CITY OF DEER PARK
AUGUST 15, 2017 - 6:30 PM
CITY COUNCIL WORKSHOP - FINAL

COUNCIL CHAMBERS
710 E SAN AUGUSTINE
DEER PARK, TX 77536

Sherry Garrison, Council Position 1
Thane Harrison, Council Position 2
Tommy Ginn, Council Position 3

Bill Patterson, Council Position 4
Ron Martin, Council Position 5
Rae A. Sinor, Council Position 6

James Stokes, City Manager
Gary Jackson, Assistant City Manager

Jerry Mouton Jr. , Mayor

Shannon Bennett, TRMC, City Secretary
Jim Fox, City Attorney

CALL TO ORDER

1. Discussion of issues relating to Introduction of Touchstone Golf's New Leadership Team at The Battleground Golf Course. DIS 17-104

Recommended Action: Discussion only in Workshop.

Department: City Manager's Office and Assistant Parks & Recreation Director Sandberg

2. Executive Session: By authority of Article 6252-17 (Section 3 - e, f, and g) V.A.T.S., and the Open Meetings Act, the Council may adjourn to an executive session related to the following item(s): EXS 17-001

a. Personnel (551.074) - Performance Evaluation of City Manager

Recommended Action: Discussion only.

Department: Mouton Jr.

3. Discussion of issues relating to traffic study conducted at Center Street and Railroad Avenue DIS 17-105

Recommended Action: For discussion only

Attachments: Report - Center St. at Railroad Avenue 2017

4. Discussion of issues relating to the Fiscal Year 2017-2018 Deer Park Community Development Corporation Budget. DIS 17-102

Recommended Action: Discussion only at Workshop. An item for consideration and possible action is included on the August 15, 2017 Regular Council Meeting agenda.

Department: City Manager's Office

Attachments: Proposed to DPCDC - 17.18 Budget 07.24.17

5. Discussion of issues relating to additional mowing contract services. DIS 17-107

Recommended Action: Discussion only

Attachments: Quotes for Additonal Mowing Services - Longclaw

The Mission of the City of Deer Park is to deliver exemplary municipal services that provide the community a high quality of life consistent with our history, culture and unique character.

6. Discussion of issues relating to the reclassification of two Library positions. DIS 17-106

Recommended Action: Discussion only during workshop. An item for consideration and possible action of an ordinance to amend the employee pay and classification scales is included on the August 15, 2017 Regular Council Meeting agenda.

Attachments: Ord_Amend Pay Range Chart August 2017

2016_17 Full Time Classification scales (Amended 8-15-17)

ADJOURN

Shannon Bennett, TRMC
City Secretary

Posted on Bulletin Board
August 11, 2017

City Hall is wheelchair accessible and accessible parking spaces are available. Requests for accommodations or interpretive services must be made 72 hours prior to any meeting. Please contact the City Secretary's office at 281.478.7248 for further information.

City of Deer Park

710 E SAN AUGUSTINE
DEER PARK, TX 77536

Legislation Details (With Text)

File #:	DIS 17-104	**Version:**	1	**Name:**	
Type:	Discussion			**Status:**	Agenda Ready
File created:	8/8/2017			**In control:**	City Council Workshop
On agenda:	8/15/2017			**Final action:**	
Title:	Discussion of issues relating to Introduction of Touchstone Golf's New Leadership Team at The Battleground Golf Course.				
Sponsors:	City Manager's Office, Charlie Sandberg				
Indexes:					
Code sections:					
Attachments:					

Date	Ver.	Action By	Action	Result
8/15/2017	1	City Council Workshop		

Discussion of issues relating to Introduction of Touchstone Golf's New Leadership Team at The Battleground Golf Course.

Summary:

Touchstone Golf recently hired a new General Manager of The Battleground Golf Course, Mr. Rich Earlywine, who takes over for former General Manger Mike Shoelen. Touchstone also announced Mr. Troy Sacco has joined their team in the role of Vice President of Operations & Sales. This position previously was held by Mr. Chris Robertson. Both Mr. Earlywine and Mr. Sacco will be in attendance at the Council Workshop on Tuesday evening, and will be introduced to Council by Mark Luthman, Touchstone's Executive Vice President and Chief Operation Officer.

Fiscal/Budgetary Impact:

N/A

Discussion only in Workshop.

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City of Deer Park

710 E SAN AUGUSTINE
DEER PARK, TX 77536

Legislation Details (With Text)

File #:	EXS 17-001	**Version:**	1	**Name:**	
Type:	Executive Session			**Status:**	Agenda Ready
File created:	8/8/2017			**In control:**	City Council Workshop
On agenda:	8/15/2017			**Final action:**	
Title:	Executive Session: By authority of Article 6252-17 (Section 3 - e, f, and g) V.A.T.S., and the Open Meetings Act, the Council may adjourn to an executive session related to the following item(s): a. Personnel (551.074) - Performance Evaluation of City Manager				
Sponsors:	Jerry Mouton Jr.				
Indexes:					
Code sections:					
Attachments:					

Date	Ver.	Action By	Action	Result
8/15/2017	1	City Council Workshop		

Executive Session: By authority of Article 6252-17 (Section 3 - e, f, and g) V.A.T.S., and the Open Meetings Act, the Council may adjourn to an executive session related to the following item(s):

a. Personnel (551.074) - Performance Evaluation of City Manager

Summary:

Section 551.074, Texas Government Code, permits the City Council to adjourn into Executive Session to deliberate the appointment, employment, evaluation, reassignment, duties, discipline, or dismissal of a public officer or employee. The annual performance evaluation of the City Manager will be discussed.

Fiscal/Budgetary Impact:

The City Manager position is a budgeted position.

Discussion only.

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City of Deer Park

710 E SAN AUGUSTINE
DEER PARK, TX 77536

Legislation Details (With Text)

File #:	DIS 17-105	**Version:**	1	**Name:**	
Type:	Discussion			**Status:**	Agenda Ready
File created:	8/9/2017			**In control:**	City Council Workshop
On agenda:	8/15/2017			**Final action:**	
Title:	Discussion of issues relating to traffic study conducted at Center Street and Railroad Avenue				
Sponsors:					
Indexes:					
Code sections:					
Attachments:	Report - Center St. at Railroad Avenue 2017				

Date	Ver.	Action By	Action	Result
8/15/2017	1	City Council Workshop		

Discussion of issues relating to traffic study conducted at Center Street and Railroad Avenue

Summary:

On March 7, 2017, staff briefed council on the illegal vehicular left turn movements occurring at the intersection of Center Street and Railroad Avenue. Some of these illegal turn movements resulted in damage to the Gateway improvements constructed by the City. Council directed staff to barricade (close) the northbound Center Street left turn lane onto Railroad. Prior to installing barricades staff made a sight visit and observed a large number of vehicles, including school buses, making legal left turns onto Railroad Avenue. Staff felt that prohibiting vehicles from legally making a left turn would require them to find alternate routes through adjacent neighborhoods and additional queueing of northbound traffic at the SH 225. On April 4, 2017 council authorized staff to enter into a contract with Midtown Engineers to observe the intersection, conduct traffic counts, and provide recommendations to mitigate the left turn movements without affecting legal traffic flow at the intersection.

The consultant has completed the study and will present their findings at the August 15, 2017 Council Workshop.

Fiscal/Budgetary Impact:

For discussion only

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TRAFFIC ANALYSIS FOR

CENTER STREET AT RAILROAD AVENUE

FOR CITY OF DEER PARK, TEXAS

JUNE 2017

STATE OF TEXAS
SUZANNA I. SET
108874
LICENSED
PROFESSIONAL ENGINEER

June 5, 2017

Midtown Engineers, LLC

5225 Katy Freeway, Suite 400 * Houston, Texas 77007 * Tele: 713-862-8848 * Fax: 713-862-8840

Content

I. INTRODUCTION AND SUMMARY 3
II. EXISTING CONDITIONS 3
A. Center Street 3
B. Railroad Avenue 3
C. State Highway 225 Frontage Road 3
D. Robin Street 3
E. Intersection Characteristics 4
F. Land Use 4
III. TRAFFIC DATA 4
A. Traffic Volumes 4
IV. TRAFFIC OPERATIONS ANALYSIS 6
A. Existing Condition 6
i. Level of Service 6
V. ALTERNATIVES 8
VI. CONCLUSION AND RECOMMENDATIONS 10
Appendix A: Exhibit 1 through Exhibit 3
Appendix B: Intersection Photographs
Appendix C: Traffic Volumes
Appendix D: Deer Park Independent School District Bus Route List
Appendix E: SYNCHRO Analysis Report

LIST OF EXHIBITS

Exhibit 1: Site Location Map
Exhibit 2: Existing Conditions
Exhibit 3: Peak Hour Volumes

LIST OF TABLES

Table 1: Vehicle Volume Summary 5
Table 2: LOS Criteria for Signalized and Unsignalized Intersections 6
Table 3: Existing LOS and Delay (seconds/vehicle)* 7
Table 4: Alternative 1: LOS and Delay (seconds/vehicle)* 8
Table 5: Alternative 2: LOS and Delay (seconds/vehicle)* 9

I. INTRODUCTION AND SUMMARY

Midtown Engineers, LLC was retained to analyze the intersection of Center Street at Railroad Avenue, located in the City of Deer Park, Harris County, Texas (Key Map 538F). The study location is shown in **Exhibit 1**. Illegal left turn movements from Railroad Avenue onto Center Street created damage to the Gateway Improvements on Center Street.

The study was comprised of the following tasks:

- Analysis of existing conditions based on collected traffic counts and lane geometry
- Develop alternatives to eliminate the illegal left turn movements at the intersection of Center Street and Railroad Avenue

II. EXISTING CONDITIONS

This section outlines the characteristics of the approach roadways, the intersection of the roadways, and the current land use of the study area.

A. Center Street

Center Street runs in the north-south direction through the City of Deer Park. It begins at State Highway 225 Frontage Road and terminates just south of Fairmont Parkway. It is comprised of a four-lane section with left turn lane pockets within the study area. Center Street turns into a private industrial street, with gated entry, just north of SH 225 Westbound Frontage Road. The land use along it is commercial. Street lighting is present along Center Street. The posted speed limit on Center Street, within the study intersection, is 40 MPH.

B. Railroad Avenue

Railroad Avenue runs in the east-west direction. It begins at Deerwood Glen Drive and terminates at Center Street. It has two westbound lanes and one eastbound lane. The land use along Railroad Avenue is composed of general industrial, office professional and general commercial. The posted speed limit on Railroad Avenue is 40 MPH.

C. State Highway 225 Frontage Road

State Highway (SH) 225 Frontage Road, runs parallel to SH 225, in the east-west direction with three lanes in each direction within the study area. SH 225 is continuous through the study area. The posted speed limit on SH 225 Frontage Roads is 50 MPH.

D. Robin Street

Robin Street runs in the north-south direction. It begins at Railroad Avenue and terminates within an industrial area, just north of SH 225 Westbound Frontage Road. The land use along Robin Street is industrial.

E. Intersection Characteristics

Center Street and Railroad Avenue is a T-intersection, where Railroad Avenue T's into Center Street. Eastbound left turn movements from Railroad Avenue to Center Street is prohibited, with "NO LEFT TURN" signs at the intersection. Northbound left turn movements from Center Street to Railroad Avenue is allowed.

During a field visit in the afternoon, there were school buses traveling north on Center Street and turning left onto Railroad Avenue. Upon reviewing the Deer Park Independent School District's (ISD) Route List, see **Appendix D**, Railroad Avenue was not on the list. Midtown Engineers contacted the Deer Park ISD Department of Transportation to verify. A representative from the department said there are school buses traveling north on Center Street and turning left onto Railroad Avenue during the school days.

F. Land Use

The study intersection is located in the City of Deer Park in Harris County, Texas. According to Houston-Galveston Area Council (H-GAC), the properties surrounding the study intersection are composed of mostly commercial and residential. An existing condition diagram of this intersection is shown in **Exhibit 2**. **Appendix B** contains photographs of each approach of the study intersection.

III. TRAFFIC DATA

The traffic data collected for this intersection includes the AM and PM peak hour vehicle turning movement counts (TMC).

A. Traffic Volumes

The AM and PM peak hour vehicle turning movement counts were recorded at the study intersection on Thursday, April 22, 2017 from 6:00 to 8:00 A.M. and 4:00 to 6:00 P.M. The complete traffic data can be found in **Appendix C**. A summary of the data is presented in **Table 1**. The peak-hour turning movement counts are shown in **Exhibit 3**.

Table 1: Vehicle Volume Summary

Time Period	Traffic Volumes (vph)			
	Northbound	**Southbound**	**Eastbound**	**Westbound**
Center Street at Railroad Avenue				
6:00 – 7:00 AM	810	333	103	N/A
7:00 – 8:00AM	673	604	133	N/A
4:00 – 5:00 PM	650	661	176	N/A
5:00 – 6:00 PM	506	862	163	N/A
Center Street at SH 225 Eastbound Frontage Road				
6:00 – 7:00 AM	776	222	214	20
7:00 – 8:00AM	623	397	334	21
4:00 – 5:00 PM	618	439	471	116
5:00 – 6:00 PM	506	656	487	93
Center Street at SH 225 Westbound Frontage Road				
6:00 – 7:00 AM	505	13	0	294
7:00 – 8:00AM	433	6	2	472
4:00 – 5:00 PM	403	191	2	579
5:00 – 6:00 PM	289	223	2	1087
Robin Street at SH 225 Eastbound Frontage Road				
6:00 – 7:00 AM	108	7	321	0
7:00 – 8:00AM	125	19	392	0
4:00 – 5:00 PM	230	14	342	0
5:00 – 6:00 PM	192	35	406	0
Robin Street at SH 225 Westbound Frontage Road				
6:00 – 7:00 AM	141	0	11	590
7:00 – 8:00AM	120	0	4	508
4:00 – 5:00 PM	36	1	3	716
5:00 – 6:00 PM	24	1	13	963

IV. TRAFFIC OPERATIONS ANALYSIS

A. Existing Condition

Capacity analysis for the existing conditions was conducted using the methodologies defined in the Highway Capacity Manual (HCM 2010). The software program, Synchro Version 9.1, was used to conduct the analysis. The traffic operations for each movement, at signalized and unsignalized intersections, were reported in terms of Level of Service (LOS) and the corresponding control delays. The LOS criteria as defined in HCM for signalized and unsignalized intersections are detailed below.

i. Level of Service

The LOS is assigned based on the intersection delay; **Table 2** lists the different levels according to the Highway Capacity Manual (HCM) 2000. Most major urban areas within the United States, LOS A-D is considered an acceptable LOS, while LOS E is considered marginal and LOS F is considered unacceptable. For intersections operating at LOS D or below, reasonable efforts have been made to maintain the existing LOS.

The LOS at unsignalized intersections is determined by the average delay a vehicle experiences on each intersection approach. Therefore, a different LOS is reported for each approach.

The LOS at signalized intersections is determined by the average vehicle delay. Values can be reported for the intersection as a whole or each individual movement.

Table 2: LOS Criteria for Signalized and Unsignalized Intersections

	Signalized Intersections	**Unsignalized Intersections**
A	< 10	0-10
B	> 10-20	> 10-15
C	> 20-35	> 15-25
D	> 35-55	> 25-35
E	> 55-80	> 35-50
F	> 80	> 50

Source: Highway Capacity Manual 2000 (Chapter 16 and 17)

The results of the capacity analysis for 2017 existing conditions are indicated in **Table *3***. It can be seen from the results table that all intersections operate at an acceptable LOS B or better during the AM and PM peak hour.

Since HCM methodology does not provide intersection-wide delay for Stop-Controlled operation, (Center Street at Railroad Avenue), the LOS of the intersection approaches and individual movements were analyzed. The results of the LOS for the unsignalized intersection of Center Street at Railroad Avenue is summarized in **Table 3**.

Table 3: Existing LOS and Delay (seconds/vehicle)*

	AM PEAK HOUR		PM PEAK HOUR	
STOP CONTROLLED INTERSECTION	Northbound Left Turn	Eastbound Right Turn	Northbound Left Turn	Eastbound Right Turn
1 - Center Street at Railroad Avenue	A (2.9)	B (10.7)	A (2.4)	B (11.3)
SIGNALIZED INTERSECTION				
2 - SH 225 EB FR at Center Street	B (12.0)		B (14.5)	
3 - SH 225 WB FR at Center Street	B (12.7)		B (17.6)	
4 - SH 225 EB FR at Robin Street	B (13.6)		B (15.3)	
5 - SH 225 WB FR at Robin Street	B (15.3)		B (18.9)	

**signal timing based on Synchro's default values*

The existing LOS for all five intersections are at LOS B or better. When this report was prepared, the signal timing plans for SH 225 Frontage Road (eastbound and westbound) at Center Street and Robin Street, was requested but was not available. Therefore, the analysis was based on the optimized pre-time created by Synchro.

V. ALTERNATIVES

Four alternatives were developed to help eliminate the illegal left turn movements at Center Street and Railroad Avenue. The details for each alternative is listed below.

Alternative 1: Close the median on Center Street at Railroad Avenue

Alternative 1 proposed to close the median at Center Street. The existing northbound left turns, from Center Street onto Railroad Avenue, will be prohibited. Traffic will be rerouted through Intersection 2, 3, 4 and 5 to return to Railroad Avenue. The rerouted traffic was analyzed in Synchro and the results are summarized below in **Table 4**.

Table 4: Alternative 1: LOS and Delay (seconds/vehicle)*

	AM PEAK HOUR		PM PEAK HOUR	
STOP CONTROLLED INTERSECTION	Northbound Left Turn	Eastbound Right Turn	Northbound Left Turn	Eastbound Right Turn
1 - Center Street at Railroad Avenue	N/A	B (10.7)	N/A	B (11.3)
SIGNALIZED INTERSECTION				
2 - SH 225 EB FR at Center Street	B (11.9)		B (14.5)	
3 - SH 225 WB FR at Center Street	B (12.6)		B (17.4)	
4 - SH 225 EB FR at Robin Street	B (12.8)		D (50.3)	
5 - SH 225 WB FR at Robin Street	B (14.7)		B (19.2)	

When compared to existing AM and PM LOS and delay, Alternative 1's AM LOS remain the same at LOS B, with minor changes to the delay. In the PM peak hour, all intersections but intersection 4, remain the same LOS B. Intersection 4 LOS changed from LOS B (existing) to D (Alternative 1). This is due to the over capacity of the shared left turn and through movement.

Alternative 1 will also impact the existing school bus routes, which travel north on Center Street and turn left onto Railroad Avenue, during the non-peak hours.

Alternative 2: Convert Railroad Avenue into a one-way street (westbound)

Alternative 2 proposed to convert Railroad Avenue into a one-way street, westbound only, starting at the intersection of Robin Street and Railroad Avenue and ending at Center Street. The existing Railroad Avenue eastbound right turn traffic onto Center Street will be rerouted through intersection 5, where vehicles will turn left onto Robin Street, then right onto SH 225 Eastbound Frontage Road, and then right onto Center Street at intersection 2. The rerouted traffic was analyzed in Synchro and the results are summarized below in **Table 5**.

Table 5: Alternative 2: LOS and Delay (seconds/vehicle)*

	AM PEAK HOUR		PM PEAK HOUR	
STOP CONTROLLED INTERSECTION	Northbound Left Turn	Eastbound Right Turn	Northbound Left Turn	Eastbound Right Turn
1 - Center Street at Railroad Avenue	A (3.1)	N/A	A (2.7)	N/A
SIGNALIZED INTERSECTION				
2 - SH 225 EB FR at Center Street	B (11.4)		B (15.5)	
3 - SH 225 WB FR at Center Street	B (12.7)		B (17.6)	
4 - SH 225 EB FR at Robin Street	B (11.1)		B (12.9)	
5 - SH 225 WB FR at Robin Street	B (15.3)		B (18.9)	

When compared to the existing AM and PM LOS and delay, Alternative 2's LOS remain the same at LOS B, with minor changes to the delay. Intersection 4, the AM and PM overall intersection delay improved with the rerouted vehicles. This is because the existing northbound right turn has very low delay, and the rerouted vehicles actually make a right turn on red. In Synchro, the overall intersection delay is a weighted average of all movements at the intersection. Therefore, increasing the volume to a movement with low delay does increase the weight for that movement and result in a decreased overall intersection delay.

<u>Alternative 3: Add a right-turn only diverter on Railroad Avenue at Center Street</u>

Alternative 3 proposed a right-turn diverter, similar to the example shown in **Figure 1.** The diverter is proposed to be positioned at the approach to an intersection that orients vehicles to making a right-turn movement only. Also, with Alternative 3, it is proposed to replace the existing "No Left" (R3-2) turn signs with "Right Turn Only" (R3-5R) signs. Alternative 3 will not alter the existing traffic flow, therefore the existing LOS and delay shown in **Table *3*** apply.

Source: https://www.phoenix.gov/streetssite/Documents/d_039263.pdf

Figure 1: Right Turn Diverter

Alternative 4: Add a non-traversable directional median on Center Street

Alternative 4 proposed adding a directional non-traversable median, with a left turn bay, for the northbound left turn movement on Center Street. See example shown in **Figure 2**. Alternative 4 will not alter the existing traffic flow, therefore the existing LOS and delay shown in **Table *3*** apply. This separator would prevent the eastbound left turn movement from Railroad Avenue, where the access becomes right-in/right-out only with just two conflict points.

This Alternative will require additional pavement on Center Street. The pavement would need to widen to 66-feet, from its existing 64-feet, with five11-foot lanes (two southbound and three northbound) and 11-foot median/left turn lane.

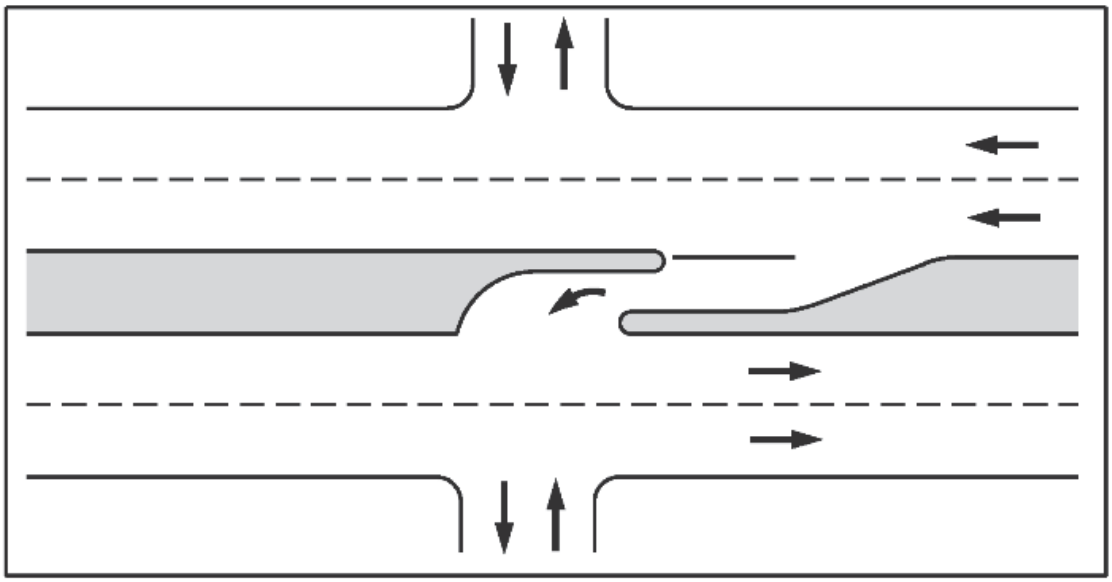


Figure 2: Left-Turn Ingress from One Direction

Source: http://onlinemanuals.txdot.gov/txdotmanuals/rdw/urban_streets.htm

VI. CONCLUSION AND RECOMMENDATIONS

The four alternatives presented above would help to eliminate the illegal eastbound left turn movement from Railroad Avenue onto Center Street. Alterative 1 proposed the closing of the median on Center Street, which will eliminate northbound access from Center Street to Railroad Avenue. This alternative will provide the most permanent solution to the illegal left turn, it will alter the traffic flow for a period of time until drivers adapt to the closure and find alternative routes. The traffic operation analysis in Synchro shows this alternative will have the same LOS as the existing for most of the intersections, except for the SH 225 Eastbound Frontage Road at Robin Street intersection, where the LOS is reduced from a B to D.

Alternative 2 proposed converting Railroad Avenue from a two-way to a one-way (westbound) roadway. This alternative will reroute all existing eastbound movement on Railroad Avenue to the intersection of Railroad Avenue and Robin Street and SH 225 Eastbound Frontage Road. Similarly to Alternative 1, it will alter the traffic flow for a period of time until drivers adapt to the closure and find alternative routes. The traffic operation analysis in Synchro shows this alternative will have the same LOS as the existing condition.

Alternative 3 proposed adding a right-turn diverter on Railroad Avenue to force all vehicles to make a right turn. This alternative will replace the existing no left turn signs with right turn only signs. This alternative will not alter the existing traffic flow.

Alternative 4 proposed a directional median with a left turn lane on Center Street to manage the illegal left turn movements on Railroad Avenue. This alternative will not alter the existing traffic flow, but will require additional pavement.

In summary, Alternative 3 is recommended, as it provides an immediate viable solution with minimum cost and no impact to existing traffic flow. Alternative 4 could supplement Alternative 3 at a later date with appropriate funding.

In addition to the recommended Alternatives listed above, the City should consider installing large streetscapes, such as bollards, in the median on Center Street within the study area. The large streetscapes will further prevent large vehicles from jumping the curb to make the illegal left turn.

Appendix A:
Exhibit 1 through Exhibit 3

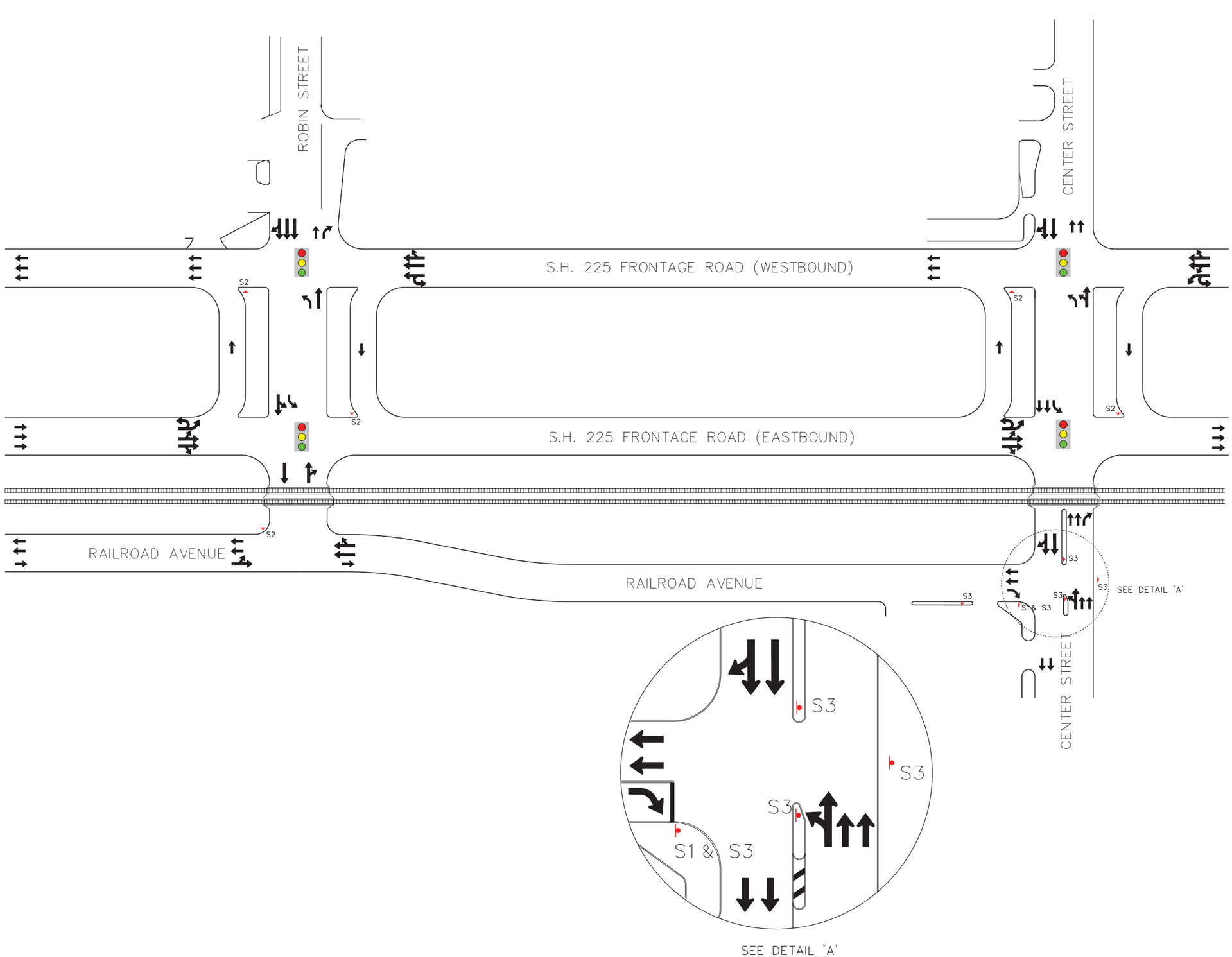
Midtown Engineers, LLC
5225 Katy Freeway, Suite 400 Houston, Texas 77007
(713) 862-8848 TBPE No. F-8934

TRAFFIC ANALYSIS FOR
CENTER ST. AT W. RAILROAD AVE.

EXHIBIT 1:
SITE LOCATION MAP

DATE:	SCALE:
6/2/2017	N.T.S.

SOURCE: GOOGLE EARTH. IMAGERY DATE: 5/02/2017



LEGEND

S1 STOP

S2 YIELD

S3

DIRECTION OF TRAFFIC

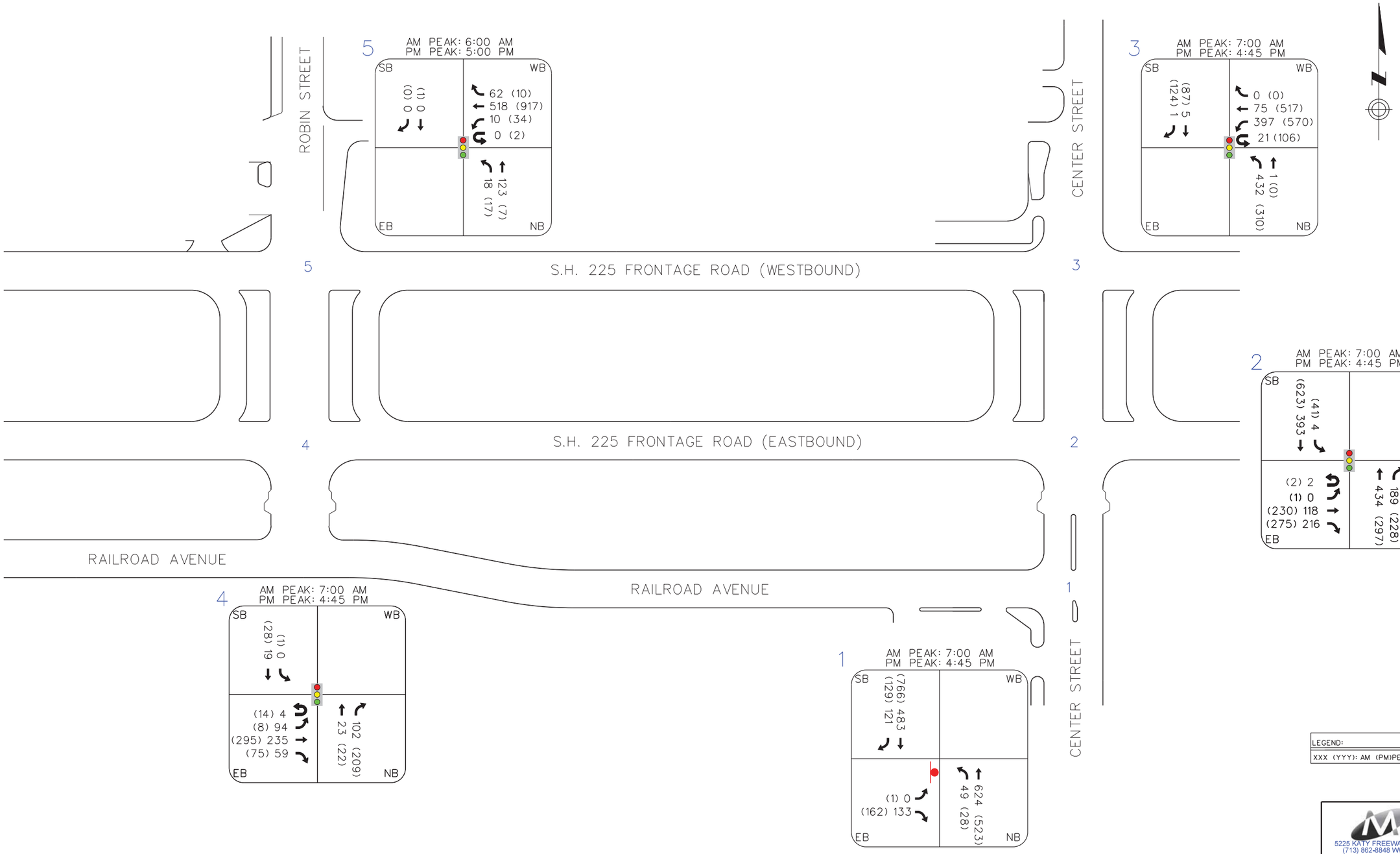
SPEED LIMITS:

CENTER STREET = 40 M.P.H.
RAILROAD AVENUE = 40 M.P.H.
SH 225 FRONTAGE ROAD = 50 M.P.H.

Midtown Engineers, LLC
5225 KATY FREEWAY, SUITE 400 HOUSTON, TX 77007
(713) 862-8848 WWW.MIDTOWNENGINEERS.COM
TBPE NO. F-8934

EXHIBIT 2:
EXISTING CONDITIONS

S:\Projects\DEER-3320\DGN\PPA\02_EXISTING CONDITIONS.dgn
6/2/2017 4:29:38 PM



LEGEND:
XXX (YYY): AM (PM)PEAK HOUR TRAFFIC VOLUMES

Midtown Engineers, LLC
5225 KATY FREEWAY, SUITE 400 HOUSTON, TX 77007
(713) 862-8848 WWW.MIDTOWNENGINEERS.COM
TBPE NO. F-8934

EXHIBIT 3:
PEAK HOUR VOLUMES

S:\Projects\DEER-3320\DGN\PP\03_PEAK HOUR VOL_AUTO.dgn
6/2/2017 1:53:07 PM

Appendix B:
Intersection Photographs

Image 1: Looking north on Center Street*

Image 2: Looking south on Center Street*

*Source – GoogleMap, Image Capture: February 2017.

Image 3: Looking east on Railroad Avenue*

Image 4: Looking west on Railroad Avenue*

*Source – GoogleMap, Image Capture: February 2017.

Appendix C:
Traffic Volumes

CJ Hensch & Associates, Inc

Midtown
5215 Sycamore Ave

Pasadena, Texas, United States 77503
555 SSet@midtownengineers.com

Count Name: 1 - Center St at Railroad St
Site Code: 1
Start Date: 04/20/2017
Page No: 1

Turning Movement Data

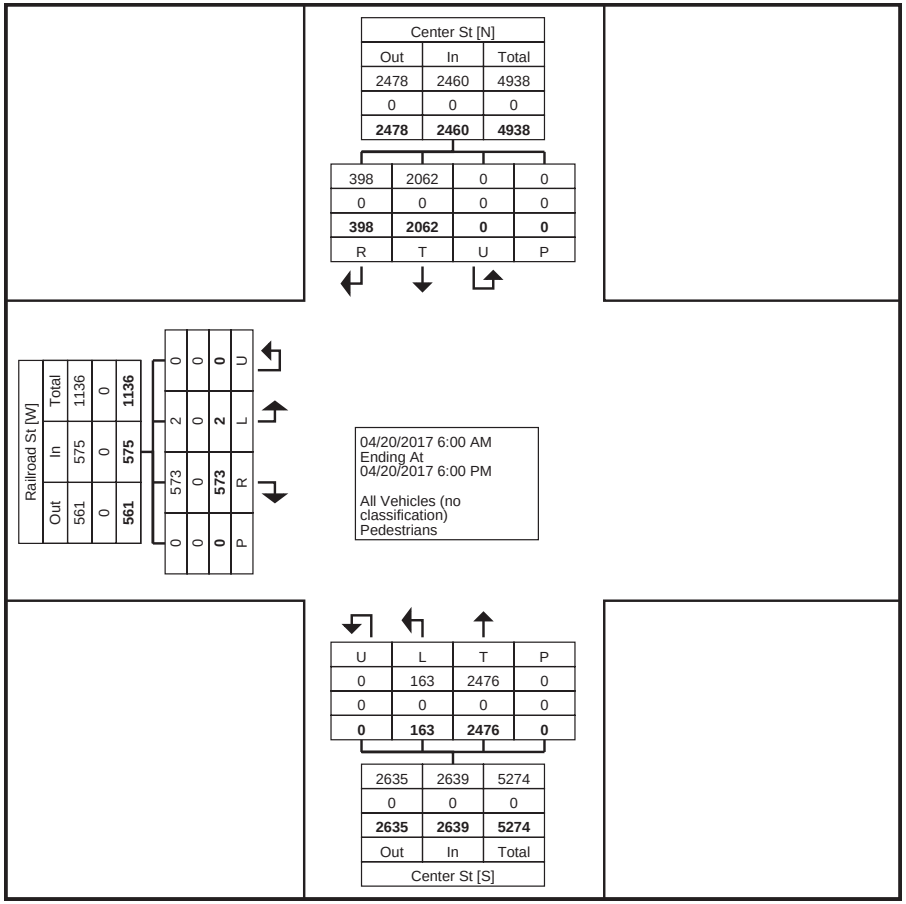
Start Time	Center St Southbound					Center St Northbound					Railroad St Eastbound					
	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Int. Total
6:00 AM	48	7	0	0	55	10	201	0	0	211	0	16	0	0	16	282
6:15 AM	47	16	0	0	63	11	186	0	0	197	0	24	0	0	24	284
6:30 AM	78	22	0	0	100	15	197	0	0	212	0	31	0	0	31	343
6:45 AM	86	29	0	0	115	10	180	0	0	190	0	32	0	0	32	337
Hourly Total	259	74	0	0	333	46	764	0	0	810	0	103	0	0	103	1246
7:00 AM	94	23	0	0	117	16	166	0	0	182	0	20	0	0	20	319
7:15 AM	123	26	0	0	149	12	154	0	0	166	0	42	0	0	42	357
7:30 AM	129	33	0	0	162	17	142	0	0	159	0	26	0	0	26	347
7:45 AM	137	39	0	0	176	4	162	0	0	166	0	45	0	0	45	387
Hourly Total	483	121	0	0	604	49	624	0	0	673	0	133	0	0	133	1410
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	139	23	0	0	162	15	183	0	0	198	0	45	0	0	45	405
4:15 PM	127	16	0	0	143	7	136	0	0	143	0	37	0	0	37	323
4:30 PM	145	21	0	0	166	10	153	0	0	163	0	55	0	0	55	384
4:45 PM	160	30	0	0	190	6	140	0	0	146	0	39	0	0	39	375
Hourly Total	571	90	0	0	661	38	612	0	0	650	0	176	0	0	176	1487
5:00 PM	221	29	0	0	250	10	162	0	0	172	1	39	0	0	40	462
5:15 PM	164	32	0	0	196	7	118	0	0	125	0	44	0	0	44	365
5:30 PM	221	38	0	0	259	5	103	0	0	108	0	40	0	0	40	407
5:45 PM	143	14	0	0	157	8	93	0	0	101	1	38	0	0	39	297
Hourly Total	749	113	0	0	862	30	476	0	0	506	2	161	0	0	163	1531
Grand Total	2062	398	0	0	2460	163	2476	0	0	2639	2	573	0	0	575	5674
Approach %	83.8	16.2	0.0	-	-	6.2	93.8	0.0	-	-	0.3	99.7	0.0	-	-	-
Total %	36.3	7.0	0.0	-	43.4	2.9	43.6	0.0	-	46.5	0.0	10.1	0.0	-	10.1	-
All Vehicles (no classification)	2062	398	0	-	2460	163	2476	0	-	2639	2	573	0	-	575	5674
% All Vehicles (no classification)	100.0	100.0	-	-	100.0	100.0	100.0	-	-	100.0	100.0	100.0	-	-	100.0	100.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CJ Hensch & Associates, Inc

Midtown
5215 Sycamore Ave

Pasadena, Texas, United States 77503
555 SSet@midtownengineers.com

Count Name: 1 - Center St at Railroad St
Site Code: 1
Start Date: 04/20/2017



Turning Movement Data Plot

CJ Hensch & Associates, Inc

Midtown
5215 Sycamore Ave

Pasadena, Texas, United States 77503
555 SSet@midtownengineers.com

Count Name: 1 - Center St at Railroad St
Site Code: 1
Start Date: 04/20/2017

Turning Movement Peak Hour Data (7:00 AM)

Start Time	Center St Southbound					Center St Northbound					Railroad St Eastbound					
	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Int. Total
7:00 AM	94	23	0	0	117	16	166	0	0	182	0	20	0	0	20	319
7:15 AM	123	26	0	0	149	12	154	0	0	166	0	42	0	0	42	357
7:30 AM	129	33	0	0	162	17	142	0	0	159	0	26	0	0	26	347
7:45 AM	137	39	0	0	176	4	162	0	0	166	0	45	0	0	45	387
Total	483	121	0	0	604	49	624	0	0	673	0	133	0	0	133	1410
Approach %	80.0	20.0	0.0	-	-	7.3	92.7	0.0	-	-	0.0	100.0	0.0	-	-	-
Total %	34.3	8.6	0.0	-	42.8	3.5	44.3	0.0	-	47.7	0.0	9.4	0.0	-	9.4	-
PHF	0.881	0.776	0.000	-	0.858	0.721	0.940	0.000	-	0.924	0.000	0.739	0.000	-	0.739	0.911
All Vehicles (no classification)	483	121	0	-	604	49	624	0	-	673	0	133	0	-	133	1410
% All Vehicles (no classification)	100.0	100.0	-	-	100.0	100.0	100.0	-	-	100.0	-	100.0	-	-	100.0	100.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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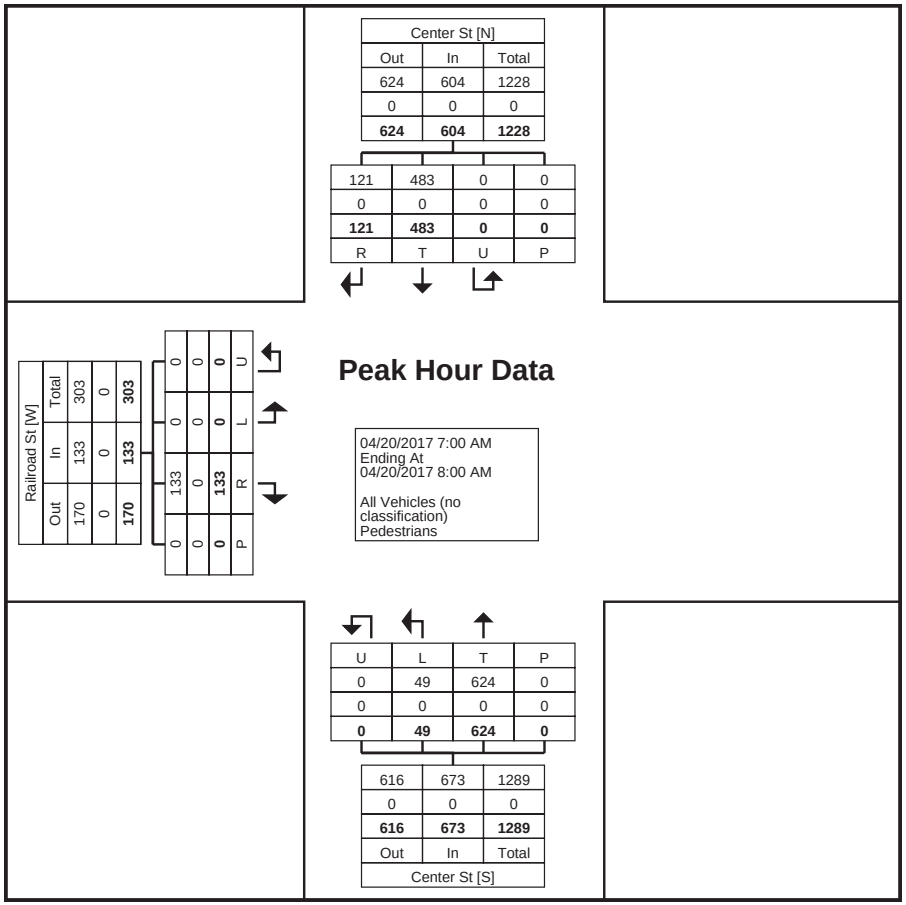
Count Name: 1 - Center St at Railroad St
Site Code: 1
Start Date: 04/20/2017



Turning Movement Peak Hour Data Plot (7:00 AM)

CJ Hensch & Associates, Inc

Midtown
5215 Sycamore Ave

Pasadena, Texas, United States 77503
555 SSet@midtownengineers.com

Count Name: 1 - Center St at Railroad St
Site Code: 1
Start Date: 04/20/2017

Turning Movement Peak Hour Data (4:45 PM)

Start Time	Center St Southbound					Center St Northbound					Railroad St Eastbound					
	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Left	Right	U-Turn	Peds	App. Total	Int. Total
4:45 PM	160	30	0	0	190	6	140	0	0	146	0	39	0	0	39	375
5:00 PM	221	29	0	0	250	10	162	0	0	172	1	39	0	0	40	462
5:15 PM	164	32	0	0	196	7	118	0	0	125	0	44	0	0	44	365
5:30 PM	221	38	0	0	259	5	103	0	0	108	0	40	0	0	40	407
Total	766	129	0	0	895	28	523	0	0	551	1	162	0	0	163	1609
Approach %	85.6	14.4	0.0	-	-	5.1	94.9	0.0	-	-	0.6	99.4	0.0	-	-	-
Total %	47.6	8.0	0.0	-	55.6	1.7	32.5	0.0	-	34.2	0.1	10.1	0.0	-	10.1	-
PHF	0.867	0.849	0.000	-	0.864	0.700	0.807	0.000	-	0.801	0.250	0.920	0.000	-	0.926	0.871
All Vehicles (no classification)	766	129	0	-	895	28	523	0	-	551	1	162	0	-	163	1609
% All Vehicles (no classification)	100.0	100.0	-	-	100.0	100.0	100.0	-	-	100.0	100.0	100.0	-	-	100.0	100.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: 1 - Center St at Railroad St
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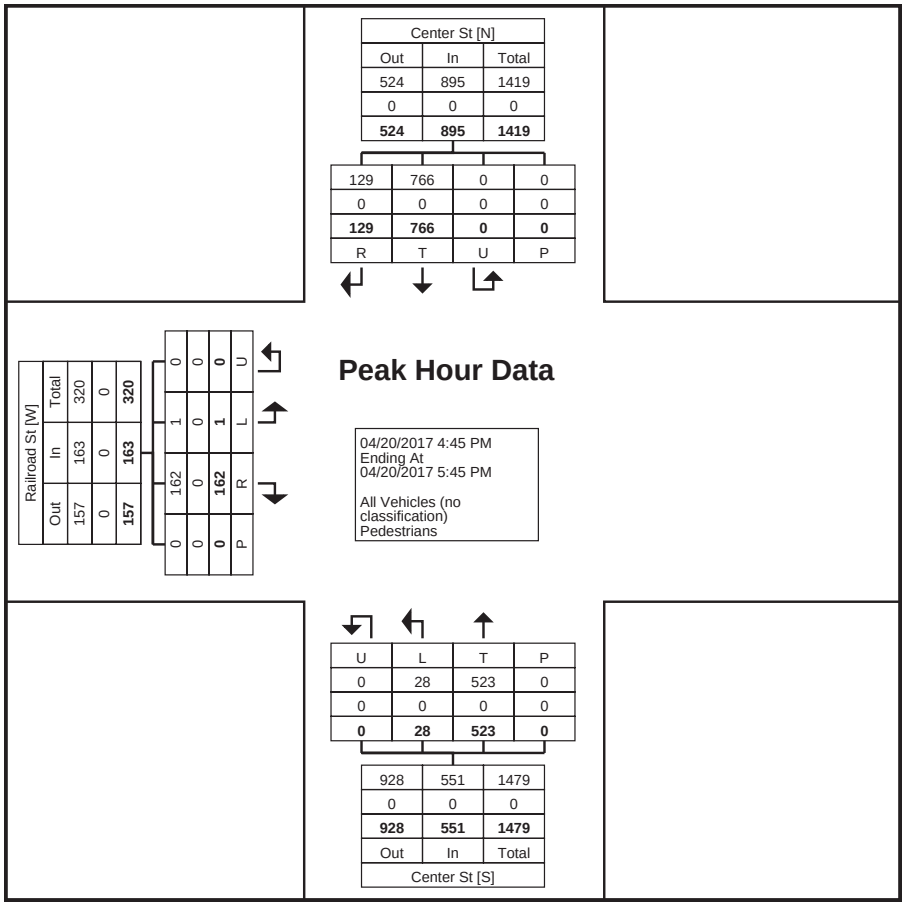
Start Date: 04/20/2017



Turning Movement Peak Hour Data Plot (4:45 PM)

CJ Hensch & Associates, Inc

Midtown
5215 Sycamore Ave

Pasadena, Texas, United States 77503
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Count Name: 2 - Center St at SH 225 EBFR
Site Code: 2
Start Date: 04/20/2017
Page No: 1

Turning Movement Data

Start Time	Center St Southbound						SH 225 EBFR Westbound						Center St Northbound						SH 225 EBFR Eastbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
6:00 AM	0	42	0	0	0	42	0	0	0	5	0	5	0	125	66	0	0	191	0	18	20	0	0	38	276
6:15 AM	0	47	0	0	0	47	0	0	0	6	0	6	0	133	68	0	0	201	1	32	18	0	0	51	305
6:30 AM	1	59	0	0	0	60	0	0	0	5	0	5	0	125	78	0	0	203	0	28	35	0	0	63	331
6:45 AM	0	73	0	0	0	73	0	0	0	4	0	4	0	122	59	0	0	181	0	26	36	0	0	62	320
Hourly Total	1	221	0	0	0	222	0	0	0	20	0	20	0	505	271	0	0	776	1	104	109	0	0	214	1232
7:00 AM	1	73	0	0	0	74	0	0	0	5	0	5	0	110	45	0	0	155	0	17	42	1	0	60	294
7:15 AM	0	108	0	0	0	108	0	0	0	5	0	5	0	121	39	0	0	160	0	31	45	1	0	77	350
7:30 AM	2	101	0	0	0	103	0	0	0	7	0	7	0	95	53	0	0	148	0	27	60	0	0	87	345
7:45 AM	1	111	0	0	0	112	0	0	0	4	0	4	0	108	52	0	0	160	0	43	69	0	0	112	388
Hourly Total	4	393	0	0	0	397	0	0	0	21	0	21	0	434	189	0	0	623	0	118	216	2	0	336	1377
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	7	87	0	0	0	94	0	0	0	21	0	21	0	115	60	0	0	175	0	72	74	1	0	147	437
4:15 PM	8	80	0	0	0	88	0	0	0	40	0	40	0	97	58	0	0	155	0	42	53	1	0	96	379
4:30 PM	15	103	0	0	0	118	0	0	0	30	0	30	0	98	58	0	0	156	0	55	63	0	0	118	422
4:45 PM	9	130	0	0	0	139	0	0	0	25	0	25	0	79	53	0	0	132	1	56	55	0	0	112	408
Hourly Total	39	400	0	0	0	439	0	0	0	116	0	116	0	389	229	0	0	618	1	225	245	2	0	473	1646
5:00 PM	13	169	0	0	0	182	0	0	0	36	0	36	0	79	73	0	0	152	0	72	91	2	0	165	535
5:15 PM	14	136	0	1	0	151	0	0	0	25	0	25	0	77	50	0	0	127	0	47	61	0	0	108	411
5:30 PM	5	188	0	0	0	193	0	0	0	20	0	20	0	62	52	0	0	114	0	55	68	0	0	123	450
5:45 PM	11	119	0	0	0	130	0	0	0	12	0	12	0	68	45	0	0	113	0	26	67	0	0	93	348
Hourly Total	43	612	0	1	0	656	0	0	0	93	0	93	0	286	220	0	0	506	0	200	287	2	0	489	1744
Grand Total	87	1626	0	1	0	1714	0	0	0	250	0	250	0	1614	909	0	0	2523	2	647	857	6	0	1512	5999
Approach %	5.1	94.9	0.0	0.1	-	-	0.0	0.0	0.0	100.0	-	-	0.0	64.0	36.0	0.0	-	-	0.1	42.8	56.7	0.4	-	-	-
Total %	1.5	27.1	0.0	0.0	-	28.6	0.0	0.0	0.0	4.2	-	4.2	0.0	26.9	15.2	0.0	-	42.1	0.0	10.8	14.3	0.1	-	25.2	-
All Vehicles (no classification)	87	1626	0	1	-	1714	0	0	0	250	-	250	0	1614	909	0	-	2523	2	647	857	6	-	1512	5999
% All Vehicles (no classification)	100.0	100.0	-	100.0	-	100.0	-	-	-	100.0	-	100.0	-	100.0	100.0	-	-	100.0	100.0	100.0	100.0	100.0	-	100.0	100.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CJ Hensch & Associates, Inc

Midtown
5215 Sycamore Ave

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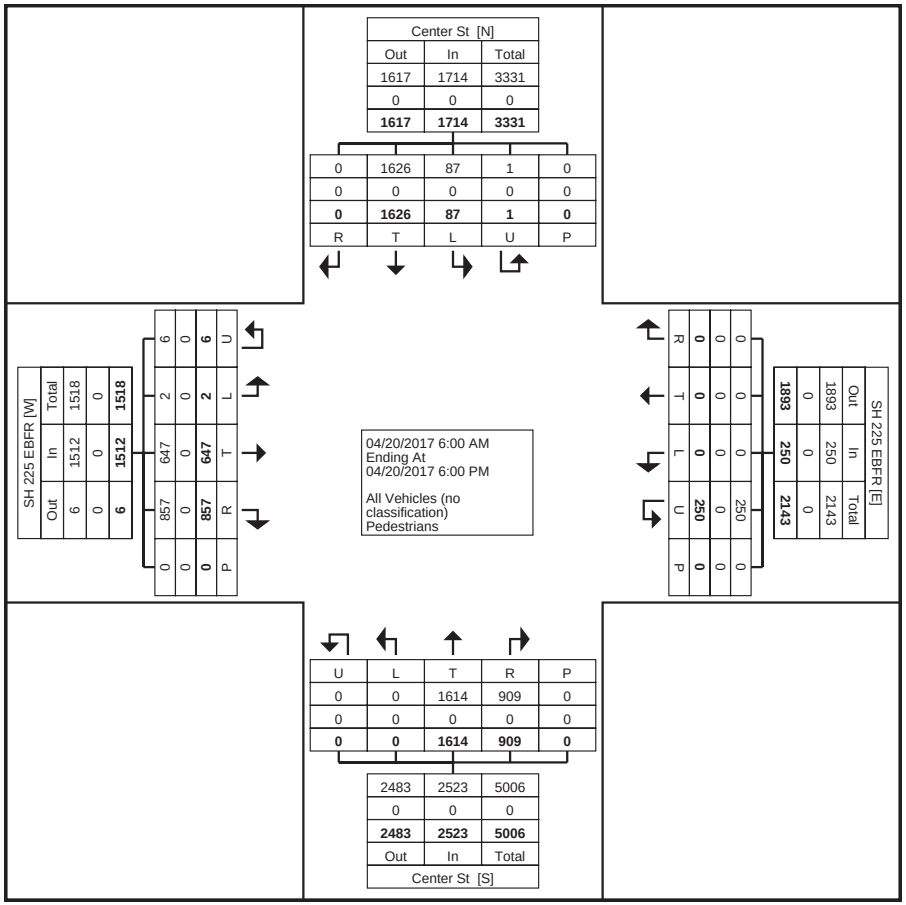
Count Name: 2 - Center St at SH 225 EBFR
Site Code: 2
Start Date: 04/20/2017
Page No: 2



Turning Movement Data Plot

CJ Hensch & Associates, Inc

Midtown
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Pasadena, Texas, United States 77503
555 SSet@midtownengineers.com

Count Name: 2 - Center St at SH 225 EBFR
Site Code: 2
Start Date: 04/20/2017

Turning Movement Peak Hour Data (7:00 AM)

Start Time	Center St Southbound						SH 225 EBFR Westbound						Center St Northbound						SH 225 EBFR Eastbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:00 AM	1	73	0	0	0	74	0	0	0	5	0	5	0	110	45	0	0	155	0	17	42	1	0	60	294
7:15 AM	0	108	0	0	0	108	0	0	0	5	0	5	0	121	39	0	0	160	0	31	45	1	0	77	350
7:30 AM	2	101	0	0	0	103	0	0	0	7	0	7	0	95	53	0	0	148	0	27	60	0	0	87	345
7:45 AM	1	111	0	0	0	112	0	0	0	4	0	4	0	108	52	0	0	160	0	43	69	0	0	112	388
Total	4	393	0	0	0	397	0	0	0	21	0	21	0	434	189	0	0	623	0	118	216	2	0	336	1377
Approach %	1.0	99.0	0.0	0.0	-	-	0.0	0.0	0.0	100.0	-	-	0.0	69.7	30.3	0.0	-	-	0.0	35.1	64.3	0.6	-	-	-
Total %	0.3	28.5	0.0	0.0	-	28.8	0.0	0.0	0.0	1.5	-	1.5	0.0	31.5	13.7	0.0	-	45.2	0.0	8.6	15.7	0.1	-	24.4	-
PHF	0.500	0.885	0.000	0.000	-	0.886	0.000	0.000	0.000	0.750	-	0.750	0.000	0.897	0.892	0.000	-	0.973	0.000	0.686	0.783	0.500	-	0.750	0.887
All Vehicles (no classification)	4	393	0	0	-	397	0	0	0	21	-	21	0	434	189	0	-	623	0	118	216	2	-	336	1377
% All Vehicles (no classification)	100.0	100.0	-	-	-	100.0	-	-	-	100.0	-	100.0	-	100.0	100.0	-	-	100.0	-	100.0	100.0	100.0	-	100.0	100.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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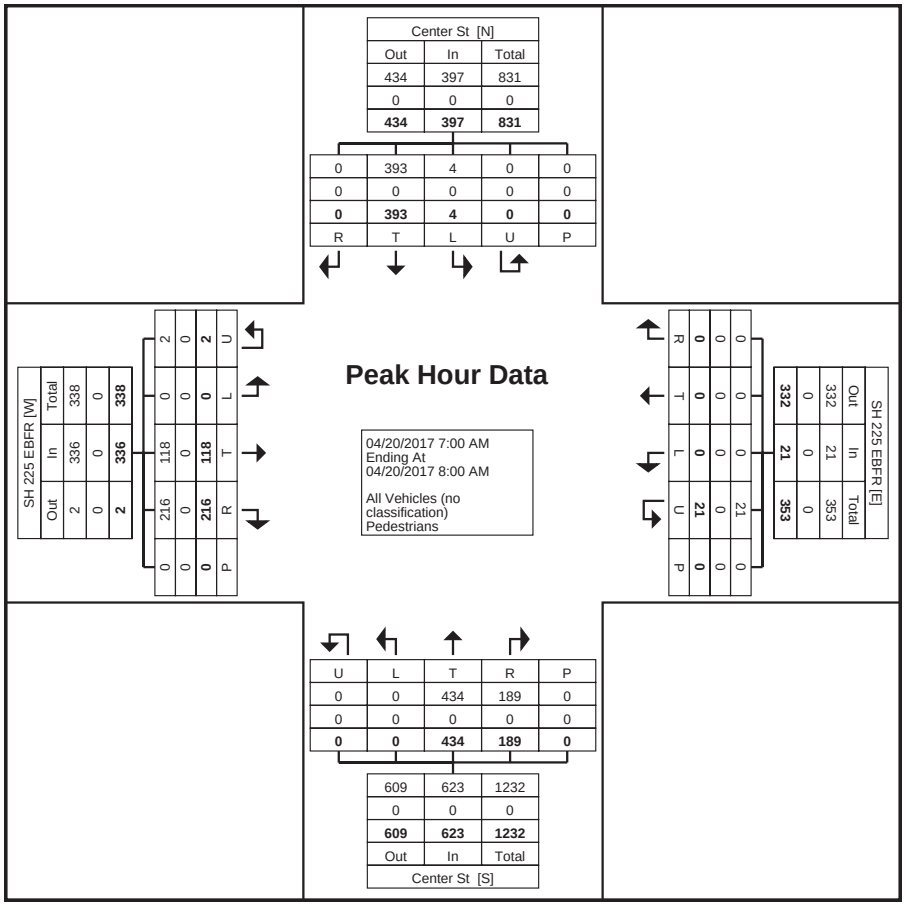
Page No: 4



Turning Movement Peak Hour Data Plot (7:00 AM)

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555 SSet@midtownengineers.com

Count Name: 2 - Center St at SH 225 EBFR
Site Code: 2
Start Date: 04/20/2017

Turning Movement Peak Hour Data (4:45 PM)

Start Time	Center St Southbound						SH 225 EBFR Westbound						Center St Northbound						SH 225 EBFR Eastbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
4:45 PM	9	130	0	0	0	139	0	0	0	25	0	25	0	79	53	0	0	132	1	56	55	0	0	112	408
5:00 PM	13	169	0	0	0	182	0	0	0	36	0	36	0	79	73	0	0	152	0	72	91	2	0	165	535
5:15 PM	14	136	0	1	0	151	0	0	0	25	0	25	0	77	50	0	0	127	0	47	61	0	0	108	411
5:30 PM	5	188	0	0	0	193	0	0	0	20	0	20	0	62	52	0	0	114	0	55	68	0	0	123	450
Total	41	623	0	1	0	665	0	0	0	106	0	106	0	297	228	0	0	525	1	230	275	2	0	508	1804
Approach %	6.2	93.7	0.0	0.2	-	-	0.0	0.0	0.0	100.0	-	-	0.0	56.6	43.4	0.0	-	-	0.2	45.3	54.1	0.4	-	-	-
Total %	2.3	34.5	0.0	0.1	-	36.9	0.0	0.0	0.0	5.9	-	5.9	0.0	16.5	12.6	0.0	-	29.1	0.1	12.7	15.2	0.1	-	28.2	-
PHF	0.732	0.828	0.000	0.250	-	0.861	0.000	0.000	0.000	0.736	-	0.736	0.000	0.940	0.781	0.000	-	0.863	0.250	0.799	0.755	0.250	-	0.770	0.843
All Vehicles (no classification)	41	623	0	1	-	665	0	0	0	106	-	106	0	297	228	0	-	525	1	230	275	2	-	508	1804
% All Vehicles (no classification)	100.0	100.0	-	100.0	-	100.0	-	-	-	100.0	-	100.0	-	100.0	100.0	-	-	100.0	100.0	100.0	100.0	100.0	-	100.0	100.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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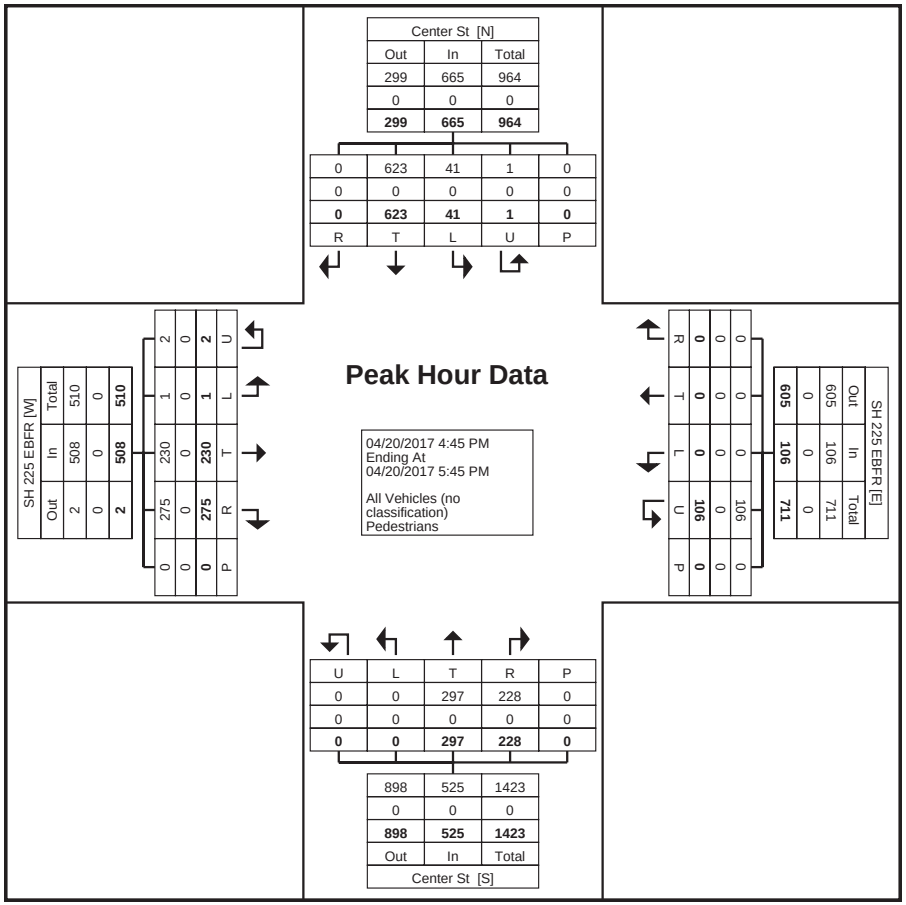
Count Name: 2 - Center St at SH 225 EBFR
Site Code: 2
Start Date: 04/20/2017
Page No: 6



Turning Movement Peak Hour Data Plot (4:45 PM)

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Midtown
5215 Sycamore Ave

Pasadena, Texas, United States 77503
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Count Name: 3 - Center St at SH 225 WBFR
Site Code: 3
Start Date: 04/20/2017
Page No: 1

Turning Movement Data

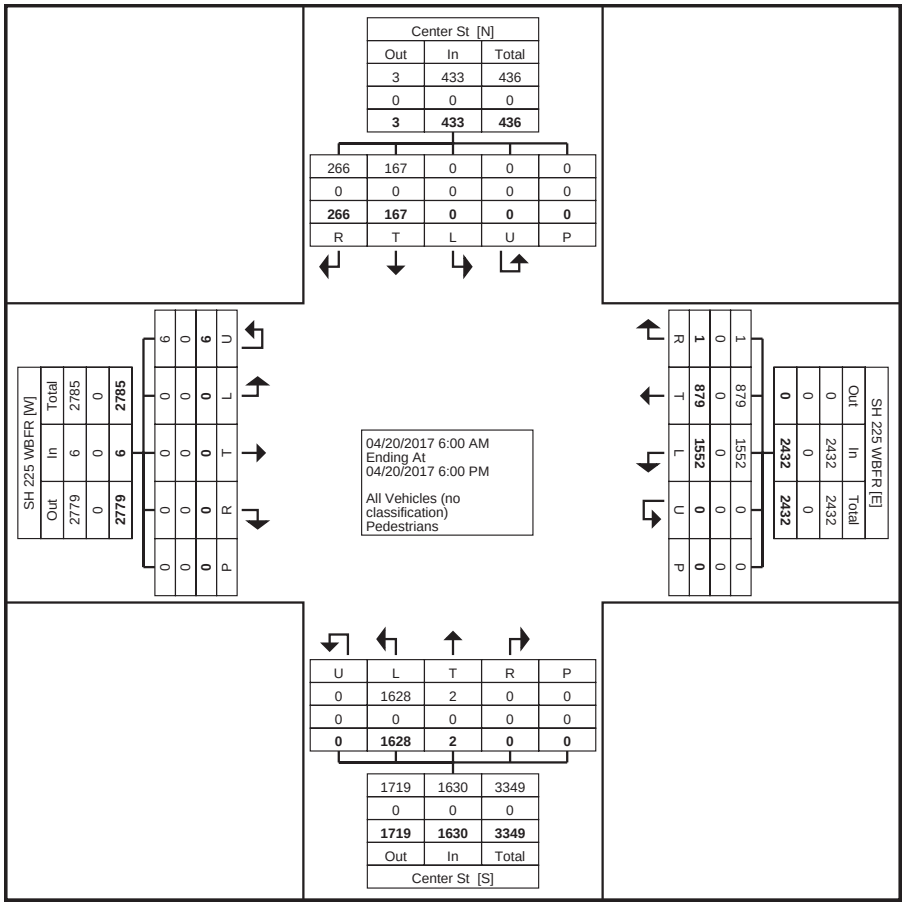
Start Time	Center St Southbound						SH 225 WBFR Westbound						Center St Northbound						SH 225 WBFR Eastbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
6:00 AM	0	1	7	0	0	8	39	25	0	0	0	64	129	0	0	0	0	129	0	0	0	0	0	0	201
6:15 AM	0	1	2	0	0	3	46	20	0	0	0	66	128	0	0	0	0	128	0	0	0	0	0	0	197
6:30 AM	0	1	1	0	0	2	62	14	0	0	0	76	123	1	0	0	0	124	0	0	0	0	0	0	202
6:45 AM	0	0	0	0	0	0	71	17	0	0	0	88	124	0	0	0	0	124	0	0	0	0	0	0	212
Hourly Total	0	3	10	0	0	13	218	76	0	0	0	294	504	1	0	0	0	505	0	0	0	0	0	0	812
7:00 AM	0	2	1	0	0	3	83	21	0	0	0	104	108	0	0	0	0	108	0	0	0	1	0	1	216
7:15 AM	0	0	0	0	0	0	96	6	0	0	0	102	120	0	0	0	0	120	0	0	0	1	0	1	223
7:30 AM	0	2	0	0	0	2	105	29	0	0	0	134	98	1	0	0	0	99	0	0	0	0	0	0	235
7:45 AM	0	1	0	0	0	1	113	19	0	0	0	132	106	0	0	0	0	106	0	0	0	0	0	0	239
Hourly Total	0	5	1	0	0	6	397	75	0	0	0	472	432	1	0	0	0	433	0	0	0	2	0	2	913
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	13	31	0	0	44	78	22	1	0	0	101	117	0	0	0	0	117	0	0	0	1	0	1	263
4:15 PM	0	12	29	0	0	41	82	52	0	0	0	134	98	0	0	0	0	98	0	0	0	1	0	1	274
4:30 PM	0	32	41	0	0	73	97	66	0	0	0	163	99	0	0	0	0	99	0	0	0	0	0	0	335
4:45 PM	0	17	16	0	0	33	112	69	0	0	0	181	89	0	0	0	0	89	0	0	0	0	0	0	303
Hourly Total	0	74	117	0	0	191	369	209	1	0	0	579	403	0	0	0	0	403	0	0	0	2	0	2	1175
5:00 PM	0	30	37	0	0	67	145	79	0	0	0	224	82	0	0	0	0	82	0	0	0	2	0	2	375
5:15 PM	0	20	28	0	0	48	143	215	0	0	0	358	77	0	0	0	0	77	0	0	0	0	0	0	483
5:30 PM	0	20	43	0	0	63	170	154	0	0	0	324	62	0	0	0	0	62	0	0	0	0	0	0	449
5:45 PM	0	15	30	0	0	45	110	71	0	0	0	181	68	0	0	0	0	68	0	0	0	0	0	0	294
Hourly Total	0	85	138	0	0	223	568	519	0	0	0	1087	289	0	0	0	0	289	0	0	0	2	0	2	1601
Grand Total	0	167	266	0	0	433	1552	879	1	0	0	2432	1628	2	0	0	0	1630	0	0	0	6	0	6	4501
Approach %	0.0	38.6	61.4	0.0	-	-	63.8	36.1	0.0	0.0	-	-	99.9	0.1	0.0	0.0	-	-	0.0	0.0	0.0	100.0	-	-	-
Total %	0.0	3.7	5.9	0.0	-	9.6	34.5	19.5	0.0	0.0	-	54.0	36.2	0.0	0.0	0.0	-	36.2	0.0	0.0	0.0	0.1	-	0.1	-
All Vehicles (no classification)	0	167	266	0	-	433	1552	879	1	0	-	2432	1628	2	0	0	-	1630	0	0	0	6	-	6	4501
% All Vehicles (no classification)	-	100.0	100.0	-	-	100.0	100.0	100.0	100.0	-	-	100.0	100.0	100.0	-	-	-	100.0	-	-	-	100.0	-	100.0	100.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CJ Hensch & Associates, Inc

Midtown
5215 Sycamore Ave

Pasadena, Texas, United States 77503
555 SSet@midtownengineers.com

Count Name: 3 - Center St at SH 225 WBFR
Site Code: 3
Start Date: 04/20/2017



Turning Movement Data Plot

CJ Hensch & Associates, Inc

Midtown
5215 Sycamore Ave

Pasadena, Texas, United States 77503
555 SSet@midtownengineers.com

Count Name: 3 - Center St at SH 225 WBFR
Site Code: 3
Start Date: 04/20/2017

Turning Movement Peak Hour Data (7:00 AM)

Start Time	Center St Southbound						SH 225 WBFR Westbound						Center St Northbound						SH 225 WBFR Eastbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:00 AM	0	2	1	0	0	3	83	21	0	0	0	104	108	0	0	0	0	108	0	0	0	1	0	1	216
7:15 AM	0	0	0	0	0	0	96	6	0	0	0	102	120	0	0	0	0	120	0	0	0	1	0	1	223
7:30 AM	0	2	0	0	0	2	105	29	0	0	0	134	98	1	0	0	0	99	0	0	0	0	0	0	235
7:45 AM	0	1	0	0	0	1	113	19	0	0	0	132	106	0	0	0	0	106	0	0	0	0	0	0	239
Total	0	5	1	0	0	6	397	75	0	0	0	472	432	1	0	0	0	433	0	0	0	2	0	2	913
Approach %	0.0	83.3	16.7	0.0	-	-	84.1	15.9	0.0	0.0	-	-	99.8	0.2	0.0	0.0	-	-	0.0	0.0	0.0	100.0	-	-	-
Total %	0.0	0.5	0.1	0.0	-	0.7	43.5	8.2	0.0	0.0	-	51.7	47.3	0.1	0.0	0.0	-	47.4	0.0	0.0	0.0	0.2	-	0.2	-
PHF	0.000	0.625	0.250	0.000	-	0.500	0.878	0.647	0.000	0.000	-	0.881	0.900	0.250	0.000	0.000	-	0.902	0.000	0.000	0.000	0.500	-	0.500	0.955
All Vehicles (no classification)	0	5	1	0	-	6	397	75	0	0	-	472	432	1	0	0	-	433	0	0	0	2	-	2	913
% All Vehicles (no classification)	-	100.0	100.0	-	-	100.0	100.0	100.0	-	-	-	100.0	100.0	100.0	-	-	-	100.0	-	-	-	100.0	-	100.0	100.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: 3 - Center St at SH 225 WBFR
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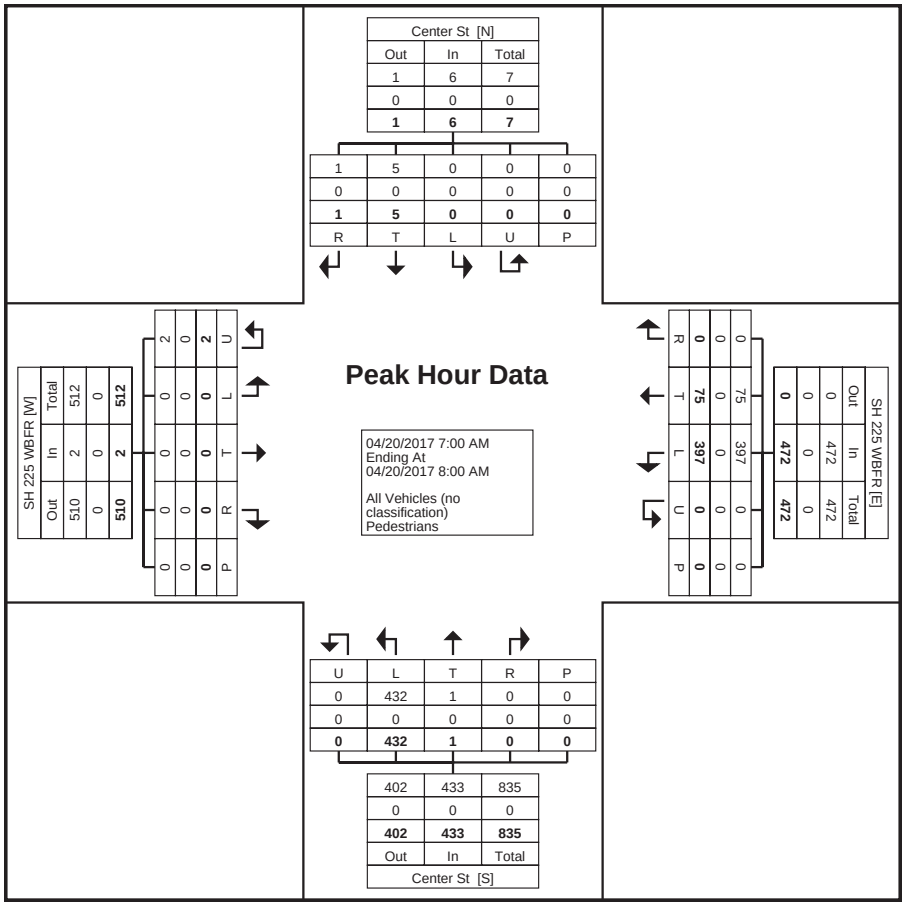
Start Date: 04/20/2017
Page No: 4



Turning Movement Peak Hour Data Plot (7:00 AM)

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5215 Sycamore Ave

Pasadena, Texas, United States 77503
555 SSet@midtownengineers.com

Count Name: 3 - Center St at SH 225 WBFR
Site Code: 3
Start Date: 04/20/2017

Turning Movement Peak Hour Data (4:45 PM)

Start Time	Center St Southbound						SH 225 WBFR Westbound						Center St Northbound						SH 225 WBFR Eastbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
4:45 PM	0	17	16	0	0	33	112	69	0	0	0	181	89	0	0	0	0	89	0	0	0	0	0	0	303
5:00 PM	0	30	37	0	0	67	145	79	0	0	0	224	82	0	0	0	0	82	0	0	0	2	0	2	375
5:15 PM	0	20	28	0	0	48	143	215	0	0	0	358	77	0	0	0	0	77	0	0	0	0	0	0	483
5:30 PM	0	20	43	0	0	63	170	154	0	0	0	324	62	0	0	0	0	62	0	0	0	0	0	0	449
Total	0	87	124	0	0	211	570	517	0	0	0	1087	310	0	0	0	0	310	0	0	0	2	0	2	1610
Approach %	0.0	41.2	58.8	0.0	-	-	52.4	47.6	0.0	0.0	-	-	100.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	100.0	-	-	-
Total %	0.0	5.4	7.7	0.0	-	13.1	35.4	32.1	0.0	0.0	-	67.5	19.3	0.0	0.0	0.0	-	19.3	0.0	0.0	0.0	0.1	-	0.1	-
PHF	0.000	0.725	0.721	0.000	-	0.787	0.838	0.601	0.000	0.000	-	0.759	0.871	0.000	0.000	0.000	-	0.871	0.000	0.000	0.000	0.250	-	0.250	0.833
All Vehicles (no classification)	0	87	124	0	-	211	570	517	0	0	-	1087	310	0	0	0	-	310	0	0	0	2	-	2	1610
% All Vehicles (no classification)	-	100.0	100.0	-	-	100.0	100.0	100.0	-	-	-	100.0	100.0	-	-	-	-	100.0	-	-	-	100.0	-	100.0	100.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: 3 - Center St at SH 225 WBFR
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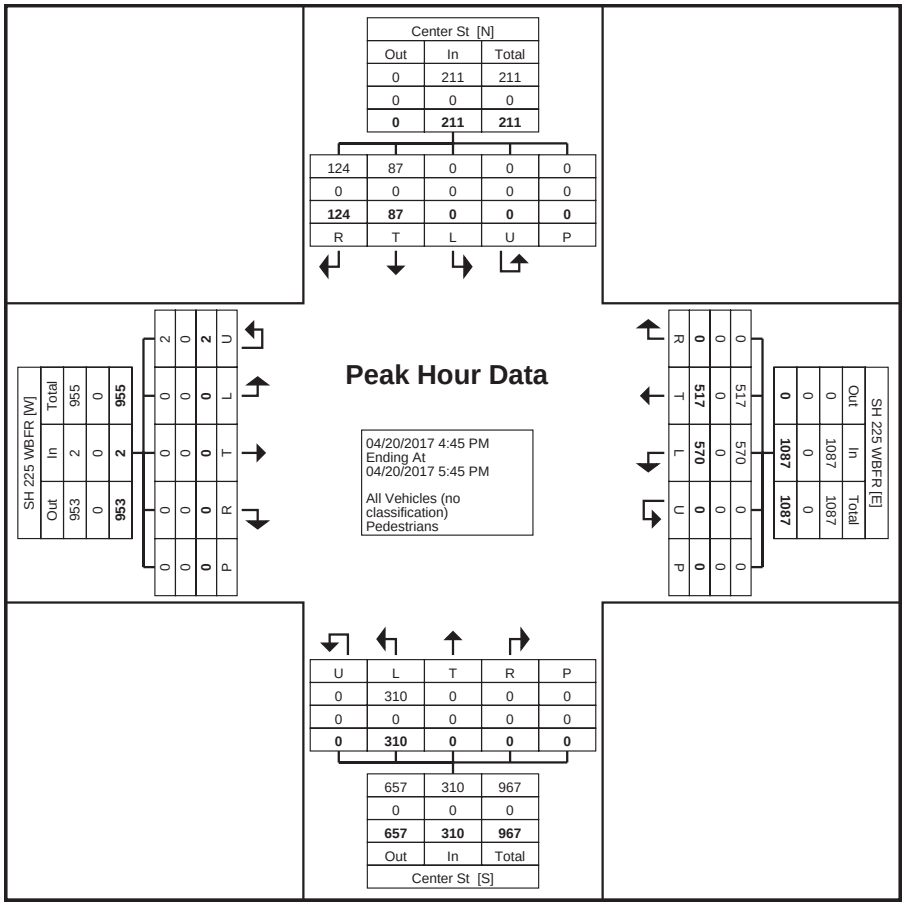
Start Date: 04/20/2017
Page No: 6



Turning Movement Peak Hour Data Plot (4:45 PM)

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5215 Sycamore Ave

Pasadena, Texas, United States 77503
555 SSet@midtownengineers.com

Count Name: 4 - Contractor Rd at SH 225 EBFR
Site Code: 4
Start Date: 04/20/2017

Turning Movement Data

Start Time	Contractor Rd Southbound						SH 225 EBFR Westbound						Contractor Rd Northbound						SH 225 EBFR Eastbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
6:00 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	6	17	0	0	23	20	20	12	2	0	54	79
6:15 AM	0	3	0	0	0	3	0	0	0	0	0	0	0	4	27	0	0	31	33	26	11	5	0	75	109
6:30 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	5	25	0	0	30	36	40	19	1	0	96	128
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	20	0	0	24	30	40	23	3	0	96	120
Hourly Total	0	7	0	0	0	7	0	0	0	0	0	0	0	19	89	0	0	108	119	126	65	11	0	321	436
7:00 AM	0	5	0	0	0	5	0	0	0	0	0	0	0	5	15	0	0	20	34	41	11	2	0	88	113
7:15 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	4	26	0	0	30	27	53	13	0	0	93	125
7:30 AM	0	6	0	0	0	6	0	0	0	0	0	0	0	9	26	0	0	35	18	64	16	1	0	99	140
7:45 AM	0	6	0	0	0	6	0	0	0	1	0	1	0	5	35	0	0	40	15	77	19	1	0	112	159
Hourly Total	0	19	0	0	0	19	0	0	0	1	0	1	0	23	102	0	0	125	94	235	59	4	0	392	537
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	2	0	0	0	2	0	0	0	2	0	2	0	6	63	0	0	69	1	77	14	0	0	92	165
4:15 PM	1	4	0	0	0	5	0	0	0	2	0	2	0	6	37	0	0	43	3	63	17	0	0	83	133
4:30 PM	1	4	0	0	0	5	0	0	0	0	0	0	0	8	50	0	0	58	2	67	16	0	0	85	148
4:45 PM	0	2	0	0	0	2	0	0	0	0	0	0	0	7	53	0	0	60	3	61	15	3	0	82	144
Hourly Total	2	12	0	0	0	14	0	0	0	4	0	4	0	27	203	0	0	230	9	268	62	3	0	342	590
5:00 PM	0	7	0	0	0	7	0	0	0	1	0	1	0	6	68	0	0	74	2	98	21	6	0	127	209
5:15 PM	1	8	0	0	0	9	0	0	0	0	0	0	0	3	34	0	0	37	3	65	21	5	0	94	140
5:30 PM	0	11	0	0	0	11	0	0	0	1	0	1	0	6	54	0	0	60	0	71	18	0	0	89	161
5:45 PM	0	8	0	0	0	8	0	0	0	0	0	0	0	4	17	0	0	21	1	77	16	2	0	96	125
Hourly Total	1	34	0	0	0	35	0	0	0	2	0	2	0	19	173	0	0	192	6	311	76	13	0	406	635
Grand Total	3	72	0	0	0	75	0	0	0	7	0	7	0	88	567	0	0	655	228	940	262	31	0	1461	2198
Approach %	4.0	96.0	0.0	0.0	-	-	0.0	0.0	0.0	100.0	-	-	0.0	13.4	86.6	0.0	-	-	15.6	64.3	17.9	2.1	-	-	-
Total %	0.1	3.3	0.0	0.0	-	3.4	0.0	0.0	0.0	0.3	-	0.3	0.0	4.0	25.8	0.0	-	29.8	10.4	42.8	11.9	1.4	-	66.5	-
All Vehicles (no classification)	3	72	0	0	-	75	0	0	0	7	-	7	0	88	567	0	-	655	228	940	262	31	-	1461	2198
% All Vehicles (no classification)	100.0	100.0	-	-	-	100.0	-	-	-	100.0	-	100.0	-	100.0	100.0	-	-	100.0	100.0	100.0	100.0	100.0	-	100.0	100.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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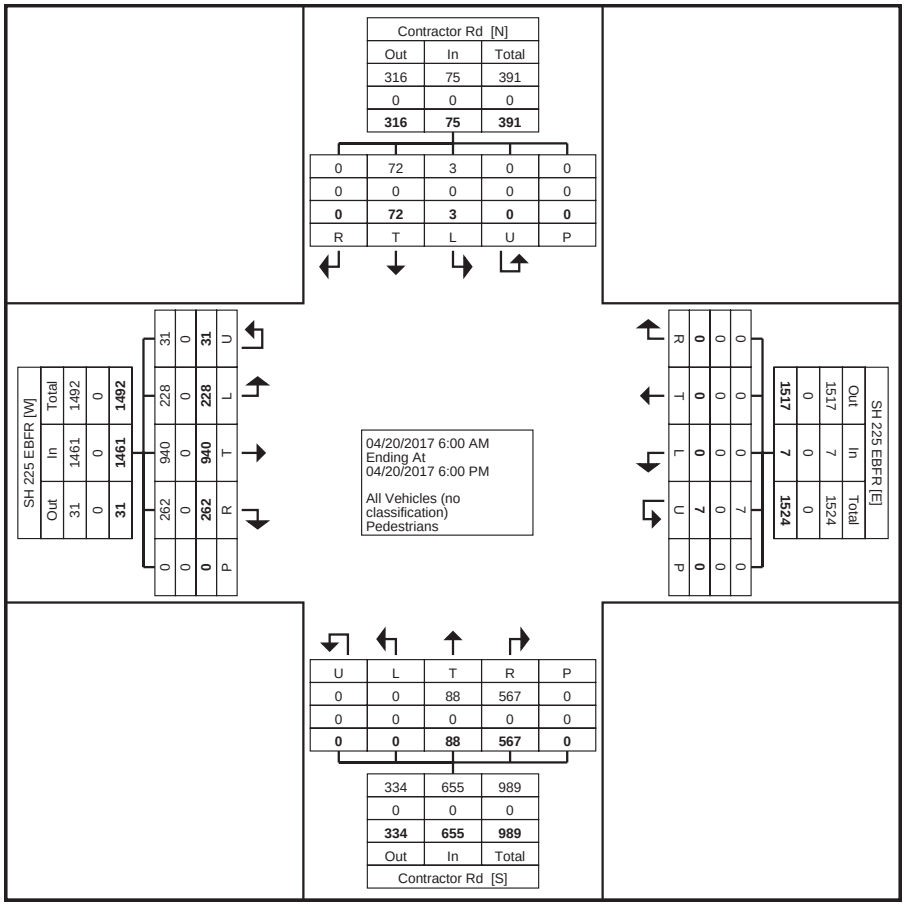
Count Name: 4 - Contractor Rd at SH 225 EBFR
Site Code: 4
Start Date: 04/20/2017
Page No: 2



Turning Movement Data Plot

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Count Name: 4 - Contractor Rd at SH 225 EBFR
Site Code: 4
Start Date: 04/20/2017

Turning Movement Peak Hour Data (7:00 AM)

Start Time	Contractor Rd Southbound						SH 225 EBFR Westbound						Contractor Rd Northbound						SH 225 EBFR Eastbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
7:00 AM	0	5	0	0	0	5	0	0	0	0	0	0	0	5	15	0	0	20	34	41	11	2	0	88	113
7:15 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	4	26	0	0	30	27	53	13	0	0	93	125
7:30 AM	0	6	0	0	0	6	0	0	0	0	0	0	0	9	26	0	0	35	18	64	16	1	0	99	140
7:45 AM	0	6	0	0	0	6	0	0	0	1	0	1	0	5	35	0	0	40	15	77	19	1	0	112	159
Total	0	19	0	0	0	19	0	0	0	1	0	1	0	23	102	0	0	125	94	235	59	4	0	392	537
Approach %	0.0	100.0	0.0	0.0	-	-	0.0	0.0	0.0	100.0	-	-	0.0	18.4	81.6	0.0	-	-	24.0	59.9	15.1	1.0	-	-	-
Total %	0.0	3.5	0.0	0.0	-	3.5	0.0	0.0	0.0	0.2	-	0.2	0.0	4.3	19.0	0.0	-	23.3	17.5	43.8	11.0	0.7	-	73.0	-
PHF	0.000	0.792	0.000	0.000	-	0.792	0.000	0.000	0.000	0.250	-	0.250	0.000	0.639	0.729	0.000	-	0.781	0.691	0.763	0.776	0.500	-	0.875	0.844
All Vehicles (no classification)	0	19	0	0	-	19	0	0	0	1	-	1	0	23	102	0	-	125	94	235	59	4	-	392	537
% All Vehicles (no classification)	-	100.0	-	-	-	100.0	-	-	-	100.0	-	100.0	-	100.0	100.0	-	-	100.0	100.0	100.0	100.0	100.0	-	100.0	100.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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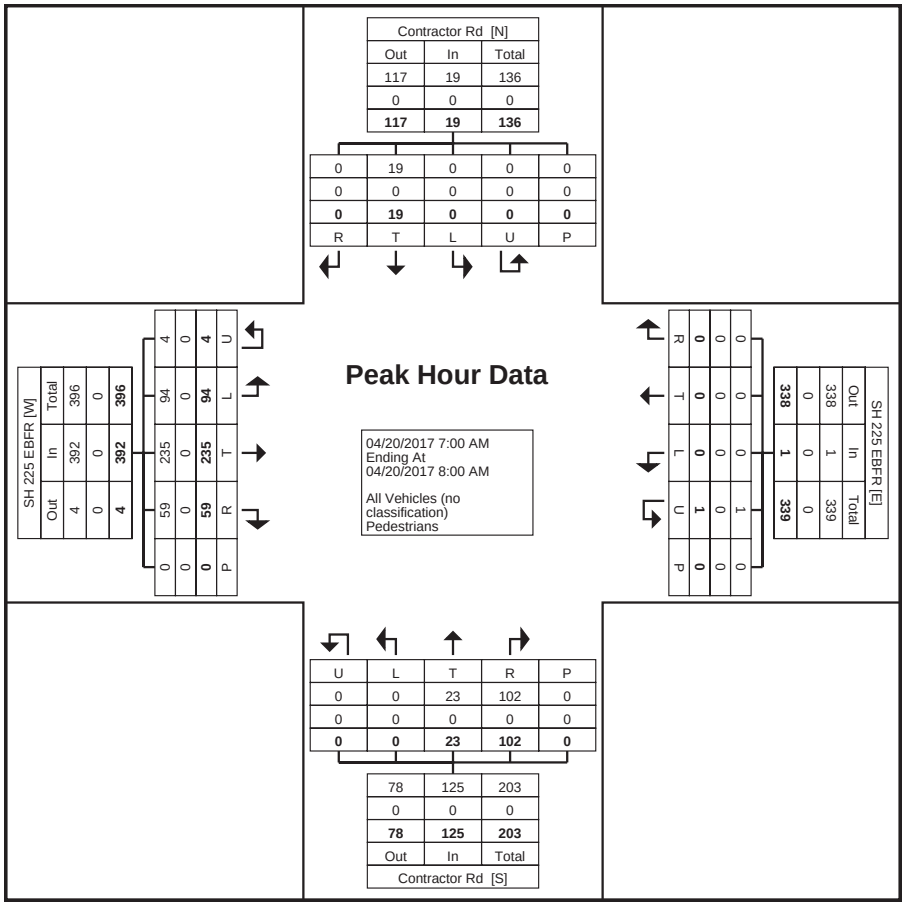

Turning Movement Peak Hour Data Plot (7:00 AM)

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Count Name: 4 - Contractor Rd at SH 225 EBFR
Site Code: 4
Start Date: 04/20/2017

Turning Movement Peak Hour Data (4:45 PM)

Start Time	Contractor Rd Southbound						SH 225 EBFR Westbound						Contractor Rd Northbound						SH 225 EBFR Eastbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
4:45 PM	0	2	0	0	0	2	0	0	0	0	0	0	0	7	53	0	0	60	3	61	15	3	0	82	144
5:00 PM	0	7	0	0	0	7	0	0	0	1	0	1	0	6	68	0	0	74	2	98	21	6	0	127	209
5:15 PM	1	8	0	0	0	9	0	0	0	0	0	0	0	3	34	0	0	37	3	65	21	5	0	94	140
5:30 PM	0	11	0	0	0	11	0	0	0	1	0	1	0	6	54	0	0	60	0	71	18	0	0	89	161
Total	1	28	0	0	0	29	0	0	0	2	0	2	0	22	209	0	0	231	8	295	75	14	0	392	654
Approach %	3.4	96.6	0.0	0.0	-	-	0.0	0.0	0.0	100.0	-	-	0.0	9.5	90.5	0.0	-	-	2.0	75.3	19.1	3.6	-	-	-
Total %	0.2	4.3	0.0	0.0	-	4.4	0.0	0.0	0.0	0.3	-	0.3	0.0	3.4	32.0	0.0	-	35.3	1.2	45.1	11.5	2.1	-	59.9	-
PHF	0.250	0.636	0.000	0.000	-	0.659	0.000	0.000	0.000	0.500	-	0.500	0.000	0.786	0.768	0.000	-	0.780	0.667	0.753	0.893	0.583	-	0.772	0.782
All Vehicles (no classification)	1	28	0	0	-	29	0	0	0	2	-	2	0	22	209	0	-	231	8	295	75	14	-	392	654
% All Vehicles (no classification)	100.0	100.0	-	-	-	100.0	-	-	-	100.0	-	100.0	-	100.0	100.0	-	-	100.0	100.0	100.0	100.0	100.0	-	100.0	100.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CJ Hensch & Associates, Inc

Midtown
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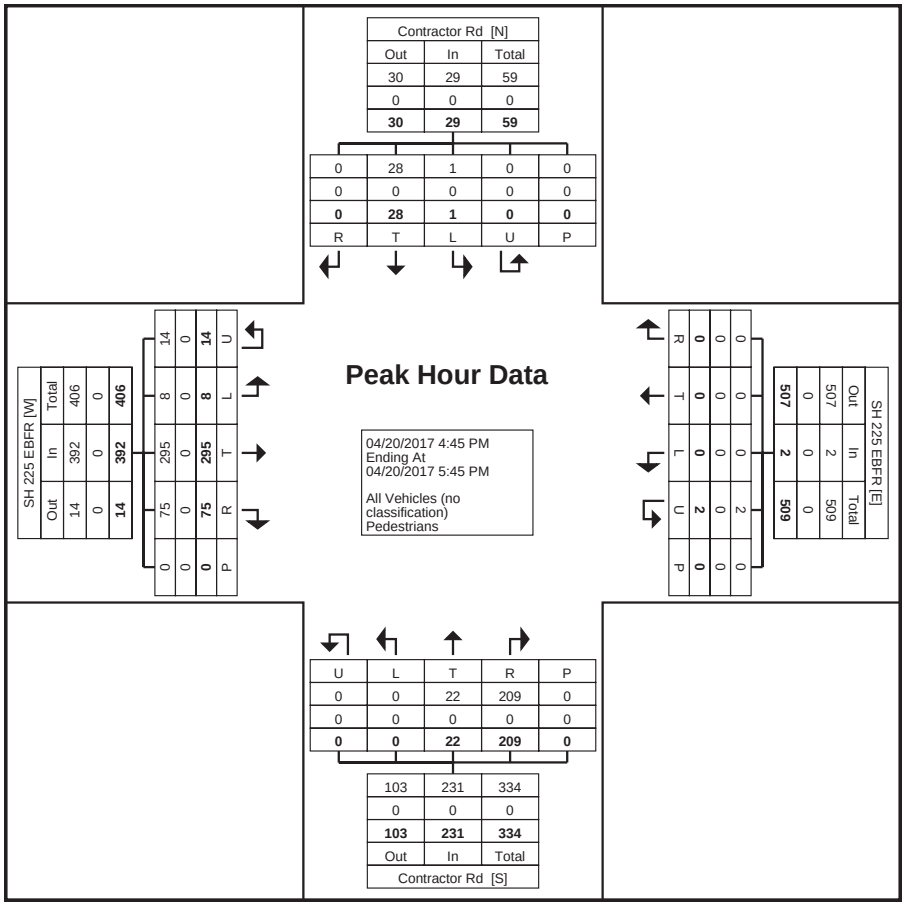
Pasadena, Texas, United States 77503
555 SSet@midtownengineers.com

Count Name: 4 - Contractor Rd at SH 225 EBFR
Site Code: 4
Start Date: 04/20/2017
Page No: 6



Turning Movement Peak Hour Data Plot (4:45 PM)

CJ Hensch & Associates, Inc

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Count Name: 5 - Contractor Rd at SH 225 WBFR
Site Code: 5
Start Date: 04/20/2017
Page No: 1

Turning Movement Data

Start Time	Contractor Rd Southbound						SH 225 WBFR Westbound						Contractor Rd Northbound						SH 225 WBFR Eastbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
6:00 AM	0	0	0	0	0	0	2	132	20	0	0	154	6	21	0	0	0	27	0	0	0	2	0	2	183
6:15 AM	0	0	0	0	0	0	3	137	15	0	0	155	6	33	0	0	0	39	0	0	0	5	0	5	199
6:30 AM	0	0	0	0	0	0	1	130	11	0	0	142	4	38	0	0	0	42	0	0	0	1	0	1	185
6:45 AM	0	0	0	0	0	0	4	119	16	0	0	139	2	31	0	0	0	33	0	0	0	3	0	3	175
Hourly Total	0	0	0	0	0	0	10	518	62	0	0	590	18	123	0	0	0	141	0	0	0	11	0	11	742
7:00 AM	0	0	0	0	0	0	5	103	14	0	0	122	4	37	0	0	0	41	0	0	0	2	0	2	165
7:15 AM	0	0	0	0	0	0	2	126	5	0	0	133	3	28	0	0	0	31	0	0	0	0	0	0	164
7:30 AM	0	0	0	0	0	0	6	122	4	0	0	132	6	20	0	0	0	26	0	0	0	1	0	1	159
7:45 AM	0	0	0	0	0	0	7	111	2	1	0	121	4	18	0	0	0	22	0	0	0	1	0	1	144
Hourly Total	0	0	0	0	0	0	20	462	25	1	0	508	17	103	0	0	0	120	0	0	0	4	0	4	632
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	0	0	0	0	0	2	165	0	2	0	169	4	1	0	0	0	5	0	0	0	0	0	0	174
4:15 PM	0	1	0	0	0	1	4	177	2	2	0	185	8	2	0	0	0	10	0	0	0	0	0	0	196
4:30 PM	0	0	0	0	0	0	5	193	3	0	0	201	7	3	0	0	0	10	0	0	0	0	0	0	211
4:45 PM	0	0	0	0	0	0	2	157	2	0	0	161	5	6	0	0	0	11	0	0	0	3	0	3	175
Hourly Total	0	1	0	0	0	1	13	692	7	4	0	716	24	12	0	0	0	36	0	0	0	3	0	3	756
5:00 PM	0	0	0	0	0	0	7	199	5	1	0	212	6	2	0	0	0	8	0	0	0	6	0	6	226
5:15 PM	0	1	0	0	0	1	8	303	3	0	0	314	2	4	0	0	0	6	0	0	0	5	0	5	326
5:30 PM	0	0	0	0	0	0	11	247	2	1	0	261	5	1	0	0	0	6	0	0	0	0	0	0	267
5:45 PM	0	0	0	0	0	0	8	168	0	0	0	176	4	0	0	0	0	4	0	0	0	2	0	2	182
Hourly Total	0	1	0	0	0	1	34	917	10	2	0	963	17	7	0	0	0	24	0	0	0	13	0	13	1001
Grand Total	0	2	0	0	0	2	77	2589	104	7	0	2777	76	245	0	0	0	321	0	0	0	31	0	31	3131
Approach %	0.0	100.0	0.0	0.0	-	-	2.8	93.2	3.7	0.3	-	-	23.7	76.3	0.0	0.0	-	-	0.0	0.0	0.0	100.0	-	-	-
Total %	0.0	0.1	0.0	0.0	-	0.1	2.5	82.7	3.3	0.2	-	88.7	2.4	7.8	0.0	0.0	-	10.3	0.0	0.0	0.0	1.0	-	1.0	-
All Vehicles (no classification)	0	2	0	0	-	2	77	2589	104	7	-	2777	76	245	0	0	-	321	0	0	0	31	-	31	3131
% All Vehicles (no classification)	-	100.0	-	-	-	100.0	100.0	100.0	100.0	100.0	-	100.0	100.0	100.0	-	-	-	100.0	-	-	-	100.0	-	100.0	100.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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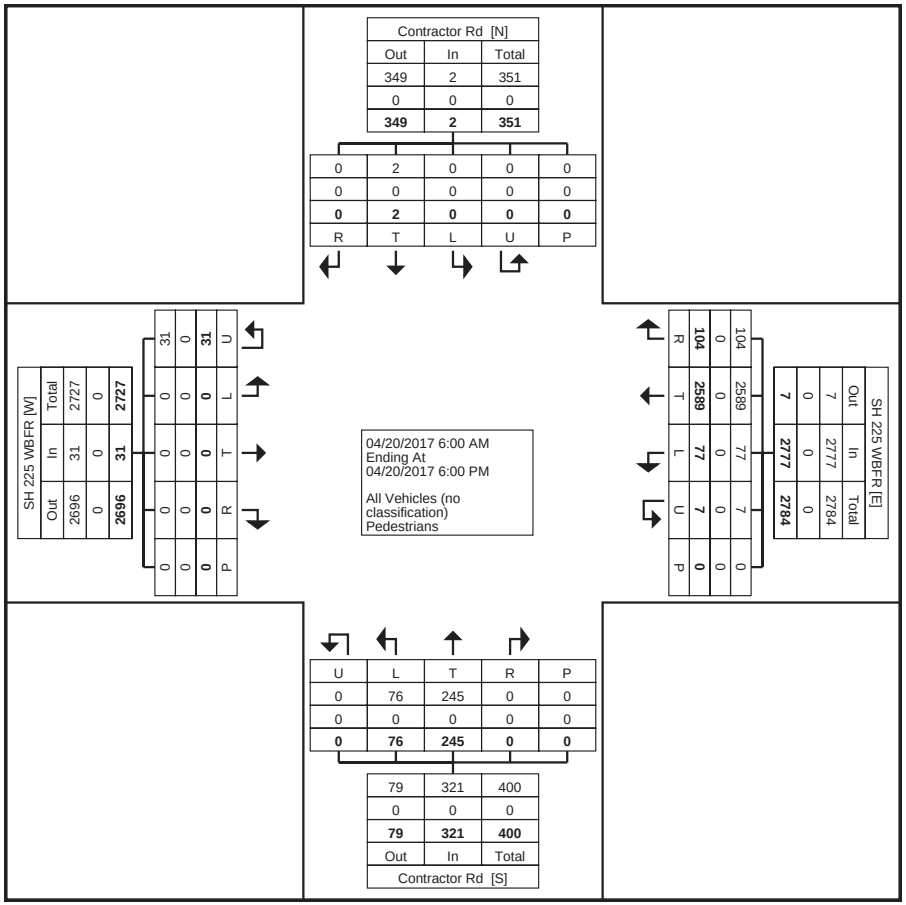
Start Date: 04/20/2017
Page No: 2



Turning Movement Data Plot

CJ Hensch & Associates, Inc

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Pasadena, Texas, United States 77503
555 SSet@midtownengineers.com

Count Name: 5 - Contractor Rd at SH 225 WBFR
Site Code: 5
Start Date: 04/20/2017

Turning Movement Peak Hour Data (6:00 AM)

Start Time	Contractor Rd Southbound						SH 225 WBFR Westbound						Contractor Rd Northbound						SH 225 WBFR Eastbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
6:00 AM	0	0	0	0	0	0	2	132	20	0	0	154	6	21	0	0	0	27	0	0	0	2	0	2	183
6:15 AM	0	0	0	0	0	0	3	137	15	0	0	155	6	33	0	0	0	39	0	0	0	5	0	5	199
6:30 AM	0	0	0	0	0	0	1	130	11	0	0	142	4	38	0	0	0	42	0	0	0	1	0	1	185
6:45 AM	0	0	0	0	0	0	4	119	16	0	0	139	2	31	0	0	0	33	0	0	0	3	0	3	175
Total	0	0	0	0	0	0	10	518	62	0	0	590	18	123	0	0	0	141	0	0	0	11	0	11	742
Approach %	NaN	NaN	NaN	NaN	-	-	1.7	87.8	10.5	0.0	-	-	12.8	87.2	0.0	0.0	-	-	0.0	0.0	0.0	100.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	1.3	69.8	8.4	0.0	-	79.5	2.4	16.6	0.0	0.0	-	19.0	0.0	0.0	0.0	1.5	-	1.5	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.625	0.945	0.775	0.000	-	0.952	0.750	0.809	0.000	0.000	-	0.839	0.000	0.000	0.000	0.550	-	0.550	0.932
All Vehicles (no classification)	0	0	0	0	-	0	10	518	62	0	-	590	18	123	0	0	-	141	0	0	0	11	-	11	742
% All Vehicles (no classification)	-	-	-	-	-	-	100.0	100.0	100.0	-	-	100.0	100.0	100.0	-	-	-	100.0	-	-	-	100.0	-	100.0	100.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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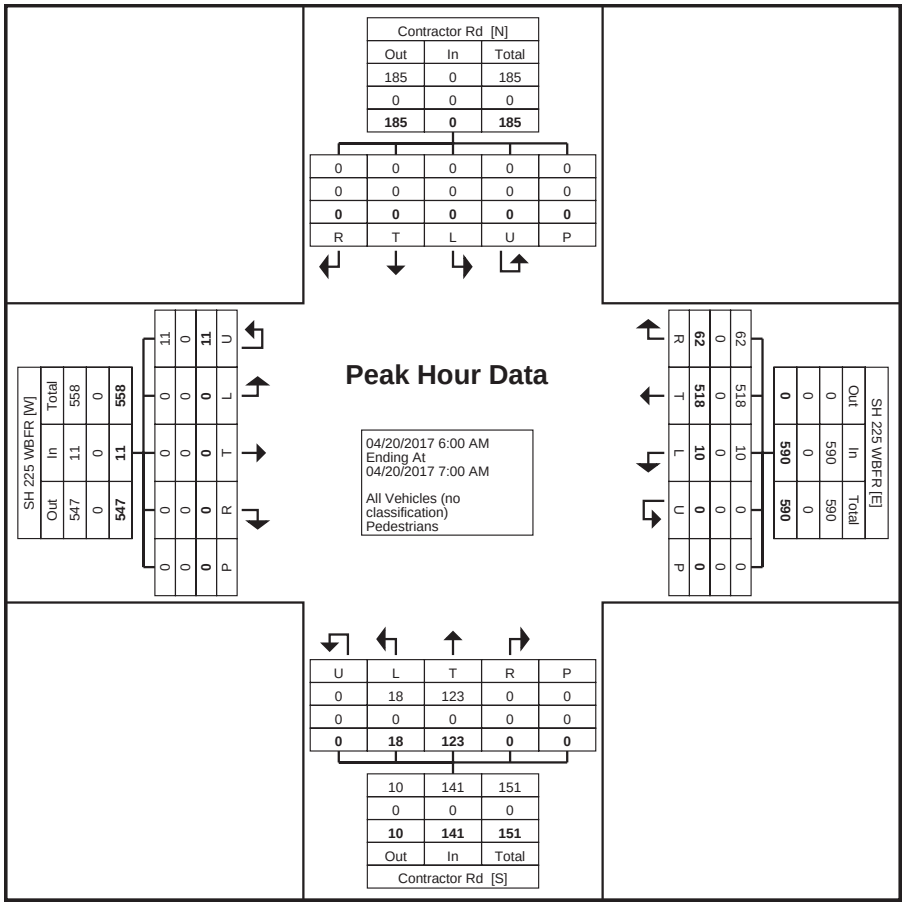
Page No: 4



Turning Movement Peak Hour Data Plot (6:00 AM)

CJ Hensch & Associates, Inc

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Pasadena, Texas, United States 77503
555 SSet@midtownengineers.com

Count Name: 5 - Contractor Rd at SH 225 WBFR
Site Code: 5
Start Date: 04/20/2017

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Contractor Rd Southbound						SH 225 WBFR Westbound						Contractor Rd Northbound						SH 225 WBFR Eastbound						
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Int. Total
5:00 PM	0	0	0	0	0	0	7	199	5	1	0	212	6	2	0	0	0	8	0	0	0	6	0	6	226
5:15 PM	0	1	0	0	0	1	8	303	3	0	0	314	2	4	0	0	0	6	0	0	0	5	0	5	326
5:30 PM	0	0	0	0	0	0	11	247	2	1	0	261	5	1	0	0	0	6	0	0	0	0	0	0	267
5:45 PM	0	0	0	0	0	0	8	168	0	0	0	176	4	0	0	0	0	4	0	0	0	2	0	2	182
Total	0	1	0	0	0	1	34	917	10	2	0	963	17	7	0	0	0	24	0	0	0	13	0	13	1001
Approach %	0.0	100.0	0.0	0.0	-	-	3.5	95.2	1.0	0.2	-	-	70.8	29.2	0.0	0.0	-	-	0.0	0.0	0.0	100.0	-	-	-
Total %	0.0	0.1	0.0	0.0	-	0.1	3.4	91.6	1.0	0.2	-	96.2	1.7	0.7	0.0	0.0	-	2.4	0.0	0.0	0.0	1.3	-	1.3	-
PHF	0.000	0.250	0.000	0.000	-	0.250	0.773	0.757	0.500	0.500	-	0.767	0.708	0.438	0.000	0.000	-	0.750	0.000	0.000	0.000	0.542	-	0.542	0.768
All Vehicles (no classification)	0	1	0	0	-	1	34	917	10	2	-	963	17	7	0	0	-	24	0	0	0	13	-	13	1001
% All Vehicles (no classification)	-	100.0	-	-	-	100.0	100.0	100.0	100.0	100.0	-	100.0	100.0	100.0	-	-	-	100.0	-	-	-	100.0	-	100.0	100.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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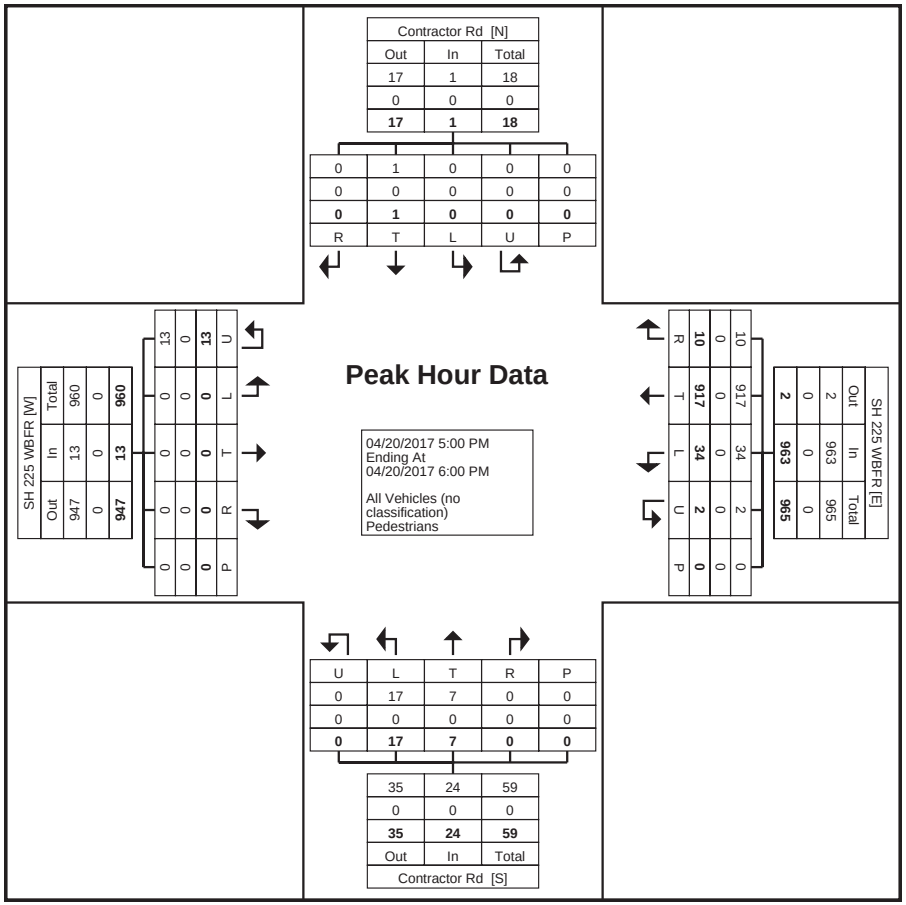
Start Date: 04/20/2017



Turning Movement Peak Hour Data Plot (5:00 PM)

Appendix D:
Deer Park Independent School District Bus Route List

District Streets	Block	Zone	City	Zip	Elem	Elem Bus	JH	JH Bus	North	NC Bus	South	SC Bus	Biling Elem.	Biling JH	DAEP	SJE DL Bus
Preston Rd (residential)	131-730	AA	Pas	77503	PWE/DWE	25/PWE 8/DWE	DWJH	41	NC	41	SC	**30**	25/PWE 8/DWE	97	**73**	48
Preston Rd/Trailer Park	128-130	AA	Pas	77503	PWE/DWE	25/PWE 8/DWE	DWJH	41	NC	41	SC	55	25/PWE 8/DWE	97	**73**	48
Preston Rd/Vista Del Sol	701	AA	Pas	77503	PWE/DWE	25(-K-1) 54(2-3) 8(4-5)	DWJH	0	NC	69	SC	96	25(-K-1) 54(2-3) 8(4-5)	0	**73**	48
Prine Ln	3901-4002	DL	DP	77536	DE	96	BJH	15	NC	23	SC	10	6	55	25	66
Rafam Dr	No Addresses	FD	Pas	77505	FE	95	FJH	95	NC	66	SC	95	56	55	38a/86p	**49**
Rainbow Bend Dr	7603-7715	FI	Pas	77505	DE	18	FJH	52	NC	31	SC	49	56	55	38a/86p	**49**
Rainfall Dr	4202-4239	FI	Pas	77505	DE	18	FJH	52	NC	31	SC	49	56	55	38a/86p	**49**
Rainforest Trail Dr	7300-7842	FI	Pas	77505	DE	18	FJH	18	NC	31	SC	49	56	55	38a/86p	**49**
Raintree Ct	4302-4323	FI	Pas	77505	DE	18	FJH	18	NC	31	SC	49	56	55	38a/86p	**49**
Ranier Dr	1502-1718	DI	DP	77536	DPE	0	DPJH	96	NC	8	SC	10	6	97	25	66
Ravena Cr	3701-3725	FD	Pas	77505	FE	95	FJH	95	NC	75	SC	29	56	55	38a/86p	**49**
Ray Dr	6302-6631	FD	Pas	77505	FE	95	FJH	95	NC	66	SC	95	56	55	38a/86p	**49**
Reata Dr, East	2202-2318	DE	DP	77536	DPE	0	DPJH	96	NC	8	SC	0	6	97	25	66
Reata Dr, East	2709-2906	DI	DP	77536	DPE	0	DPJH	96	NC	8	SC	10	6	97	25	66
Reata Dr, West	2201-2318	DE	DP	77536	DPE	0	DPJH	96	NC	8	SC	0	75	97	25	66
Red Bluff Rd	4100-5140	EI	Pas	77503	PWE/DWE	56	DWJH	76	NC	24	SC	76	56	76	41	66
Red Bluff Rd	5202	EI	Pas	77503	PWE/DWE	45/PWE 41/DWE	DWJH	76	NC	24	SC	76	45/PWE 41/DWE	76	38a/86p	66
Red Bluff Rd (Palace Inn)	5321	EJ	Pas	77503	DE	12	FJH	49	NC	70	SC	6	76/PWE 39/DWE	55	38a/86p	49
Red Bluff Rd / Cedar Bluff Apts.	5930	FB	Pas	77505	DE	69	FJH	69	NC	46	SC	6	56	55	38a/86p	49
Red Bluff Rd (houses on Red Bluff)	5742-5826	FB	Pas	77505	DE	69	FJH	69	NC	46	SC	6	56	55	38a/86p	49
Red Coral Dr	6801-7143	FE	Pas	77505	FE	0	FJH	0	NC	75	SC	29	56	55	38a/86p	**49**
Redwood Falls Dr	6701-7132	FE	Pas	77505	FE	0	FJH	0	NC	75	SC	29	56	55	38a/86p	**49**
Regency Dr	201-4033	EA	DP	77536	DE	0	BJH	15	NC	18	SC	10	59	55	25	66
Rena Jane Ln	3701-3840	AB	Pas	77503	PWE/DWE	0	DWJH	0	NC	50	SC	15	0	0	**73**	48
Reta Dr	301-435	BF	DP	77536	SJE	0	DPJH	0	NC	0	SC	0	75	97	0	0
Rhodes	3801-3934	FD	Pas	77505	FE	95	FJH	95	NC	66	SC	95	56	55	38a/86p	**49**
River Oaks Dr	3801-3934	FD	Pas	77505	FE	95	FJH	95	NC	66	SC	95	56	55	38a/86p	**49**
River Park Ln	No Addresses	FI	Pas	77505	DE	18	FJH	52	NC	45	SC	49	56	55	38a/86p	**49**
River Ranch Dr	4201-4320	FE	Pas	77505	FE	0	FJH	0	NC	75	SC	29	56	55	38a/86p	66
Robin St	201-334	BA	DP	77536	SJE	15	DPJH	0	NC	0	SC	54	75	97	0	15
Rockfield Dr	6501-6635	FE	Pas	77505	FE	0	FJH	0	NC	75	SC	29	56	55	38a/86p	**49**
Roosevelt Dr	1401-1534	DH	DP	77536	DPE	0	DPJH	96	NC	8	SC	0	6	97	25	10
Royal Dornoch	4701-4822	FF	Pas	77505	FE	0	FJH	0	NC	45	SC	52	56	55	38a/86p	**49**

Appendix E:
SYNCHRO Analysis Report

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	133	49	624	483	121
Future Volume (Veh/h)	0	133	49	624	483	121
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	145	53	678	525	132
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					191	
pX, platoon unblocked	0.95	0.95	0.95			
vC, conflicting volume	923	328	657			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	819	195	540			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	81	95			
cM capacity (veh/h)	282	775	976			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	145	189	271	271	350	307
Volume Left	0	53	0	0	0	0
Volume Right	145	0	0	0	0	132
cSH	775	976	1700	1700	1700	1700
Volume to Capacity	0.19	0.05	0.16	0.16	0.21	0.18
Queue Length 95th (ft)	17	4	0	0	0	0
Control Delay (s)	10.7	2.9	0.0	0.0	0.0	0.0
Lane LOS	B	A				
Approach Delay (s)	10.7	0.7			0.0	
Approach LOS	B					

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	36.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø8
Lane Configurations													
Traffic Volume (vph)	0	118	216	0	0	0	0	434	189	4	393	0	
Future Volume (vph)	0	118	216	0	0	0	0	434	189	4	393	0	
Satd. Flow (prot)	1695	3061	0	0	0	0	0	3539	1583	1770	3539	0	
Flt Permitted										0.950			
Satd. Flow (perm)	1695	3061	0	0	0	0	0	3539	1583	1770	3539	0	
Satd. Flow (RTOR)		235							205				
Lane Group Flow (vph)	0	363	0	0	0	0	0	472	205	4	427	0	
Turn Type	Perm	NA						NA	Perm	Prot	NA		
Protected Phases		4						2		1	6		8
Permitted Phases	4								2				
Total Split (s)	22.5	22.5						23.0	23.0	9.5	32.5		22.5
Total Lost Time (s)	4.5	4.5						4.5	4.5	4.5	4.5		
Act Effct Green (s)		12.8						31.3	31.3	5.5	33.2		
Actuated g/C Ratio		0.23						0.57	0.57	0.10	0.60		
v/c Ratio		0.41						0.23	0.21	0.02	0.20		
Control Delay		17.3						8.1	2.8	14.0	15.2		
Queue Delay		0.0						0.0	0.0	0.0	0.8		
Total Delay		17.3						8.1	2.8	14.0	16.0		
LOS		B						A	A	B	B		
Approach Delay		17.3						6.5			16.0		
Approach LOS		B						A			B		

Intersection Summary	
Cycle Length: 55	
Actuated Cycle Length: 55	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 12.0	Intersection LOS: B
Intersection Capacity Utilization 45.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: Center Street & SH225 FR EB

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø1	Ø4
Lane Configurations														
Traffic Volume (vph)	0	0	0	397	75	0	432	1	0	0	5	1		
Future Volume (vph)	0	0	0	397	75	0	432	1	0	0	5	1		
Satd. Flow (prot)	0	0	0	1610	3272	0	1681	1686	0	0	3451	0		
Flt Permitted				0.950	0.965		0.754	0.723						
Satd. Flow (perm)	0	0	0	1610	3272	0	1334	1279	0	0	3451	0		
Satd. Flow (RTOR)											1			
Lane Group Flow (vph)	0	0	0	216	298	0	235	236	0	0	6	0		
Turn Type				Perm	NA		Perm	NA			NA			
Protected Phases					8			2			6		1	4
Permitted Phases				8			2							
Total Split (s)				22.5	22.5		23.0	23.0			32.5		9.5	22.5
Total Lost Time (s)				4.5	4.5		4.5	4.5			4.5			
Act Effct Green (s)				12.8	12.8		31.3	31.3			33.2			
Actuated g/C Ratio				0.23	0.23		0.57	0.57			0.60			
v/c Ratio				0.58	0.39		0.31	0.32			0.00			
Control Delay				24.2	18.4		3.4	4.0			5.7			
Queue Delay				0.0	0.0		0.2	0.2			0.0			
Total Delay				24.2	18.4		3.6	4.2			5.7			
LOS				C	B		A	A			A			
Approach Delay					20.8			3.9			5.7			
Approach LOS					C			A			A			

Intersection Summary	
Cycle Length: 55	
Actuated Cycle Length: 55	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 12.7	Intersection LOS: B
Intersection Capacity Utilization 45.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 4: Center Street & SH225 FR WB

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø5	Ø8
Lane Configurations														
Traffic Volume (vph)	94	235	59	0	0	0	0	23	102	0	19	0		
Future Volume (vph)	94	235	59	0	0	0	0	23	102	0	19	0		
Satd. Flow (prot)	1610	3285	0	0	0	0	0	1658	0	1770	1770	0		
Flt Permitted	0.950	0.998												
Satd. Flow (perm)	1610	3285	0	0	0	0	0	1658	0	1770	1770	0		
Satd. Flow (RTOR)		53						111						
Lane Group Flow (vph)	92	329	0	0	0	0	0	136	0	0	21	0		
Turn Type	Perm	NA						NA		Prot	NA			
Protected Phases		4						2		1	6		5	8
Permitted Phases	4													
Total Split (s)	22.5	22.5						23.0		9.5	23.0		9.5	22.5
Total Lost Time (s)	4.5	4.5						4.5		4.5	4.5			
Act Effct Green (s)	12.5	12.5						33.5			31.2			
Actuated g/C Ratio	0.23	0.23						0.61			0.57			
v/c Ratio	0.25	0.42						0.13			0.02			
Control Delay	18.1	16.1						4.5			14.1			
Queue Delay	0.0	0.0						0.0			0.0			
Total Delay	18.1	16.1						4.5			14.1			
LOS	B	B						A			B			
Approach Delay		16.6						4.5			14.1			
Approach LOS		B						A			B			

Intersection Summary	
Cycle Length: 55	
Actuated Cycle Length: 55	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 13.6	Intersection LOS: B
Intersection Capacity Utilization 41.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Robin Street & SH225 FR EB

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø1	Ø4
Lane Configurations														
Traffic Volume (vph)	0	0	0	10	518	62	18	123	0	0	0	0		
Future Volume (vph)	0	0	0	10	518	62	18	123	0	0	0	0		
Satd. Flow (prot)	0	0	0	0	4999	0	1770	1863	0	0	3390	1695		
Flt Permitted					0.999		0.950							
Satd. Flow (perm)	0	0	0	0	4999	0	1770	1863	0	0	3390	1695		
Satd. Flow (RTOR)					39									
Lane Group Flow (vph)	0	0	0	0	641	0	20	134	0	0	0	0		
Turn Type				Perm	NA		Prot	NA				Perm		
Protected Phases					8		5	2			6		1	4
Permitted Phases				8								6		
Total Split (s)				22.5	22.5		9.5	23.0			23.0	23.0	9.5	22.5
Total Lost Time (s)					4.5		4.5	4.5			4.5	4.5		
Act Effct Green (s)					12.5		6.1	33.5						
Actuated g/C Ratio					0.23		0.11	0.61						
v/c Ratio					0.55		0.10	0.12						
Control Delay					16.0		16.9	11.6						
Queue Delay					0.0		0.0	0.0						
Total Delay					16.0		16.9	11.6						
LOS					B		B	B						
Approach Delay					16.0			12.3						
Approach LOS					B			B						

Intersection Summary	
Cycle Length: 55	
Actuated Cycle Length: 55	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 15.3	Intersection LOS: B
Intersection Capacity Utilization 41.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Robin Street & SH225 FR WB

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	162	28	523	766	129
Future Volume (Veh/h)	0	162	28	523	766	129
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	176	30	568	833	140
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					191	
pX, platoon unblocked	0.89	0.89	0.89			
vC, conflicting volume	1152	486	973			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	919	169	717			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	77	96			
cM capacity (veh/h)	231	751	781			

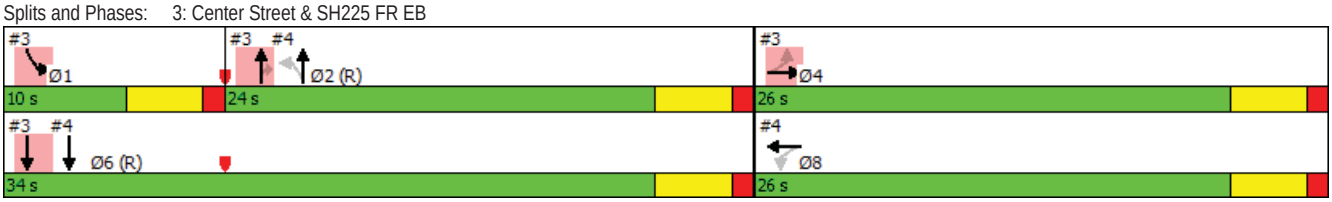
Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	176	144	227	227	555	418
Volume Left	0	30	0	0	0	0
Volume Right	176	0	0	0	0	140
cSH	751	781	1700	1700	1700	1700
Volume to Capacity	0.23	0.04	0.13	0.13	0.33	0.25
Queue Length 95th (ft)	23	3	0	0	0	0
Control Delay (s)	11.3	2.4	0.0	0.0	0.0	0.0
Lane LOS	B	A				
Approach Delay (s)	11.3	0.6			0.0	
Approach LOS	B					

Intersection Summary				
Average Delay		1.3		
Intersection Capacity Utilization		42.0%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø8
Lane Configurations													
Traffic Volume (vph)	1	230	275	0	0	0	0	297	228	41	623	0	
Future Volume (vph)	1	230	275	0	0	0	0	297	228	41	623	0	
Satd. Flow (prot)	1610	3112	0	0	0	0	0	3539	1583	1770	3539	0	
Flt Permitted	0.950									0.950			
Satd. Flow (perm)	1610	3112	0	0	0	0	0	3539	1583	1770	3539	0	
Satd. Flow (RTOR)		179							248				
Lane Group Flow (vph)	1	549	0	0	0	0	0	323	248	45	677	0	
Turn Type	Perm	NA						NA	Perm	Prot	NA		
Protected Phases		4						2		1	6		8
Permitted Phases	4								2				
Total Split (s)	26.0	26.0						24.0	24.0	10.0	34.0		26.0
Total Lost Time (s)	4.5	4.5						4.5	4.5	4.5	4.5		
Act Effct Green (s)	19.9	19.9						27.1	27.1	5.6	31.1		
Actuated g/C Ratio	0.33	0.33						0.45	0.45	0.09	0.52		
v/c Ratio	0.00	0.48						0.20	0.29	0.27	0.37		
Control Delay	12.0	11.6						12.3	3.6	19.6	18.4		
Queue Delay	0.0	0.0						0.0	0.0	0.0	3.2		
Total Delay	12.0	11.6						12.3	3.6	19.6	21.6		
LOS	B	B						B	A	B	C		
Approach Delay		11.6						8.5			21.5		
Approach LOS		B						A			C		

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 14.5	Intersection LOS: B
Intersection Capacity Utilization 61.2%	ICU Level of Service B
Analysis Period (min) 15	

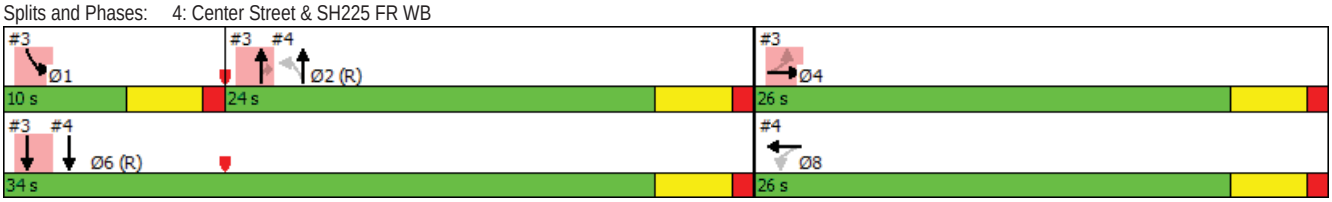
Splits and Phases: 3: Center Street & SH225 FR EB



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø1	Ø4
Lane Configurations														
Traffic Volume (vph)	0	0	0	570	517	0	310	0	0	0	87	124		
Future Volume (vph)	0	0	0	570	517	0	310	0	0	0	87	124		
Satd. Flow (prot)	0	0	0	1610	3339	0	1681	1681	0	0	3228	0		
Flt Permitted				0.950	0.985		0.608	0.608						
Satd. Flow (perm)	0	0	0	1610	3339	0	1076	1076	0	0	3228	0		
Satd. Flow (RTOR)											135			
Lane Group Flow (vph)	0	0	0	384	798	0	168	169	0	0	230	0		
Turn Type				Perm	NA		Perm	NA			NA			
Protected Phases					8			2			6		1	4
Permitted Phases				8			2							
Total Split (s)				26.0	26.0		24.0	24.0			34.0		10.0	26.0
Total Lost Time (s)				4.5	4.5		4.5	4.5			4.5			
Act Effct Green (s)				19.9	19.9		27.1	27.1			31.1			
Actuated g/C Ratio				0.33	0.33		0.45	0.45			0.52			
v/c Ratio				0.72	0.72		0.35	0.35			0.13			
Control Delay				26.0	21.6		5.6	5.6			3.9			
Queue Delay				0.9	0.3		0.2	0.2			0.0			
Total Delay				26.9	21.9		5.8	5.9			3.9			
LOS				C	C		A	A			A			
Approach Delay					23.6			5.8			3.9			
Approach LOS					C			A			A			

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 17.6	Intersection LOS: B
Intersection Capacity Utilization 61.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 4: Center Street & SH225 FR WB



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø5	Ø8
Lane Configurations														
Traffic Volume (vph)	8	295	75	0	0	0	0	22	209	1	28	0		
Future Volume (vph)	8	295	75	0	0	0	0	22	209	1	28	0		
Satd. Flow (prot)	1610	3288	0	0	0	0	0	1635	0	1681	1770	0		
Flt Permitted	0.950									0.950				
Satd. Flow (perm)	1610	3288	0	0	0	0	0	1635	0	1681	1770	0		
Satd. Flow (RTOR)		57						227						
Lane Group Flow (vph)	8	404	0	0	0	0	0	251	0	1	30	0		
Turn Type	Perm	NA						NA		Prot	NA			
Protected Phases		4						2		1	6		5	8
Permitted Phases	4													
Total Split (s)	22.5	22.5						23.0		9.5	23.0		9.5	22.5
Total Lost Time (s)	4.5	4.5						4.5		4.5	4.5			
Act Effct Green (s)	16.8	16.8						27.3		5.2	1.0			
Actuated g/C Ratio	0.31	0.31						0.50		0.09	0.02			
v/c Ratio	0.02	0.39						0.27		0.01	0.94			
Control Delay	12.7	13.7						3.5		15.0	137.9			
Queue Delay	0.0	0.0						0.0		0.0	0.0			
Total Delay	12.7	13.7						3.5		15.0	137.9			
LOS	B	B						A		B	F			
Approach Delay		13.7						3.5			133.9			
Approach LOS		B						A			F			

Intersection Summary	
Cycle Length: 55	
Actuated Cycle Length: 55	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 15.3	Intersection LOS: B
Intersection Capacity Utilization 38.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Robin Street & SH225 FR EB

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø1	Ø4
Lane Configurations														
Traffic Volume (vph)	0	0	0	34	917	10	17	7	0	0	1	0		
Future Volume (vph)	0	0	0	34	917	10	17	7	0	0	1	0		
Satd. Flow (prot)	0	0	0	0	5065	0	1770	1863	0	0	3390	1695		
Flt Permitted					0.998		0.950							
Satd. Flow (perm)	0	0	0	0	5065	0	1770	1863	0	0	3390	1695		
Satd. Flow (RTOR)					3									
Lane Group Flow (vph)	0	0	0	0	1045	0	18	8	0	0	1	0		
Turn Type				Perm	NA		Prot	NA			NA	Perm		
Protected Phases					8		5	2			6		1	4
Permitted Phases				8								6		
Total Split (s)				22.5	22.5		9.5	23.0			23.0	23.0	9.5	22.5
Total Lost Time (s)					4.5		4.5	4.5			4.5	4.5		
Act Effct Green (s)					16.8		5.2	27.3			27.3			
Actuated g/C Ratio					0.31		0.09	0.50			0.50			
v/c Ratio					0.67		0.11	0.01			0.00			
Control Delay					18.9		25.4	11.0			10.0			
Queue Delay					0.0		0.0	0.0			0.0			
Total Delay					18.9		25.4	11.0			10.0			
LOS					B		C	B			A			
Approach Delay					18.9			20.9			10.0			
Approach LOS					B			C			A			

Intersection Summary	
Cycle Length: 55	
Actuated Cycle Length: 55	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 18.9	Intersection LOS: B
Intersection Capacity Utilization 38.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Robin Street & SH225 FR WB

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	133	0	673	483	121
Future Volume (Veh/h)	0	133	0	673	483	121
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	145	0	732	525	132
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					191	
pX, platoon unblocked	0.95	0.95	0.95			
vC, conflicting volume	835	328	657			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	725	193	538			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	81	100			
cM capacity (veh/h)	343	777	977			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	145	244	244	244	350	307
Volume Left	0	0	0	0	0	0
Volume Right	145	0	0	0	0	132
cSH	777	1700	1700	1700	1700	1700
Volume to Capacity	0.19	0.14	0.14	0.14	0.21	0.18
Queue Length 95th (ft)	17	0	0	0	0	0
Control Delay (s)	10.7	0.0	0.0	0.0	0.0	0.0
Lane LOS	B					
Approach Delay (s)	10.7	0.0			0.0	
Approach LOS	B					

Intersection Summary				
Average Delay		1.0		
Intersection Capacity Utilization		32.1%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø8
Lane Configurations													
Traffic Volume (vph)	0	118	216	0	0	0	0	483	189	4	393	0	
Future Volume (vph)	0	118	216	0	0	0	0	483	189	4	393	0	
Satd. Flow (prot)	1695	3061	0	0	0	0	0	3539	1583	1770	3539	0	
Flt Permitted										0.950			
Satd. Flow (perm)	1695	3061	0	0	0	0	0	3539	1583	1770	3539	0	
Satd. Flow (RTOR)		235							205				
Lane Group Flow (vph)	0	363	0	0	0	0	0	525	205	4	427	0	
Turn Type	Perm	NA						NA	Perm	Prot	NA		
Protected Phases		4						2		1	6		8
Permitted Phases	4								2				
Total Split (s)	22.5	22.5						23.0	23.0	9.5	32.5		22.5
Total Lost Time (s)	4.5	4.5						4.5	4.5	4.5	4.5		
Act Effct Green (s)		13.1						31.0	31.0	5.5	32.9		
Actuated g/C Ratio		0.24						0.56	0.56	0.10	0.60		
v/c Ratio		0.40						0.26	0.21	0.02	0.20		
Control Delay		16.6						8.5	2.8	14.5	15.5		
Queue Delay		0.0						0.0	0.0	0.0	0.8		
Total Delay		16.6						8.5	2.8	14.5	16.3		
LOS		B						A	A	B	B		
Approach Delay		16.6						6.9			16.3		
Approach LOS		B						A			B		

Intersection Summary	
Cycle Length: 55	
Actuated Cycle Length: 55	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 11.9	Intersection LOS: B
Intersection Capacity Utilization 46.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 2: Center Street & SH225 FR EB

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø1	Ø4
Lane Configurations														
Traffic Volume (vph)	0	0	0	397	75	0	481	1	0	0	5	1		
Future Volume (vph)	0	0	0	397	75	0	481	1	0	0	5	1		
Satd. Flow (prot)	0	0	0	1610	3272	0	1681	1686	0	0	3451	0		
Flt Permitted				0.950	0.965		0.754	0.723						
Satd. Flow (perm)	0	0	0	1610	3272	0	1334	1279	0	0	3451	0		
Satd. Flow (RTOR)											1			
Lane Group Flow (vph)	0	0	0	216	298	0	261	263	0	0	6	0		
Turn Type				Perm	NA		Perm	NA			NA			
Protected Phases					8			2			6		1	4
Permitted Phases				8			2							
Total Split (s)				22.5	22.5		23.0	23.0			32.5		9.5	22.5
Total Lost Time (s)				4.5	4.5		4.5	4.5			4.5			
Act Effct Green (s)				13.1	13.1		31.0	31.0			32.9			
Actuated g/C Ratio				0.24	0.24		0.56	0.56			0.60			
v/c Ratio				0.56	0.38		0.35	0.37			0.00			
Control Delay				23.3	18.0		4.5	5.4			5.8			
Queue Delay				0.0	0.0		0.2	0.2			0.0			
Total Delay				23.3	18.0		4.7	5.6			5.8			
LOS				C	B		A	A			A			
Approach Delay					20.2			5.1			5.8			
Approach LOS					C			A			A			

Intersection Summary	
Cycle Length: 55	
Actuated Cycle Length: 55	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 12.6	Intersection LOS: B
Intersection Capacity Utilization 46.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: Center Street & SH225 FR WB

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø5	Ø8
Lane Configurations														
Traffic Volume (vph)	94	235	59	0	0	0	0	23	102	0	68	0		
Future Volume (vph)	94	235	59	0	0	0	0	23	102	0	68	0		
Satd. Flow (prot)	1610	3285	0	0	0	0	0	1658	0	1770	1770	0		
Flt Permitted	0.950	0.998												
Satd. Flow (perm)	1610	3285	0	0	0	0	0	1658	0	1770	1770	0		
Satd. Flow (RTOR)		53						111						
Lane Group Flow (vph)	92	329	0	0	0	0	0	136	0	0	74	0		
Turn Type	Perm	NA						NA		Prot	NA			
Protected Phases		4						2		1	6		5	8
Permitted Phases	4													
Total Split (s)	22.5	22.5						23.0		9.5	23.0		9.5	22.5
Total Lost Time (s)	4.5	4.5						4.5		4.5	4.5			
Act Effct Green (s)	14.0	14.0						32.0			30.1			
Actuated g/C Ratio	0.25	0.25						0.58			0.55			
v/c Ratio	0.22	0.38						0.13			0.08			
Control Delay	16.3	14.6						3.6			17.5			
Queue Delay	0.0	0.0						0.0			0.0			
Total Delay	16.3	14.6						3.6			17.5			
LOS	B	B						A			B			
Approach Delay		14.9						3.6			17.5			
Approach LOS		B						A			B			

Intersection Summary	
Cycle Length: 55	
Actuated Cycle Length: 55	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.53	
Intersection Signal Delay: 12.8	Intersection LOS: B
Intersection Capacity Utilization 42.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 4: Robin Street & SH225 FR EB

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø1	Ø4
Lane Configurations														
Traffic Volume (vph)	0	0	0	59	518	62	18	123	0	0	0	0		
Future Volume (vph)	0	0	0	59	518	62	18	123	0	0	0	0		
Satd. Flow (prot)	0	0	0	0	4989	0	1770	1863	0	0	3390	1695		
Flt Permitted					0.995		0.950							
Satd. Flow (perm)	0	0	0	0	4989	0	1770	1863	0	0	3390	1695		
Satd. Flow (RTOR)					35									
Lane Group Flow (vph)	0	0	0	0	694	0	20	134	0	0	0	0		
Turn Type				Perm	NA		Prot	NA				Perm		
Protected Phases					8		5	2			6		1	4
Permitted Phases				8								6		
Total Split (s)				22.5	22.5		9.5	23.0			23.0	23.0	9.5	22.5
Total Lost Time (s)					4.5		4.5	4.5			4.5	4.5		
Act Effct Green (s)					14.0		5.7	32.0						
Actuated g/C Ratio					0.25		0.10	0.58						
v/c Ratio					0.53		0.11	0.12						
Control Delay					14.9		19.1	13.0						
Queue Delay					0.0		0.0	0.0						
Total Delay					14.9		19.1	13.0						
LOS					B		B	B						
Approach Delay					14.9			13.8						
Approach LOS					B			B						

Intersection Summary	
Cycle Length: 55	
Actuated Cycle Length: 55	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.53	
Intersection Signal Delay: 14.7	Intersection LOS: B
Intersection Capacity Utilization 42.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Robin Street & SH225 FR WB

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	162	0	551	766	129
Future Volume (Veh/h)	0	162	0	551	766	129
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	176	0	599	833	140
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					191	
pX, platoon unblocked	0.89	0.89	0.89			
vC, conflicting volume	1103	486	973			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	863	169	717			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	77	100			
cM capacity (veh/h)	261	751	781			

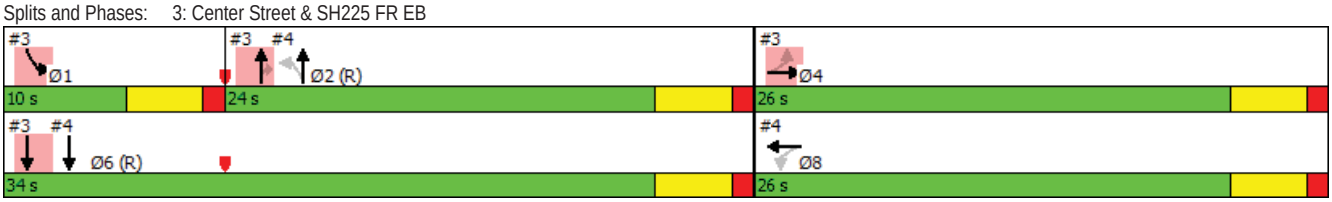
Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	176	200	200	200	555	418
Volume Left	0	0	0	0	0	0
Volume Right	176	0	0	0	0	140
cSH	751	1700	1700	1700	1700	1700
Volume to Capacity	0.23	0.12	0.12	0.12	0.33	0.25
Queue Length 95th (ft)	23	0	0	0	0	0
Control Delay (s)	11.3	0.0	0.0	0.0	0.0	0.0
Lane LOS	B					
Approach Delay (s)	11.3	0.0			0.0	
Approach LOS	B					

Intersection Summary				
Average Delay		1.1		
Intersection Capacity Utilization		42.0%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø8
Lane Configurations													
Traffic Volume (vph)	1	230	275	0	0	0	0	325	228	41	623	0	
Future Volume (vph)	1	230	275	0	0	0	0	325	228	41	623	0	
Satd. Flow (prot)	1610	3112	0	0	0	0	0	3539	1583	1770	3539	0	
Flt Permitted	0.950									0.950			
Satd. Flow (perm)	1610	3112	0	0	0	0	0	3539	1583	1770	3539	0	
Satd. Flow (RTOR)		179							248				
Lane Group Flow (vph)	1	549	0	0	0	0	0	353	248	45	677	0	
Turn Type	Perm	NA						NA	Perm	Prot	NA		
Protected Phases		4						2		1	6		8
Permitted Phases	4								2				
Total Split (s)	26.0	26.0						24.0	24.0	10.0	34.0		26.0
Total Lost Time (s)	4.5	4.5						4.5	4.5	4.5	4.5		
Act Effct Green (s)	19.9	19.9						27.1	27.1	5.6	31.1		
Actuated g/C Ratio	0.33	0.33						0.45	0.45	0.09	0.52		
v/c Ratio	0.00	0.48						0.22	0.29	0.27	0.37		
Control Delay	12.0	11.6						12.4	3.6	19.6	18.4		
Queue Delay	0.0	0.0						0.0	0.0	0.0	3.2		
Total Delay	12.0	11.6						12.4	3.6	19.6	21.6		
LOS	B	B						B	A	B	C		
Approach Delay		11.6						8.7			21.5		
Approach LOS		B						A			C		

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 14.5	Intersection LOS: B
Intersection Capacity Utilization 61.2%	ICU Level of Service B
Analysis Period (min) 15	

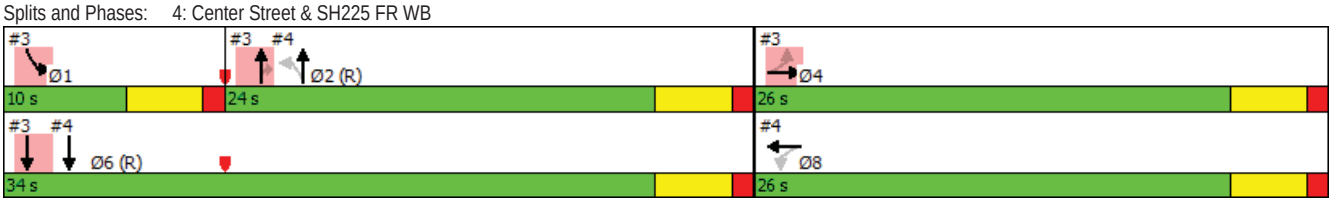
Splits and Phases: 3: Center Street & SH225 FR EB



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø1	Ø4
Lane Configurations														
Traffic Volume (vph)	0	0	0	570	517	0	338	0	0	0	87	124		
Future Volume (vph)	0	0	0	570	517	0	338	0	0	0	87	124		
Satd. Flow (prot)	0	0	0	1610	3339	0	1681	1681	0	0	3228	0		
Flt Permitted				0.950	0.985		0.608	0.608						
Satd. Flow (perm)	0	0	0	1610	3339	0	1076	1076	0	0	3228	0		
Satd. Flow (RTOR)											135			
Lane Group Flow (vph)	0	0	0	384	798	0	183	184	0	0	230	0		
Turn Type				Perm	NA		Perm	NA			NA			
Protected Phases					8			2			6		1	4
Permitted Phases				8			2							
Total Split (s)				26.0	26.0		24.0	24.0			34.0		10.0	26.0
Total Lost Time (s)				4.5	4.5		4.5	4.5			4.5			
Act Effct Green (s)				19.9	19.9		27.1	27.1			31.1			
Actuated g/C Ratio				0.33	0.33		0.45	0.45			0.52			
v/c Ratio				0.72	0.72		0.38	0.38			0.13			
Control Delay				26.0	21.6		6.0	6.0			3.9			
Queue Delay				0.9	0.3		0.2	0.2			0.0			
Total Delay				26.9	21.9		6.2	6.2			3.9			
LOS				C	C		A	A			A			
Approach Delay					23.6			6.2			3.9			
Approach LOS					C			A			A			

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 17.4	Intersection LOS: B
Intersection Capacity Utilization 61.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 4: Center Street & SH225 FR WB



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø5	Ø8
Lane Configurations														
Traffic Volume (vph)	8	295	75	0	0	0	0	22	209	1	56	0		
Future Volume (vph)	8	295	75	0	0	0	0	22	209	1	56	0		
Satd. Flow (prot)	1610	3288	0	0	0	0	0	1635	0	1681	1770	0		
Flt Permitted	0.950									0.950				
Satd. Flow (perm)	1610	3288	0	0	0	0	0	1635	0	1681	1770	0		
Satd. Flow (RTOR)		57						227						
Lane Group Flow (vph)	8	404	0	0	0	0	0	251	0	1	61	0		
Turn Type	Perm	NA						NA		Prot	NA			
Protected Phases		4						2		1	6		5	8
Permitted Phases	4													
Total Split (s)	22.5	22.5						23.0		9.5	23.0		9.5	22.5
Total Lost Time (s)	4.5	4.5						4.5		4.5	4.5			
Act Effct Green (s)	16.9	16.9						27.2		5.2	1.0			
Actuated g/C Ratio	0.31	0.31						0.49		0.09	0.02			
v/c Ratio	0.02	0.38						0.27		0.01	1.91			
Control Delay	12.7	13.6						3.5		13.0	491.8			
Queue Delay	0.0	0.0						0.0		0.0	0.0			
Total Delay	12.7	13.6						3.5		13.0	491.8			
LOS	B	B						A		B	F			
Approach Delay		13.6						3.5			484.1			
Approach LOS		B						A			F			

Intersection Summary	
Cycle Length: 55	
Actuated Cycle Length: 55	
Offset: 45.5 (83%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.91	
Intersection Signal Delay: 50.3	Intersection LOS: D
Intersection Capacity Utilization 38.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Robin Street & SH225 FR EB

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø1	Ø4
Lane Configurations														
Traffic Volume (vph)	0	0	0	62	917	10	17	7	0	0	1	0		
Future Volume (vph)	0	0	0	62	917	10	17	7	0	0	1	0		
Satd. Flow (prot)	0	0	0	0	5060	0	1770	1863	0	0	3390	1695		
Flt Permitted					0.997		0.950							
Satd. Flow (perm)	0	0	0	0	5060	0	1770	1863	0	0	3390	1695		
Satd. Flow (RTOR)					3									
Lane Group Flow (vph)	0	0	0	0	1075	0	18	8	0	0	1	0		
Turn Type				Perm	NA		Prot	NA			NA	Perm		
Protected Phases					8		5	2			6		1	4
Permitted Phases				8								6		
Total Split (s)				22.5	22.5		9.5	23.0			23.0	23.0	9.5	22.5
Total Lost Time (s)					4.5		4.5	4.5			4.5	4.5		
Act Effct Green (s)					16.9		5.2	27.2			27.2			
Actuated g/C Ratio					0.31		0.09	0.49			0.49			
v/c Ratio					0.69		0.11	0.01			0.00			
Control Delay					19.1		25.4	11.0			10.0			
Queue Delay					0.0		0.0	0.0			0.0			
Total Delay					19.1		25.4	11.0			10.0			
LOS					B		C	B			A			
Approach Delay					19.1			20.9			10.0			
Approach LOS					B			C			A			

Intersection Summary	
Cycle Length: 55	
Actuated Cycle Length: 55	
Offset: 45.5 (83%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.91	
Intersection Signal Delay: 19.2	Intersection LOS: B
Intersection Capacity Utilization 38.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Robin Street & SH225 FR WB

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	49	624	616	121
Future Volume (Veh/h)	0	0	49	624	616	121
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	53	678	670	132
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					191	
pX, platoon unblocked	0.95	0.95	0.95			
vC, conflicting volume	1068	401	802			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	971	271	692			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	94			
cM capacity (veh/h)	224	692	856			

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	189	271	271	447	355
Volume Left	53	0	0	0	0
Volume Right	0	0	0	0	132
cSH	856	1700	1700	1700	1700
Volume to Capacity	0.06	0.16	0.16	0.26	0.21
Queue Length 95th (ft)	5	0	0	0	0
Control Delay (s)	3.1	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	0.8			0.0	
Approach LOS					

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	40.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø8
Lane Configurations													
Traffic Volume (vph)	0	118	349	0	0	0	0	434	189	4	393	0	
Future Volume (vph)	0	118	349	0	0	0	0	434	189	4	393	0	
Satd. Flow (prot)	1695	3010	0	0	0	0	0	3539	1583	1770	3539	0	
Flt Permitted										0.950			
Satd. Flow (perm)	1695	3010	0	0	0	0	0	3539	1583	1770	3539	0	
Satd. Flow (RTOR)		369							205				
Lane Group Flow (vph)	0	507	0	0	0	0	0	472	205	4	427	0	
Turn Type	Perm	NA						NA	Perm	Prot	NA		
Protected Phases		4						2		1	6		8
Permitted Phases	4								2				
Total Split (s)	22.5	22.5						23.0	23.0	9.5	32.5		22.5
Total Lost Time (s)	4.5	4.5						4.5	4.5	4.5	4.5		
Act Effct Green (s)		12.8						31.3	31.3	5.5	33.2		
Actuated g/C Ratio		0.23						0.57	0.57	0.10	0.60		
v/c Ratio		0.52						0.23	0.21	0.02	0.20		
Control Delay		14.1						8.1	2.8	14.0	15.2		
Queue Delay		0.0						0.0	0.0	0.0	0.8		
Total Delay		14.1						8.1	2.8	14.0	16.0		
LOS		B						A	A	B	B		
Approach Delay		14.1						6.5			16.0		
Approach LOS		B						A			B		

Intersection Summary	
Cycle Length: 55	
Actuated Cycle Length: 55	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 11.4	Intersection LOS: B
Intersection Capacity Utilization 49.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: Center Street & SH225 FR EB

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø1	Ø4
Lane Configurations														
Traffic Volume (vph)	0	0	0	397	75	0	432	1	0	0	5	1		
Future Volume (vph)	0	0	0	397	75	0	432	1	0	0	5	1		
Satd. Flow (prot)	0	0	0	1610	3272	0	1681	1686	0	0	3451	0		
Flt Permitted				0.950	0.965		0.754	0.723						
Satd. Flow (perm)	0	0	0	1610	3272	0	1334	1279	0	0	3451	0		
Satd. Flow (RTOR)											1			
Lane Group Flow (vph)	0	0	0	216	298	0	235	236	0	0	6	0		
Turn Type				Perm	NA		Perm	NA			NA			
Protected Phases					8			2			6		1	4
Permitted Phases				8			2							
Total Split (s)				22.5	22.5		23.0	23.0			32.5		9.5	22.5
Total Lost Time (s)				4.5	4.5		4.5	4.5			4.5			
Act Effct Green (s)				12.8	12.8		31.3	31.3			33.2			
Actuated g/C Ratio				0.23	0.23		0.57	0.57			0.60			
v/c Ratio				0.58	0.39		0.31	0.32			0.00			
Control Delay				24.2	18.4		3.4	4.0			5.7			
Queue Delay				0.0	0.0		0.2	0.2			0.0			
Total Delay				24.2	18.4		3.6	4.2			5.7			
LOS				C	B		A	A			A			
Approach Delay					20.8			3.9			5.7			
Approach LOS					C			A			A			

Intersection Summary	
Cycle Length: 55	
Actuated Cycle Length: 55	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 12.7	Intersection LOS: B
Intersection Capacity Utilization 49.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 4: Center Street & SH225 FR WB

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø5	Ø8
Lane Configurations														
Traffic Volume (vph)	94	235	59	0	0	0	0	23	235	0	19	0		
Future Volume (vph)	94	235	59	0	0	0	0	23	235	0	19	0		
Satd. Flow (prot)	1610	3285	0	0	0	0	0	1634	0	1770	1770	0		
Flt Permitted	0.950	0.998												
Satd. Flow (perm)	1610	3285	0	0	0	0	0	1634	0	1770	1770	0		
Satd. Flow (RTOR)		53						255						
Lane Group Flow (vph)	92	329	0	0	0	0	0	280	0	0	21	0		
Turn Type	Perm	NA						NA		Prot	NA			
Protected Phases		4						2		1	6		5	8
Permitted Phases	4													
Total Split (s)	22.5	22.5						23.0		9.5	23.0		9.5	22.5
Total Lost Time (s)	4.5	4.5						4.5		4.5	4.5			
Act Effct Green (s)	12.5	12.5						33.5			31.2			
Actuated g/C Ratio	0.23	0.23						0.61			0.57			
v/c Ratio	0.25	0.42						0.26			0.02			
Control Delay	18.1	16.1						2.7			14.1			
Queue Delay	0.0	0.0						0.0			0.0			
Total Delay	18.1	16.1						2.7			14.1			
LOS	B	B						A			B			
Approach Delay		16.6						2.7			14.1			
Approach LOS		B						A			B			

Intersection Summary	
Cycle Length: 55	
Actuated Cycle Length: 55	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 11.1	Intersection LOS: B
Intersection Capacity Utilization 49.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Robin Street & SH225 FR EB

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø1	Ø4
Lane Configurations														
Traffic Volume (vph)	0	0	0	10	518	62	18	123	0	0	0	0		
Future Volume (vph)	0	0	0	10	518	62	18	123	0	0	0	0		
Satd. Flow (prot)	0	0	0	0	4999	0	1770	1863	0	0	3390	1695		
Flt Permitted					0.999		0.950							
Satd. Flow (perm)	0	0	0	0	4999	0	1770	1863	0	0	3390	1695		
Satd. Flow (RTOR)					39									
Lane Group Flow (vph)	0	0	0	0	641	0	20	134	0	0	0	0		
Turn Type				Perm	NA		Prot	NA				Perm		
Protected Phases					8		5	2			6		1	4
Permitted Phases				8								6		
Total Split (s)				22.5	22.5		9.5	23.0			23.0	23.0	9.5	22.5
Total Lost Time (s)					4.5		4.5	4.5			4.5	4.5		
Act Effct Green (s)					12.5		6.1	33.5						
Actuated g/C Ratio					0.23		0.11	0.61						
v/c Ratio					0.55		0.10	0.12						
Control Delay					16.0		17.6	11.7						
Queue Delay					0.0		0.0	0.0						
Total Delay					16.0		17.6	11.7						
LOS					B		B	B						
Approach Delay					16.0			12.4						
Approach LOS					B			B						

Intersection Summary	
Cycle Length: 55	
Actuated Cycle Length: 55	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 15.3	Intersection LOS: B
Intersection Capacity Utilization 49.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Robin Street & SH225 FR WB

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	28	523	931	129
Future Volume (Veh/h)	0	0	28	523	931	129
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	30	568	1012	140
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					191	
pX, platoon unblocked	0.89	0.89	0.89			
vC, conflicting volume	1331	576	1152			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1120	269	918			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	95			
cM capacity (veh/h)	170	647	656			

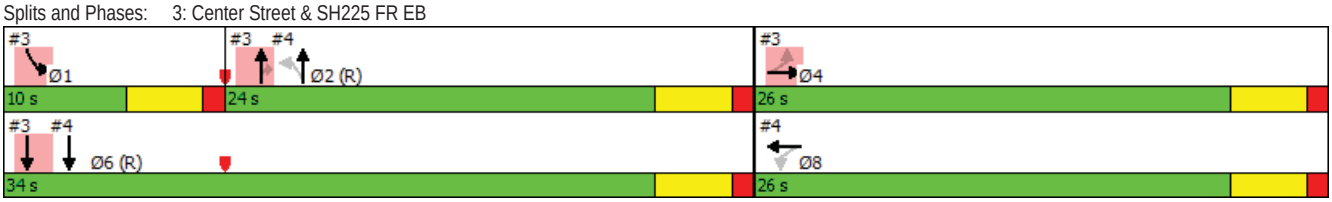
Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	144	227	227	675	477
Volume Left	30	0	0	0	0
Volume Right	0	0	0	0	140
cSH	656	1700	1700	1700	1700
Volume to Capacity	0.05	0.13	0.13	0.40	0.28
Queue Length 95th (ft)	4	0	0	0	0
Control Delay (s)	2.7	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	0.6			0.0	
Approach LOS					

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	34.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø8
Lane Configurations													
Traffic Volume (vph)	1	230	437	0	0	0	0	297	228	41	623	0	
Future Volume (vph)	1	230	437	0	0	0	0	297	228	41	623	0	
Satd. Flow (prot)	1610	3058	0	0	0	0	0	3539	1583	1770	3539	0	
Flt Permitted	0.950									0.950			
Satd. Flow (perm)	1610	3058	0	0	0	0	0	3539	1583	1770	3539	0	
Satd. Flow (RTOR)		179							248				
Lane Group Flow (vph)	1	725	0	0	0	0	0	323	248	45	677	0	
Turn Type	Perm	NA						NA	Perm	Prot	NA		
Protected Phases		4						2		1	6		8
Permitted Phases	4								2				
Total Split (s)	26.0	26.0						24.0	24.0	10.0	34.0		26.0
Total Lost Time (s)	4.5	4.5						4.5	4.5	4.5	4.5		
Act Effct Green (s)	19.9	19.9						27.1	27.1	5.6	31.1		
Actuated g/C Ratio	0.33	0.33						0.45	0.45	0.09	0.52		
v/c Ratio	0.00	0.64						0.20	0.29	0.27	0.37		
Control Delay	12.0	15.2						12.3	3.6	19.6	18.4		
Queue Delay	0.0	0.0						0.0	0.0	0.0	3.2		
Total Delay	12.0	15.2						12.3	3.6	19.6	21.6		
LOS	B	B						B	A	B	C		
Approach Delay		15.2						8.5			21.5		
Approach LOS		B						A			C		

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 15.5	Intersection LOS: B
Intersection Capacity Utilization 64.7%	ICU Level of Service C
Analysis Period (min) 15	

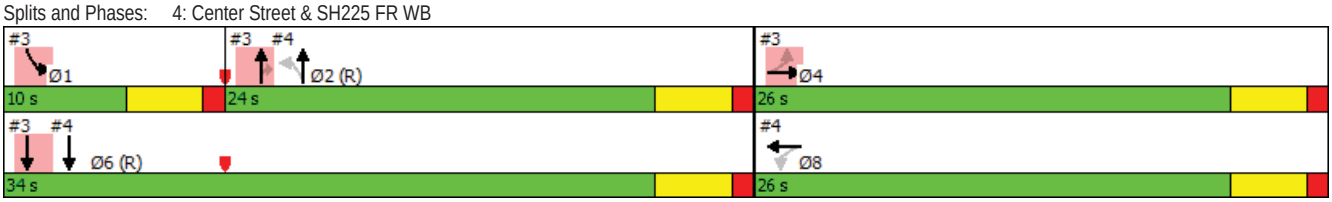
Splits and Phases: 3: Center Street & SH225 FR EB



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø1	Ø4
Lane Configurations														
Traffic Volume (vph)	0	0	0	570	517	0	310	0	0	0	87	124		
Future Volume (vph)	0	0	0	570	517	0	310	0	0	0	87	124		
Satd. Flow (prot)	0	0	0	1610	3339	0	1681	1681	0	0	3228	0		
Flt Permitted				0.950	0.985		0.608	0.608						
Satd. Flow (perm)	0	0	0	1610	3339	0	1076	1076	0	0	3228	0		
Satd. Flow (RTOR)											135			
Lane Group Flow (vph)	0	0	0	384	798	0	168	169	0	0	230	0		
Turn Type				Perm	NA		Perm	NA			NA			
Protected Phases					8			2			6		1	4
Permitted Phases				8			2							
Total Split (s)				26.0	26.0		24.0	24.0			34.0		10.0	26.0
Total Lost Time (s)				4.5	4.5		4.5	4.5			4.5			
Act Effct Green (s)				19.9	19.9		27.1	27.1			31.1			
Actuated g/C Ratio				0.33	0.33		0.45	0.45			0.52			
v/c Ratio				0.72	0.72		0.35	0.35			0.13			
Control Delay				26.0	21.6		5.6	5.6			3.9			
Queue Delay				0.9	0.3		0.2	0.2			0.0			
Total Delay				26.9	21.9		5.8	5.9			3.9			
LOS				C	C		A	A			A			
Approach Delay					23.6			5.8			3.9			
Approach LOS					C			A			A			

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 17.6	Intersection LOS: B
Intersection Capacity Utilization 64.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 4: Center Street & SH225 FR WB



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø5	Ø8
Lane Configurations														
Traffic Volume (vph)	8	295	75	0	0	0	0	22	371	1	28	0		
Future Volume (vph)	8	295	75	0	0	0	0	22	371	1	28	0		
Satd. Flow (prot)	1610	3288	0	0	0	0	0	1626	0	1681	1770	0		
Flt Permitted	0.950									0.950				
Satd. Flow (perm)	1610	3288	0	0	0	0	0	1626	0	1681	1770	0		
Satd. Flow (RTOR)		57						403						
Lane Group Flow (vph)	8	404	0	0	0	0	0	427	0	1	30	0		
Turn Type	Perm	NA						NA		Prot	NA			
Protected Phases		4						2		1	6		5	8
Permitted Phases	4													
Total Split (s)	22.5	22.5						23.0		9.5	23.0		9.5	22.5
Total Lost Time (s)	4.5	4.5						4.5		4.5	4.5			
Act Effct Green (s)	16.8	16.8						27.3		5.2	1.0			
Actuated g/C Ratio	0.31	0.31						0.50		0.09	0.02			
v/c Ratio	0.02	0.39						0.42		0.01	0.94			
Control Delay	12.7	13.7						3.4		15.0	137.9			
Queue Delay	0.0	0.0						0.0		0.0	0.0			
Total Delay	12.7	13.7						3.4		15.0	137.9			
LOS	B	B						A		B	F			
Approach Delay		13.7						3.4			133.9			
Approach LOS		B						A			F			

Intersection Summary	
Cycle Length: 55	
Actuated Cycle Length: 55	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 12.9	Intersection LOS: B
Intersection Capacity Utilization 38.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Robin Street & SH225 FR EB

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Ø1	Ø4
Lane Configurations														
Traffic Volume (vph)	0	0	0	34	917	10	17	7	0	0	1	0		
Future Volume (vph)	0	0	0	34	917	10	17	7	0	0	1	0		
Satd. Flow (prot)	0	0	0	0	5065	0	1770	1863	0	0	3390	1695		
Flt Permitted					0.998		0.950							
Satd. Flow (perm)	0	0	0	0	5065	0	1770	1863	0	0	3390	1695		
Satd. Flow (RTOR)					3									
Lane Group Flow (vph)	0	0	0	0	1045	0	18	8	0	0	1	0		
Turn Type				Perm	NA		Prot	NA			NA	Perm		
Protected Phases					8		5	2			6		1	4
Permitted Phases				8								6		
Total Split (s)				22.5	22.5		9.5	23.0			23.0	23.0	9.5	22.5
Total Lost Time (s)					4.5		4.5	4.5			4.5	4.5		
Act Effct Green (s)					16.8		5.2	27.3			27.3			
Actuated g/C Ratio					0.31		0.09	0.50			0.50			
v/c Ratio					0.67		0.11	0.01			0.00			
Control Delay					18.9		24.8	11.6			10.0			
Queue Delay					0.0		0.0	0.0			0.0			
Total Delay					18.9		24.8	11.6			10.0			
LOS					B		C	B			A			
Approach Delay					18.9			20.7			10.0			
Approach LOS					B			C			A			

Intersection Summary	
Cycle Length: 55	
Actuated Cycle Length: 55	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 18.9	Intersection LOS: B
Intersection Capacity Utilization 38.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Robin Street & SH225 FR WB

City of Deer Park

710 E SAN AUGUSTINE
DEER PARK, TX 77536

Legislation Details (With Text)

File #:	DIS 17-102	**Version:**	1	**Name:**	
Type:	Discussion			**Status:**	Agenda Ready
File created:	8/4/2017			**In control:**	City Council Workshop
On agenda:	8/15/2017			**Final action:**	
Title:	Discussion of issues relating to the Fiscal Year 2017-2018 Deer Park Community Development Corporation Budget.				
Sponsors:	City Manager's Office				
Indexes:					
Code sections:					
Attachments:	Proposed to DPCDC - 17.18 Budget 07.24.17				

Date	Ver.	Action By	Action	Result
8/15/2017	1	City Council Workshop		

Discussion of issues relating to the Fiscal Year 2017-2018 Deer Park Community Development Corporation Budget.

Summary:

The Deer Park Community Development Corporation (DPCDC) bylaws provide that the Corporation's fiscal year shall be the same as the fiscal year of the City, which is October 1 - September 30. A preliminary budget for the DPCDC for Fiscal Year 2017-2018 was presented for discussion at the April 24, 2017 DPCDC Board Meeting. The Board of Directors approved the Fiscal Year 2017-2018 DPCDC Budget at the July 24, 2017 Board Meeting and recommended that the budget be submitted to the City Council for approval. Section 501.073 of the Local Government Code states that the Corporation's authorizing unit (city council) will approve all programs and expenditures of the Corporation and annually review any financial statements of the Corporation.

This Fiscal Year 2017-2018 budget for the DPCDC includes total revenues of $2,700,900 (tax revenue and investment revenue) and total expenditures of $2,700,900 (services, supplies and operating transfers to the City to pay for the debt service costs on the bonds funding the approved capital projects).

After discussion of the DPCDC budget at the August 15, 2017 Workshop, the City Council is scheduled to adopt the DPCDC budget at the August 15, 2017 City Council Regular Meeting (note: the final Fiscal Year 2017-2018 City Budget, which incorporates all funds and component units of the City, is scheduled for adoption on September 19, 2017).

Fiscal/Budgetary Impact:

The proposed DPCDC budget includes all anticipated revenues to be derived in Fiscal Year 2017-2018 from the ½% Type B sales and use tax as well as proposed expenditures for the fiscal year.

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Discussion only at Workshop. An item for consideration and possible action is included on the August 15, 2017 Regular Council Meeting agenda.

CITY OF DEER PARK
2017-2018 ANNUAL BUDGET
DEER PARK COMMUNITY DEVELOPMENT CORPORATION (DPCDC)

REVENUE SUMMARY

DESCRIPTION	ACTUAL 15-16	BUDGET 16-17	ESTIMATED 16-17	PROJECTED 17-18
Tax Revenue	$ 3,271,782	$ 2,400,000	$ 3,200,000	$ 2,700,000
Other Revenue	513	3,600	1,000	900
Prior Year Revenue	-	892,996	480,436	-
Total Revenue	**$ 3,272,295**	**$ 3,296,596**	**$ 3,681,436**	**$ 2,700,900**

CITY OF DEER PARK
2017-2018 ANNUAL BUDGET
DEER PARK COMMUNITY DEVELOPMENT CORPORATION (DPCDC)

DESCRIPTION	ACTUAL 15-16	BUDGET 16-17	ESTIMATED 16-17	PROJECTED 17-18
3100 TAX REVENUE				
3120 Sales Tax Revenue	$ 3,271,782	$ 2,400,000	$ 3,200,000	$ 2,700,000
Total Tax Revenue	**3,271,782**	**2,400,000**	**3,200,000**	**2,700,000**
3600 OTHER REVENUE				
3620 Investment Revenue	513	3,600	1,000	900
Total Other Revenue	**513**	**3,600**	**1,000**	**900**
Prior Year Revenue	**-**	**892,996**	**480,436**	**-**
TOTAL REVENUE	**$ 3,272,295**	**$ 3,296,596**	**$ 3,681,436**	**$ 2,700,900**

CITY OF DEER PARK
2017-2018 ANNUAL BUDGET
DEER PARK COMMUNITY DEVELOPMENT CORPORATION (DPCDC)
EXPENDITURE SUMMARY

DEPARTMENT	ACTUAL 15-16	BUDGET 16-17	ESTIMATED 16-17	PROPOSED 17-18
Total DPCDC Services	$ 229,606	$ 3,296,596	$ 3,681,436	$ 2,700,900
TOTAL EXPENDITURES	**$ 229,606**	**$ 3,296,596**	**$ 3,681,436**	**$ 2,700,900**

CITY OF DEER PARK
2017-2018 ANNUAL BUDGET
DEER PARK COMMUNITY DEVELOPMENT CORPORATION (DPCDC)

EXPENDITURE SUMMARY

DESCRIPTION	ACTUAL 15-16	BUDGET 16-17	ESTIMATED 16-17	PROPOSED 17-18
Services	$ -	$ 4,400	$ 3,600	$ 4,400
Supplies	11	1,500	25	1,500
Other Operating Expenditures	229,595	3,290,696	3,677,811	2,695,000
Total Expenditures	**$ 229,606**	**$ 3,296,596**	**$ 3,681,436**	**$ 2,700,900**

PROGRAM DESCRIPTION

Chapter 505 of the Texas Local Government Code authorizes the use of Type B economic development sales tax for public park purposes and events through a development corporation appointed by City Council. The DPCDC is a Type B Corporation, and in accordance with state law, the City has adopted a 0.50% sales tax to fund the projects approved by the voters on May 9, 2015.

CITY OF DEER PARK
2017-2018 ANNUAL BUDGET
DEER PARK COMMUNITY DEVELOPMENT CORPORATION (DPCDC)

DESCRIPTION	ACTUAL 15-16	BUDGET 16-17	ESTIMATED 16-17	PROPOSED 17-18
4200 SERVICES				
4201 Public Notices	$ -	$ 1,900	$ 1,600	$ 1,900
4239 Audit Fee	-	2,000	2,000	2,000
4250 Training & Travel	-	500	-	500
4252 Dues & Fees	-	-	-	-
Total Services	**-**	**4,400**	**3,600**	**4,400**
4300 SUPPLIES				
4301 Office Supplies	-	100	-	100
4305 Printing	-	1,300	-	1,300
4307 Postage	11	100	25	100
Total Supplies	**11**	**1,500**	**25**	**1,500**
4500 OTHER OPERATING EXP.				
4525 Other Bond Related Fees	80,095	23,500	55,970	118,000
4530 Operating Transfers	87,231	3,267,196	2,184,110	2,394,362
4591 Pay-As-You-Go	62,269	-	1,437,731	182,638
Total Operating Transfers	**229,595**	**3,290,696**	**3,677,811**	**2,695,000**
TOTAL EXPENDITURES	**$ 229,606**	**$ 3,296,596**	**$ 3,681,436**	**$ 2,700,900**

DEER PARK COMMUNITY DEVELOPMENT CORPORATION (DPCDC)
2017-2018 ANNUAL BUDGET

DESCRIPTION		PROPOSED 17-18
4200 Services		
4201 Public Notices	*Estimate for two public hearings ($100); bid notice ($1,600); miscellaneous other ($200)*	$ 1,900
4239 Audit Fee	*DPCDC share of annual audit costs (apportioned as a flat fee, similar to special revenue districts)*	2,000
4250 Training & Travel	*Estimate for legislative training, etc.*	500
4252 Dues & Fees	*Estimate for user fee to obtain IRS determination regarding exemption from Form 990 filing requirements*	-
4300 Supplies		
4301 Office Supplies	*Estimate for miscellaneous office supplies*	100
4305 Printing	*Estimate for miscellaneous printing ($100) and printing of project signs for construction sites ($1,200)*	1,300
4307 Postage	*Estimate for miscellaneous correspondence*	100
4500 Other Operating Transfers		
4525 Other Bond Related Fees	*Estimated issuance costs - Proposed Series 2018:*	
	Est. Issuance Costs (@ 2% PAR) 117,000	118,000
	Est, Paying Agent Fees 1,000	
4530 Operating Transfers	*Transfer to the City for debt service payments as follows related to debt issued to fund projects approved in the 2015 election to adopt the Type B sales and use tax:*	2,394,362

	Series 2016	Series 2017	*Series 2018 (Proposed)*
Principal	1,780,000	60,000	260,000
Interest	103,986	50,463	139,913

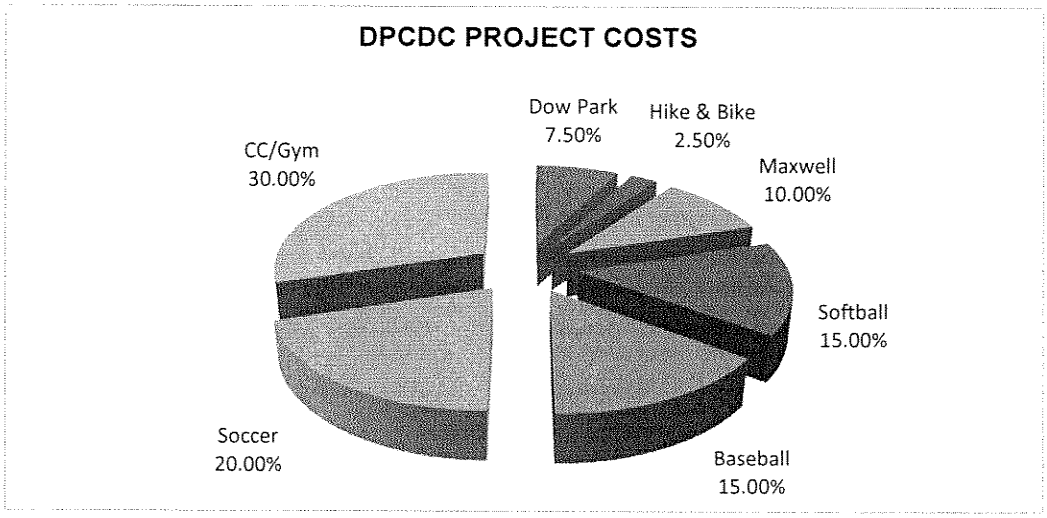
	Project costs will be paid through the capital projects (bond fund), with the pay-as-you-go funding to be handled via an operating transfer to that bond fund, with the 2018 estimates as follows:	182,638
	Hike & Bike Trails (design & construction) 182,638	

DEER PARK COMMUNITY DEVELOPMENT CORPORATION (DPCDC)
2017-2018 ANNUAL BUDGET
PROJECT COSTS APPROVED BY THE VOTERS

On May 9, 2015, the voters approved a dedicated 0.50% sales tax for the following projects, the costs of which were enumerated in the Proposition in an amount not exceed $20,000,000. This amount is for the construction, renovation, acquisition, equipment and improvement of the projects and is exclusive of the costs of financing. Project costs will be recorded in the respective bond funds (for each debt issuance to be funded by the Type B sales and use tax) or in the DPCDC Fund (for the project costs funded by pay as you go):

Projects (Design & Construction):			
Dow Park Pavilion	$	1,500,000	7.50%
Hike and Bike Trail Development		500,000	2.50%
Maxwell Center Expansion and Parking Lot		2,000,000	10.00%
Girls Softball Renovations at Youth Sports Complex		3,000,000	15.00%
Deer Park Baseball Development and Renovation including, but not limited to, Spencerview		3,000,000	15.00%
Soccer Field Development		4,000,000	20.00%
Community Center and Gym Renovation and Expansion		6,000,000	30.00%
	$	20,000,000	100.00%

Source of Funds:			
Certificates of Obligation, Series 2016	$	9,450,000	47.25%
Proposed Certificates of Obligation, Series 2017		2,700,000	13.50%
Proposed Certificates of Obligation, Series 2018		5,850,000	29.25%
Pay As You Go		2,000,000	10.00%
	$	20,000,000	100.00%



DEER PARK COMMUNITY DEVELOPMENT CORPORATION (DPCDC)
2017-2018 ANNUAL BUDGET
ANNUAL DEBT SERVICE PAYMENTS

CERTIFICATES OF OBLIGATION, SERIES 2016
(Issued by the City of Deer Park)
$9,450,000 dated February 16, 2016
Interest Rate: 1.59%

DUE IN	INTEREST	DUE MAR. 15		DUE SEP. 15	ANNUAL
FISCAL YEAR	RATE	PRINCIPAL	INTEREST	INTEREST	TOTAL
2018	4.250%	$ 1,780,000.00	$ 59,068.50	$ 44,917.50	$ 1,883,986.00
2019	4.250%	665,000.00	44,917.50	39,630.75	749,548.25
2020	4.250%	680,000.00	39,630.75	34,224.75	753,855.50
2021	4.250%	690,000.00	34,224.75	28,739.25	752,964.00
2022	4.250%	700,000.00	28,739.25	23,174.25	751,913.50
2023	4.250%	710,000.00	23,174.25	17,529.75	750,704.00
2024	4.250%	725,000.00	17,529.75	11,766.00	754,295.75
2025	4.250%	735,000.00	11,766.00	5,922.75	752,688.75
2026	4.250%	745,000.00	5,922.75	-	750,922.75
TOTAL		$ 7,430,000.00	$ 264,973.50	$ 205,905.00	$ 7,900,878.50

DEER PARK COMMUNITY DEVELOPMENT CORPORATION (DPCDC)
2017-2018 ANNUAL BUDGET
ANNUAL DEBT SERVICE PAYMENTS

CERTIFICATES OF OBLIGATION, SERIES 2017
(Issued by the City of Deer Park)
$2,700,000 dated February 14, 2017
Interest Rate: 1.89%

DUE IN FISCAL YEAR	INTEREST RATE	DUE MAR. 15 PRINCIPAL	DUE MAR. 15 INTEREST	DUE SEP. 15 INTEREST	ANNUAL TOTAL
2018	1.890%	$ 60,000.00	$ 25,515.00	$ 24,948.00	$ 110,463.00
2019	1.890%	420,000.00	24,948.00	20,979.00	465,927.00
2020	1.890%	425,000.00	20,979.00	16,962.75	462,941.75
2021	1.890%	435,000.00	16,962.75	12,852.00	464,814.75
2022	1.890%	445,000.00	12,852.00	8,646.75	466,498.75
2023	1.890%	455,000.00	8,646.75	4,347.00	467,993.75
2024	1.890%	460,000.00	4,347.00	-	464,347.00
TOTAL		$ 2,700,000.00	$ 114,250.50	$ 88,735.50	$ 2,902,986.00

DEER PARK COMMUNITY DEVELOPMENT CORPORATION (DPCDC)
2017-2018 ANNUAL BUDGET
ANNUAL DEBT SERVICE PAYMENTS

PROPOSED CERTIFICATES OF OBLIGATION, SERIES 2018
(To be issued by the City of Deer Park)
$5,850,000 dated February 13, 2018
Interest Rate: 3.50%

DUE IN FISCAL YEAR	INTEREST RATE	DUE MAR. 15 PRINCIPAL	DUE MAR. 15 INTEREST	DUE SEP. 15 INTEREST	ANNUAL TOTAL
2018	3.500%	$ 260,000.00	$ 42,088.00	$ 97,825.00	$ 399,913.00
2019	3.500%	1,005,000.00	97,825.00	80,237.50	1,183,062.50
2020	3.500%	1,040,000.00	80,237.50	62,037.50	1,182,275.00
2021	3.500%	1,075,000.00	62,037.50	43,225.00	1,180,262.50
2022	3.500%	1,215,000.00	43,225.00	21,962.50	1,280,187.50
2023	3.500%	1,255,000.00	21,962.50	-	1,276,962.50
TOTAL		$ 5,850,000.00	$ 347,375.50	$ 305,287.50	$ 6,502,663.00

This debt represents the final portion of the second of two issuances approved for the Deer Park Community Development Corporation, and is being issued to fund renovations and expansion of the Community Center and Gym. This issuance will be handled via private placement following a competitive bidding process.

City of Deer Park

710 E SAN AUGUSTINE
DEER PARK, TX 77536

Legislation Details (With Text)

File #:	DIS 17-107	**Version:**	1	**Name:**	
Type:	Discussion			**Status:**	Agenda Ready
File created:	8/10/2017			**In control:**	City Council Workshop
On agenda:	8/15/2017			**Final action:**	
Title:	Discussion of issues relating to additional mowing contract services.				
Sponsors:					
Indexes:					
Code sections:					
Attachments:	Quotes for Additonal Mowing Services - Longclaw				

Date	Ver.	Action By	Action	Result
8/15/2017	1	City Council Workshop		

Discussion of issues relating to additional mowing contract services.

To renew the current contract and add additional services which include additional mowing services on Center Street, spraying herbicide on Center Street, mowing services for ditches on Center Street and mowing on medians on Temperance Lane.

Current contract is $68,000 annually funded out of Parks & Recreation general fund. The additional services for mowing on Center Street, spraying herbicide on Center Street, mowing services for ditches on Center Street and mowing of medians on Temperance Lane was quoted at $11,355 by the current contractor. Pursuant to Sec. 252.048 Change Orders of the Texas Local Government Code, the original contract price may not be increased under this section by more than 25 percent.

The current contract with additional services total $79,355 will be funded out of the Parks & Recreation general fund.

Discussion only

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LONGCLAW CONTRACTORS

Quote

Longclaw Contractors, LLC
4306 Stacy
Seabrook, TX 77586
Email: longclawcontractors@gmail.com

Date: August 9, 2017

To: Jacob Zuniga
City of Deer Park
610 E. San Augustine
Deer Park, TX 77536
832.260.8547

Scope of Work: Spraying herbicide along Center Street in Deer Park, TX. The price listed is per spray and includes the cost of herbicide. The estimated quantity is based on one spray per month. . The unit prices are per service and are not dependent on the estimated quantity of services per year.

Salesperson	Job	Payment Terms	Due Date
David Davis		Net 30 Days	

Qty	Description	Unit Price	Line Total
12.00	Spraying herbicide on Center Street	$ 350.00	$ 4,200.00
12.00	5% Discount described in contract	($17.50)	($210.00)

Quotation prepared by: David Davis

To accept this quotation, sign here and return: _____

Subtotal	$ 3,990.00
Sales Tax	
Total	$ 3,990.00

Thank you for your business!

LONGCLAW CONTRACTORS

Quote

Longclaw Contractors, LLC
4306 Stacy
Seabrook, TX 77586
Email: longclawcontractors@gmail.com

Date: August 9, 2017

To: Jacob Zuniga
City of Deer Park
610 E. San Augustine
Deer Park, TX 77536
832.260.8547

Scope of Work: Mowing service for ditches on Center Street and one median on Temperance Lane in Deer Park, TX. The estimated quantity is based on the service schedule of "Area A" . The unit prices are per service and are not dependent on the estimated quantity of services per year.

Salesperson	Job	Payment Terms	Due Date
David Davis		Net 30 Days	

Qty	Description	Unit Price	Line Total
40.00	Mowing services for ditches on Center Street	$ 55.00	$ 2,200.00
40.00	5% Discount described in contract	($2.75)	($110.00)
40.00	Mowing of median on Temperance Lane	$ 26.25	$ 1,050.00
40.00	5% Discount described in contract	($1.25)	($50.00)

Quotation prepared by: David Davis

Subtotal	$ 3,090.00
Sales Tax	
Total	$ 3,090.00

To accept this quotation, sign here and return: _____

Thank you for your business!

LONGCLAW CONTRACTORS

Quote

Longclaw Contractors, LLC
4306 Stacy
Seabrook, TX 77586
Email: longclawcontractors@gmail.com

Date: August 4, 2017

To: Jacob Zuniga
City of Deer Park
610 E. San Augustine
Deer Park, TX 77536
832.260.8547

Scope of Work: Additional weekly mowing service for medians on Center Street in Deer Park, TX. Additional weekly mowing service will be for mowing only.The estimated quantity is based on one additional mow per week during the summer months. The unit prices are per service and are not dependent on the estimated quantity of services per year.

Salesperson	Job	Payment Terms	Due Date
David Davis		Net 30 Days	

Qty	Description	Unit Price	Line Total
12.00	Mowing services for medians on Center Street	$ 375.00	$ 4,500.00
12.00	5% Discount described in contract	($18.75)	($225.00)

Subtotal	$ 4,275.00
Sales Tax	
Total	$ **4,275.00**

Quotation prepared by: David Davis

To accept this quotation, sign here and return: _____

Thank you for your business!

City of Deer Park

710 E SAN AUGUSTINE
DEER PARK, TX 77536

Legislation Details (With Text)

File #:	DIS 17-106	**Version:**	1	**Name:**	
Type:	Discussion			**Status:**	Agenda Ready
File created:	8/10/2017			**In control:**	City Council Workshop
On agenda:	8/15/2017			**Final action:**	
Title:	Discussion of issues relating to the reclassification of two Library positions.				
Sponsors:					
Indexes:					
Code sections:					
Attachments:	Ord_Amend Pay Range Chart August 2017 2016_17 Full Time Classification scales (Amended 8-15-17)				

Date	Ver.	Action By	Action	Result
8/15/2017	1	City Council Workshop		

Discussion of issues relating to the reclassification of two Library positions.

Summary:

The Assistant Director/Head of Adult Services role has been open for six months. We have had a few experienced applicants, but each of those candidates ended up pursuing other opportunities. The Assistant Director portion of the role is vital to the day-to-day operations of the Library and needs to be filled. Bill Philibert has done a salary survey and determined that the salary for current job posting is significantly less than market salary for an Assistant Library Director position.

In order to fill this position, the Library would like to restructure two professional roles in order to create a new Assistant Director/Library Technical Services Supervisor (Grade 11) and a Head of Adult Services position (Grade 9). This would allow us to promote an existing employee who is currently the Library Technical Services Supervisor (Grade 9) into the Assistant Director/Library Technical Services Supervisor role and then create a new role, which would be the Head of Adult Services (Grade 9). The current Library Technical Services supervisor holds a Masters of Library Science degree and has been with the Library since 2012. Increasing the pay grade of the Assistant Director position recognizes the added duties of this position and brings it in line with the market data.

The newly created Head of Adult Services position would still require a Masters of Library Science and some supervisory experience, but not have the added responsibilities of staff and building management. The Head of Adult Services would be in charge of the Reference section and responsible for programming.

Fiscal/Budgetary Impact:

The Budget impact would be minimal this year (FY 2016-2017) because the Assistant Director role has been vacant since March. The budget impact next year (FY 2017-2018) would be a projected net increase of approximately $3,992.

Discussion only during workshop. An item for consideration and possible action of an ordinance to amend the employee pay and classification scales is included on the August 15, 2017 Regular Council Meeting agenda.

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ORDINANCE NO. _____

AN ORDINANCE AMENDING THE FY 2016-2017 CLASSIFICATION SCALE FOR FULL TIME (CLASSIFIED) EMPLOYEES OF THE CITY OF DEER PARK; AND DECLARING AN EMERGENCY.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF DEER PARK:

I.

On September 20, 2016 the City Council of the City of Deer Park adopted the FY 2016-2017 Employee Classification Scale and Pay Chart for employees of the City of Deer Park, Texas, by ordinance.

II.

The aforementioned Employee Classification Scale and Pay Chart includes a Classification Scale for Full Time (Classified) employees of the City of Deer Park.

III.

Two (2) positions in the in the Library are being reclassified which will change the Classification Scale for Full Time (classified) employees of the City of Deer Park as follows:

From	Grade	To	Grade
Library Technical Services Supervisor	C41-9	Asst. Library Director/Technical Services Supervisor	C43-11
Assistant Library Director/Adult Services Supervisor	C42-10	Adult Services Supervisor	C41-9

IV.

The proposed amended classification scale is attached. The effective date is August 15, 2017.

V.

All Ordinances or parts of Ordinances in conflict with any of the provisions of this Ordinance are hereby repealed insofar as the same are in conflict with the provisions thereof.

VI.

It is hereby officially found and determined that the meeting at which this Ordinance was adopted was open to the public and that public notice of the time, place and purpose of said meeting was given, all as required by Chapter 551 of the Government Code of the State of Texas.

VII.

The City Council finds that this Ordinance relates to the immediate preservation of the public peace, health, safety and welfare, in that it is necessary for the protection of the citizens of this City and the property located therein, that provisions be made for the payment of the City employees listed herein at the rates listed so that they be retained in service to provide services to the citizens, thereby creating an emergency, for which the Charter requirement providing for the reading of ordinances on three (3) several days should be dispensed with, and this Ordinance be passed finally on its introduction; and, accordingly, such requirement is dispensed with, and this Ordinance shall take effect upon its passage and approval by the Mayor.

In accordance with Article VIII, Section 1 of the City Charter, this Ordinance was introduced before the City Council of the City of Deer Park, Texas, **passed, approved and adopted** on this the ___ day of _____, 2017 **by a vote of _____ "Ayes" and _____ "Noes".**

_____
MAYOR, City of Deer Park, Texas

ATTEST:

_____
City Secretary

APPROVED:

_____
City Attorney

City of Deer Park
Classification Scale
October 1, 2016 - September 30, 2017
(Amended Effective August 15, 2017)

FULL-TIME POSITIONS (Classified Staff)

A11	A12	A13
	Custodian	Animal Control Officer
	Laborer	Equipment Operator I
	Clerk	Maintenance Worker
	Youth Artistic Specialist	Meter Reader
		Sanitation Laborer
		Secretary
		Deputy Court Clerk
		Station Attendant
		Records Technician

B21	B22	B23	B23-F/P	B24
EMS Clerk	Administrative Asst.	Arborist	Career Services Officer	Asst. Children's Librarian
Deputy Tax Collector	Engineering Aide I	Records Mgmt. Coordinator	Investigator	Equipment Operator III
Maintenance Technician I	Executive Secretary	HR Specialist	Patrol Officer	Inspector I & II
Payroll Coordinator	Equipment Operator II	Code Enforcement Officer	School Resource Officer	Crew Leader
Warehouse Attendant	Industrial Waste Inspector	Lab Analyst	City Marshal	Plant Operator "A" (Wtr/Swr)
	Public Safety Attendant	Mechanic II	Paramedic	Library Assistant
	Lab Technician	Maintenance Tech II	Fire Inspector/Investigator	Chief Deputy Court Clerk
	Mechanic I	Horticulturalist		Maintenance Technician III
	Community Liaison	Recreation Specialist		HR Generalist
	Crime Analyst	Plant Operator "B" (Wtr/Swr)		Systems Support Specialist
	Dispatcher	Theatre/Drama Specialist II		Network Specialist
	Theatre/Drama Specialist I	Techincal Prod. Coordinator		
B21-F	Plant Oper. "C" (Wtr/Swr)			
EMT Intermediate	Welder			
	B22-P			
	Police Cadet			

B25	B31	B32	C41	C41-PF
Inspector III	Animal Control Supervisor	Asst. Sanitation Supervisor	Artistic Managing Supervisor	EMS Captain
Accountant	Finance Coordinator		Athletics/Aquatics Coord.	Police Sergeant
Maintenance Electrician	Office Manager		Special Projects Coord.	
Engineering Inspector			Deputy City Secretary	
Executive Assistant			Surveyor/AutoCad Designer	
Assistant Street Supervisor			Traffic Signal Supervisor	
Crim. Intelligence Analyst			P&R Mktg/Technical Coord	
			P&R Admin. Coordinator	
			GIS Coordinator	
			Librarian (Children's)	
			Library Adult Svcs. Supv.	
			Dispatcher Supervisor	
			Records Supervisor	
			PW Operations Coordinator	
			Senior Services Supervisor	
			Building Maintenance Supv.	
			Youth Programs Coordinator	
			Purch. & Budget Coordinator	

C42	C43	C44	C45	C51
Athletics/Aquatics Supv.	Utility Billing/Tax Coll/Assessor	Chief Building Official	Economic Dev. Administrator	Accounting Supervisor
Business Analyst I	Business Analyst II	Engineering Coordinator	Asst. City Engineer	Park Operations Supervisor
Electrical Supervisor	Network Administrator	Supv - Projects & Applications		
Recreation Supervisor	Court Administrator			
Shop Supervisor	PR/Mktg. Specialist			
Sanitation Supervisor	Asst. Library Dir/Tech Svcs Supv			
Sewer Plant Supervisor				
Street Maint. Supervisor				
Utility Supervisor				
Water Treatment Supervisor				
Asst. Park Operations Supv.				