INTERSECTION ANALYSIS

US 1 at Turgot Avenue
Section 79010 – M.P. 14.879
Volusia County

Prepared for:

RIVER TO SEA TRANSPORTATION PLANNING ORGANIZATION

Prepared by:
Traffic Engineering Data Solutions, Inc.
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Traffic Engineering Data Solutions, Inc.

November 2015

Prepared by: Mikal Hale, P.E.
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11-12-15

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EXECUTIVE SUMMARY

Traffic Engineering Data Solutions, Inc. (TEDS) was retained on behalf of the River to Sea Transportation Planning Organization (R2CTPO) to conduct an Intersection Analysis at the intersection of US 1 at Turgot Avenue located in Edgewater (Volusia County), Florida. The intent of the study was to evaluate alternatives to enhance the operation and overall safety of the intersection. Based on the data collected, signal warrant analysis, field observations and engineering judgement, **it is recommended that a traffic signal not be installed at the intersection of US 1 and Turgot Avenue** for the following reasons:

- The intersection currently operates safely and efficiently under two-way STOP control.
- The installation of a traffic signal would increase intersection delay.
- The installation of a traffic signal would increase the potential for rear-end crashes on US 1 at the intersection.

However, based on additional analysis it is recommended to construct an eastbound right-turn lane at the study intersection. The engineering and construction costs associated with these improvements are estimated at approximately $110,632. It should be noted that right of way will be needed in the southwest quadrant of the intersection to construct the proposed improvements. The parcel from which right of way will be needed is owned by the City of Edgewater. Recognizing that Turgot Avenue is a City road, the City of Edgewater will thus need to dedicate a portion of this parcel to become Turgot Avenue right of way.

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INTRODUCTION

Traffic Engineering Data Solutions, Inc. (TEDS) was retained on behalf of the River to Sea Transportation Planning Organization (R2CTPO) to conduct an Intersection Analysis for US 1 at Turgot Avenue in Edgewater (Volusia County), Florida. The intent of the study was to evaluate alternatives to enhance the operation and overall safety of the intersection as the City expressed concern relative to waves of traffic that pass through the intersection as a result of activities at the nearby YMCA and Hawk's Park recreational complex. A location map of the study intersection is shown below as ***Figure 1***.

The analysis methods used in completing this study are consistent with the Manual on Uniform Traffic Control Devices (MUTCD), Manual on Uniform Traffic Studies (MUTS), and engineering judgment. This report documents existing conditions, vehicle / pedestrian / bicycle counts, crash analysis, qualitative assessment, and recommendations.

Figure 1
General Location Map
US 1 at Turgot Avenue

Source: Bing Maps

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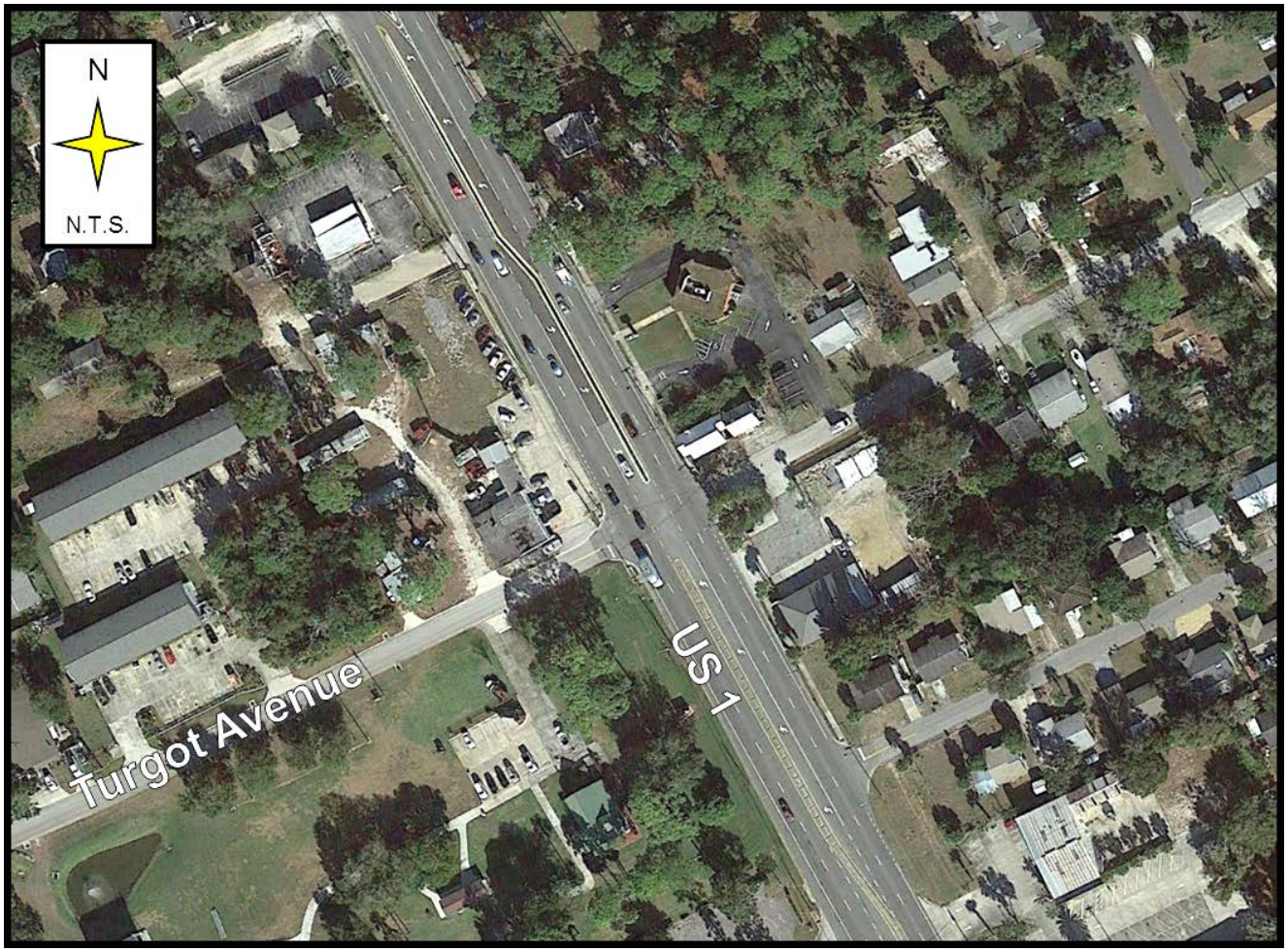
EXISTING CONDITIONS

US 1 is a north-south arterial that extends through the eastern side of Volusia County, Florida. As shown in ***Figure 2***, at the study intersection US 1 is a four-lane divided arterial. Turgot Avenue is an east-west two-lane undivided roadway extending approximately 0.55 miles. The YMCA/Hawk's Park recreational complex is located approximately 0.24 miles west of the study intersection on the south side of Turgot Avenue and the Edgewater Public School is located approximately 0.30 miles west of the study intersection at the termination of Turgot Avenue. School access is not provided through Turgot Avenue but rather from the north via Ocean Avenue and Old County Road. A large number of cultural and recreational events at the YMCA/Hawk's Park recreational complex occur including team sports and concerts.

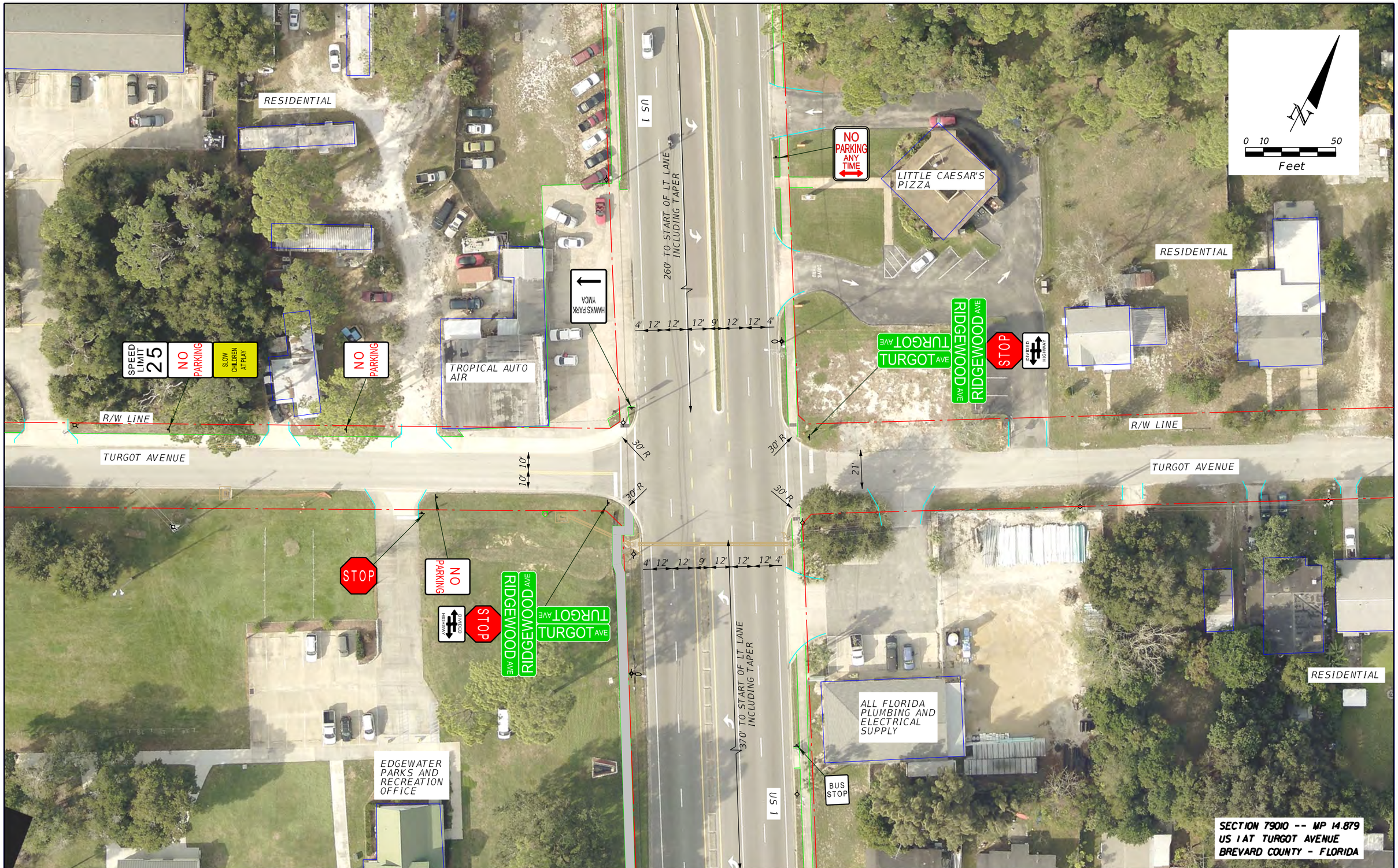
Figure 2
General Location Aerial
US 1 at Turgot Avenue



Source: Bing Maps

Table 1
Existing Conditions
US 1 at Turgot Avenue

Feature	Description
Main Street	• US 1
Side Street	• Turgot Avenue
Area Location	• Edgewater (Volusia County), Florida
Adjacent Land Uses	• Southwest: Edgewater Parks and Recreation office • Southeast: All Florida Plumbing & Electrical Supply • Northwest: Tropical Auto Air • Northeast: Little Caesar's pizza
Traffic Control	• Two-way stop control with US 1 having the right-of-way
Adjacent Signalized Intersections	• South: Indian River Boulevard (SR 442) – 0.69 miles • North: Park Avenue - 0.77 miles • West: None • East: None
US 1	• Cross Section: 4-lane divided arterial with 4-foot shoulders (unmarked bicycle lanes) and curb and gutter extending approximately 700' south and extending over 2,000' north of the intersection • Access: Class 3 • Posted Speed Limit: 45 mph • AADT: 24,500 vehicles per day (year 2014) • Northbound Approach Lanes: 1 left-turn lane and 2 through lanes • Southbound Approach Lanes: 1 left-turn lane and 2 through lanes • Intersection Alignment: 90-degrees • Pedestrian Crossings: No marked crossings • Sidewalks: Both sides • Utilities: Overhead power lines running on both sides of the road • Street Lighting: On both sides of the road
Turgot Avenue	• Cross Section: 2-lane undivided local road; gutter extending approximately 950' west of the intersection • Posted Speed Limit: 25 mph • Eastbound Approach Lanes: 1 shared left/through/right-turn lane • Westbound Approach Lanes: 1 shared left/through/right-turn lane • Pedestrian Crossings: Across the eastbound and westbound approaches • Sidewalks: On the north side of the road, west of US 1 • Utilities: Predominantly on the north side of the road west of US 1; predominantly on the south side of the road east of US 1 • Street Lighting: One (1) light pole approximately 770' west of US 1 on the north side of the road; one (1) light pole approximately 560' east of US 1 on the south side of the road



Utility Pole
Traffic Sign
Luminaire

Symbols:

Traffic Controller Cabinet
Ditch Bottom Inlet
Signal Pole
Pedestrian Signal Pole
Mitered End Section

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CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA

DEPARTMENT OF TRANSPORTATION

FIGURE 3
EXISTING CONDITIONS DIAGRAM

Figure 4 – Eastbound on Turgot Avenue, West of US 1, Looking East

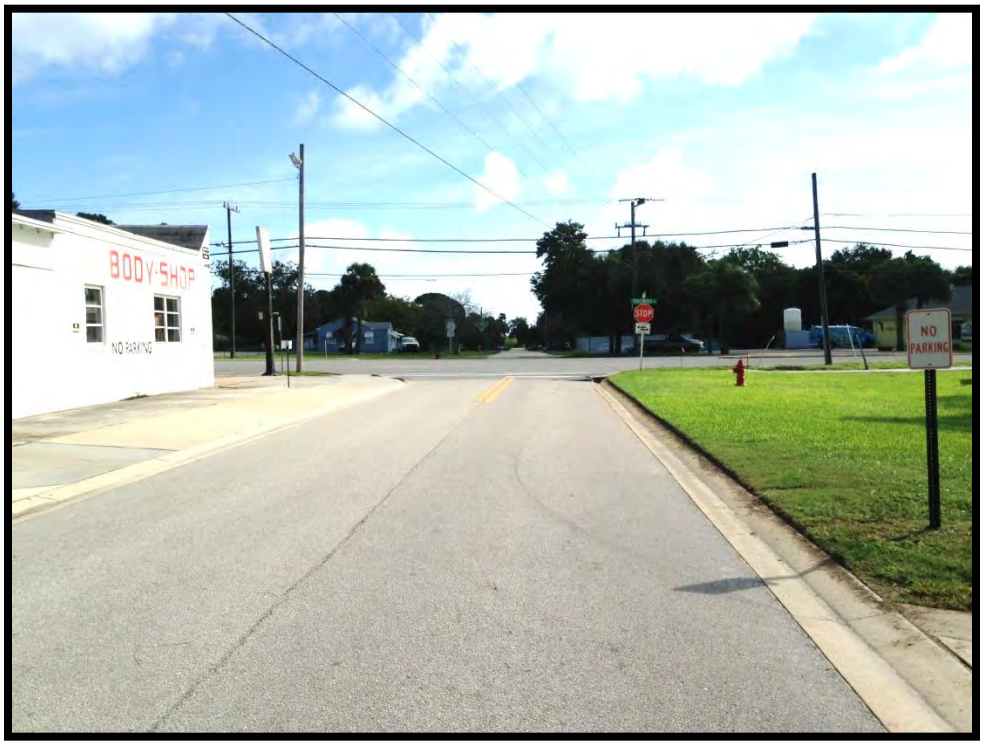


Figure 5 – Turgot Avenue at US 1, Looking West

Figure 6 – Westbound on Turgot Avenue, East of US 1, Looking West

Figure 7 – Turgot Avenue at US 1, Looking East

Figure 8 – Northbound US 1, South of Turgot Avenue, Looking North

Figure 9 – Northbound US 1 at Turgot Avenue, Looking South

Figure 10 – Southbound US 1, North of Turgot Avenue, Looking South

Figure 11 – Southbound US 1 at Turgot Avenue, Looking North

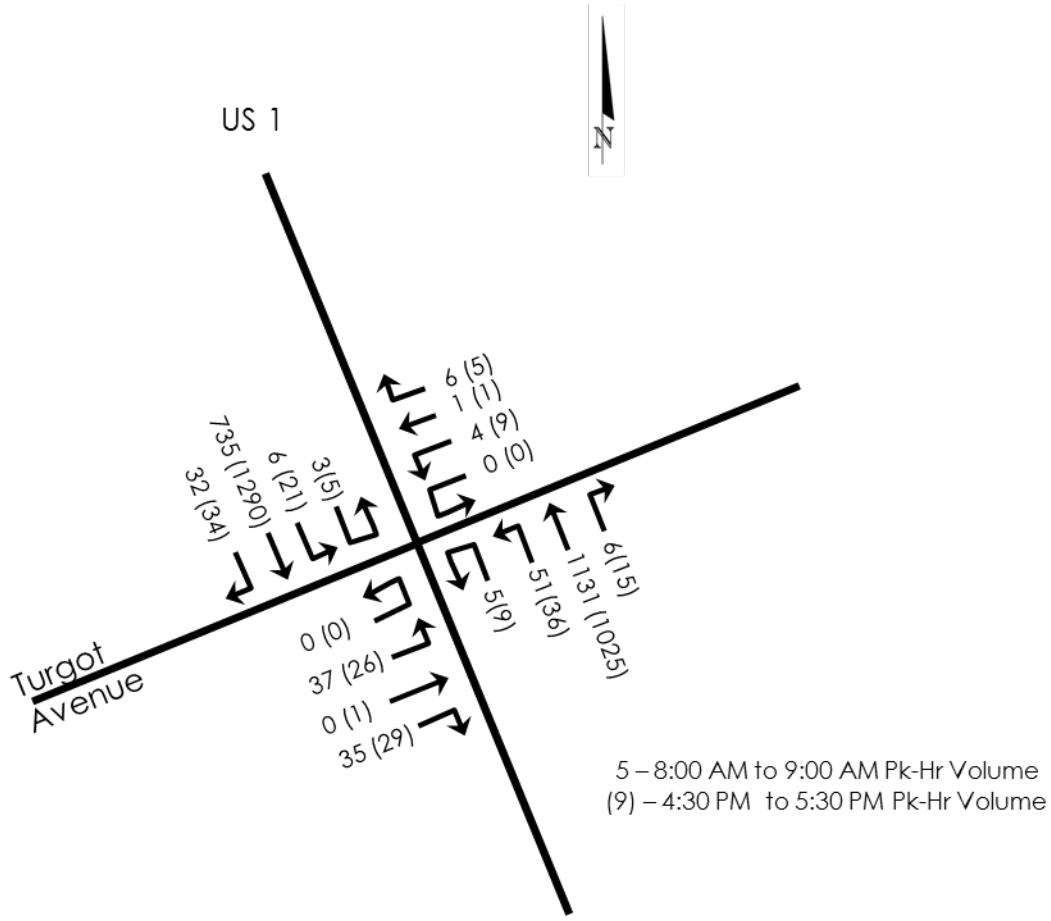
Traffic Volumes

Twenty-four hour weekday approach counts, included in the ***Appendix,*** were conducted at the study intersection on the northbound, southbound, eastbound and westbound approaches. According to these counts, the intersection had a daily traffic volume of 23,921 vehicles that entered the intersection consisting of 926 eastbound vehicles, 215 westbound vehicles; 12,864 northbound vehicles; and 9,916 southbound vehicles.

Based on a review of the twenty-four hour count data, eight (8) hours of manual turning movement counts were collected from 8:00 a.m. to 10:00 a.m., 11:00 a.m. to 1:00 p.m. and from 4:00 p.m. to 8:00 p.m. on a weekday.

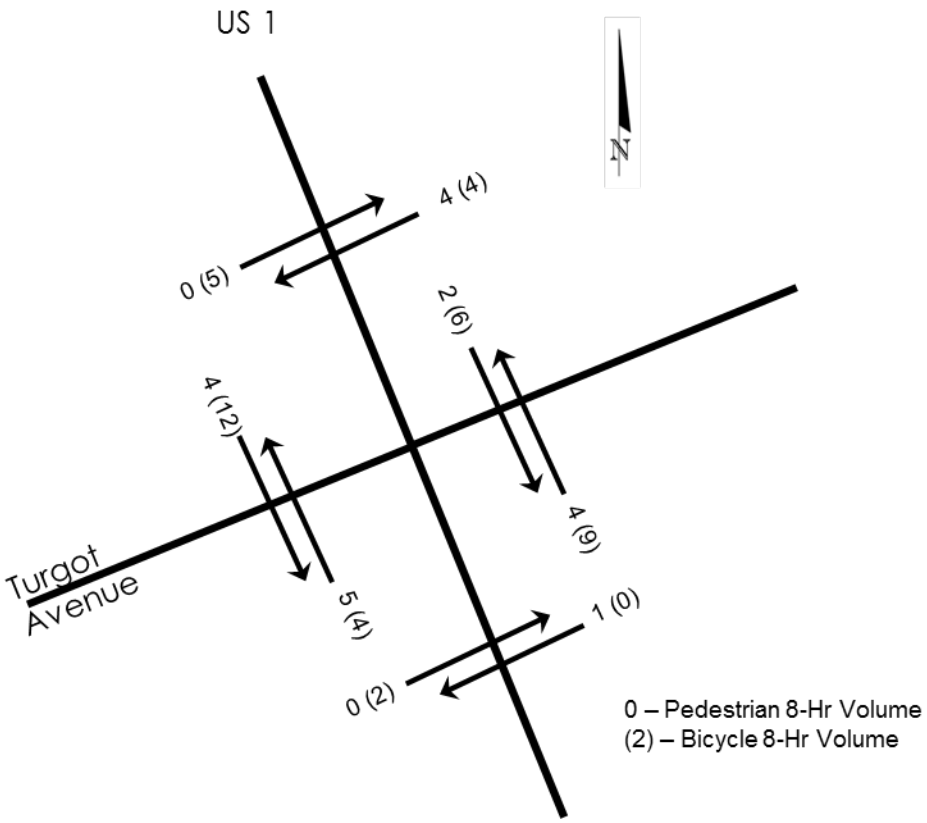
- The intersection morning peak hour occurred from 8:00 a.m. to 9:00 a.m. while the afternoon peak hour occurred from 4:30 p.m. to 5:30 p.m. As summarized below in ***Figure 12***, 2,052 and 2,506 vehicles were counted entering the intersection during the morning and afternoon peak hours, respectively, with the following characteristics:

Figure 12
Summary of Peak-Hour Turning Movements
US 1 at Turgot Avenue



- During the eight (8) hours of manually collected turning movement counts, heavy trucks, which include single unit trucks such as delivery trucks (Class 5 to 7) and tractor-trailer trucks (Class 8 to 15), accounted for approximately 1.1% (184 vehicles) of the traffic passing through the US 1/Turgot Avenue intersection. Of these 184 heavy trucks, 10 heavy trucks travelled on Turgot Avenue over the eight (8) hours.
- As summarized below in ***Figure 13,*** twenty (20) pedestrians and 42 bicyclists were observed traversing the intersection during the eight (8) hours of manually collected turning movement counts. A Pedestrian Movement Summary and a Bicycle Movement Summary are provided in the ***Appendix***.

Figure 13
Summary of Pedestrian and Bicycle Movements (8-hours)
US 1 at Turgot Avenue



- Over the 8-hour turning movement count there were five (5) pedestrians and 11 bicyclists that crossed US 1 in the vicinity of the study intersection. Per FDOT's Traffic Engineering Manual, the pedestrian/bicyclist demand needs to exceed either 20 in a single hour or 60 over four hours for a mid-block crosswalk to be considered.

Collision Data

Crash data for the study intersection for a 60-month period (January 1, 2010 to December 31, 2014) was obtained from the University of Florida's *Signal Four Analytics*. Ten (10) crashes were reported and consisted of the following crash types:

- Two (2) angle;
- Two (2) bicycle;
- Two (2) fixed-object;
- Two (2) rear-end;
- One (1) left-turn; and,
- One (1) right-turn.

- The crashes resulted in zero (0) fatalities, five (5) injuries, and $42,550 in estimated property damage.
- Seven (7) of the crashes occurred during the day and the remaining three (3) occurred at night.
- All ten (10) crashes occurred under dry pavement conditions.
- Two (2) angle crashes occurred as summarized below:
  - A westbound left-turn vehicle failed to yield the right of way, striking a southbound vehicle during the night on dry pavement
  - An eastbound left-turn vehicle failed to yield the right of way, striking a southbound vehicle during the day on dry pavement
- Two (2) bicycle crashes occurred as summarized below:
  - A northbound bicyclist traveling on the west side of US 1, struck an eastbound vehicle that was stopped at the study intersection
  - A northbound bicyclist traveling on the west side of US 1, was struck by an eastbound right-turn vehicle
- When considering Warrant 7 of a signal warrant analysis, zero (0) crashes that are susceptible to correction by the installation of a traffic signal occurred within the most recent 12-month period between January 1, 2014 and December 31, 2014.

A detailed collision summary featuring the crashes is provided in ***Table 2*** and graphically depicted in ***Figure 14***.

Table 2
Collision Summary
US 1 at Turgot Avenue

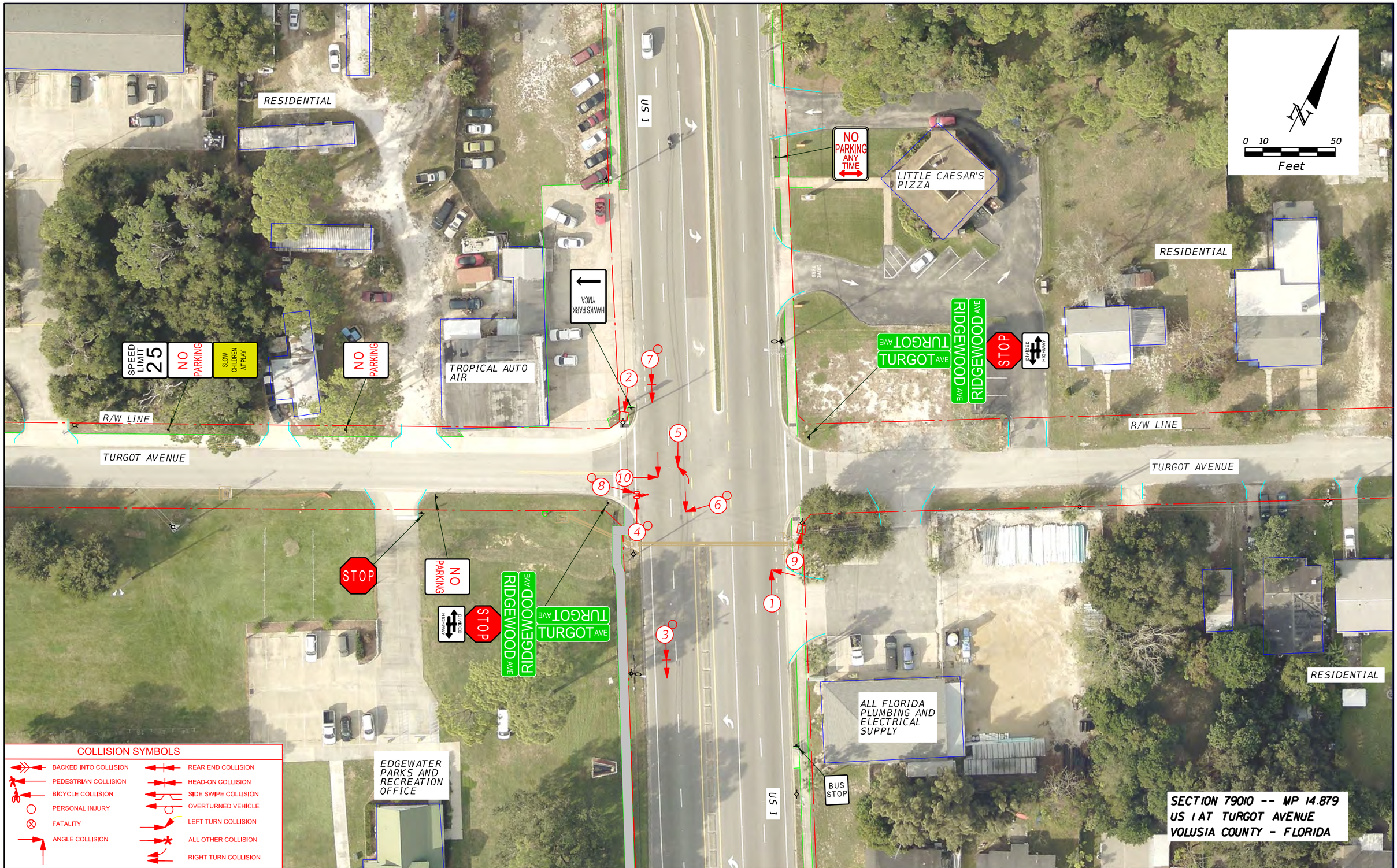
COLLISION SUMMARY												
Section:	**79100**				**State Road:**	**US 1**			**County:**	**Volusia**		
Intersecting route:	**Turgot**				**Milepost:**	**14.879**			**Data by:**	**VP**		
Study period:	**1/1/2010**	**to**	**12/31/2014**						**Date:**	**9/28/2015**		

NO.	DATE	DAY	TIME	FATAL	INJURY	PROPERTY DAMAGE	HARMFUL EVENT	DUI	DAY / NIGHT	WET / DRY	CONTRIBUTING CAUSE
1	02/01/10	Monday	10:51	0	0	$6,000	Right-turn	N	Day	Dry	Blocked vision
2	03/05/10	Friday	0:58	0	0	$10,000	Fixed-Object	Y	Night	Dry	DUI
3	04/06/11	Wednesday	16:09	0	1	$4,000	Rear-End	N	Day	Dry	Careless Driving
4	04/29/11	Friday	14:40	0	1	$0	Bicycle	N	Day	Dry	Bicyclist FTYRW
5	05/13/11	Friday	8:45	0	0	$4,000	Left-Turn	N	Day	Dry	FTYRW
6	07/18/11	Monday	20:06	0	1	$4,500	Angle	N	Night	Dry	FTYRW
7	03/06/12	Tuesday	13:09	0	1	$5,000	Rear-End	N	Day	Dry	Careless Driving
8	02/06/13	Wednesday	14:22	0	1	$50	Bicycle	N	Day	Dry	Bicyclist FTYRW
9	02/23/13	Saturday	0:16	0	0	$8,000	Fixed-Object	N	Night	Dry	Fell Asleep
10	10/04/13	Friday	8:49	0	0	$1,000	Angle	N	Day	Dry	FTYRW
TOTAL				**0**	**5**	**$42,550**					

TOTAL NO.	Fatal	Injury	Property Damage Only	Left-Turn	Rear-End	Bicycle	Fixed-Object	Angle	Side-Swipe	Off-road	Right-turn
10	0	5	5	1	2	2	2	2	0	0	1
Percent	0%	50%	50%	10%	20%	20%	20%	20%	0%	0%	10%

CONTRIB-CAUSE	Day	Night	Pavement Condition			Improper Lane Change	Careless Driving	Bicyclist FTYRW	FTYRW	DUI	Fell Asleep	Blocked vision
			Wet	Dry	?							
Total	7	3	0	10	0	0	2	2	3	1	1	1
Percent	70%	30%	0%	100%	0%	0%	20%	20%	30%	10%	10%	10%

Source: University of Florida's Signal Four Analytics



COLLISION SYMBOLS

- BACKED INTO COLLISION
- PEDESTRIAN COLLISION
- BICYCLE COLLISION
- PERSONAL INJURY
- FATALITY
- ANGLE COLLISION
- REAR END COLLISION
- HEAD-ON COLLISION
- SIDE SWIPE COLLISION
- OVERTURNED VEHICLE
- LEFT TURN COLLISION
- ALL OTHER COLLISION
- RIGHT TURN COLLISION

Symbols:

- Utility Pole
- Traffic Sign
- Luminaire
- Traffic Controller Cabinet
- Ditch Bottom Inlet
- Signal Pole
- Pedestrian Signal Pole
- Mitered End Section

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FIGURE 14
COLLISION DIAGRAM
(1/01/2010 TO 12/31/2014)

Intersection Delay

Intersection delay studies were performed for the northbound left-turn movement on US 1 as well as the eastbound approach on Turgot Avenue. Procedures from the Manual on Uniform Traffic Studies (MUTS) were applied to determine the summarized results presented in ***Table 3***.

Table 3
Summary of Delay Studies
US 1 at Turgot Avenue

Movement	Time	Maximum Queue (Veh)	Average Delay per Vehicle (Sec)	Volume (Veh/Hr)	Total Delay (Veh-Sec)	Total Delay (Veh-Hr)
Northbound Left-Turn	8:00 - 9:00 AM	2	8.1	51	415	0.12
	12:00 - 1:00 PM	4	13.3	30	399	0.12
	7:00 - 8:00 PM	2	9.8	29	285	0.09
Eastbound Approach	8:00 - 9:00 AM	2	15.5	39	606	0.19
	12:00 - 1:00 PM	4	22.5	54	1214	0.34
	7:00 - 8:00 PM	8	21.7	135	2929	0.80

Generally, an average delay in excess of 60 seconds is considered excessive at an unsignalized intersection and what could typically be expected if the intersection were signalized. As shown in ***Table 3***, the average delay for the northbound left-turn movement ranged from 8.1 seconds per vehicle to 13.3 seconds per vehicle and the average delay for the eastbound approach ranged from 15.5 seconds per vehicle to 22.5 seconds per vehicle. This level of delay is less than could be expected if the intersection was signalized.

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QUALITATIVE ASSESSMENT

The intersection of US 1 at Turgot Avenue was observed during the peak hours by a registered professional engineer to assess existing operating conditions and to determine if installing a traffic signal would be potentially beneficial.

Operations:

Based on discussions with Jack Corder of the City of Edgewater's Parks and Recreation Department, there is a concern regarding the intersection at certain times when events/activities have ended and vehicles are leaving the YMCA and Hawk's Park in waves. Of particular note were exiting peaks during the afternoon peak hours as well as during late mornings/early afternoons on the weekends.

- This study focused on the peak hours during the weekday as that is a time that represents the combined impacts of peak exiting times of the YMCA/Hawk's Park and PM peak volumes on US 1.
- Based on the 24-hour approach counts, 8-hour turning movement counts, the 3-hour delay study, and field observations, all of which occurred on four (4) separate days, the peak exiting time from the YMCA/Hawk's Park occurred consistently between 7:00 to 8:00 PM.

Mr. Corder also indicated that a crash had recently occurred nearby the study intersection on US 1, involving a person in a wheelchair that was struck by a vehicle while they crossed US 1. Mr. Corder expressed a desire to have a crosswalk across US 1 at a location along the corridor. However, based on the low pedestrian/bicyclist volume crossing US 1 at the study intersection, field observations, and that there is no trend of bicycle/pedestrian crashes, a mid-block crosswalk is not recommended at the study intersection.

Observations: The following observations were made with respect to the operations of the study intersection:

General observations:

- Northbound and southbound traffic had frequent and large gaps during both the morning and afternoon peak hours.
- Two (2) bicyclists and one (1) pedestrian were observed traveling along the west side of US 1 during the morning peak hour, and three (3) bicyclists were observed traveling along the west side of US 1 during the afternoon peak hour.
- Eastbound and westbound motorists consistently waited for acceptable gaps to turn onto US 1.
- Sight distance is adequate for all motorists traveling in all directions.
- One (1) westbound left-turning vehicle was observed to turn using a two-stage maneuver to enter US 1, first by stopping at the Turgot Avenue stop line and then staging in the median opening prior to turning onto southbound US 1.

Eastbound approach:

- The PM peak-hour at the intersection was from 4:30 to 5:30 PM. The eastbound approaching volume during this same time period is considerably lower (3 to 4 times less) than between 7:00 to 8:00 PM. As a result of this lower volume, eastbound approaching vehicles had no issue turning onto/off of Turgot Avenue.
- Eastbound left-turning movements were predominantly completed using a two-stage maneuver to enter US 1, first by stopping at the Turgot Avenue stop line and then staging in the median opening prior to turning onto northbound US 1. No conflicts or evasive maneuvers were observed.
- The maximum queue for the eastbound left-turn movement was four (4) vehicles during the morning peak hour and fifteen (15) vehicles during the evening (7:00 p.m. to 8:00 p.m.). This queue occurred at a time when activities and events ended at the YMCA/Hawk's Park as there was a clear wave of traffic that arrived at the intersection in a 30-minute interval. The evening queue dissipated relatively quickly without any conflicts or evasive maneuvers.
- Several motorists were observed to roll through the eastbound approach stop line, recognizing an immediate available gap, before performing an eastbound left-turn. No conflicts or evasive maneuvers were observed.
- One eastbound left-turn vehicle, crawling into the intersection, stopped suddenly in the outside southbound lane to yield the right of way to a northbound left-turn vehicle. No conflicts or evasive maneuvers were observed as there was no southbound approaching traffic at the time.
- The median opening is approximately 20 feet wide; however one (1) vehicle (pick-up truck) was observed to stick out onto the southbound lanes by approximately two (2) feet when performing an eastbound left-turn. No conflicts or evasive maneuvers were observed.

Northbound left-turn movement:

- Northbound left-turning vehicles were observed turning without conflict and without excessive delay as there were adequate gaps available in southbound traffic.
- The maximum queue for the northbound left-turn movement was one (1) vehicle during the morning peak hour and two (2) vehicles during the afternoon peak hour.

Safety:

In addition to the collision analysis, the following observations were made with respect to the safety of the study intersection:

- No signs of skid marks, broken glass, plastic, or other indication of a crash were observed at the intersection.

Maintenance:

During the field reviews the condition of the study intersection's asphalt, striping, signing and lighting were observed. The following are observations related to the maintenance of the intersection based on the various field reviews of the intersection:

- The signs, pavement markings, and pavement conditions at the intersection of US 1 and Turgot Avenue are in good condition.

4

IMPROVEMENT ALTERNATIVES

Signal Warrant Analysis:

The intent of the study was to evaluate alternatives to enhance the overall safety and operations of the intersection of US 1 at Turgot Avenue. One of the alternatives evaluated was the installation of a traffic signal in order to reduce intersection delay, queue lengths and reduce angle/left-turn crashes.

The traffic volumes, geometric conditions, and crash data at the intersection were analyzed, summarized, and then compared with the applicable factors in warrants for the installation of a traffic signal contained within the Manual on Uniform Traffic Control Devices (MUTCD 2009) and Manual on Uniform Traffic Studies (MUTS). A traffic signal may be installed if one or more of the warrants are satisfied. Nine (9) traffic signal warrants exist, and are detailed in ***Table 4*** as follows:

Table 4
Explanation of the Nine Signal Warrants
US 1 at Turgot Avenue

Warrant		Notes
1A	**Minimum Vehicular Volume**	This warrant is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal.
1B	**Interruption of Continuous Traffic**	This warrant is intended for application at locations where Condition A is not satisfied and where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.
2	**Four Hour Vehicular Volume**	This warrant is intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal.
3A	**Peak Hour Delay**	This warrant is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street.
3B	**Peak Hour Volume**	This warrant is intenteded for use at a location wheere an unusual traffic generator (factory entrance/exit) exists near the study intersection.
4	**Pedestrian Volume**	This warrant is intended for application where the traffic volume on a major street is so heavy that pedestrians experience excessive delay in crossing the major street.
5	**School Crossing**	This warrant is intended for application where the fact that school children cross the major street is the principal reason to consider installing a traffic control signal.
6	**Coordinated Signal System**	Progressive movement in a coordinated signal system sometimes necessitates installing traffic control signals at intersections where they would not otherwise be needed in order to maintain proper platooning of vehicles.
7	**Crash Experience**	This warrant is intended for application where the severity and frequency of crashes are the principal reasons to consider installing a traffic control signal.
8	**Roadway Network**	Installing a traffic control signal at some intersections might be justified to encourage concentration and organization of traffic flow on a roadway network.
9	**Railroad Crossing**	This warrant is intended for use where the proximity to the intersection of a grade crossing on an intersection approach controlled by a STOP or YIELD sign is the principal reason to consider installing a traffic control signal.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal. A traffic control signal should not be installed if the signal will disrupt progressive traffic flow or unless an engineering study, which based on collected data, signal warrant analysis, field observations and engineering judgement, indicates that installing a traffic control signal will improve the overall safety and/or operation of the intersection.

Upon conducting the Signal Warrant Analysis, the eastbound approach on Turgot Avenue was used as the minor street and the northbound/southbound approaches of US 1 were used as the major street. The minor street was treated as a one-lane approach in the warrant analysis comprising of the eastbound left-turn, through and right-turn movements. For the purposes of the warrant analysis, the major street was treated as a two-lane approach. Based on the critical speed of 45 mph on US 1, the 70% volume criteria were applied to the analysis, which may be used in place of the 100% traffic volumes if the posted speed limit exceeds 40 mph. The 70% traffic volumes are used to determine the minimum volume requirements necessary to satisfy Warrants 1, 2 and 3 as shown in the respective worksheets.

When considering crash history for the signal warrant analysis, the 12-month period from January 1, 2014 to December 31, 2014 was evaluated in order to identify crashes that were susceptible to correction by the installation of a traffic signal.

Warrant 2 (Four-Hour Vehicular Volume) was met for consideration of a traffic signal at the intersection of US 1 and Turgot Avenue. The volume of intersecting traffic from Turgot Avenue (734 vehicles) is only 4.6% of the total intersection traffic (15,775 vehicles). Based on collected data, field observations and engineering judgement the installation of a traffic signal is not recommended because the intersection currently operates safely and efficiently under two-way STOP control, and the installation of a traffic signal would increase intersection delay and the potential for rear-end crashes on US 1 at the intersection. The signal warrant analysis worksheets for the intersection of US 1 and Turgot Avenue are provided starting on page 20. ***Table 5*** summarizes the results of the warrant analysis.

Table 5
Signal Warrant Analysis Summary
US 1 at Turgot Avenue

Warrant		Applicable	Satisfied	Comments
1A	**Minimum Vehicular Volume**	**Yes**	**No**	The minor street traffic volumes meet the 70% requirements of this warrant for one (1) of the eight (8) hours.
1B	**Interruption of Continuous Traffic**	**No**	**N/A**	Minor street motorists do not experience excessive delay of over 60 seconds. Minor street traffic volumes meet the 70% requirements for this warrant for five (5) of eight (8) hours.
2	**Four Hour Vehicular Volume**	**Yes**	**Yes**	The minor street traffic volumes meet the 70% requirements of this warrant for four (4) hours.
3A	**Peak Hour Delay**	**No**	**N/A**	This warrant is not applicable as vehicles were not observed to experience excessive delay of over 60 seconds. One (1) hour meets the 70% requirements of this warrant.
3B	**Peak Hour Volume**	**No**	**N/A**	This warrant is not applicable as no unusual traffic generator exists near the study intersection.
4	**Pedestrian Volume**	**Yes**	**No**	This warrant is not met because pedestrian volumes are well below the requirements for this warrant.
5	**School Crossing**	**No**	**N/A**	This warrant is not applicable as no school zone exists at the intersection.
6	**Coordinated Signal System**	**No**	**N/A**	This warrant is not applicable as this intersection is not within a coordinated signal system.
7	**Crash Experience**	**Yes**	**No**	Zero (0) crashes within a 12-month period are susceptible to correction by a traffic signal.
8	**Roadway Network**	**No**	**N/A**	This warrant is not applicable as this intersection is not considered to be part of a coordinated network.
9	**Railroad Crossing**	**No**	**N/A**	This warrant is not applicable as there is no railroad crossing near the study intersection.

TRAFFIC SIGNAL WARRANT SUMMARY

City: **Edgewater** Engineer: **CW**
County: **Volusia** Date: **October 19, 2015**

Major Street: **US 1** Lanes: **2** Critical Approach Speed: **45**
Minor Street: **Turgot Avenue** Lanes: **1**

Volume Level Criteria

1. Is the critical speed of major street traffic > 70 km/h (40 mph) ? ■ Yes ☐ No
2. Is the intersection in a built-up area of isolated community of <10,000 population? ☐ Yes ■ No

If Question 1 or 2 above is answered "Yes", then use "70%" volume level ■ 70% ☐ 100%

WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

Applicable: ■ Yes ☐ No
Satisfied: ☐ Yes ■ No

Warrant 1 is satisfied if Condition A or Condition B is "100%" satisfied.
Warrant is also satisfied if both Condition A and Condition B are "80%" satisfied.

Condition A - Minimum Vehicular Volume

100% Satisfied: ☐ Yes ■ No
80% / 56% Satisfied: ☐ Yes ■ No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets)				Eight Highest Hours							
Approach Lanes	1		2 or more		800	900	1100	1200	1600	1700	1800	1900
Volume Level	100%	70%	100%	70%								
Both Approaches on Major Street	500 (400)	350 (280)*	600 (480)	420 (336)*	1,969	1,653	1,977	1,923	2,419	2,324	2,045	1,465
Highest Approach on Minor Street	150 (120)	105 (84)*	200 (160)	140 (112)*	72	64	52	52	42	53	67	213

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours . Condition is (80%) / (56%) satisfied if parenthetical volumes are met for eight hours.*

Condition B - Interruption of Continuous Traffic

Condition B is intended for application where the traffic volume is so heavy that traffic on the minor street suffers excessive delay or conflict.

Applicable: ☐ Yes ■ No
Excessive Delay/Conflict: ☐ Yes ■ No
100% Satisfied: ☐ Yes ■ No
80% / 56% Satisfied: ■ Yes ☐ No

(volumes in veh/hr)	Minimum Requirements (80% Shown in Brackets) {56% Shown in Brackets}				Eight Highest Hours							
Approach Lanes	1		2 or more		800	900	1100	1200	1600	1700	1800	1900
Volume Level	100%	70%	100%	70%								
Both Approaches on Major Street	750 (600)	525 (420)*	900 (720)	630 (504)*	1,969	1,653	1,977	1,923	2,419	2,324	2,045	1,465
Highest Approach on Minor Street	75 (60)	53 (42)*	100 (80)	70 (56)*	72	64	52	52	42	53	67	213

Record 8 highest hours and the corresponding volumes in boxes provided. Condition is 100% satisfied if the minimum volumes are met for eight hours . Condition is (80%) / (56%) satisfied if parenthetical volumes are met for eight hours.*

Source: Revised from NCHRP Report 457

TRAFFIC SIGNAL WARRANT SUMMARY

City: **Edgewater** Engineer: **CW**
County: **Volusia** Date: **October 14, 2015**

Major Street: **US 1** Lanes: **2** Critical Approach Speed: **45**
Minor Street: **Turgot Avenue** Lanes: **1**

Volume Level Criteria

1. Is the critical speed of major street traffic > 70 km/h (40 mph) ? ■ Yes ☐ No
2. Is the intersection in a built-up area of isolated community of <10,000 population? ☐ Yes ■ No

If Question 1 or 2 above is answered "Yes", then use "70%" volume level ■ 70% ☐ 100%

WARRANT 2 - FOUR-HOUR VEHICULAR VOLUME

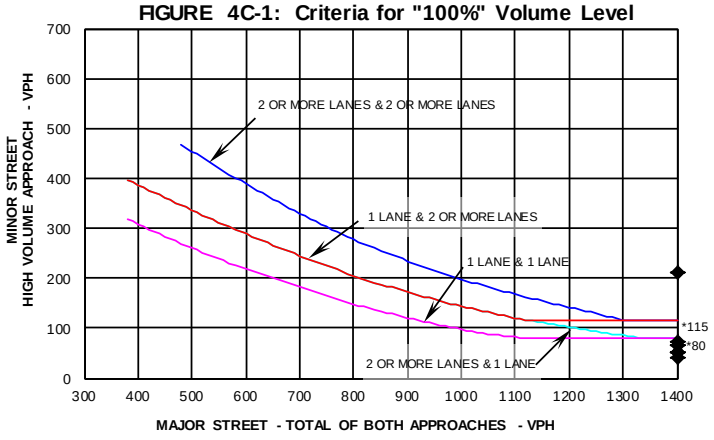
If any four points lie above the appropriate line, then the warrant is satisfied.

Applicable: ■ Yes ☐ No
Satisfied: ■ Yes ☐ No

Plot four volume combinations on the applicable figure below.

Warranting Volumes			Met	
Hour	Major Street	Minor Street	100%	70%
800	1,969	72		■
900	1,653	64		■
1100	1,977	52		
1200	1,923	52		
1600	2,419	42		
1700	2,324	53		
1800	2,045	67		■
1900	1,465	213	■	■

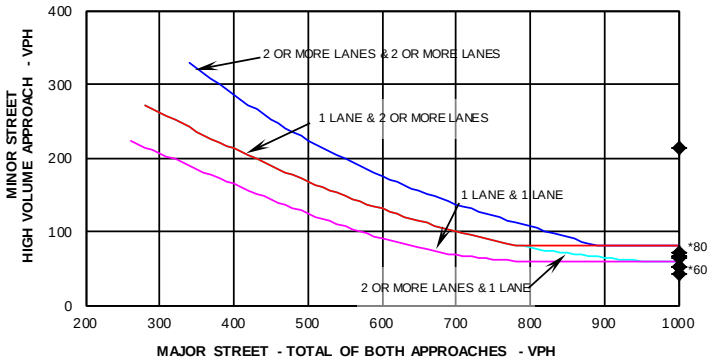
FIGURE 4C-1: Criteria for "100%" Volume Level



** Note: 115 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 80 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

FIGURE 4C-2: Criteria for "70%" Volume Level

(Community Less than 10,000 population or above 70 km/hr (40 mph) on Major Street)



** Note: 80 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 60 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

TRAFFIC SIGNAL WARRANT SUMMARY

City: **Edgewater** Engineer: **CW**
County: **Volusia** Date: **October 27, 2015**

Major Street: **US 1** Lanes: **2** Critical Approach Speed: **45**
Minor Street: **Turgot Avenue** Lanes: **1**

Volume Level Criteria

1. Is the critical speed of major street traffic > 70 km/h (40 mph) ? ■ Yes ☐ No
2. Is the intersection in a built-up area of isolated community of <10,000 population? ☐ Yes ■ No

If Question 1 or 2 above is answered "Yes", then use "70%" volume level ■ 70% ☐ 100%

WARRANT 3 - PEAK HOUR

Applicable: ☐ Yes ■ No
Satisfied: ■ Yes ☐ No

If all three criteria are fullfilled or any of the plotted points lie above the appropriate line, then the warrant is satisfed.

Unusual condition justifying use of warrant:

None

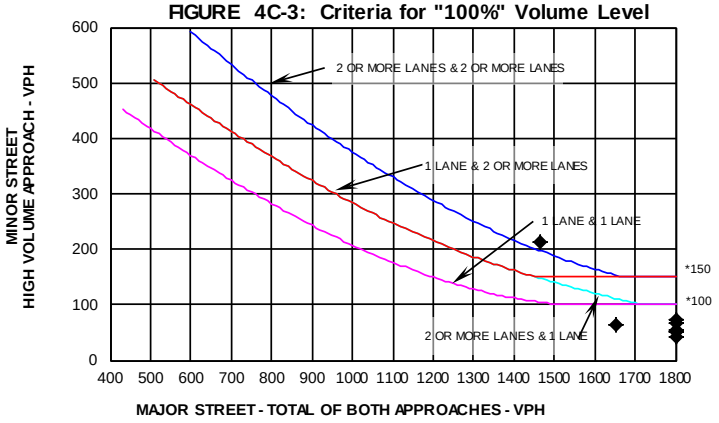
Record hour when criteria are fulfilled and the corresponding delay or volume in boxes provided.

Warranting Volumes			100%	70%
800	1,969	72		
900	1,653	64		
1100	1,977	52		
1200	1,923	52		
1600	2,419	42		
1700	2,324	53		
1800	2,045	67		
1900	1,465	213	■	■

1. Delay on Minor Approach *(vehicle-hours)		
Approach Lanes	1	2
Delay Criteria*	4.0	5.0
Delay*	0.8	0.0
Fulfilled?: ☐ Yes ■ No		
2. Volume on Minor Approach *(vehicles per hour)		
Approach Lanes	1	2
Volume Criteria*	100	150
Volume*	213	0
Fulfilled?: ■ Yes ☐ No		
3. Total Entering Volume *(vehicles per hour)		
No. of Approaches	3	4
Volume Criteria*	650	800
Volume*	0	2,506
Fulfilled?: ■ Yes ☐ No		

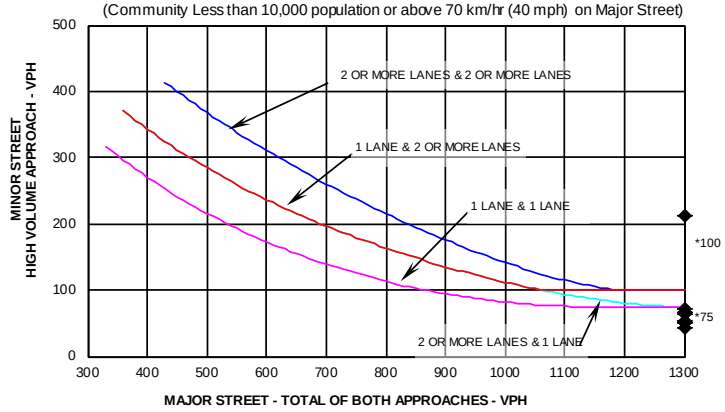
Plot volume combination on the applicable figure below.

FIGURE 4C-3: Criteria for "100%" Volume Level



** Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

FIGURE 4C-4: Criteria for "70%" Volume Level
(Community Less than 10,000 population or above 70 km/hr (40 mph) on Major Street)



** Note: 100 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 75 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

Source: Revised from NCHRP Report 457

TRAFFIC SIGNAL WARRANT SUMMARY

City: **Edgewater** Engineer: **CW**
County: **Volusia** Date: **October 14, 2015**

Major Street: **US 1** Lanes: **2** Critical Approach Speed: **45**
Minor Street: **Turgot Avenue** Lanes: **1**

WARRANT 4 - PEDESTRIAN VOLUME

Applicable: ■ Yes ☐ No
Satisfied: ☐ Yes ■ No

Record hours where criteria are fulfilled and the corresponding volume or gap frequency in the boxes provided. The warrant is satisfied if condition 1 or 2 is fulfilled and condition 3 is fulfilled.

Criteria	Hour	Pedestrian Volume	Pedestrian Gaps	Fulfilled? Yes	Fulfilled? No
1. Pedestrian volume crossing the major street is 100 ped/hr or more for each of any four hours and there are less than 60 gaps per hour in the major street traffic stream of adequate length.	1600	1	0		■
	1700	3	0		
	1800	7	0		
	1900	1	0		
2. Pedestrian volume crossing the major street is 190 ped/hr or more for any one hour and there are less than 60 gaps per hour in the major street traffic stream of adequate length.	1700	18	0		■
3. The nearest traffic signal along the major street is located more than 90 m (300 ft) away, or the nearest signal is within 90 m (300 ft) but the proposed traffic signal will not restrict the progressive movement of traffic.				■	

WARRANT 5 - SCHOOL CROSSING

Applicable: ☐ Yes ■ No
Satisfied: ☐ Yes ■ No

Record hours where criteria are fulfilled and the corresponding volume or gap frequency in the boxes provided. The warrant is satisfied if all three of the criteria are fulfilled.

Criteria				Fulfilled? Yes	Fulfilled? No
1. There are a minimum of 20 students crossing the major street during the highest crossing hour.	Students: 0	Hour: 0			■
2. There are fewer adequate gaps in the major street traffic stream during the period when the children are using the crossing than the number of minutes in the same period		Minutes: 0	Gaps: 0		■
3. The nearest traffic signal along the major street is located more than 90 m (300 ft) away, or the nearest signal is within 90 m (300 ft) but the proposed traffic signal will not restrict the progressive movement of traffic.				■	

WARRANT 6 - COORDINATED SIGNAL SYSTEM

Applicable: ☐ Yes ■ No
Satisfied: ☐ Yes ■ No

Indicate if the criteria are fulfilled in the boxes provided. The warrant is satisfied if either criterion is fulfilled. This warrant should not be applied when the resulting signal spacing would be less than 300 m (1,000 ft).

Criteria	Fulfilled? Yes	Fulfilled? No
1. On a one-way street or a street that has traffic predominately in one direction, the adjacent signals are so far apart that they do not provide the necessary degree of vehicle platooning.		■
2. On a two-way street, adjacent signals do not provide the necessary degree of platooning, and the proposed and adjacent signals will collectively provide a progressive operation.		■

Source: Revised from NCHRP Report 457

TRAFFIC SIGNAL WARRANT SUMMARY

City: **Edgewater** Engineer: **CW**
County: **Volusia** Date: **November 11, 2015**

Major Street: **US 1** Lanes: **2** Critical Approach Speed: **45**
Minor Street: **Turgot Avenue** Lanes: **1**

WARRANT 7 - CRASH EXPERIENCE

Applicable: ■ Yes ☐ No
Satisfied: ☐ Yes ■ No

Record hours where criteria are fulfilled, the corresponding volume, and other information in the boxes provided. The warrant is satisfied if all three of the criteria are fulfilled.

Criteria		Hour	Volume	Met? Yes	Met? No	Fulfilled? Yes	Fulfilled? No
1. One of the warrants to the right is met.	Warrant 1, Condition A (80% satisfied)				■		
	Warrant 1, Condition B (80% satisfied)			■			
	Warrant 4, Pedestrian Volume at 80% of volume requirements: 80 ped/hr for four (4) hours or 152 ped/hr for one (1) hour	1600	1			■	
		1700	2		■		
		1800	6				
		1900	1				
2. Adequate trial of other remedial measure has failed to reduce crash frequency.		Measure tried: None					■
3. Five or more reported crashes, of types susceptible to correction by signal, have occurred within a 12-mo. period.		Number of crashes per 12 months: 0					■

WARRANT 8 - ROADWAY NETWORK

Applicable: ☐ Yes ■ No
Satisfied: ☐ Yes ■ No

Record hours where criteria are fulfilled, and the corresponding volume or other information in the boxes provided. The warrant is satisfied if at least one of the criteria is fulfilled and if all intersecting routes have one or more of the characteristics listed.

Criteria							Met? Yes	Met? No	Fulfilled? Yes	Fulfilled? No
1. Both of the criteria to the right are met.	a. Total entering volume of at least 1,000 veh/hr during a typical weekday peak hour.			Entering Volume: 2,474			■		■	
	b. Five-year projected volumes that satisfy one or more of Warrants 1, 2, or 3.		Warrant:	1	2	3	■			
			Satisfied?:	YES	YES	YES				
2. Total entering volume at least 1,000 veh/hr for each of any 5 hrs of a non-normal business day (Sat. or Sun.)	N/A	N/A	N/A	N/A	N/A	← Hour				■
	N/A	N/A	N/A	N/A	N/A	← Volume				

Characteristics of Major Routes		Met? Yes	Met? No	Fulfilled? Yes	Fulfilled? No
1. Part of the street or highway system that serves as the principal roadway network for through traffic flow.	Major Street:	■			■
	Minor Street:		■		
2. Rural or suburban highway outside of, entering, or traversing a city.	Major Street:	■			
	Minor Street:		■		
3. Appears as a major route on an official plan.	Major Street:	■			
	Minor Street:		■		

CONCLUSIONS

Warrants Satisfied: 2

Remarks:

Source: Revised from NCHRP Report 457

TRAFFIC SIGNAL WARRANT SUMMARY

City: **Edgewater** Engineer: **CW**
County: **Volusia** Date: **October 14, 2015**

Major Street: **US 1**
Minor Street: **Turgot Avenue**

Number of Minor Street Approach Lanes: **0**
Crossing RXR Tracks:
Clear Storage Distance (D) feet:

Applicability Criteria

Is there a railroad grade crossing in the proximity of the intersection? ☐ Yes ■ No

None of the conditions described in the other eight traffic signal warrants are met. ☐ Yes ■ No

Adequate consideration has been given to other alternatives or a trial of an alternative has failed to alleviate the safety concerns associated with the grade crossing. Among the alternatives that were considered or tried are:

A. Providing additional pavement that would enable vehicles to clear the track or that would provide space for an evasive maneuver, or

B. Reassigning the stop controls at the intersection to make the approach across the track a non-stopping approach. ☐ Yes ■ No

Warrant Applicable: ☐ Yes ■ No

WARRANT 9 - INTERSECTION NEAR A GRADE CROSSING

If there is a railroad grade crossing on an approach controlled by a STOP or YIELD sign and the center of the track nearest the intersection is within 140 feet of the stop line or yield line on the approach, and any point lies above the appropriate line, then the warrant is satisfied.

Warrant Satisfied: ☐ Yes ☐ No

Warranting Volumes			Met	
Hour	Major Street	Minor St. Equiv.	1 LN	2 LN
700				
800				
900				
1100				
1400				
1500				
1600				
1700				
		Satisfied		

Adjustment Factor for Daily Frequency of Rail Traffic	
Adjustment Factor for Percentage of High Occupancy Buses	
Adjustment Factor for Percentage of Tractor-Trailer Trucks	

Figure 4C-9. Warrant 9 Intersection Near a Grade Crossing (One Approach Lane at the Track Crossing)

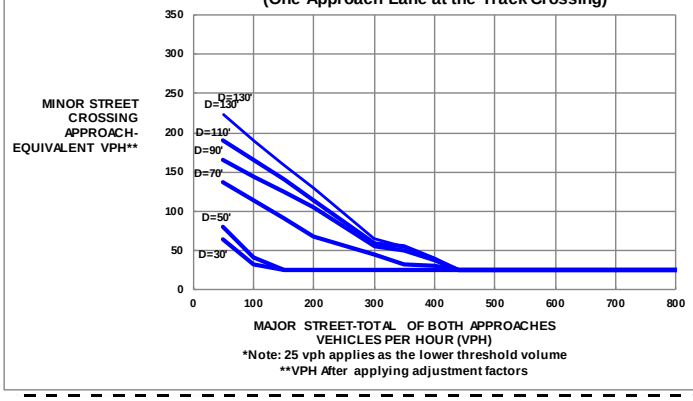
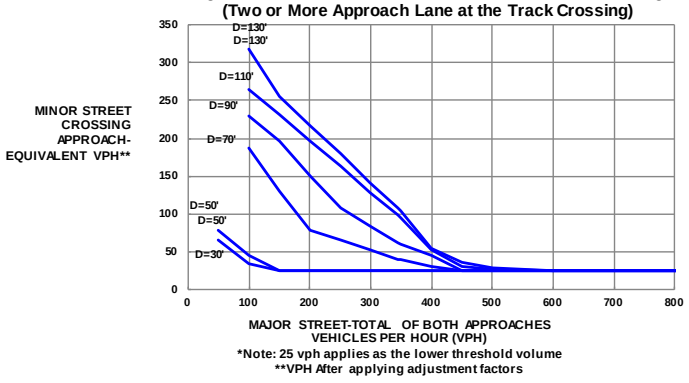


Figure 4C-10. Warrant 9 Intersection Near a Grade Crossing (Two or More Approach Lane at the Track Crossing)



Source: 2009 MUTCD

Eastbound Right-turn Lane:

Another alternative evaluated to enhance the overall safety and operations of the intersection of US 1 at Turgot Avenue was the installation of an eastbound right-turn lane. During the evening peak hour from 7:00 p.m. to 8:00 p.m. at the eastbound approach, fifteen (15) vehicles were observed to be in queue, and an average delay of 21.7 seconds and a maximum delay of 93 seconds were recorded. A Highway Capacity Software (HCS) 2010 analysis was conducted for the existing study intersection and the study intersection with the proposed eastbound right-turn lane. A comparison of the eastbound approach delays for the study intersection with the existing geometry and with the proposed eastbound right-turn lane, during the time periods of 8:00 a.m. to 9:00 a.m., 12:00 p.m. to 1:00 p.m. and 7:00 p.m. to 8:00 p.m., is shown in ***Table 5*** below.

Table 5
Eastbound Approach Delay Comparisons
US 1 at Turgot Avenue

Time	Eastbound Approach Delay with Existing Geometry (sec/veh)	Eastbound Approach Delay with Eastbound Right-Turn Lane (sec/veh)
8:00 - 9:00 AM	29.2	23.9
12:00 - 1:00 PM	21.6	20.0
7:00 - 8:00 PM	75.6	29.3

The installation of an eastbound right-turn lane would therefore reduce delay at the eastbound approach of the study intersection. HCS 2010 results reports are attached in the ***Appendix***.

An improvement concept was developed for the US 1/Turgot Avenue intersection with the additional eastbound right-turn lane (see ***Figure 15***). Based on the HCS analyses as attached, the maximum 95th percentile queue for the eastbound right-turn movement is projected to be less than two vehicles while the maximum queue for the eastbound left-turn movement is approximately four vehicles. Thus, a turn-lane length of 200 feet will adequately accommodate the projected queues. Details of the proposed improvement are provided below:

- Remove existing drop curb and construct an 11-foot wide, 200-foot long eastbound right-turn lane
- Relocate sign(s)
- Install pavement markings with directional arrows
- Reconstruct curb ramp on the southwest corner of the intersection
- Install a detectable warning surface on the southwest corner of the intersection
- Restripe stop bars
- Modify the existing ditch bottom inlet with a new concrete apron to receive runoff from the proposed drop curb
- Adjust the fire hydrant west of the study intersection on the south side of Turgot Avenue
- Reconstruct approximately 25 linear feet of the existing eastbound lane to ensure positive drainage

- Remove an existing curb inlet and construct a new curb inlet with j-bottom on radius return to receive existing 15" CMP. Adjust the guy wires on the overhead utility poles as necessary
- Adjust a manhole to grade west of the study intersection on the south side of Turgot Avenue
- Rebuild the City of Edgewater Park and Recreation office's driveway

The overall improvement costs were estimated based on FDOT historical unit prices. The total cost of the improvements, including engineering and CEI, is estimated at approximately $110,632 and is provided in ***Table 6***. It should be noted that right of way will be needed in the southwest quadrant of the intersection to construct the proposed improvements. The parcel from which right of way will be needed (parcel number 33-17-34-07-02-0010) is owned by the City of Edgewater. Recognizing that Turgot Avenue is a City road, the City of Edgewater will thus need to dedicate a portion of this parcel to become Turgot Avenue right of way.

IMPROVEMENTS:

1. REMOVE EXISTING DROP CURB AND CONSTRUCT 11-FOOT WIDE, 200-FOOT LONG EASTBOUND RIGHT-TURN LANE
2. RELOCATE SIGN(S)
3. INSTALL DIRECTIONAL ARROW
4. INSTALL PAVEMENT MARKINGS
5. INSTALL DETECTABLE WARNING SURFACE
6. RESTRIPE STOP BAR
7. MODIFY EXISTING DITCH BOTTOM INLET WITH A NEW CONCRETE APRON TO RECEIVE RUNOFF FROM PROPOSED DROP CURB. ADJUST FIRE HYDRANT
8. APPROXIMATELY 25 LF OF EXISTING EASTBOUND LANE TO BE RECONSTRUCTED TO ENSURE POSITIVE DRAINAGE
9. REMOVE EXISTING CURB INLET AND CONSTRUCT A NEW CURB INLET WITH J-BOTTOM ON RADIUS RETURN TO RECEIVE EXISTING 15" CMP. ADJUST GUY WIRES TO OVERHEAD UTILITY POLE AS NECESSARY
10. RECONSTRUCT CURB RAMP AND TYPE F CURB AND GUTTER
11. ADJUST MANHOLE TO GRADE
12. REBUILD DRIVEWAY

SECTION 79010 -- MP 14.879
US 1 AT TURGOT AVENUE
VOLUSIA COUNTY - FLORIDA

Symbols:

- Utility Pole
- Traffic Sign
- Luminaire
- Traffic Controller Cabinet
- Ditch Bottom Inlet
- Signal Pole
- Pedestrian Signal Pole
- Mitered End Section

Traffic Engineering Data Solutions, Inc.
80 Spring Vista Drive *Phone: 386.753.0558*
DeBary, FL 32713 *Fax: 386.753.0778*
CERTIFICATION OF AUTHORIZATION # 27392

STATE OF FLORIDA

DEPARTMENT OF TRANSPORTATION

FIGURE 15
IMPROVEMENT DIAGRAM

TABLE 6
ENGINEER'S OPINION OF PROBABLE COSTS
VOLUSIA COUNTY
US 1 AT TURGOT AVENUE

ITEM	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	AMOUNT
I. ROADWAY					
102-1	MOBILIZATION (25%)	1	LS	$12,216.89	$12,216.89
104-10-3	SEDIMENT BARRIER	230	LF	$2.00	$954.38
110-1-1	CLEARING AND GRUBBING	0.151	AC	$29,500.00	$4,454.50
110-4	REMOVAL OF EXISTING CONCRETE PAVEMENT	97	SY	$29.12	$2,814.93
120-1	REGULAR EXCAVATION	112	CY	$12.50	$1,400.00
120-6	EMBANKMENT	22	CY	$12.50	$280.00
160-4	TYPE B STABILIZATION	427	SY	$4.10	$1,751.38
285-709	OPTIONAL BASE,BASE GROUP 04	285	SY	$17.30	$4,926.66
337-7-55	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 82-22 (1.5")	23	TN	$210.00	$4,933.78
425-1549	INLETS, DT BOT, TYPE D, MODIFY	1	EA	$3,163.09	$3,163.09
425-1411	INLETS, CURB TYPE J-1, <10'	1	EA	$7,092.40	$7,092.40
0425-5	MANHOLE, ADJUST	1	EA	$516.12	$516.12
425-6	VALVE BOXES, ADJUST	4	EA	$352.27	$1,409.08
1644-700	FIRE HYDRANT, ADJUST & MODIFY	1	EA	$5,533.00	$5,533.00
0520 1	CONCRETE CURB & GUTTER (DROP CURB)	210	LF	$12.75	$2,677.50
520-1-10	CONCRETE CURB & GUTTER, TYPE F	20	LF	$19.07	$381.40
522-2	SIDEWALK/DRIVEWAY CONCRETE, 6" THICK	66	SY	$45.88	$3,007.69
527-2	DETECTABLE WARNINGS	10	SF	$28.64	$286.40
570-1-2	PERFORMANCE TURF, SOD	218	SY	$2.35	$513.34
				SUBTOTAL	**$58,312.54**
III. SIGNAL					
				SUBTOTAL	**$0.00**
II. SIGNING AND PAVEMENT MARKINGS					
700-1-50	SINGLE POST SIGN, RELOCATE	3	AS	$191.73	$575.19
711-16-111	THERMOPLASTIC, STANDARD-OTHER SURFACES,WHITE, SOLID, 6"	0.1	NM	$5,795.00	$579.50
711-11-123	THERMOPLASTIC, STD, WHITE, SOLID, 12"	105	LF	$4.40	$462.00
711-11-125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24"	38	LF	$5.15	$195.70
711-11-170	THERMOPLASTIC, STANDARD, WHITE, ARROW	4	EA	$95.00	$380.00
711-16-211	THERMOPLASTIC, STANDARD-OTHER SURFACE, YELLOW, SOLID, 6"	0.1	NM	$5,795.00	$579.50
711-17	THERMOPLASTIC, REMOVE	57.0	SF	$4.95	$282.15
				SUBTOTAL	**$2,771.89**
IV. RIGHT OF WAY					
				RIGHT OF WAY	$0.00
				SUBTOTAL	**$0.00**
				SUBTOTAL	$61,084.43
				MAINTENANCE OF TRAFFIC (20%)	$12,216.89
				CONSTRUCTION TOTAL	$73,301.32
				ENGINEERING	$30,000.00
				PECEI (10%)	$7,330.13
				PROJECT TOTAL	**$110,631.45**

Notes:
* Unit Prices from FDOT's 12-Month Moving Statewide Average

5

CONCLUSION

Based on the data collected, signal warrant analysis, field observations and engineering judgement, **it is recommended that a traffic signal not be installed at the intersection of US 1 and Turgot Avenue** in Edgewater (Volusia County), Florida for the following reasons:

- The intersection currently operates safely and efficiently under two-way STOP control.
- The installation of a traffic signal would increase intersection delay.
- The installation of a traffic signal would increase the potential for rear-end crashes on US 1 at the intersection.

However, based on additional analysis it is recommended to construct an eastbound right-turn lane at the study intersection, as depicted in ***Figure 15***. The engineering and construction costs associated with these improvements are estimated at approximately $110,632. It should be noted that right of way will be needed in the southwest quadrant of the intersection to construct the proposed improvements. The parcel from which right of way will be needed is owned by the City of Edgewater. Recognizing that Turgot Avenue is a City road, the City of Edgewater will thus need to dedicate a portion of this parcel to become Turgot Avenue right of way.

APPENDIX

	5 YR INV	SLD REV	BMP	EMP	INV	SLD REV
DATE	12/06/2010	12/16/2010	000.000	032.696		12/18/2014 MR
			000.000	032.696	04/17/2014 DP	05/14/2014 MR
BY	Debbie Prince	Michael Register	000.000	032.696	11/21/2013 DP	12/19/2013 MR

FLORIDA DEPARTMENT OF TRANSPORTATION

STRAIGHT LINE DIAGRAM OF ROAD INVENTORY

SECTION STATUS	INT. or US ROUTE NO.	STATE ROAD NO.	COUNTY	DISTRICT	ROADWAY ID	SHEET NO:
02	US 1	SR 5	VOLUSIA	05	79010000	3 OF 6

ROADWAY FEATURES

12,000 INSIDE CITY, AND URBAN
* EDGEWATER
* PALM COAST-DAYTONA BCH-PT ORAN
*|<=US 1
*|<SR 5
*|<US 1

ROBERTS RD 12,300 | BIANCA RD 12,492 | 12,626 INSIDE CITY, AND URBAN * EDGEWATER * PALM COAST-DAYTONA BCH-PT ORAN * S RIDGEWOOD AVE *|<SR 5 *|<US 1 | ARTHUR AVE 12,839 | ALICE ST 12,905 | JOSEPH DR 12,968 | HOMEPORT TER 12,626 | RANKEN DR 13,058 | OAK BRANCH DR 13,267 | PALM BREEZE DR 13,341 | SIVER CIR 13,412 | 0027 13,452 | PELICAN DR 13,554 | FALCON AVE 13,653 | S RIVERSIDE DR 13,653 | PINE AVE 13,941 | E BOSTON RD 13,941 | SR 442/ W INDIAN RIV 14,178 | ALAMANDA DR 14,233 | E INDIAN RIVER BLVD 14,178 | VIRGINIA ST 14,233 | 5170 | 14,407 | EDGEWATER DR 14,449 | WOLFS DRIFTWOOD CIR 14,315 | WOLFS DRIFTWOOD CIR 14,340 | HARDIN PL 14,449 | RHODE ISLAND ST | W MARION AVE 14,563 | E MARION AVE 14,563 | THOMAS AVE 14,642 | SHANGRI LA DR 14,752 | MAGNOLIA AVE 14,752 | ORANGE AVE 14,828 | COMMUNITY DR 14,935 | LOUISA DR 14,979 | W TURGOT AVE 14,879 | E TURGOT AVE 14,879

LANE WIDTHS ARE AVERAGED

12,000 104,0' - 48,0'
4 - 12,0' RDWY
35,0 VEG MED
4,0' PVD SHLD1 - LT
5,0' PVD SHLD1 - RT
2 - 6,0' LWN SHLD2

14,060 116,0' - 48,0'
4 - 12,0' RDWY
35,0 CB&VEG MED
4,0' PVD SHLD1 - LT
5,0' PVD SHLD1 - RT
2 - 12,0' LWN SHLD2

14,207 116,0' - 48,0'
4 - 12,0' RDWY
35,0 VEG MED
4,0' PVD SHLD1 - LT
5,0' PVD SHLD1 - RT
2 - 12,0' LWN SHLD2

14,768 97,0' - 48,0'
4 - 12,0' RDWY
16,0 TFSP MED
4,0' PVD SHLD1 - LT
5,0' PVD SHLD1 - RT
2 - 12,0' LWN SHLD2

14,839 77,0' - 48,0'
4 - 12,0' RDWY
16,0 TFSP MED
4,0' PVD SHLD1 - LT
5,0' PVD SHLD1 - RT
2 - 2,0' C&G SHLD2

14,883 77,0' - 48,0'
4 - 12,0' RDWY
16,0 CB&VEG MED
4,0' PVD SHLD1 - LT
5,0' PVD SHLD1 - RT
2 - 2,0' C&G SHLD2

ROADWAY COMPOSITION

12,000 28/FC-5
28/FC-5

13,664 28/FC-12.5
28/FC-12.5

HORIZONTAL ALIGNMENT

CURVE DATA NOT FIELD VERIFIED

B=N15°53'41"W(C)
Δ=5°06'00.00" D=1°00'00.00 PC=12,688 PI=12,736 PT=12,784
B=N20°59'41"W
Δ=5°42'00.00" D=1°00'00.00 PC=13,123 PI=13,177 PT=13,231
B=N26°41'41"W(C)
Δ=2°17'00.00" D=0°30'00.00 PC=13,976 PI=14,019 PT=14,062
B=N28°58'41"W(C)
PI=14,614
Δ=0°02'00.00"
B=N29°00'41"W
Δ=0°45'25.00" D=0°20'00.00 PC=14,734 PI=14,749 PT=14,777
Δ=0°45'25.00" D=0°20'00 00 PC=14,777 PI=14,798 PT=14,820
B=N29°00'41"W

STRUCTURE DESCRIPTION

12,203 1 - 18" X 83' CC
12,335 1 - 18" X 83' CC
12,658 1 - 18" X 83' CC
12,876 1 - 18" X 83' CC
13,169 1 - 18" X 83' CC
13,362 1 - 30" X 192' CC
13,719 1 - 18" X 72' CC
13,884 1 - 18" X 72' CC
13,964 1 - 23" X 14" X 58' CC
14,028 1 - 18" X 72' CC
14,098 1 - 18" X 73' CC
14,193 1 - 8' X 8' X 141' CBC
14,363 1 - 18" X 72' CC
14,375 1 - 18" X 76' CC
14,527 1 - 24" X 56' CC

Study Intersection

SIS

FUN CLASS: URBAN PRIN ART OTHER

SPEED LIMIT: 55MPH | 13,500 45MPH | 13,900 45MPH | 14,995 45MPH

AC MAN CLS: ACCESS CLASS03 | ACCESS CLASS03 14,166 | 14,166 ACCESS CLASS05

NHS: 12,000 12,000 12,000 12,000 NHS/MAP-21 PRINCIPAL ARTERIALS

ROADWAY FEATURES

15,000 INSIDE CITY, AND URBAN
* EDGEWATER
* PALM COAST-DAYTONA BCH-PT ORAN
* NEW SMYRNA BEACH
*|<=S RIDGEWOOD AVE
*|<SR 5
*|<US 1

NEW HAMPSHIRE ST 15,147 | HOTEL AVE 15,213 | WOODLEY AVE 15,236 | E CONNECTICUT AVE 15,284 | E OCEAN AVE 15,345 | MERRIMAC ST 15,424 | 5168 15,511 | E PALM WAY 15,538 | E PINE BLUFF ST 15,599 | E PARK AVE 15,659 | 15,659 INSIDE CITY, AND URBAN * EDGEWATER * PALM COAST-DAYTONA BCH-PT ORAN *|<=N RIDGEWOOD AVE *|<SR 5 *|<US 1 | E WILKINSON AVE 15,730 | E LAMONT ST 15,794 | EVERGREEN AVE 16,025 | RIVERVIEW DR 16,117 | RIO VISTA DR 16,233 | NARANGA DR 16,280 | DIXWOOD AVE 16,372 | E YELKCA TER 16,419 | E KNAPP AVE 16,511 | SANCHEZ AVE 16,591 | HAMILTON AVE 16,613 | UNSIGNED 16,624 | 16,663 INSIDE CITY, AND URBAN * NEW SMYRNA BEACH * PALM COAST-DAYTONA BCH-PT ORAN *|<SR 5 *|<US 1 | 6TH ST 17,159 | 4TH ST 17,383 | 3RD ST 17,495 | 2ND ST 17,569 | 1ST ST 17,637 | SMITH ST 17,780 | ANDERSON ST 17,847 | ANDREWS ST 17,916 | 79070003 EB OFF 17,981 | 79070004 WB ON 17,994 | SR 44

LANE WIDTHS ARE AVERAGED

15,000 77,0' - 48,0'
4 - 12,0' RDWY
16,0 CB&VEG MED
4,0' PVD SHLD1 - LT
5,0' PVD SHLD1 - RT
2 - 2,0' C&G SHLD2

15,546 77,0' - 48,0'
4 - 12,0' RDWY
16,0 TFSP MED
4,0' PVD SHLD1 - LT
5,0' PVD SHLD1 - RT
2 - 2,0' C&G SHLD2

15,820 86,0' - 48,0'
4 - 12,0' RDWY
25,0 CB&VEG MED
4,0' PVD SHLD1 - LT
5,0' PVD SHLD1 - RT
2 - 2,0' C&G SHLD2

16,207 77,0' - 48,0'
4 - 12,0' RDWY
16,0 PVD MED
4,0' PVD SHLD1 - LT
5,0' PVD SHLD1 - RT
2 - 2,0' C&G SHLD2

16,300 77,0' - 48,0'
4 - 12,0' RDWY
16,0 CB&VEG MED
4,0' PVD SHLD1 - LT
5,0' PVD SHLD1 - RT
2 - 2,0' C&G SHLD2

16,476 77,0' - 48,0'
4 - 12,0' RDWY
16,0 TFSP MED
4,0' PVD SHLD1 - LT
5,0' PVD SHLD1 - RT
2 - 2,0' C&G SHLD2

16,853 81,0' - 48,0'
4 - 12,0' RDWY
20,0 CB&VEG MED
4,0' PVD SHLD1 - LT
5,0' PVD SHLD1 - RT
2 - 2,0' C&G SHLD2

17,000 81,0' - 48,0'
4 - 12,0' RDWY
20,0 CB&VEG MED
2 - 2,0' PVD INSHLD1
4,0' PVD SHLD1 - LT
5,0' PVD SHLD1 - RT
2 - 2,0' C&G SHLD2

ROADWAY COMPOSITION

15,000 28/FC-12.5
28/FC-12.5

15,847 28/FC-12.5
28/FC-12.5

HORIZONTAL ALIGNMENT

CURVE DATA NOT FIELD VERIFIED

B=N29°00'41"W
Δ=1°18'00.00"
PI=15,276
B=N23°53'41"W
PI=15,418
Δ=1°18'00.00"
B=N22°35'41"W(C)
Δ=37°20'00.00" D=4°00'00.00 PC=16,538 PI=16,629 PT=16,714
B=N59°55'41"W
PC=16,828 PI=16,953 PT=17,063
Δ=37°55'00.00" D=3°00'00.00
B=N22°00'41"W
PC=17,440 PI=17,479 PT=17,512
Δ=25°58'00.00" D=6°30'00.00
Δ=25°58'00.00" D=6°30'00.00 PC=17,512 PI=17,554 PT=17,591
B=N22°00'41"W
Δ=21°00'00.00" D=4°00' PC=17,703 PI=17,753 PT=17,803
PC=17,803 PI=17,856 PT=17,908
Δ=21°30'00.00" D=3°51'
B=N21°29'41"W

STRUCTURE DESCRIPTION

16,637 16,645 #0117 42.2' CB
16,859 1 - 30" X 289' CC
17,981 17,994 #0128 68.6' UP

SIS

FUN CLASS: URBAN PRIN ART OTHER

SPEED LIMIT: 15,000 15,000 15,000 15,000 45MPH | 15,580 45MPH | 15,740 45MPH | 16,550 40MPH | 16,636 40MPH | 17,620 35MPH

AC MAN CLS: ACCESS CLASS05

NHS: 15,000 15,000 NHS/MAP-21 PRINCIPAL ARTERIALS

Version: 1.4.2.24 11/22/2014

US 1 & Turgot Avenue

24 Hour Approach Counts

TIME	North	South	East	West	Total
1:00	43	48	1	1	93
2:00	30	26	4	2	62
3:00	24	23	1	0	48
4:00	47	34	3	1	85
5:00	84	65	2	0	151
6:00	190	104	6	2	302
7:00	578	171	28	5	782
8:00	1168	447	32	5	1652
9:00	996	421	53	22	1492
10:00	832	468	56	14	1370
11:00	843	482	57	14	1396
12:00	850	725	46	17	1638
13:00	779	676	59	6	1520
14:00	842	595	39	7	1483
15:00	896	767	24	17	1704
16:00	863	881	55	17	1816
17:00	989	942	57	14	2002
18:00	1030	914	66	19	2029
19:00	693	684	179	16	1572
20:00	382	610	109	10	1111
21:00	321	365	29	13	728
22:00	164	242	7	5	418
23:00	150	139	10	4	303
24:00	70	87	3	4	164
	12864	**9916**	**926**	**215**	

FLORIDA DEPARTMENT OF TRANSPORTATION

SUMMARY OF VEHICLE MOVEMENTS

SECTION 79010 **CITY** Edgewater **COUNTY** Volusia

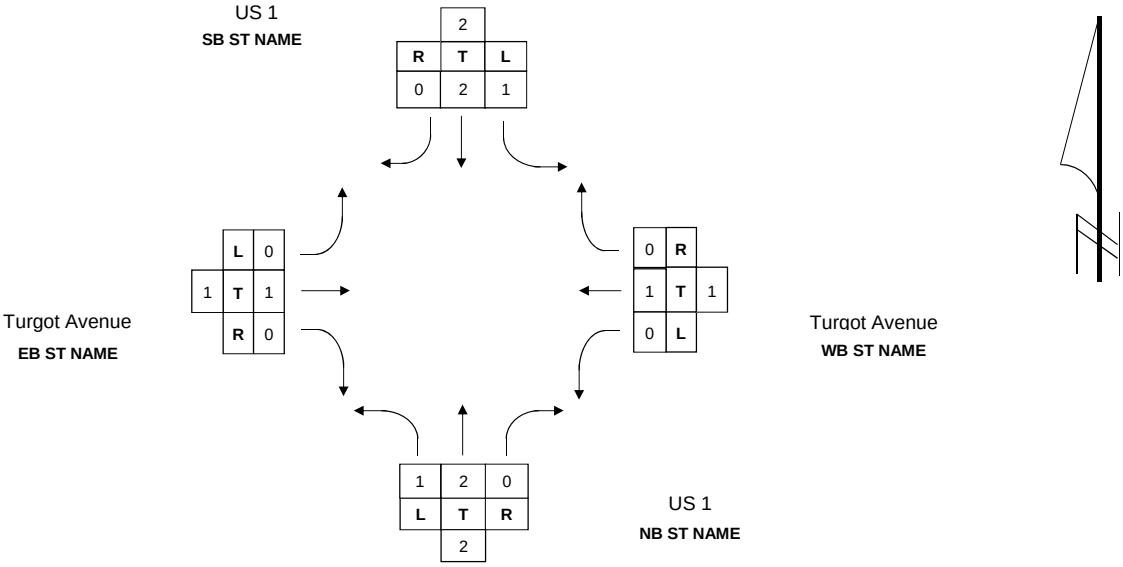
STATE ROUTE US 1 **INTERSECTING ROUTE** Turgot Avenue

OBSERVER AK **DATE** 9/30/2015 **MILEPOST**

WEATHER Sunny **ROAD CONDITION** Good

REMARKS

FORM COMPLETED BY PHF **DATE** 10/06/15



TIME	NORTHBOUND					SOUTHBOUND					TOTAL	EASTBOUND					WESTBOUND					TOTAL
BEGIN/END	L	T	R	U	TOT	L	T	R	U	TOT	N/S	L	T	R	U	TOT	L	T	R	U	TOT	E/W
8 - 9	51	1131	6	5	**1193**	6	735	32	3	**776**	**1969**	37	0	35	0	**72**	4	1	6	0	**11**	**83**
9 - 10	20	923	7	5	**955**	16	665	16	1	**698**	**1653**	25	2	37	0	**64**	5	2	14	0	**21**	**85**
11 - 12	27	946	6	19	**998**	14	943	14	8	**979**	**1977**	28	0	24	0	**52**	11	0	7	0	**18**	**70**
12 - 1	8	947	3	7	**965**	18	915	20	5	**958**	**1923**	22	0	30	0	**52**	6	1	8	0	**15**	**67**
4 - 5	37	1045	10	6	**1098**	17	1271	28	5	**1321**	**2419**	17	2	23	0	**42**	5	0	8	0	**13**	**55**
5 - 6	74	963	15	12	**1064**	14	1182	59	5	**1260**	**2324**	23	3	27	0	**53**	11	4	5	0	**20**	**73**
6 - 7	127	786	12	11	**936**	22	1003	78	6	**1109**	**2045**	29	0	38	0	**67**	3	1	8	0	**12**	**79**
7 - 8	22	568	10	5	**605**	16	805	35	4	**860**	**1465**	82	3	128	0	**213**	8	0	1	0	**9**	**222**
TOTAL	**366**	**7309**	**69**	**70**	**7814**	**123**	**7519**	**282**	**37**	**7961**	**15775**	**263**	**10**	**342**	**0**	**615**	**53**	**9**	**57**	**0**	**119**	**734**

FLORIDA DEPARTMENT OF TRANSPORTATION

PEDESTRIAN MOVEMENT SUMMARY

SECTION 79010 **CITY** Edgewater **COUNTY** Volusia
STATE ROUTE US 1 **INTERSECTING ROUTE** Turgot Avenue
OBSERVER AK **DATE** 9/30/2015

REMARKS

FORM COMPLETED BY PHF **DATE** 10/06/15

US 1
SB ST NAME

8 - 9	9 - 10	11 - 12	12 - 1	4 - 5	5 - 6	6 - 7	7 - 8	Total
0	0	0	1	0	1	1	1	**4**
0	0	0	0	0	0	0	0	**0**
0	**0**	**0**	**1**	**0**	**1**	**1**	**1**	**4**

8 - 9	1	0	**1**
9 - 10	0	0	**0**
11 - 12	0	0	**0**
12 - 1	0	0	**0**
4 - 5	1	0	**1**
5 - 6	1	3	**4**
6 - 7	0	1	**1**
7 - 8	1	1	**2**
Total	**4**	**5**	**9**

Turgot Avenue
EB ST NAME

8 - 9	0	0	**0**
9 - 10	0	0	**0**
11 - 12	0	0	**0**
12 - 1	0	0	**0**
4 - 5	0	0	**0**
5 - 6	1	3	**4**
6 - 7	1	1	**2**
7 - 8	0	0	**0**
Total	**2**	**4**	**6**

Turgot AVenue
WB ST NAME

8 - 9	9 - 10	11 - 12	12 - 1	4 - 5	5 - 6	6 - 7	7 - 8	Total
0	0	0	0	0	1	0	0	**1**
0	0	0	0	0	0	0	0	**0**
0	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**

US 1
NB ST NAME

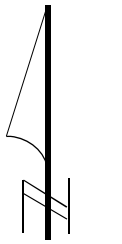
FLORIDA DEPARTMENT OF TRANSPORTATION

BICYCLE MOVEMENT SUMMARY

SECTION 79010 **CITY** Edgewater **COUNTY** Volusia
STATE ROUTE US 1 **INTERSECTING ROUTE** Turgot Avenue
OBSERVER AK **DATE** 9/30/2015

REMARKS

FORM COMPLETED BY PHF **DATE** 10/06/15



US 1
SB ST NAME

8 - 9	9 - 10	11 - 12	12 - 1	4 - 5	5 - 6	6 - 7	7 - 8	Total
2	0	0	0	0	1	1	0	**4**
0	1	0	0	1	0	3	0	**5**
2	**1**	**0**	**0**	**1**	**1**	**4**	**0**	**9**

8 - 9	2	1	**3**
9 - 10	0	1	**1**
11 - 12	1	0	**1**
12 - 1	3	1	**4**
4 - 5	2	1	**3**
5 - 6	2	0	**2**
6 - 7	1	0	**1**
7 - 8	1	0	**1**
Total	**12**	**4**	**16**

Turgot Avenue
EB ST NAME

8 - 9	0	0	**0**
9 - 10	1	1	**2**
11 - 12	0	0	**0**
12 - 1	0	2	**2**
4 - 5	2	0	**2**
5 - 6	1	4	**5**
6 - 7	0	0	**0**
7 - 8	2	2	**4**
Total	**6**	**9**	**15**

Turgot Avenue
WB ST NAME

8 - 9	9 - 10	11 - 12	12 - 1	4 - 5	5 - 6	6 - 7	7 - 8	Total
0	0	0	0	0	0	0	0	**0**
0	0	0	0	0	0	2	0	**2**
0	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**

US 1
NB ST NAME

File Name : Not Named 1
Site Code : 00000000
Start Date : 9/30/2015
Page No : 1

Groups Printed- All Vehicles

	US 1 Northbound					US 1 Southbound					TURGOT AVE Eastbound					TURGOT AVE Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
08:00 AM	14	288	1	0	303	2	183	6	0	191	4	0	7	0	11	1	0	0	0	1	506
08:15 AM	11	281	1	0	293	3	161	5	0	169	7	0	6	0	13	1	1	2	0	4	479
08:30 AM	7	283	3	0	293	2	204	6	1	213	8	0	5	0	13	1	0	4	0	5	524
08:45 AM	24	279	1	0	304	2	187	15	0	204	18	0	17	0	35	1	0	0	0	1	544
Total	56	1131	6	0	1193	9	735	32	1	777	37	0	35	0	72	4	1	6	0	11	2053
09:00 AM	11	203	0	0	214	2	166	3	0	171	11	0	12	0	23	2	2	2	0	6	414
09:15 AM	3	237	2	0	242	5	151	2	0	158	4	0	5	0	9	1	0	1	0	2	411
09:30 AM	6	200	3	0	209	3	167	3	0	173	3	1	3	0	7	1	0	4	0	5	394
09:45 AM	5	283	2	0	290	7	181	8	0	196	7	1	17	0	25	1	0	7	0	8	519
Total	25	923	7	0	955	17	665	16	0	698	25	2	37	0	64	5	2	14	0	21	1738
*** BREAK ***																					
11:00 AM	12	215	4	0	231	3	214	4	0	221	2	0	2	0	4	3	0	1	0	4	460
11:15 AM	12	253	1	0	266	6	223	0	0	229	16	0	10	0	26	2	0	1	0	3	524
11:30 AM	7	221	1	0	229	9	228	4	0	241	5	0	6	0	11	1	0	3	0	4	485
11:45 AM	15	257	0	0	272	4	278	6	0	288	5	0	6	0	11	5	0	2	0	7	578
Total	46	946	6	0	998	22	943	14	0	979	28	0	24	0	52	11	0	7	0	18	2047
12:00 PM	4	199	1	0	204	8	226	7	0	241	7	0	4	0	11	2	1	1	0	4	460
12:15 PM	2	234	1	0	237	4	218	4	0	226	2	0	10	0	12	1	0	1	0	2	477
12:30 PM	2	263	1	0	266	6	221	4	0	231	6	0	8	0	14	2	0	3	0	5	516
12:45 PM	7	251	0	0	258	5	250	5	0	260	7	0	8	0	15	1	0	3	1	5	538
Total	15	947	3	0	965	23	915	20	0	958	22	0	30	0	52	6	1	8	1	16	1991
*** BREAK ***																					
04:00 PM	17	265	1	0	283	2	327	7	0	336	2	1	7	0	10	2	0	4	0	6	635
04:15 PM	4	242	2	0	248	5	285	8	0	298	3	1	3	0	7	1	0	2	0	3	556
04:30 PM	9	275	3	0	287	7	329	4	0	340	4	0	6	0	10	0	0	1	0	1	638
04:45 PM	13	263	4	0	280	8	330	9	1	348	8	0	7	0	15	2	0	1	0	3	646
Total	43	1045	10	0	1098	22	1271	28	1	1322	17	2	23	0	42	5	0	8	0	13	2475
05:00 PM	13	241	2	0	256	4	315	7	2	328	7	0	6	0	13	5	1	2	0	8	605
05:15 PM	10	246	6	1	263	7	316	14	0	337	7	1	10	0	18	2	0	1	0	3	621
05:30 PM	14	256	4	0	274	4	290	18	2	314	6	2	6	1	15	1	1	2	1	5	608
05:45 PM	49	220	3	3	275	4	261	20	0	285	3	0	5	0	8	3	2	0	0	5	573
Total	86	963	15	4	1068	19	1182	59	4	1264	23	3	27	1	54	11	4	5	1	21	2407
06:00 PM	50	201	2	2	255	7	308	32	1	348	5	0	8	0	13	1	0	3	0	4	620
06:15 PM	32	197	2	0	231	4	238	24	0	266	10	0	9	0	19	0	0	1	0	1	517
06:30 PM	29	168	4	0	201	8	232	8	0	248	9	0	9	0	18	1	1	1	1	4	471
06:45 PM	27	220	4	0	251	9	225	14	0	248	5	0	12	0	17	1	0	3	0	4	520
Total	138	786	12	2	938	28	1003	78	1	1110	29	0	38	0	67	3	1	8	1	13	2128
07:00 PM	9	165	2	0	176	6	201	8	0	215	24	1	35	0	60	0	0	0	0	0	451
07:15 PM	6	149	3	0	158	5	211	13	0	229	33	1	45	0	79	3	0	0	1	4	470
07:30 PM	5	125	4	0	134	5	184	9	1	199	12	0	25	0	37	2	0	1	0	3	373
07:45 PM	7	129	1	0	137	4	209	5	1	219	13	1	23	0	37	3	0	0	0	3	396
Total	27	568	10	0	605	20	805	35	2	862	82	3	128	0	213	8	0	1	1	10	1690
Grand Total	436	7309	69	6	7820	160	7519	282	9	7970	263	10	342	1	616	53	9	57	4	123	16529
Apprch %	5.6	93.5	0.9	0.1		2	94.3	3.5	0.1		42.7	1.6	55.5	0.2		43.1	7.3	46.3	3.3		
Total %	2.6	44.2	0.4	0	47.3	1	45.5	1.7	0.1	48.2	1.6	0.1	2.1	0	3.7	0.3	0.1	0.3	0	0.7	

File Name : Not Named 1
Site Code : 00000000
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Groups Printed- All Vehicles

	US 1 Northbound					US 1 Southbound					TURGOT AVE Eastbound					TURGOT AVE Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 08:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	14	288	1	0	303	2	183	6	0	191	4	0	7	0	11	1	0	0	0	1	506
08:15 AM	11	281	1	0	293	3	161	5	0	169	7	0	6	0	13	1	1	2	0	4	479
08:30 AM	7	283	3	0	293	2	204	6	1	213	8	0	5	0	13	1	0	4	0	5	524
08:45 AM	24	279	1	0	304	2	187	15	0	204	18	0	17	0	35	1	0	0	0	1	544
Total Volume	56	1131	6	0	1193	9	735	32	1	777	37	0	35	0	72	4	1	6	0	11	2053
% App. Total	4.7	94.8	0.5	0		1.2	94.6	4.1	0.1		51.4	0	48.6	0		36.4	9.1	54.5	0		
PHF	.583	.982	.500	.000	.981	.750	.901	.533	.250	.912	.514	.000	.515	.000	.514	1.00	.250	.375	.000	.550	.943
Peak Hour Analysis From 08:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	08:00 AM					08:00 AM					08:15 AM					09:00 AM					
+0 mins.	14	288	1	0	303	2	183	6	0	191	7	0	6	0	13	2	2	2	0	6	
+15 mins.	11	281	1	0	293	3	161	5	0	169	8	0	5	0	13	1	0	1	0	2	
+30 mins.	7	283	3	0	293	2	204	6	1	213	18	0	17	0	35	1	0	4	0	5	
+45 mins.	24	279	1	0	304	2	187	15	0	204	11	0	12	0	23	1	0	7	0	8	
Total Volume	56	1131	6	0	1193	9	735	32	1	777	44	0	40	0	84	5	2	14	0	21	
% App. Total	4.7	94.8	0.5	0		1.2	94.6	4.1	0.1		52.4	0	47.6	0		23.8	9.5	66.7	0		
PHF	.583	.982	.500	.000	.981	.750	.901	.533	.250	.912	.611	.000	.588	.000	.600	.625	.250	.500	.000	.656	
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:00 AM																					
11:00 AM	12	215	4	0	231	3	214	4	0	221	2	0	2	0	4	3	0	1	0	4	460
11:15 AM	12	253	1	0	266	6	223	0	0	229	16	0	10	0	26	2	0	1	0	3	524
11:30 AM	7	221	1	0	229	9	228	4	0	241	5	0	6	0	11	1	0	3	0	4	485
11:45 AM	15	257	0	0	272	4	278	6	0	288	5	0	6	0	11	5	0	2	0	7	578
Total Volume	46	946	6	0	998	22	943	14	0	979	28	0	24	0	52	11	0	7	0	18	2047
% App. Total	4.6	94.8	0.6	0		2.2	96.3	1.4	0		53.8	0	46.2	0		61.1	0	38.9	0		
PHF	.767	.920	.375	.000	.917	.611	.848	.583	.000	.850	.438	.000	.600	.000	.500	.550	.000	.583	.000	.643	.885
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	11:00 AM					11:15 AM					11:15 AM					11:00 AM					
+0 mins.	12	215	4	0	231	6	223	0	0	229	16	0	10	0	26	3	0	1	0	4	
+15 mins.	12	253	1	0	266	9	228	4	0	241	5	0	6	0	11	2	0	1	0	3	
+30 mins.	7	221	1	0	229	4	278	6	0	288	5	0	6	0	11	1	0	3	0	4	
+45 mins.	15	257	0	0	272	8	226	7	0	241	7	0	4	0	11	5	0	2	0	7	
Total Volume	46	946	6	0	998	27	955	17	0	999	33	0	26	0	59	11	0	7	0	18	
% App. Total	4.6	94.8	0.6	0		2.7	95.6	1.7	0		55.9	0	44.1	0		61.1	0	38.9	0		
PHF	.767	.920	.375	.000	.917	.750	.859	.607	.000	.867	.516	.000	.650	.000	.567	.550	.000	.583	.000	.643	
Peak Hour Analysis From 02:00 PM to 07:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	9	275	3	0	287	7	329	4	0	340	4	0	6	0	10	0	0	1	0	1	638
04:45 PM	13	263	4	0	280	8	330	9	1	348	8	0	7	0	15	2	0	1	0	3	646
05:00 PM	13	241	2	0	256	4	315	7	2	328	7	0	6	0	13	5	1	2	0	8	605
05:15 PM	10	246	6	1	263	7	316	14	0	337	7	1	10	0	18	2	0	1	0	3	621
Total Volume	45	1025	15	1	1086	26	1290	34	3	1353	26	1	29	0	56	9	1	5	0	15	2510
% App. Total	4.1	94.4	1.4	0.1		1.9	95.3	2.5	0.2		46.4	1.8	51.8	0		60	6.7	33.3	0		
PHF	.865	.932	.625	.250	.946	.813	.977	.607	.375	.972	.813	.250	.725	.000	.778	.450	.250	.625	.000	.469	.971
Peak Hour Analysis From 02:00 PM to 07:45 PM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	04:00 PM					04:30 PM					07:00 PM					05:00 PM					
+0 mins.	17	265	1	0	283	7	329	4	0	340	24	1	35	0	60	5	1	2	0	8	
+15 mins.	4	242	2	0	248	8	330	9	1	348	33	1	45	0	79	2	0	1	0	3	
+30 mins.	9	275	3	0	287	4	315	7	2	328	12	0	25	0	37	1	1	2	1	5	
+45 mins.	13	263	4	0	280	7	316	14	0	337	13	1	23	0	37	3	2	0	0	5	
Total Volume	43	1045	10	0	1098	26	1290	34	3	1353	82	3	128	0	213	11	4	5	1	21	
% App. Total	3.9	95.2	0.9	0		1.9	95.3	2.5	0.2		38.5	1.4	60.1	0		52.4	19	23.8	4.8		
PHF	.632	.950	.625	.000	.956	.813	.977	.607	.375	.972	.621	.750	.711	.000	.674	.550	.500	.625	.250	.656	

File Name : TMC
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Groups Printed- Heavy Trucks

	US 1 Northbound					US 1 Southbound					TURGOT AVE Eastbound					TURGOT AVE Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
08:00 AM	0	3	0	0	3	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	11
08:15 AM	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
08:30 AM	0	3	0	0	3	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	4
08:45 AM	0	1	0	0	1	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	5
Total	0	14	0	0	14	0	13	0	0	13	0	0	0	0	0	0	0	0	0	0	27
09:00 AM	0	3	0	0	3	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	7
09:15 AM	0	4	0	0	4	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	7
09:30 AM	0	4	0	0	4	0	3	0	0	3	0	0	0	0	0	0	0	1	0	1	8
09:45 AM	0	5	0	0	5	1	6	0	0	7	0	0	0	0	0	0	0	0	0	0	12
Total	0	16	0	0	16	1	16	0	0	17	0	0	0	0	0	0	0	1	0	1	34
*** BREAK ***																					
11:00 AM	0	1	0	0	1	0	3	0	0	3	0	0	0	0	0	0	0	1	0	1	5
11:15 AM	0	2	0	0	2	1	5	0	0	6	0	0	0	0	0	0	0	0	0	0	8
11:30 AM	0	4	0	0	4	1	4	0	0	5	0	0	0	0	0	0	0	0	0	0	9
11:45 AM	0	6	0	0	6	0	2	1	0	3	0	0	0	0	0	1	0	0	0	1	10
Total	0	13	0	0	13	2	14	1	0	17	0	0	0	0	0	1	0	1	0	2	32
12:00 PM	0	3	0	0	3	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	6
12:15 PM	0	2	0	0	2	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	6
12:30 PM	1	4	0	0	5	0	5	0	0	5	0	0	2	0	2	0	0	0	0	0	12
12:45 PM	0	4	0	0	4	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	10
Total	1	13	0	0	14	0	18	0	0	18	0	0	2	0	2	0	0	0	0	0	34
*** BREAK ***																					
04:00 PM	0	4	0	0	4	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	5
04:15 PM	0	10	0	0	10	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	11
04:30 PM	0	3	0	0	3	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	7
04:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	17	0	0	17	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	24
05:00 PM	0	2	0	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	4
05:15 PM	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3
05:30 PM	0	4	0	0	4	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	6
05:45 PM	0	2	0	1	3	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	4
Total	0	10	0	1	11	0	2	0	3	5	0	0	0	1	1	0	0	0	0	0	17
06:00 PM	0	2	0	1	3	0	1	0	1	2	0	0	0	0	0	0	0	0	0	0	5
06:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
06:30 PM	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
06:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	8	0	1	9	0	1	0	1	2	0	0	0	0	0	0	0	0	0	0	11
07:00 PM	0	4	0	0	4	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	7
07:15 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
07:30 PM	0	2	0	0	2	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	3
07:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	7	0	0	7	0	5	0	1	6	0	0	0	0	0	0	0	0	0	0	13
Grand Total	1	98	0	2	101	3	76	1	5	85	0	0	2	1	3	1	0	2	0	3	192
Apprch %	1	97	0	2		3.5	89.4	1.2	5.9		0	0	66.7	33.3		33.3	0	66.7	0		
Total %	0.5	51	0	1	52.6	1.6	39.6	0.5	2.6	44.3	0	0	1	0.5	1.6	0.5	0	1	0	1.6	

File Name : TMC
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Groups Printed- Heavy Trucks

	US 1 Northbound					US 1 Southbound					TURGOT AVE Eastbound					TURGOT AVE Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 08:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 09:00 AM																					
09:00 AM	0	3	0	0	3	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	7
09:15 AM	0	4	0	0	4	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	7
09:30 AM	0	4	0	0	4	0	3	0	0	3	0	0	0	0	0	0	0	1	0	1	8
09:45 AM	0	5	0	0	5	1	6	0	0	7	0	0	0	0	0	0	0	0	0	0	12
Total Volume	0	16	0	0	16	1	16	0	0	17	0	0	0	0	0	0	0	1	0	1	34
% App. Total	0	100	0	0		5.9	94.1	0	0		0	0	0	0		0	0	100	0		
PHF	.000	.800	.000	.000	.800	.250	.667	.000	.000	.607	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.708

Peak Hour Analysis From 08:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	09:00 AM					09:00 AM					08:00 AM					08:45 AM				
+0 mins.	0	3	0	0	3	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	4	0	0	4	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	4	0	0	4	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	5	0	0	5	1	6	0	0	7	0	0	0	0	0	0	0	1	0	1
Total Volume	0	16	0	0	16	1	16	0	0	17	0	0	0	0	0	0	0	1	0	1
% App. Total	0	100	0	0		5.9	94.1	0	0		0	0	0	0		0	0	100	0	
PHF	.00 0	.80 0	.00 0	.00 0	.800	.25 0	.66 7	.00 0	.00 0	.607	.00 0	.00 0	.00 0	.00 0	.000	.00 0	.00 0	.25 0	.00 0	.250

Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 11:45 AM

11:45 AM	0	6	0	0	6	0	2	1	0	3	0	0	0	0	0	1	0	0	0	1	10
12:00 PM	0	3	0	0	3	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	6
12:15 PM	0	2	0	0	2	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	6
12:30 PM	1	4	0	0	5	0	5	0	0	5	0	0	2	0	2	0	0	0	0	0	12
Total Volume	1	15	0	0	16	0	14	1	0	15	0	0	2	0	2	1	0	0	0	1	34
% App. Total	6.2	93.8	0	0		0	93.3	6.7	0		0	0	100	0		100	0	0	0		
PHF	.250	.625	.000	.000	.667	.000	.700	.250	.000	.750	.000	.000	.250	.000	.250	.250	.000	.000	.000	.250	.708

Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	11:45 AM					12:00 PM					11:45 AM					11:00 AM				
+0 mins.	0	6	0	0	6	0	3	0	0	3	0	0	0	0	0	0	0	1	0	1
+15 mins.	0	3	0	0	3	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	2	0	0	2	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0
+45 mins.	1	4	0	0	5	0	6	0	0	6	0	0	2	0	2	1	0	0	0	1
Total Volume	1	15	0	0	16	0	18	0	0	18	0	0	2	0	2	1	0	1	0	2
% App. Total	6.2	93.8	0	0		0	100	0	0		0	0	100	0		50	0	50	0	
PHF	.25 0	.62 5	.00 0	.00 0	.667	.00 0	.75 0	.00 0	.00 0	.750	.00 0	.00 0	.25 0	.00 0	.250	.25 0	.00 0	.25 0	.00 0	.500

Peak Hour Analysis From 02:00 PM to 07:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 04:00 PM

04:00 PM	0	4	0	0	4	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	5
04:15 PM	0	10	0	0	10	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	11
04:30 PM	0	3	0	0	3	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	7
04:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	17	0	0	17	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	24
% App. Total	0	100	0	0		0	100	0	0		0	0	0	0		0	0	0	0		
PHF	.000	.425	.000	.000	.425	.000	.438	.000	.000	.438	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.545

Peak Hour Analysis From 02:00 PM to 07:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:45 PM					04:15 PM					04:45 PM					02:00 PM				
+0 mins.	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	4	0	0	4	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	10	0	0	10	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	3	0	0	3	0	0	0	2	2	0	0	0	1	1	0	0	0	0	0
Total Volume	0	17	0	0	17	0	6	0	2	8	0	0	0	1	1	0	0	0	0	0
% App. Total	0	100	0	0		0	75	0	25		0	0	0	100		0	0	0	0	
PHF	.00 0	.42 5	.00 0	.00 0	.425	.00 0	.37 5	.00 0	.25 0	.500	.00 0	.00 0	.00 0	.25 0	.250	.00 0	.00 0	.00 0	.00 0	.000

File Name : TMC
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Groups Printed- UTurns

	US 1 Northbound					US 1 Southbound					TURGOT AVE Eastbound					TURGOT AVE Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
08:00 AM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
08:15 AM	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
08:30 AM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:45 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	5	0	0	0	5	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	8
09:00 AM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
09:15 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
09:30 AM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
09:45 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	5	0	0	0	5	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	6
*** BREAK ***																					
11:00 AM	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
11:15 AM	4	0	0	0	4	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	7
11:30 AM	4	0	0	0	4	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	5
11:45 AM	7	0	0	0	7	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	11
Total	19	0	0	0	19	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	27
12:00 PM	2	0	0	0	2	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4
12:15 PM	2	0	0	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
12:30 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
12:45 PM	2	0	0	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
Total	7	0	0	0	7	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	12
*** BREAK ***																					
04:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	1	0	0	0	1	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3
04:30 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
04:45 PM	2	0	0	0	2	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	5
Total	6	0	0	0	6	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	11
05:00 PM	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
05:15 PM	1	0	0	0	1	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	4
05:30 PM	1	0	0	0	1	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3
05:45 PM	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Total	12	0	0	0	12	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	17
06:00 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
06:15 PM	4	0	0	0	4	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	7
06:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
06:45 PM	4	0	0	0	4	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	7
Total	11	0	0	0	11	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	17
07:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
07:30 PM	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
07:45 PM	3	0	0	0	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	4
Total	5	0	0	0	5	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	9
Grand Total	70	0	0	0	70	37	0	0	0	37	0	0	0	0	0	0	0	0	0	0	107
Apprch %	100	0	0	0		100	0	0	0		0	0	0	0		0	0	0	0		
Total %	65.4	0	0	0	65.4	34.6	0	0	0	34.6	0	0	0	0	0	0	0	0	0	0	

File Name : TMC
Site Code : 00000000
Start Date : 9/30/2015
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Groups Printed- UTurns

	US 1 Northbound					US 1 Southbound					TURGOT AVE Eastbound					TURGOT AVE Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 08:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
08:15 AM	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
08:30 AM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:45 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total Volume	5	0	0	0	5	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	8
% App. Total	100	0	0	0		100	0	0	0		0	0	0	0		0	0	0	0		
PHF	.417	.000	.000	.000	.417	.375	.000	.000	.000	.375	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.667

Peak Hour Analysis From 08:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM					08:00 AM					08:00 AM					08:00 AM					
+0 mins.	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+15 mins.	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	
+30 mins.	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+45 mins.	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	
Total Volume	5	0	0	0	5	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	
% App. Total	100	0	0	0		100	0	0	0		0	0	0	0		0	0	0	0		
PHF	.417	.000	.000	.000	.417	.375	.000	.000	.000	.375	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	

Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 11:00 AM

11:00 AM	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
11:15 AM	4	0	0	0	4	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	7
11:30 AM	4	0	0	0	4	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	5
11:45 AM	7	0	0	0	7	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	11
Total Volume	19	0	0	0	19	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	27
% App. Total	100	0	0	0		100	0	0	0		0	0	0	0		0	0	0	0		
PHF	.679	.000	.000	.000	.679	.500	.000	.000	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.614

Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	11:00 AM					11:15 AM					10:00 AM					10:00 AM					
+0 mins.	4	0	0	0	4	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	
+15 mins.	4	0	0	0	4	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	
+30 mins.	4	0	0	0	4	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	
+45 mins.	7	0	0	0	7	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	
Total Volume	19	0	0	0	19	10	0	0	0	10	0	0	0	0	0	0	0	0	0	0	
% App. Total	100	0	0	0		100	0	0	0		0	0	0	0		0	0	0	0		
PHF	.679	.000	.000	.000	.679	.625	.000	.000	.000	.625	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	

Peak Hour Analysis From 02:00 PM to 07:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 04:45 PM

04:45 PM	2	0	0	0	2	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	5
05:00 PM	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
05:15 PM	1	0	0	0	1	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	4
05:30 PM	1	0	0	0	1	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3
Total Volume	9	0	0	0	9	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	17
% App. Total	100	0	0	0		100	0	0	0		0	0	0	0		0	0	0	0		
PHF	.450	.000	.000	.000	.450	.667	.000	.000	.000	.667	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.850

Peak Hour Analysis From 02:00 PM to 07:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM					04:45 PM					02:00 PM					02:00 PM					
+0 mins.	5	0	0	0	5	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	
+15 mins.	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+30 mins.	1	0	0	0	1	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	
+45 mins.	5	0	0	0	5	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	
Total Volume	12	0	0	0	12	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	
% App. Total	100	0	0	0		100	0	0	0		0	0	0	0		0	0	0	0		
PHF	.600	.000	.000	.000	.600	.667	.000	.000	.000	.667	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	

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Ln.	No.	Joined Queue	Released From Queue	Delay
1	1	8:05:41 AM	8:05:52 AM	11
1	2	8:08:41 AM	8:08:45 AM	4
1	3	8:12:46 AM	8:13:17 AM	31
1	4	8:14:09 AM	8:14:32 AM	23
1	5	8:18:21 AM	8:18:26 AM	5
1	6	8:20:15 AM	8:20:21 AM	6
1	7	8:23:14 AM	8:23:18 AM	4
1	8	8:24:13 AM	8:24:23 AM	10
1	9	8:25:10 AM	8:25:24 AM	14
1	10	8:25:52 AM	8:26:14 AM	22
1	11	8:27:59 AM	8:28:06 AM	7
1	12	8:29:48 AM	8:30:10 AM	22
1	13	8:31:07 AM	8:31:19 AM	12
1	14	8:35:20 AM	8:35:33 AM	13
1	15	8:35:44 AM	8:35:53 AM	9
1	16	8:36:38 AM	8:36:48 AM	10
1	17	8:36:42 AM	8:37:00 AM	18
1	18	8:37:22 AM	8:37:32 AM	10
1	19	8:39:21 AM	8:40:12 AM	51
1	20	8:42:40 AM	8:42:46 AM	6
1	21	8:42:49 AM	8:42:53 AM	4
1	22	8:42:58 AM	8:43:34 AM	36
1	23	8:43:38 AM	8:43:46 AM	8
1	24	8:46:36 AM	8:46:43 AM	7
1	25	8:48:10 AM	8:48:15 AM	5
1	26	8:49:23 AM	8:50:12 AM	49
1	27	8:50:56 AM	8:51:07 AM	11
1	28	8:50:58 AM	8:51:09 AM	11
1	29	8:52:27 AM	8:52:50 AM	23
1	30	8:53:07 AM	8:53:24 AM	17
1	31	8:53:22 AM	8:53:43 AM	21
1	32	8:53:37 AM	8:53:45 AM	8
1	33	8:53:48 AM	8:53:53 AM	5
1	34	8:53:57 AM	8:54:10 AM	13
1	35	8:54:05 AM	8:54:27 AM	22
1	36	8:54:19 AM	8:54:42 AM	23
1	37	8:55:10 AM	8:55:36 AM	26
1	38	8:56:48 AM	8:56:58 AM	10
1	39	8:58:30 AM	8:58:49 AM	19
2	1	8:00:01 AM	8:00:01 AM	0
2	2	8:04:12 AM	8:04:19 AM	7
2	3	8:05:01 AM	8:05:32 AM	31
2	4	8:05:02 AM	8:05:34 AM	32
2	5	8:05:42 AM	8:05:50 AM	8
2	6	8:06:01 AM	8:06:02 AM	1
2	7	8:06:32 AM	8:06:34 AM	2
2	8	8:08:19 AM	8:08:23 AM	4
2	9	8:08:39 AM	8:08:43 AM	4
2	10	8:10:33 AM	8:10:37 AM	4
2	11	8:11:24 AM	8:11:43 AM	19
2	12	8:13:08 AM	8:13:14 AM	6
2	13	8:13:31 AM	8:13:34 AM	3
2	14	8:14:54 AM	8:14:57 AM	3
2	15	8:16:00 AM	8:16:10 AM	10
2	16	8:17:54 AM	8:18:08 AM	14
2	17	8:20:00 AM	8:20:03 AM	3
2	18	8:21:02 AM	8:21:08 AM	6
2	19	8:21:14 AM	8:21:17 AM	3
2	20	8:21:29 AM	8:21:32 AM	3
2	21	8:23:37 AM	8:24:00 AM	23
2	22	8:25:55 AM	8:25:59 AM	4
2	23	8:27:50 AM	8:27:55 AM	5
2	24	8:28:03 AM	8:28:05 AM	2

Ln.	No.	Joined Queue	Released From Queue	Delay
2	25	8:30:45 AM	8:31:23 AM	38
2	26	8:34:41 AM	8:34:47 AM	6
2	27	8:34:43 AM	8:34:50 AM	7
2	28	8:39:13 AM	8:39:19 AM	6
2	29	8:40:14 AM	8:40:28 AM	14
2	30	8:41:39 AM	8:41:43 AM	4
2	31	8:43:46 AM	8:43:49 AM	3
2	32	8:44:45 AM	8:44:54 AM	9
2	33	8:45:27 AM	8:45:30 AM	3
2	34	8:45:32 AM	8:45:33 AM	1
2	35	8:45:44 AM	8:45:46 AM	2
2	36	8:47:20 AM	8:47:22 AM	2
2	37	8:48:13 AM	8:48:16 AM	3
2	38	8:48:15 AM	8:48:39 AM	24
2	39	8:49:42 AM	8:50:10 AM	28
2	40	8:50:43 AM	8:50:45 AM	2
2	41	8:54:25 AM	8:54:30 AM	5
2	42	8:55:13 AM	8:55:20 AM	7
2	43	8:56:00 AM	8:56:02 AM	2
2	44	8:56:33 AM	8:56:38 AM	5
2	45	8:56:57 AM	8:56:59 AM	2
2	46	8:57:13 AM	8:57:27 AM	14
2	47	8:57:20 AM	8:57:28 AM	8
2	48	8:57:41 AM	8:57:50 AM	9
2	49	8:58:11 AM	8:58:20 AM	9
2	50	8:59:27 AM	8:59:30 AM	3
2	51	8:59:32 AM	8:59:34 AM	2

Summary Information:

8:00:00 AM - 9:00:00 AM	EB	NBL
Total Vehicle Count:	39	51
Delayed Vehicle Count:	39	51
Through Vehicle Count:	0	0
Average Stopped Time:	15.54	8.137
Maximum Stopped Time:	51	38
Min. Secs. for Delay:	0	0
Average Queue:	0.19	0.116
Queue Density:	1.06	1.113
Maximum Queue:	2	2
Delay in Vehicle Hour:	0.19	0.12
Total Delay:	606	415

File Name : Delay 12-1
Site Code : 00000000
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Ln.	No.	Joined Queue	Released From Queue	Delay
1	1	12:00:00 PM	12:00:01 PM	1
1	2	12:01:01 PM	12:01:07 PM	6
1	3	12:01:11 PM	12:01:38 PM	27
1	4	12:02:21 PM	12:02:53 PM	32
1	5	12:02:50 PM	12:03:13 PM	23
1	6	12:03:59 PM	12:04:07 PM	8
1	7	12:06:07 PM	12:06:14 PM	7
1	8	12:07:46 PM	12:08:57 PM	71
1	9	12:08:52 PM	12:09:27 PM	35
1	10	12:11:24 PM	12:11:40 PM	16
1	11	12:11:58 PM	12:12:17 PM	19
1	12	12:13:28 PM	12:13:51 PM	23
1	13	12:15:14 PM	12:15:36 PM	22
1	14	12:15:44 PM	12:15:52 PM	8
1	15	12:16:29 PM	12:16:42 PM	13
1	16	12:17:25 PM	12:17:35 PM	10
1	17	12:17:39 PM	12:18:19 PM	40
1	18	12:17:49 PM	12:18:24 PM	35
1	19	12:18:34 PM	12:18:47 PM	13
1	20	12:20:46 PM	12:20:55 PM	9
1	21	12:20:58 PM	12:21:08 PM	10
1	22	12:23:19 PM	12:24:30 PM	71
1	23	12:25:12 PM	12:25:37 PM	25
1	24	12:25:18 PM	12:25:51 PM	33
1	25	12:29:02 PM	12:29:06 PM	4
1	26	12:30:29 PM	12:30:44 PM	15
1	27	12:33:21 PM	12:33:28 PM	7
1	28	12:34:24 PM	12:34:34 PM	10
1	29	12:34:45 PM	12:34:53 PM	8
1	30	12:35:23 PM	12:35:44 PM	21
1	31	12:36:26 PM	12:36:36 PM	10
1	32	12:37:51 PM	12:38:13 PM	22
1	33	12:37:55 PM	12:38:20 PM	25
1	34	12:38:19 PM	12:38:25 PM	6
1	35	12:38:27 PM	12:39:05 PM	38
1	36	12:38:51 PM	12:39:14 PM	23
1	37	12:38:59 PM	12:39:53 PM	54
1	38	12:39:02 PM	12:39:56 PM	54
1	39	12:41:05 PM	12:42:09 PM	64
1	40	12:43:31 PM	12:43:42 PM	11
1	41	12:44:00 PM	12:44:05 PM	5
1	42	12:44:57 PM	12:45:42 PM	45
1	43	12:46:26 PM	12:46:48 PM	22
1	44	12:46:36 PM	12:46:55 PM	19
1	45	12:47:38 PM	12:47:49 PM	11
1	46	12:48:22 PM	12:48:29 PM	7
1	47	12:49:46 PM	12:49:59 PM	13
1	48	12:53:43 PM	12:54:38 PM	55
1	49	12:54:35 PM	12:54:43 PM	8
1	50	12:55:04 PM	12:55:41 PM	37
1	51	12:55:35 PM	12:55:56 PM	21
1	52	12:57:17 PM	12:57:35 PM	18
1	53	12:58:51 PM	12:58:58 PM	7
1	54	12:59:33 PM	12:59:50 PM	17
2	1	12:00:57 PM	12:00:58 PM	1
2	2	12:03:00 PM	12:03:15 PM	15
2	3	12:03:14 PM	12:03:22 PM	8
2	4	12:04:27 PM	12:04:31 PM	4
2	5	12:05:52 PM	12:06:00 PM	8
2	6	12:08:00 PM	12:08:07 PM	7
2	7	12:08:18 PM	12:09:28 PM	70
2	8	12:12:17 PM	12:12:38 PM	21
2	9	12:12:33 PM	12:12:41 PM	8

File Name : Delay 12-1
Site Code : 00000000
Start Date : 10/13/2015
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Ln.	No.	Joined Queue	Released From Queue	Delay
2	10	12:12:34 PM	12:12:43 PM	9
2	11	12:12:35 PM	12:12:53 PM	18
2	12	12:13:02 PM	12:14:13 PM	71
2	13	12:19:09 PM	12:19:11 PM	2
2	14	12:19:43 PM	12:20:12 PM	29
2	15	12:30:46 PM	12:30:51 PM	5
2	16	12:35:45 PM	12:35:47 PM	2
2	17	12:36:09 PM	12:36:10 PM	1
2	18	12:37:35 PM	12:37:53 PM	18
2	19	12:42:36 PM	12:42:45 PM	9
2	20	12:43:50 PM	12:43:59 PM	9
2	21	12:44:07 PM	12:44:17 PM	10
2	22	12:45:45 PM	12:45:49 PM	4
2	23	12:46:16 PM	12:46:27 PM	11
2	24	12:52:42 PM	12:52:50 PM	8
2	25	12:52:49 PM	12:53:00 PM	11
2	26	12:53:26 PM	12:53:33 PM	7
2	27	12:54:05 PM	12:54:11 PM	6
2	28	12:54:19 PM	12:54:29 PM	10
2	29	12:54:50 PM	12:54:53 PM	3
2	30	12:55:44 PM	12:55:58 PM	14

Summary Information:

12:00:00 PM - 1:00:00 PM	EB	NBL
Total Vehicle Count:	54	30
Delayed Vehicle Count:	54	30
Through Vehicle Count:	0	0
Average Stopped Time:	22.48	13.300
Maximum Stopped Time:	71	71
Min. Secs. for Delay:	0	0
Average Queue:	0.34	0.121
Queue Density:	1.17	1.059
Maximum Queue:	4	4
Delay in Vehicle Hour:	0.34	0.12
Total Delay:	1214	399

File Name : Delay 7-8pm
Site Code : 00000000
Start Date : 10/13/2015
Page No : 1

Ln.	No.	Joined Queue	Released From Queue	Delay
1	1	7:00:00 PM	7:00:01 PM	1
1	2	7:01:36 PM	7:01:59 PM	23
1	3	7:02:27 PM	7:02:29 PM	2
1	4	7:04:01 PM	7:04:04 PM	3
1	5	7:04:10 PM	7:04:33 PM	23
1	6	7:04:29 PM	7:04:45 PM	16
1	7	7:04:44 PM	7:04:56 PM	12
1	8	7:05:31 PM	7:05:54 PM	23
1	9	7:05:33 PM	7:05:56 PM	23
1	10	7:05:58 PM	7:06:05 PM	7
1	11	7:06:01 PM	7:06:13 PM	12
1	12	7:06:48 PM	7:07:01 PM	13
1	13	7:06:51 PM	7:07:06 PM	15
1	14	7:07:03 PM	7:07:10 PM	7
1	15	7:07:12 PM	7:07:20 PM	8
1	16	7:07:15 PM	7:07:29 PM	14
1	17	7:07:33 PM	7:08:01 PM	28
1	18	7:07:48 PM	7:08:06 PM	18
1	19	7:08:21 PM	7:08:27 PM	6
1	20	7:08:37 PM	7:09:20 PM	43
1	21	7:08:42 PM	7:09:21 PM	39
1	22	7:08:48 PM	7:09:26 PM	38
1	23	7:08:57 PM	7:09:28 PM	31
1	24	7:09:07 PM	7:09:36 PM	29
1	25	7:09:23 PM	7:09:43 PM	20
1	26	7:09:24 PM	7:09:46 PM	22
1	27	7:09:41 PM	7:09:49 PM	8
1	28	7:10:18 PM	7:10:25 PM	7
1	29	7:10:22 PM	7:10:43 PM	21
1	30	7:10:26 PM	7:11:04 PM	38
1	31	7:10:28 PM	7:11:23 PM	55
1	32	7:10:34 PM	7:11:28 PM	54
1	33	7:10:40 PM	7:11:41 PM	61
1	34	7:10:41 PM	7:12:00 PM	79
1	35	7:10:47 PM	7:12:02 PM	75
1	36	7:11:04 PM	7:12:14 PM	70
1	37	7:11:19 PM	7:12:15 PM	56
1	38	7:11:25 PM	7:12:48 PM	83
1	39	7:11:29 PM	7:12:54 PM	85
1	40	7:11:30 PM	7:13:03 PM	93
1	41	7:12:06 PM	7:13:09 PM	63
1	42	7:12:22 PM	7:13:11 PM	49
1	43	7:12:25 PM	7:13:18 PM	53
1	44	7:12:38 PM	7:13:20 PM	42
1	45	7:12:53 PM	7:13:23 PM	30
1	46	7:13:48 PM	7:14:01 PM	13
1	47	7:13:57 PM	7:14:28 PM	31
1	48	7:14:11 PM	7:14:38 PM	27
1	49	7:15:49 PM	7:15:50 PM	1
1	50	7:15:51 PM	7:15:53 PM	2
1	51	7:15:52 PM	7:15:58 PM	6
1	52	7:16:14 PM	7:16:17 PM	3
1	53	7:16:23 PM	7:16:46 PM	23
1	54	7:16:31 PM	7:16:57 PM	26
1	55	7:17:36 PM	7:17:51 PM	15
1	56	7:17:41 PM	7:17:52 PM	11
1	57	7:17:44 PM	7:17:56 PM	12
1	58	7:17:57 PM	7:18:00 PM	3
1	59	7:19:12 PM	7:19:16 PM	4
1	60	7:20:09 PM	7:20:22 PM	13
1	61	7:20:19 PM	7:20:24 PM	5
1	62	7:20:34 PM	7:20:56 PM	22
1	63	7:21:30 PM	7:22:20 PM	50

File Name : Delay 7-8pm
Site Code : 00000000
Start Date : 10/13/2015

Ln.	No.	Joined Queue	Released From Queue	Delay
1	64	7:22:35 PM	7:22:48 PM	13
1	65	7:22:36 PM	7:22:51 PM	15
1	66	7:22:41 PM	7:22:56 PM	15
1	67	7:23:45 PM	7:23:59 PM	14
1	68	7:24:36 PM	7:24:55 PM	19
1	69	7:25:31 PM	7:25:50 PM	19
1	70	7:27:13 PM	7:27:14 PM	1
1	71	7:27:52 PM	7:28:03 PM	11
1	72	7:29:01 PM	7:29:03 PM	2
1	73	7:29:20 PM	7:29:27 PM	7
1	74	7:29:35 PM	7:29:43 PM	8
1	75	7:30:14 PM	7:30:24 PM	10
1	76	7:31:18 PM	7:31:29 PM	11
1	77	7:31:19 PM	7:31:44 PM	25
1	78	7:31:37 PM	7:32:06 PM	29
1	79	7:31:45 PM	7:32:09 PM	24
1	80	7:31:57 PM	7:32:12 PM	15
1	81	7:33:16 PM	7:33:27 PM	11
1	82	7:34:24 PM	7:34:33 PM	9
1	83	7:34:55 PM	7:35:24 PM	29
1	84	7:34:58 PM	7:35:26 PM	28
1	85	7:37:45 PM	7:38:04 PM	19
1	86	7:41:57 PM	7:42:14 PM	17
1	87	7:42:49 PM	7:43:16 PM	27
1	88	7:43:06 PM	7:43:31 PM	25
1	89	7:43:29 PM	7:43:48 PM	19
1	90	7:43:39 PM	7:43:54 PM	15
1	91	7:44:15 PM	7:44:26 PM	11
1	92	7:45:24 PM	7:45:31 PM	7
1	93	7:45:32 PM	7:45:40 PM	8
1	94	7:45:34 PM	7:45:42 PM	8
1	95	7:45:45 PM	7:45:50 PM	5
1	96	7:46:46 PM	7:46:55 PM	9
1	97	7:46:53 PM	7:47:00 PM	7
1	98	7:47:37 PM	7:47:45 PM	8
1	99	7:47:55 PM	7:48:06 PM	11
1	100	7:48:40 PM	7:48:42 PM	2
1	101	7:49:15 PM	7:49:22 PM	7
1	102	7:49:18 PM	7:49:31 PM	13
1	103	7:49:35 PM	7:49:41 PM	6
1	104	7:49:56 PM	7:50:04 PM	8
1	105	7:50:02 PM	7:50:07 PM	5
1	106	7:50:12 PM	7:50:22 PM	10
1	107	7:50:43 PM	7:50:49 PM	6
1	108	7:50:54 PM	7:51:01 PM	7
1	109	7:51:02 PM	7:51:06 PM	4
1	110	7:51:10 PM	7:51:49 PM	39
1	111	7:51:26 PM	7:52:03 PM	37
1	112	7:51:36 PM	7:52:07 PM	31
1	113	7:51:59 PM	7:52:13 PM	14
1	114	7:52:33 PM	7:52:43 PM	10
1	115	7:52:42 PM	7:52:51 PM	9
1	116	7:52:59 PM	7:53:23 PM	24
1	117	7:53:00 PM	7:53:27 PM	27
1	118	7:53:02 PM	7:53:33 PM	31
1	119	7:53:03 PM	7:53:46 PM	43
1	120	7:53:08 PM	7:53:57 PM	49
1	121	7:53:48 PM	7:54:14 PM	26
1	122	7:54:08 PM	7:54:31 PM	23
1	123	7:55:09 PM	7:55:16 PM	7
1	124	7:55:11 PM	7:55:23 PM	12
1	125	7:55:18 PM	7:55:30 PM	12
1	126	7:56:05 PM	7:56:20 PM	15

Ln.	No.	Joined Queue	Released From Queue	Delay
1	127	7:56:40 PM	7:56:47 PM	7
1	128	7:56:52 PM	7:57:11 PM	19
1	129	7:57:01 PM	7:57:14 PM	13
1	130	7:58:37 PM	7:59:12 PM	35
1	131	7:58:41 PM	7:59:19 PM	38
1	132	7:58:53 PM	7:59:22 PM	29
1	133	7:59:44 PM	7:59:50 PM	6
1	134	8:00:03 PM	8:00:10 PM	7
1	135	8:00:42 PM	8:01:04 PM	22
2	1	7:01:02 PM	7:01:05 PM	3
2	2	7:01:22 PM	7:01:28 PM	6
2	3	7:06:01 PM	7:06:02 PM	1
2	4	7:06:47 PM	7:06:58 PM	11
2	5	7:07:31 PM	7:07:34 PM	3
2	6	7:07:41 PM	7:08:02 PM	21
2	7	7:11:12 PM	7:11:15 PM	3
2	8	7:13:30 PM	7:13:53 PM	23
2	9	7:16:22 PM	7:16:36 PM	14
2	10	7:16:45 PM	7:16:48 PM	3
2	11	7:18:31 PM	7:18:33 PM	2
2	12	7:20:11 PM	7:20:14 PM	3
2	13	7:21:14 PM	7:21:24 PM	10
2	14	7:21:33 PM	7:22:14 PM	41
2	15	7:28:08 PM	7:28:21 PM	13
2	16	7:31:48 PM	7:31:56 PM	8
2	17	7:31:52 PM	7:32:03 PM	11
2	18	7:32:42 PM	7:32:54 PM	12
2	19	7:33:40 PM	7:33:46 PM	6
2	20	7:36:34 PM	7:36:42 PM	8
2	21	7:37:02 PM	7:37:07 PM	5
2	22	7:37:45 PM	7:37:52 PM	7
2	23	7:39:42 PM	7:39:45 PM	3
2	24	7:40:11 PM	7:40:13 PM	2
2	25	7:40:57 PM	7:41:11 PM	14
2	26	7:46:07 PM	7:46:10 PM	3
2	27	7:49:11 PM	7:49:17 PM	6
2	28	7:51:32 PM	7:51:42 PM	10
2	29	7:54:05 PM	7:54:38 PM	33

Summary Information:

7:00:00 PM - 8:02:00 PM	EB	NBL
Total Vehicle Count:	135	29
Delayed Vehicle Count:	135	29
Through Vehicle Count:	0	0
Average Stopped Time:	21.70	9.828
Maximum Stopped Time:	93	41
Min. Secs. for Delay:	0	0
Average Queue:	0.80	0.088
Queue Density:	2.06	1.014
Maximum Queue:	8	2
Delay in Vehicle Hour:	0.80	0.09
Total Delay:	2929	285

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Vischal*
Agency/Co.	*TEDS*
Date Performed	*10/29/2015*
Analysis Time Period	*8:00 AM to 9:00 AM*

Site Information

Intersection	*US 1/Turgot (Existing)*
Jurisdiction	
Analysis Year	*2015*

Project Description

East/West Street: *Turgot Avenue* | North/South Street: *US 1*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*56*	*1131*	*6*	*9*	*735*	*32*
Peak-Hour Factor, PHF	*0.94*	*0.94*	*0.94*	*0.94*	*0.94*	*0.94*
Hourly Flow Rate, HFR (veh/h)	*59*	*1203*	*6*	*9*	*781*	*34*
Percent Heavy Vehicles	*2*	--	--	*2*	--	--
Median Type	*Raised curb*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*1*	*2*	*0*
Configuration	*L*	*T*	*TR*	*L*	*T*	*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*37*	*0*	*35*	*4*	*1*	*6*
Peak-Hour Factor, PHF	*0.51*	*0.51*	*0.51*	*0.94*	*0.94*	*0.94*
Hourly Flow Rate, HFR (veh/h)	*72*	*0*	*68*	*4*	*1*	*6*
Percent Heavy Vehicles	*2*	*2*	*2*	*2*	*2*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*L*		*LTR*			*LTR*	
v (veh/h)	*59*	*9*		*11*			*140*	
C (m) (veh/h)	*808*	*573*		*208*			*285*	
v/c	*0.07*	*0.02*		*0.05*			*0.49*	
95% queue length	*0.24*	*0.05*		*0.17*			*2.54*	
Control Delay (s/veh)	*9.8*	*11.4*		*23.3*			*29.2*	
LOS	*A*	*B*		*C*			*D*	
Approach Delay (s/veh)	--	--	*23.3*			*29.2*		
Approach LOS	--	--	*C*			*D*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Vischal*
Agency/Co.	*TEDS*
Date Performed	*10/29/2015*
Analysis Time Period	*12:00 pm to 1:00 pm*

Site Information

Intersection	*US 1/Turgot (Existing)*
Jurisdiction	
Analysis Year	*2015*

Project Description

East/West Street: *Turgot Avenue* | North/South Street: *US 1*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*15*	*947*	*3*	*23*	*915*	*20*
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*16*	*1052*	*3*	*25*	*1016*	*22*
Percent Heavy Vehicles	*2*	--	--	*2*	--	--
Median Type	*Raised curb*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*1*	*2*	*0*
Configuration	*L*	*T*	*TR*	*L*	*T*	*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*22*	*0*	*30*	*6*	*1*	*8*
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*24*	*0*	*33*	*6*	*1*	*8*
Percent Heavy Vehicles	*2*	*2*	*2*	*2*	*2*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*L*		*LTR*			*LTR*	
v (veh/h)	*16*	*25*		*15*			*57*	
C (m) (veh/h)	*665*	*656*		*252*			*273*	
v/c	*0.02*	*0.04*		*0.06*			*0.21*	
95% queue length	*0.07*	*0.12*		*0.19*			*0.77*	
Control Delay (s/veh)	*10.5*	*10.7*		*20.2*			*21.6*	
LOS	*B*	*B*		*C*			*C*	
Approach Delay (s/veh)	--	--	*20.2*			*21.6*		
Approach LOS	--	--	*C*			*C*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Vischal*
Agency/Co.	*TEDS*
Date Performed	*10/29/2015*
Analysis Time Period	*7:00 pm to 8:00 pm*

Site Information

Intersection	*US 1/Turgot (Existing)*
Jurisdiction	
Analysis Year	*2015*

Project Description

East/West Street: *Turgot Avenue* | North/South Street: *US 1*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*27*	*568*	*10*	*20*	*805*	*35*
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*30*	*631*	*11*	*22*	*894*	*38*
Percent Heavy Vehicles	*2*	--	--	*2*	--	--
Median Type	*Raised curb*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*1*	*2*	*0*
Configuration	*L*	*T*	*TR*	*L*	*T*	*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*82*	*3*	*128*	*8*	*0*	*1*
Peak-Hour Factor, PHF	*0.62*	*0.71*	*0.71*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*132*	*4*	*180*	*8*	*0*	*1*
Percent Heavy Vehicles	*2*	*2*	*2*	*2*	*2*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*L*		*LTR*			*LTR*	
v (veh/h)	*30*	*22*		*9*			*316*	
C (m) (veh/h)	*730*	*939*		*220*			*330*	
v/c	*0.04*	*0.02*		*0.04*			*0.96*	
95% queue length	*0.13*	*0.07*		*0.13*			*10.05*	
Control Delay (s/veh)	*10.1*	*8.9*		*22.1*			*75.6*	
LOS	*B*	*A*		*C*			*F*	
Approach Delay (s/veh)	--	--	*22.1*			*75.6*		
Approach LOS	--	--	*C*			*F*		

HCS+™ Version 5.6

Generated: 11/10/2015 12:43 PM

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*Vischal*	Intersection	*US 1/Turgot (Proposed)*
Agency/Co.	*TEDS*	Jurisdiction	
Date Performed	*10/29/2015*	Analysis Year	*2015*
Analysis Time Period	*8:00 AM to 9:00 AM*		

Project Description

East/West Street: *Turgot Avenue*	North/South Street: *US 1*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*56*	*1131*	*6*	*9*	*735*	*32*
Peak-Hour Factor, PHF	*0.94*	*0.94*	*0.94*	*0.94*	*0.94*	*0.94*
Hourly Flow Rate, HFR (veh/h)	*59*	*1203*	*6*	*9*	*781*	*34*
Percent Heavy Vehicles	*2*	--	--	*2*	--	--
Median Type	*Raised curb*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*1*	*2*	*0*
Configuration	*L*	*T*	*TR*	*L*	*T*	*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*37*	*0*	*35*	*4*	*1*	*6*
Peak-Hour Factor, PHF	*0.51*	*0.51*	*0.51*	*0.94*	*0.94*	*0.94*
Hourly Flow Rate, HFR (veh/h)	*72*	*0*	*68*	*4*	*1*	*6*
Percent Heavy Vehicles	*2*	*2*	*2*	*2*	*2*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*1*	*0*	*1*	*0*
Configuration	*LT*		*R*		*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*L*		*LTR*		*LT*		*R*
v (veh/h)	*59*	*9*		*11*		*72*		*68*
C (m) (veh/h)	*808*	*573*		*208*		*187*		*641*
v/c	*0.07*	*0.02*		*0.05*		*0.39*		*0.11*
95% queue length	*0.24*	*0.05*		*0.17*		*1.68*		*0.35*
Control Delay (s/veh)	*9.8*	*11.4*		*23.3*		*35.8*		*11.3*
LOS	*A*	*B*		*C*		*E*		*B*
Approach Delay (s/veh)	--	--	*23.3*			*23.9*		
Approach LOS	--	--	*C*			*C*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Vischal*
Agency/Co.	*TEDS*
Date Performed	*10/29/2015*
Analysis Time Period	*12:00 pm to 1:00 pm*

Site Information

Intersection	*US 1/Turgot (Proposed)*
Jurisdiction	
Analysis Year	*2015*

Project Description

East/West Street: *Turgot Avenue* | North/South Street: *US 1*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*15*	*947*	*3*	*23*	*915*	*20*
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*16*	*1052*	*3*	*25*	*1016*	*22*
Percent Heavy Vehicles	*2*	--	--	*2*	--	--
Median Type	*Raised curb*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*1*	*2*	*0*
Configuration	*L*	*T*	*TR*	*L*	*T*	*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*22*	*0*	*30*	*6*	*1*	*8*
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*24*	*0*	*33*	*6*	*1*	*8*
Percent Heavy Vehicles	*2*	*2*	*2*	*2*	*2*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*1*	*0*	*1*	*0*
Configuration	*LT*		*R*		*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*L*		*LTR*		*LT*		*R*
v (veh/h)	*16*	*25*		*15*		*24*		*33*
C (m) (veh/h)	*665*	*656*		*252*		*161*		*555*
v/c	*0.02*	*0.04*		*0.06*		*0.15*		*0.06*
95% queue length	*0.07*	*0.12*		*0.19*		*0.51*		*0.19*
Control Delay (s/veh)	*10.5*	*10.7*		*20.2*		*31.2*		*11.9*
LOS	*B*	*B*		*C*		*D*		*B*
Approach Delay (s/veh)	--	--	*20.2*			*20.0*		
Approach LOS	--	--	*C*			*C*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Vischal*
Agency/Co.	*TEDS*
Date Performed	*10/29/2015*
Analysis Time Period	*7:00 pm to 8:00 pm*

Site Information

Intersection	*US 1/Turgot (Proposed)*
Jurisdiction	
Analysis Year	*2015*

Project Description

East/West Street: *Turgot Avenue* | North/South Street: *US 1*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*27*	*568*	*10*	*20*	*805*	*35*
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*30*	*631*	*11*	*22*	*894*	*38*
Percent Heavy Vehicles	*2*	--	--	*2*	--	--
Median Type	*Raised curb*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*1*	*2*	*0*
Configuration	*L*	*T*	*TR*	*L*	*T*	*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*82*	*3*	*128*	*8*	*0*	*1*
Peak-Hour Factor, PHF	*0.62*	*0.71*	*0.71*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*132*	*4*	*180*	*8*	*0*	*1*
Percent Heavy Vehicles	*2*	*2*	*2*	*2*	*2*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*1*	*0*	*1*	*0*
Configuration	*LT*		*R*		*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*L*		*LTR*		*LT*		*R*
v (veh/h)	*30*	*22*		*9*		*136*		*180*
C (m) (veh/h)	*730*	*939*		*220*		*208*		*595*
v/c	*0.04*	*0.02*		*0.04*		*0.65*		*0.30*
95% queue length	*0.13*	*0.07*		*0.13*		*3.94*		*1.27*
Control Delay (s/veh)	*10.1*	*8.9*		*22.1*		*50.1*		*13.7*
LOS	*B*	*A*		*C*		*F*		*B*
Approach Delay (s/veh)	--	--	*22.1*			*29.3*		
Approach LOS	--	--	*C*			*D*		

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