98	0.00
25924	0011X - 144.52	25924 0011X - 144.52 Int of KENNEDY MEM DR, KENNEDY MEM	ORIAL DR		0	0	0	0	0	0.0 State	0.0 6.867 Statewide Crash Rate:	0.00 0.13	0.31	0.00
27040	0011X - 144.53	27040 0011X - 144.53 1103853 WAT,KENNEDY MEM DR,JACKSON ST		2	5	0	0	0	ന	40.0 State	40.0 8.798 Statewide Crash Rate:	0.19 0.13	0.29	0.00
28765	0011X - 144.69	28765 0011X - 144.69 1108993 WAT,KMD,WASHINGTON ST,EXT		ຓ	15	0	ò	2	12	2	0.0 10.197 Statewide Crash Rate:	0.49 0.63	0.98	0.00
60482	60482 0011S - 0.58	Int of KENNEDY MEMORIAL DR, RAMP ON	I FROM KENNED'		с	0	0	0	က	0.0 State	0.0 3.483 Statewide Crash Rate:	0.29 0.04	0.15	1.89
Study Years:	(ears: 3.00	2	NODE TOTALS:	Ω.	56	0	~	3 10	0 42		25.0 73.837	0.25	0.46	0.55

		CL	Crash Summary Sections	Sections	lary	· ·						: 	
End Element	Route - MP	Section U/R		3	linjr	Injury Crashes	shes		Percent			Critical	CRF
Node Node Begin - End	q	rengin	Urasnes	les K	A	۵	0		Injury	HIMVIN	Kate	Kate	
28062 28864 2667125 0 - 0.02 int of KENNEDY MEM DR. SECOND RANGEWAY	0011X - 144.33 ST RTE 11	0.02	2	0	0	~	0	~~	50.0 Statewi	50.0 0.00151 Statewide Crash Rate:	442.78 117.54	422.39	1.05
60481 28864 2077496 0 - 0.01 Int of KENNEDY MEM DR, KENNEDY MEMORIAL DR	0011X - 144.35 ST RTE 11	0.01	0	0	0	0	0	0	0.0 Statewi	0.0 0.00063 Statewide Crash Rate:	0.00	495.74	0.00
28863 60481 2077695 0 - 0.02 Int of KENNEDY MEM DR, KENNEDY MEMORIAL DR, RAMP OFF TO KENNEDY MEM DR	0011X - 144.36 ST RTE 11	0.02 1	0	0	0	0	0	0	0.0 Statewi	0.0 0.00061 Statewide Crash Rate:	0.00	497.05	0.00
28863 28865 206318 0 - 0.06 Int of KENNEDY MEM DR. KENNEDY MEMORIAL DR, RAMP OFF TO KENNEDY MEM DR	0011X - 144.38 ST RTE 11 M	0.06 1	0	0	0	0	0	0	0.0 Statewi	0.0 0.00235 Statewide Crash Rate:	0.00 117.54	379.10	0.00
28810 28865 2077698 0 - 0.06 Int of KENNEDY MEM DR, KENNEDY MEMORIAL DR, RAMP OFF TO KENNEDY MEM DR, RAMP ON	0011X - 144.44 ST RTE 11 M	0.06	0	0	0	0	0	0	0.0 Statewi	0.0 0.00248 Statewide Crash Rate:	0.00	374.29	0.00
25924 28810 2077702 0 - 0.02 Int of KENNEDY MEM DR, KENNEDY MEMORIAL DR	0011X - 144.50 ST RTE 11	0.02	0	0	0	0	0	0	0.0 Statewi	0.0 0.00090 Statewide Crash Rate:	0.00	469.50	0.00
25924 27040 203087 0 - 0.01 Int of KENNEDY MEM DR, KENNEDY MEMORIAL DR	0011X - 144.52 ST RTE 11	0.01 2	0	0	0	0	0	0	0.0 Statewi	0.0 0.00092 Statewide Crash Rate:	0.00 174.02	639.45	0.00
27040 28765 204577 0 - 0.16 1103653 WAT,KENNEDY MEM DR,JACKSON ST	0011X - 144.53 T ST RTE 11	0.16 2	თ	0	0	0	2	2	22.2 Statewi	22.2 0.01328 Statewide Crash Rate:	225.90 174.02	331.72	0.00
28863 60481 2077677 0 - 0.02 Int of KENNEDY MEM DR, KENNEDY MEMORIAL DR, RAMP OFF TO KENNEDY MEM DR	0011S - 0.64 ST RTE 11S	0.02 1	7-	0	0	0	0	~	0.0 Statewia	0.0 0.00064 Statewide Crash Rate:	520.07 117.54	494.40	1.05
28810 60482 2077500 0 - 0.06 Int of KENNEDY MEM DR, KENNEDY MEMORIAL DR, RAMP OFF TO KENNEDY MEM DR, RAMP ON	0011S - 0.52 ST RTE 11S	0.06	0	0	0	0	Ō	0	0.0 Statewi	0.0 0.00209 Statewide Crash Rate:	0.00	390.50	0.00
60482 28863 2077680 0 - 0.06 Int of KENNEDY MEMORIAL DR. RAMP ON FROM KENNEDY MEM DR	0011S - 0.58 ST RTE 11S	0.06	0	0	0	0	0	0	0.0 Statewi	0.0 0.00152 Statewide Crash Rate:	0.00	421.16	0.00
25924 28810 2077497 0 - 0.02 Int of KENNEDY MEM DR, KENNEDY MEMORIAL DR	0011S - 0.50 ST RTE 11S	0.02 1	←	0	0	0	ο.	~	0.0 Statewi	0.0 0.00092 Statewide Crash Rate:	363.87 117.54	468.34	0.00
Study Years: 3.00	Section Totals:	0.52	13	0	0		2	10	23.1	0.02785	155.60	248.17	0.63
	Grand Totals:	0.52	69	0	~	4	12	52	24.6	0.02785	825.88	337.10	2.45

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		Injury	Degree	മ	Dd							Dd	Dd	ΔЧ	U U	Dd	РО	Dd	ပ	04	Dd			PD	
		Crash	Mile Point	144.34	144.34							144.54	144.61	144.63	144.67	144.67	144.67	144.67	144.68	144.68	0.65			0.51	
		Crash Date		07/27/2010	11/16/2009							12/23/2009	02/07/2009	09/20/2008	06/16/2010	09/14/2009	10/16/2009	02/16/2010	09/13/2009	12/15/2009	06/01/2010			08/30/2010	
		Crash Report		2010-32704	2009-28268							2009-31466	2009-5026	2008-26804	2010-15085	2009-22185	2009-22986	2010-4616	2009-22184	2009-29771	2010-11939			2010-32749	
			DD	¥		0	0	0	0	0	0	7									~	0	0		10
ar S		ashes	U	0		0	0	0	0	0	0	2									0	0	0	0	2
Crash Summary	etails	Injury Crashes	ш	~~		0	0	0	0	0	0	0									0	0	0	0	~
Sul	Section Details	lnju	∢	0		0	0	0	0	0	0	0									0	0	0	0	 0
ash	Sect		×	0		0	0	0	0	0	0	0									0	0	0	0	0
້ວ		Total	Crashes	2		0	0	0	0	0	0	ი									~	0	0		13
		Route - MP		0011X - 144.33		0011X - 144.35	0011X - 144.36	0011X - 144.38	0011X - 144.44	0011X - 144.50	0011X - 144.52	0011X - 144.53									0011S - 0.64	0011S - 0.52	0011S - 0.58	0011S - 0.50	 Totals:
		Offset	Begin - End	0 - 0.02		0 - 0.01	0 - 0.02	0 - 0.06	0 - 0.06	0 - 0.02	0 - 0.01	0 - 0.16									0 - 0.02	0 - 0.06	0 - 0.06	0 - 0.02	
. 1		Element		2667125		2077496	• •		2077698		203087	204577									2077677		2077680		
		End	Node	28864		28864	60481	28865	28865	28810	27040	28765									60481	60482	28863	28810	
~		Start	Node	28062		60481	28863	28863	28810	25924	25924	27040									28863	28810	60482	25924	

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artment Of Transportation - Traffic Engineering, Crash Records Section Crash Summary II - Characteristics		PM
ng, Crash I teristic		
affic Engineeri	nd Hour	Y
tion - Traffic nary II - C	Crashes by Day and Ho	Hour of Day
nent Of Transportation - Traffic Engineering, Crash Rec Crash Summary II - Characteristics	Crashe	
ment of Tr Crash		
Aaine Depart		AM
W		

					1	AM					Ĭ	Hour of Day	Jay					Mq							
Day Of Week	12	~	8	ю	4	5	9	7	ω	6	10	÷	12	1	2 3	4	5	9	7	ω	6	10	1	ч	Tot
SUNDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	-	2	S	-	0	0	-	0	0	0	0	6
MONDAY	0	0	0	0	0	0	0	~	~~	0	0	-	~~	0	~~	*	ო	~	0	0	0	0	~~~	0	12
TUESDAY	0	0	0	0	0	0	0	0	~ ~~	0	0	2	2	-	0	4	~~	~	~~	~~	0	~	0	0	15
WEDNESDAY	~-	0	0	0	0	0	0	~ -	0	~~	0	-	0	0	0	с С	2	·	0	0	0	0	0	0	10
THURSDAY	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	~	ო	0	0	0	0	0	0	0	7
FRIDAY	0	0	0	0	0	~~	0	0	0	0	0	0	ო	0	0	4	~	0	0	0	0	0	~	0	10
SATURDAY	0	0	0	0	0	0	0	0	0	0	0	0	~~	0	<u>۲</u>	<i>4</i>	0	~~	0	0	~~·	0	0	0	9
Totals	-	0	0	0	0	-	0	2	5	с С	0	4	7	5	5 6	14	4 11	4	~	2	~	~	5	0	69
	Jrash	es by	Crashes by Year and Month	and N	ໃດດາໂກ										Veh	icle (Counts	by T	/pe						

Total	~-	0	0		0	c) (0	0	0	0	0	0	0	0	0	0	0	136	
2.0	32-3 Axle Tractor with Tandem Axle Semi	33-3 Axle Tractor with Tridem Axle Semi	35-3 Axle Tractor with Single Axle Semi & 2	Axle Trailer	36-3 Axle Tractor with Tandem Axle Semi & 2		3/-5 Axle Semi; Spill I raller I andem	38-6 Axle Semi; Split Trailer Tandem with Center Axle	39-6 Axle; Standard Trailer Tandern with Center Axle	40-4 Axle Single Unit	42-4 Axle Tractor with Tandem Axle Semi	50-Any Other Axle Configuration	60-Other Unit	70-ATV	81-2 Axle Bus	82-3 Axle Bus	98-Farm Vehicles / Tractors	99-Unknown	Total	
Total	13	78	0	2	15	22	2	0	0 0	3	0	0	0	0	~ ~~	0	0	0	C	0
ver ver Unit Type Tora 20	1-2 Door	2-4 Door	3-Convertible	4-Station Wagon	5-Van	6-Pickup Truck	7-SUV	10-Truck Tractor Only (Bobtail)	12-School Bus 13-Motor Home	14-Motorcycle	15-Moped	16-Motor Bike	17-Bicycle	18-Snowmobile	20-2 Axle Single Unit with Dual Tires	21-2 Axle Tractor with Single Axle Semi	22-2 Axle Tractor with Tandem Axle Semi	25-2 Axle Tractor with Single Axle Semi & 2	AXIe Irailer 30-3 Axle Sincle I Init	31-3 Axle Tractor with Single Axle Semi
Total	(Ø	თ	~	r i	7	വ) 4	2	7	σ	5	9	ო	c	a	69			
crasnes by real and monun 2008 2009 2010		3 1 2	351	۲ ۲		0 1 1	- 2	- 1 - 0	2 2 1	0 2 5	۲ ۲	-	1 2 3	0 2 1		3 A U	19 29 21			
Month		JANUAKY	FEBRUARY			APRIL	MAY	JUNE	JULY	AUGUST	SEDTEMBER		OCTOBER	NOVEMBER			Total			

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	Ma	laine De	epartn (Maine Department Of Transportation Crash Summar	of Trans sh St	ansportation - Summary	ion -	Traffic Engineering, Crash Records Section	Engineering, Crash Re Characteristics	kecords	s Sectio				L P	
Crashes by Apparent Contributing Factor A	t Cont	dbutti	ig Fac	ttor An	nd Driver	ह		G	Crashes by Apparent Physical Condition And Drive	oarent	Physic	al Con	dition A	nd Driv	ъ	
Apparent Contributing Factor	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total	Apparent Condition	Apparent Physical Condition	Dr 1	Dr 2	Dr.3	Dr 4 Dr 5	Other	Total	
								Normal		67	65	~~		0	133	
No Improper Action	12	54	~	0	0	0	67	Under tl	Under the Influence	2	0	0	0	0	2	
Failure to Yield Right of Way	8	4	0	0	0	0	12	Had Be	Had Been Drinking	0		0		0	~	
Illegal Unsafe Speed	5	0	0	0	0	0	5	Had Bee	Had Been Using Drugs	0	0			0	0	
Following Too Close	2	0	0	0	0	0	2	Asleep		0	0	0		0	0	
Disregard Traffic Control Device	2	·	0	0	0	0	ო	Fatigued	q	0	0			0	0	
Driving Left of Center Not Passing	0	0	0	0	0	0	0	111		0	0			0	0	
Improper Passing, Overtaking	0	0	0	0	0	0	0	Handicapped	apped	0	0	0	000	0	0	
Improper Unsafe Lane Change	4	0	0	0	0	0	4	Other		0	0			0	0	
Improper Parking Start, Stop	0	0	0	0	0	0	0							(
Improper Turn	2	0	0	0	0	0	2	10131		69	66		0	0	136	
Unsafe Backing	٠-	0	0	0	0	0	7-									
No Signal or Improper Signal	0	0	0	0	0	0	0		ā	iver A	Driver Age by Unit Type	lnit Tyl)e			
Impeding Traffic		0	0	0	0	0	۳-					í		Î	1	
Driver Inattention, Distraction	24	4	0	0	0	0	28	Age	Driver Bicycle		SnowMobile	 Pedestrian 	trian	AIV	lotal	
Driver Inexperience	~~	0	0	0	0	0		00 Hodor	c		c	ç		c	C	
Pedestrian Violation Error	0	0	0	0	0	0	0	03-011051 10-14			о с	о с			о с	
Physical Impairment	-	0	0	0	0	0	~~	15,10							, ,	
Vision Obscured, Windshield Glass	-	0	0	0	0	0	~~	20-24) c	28	
Vision Obscured, Sun, Headlights	2	0	0	0	0	0	0	25-29	10 0					» с	9 6	
Other Vision Obscurement	~-	0	o	0	0	0	۰.	30-39			c			С	16	
Other Human Violation Factor	~-		0	0	0	0	2	40-49			c	0		a	21	
Hit anở Run	0	0	0	0	0	0	0	50-59	24 0		0	0		0	24	
Defective Brakes	0	~~	0	0	0	0	~~	60-69			0	0		0	11	
Defective Tire, Tire Failure	0	0	0	0	0	0	0	62-02			0	0		0	10	
Defective Lights	0	0	0	0	0	0	0	80-Over	5		C	0		0	2	
Defective Suspension	0	0	0	0	0	0	0	linknown			• c			c	C	
Defective Steering	0	0	0	0	0	0	0	OINIOWII	a de la construcción de la constru La construcción de la construcción d		0		a yina ani a na guna in Kata na hada da			
Other Vehicle Defect or Factor	0	0	0	0	0	0	0	Total	136 0		0	0		o	136	
Unknown	-	-	0	0	0	0	5									

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Total

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Fixed Object Struck	
Fixed Object Struck	Total
1-Construction, Barricades Equipment, etc.	0
2-Traffic Signal	0
3-R.R. Crossing Device	0
4-Light Pole	0
5-Utility Pole (Tel. Electrical)	0
6-Sign Structure Post	0
7-Mail Boxes or Posts	0
8-Other Poles, posts or supports	0
9-Fire Hydrant/Parking Meter	0
10-Tree or Shrubbery	0
11-Crash Cushion	0
12-Median Safety Barrier	0
13-Bridge Piers (including protective guard rails)	0
14-Other Guardrails	0
15-Fencing (not median barrier)	0
16-Culvert Headwall	0
17-Embankment, Ditch, Curb	0
18-Building, Wall	0
19-Rock Outcrops or Ledge	0
20-Other	
21-Gate or Cable	0
22-Pressure Ridge	0
Total	1

Traffic Control Devices		
Traffic Control Device	Total	
1-Traffic Signals (Stop & Go)	46	4
2-Traffic Flashing	ო	'n
3-Overhead Flashers	0	က်
4-Stop Signs - All Approaches	0	4
5-Stop Signs - Other	-	ம்
6-Yield Sign	~~	Ģ
7-Curve Warning Sign	0	~
8-Officer, Flagman, School Patrol	0	ထ်
9-School Bus Stop Arm	0	ත්
10-School Zone Sign	0	ΙĔ
11-R.R. Crossing Device	0	
12-No Passing Zone	0	
13-None	18	
14-Other	0	
Total	69	

						1	1
	Injury Number Crashes Of Injuries	0	~	4	16	0	21
ury Data	Injury Crashes	0	~	4	12	52	69
ljuj	Severity Code	×	A	В	o	PD	Total

Road Character	
Road Character	Total
1-Level Straight	29
2-Level Curved	
3-On Grade Straight	34
4-On Grade Curved	5
5-Top of Hill Straight	0
6-Top of Hill Curved	0
7-Bottom of Hill Straight	0
8-Bottom of Hill Curved	0
9-Other	0
Total	69

Light Light	Total
1-Dawn (Morning)	~~
2-Daylight	45
3-Dusk (Evening)	9
4-Dark (Street Lights On)	16
5-Dark (No Street Lights)	0
6-Dark (Street Lights Off)	~
7-Other	0
Total	69

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

Crash Summary II - Characteristics Crashes by Crash Type and Type of Location

Crash Type	Straight Road	Curved Road	Three Leg Intersection	Four Leg Intersection	Five Leg Intersection	Driveways	Bridges	Interchanges	Other	Total
Object in Road	0	0	0	0	0	0	0	0	0	0
Rear End / Sideswipe	8	0	15	19	0	~	0	0	0	43
Head-on / Sideswipe	0	0	0	0	0	0	0	Q	o	0
Intersection Movement	0	0	Ø	10	0	Ω.	0	0	0	23
Pedestrians	0	0	0	0	0	0	0	0	0	0
Train	0	0	0	0	0	0	0	0	0	0
Ran Off Road	0	0	0	0	0	0	0	0	0	0
All Other Animal	o	0	0	0	0	0	0	0	0	0
Bike	0	0	0	0	0	0	0	0	0	0
Other	2	0	0	0	0	0	~	0	0	3
Jackknife	0	0	0	0	0	0	0	0	0	0
Rollover	0	0	0	0	0	0	0	0	0	0
Fire	0	0	0	0	0	0	0	0	0	0
Submersion	0	0	٥	0	0	0	0	0	0	0
Rock Thrown	0	0	0	0	0	0	0	0	0	0
Bear	0	0	0	0	0	0	0	0	0	0
Deer	0	0	0	0	0	0	0	0	0	0
Moose	0	0	0	0	0	0	0	0	0	0
Total	10	ο	23	29	0	9	1	0	0	69

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Maine Department Of Transportation - Traffic Engineering, Crash Records Section Approximate the surveyor and

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Crash Summary II - Characteristics

			Crashes b	s by Weather, Light Condition and Road Surface	ght Conditi	on and Roa	d Surface				
Weather Light	Debris	Dry	lce, Packed Snow, Not Sanded	lce, Packed Snow, Sanded	Ŵuddy	Oily	Other	Snow Slush, Not Sanded	Snow, Slush, Sanded	Wet	Total
Blowing Sand or Dust											
Dark (No Street Lights)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights Off)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights On)	0	0	0	0	0	0	·O	0	0	0	0
Dawn (Morning)	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0
Dusk (Evening)	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Clear											
Dark (No Street Lights)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights Off)	0	-	0	0	0	0	0	0	0	0	<i>4</i>
Dark (Street Lights On)	0	11	0	0	0	0	0	0	0	0	11
Dawn (Morning)	0	۰	o	0	0	0	0		0	0	~~
Daylight	0	24	0	0	0	0	0	0		ო	28
Dusk (Evening)	0	ო	0	0	0	0	0	0	0	0	ო
Other	o	0	a	0	0	0	0	0	0	0	0
Cloudy											
Dark (No Street Lights)	0	0	0	0	0	0	0	o	0	0	0
Dark (Street Lights Off)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights On)	0	2	0	0	0	0	0	0	0	0	7
Dawn (Morning)	o	0	0	0	0	0	0	0	0	0	0
Daylight	0	7	0	0	0	0	0	0	0	4	7-
Dusk (Evening)	0	0	0	0	0	0	0	0		0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Fog, Smog, Smoke											
Dark (No Street Lights)	0	0	0	0	0	0	0	٥	0	0	0
Dark (Street Lights Off)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights On)	0	0	0	0	0	0	0	0	0	0	0
Dawn (Morning)	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	o	0	0	0	0	0	0
Dusk (Evening)	0	0	0	0	0	0	a	0		0	0
Other	0	0	0	0	0	0	ò	0	0	0	0

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Maine Department Of Transportation - Traffic Engineering, Crash Records Section

Crash Summary II - Characteristics

			Crashes by	/ weather, L	Ight Conditi	dinion and road	d Surface				
Weather Light	Debris	Dry	Ice, Packed Snow, Not Sanded	lce, Packed Snow, Sanded	Muddy	Oily	Other	Snow Slush, Not Sanded	Snow, Slush, Sanded	Wet	Total
Other											
Dark (No Street Lights)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights Off)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights On)	0	0	0	0	0	0	0	0	0	0	0
Dawn (Morning)	0	0	0	0	0	0	.0	o	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0
Dusk (Evening)	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Rain											
Dark (No Street Lights)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights Off)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights On)	0	0	0	0	0	0	0	0	0		~~
Dawn (Morning)	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	9	9
Dusk (Evening)	0	0	~-	0	0	0	0	0	0	0	7
Other	0	0	0	0	0	0	0	0	0	0	0
Severe Cross Winds											
Dark (No Street Lights)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights Off)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights On)	0	0	0	0	0	0	0	0	0	0	0
Dawn (Morning)	0	0	0	0	0	0	٥	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0
Dusk (Evening)	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	.0	0	0	0	0
Sleet, Hail, Freezing Rain											
Dark (No Street Lights)	0	0	0	0	0	0	o	0	0	0	0
Dark (Street Lights Off)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights On)	0	0	0	0	0	0	0	0	0	0	0
Dawn (Norning)	0	0	0	0	0	0	0	0	0	o	0
Daylight	٥	0	O	0	0	0	0	0	0	0	0
Dusk (Evening)	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	O	0
							• .				

	Snow, Slush, Wet Total Sanded	0 0 0 0 0 0 0 0	1 14 03
cords Section	Snow Slüsh, Snow Not Sanded Sa	0 0 N 0 0 0 0	∾
Engineering, Crash Rec Characteristics	Other	٥٥٥٥٥٥	o
Traffic Engineering, Crash Records Section II - Characteristics t Condition and Road Surface	y oily	0000000	
· > 8	acked Dw, Muɗdy ded	0000000	0
ment Of Transportation - Traffic Engineering, Crash Rec Crash Summary II - Characteristics Crashes by Weather Light Condition and Road Surface	lce, Packed Ice, Packed Snow, Not Snow, Sanded Sanded	00000+0	с N
Maine Department Of Transportation Crashes by Weather Li	Dry Snr Snr		Q Q
	Debris		0
	Weather Light Snow	Dark (No Street Lights) Dark (Street Lights Off) Dark (Street Lights On) Dawn (Morning) Daylight Dusk (Evening) Other	TOTAL

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	Maine Department Of Tr C	Maine Department Of Transportation - Traffic Engineering, Crash Records Section Crash Summary Report	eering, Crash Records Se port	ction
REPORT SELECTIONS	R. Z. Sartion Datail	Report Selections and Input Parameters	arameters	
	A section Detail	Crash Summary II	1320 included	1320 & Driver Report Included
REPORT DESCRIPTION Lyons Rd				
<u>REPORT PARAMETERS</u> Year 2008, Start Month 1 thr	<u>REPORT PARAMETERS</u> Year 2008, Start Month 1 through Year 2010 End Month: 12			
Route: 1102238	Start Node: 25593 End Node: 26365	Start Offset: 0 End Offset: 0		Exclude First Node
				· .

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Sectors of course Maine Department Of Transportation - Traffic Engineering, Crash Records Section Crash Summary I

			Nodes	Nodes	-								
Node	Route - MP	Node Description	U/R	Total		Injury	Injury Crashes	nes	Percent	t Annual M Crash		Critical (CRF
			0	Crashes	\mathbf{x}	∢	മ	с	PD Injury	Ent-Veh	Rate	Rate	
25593	25593 1102238 - 0 Int of LYONS	Int of LYONS RD, MIDDLE RD	-	-	0	0	· ← .	0	0 100.0 State	0.0 0.991 Statewide Crash Rate:	0.34	0.53	0.00
28731	28731 1102238 - 0.16 Int of FIELD RD, LYONS RD	D, LYONS RD	~	0	0	0	0	0	0 0.0 State	0.0 0.603 Statewide Crash Rate:	0.00 140	0.58	0.00
28347	28347 1102238 - 0.20 Int of BLUE RIDGE W, LYONS RD	IDGE W, LYONS RD	~	0	0	0	0	0	0.0	0.0 0.598 Statewide Crash Rate:	0.00 0,14	0.58	0.00
28349	28349 1102238 - 0.34 Int of BLUE RIDGE E, LYONS RD	IDGE E, LYONS RD	~~	0	0	0	0	0	0.0 St	0.0 0.620 Statewide Crash Rate:	0.00 14	0.58	0.00
61608	61608 1102238 - 0.37 Int of FIELD RD, LYONS RD	D, LYONS RD	<	0	0	0	0	0	0.0 Sta	0.0 0.639 Statewide Crash Rate:	0.00 14	0.58	0.00
61603	61603 1102238 - 0.58 Non-Int LYONS RD	S RD	~~	0	0	0	0	0	0.0	0.0 0.625 Statewide Crash Rate:	0.00 0.14	0.58	0.00
28856	28856 1102238 - 0.90 Int of LYONS RD, RAMP C OFF TO LYONS	RD, RAMP C OFF TO LYONS RD		0	0	0	0	0	0 Ste	0.0 1.036 Statewide Crash Rate:	0.00	0.17	0.00
28801	28801 1102238 - 1.19 Int of LYONS RD, RAMP OFF TO LYONS RD	RD, RAMP OFF TO LYONS RD	~	~~	0	0	0	0	1 Stat	0.0 1.003 Statewide Crash Rate:	0.33	0.17	1.95
62772	62772 1102238 - 1.38 Intof LYONS RD, PERRY DR	RD, PERRY DR	4	0	0	0	0	0	0 0.0 State	0.0 0.605 Statewide Crash Rate:	0.00 0.10	0.43	0.00
25630	25630 1102238 - 1.51 Non-Int LYONS RD	S RD	~	0	0	0	0	0	0.0 St5	0.0 0.598 Statewide Crash Rate:	0.00 0.10	0.43	0.00
26365	26365 1102238 - 1.78 1103129 SID,WEST RIVER,LYONS RD			2	0	0	0	0	2 Stat	0.0 1.048 Statewide Crash Rate:	0.64	0.40	1.59
Study Years:	ears: 3.00	NODE TOTALS:	i i i i i i i i i i i i i i i i i i i	4	0 '	0	-	0	3 25.0	0 8.366	0.16	0.25	0.63

.

	Critical CRF Rate	666.37 0.00	793.33 0.00	683.70 0.00	770.35 0.00	616.14 0.00	552.98 0.00	474.61 0.00	533.99 0.00	579.80 0.00	493.54 0.00	334.15 0.36	371 GE D.GE
	Crash Cri Rate R	0.00 184.68	0.00 7	0.00 6 184.68	0.00 7 184.68	0.00 6 184.68	332.62 5 184.68	177.02 4 147.24	0.00 5	0.00 5	207.13 4 147.24	121.90 3	212 BD 3
	Annuai HMVM	0.0 0.00094 Statewide Crash Rate:	0.0 0.00023 Statewide Crash Rate:	0.0 0.00084 Statewide Crash Rate:	0.0 0.00019 Statewide Crash Rate:	0.0 0.00131 Statewide Crash Rate:	0.0 0.00200 Statewide Crash Rate:	0.0 0.00188 Statewide Crash Rate:	0.0 0.00115 Statewide Crash Rate:	0.0 0.00078 Statewide Crash Rate:	100.0 0.00161 Statewide Crash Rate:	0.01094	
	Percent Injury	0.0 Statewid	0.0 Statewid	0.0 Statewid	0.0 Statewid	0.0 Statewid	0.0 Statewid	0.0 Statewid	0.0 Statewid	0.0 Statewid	100.0 Statewid	25.0	25.0
	DD	0	0	0	0	0	2	~~	0	0	0	ო	હ
;	ashes C	0	0	0	0	0	0	0	0	0	0	0	. c
	Injury Crashes A B C	0	0	0	0	0	0	0	0	0			c
ary	Inju A	0	0	0	0	0	0	0	0	0	0	0	c
nm an	¥	0	0	0	0	0	0	0	0	0	0	0	c
Crash Summary Sections	Total Crashes	0	0	0	0	0	2		0	0	*	4	α
j'a:	nU/R	~ -	~~	~~	~	~-	~-	~	~~	~	~		
	Section U/R Length	0.16	0.04	0.14	0.03	0.21	0.32	0.29	0.19	0.13	0.27	1.78	1 70
	Route - MP	1102238 - 0 RD INV 11 02238	1102238 - 0.16 RD INV 11 02238	1102238 - 0.20 RD INV 11 02238	1102238 - 0.34 RD INV 11 02238	1102238 - 0.37 RD INV 11 02238	1102238 - 0.58 RD INV 11 02238	1102238 - 0.90 RD INV 11 02238	1102238 - 1.19 RD INV 11 02238	1102238 - 1.38 RD INV 11 02238	1102238 - 1.51 RD INV 11 02238	Section Totals:	Crond Totolo.
	Offset Begin - End	0 - 0.16	0 - 0.04	0 - 0.14	0 - 0.03	0 - 0.21	0 - 0.32	0 - 0.29 YONS RD	0 - 0.19	0 - 0.13	0 - 0.27		ŗ
	Element	202561 DLE RD	28347 28731 205944 Int of BLUE RIDGE W, LYONS RD	28347 28349 2226921 Int of BLUE RIDGE W, LYONS RD	2226874 LYONS RD	2226875 NS RD	2226862	28801 28856 206242 0 - 0.29 Int of LYONS RD, RAMP OFF TO LYONS RD	2516505 3RY DR	2516504	202611	3.00	
	End Node	28731 RD, MIE	28731 RIDGE W	28349 2006E W	61608 31DGE E,	61603 RD, LYOI	28856 VS RD	28856 RD, RAI	28801 RD, PEI	62772 \S RD	26365 \S RD		
	Start Node	25593 28731 202561 Int of LYONS RD, MIDDLE RD	28347 Int of BLUE F	28347 Int of BLUE F	28349 61608 2226874 Int of BLUE RIDGE E, LYONS RD	61608 61603 2226875 Int of FIELD RD, LYONS RD	61603 28856 Non-Int LYONS RD	28801 Int of LYONS	62772 28801 2516505 Int of LYONS RD, PERRY DR	25630 62772 2516504 Non-Int LYONS RD	25630 26365 Non-Int LYONS RD	Study Years:	

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New York State																
		Injury	Degree						PD	PD	PD			മ		
		Crash	Mile Point						0.68	0.70	1.06			1.75		
		Crash Date							01/12/2008	09/19/2008	12/05/2009			06/09/2010		
		Crash Report							2008-505	2008-22987	2009-28682			2010-13489		
			ЪD	0	0	0	0	0	2		~	0	0	0		ო
Š		shes	o	0	0	0	0	0	0		0	0	0	0		0
U U U U	tails	Injury Crashes	മ	0	0	0	0	0	0		0	0	0	4		~ -
Crash Summary	Section Details	Inju	A	0	0	0	0	0	0		0	0	0	0		0
SS n	Secti		×	0	0	0	0	0	0		0	0	0	0		0
5		Total	Crashes	0	0	0	0	0	7		~	0	0	-		4
		Route - MP		1102238 - 0	1102238 - 0.16	1102238 - 0.20	1102238 - 0.34	1102238 - 0.37	1102238 - 0.58		1102238 - 0.90	1102238 - 1.19	1102238 - 1.38	1102238 - 1.51	ar mannaithe a statemate and an	Totals:
		Offset	Begin - End	0 - 0.16	0 - 0.04	0 - 0.14	0 - 0.03	0 - 0.21	0 - 0.32		0 - 0.29	0 - 0.19	0 - 0.13	0 - 0.27		
		Element			205944				2226862		206242					
5 · *·=		End	Node	28731	28731	28349	61608	61603	28856		28856	28801	62772	26365		
			Node	25593	28347			61608			28801	62772	25630	25630		

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	section	
	Maine Department Of Transportation - Traffic Engineering, Crash Records Section	() () () () ()
	Engineering, C	Crock Cummers II Characteriotics
	on - Traffic	
	Transportatio	U.S.
	partment Of ⁻	
	Maine Dep	
: : :		

Crash Summary II - Characteristics

										Ő	Crashes	δē	Day and	and Hou	5											
						AM					- -	Hour of	f Day					۵.	РМ							
Day Of Week	12		2	3	4	5	9	7	ω	6	10		12	-	2	<i>с</i> о	4	5	6	7	8	6	10	11 Un	n Tot	Ļ
SUNDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MONDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Ö	0	0	0	0	0	0	0	0	
TUESDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
WEDNESDAY	0	0	0	~	0	0	0	~-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
THURSDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	~~	0	0	0	0	0	0	~~	
FRIDAY	0	~	0	0	0	~	0	0	0	0	0	0	0	0	0	0	0	~-	0	0	0	0	0	0	ო	
SATURDAY	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	~-	0	2	
Totals	0	~	0		0	2	0		0	0	0	0	0	0	0	0	0	2	0	0	0	0	~~	0	ω	
	Crash	les by	Crashes by Year and Month	and	Wont	е.									\geq	shiele	e Cour	nts by	Туре							

Ö	rashes	by Y	Crashes by Year and Month	lonth	Vehicl	le Col	Vehicle Counts by Type	
Month	2008	2009	2009 2010	Total	Unit Type	Total	Unit Type T	Total
)) 1		1-2 Door	0	32-3 Axle Tractor with Tandem Axle Semi	0
JANUARY	2	0	0	7	2-4 Door	5	33-3 Axle Tractor with Tridem Axle Semi	0
FEBRUARY	0	0	0	0	3-Convertible	0	35-3 Axle Tractor with Single Axle Semi & 2	0
MARCH	~	С	С	~	4-Station Wagon	0		
APRII	- c) C		· c	5-Van	~ (36-3 Axle Tractor with Tandem Axle Semi & 2 Axle Trailer	0
) (, c) () (6-Pickup Iruck	v c	37-5 Axle Semi; Split Trailer Tandem	0
MAY	5	c	5	- C	7-SUV 10-Truck Tractor Only (Bobtail)	1 C	38-6 Axle Semi; Split Trailer Tandem with	0
JUNE	0	0	~~) ,	Center Axle	
JULY	0	0	~		12-School bus 13-Motor Home	- 0	39-6 Axle; Standard Trailer Tandem with Center Axle	0
AUGUST	0	0	0	0	14-Motorcycle	0	40-4 Axle Single Unit	0
SEDTEMBED	٣	C	~	~	15-Moped	0	42-4 Axle Tractor with Tandem Axle Semi	0
		2	_	1	16-Motor Bike	0	50-Any Other Axle Configuration	0
OCTOBER	0	0	0	0	17-Bicycle	0	60-Other Unit	0
NOVEMBER	0	0	0	0	18-Snowmobile	0	70-ATV	0
	c	۲	c	Ŧ	20-2 Axle Single Unit with Dual Tires	0	81-2 Axle Bus	0
UECEMBER	S	-	0		21-2 Axle Tractor with Single Axle Semi	0	82-3 Axle Bus	0
Total	4		ო	ω	22-2 Axle Tractor with Tandem Axle Semi	0	98-Farm Vehicles / Tractors	0
					25-2 Axle Tractor with Single Axle Semi & 2	0	99-Unknown	0
					Axie Haiter 30-3 Axle Single Unit 31-3 Axle Tractor with Single Axle Semi	00	Total	~

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It Contributing Factor Dr 1 Dr 2 Dr 3 D Der Action 1 2 1 Y<	Crashes by Apparent Contributing Factor A	t Contr	ibutin	g Fact	ctor And I		Driver			Crashes by Apparent Physical Condition And Driver	y Appar	ent Phy	sical 0	onditic	on And	I Drive	5	
Normal below ay Normal Lunder the Influence ay 1 2 1 0 0 4 Under the Influence Passing 0 0 0 0 0 4 Under the Influence Passing 0 0 0 0 0 0 3 Passing 0 0 0 0 0 1 Had Been Using Drugs Passing 0 0 0 0 0 1 Fatigued Passing 0 0 0 0 0 0 1 Fatigued Passing 0 0 0 0 0 0 1 Passing 0 0 0 0 0 1 Fatigued Passing 0 0 0 0 0 0 0 1al 0 0 0 0 0 0 0 1al 0 0 0	Apparent Contributing Factor	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total	Ϋ́οΑ	parent Phys andition			Dr 3	Dr 4	Dr 5	Other	Total	
It Z It D O O O Had Been Drinking Had Been Drinking Had Been Using Drugs Bevice I O O O O O Had Been Using Drugs Pevice I O O O O O I Had Been Using Drugs Pevice I O O O O I Had Been Using Drugs Passing O O O O O I Had Been Using Drugs Passing O O O O O I Had Been Using Drugs Passing O O O O O O Had Been Using Drugs Passing O O O O O O Had Been Using Drugs Passing O O O O O Had Been Using Drugs Passing O O O O O O Drugs Passing O O <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>No</td> <td>rmal</td> <td>9</td> <td>0</td> <td>· •</td> <td>0</td> <td>0</td> <td>0</td> <td>თ</td> <td></td>									No	rmal	9	0	· •	0	0	0	თ	
ay 0 0 0 0 0 1 Had Been Using Drugs aewice 1 0 0 0 0 0 3 Had Been Using Drugs aewice 1 0 0 0 0 0 3 Had Been Using Drugs aewice 1 0 0 0 0 0 1 Had Been Using Drugs aewice 1 0 0 0 0 0 1 Had Been Using Drugs aesing 0 0 0 0 0 0 1 Had Been Using Drugs aesing 0 0 0 0 0 0 1 Had Been Using Drugs alge 0 0 0 0 0 0 1 I I alge 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	No Improper Action	~~	~	, ,	0	0	0	4	n	der the Influenc	e 1	0	0	0	0	0	~~	
3 0 0 0 0 3 Had Been Using Drugs Perice 1 0 0 0 0 0 3 Had Been Using Drugs Passing 0 0 0 0 0 0 1 Fatigued Passing 0 0 0 0 0 0 1 Handlcapped Passing 0 0 0 0 0 0 0 1 Passing 0 0 0 0 0 0 0 0 1 Handlcapped Passing 0 <td>Failure to Yield Right of Way</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>Ha</td> <td>d Been Drinking</td> <td></td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td></td>	Failure to Yield Right of Way	0	0	0	0	0	0	0	Ha	d Been Drinking		0	0	0	0	0	0	
evice 1 0 0 0 0 0 1 Asleep Passing 0 0 0 0 0 0 1 Fatigued Passing 0 0 0 0 0 0 1 Handicapped Passing 0 0 0 0 0 0 0 1 Passing 0 0 0 0 0 0 0 1 Passing 0 0 0 0 0 0 0 0 1 Passing 0 </td <td>Illegal Unsafe Speed</td> <td>ო</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>ი</td> <td>Ha</td> <td>d Been Using Di</td> <td></td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td></td>	Illegal Unsafe Speed	ო	0	0	0	0	0	ი	Ha	d Been Using Di		0	0	0	0	0	0	
evice 1 0 0 0 1 Fatigued Passing 0 0 0 0 0 0 1 nge 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1al 0 0 0 0 0 0 0 0 1al 0 0 <td< td=""><td>Following Too Close</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>As</td><td>leep</td><td>0</td><td>٥</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td></td></td<>	Following Too Close	0	0	0	0	0	0	0	As	leep	0	٥	0	0	0	0	0	
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nge 0	Improper Passing, Overtaking	0	0	0	0	0	0	0	На	ndicapped	0	0	0	0	0	0	0	
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tor 10^{-1}	Vision Obscured, Sun, Headlights	0	0	0	0	0	0	0	25-29	1.00	, 0	0		0		0	С	
tior 0 0 0 0 0 0 0 0 0 0	Other Vision Obscurement	0	0	0	0	0	0	0	30-39		Ö	0		0		0	0	
tor tor tor tor tor tor tor tor	Other Human Violation Factor	0	0	0	0	0	0	0	40-49	6	0	0		0		0	ы	
tor c	Hit and Run	0	0	0	0	0	0	0	50-59	0	0	0		0		0	0	
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	Other Vehicle Defect or Factor	0	0	0	0	0	0	0	Total	11	0	0		0		0	11	
	Unknown	0	0	0	0	0	0	0										

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Maine Department Of Transportation - Traffic Engineering, Crash Records Section

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vice 0 Electrical) 0 set 0 st or supports 0 sts 0 sts 0 sts 0 sts 0 sts 0 sts 0 sts 0 cing Meter 0 sts 0 strier 0 sts 0 strier 0 sts 0 strier 0 sts 0 strier 0	p & Go) 0	1-Level Straight
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st or supports 0 ts or supports 0 ting Meter 0 arrier 0 arrier 0 cluding protective guard 0 adian barrier) 0 fil 0 intch, Curb 2 or Ledge 0 or Ledge 0 0	4	5-Top of Hill Straight
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ts or supports 0 king Meter 0 ary 0 arrier 0 bluding protective guard 0 cluding protective guard 0 adian barrier) 0 adian barrier 0 o 0 or Ledge 0 o 0 or Ledge 0 0	0	7-Bottom of Hill Straight
cing Meter 0 ary 0 arrier 0 Barrier 0 cluding protective guard 0 clian barrier) 0 all 0 litch, Curb 2 br Ledge 0 or Ledge 0 0	school Patrol 0	8-Bottom of Hill Curved
ery 0 3arrier 0 cluding protective guard 0 sdian barrier) 0 II 0 Iftch, Curb 2 or Ledge 0 or Ledge 0 0	m 1	9-Other
arrier 0 auding protective guard 0 staten barrier) 0 adian barrier) 0 itch, Curb 2 or Ledge 0 or Ledge 0 0	0	Total
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cluding protective guard 0 13-Nor s 3 14-Oth sdian barrier) 0 14-Oth ll 0 litch, Curb 2 or Ledge 0 0 K 0 A 0 0 B	0	
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nitch, Curb 2 or Ledge 0 0 0 0 0		
or Ledge		
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000	e Crashes Of Inturies	1-Dawn (Morning)
0 0		2-Daylight
0	0	3-Dusk (Evening)
	2	4-Dark (Street Lights On)
Total 5 C	0	5-Dark (No Street Lights)
D	6	6-Dark (Street Lights Off)
		7-Other

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Light	
Light Total	
1-Dawn (Morning)	
2-Daylight 3	
3-Dusk (Evening) 0	
4-Dark (Street Lights On) 1	
5-Dark (No Street Lights) 3	
6-Dark (Street Lights Off) 0	
7-Other 0	
Total 8	

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

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Crash Summary II - Characteristics Crashes by Crash Type and Type of Location

Crash Type	Straight Road	Curved Road	Three Leg Intersection	Four Leg Intersection	Five Leg Intersection	Driveways	Bridges	Interchanges	Other	Total
Object in Road	1	0	2	0	0	0	0	0	0	ი
Rear End / Sideswipe		0		0	0	0	0	0	0	0
Head-on / Sideswipe	0	0	0	0	0	0	0	0	0	0
Intersection Movement	0	0	0	0	0	0	0	0	0	0
Pedestríans	0	0	0	0	0	٥	0	0	0	0
Train	0	0	0	0	0	0	0	Ο,	0	0
Ran Off Road	o	~-		0	0	0	0	0	0	N
All Other Animal	0	0	0	0	0	0	0	0	0	0
Bike	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	٥	0	0
Jackknife	0	0	0	0	0	0	0	0	0	0
Rollover	0	0	0	0	0	0	0	0	0	0
Fire	0	0	0	0	0	0	0	0	0	0
Submersion	0	0	0	0	0	0	0	0	0	0
Rock Thrown	0	0	0	0	0	0	0	0	0	0
Bear	0	0	0	0	0	0	0	0	0	0
Deer	0		0	0	0	0	0	0	0	4
Moose	0	0	0	0	0	0	0	0	0	0
Total	2	2	4	0	0	0	0	0	0	8

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Crash Summary II - Characteristics Crashes by Weather, Light Condition and Road Surface

Weather Light	Debris	Drý	lce, Packed Snow, Not Sanded	lce, Packed Snow, Sanded	Muddy	Oily	Other	Snow Slush, Not Sanded	Snow, Slush, Sanded	Wet	Total
Blowing Sand or Dust											
Dark (No Street Lights)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights Off)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights On)	0	0	0	0	0	0	0	0	0	0	0
Dawn (Morning)	0	0	٥	0	0	0	0	0	O	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0
Dusk (Evening)	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	ò	0	0	0	0
Clear											
Dark (No Street Lights)	0	1	0	0	0	0	0	0	0	0	
Dark (Street Lights Off)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights On)	0	0	0	0	0	0	0	0	Q	0	0
Dawn (Morning)	0	~~	o	0	0	0	0	o	0	0	۲
Daylight	0	~~	0	0	0	0	0	0	0	0	~
Dusk (Evening)	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Cloudy							-		,		
Dark (No Street Lights)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights Off)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights On)	0	-	0	0	0	0	0	0	0	0	~
Dawn (Morning)	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	~-	
Dusk (Evening)	0	0	0	0	0	0	0		0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Fog, Smog, Smoke											
Dark (No Street Lights)	0	0	1	0	0	0	0.	o	0	0	7
Dark (Street Lights Off)	0	0	0	0	0	0	0	0		0	0
Dark (Street Lights On)	0	0	0	0	0	0	0	0	0	0	0
Dawn (Morning)	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	. 0
Dusk (Evening)	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0

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			Crash Crashes b	Summary II - Characteristics w Weather, Light Condition and Road Surface	ary II - C Joht condit	Characteristics bition and Road Surface	eristics ad Sunface			- -	
Weather Light	Debris	Dry	lce, Packed Snow, Not Sanded	lce, Packed Snow, Sanded	Muddy	Oily	Other	Snow Slush, Not Sanded	Snow, Slush, Sanded	Wet	Total
Other											
Dark (No Street Lights)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights Off)	0	0	0	0	0	0	0	0	o	0	0
Dark (Street Lights On)	0	0	0	0	0	0	0	0	0	0	0
Dawn (Morning)	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0
Dusk (Evening)	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Rain							·				
Dark (No Street Lights)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights Off)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights On)	0	0	0	0	0	0	0	0	0	0	0
Dawn (Morning)	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0
Dusk (Evening)	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	٥	0	0	0	o	0	0	0
Severe Cross Winds								:			
Dark (No Street Lights)	0	0	0	0	0	0	0.	0	0	0	0
Dark (Street Lights Off)	0	0	0	0	٥	0	0	0	0	0	0
Dark (Street Lights On)	0	0	0	0	0	0	0	٥	0	0	0
Dawn (Morning)	0	0	0		0	0	0	D	0	0	0
Daylight	0	0	0	0	o	0	0	o	0	0	0
Dusk (Evening)	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	o	0	0	0
Sleet, Hail, Freezing Rain											
Dark (No Street Lights)	0	0	0	0	o	0	0	o	0	0	0
Dark (Street Lights Off)	0	0	0	0	0	0	o	0	0	0	0
Dark (Street Lights On)	0	0	0	0	0	0	0	0	0	٥	0
Dawn (Morning)	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	D	0	0	0	0	0	0
Dusk (Evening)	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0

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Maine Department Of Transportation - Traffic Engineering Crash Records Section

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Crash Summary II - Characteristics Crashes by Weather, Light Condition and Road Surface

Weather Light	Debris	Dry	Ice, Packed Snow, Not Sanded	lce, Packed Snow, Sanded	Muddy	Oily	Other	Snow Slush, Not Sanded	Snow, Slush, Sanded	Wet	Total
Snow										-	
Dark (No Street Lights)	0	0	0	0	0	0	0		0	0	
Dark (Street Lights Off)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights On)	0	0	0	0	0	0	0	0	0	0	0
Dawn (Morning)	0	0	o	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0		0	0	~
Dusk (Evening)	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	O	0	0
TOTAL	0	4	1	0	0	0	0	2	0	~	8

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		73								
		□ 1320 & Driver Report Included			Exclude First Node Exclude Last Node					
Maine Department Of Transportation - Traffic Engineering, Crash Records Section Crash Summary Report	arameters	1320 Included			Exclude		·			
Transportation - Traffic Engineering, Crash Summary Report	Report Selections and Input Parameters	Crash Summary II			Start Offset: 0 End Offset: 0					
	Ϋ́Υ.	Section Detail		<u>REPORT PARAMETERS</u> Year 2008, Start Month 1 through Year 2010 End Month: 12	Start Node: 25597 End Node: 26370			·		
		REPORT SELECTIONS	REPORT DESCRIPTION Trafton Rd	REPORT PARAMETERS Year 2008, Start Month 1 thr	Route: 1102252					

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Maine Department Of Transportation - Traffic Engineering, Crash Records Section

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			Crash Summary	nmm	ЯĽ	420MB								
			Ne	Nodes										
Node	Route - MP	Node Description	_	J/R Total		Injur	y Cra	Injury Crashes	Pel	cent /	Percent Annual M Crash		Critical	CRF
				Crashes	×	∢	മ	ပ	PD Injury	lury	Ent-Veh	Rate	Rate	
25597 1	25597 1102252 - 0 1102	1102306 OAK, BOG, TRAFTON RD.	~	-	0	0	0	0	-	0.0 Statew).0 1.020 statewide Crash Rate:	0.33 0.14	0.53	00.0
24940 1	102252 - 0.10 Into	24940 1102252 - 0.10 Int of COTTLE, TRAFTON RD	~	0	0	0	0	0	0	0.0 Statew	0.0 0.193 Statewide Crash Rate:	e: 0.00	0.43	0.00
24941 1	102252 - 0.62 110	24941 1102252 - 0.62 1101596 TL,WATERVILLE-OAKLAND	~	0	0	0	0	0	0	0.0 Statew	0.0 0.116 Statewide Crash Rate:	9.000 0.12	0.20	0.00
25164 1	102252 - 1.64 110	25164 1102252 - 1.64 1101832 WAT, EIGHT ROD, TRAFTON RD.	~	0	0	0	0	0	0	0.0 Statew	0.0 0.194 Statewide Crash Rate:	e: 0.00	0.43	0.00
25163 11	102252 - 1.67 Into	1102252 - 1.67 Int of JUNCTION RD, TRAFTON RD	~	0	0	0	0	0	0	0.0 Statew	0.0 0.204 Statewide Crash Rate:	». 0.12 0.12	0.44	0.00
26370 1	102252 - 2.59 110	26370 1102252 - 2.59 1103134 WAT, RTE. 104, TRAFTON RD.	~	0	0	0	0	0	0	0.0 Statew).0 1.312 itatewide Crash Rate:	e 0.00 0.100	0.38	0.00
Study Years: 3.00	rs: 3.00		NODE TOTALS:	-	0	0	0	0	-	0.0	3.039	0.11	0.36	0.31

	al CRF	Ø	932.42 0.00	851.53 0.00	744.46 0.00	-482.86 0.00	637.48 0.00	537.73 0.31	577.71 0.43
		Rate		_		•			
	Crash	Rate	te: 225.96	0.00 te: 225.96	296.47 te: 225.96	0.00 te: 225.96	161.67 te: 225.96	166.60	249.91
	Annual	HMVM	0.0 0.00014 Statewide Crash Rate:	0.0 0.00063 Statewide Crash Rate:	0.0 0.00112 Statewide Crash Rate	0.0 0.00004 Statewide Crash Rate:	100.0 0.00206 Statewide Crash Rate	0.00400	0.00400
	Percent	Injury	0.0 Statev	0.0 Statev	0.0 Statev	0.0 Statev	100.0 Statev	50.0	33.3
		Dd	0	0		0	0	~	2
	Injury Crashes	υ	0	0	0	0	-	<u> </u>	٠-
	ury Cr	B	0	0	0	0	0	0	0
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	210	×	0	0	0	0	0	0	0
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	Sectic	Length	0.10	0.52	1.02	0.03	0.92	2.59	2.59
	Route - MP		1102252 - 0 RD INV 11 02252	1102252 - 0.10 RD INV 11 02252	1102252 - 0.62 RD INV 11 02252	1102252 - 1.64 RD INV 11 02252	1102252 - 1.67 RD INV 11 02252	Section Totals:	Grand Totals:
	Offset	Begin - End	0 - 0.10	0 - 0.52	0 - 1.02	0 - 0.03	0 - 0.92		
	Element	والمحافظ المحافظ	24940 25597 201539 Int of COTTLE, TRAFTON RD	24940 24941 201538 Int of COTTLE, TRAFTON RD	24941 25164 201541 (1101596 TL, WATERVILLE-OAKLAND	25163 25164 201884 Int of JUNCTION RD, TRAFTON RD	25163 26370 201885 Int of JUNCTION RD, TRAFTON RD	3.00	
	End	Node	25597 NLE, TRAF	24941 ILE, TRAF	25164 L,WATER	25164 STION RD	26370 3710N RD	ears: 3	
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And a second		Injury	Degrée			Dd		o	
		Crash	Mile Point Degree			1.22		1.87	
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		Element		201539	201538	201541	201884	201885	
		End	Node	25597	24941	25164	25164	26370	
4		Start	Node	24940	24940	24941	25163	25163	

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										Cra B	Crashes by	by Day		and Hour												
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MONDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TUESDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Ō	0	0	0	0	0	0
WEDNESDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
THURSDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	, 0	0	0	0	0	0	0
FRIDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0		0	5
SATURDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	~	0	0	0	
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Tote	o	ო	0	0 0	o a	C	00	o o	0	0	0	0	0	0	0	0	0	0	0
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otal			0	0	0	С	> ~	0	~~	C	5	0	0	c	>	ო			
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Maine Department Of Transportation - Traffic Engineering, Crash Records Section Crash Summary II - Characteristics <u>-</u>---

Total 0 0 0 ŝ 0 0 0 0 0 0 0 0 3 Total 00 0 0 0 ന ĉ 0 0 0 Crashes by Apparent Physical Condition And Driver Other 0 0 0 \circ 0 0 0 0 C 0 P P 0 0 0 0 0 0 0 0 0 0 00 0 Dr 5 0 0 0 0 0 0 0 0 0 0 SnowMobile Pedestrian Dr 4 Driver Age by Unit Type 00 0 0 0 0 \circ 0 00 0 0 0 0 00 00 0 0 00 0 Ω Ω 0 0 0 Ó 0 0 0 C 0 0 Dr 2 0 0 0 0 0 0 0 0 00 0 0 0 0 0 0 0000 00 0 ۲ ۵ 0 0 0 ന 0 0 0 C ന Bicycle Apparent Physical 00 0 0 0 0 0 0 0 0 0 0 0 Had Been Using Drugs Under the Influence Had Been Drinking Handicapped Driver Condition 0 ო 0 0 0 0 0 0 0 0 0 0 e Fatigued Normal Asleep Other Total -----Unknown 09-Under 80-Over 15-19 Age 10-14 30-39 40-49 50-59 69-09 62-02 20-24 25-29 Total Total 0 0 0 0 0 0 0 00000000000000 ×---0 0 0 0 0 0 0 0 Other 0 0 0 0 0 0 0000 00 0 0 0 0 0 0 00 0 0 0 00 000 Crashes by Apparent Contributing Factor And Driver Dr 5 0 0 0 00000 Dr 4 0 0 0 0 00 Dr 3 0 0 0 0 0 0 0 0 \circ 0 0 0 0 000 0 0 00 0 0 0 0 0 0 0 00 ۲ 2 0 0 0 0 ŗ 0 0 0 Apparent Contributing Factor Vision Obscured, Windshield Glass Driving Left of Center Not Passing Vision Obscured, Sun, Headlights **Disregard Traffic Control Device** Improper Unsafe Lane Change Improper Passing, Overtaking Other Human Violation Factor Other Vehicle Defect or Factor Driver Inattention, Distraction Improper Parking Start, Stop No Signal or Improper Signal Failure to Yield Right of Way Other Vision Obscurement Defective Tire, Tire Failure Pedestrian Violation Error Defective Suspension Following Too Close Physical Impairment Illegal Unsafe Speed No Improper Action Driver Inexperience **Defective Steering Defective Brakes** Impeding Traffic Defective Lights Unsafe Backing Improper Turn Hit and Run Unknown

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 Maine Department Of Transportation - Traffic Engineering, Crash Records Section

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Road Character Road Character

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-	Crash Summary II
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Fixed Object Struck	
Fixed Object Struck	Total
1-Construction, Barricades Equipment, etc.	0
2-Traffic Signal	0
3-R.R. Crossing Device	0
4-Light Pole	0
5-Utility Pole (Tel. Electrical)	0
6-Sign Structure Post	0
7-Mail Boxes or Posts	~~
8-Other Poles, posts or supports	0
9-Fire Hydrant/Parking Meter	0
10-Tree or Shrubbery	0
11-Crash Cushion	0
12-Median Safety Barrier	0
13-Bridge Piers (including protective guard rails)	0
14-Other Guardrails	0
15-Fencing (not median barrier)	0
16-Culvert Headwall	0
17-Embankment, Ditch, Curb	2
18-Building, Wall	0
19-Rock Outcrops or Ledge	0
20-Other	0
21-Gate or Cable	0
22-Pressure Ridge	0
Total	3

Traffic Control Devices		Road
Traffic Control Device	Total	Road C
1-Traffic Signals (Stop & Go)	0	1-Level Straight
2-Traffic Flashing	0	2-Level Curved
3-Overhead Flashers	0	3-On Grade Straight
4-Stop Signs - All Approaches	0	4-On Grade Curved
5-Stop Signs - Other	7 ~*	5-Top of Hill Straight
6-Yield Sign	0	6-Top of Hill Curved
7-Curve Warning Sign	0	7-Bottorn of Hill Straight
8-Officer, Flagman, School Patrol	0	8-Bottom of Hill Curved
9-School Bus Stop Arm	0	9-Other
10-School Zone Sign	0	Total
11-R.R. Crossing Device	0	
12-No Passing Zone	0	
13-None	0	
14-Other	0	
Total	Э	

	Number Of Injuries	0	0	0	~~	0	L
ry Data	Injury Crashes	0	0	0	~~	2	ю
ոնկ	Severity Code	X	A	В	U	PD	Total

» 0 0 5 0

5-Dark (No Street Lights) 6-Dark (Street Lights Off)

7-Other Total

Total	0	~~	0	0
Light Light	1-Dawn (Morning)	2-Daylight	3-Dusk (Evening)	4-Dark (Street Lights On)

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

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Crash Summary II - Characteristics Grashes by Grash Type and Type of Location

Crash Type	Straight Road	Curved Road	Three Leg Intersection	Four Leg Intersection	Five Leg Intersection	Driveways	Bridges	Interchanges	Other	Total
Object in Road	0	0	0	0	0	0	0	0	0	0
Rear End / Sideswipe	0	0	0	0	0	0	0	0	0	0
Head-on / Sideswipe	0	0	0	0	0	0	0	0	0	0
Intersection Movement	0	0	0	0	0	0	0	0	a	0
Pedestrians	0	0	0	0	0	0	0	0	0	0
Train	0	0	0	0	0	0	0	0	0	0
Ran Off Road	N	0	۲	0	0	0	0	0	0	ы
All Other Animal	0	0	0	0	0	0	0	0	0	0
Bike	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	Q	0	0	0	0
Jackknife	0	0	0	0	0	0	0	0	0	0
Rollover	0	0	0	0	0	0	0	0	0	0
Fire	0	0	o	0	0	0	0	0	0	0
Submersion	0	0	0	0	0	0	0	0	0	0
Rock Thrown	0	0	0	0	0	0	0	0		0
Bear	0	0	0	0	0	0	0	0	0	0
Deer	0	0	0	0	0	٥	0	0	0	0
Moose	0	0	0	0	0	0	0	0	0	0
Total	2	o	~	0	0	0	0	a	0	3

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			Crashes b	oy Weather, Light Condition and Road Surface	Ight Condit	ion and Ros	id Surface				
Weather Light	Debris	Dry	Ice, Packed Snow, Not Sanded	lce, Packed Snow, Sanded	Muddy	Öily	Other	Snow Slush, Not Sanded	Snow, Slush, Sanded	Wet	Total
Blowing Sand or Dust											
Dark (No Street Lights)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights Off)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights On)	0	0	0	0	0	0	0	0	0	0	0
Dawn (Morning)	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0
Dusk (Evening)	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Clear											
Dark (No Street Lights)	0	1	0	0	0	0	0	0	Ţ	0	2
Dark (Street Lights Off)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights On)	0	0	0	0	0	0	0	0	0	0	0
Dawn (Morning)	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	7.	0	0	0	0	0	0	0	0	۰-
Dusk (Evening)	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Cloudy											A COMMENSATION OF A COM
Dark (No Street Lights)	0	0		0	0	0	0	0	0	0	0
Dark (Street Lights Off)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights On)	0	0	0	0	0	0	0	0	0	0	0
Dawn (Morning)	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0
Dusk (Evening)	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Fog, Smog, Smoke					a ja ka			a de la constante de la constan	39479000776407797077974747474747479707793		
Dark (No Street Lights)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights Off)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights On)	0	0	0	0	0	0	0	0	0	0	0
Dawn (Morning)	0	0	0	0	0	0	0	0	0	0	0 1
Daylight	0	0	0	0	0	0	0	0	0	0	0 0
Dusk (Evening)	0	0	0	0	0	0	0	0	0 0	-	5 0
Other	0	0	0	0	0	0	0	0	0	Э	þ

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	Total	0	0	0	0	0	0	0		0	0	0	0	0	o	0	1000-1000 EXVLasion-Alvier	0	0	0	0	0	0	0		0	о (0	0	0	0
	Τc	****															enitzinisiidhig (Dorney Oblanninian Antolog														
	Wet	0	0	0	0	0	0	0		0	0	0	0	0	0	0	a da a manda da manana da manan	0	0	0	0	0	0	0		0	0	0	0	0	0
	Snow, Slush, Sanded	0	0	0	0	0	0	0		0	0	0	0	0	0	0	3	0	0	0	0	0	0	0		0	0	0	0	0	0
II - Characteristics t condition and Road Surface	Snow Slush, Not Sanded	0	0	o	o	0	0	0		o	0	0	0	0	0	0		0	0	o	o	0	0	0		0	0	0	0	0	0
Characteristics	Other	0	0	0	0	0	0	0		0	0	0	0	0	0	0		0	0	0	0	Ö	0	0		0	0	0	0	0	0
I Summary II - Characteristics by Weather, Light Condition and Road Surface	Oily	0	0	0	0	0	0	0		0	0	0	0	0	0	0		0	0	0	0	0	0	0		0	0	0	0	0	0
light Condit	Muddy		0	0	0	0	o	0		0	o	0	0	0	0	0		o	0	0	0	0	0	0		o	0	0	0	0	0
y Weather, Light	lce, Packed Snow, Sanded	0	0	0	0	0	0	0		0	0	0	0	0	0	0		0	0	0	0	0	0	0		0	0	0	0	0	0
Crashes b	Ice, Packed Snow, Not Sanded	0	0	0	0	0	0	0		0	0	0	0	0	0	0		o	0	0	0	0	0	0		0	0	0	0	0	0
	Dry	0	0	0	0	0	0	0		0	0	0	0	0	0	0		0	0	0	0	0	0	0		0	0	0	0	0	0
	Debris	0	0	0	0	0	0	0		0	0	0	0	0	0	0		0	0	0	0	0	0	0		0	0	0	0	0	0
	Weather Light Other	Dark (No Street Lights)	Dark (Street Lights Off)	Dark (Street Lights On)	Dawn (Morning)	Daylight	Dusk (Evening)	Other	Rain	Dark (No Street Lights)	Dark (Street Lights Off)	Dark (Street Lights On)	Dawn (Morning)	Daylight	Dusk (Evening)	Other	Severe Cross Winds	Dark (No Street Lights)	Dark (Street Lights Off)	Dark (Street Lights On)	Dawn (Morning)	Daylight	Dusk (Evening)	Other	Sleet, Hail, Freezing Rain	Dark (No Street Lights)	Dark (Street Lights Off)	Dark (Street Lights On)	Dawn (Norning)	Daylight	Dusk (Evening)

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	Total	000		m
	Wet	000		O
	Snow, Slush, Śanded	000		-
	Show Slush, Not Sanded	000		0
	Other	000	- <u>,</u> , , , , , , , , , , , , , , , , , ,	O
	Oily	000		0
	Muddy	000		0
	ice, Packed Snow, Sanded	000		O
Crashes by We	Ice, Packed Snow, Not Sanded	000		0
	Dry	000		Ν
	Debris	000		0
101	VVeather Light Snow	Dark (No Street Lights) Dark (Street Lights Off) Dark (Street Linhts On)	Dawn (Morrning) Dawn (Morrning) Daylight Dusk (Evening) Other	TOTAL

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cords Section	ded	·	Exclude First Node Exclude Last Node	
Maine Department Of Transportation - Traffic Engineering, Crash Records Section Crash Summary Report	0 Included	Securition 95S	KEPORT PARAIMETERS Year 2008, Start Month 1 through Year 2010 End Month: 12 Route: 0095S Start Offset: 0 Exclude Fit End Node: 28853 End Offset: 0	

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Crash Summary I

	Nodes	des	,									
Node Route - MP Node Description	U/R	Total		Injur	/ Cra	Injury Crashes	ЪР	Percent A	Annual M C	Crash (Critical	CRF
	-	Crashes	\mathbf{x}	.∢	ш	U	PD Injury			Rate	Rate	
28912 0095S - 177.11 TL - Oakland, Waterville	-	0	0	0	0	0	0	0.0 Statewi	0.0 6.391 Statewide Crash Rate:	0.00	0.13	0.00
28867 0095S - 177.23 Int of 195 SB, RAMP OFF TO KENNEDY MEM DR		~~	0	0	0	0	~	0.0 Statewi	0.0 6.391 Statewide Crash Rate:	0.05	0.13	0.00
28866 0095S - 177.44 Int of 195 SB, RAMP ON FROM KENNEDY MEM DR			0	0	0	0	~~	0.0 Statewi	0.0 4.931 Statewide Crash Rate:	0.07	0.14	0.00
28862 0095S - 177.63 Intof195 SB, RAMP ON FROM KENNEDY MEM DR	۲	4	0	0	0	0	4	0.0 Statewi	0.0 5.084 Statewide Crash Rate:	0.26	0.14	1.88
28588 0095S - 178.01 Non-Int I 95 SB	~~	0	0	0	0	0	0	0.0 Statewi	0.0 5.084 Statewide Crash Rate:	0.00	0.14	0.00
28861 0095S - 179.07 BRG 1461, I 95 SB over WEBB ROAD	~	0	0	0	0	0	0	0.0 Statewi	0.0 5.084 Statewide Crash Rate:	0.00	0.14	0.00
28860 0095S - 180.28 BRG 5812, I 95 SB under TRAFTON RD	~	0	0	0	0	0	0	0.0 Statewi	0.0 5.084 Statewide Crash Rate:	0.00	0.14	0.00
28859 0095S - 180.51 TL - Sidney, Waterville	~	0	0	0	0	0	0	0.0 Statewi	0.0 5.084 Statewide Crash Rate:	0.00	0.14	0.00
28858 0095S - 181.14 BRG 5785, I 95 SB under TOWN FARM RD	~	0	0	0	0	0	0	0.0 Statewi	0.0 5.084 Statewide Crash Rate:	0.00	0.14	0.00
28857 0095S - 182.24 BRG 5784, I 95 SB under DRUMMOND RD	/	0	0	0	0	0	0	0.0 Statewi	0.0 5.084 Statewide Crash Rate:	0.00	0.14	0.00
28855 0095S - 184.21 Int of 195 SB, RAMP C OFF TO LYONS RD	~-	0	0	Ο.	0	0	0	0.0 Statewi	0.0 5.084 Statewide Crash Rate:	0.00	0.14	0.00
28854 0095S - 184.33 Int of 195 SB, RAMP D ON FROM LYONS RD	←	0	0	0	0	0	0	0.0 Statewi	0.0 5.603 Statewide Crash Rate:	0.00	0.14	0.00
28853 0095S - 185.44 Non-Int I 95 SB	~	0	0	0	0	0	0	0.0 Statewi	0.0 5.603 Statewide Crash Rate:	0.04	0.14	0.00
Study Years: 3.00 NODE TOTALS	ALS:	e	0	0	0.	0	9	0.0	69.591	0.03	0.07	0.39

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		Injury Degree	PD	ပ	РО	Dd	DD	ပ	DD	Dd	PD	۵	- C			<u>)</u> 0	o	ပ	ЪD	РО	۵	ပ	A	DD	в	ပ	DD	ЪО	O	A	D	o
		Crasn Mile Point	177.13	177.17	177.17	177.17	177.17	177.18	177.18	177.21	177.21		177 45	177 64	177.63	177.66	177.71	177.71	177.83	177.96	178.02	178.10	178.19	178.20	178.54	178.54	178.54	178.61	178.68	178.71	178.71	179.01
		Crash Date	02/26/2010	01/18/2008	06/29/2010	12/16/2010	06/29/2010	01/27/2009	02/08/2008	04/21/2009	01/28/2010		01/26/2010		0102/02/11	07/25/2009	02/13/2008	03/11/2009	01/28/2010	11/05/2009	01/18/2010	07/26/2009	02/04/2010	12/27/2008	11/19/2008	01/02/2010	01/19/2010	01/18/2008	12/06/2010	05/18/2008	09/16/2008	06/20/2010
	- - - -	Crash Keport	2010-4323	2008-956	2010-13653	2010-28288	2010-13654	2009-1629	2008-2794	2009-8876	2010-1839		2010-27003 2010-8282		2010-25858	2009-16749	2008-4162	2009-5466	2010-1838	2009-25402	2010-1431	2009-16996	2010-2510	2008-34286	2008-28652	2010-34	2010-820	2008-955	2010-27341	2008-13274	2008-22958	2010-12276
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5	-	Lotal Crashes	თ									0	n		¢,	C					12											
м 		Koute - MP	0095S - 177.11									0095S - 177.23	- 1//.44								0095S - 178.01											
1. 	(ନ୍ଧ 	0095S									S3600	20800			00200					0095S											
		Offset Begin - End	0 - 0.12									0 - 0.21	0 - 0.19			0 - 0.30					0 - 1.06											
		Element	2524334									2656363				6/coco7					2656347											
	·	Ende Node	28912									28867	28866			70007					28861											
and the second sec		Start Node	28867									28866	28862			70000					28588											

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	Injury Degree	Dd	Dd	DD	DD	ပ	PD	DD	ပ	ပ	PD	PD	DD	ш	в	PD	в	DA	ပ	PD	DD	ပ	ш	DD	DD	ш	A	DD	PD	PD
	Crash Mile Point	179.13	179.17	179.18	179.20	179.28	179.28	179.48	179.57	179.60	179.68	179.68	179.68	180.18	180.18	180.31	180.38	180.38	180.41	180.41	180.55	180.61	180.64	180.64	180.66	180.74	180.82	180.84	180.94	181.12
anna an ann an Anna an	Crash Date	02/08/2008	12/07/2009	07/04/2008	02/08/2008	07/31/2009	02/13/2008	02/04/2009	10/27/2010	08/18/2008	05/05/2008	07/30/2010	06/20/2010	01/23/2008	12/27/2008	06/21/2008	08/22/2009	12/22/2010	05/12/2008	02/20/2009	01/18/2010	10/02/2009	04/26/2008	01/26/2008	06/02/2010	06/02/2008	10/08/2010	10/29/2009	06/08/2009	12/28/2009
	Crash Report	2008-5992	2009-28688	2008-16229	2008-2762	2009-17001	2008-3235	2009-14073	2010-23518	2008-21317	2008-11872	2010-15410	2010-12277	2008-1322	2008-35066	2008-15919	2009-19000	2010-28941	2008-13304	2009-14075	2010-3238	2009-25127	2008-11479	2008-2004	2010-10784	2008-14568	2010-21739	2009-25409	2009-13080	2009-32170
	D Cd	0														<i>с</i>					9									
		e																			~~									
Ma	ails ' Cras B	2														4-m					2									
Summary	Section Details Injury Crashes K A B C	0														0					~									
	ection K	0														0					0									
Crash	10.00																													
	Total Crashes	14														5					10									
	- MP	9.07														30.28					30.51									
1	Route - MP	0095S - 179.07														0095S - 180.28					0095S - 180.51									
		3600														3600					3600									
	Offset Begin - End	0 - 1.21														0 - 0.23					0 - 0.63									
		44														11					13									
-	Element	2524344														2524111					2524113									
	End Node	28861														28860					28859									
and a second sec	Start Node	28860														28859					28858									·
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	Injury Degree	œ	Dd	Ш	o	A	Dd	ш	o	DD	ပ	മ	PD	DD	Dd	DD	DD	DD	DD	PD	മ	DD	ЪD	PD	Dd	ш	ЪD	മ	U	DD	D
	Crash Mile Point	181.24	181.26	181.34	181.41	181.58	181.58	181.68	181.68	181.68	181.74	182.14	182.14	182.14	182.17	182.31	182.34	182.44	182.64	182.71	182.74	183.21	183.51	183.66	183.66	183.85	183.91	184.01	184.01	184.01	184.32
	Crash Date _N	08/15/2009	10/14/2008	02/27/2010	06/04/2009	01/01/2010	01/01/2010	06/19/2009	07/30/2010	06/24/2009	11/15/2008	02/02/2008	11/07/2010	11/07/2010	09/23/2010	02/08/2008	10/16/2010	09/23/2010	12/08/2010	02/10/2008	01/20/2010	05/09/2010	07/05/2010	07/31/2008	06/15/2010	07/08/2010	08/25/2010	05/14/2010	01/23/2008	12/29/2009	01/13/2009
	Crash Report	2009-18195	2008-24878	2010-4664	2009-12543	2010-26	2010-25	2009-13473	2010-16551	2009-14083	2008-27752	2008-2340	2010-24623	2010-24624	2010-20431	2008-3233	2010-23046	2010-20203	2010-27447	2008-3579	2010-1443	2010-10788	2010-13765	2008-18995	2010-11905	2010-14517	2010-18199	2010-9690	2008-1323	2009-32535	2009-436
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ary	ashes C	<i>с</i> о														<b>t</b>															0
nm	n Details Injury Crashes A B C	4														ო															0
Crash Summary	Section Details Injury Ci K A B	-														0															0
ash		0														0															0
5	Total Crashes	14														15															~
and the second second	- MP	31.14														32.24															34.21
	Route - MP	0095S - 181.14														0095S - 182.24															0095S - 184.21
en e constante	Offset Begin - End	0 - 1.10														0 - 1.97															0 - 0.12
	Element	2524115														2524117															2524119
an a	End Node	28858														28857															28855
	Start Node	28857														28855															28854

entre entre services and the service of the service

n portuna de la composición de														
		Injury	Degree	РО	Оď	ပ	Qd	DD	DD	മ	ပ	ပ	РО	DD
		Crash	Mile Point	184.34	184.44	184.54	184.64	184.66	184.89	184.94	185.14	185.14	185.14	185.14
			Mil	<i>t</i>	<b>A</b>	~	~	<u>~</u>	~	<del>~-</del>	<del>~-</del>	~	<u></u>	~
		Crash Date		12/04/2009	04/29/2008	02/05/2008	01/18/2010	01/14/2010	02/08/2008	02/22/2008	02/08/2008	02/08/2008	03/21/2008	02/08/2008
		port		50	8	62	8	<b>y</b>	37	38	55	40	27	33
a constraint and the set of sector		Crash Report		2009-28150	2008-11481	2008-2779	2010-818	2010-971	2008-5997	2008-5238	2008-2855	2008-2854	2008-8207	2008-2763
			DD	7										
		hes	υ	ო										
B B B	ails	Injury Crashes	B	<del></del>										
Crash Summary	Section Details	Injury	A	0										
ີ 2 ເລີຍ	Sectio		~	0										
C	~	Total	Crashes K	ł										
		Route - MP		0095S - 184.33										
and the second sec		Offset	Begin - End	0 - 1.11										
and the second s		Element	والمحاولة	28853 28854 2524121 0-1.11										
1		End	Node	28854										
n n n n n n n n n n n n n n n n n n n		Start		28853										

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Maine Department Of Transportation - Traffic Engineering, Crash Records Section Crash Summary II - Characteristics

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										2	3	16 Mo	orasnes oy bay ano Flou	0 F (0) B												
						AM					I	Hour of Day	f Day					Ц	РМ							
Day Of Week 12	12	~	2	ю	4	2 2	ဖ	7	ω	6	10	÷	12	-	5	8	4	5	9	7	8	6	10	11	n	Tot
SUNDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	2	0	-	-	5	0	0	0	6
MONDAY	0	~	<del>~</del>	0	0	0	<del>~</del>	0	<del></del>	2	4	2	٠	0	0	0		0	0	<del>~~</del>	0	0	<del>~~~</del>	0	0	16
TUESDAY	0	<del>~~</del>	0	0	<del>~~</del>	0	0	3	0	2	0	2	0	<del>~~</del>	0	0	0	ო	0	0	0	0	0	0	0	12
WEDNESDAY	0	0	0	0	<del>~-</del>	ო	~	0	2	0	0	0	<del>~~</del>	<del>~~</del>	0	~	<del></del>	<del>~~</del>	<del>~~</del>	<del></del>	0	~	0	0	0	15
THURSDAY	0	0	0	0	0	<del>~~</del>	<del>~~</del>	0	-	0	0	0	0	0	0	2	0	с	0	<del>~</del>	~	2	0	<del>7</del>	0	13
FRIDAY	0	-	0	0	0	0	<del>~~</del>	0	ო	2	0	<del></del>	ო	0	ю	9	5	<del>~~</del>	2		0	£	0	0	0	27
SATURDAY	0	~	<b>~</b>	0	0	0	÷	~	0	<b>~</b>	0	0	0	<del>~-</del>	0	ო	2	0	2	0	0	~	0	0	0	14
Totals	0	4	2	0	2	4	2	ю	~	7	4	Ω	ۍ	ю	4	13	7	10	ъ	ۍ ۲	2	7	<del></del>	<del>~~</del>	0	106
																					Contraction of the local division of the loc					

	shes	bу Ү( 2000	Grashes by Year and Month		Vehi Unit Tune	ele Co Total	unts by Type Itait Type	Total
Month	2008	2008 2009 2010	2010	Total	1-2 Door	7	32-3 Ayle Tractor with Tandem Ayle Semi	5 2
JANUARY	9	2		19	2-4 Door	55	33-3 Axle Tractor with Tridem Axle Semi	)
FEBRUARY	4	ო	ო	20	3-Convertible	0 -	35-3 Axle Tractor with Single Axle Serni & 2 Axle Trailer	0
MARCH	· (	<del>,</del> ,	0,	0	4-station wagon 5-Van	t 00	36-30 Attention with Tandem Axle Semi & 2	0
AFRIC		- c	- c	4 (	6-Pickup Truck	24	37-5 Axle Semi; Split Trailer Tandem	0
JUNE	4 N	D 4	v v	o <u>6</u>	7-50V 10-Truck Tractor Only (Bobtail)	9 O	38-6 Axle Semi; Split Trailer Tandem with Center Axle	0
JULY	3	ო	4	6	12-School Bus 13-Motor Home	00	39-6 Axle; Standard Trailer Tandem with Center Axle	0
AUGUST		2		4	14-Motorcycle	ŝ	40-4 Axle Single Unit	0
SEPTEMBER	<del></del>	С	~	С	15-Moped	0	42-4 Axle Tractor with Tandem Axle Semi	0
	•	)	1	)	16-Motor Bike	0	50-Any Other Axle Configuration	0
OCTOBER	<del></del>	2	ო	Q	17-Bicycle	0	60-Other Unit	0
NOVEMBER	2	~	S	ω	18-Snowmobile	0	70-ATV	0
	~	~	ч	(r 7	20-2 Axle Single Unit with Dual Tires	ო	81-2 Axle Bus	0
	1	1	S		21-2 Axle Tractor with Single Axle Semi	0	82-3 Axle Bus	<del>~``</del>
<b>Fotal</b>	40	23	43	106	22-2 Axle Tractor with Tandem Axle Semi		98-Farm Vehicles / Tractors	0
					25-2 Axle Tractor with Single Axle Semi & 2	<del>~~~</del>	99-Unknown	1
					30-3 Axle Single Unit	0	Total	139
					31-3 Axle Tractor with Single Axle Semi	0		

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	Mai	ne De	Maine Department Cra	ment Of Cras	of Trans ISh Su	of Transportation - Sh Summary	ion -	Traffic Eng	Traffic Engineering, Crash Records Section	stics	cords	Sectio	C		n		
Crashes by Apparent Contributing Factor	t Contr	Iloutin	<u> </u> ମିଥିବା		And Drive	<u>5</u>			Crashes by Apparent Physical Condition And Driver	/ App∈	rent P	hysica	l Condi	hon Ar	id Driv€	5	
Apparent Contributing Factor	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total	Ϋŭ	Apparent Physical Condition		Dr 1 Dr	Dr 2 Dr	3 Dr 4	Dr 5	Other	Total	
								No	Normal		101 24	4	•	2	~	134	
No Improper Action	25	20	2	2	2	<del></del>	52	'n	Under the Influence		1 0	0		0	0	<del></del>	
Failure to Yield Right of Way	4	0	0	0	0	0	4	Ha	Had Been Drinking		0	0		0	0	0	
Illegal Unsafe Speed	48	0	<del>~~</del>	0	0	0	49	Ц	Had Been Using Drugs	sôn	50			0	0	<del></del>	
Following Too Close	£	~	0	0	0	0	9	As	Asleep	·	1		0	0	0	<del>~~</del>	
Disregard Traffic Control Device	<del>~-</del>	0	0	0	0	0	<b>~</b>	Fa	Fatigued		5			0	0	<del></del>	
Driving Left of Center Not Passing	0	0	0	0	0	0	0	III			0 0	0	0	0	0	0	
Improper Passing, Overtaking	0	<b>~</b>	0	0	0	0		Ha	Handicapped		0			0	0	0	
Improper Unsafe Lane Change	ო	0	0	0	0	0	ო	ð	Other		1			0	0	<del>~-</del>	
Improper Parking Start, Stop	0	0	*	0	0	0	<del></del>	- ,	a des constantes estes est Analysis estes e	approvability and approved by the second s				C			
Improper Turn	0	0	o	0	0	0	0	10131	(a)	~	106 24	4	N	N		139	
Unsafe Backing	0	0	0	0	0	0	0										
No Signal or Improper Signal	0	0	0	0	0	0	0			Mg.	Driver Age by Unit I	ay Ur	nt Type				
Impeding Traffic	0	0	0	0	0	0	0								F	Tation T	
Driver Inattention, Distraction	10	<del></del>	0	0	0	0	÷	Age	Driver	Bicycle		Snowiwiobile	Pedestrian	an	Ai<	0131	
Driver Inexperience	ы	0	0	0	0	0	2	0aul Inder	С	C		C	С		С	O	
Pedestrian Violation Error	0	0	0	0	0	0	0	10-14		о с		» с	, c			, c	
Physical Impairment	<del></del>	0	0	0	0	0	<del>~~</del>	15-10	2 <del>C</del>	i c		, c	o c			0	
Vision Obscured, Windshield Glass	0	0	0	0	0	0	0	20-24	22	0		. 0	0		0	22	
Vision Obscured, Sun, Headlights	0	0	0	0	0	0	0	25-29	16	0		0	0		0	16	
Other Vision Obscurement	0	0	0	0	0	0	0	30-39	26	0		0	Q		0	26	
Other Human Violation Factor	2	0	0	0	0	0	N	40-49	30	0		0	0		0	30	
Hit and Run	0	0	0	0	0	0	0	50-59	18	0		0	0		0	18	
Defective Brakes	0	0	0	0	0	0	0	60-69	12	0		0	0		0	12	
Defective Tire, Tire Failure	0	0	0	0	0	0	0	62-02	4	0		0	0		0	4	
Defective Lights	0	0	0	0	0	0	0	80-Over	0	0		0	0		0	0	
Defective Suspension	0	0	0	0	0	0	0	Unknown	<del></del>	0		0	~		0	2	
Defective Steering	0	0	0	0	0	0	0		anna a miriteanna an Armaign air an Armaign ann an Armaign an Armaign an Armaign an Armaign an Armaign an Armai Ar Ann an Armaign a' Armaign an Ar				a seran a secondario de la companya				
Other Vehicle Defect or Factor	S	0	0	0	0	0	S	Total	139	0		0			0	140	
Unknown	0		0	0	0	0	1										
Total	106	24	4	5	5	-	139										

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August Longer Concerns

National configer power		Traffic Control Devices	ol Devices	Road Character	
Fixed Object Struck	Total	Traffic Control Device	Device Total	LC.	Total
1-Construction, Barricades Equipment, etc.	~	1-Traffic Signals (Stop & Go)	0	1-Level Straight	92
2-Traffic Signal	0	2-Traffic Flashing	5	2-Level Curved	<del>~~</del>
3-R.R. Crossing Device	0	3-Overhead Flashers	0	3-On Grade Straight	ო
4-Light Pole	0	4-Stop Signs - All Approaches	0	4-On Grade Curved	0
5-Utility Pole (Tel. Electrical)	0	5-Stop Signs - Other	0	5-Top of Hill Straight	0
6-Sign Structure Post	۲	6-Yield Sign	ę	6-Top of Hill Curved	0
7-Mail Boxes or Posts	0	7-Curve Warning Sign	0	7-Bottom of Hill Straight	0
8-Other Poles, posts or supports	0	8-Officer, Flagman, School Patrol	itrol 0	8-Bottom of Hill Curved	0
9-Fire Hydrant/Parking Meter	0	9-School Bus Stop Arm	0	9-Other	0
10-Tree or Shrubbery	12	10-School Zone Sign	0	Total	106
11-Crash Cushion	0	11-R.R. Crossing Device	0		
12-Median Safety Barrier	7	12-No Passing Zone	0		
13-Bridge Piers (including protective guard	0	13-None	20		
rails)		14-Other	31		
14-Other Guardrails	14	$T \sim 10^{-10}$			
15-Fencing (not median barrier)	0		001		
16-Culvert Headwall	0				
17-Embankment, Ditch, Curb	14	Cate	lates		
18-Building, Wall	0			Liaht	Total
19-Rock Outcrops or Ledge	0	Severity Code Cra	Crashes Of Injuries	1-Dawn (Morning)	ۍ ۱
20-Other	<del>~-</del>	×		2-Daylight	62
21-Gate or Cable	0	∢	4	3-Dusk (Evening)	4
22-Pressure Ridge	0	۵	17 20	4-Dark (Street Lights On)	4
Total	45	O	20 26	5-Dark (No Street Lights)	30
		PD	65 0	6-Dark (Street Lights Off)	<del>.</del>
		n vezeta nich en a de la secta e de la secta e de la secta de la secta e de la secta e de la secta e de la de La vezeta de la secta de la		7-Other	0
		Total	106 50	ала така продолжите	

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Maine Department Of Transportation - Traffic Engineering, Crash Records Section Crash Summary II - Characteristics

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## Crash Summary II - Characteristics Crashes by Crash Type and Type of Location

Crash Type	Straight Road	Curved Road	Three Leg Intersection	Four Leg Intersection	Five Leg Intersection	Driveways	Bridges	Interchanges	Other	Total	
Object in Road	÷-	<del>~~</del>	0	0	0	0	2	ю	0	17	
Rear End / Sideswipe	21	0	0	0	0	0	0	N	0	23	
Head-on / Sideswipe	0	0	0	0	0	0	0	0	0	0	
Intersection Movement	0	0	0	0	0	0	0	<del>7</del>	0	<del></del>	
Pedestrians	0	0	0	0	0	0	0	0	0	0	
Train	0	0	0	0	0	0	0	0	0	0	
Ran Off Road	33	0	0	0	0	0	0	£	0	36	
All Other Animal	۳.	0	0	0	o	0	0	0	0	<del></del>	
Bike	0	0	0	0	0	0	0	0	0	0	
Other	4	0	0	0	0	0	0	0	0	4	
Jackknife	0	0	0	0	0	0	0	0	0	0	
Rollover	۲-	0	0	0	0	0	0	0	0	<del></del>	
Fire	ю	0	0	0	0	0	0	0	0	ю	
Submersion	0	0	0	0	0	0	0	0	0	0	
Rock Thrown	0	0	0	0	0	0	0	0	0	0	
Bear	0	0	0	0	0	0	0	0	0	0	
Deer	15	~	0	0	0	0	0	0	0	16	
Moose	ю	<del>~~</del>	0	0	0	0	0	0	0	4	
Total	92	5	0	0	0	o	2	7	0	106	

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			)) 							AND ADDRESS OF A DESCRIPTION OF A DESCRI		
			Crashes by W		eather, Light Condition and Road Surface	and Road	Surface					
	Debris D	Dy	Ice, Packed Snow, Not Sanded	lce, Packed Snow, Sanded	Muddy	Oily	Other	Snow Slush, Not Sanded	Snow, Slush, Sanded	Wet	Total	
BIOWING SAND OF DUST								•				
Dark (No Street Lights)		0	0	0	0	0	0	0	0	0	0	
Dark (Street Lights Off)		0	0	0	0	0	0	0	0	0	0	
Dark (Street Lights On)		0	0	0	0	0	0	0	0	0	0	
Dawn (Morning)	0	0	0	0	0	0	0	0	0	0	0	
Daylight		0	0	0	0	0	0	0	0	0	0	
Dusk (Evening)	0	0	0	0	0	0	0	0	0	0	0	
Other		0	0	0	0	0	0	0	0	0	0	
Clear					:				:			
Dark (No Street Lights)		14	0	0	0	0	0	0	0	0	14	
Dark (Street Lights Off)		0	0	0	0	0	0	0	0	0	0	
Dark (Street Lights On)	0	2	~	0	0	0	0	0	0	0	ო	
Dawn (Morning)		N	0	٥	0	0	Ō	0	0	0	7	
Daylight		21	۴	<del>/</del>	0	0	0	0	<del>7-</del>	0	24	
Dusk (Evening)		<b>v</b>	0	0	0	0	0	0	0	0	<del></del>	
		0	0	0	0	0	0	0	0	0	0	
Cloudy												
Dark (No Street Lights)	a de la factoria de la calencia de la calencia de la calencia de la c	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	
Dark (Street Lights On)		0	0	0	0	0	0	0	0	0	0	
Dawn (Morning)			0	0	0	0	0	0	<del>~</del>	0	2	
		20	0	0	0	0	0	0	0	<del></del>	9	
(Evening)		0	0	<del>~~</del>	0	0	0	0	0	0	<del>~~</del>	
		0	0	0	O	0	0	0	0	0	0	
Fog, Smog, Smoke												
Dark (No Street Lights)		0	o	0	0	٥	0	0	0	0	0	
Dark (Street Lights Off)		0	0	0	0	0	0	0	0	0	0	
Dark (Street Lights On)		0	0	0	0	0	0	0	0	o	0	
lorning)		0	0	0	0	0	0	0	٥	0	0	
	0	0	0	0	0	0	0	0	0	0	0	
(Evening)		0	0	0	0	0	0	0	0	0	0 '	
Other		0	0	0	0	٥	0	0	<b>o</b>	0	0	

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			Crashes by W	eather	t Con(	dition and Road Surface	al Surface				
Weather Light Other	Debris	Dry	lce, Packed Snow, Not Sanded	lce, Packed Snow, Sanded	Muddy	Oily	Other	Snow Slush, Not Sanded	Snow, Slush, Sanded	Wet	Total
Dark (No Street Lights)	0	0	0	0	0	C	U				U
Dark (Street Lights Off)	0	0	0	0	0	00	0	0	0 0	> 0	0
Dark (Street Lights On)	0	0	0	0	0	٥	0	0	0	0	0
Dawn (Morning)	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0
Dusk (Evening)	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Rain											
Dark (No Street Lights)	0	0	0	٦	o	0	0	0	0	0	٢
Dark (Street Lights Off)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights On)	0	0	0	0	0	0	0	0	0	0	0
Dawn (Morning)	0	0	0	0	0	0	0	0	0	۴-	-
Daylight	0	0	0	0	0	0	0	, 0	0	ø	œ
Dusk (Evening)	0	0	0	0	0	0	0	0	0	<del></del>	<del></del>
Other	0	0	0	0	0	0	0	0	0	0	0
Severe Cross Winds											
Dark (No Street Lights)	o	0	ο	0	0	0	o	0	0	٥	0
Dark (Street Lights Off)	o	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights On)	0	0	0	0	0	0	0	0	0	0	0
Dawn (Morning)	0	0	0	0	0	0	0	0	٥	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0
Dusk (Evening)	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Sleet, Hail, Freezing Rain											
Dark (No Street Lights)	o	0	0	0	0	0	Q	<del>~~</del>	0	0	←
Dark (Street Lights Off)	0	0	0	0	0	0	0	<del>~~</del>	0	0	<del>~-</del>
Dark (Street Lights On)	0	0	0	0	0	0	0	0	0	0	0
Dawn (Morning)	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	~	O	0	0	a	<del></del>	0	2
Dusk (Evening)	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0

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		Maine Dep.	Maine Department Of Transportation - Traffic Engineering, Crash Records Section Crash Summary II - Characteristics Crashes by Weather, Light Condition and Road Surface	ansportation - Traffic Engineering, Crash Rec Summary II - Characteristics y Weather, Light Condition and Road Surface	I - Traffic E Iry II - C Ight condit	ingineering, inaracte	Crash Rec Pristics d Surface	ords Section			
Weather Light Snow	Debris	Dry	Ice, Packed Snow, Not Sanded	lce, Packed Snow, Sanded	Muddy	Oily	Other	Snow Slush, Not Sanded	Snow, Slush, Sanded	Wet	Total
Dark (No Street Lights)	0	+	9	0	0	0	0	6		0	14
Dark (Street Lights Off)	0	0	0	0	0	0	0	0	0	0	0
Dark (Street Lights On)	0	0	0	0	0	0	0	o	<b>~</b>	0	<del></del>
Dawn (Morning)	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	ω	0	0	0	0	8	9	0	22
Dusk (Evening)	0	0	<i>t</i>	0	0	0	0	0	0	0	<del></del>
Other	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	47	17	4	0	0	0	16		11	106

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	INVESTIGATING AGENCY CODE NUMBER MEMSP	20000		IC ACC		T REPO	RT	s	P08-0	04083				BE ONLY	(
-1	DATE MONTH D	AY YEAR	DAY OF W	VEEK	TIM	ε Π				ARRIVED		200	)8-95	00	
2	MOUDENI	8 2008			08: OR TO			:50		8:50	00000			Line	
	^{ON} 195	NAME OF STREET OR		Wate	rville	Э		DE NUM 1124(		Kennel				HIT AND RUN	
1	AT 28867 28		FROM SCE			UMBER 3867	]	MILES		ENTHS TO akland					V E S E ONE
	S J UNIT NO. 1 -	Vehicle	TOTAL L	JNITS IN	v. 1	Π	UN	IIT NO		V	ан. 2	PED.		BIKE	
	DRIVER'S LICENSE NUMBER 7369247		STA ME			DRIVER'S	S LICE	NSE NU	MBER				8	TATE	
ן ן	LAST NAME Cote, Emma	FIRST NAME	MI	DDLE	R	LAST NA	ME			FIRSTI	VAME		l	MIDDLE	
<u>+</u> ]	NUMBER AND STREET 12 Kelsey Street					NUMBER	AND S	STREET						******	
	спту Waterville	STATE ME 04901		NUMBER	R	CITY			*****	STAT	<u> </u>		CC 	DENUN	ABER
		CENSE STATUS RES	ST/PERM	CLASS C		DATE OF	BIRT	1	SEX	LICENSE A S	ESTATU PN	S RES	T/PERI		ASS
	LAST NAME - OWNER 1 Cote, Emma	FIRST NAME	MI	DDLE		LAST NA	ME - 0	WNER ·	1	FIRST	NAME			MIDDLE	
	NUMBER AND STREET 12 Kelsey Street				NE	NUMBER	AND	STREET							
	слтү Waterville	STATE ME 04901			R	CITY		*******		STAT	E				
	4 Door 2 19	R AND MAKE 197 Dodge	Ora	OLOR 9 Purple, ange,Other	E	VEHICLE				YEAR AND				COL	OR
	4960KX :	YEAR ISSUE ST 2008 ME		OCCUP		LICENSE				YEAR	15	SUE ST/	ATE		CUP
	VEHICLE IDENTIFICATION NO. : INSURANCE CO. Geico	2B3HD46TXVH5	36216		F	VEHICLE			ION NO						
_	POLICY NO. 4051-86-17-24					POLICY				·					
	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	TOWED BY: Na 6 DAMAGE CODES T	<u>ş</u> 1,20		-		3 9 (1 10 (BO) 7			+ + + 11	ED BY:	<u> </u>	\$		ATT
	l 95 Watervill			<u>, 1997 ( L. </u>	Wa trav stri	SCRIP Iterville	TION ne too railir	I: Ur ar th fast f ng on	nit 1 e Oa or roa	was tra kland ad cond side. \	avelin town ditions	g sou line. s and	uth d Uni left	on 198 t 1 \ road\	5 in was way
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	INVESTIGATING OFFICER (SIGNATURE	E) OFFICER	NUMBER	TROOP	OR DE	PARTMEN	T		APPRON	/ED BY: oderick (		·	[ DA	7E 27/20	

Tr. Derrick Record FORM 13:20A Rev 4/97

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	STIGATING AGENCY	MSP0C00		TRAFFIC AC			PORT		SP08-(	09363	3	F		9.5. US 8-27	SE ONL	(
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<b> </b>	SJ. UNIT NO	1 - Vehicle	 	TOTAL UNITS		1		LN		- [	Тиен				CIRCLI BIKE	E ONE
1	/ER'S LICENSE NUME			STATE	T	DRIVE	R'S LICE	NSE N	UMBER					s	TATE	
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LAST	T NAME - OWNER 1	FIRST NAM	E	MIDDLE		LAST	NAME - C	OWNER	1	and mariness	RST NA		1		MIDDLI	
	AYES, NA	<u>THANIEL</u> (	C		N		ER AND	STREE	T							
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SCI	arborough	STATE ME 040	74		R	CITY				2	STATE					
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	ESTIGATING A		MSP0C00		TRAF	FIC AC			PORT		SP09-	006203			0R D.P.		E ONL	Y
	OF CIDENT	олтн 1	DAY 27	YEAR 2009	) Τι	Je	09	^{ме} :15	09	:16	0	E ARRIV	)					
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	st name ilion, N	litche	FIRST N	ME		WIDDLE		LAST	NAME.			FIR	ST NAM	E			MIDDLI	Ξ
I	MBER AND STI Hidden Ra		STATE			E NUMBE		NUME	SER AND	STREE	ET	C	TATE				DE NU	MDED
	DOKSETT	1	NH ( EX LICENSE S	TATUS RE	2 ST/PERM	2 CLASS			OF BIRT	H	SE		NSE ST.		REST			ASS
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3 28	MBER AND STR 39 Phillips	REET	r Road				W N E		SER AND	STREE	ET							
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Thu	urston, Davi	d (With	ess)											22			М	50
			· · · ·															
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Tr. Sean P. Kinney FORM 13:20A Rev 4/97

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INVESTIGATING AC		ISP0C0	0	TRA	AFFIC ACC STATE OF			PORT		SP09-(	)2605	1	ų	OR D.P	.s. us 9-88		Ŷ
DATE MO OF ACCIDENT		DAY 21	20	1		ты 17:	^{AE} 38	TIME RE	EPORTI		E ARRI 7:4	1					
ON INT 95 SE		OR NAME OF 95 SB	FSTREET	F OR HIGHW	AY CITY Wate				DE NUN 1124		Ken	nebe	C	{		HIT AND RUN	
AT BETWEEN N		IBERS 28912		NCE FROM S			NUMBE		MILE	S AND	TENTH	S TO L	NDMA	RK		W	N E S E ONE
S 🕹 UN	T NO.	1 - Vehic	cle	тот	AL UNITS IN	V.	1	U	NIT NC	).	- [	VEH	. 2	PED.		BIKE	C ONC
DRIVER'S LICENSE	NUMBER				STATE ME	Τ	DRIVI	ER'S LICE	NSE NI	JMBER					5	TATE	
LAST NAME	<u> </u>	FIRST			MIDDLE		LAST	NAME			FI	RST N/	ME			MIDDLI	E
Escudie- NUMBER AND STR		<u>/ne, Cl</u>	narle	<u>s G</u>		-11	NUMI	BER AND	STREE	r		***					
Po BoX 266		STATE			DE NUMBER		CITY					STATE			<u></u>	DE NU	MRER
Shawmut			04975		2 2	R	1				i	NAIE					
DATE OF BIRTH 03/05/1974	SEX			REST/PERM	M CLASS C			OF BIRT		SE>	1	ENSE S		RES	I7PERN	A CL	ASS
LAST NAME - OWN Escudie-		FIRST			MIDDLE	0	LAST	NAME - (	WNER	1	FI	RST N/	ME			MIDDLI	E
NUMBER AND STR		<u>116, O</u>	nanc			- W N	NUMI	BER AND	STREE	T	•				<u> </u>		
Po BoX 266		STATE				E	CITY	at a to a construction of a fact				STATE					
Shawmut			04975			R					``						
VEHICLE TYPE 4 Door	2	YEAR AND N 1998 FO		6	COLOR 1 White	4 V E H	VEHI	CLE TYPI	~		YEAR	AND M		`		COL	
LICENSE PLATE NU 769QB	MBER	YEAR 2010	1	JE STATE ME	NO OCCUF	2. I C	LICE	NSE PLAT	TE NUN	BER	YI	EAR	ISS	UE ST/	<b>\TE</b>	NO O	CCUP.
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INSURANCE CO.							Į		:0.		<b></b>						
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8 7	9 R 6 E		GE CODE	ES DAMAGI		-	8	7		6 <u>R</u>			E COD			EESTIN	
			na de la constante de la const	।-95		dı ur Ur	iring Nawf nit 1	RIPTIOI heavy ul inha drifted ht. Uni	rain. alents to th	The prics e left	driv or to and	er of and the c	unit poss Iriver	1 ha ibly v ove	id be while r cor	en u e driv recte	sing /ing.
tre										ielta An	nb Corp	Water	ville(21	5)			
TOTAL NUMBER O	PERSON	II I	$\frac{11}{2}$			OV	WNER O	F DAMAGE Y (OTHER	ED	EH )							
NAMES OF ALL PERS	ONS INVOL	VED (DRIVER	IS - PASSE	NGERS - WIT	NESSES - PEC	ESTR	IANS)	25	26	27	28	29	30	31	32	33	34
Escudie-Brown Pouliot, Janelle			whe	1)				11	11	2	5	1	1 22	1	1	M F	35
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INVESTIGATING OFFI	100 (0101)	ATHER	Inc	FICER NUMBE	10 TOOOD	n op n	EPART	MENT	h-a	ADDD	OVED B	V.				1 1 21/2(	

Tpr. Jeffrey S. Beach FORM 13:20A Rev. 4/97

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DATE OP         MONTH         OAV         VERIE         DAVE         TIME	INVESTIGATING AGENCY CODE NUMBER MEMSPOCOO	TRAFFIC ACC STATE O	CIDENT REPORT	SP10	0-006700		P.S. USE ONLY 0-1839
ON         INT 95 SB         I 95 SB         I 95 SB         Waterville         I 1240         Kenneboc         Mile           AT         E2867         28912         ID/MACE (00) Printing         TO NUMBER         MILES AND TENTING TO LANDMARK         will be set of the set	OF 1 28 2	010 Thu	17:10 1	7:15	17:30		
AT       28867       28912       0       Multices (02) TMTHIS       28867       weit 2       Peter 2	ON INT 95 SB I 95 SB						AND
DRIVERS LICENSE MUMBER         STATE         DRIVERS LICENSE MUMBER         STATE           1008060         ME         ME         ME         STATE         MIDUE           LAST WAKE         MIDUE         MIDUE         FIRST MAKE         MIDUE           LAST WAKE         MIDUE         MIDUE         MIDUE         MIDUE           MARSE AND STREET         CODE MUMBER         FIRST MAKE         MIDUE           OFF OF REAT         STATE         CODE MUMBER         SEX         LICENSE STATUS         FIRST MAKE           OTE OF REAT         SEX         LICENSE STATUS         FIRST MAKE         MIDUE         MIDUE           DATE OF REAT         SEX         LICENSE STATUS         FIRST MAKE         MIDUE         MIDUE           CAST MAKE OWNERT         SEX         LOGENER STATUS         FIRST MAKE         MIDUE				MILES ANI	D TENTHS TO	LANDMARK	Ws
1008060       ME       ME       MIDDLE       ME         Legge, William R       NUMBER AND STREET       6       Sarah Gould Rd       NUMBER AND STREET       NU		L				EH. 2 PED	
Legge, William R       NUMBER AND STREET         6 Sarah Gould Rd       CITY       STATE       CODE NUMBER         CITY       STATE       CODE NUMBER       CODE NUMBER         CAST NAME - OWNERT       FIRST NAME       MICOLE       DATE OF BIRTH       SEX       LUCENES STATUS RESTREEM         CAST NAME - OWNERT       FIRST NAME       MICOLE       OTY       STATE       CODE NUMBER         Legge, William R       NUMBER AND STREET       STATE       MICOLE       NUMBER AND STREET         6 Sarah Gould Rd       STATE       MICOLE       NUMBER AND STREET       MICOLE         CITY       STATE       MICOLE       NUMBER AND STREET       MICOLE         CITY       STATE       MICOLE       NUMBER AND STREET       STATE         CITY       STATE       MICOLE       VEHICLE TYPE       VEAR AND MAKE       OLOR         VEHICLE TYPE       VEAR AND MAKE       ISSUE STATE       NO OCCUP       VEHICLE TYPE       VEAR AND MAKE       COLOR         VEHICLE DENTIFICATION NO.       1TIZER15E5ATA08727       VEHICLE TYPE       VEAR AND MAKE       NO OCCUP         VEHICLE DENTIFICATION NO.       1TIZER15E5ATA08727       VEHICLE DENTIFICATION NO.       NO OCCUP       NUMAGE ESTIMATE         VEHICLE DENTIFICATION NO.	1008060	ME	_ D	ENGE NUMBE	·····		
6 Sarah Gould Rd       V       Citry       State       Code NUMBER         Citry       State       Code NUMBER       Ex       LICENSE STATUS RESTREAM       CLASS         DATE OF BRITH       SEX       LICENSE STATUS RESTREAM       CLASS       A S P N       P N         DATE OF BRITH       SEX       LICENSE STATUS RESTREAM       CLASS       A S P N       N         CAST MARE - OWNER 1       FIRST NAME       MIDDLE       LAST NAME - OWNER 1       FIRST NAME       MIDDLE         LAST MARE - OWNER 1       FIRST NAME       MIDDLE       VEMILIE TYPE       VEMILIE TOWN NO.       TOWED BY:       VEMILIE TYPE       VEMILIE TYPE <td>Legge, William R</td> <td>MIDDLE</td> <td></td> <td>STREET</td> <td>FIRST</td> <td></td> <td>MIDDLE</td>	Legge, William R	MIDDLE		STREET	FIRST		MIDDLE
Yarmouth       ME 04096       2       2       R       R         Darte of BRTH       ISEX       LICENSE STATUS   REST/PERM       CLASS       Date of BIRTH       SEX       LICENSE STATUS   REST/PERM       CLASS         LAST NAME       OWLER       FIRST NAME       MIDDLE       ULASS       A       S       P       NONBER AND STREET       State       MIDDLE       VENCE	6 Sarah Gould Rd		V		(5.7° A 197		00051888
OTZ28/1934       M       M       O       S       P       A       C         LAST NAME - OWNER1       FIRST NAME       MIDDLE       A. S. P. N.       A. S. P. N.       MIDDLE         Legg.e., William R       NUMBER AND STREET       MIDDLE       VERVICE TYPE       FIRST NAME       MIDDLE         City       State       State       Colors       First Name       MIDDLE         VENUE TYPE       State       COLOR       First Name       COLOR       First Name       MIDDLE         VENUE TYPE       VERA AND MAKE       6       COLOR       First Name       COLOR       First Name       MIDDLE         VENUE TYPE       VERA AND MAKE       6       COLOR       First Name       COLOR       First Name       COLOR         VENUE DENTIFICATION NO.       1FIZERISEGATADOSTZ       First Name       MODEE       First Name       First Name       COLOR         VENUE DENTIFICATION NO.       1FIZERISEGATADOSTZ       First Name       MODEE       First Name       First Name       COLOR         VENUE DENTIFICATION NO.       1FIZERISEGATADOSTZ       First Name       MODEE       First Name       First Name       COLOR         OULCY NO.       15.8       8.4,500.00       MODE       First Name	Yarmouth ME 0409	96 22					
Legge, William R       NUMBER AND STREET            Sarah Gould Rd          GITY          OTY         Yarmouth         ME 04096           GITY          VEHICLE TYPE         YEAR AND MAKE           COLOR          Plickup Truck           ZO04 Ford           Black          UCENSE PLANE MUMBER           VEHICLE TYPE           YEAR AND MAKE           COLOR          VEHICLE DENTIFICATION NO.           ISSUE STATE           VEHICLE DENTIFICATION NO.           ISSUE STATE           VEHICLE DENTIFICATION NO.          VEHICLE DENTIFICATION NO.           ISSUE STATE           VEHICLE IDENTIFICATION NO.           ISSUE STATE           VEHICLE IDENTIFICATION NO.          NUMBER AND ADDRESS           E         VEHICLE IDENTIFICATION NO.           ISSUE STATE           VEHICLE IDENTIFICATION NO.             VEHICLE DENTIFICATION NO.           ISURANCE CO.           POLICY NO.           TOWED BY:           TOWED BY:             VEHICLE DENTIFICATION NO.           ISURANCE CO.           DAMAGE CODES           DAMAGE CODES             VEHICLE IDENTIFICATION NO.           I	07/28/1934 M @ S P N		DATE OF BIR	TH	i'	1	T/PERM CLAS
6 Sarah Gould Rd       IN       In<	Legge, William R	MIDDLE			FIRSTI	NAME	MIDDLE
Yarmouth         ME         04096         N           Vernoute TYPE         Year AND Make         6         COLOR 1         Y         Y         Year AND Make         Y         Year AND Make         Y         Y         Y         Y         Y         Y         Y         Y         Y         Y         Y         Y         Y         Y         Y         Y         Y         Y         Y         Y         Y         Y         Y         Y         Y         Y         Y         Y         Y         Y	6 Sarah Gould Rd			JSIREEI			
Pickup Truck         2004 Ford         Black         Black         Construct         Con		6	RCITY		STAT	E	
LICENSE PLATE NUMBER       YEAR       ISSUE STATE       NO OCCUP       1       LICENSE PLATE NUMBER       YEAR       ISSUE STATE       NO OCCUP         1093NR       2010       ME       1       LICENSE PLATE NUMBER       YEAR       ISSUE STATE       NO OCCUP         VEHICLE IDENTIFICATION NO.       1FTZR15E54TA06727       LICENSE PLATE NUMBER       YEAR       ISSUE STATE       NO OCCUP         VEHICLE IDENTIFICATION NO.       071648803       VEHICLE IDENTIFICATION NO.       TOWED BY:       NO OCCUP         VEHICLE IDENTIFICATION NO.       0716548803       VEHICLE IDENTIFICATION NO.       1000000000000000000000000000000000000			E	Ϋ́Ε	YEAR AND	MAKE	COLOI
INSURANCE CO.       GENO GENERAL INSURANCE COMPANY NAIC: 35842         POLICY NO.       0791548803         2       4       F         9       13,8       \$ 4,500.00         7       6       F         13,8       \$ 4,500.00         14       14         7       6       F         7       6       F         14       13,8       \$ 4,500.00         15       14       14       Was traveling south or interstate 95 in the city of Waterville. Driver of Unit #1         16       15       14       14       14       15       15         16       15       14       14       15       16       16       16       16         19       10       14       14       14       14       14       14       14       15       14       14       14       14       14       14       14       14       14       14       14	1 1		P. I LICENSE PLA	TE NUMBER	YEAR	ISSUE STA	ATE NO OCC
POLICY NO.       0791548803         2       4       5       4       5       7         0       13.8       \$ 4,500.00       1       2       3       4       5       7         0       13.8       \$ 4,500.00       7       6       7       6       7       7       5       7       7       5       7       7       5       7       7       5       7       7       5       7       7       7       6       7       7       6       7       7       6       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7			the second s	the second s	NO.		
Image: structure indication in the second structure in the second structure indication in the second structure inditex indication in the second structure indica	0.010.0000					·	
Town of Waterville       N         I-95 SE       Image: Second Seco	1 (10 (BOTTOM) 5 H H 11,3,8	\$ 4,500.00	1 10 (8	TOP 5			
I-95 SR       IIII         I-95 SR       IIIII         I-95 SR       IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII		(N)	DESCRIPTIC Interstate 95 lost control	N: Unit in the cit on the icy	#1 was y of Wate roadway	s traveling erville. Driv and struc	g south /er of Unit k a guardr
AMBULANCE CODES       N/A(1000)         NAME AND ADDRESS OF OWNER OF PERSONS INVOLVED       1         NAMES OF ALL PERSONS INVOLVED       1         NAMES OF ALL PERSONS INVOLVED (DRIVERS - PASSENGERS - WITNESSES - PEDESTRIANS)       25       28       27       28       29       30       31       32       33       34         Legge, William R (Driver/Owner)       11       11       2       5       12       1       1       M       75         Image: Involute Involu	<del> </del>						
NAME AND ADDRESS OF OWNER OF DAMAGED PROPERTY (OTHER THAN VEH.)           TOTAL NUMBER OF PERSONS INVOLVED         1           NAMES OF ALL PERSONS INVOLVED (DRIVERS - PASSENGERS - WITNESSES - PEDESTRIANS)         25         28         27         28         29         30         31         32         33         34           Legge, William R (Driver/Owner)         11         11         2         5         12         1         1         M         75           Image: Interview of the state	I-95 SB						
NAME AND ADDRESS OF OWNER OF DAMAGED PROPERTY (OTHER THAN VEH.)           TOTAL NUMBER OF PERSONS INVOLVED         1           NAMES OF ALL PERSONS INVOLVED (DRIVERS - PASSENGERS - WITNESSES - PEDESTRIANS)         25         28         27         28         29         30         31         32         33         34           Legge, William R (Driver/Owner)         11         11         2         5         12         1         1         M         75           Image: Intervent of the state	<u>BOI</u>						
NAME AND ADDRESS OF DWNER OF DAMAGED PROPERTY (OTHER THAN VEH.)           TOTAL NUMBER OF PERSONS INVOLVED         1           NAMES OF ALL PERSONS INVOLVED (DRIVERS - PASSENGERS - WITNESSES - PEDESTRIANS)         25         28         27         28         29         30         31         32         33         34           Legge, William R (Driver/Owner)         11         11         2         5         12         1         1         M         75           Image: Intersection of the state of the st	<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>	<u>ислаапав</u>	AMBULANCE CO	DES N/A(10	000)		
TOTAL NOMOLIC OF PERSONS INVOLVED         NAMES OF ALL PERSONS INVOLVED (DRIVERS - PASSENGERS - WITNESSES - PEDESTRIANS)         25       26       27       28       29       30       31       32       33       34         Legge, William R (Driver/Owner)       11       11       2       5       12       1       1       1       M       75	Association and a second second	to Scale	NAME AND ADDRE	SS OF			
	NAMES OF ALL PERSONS INVOLVED (DRIVERS - PAS	1 SENGERS - WITNESSES - PEC	ESTRIANS) 25	28 27			
	Legge, William R (Driver/Owner)		11	11 2	5 12		1 M 7
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UNVED HOR HIS UPPLIER (GROWATERE) I UPPLIER NEIMPER I DROLP DR DEPENSION I ADDREMED RV. I DATE	INVESTIGATING OFFICER (SIGNATURE)	OFFICER NUMBER TROOF 4475 Main	OR DEPARTMENT	6000			DATE 1/29/201

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	INVESTIGATING AGENCY CODE NUMBER MEMSPOCOO	DENT REF				)13511		FOR D.P.S. USE ONLY 2010-4323					
	ROUTE OR NAME OF STE	EET OR HIGHWAY CITY	TIME 21:13 OR TOWN	21	:13 DE NUM	2 IBER	1:25	5 COL	UNTY		HIT		
27	BETWEEN NODE NUMBERS D	Wate	orville TO NUMBER 28867	<u> </u>	1124 MILE		Kenr	TO LAN			RUN W		
	S UNIT NO. 1 - Vehicle DRIVER'S LICENSE NUMBER 7649276	TOTAL UNITS IN STATE ME		R'S LICE	NIT NO			VEH. 2	<u> </u>	PED.	BIKE		
³ 10	LAST NAME FIRST NAME Abbott, Harold M NUMBER AND STREET 738 Levenseller Road		R I V V	ER AND	STREE	F							
	02/26/1955     M     © S P N     A, I     C     A S P N       LAST NAME - OWNER 1     FIRST NAME     MIDDLE     LAST NAME - OWNER 1     FIRST NAME     MIDDLE												
5 13	LAST NAME - OWNER 1 FIRST NAM Abbott, Harold M NUMBER AND STREET 738 Levenseller Road	MIDDLE.		IAME - ( ER AND			FIR	ST NAM	E		MIDDI	.E	
	CITY STATE Holden ME 044 VEHICLE TYPE YEAR AND MAKE 4 Door 2 2002 Toyot	14 COLOR	R CITY	LE TYPI				TATE	KE.		cc	LOR	
5	LICENSE PLATE NUMBER YEAR 51797 2010 VEHICLE IDENTIFICATION NO. 4T1BE32	P. I LICEN C L E VEHIC	H LICENSE PLATE NUMBER YEAR ISSUE STATE NO OCCU C VEHICLE IDENTIFICATION NO.										
3	INSURANCE CO.         State Farm           POLICY NO.         006 7905 E09 19E           2         3         4         E           3         4         E         V           1         9 (TOP)         1         H         5	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$											
9 1	$\begin{array}{c c} & & 10 (BOTTQM) \\ \hline 8 & 7 & 6 \\ \hline \\$	S 5,000.00 DDES DAMAGE ESTIMATE	DESCR		N: U	e ₽ Init 1	was	trav	eling	soul	GE EST	1-95,	
10 1 11 65 12 1			attempt for the was un and stri	ed to road able to	char cond crega	nge la ítions	anes s. Un	and w it 1 b	vas tr egan	avelir to sl	ng too kid. E	) fast river	
•			AMBULAN NAME AND OWNER OF PROPERTY	ADDRES	S OF		ille Res	scue(98	87)				
	TOTAL NUMBER OF PERSONS INVOLVED NAMES OF ALL PERSONS INVOLVED (DRIVERS - P/ Abbott, Harold M (Driver/Owner) Abbott, Tamra L (Passenger)	2 SSENGERS - WITNESSES - PE		25 11 11	26 11 11	27 2 2 2	28 5 5	1	1	1 3: 1 1 1 3	M	34 55 52	
. (J= 1	INVESTIGATING OFFICER (SIGNATURE)		P OR DEPARTN le State Police		egan	APPRO S	OVED BY:				DATE 2/26/2	2010	

FORM 13:20A Rev 4/97

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INVESTIGATING AGENCY CODE NUMBER MEMSPOCOO			PORT	SP10-	045002	1	.P.S. USE ONLY 0-13653							
DATE MONTH DAY OF 6 29 2	YEAR DAY OF WEEK	TIME 09:04		EPORTED TIM	E ARRIVED	201	0-13033							
ON INT 95 SB 195 SB		TY OR TOWN		DE NUMBER	Kennet	COUNTY	HIT AND RUN							
	STANCE FROM SCENE 0 MILES 06 TNTHS	TO NUMB		MILES AND	TENTHS TO	LANDMARK	W E S CIRCLE ONE							
S 🕹 UNIT NO. 1 - Vehicle	TOTAL UNITS	SINV. 1												
DRIVER'S LICENSE NUMBER FAIRB280448006	STATE NS		ER'S LICE	NSE NUMBER			STATE							
IAST NAME         FIRST NAME           Fairbairn, Stuart G         NUMBER AND STREET	MIDDLE		NAME	وروار	FIRST	VAME	MIDDLE							
38 Commodore St.		V	V NUMBER AND STREET											
CITY STATE Middle Sackville NS B4I	CODE NUMI E3B2 66				STAT	Ê								
	US REST/PERM CLAS	S DATI	E OF BIRTH	-I SE		STATUS RES	ST/PERM CLASS							
LAST NAME - OWNER 1 FIRST NAME Bison Transport Inc.	MIDDLE	0	NAME - C	WNER 1	FIRST	NAME	MIDDLE							
5         NUMBER AND STREET           13         1051 Sherwin Rd.		N	BER AND	STREET										
CITY STATE Winnipeg MB R3h	Ot8				STAT	E								
VEHICLE TYPE 3 Axle Tractor with 32 2009 VOIVO	22 COLOI Gold	3 E	ICLE TYPE		YEAR AND	MAKE	COLOR							
2         Tandem Axte Semi         C         DOUT         DOUT           LICENSE PLATE NUMBER         YEAR         I           PBT912         2009	LICENSE PLATE NUMBER YEAR ISSUE STATE NO OCCUP.						Ċ							
	139N276311	E VEH	L VEHICLE IDENTIFICATION NO.											
1 INSURANCE CO. The Manitoba Public Insura POLICY NO. AM1000367030	nce Corp.		INSURANCE CO. POLICY NO.											
8 2 3 4 E V TOWED BY:	Boullette's Towing		3	4 E	Y TOW	ED BY:								
	\$ 1,500.00 DDES DAMAGE ESTIMA		<u>9 (1</u> 10 (80) 7		#11		\$ DAMAGE ESTIMATE							
B 1 1 1 1 1 1 1 1 1 1 1 1 1		DESCF Interst and th the rac the tir losing of lugr hub ap losing	RIPTION ate 95. en anot lio that es. Un the rea nut boll opeared the wh	V: Unit Unit 1 ac ther tracto his tire w it 1 pulle ar right du ts becaus I to be lea neel sugg	1 was lvised a or trailer vas smol- ed over ual whee e they w aking flui est the re	travelin passerby p driver adv king and th to a safe ls. The hu vere sheer d. Break	g south on pointed to him vised him over nat he just lost location after ub was voided ed off and the marks prior to ires locked up							
TOTAL NUMBER OF PERSONS INVOLVED NAMES OF ALL PERSONS INVOLVED (DRIVERS - PA	1 SSENGERS - WITNESSES - F	1	Y (OTHER 1	THAN VEH.) 26 27	28 29	30 31	32 33 34							
Fairbairn, Stuart G (Driver)			11	11 2	5 1	1 1	1 M 62							
INVESTIGATING OFFICER (SIGNATURE)	OFFICED AN MARDED TO TOO	OOP OR DEPART	MEXT.	4000	DUED BY:									
Tr Rick I Moody		aine State Polic		gan Tr. J	oved by: onathan W	/ilson	DATE 7/7/2010							

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INVESTIGATING AGENCY CODE NUMBER MEMS			DENT REPORT				04507	5	FOR D.P.S. USE ONL 2010-13654						
DATE MONTH OF 6		TEAR DAY OF V	1	тім 13:			PORT	ED TIM	E ARR						
ONI	R NAME OF STREE	T OR HIGHWAY	CITY ( Wate				DE NUM 1124	ABER 0 R	Ker	nneb	COUNT EC	Y		HIT AND RUN	
AT BETWEEN NODE NUMB		ANCE FROM SCI MILES 06 TN			UMBER		MILE	SAND	TENTH	IS TO L	ANDM/	<b>RK</b>		W	N S E ONE
S 🕹 UNIT NO. 1	- Vehicle	TOTAL	UNITS IN	1. 1	[]	UN	IIT NO	).	- [		1.2	PED			
DRIVER'S LICENSE NUMBER 3242324		ST/ MI	ATE E	D	DRIVER'S	LICE	VSE NI	JMBER					8	TATE	
Moody, Keyna	FIRST NAME	M	IDDLE	R	LAST NAM				FI	RST N	AME			MIDDL	E
NUMBER AND STREET 74 Town Farm Rd.				R E CITY STATE CODE NUMBER											
слту Oakland	STATE ME 0496	· · · · · · · · · · · · · · · · · · ·	NUMBER												
DATE OF BIRTH SEX 05/12/1992 F	LICENSE STATUS		CLASS C		DATE OF I	BIRTH	ł	SE)	1		STATU: P N	S RES	T/PERI		ASS
LAST NAME - OWNER 1		M	IDDLE	0 W	LAST NAM	1E - 0	WNER	1	F	IRST N	AME			MIDDL	E
Woodward, Lisa B NUMBER AND STREET 74 Town Farm Rd.					NUMBER	AND	STREE	T							
CITY Oakland	STATE ME 04963			R	R CITY STATE										
VEHICLE TYPE	EAR AND MAKE 1999 Subaru	17 (	COLOR 11 Iaroon	Ε	VEHICLE	TYPE			YEAR	AND N	IAKE			COL	.OR
LICENSE PLATE NUMBER 8706RU	H C	LICENSE	PLAT	E NUIV	BER	Y	EAR	ISS	SUE STA	ATE	NOO	CCUF			
VEHICLE IDENTIFICATION NO. INSURANCE CO. GEICO INDI			11 - 11 - 11 - 11 - 11 - 11 - 11 - 11	L VEHICLE IDENTIFICATION NO.											
POLICY NO. 4160473403		14/10. 22000			POLICY N										
	TOWED BY:			2 3 4 E V TOWED BY:											
	11 /	ES DAMAGE E				0 (BOT 7			#11	DAMA	GE COD	DES D	\$ AMAG	E ESTI	MATE
Interstate	9 [‡] 5 MW	1 127	SB	Inte app adv pul dite	SCRIPT erstate proache vised sl lled to ch and nicle. N	95. ed the p the p dr	Uni he N out it left ove	t 1 a IM 12 in 4 and o out	ttem 27 sc th ge off th after	pted outhb ear b ne ro scr	to sh ound y acc ad. I aping	l off iden Unit g the	neu ramp t. Ur 1 we left	o. Ur nit 1 nt in side	as i nit 1 was to a
	AMBULANCE CODES Defite Amb Corp/Waterville(215), Waterville Rescue(987) NAME AND ADDRESS OF OWNER OF DAMAGED														
TOTAL NUMBER OF PERSONS NAMES OF ALL PERSONS INVOLVE			SES - PEDI		NPERTY (OT ANS)	HER 1 25	HAN V 26	27	28	29	30	31	32	33	34
Moody, Keyna M (Driver)						11	11	2	5	1	1	1	1	F	18
Riddle, Samantha (Passe Paci, Nicholas (Passenge					[	11 11	11 11	2	5 5	1	1	1	6	F M	17 15
										· 	· 	·			
			1	PLPL 20-2-					N 1000 -						
INVESTIGATING OFFICER (S)GNAT	uric) [ 0]	FICER NUMBER			PARTMENT Police ski			AL HAG	JACO R	v: an Wi	loon		L DV	17/20	

Tr. Rick L. Moody FORM 13:20A Rev 4/97

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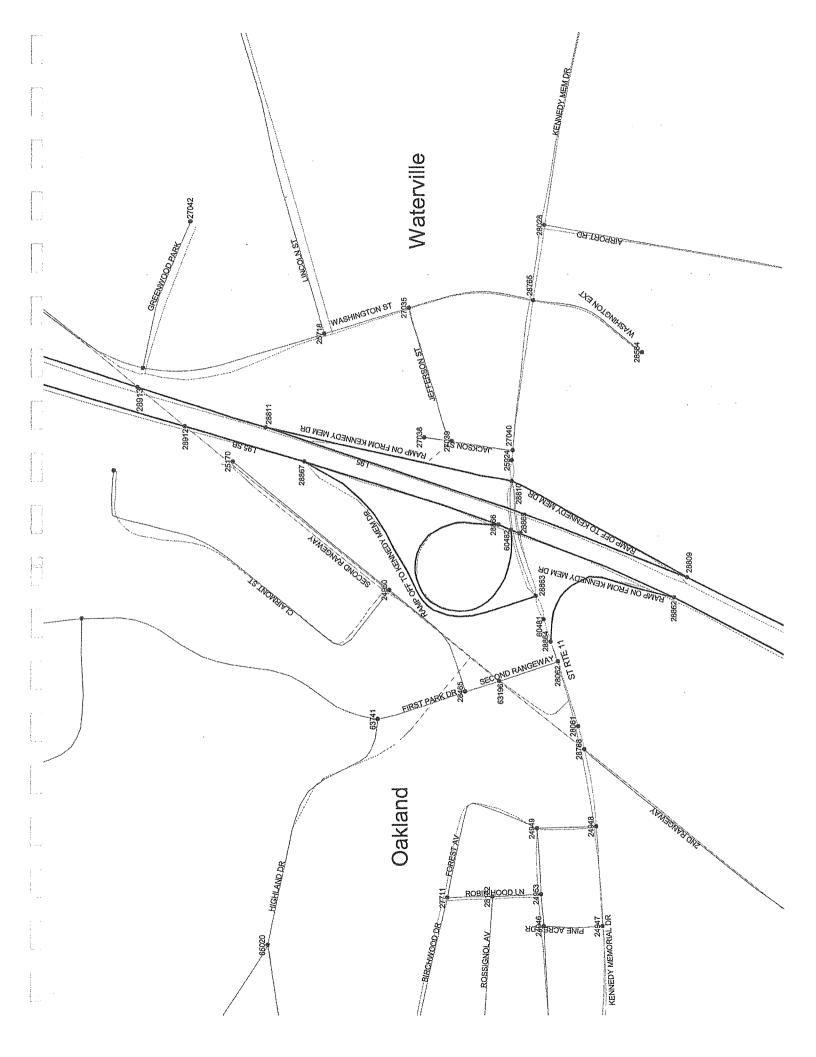
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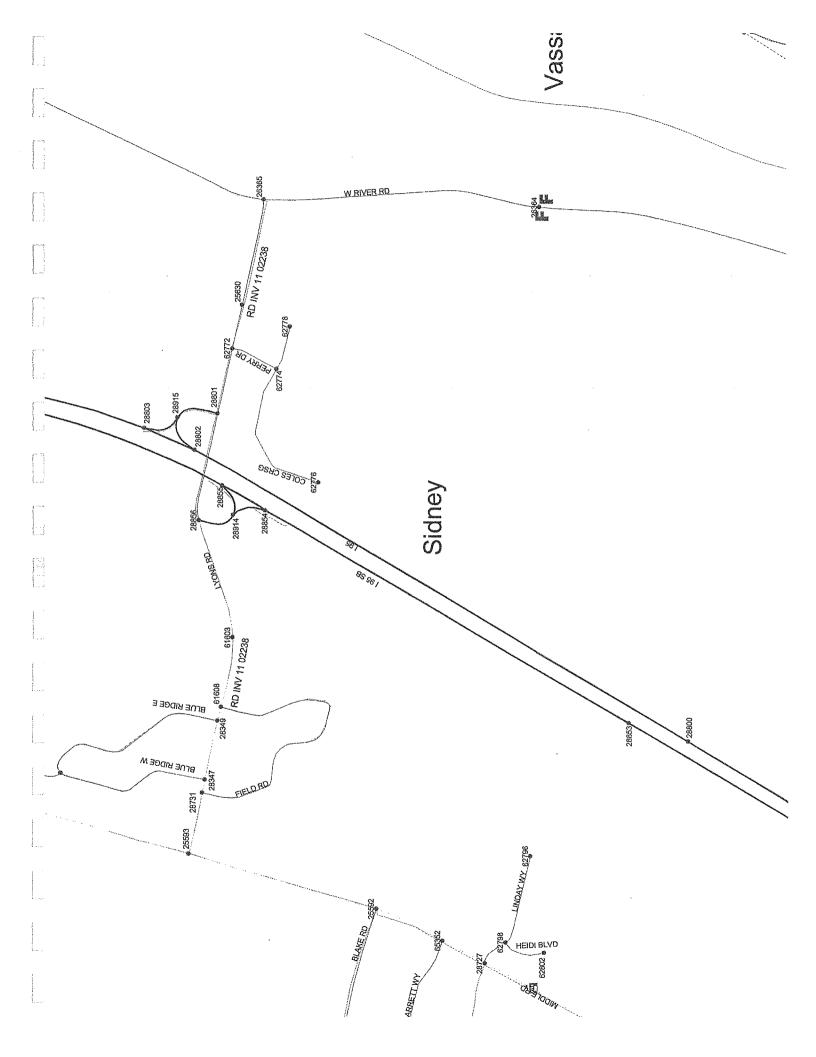
1	INVESTIGATING AGENCY CODE NUMBER ME		TRAFF	IC ACCI			PORT		SP10-(	09180	9	FOR D.P.S. USE ONLY 2010-28288						
1 2	DATE MONTH OF ACCIDENT 12	-	2010	DAY OF W	L L	тім 2 <b>1</b> :	15		:19	2	E ARRI	0						
	ON INT 95 SB	OR NAME OF ST		IIGHWAY	CITY C Water	rville	€		DE NUA 1124		Ker	nneb		Y		HIT AND RUN		
2 17	AT 28867	TO NUMBER MILES AND TENTHS TO LANDMARK 28867										W	N S <u>e one</u>					
1	S UNIT NO. DRIVER'S LICENSE NUMBI 5697147			TOTAL L				UN R'S LICE	NT NC		-	VE	4.2	PED		BIKE TATE		
3	LAST NAME NICHOLS, JO NUMBER AND STREET	FIRST NAM		1	DDLE		LAST I		STREE	T	FI	RST N	AME		I	MIDDLI	E	
	534 NORTH WAY	STATE			NUMBER													
<u>_</u> [ī		ME 04: EX LICENSE STAT M (A) S P	US REST		2 CLASS C	R	DATE	OF BIRTI	4	SE)	1		STATU: P N	S RES	T/PERN	A CL	ASS	
5 1	LAST NAME - OWNER 1 FIRST NAME MIDDLE MIDDLE NICHOLS, JOSHUA P						O W NUMBER AND STREET											
	534 NORTH WAYNE RD. CITY STATE Winthrop ME 04364						R CITY STATE											
h	Winthrop VEHICLE TYPE SUV	YEAR AND MAKE 7 2003 Toyot			OLOR 4 ue (BL)	VE	VEHIC	LE TYPE	:		YEAR	AND	AAKE			COL	.OR	
	LICENSE PLATE NUMBER 9318RY		ISSUE STA ME	VTE NC	OCCUP 3	- H - C	LICEN	ISE PLAT	ENUN	IBER	Y	EAR	ISS	SUE STA	ATE	NO O	CCUP.	
1	VEHICLE IDENTIFICATION INSURANCE CO. USAA	CASUALTY INS		1150		L VEHICLE IDENTIFICATION NO.												
8 1		85C7101 2 E V T H R #11 B E TOWED BY TOWED BY TOWED BY TOWED BY TOWED BY		ş 2,00		POLICY NO. $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$											VATE	
₽ 2 0 1	DEER	/ i95 SOUT		(j)		SE DR	VER/ NVEF STR	IPTIOI AL D OF V UCK TABL	EER ΈH 1 Α Ι	CAN WAS DEEF	/IE F SUN. ₹KII	FROM ABLI	VI TH ETO G IT	HE N AVOI F AN	/IEDI/ D TH ND (	۹N.	THE VEH	
1 35 12 1																		
	TOTAL NUMBER OF PERSONS INVOLVED 3						AMBULANCE CODES N/A(1000) NAME AND ADDRESS OF OWNER OF DAMAGED PROPERTY (OTHER THAN VEH.)											
Ī	NAMES OF ALL PERSONS INV NICHOLS, JOSHUA P	OLVED (DRIVERS - P)	-	S - WITNESS	SES - PEDI	ESTRIA	ANS)	25 11	26 11	27 2	28 5	29 1	30 1	<u>31</u> 1	32 1	33 M	34 44	
L	NICHOLS, DEBORAH							11	11	2	5	1	1	1	3	F	43	
	NICHOLS, ZACHARY	P (Passenger)						11	11	2	5	1	1	1	6	M	19	
								-										
ŀ	INVESTIGATING OFFICER (SI		PARTN	ENT skowh	egan	APPR Sgt.	oveo B Rode	l _{Y:} rick F	. Char	l rette	L   DA   12	те /16/2	L 010					

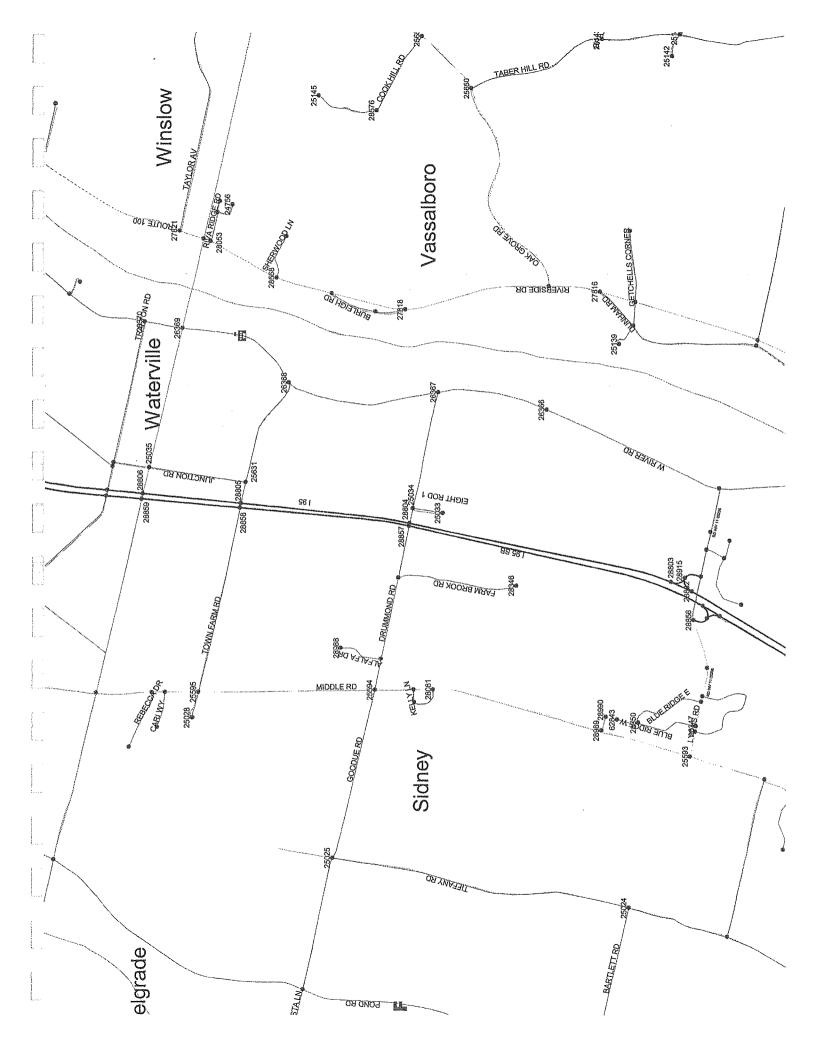
Tpr. Scott E. Dalton FORM 13:20A Rev. 4/97

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# **CAPACITY ANALYSES**

#### 1: West River Road & Lyons Road Performance by approach

Approach	EB	NB	SB	All	
Total Delay (hr)	0.4	0.1	0.3	0.8	
Total Del/Veh (s)	7.3	1.5	4.1	4.6	
Speed Delay (hr)	0.4	0.1	0.1	0.6	
Speed Del/Veh (s)	7.1	1.3	1.1	3.1	
Density (ft/veh)	705	1432	1246	1030	

#### 2: ConWay/I-95 NB & Lyons Road Performance by approach

Approach	EB	WB	NB	SB	All
Total Delay (hr)	0.1	0.0	0.0	0.4	0.5
Total Del/Veh (s)	1.9	0.9	5.9	7.1	3.4
Speed Delay (hr)	0.1	0.0	0.0	0.4	0.5
Speed Del/Veh (s)	1.9	0.7	5.8	6.9	3.3
Density (ft/veh)	1298	1222		474	1001

## 3: I-95 SB/Pike & Lyons Road Performance by approach

Approach	EB	WB	NB	SB	All
Total Delay (hr)	0.1	0.1	0.1	0.0	0.4
Total Del/Veh (s)	1.5	2.6	5.1	5.3	2.6
Speed Delay (hr)	0.1	0.1	0.1	0.0	0.4
Speed Del/Veh (s)	1.3	2.6	4.9	5.2	2.5
Density (ft/veh)	902	972			1280

#### 5: West River Road & Trafton Road Performance by approach

Approach	EB	NB	SB	All
Total Delay (hr)	0.3	0.3	0.3	1.0
Total Del/Veh (s)	10.0	3.4	2.7	3.9
Speed Delay (hr)	0.3	0.3	0.3	0.9
Speed Del/Veh (s)	9.9	3.4	2.4	3.8
Density (ft/veh)	1209	839	465	748

## 7: Junction Road & Trafton Road Performance by approach

Approach	EB	WB	NB	All
Total Delay (hr)	0.1	0.0	0.0	0.1
Total Del/Veh (s)	1.2	0.6	0.8	1.1
Speed Delay (hr)	0.0	0.0	0.0	0.0
Speed Del/Veh (s)	0.6	0.4	0.8	0.6
Density (ft/veh)				

#### 8: Trafton Road & 8 Rod Road Performance by approach

Approach	EB	WB	SB	All	
Total Delay (hr)	0.0	0.0	0.0	0.0	
Total Del/Veh (s)	0.9	0.2	2.7	0.8	
Speed Delay (hr)	0.0	0.0	0.0	0.0	
Speed Del/Veh (s)	0.8	0.1	2.6	0.7	
Density (ft/veh)	2086			2634	

#### 11: Middle Road & Trafton Road Performance by approach

Approach	WB	NB	SB	All
Total Delay (hr)	0.1	0.1	0.1	0.3
Total Del/Veh (s)	4.8	1.0	2.1	1.8
Speed Delay (hr)	0.1	0.1	0.1	0.3
Speed Del/Veh (s)	4.7	0.8	1.8	1.6
Density (ft/veh)		755	821	1093

## 12: Trafton Road Performance by approach

Approach	EB	WB	NB	All	
Total Delay (hr)	0.2	0.6	0.1	0.8	
Total Del/Veh (s)	4.2	5.5	2.7	4.9	
Speed Delay (hr)	0.2	0.5	0.1	0.8	
Speed Del/Veh (s)	4.2	5.3	2.6	4.7	
Density (ft/veh)		416		572	

## **Total Network Performance**

Total Delay (hr)	4.8
Total Del/Veh (s)	5.2
Speed Delay (hr)	4.3
Speed Del/Veh (s)	4.7
Density (ft/veh)	703

#### Intersection: 1: West River Road & Lyons Road

Movement	EB	NB	SB
Directions Served	LR	LT	R
Maximum Queue (ft)	106	41	13
Average Queue (ft)	47	7	1
95th Queue (ft)	88	29	6
Link Distance (ft)	1248	978	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			100
Storage Blk Time (%)			
Queuing Penalty (veh)			

# Intersection: 2: ConWay/I-95 NB & Lyons Road

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LR	LTR
Maximum Queue (ft)	57	6	26	136
Average Queue (ft)	10	0	2	66
95th Queue (ft)	37	4	17	109
Link Distance (ft)	1444	1252	628	1066
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

## Intersection: 3: I-95 SB/Pike & Lyons Road

Movement	EB	WB	NB	SB	
Directions Served	LTR	LTR	LTR	LTR	
Maximum Queue (ft)	13	69	77	65	
Average Queue (ft)	1	23	35	17	
95th Queue (ft)	6	57	62	53	
Link Distance (ft)	1252	1444	703	1056	
Jpstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

#### Intersection: 5: West River Road & Trafton Road

Movement	EB	NB	NB	SB	
Directions Served	LR	L	Т	TR	
Maximum Queue (ft)	125	109	52	36	
Average Queue (ft)	48	48	3	2	
95th Queue (ft)	89	93	51	16	
Link Distance (ft)	1092		670	966	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		100			
Storage Blk Time (%)		1			
Queuing Penalty (veh)		2			

## Intersection: 7: Junction Road & Trafton Road

Movement	EB	NB	
Directions Served	TR	LR	
Maximum Queue (ft)	30	20	
Average Queue (ft)	1	1	
95th Queue (ft)	13	10	
Link Distance (ft)	74	1028	
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)	anda dan san tetas ta metalama an stranador		
Queuing Penalty (veh)			

## Intersection: 8: Trafton Road & 8 Rod Road

Movement	EB	SB	
Directions Served	LT	LR	
Maximum Queue (ft)	5	52	
Average Queue (ft)	0	6	
95th Queue (ft)	4	27	
Link Distance (ft)	3699	1068	
Upstream Blk Time (%)			
Queuing Penalty (veh)	at a factor for the second second		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

## Intersection: 11: Middle Road & Trafton Road

Movement	WB	SB	
Directions Served	LR	LT	
Maximum Queue (ft)	76	52	
Average Queue (ft)	30	16	
95th Queue (ft)	59	43	
Link Distance (ft)	1422	1317	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

## Intersection: 12: Trafton Road

Movement	EB	WB	NB	NB	
Directions Served	TR	LT	L	R	
Maximum Queue (ft)	75	78	34	45	
Average Queue (ft)	38	45	12	23	
95th Queue (ft)	61	68	36	44	
Link Distance (ft)	38	1092	315	315	
Upstream Blk Time (%)	8				
Queuing Penalty (veh)	0				
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

#### **Network Summary**

Network wide Queuing Penalty: 2

#### 1: West River Road & Lyons Road Performance by approach

Approach	EB	NB	SB	All	
Total Delay (hr)	0.4	0.1	0.5	1.0	
Total Del/Veh (s)	7.7	1.5	4.7	4.7	
Speed Delay (hr)	0.4	0.1	0.1	0.6	
Speed Del/Veh (s)	7.5	1.3	1.4	3.0	

## 2: ConWay/I-95 NB & Lyons Road Performance by approach

Approach	EB	WB	NB	SB	All
Total Delay (hr)	0.0	0.1	0.0	0.5	0.6
Total Del/Veh (s)	1.4	1.1	6.1	7.0	3.8
Speed Delay (hr)	0.0	0.1	0.0	0.5	0.6
Speed Del/Veh (s)	1.4	0.9	6.0	6.8	3.6

## 3: I-95 SB/Pike & Lyons Road Performance by approach

Approach	EB	WB	NB	SB	All
Total Delay (hr)	0.0	0.3	0.2	0.0	0.5
Total Del/Veh (s)	0.7	2.9	7.1	4.7	3.1
Speed Delay (hr)	0.0	0.3	0.2	0.0	0.5
Speed Del/Veh (s)	0.6	2.8	6.9	4.6	3.1

#### 5: West River Road & Trafton Road Performance by approach

Approach	EB	NB	SB	All	
Total Delay (hr)	1.3	0.2	0.1	1.7	
Total Del/Veh (s)	12.7	2.4	1.8	6.1	
Speed Delay (hr)	1.3	0.1	0.1	1.6	
Speed Del/Veh (s)	12.5	1.3	1.6	5.6	

## 7: Junction Road & Trafton Road Performance by approach

Approach	EB	WB	NB	All
Total Delay (hr)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.1	0.4	3.6	0.4
Speed Delay (hr)	0.0	0.0	0.0	0.0
Speed Del/Veh (s)	0.1	0.3	3.5	0.3

# 8: Trafton Road & 8 Rod Road Performance by approach

Anerooch	EB	WB	SB	All	
Approach					
Total Delay (hr)	U.U	0.0	0.0	0.0	
Total Del/Veh (s)	0,7	0.2	2.9	0.4	
Speed Delay (hr)	0.0	0.0	0.0	0.0	
Speed Del/Veh (s)	0.6	0,1	2.8	0.3	

## 9: Trafton Road Performance by approach

Approach	EB	WB	NB	All
Total Delay (hr)	0.1	0.1	0.5	0.8
Total Del/Veh (s)	6.3	5.2	4.7	5.0
Speed Delay (hr)	0.1	0.1	0.5	0.8
Speed Del/Veh (s)	6.2	5.2	4.5	4.8

## 11: Middle Road & Trafton Road Performance by approach

Approach	WB	NB	SB	All
Total Delay (hr)	0.2	0.1	0.1	0.3
Total Del/Veh (s)	4.6	1.1	1.0	1.9
Speed Delay (hr)	0.2	0.1	0.0	0.3
Speed Del/Veh (s)	4.4	0.9	0.8	1.7

## **Total Network Performance**

Total Delay (hr)	5.6
Total Del/Veh (s)	6.0
Speed Delay (hr) Speed Del/Veh (s)	5.0
Speed Del/Veh (s)	5.3

## Intersection: 1: West River Road & Lyons Road

Movement	EB	NB	SB
Directions Served	LR	LT	R
Maximum Queue (ft)	115	38	14
Average Queue (ft)	48	6	1
95th Queue (ft)	89	26	7
Link Distance (ft)	1248	978	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			100
Storage Blk Time (%)			
Queuing Penalty (veh)			

## Intersection: 2: ConWay/I-95 NB & Lyons Road

Movement	EB	NB	SB	
Directions Served	LTR	LTR	LTR	
Maximum Queue (ft)	42	68	158	
Average Queue (ft)	8	15	74	
95th Queue (ft)	- 31	51	123	
Link Distance (ft)	1444	628	1066	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

## Intersection: 3: I-95 SB/Pike & Lyons Road

Movement	EB	WB	NB	SB	
Directions Served	LTR	LTR	LTR	LTR	
Maximum Queue (ft)	4	62	117	58	
Average Queue (ft)	0	18	41	11	
95th Queue (ft)	3	51	79	40	
Link Distance (ft)	1252	1444	703	1056	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

#### Intersection: 5: West River Road & Trafton Road

Movement	EB	NB	
Directions Served	LR	L	
Maximum Queue (ft)	220	46	
Average Queue (ft)	92	11	
95th Queue (ft)	169	35	
Link Distance (ft)	982		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		100	
Storage Blk Time (%)			
Queuing Penalty (veh)			

# Intersection: 7: Junction Road & Trafton Road

Movement	NB	
Directions Served	LR	
Maximum Queue (ft)	27	
Average Queue (ft)	3	
95th Queue (ft)	15	
Link Distance (ft)	1028	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Intersection: 8: Trafton Road & 8 Rod Road

Movement	EB	WB	SB	
Directions Served	LT	TR	LR	
Maximum Queue (ft)	15	6	43	
Average Queue (ft)	0	0	6	
95th Queue (ft)	8	4	26	
Link Distance (ft)	3699	74	1068	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

## Intersection: 9: Trafton Road

Movement	EB	WB	NB	NB	
Directions Served	TR	LT	L	R	
Maximum Queue (ft)	68	54	54	95	
Average Queue (ft)	31	31	31	51	
95th Queue (ft)	55	44	45	79	
Link Distance (ft)	176	982	351	351	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

## Intersection: 11: Middle Road & Trafton Road

Movement	WB	SB	
Directions Served	LR	LT	
Maximum Queue (ft)	88	33	
Average Queue (ft)	41	3	
95th Queue (ft)	70	19	
Link Distance (ft)	1422	1317	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

## **Network Summary**

Network wide Queuing Penalty: 0

.

#### 1: KMD & First Park Drive Performance by approach

Approach	EB	WB	SB	All	
Total Delay (hr)	0.7	0.4	0.6	1.7	
Total Del/Veh (s)	2.6	2.4	32.3	3.6	
Speed Delay (hr)	0.7	0.4	0.5	1.7	
Speed Del/Veh (s)	2.6	2.3	30.8	3.6	
Density (ft/veh)	245	317	1686	605	

## 2: KMD & I-95 SB Ramps Performance by approach

Approach	EB	WB	SB	All
Total Delay (hr)	1.6	0.2	4.1	5.9
Total Del/Veh (s)	6.6	1.6	29.9	11.5
Speed Delay (hr)	1.6	0.2	3.7	5.5
Speed Del/Veh (s)	6.6	1.6	27.1	10.8
Density (ft/veh)	147	610	138	199

# 3: I-95 NB Off Ramp/I-95 NB Ramps & KMD Performance by approach

Approach	EB	WB	NB	All
Total Delay (hr)	3.2	4.6	2.1	9.9
Total Del/Veh (s)	9.5	16.4	24.3	14.1
Speed Delay (hr)	3.2	4.4	1.7	9.3
Speed Del/Veh (s)	9.5	15.8	19.9	13.3
Density (ft/veh)	181	305	362	275

## 4: Washington Street & KMD Performance by approach

Approach	EB	WB	NB	SB	All	
Total Delay (hr)	3.4	4.7	0.9	2.7	11.7	
Total Del/Veh (s)	9.9	21.7	30.4	31.1	17.3	
Speed Delay (hr)	3.4	4.7	0.8	2.4	11.4	
Speed Del/Veh (s)	9.9	21.7	29.2	27.6	16.8	
Density (ft/veh)	288	222	453	146	254	

# 41: SB On-Ramp & KMD Performance by approach

Approach	EB	WB	All
Total Delay (hr)	0.6	1.1	1.7
Total Del/Veh (s)	2.0	6.1	3.5
Speed Delay (hr)	0.5	1.1	1.6
Speed Del/Veh (s)	1.9	6.1	3.5
Density (ft/veh)	369	190	283

# 66: KMD & I-95 SB On-Ramp Performance by approach

Approach	EB	WB	All
Total Delay (hr)	0.3	0.3	0.6
Total Del/Veh (s)	0.9	1.5	1.1
Speed Delay (hr)	0.3	0.3	0.6
Speed Del/Veh (s)	0.9	1.5	$\sim 13$ . The second state of the second state of the second state of the second state $\sim$
Density (ft/veh)	347	358	352

## **Total Network Performance**

Total Delay (hr)	34.8
Total Del/Veh (s)	37.1
Speed Delay (hr)	33.3
Speed Del/Veh (s)	35.5
Density (ft/veh)	261

## Intersection: 1: KMD & First Park Drive

Movement	EB	EB	EB	B76	B76	WB	WB	SB	SB	SB
Directions Served	LT	Т	Т	Т	Т	Т	TR	L	L	R
Maximum Queue (ft)	121	108	59	80	58	110	115	90	127	72
Average Queue (ft)	66	50	11	7	3	25	53	18	49	15
95th Queue (ft)	122	100	40	37	27	76	108	62	100	54
Link Distance (ft)	46	46	46	1784	1784	114	114		421	
Upstream Blk Time (%)	10	5	0			0	0			
Queuing Penalty (veh)	0	0	0			0	1			
Storage Bay Dist (ft)								300		300
Storage Blk Time (%)										
Queuing Penalty (veh)										

## Intersection: 2: KMD & I-95 SB Ramps

Movement	EB	EB	WB	WB	SB	SB	
Directions Served	Т	Т	Т	Т	L	R	
Maximum Queue (ft)	126	133	79	85	344	252	
Average Queue (ft)	87	88	17	22	196	66	
95th Queue (ft)	136	138	58	66	315	175	
Link Distance (ft)	101	101	214	214	331		
Upstream Blk Time (%)	7	6			0	0	
Queuing Penalty (veh)	30	28			0	0	
Storage Bay Dist (ft)						300	
Storage Blk Time (%)					1	0	
Queuing Penalty (veh)					1	0	

## Intersection: 3: I-95 NB Off Ramp/I-95 NB Ramps & KMD

Movement	EB	EB	EB	WB	WB	WB	NB	NB	
Directions Served	L	Т	Т	Т	Т	R	LT	R	
Maximum Queue (ft)	262	90	106	270	294	220	114	159	
Average Queue (ft)	148	26	38	86	155	57	44	75	
95th Queue (ft)	241	70	86	191	257	174	93	136	
Link Distance (ft)	248	248	248	903	903		515		
Upstream Blk Time (%)	1								
Queuing Penalty (veh)	4								
Storage Bay Dist (ft)						275		200	
Storage Blk Time (%)					1			0	
Queuing Penalty (veh)					2			0	

## Intersection: 4: Washington Street & KMD

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	Т	TR	Ĺ	Т	Т	R	LT	R	LT	R
Maximum Queue (ft)	205	218	256	42	240	317	118	166	68	215	197
Average Queue (ft)	88	69	91	9	112	176	36	70	18	107	56
95th Queue (ft)	166	149	173	30	210	283	85	141	54	193	137
Link Distance (ft)		903	903		314	314	314	224		225	
Upstream Blk Time (%)						0		-0		1	
Queuing Penalty (veh)						0		0		0	
Storage Bay Dist (ft)	750			200					100		125
Storage Blk Time (%)					0`			6	0	8	0
Queuing Penalty (veh)					0			1	0	13	1

## Intersection: 41: SB On-Ramp & KMD

Movement	EB	EB	EB	WB	WB	
Directions Served	Т	Т	R	Т	Т	
Maximum Queue (ft)	114	112	34	10	77	
Average Queue (ft)	27	26	1	0	5	
95th Queue (ft)	90	85	18	7	36	
Link Distance (ft)	114	114	114	101	101	
Upstream Blk Time (%)	1	0	0		0	
Queuing Penalty (veh)	2	1	0		0	
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

## Intersection: 66: KMD & I-95 SB On-Ramp

Movement	EB
Directions Served	Т
Maximum Queue (ft)	32
Average Queue (ft)	1
95th Queue (ft)	14
Link Distance (ft)	214
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

#### **Network Summary**

Network wide Queuing Penalty: 86

## Intersection: 1: KMD & First Park Drive

Phase	2	4	6
Movement(s) Served	EBTL	SBL	WBT
Maximum Green (s)	56.5	30.5	56.5
Minimum Green (s)	10.0	5.0	10.0
Recall	Max	None	C-Max
Avg. Green (s)	89.0	7.3	89.0
g/C Ratio	0.77	0.06	0.77
Cycles Skipped (%)	14	13	14
Cycles @ Minimum (%)	0	24	0
Cycles Maxed Out (%)	86	0	86
Cycles with Peds (%)	0	0	0
Controller Summary			

Average Cycle Length (s): 100.0 Number of Complete Cycles : 35

# Intersection: 2: KMD & I-95 SB Ramps

Phase	2	4	6
Movement(s) Served	EBT	SBL	WBT
Maximum Green (s)	44.0	44.0	44.0
Minimum Green (s)	10.0	5.0	10.0
Recall	Max	None	C-Max
Avg. Green (s)	63.4	24.8	63.4
g/C Ratio	0.63	0.25	0.63
Cycles Skipped (%)	0	0	0
Cycles @ Minimum (%)	0	0	0
Cycles Maxed Out (%)	100	3	100
Cycles with Peds (%)	0	0	0
Controller Summary			

Average Cycle Length (s): 100.0 Number of Complete Cycles : 35

## Intersection: 3: I-95 NB Off Ramp/I-95 NB Ramps & KMD

Phase	2	3	5	6
Movement(s) Served	EBT	NBTL	EBL	WBT
Maximum Green (s)	63.0	25.0	20.0	37.0
Minimum Green (s)	10.0	5.0	5.0	10.0
Recall	Max	None	None	C-Max
Avg. Green (s)	89.6	9.8	20.0	55.0
g/C Ratio	0.82	0.09	0.20	0.55
Cycles Skipped (%)	9	11	0	0
Cycles @ Minimum (%)	0	17	0	0
Cycles Maxed Out (%)	91	0	94	100
Cycles with Peds (%)	0	0	0	0
Controller Summary				

Average Cycle Length (s): 100.0

Number of Complete Cycles : 35

## Intersection: 4: Washington Street & KMD

Phase	1	2	4	5	6	8
Movement(s) Served	WBL	EBT	SBTL	EBL	WBT	NBTL
Maximum Green (s)	9.5	41.0	30.5	19.5	31.0	30.5
Minimum Green (s)	5.0	10.0	5.0	5.0	10.0	5.0
Recall	None	Max	None	None	C-Max	None
Avg. Green (s)	5.7	65.5	20.0	19.5	42.7	20.0
g/C Ratio	0.02	0.65	0.20	0.19	0.43	0.20
Cycles Skipped (%)	71	0	0	3	0	0
Cycles @ Minimum (%)	20	0	0	0	0	0
Cycles Maxed Out (%)	0	100	11	94	100	11
Cycles with Peds (%)	0	0	0	0	0	0
Controller Summary						

Average Cycle Length (s): 100.0 Number of Complete Cycles : 35

## 1: KMD & First Park Drive Performance by approach

Approach	EB	WB	SB	All
Total Delay (hr)	1.1	1.4	1.0	3.5
Total Del/Veh (s)	4.9	3.7	21.8	5.4
Speed Delay (hr)	1.1	1.4	0.9	3.4
Speed Del/Veh (s)	4.9	3.7	19.7	5.2
Density (ft/veh)	193	138	923	338

## 2: KMD & I-95 SB Ramps Performance by approach

Approach	EB	WB	SB	All
Total Delay (hr)	1.5	1.0	3.2	5.7
Total Del/Veh (s)	6.4	3.6	18.5	8.3
Speed Delay (hr)	1.5	1.0	2.3	4.8
Speed Del/Veh (s)	6.4	3.6	13.5	7.1
Density (ft/veh)	156	237	182	191

## 3: I-95 NB Off Ramp/I-95 NB Ramps & KMD Performance by approach

Approach	EB	WB	NB	All
Total Delay (hr)	4.6	10.8	3.4	18.9
Total Del/Veh (s)	14.7	24.5	22.0	20.7
Speed Delay (hr)	4.6	10.7	2.5	17.8
Speed Del/Veh (s)	14.6	24.3	16.1	19.5
Density (ft/veh)	148	148	231	160

## 4: Washington Street & KMD Performance by approach

Approach	EB	WB	NB	SB	All
Total Delay (hr)	6.3	10.2	2.2	3.3	22.0
Total Del/Veh (s)	17.2	25.7	33.4	31.8	23.6
Speed Delay (hr)	6.3	10.2	2.1	2.9	21.4
Speed Del/Veh (s)	17.2	25.7	31.1	27.9	23.0
Density (ft/veh)	215	107	178	122	158

## 41: SB On-Ramp & KMD Performance by approach

Approach	EB	WB	All
Total Delay (hr)	0.4	1.6	2.1
Total Del/Veh (s)	1.7	4.4	3.3
Speed Delay (hr)	0.4	1.6	2.1
Speed Del/Veh (s)	1.6	4.4	3.2
Density (ft/veh)	390	111	216

## 66: KMD & I-95 SB On-Ramp Performance by approach

Approach	EB	WB	All
Total Delay (hr)	0.5	0.9	1.4
Total Del/Veh (s)	1.5	2.5	2.1
Speed Delay (hr)	0.5	0.8	1.3
Speed Del/Veh (s)	1.5	2.5	2.0
Density (ft/veh)	348	217	274

## **Total Network Performance**

Total Delay (hr)	59.6
Total Del/Veh (s)	48.2
Speed Delay (hr)	56.9
Speed Del/Veh (s)	46.0
Density (ft/veh)	177

#### Intersection: 1: KMD & First Park Drive

Movement	EB	EB	EB	B76	B76	WB	WB	SB	SB	SB	
Directions Served	LT	Т	Т	Т	Т	Т	TR	L	L	R	
Maximum Queue (ft)	129	110	64	153	81	118	120	95	103	65	
Average Queue (ft)	69	53	13	17	4	71	87	36	50	24	
95th Queue (ft)	130	98	45	82	41	126	129	76	86	56	
Link Distance (ft)	46	46	46	1120	1120	114	114		421		
Upstream Blk Time (%)	18	6	1			0	1				
Queuing Penalty (veh)	0	0	0			2	7				
Storage Bay Dist (ft)								300		300	
Storage Blk Time (%)											
Queuing Penalty (veh)											

## Intersection: 2: KMD & I-95 SB Ramps

Movement	EB	EB	WB	WB	SB	SB	
Directions Served	Т	Т	Т	Т	L	R	
Maximum Queue (ft)	118	123	132	112	243	263	
Average Queue (ft)	76	75	54	39	111	117	
95th Queue (ft)	120	118	107	85	188	220	
Link Distance (ft)	101	101	214	214	331		
Upstream Blk Time (%)	3	3				0	
Queuing Penalty (veh)	13	12				0	
Storage Bay Dist (ft)						300	
Storage Blk Time (%)					0	0	
Queuing Penalty (veh)					0	0	

# Intersection: 3: I-95 NB Off Ramp/I-95 NB Ramps & KMD

Movement	EB	EB	EB	WB	WB	WB	NB	NB	
Directions Served	L	Т	Т	Т	Т	R	LT	R	
Maximum Queue (ft)	259	125	127	411	511	348	123	209	
Average Queue (ft)	159	47	51	198	232	180	54	112	
95th Queue (ft)	270	93	96	345	404	343	98	186	
Link Distance (ft)	248	248	248	903	903		515		
Upstream Blk Time (%)	6								
Queuing Penalty (veh)	21								
Storage Bay Dist (ft)						275		200	
Storage Blk Time (%)					3	3		1	
Queuing Penalty (veh)					14	14		1	

## Intersection: 4: Washington Street & KMD

Movement	EB	EB	EB	WB	WB	WB	WB	B5	B5	NB	NB	SB
Directions Served	L	Т	TR	L	Т	Т	R	Т	Т	LT	R	LT
Maximum Queue (ft)	215	293	322	222	377	385	114	117	228	231	174	209
Average Queue (ft)	101	145	167	69	250	301	41	5	25	112	58	95
95th Queue (ft)	181	244	268	147	382	426	92	49	110	191	133	170
Link Distance (ft)		903	903		314	314	314	2193	2193	224		225
Upstream Blk Time (%)					2	8				1		0
Queuing Penalty (veh)					0	0				0		0
Storage Bay Dist (ft)	750			200							100	
Storage Blk Time (%)				0	10					16	1	4
Queuing Penalty (veh)				1	9					16	1	9

# Intersection: 4: Washington Street & KMD

Movement	SB	
Directions Served	R	-
Maximum Queue (ft)	187	
Average Queue (ft)	94	
95th Queue (ft)	170	
Link Distance (ft)		
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	125	
Storage Blk Time (%)	4	
Queuing Penalty (veh)	5	

## Intersection: 41: SB On-Ramp & KMD

Movement	EB	EB	WB	WB	
Directions Served	Т	Т	Т	Т	
Maximum Queue (ft)	92	95	65	159	
Average Queue (ft)	10	8	3	46	
95th Queue (ft)	52	45	30	135	
Link Distance (ft)	114	114	101	101	
Upstream Blk Time (%)	0	0	0	3	
Queuing Penalty (veh)	0	0	1	22	
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

## Intersection: 66: KMD & I-95 SB On-Ramp

Movement	EB
Directions Served	Т
Maximum Queue (ft)	103
Average Queue (ft)	11
95th Queue (ft)	66
Link Distance (ft)	214
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	
Network Summary	

Network wide Queuing Penalty: 149

#### Intersection: 1: KMD & First Park Drive

Phase	2	4	6
Movement(s) Served	EBTL	SBL	WBT
Maximum Green (s)	31.5	15.5	31.5
Minimum Green (s)	10.0	5.0	10.0
Recall	Max	None	C-Max
Avg. Green (s)	42.4	7.5	42.4
g/C Ratio	0.67	0.12	0.67
Cycles Skipped (%)	5	7	5
Cycles @ Minimum (%)	0	34	0
Cycles Maxed Out (%)	95	0	95
Cycles with Peds (%)	0	0	0
Controller Summary			

Average Cycle Length (s): 60.0 Number of Complete Cycles : 59

## Intersection: 2: KMD & I-95 SB Ramps

2	4	6	
EBT	SBL	WBT	
27.0	21.0	27.0	
10.0	5.0	10.0	
Max	None	C-Max	
30.9	17.1	30.9	
0.51	0.29	0.51	
0	0	0	
0	0	0	
100	40	100	
0	0	0	
ANALY	EBT 27.0 10.0 Max 30.9 0.51 0 0 0 100	EBT         SBL           27.0         21.0           10.0         5.0           Max         None           30.9         17.1           0.51         0.29           0         0           0         0           100         40	EBT         SBL         WBT           27.0         21.0         27.0           10.0         5.0         10.0           Max         None         C-Max           30.9         17.1         30.9           0.51         0.29         0.51           0         0         0           0         0         0           100         40         100

Controller Summary

Average Cycle Length (s): 60.0 Number of Complete Cycles : 59

## Intersection: 3: I-95 NB Off Ramp/I-95 NB Ramps & KMD

Average Cycle Length (s): 60.0

Number of Complete Cycles : 59

## Intersection: 4: Washington Street & KMD

Dhees	1	2	4	5	6	8
Phase						
Movement(s) Served	WBL	EBT	SBTL	EBL	WBT	NBTL
Maximum Green (s)	14.5	56.0	30.5	19.5	51.0	30.5
Minimum Green (s)	5.0	10.0	5.0	5.0	10.0	5.0
Recall	None	Min	None	None	C-Min	None
Avg. Green (s)	9.7	59.5	20.2	17.7	50.5	20.2
g/C Ratio	0.07	0.50	0.17	0.15	0.42	0.17
Cycles Skipped (%)	9	0	0	0	0	0
Cycles @ Minimum (%)	18	0	0	0	0	0
Cycles Maxed Out (%)	0	27	3	12	100	3
Cycles with Peds (%)	0	0	0	0	0	0
Controller Summary						

Average Cycle Length (s): 120.0 Number of Complete Cycles : 29

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## 1: West River Road & Lyons Road Performance by approach

Approach	EB	NB	SB	All
Total Delay (hr)	0.1	0.0	0.1	0.2
Total Del/Veh (s)	4.1	1.2	1.2	1.6
Speed Delay (hr)	0.1	0.0	0.1	0.2
Speed Del/Veh (s)	4.0	1.0	1.0	1.5
Density (ft/veh)	2500	1557	800	1402

## 2: ConWay/I-95 NB & Lyons Road Performance by approach

Approach	EB	WB	NB	SB	All	
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	2200230400000
Total Del/Veh (s)	1.2	0.6	5.5	3.4	1.5	
Speed Delay (hr)	0.0	0.0	0.0	0.0	0.1	
Speed Del/Veh (s)	1.2	0.5	5.4	3.3	1.4	
Density (ft/veh)	1815	2207		1815	2231	

## 3: I-95 SB/Pike & Lyons Road Performance by approach

Approach	EB	WB	NB	SB	All
Total Delay (hr)	0.0	0.1	0.1	0.0	0.2
Total Del/Veh (s)	1.0	1.5	4.2	5.7	1.9
Speed Delay (hr)	0.0	0.1	0.1	0.0	0.2
Speed Del/Veh (s)	0.8	1.5	4.0	5.6	1.8
Density (ft/veh)	1242	1569			1828

## 5: West River Road & Trafton Road Performance by approach

Approach	EB	NB	SB	All
Total Delay (hr)	0.6	0.1	0.5	1.2
Total Del/Veh (s)	9.9	2.1	4.5	5.4
Speed Delay (hr)	0.6	0.1	0.2	0.9
Speed Del/Veh (s)	9.6	1.9	1.6	3.8
Density (ft/veh)	1277	892	973	1073

#### 7: Trafton Road Performance by approach

Approach	EB	WB	NB	All		
Total Delay (hr)	0.8	0.5	0.1	1.4		
Total Del/Veh (s)	6.7	6.4	3.7	6.4		
Speed Delay (hr)	0.8	0.5	0.1	1.3		
Speed Del/Veh (s)	6.2	6.3	3.6	6.0		
Density (ft/veh)	91	560		533		

## 10: I-95 NB/3 & Trafton Road Performance by approach

Approach	EB	WB	NB	SB	All	
Total Delay (hr)	0.1	0.1	0.3	0.0	0.6	
Total Del/Veh (s)	1.8	2.5	5.2	6.6	3.0	
Speed Delay (hr)	0.1	0.1	0.3	0.0	0.5	
Speed Del/Veh (s)	1.7	1.0	5.0	6.5	2.5	
Density (ft/veh)	722	2045	1411		1380	

#### 11: Middle Road & Trafton Road Performance by approach

Approach	WB	NB	SB	All
Total Delay (hr)	0.1	0.1	0.3	0.5
Total Del/Veh (s)	5.1	1.3	3.0	2.6
Speed Delay (hr)	0.1	0.1	0.2	0.5
Speed Del/Veh (s)	5.0	1.0	2.8	2.4
Density (ft/veh)	1644	804	644	897

## 22: I-95 SB & Trafton Road Performance by approach

Approach	EB	WB	NB	All
Total Delay (hr)	0.1	0.1	0.2	0.3
Total Del/Veh (s)	1.4	1.6	3.9	2.3
Speed Delay (hr)	0.1	0.1	0.2	0.3
Speed Del/Veh (s)	1.2	1.3	3.7	2.1
Density (ft/veh)	1361	2580	1690	1866

## **Total Network Performance**

Total Delay (hr)	5.2	
Total Del/Veh (s)	5.2	
Speed Delay (hr)	4.6	
Speed Del/Veh (s)	4.6	
Density (ft/veh)	809	

## Intersection: 1: West River Road & Lyons Road

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	66	46
Average Queue (ft)	32	7
95th Queue (ft)	56	29
Link Distance (ft)	1262	978
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Intersection: 2: ConWay/I-95 NB & Lyons Road

Movement	EB	NB	SB
Directions Served	LTR	LR	LTR
Maximum Queue (ft)	54	44	65
Average Queue (ft)	5	3	29
95th Queue (ft)	26	23	59
Link Distance (ft)	1444	628	1066
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

# Intersection: 3: I-95 SB/Pike & Lyons Road

Movement	EB	WB	NB	SB	
Directions Served	LTR	LTR	LTR	LTR	
Maximum Queue (ft)	14	66	70	79	
Average Queue (ft)	0	9	30	21	
95th Queue (ft)	7	38	57	63	
Link Distance (ft)	1252	1444	703	1056	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

## Intersection: 5: West River Road & Trafton Road

Movement	EB	EB	NB	SB	
Directions Served	L	R	LT	R	
Maximum Queue (ft)	141	83	81	26	
Average Queue (ft)	55	16	15	1	
95th Queue (ft)	103	50	53	12	
Link Distance (ft)	1035		686		
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		100		100	
Storage Blk Time (%)	1	0			
Queuing Penalty (veh)	0	0			

## Intersection: 7: Trafton Road

Movement	EB	WB	NB	NB	
Directions Served	TR	LT	L	R	
Maximum Queue (ft)	131	63	47	29	
Average Queue (ft)	88	39	23	13	
95th Queue (ft)	132	57	44	35	
Link Distance (ft)	116	1035	316	316	
Upstream Blk Time (%)	2				
Queuing Penalty (veh)	0				
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

## Intersection: 10: I-95 NB/3 & Trafton Road

Movement	EB	WB	NB	NB	SB	
Directions Served	LTR	L	LT	R	LTR	
Maximum Queue (ft)	16	48	56	88	30	
Average Queue (ft)	1	10	13	49	8	
95th Queue (ft)	9	33	41	77	28	
Link Distance (ft)	1738		1022	1022	1148	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		100				
Storage Blk Time (%)						
Queuing Penalty (veh)						

## Intersection: 11: Middle Road & Trafton Road

Movement	WB	SB	
Directions Served	LR	LT	
Maximum Queue (ft)	92	72	
Average Queue (ft)	36	26	
95th Queue (ft)	66	62	
Link Distance (ft)	1424	1317	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

## Intersection: 22: I-95 SB & Trafton Road

Movement	EB	WB	NB	NB	
Directions Served	TR	L	L	R	
Maximum Queue (ft)	- 4	46	45	76	
Average Queue (ft)	0	10	17	36	
95th Queue (ft)	3	33	40	59	
Link Distance (ft)	2066		999	999	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		100			
Storage Blk Time (%)					
Queuing Penalty (veh)					

#### **Network Summary**

Network wide Queuing Penalty: 0

#### 1: West River Road & Lyons Road Performance by approach

Approach	EB	NB	SB	All	
Total Delay (hr)	0.2	0.0	0.1	0.3	
Total Del/Veh (s)	5.1	1.0	1.0	1.9	
Speed Delay (hr)	0.2	0.0	0.1	0.3	
Speed Del/Veh (s)	5.0	0.8	0.8	1.7	
Density (ft/veh)	927	1275	844	1005	

#### 2: ConWay/I-95 NB & Lyons Road Performance by approach

Approach	EB	WB	NB	SB	All
Total Delay (hr)	0.0	0.0	0.0	0.2	0.2
Total Del/Veh (s)	1.0	0.6	5.9	4.5	2.7
Speed Delay (hr)	0.0	0.0	0.0	0.2	0.2
Speed Del/Veh (s)	1.0	0.5	5.7	4.3	2.6
Density (ft/veh)	2036			598	1513

### 3: I-95 SB/Pike & Lyons Road Performance by approach

Approach	EB	WB	NB	SB	All
Total Delay (hr)	0.0	0.0	0.1	0.0	0.1
Total Del/Veh (s)	0.7	1.1	3.7	3.6	1.5
Speed Delay (hr)	0.0	0.0	0.1	0.0	0.1
Speed Del/Veh (s)	0.5	1.1	3.5	3.5	1.4
Density (ft/veh)	2225	1273			2153

### 5: West River Road & Trafton Road Performance by approach

Approach	EB	NB	SB	All
Total Delay (hr)	1.2	0.1	0.4	1.7
Total Del/Veh (s)	12.5	1.8	4.2	6.5
Speed Delay (hr)	1.2	0.1	0.1	1.4
Speed Del/Veh (s)	12.4	1.6	1.4	5.4
Density (ft/veh)	575	772	1083	772

#### 7: Trafton Road Performance by approach

Approach	EB	WB	NB	All	
Total Delay (hr)	0.8	0.5	0.8	2.2	
Total Del/Veh (s)	10.4	9.1	7.3	8.7	
Speed Delay (hr)	0.8	· 0.5	0.8	2.1	
Speed Del/Veh (s)	10.1	9.1	7.0	8.5	
Density (ft/veh)	280	566	358	403	

### 10: I-95 NB/8 Rod Road & Trafton Road Performance by approach

Approach	EB	WB	NB	SB	All	
Total Delay (hr)	0.1	0.5	0.2	0.0	0.8	
Total Del/Veh (s)	1.3	4.5	4.4	3.1	3.8	
Speed Delay (hr)	0.1	0.2	0.2	0.0	0.5	
Speed Del/Veh (s)	1.3	2.1	4.2	3.0	2.4	
Density (ft/veh)	1183	854	1542		1383	

### 11: Middle Road & Trafton Road Performance by approach

Approach	WB	NB	SB	All
Total Delay (hr)	0.3	0.1	0.2	0.5
Total Del/Veh (s)	5.3	1.4	2.1	2.8
Speed Delay (hr)	0.3	0.1	0.1	0.5
Speed Del/Veh (s)	5.1	1.1	1.9	2.6
Density (ft/veh)	841	1033	771	860

## 22: I-95 SB & Trafton Road Performance by approach

Approach	EB	WB	NB	All
Total Delay (hr)	0.0	0.2	0.2	0.4
Total Del/Veh (s)	0.9	2.4	3.9	2.5
Speed Delay (hr)	0.0	0.2	0.1	0.4
Speed Del/Veh (s)	0.7	2.1	3.8	2.2
Density (ft/veh)	1994	1271	2223	1612

## **Total Network Performance**

Total Delay (hr)	7.2
Total Del/Veh (s)	6.6
Speed Delay (hr)	6.4
Speed Del/Veh (s)	5.9
Density (ft/veh)	681

## Intersection: 1: West River Road & Lyons Road

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	74	37
Average Queue (ft)	34	4
95th Queue (ft)	57	23
Link Distance (ft)	507	978
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

# Intersection: 2: ConWay/I-95 NB & Lyons Road

Movement	EB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	27	55	102
Average Queue (ft)	2	9	51
95th Queue (ft)	14	37	83
Link Distance (ft)	1444	628	1066
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

# Intersection: 3: I-95 SB/Pike & Lyons Road

Movement	WB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	41	68	31
Average Queue (ft)	4	31	6
95th Queue (ft)	22	58	27
Link Distance (ft)	1444	703	1056
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

## Intersection: 5: West River Road & Trafton Road

Movement	EB	EB	NB	SB	
Directions Served	L	R	LT	R	
Maximum Queue (ft)	170	117	53	22	
Average Queue (ft)	68	28	7	1	
95th Queue (ft)	128	75	31	12	
Link Distance (ft)	785		686		
Jpstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		100		100	
Storage Blk Time (%)	3	0			
Queuing Penalty (veh)	1	0			

## Intersection: 7: Trafton Road

Movement	EB	WB	NB	NB	
Directions Served	TR	LT	L	R	
Maximum Queue (ft)	115	69	132	72	
Average Queue (ft)	59	37	66	33	
95th Queue (ft)	94	55	108	57	
Link Distance (ft)	366	785	325	325	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

## Intersection: 10: I-95 NB/8 Rod Road & Trafton Road

Movement	EB	WB	NB	NB	SB	
Directions Served	LTR	L	LT	R	LR	
Maximum Queue (ft)	27	69	58	88	28	
Average Queue (ft)	2	20	22	43	4	
95th Queue (ft)	11	51	51	72	21	
Link Distance (ft)	1738		1022	1022	1148	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		100				
Storage Blk Time (%)		0				
Queuing Penalty (veh)		0				

### Intersection: 11: Middle Road & Trafton Road

Movement	WB	SB	
Directions Served	LR	LT	
Maximum Queue (ft)	78	57	
Average Queue (ft)	41	15	
95th Queue (ft)	65	43	
Link Distance (ft)	1424	1317	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

### Intersection: 22: I-95 SB & Trafton Road

Movement	EB	WB	NB	NB	
Directions Served	TR	L	L	R	
Maximum Queue (ft)	4	55	56	54	
Average Queue (ft)	0	16	27	26	
95th Queue (ft)	3	44	46	45	
Link Distance (ft)	2066		999	999	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		100			
Storage Blk Time (%)					
Queuing Penalty (veh)					

## Network Summary

Network wide Queuing Penalty: 2

### 1: KMD & First Park Drive Performance by approach

Approach	EB	WB	SB	All	
Total Delay (hr)	0.7	0.4	0.5	1.5	
Total Del/Veh (s)	2.5	2.0	29.8	3.2	
Speed Delay (hr)	0.7	0.3	0.4	1.5	
Speed Del/Veh (s)	2.5	1.9	28.6	3.1	
Density (ft/veh)	245	334	2031	642	

#### 2: KMD & I-95 SB Ramps Performance by approach

Approach	EB	WB	SB	All
Total Delay (hr)	1.4	0.1	3.4	4.9
Total Del/Veh (s)	5.6	0.8	30.7	9.9
Speed Delay (hr)	1.4	0.1	3.2	4.6
Speed Del/Veh (s)	5.6	0.8	28.2	9.3
Density (ft/veh)	166	642	164	228

## 3: I-95 NB Off Ramp/I-95 NB Ramps & KMD Performance by approach

Approach	EB	WB	NB	Ali
Total Delay (hr)	2.4	2.8	1.9	7.1
Total Del/Veh (s)	7.6	10.2	24.7	10.7
Speed Delay (hr)	2.4	2.6	1.6	6.6
Speed Del/Veh (s)	7.5	9.5	20.7	9.9
Density (ft/veh)	219	390	394	337

### 4: Washington Street & KMD Performance by approach

Approach	EB	WB	NB	SB	All	
Total Delay (hr)	3.7	3.9	0.8	2.6	11.0	<u></u>
Total Del/Veh (s)	11.5	19.8	32.4	29.3	17.4	
Speed Delay (hr)	3.7	3.9	0.8	2.3	10.7	Chronie and Chronie and
Speed Del/Veh (s)	11.5	19.8	31.3	26.2	16.9	
Density (ft/veh)	289	263	471	151	269	

### 41: SB On-Ramp & KMD Performance by approach

Approach	EB	WB	All
Total Delay (hr)	0.5	1.1	1.6
Total Del/Veh (s)	1.5	6.2	3.3
Speed Delay (hr)	0.4	1.1	1.5
Speed Del/Veh (s)	1.5	6.2	3.3
Density (ft/veh)	390	187	289

### 66: KMD & I-95 SB On-Ramp Performance by approach

Approach	EB	WB	All
Total Delay (hr)	0.3	0.3	0.6
Total Del/Veh (s)	0.9	1.2	1.0
Speed Delay (hr)	0.3	0.3	0.5
Speed Del/Veh (s)	0.9	1.2	10
Density (ft/veh)	379	366	373

#### **Total Network Performance**

Total Delay (hr)	29.2	
Total Del/Veh (s)	32.9	
Speed Delay (hr)	27.9	
Speed Del/Veh (s)	31.5	
Density (ft/veh)	285	

#### Intersection: 1: KMD & First Park Drive

Movement	EB	EB	EB	B76	B76	WB	WB	SB	SB	SB	
Directions Served	LT	Т	Т	Т	Т	Т	TR	L	L	R	
Maximum Queue (ft)	127	119	58	56	77	98	109	73	128	65	
Average Queue (ft)	65	52	11	6	5	20	38	13	47	14	
95th Queue (ft)	123	105	42	36	41	66	88	50	98	52	
Link Distance (ft)	46	46	46	1784	1784	114	114		421		
Upstream Blk Time (%)	10	5	1			0	0				
Queuing Penalty (veh)	0	0	0			0	1				
Storage Bay Dist (ft)								300		300	
Storage Blk Time (%)											
Queuing Penalty (veh)											

### Intersection: 2: KMD & I-95 SB Ramps

Movement	EB	EB	WB	WB	SB	SB	
Directions Served	Т	Т	Т	Т	L	R	
Maximum Queue (ft)	123	122	61	79	296	194	
Average Queue (ft)	83	83	6	11	165	57	
95th Queue (ft)	138	133	31	46	257	140	
Link Distance (ft)	101	101	214	214	331		
Upstream Blk Time (%)	5	4			0	0	
Queuing Penalty (veh)	21	19			0	0	
Storage Bay Dist (ft)						300	
Storage Blk Time (%)					0		
Queuing Penalty (veh)					1		

## Intersection: 3: I-95 NB Off Ramp/I-95 NB Ramps & KMD

Movement	EB	EB	EB	WB	WB	WB	NB	NB	
Directions Served	L	Т	Т	Т	Т	R	LT	R	
Maximum Queue (ft)	230	90	126	159	195	85	120	164	
Average Queue (ft)	112	25	41	42	99	9	50	63	
95th Queue (ft)	195	65	90	107	173	58	97	116	
Link Distance (ft)	248	248	248	903	903		515		
Upstream Blk Time (%)	0								
Queuing Penalty (veh)	2								
Storage Bay Dist (ft)						275		200	
Storage Blk Time (%)								0	
Queuing Penalty (veh)								0	

### Intersection: 4: Washington Street & KMD

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	Т	TR	L	Т	Т	R	LT	R	LT	R
Maximum Queue (ft)	191	180	185	50	236	294	114	179	95	224	197
Average Queue (ft)	96	77	96	12	91	148	34	66	19	101	50
95th Queue (ft)	171	149	163	35	173	245	81	138	60	175	119
Link Distance (ft)		903	903		314	314	314	224		225	
Upstream Blk Time (%)						0		0		1	
Queuing Penalty (veh)						0		0		0	
Storage Bay Dist (ft)	750			200					100		125
Storage Blk Time (%)					0			5	0	6	0
Queuing Penalty (veh)					0			1	0	10	0

### Intersection: 41: SB On-Ramp & KMD

Movement	EB	EB	WB	WB	
Directions Served	Т	Т	Т	Т	
Maximum Queue (ft)	99	105	20	60	
Average Queue (ft)	15	14	1	3	
95th Queue (ft)	60	60	14	26	
Link Distance (ft)	114	114	101	101	
Upstream Blk Time (%)	0	0	0	0	
Queuing Penalty (veh)	1	1	0	1	
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

#### Intersection: 66: KMD & I-95 SB On-Ramp

Movement	EB	
Directions Served	Т	
Maximum Queue (ft)	25	
Average Queue (ft)	1	
95th Queue (ft)	14	
Link Distance (ft)	214	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

#### **Network Summary**

Network wide Queuing Penalty: 56

#### Intersection: 1: KMD & First Park Drive

Phase	2	4	6
Movement(s) Served	EBTL	SBL	WBT
Maximum Green (s)	56.5	30.5	56.5
Minimum Green (s)	10.0	5.0	10.0
Recall	Max	None	C-Max
Avg. Green (s)	88.4	7.5	88.4
g/C Ratio	0.76	0.06	0.76
Cycles Skipped (%)	14	14	14
Cycles @ Minimum (%)	0	24	0
Cycles Maxed Out (%)	86	0	86
Cycles with Peds (%)	0	0	0
Controller Summary			

Average Cycle Length (s): 100.0

Number of Complete Cycles : 35

## Intersection: 2: KMD & I-95 SB Ramps

Phase	2	4	6	
Movement(s) Served	EBT	SBL	WBT	
Maximum Green (s)	44.0	44.0	44.0	
Minimum Green (s)	10.0	5.0	10.0	
Recall	Max	None	C-Max	
Avg. Green (s)	67.5	21.1	67.5	
g/C Ratio	0.67	0.21	0.67	
Cycles Skipped (%)	0	0	0	
Cycles @ Minimum (%)	0	0	0	
Cycles Maxed Out (%)	100	0	100	
Cycles with Peds (%)	0	0	0	

Controller Summary

Average Cycle Length (s): 100.0 Number of Complete Cycles : 35

#### Intersection: 3: I-95 NB Off Ramp/I-95 NB Ramps & KMD

Phase	2	3	5	6
Movement(s) Served	EBT	NBTL	EBL	WBT
Maximum Green (s)	66.0	22.0	22.0	38.0
Minimum Green (s)	10.0	5.0	5.0	10.0
Recall	Max	None	None	C-Max
Avg. Green (s)	87.4	9.2	21.9	52.8
g/C Ratio	0.82	0.09	0.22	0.53
Cycles Skipped (%)	6	6	0	0
Cycles @ Minimum (%)	0	20	0	0
Cycles Maxed Out (%)	94	3	94	100
Cycles with Peds (%)	0	0	0	0
Controller Summary				

Average Cycle Length (s): 100.0

Number of Complete Cycles : 35

## Intersection: 4: Washington Street & KMD

Phase	1	2	4	5	6	8
Movement(s) Served	WBL	EBT	SBTL	EBL	WBT	NBTL
Maximum Green (s)	9.5	41.0	30.5	19.5	31.0	30.5
Minimum Green (s)	5.0	10.0	5.0	5.0	10.0	5.0
Recall	None	Max	None	None	C-Max	None
Avg. Green (s)	5.8	67.2	18.8	19.8	43.5	18.8
g/C Ratio	0.02	0.67	0.19	0.20	0.44	0.19
Cycles Skipped (%)	68	0	0	0	0	0
Cycles @ Minimum (%)	26	0	3	0	0	3
Cycles Maxed Out (%)	0	100	11	100	100	11
Cycles with Peds (%)	0	0	0	0	0	0
Controller Summary						

Average Cycle Length (s): 100.0

Number of Complete Cycles : 35

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#### 1: KMD & First Park Drive Performance by approach

Approach	EB	WB	SB	All	
Total Delay (hr)	1.0	1.3	0.9	3.2	
Total Del/Veh (s)	4.8	3.6	21.6	5.2	
Speed Delay (hr)	1.0	1.3	0.9	3.1	
Speed Del/Veh (s)	4.8	3.5	19.6	5.1	
Density (ft/veh)	209	147	942	357	

#### 2: KMD & I-95 SB Ramps Performance by approach

Approach	EB	WB	SB	All	
Total Delay (hr)	1.2	0.9	2.5	4.6	
Total Del/Veh (s)	5.5	3.3	16.7	7.1	
Speed Delay (hr)	1.2	0.9	1.8	4.0	
Speed Del/Veh (s)	5.5	3.3	12.5	6.2	
Density (ft/veh)	181	240	224	218	

## 3: I-95 NB Off Ramp/I-95 NB Ramps & KMD Performance by approach

Approach	EB	WB	NB	All	
Total Delay (hr)	2.7	8.1	3.6	14.4	
Total Del/Veh (s)	9.2	19.5	23.5	16.7	
Speed Delay (hr)	2.7	8.0	2.7	13.5	
Speed Del/Veh (s)	9.2	19.4	17.7	15.6	
Density (ft/veh)	213	177	221	192	

### 4: Washington Street & KMD Performance by approach

Approach	EB	WB	NB	SB	All	
Total Delay (hr)	5.9	9.2	2.2	2.9	20.3	
Total Del/Veh (s)	16.8	24.7	30.5	30.0	22.7	
Speed Delay (hr)	5.9	9.2	2.1	2.5	19.7	
Speed Del/Veh (s)	16.8	24.7	27.9	26.0	22.0	
Density (ft/veh)	226	118	176	138	169	

#### 41: SB On-Ramp & KMD Performance by approach

Approach	EB	WB	All	
Total Delay (hr)	0.4	1.5	1.8	
Total Del/Veh (s)	1.4	4.1	3.0	
Speed Delay (hr)	0.4	1.5	1.8	
Speed Del/Veh (s)	1.4	4.1	3.0	
Density (ft/veh)	428	122	236	

## 66: KMD & I-95 SB On-Ramp Performance by approach

Approach	EB	WB	All
Total Delay (hr)	0.3	0.8	1.1
Total Del/Veh (s)	1.0	2.3	1.7
Speed Delay (hr)	0.3	0.8	1.1
Speed Del/Veh (s)	1.0	2.2	1.7
Density (ft/veh)	404	220	294

#### **Total Network Performance**

Total Delay (hr)	50.5
Total Del/Veh (s)	43.4
Speed Delay (hr)	48.1
Speed Del/Veh (s)	41.3
Density (ft/veh)	195

#### Intersection: 1: KMD & First Park Drive

Movement	EB	EB	EB	B76	B76	WB	WB	SB	SB	SB
Directions Served	LT	Т	Т	Т	Т	Т	TR	L	L	R
Maximum Queue (ft)	128	114	56	131	19	117	133	78	119	83
Average Queue (ft)	67	56	11	11	1	65	84	32	49	22
95th Queue (ft)	123	101	39	67	15	124	127	67	88	62
Link Distance (ft)	46	46	46	1120	1120	114	114		421	
Upstream Blk Time (%)	17	7	1			0	1			
Queuing Penalty (veh)	0	0	0			3	8			
Storage Bay Dist (ft)								300		300
Storage Blk Time (%)	·									
Queuing Penalty (veh)										

### Intersection: 2: KMD & I-95 SB Ramps

Movement	EB	EB	WB	WB	SB	SB	
Directions Served	Т	Т	Т	Т	L	R	
Maximum Queue (ft)	121	117	148	146	192	209	
Average Queue (ft)	69	70	49	46	100	98	
95th Queue (ft)	114	115	113	111	162	182	
Link Distance (ft)	101	101	214	214	331		
Upstream Blk Time (%)	2	2	0	0			
Queuing Penalty (veh)	7	7	0	1			
Storage Bay Dist (ft)						300	
Storage Blk Time (%)							
Queuing Penalty (veh)							

## Intersection: 3: I-95 NB Off Ramp/I-95 NB Ramps & KMD

Movement	EB	EB	EB	WB	WB	WB	NB	NB	
Directions Served	L	Т	Т	Т	Т	R	LT	R	
Maximum Queue (ft)	230	98	95	320	372	340	166	204	
Average Queue (ft)	111	38	41	166	198	132	72	106	
95th Queue (ft)	196	79	79	289	316	292	127	176	
Link Distance (ft)	248	248	248	903	903		515		
Upstream Blk Time (%)	0								
Queuing Penalty (veh)	1								
Storage Bay Dist (ft)						275		200	
Storage Blk Time (%)					1	· 1	0	0	
Queuing Penalty (veh)					6	5	0	1	

#### Intersection: 4: Washington Street & KMD

Movement	EB	EB	EB	WB	WB	WB	WB	B5	B5	NB	NB	SB
Directions Served	Ĺ	Т	TR	L	Т	Т	R	Т	Т	LT	R	LT
Maximum Queue (ft)	180	261	290	249	380	385	151	42	130	232	164	210
Average Queue (ft)	86	142	165	66	228	278	43	2	12	111	55	81
95th Queue (ft)	153	236	257	150	351	405	103	24	66	199	119	159
Link Distance (ft)		903	903		314	314	314	2193	2193	224		225
Upstream Blk Time (%)					1	5				1		0
Queuing Penalty (veh)					0	0				0		0
Storage Bay Dist (ft)	750			200							100	
Storage Blk Time (%)					7					16	1	3
Queuing Penalty (veh)					6					16	1	7

## Intersection: 4: Washington Street & KMD

Movement	SB	
Directions Served	R	
Maximum Queue (ft)	182	
Average Queue (ft)	81	
95th Queue (ft)	157	
Link Distance (ft)		
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	125	
Storage Blk Time (%)	3	
Queuing Penalty (veh)	4	

## Intersection: 41: SB On-Ramp & KMD

Movement	EB	EB	WB	WB	
Directions Served	Т	Т	Т	Т	
Maximum Queue (ft)	92	62	68	159	
Average Queue (ft)	5	5	5	30	
95th Queue (ft)	37	30	38	100	
Link Distance (ft)	114	114	101	101	
Upstream Blk Time (%)	0	0	0	1	
Queuing Penalty (veh)	0	0	1	7	
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

#### Intersection: 66: KMD & I-95 SB On-Ramp

Movement	EB	WB	WB	
Directions Served	Т	Т	TR	
Maximum Queue (ft)	12	11	33	
Average Queue (ft)	0	0	1	
95th Queue (ft)	6	8	23	
Link Distance (ft)	214	248	248	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				
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## **Network Summary**

Network wide Queuing Penalty: 82

#### Intersection: 1: KMD & First Park Drive

Phase	2	4	6
Movement(s) Served	EBTL	SBL	WBT
Maximum Green (s)	31.5	15.5	31.5
Minimum Green (s)	10.0	5.0	10.0
Recall	Max	None	C-Max
Avg. Green (s)	42.6	7.5	42.6
g/C Ratio	0.67	0.12	0.67
Cycles Skipped (%)	5	7	5
Cycles @ Minimum (%)	0	36	0
Cycles Maxed Out (%)	95	2	95
Cycles with Peds (%)	0	0	0
Controller Summary			

Average Cycle Length (s): 60.0

Number of Complete Cycles : 59

#### Intersection: 2: KMD & I-95 SB Ramps

Phase	2	4	6
Movement(s) Served	EBT	SBL	WBT
Maximum Green (s)	27.0	21.0	27.0
Minimum Green (s)	10.0	5.0	10.0
Recall	Max	None	C-Max
Avg. Green (s)	32.4	15.6	32.4
g/C Ratio	0.54	0.26	0.54
Cycles Skipped (%)	0	0	0
Cycles @ Minimum (%)	0	2	0
Cycles Maxed Out (%)	100	23	100
Cycles with Peds (%)	0	0	0

Controller Summary

Average Cycle Length (s): 60.0 Number of Complete Cycles : 59

#### Intersection: 3: I-95 NB Off Ramp/I-95 NB Ramps & KMD

Phase	2	3	5	6
Movement(s) Served	EBT	NBTL	EBL	WBT
Maximum Green (s)	37.0	11.0	9.0	22.0
Minimum Green (s)	10.0	5.0	5.0	10.0
Recall	Max	None	None	C-Max
Avg. Green (s)	40.3	10.0	9.0	25.5
g/C Ratio	0.66	0.16	0.13	0.43
Cycles Skipped (%)	2	3	10	0
Cycles @ Minimum (%)	0	7	0	0
Cycles Maxed Out (%)	98	63	88	100
Cycles with Peds (%)	0	0	0	0
Controller Summary				

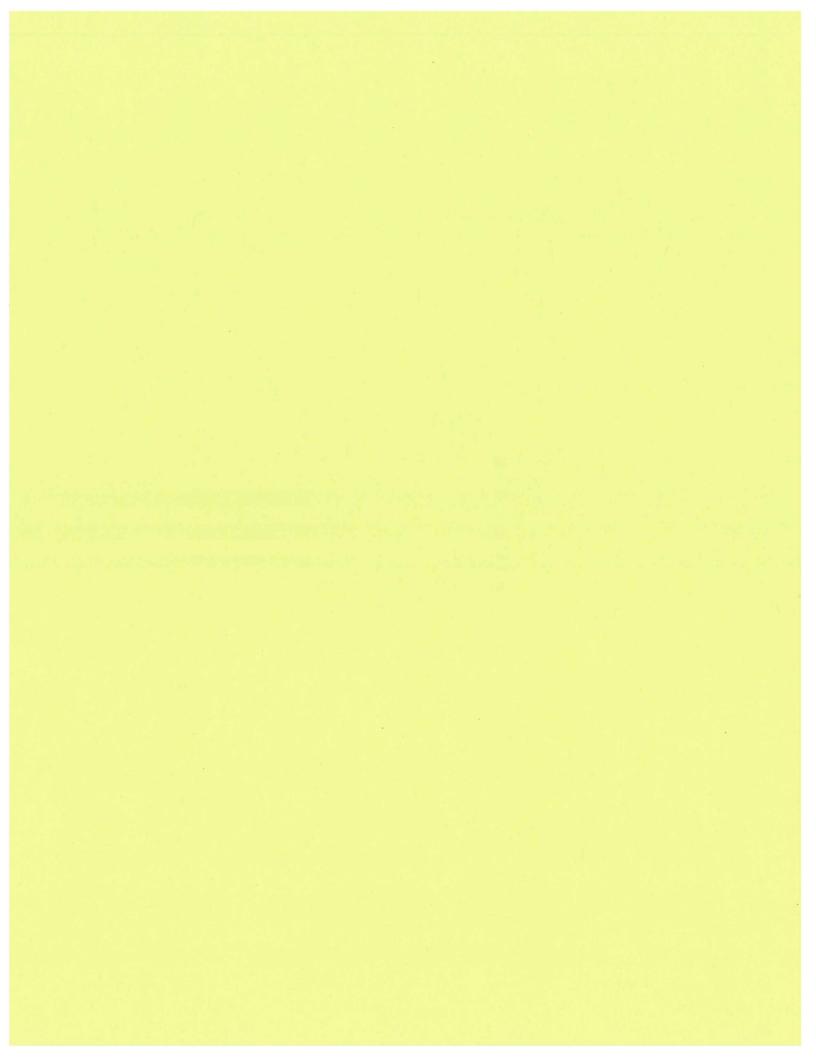
Average Cycle Length (s): 60.0

Number of Complete Cycles : 59

## Intersection: 4: Washington Street & KMD

Phase	1	2	4	5	6	8
Movement(s) Served	WBL	EBT	SBTL	EBL	WBT	NBTL
Maximum Green (s)	14.5	56.0	30.5	19.5	51.0	30.5
Minimum Green (s)	5.0	10.0	5.0	5.0	10.0	5.0
Recall	None	Min	None	None	C-Min	None
Avg. Green (s)	9.4	54.2	19.7	16.2	45.4	19.7
g/C Ratio	0.07	0.45	0.16	0.14	0.37	0.16
Cycles Skipped (%)	9	0	0	0	3	0
Cycles @ Minimum (%)	18	0	0	0	0	0
Cycles Maxed Out (%)	0	17	3	8	97	3
Cycles with Peds (%)	0	0	0	0	0	0
Controller Summary						

Average Cycle Length (s): 120.0 Number of Complete Cycles : 29



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General Information			Site Information		aan amad kan hini ka da kalan kan kan kan maan maan amaa ana ana ana ana ana an
Analyst	TOM GORRI	ILL	Highway/Direction of Tra		
Agency or Company	GORRILL PALMER		From/To SOUTH OF LYON LYONS		OF LYONS TO
Date Performed Analysis Time Period	9/7/2012 AM PEAK		Jurisdiction Analysis Year	2016	
Project Description TRAF	TON IJR-PRE	DEVELOPME	NT WO INT		
Oper.(LOS)		I D	es.(N)	🗌 Plan	ning Data
Flow Inputs			An article was an		
Volume, V AADT	1156	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T	0.94 5	
Peak-Hr Prop. of AADT, K Peak-Hr Direction Prop, D DDHV = AADT x K x D		veh/h	%RVs, P _R General Terrain: Grade % Length Up/Down %	0 Level mi	
Calculate Flow Adjus	tments	n na			
fp	1.00	ny ngong nang pangananana ana manana manana manana na saka na ang kababaha	E _R	1.2	
E _T	1.5		$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R)]$	- 1)] <i>0.976</i>	
Speed Inputs		nyngen en e	Calc Speed Adj and	I FFS	
Lane Width	12.0	ft			
Rt-Side Lat. Clearance	6.0	ft	f _{LW}	0.0	mph
Number of Lanes, N	2		f _{LC}	0.0	mph
Total Ramp Density, TRD	0.30	ramps/mi	TRD Adjustment	1.2	mph
FFS (measured)		mph	FFS	74.2	mph
Base free-flow Speed, BFFS	75.4	mph			
LOS and Performanc	<u>e Measures</u>	5	Design (N)		anna an bar a bar bar bar bar bar bar bar bar b
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x x f _p )	N x f _{HV} 630	pc/h/ln	<u>Design (N)</u> Design LOS v _p = (V or DDHV) / (PHF	x N x f _{HV}	pc/h/ln
S	75.0	mph	x f _p ) S		mph
$D = v_p / S$	8.4	pc/mi/ln	$D = v_p / S$		pc/mi/ln
LOS	А		Required Number of Lar	nes, N	permini
Glossary		<u>, , , , , , , , , , , , , , , , , , , </u>	Factor Location		атратик жата алалык жана такар түү доор бордоор бай бай бай.
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	BFFS - Ba		E _R - Exhibits 11-10, 11-1 E _T - Exhibits 11-10, 11-1 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibi 11-3	1, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-1

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	BASIC FR	EEWAY SE	GMENTS WORKSHE	ET	
General Information			Site Information		
Analyst Agency or Company Date Performed Analysis Time Period	TOM GORRI GORRILL PA 9/7/2012 AM PEAK	ALMER	Highway/Direction of Tra- From/To Jurisdiction Analysis Year		OF LYONS
	TON IJR-PRE	DEVELOPME			an falainn an an ann an an an an an an an an an
Oper.(LOS)	*****	I · D	Des.(N)	Plan	ining Data
Flow Inputs	2011-10-10-10-10-10-10-10-10-10-10-10-10-				ารระบบการการการการการการการการการการการการการก
Volume, V AADT	1174	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T	0.94 5	
Peak-Hr Prop. of AADT, K Peak-Hr Direction Prop, D DDHV = AADT x K x D		veh/h	%RVs, P _R General Terrain: Grade % Length Up/Down %	0 Level mi	
Calculate Flow Adjus	tments	*************			
f _p	1.00		E _R	1.2	
E _T	1.5	Augustum and a second state of the second state and second state	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R)]$	- 1)] <i>0.</i> 976	and the second secon
Speed Inputs		openeter and a second	Calc Speed Adj and	I FFS	
Lane Width	12.0	ft			
Rt-Side Lat. Clearance	6.0	ft	f _{LW}	0.0	mph
Number of Lanes, N	2		f _{LC}	0.0	mph
Total Ramp Density, TRD	0.30	ramps/mi	TRD Adjustment	1.2	mph
FFS (measured)		mph	FFS	74.2	mph
Base free-flow Speed, BFFS	75.4	mph			
LOS and Performanc	e Measure	5	Design (N)		
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x	N x f _{HV} 640	pc/h/ln	<u>Design (N)</u> Design LOS v _p = (V or DDHV) / (PHF	x N x f _{HV}	
x f _p )	75.0	ure a la	x f _p )		pc/h/ln
S D=v /S	75.0 8.5	mph pc/mi/ln	S		mph
D = v _p / S LOS	8.5 A	permini	$D = v_p / S$		pc/mi/ln
103	A		Required Number of Lar	nes, N	
Glossary			Factor Location		
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	S - Speed D - Density FFS - Free-flow speed BFFS - Base free-flow		E _R - Exhibits 11-10, 11-12 E _T - Exhibits 11-10, 11-11, 11-13 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibits 11-2, 11-3		f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-11
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Analyst Agency or Company Date Performed Analysis Time Period	TOM GORR GORRILL P/ 9/7/2012 AM PEAK	ALMER	Highway/Direction of Tray From/To Jurisdiction Analysis Year		OF KMD
	TON IJR-PRE	DEVELOPME			
C Oper.(LOS)		ΓD	es.(N)	☐ Plan	ning Data
Flow Inputs			n an		
Volume, V AADT Peak-Hr Prop. of AADT, K	1279	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R	0.94 5 0	
Peak-Hr Direction Prop, D DDHV = AADT x K x D		veh/h	General Terrain: Grade % Length Up/Down %	Level mi	
Calculate Flow Adjus	tments	<u></u>			
f _p E _T	1.00 1.5		$E_{R}$ $f_{HV} = 1/[1+P_{T}(E_{T} - 1) + P_{R}(E_{R})$	1.2 - 1)] 0.976	
Speed Inputs		ana and a second se	Calc Speed Adj and	I FFS	<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>
Lane Width	12.0	ft		<u></u>	ann an Annaich an Annaich ann an Annaichean ann an Annaichean ann an Annaichean ann an Annaichean ann an Annaic
Rt-Side Lat. Clearance	6.0	ft	f _{LW}	0.0	mph
Number of Lanes, N	2		f _{LC}	0.0	mph
Total Ramp Density, TRD	0.30	ramps/mi	TRD Adjustment	1.2	mph
FFS (measured)		mph	FFS	74.2	mph
Base free-flow Speed, BFFS	75.4	mph			•
LOS and Performanc	e Measure	S	Design (N)		
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x x f _p ) S	N x f _{HV} 697 75.0	pc/h/ln mph	<u>Design (N)</u> Design LOS v _p = (V or DDHV) / (PHF x f _p ) S	x N x f _{HV}	pc/h/ln mph
$D = v_p / S$	9.3	pc/mi/ln	1		-
LOS	А		D = v _p / S Required Number of Lar	nes, N	pc/mi/ln
Glossary			Factor Location		
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	S - Speed D - Density FFS - Free-flow speed BFFS - Base free-flow		E _R - Exhibits 11-10, 11-12 E _T - Exhibits 11-10, 11-11, 11-13 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibits 11-2, 11-3		f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-11
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General Information	баған алған жаға қазақ қазақ қазақ қазақ қазақ жа		Site Information	enesteri dan di fan da fan da fan da fan de fan	al da an	
Analyst Agency or Company Date Performed Analysis Time Period	TOM GORR GORRILL P/ 9/7/2012 AM PEAK		Highway/Direction of Tra From/To Jurisdiction Analysis Year	ivel I-95 SB SOUTH OF LYONS 2016		
Project Description TRAF	TON IJR-PRE	DEVELOPME	NT WO INT			
Coper.(LOS)		Γc	Des.(N)	T Plar	nning Data	
Flow Inputs						
Volume, V AADT Peak-Hr Prop. of AADT, K	1222	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R	0.94 5 0		
Peak-Hr Direction Prop, D DDHV = AADT x K x D		veh/h	General Terrain: Grade % Length Up/Down %	Level mi		
Calculate Flow Adjus	tments	king ang ang ang ang ang ang ang ang ang a		*****	******	
f _p Ε _T	1.00 1.5		$E_{R}$ $f_{HV} = 1/[1+P_{T}(E_{T}-1) + P_{R}(E_{R})]$	1.2	na na constituina e a constituina polo de la constituina de la constituina de la constituina de la constituina	
Speed Inputs	74236044011056014504600604546411056545460415	Calc Speed Adj and FFS				
Lane Width	12.0	ft				
Rt-Side Lat. Clearance	12.0 6.0	ft				
Number of Lanes, N	2	11	f _{LW}	0.0	mph	
Total Ramp Density, TRD	2 0.30	romno/mi	f _{LC}	0.0	mph	
	0.30	ramps/mi	TRD Adjustment	1.2	mph	
FFS (measured) Base free-flow Speed, BFFS	75.4	mph mph	FFS	74.2	mph	
LOS and Performanc	e Measures	\$	Design (N)			
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x	N x f _{HV} 666	pc/h/ln	<u>Design (N)</u> Design LOS v _p = (V or DDHV) / (PHF	× N × f _{HV}		
x f _p )	75.0		x f _p )		pc/h/ln	
S D = y / S	75.0	mph	s		mph	
$D = v_p / S$	8.9	pc/mi/ln	$D = v_p / S$		pc/mi/ln	
_OS	A		Required Number of Lar	nes, N		
Glossary	****		Factor Location		2000-2000-00-2000-00-00-00-00-00-00-00-0	
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	BFFS - Ba		E _R - Exhibits 11-10, 11- E _T - Exhibits 11-10, 11- f _p - Page 11-18 LOS, S, FFS, v _p - Exhibi 11-3	1, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-1	

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	BASIC FR	EEWAY SE	GMENTS WORKSHE	ET	
General Information			Site Information		
Analyst Agency or Company Date Performed Analysis Time Period	TOM GORRILL GORRILL PALMER 9/7/2012 AM PEAK		Highway/Direction of Travel I-95 SB		OF LYONS
Project Description TRAF	TON IJR-PRE	DEVELOPME	NT WO INT	en en en en en en en de de de ser de de de se de	ana a ta a a a a a a a a a a a a a a a a
Coper.(LOS)		r c	es.(N)	🗌 🗌 Plar	nning Data
Flow Inputs					
Volume, V AADT	1114	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T	0.94 5	
Peak-Hr Prop. of AADT, K Peak-Hr Direction Prop, D DDHV = AADT x K x D		veh/h	%RVs, P _R General Terrain: Grade % Length Up/Down %	0 Level mi	
Calculate Flow Adjus	tments		annan neran muun marind a arma nediridari dicektidi darimtidan yinda kada katarda da medi daka Marida	***************************************	nig til forstallande for ander Statistical for the foreign for the second second second second second second se
f _p E _T	1.00 1.5		$E_{R}$ $f_{HV} = 1/[1+P_{T}(E_{T}-1) + P_{R}(E_{R})]$	1.2 - 1)10 976	
Speed Inputs		Calc Speed Adj and FFS			
Lane Width	12.0	ft			
Rt-Side Lat. Clearance	6.0	ft	£	0.0	man h
Number of Lanes, N	2	it.	f _{LW}	0.0	mph
Total Ramp Density, TRD	2 0.30	ramps/mi	f _{LC}	0.0	mph
FFS (measured)	0.50	mph	TRD Adjustment	1.2	mph
Base free-flow Speed, BFFS	75.4	mph	FFS	74.2	mph
LOS and Performanc	e Measures	•	Design (N)		
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x	Nxf		<u>Design (N)</u> Design LOS		
x f _p )		pc/h/ln	v _p = (V or DDHV) / (PHF x f _p )	x N x f _{HV}	pc/h/ln
S D=v /S	75.0	mph na/mi//n	S		mph
$D = v_p / S$	8.1	pc/mi/ln	$D = v_p / S$		pc/mi/In
LOS	A		Required Number of Lan	es, N	
Glossary			Factor Location	********	an a
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	S - Speed D - Density FFS - Free-flow speed BFFS - Base free-flow		E _R - Exhibits 11-10, 11-1 E _T - Exhibits 11-10, 11-1 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibit 11-3	1, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-1
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	BASIC FRI	EEWAY SEC	GMENTS WORKSHE			
General Information		Mina and in an	Site Information		gyngrigdanan mae ar elechydd ffriodhyddan mae arwenyddan yn Gabledd yw	
Analyst Agency or Company Date Performed Analysis Time Period	TOM GORRI GORRILL PA 9/7/2012 AM PEAK	LMER	Highway/Direction of Trav From/To Jurisdiction Analysis Year	rel I-95 SB NORTH OF KMD 2016		
	TON IJR-PRE	DEVELOPME			an a stady da wiley da da da da ana ana ana ang ang ang ang ang ang an	
✓ Oper.(LOS)			es.(N)	Plan	ining Data	
Flow Inputs				analesistikon Manjarananana		
Volume, V AADT Peak-Hr Prop. of AADT, K	1156	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R	0.94 5 0		
Peak-Hr Direction Prop, D DDHV = AADT x K x D		veh/h	General Terrain: Grade % Length Up/Down %	Level mi		
Calculate Flow Adjus	tments			an one of the second		
f _ρ Ε _Τ	1.00 1.5		$E_{R}$ $f_{HV} = 1/[1+P_{T}(E_{T}-1) + P_{R}(E_{R}-1)]$	1.2 1)] <i>0.976</i>		
Speed Inputs			Calc Speed Adj and	FFS	danah kalan kal	
Lane Width Rt-Side Lat. Clearance Number of Lanes, N Total Ramp Density, TRD FFS (measured) Base free-flow Speed, BFFS <b>LOS and Performanc</b>	12.0 6.0 2 0.30 75.4 <b>e Measures</b>	ft ft ramps/mi mph mph	f _{LW} f _{LC} TRD Adjustment FFS <b>Design (N)</b>	0.0 0.0 1.2 74.2	mph mph mph mph	
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x x f _p ) S D = v _p / S LOS	N x f _{HV} 630 75.0 8.4 A	pc/h/ln mph pc/mi/ln	Design LOS $v_p = (V \text{ or DDHV}) / (PHF x f_p)$ S $D = v_p / S$ Required Number of Lan		pc/h/ln mph pc/mi/ln	
Glossary			Factor Location			
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	S - Speed D - Density FFS - Free-flow speed BFFS - Base free-flow hour volume		E _R - Exhibits 11-10, 11-1 E _T - Exhibits 11-10, 11-1 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibit 11-3	1, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-1 ⁻	

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	BASIC FR	EEWAY SEC	GMENTS WORKSHE	ET		
General Information		REDGROUP()04447004000000000000000000000000000000	Site Information		namen and and the deficient of the form of the deficiency of the state	
Analyst Agency or Company Date Performed	TOM GORRILL GORRILL PALMER 9/7/2012		Highway/Direction of Travel I-95 NE		OF LYONS	
Analysis Time Period	PM PEAK		Analysis Year	2016		
	TON IJR-PRE	DEVELOPME		Service, The P	<u>,</u>	
Oper.(LOS)		1 · · D	es.(N)	l Plan	ning Data	
Flow Inputs	ayun ayun ayun ayun ayun ayun ayun ayun				the information and the second sec	
Volume, V AADT	1648	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T	0.94 5		
Peak-Hr Prop. of AADT, K Peak-Hr Direction Prop, D DDHV = AADT x K x D		veh/h	%RVs, P _R General Terrain: Grade % Length Up/Down %	0 Level mi		
Calculate Flow Adjus	tments					
f _p	1.00 1.5		E _R f _{HV} = 1/[1+P _T (E _T - 1) + P _R (E _R	1.2 - 1)10 976		
E _T		Calc Speed Adj and FFS				
Speed Inputs	*****			ΙΓΓΟ	<u></u>	
Lane Width	12.0	ft				
Rt-Side Lat. Clearance	6.0	ft	f _{LW}	0.0	mph	
Number of Lanes, N	2		f _{LC}	0.0	mph	
Total Ramp Density, TRD	0.30	ramps/mi	TRD Adjustment	1.2	mph	
FFS (measured) Base free-flow Speed, BFFS	75.4	mph mph	FFS	74.2	mph	
LOS and Performanc	e Measures		Design (N)			
Operational (LOS)			<u>Design (N)</u> Design LOS	24-24-24-24-24-24-24-24-24-24-24-24-24-2	anna an	
v _p = (V or DDHV) / (PHF x x f _p )		pc/h/ln	v _p = (V or DDHV) / (PHF x f _p )	x N x f _{HV}	pc/h/ln	
S	75.0	mph	ຣ໌		mph	
$D = v_p / S$	12.0	pc/mi/ln	$D = v_p / S$		pc/mi/ln	
LOS	В		Required Number of Lar	ies, N		
Glossary			Factor Location		<u></u>	
N - Number of lanes V - Hourly volume v _n - Flow rate	S - Speed D - Density FFS - Free-flow speed		E _R - Exhibits 11-10, 11-1 E _T - Exhibits 11-10, 11-1		f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9	
LOS - Level of service speed DDHV - Directional design	BFFS - B	ase free-flow	f _p - Page 11-18 LOS, S, FFS, v _p - Exhibi 11-3	ts 11-2,	TRD - Page 11-1	
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General Information	n fan de fan	a badaa oo ahaa ahaa ahaa ahaa ahaa ahaa ah	Site Information	******	al na gaza a caracterization (MMO) (Cabinet (Cabinet Cabinet Cabinet Cabinet Cabinet Cabinet Cabinet Cabinet Ca	
Analyst Agency or Company Date Performed Analysis Time Period	TOM GORRI GORRILL PA 9/7/2012 PM PEAK	LMER	Highway/Direction of Trav From/To Jurisdiction Analysis Year	el I-95 NB NORTH OF LYONS 2016		
	TON IJR-PRE		nie za	12-12-12-12-12-12-12-12-12-12-12-12-12-1	anda manana manana ang katang kata	
Coper.(LOS)			Des.(N)	Plar	nning Data	
Flow Inputs	ni oo daharaa ayaa ka ka sadaa da ka yada sa kisi da ka sada sa kisi da ka sada sa kisi da ka sa ka sa ka sa k		ziennem na managene and an	MCMC (18/008/00/MCMO2CONTRACTOR		
Volume, V AADT Peak-Hr Prop. of AADT, K	1520	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R	0.94 5 0		
Peak-Hr Direction Prop, D DDHV = AADT x K x D		veh/h	General Terrain: Grade % Length Up/Down %	Level mi		
Calculate Flow Adjus	tments			****		
f _ρ Ε _Τ	1.00 1.5		E _R f _{HV} = 1/[1+P _T (E _T - 1) + P _R (E _R -	1.2 1)] <i>0.976</i>		
Speed Inputs	****	**********	Calc Speed Adj and		an a	
Lane Width	12.0	ft	na an a		nen under an zure zu die Alexander Heinen andere under Alexander andere einer andere einer die einer die einer	
Rt-Side Lat. Clearance	6.0	ft	f _{LW}	0.0	mph	
Number of Lanes, N	2		f _{LC}	0.0	mph	
Total Ramp Density, TRD	0.30	ramps/mi	TRD Adjustment	1.2	mph	
FFS (measured)		mph	FFS	74.2	mph	
Base free-flow Speed, BFFS	75.4	mph		74.2	трп	
LOS and Performanc	e Measures		Design (N)			
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x x f _p ) S D = v _p / S LOS	N x f _{HV} 829 75.0 11.1 B	pc/h/ln mph pc/mi/ln	Design (N) Design LOS $v_p = (V \text{ or DDHV}) / (PHF)$ x f _p ) S D = v _p / S Required Number of Lane		pc/h/ln mph pc/mi/ln	
Classen	NCUITATION (1,000,000,000,000,000,000,000,000,000,0	nyaéta dahua kapatén dalak kamatan di kapatén di kapatén kapatén kapatén kapatén kapatén kapatén kapatén kapaté	Factor Location	55, IN	course and which particle and the second course and the second second second second second second second second	
Glossary	0 0				ng mga ng mga mga mga mga mga mga mga mga mga mg	
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	S - Speed D - Density FFS - Free-flow speed BFFS - Base free-flow hour volume		E _R - Exhibits 11-10, 11-12 E _T - Exhibits 11-10, 11-11, 11-13 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibits 11-2, 11-3		f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-11	

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	BASIC FR	EEWAY SE	GMENTS WORKSHE	EET			
General Information	<u>terrente tetre en socio-ondo trovits y subvario biologica</u>		Site Information	an a			
Analyst Agency or Company Date Performed Analysis Time Period	TOM GORRILL GORRILL PALMER 9/7/2012 PM PEAK		Highway/Direction of Tra From/To Jurisdiction Analysis Year		NO OF KMD		
Project Description TRAF	TON IJR-PRE	DEVELOPME	NT WO INT-NB				
M Oper.(LOS)			es.(N)	T Plar	Planning Data		
Flow Inputs				****			
Volume, V AADT Peak-Hr Prop. of AADT, K Peak-Hr Direction Prop, D DDHV = AADT x K x D	1646	veh/h veh/day veh/h	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R General Terrain: Grade % Length	5 0 Level			
			Up/Down %				
Calculate Flow Adjus	tments			*****			
f _p E _T	1.00 1.5	Gint Down - Charles Feet allowed a Grand Charles	$E_{R}$ $f_{HV} = 1/[1+P_{T}(E_{T}-1) + P_{R}(E_{f})]$	1.2 _R - 1)] 0.976			
Speed Inputs				Calc Speed Adj and FFS			
Lane Width Rt-Side Lat. Clearance Number of Lanes, N Total Ramp Density, TRD FFS (measured) Base free-flow Speed,	12.0 6.0 2 0.30	ft ft ramps/mi mph	f _{∟w} f _{LC} TRD Adjustment FFS	0.0 0.0 1.2 74.2	mph mph mph mph		
BFFS LOS and Performanc	75.4	mph	Design (N)	nedotteonote anton basismi technik senseba ese			
<u>Operational (LOS)</u> $v_p = (V \text{ or DDHV}) / (PHF x   x f_p)$ S D = $v_p / S$ LOS Glossary		pc/h/ln mph pc/mi/ln	Design (N) Design LOS $v_p = (V \text{ or DDHV}) / (PHF x f_p) S D = v_p / S Required Number of La Factor Location$		pc/h/ln mph pc/mi/ln		
			Factor Location				
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	S - Speed D - Density FFS - Free-flow speed BFFS - Base free-flow		E _R - Exhibits 11-10, 11- E _T - Exhibits 11-10, 11- f _p - Page 11-18 LOS, S, FFS, v _p - Exhib 11-3	11, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-11		
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General Information		Stational construction of the second s	Site Information	nin el principan de la companya de l	noran analan kanan ka	
Analyst Agency or Company Date Performed Analysis Time Period	TOM GORRILL GORRILL PALMER 9/7/2012 PM PEAK		Highway/Direction of Tray From/To Jurisdiction Analysis Year		SOUTH OF LYONS	
na za na	TON IJR-PRE	DEVELOPME	NT WO INT			
Coper.(LOS)			Des.(N)		nning Data	
Flow Inputs						
Volume, V AADT Peak-Hr Prop. of AADT, K Peak-Hr Direction Prop, D DDHV = AADT x K x D	- <u>1222</u> 1348	veh/h veh/day veh/h	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R General Terrain: Grade % Length	0.94 5 0 Level mi		
			Up/Down %			
Calculate Flow Adjus	tments					
f _p E _T	1.00 1.5		E _R f _{HV} = 1/[1+P _T (E _T - 1) + P _R (E _R -	1.2 - 1)] 0.976		
Speed Inputs	***************	nininini kalena ana ana any sy pasagana ana any s	Calc Speed Adj and FFS			
Lane Width	12.0	ft			anna laonna anna a sao ann an an ann an ann an ann an ann an	
Rt-Side Lat. Clearance	6.0	ft	f _{LW}	0.0	mph	
Number of Lanes, N	2		f _{LC}	0.0	mph	
Total Ramp Density, TRD	0.30	ramps/mi	TRD Adjustment	1.2	mph	
FFS (measured)		mph	FFS	74.2	mph	
Base free-flow Speed, BFFS	75.4	mph		17.2	mpn	
LOS and Performanc	e Measures		Design (N)			
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x l x f _p ) S D = v _p / S LOS	N x f _{HV} 666 75.0 8.9 A	pc/h/ln mph pc/mi/ln	<u>Design (N)</u> Design LOS v _p = (V or DDHV) / (PHF x f _p ) S D = v _p / S Required Number of Land		pc/h/ln mph pc/mi/ln	
Glossary			Factor Location			
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	S - Speed D - Density FFS - Free-flow speed BFFS - Base free-flow hour volume		E _R - Exhibits 11-10, 11-1 E _T - Exhibits 11-10, 11-1 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibit 11-3	1, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-1	

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	<b>BASIC FRI</b>	EEWAY SE	GMENTS WORKSHEE		an a	
General Information	n se		Site Information	<u></u>		
Analyst Agency or Company Date Performed Analysis Time Period	TOM GORRILL GORRILL PALMER 9/7/2012 PM PEAK		Highway/Direction of Travel <i>I-95 SB</i> From/To NORTH OF LYON Jurisdiction Analysis Year 2016		OF LYONS	
	TON IJR-PRE	2012/01/22/2012/02/2012/02/22/2012/22/22/22/22/22/22/22/22/22/22/22/22/2		****		
C Oper.(LOS)		Г ^т С	Des.(N)	Plar	ning Data	
Flow Inputs				na an ann an an an An Airlinn an Airlinn An Airlinn		
Volume, V AADT	1348	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T	0.94 5		
Peak-Hr Prop. of AADT, K Peak-Hr Direction Prop, D DDHV = AADT x K x D		veh/h	%RVs, P _R General Terrain: Grade % Length Up/Down %	0 Level mi		
Calculate Flow Adjus	tments	<u></u>			9794787930004979798899999999999999999999999999999	
f _ρ Ε _Τ	1.00 1.5		$E_{R}$ $f_{HV} = 1/[1+P_{T}(E_{T}-1) + P_{R}(E_{R}-1)]$	1.2 1)] <i>0.976</i>		
Speed Inputs			Calc Speed Adj and FFS			
Lane Width	12.0	ft			***************************************	
Rt-Side Lat. Clearance	6.0	ft	f _{LW}	0.0	mph	
Number of Lanes, N	2			0.0	mph	
Total Ramp Density, TRD	0.30	ramps/mi	f _{LC} TRD Adjustment	1.2	mph	
FFS (measured)	0.00	mph				
Base free-flow Speed, BFFS	75.4	mph	FFS	74.2	mph	
LOS and Performanc	e Measures	5	Design (N)			
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x l	Nvf		<u>Design (N)</u> Design LOS			
x f _p )		pc/h/ln	v _p = (V or DDHV) / (PHF x x f _p )	k N x f _{HV}	pc/h/ln	
S / C	75.0	mph	ร้		mph	
$D = v_p / S$	9.8	pc/mi/ln	$D = v_p / S$		pc/mi/ln	
LOS	A		Required Number of Lane	es, N		
Glossary	****	*****	Factor Location	<u> </u>		
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	S - Speed D - Density FFS - Free-flow speed BFFS - Base free-flow hour volume		E _R - Exhibits 11-10, 11-12 E _T - Exhibits 11-10, 11-17 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibits 11-3	1, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-1 ⁻	

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	BASIC FR	EEWAY SE	GMENTS WORKSHEI			
General Information	********	ter and the sum	Site Information	a da furfinada a sinta comunica comunada	an a	
Analyst Agency or Company Date Performed Analysis Time Period	TOM GORR GORRILL P/ 9/7/2012 PM PEAK		Highway/Direction of Trav From/To Jurisdiction Analysis Year	Direction of Travel <i>I-95 SB</i> NORTH OF KMD n		
Project Description TRAF	TON IJR-PRE	EDEVELOPME	NT WO INT			
Coper.(LOS)			Des.(N)	T Plar	nning Data	
Flow Inputs						
Volume, V AADT Book Hr Bron, of AADT, K	1606	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R	0.94 5 0		
Peak-Hr Prop. of AADT, K Peak-Hr Direction Prop, D DDHV = AADT x K x D		veh/h	General Terrain: Grade % Length Up/Down %	U Level mi		
Calculate Flow Adjus	tments		антала на наколеми на пака наколеми на решина у 200 мето 600 м. 900 годи со орбитал Англии Сология. На		nan dan kanan k	
f _p E _T	1.00 1.5		E _R f _{HV} = 1/[1+P _T (E _T - 1) + P _R (E _R -	1.2 1)] <i>0.976</i>		
Speed Inputs	and a state of the	n 12 year year an	Calc Speed Adj and FFS			
Lane Width	12.0	ft		n stande kannan nie delan er en	ĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸ	
Rt-Side Lat. Clearance	6.0	ft	f _{LW}	0.0	mph	
Number of Lanes, N	2		f _{LC}	0.0	mph	
Total Ramp Density, TRD	0.30	ramps/mi	TRD Adjustment	1.2	mph	
FFS (measured)		mph	FFS	74.2	mph	
Base free-flow Speed, BFFS	75.4	mph	110	14.2	трп	
LOS and Performanc	e Measures	3	Design (N)			
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x l	N x f _{HV 976}	n o /lo /l.n	Design (N) Design LOS	< N × f		
s f _p )	75.0	pc/h/ln mph	v _p = (V or DDHV) / (PHF : x f _p )	K IN X I _{HV}	pc/h/ln	
$D = v_p / S$	11.7	pc/mi/ln	S		mph	
LOS	В	·	D = v _p / S Required Number of Lane	es, N	pc/mi/ln	
Glossary			Factor Location			
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	BFFS - Ba		E _R - Exhibits 11-10, 11-12 E _T - Exhibits 11-10, 11-12 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibits 11-3	I, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-1	
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n segan yang mengang mengang kanalak ka		Site Information		and a superior of the superior of t		
GORRILL PALMER 9/7/2012		Highway/Direction of Trave From/To Jurisdiction Analysis Year		OF LYONS		
-TON IJR-POS			Dia	wing Data		
an a		Jes.(N)	Plar	ining Data		
1524	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P ₂	0.94 5 0	en manna tha chuidh dhù ann ann ann ann ann ann ann ann ann an		
	veh/h	General Terrain: Grade % Length Up/Down %	Level mi			
tments	***************************************					
1.00 1.5		E _R f _{HV} = 1/[1+P _T (E _T - 1) + P _R (E _R -	1.2 1)] 0.976			
E _T 1.5 Speed Inputs			Calc Speed Adj and FFS			
12.0 6.0 2 0.30 75.4	ft ft ramps/mi mph mph	f _{LW} f _{LC} TRD Adjustment FFS	0.0 0.0 1.2 74.2	mph mph mph mph		
e Measures	\$	Design (N)				
N x f _{HV} 831 75.0 11.1 B	pc/h/ln mph pc/mi/ln	x f _p ) S D = v _p / S		pc/h/ln mph pc/mi/ln		
		Factor Location				
S - Speed D - Density FFS - Free-flow speed BFFS - Base free-flow		E _T - Exhibits 11-10, 11-11 f _p - Page 11-18	I, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-11		
	$\begin{array}{c} \text{GORRILL PA} \\ \text{9/7/2012} \\ \text{AM PEAK} \\ \hline \\ $	GORRILL PALMER 9/7/2012 AM PEAK TON IJR-POSTDEVELOPM TON IJR-POSTDEVELOPM 1524 veh/h veh/day veh/h tments 1.00 1.5 12.0 ft 6.0 ft 2 0.30 ramps/mi mph 75.4 mph e Measures N $\times f_{HV} 831$ pc/h/ln 75.0 mph 11.1 pc/mi/ln B S - Speed D - Density FFS - Free-flow speed BFFS - Base free-flow	TOM GORRILL GORRILL PALMER 9/7/2012 AM PEAKHighway/Direction of Trav. From/To Jurisdiction Analysis YearTON IJR-POSTDEVELOPMENT WO INTTON IJR-POSTDEVELOPMENT WO INTTobs.(N)1524veh/h veh/dayPeak-Hour Factor, PHF veh/day weh/hVeh/hPeak-Hour Factor, PHF veh/day weth/h1524veh/h veh/hPeak-Hour Factor, PHF veh/hVeh/hPeak-Hour Factor, PHF weth/h1524veh/h veh/h1524veh/h veh/hPeak-Hour Factor, PHF weth/hVeh/hPeak-Hour Factor, PHF weth/h100ER R (full the probability)1.00ER (full the probability)1.00ER (full the probability)1.00FR (full the probability)1.00ft (full the probability)1.00FR (full the probability)1.00ft (full the probability)1.00ft (full the probability)1.00ft (full the probability)2.03ramps/mi (full the probability)2.03ramps/mi (full the probability)75.0mph (full the probability) </td <td>TOM GORR/ILL GORR/ILL PALMER 9/7/2012Highway/Direction of Travel I-95 NB SOUTH Jurisdiction$MPEAK$Analysis Year2036TON IJR-POSTDEVELOPMENT WO INTImage: ConstructionImage: Construction1524veh/h veh/dayPeak-Hour Factor, PHF0.940veh/day%Trucks and Buses, PT %RVs, PR 0 General Terrain: Up/Down %01524veh/hPeak-Hour Factor, PHF0.941524veh/hPeak-Hour Factor, PHF0.94veh/day%Trucks and Buses, PT %RVs, PR 0 General Terrain: Up/Down %0100ER H1.21.5ft HV1.21.00FR1.21.5ft LW0.01.00ft LW0.01.00FR1.21.5ft LW0.01.5ft LW0.01.6ft LW0.020.30ramps/mi mphmphFFS74.275.4mphe MeasuresDesign (N)Design LOS vp = (V or DDHV) / (PHF x N x f_HV x fp)8Cord DOR P = vp / S9Required Number of Lanes, NFFS - Free-flow speed BFFS - Base free-flowER L Exhibits 11-10, 11-11, 11-13 fp - Page 11-18 LOS, S, FFS, vp - Exhibits 11-2, 11-3</td>	TOM GORR/ILL GORR/ILL PALMER 9/7/2012Highway/Direction of Travel I-95 NB SOUTH Jurisdiction $MPEAK$ Analysis Year2036TON IJR-POSTDEVELOPMENT WO INTImage: ConstructionImage: Construction1524veh/h veh/dayPeak-Hour Factor, PHF0.940veh/day%Trucks and Buses, PT %RVs, PR 0 General Terrain: Up/Down %01524veh/hPeak-Hour Factor, PHF0.941524veh/hPeak-Hour Factor, PHF0.94veh/day%Trucks and Buses, PT %RVs, PR 0 General Terrain: Up/Down %0100ER H1.21.5ft HV1.21.00FR1.21.5ft LW0.01.00ft LW0.01.00FR1.21.5ft LW0.01.5ft LW0.01.6ft LW0.020.30ramps/mi mphmphFFS74.275.4mphe MeasuresDesign (N)Design LOS vp = (V or DDHV) / (PHF x N x f_HV x fp)8Cord DOR P = vp / S9Required Number of Lanes, NFFS - Free-flow speed BFFS - Base free-flowER L Exhibits 11-10, 11-11, 11-13 fp - Page 11-18 LOS, S, FFS, vp - Exhibits 11-2, 11-3		

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	angunan mananan ang ing ing ing ing ing ing ing ing ing i	Site Information				
		Highway/Direction of Trave From/To Jurisdiction Analysis Year		OF LYONS		
TON IJR-POS			1775 <b>S</b> I			
	) - C	es.(N)	I Plan	ining Data		
	-			Missisian an a		
1342	veh/h veh/day	%Trucks and Buses, $P_T$	5			
	veh/h	General Terrain: Grade % Length Up/Down %	Level mi			
tments						
1.00 1.5		$E_{R}$ $f_{HV} = 1/[1+P_{T}(E_{T}-1) + P_{R}(E_{R}-1)]$	1.2 1)] 0.976			
E _T 1.5 Speed Inputs			Calc Speed Adj and FFS			
12.0	ft			na na hana na mana na m		
	ft	f	00	mph		
2				mph		
0.30	ramps/mi			mph		
		-		mph		
75.4	mph	110	74.2	mpn		
e Measures	<u>)</u>	Design (N)				
Nxfu		<u>Design (N)</u> Design LOS				
		v _p = (V or DDHV) / (PHF × x f _p )	( N x f _{HV}	pc/h/ln		
	÷	s		mph		
	permini	$D = v_p / S$		pc/mi/ln		
A		Required Number of Lane	es, N			
		Factor Location				
D - Dens FFS - Free BFFS - Ba	sity e-flow speed	E _T - Exhibits 11-10, 11-11 f _p - Page 11-18	, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-11		
	$\begin{array}{c} \text{GORRILL PA} \\ \text{9/7/2012} \\ \text{AM PEAK} \\ \hline \text{TON IJR-POS} \\ \hline \text{TON IJR-POS} \\ \hline \text{1342} \\ \hline \hline \text{1342} \hline \hline \text{1342} \\ \hline \hline \text{1342} \hline \hline \text{1342} \hline \hline \text{1342} \hline \hline \hline \text{1342} \hline \hline \text{1342} \hline \hline \hline \ \text{1342} \hline \hline \hline \ \text{1342} \hline \hline \hline \ \text{1342} \hline \hline \hline \hline \ \text{1342} \hline \hline \hline \hline \hline \ \text{1342} \hline \hline \hline \hline \hline \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	GORRILL PALMER 9/7/2012 AM PEAK TON IJR-POSTDEVELOPM TON IJR-POSTDEVELOPM 1342 veh/h veh/day veh/h tments 1.00 1.5 12.0 ft 6.0 ft 2 0.30 ramps/mi mph 75.4 mph e Measures N x f _{HV} 732 pc/h/ln 75.4 mph 9.8 pc/mi/ln A S - Speed D - Density FFS - Free-flow speed BFFS - Base free-flow	TOM GORRILL GORRILL PALMER 9/7/2012 AM PEAKHighway/Direction of Trave From/To Jurisdiction Analysis YearTON IJR-POSTDEVELOPMENT WO INTTON IJR-POSTDEVELOPMENT WO INT1342veh/h veh/day1342veh/h veh/day1342veh/h veh/day1342veh/h veh/day1342veh/h veh/day1342veh/h veh/day1342veh/h veh/day1342veh/h veh/day1342veh/h veh/day1342veh/h veh/h1342veh/h veh/h1342veh/h veh/h1342veh/h veh/h1342veh/h veh/h1342veh/h veh/h1342veh/h veh/h1342veh/h veh/h1342veh/h veh/h1342veh/h veh/h1342veh/h veh/h1342veh/h veh/h1342veh/h veh/h1342veh/h veh/h1342veh/h veh/h1345Peak-Hour Factor, PHF veh/h Grade100E R flc1.00E R flc1.00ft flc flc1.00ft flc flc1.00ft flc flc TRD Adjustment FFS1.00ft flc flc1.00ft flc flc flc1.00ft flc flc flc flc1.00ft flc flc flc1.00ft flc flc flc1.00ft flc flc <br< td=""><td>TOM GORRILL GORRILL PALMER 9/7/2012Highway/Direction of Travel I-95 NB From/To Jurisdiction$MPEAK$Analysis Year2036TON IJR-POSTDEVELOPMENT WO INTImage: constraint of the second second</td></br<>	TOM GORRILL GORRILL PALMER 9/7/2012Highway/Direction of Travel I-95 NB From/To Jurisdiction $MPEAK$ Analysis Year2036TON IJR-POSTDEVELOPMENT WO INTImage: constraint of the second		

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<u></u>	BASIC FR	EEWAY SE	GMENTS WORKSHE		
General Information	ana cana a amin'ny faritr'o ana amin'ny faritr'o dia		Site Information	1990 - Charles Constant and Const	talet/2015/04/04/04/04/04/04/04/04/04/04/04/04/04/
Analyst Agency or Company Date Performed Analysis Time Period	GORRILL PALMER 9/7/2012		Highway/Direction of Tra From/To Jurisdiction Analysis Year		OF KMD
	TON IJR-POS	STDEVELOPM		aranya panya kana mananika kata kata kata kata kata kata kata k	
C Oper.(LOS)			Des.(N)	Plar	ning Data
Flow Inputs				addad Mahad in san an a	01.001.01.00002.0111100007/014140021110002100000000000000000000000
Volume, V AADT Peak-Hr Prop. of AADT, K	1566	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R	0.94 5 0	
Peak-Hr Direction Prop, D DDHV = AADT x K x D		veh/h	General Terrain: Grade % Length Up/Down %	Level mi	
Calculate Flow Adjus	tments		na an ann an an an an an an an an ann an a		
f _p	1.00		E _R	1.2	
E _T	1.5		$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R)]$	- 1)] <i>0.976</i>	
Speed Inputs	gan upapaqaan maana maana aha ka ka ka ka	SAMETHE SPACED IN THE REAL PROPERTY AND AN AND AND AND AND AND AND AND AND	Calc Speed Adj and	d FFS	an san an an air bhliach fa air bhliach Stàit Meanna ann an ann an ann an an an gana, an an ag
Lane Width	12.0	ft			
Rt-Side Lat. Clearance	6.0	ft	f _{LW}	0.0	mph
Number of Lanes, N	2		f _{LC}	0.0	mph
Total Ramp Density, TRD	0.30	ramps/mi	TRD Adjustment	1.2	mph
FFS (measured)		mph	FFS	74.2	mph
Base free-flow Speed, BFFS	75.4	mph			
LOS and Performanc	e Measures	3	Design (N)		
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x	N x f _{HV and}		Design (N) Design LOS	·	
x f _p ) S	75.0	pc/h/ln mph	v _p = (V or DDHV) / (PHF x f _p )	x n x i _{HV}	pc/h/ln
$D = v_p / S$	11.4	pc/mi/ln	S		mph
LOS	B	F	D = v _p / S Required Number of Lar	nes, N	pc/mi/ln
Glossary			Factor Location		ana ana amin'ny faritr'o dia kaodim-paositra amin'ny faritr'o dia kaodim-paositra dia kaodim-paositra dia kaodi
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	S - Speed D - Density FFS - Free-flow speed BFFS - Base free-flow		E _R - Exhibits 11-10, 11- E _T - Exhibits 11-10, 11- f _p - Page 11-18 LOS, S, FFS, v _p - Exhib 11-3	11, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-1

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	BASIC FR	EEWAY SE	GMENTS WORKSHEE			
General Information	901-10-10-10-10-10-10-10-10-10-10-10-10-1		Site Information	าได้สารที่สารางระบุระบารเหลาะเกตร		
Analyst Agency or Company Date Performed Analysis Time Period	TOM GORRILL GORRILL PALMER 9/7/2012 AM PEAK		Highway/Direction of Trav From/To Jurisdiction Analysis Year		OF LYONS	
Project Description TRAF	TON IJR-PO	STDEVELOPM	ENT WO INT		\$19.0077/4079700979700051790051790144504660400000000000000000000000000000	
C Oper.(LOS)		J	Des.(N)	Plan	nning Data	
Flow Inputs	Malifizzation concernence and the concernence of the	en son an eine an	ап на так каки си так на каки си на каки си на каки си на каки се			
Volume, V AADT Peak-Hr Prop. of AADT, K	1367	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R	0.94 5 0		
Peak-Hr Direction Prop, D DDHV = AADT x K x D		veh/h	General Terrain: Grade % Length Up/Down %	Level mi		
Calculate Flow Adjus	tments			i in the second se		
f _ρ Ε _Τ	1.00 1.5		E _R f _{HV} = 1/[1+P _T (E _T - 1) + P _R (E _R -	1.2 1)] 0.976		
Speed Inputs	<u></u>		Calc Speed Adj and FFS			
Lane Width	12.0	ft				
Rt-Side Lat. Clearance	6.0	ft	f _{LW}	0.0	mph	
Number of Lanes, N	2		f _{LC}	0.0	mph	
Total Ramp Density, TRD	0.30	ramps/mi	TRD Adjustment	1.2	mph	
FFS (measured)		mph	FFS	74.2	mph	
Base free-flow Speed, BFFS	75.4	mph		1 1. 644		
LOS and Performanc	e Measures	S	Design (N)			
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x	N x f _{HV 745}	pc/h/ln	<u>Design (N)</u> Design LOS v _p = (V or DDHV) / (PHF >	(N x f _{HV}		
x f _p )	75.0		x f _p )		pc/h/ln	
S D-V (S	75.0 9.9	mph pc/mi/ln	s		mph	
D = v _p / S LOS	9.9 A	ponnin	D = v _p / S Required Number of Lane	es, N	pc/mi/In	
Glossary			Factor Location	<del>атарын актарын күнүн кол</del> ори	n fel fel fel se af management an an an an an an fel	
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	BFFS - B		E _R - Exhibits 11-10, 11-12 E _T - Exhibits 11-10, 11-11 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibits 11-3	, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-11	
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	BASIC FRI	EEWAY SE	GMENTS WORKSHE	ET	
General Information	беріуу білектектектектектектектерірағын дағын разарақтарарық ор	an ann ann an an ann ann ann ann ann an	Site Information	1999 - C C C C C C C	and a design of the second
Analyst Agency or Company Date Performed Analysis Time Period	TOM GORRILL GORRILL PALMER 9/7/2012 AM PEAK		Highway/Direction of Tra From/To Jurisdiction Analysis Year		OF LYONS
an na printer and a state of the	TON IJR-POS	STDEVELOPM	ENT WO INT		n an an the first of the state of the first state of the
M Oper.(LOS)	uje (dajili i panjana ang manang panana munipana ang manang pangan	<u>Fi</u> E	Des.(N)	☐ Plar	ning Data
Flow Inputs		indefendet kommunister men			
Volume, V AADT Peak-Hr Prop. of AADT, K	1367	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R	0.94 5 0	
Peak-Hr Direction Prop, D DDHV = AADT x K x D		veh/h	General Terrain: Grade % Length Up/Down %	Level mi	
Calculate Flow Adjus	tments			ne an air an far	атана – сита на сибера 6442224 илистика жераление и сос
f _p E _T	1.00 1.5		$E_{R}$ $f_{HV} = 1/[1+P_{T}(E_{T}-1)+P_{R}(E_{R})]$	1.2 - 1)1 <i>0</i> .976	
Speed Inputs			Calc Speed Adj and		utaan na karana kara
Lane Width	12.0	ft			da Bada Bada Bada Bada Bada Barrow na mana ay na pina ang kanya kana kana kana na mana pang mang
Rt-Side Lat. Clearance	6.0	ft	f _{LW}	0.0	mph
Number of Lanes, N	2		f _{LC}	0.0	mph
Total Ramp Density, TRD	0.30	ramps/mi	TRD Adjustment	1.2	mph
FFS (measured)		mph	FFS	74.2	
Base free-flow Speed, BFFS	75.4	mph		14.2	mph
LOS and Performance	e Measures		Design (N)		***************************************
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x I	Nyf		<u>Design (N)</u> Design LOS		
x f _p )		pc/h/ln	v _p = (V or DDHV) / (PHF x f _p )	x N x f _{HV}	pc/h/In
S D=v /S	75.0	mph	S		mph
$D = v_p / S$	9.9	pc/mi/ln	$D = v_p / S$		pc/mi/ln
LOS	A		Required Number of Lan	es, N	
Glossary			Factor Location		
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design l	BFFS - Ba		E _R - Exhibits 11-10, 11-1 E _T - Exhibits 11-10, 11-1 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibit 11-3	1, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-1

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	BASIC FR	EEWAY SE	GMENTS WORKSHE	ET	
General Information		diana a dana amin'ny fisiana amin'ny fisiana amin'ny fisiana amin'ny fisiana amin'ny fisiana amin'ny fisiana am	Site Information		
Analyst Agency or Company Date Performed Analysis Time Period	TOM GORRILL GORRILL PALMER 9/7/2012		Highway/Direction of Tra From/To Jurisdiction Analysis Year		I OF KMD
	TON IJR-POS	TDEVELOPM	The second s		
Coper.(LOS)	na na mana na na mana na na na na mangana kana na		Des.(N)	T Plar	nning Data
Flow Inputs			ан на н		
Volume, V AADT Peak-Hr Prop. of AADT, K	1430	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R	0.94 5 0	ann an de anna an de an
Peak-Hr Direction Prop, D DDHV = AADT $x K x D$		veh/h	General Terrain: Grade % Length Up/Down %	Level mi	
Calculate Flow Adjus	tments	n gen fan de	an a	97.0007.001.00000.000.000.0000.0000.000	
f _ρ Ε _Τ	1.00 1.5	na en activita de la constante	$E_{R}$ $f_{HV} = 1/[1+P_{T}(E_{T} - 1) + P_{R}(E_{R}$	1.2 - 1)] 0.976	
Speed Inputs			Calc Speed Adj and		
Lane Width	12.0	ft			
Rt-Side Lat. Clearance Number of Lanes, N	6.0 2	ft	f _{LW}	0.0	mph
Total Ramp Density, TRD	2 0.30	ramps/mi	f _{LC} TRD Adjustment	0.0 1.2	mph mph
FFS (measured)		mph	FFS	74.2	
Base free-flow Speed, BFFS	75.4	mph	FF <b>3</b>	14.2	mph
LOS and Performanc	e Measures	>	Design (N)		alter et el la contra el contra de la contra d La contra de la contr
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x I	N x f _{HV zeo}	no/h/ln	Design (N) Design LOS	v N v f	
x f _p ) S	75.0	pc/h/ln mph	v _p = (V or DDHV) / (PHF x f _p )	X IN X IHV	pc/h/ln
$D = v_p / S$	10.4	pc/mi/ln	s		mph
LOS	, о.4 А	porman	D = v _p / S Required Number of Lan	es, N	pc/mi/ln
Glossary	***		Factor Location		
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	BFFS - Ba		E _R - Exhibits 11-10, 11-1 E _T - Exhibits 11-10, 11-1 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibit 11-3	1, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-1

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	BASIC FRI	EEWAY SE	GMENTS WORKSHE	ET		
General Information		12701194333101110-1474220020410931193226200224939	Site Information	ezitési manakon mini tana tanan ka	****	
Analyst Agency or Company Date Performed Analysis Time Period	9/7/2012		Highway/Direction of Trav From/To Jurisdiction Analysis Year		OF LYONS	
Project Description TRAF	TON IJR-POS	STDEVELOPM	ENT WO INT			
C Oper.(LOS)		T C	Des.(N)	T Plar	nning Data	
Flow Inputs						
Volume, V AADT Peak-Hr Prop. of AADT, K Peak-Hr Direction Prop, D DDHV = AADT x K x D	2032	veh/h veh/day veh/h	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R General Terrain: Grade % Length	0.94 5 0 Level mi		
			Up/Down %			
Calculate Flow Adjus	tments					
f _ρ Ε _Τ	1.00 1.5		E _R f _{HV} = 1/[1+P _T (E _T - 1) + P _R (E _R -	1.2 - 1)] <i>0.976</i>		
Speed Inputs	aan ah		Calc Speed Adj and FFS			
Lane Width	12.0	ft			annan bid bid din din din din din bid bid anna an a	
Rt-Side Lat. Clearance	6.0	ft	f _{LW}	0.0	mph	
Number of Lanes, N	2		f _{LC}	0.0	mph	
Total Ramp Density, TRD	0.30	ramps/mi	TRD Adjustment	1.2	mph	
FFS (measured) Base free-flow Speed,	75 4	mph	FFS	74.2	mph	
BFFS	75.4	mph			ana ang ing ang ing ang ing ang ing ing ing ing ing ing ing ing ing i	
LOS and Performanc	e Measures		Design (N)			
<u>Operational (LOS)</u> $v_p = (V \text{ or DDHV}) / (PHF x)$ $x f_p)$ S D = $v_p / S$ LOS	N x f _{HV} 1108 74.9 14.8 B	pc/h/ln mph pc/mi/ln	$\frac{\text{Design (N)}}{\text{Design LOS}}$ $v_p = (V \text{ or DDHV}) / (PHF)$ $x f_p)$ $S$ $D = v_p / S$		pc/h/ln mph pc/mi/ln	
	ay nampang manang mang mang mang mang mang mang	an a	Required Number of Lan	es, in		
Glossary			Factor Location	944395111245494145111451114511146111461114		
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed	BFFS - Ba		E _R - Exhibits 11-10, 11-1 E _T - Exhibits 11-10, 11-1 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibit 11-3	1, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-11	
DDHV - Directional design				<u> </u>	rated: 9/7/2012 11:13 A	

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	BASIC FR	EEWAY SE	GMENTS WORKSHE	ET		
General Information		uun ala ana ana ana ana ana ana ana ana an	Site Information		an a	
Analyst Agency or Company Date Performed Analysis Time Period	TOM GORRILL GORRILL PALMER 9/7/2012 PM PEAK		Highway/Direction of Tra From/To Jurisdiction Analysis Year		I OF LYONS	
Project Description TRAF	TON IJR-POS	STDEVELOPM	ENT WO INT	ny transmission and the factor of the		
C Oper.(LOS)		Гс	Des.(N)	🗆 🏳 Plai	nning Data	
Flow Inputs						
Volume, V AADT Peak-Hr Prop. of AADT, K	1853	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R	0.94 5 0		
Peak-Hr Direction Prop, D DDHV = AADT x K x D		veh/h	General Terrain: Grade % Length Up/Down %	Level mi		
Calculate Flow Adjus	tments			an a		
f _p E _T	1.00 1.5	in an the second se	$E_{R}$ $f_{HV} = 1/[1+P_{T}(E_{T}-1) + P_{R}(E_{R})$	1.2 - 1)] 0.976		
Speed Inputs	na a su a		Calc Speed Adj and FFS			
Lane Width	12.0	ft			in the second	
Rt-Side Lat. Clearance Number of Lanes, N	6.0 2	ft	f _{LW} f _{LC}	0.0 0.0	mph	
Total Ramp Density, TRD FFS (measured)	0.30	ramps/mi mph	TRD Adjustment	1.2	mph mph	
Base free-flow Speed, BFFS	75.4	mph	FFS	74.2	mph	
LOS and Performanc	e Measures	)	Design (N)			
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x I	N x f _{HV 4040}	pc/h/ln	Design (N) Design LOS	v NI v F		
x f _p ) S	75.0	mph	v _p = (V or DDHV) / (PHF x f _p )	X IN X IHV	pc/h/ln	
D = v _p / S LOS	13.5 B	pc/mi/ln	S D = v _p / S Required Number of Lan	es. N	mph pc/mi/ln	
Glossary			Factor Location	- underscheiden eine Schleinen einen		
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	BFFS - Ba		E _R - Exhibits 11-10, 11-1 E _T - Exhibits 11-10, 11-1 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibit 11-3	1, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-11	

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	BASIC FR	EEWAY SE	GMENTS WORKSHE	ET	
General Information		n felge op synthesis and an all and a start of the synthesis of the start of the	Site Information		
Analyst Agency or Company Date Performed Analysis Time Period	GORRILL PALMER 9/7/2012		Highway/Direction of Tra From/To Jurisdiction Analysis Year		OF KMD
	TON IJR-POS	STDEVELOPM			ernen anderen foreit der med alste het die ernen met die personen twee personen anderen anderen anderen andere
C Oper.(LOS)			es.(N)	🗌 🗌 Plar	ning Data
Flow Inputs				*****	
Volume, V AADT Peak-Hr Prop. of AADT, K	2022	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R	0.94 5 0	
Peak-Hr Direction Prop, D DDHV = AADT x K x D		veh/h	General Terrain: Grade % Length Up/Down %	Level mi	
Calculate Flow Adjus	tments	any panana panana ang kang kang kang kang kang kang		*****	
f _p Ε _T	1.00 1.5		E _R f _{HV} = 1/[1+P _T (E _T - 1) + P _R (E _R	1.2 - 1)] 0.976	
Speed Inputs	######################################		Calc Speed Adj and	FFS	
Lane Width Rt-Side Lat. Clearance	12.0 6.0	ft ft		0.0	mph
Number of Lanes, N	2		f _{LW}	0.0	mph
Total Ramp Density, TRD	0.30	ramps/mi	f _{LC} TRD Adjustment	1.2	mph
FFS (measured)	0.00	mph	-		•
Base free-flow Speed, BFFS	75.4	mph	FFS	74.2	mph
LOS and Performanc	e Measures	3	Design (N)		
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x x f _p )	N x f _{HV} 1102	pc/h/ln	<u>Design (N)</u> Design LOS v _p = (V or DDHV) / (PHF	x N x f _{HV}	pc/h/ln
S D = v _p / S LOS	74.9 14.7 B	mph pc/mi/ln	x f _p ) S D = v _p / S Required Number of Lar	nes, N	mph pc/mi/ln
Glossary	<u> 1949-1989 - 1988 - 1988 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989</u>	yn yn en ar	Factor Location	*****	
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	BFFS - Ba		E _R - Exhibits 11-10, 11-7 E _T - Exhibits 11-10, 11-1 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibi 11-3	1, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-11
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General Information			Site Information		
Analyst Agency or Company Date Performed Analysis Time Period	TOM GORRILL GORRILL PALMER 9/7/2012 PM PEAK		Highway/Direction of Tray From/To Jurisdiction Analysis Year		OF LYONS
		STDEVELOPM		mar -	
Oper.(LOS)	an a	1 · L	Des.(N)	I Plar	nning Data
Flow Inputs	4770	1 (1		0.04	25 0 # 2 # 2 0 # 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Volume, V AADT	1770	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T	0.94 5	
Peak-Hr Prop. of AADT, K Peak-Hr Direction Prop, D DDHV = AADT x K x D		veh/h	%RVs, P _R General Terrain: Grade % Length Up/Down %	0 Level mi	
Calculate Flow Adjus	tments		Na 1944 Martin Marti		
f _p	1.00		E _R	1.2	nin hall ta konstruktion and a fail and a second
E _T	1.5		$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	1)] 0.976	
Speed Inputs		tindationtententen maan op aan op aan op aan	Calc Speed Adj and	FFS	
Lane Width	12.0	ft			
Rt-Side Lat. Clearance	6.0	ft	f _{LW}	0.0	mph
Number of Lanes, N	2		f _{LC}	0.0	mph
Total Ramp Density, TRD	0.30	ramps/mi	TRD Adjustment	1.2	mph
FFS (measured)		mph	FFS	74.2	mph
Base free-flow Speed, BFFS	75.4	mph		, ,,,_	mpri
LOS and Performanc	e Measure	S	Design (N)		
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x	N x fuy		<u>Design (N)</u> Design LOS		
x f _p )		pc/h/ln	$v_p = (V \text{ or DDHV}) / (PHF x f_p)$	x N x f _{HV}	pc/h/ln
S D = v / S	75.0	mph	ร์		mph
$D = v_p / S$	12.9	pc/mi/ln	$D = v_p / S$		pc/mi/ln
LOS	В		Required Number of Lan	es, N	
Glossary		******	Factor Location	57057-54-47-67-47-47-47-67-67-67-67-67-67-67-67-67-67-67-67-67	dan 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 19
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	BFFS - Ba		E _R - Exhibits 11-10, 11-1 E _T - Exhibits 11-10, 11-1 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibit 11-3	1, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-17
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	BASIC FR	EEWAY SE	GMENTS WORKSHE	E T		
General Information	akannanan yanpan annan myanga		Site Information		anan mananan katala	
Analyst Agency or Company Date Performed Analysis Time Period	TOM GORRILL GORRILL PALMER 9/7/2012		Highway/Direction of Tra From/To Jurisdiction Analysis Year		I OF LYONS	
	TON IJR-POS	STDEVELOPM	ENT WO INT			
M Oper.(LOS)		The c	Des.(N)	🗌 🕅 Plar	nning Data	
Flow Inputs						
Volume, V AADT Peak-Hr Prop. of AADT, K	1647	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R	0.94 5 0		
Peak-Hr Direction Prop, D DDHV = AADT x K x D		veh/h	General Terrain: Grade % Length Up/Down %	Level mi		
<b>Calculate Flow Adjus</b>	tments		na di na bina kana kana kana kana kana kana kana k	na sooileminikaksi eyderkeette tään päälinnoiteisen	chi tehning Barti di kala dan kerungkan kerungkan panjan di penyakan di penyakan di penyakan di penyakan di pe	
f _ρ Ε _Τ	1.00 1.5		$E_{R}$ $f_{HV} = 1/[1+P_{T}(E_{T}-1) + P_{R}(E_{R})$	1.2 - 1)] 0.976		
Speed Inputs			Calc Speed Adj and FFS			
Lane Width	12.0	ft				
Rt-Side Lat. Clearance	6.0	ft	f	0.0	mph	
Number of Lanes, N	2		f _{LW}	0.0	•	
Total Ramp Density, TRD	0.30	ramps/mi	f _{LC}	1.2	mph	
FFS (measured)	0.00	mph	TRD Adjustment		mph	
Base free-flow Speed, BFFS	75.4	mph	FFS	74.2	mph	
LOS and Performanc	e Measures	)	Design (N)			
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x I x f _p )		pc/h/ln	<u>Design (N)</u> Design LOS v _p = (V or DDHV) / (PHF x f _p )	x N x f _{HV}	pc/h/ln	
S D = v / C	75.0	mph	s		mph	
D = v _p / S LOS	12.0 В	pc/mi/ln	D = v _p / S Required Number of Lan	es, N	pc/mi/ln	
Glossary	annan an ann an ann an ann ann ann ann	****************	Factor Location		#1.900.001.000.000.000.000.000.000.000.00	
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	S - Speed D - Density FFS - Free-flow speed BFFS - Base free-flow hour volume		E _R - Exhibits 11-10, 11-1 E _T - Exhibits 11-10, 11-1 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibi 11-3	1, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-11	

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General Information			Site Information		
Analyst Agency or Company Date Performed Analysis Time Period	TOM GORRILL GORRILL PALMER 9/7/2012 PM PEAK		Highway/Direction of Tra From/To Jurisdiction Analysis Year		I OF KMD
Project Description TRAF	TON IJR-POS	STDEVELOPM	ENT WO INT		
C Oper.(LOS)			Des.(N)	🗏 Plar	nning Data
Flow Inputs		NORMAL CONTRACTOR FOR COMPACT			
Volume, V AADT Peak-Hr Prop. of AADT, K	1963	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R	0.94 5 0	
Peak-Hr Direction Prop, D DDHV = AADT x K x D		veh/h	General Terrain: Grade % Length Up/Down %	Level mi %	
Calculate Flow Adjus	tments				
f _p E _T	1.00 1.5		E _R f _{HV} = 1/[1+P _T (E _T - 1) + P _R (E _B	1.2 - 1)] 0.976	
Speed Inputs			Calc Speed Adj and	d FFS	
Lane Width	12.0	ft	1		
Rt-Side Lat. Clearance	6.0	ft	f _{LW}	0.0	mph
Number of Lanes, N	2		f _{LC}	0.0	mph
Total Ramp Density, TRD	0.30	ramps/mi	TRD Adjustment	1.2	mph
FFS (measured) Base free-flow Speed, BFFS	75.4	mph mph	FFS	74.2	mph
LOS and Performanc	e Measures	5	Design (N)		an na gana ana ang ang ang ang ang ang a
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x x f _p ) S D = v _p / S	N x f _{HV} 1070 74.9 14.3	pc/h/ln mph pc/mi/ln	Design (N) Design LOS v _p = (V or DDHV) / (PHF x f _p ) S D = v _p / S	x N x f _{HV}	pc/h/ln mph pc/mi/ln
LOS	B	nt strid on the strid data more some some deserver and some some some some some some some some	Required Number of Lar	nes, N	Portiniti
Glossary	ny ny tanàna kaominina mpikambana kaominina dia kaominina dia kaominina dia kaominina dia kaominina dia kaomini	neeligden in internet and a provide a source internet internet internet internet internet internet internet inte	Factor Location	nanganyanon kayana kayana kayana kayana ka	
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	BFFS - Ba		E _R - Exhibits 11-10, 11- ⁻ E _T - Exhibits 11-10, 11- ⁻ f _p - Page 11-18 LOS, S, FFS, v _p - Exhibi 11-3	1, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-11

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General Information			Site Information	anna a marmhainn airte dha dhan bhairteat	
Analyst Agency or Company Date Performed Analysis Time Period	TOM GORRILL GORRILL PALMER 9/7/2012 AM PEAK		Highway/Direction of Trav From/To Jurisdiction Analysis Year		OF LYONS
	TON IJR-POS	STDEVELOPM			1
✓ Oper.(LOS)			Des.(N)	Plar	nning Data
Flow Inputs		ala hisionalis ana ana ana ani ani ini ana 100 km ang			
Volume, V AADT	1524	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T	0.94 5	
Peak-Hr Prop. of AADT, K Peak-Hr Direction Prop, D DDHV = AADT x K x D		veh/h	%RVs, P _R General Terrain: Grade % Length Up/Down %	0 Level mi	
Calculate Flow Adjus	tments	navni – – Liinnen ander in daret Bernarman		มาระกมเขาแขน และส่งเท่ายางการการกำรงสำนักของ	
f _p	1.00		E _R	1.2	
E _T	1.5		$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	1)] <i>0.976</i>	
Speed Inputs		*****	Calc Speed Adj and	FFS	
Lane Width	12.0	ft			
Rt-Side Lat. Clearance	6.0	ft	f _{LW}	0.0	mph
Number of Lanes, N	2		f _{LC}	0.0	mph
Total Ramp Density, TRD	0.70	ramps/mi	TRD Adjustment	2.4	mph
FFS (measured)		mph	FFS	73.0	mph
Base free-flow Speed, BFFS	75.4	mph		*****	•
LOS and Performanc	e Measures		Design (N)		
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x	N x f _{HV 831}	pc/h/ln	Design (N) Design LOS v _n = (V or DDHV) / (PHF >	< N x funz	
x f _p )		·	$x f_p$	HV	pc/h/ln
S	75.0	mph	S P		mph
$D = v_p / S$	11.1	pc/mi/ln	$D = v_p / S$		pc/mi/ln
LOS	В		Required Number of Lane	es, N	
Glossary	2772129499294999999929292999299929999999999		Factor Location	********	
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	BFFS - Ba		E _R - Exhibits 11-10, 11-12 E _T - Exhibits 11-10, 11-11 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibits 11-3	I, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-1

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	BASIC FRI	EEWAY SE	GMENTS WORKSHE	ET	
General Information			Site Information		an a
Analyst Agency or Company Date Performed Analysis Time Period	TOM GORRI GORRILL PA 9/7/2012 AM PEAK		Highway/Direction of Trav From/To Jurisdiction Analysis Year		OF LYONS
	TON IJR-POS	TDEVELOPM			
Coper.(LOS)	айан алкан талан жаккан факры крупп фарарарарарарара (фарара		Des.(N)	Plan	ning Data
Flow Inputs			######################################	******	9499409449549497090000000000000000000000
Volume, V AADT Peak-Hr Prop. of AADT, K	1542	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R	0.94 5 0	en geleren de en de e
Peak-Hr Direction Prop, D DDHV = AADT x K x D		veh/h	General Terrain: Grade % Length Up/Down %	Level mi	
Calculate Flow Adjus	tments			an a	
f _p Ε _T	1.00 1.5		E _R f _{HV} = 1/[1+P _T (E _T - 1) + P _R (E _R -	1.2 1)] 0.976	
Speed Inputs	****	Mari Makalanan daran menangkan mutan menangkan pangkan pan	Calc Speed Adj and		
Lane Width	12.0	ft			
Rt-Side Lat. Clearance	6.0	ft	f _{LW}	0.0	mph
Number of Lanes, N	2		f _{LC}	0.0	mph
Total Ramp Density, TRD	0.70	ramps/mi	TRD Adjustment	2.4	mph
FFS (measured)		mph	FFS	2.4 73.0	-
Base free-flow Speed, BFFS	75.4	mph	rro	75.0	mph
LOS and Performanc	e Measures	) }	Design (N)		
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x I	N x f _{HV 044}		Design (N) Design LOS	v NI v F	
x f _p ) S	75.0	pc/h/ln	v _p = (V or DDHV) / (PHF : x f _p )	A IN A 'HV	pc/h/ln
$D = v_p / S$	11.2	mph pc/mi/ln	S		mph
LOS	B	porman	D = v _p / S Required Number of Land	es, N	pc/mi/ln
Glossary		KASTIKKUMI KALANGA KANGUNAN KA	Factor Location		anna - Caralla Maraka Anna Anna -
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	BFFS - Ba		E _R - Exhibits 11-10, 11-12 E _T - Exhibits 11-10, 11-12 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibits 11-3	1, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-1

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General Information		ng ng kang kang kang kang kang kang kang	Site Information	017577659909999999999999999999999999999999	
Analyst Agency or Company Date Performed Analysis Time Period	TOM GORRILL GORRILL PALMER 9/7/2012 AM PEAK		Highway/Direction of Tray From/To Jurisdiction Analysis Year		OF TRAFTON
Project Description TRAF	TON IJR-POS	TDEVELOPM	ENT W INT		
C Oper.(LOS)		The E	es.(N)	F Plar	nning Data
Flow Inputs					
Volume, V AADT	1441	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T	0.94 5	
Peak-Hr Prop. of AADT, K Peak-Hr Direction Prop, D DDHV = AADT x K x D		veh/h	%RVs, P _R General Terrain: Grade % Length Up/Down %	0 Level mi	
Calculate Flow Adjus	tments				99.00 - 97 - 98 - 99 - 99 - 99 - 99 - 99 - 99
f _p E _T	1.00 1.5		$E_{R}$ $f_{HV} = 1/(1+P_{T}(E_{T}-1)+P_{R}(E_{R})$	1.2 - 1)] 0.976	
Speed Inputs			Calc Speed Adj and		
Lane Width	12.0	ft			nen ander an de Rossien ander an de Rossien an de Rossien de Rossien de Rossien de Rossien de Rossien de Rossie
Rt-Side Lat. Clearance	6.0	ft	f _{LW}	0.0	mph
Number of Lanes, N	2		f _{LC}	0.0	mph
Total Ramp Density, TRD	0.70	ramps/mi	LC TRD Adjustment	2.4	mph
FFS (measured)		mph	FFS	2.4 73.0	•
Base free-flow Speed, BFFS	75.4	mph	rro	73.0	mph
LOS and Performanc	e Measures		Design (N)		
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x I x f _p )	N x f _{HV} 786	pc/h/ln	<u>Design (N)</u> Design LOS v _p = (V or DDHV) / (PHF	x N x f _{HV}	pc/h/ln
S	75.0	mph	x f _p )		ponnin
D = v _p / S	10.5	pc/mi/ln	S		mph
LOS	A	porman	D = v _p / S Required Number of Lan	es, N	pc/mi/In
Glossary			Factor Location		
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	BFFS - Ba		E _R - Exhibits 11-10, 11-1 E _T - Exhibits 11-10, 11-1 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibit 11-3	1, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-1 ⁻

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	BASIC FR	EEWAY SE	GMENTS WORKSHE	E	
General Information		erandiaataananana karananananananananananan	Site Information	14000000000000000000000000000000000000	
Analyst Agency or Company Date Performed Analysis Time Period	TOM GORRILL GORRILL PALMER 9/7/2012 AM PEAK		Highway/Direction of Tra From/To Jurisdiction Analysis Year		OF KMD
	620/68/646/66/66/66/66/66/66/66/66/66/66/66/66	STDEVELOPM		2000	äneteetoivun olla ministra kollanaan 2004 aanuun maanaa an
Øper.(LOS)			Des.(N)	T Plar	ning Data
Flow Inputs	*******				
Volume, V AADT Peak-Hr Prop. of AADT, K Peak-Hr Direction Prop, D	1541	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R General Terrain:	0.94 5 0 Level	Standard Andrewski, son and standard geologic geographic standard standard
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	mi	
Calculate Flow Adjus	tments				
f _p E _T	1.00 1.5		$E_{R}$ $f_{HV} = 1/[1+P_{T}(E_{T} - 1) + P_{R}(E_{R}$	1.2 - 1)] 0.976	an Marka Andrian Andria Andrian an Anang ang A
Speed Inputs		*****	Calc Speed Adj and	IFFS	ann an tha an
Lane Width Rt-Side Lat. Clearance Number of Lanes, N Total Ramp Density, TRD FFS (measured) Base free-flow Speed, BFFS	12.0 6.0 2 0.70 75.4	ft ft ramps/mi mph mph	f _{LW} f _{LC} TRD Adjustment FFS	0.0 0.0 2.4 73.0	mph mph mph mph
LOS and Performanc	e Measures		Design (N)	1994 (1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 -	
<u>Operational (LOS)</u> $v_p = (V \text{ or DDHV}) / (PHF x   x f_p)SD = v_p / SLOS$		pc/h/ln mph pc/mi/ln	Design (N) Design LOS v _p = (V or DDHV) / (PHF x f _p ) S D = v _p / S Required Number of Lan		pc/h/ln mph pc/mi/ln
Glossary	201 - 14 - 14 - 14 - 14 - 14 - 14 - 14 -		Factor Location		
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	BFFS - Ba		E _R - Exhibits 11-10, 11-1 E _T - Exhibits 11-10, 11-1 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibi 11-3	1, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-11
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General Information	RAUMAN AND AND AND AND AND AND AND AND AND A	its (MAS) (MAS) (Constitution of the state of the	Site Information	*****	alara (a - four annon at the protection of a construction of a construction of a construction of a construction
Analyst Agency or Company Date Performed Analysis Time Period	TOM GORRILL GORRILL PALMER 9/7/2012 AM PEAK AFTON IJR-POSTDEVELOPM		Highway/Direction of Tra From/To Jurisdiction Analysis Year		OF LYONS
					enine Dete
	****		Des.(N)	I & Plai	nning Data
Volume, V AADT Peak-Hr Prop. of AADT, K Peak-Hr Direction Prop, D DDHV = AADT x K x D	1528	veh/h veh/day veh/h	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R General Terrain: Grade % Length	0.94 5 0 Level mi	
	าร่ะจะอยู่ดังวิทศสาราสาราสาราสาราสาราสาราสาราสารา		Up/Down %	)	
Calculate Flow Adjus	tments				
f _ρ Ε _Τ	1.00 1.5		$E_{R}$ $f_{HV} = 1/[1+P_{T}(E_{T} - 1) + P_{R}(E_{R}$	1.2 - 1)] 0.976	
Speed Inputs		*********	Calc Speed Adj and	IFFS	
Lane Width Rt-Side Lat. Clearance Number of Lanes, N Total Ramp Density, TRD FFS (measured) Base free-flow Speed, BFFS	12.0 6.0 2 0.70 75.4	ft ft ramps/mi mph mph	f _{LW} f _{LC} TRD Adjustment FFS	0.0 0.0 2.4 73.0	mph mph mph mph
LOS and Performanc	e Measures	3	Design (N)		
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x x f _p ) S D = v _p / S LOS	N × f _{HV} 833 75.0 11.1 B	pc/h/ln mph pc/mi/ln	$\frac{\text{Design (N)}}{\text{Design LOS}}$ $v_p = (V \text{ or DDHV}) / (PHF)$ $x f_p)$ $S$ $D = v_p / S$ Required Number of Lan		pc/h/ln mph pc/mi/ln
Glossary	ana na mana mana mana mana mana mana ma	néoékocinin nodána mata account a san a	Factor Location	where we have a second and a second secon	n baran baran kura kura kura kura kura kura kura kura
	BFFS - Ba		E _R - Exhibits 11-10, 11-1 E _T - Exhibits 11-10, 11-1 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibit 11-3	1, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-1
speed DDHV - Directional design	hour volume		1 · · ·		rated: 9/7/2012

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General Information	Martin Construction of Stational Construction of Stational Constructions		Site Information	tar ya ya wa ya mayaa ka ya ka y	an mar est a chuilt a bhford a chuir chuir a bha ann an ann an ann an ann an ann an ann ann ann ann ann ann ann
Analyst Agency or Company Date Performed Analysis Time Period	TOM GORRILL GORRILL PALMER 9/7/2012 AM PEAK		Highway/Direction of Tra From/To Jurisdiction Analysis Year		OF LYONS
an a	*****	STDEVELOPM		1997-0490 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -	
⊡ Oper.(LOS)	a de compañía d		Des.(N)	🗍 Plar	ning Data
Flow Inputs				and the state of the	
Volume, V AADT Peak-Hr Prop. of AADT, K	1430	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R	0.94 5 0	
Peak-Hr Direction Prop, D DDHV = AADT x K x D		veh/h	General Terrain: Grade % Length Up/Down %	Level mi	
Calculate Flow Adjus	tments	<u></u>	n an		
f _ρ Ε _Τ	1.00 1.5		$E_{R}$ $f_{HV} = 1/(1+P_{T}(E_{T}-1) + P_{R}(E_{R})$	1.2 - 1)] <i>0.</i> 976	
Speed Inputs	*****	*****	Calc Speed Adj and		<del></del>
Lane Width	12.0	ft			anna an
Rt-Side Lat. Clearance	6.0	ft	£	0.0	nonb
Number of Lanes, N	2	11	f _{LW}	0.0	mph
Total Ramp Density, TRD	0.70	ramps/mi	f _{LC}	0.0	mph
• •	0.70	•	TRD Adjustment	2.4	mph
FFS (measured) Base free-flow Speed, BFFS	75.4	mph mph	FFS	73.0	mph
LOS and Performanc	e Measures	3	Design (N)	nana yana ya kata kata kata kata kata kata kata	
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x x f _p )	N x f _{HV} 780	pc/h/ln	<u>Design (N)</u> Design LOS v _p = (V or DDHV) / (PHF	x N x f _{HV}	pc/h/ln
S	75.0	mph	x f _p ) S		mph
D = v _p / S	10.4	pc/mi/ln			mph
LOS	А		D = v _p / S Required Number of Lar	nes, N	pc/mi/ln
Glossary			Factor Location		
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed	BFFS - Ba		E _R - Exhibits 11-10, 11-7 E _T - Exhibits 11-10, 11-1 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibi 11-3	1, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-11
DDHV - Directional design			HCS 2010TM Version 6.1		rated: 9/7/2012 11:56 /

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General Information	anna an ann an tharachadh an Annair an Annaich an Annaich an Annaich an Annaich an Annaich an Annaich an Annaic		Site Information		
Analyst Agency or Company Date Performed Analysis Time Period	TOM GORRI GORRILL PA 9/7/2012 AM PEAK	ALMER	Highway/Direction of Tra From/To Jurisdiction Analysis Year		OF TRAFTON
	-TON IJR-POS	TDEVELOPM			
Oper.(LOS)	ti de la précimient de la company de la c		es.(N)	l Plar	ning Data
Flow Inputs		n an		1/1301-3202020/00/0256/2010/0256/2010/0256/2010/0256/2010/0256/2010/0256/2010/0256/2010/0256/2010/0256/2010/02	
Volume, V AADT	1489	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T	0.94 5	
Peak-Hr Prop. of AADT, K Peak-Hr Direction Prop, D DDHV = AADT x K x D		veh/h	%RVs, P _R General Terrain: Grade % Length Up/Down %	0 Level mi	
Calculate Flow Adjus	tments	***************************************	n an fan de f	kiminingene variensen en e	an Anna an
f _ρ Ε _Τ	1.00 1.5		$E_{R}$ $f_{HV} = 1/[1+P_{T}(E_{T} - 1) + P_{R}(E_{R})]$	1.2 - 1)10 976	
Speed Inputs	1.0	nia any minina na any mangana aminina akao amin' populan	Calc Speed Adj and		
*****	40.0	<i>C</i> 1	Calc Speed Auj and		
Lane Width	12.0	ft			
Rt-Side Lat. Clearance	6.0	ft	f _{LW}	0.0	mph
Number of Lanes, N	2	, .	f _{LC}	0.0	mph
Total Ramp Density, TRD	0.70	ramps/mi	TRD Adjustment	2.4	mph
FFS (measured) Base free-flow Speed, BFFS	75.4	mph mph	FFS	73.0	mph
LOS and Performanc	e Measures		Design (N)		San ang kang kang kang kang kang kang kan
Operational (LOS)			<u>Design (N)</u> Design LOS		
v _p = (V or DDHV) / (PHF x l x f _p )		pc/h/ln	v _p = (V or DDHV) / (PHF x f _p )	x N x f _{HV}	pc/h/ln
S	75.0	mph	S		mph
$D = v_p / S$	10.8	pc/mi/ln	$D = v_p / S$		pc/mi/ln
LOS	A		Required Number of Lar	nes, N	•
Glossary	ni posi producen na kalekan na kalekan kalekan kalekan kale		Factor Location		
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	BFFS - Ba		E _R - Exhibits 11-10, 11- ⁻ E _T - Exhibits 11-10, 11-1 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibi 11-3	1, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-1 ⁻

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	BASIC FR	EEWAY SE	GMENTS WORKSHEI		
General Information	4001/1401/1501/17/1-1400/440/1500/1700/1700/1700/1700/1700/1700/170		Site Information		NE HIROLEN AND AN AND AND AND AND AND AND AND AND
Analyst Agency or Company Date Performed Analysis Time Period	TOM GORR GORRILL P/ 9/7/2012		Highway/Direction of Trav From/To Jurisdiction Analysis Year		I OF KMD
Project Description TRAF	TON IJR-POS	STDEVELOPM	IENT W INT		
₩ Oper.(LOS)			Des.(N)	🗖 Plai	nning Data
Flow Inputs					
Volume, V AADT Peak-Hr Prop. of AADT, K Peak-Hr Direction Prop, D	1430	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R General Terrain:	0.94 5 0 Level	
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	mi	
Calculate Flow Adjus	tmonte		Op/DOWN 70		
$f_p$ $E_T$	1.00 1.5		E _R f _{HV} = 1/[1+P _T (E _T - 1) + P _R (E _R -	1.2 1)] 0.976	лтад талар ултан на консекца —
Speed Inputs	******	ti (17 Air) (1 an ion ann an ann an ann an ann an ann an ann an a	Calc Speed Adj and		
Lane Width	12.0	ft		<u>FFS</u>	anana na manana na mata Magi ba ao manana mana sy ay aga
Rt-Side Lat. Clearance	6.0	ft	f _{LW}	0.0	mph
Number of Lanes, N	2	-	f _{LC}	0.0	mph
Total Ramp Density, TRD	0.70	ramps/mi	TRD Adjustment	2.4	mph
FFS (measured)		mph	FFS	2.4 73.0	
Base free-flow Speed, BFFS	75.4	mph	rro	73.0	mph
LOS and Performanc	e Measures	·	Design (N)		
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x l x f _p )	N x f _{HV} 780	pc/h/ln	<u>Design (N)</u> Design LOS v _p = (V or DDHV) / (PHF › x f _p )	κ N x f _{HV}	pc/h/ln
S	75.0	mph	S		mph
D = v _p / S	10.4	pc/mi/ln	$D = v_p / S$		pc/mi/ln
LOS	A		Required Number of Lane	es, N	portunt
Glossary	annan an an an ann an an an an an an an		Factor Location	******	4544/0-042304/1-1-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	BFFS - Ba		E _R - Exhibits 11-10, 11-12 E _T - Exhibits 11-10, 11-11 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibits 11-3	, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-11

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	BASIC FR	EEWAY SE	GMENTS WORKSHEE		
General Information	at the contract of the contract		Site Information		nahan Millen vieleten Höten Meridan kommunikan para kan p
Analyst Agency or Company Date Performed Analysis Time Period	TOM GORRI GORRILL PA 9/7/2012 PM PEAK		Highway/Direction of Trav From/To Jurisdiction Analysis Year		OF LYONS
Project Description TRAF	TON IJR-POS	STDEVELOPM	ENT W INT		
C Oper.(LOS)		Γ c	Des.(N)	T Plar	nning Data
Flow Inputs	antiski miniski konstantisko postala sa			100073656000056056074675676769666666969	
Volume, V AADT Peak-Hr Prop. of AADT, K Peak-Hr Direction Prop, D	2032	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R General Terrain:	0.94 5 0 Level	
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	mi	
Calculate Flow Adjus	tments	91794685998792949999949247949949949949494949499999	9 19 22 29 39 20 39 20 39 20 39 20 39 20 39 20 39 20 39 20 39 20 39 20 39 20 39 20 39 20 39 20 39 20 39 20 39 2		
f _ρ Ε _Τ	1.00 1.5		E _R f _{HV} = 1/[1+P _T (E _T - 1) + P _R (E _R -	1.2 1)] 0.976	
Speed Inputs			Calc Speed Adj and		econtrative and a second data in a community of the second second second second second second second second sec
Lane Width	12.0	ft			anna an
Rt-Side Lat. Clearance	6.0	ft	f _{LW}	0.0	mph
Number of Lanes, N	2		f _{LC}	0.0	mph
Total Ramp Density, TRD	0.70	ramps/mi	TRD Adjustment	2.4	mph
FFS (measured)		mph	FFS	73.0	-
Base free-flow Speed, BFFS	75.4	mph		75.0	mph
LOS and Performanc	e Measures	·····	Design (N)		
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x l x f _p ) S D = v _p / S LOS	N x f _{HV} 1108 74.9 14.8 B	pc/h/ln mph pc/mi/ln	Design (N) Design LOS v _p = (V or DDHV) / (PHF > x f _p ) S D = v _p / S Required Number of Lane		pc/h/ln mph pc/mi/ln
Glossary			Factor Location		
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	BFFS - Ba		E _R - Exhibits 11-10, 11-12 E _T - Exhibits 11-10, 11-11 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibits 11-3	, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-11
DDHV - Directional design					erated: 9/7/2012 1:30

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General Information			Site Information		g and an
Analyst Agency or Company Date Performed Analysis Time Period	TOM GORRI GORRILL PA 9/7/2012 PM PEAK	LMER	Highway/Direction of Trav From/To Jurisdiction Analysis Year		OF LYONS
	TON IJR-POS				
Coper.(LOS)	****		es.(N)	🗔 Plar	nning Data
Flow Inputs	annanna an an an airte a' stàrban bealtacana an airteadh	yata 1934 (katali palita ja		oos is water a state of the sta	
Volume, V AADT	1928	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T	0.94 5	
Peak-Hr Prop. of AADT, K Peak-Hr Direction Prop, D DDHV = AADT x K x D		veh/h	%RVs, P _R General Terrain: Grade % Length Up/Down %	0 Level mi	
Calculate Flow Adjus	tments	NICHONICHIMINENTICS AT NOT COMMON COMMON COMMON COMPANY		, and an	
f _ρ Ε _Τ	1.00 1.5		E _R f _{HV} = 1/[1+P _T (E _T - 1) + P _R (E _R -	1.2 1)] <i>0.976</i>	
Speed Inputs		en e	Calc Speed Adj and		001969789098829829999999999999999999999999999
Lane Width	12.0	ft		46.400.201944549915489465465465465465455555997634	1999 / The Control of Co
Rt-Side Lat. Clearance	6.0	ft	f _{LW}	0.0	mph
Number of Lanes, N	2		f _{LC}	0.0	mph
Total Ramp Density, TRD	0.70	ramps/mi	TRD Adjustment	2.4	mph
FFS (measured)		mph	FFS	73.0	mph
Base free-flow Speed, BFFS	75.4	mph		70.0	bu
LOS and Performanc	e Measures		Design (N)		
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x	N x f _{HV 1051}	pc/h/ln	<u>Design (N)</u> Design LOS v _p = (V or DDHV) / (PHF :	x N x f	
x f _p ) S	75.0	mph	x f _p )	HV	pc/h/ln
D = v _p / S	14.0	pc/mi/ln	S		mph
LOS	В	P	D = v _p / S Required Number of Lane	es, N	pc/mi/In
Glossary		*******	Factor Location		8844458689944699454949496986699999294494494
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	BFFS - Ba		E _R - Exhibits 11-10, 11-1 E _T - Exhibits 11-10, 11-1 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibit 11-3	1, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-11

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	.MER DEVELOPM	Site Information Highway/Direction of Trave From/To Jurisdiction Analysis Year ENT W INT res.(N) Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R General Terrain: Grade % Length Up/Down %	NORTH 2036	OF TRAFTON
GORRILL PAL 9/7/2012 PM PEAK ON IJR-POST 1948 <b>nents</b>	<i>.MER</i> <i>DEVELOPM</i> □ D veh/h veh/h veh/day	From/To Jurisdiction Analysis Year <u>ENT W INT</u> es.(N) Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R General Terrain: Grade % Length	NORTH 2036 ∫ Plan 0.94 5 0 Level	
1948 <b>nents</b>	۲ D veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R General Terrain: Grade % Length	0.94 5 0 Level	ning Data
nents	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R General Terrain: Grade % Length	0.94 5 0 Level	ning Data
nents	veh/day	%Trucks and Buses, P _T %RVs, P _R General Terrain: Grade % Length	5 0 Level	
nents	veh/day	%Trucks and Buses, P _T %RVs, P _R General Terrain: Grade % Length	5 0 Level	
nents	veh/h	General Terrain: Grade % Length	Level	
1 00		***************************************		894149993494174596984548594999999999999999999999999999
		E _R	1.2	
1.5				and water and a state of the st
		Calc Speed Adj and I	FS	
12.0	ft			
5.0	ft	f _{LW}	0.0	mph
2		f _{LC}	0.0	mph
0.70	ramps/mi	TRD Adjustment	2.4	mph
	mph	FFS	73.0	mph
75.4	mph			
Measures	11.2.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	Design (N)		2011/02/02/02/02/02/02/02/02/02/02/02/02/02/
× f _{HV} 1062	pc/h/ln		N x f _{HV}	pc/h/ln
75.0	mph			non
14.2	pc/mi/ln	1		mph
В		1 ⁻	s, N	pc/mi/ln
	antietheeniesensetensetistesensetesen	Factor Location		
D - Density FFS - Free- BFFS - Bas	y flow speed	f _p - Page 11-18		f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-1
	.0 .70 5.4 <b>Measures</b> * ^f _{HV} 1062 75.0 14.2 B S - Speed D - Densit FFS - Free-	2.0 ft 3.0 ft 3.70 ramps/mi mph 5.4 mph Measures $f_{HV} 1062$ pc/h/ln 75.0 mph 14.2 pc/mi/ln B S - Speed D - Density FFS - Free-flow speed BFFS - Base free-flow	Calc Speed Adj and F2.0ft.0ft.0ft.10ft.10ft.11 $f_{LW}$ .12ramps/mimphmph.11FFS.11 $f_{LW}$ .11 $f_{LC}$ .11TRD Adjustment.11FFS.11TRD Adjustment.11FFS.11TRD Adjustment.11FFS.11Design (N)Design LOSVp = (V or DDHV) / (PHF x.11X fp)SD = Vp / S.11Required Number of Lanes.11FFS - Free-flow speed.11FFS - Free-flow speed.11FFS - Base free-flow.11.11.11.11.12.11.13.11.14.11.14.11.15.11.16.11.17.11.17.11.18.11.11.11.11.11.12.11.13.11.14.11.14.11.15.11.16.11.17.11.18.11.19.11.11.11.11.11.12.11.13.11.14.11.15.11.16.11.17.11	Inv Fight Product with the formation of the f

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General Information	an ang ang anang panaggan ng ang ang ang ang ang ang ang a		Site Information				
Analyst Agency or Company Date Performed Analysis Time Period	TOM GORRI GORRILL PA 9/7/2012 PM PEAK		Highway/Direction of Trav From/To Jurisdiction Analysis Year		NORTH OF KMD		
Project Description TRAF	TON IJR-POS	TDEVELOPM	ENT W INT	202122302000000000000000000000000000000			
Coper.(LOS)	, an	Γc	Des.(N)	🗂 Plai	nning Data		
Flow Inputs		anı arayın ayı məsədəni aydadı ayda yaqan yaqan dağı	AND CEREMANCE AND AN ANY AND AN ANY ANY ANY ANY ANY ANY ANY ANY ANY				
Volume, V AADT Peak-Hr Prop. of AADT, K	2020	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R General Terrain:	0.94 5 0			
Peak-Hr Direction Prop, D DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	Level mi			
Calculate Flow Adjus	tments	******	n an fail i an saon an Caranna an Saon an Caranna ann an Saon an Anna an Caranna an Caranna an Caranna an Caran				
f _ρ Ε _Τ	1.00 1.5		E _R f _{HV} = 1/[1+P _T (E _T - 1) + P _R (E _R -	1.2 1)] 0.976			
Speed Inputs		Calc Speed Adj and FFS					
Lane Width	12.0	ft			an a		
Rt-Side Lat. Clearance	6.0	ft	f _{LW}	0.0	mph		
Number of Lanes, N	2		f _{LC}	0.0	mph		
Total Ramp Density, TRD	0.70	ramps/mi	TRD Adjustment	2.4	mph		
FFS (measured)		mph	FFS	73.0	mph		
Base free-flow Speed, BFFS	75.4	mph		70.0	mpir		
LOS and Performanc	e Measures		Design (N)				
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x l	N x f _{HV}		Design (N) Design LOS	- N 6			
x f _p ) S	74.9	pc/h/ln mph	v _p = (V or DDHV) / (PHF x x f _p )	K N X T _{HV}	pc/h/ln		
D = v _p / S	14.7	pc/mi/ln	S		mph		
LOS	B	pomm	D = v _p / S Required Number of Lane	es, N	pc/mi/In		
Glossary	******	92079/10/44091/02/00/0440/44/0/40/06/02/22/02/02/02/02/02/02/02/02/02/02/02/	Factor Location				
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	BFFS - Ba		E _R - Exhibits 11-10, 11-12 E _T - Exhibits 11-10, 11-11 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibits 11-3	I, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-11		

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	<b>BASIC FRI</b>	EEWAY SE	GMENTS WORKSHEE		na n		
General Information			Site Information				
Analyst Agency or Company Date Performed Analysis Time Period	TOM GORRI GORRILL PA 9/7/2012 PM PEAK	Highway/Direction of Trav From/To Jurisdiction Analysis Year		TH OF LYONS			
	TON IJR-POS						
☑ Oper.(LOS)	*******	T C	Des.(N)	☐ Plar	nning Data		
Flow Inputs					an a sharan a sharan a sharan a sharan a sharan a gaya yayin a sharan a sharan a sharan a sharan a sharan yaya		
Volume, V AADT Peak-Hr Prop. of AADT, K	1875	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R	0.94 5 0			
Peak-Hr Direction Prop, D DDHV = AADT x K x D		veh/h	General Terrain: Grade % Length Up/Down %	Level mi			
Calculate Flow Adjus	tments						
f _p E _T	1.00 1.5		$E_{R}$ $f_{HV} = 1/[1+P_{T}(E_{T}-1) + P_{R}(E_{R}-1)]$	1.2 1)] <i>0.976</i>			
Speed Inputs	ราวไรเขารอยาสตา และการจะเอากละ เสาะหารเอากุลา รอกม	an managan yang kang kang kang kang kang kang kang k	Calc Speed Adj and FFS				
Lane Width	12.0	ft					
Rt-Side Lat. Clearance	6.0	ft	f _{LW}	0.0	mph		
Number of Lanes, N	2		f _{LC}	0.0	mph		
Total Ramp Density, TRD	0.70	ramps/mi	TRD Adjustment	2.4	mph		
FFS (measured)		mph	FFS	73.0	-		
Base free-flow Speed, BFFS	75.4	mph	rro	73.0	mph		
LOS and Performanc	e Measures	1. 	Design (N)				
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x I x f _p ) S D = v _p / S LOS	N x f _{HV} 1022 75.0 13.6 B	pc/h/ln mph pc/mi/ln	Design (N) Design LOS $v_p = (V \text{ or DDHV}) / (PHF > x f_p)$ S D = $v_p / S$		pc/h/ln mph pc/mi/ln		
an a	na ana kata ang katang kata		Required Number of Lane	es, N			
Glossary	-	LANGE CONTRACTOR AND A SOLUTION CONTRACTOR AND AND AND	Factor Location				
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	BFFS - Ba		E _R - Exhibits 11-10, 11-12 E _T - Exhibits 11-10, 11-11 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibits 11-3	, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-11		

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	<b>BASIC FRI</b>	EEWAY SEG	GMENTS WORKSHEE				
	FOHAMMEDIANDIANSI PROVINSI PRO	1997-19-19-19-19-19-19-19-19-19-19-19-19-19-	0:4.2 /				
General Information		1 1	Site Information	N LOESD	ni kana manang kana kana kana kana kana kana kana		
Analyst Agency or Company Date Performed	TOM GORRI GORRILL PA 9/7/2012		Highway/Direction of Trave From/To Jurisdiction		OF LYONS		
Analysis Time Period	PM PEAK		Analysis Year	2036			
Project Description TRAF	TON IJR-POS			1714-700-00-00-00-00-00-00-00-00-00-00-00-00			
C Oper.(LOS)		ľ D	es.(N)	- Plan	ning Data		
Flow Inputs		*****	na gampuna urananan mara urana ing kanina mana kana kana kana kana kana kana ka				
Volume, V AADT	1885	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T	0.94 5			
Peak-Hr Prop. of AADT, K Peak-Hr Direction Prop, D DDHV = AADT x K x D		veh/h	%RVs, P _R General Terrain: Grade % Length Up/Down %	0 Level mi			
Calculate Flow Adjus	tments			*****			
f _p	1.00		E _R	1.2			
E _T	1.5		$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R -$	1)] <i>0.976</i>			
Speed Inputs			Calc Speed Adj and FFS				
Lane Width	12.0	ft					
Rt-Side Lat. Clearance	6.0	ft	f _{LW}	0.0	mph		
Number of Lanes, N	2		f _{LC}	0.0	mph		
Total Ramp Density, TRD	0.70	ramps/mi	TRD Adjustment	2.4	mph		
FFS (measured)		mph	FFS	73.0	mph		
Base free-flow Speed, BFFS	75.4	mph			•		
LOS and Performanc	e Measures		Design (N)				
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x	N x f _{HV}		Design (N) Design LOS				
x f _p )		pc/h/ln	v _p = (V or DDHV) / (PHF × x f _p )	(n x t _{HV}	pc/h/ln		
S D-V/S	75.0 13.7	mph na/mi/ln	S		mph		
$D = v_p / S$		pc/mi/ln	$D = v_p / S$		pc/mi/ln		
LOS	В		Required Number of Lane	es, N			
Glossary			Factor Location				
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	BFFS - Ba		E _R - Exhibits 11-10, 11-12 E _T - Exhibits 11-10, 11-11 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibits 11-3	, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-1		

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	BASIC FRI	EEWAY SE	GMENTS WORKSHEE					
General Information	DJANERTA ÇALI GOL ÇALDA MUNELA CA MAQVE KUDUL KUMUNUMU.	anananan tanen kajada kajan kajan kan kan kan kan kan kan kan kan kan k	Site Information	ndaaren on an ad a chow on a chuichtean a chuichtean a chuichtean a chuichtean a chuichtean a chuichtean a chui	nan da			
Analyst Agency or Company Date Performed Analysis Time Period	TOM GORRI GORRILL PA 9/7/2012 PM PEAK	LMER	Highway/Direction of Trav From/To Jurisdiction Analysis Year		NORTH OF TRAFTON			
	TON IJR-POS	*****	***************************************					
C Oper.(LOS)			Des.(N)	☐ Plar	nning Data			
Flow Inputs								
Volume, V AADT Peak-Hr Prop. of AADT, K Peak-Hr Direction Prop, D	1723	veh/h veh/day	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R General Terrain:	0.94 5 0 Level				
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	mi				
Calculate Flow Adjus	tments							
f _p E _T	1.00 1.5		E _R f _{HV} = 1/[1+P _T (E _T - 1) + P _R (E _R -	1.2 1)] <i>0.</i> 976				
Speed Inputs	hanimaan maana maana maana maana maada ay maddi dalad ishida		Calc Speed Adj and FFS					
Lane Width	12.0	ft	อนข้องและสามหารณ์แหน่งมีแหน่งมีการและการสามหารณ์แหน่งมีเห็น 	in chi și în la mașta în construir construir construir construir construir construir construir construir const	an a			
Rt-Side Lat. Clearance	6.0	ft	f _{LW}	0.0	mph			
Number of Lanes, N	2		f _{LC}	0.0	mph			
Total Ramp Density, TRD	0.70	ramps/mi	TRD Adjustment	2.4	mph			
FFS (measured)		mph			•			
Base free-flow Speed, BFFS	75.4	mph	FFS	73.0	mph			
LOS and Performanc	e Measures	6	Design (N)					
<u>Operational (LOS)</u> v _p = (V or DDHV) / (PHF x l x f _p ) S	N x f _{HV 939} 75.0	pc/h/ln mph	<u>Design (N)</u> Design LOS v _p = (V or DDHV) / (PHF x x f _p )	κΝ x f _{HV}	pc/h/ln			
D = v _p / S	12.5	pc/mi/ln	S		mph			
LOS	В	L	D = v _p / S Required Number of Lane	es, N	pc/mi/ln			
Glossary		namen en e	Factor Location					
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	BFFS - Ba		E _R - Exhibits 11-10, 11-12 E _T - Exhibits 11-10, 11-11 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibits 11-3	I, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-11			

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	BASIC FRI	EEWAY SEC	GMENTS WORKSHEE		2012/01/01/01/01/01/01/01/01/01/01/01/01/01/	
General Information			Site Information			
Analyst Agency or Company Date Performed Analysis Time Period	t TOM GORRILL v or Company GORRILL PALMER erformed 9/7/2012 is Time Period PM PEAK			el I-95SB NORTH 2036	RTH OF KMD	
	TON IJR-POS	STDEVELOPM	ENT W INT			
	1		Des.(N)	🗌 🗌 🗍 Plar	ning Data	
Flow Inputs		00000000000000000000000000000000000000				
Volume, V AADT Peak-Hr Prop. of AADT, K Peak-Hr Direction Prop, D DDHV = AADT x K x D	1963	veh/h veh/day veh/h	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R General Terrain: Grade % Length	0.94 5 0 Level mi		
		VCIIII	Up/Down %			
Calculate Flow Adjus	tments					
f _p E _T	1.00 1.5		E _R f _{HV} = 1/[1+P _T (E _T - 1) + P _R (E _R -	1.2 1)] 0.976		
Speed Inputs		Calc Speed Adj and FFS				
Lane Width Rt-Side Lat. Clearance Number of Lanes, N Total Ramp Density, TRD FFS (measured)	12.0 6.0 2 0.70	ft ft ramps/mi mph	f _{LW} f _{LC} TRD Adjustment FFS	0.0 0.0 2.4 73.0	mph mph mph mph	
Base free-flow Speed, BFFS	75.4	mph			สารายการการการการการการการการการการการการการก	
LOS and Performanc	e Measures	<b>}</b>	Design (N)	***	numarcae nikolokiliki (KNI) (KNI)	
<u>Operational (LOS)</u> $v_p = (V \text{ or DDHV}) / (PHF x x f_p)$ S D = $v_p / S$ LOS	N x f _{HV} 1070 74.9 14.3 B	pc/h/ln mph pc/mi/ln	Design (N) Design LOS v _p = (V or DDHV) / (PHF : x f _p ) S D = v _p / S Required Number of Lane		pc/h/ln mph pc/mi/ln	
Glossary		elentration and formation and the formation of the second	Factor Location			
N - Number of lanes V - Hourly volume v _p - Flow rate LOS - Level of service speed DDHV - Directional design	BFFS - Ba		E _R - Exhibits 11-10, 11-12 E _T - Exhibits 11-10, 11-12 f _p - Page 11-18 LOS, S, FFS, v _p - Exhibit 11-3	1, 11-13	f _{LW} - Exhibit 11-8 f _{LC} - Exhibit 11-9 TRD - Page 11-11	
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General Infori				NCTIONS W Site Infori						047-7FP-7F-9776010000000-FF-7FV
And any second second device of the second				and the second		1-95 NI				n para di matana di matana di mata
Analyst		GORRILL RILL PALMER		Freeway/Dir of Tra Junction	ivei		> S RD NB ON			
gency or Company ate Performed	9/7/20			Jurisdiction		LIUN				
nalysis Time Period				Analysis Year		2016				
and the second	TRAFTON PRO	OPERTIES IJR					10 000 FE 10 10 10 10 10 10 10 10 10 10 10 10 10	****		
nputs		1993-0-1993-0-1993-0-1993-0-1993-0-1993-0-1993-0-1993-0-1993-0-1993-0-1993-0-1993-0-1993-0-1993-0-1993-0-1993-0				*****		542-163-06-10000000000000000000000000000000		
ipstream Adj Ramp		Number of Lane		2					Downstre Ramp	eam Adj
✓Yes □On		Acceleration La	ne Length, L _A	350						
		Deceleration La	ine Length L _D						☐ Yes	☐ On
[—] No		Freeway Volum	ie, V _F	1099					년 No	└─ Off
		Ramp Volume,	V _D	75					L _{down} =	ft
_{up} = 575 ft		Freeway Free-I		<del>_</del> 70.0					~down	
/ _u = 57 veł		Ramp Free-Flo		35.0					V _D =	veh/h
-										
Conversion to	pc/h Unc	[	conditions		1	I	T	-	ſ	
(pc/h)	v (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PH	F x f _{HV} x f _p
reeway	1099	0.90	Level	0	0	1	.000	1.00		1221
Ramp	75	0.90	Level	0	0	1	.000	1.00	<u></u>	83
JpStream	57	0.90	Level	0	0	1	.000	1.00		63
DownStream									<u> </u>	
		Verge Areas			Diverge Areas Estimation of v ₁₂					
stimation of	v ₁₂									
	V ₁₂ = V _F	,			$V_{12} = V_{R} + (V_{F} - V_{R})P_{FD}$					
EQ =	(Equa	ation 13-6 or	13-7)		L _{EQ} = (Equation 13-12 or 13-13)					
P _{FM} =	1.000	using Equati	on (Exhibit 13-	-6)	P _{FD} = using Equation (Exhibit 13-7)					
/ ₁₂ =	1221	oc/h			V ₁₂ = pc/h					
$V_3$ or $V_{av34}$		n (Equation 1	3-14 or 13-1	7)	V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17)					
s V ₃ or V _{av34} > 2,70	0 pc/h? 🦳 Yes	s 🕅 No			Is V ₃ or V _{av34} > 2,700 pc/h?  Yes  No					
s V ₃ or V _{av34} > 1.5 *					Is $V_3$ or $V_a$	_{iv34} > 1.		Yes 🗆 No		
f Yes,V _{12a} =		(Equation 13	-16, 13-18, o	r	If Yes,V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					
Capacity Che	13-19)			abbe ini anna anna anna anna anna anna anna	Capaci	tv Cł	CONTRACTOR OF THE OWNER	5-10)		
sapacity one	Actual	T C:	apacity	LOS F?	100,000		Actual	l Ca	pacity	LOS F?
	7100001	† T			V _F			Exhibit 13-	in the second se	404400000 0000000000000000000000000000
	1001	E 111/40 0		N	V _{FO} = V			Exhibit 13-	-8	
V _{FO}	1304	Exhibit 13-8		No				Exhibit 13		NAMES OF TAXABLE PARTY OF
					V _R	-		10		
-low Entering	y Merge In	fluence A	rea		Flow E	nteri	ng Dive	rge Influei		
	Actual		Desirable	Violation?			Actual	Max Des	sirable	Violation
V _{R12}	1304	Exhibit 13-8	4600:All	No	V ₁₂	<u> </u>		Exhibit 13-8		
Level of Serv			Construction of the second s		Level			terminatio		ot F)
i c	0.00734 v _R + (	0.0078 V ₁₂ - 0.0	0627 L _A		L			.0086 V ₁₂ - 0	1.009 L _D	
0 _R = 13.4 (pc/m	i/ln)				D _R =	(pc/mi	/ln)			
OS = B (Exhibit	13-2)				LOS =	(Exhib	it 13-2)	****		
Speed Detern	nination				Speed	Dete	rminatio	on		
M _S = 0.311 (Exi					D _s = (	(Exhibit	13-12)			
•	(Exhibit 13-11)					mph (E:	xhibit 13-12)			
••	Exhibit 13-11)				1	mph (E:	xhibit 13-12)			
v	(Exhibit 13-13)				1°	• •	, xhibit 13-13			
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Comprel Informe		IPS AND			The second s		,		an an an an an an an an an Anna Anna An	******
General Inform		00000	*****	Site Inform	Ministration and a second s	105 11			******	10000000000000000000000000000000000000
Analyst				Freeway/Dir of Tra Junction	ivel	1-95 NE	3 IB ON RAMI	2		
Agency or Company Date Performed				Jurisdiction		יו טואא		-		
Analysis Time Period	/			Analysis Year		2016				
	RAFTON PRO	OPERTIES IJR								
Inputs					*****************					
Jpstream Adj Ramp	1	Number of Lan		2					Downstre Ramp	eam Adj
⊠Yes 厂On		Acceleration La	- 1	350					•	
		Deceleration La	ane Length L _D						Yes	☐ On
T No F Off		Freeway Volum	ne, V _F	911					🖂 No	☐ Off
- 2000 #		Ramp Volume,	V _R	368					L _{down} =	ft
- _{up} = 2000 ft		Freeway Free-	Flow Speed, S	_{FE} 70.0					GOWIS	
V _u = 263 veh/		Ramp Free-Flo		35.0					V _D =	veh/h
Conversion to						n de la Company de la Comp	****			DJOYINA MIC
	V	PHF	Terrain	%Truck	%Rv	1	f	f _p	v = \//РН	F x f _{HV} x f _p
(pc/h)	(Veh/hr)						f _{HV}			
Freeway	911	0.90	Level	<u> </u>	0		.000	1.00		1012
Ramp	368	0.90	Level	0	0		.000	1.00		409 292
UpStream DownStream	263	0.90	Level	0	0		.000	1.00	******	292
DownSuean		lerge Areas	22/07/07/2012/07/07/07/07/07/2012/07/07/07/07/07/07/07/07/07/07/07/07/07/			L	D	iverge Areas		116-4 ¹¹¹¹⁻¹⁶⁰ 167-1111-1
Estimation of v	12			an de la companya de	Estimation of v ₁₂					
	$V_{12} = V_{F}$	(P.,.)			$V_{12} = V_{R} + (V_{F} - V_{R})P_{FD}$					
L _{EQ} =	12	ation 13-6 or	13-7)		L _{EQ} = (Equation 13-12 or 13-13)					
-EQ P _{FM} =		using Equati		1-6)	P _{FD} = using Equation (Exhibit 13-7)					
FM √ ₁₂ =	1012 p			, 0)	$V_{12} = pc/h$					
* 12 V ₃ or V _{av34}		n (Equation 1	3-14 or 13-1	17)	V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17)					
Is V ₃ or V _{av34} > 2,700 p				,	Is V ₃ or V _{av34} > 2,700 pc/h? <b>Yes No</b>					
Is $V_3$ or $V_{av34} > 1.5 * V_2$					1 .			Yes TNo		
• • • • • •		Equation 13	-16, 13-18, d	or				c/h (Equatio	n 13-16,	13-18, or
f Yes,V _{12a} =	13-19)	, I	anatote on date of the second	1999 TO THE REPORT OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE T	lf Yes,V _{12a}		13	3-19)		
Capacity Check					Capaci	ty Ch	CARGONINE MARKER DOWN THE TANK THE			
	Actual		apacity	LOS F?	<u> </u>		Actual	and the second s	pacity	LOS F?
					V _F			Exhibit 13-	_	
V _{FO}	1421	Exhibit 13-8		No	$V_{FO} = V$	_F - V _R		Exhibit 13-		
					V _F			Exhibit 13 10	-	
Flow Entering I	Merae In	<u>I I</u> fluence A	rea		Flow E	nteri	na Diver	ge Influer	ice Are	 a
	Actual		Desirable	Violation?			Actual	Max Des		Violation?
V _{R12}	1421	Exhibit 13-8	4600:All	No	V ₁₂	Τ		Exhibit 13-8		
Level of Servic	e Detern	nination (i	f not F)			of Ser	vice De	terminatio	n (if no	ot F)
D _R = 5.475 + 0.0						D _R =	4.252 + 0	0086 V ₁₂ - 0	.009 L _D	
D _R = 14.2 (pc/mi/lr			-		D _R =	(pc/mi/	'ln)			
_OS = B (Exhibit 13-					1	(Exhib	it 13-2)			
Speed Determi	-		Andrew and a star of the second s	alanda kalan kalan karanga menangan kenangan karangan karanga karanga karanga karanga karanga karanga karanga k	L		rminatic	n		
M _S = 0.313 (Exibit		******		geography and a second seco		(Exhibit				
0	-				1	•	, (hibit 13-12)			
K · ·							(hibit 13-12)			
S ₀ =        N/A mph (Exl S =         61.2 mph (Ex					1		(hibit 13-13)			
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Concrat luke	The second s			NCTIONS W	Name and Address of the Address of t		1019150300000000000000000000000000000000			
General Infor		000000	nyy magananya ang mang mang mang mang mang mang mang	Site Infor	In the second	105 0	D	teran management and a tablear		
Analyst		GORRILL		Freeway/Dir of Tra	ivei	I-95 SI		P-NORTH RAN	<i>I</i> P	
gency or Company	GOR	RILL PALMER		Junction						
Date Performed	9/7/2			Jurisdiction						
Analysis Time Period	AM V	V/0 INT PREDE	VELOPMENT	Analysis Year		2016				
Project Description	TRAFTON PR	OPERTIES IJR		*******						
nputs					****			12/10/00/00/00/00/00/00/00/00/00/00/00/00/		ANN WARFING AND
Jpstream Adj Ramp		Number of Lan	es, N	2					Downstrea	am Adj
		Acceleration La	ane Length, L _A	450					Ramp	
⊠Yes □On		Deceleration L	ane Length L _D						T Yes	🗔 On
🗆 No 🛛 🖾 Off		Freeway Volur	ne, V _F	762					R No	Off
		Ramp Volume,	V _R	268					1. =	ft
- _{up} = 950 ft		1	Flow Speed, S _F	ء 70.0					L _{down} =	1.
V _u = 394 ve	h/h	Ramp Free-Flo		35.0					V _D =	veh/h
-					1998-1999-1999-1999-1999-1999-1999-1999	2010/1000000000000000		*****	<u></u>	
Conversion to	v pc/h Uno	1		1	I	<u> </u>	<del>.</del>	_	1	
(pc/h)	(Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	V = V/PHF	= x f _{HV} x f _p
Freeway	762	0.90	Level	0	0	1	1.000	1.00		847
Ramp	268	0.90	Level	0	0	1	1.000	1.00		298
UpStream	394	0.90	Level	0	0	1	1.000	1.00		438
DownStream		L L		<u> </u>			l	iverge Areas		2014-11-11-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-
Estimation of		Merge Areas	an a		Estima	tion		iverge Areas	ayaay aayaaaa in hii hii kaasha	De201070707070707070707010000000000000000
								/\ ( \ \ (	10	
	V ₁₂ = V _F	1.101					12	/ _R + (V _F - V _I	• • • =	0
EQ =		ation 13-6 or			L _{EQ} =		•	Equation 13		-
P _{FM} =			on (Exhibit 13-	-6)	P _{FD} =			ising Equati	on (Exhibit 1	3-7)
V ₁₂ =	847 p				V ₁₂ =		•	oc/h	10 11	(-7)
V ₃ or V _{av34}	-		3-14 or 13-1	7)	V ₃ or V _{av34}			oc/h (Equation		17)
Is $V_3$ or $V_{av34} > 2,70$					1			Yes 🗆 No		
Is $V_3$ or $V_{av34}$ > 1.5 *	V ₁₂ /2	s 🗹 No	40 40 40 -	_	1			Yes		2 10 or
lf Yes,V _{12a} =	pc/n 13-19		-16, 13-18, o	ſ	If Yes,V _{12a}	=		3-19)	10, 1	5-10, 01
Capacity Che			on and a second seco	****	Capaci	ty Cł				
	Actual	C	apacity	LOS F?			Actual	Ca	apacity	LOS F?
					V _F	:		Exhibit 13	-8	
V _{FO}	1145	Exhibit 13-8		No	V _{FO} = V	_F - V _R		Exhibit 13	-8	
- FO					V _R			Exhibit 1	3-	
								10		
Flow Entering				Vielet0	HOW E	nteri	And the second se	r <b>ge Influe</b> Max De		Violation?
V	Actual 1145	Exhibit 13-8	Desirable 4600:All	Violation? No	V ₁₂		Actual	Exhibit 13-8	SILADIC	violation
V _{R12}		k				JE Sol	nvice Do	terminati	n (if not	<u>ا</u> ۶ <i>E</i> )
Level of Serv								.0086 V ₁₂ - 0		· · /
		0.0078 V ₁₂ - 0.0	A A A A A A A A A A A A A A A A A A A		h =			12		
$D_{\rm R} = 11.4  (\rm pc/m)$					1	(pc/mi	,			
LOS = B (Exhibit					.1	-	oit 13-2)	******	andrede i der angehandet for ein som andrede andre	
Speed Detern				00000000000000000000000000000000000000			rminatio	<i>א</i> ון און און און און און און און און און א		
M _S = 0.302 (Exi	oit 13-11)					•	: 13-12)			
S - Gigmobi	Exhibit 13-11)				1		xhibit 13-12)			
S _R = 61.6 mph	· · ·									
S ₀ = N/A mph (	Exhibit 13-11) Exhibit 13-13)						xhibit 13-12) xhibit 13-13)			

	RAI	VPS AND I	RAMP JUN	ICTIONS W		EET				
General Infor				Site Inforr						590,500 Minis (200 miles provide a second
Analyst	TOM	GORRILL	F	reeway/Dir of Tra	ivel	1-95 S				
Agency or Company	GOR	RILL PALMER	J	unction			SB ON RAM P-DOWN	P-NORTH		
Date Performed	9/7/20	012		lurisdiction		10-100	-DOWN			
Analysis Time Period	M MA	V/0 INT PREDE	/ELOPMENT ,	Analysis Year		2016				
Project Description	TRAFTON PRO	OPERTIES IJR	*****		12-102-20-20-20-20-20-20-20-20-20-20-20-20-2					
Inputs										0.47400310030044
Jpstream Adj Ramp		Number of Lan Acceleration La		2 450					Downstre Ramp	am Adj
∏Yes ☐Or	า	Deceleration La		450					I ∕ Yes	l⊽ On
⊠No ⊏Of	f	Freeway Volum	0	762					□ No	└─ Off
_ #		Ramp Volume,	V _R	268					L _{down} =	800 ft
- _{up} = ft		Freeway Free-I	Flow Speed, S _{FF}	. 70.0						
V _u = veh/h		Ramp Free-Flo		35.0		a a constantina de la constante			V _D =	84 veh/h
Conversion t	o pc/h Und	der Base C	conditions		(azw.c					
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PH	F x f _{HV} x f _p
Freeway	762	0.90	Level	0	0	· I	1.000	1.00		847
Ramp	268	0.90	Level	0	0		1.000	1.00		298
UpStream	04	0.00	l aval	0	0		1.000	1.00		93
DownStream	84	0.90 Merge Areas	Level		0			Diverge Areas	<u>L</u>	30
Estimation of		neige Areas			Estima	tion			dan da ang kang kanang mananan kan kan kan kan kan kan kan kan k	ushtee0019962059620000000000000000000000000000000
ana ana amin'ny fantsa ana amin'ny fantsa amin'ny fantsa amin'ny fantsa amin'ny fantsa amin'ny fantsa amin'ny f	$V_{12} = V_{F}$	( P _{FM} )		******	İ		V ₁₂ = 1	V _R + (V _F - V _F	_R )P _{FD}	********
-eq =		ation 13-6 or	13-7)		L _{EQ} =			(Equation 13	-12 or 13-	13)
P _{FM} =	1.000	using Equati	on (Exhibit 13-	6)	P _{FD} =			using Equation	on (Exhibit '	13-7)
/ ₁₂ =	847 p				V ₁₂ =			pc/h		
√ ₃ or V _{av34}		h (Equation 1	3-14 or 13-1	7)	V ₃ or V _{av34}	L		pc/h (Equation	13-14 or 13-	-17)
Is V ₃ or V _{av34} > 2,70							,700 pc/h? [	Yes 🗆 No	•	
Is $V_3$ or $V_{av34} > 1.5$								Yes No		
If Yes,V _{12a} =	pc/h	(Equation 13-	-16, 13-18, o	r	If Yes,V _{12a}			pc/h (Equatio		13-18, or
	<u>13-19)</u>	)			Capaci		2002/010/02/02/01/01/01/01/02/02/02/02/02/02/02/02/02/02/02/02/02/	3-19)		
Capacity Che	Actual		apacity	LOS F?		<u>ty</u> 01	Actual	L Ca	apacity	LOS F?
	Aviuai	T T						Exhibit 13		
V	1145	Exhibit 13-8		No	V _{FO} = V			Exhibit 13		
V _{FO}	1145	EXHIBIT 13-0		NO				Exhibit 13	3-	
Flow Enterin	<u> </u>	<u>I</u> Influence A	rea			•	ing Dive	rge Influe	nce Are	 a
	Actual		Desirable	Violation?			Actual	Max De		Violation?
V _{R12}	1145	Exhibit 13-8	4600:All	No	V ₁₂			Exhibit 13-8		
Level of Serv	vice Deterr	nination (i	f not F)		Level			eterminatio	The second s	t F)
D _R = 5.475 +	+0.00734 v _R +	0.0078 V ₁₂ - 0.0	0627 L _A			D _R =	4.252 + 0	).0086 V ₁₂ - (	0.009 L _D	
D _R = 11.4 (pc/n	ni/In)				D _R =	(pc/mi	i/ln)			
LOS = B (Exhibit	13-2)				LOS =	(Exhib	oit 13-2)			
Speed Deteri	mination				Speed	Dete	erminati	on		
	ibit 13-11)				D _s =	(Exhibi	t 13-12)			
<b>v</b>	(Exhibit 13-11)				1	mph (E	xhibit 13-12	)		
	(Exhibit 13-11)					mph (E	xhibit 13-12	)		
•	(Exhibit 13-13)				S =	mph (E	xhibit 13-13	)		
	······	Rights Reserved					ersion 6.1		Generate	d: 9/9/2012 10

General Infor		III O MINU	RAMP JUN	Site Infor		Aco Len X	*****			ALCH COLUMN AND AND A COLUMN AND
				WINCOM BUILDING WINCOM CONTRACTOR AND CONTRACTOR		105 0	Q			
Analyst		GORRILL		reeway/Dir of Tra	avei	I-95 S KMD :		P-SOUTH RAN	ΛP	
Agency or Company	GOR	RILL PALMER	J	unction					•••	
Date Performed	9/7/2			urisdiction						
Analysis Time Period	AM V	V/0 INT PREDE	VELOPMENT A	nalysis Year		2016				
Project Description	TRAFTON PR	OPERTIES LIR		energy of he with an bldg is a first of				encer en marministation infantistic		9 <b>01400000000000000000000000</b>
nputs					çını için işin karını manışlarını i	hand an an Anal Calmark Calmark		54534454 <u>594</u> 460009446590553467474947474		and the second
Jpstream Adj Ramp		Number of Lar	ies. N	2				******	Downstrea	am Adi
		1	ane Length, L _A	700					Ramp	ann 7 tog
🖻 Yes 🛛 🗖 On		Deceleration L	11						T Yes	□ On
⊂No ⊂Off				4020						
		Freeway Volur	,	1030					전 No	☐ Off
_{rup} = 200 ft		Ramp Volume		84					L _{down} =	ft
		1	Flow Speed, S _{FF}	70.0						
/ _u = 268 ve	eh/h	Ramp Free-Flo	ow Speed, S _{FR}	35.0					V _D =	veh/h
Conversion to	pc/h Und	der Base (	Conditions		***************************************	********	<u>, , , , , , , , , , , , , , , , , , , </u>			***
(pc/h)	V	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PHF	x f x f
	(Veh/hr)	ļ			ļ					
Freeway	1030	0.90	Level	0	0		1.000	1.00		144
Ramp	84	0.90	Level	0	0		1.000	1.00		93
JpStream	268	0.90	Level	0	0		1.000	1.00		298
DownStream		L L Merge Areas					L	iverge Areas	1	
Estimation of				- -	Estima	tion				and and a second se
	$\frac{12}{V_{12} = V_F}$	/D \	nin an			oʻsaro tarimi sayati		V _R + (V _F - V _f	١D	
_		tion 13-6 or	10 7)		_		•=	Equation 13		3)
EQ =			-		L _{EQ} =					
FM =			ion (Exhibit 13-6	))	P _{FD} =			using Equation		)-/)
/ ₁₂ =	1144			•	$V_{12} =$			oc/h	40 44 40 4	-71
⁴ 3 or V _{av34}			13-14 or 13-17	()	V ₃ or V _{av34}			pc/h (Equation		/)
Is $V_3$ or $V_{av34} > 2,70$								Yes 🗌 No		
Is V ₃ or V _{av34} > 1.5 *			10 10 10					[™] Yes [™] No oc/h (Equatio		2 10 or
f Yes,V _{12a} =	pc/n 13-19)		5-16, 13-18, or		lf Yes,V _{12a}	=		3-19)	JII 13-10, 14	5-10, 01
Capacity Che		*****			Capaci	ty Cl		******	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	edal 60 York Carace Anna ann an Anna ann an Anna Anna Anna
	Actual	l C	apacity	LOS F?			Actual	Ca	apacity	LOS F?
					V _F			Exhibit 13	-8	
V _{FO}	1237	Exhibit 13-8		No	V _{FO} = V	_F - V _R		Exhibit 13	-8	
• FO	1201				V _R			Exhibit 13	3-	1
					1			10		
low Entering					Flow E	nteri	No. of Concession, Name of Street, or other Designation, or other Designation, or other Designation, or other D	rge Influe		1/c-1-0
	Actual	Same and the second sec	Desirable	Violation?			Actual	Max De:	sirable	Violation?
V _{R12}	1237	Exhibit 13-8	4600:All	No	V ₁₂	<u> </u>	X 9%-	Exhibit 13-8		Jacow 1
evel of Servi		0.000 Million (0.000			Levelo			terminatio		<u>r)</u>
	0.00734 v _R + (	).0078 V ₁₂ - 0.(	)0627 L _a					.0086 V ₁₂ - (	0.009 L _D	
) _R = 10.7 (pc/m	-				1	(pc/mi				
.OS = B (Exhibit	13-2)						it 13-2)		*****	
Speed Detern	nination				Speed	Dete	rminatio	on		
∕l _s = 0.285 (Exil	oit 13-11)				D _s = (	Exhibit	13-12)			
9	Exhibit 13-11)				1	mph (E:	xhibit 13-12)			
	Exhibit 13-11)				1	mph (E:	xhibit 13-12)			
0	Exhibit 13-13)				ľ		, xhibit 13-13)			
					HCS20	<u> </u>	,			

A		NIC O ANU	WINE JUI	NCTIONS W	and the second se		****			07,97,774449340455eenineministeriinn
General Inform	000410044000000000000000000000000000000			Site Infor					ALCHIMATIC COMPANY	THE PROPERTY IN THE PROPERTY IS NOT THE
nalyst		GORRILL		Freeway/Dir of Tra		1-95 SE				
gency or Company				Junction		LYON	S ROAD SB			
ate Performed	9/7/2 AM M	J1Z V/0 INT PREDE		Jurisdiction						
nalysis Time Period	AIVI	WU INT FREDE	VELOPIVIENT	Analysis Year		2016				
นายนในกา <del>ย</del>	RAFTON PRO	OPERTIES IJR	*****				************	**************		
nputs									1	sign and a state of the state o
lpstream Adj Ramp		Number of Lan		2					Downstre	eam Adj
⊽Yes ⊏On		Acceleration La	ine Length, L _A	350					Ramp	
· Tes i Oli		Deceleration La	ane Length L _D						☐ Yes	☐ On
No 🔽 Off		Freeway Volun	ne, V _F	1047					I No	⊡ Off
		Ramp Volume,	Vp	175						ft
_{up} = 600 ft		Freeway Free-		e 70.0					L _{down} =	10
/_ = 67 veh/	h	Ramp Free-Flo	•	35.0					V _D =	veh/h
-		1		wy yww.www.www.www.www.iwithithithichand.co.co.co.co.co.co.co.co.co.co.co.co.co.		*****		and the state of the state	<u>[</u>	
Conversion to	<u>v</u>	I I			0/Du	Ī	¢ I	£		F x f _{HV} x f _p
(pc/h)	(Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p		
reeway	1047	0.90	Level	0	0		.000	1.00	ļ	1163
Ramp	175	0.90	Level	0	0		.000	1.00	ļ	194
JpStream	67	0.90	Level	0	0	-1	.000	1.00		74
DownStream		Merge Areas					l	iverge Areas	1	a a fund divina a sua sua sua sua sua sua sua sua sua
stimation of v		WEIGE AIEas	99999998888888888888888888888888888888	ala canada a su a construir a construir a na ana ana ana ana ana ana ana ana a	Estimat	ion d		Weige Hieus		*****
				and the second				/ _R + (V _F - V _F		
	V ₁₂ = V _F		10 7						• • -	40)
eq =		ation 13-6 or		-	L _{EQ} =			Equation 13		
FM =		using Equati	on (Exhibit 13-	-6)	P _{FD} =			sing Equatio	on (Exhibit	13-7)
1 ₁₂ =	1163				V ₁₂ =		•	ic/h		(
5 av54	-	h (Equation 1	3-14 or 13-1	7)	$V_3 \text{ or } V_{av34}$		-	oc/h (Equation		-17)
s V ₃ or V _{av34} > 2,700					1 -			Yes T No		
s V ₃ or V _{av34} > 1.5 * V					Is $V_3$ or $V_{av}$	_{/34} > 1.		Yes 🔽 No		
Yes,V _{12a} =	pc/h 13-19)	(Equation 13	-16, 13-18, o	r	lf Yes,V _{12a}	æ		c/h (Equatio -19)	on 13-16,	13-18, or
Capacity Chec	and the second	) 			Capacit	v Cł	CONTRACTOR OF THE OWNER	-10)	ang tanan ga na na mului. Sina	
	Actual	C	apacity	LOS F?			Actual	Ca	pacity	LOS F?
		T			V _F	*****		Exhibit 13		
V	4057	Tubibit 40.0		No	$V_{FO} = V_F$	- <b>-</b> V _D		Exhibit 13	-8	
V _{FO}	1357	Exhibit 13-8		No		<u> </u>		Exhibit 13	3-	10/8/ <b>70</b>
					V _R		<u> </u>	10		
Flow Entering	Merge In				Flow E	nteri	20	ge Influei		
	Actual		Desirable	Violation?		_	Actual	Max Des	sirable	Violation
V _{R12}	1357	Exhibit 13-8	4600:All	No	V ₁₂	<u> </u>	<u> </u>	Exhibit 13-8	1.6	
evel of Servic			NAMES OF TAXABLE PARTY OF TAXABLE PARTY.	*****	Level o			terminatio		<u>(, , , , , , , , , , , , , , , , , , , </u>
IX.		0.0078 V ₁₂ - 0.0	10021 LA		<b>D</b>	••		0086 V ₁₂ - 0		
) _R = 13.8 (pc/mi/l					1	pc/mi/				
.OS = B (Exhibit 13							it 13-2)			an a
Speed Determ	ination			******		*********	rminatio	n	011070000000000000000000000000000000000	Relikovanskom and generative
∕I _S = 0.312 (Exibi	t 13-11)						13-12)			
•	xhibit 13-11)				1	nph (E)	xhibit 13-12)			
$S_0 = N/A mph (E)$					S ₀ = n	nph (Ex	xhibit 13-12)			
• • •	xhibit 13-13)				S= r	nph (Ex	xhibit 13-13)			
vright © 2010 University		Dishts Deserve				TM .	/ersion 6.1	······································	Generate	ed: 9/9/2012

HCS2010TM Version 6.1

Generated: 9/9/2012 9:54 AM

A		MFS AND	KAIMP JUI	NCTIONS W				****		*****
General Info				Site Infor		1.05.11		****		
Analyst		GORRILL RILL PALMER		Freeway/Dir of Tra Junction	avel	1-95 N	B S RD NB OI			
Agency or Company Date Performed	y GOR 9/7/2			Jurisdiction		LION				
	DM V					0040				
Analysis Time Perio				Analysis Year	and a state of the	2016				a an the second state of the second
Project Description	TRAFTON PR	OPERTIES IJR		*****	guyuu yayaqu manga manayalka na kalida kin			***		a an
Inputs	n an				****	204703001000000			1	
Jpstream Adj Ramp	0	Number of Lar		2					Downstre Ramp	eam Adj
⊠Yes ⊏O	n		ane Length, L _A	350						-
		1	ane Length L _D							☐ On
∏No I⊄O	ff	Freeway Volur	ne, V _F	1470					🗹 No	☐ Off
- _{up} = 575	fi	Ramp Volume	, V _R	50					L _{down} =	ft
"up 010	11	Freeway Free-	Flow Speed, S _F	F 70.0						
ν _u = 178 ν	/eh/h	Ramp Free-Flo	ow Speed, S _{FR}	35.0					V _D =	veh/h
Conversion	to nc/h Uni	<u>I</u>		*****				<b>619-0</b> 5-019	1	192007498.840040 www.energia.com
		PHF	CARENCES INCOMENTATION CONTRACTOR DOCUMENT	l l	%Rv	l	f I	f		IF x f _{HV} x f _p
(pc/h)	(Veh/hr)	<u> </u>	Terrain	%Truck			f _{HV}	fp		
Freeway	1470	0.90	Level	0	0		1.000	1.00	<u> </u>	1633
Ramp	50	0.90	Level	0	0		1.000	1.00		56
UpStream DownStream	178	0.90	Level	0	0		1.000	1.00		198
JownStream		I L Verge Areas			<u> </u>	<u> </u>	ا C	)iverge Areas	1	atport de la composition de la composit
Estimation o			*****	<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>	Estima	tion				
	$V_{12} = V_F$	(P)						V _R + (V _F - V _F		
-EQ =		ation 13-6 or	13-7)		L _{EQ} =			Equation 13		-13)
EQ PFM =			ion (Exhibit 13	-6)	$P_{FD} =$			using Equation		-
+M / ₁₂ =	1633	÷ .		0)	V ₁₂ =			oc/h		,
' 12 / ₃ or V _{av34}			13-14 or 13-1	7)	V ₃ or V _{av34}			pc/h (Equation	13-14 or 13	-17)
Is $V_3$ or $V_{av34} > 2,7$				()				TYes ⊡No		,
$V_3 \text{ or } V_{av34} = 1.5$ Is $V_3 \text{ or } V_{av34} > 1.5$								Tes ⊟ No		
			-16, 13-18, c	r				oc/h (Equatio		13-18, or
f Yes,V _{12a} =	13-19)				lf Yes,V _{12a}		1	3-19)	ne se de la de la completa da de	54511570/10080/024224-02116-04511-0-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-
Capacity Ch		-			Capaci	ty Ch				
1.46.000.000.000.000.000.000.000.000.000.	Actual		apacity	LOS F?	, , , , , , , , , , , , , , , , ,		Actual		pacity	LOS F?
					V _F		<b> </b>	Exhibit 13		
V _{FO}	1689	Exhibit 13-8		No	$V_{FO} = V_{I}$	_F - V _R	ļ	Exhibit 13		
					V _R			Exhibit 13	5-	
Flow Enterin	a Merae In	fluence A	rea		Flow E	nteri	, ng Dive	rge Influei	nce Are	a
	Actual		Desirable	Violation?			Actual	Max Des		Violation?
V _{R12}	1689	Exhibit 13-8	4600:All	No	V ₁₂			Exhibit 13-8		
Level of Serv	vice Detern	nination (	if not F)		Level o	f Sel	rvice De	terminatio	on (if no	ot F)
D _R = 5.475 ·	+ 0.00734 v _R + (	).0078 V ₁₂ - 0.0	0627 L _A			D _R =	4.252 + 0	.0086 V ₁₂ - 0	0.009 L _D	
D _R = 16.4 (pc/r	mi/In)				D _R = (	pc/mi	/ln)			
.OS = B (Exhibi	t 13-2)				LOS = (	Exhib	it 13-2)			
Speed Deter		*******	***********************	n frank fan skrifter	Speed	Dete	rminatio	on		
	(ibit 13-11)	*****		***************************************	fundament		13-12)			
-	(Exhibit 13-11)				1		, xhibit 13-12)			
	(Exhibit 13-11)				1		, xhibit 13-12)			
· ·	(Exhibit 13-13)				1.		xhibit 13-13)			
		Rights Reserve			HCS2010				Conorator	1: 9/9/2012 10

Open a section of		ILS AND	KAWP JU	NCTIONS W					parajan and a second diski	*1/+00/h/d/
General Infor				Site Infor				alanaa ka k		
Analyst Agency or Company Date Performed		GORRILL RILL PALMER	,	Freeway/Dir of Tra Junction Jurisdiction	avel	1-95 N KMD I	B NB ON RAMF	<b>b</b>		
Analysis Time Period	DM M	//0 INT PREDE	VELOPMENT	Analysis Year		2016				
Project Description	TRAFTON PRO	OPERTIES IJR								
Inputs										
Jpstream Adj Ramp		Number of Lar Acceleration L	es, N ane Length, L _A	2 350					Downstre Ramp	eam Adj
⊠Yes □⊂Or	ו	Deceleration L	ane Length Lp						T Yes	☐ On
⊡No ⊠Of	f	Freeway Volur	ne, V _F	1047					⊠ No	□ Off
- _{up} = 2000	ft	Ramp Volume	.,	599					L _{down} =	ft
		Freeway Free-	Flow Speed, S _F	F 70.0					V -	u a la lla
/ _u = 473 v	eh/h	Ramp Free-Flo	ow Speed, S _{FR}	35.0					V _D =	veh/h
Conversion t	o pc/h Und	ler Base (	Conditions	}						
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PH	F x f _{HV} x f _p
Freeway	1047	0.90	Level	0	0		1.000	1.00		1163
Ramp	599	0.90	Level	0	0		1.000	1.00		666
UpStream	473	0.90	Level	0	0		1.000	1.00	·····	526
DownStream	<u></u>	Merge Areas					l D	verge Areas		den-Australian
Estimation of		nerge Areao	****		Estima	tion			*****	
	$V_{12} = V_{F}$	(D)	executive contraction in the second					/ _R + (V _F - V _R	)P	
-		tion 13-6 or	13_7)		=		• •	R · (VF VR Equation 13-		13)
EQ =			ion (Exhibit 13	6)	L _{EQ} = P _{FD} =			sing Equation		
P _{FM} = / ₁₂ =	1163				V ₁₂ =			c/h		,
′ 12 / ₃ or V _{av34}	-		13-14 or 13-1	7)	V ₃ or V _{av34}		•	c/h (Equation 1	3-14 or 13-	-17)
ls V ₃ or V _{av34} > 2,70				, ,	1			Yes TNo		
Is $V_3$ or $V_{av34} > 1.5$								Yes T No		
f Yes,V _{12a} =		(Equation 13	-16, 13-18, o	or	lf Yes,V _{12a}		p	c/h (Equation -19)	n 13-16,	13-18, or
Capacity Che	ecks				Capaci	ty Cl	hecks			
	Actual	C C	apacity	LOS F?			Actual		pacity	LOS F?
					V _F			Exhibit 13-	8	
V _{FO}	1829	Exhibit 13-8		No	V _{FO} = V	_F - V _R	ļ	Exhibit 13-	um la seconda de la seconda	
					V _R	ł		Exhibit 13 10	-	
-low Enterin	a Merae In	fluence A	rea	L	Flow E	nteri	na Diver	ge Influen	ice Are	a
	Actual		Desirable	Violation?			Actual	Max Des		Violation?
V _{R12}	1829	Exhibit 13-8	4600:All	No	V ₁₂			Exhibit 13-8		
Level of Serv	vice Detern	nination (	if not F)		Level o	Non-statistic to the state		terminatio		tF)
D _R = 5.475 +	+ 0.00734 v _R + (	0.0078 V ₁₂ - 0.0	00627 L _A			D _R =	4.252 + 0.	0086 V ₁₂ - 0	.009 L _D	
D _R = 17.2 (pc/r	ni/ln)				D _R =	(pc/mi	/ln)			
OS = B (Exhibit	13-2)				LOS =	(Exhib	oit 13-2)			
Speed Deter	mination				Speed	Dete	rminatio	n		
	ibit 13-11)		A CONTRACTOR OF A CONTRACTOR O		D _s =	(Exhibit	13-12)			
	(Exhibit 13-11)					mph (E	xhibit 13-12)			
N .	(Exhibit 13-11)				S ₀ =	mph (E	xhibit 13-12)			
Ŷ	(Exhibit 13-13)				S =	mph (E	xhibit 13-13)			
yright © 2010 Univer	sity of Florida All	Rights Reserve	d		HCS201	OTM V	ersion 6.1		Generated	1: 9/9/2012 10

HCS2010TM Version 6.1

		<b>MPS AND</b>	RAMP JUN		Decomposition and a second sec	EET				
General Infor	mation			Site Inforr	*****					
Analyst	TOM	GORRILL	F	reeway/Dir of Tra	avel	I-95 S				
Agency or Company	GORI	RILL PALMER	j	unction		KMD S	SB ON RAM	P-NORTH RAN	ΛP	
Date Performed	9/7/20	)12	J	urisdiction						
Analysis Time Period	i PM W	//0 INT PREDE	VELOPMENT A	nalysis Year		2016				
Project Description	TRAFTON PRO	OPERTIES IJR			******	*****				**************************************
Inputs							***			NUMBER OF STREET, STREE
Upstream Adj Ramp		Number of Lan	-	2					Downstrea	am Adj
I⊽ Yes □ □ Or	1	Acceleration Li	- 1	450					Ramp	□ On
⊡No ☑ Of	f	Freeway Volur	5	1101					₽ No	□Off
		Ramp Volume		184						
- _{up} = 950 fi	t		∙ _R Flow Speed, S _{FF}						L _{down} =	ft
V _u = 505 ve	eh/h	Ramp Free-Flo		35.0					V _D =	veh/h
Conversion t	o pc/h Und	l der Base (	Conditions	<u></u>	************			*******	Language	
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	Τ	f _{HV}	f _p	v = V/PHF	x f _{HV} x f _p
Freeway	1101	0.90	Level	0	0		1.000	1.00	1	223
Ramp	184	0.90	Level	0	0	1	1.000	1.00		204
UpStream	505	0.90	Level	0	0	1	1.000	1.00	Į į	561
DownStream										
····		Merge Areas			Estima	tion		iverge Areas		
Estimation of					Estina					
	$V_{12} = V_{F}$							V _R + (V _F - V _F		
-EQ =		ation 13-6 or			L _{EQ} =			Equation 13		
P _{FM} =		-	on (Exhibit 13-6	5)	P _{FD} =			using Equation	on (Exhibit 13	3-7)
V ₁₂ =	1223				V ₁₂ =			oc/h		
V ₃ or V _{av34}			3-14 or 13-17	")	V ₃ or V _{av34}			pc/h (Equation		7)
Is $V_3$ or $V_{av34} > 2,70$								Yes 🗆 No		
Is $V_3 \text{ or } V_{av34} > 1.5$					Is V ₃ or V _a	_{av34} > 1.		Yes 🗆 No		0.40
If Yes,V _{12a} =	pc/h 13-19)		-16, 13-18, or		lf Yes,V _{12a}	=		pc/h (Equatio 3-19)	on 13-16, 1	3-18, or
Capacity Che		02020200000000000000000000000000000000	ann an an tao ann an tao amhráite Brith		Capaci	ty Cl	CONTRACTOR AND ADDRESS OF A DOCUMENT			
	Actual	C	apacity	LOS F?			Actual	Ca	apacity	LOS F?
					V _F			Exhibit 13	-8	
V _{FO}	1427	Exhibit 13-8		No	V _{FO} = V	_F - V _R		Exhibit 13	-8	
FO					V _R	2		Exhibit 13	3-	
Flow Entering	u a Merae In	fluence A	rea		Flow E	nteri	na Dive	rge Influe	nce Area	
on Entoinit	Actual		Desirable	Violation?			Actual	Max De		Violation?
V _{R12}	1427	Exhibit 13-8	4600:All	No	V ₁₂			Exhibit 13-8		
Level of Serv	rice Detern	nination (	f not F)		Level c			terminatio	and the second sec	F)
D _R = 5.475 +	0.00734 v _R + (	0.0078 V ₁₂ - 0.0	0627 L _A			D _R =	4.252 + 0	.0086 V ₁₂ - (	0.009 L _D	
D _R = 13.7 (pc/m	ni/ln)				D _R =	(pc/mi	/ln)			
LOS = B (Exhibit	13-2)				LOS =	(Exhib	oit 13-2)			
Speed Deterr	nination				Speed	Dete	rminatio	on		
M _S = 0.306 (Exi	bit 13-11)				D _s =	(Exhibit	13-12)			
<b>U</b> .	(Exhibit 13-11)					mph (E	xhibit 13-12)			
	Exhibit 13-11)				S ₀ =	mph (E	xhibit 13-12)			
•	(Exhibit 13-13)				S =	mph (E	xhibit 13-13)			
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General Infor			AMP JUN	CTIONS W	And a second				
		and a manufacture of the West		Site Infor		<del>wasan ang ang ang ang aka</del> tata	datesta batean anna anna anna anna anna anna anna	eJ4942444464444	analéd felgelasi menananan di
Analyst	TOM	GORRILL	F	reeway/Dir of Tra		I-95 SB			
Agency or Company	GOR	RILL PALMER	ال	unction		RAMP-DOW	RAMP-NORTH N		
Date Performed	9/7/2	012	ال	urisdiction					
Analysis Time Period	y MQ	W/0 INT PREDE	VELOPMENT A	nalysis Year		2016			
Project Description	TRAFTON PR	OPERTIES IJR	****		****		*****		4396.000000000000000000000000000000000000
Inputs		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	*****			//////////////////////////////////////			
Jpstream Adj Ramp		Number of Lan	es, N	2	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			Downstre	eam Adj
		Acceleration La	ane Length, L _A	450				Ramp	
∏Yes □Or	1	Deceleration L	ane Length L _D					🖂 Yes	🔄 On
🖻 No 🛛 🗖 Of	f	Freeway Volun	ne, V _F	1101				□ No	☐ Off
- 4		Ramp Volume,	V _R	184				L _{down} =	800 ft
- _{up} = ft			Flow Speed, S _{FF}	70.0				down	000 ft
V _u = veh/ł	۱	Ramp Free-Flo	••	35.0				V _D =	63 veh/h
Conversion t	nnc/h lln	·			******		n an		
		PHF	Terrain	%Truck	%Rv	f _{HV}	fp		IF x f _{HV} x f _p
(pc/h)	(Veh/hr)				ļ				Constanting and a second se
Freeway	1101	0.90	Level	0	0	1.000	1.00		204
Ramp UpStream	184	0.90	Level		U	1.000	1,00		204
DownStream	63	0.90	Level	0	0	1.000	1.00		70
		Merge Areas	*****				Diverge Area	S	
Estimation o	f v ₁₂				Estimat	tion of v ₁	2	*****	
	V ₁₂ = V _F	(P _{FM} )				V.	₁₂ = V _R + (V _F - '	V _R )P _{FD}	
L _{EQ} =	(Equ	ation 13-6 or	13-7)		L _{EQ} =		(Equation 1	13-12 or 13-	-13)
P _{FM} =	1.000	using Equati	on (Exhibit 13-6	S)	P _{FD} =		using Equa	ation (Exhibit	13-7)
V ₁₂ =	1223				V ₁₂ =		pc/h		
$V_3^{}$ or $V_{av34}^{}$			3-14 or 13-17	")	$V_3$ or $V_{av34}$			on 13-14 or 13	-17)
Is $V_3$ or $V_{av34} > 2,70$							/h? ☐ Yes ☐ N		
Is $V_3$ or $V_{av34}$ > 1.5			16 12 10 00		1			No ition 13-16,	13-18 or
If Yes,V _{12a} =	13-19		-16, 13-18, or		lf Yes,V _{12a}	<u>-</u>	13-19)	1011 10-10,	10-10, 01
Capacity Che	eks				Capacit	ty Check			
	Actual	Ç	apacity	LOS F?	ļ	A	the second s	Capacity	LOS F?
					V _F		Exhibit		
V _{FO}	1427	Exhibit 13-8		No	$V_{FO} = V_{FO}$	- V _R	Exhibit		
					V _R		Exhibit 10		
Flow Enterin	g Merge lı	nfluence A	rea		Flow E	ntering D	)iverge Influ	ence Are	a
	Actual		Desirable	Violation?		Actua	II Max E	Desirable	Violation?
V _{R12}	1427	Exhibit 13-8	4600:All	No	V ₁₂		Exhibit 13-		
Level of Serv				<u></u>	Level o		Determina		ot F)
		0.0078 V ₁₂ - 0.0	10627 L _a				2 + 0.0086 V ₁₂	- 0.009 L _D	
	ni/In)					pc/mi/ln)	0)		
D _R = 13.7 (pc/n					LOS = (	Exhibit 13-			
D _R = 13.7 (pc/n LOS = B (Exhibit	13-2)	ana ana amin'ny fanana amin'ny fanana amin'ny fanana amin'ny fanana amin'ny fanana amin'ny fanana amin'ny fana			10	m			
D _R = 13.7 (pc/n LOS = B (Exhibit <b>Speed Detern</b>	13-2) mination	ana ana amin'ny fanansa amin'ny fanansa amin'ny fanansa amin'ny fanansa amin'ny fanansa amin'ny fanansa amin'ny		*******		Determin			
D _R = 13.7 (pc/n LOS = B (Exhibit <b>Speed Detern</b> M _S = 0.306 (Ex	13-2) mination ibit 13-11)	anna an tha an tao a	**************************************	2010-0022-0022-0022-0022-0022-0022-0022	D _s = (	Exhibit 13-12	)		
$D_{R} = 13.7 (pc/n)$ $LOS = B (Exhibit)$ <b>Speed Detern</b> $M_{S} = 0.306 (Ex)$ $S_{R} = 61.4 mph$	13-2) mination ibit 13-11) (Exhibit 13-11)		anna an tao an tao amin' is defining ang sa		D _s = ( S _R = r	Exhibit 13-12) nph (Exhibit 1	)  3-12)		118 gener III waard da bestaan da
$D_R = 13.7 (pc/m)$ LOS = B (Exhibit) <b>Speed Detern</b> $M_S = 0.306 (Ex)$ $S_R = 61.4 mph$ $S_0 = N/A mph$	13-2) mination ibit 13-11)				D _s = ( S _R = r S ₀ = r	Exhibit 13-12	) (3-12) (3-12)		

	INCOMENDATION OF THE OWNER	WPS AND	RAMP JUN	Contrast of the Contrast of Co						5969674 <u>0-4966990</u>
General Infor			ana ana amin'ny faritr'o amin'ny faritr'o amin'ny faritr'o amin'ny faritr'o amin'ny faritr'o amin'ny faritr'o a	Site Infor	CONTRACTOR OF CONTRACTOR OF CONTRACTOR					10/10/4300/2010 mmg, mpany mm
Analyst	TOM	GORRILL	F	reeway/Dir of Tra	ivel	1-95 SI			חו	
Agency or Company	GOR	RILL PALMER	JL	unction		KMDS	DR ON KAW	P-SOUTH RAM	IP	
Date Performed	9/7/20	012	JI	urisdiction						
Analysis Time Period	I PM W	V/0 INT PREDE	VELOPMENT A	nalysis Year		2016			(1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	
Project Description	TRAFTON PRO	OPERTIES IJR		2012-04-04-04-04-04-04-04-04-04-04-04-04-04-						
Inputs	an particular de la contra de la	-				15K122642444444		ana da ser casto que ta casto de la ca	r	
Jpstream Adj Ramp		Number of Lan Acceleration La		2 700					Downstre Ramp	am Adj
🖾 Yes 🛛 🖾 On	1	Deceleration L		700					∏ Yes	□ On
⊡No ⊡Of	f	Freeway Volur		1285					₩ No	☐ Off
		Ramp Volume	V _P	63						ft
- _{up} = 200 ff	t		Flow Speed, S _{FF}	70.0					L _{down} =	it.
V _u = 184 ve	əh/h	Ramp Free-Flo	ow Speed, S _{FR}	35.0					V _D =	veh/h
Conversion t	o pc/h Und	der Base (	Conditions	996-004 (Sector)						
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PHF	= x f _{HV} x f _p
Freeway	1285	0.90	Level	0	0	1	.000	1.00		1428
Ramp	63	0.90	Level	0	0	1	.000	1.00		70
UpStream	184	0.90	Level	0	0	1	.000	1.00		204
DownStream		<u> </u>			<b> </b>			Lunen Arono	L	MMXXX-7444
Estimation of		Merge Areas	******	nga Sanaya ang Kanaya Sanaya	Estima	tion		iverge Areas		-
		· · · ·		o su an						
	$V_{12} = V_{F}$		( <b>.</b>					$V_{\rm R}$ + ( $V_{\rm F}$ - $V_{\rm R}$		
-EQ =		ation 13-6 or			L _{EQ} =			Equation 13-		
P _{FM} =			ion (Exhibit 13-6	i)	P _{FD} =			ising Equatio	on (Exnidit i	3-1)
/ ₁₂ =	1428	-			$V_{12} =$			oc/h	40 44 40 A	4-71
V ₃ or V _{av34}			13-14 or 13-17	)	V ₃ or V _{av34}			oc/h (Equation		17)
Is $V_3$ or $V_{av34} > 2,70$								Yes No		
Is $V_3$ or $V_{av34} > 1.5$			-16, 13-18, or					∃Yes I⊟No oc/h (Equatio		3-18 or
f Yes,V _{12a} =	13-19)		-10, 13-10, 01		lf Yes,V _{12a}	=		3-19)	ni 10-10, 1	0-10, 01
Capacity Che	ecks				Capaci	ty Ch	necks			
	Actual	C	apacity	LOS F?	Į		Actual		pacity	LOS F?
					V _F			Exhibit 13-	8	
V _{FO}	1498	Exhibit 13-8		No	V _{FO} = V	_F - V _R		Exhibit 13-		
					V _R	t		Exhibit 13 10	3-	
Flow Entering	g Merge In	fluence A	rea		Flow E	nteri	ng Dive	rge Influer	nce Area	2
	Actual	Max	Desirable	Violation?	I		Actual	Max Des		Violation?
V _{R12}	1498	Exhibit 13-8	4600:All	No	V ₁₂			Exhibit 13-8	]	L
Level of Serv					Level o	THE ROLL OF COMPANY OF COMPANY		terminatio		t F)
D _R = 5.475 +	0.00734 v _R +	0.0078 V ₁₂ - 0.0	00627 L _A			D _R =	4.252 + 0	.0086 V ₁₂ - C	0.009 L _D	
D _R = 12.7 (pc/m	ni/In)				D _R =	(pc/mi/	/ln)			
LOS = B (Exhibit	13-2)				LOS =	(Exhib	it 13-2)			******
Speed Deterr	nination				Speed	Dete	rminatio	on		
M _S = 0.289 (Exi	bit 13-11)				D _s =	(Exhibit	13-12)			
-	(Exhibit 13-11)				S _R =	mph (E)	khibit 13-12)			
i v	Exhibit 13-11)				S ₀ =	mph (E)	xhibit 13-12)			
• · ·	(Exhibit 13-13)				S =	mph (Ex	xhibit 13-13)			
right © 2010 Universi	ity of Florida All	Rights Reserved			HCS201	OTM V	ersion 6.1		Generated	i: 9/9/2012 1

General Infor	mation		****	Site Infori	mation		12747744688888888888888888888888888888888		
Analyst	na an a	GORRILL	F۱	reeway/Dir of Tra		-95 SB	,	**********	
Agency or Company				Inction		YONS ROAD	SB ON RAMP		
Date Performed	9/7/2	.012	Ju	urisdiction					
Analysis Time Period	j PM V	W/0 INT PREDE	VELOPMENT A	nalysis Year		2016			
	TRAFTON PR								
Inputs	INALION FIX		ala an		gan iyo maan kara kara kara kara kara kara kara k				
Jpstream Adj Ramp	<u>Bullenner (1997)</u>	Number of Lan	es. N	2	*******	ann an an ann an de chùrachd an Add Sachdor	*****	Downstr	eam Adj
		Acceleration L	•	350				Ramp	
I Yes □ Or	1	Deceleration L						☐ Yes	⊂ On
⊡No I⊄ Of	f	Freeway Volur		1280				₩ No	Off
	•			68					
- _{up} = 600 f	t	Ramp Volume						L _{down} =	ft
			Flow Speed, S _{FF}					V _D =	veh/h
V _u = 68 ve	h/h	Ramp Free-Flo	w Speed, S _{FR}	35.0			ANT AND	L, D	VOIM
Conversion t	The second s	der Base (	Conditions						50000000000000000000000000000000000000
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PH	HF x f _{HV} x f _p
Freeway	1280	0.90	Level	0	0	1.000	1.00	-	1422
Ramp	68	0.90	Level	0	0	1.000	1.00		76
UpStream	68	0.90	Level	0	0	1.000	1.00		76
DownStream					[			<u> </u>	
P ^{mi} - 4 ¹		Merge Areas			-		Diverge Areas		ta nononana para kana kana kana kana kana kana kana k
Estimation o			***		Esumau	on of v ₁₂			
	V ₁₂ = V _F					V ₁₂	= V _R + (V _F - V		
L _{EQ} =	(Equ	ation 13-6 or	13-7)		L _{EQ} =		(Equation 13		
P _{FM} =	1.000	using Equation	on (Exhibit 13-6	)	P _{FD} =		using Equat	ion (Exhibit	13-7)
V ₁₂ =	1422	•			V ₁₂ =		pc/h		
$V_3 \text{ or } V_{av34}$	-		13-14 or 13-17	)	$V_3$ or $V_{av34}$		pc/h (Equation		3-17)
Is $V_3$ or $V_{av34} > 2,70$							? TYes TN		
Is $V_3$ or $V_{av34}$ > 1.5			10 10 10		Is V ₃ or V _{av3}	₃₄ > 1.5 * V ₁₂ /2	□ Yes □ N		40.40
lf Yes,V _{12a} =	pc/h 13-19		-16, 13-18, or		If Yes,V _{12a} =		pc/h (Equati 13-19)	on 13-16,	13-18, of
Capacity Che		Lauren and an and an and an and an and an and an	nen men men men sen sen sen sen sen sen sen sen sen s		Capacity	y Checks			56000040771000000020400050600010000
	Actual	С	apacity	LOS F?		Actu	ial C	apacity	LOS F?
		I T			V _F		Exhibit 1	3-8	
V _{FO}	1498	Exhibit 13-8		No	$V_{FO} = V_{F}$	- V _R	Exhibit 1	3-8	
FU				-	V _R		Exhibit 1	3-	
Plans Paters			~~~	1	L	toring Di	l 10 /erge Influe	1	
Flow Enterin	Actual		<b>rea</b> Desirable	Violation?	Flow En	Actual	Max De		Violation?
V _{R12}	1498	Exhibit 13-8	4600:All	No	V ₁₂	/ iotudi	Exhibit 13-8	1	
Level of Serv	L			<u> </u>	and the second se	Service l	Determinati		 of F)
destroad to the contract of the	- 0.00734 v _R +			##201419600448.9421972634645.001,=000000			+ 0.0086 V ₁₂ -		
D _R = 14.9 (pc/n		12 3.	-A			c/mi/ln)	12	U	
LOS = B (Exhibit	-					Exhibit 13-2)			
Speed Deteri		1202309-1-12023-12040-12040-12040-12040-12040-12040-12040-12040-12040-12040-12040-12040-12040-12040-12040-1204		Contractive of the second s	-	Determina	tion	****	
		******				xhibit 13-12)			28024089404046484644464949999999999999999999
	idit 13-11)						12)		
M _S = 0.314 (Ex					S_≃ m	nn (Hyninit 1 4-			
M _S = 0.314 (Ex S _R = 61.2 mph	(Exhibit 13-11)				1	ph (Exhibit 13- ph (Exhibit 13-			
$M_{S} = 0.314$ (Ex S _R = 61.2 mph S ₀ = N/A mph (					S ₀ = m	ph (Exhibit 13- ph (Exhibit 13- ph (Exhibit 13-	12)		

**************************************	CONTRACTOR OF CONT	NPS AND	RAMP JUNG	HAVE NOT THE OWNER OF THE OWNER	*****	EET	1			
General Infor		****	CONTRACTOR OF CONT	Site Infori			***	A CONTRACTOR OF		
Analyst		GORRILL		eeway/Dir of Tra	ivel	I-95 N				
gency or Company		RILL PALMER		nction		LYON	S RD NB ON	RAMP		
Date Performed	9/7/20	)12 //2.00750		risdiction						
nalysis Time Period	I AM W	//0 INTPOSTDE	EVELOPMENT An	alysis Year		2036				
Project Description	TRAFTON PRO	OPERTIES IJR	*****					*********		
Inputs				14.19	MC11147		an a	1917-04110191017-0411-0411-0411-0412-042-04	*****	
Jpstream Adj Ramp		Number of Lan	es, N	2					Downstre	am Adj
		Acceleration L	ane Length, L _A	350					Ramp	
r Yes ⊂ Or	1	Deceleration L	ane Length L _D						☐ Yes	☐ On
⊂ No 🔽 Of	f	Freeway Volur	ne, V _F	1342					I⊠ No	Off
		Ramp Volume	V _P	91					. =	ft
- _{up} = 575 fi	t		Flow Speed, S _{FF}	70.0					L _{down} =	11
$V_{\rm u} = 182  {\rm ve}$	ah/h	Ramp Free-Flo		35.0					V _D =	veh/h
-			110	55.0	****					
Conversion t	opc/nUnd V			<u>I</u>	1		. 1			
(pc/h)	(Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = v/PH	F x f _{HV} x f _p
Freeway	1342	0.90	Level	5	2	(	).972	1.00		1534
Ramp	91	0.90	Level	5	2		).972	1.00		104
UpStream	182	0.90	Level	5	2		).972	1.00		208
DownStream				<u> </u>	<u></u>			VARMA ARAGA		
Estimation of		Merge Areas		alan yang general kan sebarah katalah di Cali di Californi da	Estima	tion		iverge Areas	*****	
cstimation of		/ 1995 - L			Lound				\ <b>D</b>	
	V ₁₂ = V _F	1.00			l.			/ _R + (V _F - V _R		10)
-EQ =		ation 13-6 or			L _{EQ} =			Equation 13-		
P _{FM} =			on (Exhibit 13-6)		P _{FD} =			sing Equatio	n (Exhibit '	13-7)
/ ₁₂ =	1534				V ₁₂ =		•	c/h		
V ₃ or V _{av34}			13-14 or 13-17)	)	V ₃ or V _{av34}			c/h (Equation 1	3-14 or 13-	-17)
Is $V_3$ or $V_{av34} > 2,70$					1			Yes 🗆 No		
Is $V_3$ or $V_{av34} > 1.5$					Is V ₃ or V _a	_{av34} > 1.		Yes 🗆 No		
lf Yes,V _{12a} =	pc/h 13-19)	(Equation 13	-16, 13-18, or		lf Yes,V _{12a}	=		c/h (Equatio -19)	n 13-16, 1	13-18, or
Capacity Che	Contract of the Contract of Contract of Contract		*****		Capaci	tv Cl	in the second			
oupdony one	Actual	l c	apacity	LOS F?	-		Actual	Ca	pacity	LOS F?
******				Ì	V _F			Exhibit 13-	8	
N	1638	Exhibit 13-8		No	V _{FO} = V		<u> </u>	Exhibit 13-	8	
V _{FO}	1030	EXHIBIT 13-0		NO	T			Exhibit 13		
					V _F			10		
Flow Enterin		A CONTRACTOR OF A CONT		1	Flow E	nteri	Y	ge Influer		Concession of the local division of the loca
1. /	Actual		Desirable	Violation?			Actual	Max Des		Violation
V _{R12}	1638	Exhibit 13-8	4600:All	No	V ₁₂			Exhibit 13-8	1 m /is	
Level of Serv				da govern taan taa ka sa	Lever			terminatio		nrj
	-0.00734 v _R +(	0.0078 V ₁₂ - 0.0	10021 LA		<u> </u>	••		0086 V ₁₂ - 0	.003 L _D	
D _R = 16.0 (pc/n					1	(pc/mi				
_OS = B (Exhibit						-	oit 13-2)	MILLING MARKAGE CONTRACTOR		
Speed Deteri	mination		20130-11-11-11-11-11-11-11-11-11-11-11-11-11		a formation management		rminatic	n		N2407978928826
M _s = 0.317 (Ex	ibit 13-11)						13-12)			
-	(Exhibit 13-11)				1		xhibit 13-12)			
$S_0 = N/A mph (Exhibit 13-11)$					S ₀ =	mph (E	xhibit 13-12)			
	(Exhibit 13-13)				S =	mph (E	xhibit 13-13)			
ovright © 2010 Univer		Diabte Decense	d			oTM v	ersion 6.1		Generated	d: 9/9/2012 11

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Conoral Infor			RAMP JUNC	Site Infor		<b></b>		ana ana amang kana kana kana kata kata kata kata kata		
General Infor	*****		*****	****		1.00 1.00				
Analyst		GORRILL		eway/Dir of Tra oction		1-95 NE				
gency or Company Date Performed	9/7/2	RILL PALMER		isdiction		KIND N	B ON RAM	7		
	. AM V	V/0 INT POSTE	EVELOPMENTAna							
analysis Time Period	1		Ana	alysis Year		2036				
Project Description	TRAFTON PR	OPERTIES IJR					N2201580534024835589859999999			X840703000100000000000000000
nputs		-			****	652865772693460706	*****			
Jpstream Adj Ramp		Number of Lar		2					Downstre	eam Adj
⊡Yes □Or		Acceleration L	ane Length, L _A	350					Ramp	
res i Or	1	Deceleration L	ane Length L _D						⊡ Yes	☐ On
∏No ⊽Of	f	Freeway Volur	ne, V _e	1113					I No	☐ Off
		Ramp Volume	1	453						
- _{up} = 2000	ft	1	Flow Speed, S _{FF}	70.0					L _{down} =	ft
/ - <u>200</u>	-  - //-	1							V _D =	veh/h
$v_{\rm u} = 320  {\rm v}$		Ramp Free-Flo		35.0					- D	<b>FOID</b>
Conversion t	o pc/h Und	der Base (	Conditions						pro-	
(pc/h)	V (Voh/br)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PH	F x f _{HV} x f _p
Freeway	(Veh/hr) 1113	0.90	Level	5	2	~~~	972	1.00		1273
Ramp	453	0.90	Level	5	2		972	1.00		518
UpStream	320	0.90	Level	5	2		972	1.00		366
DownStream			20101		<u> </u>	<u> </u>		1.00	*******	
Michigan (1997)		Merge Areas						iverge Areas	Lanani ini ini ini ini ini ini ini ini in	
Estimation of	^F V ₁₂				Estimat	ion c	of V ₁₂			
	V ₁₂ = V _F	(P _{cu} )			†		$V_{10} = V$	/ _R + (V _F - V _R	)Pro	
		ation 13-6 or	13-7)		Leo =			Equation 13-		13)
-eq = Fm =			ion (Exhibit 13-6)		L _{EQ} = P _{FD} =			sing Equation		
FM / ₁₂ =	1.000				FD V ₁₂ =			ising Equation		10-17
		-	12 44 ar 49 47)		1				2 14 05 12	17)
/ ₃ or V _{av34}			13-14 or 13-17)		$V_3$ or $V_{av34}$	× 0 7	-	c/h (Equation 1	5-14 01 15-	.17)
Is $V_3$ or $V_{av34} > 2,70$					1 .	•••		Yes No		
Is V ₃ or V _{av34} > 1.5			-16, 13-18, or			•••		Yes	n 13-16	13-18 or
f Yes,V _{12a} =	13-19)		-10, 13-10, 01		If Yes,V _{12a} =	=		-19)	11 1 <b>3-</b> 10,	13-10, 01
Capacity Che	cks				Capacit	y Ch	ecks	*****	anaanaanaa Bir. 1994 (n. 1994)	idebiliteti dalamana more eseterare a ana
	Actual	C	apacity	LOS F?			Actual	Ca	pacity	LOS F?
		Τ			V _F			Exhibit 13-	8	
V _{FO}	1791	Exhibit 13-8		No	V _{FO} = V _F	- V _P		Exhibit 13-	8	
*F0	1751			110	Construction and an			Exhibit 13	-	
	<u> </u>			l	V _R			10		
Flow Entering					Flow En	nterir	ng Diver	ge Influen		
	Actual	-parameter contraction of the	Desirable	Violation?	<u> </u>		Actual	Max Des	irable	Violation
V _{R12}	1791	Exhibit 13-8	4600:All	No	V ₁₂			Exhibit 13-8	L	
Level of Serv			a construction of the construction of the providence of the construction of the constr					terminatio		<u>t F)</u>
D _R = 5.475 +	0.00734 v _R + 0	0.0078 V ₁₂ - 0.0	)0627 L _A			D _R = 4	4.252 + 0.	0086 V ₁₂ - 0	.009 L _D	
D _R = 17.0 (pc/m	ii/ln)				D _R = (p	oc/mi/l	n)			
OS = B (Exhibit	13-2)				LOS = (E	Exhibi	t 13-2)			
Speed Detern	nination	ni in an	eren gen en eren er en er	in an	Speed L	Deter	minatic	n		
M _S = 0.320 (Exi		in na shirikini Salikini ya Salaman kutaka d	******************	******	D _s = (E	Exhibit '	13-12)			
	(Exhibit 13-11)				1		, hibit 13-12)			
	Exhibit 13-11)				1		hibit 13-12)			
•	(Exhibit 13-13)				1		hibit 13-13)			
, orompu	(	Rights Reserved			HCS2010				Generated	

x13x12x12x12x10x100000000000000000000000	RAN	MPS AND	RAMP JUNC	TIONS W	ORKSH	EET		*****		
General Infor				Site Inforr						54947794878688888899999999999999999
Analyst	TOM	GORRILL	Fre	eway/Dir of Tra	ivel	1-95 SI				
Agency or Company	GORI	RILL PALMER	Jur	nction		KMD S	SB ON RAMF	P-NORTH RAN	ΛP	
Date Performed	9/7/20	112	Jur	isdiction		051				
	, AM W	//0 INT POSTD	EVELOPMENTAN			2036				
Analysis Time Perioc			Alla	alysis real		2030				ىمىر بەرەرىمىرىرىيە مەسىلىك تەركىتە
Project Description	TRAFTON PR	OPERTIES IJR			an a					0,000 W.W.COMIC:
Inputs		<b>L</b> 1	ki	0			Mariyi ayaa ya ka ka ahaa ahaa ahaa ahaa ahaa		1	
Jpstream Adj Ramp		Number of Lan		2 450					Downstrea Ramp	am Adj
⊠Yes □Or	ı	Acceleration La		400					TYes	⊂ On
		Deceleration L								
∏No ☑Of	f	Freeway Volun		939					I I No	└─ Off
- _{up} = 950 ff	t	Ramp Volume,		327					L _{down} =	ft
		Freeway Free-	Flow Speed, S _{FF}	70.0						
$V_u = 491 ve$	eh/h	Ramp Free-Flo	w Speed, S _{FR}	35.0					V _D =	veh/h
Conversion t	o pc/h Und	der Base (	Conditions	******		anta Bacanta Anta Anta Anta Anta Anta Anta Anta				90099977790000000000000000000000000000
(pc/h)	V	PHF	Terrain	%Truck	%Rv	ſ	f _{HV}	fp	v = V/PHF	x f_n, x f_
	(Veh/hr)					<u> </u>	Į.			
Freeway	939 327	0.90	Level	5 5	2		).972 ).972	1.00		074 374
Ramp UpStream	491	0.90	Level	5	2		).972	1.00	างรู้จะอองสมระหว่างจากกระบบการ	561
DownStream	491	0.90	Level	J	<u> </u>			1.00		
		Merge Areas						iverge Areas		
Estimation of	f V ₁₂				Estima	tion (	of v ₁₂			
	$V_{12} = V_{F}$	(P _{FM} )					V ₁₂ = \	/ _R + (V _F - V _I	_R )P _{FD}	
-EQ =		ation 13-6 or	13-7)		L _{EQ} =		(	Equation 13	-12 or 13-1	3)
CQ FM ≕			on (Exhibit 13-6)		P _{FD} =		u	sing Equati	on (Exhibit 1	3-7)
V ₁₂ =	1074		· · · ·		$V_{12} =$		p	ic/h		
V ₃ or V _{av34}			3-14 or 13-17)		V ₃ or V _{av34}		ŗ	c/h (Equation	13-14 or 13-1	7)
Is V ₃ or V _{av34} > 2,70			,					Yes T No		
Is $V_3$ or $V_{av34} > 1.5$								Yes T No		
If Yes,V _{12a} =	pc/h	(Equation 13	-16, 13-18, or		If Yes,V _{12a}	=		c/h (Equation	on 13-16, 1	3-18, or
	13-19)			ung warman an a	Capaci	-		-19)	enaldia ducto de terreter en este en este este este este este est	
Capacity Che	Actual		apacity	LOS F?	T	iy ci	Actual		apacity	LOS F?
*****	Actual	Ť	apacity	LUGT	V _F		Actuar	Exhibit 13		
					V _{FO} = V	_		Exhibit 13	~~~ <u>}</u> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
V _{FO}	1448	Exhibit 13-8		No				Exhibit 1		
					V _R	:		10	<u> </u>	
Flow Entering	g Merge In	fluence A	rea		Flow E	nteri	ng Diver	ge Influe		
	Actual	Constant of the second s	Desirable	Violation?			Actual	Max De	sirable	Violation?
V _{R12}	1448	Exhibit 13-8	4600:All	No	V ₁₂			Exhibit 13-8		
Level of Serv					Level o		NAMES OF CONTRACTOR OF CONT	terminati	PROPERTY OF CONTRACTOR OF	<u>F)</u>
••	0.00734 v _R + (	0.0078 V ₁₂ - 0.0	0627 L _A			••		0086 V ₁₂ - (	0.009 L _D	
D _R = 13.8 (pc/m	ni/ln)				1 ''	(pc/mi	•			
LOS = B (Exhibit	13-2)					-	it 13-2)		10 p	
Speed Deterr	nination				Speed	Dete	rminatio	n		alati Malifana mangangangangangangangang
M _s = 0.306 (Exi	ibit 13-11)				D _s =	(Exhibit	13-12)			
0	(Exhibit 13-11)				S _R =	mph (E:	xhibit 13-12)			
	Exhibit 13-11)				S ₀ =	mph (E:	xhibit 13-12)			
v	(Exhibit 13-13)				S = 1	mph (E:	xhibit 13-13)			
		Diabte Deserved			L		Amon 10-10)			· 9/9/2012

ana amin'ny fisiana amin'ny fisiana amin'ny fisiana	RAN	IPS AND	RAMP JUNC	TIONS W	ORKSH	EET				
General Infor			والمحافظ والمحافظ والمحافظ والمحافظ والمحافظ والمحافظ والمحافظ والمحاوظ والمحاوظ والمحاوظ والمحافظ والمحافظ وال	Site Inforr						***************************************
Analyst	TOM	GORRILL	Free	eway/Dir of Tra	ivel	1-95 SI				
Agency or Company	GORF	RILL PALMER	Jun	ction			SB ON RAM DOWN	P-NORTH		
Date Performed	9/7/20	)12	Juri	sdiction		1.0-1101	-0000			
Analysis Time Period	AM W	//0 INT POSTD	EVELOPMENTAna	lysis Year		2036				
Project Description	TRAFTON PRO	PERTIES IJR								
Inputs			and the second					*****	-	
Upstream Adj Ramp		Number of Lan Acceleration La	•	2 450					Downstre Ramp	eam Adj
TYes COn		Deceleration La	ane Length L _D						M Yes	I⊄ On
⊠No ⊂Off	÷	Freeway Volun	ne, V _F	939					□ No	Off
L _{up} = ft		Ramp Volume,	V _R	327					L _{down} =	800 ft
"up to		Freeway Free-	Flow Speed, S _{FF}	70.0						
V _u = veh/h		Ramp Free-Flo	w Speed, S _{FR}	35.0					V _D =	101 veh/h
Conversion to	o pc/h Unc	ler Base C	Conditions	9499999112010000000000000000000000000000						
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	fp	v = V/PH	F x f _{HV} x f _p
Freeway	939	0.90	Level	5	0	C	).976	1.00	1	1069
Ramp	327	0.90	Level	5	0	0	).976	1.00		372
UpStream				~~~~~				4.00		440
DownStream	101	0.90 Merge Areas	Level	2	0		).990	1.00 Diverge Areas	L	113
Estimation of		neige Aleas	*****	çarının madanı bir kantışıklarında kandı	Estima	tion	ofva	Averge Areas		*******
	$V_{12} = V_F($	( q )				*******		V _R + (V _F - V _I	_)P	
=		tion 13-6 or	13-7)		=			(Equation 13		13)
- _{EQ} = P _{FM} =			on (Exhibit 13-6)		L _{EQ} = P _{FD} =			using Equati		-
ν FM V ₁₂ =	1069 p				V ₁₂ =			pc/h		
* 12 V ₃ or V _{av34}	•		3-14 or 13-17)		$V_3$ or $V_{av34}$			pc/h (Equation	13-14 or 13-	-17)
Is V ₃ or V _{av34} > 2,70			0 1 0 10 17					Yes I No		
Is V ₃ or V _{av34} > 1.5 *								Yes IN		
If Yes,V _{12a} =	pc/h (		-16, 13-18, or		If Yes,V _{12a}			pc/h (Equation	on 13-16,	13-18, or
	13-19)			*****				3-19)	68469744997 <del>87979797977777777</del>	natan 45% in tanan ang panalan ang m
Capacity Che					Capaci	ty Cr			apacity	LOS F?
	Actual		apacity	LOS F?	V _F		Actual	Exhibit 13		
					$V_{FO} = V_{I}$			Exhibit 13	*******	
V _{FO}	1441	Exhibit 13-8		No			l	Exhibit 1		
					V _R		<u> </u>	10		
Flow Entering	Construction of the local division of the lo	CONTRACTOR OF THE OWNER	CONTRACTOR OF A		Flow E	nteri		rge Influe		
V	Actual	1	Desirable	Violation?			Actual	Max De Exhibit 13-8	sirable	Violation?
V _{R12}	1441	Exhibit 13-8	4600:All	No	V ₁₂	f Sal	nico De	terminati	<u> </u>	<u> </u>
Level of Serv	0.00734 v _R + 0				Level 0			).0086 V ₁₂ - 1	the second s	
		12 - 0.0	A		D_ = /			12	0.000 LD	
D _R = 13.7 (pc/m LOS = B (Exhibit						(pc/mi Exhib	/in) it 13-2)			
Speed Detern	Contraction of the Contraction o	10-10-10-10-10-10-10-10-10-10-10-10-10-1				-	rminati	nn		
COLUMN STREET,							13-12)			
M _S = 0.306 (Exi S = 61.4 mmb							xhibit 13-12)	)		
	(Exhibit 13-11) Exhibit 13-11)						xhibit 13-12			
Ų , ,	(Exhibit 13-13)				1 -		xhibit 13-13			
vright © 2010 Universi		~			1		ersion 6.1		Conorato	ed: 9/9/2012 11

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General Informa				Site Inform			enner and a second s			
Analyst	TOM	GORRILL	Free	eway/Dir of Tra	vel	1-95 SE			10	
Agency or Company	GOR	RILL PALMER	Jun	ction		KMD S	B ON RAM	P-SOUTH RAM	IF	
Date Performed	9/7/20			sdiction						
Analysis Time Period	AM W	O INT POSTDI	EVELOPMENTAna	ilysis Year		2036				
Project Description TRA	FTON PRO	OPERTIES IJR		*******	***********************		**************************************		1012.0	****
Inputs			MONTANA AND AND A CONTRACT OF A		**	****				
Jpstream Adj Ramp		Number of Lan Acceleration La	•	2 700					Downstre Ramp	am Adj
Yes 🕅 On		Deceleration La	ine Length L _D						□ Yes	⊡ On
⊡ No ☐ Off		Freeway Volum	ie, V _F	1266					团 No	└ Off
- _{up} = 200 ft		Ramp Volume,	V _R	101					L _{down} =	ft
-up 200 R		Freeway Free-I	Flow Speed, S _{FF}	70.0					1	
V _u = 327 veh/h	I	Ramp Free-Flo	w Speed, S _{FR}	35.0					V _D =	veh/h
Conversion to p	c/h Und	ler Base C	onditions			an a				
(nc/b)	V Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	fp	v = V/PHI	= x f _{HV} x f _p
Freeway	1266	0.90	Level	5	2	0	.972	1.00		1447
Ramp	101	0.90	Level	5	2	0	.972	1.00		115
UpStream	327	0.90	Level	5	2	0	.972	1.00	ļ	374
DownStream								iverge Areas		
Estimation of v ₁		Verge Areas			Estimat	tion	of V.	iverge Areas		
	200 Contractor (200 A 200 C							/ _R + (V _F - V _F		
-	$V_{12} = V_{F}$		19 7)					Equation 13		13)
-EQ =		ation 13-6 or	on (Exhibit 13-6)		L _{EQ} = P _{FD} =			using Equation		
^{&gt;} FM = √ ₁₂ =	1447				' FD V ₁₂ =			oc/h		01)
v 12 [−] V ₃ or V _{av34}	•		3-14 or 13-17)		12 V ₃ or V _{av34}		•	oc/h (Equation	13-14 or 13-	17)
ls V ₃ or V _{av34} > 2,700 pc	-		0-14-01-10-17)					Yes TNo		,
Is $V_3$ or $V_{av34} > 1.5 * V_{12}$								Yes ⊡No		
lf Yes,V _{12a} =	pc/h	(Equation 13	-16, 13-18, or		If Yes,V _{12a}		ſ	oc/h (Equatio	on 13-16, 1	3-18, or
	13-19)			*****				3-19)		8:20039:4144444444
Capacity Check				1 100 50	Capaci	ty Ch	The second s		no situ	LOS F?
	Actual		apacity	LOS F?	V _F		Actual	Exhibit 13	pacity	LUSF?
					V _{FO} = V			Exhibit 13		
V _{FO}	1562	Exhibit 13-8		No				Exhibit 13		-
					V _R			10	<u> </u>	
Flow Entering N	lerge In				Flow E	nterii	ng Dive	rge Influei		
	Actual	Construction of the second	Desirable	Violation?			Actual	Max Des	sirable	Violation?
V _{R12}	1562	Exhibit 13-8	4600:All	No	V ₁₂	<u>_</u>		Exhibit 13-8	1	<u> </u>
Level of Service	and a well down and a state of the state of				Level o	CONTRACTOR DATE		terminatio	NAMES OF TAXABLE PARTY OF TAXAB	( <del> </del> )
$D_{R} = 5.475 \pm 0.00$	)/34 v _R +(	0.0078 V ₁₂ - 0.0	0627 L _A					.0086 V ₁₂ - 0	1.009 LD	
D _R = 13.2 (pc/mi/ln)					1	(pc/mi/				
LOS = B (Exhibit 13-2	OTHER DESIGNATION OF THE OTHER DESIGNATION OF		, ya ya ayoo ya ya waxaa aa	1231247C240200//#013177C141455	1		it 13-2)	00000000000000000000000000000000000000	MANKER RADE TO THE OWNER	1.00070% <del>8.2.00000000000000000000000000000000000</del>
Speed Determin	ation		<del></del>				rminatio	on	APREN AND IN THE REAL PROPERTY OF	
M _S = 0.291 (Exibit 1					l ·	Exhibit				
S _R = 61.9 mph (Ext	-				1.0		(hibit 13-12)			
S ₀ = N/A mph (Exh S = 61.9 mph (Exh					1		(hibit 13-12)			
S = 61.9 mph (Exh	10.4 5 1 4 3 \				S= 1	mnn(-)	(hibit 13-13)			

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		MPS AND	RAMP JUNC			EET				064643343 <u>371</u>
General Infor	*****			Site Infor	000000000000000000000000000000000000000		14514547447568507593444455em		off a knowled and should be the second	
Analyst		GORRILL		eway/Dir of Tr		I-95 SI				
gency or Company				nction		LYON	S ROAD SE	ON RAMP		
Date Performed	9/7/2 AM V			isdiction						
analysis Time Perio	d Alvi v		EVELOPMENTAN	alysis Year		2036				
Project Description	TRAFTON PR	OPERTIES IJR	****						****	
nputs		1							r	10.2.702/01/d v/waa
Jpstream Adj Ramp		Number of Lan		2					Downstre	am Adj
⊽Yes ┌Oı	<b>`</b>	Acceleration L	ane Length, L _A	350					Ramp	
103 101	1	Deceleration L	ane Length L _D						∏ Yes	└ On
⊼No I⊄ Of	f	Freeway Volur	ne, V _F	1286					I No	└── Off
- 000 4	<b>.</b>	Ramp Volume	V _R	233					L _{down} =	ft
_{up} = 600 f		Freeway Free-	Flow Speed, S _{FF}	70.0					∽down	11
/_= 81 ve		Ramp Free-Flo	- 11	35.0					V _D =	veh/h
conversion t	o pc/h Uni								<u>I</u>	***
(pc/h)	V	PHF	Terrain	%Truck	%Rv	Τ	f _{HV}	f _p	v = V/PH	F x f _{HV} x f _p
reeway	(Veh/hr) 1286	0.90			ļ	<u> </u>			<u> </u>	
Ramp	233	0.90	Level	5	2		.972 .972	1.00	<u> </u>	1470 266
JpStream	81	0.90	Level	5	2		.972	1.00		93
DownStream			LOVO	U		+	.072	1.00		50
		Merge Areas						iverge Areas		
stimation o	f v ₁₂				Estimat	ion c	of v ₁₂			
	V ₁₂ = V _F	(P _{FM} )					V ₁₂ = V	V _R + (V _F - V _R	)P _{FD}	
EQ =	(Equ	ation 13-6 or	13-7)		L _{EQ} =		(	Equation 13-	12 or 13-	13)
FM =	1.000	using Equati	on (Exhibit 13-6)		P _{FD} =		ι	using Equatio	n (Exhibit 1	3-7)
12 =	1470	pc/h			V ₁₂ =		F	oc/h		
or V _{av34}	0 pc/l	h (Equation 1	3-14 or 13-17)		V ₃ or V _{av34}			oc/h (Equation 1	3-14 or 13-	17)
s V ₃ or V _{av34} > 2,70	)0 pc/h? 🗂 Ye	s 🖻 No				₃₄ > 2,7	700 pc/h? [ ⁻	Yes  ☐ No		
s $V_3$ or $V_{av34} > 1.5$						• •		Yes ┌ No		
Yes,V _{12a} =	pc/h	(Equation 13	-16, 13-18, or		If Yes,V _{12a} =	•	F	oc/h (Equatio	n 13-16, 1	13-18, or
	13-19)	) 		in in a farmer a farministic in a statistication of the second second second second second second second second				3-19)	da shanda da ku sa da ku sa da ku	
Capacity Che	Actual		anacity	LOS F?	Capacit		Actual	Co	naoitu	
	Actual	Ť	apacity	LUGTY	V _F		Actual	Exhibit 13-	pacity s	LOS F
						$\overline{}$		Exhibit 13-		
V _{FO}	1736	Exhibit 13-8		No	$V_{FO} = V_F$	- v _R	eninistra en	Exhibit 13		
					V _R			10	-	
low Enterin	g Merge In	fluence A	rea		Flow En	nterii	ng Dive	rge Influen		3
2010544240044444444444444444444444444444	Actual	Max [	Desirable	Violation?		1	Actual	Max Des	irable	Violation
V _{R12}	1736	Exhibit 13-8	4600:All	No	V ₁₂			Exhibit 13-8		L
evel of Serv			***************************************	071112-12-17440/cW-0410Fickard-041644		****	unwetteretweinweiskasiewes/soo	terminatio		t F)
	•0.00734 v _R + (	0.0078 V ₁₂ - 0.0	0627 L _A					.0086 V ₁₂ - 0	.009 L _D	
_R = 16.7 (pc/m					1	oc/mi/	•			
OS = B (Exhibit		In CARAO Procession and an and an and an and an an an and an	*****	adariti al te concentrationerio			t 13-2)	den menden i sedera i den den de		
Speed Deterr	nination				Speed L	Deter	rminatic	n		
1 _s = 0.319 (Exi	bit 13-11)				D _s = (E	Exhibit	13-12)			
•	(Exhibit 13-11)				S _R = m	ph (Ex	hibit 13-12)			
	Exhibit 13-11)				1	ph (Ex	hibit 13-12)			
	(Exhibit 13-13)				S= m	ph (Ex	hibit 13-13)			
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Care a Nal Information		RAMP JUNC	Site Infori					
General Informatio	*********************				AC 110		NATO CONTRACTOR OF A DECISION	24244440/792221111111121121121121121
Analyst	TOM GORRILL		eway/Dir of Tra		95 NB			
Agency or Company Date Performed	GORRILL PALMEF 9/7/2012		iction isdiction	L	YONS RD I	NB ON RAMP		
	PM W/0 INTPOST		ISUICIUM					
Analysis Time Period		Ana	alysis Year	2	036		01-01-1-10-004-0-0-0-0-0-0-0-0-0-0-0-0-0	
Project Description TRAFT	ON PROPERTIES IJ	२		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
Inputs					1177			
Jpstream Adj Ramp	Number of La	nes, N	2					ream Adj
∀Yes └On	Acceleration	_ane Length, L _A	350				Ramp	
r Yes □ On	Deceleration	Lane Length L _D					☐ Yes	☐ On
「No F Off	Freeway Volu	ime, V _E	1793				I No	⊡ Off
	Ramp Volum	•	60				1	
_{-up} = 575 ft							L _{down} =	ft
		-Flow Speed, S _{FF}	70.0				V _D =	veh/h
$V_u = 239 \text{ veh/h}$		low Speed, S _{FR}	35.0	***				
Conversion to pc/l	h Under Base	Conditions						
(pc/h)	/ PHF	Terrain	%Truck	%Rv	f _{HV}	fp	v = V/Pl	HF x f _{HV} x f _p
Freeway 179	n/hr) 0.90	Level	5	2	0.972	1.00		2050
Ramp 60		Level	5	2	0.972	1.00	-	69
UpStream 23		Level	5	2	0.972	1.00		273
DownStream 23	3 0.30	Level			0.012		-	
	Merge Areas					Diverge Areas	}	
Estimation of v ₁₂				Estimatio	on of v ₁	2		
	$_{12} = V_{\rm F} (P_{\rm FM})$					$\frac{1}{12} = V_R + (V_F - V_F)$		
	(Equation 13-6 c	r 13-7)		L _{EQ} =		(Equation 1		3-13)
- _{EQ} =	1.000 using Equa			FEQ P _{FD} =		using Equa		
1 101				' FD V ₁₂ =		pc/h		
14	2050 pc/h	40 44 40 47)		1			n 12 11 or 1	2 17)
0 000	0 pc/h (Equation	13-14 or 13-17)		$V_3$ or $V_{av34}$	> 2 700 pr			5-17)
Is $V_3$ or $V_{av34} > 2,700$ pc/h?						/h? □Yes □N		
Is $V_3$ or $V_{av34} > 1.5 * V_{12}/2$		2 4 C 12 19 or				₂/2 □ Yes □ N pc/h (Equat		13-18 or
If Yes,V _{12a} =	pc/h (Equation 1 13-19)	3-10, 13-10, 01		If Yes,V _{12a} =		13-19)	.011 10-10,	10-10, 01
Capacity Checks				Capacity	Check		Men and a supervised of the su	
	tual	Capacity	LOS F?		A	ctual (	Capacity	LOS F?
				V _F		Exhibit 1	3-8	
V 9'	Exhibit 13-8		No	$V_{FO} = V_F$	- V _R	Exhibit 1	3-8	1
V _{FO} 2'			NO			Exhibit	13-	
		l		V _R		10		
Flow Entering Mei		Concrete which we want the second		Flow En	the second se	oiverge Influ		
Contraction of the contraction o		Desirable	Violation?	<u> </u>	Actua	Contraction of the Association o	esirable	Violation
V _{R12} 21			No	V ₁₂	L	Exhibit 13-		
Level of Service D			****			e Determinat	10-10-10-10-10-10-10-10-10-10-10-10-10-1	ot F)
D _R = 5.475 + 0.0073	4 v _R + 0.0078 V ₁₂ - 0	.00627 L _A			D _R = 4.253	2 + 0.0086 V ₁₂ -	0.009 L _D	
D _R = 19.8 (pc/mi/ln)				D _R = (p	c/mi/ln)			
LOS = B (Exhibit 13-2)				LOS = (E	xhibit 13-	2)		
Speed Determinat	ion	<u>en norden en e</u>		Speed D	etermir	nation		
M _S = 0.329 (Exibit 13-1		****			xhibit 13-12			
· · · · · · · · · · · · · · · · · · ·					oh (Exhibit 1			
S _R = 60.8 mph (Exhibit				1	oh (Exhibit 1			
$S_0^{=}$ N/A mph (Exhibit S = 60.8 mph (Exhibit	•			1.	oh (Exhibit 1	-		

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	Constructed by the American Statements	APS AND	RAMP JUNC	TIONS W	ORKSH	EET			****	
General Infor	mation		Ś	Site Inforr	nation					nacha196415465452454000000000000000000000000000000
nalyst gency or Company ate Performed	GORI 9/7/20	GORRILL RILL PALMER 012	Jun Juri	eway/Dir of Tra ction sdiction		I-95 NE KMD N	B ON RAM	5		
nalysis Time Period	PM W	//0 INT POSTD	EVELOPMENTAna	Ilysis Year		2036				
Project Description	TRAFTON PRO	OPERTIES IJR				/0+11/4-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1				
nputs	2000.000-000-000-000-000-000-000-000-000	pt		in second se		AND			·····	
Ipstream Adj Ramp		Number of Lan Acceleration La		2 350					Downstre Ramp	eam Adj
⊽Yes └On		Deceleration La	ane Length L _D						∏ Yes	☐ On
No		Freeway Volun	ne, V _E	1277					I ^一 No	└ Off
-up = 2000	ft	Ramp Volume,	V _R	745					L _{down} =	ft
			Flow Speed, S _{FF}	70.0					V _D =	veh/h
$l_{\rm u} = 576  {\rm ve}$	eh/h	Ramp Free-Flo	w Speed, S _{FR}	35.0					L, D	vonin
Conversion te	o pc/h Und	der Base (	Conditions					Marka Marka and a subsection of the subsection o		an de la company a c
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PH	IF x f _{HV} x f _p
Freeway	1277	0.90	Level	5	2		.972	1.00	ļ	1460
Ramp	745	0.90	Level	5	2		.972	1.00		852
UpStream	576	0.90	Level	5	2	0	.972	1.00	+	659
DownStream	9003450000000000000000000000000000000000	Merge Areas		<u> </u>			I	iverge Areas		*****
Estimation of		and go / hour			Estimat	ion c				a anno a tarron ann an an ann an an ann an an an an an
	$V_{12} = V_F$	(P)						/ _R + (V _F - V		
_		(' _{FM} ) ation 13-6 or	13_7)		   =			Equation 13		-13)
EQ =			on (Exhibit 13-6)		L _{EQ} = P _{FD} =			ising Equati		
P _{FM} = / ₁₂ =	1460	- ·			$V_{12} =$			oc/h		,
′ 12 ∕ ₃ or V _{av34}	-		3-14 or 13-17)		$V_3^{12}$ or $V_{av34}^{12}$		•	oc/h (Equation	13-14 or 13	-17)
$V_3 \text{ or } V_{av34} > 2,70$						, ₃₄ > 2,7		Yes 🗆 No		
Is $V_3$ or $V_{av34} > 1.5$								Yes 🗆 No		
f Yes,V _{12a} =		(Equation 13	-16, 13-18, or		If Yes, V _{12a}		F	oc/h (Equatio 3-19)		13-18, or
Capacity Che	ecks				Capacit	ty Ch	ecks			
	Actual	C	apacity	LOS F?			Actual		apacity	LOS F?
					V _F			Exhibit 13		
V _{FO}	2312	Exhibit 13-8		No	$V_{FO} = V_{FO}$	- V _R		Exhibit 13		
					V _R			Exhibit 1 10	3-	
Flow Entering	n Marga In	fluence A	rea		Elow Fi	nterii	na Dive	rge Influe	nce Are	a
IVW EIIGIII	Actual		Desirable	Violation?			Actual	Max De		Violation?
V _{R12}	2312	Exhibit 13-8	4600:All	No	V ₁₂			Exhibit 13-8		
Level of Serv	ice Deterr	nination (i	f not F)		Level o	f Ser	vice De	terminati	on (if no	ot F)
D _R = 5.475 +	0.00734 v _R +	0.0078 V ₁₂ - 0.0	0627 L _A			D _R =	4.252 + 0	.0086 V ₁₂ -	0.009 L _D	
D _R = 20.9 (pc/m	ni/In)				D _R = (	pc/mi/	'ln)			
.OS = C (Exhibit	13-2)				LOS = (	Exhib	it 13-2)			
Speed Deterr	nination				Speed	Dete	rminatio	on 🛛		
M _S = 0.336 (Exi		*****	*********	**************************************	D _s = (	Exhibit	13-12)			
•	(Exhibit 13-11)					nph (E>	(hibit 13-12)			
	Exhibit 13-11)				S ₀ = r	nph (E>	(hibit 13-12)			
<b>v</b> • •	(Exhibit 13-13)				S= r	nph (Ex	(hibit 13-13)			
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Conorel lufe	Colored and a	MES AND	RAMP JUNC	and the second se		<u>La La 1</u>		deren anderen a	MR.6************************************	
General Infor			0.000000000000000000000000000000000000	Site Inform		1-95 SI				
Analyst		GORRILL		eway/Dir of Tra	IVEI			P-NORTH RAN	/P	
gency or Company	GOR	RILL PALMER	Jun	ction		UPST				
ate Performed	9/7/2	012		sdiction						
analysis Time Period	PM V	V/0 INT POSTD	EVELOPMENTAna	ilysis Year		2036				
Project Description	TRAFTON PR	OPERTIES IJR						******	****	
nputs										
Jpstream Adj Ramp		Number of Lan	es, N	2					Downstrea	m Adj
		Acceleration La	ane Length, L _A	450					Ramp	
I‴Yes ∏On		Deceleration L	ane Length L _D						T Yes	□On
⊡No ⊡Ofi	f	Freeway Volun	ne, V _F	1347					년 No	└ Off
		Ramp Volume,	V _P	225					1	ft
- _{up} = 950 ft		1	Flow Speed, S _{FF}	70.0					L _{down} =	11
$V_{u} = 616 ve$	eh/h	Ramp Free-Flo		35.0					V _D =	veh/h
-			110						<u> </u>	
Conversion t	b pc/n Und		1			T				
(pc/h)	(Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	fp	v = V/PHF	x t _{HV} x t _p
Freeway	1347	0.90	Level	5	2		.972	1.00	****	540
Ramp	225	0.90	Level	5	2		.972	1.00	·	
UpStream	616	0.90	Level	5	2		.972	1.00	7	'04
DownStream		Merge Areas		9494499977777777777777777			L	iverge Areas	<u></u>	
Estimation of				nange popular an oran non-drive the data	Estima	tion o				****
	$V_{12} = V_F$	(P)		eyen ayının ana ayın anın danı kanaktaraktar				/ _R + (V _F - V _F	)Pcp	
-EQ =		ation 13-6 or	13-7)		L _{EQ} =		1.2	Equation 13		3)
EQ PFM ≕			on (Exhibit 13-6)		P _{FD} =			ising Equation		
/ ₁₂ =	1540		,		V ₁₂ =			oc/h	,	
/ ₃ or V _{av34}		-	3-14 or 13-17)		V ₃ or V _{av34}			oc/h (Equation	13-14 or 13-1	7)
$V_3 \text{ or } V_{av34} > 2,70$			,					Yes TNC		
Is V ₃ or V _{av34} > 1.5								Yes No		
if Yes,V _{12a} =	pc/h	(Equation 13	-16, 13-18, or		If Yes,V _{12a}		I	oc/h (Equatio		3-18, or
	13-19	)			Capaci		CHARMEN CONSTRUCTION OF CONSTRUCTION	3-19)		
Capacity Che	Actual		apacity	LOS F?	T	ly Ch	Actual	T C:	apacity	LOS F?
<u></u>	Actual	Ť	apacity	2001:			Piotudi	Exhibit 13		
. /	4707	Cultility 40 c		No	V _{FO} = V	to to the second se	******	Exhibit 13		
$V_{FO}$	1797	Exhibit 13-8		No				Exhibit 13		+
	L			<u> </u>				10	<u>    l                                </u>	
Flow Entering		crystally holds and an inclusion of the second s	COLORODO COMPANY COLORODO CO COLORODO COLORODO C		Flow E	nteri		rge Influe		\ <i>P</i> \ <i>r</i> =
	Actual		Desirable	Violation?			Actual	Max De	sirable	Violation?
V _{R12}	1797	Exhibit 13-8	4600:All	No	V ₁₂		nder D-	Exhibit 13-8	n (if not	<b>E</b> )
Level of Serv					Levero	on the second state	CONTRACTOR WAY CONTRACTOR	<i>terminatio</i> .0086 V ₁₂ - 0	and the second se	<u>r)</u>
		0.0078 V ₁₂ - 0.0	NUUZI LA		n -				5.003 LD	
D _R = 16.6 (pc/m					1	(pc/mi/				
OS = B (Exhibit		52710-07-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0			1		it 13-2)			
Speed Deterr			active the state of the state o				rminatio	)//		
M _S = 0.313 (Exi	-					(Exhibit				
R .	(Exhibit 13-11)				1		khibit 13-12)			
	Exhibit 13-11)				ľ		(hibit 13-12)			
S = 61.2  mph	(Exhibit 13-13)				S = 1	mbu (E)	xhibit 13-13)			

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Comparel I-f		IPS AND	RAMP JUNC	Notice and the second se			energy and a state of the state			2000 #1000 #1000 #1000 #1000 #1000 #1000
General Infor			والانتفاظ فخط مشراط المتراجع والأمر ومعادمه والمتراجع	Site Inform eway/Dir of Tra	A CONTRACTOR OF A CONTRACT OF	1-95 SI	2			001/04/04/04/04/04/04/04/04/04/04/04/04/04/
Analyst		GORRILL		•	1401		3 SB ON RAM	P-NORTH		
gency or Company	GORI	RILL PALMER		ction			-DOWN			
Date Performed	9/7/20	)12 //2 !!!!!! DOOTD	Juri	sdiction						
Analysis Time Period	I PW M	I/0 INT POSTD	EVELOPMENTAna	lysis Year		2036				
Project Description	TRAFTON PRO	OPERTIES IJR	*****							*****
nputs				***				21:000.000		
Jpstream Adj Ramp		Number of Lan	•	2					Downstre Ramp	eam Adj
⊡Yes □Or	1	Acceleration La	- 8	450					·	gowere.
		Deceleration La	- 0						M Yes	🗹 On
I No □ Of		Freeway Volun		1347					∏ No	☐ Off
- _{up} = ft		Ramp Volume,	IX .	225					L _{down} =	800 ft
άp		Freeway Free-	Flow Speed, S _{FF}	70.0						
$V_{\rm u} = {\rm veh/h}$	I	Ramp Free-Flo	w Speed, S _{FR}	35.0					V _D =	75 veh/h
Conversion t	o pc/h Und	ler Base C	Conditions							
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	fp	v = V/PH	IF x f _{HV} x f _p
Freeway	(Ven/nr) 1347	0.90	Level	5	2	1	.972	1.00	+	1540
Ramp	225	0.90	Level	5	2		.972	1.00	1	257
UpStream										
DownStream	75	0.90	Level	2	2		.986	1.00		85
- Aine Aine a		Merge Areas			Ectimo	tion		iverge Areas		
Estimation of				TRANSPORTED TRANSPORT	Estimat					
	$V_{12} = V_{F}$							V _R + (V _F - V _I		40
EQ =		ation 13-6 or			L _{EQ} =			Equation 13		
^P FM =			on (Exhibit 13-6)		P _{FD} =			using Equation	on (Exhibit	13-7)
$/_{12} =$	1540 j		0 44 40 47)		$V_{12} =$			oc/h pc/h (Equation	12 11 or 13	17)
V ₃ or V _{av34} Is V ₃ or V _{av34} > 2,70			3-14 or 13-17)		V ₃ or V _{av34}			Ves No		- 17 )
Is $V_3$ or $V_{av34} > 2.70$ Is $V_3$ or $V_{av34} > 1.5^{-1}$								Yes T No		
			-16, 13-18, or				• • _{12'} - •	oc/h (Equation	on 13-16,	13-18, or
f Yes,V _{12a} =	13-19)			ulauseding two orange were compared	If Yes,V _{12a}		1	3-19)		
Capacity Che	Statistics (Statistics) (Sta	1			Capacit	ty Ch				
	Actual		apacity	LOS F?	V _F		Actual	Exhibit 13	apacity	LOS F?
					Construction of the Constr	-		Exhibit 13		
V _{FO}	1797	Exhibit 13-8		No	$V_{FO} = V_{f}$			Exhibit 13		
				<u> </u>	V _R			10		
Flow Entering	Contraction of the second s	a second and a second			Flow E	nteri		rge Influe		
	Actual		Desirable	Violation?	<u> </u>		Actual	Max De	sirable	Violation?
V _{R12}	1797	Exhibit 13-8	4600:All	No	V ₁₂			Exhibit 13-8		
Level of Serv				and Galilloon wat the Bally of State	Level o	CONTRACTOR DOCUMENTS		.0086 V ₁₂ - 0	Contraction of the Contraction o	<u>n r)</u>
	-0.00734 v _R + (	0.0078 V ₁₂ - 0.0	10021 LA		L _ /				0.009 LD	
D _R = 16.6 (pc/n					1	pc/mi				
OS = B (Exhibit	Contraction of the second s	**************************************		943945694556454555666865656575777	1		it 13-2)			THE REAL PROPERTY OF THE PROPERTY OF THE REAL PROPE
Speed Deterr		****	ennesse and a second				rminatio	חת		
M _S = 0.313 (Ex					1 .	Exhibit	13-12) (hibit 13-12)			
	(Exhibit 13-11)				1		(hibit 13-12)			
•	(Exhibit 13-11)				v		(13-12)			
S = 61.2 mph	(Exhibit 13-13)				1 ⁰ - 1	uhu (⊏;	~iiiuit 10~10)			

	RAI	MPS AND	RAMP JUNC	TIONS W	ORKSH	EET				
General Inform	mation			Site Inforr	nation					
Analyst	том	GORRILL	Fre	eway/Dir of Tra	ivel	I-95 SB				
Agency or Company	GOR	RILL PALMER	Jun	ction		KMD S	B ON RAM	P-SOUTH RAN	ΛP	
Date Performed	9/7/20	012		sdiction						
Analysis Time Period	AM W	VO INT POSTD	EVELOPMENTAna	alysis Year		2036				
Project Description	TRAFTON PRO	OPERTIES IJR						*****		
Inputs				e www.ee.ee.ee.ee.ee.ee.ee.ee.ee.ee.ee.ee.						ACT III
Jpstream Adj Ramp		Number of Lar Acceleration L	ies, N ane Length, L _A	2 700					Downstre Ramp	am Adj
🖾 Yes 🖉 On		Deceleration L	ane Length L _D						☐ Yes	□On
⊂No ⊂Off	:	Freeway Volur	ne, V _F	1572					I ⊂ No	└─ Off
- _{up} = 200 ft		Ramp Volume	, V _R	75					L _{down} =	ft
-up 200 R		Freeway Free-	Flow Speed, S _{FF}	70.0						
√ _u = 225 v€	≥h/h	Ramp Free-Fl	ow Speed, S _{FR}	35.0					V _D =	veh/h
Conversion to	pc/h Un	der Base (	Conditions					********		Sálotta TP CO "POCIONINA Kalovalovanos
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PHI	= x f _{HV} x f _p
Freeway	1572	0.90	Level	5	2	0.	972	1.00		1797
Ramp	75	0.90	Level	5	2	0.	972	1.00		86
UpStream	225	0.90	Level	5	2	0.	972	1.00		257
DownStream			l				l	iverge Areas		ACTIVITY COLUMN
Estimation of		Merge Areas	1997 1997 1997 1997 1997 1997 1997 1997	an a	Estimat	tion c		iverge Areas	<u></u>	*****
		<u>(۵)</u>	******					/ _R + (V _F - V _f	١D	
_	$V_{12} = V_F$		40 7		-			Equation 13		13)
-EQ =		ation 13-6 or			- _{EQ} =			ising Equation		
PFM =			ion (Exhibit 13-6)		P _{FD} =			oc/h		5-1)
$V_{12} =$	1797	•	40 44 40 47		$V_{12} =$		•	c/h (Equation	12 11 or 13	17\
$V_3$ or $V_{av34}$	-		13-14 or 13-17)		V ₃ or V _{av34}			Tes ⊡Nc		(1)
Is $V_3$ or $V_{av34} > 2,70$								Yes T No		
Is V ₃ or V _{av34} > 1.5 *			3-16, 13-18, or				, v ₁₂ , - ,	oc/h (Equation	on 13-16, 1	13-18, or
If Yes,V _{12a} =	13-19)				If Yes,V _{12a}		1:	3-19)		·
Capacity Che	cks				Capaci	ty Ch				
	Actual		apacity	LOS F?	<u> </u>		Actual	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	apacity	LOS F?
					V _F	and and a second se		Exhibit 13		
V _{FO}	1883	Exhibit 13-8		No	V _{FO} = V	_F - V _R		Exhibit 13		
					V _R			Exhibit 1: 10	3-	
Flow Entering	, a Merae Ir	fluence A	rea		Flow E	nterir	ng Dive	rge Influe	nce Area	3
	Actual		Desirable	Violation?	Ļ		Actual	Max De		Violation?
V _{R12}	1883	Exhibit 13-8	4600:All	No	V ₁₂	l		Exhibit 13-8		
Level of Serv					Level o	Contraction of the local division of the loc		terminati	And a second	<u>t F)</u>
D _R = 5.475 +	0.00734 v _R +	0.0078 V ₁₂ - 0.	00627 L _A			D _R =	4.252 + 0	.0086 V ₁₂ - (	0.009 L _D	
D _R = 15.7 (pc/m	ıi/ln)				1	(pc/mi/				
LOS = B (Exhibit							t 13-2)		and a second	
Speed Deterr	nination					Detei	rminatio	on		4.24244-1974-1974-1974-1974-1974-1974-1974-19
M _S = 0.298 (Exi	bit 13-11)					Exhibit	•			
÷	(Exhibit 13-11)				S _R = r	nph (Ex	hibit 13-12)			
	Exhibit 13-11)				S ₀ = 1	mph (Ex	hibit 13-12)			
0	(Exhibit 13-13)				S = 1	mph (Ex	hibit 13-13)			
· · · · ·		Pichts Reserver					reion 6 1		0	d: 9/9/2012 1

General Informa			RAMP JUNC	Site Infor		nen lafik II Kalesunnekaningsinganisterikanin			
Analyst	CARDON MARKAGE AND A CONTRACTOR OF A	GORRILL	******	eway/Dir of Tra		I-95 SB		klastinastalioodortmetorod	
Igency or Company				eway/Dir of The			D SB ON RAMP		
ate Performed	9/7/2			isdiction			D OD ON INAMI		
	PM V	VO INT POSTD	EVELOPMENTAna						
nalysis Time Period			Ana	aiysis year		2036		97-1	
Constant and the Constant of Constant and Constant and Constant and Constant and Constant and Constant and Const	AFTON PRO	OPERTIES IJR	*****					CALLXAN MANDON COMMINS	
nputs		1						1	
pstream Adj Ramp		Number of Lan		2				Downstr	eam Adj
✓Yes □ On		Acceleration La	ane Length, L _A	350				Ramp	
ies i oli		Deceleration L	ane Length L _D					∏ Yes	└ On
_No ☑ Off		Freeway Volun	ne, V _F	1565				I⊠ No	└─ Off
		Ramp Volume,	V _R	205					
_{up} = 600 ft			Flow Speed, S _{FF}	70.0				L _{down} =	11
/ _u = 82 veh/h		Ramp Free-Flo		35.0				$V_{\rm D} =$	veh/h
	200000000000000000000000000000000000000		A T T	JJ.U	1711-1-10-10-20-20-20-20-20-20-20-20-20-20-20-20-20				
Conversion to p	v	der Base C	<u>conditions</u>		1	T		1	
(pc/h)	(Veh/hr)	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/PF	$IF \ge f_{HV} \ge f_{p}$
Freeway	1565	0.90	Level	5	2	0.972	1.00		1789
Ramp	205	0.90	Level	5	2	0.972	1.00		234
UpStream	82	0.90	Level	5	2	0.972	1.00		94
DownStream									1955-1970-1983-1943-1944-1944-1944-1944-1944-1944-194
-		Merge Areas	ali (100 1000), ami a si ang ami ang		Cotimot	ion of v	Diverge Areas	,	
Estimation of v	12	***			Estimat	ion of v ₁₂			(*************************************
	$V_{12} = V_{F}$	( P _{FM} )			ļ	V ₁	$_{2} = V_{R} + (V_{F} - V_{F})$	_R )P _{FD}	
-EQ =	(Equa	ation 13-6 or	13-7)		L _{EQ} =		(Equation 13	3-12 or 13-	-13)
PFM =	1.000	using Equati	on (Exhibit 13-6)		P _{FD} =		using Equati	on (Exhibit	13-7)
/ ₁₂ =	1789	pc/h			V ₁₂ =		pc/h		
/ ₃ or V _{av34}	0 pc/ł	h (Equation 1	3-14 or 13-17)		V ₃ or V _{av34}		pc/h (Equation	13-14 or 13	-17)
Is V ₃ or V _{av34} > 2,700 p	/h? TYes	s 🕅 No				₃₄ > 2,700 pc/	h? 🗆 Yes 🧮 No	<b>)</b>	
Is $V_3$ or $V_{av34} > 1.5 * V_1$						•	2 □ Yes □ No		
f Yes,V _{12a} =	pc/h	(Equation 13	-16, 13-18, or		If Yes,V _{12a} =		pc/h (Equation		13-18, or
	13-19)	unna del milio de anche na consecuent de contra	*****	**********************************			13-19)	-	Network Cold Cold Street St
Capacity Check					Capacit	y Checks			
	Actual		apacity	LOS F?		Ac		apacity	LOS F?
					V _F		Exhibit 13		
V _{FO}	2023	Exhibit 13-8		No	$V_{FO} = V_{F}$	- V _R	Exhibit 13		
					V _R		Exhibit 1 10	3-	
Flow Entering N	lorgo In	fluence A	roa	1	Elow Er	toring D	iverge Influe	nce Are	<u></u>
	Actual		Desirable	Violation?		Actual	Max De		Violation'
V _{R12}	2023	Exhibit 13-8	4600:All	No	V ₁₂		Exhibit 13-8	T	
evel of Service		L			and the second se	f Service	Determinatio	on (if no	ot F)
$D_{\rm B} = 5.475 + 0.0$	Constantial and other and an and a state of the state of						+ 0.0086 V ₁₂ - 0		
) _R = 19.0 (pc/mi/ln)		12 010	A		L	oc/mi/ln)		u u	
					1	'	4		
.OS = B (Exhibit 13-:	-	.,,,.,,		an hirana an		Exhibit 13-2			
0	iation					Determina	ation		
Speed Determir						-vnini+ 12 10)			
∕i _s = 0.326 (Exibit ′						Exhibit 13-12)			
					S _R = m	ph (Exhibit 13			
4 _S = 0.326 (Exibit 1	nibit 13-11) ibit 13-11)				S _R = m				

.

	RAN	APS AND	RAMP JU	NCTIONS W	ORKSH	EET		reneral and a second decoderation	******	
General Infor				Site Inform						
Analyst Agency or Company Date Performed	TOM GORI 9/7/2			Freeway/Dir of Tra Junction Jurisdiction	ivel		B S RD NB O	N RAMP		static mmm nggygyg y gan ngan kini nawy
Analysis Time Period Project Description		/ INTPOSTDEV	ELOPMENT	Analysis Year		2036			******	
Inputs	TRAFIUNER	JPERHESIJK	*****			*******				Committies of Alastacian in the Electric Control Control
Upstream Adj Ramp	anada 500 (AMOL 7700) Constanting	Number of Lan	es N	2		****			Downstre	am Adi
upstream Auj Namp		Acceleration La		_					Ramp	ann naj
r Yes □ Or	n	Deceleration L	- /						⊡ Yes	└─ On
⊂ No 🖾 Of	ff	Freeway Volun	ne, V _F	1474					I⊂ No	☐ Off
- _{up} = 575 f	ť	Ramp Volume,		68					L _{down} =	ft
		Freeway Free-							V _D =	veh/h
$V_{\rm u} = 50 \text{ ve}$	h/h	Ramp Free-Flo	w Speed, S _{FR}	35.0					°D -	Ven/m
Conversion t	o pc/h Und	der Base C	Condition	S				1000477		
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PH	F x f _{HV} x f _p
Freeway	1474	0.90	Level	5	2		.972	1.00		1685
Ramp	68	0.90	Level	5	2	www.endoweenwee	.972	1.00		78
UpStream	50	0.90	Level	5	2		).972	1.00		57
DownStream	<u></u>	L Merge Areas					r	L Diverge Areas	<u> </u>	reaction and an induced and contraction of the second
Estimation o		nerge Areas	****		Estima	tion				
	$V_{12} = V_{F}$	(P _{EM} )				*******	V ₁₂ =	V _R + (V _F - V	V _R )P _{FD}	Set Million and an angle of the set
-EQ =	(Equa	ation 13-6 or	13-7)		L _{EQ} =			(Equation 1	3-12 or 13-	13)
Р _{FM} =	1.000	using Equati	on (Exhibit 13	3-6)	P _{FD} =			using Equa	tion (Exhibit	13-7)
/ ₁₂ =	1685	oc/h			V ₁₂ =			pc/h		
/ ₃ or V _{av34}	0 pc/l	n (Equation 1	3-14 or 13-	17)	$V_3$ or $V_{av34}$			pc/h (Equatio	n 13-14 or 13-	-17)
Is V ₃ or V _{av34} > 2,70	00 pc/h? 🖵 Ye	s 🖾 No			Is $V_3$ or $V_2$	_{av34} > 2,	700 pc/h? [	Yes N	lo	
Is $V_3$ or $V_{av34} > 1.5$	*V ₁₂ /2	s 🖂 No			Is $V_3$ or $V_2$	_{av34} > 1.		TYes TN		
f Yes,V _{12a} =	pc/h 13-19)	(Equation 13	-16, 13-18,	or	lf Yes,V _{12a}	=		pc/h (Equat 3-19)	tion 13-16,	13-18, or
Capacity Che	ecks				Capaci	ty Cł	iecks			
	Actual	Ç	apacity	LOS F?			Actual	and the set of the set	Capacity	LOS F?
								Exhibit 1		
V _{FO}	1763	Exhibit 13-8		No	$V_{FO} = V$	_F - V _R		Exhibit 1		
						2		Exhibit 10	13-	
Flow Enterin	<u> </u> a Morao In	<u>I</u>	r0.2		Elow E	ntori	na Divo	rge Influ	onco Are	<u> </u>
INAA FUICEIUI	Actual	~;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;	Desirable	Violation?			Actual		esirable	Violation?
V _{R12}	1763	Exhibit 13-8	4600:All	No	V ₁₂			Exhibit 13-		
Level of Serv	vice Determ	<u></u>			And the second s	of Se	rvice De	eterminat	tion (if no	t F)
2440.467 Contemporaries and a second s	+ 0.00734 v _R + (		A REAL PROPERTY AND A REAL PROPERTY A REAL PROPERTY AND A REAL PROPERTY AND A REAL PRO	an a	1			).0086 V ₁₂ -		4.44440000A
D _R = 17.0 (pc/r		12			D _R =	(pc/mi				
LOS = B (Exhibit	-						, it 13-2)			
Speed Deter	AND ADDRESS OF THE OWNER OWNER OF THE OWNER	, , , , , , , , , , , , , , , , , , ,	and other and a second s				rminati	on		***************************************
E	kibit 13-11)			unaan ka		(Exhibit	********		gan panapapan na n	******
0					1 "		xhibit 13-12	)		
	(Exhibit 13-11)						xhibit 13-12	•		
· ·	(Exhibit 13-11) (Exhibit 13-13)				1		xhibit 13-13			
opyright © 2010 Univ					1		rsion 6.1	1	Concepted.	9/9/2012 11:47

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	RAI	MPS AND	RAMP JUI	NCTIONS W	ORKSH	EET			<u>,, , , , , , , , , , , , , , , , , , ,</u>	
General Info				Site Inforr	******					*****
Analyst		GORRILL		Freeway/Dir of Tra		I-95 N	В		****	
Agency or Compan		RILL PALMER		Junction		TRAF	TON RD NB	ON RAMP		
Date Performed	9/7/2			Jurisdiction						
Analysis Time Perio	V MA bc	VINT POSTDE	VELOPMENT	Analysis Year		2036				and the second
Project Description	TRAFTON PR	OPERTIES IJR								
nputs			فالبقا فاسترجع ومرجع ومعروفه والمرجع ومرجع		******					10 ²⁴ insknamer procession and some
Jpstream Adj Ram	р	Number of Lan		2					Downstre Ramp	am Adj
Yes C	)n	Acceleration La Deceleration L	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	1350					TYes	└ On
⊡No P⊂C	Off	Freeway Volur	ne, V _F	1335					⊠ No	☐ Off
- _{up} = 900	ft	Ramp Volume,	V _R	106					L _{down} =	ft
up ett		Freeway Free-	Flow Speed, S _F	F 70.0						
/ _u = 207	veh/h	Ramp Free-Flo	w Speed, S _{FR}	35.0					V _D =	veh/h
Conversion	to pc/h Un	der Base (	Conditions	•				******		****
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PH	$F \ge f_{HV} \ge f_p$
Freeway	1335	0.90	Level	5	2	(	).972	1.00		1526
Ramp	106	0.90	Level	5	2		0.972	1.00		121
UpStream	207	0.90	Level	5	2	(	).972	1.00	T	237
DownStream										
		Merge Areas				22.43.447.747.747.74		iverge Areas	A.A	1.00%###################################
Estimation o	of $v_{12}$				Estima	tion	of v ₁₂			
	V ₁₂ = V _F	(P_,)	******	40-1998 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 19		ça çan da an an da kala k	$V_{10} = V$	/ _R + (V _F - V _F		***************************************
		ation 13-6 or	13.7)		. =		1.2-	Equation 13		13)
EQ =				()	L _{EQ} =		•	ising Equation		-
°FM =		using Equati		-0)	P _{FD} =					10-17
/ ₁₂ =	1526	•			V ₁₂ =		•	ic/h	10.11.10	47
$V_3$ or $V_{av34}$		h (Equation '	13-14 or 13-1	7)	$V_3$ or $V_{av34}$			oc/h (Equation		-17)
is $V_3$ or $V_{av34} > 2,7$					1			Yes 🗆 No		
Is V ₃ or V _{av34} > 1.5					Is V ₃ or V _a	_{Iv34} > 1		Yes 🔽 No		
f Yes,V _{12a} =	pc/h 13-19	(Equation 13	-16, 13-18, c	or	lf Yes,V _{12a}	=		oc/h (Equatio 8-19)	on 13-16,	13-18, or
Capacity Ch		(			Capaci	ty Cl	hecks			
	Actual	C	apacity	LOS F?			Actual	Ca	apacity	LOS F?
					V _F			Exhibit 13	-8	
V	1647	Exhibit 13-8		No	V _{FO} = V	V _D		Exhibit 13	-8	1
$V_{FO}$	1047	EXHIBIT 19-0		110			<u> </u>	Exhibit 13	3-	
					V _R			10		
Flow Enterin	ng Merge Ir				Flow E	nteri	ng Dive	ge Influe		
	Actual		Desirable	Violation?			Actual	Max De	sirable	Violation?
V _{R12}	1647	Exhibit 13-8	4600:All	No	V ₁₂			Exhibit 13-8		
Level of Ser		CONTRACTOR OF CONT			Level o	CATHOLICE,	00000000000000000000000000000000000000	terminatio	Contraction of the local division of the loc	ot F)
D _R = 5.475	+0.00734 v _R +	0.0078 V ₁₂ - 0.0	)0627 L _A			D _R =	4.252 + 0	.0086 V ₁₂ - (	0.009 L _D	
D _R = 9.8 (pc/r	ni/ln)				D _R =	(pc/mi	/ln)			
_OS = A (Exhib	•				1		, pit 13-2)			
Speed Deter	Contraction of the local data and the local data an	****				-	rminatio	n	*****	
una la constante de la constant	2000///widce-e-004/00	******	*****	annan an tao ann an tao ann an Aonaichtean ann ann ann an Aonaichtean ann ann an Aonaichtean ann ann ann ann an			13-12)		-1	
0	xibit 13-11)					•	xhibit 13-12)			
IX ·	h (Exhibit 13-11)									
v .	n (Exhibit 13-11)				1 °		xhibit 13-12)			
S = 63.1 mp	h (Exhibit 13-13)		1194		S =	mph (E	xhibit 13-13)			
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	KAI	MPS AND	RAMP JUI	<b>NCTIONS W</b>	ORKSH	EET							
al Infor	mation			Site Infor						**************************************			
		GORRILL		Freeway/Dir of Tra		I-95 N	B		******				
Company	GOR	RILL PALMER		•	KMD NB ON RAMP			P					
rmed	9/7/2	012		Jurisdiction									
ime Period	AM V	VINT POSTDE	/ELOPMENT	Analysis Year		2036							
scription	TRAFTON PR	OPERTIES IJR											
		n an	11-11-11-11-11-11-11-11-11-11-11-11-11-	****			an a			1971 - 1974), i subaran yang mangang ma			
Adj Ramp		1		2 350						am Adj			
[⊂ On		1		000					T Yes	└─ On			
년 ज	•	Freeway Volun	ne, V _F	1158					I No	☐ Off			
2000	64	Ramp Volume,	V _R	383									
2000	11	Freeway Free-	=low Speed, S _F	F 70.0									
									V _D =	veh/h			
rsion to	o pc/h Un	der Base (	conditions										
/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PH	F x f _{HV} x f _p			
	1158	0.90	Level	5	2	(	).972	1.00		1324			
	383	0.90	Level	5	2	(	).972	1.00		438			
	1158	0.90	Level	5	2	(	).972	1.00		1324			
am													
		Merge Areas	****	*****	ļ	_		iverge Areas					
tion of	V ₁₂				Estimat	tion	of v ₁₂						
2004/1000/1000000	$V_{12} = V_{F}$	(P _{EM} )					V ₁₂ = \	/ _R + (V _F - V _R )	)P _{FD}				
	(Eau	ation 13-6 or	13-7)		L=0 =		(	Equation 13-	12 or 13-	13)			
				-6)	1			-					
				-0)									
			3-14 or 13-1	7)									
_{av34} > 1.5 *					Is $V_3$ or $V_{av34} > 1.5 * V_{12}/2$ Tyes TNo								
=			-16, 13-18, o	r	If Yes, $V_{12a}$ = pc/h (Equation 13-16, 13-18, or								
	SUCCESSION COLUMN TO AN ADDRESS OF ADDRE ADDRESS OF ADDRESS OF ADD	ana ana amin'ny fanonana amin'ny fanonana amin'ny fanonana amin'ny fanonana amin'ny fanonana amin'ny fanonana a	A.X		L		COLUMN 2 COL	5-19)					
ty che			nacity		Tepach			l Car	nacity	LOS F?			
			арабну										
					And and a second s	CONTRACTOR DESCRIPTION	ANALALIAN CLIMP CANADIS -						
=0	1762	Exhibit 13-8		No	$V_{FO} = V_{f}$	_F - V _R							
					V _R				-				
nterino	n Merae In	fluence A	rea	<b>.</b>	Flow E	nteri	na Diver		ce Area	<del></del>			
×	Actual			Violation?		Τ	Actual			Violation?			
12	1762	Exhibit 13-8	4600:All	No	V ₁₂	Î		Exhibit 13-8		1			
	ice Detern	1	f not F)			of Sei	rvice De	terminatio	n (if no	t F)			
				*****									
16.8 (pc/m		12	А		$D_{\rm R} = 4.252 \pm 0.0000  V_{12} = 0.0000  L_{\rm D}$ $D_{\rm R} = (\rm pc/mi/ln)$								
B (Exhibit	•				1		it 13-2)						
-	-			an a fan an a			NAMES AND DESCRIPTION OF THE PARTY OF THE PA	m	an a				
Dafara		Speed Determination I _S = 0.319 (Exibit 13-11)						Speed Determination					
					-								
0.319 (Exil	oit 13-11)				1 °		-						
0.319 (Exil 61.1 mph (	oit 13-11) Exhibit 13-11)				S _R = n	nph (Ex	(hibit 13-12)						
0.319 (Exil 61.1 mph ( N/A mph (I	oit 13-11)				S _R = n S ₀ = n	nph (E) nph (E)	-						
	rmed me Period scription Adj Ramp □ On □ On □ On □ On □ On □ Off 2000 1158 v rsion to /h) am tion of ty Che □ On □ Off 2000 158 v rsion to /h) □ Off 2000 158 v rsion to f 158 v rsion to f f 50 v rsion to f f 50 v rsion to f f 50 v rsion to f f 50 v rsion to f f 50 v rsion to f f 50 v rsion to f 50 v rsion to f f 50 v rsion to f f 50 v rsion to f 50 v rsion to f 50 v f 50 v f 50 v f f 50 v f 50 v f f 50 v f f 50 v f f 50 v f f 50 v f f 50 v f f 50 v f f 50 v f f 50 v f f f 50 v f f f f f f f f f f f f f	CompanyGORrmed9/7/2me PeriodAM VscriptionTRAFTON PRAdj Ramp $\Box$ On $\Box$ Off2000 ft1158 veh/h1158rsion to pc/h Und0/h)V(Veh/hr)11583831158am0tion of v12V12 = VFV12 = VF(Equ1.00013240pc/h132400pc/h13241.5 * V12/21324Ye13241.5 * V12/213241.5 * V12/213251.5 * V12/213261.5 * V12/213271.5 * V12/213281.5 * V12/213291.5 * V12/213201.5 * V12/213211.5	CompanyGORRILL PALMERrmed $9/7/2012$ me PeriodAM W INT POSTDEVscriptionTRAFTON PROPERTIES IJRAdj RampNumber of LandAdj RampNumber of LandAcceleration LaImage: OnffFreeway Volume,2000ftRamp Volume,Preeway Free-I1158veh/hRamp Free-Florsion to pc/h Under Base O/h)VVhPHF11580.903830.903830.90amMerge Areastion of v12V12 = V _F (P _{FM} )V12 = V _F (P _{FM} )(Equation 13-6 or1.000using Equation1324pc/h0pc/h (Equation 13-6)1324pc/h0pc/h (Equation 13-6)1324pc/h0pc/h (Equation 13-6)1324pc/h0pc/h (Equation 13-6)13-19)ty ChecksActualCaActualMax D121762Exhibit 13-8of Service Determination (internation (inte	CompanyGORRILL PALMER medmed9/7/2012me PeriodAM W INT POSTDEVELOPMENTscriptionTRAFTON PROPERTIES IJRAdj RampNumber of Lanes, N Acceleration Lane Length, LA Deceleration Lane Length, VFAdj RampNumber of Lanes, N Acceleration Lane Length, LA Deceleration Lane Length, VF2000ftFreeway Volume, VF Ramp Volume, VR Freeway Free-Flow Speed, SFR2000ftRamp Volume, VR Freeway Free-Flow Speed, SFR2000ft11580.9011580.9011580.9011580.9011580.9011580.9011580.9011580.9011580.9011580.9011580.9011580.9011580.9011580.9011580.9011580.9011580.9012V12V12VF (PFM) (Equation 13-6 or 13-7) 1.0001.000using Equation (Exhibit 13- 13241324pc/h 01324pc/h0pc/h (Equation 13-14 or 13-1 01324pc/h0pc/h (Equation 13-16, 13-18, or 13-19)typeYes F No 13-19)1217621762Exhibit 13-81217621762Exhibit 13-81217621364600:All 1613713.12	Company rmedGORRILL PALMER 9/7/2012Junction Jurisdictionme PeriodAM W INT POSTDEVELOPMENTAnalysis YearscriptionTRAFTON PROPERTIES IJRAdj RampNumber of Lanes, N2Acceleration Lane Length, LA350If OnDeceleration Lane Length, LA350Joon ftFreeway Volume, VF11582000 ftRamp Volume, VR383Freeway Free-Flow Speed, SFF70.01158 veh/hRamp Free-Flow Speed, SFR35.0rsion to pc/h Under Base Conditions/h)VPHFTerrain%Truck11580.90Level53830.90Level53830.90Level5amIntege Areas1158Merge Areastion of $v_{12}$ $v_{12} = v_F (P_{FM})$ (Equation 13-6 or 13-7)1.000using Equation (Exhibit 13-6)1324pc/hpc/h (Equation 13-14 or 13-17) $w_{34} > 2.700 pc/h? 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         am         1158         0.90         Level         5         2         0.972         1.00           am         1158         0.90         Level         5         2         0.972         1.00           am         1158         0.90         Level         5         2         0.972         1.00           am         0	Company rmedGORILL PALMER UnitsJunction JuntsdictionKMD NB ON RAMP Juntsdictionme PeriodAW WINT POSTDEVELOPMENT Analysis Year2036soriptionTRAFTON PROPERTIES LIRDownstre RampAdj RampNumber of Lanes, N2Acceleration Lane Length La Deceleration Lane Length LpTree ForIF OrfFreeway Volume, VR Ramp Yolume, VR3832000ftRamp Volume, VR Ramp Yree-Flow Speed, SFR Ramp Yolume, VR3832000ftRamp Pree-Flow Speed, SFR Ramp Yree-Flow Speed, SFR Ramp Yre			

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General Infor			RAMP JUN	Site Infori						
					*****	I-95 S	D	****		
Analyst	TOM	GORRILL		eeway/Dir of Tra	IVEI			P-NORTH RAM	Р	
gency or Company	GOR	RILL PALMER	Ju	inction	UPST					
Date Performed	9/7/20	012	Ju	irisdiction						
Analysis Time Period			ELOPMENT A	nalysis Year		2036				
Project Description	TRAFTON PRO	OPERTIES IJR								
nputs						edurect/chickedet/mana-an				
Jpstream Adj Ramp		Number of Lan	es, N	2					Downstre	eam Adj
		Acceleration La	ne Length, L _A	450					Ramp	
マYes 「On		Deceleration La	ane Length L _D						∏ Yes	☐ On
⊡No I⊄Ofi	No 🖾 Off Freeway Volume, V _F								IF No	⊂ Off
		Ramp Volume,		331						£4
_{up} = 950 ft		1	Flow Speed, S _{FF}	70.0					L _{down} =	ft
/	. I. <i>D</i> .								V _D =	veh/h
/ _u = 396 ve		Ramp Free-Flo		35.0		040404040				
Conversion to	o pc/h Und	der Base C	conditions		20101 - 10101 - 1010 - 1010 - 1010 - 1010					
(pc/h)	V	PHF	Terrain	%Truck	%Rv		f _{HV}	fp	v = V/PH	F x f _{HV} x f _p
	(Veh/hr)			5	2		0.972	1.00		1186
Freeway	1037 331	0.90	Level Level	5	2	ann an the second s	0.972	1.00		378
Ramp	396	0.90	Level	5	2		0.972	1.00		453
JpStream DownStream	290	0.90	Levei		<u></u>		0.012	1,00		-100
Jownouedin		Merge Areas		<u></u>			ر ۲	verge Areas	1	
Estimation of			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	9840-000-000-000-000-000-000-000-000-000-	Estima	tion		-2012041949446EE44019401		
		(D)		an a daga sa	<u> </u>			V _R + (V _F - V _R	\P	
	$V_{12} = V_F$		40.7)		_		• • •			12)
EQ =		ation 13-6 or			L _{EQ} =			Equation 13-		
P _{FM} =			on (Exhibit 13-6	)	P _{FD} =			using Equatio	n (Exhibit	(3-7)
/ ₁₂ =	1186	•			$V_{12} = pc/h$					
/ ₃ or V _{av34}			3-14 or 13-17	)	V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17)					
is V ₃ or V _{av34} > 2,70					Is V ₃ or V _{av34} > 2,700 pc/h?  Yes  No					
is V ₃ or V _{av34} > 1.5					Is $V_3$ or $V_{av34} > 1.5 * V_{12}/2$ TYes TNo					
f Yes,V _{12a} =			-16, 13-18, or		If Yes,V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					
Capacity Che	13-19)	)	ġġġġġġġġġġġġġġġġġġġġġġġġġġġġġġġġġġġġġġ		L		The second s	5-15)		
sapacity che	Actual		apacity	LOS F?	Capacity Checks					LOS F?
	Actual		apacity		V _F		l	Exhibit 13-	in the second statement of the	
								Exhibit 13-		
V _{FO}	1564	Exhibit 13-8		No	V _{FO} = V			Exhibit 13		
					V _F	٦		10	<u></u>	
-low Entering	n Merae Ir	fluence A	rea		Flow E	nter	ina Dive	rge Influer	nce Are	a
, or Littering	Actual	many eliterated to a trade to a sub-section of the section of the	Desirable	Violation?	1	T	Actual	Max Des		Violation?
V _{R12}	1564	Exhibit 13-8	4600:All	No	V ₁₂			Exhibit 13-8		
Level of Serv	ice Deterr					of Se	rvice De	terminatio	n (if no	
	ويهجر ويستعد والمستعد والمستعد والمتحد والمتحد والمتحد والمحد والمحد والمحد والمحد والمحد والمحد والمحد والمحد	0.0078 V ₁₂ - 0.0						.0086 V ₁₂ - 0	and a second	
	$D_{R} = (pc/mi/ln)$									
R .							oit 13-2)			
LOS = B (Exhibit 13-2) Speed Determination								<u></u>		
Speed Deterr			erminatio	ווכ						
M _S = 0.308 (Exi		•	t 13-12)							
S _R = 61.4 mph	1		xhibit 13-12							
	Exhibit 13-11)				l v	mph (E	xhibit 13-12	)		
• •	(Exhibit 13-13)				S =	mph (E	xhibit 13-13	)		
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General Infor				Site Inform				0007010940-000011015009444-9-7-		
Analyst	TOM	GORRILL	Fre	eeway/Dir of Tra	avel	1-95 SE				
Agency or Company	GORI	RILL PALMER	Ju	nction	KMD SB ON RAMP-NORT			MONTH		
Date Performed	9/7/20	012	risdiction							
Analysis Time Period	AM W	VINT POSTDE	VELOPMENT Ar	alysis Year		2036				
Project Description	TRAFTON PRO	OPERTIES IJR								
Inputs	1000,022000 (Marine Marine Ma						****	242454447100		
Jpstream Adj Ramp		Number of Lar		2					Downstre	eam Adj
⊡Yes □Or		Acceleration L	ane Length, L _A	450					Ramp	
i tes i Oi	ł	Deceleration L	ane Length L _D						I ∕ Yes	🗹 On
⊠ No ⊂ Of	f	Freeway Volu	ne, V _F	1037					∏⊡ No	└─ Off
		Ramp Volume	331					=	800 ft	
- _{up} = ft			-Flow Speed, S _{FF}	70.0					L _{down} =	000 11
V _u = veh/h									V _D =	121 veh/h
			ow Speed, S _{FR}	35.0				and the second		
Conversion t	A CONTRACTOR OF	der Base (	Conditions		1				1	
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PH	IF x f _{HV} x f _p
Freeway	1037	0.90	Level	5	2	0	.972	1.00		1186
Ramp	331	0.90	Level	5	2		.972	1.00	1	378
UpStream			<u></u>				İ		1	
DownStream	121	0.90	Level	2	2	0	.986	1.00	lasa	136
		Merge Areas						iverge Areas		*****
Estimation of	f v ₁₂				Estima	tion o	of v ₁₂			
	V ₁₂ = V _F	(P _{EM} )			1		V ₁₂ = V	/ _R + (V _F - V _I	_R )P _{FD}	
-EQ =		ation 13-6 of	- 13-7)		L _{EQ} =		(	Equation 13	-12 or 13	-13)
P _{FM} =			ion (Exhibit 13-6)	)	P _{FD} =		ι	ising Equati	on (Exhibit	13-7)
V ₁₂ =	1186				$V_{12} =$		r	oc/h		
V ₃ or V _{av34}		•	13-14 or 13-17)	)	V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17)					
Is $V_3$ or $V_{av34} > 2,70$	-				Is V ₃ or V _{av34} > 2,700 pc/h?  Yes  No					
Is $V_3$ or $V_{av34} > 1.5$					Is $V_3$ or $V_{av34} > 1.5 * V_{12}/2$ TYes TNo					
			3-16, 13-18, or		pc/h (Equation 13-16, 13-18, or					
If Yes,V _{12a} =	13-19				13-19)					
Capacity Che	and and a state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of		and the second second second second second second second second second second second second second second secon		Capacity Checks					
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					V			Exhibit 13		
V _{FO}	1564	Exhibit 13-8		No	V _{FO} = V	_F - V _R	-	Exhibit 13		
					V _F	٦		Exhibit 1 10	3-	
Elaw Entorin	<u>I</u> a Morao Ir	fluonoo	1502		Flow Entering Diverge Influence Area					
Flow Enterin	Actual	www.commencements.commencements.com	Desirable	Violation?	1 1000 L		Actual	Max De		Violation
V _{R12}	1564	Exhibit 13-8	4600:All	No	V ₁₂			Exhibit 13-8	T	
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11	D _R =	(pc/mi/		12	U					
							it 13-2)			
LOS = B (Exhibit				<u></u>						
Speed Deter	mination		and the second second second second second second second second second second second second second second secon				rminatio	///		
	ibit 13-11)				L C	(Exhibit				
S _R = 61.4 mph	(Exhibit 13-11)				1		(hibit 13-12)			
0 .	(Exhibit 13-11)				L.		(hibit 13-12)			
S = 61.4 mph	(Exhibit 13-13)				S =	mph (E)	khibit 13-13)			······
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General Info	*****	00000		Site Infor	·····	1.05.03				
nalyst	TOM	GORRILL	F	reeway/Dir of Tra	avel	1-95 SI		P-SOUTH RAM	D	
gency or Compan	y GOR	RILL PALMER	J	unction		NIND			Г	
Date Performed	9/7/2	012	ال	urisdiction						
nalysis Time Perio			VELOPMENT A	nalysis Year	****	2036				
Project Description	TRAFTON PR	OPERTIES IJR				00MED010000000073				******
nputs		<b>I</b>			alaya taka taka taka taka mbana ang					
Jpstream Adj Ram	р	Number of Lar		2					Downstre Ramp	eam Adj
🗟 Yes 🛛 🖾 C	'n		ane Length, L _A	700					·	~ ~
yana yana ya		Deceleration L							☐ Yes	☐ On
	off	Freeway Volur		1368					I ⊂ No	☐ Off
up = 200	ft	Ramp Volume	, V _R	121					L _{down} =	ft
	70.0									
/ _u = 331 ·	veh/h	Ramp Free-Flo	ow Speed, S _{FR}	35.0					V _D =	veh/h
Conversion	to pc/h Und	der Base (	Conditions	**********				antan manafamilind'nye bertarbata tibat 1988 pada ba		2000 C 2001
(pc/h)	V	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PH	F x f _{HV} x f _p
	(Veh/hr)	<b> </b>  -		5	2	<u> </u>	.972	•		1564
Freeway Ramp	1368	0.90	Level	5	2		.972	1.00		138
UpStream	331	0.90	Level	5	2		.972	1.00		378
DownStream		0.00		*****		+	.012	1,00		
		Merge Areas						iverge Areas		
Estimation o	of v ₁₂				Estima	tion o	of v ₁₂			
	V ₁₂ = V _F	(P _{FM} )					V ₁₂ = '	V _R + (V _F - V _R	)P _{FD}	
EQ =	(Equa	ation 13-6 or	13-7)		L _{EQ} =		(	Equation 13-	12 or 13-	13)
P _{FM} =	1.000	using Equati	ion (Exhibit 13-6	i)	P _{FD} = using Equation (Exhibit 13-7)					
′ ₁₂ =	1564	pc/h			V ₁₂ = pc/h					
′ ₃ or V _{av34}			13-14 or 13-17	)	V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17)					
s V ₃ or V _{av34} > 2,7					Is V ₃ or V _{av34} > 2,700 pc/h? TYes TNo					
ls V ₃ or V _{av34} > 1.5					Is $V_3$ or $V_{av34} > 1.5 * V_{12}/2$ TYes No					
Yes,V _{12a} =	pc/h 13-19)	(Equation 13	-16, 13-18, or		If Yes,V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)					
Capacity Ch	managementations			*****	Capaci	tv Ch			***********************	
	Actual	C	apacity	LOS F?			Actual	Ca	oacity	LOS F?
					V _F			Exhibit 13-	8	
V _{FO}	1702	Exhibit 13-8		No	V _{FO} = V	_F - V _R		Exhibit 13-	8	
- FO					V _R			Exhibit 13	-	
							~ 1	10		-
Flow Enterin	Actual		<b>rea</b> Desirable	Violation?	IFIOW E	nterii	ng Dive	r <b>ge Influer</b> Max Des		a Violation?
V _{R12}	1702	Exhibit 13-8	4600:All	No	V ₁₂		nuludi	Exhibit 13-8		violation
Level of Ser					and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s	of Sar	vice De	terminatio	n (if no	1 († F)
	+ 0.00734 v _R + (			2720-1414-0-1400-1400-1-0-1-14-14-14-14-14-14-14-14-14-14-14-14-1		****	WAARDO WIENDAWII DOMANII MATHAWIII	.0086 V ₁₂ - 0		/
0 _R = 14.3 (pc/	D _R = (	pc/mi/		12	D					
	-				1		t 13-2)			
.OS = B (Exhibit 13-2) Speed Determination							minatio			CALL CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACT
a de la constantia de la c		Exhibit		/11	,					
$M_{\rm S} = 0.293$ (E)	1	-	hibit 13-12)							
	(Exhibit 13-11)				1		hibit 13-12)			
· ·	(Exhibit 13-11) (Exhibit 13-13)						hibit 13-12)			
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General lı	nformati	on			Site Inform	nation						
Analyst Agency or Corr Date Performer			GORRILL RILL PALMER )12		Freeway/Dir of Tra Junction Jurisdiction	avel I-95 SB KMD SB ON RAMP			)			
nalysis Time I		AM W	INT POSTDE	VELOPMENT	Analysis Year		2036					
Project Descrip	otion TRAF	TON PRO	OPERTIES IJR	******							-	
nputs							n-spiptor and a state of the					
Ipstream Adj F		1	Number of Lan Acceleration L		2 1350					Downstr Ramp	eam Adj	
	Deceleration Lane Length I									T Yes	└─ On	
No	🗹 Off		Freeway Volur	ne, V _F	1297					🖾 No	└─ Off	
_{up} = 1	100 ft		Ramp Volume		139 == 70.0					L _{down} =	ft	
Freeway Free-Flow Speed, S V _u = 192 veh/h Ramp Free-Flow Speed, S				FF 75.0 35.0					V _D =	veh/h		
Conversi	on to pc/	h Unc	ler Base (	Condition	S							
(pc/h)	(Ve	V eh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PH	IF x f _{HV} x f _p	
Freeway	12	97	0.90	Level	5	2	0	).972	1.00		1483	
Ramp	1:	39	0.90	Level	5	2		).972	1.00		159	
JpStream	1	92	0.90	Level	5	2		).972	1.00		220	
DownStream												
	e		Merge Areas			P" - Aires -	(i.e. 10)		iverge Area	S		
Estimatio	on of $v_{12}$	1000/min/milion.com				Estimat				And the second second second second second second second second second second second second second second second		
EQ =	N	√ ₁₂ = V _F (Equa	(P _{FM} ) ation 13-6 or	13-7)		L _{EQ} =		(1	-	13-12 or 13		
FM =		1.000	using Equat	on (Exhibit 13	3-6)	P _{FD} =		u	sing Equa	ition (Exhibit	13-7)	
$l_{12} =$		1483	oc/h			V ₁₂ = pc/h						
/3 or Vav34		0 pc/ł	n (Equation	13-14 or 13-	17)	V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17)						
Is V ₃ or V _{av34}	> 2,700 pc/h	? 🗆 Ye	s 🖾 No			Is V ₃ or V _{av34} > 2,700 pc/h? TYes TNo						
Is $V_3$ or $V_{av34}$						Is $V_3$ or $V_{av34} > 1.5 * V_{12}/2$ TYes TNo						
f Yes,V _{12a} =	12		(Equation 13	-16, 13-18,	or	If Yes,V _{12a} = pc/h (Equation 13-16, 13-18, or 13-19)						
Capacity	Checks					Capaci	ty Cł	necks	10000000000000000000000000000000000000			
	A	ctual	C	apacity	LOS F?			Actual		Capacity	LOS F?	
						V _F			Exhibit	13-8		
V _{FO}	1	642	Exhibit 13-8		No	$V_{FO} = V_{I}$	- V _R		Exhibit	13-8		
* FO		072			110	V _R	a ann an tao an tao an tao an tao an tao an tao an tao an tao an tao an tao an tao an tao an tao an tao an tao		Exhibit	13-		
						1			10			
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	A	ctual		Desirable	Violation?			Actual	00	Desirable	Violation?	
V _{R12}		642	Exhibit 13-8	4600:All	No	V ₁₂			Exhibit 13-	1		
_evel of S	Service L	Detern	nination (	if not F)		Level o	of Sei	rvice De	termina	tion (if n	ot F)	
D _R = 5.	.475 + 0.0073	34 v _R + (	0.0078 V ₁₂ - 0.	0627 L _A			D _R =	4.252 + 0.	0086 V ₁₂	- 0.009 L _D		
D _R = 9.7 (pc/mi/ln)							pc/mi	/ln)				
LOS = A (Exhibit 13-2)							Exhib	it 13-2)				
Speed Determination							-		n			
	47 (Exibit 13-		<u></u>		99999999999999999999999999999999999999	Speed Determination           D _s = (Exhibit 13-12)						
•	1 mph (Exhibi					4	nph (E	xhibit 13-12)				
	mph (Exhibit					1 '`		xhibit 13-12)				
v	1 mph (Exhibi 1 mph (Exhibi					1 °		xhibit 13-13)				
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Deneral Information         Site Information           najat         TOM GORRILL         Freeway/Dir of Tavel         195 SB           geny of Company         GORRILL PALMER         Junction         K4b SB ON RAMP           geny of Company         GORRILL PALMER         Junction         K4b SB ON RAMP           geny of Company         GORRILL PALMER         Junction         K4b SB ON RAMP           geny of Company         GORRILL PALMER         Junction         K4b SB ON RAMP           majetis Time France         Minth POSTDEVELOPMENT         Analysis Year         Downstream Adj           reget secondaria         Acceleration Lane Length L ₂ 1350         Remp           Yes         On         Deceleration Lane Length L ₂ 1350         Immer Time           No         FOR         Freeway Volume, V _p 1297         No         For           yes         Freeway Volume, V _p 1297         No         For         No         For           optimum         Ramp Pree-Flow Speed, Sen         36.0         Vo         1483         No         Tow         For         No         For         So         2.0         972         1.00         129         139         149         149         149         149 </th <th></th> <th></th> <th>RAI</th> <th>MPS AND</th> <th>RAMP JU</th> <th>NCTIONS W</th> <th>ORKSH</th> <th>EET</th> <th>*****</th> <th></th> <th></th> <th></th>			RAI	MPS AND	RAMP JU	NCTIONS W	ORKSH	EET	*****				
abyst persor or Comparing entrop or Comparing tells Performed analysis Time Period AMW NINT POSTDEVELOPMENT Analysis Year         145 SB MMD SE OR RAMP Models SO RAMP analysis Time Period           abyst Time Period AMW NINT POSTDEVELOPMENT Analysis Time Period         Comparing AMW NINT POSTDEVELOPMENT Analysis Year         2038           TOTUS         Downstream Acceleration Lane Length, L, to Bacaleration Length, L, to Bacaleration Length, L, to Bacaleration Length, L, to Bacaleration Length, L, to Bacaleration Length, L, to Bacaleration Length, L, to Bacaleration Length, L, to Bacaleration Length, L, to Bacaleration Length, L, to Bacaleration Length, L, to Bacaleration Length, L, to Bacaleration Length, L, to Bacaleration Length, L, to Bacaleration Length, L, to Bacaleration Length, L, to Bacaleration Length, L, to Bacaleration Length, L, to Bacaleration Length, L, to Bacaleration Length, L, to Bacaleration Length, L, to Bacaleration Length, L, to Bacaleration Length, L, to Bacaleration Length, L, to Bacaleration Length, L, to Bacaleration Length, L, to Bacaleration Length, L, to Bacaleration Length, L, to Bacal	Genera	I Infori							******				
TRAFTON PROPERTIES UR mputs           mputs         Number of Lanes, N         2         Downstream Adj Ramp         Downstream Adj Ramp $\nabla$ Yes $\cap$ on         Deceleration Lane Length, L, accolaration Lane Length, L, $1350$ 1297 $\Box$ N $\nabla$ Yes $\cap$ on $\nabla$ Yes $\cap$ off         Freeway Tree-Flow Speed, Srp.         70.0 $\Box$ web/h $\Box$ web/h $\nabla$ Yes $\top$ Off         Freeway Tree-Flow Speed, Srp.         70.0 $\nabla$ b $\nabla$ web/h           Conversion to pc/h Under Base Conditions $\nabla$ veb/h $\nabla$ veb/h $\nabla$ veb/h $\nabla$ on           Stamp         139         0.80         Level         5         2         0.972         1.00         1483           Stamp         139         0.80         Level         5         2         0.972         1.00         220           DownStream         Marge Areas         Estimation of V_12         V1.2         V1.2         V1.2         V1.2         V1.2         V1.2         V2.1         V2.1 </td <td></td> <td>•••</td> <td>GOR</td> <td>RILL PALMER</td> <td></td> <td>Junction</td> <td colspan="3">KMD SB ON RAMP</td> <td>IP</td> <td>*****</td> <td>MANDA EUROpage annu gan degaga pana</td>		•••	GOR	RILL PALMER		Junction	KMD SB ON RAMP			IP	*****	MANDA EUROpage annu gan degaga pana	
Imputs           Number of Lanes, N         2         Downstream Adj $\overline{V}$ Yes $\overline{\Gamma}$ On         Doceleration Lane Length, La         1360         Ramp $\overline{V}$ Yes $\overline{\Gamma}$ On         Doceleration Lane Length, La         1360 $\overline{\Gamma}$ Yes $\overline{\Gamma}$ On $\overline{V}$ or $\overline{\Gamma}$ Preway Volume, V _p 139 $\overline{\Gamma}$ Yes $\overline{\Gamma}$ On $\overline{V}$ are         1100 ft         Freeway Volume, V _p 139 $\overline{V}_{dam}$ ft $u_{a}$ 192 veh/h         Ramp Free-Flow Speed, S _{FR} 35.0 $V_{D} = veh/h$ Conversion to pc/h Under Base Conditions         2         0.972         1.00         1483           Grap         139         0.80         Level         5         2         0.972         1.00         139           DosenBriam         192         0.90         Level         5         2         0.972         1.00         139           Stimation of V_12         Stimation Stim V_2 = V_p + V(p - V_p)P_p_D         Stim					VELOPMENT	Analysis Year		2036		*****			
patream Adj RampNumber of Lanes, N2Downstream Adj Ramp $\overline{\nabla}$ Yes $\overline{\Box}$ OnDeveleration Lane Length L _A 1350Team $\overline{\Box}$ No $\overline{\Box}$ OffFreeway Free-Flow Speed, Spc139 $\overline{\Box}$ Yes $\overline{\Box}$ On $\overline{uv}$ 1100ftRamp Volume, V _p 139 $\overline{\Box}$ warm $\overline{\Box}$ warm $\overline{\Box}$ warm $uv$ 1100ftRamp Volume, V _p 139 $\overline{\Box}$ warm $\overline{\Box}$ warm $\overline{\Box}$ warm $uv$ 120velve/hRamp Free-Flow Speed, Spc70.0 $\overline{V}$ worm $\overline{\Box}$ warm $\overline{\Box}$ warmConversion to pc/h Under Base Conditions(pch)YebPHFTerrain $\overline{\nabla}$ for ward $\overline{\Box}$ warmStamp12970.90Level520.9721.001483Samp1390.90Level520.9721.001483Samp1390.90Level520.9721.00120DownStream1390.90Level520.9721.00120Spitream1390.90Level520.9721.00120DownStream1920.90Level520.9721.00120Spitream1920.90Level520.9721.00120Spitream1920.90Level520.9721.00120Spitream1920.90Level520.9721.		cription	TRAFTON PR	OPERTIES IJR			an an an an an an an an an an an an an a		*******				
Acceleration Lane Length L _A 1350         Ramp         Ramp         Ramp         Ramp         Ramp         To Proceeding to Law Length L _A 1350         Proceeding to Law Length L _A To Proceeding to Law Length L _A To Proceeding to Law Length L _A To Proceeding to Law Length L _A To Proceeding to Law Length L _A To Proceeding to Law Length L _A To Proceeding to Law Length L _A To Proceeding to Law Length L _A To Proceeding to Law Length L _A To Proceeding to Law Length L _A To Proceeding to Law Length L _A To Proceeding to Law Length L _A To Proceeding to Law Length L _A To Proceeding to Law Length L _A To Proceeding to Law Length L _A To Proceeding to Law Length L _A To Drow Proceeding to Law Length L _A To Drow Proceeding to Law Length L _A To Drow Proceeding to Law Length L _A To Drow Proceeding to Law Length L _A To Drow Proceeding to Law Length L _A To Drow Proceeding to Law Length L _A To Drow Proceeding to Law Length L _A To Drow Proceeding to Law Length L _A To Drow Proceeding to Law Length L _A To Drow Length L _A To Drow Pr	annan Bacanan an			h	h				anio konzili la miceri in finite in Ci		<u> </u>		
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				Deceleration L	ane Length L _D						☐ Yes	└─ On	
	No	🖸 Off		Freeway Volur	ne, V _F	1297					I I No	└ Off	
$V_u$ =       192 veh/h       Ramp Free-Flow Speed, $S_{FR}$ 35.0 $V_D$ =       veh/h         Conversion to pc/h Under Base Conditions         (poh)       V       PHF       Terrain       %Truck       %Erv $f_{HV}$ $f_p$ $V = V/PHF x f_{HV} x f_p$ iceway       1297       0.90       Level       5       2       0.972       1.00       1483         isamp       139       0.90       Level       5       2       0.972       1.00       1283         jobream       192       0.90       Level       5       2       0.972       1.00       1280         jobream       192       0.90       Level       5       2       0.972       1.00       1280         jobream       192       0.90       Level       5       2       0.972       1.00       1280         jobream       192       0.90       Level       5       2       0.972       1.00       1280         jobream       192       0.90       Level       5       2       0.972       1.00       1280         jobream       132       0.90       Level       5       0.972       1.00       1280	L _{up} = 1100 ft										L _{down} =	ft	
$ \begin{array}{ c c c c c } \hline (pch) & V \\ (Veh/m) & PHF & Terrain & \%Truck & \% Rv & f_{HV} & f_p & v = V/PHF x f_{HV} x f_p \\ \hline reeway & 1297 & 0.90 & Level & 5 & 2 & 0.972 & 1.00 & 1483 \\ \hline reeway & 1297 & 0.90 & Level & 5 & 2 & 0.972 & 1.00 & 1483 \\ \hline pStream & 192 & 0.90 & Level & 5 & 2 & 0.972 & 1.00 & 220 \\ \hline momStream & & & & & & & & & & & \\ \hline momStream & & & & & & & & & & & & & \\ \hline momStream & & & & & & & & & & & & & & & & \\ \hline momStream & & & & & & & & & & & & & & & & & & \\ \hline momStream & & & & & & & & & & & & & & & & & & &$					,						V _D =	veh/h	
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Nerge Areas         Diverge Areas           Stimation of $v_{12}$ Estimation of $v_{12}$ $V_{12} = V_F (P_{FM})$ $V_{12} = V_R + (V_F - V_R)P_{FD}$ EG =         (Equation 13-6 or 13-7)           FM =         1.000 using Equation (Exhibit 13-6) $v_{12} = V_R + (V_F - V_R)P_{FD}$ $v_{12} = V_R + (V_F - V_R)P_{FD}$ $v_{12} = V_R + (V_F - V_R)P_{FD}$ $v_{12} = V_R + (V_F - V_R)P_{FD}$ $v_{12} = V_R + (V_F - V_R)P_{FD}$ $v_{12} = 0$ <td>Ramp</td> <td></td> <td>139</td> <td>0.90</td> <td>Level</td> <td>5</td> <td>2</td> <td></td> <td>.972</td> <td>1.00</td> <td></td> <td>159</td>	Ramp		139	0.90	Level	5	2		.972	1.00		159	
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					13-14 or 13-1	7)							
Yes, $V_{12a} =$ pc/h (Equation 13-16, 13-18, or 13-19)         Capacity Checks       Capacity Checks         Actual       Capacity       LOS F?       Actual       Capacity       LOS F?         VFO       1642       Exhibit 13-8       V       Exhibit 13-8       V       Exhibit 13-8       LOS F?         VFO       1642       Exhibit 13-8       No       V       Exhibit 13-8       V       Exhibit 13-8       V         Flow Entering Merge Influence Area       Flow Entering Diverge Influence Area       Vorthit 13-8       V       Exhibit 13-8       V       Vorthit 13-8       V       Vorthit 13-8       V       V       Exhibit 13-8       V       Vorthit 13-8       V       V       Exhibit 13-8       V       V       V       Exhibit 13-8       V       V       V       Exhibit 13-8       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V													
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EQ ⁼		ation 13-6 or		<b>C</b> )	L _{EQ} = D -			sing Equation		
FM ⁼		using Equati	on (Exhibit 13	-0)	P _{FD} = V ₁₂ =			ising Equation ic/h		10-1 )
$l_{12} = l_{12}$	1573	-	0 11 00 10 1	7)	V ₃ or V _{av34} pc/h (Equation 13-14 or 13-17)					
/ ₃ or V _{av34} Is V ₃ or V _{av34} > 2,70		h (Equation 1	13-14 OF 13-1	()	$V_3 \text{ of } V_{av34}$ is $V_3 \text{ or } V_{av34} > 2,700 \text{ pc/h}? \Box \text{ Yes } \Box \text{ No}$					
Is $V_3$ or $V_{av34} > 2.70$ Is $V_3$ or $V_{av34} > 1.5^{-1}$					$  _{s V_{3} or V_{av34}} > 1.5 * V_{12}/2 \ \forall es \ \forall No$					
f Yes, V _{12a} =		(Equation 13	-16, 13-18, c	or	If Yes, $V_{12a} = \frac{pc/h}{13-19}$ (Equation 13-16, 13-18, or					
Capacity Che					Capacity Checks					
Suparty one	Actual	С	apacity	LOS F?	T	alannanna	Actual	C	apacity	LOS F?
<u></u>	1	ſ	<u></u>		V _F		I	Exhibit 13	3-8	
V _{FO}	1747	Exhibit 13-8		No	V _{FO} = V	F - VR		Exhibit 13	3-8	
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0	(Exhibit 13-11)				1	mph (E	xhibit 13-12)			
i v	(Exhibit 13-11)				1	mph (E	xhibit 13-12)			
v .	(Exhibit 13-13)				1	mph (E	xhibit 13-13)			
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Freeway	1881	0.90	Level	5	2	0	.972	1.00		2151
Ramp	47	0.90	Level	5	2	0	.972	1.00		54
UpStream	151	0.90	Level	5	2	0	.972	1.00		173
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		Merge Areas			C. diana	4. ²		liverge Area	S	
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EQ =		ation 13-6 or			L _{EQ} =				3-12 or 13	-
P _{FM} =		using Equat	ion (Exhibit 13	3-6)	P _{FD} =				tion (Exhibit	13-7)
/ ₁₂ =	2151	•			V ₁₂ =			oc/h		
		h (Equation '	13-14 or 13-	17)	$V_3$ or $V_{av34}$				in 13-14 or 13	-17)
• • • • •	2,700 pc/h? ┌─ Ƴe				1			Yes T		
• • • • • •	1.5 * V ₁₂ /2	es I⊠ No (Equation 13	-16. 13-18. (	or	1			[−] Yes / [−] N oc/h (Equa	₩o tion 13-16,	13-18, or
f Yes,V _{12a} =	13-19				lf Yes,V _{12a}		1:	3-19)		
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					V _F			Exhibit '	13-8	
V _{FO}	2205	Exhibit 13-8		No	V _{FO} = V	_F - V _R		Exhibit '	13-8	
FU					V _R			Exhibit	13-	
				<u> </u>	1			10	<u> </u>	
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N /	Actual	and second s	Desirable	Violation?			Actual		)esirable o	Violation?
V _{R12}	2205	Exhibit 13-8	4600:All	No	V ₁₂		# GNA	Exhibit 13-		
	ervice Deter				Level	***			tion (if no	DT F)
	′5 +0.00734 v _R +	0.0078 V ₁₂ - 0.0	)0627 L _A					.0086 V ₁₂	- 0.009 L _D	
0 _R = 20.5 (p	oc/mi/ln)				1	(pc/mi/				
.OS = C (Exh	ibit 13-2)				LOS =	(Exhib	it 13-2)			
Speed Det	ermination				Speed	Dete	rminati	on		
000000000000000000000000000000000000000	(Exibit 13-11)		*******		D _s = (	(Exhibit	13-12)			
0	uph (Exhibit 13-11)				4	mph (E>	xhibit 13-12)			
	ph (Exhibit 13-11)				1	mph (E)	xhibit 13-12)			
v .	ph (Exhibit 13-13)	I			1		xhibit 13-13)			
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		RA	MPS AND	RAMP JUI	NCTIONS W	ORKSHI	EET				*******
Genera	al Inform				Site Inform						
Analyst Agency or Date Perfo	Company	TOM GOR 9/7/2	GORRILL RILL PALMER 012 V INT POSTDE		Freeway/Dir of Tra Junction Jurisdiction Analysis Year		I-95 NI TRAF 2036	B Fon NB on	RAMP		
Project Des	scription	FRAFTON PR	OPERTIES IJR				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
Inputs					***						
Jpstream /			Number of Lar Acceleration L		2 1350					Downstre Ramp	eam Adj
I Yes	∏ On		Deceleration L	b						⊤ Yes	
No	I⊂ Off		Freeway Volur		1738					🖾 No	☐ Off
-up =	2000 f	t	Ramp Volume Freeway Free-	. V _R Flow Speed, S _r	210 == 70.0					L _{down} =	ft
V _u =	190 ve	h/h	Ramp Free-Flo	•	35.0					V _D =	veh/h
Conve	rsion to	pc/h Un	der Base (	Conditions	}						
(pc	:/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PH	IF x f _{HV} x f _p
Freeway		1738	0.90	Level	5	2	C	.972	1.00		1987
Ramp		210	0.90	Level	5	2		.972	1.00		240
UpStream	the second second second second second second second second second second second second second second second se	190	0.90	Level	5	2		.972	1.00	ļ	217
DownStre	/nStream							Ţ	A	<u>l</u>	
	<u> </u>		Merge Areas			Ectimot	lion		iverge Areas		
estima	tion of	V ₁₂		***		Estimat					T/1-17/1-101-10-10-10-10-10-10-10-10-10-10-10-1
-EQ = P _{FM} =			(P _{FM} ) ation 13-6 or using Equat		I-6)	L _{EQ} = P _{FD} =		(	/ _R + (V _F - V _R Equation 13- Ising Equatic	12 or 13-	-
√ ₁₂ =		1987	pc/h			V ₁₂ =		p	oc/h bc/h (Equation '		
	_{av34} > 2,700 _{av34} > 1.5 *	) pc/h?	s 座 No (Equation 13				_{v34} > 1.	700 pc/h?	Yes └ No Yes └ No oc/h (Equatio		
		13-19	)		1,720,720,720,720,720,720,720,720,720,720	Capacit		constructed and the second second second second second second second second second second second second second	3-19)	0771071)0000000000000000000000000000000	2007.04 menses and an annual annual
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V	FO	2227	Exhibit 13-8		No	$V_{FO} = V_{f}$			Exhibit 13- Exhibit 13		
					<u> </u>				10		
Flow E	ntering		nfluence A	والمترابي والمرابية والمستعمين والمستخلف والمتكر فأوار فأوار		Flow E	nteri		ge Influer	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	
Vr	र12	Actual 2227	Max Exhibit 13-8	Desirable 4600:All	Violation? No	V ₁₂	_	Actual	Max Des Exhibit 13-8		Violation?
		ce Deteri	nination (	if not F)		Level o	f Se	rvice De	terminatio	on (if no	ot F)
D _R = _OS =	a = 5.475 + 14.3 (pc/mi B (Exhibit 1	0.00734 v _R + /ln)  3-2)	0.0078 V ₁₂ - 0.			LOS = (	pc/mi Exhib	/ln) it 13-2)	.0086 V ₁₂ - 0	).009 L _D	
Speed	Detern	nination				Contraction of the second second second second second second second second second second second second second s	Dete	rminatio	on		aga an china an an an an an an an an an an an an a
S _R = S ₀ =	N/A mph (E	Exhibit 13-11) Exhibit 13-11)				S _R = r S ₀ = r	nph (E nph (E	13-12) xhibit 13-12) xhibit 13-12)			
		Exhibit 13-13)						xhibit 13-13)		<u></u>	0/0/00/00/00
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Agency or Compar				Junction			- VB ON RAM	P		
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alysis Time Peri		WINT POSTDE	/ELOPMENT	Analysis Year		2036				
Project Description										******
nputs	****	******	<u> </u>		*********					
Jpstream Adj Ram	n	Number of Lan	es, N	2	201210700000000000000000000000000000000	****			Downstre	eam Adi
		Acceleration La	ane Length, L,	350					Ramp	,
Yes TC	n	Deceleration L	••						☐ Yes	└ On
			- 0	1000						
∏No ⊮C	)TT	Freeway Volun	ne, V _F	1389					🖾 No	☐ Off
up = 2000	ft	Ramp Volume,	V _R	631					L _{down} =	ft
up 2000	n	Freeway Free-	Flow Speed, S,	FF 70.0					dowa	
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							aga kanang mang mang mang mang mang mang mang		1	************
Conversion	Construction of the second second second second second second second second second second second second second	der Base (	onaitions	5	Ī			p	T	174376-1624-1626-1424-1426-1426-1426-1426-142
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PH	F x f _{HV} x f _p
Freeway	1389	0.90	Level	5	2		).972	1,00	1	1588
Ramp	631	0.90	Level	5	2		).972	1.00		721
JpStream	559	0.90	Level	5	2	avandaraara	).972	1.00		639
DownStream		0.00			<u> </u>	<u> </u>		1.00		000
Souriou cum		Merge Areas	******	49 (19) o fei fei fei fei fei fei fei fei fei fei		netradamentere	D	iverge Areas		
Estimation of			45400000000000000000000000000000000000		Estimat	tion				
		(D)		n a fa				/ _R + (V _F - V _F	١D	
	$V_{12} = V_{F}$		( <b>A A )</b>							(0)
EQ =		ation 13-6 or	-		L _{EQ} =			Equation 13		-
P _{FM} =		using Equati	on (Exhibit 13	3-6)	P _{FD} =			ising Equation	on (Exhibit	13-7)
/ ₁₂ =	1588	•			V ₁₂ =		•	oc/h		
/ ₃ or V _{av34}		h (Equation 1	3-14 or 13-1	17)	$V_3$ or $V_{av34}$			oc/h (Equation		-17)
Is V ₃ or V _{av34} > 2,2	700 pc/h? 🦳 Ye	s 🖾 No			Is $V_3$ or $V_{a_1}$	_{v34} > 2,	700 pc/h? 🔽	Yes 🗆 No	)	
Is V ₃ or V _{av34} > 1.	5 * V ₁₂ /2	s 🖻 No			Is V ₃ or V _{av}	_{v34} > 1.	5*V ₁₂ /2 [*	Yes 🗆 No	1	
f Yes,V _{12a} =		(Equation 13	-16, 13-18, d	or	If Yes, V _{12a}	=		oc/h (Equatio	on 13-16, 1	13-18, or
	13-19	)						3-19)		de Bildon - Anna ang ang ang ang ang ang ang ang ang
Capacity Ch	ecks				Capacit	ty Cl	iecks			
	Actual	<u> </u>	apacity	LOS F?			Actual	CONTRACTOR CONTRACTOR CONTRACTOR	apacity	LOS F?
					V _F			Exhibit 13	-8	
V _{FO}	2309	Exhibit 13-8		No	$V_{FO} = V_{F}$	V _R		Exhibit 13	-8	
FO					V _R			Exhibit 13	3-	
					1			10		
Flow Enterin	<u>ıg Merge lı</u>				Flow Er	nteri		rge Influe	THE R. P. LEWIS CO., LANSING MICH.	And a second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second sec
	Actual		Desirable	Violation?			Actual	Max De	sirable	Violation?
V _{R12}	2309	Exhibit 13-8	4600:All	No	V ₁₂			Exhibit 13-8		
level of Ser	vice Deteri	mination (i	f not F)		Level o	fSe	rvice De	terminatio	on (if no	ot F)
D _R = 5.475	+ 0.00734 v _R +	0.0078 V ₁₂ - 0.0	0627 L _A			D _R =	4.252 + 0	.0086 V ₁₂ - (	).009 L _D	
) _R = 21.0 (pc	/mi/ln)	-			D _R = (	pc/mi	/ln)			
OS = C (Exhib	·					•	it 13-2)			
Speed Deter				ayay ay amana a ana ana ana ana ana ana ana ana			rminatio	n <i>m</i>		9046700209424000004124024024024
								/		NUMBER OF CONTRACTOR OF CONTRACT CONTRACT
M _S = 0.336 (E	xibit 13-11)						13-12)			
S _R = 60.6 mp	n (Exhibit 13-11)						xhibit 13-12)			
	(Exhibit 13-11)				S ₀ ≃ n	nph (E:	xhibit 13-12)			
	n (Exhibit 13-13)				S= n	nph (E:	xhibit 13-13)			
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		WIF3 AND	NAIVIE JUN	CTIONS W			******************			******
General Infor		0000011		Site Infor		105 0				
nalyst	TOM	GORRILL	F	reeway/Dir of Tra	avel	1-95 SI		P-NORTH RAM	1D	
gency or Company	GOR	RILL PALMER	ال	unction		UPST				
ate Performed	9/7/20	012	ال	urisdiction						
nalysis Time Perio	d PM V	VINT POSTDE	VELOPMENT A	nalysis Year		2036				
roject Description	TRAFTON PRO	OPERTIES IJR								C560.00.0920.0046.002.004
nputs			*****				-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
lpstream Adj Ramp		Number of Lan		2					Downstre	eam Adj
Yes 🗔 Oi	<b>^</b>	Acceleration La	ane Length, L _A	450					Ramp	
	1	Deceleration L	ane Length L _D						☐ Yes	☐ On
No 🕅 Ot	ff	Freeway Volun	ne, V _F	1445					区 No	└ Off
	<b>.</b> .	Ramp Volume,	V _R	210					L _{down} =	ft
_{up} = 950 f	t	1	Flow Speed, S _{FF}	70.0					-down	
/_= 518 v	⊳h/h	Ramp Free-Flo		35.0					V _D =	veh/h
				55.0	******			and a second second state of the second second second second second second second second second second second s	L	
Conversion t	<u>opc/hUnc</u> Iv	per Base (	onaitions	1	1				1	
(pc/h)	(Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	V = V/PH	IF x f _{HV} x f _p
reeway	1445	0.90	Level	5	2		.972	1.00		1652
Ramp	210	0.90	Level	5	2	C	.972	1.00		240
JpStream	518	0.90	Level	5	2	C	.972	1.00		592
DownStream					ļ				L	
- 41		Merge Areas	AND AND AND AND AND AND AND AND AND AND		Estimo	tion .		Diverge Areas		5404904422504554944449999944499994444
stimation o					Estima				no-server of the market	
	V ₁₂ = V _F	( P _{FM} )					. =	$V_{R} + (V_{F} - V_{F})$	–	
EQ =	(Equ	ation 13-6 or	13-7)		L _{EQ} =			(Equation 13		
FM =	1.000	using Equati	on (Exhibit 13-6	3)	P _{FD} =			using Equation	on (Exhibit	13-7)
12 =	1652	pc/h			$V_{12} =$			pc/h		
₃ or V _{av34}	0 pc/l	h (Equation 1	13-14 or 13-17	<b>'</b> )	$V_3$ or $V_{av34}$			pc/h (Equation		-17)
s V ₃ or V _{av34} > 2,7					1			Yes 🗆 No		
s V ₃ or V _{av34} > 1.5					Is $V_3$ or $V_a$	_{IV34} > 1.		⊤Yes ∏No		
Yes,V _{12a} =			-16, 13-18, or		If Yes, V _{12a}	=		pc/h (Equatio 3-19)	on 13-16,	13-18, or
Capacity Che	13-19)	)	Antonia and an and a second second second second second second second second second second second second second		Capaci	ty Ch	COMPANY OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER	5-13)		
sapacity cit	Actual	Гс	apacity	LOS F?	<u>100,000</u>	.y 01	Actual	Ca	apacity	LOS F?
	riotati	† – – Ť	apuony					Exhibit 13		
	(000				V _{FO} = V			Exhibit 13		
V _{FO}	1892	Exhibit 13-8		No				Exhibit 13		
								10		
Flow Enterin	g Merge In	nfluence A	rea		Flow E	nteri	ng Dive	erge Influe		
	Actual		Desirable	Violation?			Actual	Max De	sirable	Violation
V _{R12}	1892	Exhibit 13-8	4600:All	No	V ₁₂			Exhibit 13-8		
evel of Sen	والإحداثية الزبار المحاور ومنابعه بتطار أوجعت والمتعاد والمحاد				Level c			eterminatio		ot F)
D _R = 5.475 ·	+ 0.00734 v _R +	0.0078 V ₁₂ - 0.0	0627 L _A			D _R =	4.252 + (	0.0086 V ₁₂ - (	0.009 L _D	
) _R = 17.3 (pc/r	mi/ln)				D _R =	(pc/mi	/in)			
OS = B (Exhibi	t 13-2)						it 13-2)			
Speed Deter	mination				Speed	Dete	rminati	on		
л _s = 0.315 (Ех	(ibit 13-11)				D _s =	(Exhibit	13-12)			
-	(Exhibit 13-11)				1	mph (E	xhibit 13-12	)		
i i i i i i i i i i i i i i i i i i i	(Exhibit 13-11)				1	mph (E	xhibit 13-12	:)		
• •	(Exhibit 13-13)					mph (E	xhibit 13-13	5)		
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General Info		~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	RAMP JUN	Site Infor					an an an an an an an an an an an an an a	
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-				•	1 <b>1</b> 01		SB ON RAMI	P-NORTH		
Agency or Compar	iy GOR	RILL PALMER		nction		RAMP	-DOWN			
Date Performed	9/7/2			risdiction		0000				
Analysis Time Peri Project Description			VELOPMENT Ar	alysis year		2036	****			****
Inputs								****		
Jpstream Adj Ram		Number of Lar	ies. N	2			*******	00000000000000000000000000000000000000	Downstr	eam Adi
		Acceleration L	•	- 450					Ramp	sanninaj
TYes C	On	Deceleration L	- 1						🖂 Yes	⊡ On
⊠No ⊏C	Off	Freeway Volur		1445					∏ No	⊡ Off
		Ramp Volume	1	210						
- _{up} = ft		1	Flow Speed, S _{FF}	70.0					L _{down} =	800 ft
V _u = veh									V _D =	68 veh/h
		Ramp Free-Flo		35.0			warmen washedon with 0.000			
Conversion		<u>der Base (</u>	Conditions		Υ		T			n water water and the state of the state of the state of the state of the state of the state of the state of the
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PH	IF x f _{HV} x f _p
Freeway	1445	0.90	Level	5	2	0	.972	1.00		1652
Ramp	210	0.90	Level	5	2	0	.972	1.00		240
UpStream				ļ						
DownStream	68	0.90	Level	2	2	0	.986	1.00	L	77
Estimation of		Merge Areas			Diverge Areas Estimation of v ₁₂					*******
		/ <b>D</b>			Louna				<u>\</u>	
	$V_{12} = V_F$		40.7)		_		14	$V_{\rm R}$ + ( $V_{\rm F}$ - $V_{\rm R}$		40)
-EQ =		ation 13-6 or			L _{EQ} =		•	Equation 13-		-
P _{FM} =			ion (Exhibit 13-6)	)	P _{FD} =			sing Equatio	חו (בגוווטונ	13-7)
$/_{12} =$	1652		(0 4 4 40 47)		V ₁₂ = V ₃ or V _{av34}		•	c/h c/h (Equation 1	12 11 or 12	17)
$V_3 \text{ or } V_{av34}$			13-14 or 13-17)	)				Yes INO	13-14 01 13	-17)
Is $V_3$ or $V_{av34} > 2,7$					1 * *			Yes No		
Is V ₃ or V _{av34} > 1.			-16, 13-18, or					c/h (Equatio	n 13-16.	13-18. or
f Yes,V _{12a} =	13-19)			NAMES AND ADDRESS OF TAXABLE PARTY.	lf Yes,V _{12a}	=		-19)		
Capacity Ch	iecks				Capaci	ty Ch	lecks			
	Actual	<u> </u>	apacity	LOS F?			Actual		pacity	LOS F?
					V _F			Exhibit 13-		
$V_{FO}$	1892	Exhibit 13-8		No	V _{FO} = V	_F - V _R	******	Exhibit 13-		
					V _R			Exhibit 13 10	-	
Flow Enterii	na Merae In	fluence A	rea		Flow E	nteri	na Diver	ge Influer	ice Are	a
	Actual	- Constant and the second second second second second second second second second second second second second s	Desirable	Violation?			Actual	Max Des		Violation?
V _{R12}	1892	Exhibit 13-8	4600:All	No	V ₁₂			Exhibit 13-8		
Level of Ser	vice Detern	nination (i	if not F)		Level o	of Ser	vice De	terminatic	on (if no	ot F)
D _R = 5.475	+0.00734 v _R +(	0.0078 V ₁₂ - 0.0	0627 L _A			D _R =	4.252 + 0.	0086 V ₁₂ - 0	.009 L _D	
O _R = 17.3 (pc.	/mi/ln)				D _R = (	(pc/mi/	'in)			
.OS = B (Exhib	oit 13-2)				LOS = (	Exhib	it 13-2)			
Speed Deter	rmination			***********	Speed	Dete	rminatic	n		
M _s = 0.315 (E	xibit 13-11)				D _s = (	Exhibit	13-12)			
-	h (Exhibit 13-11)				1	nph (E>	(hibit 13-12)			
	n (Exhibit 13-11)				S ₀ = 1	mph (Ex	(hibit 13-12)			
<b>v</b> .	h (Exhibit 13-13)				S= 1	nph (E>	(hibit 13-13)			
vright © 2010 Unive	areity of Elorida All	Rights Reserve	d		HCS201	TM VA	reion 6 1		Generate	d: 9/9/2012 12

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Analyst	****	GORRILL		eeway/Dir of Tra		95 SB			1996-9996-9996-9996-9996-9996-9996-9996
				nction		MD SB ON RAI	MP-SOUTH RAM	1P	
Agency or Company									
Date Performed	9/7/20		Jur VELOPMENT An	risdiction	2	036			
Analysis Time Period Project Description				aiysis i cai	Z1	000			
Inputs		OT EITHEO INT	************		an an an an an an an an an an an an an a				and the second second second second second second second second second second second second second second secon
Jpstream Adj Ramp		Number of Lan	es. N	2		00 <del>1, 11, 10, 10, 10, 10, 10, 10, 10, 10, 1</del>	anang yang yang yang yang yang yang yang	Downstr	eam Adj
		Acceleration La		700				Ramp	···· <b>·</b>
I Yes I On		Deceleration L	N					☐ Yes	⊡ On
□ No □ Off		Freeway Volun	6	1655				I™ No	Off
				68					
- _{up} = 200 ft		Ramp Volume,						L _{down} =	ft
			Flow Speed, S _{FF}	70.0				V _D =	veh/h
V _u = 210 ve	h/h	Ramp Free-Flo	w Speed, S _{FR}	35.0				*D	VCIUIT
Conversion to	pc/h Un	der Base (	Conditions						
(pc/h)	V	PHF	Terrain	%Truck	%Rv	f _{HV}	f _p	v = V/Pł	HF x f _{HV} x f _p
Freeway	(Veh/hr) 1655	0.90	Level	5	2	0.972	1.00	1	1892
Ramp	68	0.90	Level	5	2	0.972	1.00	1	78
UpStream	210	0.90	Level	5	2	0.972	1.00	1	240
DownStream	210								
		Merge Areas					Diverge Areas		
Estimation of	V ₁₂				Estimatio	on of v ₁₂			
	V ₁₂ = V _F	(P _{FM} )				V ₁₂ =	· V _R + (V _F - V _F	_R )P _{FD}	
-EQ =		ation 13-6 or	13-7)		L _{EQ} =		(Equation 13	-12 or 13	-13)
P _{FM} =			ion (Exhibit 13-6)	1	P _{FD} =		using Equation	on (Exhibit	: 13-7)
V ₁₂ =	1892				V ₁₂ =		pc/h		
V ₃ or V _{av34}		-	13-14 or 13-17)	1	V ₃ or V _{av34}		pc/h (Equation	13-14 or 13	3-17)
Is V ₃ or V _{av34} > 2,700	0 pc/h? ┌─ Ye	s 🖾 No			Is V ₃ or V _{av34}	4 > 2,700 pc/h?	□Yes □No	)	
Is V ₃ or V _{av34} > 1.5 *					Is $V_3$ or $V_{av34}$	₄ > 1.5 * V ₁₂ /2	□Yes □No	)	
If Yes,V _{12a} =	pc/h	(Equation 13	3-16, 13-18, or		If Yes,V _{12a} =		pc/h (Equatio	on 13-16,	13-18, or
1 100, 128	13-19	)			128		13-19)		*****
	alza	Construction of the local distribution of th			Canacity				
			apacity	1.09.52	Capacity	and the second second second second second second second second second second second second second second second		anacity	LOS F?
	<b>cks</b> Actual	C T	apacity	LOS F?		Actua	and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s	apacity -8	LOS F?
Capacity Che	Actual		apacity		V _F	Actua	Exhibit 13	-8	LOS F?
		C Exhibit 13-8	apacity	LOS F? No	V _F V _{FO} = V _F ·	Actua	Exhibit 13 Exhibit 13	-8	LOS F?
Capacity Che	Actual		apacity		V _F	Actua	Exhibit 13	-8	LOS F?
Capacity Che V _{FO}	Actual 1970	Exhibit 13-8		No	$\frac{V_F}{V_{FO} = V_F}$	Actua	Exhibit 13 Exhibit 13 Exhibit 13 Exhibit 13 10 erge Influe	-8 -8 3- nce Are	28
Capacity Che V _{FO} Flow Entering	Actual 1970	Exhibit 13-8	rea Desirable		$\frac{V_{F}}{V_{FO} = V_{F}}$ $V_{R}$ <i>Flow En</i>	Actua	Exhibit 13 Exhibit 13 Exhibit 13 10 erge Influe Max De	-8 -8 3- nce Are	
Capacity Che V _{FO} Flow Entering V _{R12}	Actual 1970 <b>Merge Ir</b> Actual 1970	Exhibit 13-8 nfluence A Max I Exhibit 13-8	r <b>ea</b> Desirable 4600:All	No	$\frac{V_{F}}{V_{FO} = V_{F}}$ $\frac{V_{FO} = V_{F}}{V_{R}}$ $Flow Entry V_{12}$	Actua	Exhibit 13 Exhibit 13 Exhibit 13 Exhibit 13 10 Erge Influe Max De Exhibit 13-8	-8 -8 3- nce Are sirable	ea Violation?
Capacity Che V _{FO} Flow Entering V _{R12} Level of Servi	Actual 1970 <b>Merge Ir</b> Actual 1970 <b>ice Deterr</b>	Exhibit 13-8 Influence A Max I Exhibit 13-8 Imination (i	rea Desirable 4600:All <b>if not F)</b>	No Violation?		Actua	Exhibit 13 Exhibit 13 Exhibit 13 Exhibit 13 10 Erge Influe Max De Exhibit 13-8 Etermination	-8 -8 3- sirable on (if no	ea Violation?
Capacity Che V _{FO} Flow Entering V _{R12} Level of Servi	Actual 1970 <b>Merge Ir</b> Actual 1970 <b>ice Deterr</b>	Exhibit 13-8 nfluence A Max I Exhibit 13-8	rea Desirable 4600:All <b>if not F)</b>	No Violation?		Actua	Exhibit 13 Exhibit 13 Exhibit 13 Exhibit 13 10 Erge Influe Max De Exhibit 13-8	-8 -8 3- sirable on (if no	ea Violation?
Capacity Che V _{FO} Flow Entering V _{R12} Level of Servi D _R = 5.475 +	Actual 1970 9 Merge Ir Actual 1970 ice Deterr 0.00734 v _R +	Exhibit 13-8 Influence A Max I Exhibit 13-8 Imination (i	rea Desirable 4600:All <b>if not F)</b>	No Violation?	$V_{FO} = V_F$ $V_{FO} = V_F$ $V_R$ $Flow Em$ $V_{12}$ $Level of$	Actua	Exhibit 13 Exhibit 13 Exhibit 13 Exhibit 13 10 Erge Influe Max De Exhibit 13-8 Etermination	-8 -8 3- sirable on (if no	ea Violation?
Capacity Che $V_{FO}$ Flow Entering $V_{R12}$ Level of Servi $D_R = 5.475 + 10^{-1}$ $D_R = 16.4 (pc/mi)$	Actual 1970 <b>9 Merge Ir</b> Actual 1970 <b>ice Deterr</b> 0.00734 v _R + i/ln)	Exhibit 13-8 Influence A Max I Exhibit 13-8 Imination (i	rea Desirable 4600:All <b>if not F)</b>	No Violation?		Actual - V _R tering Dive Actual Service D D _R = 4.252 +	Exhibit 13 Exhibit 13 Exhibit 13 Exhibit 13 10 Erge Influe Max De Exhibit 13-8 Etermination	-8 -8 3- sirable on (if no	ea Violation?
Capacity Che $V_{FO}$ Flow Entering $V_{R12}$ Level of Servi $D_R = 5.475 + 10^{-10}$ $D_R = 16.4$ (pc/mi LOS = B (Exhibit 1)	Actual 1970 9 Merge Ir Actual 1970 ice Deterr 0.00734 v _R + i/ln) 13-2)	Exhibit 13-8 Influence A Max I Exhibit 13-8 Imination (i	rea Desirable 4600:All <b>if not F)</b>	No Violation?		Actua - V _R tering Dive Actual Service D D _R = 4.252 + c/mi/ln)	Exhibit 13 Exhibit 13 Exhibit 13 Exhibit 13 10 Erge Influe Exhibit 13-8 Etermination 0.0086 V ₁₂ - 0	-8 -8 3- sirable on (if no	ea Violation?
Capacity Che $V_{FO}$ Flow Entering $V_{R12}$ Level of Servi $D_R = 5.475 + 10^{-10}$ $D_R = 16.4$ (pc/mi LOS = B (Exhibit 10)	Actual 1970 9 Merge Ir Actual 1970 ice Deterr 0.00734 v _R +- i/ln) 13-2) mination	Exhibit 13-8 Influence A Max I Exhibit 13-8 Imination (i	rea Desirable 4600:All <b>if not F)</b>	No Violation?	$V_{FO} = V_F$ $V_{FO} = V_F$ $V_R$ $Flow Em$ $V_{12}$ $Level of$ $D_R = (pr)$ $LOS = (E$ $Speed D$	Actua - V _R tering Dive Actual Service D O _R = 4.252 + c/mi/ln) xhibit 13-2)	Exhibit 13 Exhibit 13 Exhibit 13 Exhibit 13 10 Erge Influe Exhibit 13-8 Etermination 0.0086 V ₁₂ - 0	-8 -8 3- sirable on (if no	ea Violation?
Capacity Che $V_{FO}$ Flow Entering $V_{R12}$ Level of Servi $D_R = 5.475 + 10$ $D_R = 16.4$ (pc/mi LOS = B (Exhibit 1) Speed Determ $M_S = 0.300$ (Exit	Actual 1970 9 Merge Ir Actual 1970 ice Deterr 0.00734 v _R +- i/ln) 13-2) mination bit 13-11)	Exhibit 13-8 mfluence A Max I Exhibit 13-8 mination (i 0.0078 V ₁₂ - 0.0	rea Desirable 4600:All <b>if not F)</b>	No Violation?	$\begin{array}{c} V_{FO} = V_{F} \\ \hline V_{FO} = V_{F} \\ \hline V_{R} \\ \hline V_{12} \\ \hline \\ Level of \\ \hline \\ D_{R} = (p) \\ LOS = (E \\ \hline \\ Speed D \\ \hline \\ D_{s} = (E) \\ \hline \end{array}$	Actual tering Dive Actual Service D D _R = 4.252 + c/mi/ln) xhibit 13-2) Determinat	Exhibit 13 Exhibit 13 Exhibit 13 Exhibit 13 10 erge Influe Max De Exhibit 13-8 etermination 0.0086 V ₁₂ - 0	-8 -8 3- sirable on (if no	ea Violation?
Capacity Che $V_{FO}$ Flow Entering $V_{R12}$ Level of Servi $D_R = 5.475 + 1$ $D_R = 16.4$ (pc/mil LOS = B (Exhibit 1) Speed Determ $M_S = 0.300$ (Exit $S_R = 61.6$ mph (	Actual 1970 9 Merge Ir Actual 1970 ice Deterr 0.00734 v _R +- i/ln) 13-2) mination	Exhibit 13-8 mfluence A Max I Exhibit 13-8 mination (i 0.0078 V ₁₂ - 0.0	rea Desirable 4600:All <b>if not F)</b>	No Violation?	$\begin{array}{c} V_{F} \\ V_{FO} = V_{F} \\ V_{R} \\ \hline \\ V_{R} \\ \hline \\ V_{12} \\ \hline \\ Level of \\ D_{R} = (p) \\ LOS = (E) \\ \hline \\ Speed D \\ D_{s} = (E) \\ S_{R} = mp \end{array}$	Actual - $V_R$ tering Dive Actual Service D $D_R = 4.252 +$ c/mi/ln) xhibit 13-2) eterminat xhibit 13-12)	Exhibit 13 Exhibit 13 Exhibit 13 Exhibit 13 10 Erge Influe Exhibit 13-8 Etermination 0.0086 V ₁₂ - 0 ion	-8 -8 3- sirable on (if no	ea Violation?

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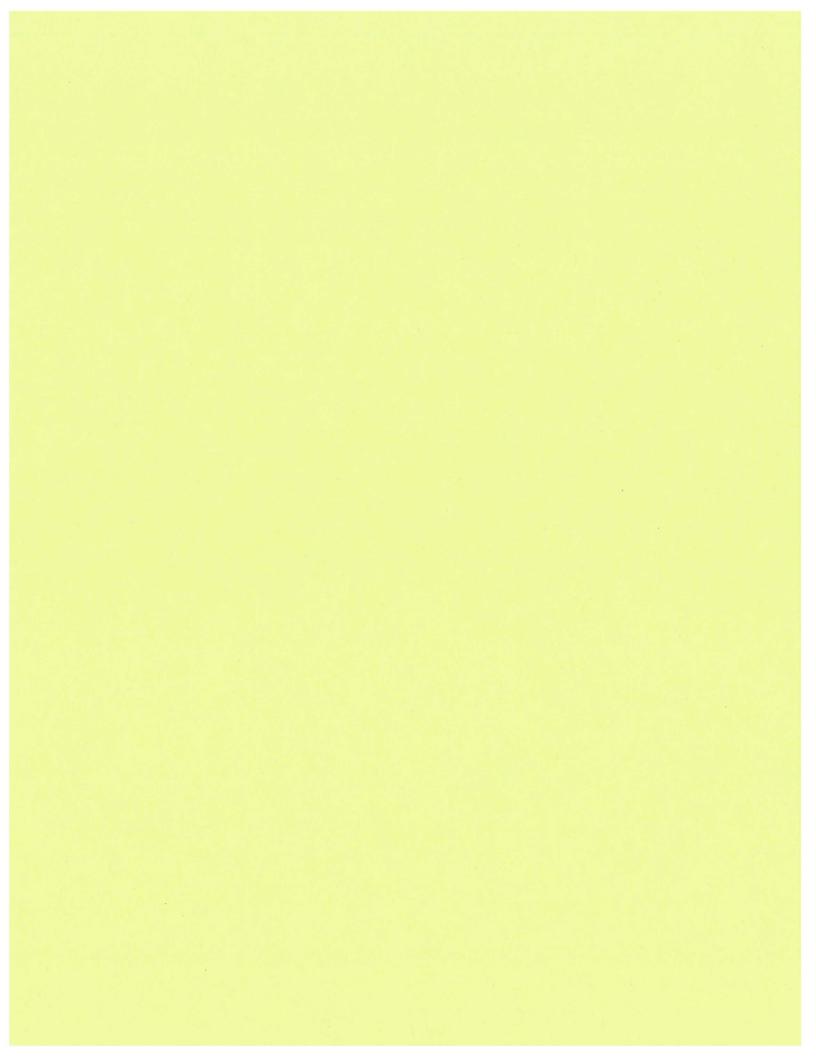
*****	RAI	MPS AND	RAMP JUI	NCTIONS W	ORKSH	EET		19999911-0099-1000000000000000000000000		
General Info	****			Site Infor	***		********	*****	****	
Analyst Agency or Compar Date Performed	TOM	GORRILL RILL PALMER 012		Freeway/Dir of Tra Junction Jurisdiction		I-95 S KMD	B SB ON RAM	P	annan dalakin in Nober California	1997-9999 - 999 - 999 - 999 - 999 - 999 - 999 - 999 - 999 - 999 - 999 - 999 - 999 - 999 - 999 - 999 - 999 - 99
Analysis Time Peri	od PM V	VINT POSTDE	VELOPMENT	Analysis Year		2036				
Project Description	TRAFTON PR	OPERTIES IJR								
nputs	*******			****		No. Compare of Community				
Jpstream Adj Ram Yes		Number of Lan Acceleration L		2 1350					Downstre Ramp	am Adj
res i C	ח	Deceleration L	ane Length L _D						∏ Yes	└ On
⊡No FC	Off	Freeway Volun	ne, V _F	1678					🗁 No	└─ Off
up = 1100	ft	Ramp Volume, Freeway Free	V _R Flow Speed, S _F	207 					L _{down} =	ft
/ _u = 145	veh/h	Ramp Free-Flo		F 70.0 35.0					V _D =	veh/h
Conversion	to pc/h Und	der Base (	Conditions							
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PH	F x f _{HV} x f _p
Freeway	1678	0.90	Level	5	2		).972	1.00		1919
Ramp	207	0.90	Level	5	2		).972	1.00	*****	237
UpStream	145	0.90	Level	5	2		).972	1.00		166
DownStream			and a subscription of the second second second second second second second second second second second second s					)iverge Areas		
Estimation of		Merge Areas	an de post de la participa de la participa de la participa de la participa de la participa de la participa de l	an an an an an an an an an an an an an a	Estimat	tion		nverge Areas		a a a a a a a a a a a a a a a a a a a
\$425.005.005.005.005.005.005.005.005.005.0	$V_{12} = V_{F}$	(P)			<u> </u>			V _R + (V _F - V _R )	P	10400400-in anna an an an an an an an an an an an
=	12 1	ation 13-6 or	13-7)					Equation 13-		13)
EQ ⁼		using Equati		6)	L _{EQ} = P =			using Equation		
FM = (12 =				-0)	P _{FD} =			oc/h		5-7)
	1919		0.4440.4		$V_{12} = V_{12} = V$		•		2 14 12	47)
′ ₃ or V _{av34}		h (Equation 1	3-14 OF 13-1	()	$V_3$ or $V_{av34}$	. 0		pc/h (Equation 1	3-14 01 13-	17)
s $V_3$ or $V_{av34} > 2,7$								Yes No		
s V ₃ or V _{av34} > 1.6 Yes,V _{12a} =		(Equation 13	-16, 13-18, o	r	IS V ₃ or V _{av} If Yes,V _{12a}			[─] Yes ^{──} No oc/h (Equation 3-19)	n 13-16, 1	3-18, or
Capacity Ch				******	Capacit	tv Cl		0.10/		
	Actual	C	apacity	LOS F?		leaven	Actual	Car	pacity	LOS F?
*****	1	T	สารางการสารางสารางการการการสารางสารางส	1 I I I I I I I I I I I I I I I I I I I	V _F			Exhibit 13-8		
V _{FO}	2156	Exhibit 13-8		No	$V_{FO} = V_{FO}$	- V _R		Exhibit 13-8	3	
° FO	2100			no	V _R			Exhibit 13- 10	-	
-low Enterin	ng Merge In	fluence A	rea		Flow E	nteri	ng Dive	rge Influen	ce Area	2
	Actual	and the second second second second second second second second second second second second second second second	Desirable	Violation?			Actual	Max Desi	rable	Violation?
V _{R12}	2156	Exhibit 13-8	4600:All	No	V ₁₂			Exhibit 13-8		
.evel of Ser	vice Detern	nination (i	f not F)					terminatio		t F)
D _R = 5.475	+0.00734 v _R + (	0.0078 V ₁₂ - 0.0	0627 L _A			D _R =	4.252 + 0	.0086 V ₁₂ - 0.	.009 L _D	
) _R = 13.7 (pc/	ˈmi/ln)				D _R = (	pc/mi	/in)			
.OS = B (Exhib	it 13-2)				LOS = (	Exhib	it 13-2)			
Speed Deter	mination				Speed I	Dete	rminatio	on		
	xibit 13-11)		******				13-12)		a miatakan unukan pada hayan ya	
<b>e</b> .	n (Exhibit 13-11)				-		xhibit 13-12)			
	(Exhibit 13-11)						, xhibit 13-12)			
	(Exhibit 13-13)				1	• •	xhibit 13-13)			
	versity of Florida				HOSDOTO				Deverated.	9/9/2012 12:33

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	RAI	MPS AND I	RAMP JUN	ICTIONS W	ORKSHI	EET	3/23.20.00/2000/00/00/00/00/00/00/00/00/200/2		****	ELECTRE Continue concernance in successive to the second
General Infor				Site Inform						
Analyst Agency or Company Date Performed	TOM GOR 9/7/2			Freeway/Dir of Tra Junction Jurisdiction			3 S ROAD SB	ON RAMP		
Analysis Time Period		VINT POSTDE	ELOPWENT /	Analysis real		2036		*****		ini tille av and a faith and
nputs	INAL LON FIX				****		****			
Jpstream Adj Ramp		Number of Lan	es. N	2			******	<u></u>	Downstre	am Adi
		Acceleration La		350					Ramp	,
r Yes □ Or	Ì	Deceleration La							☐ Yes	☐ On
⊡No ☑Of	f	Freeway Volun	ne, V _F	1824					I I No	└ Off
-up = 600 ft		Ramp Volume,	V _R	54					L _{down} =	ft
- _{up} = 600 ff		Freeway Free-	Flow Speed, S _{FI}	F 70.0						
$V_{\rm u} = 61$ vel	h/h	Ramp Free-Flo	w Speed, S _{FR}	35.0					V _D =	veh/h
Conversion t	o pc/h Un	der Base C	conditions							
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PH	F x f _{HV} x f _p
Freeway	1824	0.90	Level	5	2	0	.972	1.00		2085
Ramp	54	0.90	Level	5	2	0	.972	1.00		62
UpStream	61	0.90	Level	5	2	0	.972	1.00		70
DownStream		<u> </u>								*****
- Almantian at		Merge Areas			Estimat	tion		verge Areas		ali mbi ng lancananggun ana ang ang ang ang ang ang ang ang an
Estimation of					Lound			·		1997-TEMBRING 1997-1997
-EQ =	V ₁₂ = V _F (Equ	(P _{FM} ) ation 13-6 or	13-7)		L _{EQ} =		,	/ _R + (V _F - V Equation 13		13)
P _{FM} =	1.000	using Equati	on (Exhibit 13-	6)	P _{FD} =		u	sing Equati	on (Exhibit	13-7)
/ ₁₂ =	2085	pc/h			V ₁₂ =		p	c/h		
V ₃ or V _{av34}	0 pc/	h (Equation 1	3-14 or 13-1	7)	$V_3$ or $V_{av34}$		-	c/h (Equation		-17)
Is V ₃ or V _{av34} > 2,70								Yes 🗆 No		
Is V ₃ or V _{av34} > 1.5	* V ₁₂ /2 「Ye	s 🖾 No			Is $V_3$ or $V_{av}$	_{v34} > 1.		Yes T No		
f Yes,V _{12a} =		(Equation 13	-16, 13-18, o	r	If Yes, V _{12a}	=		c/h (Equati -19)	on 13-16,	13-18, or
Capacity Che	13-19		<u></u>	ANY ANY CONTRACTOR OF A DESCRIPTION	Capaci			-13)		555c0+72478cialment tarmatel at sold alternation
capacity che	Actual		apacity	LOS F?	1		Actual	l c	apacity	LOS F?
		ŤŤ	apaony		V _F		, totau	Exhibit 13		
					V _{FO} = V _F	COCOLORIZATION INCOLORIZATION  INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZATIONI INCOLORIZ	annakan kuticlati Zati (Zoti Cottane ta	Exhibit 13		
$V_{FO}$	2147	Exhibit 13-8		No	and an an an output we wanted			Exhibit 1		
					V _R			10		
Flow Entering	g Merge lı	nfluence A	rea		Flow E	nteri	ng Diver	ge Influe		
	Actual		Desirable	Violation?	<u> </u>		Actual	Max De	1	Violation?
V _{R12}	2147	Exhibit 13-8	4600:All	No	V ₁₂			Exhibit 13-8		
Level of Serv				***************************************	Level o	COLORAD DUAL OF MALE INC.		terminati		ot F)
D _R = 5.475 +	-0.00734 v _R +	0.0078 V ₁₂ - 0.0	0627 L _A					0086 V ₁₂ -	0.009 L _D	
D _R = 20.0 (pc/n	ni/In)				1 '`	(pc/mi				
LOS = B (Exhibit	13-2)			21-11-2-11-11-11-11-11-11-11-11-11-11-11			it 13-2)			-MidWalance requires reactions
Speed Deteri	mination				Speed	Dete	rminatio	<u>n</u>		*****
M _s = 0.330 (Ex	ibit 13-11)					Exhibit				
	(Exhibit 13-11)				1 .	nph (E:	khibit 13-12)			
iv .	(Exhibit 13-11)				S ₀ = r	mph (E:	khibit 13-12)			
0 .	(Exhibit 13-13)				S = 1	mph (E:	xhibit 13-13)			
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	anna a annan a sann marairtí MCCCDA dhailtí Airea	RAMP	S AND RAI	MP JUNCTI	ONS WO	RKS	HEET	004042000050950449400000050422209			
General In	formation			Site Infor						· · · · · · · · · · · · · · · · · · ·	
Analyst	****	/ GORRILL	skali foto financio e construcciona da	Freeway/Dir of Tr		I-95 NB	oconaran an  aki in Malanan kanan kanan kanan kanan ka	inner af ter som karlande för at kärd at som som			
Agency or Comp		RRILL PALMER		Junction		LYONS	RD OFF RA	MP			
Date Performed	9/9/	2012		Jurisdiction							
Analysis Time Pe	eriod AM	W/O INTPREDI	EVELOPMENT	Analysis Year		2016					
	on TRAFTON PR	ROPERTIES								***	
Inputs									*****		
Upstream A		Number of La Acceleration I	nes, N _ane Length, L _A	2					Downstrea Ramp	m Adj	
T Yes	Г On		Lane Length L _D	225					🖾 Yes	⊮ On	
I⊂ No	└─ Off	Freeway Volu	me, V _F	1156					∏ No	Off	
1 -	<b>E</b> 1	Ramp Volume	e, V _R	57					- 1	575 ft	
L _{up} =	ft	Freeway Free	-Flow Speed, S _F	<del>.</del> 70.0					L _{down} =	575 IL	
V _u =	veh/h								V _D =	75 veh/h	
			low Speed, S _{FR}	35.0			****				
Conversio	n to pc/h Un	der Base	Conditions	; 		1		indisensioning with the set of the book of the set	(1999) Martine Martin Concernance		
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	_	f _{HV}	f _p	v = V/PHF	x f _{HV} x f _p	
Freeway	1156	Level	5	2	0.	972	1.00	13:	22		
Ramp	57	0.90	Level	5	2	0.	972	1.00	6	5	
UpStream		0.90			<u> </u>	<u> </u>					
DownStream	75	Level	5	2	0.	972	1.00	8	6		
Estimation	- AFV	Merge Areas	******		Diverge Are Estimation of v ₁₂				<u>as</u>		
	CONTRACTOR CONTRACTOR CONTRACTOR	****	*****	******						canter a second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s	
	V ₁₂ = V							/ _R + (V _F - V _F			
- _{EQ} =	(Equ	ation 13-6 or	13-7)		L _{EQ} =		(E	quation 13-1	2 or 13-13	)	
P _{FM} =	using	g Equation (I	Exhibit 13-6)		P _{FD} =		1.00	0 using Equ	ation (Exhil	bit 13-7)	
V ₁₂ =	pc/h				V ₁₂ =		132	2 pc/h			
$V_3$ or $V_{av34}$	pc/h	(Equation 13	-14 or 13-17)		$V_3$ or $V_{av34}$		0 p	c/h (Equatio	n 13-14 or	13-17)	
	2,700 pc/h? 🦳 🗙	es 🗆 No			Is V ₃ or V _{av3}	34 > 2,7	00 pc/h? 🦳	Yes 🕅 No			
	1.5 * V ₁₂ /2 TY				Is V ₃ or V _{3V3}	3 ₄ > 1.5	* V12/2	Yes 🕅 No			
f Yes,V _{12a} =		(Equation 13	-16, 13-18, or		If Yes, V _{12a} =			h (Equation	13-16, 13-	18, or 13-	
Capacity C		of and an a state to the test of an all state to the test of the test of the test of the test of the test of the test of the test of the test of the test of the test of the test of the test of the test of the test of the test of the test of the test of the test of the test of the test of the test of the test of the test of the test of the test of the test of the test of the test of the test of the test of the test of the test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test of test		***************************************	Capacity	y Ch	ecks				
	Actual	(	Capacity	LOS F?		l	Actual	Ca	pacity	LOS F?	
					V _F		1322	Exhibit 13-8	1	No	
V _{FO}		Exhibit 13-8			$V_{FO} = V_F$	- V _P	1257	Exhibit 13-8	4800	No	
FU					V _R	~	65	Exhibit 13-1		No	
p=== 1 =			R					1	1	110	
Flow Enter	ring Merge I			Violation2	FIOW En	*****		ye Influen		Violation?	
V _{R12}	Actual	Exhibit 13-8	Desirable	Violation?	V ₁₂		Actual	Max Desirat Exhibit 13-8	4400:All	No No	
					- Contraction of the State of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of the International Action of						
·····	ervice Deter							erminatio	International International Contractory States		
IX .	+ 0.00734 v _R +	0.0078 V ₁₂	- 0.00027 L _A					086 V ₁₂ - 0.	ooa r ^D		
D _R = (pc/m	-				1		/mi/ln)				
	bit 13-2)					-	oit 13-2)				
Speed Det	ermination				Speed D	Deter	minatio	1			
M _s = (Exib	it 13-11)				D _s = 0.4	434 (E	xhibit 13-1	2)			
9	Exhibit 13-11)					7.9 mph	(Exhibit 1	3-12)			
						-	(Exhibit 1				
S ₀ = mph (Exhibit 13-11) S = mph (Exhibit 13-13)					1		(Exhibit 1				
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		RAMP	S AND RAI	MP JUNCTI	ONS WO	DRKS	HEET			****	
General In	formation	***************************************		Site Infor							
Analyst		M GORRILL		Freeway/Dir of Tr	avel	1-95 NE		*****		****	
Agency or Comp		RRILL PALMER		Junction			D OFF RAM	IP			
Date Performed	-	2012		Jurisdiction							
Analysis Time Pe			EVELOPMENT			2016					
	on TRAFTON PI				20200000000000000000000000000000000000			n an an a coord an an an an an an an an an an an an an	unis Dela Codi Caldor de Inskill II. Adda Casanan		
Inputs		**********			***************************************	***************	**************				
Upstream A	dj Ramp	Number of La Acceleration I	nes, N _ane Length, L _A	2					Downstrea Ramp	m Adj	
T Yes	「 On	1	Lane Length L _D	450					⊠ Yes	⊡ On	
✓ No	└ Off	Freeway Volu	me, V _F	1174					∏ No	∫ Off	
L _{up} =	ft	Ramp Volume	e, V _R	263					L _{down} =	2000 ft	
άþ		Freeway Free	-Flow Speed, S _F	F 70.0							
V _u =	veh/h	Ramp Free-F	low Speed, S _{FR}	35.0					V _D =	368 veh/h	
Conversio	n to pc/h Ur	nder Base	Conditions	;	*********************************						
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PHF	x f _{HV} x f _p	
Freeway	1174	0.90	Level	5	2	0.	972	1.00	13	42	
Ramp	263	0.90	Level	5	2	0.	972	1.00	30	1	
UpStream											
DownStream	368	0.90	Level	5	2	0.	972	1.00	42	21	
		Merge Areas		#55565765#00194777#0726496657220177#89500			Di	verge Areas			
Estimation	of v ₁₂				Estimation of v ₁₂						
	V ₁₂ = V	F(P _{FM} )					V ₁₂ = 1	V _R + (V _F - V _F	_R )P _{FD}		
L _{EQ} =	(Equ	ation 13-6 or	13-7)		L _{EQ} =		(E	quation 13-1	2 or 13-13	)	
P _{FM} =		g Equation (			P _{FD} =			00 using Equ			
V ₁₂ =	pc/h				V ₁₂ =			12 pc/h			
	-		44 40 47)					•	40.44	40.47	
V ₃ or V _{av34}			-14 or 13-17)		V ₃ or V _{av34}			pc/h (Equatio	on 13-14 or	13-17)	
• • • • •	2,700 pc/h? 🦳 Y							Yes 🖻 No			
Is $V_3$ or $V_{av34}$ >	1.5 * V ₁₂ /2				Is V ₃ or V ₄	_{av34} > 1.5		Yes 🖾 No			
lf Yes,V _{12a} =	pc/h	(Equation 13	-16, 13-18, or	<b>^</b>	If Yes, V _{12a}	=		h (Equation	13-16, 13-	18, or 13-	
Capacity C	13-19	3)			Capaci		19 acks	)			
Capacity C	Actual	(	Capacity	LOS F?			Actual	Ca	pacity	LOS F?	
			λαρασιτγ				1342	Exhibit 13-8		No	
· · · ·		Evhibit 42 0			-		1041	Exhibit 13-8			
V _{FO}		Exhibit 13-8			$V_{FO} = V$					No	
	<u> </u>		τ.	<u> </u>		`	301	Exhibit 13-1	1	No	
Flow Enter	ring Merge I	carry commercial and a second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s			Flow E	interin	g Diver	ge Influen			
	Actual	Max	Desirable	Violation?			Actual	Max Desirat	£	Violation?	
V _{R12}		Exhibit 13-8			V ₁₂		1342	Exhibit 13-8	4400:All	No	
Level of Se	ervice Deter	mination (	if not F)		Level o			erminatio		F)	
D _R = 5.475 ·	+ 0.00734 v _R +	+ 0.0078 V ₁₂	- 0.00627 L _A			D _R = 4	1.252 + 0.	0086 V ₁₂ - 0.	009 L _D		
D _R = (pc/m	ni/ln)				D _R =	11.7 (pc	/mi/ln)				
LOS = (Exhi	bit 13-2)				LOS =	B (Exhil	oit 13-2)				
Speed Det	************			minatio	n						
	it 13-11)	······					xhibit 13-			4	
-	Exhibit 13-11)				1 ~	•	ı (Exhibit '	-			
		1	•	(Exhibit 1	-						
<b>.</b>	Exhibit 13-11)				•	-					
o – mpn (	Exhibit 13-13)				0-	or.ompr	(Exhibit '	10-10)			

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ACTIVICATION OF THE TRANSPORT	9479 - F. Marine C. M	RAMP	S AND RA	MP JUNCTIO	ONS WO	DRKSI	HEET			
General In	formation			Site Inform						
Analyst		I GORRILL		Freeway/Dir of Tra	avel	I-95 SB			*****	
Agency or Comp		RILL PALMER		Junction		KMD RI	O OFF RAME	<b>)</b>		
Date Performed	9/9/2	2012		Jurisdiction						
Analysis Time Pe	eriod AM \	N/O INTPREDE	VELOPMENT	Analysis Year		2016		·		
Project Descripti	on TRAFTON PR	OPERTIES								
Inputs						9420325389489489499		T		
Upstream A	-	Number of Lar Acceleration L	nes, N ane Length, L _A	2					Downstrea Ramp	m Adj
T Yes	T On	1	ane Length L _D	500					☞ Yes	
✓ No	☐ Off	Freeway Volu	me, V _F	1156					∏ No	□ Off
1 -	<i>t</i> 1	Ramp Volume	, V _R	394					L _{down} =	950 ft
L _{up} =	ft	Freeway Free	-Flow Speed, Sr	70.0					down	000
V _u =	veh/h		ow Speed, S _{FR}	35.0					V _D =	268 veh/h
Conversio	n to pc/h Un	der Base	Conditions	3	****		<u>99 Mary</u>			
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PHF	x f _{HV} x f _p
Freeway	1156	0.90	Level	5	2	0.9	972	1.00	132	22
Ramp	394	Level	5	2	0.9	972	1.00	45	0	
UpStream										
DownStream	268	Level	5	2	0.9	972	1.00	30	6	
		Merge Areas			Diverge Are					
Estimation	of v ₁₂				Estimation of v ₁₂					
1999-1999-1999-1999-1999-1999-1999-199	V ₁₂ = V _F	(P _{EM} )					V ₁₂ = V	/ _R + (V _F - V _F	R)P _{FD}	
L _{EQ} =		ation 13-6 or	13-7)		L _{EQ} =			quation 13-1		
-EQ P _{FM} =		Equation (I			P _{FD} =		•	0 using Equ		
	pc/h				V ₁₂ =			2 pc/h		
$V_{12} =$		(Enveting 40	44 40 47					•	n 12 14 or	12 17)
V ₃ or V _{av34}			-14 or 13-17)	•	V ₃ or V _{av34}			c/h (Equatio	0113-1401	13-17)
	2,700 pc/h? TY							Yes 🔽 No		
Is V ₃ or V _{av34} >	1.5 * V ₁₂ /2				Is V ₃ or V ₂	_{av34} > 1.5		Yes 🔽 No	40.40.40	40
lf Yes,V _{12a} =	pc/h 13-19		-16, 13-18, o	r	If Yes, V _{12a}	_ =	рс/ 19)	h (Equation	13-16, 13-	18, or 13-
Capacity (		<u>')</u>			Capaci	itv Ch	and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second se		<u>, , , , , , , , , , , , , , , , , , , </u>	*****
	Actual	1	Capacity	LOS F?			Actual	Ca	apacity	LOS F?
2 	Actual		apaony			_	1322	Exhibit 13-8		No
		<b>T</b> 1 <b>1 1 1 0 0</b>			Annual Contractor Contractor					
V _{FO}		Exhibit 13-8			$V_{FO} = V$		872	Exhibit 13-8		No
					V _F	R	450	Exhibit 13-1	0 2000	No
Flow Ente	ring Merge I	nfluence A	\rea		Flow E	nterin	g Diverg	ge Influen		
	Actual	Max	Desirable	Violation?			Actual	Max Desiral	I CONTRACTOR OF THE OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER OWNER	Violation?
V _{R12}		Exhibit 13-8			V ₁₂		1322	Exhibit 13-8	4400:All	No
Level of S	ervice Deter	mination (	if not F)		Level	of Sen	vice Dete	erminatio	n (if not i	F)
Constrainty of the second second second second second second second second second second second second second s	+ 0.00734 v _R +					D _R = 4	4.252 + 0.0	086 V ₁₂ - 0.	.009 L _D	
	ni/ln)	,2	<i>,</i> , , , , , , , , , , , , , , , , , ,		D _R =	11.1 (pc	/mi/ln)			
	ibit 13-2)				1		bit 13-2)			
	-						minatio	7		****
Speed Determination							xhibit 13-1			
, , , , , , , , , , , , , , , , , , ,	-				1 -	•	n (Exhibit 1			
S _R = mph (Exhibit 13-11)							(Exhibit 1	-		
S ₀ = mph (Exhibit 13-11) S = mph (Exhibit 13-13)					1		•			
S = mph		S =	oo.9 mpt	n (Exhibit 1	<u>১-13)</u>					

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		RAMP	S AND RAI		ONS WC	RKSI	HEET			*****
General In	formation			Site Inforr						
Analyst		A GORRILL		Freeway/Dir of Tra	avel	I-95 SB		Contraction of the second second second second second second second second second second second second second s		a na kana ka
Agency or Comp		RRILL PALMER		Junction		LYONS	RD OFF RA	MP		
Date Performed		2012		Jurisdiction						
Analysis Time Pe	eriod AM '	W/O INTPREDI	EVELOPMENT	Analysis Year		2016				***
Project Descripti	on TRAFTON PF	ROPERTIES	****		and water and the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second state of the second s					
Inputs										
Upstream A	•	Number of La Acceleration I	nes, N .ane Length, L _A	2					Downstrea Ramp	m Adj
☐ Yes	└─ On		Lane Length L _D	375					🗁 Yes	I ⊂ On
I⊂ No	厂 Off	Freeway Volu	me, V _F	1114					∏ No	Off
L _{up} =	ft	Ramp Volumo		67					L _{down} =	600 ft
-			-Flow Speed, S _F	f 70.0				,	V _D =	175 voh/h
V _u =	veh/h	Ramp Free-F	low Speed, S _{FR}	35.0					vD-	175 veh/h
Conversio	n to pc/h Un	der Base	Conditions		99999999999999999999999999999999999999	****				
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PHF	x f _{HV} x f _p
Freeway	1114	0.90	Level	5	2	0.9	972	1.00	12	74
Ramp	67	0.90	Level	5	2	0.9	972	1.00	7	7
UpStream										
DownStream	175	0.90	Level	5	2	0.9	972	1.00	2(	00
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Merge Areas			<b>F</b> atives			erge Areas		24
Estimation	1 of V ₁₂				Estima	tion o	<u>12</u>		10000000000000000000000000000000000000	
	V ₁₂ = V ₁	_F (P _{FM})					V ₁₂ = \	/ _R + (V _F - V _F)P _{FD}	
L _{EQ} =	(Equ	ation 13-6 or	· 13-7)		L _{EQ} =		(Ed	quation 13-1	2 or 13-13)
P _{FM} =	using	g Equation (Exhibit 13-6)		P _{FD} =		1.00	0 using Equ	uation (Exhi	bit 13-7)
V ₁₂ =	pc/h				$V_{12} =$		127-	4 pc/h		
V_3^{12} or V_{av34}^{12}	•	(Equation 13	3-14 or 13-17)		V ₃ or V _{av34}			c/h (Equatio	n 13-14 or	13-17)
	2,700 pc/h? □ Ye		, ,				-	Yes 🕅 No		
0 4001					1			Yes I No		
	1.5 * V ₁₂ /2		3-16, 13-18, oi					h (Equation	13-16, 13	-18. or 13-
If Yes,V _{12a} =	13-19		, 10, 10, 10, 01		lf Yes,V _{12a}	=	19)			,
Capacity C	Checks			2	Capaci	ty Ch	ecks			
	Actual	(Capacity	LOS F?	1		Actual	Ca	pacity	LOS F?
					V _F	:	1274	Exhibit 13-8	3 4800	No
V _{FO}		Exhibit 13-8			$V_{FO} = V$	′ _F - V _R	1197	Exhibit 13-8	3 4800	No
rO							77	Exhibit 13-1	0 2000	No
				<u>_</u>	i	<u>`</u>		ge Influen		
riow Ente	ring Merge I		Desirable	Violation?		5	Actual	Max Desirat		Violation?
	Actual	Exhibit 13-8			V ₁₂		1274	Exhibit 13-8	4400:All	No
V _{R12}	anvice Defer			<u> </u>				erminatio		
NAMES OF TAXABLE PARTY OF TAXABLE PARTY.	ervice Deter + 0.00734 v _R +		10000000000000000000000000000000000000		Level C			086 V ₁₂ - 0.		: /
	ni/ln)		A		D _R =	-к 11.8 (рс		12	U	
	•				1		oit 13-2)			
	ibit 13-2)						-	A		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
	termination						minatio			
M _S = (Exit	bit 13-11)				ľ	•	xhibit 13-1			
S _R = mph ((Exhibit 13-11)				1	•	(Exhibit 1	-		
S ₀ = mph ((Exhibit 13-11)				l °		(Exhibit 1			
	(Exhibit 13-13)				S =	57.8 mpł	ı (Exhibit 1	3-13)		
Conviciant @ 2010			_					~	Senerated: 9/	

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		RAMP	S AND RAM	IP JUNCTI	ONS WC	RKS	HEET	******		***
General Inf	ormation			Site Infor	mation					
Analyst Agency or Comp Date Performed	any GOF 9/9/2	A GORRILL RRILL PALMER 2012		Freeway/Dir of Tr Junction Jurisdiction	avel		RD OFF R	AMP		
Analysis Time Pe Project Descriptic	n TRAFTON PR	THE OWNER AND A DESCRIPTION OF THE OWNER AND ADDRESS OF THE OWNER ADDRES	EVELOPMENT A	Analysis rear		2016			and the second second second second second second second second second second second second second second second	
Inputs								na karna internet kirket andra tit skille tit skille tit skille tit skille tit skille tit skille tit skille ti		*********
Upstream Ac	dj Ramp	Number of La	nes, N ane Length, L _A	2	****	****	******		Downstrea Ramp	m Adj
	└ On		ane Length L _D	225					⊠ Yes	🔽 On
⊠ No	└ Off	Freeway Volu	me, V _F	1648					∏ No	└─ Off
L _{up} =	ft	Ramp Volume	ı, V _R -Flow Speed, S _{FF}	178 - 70.0					L _{down} =	575 ft
V _u =	veh/h	1	ow Speed, S _{FR}	35.0					V _D =	50 veh/h
Conversior	n to pc/h Un	der Base	Conditions	******	******			antoning and an and an and an and		
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PHF	x f _{HV} x f _p
Freeway	1648	0.90	Level	5	2	0.	972	1.00	188	34
Ramp	178	0.90	Level	5	2	0.	972	1.00	20	4
UpStream				<u> </u>	<u> </u>	<u> </u>		4.00		
DownStream	50	0.90 Merge Areas	Level	5	2	0.	972	1.00 I iverge Areas	57	(
Estimation	of V ₁₂	Merge Areas	***	\$1000041170017017017017017017017017017017017017	Estima	tion o		iverge Areas	er ar sen ek kankan kur han hydyskilywr ar an	######################################
	$V_{12} = V_{f}$	- (P _{ru})		*****				V _R + (V _F - V _F		
L _{EQ} =		ation 13-6 or	13-7)		L _{EQ} =			Equation 13-1	. 10	
P _{FM} =		Equation (E			$P_{FD} =$)00 using Equ		
V ₁₂ =	pc/h	,			V ₁₂ =			84 pc/h		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
V_3 or V_{av34}	•	(Equation 13	-14 or 13-17)		V ₃ or V _{av34}			pc/h (Equatio	on 13-14 or	13-17)
	2,700 pc/h? └─ Ƴ€		,			~ > 2.7		Yes ⊠ No		
	.5 * V ₁₂ /2							Yes V No		
If Yes,V _{12a} =		(Equation 13	-16, 13-18, or		If Yes, V _{12a}			c/h (Equation	13-16, 13-	18, or 13-
Capacity C	hecks				Capaci	ty Ch	ecks			
	Actual	C	apacity	LOS F?			Actual	Ca	pacity	LOS F?
					V _F		1884	Exhibit 13-8	4800	No
V _{FO}		Exhibit 13-8			V _{FO} = V	_F - V _R	1680	Exhibit 13-8	3 4800	No
					V _R		204	Exhibit 13-1	0 2000	No
Flow Enter	ing Merge II	nfluence A	rea		Flow E	nterin	g Diver	ge Influen	ce Area	
	Actual	Max	Desirable	Violation?			Actual	Max Desirab	ole	Violation?
V _{R12}		Exhibit 13-8			V ₁₂		1884	Exhibit 13-8	4400:All	No
Level of Se	rvice Deter	mination (if not F)		Level o	f Ser	vice De	terminatio	n (if not l	5)
D _R = 5.475 +	0.00734 v _R +	0.0078 V ₁₂ -	0.00627 L _A			D _R = 4	1.252 + 0.	0086 V ₁₂ - 0.	009 L _D	
D _R = (pc/m	i/ln)				D _R = 1	8.4 (pc	/mi/ln)			
LOS = (Exhib	oit 13-2)				LOS = E	3 (Exhil	oit 13-2)			
Speed Dete	ermination				Speed	Deter	minatio	n		
0 .	t 13-11)				l °	•	xhibit 13-			
	Exhibit 13-11)				1 "		(Exhibit	•		
	Exhibit 13-11) Exhibit 13-13)				ľ	•	(Exhibit 1 (Exhibit	-		
Conviciant @ 2010 []					-1	TM Vor			enerated 9/9	

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		RAMP	S AND RAI	MP JUNCTIC	ONS WO	RKSł	IEET			
General Inf	ormation			Site Inform	nation					
Analyst		A GORRILL		Freeway/Dir of Tra	ivel	I-95 NB				
Agency or Compa		RRILL PALMER		Junction		KMD RE	OFF RAMP			
Date Performed	-	2012		Jurisdiction						
Analysis Time Pe	riod PM	W/O INTPREDE	VELOPMENT	Analysis Year		2016				
Project Descriptic	on TRAFTON PR									
Inputs										
Upstream Ac	dj Ramp	Number of Lar	nes, N ane Length, L _A	2					Downstrea Ramp	ım Adj
☐ Yes	└ On		ane Length L_D	450					I ∕ Yes	⊡ On
I⊂ No	└─ Off	Freeway Volu	me, V _F	1520					∏ No	厂 Off
L _{up} =	ft	Ramp Volume		473					L _{down} =	2000 ft
·		Freeway Free	-Flow Speed, S _F	F 70.0					V -	500
V _u =	veh/h	Ramp Free-Fl	ow Speed, S _{FR}	35.0					V _D =	599 veh/h
Conversion	n to pc/h Un	der Base	Conditions	<u>anderen anderen /u> 2						
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		НV	f _p	v = V/PHF	x f _{HV} x f _p
Freeway	1520	0.90	Level	5	2	0.9	972	1.00	17	38
Ramp	473	0.90	Level	5	2	0.9	972	1.00	5	41
UpStream		1								
DownStream	599	0.90	Level	5	2	0.9	972	1.00	6	85
		Merge Areas						erge Areas		
Estimation	of V12				Estima	tion o	f v ₁₂			
		F(P _{EM})	994474478888888888888888888888888888888	<u> </u>			$V_{40} = V$)P _{ED}	
	.=	etion 13-6 or	12 7)		=			uation 13-1		()
L _{EQ} =					L _{EQ} ≃ D −		•			
P _{FM} =		g Equation (I	EXHIDIT 13-6)		P _{FD} =) using Equ		iuit 13-7)
V ₁₂ =	pc/h				V ₁₂ =			pc/h		
V ₃ or V _{av34}	pc/h	(Equation 13	-14 or 13-17)		V_3 or V_{av34}			c/h (Equatio	on 13-14 o	r 13-17)
Is V_3 or $V_{av34} > 2$	2,700 pc/h? 🦳 Y	es 🗆 No					00 pc/h? 🦳 י			
Is V_3 or $V_{av34} > 1$	1.5 * V ₁₂ /2 「 Y	es 🗆 No			Is V_3 or V_a	_{w34} > 1.5	*V ₁₂ /2			
lf Yes,V _{12a} =	pc/h 13-19	(Equation 13	-16, 13-18, oi		lf Yes,V _{12a}		19)	h (Equation	13-16, 13	-18, or 13-
Capacity C	hecks				Capaci	ty Ch	ecks			
	Actual		Capacity	LOS F?			Actual	Ca	apacity	LOS F?
					V _F	-	1738	Exhibit 13-8	8 4800	No
V _{FO}		Exhibit 13-8			$V_{FO} = V$	' _F - V _R	1197	Exhibit 13-	8 4800	No
							541	Exhibit 13-1	0 2000	No
	l .					-		le Influen		
riow Enter	ring Merge I	and the second se	Desirable	Violation?	ITIOW E		Actual	Max Desiral		Violation?
	Actual	Exhibit 13-8	DC9II QDIC	Violation	V ₁₂			Exhibit 13-8	4400:All	No
V _{R12}			(16							a la construction and the second second second second second second second second second second second second s
And a local division of the local division o	ervice Deter	Manager and an and a second second second second second second second second second second second second second			Lever			erminatio 086 V ₁₂ - 0.	and the second second second second second second second second second second second second second second second	<u>r)</u>
	+ 0.00734 v _R ·	+ 0.0070 V ₁₂	- 0.00021 LA		b -			••••• ₁₂ - 0.		
D _R = (pc/m	ni/ln)					15.1 (pc				
LOS = (Exhi	bit 13-2)				1	CALCULATION DOLLARS	oit 13-2)		anna i i wa di bingi ta Managarang	THE MORE CARACITY OF THE PARTY OF
Speed Det	ermination				Speed	Deter	minatior	}		
M _s = (Exib	it 13-11)				D _s =	0.477 (E	xhibit 13-1	2)		
	Exhibit 13-11)				S _R =	56.7 mpł	(Exhibit 1	3-12)		
	Exhibit 13-11)				5	N/A mph	(Exhibit 13	3-12)		
	Exhibit 13-11)				1.	•	(Exhibit 1			
			nved			oTM Ver				9/2012 1:17 P

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	****	RAMP	S AND RAN	IP JUNCTI	ONS WO	RKSI	HEET			
General Ini	formation			Site Inforr	nation					
Analyst Agency or Comp Date Performed		I GORRILL RRILL PALMER	L.	Freeway/Dir of Tra lunction lurisdiction	avel	I-95 SB KMD RI	OFF RAM	כ		
Analysis Time Pe			EVELOPMENT A			2016				
A REAL PROPERTY AND A REAL	on TRAFTON PP	Contraction of the second second second second second second second second second second second second second s								
Inputs										
Upstream A		Number of La Acceleration L	nes, N .ane Length, L _A	2					Downstrea Ramp	m Adj
☐ Yes	「 On		ane Length L _D	500					⊠ Yes	⊡ On
I No	└─ Off	Freeway Volu	me, V _F	1606					□ No	└ Off
L _{up} =	ft	Ramp Volume	e, V _R -Flow Speed, S _{FI}	505 - 70.0				,	L _{down} =	950 ft
V _u =	veh/h		ow Speed, S _{FR}	35.0					V _D =	184 veh/h
Conversio	n to pc/h Un	der Base	Conditions		ançına sonran Conselərin (d.1777-1794)	****************		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		************
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		^f нv	f _p	v = V/PHF	x f _{HV} x f _p
Freeway	1606	0.90	Level	5	2		972	1.00	18	a a construction of the sector of the sector of the sector of the sector of the sector of the sector of the sec
Ramp	505	0.90	Level	5	2	0.9	972	1.00	57	7
UpStream					ļ		270	4.00	0.0	0
DownStream	184	0.90 Merge Areas	Level	5	2	0.	972 Div	1.00 /erge Areas	21	10
Estimation	ofvan	Werge Areas		aynantan ywyniain olwyniai ywry	Estima	tion o		reige Aleas	2340049999999999999999999999999999999999	
	V ₁₂ = V	(P)		granter temperature and a second second second second second second second second second second second second s	<u> </u>		2 000	V _R + (V _F - V _F)P	*****
l == =		ation 13-6 or	13-7)		L _{EQ} =			quation 13-1)
L _{EQ} = P _{FM} =		g Equation (P _{FD} =			0 using Equ		
° ⊦м V ₁₂ =	pc/h				V ₁₂ =			6 pc/h		
• 12 V ₃ ог V _{av34}	•	(Equation 13	-14 or 13-17)		V ₃ or V _{av34}			oc/h (Equatio	on 13-14 or	13-17)
	2,700 pc/h? 🦳 Ye						-	Yes I No		,
	1.5 * V ₁₂ /2 ┌─ ʏe							Yes I No		
lf Yes,V _{12a} =		(Equation 13	-16, 13-18, or		lf Yes,V _{12a}			/h (Equation	13-16, 13-	-18, or 13-
Capacity C	checks		1999))))))) (1999) 1999))))))		Capaci	ty Ch	ecks			-
	Actual	(Capacity	LOS F?			Actual	Ca	pacity	LOS F?
					V _F	:	1836	Exhibit 13-8	3 4800	No
V _{FO}		Exhibit 13-8			V _{FO} = V	′ _F - V _R	1259	Exhibit 13-8	8 4800	No
					V _F	2	577	Exhibit 13-1	0 2000	No
Flow Enter	ring Merge I	nfluence A	Area		Flow E	nterin	g Diver	ge Influen	ce Area	
	Actual	In sector plant in the foreign in the foreign in the foreign in the foreign in the foreign in the foreign in the	Desirable	Violation?		/	Actual	Max Desiral	ble	Violation?
V _{R12}		Exhibit 13-8			V ₁₂		836	Exhibit 13-8	4400:All	No
	ervice Deter	mination ('if not F)		Level o			erminatio		<u>F)</u>
D _R = 5.475	+ 0.00734 v _R +	- 0.0078 V ₁₂	- 0.00627 L _A			D _R = 4	1.252 + 0.0	0086 V ₁₂ - 0.	.009 L _D	
D _R = (pc/m	ni/ln)				D _R =	15.5 (pc	/mi/ln)			
LOS = (Exhi	ibit 13-2)				LOS =	B (Exhil	oit 13-2)			
Speed Det	ermination	yaanaa ahaa ahaa ahaa ahaa ahaa ahaa aha			Speed	Deter	minatio	n		
M _s = (Exib	oit 13-11)				1 °		xhibit 13-			
-	Exhibit 13-11)				1		(Exhibit 1			
1	Exhibit 13-11)				Ň	•	(Exhibit 1			
1 -	Exhibit 13-13)				S =	56.6 mph	ı (Exhibit 1	3-13)		
	Iniversity of Electida					oTM Vor		-	Generated: 9/9	0040 4.40 0

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	*****	RAMP	S AND RAI	MP JUNCTI	ONS WO	ORKSI	HEET	*****	<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>	
General Info	rmation	491 (141 Bold to a state of the		Site Infor				<u></u>	*****	****
Analyst	TON	GORRILL		Freeway/Dir of Tr	avel	I-95 SB	0801040102204004002000000000000	and the first of the local state of the stat		Gitte Colde Cold reached and a second second second second second second second second second second second se
Agency or Compar	iy GOF	RRILL PALMER		Junction		LYONS	RD OFF R	AMP		
Date Performed	9/9/2	2012	,	Jurisdiction						
Analysis Time Peri	od PM \	N/O INTPREDE	VELOPMENT	Analysis Year		2016				
Project Description	TRAFTON PR	OPERTIES	******			*****			*****	
Inputs									****	
Upstream Adj		Number of Lar Acceleration L	nes, N ane Length, L _a	2					Downstrea Ramp	ım Adj
	l [—] On	1	ane Length L _D	375					I ∕ Yes	☞ On
Mo No	└ Off	Freeway Volu	ne, V _F	1348					□ No	└ Off
L _{up} =	ft	Ramp Volume	, V _R	68					L _{down} =	600 ft
υp		Freeway Free	-Flow Speed, S _F	F 70.0						
V _u =	veh/h	Ramp Free-Fl	ow Speed, S _{FR}	35.0					V _D =	68 veh/h
Conversion	to pc/h Un	der Base (Conditions							
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PHF	x f _{HV} x f _p
Freeway	eeway 1348 0.90 Level					0.9	972	1.00	15	
Ramp						0.9	972	1.00	7	8
UpStream										
DownStream	68	Level	5	2	0.9	972	1.00	7	8	
				Estimation of v ₁₂			iverge Areas		664/a	
Estimation o	of v ₁₂				Estima	tion o	^{f V} 12			
	V ₁₂ = V _F	(P _{FM})					V ₁₂ =	V _R + (V _F - V _F	_R)P _{FD}	
-EQ =	(Equa	ation 13-6 or	13-7)		L _{EQ} =		(E	Equation 13-1	2 or 13-13)
P _{FM} =	using	Equation (E	Exhibit 13-6)		P _{FD} =		1.0	00 using Equ	uation (Exhi	bit 13-7)
/ ₁₂ =	pc/h				$V_{12} =$			41 pc/h		
V_3 or V_{av34}	•	(Equation 13	-14 or 13-17)		V_3^{12} or V_{av34}^{12}			pc/h (Equatio	n 13 14 or	13_17)
'3 ⁰ ' [*] av34 Is V ₃ or V _{av34} > 2,7								Yes I No	/1 10-14-01	10-11)
Is V ₃ or V _{av34} > 1.5			10 10 10		is v ₃ or v _a	$_{1034} > 1.5$		Yes 🕅 No	40.40.40	10 10
f Yes,V _{12a} =	pc/n (13-19		-16, 13-18, or		If Yes, V _{12a}	=	19	c/h (Equation	13-10, 13-	-18, 01 13-
Capacity Ch					Capaci	ty Ch				
and a second second second second second second second second second second second second second second second	Actual) C	apacity	LOS F?	d <u>eessed</u> eessee		Actual	Ca	pacity	LOS F
					V _F	:	1541	Exhibit 13-8	3 4800	No
V _{FO}		Exhibit 13-8			$V_{FO} = V$	′ _E - V _D	1463	Exhibit 13-8	3 4800	No
FO					V _F		78	Exhibit 13-1		No
Flow Enterin	L Da Morao Ir	I I I	102	<u> </u>				ge Influen	l.	1 10
10W LINCIN	Actual		Desirable	Violation?		and the second se	Actual	Max Desirat		Violation
V _{R12}		Exhibit 13-8	********		V ₁₂		541	Exhibit 13-8	4400:All	No
Level of Ser	vice Deteri		if not F)			of Sen	vice Det	terminatio	n (if not	
$D_R = 5.475 + 1$				1990 III - III - III - III - III - III - III - III - III - III - III - III - III - III - III - III - III - III	1			0086 V ₁₂ - 0.		
D _R = (pc/mi/		12	Л		D _R =	14.1 (pc		12	5	
.0S = (Exhibi							oit 13-2)			
Speed Deter	-	*****	an an an an an an an an an an an an an a	-1900, w. K. M.			minatio	n		- A CARLON AND IN CONTRACTOR
M _s = (Exibit			RI MURALI E NOMPLE PERMIT				xhibit 13-			
-	(hibit 13-11)				S _R = :	57.8 mph	(Exhibit	13-12)		
	(hibit 13-11)				S ₀ =	N/A mph	(Exhibit 1	3-12)		
					1	•	(Exhibit	-		
S = mph (Exhibit 13-13) Copyright © 2010 University of Florida. All Rights Reserved					1	nTM Vers			Senerated: 9/9	10040 4.40

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AL 1 P	<u>د -</u>		SAND RAM		CARLOW COLOR DOLLARS AND A DESCRIPTION OF THE PARTY OF TH		1 fan Sav F			
General Informa		00000		Site Infor						
Analyst Agency or Company Date Performed	GOR 9/9/2	GORRILL RILL PALMER 012	Jur Jur	eeway/Dir of Tranction risdiction	avel	I-95 NB LYONS	RD OFF F	AMP		
Analysis Time Period	AM V	V/O INTPOSTD	EVELOPMENT _{An}	alysis Year		2036				
Project Description TRA	AFTON PR	OPERTIES								
Inputs	and a construct of the second state of the second state of the second state of the second state of the second s					*****		****		
Upstream Adj Ramp		Number of Lan Acceleration La		2					Downstrear Ramp	n Adj
TYes TO	1	Deceleration L	ane Length L _D	225					I ∀es	🖓 On
ГN0 ГО	f	Freeway Volur	ne, V _F	1524					□ No	Off
L _{up} = ft		Ramp Volume	V _R Flow Speed, S _{FF}	182 70.0					L _{down} = g	575 ft
V _u = veh/ł	1	Ramp Free-Flo		35.0					V _D = 9	1 veh/h
Conversion to p	c/h Un	der Base (Conditions				****			
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PHF >	: f _{HV} x f _p
Freeway	1524	0.90	Level	5	2	0.9	972	1.00	174	
Ramp	182	0.90	Level	5	2	0,9	972	1.00	208	}
UpStream DownStream	91	0.90	Level	5	2		972	1.00	104	
DownStream		Merge Areas	LEVEI	5			The second second second second second second second second second second second second second second second se	liverge Areas		i dan menerakan di kata panan da
Estimation of v					Estima	tion o			and the second second second second second second second second second second second second second second secon	
,	V ₁₂ = V _F	(P _{EM})			-		V ₁₂ =	V _R + (V _F - V _F	P _{FD}	
-EQ =		ation 13-6 or	13-7)		L _{EQ} =			Equation 13-1		
P _{FM} =	using	Equation (E	xhibit 13-6)		P _{FD} =		1.	000 using Equ	uation (Exhib	it 13-7)
V ₁₂ =	pc/h				V ₁₂ =		17	'42 pc/h		
V ₃ or V _{av34}		Equation 13-	14 or 13-17)		V_3 or V_{av34}			pc/h (Equatio	n 13-14 or	13-17)
Is V_3 or $V_{av34} > 2,700$ pc								Yes 🗹 No		
Is V ₃ or V _{av34} > 1.5 * V ₁₃ If Yes,V _{12a} =			-16, 13-18, or		Is V ₃ or V _a If Yes,V _{12a}		p	⊂Yes I⊂ No ic/h (Equation	13-16, 13-1	8, or 13
	13-19))	an gangang ang kang kang kang kang kang		Capaci		1: ooke	9)		****
Capacity Check	Actual		apacity	LOS F?		iy cin	Actual	Ca	pacity	LOS F
	Actual	† Ť	αρασιτγ				1742	Exhibit 13-8		No
V _{FO}		Exhibit 13-8			$V_{FO} = V$		1534	Exhibit 13-8	3 4800	No
FU							208	Exhibit 13-1		No
Flow Entering N	lerae Ir	i i Influence A	rea				a Dive	rge Influen	ce Area	
	Actual		Desirable	Violation?			Actual	Max Desirat	the second second second second second second second second second second second second second second second se	Violation
V _{R12}		Exhibit 13-8			V ₁₂		1742	Exhibit 13-8	4400:All	No
Level of Service			******		Level o			terminatio		9
D _R = 5.475 + 0.007	734 v _R +	0.0078 V ₁₂ -	0.00627 L _A					.0086 V ₁₂ - 0.	009 L _D	
D _R = (pc/mi/ln)						17.2 (pc				
LOS = (Exhibit 13-							oit 13-2)			
Speed Determir	nation		****	4 4,5,1 /	Speed		يسمع المستخلفية وبجبية ابن			
M _S = (Exibit 13-1	1)				1 °	•	xhibit 13			
S _R = mph (Exhibit					1		(Exhibit			
S ₀ = mph (Exhibit					ľ		(Exhibit			
S = mph (Exhibit	13-13)				S = HCS201	57.5 mph	ı (Exhibit	13-13)	Generated: 9/	

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***		RAMP	<u>S AND RAMI</u>	alan Sahari kalan kalan dari kumu dara dari kala dari		RKSI	HEET			
General Info	rmation		in manial waards territal albeet marks in the basis of the own	Site Infor						
Analyst		GORRILL		eway/Dir of Tra	avel	I-95 NB				
Agency or Compar	-	RILL PALMER		nction		KMD RI	OOFF RAM			
Date Performed	9/9/2	012	Ju	isdiction						
Analysis Time Peri	od AM V	V/O INTPOSTE	EVELOPMENT An	alysis Year		2036				
Project Description	TRAFTON PR	OPERTIES								
Inputs	****	<u></u>			deret site in the state of the		******	F		
Upstream Adj	Ramp	Number of La	nes, N ane Length, L _A	2					Downstrea Ramp	ım Adj
☐ Yes	└ On		ane Length L _n	450					Ves	🔽 On
I⊂ No	Off	Freeway Volu	me, V _F	1433					No	└ Off
1 -	ft	Ramp Volume	, V _R	320					L _{down} =	2000 ft
L _{up} =	n,	Freeway Free	-Flow Speed, S _{FF}	70.0					-down	2000 10
V _u =	veh/h	Ramp Free-Fl	ow Speed, S _{FR}	35.0					V _D =	453 veh/l
Conversion	to pc/h Un	der Base (Conditions							
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PHF	x f _{HV} x f _p
Freeway	1433	0.90	Level	5	2	0.9	972	1.00	16	38
Ramp	320	0.90	Level	5	2		972	1.00	3	66
UpStream		ļ								2-44
DownStream	453	0.90	Level	5	2	0.9	972	1.00	5	18
Estimation of		Merge Areas	ý na 1 6 a 16	a a na an an an an an an an an an an an	Estimat	ion o		verge Areas	***	TRANS.
									10	
_	$V_{12} = V_F$		10 7)		_			/ _R + (V _F - V _R quation 13-1		`
EQ =		ation 13-6 or			L _{EQ} =		•			-
P _{FM} =	-	Equation (E	znibit 13-6)		P _{FD} =			0 using Equ	lation (Exil	DIT 13-7)
V ₁₂ =	pc/h				V ₁₂ =			8 pc/h		
√ ₃ or V _{av34}			-14 or 13-17)		V_3 or V_{av34}			oc/h (Equatio	n 13-14 o	- 13-17)
Is V_3 or $V_{av34} > 2,3$					1 0 0			Yes 🕅 No		
Is V_3 or $V_{av34} > 1.5$					Is V_3 or V_{av}	_{/34} > 1.5		Yes 🗵 No		
f Yes,V _{12a} =			-16, 13-18, or		If Yes,V _{12a} :	=		/h (Equation	13-16, 13	-18, or 13
Capacity Ch	13-19))	<u></u>		Capacit		19) ecks	//////////////////////////////////////		0.0
capacity on	Actual	I C	apacity	LOS F?			Actual	l Ca	pacity	LOS F
****************		Ī			V _F		1638	Exhibit 13-8		No
V _{FO}		Exhibit 13-8			$V_{FO} = V_F$		1272	Exhibit 13-8	4800	No
FU							366	Exhibit 13-1		No
Flow Enterii	n Merae Ir	<u>I I</u> Ifluence A	rea	1				ge Influen		
	Actual		Desirable	Violation?		and the second se	Actual	Max Desirab		Violation
V _{R12}		Exhibit 13-8			V ₁₂	1	638	Exhibit 13-8	4400:All	No
Level of Ser								erminatio		F)
D _R = 5.475 + 6	0.00734 v _R +	0.0078 V ₁₂ -	0.00627 L _A			D _R = 4	.252 + 0.0	0086 V ₁₂ - 0.	009 L _D	
D _R = (pc/mi/	in)				D _R = 1	4.3 (pc/	/mi/ln)			
_OS = (Exhibi	-	****					oit 13-2)			
Speed Deter	rmination		al de la calca de la calca de mandra de la managada de la calca				minatio			
	13-11)				D _s = 0	.461 (E	xhibit 13-1	2)		
M _s = (Exibit					6					
-	(hibit 13-11)				1		(Exhibit 1			
$S_R^=$ mph (E) $S_0^=$ mph (E)	-				1		(Exhibit 1 (Exhibit 1			

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	i fi fan fan sen an	RAMPS	SAND RAMP	JUNCTI	ONS WO	RKSI	HEET		, , , , , , , , , , , , , , , , , , ,	
General Infor	mation			Site Inform				***		
Analyst		GORRILL	Fre	eway/Dir of Tra	avel	I-95 SB		6073390000000000000000000000000000000000		
Agency or Company	GOR	RILL PALMER	Jur	nction		KMD RI	OFF RAI	ИР		
Date Performed	9/9/2	012	Jur	isdiction						
Analysis Time Period	AM V	V/O INTPOSTD	EVELOPMENTAna	alysis Year		2036				
Project Description	TRAFTON PR	OPERTIES		****	*****	****		1997.7.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1		
Inputs										
Upstream Adj Ra	amp	Number of Lan		2					Downstre Ramp	am Adj
□ Yes □	On	Acceleration La							·	-
		Deceleration L	5	500					F Yes	🖾 On
I⊽ No T	Off	Freeway Volun	ne, V _F	1430					「 No	└── Off
L _{up} = ff		Ramp Volume,	V _R	491					L _{down} =	950 ft
dþ		Freeway Free-	Flow Speed, S _{FF}	70.0						
V _u = ve	eh/h	Ramp Free-Flo	ow Speed, S _{FR}	35.0					V _D =	101 veh/ł
Conversion to	o pc/h Une	der Base (Conditions							
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PHI	= x f _{HV} x f _p
Freeway	1430	0.90	Level	5	2	0.9	972	1.00	1	635
Ramp	491	0.90	Level	5	2		972	1.00	į	561
UpStream					1				J.	
DownStream	101	0.90	Level	5	2	0.9	972	1.00	<u>l</u>	115
		Merge Areas			Fatiment			liverge Areas		
Estimation of					Estimat			1042/4014410-0010-0010-0010-0010-0010-0010-0	MAN	
	$V_{12} = V_{F}$							V _R + (V _F - V		
-eq =		ation 13-6 or			L _{EQ} =			Equation 13-		
P _{FM} =	using	Equation (E	xhibit 13-6)		P _{FD} =			000 using Eq	uation (Exl	hibit 13-7)
V ₁₂ =	pc/h				V ₁₂ =		16	635 pc/h		
√ ₃ or V _{av34}	pc/h (Equation 13-	-14 or 13-17)		V_3 or V_{av34}		0	pc/h (Equati	on 13-14 d	or 13-17)
Is V ₃ or V _{av34} > 2,70	0 pc/h? 🗂 Ye	s ∏No			Is V ₃ or V _a	_{v34} > 2,7	00 pc/h? ⊺	Yes 🖂 No		
Is V_3 or $V_{av34} > 1.5$					Is V ₃ or V ₂	_{v34} > 1.5	* V ₁₂ /2	- Yes ☞ No		
if Yes,V _{12a} =	pc/h (Equation 13-	-16, 13-18, or		If Yes,V _{12a}		p	c/h (Equation	n 13-16, 13	3-18, or 13-
Capacity Che	13-19)			Capaci		1	9)		
сарасну спе	Actual		apacity	LOS F?	Capaci		Actual		apacity	LOS F
	Actual		apacity				1635	Exhibit 13-		No
V		Exhibit 13-8			$V_{FO} = V$	design and the second sec	1000	Exhibit 13-		
V _{FO}		EXHIBIT 13-0			V _R		561	Exhibit 13-		
				<u> </u>						1
Flow Entering			rea Desirable	Violation?	FIOW E		Actual	rge Influer Max Desira	Contractory of the local data and the local data an	Violation
V _{R12}	Actual	Exhibit 13-8			V ₁₂		1635	Exhibit 13-8	4400:All	No
Level of Serv	ice Deterr		if not F)					terminatio	n (if not	1
$D_R = 5.475 + 0.$					1			.0086 V ₁₂ - 0		<u></u>
D _R = (pc/mi/ln		12	0		D _R =	13.8 (pc			B	
LOS = (Exhibit							bit 13-2)			
Speed Deterr			*****		Speed		The second sector second second second second second second second second second second second second second s	on	χ¢γγ¢αατα απο το απογολογιαία	
***************************************	······································	*****	*****				xhibit 13			uccumenta a tida na antique aprox
M _S = (Exibit 1)						-	(Exhibit			
	nibit 13-11)						(Exhibit			
· · ·	nibit 13-11) nibit 13-13)					-	(Exhibit			
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General Info	rmation			Site Infor						
Analyst		GORRILL	Fre	eway/Dir of Tr	avel	I-95 SB				
gency or Company	y GOR	RILL PALMER	Ju	nction		LYONS	RD OFF R	AMP		
Date Performed	9/9/2	012	Ju	risdiction						
Analysis Time Peric	od AM V	V/O INTPOSTE	DEVELOPMENTAn	alysis Year		2036				
Project Description	TRAFTON PR	OPERTIES				***************************************		***************************************		******
Inputs	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	y								
Upstream Adj I		Number of La Acceleration L	nes, N .ane Length, L _A	2					Downstre Ramp	am Adj
T Yes	On	1	ane Length Lp	225					P Yes	⊡ On
[⊂ No]	Off	Freeway Volu	- 0	1367					∏ No	Off
1 -	ft	Ramp Volume	e, V _R	81					L _{down} =	575 ft
L _{up} =	11	Freeway Free	-Flow Speed, S _{FF}	70.0					"down	070 IL
V _u = v	/eh/h		ow Speed, S _{FR}	35.0					V _D =	233 veh/l
Conversion	to pc/h Une	der Base (Conditions			~~~~				
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PHF	⁼ x f _{HV} x f _p
Freeway	1367	0.90	Level	5	2	0.9	972	1.00	1	563
Ramp	81	0.90	Level	5	2	0.9	972	1.00		93
UpStream	I				1					
DownStream	233	0.90	Level	5	2	0.9	972	1.00	2	266
		Merge Areas						iverge Areas		9709KWC
Estimation o	of v ₁₂				Estimat	tion o	f v ₁₂			
	V ₁₂ = V _F	(P _{FM})					V ₁₂ =	V _R + (V _F - V _F	_R)P _{FD}	
-EQ =	(Equa	tion 13-6 or	13-7)		L _{EQ} =		(E	Equation 13-1	2 or 13-1:	3)
P _{FM} =	using	Equation (I	Exhibit 13-6)		P _{FD} =		1.0	00 using Equ	uation (Exh	ibit 13-7)
/ ₁₂ =	pc/h				$V_{12} =$			63 pc/h		,
V_3 or V_{av34}	,	Equation 13	-14 or 13-17)		V_3^{12} or V_{av34}^{12}			pc/h (Equatio	n 13-14 c	r 13_17)
								Yes ⊠No	10-140	(10- <i>11</i>)
Is V_3 or $V_{av34} > 2,7$					1 -					
Is V_3 or $V_{av34} > 1.5$			10 10 10					Yes 🗹 No	10 10 10	10 10
f Yes,V _{12a} =	pc/n (13-19)		-16, 13-18, or		If Yes,V _{12a}	=	19 19	c/h (Equation	13-16, 13	5-18, OF 13-
Capacity Ch	CONTRACTOR OF CONT		***************************************		Capacit	tv Che		1		##### <u>~~~~~~</u>
an an an an an an an an an an an an an a	Actual	l c	apacity	LOS F?		demonstration I	Actual	Ca	pacity	LOS F
		T			V _F		1563	Exhibit 13-8		No
V _{FO}		Exhibit 13-8			$V_{FO} = V_{I}$		1470	Exhibit 13-8	3 4800	No
*FO		CALIDIC 10-0				***************************************	*****			
	L			<u> </u>	V _R	1	93	Exhibit 13-1		No
Flow Enterin	1			<u>\///</u>	Flow Ei		×	ge Influen		
	Actual	1 7	Desirable	Violation?			Actual	Max Desirat		Violation
V _{R12}		Exhibit 13-8		MANNAHERANAG PURMA COTORINA	V ₁₂		563	Exhibit 13-8	4400:All	No No
D _R = 5.475 + 0				8 <u></u>	A REAL PROPERTY AND A REAL			terminatio 0086 V ₁₂ - 0.		<u>r)</u>
		0.0070 v ₁₂	0.00021 LA		1	••		······································		
D _R = (pc/mi/li	,					5.7 (pc	•			
.0S = (Exhibit				****			oit 13-2)			
Speed Deter	mination				Speed I			anevortario-double-weather-inductored minutes of		1944 (days)
M _S = (Exibit 1	13-11)					•	xhibit 13-	-		
S _R = mph (Ex	hibit 13-11)				S _R = 5	57.8 mph	(Exhibit	13-12)		
	hibit 13-11)				S ₀ = N	V/A mph	(Exhibit 1	13-12)		
S = mph (Exhibit 13-13)					S = 5	57.8 mph	(Exhibit	13-13)		
		Rights Reserve				nTM Ver	-		Generated:	

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		RAMPS	AND RAME	JUNCTI	ONS WO	RKSH	IEET			
General Infor	mation			Site Infori	nation					
Analyst	والمستحد المراجب والمعارفة والمتعارة والمتعارة والمراجب والمحادث والمحاد والمحد والم	GORRILL	Fre	eway/Dir of Tra	avel I	I-95 NB				
Agency or Company	GOR	RILL PALMER	Jun	iction	1	LYONS	RD OFF R	AMP		
Date Performed	9/9/20	012		isdiction						
Analysis Time Period	I PM W	V/O INTPOSTDI	EVELOPMENTAna	alysis Year	:	2036				
Project Description	TRAFTON PRO	OPERTIES	997		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
Inputs			******			edostati terretari		<u> </u>	-	
Upstream Adj R	r	Number of Lan Acceleration La		2					Downstre Ramp	am Adj
T Yes	Ôn	Deceleration La	ane Length L _D	225					🖾 Yes	🖾 On
™No ⊓	Off	Freeway Volun	ne, V _F	2032					∏ No	└─ Off
L,_ = fi	+	Ramp Volume,	V _R	239					L _{down} =	575 ft
L _{up} = fi		Freeway Free-	Flow Speed, S _{FF}	70.0						
V _u = ve	eh/h	Ramp Free-Flo	w Speed, S _{FR}	35.0					V _D =	60 veh/h
Conversion t	o pc/h Und	der Base C	Conditions							
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	1	нv	f _p	v = V/PHI	= x f _{HV} x f _p
Freeway	2032	0.90	Level	5	2	0.9	72	1.00	2	323
Ramp	239	0.90	Level	5	2	0.9	972	1.00		273
UpStream										
DownStream	60	0.90	Level	5	2	0.9	972	1.00		69
		Merge Areas			Estimat	ion o		iverge Areas	AU-10-10-10-10-10-10-10-10-10-10-10-10-10-	
Estimation of								<u></u>	\ ``	*****
	V ₁₂ = V _F						14	$V_R + (V_F - V_F)$		2)
L _{EQ} =		ation 13-6 or			L _{EQ} =		•	Equation 13-1		
P _{FM} =	using	Equation (E	xhibit 13-6)		P _{FD} =			00 using Equ	uation (Exi	nibit 13-7)
V ₁₂ =	pc/h				V ₁₂ =			23 pc/h		
V ₃ or V _{av34}	pc/h (Equation 13-	14 or 13-17)		V_3 or V_{av34}			pc/h (Equatio	on 13-14 d	or 13-17)
Is V_3 or $V_{av34} > 2,70$	0 pc/h? 🦳 Ye	s 🗆 No						Yes 🖂 No		
Is V_3 or $V_{av34} > 1.5$	*V ₁₂ /2	s 🗌 No			Is V ₃ or V _{av}	_{/34} > 1.5		Yes 🕅 No		
lf Yes,V _{12a} =			16, 13-18, or		If Yes, V _{12a} =	=	p 19	c/h (Equation	13-16, 1	3-18, or 13-
Capacity Che	13-19))			Capacit	v Che		<u></u>		
	Actual	C:	apacity	LOS F?			Actual	Ca	pacity	LOS F?
		Ť			V _F		2323	Exhibit 13-8	3 4800	No
V _{FO}		Exhibit 13-8			V _{FO} = V _F		2050	Exhibit 13-8	3 4800	No
FO					V _R	No. of Concession, Name	273	Exhibit 13-1	0 2000	No
Flow Entering	<u>I</u> n Marna Ir	I I I	rea	<u>L</u>				rge Influen		
I IOW LIILCIII	Actual		Desirable	Violation?			Actual	Max Desirat		Violation?
V _{R12}		Exhibit 13-8			V ₁₂		2323	Exhibit 13-8	4400:All	No
Level of Serv	vice Deterr	nination (i	f not F)			f Sen	/ice De	terminatio	n (if no	t F)
D _R = 5.475 + 0.	.00734 v _R +	0.0078 V ₁₂ -	0.00627 L _A		T	$D_R = 4$.252 + 0	.0086 V ₁₂ - 0.	009 L _D	
D _R = (pc/mi/lr	1)				D _R = 2	2.2 (pc	/mi/ln)			
LOS = (Exhibit	13-2)				LOS = C	C (Exhil	oit 13-2)			
Speed Deterr					Speed I			on		
M _s = (Exibit 1					D _s = 0	.453 (E	xhibit 13	-12)		
-	nibit 13-11)				1	7.3 mph	(Exhibit	13-12)		
	nibit 13-11)				S ₀ = N	I/A mph	(Exhibit	13-12)		
S = mph (Exhibit 13-13)						57.3 mph	(Exhibit	13-13)		
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		RAMP	S AND RAMI			JKKS	<u>ieet</u>	*****		
General Info	*******		та составляется на составляется составляется на составляется на составляется на составляется на составляется н	Site Infor		oranosana e sono do do		*****	*****	-
Analyst		GORRILL		eway/Dir of Tra	avel	I-95 NB				
gency or Company		RILL PALMER		nction		KMD RI	O OFF RAN	МР		
Date Performed	9/9/2	012 MO INTROCTO		risdiction						
Analysis Time Perio	d PM V	WO INTPOSIL	DEVELOPMENT An	alysis Year		2036				
Project Description	TRAFTON PR	OPERTIES	***************************************	***************************************				******		
Inputs	······	Number of La	200 N	2		1000 1000 1000 1000 1000 1000 1000 100			Deurotroo	مم ۸ ما:
Upstream Adj F		1	ane Length, L	2					Downstrea Ramp	m Adj
TYes T	On	Deceleration L	ane Length L _D	450					I ∕ Yes	I⊂ On
™ No I	Off	Freeway Volu	me, V _F	1853					□ No	└ Off
L _{up} =	ft	Ramp Volume	, V _R	576					L _{down} =	2000 ft
uμ		Freeway Free	-Flow Speed, S _{FF}	70.0						
u	/eh/h		ow Speed, S _{FR}	35.0					V _D =	745 veh/l
Conversion t	B B B B B B B B B B B B B B B B B B B	der Base (Conditions		1		T	1999-1997-1999-1999-1999-1999-1999-1999		
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PHF	x f _{HV} x f _p
Freeway	1853	0.90	Level	5	2	0.9	972	1.00	21	19
Ramp	576	0.90	Level	5	2	0.9	972	1.00	65	9
UpStream	Į									
DownStream	745	0.90	Level	5	2	0.9	972	1.00	85	2
Estimation o		Merge Areas	na kaodini mandri uzuka manja manjamana kata dia sa a	*******	Estima	tion o	D fv	iverge Areas		
		(D)						V _R + (V _F - V _F		• <i>₩</i> ~•••••••••••••••••••••••••••••••••••
_	$V_{12} = V_F$		40.7)							
-EQ =		ation 13-6 or			L _{EQ} =			Equation 13-1		
P _{FM} =	-	Equation (E	-xnibit 13-6)		P _{FD} =			000 using Equ	Jation (Exhi	olt 13-7)
/ ₁₂ =	pc/h				V ₁₂ =			19 pc/h		
/ ₃ or V _{av34}			-14 or 13-17)		V_3 or V_{av34}			pc/h (Equatio	on 13-14 or	13-17)
Is V_3 or $V_{av34} > 2,70$	00 pc/h? 🦳 Ye	s 🗆 No			Is V ₃ or V _a	_{v34} > 2,7	00 pc/h? 🗂	Yes 🖂 No		
Is V ₃ or V _{av34} > 1.5	*V ₁₂ /2 TYe	s ∏No			Is V_3 or V_a	_{v34} > 1.5	* V ₁₂ /2 「	Yes 🗷 No		
f Yes,V _{12a} =	pc/h (Equation 13	-16, 13-18, or		If Yes, V _{12a}	=		c/h (Equation	13-16, 13-	18, or 13
Capacity Che	13-19))	******	*************************	Capaci		19 acks	J)		****
capacity of	Actual	T C	apacity	LOS F?			Actual	Ca	pacity	LOS F
		Ī			V _F	ĺ	2119	Exhibit 13-8	1	No
V _{FO}		Exhibit 13-8			V _{FO} = V		1460	Exhibit 13-8	3 4800	No
*F0		EXHIBIT TO U			V _R		659	Exhibit 13-1		No
Flow Frederic	a Marara In		2000-000-000-000-000-000-000-000-000-00		2				L	
Flow Enterin	Actual	A DESCRIPTION OF THE OWNER OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OWNER OF THE OWNER	Desirable	Violation?	FIUW E	Notice and American Contraction	d Diver	r ge Influen Max Desiral		Violation
V _{R12}	notuai	Exhibit 13-8			V ₁₂		2119	Exhibit 13-8	4400:All	No
Level of Serv	, vice Detern	L	if not F)			fSen	vice De	terminatio	n (if not i	F)
D _R = 5.475 + 0	.00734 v _R +	0.0078 V ₁₂ -	0.00627 L _A			D _R = 4	.252 + 0	.0086 V ₁₂ - 0.	009 L _D	
D _R = (pc/mi/lr	n)				D _R = 1	8.4 (pc	/mi/ln)			
.OS = (Exhibit	13-2)				LOS = E	3 (Exhit	oit 13-2)			
Speed Deter					Speed			»n		
M _s = (Exibit 1	3-11)				$D_s = 0$).487 (E	xhibit 13-	-12)		
-	hibit 13-11)					6.4 mph	(Exhibit	13-12)		
K · ·	hibit 13-11)						(Exhibit	-		
	hibit 13-13)				1		(Exhibit			
					l			,	Generated 9	

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		RAMPS	SAND RAM		and the second se	ORKS	HEET			
General Infor	mation			Site Infor						
Analyst		GORRILL		eway/Dir of Tra	avel	I-95 SB				
Agency or Company		RILL PALMER		nction		KMD R	D OFF RAI	MP		
Date Performed	9/9/2	012 WO INTROOTO		isdiction						
Analysis Time Period	I PM V	WOINTPOSTD	EVELOPMENTAna	alysis Year		2036				
Project Description	TRAFTON PR	OPERTIES	*****							
Inputs			****			0.000 (0.000 and 0.000			041,047,010 and 10	
Upstream Adj R		Number of Lan Acceleration La		2					Downstrea Ramp	am Adj
「Yes 「	Őn	Deceleration L		500					I⊽ Yes	ি On
⊠ No ⊓	Off	Freeway Volun	5	1963					厂 No	└ Off
		Ramp Volume,	I	616						
L _{up} = f	t	1	Flow Speed, S _{FF}	70.0					L _{down} =	950 ft
V _u = v	eh/h	Ramp Free-Flo		35.0					V _D =	225 veh/
Conversion t	o pc/h Und	der Base C	Conditions							
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PHF	x f _{HV} x f _p
Freeway	1963	0.90	Level	5	2		972	1.00	22	244
Ramp	616	0.90	Level	5	2	0.	972	1.00	7	04
UpStream										
DownStream	225	0.90	Level	5	2	0.	972	1.00	2	57
		Merge Areas			Fatimes	42.0.00		verge Areas	*****	
Estimation of					Estima					
	V ₁₂ = V _F							V _R + (V _F - V		
- _{EQ} =		ation 13-6 or	-		L _{EQ} =		•	Equation 13-		
P _{FM} =	using	Equation (E	xhibit 13-6)		P _{FD} =		1.	000 using Ec	quation (Exh	ibit 13-7)
V ₁₂ =	pc/h				V ₁₂ =			244 pc/h		
V ₃ or V _{av34}	pc/h (Equation 13-	14 or 13-17)		V ₃ or V _{av34}			pc/h (Equati		r 13-17)
Is V_3 or $V_{av34} > 2,70$					1			Yes 🖂 No		
Is V_3 or $V_{av34} > 1.5$					Is V ₃ or V ₂	_{av34} > 1.5		Yes 🗹 No		
lf Yes,V _{12a} =	pc/h (13-19)		16, 13-18, or		If Yes, V _{12a}	=		c/h (Equatio 9)	n 13-16, 13	-18, or 13
Capacity Che	THE REAL PROPERTY AND A DESCRIPTION OF A	/	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Capaci	itv Ch		5)	*****	******
oupdony one	Actual	C	apacity	LOS F?	1		Actual	C	apacity	LOS F
		T			V,	-	2244	Exhibit 13	-8 4800	No
V _{FO}		Exhibit 13-8			V _{FO} = V		1540	Exhibit 13	-8 4800	No
- FO							704	Exhibit 13-		No
Flow Entering	L Marga Ir	I I I	roa					rge Influei		
now Lintering	Actual		Desirable	Violation?	110112		Actual	Max Desira		Violation
V _{R12}		Exhibit 13-8	and a second second second second second second second second second second second second second second second		V ₁₂		2244	Exhibit 13-8	4400:All	No
Level of Serv	ice Deterr		f not F)	f		of Ser	vice De	terminatio	on (if not	F)
D _R = 5.475 + 0.		2004039-0000-0000-0000-0000-0000-0000-000		eyen	Τ		******	.0086 V ₁₂ - 0		
D _R = (pc/mi/ln		.2	<i>,</i> ,		D _R =	19.1 (pc	:/mi/ln)			
LOS = (Exhibit	-					B (Exhi	bit 13-2)			
Speed Deterr		972409/07/2007-000-000-0009/	******		Speed	-		on		944
M _s = (Exibit 1				*****			xhibit 13		appaper and a second second second second second second second second second second second second second second	
	nibit 13-11)						n (Exhibit			
	nbit 13-11)				1		(Exhibit			
•	nibit 13-11)				1	-	(Exhibit			
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	an an an an an an an an an an an an an a	RAMPS	AND RAM			RKSH	IEET			
General Inform	nation			Site Infor	mation					
Analyst Agency or Company Date Performed	GOR 9/9/2	GORRILL RILL PALMER 012	Jur Jur	eeway/Dir of Tr nction isdiction		-95 SB LYONS	RD OFF F	AMP		
Analysis Time Period	PM V	V/O INTPOSTD	EVELOPMENTAN	alysis Year	2	2036				
Project Description	RAFTON PR	OPERTIES	ana da ang mang mang mang mang mang mang mang		****					
Inputs										
Upstream Adj Ra		Number of Lan Acceleration La	,	2					Downstre Ramp	am Adj
ΓYes Γ	On	Deceleration L	ane Length Ln	225					🗹 Yes	🗁 On
^{I™} No I [™]	Off	Freeway Volur	ne, V _F	1647					□ No	└─ Off
L _{up} = ft		Ramp Volume		82					L _{down} =	575 ft
V _u = ve	h/h	Freeway Free- Ramp Free-Flo	Flow Speed, S	70.0 35.0					V _D =	205 veh/h
4			110							
Conversion to	<u>pc/n Und</u> V	T			1	Τ.				
(pc/h)	(Veh/hr)	PHF	Terrain	%Truck	%Rv		ну	F		= x f _{HV} x f _p
Freeway	1647	0.90	Level	5	2	0.9		1.00		883
Ramp UpStream	82	0.90	Level	5	2	0.9	72	1.00	****	94
DownStream	205	0.90	Level	5	2	0.9	72	1.00	2	234
		Merge Areas]	iverge Areas		
Estimation of	v ₁₂				Estimati	ion oi	f v ₁₂			
	$V_{12} = V_{F}$	(P _{FM})	, <u>, , , , , , , , , , , , , , , , , , </u>				V ₁₂ =	V _R + (V _F - V _F	_R)P _{FD}	Mi-An
-EQ =	(Equa	ition 13-6 or	13-7)		L _{EQ} =		(Equation 13-1	2 or 13-1	3)
P _{FM} =	using	Equation (E	xhibit 13-6)		P _{FD} =		1.	000 using Equ	uation (Exł	nibit 13-7)
V ₁₂ =	pc/h				V ₁₂ =		18	183 pc/h		
V ₃ or V _{av34}	pc/h (Equation 13-	14 or 13-17)		V_3 or V_{av34}			pc/h (Equatio	on 13-14 c	or 13-17)
Is V ₃ or V _{av34} > 2,700	pc/h? TYe	s 🗆 No			Is V ₃ or V _{av3}	₃₄ > 2,70)0 pc/h? [Yes 🗵 No		
Is V_3 or $V_{av34} > 1.5 * 1$					Is V ₃ or V _{av3}	₃₄ > 1.5		Yes 🔽 No		
If Yes,V _{12a} =	pc/h (13-19)		16, 13-18, or		If Yes, V _{12a} =	:	ې 1	c/h (Equation	13-16, 13	8-18, or 13-
Capacity Chec			*******		Capacit	v Che		<u>.</u>	******	
1	Actual	C	apacity	LOS F?			Actual	Ca	pacity	LOS F
					V _F		1883	Exhibit 13-8	3 4800	No
V _{FO}		Exhibit 13-8			$V_{FO} = V_{F}$	- V _R	1789	Exhibit 13-8	3 4800	No
					V _R	Ť	94	Exhibit 13-1	0 2000	No
Flow Entering	Merge In	fluence A	rea		Flow En	terin	g Dive	rge Influen	ce Area	
Ĩ	Actual	and the second se	Desirable	Violation?			Actual	Max Desiral		Violation?
V _{R12}		Exhibit 13-8			V ₁₂		883	Exhibit 13-8	4400:All	No
Level of Servi			THE REPORT OF A DESCRIPTION OF A DESCRIP			orococorrection with the		terminatio	the second second second second second second second second second second second second second second second s	F)
D _R = 5.475 + 0.0	0734 v _R +	0.0078 V ₁₂ -	0.00627 L _A			D _R = 4	.252 + 0	.0086 V ₁₂ - 0.	.009 L _D	
D _R = (pc/mi/ln)					1	3.4 (pc/				
LOS = (Exhibit 1	-						oit 13-2)			a che une douction that fire from
Speed Determ	ination		*****		Speed L		عليب والمجار والمتحكمة والمجارة والمراوية و			
M _S = (Exibit 13	-11)				1 °		xhibit 13			
S _R = mph (Exhi	bit 13-11)				1		(Exhibit			
S ₀ = mph (Exhi					1		(Exhibit	-		
S = mph (Exhi	bit 13-13)				S = 57	7.8 mph	(Exhibit	13-13)		·····
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		RAMP	S AND RAN	IP JUNCTI	ONS WC	RKS	HEET		gan, actual factorian and a second of the		
General In	formation			Site Infori	mation						
Analyst	TOT	M GORRILL	F	Freeway/Dir of Tra	avel	1-95 NB					
Agency or Comp	oany GO	RRILL PALMER	: J	lunction		LYONS RD OFF RAMP					
Date Performed		2012		lurisdiction							
Analysis Time P			EVELOPMENT A	Analysis Year		2036		or the contract of the contrac		PPD/20070000000000000000000000000000000000	
Project Descripti	on TRAFTON PI	ROPERTIES							****	*******	
Inputs		he de con		<u>م</u>							
Upstream A		Number of La Acceleration I	nes, N Lane Length, L _A	2					Downstrea Ramp	im Adj	
Yes	「 On	1	Lane Length L _D	225					I ∕ Yes	₩ On	
区 No	└─ Off	Freeway Volu	me, V _F	1524					∏ No	└ Off	
L _{up} =	ft	Ramp Volume	e, V _R	50					L _{down} =	575 ft	
∽up	11	Freeway Free	-Flow Speed, S _{FF}	70.0					down		
V _u =	veh/h	1	low Speed, S _{FR}	35.0					V _D =	68 veh/h	
Conversio	n to pc/h Ur	nder Base	Conditions								
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PHF x f _{HV} x		
Freeway	1524	0.90	Level	5	2	0.	972	1.00	17	42	
Ramp	50	0.90	Level	5	2	0.	972	1.00	5	7	
UpStream											
DownStream	68	0.90	Level	5	2	0.	972	1.00	7	8	
Fatimation		Merge Areas	****		Eatima	tion o		erge Areas	******		
Estimation		C SLOWING WARMAN AND A DECEMBER OF A DECEMBER OF A DECEMBER OF A DECEMBER OF A DECEMBER OF A DECEMBER OF A DECE			Estima						
	V ₁₂ = V	_F (P _{FM})						/ _R + (V _F - V _F			
L _{EQ} =	(Equ	ation 13-6 or	13-7)		L _{EQ} = (Equation 13-12 or 13-13)						
P _{FM} =	using	g Equation (Exhibit 13-6)		P _{FD} = 1.000 using Equation (Exhibit 13-7)						
V ₁₂ =	pc/h				V ₁₂ = 1742 pc/h						
V ₃ or V _{av34}	pc/h	(Equation 13	-14 or 13-17)		V ₃ or V _{av34} 0 pc/h (Equation 13-14 or 13-17)						
	2,700 pc/h? 🦳 Y				Is V ₃ or V _{av34} > 2,700 pc/h? TYes F No						
	1.5 * V ₁₂ /2 ┌─ Υ				Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2						
If Yes,V _{12a} =		(Equation 13	16, 13-18, or		If Yes, $V_{12a} = \frac{pc/h}{19}$ (Equation 13-16, 13-18, or 13- 19)						
Capacity C				nya genya ana aka aka aka aka aka aka aka aka ak	Capaci	ty Ch	ecks	CHURCENCOLOGICA, COMUNICATION AND THE AND THE AND THE AND THE AND THE AND THE AND THE AND THE AND THE AND THE A		****	
	Actual	(Capacity	LOS F?	Actual Capacity LO						
					V _F		1742	Exhibit 13-8	3 4800	No	
V _{FO}		Exhibit 13-8			$V_{FO} = V$	- Vp	1685	Exhibit 13-8	3 4800	No	
FV							57	Exhibit 13-1		No	
Elouy Entor	ring Merge I	nfluanaa	100	<u>l</u>				ge Influen			
FIOW EITER	Actual		Desirable	Violation?	TIOWL		Actual	Max Desirat		Violation?	
V _{R12}		Exhibit 13-8			V ₁₂		742	Exhibit 13-8	4400:All	No	
AND DESCRIPTION OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OWN	ervice Deter		(if not E)					erminatio		1	
Contractory (1997)	+ 0.00734 v _R +		and the second second second second second second second second second second second second second second second					086 V ₁₂ - 0.			
D _R = (pc/n	ni/In)				D _R = 1	17.2 (pc	/mi/ln)				
LOS = (Exhi	bit 13-2)				LOS = E	3 (Exhil	oit 13-2)				
Speed Determination							, , ,	7	******		
M _s = (Exibit 13-11)					Speed DeterminationDs =0.433 (Exhibit 13-12)						
S _R = mph (Exhibit 13-11)				1		(Exhibit 1				
	Exhibit 13-11)				S ₀ = 1	V/A mph	(Exhibit 13	3-12)			
	Exhibit 13-13)				S = {	57.9 mph	(Exhibit 1	3-13)			
	Iniversity of Florida	All D'-1-1- D	at			TM Vor		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	New seasts du O/C	/2012 1:46 PI	

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	******	RAMP	S AND RA	MP JUNCTI	ONS WO	ORKS	HEET			Side Concentration and a state of the second second second second second second second second second second sec	
General In	formation			Site Infor						*****	
Analyst TOM GORRILL Freeway/Dir of Tra											
Agency or Comp	any GOR	RILL PALMER		Junction		TRAFTON RD OFF RAMP					
Date Performed	9/9/2	2012		Jurisdiction							
Analysis Time Pe	eriod AM V	WINT POSTDE	VELOPMENT	Analysis Year		2036					
	on TRAFTON PR	OPERTIES						*****			
Inputs											
Upstream A		Number of La Acceleration L	nes, N .ane Length, L _A	2					Downstrea Ramp	ım Adj	
☐ Yes	☐ On		ane Length L _D	550	550 F Y				🗁 Yes	🖾 On	
🖾 No	☐ Off	Freeway Volu	me, V _F	1542					└─ No	└─ Off	
L _{up} =	ft	Ramp Volume	e, V _R	207					L _{down} =	900 ft	
-up		Freeway Free	-Flow Speed, S _F	F 70.0							
V _u =	veh/h	Ramp Free-Fl	ow Speed, S _{FR}	35.0					V _D =	106 veh/h	
Conversio	n to pc/h Un	der Base (Conditions								
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PHF	x f _{HV} x f _p	
Freeway	1542	0.90	Level	5	2	0.	972	1.00	17	63	
Ramp	207	0.90	Level	5	2	0.1	972	1.00	2:	37	
UpStream						_					
DownStream	106	0.90	Level	5	2	0.	972	1.00	1:	21	
Estimation		Merge Areas	****	ey ng	Estima	tion o	U fv	iverge Areas		9994 AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	
Estimation				<u></u>	Louna		COLORADO COLORADO COLORADO COLORADO COLORADO COLORADO COLORADO COLORADO COLORADO COLORADO COLORADO COLORADO COL				
	V ₁₂ = V _F				$V_{12} = V_R + (V_F - V_R)P_{FD}$						
L _{EQ} =		ation 13-6 or	-		L _{EQ} = (Equation 13-12 or 13-13)						
P _{FM} =	using	Equation (I	Exhibit 13-6)		P _{FD} = 1.000 using Equation (Exhibit 13-7)						
V ₁₂ =	pc/h				V ₁₂ = 1763 pc/h						
V ₃ or V _{av34}	pc/h ((Equation 13	-14 or 13-17)		V ₃ or V _{av34} 0 pc/h (Equation 13-14 or 13-17)						
Is V_3 or $V_{av34} > 0$	2,700 pc/h? 🦳 Ye	s 🗆 No			Is V ₃ or V _{av34} > 2,700 pc/h? Yes No						
• • • • • •	1.5 * V ₁₂ /2 TYe				Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2						
If Yes,V _{12a} =		(Equation 13	-16, 13-18, oi	r	lf Yes,V _{12a} = pc/h (Equation 13-16, 13-18, or 13- 19)						
Capacity C	Checks				Capaci	ty Ch	ecks				
	Actual		Capacity	LOS F?	Actual			Ca	pacity	LOS F?	
					V _F	:	1763	Exhibit 13-8	3 4800	No	
V _{FO}		Exhibit 13-8			$V_{FO} = V$	′ _F - V _R	1526	Exhibit 13-8	3 4800	No	
					V	,	237	Exhibit 13-1	0 2000	No	
Flow Enter	ing Merge Ir	nfluence 4	rea			·	a Diver	ge Influen	ce Area		
	Actual		Desirable	Violation?		~~~~	Actual	Max Desiral	*****	Violation?	
V _{R12}		Exhibit 13-8	****		V ₁₂		763	Exhibit 13-8	4400:All	No	
	ervice Deteri	mination (if not F)			of Sen	/ice De	terminatio	1		
	+ 0.00734 v _R +			***********				.0086 V ₁₂ - 0.			
D _R = (pc/m	••	12	A		D _R =	-я 14.5 (рс		12 0.	-D		
~ ~											
LOS = (Exhibit 13-2)							oit 13-2)				
Speed Determination							minatio		aucharconnectorine voice comm		
0 .	it 13-11)				1 *		xhibit 13-				
S _R = mph (Exhibit 13-11)						(Exhibit	-			
S ₀ = mph (i	Exhibit 13-11)				ľ		(Exhibit 1	-			
S = mph (Exhibit 13-13)				S =	57.4 mph	(Exhibit	13-13)			
	Injuersity of Elorida	41 O' LL D				TM Mar				2012 1.50 E	

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	*****	RAMP	S AND RA	MP JUNCTIC	ONS WO	RKSH	IEET				
General Info	ormation			Site Inform	nation						
Analyst TOM GORRILL Freeway/Dir of Trave						I-95 NB					
Agency or Compa	ny GOR	RILL PALMER		Junction		KMD RE	OFF RAMP)			
Date Performed	9/9/2			Jurisdiction							
Analysis Time Per			VELOPMENT	Analysis Year		2036					
Project Description	1 TRAFTON PR	OPERTIES			4-14-19-19-19-19-19-19-19-19-19-19-19-19-19-	and the design of the second second second second second second second second second second second second second					
Inputs		T		~			ne i 14 (normane e man			:	
Upstream Adj		Number of La Acceleration L	ies, N ane Length, L _A	2					Downstrea Ramp	m Adj	
☐ Yes	└ On		ane Length L _D	450					I ∕ Yes	ি On	
년 No	└─ Off	Freeway Volu	me, V _F	1441					□ No	☐ Off	
L _{up} =	ft	Ramp Volume		283					L _{down} =	2000 ft	
. /		1	-Flow Speed, S						V _D =	383 veh/h	
V _u =	veh/h	Ramp Free-Fl	ow Speed, S _{FR}	35.0				Non-statement of the statement of the state	•D		
Conversion	to pc/h Une	der Base (Condition	S		~~~		******			
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		ни	f _p	v = V/PHF	x f _{HV} x f _p	
Freeway	1441	0.90	Level	5	2	0.9	972	1.00	16	48	
Ramp	283	0.90	Level	5	2	0.9	972	1.00	32	24	
UpStream						_					
DownStream	383	0.90	Level	5	2	0.9	972 	1.00	43	38	
		Merge Areas			Estima	tion o		erge Areas		2012004-0000-00-00-00-00-00-00-00-00-00-00-0	
Estimation	or v ₁₂				ESuma		۵ ک محمد محمد (۱۱۱۱/۱۱۱۱/۱۱۱		<u></u>		
	V ₁₂ = V _F	(P _{FM})			$V_{12} = V_{R} + (V_{F} - V_{R})P_{FD}$						
L _{EQ} =	(Equa	ation 13-6 or	13-7)		L _{EQ} = (Equation 13-12 or 13-13)						
P _{FM} =	using	Equation (I	Exhibit 13-6)		P _{FD} = 1.000 using Equation (Exhibit 13-7)						
V ₁₂ =	pc/h				V ₁₂ = 1648 pc/h						
V_3 or V_{av34}	pc/h	(Equation 13	-14 or 13-17)	V ₃ or V _{av34} 0 pc/h (Equation 13-14 or 13-17)						
	,700 pc/h? 🦳 Ye			•	Is V ₃ or V _{av34} > 2,700 pc/h? TYes TNo						
	.5 * V ₁₂ /2				Is V ₃ or V _{av34} > 1.5 * V ₁₂ /2						
If Yes,V _{12a} =		(Equation 13	-16, 13-18, c	or	If Yes, $V_{12a} = \frac{pc/h}{19}$ (Equation 13-16, 13-18, or 13- 19)						
Capacity Cl		4			Capaci	ty Ch	ecks				
	Actual) (Capacity	LOS F?	Actual Capacity LOS I						
					V _F	-	1648	Exhibit 13-	8 4800	No	
V _{FO}		Exhibit 13-8			V _{FO} = V	′ _F - V _R	1324	Exhibit 13-	8 4800	No	
FO							324	Exhibit 13-1	10 2000	No	
Elow Entori	ing Merge Ir	nfluanca	lraa		<u> </u>	·	a Divera	ge Influen	ice Area		
FIOW LITTER	Actual		Desirable	Violation?			Actual	Max Desira		Violation?	
V _{R12}	/ lotour	Exhibit 13-8	00010010		V ₁₂		1648	Exhibit 13-8	4400:All	No	
	 nvice Deteri		(if not F)		d	of Ser	vice Det	erminatio	n (if not	F)	
Level of Service Determination (if not F) $D_{R} = 5.475 + 0.00734 v_{R} + 0.0078 V_{12} - 0.00627 L_{A}$								086 V ₁₂ - 0	And the second se		
D _R = (pc/mi	/ln)				D _R =	14.4 (pc	/mi/ln)				
LOS = (Exhib	oit 13-2)			•	LOS =	B (Exhil	oit 13-2)				
Speed Determination					Speed	Deter	mination	1			
$M_{\rm s}$ = (Exibit 13-11)						D _s = 0.457 (Exhibit 13-12)					
S _R = mph (E	Exhibit 13-11)				1	-	ı (Exhibit 1				
	Exhibit 13-11)				S ₀ =	N/A mph	(Exhibit 1	3-12)			
	Exhibit 13-13)				S =	57.2 mpł	n (Exhibit 1	3-13)			
L	niversity of Florida				HC \$201	714			Concreted: 0/	9/2012 1:51 PI	

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		RAMP	S AND RA	MP JUNCTIO	ONS WO	RKS	HEET					
General In	formation	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Site Inforr	nation							
Analyst TOM GORRILL Freeway/Dir of Trav						I-95 SB						
Agency or Com	pany GC	ORRILL PALMER		Junction		KMD R	OOFF RAMP	0				
Date Performed		9/2012		Jurisdiction								
Analysis Time F		MWINTPOSTDE	VELOPMENT	Analysis Year		2036		*****				
Project Descript	ion TRAFTON I	PROPERTIES						er an an an an an an an an an an an an an	XIII TUUR IN CONSTRUCTION AND AND AND AND AND AND AND AND AND AN	Allo monecontractoritation		
Inputs					and the second second second second second second second second second second second second second second second			<u> </u>				
Upstream /		Number of La Acceleration L	nes, N .ane Length, L _A	2					Downstrea Ramp	m Adj		
Yes	☐ On		ane Length L _D	500					ি Yes	🗟 On		
🖻 No	└─ Off	Freeway Volu	me, V _F	1430					∏ No	☐ Off		
L _{up} =	ft	Ramp Volume	i v	396					L _{down} =	950 ft		
			Freeway Free-Flow Speed, S _{FF} 70.0						V _D =	331 veh/h		
V _u =	veh/h	Ramp Free-F	low Speed, S _{FR}	35.0					•D -	SST Ven/IT		
Conversio	on to pc/h U	Inder Base	Condition	S								
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PHF	x f _{HV} x f _p		
Freeway	1430	0.90	Level	5	2	0.9	972	1.00	16	35		
Ramp	396	0.90	Level	5	2	0.9	972	1.00	45	3		
UpStream												
DownStream	331	0.90	Level	5	2	0.9	972	1.00	37	8		
	-	Merge Areas	alasahas turop pangangan manananan dalah dalah			4 ^g		erge Areas				
Estimatio	n of v ₁₂				Estimation of v ₁₂							
	V ₁₂ =	V _F (P _{FM})			$V_{12} = V_R + (V_F - V_R)P_{FD}$							
L _{EQ} =	(Ec	uation 13-6 or	13-7)		L _{EQ} = (Equation 13-12 or 13-13)							
P _{FM} =		ng Equation (P _{FD} = 1.000 using Equation (Exhibit 13-7)							
V ₁₂ =	pc/				V ₁₂ = 1635 pc/h							
* 12 V ₃ or V _{av34}	•	'' h (Equation 13	14 or 13.17	`	V ₃ or V _{av34} 0 pc/h (Equation 13-14 or 13-17)							
			-1401 10-17)	Is V_3 or V_{av34} > 2,700 pc/h? \Box Yes \Box No							
	• 2,700 pc/h?				$ 15 V_3 \text{ or } V_{av34} \ge 1.5 * V_{12}/2$ Yes V No							
	• 1.5 * V ₁₂ /2	Yes I No h (Equation 13	16 13 18 6	or.	no/h (Equation 12 16 12 19 or 12							
lf Yes,V _{12a} =	13- ⁻		-10, 13-10, C		If Yes, $V_{12a} = 19$							
Capacity				***************************************	Capaci	ity Ch	ecks					
	Actual		Capacity	LOS F?			Actual	Ca	pacity	LOS F?		
					V _F	:	1635	Exhibit 13-8	3 4800	No		
V _{FO}		Exhibit 13-8			$V_{FO} = V$	/ V_	1182	Exhibit 13-8	3 4800	No		
							453	Exhibit 13-1	0 2000	No		
									1			
Flow Ente	ering Merge	COLOR DE LA COLOR DE LA COLOR DE LA COLOR DE LA COLOR DE LA COLOR DE LA COLOR DE LA COLOR DE LA COLOR DE LA COL		Violation?	IFIOW E	AND DESCRIPTION OF THE OWNER OWNER OWNE	Actual	ge Influen Max Desiral		Violation?		
	Actual	Manager and a state of the second state of the	Desirable	VIOLAUOTT	V ₁₂		1635	Exhibit 13-8	4400:All	No		
V _{R12}	<u> </u>	Exhibit 13-8	(* C	L					L	1		
and the second se	ervice Dete		and the second second second second second second second second second second second second second second second		Lever			erminatio	Contraction of the Contraction o	<u>r)</u>		
D _R = 5.475	+ 0.00734 v _R	+ 0.0078 V ₁₂	- 0.00627 L _A					086 V ₁₂ - 0.	.009 L _D			
D _R = (pc/i	mi/ln)				D _R =	13.8 (pc	/mi/ln)					
LOS = (Exhibit 13-2)						LOS = B (Exhibit 13-2)						
Speed De	termination]			Speed	Deter	minatio	1				
	bit 13-11)				D _s =	0.469 (E	xhibit 13-1	2)				
ľ	(Exhibit 13-11)	١			1 °	•	ı (Exhibit 1	-				
	,						(Exhibit 1					
	(Exhibit 13-11				1 °	•	(Exhibit 1					
S = mph	(Exhibit 13-13)							Generated: 9/9			

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		RAMP	S AND RAI	MP JUNCTIO	ONS WC	RKSł	1EET		n an		
General Inf	ormation			Site Inforr							
Analyst	The second second second second second second second second second second second second second second second s	GORRILL		Freeway/Dir of Tra	avel	I-95 SB					
Agency or Comp		RILL PALMER		Junction		TRAFT	ON RD OFF	RAMP			
Date Performed	9/9/2										
Analysis Time Pe			VELOPMENT	Analysis Year		2036					
	on TRAFTON PR	OPERTIES						******	******		
Inputs									***		
Upstream Ad	dj Ramp	Number of La Acceleration L	nes, N .ane Length, L _A	2					Downstrea Ramp	m Adj	
T Yes	└ On		ane Length L _D	550					🗹 Yes	🖂 On	
I ⊂ No	└─ Off	Freeway Volu	me, V _F	1489					∏ No	└ Off	
L _{up} =	ft	Ramp Volume		192					L _{down} =	900 ft	
V -	uch/h		-Flow Speed, S _F	,					V _D =	139 veh/h	
V _u =	veh/h	Ramp Free-F	ow Speed, S _{FR}	35.0		unguna manana ana ana ana ana ana ana ana an			- D		
Conversio	n to pc/h Un	der Base	Conditions								
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		ну		v = V/PHF		
Freeway	1489	0.90	Level	5	2	0.9	72	1.00	17(
Ramp	192	0.90	Level	5	2	0.9	372	1.00	22	0	
UpStream					ļ					-	
DownStream	139	0.90	Level	5	2	0.9	972 1	1.00	15	9	
		Merge Areas			Eatimo	tion o		verge Areas			
Estimation	of V ₁₂				Estima	<i>aon</i> o					
	V ₁₂ = V _F	(P _{FM})					V ₁₂ = \	/ _R + (V _F - V _F	_R)P _{FD}		
L _{EQ} =	(Equ	ation 13-6 or	13-7)		L _{EQ} = (Equation 13-12 or 13-13)						
P _{FM} =	• •	Equation (-		P _{FD} = 1.000 using Equation (Exhibit 13-7)						
	pc/h				$V_{12} = 1702 \text{ pc/h}$						
V ₁₂ =		/= ·· ·									
V ₃ or V _{av34}			-14 or 13-17)		$V_3 \text{ or } V_{av34}$ 0 pc/h (Equation 13-14 or 13-17)						
Is V ₃ or V _{av34} > 2	2,700 pc/h? 🦳 Ye	es 🗆 No			Is V ₃ or V _{av34} > 2,700 pc/h? Yes V No						
Is V_3 or $V_{av34} > 1$	1.5 * V ₁₂ /2	s ∏No			Is V_3 or $V_{av34} > 1.5 * V_{12}/2$ TYes TNO						
If Yes,V _{12a} =			8-16, 13-18, o	r	If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13						
	13-19)			1		19) Doko		**************************************	******	
Capacity C		T	lan a situ	100 52	Capacity Checks						
l	Actual		Capacity	LOS F?	V _F			Exhibit 13-8		No	
					and the statement of th	The second second second	1702				
V _{FO}		Exhibit 13-8			V _{FO} = V		1482	Exhibit 13-8		No	
					V _F	र	220	Exhibit 13-1	0 2000	No	
Flow Enter	ring Merge li	nfluence A	Area		Flow E	nterin	g Diverg	ge Influen	ce Area		
	Actual		Desirable	Violation?			Actual	Max Desiral	ble	Violation?	
V _{R12}		Exhibit 13-8			V ₁₂		702	Exhibit 13-8	4400:All	No	
Concerning the second s	ervice Deter	mination ((if not F)		Level o	of Sen	vice Det	erminatio	n (if not i	F)	
$D_{p} = 5.475$ -	+ 0.00734 v _R +	0.0078 V ₁₂	- 0.00627 L _A		Τ	D _R = 4	1.252 + 0.0	086 V ₁₂ - 0.	.009 L _D		
D _R = (pc/m		12	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		D _R =	13.9 (pc	/mi/ln)				
					1		oit 13-2)				
LOS = (Exhibit 13-2) Speed Determination							minatio	'n			
				10-19-19-19-19-19-19-19-19-19-19-19-19-19-			xhibit 13-1				
	it 13-11)				l °	•	(Exhibit 1				
	Exhibit 13-11)				1	•	•				
	Exhibit 13-11)				ľ	•	(Exhibit 1				
S = mph (Exhibit 13-13)						(Exhibit 1				
	Injugrativ of Elorida					oTM Vor		~	Concreted: 0/0	/2012 1:54 P	

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	and and a second second second second second second second second second second second second second second se	RAMP	S AND RA	MP JUNCTIC	ONS WC	RKSH	HEET	anna an taon ann an taon			
General Inf	ormation			Site Inform							
Analyst TOM GORRILL Agency or Company GORRILL PALMER Date Performed 9/9/2012				Freeway/Dir of Tra Junction Jurisdiction	I-95 SB LYONS RD OFF RAMP						
Analysis Time Period AM W INTPOSTDEVELOPMENT				Analysis Year		2036					
for the second	n TRAFTON PR	OPERTIES					An an an an an an an an an an an an an an		***		
Inputs								T			
Upstream Ac		Number of La Acceleration L	nes, N .ane Length, L _A	2					Downstrea Ramp	m Adj	
☐ Yes	「 On	1	ane Length L _D	225						I⊄ On	
🖾 No	└─ Off	Freeway Volu	me, V _F	1436					∏ No	└ Off	
L _{up} =	ft	Ramp Volume	e, V _R -Flow Speed, S	60 FF 70.0					L _{down} =	575 ft	
V _u =	veh/h		ow Speed, S _{FR}			107200			V _D =	152 veh/h	
Conversior	n to pc/h Un	der Base	Condition	S					1144 mar 11 mar 11 mar 11 mar 11 mar 11 mar 11 mar 11 mar 11 mar 11 mar 11 mar 11 mar 11 mar 11 mar 11 mar 11 m		
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}		v = V/PHF	1 10-0000000000000000000000000000000000	
Freeway	1436	0.90	Level	5	2		972	1.00	164		
Ramp	60	0.90	Level	5	2	0.9	972	1.00	6	y	
UpStream	450	0.00		5	2		972	1.00		74	
DownStream	152	0.90 Merge Areas	Level	1 3		1 0.3	Statement of the local division of the local	erge Areas	17	-T	
Estimation	ofV	mergerneue			Estima	tion o				***********	
		(D)						_R + (V _F - V _F)P		
	$V_{12} = V_F$		12 7)								
L _{EQ} =		ation 13-6 or			$L_{EQ} = (Equation 13-12 \text{ or } 13-13)$ $P_{FD} = 1.000 \text{ using Equation (Exhibit 13-7)}$						
P _{FM} =	-	Equation (EXHIDIC 15-0)		$V_{12} = 1642 \text{ pc/h}$						
$V_{12} =$	pc/h	(Equation 12	14 an 12 17	`							
V_3 or V_{av34}			-14 or 13-17)	V ₃ or V _{av34} 0 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h?						
	2,700 pc/h? 🏳 Ye				Is V_3 or $V_{av34} > 1.5 * V_{12}/2$ Yes No						
Is V ₃ or V _{av34} > If Yes,V _{12a} =	1.5 * V ₁₂ /2	(Equation 13	5-16, 13-18, c	or	If Yes, $V_{12a} = \frac{pc/h}{19}$ (Equation 13-16, 13-18, or 13- 19)						
Capacity C	1000 000 000 000 000 000 000 000 000 00	Concernment of the second second second second second second second second second second second second second s			Capaci	ty Ch	ecks				
anne channe ann an than ann an	Actual	(Capacity	LOS F?	Actual Capacity						
		1			V _F	:	1642	Exhibit 13-8	3 4800	No	
V _{FO}		Exhibit 13-8			$V_{FO} = V$	′ _F - V _R	1573	Exhibit 13-8	3 4800	No	
10					V _F		69	Exhibit 13-1	0 2000	No	
Elow Entor	ing Merge II	l nfluanca l	lrea	<u> </u>			a Divero	e Influen	ce Area		
I IOW LITCH	Actual		Desirable	Violation?	110112		Actual	Max Desiral		Violation?	
V _{R12}		Exhibit 13-8	*****		V ₁₂		1642	Exhibit 13-8	4400:All	No	
	ervice Deter		(if not F)	10000		of Sen	vice Dete	erminatio	n (if not	<u>,</u> F)	
Contraction of the Contraction o	+ 0.00734 v _R +							086 V ₁₂ - 0.			
D _R = (pc/m		12	A		D _R =	16.3 (pc		12	U		
	-						bit 13-2)				
									90000000000000000000000000000000000000		
Speed Determination M _s = (Exibit 13-11)						Speed DeterminationDs =0.434 (Exhibit 13-12)					
1 -	Exhibit 13-11)				S _R =	57.8 mpł	n (Exhibit 1	3-12)			
	Exhibit 13-11)				1	N/A mph	(Exhibit 13	8-12)			
	Exhibit 13-13)				S =	57.8 mpł	n (Exhibit 1	3-13)			
L		All Dights Doco							Demonstrady Off	2012 2.00 P	

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		RAMP	S AND RAN	IP JUNCTIO	ONS WO	RKSI	HEET					
General In	formation			Site Infori	nation							
Analyst	[FOM GORRILL	F	reeway/Dir of Tra	avel	I-95 NB				stor Zaran ana manaka kang pana kang pan		
Agency or Com	pany (GORRILL PALMER	J	unction		LYONS	RD OFF F	RAMP				
Date Performed		9/9/2012	J	urisdiction								
Analysis Time F		PM W INT POSTDE	VELOPMENT A	nalysis Year		2036						
		PROPERTIES							*****			
nputs						********						
Upstream A	Adj Ramp	Number of Lar	ies, N	2					Downstream Adj			
gaoneen.	_ منبعدی	Acceleration L	ane Length, L _A						Ramp			
☐ Yes	☐ On	Deceleration L	ane Length L _D	225					⊠ Yes	🗁 On		
☑ No	☐ Off	Freeway Volur	ne, V _F	2032					□ No □ Off			
1 -	ft	Ramp Volume	, V _R	151					L _{down} =	575 ft		
L _{up} =	11	Freeway Free	Flow Speed, SFF	70.0					-down	010 11		
V _u =	veh/h	Ramp Free-Fl	ow Speed, S _{FR}	35.0					V _D =	47 veh/h		
Conversio	n to pc/h	Under Base (Conditions					L				
(pc/h)	V	PHE	Terrain	%Truck	%Rv	1	f _{HV}	f _p	v = V/PH	F x f _{HV} x f _p		
	(Veh/h	<u>r)</u>						·····	*******			
Freeway	2032	0.90	Level	5	2		972	1.00		2323		
Ramp	151	0.90	Level	5	2		972	1.00		173		
UpStream DownStream	47	0.90	Level	5	2	0.9	972	1.00		54		
Jownotican		Merge Areas	LOVOI		<u> </u>			iverge Areas	10100000000000000000000000000000000000			
Estimatio	n of v ₁₂	a	*****************		Estimation of v ₁₂							
<u>2000-000-000-000-000-000-000-000-000-00</u>	V ₁₂ :	= V _F (P _{FM})					V ₁₂ =	V _R + (V _F - V _F)P _{ED}			
EQ =		Equation 13-6 or	13-7)		L _{EQ} =			Equation 13-1		3)		
		sing Equation (E	-		$P_{FD} = 1.000$ using Equation (Exhibit 13-7)							
P _{FM} =			-XIIIDIC 10-07									
/ ₁₂ =	•	c/h			V_{12} = 2323 pc/h							
V_3 or V_{av34}	-	c/h (Equation 13-	-14 or 13-17)		V ₃ or V _{av34} 0 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h?							
	2,700 pc/h?					•						
Is V ₃ or V _{av34} >	1.5 * V ₁₂ /2	Yes No			Is V_3 or $V_{av34} > 1.5 * V_{12}/2$ TYes TNO							
Yes,V _{12a} =		h (Equation 13	-16, 13-18, or		If Yes,V _{12a} =	=		c/h (Equation	13-16, 1	3-18, or 13-		
Capacity (A CONTRACTOR OF A CONTRACTOR O	-19)	, 10 , 111, 10, 10, 10, 10, 10, 10, 10, 10, 1		Capacit		19 ecks	3)		57.4		
supaony d	Actua		apacity	LOS F?			Actual	Ca	pacity	LOS F?		
					V _F	Ì	2323	Exhibit 13-8		No		
V _{FO}		Exhibit 13-8			$V_{FO} = V_{F}$	- V _R	2150	Exhibit 13-8	4800	No		
10					V _R		173	Exhibit 13-1	0 2000	No		
-low Ente	ring Merge	e Influence A	rea		Flow Er	nterin	g Dive	rge Influen	ce Area	3		
	Actua		Desirable	Violation?		/	Actual	Max Desirat	ole	Violation		
V _{R12}		Exhibit 13-8			V ₁₂		2323	Exhibit 13-8	4400:All	No		
	THE REPORT OF TH	ermination (NAMES AND DESCRIPTION OF TAXABLE PARTY O		terminatio		<u>t F)</u>		
D _R = 5.475	+ 0.00734 v	_R + 0.0078 V ₁₂ -	0.00627 L _A			D _R = 4	1.252 + 0	.0086 V ₁₂ - 0.	009 L _D			
0 _R = (pc/r	mi/ln)				D _R = 2	2.2 (pc	/mi/ln)					
.0S = (Exh	ibit 13-2)				LOS = C	(Exhil	oit 13-2)		~~~			
Speed Dea	terminatio	n			Speed I							
/I _S = (Exit	oit 13-11)					.444 (E	xhibit 13	-12)				
$M_{\rm S}^{=}$ (Exhibit 13-11) $S_{\rm R}^{=}$ mph (Exhibit 13-11)						7.6 mph	ı (Exhibit	13-12)				
R inpu					S _R = 57.6 mph (Exhibit 13-12) S ₀ = N/A mph (Exhibit 13-12)							
	(Exhibit 13-1 [.]	1)			S ₀ = N	I/A mph	(Exhibit	13-12)				
S ₀ = mph	-				1		(Exhibit (Exhibit					

		RAMP	S AND RA	MP JUNCTIO	ONS WO	DRKSH	HEET					
General Info	ormation			Site Inform								
Analyst TOM GORRILL Agency or Company GORRILL PALMER Date Performed 9/9/2012 Analysis Time Period PM W INT POSTDEVELOPMENT				Freeway/Dir of Tra Junction Jurisdiction Analysis Year	vel	I-95 NB TRAFTON RD OFF RAMP 2036						
	n TRAFTON PR					2000						
Inputs			*****	******************				****	<u></u>			
Upstream Ad		Number of La Acceleration I	nes, N _ane Length, L _A	2					Downstrear Ramp	n Adj		
T Yes	「 On		Lane Length L _D	550					🗁 Yes 🖙 On			
I⊂ No	└─ Off	Freeway Volu	me, V _F	1928					└─ No └─ Off			
L _{up} =	ft	Ramp Volume	e, V _R e-Flow Speed, S	190 FF 70.0					-down =	900 ft		
V _u =	veh/h	Ramp Free-Flow Speed, S _{FR} 35.0				V _D =	210 veh/h					
Conversion	to pc/h Un	der Base	Condition	S	parameters				CONTRACTORISTIC CO. NO. 2014 (1994)			
(pc/h) V PHF Terrain %T					%Rv	f _{HV} f _p			/ = V/PHF :			
Freeway	1928	0.90	Level	5	2		972	1.00	220			
Ramp	190	0.90	Level	5	2	0.9	972	1.00	21	/		
UpStream DownStream	210	0.90	Level	5	2)72	1.00	24	 າ		
DownStream	and the second second second second second second second second second second second second second second second	Merge Areas	Level		L	0.	and the second second second second second second second second second second second second second second second	verge Areas	4.T			
Estimation		morgornoud	****	****	Estima	tion o		And the second se	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
	V ₁₂ = V _F	(P)				,		V _R + (V _F - V _R)P			
L _{EQ} =	(Equa	ation 13-6 or			$P_{FD} =$ (Equation 13-12 or 13-13) (Equation 13-12 or 13-13)							
P _{FM} = V ₁₂ =	using pc/h	Equation (EXHIDIL 13-0)		V ₁₂ = 2204 pc/h							
V ₃ or V _{av34} Is V ₂ or V ₂ or 2	pc/h (2,700 pc/h? ̄ Ye		3-14 or 13-17)	V ₃ or V _{av34} 0 pc/h (Equation 13-14 or 13-17) Is V ₃ or V _{av34} > 2,700 pc/h?							
	.5 * V ₁₂ /2 「Ye	es	3-16, 13-18, c	or	Is V_3 or $V_{av34} > 1.5 * V_{12}/2$ T Yes \overrightarrow{V} No If Yes, $V_{12a} = \frac{pc/h}{19}$ (Equation 13-16, 13-18, or 13- 19)							
Capacity C					Capaci	itv Ch			*********			
	Actual	1 (Capacity	LOS F?	Actual Capacity LOS I							
· · · · · · · · · · · · · · · · · · ·			V _F 2204 E		Exhibit 13-8 Exhibit 13-8		No No					
V _{FO}		Exhibit 13-8			V _{FO} - V	COLUMN DIA WALL DO THE OWNER	1987 	Exhibit 13-1		No		
	<u></u>		<u> </u>					1				
Flow Enter	ing Merge II	and the second design of the second design of the second design of the second design of the second design of the		Violation?	FIOW E	1	<u>g Diver</u> Actual	ge Influen Max Desirat		Violation?		
V _{R12}	Actual	Exhibit 13-8	Desirable	Violation?	V ₁₂		2204	Exhibit 13-8	4400:All	No		
Level of Service Determination (if not F)						of Sen	vice Det	erminatio	n (if not l	=)		
A REAL PROPERTY AND A REAL	- 0.00734 v _R +				1	0.0000000000000000000000000000000000000		0086 V ₁₂ - 0.				
D _R = (pc/m		12	~		D _R =	18.3 (pc			-			
1X	oit 13-2)						oit 13-2)					
Speed Dete	-	***					minatio	n		******		
M _S = (Exibi	t 13-11)		1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 - 1994 -		D _s =	0.448 (E	xhibit 13-	12)				
	Exhibit 13-11)				1		(Exhibit '					
	Exhibit 13-11) Exhibit 13-13)				ľ		(Exhibit 1 (Exhibit ⁻	-				
J	Iniversity of Florida								enerated: 9/9	2040 2.02 0		

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	************	RAMP	S AND RA	MP JUNCTI	ONS WC	RKS	HEET	*****	****			
General Inf	ormation	***************************************		Site Infor	*****							
Analyst	TON	M GORRILL	****	Freeway/Dir of Tr	avel	1-95 NE	}	an de ser de la companya de la companya de la companya de la companya de la companya de la companya de la comp	udodicioł bilu Cilio oktowia kowistawa			
Agency or Compa		RRILL PALMER		Junction			D OFF RAM	ΛP				
Date Performed	-	2012		Jurisdiction								
Analysis Time Per		W INTPOSTDE	VELOPMENT	Analysis Year		2036						
Project Descriptio	or the state of th				9=~*@#370000000000000000000000000000							
Inputs												
Upstream Ad		Number of La Acceleration L	nes, N .ane Length, L _A	2					Downstrea Ramp	m Adj		
☐ Yes	└ On	1	ane Length L _D	450					🖙 Yes 🖙 On			
🖾 No	└ Off	Freeway Volu	me, V _F	1948					∏ No	☐ Off		
L _{up} =	ft	Ramp Volume		559					L _{down} =	2000 ft		
-1		Freeway Free	-Flow Speed, S	_{FF} 70.0								
V _u =	veh/h	Ramp Free-F	ow Speed, S _{FR}	35.0	5.0				V _D =	631 veh/h		
Conversion	to pc/h Un	der Base	Conditions									
(pc/h) V PHF Terrain %Truck					%Rv		f _{HV}	f _p	v = V/PHF	x f _{HV} x f _p		
Freeway	1948	0.90	Level	5	2	0.	972	1.00	22	27		
Ramp	559	0.90	Level	5	2	0.	972	1.00	63	9		
UpStream												
DownStream	631	0.90	Level	5	2	0.	972	1.00	72	21		
P" - fine - fier		Merge Areas	******		Diverge Areas Estimation of v ₁₂							
Estimation		****	*****	N#175420000011100000000000000000000000000000	Estimat			in en anticipation de la contractica de la contractica de la contractica de la contractica de la contractica de	****			
$V_{12} = V_F (P_{FM})$							V ₁₂ =	V _R + (V _F - V _F)P _{FD}			
L _{EQ} = (Equation 13-6 or 13-7)							(E	Equation 13-1	2 or 13-13)		
P _{FM} = using Equation (Exhibit 13-6)					P _{FD} = 1.000 using Equation (Exhibit 13-7)							
V ₁₂ =	pc/h				$V_{12} =$		22	27 pc/h				
V_3 or V_{av34}	•	(Equation 13	-14 or 13-17		$V_3 \text{ or } V_{av34}$ 0 pc/h (Equation 13-14 or 13-17)							
			-14 01 10-17)		$V_{3} \circ V_{av34}$ = 0 pc/n (Equation 13-14 of 13-17) Is $V_{3} \circ V_{av34} > 2,700 \text{ pc/h}$? Tyes \overrightarrow{r} No							
Is V_3 or $V_{av34} > 2$					1 ° °							
Is V_3 or $V_{av34} > 1$					Is V_3 or $V_{av34} > 1.5 * V_{12}/2$ [Yes [No							
lf Yes,V _{12a} =	pc/h 13-19	(Equation 13	-16, 13-18, 0	r	If Yes,V _{12a} = pc/h (Equation 13-16, 13-18, or 13- 19)							
Capacity Cl				****	Capaci	tv Ch		,, <u> </u>				
	Actual	1	apacity	LOS F?	Actual Capacity LOS							
					V _F		2227	Exhibit 13-8	<u> </u>	No		
V _{FO}		Exhibit 13-8			$V_{FO} = V_{FO}$		1588	Exhibit 13-8		No		
*F0		LATION TO U			V _R	· · · · ·	639	Exhibit 13-1		No		
Elour Entori	Ing Marga I							1	1			
Flow Enteri	Actual		Desirable	Violation?			Actual	ge Influen Max Desirat	Contraction of the local data and the local data an	Violation?		
V _{R12}		Exhibit 13-8		violation:	V ₁₂		2227	Exhibit 13-8	4400:All	No		
Contraction of the International Contractional Contra	rvice Deter		if not FI	<u> </u>	and the second			terminatio		1		
	0.00734 v _R +			***				0086 V ₁₂ - 0.	*****			
D _R = (pc/mi			A		D _R = 1	9.4 (pc		12 0.	U			
	oit 13-2)				1		oit 13-2)					
Speed Dete	-	ine stablishterne en en en en et elektrik	19 a Maintine La Instantine a Mercanina a Maintine a Maintine a Mainti	alinenalmentetti maamattikatiin		-	minatio	n				
	: 13-11)	*****					xhibit 13-					
	xhibit 13-11)				1		(Exhibit					
						-	(Exhibit 1					
• • •	xhibit 13-11)				1.							
S = mph (Exhibit 13-13)						o.4 mpr	(Exhibit	13-13)				

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44,000,000,000,000,000,000,000,000,000,	****	RAMP	S AND RA	MP JUNCTI	ONS WO	ORKSI	HEET	nije kanancina karan nina taken kepar				
General Inf	ormation			Site Infor	**************************************							
Analyst	TON	1 GORRILL		Freeway/Dir of Tra	avel	I-95 SB		ale in the second second second second second second second second second second second second second second s	1993 - Teleford Statistic Construction Construction	n new line of a state of the second state of the		
Agency or Company GORRILL PALMER				Junction		KMD RI	O OFF RAME	0				
Date Performed	, 9/9/2	2012		Jurisdiction								
Analysis Time Per			VELOPMENT	Analysis Year		2036						
	n TRAFTON PF						***					
Inputs												
Upstream Ad	lj Ramp	Number of La Acceleration L	nes, N _ane Length, L _A	2					Downstrea Ramp	ım Adj		
☐ Yes	└ On		Lane Length L _D	500					🖙 Yes 🖙 On			
I ⊂ No	└─ Off	Freeway Volu	ime, V _F	1963					□ No □ Off			
L _{up} =	ft	Ramp Volume		518					L _{down} =	950 ft		
·			e-Flow Speed, S _F	_{FF} 70.0					V -	040 1 //		
V _u =	veh/h	Ramp Free-F	low Speed, S_{FR}	35.0					V _D = 210 veh			
Conversion	to pc/h Un	der Base	Conditions	>	*****			*****				
(pc/h) V PHF Terrain %Tru					%Rv		f _{HV} f _p v = V/PHF			x f _{HV} x f _p		
Freeway	1963	0.90	Level	5	2	0.	972	1.00	22	44		
Ramp	518	0.90	Level	5	2	0.	972	1.00	59	92		
UpStream												
DownStream	210	0.90	Level	5	2	0.	972	1.00	24	10		
		Merge Areas			<u> </u>			erge Areas		fő Vatanan er Adradókan menten haka		
Estimation	of v ₁₂				Estima	tion o	fv ₁₂					
997,949,7197,979,979,979,979,979,979,979,979,9	V ₁₂ = V ₁	(P _{EM})	********		1		V ₁₂ = \	/ _R + (V _F - V _F	R)P _{FD}			
L _{EQ} = (Equation 13-6 or 13-7)								juation 13-1	2 or 13-13)		
		gEquation (-		L _{EQ} = (Equation 13-12 or 13-13) P _{FD} = 1.000 using Equation (Exhibit 13-7)							
P _{FM} =	-	g Lquation ($V_{12} = 2244 \text{ pc/h}$							
V ₁₂ =	pc/h											
$V_3 \text{ or } V_{av34}$	-		3-14 or 13-17))	$V_3 \text{ or } V_{av34}$ 0 pc/h (Equation 13-14 or 13-17)							
	2,700 pc/h? 🦳 Ye				Is V ₃ or V _{av34} > 2,700 pc/h?							
Is V_3 or $V_{av34} > 1$	l.5 * V ₁₂ ∕2	es 🗆 No			Is V_3 or $V_{av34} > 1.5 * V_{12}/2$ Tyes To No							
If Yes,V _{12a} =			8-16, 13-18, o	r	If Yes, V _{12a} = pc/h (Equation 13-16, 13-18, or 13- 19)							
Capacity C	13-19	<u>)</u>		******			Contraction of the owner of the owner of the					
capacity c	Actual	1	Capacity	LOS F?	Capacity Checks							
	Actual						2244	Exhibit 13-8		No		
		E-1-1-1-40.0					*****			·····		
V _{FO}		Exhibit 13-8			V _{FO} = V		1652	Exhibit 13-		No		
						R	592	Exhibit 13-1	0 2000	No		
Flow Enter	ing Merge I	nfluence A	Area		Flow E	nterin	g Diverg	ge Influen				
«()-)	Actual		Desirable	Violation?	4		Actual	Max Desiral		Violation?		
V _{R12}		Exhibit 13-8			V ₁₂		2244	Exhibit 13-8	4400:All	No		
	rvice Deter	mination ((if not F)		Level			erminatio		F)		
D _R = 5.475 +	- 0.00734 v _R +	0.0078 V ₁₂	- 0.00627 L _A			D _R = 4	4.252 + 0.0	086 V ₁₂ - 0.	.009 L _D			
D _R = (pc/m	i/ln)				D _R =	19.1 (pc	/mi/ln)					
							-					
-		and the second second second second second second second second second second second second second second second				-	Contraction of the Contraction	1	****	eta Milinaro da Mininaria Milanda Andre		
			<u></u>									
-					-	•		•				
					1	-						
					1.		•	-				
S = mph (E	=xhibit 13-13)				<u> S</u> =	56.5 mpl	i (Exhibit 1	3-13)				
LOS = (Exhit Speed Dete M_s = (Exibi S_R = mph (E S_0 = mph (E S = mph (E	oit 13-2)				LOS = Speed D _s = S _R = S ₀ = S =	B (Exhil Deter 0.481 (E 56.5 mpt N/A mph	bit 13-2) mination xhibit 13-1 a (Exhibit 1 (Exhibit 1 a (Exhibit 1	2) 3-12) 3-12) 3-13)	Senerated: 9/			

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	****	RAMP	S AND RAN		ONS WO	DRKS	HEET					
General Inf	ormation			Site Inforr								
Analyst TOM GORRILL Agency or Company GORRILL PALMER Date Performed 9/9/2012				Freeway/Dir of Travel Junction Jurisdiction			I-95 SB TRAFTON RD OFF RAMP					
Analysis Time Pe		and the second second second second second second second second second second second second second second second	EVELOPMENT A	Analysis Year	****	2036	ang manang manang manang katalak					
Project Descriptio Inputs	n TRAFTON PR	OPERHES								1991		
Upstream Ac	2		<u></u>			Downstrea	am Adj					
Yes	└ On		ane Length, L _A						Ramp			
년 No	厂 Off	Deceleration I Freeway Volu	Lane Length L _D	550 1723					I ∕ Yes	⊡ On		
I* INO		1							厂 No	└─ Off		
L _{up} =	ft	Ramp Volume	e, v _R e-Flow Speed, S _{FF}	145 - 70.0					L _{down} =	900 ft		
V _u =	veh/h	1	low Speed, S _{FR}	35.0					V _D =	207 veh/h		
Conversior	n to pc/h Un	der Base	Conditions		ngana a nananakari dipiki Unite	******		2000-00-00-00-00-00-00-00-00-00-00-00-00	1	*******************		
(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv		f _{HV}	f _p	v = V/PHF	x f _{HV} x f _p		
Freeway	1723	0.90	Level	5	2	0.	972	1.00	19)70		
Ramp	145	0.90	Level	5	2	0.	972	1.00	1	66		
UpStream					<u> </u>	_			ļ	~~		
DownStream	207	0.90	Level	5	2	0.	972	1.00 liverge Areas	2	37		
Estimation		Merge Areas			Estima	tion o		iverge Areas		<u></u>		
		(P)			<u> </u>			V _R + (V _F - V				
V ₁₂ = V _F (P _{FM}) L _{EQ} = (Equation 13-6 or 13-7)						L _{EQ} = (Equation 13-12 or 13-13)						
P _{FM} =	• •	Equation (-		P _{FD} = 1.000 using Equation (Exhibit 13-7)							
V ₁₂ =	pc/h		,		V ₁₂ =			170 pc/h	·	,		
V_3^{12} or V_{av34}^{12}	pc/h (Equation 13	8-14 or 13-17)		V ₃ or V _{av34} 0 pc/h (Equation 13-14 or 13-17)							
-	2,700 pc/h? TYe	s 🗆 No			Is V ₃ or V _{av34} > 2,700 pc/h? Tyes Tr No							
	I.5 * V ₁₂ /2				Is V_3 or $V_{av34} > 1.5 * V_{12}/2$ TYes To No							
If Yes,V _{12a} =	pc/h (13-19		3-16, 13-18, or		If Yes,V _{12a} = pc/h (Equation 13-16, 13-18, or 13- 19)							
Capacity C)		*;************************************	Capaci	itv Ch		<i></i>				
	Actual	(Capacity	LOS F?	Actual				apacity	LOS F?		
					V _f	-	1970	Exhibit 13-	8 4800	No		
V _{FO}		Exhibit 13-8			V _{FO} = V	$V_{\rm F}$ - $V_{\rm R}$	1804	Exhibit 13-	8 4800	No		
					V	२	166	Exhibit 13-1	10 2000	No		
Flow Enter	ing Merge Ir	fluence A	Area		Flow E	nterir	ng Dive	rge Influer	ice Area			
	Actual		Desirable	Violation?			Actual	Max Desira	1	Violation?		
V _{R12}		Exhibit 13-8			V ₁₂		1970	Exhibit 13-8	4400:All	No		
And and a second second second second second second second second second second second second second second se	ervice Deteri		Contraction of the second second second second second second second second second second second second second s		Level			terminatio		<u>r)</u>		
	+ 0.00734 v _R +	0.00/8 V ₁₂	- U.UU621 L _A		L -			.0086 V ₁₂ - 0	D			
D _R = (pc/m	,				1	16.2 (pc	bit 13-2)					
LOS = (Exhil Speed Dete	bit 13-2)	<u></u>			1	-	minatio		4146414-0/#CONTRACTOR #1151			
- Commencer and the second							Exhibit 13			-1		
	it 13-11) Exhibit 13-11)				l v		n (Exhibit	-				
	Exhibit 13-11)				1 ⁽¹⁾		(Exhibit	-				
	Exhibit 13-13)				1		` ı (Exhibit	-				
						1	•		······	0/2012 2:06		

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		RAMP	S AND RA	MP JUNCTIO	ONS WC	RKSI	IEET									
General Info	ormation			Site Inforr				angen an								
Analyst TOM GORRILL Agency or Company GORRILL PALMER				Junction L			I-95 SB LYONS RD OFF RAMP									
Date Performed Analysis Time Per		V INTPOSTDE	VELOPMENT	Jurisdiction Analysis Year		2036										
Project Description	n TRAFTON PR	OPERTIES								,						
Inputs		L , , , ,		0				T		. A ('						
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WATERVILLE AND SIDNEY ACCESS PLANS



Office of the City Manager

October 16, 2012

Mr. Herb Thomson, Director Bureau of Transportation Systems Planning Maine Department of Transportation State House Station 16 Augusta, Maine 04333

Dear Mr. Thomson,

In regards to the Trafton Realty, LLC Interchange Justification Report currently under review by your office, I have been made aware that the Department and the Federal Highway Administration seek clarification as to the future intentions of the City of Waterville to seek access to I-95 beyond the current request contained in the IJR now before you.

The City of Waterville is on record supporting the request for a new I-95 interchange at or in the vicinity of Trafton Road. The City has no plans nor is it aware of any regarding any further requests for access within the City to I-95.

Please feel free to contact me should you have any further questions.

Sincerely

Michael Roy City Manager

cc: Harry Kojoian, Trafton Properties Daryl Belz, MDOT Jeff McEwen, P.E., FHWA John Melrose



City Hall, 1 Common Street, Waterville, ME 04901-6699 Phone: (207) 680-4204 | Fax: (207) 680-4207 mroy@waterville-me.gov | www.waterville-me.gov

Town of Sidney, Maine

2986 Middle Road, Sidney, ME 04330

Phone: 207-547-3340 / 207-547-3159 Fax: 207-547-5054

October 15, 2012

Mr. Herb Thomson, Director Bureau of Transportation Systems Planning Maine Department of Transportation State House Station 16 Augusta, Maine 04333

Dear Mr. Thomson,

In regards to the Trafton Realty, LLC Interchange Justification Report (IJR) currently under review by your office, I have been made aware that the Department and the Federal Highway Administration seek clarification as to the future intentions of the Town of Sidney to seek access to I-95 beyond the current request contained in the IJR now before you. The Town of Sidney is on record supporting the request for a new I-95 interchange at or in the vicinity of Trafton Road. The Town has no plans nor is it aware of any regarding any further requests for access within the Town to I-95.

Sincerely, Town of Sidney Board of Selectmen

John Whitcomb, Chairman

Brént Dugal

Kelly Couture

Doug Eugle

Peter Schutte

PUBLIC PARTICIPATION RECORDS



One Post Office Square • Waterville, ME 04901 Telephone (207) 873-3315 • Fax (207) 877-0087 info@midmainechamber.com www.midmainechamber.com

Mayor Paul LePage City of Waterville One Common Street Waterville, ME 04901

March 4, 2010

Dear Mayor LePage,

At the February meeting of the Board of Directors of the Mid-Maine Chamber of Commerce, the Board received a presentation from representatives of Trafton Properties. The presentation spoke to the need for improved access to Trafton Road via I-95. As you are well aware, there is an abundance of land development prospects located south of Kennedy Memorial Drive, KMD, including the Waterville Airport Business Park and the unique 900 acre assemblage owned by Trafton Properties. The connection of sewer lines to Oakland now underway adds to the development opportunity in this area. Yet, without improved access to and from I-95, these development prospects will be less likely to materialize.

At present, the I-95 ramps at Kennedy Memorial Drive are approaching full utilization. Meanwhile the mainline capacity of I-95 through Waterville remains underutilized. Another significant transportation asset, the Donald Carter Memorial Bridge also is underutilized but is constrained where it intersects with Kennedy Memorial Drive. I-95 and the Donald Carter Memorial Bridge are two of Waterville's most significant development assets. The Chamber wishes to see these assets employed to a greater degree to spur our economy.

Current traffic projections suggest that KMD will hit capacity in 2015 at the I-95 ramps and at the Cool/Colette, West River Road, Carter Memorial Drive signalized intersections. That forecast extends out to 2021 if signalization improvements now planned are made on KMD. To put the capacity issue in perspective, one additional medium to large grocery store or its equivalent would use up the remaining capacity on KMD. At that point, gaining a traffic movement permit for additional development will become problematic and potentially prohibitive due to the mitigation costs that would likely be imposed. A new Trafton Road interchange would make development to the south of KMD not reliant on KMD and would also lend economic support to Winslow, Oakland and Sidney.

At one time in the 1980's, the City, Maine DOT and FHWA were all on record endorsing a new I-95 Interchange at the Trafton Road. Press reports at that time indicated the project was funded. Procedural delays and declining financial fortunes ultimately stalled the initiative. Our dire need for economic development combined with the forecasted capacity limits on KMD, clearly suggests it is time to revisit the Trafton Road Interchange project. We ask that the City play a leadership role in forging a partnership of interests that can advance this project through the design and permitting stages so we have a project that is ready to go.

In the past, the City and the MaineDOT have indicated a willingness to advance this project to construction if significant development prospects materialize. The problem with that approach is that development will be deterred by the wait involved in getting an interchange designed and permitted. Like a business park that has already been planned, designed and permitted for prospective tenants, Waterville needs to take the delay and risk out of the interstate access issue by having a project that is, as they say, "shovel ready".

ALBION • BELGRADE • BENTON • BURNHAM • CLINTON • FAIRFIELD • HINCKLEY • OAKLAND • ROME • SIDNEY SHAWMUT • THORNDIKE • UNITY • VASSALBORO • WATERVILLE • WINSLOW We are pleased to learn that Trafton Properties has already engaged the services of local professionals to design and engineer different configurations for a proposed on off ramp and we are pleased with their offer to donate the right of way needed under their preferred interchange design. We believe they have offered other ideas that can materially help in keeping overall project costs down. We note that they have an established track record with the community by filling the long vacant Wyandotte mill with tenants that are now making a substantial tax contribution to the City of Waterville. Finally, we appreciate their willingness to place their marketing priority on attracting manufacturing and transportation related businesses with residential and commercial retail development not being a marketing priority.

In closing, we urge the City of Waterville to reaffirm the City's support for constructing an I-95 interchange at Trafton Road. We further request that the City convene interested parties to identify a strategy for getting this project designed, permitted and built. Thank you for your consideration of the Chamber's position on this matter. Please let us know how we can be of further service in advancing this initiative.

Sincerely,

Kind regards,

Monthemate

Mike Crowell Chair of the board Mid-Maine Chamber of Commerce

Kimberly N. Lindlof President & CEO Mid-Maine Chamber of Commerce

cc: Michael Roy, city of Waterville Harry Kojoian, Trafton Properties



Board Members:

Doug Cutchin Scott Bullock Jim Nicholson Bill Dubord Kathy Corey Paul Boghossian Janet Parkhurst Pamela Kick Allan Rancourt Dana Sennett John Dalton Don Plourde John Koons Jay Violette

Ex-Officio Members:

William Adams Paul LePage George Spann C. Patrick Michaud Mike Roy

Other Members:

John Butera Shannon Haines Kim Lindlof Ken Young Leonard Dow Greg Brown

Waterville Development Corporation

March 23, 2010

Dear Mayor LePage,

The Waterville Development Corporation met on March 9th and included on the agenda was the topic of developing an Interstate-95 interchange at Trafton Road. At this meeting we heard from three representatives from Trafton properties and received briefing materials prepared by them. The WDC Board had a thorough and lively conversation on this topic that concluded with a unanimous vote of support for this project coupled with a request to the City that it renew its commitment to having an interchange built at this location. We know the City has considered this issue in the past and at times has been very active in its advocacy for such an improvement. A renewed effort would be timely given development interests and the lead times required for a project like this to come to fruition.

Much of the discussion that took place among Board members addressed how this initiative would complement other Waterville economic development activities and assets. The conversation concluded with the belief that this additional investment would enhance Waterville's overall economic development offerings and would improve our competitive position. How well we maximize the benefits from such an investment will rest with the City through its own community planning and development leadership. The WDC stands ready to assist in this regard.

It is understood that transportation capital financing is very tight at the moment. This impediment could be overcome if Waterville was in a position to assure prospective developers that it had secured the necessary local, state and federal approvals to proceed with construction. Construction could then be financed as part of an overall development plan involving a mix of private and public financing. Trafton Properties has indicated a willingness to donate a portion of its land for the interchange. This scenario cannot play out unless approvals are in hand. While the cost of securing such approvals is relatively low compared to overall project costs, the time required to secure approvals is the real obstacle to prospective development. Therefore, we encourage the City to work with interested stakeholders to devise a strategy for securing the necessary approvals to proceed with construction.

Thank you for your consideration of this request.

Doug Cutchin, WDC Chair

Michael Roy, Waterville City Manager Harry Kojoian, Trafton Properties



CENTRAL MAINE GROWTH COUNCIL

Four Communities... One Vision!

March 30, 2010

Dear Mayor LePage,

At the March 16th meeting of the Board of Directors of the Central Maine Growth Council, the matter of building a new interstate interchange at Trafton Road was discussed. Representatives of Trafton Properties were on hand to give their perspective. The Board also had for its review copies of the recent letter sent to you from the Mid-Maine Chamber of Commerce which extended their support for this initiative. Following discussion, the Board voted unanimously to support this proposal. Peter Neilsen, the Oakland Town Manager, abstained since he expects his Town Council to take up this matter at a future time.

I will not reiterate the points made to you previously in the letter from the Chamber but I will say that we thought their comments were well considered and on target. On behalf of the region CMGC serves, I would add that this initiative has good potential to expand our land development opportunities and diversify our economy. With a Trafton Road interchange, Waterville will expand capacity to attract business and industry to our area and create good paying jobs. Those businesses and jobs will add customers to our downtowns and retail centers. Neighboring communities will benefit as well.

The benefits of a new interchange to Waterville and the region extend well beyond the prospects for Trafton Properties. However, at the moment they are the principal initiators for getting this conversation going again. Their representatives have done well in establishing relations with our organization and I believe we will work well together in the future to make sure we optimize all of the development assets of our region in a coordinated manner.

The Growth Council thanks you for your consideration of its position in support of the construction of an interchange at Trafton Road. CMGC asks that this matter be brought before the City Council and urges the City to reaffirm its support for this important infrastructure investment.

Regards Døug Culchin, CMGC/Board Chair ohn Butera, CMGC Executive Director CC:

Harry Kojoian, Trafton Properties, Mike Roy, Waterville City Manager

Town of Sidney, Maine

2986 Middle Road, Sidney, ME 04330 Phone: 207-547-3340/207-547-3159 Fax: 207-547-5054

March 29, 2010

Ms. Nancy Waddell, President Trafton Properties, Inc. 272 Valley Road, Suite 3 Middletown, RI. 02842

Dear Ms. Waddell,

The Board of Selectmen of the Town of Sidney had the opportunity on two occasions earlier this year to meet with representatives of your company to discuss advancing job creation and business development in our community through the construction of a new I-95 interchange. The proposed interchange would be located at Trafton Road just across the Sidney-Waterville Town line. We understand that a proposed interchange at this location received local, state and federal approvals in the 1980's but languished as financing became more difficult. We support the efforts of Trafton Properties to revive this proposal.

Our support is based on the knowledge that Trafton Properties owns over 900 acres it seeks to develop in proximity to the proposed interchange with roughly half of this property located in Sidney. Your stated intention is to market this property to manufacturers and business prospects other than commercial retail. This has been your approach with the former Wyandotte Mill complex that you own. As we indicated at meetings with your representatives, Sidney seeks to build its tax base and support the creation of decent paying jobs. Your objectives and ours seem to be in alignment.

Since our last meeting it is our understanding that this proposal has been unanimously endorsed by the Mid-Maine Chamber of Commerce, the Central Maine Growth Council and the Waterville Development Corporation. We encourage you to continue to build the base of support for this initiative and certainly hope you will receive a favorable response from the City of Waterville and neighboring communities like Oakland and Winslow who are also likely to be beneficiaries.

We are well aware that this is a complex and time consuming undertaking and that you are only in the early phases of advancing the interchange proposal. We would encourage Trafton Properties to continue to apprise the Town of Sidney of its plans for development. While it is premature to discuss development incentives the Town might consider to attract business and industry to our community, we are willing to entertain that conversation at the appropriate time.

Sincerely,

Jeff Frost, Chairman Town of Sidney Board of Selectmen

Cc:

Mike Heavener, Winslow Town Manager Peter Neilsen, Oakland Town Manager Mike Roy, Waterville City Manager

CITY OF WATERVILLE

REGULAR MEETING COUNCIL AGENDA APRIL 6, 2010

PUBLIC HEARING

6:45 P.M. CDBG PUBLIC SERVICE GRANT APPLICATION (EDUCARE)

REGULAR MEETING

7:00 P.M.

APPROVAL OF CONSENT AGENDA

UNFINISHED BUSINESS

NONE

NEW BUSINESS

RESOLUTION NO 38----AUTHORIZING THE ISSUANCE OF A SECONDHAND DEALER LICENSE TO CARRIE ROSSIGNOL D/B/A "VIDEO GAME EXCHANGE"

- RESOLUTION NO 39----AUTHORIZING THE ISSUANCE OF A SPECIAL AMUSEMENT PERMIT TO LUCIA HAYWOOD, ROBERT HAYWOOD D/B/A "GLO"
- RESOLUTION NO 40----REFERENCE TO THE PLANNING BOARD BY THE CITY COUNCIL AN AMENDMENT TO THE ZONING MAP (PINE CONE SHOP)
- RESOLUTION NO 41----AUTHORIZING AN APPLICATION FOR A CDBG PUBLIC SERVICE GRANT (EDUCARE)
- RESOLUTION NO 42---AUTHORIZING OUTDOOR DINING FOR DOWNTOWN RESTAURANTS
- RESOLUTION NO 43----BID AWARD FY 10/11 PAVEMENT REHABILITATION PROJECTS
- RESOLUTION NO 44----BID AWARD TRAFFIC PAINT & ACCESSORY SUPPLIES
- RESOLUTION NO 45----SUPPORT FOR THE CONSTRUCTION OF INTERSTATE-95 INTERCHANGE AT TRAFTON ROAD

APRIL 6, 2010

RESOLUTION NO 46----LISTING AGREEMENT FOR AIRPORT BUSINESS PARK LOTS ORDER NO 09-----TO PURCHASE PROPERTY TO IMPROVE THE FIRST RANGEWAY 5 WAY INTERSECTION ORDER NO 10-----AUTHORIZATION FOR SPECIAL MUNICIPAL ELECTION TO BE HELD ON JUNE 8 2010 FOR THE WATERVILLE PUBLIC SCHOOL BUDGET REFERENDUM THE CONTINUATION OF THE BUDGET VALIDATION REFERENDUM PROCESS AND THE AOS SCHOOL BUDGET REFERENDUM ORDER NO 11-----AN ORDER PROVIDING FOR APPROPRIATION OF MUNICIPAL AND SCHOOL OPERATING BUDGETS FOR THE PERIOD OF JULY 1, 2010 THROUGH JUNE 30, 2011

ORDINANCE NO 01----REPEAL OF ORDINANCE 13-1989 AND ACCEPTANCE OF ZONING ORDINANCE

APPOINTMENTS

WATERVILLE HOUSING AUTHORITY COMMISSIONERS

KIMBERLY E WORKMAN - TERM TO EXPIRE 2012

PUBLIC LIBRARY TRUSTEES

GEORGE MYERS, JR - TERM TO EXPIRE MARNIE TERHUNE - TERM TO EXPIRE

COMMUNITY NOTES



CITY OF WATERVILLE

CITY COUNCIL

RESOLUTION NO.: 45-2010

A RESOLUTION PROVIDING FOR:

SUPPORT FOR THE CONSTRUCTION OF AN INTERSTATE-95 INTERCHANGE AT TRAFTON ROAD

BE IT RESOLVED by the City Council of the City of Waterville, acting as the municipal officers, as follows:

WHEREAS future growth prospects for Waterville will depend in part on enhanced access to one of the region's most significant economic assets, Interstate-95; and

WHEREAS, despite planned signalization improvements, Kennedy Memorial Drive (KMD) will reach capacity in 2021 at the I-95 ramps and at its intersections with Cool Street, Colette Street, West River Road, and Carter Memorial Drive, at which time potential economic development will be thwarted by traffic mitigation costs, and

WHEREAS, an abundance of vacant land is situated south of KMD, including City-owned land at the Waterville Airport Business Park and 900 acres owned by Trafton Properties off of Trafton Road in Waterville, Sidney, and Oakland; and

WHEREAS, the extension of the sewerage line down Webb Road to Oakland enhances development opportunities south of KMD;

NOW THEREFORE, BE IT RESOLVED that this City Council endorses the construction of an I-95 interchange at Trafton Road to support future development south of Kennedy Memorial Drive.

S/ DANA V. SENNETT

Dana W. Sennett, Chair, City Council

IN THE CITY COUNCIL.

aline Watan CLERK

APPROVED, April 8, 2010

Paul helog

CITY OF WATERVILLE

REGULAR MEETING

COUNCIL AGENDA

SEPTEMBER 7, 2010

REGULAR MEETING

7:00 P.M.

APPROVAL OF CONSENT AGENDA

UNFINISHED BUSINESS

ORDER NO 25-----TO APPLY AND ACCEPT FAA GRANT FOR (SECOND READING) AIRPORT DESIGN

ORDER NO 26-----ACCEPTANCE OF BID (SNOW DUMP) (SECOND READING)

ORDER NO 27-----ACCEPTANCE OF BID (TWO CENT BRIDGE) (SECOND READING)

NEW BUSINESS

- RESOLUTION NO 117---OPPOSITION TO THE PSAP CONSOLIDATION PROPOSAL
- RESOLUTION NO 118---I-95 INTERSTATE ACCESS PROJECT ADVISORY COMMITTEE
- RESOLUTION NO 119---REFERENCE TO THE PLANNING BOARD BY THE CITY COUNCIL: AN AMENDMENT TO THE ZONING ORDINANCE (MEDICAL MARIJUANA DISPENSARIES)
- RESOLUTION NO 120---ADVANCE AUTHORIZATION TO ACCEPT AND APPROVE LOWEST RESPONSIBLE BID-FY 10/11 HEATING FUEL
- ORDER NO 28-----SALE OF CITY PROPERTY (55 SUMMER ST)
- ORDER NO 29-----TRANSFER OF FUNDS FROM THE GENERAL FUND TO THE TIF FUND
- ORDER NO 30-----ACCEPTANCE OF GRANT FUNDS
- ORDER NO 31-----ACCEPTANCE OF GRANT FROM EFFICIENCY MAINE TRUST

SPETEMBER 7, 2010

ORDER NO 32-----APPROVAL OF AGREEMENT WITH COLBY COLLEGE AND MAINE DOT

RESOLUTION NO 121---A DECLARATION OF INTENT FOR BOND ISSUANCE AND GENERAL/CAPITAL FUNDS REIMBURSEMENT

ORDER NO 33-----ACCEPTANCE OF BID FOR PINE RIDGE GOLF COURSE

MANAGER'S REPORT

COMMUNITY NOTES



CITY OF WATERVILLE

CITY COUNCIL

RESOLUTION NO. 118-2010

164

A RESOLUTION PROVIDING FOR

I-95 INTERSTATE ACCESS PROJECT ADVISORY COMMITTEE

BE IT RESOLVED by the City Council of the City of Waterville, acting as the municipal officers as follows:

THAT, a committee be assembled with representatives from concerned organizations as shown on the attached Purpose Statement to study the growth potential of the southern section of the City adjacent to the I-95 corridor.

Paul R LePage

Mayor

IN THE CITY COUNCIL

City Clerk , 2010; Read and Adopted.

APPROVED September 10, 2010 Fauer hafage Mavor

TRAFTON ROAD INTERCHANGE STUDY COMMITTEE WEDNESDAY, OCTOBER 20, 2010 CITY COUNCIL CHAMBERS 4:30PM

AGENDA

- 1. Welcome and Review of Purpose Statement (Mike Roy)
- 2. Process Overview (Mike Roy)
- 3. Explanation of Purpose and Need Statement (John Melrose)
- 4. Review of Alternative Analysis Process (John Melrose)
- 5. Election of Chairperson

@_:-

6. Discussion of Future Meeting Dates

I-95 Interstate Access Project Advisory Committee

On April 8, 2010 the Waterville City Council adopted a resolve endorsing the "construction of an I-95 interchange at Trafton Road to support future development south of Kennedy Memorial Drive". The charge of the I-95 Interstate Access Project Advisory Committee is to assist the City with the planning of this proposed initiative and to make recommendations to the City Council that will advance project implementation.

Specifically, the Council seeks recommendations from the Committee as follows:

- Suggested language for a project purpose and need statement likely to gain state and federal approval under both FHWA and ACOE requirements
- Identification of project alternatives including the no-build alternative to be examined as part of a required state and federal alternatives analysis
- Identification of issues to be considered through the City's current efforts to update the comprehensive plan
- A suggested scope of work for the city to approve in concert with state and federal officials that will advance the work required to secure all necessary local, state and federal approvals

MEMBERSHIP

*6*1)

- City Councilor(s) -- John O'Donnell & Rosemary Winslow
- Peter Nielsen, Town Mgr. Oakland
- Representative from Sidney
- George Spann, Thomas College
- John Butera, Growth Council
- Chris Huck, KVCOG
- Harry Kojoian, Trafton Properties
- Peter McAllister, Mid State Machine
- Paul Mitchell -- Planning Board member

Ex Officio Members

- Ann Beverage, City Planner
- Mark Turner, Director Public Works
- John Melrose, Maine Tomorrow
- Mike Roy, City Manager

REPORTING

It is expected that the Committee would conclude this charge this year but remain in existence to support this initiative as it moves to the next phase of implementation.

Greater Waterville I-95 Access Enhancement Initiative

Prepared for the I-95 Access Project Advisory Committee

October 18, 2010

Overview

Future growth prospects for the greater Waterville region will depend in part on enhanced access to the region's most significant transportation asset for economic development, Interstate 95. At present the I-95 interchange at Kennedy Memorial Drive is approaching full utilization while the mainline capacity of I-95 through Waterville remains underutilized. The Donald Carter Memorial Bridge is another area transportation asset for economic development that is underutilized but constrained where it intersects with Kennedy Memorial Drive.

Projections by traffic engineers suggested that KMD would hit capacity in 2015 at the I-95 ramps and at the Cool/Colette, West River Road, Carter Memorial Drive signalized intersections. That forecast extends out to 2021 with signalization improvements made on KMD. To put the capacity issue in perspective, one additional medium to large grocery store or its equivalent would use up the remaining traffic handling capacity on KMD. At that point, gaining a traffic movement permit through the State for additional development will become problematic and potentially prohibitive due to mitigation costs. This circumstance poses risk to planned developments like FirstPark and the Waterville Airport Business Park.

The current severely limited fiscal capacity of the MaineDOT and U.S. DOT means government is not likely to fix this problem on its own. By default, as is now occurring throughout the state in similar circumstances, developments that add traffic to roads that are at capacity generally are required to fix the problem at their expense or at a minimum share the expense with government. If the costs are too high for developers as might be the case with KMD, future development comes to a halt. When a road hits capacity, the existing development on the ground is often also placed at risk. Commerce generally thrives with high traffic flow but when traffic flow exceeds capacity existing commerce often hits a growth wall.

The functionality of transportation infrastructure is critical to the economic engine lining KMD. It is also critical to the south Waterville, north Sidney area where there is an abundance of land development prospects but poor connectivity to I-95. Improved I-95 access for this area could extend the capacity of KMD while improving the development prospects for south Waterville and north Sidney including the Waterville Airport Business Park, the unusual 900 acre cluster of parcels held for development by Trafton Properties, the retired Waterville solid waste site and the Brownfield site on West River Road also owned by the City of Waterville. Work currently underway connecting sewer service between Oakland and Waterville in this area adds to the development opportunities south of KMD.

Project History

The City of Waterville has attempted over three decades to address this issue most notably through its support for a Trafton Road interchange with I-95. The history of that effort is chronicled here:

- July 1986, Maine DOT completes Trafton Road Interchange Study
- January 1987, FHWA approves Trafton Road Interchange

- Spring 1987, Maine DOT funds Trafton Road Interchange in 1988-1989 BTIP
- September 1987, Maine DOT deems project "contingent upon a firm commitment from the City and private developers toward developing the area this new interchange would serve"
- 1989-1998, City shifts request from Trafton to Webb then back to Trafton Road
- 1998, FHWA issues guidance and procedures on granting new access to the Interstate
- 2009, Trafton Properties retains Maine Tomorrow and Gorrill-Palmer Consulting Engineers to conduct a preliminary feasibility review for a Trafton Road interchange
- March 2010, unanimous project endorsements received from the Mid-Maine Chamber of Commerce, the Waterville Development Corporation and the Central Maine Growth Council
- March 29, 2010, letter of support received from the Town of Sidney
- April 6, 2010, resolution of support passed unanimously by the Waterville City Council
- September 7, 2010, Waterville City Council unanimously supports resolution forming the I-95 Access Project Advisory Committee

Project Process

- Convene the I-95 Project Advisory Committee
- Advisory Committee recommends a NEPA Project Purpose and Need statement to the City of Waterville, Maine DOT and FHWA
- Advisory Committee recommends to the City, MaineDOT and FHWA project alternatives to consider under a NEPA alternatives analysis
- Advisory Committee recommends changes, if needed, to local, regional and state plans to assure consistency with the project initiative and recommendations
- Secure a consensus of the City, MaineDOT and FHWA on a Purpose and Need Statement and on the alternatives to be reviewed under the alternatives analysis
- MaineDOT, FHWA and the City agree on a project study scope of work that when completed would result in a shovel ready project meaning all local, state and federal approvals are secured
- Secure funding to complete the scope of work
- Complete the scope of work working with the Project Advisory Committee in close consultation with MaineDOT and FHWA
- Assuming an acceptable outcome for the key stakeholders, secure financing for the preferred alternative selected by the MaineDOT and FHWA

Committee Representation

Waterville City Councilors John O'Donnell and Rosemary Winslow, Waterville Planning Board Member Paul Mitchell, Oakland Town Manager Peter Nielsen, Town of Sidney representative, John Butera of Central Maine Growth Council, Chris Huck of Kennebec Valley Council of Governments, Harry Kojoian of Trafton Properties, Paul Boghossian of the Waterville Development Corporation, George Spann of Thomas College and Peter McAllister of Mid-State Machine

Greater Waterville I-95 Access Enhancement Initiative

Draft Purpose and Need Statement October 18, 2010

The following is offered to stimulate discussion and ideas on what a purpose and need statement might entail for a transportation study of this initiative. It is best to get all ideas and suggestions of the Project Advisory Committee surfaced early in this process so collaboration with City, State and Federal officials can be as informed as possible. It is important to keep in mind that the drafting of a purpose and need statement typically involves many stakeholders and the draft usually undergoes many rewrites before a consensus statement emerges. Further, the final decision on content rests with the lead agency which in this case might be jointly shared by FHWA and MaineDOT. The following initial suggestions are offered:

Purposes

- 1. Reduce transportation impediments to planned development south of KMD.
- 2. Improve regional mobility.
- 3. Sustain a level of service on KMD sufficient to support existing and planned uses along the corridor.
- 4. Expand freight and passenger transportation connectivity.
- 5.

Needs

- 1. A traffic choke point is forecasted at the I-95/KMD interchange
- 2. Traffic choke points are forecasted on KMD at the intersections with Cool, Colette, West River Road and Carter Memorial Drive
- 3. I-95 access for south Waterville and north Sidney is inadequate to support manufacturing, distribution and warehousing employment growth
- 4. Connectivity and balance of area traffic is not optimized
- 5. Emergency response times are not minimized
- 6. Truck freight movements on the Interstate are not maximized
- 7.

For discussion purposes only

Preliminary Alternative Interchange Analysis - October 20, 2010

Maine Tomorrow and Gorrill-Palmer Consulting Engineers have evaluated on a very preliminary basis three alternative I-95 interchange access alternatives to serve south Waterville and north Sidney development prospects. These are suggestions for the I-95 Interstate Access Advisory Committee to consider under a NEPA alternatives analysis. Each option requires MaineDOT and FHWA approval to break the current control of access. A sketch for two of these alternatives accompanies this summary.

An alternatives analysis must include consideration of the so-called no build alternative. The no build option represents the status quo and is not elaborated upon further in this summary. Consideration was given to the Webb Road as an alternative but FHWA guidance encourages a minimum interchange spacing of 3 miles in rural areas. The distance from the Kennedy Memorial Drive (KMD) interchange to Webb Road falls well below that minimum so this alternative was dropped.

Trafton Road Interstate Access Alternative - (sketch provided)

- Construct a full movement interchange at Trafton Road using the southerly quadrants owned by Trafton Properties to minimize right of way costs
- Maximize distance from on/off ramps to Trafton Road Bridge to provide safe sight distances
- Widen under the Trafton Road Bridge to accommodate acceleration and deceleration lanes
- Upgrade Trafton Road bridge over I-95 only when it reaches its useful life (current bridge is comparable to the Sidney Lyons Road overpass)
- Upgrade Trafton Road to same standards in place on Lyons Road in Sydney

Town Farm Road Access Alternative

- Construct a full movement interchange at Town Farm Road using the northerly quadrants owned by Trafton Properties to minimize right of way costs.
- Maximize distance from on/off ramps to Town Farm Road Bridge to provide safe sight distances
- Widen under the Town Farm Road Bridge to accommodate acceleration and deceleration lanes
- Upgrade Town Farm Road bridge over I-95 only when it reaches its useful life assuming the current bridge is comparable to the Sidney Lyons Road overpass
- Upgrade Town Farm Road to same standards in place on Lyons Road
- Construct northbound ramps to include likely relocation of Eight Rod Road

Eight Rod Road and West Frontage Road Alternative - (sketch provided)

- Construct a connector road between Trafton Road and Town Farm Road west of I-95
- Reconstruct Eight Rod Road
- Construct southbound on/off ramps to the west connector road and northbound on/off ramps to Eight Rod Road
- Upgrade Trafton Road and Town Farm Road



I-95 ACCESS ADVISORY COMMITTEE

Minutes of Meeting October 20, 2010

4:30pm – The meeting opened with the following members present:

Paul Mitchell Ann Beverage John Butera Chris Huck Harry Kojoian John Melrose Peter Nielsen Ann Beverage Rosemary Winslow Peter McAllister George Spann John O'Donnell Mark Turner Mike Roy

Mike Roy welcomed everyone and briefly explained the purpose for the Committee's formation. He gave a brief history of the City's interest in the formation of this Committee. He noted that the Town of Sidney was invited to have a representative on the Committee and is expected to make an appointment by the next meeting.

Mr. Mitchell provided a summary of the City's prior proposals for an I-95 interchange at Trafton Road and Webb Road and explained that the Wyandotte Mill was relocated to Trafton Road as part of a federally funded downtown urban renewal program that also paid for the extension of public water to the new site. Mr. Melrose noted that the Trafton Road interchange was approved by both the State and federal agencies in the late 1980's and, in fact, funded. The project was sidetracked when the City could not decide which road they preferred to align with the interchange.

PURPOSE & NEED

John Melrose helped lead a discussion on developing a Purpose and Need Statement. The Committee reviewed a draft statement dated October 18, 2010, listing project needs and purposes. All agreed that the following purposes are important for this study:

- 1. Reduce transportation impediments to planned development south of KMD.
- 2. Improve regional mobility.
- 3. Sustain a level of service on KMD sufficient to support existing and planned uses along the corridor.
- 4. Expand freight and passenger transportation connectivity.

Chris Huck suggested consideration be given to the additional purposes of energy savings and air quality improvement through congestion mitigation.

Likewise, the following needs were also identified:

- 1. A traffic choke point is forecasted at the I-95/KMD interchange
- 2. Traffic choke points are forecasted on KMD at the intersections with Cool, Colette, West River Road and Carter Memorial Drive
- 3. 1-95 access for south Waterville and north Sidney is inadequate to support manufacturing, distribution and warehousing employment growth
- 4. Connectivity and balance of area traffic is not optimized
- 5. Emergency response times are not minimized
- 6. Truck freight movements on the Interstate are not maximized

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ALTERNATIVE ANALYSIS

The Committee reviewed a preliminary analysis of three (3) alternatives to a Trafton Road interchange. John Melrose explained in detail how this is a required element of any proposed interchange project. Preliminary designs were also reviewed. The Webb Road alternative was not considered as it is within three (3) miles of Kennedy Memorial Drive interchange. Peter Nielsen registered Oakland's concerns for alternatives that would result in a potential loss of commerce on KMD or any new road maintenance burdens that might arise for the Town.

NEXT STEPS

Chris Huck said the interchange concept was mentioned in their regional transportation plan but that it was a lower priority due to current funding constraints. He thought the project was not mentioned in the six year transportation plan that goes to MaineDOT but he was going to check. He urged the group to consider alternative funding options like the U.S. Economic Development Agency. Mike Roy and John Melrose were asked to meet with MDOT officials to further define the process going forward. This will be the subject of the next meeting. There was a discussion around zoning and it is likely this topic will need to be revisited.

NEXT MEETING

It was agreed to meet again on Wednesday, November 17 @ 4:30pm in the City Council Chambers.

Respectfully Submitted,

Mike Roy

TRAFTON ROAD INTERCHANGE STUDY COMMITTEE WEDNESDAY, NOVEMBER 17, 2010 CITY COUNCIL CHAMBERS 4:30PM

AGENDA

- 1. Welcome and Introduction of Sidney Representative to Committee
- 2. Review Minutes of Prior Meeting (See Attached)
- 3. Report of Meeting with DOT Officials
- 4. Next Steps
 - a. Recommendation on Purpose and Need Statement
 - b. Recommendation on Alternatives Analysis
 - c. Preliminary Outline of Suggested Scope of Work
- 5. Election of Chairperson
- 6. Discussion of Future Meeting Dates



I-95 ACCESS ADVISORY COMMITTEE

Minutes of Meeting November 17, 2010

4:30pm – The meeting opened with the following members present. Bob Willette was introduced as the new member from Sidney.

Ann Beverage Chris Huck Harry Kojoian John Melrose Peter Nielsen Ann Beverage Rosemary Winslow Peter McAllister John O'Donnell Mark Turner Mike Roy Bob Willette

MINUTES: Minutes of the prior meeting were approved as presented.

MEETING WITH D.O.T. OFFICIALS

Mike and John reported on the November 4 meeting with Commissioner David Cole, Kat Beaudoin, Chief of Transportation Systems Planning, Dave Bernhardt, Director of Engineering and Operations and Tom Gorrill of Gorrill Palmer Consulting Engineers. The meeting took about an hour and a half with the Commissioner sitting in for two-thirds of the meeting. Perhaps the most significant part of the meeting was the clear position the Department took that they would not insist on having the Trafton Road Bridge replaced assuming the preferred alternative was the one with ramps coming on to Trafton Road. This determination is critical to arrive at an affordable solution. MaineDOT may want to locate the ramps in such a way as to accommodate the placement of a new bridge just south of the existing one when a replacement is needed. Kat Beaudoin agreed to

provide further feedback on the process going forward which she did and that work was presented to the Committee. This feedback is preliminary to a meeting with FHWA to seek their input. In regards to alternatives, the Department may want to include an examination of upgrades to Kennedy Memorial Drive to get more capacity out of that road before building a new interchange.

The Director of Engineering and Operations, Dave Bernhardt, who has design experience with KMD, indicated his doubts on the utility of that option. The Department was skeptical on the alternative presented where the ramps lie between Trafton and Town Farm Road hooking into Eight Rod Road and a new road running parallel to I-95 on the west. They did not ask to remove it from consideration but felt FHWA would not look on it favorably. The option of a new bridge between Town Farm Road and Trafton Road that would replace the bridges now on those roads was discussed. While the potential economies are attractive, there was doubt that the concept would be acceptable to the public. Kat Beaudoin noted that the scope of work would have to include early public meetings to allow input on the purpose and need statement and the alternatives to be selected for analysis. MaineDOT would prefer to have the City run those public meetings. It was recommended that KVCOG submit an amendment to their Regional Transportation Assessment (RTA). It turns out that the RTA includes the following priority capital project so this is already covered. That language reads as follows:

8. New I-95 Interchange in Southern Waterville – A new interchange for I-95 has been suggested for southern Waterville, south of existing Exit 127. An interchange onto one of Waterville's local roads would open up land for economic development adjacent to or nearby the airport. This project has been discussed and proposed for many years by the City of Waterville.

PURPOSE AND NEED DISCUSSION

The Committee reviewed the purpose and need statement that was provided at the earlier meeting. A discussion followed on adding to the statement a reference to the Waterville Airport and the need to use this capacity for further economic development. It was noted that the land adjacent to the Airport has a Foreign Trade Zone designation. To date this designation has not helped the City with attracting development. A new I-95 interchange could make that asset more useful. The old City solid waste site off Webb Road and the brown field site owned by the City off the West River Road are also in the vicinity. There is a desire to put to better economic use these sites and therefore should be mentioned as well in the purpose and need statement. The Committee requested that the statement be redrafted to incorporate these components.

MEETING WITH FHWA

It was agreed that Mike Roy would meet with MaineDOT and FHWA to refine the process going forward. The Committee's preference was to recommend to the City Council a purpose and need statement and a list of alternatives to be analyzed that the Council, after public input at a public meeting, could act upon in the form of a recommendation to MaineDOT and FHWA. A preference was to forward alternatives the City and Trafton Properties were willing to support rather than examine alternatives they could not support if they were responsible for seeing the project implemented. The hope was to present MaineDOT and FHWA with alternatives that had the least environmental impact, best met purpose and need and were affordable. If MaineDOT or FHWA at that point could suggest a better alternative it would be examined but otherwise it was hoped that the City's preference would be respected.

NEXT MEETING

It was agreed to meet again on Wednesday, December 8 @ 4:30pm in the City Council Chambers.

Respectfully Submitted,

Mike Roy

TRAFTON ROAD INTERCHANGE STUDY COMMITTEE WEDNESDAY, DECEMBER 8, 2010 CITY COUNCIL CHAMBERS 4:30PM

AGENDA

- 1. Review and approval of minutes of prior meeting See attached
- 2. Report of recent meeting with DOT Officials
- 3. Review and approval of revised Purpose & Need Statement See attached
- 4. Review and approval of alternatives
- 5. Discussion of next steps
- 6. Schedule for future meeting dates



I-95 ACCESS ADVISORY COMMITTEE

Minutes of Meeting December 8, 2010

4:30pm – The meeting opened with the following members present:

Harry Kojoian John Melrose Beth Gibbs Rosemary Winslow Paul Boghosian Ann Beverage Bob Willette Mark Turner Chris Huck Peter Nielsen Mike Roy

MINUTES

The minutes from the prior meeting were approved as presented.

MEETING WITH MDOT

John & Mike reported on their recent meeting with officials from MDOT and the Federal Highway Administration (FHWA). Both Mike and John are encouraged with what both agencies have said so far.

This project is being viewed by both agencies as an economic development project. An interstate justification report (IJR) will be needed. Trafton Properties and the City would prepare a draft IJR and submit it for concurrent review by MaineDOT and FHWA. Once in a form acceptable to the parties, MaineDOT would accept the IJR to FHWA for their approval subject to NEPA final review. At the meeting, FHWA indicated their review would pay attention to site distances between the ramps and the overpass, access control along Trafton Road near the interchange, compatibility with City plans and how a new interchange relates to existing and future access to I-95. FHWA would defer to MaineDOT on which alternatives will need to be considered. FHWA may have a preference for parallel ramps connecting to the I-95 mainline versus tapered ramps as are common in the area presently. FHWA indicated an interest in having the northbound ramps align with Eight Rod Road causing the relocation of Eight Rod and Junction Roads where they intersect with Trafton Road.

MaineDOT and FHWA agreed to define the project study area in a manner consistent with the Traffic Movement Permit process, probably involving I-95 from Kennedy Memorial Drive to Lyons Road in Sidney. There was discussion on the likely need to reclassify Trafton Road from a local road to a major collector and to downgrade Webb Road from a minor collector to a local road.

The next step involves the City recommending to MaineDOT a purpose and need statement and the alternative interchange configurations it seeks to have analyzed. Then the City, the developer and MaineDOT would prepare a scope of work to complete all the required studies and submittals including the alternatives analysis, the IJR, the NEPA documentation and a Traffic Movement Permit.

It was noted that the City would need to host a public meeting early on in the process to receive public input on the initiative and specifically on the purpose and need statement and any design alternatives of interest.

PURPOSE & NEED STATEMENT

After substantial discussion, the proposed purpose and need statement (see attached) was recommended to the City Council as presented.

ALTERNATIVE ANALYSIS

MDOT and FHWA officials agree that the "no build" alternative must be considered and should involve an analysis of all the costs/impacts associated with development occurring south of KMD into Sidney without any new interchange. Although the project will require a "big picture" view of how and where a proposed interchange fits in with everything else, there will not be a need to spend a lot of time and money on the local level with analysis of options which are not practical or financially feasible. There is general agreement that the primary build alternative to be studied involves placing interchange ramps in the southerly quadrants of the intersection of Trafton Road and I-95.

The Committee agreed to support this approach and recommended it to the City Council.

NEXT MEETING

It was agreed to hold a public meeting on this project on January 11, 2011, at 6:30pm in the City Council Chambers. The Committee will reconvene once the Council takes action on its recommendations.

Respectfully Submitted,

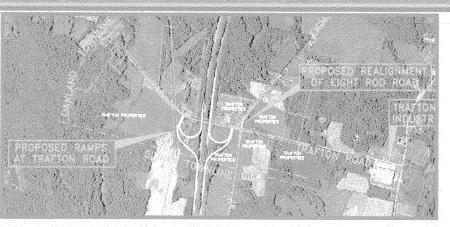
Mike Roy

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	OWNER NAME	MAILING ADDRESS	TOWN	STATE	ZIP	PROPERTY LOC. MAP/LOT	MAP/LOT
*	CARL OUIRION	524 CUSHMAN ROAD	WINSI OW	ШШ	04902	SIDNFY	001/008
2	PAUL SIMPSON & ELAINE LUNDGREN	·	OAKLAND	ТШ Ш	04963	SIDNEY	002/008
с С		131 TOWN FARM ROAD	SIDNEY	ME	04330	SIDNEY	002/009
4	LAWRENCE & CANDICE WILLETTE	39 JUNCTION ROAD	SIDNEY	ME	04330	SIDNEY	002/12&13
Ω	PETER AND MANDY BUCKNAM	65 JUNCTION ROAD	SIDNEY	ME	04330	SIDNEY	002/011
9		77 JUNCTION ROAD	SIDNEY	ШШ	04330	SIDNEY	002/007A
7	-	89 JUNCTION ROAD	SIDNEY	ШШ	04330	SIDNEY	002/007B
8	FANADO PELOTTE	3944 WEST RIVER ROAD	WATERVILLE	MП	04901	SIDNEY	002/007
	FANADO PELOTTE	229 TRAFTON RD	WATERVILLE	ME	04901-9764	WATERVILLE	010-080-000
	FANADO J PELOTTE	229 TRAFTON RD	WATERVILLE	ME	04901-9764	WATERVILLE	011-020-000
	FANADO PELOTTE	229 TRAFTON RD	WATERVILLE	ME	04901-9764	WATERVILLE	005-040-000
	FANADO PELOTTE	229 TRAFTON RD	WATERVILLE	ME	04901-9764	WATERVILLE	006-030-000
	FANADO PELOTTE	229 TRAFTON RD	WATERVILLE	ME	04901-9764	WATERVILLE	000-090-900
თ	DARREN DOUCETTE	102 JUNCTION ROAD	SIDNEY	ME	04330	SIDNEY	002/004
10	LINDA TUTTLE	95 JUNCTION ROAD	SIDNEY	ШШ	04330	SIDNEY	002/006
~	MICHAEL & ELIZABETH DOYON	217 TOWN FARM ROAD	SIDNEY	ME	04330	SIDNEY	002/002
12	LIONEL AND FRANCES MARCOUX	202 TOWN FARM ROAD	SIDNEY	ШШ	04330	SIDNEY	800/600
	LIONEL AND FRANCES MARCOUX	202 TOWN FARM ROAD	SIDNEY	ШМ	04330	SIDNEY	600/600
	LIONEL AND FRANCES MARCOUX	202 TOWN FARM ROAD	SIDNEY	ME	04330	SIDNEY	009/010
13	JAMES & SANDRA ROGERS	236 TOWN FARM ROAD	SIDNEY	ME	04330	SIDNEY	009/012
44	MARK GOULD	162 DRUMMOND ROAD	SIDNEY	MП	04330	SIDNEY	012/004
15	JEAN & THEODORE BROWN	431 TRAFTON RD	OAKLAND	ME	04903-4870	WATERVILLE	010-070-000
	JAMES J & SARA L BROWN		OAKLAND	ШM	04903-4870	WATERVILLE	010-090-000
	JAMES J & SARA L BROWN	431 TRAFTON RD	OAKLAND	ME	04903-4870	WATERVILLE	011-025-000
	JAMES J & SARA L BROWN	PO BOX 396	OAKLAND	ME	04963-0396	WATERVILLE	002-020-000
16	WILLARD JR & GERALDINE SHIRLEY	501 EIGHT ROD RD	WATERVILLE	ME	04901-9739	WATERVILLE	011-010-000
17	GREGORY G & SANDRA CORMIER	263 TRAFTON RD	WATERVILLE	ME	04901-9764	WATERVILLE	002-030-000
18	TRAFTON PROPERTIES INC	272 VALLEY RD	MIDDLETOWN	R	02842-5238	WATERVILLE	005-010-000
	TRAFTON PROPERTIES INC	272 VALLEY RD	MIDDLETOWN	R	02842-5238	WATERVILLE	006-010-000
	TRAFTON PROPERTIES INC	272 VALLEY RD	MIDDLETOWN	R	02842-5238	WATERVILLE	006-020-000
	TRAFTON PROPERTIES INC	~ 1	MIDDLETOWN	R	02842-5238	WATERVILLE	000-020-900
	TRAFTON PROPERTIES INC	VALLEY RD	MIDDLETOWN	R	02842-5238	WATERVILLE	006-080-000
5	RAYMOND J PELOTTE	599 EIGHT ROD RD	WATERVILLE	ME	04901-9739	WATERVILLE	006-050-000

PUBLIC MEETING NOTICE

GREATER WATERVILLE I-95 ACCESS ENHANCEMENT



The City of Waterville will hold a public meeting on **Tuesday**, **January 11**, at 6:30pm in the **Waterville City Council Chambers** located at **93 Main Street** (the Center Building), **3rd floor**, to obtain resident input on the proposal to develop a new Interstate 95 interchange at the Trafton Road location.

This is an exciting opportunity for growth in our area and we hope that you can attend to make your views known.

You are welcome to attend and comment on this proposed project. If you are unable to attend, any *written comments* may be addressed to Michael Roy, City Manager, 1 Common Street, Waterville, ME 04901.



OFFICE OF ADMINISTRATION CITY OF WATERVILLE

Ph 207.680.4204 | Fx 207.680.4207 1 Common Street, Waterville, Maine 04901

www.waterville-me.gov

REGULAR MEETING OF THE CITY COUNCIL

JANUARY 18, 2011

CITY COUNCIL CHAMBERS

CITY COUNCIL CHAMBERS

MIKE ROY, CITY MANAGER PRESENT:

CHARLES F. STUBBERT, JR, GEORGE MYERS, JR COUNCILORS: ROSEMARY WINSLOW, DANA SENNETT, CHAIR, JOHN O'DONNELL, AND KAREN RANCOURT-THOMAS

EXECUTIVE SESSION

6:15 P.M. TAX ABATEMENT REQUEST #4-2010 CONFIDENTIAL RECORDS 1 M.R.S.A. §405 (6) (F)

INTERVIEWS

6:30 P.M. COUNCILOR-WARD 6

REGULAR MEETING 7:00 P.M.

APPROVAL OF CONSENT AGENDA

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REGULAR MEETING CONSENT AGENDA JANUARY 18, 2011

MINUTES

APPROVAL OF JANUARY 4, 2011 RESOLUTION NO 12----ROLL OF ACCOUNTS NO 2

RESOLUTION NO.13----AUTHORIZING THE RENEWAL OF A PAWNBROKER LICENSE TO JOHN WEEKS D/B/A "J R'S TRADING & JEWELRY"

> O'Donnell Moved to Adopt Winslow Seconded the Motion Vote: All in Favor (6-0)

UNFINISHED BUSINESS

RESOLUTION 163-A RESOLUTION PROVIDING FOR POVERTY ABATEMENT #4-2010 BE IT RESOLVED by the City Council of the City of Waterville, acting as the municipal officers, as follows: THAT, the City Council approves Tax Abatement Request #4-2010 for unpaid taxes, Interest and lien charges for the tax year 2009 In the amount of \$492.23. and 2010 in the amount of \$625.76.

> Resolution Read in Full Winslow Moved to Adopt O'Donnell Seconded the Motion Winslow Moved to Amend by Adding a period after \$492.23 which would delete "and 2010 in the amount of \$625.76" as Shown Above O'Donnell Seconded the Motion Vote: All in Favor (6-0) Vote on Resolution 163-2011 as Amended Vote: All in Favor: (6-0)

ORDINANCE 11-2011-AN ORDINANCE PROVIDING FOR AMENDMENT TO ARTICLE 5, ZONING DISTRICT REQUIREMENTS, OF THE ZONING ORDINANCE

BE IT ENACTED by the City Council of the City of Waterville, acting as the municipal officers, as follows:

THAT, Article 5, Zoning District Requirements, of the Zoning Ordinance of the City of Waterville, Maine, be amended as follows: (Underscored language is an addition.)

5.7.4. C-A Prohibited uses.

5.7.4.A. Service, repair, and sale of automobiles.
5.7.4.B. Boat and trailer sales and service.
5.7.4.C. Junk yards, including the storage of inoperative motor vehicles.
5.7.4.D. The following uses are prohibited between Union Street and Spring Street and between Elm Street and the Kennebec River: adult entertainment businesses including pornography, nudity, escort services, and massage parlors, but excluding massage therapists licensed by the state of Maine.

> Ordinance Read in Full Sennett Moved to Accept Winslow Seconded the Motion O'Donnell Moved to Postpone to the Next Meeting Winslow Seconded the Motion Vote: All in Favor (6-0)

NEW BUSINESS

RESOLUTION 14-2011-A RESOLUTION PROVIDING FOR ISSUANCE OF A VICTUALER LICENSE TO REBECCA & SHANE REAGH, LLC D/B/A "Tim Horton" at 333 Main St. THAT, the City Council hereby authorize the issuance of a Victualer License to Rebecca & Shane Reagh, LLC d/b/a "Tim Horton" at 333 Main St. Resolution Read in Full Winslow Moved to Adopt O'Donnell Seconded the Motion Vote: All in Favor (6-0)

RESOLUTION-15-A RESOLUTION PROVIDING FOR APPOINTMENT OF A CITY COUNCILOR (WARD 6)

BE IT RESOLVED by the City council of the City of Waterville, acting as the Municipal Officers, as follows:

THAT,_____, be appointed to fill the vacancy in Ward 6 Council seat until the next regularly scheduled municipal election. Resolution Read in Full Sennett Moved to Appoint Eliza Mathias as Councilor Ward 6 Vote in Favor Stubbert, Myers, Winslow Sennett and Rancourt-Thomas Vote: (5-0) O'Donnell Moved to Appoint Dana Hernandez Winslow Seconded the Motion Winslow Moved to Cease Nominations O'Donnell Seconded the Motion Vote: All in Favor (6-0) With the Majority of Votes Eliza Mathias has been appointed Councilor for Ward 6

Eliza Mathias has been sworn in as Councilor in Ward 6 and is now ready to take her seat.

RESOLUTION 16- A RESOLUTION PROVIDING FOR DECLARING A VACANCY FOR OFFICE OF MAYOR BE IT RESOLVED by the City Council of the City of Waterville, acting as the municipal officers, as follows: THAT, the Office of Mayor is hereby declared vacant due to the resignation of Paul R LePage on January 4, 2011. Resolution Read in Full Sennett Moved to Adopt Myers Seconded the Motion Vote: All in Favor (7-0) RESOLUTION -17- A RESOLUTION PROVIDING FOR RECONSIDERATION OF ORDINANCE NO 09-2010 BE IT RESOLVED by the City Council of the City of Waterville as follows: THAT, Ordinance No 09-2010, Shoreland to the Zoning Ordinance, be Amendments reconsidered. Resolution Read in Full

Resolution Read in Full Winslow Moved to Adopt O'Donnell Moved to Second Vote: All in Favor: (7-0) Sennett Moved to Accept Ordinance 09-2010 Winslow Seconded the Motion Vote: All in Favor (7-0) O'Donnell Moved to Hold Third and Final Reading by Title Only Winslow Seconded the Motion Vote: All in Favor (7-0) Ordinance Read by Title Only Sennett Moved to Adopt Winslow Seconded the Motion

Roll Call Vote	Yes	No	Abstain
Charles F Stubbert Jr	1		
George Myers, Jr	2		
Rosemary A Winslow	3		
Dana Sennett	4		
John O'Donnell	5		
Eliza Mathias	6		
Karen Rancourt-Thomas	7		
Vote (7-0)			

RESOLUTION 18- A RESOLUTION PROVIDING FOR REFERENCE TO THE PLANNING BOARD BY THE CITY COUNCIL AN AMENDMENT TO THE ZONING MAP (WATER ST)

> BE IT RESOLVED by the City Council of the City of Waterville, acting as the municipal officers and in accordance with Article 7, Section 7.1, of the Zoning Ordinance, to refer to the Planning Board for public hearing and recommendation a proposal for rezoning.

> The proposal is to rezone properties on or near Water Street between King Street and Redington Street from Commercial-B (C-B) to Residential-C (R-C). In addition, two parcels on the riverbank would be rezoned from Commercial-B (C-B) to Resource Protection.

Those parcels proposed for rezoning are listed on the attachment and found on the Property Map of the City of Waterville dated April 1, 1992, as updated on April 1, 2010.

> Resolution Read in Full Winslow Moved to Adopt O'Donnell Seconded the Motion Vote: All in Favor (7-0)

RESOLUTION 19- A RESOLUTION PROVIDING FOR SUPPORT FOR TRAFTON ROAD INTERCHANGE PROJECT

> BE IT RESOLVED by the City Council of the City of Waterville, acting as the municipal officers:

THAT the City Council accept the recommendations of the I-95 Access Advisory Committee (see attached minutes) regarding a Purpose and Need statement and an Alternative Analysis and further that said recommendations be forwarded to Maine Department of Transportation to serve as a basis for further study of the project.

> Resolution Read in Full Winslow Moved to Adopt Sennett Seconded the Motion Vote In Favor: Stubbert, Myers, Winslow, Sennett, Mathias and Rancourt-Thomas Vote to Oppose: O'Donnell Vote to Abstain: None Vote: (6-1-0)

The Council Chair announced the appointment of Lawrence Lauzon to the Board of Zoning Appeals. His term will expire in 2014. Vote: All in Favor (7-0) There being no further business the meeting was adjourned.

A True Copy Attest

Clerk

6



CITY OF WATERVILLE

CITY COUNCIL

RESOLUTION NO. 19 -2011

A RESOLUTION PROVIDING FOR:

SUPPORT FOR TRAFTON ROAD INTERCHANGE PROJECT

BE IT RESOLVED by the City Council of the City of Waterville, acting as the municipal officers:

THAT the City Council accept the recommendations of the I-95 Access Advisory Committee (see attached minutes) regarding a Purpose and Need statement and an Alternative Analysis and further that said recommendations be forwarded to Maine Department of Transportation to serve as a basis for further study of the project.

Dana W. Sennett

Dana W. Sennett Chair, City Council

IN THE C	ITY COUNCIL
January.	18, 2011, Read and Adopted.
0-0-	
	Allene Stichan

CITY CLERK

APPROVED, January 19, , 2011

General Mi da

MAYOR



Paul R. LePage GOVERNOR STATE OF MAINE Department of Transportation Region 2 98 STATE House Station Augusta, Maine 04333-0098

David Bernhardt COMMISSIONER

May 10, 2011

12

Ann Beverage, City Planner City of Waterville One Common Street Waterville, Maine 04901

RE: Maine Department of Transportation Scoping Meeting Trafton Properties, Light Industrial Facility, Waterville, ME

Dear Ms. Beverage:

The Maine Department of Transportation (MDOT) has scheduled a scoping meeting for the above referenced project pursuant to obtaining an MDOT Traffic Movement Permit. The project is estimated to generate 442 one-way trips during the weekday AM peak hour, and 480 one-way trips during the PM peak hour. The project is proposing to access from State Route 104 and Trafton Road.

The scoping meeting will be held at the City of Waterville Counsel's Chambers. The meeting is scheduled for 7:00 p.m. on Tuesday May 24, 2011. You or your staff's input at this meeting would be welcome if you choose to attend. Please share this letter with Town officials, including the police chief, and with staff whom you feel would have relevant input. The meeting is open to the general public, and participation of several abutting property owners is expected.

The applicant is required to perform the following, if not already completed, prior to the scoping meeting:

- A. Submit a signed copy of the "Notice of Intent to File" to the Town.
- B. Send the same notice to abutting property owners via certified mail, return receipt requested, a minimum of 7 days prior to the scoping meeting.
- C. Publish the notice in a local newspaper.



Thank you for your cooperation, and if you have any questions or would like to discuss this further please feel free to contact David Allen at 624-8200.

Sincerely,

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David P. Allen, P.E. Mid-Coast Region Traffic Engineer Maine Department of Transportation

cc: Steve Landry, Assistant State Traffic Engineer Thomas Gorrill, Gorrill-Palmer Consulting Engineers, Inc. City of Waterville KVCOG Abutting Municipalities Gerald & Julie Dubios Christopher & Aimee Gilbert William & Marry Anne Trafton File

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<u>Meeting Minutes</u> <u>Trafton Properties MaineDOT Scoping Meeting</u> <u>Waterville, Maine</u>

Date of Meeting: Place of Meeting: Purpose of Meeting: Attendees:

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May 24, 2011 Council Chambers Waterville City Hall, Maine MaineDOT Scoping Meeting Ann Beverage, City Planner Greg Brown, City Engineer Bob Willette, Town of Sidney Julie Dubois, 101 Trafton Road Gerard Dubois, 101 Trafton Road Chris Gilbert, 35 Trafton Road Aimee Gilbert, 35 Trafton Road Mary Ann Trafton, 51 Trafton Road Dave Allen, MaineDOT Darryl Belz, MaineDOT Harry Kojoian, Trafton Properties John Melrose, Eaton Peabody Consulting Group Tom Gorrill, Gorrill Palmer Consulting Engineers

Prepared by: Tom Gorrill-5-31-11

Summary of Discussions:

- 1. Dave Allen opened the meeting by explaining that an application for a MaineDOT traffic movement permit has been filed by Trafton Properties and it has been determined to be complete. He explained the purpose of the meeting is to determine the study area and scope of the study to be completed. He explained the format of the meeting would be to ask for comment from Waterville and Sidney followed by the public. He said he would set the scope of the study following these comments.
- 2. Greg Brown asked how many trips would be generated by the project and what weight trucks were given relative to passenger cars. Dave answered that the project is forecast to generate 442 AM and 480 PM peak hour trip ends respectively. Tom explained that equates to 221 and 240 round trips respectively. Dave explained that one truck counts as two passenger cars for the purpose of the traffic volume determination.
- 3. Bob Willette said that the Town of Sidney wants to see more industry rather than residences. He said a new interchange on Trafton Road will take the pressure off Lyons Road but some residents are concerned with the additional traffic from an interchange on Trafton Road. He feels that the proposed project will impact Eight Rod Road and asked that this be included in the study. He stated that traffic counters were currently placed in the area and Dave responded that these counts are part of MaineDOT's statewide traffic count program.
- 4. Several residents agreed with Mr. Willette that Eight Rod Road should be included in the study.

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- 5. Greg pointed out that Silver Street and the bridge are labeled incorrectly on the diagram. He agreed with the residents that Eight Rod Road and Junction Road should be included in the study.
- 6. Dave set the study areas to include the following intersections in the "without the interchange" analysis:
 - Site driveways
 - Trafton Road/Eight Rod Road and Junction Road
 - Trafton Road and West River Road
 - West River Road and Lyons Road
 - Lyons Road interchanges
 - Trafton Road and Middle Road
 - Church Street, Oak Street and Water Street
 - Oak Street, Main Street and Center Street
 - Main Street, Pleasant Street, Fairfield Street, and KMD- any potential mitigation at this intersection will be limited and proportional to impact
 - KMD interchanges
 - Interconnected signal system on KMD to West River Road
 - Donald Carter Drive and Abenaki Road
- 7. Dave set the study areas to include the following intersections in the "with the interchange" analysis:
 - Site driveways
 - Trafton Road/Eight Rod Road and Junction Road
 - Trafton Road and West River Road
 - Trafton Road and Middle Road
 - KMD interchanges
 - Interconnected signal system on KMD to West River Road
 - Main Street, Water Street, and Waterville Winslow Bridge
- 8. Dave requested the counts be completed during a weekday from 7:00 AM to 9:00 AM and again from 4:00 PM to 6:00 PM.
- 9. Ann Beverage confirmed that there are no other approved or pending projects not yet developed that need to be included in the traffic study as background traffic.