TRAFFIC STUDY FOR EL PASO BASEBALL PARK

Prepared for:

City of El Paso
Engineering & Construction Management Department

Phase-I & II

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Executive Summary

This traffic study was undertaken with a two-fold purpose. The first being a supporting document of the Stevens Replat-A in conjunction with the proposed baseball park. The second is a traffic impact study to assess the impacts for the existing traffic conditions without consideration for any additional traffic on the three chosen corridors of Missouri Avenue, Santa Fe Street, and Durango Street. To assess the impacts from the increased traffic generated by a baseball park event. To assess the impacts from the increased traffic generated by a baseball park event plus a simultaneous event occurring at the Civic Center Complex. The last two considerations was the outbound traffic with the assumption that that at one point both simultaneous events would end at the same hour.

In this summary the traffic impacts from the capacity analyses that were run using the *Synchro* software, *Version 7*. for the hours of 6:00 PM to 7:00PM and using the traffic counts collected for that hour and assuming the 9:00 PM to 10:00 traffic counts as being relatively similar to the traffic at the 10:00 PM hour. A condensed version of all the findings are presented in the following;

The existing conditions for each intersection, of each of the three corridors, were inventoried and are included in *Appendix-A* of this report.

The existing conditions and the collected traffic counts were used to run the capacity analyses for the 6:00 PM to 7:00 PM hour. The results of the capacity analyses show that there is a very favorable level of service (LOS) for the corridors of Missouri Avenue and Santa Fe Street. No analyses were performed for Durango Avenue or any intersections where no traffic counts were collected.

The inbound traffic volumes are shown on *Figure-20* thru 22 and included in *Appendix-B* of this report. The results of the capacity analysis are summarized on *Table-F* below. The *Synchro* data sheets with the results in the table below are included as *Appendix-D* included in this report.

Table-F Existing Traffic Delay & LOS

Intersection	Intersection Delay	Inter. Level of Service
Missouri at Kansas	8.5	A
Missouri at Oregon	7.6	A
Santa Fe at Yandell	12.6	B
Santa Fe at Wyoming	8.6	A
Santa Fe at Missouri	27.3	C
Santa Fe at Franklin	10.5	B
Santa Fe at Main	3.3	A
Santa Fe at Sheldon	9.7	A
Santa Fe at San Antonio	11.5	B
Santa Fe at Paisano	34.9	C

The existing conditions and the collected traffic counts plus the generated baseball traffic were used to run the capacity analyses for the 6:00 PM to 7:00 PM hour.
The results of the capacity analyses show that there is an acceptable level of service (LOS) for the corridors of Missouri Avenue and Santa Fe Street. No analyses were performed for Durango Avenue or any intersections where no traffic counts were collected.

The level of service and the delay being created by the existing traffic plus the baseball traffic will be analyzed. The inbound traffic volumes are shown on *Figure-25* thru *27* in this report. *Figure-28* shows the outbound existing traffic plus baseball traffic on the Santa Fe corridor only as Missouri Avenue is a one way inbound street. The results are summarized on *Table-G* below. The Synchro data sheets with the results in the table below are included as *Appendix-E*

Table-G Inbound Existing Plus Baseball Traffic Delay & LOS

Intersection	Intersection Delay	Inter. Level of Service
Missouri at Kansas	21.2	C
Missouri at Oregon	34	C
Santa Fe at Yandell	13.1	B
Santa Fe at Wyoming	202.8	F
Santa Fe at Missouri	19.9	B
Santa Fe at Franklin	248	F
Santa Fe at Main	12.3	B
Santa Fe at Sheldon	10.9	B
Santa Fe at San Antonio	10.4	B
Santa Fe at Paisano	50.4	D

As expected, the amount of the eastbound right turn traffic on the Wyoming Avenue off-ramp from Interstate-10 and the southbound left turn at Franklin will theoretically cause excessive delay on that particular movement to cause the intersection level of service be less than desirable.

However, for the remainder of the Santa Fe Street and Missouri Avenue existing traffic plus the augmented baseball generated traffic the levels of service on those corridors is highly acceptable.

It is ascertained and understood that the combined existing traffic and the baseball generated traffic will not cause any undesirable effects on the street system except as previously shown on the *Table-G* on Wyoming Avenue.

The outbound existing plus baseball traffic will be analyzed for Santa Fe Street only because Missouri Avenue is a one-way inbound street. The outbound traffic volumes are shown on *Figure-28* in this report. The results are summarized on *Table-H* below. The Synchro data sheets with the results in the table below are included as *Appendix-F* included in this report.

Table-H Outbound Existing Plus Baseball Traffic Delay & LOS

Intersection	Intersection Delay	Inter. Level of Service
Santa Fe at Yandell	47.4	D
Santa Fe at Wyoming	18.9	B
Santa Fe at Missouri	17.6	B
Santa Fe at Franklin	31.7	C
Santa Fe at Main	22.9	C
Santa Fe at Sheldon	433.5	F
Santa Fe at San Antonio	14.4	B
Santa Fe at Paisano	21.6	C

As expected, the amount of the eastbound left turn and right turn traffic leaving the Civic Center parking garage will theoretically cause excessive delay on those particular movements to cause the intersection level of service be less than desirable. This level of service is expected as the parking garage has only right/left turn movements existing the garage.

So therefore, the baseball generated traffic combined with the existing traffic on the Missouri Avenue and Santa Fe Street corridors will not have any detrimental effect on the street system.

The next analyses that were performed were for the combined existing traffic plus the baseball generated traffic plus the Civic Center Complex generated traffic.

The level of service and the delay being created by the existing traffic plus the baseball traffic will be analyzed. The inbound traffic volumes are shown on *Figure-29* thru *31* in this report. The results are summarized on *Table-I* below. The Synchro data sheets with the results in the table below are included as *Appendix-G* included in this report.

Table-I Inbound Existing Plus Baseball Plus Civic Center Traffic Delay & LOS

Intersection	Delay	Level of Service
Missouri at Kansas	86.9	F
Missouri at Oregon	123.7	F
Santa Fe at Yandell	12.1	B
Santa Fe at Wyoming	467.4	F
Santa Fe at Missouri	48.5	D
Santa Fe at Franklin	355	F
Santa Fe at Main	78.6	E
Santa Fe at Sheldon	11.4	B
Santa Fe at San Antonio	11.0	B
Santa Fe at Paisano	68.6	E

Table-I clearly shows that the existing traffic plus the baseball generated traffic plus the civic center complex generated traffic will cause a severe congestion problem on both the Missouri Avenue corridor and the Santa Fe Street corridor. This primarily occurs because the analysis assumes that all events have the same performance starting time of 7:00 PM and all the generated traffic is attempting to arrive at the central point (the Civic Center Parking Garage) at the same time.

The outbound existing plus baseball traffic plus Civic Center Complex traffic will be analyzed for Santa Fe Street only because Missouri Avenue is a one-way inbound street. The outbound traffic volumes are shown on *Figure-32* in this report. The results are summarized on *Table-J* below. The Synchro data sheets with the results in the table below are included as *Appendix-H* included in this report.

Table-J Outbound Existing Plus Baseball Plus Civic Center Traffic Delay & LOS

Intersection	Delay	Level of Service
Santa Fe at Yandell	187.1	F
Santa Fe at Wyoming	81.1	F
Santa Fe at Missouri	20.1	C
Santa Fe at Franklin	129.4	F
Santa Fe at Main	80.7	F
Santa Fe at Sheldon	875.9	F
Santa Fe at San Antonio	15.6	B
Santa Fe at Paisano	24.0	C

Table-J clearly shows that the existing traffic plus the baseball generated traffic plus the civic center complex generated traffic will cause a severe congestion problem on the Santa Fe Street corridor. This primarily occurs because the analysis assumes that all events have the same performance ending time of 10:00 PM and all the generated traffic is attempting to depart the central point (the Civic Center Parking Garage) at the same time.

In summary *Table-K* below depicts the levels of service through three analysis considerations. Where the results of each analysis, for each event, can be clearly evaluated.

Table-K Inbound Traffic LOS Comparison

Intersection	Existing LOS	Extg + BB LOS	Extg+BB+CC LOS
Missouri at Kansas	A	C	F
Missouri at Oregon	A	C	F
Santa Fe at Yandell	B	B	B
Santa Fe at Wyoming	A	F	F
Santa Fe at Missouri	C	C	D
Santa Fe at Franklin	B	D	F
Santa Fe at Main	A	B	E
Santa Fe at Sheldon	A	B	B
Santa Fe at San Antonio	B	B	B
Santa Fe at Paisano	C	D	E

Table-L below depicts the levels of service through two analysis considerations for the outbound traffic assuming the central point being the Civic Center Parking Garage. Where the results of each analysis, for each event, can be clearly evaluated.

Table-L Outbound Traffic LOS Comparison

Intersection	Extg + BB LOS	Extg+BB+CC LOS
Santa Fe at Yandell	D	F
Santa Fe at Wyoming	B	F
Santa Fe at Missouri	B	C
Santa Fe at Franklin	C	F
Santa Fe at Main	C	F
Santa Fe at Sheldon	F	F
Santa Fe at San Antonio	B	B
Santa Fe at Paisano	C	C

It can be concluded from this traffic impact study that after the numerous figures, tables, appendices and analyses it can be clearly ascertained that the existing traffic flows and operates at a highly desirable level of service. These ideal conditions and levels of service will always be there even after consideration for the approval and implementation of the *Stevens Replat-A*. These ideal conditions will further improve when the existing City Hall client and employee traffic is removed from the existing traffic at the hour from 6:00 PM to 7:00PM.

The consideration of approving the *Stevens Replat-A* to allow for the construction of a baseball park and the traffic generated by this type of facility will not significantly or negatively impact the street corridors of Missouri Avenue and Santa Fe Street as can clearly be observed by the tabulated analysis shown on *Table-G*. Again, it is reaffirmed that traffic conditions will further improve when the existing City Hall client and employee traffic is removed from the existing traffic at the hour from 6:00 PM to 7:00PM.

When simultaneous baseball events and Civic Center Complex events are held with the same start time of 7:00 PM the traffic conditions will certainly cause a very undesirable levels of service on the street corridors that were analyzed for this report. This is evidenced by the analyses reported and tabulated on *Tables-I* and *J*. However, there are co-operative measures that will improve the traffic issues, such as staggering start times for events, redirecting traffic to lesser used corridors, encouragement for the use of transit or private conveyance (taxis) from transit stations or entertainment districts. This condition will occur for approximately 1 hour, that hour being the 6:00 PM to 7:00 PM of simultaneous events, a baseball game and a Civic Center Complex event, being held

Therefore as a standing of this report it is recommended that the following strategies be considered.

- Make full use of the variable message signs (vms) on Intersate-10 to direct traffic to other optional exits to circulate traffic to baseball events or simultaneous occurring events,

- COEP should consider planning and funding for roadside vms to direct traffic circulation for arriving and departing traffic on downtown streets,

- COEP should seriously consider making El Paso Street a ***two-way*** street from Paisano Drive to Sheldon Way,

- COEP should consider free on-street parking 3/8 to1/2 mile from the Baseball park and Civic Center Complex to encourage walking to the events,

- COEP should consider parking prohibition on certain streets, closure of streets, and the use of turn restrictions,

- COEP should consider the use police or code enforcement officers for traffic control at signalized intersections, and intersections where turning movements will be numerous, as well as use of traffic cones or barricades to guide pedestrians and traffic flow,

- Encourage the use of *fee based* transit from transit terminals similar to what is done for the UTEP football and Sun Bowl Game,

- On Durango Street provide *free* "up-hill" or parking lots, from parking lots 1/2 mile away, trolley service to the baseball park or Civic Center Complex,
- After the initial events the COEP should seriously consider re-counting the entire CBD area for 7 continuous days which would permit the COEP to develop arriving and departing special signal timing plans to aid in the efficient movement of traffic as well as allow the recalibration of the City's traffic signal model.

It can be ascertained that this report clearly identifies the areas of concern that will come with the future of the baseball park project. However, those concerns can be mitigated by the implementation, of one or more, of the recommended solutions presented above. Those improvements will come as we understand the nuances of each event and step out to aggressively to address the solution to solve the arisen issue.

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PHASE-I

1.0 Introduction –

The MARTINEZ ENGINEERING GROUP (MEG) was retained by the City of El Paso's Engineering & Construction Management Department and the Department of Transportation to investigate and evaluate the traffic impacts of the *El Paso Baseball Park* and the Stevens Replat-A.

The proposed baseball park will be designed for AAA minor league baseball. The project is anticipated to have a capacity of 9,000 spectators to include approximately 7,000 fixed seats, 20 to 30 luxury suites, 250 to 300 club seats, office space, and baseball club team facilities. [1]

The El Paso Baseball Park will be located in the area bounded by Durango Street on the west, Santa Fe Street on the east, Missouri Avenue on the north and the railroad lines on the south.

Figure1 illustrates the *Area Location* of the proposed baseball park relative to the central city of El Paso.

2.0 Study Area – Phase-I & II

The traffic analysis is comprised of three corridors. Those corridors being **Missouri Avenue** from Kansas Street to Durango Street, **Santa Fe Street** from Paisano Drive to Yandell Drive and **Durango Street** from San Antonio Avenue to Missouri Avenue.

3.0 Study Methodology – Phase I & II

The MARTINEZ ENGINEERING GROUP (MEG) coordinated with the City of El Paso's Engineering & Construction Management Department to establish the study scope, study boundaries, the three corridors to be studied. The methodology to be used in the prosecution of the study is enumerated below;

* Conducted a detailed field inventory, of the three corridors which comprised the study scope,
* All analyses will be evaluated for the baseball park evening peak hour only,

[1] El Paso Times, October 7, 2012

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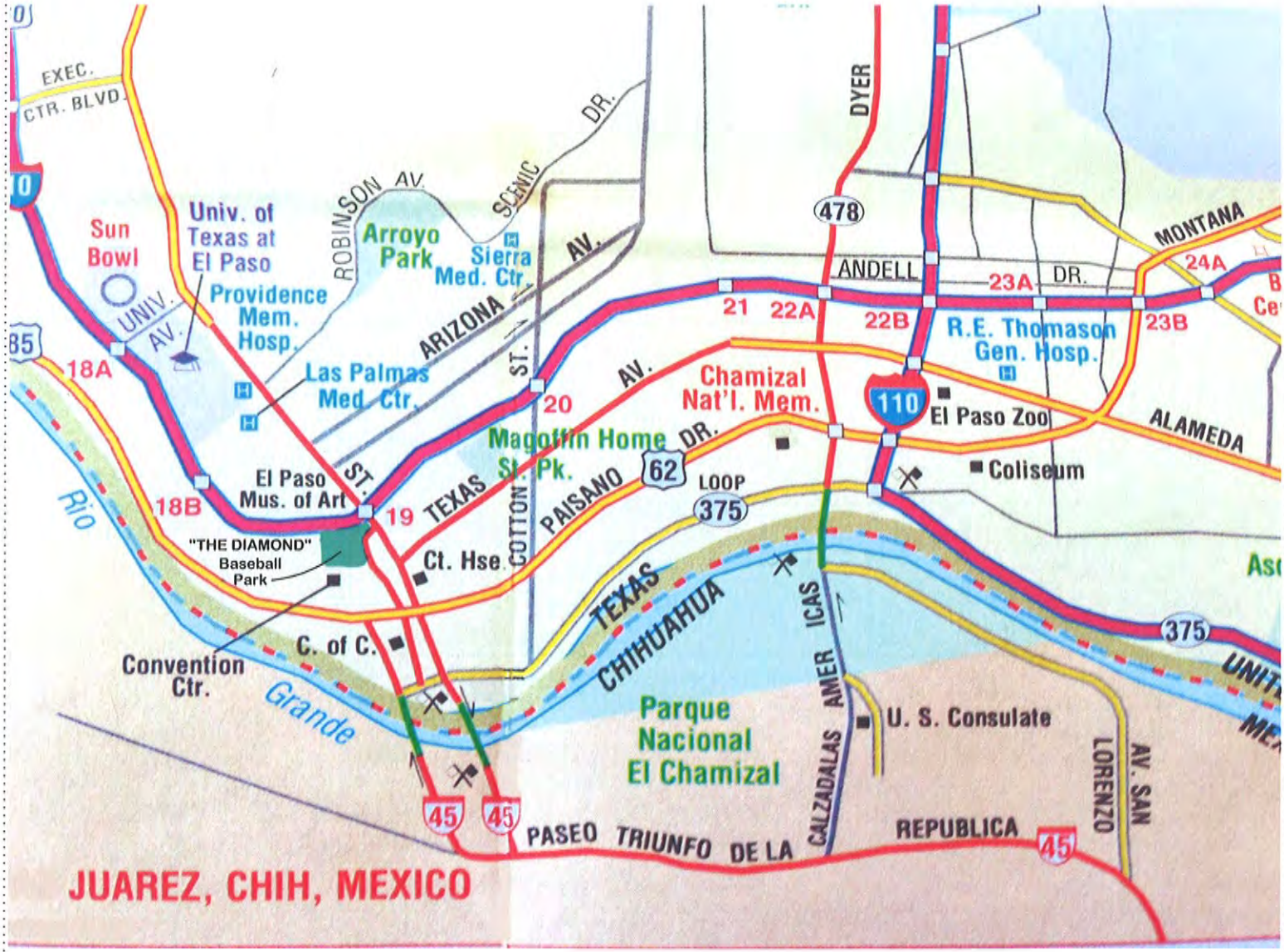

Sources: Universal Map – Texas

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PROJECT LOCATION

"The Diamond"
Baseball Park Traffic Analysis
El Paso, Texas

Figure - 1

* COEP conducted 15 minute turning movement counts at 10 intersections of which 10 counts locations were on the tasked corridors.
* COEP conducted 24 hour volume counts at 4 locations of which 3 counts locations were on the tasked corridors.
* Determine the volume to capacity (V/c) ratio for the collected 24-Hour traffic volumes,
* Established the peak hour for baseball arrival traffic and departing traffic,
* Estimated the baseball park generated traffic based on the 9,000 spectators,
* Estimated the baseball park traffic arrival/departure distribution over the available corridors,
* Assigned the expected baseball park traffic onto the available street system using the arrival/departure distribution,
* Determine the lane reductions,
* Evaluated the traffic of the baseball park over the three corridors identified for this study by using Synchro-7 software analyses,
* Modeled the three corridors using Synchro-7 Sim-Traffic,
* Developed and evaluated the roadway and intersection improvements to mitigate identified traffic impacts.

4.0 Study Assumptions – Phase I & II

For the purpose of analyzing this project and the three corridors several assumptions were made. These assumptions are derivatives from published transportation research on baseball stadia and others were made from the intersection inventory undertaken for this project, and consultation with COEP staff. These analysis assumptions are listed below.

* Baseball games will start at 7 PM and last for approximately 3 hours.
* Traffic analysis scenario assumes a capacity crowd for all events.
* Traffic turning movement counts were collected for 15 hours, from 7:00 AM to 10:00 PM, in 15 minute intervals and are shown on *Figures-20*, *21* and *22* for each corridor respectively. Those counts are included as *Appendix-B.*
* Traffic 24 hour volumes counts were collected for 24 hours for Non-event day and an event day.
* Baseball Park capacity is 9,000 people.
* By the use of *Traffic Operations Planning for Stadia and Arenas* (February 1994) and supported by experience with baseball stadiums from around the country the average vehicle occupancy rate is 3.5 persons per vehicle. Several other assumptions from the named publications are assumed and undertaken in this study.
* Approximately 90 percent of the game crowd is expected to arrive 90 to 60

minutes before the start of the game. However, the 6:00 PM to 7:00 PM hour will be used for Arrival Traffic and the 9:00 PM to 10:00 PM will be used as the Departure Traffic peak hour.

* Travel modes are assumed to be 85% by automobile, 15% public transit, bicycling, or walking.
* General parking and preferred season tickets reserved parking has been addressed by the COEP separate from this study.

5.0 Roadway Inventory - Phase I

The existing traffic conditions for 18 intersections in the three corridors were collected and are shown respectively in *Figures-2* thru *19* in *Appendix-A* and listed in the *Table-A* below.

Each intersection roadway section was inventoried for intersection pavement markings, intersection traffic control, intersection lane use, pedestrian facilities, parking prohibitions, and any unusual roadway features. For intersection details see *Figures-2* thru *19* in *Appendix-A*

Table-A Intersection Inventory

FIGURE	CORRIDOR	INTERSECTION	TRAVEL DIRECTION	PED FACILITIES	TRAFFIC CONTROL
2	Missouri Ave	Campbell St	One Way	Sidewalks & Ramps	Signalized
3	Missouri Ave	Kansas St	One Way	Sidewalks & Ramps	Signalized
4	Missouri Ave	Stanton St	One Way	Sidewalks & Ramps	Signalized
5	Missouri Ave	Mesa St	One Way	Sidewalks & Ramps	Signalized
6	Missouri Ave	Oregon St	One Way	Sidewalks & Ramps	Signalized
7	Missouri Ave	El Paso St	One Way	Sidewalks & Ramps	Stop Control
8	Missouri Ave	Santa Fe St	One Way	Sidewalks & Ramps	Signalized
9	Missouri Ave	Durango St	One Way	Sidewalks & Ramps	Stop Control
10	Santa St	Yandell Dr	Two Way	Sidewalks & Ramps	Signalized
11	Santa St	Wyoming St	Two Way	Sidewalks & Ramps	Signalized
12	Santa St	Franklin Ave	Two Way	Sidewalks & Ramps	Signalized

Table-A (Continued)

13	Santa St	Main St	Two Way	Sidewalks & Ramps	Signalized
14	Santa St	Sheldon Ave	Two Way	Sidewalks & Ramps	Signalized
15	Santa St	San Antonio St	Two Way	Sidewalks & Ramps	Signalized
16	Santa St	Overland	Two Way	Sidewalks & Ramps	Signalized
17	Santa St	Paisano Dr	Two Way	Sidewalks & Ramps	Signalized
18	Durango St	San Antonio St	Two Way	Sidewalks & Ramps	Signalized
19	Durango St	Franklin Ave	Two Way	Sidewalks & Ramps	Stop Control

There were no unusual roadway geometrics or features on any of the inventoried roadways.

6.0 24 Hour Volumes and Volume to Capacity Ratios (V/c) – Phase I

Twenty-four hours counts were collected at the 4 locations as shown on *Table-B*. The collected traffic volumes are tabulated in *Appendix-C*. These traffic volumes were used to calculate the volume to capacity ratios (V/c). The highest volume between the "event" and "non-event" volumes will be chosen for the computations.

The (V/c) ratio was computed for the highest PM Peak hour to correlate with the peak hour of the baseball park operations.

Table-B Collected 24 Hour Volumes

Street	Location	Type	Direction	Direction
San Antonio	Leon	Event Day	205 EB	229 WB
San Antonio	Leon	Non-Event Day	97 EB	137 WB
Santa Fe	San Antonio	Event Day	454 NB	No Data
Santa Fe	San Antonio	Non-Event Day	322 NB	537 SB
Franklin	Santa Fe	Event Day	220 EB	44 WB
Franklin	Santa Fe	Non-Event Day	126 EB	38 WB
Santa Fe	Wyoming	Event Day	746 NB	No Data
Santa Fe	Wyoming	Non-Event Day	399 NB	391 SB

"The Highway Capacity Manual methodology reports *single direction* capacities, with a flow rate of 1,700 passenger cars/hour/lane used as the capacity under base conditions."[2] For uninterrupted flow.

However the traffic volume counts that were collected are in an urban environment and in the proximity of signalized intersections. Therefore, the 1,700 v/hr/l will be reduced to 1,400 v/hr/l for the purposed of this analysis. The justification being that the study will be done for a window of time that is outside of the normal 5PM to 6PM evening peak hour. Second, the data collected was collected in an hourly bin and so therefore there is no headway information or 15 minute intervals to allow a more accurate saturation flow rate.

The s (saturation flow rate) equation[3] s=3600/h where;

s=saturation flow rate (veh/hr)
3600 = 3600 sec/hr
h= saturation headway (sec), a value of 2.5 seconds was used for this study.

Therefore, a saturation flow rate of 1,400 vehicles/hour/lane was derived by:

$$3600/2.5 = s = 1{,}440 \text{ veh/hr/l}$$

The calculation is very simple division of the collected volume by the 1,400 v/hr/l. As observed in *Table*-B the highest volumes are those collected during event days. Those volumes will be used for the analysis. *Table-C* below shows the result of the V/c ratios.

Table-C Volumes to Capacity (V/c) Ratios

Street	Location	Type	Direction	V/c	Direction	V/c
San Antonio	Leon	Event Day	205 EB	.15	229 WB	.16
Santa Fe	San Antonio	Event Day	454 NB	.32	No Data	
Franklin	Santa Fe	Event Day	220 EB	.16	44 WB	.03
Santa Fe	Wyoming	Event Day	746 NB	.53	No Data	

The V/c ratios shown are very low ratios, very much below, where a 1.0 would be an indication of an undesirable level of service.

"Therefore, the HCM often uses the *V/c* ratio to define the LOS E-F threshold, but not to define other LOS thresholds."[4]

[2] HCM2010,Volume 1, Concepts, Pg 3-15
[3] HCM2010, Volume 1, Concepts, Pg 4-12
[4] HCM2010,Volume 1, Concepts, Pg 5-9

The current 24 Hour traffic volumes provided, for event day, are not a burden that would indicate that there is a undesirable LOS on the street where the traffic volumes were collected.

7.0 Recommended Lane Reductions – Phase I

There are currently lane reductions on the following intersections:

Existing on the *Missouri Avenue Corridor*, one-way westbound –

There are two mandatory left turn lanes southbound onto Kansas Street.

There is a mandatory right turn lane northbound onto Mesa Street.

There is a mandatory left turn lane southbound onto Santa Fe Street.

There is a mandatory, eastbound, right turn lane southbound onto Santa Fe Street.

On the ***Missouri Avenue Corridor it is recommended*** that the following lane reductions be considered:

* Missouri, west of Santa Fe Street, shall remain and one-way local street and be removed from the MTP.

Existing on the *Santa Fe Street Corridor*, two-way southbound and northbound –

There is a mandatory left turn lane on Yandell Drive westbound onto I-10 ramp.

There are two mandatory left turn lanes on Santa Fe Street northbound onto I-10 ramp.

There is a mandatory left turn lane on Santa Fe Street southbound onto Wyoming Avenue.

There is a mandatory left turn lane on Santa Fe Street eastbound onto Franklin Avenue.

There is a mandatory right turn lane on City Hall Exit eastbound onto Santa Fe Street.

There is a mandatory right turn lane on Santa Fe Street eastbound onto Main Avenue.

There is a mandatory right turn lane on Santa Fe Street westbound onto San Antonio Avenue.

There is a mandatory left turn lane on San Antonio Avenue northbound onto Santa Fe Street.

There are unmarked mandatory left turn lanes on Santa Fe Street eastbound and westbound onto Overland Avenue.

There is an unmarked mandatory left turn lane on Santa Fe Street eastbound onto Paisano Drive.

There is a mandatory left turn lane and an optional left turn lane on Santa Fe Street westbound onto Paisano Drive.

There are unmarked mandatory left turn lanes on Paisano Drive northbound and southbound onto Santa Fe Street.

On the ***Santa Fe Street Corridor it is recommended*** that the following lane reductions be considered:

* Downgrade the street classification to a minor arterial.

Existing on the *Durango Street Corridor*, two-way southbound and northbound –

There is a mandatory left turn lane on Durango Street eastbound onto San Antonio Avenue.

There is a mandatory right turn and left turn lane on Franklin Avenue northbound and southbound onto Durango Street.

On the ***Durango Street Corridor it is recommended*** that the following lane reductions be considered:

* Downgrade the street classification to a collector arterial.

Conclusion of Phase-I

PHASE-II

8.0 Baseball Park Generated Traffic –

The proposed baseball park will be designed for AAA minor league baseball. The project is anticipated to have a capacity of 9,000 spectators to include approximately 7,000 fixed seats, 20 to 30 luxury suites, 250 to 300 club seats, office space, and baseball club team facilities.[5]

The proposed baseball park having a capacity of 9,000 seats, and assuming a capacity crowd at opening day. The high attendance would encourage higher vehicle occupancy rate for the ball park. The Institute of Transportation Engineers (ITE) informational report titled *Traffic Operations Planning for Stadia and Arenas*, 1994 indicates that vehicle occupancy rates may vary from 3.0 to 3.5 vehicle occupancy rate. For this study it will be assumed that a conservative 3.3 vehicle occupancy rate will be the default rate for this analysis. At this vehicle occupancy rate, a 9,000 seat baseball park would generate 2,730 estimated raw vehicles trips to the baseball park.

However, there will be a modal split which has to be considered by the inherent nature that the baseball park will be located in the central business district. This will lead to consideration there may be a walk-up pedestrians from the downtown neighborhoods, offices- businesses, entertainment districts, possibility of some bicycle traffic, and of course transit traffic. A study done for a similar AAA baseball park by Linscott, Law, & Greenspan Engineers, *Escondido Ballpark Project*, *Traffic Impact Study*, October 2010 for the City of Escondido developed a table[6] which described the travel mode projections as 85% by automobile and 15% non-auto, transit, taxi, bicycling, walking.

For the El Paso Baseball Park Project the referenced table will be expanded to refine the travel mode projections as shown on *Table D* below.

Table-D Modal Splits

Travel Mode	Anticipated Travel Split
Automobile	88%
Transit	5%
Bicycling	1%
Walking	6%
Total	**100%**

[5] El Paso Times, October 7, 2012
[6] Escondido Ballpark Project, October 2010, page 24

So therefore, the 2,730 estimated raw vehicle trips will be factored to properly consider the different travel modes. *Table-E* describes the more realistic vehicle trips to be imposed on the existing evening, 6:00 PM to 7:00 PM, traffic.

Table-E Modal Trips Splits

Travel Mode	Travel Split	Capacity	Persons
Automobile	88%	9,000	7,920
Transit	5%	9,000	450
Bicycling	1%	9,000	90
Walking	6%	9,000	540
Total	**100%**		**9,000**

The 7,920 persons travelling by automobile can be factored to 2,400 vehicle trips with a vehicle occupancy rate of 3.3.

These 2,400 vehicle trips will be used to develop the arrival and distribution traffic on the three corridors that will carry the vehicular traffic to the baseball park.

9.0 Vehicular and Pedestrian Circulation –

Vehicular circulation should be accomplished by the use of the surface streets to guide vehicles to either on street parking or parking garages. Vehicular traffic restrictions should be to prohibit traffic on Missouri Avenue west of Santa Fe Street except for permitted residential one-way traffic into the residential area in the proximity of the baseball park, or vehicular traffic associated with the baseball park operations, and emergency vehicles. The same circulation restrictions should be implemented on Durango from San Antonio Avenue north to Missouri Avenue.

Pedestrian circulation, at present, is limited to pedestrian activity primarily generated by the residential located on Missouri Avenue west of Santa Fe Street. All other pedestrian activity is generated by the Civic Center, Chamber Building, and the Public Library and transit use but is not heavy pedestrian traffic. At least not heavy in comparison to the street festivals and concerts which are held occasionally in the downtown area or the Civic Center complex.

It can be safely ascertained that once the baseball park is constructed and operational the pedestrian traffic to the baseball park can be adequately handled on the existing roadway sidewalks on all three corridors that are being analyzed for this project.

The only exceptions are on Missouri Avenue west of Santa Fe Street where a sidewalk will probably be reconstructed adjacent to the baseball park. The other location will be on Durango Street from San Antonio Avenue to Franklin Avenue the existing bridge structure will have to be rehabilitated and retrofitted with sidewalks at least 10' wide on both sides of the bridge deck to accommodate the pre-game and post game activity on the bridge.

The Missouri Avenue and Santa Fe Street corridor have sidewalks that are approximately 10' in width and are ADA accessible that would provide for an adequate walking surface to and from the baseball park.

10.0 Arrival and Departure Traffic –

The arrival and departure traffic that will be analyzed will be that traffic which will be generated by the baseball park events. That traffic is the 2,730 vehicle trips that were calculated in Section 8.0 of this report. The vehicle trips are assumed to be coming from throughout the El Paso area but are channelized into the three corridors that were selected for this project, those corridors being Missouri Avenue from Kansas Street to Santa Fe Street, Santa Fe Street from Paisano Drive to Yandell Drive, and Durango Street from San Antonio Avenue to Franklin Avenue.

There are several Arrival/Departure surveys that have been conducted around the country for baseball parks and travel distribution. Generally these studies have found that traffic arriving at baseball parks are typically done in a pattern over one to two hours and can involve a substantial numbers of "regular" spectators. Vehicle arrivals at three baseball parks in the country were studies in the paper *Get Me to the Ball Game on Time*, (Transportation Research Record 1735, Paper No. 00-0907). Contents of that study indicates that 70% of the vehicle arrivals occurs during the 60 minutes before the game starts and 64% of the arrivals would occur between 90 minutes and 30 minutes before the start of the event. The paper also indicates that for baseball parks the traffic design should provide enough exit capacity from the facility to dissipate spectators within 45 to 60 minutes after the end of the event.

For the El Paso Baseball Park a 60 minute time window will be used for the traffic design with that window starting at 6 PM and assuming all traffic will arrive during the 6PM to 7PM hour before the event and 60 minutes after the termination of the event, or 10PM.

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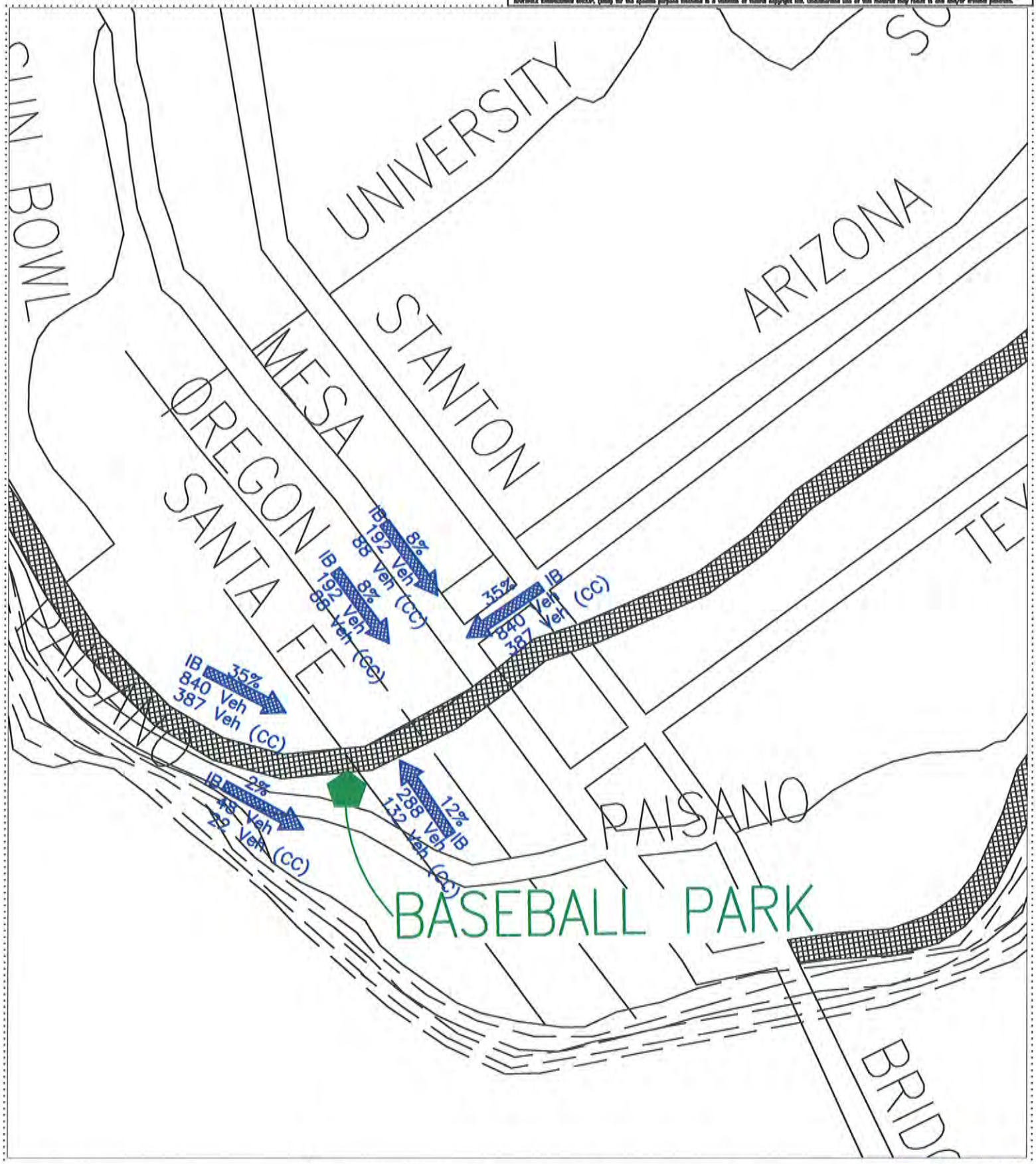

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ARRIVAL TRAFFIC SPLITS
BASEBALL TRAFFIC

"The Diamond"
Baseball Park Traffic Analysis
El Paso, Texas

Figure - 23

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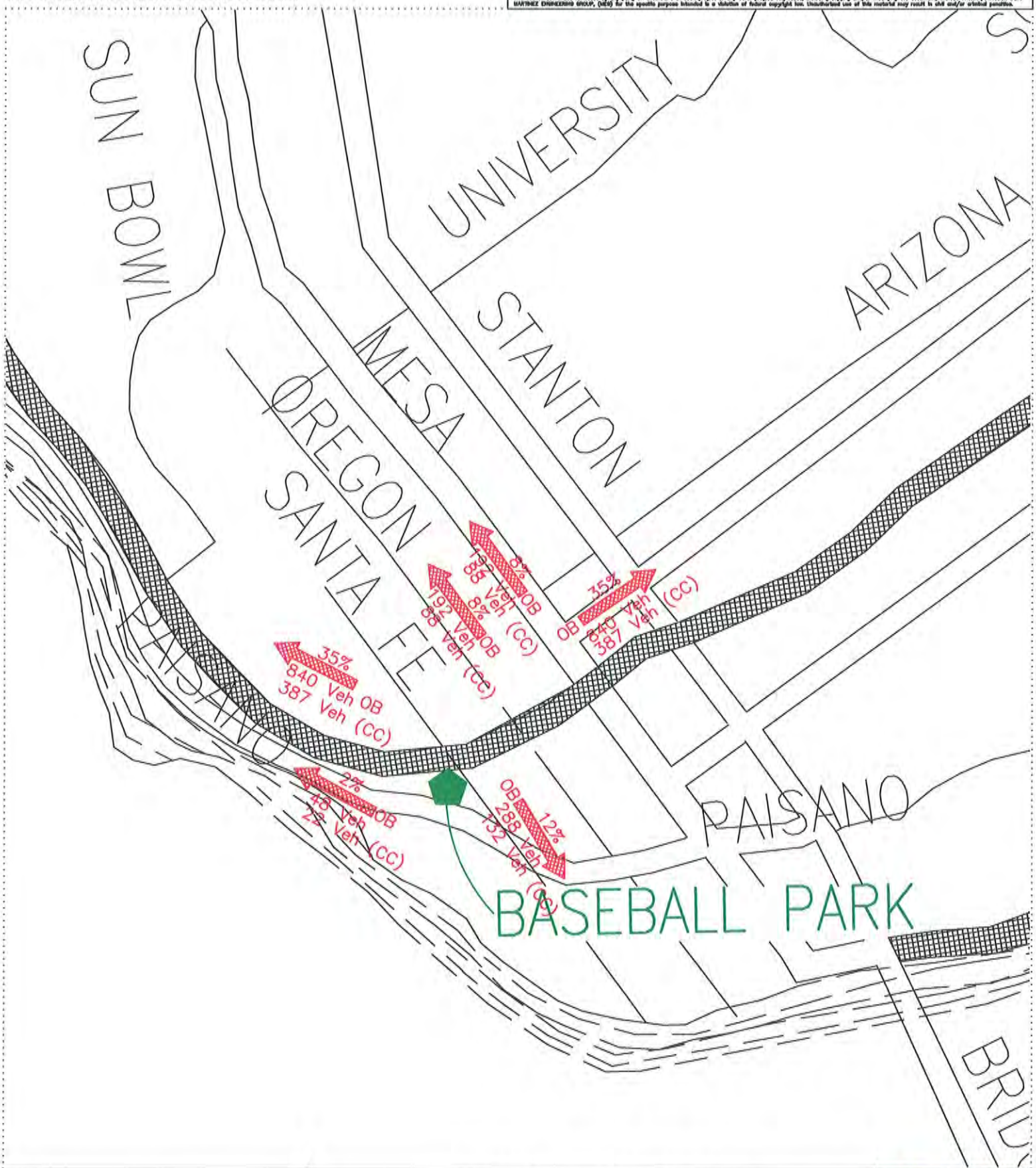

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DEPARTURE TRAFFIC SPLITS
BASEBALL TRAFFIC

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Baseball Park Traffic Analysis
El Paso, Texas

Figure - 24

Figure-23 shows the **Arrival Trips** distributed over the approaches of the three corridors that were considered for this project. These trips will be augmented onto the existing 6:00 PM to 7:00 PM hourly counts that were collected.

Figure-24 shows the **Departure Trips** distributed over the approaches of the same three corridors that were considered for this project. These trips will be stand alone trips outbound as there was no traffic counts collected for the 10PM to 11PM hour. However, in order to approximate a reliable capacity analysis the 9:00 PM to 10:00 PM traffic will be used as existing traffic to substitute for the 10PM departure traffic,

11.0 Existing Traffic –

But before that a baseline level of service and delay will be established by evaluating the existing 6:00 PM to 7:00 PM traffic. The inbound traffic volumes are shown on *Figure-20* thru 22 and included in *Appendix-B*. The results of the capacity analysis are summarized on *Table-F* below. The Synchro data sheets with the results in the table below are included as *Appendix-D.*

Table-F Existing Traffic Delay & LOS

Intersection	Intersection Delay	Inter. Level of Service
Missouri at Kansas	8.5	A
Missouri at Oregon	7.6	A
Santa Fe at Yandell	12.6	B
Santa Fe at Wyoming	8.6	A
Santa Fe at Missouri	27.3	C
Santa Fe at Franklin	10.5	B
Santa Fe at Main	3.3	A
Santa Fe at Sheldon	9.7	A
Santa Fe at San Antonio	11.5	B
Santa Fe at Paisano	34.9	C

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MISSOURI AVENUE
Existing Traffic Counts

"The Diamond"
Baseball Park Traffic Analysis
El Paso, Texas

Figure - 20

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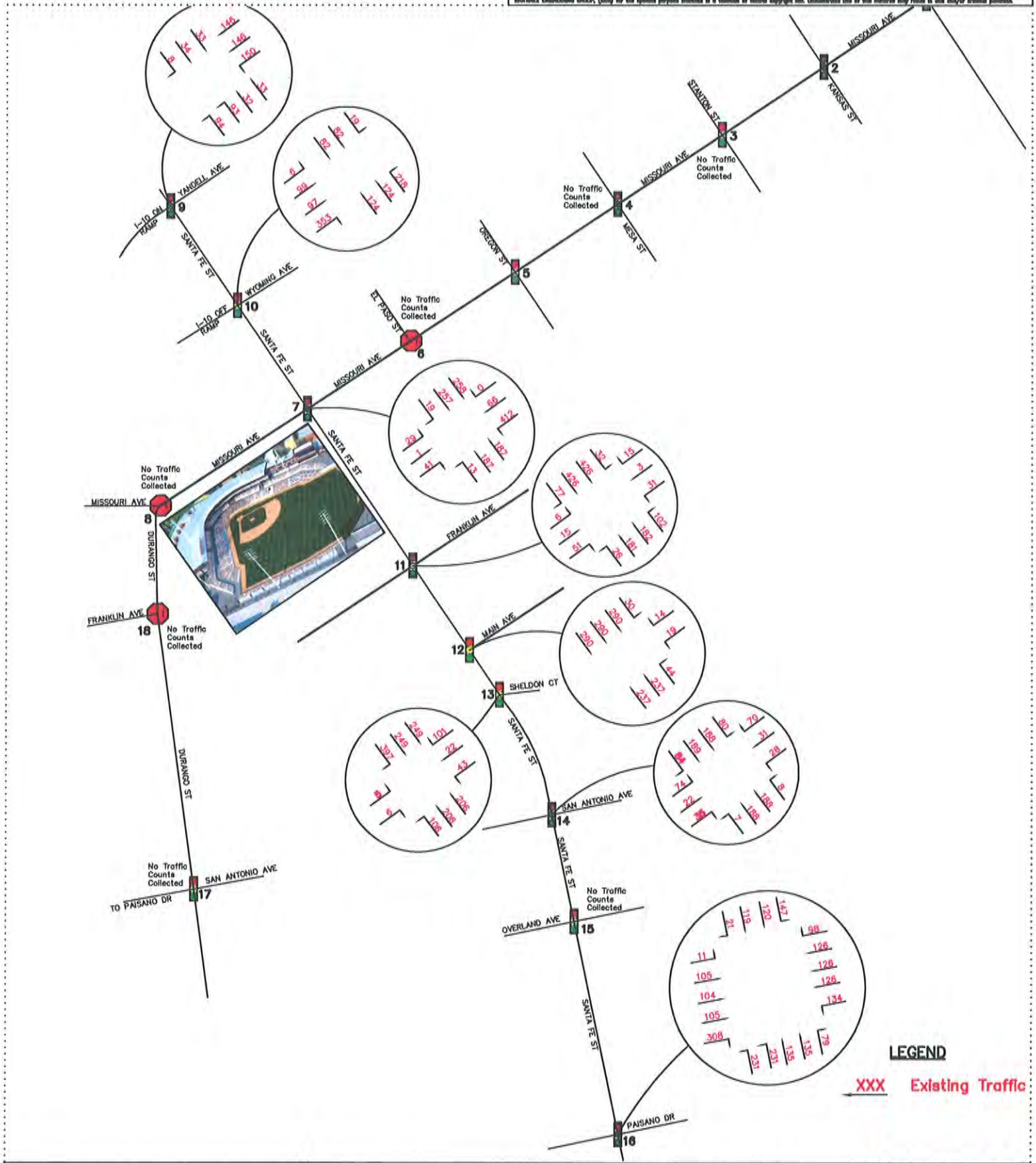

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SANTA FE STREET
Existing Traffic Counts

"The Diamond"
Baseball Park Traffic Analysis
El Paso, Texas

Figure - 21

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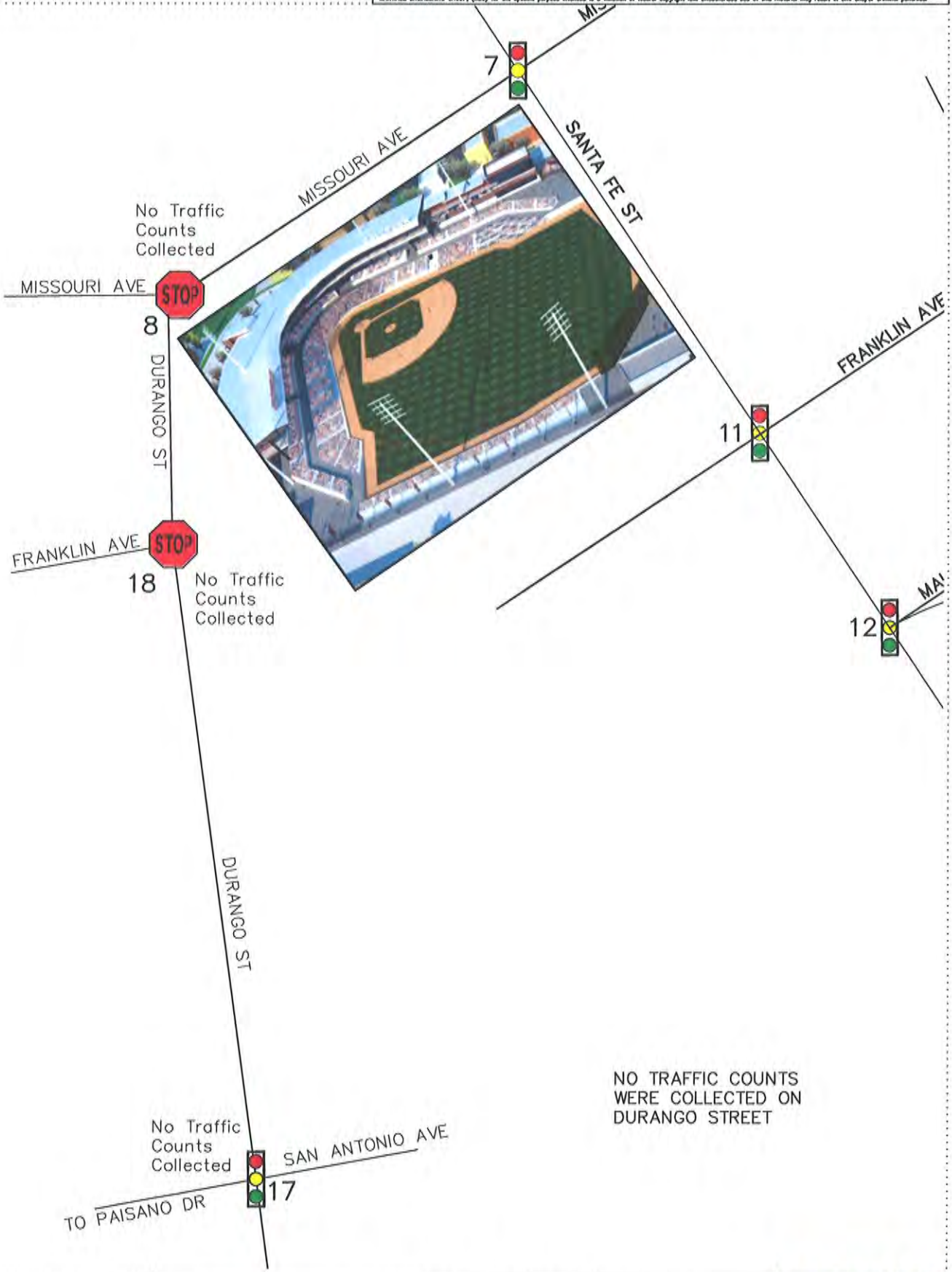

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DURANGO STREET
Existing Traffic Counts

"The Diamond"
Baseball Park Traffic Analysis
El Paso, Texas

Figure - 22

12.0 Baseball Generated Traffic –

The baseball generated traffic was derived as explained in *Section 8* of this report. Both the Arrival Trips and the Departure Trips were assigned onto the existing 6:00 PM to 7:00 PM traffic.

The generated inbound baseball traffic will be augmented onto the existing 6:00 PM to 7:00 PM traffic. This will permit an analysis of the combined existing traffic plus the baseball traffic on the corridors of Missouri Avenue and Santa Fe Street. The level of service and the delay being created by the existing traffic plus the baseball traffic will be analyzed. The inbound traffic volumes are shown on *Figure-25* thru *27. Figure-28* shows the outbound existing traffic plus baseball traffic on the Santa Fe corridor only as Missouri Avenue is a one way inbound street. The results are summarized on *Table-G* below. The Synchro data sheets with the results in the table below are included as *Appendix-E*

Table-G Inbound Existing Plus Baseball Traffic Delay & LOS

Intersection	Intersection Delay	Inter. Level of Service
Missouri at Kansas	21.2	C
Missouri at Oregon	34	C
Santa Fe at Yandell	13.1	B
Santa Fe at Wyoming	202.8	F
Santa Fe at Missouri	19.9	B
Santa Fe at Franklin	248	F
Santa Fe at Main	12.3	B
Santa Fe at Sheldon	10.9	B
Santa Fe at San Antonio	10.4	B
Santa Fe at Paisano	50.4	D

As expected, the amount of the eastbound right turn traffic on the Wyoming Avenue off-ramp from Interstate-10 and the southbound left turn at Franklin will theoretically cause excessive delay on that particular movement to cause the intersection level of service be less than desirable.

However, for the remainder of the Santa Fe Street and Missouri Avenue existing traffic plus the augmented baseball generated traffic the levels of service on those corridors is highly acceptable.

It is ascertained and understood that the combined existing traffic and the baseball generated traffic will not cause any undesirable effects on the street system except as previously mentioned on Wyoming Avenue.

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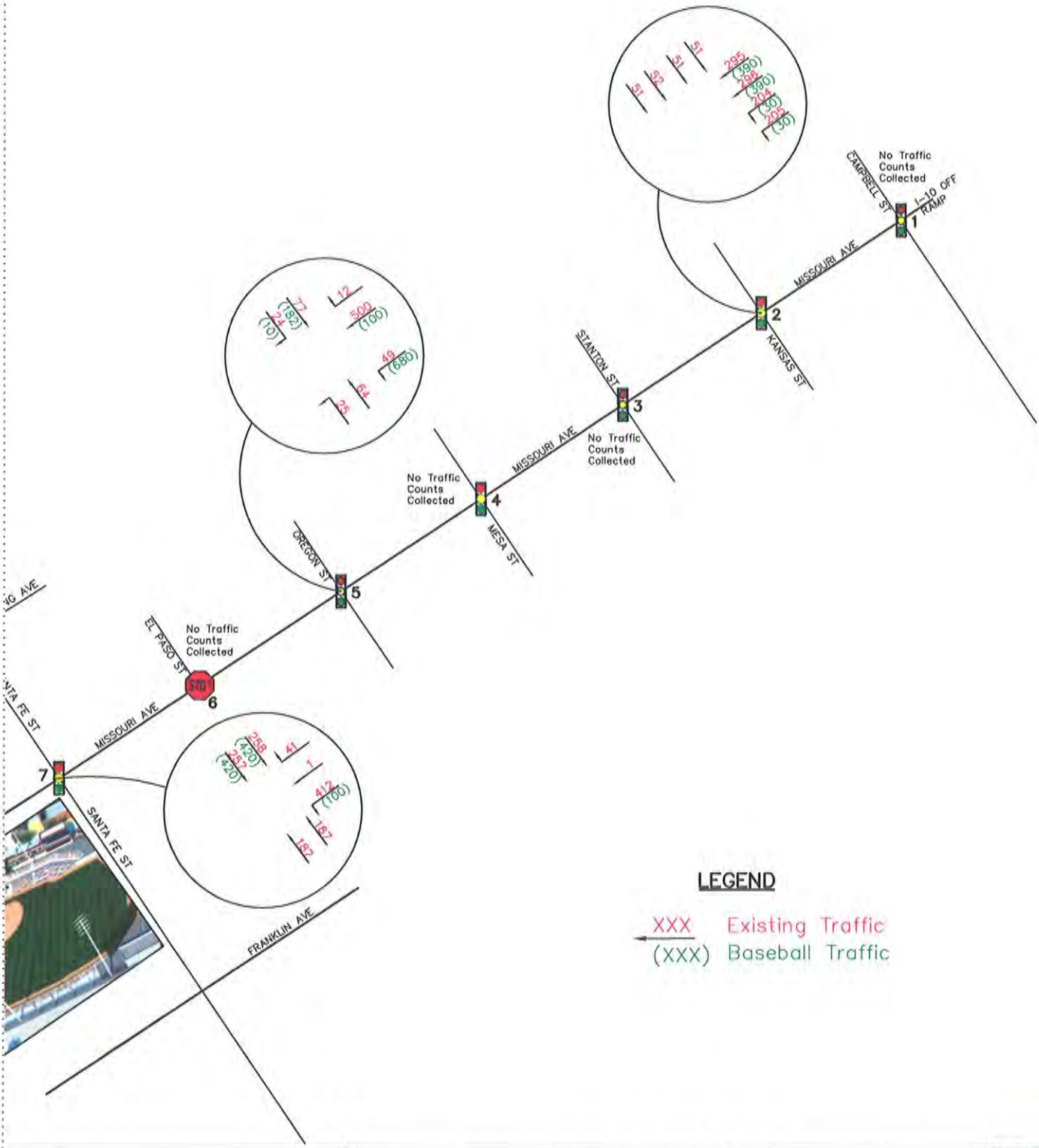

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MISSOURI AVENUE
Inbound Existing + Baseball Traffic

"The Diamond"
Baseball Park Traffic Analysis
El Paso, Texas

Figure - 25

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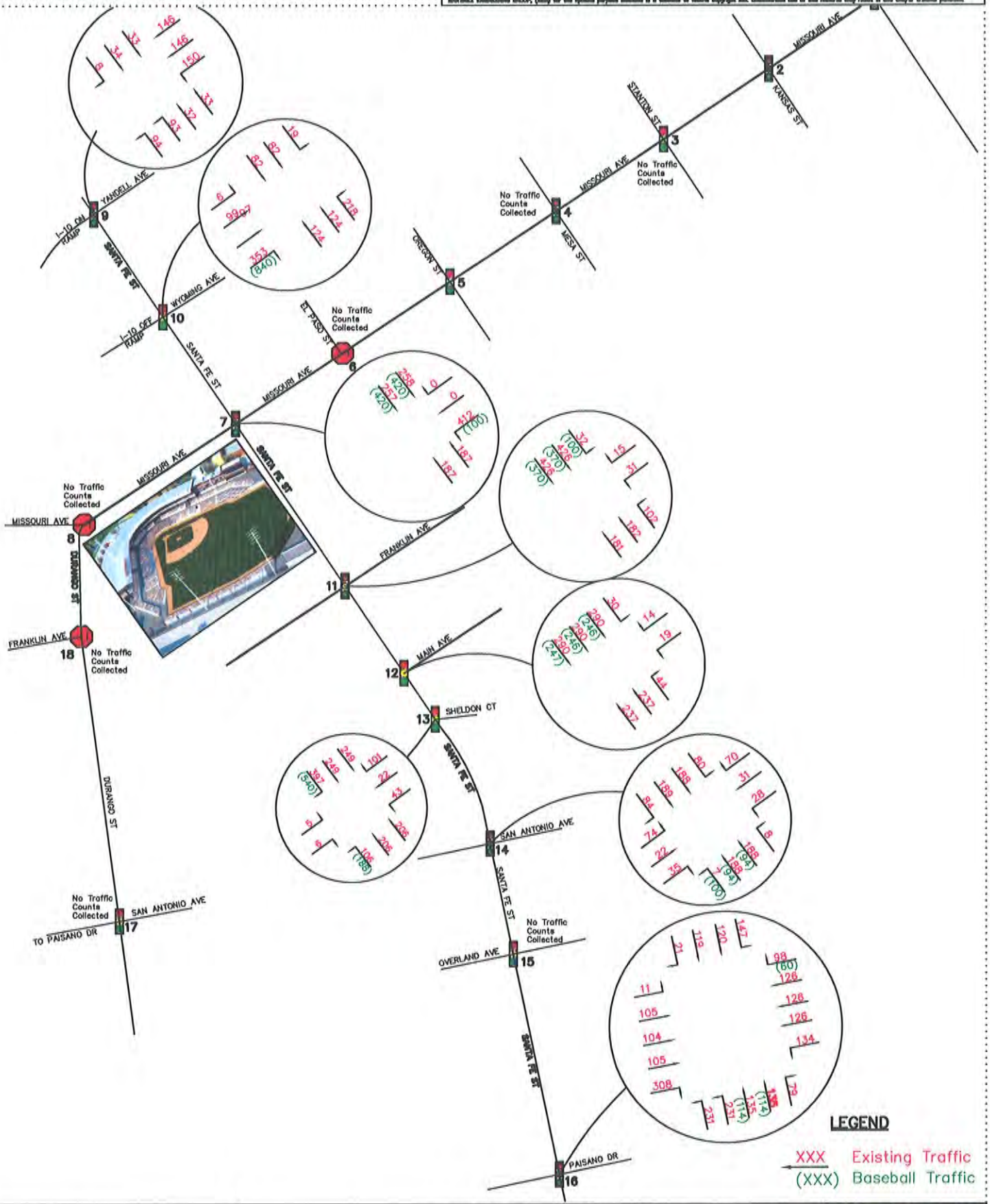

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SANTA FE STREET
Inbound Existing + Baseball Traffic

"The Diamond"
Baseball Park Traffic Analysis
El Paso, Texas

Figure - 26

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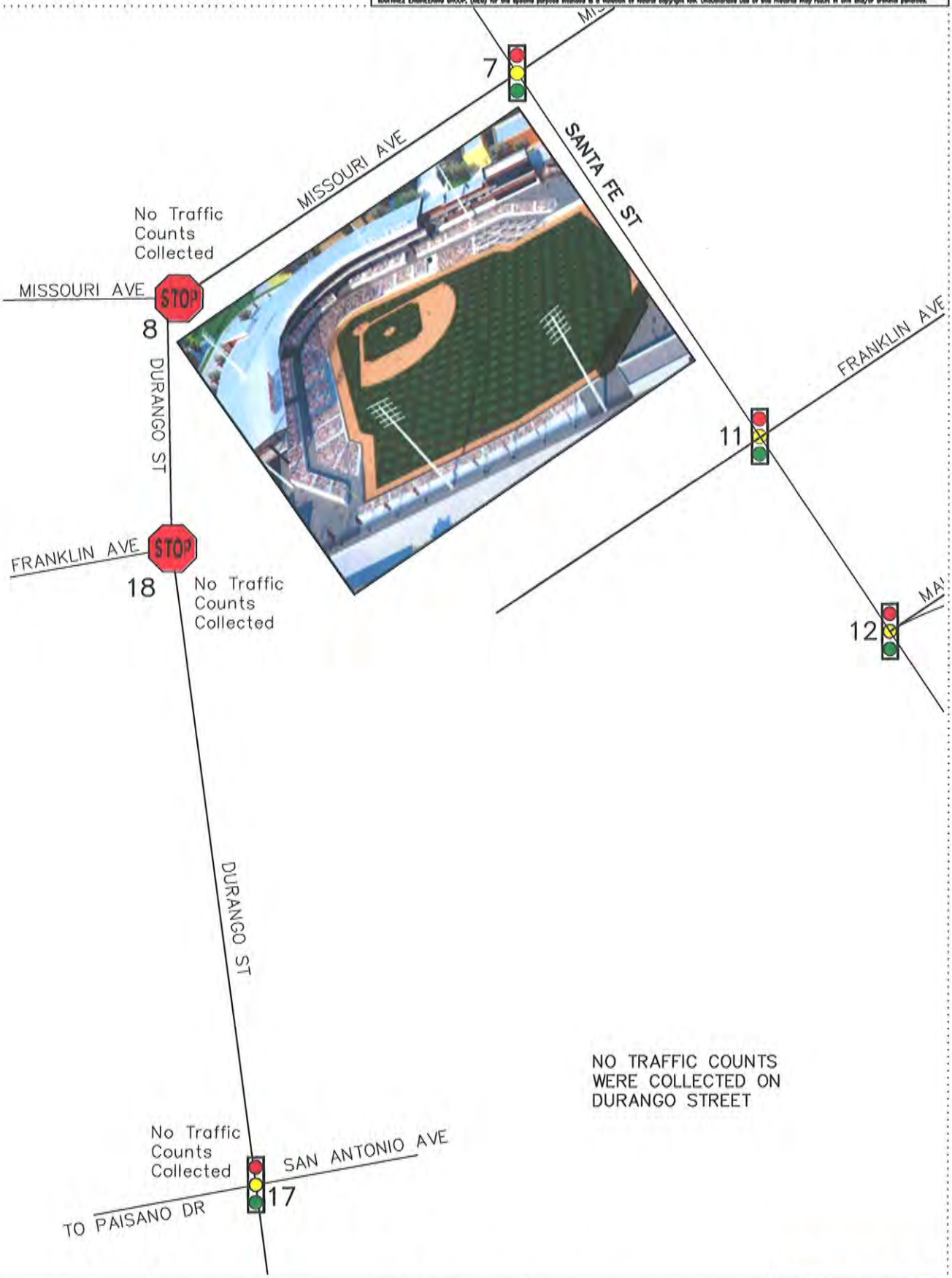

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DURANGO STREET
Inbound Existing + Baseball Traffic

"The Diamond"
Baseball Park Traffic Analysis
El Paso, Texas

Figure - 27

The baseball generated traffic was derived as explained in *Section 8* of this report. Both the Arrival Trips and the Departure Trips were assigned onto the existing 9:00 PM to 10:00 PM traffic.

The outbound existing plus baseball traffic will be analyzed for Santa Fe Street only because Missouri Avenue is a one-way inbound street. The outbound traffic volumes are shown on *Figure-28*. The results are summarized on *Table-H* below. The Synchro data sheets with the results in the table below are included as *Appendix-F*

Table-H Outbound Existing Plus Baseball Traffic Delay & LOS

Intersection	Intersection Delay	Inter. Level of Service
Santa Fe at Yandell	47.4	D
Santa Fe at Wyoming	18.9	B
Santa Fe at Missouri	17.6	B
Santa Fe at Franklin	31.7	C
Santa Fe at Main	22.9	C
Santa Fe at Sheldon	433.5	F
Santa Fe at San Antonio	14.4	B
Santa Fe at Paisano	21.6	C

As expected, the amount of the eastbound left turn and right turn traffic leaving the Civic Center parking garage will theoretically cause excessive delay on those particular movements to cause the intersection level of service be less than desirable. This level of service is expected as the parking garage has only right/left turn movements existing the garage.

The intersection of Santa Fe Street at Yandell Drive where arrival traffic will be reversing course to enter Interstate-10 as departing traffic the level of service, while not ideal, is a tolerable level of service.

However, for the remainder of the Santa Fe Street existing traffic plus the augmented baseball generated traffic the levels of service on this corridor is highly acceptable.

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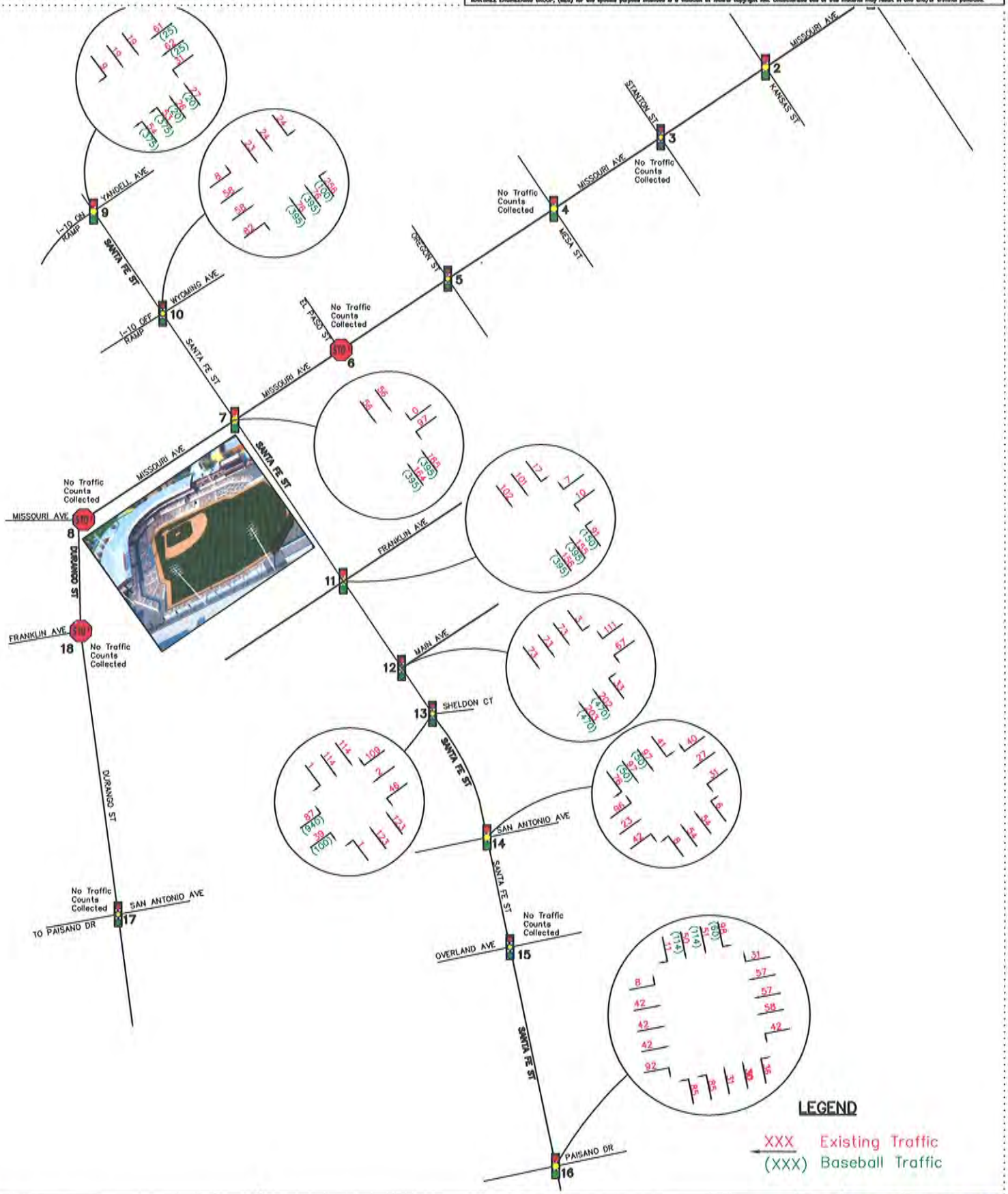

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SANTA FE STREET
Outbound Existing + Baseball Traffic

"The Diamond"
Baseball Park Traffic Analysis
El Paso, Texas

Figure - 28

13.0 Civic Center Complex Generated Traffic –

There has to be consideration given to the generated traffic that is generated by the Civic Center Complex. The Civic Center Complex to be considered consists of the Convention Center, the Abraham Chavez Theatre, and the Plaza Theatre.

A same day event that coincides with a baseball game will be considered as a scenario that has a significant probability of occurring.

There presently does not exist a trip generation table to calculate the trips for the Civic Center Complex. There is a table for an Arena however, it is recommended that further research needed sine there is only one independent variable.

Internet research identified similar issues that are currently being studied for the El Paso project.

"TRIP GENERATION[7]

The trip generation rate for the proposed development are based upon data published by the Institute of Transportation Engineers (ITE), Urban Land Institute (ULI) and other available data for the proposed land uses."

"Arena Trip Generation

The published data in the *Trip Generation* manual for arenas (ITE land Use Code 460) is based upon a single site surveyed in California in 1970. The data is limited to the number of trips generated over the course of an average weekday. Because the data is based upon a single study completed more than four decades ago. TPD determined this information was not a reliable indicator of the traffic that will be generated by the proposed arena.

Therefore, TPD researched applicable data for stadiums, arenas, and concerts. The Table below summarizes the occupancy rate (persons per car) for vehicles arriving at arenas or similar facilities:

[7] Allentown Arena & Mixed Use Development, Traffic Planning Design, Inc., May 2011

VEHICLE OCCUPANCY DATA

Data Source	Vehicle Occupancy Rate
1994 ITE Report on Stadia and Arenas	3.0 to 3.5
ULI Shared Parking Manual (P.62) – Arena (Concerts)	2.0
ULI Shared Parking Manual (P.63) – Arena Public Parking	3.0
ULI Shared Parking Manual (P.69) – Stadium (Football Game)	3.3
ITE Discussion Group – 2003 San Antonio Amphitheatre Study (9,000 attendees)	2.60-2.75
Average	**2.78 to 2.91**

Close Quote "

For the El Paso Study the Vehicle Occupancy Rate of 3 will be used as the default value for the generated trips for the Civic Center Complex.

The historical data provided by the El Paso Convention & Visitors Bureau shows the attendance for all events in the Civic Center Complex (Convention Center, Abraham Chavez Theatre, and the Plaza Theatre) The data provides enough information to be able to ascertain the highest monthly ticketed attendance.

Civic Center Historical Monthly Ticketed Attendance

Month	Highest Mon Equivalent Avg Ticketed Attendees
Sept-2011	3,045
Oct-2011	1,194
Nov-2011	2,117
Dec-2011	4,070
Jan-2012	2,025
Feb-2012	3,987
Mar-2012	6,045
Apr-2012	2,022
May-2012	2,999
Jun-2012	8,489
Jul-2012	1,604
Aug-2012	2,195
Average Ticketed Attendees	39,792 Attendees ÷ 12 Months = **3,316**

After analyzing the data over a 12 running month period from September 2011 to August 2012 the highest average ticked attendance for an equivalent single event averaged over 12 months is 3,316 ticketed attendees per event.

So therefore, the traffic generated by an average event occurring simultaneously with a base ball game will be:

3,316 attendees/3 passengers per vehicle = 1105 trips generated trips by the Civic Center Complex.

This traffic will be distributed over the same Arrival and Departure Trips as the baseball traffic trips.

These trips are shown on *Figure-29* thru *31* will be augmented onto the Existing Traffic + Baseball Traffic + Civic Center Complex traffic.

The generated inbound civic center complex traffic will be augmented onto the existing 6:00 PM to 7:00 PM traffic and the baseball traffic. This will permit an analysis of the combined existing traffic plus the baseball traffic plus the civic center traffic on the corridors on Missouri Avenue and Santa Fe Street. The level of service and the delay being created by the existing traffic plus the baseball traffic will be analyzed. The inbound traffic volumes are shown on *Figure-29* thru *31*. The results are summarized on *Table-I* below. The Synchro data sheets with the results in the table below are included as *Appendix-G*

Table-I Inbound Existing Plus Baseball Plus Civic Center Traffic Delay & LOS

Intersection	Delay	Level of Service
Missouri at Kansas	86.9	F
Missouri at Oregon	123.7	F
Santa Fe at Yandell	12.1	B
Santa Fe at Wyoming	467.4	F
Santa Fe at Missouri	48.5	D
Santa Fe at Franklin	103.6	F
Santa Fe at Main	78.6	E
Santa Fe at Sheldon	11.4	B
Santa Fe at San Antonio	11.0	B
Santa Fe at Paisano	68.6	E

Table-I clearly shows that the existing traffic plus the baseball generated traffic plus the civic center complex generated traffic will cause a severe congestion problem on both the Missouri Avenue corridor and the Santa Fe Street corridor. This primarily occurs because the analysis assumes that all events have the same performance starting time of 7:00 PM and all the generated traffic is attempting to arrive at the central point (the Civic Center Parking Garage) at the same time.

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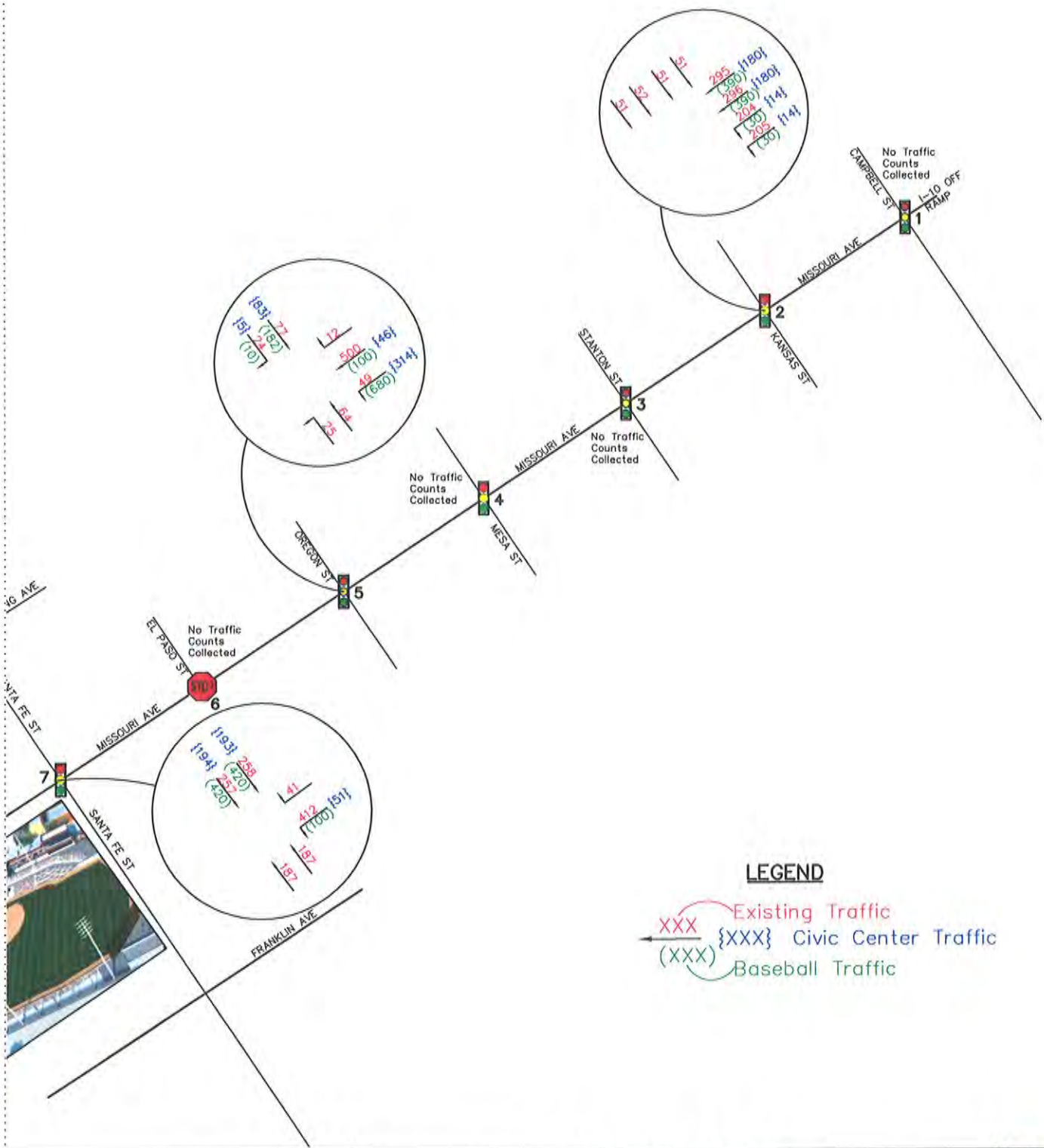

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MISSOURI AVENUE
Inbound Existing + Baseball + Civic Center Traffic

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Figure - 29

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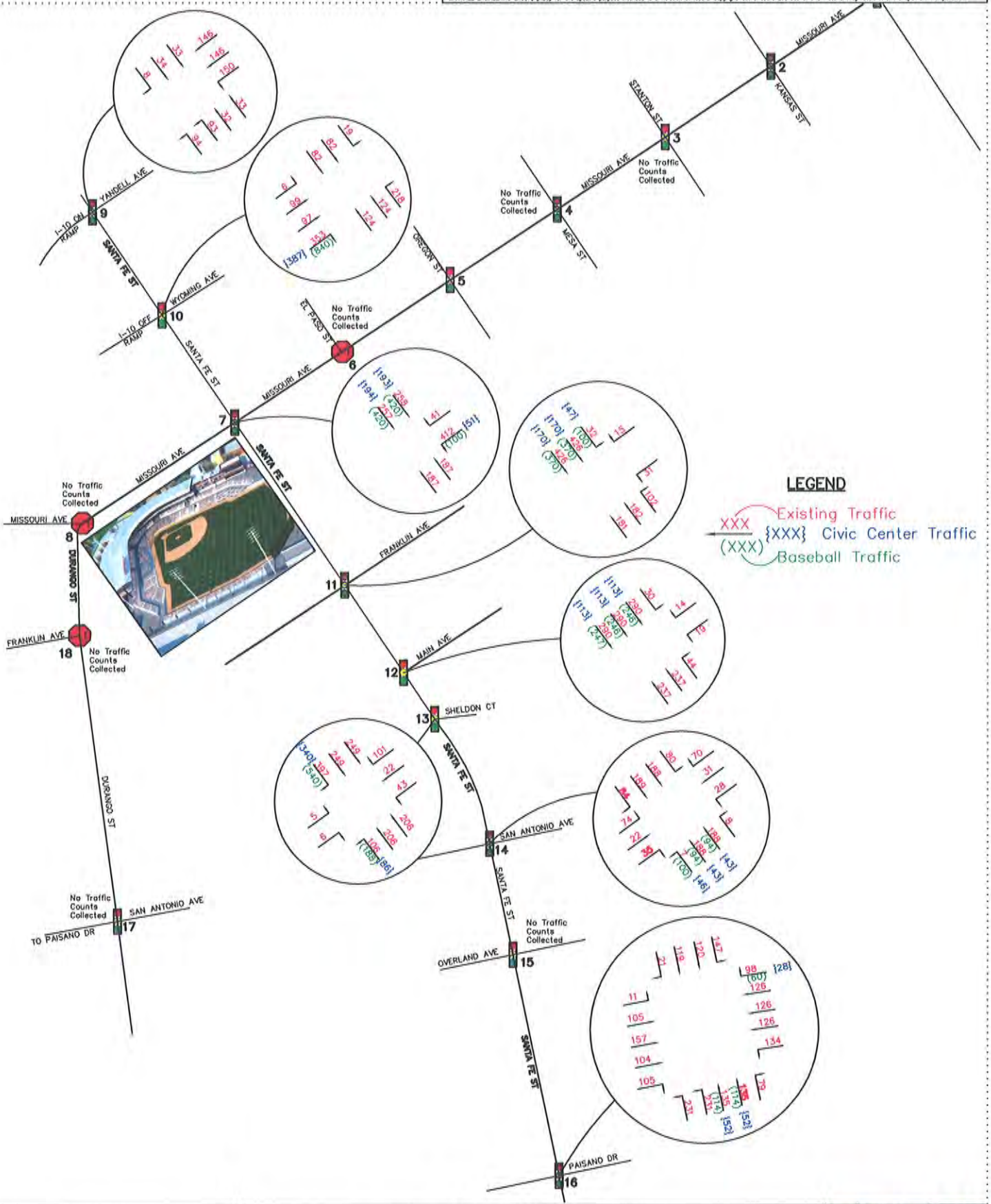

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SANTA FE STREET
Inbound Existing + Baseball + Civic Center Traffic

"The Diamond"
Baseball Park Traffic Analysis
El Paso, Texas

Figure - 30

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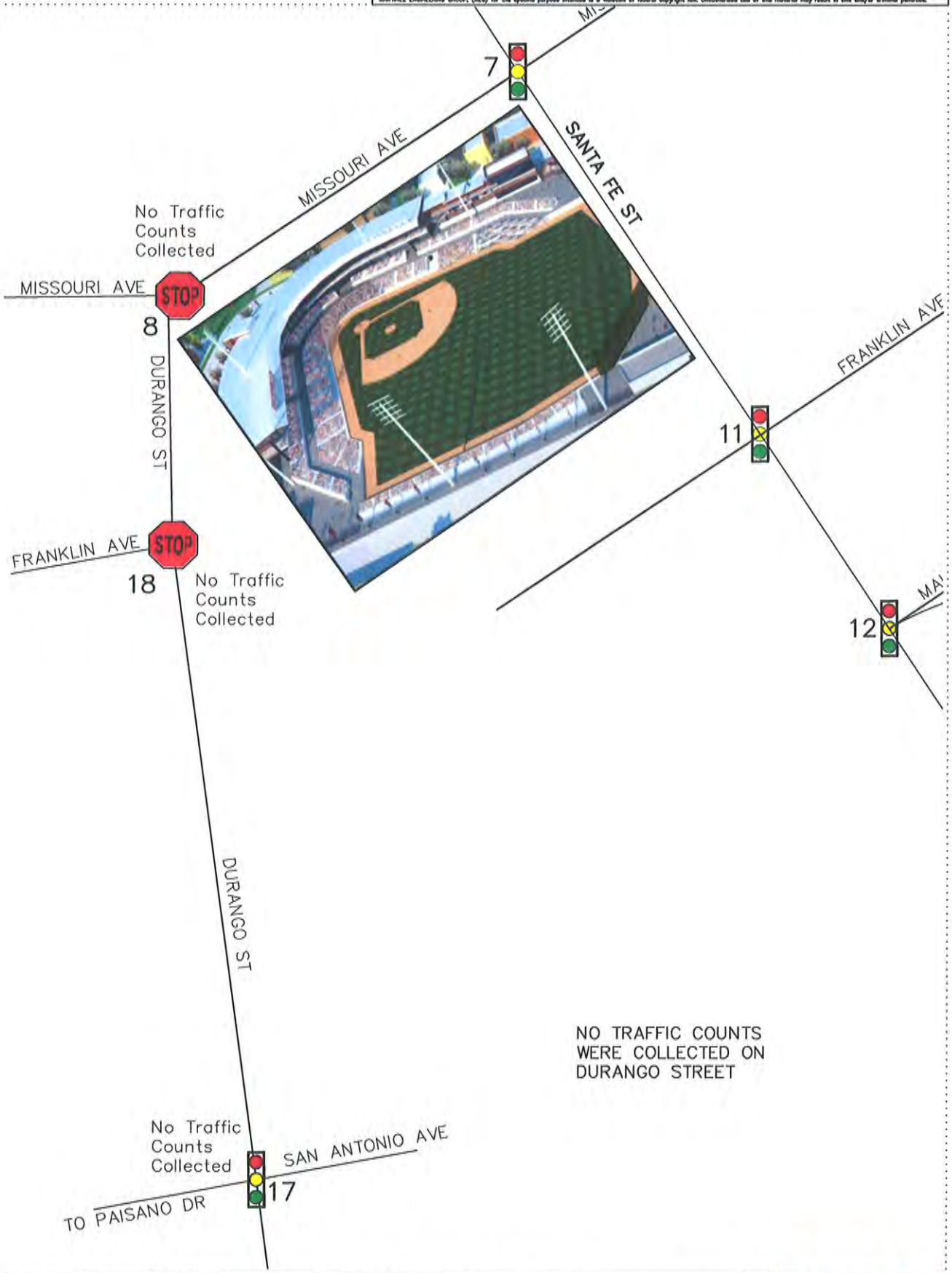

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DURANGO STREET
Inbound Existing + Baseball + Civic Center Traffic

"The Diamond"
Baseball Park Traffic Analysis
El Paso, Texas

Figure - 31

The outbound existing plus baseball traffic plus Civic Center Complex traffic will be analyzed for Santa Fe Street only because Missouri Avenue is a one-way inbound street. The outbound traffic volumes are shown on *Figure-32*. The results are summarized on *Table-J* below. The Synchro data sheets with the results in the table below are included as *Appendix-H*

Table-J Outbound Existing Plus Baseball Plus Civic Center Traffic Delay & LOS

Intersection	Delay	Level of Service
Santa Fe at Yandell	187.1	F
Santa Fe at Wyoming	81.1	F
Santa Fe at Missouri	20.1	C
Santa Fe at Franklin	355	F
Santa Fe at Main	80.7	F
Santa Fe at Sheldon	875.9	F
Santa Fe at San Antonio	15.6	B
Santa Fe at Paisano	24.0	C

Table-J clearly shows that the existing traffic plus the baseball generated traffic plus the civic center complex generated traffic will cause a severe congestion problem on the Santa Fe Street corridor. This primarily occurs because the analysis assumes that all events have the same performance ending time of 10:00 PM and all the generated traffic is attempting to depart the central point (the Civic Center Parking Garage) at the same time.

14.0 Level of Service Comparisons –

In summary *Table-K* below depicts the levels of service through three analysis considerations. Where the results of each analysis, for each event, can be clearly evaluated.

Table-K Inbound Traffic LOS Comparison

Intersection	Existing LOS	Extg + BB LOS	Extg+BB+CC LOS
Missouri at Kansas	A	C	F
Missouri at Oregon	A	C	F
Santa Fe at Yandell	B	B	B
Santa Fe at Wyoming	A	F	F
Santa Fe at Missouri	C	C	D
Santa Fe at Franklin	B	D	F
Santa Fe at Main	A	B	E
Santa Fe at Sheldon	A	B	B
Santa Fe at San Antonio	B	B	B
Santa Fe at Paisano	C	D	E

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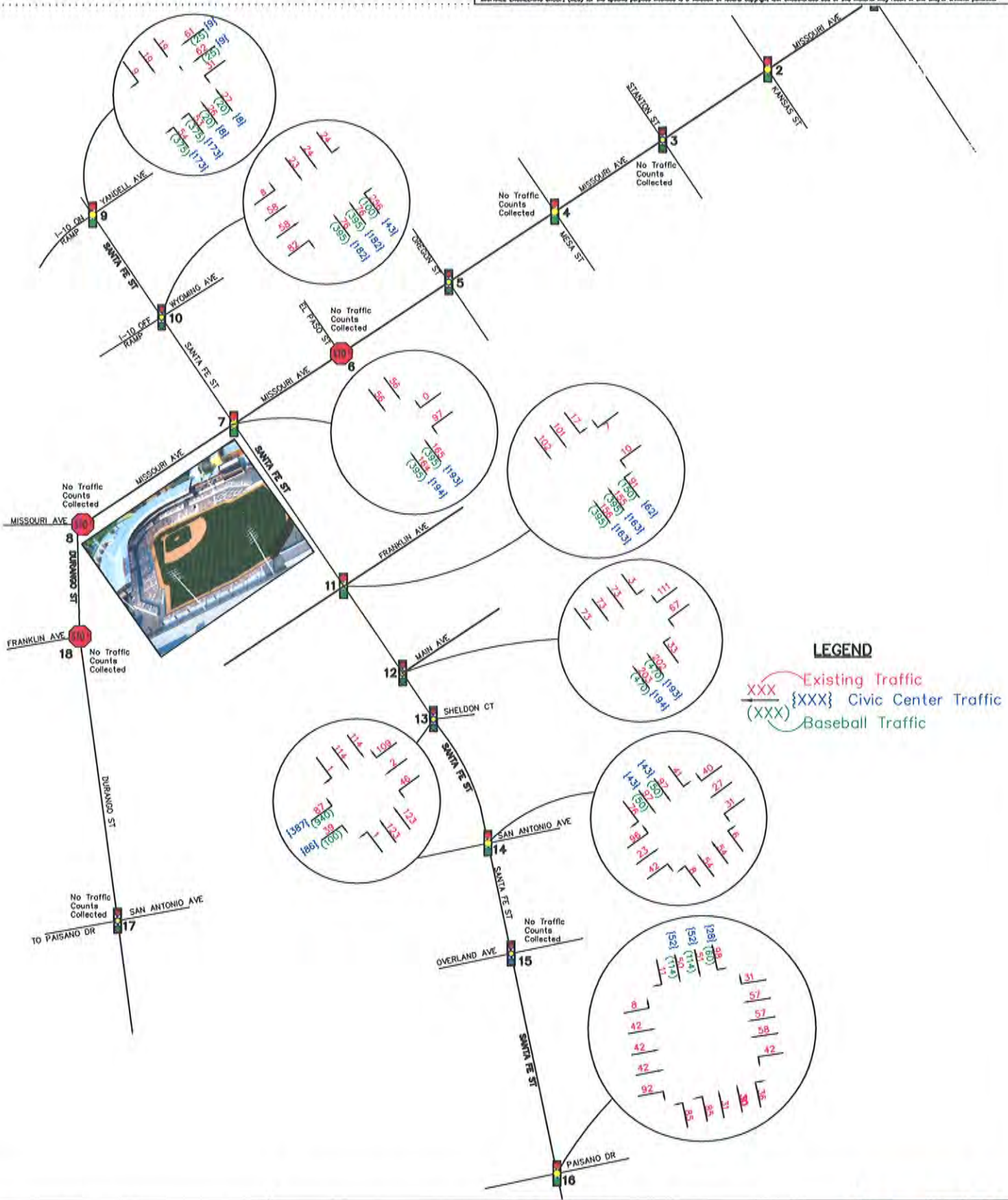

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SANTA FE STREET
Outbound Existing + Baseball + Civic Center Traffic

"The Diamond"
Baseball Park Traffic Analysis
El Paso, Texas

Figure - 32

In summary *Table-L* below depicts the levels of service through two analysis considerations for the outbound traffic assuming the central point being the Civic Center Parking Garage. Where the results of each analysis, for each event, can be clearly evaluated.

Table-L Outbound Traffic LOS Comparison

Intersection	Extg + BB LOS	Extg+BB+CC LOS
Santa Fe at Yandell	D	F
Santa Fe at Wyoming	B	F
Santa Fe at Missouri	B	C
Santa Fe at Franklin	C	F
Santa Fe at Main	C	F
Santa Fe at Sheldon	F	F
Santa Fe at San Antonio	B	B
Santa Fe at Paisano	C	C

Conclusions –

After the numerous figures, tables, appendices and analyses it can be clearly ascertained that the existing traffic flows and operates at a highly desirable level of service. These ideal conditions and levels of service will always be there even after consideration for the approval and implementation of the *Stevens Replat-A*. These ideal conditions will further improve when the existing City Hall client and employee traffic is removed from the existing traffic at the hour from 6:00 PM to 7:00PM.

The consideration of approving the *Stevens Replat-A* to allow for the construction of a baseball park and the traffic generated by this type of facility will not significantly or negatively impact the street corridors of Missouri Avenue and Santa Fe Street as can clearly be observed by the tabulated analysis shown on *Table-G.* Again, it is reaffirmed that traffic conditions will further improve when the existing City Hall client and employee traffic is removed from the existing traffic at the hour from 6:00 PM to 7:00PM.

When simultaneous baseball events and Civic Center Complex events are held with the same start time of 7:00 PM the traffic conditions will certainly cause a very undesirable levels of service on the street corridors that were analyzed for this report. This is evidenced by the analyses reported and tabulated on *Tables-I* and *J*. However, there are co-operative measures that will improve the traffic issues, such as staggering start times for events, redirecting traffic to lesser used corridors, encouragement for the use of transit or private conveyance (taxis) from transit stations or entertainment districts. This condition will occur for approximately 1 hour, that hour being the 6:00 PM to 7:00 PM of simultaneous events, a baseball game and a Civic Center Complex event, being held.

15.0 Recommendations –

Along with the recommendations that were made a part of Phase-I of this report and enumerated in *Section-7* of this report the following recommendations are submitted for consideration to improve or ameliorate traffic related concerns.

- Make full use of the variable message signs (vms) on Intersate-10 to direct traffic to other optional exits to circulate traffic to baseball events or simultaneous occurring events,

- COEP should consider planning and funding for roadside vms to direct traffic circulation for arriving and departing traffic on downtown streets,

- COEP should seriously consider making El Paso Street a ***two-way*** street from Paisano Drive to Sheldon Way to facilitate parking and circulation to the baseball park.

- COEP should consider free on-street parking 3/8 to1/2 mile from the Baseball park and Civic Center Complex to encourage walking to the events,

- COEP should consider parking prohibition on certain streets, closure of streets, and the use of turn restrictions,

- COEP should consider the use police or code enforcement officers for traffic control at signalized intersections, and intersections where turning movements will be numerous, as well as use of traffic cones or barricades to guide pedestrians and traffic flow,

- Encourage the use of *fee based* transit from transit terminals similar to what is done for the UTEP football and Sun Bowl Game,

- On Durango Street provide *free* "up-hill" or parking lots, from parking lots 1/2 mile away, trolley service to the baseball park or Civic Center Complex,

- After the initial events the COEP should seriously consider re-counting the entire CBD area for 7 continuous days which would permit the COEP to develop arriving and departing special signal timing plans to aid in the efficient movement of traffic as well as allow the recalibration of the City's traffic signal model.

Appendix-A

Nov 19,2012 5:12pm MEG
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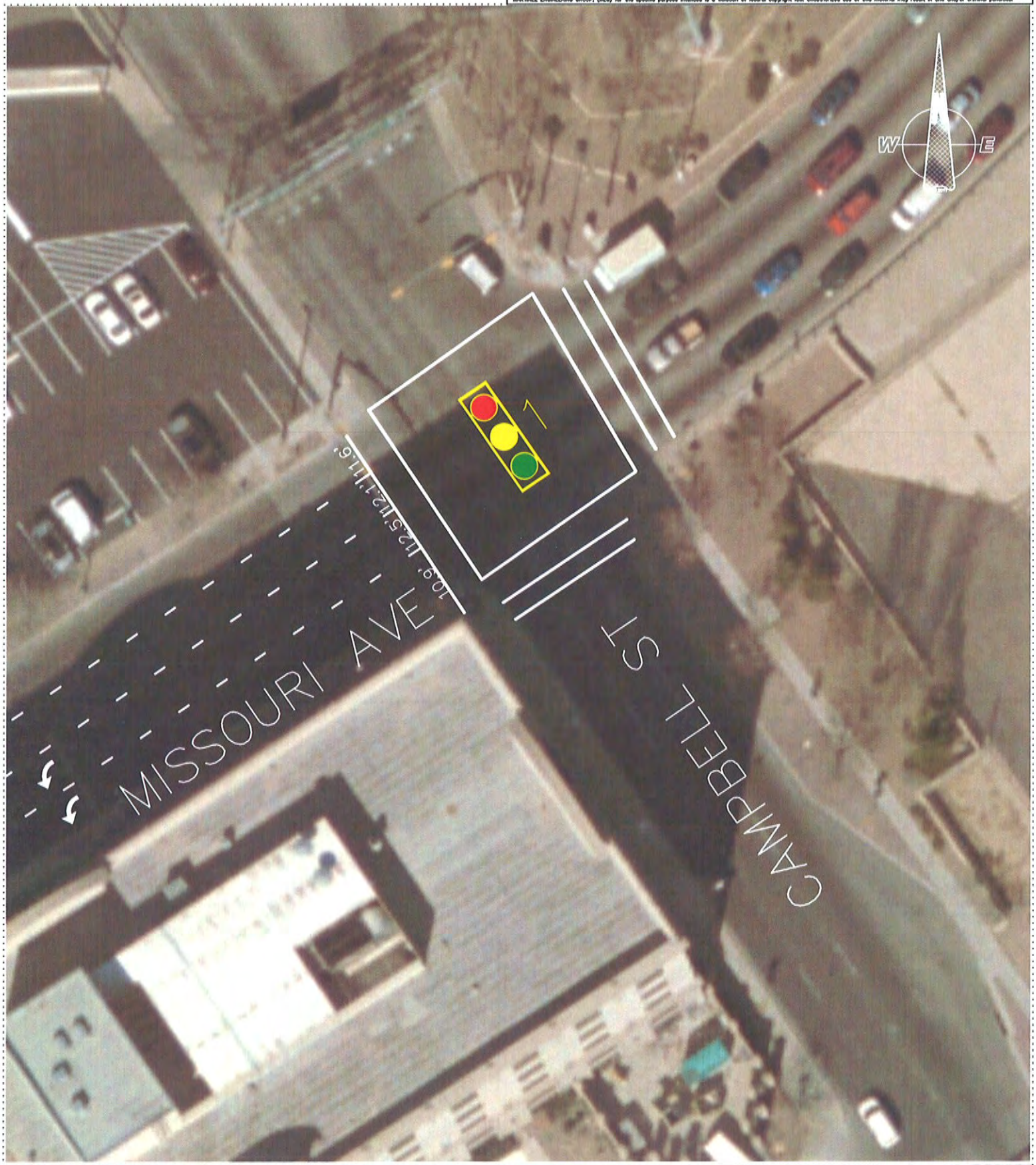

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El Paso, Texas

Figure - 2

Nov 19,2012 8:12am MEG
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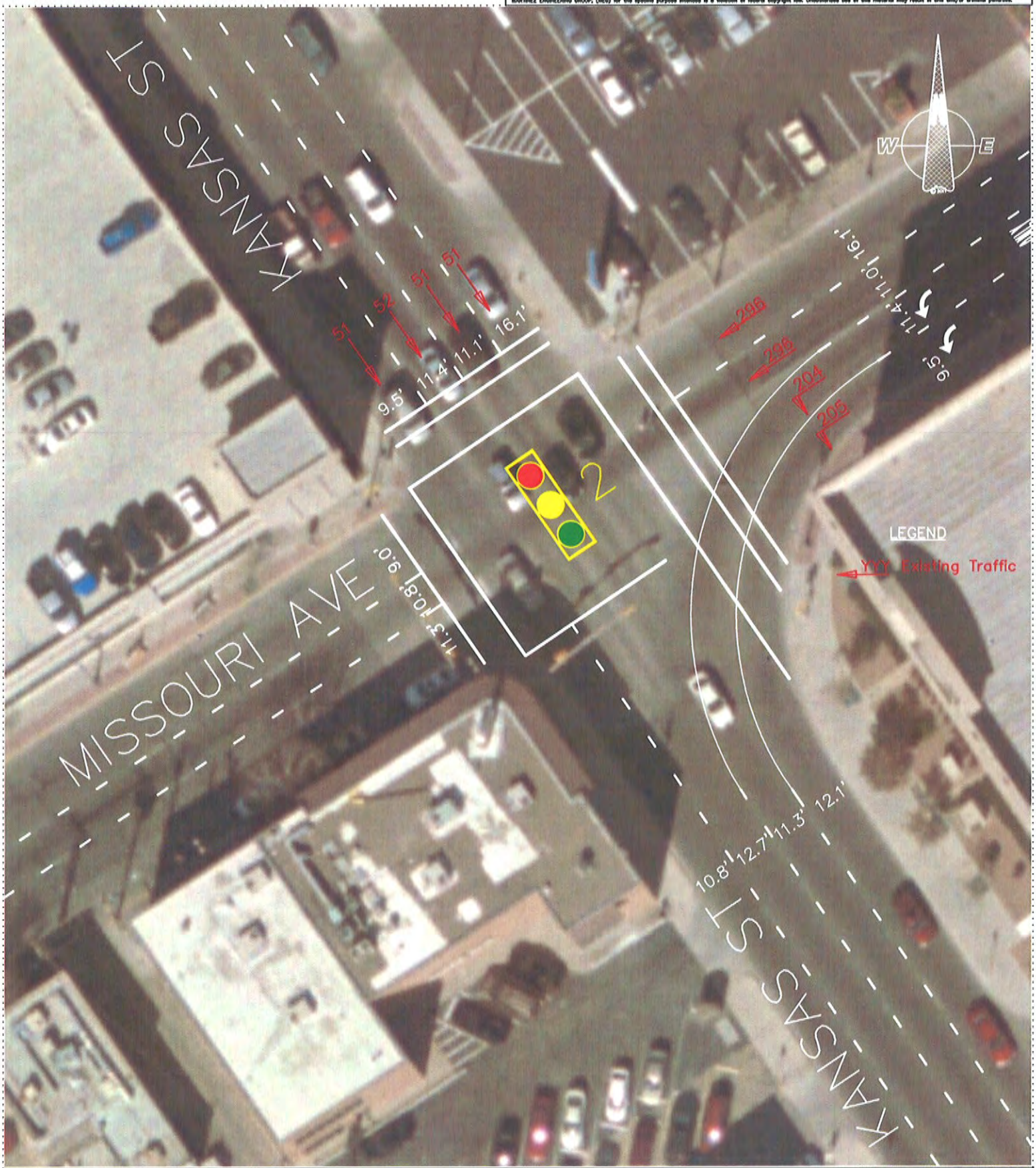

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Figure - 3

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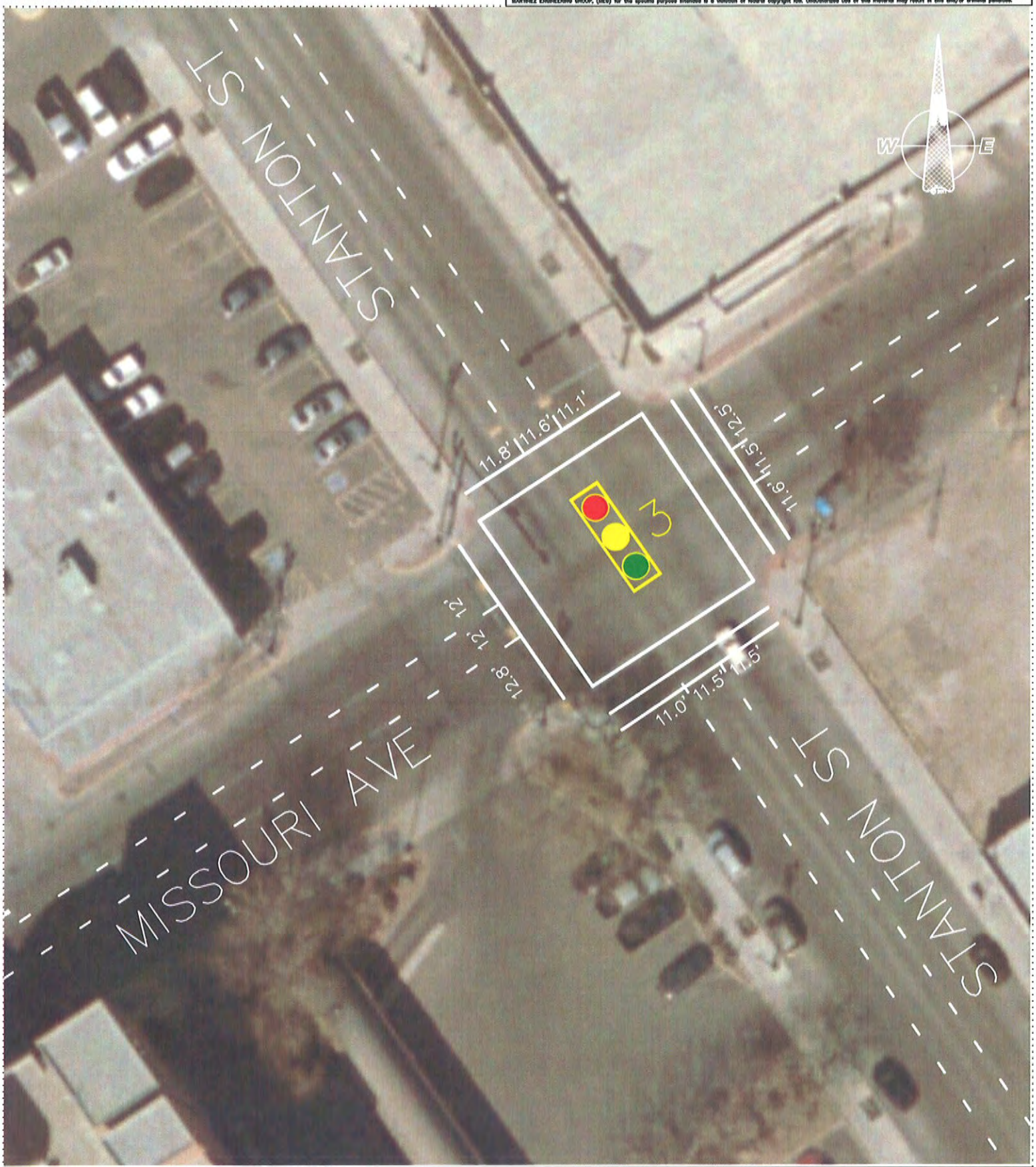

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Figure - 4

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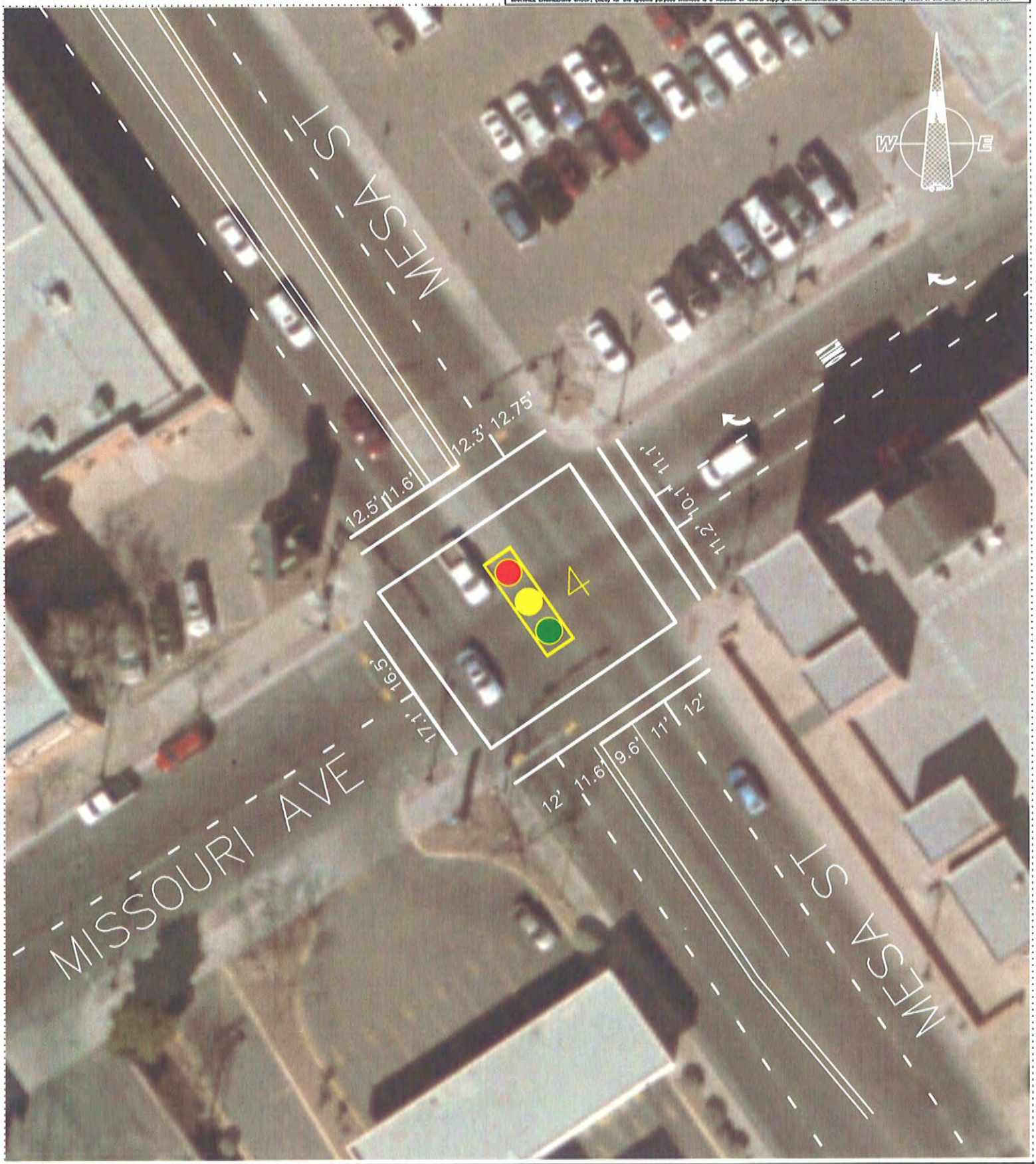

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Figure - 5

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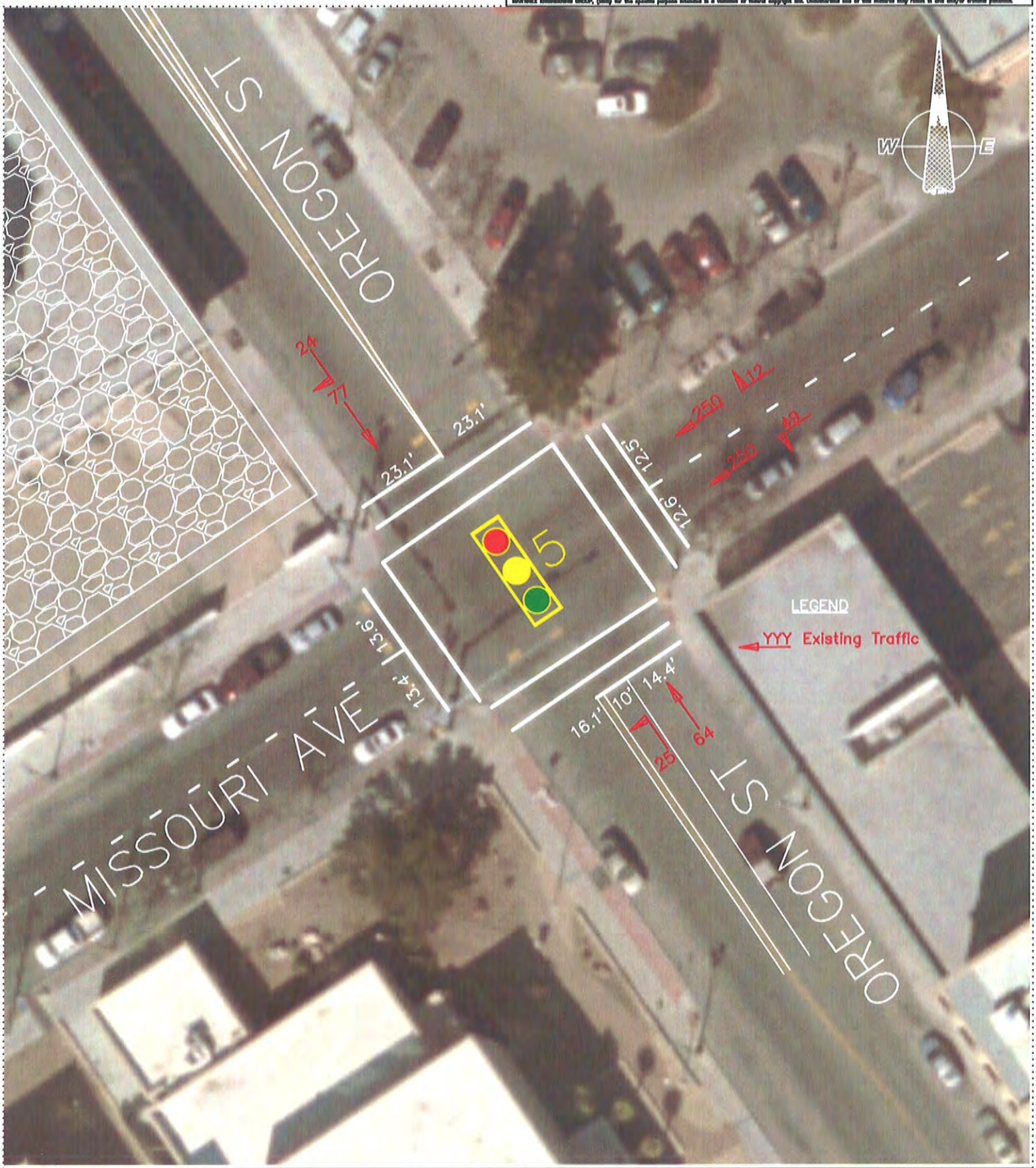

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Figure - 6

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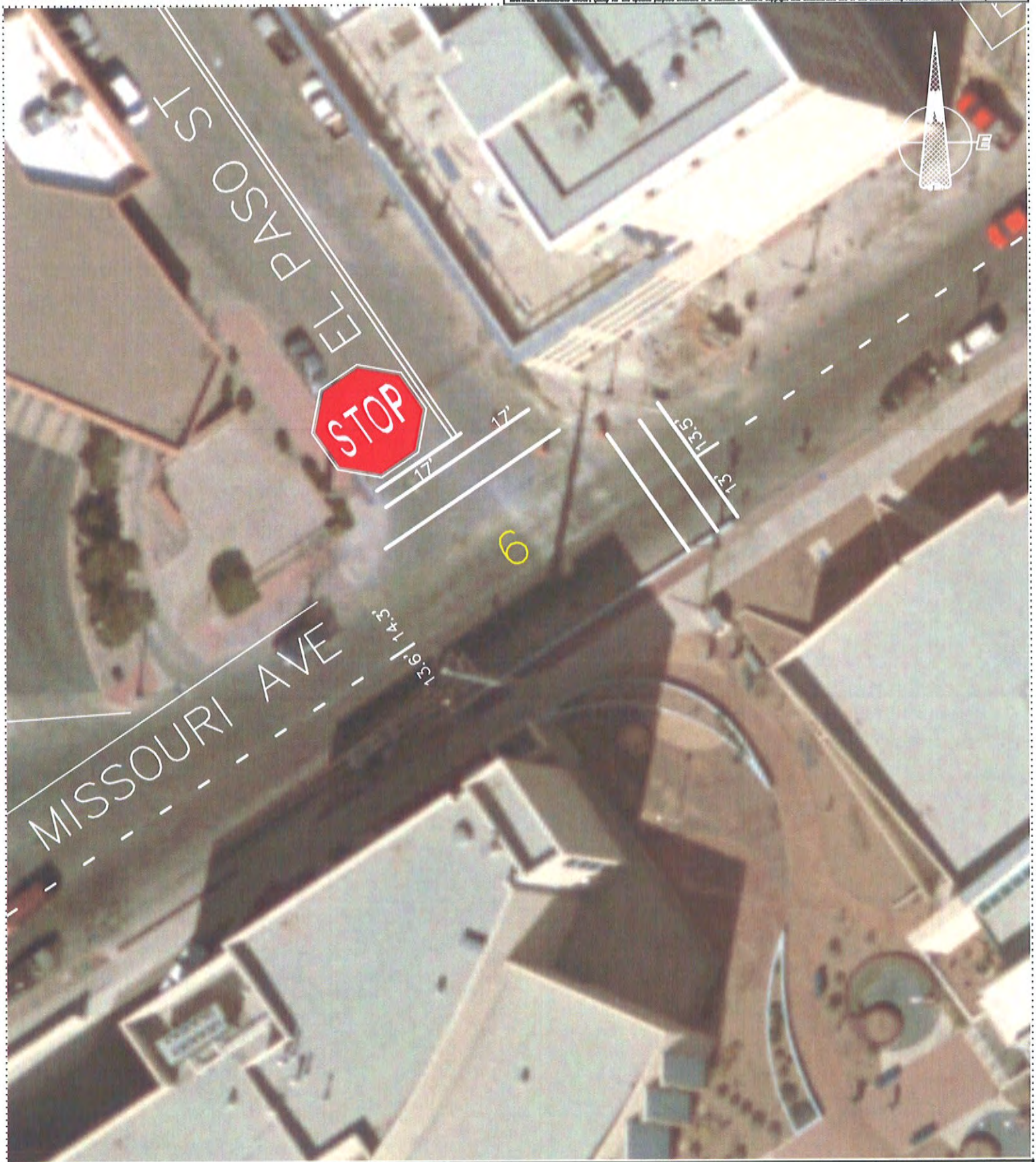

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Figure - 7

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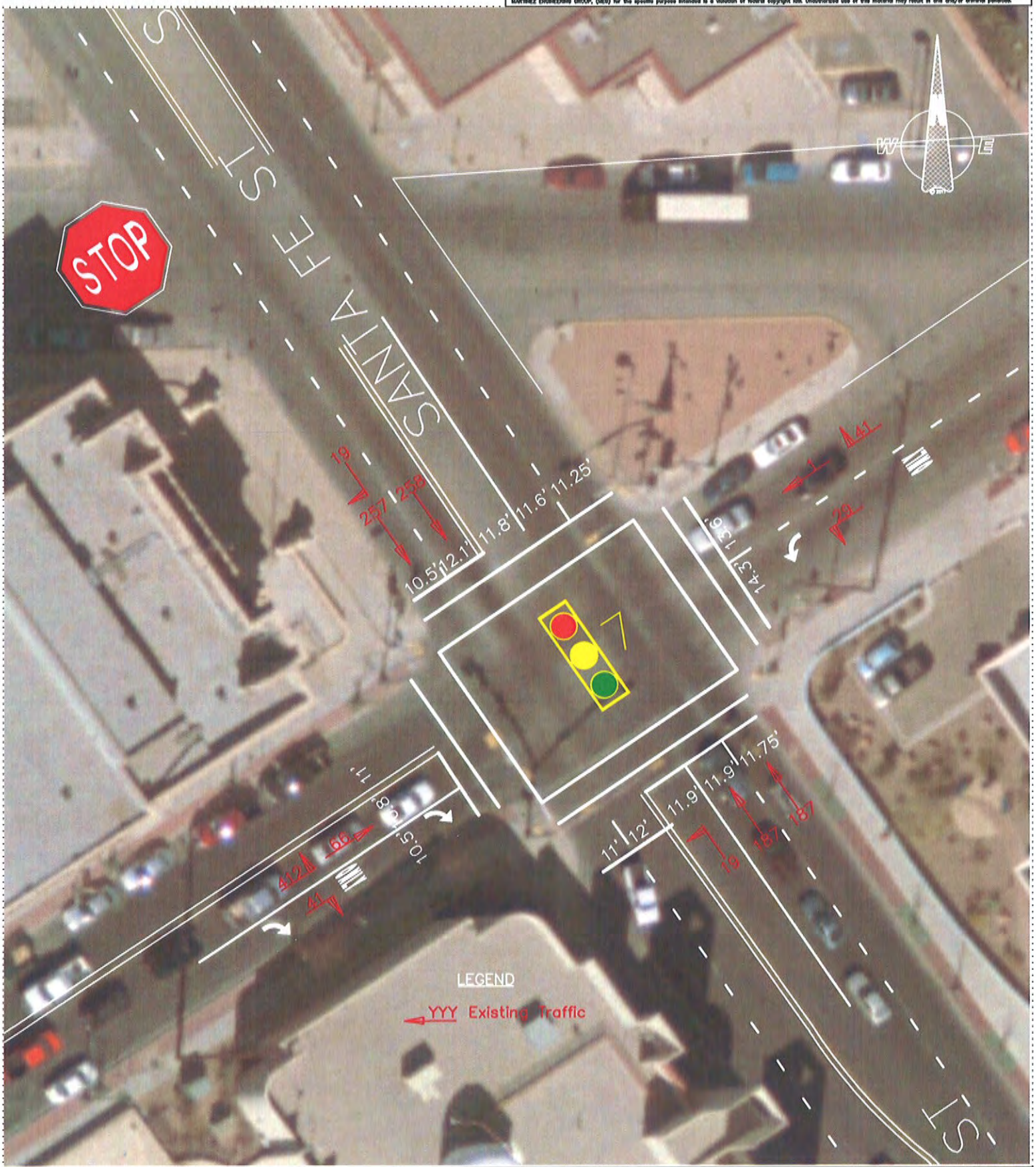

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Figure - 9

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Figure - 10

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Figure - 11

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Figure - 12

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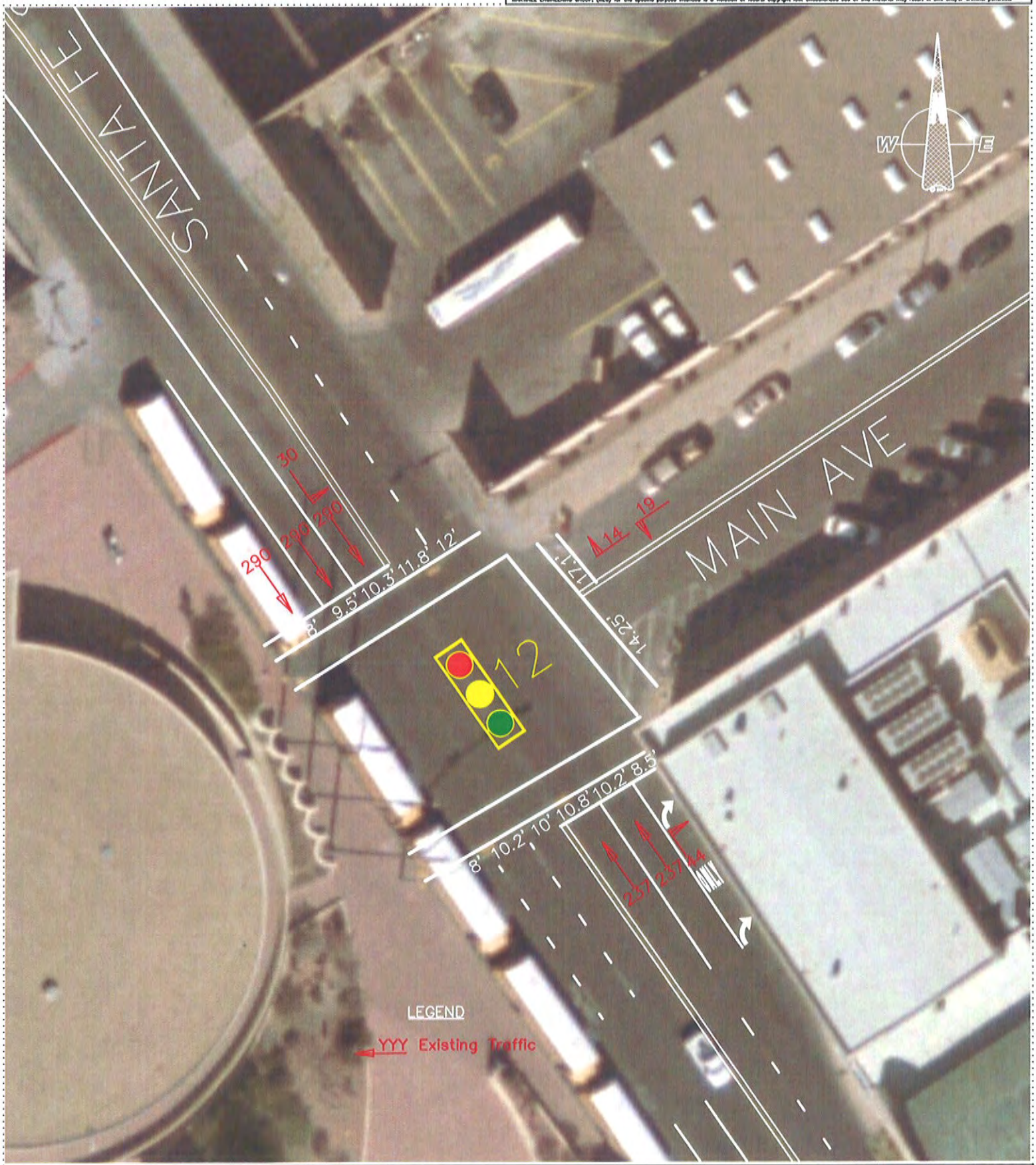

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Figure - 13

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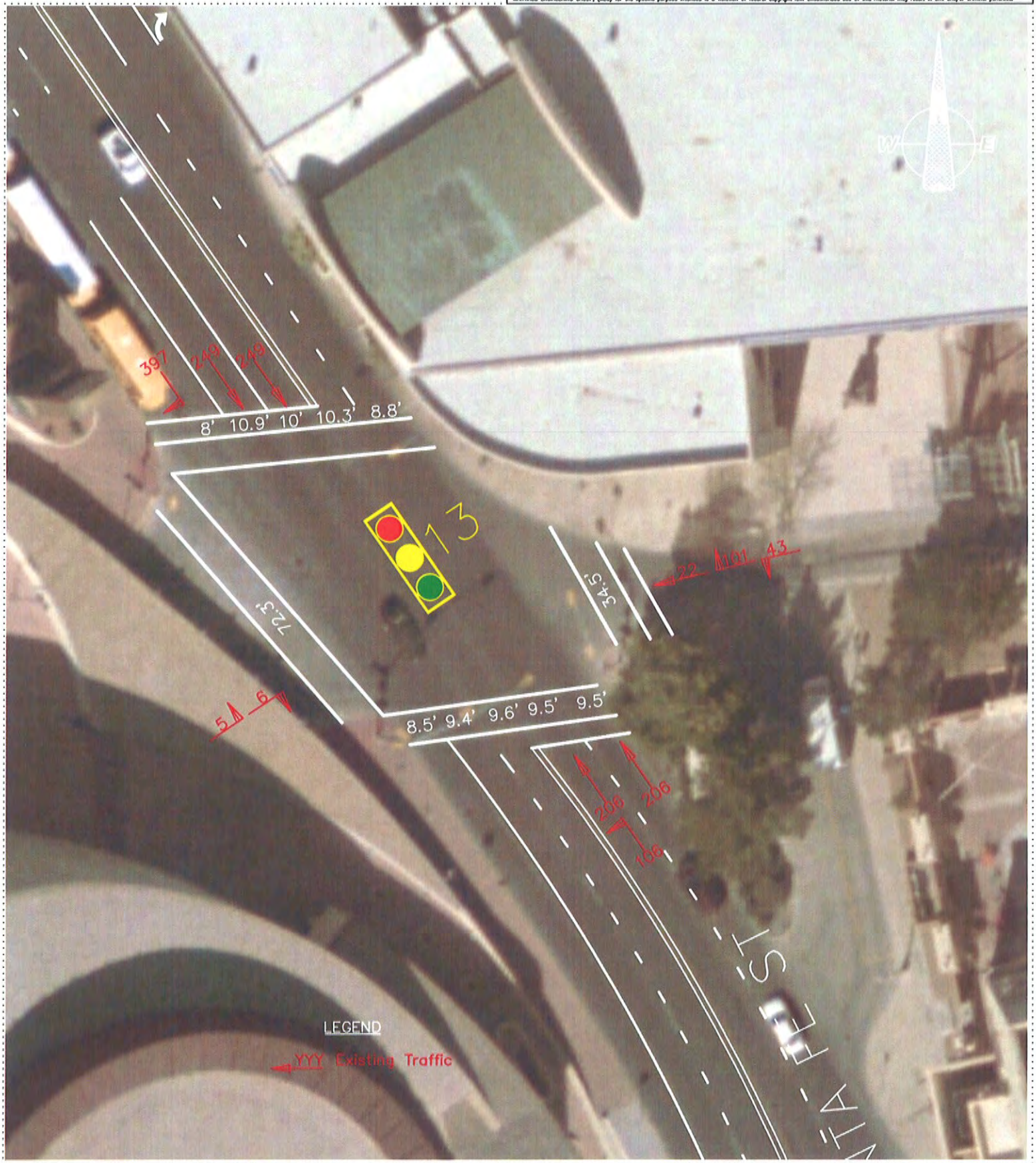

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Figure - 14

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Figure - 15

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Figure - 17

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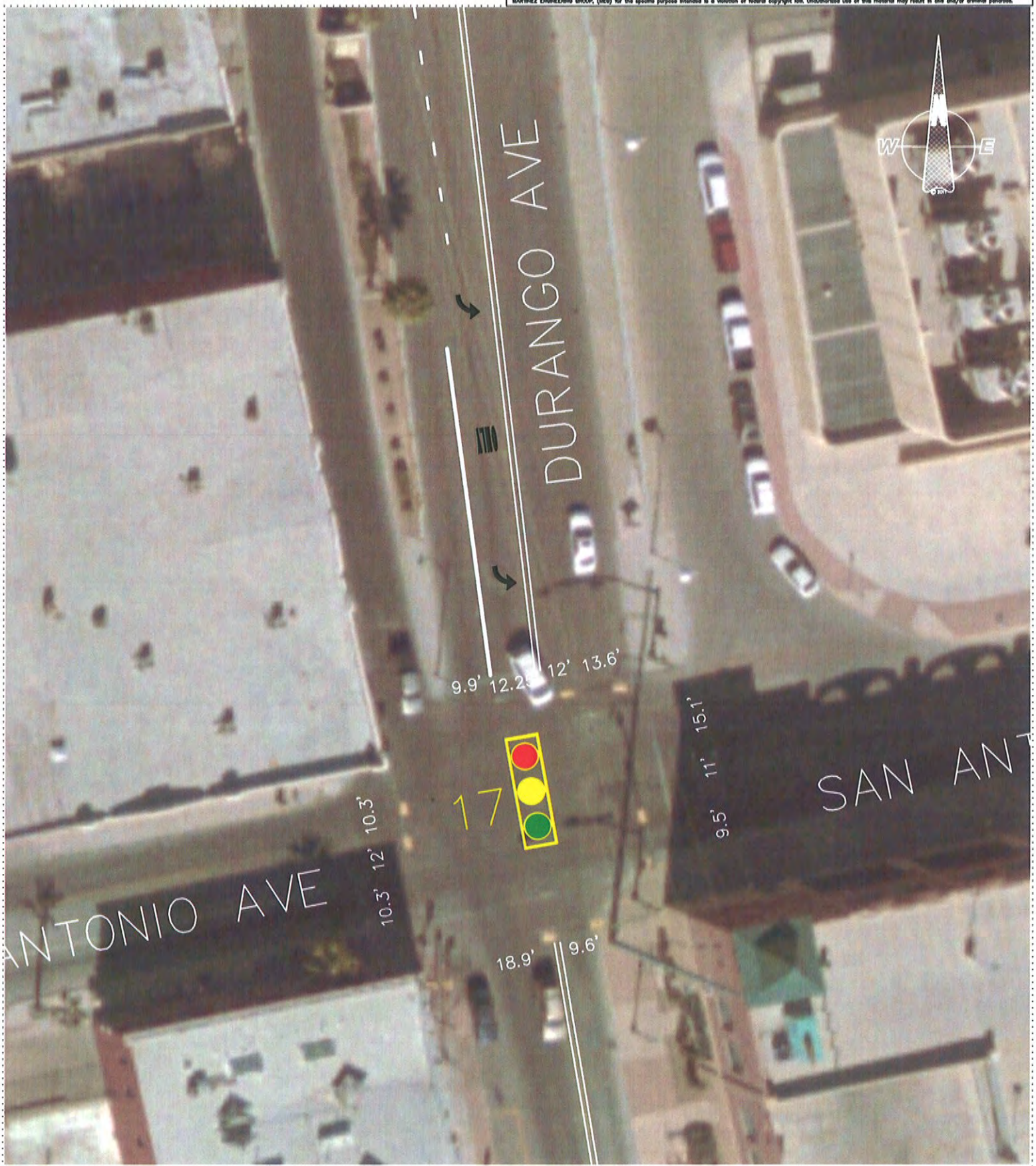

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Figure - 18

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El Paso, Texas

Figure - 19

Appendix-B

City of El Paso
Department of Transportation
7968 San Paulo Dr
El Paso, Texas, United States 79907
915 621 6480 rayjl@elpasotexas.gov
Video Detection Count

Count Name: Kansas & Missouri
Site Code:
Start Date: 09/14/2012
Page No: 1

Turning Movement Data

Start Time	Kansas Northbound		Kansas Southbound			Missouri Eastbound		Missouri Westbound				Int. Total
	Peds	App. Total	Thru	Peds	App. Total	Peds	App. Total	Left	Thru	Peds	App. Total	
7:00 AM	0	0	78	13	78	1	0	125	119	13	244	322
7:15 AM	0	0	117	19	117	0	0	190	153	20	343	460
7:30 AM	0	0	145	29	145	3	0	272	237	24	509	654
7:45 AM	0	0	152	54	152	6	0	285	262	47	547	699
Hourly Total	0	0	492	115	492	10	0	872	771	104	1643	2135
8:00 AM	0	0	173	40	173	0	0	241	242	34	483	656
8:15 AM	0	0	150	35	150	5	0	248	215	30	463	613
8:30 AM	0	0	141	16	141	2	0	233	229	18	462	603
8:45 AM	0	0	129	19	129	1	0	184	231	14	415	544
Hourly Total	0	0	593	110	593	8	0	906	917	96	1823	2416
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	1	0	91	11	91	2	0	151	133	9	284	375
11:15 AM	0	0	102	17	102	1	0	159	122	14	281	383
11:30 AM	1	0	95	21	95	1	0	147	150	13	297	392
11:45 AM	0	0	107	19	107	1	0	152	133	16	285	392
Hourly Total	2	0	395	68	395	5	0	609	538	52	1147	1542
12:00 PM	0	0	130	16	130	1	0	142	137	13	279	409
12:15 PM	0	0	100	22	100	2	0	144	115	15	259	359
12:30 PM	0	0	109	17	109	0	0	140	143	12	283	392
12:45 PM	0	0	116	29	116	0	0	152	138	25	290	406
Hourly Total	0	0	455	84	455	3	0	578	533	65	1111	1566
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	0	117	6	117	2	0	122	140	11	262	379
4:15 PM	0	0	100	5	100	0	0	135	121	9	256	356
4:30 PM	0	0	123	16	123	1	0	128	136	16	264	387
4:45 PM	0	0	108	23	108	2	0	147	147	35	294	402
Hourly Total	0	0	448	50	448	5	0	532	544	71	1076	1524
5:00 PM	0	0	123	57	123	2	0	133	139	46	272	395
5:15 PM	2	0	132	22	132	2	0	118	157	23	275	407
5:30 PM	0	0	82	16	82	2	0	121	158	11	279	361
5:45 PM	0	0	71	7	71	3	0	130	159	4	289	360
Hourly Total	2	0	408	102	408	9	0	502	613	84	1115	1523
6:00 PM	0	0	54	1	54	2	0	119	173	1	292	346
6:15 PM	0	0	47	6	47	0	0	101	150	4	251	298
6:30 PM	0	0	51	3	51	0	0	110	162	1	272	323
6:45 PM	1	0	53	8	53	0	0	79	106	5	185	238
Hourly Total	1	0	205	18	205	2	0	409	591	11	1000	1205
7:00 PM	0	0	38	5	38	0	0	67	93	3	160	198
7:15 PM	1	0	52	3	52	1	0	70	79	3	149	201
7:30 PM	0	0	47	2	47	0	0	52	62	0	114	161
7:45 PM	0	0	40	6	40	0	0	54	82	0	136	176
Hourly Total	1	0	177	16	177	1	0	243	316	6	559	736
8:00 PM	0	0	33	4	33	0	0	49	67	0	116	149
8:15 PM	0	0	22	0	22	0	0	37	64	0	101	123
8:30 PM	0	0	28	1	28	0	0	53	72	1	125	153
8:45 PM	0	0	37	0	37	1	0	57	72	0	129	166
Hourly Total	0	0	120	5	120	1	0	196	275	1	471	591
9:00 PM	0	0	26	5	26	1	0	41	81	1	122	148
9:15 PM	0	0	25	2	25	1	0	56	62	0	118	143
9:30 PM	0	0	25	6	25	0	0	68	79	0	147	172
9:45 PM	0	0	35	6	35	0	0	54	70	0	124	159
Hourly Total	0	0	111	19	111	2	0	219	292	1	511	622
Grand Total	6	0	3404	587	3404	46	0	5066	5390	491	10456	13860
Approach %	-	-	100.0	-	-	-	-	48.5	51.5	-	-	-
Total %	-	0.0	24.6	-	24.6	-	0.0	36.6	38.9	-	75.4	-
Car	-	0	3404	-	3404	-	0	5066	5390	-	10456	13860
% Car	-	-	100.0	-	100.0	-	-	100.0	100.0	-	100.0	100.0
Ped	6	-	-	587	-	46	-	-	-	491	-	-
% Ped	100.0	-	-	100.0	-	100.0	-	-	-	100.0	-	-

City of El Paso
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Turning Movement Data

Start Time	Kansas Northbound		Kansas Southbound			Missouri Eastbound		Missouri Westbound				Int. Total
	Peds	App. Total	Thru	Peds	App. Total	Peds	App. Total	Left	Thru	Peds	App. Total	
7:00 AM	0	0	78	13	78	1	0	125	119	13	244	322
7:15 AM	0	0	117	19	117	0	0	190	153	20	343	460
7:30 AM	0	0	145	29	145	3	0	272	237	24	509	654
7:45 AM	0	0	152	54	152	6	0	285	262	47	547	699
Hourly Total	0	0	492	115	492	10	0	872	771	104	1643	2135
8:00 AM	0	0	173	40	173	0	0	241	242	34	483	656
8:15 AM	0	0	150	35	150	5	0	248	215	30	463	613
8:30 AM	0	0	141	16	141	2	0	233	229	18	462	603
8:45 AM	0	0	129	19	129	1	0	184	231	14	415	544
Hourly Total	0	0	593	110	593	8	0	906	917	98	1823	2416
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	1	0	91	11	91	2	0	151	133	9	284	375
11:15 AM	0	0	102	17	102	1	0	159	122	14	281	383
11:30 AM	1	0	95	21	95	1	0	147	150	13	297	392
11:45 AM	0	0	107	19	107	1	0	152	133	16	285	392
Hourly Total	2	0	395	68	395	5	0	609	538	52	1147	1542
12:00 PM	0	0	130	16	130	1	0	142	137	13	279	409
12:15 PM	0	0	100	22	100	2	0	144	115	15	259	359
12:30 PM	0	0	109	17	109	0	0	140	143	12	283	392
12:45 PM	0	0	116	29	116	0	0	152	138	25	290	406
Hourly Total	0	0	455	84	455	3	0	578	533	65	1111	1566
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	0	117	8	117	2	0	122	140	11	262	379
4:15 PM	0	0	100	5	100	0	0	135	121	9	256	356
4:30 PM	0	0	123	16	123	1	0	128	136	16	264	387
4:45 PM	0	0	108	23	108	2	0	147	147	35	294	402
Hourly Total	0	0	448	50	448	5	0	532	544	71	1076	1524
5:00 PM	0	0	123	57	123	2	0	133	139	46	272	395
5:15 PM	2	0	132	22	132	2	0	118	157	23	275	407
5:30 PM	0	0	82	16	82	2	0	121	158	11	279	361
5:45 PM	0	0	71	7	71	3	0	130	159	4	289	360
Hourly Total	2	0	408	102	408	9	0	502	613	84	1115	1523
6:00 PM	0	0	54	1	54	2	0	119	173	1	292	346
6:15 PM	0	0	47	6	47	0	0	101	150	4	251	298
6:30 PM	0	0	51	3	51	0	0	110	162	1	272	323
6:45 PM	1	0	53	8	53	0	0	79	106	5	185	238
Hourly Total	1	0	205	18	205	2	0	409	591	11	1000	1205
7:00 PM	0	0	38	5	38	0	0	67	93	3	160	198
7:15 PM	1	0	52	3	52	1	0	70	79	3	149	201
7:30 PM	0	0	47	2	47	0	0	52	62	0	114	161
7:45 PM	0	0	40	6	40	0	0	54	82	0	136	176
Hourly Total	1	0	177	16	177	1	0	243	316	6	559	736
8:00 PM	0	0	33	4	33	0	0	49	67	0	116	149
8:15 PM	0	0	22	0	22	0	0	37	64	0	101	123
8:30 PM	0	0	28	1	28	0	0	53	72	1	125	153
8:45 PM	0	0	37	0	37	1	0	57	72	0	129	166
Hourly Total	0	0	120	5	120	1	0	196	275	1	471	591
9:00 PM	0	0	26	5	26	1	0	41	81	1	122	148
9:15 PM	0	0	25	2	25	1	0	56	62	0	118	143
9:30 PM	0	0	25	6	25	0	0	68	79	0	147	172
9:45 PM	0	0	35	6	35	0	0	54	70	0	124	159
Hourly Total	0	0	111	19	111	2	0	219	292	1	511	622
Grand Total	6	0	3404	587	3404	46	0	5066	5390	491	10456	13860
Approach %	-	-	100.0	-	-	-	-	48.5	51.5	-	-	-
Total %	-	0.0	24.6	-	24.6	-	0.0	36.6	38.9	-	75.4	-
Car	-	0	3404	-	3404	-	0	5066	5390	-	10456	13860
% Car	-	-	100.0	-	100.0	-	-	100.0	100.0	-	100.0	100.0
Ped	6	-	-	587	-	46	-	-	-	491	-	-
% Ped	100.0	-	-	100.0	-	100.0	-	-	-	100.0	-	-

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Turning Movement Data

Start Time	Oregon Northbound				Oregon Southbound				Missouri Eastbound		Missouri Westbound					Int. Total
	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
7:00 AM	3	8	0	11	16	2	0	18	5	0	20	34	5	5	59	88
7:15 AM	1	7	1	8	24	3	0	27	4	0	16	57	7	3	80	115
7:30 AM	0	12	1	12	32	2	3	34	10	0	19	100	6	6	125	171
7:45 AM	6	25	1	31	37	3	1	40	2	0	16	97	18	3	131	202
Hourly Total	10	52	3	62	109	10	4	119	21	0	71	288	36	17	395	576
8:00 AM	1	16	1	17	34	6	0	40	2	0	19	89	15	2	123	180
8:15 AM	0	13	1	13	40	2	0	42	4	0	24	65	10	2	99	154
8:30 AM	0	19	0	19	29	7	1	36	9	0	16	78	14	3	108	163
8:45 AM	0	11	2	11	39	3	0	42	6	0	21	83	18	3	122	175
Hourly Total	1	59	4	60	142	18	1	160	21	0	80	315	57	10	452	672
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	1	15	2	16	34	7	0	41	3	0	8	58	11	3	77	134
11:15 AM	2	20	2	22	18	5	1	23	18	0	17	57	9	3	83	128
11:30 AM	2	21	3	23	31	3	5	34	7	0	18	74	7	3	99	156
11:45 AM	1	23	6	24	31	6	7	37	7	0	7	83	4	15	94	155
Hourly Total	6	79	13	85	114	21	13	135	35	0	50	272	31	24	353	573
12:00 PM	2	17	6	19	36	4	4	40	4	0	14	72	5	9	91	150
12:15 PM	6	30	1	36	33	1	3	34	6	0	13	74	5	5	92	162
12:30 PM	4	27	3	31	31	4	6	35	12	0	19	60	6	7	85	151
12:45 PM	4	22	6	26	38	7	6	45	13	0	13	55	4	5	72	143
Hourly Total	16	96	16	112	138	16	19	154	35	0	59	261	20	26	340	606
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	4	21	2	25	35	7	0	42	5	0	12	98	8	2	118	185
4:15 PM	8	19	0	27	23	2	0	25	5	0	16	77	3	3	96	148
4:30 PM	8	27	0	35	39	7	7	46	6	0	16	86	1	5	103	184
4:45 PM	5	22	4	27	29	8	2	37	3	0	14	99	4	4	117	181
Hourly Total	25	89	6	114	126	24	9	150	19	0	58	360	16	14	434	698
5:00 PM	4	38	1	42	32	4	2	36	0	0	21	116	11	1	148	226
5:15 PM	3	30	0	33	24	11	3	35	1	0	11	117	7	1	135	203
5:30 PM	2	23	0	25	25	11	0	36	5	0	10	118	6	1	134	195
5:45 PM	0	24	3	24	20	4	1	24	3	0	12	134	4	1	150	198
Hourly Total	9	115	4	124	101	30	6	131	9	0	54	485	28	4	567	822
6:00 PM	9	17	0	26	21	3	0	24	6	0	18	132	9	1	159	209
6:15 PM	6	17	0	23	23	6	1	29	4	0	11	133	1	0	145	197
6:30 PM	2	9	0	11	11	7	1	18	5	0	11	137	1	4	149	178
6:45 PM	8	21	1	29	22	8	0	30	3	0	9	98	1	4	108	167
Hourly Total	25	64	1	89	77	24	2	101	18	0	49	500	12	9	561	751
7:00 PM	2	19	1	21	8	2	0	10	2	0	5	65	4	0	74	105
7:15 PM	2	11	1	13	11	5	2	16	1	0	9	62	1	1	72	101
7:30 PM	4	8	0	12	10	1	1	11	1	0	8	46	3	1	57	80
7:45 PM	2	7	3	9	15	5	2	20	1	0	8	42	2	0	52	81
Hourly Total	10	45	5	55	44	13	5	57	5	0	30	215	10	2	255	367
8:00 PM	2	8	3	10	7	3	2	10	0	0	8	42	1	0	51	71
8:15 PM	1	11	0	12	9	3	1	12	1	0	4	43	0	0	47	71
8:30 PM	2	7	1	9	9	3	0	12	1	0	7	47	0	0	54	75
8:45 PM	2	3	0	5	18	4	3	22	2	0	6	50	1	1	57	84
Hourly Total	7	29	4	36	43	13	6	56	4	0	25	182	2	1	209	301
9:00 PM	5	3	0	8	8	3	0	11	2	0	3	49	1	0	53	72
9:15 PM	1	5	2	6	6	2	2	8	1	0	8	43	3	1	54	68
9:30 PM	0	2	0	2	5	1	0	6	0	0	5	57	1	0	63	71
9:45 PM	0	11	0	11	9	2	0	11	0	0	3	47	2	1	52	74
Hourly Total	6	21	2	27	28	8	2	36	3	0	19	196	7	2	222	285
Grand Total	115	649	58	764	922	177	67	1099	170	0	495	3074	219	109	3788	5651
Approach %	15.1	84.9	-	-	83.9	16.1	-	-	-	-	13.1	81.2	5.8	-	-	-
Total %	2.0	11.5	-	13.5	16.3	3.1	-	19.4	-	0.0	8.8	54.4	3.9	-	67.0	-
Car	115	649	-	764	922	177	-	1099	-	0	495	3074	219	-	3788	5651
% Car	100.0	100.0	-	100.0	100.0	100.0	-	100.0	-	-	100.0	100.0	100.0	-	100.0	100.0
Ped	-	-	58	-	-	-	67	-	170	-	-	-	-	109	-	-
% Ped	-	-	100.0	-	-	-	100.0	-	100.0	-	-	-	-	100.0	-	-

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Start Time	Oregon Northbound				Oregon Southbound				Missouri Eastbound		Missouri Westbound					Int. Total
	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
7:00 AM	3	8	0	11	16	2	0	18	5	0	20	34	5	5	59	88
7:15 AM	1	7	1	8	24	3	0	27	4	0	16	57	7	3	80	115
7:30 AM	0	12	1	12	32	2	3	34	10	0	19	100	6	6	125	171
7:45 AM	6	25	1	31	37	3	1	40	2	0	16	97	18	3	131	202
Hourly Total	10	52	3	62	109	10	4	119	21	0	71	288	36	17	395	576
8:00 AM	1	16	1	17	34	6	0	40	2	0	19	89	15	2	123	180
8:15 AM	0	13	1	13	40	2	0	42	4	0	24	65	10	2	99	154
8:30 AM	0	19	0	19	29	7	1	36	9	0	16	79	14	3	108	163
8:45 AM	0	11	2	11	39	3	0	42	6	0	21	83	18	3	122	175
Hourly Total	1	59	4	60	142	18	1	160	21	0	80	315	57	10	452	672
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	1	15	2	16	34	7	0	41	3	0	8	58	11	3	77	134
11:15 AM	2	20	2	22	18	5	1	23	18	0	17	57	9	3	83	128
11:30 AM	2	21	3	23	31	3	5	34	7	0	18	74	7	3	99	156
11:45 AM	1	23	6	24	31	6	7	37	7	0	7	83	4	15	94	155
Hourly Total	6	79	13	85	114	21	13	135	35	0	50	272	31	24	353	573
12:00 PM	2	17	5	19	36	4	4	40	4	0	14	72	5	9	91	150
12:15 PM	6	30	1	36	33	1	3	34	6	0	13	74	5	5	92	162
12:30 PM	4	27	3	31	31	4	6	35	12	0	19	60	6	7	85	151
12:45 PM	4	22	6	26	38	7	6	45	13	0	13	55	4	5	72	143
Hourly Total	16	96	16	112	138	16	19	154	35	0	59	261	20	26	340	606
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	4	21	2	25	35	7	0	42	5	0	12	98	8	2	118	185
4:15 PM	8	19	0	27	23	2	0	25	5	0	16	77	3	3	96	148
4:30 PM	8	27	0	35	39	7	7	46	6	0	16	86	1	5	103	184
4:45 PM	5	22	4	27	29	8	2	37	3	0	14	99	4	4	117	181
Hourly Total	25	89	6	114	126	24	9	150	19	0	58	360	16	14	434	698
5:00 PM	4	38	1	42	32	4	2	36	0	0	21	116	11	1	148	226
5:15 PM	3	30	0	33	24	11	3	35	1	0	11	117	7	1	136	203
5:30 PM	2	23	0	25	25	11	0	36	5	0	10	118	6	1	134	195
5:45 PM	0	24	3	24	20	4	1	24	3	0	12	134	4	1	150	198
Hourly Total	9	115	4	124	101	30	6	131	9	0	54	485	28	4	567	822
6:00 PM	9	17	0	26	21	3	0	24	6	0	18	132	9	1	159	209
6:15 PM	6	17	0	23	23	6	1	29	4	0	11	133	1	0	145	197
6:30 PM	2	9	0	11	11	7	1	18	5	0	11	137	1	4	149	178
6:45 PM	8	21	1	29	22	8	0	30	3	0	9	98	1	4	108	167
Hourly Total	25	64	1	89	77	24	2	101	18	0	49	500	12	9	561	751
7:00 PM	2	19	1	21	8	2	0	10	2	0	5	65	4	0	74	105
7:15 PM	2	11	1	13	11	5	2	16	1	0	9	62	1	1	72	101
7:30 PM	4	8	0	12	10	1	1	11	1	0	8	46	3	1	57	80
7:45 PM	2	7	3	9	15	5	2	20	1	0	8	42	2	0	52	81
Hourly Total	10	45	5	55	44	13	5	57	5	0	30	215	10	2	255	367
8:00 PM	2	8	3	10	7	3	2	10	0	0	8	42	1	0	51	71
8:15 PM	1	11	0	12	9	3	1	12	1	0	4	43	0	0	47	71
8:30 PM	2	7	1	9	9	3	0	12	1	0	7	47	0	0	54	75
8:45 PM	2	3	0	5	18	4	3	22	2	0	6	50	1	1	57	84
Hourly Total	7	29	4	36	43	13	6	56	4	0	25	182	2	1	209	301
9:00 PM	5	3	0	8	8	3	0	11	2	0	3	49	1	0	53	72
9:15 PM	1	5	2	6	6	2	2	8	1	0	8	43	3	1	54	68
9:30 PM	0	2	0	2	5	1	0	6	0	0	5	57	1	0	63	71
9:45 PM	0	11	0	11	9	2	0	11	0	0	3	47	2	1	52	74
Hourly Total	6	21	2	27	28	8	2	36	3	0	19	196	7	2	222	285
Grand Total	115	649	58	764	922	177	67	1099	170	0	495	3074	219	109	3788	5651
Approach %	15.1	84.9	-	-	83.9	16.1	-	-	-	-	13.1	81.2	5.8	-	-	-
Total %	2.0	11.5	-	13.5	16.3	3.1	-	19.4	-	0.0	8.8	54.4	3.9	-	67.0	-
Car	115	649	-	764	922	177	-	1099	-	0	495	3074	219	-	3788	5651
% Car	100.0	100.0	-	100.0	100.0	100.0	-	100.0	-	-	100.0	100.0	100.0	-	100.0	100.0
Ped	-	-	58	-	-	-	67	-	170	-	-	-	-	109	-	-
% Ped	-	-	100.0	-	-	-	100.0	-	100.0	-	-	-	-	100.0	-	-

City of El Paso
Department of Transportation
7968 San Paulo Dr
El Paso, Texas, United States 79907
915 621 6480 rayjl@elpasotexas.gov
Video Detection Count

Count Name: Missouri & Santa Fe
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Turning Movement Data

Start Time	Santa Fe Northbound					Santa Fe Southbound					Missouri Eastbound					Missouri Westbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
7:00 AM	3	52	0	1	55	0	26	1	2	27	1	0	3	2	4	18	7	2	25	111
7:15 AM	1	56	0	1	57	0	39	0	1	39	6	0	5	3	11	27	12	1	39	146
7:30 AM	1	82	1	1	84	0	47	4	4	51	7	0	7	3	14	52	17	3	69	218
7:45 AM	0	108	0	8	108	0	37	1	2	38	16	0	11	2	27	33	14	15	47	220
Hourly Total	5	298	1	11	304	0	149	6	9	155	30	0	26	10	56	130	50	21	180	695
8:00 AM	0	95	0	1	95	0	46	3	2	49	8	0	6	2	14	32	31	2	63	221
8:15 AM	2	67	0	3	69	0	34	4	3	38	10	0	6	4	16	30	11	1	41	164
8:30 AM	1	78	0	2	79	0	39	2	3	41	5	0	3	2	8	38	18	4	56	184
8:45 AM	3	81	0	3	84	0	56	4	4	60	5	0	4	7	9	44	14	1	58	211
Hourly Total	6	321	0	9	327	0	175	13	12	188	28	0	19	15	47	144	74	8	218	780
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	3	75	0	2	78	0	63	3	0	66	12	0	2	0	14	36	16	0	52	210
11:15 AM	2	70	0	3	72	0	56	3	0	59	18	0	3	1	21	25	17	3	42	194
11:30 AM	2	73	0	4	75	0	64	1	3	65	14	0	5	0	19	38	14	0	52	211
11:45 AM	1	59	0	5	60	0	66	7	1	73	10	0	4	1	14	32	23	2	55	202
Hourly Total	8	277	0	14	285	0	249	14	4	263	54	0	14	2	68	131	70	5	201	817
12:00 PM	1	86	0	6	87	0	74	3	2	77	11	0	6	0	17	26	22	2	48	229
12:15 PM	1	70	0	6	71	0	64	6	0	70	10	0	5	1	15	29	24	0	53	209
12:30 PM	3	85	0	3	88	0	71	3	3	74	16	0	6	2	22	35	21	0	56	240
12:45 PM	1	78	0	4	79	0	68	4	1	72	6	0	4	5	10	37	21	2	58	219
Hourly Total	6	319	0	19	325	0	277	16	6	293	43	0	21	8	64	127	88	4	215	897
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	2	94	0	4	96	0	85	2	1	87	17	0	8	2	25	48	18	2	66	274
4:15 PM	0	77	0	3	77	0	92	5	0	97	6	0	10	1	16	57	12	1	69	259
4:30 PM	0	91	0	1	91	0	97	5	3	102	14	0	5	1	19	46	12	0	58	270
4:45 PM	1	75	0	1	76	0	96	1	0	97	13	0	7	3	20	53	24	1	77	270
Hourly Total	3	337	0	9	340	0	370	13	4	383	50	0	30	7	80	204	66	4	270	1073
5:00 PM	4	94	0	2	98	0	123	7	14	130	15	0	7	8	22	43	30	9	73	323
5:15 PM	0	113	0	3	113	0	125	3	2	128	20	0	3	6	23	68	23	0	91	355
5:30 PM	2	74	0	6	76	0	85	5	2	90	12	1	6	5	19	77	19	1	96	281
5:45 PM	6	95	0	2	101	0	127	2	1	129	14	0	6	0	20	107	23	1	130	380
Hourly Total	12	376	0	13	388	0	460	17	19	477	61	1	22	19	84	295	95	11	390	1339
6:00 PM	3	94	0	3	97	0	132	6	2	138	7	0	7	2	14	100	14	1	114	363
6:15 PM	1	91	1	1	93	0	130	3	1	133	5	0	18	2	23	110	16	1	126	375
6:30 PM	3	99	0	2	102	0	142	3	6	145	12	1	3	0	16	113	20	5	133	396
6:45 PM	6	90	0	4	96	0	111	7	3	118	5	0	13	6	18	89	16	1	105	337
Hourly Total	13	374	1	10	388	0	515	19	12	534	29	1	41	10	71	412	66	8	478	1471
7:00 PM	2	92	0	2	94	0	63	5	0	68	12	0	3	0	15	30	20	1	50	227
7:15 PM	1	56	0	2	57	0	54	1	0	55	19	0	2	0	21	44	22	0	66	199
7:30 PM	2	88	0	0	90	0	56	7	2	63	12	0	2	1	14	25	15	1	40	207
7:45 PM	1	89	0	1	90	0	56	2	2	58	14	0	0	2	14	28	11	0	39	201
Hourly Total	6	325	0	5	331	0	229	15	4	244	57	0	7	11	64	127	68	2	195	834
8:00 PM	2	78	0	2	80	0	47	3	3	50	9	0	3	1	12	26	15	1	41	183
8:15 PM	2	93	0	0	95	0	47	1	0	48	9	0	5	2	14	25	19	1	44	201
8:30 PM	2	200	0	1	202	0	45	3	0	48	39	0	5	1	44	29	12	0	41	335
8:45 PM	1	184	0	1	185	0	35	3	0	38	23	0	2	1	25	30	14	0	44	292
Hourly Total	7	555	0	4	562	0	174	10	3	184	80	0	15	5	95	110	60	2	170	1011
9:00 PM	1	84	0	3	85	0	39	8	0	47	13	0	1	1	14	25	21	0	46	192
9:15 PM	0	84	0	2	84	0	27	7	4	34	18	0	4	2	22	23	19	0	42	182
9:30 PM	0	75	1	1	76	0	19	5	1	24	16	0	7	2	23	26	23	0	49	172
9:45 PM	4	86	1	1	91	0	27	0	1	27	15	0	5	0	20	23	23	0	46	184
Hourly Total	5	329	2	7	336	0	112	20	6	132	62	0	17	5	79	97	86	0	183	730
Grand Total	71	3511	4	101	3586	0	2710	143	79	2853	494	2	212	92	708	1777	723	65	2500	9647
Approach %	2.0	97.9	0.1	-	-	0.0	95.0	5.0	-	-	69.8	0.3	29.9	-	-	71.1	28.9	-	-	-
Total %	0.7	36.4	0.0	-	37.2	0.0	28.1	1.5	-	29.6	5.1	0.0	2.2	-	7.3	18.4	7.5	-	25.9	-
Car	71	3511	4	-	3586	0	2710	143	-	2853	494	2	212	-	708	1777	723	-	2500	9647
% Car	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
Ped	-	-	-	101	-	-	-	-	79	-	-	-	-	92	-	-	-	65	-	-
% Ped	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	100.0	-	-

City of El Paso
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Turning Movement Data

Start Time	Santa Fe Northbound					Santa Fe Southbound					Missouri Eastbound					Missouri Westbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
7:00 AM	3	52	0	1	55	0	26	1	2	27	1	0	3	2	4	18	7	2	25	111
7:15 AM	1	56	0	1	57	0	39	0	1	39	6	0	5	3	11	27	12	1	39	146
7:30 AM	1	82	1	1	84	0	47	4	4	51	7	0	7	3	14	52	17	3	69	218
7:45 AM	0	108	0	8	108	0	37	1	2	38	16	0	11	2	27	33	14	15	47	220
Hourly Total	5	298	1	11	304	0	149	6	9	155	30	0	26	10	56	130	50	21	180	695
8:00 AM	0	95	0	1	95	0	46	3	2	49	8	0	6	2	14	32	31	2	63	221
8:15 AM	2	67	0	3	69	0	34	4	3	38	10	0	6	4	16	30	11	1	41	164
8:30 AM	1	78	0	2	79	0	39	2	3	41	5	0	3	2	8	38	18	4	56	184
8:45 AM	3	81	0	3	84	0	56	4	4	60	5	0	4	7	9	44	14	1	58	211
Hourly Total	6	321	0	9	327	0	175	13	12	188	28	0	19	15	47	144	74	8	218	780
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	3	75	0	2	78	0	63	3	0	66	12	0	2	0	14	36	16	0	52	210
11:15 AM	2	70	0	3	72	0	56	3	0	59	18	0	3	1	21	25	17	3	42	194
11:30 AM	2	73	0	4	75	0	64	1	3	65	14	0	5	0	19	38	14	0	52	211
11:45 AM	1	59	0	5	60	0	66	7	1	73	10	0	4	1	14	32	23	2	55	202
Hourly Total	8	277	0	14	285	0	249	14	4	263	54	0	14	2	68	131	70	5	201	817
12:00 PM	1	86	0	6	87	0	74	3	2	77	11	0	6	0	17	26	22	2	48	229
12:15 PM	1	70	0	6	71	0	64	6	0	70	10	0	5	1	15	29	24	0	53	209
12:30 PM	3	85	0	3	88	0	71	3	3	74	16	0	6	2	22	35	21	0	56	240
12:45 PM	1	78	0	4	79	0	68	4	1	72	6	0	4	5	10	37	21	2	58	219
Hourly Total	6	319	0	19	325	0	277	16	6	293	43	0	21	8	64	127	88	4	215	897
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	2	94	0	4	96	0	85	2	1	87	17	0	8	2	25	48	18	2	66	274
4:15 PM	0	77	0	3	77	0	92	5	0	97	6	0	10	1	16	57	12	1	69	259
4:30 PM	0	91	0	1	91	0	97	5	3	102	14	0	5	1	19	46	12	0	58	270
4:45 PM	1	75	0	1	76	0	96	1	0	97	13	0	7	3	20	53	24	1	77	270
Hourly Total	3	337	0	9	340	0	370	13	4	383	50	0	30	7	80	204	66	4	270	1073
5:00 PM	4	94	0	2	98	0	123	7	14	130	15	0	7	8	22	43	30	9	73	323
5:15 PM	0	113	0	3	113	0	125	3	2	128	20	0	3	6	23	68	23	0	91	355
5:30 PM	2	74	0	6	76	0	85	5	2	90	12	1	6	5	19	77	19	1	96	281
5:45 PM	6	95	0	2	101	0	127	2	1	129	14	0	6	0	20	107	23	1	130	380
Hourly Total	12	376	0	13	388	0	460	17	19	477	61	1	22	19	84	295	95	11	390	1339
6:00 PM	3	94	0	3	97	0	132	6	2	138	7	0	7	2	14	100	14	1	114	363
6:15 PM	1	91	1	1	93	0	130	3	1	133	5	0	18	2	23	110	16	1	126	375
6:30 PM	3	99	0	2	102	0	142	3	6	145	12	1	3	0	16	113	20	5	133	396
6:45 PM	6	90	0	4	96	0	111	7	3	118	5	0	13	6	18	89	16	1	105	337
Hourly Total	13	374	1	10	388	0	515	19	12	534	29	1	41	10	71	412	66	8	478	1471
7:00 PM	2	92	0	2	94	0	63	5	0	68	12	0	3	8	15	30	20	1	50	227
7:15 PM	1	56	0	2	57	0	54	1	0	55	19	0	2	0	21	44	22	0	66	199
7:30 PM	2	88	0	0	90	0	56	7	2	63	12	0	2	1	14	25	15	1	40	207
7:45 PM	1	89	0	1	90	0	56	2	2	58	14	0	0	2	14	28	11	0	39	201
Hourly Total	6	325	0	5	331	0	229	15	4	244	57	0	7	11	64	127	68	2	195	834
8:00 PM	2	78	0	2	80	0	47	3	3	50	9	0	3	1	12	26	15	1	41	183
8:15 PM	2	93	0	0	95	0	47	1	0	48	9	0	5	2	14	25	19	1	44	201
8:30 PM	2	200	0	1	202	0	45	3	0	48	39	0	5	1	44	29	12	0	41	335
8:45 PM	1	184	0	1	185	0	35	3	0	38	23	0	2	1	25	30	14	0	44	292
Hourly Total	7	555	0	4	562	0	174	10	3	184	80	0	15	5	95	110	60	2	170	1011
9:00 PM	1	84	0	3	85	0	39	8	0	47	13	0	1	1	14	25	21	0	46	192
9:15 PM	0	84	0	2	84	0	27	7	4	34	18	0	4	2	22	23	19	0	42	182
9:30 PM	0	75	1	1	76	0	19	5	1	24	16	0	7	2	23	26	23	0	49	172
9:45 PM	4	86	1	1	91	0	27	0	1	27	15	0	5	0	20	23	23	0	46	184
Hourly Total	5	329	2	7	336	0	112	20	6	132	62	0	17	5	79	97	86	0	183	730
Grand Total	71	3511	4	101	3586	0	2710	143	79	2853	494	2	212	92	708	1777	723	65	2500	9647
Approach %	2.0	97.9	0.1	-	-	0.0	95.0	5.0	-	-	69.8	0.3	29.9	-	-	71.1	28.9	-	-	-
Total %	0.7	36.4	0.0	-	37.2	0.0	28.1	1.5	-	29.6	5.1	0.0	2.2	-	7.3	18.4	7.5	-	25.9	-
Car	71	3511	4	-	3586	0	2710	143	-	2853	494	2	212	-	708	1777	723	-	2500	9647
% Car	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
Ped	-	-	-	101	-	-	-	-	79	-	-	-	-	92	-	-	-	65	-	-
% Ped	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	100.0	-	-

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Turning Movement Data

Start Time	Santa Fe Northbound					Santa Fe Southbound					Yandell Eastbound					Yandell Westbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	17	20	0	0	37	0	8	2	0	10	0	0	0	1	0	7	23	0	0	30	77
7:15 AM	16	21	0	0	37	0	18	7	0	25	0	0	0	0	0	7	52	0	0	59	121
7:30 AM	26	20	0	0	46	0	16	5	0	21	0	0	0	0	0	16	73	0	0	89	156
7:45 AM	39	46	0	0	85	0	14	4	0	18	0	0	0	0	0	16	103	0	1	119	222
Hourly Total	98	107	0	0	205	0	56	18	0	74	0	0	0	1	0	46	251	0	1	297	576
8:00 AM	32	31	0	0	63	0	18	4	1	22	0	0	0	1	0	11	87	0	0	98	183
8:15 AM	35	23	0	0	58	0	14	3	0	17	0	0	0	1	0	10	75	0	2	85	160
8:30 AM	36	27	0	0	63	0	15	2	0	17	0	0	0	0	0	8	80	1	1	89	169
8:45 AM	24	44	0	0	68	0	24	3	0	27	0	0	0	0	0	13	79	0	1	92	187
Hourly Total	127	125	0	0	252	0	71	12	1	83	0	0	0	2	0	42	321	1	4	364	699
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	43	16	0	0	59	0	12	3	2	15	0	0	0	1	0	15	91	0	2	106	180
11:15 AM	39	23	0	0	62	0	16	1	2	17	0	0	0	0	0	13	76	0	2	89	168
11:30 AM	45	20	0	0	65	0	22	8	0	30	0	0	0	0	0	6	98	0	0	104	199
11:45 AM	29	13	0	0	42	0	19	4	0	23	0	0	0	1	0	16	131	0	1	147	212
Hourly Total	156	72	0	0	228	0	69	16	4	85	0	0	0	2	0	50	396	0	5	446	759
12:00 PM	47	23	0	0	70	0	21	4	0	25	0	0	0	0	0	19	120	0	2	139	234
12:15 PM	32	15	0	0	47	0	20	2	0	22	0	0	0	0	0	13	111	0	0	124	193
12:30 PM	41	21	0	0	62	0	17	2	0	19	0	0	0	0	0	19	96	0	2	115	196
12:45 PM	46	15	0	0	61	0	29	9	0	38	0	0	0	0	0	16	94	0	0	110	209
Hourly Total	166	74	0	0	240	0	87	17	0	104	0	0	0	0	0	67	421	0	4	488	832
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	54	22	0	0	76	0	28	3	0	31	0	0	0	1	0	11	123	3	2	137	244
4:15 PM	46	20	0	0	66	1	21	3	0	25	0	0	0	0	0	17	127	1	2	145	236
4:30 PM	47	28	0	0	75	0	23	4	0	27	0	0	0	0	0	24	116	0	6	140	242
4:45 PM	44	20	0	0	64	0	19	6	0	25	0	0	0	0	0	20	170	1	0	191	280
Hourly Total	191	90	0	0	281	1	91	16	0	108	0	0	0	1	0	72	536	5	10	613	1002
5:00 PM	64	26	0	0	90	0	31	4	0	35	0	0	0	0	0	28	199	0	4	227	352
5:15 PM	70	28	0	0	98	0	21	0	0	21	0	0	0	1	0	16	149	1	0	166	285
5:30 PM	43	17	0	0	60	0	16	6	0	22	0	0	0	1	0	24	127	0	1	151	233
5:45 PM	49	17	0	0	66	0	13	5	0	18	0	0	0	0	0	30	94	0	1	124	208
Hourly Total	226	88	0	0	314	0	81	15	0	96	0	0	0	2	0	98	569	1	6	668	1078
6:00 PM	42	19	0	0	61	0	21	2	0	23	0	0	0	0	0	37	98	0	1	135	219
6:15 PM	43	20	0	0	63	0	15	1	0	16	0	0	0	0	0	36	79	0	1	115	194
6:30 PM	51	16	0	0	67	0	22	2	0	24	0	0	1	0	1	45	68	0	1	113	205
6:45 PM	51	10	0	0	61	0	9	3	0	12	0	0	0	0	0	32	47	0	0	79	152
Hourly Total	187	65	0	0	252	0	67	8	0	75	0	0	1	0	1	150	292	0	3	442	770
7:00 PM	48	22	0	0	70	0	20	2	0	22	0	0	0	5	0	15	57	0	0	72	164
7:15 PM	31	12	0	0	43	0	14	0	0	14	0	0	0	0	0	10	59	0	0	69	126
7:30 PM	34	14	0	0	48	0	11	1	0	12	0	0	0	0	0	12	58	0	4	70	130
7:45 PM	41	17	0	0	58	0	15	2	0	17	0	0	0	0	0	13	34	0	0	47	122
Hourly Total	154	65	0	0	219	0	60	5	0	65	0	0	0	5	0	50	208	0	4	258	542
8:00 PM	45	13	0	0	58	0	14	1	0	15	0	0	0	0	0	12	32	1	0	45	118
8:15 PM	47	15	0	0	62	0	15	2	0	17	0	0	0	0	0	8	31	0	1	39	118
8:30 PM	82	19	0	0	101	0	10	3	0	13	0	0	0	1	0	10	37	0	1	47	161
8:45 PM	64	24	0	0	88	0	10	1	0	11	0	0	0	0	0	7	28	0	0	35	134
Hourly Total	238	71	0	0	309	0	49	7	0	56	0	0	0	1	0	37	128	1	2	166	531
9:00 PM	36	13	0	0	49	0	5	3	0	8	0	0	0	0	0	7	33	0	0	40	97
9:15 PM	21	14	0	0	35	0	12	1	0	13	0	0	0	0	0	10	35	0	0	45	93
9:30 PM	19	15	0	0	34	0	8	4	0	12	0	0	0	0	0	7	26	0	2	33	79
9:45 PM	31	11	0	0	42	0	13	1	0	14	0	0	0	0	0	7	38	0	0	45	101
Hourly Total	107	53	0	0	160	0	38	9	0	47	0	0	0	0	0	31	132	0	2	163	370
Grand Total	1650	810	0	0	2460	1	669	123	5	793	0	0	1	14	1	643	3254	8	41	3905	7159
Approach %	67.1	32.9	0.0	-	-	0.1	84.4	15.5	-	-	0.0	0.0	100.0	-	-	16.5	83.3	0.2	-	-	-
Total %	23.0	11.3	0.0	-	34.4	0.0	9.3	1.7	-	11.1	0.0	0.0	0.0	-	0.0	9.0	45.5	0.1	-	54.5	-
Car	1650	810	0	-	2460	1	669	123	-	793	0	0	1	-	1	643	3254	8	-	3905	7159
% Car	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
Ped	-	-	-	0	-	-	-	-	5	-	-	-	-	14	-	-	-	-	41	-	-
% Ped	-	-	-	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

City of El Paso
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Count Name: Santa Fe & Yandell
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Turning Movement Data

Start Time	Santa Fe Northbound					Santa Fe Southbound					Yandell Eastbound					Yandell Westbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
7:00 AM	17	20	0	0	37	0	8	2	0	10	0	0	0	1	0	7	23	0	0	30	77
7:15 AM	16	21	0	0	37	0	18	7	0	25	0	0	0	0	0	7	52	0	0	59	121
7:30 AM	26	20	0	0	46	0	16	5	0	21	0	0	0	0	0	16	73	0	0	89	156
7:45 AM	39	46	0	0	85	0	14	4	0	18	0	0	0	0	0	16	103	0	1	119	222
Hourly Total	98	107	0	0	205	0	56	18	0	74	0	0	0	1	0	46	251	0	1	297	576
8:00 AM	32	31	0	0	63	0	18	4	1	22	0	0	0	1	0	11	87	0	0	98	183
8:15 AM	35	23	0	0	58	0	14	3	0	17	0	0	0	1	0	10	75	0	2	85	160
8:30 AM	36	27	0	0	63	0	15	2	0	17	0	0	0	0	0	8	80	1	1	89	169
8:45 AM	24	44	0	0	68	0	24	3	0	27	0	0	0	0	0	13	79	0	1	92	187
Hourly Total	127	125	0	0	252	0	71	12	1	83	0	0	0	2	0	42	321	1	4	364	699
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	43	16	0	0	59	0	12	3	2	15	0	0	0	1	0	15	91	0	2	106	180
11:15 AM	39	23	0	0	62	0	16	1	2	17	0	0	0	0	0	13	76	0	2	89	168
11:30 AM	45	20	0	0	65	0	22	8	0	30	0	0	0	0	0	6	98	0	0	104	199
11:45 AM	29	13	0	0	42	0	19	4	0	23	0	0	0	1	0	16	131	0	1	147	212
Hourly Total	156	72	0	0	228	0	69	16	4	85	0	0	0	2	0	50	396	0	5	446	759
12:00 PM	47	23	0	0	70	0	21	4	0	25	0	0	0	0	0	19	120	0	2	139	234
12:15 PM	32	15	0	0	47	0	20	2	0	22	0	0	0	0	0	13	111	0	0	124	193
12:30 PM	41	21	0	0	62	0	17	2	0	19	0	0	0	0	0	19	96	0	2	115	196
12:45 PM	46	15	0	0	61	0	29	9	0	38	0	0	0	0	0	16	94	0	0	110	209
Hourly Total	166	74	0	0	240	0	87	17	0	104	0	0	0	0	0	67	421	0	4	488	832
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	54	22	0	0	76	0	28	3	0	31	0	0	0	1	0	11	123	3	2	137	244
4:15 PM	46	20	0	0	66	1	21	3	0	25	0	0	0	0	0	17	127	1	2	145	236
4:30 PM	47	28	0	0	75	0	23	4	0	27	0	0	0	0	0	24	116	0	6	140	242
4:45 PM	44	20	0	0	64	0	19	6	0	25	0	0	0	0	0	20	170	1	0	191	280
Hourly Total	191	90	0	0	281	1	91	16	0	108	0	0	0	1	0	72	536	5	10	613	1002
5:00 PM	64	26	0	0	90	0	31	4	0	35	0	0	0	0	0	28	199	0	4	227	352
5:15 PM	70	28	0	0	98	0	21	0	0	21	0	0	0	1	0	16	149	1	0	166	285
5:30 PM	43	17	0	0	60	0	16	6	0	22	0	0	0	1	0	24	127	0	1	151	233
5:45 PM	49	17	0	0	66	0	13	5	0	18	0	0	0	0	0	30	94	0	1	124	208
Hourly Total	226	88	0	0	314	0	81	15	0	96	0	0	0	2	0	98	569	1	6	668	1078
6:00 PM	42	19	0	0	61	0	21	2	0	23	0	0	0	0	0	37	98	0	1	135	219
6:15 PM	43	20	0	0	63	0	15	1	0	16	0	0	0	0	0	36	79	0	1	115	194
6:30 PM	51	16	0	0	67	0	22	2	0	24	0	0	1	0	1	45	68	0	1	113	205
6:45 PM	51	10	0	0	61	0	9	3	0	12	0	0	0	0	0	32	47	0	0	79	152
Hourly Total	187	65	0	0	252	0	67	8	0	75	0	0	1	0	1	150	292	0	3	442	770
7:00 PM	48	22	0	0	70	0	20	2	0	22	0	0	0	5	0	15	57	0	0	72	164
7:15 PM	31	12	0	0	43	0	14	0	0	14	0	0	0	0	0	10	59	0	0	69	126
7:30 PM	34	14	0	0	48	0	11	1	0	12	0	0	0	0	0	12	58	0	4	70	130
7:45 PM	41	17	0	0	58	0	15	2	0	17	0	0	0	0	0	13	34	0	0	47	122
Hourly Total	154	65	0	0	219	0	60	5	0	65	0	0	0	5	0	50	208	0	4	258	542
8:00 PM	45	13	0	0	58	0	14	1	0	15	0	0	0	0	0	12	32	1	0	45	118
8:15 PM	47	15	0	0	62	0	15	2	0	17	0	0	0	0	0	8	31	0	1	39	118
8:30 PM	82	19	0	0	101	0	10	3	0	13	0	0	0	1	0	10	37	0	1	47	161
8:45 PM	64	24	0	0	88	0	10	1	0	11	0	0	0	0	0	7	28	0	0	35	134
Hourly Total	238	71	0	0	309	0	49	7	0	56	0	0	0	1	0	37	128	1	2	166	531
9:00 PM	36	13	0	0	49	0	5	3	0	8	0	0	0	0	0	7	33	0	0	40	97
9:15 PM	21	14	0	0	35	0	12	1	0	13	0	0	0	0	0	10	35	0	0	45	93
9:30 PM	19	15	0	0	34	0	8	4	0	12	0	0	0	0	0	7	26	0	2	33	79
9:45 PM	31	11	0	0	42	0	13	1	0	14	0	0	0	0	0	7	38	0	0	45	101
Hourly Total	107	53	0	0	160	0	38	9	0	47	0	0	0	0	0	31	132	0	2	163	370
Grand Total	1650	810	0	0	2460	1	669	123	5	793	0	0	1	14	1	643	3254	8	41	3905	7159
Approach %	67.1	32.9	0.0	-	-	0.1	84.4	15.5	-	-	0.0	0.0	100.0	-	-	16.5	83.3	0.2	-	-	-
Total %	23.0	11.3	0.0	-	34.4	0.0	9.3	1.7	-	11.1	0.0	0.0	0.0	-	0.0	9.0	45.5	0.1	-	54.5	-
Car	1650	810	0	-	2460	1	669	123	-	793	0	0	1	-	1	643	3254	8	-	3905	7159
% Car	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
Ped	-	-	-	0	-	-	-	-	5	-	-	-	-	14	-	-	-	-	41	-	-
% Ped	-	-	-	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

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Turning Movement Data

Start Time	Santa Fe Northbound					Santa Fe Southbound					Wyoming Eastbound					Wyoming Westbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	35	26	0	61	11	8	0	0	19	0	109	14	1	123	0	0	0	1	0	203
7:15 AM	0	34	26	0	60	12	13	0	0	25	2	171	24	0	197	0	0	0	2	0	282
7:30 AM	0	48	47	0	95	9	23	0	0	32	0	192	26	0	218	0	0	0	1	0	345
7:45 AM	0	80	47	0	127	9	20	0	0	29	3	245	13	0	261	0	0	0	0	0	417
Hourly Total	0	197	146	0	343	41	64	0	0	105	5	717	77	1	799	0	0	0	4	0	1247
8:00 AM	0	66	50	0	116	17	13	0	0	30	0	215	28	1	243	0	0	0	0	0	389
8:15 AM	0	52	30	0	82	11	13	0	0	24	3	209	27	1	239	0	0	0	0	0	345
8:30 AM	0	58	31	0	89	14	9	0	0	23	3	176	34	1	213	0	0	0	1	0	325
8:45 AM	0	66	34	0	100	18	18	0	0	36	7	159	36	1	202	0	0	0	0	0	338
Hourly Total	0	242	145	0	387	60	53	0	0	113	13	759	125	4	897	0	0	0	1	0	1397
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	0	59	36	0	95	9	21	0	0	30	0	100	37	0	137	0	0	0	0	0	262
11:15 AM	0	61	44	0	105	10	19	0	0	29	3	82	38	0	123	0	0	0	2	0	257
11:30 AM	0	59	44	0	103	14	14	0	0	28	4	81	43	0	128	0	0	0	0	0	259
11:45 AM	0	42	41	0	83	13	21	0	0	34	0	107	53	1	160	0	0	0	1	0	277
Hourly Total	0	221	165	0	386	46	75	0	0	121	7	370	171	1	548	0	0	0	3	0	1055
12:00 PM	0	69	45	0	114	14	26	0	0	40	1	85	43	0	129	0	0	0	1	0	283
12:15 PM	0	46	44	0	90	10	20	0	0	30	1	73	44	1	118	0	0	0	0	0	238
12:30 PM	0	58	53	1	111	13	23	0	0	36	2	88	49	0	139	0	0	0	0	0	286
12:45 PM	0	55	42	2	97	18	28	0	0	46	4	75	44	1	123	1	0	0	1	1	267
Hourly Total	0	228	184	3	412	55	97	0	0	152	8	321	180	2	509	1	0	0	2	1	1074
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	75	63	0	138	16	22	0	0	38	0	85	49	1	134	0	0	0	1	0	310
4:15 PM	0	66	38	0	104	9	29	0	0	38	4	68	65	0	137	0	0	0	0	0	279
4:30 PM	0	76	54	0	130	14	33	0	0	47	0	103	66	0	169	0	0	0	0	0	346
4:45 PM	0	59	59	0	118	12	27	0	0	39	2	71	64	0	137	0	0	0	1	0	294
Hourly Total	0	276	214	0	490	51	111	0	0	162	6	327	244	1	577	0	0	0	2	0	1229
5:00 PM	0	91	70	1	161	16	42	0	0	58	2	82	66	0	150	0	0	0	2	0	369
5:15 PM	0	91	66	0	157	17	21	0	0	38	5	146	95	1	246	0	0	0	0	0	441
5:30 PM	0	59	44	0	103	7	31	0	0	38	2	65	61	0	128	0	0	0	0	0	269
5:45 PM	0	64	65	0	129	11	34	0	0	45	3	53	95	1	151	0	0	0	0	0	325
Hourly Total	0	305	245	1	550	51	128	0	0	179	12	346	317	2	675	0	0	0	2	0	1404
6:00 PM	0	63	55	0	118	8	50	0	0	58	2	48	84	0	134	0	0	0	0	0	310
6:15 PM	0	55	60	0	115	10	40	0	0	50	3	48	102	0	153	0	0	0	1	0	318
6:30 PM	0	68	59	0	127	15	35	0	0	50	1	48	98	5	147	0	0	0	1	0	324
6:45 PM	0	62	44	0	106	5	39	0	0	44	0	53	69	0	122	0	0	0	0	0	272
Hourly Total	0	248	218	0	466	38	164	0	0	202	6	197	353	5	556	0	0	0	2	0	1224
7:00 PM	0	66	51	1	117	6	27	0	0	33	2	42	37	4	81	0	0	0	0	0	231
7:15 PM	0	41	38	1	79	9	15	0	0	24	2	52	35	0	89	0	0	0	0	0	192
7:30 PM	0	47	60	0	107	6	15	0	0	21	1	35	44	0	80	0	0	0	0	0	208
7:45 PM	0	53	48	0	101	7	25	0	0	32	2	25	28	0	55	0	0	0	0	0	188
Hourly Total	0	207	197	2	404	28	82	0	0	110	7	154	144	4	305	0	0	0	0	0	819
8:00 PM	0	57	39	0	96	8	18	0	0	26	3	23	26	0	52	0	0	0	2	0	174
8:15 PM	0	61	52	0	113	8	17	0	0	25	2	23	32	1	57	0	0	0	1	0	195
8:30 PM	0	98	149	0	247	5	12	0	0	17	1	16	28	0	45	0	0	0	0	0	309
8:45 PM	0	90	125	0	215	8	12	0	0	20	1	34	25	0	60	0	0	0	0	0	295
Hourly Total	0	306	365	0	671	29	59	0	0	88	7	96	111	1	214	0	0	0	3	0	973
9:00 PM	0	46	59	0	105	5	8	0	0	13	2	28	36	0	66	0	0	0	0	0	184
9:15 PM	0	33	71	0	104	6	17	0	0	23	2	27	13	0	42	0	0	0	0	0	169
9:30 PM	0	32	66	0	98	5	9	0	0	14	2	29	15	0	46	0	0	0	0	0	158
9:45 PM	0	41	60	0	101	8	13	0	0	21	2	32	18	1	52	0	0	0	0	0	174
Hourly Total	0	152	256	0	408	24	47	0	0	71	8	116	82	1	206	0	0	0	0	0	685
Grand Total	0	2382	2135	6	4517	423	880	0	0	1303	79	3403	1804	22	5286	1	0	0	19	1	11107
Approach %	0.0	52.7	47.3	-	-	32.5	67.5	0.0	-	-	1.5	64.4	34.1	-	-	100.0	0.0	0.0	-	-	-
Total %	0.0	21.4	19.2	-	40.7	3.8	7.9	0.0	-	11.7	0.7	30.6	16.2	-	47.6	0.0	0.0	0.0	-	0.0	-
Car	0	2382	2135	-	4517	423	880	0	-	1303	79	3403	1804	-	5286	1	0	0	-	1	11107
% Car	-	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
Ped	-	-	-	6	-	-	-	-	0	-	-	-	-	22	-	-	-	-	19	-	-
% Ped	-	-	-	100.0	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-

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Turning Movement Data

Start Time	Santa Fe Northbound					Santa Fe Southbound					Wyoming Eastbound					Wyoming Westbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	35	26	0	61	11	8	0	0	19	0	109	14	1	123	0	0	0	1	0	203
7:15 AM	0	34	26	0	60	12	13	0	0	25	2	171	24	0	197	0	0	0	2	0	282
7:30 AM	0	48	47	0	95	9	23	0	0	32	0	192	26	0	218	0	0	0	1	0	345
7:45 AM	0	80	47	0	127	9	20	0	0	29	3	245	13	0	261	0	0	0	0	0	417
Hourly Total	0	197	146	0	343	41	64	0	0	105	5	717	77	1	799	0	0	0	4	0	1247
8:00 AM	0	66	50	0	116	17	13	0	0	30	0	215	28	1	243	0	0	0	0	0	389
8:15 AM	0	52	30	0	82	11	13	0	0	24	3	209	27	1	239	0	0	0	0	0	345
8:30 AM	0	58	31	0	89	14	9	0	0	23	3	176	34	1	213	0	0	0	1	0	325
8:45 AM	0	66	34	0	100	18	18	0	0	36	7	159	36	1	202	0	0	0	0	0	338
Hourly Total	0	242	145	0	387	60	53	0	0	113	13	759	125	4	897	0	0	0	1	0	1397
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	0	59	36	0	95	9	21	0	0	30	0	100	37	0	137	0	0	0	0	0	262
11:15 AM	0	61	44	0	105	10	19	0	0	29	3	82	38	0	123	0	0	0	2	0	257
11:30 AM	0	59	44	0	103	14	14	0	0	28	4	81	43	0	128	0	0	0	0	0	259
11:45 AM	0	42	41	0	83	13	21	0	0	34	0	107	53	1	160	0	0	0	1	0	277
Hourly Total	0	221	165	0	386	46	75	0	0	121	7	370	171	1	548	0	0	0	3	0	1055
12:00 PM	0	69	45	0	114	14	26	0	0	40	1	85	43	0	129	0	0	0	1	0	283
12:15 PM	0	46	44	0	90	10	20	0	0	30	1	73	44	1	118	0	0	0	0	0	238
12:30 PM	0	58	53	1	111	13	23	0	0	36	2	88	49	0	139	0	0	0	0	0	286
12:45 PM	0	55	42	2	97	18	28	0	0	46	4	75	44	1	123	1	0	0	1	1	267
Hourly Total	0	228	184	3	412	55	97	0	0	152	8	321	180	2	509	1	0	0	2	1	1074
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	75	63	0	138	16	22	0	0	38	0	85	49	1	134	0	0	0	1	0	310
4:15 PM	0	66	38	0	104	9	29	0	0	38	4	68	65	0	137	0	0	0	0	0	279
4:30 PM	0	76	54	0	130	14	33	0	0	47	0	103	66	0	169	0	0	0	0	0	346
4:45 PM	0	59	59	0	118	12	27	0	0	39	2	71	64	0	137	0	0	0	1	0	294
Hourly Total	0	276	214	0	490	51	111	0	0	162	6	327	244	1	577	0	0	0	2	0	1229
5:00 PM	0	91	70	1	161	16	42	0	0	58	2	82	66	0	150	0	0	0	2	0	369
5:15 PM	0	91	66	0	157	17	21	0	0	38	5	146	95	1	246	0	0	0	0	0	441
5:30 PM	0	59	44	0	103	7	31	0	0	38	2	65	61	0	128	0	0	0	0	0	269
5:45 PM	0	64	65	0	129	11	34	0	0	45	3	53	95	1	151	0	0	0	0	0	325
Hourly Total	0	305	245	1	550	51	128	0	0	179	12	346	317	2	675	0	0	0	2	0	1404
6:00 PM	0	63	55	0	118	8	50	0	0	58	2	48	84	0	134	0	0	0	0	0	310
6:15 PM	0	55	60	0	115	10	40	0	0	50	3	48	102	0	153	0	0	0	1	0	318
6:30 PM	0	68	59	0	127	15	35	0	0	50	1	48	98	5	147	0	0	0	1	0	324
6:45 PM	0	62	44	0	106	5	39	0	0	44	0	53	69	0	122	0	0	0	0	0	272
Hourly Total	0	248	218	0	466	38	164	0	0	202	6	197	353	5	556	0	0	0	2	0	1224
7:00 PM	0	66	51	1	117	6	27	0	0	33	2	42	37	4	81	0	0	0	0	0	231
7:15 PM	0	41	38	1	79	9	15	0	0	24	2	52	35	0	89	0	0	0	0	0	192
7:30 PM	0	47	60	0	107	6	15	0	0	21	1	35	44	0	80	0	0	0	0	0	208
7:45 PM	0	53	48	0	101	7	25	0	0	32	2	25	28	0	55	0	0	0	0	0	188
Hourly Total	0	207	197	2	404	28	82	0	0	110	7	154	144	4	305	0	0	0	0	0	819
8:00 PM	0	57	39	0	96	8	18	0	0	26	3	23	26	0	52	0	0	0	2	0	174
8:15 PM	0	61	52	0	113	8	17	0	0	25	2	23	32	1	57	0	0	0	1	0	195
8:30 PM	0	98	149	0	247	5	12	0	0	17	1	16	28	0	45	0	0	0	0	0	309
8:45 PM	0	90	125	0	215	8	12	0	0	20	1	34	25	0	60	0	0	0	0	0	295
Hourly Total	0	306	365	0	671	29	59	0	0	88	7	96	111	1	214	0	0	0	3	0	973
9:00 PM	0	46	59	0	105	5	8	0	0	13	2	28	36	0	66	0	0	0	0	0	184
9:15 PM	0	33	71	0	104	6	17	0	0	23	2	27	13	0	42	0	0	0	0	0	169
9:30 PM	0	32	66	0	98	5	9	0	0	14	2	29	15	0	46	0	0	0	0	0	158
9:45 PM	0	41	60	0	101	8	13	0	0	21	2	32	18	1	52	0	0	0	0	0	174
Hourly Total	0	152	256	0	408	24	47	0	0	71	8	116	82	1	206	0	0	0	0	0	685
Grand Total	0	2382	2135	6	4517	423	880	0	0	1303	79	3403	1804	22	5286	1	0	0	19	1	11107
Approach %	0.0	52.7	47.3	-	-	32.5	67.5	0.0	-	-	1.5	64.4	34.1	-	-	100.0	0.0	0.0	-	-	-
Total %	0.0	21.4	19.2	-	40.7	3.8	7.9	0.0	-	11.7	0.7	30.6	16.2	-	47.6	0.0	0.0	0.0	-	0.0	-
Car	0	2382	2135	-	4517	423	880	0	-	1303	79	3403	1804	-	5286	1	0	0	-	1	11107
% Car	-	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
Ped	-	-	-	6	-	-	-	-	0	-	-	-	-	22	-	-	-	-	19	-	-
% Ped	-	-	-	100.0	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-

City of El Paso
Department of Transportation
7968 San Paulo Dr
El Paso, Texas, United States 79907
915 621 6480 rayjl@elpasotexas.gov
Video Detection Count

Count Name: Santa Fe & Franklin
Site Code:
Start Date: 09/14/2012
Page No: 1

Turning Movement Data

Start Time	Santa Fe Northbound					Santa Fe Southbound					Franklin Eastbound					Franklin Westbound					Int Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
7:00 AM	1	59	16	2	76	7	35	2	6	44	0	0	0	5	0	3	0	1	1	4	124
7:15 AM	3	56	17	3	76	10	59	2	1	71	0	0	0	3	0	5	0	0	1	5	152
7:30 AM	5	86	23	4	114	16	87	7	9	110	1	0	2	5	3	6	2	0	5	8	235
7:45 AM	5	111	29	4	145	6	62	11	8	79	0	1	1	7	2	5	0	0	9	5	231
Hourly Total	14	312	85	13	411	39	243	22	24	304	1	1	3	20	5	19	2	1	16	22	742
8:00 AM	2	92	19	1	113	10	69	9	3	88	1	1	1	3	3	3	0	1	2	4	208
8:15 AM	3	64	22	2	89	4	57	13	3	74	0	2	0	4	2	3	0	0	2	3	168
8:30 AM	0	74	19	1	93	7	72	5	3	84	0	1	1	2	2	4	0	1	3	5	184
8:45 AM	6	89	18	1	113	7	84	8	13	99	3	1	0	2	4	2	3	0	1	5	221
Hourly Total	11	319	78	5	408	28	282	35	22	345	4	5	2	11	11	12	3	2	8	17	781
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	2	76	24	1	102	9	87	5	6	101	2	2	1	3	5	3	0	4	5	7	215
11:15 AM	1	67	22	4	90	8	74	3	2	85	1	3	0	2	4	5	1	5	2	11	190
11:30 AM	3	67	22	1	92	14	93	2	3	109	1	4	1	6	6	3	0	2	0	5	212
11:45 AM	3	58	27	0	88	4	96	3	7	103	2	6	5	5	13	6	0	1	2	7	211
Hourly Total	9	268	95	6	372	35	350	13	18	398	6	15	7	16	28	17	1	12	9	30	828
12:00 PM	1	83	28	1	112	11	92	2	6	105	1	4	1	2	6	6	0	4	1	10	233
12:15 PM	0	84	28	0	92	9	90	3	1	102	2	4	1	0	7	3	1	4	0	8	209
12:30 PM	1	82	24	2	107	7	101	3	3	111	0	5	1	0	6	3	0	8	2	11	235
12:45 PM	1	71	34	4	106	9	93	3	7	105	0	1	0	1	1	6	0	4	3	10	222
Hourly Total	3	300	114	7	417	36	376	11	17	423	3	14	3	3	20	18	1	20	6	39	899
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	1	87	42	6	130	14	117	2	4	133	0	8	6	6	14	4	1	8	1	13	290
4:15 PM	1	73	28	0	102	10	148	2	4	160	0	5	1	2	6	11	0	4	1	15	283
4:30 PM	0	81	29	3	110	13	133	5	5	151	0	5	0	2	5	7	0	3	0	10	276
4:45 PM	2	73	30	0	105	9	143	4	9	156	3	5	3	5	11	5	0	4	0	9	281
Hourly Total	4	314	129	9	447	46	541	13	22	600	3	23	10	14	36	27	1	19	2	47	1130
5:00 PM	1	101	46	7	148	9	156	4	2	169	2	6	3	6	11	9	0	5	10	14	342
5:15 PM	3	98	42	3	143	13	184	3	0	200	0	2	2	3	4	4	0	4	8	8	355
5:30 PM	2	75	24	2	101	6	157	5	7	168	1	1	1	4	3	3	0	2	2	5	277
5:45 PM	8	100	35	4	143	16	207	16	10	239	0	4	2	5	6	8	1	4	8	13	401
Hourly Total	14	374	147	16	535	44	704	28	19	776	3	13	8	18	24	24	1	15	28	40	1375
6:00 PM	9	91	26	9	126	8	212	16	7	236	1	8	10	7	19	12	0	4	0	16	397
6:15 PM	5	79	28	11	112	7	225	22	8	254	0	4	1	9	5	6	1	4	6	11	382
6:30 PM	6	98	24	0	128	8	219	32	3	259	3	0	7	3	10	6	0	5	7	11	408
6:45 PM	6	95	24	6	125	9	196	7	3	212	2	3	3	18	8	7	2	2	0	11	356
Hourly Total	26	363	102	26	491	32	852	77	21	981	6	15	21	37	42	31	3	15	13	49	1543
7:00 PM	5	78	28	10	111	10	86	1	0	97	1	0	1	0	2	3	1	5	0	9	219
7:15 PM	2	54	25	4	81	7	91	1	0	99	0	4	0	0	4	5	1	1	0	7	191
7:30 PM	5	74	29	5	108	3	78	2	0	83	6	7	2	0	15	1	0	3	2	4	210
7:45 PM	2	68	21	0	91	3	75	2	0	80	5	2	0	0	7	3	1	4	0	8	186
Hourly Total	14	274	103	19	391	23	330	6	0	359	12	13	3	0	28	12	3	13	2	28	806
8:00 PM	0	76	20	4	96	10	65	0	2	75	2	7	3	2	12	1	0	5	2	6	189
8:15 PM	0	90	27	2	117	2	69	4	5	75	15	7	2	18	24	1	0	3	1	4	220
8:30 PM	2	188	39	6	229	8	73	0	6	81	11	26	8	11	45	2	0	6	0	8	363
8:45 PM	3	165	28	0	196	6	59	2	1	67	4	1	4	3	9	6	0	3	0	9	281
Hourly Total	5	519	114	12	638	26	266	6	14	298	32	41	17	34	90	10	0	17	3	27	1053
9:00 PM	3	80	18	3	101	3	64	1	0	68	1	5	4	1	10	3	0	4	0	7	186
9:15 PM	1	75	26	2	102	6	43	1	0	50	4	5	1	3	10	2	0	0	2	2	164
9:30 PM	1	76	24	5	101	4	44	4	0	52	3	10	4	2	17	1	0	4	4	5	175
9:45 PM	2	80	23	0	105	4	52	1	0	57	3	1	2	1	6	1	1	2	1	4	172
Hourly Total	7	311	91	10	409	17	203	7	0	227	11	21	11	7	43	7	1	10	7	18	697
Grand Total	107	3354	1058	123	4519	326	4147	218	157	4691	81	161	85	160	327	177	16	124	92	317	9854
Approach %	2.4	74.2	23.4	-	-	6.9	88.4	4.6	-	-	24.8	49.2	26.0	-	-	55.8	5.0	39.1	-	-	-
Total %	1.1	34.0	10.7	-	45.9	3.3	42.1	2.2	-	47.6	0.8	1.6	0.9	-	3.3	1.8	0.2	1.3	-	3.2	-
Car	107	3354	1058	-	4519	326	4147	218	-	4691	81	161	85	-	327	177	16	124	-	317	9854
% Car	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	-	100.0	100.0
Ped	-	-	-	123	-	-	-	-	157	-	-	-	-	160	-	-	-	-	92	-	-
% Ped	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

City of El Paso
Department of Transportation
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Video Detection Count

Count Name: Santa Fe & Franklin
Site Code:
Start Date: 09/14/2012
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Turning Movement Data

Start Time	Santa Fe Northbound					Santa Fe Southbound					Franklin Eastbound					Franklin Westbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
7:00 AM	1	59	16	2	76	7	35	2	6	44	0	0	0	5	0	3	0	1	1	4	124
7:15 AM	3	56	17	3	76	10	59	2	1	71	0	0	0	3	0	5	0	0	1	5	152
7:30 AM	5	86	23	4	114	16	87	7	9	110	1	0	2	5	3	6	2	0	5	8	235
7:45 AM	5	111	29	4	145	6	62	11	8	79	0	1	1	7	2	5	0	0	9	5	231
Hourly Total	14	312	85	13	411	39	243	22	24	304	1	1	3	20	5	19	2	1	16	22	742
8:00 AM	2	92	19	1	113	10	69	9	3	88	1	1	1	3	3	3	0	1	2	4	208
8:15 AM	3	64	22	2	89	4	57	13	3	74	0	2	0	4	2	3	0	0	2	3	168
8:30 AM	0	74	19	1	93	7	72	5	3	84	0	1	1	2	2	4	0	1	3	5	184
8:45 AM	6	89	18	1	113	7	84	8	13	99	3	1	0	2	4	2	3	0	1	5	221
Hourly Total	11	319	78	5	408	28	282	35	22	345	4	5	2	11	11	12	3	2	8	17	781
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	2	76	24	1	102	9	87	5	6	101	2	2	1	3	5	3	0	4	5	7	215
11:15 AM	1	67	22	4	90	8	74	3	2	85	1	3	0	2	4	5	1	5	2	11	190
11:30 AM	3	67	22	1	92	14	93	2	3	109	1	4	1	6	6	3	0	2	0	5	212
11:45 AM	3	58	27	0	88	4	96	3	7	103	2	6	5	5	13	6	0	1	2	7	211
Hourly Total	9	268	95	6	372	35	350	13	18	398	6	15	7	16	28	17	1	12	9	30	828
12:00 PM	1	83	28	1	112	11	92	2	6	105	1	4	1	2	6	6	0	4	1	10	233
12:15 PM	0	64	28	0	92	9	90	3	1	102	2	4	1	0	7	3	1	4	0	8	209
12:30 PM	1	82	24	2	107	7	101	3	3	111	0	5	1	0	6	3	0	8	2	11	235
12:45 PM	1	71	34	4	106	9	93	3	7	105	0	1	0	1	1	6	0	4	3	10	222
Hourly Total	3	300	114	7	417	36	376	11	17	423	3	14	3	3	20	18	1	20	6	39	899
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	1	87	42	6	130	14	117	2	4	133	0	8	6	5	14	4	1	8	1	13	290
4:15 PM	1	73	28	0	102	10	148	2	4	160	0	5	1	2	6	11	0	4	1	15	283
4:30 PM	0	81	29	3	110	13	133	5	5	151	0	5	0	2	5	7	0	3	0	10	276
4:45 PM	2	73	30	0	105	9	143	4	9	156	3	5	3	8	11	5	0	4	0	9	281
Hourly Total	4	314	129	9	447	46	541	13	22	600	3	23	10	14	36	27	1	19	2	47	1130
5:00 PM	1	101	46	7	148	9	156	4	2	169	2	6	3	6	11	9	0	5	10	14	342
5:15 PM	3	98	42	3	143	13	184	3	0	200	0	2	2	3	4	4	0	4	8	8	355
5:30 PM	2	75	24	2	101	6	157	5	7	168	1	1	1	4	3	3	0	2	2	5	277
5:45 PM	8	100	35	4	143	16	207	16	10	239	0	4	2	5	6	8	1	4	6	13	401
Hourly Total	14	374	147	16	535	44	704	28	19	776	3	13	8	18	24	24	1	15	26	40	1375
6:00 PM	9	91	26	9	126	8	212	16	7	236	1	8	10	7	19	12	0	4	0	16	397
6:15 PM	5	79	28	11	112	7	225	22	8	254	0	4	1	9	5	6	1	4	6	11	382
6:30 PM	6	98	24	0	128	8	219	32	3	259	3	0	7	3	10	6	0	5	7	11	408
6:45 PM	6	95	24	6	125	9	196	7	3	212	2	3	3	18	8	7	2	2	0	11	356
Hourly Total	26	363	102	26	491	32	852	77	21	961	6	15	21	37	42	31	3	15	13	49	1543
7:00 PM	5	78	28	10	111	10	86	1	0	97	1	0	1	0	2	3	1	5	0	9	219
7:15 PM	2	54	25	4	81	7	91	1	0	99	0	4	0	0	4	5	1	1	0	7	191
7:30 PM	5	74	29	5	108	3	78	2	0	83	6	7	2	0	15	1	0	3	2	4	210
7:45 PM	2	68	21	0	91	3	75	2	0	80	5	2	0	0	7	3	1	4	0	8	186
Hourly Total	14	274	103	19	391	23	330	6	0	359	12	13	3	0	28	12	3	13	2	28	806
8:00 PM	0	76	20	4	96	10	65	0	2	75	2	7	3	2	12	1	0	5	2	6	189
8:15 PM	0	90	27	2	117	2	69	4	5	75	15	7	2	18	24	1	0	3	1	4	220
8:30 PM	2	188	39	6	229	8	73	0	6	81	11	26	8	11	45	2	0	6	0	8	363
8:45 PM	3	165	28	0	196	6	59	2	1	67	4	1	4	3	9	6	0	3	0	9	281
Hourly Total	5	519	114	12	638	26	266	6	14	298	32	41	17	34	90	10	0	17	3	27	1053
9:00 PM	3	80	18	3	101	3	64	1	0	68	1	5	4	1	10	3	0	4	0	7	186
9:15 PM	1	75	26	2	102	6	43	1	0	50	4	5	1	3	10	2	0	0	2	2	164
9:30 PM	1	76	24	5	101	4	44	4	0	52	3	10	4	2	17	1	0	4	4	5	175
9:45 PM	2	80	23	0	105	4	52	1	0	57	3	1	2	1	6	1	1	2	1	4	172
Hourly Total	7	311	91	10	409	17	203	7	0	227	11	21	11	7	43	7	1	10	7	18	697
Grand Total	107	3354	1058	123	4519	326	4147	218	157	4691	81	161	85	160	327	177	16	124	92	317	9854
Approach %	2.4	74.2	23.4	-	-	6.9	88.4	4.6	-	-	24.8	49.2	26.0	-	-	55.8	5.0	39.1	-	-	-
Total %	1.1	34.0	10.7	-	45.9	3.3	42.1	2.2	-	47.6	0.8	1.6	0.9	-	3.3	1.8	0.2	1.3	-	3.2	-
Car	107	3354	1058	-	4519	326	4147	218	-	4691	81	161	85	-	327	177	16	124	-	317	9854
% Car	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	-	100.0	100.0
Ped	-	-	-	123	-	-	-	-	157	-	-	-	-	160	-	-	-	-	92	-	-
% Ped	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

City of El Paso
Department of Transportation
7968 San Paulo Dr
El Paso, Texas, United States 79907
915 621 6480 rayjl@elpasotexas.gov
Video Detection Count

Count Name: Main & Santa Fe
Site Code:
Start Date: 09/14/2012

Turning Movement Data

Start Time	Santa Fe Northbound					Santa Fe Southbound				Main Westbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
7:00 AM	0	70	2	1	72	0	43	0	43	2	2	9	4	119
7:15 AM	1	76	4	0	81	0	62	0	62	0	0	2	0	143
7:30 AM	0	115	2	1	117	0	91	0	91	2	0	3	2	210
7:45 AM	0	149	2	2	151	0	63	0	63	1	0	3	1	215
Hourly Total	1	410	10	4	421	0	259	0	259	5	2	17	7	687
8:00 AM	0	110	2	1	112	0	76	2	76	0	0	3	0	188
8:15 AM	0	89	4	5	93	1	57	1	58	3	0	4	3	154
8:30 AM	0	91	4	1	95	2	70	1	72	1	0	3	1	168
8:45 AM	0	111	5	2	116	2	88	2	90	1	0	3	1	207
Hourly Total	0	401	15	9	416	5	291	6	296	5	0	13	5	717
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	0	106	4	1	110	1	92	2	93	2	0	6	2	205
11:15 AM	0	86	9	3	95	0	79	0	79	5	0	6	5	179
11:30 AM	0	87	5	2	92	3	91	0	94	4	0	0	4	190
11:45 AM	0	90	9	4	99	4	101	0	105	2	1	4	3	207
Hourly Total	0	369	27	10	396	8	363	2	371	13	1	16	14	781
12:00 PM	0	103	10	3	113	6	95	0	101	4	4	1	8	222
12:15 PM	0	90	8	4	98	1	88	2	89	0	1	2	1	188
12:30 PM	0	100	8	0	108	3	104	0	107	1	2	1	3	218
12:45 PM	0	103	7	3	110	2	101	0	103	1	3	3	4	217
Hourly Total	0	396	33	10	429	12	388	2	400	6	10	7	16	845
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	127	6	6	133	1	134	2	135	5	1	2	6	274
4:15 PM	0	98	7	2	105	3	156	1	159	2	1	0	3	267
4:30 PM	0	111	9	3	120	3	134	2	137	2	0	0	2	259
4:45 PM	0	104	11	3	115	2	149	7	151	4	1	0	5	271
Hourly Total	0	440	33	14	473	9	573	12	582	13	3	2	16	1071
5:00 PM	0	143	13	3	156	4	164	3	168	4	0	3	4	328
5:15 PM	0	139	18	3	157	3	189	3	192	6	3	3	9	358
5:30 PM	0	101	16	12	117	12	137	4	149	5	3	2	8	274
5:45 PM	0	127	19	15	146	11	211	2	222	8	9	4	17	385
Hourly Total	0	510	66	33	576	30	701	12	731	23	15	12	38	1345
6:00 PM	0	122	15	6	137	16	213	5	229	6	4	10	10	376
6:15 PM	0	110	9	6	119	5	227	2	232	6	3	5	9	360
6:30 PM	0	124	12	3	136	3	227	13	230	1	2	4	3	369
6:45 PM	1	118	8	5	127	6	203	13	209	6	5	7	11	347
Hourly Total	1	474	44	20	519	30	870	33	900	19	14	26	33	1452
7:00 PM	0	117	10	4	127	1	93	2	94	4	3	7	7	228
7:15 PM	0	87	13	2	100	1	91	4	92	3	2	0	5	197
7:30 PM	0	116	5	5	121	2	86	0	88	0	1	5	1	210
7:45 PM	0	97	7	7	104	3	78	1	81	3	5	2	8	193
Hourly Total	0	417	35	18	452	7	348	7	355	10	11	14	21	828
8:00 PM	0	95	7	4	102	3	69	3	72	2	2	9	4	178
8:15 PM	0	127	7	17	134	1	71	2	72	3	3	7	6	212
8:30 PM	0	232	14	14	246	6	77	6	83	1	1	3	2	331
8:45 PM	0	182	14	11	196	1	69	1	70	2	2	1	4	270
Hourly Total	0	636	42	46	678	11	286	12	297	8	8	20	16	991
9:00 PM	0	104	12	9	116	1	69	3	70	3	0	5	3	189
9:15 PM	0	93	8	11	101	0	49	2	49	1	2	3	3	153
9:30 PM	0	103	6	16	109	2	47	0	49	4	1	6	5	163
9:45 PM	0	105	7	3	112	0	54	0	54	1	0	1	1	167
Hourly Total	0	405	33	39	438	3	219	5	222	9	3	15	12	672
Grand Total	2	4458	338	203	4798	115	4298	91	4413	111	67	142	178	9389
Approach %	0.0	92.9	7.0	-	-	2.6	97.4	-	-	62.4	37.6	-	-	-
Total %	0.0	47.5	3.6	-	51.1	1.2	45.8	-	47.0	1.2	0.7	-	1.9	-
Car	2	4458	338	-	4798	115	4298	-	4413	111	67	-	178	9389
% Car	100.0	100.0	100.0	-	100.0	100.0	100.0	-	100.0	100.0	100.0	-	100.0	100.0
Ped	-	-	-	203	-	-	-	91	-	-	-	142	-	-
% Ped	-	-	-	100.0	-	-	-	100.0	-	-	-	100.0	-	-

City of El Paso
Department of Transportation
7968 San Paulo Dr
El Paso, Texas, United States 79907
915 621 6480 rayjl@elpasotexas.gov
Video Detection Count

Count Name: Main & Santa Fe
Site Code:
Start Date: 09/14/2012

Turning Movement Data

Start Time	Santa Fe Northbound					Santa Fe Southbound				Main Westbound				
	Left	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
7:00 AM	0	70	2	1	72	0	43	0	43	2	2	9	4	119
7:15 AM	1	76	4	0	81	0	62	0	62	0	0	2	0	143
7:30 AM	0	115	2	1	117	0	91	0	91	2	0	3	2	210
7:45 AM	0	149	2	2	151	0	63	0	63	1	0	3	1	215
Hourly Total	1	410	10	4	421	0	259	0	259	5	2	17	7	687
8:00 AM	0	110	2	1	112	0	76	2	76	0	0	3	0	188
8:15 AM	0	89	4	5	93	1	57	1	58	3	0	4	3	154
8:30 AM	0	91	4	1	95	2	70	1	72	1	0	3	1	168
8:45 AM	0	111	5	2	116	2	88	2	90	1	0	3	1	207
Hourly Total	0	401	15	9	416	5	291	6	296	5	0	13	5	717
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	0	106	4	1	110	1	92	2	93	2	0	6	2	205
11:15 AM	0	86	9	3	95	0	79	0	79	5	0	6	5	179
11:30 AM	0	87	5	2	92	3	91	0	94	4	0	0	4	190
11:45 AM	0	90	9	4	99	4	101	0	105	2	1	4	3	207
Hourly Total	0	369	27	10	396	8	363	2	371	13	1	16	14	781
12:00 PM	0	103	10	3	113	6	95	0	101	4	4	1	8	222
12:15 PM	0	90	8	4	98	1	88	2	89	0	1	2	1	188
12:30 PM	0	100	8	0	108	3	104	0	107	1	2	1	3	218
12:45 PM	0	103	7	3	110	2	101	0	103	1	3	3	4	217
Hourly Total	0	396	33	10	429	12	388	2	400	6	10	7	16	845
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	127	6	6	133	1	134	2	135	5	1	2	6	274
4:15 PM	0	98	7	2	105	3	156	1	159	2	1	0	3	267
4:30 PM	0	111	9	3	120	3	134	2	137	2	0	0	2	259
4:45 PM	0	104	11	3	115	2	149	7	151	4	1	0	5	271
Hourly Total	0	440	33	14	473	9	573	12	582	13	3	2	16	1071
5:00 PM	0	143	13	3	156	4	164	3	168	4	0	3	4	328
5:15 PM	0	139	18	3	157	3	189	3	192	6	3	3	9	358
5:30 PM	0	101	16	12	117	12	137	4	149	5	3	2	8	274
5:45 PM	0	127	19	15	146	11	211	2	222	8	9	4	17	385
Hourly Total	0	510	66	33	576	30	701	12	731	23	15	12	38	1345
6:00 PM	0	122	15	6	137	16	213	5	229	6	4	10	10	376
6:15 PM	0	110	9	6	119	5	227	2	232	6	3	5	9	360
6:30 PM	0	124	12	3	136	3	227	13	230	1	2	4	3	369
6:45 PM	1	118	8	5	127	6	203	13	209	6	5	7	11	347
Hourly Total	1	474	44	20	519	30	870	33	900	19	14	26	33	1452
7:00 PM	0	117	10	4	127	1	93	2	94	4	3	7	7	228
7:15 PM	0	87	13	2	100	1	91	4	92	3	2	0	5	197
7:30 PM	0	116	5	5	121	2	86	0	88	0	1	5	1	210
7:45 PM	0	97	7	7	104	3	78	1	81	3	5	2	8	193
Hourly Total	0	417	35	18	452	7	348	7	355	10	11	14	21	828
8:00 PM	0	95	7	4	102	3	69	3	72	2	2	9	4	178
8:15 PM	0	127	7	17	134	1	71	2	72	3	3	7	6	212
8:30 PM	0	232	14	14	246	6	77	6	83	1	1	3	2	331
8:45 PM	0	182	14	11	196	1	69	1	70	2	2	1	4	270
Hourly Total	0	636	42	46	678	11	286	12	297	8	8	20	16	991
9:00 PM	0	104	12	9	116	1	69	3	70	3	0	5	3	189
9:15 PM	0	93	8	11	101	0	49	2	49	1	2	3	3	153
9:30 PM	0	103	6	16	109	2	47	0	49	4	1	6	5	163
9:45 PM	0	105	7	3	112	0	54	0	54	1	0	1	1	167
Hourly Total	0	405	33	39	438	3	219	5	222	9	3	15	12	672
Grand Total	2	4458	338	203	4798	115	4298	91	4413	111	67	142	178	9389
Approach %	0.0	92.9	7.0	-	-	2.6	97.4	-	-	62.4	37.6	-	-	-
Total %	0.0	47.5	3.6	-	51.1	1.2	45.8	-	47.0	1.2	0.7	-	1.9	-
Car	2	4458	338	-	4798	115	4298	-	4413	111	67	-	178	9389
% Car	100.0	100.0	100.0	-	100.0	100.0	100.0	-	100.0	100.0	100.0	-	100.0	100.0
Ped	-	-	-	203	-	-	-	91	-	-	-	142	-	-
% Ped	-	-	-	100.0	-	-	-	100.0	-	-	-	100.0	-	-

City of El Paso
Department of Transportation
7968 San Paulo Dr
El Paso, Texas, United States 79907
915 621 6480 rayjl@elpasotexas.gov
Video Detection Count

Count Name: Santa Fe & Sheldon
Site Code:
Start Date: 09/14/2012
Page No: 1

Turning Movement Data

Start Time	Santa Fe Northbound					Santa Fe Southbound					Driveway Eastbound					San Francisco Westbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
7:00 AM	3	66	0	2	69	1	38	5	4	44	2	0	1	2	3	0	0	4	0	4	120
7:15 AM	4	77	0	4	81	0	53	10	2	63	2	1	0	4	3	0	0	1	1	1	148
7:30 AM	7	112	0	3	119	0	68	23	1	91	1	0	0	3	1	2	0	3	1	5	216
7:45 AM	5	143	0	2	148	1	53	13	1	67	1	0	1	0	2	1	0	1	1	2	219
Hourly Total	19	398	0	11	417	2	212	51	8	265	6	1	2	9	9	3	0	9	3	12	703
8:00 AM	2	105	0	2	107	1	64	9	2	74	1	0	0	4	1	0	2	6	0	8	190
8:15 AM	3	83	0	2	86	2	51	7	1	60	0	0	0	1	0	2	3	9	0	14	160
8:30 AM	5	87	1	3	93	0	66	2	5	68	1	0	1	3	2	3	0	7	2	10	173
8:45 AM	2	106	0	4	108	0	79	11	0	90	5	0	1	4	6	2	0	4	0	6	210
Hourly Total	12	381	1	11	394	3	260	29	8	292	7	0	2	12	9	7	5	26	2	38	733
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	2	98	0	2	100	0	91	5	4	96	3	0	0	1	3	7	0	11	0	18	217
11:15 AM	2	78	0	5	80	0	80	2	1	82	0	0	0	4	0	2	0	16	0	18	180
11:30 AM	3	82	0	2	85	0	95	3	8	98	0	0	2	4	2	8	0	5	0	13	198
11:45 AM	1	87	0	3	88	1	96	6	13	103	3	0	1	1	4	2	0	10	1	12	207
Hourly Total	8	345	0	12	353	1	362	16	26	379	6	0	3	10	9	19	0	42	1	61	802
12:00 PM	0	92	0	3	92	0	98	2	0	100	3	2	2	0	7	9	0	19	1	28	227
12:15 PM	4	72	0	4	76	0	87	4	3	91	6	0	2	1	8	7	0	22	0	29	204
12:30 PM	2	79	0	10	81	0	101	4	5	105	4	0	1	2	5	9	0	24	1	33	224
12:45 PM	4	88	0	3	92	0	94	8	5	102	5	0	2	3	7	5	0	20	0	25	226
Hourly Total	10	331	0	20	341	0	380	18	13	398	18	2	7	6	27	30	0	85	2	115	881
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	2	109	0	1	111	0	137	5	5	142	10	0	4	1	14	5	2	15	0	22	289
4:15 PM	2	90	0	2	92	0	141	14	5	155	6	0	5	3	11	4	0	4	0	8	266
4:30 PM	3	90	0	5	93	0	128	8	1	136	6	0	1	4	7	5	0	23	0	28	264
4:45 PM	6	88	0	0	94	0	135	17	9	152	8	0	13	10	21	12	1	16	0	29	296
Hourly Total	13	377	0	8	390	0	541	44	20	585	30	0	23	18	53	26	3	58	0	87	1115
5:00 PM	3	108	0	8	111	0	157	10	11	167	29	0	13	7	42	11	0	18	1	29	349
5:15 PM	8	115	0	10	123	0	169	29	13	198	7	0	4	9	11	11	3	26	0	40	372
5:30 PM	10	95	0	18	105	0	115	31	14	146	2	0	3	15	5	16	6	11	0	33	289
5:45 PM	14	102	0	60	116	0	158	58	24	216	6	0	3	10	9	5	15	33	3	53	394
Hourly Total	35	420	0	96	455	0	599	128	62	727	44	0	23	41	67	43	24	88	4	155	1404
6:00 PM	16	106	1	55	123	0	141	82	44	223	2	0	2	8	4	7	7	31	1	45	395
6:15 PM	27	92	0	28	119	0	131	102	14	233	2	1	1	15	4	8	11	21	1	40	396
6:30 PM	39	111	0	24	150	0	100	125	18	225	0	0	1	10	1	17	2	24	0	43	419
6:45 PM	24	103	0	23	127	0	126	88	55	214	1	0	2	14	3	11	2	25	1	38	382
Hourly Total	106	412	1	130	519	0	498	397	131	895	5	1	6	47	12	43	22	101	3	166	1592
7:00 PM	6	104	0	12	110	0	68	20	29	88	2	0	2	5	4	6	1	24	0	31	233
7:15 PM	2	82	0	9	84	1	75	6	20	82	3	0	1	15	4	10	0	18	2	28	198
7:30 PM	0	82	0	10	82	0	64	0	17	64	12	0	0	21	12	14	1	23	3	38	196
7:45 PM	0	60	0	28	60	1	56	5	37	62	22	0	1	12	23	9	1	20	3	30	175
Hourly Total	8	328	0	59	336	2	263	31	103	296	39	0	4	53	43	39	3	85	8	127	802
8:00 PM	0	57	0	23	57	0	66	5	25	71	14	0	6	8	20	7	0	29	3	36	184
8:15 PM	2	63	0	24	65	0	70	1	23	71	51	0	14	14	65	4	1	23	0	28	229
8:30 PM	0	112	0	19	112	0	78	3	31	81	77	0	60	18	137	7	0	60	9	67	397
8:45 PM	0	82	0	7	82	0	70	2	13	72	78	0	27	18	105	4	0	32	1	36	295
Hourly Total	2	314	0	73	316	0	284	11	92	295	220	0	107	58	327	22	1	144	13	167	1105
9:00 PM	0	60	0	16	60	0	71	1	20	72	22	0	7	8	29	12	1	35	0	48	209
9:15 PM	0	55	0	11	55	0	51	0	11	51	15	0	3	22	18	11	0	25	4	36	160
9:30 PM	1	59	0	13	60	0	51	0	19	51	21	0	17	19	38	10	0	31	0	41	190
9:45 PM	0	72	0	11	72	0	55	0	16	55	29	0	12	22	41	13	1	18	0	32	200
Hourly Total	1	246	0	51	247	0	228	1	66	229	87	0	39	71	126	46	2	109	4	157	759
Grand Total	214	3552	2	471	3768	8	3627	726	529	4361	462	4	216	325	682	278	60	747	40	1085	9896
Approach %	5.7	94.3	0.1	-	-	0.2	83.2	16.6	-	-	67.7	0.6	31.7	-	-	25.6	5.5	68.8	-	-	-
Total %	2.2	35.9	0.0	-	38.1	0.1	36.7	7.3	-	44.1	4.7	0.0	2.2	-	6.9	2.8	0.6	7.5	-	11.0	-
Car	214	3552	2	-	3768	8	3627	726	-	4361	462	4	216	-	682	278	60	747	-	1085	9896
% Car	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	-	100.0	100.0
Ped	-	-	-	471	-	-	-	-	529	-	-	-	-	325	-	-	-	-	40	-	-
% Ped	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

City of El Paso
Department of Transportation
7968 San Paulo Dr
El Paso, Texas, United States 79907
915 621 6480 rayjl@elpasotexas.gov
Video Detection Count

Count Name: Santa Fe & Sheldon
Site Code:
Start Date: 09/14/2012
Page No: 1

Turning Movement Data

Start Time	Santa Fe Northbound					Santa Fe Southbound					Driveway Eastbound					San Francisco Westbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	3	66	0	2	69	1	38	5	4	44	2	0	1	2	3	0	0	4	0	4	120
7:15 AM	4	77	0	4	81	0	53	10	2	63	2	1	0	4	3	0	0	1	1	1	148
7:30 AM	7	112	0	3	119	0	68	23	1	91	1	0	0	3	1	2	0	3	1	5	216
7:45 AM	5	143	0	2	148	1	53	13	1	67	1	0	1	0	2	1	0	1	1	2	219
Hourly Total	19	398	0	11	417	2	212	51	8	265	6	1	2	9	9	3	0	9	3	12	703
8:00 AM	2	105	0	2	107	1	64	9	2	74	1	0	0	4	1	0	2	6	0	8	190
8:15 AM	3	83	0	2	86	2	51	7	1	60	0	0	0	1	0	2	3	9	0	14	160
8:30 AM	5	87	1	3	93	0	66	2	5	68	1	0	1	3	2	3	0	7	2	10	173
8:45 AM	2	106	0	4	108	0	79	11	0	90	5	0	1	4	6	2	0	4	0	6	210
Hourly Total	12	381	1	11	394	3	260	29	8	292	7	0	2	12	9	7	5	26	2	38	733
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	2	98	0	2	100	0	91	5	4	96	3	0	0	1	3	7	0	11	0	18	217
11:15 AM	2	78	0	5	80	0	80	2	1	82	0	0	0	4	0	2	0	16	0	18	180
11:30 AM	3	82	0	2	85	0	95	3	8	98	0	0	2	4	2	8	0	5	0	13	198
11:45 AM	1	87	0	3	88	1	96	6	13	103	3	0	1	1	4	2	0	10	1	12	207
Hourly Total	8	345	0	12	353	1	362	16	26	379	6	0	3	10	9	19	0	42	1	61	802
12:00 PM	0	92	0	3	92	0	98	2	0	100	3	2	2	0	7	9	0	19	1	28	227
12:15 PM	4	72	0	4	76	0	87	4	3	91	6	0	2	1	8	7	0	22	0	29	204
12:30 PM	2	79	0	10	81	0	101	4	5	105	4	0	1	2	5	9	0	24	1	33	224
12:45 PM	4	88	0	3	92	0	94	8	5	102	5	0	2	3	7	5	0	20	0	25	226
Hourly Total	10	331	0	20	341	0	380	18	13	398	18	2	7	6	27	30	0	85	2	115	881
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	2	109	0	1	111	0	137	5	5	142	10	0	4	1	14	5	2	15	0	22	289
4:15 PM	2	90	0	2	92	0	141	14	5	155	6	0	5	3	11	4	0	4	0	8	266
4:30 PM	3	90	0	5	93	0	128	8	1	136	6	0	1	4	7	5	0	23	0	28	264
4:45 PM	6	88	0	0	94	0	135	17	9	152	8	0	13	10	21	12	1	16	0	29	296
Hourly Total	13	377	0	8	390	0	541	44	20	585	30	0	23	18	53	26	3	58	0	87	1115
5:00 PM	3	108	0	8	111	0	157	10	11	167	29	0	13	7	42	11	0	18	1	29	349
5:15 PM	8	115	0	10	123	0	169	29	13	198	7	0	4	9	11	11	3	26	0	40	372
5:30 PM	10	95	0	18	105	0	115	31	14	146	2	0	3	15	5	16	6	11	0	33	289
5:45 PM	14	102	0	60	116	0	158	58	24	216	6	0	3	10	9	5	15	33	3	53	394
Hourly Total	35	420	0	96	455	0	599	128	62	727	44	0	23	41	67	43	24	88	4	155	1404
6:00 PM	16	106	1	55	123	0	141	82	44	223	2	0	2	0	4	7	7	31	1	45	395
6:15 PM	27	92	0	28	119	0	131	102	14	233	2	1	1	15	4	8	11	21	1	40	396
6:30 PM	39	111	0	24	150	0	100	125	18	225	0	0	1	10	1	17	2	24	0	43	419
6:45 PM	24	103	0	23	127	0	126	88	55	214	1	0	2	14	3	11	2	25	1	38	382
Hourly Total	106	412	1	130	519	0	498	397	131	895	5	1	6	47	12	43	22	101	3	166	1592
7:00 PM	6	104	0	12	110	0	68	20	29	88	2	0	2	5	4	6	1	24	0	31	233
7:15 PM	2	82	0	9	84	1	75	6	20	82	3	0	1	15	4	10	0	18	2	28	198
7:30 PM	0	82	0	10	82	0	64	0	17	64	12	0	0	21	12	14	1	23	3	38	196
7:45 PM	0	60	0	28	60	1	56	5	37	62	22	0	1	12	23	9	1	20	3	30	175
Hourly Total	8	328	0	59	336	2	263	31	103	296	39	0	4	53	43	39	3	85	8	127	802
8:00 PM	0	57	0	23	57	0	66	5	25	71	14	0	6	8	20	7	0	29	3	36	184
8:15 PM	2	63	0	24	65	0	70	1	23	71	51	0	14	14	65	4	1	23	0	28	229
8:30 PM	0	112	0	19	112	0	78	3	31	81	77	0	60	18	137	7	0	60	9	67	397
8:45 PM	0	82	0	7	82	0	70	2	13	72	78	0	27	18	105	4	0	32	1	36	295
Hourly Total	2	314	0	73	316	0	284	11	92	295	220	0	107	58	327	22	1	144	13	167	1105
9:00 PM	0	60	0	16	60	0	71	1	20	72	22	0	7	8	29	12	1	35	0	48	209
9:15 PM	0	55	0	11	55	0	51	0	11	51	15	0	3	22	18	11	0	25	4	36	160
9:30 PM	1	59	0	13	60	0	51	0	19	51	21	0	17	19	38	10	0	31	0	41	190
9:45 PM	0	72	0	11	72	0	55	0	16	55	29	0	12	22	41	13	1	18	0	32	200
Hourly Total	1	246	0	51	247	0	228	1	66	229	87	0	39	71	126	46	2	109	4	157	759
Grand Total	214	3552	2	471	3768	8	3627	726	529	4361	462	4	216	325	682	278	60	747	40	1085	9896
Approach %	5.7	94.3	0.1	-	-	0.2	83.2	16.6	-	-	67.7	0.6	31.7	-	-	25.6	5.5	68.8	-	-	-
Total %	2.2	35.9	0.0	-	38.1	0.1	36.7	7.3	-	44.1	4.7	0.0	2.2	-	6.9	2.8	0.6	7.5	-	11.0	-
Car	214	3552	2	-	3768	8	3627	726	-	4361	462	4	216	-	682	278	60	747	-	1085	9896
% Car	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	-	100.0	100.0
Ped	-	-	-	471	-	-	-	-	529	-	-	-	-	325	-	-	-	-	40	-	-
% Ped	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

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7968 San Paulo Dr
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Count Name: San Antonio & Santa Fe
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Start Date: 09/14/2012
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Turning Movement Data

Start Time	Santa Fe Northbound					Santa Fe Southbound					San Antonio Eastbound					San Antonio Westbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	4	65	1	2	70	4	31	3	1	38	8	0	8	2	16	0	1	0	1	1	125
7:15 AM	2	61	1	2	64	4	45	4	0	53	15	2	11	4	28	1	2	2	5	5	150
7:30 AM	4	91	1	4	96	5	52	10	0	67	24	1	11	2	36	3	0	4	2	7	206
7:45 AM	2	122	2	3	126	3	45	7	3	55	22	4	12	4	38	1	0	4	10	5	224
Hourly Total	12	339	5	11	356	16	173	24	4	213	69	7	42	12	118	5	3	10	18	18	705
8:00 AM	3	88	3	0	94	10	45	13	0	68	20	2	7	2	29	1	4	4	0	9	200
8:15 AM	1	66	3	1	70	9	37	5	0	51	19	7	7	4	33	4	2	4	1	10	164
8:30 AM	0	80	2	3	82	8	56	5	3	69	9	1	8	0	18	2	0	5	3	7	176
8:45 AM	1	91	2	2	94	9	57	14	0	80	14	1	11	1	26	4	1	6	1	11	211
Hourly Total	5	325	10	6	340	36	195	37	3	268	62	11	33	7	106	11	7	19	5	37	751
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	2	79	2	4	83	11	74	11	1	96	13	4	3	3	20	4	4	9	7	17	216
11:15 AM	1	60	1	1	62	12	62	11	1	85	11	3	7	4	21	3	5	12	3	20	188
11:30 AM	0	55	1	3	56	13	83	10	2	106	23	7	15	3	45	3	10	9	4	22	229
11:45 AM	0	63	2	4	65	7	72	17	0	96	13	6	7	0	26	8	9	12	5	29	216
Hourly Total	3	257	6	12	266	43	291	49	4	383	60	20	32	10	112	18	28	42	19	88	849
12:00 PM	2	80	2	1	84	8	82	14	2	104	8	2	3	2	13	4	2	5	4	11	212
12:15 PM	0	57	0	3	57	8	69	13	2	90	15	10	2	1	27	7	7	5	5	19	193
12:30 PM	5	61	1	3	67	5	90	16	0	111	16	5	11	1	32	9	8	6	2	23	233
12:45 PM	2	60	1	4	63	11	71	18	4	100	17	6	10	8	33	6	4	13	5	23	219
Hourly Total	9	258	4	11	271	32	312	61	8	405	56	23	26	12	105	26	21	29	16	76	857
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	4	89	1	1	94	13	117	13	1	143	13	2	3	0	18	3	8	11	3	22	277
4:15 PM	0	71	3	0	74	11	118	19	0	148	10	1	9	1	20	7	7	9	2	23	265
4:30 PM	0	71	2	1	73	11	111	16	0	138	16	4	12	1	32	4	4	9	0	17	260
4:45 PM	2	66	2	4	70	19	131	27	2	177	18	9	9	8	36	5	11	10	5	26	309
Hourly Total	6	297	8	6	311	54	477	75	3	606	57	16	33	10	106	19	30	39	10	88	1111
5:00 PM	0	72	2	4	74	5	153	22	1	180	27	2	11	5	40	4	7	12	4	23	317
5:15 PM	5	90	2	2	97	18	143	17	2	178	17	6	22	4	45	11	13	17	5	41	361
5:30 PM	1	70	2	0	73	12	106	14	1	132	14	4	9	2	27	8	15	21	4	44	276
5:45 PM	2	84	2	0	88	28	108	33	8	169	13	6	11	8	30	1	12	26	3	39	326
Hourly Total	8	316	8	6	332	63	510	86	12	659	71	18	53	17	142	24	47	76	16	147	1280
6:00 PM	1	92	3	7	96	24	100	20	3	144	16	8	16	5	40	5	9	17	4	31	311
6:15 PM	3	82	1	5	86	21	94	24	5	139	21	4	6	7	31	7	3	18	7	28	284
6:30 PM	0	119	4	11	123	12	92	19	5	123	14	4	3	10	21	7	10	24	2	41	308
6:45 PM	3	83	0	0	86	23	91	21	1	135	23	6	10	4	39	9	9	11	5	29	289
Hourly Total	7	376	8	23	391	80	377	84	14	541	74	22	35	26	131	28	31	70	18	129	1192
7:00 PM	0	79	4	0	83	15	60	12	7	87	19	6	3	1	28	4	3	16	10	23	221
7:15 PM	1	52	1	0	54	12	60	26	10	98	22	2	7	6	31	6	6	7	9	19	202
7:30 PM	1	63	7	6	71	13	70	19	7	102	13	9	1	9	23	2	5	9	2	16	212
7:45 PM	1	44	1	10	46	17	55	11	2	83	12	6	6	6	24	1	4	2	2	7	160
Hourly Total	3	238	13	16	254	57	245	68	26	370	66	23	17	22	106	13	18	34	23	65	795
8:00 PM	0	35	0	1	35	11	52	14	4	77	20	3	5	3	28	6	4	3	3	13	153
8:15 PM	2	38	0	5	40	10	52	20	0	82	33	6	12	7	51	3	4	8	4	15	188
8:30 PM	1	45	3	6	49	26	91	29	8	146	59	8	26	10	93	5	4	5	1	14	302
8:45 PM	1	37	0	4	38	18	59	25	6	102	36	6	13	7	55	8	6	5	4	19	214
Hourly Total	4	155	3	16	162	65	254	88	18	407	148	23	56	27	227	22	18	21	12	61	857
9:00 PM	1	28	5	4	34	11	58	20	3	89	19	7	9	1	35	5	8	11	4	24	182
9:15 PM	2	23	0	2	25	10	40	14	13	64	24	3	9	5	36	13	3	7	7	23	148
9:30 PM	2	28	1	2	31	17	42	19	5	78	20	5	13	7	38	5	6	14	4	25	172
9:45 PM	3	29	0	2	32	3	54	23	13	80	33	8	11	0	52	8	10	8	9	26	190
Hourly Total	8	108	6	10	122	41	194	76	34	311	96	23	42	13	161	31	27	40	24	98	692
Grand Total	65	2669	71	117	2805	487	3028	648	126	4163	759	186	369	156	1314	197	230	380	161	807	9089
Approach %	2.3	95.2	2.5	-	-	11.7	72.7	15.6	-	-	57.8	14.2	28.1	-	-	24.4	28.5	47.1	-	-	-
Total %	0.7	29.4	0.8	-	30.9	5.4	33.3	7.1	-	45.8	8.4	2.0	4.1	-	14.5	2.2	2.5	4.2	-	8.9	-
Car	65	2669	71	-	2805	487	3028	648	-	4163	759	186	369	-	1314	197	230	380	-	807	9089
% Car	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	-	100.0	100.0
Ped	-	-	-	117	-	-	-	-	126	-	-	-	-	156	-	-	-	-	161	-	-
% Ped	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

City of El Paso
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Video Detection Count

Count Name: San Antonio & Santa Fe
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Turning Movement Data

Start Time	Santa Fe Northbound					Santa Fe Southbound					San Antonio Eastbound					San Antonio Westbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
7:00 AM	4	65	1	2	70	4	31	3	1	38	8	0	8	2	16	0	1	0	1	1	125
7:15 AM	2	61	1	2	64	4	45	4	0	53	15	2	11	4	28	1	2	2	5	5	150
7:30 AM	4	91	1	4	96	5	52	10	0	67	24	1	11	2	36	3	0	4	2	7	206
7:45 AM	2	122	2	3	126	3	45	7	3	55	22	4	12	4	38	1	0	4	10	5	224
Hourly Total	12	339	5	11	356	16	173	24	4	213	69	7	42	12	118	5	3	10	18	18	705
8:00 AM	3	88	3	0	94	10	45	13	0	68	20	2	7	2	29	1	4	4	0	9	200
8:15 AM	1	66	3	1	70	9	37	5	0	51	19	7	7	4	33	4	2	4	1	10	164
8:30 AM	0	80	2	3	82	8	56	5	3	69	9	1	8	0	18	2	0	5	3	7	176
8:45 AM	1	91	2	2	94	9	57	14	0	80	14	1	11	1	26	4	1	6	1	11	211
Hourly Total	5	325	10	6	340	36	195	37	3	268	62	11	33	7	106	11	7	19	5	37	751
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	2	79	2	4	83	11	74	11	1	96	13	4	3	3	20	4	4	9	7	17	216
11:15 AM	1	60	1	1	62	12	62	11	1	85	11	3	7	4	21	3	5	12	3	20	188
11:30 AM	0	55	1	3	56	13	83	10	2	106	23	7	15	3	45	3	10	9	4	22	229
11:45 AM	0	63	2	4	65	7	72	17	0	96	13	6	7	0	26	8	9	12	5	29	216
Hourly Total	3	257	6	12	266	43	291	49	4	383	60	20	32	10	112	18	28	42	19	88	849
12:00 PM	2	80	2	1	84	8	82	14	2	104	8	2	3	2	13	4	2	5	4	11	212
12:15 PM	0	57	0	3	57	8	69	13	2	90	15	10	2	1	27	7	7	5	5	19	193
12:30 PM	5	61	1	3	67	5	90	16	0	111	16	5	11	1	32	9	8	6	2	23	233
12:45 PM	2	60	1	4	63	11	71	18	4	100	17	6	10	8	33	6	4	13	5	23	219
Hourly Total	9	258	4	11	271	32	312	61	8	405	56	23	26	12	105	26	21	29	16	76	857
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	4	89	1	1	94	13	117	13	1	143	13	2	3	0	18	3	8	11	3	22	277
4:15 PM	0	71	3	0	74	11	118	19	0	148	10	1	9	1	20	7	7	9	2	23	265
4:30 PM	0	71	2	1	73	11	111	16	0	138	16	4	12	1	32	4	4	9	0	17	260
4:45 PM	2	66	2	4	70	19	131	27	2	177	18	9	9	8	36	5	11	10	5	26	309
Hourly Total	6	297	8	6	311	54	477	75	3	606	57	16	33	10	106	19	30	39	10	88	1111
5:00 PM	0	72	2	4	74	5	153	22	1	180	27	2	11	5	40	4	7	12	4	23	317
5:15 PM	5	90	2	2	97	18	143	17	2	178	17	6	22	4	45	11	13	17	5	41	361
5:30 PM	1	70	2	0	73	12	106	14	1	132	14	4	9	2	27	8	15	21	4	44	276
5:45 PM	2	84	2	0	88	28	108	33	8	169	13	6	11	6	30	1	12	26	3	39	326
Hourly Total	8	316	8	6	332	63	510	86	12	659	71	18	53	17	142	24	47	76	16	147	1280
6:00 PM	1	92	3	7	96	24	100	20	3	144	16	8	16	5	40	5	9	17	4	31	311
6:15 PM	3	82	1	5	86	21	94	24	5	139	21	4	6	7	31	7	3	18	7	28	284
6:30 PM	0	119	4	11	123	12	92	19	5	123	14	4	3	10	21	7	10	24	2	41	308
6:45 PM	3	83	0	0	86	23	91	21	1	135	23	6	10	4	39	9	9	11	5	29	289
Hourly Total	7	376	8	23	391	80	377	84	14	541	74	22	35	26	131	28	31	70	18	129	1192
7:00 PM	0	79	4	0	83	15	60	12	7	87	19	6	3	1	28	4	3	16	10	23	221
7:15 PM	1	52	1	0	54	12	60	26	10	98	22	2	7	6	31	6	6	7	9	19	202
7:30 PM	1	63	7	6	71	13	70	19	7	102	13	9	1	9	23	2	5	9	2	16	212
7:45 PM	1	44	1	10	46	17	55	11	2	83	12	6	6	6	24	1	4	2	2	7	160
Hourly Total	3	238	13	16	254	57	245	68	26	370	66	23	17	22	106	13	18	34	23	65	795
8:00 PM	0	35	0	1	35	11	52	14	4	77	20	3	5	3	28	6	4	3	3	13	153
8:15 PM	2	38	0	5	40	10	52	20	0	82	33	6	12	7	51	3	4	8	4	15	188
8:30 PM	1	45	3	6	49	26	91	29	8	146	59	8	26	10	93	5	4	5	1	14	302
8:45 PM	1	37	0	4	38	18	59	25	6	102	36	6	13	7	55	8	6	5	4	19	214
Hourly Total	4	155	3	16	162	65	254	88	18	407	148	23	56	27	227	22	18	21	12	61	857
9:00 PM	1	28	5	4	34	11	58	20	3	89	19	7	9	1	35	5	8	11	4	24	182
9:15 PM	2	23	0	2	25	10	40	14	13	64	24	3	9	5	36	13	3	7	7	23	148
9:30 PM	2	28	1	2	31	17	42	19	5	78	20	5	13	7	38	5	6	14	4	25	172
9:45 PM	3	29	0	2	32	3	54	23	13	80	33	8	11	0	52	8	10	8	9	26	190
Hourly Total	8	108	6	10	122	41	194	76	34	311	96	23	42	13	161	31	27	40	24	98	692
Grand Total	65	2669	71	117	2805	487	3028	648	126	4163	759	186	369	156	1314	197	230	380	161	807	9089
Approach %	2.3	95.2	2.5	-	-	11.7	72.7	15.6	-	-	57.8	14.2	28.1	-	-	24.4	28.5	47.1	-	-	-
Total %	0.7	29.4	0.8	-	30.9	5.4	33.3	7.1	-	45.8	8.4	2.0	4.1	-	14.5	2.2	2.5	4.2	-	8.9	-
Car	65	2669	71	-	2805	487	3028	648	-	4163	759	186	369	-	1314	197	230	380	-	807	9089
% Car	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	-	100.0	100.0
Ped	-	-	-	117	-	-	-	-	126	-	-	-	-	156	-	-	-	-	161	-	-
% Ped	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

City of El Paso
Department of Transportation
7968 San Paulo Dr
El Paso, Texas, United States 79907
915 621 6480 rayjl@elpasotexas.gov
Video Detection Count

Count Name: Paisano & Santa Fe
Site Code:
Start Date: 09/14/2012
Page No: 1

Turning Movement Data

Start Time	Santa Fe Northbound					Santa Fe Southbound					Paisano Eastbound					Paisano Westbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	73	50	19	5	142	10	23	2	20	35	1	74	47	17	122	21	65	9	4	95	394
7:15 AM	102	64	11	8	177	22	32	3	16	57	2	103	87	34	192	14	73	13	8	100	526
7:30 AM	106	79	9	11	194	22	36	3	25	61	5	167	101	41	273	12	80	15	4	107	635
7:45 AM	98	89	9	12	196	13	40	2	35	55	4	181	77	33	262	11	105	29	12	145	658
Hourly Total	379	282	48	36	709	67	131	10	96	208	12	525	312	125	849	58	323	66	28	447	2213
8:00 AM	109	64	16	13	189	31	26	2	22	59	0	187	68	44	255	27	93	26	8	146	649
8:15 AM	81	67	13	13	161	16	30	3	30	49	3	155	73	25	231	18	82	16	7	116	557
8:30 AM	84	71	13	14	168	22	37	1	33	60	5	106	71	22	182	20	88	20	13	128	538
8:45 AM	72	73	13	10	158	29	34	1	26	64	4	93	52	24	149	22	101	24	3	147	518
Hourly Total	346	275	55	50	676	98	127	7	111	232	12	541	264	115	817	87	364	86	31	537	2262
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	59	56	12	5	127	32	45	3	33	80	3	73	33	15	109	15	71	15	11	101	417
11:15 AM	51	39	12	4	102	32	28	3	23	63	3	64	36	14	103	22	101	18	0	141	409
11:30 AM	49	45	11	12	105	47	46	3	36	96	1	58	40	13	99	21	77	18	19	116	416
11:45 AM	61	34	21	14	116	32	56	2	43	90	4	78	52	15	134	33	91	13	7	137	477
Hourly Total	220	174	56	35	450	143	175	11	135	329	11	273	161	57	445	91	340	64	45	495	1719
12:00 PM	61	51	15	31	127	33	38	4	26	75	3	73	37	21	113	26	87	26	14	139	454
12:15 PM	52	26	20	11	98	31	48	2	21	81	4	78	56	12	138	23	100	19	12	142	459
12:30 PM	81	35	7	12	123	47	57	2	15	106	2	68	43	6	113	29	88	25	12	142	484
12:45 PM	52	34	20	11	106	30	49	1	17	80	5	78	44	12	127	32	86	23	6	141	454
Hourly Total	246	146	62	65	454	141	192	9	79	342	14	297	180	51	491	110	361	93	44	564	1851
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	116	61	26	12	203	44	80	5	22	129	4	140	114	19	258	30	140	22	4	192	782
4:15 PM	120	47	15	8	182	52	80	4	11	136	7	154	96	8	257	36	134	21	4	191	766
4:30 PM	123	42	18	10	183	39	87	3	9	129	5	144	133	7	282	38	131	19	4	188	782
4:45 PM	138	43	24	8	205	38	91	5	11	134	5	140	104	6	249	41	142	22	2	205	793
Hourly Total	497	193	83	38	773	173	338	17	53	528	21	578	447	40	1046	145	547	84	14	776	3123
5:00 PM	140	59	16	9	215	60	99	6	18	165	5	112	120	10	237	47	184	13	13	244	861
5:15 PM	146	57	14	16	217	47	106	4	14	157	2	120	102	7	224	36	169	27	8	232	830
5:30 PM	122	42	27	10	191	42	75	5	5	122	3	124	104	5	231	33	153	32	11	218	762
5:45 PM	133	66	23	11	222	50	74	12	9	136	3	84	104	9	191	32	114	26	10	172	721
Hourly Total	541	224	80	46	845	199	354	27	46	580	13	440	430	31	883	148	620	98	42	866	3174
6:00 PM	140	74	19	11	233	36	75	6	12	117	2	90	78	15	170	34	112	22	5	168	688
6:15 PM	95	61	15	6	171	39	57	2	8	98	1	92	69	7	162	39	94	30	10	163	594
6:30 PM	116	70	27	9	213	31	59	9	9	99	4	78	82	17	164	34	94	31	3	159	635
6:45 PM	111	65	18	10	194	41	48	4	11	93	4	54	79	8	137	27	78	15	0	120	544
Hourly Total	462	270	79	36	811	147	239	21	40	407	11	314	308	47	633	134	378	98	18	610	2461
7:00 PM	101	57	16	4	174	34	38	2	18	74	5	46	60	7	111	32	79	27	7	138	497
7:15 PM	73	33	15	4	121	33	39	1	8	73	3	58	50	5	111	25	67	16	6	108	413
7:30 PM	69	42	14	0	125	31	32	4	11	67	3	47	56	0	106	12	49	14	3	75	373
7:45 PM	75	27	14	1	116	28	25	0	1	53	3	35	30	2	68	25	43	12	0	80	317
Hourly Total	318	159	59	9	536	126	134	7	38	267	14	186	196	14	396	94	238	69	16	401	1600
8:00 PM	52	19	14	0	85	34	26	1	1	61	0	40	40	3	80	15	51	13	2	79	305
8:15 PM	67	27	13	1	107	30	26	1	0	57	0	28	31	0	59	14	40	7	0	61	284
8:30 PM	51	24	7	0	82	47	54	9	0	110	1	50	34	4	85	12	37	12	3	61	338
8:45 PM	55	19	8	1	82	32	41	6	0	79	3	28	21	5	52	14	45	12	3	71	284
Hourly Total	225	89	42	2	356	143	147	17	1	307	4	146	126	12	276	55	173	44	8	272	1211
9:00 PM	48	17	10	1	75	31	36	3	0	70	2	33	26	0	61	13	41	8	4	62	268
9:15 PM	41	9	12	4	62	24	20	3	1	47	4	24	21	3	49	7	41	7	2	55	213
9:30 PM	40	17	7	0	64	22	27	1	1	50	2	26	20	3	48	13	37	8	5	58	220
9:45 PM	41	18	7	0	66	21	18	4	1	43	0	43	25	1	68	9	54	8	2	71	248
Hourly Total	170	61	36	5	267	98	101	11	3	210	8	126	92	7	226	42	173	31	13	246	949
Grand Total	3404	1873	600	322	5877	1335	1938	137	602	3410	120	3426	2516	499	6062	964	3517	733	259	5214	20563
Approach %	57.9	31.9	10.2	-	-	39.1	56.8	4.0	-	-	2.0	56.5	41.5	-	-	18.5	67.5	14.1	-	-	-
Total %	16.6	9.1	2.9	-	28.6	6.5	9.4	0.7	-	16.6	0.6	16.7	12.2	-	29.5	4.7	17.1	3.6	-	25.4	-
Car	3404	1873	600	-	5877	1335	1938	137	-	3410	120	3426	2516	-	6062	964	3517	733	-	5214	20563
% Car	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	-	100.0	100.0
Ped	-	-	-	322	-	-	-	-	602	-	-	-	-	499	-	-	-	-	259	-	-
% Ped	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

City of El Paso
Department of Transportation
7968 San Paulo Dr
El Paso, Texas, United States 79907
915 621 6480 rayjl@elpasotexas.gov
Video Detection Count

Count Name: Paisano & Santa Fe
Site Code:
Start Date: 09/14/2012
Page No: 1

Turning Movement Data

Start Time	Santa Fe Northbound					Santa Fe Southbound					Paisano Eastbound					Paisano Westbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	73	50	19	5	142	10	23	2	20	35	1	74	47	17	122	21	65	9	4	95	394
7:15 AM	102	64	11	8	177	22	32	3	16	57	2	103	87	34	192	14	73	13	8	100	526
7:30 AM	106	79	9	11	194	22	36	3	25	61	5	167	101	41	273	12	80	15	4	107	635
7:45 AM	98	89	9	12	196	13	40	2	35	55	4	181	77	33	262	11	105	29	12	145	658
Hourly Total	379	282	48	36	709	67	131	10	96	208	12	525	312	125	849	58	323	66	28	447	2213
8:00 AM	109	64	16	13	189	31	26	2	22	59	0	187	68	44	255	27	93	26	8	146	649
8:15 AM	81	87	13	13	161	16	30	3	30	49	3	155	73	25	231	18	82	16	7	116	557
8:30 AM	84	71	13	14	168	22	37	1	33	60	5	106	71	22	182	20	88	20	13	128	538
8:45 AM	72	73	13	10	158	29	34	1	26	64	4	93	52	24	149	22	101	24	3	147	518
Hourly Total	346	275	55	50	676	98	127	7	111	232	12	541	264	115	817	87	364	86	31	537	2262
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	59	56	12	5	127	32	45	3	33	80	3	73	33	15	109	15	71	15	11	101	417
11:15 AM	51	39	12	4	102	32	28	3	23	63	3	64	36	14	103	22	101	18	8	141	409
11:30 AM	49	45	11	12	105	47	46	3	36	96	1	58	40	13	99	21	77	18	19	116	416
11:45 AM	61	34	21	14	116	32	56	2	43	90	4	78	52	15	134	33	91	13	7	137	477
Hourly Total	220	174	56	35	450	143	175	11	135	329	11	273	161	57	445	91	340	64	45	495	1719
12:00 PM	61	51	15	31	127	33	38	4	26	75	3	73	37	21	113	26	87	26	14	139	454
12:15 PM	52	26	20	11	98	31	48	2	21	81	4	78	56	12	138	23	100	19	12	142	459
12:30 PM	81	35	7	12	123	47	57	2	16	106	2	68	43	6	113	29	88	25	12	142	484
12:45 PM	52	34	20	11	106	30	49	1	17	80	5	78	44	12	127	32	86	23	6	141	454
Hourly Total	246	146	62	65	454	141	192	9	79	342	14	297	180	51	491	110	361	93	44	564	1851
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	116	61	26	12	203	44	80	5	22	129	4	140	114	19	258	30	140	22	4	192	782
4:15 PM	120	47	15	8	182	52	80	4	11	136	7	154	96	8	257	36	134	21	4	191	766
4:30 PM	123	42	18	10	183	39	87	3	9	129	5	144	133	7	282	38	131	19	4	188	782
4:45 PM	138	43	24	8	205	38	91	5	11	134	5	140	104	6	249	41	142	22	2	205	793
Hourly Total	497	193	83	38	773	173	338	17	53	528	21	578	447	40	1046	145	547	84	14	776	3123
5:00 PM	140	59	16	9	215	60	99	6	18	165	5	112	120	10	237	47	184	13	13	244	861
5:15 PM	146	57	14	16	217	47	106	4	14	157	2	120	102	7	224	36	169	27	8	232	830
5:30 PM	122	42	27	10	191	42	76	5	5	122	3	124	104	5	231	33	153	32	11	218	762
5:45 PM	133	66	23	11	222	50	74	12	9	136	3	84	104	9	191	32	114	26	10	172	721
Hourly Total	541	224	80	46	845	199	354	27	46	580	13	440	430	31	883	148	620	98	42	866	3174
6:00 PM	140	74	19	11	233	36	75	6	12	117	2	90	78	15	170	34	112	22	5	168	688
6:15 PM	95	61	15	6	171	39	57	2	8	98	1	92	69	7	162	39	94	30	10	163	594
6:30 PM	116	70	27	9	213	31	59	9	9	99	4	78	82	17	164	34	94	31	3	159	635
6:45 PM	111	65	18	10	194	41	48	4	11	93	4	54	79	8	137	27	78	15	0	120	544
Hourly Total	462	270	79	36	811	147	239	21	40	407	11	314	308	47	633	134	378	98	18	610	2461
7:00 PM	101	57	16	4	174	34	38	2	18	74	5	46	60	7	111	32	79	27	7	138	497
7:15 PM	73	33	15	4	121	33	39	1	8	73	3	58	50	5	111	25	67	16	6	108	413
7:30 PM	69	42	14	0	125	31	32	4	11	67	3	47	56	0	106	12	49	14	3	75	373
7:45 PM	75	27	14	1	116	28	25	0	1	53	3	35	30	2	68	25	43	12	0	80	317
Hourly Total	318	159	59	9	536	126	134	7	38	267	14	186	196	14	396	94	238	69	16	401	1600
8:00 PM	52	19	14	0	85	34	26	1	1	61	0	40	40	3	80	15	51	13	2	79	305
8:15 PM	67	27	13	1	107	30	26	1	0	57	0	28	31	0	59	14	40	7	0	61	284
8:30 PM	51	24	7	0	82	47	54	9	0	110	1	50	34	4	85	12	37	12	3	61	338
8:45 PM	55	19	8	1	82	32	41	6	0	79	3	28	21	5	52	14	45	12	3	71	284
Hourly Total	225	89	42	2	356	143	147	17	1	307	4	146	126	12	276	55	173	44	8	272	1211
9:00 PM	48	17	10	1	75	31	36	3	0	70	2	33	26	0	61	13	41	8	4	62	268
9:15 PM	41	9	12	4	62	24	20	3	1	47	4	24	21	3	49	7	41	7	2	55	213
9:30 PM	40	17	7	0	64	22	27	1	1	50	2	26	20	3	48	13	37	8	5	58	220
9:45 PM	41	18	7	0	66	21	18	4	1	43	0	43	25	1	68	9	54	8	2	71	248
Hourly Total	170	61	36	5	267	98	101	11	3	210	8	126	92	7	226	42	173	31	13	246	949
Grand Total	3404	1873	600	322	5877	1335	1938	137	602	3410	120	3426	2516	499	6062	964	3517	733	259	5214	20563
Approach %	57.9	31.9	10.2	-	-	39.1	56.8	4.0	-	-	2.0	56.5	41.5	-	-	18.5	67.5	14.1	-	-	-
Total %	16.6	9.1	2.9	-	28.6	6.5	9.4	0.7	-	16.6	0.6	16.7	12.2	-	29.5	4.7	17.1	3.6	-	25.4	-
Car	3404	1873	600	-	5877	1335	1938	137	-	3410	120	3426	2516	-	6062	964	3517	733	-	5214	20563
% Car	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	-	100.0	100.0
Ped	-	-	-	322	-	-	-	-	602	-	-	-	-	499	-	-	-	-	259	-	-
% Ped	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

Appendix-C

Jose Bocanegra & Dennis C Means

El Paso Department of Transportation

7968 San Paulo
El Paso, Texas 79907
(915) 566-6223

EVENT DAY

Site Code: 21149
Station ID: EB
San Antonio
Leon
Latitude: 31' 45.405 North
Longitude: 106' 29.496 West

EASTBOUND

Start Time	Mon 10-Sep-12	Tue 11-Sep-12	Wed 12-Sep-12	Thu 13-Sep-12	Fri 14-Sep-12	Average Day	Sat 15-Sep-12	Sun 16-Sep-12	Week Average
12:00 AM	*	*	*	*	23	23	**94**	82	66
01:00	*	*	*	*	42	42	65	90	66
02:00	*	*	*	*	30	30	79	**172**	**94**
03:00	*	*	*	*	1	1	8	30	13
04:00	*	*	*	*	14	14	13	8	12
05:00	*	*	*	*	33	33	19	17	23
06:00	*	*	*	*	35	35	22	19	25
07:00	*	*	*	*	**105**	**105**	26	25	52
08:00	*	*	*	*	94	94	44	12	50
09:00	*	*	*	*	60	60	45	25	43
10:00	*	*	*	*	62	62	74	30	55
11:00	*	*	*	*	86	86	79	53	73
12:00 PM	*	*	*	*	82	82	95	74	84
01:00	*	*	*	*	95	95	104	61	87
02:00	*	*	*	*	103	103	92	**152**	116
03:00	*	*	*	*	103	103	90	82	92
04:00	*	*	*	*	104	104	59	48	70
05:00	*	*	*	*	112	112	**205**	57	**125**
06:00	*	*	*	*	97	97	123	80	100
07:00	*	*	*	*	78	78	63	61	67
08:00	*	*	*	*	115	115	124	36	92
09:00	*	*	*	*	**140**	**140**	88	24	84
10:00	*	*	*	*	117	117	124	22	88
11:00	*	*	*	*	105	105	100	17	74
Day Total	0	0	0	0	1836	1836	1835	1277	1651
% Avg. WkDay	0.0%	0.0%	0.0%	0.0%	100.0%				
% Avg. Week	0.0%	0.0%	0.0%	0.0%	111.2%	111.2%	111.1%	77.3%	
AM Peak					07:00	07:00	00:00	02:00	02:00
Vol.					105	105	94	172	94
PM Peak					21:00	21:00	17:00	14:00	17:00
Vol.					140	140	205	152	125
Grand Total	0	0	0	0	1836	1836	1835	1277	1651

ADT ADT 1,646 AADT 1,646

Jose Bocanegra & Dennis C Means

El Paso Department of Transportation

7968 San Paulo
El Paso, Texas 79907
(915) 566-6223

Site Code: 17275
Station ID: WB
San Antonio
Leon
Latitude: 31' 45.413 North
Longitude: 106' 29.507 West

WESTBOUND

Start Time	Mon 10-Sep-12	Tue 11-Sep-12	Wed 12-Sep-12	Thu 13-Sep-12	Fri 14-Sep-12	Average Day	Sat 15-Sep-12	Sun 16-Sep-12	Week Average
12:00 AM	*	*	*	*	24	24	69	**148**	**80**
01:00	*	*	*	*	19	19	37	59	38
02:00	*	*	*	*	11	11	39	48	33
03:00	*	*	*	*	7	7	2	13	7
04:00	*	*	*	*	12	12	6	7	8
05:00	*	*	*	*	14	14	8	7	10
06:00	*	*	*	*	5	5	12	6	8
07:00	*	*	*	*	31	31	22	13	22
08:00	*	*	*	*	53	53	51	23	42
09:00	*	*	*	*	34	34	**76**	67	59
10:00	*	*	*	*	55	55	64	39	53
11:00	*	*	*	*	**72**	**72**	71	47	63
12:00 PM	*	*	*	*	81	81	105	72	86
01:00	*	*	*	*	68	68	97	80	82
02:00	*	*	*	*	50	50	89	**96**	78
03:00	*	*	*	*	78	78	110	64	84
04:00	*	*	*	*	103	103	104	54	87
05:00	*	*	*	*	144	144	123	75	114
06:00	*	*	*	*	113	113	112	40	88
07:00	*	*	*	*	87	87	49	34	57
08:00	*	*	*	*	142	142	75	19	79
09:00	*	*	*	*	118	118	84	14	72
10:00	*	*	*	*	132	132	177	16	108
11:00	*	*	*	*	**166**	**166**	**229**	10	**135**
Day Total	0	0	0	0	1619	1619	1811	1051	1493
% Avg. WkDay	0.0%	0.0%	0.0%	0.0%	100.0%				
% Avg. Week	0.0%	0.0%	0.0%	0.0%	108.4%	108.4%	121.3%	70.4%	
AM Peak					11:00	11:00	09:00	00:00	00:00
Vol.					72	72	76	148	80
PM Peak					23:00	23:00	23:00	14:00	23:00
Vol.					166	166	229	96	135
Grand Total	0	0	0	0	1619	1619	1811	1051	1493

ADT ADT 1,486 AADT 1,486

Department of Transportation
City of El Paso

Site Code: 21163
Station ID: EB
San Antonio
Leon
Latitude: 31' 45.407 North

NON EVENT DAY

EASTBOUND

Start Time	Mon 27-Aug-12	Tue 28-Aug-12	Wed 29-Aug-12	Thu 30-Aug-12	Fri 31-Aug-12	Average Day	Sat 01-Sep-12	Sun 02-Sep-12	Week Average
12:00 AM	*	*	*	*	32	32	99	75	69
01:00	*	*	*	*	25	25	**103**	**137**	**88**
02:00	*	*	*	*	18	18	74	70	54
03:00	*	*	*	*	8	8	16	13	12
04:00	*	*	*	*	25	25	13	4	14
05:00	*	*	*	*	27	27	22	11	20
06:00	*	*	*	*	31	31	24	15	23
07:00	*	*	*	*	**114**	**114**	22	17	51
08:00	*	*	*	*	70	70	25	16	37
09:00	*	*	*	*	55	55	39	27	40
10:00	*	*	*	*	61	61	45	23	43
11:00	*	*	*	*	85	85	53	35	58
12:00 PM	*	*	*	*	98	98	52	**42**	64
01:00	*	*	*	*	95	95	46	41	61
02:00	*	*	*	*	67	67	69	*	68
03:00	*	*	*	*	89	89	50	*	70
04:00	*	*	*	*	86	86	60	*	73
05:00	*	*	*	*	74	74	60	*	67
06:00	*	*	*	*	41	41	45	*	43
07:00	*	*	*	*	49	49	40	*	44
08:00	*	*	*	*	48	48	57	*	52
09:00	*	*	*	*	74	74	81	*	78
10:00	*	*	*	*	**102**	**102**	91	*	**96**
11:00	*	*	*	*	91	91	**97**	*	94
Day Total	0	0	0	0	1465	1465	1283	526	1319
% Avg. WkDay	0.0%	0.0%	0.0%	0.0%	100.0%				
% Avg. Week	0.0%	0.0%	0.0%	0.0%	111.1%	111.1%	97.3%	39.9%	
AM Peak					07:00	07:00	01:00	01:00	01:00
Vol.					114	114	103	137	88
PM Peak					22:00	22:00	23:00	12:00	22:00
Vol.					102	102	97	42	96
Grand Total	0	0	0	0	1465	1465	1283	526	1319

ADT ADT 1,294 AADT 1,294

Department of Transportation
City of El Paso

Site Code: 21158
Station ID: WB
San Antonio
Leon
Latitude: 31' 45.411 North

WESTBOUND

Start Time	Mon 27-Aug-12	Tue 28-Aug-12	Wed 29-Aug-12	Thu 30-Aug-12	Fri 31-Aug-12	Average Day	Sat 01-Sep-12	Sun 02-Sep-12	Week Average
12:00 AM	*	*	*	*	33	33	62	70	55
01:00	*	*	*	*	21	21	36	46	34
02:00	*	*	*	*	8	8	27	21	19
03:00	*	*	*	*	6	6	2	5	4
04:00	*	*	*	*	2	2	10	3	5
05:00	*	*	*	*	12	12	11	3	9
06:00	*	*	*	*	17	17	13	3	11
07:00	*	*	*	*	26	26	18	10	18
08:00	*	*	*	*	19	19	14	7	13
09:00	*	*	*	*	28	28	22	15	22
10:00	*	*	*	*	33	33	29	18	27
11:00	*	*	*	*	46	46	32	36	38
12:00 PM	*	*	*	*	46	46	33	28	36
01:00	*	*	*	*	45	45	28	36	36
02:00	*	*	*	*	47	47	27	*	37
03:00	*	*	*	*	57	57	22	*	40
04:00	*	*	*	*	59	59	30	*	44
05:00	*	*	*	*	57	57	52	*	54
06:00	*	*	*	*	65	65	74	*	70
07:00	*	*	*	*	27	27	70	*	48
08:00	*	*	*	*	54	54	36	*	45
09:00	*	*	*	*	78	78	78	*	78
10:00	*	*	*	*	151	151	133	*	142
11:00	*	*	*	*	137	137	137	*	137
Day Total	0	0	0	0	1074	1074	996	301	1022
% Avg. WkDay	0.0%	0.0%	0.0%	0.0%	100.0%				
% Avg. Week	0.0%	0.0%	0.0%	0.0%	105.1%	105.1%	97.5%	29.5%	
AM Peak					11:00	11:00	00:00	00:00	00:00
Vol.					46	46	62	70	55
PM Peak					22:00	22:00	23:00	13:00	22:00
Vol.					151	151	137	36	142
Grand Total	0	0	0	0	1074	1074	996	301	1022

ADT ADT 967 AADT 967

Department of Transportation
City of El Paso

Site Code: 17277
Station ID: North
San Antonio
Santa Fe
Latitude: 0' 0.000 Undefined

EVENT DAY

NORTHBOUND

Start Time	Mon 10-Sep-12	Tue 11-Sep-12	Wed 12-Sep-12	Thu 13-Sep-12	Fri 14-Sep-12	Average Day	Sat 15-Sep-12	Sun 16-Sep-12	Week Average
12:00 AM	*	*	*	*	49	49	134	152	112
01:00	*	*	*	*	70	70	146	151	122
02:00	*	*	*	*	60	60	133	**312**	168
03:00	*	*	*	*	18	18	48	76	47
04:00	*	*	*	*	41	41	24	26	30
05:00	*	*	*	*	79	79	54	30	54
06:00	*	*	*	*	173	173	100	63	112
07:00	*	*	*	*	411	411	148	94	218
08:00	*	*	*	*	**415**	**415**	170	91	225
09:00	*	*	*	*	336	336	194	132	221
10:00	*	*	*	*	322	322	280	158	253
11:00	*	*	*	*	361	361	**290**	222	**291**
12:00 PM	*	*	*	*	346	346	400	293	346
01:00	*	*	*	*	390	390	**454**	352	399
02:00	*	*	*	*	360	360	448	**414**	407
03:00	*	*	*	*	366	366	435	396	399
04:00	*	*	*	*	414	414	368	318	367
05:00	*	*	*	*	470	470	418	356	**415**
06:00	*	*	*	*	**504**	**504**	451	280	412
07:00	*	*	*	*	348	348	285	229	287
08:00	*	*	*	*	295	295	239	190	241
09:00	*	*	*	*	247	247	208	133	196
10:00	*	*	*	*	198	198	192	118	169
11:00	*	*	*	*	152	152	180	94	142
Day Total	0	0	0	0	6425	6425	5799	4680	5633
% Avg. WkDay	0.0%	0.0%	0.0%	0.0%	100.0%				
% Avg. Week	0.0%	0.0%	0.0%	0.0%	114.1%	114.1%	102.9%	83.1%	
AM Peak					08:00	08:00	11:00	02:00	11:00
Vol.					415	415	290	312	291
PM Peak					18:00	18:00	13:00	14:00	17:00
Vol.					504	504	454	414	415
Grand Total	0	0	0	0	6425	6425	5799	4680	5633

ADT ADT 5,533 AADT 5,533

Department of Transportation
City of El Paso

Site Code: 13983
Station ID: NB
San Antonio
Santa Fe
Latitude: 31' 45.447 North

NON EVENT DAY

NORTHBOUND

Start Time	Mon 27-Aug-12	Tue 28-Aug-12	Wed 29-Aug-12	Thu 30-Aug-12	Fri 31-Aug-12	Average Day	Sat 01-Sep-12	Sun 02-Sep-12	Week Average
12:00 AM	*	*	*	*	29	29	162	210	134
01:00	*	*	*	*	51	51	235	294	193
02:00	*	*	*	*	23	23	94	125	81
03:00	*	*	*	*	37	37	37	23	32
04:00	*	*	*	*	88	88	48	24	53
05:00	*	*	*	*	165	165	119	66	117
06:00	*	*	*	*	312	312	128	92	177
07:00	*	*	*	*	453	453	138	99	230
08:00	*	*	*	*	353	353	188	122	221
09:00	*	*	*	*	342	342	236	145	241
10:00	*	*	*	*	320	320	287	182	263
11:00	*	*	*	*	331	331	305	206	281
12:00 PM	*	*	*	*	380	380	322	229	310
01:00	*	*	*	*	355	355	317	234	302
02:00	*	*	*	*	308	308	307	*	308
03:00	*	*	*	*	319	319	284	*	302
04:00	*	*	*	*	431	431	301	*	366
05:00	*	*	*	*	417	417	314	*	366
06:00	*	*	*	*	342	342	293	*	318
07:00	*	*	*	*	292	292	220	*	256
08:00	*	*	*	*	225	225	183	*	204
09:00	*	*	*	*	188	188	188	*	188
10:00	*	*	*	*	163	163	163	*	163
11:00	*	*	*	*	155	155	192	*	174
Day Total	0	0	0	0	6079	6079	5061	2051	5280
% Avg. WkDay	0.0%	0.0%	0.0%	0.0%	100.0%				
% Avg. Week	0.0%	0.0%	0.0%	0.0%	115.1%	115.1%	95.9%	38.8%	
AM Peak					07:00	07:00	11:00	01:00	11:00
Vol.					453	453	305	294	281
PM Peak					16:00	16:00	12:00	13:00	16:00
Vol.					431	431	322	234	366
Grand Total	0	0	0	0	6079	6079	5061	2051	5280

ADT ADT 5,048 AADT 5,048

Jose Bocanegra & Dennis C Means

El Paso Department of Transportation

7968 San Paulo
El Paso, Texas 79907
(915) 566-6223

Site Code: 13983
Station ID: SB
San Antonio
Santa Fe
Latitude: 31' 45.464 North
Longitude: 106' 29.418 West

SOUTHBOUND

Start Time	Mon 10-Sep-12	Tue 11-Sep-12	Wed 12-Sep-12	Thu 13-Sep-12	Fri 14-Sep-12	Average Day	Sat 15-Sep-12	Sun 16-Sep-12	Week Average
12:00 AM	*	*	*	*	39	39	101	182	107
01:00	*	*	*	*	40	40	79	79	66
02:00	*	*	*	*	18	18	65	76	53
03:00	*	*	*	*	30	30	25	27	27
04:00	*	*	*	*	29	29	21	16	22
05:00	*	*	*	*	57	57	54	50	54
06:00	*	*	*	*	111	111	82	56	83
07:00	*	*	*	*	219	219	194	76	163
08:00	*	*	*	*	273	273	309	152	245
09:00	*	*	*	*	308	308	331	235	291
10:00	*	*	*	*	364	364	414	253	344
11:00	*	*	*	*	**390**	**390**	**448**	**280**	**373**
12:00 PM	*	*	*	*	417	417	463	311	397
01:00	*	*	*	*	447	447	478	332	419
02:00	*	*	*	*	386	386	484	**377**	416
03:00	*	*	*	*	464	464	534	347	448
04:00	*	*	*	*	624	624	470	281	458
05:00	*	*	*	*	**691**	**691**	**537**	346	**525**
06:00	*	*	*	*	558	558	493	277	443
07:00	*	*	*	*	370	370	323	186	293
08:00	*	*	*	*	418	418	310	160	296
09:00	*	*	*	*	322	322	266	89	226
10:00	*	*	*	*	235	235	306	71	204
11:00	*	*	*	*	219	219	287	50	185
Day Total	0	0	0	0	7029	7029	7074	4309	6138
% Avg. WkDay	0.0%	0.0%	0.0%	0.0%	100.0%				
% Avg. Week	0.0%	0.0%	0.0%	0.0%	114.5%	114.5%	115.2%	70.2%	
AM Peak					11:00	11:00	11:00	11:00	11:00
Vol.					390	390	448	280	373
PM Peak					17:00	17:00	17:00	14:00	17:00
Vol.					691	691	537	377	525
Grand Total	0	0	0	0	7029	7029	7074	4309	6138

ADT ADT 6,128 AADT 6,128

Department of Transportation
City of El Paso

NON EVENT DAY

Site Code: 17274
Station ID: EB
Franklin
Santa Fe
Latitude: 31' 45.572 North

EASTBOUND

Start Time	Mon 27-Aug-12	Tue 28-Aug-12	Wed 29-Aug-12	Thu 30-Aug-12	Fri 31-Aug-12	Average Day	Sat 01-Sep-12	Sun 02-Sep-12	Week Average
12:00 AM	*	*	*	*	20	20	58	77	52
01:00	*	*	*	*	18	18	72	59	50
02:00	*	*	*	*	10	10	26	16	17
03:00	*	*	*	*	19	19	12	7	13
04:00	*	*	*	*	52	52	26	13	30
05:00	*	*	*	*	56	56	49	29	45
06:00	*	*	*	*	124	124	42	38	68
07:00	*	*	*	*	142	142	50	42	78
08:00	*	*	*	*	131	131	76	47	85
09:00	*	*	*	*	130	130	108	53	97
10:00	*	*	*	*	144	144	111	**80**	**112**
11:00	*	*	*	*	**153**	**153**	**118**	61	111
12:00 PM	*	*	*	*	195	195	109	**87**	130
01:00	*	*	*	*	180	180	**126**	80	129
02:00	*	*	*	*	161	161	117	*	139
03:00	*	*	*	*	148	148	118	*	133
04:00	*	*	*	*	**200**	**200**	108	*	**154**
05:00	*	*	*	*	150	150	110	*	130
06:00	*	*	*	*	98	98	93	*	96
07:00	*	*	*	*	68	68	72	*	70
08:00	*	*	*	*	82	82	69	*	76
09:00	*	*	*	*	58	58	71	*	64
10:00	*	*	*	*	83	83	55	*	69
11:00	*	*	*	*	56	56	81	*	68
Day Total	0	0	0	0	2478	2478	1877	689	2016
% Avg. WkDay	0.0%	0.0%	0.0%	0.0%	100.0%				
% Avg. Week	0.0%	0.0%	0.0%	0.0%	122.9%	122.9%	93.1%	34.2%	
AM Peak					11:00	11:00	11:00	10:00	10:00
Vol.					153	153	118	80	112
PM Peak					16:00	16:00	13:00	12:00	16:00
Vol.					200	200	126	87	154
Grand Total	0	0	0	0	2478	2478	1877	689	2016

ADT ADT 2,082 AADT 2,082

Jose Bocanegra & Dennis C Means

El Paso Department of Transportation

7968 San Paulo
El Paso, Texas 79907
(915) 566-6223

EVENT DAY

Site Code: 21164
Station ID: EB
Franklin
Santa Fe
Latitude: 31' 45.574 North
Longitude: 106' 29.471 West

EAST BOUND

Start Time	Mon 10-Sep-12	Tue 11-Sep-12	Wed 12-Sep-12	Thu 13-Sep-12	Fri 14-Sep-12	Average Day	Sat 15-Sep-12	Sun 16-Sep-12	Week Average
12:00 AM	*	*	*	*	20	20	47	68	45
01:00	*	*	*	*	26	26	46	53	42
02:00	*	*	*	*	15	15	46	61	41
03:00	*	*	*	*	5	5	8	32	15
04:00	*	*	*	*	21	21	10	8	13
05:00	*	*	*	*	36	36	36	10	27
06:00	*	*	*	*	51	51	31	27	36
07:00	*	*	*	*	127	127	52	37	72
08:00	*	*	*	*	109	109	55	33	66
09:00	*	*	*	*	125	125	72	53	83
10:00	*	*	*	*	129	129	103	57	96
11:00	*	*	*	*	**149**	**149**	**113**	**83**	**115**
12:00 PM	*	*	*	*	165	165	146	102	138
01:00	*	*	*	*	172	172	148	136	152
02:00	*	*	*	*	178	178	144	170	164
03:00	*	*	*	*	167	167	185	152	168
04:00	*	*	*	*	**197**	**197**	125	109	144
05:00	*	*	*	*	195	195	**220**	**178**	**198**
06:00	*	*	*	*	152	152	178	105	145
07:00	*	*	*	*	148	148	86	65	100
08:00	*	*	*	*	174	174	134	40	116
09:00	*	*	*	*	129	129	104	44	92
10:00	*	*	*	*	80	80	87	38	68
11:00	*	*	*	*	80	80	71	31	61
Day Total	0	0	0	0	2650	2650	2247	1692	2197
% Avg. WkDay	0.0%	0.0%	0.0%	0.0%	100.0%				
% Avg. Week	0.0%	0.0%	0.0%	0.0%	120.6%	120.6%	102.3%	77.0%	
AM Peak					11:00	11:00	11:00	11:00	11:00
Vol.					149	149	113	83	115
PM Peak					16:00	16:00	17:00	17:00	17:00
Vol.					197	197	220	178	198
Grand Total	0	0	0	0	2650	2650	2247	1692	2197

ADT ADT 2,194 AADT 2,194

Jose Bocanegra & Dennis C Means

El Paso Department of Transportation

7968 San Paulo
El Paso, Texas 79907
(915) 566-6223

Site Code: 21163
Station ID: WB
Franklin
Santa Fe
Latitude: 31' 45.587 North
Longitude: 106' 29.467 West

WEST BOUND

Start Time	Mon 10-Sep-12	Tue 11-Sep-12	Wed 12-Sep-12	Thu 13-Sep-12	Fri 14-Sep-12	Average Day	Sat 15-Sep-12	Sun 16-Sep-12	Week Average
12:00 AM	*	*	*	*	1	1	9	8	6
01:00	*	*	*	*	3	3	5	5	4
02:00	*	*	*	*	3	3	5	2	3
03:00	*	*	*	*	1	1	1	0	1
04:00	*	*	*	*	0	0	2	0	1
05:00	*	*	*	*	1	1	0	5	2
06:00	*	*	*	*	12	12	5	1	6
07:00	*	*	*	*	26	26	9	2	12
08:00	*	*	*	*	26	26	16	8	17
09:00	*	*	*	*	25	25	24	13	21
10:00	*	*	*	*	35	35	34	12	27
11:00	*	*	*	*	**40**	**40**	**37**	**28**	**35**
12:00 PM	*	*	*	*	37	37	32	26	32
01:00	*	*	*	*	50	50	38	35	**41**
02:00	*	*	*	*	35	35	**44**	38	39
03:00	*	*	*	*	26	26	40	**40**	35
04:00	*	*	*	*	50	50	25	15	30
05:00	*	*	*	*	45	45	30	19	31
06:00	*	*	*	*	**55**	**55**	37	22	38
07:00	*	*	*	*	34	34	16	14	21
08:00	*	*	*	*	25	25	15	11	17
09:00	*	*	*	*	16	16	7	3	9
10:00	*	*	*	*	5	5	10	1	5
11:00	*	*	*	*	12	12	11	*	12
Day Total	0	0	0	0	563	563	452	308	445
% Avg. WkDay	0.0%	0.0%	0.0%	0.0%	100.0%				
% Avg. Week	0.0%	0.0%	0.0%	0.0%	126.5%	126.5%	101.6%	69.2%	
AM Peak					11:00	11:00	11:00	11:00	11:00
Vol.					40	40	37	28	35
PM Peak					18:00	18:00	14:00	15:00	13:00
Vol.					55	55	44	40	41
Grand Total	0	0	0	0	563	563	452	308	445

ADT ADT 441 AADT 441

Department of Transportation
City of El Paso

Site Code: 21167
Station ID: WB
Franklin
Santa Fe
Latitude: 31' 45.586 North

WEST BOUND

Start Time	Mon 27-Aug-12	Tue 28-Aug-12	Wed 29-Aug-12	Thu 30-Aug-12	Fri 31-Aug-12	Average Day	Sat 01-Sep-12	Sun 02-Sep-12	Week Average
12:00 AM	*	*	*	*	0	0	3	7	3
01:00	*	*	*	*	1	1	4	5	3
02:00	*	*	*	*	1	1	2	2	2
03:00	*	*	*	*	2	2	2	3	2
04:00	*	*	*	*	4	4	2	2	3
05:00	*	*	*	*	16	16	0	0	5
06:00	*	*	*	*	30	30	8	3	14
07:00	*	*	*	*	25	25	17	6	16
08:00	*	*	*	*	22	22	18	6	15
09:00	*	*	*	*	32	32	30	9	24
10:00	*	*	*	*	52	52	**33**	**17**	**34**
11:00	*	*	*	*	**54**	**54**	19	17	30
12:00 PM	*	*	*	*	49	49	24	10	28
01:00	*	*	*	*	48	48	**38**	**23**	36
02:00	*	*	*	*	**55**	**55**	36	*	**46**
03:00	*	*	*	*	49	49	27	*	38
04:00	*	*	*	*	44	44	24	*	34
05:00	*	*	*	*	44	44	19	*	32
06:00	*	*	*	*	26	26	15	*	20
07:00	*	*	*	*	16	16	13	*	14
08:00	*	*	*	*	15	15	12	*	14
09:00	*	*	*	*	12	12	4	*	8
10:00	*	*	*	*	12	12	9	*	10
11:00	*	*	*	*	10	10	10	*	10
Day Total	0	0	0	0	619	619	369	110	441
% Avg. WkDay	0.0%	0.0%	0.0%	0.0%	100.0%				
% Avg. Week	0.0%	0.0%	0.0%	0.0%	140.4%	140.4%	83.7%	24.9%	
AM Peak					11:00	11:00	10:00	10:00	10:00
Vol.					54	54	33	17	34
PM Peak					14:00	14:00	13:00	13:00	14:00
Vol.					55	55	38	23	46
Grand Total	0	0	0	0	619	619	369	110	441

ADT ADT 452 AADT 452

Department of Transportation
City of El Paso

EVENT DAY

Site Code: 21167
Station ID: NB
Santa Fe
Wyoming
Latitude: 31' 45.639 North

NORTH BOUND

Start Time	Mon 10-Sep-12	Tue 11-Sep-12	Wed 12-Sep-12	Thu 13-Sep-12	Fri 14-Sep-12	Average Day	Sat 15-Sep-12	Sun 16-Sep-12	Week Average
12:00 AM	*	*	*	*	70	70	216	226	171
01:00	*	*	*	*	91	91	218	298	202
02:00	*	*	*	*	94	94	249	**510**	284
03:00	*	*	*	*	27	27	72	79	59
04:00	*	*	*	*	46	46	32	36	38
05:00	*	*	*	*	72	72	45	35	51
06:00	*	*	*	*	170	170	81	54	102
07:00	*	*	*	*	362	362	131	86	193
08:00	*	*	*	*	370	370	173	89	211
09:00	*	*	*	*	336	336	230	134	233
10:00	*	*	*	*	336	336	309	178	274
11:00	*	*	*	*	**398**	**398**	**340**	242	**327**
12:00 PM	*	*	*	472	426	449	446	*	448
01:00	*	*	*	404	421	412	530	*	452
02:00	*	*	*	435	402	418	523	*	453
03:00	*	*	*	448	449	448	548	*	482
04:00	*	*	*	524	465	494	511	*	500
05:00	*	*	*	**574**	523	**548**	**746**	*	**614**
06:00	*	*	*	417	461	439	598	*	492
07:00	*	*	*	298	383	340	319	*	333
08:00	*	*	*	230	**643**	436	460	*	444
09:00	*	*	*	183	417	300	295	*	298
10:00	*	*	*	152	245	198	244	*	214
11:00	*	*	*	127	216	172	241	*	195
Day Total	0	0	0	4264	7423	7026	7557	1967	7070
% Avg. WkDay	0.0%	0.0%	0.0%	60.7%	105.7%				
% Avg. Week	0.0%	0.0%	0.0%	60.3%	105.0%	99.4%	106.9%	27.8%	
AM Peak					11:00	11:00	11:00	02:00	11:00
Vol.					398	398	340	510	327
PM Peak				17:00	20:00	17:00	17:00		17:00
Vol.				574	643	548	746		614
Grand Total	0	0	0	4264	7423	7026	7557	1967	7070

ADT ADT 7,043 AADT 7,043

Department of Transportation
City of El Paso

Site Code: 21159
Station ID: SB
Santa Fe
Wyoming
Latitude: 31' 45.632 North

SOUTHBOUND

Start Time	Mon 10-Sep-12	Tue 11-Sep-12	Wed 12-Sep-12	Thu 13-Sep-12	Fri 14-Sep-12	Average Day	Sat 15-Sep-12	Sun 16-Sep-12	Week Average
12:00 AM	*	*	*	*	30	30	35	87	51
01:00	*	*	*	*	18	18	31	43	31
02:00	*	*	*	*	15	15	29	26	23
03:00	*	*	*	*	11	11	13	10	11
04:00	*	*	*	*	20	20	13	12	15
05:00	*	*	*	*	28	28	23	29	27
06:00	*	*	*	*	94	94	58	34	62
07:00	*	*	*	*	164	164	120	58	114
08:00	*	*	*	*	178	178	212	96	162
09:00	*	*	*	*	208	208	265	144	206
10:00	*	*	*	*	238	238	**319**	199	252
11:00	*	*	*	*	**259**	**259**	301	**231**	**264**
12:00 PM	*	*	*	264	288	276	294	*	282
01:00	*	*	*	280	277	278	322	*	293
02:00	*	*	*	276	287	282	350	*	304
03:00	*	*	*	298	311	304	**391**	*	333
04:00	*	*	*	**437**	388	412	268	*	364
05:00	*	*	*	420	**464**	**442**	316	*	**400**
06:00	*	*	*	210	429	320	327	*	322
07:00	*	*	*	146	207	176	199	*	184
08:00	*	*	*	120	178	149	161	*	153
09:00	*	*	*	71	115	93	184	*	123
10:00	*	*	*	70	130	100	184	*	128
11:00	*	*	*	32	96	64	173	*	100
Day Total	0	0	0	2624	4433	4159	4588	969	4204
% Avg. WkDay	0.0%	0.0%	0.0%	63.1%	106.6%				
% Avg. Week	0.0%	0.0%	0.0%	62.4%	105.4%	98.9%	109.1%	23.0%	
AM Peak					11:00	11:00	10:00	11:00	11:00
Vol.					259	259	319	231	264
PM Peak				16:00	17:00	17:00	15:00		17:00
Vol.				437	464	442	391		400
Grand Total	0	0	0	2624	4433	4159	4588	969	4204

ADT ADT 4,186 AADT 4,186

Department of Transportation
City of El Paso

NON EVENT DAY

Site Code: 21159
Station ID: NB
Santa Fe
Wyoming
Latitude: 31' 45.633 North

NORTH BOUND

Start Time	Mon 27-Aug-12	Tue 28-Aug-12	Wed 29-Aug-12	Thu 30-Aug-12	Fri 31-Aug-12	Average Day	Sat 01-Sep-12	Sun 02-Sep-12	Week Average
12:00 AM	*	*	*	*	78	78	314	**497**	296
01:00	*	*	*	*	47	47	244	270	187
02:00	*	*	*	*	31	31	59	53	48
03:00	*	*	*	*	46	46	41	36	41
04:00	*	*	*	*	97	97	75	66	79
05:00	*	*	*	*	236	236	88	56	127
06:00	*	*	*	*	370	370	124	102	199
07:00	*	*	*	*	329	329	202	141	224
08:00	*	*	*	*	334	334	244	179	252
09:00	*	*	*	*	366	366	317	218	300
10:00	*	*	*	*	410	410	344	243	332
11:00	*	*	*	*	**444**	**444**	**386**	276	**369**
12:00 PM	*	*	*	*	395	395	**399**	295	363
01:00	*	*	*	*	449	449	381	**314**	381
02:00	*	*	*	*	446	446	378	*	412
03:00	*	*	*	*	515	515	356	*	436
04:00	*	*	*	*	**542**	**542**	374	*	**458**
05:00	*	*	*	*	383	383	382	*	382
06:00	*	*	*	*	315	315	260	*	288
07:00	*	*	*	*	288	288	237	*	262
08:00	*	*	*	*	246	246	214	*	230
09:00	*	*	*	*	222	222	227	*	224
10:00	*	*	*	*	254	254	268	*	261
11:00	*	*	*	*	234	234	332	*	283
Day Total	0	0	0	0	7077	7077	6246	2746	6434
% Avg. WkDay	0.0%	0.0%	0.0%	0.0%	100.0%				
% Avg. Week	0.0%	0.0%	0.0%	0.0%	110.0%	110.0%	97.1%	42.7%	
AM Peak					11:00	11:00	11:00	00:00	11:00
Vol.					444	444	386	497	369
PM Peak					16:00	16:00	12:00	13:00	16:00
Vol.					542	542	399	314	458
Grand Total	0	0	0	0	7077	7077	6246	2746	6434

ADT ADT 6,246 AADT 6,246

Appendix-D

HCM Signalized Intersection Capacity Analysis
170: MISSOURI & KANSAS

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	0	0	0	409	591	0	0	454	27	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.0	3.0			3.0				
Lane Util. Factor				0.97	0.95			0.91				
Frt				1.00	1.00			0.99				
Flt Protected				0.95	1.00			1.00				
Satd. Flow (prot)				3090	3185			4538				
Flt Permitted				0.95	1.00			1.00				
Satd. Flow (perm)				3090	3185			4538				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	454	657	0	0	504	30	0	0	0
RTOR Reduction (vph)	0	0	0	230	0	0	0	9	0	0	0	0
Lane Group Flow (vph)	0	0	0	224	657	0	0	525	0	0	0	0
Turn Type				Split								
Protected Phases				1	1			2				
Permitted Phases												
Actuated Green, G (s)				35.0	35.0			30.0				
Effective Green, g (s)				37.0	37.0			32.0				
Actuated g/C Ratio				0.49	0.49			0.43				
Clearance Time (s)				5.0	5.0			5.0				
Lane Grp Cap (vph)				1524	1571			1936				
v/s Ratio Prot				0.07	c0.21			c0.12				
v/s Ratio Perm												
v/c Ratio				0.15	0.42			0.27				
Uniform Delay, d1				10.4	12.1			13.9				
Progression Factor				0.01	0.36			1.37				
Incremental Delay, d2				0.2	0.7			0.3				
Delay (s)				0.3	5.1			19.5				
Level of Service				A	A			B				
Approach Delay (s)		0.0			3.2			19.5			0.0	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	8.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
170: MISSOURI & KANSAS

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	0	0	0	409	591	0	0	454	27	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.0	3.0			3.0				
Lane Util. Factor				0.97	0.95			0.91				
Frt				1.00	1.00			0.99				
Flt Protected				0.95	1.00			1.00				
Satd. Flow (prot)				3090	3185			4538				
Flt Permitted				0.95	1.00			1.00				
Satd. Flow (perm)				3090	3185			4538				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	454	657	0	0	504	30	0	0	0
RTOR Reduction (vph)	0	0	0	230	0	0	0	9	0	0	0	0
Lane Group Flow (vph)	0	0	0	224	657	0	0	525	0	0	0	0
Turn Type		-		Split								
Protected Phases				1	1			2				
Permitted Phases												
Actuated Green, G (s)				35.0	35.0			30.0				
Effective Green, g (s)				37.0	37.0			32.0				
Actuated g/C Ratio				0.49	0.49			0.43				
Clearance Time (s)				5.0	5.0			5.0				
Lane Grp Cap (vph)				1524	1571			1936				
v/s Ratio Prot				0.07	c0.21			c0.12				
v/s Ratio Perm												
v/c Ratio				0.15	0.42			0.27				
Uniform Delay, d1				10.4	12.1			13.9				
Progression Factor				0.01	0.36			1.37				
Incremental Delay, d2				0.2	0.7			0.3				
Delay (s)				0.3	5.1			19.5				
Level of Service				A	A			B				
Approach Delay (s)		0.0			3.2			19.5			0.0	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	8.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
173: MISSOURI & OREGON #59

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	97	561	0	25	64	0	0	101	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					3.0		3.0	3.0			3.0	
Lane Util. Factor					0.95		1.00	1.00			1.00	
Frt					1.00		1.00	1.00			0.96	
Flt Protected					0.99		0.95	1.00			1.00	
Satd. Flow (prot)					3162		1593	1676			1603	
Flt Permitted					0.99		0.62	1.00			1.00	
Satd. Flow (perm)					3162		1046	1676			1603	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	108	623	0	28	71	0	0	112	54
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	23	0
Lane Group Flow (vph)	0	0	0	0	731	0	28	71	0	0	143	0
Turn Type				Split			Perm					
Protected Phases				1	1			2			2	
Permitted Phases							2				2	
Actuated Green, G (s)					34.0		29.0	29.0			29.0	
Effective Green, g (s)					37.0		32.0	32.0			32.0	
Actuated g/C Ratio					0.49		0.43	0.43			0.43	
Clearance Time (s)					6.0		6.0	6.0			6.0	
Lane Grp Cap (vph)					1560		446	715			684	
v/s Ratio Prot					c0.23			0.04			c0.09	
v/s Ratio Perm							0.03					
v/c Ratio					0.47		0.06	0.10			0.21	
Uniform Delay, d1					12.5		12.7	12.9			13.5	
Progression Factor					0.48		1.15	1.17			0.37	
Incremental Delay, d2					1.0		0.3	0.3			0.7	
Delay (s)					7.0		14.8	15.3			5.7	
Level of Service					A		B	B			A	
Approach Delay (s)		0.0			7.0			15.1			5.7	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	7.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	42.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
175: MISSOURI & SANTA FE

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	0	41	412	66	0	19	374	0	0	534	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0		3.0	3.0	3.0		3.0	3.0			3.0	
Lane Util. Factor	1.00		1.00	1.00	1.00		1.00	0.95			0.95	
Frt	1.00		0.85	1.00	1.00		1.00	1.00			1.00	
Flt Protected	0.95		1.00	0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)	1593		1425	1593	1676		1593	3185			3173	
Flt Permitted	0.95		1.00	0.95	1.00		0.34	1.00			1.00	
Satd. Flow (perm)	1593		1425	1593	1676		567	3185			3173	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	32	0	46	458	73	0	21	416	0	0	593	16
RTOR Reduction (vph)	0	0	39	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	32	0	7	458	73	0	21	416	0	0	607	0
Turn Type	custom		custom	Split			Perm					
Protected Phases	3			1	1			2			2	
Permitted Phases	3		3				2				2	
Actuated Green, G (s)	10.0		10.0	20.0	20.0		30.0	30.0			30.0	
Effective Green, g (s)	12.0		12.0	22.0	22.0		32.0	32.0			32.0	
Actuated g/C Ratio	0.16		0.16	0.29	0.29		0.43	0.43			0.43	
Clearance Time (s)	5.0		5.0	5.0	5.0		5.0	5.0			5.0	
Lane Grp Cap (vph)	255		228	467	492		242	1359			1354	
v/s Ratio Prot	c0.02			c0.29	0.04			0.13			c0.19	
v/s Ratio Perm			0.01				0.04					
v/c Ratio	0.13		0.03	0.98	0.15		0.09	0.31			0.45	
Uniform Delay, d1	27.0		26.6	26.3	19.6		12.8	14.2			15.2	
Progression Factor	1.00		1.00	1.05	0.99		0.50	0.49			0.89	
Incremental Delay, d2	1.0		0.3	36.6	0.6		0.6	0.5			1.0	
Delay (s)	28.0		26.9	64.2	20.0		7.0	7.5			14.5	
Level of Service	C		C	E	C		A	A			B	
Approach Delay (s)		27.3			58.1			7.5			14.5	
Approach LOS		C			E			A			B	

Intersection Summary			
HCM Average Control Delay	27.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
163: YANDELL & SANTA FE

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	150	292	0	187	65	0	0	75	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.0	3.0		3.0	3.0			3.0	
Lane Util. Factor				1.00	0.95		0.97	0.95			0.95	
Frt				1.00	1.00		1.00	1.00			0.98	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1593	3185		3090	3185			3108	
Flt Permitted				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (perm)				1593	3185		3090	3185			3108	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	167	324	0	208	72	0	0	83	16
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	13	0
Lane Group Flow (vph)	0	0	0	167	324	0	208	72	0	0	86	0
Turn Type				Split		Perm	Prot					
Protected Phases				1	1		7	4			8	
Permitted Phases						1						
Actuated Green, G (s)				30.0	30.0		20.0	35.0			10.0	
Effective Green, g (s)				32.0	32.0		22.0	37.0			12.0	
Actuated g/C Ratio				0.43	0.43		0.29	0.49			0.16	
Clearance Time (s)				5.0	5.0		5.0	5.0			5.0	
Lane Grp Cap (vph)				680	1359		906	1571			497	
v/s Ratio Prot				c0.10	0.10		c0.07	0.02			c0.03	
v/s Ratio Perm												
v/c Ratio				0.25	0.24		0.23	0.05			0.17	
Uniform Delay, d1				13.8	13.7		20.1	9.8			27.2	
Progression Factor				0.69	0.68		0.64	0.73			1.00	
Incremental Delay, d2				0.8	0.4		0.5	0.0			0.8	
Delay (s)				10.4	9.8		13.3	7.3			28.0	
Level of Service				B	A		B	A			C	
Approach Delay (s)		0.0			10.0			11.7			28.0	
Approach LOS		A			A			B			C	

Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
164: WYOMING & SANTA FE

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	11	202	353	0	0	0	0	466	461	19	164	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0					3.0		3.0	3.0	
Lane Util. Factor		0.95	1.00					0.95		1.00	0.95	
Frt		1.00	0.85					0.93		1.00	1.00	
Flt Protected		1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)		3177	1425					2948		1593	3185	
Flt Permitted		1.00	1.00					1.00		0.21	1.00	
Satd. Flow (perm)		3177	1425					2948		357	3185	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	224	392	0	0	0	0	518	512	21	182	0
RTOR Reduction (vph)	0	0	261	0	0	0	0	190	0	0	0	0
Lane Group Flow (vph)	0	236	131	0	0	0	0	840	0	21	182	0
Turn Type	Split		Perm							Perm		
Protected Phases	1	1						2			2	
Permitted Phases		1	1					2		2		
Actuated Green, G (s)		23.0	23.0					42.0		42.0	42.0	
Effective Green, g (s)		25.0	25.0					44.0		44.0	44.0	
Actuated g/C Ratio		0.33	0.33					0.59		0.59	0.59	
Clearance Time (s)		5.0	5.0					5.0		5.0	5.0	
Lane Grp Cap (vph)		1059	475					1729		209	1869	
v/s Ratio Prot		0.07						c0.29			0.06	
v/s Ratio Perm			c0.09							0.06		
v/c Ratio		0.22	0.28					0.49		0.10	0.10	
Uniform Delay, d1		18.0	18.3					9.0		6.8	6.8	
Progression Factor		1.00	1.00					0.23		0.64	0.58	
Incremental Delay, d2		0.5	1.4					1.0		0.9	0.1	
Delay (s)		18.5	19.8					3.0		5.3	4.1	
Level of Service		B	B					A		A	A	
Approach Delay (s)		19.3			0.0			3.0			4.2	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM Average Control Delay	8.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
176: FRANKLIN & SANTA FE

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	15	51	7	49	7	26	468	118	32	852	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85		0.98		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1593	1676	1425		1346		1593	2589		812	3185	1425
Flt Permitted	0.76	1.00	1.00		0.60		0.22	1.00		0.35	1.00	1.00
Satd. Flow (perm)	1267	1676	1425		814		375	2589		301	3185	1425
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	7	17	57	8	54	8	29	520	131	36	947	86
RTOR Reduction (vph)	0	0	35	0	5	0	0	30	0	0	0	40
Lane Group Flow (vph)	7	17	22	0	65	0	29	621	0	36	947	46
Heavy Vehicles (%)	2%	2%	2%	100%	2%	100%	2%	2%	100%	100%	2%	2%
Turn Type	D.Pm		custom	Perm			Perm			Perm		Perm
Protected Phases		2!			1			2!			2!	
Permitted Phases	1		1	1			2!			2!		2
Actuated Green, G (s)	27.0	38.0	27.0		27.0		38.0	38.0		38.0	38.0	38.0
Effective Green, g (s)	29.0	40.0	29.0		29.0		40.0	40.0		40.0	40.0	40.0
Actuated g/C Ratio	0.39	0.53	0.39		0.39		0.53	0.53		0.53	0.53	0.53
Clearance Time (s)	5.0	5.0	5.0		5.0		5.0	5.0		5.0	5.0	5.0
Lane Grp Cap (vph)	490	894	551		315		200	1381		161	1699	760
v/s Ratio Prot		0.01						0.24			c0.30	
v/s Ratio Perm	0.01		0.02		c0.08		0.08			0.12		0.03
v/c Ratio	0.01	0.02	0.04		0.21		0.14	0.45		0.22	0.56	0.06
Uniform Delay, d1	14.2	8.3	14.3		15.3		8.9	10.7		9.3	11.6	8.4
Progression Factor	1.00	1.00	1.00		1.19		0.36	0.26		1.07	1.10	1.73
Incremental Delay, d2	0.1	0.0	0.1		1.5		1.5	1.0		2.4	1.0	0.1
Delay (s)	14.2	8.3	14.5		19.8		4.7	3.8		12.3	13.8	14.7
Level of Service	B	A	B		B		A	A		B	B	B
Approach Delay (s)		13.1			19.8			3.9			13.8	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	10.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
177: MAIN & SANTA FE #59

11/21/2012

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	33	60	518	88	30	780
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0		3.0		3.0	3.0
Lane Util. Factor	1.00		0.95		1.00	0.95
Frt	0.91		0.98		1.00	1.00
Flt Protected	0.98		1.00		0.95	1.00
Satd. Flow (prot)	1504		3116		1593	3185
Flt Permitted	0.98		1.00		0.35	1.00
Satd. Flow (perm)	1504		3116		582	3185
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	37	67	576	98	33	867
RTOR Reduction (vph)	43	0	18	0	0	0
Lane Group Flow (vph)	61	0	656	0	33	867
Turn Type					Perm	
Protected Phases	1		2			2
Permitted Phases					2	
Actuated Green, G (s)	25.0		40.0		40.0	40.0
Effective Green, g (s)	27.0		42.0		42.0	42.0
Actuated g/C Ratio	0.36		0.56		0.56	0.56
Clearance Time (s)	5.0		5.0		5.0	5.0
Lane Grp Cap (vph)	541		1745		326	1784
v/s Ratio Prot	c0.04		0.21			c0.27
v/s Ratio Perm					0.06	
v/c Ratio	0.11		0.38		0.10	0.49
Uniform Delay, d1	16.0		9.2		7.7	10.0
Progression Factor	1.00		0.11		0.28	0.24
Incremental Delay, d2	0.4		0.6		0.5	0.8
Delay (s)	16.4		1.6		2.7	3.2
Level of Service	B		A		A	A
Approach Delay (s)	16.4		1.6			3.1
Approach LOS	B		A			A

Intersection Summary			
HCM Average Control Delay	3.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	38.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
194: SAN FRANCISCO & SANTA FE #59

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	0	6	5	166	13	3	518	0	0	885	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0		3.0		3.0			3.0			3.0	3.0
Lane Util. Factor	1.00		1.00		1.00			0.95			0.86	0.86
Frt	1.00		0.85		0.99			1.00			1.00	0.85
Flt Protected	0.95		1.00		1.00			1.00			1.00	1.00
Satd. Flow (prot)	1593		1425		1658			3184			4324	1226
Flt Permitted	0.59		1.00		1.00			0.95			1.00	1.00
Satd. Flow (perm)	981		1425		1658			3029			4324	1226
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	0	7	6	184	14	3	576	0	0	983	21
RTOR Reduction (vph)	0	0	4	0	4	0	0	0	0	0	0	9
Lane Group Flow (vph)	6	0	3	0	200	0	0	579	0	0	985	10
Turn Type	D.Pm		custom	Perm			Perm					Perm
Protected Phases					1			2			2	
Permitted Phases	1		1	1			2					2
Actuated Green, G (s)	29.0		29.0		29.0			36.0			36.0	36.0
Effective Green, g (s)	31.0		31.0		31.0			38.0			38.0	38.0
Actuated g/C Ratio	0.41		0.41		0.41			0.51			0.51	0.51
Clearance Time (s)	5.0		5.0		5.0			5.0			5.0	5.0
Lane Grp Cap (vph)	405		589		685			1535			2191	621
v/s Ratio Prot											c0.23	
v/s Ratio Perm	0.01		0.00		0.12			0.19				0.01
v/c Ratio	0.01		0.00		0.29			0.38			0.45	0.02
Uniform Delay, d1	13.0		12.9		14.7			11.3			11.8	9.2
Progression Factor	1.00		1.00		0.92			0.71			0.73	1.29
Incremental Delay, d2	0.1		0.0		1.1			0.7			0.6	0.0
Delay (s)	13.1		12.9		14.6			8.7			9.2	11.9
Level of Service	B		B		B			A			A	B
Approach Delay (s)		13.0			14.6			8.7			9.3	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	9.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	43.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
195: SAN ANTONIO & SANTA FE #59

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	58	42	52	127	67	7	391	15	28	456	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0			3.0			3.0	3.0
Lane Util. Factor	1.00	1.00			1.00			0.95			0.95	1.00
Frt	1.00	0.94			0.96			0.99			1.00	0.85
Flt Protected	0.95	1.00			0.99			1.00			1.00	1.00
Satd. Flow (prot)	1593	1570			1598			3165			3176	1425
Flt Permitted	0.51	1.00			0.92			0.95			0.91	1.00
Satd. Flow (perm)	853	1570			1487			2999			2913	1425
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	82	64	47	58	141	74	8	434	17	31	507	93
RTOR Reduction (vph)	0	30	0	0	18	0	0	4	0	0	0	41
Lane Group Flow (vph)	82	81	0	0	255	0	0	455	0	0	538	52
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		1			1			2			2	
Permitted Phases	1			1			2			2		2
Actuated Green, G (s)	25.0	25.0			25.0			40.0			40.0	40.0
Effective Green, g (s)	27.0	27.0			27.0			42.0			42.0	42.0
Actuated g/C Ratio	0.36	0.36			0.36			0.56			0.56	0.56
Clearance Time (s)	5.0	5.0			5.0			5.0			5.0	5.0
Lane Grp Cap (vph)	307	565			535			1679			1631	798
v/s Ratio Prot		0.05										
v/s Ratio Perm	0.10				c0.17			0.15			c0.18	0.04
v/c Ratio	0.27	0.14			0.48			0.27			0.33	0.07
Uniform Delay, d1	17.0	16.2			18.5			8.6			8.9	7.5
Progression Factor	0.89	0.80			0.85			0.70			1.12	1.71
Incremental Delay, d2	2.1	0.5			3.0			0.4			0.5	0.1
Delay (s)	17.2	13.5			18.8			6.4			10.5	13.0
Level of Service	B	B			B			A			B	B
Approach Delay (s)		15.1			18.8			6.4			10.9	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
219: PAISANO & SANTA FE #59

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	11	622	379	134	476	48	231	580	67	147	260	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		0.91	0.91		0.91	0.91	
Frt	1.00	0.94		1.00	0.99		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1593	4192		1593	4514		1344	2737		1449	3013	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1593	4192		1593	4514		1344	2737		1449	3013	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	691	421	149	529	53	257	644	74	163	289	22
RTOR Reduction (vph)	0	122	0	0	12	0	0	9	0	0	6	0
Lane Group Flow (vph)	12	990	0	149	570	0	231	735	0	147	321	0
Heavy Vehicles (%)	2%	2%	10%	2%	2%	2%	10%	13%	2%	2%	2%	2%
Turn Type	Prot			Prot			Split			Split		
Protected Phases	3	8		7	4		2	2		1	1	
Permitted Phases												
Actuated Green, G (s)	1.4	20.2		8.2	27.0		26.3	26.3		15.3	15.3	
Effective Green, g (s)	3.4	22.2		10.2	29.0		28.3	28.3		17.3	17.3	
Actuated g/C Ratio	0.04	0.25		0.11	0.32		0.31	0.31		0.19	0.19	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	60	1034		181	1455		423	861		279	579	
v/s Ratio Prot	0.01	c0.24		c0.09	0.13		0.17	c0.27		0.10	c0.11	
v/s Ratio Perm												
v/c Ratio	0.20	0.96		0.82	0.39		0.55	0.85		0.53	0.56	
Uniform Delay, d1	42.0	33.4		39.0	23.7		25.5	28.9		32.7	32.9	
Progression Factor	1.00	1.00		1.43	0.98		0.33	0.33		1.00	1.00	
Incremental Delay, d2	2.2	19.4		20.1	0.6		1.4	6.7		2.3	1.4	
Delay (s)	44.2	52.9		76.1	23.8		9.9	16.3		35.0	34.3	
Level of Service	D	D		E	C		A	B		D	C	
Approach Delay (s)		52.8			34.4			14.8			34.5	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	34.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Appendix-E

HCM Signalized Intersection Capacity Analysis
170: MISSOURI & KANSAS

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	0	0	0	469	1371	0	0	205	27	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.0	3.0			3.0				
Lane Util. Factor				0.97	0.95			0.91				
Frt				1.00	1.00			0.98				
Flt Protected				0.95	1.00			1.00				
Satd. Flow (prot)				3090	3185			4497				
Flt Permitted				0.95	1.00			1.00				
Satd. Flow (perm)				3090	3185			4497				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	521	1523	0	0	228	30	0	0	0
RTOR Reduction (vph)	0	0	0	264	0	0	0	9	0	0	0	0
Lane Group Flow (vph)	0	0	0	257	1523	0	0	249	0	0	0	0
Turn Type				Split								
Protected Phases				1	1			2				
Permitted Phases												
Actuated Green, G (s)				35.0	35.0			30.0				
Effective Green, g (s)				37.0	37.0			32.0				
Actuated g/C Ratio				0.49	0.49			0.43				
Clearance Time (s)				5.0	5.0			5.0				
Lane Grp Cap (vph)				1524	1571			1919				
v/s Ratio Prot				0.08	c0.48			c0.06				
v/s Ratio Perm												
v/c Ratio				0.17	0.97			0.13				
Uniform Delay, d1				10.5	18.5			13.0				
Progression Factor				0.02	0.68			1.40				
Incremental Delay, d2				0.2	16.2			0.1				
Delay (s)				0.5	28.7			18.5				
Level of Service				A	C			B				
Approach Delay (s)		0.0			21.5			18.5			0.0	
Approach LOS		A			C			B			A	

Intersection Summary			
HCM Average Control Delay	21.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
173: MISSOURI & OREGON #59

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	729	612	0	25	64	0	0	293	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.0	3.0		3.0	3.0			3.0	
Lane Util. Factor				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	1.00		1.00	1.00			0.98	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1593	1676		1593	1676			1644	
Flt Permitted				0.95	1.00		0.39	1.00			1.00	
Satd. Flow (perm)				1593	1676		660	1676			1644	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	810	680	0	28	71	0	0	326	54
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	8	0
Lane Group Flow (vph)	0	0	0	810	680	0	28	71	0	0	372	0
Turn Type				Split			Perm					
Protected Phases				1	1			2			2	
Permitted Phases							2				2	
Actuated Green, G (s)				34.0	34.0		29.0	29.0			29.0	
Effective Green, g (s)				37.0	37.0		32.0	32.0			32.0	
Actuated g/C Ratio				0.49	0.49		0.43	0.43			0.43	
Clearance Time (s)				6.0	6.0		6.0	6.0			6.0	
Lane Grp Cap (vph)				786	827		282	715			701	
v/s Ratio Prot				c0.51	0.41			0.04			c0.23	
v/s Ratio Perm							0.04					
v/c Ratio				1.03	0.82		0.10	0.10			0.53	
Uniform Delay, d1				19.0	16.2		12.9	12.9			15.9	
Progression Factor				0.81	0.80		1.18	1.17			0.73	
Incremental Delay, d2				40.1	9.0		0.7	0.3			2.9	
Delay (s)				55.5	21.9		15.9	15.4			14.5	
Level of Service				E	C		B	B			B	
Approach Delay (s)		0.0			40.2			15.5			14.5	
Approach LOS		A			D			B			B	

Intersection Summary			
HCM Average Control Delay	34.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
175: MISSOURI & SANTA FE

12/3/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	512	1	41	0	374	0	0	1355	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.0	3.0			3.0			3.0	
Lane Util. Factor				1.00	1.00			0.95			0.95	
Frt				1.00	0.85			1.00			1.00	
Flt Protected				0.95	1.00			1.00			1.00	
Satd. Flow (prot)				1593	1430			3185			3180	
Flt Permitted				0.95	1.00			1.00			1.00	
Satd. Flow (perm)				1593	1430			3185			3180	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	569	1	46	0	416	0	0	1506	16
RTOR Reduction (vph)	0	0	0	0	26	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	569	21	0	0	416	0	0	1521	0
Turn Type				Split			Perm					
Protected Phases				1	1			2			2	
Permitted Phases							2				2	
Actuated Green, G (s)				30.0	30.0			35.0			35.0	
Effective Green, g (s)				32.0	32.0			37.0			37.0	
Actuated g/C Ratio				0.43	0.43			0.49			0.49	
Clearance Time (s)				5.0	5.0			5.0			5.0	
Lane Grp Cap (vph)				680	610			1571			1569	
v/s Ratio Prot				c0.36	0.01			0.13			c0.48	
v/s Ratio Perm												
v/c Ratio				0.84	0.03			0.26			0.97	
Uniform Delay, d1				19.2	12.5			11.1			18.5	
Progression Factor				0.70	0.69			1.42			0.92	
Incremental Delay, d2				10.8	0.1			0.4			2.7	
Delay (s)				24.2	8.7			16.1			19.7	
Level of Service				C	A			B			B	
Approach Delay (s)		0.0			23.0			16.1			19.7	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
163: YANDELL & SANTA FE

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	150	292	0	187	65	0	0	75	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.0	3.0		3.0	3.0			3.0	
Lane Util. Factor				1.00	0.95		0.97	0.95			0.95	
Frt				1.00	1.00		1.00	1.00			0.98	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1593	3185		3090	3185			3108	
Flt Permitted				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (perm)				1593	3185		3090	3185			3108	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	167	324	0	208	72	0	0	83	16
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	13	0
Lane Group Flow (vph)	0	0	0	167	324	0	208	72	0	0	86	0
Turn Type				Split		Perm	Prot					
Protected Phases				1	1		7	4			8	
Permitted Phases						1						
Actuated Green, G (s)				30.0	30.0		20.0	35.0			10.0	
Effective Green, g (s)				32.0	32.0		22.0	37.0			12.0	
Actuated g/C Ratio				0.43	0.43		0.29	0.49			0.16	
Clearance Time (s)				5.0	5.0		5.0	5.0			5.0	
Lane Grp Cap (vph)				680	1359		906	1571			497	
v/s Ratio Prot				c0.10	0.10		c0.07	0.02			c0.03	
v/s Ratio Perm												
v/c Ratio				0.25	0.24		0.23	0.05			0.17	
Uniform Delay, d1				13.8	13.7		20.1	9.8			27.2	
Progression Factor				0.69	0.68		0.70	0.98			1.00	
Incremental Delay, d2				0.8	0.4		0.5	0.1			0.8	
Delay (s)				10.4	9.8		14.6	9.7			28.0	
Level of Service				B	A		B	A			C	
Approach Delay (s)		0.0			10.0			13.3			28.0	
Approach LOS		A			A			B			C	

Intersection Summary			
HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	93.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
164: WYOMING & SANTA FE

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	196	1193	0	0	0	0	466	218	19	164	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0					3.0		3.0	3.0	
Lane Util. Factor		0.95	1.00					0.95		1.00	0.95	
Frt		1.00	0.85					0.95		1.00	1.00	
Flt Protected		1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)		3180	1425					3033		1593	3185	
Flt Permitted		1.00	1.00					1.00		0.32	1.00	
Satd. Flow (perm)		3180	1425					3033		528	3185	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	7	218	1326	0	0	0	0	518	242	21	182	0
RTOR Reduction (vph)	0	0	490	0	0	0	0	74	0	0	0	0
Lane Group Flow (vph)	0	225	836	0	0	0	0	686	0	21	182	0
Turn Type	Split		Perm							Perm		
Protected Phases	1	1						2			2	
Permitted Phases		1	1					2		2		
Actuated Green, G (s)		23.0	23.0					42.0		42.0	42.0	
Effective Green, g (s)		25.0	25.0					44.0		44.0	44.0	
Actuated g/C Ratio		0.33	0.33					0.59		0.59	0.59	
Clearance Time (s)		5.0	5.0					5.0		5.0	5.0	
Lane Grp Cap (vph)		1060	475					1779		310	1869	
v/s Ratio Prot		0.07						c0.23			0.06	
v/s Ratio Perm			c0.59							0.04		
v/c Ratio		0.21	1.76					0.39		0.07	0.10	
Uniform Delay, d1		17.9	25.0					8.3		6.7	6.8	
Progression Factor		1.00	1.00					1.00		0.61	0.58	
Incremental Delay, d2		0.5	350.6					0.6		0.4	0.1	
Delay (s)		18.4	375.6					8.9		4.5	4.1	
Level of Service		B	F					A		A	A	
Approach Delay (s)		323.7			0.0			8.9			4.1	
Approach LOS		F			A			A			A	

Intersection Summary			
HCM Average Control Delay	202.8	HCM Level of Service	F
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	93.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
176: FRANKLIN & SANTA FE

12/3/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	7	46	7	0	465	118	132	1794	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					3.0			3.0			3.0	
Lane Util. Factor					1.00			0.95			0.95	
Frt					0.98			0.97			1.00	
Flt Protected					0.99			1.00			1.00	
Satd. Flow (prot)					1334			2586			2978	
Flt Permitted					0.99			1.00			0.80	
Satd. Flow (perm)					1334			2586			2395	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	8	51	8	0	517	131	147	1993	0
RTOR Reduction (vph)	0	0	0	0	5	0	0	30	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	62	0	0	618	0	0	2140	0
Heavy Vehicles (%)	2%	2%	2%	100%	2%	100%	2%	2%	100%	100%	2%	2%
Turn Type				Perm						Perm		
Protected Phases					1			2			2	
Permitted Phases				1						2		
Actuated Green, G (s)					27.0			38.0			38.0	
Effective Green, g (s)					29.0			40.0			40.0	
Actuated g/C Ratio					0.39			0.53			0.53	
Clearance Time (s)					5.0			5.0			5.0	
Lane Grp Cap (vph)					516			1379			1277	
v/s Ratio Prot								0.24				
v/s Ratio Perm					0.05						c0.89	
v/c Ratio					0.12			0.45			1.68	
Uniform Delay, d1					14.8			10.7			17.5	
Progression Factor					1.14			0.23			1.35	
Incremental Delay, d2					0.5			1.0			305.5	
Delay (s)					17.4			3.5			329.2	
Level of Service					B			A			F	
Approach Delay (s)		0.0			17.4			3.5			329.2	
Approach LOS		A			B			A			F	

Intersection Summary			
HCM Average Control Delay	248.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	91.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
177: MAIN & SANTA FE #59

11/21/2012

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	33	60	518	88	30	1609
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0		3.0		3.0	3.0
Lane Util. Factor	1.00		0.95		1.00	0.95
Frt	0.91		0.98		1.00	1.00
Flt Protected	0.98		1.00		0.95	1.00
Satd. Flow (prot)	1504		3116		1593	3185
Flt Permitted	0.98		1.00		0.35	1.00
Satd. Flow (perm)	1504		3116		582	3185
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	37	67	576	98	33	1788
RTOR Reduction (vph)	43	0	18	0	0	0
Lane Group Flow (vph)	61	0	656	0	33	1788
Turn Type					Perm	
Protected Phases	1		2			2
Permitted Phases					2	
Actuated Green, G (s)	25.0		40.0		40.0	40.0
Effective Green, g (s)	27.0		42.0		42.0	42.0
Actuated g/C Ratio	0.36		0.56		0.56	0.56
Clearance Time (s)	5.0		5.0		5.0	5.0
Lane Grp Cap (vph)	541		1745		326	1784
v/s Ratio Prot	c0.04		0.21			c0.56
v/s Ratio Perm					0.06	
v/c Ratio	0.11		0.38		0.10	1.00
Uniform Delay, d1	16.0		9.2		7.7	16.5
Progression Factor	1.00		0.01		0.95	0.58
Incremental Delay, d2	0.4		0.5		0.1	6.9
Delay (s)	16.4		0.6		7.4	16.5
Level of Service	B		A		A	B
Approach Delay (s)	16.4		0.6			16.3
Approach LOS	B		A			B

Intersection Summary			
HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
194: SAN FRANCISCO & SANTA FE #59

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	0	6	5	166	13	3	706	0	0	1435	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0		3.0		3.0			3.0			3.0	3.0
Lane Util. Factor	1.00		1.00		1.00			0.95			0.86	0.86
Frt	1.00		0.85		0.99			1.00			1.00	0.85
Flt Protected	0.95		1.00		1.00			1.00			1.00	1.00
Satd. Flow (prot)	1593		1425		1658			3185			4324	1226
Flt Permitted	0.59		1.00		1.00			0.95			1.00	1.00
Satd. Flow (perm)	981		1425		1658			3021			4324	1226
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	0	7	6	184	14	3	784	0	0	1594	21
RTOR Reduction (vph)	0	0	4	0	4	0	0	0	0	0	0	9
Lane Group Flow (vph)	6	0	3	0	200	0	0	787	0	0	1596	10
Turn Type	D.Pm		custom	Perm			Perm					Perm
Protected Phases					1			2			2	
Permitted Phases	1		1	1			2					2
Actuated Green, G (s)	29.0		29.0		29.0			36.0			36.0	36.0
Effective Green, g (s)	31.0		31.0		31.0			38.0			38.0	38.0
Actuated g/C Ratio	0.41		0.41		0.41			0.51			0.51	0.51
Clearance Time (s)	5.0		5.0		5.0			5.0			5.0	5.0
Lane Grp Cap (vph)	405		589		685			1531			2191	621
v/s Ratio Prot											c0.37	
v/s Ratio Perm	0.01		0.00		0.12			0.26				0.01
v/c Ratio	0.01		0.00		0.29			0.51			0.73	0.02
Uniform Delay, d1	13.0		12.9		14.7			12.3			14.5	9.2
Progression Factor	1.00		1.00		0.92			0.54			0.79	1.13
Incremental Delay, d2	0.1		0.0		1.1			1.1			0.6	0.0
Delay (s)	13.1		12.9		14.6			7.8			12.0	10.4
Level of Service	B		B		B			A			B	B
Approach Delay (s)		13.0			14.6			7.8			12.0	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
195: SAN ANTONIO & SANTA FE #59

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	57	42	52	129	67	7	671	15	28	457	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0			3.0			3.0	3.0
Lane Util. Factor	1.00	1.00			1.00			0.95			0.95	1.00
Frt	1.00	0.94			0.96			1.00			1.00	0.85
Flt Protected	0.95	1.00			0.99			1.00			1.00	1.00
Satd. Flow (prot)	1593	1569			1599			3173			3176	1425
Flt Permitted	0.51	1.00			0.92			0.95			0.89	1.00
Satd. Flow (perm)	850	1569			1489			3016			2836	1425
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	82	63	47	58	143	74	8	746	17	31	508	93
RTOR Reduction (vph)	0	30	0	0	18	0	0	2	0	0	0	41
Lane Group Flow (vph)	82	80	0	0	257	0	0	769	0	0	539	52
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		1			1			2			2	
Permitted Phases	1			1			2			2		2
Actuated Green, G (s)	25.0	25.0			25.0			40.0			40.0	40.0
Effective Green, g (s)	27.0	27.0			27.0			42.0			42.0	42.0
Actuated g/C Ratio	0.36	0.36			0.36			0.56			0.56	0.56
Clearance Time (s)	5.0	5.0			5.0			5.0			5.0	5.0
Lane Grp Cap (vph)	306	565			536			1689			1588	798
v/s Ratio Prot		0.05										
v/s Ratio Perm	0.10				c0.17			c0.25			0.19	0.04
v/c Ratio	0.27	0.14			0.48			0.46			0.34	0.07
Uniform Delay, d1	17.0	16.2			18.6			9.7			9.0	7.5
Progression Factor	0.89	0.80			0.85			0.84			0.74	0.72
Incremental Delay, d2	2.1	0.5			3.1			0.9			0.4	0.1
Delay (s)	17.2	13.4			18.8			9.1			7.0	5.6
Level of Service	B	B			B			A			A	A
Approach Delay (s)		15.0			18.8			9.1			6.8	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	10.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
219: PAISANO & SANTA FE #59

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	11	622	379	134	536	48	231	808	67	147	260	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		0.91	0.91		0.91	0.91	
Frt	1.00	0.94		1.00	0.99		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1593	4192		1593	4521		1344	2742		1449	3013	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1593	4192		1593	4521		1344	2742		1449	3013	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	691	421	149	596	53	257	898	74	163	289	22
RTOR Reduction (vph)	0	122	0	0	10	0	0	6	0	0	6	0
Lane Group Flow (vph)	12	990	0	149	639	0	231	992	0	147	321	0
Heavy Vehicles (%)	2%	2%	10%	2%	2%	2%	10%	13%	2%	2%	2%	2%
Turn Type	Prot			Prot			Split			Split		
Protected Phases	3	8		7	4		2	2		1	1	
Permitted Phases												
Actuated Green, G (s)	1.4	20.0		7.0	25.6		27.7	27.7		15.3	15.3	
Effective Green, g (s)	3.4	22.0		9.0	27.6		29.7	29.7		17.3	17.3	
Actuated g/C Ratio	0.04	0.24		0.10	0.31		0.33	0.33		0.19	0.19	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	60	1025		159	1386		444	905		279	579	
v/s Ratio Prot	0.01	c0.24		c0.09	0.14		0.17	c0.36		0.10	c0.11	
v/s Ratio Perm												
v/c Ratio	0.20	0.97		0.94	0.46		0.52	1.10		0.53	0.56	
Uniform Delay, d1	42.0	33.6		40.2	25.2		24.4	30.2		32.7	32.9	
Progression Factor	1.00	1.00		1.43	0.96		0.44	0.45		1.00	1.00	
Incremental Delay, d2	2.2	20.9		43.6	0.8		1.2	57.8		2.3	1.4	
Delay (s)	44.2	54.5		101.2	25.0		11.9	71.4		35.0	34.3	
Level of Service	D	D		F	C		B	E		D	C	
Approach Delay (s)		54.4			39.3			60.2			34.5	
Approach LOS		D			D			E			C	

Intersection Summary			
HCM Average Control Delay	50.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Appendix-F

HCM Signalized Intersection Capacity Analysis
163: YANDELL & SANTA FE

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	31	173	0	857	93	0	0	49	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.0	3.0		3.0	3.0			3.0	
Lane Util. Factor				1.00	0.95		0.97	0.95			0.95	
Frt				1.00	1.00		1.00	1.00			0.97	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1593	3185		3090	3185			3076	
Flt Permitted				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (perm)				1593	3185		3090	3185			3076	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	34	192	0	952	103	0	0	54	16
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	13	0
Lane Group Flow (vph)	0	0	0	34	192	0	952	103	0	0	57	0
Turn Type				Split		Perm	Prot					
Protected Phases				1	1		7	4			8	
Permitted Phases						1						
Actuated Green, G (s)				30.0	30.0		20.0	35.0			10.0	
Effective Green, g (s)				32.0	32.0		22.0	37.0			12.0	
Actuated g/C Ratio				0.43	0.43		0.29	0.49			0.16	
Clearance Time (s)				5.0	5.0		5.0	5.0			5.0	
Lane Grp Cap (vph)				680	1359		906	1571			492	
v/s Ratio Prot				0.02	c0.06		c0.31	0.03			c0.02	
v/s Ratio Perm												
v/c Ratio				0.05	0.14		1.05	0.07			0.11	
Uniform Delay, d1				12.6	13.1		26.5	9.9			27.0	
Progression Factor				1.13	1.04		1.03	0.67			1.00	
Incremental Delay, d2				0.1	0.2		33.9	0.0			0.5	
Delay (s)				14.4	13.9		61.1	6.7			27.4	
Level of Service				B	B		E	A			C	
Approach Delay (s)		0.0			14.0			55.8			27.4	
Approach LOS		A			B			E			C	

Intersection Summary			
HCM Average Control Delay	47.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
164: WYOMING & SANTA FE

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	124	82	0	0	0	0	1298	218	24	47	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0					3.0		3.0	3.0	
Lane Util. Factor		0.95	1.00					0.95		1.00	0.95	
Frt		1.00	0.85					0.98		1.00	1.00	
Flt Protected		1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)		3178	1425					3117		1593	3185	
Flt Permitted		1.00	1.00					1.00		0.09	1.00	
Satd. Flow (perm)		3178	1425					3117		152	3185	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	7	138	91	0	0	0	0	1442	242	27	52	0
RTOR Reduction (vph)	0	0	61	0	0	0	0	18	0	0	0	0
Lane Group Flow (vph)	0	145	30	0	0	0	0	1666	0	27	52	0
Turn Type	Split		Perm							Perm		
Protected Phases	1	1						2			2	
Permitted Phases		1	1					2		2		
Actuated Green, G (s)		23.0	23.0					42.0		42.0	42.0	
Effective Green, g (s)		25.0	25.0					44.0		44.0	44.0	
Actuated g/C Ratio		0.33	0.33					0.59		0.59	0.59	
Clearance Time (s)		5.0	5.0					5.0		5.0	5.0	
Lane Grp Cap (vph)		1059	475					1829		89	1869	
v/s Ratio Prot		c0.05						c0.53			0.02	
v/s Ratio Perm			0.02							0.18		
v/c Ratio		0.14	0.06					0.91		0.30	0.03	
Uniform Delay, d1		17.5	17.0					13.8		7.8	6.5	
Progression Factor		1.00	1.00					0.86		1.88	0.83	
Incremental Delay, d2		0.3	0.3					7.5		8.6	0.0	
Delay (s)		17.7	17.3					19.4		23.2	5.4	
Level of Service		B	B					B		C	A	
Approach Delay (s)		17.6			0.0			19.4			11.5	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	18.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
175: MISSOURI & SANTA FE

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	97	0	41	0	1119	0	0	112	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.0	3.0			3.0			3.0	
Lane Util. Factor				1.00	1.00			0.95			0.95	
Frt				1.00	0.85			1.00			0.98	
Flt Protected				0.95	1.00			1.00			1.00	
Satd. Flow (prot)				1593	1425			3185			3131	
Flt Permitted				0.95	1.00			1.00			1.00	
Satd. Flow (perm)				1593	1425			3185			3131	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	108	0	46	0	1243	0	0	124	16
RTOR Reduction (vph)	0	0	0	0	31	0	0	0	0	0	6	0
Lane Group Flow (vph)	0	0	0	108	15	0	0	1243	0	0	134	0
Turn Type				Split			Perm					
Protected Phases				1	1			2			2	
Permitted Phases							2				2	
Actuated Green, G (s)				22.0	22.0			43.0			43.0	
Effective Green, g (s)				24.0	24.0			45.0			45.0	
Actuated g/C Ratio				0.32	0.32			0.60			0.60	
Clearance Time (s)				5.0	5.0			5.0			5.0	
Lane Grp Cap (vph)				510	456			1911			1879	
v/s Ratio Prot				c0.07	0.01			c0.39			0.04	
v/s Ratio Perm												
v/c Ratio				0.21	0.03			0.65			0.07	
Uniform Delay, d1				18.6	17.5			9.8			6.3	
Progression Factor				1.34	3.25			1.69			0.84	
Incremental Delay, d2				0.7	0.1			0.2			0.1	
Delay (s)				25.6	57.0			16.8			5.3	
Level of Service				C	E			B			A	
Approach Delay (s)		0.0			35.0			16.8			5.3	
Approach LOS		A			C			B			A	

Intersection Summary			
HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
176: FRANKLIN & SANTA FE

12/3/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	7	17	7	0	1342	118	17	220	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					3.0			3.0			3.0	
Lane Util. Factor					1.00			0.95			0.95	
Frt					0.97			0.99			1.00	
Flt Protected					0.99			1.00			1.00	
Satd. Flow (prot)					1116			2920			2968	
Flt Permitted					0.99			1.00			0.79	
Satd. Flow (perm)					1116			2920			2342	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	8	19	8	0	1491	131	19	244	0
RTOR Reduction (vph)	0	0	0	0	5	0	0	9	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	30	0	0	1613	0	0	263	0
Heavy Vehicles (%)	2%	2%	2%	100%	2%	100%	2%	2%	100%	100%	2%	2%
Turn Type				Perm						Perm		
Protected Phases					1			2			2	
Permitted Phases				1						2		
Actuated Green, G (s)					27.0			38.0			38.0	
Effective Green, g (s)					29.0			40.0			40.0	
Actuated g/C Ratio					0.39			0.53			0.53	
Clearance Time (s)					5.0			5.0			5.0	
Lane Grp Cap (vph)					432			1557			1249	
v/s Ratio Prot								c0.55				
v/s Ratio Perm					0.03						0.11	
v/c Ratio					0.07			1.04			0.21	
Uniform Delay, d1					14.5			17.5			9.2	
Progression Factor					1.24			0.58			0.90	
Incremental Delay, d2					0.3			25.5			0.4	
Delay (s)					18.4			35.7			8.7	
Level of Service					B			D			A	
Approach Delay (s)		0.0			18.4			35.7			8.7	
Approach LOS		A			B			D			A	

Intersection Summary			
HCM Average Control Delay	31.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	55.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
177: MAIN & SANTA FE #59

11/21/2012

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	178	60	1378	88	3	219
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0		3.0		3.0	3.0
Lane Util. Factor	1.00		0.95		1.00	0.95
Frt	0.97		0.99		1.00	1.00
Flt Protected	0.96		1.00		0.95	1.00
Satd. Flow (prot)	1561		3157		1593	3185
Flt Permitted	0.96		1.00		0.10	1.00
Satd. Flow (perm)	1561		3157		160	3185
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	198	67	1531	98	3	243
RTOR Reduction (vph)	16	0	6	0	0	0
Lane Group Flow (vph)	249	0	1623	0	3	243
Turn Type					Perm	
Protected Phases	1		2			2
Permitted Phases					2	
Actuated Green, G (s)	25.0		40.0		40.0	40.0
Effective Green, g (s)	27.0		42.0		42.0	42.0
Actuated g/C Ratio	0.36		0.56		0.56	0.56
Clearance Time (s)	5.0		5.0		5.0	5.0
Lane Grp Cap (vph)	562		1768		90	1784
v/s Ratio Prot	c0.16		c0.51			0.08
v/s Ratio Perm					0.02	
v/c Ratio	0.44		0.92		0.03	0.14
Uniform Delay, d1	18.3		14.9		7.4	7.9
Progression Factor	1.00		1.68		0.49	0.46
Incremental Delay, d2	2.5		1.0		0.7	0.2
Delay (s)	20.8		26.1		4.3	3.7
Level of Service	C		C		A	A
Approach Delay (s)	20.8		26.1			3.7
Approach LOS	C		C			A

Intersection Summary			
HCM Average Control Delay	22.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
194: SAN FRANCISCO & SANTA FE #59

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1027	0	139	5	127	13	3	247	0	0	228	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0		3.0		3.0			3.0			3.0	3.0
Lane Util. Factor	1.00		1.00		1.00			0.95			0.86	0.86
Frt	1.00		0.85		0.99			1.00			1.00	0.85
Flt Protected	0.95		1.00		1.00			1.00			1.00	1.00
Satd. Flow (prot)	1593		1425		1654			3184			4325	1226
Flt Permitted	0.64		1.00		1.00			0.95			1.00	1.00
Satd. Flow (perm)	1065		1425		1654			3035			4325	1226
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1141	0	154	6	141	14	3	274	0	0	253	1
RTOR Reduction (vph)	0	0	71	0	5	0	0	0	0	0	0	0
Lane Group Flow (vph)	1141	0	83	0	156	0	0	277	0	0	253	1
Turn Type	D.Pm		custom	Perm			Perm					Perm
Protected Phases					1			2			2	
Permitted Phases	1		1	1			2					2
Actuated Green, G (s)	29.0		29.0		29.0			36.0			36.0	36.0
Effective Green, g (s)	31.0		31.0		31.0			38.0			38.0	38.0
Actuated g/C Ratio	0.41		0.41		0.41			0.51			0.51	0.51
Clearance Time (s)	5.0		5.0		5.0			5.0			5.0	5.0
Lane Grp Cap (vph)	440		589		684			1538			2191	621
v/s Ratio Prot											0.06	
v/s Ratio Perm	c1.07		0.06		0.09			c0.09				0.00
v/c Ratio	2.59		0.14		0.23			0.18			0.12	0.00
Uniform Delay, d1	22.0		13.7		14.3			10.0			9.7	9.1
Progression Factor	1.00		1.00		1.07			1.08			1.17	1.01
Incremental Delay, d2	723.5		0.5		0.8			0.3			0.1	0.0
Delay (s)	745.5		14.2		16.0			11.1			11.5	9.2
Level of Service	F		B		B			B			B	A
Approach Delay (s)		658.6			16.0			11.1			11.4	
Approach LOS		F			B			B			B	

Intersection Summary			
HCM Average Control Delay	433.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	91.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
195: SAN ANTONIO & SANTA FE #59

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	96	65	42	52	98	67	7	124	15	28	335	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0			3.0			3.0	3.0
Lane Util. Factor	1.00	1.00			1.00			0.95			0.95	1.00
Frt	1.00	0.94			0.96			0.98			1.00	0.85
Flt Protected	0.95	1.00			0.99			1.00			1.00	1.00
Satd. Flow (prot)	1593	1577			1588			3128			3173	1425
Flt Permitted	0.54	1.00			0.91			0.94			0.93	1.00
Satd. Flow (perm)	911	1577			1462			2942			2954	1425
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	107	72	47	58	109	74	8	138	17	31	372	84
RTOR Reduction (vph)	0	30	0	0	21	0	0	7	0	0	0	37
Lane Group Flow (vph)	107	89	0	0	220	0	0	156	0	0	403	47
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		1			1			2			2	
Permitted Phases	1			1			2			2		2
Actuated Green, G (s)	25.0	25.0			25.0			40.0			40.0	40.0
Effective Green, g (s)	27.0	27.0			27.0			42.0			42.0	42.0
Actuated g/C Ratio	0.36	0.36			0.36			0.56			0.56	0.56
Clearance Time (s)	5.0	5.0			5.0			5.0			5.0	5.0
Lane Grp Cap (vph)	328	568			526			1648			1654	798
v/s Ratio Prot		0.06										
v/s Ratio Perm	0.12				c0.15			0.05			c0.14	0.03
v/c Ratio	0.33	0.16			0.42			0.09			0.24	0.06
Uniform Delay, d1	17.4	16.3			18.1			7.7			8.4	7.5
Progression Factor	1.23	1.36			1.18			1.95			0.64	0.51
Incremental Delay, d2	2.6	0.6			2.4			0.1			0.3	0.1
Delay (s)	24.1	22.8			23.7			15.0			5.7	3.9
Level of Service	C	C			C			B			A	A
Approach Delay (s)		23.4			23.7			15.0			5.4	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM Average Control Delay	14.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
219: PAISANO & SANTA FE #59

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	8	218	379	42	203	48	85	182	67	158	340	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		0.91	0.91		0.91	0.91	
Frt	1.00	0.90		1.00	0.97		1.00	0.96		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1593	3944		1593	4446		1344	2714		1449	3021	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1593	3944		1593	4446		1344	2714		1449	3021	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	9	242	421	47	226	53	94	202	74	176	378	22
RTOR Reduction (vph)	0	258	0	0	30	0	0	42	0	0	4	0
Lane Group Flow (vph)	9	405	0	47	249	0	85	243	0	158	414	0
Heavy Vehicles (%)	2%	2%	10%	2%	2%	2%	10%	13%	2%	2%	2%	2%
Turn Type	Prot			Prot			Split			Split		
Protected Phases	3	8		7	4		2	2		1	1	
Permitted Phases												
Actuated Green, G (s)	1.6	32.9		6.2	37.5		14.1	14.1		16.8	16.8	
Effective Green, g (s)	3.6	34.9		8.2	39.5		16.1	16.1		18.8	18.8	
Actuated g/C Ratio	0.04	0.39		0.09	0.44		0.18	0.18		0.21	0.21	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	64	1529		145	1951		240	486		303	631	
v/s Ratio Prot	0.01	c0.10		c0.03	0.06		0.06	c0.09		0.11	c0.14	
v/s Ratio Perm												
v/c Ratio	0.14	0.27		0.32	0.13		0.35	0.50		0.52	0.66	
Uniform Delay, d1	41.7	18.8		38.3	15.0		32.4	33.3		31.6	32.6	
Progression Factor	1.00	1.00		1.61	0.43		0.38	0.27		1.00	1.00	
Incremental Delay, d2	1.4	0.4		1.3	0.1		0.9	0.8		2.1	2.7	
Delay (s)	43.1	19.2		63.1	6.6		13.1	10.0		33.7	35.4	
Level of Service	D	B		E	A		B	B		C	D	
Approach Delay (s)		19.5			14.8			10.7			34.9	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM Average Control Delay	21.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Appendix-G

HCM Signalized Intersection Capacity Analysis
170: MISSOURI & KANSAS

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	0	0	0	497	1731	0	0	205	27	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.0	3.0			3.0				
Lane Util. Factor				0.97	0.95			0.91				
Frt				1.00	1.00			0.98				
Flt Protected				0.95	1.00			1.00				
Satd. Flow (prot)				3090	3185			4497				
Flt Permitted				0.95	1.00			1.00				
Satd. Flow (perm)				3090	3185			4497				
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	552	1923	0	0	228	30	0	0	0
RTOR Reduction (vph)	0	0	0	280	0	0	0	3	0	0	0	0
Lane Group Flow (vph)	0	0	0	272	1923	0	0	255	0	0	0	0
Turn Type				Split								
Protected Phases				1	1			2				
Permitted Phases												
Actuated Green, G (s)				35.0	35.0			30.0				
Effective Green, g (s)				37.0	37.0			32.0				
Actuated g/C Ratio				0.49	0.49			0.43				
Clearance Time (s)				5.0	5.0			5.0				
Lane Grp Cap (vph)				1524	1571			1919				
v/s Ratio Prot				0.09	c0.60			c0.06				
v/s Ratio Perm												
v/c Ratio				0.18	1.22			0.13				
Uniform Delay, d1				10.6	19.0			13.1				
Progression Factor				0.04	0.75			1.39				
Incremental Delay, d2				0.3	106.6			0.1				
Delay (s)				0.7	120.9			18.3				
Level of Service				A	F			B				
Approach Delay (s)		0.0			94.1			18.3			0.0	
Approach LOS		A			F			B			A	

Intersection Summary			
HCM Average Control Delay	86.9	HCM Level of Service	F
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
173: MISSOURI & OREGON #59

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	1043	658	0	25	64	0	0	381	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.0	3.0		3.0	3.0			3.0	
Lane Util. Factor				1.00	1.00		1.00	1.00			1.00	
Frt				1.00	1.00		1.00	1.00			0.98	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1593	1676		1593	1676			1651	
Flt Permitted				0.95	1.00		0.30	1.00			1.00	
Satd. Flow (perm)				1593	1676		501	1676			1651	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	1159	731	0	28	71	0	0	423	54
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	6	0
Lane Group Flow (vph)	0	0	0	1159	731	0	28	71	0	0	471	0
Turn Type				Split			Perm					
Protected Phases				1	1			2			2	
Permitted Phases							2				2	
Actuated Green, G (s)				34.0	34.0		29.0	29.0			29.0	
Effective Green, g (s)				37.0	37.0		32.0	32.0			32.0	
Actuated g/C Ratio				0.49	0.49		0.43	0.43			0.43	
Clearance Time (s)				6.0	6.0		6.0	6.0			6.0	
Lane Grp Cap (vph)				786	827		214	715			704	
v/s Ratio Prot				c0.73	0.44			0.04			c0.29	
v/s Ratio Perm							0.06					
v/c Ratio				1.47	0.88		0.13	0.10			0.67	
Uniform Delay, d1				19.0	17.1		13.1	12.9			17.2	
Progression Factor				0.86	0.85		1.20	1.17			0.78	
Incremental Delay, d2				220.4	13.2		1.3	0.3			5.0	
Delay (s)				236.8	27.7		16.9	15.4			18.5	
Level of Service				F	C		B	B			B	
Approach Delay (s)		0.0			155.9			15.8			18.5	
Approach LOS		A			F			B			B	

Intersection Summary			
HCM Average Control Delay	123.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	96.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
175: MISSOURI & SANTA FE

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	563	0	41	0	374	0	0	1742	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.0	3.0			3.0			3.0	
Lane Util. Factor				1.00	1.00			0.95			0.95	
Frt				1.00	0.85			1.00			1.00	
Flt Protected				0.95	1.00			1.00			1.00	
Satd. Flow (prot)				1593	1425			3185			3181	
Flt Permitted				0.95	1.00			1.00			1.00	
Satd. Flow (perm)				1593	1425			3185			3181	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	626	0	46	0	416	0	0	1936	16
RTOR Reduction (vph)	0	0	0	0	31	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	626	15	0	0	416	0	0	1951	0
Turn Type				Split			Perm					
Protected Phases				1	1			2			2	
Permitted Phases							2				2	
Actuated Green, G (s)				22.0	22.0			43.0			43.0	
Effective Green, g (s)				24.0	24.0			45.0			45.0	
Actuated g/C Ratio				0.32	0.32			0.60			0.60	
Clearance Time (s)				5.0	5.0			5.0			5.0	
Lane Grp Cap (vph)				510	456			1911			1909	
v/s Ratio Prot				c0.39	0.01			0.13			c0.61	
v/s Ratio Perm												
v/c Ratio				1.23	0.03			0.22			1.02	
Uniform Delay, d1				25.5	17.5			6.9			15.0	
Progression Factor				0.94	1.00			1.17			1.00	
Incremental Delay, d2				117.5	0.1			0.2			13.0	
Delay (s)				141.5	17.6			8.3			27.9	
Level of Service				F	B			A			C	
Approach Delay (s)		0.0			133.1			8.3			27.9	
Approach LOS		A			F			A			C	

Intersection Summary			
HCM Average Control Delay	48.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	95.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
163: YANDELL & SANTA FE

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	150	292	0	187	65	0	0	75	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.0	3.0		3.0	3.0			3.0	
Lane Util. Factor				1.00	0.95		0.97	0.95			0.95	
Frt				1.00	1.00		1.00	1.00			0.98	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1593	3185		3090	3185			3108	
Flt Permitted				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (perm)				1593	3185		3090	3185			3108	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	167	324	0	208	72	0	0	83	16
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	13	0
Lane Group Flow (vph)	0	0	0	167	324	0	208	72	0	0	86	0
Turn Type				Split		Perm	Prot					
Protected Phases				1	1		7	4			8	
Permitted Phases						1						
Actuated Green, G (s)				30.0	30.0		20.0	35.0			10.0	
Effective Green, g (s)				32.0	32.0		22.0	37.0			12.0	
Actuated g/C Ratio				0.43	0.43		0.29	0.49			0.16	
Clearance Time (s)				5.0	5.0		5.0	5.0			5.0	
Lane Grp Cap (vph)				680	1359		906	1571			497	
v/s Ratio Prot				c0.10	0.10		c0.07	0.02			c0.03	
v/s Ratio Perm												
v/c Ratio				0.25	0.24		0.23	0.05			0.17	
Uniform Delay, d1				13.8	13.7		20.1	9.8			27.2	
Progression Factor				0.69	0.68		0.53	0.73			1.00	
Incremental Delay, d2				0.8	0.4		0.5	0.1			0.8	
Delay (s)				10.4	9.8		11.1	7.3			28.0	
Level of Service				B	A		B	A			C	
Approach Delay (s)		0.0			10.0			10.1			28.0	
Approach LOS		A			A			B			C	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	120.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
164: WYOMING & SANTA FE

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	202	1580	0	0	0	0	466	218	19	164	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0					3.0		3.0	3.0	
Lane Util. Factor		0.95	1.00					0.95		1.00	0.95	
Frt		1.00	0.85					0.95		1.00	1.00	
Flt Protected		1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)		3180	1425					3033		1593	3185	
Flt Permitted		1.00	1.00					1.00		0.32	1.00	
Satd. Flow (perm)		3180	1425					3033		528	3185	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	7	224	1756	0	0	0	0	518	242	21	182	0
RTOR Reduction (vph)	0	0	490	0	0	0	0	74	0	0	0	0
Lane Group Flow (vph)	0	231	1266	0	0	0	0	686	0	21	182	0
Turn Type	Split		Perm							Perm		
Protected Phases	1	1						2			2	
Permitted Phases		1	1					2		2		
Actuated Green, G (s)		23.0	23.0					42.0		42.0	42.0	
Effective Green, g (s)		25.0	25.0					44.0		44.0	44.0	
Actuated g/C Ratio		0.33	0.33					0.59		0.59	0.59	
Clearance Time (s)		5.0	5.0					5.0		5.0	5.0	
Lane Grp Cap (vph)		1060	475					1779		310	1869	
v/s Ratio Prot		0.07						c0.23			0.06	
v/s Ratio Perm			c0.89							0.04		
v/c Ratio		0.22	2.67					0.39		0.07	0.10	
Uniform Delay, d1		18.0	25.0					8.3		6.7	6.8	
Progression Factor		1.00	1.00					0.45		0.61	0.58	
Incremental Delay, d2		0.5	755.4					0.6		0.4	0.1	
Delay (s)		18.4	780.4					4.4		4.5	4.1	
Level of Service		B	F					A		A	A	
Approach Delay (s)		691.8			0.0			4.4			4.1	
Approach LOS		F			A			A			A	

Intersection Summary			
HCM Average Control Delay	467.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	120.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
176: FRANKLIN & SANTA FE

12/3/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	7	46	7	0	465	118	179	1932	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					3.0			3.0			3.0	
Lane Util. Factor					1.00			0.95			0.95	
Frt					0.98			0.97			1.00	
Flt Protected					0.99			1.00			1.00	
Satd. Flow (prot)					1334			2586			2933	
Flt Permitted					0.99			1.00			0.75	
Satd. Flow (perm)					1334			2586			2209	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	8	51	8	0	517	131	199	2147	0
RTOR Reduction (vph)	0	0	0	0	5	0	0	30	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	62	0	0	618	0	0	2346	0
Heavy Vehicles (%)	2%	2%	2%	100%	2%	100%	2%	2%	100%	100%	2%	2%
Turn Type				Perm						Perm		Perm
Protected Phases					1			2			2	
Permitted Phases				1						2		2
Actuated Green, G (s)					27.0			38.0			38.0	
Effective Green, g (s)					29.0			40.0			40.0	
Actuated g/C Ratio					0.39			0.53			0.53	
Clearance Time (s)					5.0			5.0			5.0	
Lane Grp Cap (vph)					516			1379			1178	
v/s Ratio Prot								0.24				
v/s Ratio Perm					0.05						c1.06	
v/c Ratio					0.12			0.45			1.99	
Uniform Delay, d1					14.8			10.7			17.5	
Progression Factor					1.14			0.23			0.87	
Incremental Delay, d2					0.5			1.0			446.5	
Delay (s)					17.3			3.5			461.8	
Level of Service					B			A			F	
Approach Delay (s)		0.0			17.3			3.5			461.8	
Approach LOS		A			B			A			F	

Intersection Summary			
HCM Average Control Delay	355.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	97.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
177: MAIN & SANTA FE #59

11/21/2012

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	33	60	518	88	30	1948
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0		3.0		3.0	3.0
Lane Util. Factor	1.00		0.95		1.00	0.95
Frt	0.91		0.98		1.00	1.00
Flt Protected	0.98		1.00		0.95	1.00
Satd. Flow (prot)	1504		3116		1593	3185
Flt Permitted	0.98		1.00		0.35	1.00
Satd. Flow (perm)	1504		3116		582	3185
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	37	67	576	98	33	2164
RTOR Reduction (vph)	43	0	18	0	0	0
Lane Group Flow (vph)	61	0	656	0	33	2164
Turn Type					Perm	
Protected Phases	1		2			2
Permitted Phases					2	
Actuated Green, G (s)	25.0		40.0		40.0	40.0
Effective Green, g (s)	27.0		42.0		42.0	42.0
Actuated g/C Ratio	0.36		0.56		0.56	0.56
Clearance Time (s)	5.0		5.0		5.0	5.0
Lane Grp Cap (vph)	541		1745		326	1784
v/s Ratio Prot	c0.04		0.21			c0.68
v/s Ratio Perm					0.06	
v/c Ratio	0.11		0.38		0.10	1.21
Uniform Delay, d1	16.0		9.2		7.7	16.5
Progression Factor	1.00		0.01		0.96	0.65
Incremental Delay, d2	0.4		0.5		0.1	96.4
Delay (s)	16.4		0.6		7.5	107.0
Level of Service	B		A		A	F
Approach Delay (s)	16.4		0.6			105.5
Approach LOS	B		A			F

Intersection Summary			
HCM Average Control Delay	78.6	HCM Level of Service	E
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
194: SAN FRANCISCO & SANTA FE #59

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	0	6	5	164	13	3	792	0	0	1775	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0		3.0		3.0			3.0			3.0	3.0
Lane Util. Factor	1.00		1.00		1.00			0.95			0.86	0.86
Frt	1.00		0.85		0.99			1.00			1.00	0.85
Flt Protected	0.95		1.00		1.00			1.00			1.00	1.00
Satd. Flow (prot)	1593		1425		1658			3185			4325	1226
Flt Permitted	0.59		1.00		1.00			0.95			1.00	1.00
Satd. Flow (perm)	985		1425		1658			3012			4325	1226
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	0	7	6	182	14	3	880	0	0	1972	1
RTOR Reduction (vph)	0	0	3	0	4	0	0	0	0	0	0	0
Lane Group Flow (vph)	6	0	4	0	198	0	0	883	0	0	1972	1
Turn Type	D.Pm		custom	Perm			Perm					Perm
Protected Phases					1			2			2	
Permitted Phases	1		1	1			2					2
Actuated Green, G (s)	29.0		29.0		29.0			36.0			36.0	36.0
Effective Green, g (s)	31.0		31.0		31.0			38.0			38.0	38.0
Actuated g/C Ratio	0.41		0.41		0.41			0.51			0.51	0.51
Clearance Time (s)	5.0		5.0		5.0			5.0			5.0	5.0
Lane Grp Cap (vph)	407		589		685			1526			2191	621
v/s Ratio Prot											c0.46	
v/s Ratio Perm	0.01		0.00		0.12			0.29				0.00
v/c Ratio	0.01		0.01		0.29			0.58			0.90	0.00
Uniform Delay, d1	13.0		12.9		14.7			12.9			16.8	9.1
Progression Factor	1.00		1.00		0.92			0.52			0.71	1.09
Incremental Delay, d2	0.1		0.0		1.1			1.4			0.7	0.0
Delay (s)	13.1		13.0		14.5			8.2			12.5	10.0
Level of Service	B		B		B			A			B	A
Approach Delay (s)		13.0			14.5			8.2			12.5	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
195: SAN ANTONIO & SANTA FE #59

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	94	57	42	52	129	67	7	811	15	28	457	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0			3.0			3.0	3.0
Lane Util. Factor	1.00	1.00			1.00			0.95			0.95	1.00
Frt	1.00	0.94			0.96			1.00			1.00	0.85
Flt Protected	0.95	1.00			0.99			1.00			1.00	1.00
Satd. Flow (prot)	1593	1569			1599			3175			3176	1425
Flt Permitted	0.51	1.00			0.92			0.95			0.88	1.00
Satd. Flow (perm)	850	1569			1489			3020			2794	1425
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	104	63	47	58	143	74	8	901	17	31	508	93
RTOR Reduction (vph)	0	30	0	0	18	0	0	2	0	0	0	41
Lane Group Flow (vph)	104	80	0	0	257	0	0	924	0	0	539	52
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		1			1			2			2	
Permitted Phases	1			1			2			2		2
Actuated Green, G (s)	25.0	25.0			25.0			40.0			40.0	40.0
Effective Green, g (s)	27.0	27.0			27.0			42.0			42.0	42.0
Actuated g/C Ratio	0.36	0.36			0.36			0.56			0.56	0.56
Clearance Time (s)	5.0	5.0			5.0			5.0			5.0	5.0
Lane Grp Cap (vph)	306	565			536			1691			1565	798
v/s Ratio Prot		0.05										
v/s Ratio Perm	0.12				c0.17			c0.31			0.19	0.04
v/c Ratio	0.34	0.14			0.48			0.55			0.34	0.07
Uniform Delay, d1	17.5	16.2			18.6			10.5			9.0	7.5
Progression Factor	0.90	0.82			0.85			0.88			0.74	0.87
Incremental Delay, d2	3.0	0.5			3.1			1.3			0.3	0.1
Delay (s)	18.8	13.8			18.8			10.5			6.9	6.7
Level of Service	B	B			B			B			A	A
Approach Delay (s)		16.2			18.8			10.5			6.9	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
219: PAISANO & SANTA FE #59

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	11	471	379	134	564	48	231	942	67	147	260	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		0.91	0.91		0.91	0.91	
Frt	1.00	0.93		1.00	0.99		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1593	4126		1593	4523		1344	2743		1449	3013	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1593	4126		1593	4523		1344	2743		1449	3013	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	523	421	149	627	53	257	1047	74	163	289	22
RTOR Reduction (vph)	0	162	0	0	10	0	0	5	0	0	6	0
Lane Group Flow (vph)	12	782	0	149	670	0	231	1142	0	147	321	0
Heavy Vehicles (%)	2%	2%	10%	2%	2%	2%	10%	13%	2%	2%	2%	2%
Turn Type	Prot			Prot			Split			Split		
Protected Phases	3	8		7	4		2	2		1	1	
Permitted Phases												
Actuated Green, G (s)	1.4	20.0		7.0	25.6		27.7	27.7		15.3	15.3	
Effective Green, g (s)	3.4	22.0		9.0	27.6		29.7	29.7		17.3	17.3	
Actuated g/C Ratio	0.04	0.24		0.10	0.31		0.33	0.33		0.19	0.19	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	60	1009		159	1387		444	905		279	579	
v/s Ratio Prot	0.01	c0.19		c0.09	0.15		0.17	c0.42		0.10	c0.11	
v/s Ratio Perm												
v/c Ratio	0.20	0.87dr		0.94	0.48		0.52	1.26		0.53	0.56	
Uniform Delay, d1	42.0	31.7		40.2	25.4		24.4	30.2		32.7	32.9	
Progression Factor	1.00	1.00		1.43	0.96		0.50	0.51		1.00	1.00	
Incremental Delay, d2	2.2	5.8		43.6	0.9		1.3	125.7		2.3	1.4	
Delay (s)	44.2	37.5		101.2	25.2		13.4	141.1		35.0	34.3	
Level of Service	D	D		F	C		B	F		D	C	
Approach Delay (s)		37.6			38.8			119.7			34.5	
Approach LOS		D			D			F			C	

Intersection Summary			
HCM Average Control Delay	68.6	HCM Level of Service	E
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Appendix-H

HCM Signalized Intersection Capacity Analysis
163: YANDELL & SANTA FE

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	31	191	0	1203	109	0	0	47	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.0	3.0		3.0	3.0			3.0	
Lane Util. Factor				1.00	0.95		0.97	0.95			0.95	
Frt				1.00	1.00		1.00	1.00			0.96	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1593	3185		3090	3185			3073	
Flt Permitted				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (perm)				1593	3185		3090	3185			3073	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	34	212	0	1337	121	0	0	52	16
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	13	0
Lane Group Flow (vph)	0	0	0	34	212	0	1337	121	0	0	55	0
Turn Type				Split		Perm	Prot					
Protected Phases				1	1		7	4			8	
Permitted Phases						1						
Actuated Green, G (s)				30.0	30.0		20.0	35.0			10.0	
Effective Green, g (s)				32.0	32.0		22.0	37.0			12.0	
Actuated g/C Ratio				0.43	0.43		0.29	0.49			0.16	
Clearance Time (s)				5.0	5.0		5.0	5.0			5.0	
Lane Grp Cap (vph)				680	1359		906	1571			492	
v/s Ratio Prot				0.02	c0.07		c0.43	0.04			c0.02	
v/s Ratio Perm												
v/c Ratio				0.05	0.16		1.48	0.08			0.11	
Uniform Delay, d1				12.6	13.2		26.5	10.0			26.9	
Progression Factor				1.13	1.04		1.09	0.78			1.00	
Incremental Delay, d2				0.1	0.2		214.6	0.0			0.5	
Delay (s)				14.4	13.9		243.5	7.8			27.4	
Level of Service				B	B		F	A			C	
Approach Delay (s)		0.0			14.0			223.9			27.4	
Approach LOS		A			B			F			C	

Intersection Summary			
HCM Average Control Delay	187.2	HCM Level of Service	F
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	77.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
164: WYOMING & SANTA FE

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	124	82	0	0	0	0	1705	218	24	47	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0					3.0		3.0	3.0	
Lane Util. Factor		0.95	1.00					0.95		1.00	0.95	
Frt		1.00	0.85					0.98		1.00	1.00	
Flt Protected		1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)		3178	1425					3131		1593	3185	
Flt Permitted		1.00	1.00					1.00		0.09	1.00	
Satd. Flow (perm)		3178	1425					3131		152	3185	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	7	138	91	0	0	0	0	1894	242	27	52	0
RTOR Reduction (vph)	0	0	61	0	0	0	0	13	0	0	0	0
Lane Group Flow (vph)	0	145	30	0	0	0	0	2123	0	27	52	0
Turn Type	Split		Perm							Perm		
Protected Phases	1	1						2			2	
Permitted Phases		1	1					2		2		
Actuated Green, G (s)		23.0	23.0					42.0		42.0	42.0	
Effective Green, g (s)		25.0	25.0					44.0		44.0	44.0	
Actuated g/C Ratio		0.33	0.33					0.59		0.59	0.59	
Clearance Time (s)		5.0	5.0					5.0		5.0	5.0	
Lane Grp Cap (vph)		1059	475					1837		89	1869	
v/s Ratio Prot		c0.05						c0.68			0.02	
v/s Ratio Perm			0.02							0.18		
v/c Ratio		0.14	0.06					1.16		0.30	0.03	
Uniform Delay, d1		17.5	17.0					15.5		7.8	6.5	
Progression Factor		1.00	1.00					0.77		1.85	0.85	
Incremental Delay, d2		0.3	0.3					74.9		8.6	0.0	
Delay (s)		17.7	17.3					86.9		23.0	5.5	
Level of Service		B	B					F		C	A	
Approach Delay (s)		17.6			0.0			86.9			11.5	
Approach LOS		B			A			F			B	

Intersection Summary			
HCM Average Control Delay	77.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	77.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
175: MISSOURI & SANTA FE

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	97	0	41	0	1506	0	0	112	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.0	3.0			3.0			3.0	
Lane Util. Factor				1.00	1.00			0.95			0.95	
Frt				1.00	0.85			1.00			0.98	
Flt Protected				0.95	1.00			1.00			1.00	
Satd. Flow (prot)				1593	1425			3185			3131	
Flt Permitted				0.95	1.00			1.00			1.00	
Satd. Flow (perm)				1593	1425			3185			3131	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	108	0	46	0	1673	0	0	124	16
RTOR Reduction (vph)	0	0	0	0	17	0	0	0	0	0	6	0
Lane Group Flow (vph)	0	0	0	108	29	0	0	1673	0	0	134	0
Turn Type				Split			Perm					
Protected Phases				1	1			2			2	
Permitted Phases							2				2	
Actuated Green, G (s)				22.0	22.0			43.0			43.0	
Effective Green, g (s)				24.0	24.0			45.0			45.0	
Actuated g/C Ratio				0.32	0.32			0.60			0.60	
Clearance Time (s)				5.0	5.0			5.0			5.0	
Lane Grp Cap (vph)				510	456			1911			1879	
v/s Ratio Prot				c0.07	0.02			c0.53			0.04	
v/s Ratio Perm												
v/c Ratio				0.21	0.06			0.88			0.07	
Uniform Delay, d1				18.6	17.7			12.6			6.3	
Progression Factor				1.34	1.57			1.47			0.84	
Incremental Delay, d2				0.7	0.2			0.6			0.1	
Delay (s)				25.6	28.0			19.2			5.3	
Level of Service				C	C			B			A	
Approach Delay (s)		0.0			26.3			19.2			5.3	
Approach LOS		A			C			B			A	

Intersection Summary			
HCM Average Control Delay	18.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	58.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
176: FRANKLIN & SANTA FE

12/3/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	7	17	7	0	1730	118	17	220	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					3.0			3.0		3.0	3.0	
Lane Util. Factor					1.00			0.95		0.91	0.91	
Frt					0.97			0.99		1.00	1.00	
Flt Protected					0.99			1.00		0.95	1.00	
Satd. Flow (prot)					1116			2973		739	3026	
Flt Permitted					0.99			1.00		0.10	0.85	
Satd. Flow (perm)					1116			2973		78	2578	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	8	19	8	0	1922	131	19	244	0
RTOR Reduction (vph)	0	0	0	0	5	0	0	7	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	30	0	0	2046	0	17	246	0
Heavy Vehicles (%)	2%	2%	2%	100%	2%	100%	2%	2%	100%	100%	2%	2%
Turn Type				Perm						Perm		Perm
Protected Phases					1			2			2	
Permitted Phases				1						2		2
Actuated Green, G (s)					27.0			38.0		38.0	38.0	
Effective Green, g (s)					29.0			40.0		40.0	40.0	
Actuated g/C Ratio					0.39			0.53		0.53	0.53	
Clearance Time (s)					5.0			5.0		5.0	5.0	
Lane Grp Cap (vph)					432			1586		42	1375	
v/s Ratio Prot								c0.69				
v/s Ratio Perm					0.03					0.22	0.10	
v/c Ratio					0.07			1.29		0.40	0.18	
Uniform Delay, d1					14.5			17.5		10.4	9.0	
Progression Factor					1.24			0.69		1.40	0.91	
Incremental Delay, d2					0.3			131.1		26.5	0.3	
Delay (s)					18.4			143.2		41.0	8.5	
Level of Service					B			F		D	A	
Approach Delay (s)		0.0			18.4			143.2			10.6	
Approach LOS		A			B			F			B	

Intersection Summary			
HCM Average Control Delay	126.5	HCM Level of Service	F
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
177: MAIN & SANTA FE #59

11/21/2012

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	178	60	1765	88	3	219
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0		3.0		3.0	3.0
Lane Util. Factor	1.00		0.95		1.00	0.95
Frt	0.97		0.99		1.00	1.00
Flt Protected	0.96		1.00		0.95	1.00
Satd. Flow (prot)	1561		3163		1593	3185
Flt Permitted	0.96		1.00		0.10	1.00
Satd. Flow (perm)	1561		3163		160	3185
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	198	67	1961	98	3	243
RTOR Reduction (vph)	6	0	5	0	0	0
Lane Group Flow (vph)	259	0	2054	0	3	243
Turn Type					Perm	
Protected Phases	1		2			2
Permitted Phases					2	
Actuated Green, G (s)	25.0		40.0		40.0	40.0
Effective Green, g (s)	27.0		42.0		42.0	42.0
Actuated g/C Ratio	0.36		0.56		0.56	0.56
Clearance Time (s)	5.0		5.0		5.0	5.0
Lane Grp Cap (vph)	562		1771		90	1784
v/s Ratio Prot	c0.17		c0.65			0.08
v/s Ratio Perm					0.02	
v/c Ratio	0.46		1.16		0.03	0.14
Uniform Delay, d1	18.4		16.5		7.4	7.9
Progression Factor	1.00		1.75		0.49	0.46
Incremental Delay, d2	2.7		72.6		0.7	0.2
Delay (s)	21.1		101.6		4.3	3.7
Level of Service	C		F		A	A
Approach Delay (s)	21.1		101.6			3.7
Approach LOS	C		F			A

Intersection Summary			
HCM Average Control Delay	83.9	HCM Level of Service	F
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
194: SAN FRANCISCO & SANTA FE #59

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1414	0	225	5	157	13	3	147	0	0	129	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0		3.0		3.0			3.0			3.0	3.0
Lane Util. Factor	1.00		1.00		1.00			0.95			0.86	0.86
Frt	1.00		0.85		0.99			1.00			1.00	0.85
Flt Protected	0.95		1.00		1.00			1.00			1.00	1.00
Satd. Flow (prot)	1593		1425		1658			3182			4325	1226
Flt Permitted	0.60		1.00		1.00			0.95			1.00	1.00
Satd. Flow (perm)	1000		1425		1658			3033			4325	1226
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1571	0	250	6	174	14	3	163	0	0	143	1
RTOR Reduction (vph)	0	0	84	0	4	0	0	0	0	0	0	0
Lane Group Flow (vph)	1571	0	166	0	190	0	0	166	0	0	143	1
Turn Type	D.Pm		custom	Perm			Perm					Perm
Protected Phases					1			2			2	
Permitted Phases	1		1	1			2					2
Actuated Green, G (s)	29.0		29.0		29.0			36.0			36.0	36.0
Effective Green, g (s)	31.0		31.0		31.0			38.0			38.0	38.0
Actuated g/C Ratio	0.41		0.41		0.41			0.51			0.51	0.51
Clearance Time (s)	5.0		5.0		5.0			5.0			5.0	5.0
Lane Grp Cap (vph)	413		589		685			1537			2191	621
v/s Ratio Prot											0.03	
v/s Ratio Perm	c1.57		0.12		0.11			c0.05				0.00
v/c Ratio	3.80		0.28		0.28			0.11			0.07	0.00
Uniform Delay, d1	22.0		14.6		14.6			9.7			9.4	9.1
Progression Factor	1.00		1.00		1.06			1.08			1.15	1.03
Incremental Delay, d2	1267.6		1.2		1.0			0.1			0.1	0.0
Delay (s)	1289.6		15.8		16.4			10.6			10.9	9.4
Level of Service	F		B		B			B			B	A
Approach Delay (s)		1114.7			16.4			10.6			10.9	
Approach LOS		F			B			B			B	

Intersection Summary			
HCM Average Control Delay	875.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.77		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	114.3%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
195: SAN ANTONIO & SANTA FE #59

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	96	65	42	52	98	67	7	122	15	28	380	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0			3.0			3.0			3.0	3.0
Lane Util. Factor	1.00	1.00			1.00			0.95			0.95	1.00
Frt	1.00	0.94			0.96			0.98			1.00	0.85
Flt Protected	0.95	1.00			0.99			1.00			1.00	1.00
Satd. Flow (prot)	1593	1577			1588			3127			3174	1425
Flt Permitted	0.54	1.00			0.91			0.94			0.93	1.00
Satd. Flow (perm)	911	1577			1462			2935			2963	1425
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	107	72	47	58	109	74	8	136	17	31	422	84
RTOR Reduction (vph)	0	30	0	0	21	0	0	7	0	0	0	37
Lane Group Flow (vph)	107	89	0	0	220	0	0	154	0	0	453	47
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		1			1			2			2	
Permitted Phases	1			1			2			2		2
Actuated Green, G (s)	25.0	25.0			25.0			40.0			40.0	40.0
Effective Green, g (s)	27.0	27.0			27.0			42.0			42.0	42.0
Actuated g/C Ratio	0.36	0.36			0.36			0.56			0.56	0.56
Clearance Time (s)	5.0	5.0			5.0			5.0			5.0	5.0
Lane Grp Cap (vph)	328	568			526			1644			1659	798
v/s Ratio Prot		0.06										
v/s Ratio Perm	0.12				c0.15			0.05			c0.15	0.03
v/c Ratio	0.33	0.16			0.42			0.09			0.27	0.06
Uniform Delay, d1	17.4	16.3			18.1			7.7			8.6	7.5
Progression Factor	1.23	1.36			1.18			1.95			0.97	1.32
Incremental Delay, d2	2.6	0.6			2.4			0.1			0.4	0.1
Delay (s)	24.1	22.8			23.7			15.1			8.7	10.1
Level of Service	C	C			C			B			A	B
Approach Delay (s)		23.4			23.7			15.1			8.9	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM Average Control Delay	15.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	47.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
219: PAISANO & SANTA FE #59

11/21/2012

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	8	218	379	42	203	48	85	182	67	186	433	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		0.91	0.91		0.91	0.91	
Frt	1.00	0.90		1.00	0.97		1.00	0.96		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1593	3944		1593	4446		1344	2714		1449	3026	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1593	3944		1593	4446		1344	2714		1449	3026	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	9	242	421	47	226	53	94	202	74	207	481	22
RTOR Reduction (vph)	0	261	0	0	30	0	0	42	0	0	3	0
Lane Group Flow (vph)	9	402	0	47	249	0	85	243	0	186	521	0
Heavy Vehicles (%)	2%	2%	10%	2%	2%	2%	10%	13%	2%	2%	2%	2%
Turn Type	Prot			Prot			Split			Split		
Protected Phases	3	8		7	4		2	2		1	1	
Permitted Phases												
Actuated Green, G (s)	1.6	32.1		6.2	36.7		14.1	14.1		17.6	17.6	
Effective Green, g (s)	3.6	34.1		8.2	38.7		16.1	16.1		19.6	19.6	
Actuated g/C Ratio	0.04	0.38		0.09	0.43		0.18	0.18		0.22	0.22	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	64	1494		145	1912		240	486		316	659	
v/s Ratio Prot	0.01	c0.10		c0.03	0.06		0.06	c0.09		0.13	c0.17	
v/s Ratio Perm												
v/c Ratio	0.14	0.27		0.32	0.13		0.35	0.50		0.59	0.79	
Uniform Delay, d1	41.7	19.3		38.3	15.5		32.4	33.3		31.6	33.3	
Progression Factor	1.00	1.00		1.62	0.43		0.37	0.27		1.00	1.00	
Incremental Delay, d2	1.4	0.4		1.3	0.1		0.9	0.8		3.3	6.8	
Delay (s)	43.1	19.8		63.3	6.8		13.1	10.0		34.9	40.0	
Level of Service	D	B		E	A		B	A		C	D	
Approach Delay (s)		20.1			14.9			10.7			38.7	
Approach LOS		C			B			B			D	

Intersection Summary			
HCM Average Control Delay	24.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	51.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group