

September 15, 2022

PK# 5431-22.460

TRAFFIC IMPACT ANALYSIS

Project:

1715 Market Center

In Dallas, Texas

Prepared for:

City of Dallas

On behalf of:

Market Center Boulevard JV LP

Prepared by:

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EXECUTIVE SUMMARY

The services of **Pacheco Koch** were retained by **Market Center Boulevard JV LP** to prepare a Traffic Impact Analysis (TIA) for the proposed office development with ground-floor commercial located at 1715 Market Center Boulevard in Dallas, Texas. The Project is a redevelopment of the existing site. Buildout of the Project is estimated to occur by 2025. A TIA is required by the City of Dallas for review as part of the Owner's request to create a new PD Subdistrict for the subject property.

The purpose of this report is to estimate the incremental impact on the background traffic operational conditions caused by the proposed development within a specific study area as determined by standardized engineering analyses. The study parameters used in this TIA are based upon the requirements of City and are consistent with the standard industry practices used in similar studies.

Based upon the analyses performed herein, Pacheco Koch developed the following findings and recommendations.

FINDING: The proposed site redevelopment will include mid-rise office buildings with ground-floor retail and structured parking. The planned uses are anticipated to generate about 9,000 trip ends per day, including approximately 700 trip ends during the AM Peak Hour and 1,000 trip ends during the PM Peak Hour.

FINDING: The subject site is short distance from the Trinity Strand Trail. A small percent of site-generated trips may utilize the trail for access.

- ❖ **RECOMMENDATION:** Reinstall the pavement markings for the crosswalk on the south leg of Turtle Creek Boulevard at the Market Center Boulevard intersection to facilitate crossings of trail users from the Trinity Strand Trail who are destined for the subject site.

FINDING: The proposed development will effectively utilize existing access points located on Market Center Boulevard and E Irving Boulevard. The northern driveway on Market Center Boulevard provides a hooded left turn into the existing driveway; both driveways on E Irving Boulevard have access to full median openings—one at the intersection with Riveredge Drive, and the other serving private driveways. The proposed development will remove two existing driveways on Market Center Boulevard. The number of driveways on Irving Boulevard will remain the same.

FINDING: Traffic-signal-controlled intersections in the vicinity of the site exist near the four corners—at the intersections with Oak Lawn Avenue and with Turtle Creek Boulevard. Generally, all signal-controlled-intersections currently operate at very good Levels of Service during peak hour periods. The greatest traffic impact is anticipated to occur at the intersection of Market Center Boulevard and Oak Lawn Avenue, which is anticipated to operate at Level of Service C with the addition of background growth and

site-generated traffic. If background traffic growth continues for several years, the intersection may degrade to Level of Service D (generally “acceptable” for urban conditions) several years after site buildout. Automated traffic signal timing optimizations may negate or reduce the projected increases in delays.

FINDING: With the addition of projected background traffic growth, which includes projected traffic from future off-site developments in the vicinity, left turns from the minor-street approaches at the unsignalized intersection of E Irving Boulevard and Riveredge Drive/Site Driveway 1, are projected to experience high delays during peak hour periods. The intersection is not considered to be a candidate for installation of a traffic signal due to proximity of existing traffic signals. However, if the volume projections are accurate, motorists on both sides of the street have other route alternatives that would allow them to avoid unprotected left-turn maneuvers if desired. In the case of the subject site, motorists can instead use the driveways on Market Center Boulevard to make right-turns in lieu of left turns onto E Irving Boulevard. For Riveredge Drive, motorists can choose to travel east or west on E Levee Street to access nearby traffic signals to perform protected turning maneuvers.

- ❖ RECOMMENDATION: To reduce delay for right-turning motorists at the intersection of E Irving Boulevard and Riveredge Drive/Site Driveway 1, it is recommended that (in the case of Riveredge Drive) the existing roadway be re-stripped within existing pavement to provide a separate left- and right-approach lanes. It is recommended that Driveway 1 be reconstructed to a width sufficient to provide separate left- and right-turning approach lanes. During the engineering design phase, efforts should be made to align Site Driveway 1 with Riveredge Drive to eliminate the existing offset of opposing left-turn maneuvers.

NOTE: The City of Dallas Thoroughfare Plan calls for Market Center Boulevard to have a “Special” four-lane, median-divided cross-section in the future (currently, the cross-section has six lanes with a raised center median). Though no timetable for modifications to this roadway are known, this analysis indicates that the roadway link capacity will continue to be sufficient after the lane reduction to support traffic from the proposed development.

END



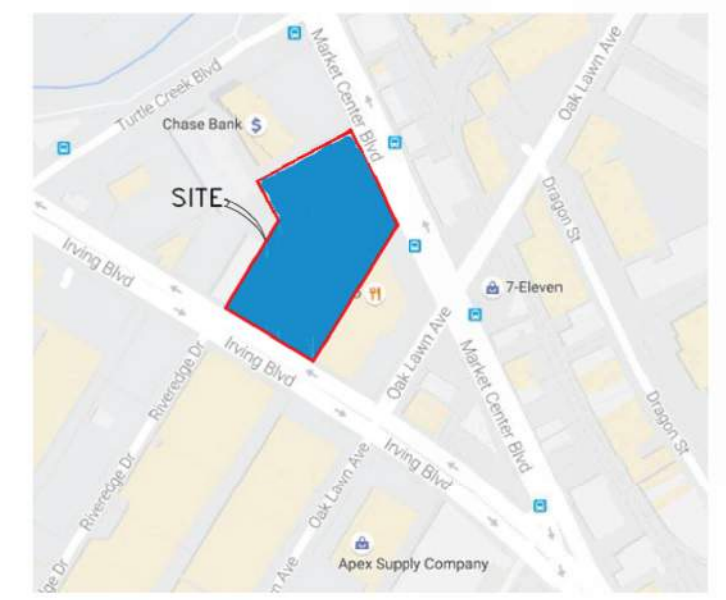
- Project Location
- Study Area Intersection (Signalized)
- Traffic Signal
- Study Area Intersection (Unsignalized)

Site Location Map

1715 Market Center, Dallas, Texas

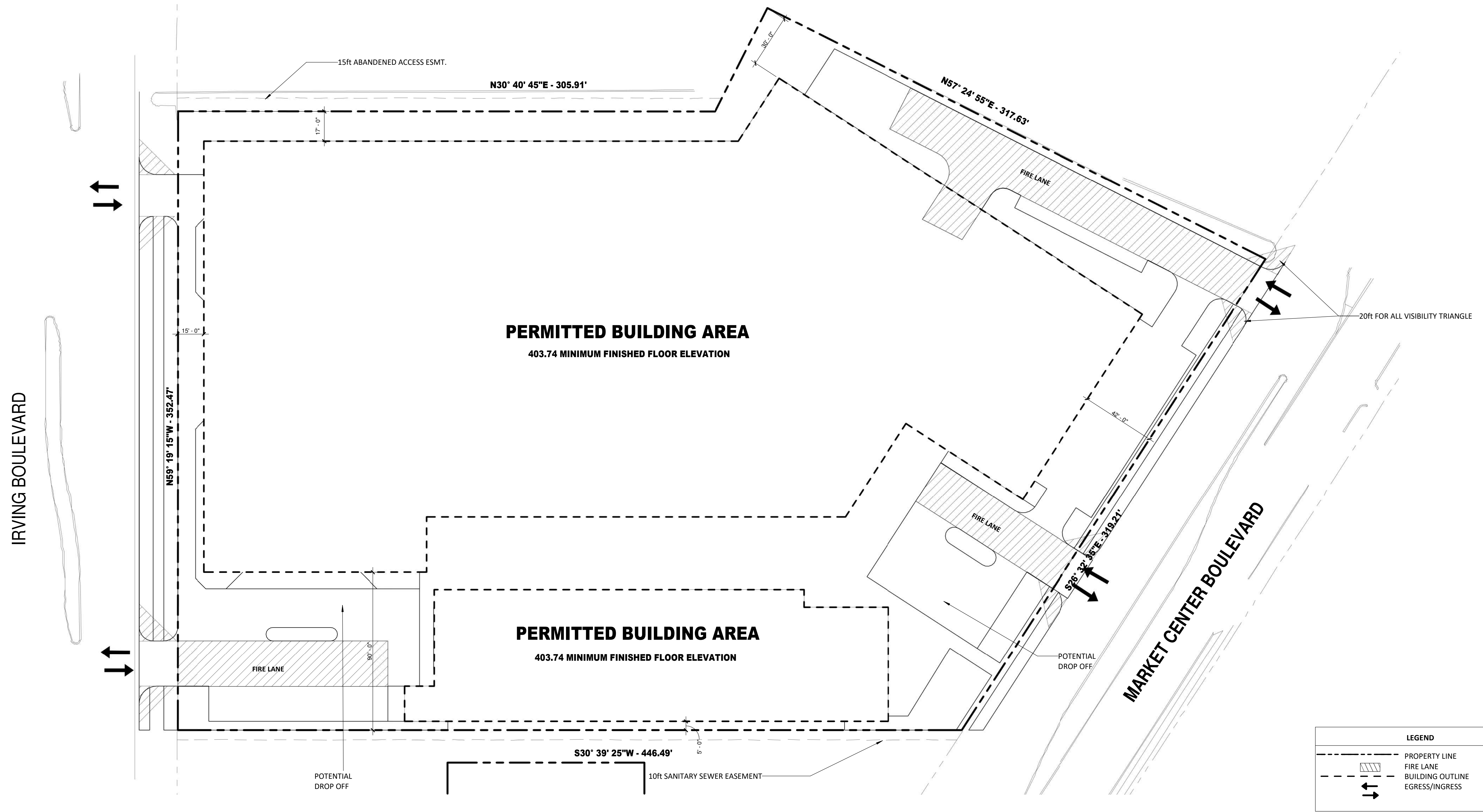
PK #5431-22.460 (SMN: 09/15/22)

| OVERALL SITE DATA TABLE | |
|---|--|
| Allowable Uses Per PD 621, Subdistrict 1K | |
| Site Area | 4.416 acres (192,365 SF) |
| Building Height | 185' Mechanical equipment, elevator overrides, penthouses, parapet walls, and related equipment and structures may extend an additional 20 feet in height above the maximum structure height. |
| FAR | 4.0 |



VICINITY MAP

NOT TO SCALE



TRAFFIC IMPACT ANALYSIS
1715 Market Center
Dallas, Texas

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INTRODUCTION

The services of **Pacheco Koch** (PK) were retained by **Market Center Boulevard JV LP** to prepare a Traffic Impact Analysis for a proposed office development with ground-floor commercial located at 1715 Market Center Boulevard in Dallas, Texas. A conceptual site plan for the Project, prepared by **HKS**, and a site location map (**Exhibit 1**) are provided following the EXECUTIVE SUMMARY section of this report.

In order to facilitate development of the Project, Market Center Boulevard JV LP (the “Applicant”) has made a request to the **City of Dallas** (the “Approving Agency”) to create a new PD Subdistrict for the subject property. As part of application process for this request, submittal of a TIA commissioned by the Applicant must be submitted to the Approving Agency for review.

This TIA was prepared by traffic engineers at Pacheco Koch (the “Engineer”) in accordance with industry and local standards. Pacheco Koch is a licensed engineering firm, based in Texas, that provides professional engineering and related services.

Purpose

A Traffic Impact Analysis (TIA) is an engineering study used to provide information on the projected off-site impacts produced by a specific Project on the traffic operations of public traffic facilities. In some instances, those Project impacts can be sufficiently accommodated by the existing roadway network; while in other cases, Project impacts may require mitigation. Determination of mitigation requirements is subject to the standards and expectations of the Approving Agency.

Commissioning a TIA may be required by an Approving Agency when an Applicant is seeking approvals or entitlements for the Project. Using standardized analysis methodologies, the findings of the TIA are used to gage the direct impacts on the transportation system that are attributable to the Project. Under certain circumstances and within legal parameters, the Approving Agency may require the Applicant to fund the improvement(s) needed to mitigate the impacts.

A TIA should be prepared by a licensed Engineer skilled in the principles of traffic and transportation engineering and planning. The general methodologies, processes, and guidelines used in a TIA are established by industry standards—which are maintained by organizations such as the Institute of Transportation Engineers (ITE) and others—although, the project-specific parameters of the study (e.g., study locations, analysis scenarios, analytical assumptions, etc.) may be established by local ordinances or technical staff of the Approving Agency.

Generally, existing and background conditions of the transportation system are assumed to be the responsibility of the respective governing agency(-ies). Although the explicit purpose of a TIA is not to evaluate those conditions and identify deficiencies, this information may be evident from the study’s findings. The

Engineer may suggest or recommend modifications to the transportation system that, in the Engineer's opinion, could improve overall traffic operations, safety, site access, circulation, etc. However, such proposals may be unrelated to the traffic impacts of the Project and are not considered to be the responsibility of the Developer. Implementation of such modifications are subject to the discretion and approval of the respective agency. In general all proposals from the Engineer should not be considered mandatory and are not intended to assign or imply funding responsibility.

A TIA is not a detailed site plan review nor a substitute for local or regional transportation planning.

Project Description

The Project will consist of high-rise office with ground-floor commercial use in multiple buildings. Buildout of the Project is estimated to occur by 2025. A summary of the proposed development program, by phase, is provided in **Table 1**.

Table 1. Development Program Summary

| USE | FUTURE AMOUNT |
|------------|---------------|
| Office | 462,100 SF |
| Commercial | 60,000 SF |

NOTE: The development program provided above is based upon the most current and complete information available at the time of this study publication.

The subject site will have four points of vehicular access—two on Market Center Boulevard, including one at an existing “hooded” median opening and two on E Irving Boulevard (both at existing median openings).

Existing uses on the site include office/showroom warehouse, which will be replaced by the proposed development.

The 4.4-acre subject site is currently zoned Old Trinity and Design District Special Purpose District (PD No. 621), Subdistrict 1.

Study Parameters

The study parameters used in this TIA are based upon industry standard practices and requirements of the City of Dallas. Project-specific study parameters were reviewed with City staff at the outset of the study.

This TIA analyzed the day-to-day traffic operations on the public roadway system at time periods that have the greatest combined volume of the background traffic and site-related traffic. Due to the predominant influence of background traffic, the weekday AM and PM peak hours of adjacent street traffic are typically analyzed.

The analysis scenarios addressed in this study include the following:

- at existing conditions ("Existing" scenario)
- at site buildout year without site-generated traffic ("Background" scenario)
- at site buildout year with site-generated traffic ("Buildout" scenario)
- at five years after site buildout without site-generated traffic
- at five years after site buildout with site-generated traffic ("Horizon" scenario)

NOTE: Analyses of all future conditions scenarios utilize projected traffic volumes derived by Pacheco Koch using reasonable and customary assumptions that are based upon existing conditions where possible. ITE appropriately points out that, due to natural changes in traffic patterns that occur over time, the margin of error for projected traffic volumes increases as the length of time of the projection increases; and, any projection of hourly turning movement volumes beyond five years inherently contain significant assumptions.

The following technical assumptions were also made in this analysis.

- Background traffic includes projected traffic volumes from a nearby development currently under construction:
 - 161 Riveredge Drive (same Developer) - the Riveredge development is expected to contain approximately 123,000 SF of office and a 10,000-SF restaurant to be constructed during a similar timeframe as the Market Center redevelopment. Detailed trip data are provided in APPENDIX C.

Study Area

The study area for a TIA is typically defined to allow an assessment of the most relevant traffic impacts to the local area. The extent of the study area is discretionary but is generally commensurate with the scale of the proposed development. Special localized factors may also be considered. The specific locations included in the study area of this TIA are listed below and depicted in **Exhibit 1**.

Traffic-Signal-Controlled Intersections:

- (a) Oak Lawn Avenue and Irving Boulevard
- (b) Oak Lawn Avenue and Market Center Boulevard
- (c) Market Center Boulevard and Turtle Creek Boulevard

STOP-Sign-Controlled Intersections:

- (d) Irving Boulevard and Riveredge Drive/Site Driveway 1
- (e) Irving Boulevard and Site Driveway 2
- (f) Market Center Boulevard and Site Driveway 3
- (g) Market Center Boulevard and Site Driveway 4

Roadway Links:

- (A) Market Center Boulevard north of Oak Lawn Avenue
 - ❑ Existing operation and cross-section: *six lanes, two-way operation, median-divided*
 - ❑ City of Dallas Thoroughfare Plan Designation: *Principal Arterial/Special 4D*
 - ❑ Current Daily Traffic Volume: *8,644 (Tuesday, July 21, 2022)*
 - ❑ Posted Speed Limit: *35 MPH (per Sec. 28-44)*

- (B) Irving Boulevard west of Oak Lawn Avenue
 - ❑ Existing operation and cross-section: *six lanes, two-way operation, median-divided*
 - ❑ City of Dallas Thoroughfare Plan Designation: *Principal Arterial/M-6-D(A)*
 - ❑ Current Daily Traffic Volume: *16,426 (Tuesday, July 21, 2022)*
 - ❑ Posted Speed Limit: *35 MPH (per Sec. 28-44)*

TRAFFIC IMPACT ANALYSIS

The following is a description of the analyses performed as part of this Traffic Impact Analysis.

Approach

The TIA presented in this report analyzed the operational conditions of the study area intersections for the relevant peak hours using standardized analytical methodologies, where applicable. Actual traffic volumes (with adjustments described previously) represent background traffic conditions with no site-related traffic included. Then, traffic generated by the proposed development was calculated using the industry-standard four-step approach of trip generation, mode split, trip distribution, and traffic assignment. By adding the site-generated traffic to the background traffic, the resulting site-plus-background operational conditions were re-analyzed in order to measure the "impact" created by the Project. For any scenario, where appropriate, the Engineer considered and may recommend measures to mitigate undue operational conditions. Recommendations may be unrelated to impact of the Project. However, any recommendations provided by the Engineer are for the consideration of the Approving Agency who may or may not accept the recommendations. Recommendations provided by the Engineer are not intended to assign or imply a mandate nor financial responsibility as such decisions are for the Approving Agency and Applicant to resolve.

Background Traffic Volume Data

Existing Volumes

Current traffic volumes were collected during the analysis periods at the study area intersections on Tuesday, July 12, 2022. Traffic volumes are graphically summarized in APPENDIX A; detailed data sheets are provided in APPENDIX B.

Projected Background Traffic Volumes

Background traffic growth is defined as the normal growth of traffic that is not directly related to the subject development of this study. A review of historical traffic volume data can provide an indication of the local traffic growth patterns.

Table 2 provides a comparison of prior traffic volumes from institutional sources in the vicinity of the subject site, from which PK calculated an annual growth rate.

Table 2. Historical Daily Traffic Volume Data

| ROADWAY SEGMENT | HISTORICAL DAILY VOLUME (DATE) | ANNUAL GROWTH RATE |
|--|--|--------------------|
| Oak Lawn Avenue, between Irving Boulevard and Market Center Boulevard | 6,016 ('19) ^A 5,550 ('14) ^A | 1.63% |

Data Source: A = (TxDOT)

According to these historical data, traffic volumes in the vicinity of the subject site are generally increasing. For purposes of this study, Pacheco Koch assumed a growth rate of two percent (2.0%) per year to estimate future background traffic volumes.

By applying the assumed growth rate(s) described previously, future background traffic volumes at the Project buildout year were calculated for the study area intersections. These volumes are graphically summarized in APPENDIX A.

Site-Related Traffic

Trip Generation and Mode Split

Trip generation is calculated in terms of "trip ends" – a trip end is a one-way vehicular trip entering or exiting a site driveway (i.e., a single vehicle entering and exiting a site represents two trip ends). Trip generation for this Project was calculated using the Institute of Transportation Engineers (ITE) *Trip Generation* manual (11th Edition). ITE *Trip Generation* is a compilation of actual, vehicular traffic volume generation data and statistics by land use as collected over several decades by creditable sources across the country. Using the ITE equations and rates is an accepted methodology to calculate the projected site-generated traffic volumes for many land uses (though engineering judgment is strongly advised).

The base trip generation data from ITE generally reflect average conditions for a standalone use on a typical day. However, in some cases, the Engineer may judge that other factors may be of sufficient significance to warrant adjusting the base

ITE calculations in order to more accurately reflect Project-specific conditions. For this analysis “internal trip capture” was considered to be of sufficient significance to justify adjustment of the base ITE data.

“Internal trip capture” refers to the phenomenon that some portion of the trips generated by a given use originates from within the same site and, therefore, do not impact the external roadway network. The methodology used to calculate internal trip capture is recognized by ITE. The most current research and data collection is presented in the Transportation Research Board’s *NCHRP Report 684* (2011).

“Mode split” refers to the consideration of all modes of transportation. Typically, the majority of trips occur by passenger vehicles such as personal autos and ridesharing services. But, some alternative modes—such as travel by public transit, bicycle, and walking—do not generate additional vehicle trips. The default trip generation data from ITE is summarized in vehicular trip ends and incorporate “typical” mode split characteristics. However, when travel by alternative mode has the potential to be greater than normal, a reduction in the number of vehicular trip volume may be warranted. As described previously, for this analysis, an additional five percent (5.0%) reduction was applied to the base ITE data to account for bicycle mode split due to the close proximity of and convenient access to Trinity Strand Trail from the subject site.

Table 3 provides a summary of the calculated trip ends generated by the project. Supplemental information used in the trip generation calculations is provided in APPENDIX C.

Table 3. Projected Trip Generation Summary

| USE | DAILY TRIP ENDS (WEEKDAY) | AM PEAK HOUR TRIP ENDS (ADJACENT STREET PEAK) | PM PEAK HOUR TRIP ENDS (ADJACENT STREET PEAK) |
|----------------------------|---------------------------|---|---|
| | | Total (In/Out) | Total (In/Out) |
| General Office | 5,009 | 702 (618/84) | 665 (113/552) |
| Retail (est: 12 kSF) | 810 | 21 (13/8) | 62 (30/32) |
| Restaurant (est.: 48 kSF) | 4,024 | 35 (18/17) | 374 (251/123) |
| GROSS TOTAL | 9,843 | 758 (649/109) | 1,101 (394/707) |
| SUBTOTAL AFTER REDUCTIONS* | 9,351** | 687* (600/87)* | 978* (340/638)* |

* Reductions include alternate travel mode and internal trip capture reductions.

** Alternative travel mode reductions only (equations for daily internal trip capture calculations are not available).

Trip Distribution and Assignment

The distribution and assignment of site-generated trip ends to the surrounding roadway system is determined by proportionally estimating the orientation of travel

via various travel routes. This is a subjective exercise based upon professional judgment considering such factors as directional characteristics of existing local traffic, trip attributes (e.g., trip purpose, trip length, travel time, etc.), roadway features (e.g., capacity, operational conditions, character of environment), regional demographics, etc.

Traffic for the proposed redevelopment was distributed and assigned to the study area roadway network based upon consideration of the factors listed above. Detailed trip distribution and traffic assignment calculations and results are summarized in APPENDIX C.

Site-Generated Traffic Volumes

Site-generated traffic is calculated by multiplying the trip generation value (from **Table 3**) by the corresponding traffic assignments (from APPENDIX C). The resulting cumulative (for all uses) peak period site-generated traffic volumes at buildout of the Project are graphically summarized in APPENDIX A.

Traffic Operational Analysis — Roadway Links

Description

A roadway link is a segment of roadway between two intersections. Roadway link capacity analysis is a comparison of actual or forecasted traffic volumes to the theoretically optimum roadway capacity. The capacity of the roadway link is predominantly a function of the roadway's cross-section (i.e., number of lanes, lane widths, type of center divider, etc.). However, other more theoretical factors also apply, such as the character of environment and the functional classification of the roadway. Generally, roadway link capacity is less critical than intersection capacity; however, it can provide a gage of the utilization of given roadway.

A specific industry standard for roadway link capacity does not exist, but the typical concept is derived from a base saturation flow rate (i.e., the maximum theoretical rate of continuous flow under ideal, unobstructed conditions -- in the traffic engineering industry, this value is generally considered to range between 1,900-2,100 vehicles per lane per hour). A series of adjustment factors are then applied to the saturation flow rate to reflect the characteristics of a given location.

The North Central Texas Council of Governments (NCTCOG) – the metropolitan planning agency for the Dallas-Fort Worth region – has derived internal “hourly service volume” guidelines used for transportation modelling purposes. The NCTCOG values were based upon the principals presented in the *Highway Capacity Manual* with “regional calibration” factors applied. Though these per-lane capacities, or “Service Volumes” (summarized in the table below), are intended for modelling purposes, they do provide a reasonable gage of theoretical capacity.

Hourly Service Volumes By Roadway Function

| Area Type | Activity Density Range (per acre) | Principal Arterial | | Minor Arterial & Frontage Road | | Collector & Local Street | |
|----------------------|-----------------------------------|---------------------------|-------------------|--------------------------------|-------------------|---------------------------|-------------------|
| | | Median-Divided or One-Way | Undivided Two-Way | Median-Divided or One-Way | Undivided Two-Way | Median-Divided or One-Way | Undivided Two-Way |
| CBD | >125 | 725 | 650 | 725 | 650 | 475 | 425 |
| Outer Business | 30-125 | 775 | 725 | 775 | 725 | 500 | 450 |
| Urban Residential | 7.5-30 | 850 | 775 | 825 | 750 | 525 | 475 |
| Suburban Residential | 1.8-7.5 | 900 | 875 | 900 | 825 | 575 | 525 |
| Rural | <1.8 | 1,025 | 925 | 975 | 875 | 600 | 550 |

To determine the utilization of a roadway, the volume:capacity ratio can be calculated – a v/c ratio of less than 1.0 indicates that the roadway is operating under capacity. NCTCOG’s Level of Service denominations are as follows:

- Volume:Capacity Ratio \leq 65% is LOS A/B/C,
- Volume:Capacity Ratio $>$ 65% and \leq 100% is LOS D/E,
- Volume:Capacity Ratio \geq 100% is LOS F

Summary of Results

For roadways adjacent to or in the vicinity of the subject site, the volume/capacity ratio was calculated for existing and site buildout conditions. A summary of the link capacity analysis is provided in **Table 4**. See specific recommendations in the *Recommendations* section of this report.

Table 4. Roadway Link Capacity Analysis Results Summary

| ROADWAY/ SCENARIO | PEAK HOUR VOLUME | THEORETICAL HOURLY CAPACITY | V:C RATIO— LEVEL OF SERVICE |
|--------------------------------|------------------|-----------------------------|-----------------------------|
| <i>Market Center Boulevard</i> | | | |
| <i>(AM Peak Hour)</i> | | | |
| Existing Conditions | 831 | 5,100/3,400* | 0.16-A / 0.24-A* |
| Buildout Year-Background | 882 | 5,100/3,400* | 0.17-A / 0.26-B* |
| Buildout Year-Buildout | 1,148 | 5,100/3,400* | 0.23-A / 0.34-B* |
| <i>Irving Boulevard</i> | | | |
| <i>(PM Peak Hour)</i> | | | |
| Existing Conditions | 1,731 | 5,100 | 0.34-B |
| Buildout Year-Background | 1,837 | 5,100 | 0.36-B |
| Buildout Year-Buildout | 2,232 | 5,100 | 0.44-B |

* Hypothetical results as a four-lane, median-divided cross-section (per City of Dallas Thoroughfare Plan).

Traffic Operational Analysis — Roadway Intersections

Description

The level of performance of civil infrastructure can often be measured through an analysis of volume and capacity that considers various physical and operational characteristics of the system. For vehicular traffic an operational analysis of roadway intersection capacity over a 60-minute period is the most detailed type of analysis. An industry-standardized methodology for this type of analysis was developed by the Transportation Research Board and is presented in the Highway Capacity Manual (HCM). HCM uses the term “Level of Service” (or, LOS) to qualitatively describe the efficiency using a letter grade of A through F. Generally, LOS can be described as follows:

LOS A = free, unobstructed flow

LOS B = reasonably free flow

LOS C = stable flow

LOS D = approaching unstable flow

LOS E = unstable flow, operating at design capacity

LOS F = operating over design capacity

Traffic operational analysis is typically measured in one-hour periods during day-to-day peak conditions. In most urban settings, LOS C, or better, is desirable, although LOS D is considered to be acceptable in urban conditions; LOS E indicates a facility or maneuver is approaching capacity, while LOS F is theoretically an over-capacity condition. On highly-utilized transportation facilities, brief periods of LOS E or F conditions are not uncommon for during peak periods. In some cases measures to increase capacity, either through operational changes and/or physical improvements, can be identified to improve efficiency and sometimes raise Level of Service.

For traffic-signal-controlled (“signalized”) intersections and STOP-controlled (“unsignalized”) intersections, LOS is determined based upon the calculated average seconds of delay per vehicle. For signalized intersections the average delay per vehicle can be effectively calculated for the entire intersection; however, for unsignalized intersections the average delay per vehicle is calculated only by approach or by individual traffic maneuvers that must stop or yield right-of-way.

NOTE: The HCM unsignalized intersection analysis methodology was developed and calibrated for low-to-moderate volume intersections. When applied to intersections with one or more high-volume or high-capacity approaches, the analyses often reflect poor results (i.e., low Level of Service). However, the actual delay/operational conditions are typical of similar locations and do not necessarily represent unique conditions. Low-performing, high-volume, unsignalized intersections cannot be analytically mitigated unless a traffic signal is installed. (Traffic signal installation is subject to a detailed analysis of established criteria AND approval of the responsible agency. Neither Level of Service nor vehicle delay is a warrant for traffic signal installation.)

The following table summarizes the LOS criteria for signalized and unsignalized intersections as defined in the latest edition of the *Highway Capacity Manual*.

| | Signalized Intersection (Average Delay per Vehicle) | Unsignalized Intersection (Average Delay per Vehicle) |
|-------|--|--|
| LOS A | ≤ 10 | ≤ 10 |
| LOS B | $> 10 - \leq 20$ | $> 10 - \leq 15$ |
| LOS C | $> 20 - \leq 35$ | $> 15 - \leq 25$ |
| LOS D | $> 35 - \leq 55$ | $> 25 - \leq 35$ |
| LOS E | $> 55 - \leq 80$ | $> 35 - \leq 50$ |
| LOS F | > 80 | > 50 |

Analysis Traffic Volumes

Determination of the traffic impact associated with the Project is measured by comparing the incremental change in operational conditions during peak periods with and without site-related traffic. APPENDIX A provides exhibits summarizing the following:

- Existing traffic volumes during study peak hours
- Projected Background traffic volumes at the Site Buildout Year during study peak hours
- Projected Site-Generated traffic volumes during study peak hours
- Projected Background-plus-Site-Generated traffic volumes at the Site Buildout Year during study peak hours
- Projected five years after site buildout traffic volumes, including Site-Generated traffic during study peak hours

A summary of the existing intersection/roadway geometry and traffic control devices is also graphically summarized in APPENDIX A.

Summary of Results

Intersection capacity analyses presented in this study were performed using the *Synchro* software package. **Table 5** and **Table 6** provide a summary of the peak period intersection operational conditions under the analysis conditions presented previously. Detailed software output is provided in APPENDIX D.

SITE ACCESS EVALUATION

The City of Dallas *Street Design Manual* suggests various site access items should be evaluated for each project, where applicable. **Table 7** summarizes the findings and recommendations of these evaluations. Applicable supplemental information is provided in APPENDIX E.

Table 5. Peak Hour Intersection Capacity Analysis Results Summary
(Signalized Intersections)

| INTERSECTION | | EXISTING CONDITIONS | | | | | | NO BUILD CONDITIONS | | | | | | BUILD CONDITIONS | | | | | | HORIZON CONDITIONS | | | | | | | | |
|---|----------------|---------------------|---------------|--------|----------|---------------|--------|---------------------|---------------|--------|----------|---------------|--------|------------------|---------------|--------|----------|---------------|--------|--------------------|---------------|--------|----------|---------------|--------|-----|-------|-------|
| | | AM | | | PM | | | AM | | | PM | | | AM | | | PM | | | AM | | | PM | | | | | |
| | | LOS | delay | queue | LOS | delay | queue | LOS | delay | queue | LOS | delay | queue | LOS | delay | queue | LOS | delay | queue | LOS | delay | queue | LOS | delay | queue | LOS | delay | queue |
| Oak Lawn Avenue @ E Irving Boulevard | Overall | D | (36.0) | | B | (15.3) | | D | (36.2) | | B | (15.5) | | D | (35.3) | | B | (16.8) | | D | (37.7) | | B | (16.7) | | | | |
| | EB | D | (43.6) | 126 ft | B | (17.7) | 156 ft | D | (51.5) | 153 ft | B | (17.9) | 167 ft | D | (55.0) | 168 ft | C | (20.2) | 190 ft | E | (63.5) | 200 ft | B | (19.8) | 215 ft | | | |
| | WB | D | (44.6) | 198 ft | B | (17.6) | 43 ft | D | (43.0) | 218 ft | B | (16.4) | 45 ft | D | (41.3) | 230 ft | B | (15.1) | 50 ft | D | (39.5) | 242 ft | B | (14.0) | 54 ft | | | |
| | NB | A | (9.9) | 25 ft | B | (14.4) | 60 ft | B | (11.0) | 28 ft | B | (15.9) | 66 ft | B | (12.1) | 29 ft | B | (17.2) | 66 ft | B | (13.4) | 34 ft | B | (18.6) | 72 ft | | | |
| | SB | A | (4.9) | 33 ft | A | (4.1) | 117 ft | A | (4.9) | 37 ft | A | (4.7) | 160 ft | A | (7.1) | 96 ft | A | (8.6) | 167 ft | A | (9.1) | 135 ft | A | (6.6) | 182 ft | | | |
| Oak Lawn Avenue @ Market Center Boulevard | Overall | C | (20.5) | | B | (17.0) | | C | (23.1) | | B | (19.1) | | C | (26.1) | | C | (22.1) | | C | (27.2) | | C | (25.6) | | | | |
| | EB | A | (5.9) | 30 ft | A | (5.4) | 15 ft | A | (6.4) | 34 ft | A | (5.2) | 16 ft | A | (8.2) | 44 ft | B | (11.1) | 97 ft | A | (8.6) | 47 ft | B | (12.6) | 115 ft | | | |
| | WB | A | (7.5) | 105 ft | A | (9.5) | 50 ft | A | (8.5) | 118 ft | A | (9.9) | 53 ft | B | (12.1) | 150 ft | B | (12.7) | 67 ft | B | (12.6) | 168 ft | B | (13.2) | 74 ft | | | |
| | NB | D | (52.5) | 103 ft | C | (24.0) | 72 ft | D | (51.8) | 113 ft | C | (25.2) | 96 ft | D | (44.4) | 117 ft | C | (26.2) | 104 ft | D | (46.4) | 127 ft | C | (27.3) | 110 ft | | | |
| | SB | D | (44.3) | 126 ft | C | (27.9) | 117 ft | D | (47.4) | 179 ft | C | (31.7) | 153 ft | D | (47.0) | 398 ft | D | (36.1) | 180 ft | D | (49.5) | 424 ft | C | (44.8) | 203 ft | | | |
| Turtle Creek Boulevard @ Market Center Boulevard | Overall | B | (11.3) | | B | (13.9) | | B | (11.4) | | B | (14.5) | | B | (11.7) | | B | (16.2) | | B | (11.8) | | B | (16.6) | | | | |
| | EB | A | (2.5) | 25 ft | B | (10.2) | 58 ft | A | (2.5) | 28 ft | B | (10.8) | 65 ft | A | (3.3) | 46 ft | B | (13.2) | 78 ft | A | (3.5) | 50 ft | B | (13.3) | 84 ft | | | |
| | WB | A | (3.7) | 55 ft | B | (16.8) | 72 ft | A | (4.0) | 61 ft | B | (18.2) | 82 ft | A | (4.7) | 69 ft | B | (19.2) | 78 ft | A | (5.0) | 78 ft | B | (19.8) | 87 ft | | | |
| | NB | D | (42.6) | 52 ft | B | (16.7) | 55 ft | D | (44.0) | 59 ft | B | (16.5) | 66 ft | D | (47.1) | 77 ft | B | (18.6) | 130 ft | D | (47.5) | 80 ft | B | (19.3) | 136 ft | | | |
| | SB | C | (34.1) | 76 ft | B | (13.2) | 41 ft | C | (33.2) | 79 ft | B | (13.2) | 43 ft | C | (29.9) | 76 ft | B | (13.0) | 43 ft | C | (29.8) | 83 ft | B | (13.2) | 46 ft | | | |
| Turtle Creek Boulevard @ E Irving Boulevard | Overall | A | (6.6) | | B | (16.4) | | A | (8.4) | | B | (17.4) | | A | (8.2) | | B | (17.2) | | A | (8.7) | | B | (17.8) | | | | |
| | EB | A | (3.5) | 45 ft | B | (16.6) | 275 ft | A | (4.3) | 57 ft | B | (17.0) | 299 ft | A | (4.3) | 64 ft | B | (17.3) | 309 ft | A | (5.3) | 71 ft | B | (18.0) | 352 ft | | | |
| | WB | A | (3.8) | 67 ft | B | (14.0) | 105 ft | A | (4.7) | 84 ft | B | (14.4) | 112 ft | A | (4.7) | 87 ft | B | (13.8) | 144 ft | A | (5.0) | 98 ft | B | (14.6) | 160 ft | | | |
| | NB | C | (28.1) | 44 ft | C | (22.9) | 77 ft | C | (29.0) | 51 ft | C | (29.7) | 128 ft | C | (29.0) | 51 ft | C | (29.7) | 128 ft | C | (29.4) | 55 ft | C | (30.0) | 133 ft | | | |
| | SB | C | (27.3) | 56 ft | B | (19.7) | 59 ft | C | (33.8) | 87 ft | C | (21.5) | 73 ft | C | (33.8) | 87 ft | C | (21.5) | 73 ft | C | (33.8) | 90 ft | C | (21.2) | 78 ft | | | |

NOTE: Traffic signal operational parameters used in this analysis were based upon actual traffic signal operational characteristics observed in the field at the time of data collection.

Table 6. Peak Hour Intersection Capacity Analysis Results Summary
(Unsignalized Intersections)

| INTERSECTION | | TRAFFIC MANEUVER | EXISTING CONDITIONS | | | | | | NO BUILD CONDITIONS | | | | | | BUILD CONDITIONS | | | | | |
|---|------------|------------------|---------------------|-------------|----------|---------------|--------------|----------|---------------------|--------------|----------|---------------|--------------|----------|------------------|--------------|----------|------------------|----------------|-------|
| | | | AM | | | PM | | | AM | | | PM | | | AM | | | PM | | |
| | | | LOS | delay | queue | LOS | delay | queue | LOS | delay | queue | LOS | delay | queue | LOS | delay | queue | LOS | delay | queue |
| Rivertown Drive/Site Driveway 1 @ E Irving Boulevard | NB | B | (12.0) | 5 ft | C | (18.8) | 12 ft | B | (14.8) | 12 ft | C | (21.6) | 78 ft | C | (20.3) | 19 ft | D | (33.5) | 118 ft | |
| | SB | A | (9.8) | 0 ft | C | (20.5) | 2 ft | A | (9.8) | 0 ft | E | (39.9) | 5 ft | F | (69.0) | 68 ft | F | (>100) | 1626 ft | |
| | EBL | A | (8.8) | 0 ft | A | (0.0) | 0 ft | A | (8.8) | 0 ft | A | (0.0) | 0 ft | B | (11.2) | 7 ft | A | (9.2) | 2 ft | |
| | WBL | A | (8.9) | 5 ft | B | (10.7) | 5 ft | B | (10.3) | 31 ft | B | (12.1) | 14 ft | B | (10.6) | 33 ft | B | (11.5) | 14 ft | |
| w/ Improvement ^{1,2} | NBL | | | | | | | | | | | | | F | (53.6) | 5 ft | F | (>100) | 21 ft | |
| | NBR | | | | | | | | | | | | | C | (16.6) | 14 ft | C | (15.1) | 47 ft | |
| | SBL | | | | | | | | | | | | | - | - | - | - | - | | |
| | SBR | | | | | | | | | | | | | F | (69.0) | 68 ft | F | (>100) | 1640 ft | |
| | EBL | | | | | | | | | | | | | B | (11.2) | 7 ft | A | (9.2) | 2 ft | |
| | WBL | | | | | | | | | | | | | B | (10.6) | 33 ft | B | (11.5) | 14 ft | |
| E Irving Boulevard @ Site Driveway 2 | EBL | - | | | - | | | - | | | - | | | A | (9.5) | 2 ft | A | (9.5) | 2 ft | |
| | SB | | | | | | | | | | | | | C | (18.8) | 2 ft | C | (21.8) | 21 ft | |
| Market Center Boulevard @ Site Driveway 3 | NB | - | | | - | | | - | | | - | | | A | (9.2) | 0 ft | A | (10.0) | 7 ft | |
| | | | | | | | | | | | | | | | | | | | | |
| Market Center Boulevard @ Site Driveway 4 | NB | - | | | - | | | - | | | - | | | A | (9.3) | 2 ft | B | (10.8) | 24 ft | |
| | WBL | - | | | - | | | - | | | - | | | B | (10.3) | 26 ft | A | (9.5) | 14 ft | |

NOTE: Traffic maneuvers in bold font reflect maneuvers in the public right-of-way. (Other maneuvers listed only affect traffic maneuvers on private property.)

KEY:

A, B, C, D, E, F = Level-of-Service
NB, SB, EB, WB = Intersection approach
AM = AM Peak Hour of Adjacent Street

(##.#) = Average Seconds of Delay Per Vehicle
-L, -T, -R = Left, Through, Right Turning movement
PM = PM Peak Hour of Adjacent Street

IMPROVEMENTS (PROPOSED):

- 1 - Re-stripe and add NB left-turn lane.
- 2 - Re-stripe and add SB left-turn lane.

Table 7. Site Access Evaluation

| EVALUATION | FINDING | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|----------|----------|----------|--------|---|----|---|----|--|----|---|---|--------------------------------|---|---|---|-------------------------|---|---|---|--------------|-----------|----------|----------|
| <u>Auxiliary (Deceleration) Lanes</u> | Construction of deceleration lanes not recommended in urban conditions due to low speeds, driveway spacing, and pedestrian impact. | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>Signage and Pavement Markings on Public Rights-of-Way</u> | Pavement markings along Irving Boulevard are in good condition; pavement markings along Market Center Boulevard are in poor condition. Existing signage around the perimeter of the site is in good condition. | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>Historical Accident Analysis</u> | <p>According to the TxDOT Crash Records Information System (CRIS) database, a total of 30 reported crashes occurred around the perimeter of the site between 2019-2021. The following summarizes the number of severe crashes involving fatality (Type K) or serious injury (Type A). (See detailed summary data in Appendix E.)</p> <table border="1"> <thead> <tr> <th>Location</th> <th>Total</th> <th>Type K</th> <th>Type A</th> </tr> </thead> <tbody> <tr> <td>Intersection of Market Center Blvd & Oak Lawn Ave</td> <td>16</td> <td>0</td> <td>1</td> </tr> <tr> <td>Intersection of Irving Blvd & Oak Lawn Ave</td> <td>11</td> <td>0</td> <td>0</td> </tr> <tr> <td>Midblock on Market Center Blvd</td> <td>2</td> <td>0</td> <td>0</td> </tr> <tr> <td>Midblock on Irving Blvd</td> <td>1</td> <td>0</td> <td>0</td> </tr> <tr> <td>TOTAL</td> <td>30</td> <td>0</td> <td>1</td> </tr> </tbody> </table> | Location | Total | Type K | Type A | Intersection of Market Center Blvd & Oak Lawn Ave | 16 | 0 | 1 | Intersection of Irving Blvd & Oak Lawn Ave | 11 | 0 | 0 | Midblock on Market Center Blvd | 2 | 0 | 0 | Midblock on Irving Blvd | 1 | 0 | 0 | TOTAL | 30 | 0 | 1 |
| Location | Total | Type K | Type A | | | | | | | | | | | | | | | | | | | | | | |
| Intersection of Market Center Blvd & Oak Lawn Ave | 16 | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | |
| Intersection of Irving Blvd & Oak Lawn Ave | 11 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | |
| Midblock on Market Center Blvd | 2 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | |
| Midblock on Irving Blvd | 1 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | |
| TOTAL | 30 | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | |
| <u>Pedestrian Safety at Unsignalized Crossing(s)</u> | N/A - No unsignalized crossings around the perimeter of the site. | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>Driveway Sight Distances</u> | All site driveways must comply with applicable sight distance requirements. No permanent obstructions were apparent. | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>Number of Access Points and Driveway Spacing</u> | <p>The subject site currently has six points of vehicular access on the perimeter roadways (4 on Market Center, 2 on Irving). The proposed site plan will reduce the total number of driveways on Market Center Boulevard by two.</p> <table border="1"> <thead> <tr> <th>Frontage</th> <th>Existing</th> <th>Proposed</th> <th>Change</th> </tr> </thead> <tbody> <tr> <td>Market Center Blvd</td> <td>4</td> <td>2</td> <td>-2</td> </tr> <tr> <td>Irving Blvd</td> <td>2</td> <td>2</td> <td>0</td> </tr> </tbody> </table> | Frontage | Existing | Proposed | Change | Market Center Blvd | 4 | 2 | -2 | Irving Blvd | 2 | 2 | 0 | | | | | | | | | | | | |
| Frontage | Existing | Proposed | Change | | | | | | | | | | | | | | | | | | | | | | |
| Market Center Blvd | 4 | 2 | -2 | | | | | | | | | | | | | | | | | | | | | | |
| Irving Blvd | 2 | 2 | 0 | | | | | | | | | | | | | | | | | | | | | | |
| <u>Corner Clearances</u> | All corner clearances are anticipated to comply with applicable standards. See Engineering Plans for detailed design. | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>Median Openings</u> | <p>Market Center Blvd - The northernmost site driveway on Market Center Boulevard is served by an existing hooded left-turn entering the site. All other site driveways are right-in/right-out only. No changes to the existing median are anticipated.</p> <p>Irving Blvd - Both proposed site driveways on Irving Blvd are served by existing full median openings. Prior conversations with the City have included reducing the existing median opening with at the western driveway (Riveredge Drive intersection); it is recommended that the proposed driveway better align with Riveredge Drive to the extent possible. It is also recommended that the alignment of the eastern driveway also center with the median opening to the extent possible.</p> | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>Shared Access</u> | N/A | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>Stopping Sight Distance</u> | N/A | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>Traffic Signal or STOP Control Warrant Analysis</u> | N/A | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>Driveway Improvements</u> | All proposed driveways will be new or reconstructed and are anticipated to comply with applicable standards. See Engineering Plans for detailed design. | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>Curb Return Radius</u> | All proposed driveways will be new or reconstructed and are anticipated to comply with applicable standards. See Engineering Plans for detailed design. | | | | | | | | | | | | | | | | | | | | | | | | |

SUMMARY OF FINDINGS AND RECOMMENDATIONS

NOTE: Recommendations presented in this report reflect the opinion of Pacheco Koch based solely upon technical analysis and professional judgment but are not intended to infer mandates or funding responsibility. Any proposed improvements in the public right-of-way are subject to approval of the responsible agency(-ies). Should the approving agency determine that any off-site improvements are required for approval of the Project, legal precedents apply with regard to jurisdiction and funding allocation.

The following findings and, if applicable, recommendations were based upon an analysis of the anticipated traffic impact generated by the proposed development scenario outlined in the Project Description section of this report.

FINDING: The proposed site redevelopment will include mid-rise office buildings with ground-floor retail and structured parking. The planned uses are anticipated to generate about 9,000 trip ends per day, including approximately 700 trip ends during the AM Peak Hour and 1,000 trip ends during the PM Peak Hour.

FINDING: The subject site is short distance from the Trinity Strand Trail. A small percent of site-generated trips may utilize the trail for access.

- ❖ **RECOMMENDATION:** Reinstall the pavement markings for the crosswalk on the south leg of Turtle Creek Boulevard at the Market Center Boulevard intersection to facilitate crossings of trail users from the Trinity Strand Trail who are destined for the subject site.

FINDING: The proposed development will effectively utilize existing access points located on Market Center Boulevard and E Irving Boulevard. The northern driveway on Market Center Boulevard provides a hooded left turn into the existing driveway; both driveways on E Irving Boulevard have access to full median openings—one at the intersection with Riveredge Drive, and the other serving private driveways. The proposed development will remove two existing driveways on Market Center Boulevard. The number of driveways on Irving Boulevard will remain the same.

FINDING: Traffic-signal-controlled intersections in the vicinity of the site exist near the four corners—at the intersections with Oak Lawn Avenue and with Turtle Creek Boulevard. Generally, all signal-controlled-intersections currently operate at very good Levels of Service during peak hour periods. The greatest traffic impact is anticipated to occur at the intersection of Market Center Boulevard and Oak Lawn Avenue, which is anticipated to operate at Level of Service C with the addition of background growth and site-generated traffic. If background traffic growth continues for several years, the intersection may degrade to Level of Service D (generally “acceptable” for urban conditions) several years after site buildout. Automated traffic signal timing optimizations may negate or reduce the projected increases in delays.

FINDING: With the addition of projected background traffic growth, which includes projected traffic from future off-site developments in the vicinity,

left turns from the minor-street approaches at the unsignalized intersection of E Irving Boulevard and Riveredge Drive/Site Driveway 1, are projected to experience high delays during peak hour periods. The intersection is not considered to be a candidate for installation of a traffic signal due to proximity of existing traffic signals. However, if the volume projections are accurate, motorists on both sides of the street have other route alternatives that would allow them to avoid unprotected left-turn maneuvers if desired. In the case of the subject site, motorists can instead use the driveways on Market Center Boulevard to make right-turns in lieu of left turns onto E Irving Boulevard. For Riveredge Drive, motorists can choose to travel east or west on E Levee Street to access nearby traffic signals to perform protected turning maneuvers.

- ❖ **RECOMMENDATION:** To reduce delay for right-turning motorists at the intersection of E Irving Boulevard and Riveredge Drive/Site Driveway 1, it is recommended that (in the case of Riveredge Drive) the existing roadway be re-stripped within existing pavement to provide a separate left- and right-approach lanes. It is recommended that Driveway 1 be reconstructed to a width sufficient to provide separate left- and right-turning approach lanes. During the engineering design phase, efforts should be made to align Site Driveway 1 with Riveredge Drive to eliminate the existing offset of opposing left-turn maneuvers.

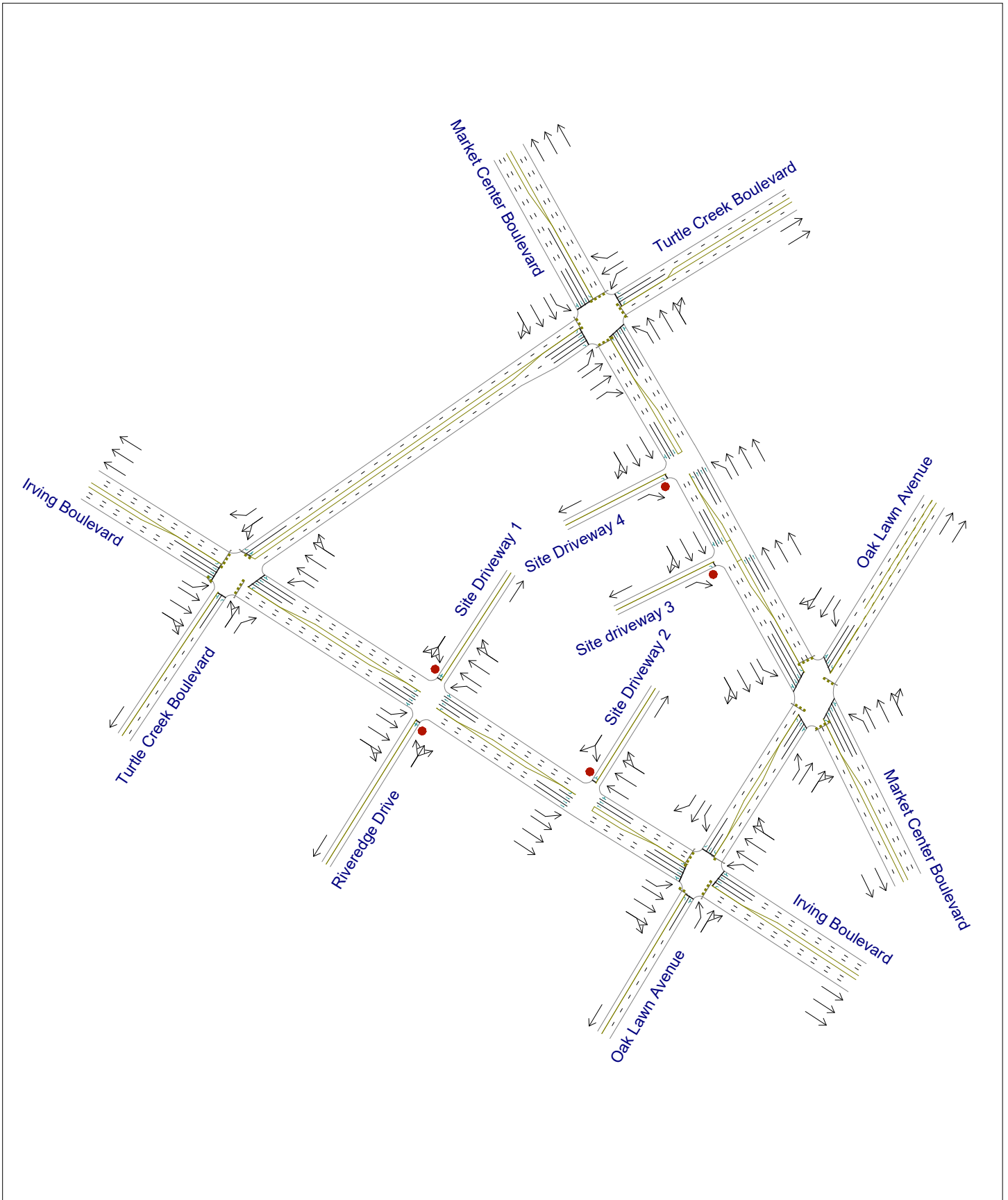
NOTE: The City of Dallas Thoroughfare Plan calls for Market Center Boulevard to have a "Special" four-lane, median-divided cross-section in the future (currently, the cross-section has six lanes with a raised center median). Though no timetable for modifications to this roadway are known, this analysis indicates that the roadway link capacity will continue to be sufficient after the lane reduction to support traffic from the proposed development.

END OF MEMO

APPENDIX A. Traffic Volumes Exhibits

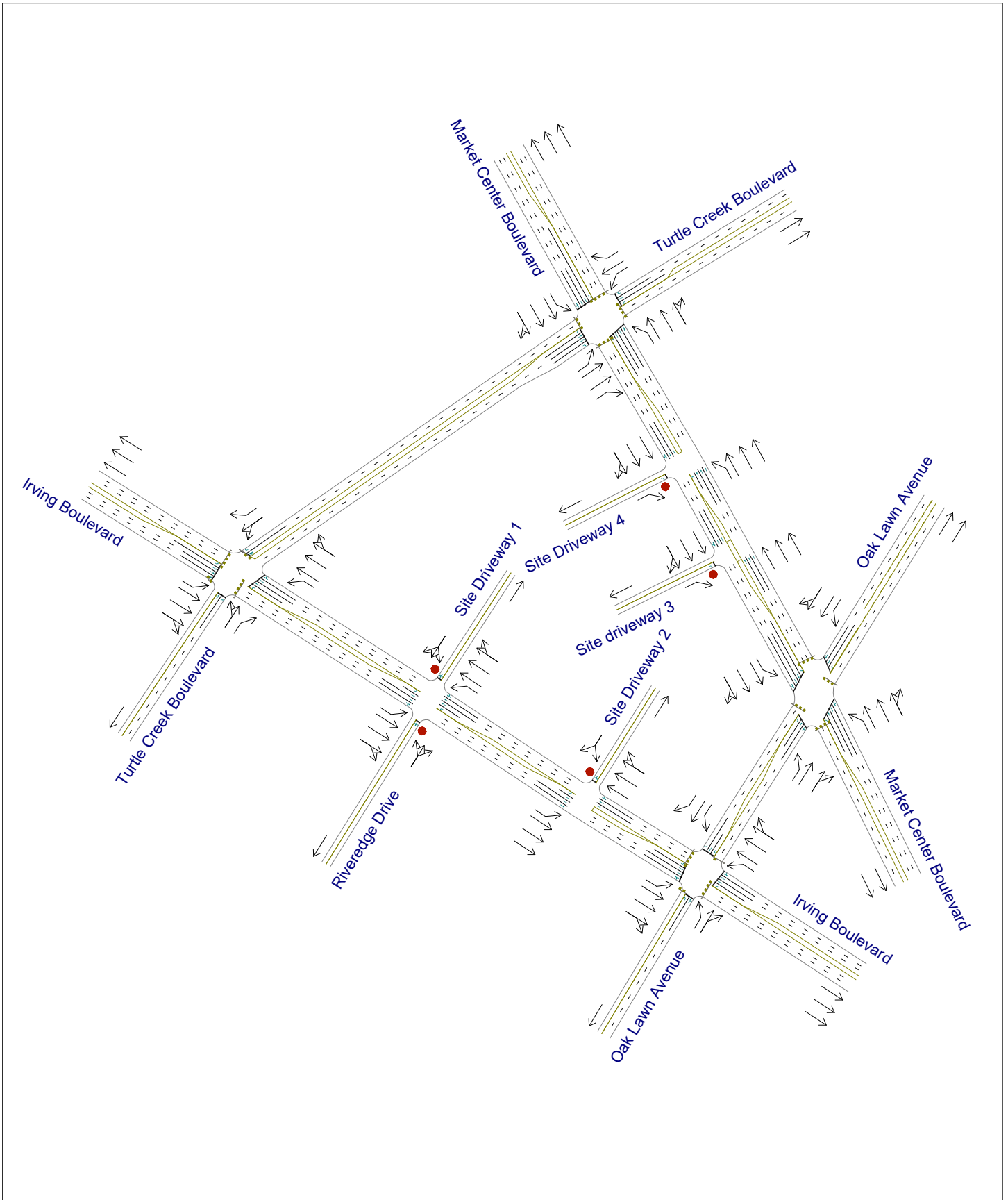
Appendix A1- Existing Roadway Geometry

North ^
Not to Scale



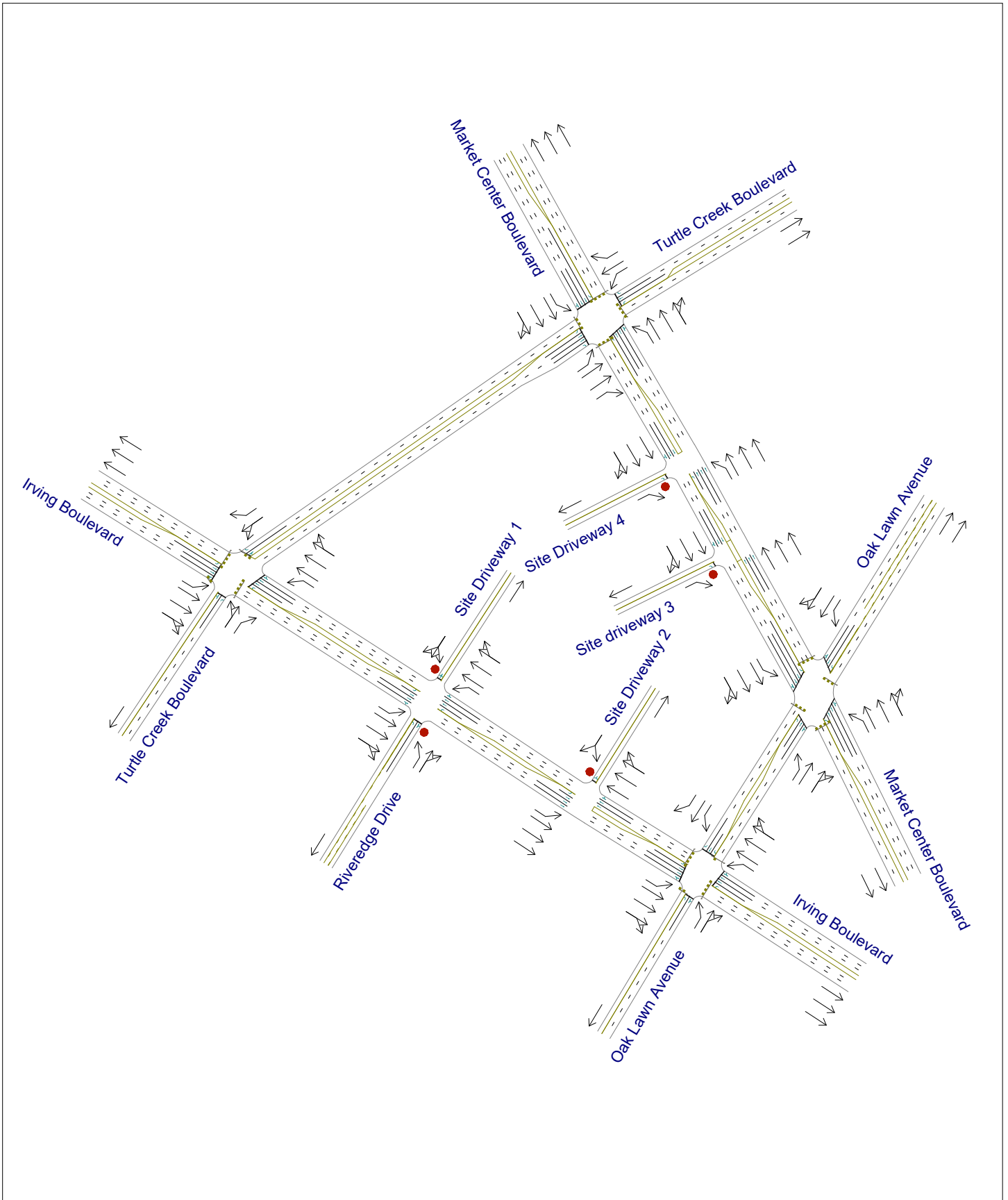
Appendix A1a - Proposed Roadway Geometry

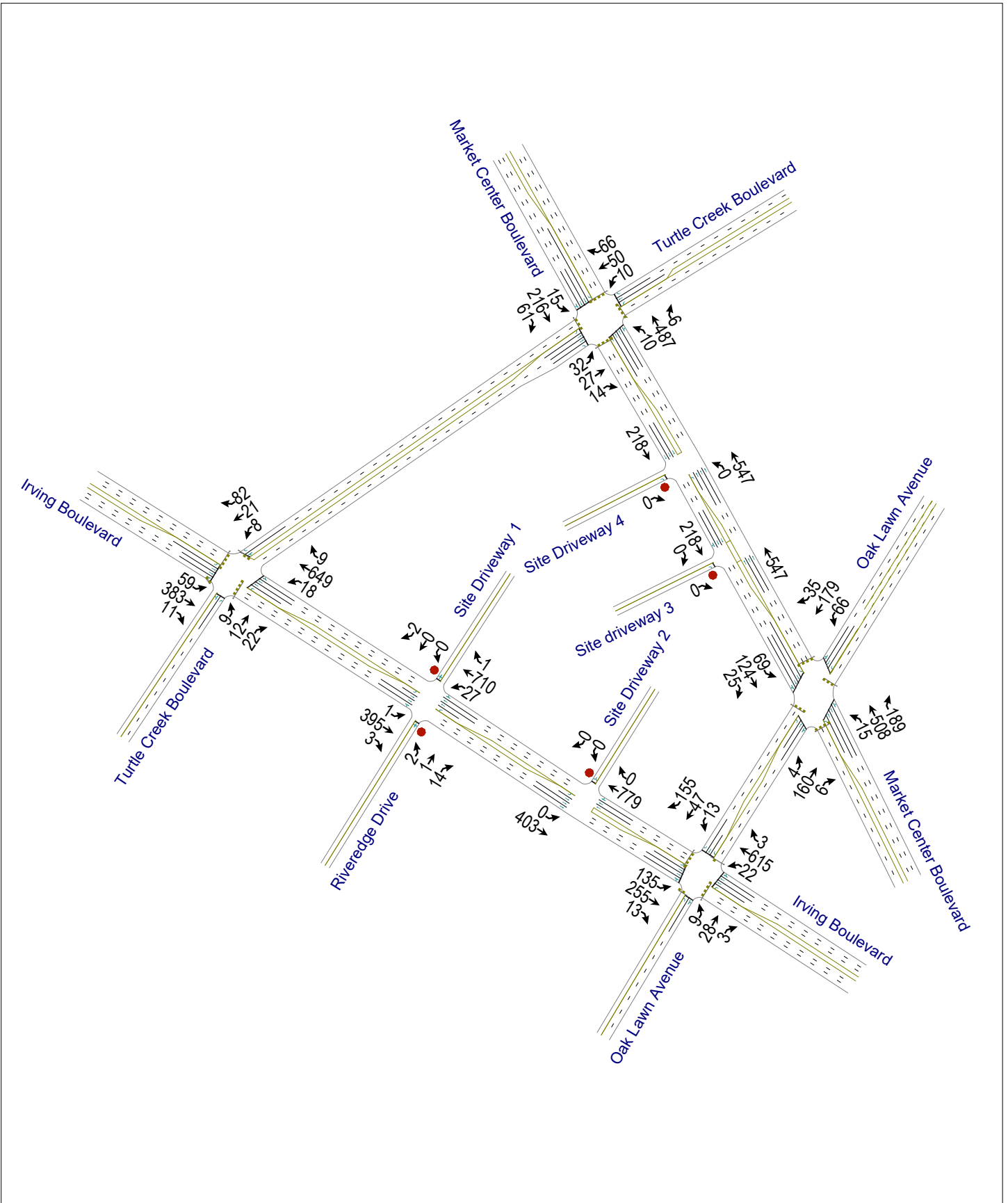
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Not to Scale

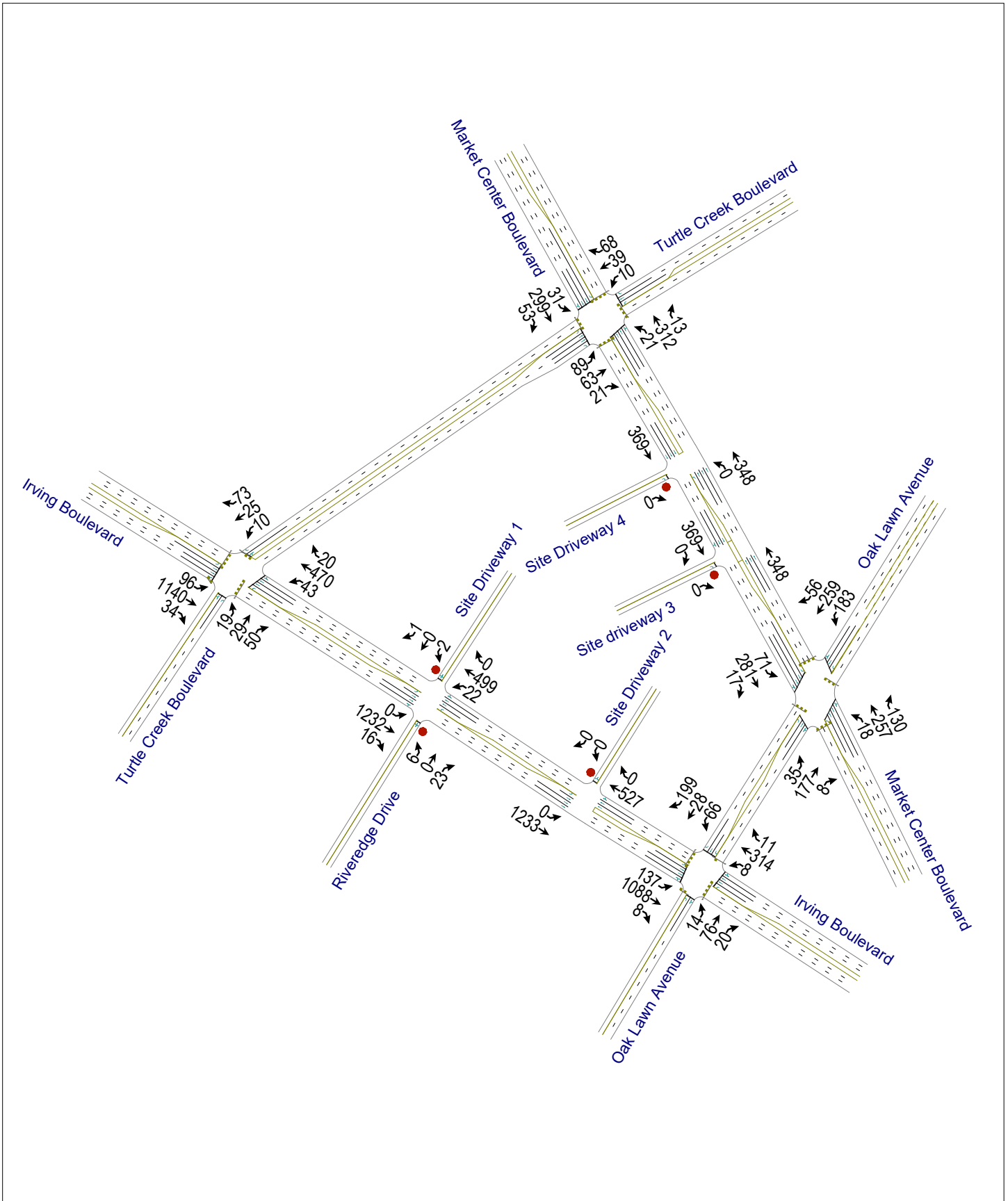


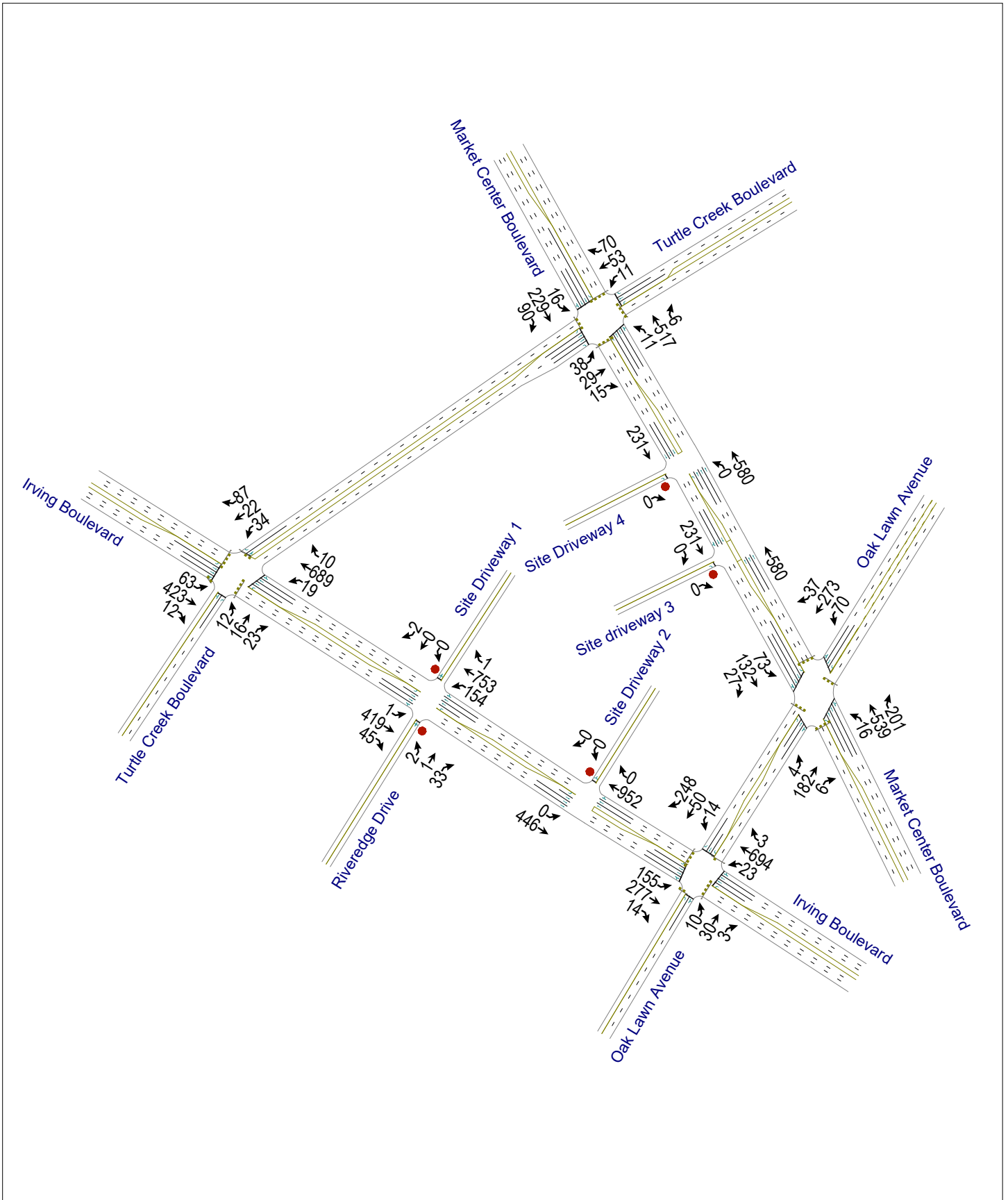
Appendix A1b - Improved Proposed Roadway Geometry

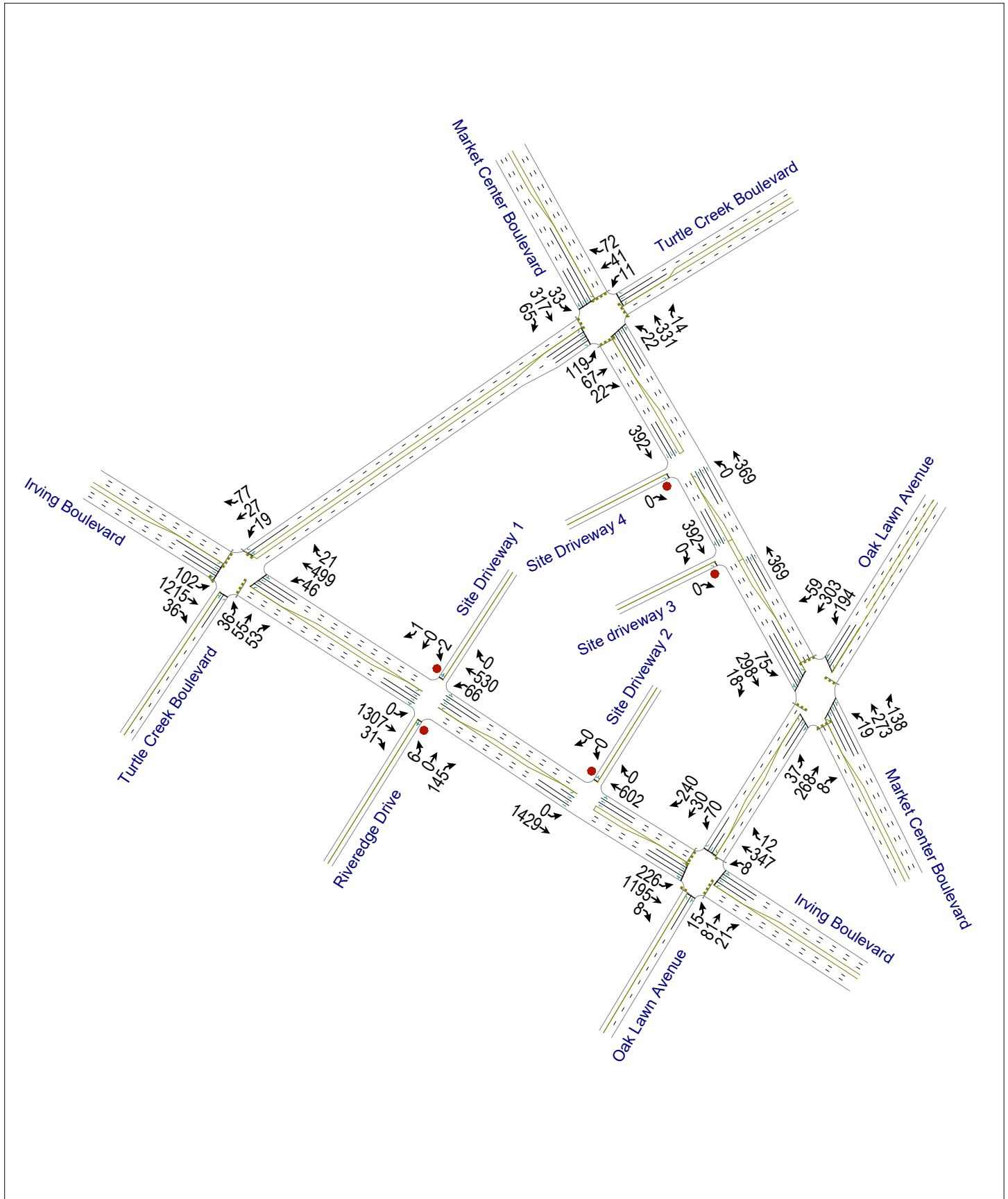
North ^
Not to Scale

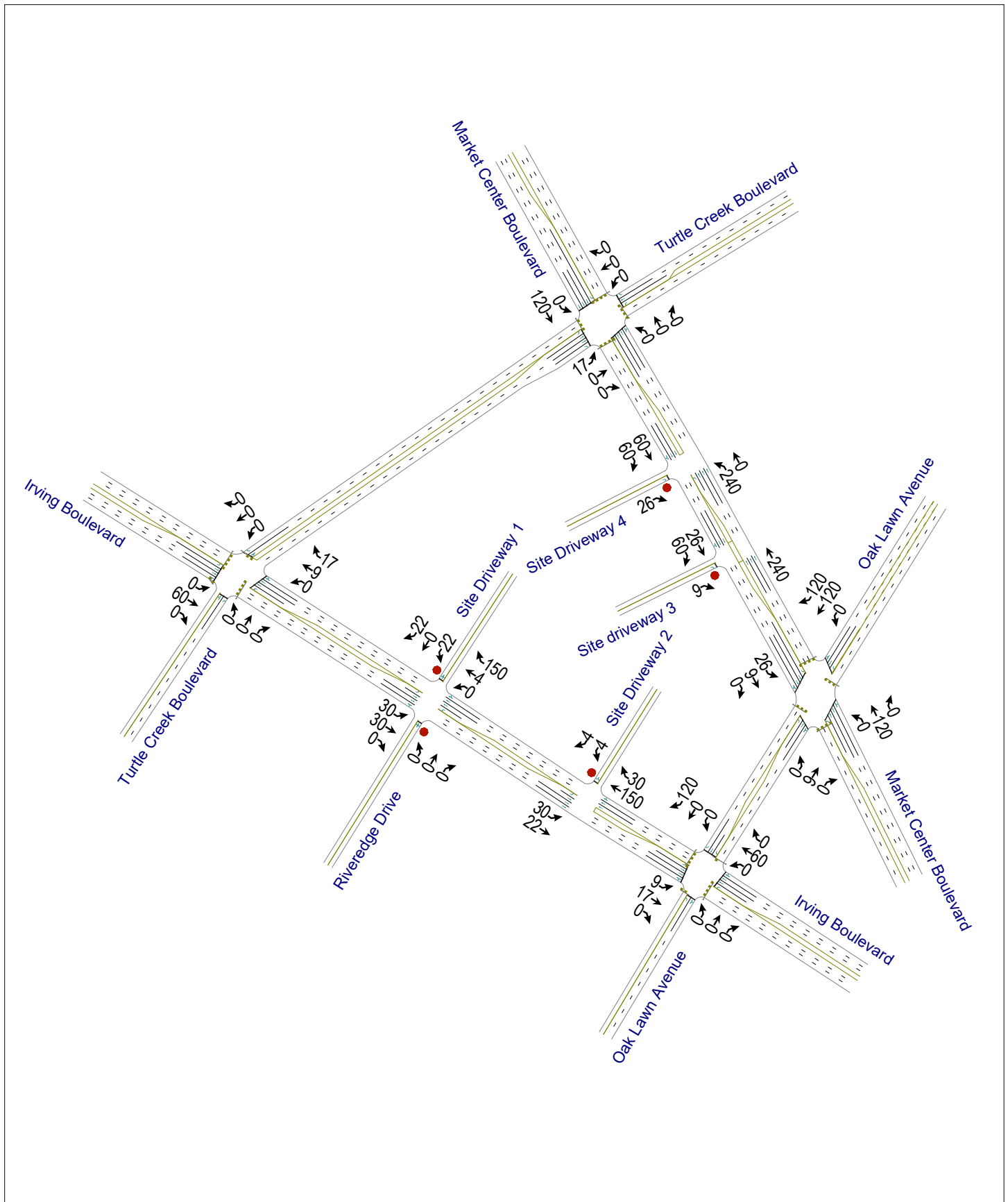


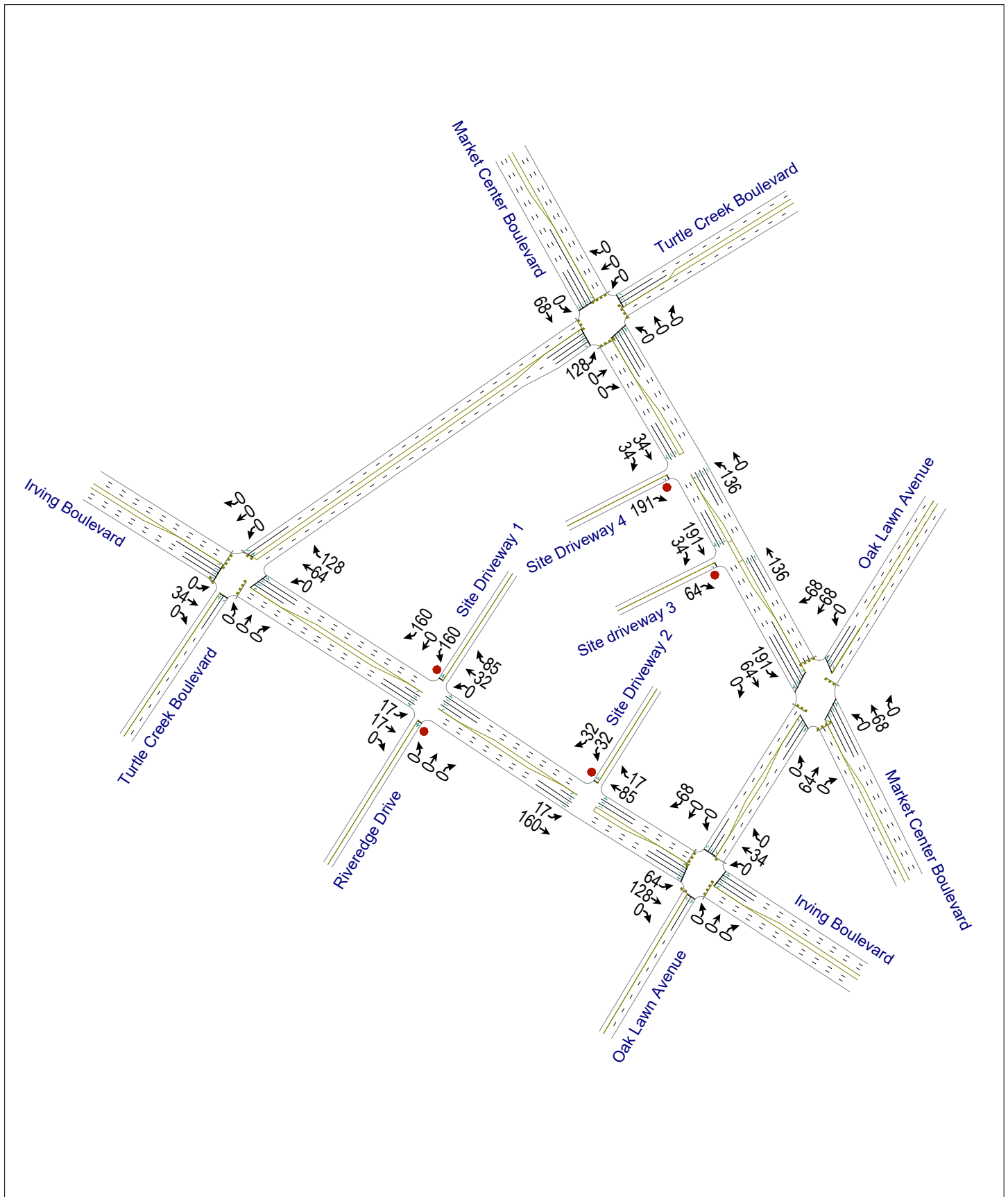


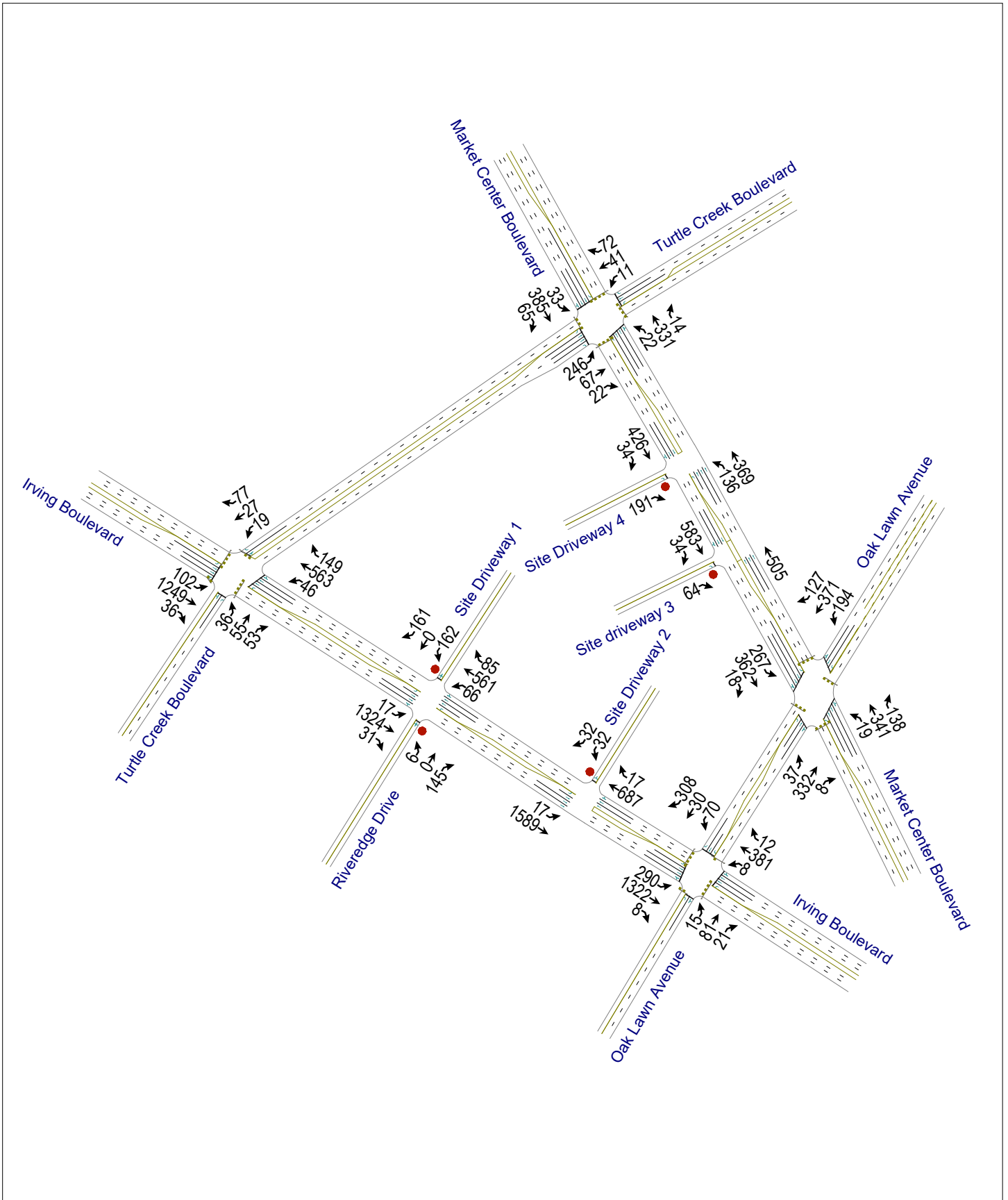


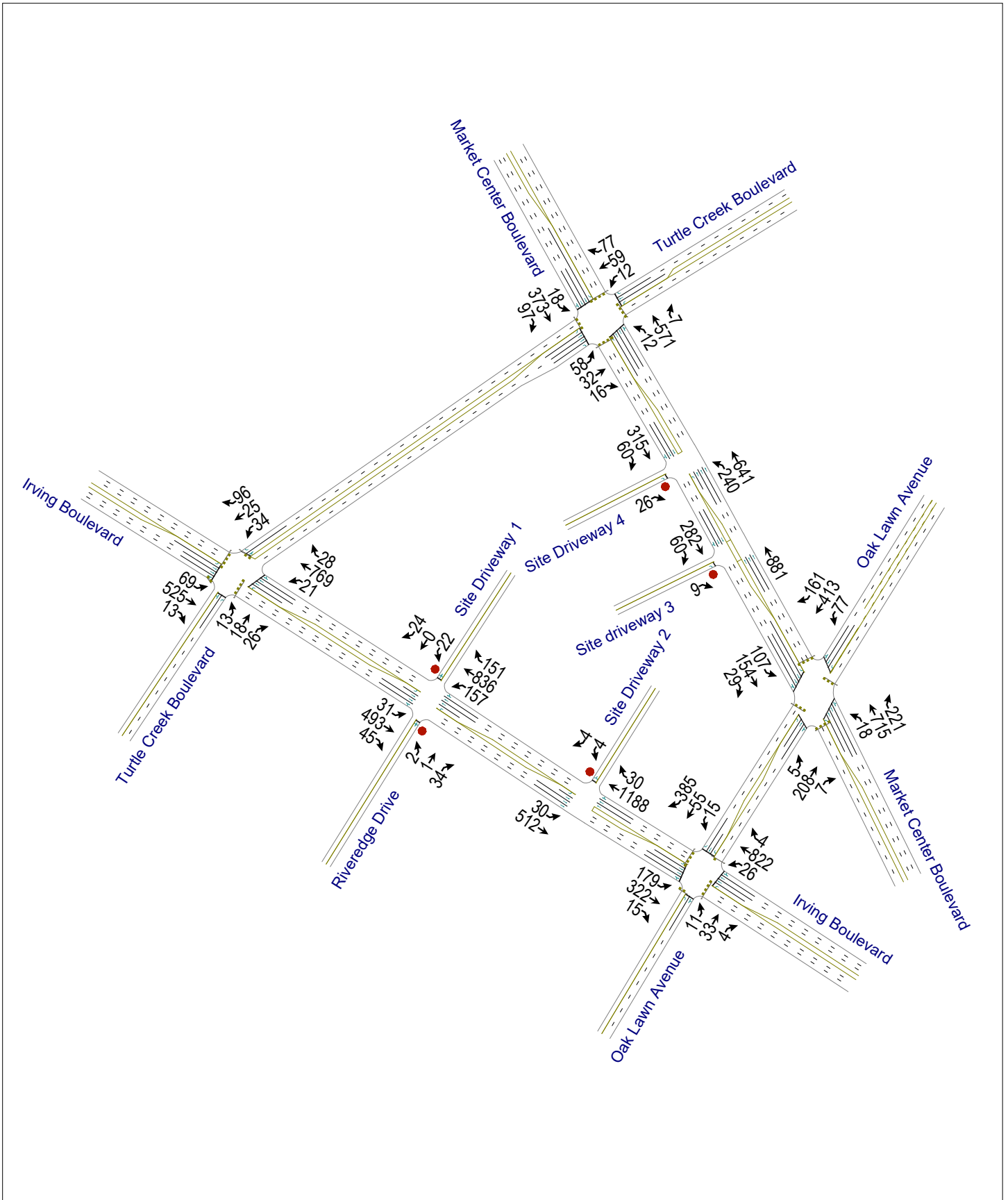


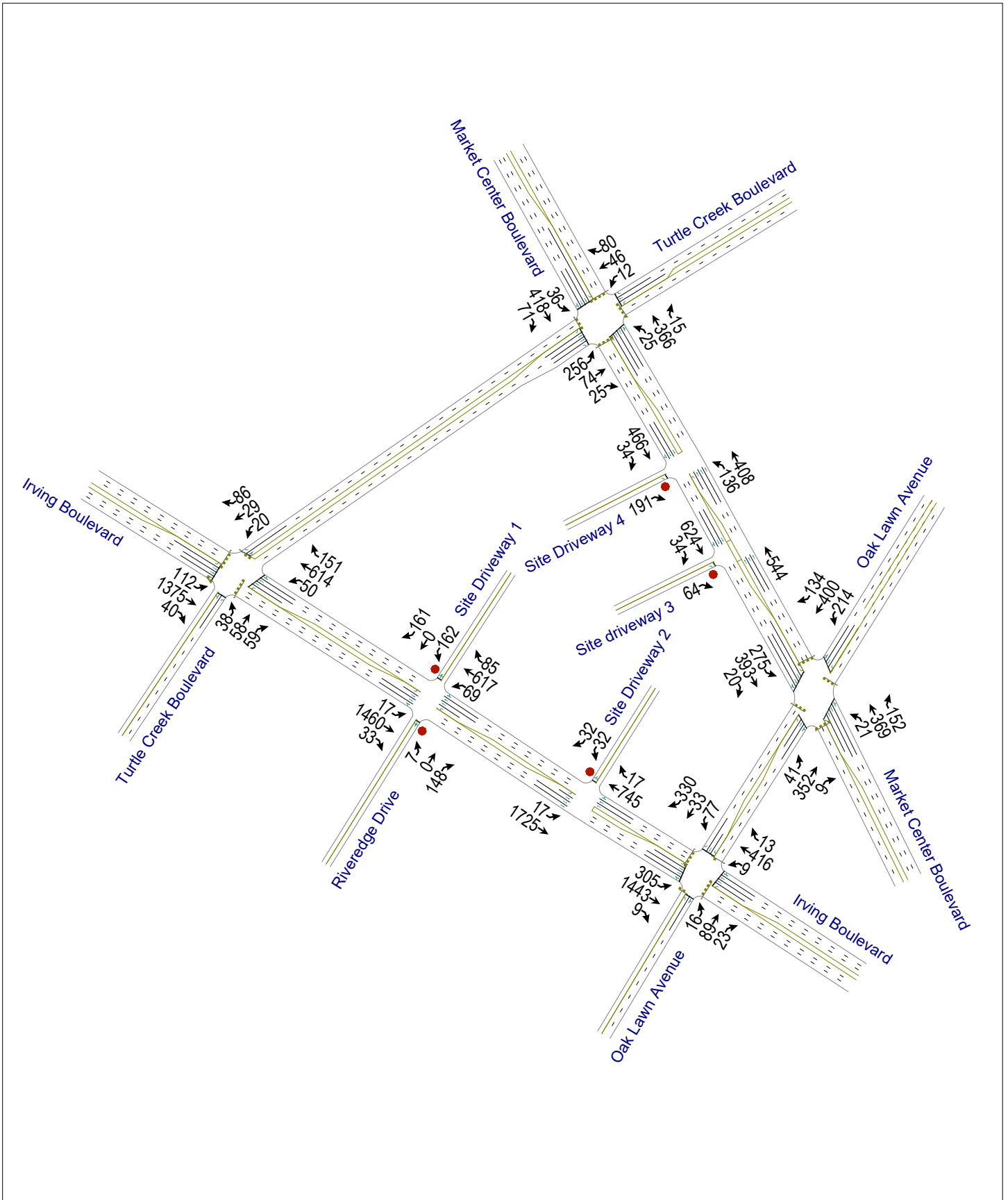












APPENDIX B. Detailed Traffic Volume Data

Intersection Turning Movement Counts

| | | | NORTH LEG | | | | | | EAST LEG | | | | | | SOUTH LEG | | | | | | WEST LEG | | | | | |
|------------------|------------------------------|-------------------|--|------|------|------|-----|----|--|------|------|------|-----|------|--|------|----|------|------|------|--|----|---|------|-----|----|
| | | | Southbound Approach on Turtle Creek Boulevard | | | | | | Westbound Approach on Market Center Boulevard | | | | | | Northbound Approach on Turtle Creek Boulevard | | | | | | Eastbound Approach on Market Center Boulevard | | | | | |
| | | | Vehicles | | | Peds | | | Vehicles | | | Peds | | | Vehicles | | | Peds | | | Vehicles | | | Peds | | |
| | | | U | L | T | R | CCW | CW | U | L | T | R | CCW | CW | U | L | T | R | CCW | CW | U | L | T | R | CCW | CW |
| START | END | | | | | | | | | | | | | | | | | | | | | | | | | |
| City: | Dallas | 7:00 AM | 7:15 AM | 1 | 5 | 8 | | | 3 | 109 | 0 | | | 5 | 6 | 2 | | | 1 | 25 | 8 | | | | | |
| State: | Texas | 7:15 AM | 7:30 AM | 1 | 9 | 9 | | | 1 | 131 | 4 | | | 1 | 2 | 1 | | | 6 | 23 | 13 | | | | | |
| Day: | Tuesday | 7:30 AM | 7:45 AM | 1 | 9 | 11 | | | 5 | 170 | 3 | | | 8 | 4 | 4 | | | 5 | 35 | 13 | | | | | |
| Date: | 12-Jul | 7:45 AM | 8:00 AM | 0 | 10 | 14 | | | 3 | 130 | 3 | | | 6 | 8 | 6 | | | 2 | 54 | 7 | | | | | |
| Year: | 2022 | 8:00 AM | 8:15 AM | 1 | 16 | 9 | | | 3 | 138 | 1 | | | 7 | 7 | 1 | | | 8 | 52 | 18 | | | | | |
| Data Collector: | Camera | 8:15 AM | 8:30 AM | 3 | 10 | 18 | | | 4 | 122 | 2 | | | 9 | 7 | 7 | | | 0 | 53 | 16 | | | | | |
| Data Source: | CJ Hensch & Associates, Inc. | 8:30 AM | 8:45 AM | 4 | 10 | 24 | | | 0 | 120 | 1 | | | 4 | 7 | 3 | | | 1 | 55 | 9 | | | | | |
| Traffic Control: | Traffic Signal | 8:45 AM | 9:00 AM | 2 | 14 | 15 | | | 3 | 107 | 2 | | | 12 | 6 | 3 | | | 6 | 56 | 18 | | | | | |
| Observations: | | 4:30 PM | 4:45 PM | 2 | 10 | 17 | | | 5 | 83 | 0 | | | 25 | 15 | 4 | | | 5 | 84 | 12 | | | | | |
| | | 4:45 PM | 5:00 PM | 1 | 8 | 11 | | | 3 | 66 | 7 | | | 16 | 14 | 5 | | | 10 | 72 | 19 | | | | | |
| | | 5:00 PM | 5:15 PM | 3 | 8 | 21 | | | 6 | 88 | 3 | | | 28 | 18 | 5 | | | 8 | 71 | 12 | | | | | |
| | | 5:15 PM | 5:30 PM | 4 | 13 | 19 | | | 7 | 75 | 3 | | | 20 | 16 | 7 | | | 8 | 72 | 10 | | | | | |
| | | 5:30 PM | 5:45 PM | 5 | 13 | 23 | | | 3 | 81 | 4 | | | 21 | 13 | 2 | | | 14 | 60 | 15 | | | | | |
| | | 5:45 PM | 6:00 PM | 3 | 13 | 17 | | | 1 | 63 | 2 | | | 19 | 9 | 2 | | | 13 | 104 | 11 | | | | | |
| | | 6:00 PM | 6:15 PM | 3 | 15 | 19 | | | 2 | 69 | 4 | | | 20 | 8 | 5 | | | 3 | 93 | 15 | | | | | |
| | | 6:15 PM | 6:30 PM | 1 | 10 | 16 | | | 1 | 68 | 4 | | | 22 | 11 | 5 | | | 9 | 67 | 16 | | | | | |
| AM Peak Hour | Intersection PHF: | 0.95 | Intersection PHV: | 0 | 5 | 45 | 52 | | 0 | 15 | 560 | 9 | | 0 | 30 | 26 | 18 | | 0 | 15 | 194 | 54 | | | | |
| | Peak Hour: | 7:30 AM - 8:30 AM | PHF: | 0.42 | 0.70 | 0.72 | | | 0.75 | 0.82 | 0.75 | | | 0.83 | 0.81 | 0.64 | | | 0.47 | 0.90 | 0.75 | | | | | |
| | Study Area PHF: | 0.95 | Study Area PHV: | 0 | 10 | 50 | 66 | | 0 | 10 | 487 | 6 | | 0 | 32 | 27 | 14 | | 0 | 15 | 216 | 61 | | | | |
| | Peak Hour: | 8:00 AM - 9:00 AM | PHF: | 0.63 | 0.78 | 0.69 | | | 0.63 | 0.88 | 0.75 | | | 0.67 | 0.96 | 0.50 | | | 0.47 | 0.96 | 0.85 | | | | | |
| PM Peak Hour | Intersection PHF: | 0.96 | Intersection PHV: | 0 | 15 | 47 | 80 | | 0 | 17 | 307 | 12 | | 0 | 88 | 56 | 16 | | 0 | 43 | 307 | 48 | | | | |
| | Peak Hour: | 5:00 PM - 6:00 PM | PHF: | 0.75 | 0.90 | 0.87 | | | 0.61 | 0.87 | 0.75 | | | 0.79 | 0.78 | 0.57 | | | 0.77 | 0.74 | 0.80 | | | | | |
| | Study Area PHF: | 0.94 | Study Area PHV: | 0 | 10 | 39 | 68 | | 0 | 21 | 312 | 13 | | 0 | 89 | 63 | 21 | | 0 | 31 | 299 | 53 | | | | |
| | Peak Hour: | 4:30 PM - 5:30 PM | PHF: | 0.63 | 0.75 | 0.81 | | | 0.75 | 0.89 | 0.46 | | | 0.79 | 0.88 | 0.75 | | | 0.78 | 0.89 | 0.70 | | | | | |

Intersection Turning Movement Counts

| | | | NORTH LEG | | | | | | EAST LEG | | | | | | SOUTH LEG | | | | | | WEST LEG | | | | | |
|------------------|------------------------------|-------------------|---|-------------------|------|------|------|----|--|------|------|------|-----|----|---|------|------|------|-----|------|--|------|----|------|-----|----|
| | | | Southbound Approach on Oak Lawn Avenue | | | | | | Westbound Approach on market Center Boulevard | | | | | | Northbound Approach on Oak Lawn Avenue | | | | | | Eastbound Approach on market Center Boulevard | | | | | |
| | | | Vehicles | | | Peds | | | Vehicles | | | Peds | | | Vehicles | | | Peds | | | Vehicles | | | Peds | | |
| | | | U | L | T | R | CCW | CW | U | L | T | R | CCW | CW | U | L | T | R | CCW | CW | U | L | T | R | CCW | CW |
| START | END | | | | | | | | | | | | | | | | | | | | | | | | | |
| City: | Dallas | 7:00 AM | 7:15 AM | 3 | 18 | 6 | | | 1 | 102 | 29 | | | 0 | 15 | 0 | | | 8 | 17 | 3 | | | | | |
| State: | Texas | 7:15 AM | 7:30 AM | 11 | 20 | 8 | | | 5 | 143 | 34 | | | 2 | 17 | 1 | | | 8 | 15 | 2 | | | | | |
| Day: | Tuesday | 7:30 AM | 7:45 AM | 7 | 18 | 11 | | | 3 | 158 | 35 | | | 3 | 27 | 1 | | | 11 | 22 | 5 | | | | | |
| Date: | 12-Jul | 7:45 AM | 8:00 AM | 17 | 33 | 9 | | | 7 | 139 | 51 | | | 1 | 36 | 0 | | | 21 | 33 | 3 | | | | | |
| Year: | 2022 | 8:00 AM | 8:15 AM | 12 | 46 | 6 | | | 4 | 128 | 50 | | | 1 | 33 | 0 | | | 15 | 28 | 7 | | | | | |
| Data Collector: | Camera | 8:15 AM | 8:30 AM | 18 | 36 | 10 | | | 3 | 137 | 55 | | | 1 | 46 | 1 | | | 22 | 26 | 6 | | | | | |
| Data Source: | CJ Hensch & Associates, Inc. | 8:30 AM | 8:45 AM | 16 | 47 | 7 | | | 7 | 126 | 38 | | | 2 | 38 | 2 | | | 17 | 32 | 3 | | | | | |
| Traffic Control: | Traffic Signal | 8:45 AM | 9:00 AM | 20 | 50 | 12 | | | 1 | 117 | 46 | | | 0 | 43 | 3 | | | 15 | 38 | 9 | | | | | |
| Observations: | | 4:30 PM | 4:45 PM | 44 | 57 | 13 | | | 5 | 71 | 34 | | | 6 | 33 | 2 | | | 21 | 75 | 7 | | | | | |
| | | 4:45 PM | 5:00 PM | 48 | 58 | 8 | | | 1 | 59 | 31 | | | 10 | 42 | 1 | | | 14 | 61 | 5 | | | | | |
| | | 5:00 PM | 5:15 PM | 37 | 66 | 16 | | | 8 | 74 | 38 | | | 12 | 56 | 3 | | | 18 | 80 | 3 | | | | | |
| | | 5:15 PM | 5:30 PM | 54 | 78 | 19 | | | 4 | 53 | 27 | | | 7 | 46 | 2 | | | 18 | 65 | 2 | | | | | |
| | | 5:30 PM | 5:45 PM | 44 | 59 | 16 | | | 2 | 61 | 26 | | | 6 | 32 | 5 | | | 20 | 63 | 3 | | | | | |
| | | 5:45 PM | 6:00 PM | 54 | 60 | 12 | | | 4 | 47 | 30 | | | 7 | 31 | 6 | | | 12 | 85 | 7 | | | | | |
| | | 6:00 PM | 6:15 PM | 37 | 54 | 12 | | | 5 | 61 | 28 | | | 5 | 46 | 4 | | | 21 | 91 | 6 | | | | | |
| | | 6:15 PM | 6:30 PM | 33 | 49 | 4 | | | 3 | 50 | 32 | | | 11 | 47 | 3 | | | 18 | 47 | 7 | | | | | |
| AM Peak Hour | Intersection PHF: | 0.96 | | Intersection PHV: | 0 | 66 | 179 | 35 | | 0 | 15 | 508 | 189 | | 0 | 4 | 160 | 6 | | 0 | 69 | 124 | 25 | | | |
| | Peak Hour: | 8:00 AM - 9:00 AM | | PHF: | 0.83 | 0.90 | 0.73 | | | 0.54 | 0.93 | 0.86 | | | 0.50 | 0.87 | 0.50 | | | 0.78 | 0.82 | 0.69 | | | | |
| | Study Area PHF: | 0.96 | | Study Area PHV: | 0 | 66 | 179 | 35 | | 0 | 15 | 508 | 189 | | 0 | 4 | 160 | 6 | | 0 | 69 | 124 | 25 | | | |
| | Peak Hour: | 8:00 AM - 9:00 AM | | PHF: | 0.83 | 0.90 | 0.73 | | | 0.54 | 0.93 | 0.86 | | | 0.50 | 0.87 | 0.50 | | | 0.78 | 0.82 | 0.69 | | | | |
| PM Peak Hour | Intersection PHF: | 0.91 | | Intersection PHV: | 0 | 183 | 259 | 56 | | 0 | 18 | 257 | 130 | | 0 | 35 | 177 | 8 | | 0 | 71 | 281 | 17 | | | |
| | Peak Hour: | 4:30 PM - 5:30 PM | | PHF: | 0.85 | 0.83 | 0.74 | | | 0.56 | 0.87 | 0.86 | | | 0.73 | 0.79 | 0.67 | | | 0.85 | 0.88 | 0.61 | | | | |
| | Study Area PHF: | 0.91 | | Study Area PHV: | 0 | 183 | 259 | 56 | | 0 | 18 | 257 | 130 | | 0 | 35 | 177 | 8 | | 0 | 71 | 281 | 17 | | | |
| | Peak Hour: | 4:30 PM - 5:30 PM | | PHF: | 0.85 | 0.83 | 0.74 | | | 0.56 | 0.87 | 0.86 | | | 0.73 | 0.79 | 0.67 | | | 0.85 | 0.88 | 0.61 | | | | |

Intersection Turning Movement Counts

| | | | | NORTH LEG | | | | | | EAST LEG | | | | | | SOUTH LEG | | | | | | WEST LEG | | | | | | | | | | |
|------------------|------------------------------|-------------------|---------|--|---|---|------|-----|----|---|-----|---|------|-----|----|--|---|----|------|-----|----|---|-----|---|------|-----|----|----------------|--|--|--|--|
| | | | | Southbound Approach on Riverredge Drive | | | | | | Westbound Approach on Irving Boulevard | | | | | | Northbound Approach on Riverredge Drive | | | | | | Eastbound Approach on Irving Boulevard | | | | | | | | | | |
| | | | | Vehicles | | | Peds | | | Vehicles | | | Peds | | | Vehicles | | | Peds | | | Vehicles | | | Peds | | | | | | | |
| | | START | END | U | L | T | R | CCW | CW | U | L | T | R | CCW | CW | U | L | T | R | CCW | CW | U | L | T | R | CCW | CW | | | | | |
| City: | Dallas | 7:00 AM | 7:15 AM | 0 | 0 | 0 | | | | 4 | 152 | 0 | | | | 1 | 0 | 2 | | | | 0 | 53 | 1 | | | | | | | | |
| State: | Texas | 7:15 AM | 7:30 AM | 0 | 0 | 0 | | | | 1 | 181 | 0 | | | | 0 | 0 | 0 | | | | 0 | 71 | 1 | | | | | | | | |
| Day: | Tuesday | 7:30 AM | 7:45 AM | 0 | 0 | 0 | | | | 1 | 175 | 0 | | | | 2 | 0 | 4 | | | | 2 | 86 | 1 | | | | | | | | |
| Date: | 12-Jul | 7:45 AM | 8:00 AM | 0 | 0 | 0 | | | | 2 | 209 | 0 | | | | 0 | 0 | 3 | | | | 0 | 86 | 3 | | | | | | | | |
| Year: | 2022 | 8:00 AM | 8:15 AM | 0 | 0 | 0 | | | | 11 | 175 | 0 | | | | 2 | 0 | 3 | | | | 0 | 83 | 1 | | | | | | | | |
| Data Collector: | Camera | 8:15 AM | 8:30 AM | 0 | 0 | 0 | | | | 3 | 162 | 0 | | | | 0 | 0 | 2 | | | | 0 | 109 | 1 | | | | | | | | |
| Data Source: | CJ Hensch & Associates, Inc. | 8:30 AM | 8:45 AM | 0 | 0 | 0 | | | | 0 | 185 | 0 | | | | 0 | 1 | 3 | | | | 1 | 95 | 0 | | | | | | | | |
| Traffic Control: | Minor Approach Stop | 8:45 AM | 9:00 AM | 0 | 0 | 2 | | | | 13 | 188 | 1 | | | | 0 | 0 | 6 | | | | 0 | 108 | 1 | | | | | | | | |
| Observations: | | 4:30 PM | 4:45 PM | 1 | 0 | 0 | | | | 5 | 112 | 0 | | | | 1 | 0 | 4 | | | | 0 | 298 | 3 | | | | | | | | |
| | | 4:45 PM | 5:00 PM | 0 | 0 | 0 | | | | 6 | 136 | 0 | | | | 1 | 0 | 4 | | | | 0 | 295 | 8 | | | | | | | | |
| | | 5:00 PM | 5:15 PM | 1 | 0 | 1 | | | | 2 | 129 | 0 | | | | 2 | 0 | 10 | | | | 0 | 364 | 1 | | | | | | | | |
| | | 5:15 PM | 5:30 PM | 0 | 0 | 0 | | | | 9 | 122 | 0 | | | | 2 | 0 | 5 | | | | 0 | 275 | 4 | | | | | | | | |
| | | 5:30 PM | 5:45 PM | 0 | 0 | 0 | | | | 5 | 107 | 0 | | | | 4 | 0 | 9 | | | | 0 | 256 | 4 | | | | | | | | |
| | | 5:45 PM | 6:00 PM | 0 | 0 | 0 | | | | 2 | 111 | 0 | | | | 3 | 0 | 1 | | | | 0 | 265 | 5 | | | | | | | | |
| | | 6:00 PM | 6:15 PM | 0 | 0 | 0 | | | | 8 | 107 | 0 | | | | 2 | 0 | 11 | | | | 0 | 283 | 8 | | | | | | | | |
| | | 6:15 PM | 6:30 PM | 0 | 0 | 2 | | | | 3 | 77 | 0 | | | | 0 | 0 | 4 | | | | 0 | 202 | 0 | | | | | | | | |
| AM Peak Hour | Intersection PHF: | 0.91 | | Intersection PHV: | | | | | | 0 27 710 1 | | | | | | 0 2 1 14 | | | | | | 0 1 395 3 | | | | | | | | | | |
| | Peak Hour: | 8:00 AM - 9:00 AM | | PHF: | | | | | | 0.00 0.00 0.25 | | | | | | 0.52 0.94 0.25 | | | | | | 0.25 0.25 0.58 | | | | | | 0.25 0.91 0.75 | | | | |
| PM Peak Hour | Study Area PHF: | 0.91 | | Study Area PHV: | | | | | | 0 27 710 1 | | | | | | 0 2 1 14 | | | | | | 0 1 395 3 | | | | | | | | | | |
| | Peak Hour: | 8:00 AM - 9:00 AM | | PHF: | | | | | | 0.00 0.00 0.25 | | | | | | 0.52 0.94 0.25 | | | | | | 0.25 0.25 0.58 | | | | | | 0.25 0.91 0.75 | | | | |
| AM Peak Hour | Intersection PHF: | 0.88 | | Intersection PHV: | | | | | | 0 22 499 0 | | | | | | 0 6 0 23 | | | | | | 0 0 1,232 16 | | | | | | | | | | |
| | Peak Hour: | 4:30 PM - 5:30 PM | | PHF: | | | | | | 0.50 0.00 0.25 | | | | | | 0.61 0.92 0.00 | | | | | | 0.75 0.00 0.58 | | | | | | 0.00 0.85 0.50 | | | | |
| PM Peak Hour | Study Area PHF: | 0.88 | | Study Area PHV: | | | | | | 0 22 499 0 | | | | | | 0 6 0 23 | | | | | | 0 0 1,232 16 | | | | | | | | | | |
| | Peak Hour: | 4:30 PM - 5:30 PM | | PHF: | | | | | | 0.50 0.00 0.25 | | | | | | 0.61 0.92 0.00 | | | | | | 0.75 0.00 0.58 | | | | | | 0.00 0.85 0.50 | | | | |

Intersection Turning Movement Counts

| | | START | | NORTH LEG Southbound Approach on Oak Lawn Avenue | | | | | | EAST LEG Westbound Approach on Irving Boulevard | | | | | | SOUTH LEG Northbound Approach on Oak Lawn Avenue | | | | | | WEST LEG Eastbound Approach on Irving Boulevard | | | | | | | | | |
|------------------|------------------------------|-------------------|---------|--|----|----|---|------|------|---|-----|---|---|------|----|--|------|------|------|------|----|---|------|------|------|------|----|---|------|-------|------|
| | | START | END | Vehicles | | | | Peds | | Vehicles | | | | Peds | | Vehicles | | | | Peds | | Vehicles | | | | Peds | | | | | |
| | | | | U | L | T | R | CCW | CW | U | L | T | R | CCW | CW | U | L | T | R | CCW | CW | U | L | T | R | CCW | CW | | | | |
| City: | Dallas | 7:00 AM | 7:15 AM | 2 | 5 | 15 | | | | 3 | 143 | 0 | | | | 1 | 1 | 0 | | | | 16 | 39 | 3 | | | | | | | |
| State: | Texas | 7:15 AM | 7:30 AM | 4 | 5 | 19 | | | | 3 | 157 | 1 | | | | 1 | 6 | 1 | | | | 16 | 54 | 2 | | | | | | | |
| Day: | Tuesday | 7:30 AM | 7:45 AM | 2 | 6 | 16 | | | | 1 | 149 | 1 | | | | 1 | 6 | 0 | | | | 32 | 63 | 1 | | | | | | | |
| Date: | 12-Jul | 7:45 AM | 8:00 AM | 5 | 9 | 31 | | | | 4 | 181 | 2 | | | | 1 | 2 | 2 | | | | 29 | 51 | 6 | | | | | | | |
| Year: | 2022 | 8:00 AM | 8:15 AM | 0 | 12 | 44 | | | | 4 | 146 | 0 | | | | 1 | 7 | 1 | | | | 25 | 63 | 4 | | | | | | | |
| Data Collector: | Camera | 8:15 AM | 8:30 AM | 3 | 9 | 34 | | | | 6 | 137 | 0 | | | | 4 | 8 | 1 | | | | 35 | 61 | 3 | | | | | | | |
| Data Source: | CJ Hensch & Associates, Inc. | 8:30 AM | 8:45 AM | 6 | 10 | 38 | | | | 5 | 165 | 3 | | | | 2 | 8 | 0 | | | | 43 | 63 | 2 | | | | | | | |
| Traffic Control: | Traffic Signal | 8:45 AM | 9:00 AM | 4 | 16 | 39 | | | | 7 | 167 | 0 | | | | 2 | 5 | 1 | | | | 32 | 68 | 4 | | | | | | | |
| Observations: | | 4:30 PM | 4:45 PM | 15 | 5 | 42 | | | | 1 | 81 | 1 | | | | 2 | 12 | 9 | | | | 33 | 286 | 1 | | | | | | | |
| | | 4:45 PM | 5:00 PM | 16 | 6 | 45 | | | | 0 | 88 | 2 | | | | 5 | 15 | 4 | | | | 33 | 243 | 3 | | | | | | | |
| | | 5:00 PM | 5:15 PM | 19 | 11 | 48 | | | | 4 | 77 | 4 | | | | 4 | 33 | 5 | | | | 47 | 308 | 2 | | | | | | | |
| | | 5:15 PM | 5:30 PM | 16 | 6 | 64 | | | | 3 | 68 | 4 | | | | 3 | 16 | 2 | | | | 24 | 251 | 2 | | | | | | | |
| | | 5:30 PM | 5:45 PM | 13 | 6 | 42 | | | | 2 | 77 | 4 | | | | 1 | 13 | 3 | | | | 35 | 258 | 2 | | | | | | | |
| | | 5:45 PM | 6:00 PM | 24 | 10 | 37 | | | | 1 | 72 | 4 | | | | 2 | 9 | 1 | | | | 23 | 224 | 1 | | | | | | | |
| | | 6:00 PM | 6:15 PM | 14 | 5 | 44 | | | | 1 | 63 | 6 | | | | 1 | 20 | 2 | | | | 36 | 261 | 0 | | | | | | | |
| | | 6:15 PM | 6:30 PM | 14 | 7 | 34 | | | | 3 | 42 | 4 | | | | 1 | 14 | 2 | | | | 28 | 179 | 2 | | | | | | | |
| AM Peak Hour | Intersection PHF: | 0.94 | | Intersection PHV: | | | | 0 | 13 | 47 | 155 | | | | | 0 | 22 | 615 | 3 | | | 0 | 9 | 28 | 3 | | | 0 | 135 | 255 | 13 |
| | Peak Hour: | 8:00 AM - 9:00 AM | | PHF: | | | | 0.54 | 0.73 | 0.88 | | | | | | | 0.79 | 0.92 | 0.25 | | | | 0.56 | 0.88 | 0.75 | | | | 0.78 | 0.94 | 0.81 |
| PM Peak Hour | Study Area PHF: | 0.94 | | Study Area PHV: | | | | 0 | 13 | 47 | 155 | | | | | 0 | 22 | 615 | 3 | | | 0 | 9 | 28 | 3 | | | 0 | 135 | 255 | 13 |
| | Peak Hour: | 8:00 AM - 9:00 AM | | PHF: | | | | 0.54 | 0.73 | 0.88 | | | | | | | 0.79 | 0.92 | 0.25 | | | | 0.56 | 0.88 | 0.75 | | | | 0.78 | 0.94 | 0.81 |
| AM Peak Hour | Intersection PHF: | 0.88 | | Intersection PHV: | | | | 0 | 66 | 28 | 199 | | | | | 0 | 8 | 314 | 11 | | | 0 | 14 | 76 | 20 | | | 0 | 137 | 1,088 | 8 |
| | Peak Hour: | 4:30 PM - 5:30 PM | | PHF: | | | | 0.87 | 0.64 | 0.78 | | | | | | | 0.50 | 0.89 | 0.69 | | | | 0.70 | 0.58 | 0.56 | | | | 0.73 | 0.88 | 0.67 |
| PM Peak Hour | Study Area PHF: | 0.88 | | Study Area PHV: | | | | 0 | 66 | 28 | 199 | | | | | 0 | 8 | 314 | 11 | | | 0 | 14 | 76 | 20 | | | 0 | 137 | 1,088 | 8 |
| | Peak Hour: | 4:30 PM - 5:30 PM | | PHF: | | | | 0.87 | 0.64 | 0.78 | | | | | | | 0.50 | 0.89 | 0.69 | | | | 0.70 | 0.58 | 0.56 | | | | 0.73 | 0.88 | 0.67 |

ROADWAY: Irving Boulevard
 LOCATION: Between Riveredge Drive and Oak Lawn Avenue
 DAY: Tuesday
 DATE: 12-Jul
 YEAR: 2022
 SOURCE: CJ Hensch & Associates

24-HOUR, BI-DIRECTIONAL VOLUME
16,426
 (WEEKDAY)

Irving Boulevard

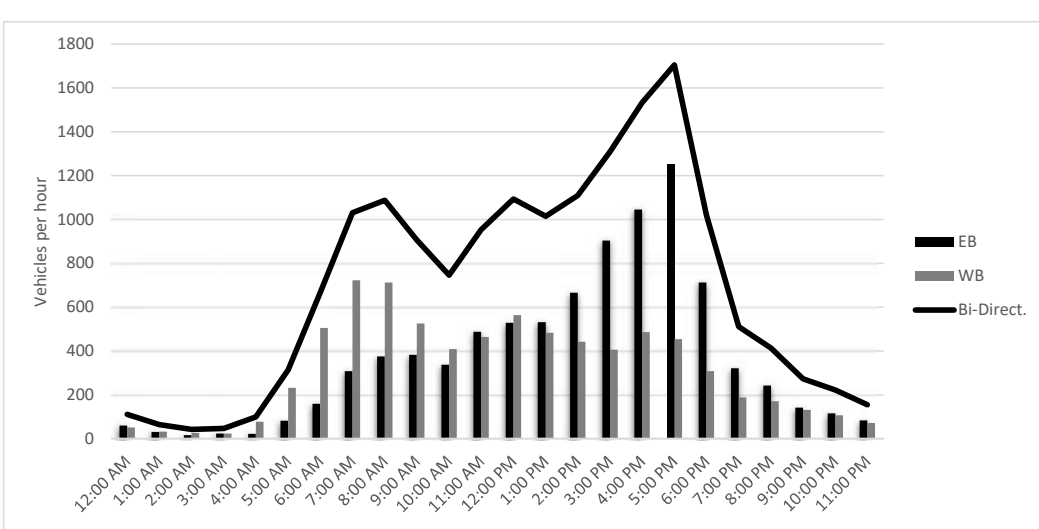
| START TIME | Eastbound | | | | Westbound | | | | Totals | | |
|------------|-----------|------|------|------|-----------|------|------|------|--------|-----|------------|
| | 0:00 | 0:15 | 0:30 | 0:45 | 0:00 | 0:15 | 0:30 | 0:45 | EB | WB | Bi-Direct. |
| 12:00 AM | 28 | 10 | 10 | 12 | 18 | 10 | 8 | 15 | 60 | 51 | 111 |
| 1:00 AM | 7 | 8 | 10 | 6 | 12 | 9 | 10 | 2 | 31 | 33 | 64 |
| 2:00 AM | 7 | 7 | 2 | 1 | 6 | 8 | 5 | 7 | 17 | 26 | 43 |
| 3:00 AM | 9 | 5 | 6 | 3 | 2 | 8 | 6 | 8 | 23 | 24 | 47 |
| 4:00 AM | 2 | 6 | 7 | 7 | 5 | 14 | 17 | 41 | 22 | 77 | 99 |
| 5:00 AM | 12 | 14 | 20 | 36 | 26 | 42 | 68 | 96 | 82 | 232 | 314 |
| 6:00 AM | 22 | 34 | 40 | 64 | 84 | 90 | 148 | 184 | 160 | 506 | 666 |
| 7:00 AM | 68 | 77 | 99 | 64 | 151 | 186 | 186 | 200 | 308 | 723 | 1031 |
| 8:00 AM | 102 | 85 | 97 | 92 | 185 | 158 | 181 | 188 | 376 | 712 | 1088 |
| 9:00 AM | 118 | 84 | 98 | 82 | 156 | 143 | 126 | 100 | 382 | 525 | 907 |
| 10:00 AM | 78 | 99 | 66 | 94 | 127 | 90 | 90 | 102 | 337 | 409 | 746 |
| 11:00 AM | 112 | 98 | 140 | 138 | 104 | 111 | 113 | 137 | 488 | 465 | 953 |
| 12:00 PM | 148 | 151 | 120 | 110 | 132 | 136 | 148 | 148 | 529 | 564 | 1093 |
| 1:00 PM | 156 | 111 | 136 | 128 | 149 | 112 | 116 | 106 | 531 | 483 | 1014 |
| 2:00 PM | 138 | 134 | 182 | 212 | 120 | 104 | 109 | 110 | 666 | 443 | 1109 |
| 3:00 PM | 193 | 186 | 244 | 280 | 103 | 104 | 111 | 88 | 903 | 406 | 1309 |
| 4:00 PM | 250 | 268 | 282 | 245 | 123 | 104 | 132 | 128 | 1045 | 487 | 1532 |
| 5:00 PM | 378 | 323 | 312 | 238 | 115 | 120 | 110 | 109 | 1251 | 454 | 1705 |
| 6:00 PM | 235 | 203 | 164 | 110 | 89 | 72 | 69 | 78 | 712 | 308 | 1020 |
| 7:00 PM | 122 | 76 | 66 | 58 | 53 | 50 | 48 | 38 | 322 | 189 | 511 |
| 8:00 PM | 88 | 65 | 42 | 48 | 30 | 41 | 62 | 38 | 243 | 171 | 414 |
| 9:00 PM | 45 | 43 | 22 | 32 | 22 | 36 | 36 | 37 | 142 | 131 | 273 |
| 10:00 PM | 27 | 33 | 30 | 25 | 34 | 28 | 29 | 16 | 115 | 107 | 222 |
| 11:00 PM | 20 | 16 | 23 | 24 | 18 | 16 | 17 | 21 | 83 | 72 | 155 |

7:15 AM 8:15 AM
 4:45 PM 5:45 PM
 4:45 PM 5:45 PM
 7:15 AM 8:15 AM

24-Hour Total: 16,426
 (Bi-Direct.) AM Peak Hour Total: 1,099
 (Bi-Direct.) PM Peak Hour Total: 1,731
 Highest By Direction (EB): 1,258
 Highest By Direction (WB): 757

| | EB | WB | Bi-Direct. |
|----------------------------------|-------|-------|------------|
| 24-Hour Total: | 8,828 | 7,598 | 16,426 |
| (Bi-Direct.) AM Peak Hour Total: | 342 | 757 | 1,099 |
| (Bi-Direct.) PM Peak Hour Total: | 1,258 | 473 | 1,731 |
| Highest By Direction (EB): | 1,258 | | |
| Highest By Direction (WB): | | 757 | |

Graph



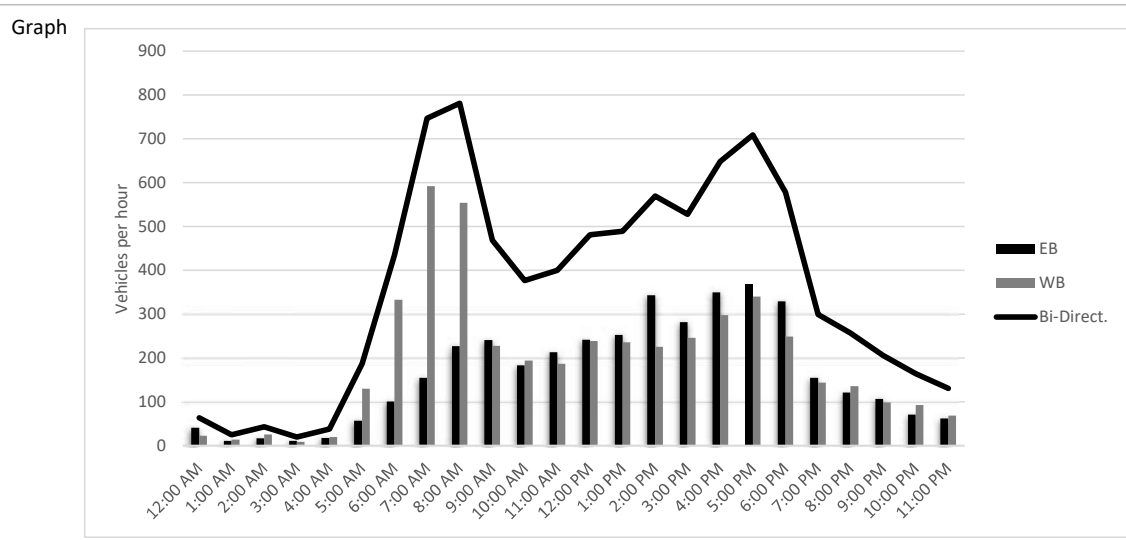
ROADWAY: Market Center Boulevard
 LOCATION: Between Oak Lawn Avenue and Turtle Creek Boulevard
 DAY: Tuesday
 DATE: 12-Jul
 YEAR: 2022
 SOURCE: CJ Hensch & Associates

24-HOUR, BI-DIRECTIONAL VOLUME
8,644
 (WEEKDAY)

Market Center Boulevard

| START TIME | Eastbound | | | | Westbound | | | | Totals | | |
|------------|-----------|------|------|------|-----------|------|------|------|--------|-----|------------|
| | 0:00 | 0:15 | 0:30 | 0:45 | 0:00 | 0:15 | 0:30 | 0:45 | EB | WB | Bi-Direct. |
| 12:00 AM | 11 | 18 | 5 | 7 | 6 | 9 | 4 | 4 | 41 | 23 | 64 |
| 1:00 AM | 2 | 3 | 1 | 5 | 0 | 2 | 4 | 8 | 11 | 14 | 25 |
| 2:00 AM | 8 | 2 | 4 | 3 | 8 | 7 | 4 | 7 | 17 | 26 | 43 |
| 3:00 AM | 1 | 1 | 3 | 6 | 0 | 4 | 2 | 3 | 11 | 9 | 20 |
| 4:00 AM | 2 | 3 | 6 | 7 | 2 | 7 | 1 | 10 | 18 | 20 | 38 |
| 5:00 AM | 8 | 7 | 22 | 20 | 14 | 24 | 44 | 48 | 57 | 130 | 187 |
| 6:00 AM | 17 | 30 | 20 | 34 | 38 | 72 | 97 | 126 | 101 | 333 | 434 |
| 7:00 AM | 28 | 27 | 44 | 56 | 108 | 158 | 166 | 160 | 155 | 592 | 747 |
| 8:00 AM | 52 | 60 | 55 | 60 | 135 | 158 | 134 | 127 | 227 | 554 | 781 |
| 9:00 AM | 69 | 61 | 62 | 49 | 69 | 63 | 56 | 40 | 241 | 228 | 469 |
| 10:00 AM | 39 | 56 | 36 | 52 | 50 | 58 | 46 | 40 | 183 | 194 | 377 |
| 11:00 AM | 46 | 51 | 54 | 62 | 40 | 50 | 53 | 44 | 213 | 187 | 400 |
| 12:00 PM | 50 | 62 | 66 | 64 | 64 | 57 | 52 | 66 | 242 | 239 | 481 |
| 1:00 PM | 66 | 62 | 71 | 54 | 64 | 49 | 68 | 55 | 253 | 236 | 489 |
| 2:00 PM | 70 | 89 | 88 | 96 | 50 | 62 | 56 | 58 | 343 | 226 | 569 |
| 3:00 PM | 60 | 72 | 70 | 80 | 64 | 68 | 57 | 57 | 282 | 246 | 528 |
| 4:00 PM | 88 | 80 | 96 | 86 | 62 | 64 | 100 | 72 | 350 | 298 | 648 |
| 5:00 PM | 98 | 88 | 77 | 106 | 108 | 81 | 82 | 69 | 369 | 340 | 709 |
| 6:00 PM | 110 | 82 | 83 | 54 | 82 | 68 | 50 | 49 | 329 | 249 | 578 |
| 7:00 PM | 46 | 42 | 38 | 29 | 36 | 39 | 32 | 37 | 155 | 144 | 299 |
| 8:00 PM | 37 | 22 | 27 | 35 | 35 | 38 | 33 | 30 | 121 | 136 | 257 |
| 9:00 PM | 26 | 37 | 26 | 18 | 25 | 28 | 20 | 26 | 107 | 99 | 206 |
| 10:00 PM | 20 | 18 | 14 | 19 | 28 | 17 | 28 | 20 | 71 | 93 | 164 |
| 11:00 PM | 22 | 16 | 14 | 10 | 16 | 18 | 19 | 16 | 62 | 69 | 131 |

| | | | | | |
|---------|---------|----------------------------------|-------|-------|-------|
| 7:30 AM | 8:30 AM | 24-Hour Total: | 3,959 | 4,685 | 8,644 |
| 4:30 PM | 5:30 PM | (Bi-Direct.) AM Peak Hour Total: | 212 | 619 | 831 |
| 5:15 PM | 6:15 PM | (Bi-Direct.) PM Peak Hour Total: | 368 | 361 | 729 |
| 7:15 AM | 8:15 AM | Highest By Direction (EB): | 381 | | |
| | | Highest By Direction (WB): | | 619 | |



APPENDIX C. Site-Generated Traffic Supplement

Trip Generation Summary

1715 Market Center

Ped/Transit Reduction

5%

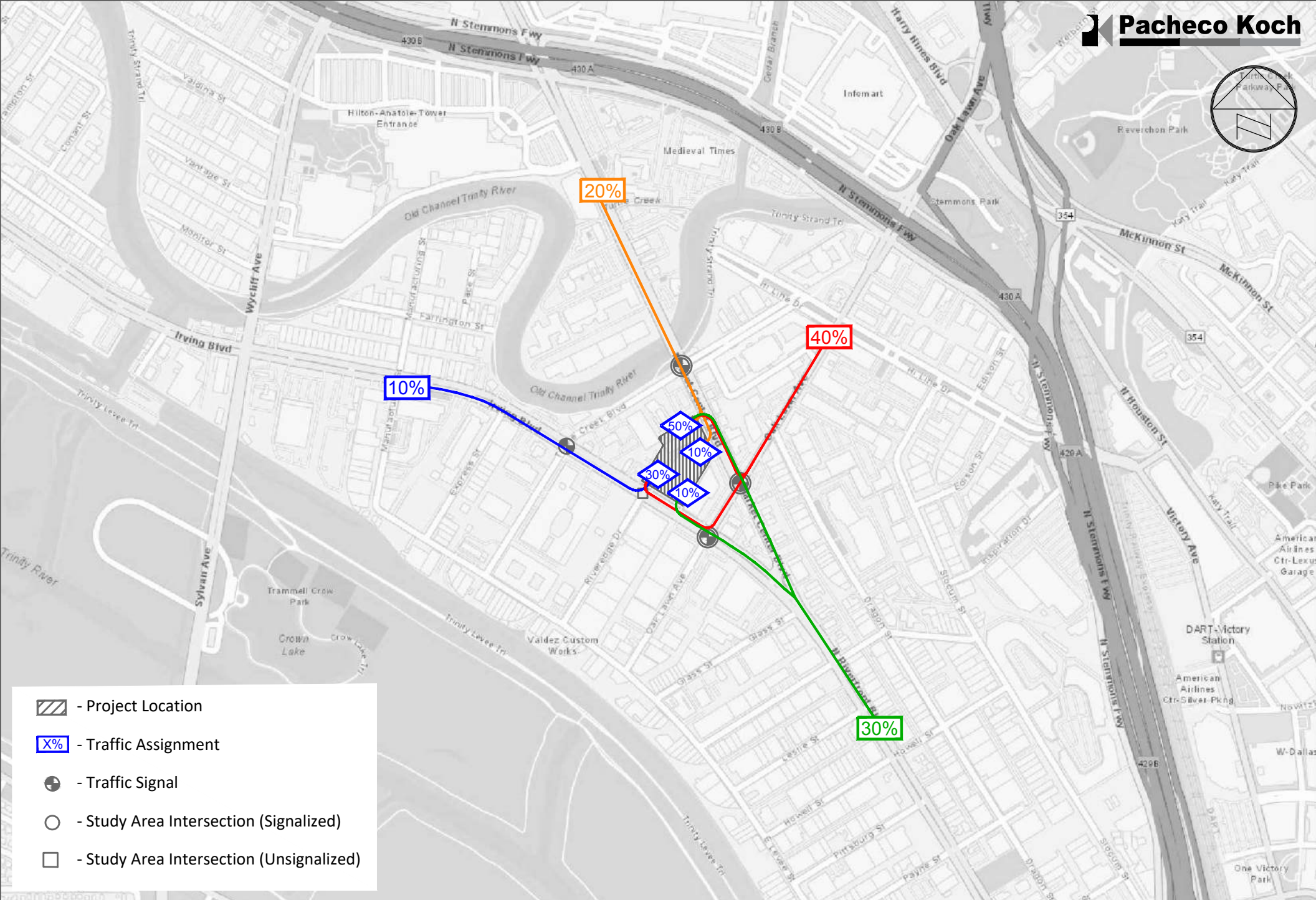
5%






5%

| Development Program | | | | Weekday Trip Ends | | | | | | |
|----------------------------------|----------------------------|----------|-------|-------------------|---------------------------|------------|------------|---------------------------|------------|-------------|
| ITE Landuse Code | Land Use | Quantity | Units | Weekday Daily | AM Peak - Adjacent Street | | | PM Peak - Adjacent Street | | |
| | | | | | In | Out | Total | In | Out | Total |
| ITE LUC #710 | General Office | 462,100 | SF | 5009 | 618 | 84 | 702 | 113 | 552 | 665 |
| | Internal trip capture | | | | 7 | 8 | | 5 | 7 | |
| | Ped/Bike/Transit Reduction | | | 250 | 31 | 4 | | 5 | 27 | |
| ITE LUC #821 | Shopping Plaza | 12,000 | SF | 810 | 13 | 8 | 21 | 30 | 32 | 62 |
| | Internal trip capture | | | | 5 | 3 | | 17 | 10 | |
| | Ped/Bike/Transit Reduction | | | 41 | 0 | 0 | | 1 | 1 | |
| ITE LUC #931 | Fine Dining Restaurant | 48,000 | SF | 4024 | 18 | 17 | 35 | 251 | 123 | 374 |
| | Internal trip capture | | | | 5 | 6 | | 14 | 19 | |
| | Ped/Bike/Transit Reduction | | | 201 | 1 | 1 | | 12 | 5 | |
| Subtotal (no adjustments) | | | | 9843 | 649 | 109 | 758 | 394 | 707 | 1101 |
| Adjusted Subtotal | | | | 9351 | 600 | 87 | 687 | 340 | 638 | 978 |
| Pass-by (N/A) | | | | | | | | | | |
| Net Driveway Vols | | | | 9351 | 600 | 87 | 687 | 340 | 638 | 978 |

Off-Site Trip Generation: 5182-21.693 161 Riveredge

| Development Program | | | | Weekday Trip Ends | | | | | | |
|------------------------------------|----------------|----------|-------|-------------------|---------------------------|-----------|------------|---------------------------|------------|------------|
| ITE Landuse Code | Land Use | Quantity | Units | Weekday Daily | AM Peak - Adjacent Street | | | PM Peak - Adjacent Street | | |
| | | | | | In | Out | Total | In | Out | Total |
| ITE LUC #710 | General Office | 123,065 | SF | 1334 | 165 | 22 | 187 | 30 | 147 | 177 |
| ITE LUC #931 | Restaurant | 10,350 | SF | 868 | 4 | 4 | 8 | 54 | 27 | 81 |
| Subtotal (no adjustments) | | | | 2202 | 169 | 26 | 195 | 84 | 174 | 258 |
| Ped/Trans Reductions | | | | | | | | | | |
| Internal Capture (Restaurant only) | | | | | | | | | | |
| Subtotal | | | | 434 | 2 | 2 | 4 | 27 | 14 | 41 |
| Pass-by | | | | 1768 | 167 | 24 | 191 | 57 | 161 | 218 |
| Net Driveway Vols | | | | 1768 | 167 | 24 | 191 | 57 | 161 | 218 |

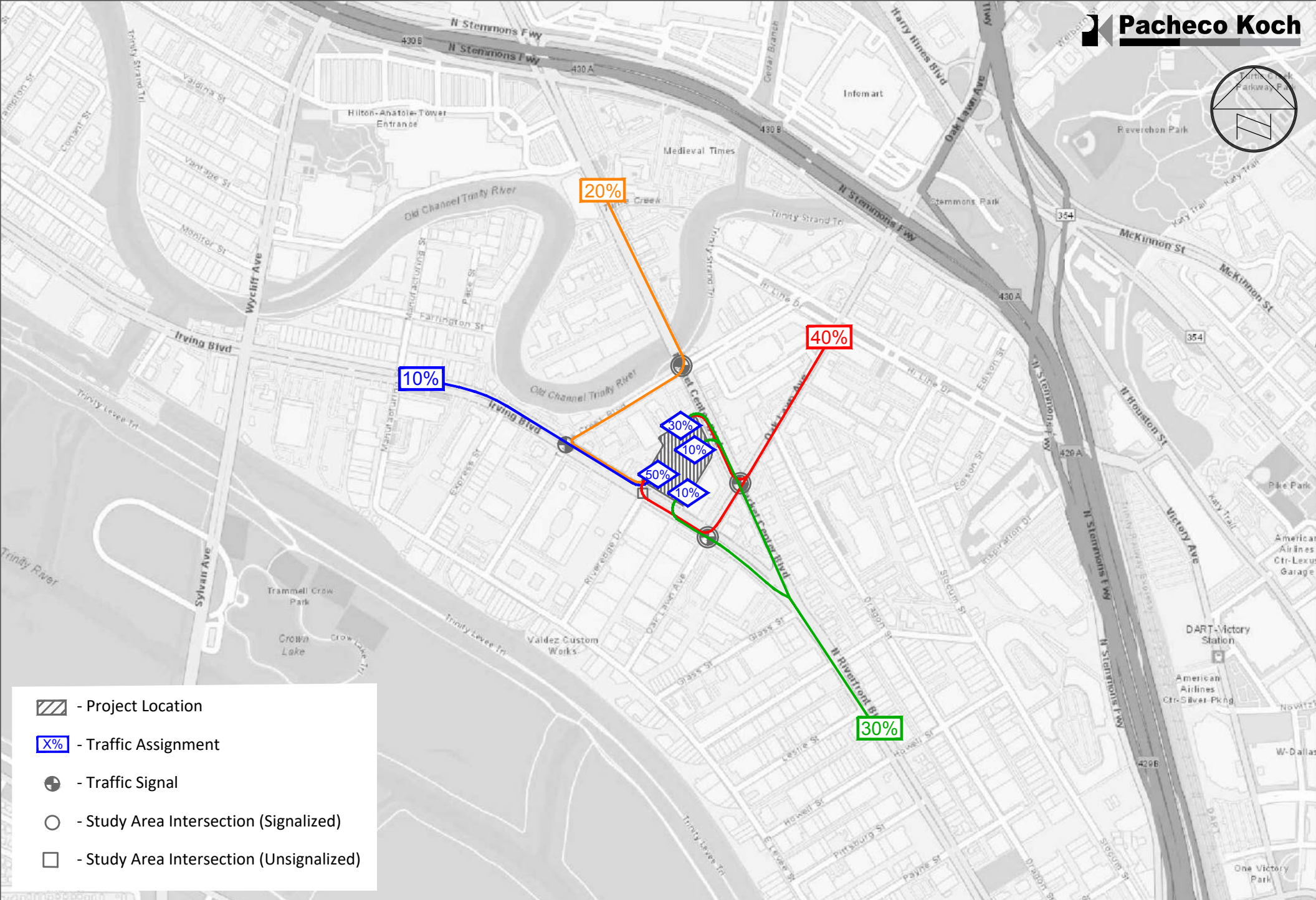







-  - Project Location
-  - Traffic Assignment
-  - Traffic Signal
-  - Study Area Intersection (Signalized)
-  - Study Area Intersection (Unsignalized)

Site Generated Trip Distribution - Inbound

1715 Market Center, Dallas, Texas

PK #5431-22.460 (SMN: 08/04/22)

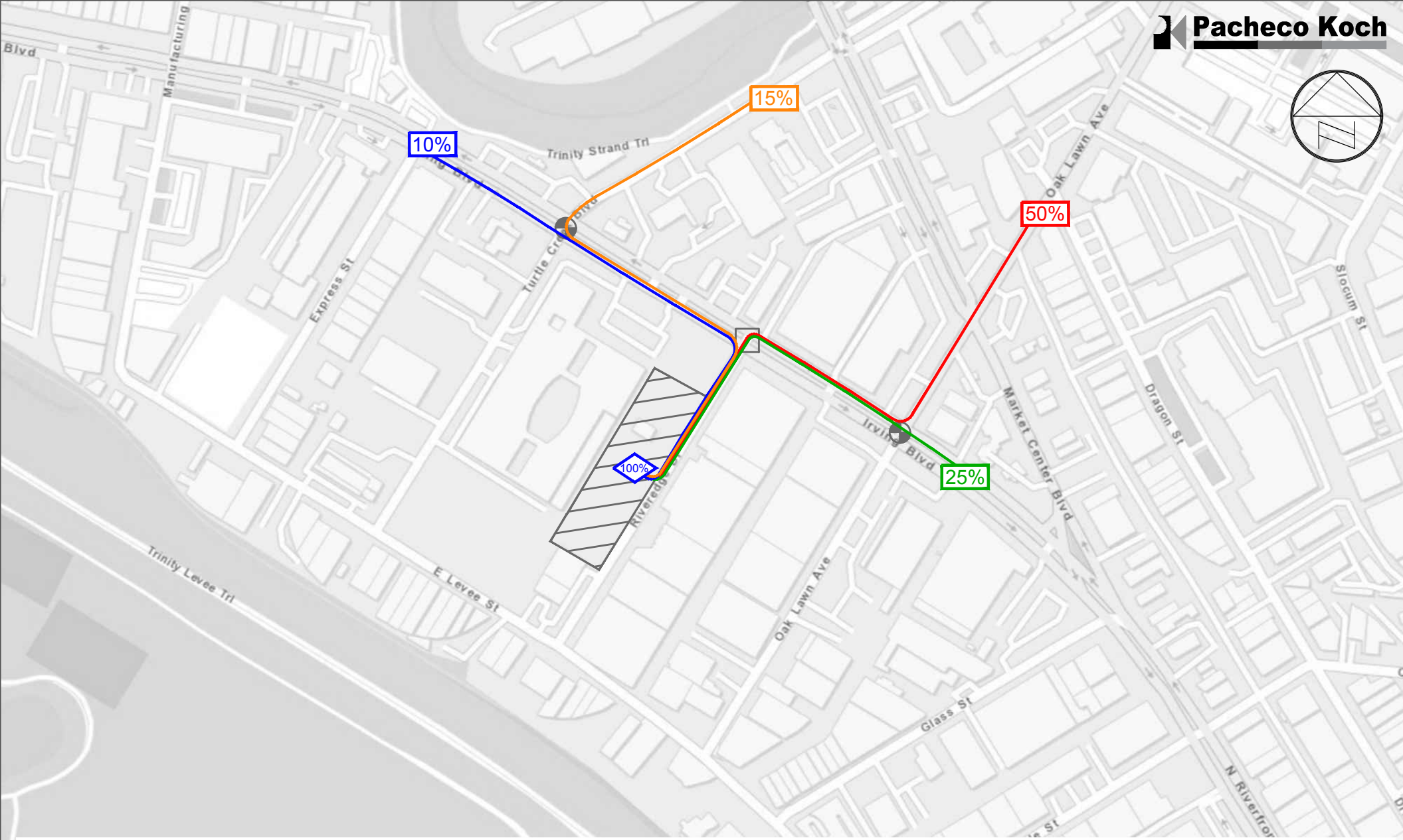


-  - Project Location
-  - Traffic Assignment
-  - Traffic Signal
-  - Study Area Intersection (Signalized)
-  - Study Area Intersection (Unsignalized)

Site Generated Trip Distribution - Outbound

1715 Market Center, Dallas, Texas

PK #5431-22.460 (SMN: 08/04/22)

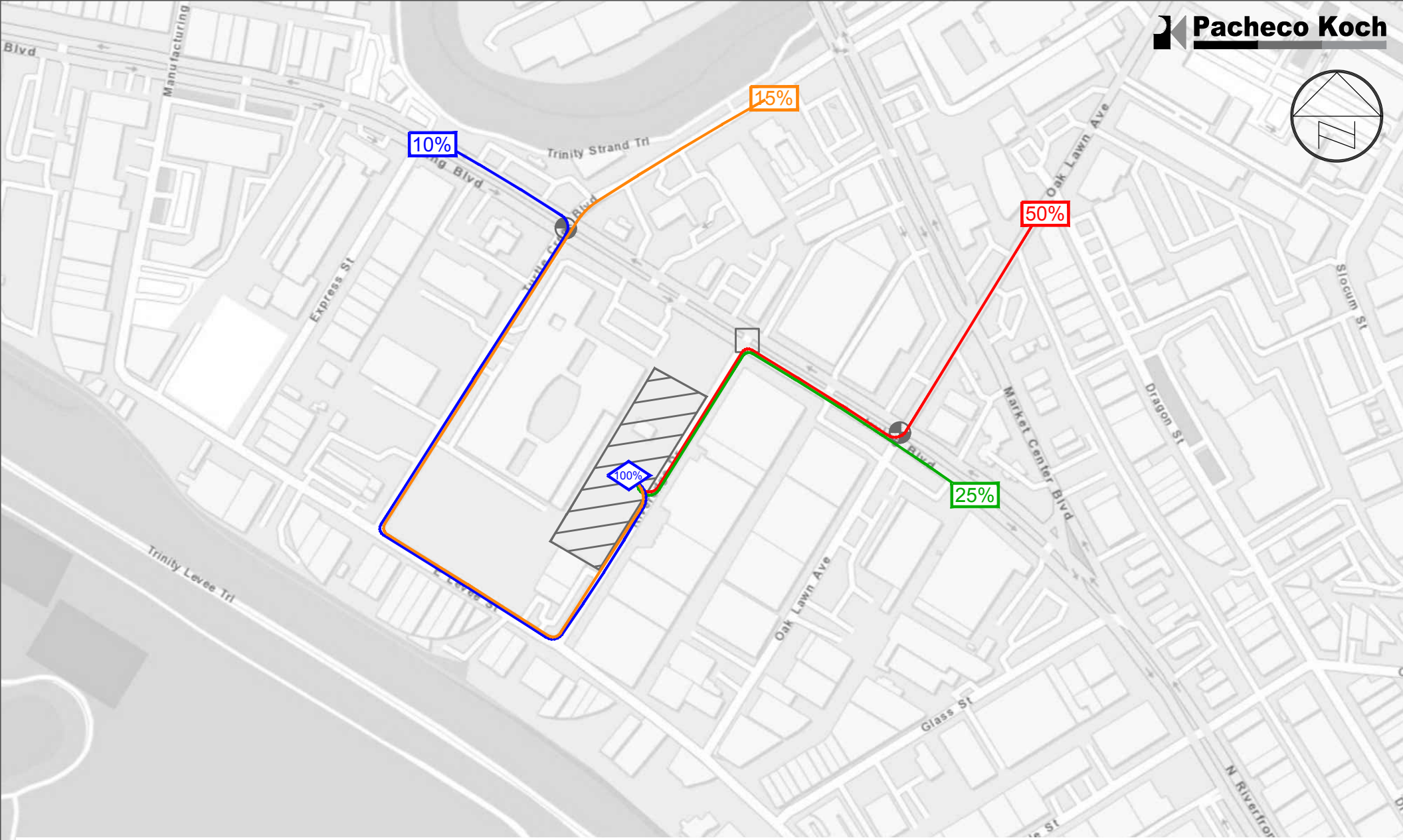


- Project Location
- Traffic Assignment

Site Generated Trip Distribution - Inbound

161 Riveredge Drive, Dallas, Texas

PK 5182-21.693 (SMN: 09/14/22)



- Project Location
- Traffic Assignment

Site Generated Trip Distribution - Outbound

161 Riveredge Drive, Dallas, Texas

PK 5182-21.693 (SMN: 09/14/22)

APPENDIX D. Detailed Intersection Capacity Analysis Results

1: Oak Lawn Avenue & Irving Boulevard
5431-22.460

Existing
Timing Plan: AM

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↔ | ↕↕ | ↔ | ↔ | ↕↕ | ↔ | ↔ | ↕ | ↔ | ↔ | ↕ | ↔ |
| Traffic Volume (vph) | 135 | 255 | 13 | 22 | 615 | 3 | 9 | 28 | 3 | 13 | 47 | 155 |
| Future Volume (vph) | 135 | 255 | 13 | 22 | 615 | 3 | 9 | 28 | 3 | 13 | 47 | 155 |
| Peak Hour Factor | 0.78 | 0.94 | 0.81 | 0.79 | 0.92 | 0.50 | 0.56 | 0.88 | 0.75 | 0.54 | 0.73 | 0.88 |
| Adj. Flow (vph) | 173 | 271 | 16 | 28 | 668 | 6 | 16 | 32 | 4 | 24 | 64 | 176 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 173 | 287 | 0 | 28 | 674 | 0 | 16 | 36 | 0 | 24 | 64 | 176 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | NA | Perm | NA | Perm | NA | Perm | Perm |
| Protected Phases | 7 | 4 | 3 | 8 | | | 2 | 2 | | 6 | 6 | |
| Permitted Phases | 4 | | 8 | | | | 2 | | | 6 | | 6 |
| Detector Phase | 7 | 4 | 3 | 8 | | | 2 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 9.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Total Split (s) | 13.0 | 84.0 | 13.0 | 84.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 |
| Total Split (%) | 11.3% | 73.0% | 11.3% | 73.0% | 15.7% | 15.7% | 15.7% | 15.7% | 15.7% | 15.7% | 15.7% | 15.7% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | | | | | | | | |
| Recall Mode | None | None | None | None | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s) | 33.6 | 28.5 | 29.8 | 22.8 | 70.2 | 70.2 | 70.2 | 70.2 | 70.2 | 70.2 | 70.2 | 70.2 |
| Actuated g/C Ratio | 0.29 | 0.25 | 0.26 | 0.20 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 |
| v/c Ratio | 0.82 | 0.23 | 0.09 | 0.67 | 0.02 | 0.03 | 0.03 | 0.06 | 0.17 | | | |
| Control Delay | 60.7 | 33.3 | 26.5 | 45.3 | 10.6 | 9.5 | 10.5 | 10.4 | 2.1 | | | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 60.7 | 33.3 | 26.5 | 45.3 | 10.6 | 9.5 | 10.5 | 10.4 | 2.1 | | | |
| LOS | E | C | C | D | B | A | B | B | A | | | |
| Approach Delay | | 43.6 | | 44.6 | | 9.9 | | 4.9 | | | | |
| Approach LOS | | D | | D | | A | | A | | | | |
| Queue Length 50th (ft) | 98 | 61 | 15 | 170 | 4 | 9 | 7 | 18 | 0 | | | |
| Queue Length 95th (ft) | #126 | 84 | 29 | 198 | 10 | 25 | 12 | 33 | 28 | | | |
| Internal Link Dist (ft) | | 192 | | 382 | | 653 | | 332 | | | | |
| Turn Bay Length (ft) | 84 | | 85 | | | | 60 | | 140 | | | |
| Base Capacity (vph) | 211 | 3492 | 341 | 3512 | 812 | 1118 | 833 | 1136 | 1034 | | | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.82 | 0.08 | 0.08 | 0.19 | 0.02 | 0.03 | 0.03 | 0.06 | 0.17 | | | |

Intersection Summary

Cycle Length: 115
 Actuated Cycle Length: 115
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.82

1: Oak Lawn Avenue & Irving Boulevard
5431-22.460

Existing
Timing Plan: AM

Intersection Signal Delay: 36.0
 Intersection LOS: D
 Intersection Capacity Utilization 38.1%
 ICU Level of Service A
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Oak Lawn Avenue & Irving Boulevard



2: Oak Lawn Avenue & Market Center Boulevard
5431-22.460

Existing
Timing Plan: AM



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|
| Lane Configurations | ↔ | ↕ | ↔ | ↔ | ↕ | ↕ | ↔ | ↕ | ↔ | ↔ | ↕ | ↔ |
| Traffic Volume (vph) | 69 | 124 | 25 | 15 | 508 | 189 | 4 | 160 | 6 | 66 | 179 | 35 |
| Future Volume (vph) | 69 | 124 | 25 | 15 | 508 | 189 | 4 | 160 | 6 | 66 | 179 | 35 |
| Confl. Peds. (#/hr) | 130 | | | | | | | | | | | |
| Peak Hour Factor | 0.78 | 0.82 | 0.69 | 0.54 | 0.93 | 0.86 | 0.50 | 0.87 | 0.50 | 0.83 | 0.90 | 0.73 |
| Adj. Flow (vph) | 88 | 151 | 36 | 28 | 546 | 220 | 8 | 184 | 12 | 80 | 199 | 48 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 88 | 187 | 0 | 28 | 766 | 0 | 8 | 196 | 0 | 80 | 247 | 0 |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | |
| Protected Phases | 1 | 6 | | 5 | 2 | | 7 | 4 | | 3 | 8 | |
| Permitted Phases | 6 | | | 2 | | | 4 | | | 8 | | |
| Detector Phase | 1 | 6 | | 5 | 2 | | 7 | 4 | | 3 | 8 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Minimum Split (s) | 9.5 | 22.5 | | 9.5 | 22.5 | | 9.5 | 22.5 | | 9.5 | 22.5 | |
| Total Split (s) | 21.0 | 63.0 | | 21.0 | 63.0 | | 10.0 | 23.0 | | 10.0 | 23.0 | |
| Total Split (%) | 17.9% | 53.8% | | 17.9% | 53.8% | | 8.5% | 19.7% | | 8.5% | 19.7% | |
| Yellow Time (s) | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Recall Mode | None | C-Max | | None | C-Max | | None | None | | None | None | |
| Act Effect Green (s) | 86.0 | 81.3 | | 83.0 | 78.1 | | 16.6 | 12.2 | | 19.3 | 18.2 | |
| Actuated g/C Ratio | 0.74 | 0.69 | | 0.71 | 0.67 | | 0.14 | 0.10 | | 0.16 | 0.16 | |
| v/c Ratio | 0.18 | 0.05 | | 0.03 | 0.23 | | 0.04 | 0.53 | | 0.44 | 0.45 | |
| Control Delay | 5.6 | 6.1 | | 5.1 | 7.6 | | 37.2 | 53.1 | | 48.0 | 43.1 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 5.6 | 6.1 | | 5.1 | 7.6 | | 37.2 | 53.1 | | 48.0 | 43.1 | |
| LOS | A | A | | A | A | | D | D | | D | D | |
| Approach Delay | 5.9 | | | 7.5 | | | 52.5 | | | 44.3 | | |
| Approach LOS | A | | | A | | | D | | | D | | |
| Queue Length 50th (ft) | 16 | 13 | | 5 | 68 | | 5 | 73 | | 52 | 78 | |
| Queue Length 95th (ft) | 30 | 24 | | 9 | 105 | | 10 | 103 | | 85 | 126 | |
| Internal Link Dist (ft) | 164 | | | 443 | | | 332 | | | 494 | | |
| Turn Bay Length (ft) | 130 | | | 80 | | | 70 | | | 109 | | |
| Base Capacity (vph) | 591 | 3441 | | 963 | 3291 | | 189 | 558 | | 183 | 617 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.15 | 0.05 | | 0.03 | 0.23 | | 0.04 | 0.35 | | 0.44 | 0.40 | |

Intersection Summary

Cycle Length: 117
 Actuated Cycle Length: 117
 Offset: 21 (18%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated

2: Oak Lawn Avenue & Market Center Boulevard
5431-22.460

Existing
Timing Plan: AM

Maximum v/c Ratio: 0.53

Intersection Signal Delay: 20.5

Intersection LOS: C

Intersection Capacity Utilization 43.4%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: Oak Lawn Avenue & Market Center Boulevard



3: Turtle Creek Boulevard & Market Center Boulevard
5431-22.460

Existing
Timing Plan: AM

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↔ | ↕↕↕ | ↔ | ↔ | ↕↕↕ | ↔ | ↔ | ↕↕↕ | ↔ | ↔ | ↕ | ↕ |
| Traffic Volume (vph) | 15 | 216 | 61 | 10 | 487 | 6 | 32 | 27 | 14 | 10 | 50 | 66 |
| Future Volume (vph) | 15 | 216 | 61 | 10 | 487 | 6 | 32 | 27 | 14 | 10 | 50 | 66 |
| Peak Hour Factor | 0.50 | 0.96 | 0.85 | 0.63 | 0.88 | 0.75 | 0.67 | 0.96 | 0.50 | 0.63 | 0.78 | 0.69 |
| Adj. Flow (vph) | 30 | 225 | 72 | 16 | 553 | 8 | 48 | 28 | 28 | 16 | 64 | 96 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 30 | 297 | 0 | 16 | 561 | 0 | 48 | 28 | 28 | 16 | 64 | 96 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | NA | Perm | Perm | Perm | NA | Perm | Perm |
| Protected Phases | 1 | 6 | 5 | 2 | 4 | 4 | 4 | 4 | 8 | 8 | 8 | 8 |
| Permitted Phases | 6 | | 2 | | 4 | | 4 | | 4 | 8 | | 8 |
| Detector Phase | 1 | 6 | 5 | 2 | 4 | 4 | 4 | 4 | 8 | 8 | 8 | 8 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Total Split (s) | 15.0 | 65.0 | 15.0 | 65.0 | 36.0 | 36.0 | 36.0 | 36.0 | 36.0 | 36.0 | 36.0 | 36.0 |
| Total Split (%) | 12.9% | 56.0% | 12.9% | 56.0% | 31.0% | 31.0% | 31.0% | 31.0% | 31.0% | 31.0% | 31.0% | 31.0% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | | | | | | | | |
| Recall Mode | None | C-Min | None | C-Min | None | None | None | None | None | None | None | None |
| Act Effct Green (s) | 95.6 | 93.1 | 94.4 | 90.9 | 9.7 | 9.7 | 9.7 | 9.7 | 9.7 | 9.7 | 9.7 | 9.7 |
| Actuated g/C Ratio | 0.82 | 0.80 | 0.81 | 0.78 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| v/c Ratio | 0.04 | 0.08 | 0.02 | 0.14 | 0.43 | 0.09 | 0.15 | 0.14 | 0.41 | 0.44 | | |
| Control Delay | 2.1 | 2.5 | 2.1 | 3.8 | 61.4 | 48.1 | 4.8 | 50.2 | 57.3 | 16.0 | | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Total Delay | 2.1 | 2.5 | 2.1 | 3.8 | 61.4 | 48.1 | 4.8 | 50.2 | 57.3 | 16.0 | | |
| LOS | A | A | A | A | E | D | A | D | E | B | | |
| Approach Delay | | 2.5 | | 3.7 | | 42.6 | | | 34.1 | | | |
| Approach LOS | | A | | A | | D | | | C | | | |
| Queue Length 50th (ft) | 3 | 7 | 1 | 36 | 35 | 10 | 0 | 11 | 46 | 0 | | |
| Queue Length 95th (ft) | 5 | 25 | 4 | 55 | 52 | 24 | 0 | 23 | 76 | 22 | | |
| Internal Link Dist (ft) | | 527 | | 443 | | 954 | | 100 | 135 | | 698 | |
| Turn Bay Length (ft) | 210 | | 113 | | 110 | | 100 | 135 | | | | |
| Base Capacity (vph) | 752 | 3949 | 944 | 3979 | 361 | 961 | 470 | 373 | 505 | 499 | | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Reduced v/c Ratio | 0.04 | 0.08 | 0.02 | 0.14 | 0.13 | 0.03 | 0.06 | 0.04 | 0.13 | 0.19 | | |

Intersection Summary

Cycle Length: 116
 Actuated Cycle Length: 116
 Offset: 15 (13%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.44

3: Turtle Creek Boulevard & Market Center Boulevard
5431-22.460

Existing
Timing Plan: AM

Intersection Signal Delay: 11.3
 Intersection LOS: B
 Intersection Capacity Utilization 29.1%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 3: Turtle Creek Boulevard & Market Center Boulevard



8: Turtle Creek Boulevard & Irving Boulevard
5431-22.460

Existing
Timing Plan: AM

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↔ | ↕↕ | ↔ | ↔ | ↕↕ | ↔ | ↔ | ↕ | ↕ | ↔ | ↕ | ↔ |
| Traffic Volume (vph) | 59 | 383 | 11 | 18 | 649 | 9 | 9 | 12 | 22 | 8 | 21 | 82 |
| Future Volume (vph) | 59 | 383 | 11 | 18 | 649 | 9 | 9 | 12 | 22 | 8 | 21 | 82 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 64 | 416 | 12 | 20 | 705 | 10 | 10 | 13 | 24 | 9 | 23 | 89 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 64 | 428 | 0 | 20 | 715 | 0 | 0 | 23 | 24 | 0 | 32 | 89 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | NA | Perm | Perm | Perm | NA | Perm | Perm |
| Protected Phases | 5 | 2 | 1 | 6 | | | | 8 | | 4 | | |
| Permitted Phases | 2 | | 6 | | 8 | | 8 | 8 | 4 | 4 | | 4 |
| Detector Phase | 5 | 2 | 1 | 6 | | | 8 | 8 | 4 | 4 | | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 9.5 | 22.5 | | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Total Split (s) | 22.0 | 64.0 | 16.0 | 58.0 | | 37.0 | 37.0 | 37.0 | 37.0 | 37.0 | 37.0 | 37.0 |
| Total Split (%) | 18.8% | 54.7% | 13.7% | 49.6% | | 31.6% | 31.6% | 31.6% | 31.6% | 31.6% | 31.6% | 31.6% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lead | Lag | Lag | | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | | | | | | | | |
| Recall Mode | None | C-Max | None | C-Max | | None | None | None | None | None | None | None |
| Act Effect Green (s) | 94.0 | 94.0 | 91.3 | 91.3 | | 7.6 | 7.6 | | 7.6 | 7.6 | | 7.6 |
| Actuated g/C Ratio | 0.80 | 0.80 | 0.78 | 0.78 | | 0.06 | 0.06 | | 0.06 | 0.06 | | 0.06 |
| v/c Ratio | 0.11 | 0.11 | 0.03 | 0.18 | | 0.22 | 0.12 | | 0.29 | 0.46 | | 0.46 |
| Control Delay | 4.3 | 3.4 | 4.0 | 3.8 | | 56.1 | 1.3 | | 58.2 | 16.2 | | 16.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 |
| Total Delay | 4.3 | 3.4 | 4.0 | 3.8 | | 56.1 | 1.3 | | 58.2 | 16.2 | | 16.2 |
| LOS | A | A | A | A | | E | A | | E | B | | B |
| Approach Delay | | 3.5 | | 3.8 | | 28.1 | | | 27.3 | | | |
| Approach LOS | | A | | A | | C | | | C | | | |
| Queue Length 50th (ft) | 5 | 12 | 3 | 44 | | 17 | 0 | | 23 | 0 | | 0 |
| Queue Length 95th (ft) | 27 | 45 | 10 | 67 | | 44 | 0 | | 56 | 44 | | 44 |
| Internal Link Dist (ft) | | 330 | | 590 | | 366 | | | 954 | | | |
| Turn Bay Length (ft) | 133 | | 75 | | | | | | | | | |
| Base Capacity (vph) | 689 | 4068 | 800 | 3962 | | 441 | 510 | | 468 | 510 | | 510 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Reduced v/c Ratio | 0.09 | 0.11 | 0.03 | 0.18 | | 0.05 | 0.05 | | 0.07 | 0.17 | | 0.17 |

Intersection Summary

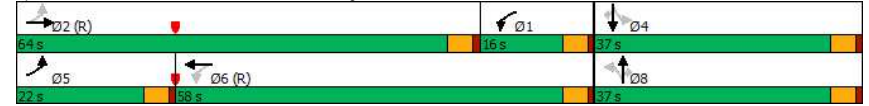
Cycle Length: 117
 Actuated Cycle Length: 117
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.46

8: Turtle Creek Boulevard & Irving Boulevard
5431-22.460

Existing
Timing Plan: AM

Intersection Signal Delay: 6.6
 Intersection Capacity Utilization 36.3%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 8: Turtle Creek Boulevard & Irving Boulevard



| Intersection | | | | | | | | | | | | |
|--------------------------|-------|------|------|-------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.7 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↵ ↑↑↑ | | | ↵ ↑↑↑ | | | ↕ | | | ↕ | | |
| Traffic Vol, veh/h | 1 | 395 | 3 | 27 | 710 | 1 | 2 | 1 | 14 | 0 | 0 | 2 |
| Future Vol, veh/h | 1 | 395 | 3 | 27 | 710 | 1 | 2 | 1 | 14 | 0 | 0 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 43 | - | - | 60 | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 50 | 91 | 75 | 52 | 94 | 50 | 50 | 50 | 58 | 92 | 92 | 50 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 2 | 434 | 4 | 52 | 755 | 2 | 4 | 2 | 24 | 0 | 0 | 4 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|------|------|--------|------|------|
| Conflicting Flow All | 757 | 0 | 0 | 438 | 0 | 0 | 846 | 1301 | 219 | 1039 | 1302 | 379 |
| Stage 1 | - | - | - | - | - | - | 440 | 440 | - | 860 | 860 | - |
| Stage 2 | - | - | - | - | - | - | 406 | 861 | - | 179 | 442 | - |
| Critical Hdwy | 5.34 | - | - | 5.34 | - | - | 6.44 | 6.54 | 7.14 | 6.44 | 6.54 | 7.14 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 7.34 | 5.54 | - | 7.34 | 5.54 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.74 | 5.54 | - | 6.74 | 5.54 | - |
| Follow-up Hdwy | 3.12 | - | - | 3.12 | - | - | 3.82 | 4.02 | 3.92 | 3.82 | 4.02 | 3.92 |
| Pot Cap-1 Maneuver | *946 | - | - | 967 | - | - | *314 | 160 | *845 | *242 | 160 | *753 |
| Stage 1 | - | - | - | - | - | - | *755 | 753 | - | *700 | 690 | - |
| Stage 2 | - | - | - | - | - | - | *772 | 689 | - | *867 | 752 | - |
| Platoon blocked, % | 1 | - | - | 1 | - | - | - | - | 1 | - | - | 1 |
| Mov Cap-1 Maneuver | *946 | - | - | 967 | - | - | *299 | 151 | *845 | *223 | 151 | *753 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | *299 | 151 | - | *223 | 151 | - |
| Stage 1 | - | - | - | - | - | - | *754 | 752 | - | *699 | 652 | - |
| Stage 2 | - | - | - | - | - | - | *727 | 652 | - | *838 | 750 | - |

| Approach | EB | WB | NB | SB |
|----------------------|----|-----|----|-----|
| HCM Control Delay, s | 0 | 0.6 | 12 | 9.8 |
| HCM LOS | | | B | A |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 546 | * 946 | - | - | 967 | - | - | 753 |
| HCM Lane V/C Ratio | 0.055 | 0.002 | - | - | 0.054 | - | - | 0.005 |
| HCM Control Delay (s) | 12 | 8.8 | - | - | 8.9 | - | - | 9.8 |
| HCM Lane LOS | B | A | - | - | A | - | - | A |
| HCM 95th %tile Q(veh) | 0.2 | 0 | - | - | 0.2 | - | - | 0 |

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

1: Oak Lawn Avenue & Irving Boulevard
5431-22.460

Existing
Timing Plan: PM

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↔ | ↕ | ↔ | ↔ | ↕ | ↔ | ↔ | ↕ | ↔ | ↔ | ↕ | ↔ |
| Traffic Volume (vph) | 137 | 1088 | 8 | 8 | 314 | 11 | 14 | 76 | 20 | 66 | 28 | 199 |
| Future Volume (vph) | 137 | 1088 | 8 | 8 | 314 | 11 | 14 | 76 | 20 | 66 | 28 | 199 |
| Peak Hour Factor | 0.73 | 0.88 | 0.67 | 0.50 | 0.89 | 0.69 | 0.70 | 0.58 | 0.56 | 0.87 | 0.64 | 0.78 |
| Adj. Flow (vph) | 188 | 1236 | 12 | 16 | 353 | 16 | 20 | 131 | 36 | 76 | 44 | 255 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 188 | 1248 | 0 | 16 | 369 | 0 | 20 | 167 | 0 | 76 | 44 | 255 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | NA | Perm | NA | Perm | NA | Perm | Perm |
| Protected Phases | 7 | 4 | 3 | 8 | 2 | 2 | | | | | | |
| Permitted Phases | 4 | | 8 | | 2 | | 6 | | 6 | | 6 | |
| Detector Phase | 7 | 4 | 3 | 8 | 2 | 2 | 6 | 6 | 6 | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 9.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Total Split (s) | 10.0 | 40.0 | 10.0 | 40.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 |
| Total Split (%) | 14.3% | 57.1% | 14.3% | 57.1% | 28.6% | 28.6% | 28.6% | 28.6% | 28.6% | 28.6% | 28.6% | 28.6% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | | | | | | | | |
| Recall Mode | None | None | None | None | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s) | 28.6 | 27.5 | 25.0 | 19.5 | 31.5 | 31.5 | 31.5 | 31.5 | 31.5 | 31.5 | 31.5 | 31.5 |
| Actuated g/C Ratio | 0.41 | 0.39 | 0.36 | 0.28 | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 |
| v/c Ratio | 0.46 | 0.62 | 0.07 | 0.26 | 0.03 | 0.20 | 0.14 | 0.05 | 0.30 | | | |
| Control Delay | 15.4 | 18.1 | 9.1 | 18.0 | 16.0 | 14.2 | 6.9 | 5.9 | 3.0 | | | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 15.4 | 18.1 | 9.1 | 18.0 | 16.0 | 14.2 | 6.9 | 5.9 | 3.0 | | | |
| LOS | B | B | A | B | B | B | A | A | A | A | A | A |
| Approach Delay | | 17.7 | | 17.6 | | 14.4 | | 4.1 | | | | |
| Approach LOS | | B | | B | | B | | A | | | | |
| Queue Length 50th (ft) | 53 | 153 | 4 | 45 | 4 | 34 | 4 | 2 | 2 | | | |
| Queue Length 95th (ft) | 41 | 156 | 5 | 43 | 17 | 60 | m49 | 12 | 117 | | | |
| Internal Link Dist (ft) | | 192 | | 382 | | 653 | | 332 | | | | |
| Turn Bay Length (ft) | 84 | | 85 | | | | 60 | | 140 | | | |
| Base Capacity (vph) | 409 | 2577 | 228 | 2567 | 610 | 821 | 545 | 838 | 852 | | | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.46 | 0.48 | 0.07 | 0.14 | 0.03 | 0.20 | 0.14 | 0.05 | 0.30 | | | |

Intersection Summary

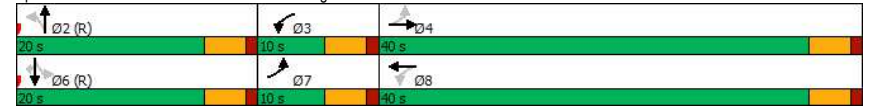
Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.62

1: Oak Lawn Avenue & Irving Boulevard
5431-22.460

Existing
Timing Plan: PM

Intersection Signal Delay: 15.3
 Intersection LOS: B
 Intersection Capacity Utilization 46.9%
 ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Oak Lawn Avenue & Irving Boulevard



2: Oak Lawn Avenue & Market Center Boulevard
5431-22.460

Existing
Timing Plan: PM

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|
| Lane Configurations | ↔ | ↔↔ | ↔ | ↔ | ↔↔ | ↔ | ↔ | ↔↔ | ↔ | ↔ | ↔↔ | ↔ |
| Traffic Volume (vph) | 71 | 281 | 17 | 18 | 257 | 130 | 35 | 177 | 8 | 183 | 259 | 56 |
| Future Volume (vph) | 71 | 281 | 17 | 18 | 257 | 130 | 35 | 177 | 8 | 183 | 259 | 56 |
| Confl. Peds. (#/hr) | 130 | | | | | | | | | | | |
| Peak Hour Factor | 0.85 | 0.88 | 0.61 | 0.56 | 0.87 | 0.86 | 0.73 | 0.79 | 0.67 | 0.85 | 0.83 | 0.74 |
| Adj. Flow (vph) | 84 | 319 | 28 | 32 | 295 | 151 | 48 | 224 | 12 | 215 | 312 | 76 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 84 | 347 | 0 | 32 | 446 | 0 | 48 | 236 | 0 | 215 | 388 | 0 |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | |
| Protected Phases | 1 | 6 | | 5 | 2 | | 7 | 4 | | 3 | 8 | |
| Permitted Phases | 6 | | | 2 | | | 4 | | | 8 | | |
| Detector Phase | 1 | 6 | | 5 | 2 | | 7 | 4 | | 3 | 8 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Minimum Split (s) | 9.5 | 22.5 | | 9.5 | 22.5 | | 9.5 | 22.5 | | 9.5 | 22.5 | |
| Total Split (s) | 15.0 | 27.0 | | 15.0 | 27.0 | | 10.0 | 18.0 | | 10.0 | 18.0 | |
| Total Split (%) | 21.4% | 38.6% | | 21.4% | 38.6% | | 14.3% | 25.7% | | 14.3% | 25.7% | |
| Yellow Time (s) | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Recall Mode | None | C-Max | | None | C-Max | | None | None | | None | None | |
| Act Effect Green (s) | 38.8 | 35.4 | | 35.4 | 30.4 | | 16.5 | 11.0 | | 18.3 | 15.0 | |
| Actuated g/C Ratio | 0.55 | 0.51 | | 0.51 | 0.43 | | 0.24 | 0.16 | | 0.26 | 0.21 | |
| v/c Ratio | 0.16 | 0.14 | | 0.06 | 0.20 | | 0.17 | 0.42 | | 0.68 | 0.51 | |
| Control Delay | 4.5 | 5.7 | | 8.1 | 9.7 | | 16.9 | 25.4 | | 33.1 | 25.0 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 4.5 | 5.7 | | 8.1 | 9.7 | | 16.9 | 25.4 | | 33.1 | 25.0 | |
| LOS | A | A | | A | A | | B | C | | C | C | |
| Approach Delay | 5.4 | | | 9.5 | | | 24.0 | | | 27.9 | | |
| Approach LOS | A | | | A | | | C | | | C | | |
| Queue Length 50th (ft) | 7 | 9 | | 6 | 29 | | 14 | 43 | | 71 | 73 | |
| Queue Length 95th (ft) | 11 | 15 | | 10 | 50 | | 32 | 72 | | #117 | 102 | |
| Internal Link Dist (ft) | 164 | | | 443 | | | 332 | | | 494 | | |
| Turn Bay Length (ft) | 130 | | | 80 | | | 70 | | | 109 | | |
| Base Capacity (vph) | 575 | 2553 | | 668 | 2179 | | 288 | 682 | | 315 | 779 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.15 | 0.14 | | 0.05 | 0.20 | | 0.17 | 0.35 | | 0.68 | 0.50 | |

Intersection Summary

Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 15 (21%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated

2: Oak Lawn Avenue & Market Center Boulevard
5431-22.460

Existing
Timing Plan: PM

Maximum v/c Ratio: 0.68
 Intersection Signal Delay: 17.0
 Intersection LOS: B
 Intersection Capacity Utilization 42.3%
 ICU Level of Service A
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Oak Lawn Avenue & Market Center Boulevard



3: Turtle Creek Boulevard & Market Center Boulevard
5431-22.460

Existing
Timing Plan: PM

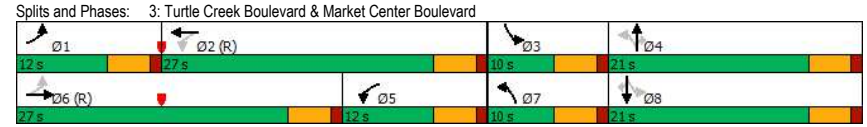
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↔ | ↕↕↕ | ↔ | ↔ | ↕↕↕ | ↔ | ↔ | ↕↕↕ | ↔ | ↔ | ↕ | ↕ |
| Traffic Volume (vph) | 31 | 299 | 53 | 21 | 312 | 13 | 89 | 63 | 21 | 10 | 39 | 68 |
| Future Volume (vph) | 31 | 299 | 53 | 21 | 312 | 13 | 89 | 63 | 21 | 10 | 39 | 68 |
| Peak Hour Factor | 0.78 | 0.89 | 0.70 | 0.75 | 0.89 | 0.50 | 0.79 | 0.88 | 0.75 | 0.63 | 0.75 | 0.81 |
| Adj. Flow (vph) | 40 | 336 | 76 | 28 | 351 | 26 | 113 | 72 | 28 | 16 | 52 | 84 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 40 | 412 | 0 | 28 | 377 | 0 | 113 | 72 | 28 | 16 | 52 | 84 |
| Turn Type | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm | NA | Perm |
| Protected Phases | 1 | 6 | 5 | 2 | 7 | 4 | 7 | 4 | 4 | 3 | 8 | 8 |
| Permitted Phases | 6 | | 2 | | 4 | | 4 | | 4 | 8 | | 8 |
| Detector Phase | 1 | 6 | 5 | 2 | 7 | 4 | 7 | 4 | 4 | 3 | 8 | 8 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 |
| Total Split (s) | 12.0 | 27.0 | 12.0 | 27.0 | 10.0 | 21.0 | 10.0 | 21.0 | 10.0 | 21.0 | 10.0 | 21.0 |
| Total Split (%) | 17.1% | 38.6% | 17.1% | 38.6% | 14.3% | 30.0% | 14.3% | 30.0% | 14.3% | 30.0% | 14.3% | 30.0% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Min | None | C-Min | None | None | None | None | None | None | None | None |
| Act Effct Green (s) | 38.8 | 39.7 | 37.5 | 37.5 | 19.5 | 17.1 | 17.1 | 12.4 | 7.4 | 7.4 | | |
| Actuated g/C Ratio | 0.55 | 0.57 | 0.54 | 0.54 | 0.28 | 0.24 | 0.24 | 0.18 | 0.11 | 0.11 | | |
| v/c Ratio | 0.07 | 0.15 | 0.05 | 0.14 | 0.31 | 0.08 | 0.05 | 0.06 | 0.26 | 0.22 | | |
| Control Delay | 14.0 | 9.8 | 21.0 | 16.4 | 19.1 | 19.2 | 0.2 | 15.9 | 31.5 | 1.4 | | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Total Delay | 14.0 | 9.8 | 21.0 | 16.4 | 19.1 | 19.2 | 0.2 | 15.9 | 31.5 | 1.4 | | |
| LOS | B | A | C | B | B | B | A | B | C | A | | |
| Approach Delay | | 10.2 | | 16.8 | | 16.7 | | 13.2 | | | | |
| Approach LOS | | B | | B | | B | | B | | | | |
| Queue Length 50th (ft) | 7 | 22 | 8 | 38 | 36 | 11 | 0 | 5 | 21 | 0 | | |
| Queue Length 95th (ft) | 27 | 58 | m24 | 72 | 55 | 28 | 0 | 11 | 41 | 0 | | |
| Internal Link Dist (ft) | | 527 | | 443 | | 956 | | 698 | | | | |
| Turn Bay Length (ft) | 210 | | 113 | | 110 | | 100 | 135 | | | | |
| Base Capacity (vph) | 553 | 2839 | 578 | 2716 | 369 | 990 | 611 | 271 | 439 | 551 | | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Reduced v/c Ratio | 0.07 | 0.15 | 0.05 | 0.14 | 0.31 | 0.07 | 0.05 | 0.06 | 0.12 | 0.15 | | |

Intersection Summary
 Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 12 (17%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.31

3: Turtle Creek Boulevard & Market Center Boulevard
5431-22.460

Existing
Timing Plan: PM

Intersection Signal Delay: 13.9 Intersection LOS: B
 Intersection Capacity Utilization 34.0% ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.



8: Turtle Creek Boulevard & Irving Boulevard
5431-22.460

Existing
Timing Plan: PM

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↔ | ↕↕ | ↔ | ↔ | ↕↕ | ↔ | ↔ | ↕ | ↕ | ↔ | ↕ | ↔ |
| Traffic Volume (vph) | 96 | 1140 | 34 | 43 | 470 | 20 | 19 | 29 | 50 | 10 | 25 | 73 |
| Future Volume (vph) | 96 | 1140 | 34 | 43 | 470 | 20 | 19 | 29 | 50 | 10 | 25 | 73 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 104 | 1239 | 37 | 47 | 511 | 22 | 21 | 32 | 54 | 11 | 27 | 79 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 104 | 1276 | 0 | 47 | 533 | 0 | 0 | 53 | 54 | 0 | 38 | 79 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | NA | Perm | Perm | Perm | NA | Perm | Perm |
| Protected Phases | 5 | 2 | 1 | 6 | 8 | 8 | 8 | 8 | 4 | 4 | 4 | 4 |
| Permitted Phases | 2 | | 6 | | 8 | | 8 | | 8 | 4 | | 4 |
| Detector Phase | 5 | 2 | 1 | 6 | 8 | 8 | 8 | 8 | 4 | 4 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Total Split (s) | 22.0 | 87.0 | 16.0 | 81.0 | 41.0 | 41.0 | 41.0 | 41.0 | 41.0 | 41.0 | 41.0 | 41.0 |
| Total Split (%) | 15.3% | 60.4% | 11.1% | 56.3% | 28.5% | 28.5% | 28.5% | 28.5% | 28.5% | 28.5% | 28.5% | 28.5% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lead | Lag | Lag | Yes | Yes | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | C-Max | None | C-Max | Max | Max | Max | Max | Max | Max | Max | Max |
| Act Effct Green (s) | 85.7 | 85.7 | 84.7 | 84.7 | 36.5 | 36.5 | 36.5 | 36.5 | 36.5 | 36.5 | 36.5 | 36.5 |
| Actuated g/C Ratio | 0.60 | 0.60 | 0.59 | 0.59 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 |
| v/c Ratio | 0.20 | 0.42 | 0.15 | 0.18 | 0.12 | 0.12 | 0.09 | 0.17 | | | | |
| Control Delay | 14.6 | 16.8 | 16.6 | 13.8 | 42.5 | 3.7 | 41.8 | 9.0 | | | | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 14.6 | 16.8 | 16.6 | 13.8 | 42.5 | 3.7 | 41.8 | 9.0 | | | | |
| LOS | B | B | B | B | D | A | D | A | | | | |
| Approach Delay | | 16.6 | | 14.0 | 22.9 | | 19.7 | | | | | |
| Approach LOS | | B | | B | C | | B | | | | | |
| Queue Length 50th (ft) | 43 | 239 | 18 | 79 | 39 | 0 | 27 | 0 | | | | |
| Queue Length 95th (ft) | 72 | 275 | 38 | 105 | 77 | 16 | 59 | 42 | | | | |
| Internal Link Dist (ft) | | 339 | | 581 | 352 | | 956 | | | | | |
| Turn Bay Length (ft) | 133 | | 75 | | | | | | | | | |
| Base Capacity (vph) | 569 | 3016 | 330 | 2977 | 426 | 460 | 443 | 460 | | | | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.18 | 0.42 | 0.14 | 0.18 | 0.12 | 0.12 | 0.09 | 0.17 | | | | |

Intersection Summary

Cycle Length: 144
 Actuated Cycle Length: 144
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.42

8: Turtle Creek Boulevard & Irving Boulevard
5431-22.460

Existing
Timing Plan: PM

Intersection Signal Delay: 16.4
 Intersection LOS: B
 Intersection Capacity Utilization 47.4%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 8: Turtle Creek Boulevard & Irving Boulevard



Intersection

Int Delay, s/veh 0.7

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------------|-------|------|------|-------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↵ ↑↑↑ | | | ↵ ↑↑↑ | | | ↕ | | | ↕ | | |
| Traffic Vol, veh/h | 0 | 1232 | 16 | 22 | 499 | 0 | 6 | 0 | 23 | 2 | 0 | 1 |
| Future Vol, veh/h | 0 | 1232 | 16 | 22 | 499 | 0 | 6 | 0 | 23 | 2 | 0 | 1 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 43 | - | - | 60 | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 85 | 50 | 61 | 92 | 92 | 75 | 92 | 58 | 50 | 50 | 50 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 1449 | 32 | 36 | 542 | 0 | 8 | 0 | 40 | 4 | 0 | 2 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|------|------|--------|------|------|
| Conflicting Flow All | 542 | 0 | 0 | 1481 | 0 | 0 | 1754 | 2079 | 741 | 1194 | 2095 | 271 |
| Stage 1 | - | - | - | - | - | - | 1465 | 1465 | - | 614 | 614 | - |
| Stage 2 | - | - | - | - | - | - | 289 | 614 | - | 580 | 1481 | - |
| Critical Hdwy | 5.34 | - | - | 5.34 | - | - | 6.44 | 6.54 | 7.14 | 6.44 | 6.54 | 7.14 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 7.34 | 5.54 | - | 7.34 | 5.54 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.74 | 5.54 | - | 6.74 | 5.54 | - |
| Follow-up Hdwy | 3.12 | - | - | 3.12 | - | - | 3.82 | 4.02 | 3.92 | 3.82 | 4.02 | 3.92 |
| Pot Cap-1 Maneuver | 900 | - | - | 666 | - | - | *90 | 53 | *641 | *196 | 52 | *833 |
| Stage 1 | - | - | - | - | - | - | *518 | 535 | - | *610 | 652 | - |
| Stage 2 | - | - | - | - | - | - | *855 | 652 | - | *658 | 523 | - |
| Platoon blocked, % | 1 | - | - | 1 | - | - | - | - | 1 | - | - | 1 |
| Mov Cap-1 Maneuver | 900 | - | - | 666 | - | - | *86 | 50 | *641 | *176 | 49 | *833 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | *86 | 50 | - | *176 | 49 | - |
| Stage 1 | - | - | - | - | - | - | *518 | 535 | - | *610 | 617 | - |
| Stage 2 | - | - | - | - | - | - | *807 | 617 | - | *617 | 523 | - |

| Approach | EB | WB | NB | SB |
|----------------------|----|-----|------|------|
| HCM Control Delay, s | 0 | 0.7 | 18.8 | 20.5 |
| HCM LOS | | | C | C |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 308 | 900 | - | - | 666 | - | - | 239 |
| HCM Lane V/C Ratio | 0.155 | - | - | - | 0.054 | - | - | 0.025 |
| HCM Control Delay (s) | 18.8 | 0 | - | - | 10.7 | - | - | 20.5 |
| HCM Lane LOS | C | A | - | - | B | - | - | C |
| HCM 95th %tile Q(veh) | 0.5 | 0 | - | - | 0.2 | - | - | 0.1 |

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

1: Oak Lawn Avenue & Irving Boulevard
5431-22.460

No Build
Timing Plan: AM

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↔ | ↕↕↕ | ↔ | ↔ | ↕↕↕ | ↔ | ↔ | ↕ | ↔ | ↔ | ↕ | ↕ |
| Traffic Volume (vph) | 155 | 277 | 14 | 23 | 694 | 3 | 10 | 30 | 3 | 14 | 50 | 248 |
| Future Volume (vph) | 155 | 277 | 14 | 23 | 694 | 3 | 10 | 30 | 3 | 14 | 50 | 248 |
| Peak Hour Factor | 0.78 | 0.94 | 0.81 | 0.79 | 0.92 | 0.50 | 0.56 | 0.88 | 0.75 | 0.54 | 0.73 | 0.88 |
| Adj. Flow (vph) | 199 | 295 | 17 | 29 | 754 | 6 | 18 | 34 | 4 | 26 | 68 | 282 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 199 | 312 | 0 | 29 | 760 | 0 | 18 | 38 | 0 | 26 | 68 | 282 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | NA | Perm | NA | Perm | NA | Perm | Perm |
| Protected Phases | 7 | 4 | 3 | 8 | | | 2 | 2 | | 6 | 6 | |
| Permitted Phases | 4 | | 8 | | | | 2 | | | 6 | | 6 |
| Detector Phase | 7 | 4 | 3 | 8 | | | 2 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 9.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Total Split (s) | 13.0 | 84.0 | 13.0 | 84.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 |
| Total Split (%) | 11.3% | 73.0% | 11.3% | 73.0% | 15.7% | 15.7% | 15.7% | 15.7% | 15.7% | 15.7% | 15.7% | 15.7% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | | | | | | | | |
| Recall Mode | None | None | None | None | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s) | 36.2 | 31.1 | 32.4 | 25.4 | 67.6 | 67.6 | 67.6 | 67.6 | 67.6 | 67.6 | 67.6 | 67.6 |
| Actuated g/C Ratio | 0.31 | 0.27 | 0.28 | 0.22 | 0.59 | 0.59 | 0.59 | 0.59 | 0.59 | 0.59 | 0.59 | 0.59 |
| v/c Ratio | 0.95 | 0.23 | 0.09 | 0.68 | 0.02 | 0.04 | 0.03 | 0.06 | 0.27 | | | |
| Control Delay | 82.8 | 31.6 | 24.7 | 43.7 | 11.7 | 10.6 | 11.7 | 11.6 | 2.2 | | | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | | | |
| Total Delay | 82.8 | 31.6 | 24.7 | 43.7 | 11.7 | 10.6 | 11.7 | 11.6 | 2.6 | | | |
| LOS | F | C | C | D | B | B | B | B | A | | | |
| Approach Delay | | 51.5 | | 43.0 | | 11.0 | | 4.9 | | | | |
| Approach LOS | | D | | D | | B | | A | | | | |
| Queue Length 50th (ft) | 110 | 65 | 14 | 189 | 5 | 10 | 8 | 20 | 0 | | | |
| Queue Length 95th (ft) | #153 | 87 | 29 | 218 | 11 | 28 | 13 | 37 | 37 | | | |
| Internal Link Dist (ft) | | 192 | | 382 | | 653 | | 332 | | | | |
| Turn Bay Length (ft) | 84 | | 85 | | | | 60 | 140 | | | | |
| Base Capacity (vph) | 210 | 3492 | 359 | 3512 | 780 | 1078 | 801 | 1094 | 1046 | | | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 394 | | | |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Reduced v/c Ratio | 0.95 | 0.09 | 0.08 | 0.22 | 0.02 | 0.04 | 0.03 | 0.06 | 0.43 | | | |

Intersection Summary
 Cycle Length: 115
 Actuated Cycle Length: 115
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.95

1: Oak Lawn Avenue & Irving Boulevard
5431-22.460

No Build
Timing Plan: AM

Intersection Signal Delay: 36.2 Intersection LOS: D
 Intersection Capacity Utilization 44.2% ICU Level of Service A
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Oak Lawn Avenue & Irving Boulevard



2: Oak Lawn Avenue & Market Center Boulevard
5431-22.460

No Build
Timing Plan: AM

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|
| Lane Configurations | ↔ | ↔↔ | ↔ | ↔ | ↔↔ | ↔ | ↔ | ↔↔ | ↔ | ↔ | ↔↔ | ↔ |
| Traffic Volume (vph) | 73 | 132 | 27 | 16 | 539 | 201 | 4 | 182 | 6 | 70 | 273 | 37 |
| Future Volume (vph) | 73 | 132 | 27 | 16 | 539 | 201 | 4 | 182 | 6 | 70 | 273 | 37 |
| Confl. Peds. (#/hr) | 130 | | | | | | | | | | | |
| Peak Hour Factor | 0.78 | 0.82 | 0.69 | 0.54 | 0.93 | 0.86 | 0.50 | 0.87 | 0.50 | 0.83 | 0.90 | 0.73 |
| Adj. Flow (vph) | 94 | 161 | 39 | 30 | 580 | 234 | 8 | 209 | 12 | 84 | 303 | 51 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 94 | 200 | 0 | 30 | 814 | 0 | 8 | 221 | 0 | 84 | 354 | 0 |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | |
| Protected Phases | 1 | 6 | | 5 | 2 | | 7 | 4 | | 3 | 8 | |
| Permitted Phases | 6 | | | 2 | | | 4 | | | 8 | | |
| Detector Phase | 1 | 6 | | 5 | 2 | | 7 | 4 | | 3 | 8 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Minimum Split (s) | 9.5 | 22.5 | | 9.5 | 22.5 | | 9.5 | 22.5 | | 9.5 | 22.5 | |
| Total Split (s) | 21.0 | 63.0 | | 21.0 | 63.0 | | 10.0 | 23.0 | | 10.0 | 23.0 | |
| Total Split (%) | 17.9% | 53.8% | | 17.9% | 53.8% | | 8.5% | 19.7% | | 8.5% | 19.7% | |
| Yellow Time (s) | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Recall Mode | None | C-Max | | None | C-Max | | None | None | | None | None | |
| Act Effect Green (s) | 84.7 | 79.8 | | 80.6 | 74.5 | | 18.1 | 13.7 | | 20.8 | 19.7 | |
| Actuated g/C Ratio | 0.72 | 0.68 | | 0.69 | 0.64 | | 0.15 | 0.12 | | 0.18 | 0.17 | |
| v/c Ratio | 0.21 | 0.06 | | 0.04 | 0.26 | | 0.05 | 0.54 | | 0.45 | 0.60 | |
| Control Delay | 6.2 | 6.4 | | 5.5 | 8.6 | | 36.2 | 52.3 | | 47.2 | 47.4 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 6.2 | 6.4 | | 5.5 | 8.6 | | 36.2 | 52.3 | | 47.2 | 47.4 | |
| LOS | A | A | | A | A | | D | D | | D | D | |
| Approach Delay | 6.4 | | | 8.5 | | | 51.8 | | | 47.4 | | |
| Approach LOS | A | | | A | | | D | | | D | | |
| Queue Length 50th (ft) | 18 | 15 | | 5 | 76 | | 5 | 83 | | 54 | 122 | |
| Queue Length 95th (ft) | 34 | 26 | | 10 | 118 | | 10 | 113 | | 86 | 179 | |
| Internal Link Dist (ft) | 164 | | | 443 | | | 332 | | | 494 | | |
| Turn Bay Length (ft) | 130 | | | 80 | | | 70 | | | 109 | | |
| Base Capacity (vph) | 561 | 3379 | | 940 | 3143 | | 168 | 558 | | 188 | 629 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.17 | 0.06 | | 0.03 | 0.26 | | 0.05 | 0.40 | | 0.45 | 0.56 | |

Intersection Summary

Cycle Length: 117
 Actuated Cycle Length: 117
 Offset: 21 (18%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated

2: Oak Lawn Avenue & Market Center Boulevard
5431-22.460

No Build
Timing Plan: AM

| | |
|---|------------------------|
| Maximum v/c Ratio: 0.60 | Intersection LOS: C |
| Intersection Signal Delay: 23.1 | ICU Level of Service A |
| Intersection Capacity Utilization 47.0% | |
| Analysis Period (min) 15 | |

Splits and Phases: 2: Oak Lawn Avenue & Market Center Boulevard



3: Turtle Creek Boulevard & Market Center Boulevard
5431-22.460

No Build
Timing Plan: AM

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↔ | ↕ | ↔ | ↔ | ↕ | ↔ | ↔ | ↕ | ↔ | ↔ | ↕ | ↔ |
| Traffic Volume (vph) | 16 | 229 | 90 | 11 | 517 | 6 | 38 | 29 | 15 | 11 | 53 | 70 |
| Future Volume (vph) | 16 | 229 | 90 | 11 | 517 | 6 | 38 | 29 | 15 | 11 | 53 | 70 |
| Peak Hour Factor | 0.50 | 0.96 | 0.85 | 0.63 | 0.88 | 0.75 | 0.67 | 0.96 | 0.50 | 0.63 | 0.78 | 0.69 |
| Adj. Flow (vph) | 32 | 239 | 106 | 17 | 588 | 8 | 57 | 30 | 30 | 17 | 68 | 101 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 32 | 345 | 0 | 17 | 596 | 0 | 57 | 30 | 30 | 17 | 68 | 101 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | NA | Perm | Perm | Perm | NA | Perm | Perm |
| Protected Phases | 1 | 6 | 5 | 2 | 4 | 4 | 4 | 4 | 8 | 8 | 8 | 8 |
| Permitted Phases | 6 | | 2 | | 4 | | 4 | | 4 | 8 | | 8 |
| Detector Phase | 1 | 6 | 5 | 2 | 4 | 4 | 4 | 4 | 8 | 8 | 8 | 8 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 9.5 | 22.5 | 36.0 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Total Split (s) | 15.0 | 65.0 | 15.0 | 65.0 | 36.0 | 36.0 | 36.0 | 36.0 | 36.0 | 36.0 | 36.0 | 36.0 |
| Total Split (%) | 12.9% | 56.0% | 12.9% | 56.0% | 31.0% | 31.0% | 31.0% | 31.0% | 31.0% | 31.0% | 31.0% | 31.0% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Min | None | C-Min | None | None | None | None | None | None | None | None |
| Act Effct Green (s) | 95.0 | 92.4 | 93.7 | 90.2 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 | 10.4 |
| Actuated g/C Ratio | 0.82 | 0.80 | 0.81 | 0.78 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| v/c Ratio | 0.05 | 0.09 | 0.02 | 0.15 | 0.48 | 0.09 | 0.16 | 0.14 | 0.41 | 0.43 | 0.43 | 0.43 |
| Control Delay | 2.3 | 2.5 | 2.3 | 4.1 | 62.7 | 47.2 | 5.3 | 49.3 | 56.2 | 15.1 | 15.1 | 15.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 2.3 | 2.5 | 2.3 | 4.1 | 62.7 | 47.2 | 5.3 | 49.3 | 56.2 | 15.1 | 15.1 | 15.1 |
| LOS | A | A | A | A | E | D | A | D | E | B | B | B |
| Approach Delay | | 2.5 | | 4.0 | | 44.0 | | 33.2 | | | | |
| Approach LOS | | A | | A | | D | | C | | | | |
| Queue Length 50th (ft) | 3 | 8 | 2 | 40 | 41 | 11 | 0 | 12 | 49 | 0 | 0 | 0 |
| Queue Length 95th (ft) | 5 | 28 | 4 | 61 | 59 | 25 | 0 | 24 | 79 | 22 | 22 | 22 |
| Internal Link Dist (ft) | | 527 | | 443 | | 954 | | 698 | | | | |
| Turn Bay Length (ft) | 210 | | 113 | | 110 | | 100 | 135 | | | | |
| Base Capacity (vph) | 727 | 3887 | 901 | 3948 | 360 | 961 | 470 | 372 | 505 | 503 | 503 | 503 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.04 | 0.09 | 0.02 | 0.15 | 0.16 | 0.03 | 0.06 | 0.05 | 0.13 | 0.20 | 0.20 | 0.20 |

Intersection Summary

Cycle Length: 116
 Actuated Cycle Length: 116
 Offset: 15 (13%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.48

3: Turtle Creek Boulevard & Market Center Boulevard
5431-22.460

No Build
Timing Plan: AM

Intersection Signal Delay: 11.4
 Intersection LOS: B
 Intersection Capacity Utilization 29.9%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 3: Turtle Creek Boulevard & Market Center Boulevard



8: Turtle Creek Boulevard & Irving Boulevard
5431-22.460

No Build
Timing Plan: AM

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↔ | ↔↔↔ | ↔ | ↔ | ↔↔↔ | ↔ | ↔ | ↔ | ↔ | ↔ | ↔ | ↔ |
| Traffic Volume (vph) | 63 | 423 | 12 | 19 | 689 | 10 | 12 | 16 | 23 | 34 | 22 | 87 |
| Future Volume (vph) | 63 | 423 | 12 | 19 | 689 | 10 | 12 | 16 | 23 | 34 | 22 | 87 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 68 | 460 | 13 | 21 | 749 | 11 | 13 | 17 | 25 | 37 | 24 | 95 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 68 | 473 | 0 | 21 | 760 | 0 | 0 | 30 | 25 | 0 | 61 | 95 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | NA | Perm | Perm | Perm | NA | Perm | Perm |
| Protected Phases | 5 | 2 | 1 | 6 | 8 | 8 | 8 | 8 | 8 | 4 | 4 | 4 |
| Permitted Phases | 2 | | 6 | | 8 | | 8 | | 8 | 4 | | 4 |
| Detector Phase | 5 | 2 | 1 | 6 | 8 | 8 | 8 | 8 | 8 | 4 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 9.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Total Split (s) | 22.0 | 64.0 | 16.0 | 58.0 | 37.0 | 37.0 | 37.0 | 37.0 | 37.0 | 37.0 | 37.0 | 37.0 |
| Total Split (%) | 18.8% | 54.7% | 13.7% | 49.6% | 31.6% | 31.6% | 31.6% | 31.6% | 31.6% | 31.6% | 31.6% | 31.6% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lead | Lag | Lag | Yes | Yes | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | | | | | | | | |
| Recall Mode | None | C-Max | None | C-Max | None | None | None | None | None | None | None | None |
| Act Effct Green (s) | 91.7 | 91.7 | 88.9 | 88.9 | 9.9 | 9.9 | 9.9 | 9.9 | 9.9 | 9.9 | 9.9 | 9.9 |
| Actuated g/C Ratio | 0.78 | 0.78 | 0.76 | 0.76 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| v/c Ratio | 0.12 | 0.12 | 0.03 | 0.20 | 0.22 | 0.11 | 0.49 | 0.43 | | | | |
| Control Delay | 5.2 | 4.1 | 5.1 | 4.7 | 52.4 | 1.0 | 63.2 | 15.0 | | | | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 5.2 | 4.1 | 5.1 | 4.7 | 52.4 | 1.0 | 63.2 | 15.0 | | | | |
| LOS | A | A | A | A | D | A | E | B | | | | |
| Approach Delay | | 4.3 | | 4.7 | 29.0 | | 33.8 | | | | | |
| Approach LOS | | A | | A | C | | C | | | | | |
| Queue Length 50th (ft) | 6 | 16 | 4 | 53 | 21 | 0 | 45 | 0 | | | | |
| Queue Length 95th (ft) | 32 | 57 | 12 | 84 | 51 | 0 | 87 | 48 | | | | |
| Internal Link Dist (ft) | | 330 | | 590 | | | 366 | | | | 954 | |
| Turn Bay Length (ft) | 133 | | 75 | | | | | | | | | |
| Base Capacity (vph) | 653 | 3970 | 753 | 3855 | 443 | 510 | 412 | 510 | | | | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.10 | 0.12 | 0.03 | 0.20 | 0.07 | 0.05 | 0.15 | 0.19 | | | | |

Intersection Summary

Cycle Length: 117
 Actuated Cycle Length: 117
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.49

8: Turtle Creek Boulevard & Irving Boulevard
5431-22.460

No Build
Timing Plan: AM

Intersection Signal Delay: 8.4
 Intersection Capacity Utilization 38.7%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 8: Turtle Creek Boulevard & Irving Boulevard



| Intersection | | | | | | | | | | | | |
|--------------------------|-------|------|------|-------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.4 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↵ ↑↑↑ | | | ↵ ↑↑↑ | | | ↕ | | | ↕ | | |
| Traffic Vol, veh/h | 1 | 419 | 45 | 154 | 753 | 1 | 2 | 1 | 33 | 0 | 0 | 2 |
| Future Vol, veh/h | 1 | 419 | 45 | 154 | 753 | 1 | 2 | 1 | 33 | 0 | 0 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 43 | - | - | 60 | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 50 | 91 | 75 | 52 | 94 | 50 | 50 | 50 | 58 | 92 | 92 | 50 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 2 | 460 | 60 | 296 | 801 | 2 | 4 | 2 | 57 | 0 | 0 | 4 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|------|------|--------|------|------|
| Conflicting Flow All | 803 | 0 | 0 | 520 | 0 | 0 | 1406 | 1889 | 260 | 1583 | 1918 | 402 |
| Stage 1 | - | - | - | - | - | - | 494 | 494 | - | 1394 | 1394 | - |
| Stage 2 | - | - | - | - | - | - | 912 | 1395 | - | 189 | 524 | - |
| Critical Hdwy | 5.34 | - | - | 5.34 | - | - | 6.44 | 6.54 | 7.14 | 6.44 | 6.54 | 7.14 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 7.34 | 5.54 | - | 7.34 | 5.54 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.74 | 5.54 | - | 6.74 | 5.54 | - |
| Follow-up Hdwy | 3.12 | - | - | 3.12 | - | - | 3.82 | 4.02 | 3.92 | 3.82 | 4.02 | 3.92 |
| Pot Cap-1 Maneuver | *946 | - | - | 969 | - | - | 147 | 70 | *822 | *115 | 67 | *753 |
| Stage 1 | - | - | - | - | - | - | 804 | 777 | - | *256 | 355 | - |
| Stage 2 | - | - | - | - | - | - | 650 | 355 | - | *844 | 752 | - |
| Platoon blocked, % | 1 | - | - | 1 | - | - | - | - | 1 | - | - | 1 |
| Mov Cap-1 Maneuver | *946 | - | - | 969 | - | - | 111 | 49 | *822 | *79 | 46 | *753 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 111 | 49 | - | *79 | 46 | - |
| Stage 1 | - | - | - | - | - | - | 803 | 776 | - | *256 | 246 | - |
| Stage 2 | - | - | - | - | - | - | 449 | 246 | - | *782 | 751 | - |

| Approach | EB | | | WB | | | NB | | | SB | | |
|----------------------|----|--|--|-----|--|--|------|--|--|-----|--|--|
| HCM Control Delay, s | 0 | | | 2.8 | | | 14.8 | | | 9.8 | | |
| HCM LOS | | | | | | | B | | | A | | |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 431 | * 946 | - | - | 969 | - | - | 753 |
| HCM Lane V/C Ratio | 0.146 | 0.002 | - | - | 0.306 | - | - | 0.005 |
| HCM Control Delay (s) | 14.8 | 8.8 | - | - | 10.3 | - | - | 9.8 |
| HCM Lane LOS | B | A | - | - | B | - | - | A |
| HCM 95th %tile Q(veh) | 0.5 | 0 | - | - | 1.3 | - | - | 0 |

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

1: Oak Lawn Avenue & Irving Boulevard
5431-22.460

No Build
Timing Plan: PM

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↔ | ↕ | ↔ | ↔ | ↕ | ↔ | ↔ | ↕ | ↔ | ↔ | ↕ | ↔ |
| Traffic Volume (vph) | 226 | 1195 | 8 | 8 | 347 | 12 | 15 | 81 | 21 | 70 | 30 | 240 |
| Future Volume (vph) | 226 | 1195 | 8 | 8 | 347 | 12 | 15 | 81 | 21 | 70 | 30 | 240 |
| Peak Hour Factor | 0.73 | 0.88 | 0.67 | 0.50 | 0.89 | 0.69 | 0.70 | 0.58 | 0.56 | 0.87 | 0.64 | 0.78 |
| Adj. Flow (vph) | 310 | 1358 | 12 | 16 | 390 | 17 | 21 | 140 | 38 | 80 | 47 | 308 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 310 | 1370 | 0 | 16 | 407 | 0 | 21 | 178 | 0 | 80 | 47 | 308 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | NA | Perm | NA | Perm | NA | Perm | Perm |
| Protected Phases | 7 | 4 | 3 | 8 | 2 | 2 | | | | | | |
| Permitted Phases | 4 | | 8 | | 2 | | 6 | | 6 | | 6 | |
| Detector Phase | 7 | 4 | 3 | 8 | 2 | 2 | | | 6 | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 9.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Total Split (s) | 10.0 | 40.0 | 10.0 | 40.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 |
| Total Split (%) | 14.3% | 57.1% | 14.3% | 57.1% | 28.6% | 28.6% | 28.6% | 28.6% | 28.6% | 28.6% | 28.6% | 28.6% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | | | | | | | | |
| Recall Mode | None | None | None | None | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s) | 30.9 | 29.8 | 27.3 | 21.8 | 29.2 | 29.2 | 29.2 | 29.2 | 29.2 | 29.2 | 29.2 | 29.2 |
| Actuated g/C Ratio | 0.44 | 0.43 | 0.39 | 0.31 | 0.42 | 0.42 | 0.42 | 0.42 | 0.42 | 0.42 | 0.42 | 0.42 |
| v/c Ratio | 0.72 | 0.63 | 0.07 | 0.26 | 0.04 | 0.23 | 0.16 | 0.06 | 0.37 | | | |
| Control Delay | 22.9 | 16.8 | 8.1 | 16.7 | 17.3 | 15.8 | 7.2 | 6.0 | 3.9 | | | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | |
| Total Delay | 22.9 | 16.8 | 8.1 | 16.7 | 17.3 | 15.8 | 7.2 | 6.0 | 3.9 | | | |
| LOS | C | B | A | B | B | B | A | A | A | | | |
| Approach Delay | | 17.9 | | 16.4 | | 15.9 | | 4.7 | | | | |
| Approach LOS | | B | | B | | B | | A | | | | |
| Queue Length 50th (ft) | 88 | 160 | 4 | 47 | 5 | 41 | 4 | 2 | 7 | | | |
| Queue Length 95th (ft) | 62 | 167 | 4 | 45 | 19 | 66 | m52 | 16 | 140 | | | |
| Internal Link Dist (ft) | | 192 | | 382 | | 653 | | 332 | | | | |
| Turn Bay Length (ft) | 84 | | 85 | | | | 60 | | 140 | | | |
| Base Capacity (vph) | 429 | 2577 | 229 | 2570 | 564 | 763 | 494 | 778 | 840 | | | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Reduced v/c Ratio | 0.72 | 0.53 | 0.07 | 0.16 | 0.04 | 0.23 | 0.16 | 0.06 | 0.37 | | | |

Intersection Summary

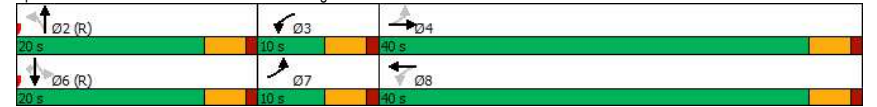
Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.72

1: Oak Lawn Avenue & Irving Boulevard
5431-22.460

No Build
Timing Plan: PM

Intersection Signal Delay: 15.5
 Intersection Capacity Utilization 49.2%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service A
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Oak Lawn Avenue & Irving Boulevard



2: Oak Lawn Avenue & Market Center Boulevard
5431-22.460

No Build
Timing Plan: PM



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|
| Lane Configurations | ↔ | ↕ | ↔ | ↔ | ↕ | ↔ | ↔ | ↕ | ↔ | ↔ | ↕ | ↔ |
| Traffic Volume (vph) | 75 | 298 | 18 | 19 | 273 | 138 | 37 | 268 | 8 | 194 | 303 | 59 |
| Future Volume (vph) | 75 | 298 | 18 | 19 | 273 | 138 | 37 | 268 | 8 | 194 | 303 | 59 |
| Confl. Peds. (#/hr) | 130 | | | | | | | | | | | |
| Peak Hour Factor | 0.85 | 0.88 | 0.61 | 0.56 | 0.87 | 0.86 | 0.73 | 0.79 | 0.67 | 0.85 | 0.83 | 0.74 |
| Adj. Flow (vph) | 88 | 339 | 30 | 34 | 314 | 160 | 51 | 339 | 12 | 228 | 365 | 80 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 88 | 369 | 0 | 34 | 474 | 0 | 51 | 351 | 0 | 228 | 445 | 0 |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | |
| Protected Phases | 1 | 6 | | 5 | 2 | | 7 | 4 | | 3 | 8 | |
| Permitted Phases | 6 | | | 2 | | | 4 | | | 8 | | |
| Detector Phase | 1 | 6 | | 5 | 2 | | 7 | 4 | | 3 | 8 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Minimum Split (s) | 9.5 | 22.5 | | 9.5 | 22.5 | | 9.5 | 22.5 | | 9.5 | 22.5 | |
| Total Split (s) | 15.0 | 27.0 | | 15.0 | 27.0 | | 10.0 | 18.0 | | 10.0 | 18.0 | |
| Total Split (%) | 21.4% | 38.6% | | 21.4% | 38.6% | | 14.3% | 25.7% | | 14.3% | 25.7% | |
| Yellow Time (s) | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Recall Mode | None | C-Max | | None | C-Max | | None | None | | None | None | |
| Act Effect Green (s) | 37.8 | 34.5 | | 34.4 | 29.3 | | 17.5 | 12.0 | | 19.3 | 16.0 | |
| Actuated g/C Ratio | 0.54 | 0.49 | | 0.49 | 0.42 | | 0.25 | 0.17 | | 0.28 | 0.23 | |
| v/c Ratio | 0.18 | 0.15 | | 0.06 | 0.22 | | 0.18 | 0.58 | | 0.80 | 0.55 | |
| Control Delay | 4.9 | 5.3 | | 8.2 | 10.0 | | 15.4 | 26.7 | | 43.5 | 25.7 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 4.9 | 5.3 | | 8.2 | 10.0 | | 15.4 | 26.7 | | 43.5 | 25.7 | |
| LOS | A | A | | A | B | | B | C | | D | C | |
| Approach Delay | 5.2 | | | 9.9 | | | 25.2 | | | 31.7 | | |
| Approach LOS | A | | | A | | | C | | | C | | |
| Queue Length 50th (ft) | 8 | 10 | | 6 | 32 | | 14 | 76 | | 74 | 86 | |
| Queue Length 95th (ft) | 12 | 16 | | 11 | 53 | | m23 | 96 | | #153 | 119 | |
| Internal Link Dist (ft) | 164 | | | 443 | | | 332 | | | 494 | | |
| Turn Bay Length (ft) | 130 | | | 80 | | | 70 | | | 109 | | |
| Base Capacity (vph) | 556 | 2484 | | 644 | 2112 | | 280 | 682 | | 286 | 812 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.16 | 0.15 | | 0.05 | 0.22 | | 0.18 | 0.51 | | 0.80 | 0.55 | |

Intersection Summary

Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 15 (21%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated

2: Oak Lawn Avenue & Market Center Boulevard
5431-22.460

No Build
Timing Plan: PM

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 19.1

Intersection LOS: B

Intersection Capacity Utilization 45.9%

ICU Level of Service A

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Oak Lawn Avenue & Market Center Boulevard



3: Turtle Creek Boulevard & Market Center Boulevard
5431-22.460

No Build
Timing Plan: PM

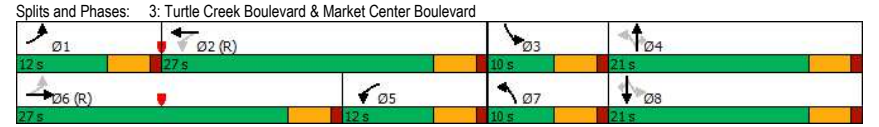
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↔ | ↕↕↕ | ↔ | ↔ | ↕↕↕ | ↔ | ↔ | ↕↕↕ | ↔ | ↔ | ↕ | ↕ |
| Traffic Volume (vph) | 33 | 317 | 65 | 22 | 331 | 14 | 119 | 67 | 22 | 11 | 41 | 72 |
| Future Volume (vph) | 33 | 317 | 65 | 22 | 331 | 14 | 119 | 67 | 22 | 11 | 41 | 72 |
| Peak Hour Factor | 0.78 | 0.89 | 0.70 | 0.75 | 0.89 | 0.50 | 0.79 | 0.88 | 0.75 | 0.63 | 0.75 | 0.81 |
| Adj. Flow (vph) | 42 | 356 | 93 | 29 | 372 | 28 | 151 | 76 | 29 | 17 | 55 | 89 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 42 | 449 | 0 | 29 | 400 | 0 | 151 | 76 | 29 | 17 | 55 | 89 |
| Turn Type | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | NA | Perm | Perm |
| Protected Phases | 1 | 6 | 5 | 2 | 7 | 4 | 4 | 8 | 3 | 8 | 8 | 8 |
| Permitted Phases | 6 | | 2 | | 4 | | 4 | 8 | | 8 | | 8 |
| Detector Phase | 1 | 6 | 5 | 2 | 7 | 4 | 4 | 3 | 8 | 8 | 8 | 8 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 | 22.5 |
| Total Split (s) | 12.0 | 27.0 | 12.0 | 27.0 | 10.0 | 21.0 | 21.0 | 10.0 | 21.0 | 10.0 | 21.0 | 21.0 |
| Total Split (%) | 17.1% | 38.6% | 17.1% | 38.6% | 14.3% | 30.0% | 30.0% | 14.3% | 30.0% | 30.0% | 30.0% | 30.0% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Min | None | C-Min | None | None | None | None | None | None | None | None |
| Act Effct Green (s) | 37.6 | 38.5 | 36.0 | 36.0 | 21.1 | 18.6 | 18.6 | 12.5 | 7.5 | 7.5 | 7.5 | 7.5 |
| Actuated g/C Ratio | 0.54 | 0.55 | 0.51 | 0.51 | 0.30 | 0.27 | 0.27 | 0.18 | 0.11 | 0.11 | 0.11 | 0.11 |
| v/c Ratio | 0.08 | 0.16 | 0.05 | 0.15 | 0.37 | 0.08 | 0.05 | 0.06 | 0.28 | 0.23 | 0.23 | 0.23 |
| Control Delay | 15.2 | 10.3 | 22.9 | 17.9 | 19.0 | 17.7 | 0.1 | 14.9 | 31.6 | 1.5 | 1.5 | 1.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 15.2 | 10.3 | 22.9 | 17.9 | 19.0 | 17.7 | 0.1 | 14.9 | 31.6 | 1.5 | 1.5 | 1.5 |
| LOS | B | B | C | B | B | B | A | B | C | A | A | A |
| Approach Delay | | 10.8 | | 18.2 | | 16.5 | | 13.2 | | | | |
| Approach LOS | | B | | B | | B | | B | | | | |
| Queue Length 50th (ft) | 8 | 25 | 8 | 46 | 47 | 11 | 0 | 5 | 22 | 0 | 0 | 0 |
| Queue Length 95th (ft) | 30 | 65 | m25 | 82 | 66 | 28 | 0 | 11 | 43 | 0 | 0 | 0 |
| Internal Link Dist (ft) | | 527 | | 443 | | 956 | | 698 | | | | |
| Turn Bay Length (ft) | 210 | | 113 | | 110 | 100 | 135 | | | | | |
| Base Capacity (vph) | 527 | 2779 | 558 | 2639 | 409 | 1049 | 634 | 273 | 439 | 551 | | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.08 | 0.16 | 0.05 | 0.15 | 0.37 | 0.07 | 0.05 | 0.06 | 0.13 | 0.16 | | |

Intersection Summary
 Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 12 (17%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.37

3: Turtle Creek Boulevard & Market Center Boulevard
5431-22.460

No Build
Timing Plan: PM

Intersection Signal Delay: 14.5 Intersection LOS: B
 Intersection Capacity Utilization 36.3% ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.



8: Turtle Creek Boulevard & Irving Boulevard
5431-22.460

No Build
Timing Plan: PM

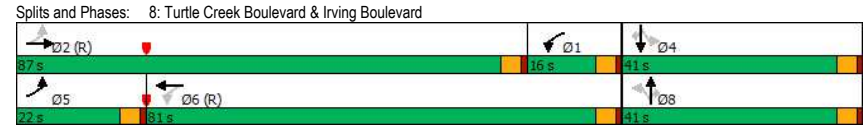
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↔ | ↔↔↔ | ↔ | ↔ | ↔↔↔ | ↔ | ↔ | ↔ | ↔ | ↔ | ↔ | ↔ |
| Traffic Volume (vph) | 102 | 1215 | 36 | 46 | 499 | 21 | 36 | 55 | 53 | 19 | 27 | 77 |
| Future Volume (vph) | 102 | 1215 | 36 | 46 | 499 | 21 | 36 | 55 | 53 | 19 | 27 | 77 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 111 | 1321 | 39 | 50 | 542 | 23 | 39 | 60 | 58 | 21 | 29 | 84 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 111 | 1360 | 0 | 50 | 565 | 0 | 0 | 99 | 58 | 0 | 50 | 84 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | NA | Perm | Perm | Perm | NA | Perm | Perm |
| Protected Phases | 5 | 2 | 1 | 6 | 8 | 8 | 8 | 8 | 8 | 4 | 4 | 4 |
| Permitted Phases | 2 | | 6 | | 8 | | 8 | | 8 | 4 | | 4 |
| Detector Phase | 5 | 2 | 1 | 6 | 8 | 8 | 8 | 8 | 8 | 4 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Total Split (s) | 22.0 | 87.0 | 16.0 | 81.0 | 41.0 | 41.0 | 41.0 | 41.0 | 41.0 | 41.0 | 41.0 | 41.0 |
| Total Split (%) | 15.3% | 60.4% | 11.1% | 56.3% | 28.5% | 28.5% | 28.5% | 28.5% | 28.5% | 28.5% | 28.5% | 28.5% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lead | Lag | Lag | Yes | Yes | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | C-Max | None | C-Max | Max | Max | Max | Max | Max | Max | Max | Max |
| Act Effct Green (s) | 85.7 | 85.7 | 84.4 | 84.4 | 36.5 | 36.5 | 36.5 | 36.5 | 36.5 | 36.5 | 36.5 | 36.5 |
| Actuated g/C Ratio | 0.60 | 0.60 | 0.59 | 0.59 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 |
| v/c Ratio | 0.22 | 0.45 | 0.17 | 0.19 | 0.24 | 0.13 | 0.12 | 0.18 | 0.12 | 0.18 | 0.18 | 0.18 |
| Control Delay | 14.8 | 17.2 | 17.6 | 14.1 | 44.6 | 4.4 | 42.5 | 9.1 | 42.5 | 9.1 | 42.5 | 9.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 14.8 | 17.2 | 17.6 | 14.1 | 44.6 | 4.4 | 42.5 | 9.1 | 42.5 | 9.1 | 42.5 | 9.1 |
| LOS | B | B | B | B | D | A | D | A | D | A | D | A |
| Approach Delay | | 17.0 | | 14.4 | 29.7 | | 21.5 | | 21.5 | | 17.0 | |
| Approach LOS | | B | | B | C | | C | | C | | B | |
| Queue Length 50th (ft) | 46 | 261 | 19 | 85 | 74 | 0 | 36 | 0 | 36 | 0 | 261 | 0 |
| Queue Length 95th (ft) | 76 | 299 | 40 | 112 | 128 | 21 | 73 | 43 | 73 | 43 | 299 | 43 |
| Internal Link Dist (ft) | | 339 | | 581 | 352 | | 956 | | 956 | | 339 | |
| Turn Bay Length (ft) | 133 | | 75 | | | | | | | | | |
| Base Capacity (vph) | 554 | 3016 | 309 | 2967 | 414 | 460 | 415 | 463 | 415 | 463 | 309 | 2967 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.20 | 0.45 | 0.16 | 0.19 | 0.24 | 0.13 | 0.12 | 0.18 | 0.12 | 0.18 | 0.16 | 0.19 |

Intersection Summary
 Cycle Length: 144
 Actuated Cycle Length: 144
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.45

8: Turtle Creek Boulevard & Irving Boulevard
5431-22.460

No Build
Timing Plan: PM

Intersection Signal Delay: 17.4 Intersection LOS: B
 Intersection Capacity Utilization 51.2% ICU Level of Service A
 Analysis Period (min) 15



| Intersection | | | | | | | | | | | | |
|--------------------------|-------|------|------|-------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.8 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↵ ↑↑↑ | | | ↵ ↑↑↑ | | | ↕ | | | ↕ | | |
| Traffic Vol, veh/h | 0 | 1307 | 31 | 66 | 530 | 0 | 6 | 0 | 145 | 2 | 0 | 1 |
| Future Vol, veh/h | 0 | 1307 | 31 | 66 | 530 | 0 | 6 | 0 | 145 | 2 | 0 | 1 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 43 | - | - | 60 | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 85 | 50 | 61 | 92 | 92 | 75 | 92 | 58 | 50 | 50 | 50 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 1538 | 62 | 108 | 576 | 0 | 8 | 0 | 250 | 4 | 0 | 2 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|------|------|--------|------|------|
| Conflicting Flow All | 576 | 0 | 0 | 1600 | 0 | 0 | 2015 | 2361 | 800 | 1407 | 2392 | 288 |
| Stage 1 | - | - | - | - | - | - | 1569 | 1569 | - | 792 | 792 | - |
| Stage 2 | - | - | - | - | - | - | 446 | 792 | - | 615 | 1600 | - |
| Critical Hdwy | 5.34 | - | - | 5.34 | - | - | 6.44 | 6.54 | 7.14 | 6.44 | 6.54 | 7.14 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 7.34 | 5.54 | - | 7.34 | 5.54 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.74 | 5.54 | - | 6.74 | 5.54 | - |
| Follow-up Hdwy | 3.12 | - | - | 3.12 | - | - | 3.82 | 4.02 | 3.92 | 3.82 | 4.02 | 3.92 |
| Pot Cap-1 Maneuver | 866 | - | - | 613 | - | - | 62 | 35 | *623 | *146 | 33 | *833 |
| Stage 1 | - | - | - | - | - | - | 483 | 506 | - | *452 | 534 | - |
| Stage 2 | - | - | - | - | - | - | 813 | 534 | - | *639 | 484 | - |
| Platoon blocked, % | 1 | - | - | 1 | - | - | - | - | 1 | - | - | 1 |
| Mov Cap-1 Maneuver | 866 | - | - | 613 | - | - | 54 | 29 | *623 | *76 | 27 | *833 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 54 | 29 | - | *76 | 27 | - |
| Stage 1 | - | - | - | - | - | - | 483 | 506 | - | *452 | 440 | - |
| Stage 2 | - | - | - | - | - | - | 668 | 440 | - | *383 | 484 | - |

| Approach | EB | WB | NB | SB |
|----------------------|----|-----|------|------|
| HCM Control Delay, s | 0 | 1.9 | 21.6 | 39.9 |
| HCM LOS | | | C | E |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 470 | 866 | - | - | 613 | - | - | 109 |
| HCM Lane V/C Ratio | 0.549 | - | - | - | 0.177 | - | - | 0.055 |
| HCM Control Delay (s) | 21.6 | 0 | - | - | 12.1 | - | - | 39.9 |
| HCM Lane LOS | C | A | - | - | B | - | - | E |
| HCM 95th %tile Q(veh) | 3.3 | 0 | - | - | 0.6 | - | - | 0.2 |

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

1: Oak Lawn Avenue & Irving Boulevard
5431-22.460

Build
Timing Plan: AM

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|-------|
| Lane Configurations | ↔ | ↕↕↕ | ↔ | ↔ | ↕↕↕ | ↔ | ↔ | ↕ | ↔ | ↔ | ↕ | ↕ |
| Traffic Volume (vph) | 164 | 294 | 14 | 23 | 754 | 3 | 10 | 30 | 3 | 14 | 50 | 368 |
| Future Volume (vph) | 164 | 294 | 14 | 23 | 754 | 3 | 10 | 30 | 3 | 14 | 50 | 368 |
| Peak Hour Factor | 0.78 | 0.94 | 0.81 | 0.79 | 0.92 | 0.50 | 0.56 | 0.88 | 0.75 | 0.54 | 0.73 | 0.88 |
| Adj. Flow (vph) | 210 | 313 | 17 | 29 | 820 | 6 | 18 | 34 | 4 | 26 | 68 | 418 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 210 | 330 | 0 | 29 | 826 | 0 | 18 | 38 | 0 | 26 | 68 | 418 |
| Turn Type | pm+pt | NA | | pm+pt | NA | | Perm | NA | | Perm | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | 6 |
| Detector Phase | 7 | 4 | | 3 | 8 | | 2 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | | 9.5 | 22.5 | | 22.5 | 22.5 | | 22.5 | 22.5 | 22.5 |
| Total Split (s) | 13.0 | 84.0 | | 13.0 | 84.0 | | 18.0 | 18.0 | | 18.0 | 18.0 | 18.0 |
| Total Split (%) | 11.3% | 73.0% | | 11.3% | 73.0% | | 15.7% | 15.7% | | 15.7% | 15.7% | 15.7% |
| Yellow Time (s) | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lag | | Lead | Lag | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Recall Mode | None | None | | None | None | | C-Max | C-Max | | C-Max | C-Max | C-Max |
| Act Effct Green (s) | 38.5 | 33.4 | | 34.6 | 27.7 | | 65.3 | 65.3 | | 65.3 | 65.3 | 65.3 |
| Actuated g/C Ratio | 0.33 | 0.29 | | 0.30 | 0.24 | | 0.57 | 0.57 | | 0.57 | 0.57 | 0.57 |
| v/c Ratio | 1.00 | 0.22 | | 0.08 | 0.67 | | 0.02 | 0.04 | | 0.03 | 0.06 | 0.40 |
| Control Delay | 94.2 | 30.0 | | 23.0 | 42.0 | | 12.9 | 11.8 | | 12.9 | 12.8 | 5.1 |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.7 |
| Total Delay | 94.2 | 30.0 | | 23.0 | 42.0 | | 12.9 | 11.8 | | 12.9 | 12.8 | 5.8 |
| LOS | F | C | | C | D | | B | B | | B | B | A |
| Approach Delay | | 55.0 | | | 41.3 | | | 12.1 | | | | 7.1 |
| Approach LOS | | D | | | D | | | B | | | | A |
| Queue Length 50th (ft) | -116 | 68 | | 14 | 204 | | 6 | 10 | | 8 | 21 | 33 |
| Queue Length 95th (ft) | #168 | 89 | | 27 | 230 | | 12 | 29 | | 14 | 39 | 96 |
| Internal Link Dist (ft) | | 192 | | | 382 | | | 653 | | | 332 | |
| Turn Bay Length (ft) | 84 | | | 85 | | | | | | 60 | | 140 |
| Base Capacity (vph) | 210 | 3492 | | 375 | 3512 | | 754 | 1042 | | 774 | 1058 | 1035 |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | 328 |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Reduced v/c Ratio | 1.00 | 0.09 | | 0.08 | 0.24 | | 0.02 | 0.04 | | 0.03 | 0.06 | 0.59 |

Intersection Summary

Cycle Length: 115
 Actuated Cycle Length: 115
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.00

1: Oak Lawn Avenue & Irving Boulevard
5431-22.460

Build
Timing Plan: AM

Intersection Signal Delay: 35.3
 Intersection LOS: D
 Intersection Capacity Utilization 52.8%
 ICU Level of Service A
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Oak Lawn Avenue & Irving Boulevard



2: Oak Lawn Avenue & Market Center Boulevard
5431-22.460

Build
Timing Plan: AM



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|
| Lane Configurations | ↔ | ↕↕ | ↔ | ↔ | ↕↕ | ↔ | ↔ | ↕↕ | ↔ | ↔ | ↕↕ | ↔ |
| Traffic Volume (vph) | 99 | 140 | 27 | 16 | 659 | 201 | 4 | 190 | 6 | 70 | 393 | 157 |
| Future Volume (vph) | 99 | 140 | 27 | 16 | 659 | 201 | 4 | 190 | 6 | 70 | 393 | 157 |
| Confl. Peds. (#/hr) | 130 | | | | | | | | | | | |
| Peak Hour Factor | 0.78 | 0.82 | 0.69 | 0.54 | 0.93 | 0.86 | 0.50 | 0.87 | 0.50 | 0.83 | 0.90 | 0.73 |
| Adj. Flow (vph) | 127 | 171 | 39 | 30 | 709 | 234 | 8 | 218 | 12 | 84 | 437 | 215 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 127 | 210 | 0 | 30 | 943 | 0 | 8 | 230 | 0 | 84 | 652 | 0 |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | |
| Protected Phases | 1 | 6 | | 5 | 2 | | 7 | 4 | | 3 | 8 | |
| Permitted Phases | 6 | | | 2 | | | 4 | | | 8 | | |
| Detector Phase | 1 | 6 | | 5 | 2 | | 7 | 4 | | 3 | 8 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Minimum Split (s) | 9.5 | 22.5 | | 9.5 | 22.5 | | 9.5 | 22.5 | | 9.5 | 22.5 | |
| Total Split (s) | 21.0 | 63.0 | | 21.0 | 63.0 | | 10.0 | 23.0 | | 10.0 | 23.0 | |
| Total Split (%) | 17.9% | 53.8% | | 17.9% | 53.8% | | 8.5% | 19.7% | | 8.5% | 19.7% | |
| Yellow Time (s) | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Recall Mode | None | C-Max | | None | C-Max | | None | None | | None | None | |
| Act Effect Green (s) | 78.5 | 72.9 | | 72.8 | 66.6 | | 24.9 | 20.5 | | 27.6 | 26.5 | |
| Actuated g/C Ratio | 0.67 | 0.62 | | 0.62 | 0.57 | | 0.21 | 0.18 | | 0.24 | 0.23 | |
| v/c Ratio | 0.34 | 0.07 | | 0.04 | 0.33 | | 0.06 | 0.37 | | 0.33 | 0.81 | |
| Control Delay | 9.0 | 7.8 | | 6.5 | 12.3 | | 34.8 | 44.7 | | 39.8 | 47.9 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 9.0 | 7.8 | | 6.5 | 12.3 | | 34.8 | 44.7 | | 39.8 | 47.9 | |
| LOS | A | A | | A | B | | C | D | | D | D | |
| Approach Delay | 8.2 | | | 12.1 | | | 44.4 | | | 47.0 | | |
| Approach LOS | A | | | B | | | D | | | D | | |
| Queue Length 50th (ft) | 30 | 19 | | 7 | 115 | | 5 | 81 | | 51 | 219 | |
| Queue Length 95th (ft) | 44 | 27 | | 10 | 150 | | 10 | 117 | | 86 | #398 | |
| Internal Link Dist (ft) | 164 | | | 443 | | | 332 | | | 494 | | |
| Turn Bay Length (ft) | 130 | | | 80 | | | 70 | | | 109 | | |
| Base Capacity (vph) | 476 | 3093 | | 866 | 2831 | | 136 | 618 | | 252 | 809 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.27 | 0.07 | | 0.03 | 0.33 | | 0.06 | 0.37 | | 0.33 | 0.81 | |

Intersection Summary

Cycle Length: 117
 Actuated Cycle Length: 117
 Offset: 21 (18%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated

2: Oak Lawn Avenue & Market Center Boulevard
5431-22.460

Build
Timing Plan: AM

| | |
|---|------------------------|
| Maximum v/c Ratio: 0.81 | Intersection LOS: C |
| Intersection Signal Delay: 26.1 | ICU Level of Service B |
| Intersection Capacity Utilization 57.8% | |
| Analysis Period (min) 15 | |
| # 95th percentile volume exceeds capacity, queue may be longer. | |
| Queue shown is maximum after two cycles. | |

Splits and Phases: 2: Oak Lawn Avenue & Market Center Boulevard



3: Turtle Creek Boulevard & Market Center Boulevard
5431-22.460

Build
Timing Plan: AM

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↔ | ↕ | ↔ | ↔ | ↕ | ↔ | ↔ | ↕ | ↔ | ↔ | ↕ | ↔ |
| Traffic Volume (vph) | 16 | 349 | 90 | 11 | 517 | 6 | 55 | 29 | 15 | 11 | 53 | 70 |
| Future Volume (vph) | 16 | 349 | 90 | 11 | 517 | 6 | 55 | 29 | 15 | 11 | 53 | 70 |
| Peak Hour Factor | 0.50 | 0.96 | 0.85 | 0.63 | 0.88 | 0.75 | 0.67 | 0.96 | 0.50 | 0.63 | 0.78 | 0.69 |
| Adj. Flow (vph) | 32 | 364 | 106 | 17 | 588 | 8 | 82 | 30 | 30 | 17 | 68 | 101 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 32 | 470 | 0 | 17 | 596 | 0 | 82 | 30 | 30 | 17 | 68 | 101 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | NA | Perm | Perm | Perm | NA | Perm | Perm |
| Protected Phases | 1 | 6 | 5 | 2 | 4 | 4 | 4 | 4 | 8 | 8 | 8 | 8 |
| Permitted Phases | 6 | | 2 | | 4 | | 4 | | 4 | 8 | | 8 |
| Detector Phase | 1 | 6 | 5 | 2 | 4 | 4 | 4 | 4 | 8 | 8 | 8 | 8 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Total Split (s) | 15.0 | 65.0 | 15.0 | 65.0 | 36.0 | 36.0 | 36.0 | 36.0 | 36.0 | 36.0 | 36.0 | 36.0 |
| Total Split (%) | 12.9% | 56.0% | 12.9% | 56.0% | 31.0% | 31.0% | 31.0% | 31.0% | 31.0% | 31.0% | 31.0% | 31.0% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lead | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Min | None | C-Min | None | C-Min | None | C-Min | None | C-Min | None | C-Min |
| Act Effct Green (s) | 92.8 | 90.2 | 91.6 | 88.0 | 12.6 | 12.6 | 12.6 | 12.6 | 12.6 | 12.6 | 12.6 | 12.6 |
| Actuated g/C Ratio | 0.80 | 0.78 | 0.79 | 0.76 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| v/c Ratio | 0.05 | 0.12 | 0.02 | 0.15 | 0.57 | 0.08 | 0.14 | 0.11 | 0.11 | 0.34 | 0.39 | 0.39 |
| Control Delay | 2.9 | 3.3 | 2.9 | 4.8 | 63.6 | 44.6 | 4.7 | 45.9 | 50.8 | 13.0 | 13.0 | 13.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 2.9 | 3.3 | 2.9 | 4.8 | 63.6 | 44.6 | 4.7 | 45.9 | 50.8 | 13.0 | 13.0 | 13.0 |
| LOS | A | A | A | A | E | D | A | D | D | D | B | B |
| Approach Delay | | 3.3 | | 4.7 | | 47.1 | | 29.9 | | | | |
| Approach LOS | | A | | A | | D | | C | | | | |
| Queue Length 50th (ft) | 4 | 16 | 2 | 44 | 59 | 11 | 0 | 12 | 48 | 0 | 0 | 0 |
| Queue Length 95th (ft) | 6 | 46 | 5 | 69 | 77 | 24 | 0 | 23 | 76 | 21 | 21 | 21 |
| Internal Link Dist (ft) | | 527 | | 443 | | 954 | | 698 | | | | |
| Turn Bay Length (ft) | 210 | | 113 | | 110 | | 100 | 135 | | | | |
| Base Capacity (vph) | 712 | 3841 | 796 | 3851 | 360 | 961 | 470 | 372 | 505 | 503 | 503 | 503 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.04 | 0.12 | 0.02 | 0.15 | 0.23 | 0.03 | 0.06 | 0.05 | 0.13 | 0.20 | 0.20 | 0.20 |

Intersection Summary

Cycle Length: 116
 Actuated Cycle Length: 116
 Offset: 15 (13%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.57

3: Turtle Creek Boulevard & Market Center Boulevard
5431-22.460

Build
Timing Plan: AM

Intersection Signal Delay: 11.7
 Intersection LOS: B
 Intersection Capacity Utilization 30.5%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 3: Turtle Creek Boulevard & Market Center Boulevard



8: Turtle Creek Boulevard & Irving Boulevard
5431-22.460

Build
Timing Plan: AM

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↔ | ↔↔↔ | ↔ | ↔ | ↔↔↔ | ↔ | ↔ | ↔ | ↔ | ↔ | ↔ | ↔ |
| Traffic Volume (vph) | 63 | 483 | 12 | 19 | 697 | 27 | 12 | 16 | 23 | 34 | 22 | 87 |
| Future Volume (vph) | 63 | 483 | 12 | 19 | 697 | 27 | 12 | 16 | 23 | 34 | 22 | 87 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 68 | 525 | 13 | 21 | 758 | 29 | 13 | 17 | 25 | 37 | 24 | 95 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 68 | 538 | 0 | 21 | 787 | 0 | 0 | 30 | 25 | 0 | 61 | 95 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | NA | Perm | Perm | Perm | NA | Perm | Perm |
| Protected Phases | 5 | 2 | 1 | 6 | 8 | 8 | 8 | 8 | 8 | 4 | 4 | 4 |
| Permitted Phases | 2 | | 6 | | 8 | | 8 | | 8 | 4 | | 4 |
| Detector Phase | 5 | 2 | 1 | 6 | 8 | 8 | 8 | 8 | 8 | 4 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 9.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Total Split (s) | 22.0 | 64.0 | 16.0 | 58.0 | 37.0 | 37.0 | 37.0 | 37.0 | 37.0 | 37.0 | 37.0 | 37.0 |
| Total Split (%) | 18.8% | 54.7% | 13.7% | 49.6% | 31.6% | 31.6% | 31.6% | 31.6% | 31.6% | 31.6% | 31.6% | 31.6% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lead | Lag | Lag | Yes | Yes | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | | | | | | | | |
| Recall Mode | None | C-Max | None | C-Max | None | None | None | None | None | None | None | None |
| Act Effct Green (s) | 91.7 | 91.7 | 88.9 | 88.9 | 9.9 | 9.9 | 9.9 | 9.9 | 9.9 | 9.9 | 9.9 | 9.9 |
| Actuated g/C Ratio | 0.78 | 0.78 | 0.76 | 0.76 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| v/c Ratio | 0.13 | 0.14 | 0.03 | 0.20 | 0.22 | 0.11 | 0.49 | 0.43 | | | | |
| Control Delay | 5.3 | 4.2 | 5.1 | 4.7 | 52.4 | 1.0 | 63.2 | 15.0 | | | | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | |
| Total Delay | 5.3 | 4.2 | 5.1 | 4.7 | 52.4 | 1.0 | 63.2 | 15.0 | | | | |
| LOS | A | A | A | A | D | A | E | B | | | | |
| Approach Delay | | 4.3 | | 4.7 | 29.0 | | 33.8 | | | | | |
| Approach LOS | | A | | A | C | | C | | | | | |
| Queue Length 50th (ft) | 6 | 19 | 4 | 55 | 21 | 0 | 45 | 0 | | | | |
| Queue Length 95th (ft) | 32 | 64 | 12 | 87 | 51 | 0 | 87 | 48 | | | | |
| Internal Link Dist (ft) | | 330 | | 590 | 366 | | 954 | | | | | |
| Turn Bay Length (ft) | 133 | | 75 | | | | | | | | | |
| Base Capacity (vph) | 641 | 3970 | 716 | 3841 | 443 | 510 | 412 | 510 | | | | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| Reduced v/c Ratio | 0.11 | 0.14 | 0.03 | 0.20 | 0.07 | 0.05 | 0.15 | 0.19 | | | | |

Intersection Summary
 Cycle Length: 117
 Actuated Cycle Length: 117
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.49

8: Turtle Creek Boulevard & Irving Boulevard
5431-22.460

Build
Timing Plan: AM

Intersection Signal Delay: 8.2
 Intersection Capacity Utilization 39.2%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 8: Turtle Creek Boulevard & Irving Boulevard



4: Riveredge Drive/Site Driveway 1 & Irving Boulevard
5431-22.460

Build
Timing Plan: AM

| Intersection | | | | | | | | | | | | |
|--------------------------|-------|------|------|-------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 4.6 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↕ ↑↑↑ | | | ↕ ↑↑↑ | | | ↕ | | | ↕ | | |
| Traffic Vol, veh/h | 31 | 449 | 45 | 154 | 758 | 151 | 2 | 1 | 33 | 22 | 0 | 24 |
| Future Vol, veh/h | 31 | 449 | 45 | 154 | 758 | 151 | 2 | 1 | 33 | 22 | 0 | 24 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 43 | - | - | 60 | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | 0 | - | 0 | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 50 | 91 | 75 | 52 | 94 | 50 | 50 | 50 | 58 | 92 | 92 | 50 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 62 | 493 | 60 | 296 | 806 | 302 | 4 | 2 | 57 | 24 | 0 | 48 |

| Major/Minor | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 1108 | 0 | 0 | 553 |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |
| Critical Hdwy | 5.34 | - | - | 5.34 |
| Critical Hdwy Stg 1 | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - |
| Follow-up Hdwy | 3.12 | - | - | 3.12 |
| Pot Cap-1 Maneuver | 641 | - | - | 933 |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |
| Platoon blocked, % | 1 | - | - | 1 |
| Mov Cap-1 Maneuver | 641 | - | - | 933 |
| Mov Cap-2 Maneuver | - | - | - | - |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |

| Approach | EB | WB | NB | SB |
|----------------------|-----|-----|------|----|
| HCM Control Delay, s | 1.1 | 2.2 | 20.3 | 69 |
| HCM LOS | | | C | F |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 298 | 641 | - | - | 933 | - | - | 123 |
| HCM Lane V/C Ratio | 0.211 | 0.097 | - | - | 0.317 | - | - | 0.585 |
| HCM Control Delay (s) | 20.3 | 11.2 | - | - | 10.6 | - | - | 69 |
| HCM Lane LOS | C | B | - | - | B | - | - | F |
| HCM 95th %tile Q(veh) | 0.8 | 0.3 | - | - | 1.4 | - | - | 2.9 |

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

5: Irving Boulevard & Site Driveway 2
5431-22.460

Build
Timing Plan: AM

| Intersection | | | | | | |
|--------------------------|-----------|------|------|------|------|------|
| Int Delay, s/veh | 0.3 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | ↕ ↑↑↑ ↑↑↑ | | | ↕ | | ↕ |
| Traffic Vol, veh/h | 30 | 467 | 1102 | 30 | 4 | 4 |
| Future Vol, veh/h | 30 | 467 | 1102 | 30 | 4 | 4 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 40 | - | - | - | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 33 | 508 | 1198 | 33 | 4 | 4 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1231 | 0 | - |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |
| Critical Hdwy | 5.34 | - | - |
| Critical Hdwy Stg 1 | - | - | - |
| Critical Hdwy Stg 2 | - | - | - |
| Follow-up Hdwy | 3.12 | - | - |
| Pot Cap-1 Maneuver | *833 | - | - |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |
| Platoon blocked, % | 1 | - | - |
| Mov Cap-1 Maneuver | *833 | - | - |
| Mov Cap-2 Maneuver | - | - | - |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.6 | 0 | 18.8 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | *833 | - | - | - | 269 |
| HCM Lane V/C Ratio | 0.039 | - | - | - | 0.032 |
| HCM Control Delay (s) | 9.5 | - | - | - | 18.8 |
| HCM Lane LOS | A | - | - | - | C |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 0.1 |

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

6: Site driveway 3 & Market Center Boulevard
5431-22.460

Build
Timing Plan: AM

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.1 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑↑↑ | | | ↑↑↑ | | ↑ |
| Traffic Vol, veh/h | 257 | 60 | 0 | 820 | 0 | 9 |
| Future Vol, veh/h | 257 | 60 | 0 | 820 | 0 | 9 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | - | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 279 | 65 | 0 | 891 | 0 | 10 |

| Major/Minor | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|----------|
| Conflicting Flow All | 0 | 0 | - 172 |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |
| Critical Hdwy | - | - | - 7.14 |
| Critical Hdwy Stg 1 | - | - | - |
| Critical Hdwy Stg 2 | - | - | - |
| Follow-up Hdwy | - | - | - 3.92 |
| Pot Cap-1 Maneuver | - | 0 | - 0 *866 |
| Stage 1 | - | 0 | - 0 |
| Stage 2 | - | 0 | - 0 |
| Platoon blocked, % | - | - | - 1 |
| Mov Cap-1 Maneuver | - | - | - *866 |
| Mov Cap-2 Maneuver | - | - | - |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |

| Approach | EB | WB | NB |
|----------------------|----|----|-----|
| HCM Control Delay, s | 0 | 0 | 9.2 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBT |
|-----------------------|-------|-----|-----|-----|
| Capacity (veh/h) | 866 | - | - | - |
| HCM Lane V/C Ratio | 0.011 | - | - | - |
| HCM Control Delay (s) | 9.2 | - | - | - |
| HCM Lane LOS | A | - | - | - |
| HCM 95th %tile Q(veh) | 0 | - | - | - |

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

7: Site Driveway 4 & Market Center Boulevard
5431-22.460

Build
Timing Plan: AM

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.3 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑↑↑ | | | ↑↑↑ | | ↑ |
| Traffic Vol, veh/h | 291 | 60 | 240 | 580 | 0 | 26 |
| Future Vol, veh/h | 291 | 60 | 240 | 580 | 0 | 26 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | 50 | - | - | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 316 | 65 | 261 | 630 | 0 | 28 |

| Major/Minor | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|-----------|
| Conflicting Flow All | 0 | 0 | 381 - 191 |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |
| Critical Hdwy | - | 5.34 | - 7.14 |
| Critical Hdwy Stg 1 | - | - | - |
| Critical Hdwy Stg 2 | - | - | - |
| Follow-up Hdwy | - | 3.12 | - 3.92 |
| Pot Cap-1 Maneuver | - | 940 | - 0 *866 |
| Stage 1 | - | - | - 0 |
| Stage 2 | - | - | - 0 |
| Platoon blocked, % | - | 1 | - 1 |
| Mov Cap-1 Maneuver | - | 940 | - *866 |
| Mov Cap-2 Maneuver | - | - | - |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |

| Approach | EB | WB | NB |
|----------------------|----|----|-----|
| HCM Control Delay, s | 0 | 3 | 9.3 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 866 | - | - | 940 | - |
| HCM Lane V/C Ratio | 0.033 | - | - | 0.278 | - |
| HCM Control Delay (s) | 9.3 | - | - | 10.3 | - |
| HCM Lane LOS | A | - | - | B | - |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 1.1 | - |

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

1: Oak Lawn Avenue & Irving Boulevard
5431-22.460

Build
Timing Plan: PM

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↔ | ↕ | ↔ | ↔ | ↕ | ↔ | ↔ | ↕ | ↔ | ↔ | ↕ | ↔ |
| Traffic Volume (vph) | 290 | 1322 | 8 | 8 | 381 | 12 | 15 | 81 | 21 | 70 | 30 | 308 |
| Future Volume (vph) | 290 | 1322 | 8 | 8 | 381 | 12 | 15 | 81 | 21 | 70 | 30 | 308 |
| Peak Hour Factor | 0.73 | 0.88 | 0.67 | 0.50 | 0.89 | 0.69 | 0.70 | 0.58 | 0.56 | 0.87 | 0.64 | 0.78 |
| Adj. Flow (vph) | 397 | 1502 | 12 | 16 | 428 | 17 | 21 | 140 | 38 | 80 | 47 | 395 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 397 | 1514 | 0 | 16 | 445 | 0 | 21 | 178 | 0 | 80 | 47 | 395 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | NA | Perm | NA | Perm | NA | Perm | Perm |
| Protected Phases | 7 | 4 | 3 | 8 | | | 2 | 2 | | 6 | 6 | |
| Permitted Phases | 4 | | 8 | | | | 2 | | | 6 | | 6 |
| Detector Phase | 7 | 4 | 3 | 8 | | | 2 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 9.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Total Split (s) | 10.0 | 40.0 | 10.0 | 40.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 |
| Total Split (%) | 14.3% | 57.1% | 14.3% | 57.1% | 28.6% | 28.6% | 28.6% | 28.6% | 28.6% | 28.6% | 28.6% | 28.6% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | | | | | | | | |
| Recall Mode | None | None | None | None | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s) | 33.1 | 32.0 | 29.5 | 24.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 |
| Actuated g/C Ratio | 0.47 | 0.46 | 0.42 | 0.34 | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 |
| v/c Ratio | 0.89 | 0.65 | 0.07 | 0.26 | 0.04 | 0.25 | 0.18 | 0.07 | 0.46 | | | |
| Control Delay | 37.1 | 15.8 | 7.2 | 15.4 | 18.2 | 17.0 | 7.7 | 6.2 | 5.1 | | | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 37.1 | 15.8 | 7.2 | 15.4 | 18.2 | 17.0 | 7.7 | 6.2 | 5.1 | | | |
| LOS | D | B | A | B | B | B | A | A | A | A | A | A |
| Approach Delay | | 20.2 | | 15.1 | | 17.2 | | 5.6 | | | | |
| Approach LOS | | C | | B | | B | | A | | | | |
| Queue Length 50th (ft) | 110 | 169 | 4 | 49 | 5 | 44 | 5 | 3 | 13 | | | |
| Queue Length 95th (ft) | 80 | 190 | 4 | 50 | 19 | 66 | m30 | m12 | 167 | | | |
| Internal Link Dist (ft) | | 192 | | 382 | | 653 | | 332 | | | | |
| Turn Bay Length (ft) | 84 | | 85 | | | | 60 | 140 | | | | |
| Base Capacity (vph) | 446 | 2584 | 231 | 2569 | 520 | 705 | 450 | 717 | 852 | | | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.89 | 0.59 | 0.07 | 0.17 | 0.04 | 0.25 | 0.18 | 0.07 | 0.46 | | | |

Intersection Summary

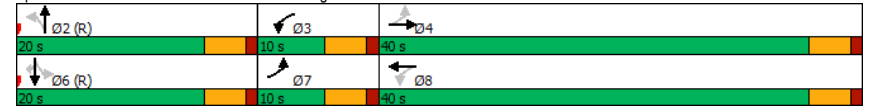
Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.89

1: Oak Lawn Avenue & Irving Boulevard
5431-22.460

Build
Timing Plan: PM

Intersection Signal Delay: 16.8
 Intersection LOS: B
 Intersection Capacity Utilization 51.7%
 ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Oak Lawn Avenue & Irving Boulevard



2: Oak Lawn Avenue & Market Center Boulevard
5431-22.460

Build
Timing Plan: PM



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|
| Lane Configurations | ↔ | ↕↕ | ↔ | ↔ | ↕↕ | ↔ | ↔ | ↕↕ | ↔ | ↔ | ↕↕ | ↔ |
| Traffic Volume (vph) | 267 | 362 | 18 | 19 | 341 | 138 | 37 | 332 | 8 | 194 | 371 | 127 |
| Future Volume (vph) | 267 | 362 | 18 | 19 | 341 | 138 | 37 | 332 | 8 | 194 | 371 | 127 |
| Confl. Peds. (#/hr) | 130 | | | | | | | | | | | |
| Peak Hour Factor | 0.85 | 0.88 | 0.61 | 0.56 | 0.87 | 0.86 | 0.73 | 0.79 | 0.67 | 0.85 | 0.83 | 0.74 |
| Adj. Flow (vph) | 314 | 411 | 30 | 34 | 392 | 160 | 51 | 420 | 12 | 228 | 447 | 172 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 314 | 441 | 0 | 34 | 552 | 0 | 51 | 432 | 0 | 228 | 619 | 0 |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | |
| Protected Phases | 1 | 6 | | 5 | 2 | | 7 | 4 | | 3 | 8 | |
| Permitted Phases | 6 | | | 2 | | | 4 | | | 8 | | |
| Detector Phase | 1 | 6 | | 5 | 2 | | 7 | 4 | | 3 | 8 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Minimum Split (s) | 9.5 | 22.5 | | 9.5 | 22.5 | | 9.5 | 22.5 | | 9.5 | 22.5 | |
| Total Split (s) | 15.0 | 27.0 | | 15.0 | 27.0 | | 10.0 | 18.0 | | 10.0 | 18.0 | |
| Total Split (%) | 21.4% | 38.6% | | 21.4% | 38.6% | | 14.3% | 25.7% | | 14.3% | 25.7% | |
| Yellow Time (s) | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Recall Mode | None | C-Max | | None | C-Max | | None | None | | None | None | |
| Act Effect Green (s) | 38.1 | 33.9 | | 30.1 | 23.9 | | 18.0 | 12.5 | | 19.8 | 16.5 | |
| Actuated g/C Ratio | 0.54 | 0.48 | | 0.43 | 0.34 | | 0.26 | 0.18 | | 0.28 | 0.24 | |
| v/c Ratio | 0.64 | 0.18 | | 0.07 | 0.31 | | 0.22 | 0.68 | | 0.87 | 0.72 | |
| Control Delay | 17.3 | 6.7 | | 8.6 | 12.9 | | 15.4 | 27.5 | | 54.4 | 29.3 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 17.3 | 6.7 | | 8.6 | 12.9 | | 15.4 | 27.5 | | 54.4 | 29.3 | |
| LOS | B | A | | A | B | | B | C | | D | C | |
| Approach Delay | 11.1 | | | 12.7 | | | 26.2 | | | 36.1 | | |
| Approach LOS | B | | | B | | | C | | | D | | |
| Queue Length 50th (ft) | 40 | 17 | | 6 | 45 | | 13 | 98 | | 74 | 122 | |
| Queue Length 95th (ft) | 97 | 33 | | 11 | 67 | | m19 | m104 | | #142 | #180 | |
| Internal Link Dist (ft) | 164 | | | 443 | | | 332 | | | 494 | | |
| Turn Bay Length (ft) | 130 | | | 80 | | | 70 | | | 109 | | |
| Base Capacity (vph) | 498 | 2449 | | 576 | 1766 | | 232 | 683 | | 263 | 854 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.63 | 0.18 | | 0.06 | 0.31 | | 0.22 | 0.63 | | 0.87 | 0.72 | |

Intersection Summary

Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 15 (21%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated

2: Oak Lawn Avenue & Market Center Boulevard
5431-22.460

Build
Timing Plan: PM

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 22.1

Intersection LOS: C

Intersection Capacity Utilization 59.6%

ICU Level of Service B

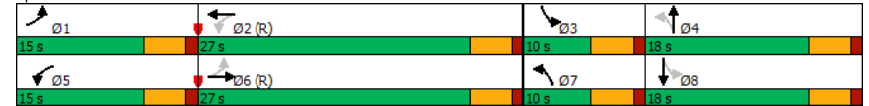
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Oak Lawn Avenue & Market Center Boulevard



3: Turtle Creek Boulevard & Market Center Boulevard
5431-22.460

Build
Timing Plan: PM

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↔ | ↕ | ↔ | ↔ | ↕ | ↔ | ↔ | ↕ | ↔ | ↔ | ↕ | ↔ |
| Traffic Volume (vph) | 33 | 385 | 65 | 22 | 331 | 14 | 246 | 67 | 22 | 11 | 41 | 72 |
| Future Volume (vph) | 33 | 385 | 65 | 22 | 331 | 14 | 246 | 67 | 22 | 11 | 41 | 72 |
| Peak Hour Factor | 0.78 | 0.89 | 0.70 | 0.75 | 0.89 | 0.50 | 0.79 | 0.88 | 0.75 | 0.63 | 0.75 | 0.81 |
| Adj. Flow (vph) | 42 | 433 | 93 | 29 | 372 | 28 | 311 | 76 | 29 | 17 | 55 | 89 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 42 | 526 | 0 | 29 | 400 | 0 | 311 | 76 | 29 | 17 | 55 | 89 |
| Turn Type | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm | NA | Perm |
| Protected Phases | 1 | 6 | 5 | 2 | 7 | 4 | 3 | 8 | 8 | 8 | 8 | 8 |
| Permitted Phases | 6 | | 2 | | 4 | | 4 | 8 | | 8 | | 8 |
| Detector Phase | 1 | 6 | 5 | 2 | 7 | 4 | 4 | 3 | 8 | 8 | 8 | 8 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 | 22.5 | 9.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Total Split (s) | 12.0 | 27.0 | 12.0 | 27.0 | 10.0 | 21.0 | 21.0 | 10.0 | 21.0 | 21.0 | 21.0 | 21.0 |
| Total Split (%) | 17.1% | 38.6% | 17.1% | 38.6% | 14.3% | 30.0% | 30.0% | 14.3% | 30.0% | 30.0% | 30.0% | 30.0% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Min | None | C-Min | None | None | None | None | None | None | None | None |
| Act Effct Green (s) | 31.4 | 31.4 | 28.3 | 28.3 | 25.6 | 23.3 | 23.3 | 12.4 | 7.5 | 7.5 | 7.5 | 7.5 |
| Actuated g/C Ratio | 0.45 | 0.45 | 0.40 | 0.40 | 0.37 | 0.33 | 0.33 | 0.18 | 0.11 | 0.11 | 0.11 | 0.11 |
| v/c Ratio | 0.10 | 0.23 | 0.07 | 0.20 | 0.60 | 0.06 | 0.04 | 0.06 | 0.28 | 0.23 | 0.23 | 0.23 |
| Control Delay | 16.3 | 12.9 | 23.0 | 18.9 | 21.1 | 15.5 | 0.1 | 13.8 | 31.6 | 1.5 | 1.5 | 1.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 16.3 | 12.9 | 23.0 | 18.9 | 21.1 | 15.5 | 0.1 | 13.8 | 31.6 | 1.5 | 1.5 | 1.5 |
| LOS | B | B | C | B | C | B | A | B | C | A | A | A |
| Approach Delay | | 13.2 | | 19.2 | | 18.6 | | 13.0 | | | | |
| Approach LOS | | B | | B | | B | | B | | | | |
| Queue Length 50th (ft) | 10 | 42 | 9 | 45 | 88 | 9 | 4 | 22 | 0 | 0 | 0 | 0 |
| Queue Length 95th (ft) | 28 | 78 | m21 | m78 | 130 | 27 | 0 | 43 | 0 | 0 | 0 | 0 |
| Internal Link Dist (ft) | | 527 | | 443 | | 956 | | 698 | | | | |
| Turn Bay Length (ft) | 210 | | 113 | | 110 | 100 | 135 | | | | | |
| Base Capacity (vph) | 445 | 2292 | 449 | 2185 | 522 | 1229 | 702 | 272 | 439 | 551 | | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.09 | 0.23 | 0.06 | 0.18 | 0.60 | 0.06 | 0.04 | 0.06 | 0.13 | 0.16 | | |

Intersection Summary

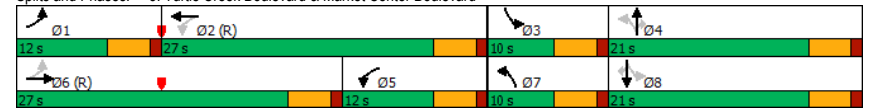
Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 12 (17%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.60

3: Turtle Creek Boulevard & Market Center Boulevard
5431-22.460

Build
Timing Plan: PM

Intersection Signal Delay: 16.2
 Intersection LOS: B
 Intersection Capacity Utilization 44.6%
 ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Turtle Creek Boulevard & Market Center Boulevard



8: Turtle Creek Boulevard & Irving Boulevard
5431-22.460

Build
Timing Plan: PM

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|------|------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↔ | ↔↔ | ↔ | ↔ | ↔↔ | ↔ | ↔ | ↔ | ↔ | ↔ | ↔ | ↔ |
| Traffic Volume (vph) | 102 | 1249 | 36 | 46 | 563 | 149 | 36 | 55 | 53 | 19 | 27 | 77 |
| Future Volume (vph) | 102 | 1249 | 36 | 46 | 563 | 149 | 36 | 55 | 53 | 19 | 27 | 77 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 111 | 1358 | 39 | 50 | 612 | 162 | 39 | 60 | 58 | 21 | 29 | 84 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 111 | 1397 | 0 | 50 | 774 | 0 | 0 | 99 | 58 | 0 | 50 | 84 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | NA | Perm | Perm | Perm | NA | Perm | Perm |
| Protected Phases | 5 | 2 | 1 | 6 | | | | 8 | | | 4 | |
| Permitted Phases | 2 | | 6 | | 8 | | 8 | 8 | 4 | | 4 | |
| Detector Phase | 5 | 2 | 1 | 6 | | | 8 | 8 | 4 | | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 22.5 | 22.5 | | | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Total Split (s) | 22.0 | 87.0 | 16.0 | 81.0 | | | 41.0 | 41.0 | 41.0 | 41.0 | 41.0 | 41.0 |
| Total Split (%) | 15.3% | 60.4% | 11.1% | 56.3% | | | 28.5% | 28.5% | 28.5% | 28.5% | 28.5% | 28.5% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | | | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lead | Lag | Lag | | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | | | | | | | | |
| Recall Mode | None | C-Max | None | C-Max | | | Max | Max | Max | Max | Max | Max |
| Act Effct Green (s) | 85.7 | 85.7 | 84.4 | 84.4 | | | 36.5 | 36.5 | 36.5 | 36.5 | 36.5 | 36.5 |
| Actuated g/C Ratio | 0.60 | 0.60 | 0.59 | 0.59 | | | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 |
| v/c Ratio | 0.27 | 0.46 | 0.17 | 0.27 | | | 0.24 | 0.13 | 0.12 | 0.18 | 0.18 | 0.18 |
| Control Delay | 15.4 | 17.4 | 18.0 | 13.6 | | | 44.6 | 4.4 | 42.5 | 9.1 | 9.1 | 9.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 15.4 | 17.4 | 18.0 | 13.6 | | | 44.6 | 4.4 | 42.5 | 9.1 | 9.1 | 9.1 |
| LOS | B | B | B | B | | | D | A | D | A | A | A |
| Approach Delay | | 17.3 | | 13.8 | | | 29.7 | | 21.5 | | | |
| Approach LOS | | B | | B | | | C | | C | | | |
| Queue Length 50th (ft) | 46 | 271 | 19 | 112 | | | 74 | 0 | 36 | 0 | 0 | 0 |
| Queue Length 95th (ft) | 76 | 309 | 40 | 144 | | | 128 | 21 | 73 | 43 | 43 | 43 |
| Internal Link Dist (ft) | | 339 | | 581 | | | 352 | | 956 | | | |
| Turn Bay Length (ft) | 133 | | 75 | | | | | | | | | |
| Base Capacity (vph) | 475 | 3016 | 300 | 2918 | | | 414 | 460 | 415 | 463 | 463 | 463 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | | | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | | | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | | | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.23 | 0.46 | 0.17 | 0.27 | | | 0.24 | 0.13 | 0.12 | 0.18 | 0.18 | 0.18 |

Intersection Summary
 Cycle Length: 144
 Actuated Cycle Length: 144
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.46

8: Turtle Creek Boulevard & Irving Boulevard
5431-22.460

Build
Timing Plan: PM

Intersection Signal Delay: 17.2
 Intersection Capacity Utilization 51.9%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 8: Turtle Creek Boulevard & Irving Boulevard



6: Site driveway 3 & Market Center Boulevard
5431-22.460

Build
Timing Plan: PM

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.5 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑↑↑ | | | ↑↑↑ | | ↑ |
| Traffic Vol, veh/h | 583 | 34 | 0 | 505 | 0 | 64 |
| Future Vol, veh/h | 583 | 34 | 0 | 505 | 0 | 64 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | - | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 634 | 37 | 0 | 549 | 0 | 70 |

| Major/Minor | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|----------|
| Conflicting Flow All | 0 | 0 | - 336 |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |
| Critical Hdwy | - | - | - 7.14 |
| Critical Hdwy Stg 1 | - | - | - |
| Critical Hdwy Stg 2 | - | - | - |
| Follow-up Hdwy | - | - | - 3.92 |
| Pot Cap-1 Maneuver | - | - | 0 - *796 |
| Stage 1 | - | - | 0 - |
| Stage 2 | - | - | 0 - |
| Platoon blocked, % | - | - | - 1 |
| Mov Cap-1 Maneuver | - | - | - *796 |
| Mov Cap-2 Maneuver | - | - | - |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |

| Approach | EB | WB | NB |
|----------------------|----|----|----|
| HCM Control Delay, s | 0 | 0 | 10 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBT |
|-----------------------|-------|-----|-----|-----|
| Capacity (veh/h) | 796 | - | - | - |
| HCM Lane V/C Ratio | 0.087 | - | - | - |
| HCM Control Delay (s) | 10 | - | - | - |
| HCM Lane LOS | B | - | - | - |
| HCM 95th %tile Q(veh) | 0.3 | - | - | - |

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

7: Site Driveway 4 & Market Center Boulevard
5431-22.460

Build
Timing Plan: PM

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.9 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑↑↑ | | | ↑↑↑ | | ↑ |
| Traffic Vol, veh/h | 426 | 34 | 136 | 369 | 0 | 191 |
| Future Vol, veh/h | 426 | 34 | 136 | 369 | 0 | 191 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | 50 | - | - | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 463 | 37 | 148 | 401 | 0 | 208 |

| Major/Minor | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|--------------|
| Conflicting Flow All | 0 | 0 | 500 - 250 |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |
| Critical Hdwy | - | - | 5.34 - 7.14 |
| Critical Hdwy Stg 1 | - | - | - |
| Critical Hdwy Stg 2 | - | - | - |
| Follow-up Hdwy | - | - | 3.12 - 3.92 |
| Pot Cap-1 Maneuver | - | - | 946 - 0 *833 |
| Stage 1 | - | - | 0 - |
| Stage 2 | - | - | 0 - |
| Platoon blocked, % | - | - | 1 - 1 |
| Mov Cap-1 Maneuver | - | - | 946 - *833 |
| Mov Cap-2 Maneuver | - | - | - |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |

| Approach | EB | WB | NB |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0 | 2.6 | 10.8 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 833 | - | - | 946 | - |
| HCM Lane V/C Ratio | 0.249 | - | - | 0.156 | - |
| HCM Control Delay (s) | 10.8 | - | - | 9.5 | - |
| HCM Lane LOS | B | - | - | A | - |
| HCM 95th %tile Q(veh) | 1 | - | - | 0.6 | - |

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

1: Oak Lawn Avenue & Irving Boulevard
5431-22.460

Horizon
Timing Plan: AM

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|-------|
| Lane Configurations | ↔ | ↕↕ | ↔ | ↔ | ↕↕ | ↔ | ↔ | ↕ | ↔ | ↔ | ↕ | ↔ |
| Traffic Volume (vph) | 179 | 322 | 15 | 26 | 822 | 4 | 11 | 33 | 4 | 15 | 55 | 385 |
| Future Volume (vph) | 179 | 322 | 15 | 26 | 822 | 4 | 11 | 33 | 4 | 15 | 55 | 385 |
| Peak Hour Factor | 0.78 | 0.94 | 0.81 | 0.79 | 0.92 | 0.50 | 0.56 | 0.88 | 0.75 | 0.54 | 0.73 | 0.88 |
| Adj. Flow (vph) | 229 | 343 | 19 | 33 | 893 | 8 | 20 | 38 | 5 | 28 | 75 | 438 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 229 | 362 | 0 | 33 | 901 | 0 | 20 | 43 | 0 | 28 | 75 | 438 |
| Turn Type | pm+pt | NA | | pm+pt | NA | | Perm | NA | | Perm | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | 6 |
| Detector Phase | 7 | 4 | | 3 | 8 | | 2 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | | 9.5 | 22.5 | | 22.5 | 22.5 | | 22.5 | 22.5 | 22.5 |
| Total Split (s) | 13.0 | 84.0 | | 13.0 | 84.0 | | 18.0 | 18.0 | | 18.0 | 18.0 | 18.0 |
| Total Split (%) | 11.3% | 73.0% | | 11.3% | 73.0% | | 15.7% | 15.7% | | 15.7% | 15.7% | 15.7% |
| Yellow Time (s) | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lag | | Lead | Lag | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Recall Mode | None | None | | None | None | | C-Max | C-Max | | C-Max | C-Max | C-Max |
| Act Effct Green (s) | 40.8 | 35.7 | | 37.2 | 30.1 | | 62.9 | 62.9 | | 62.9 | 62.9 | 62.9 |
| Actuated g/C Ratio | 0.35 | 0.31 | | 0.32 | 0.26 | | 0.55 | 0.55 | | 0.55 | 0.55 | 0.55 |
| v/c Ratio | 1.10 | 0.23 | | 0.09 | 0.68 | | 0.03 | 0.04 | | 0.04 | 0.07 | 0.44 |
| Control Delay | 118.8 | 28.5 | | 21.4 | 40.2 | | 14.4 | 12.9 | | 14.3 | 14.1 | 7.1 |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.9 |
| Total Delay | 118.8 | 28.5 | | 21.4 | 40.2 | | 14.4 | 12.9 | | 14.3 | 14.1 | 8.0 |
| LOS | F | C | | C | D | | B | B | | B | B | A |
| Approach Delay | | 63.5 | | | 39.5 | | | 13.4 | | | | 9.1 |
| Approach LOS | | E | | | D | | | B | | | | A |
| Queue Length 50th (ft) | -132 | 72 | | 15 | 219 | | 7 | 12 | | 9 | 25 | 53 |
| Queue Length 95th (ft) | #200 | 93 | | 29 | 242 | | 13 | 34 | | 16 | 45 | 135 |
| Internal Link Dist (ft) | | 192 | | | 382 | | | 653 | | | 332 | |
| Turn Bay Length (ft) | 84 | | | 85 | | | | | | 60 | | 140 |
| Base Capacity (vph) | 209 | 3492 | | 388 | 3512 | | 720 | 1002 | | 742 | 1018 | 995 |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | 296 |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Reduced v/c Ratio | 1.10 | 0.10 | | 0.09 | 0.26 | | 0.03 | 0.04 | | 0.04 | 0.07 | 0.63 |

Intersection Summary

Cycle Length: 115
 Actuated Cycle Length: 115
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.10

1: Oak Lawn Avenue & Irving Boulevard
5431-22.460

Horizon
Timing Plan: AM

Intersection Signal Delay: 37.7
 Intersection LOS: D
 Intersection Capacity Utilization 55.2%
 ICU Level of Service B
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Oak Lawn Avenue & Irving Boulevard



2: Oak Lawn Avenue & Market Center Boulevard
5431-22.460

Horizon
Timing Plan: AM

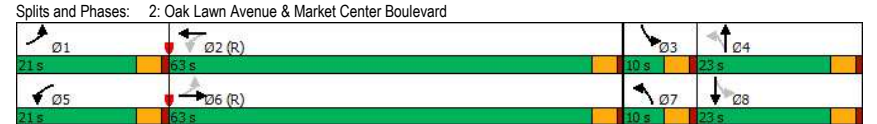
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|
| Lane Configurations | ↔ | ↕↕↕ | ↔ | ↔ | ↕↕↕ | ↔ | ↔ | ↕↕↕ | ↔ | ↔ | ↕↕↕ | ↔ |
| Traffic Volume (vph) | 107 | 154 | 29 | 18 | 715 | 221 | 5 | 208 | 7 | 77 | 413 | 161 |
| Future Volume (vph) | 107 | 154 | 29 | 18 | 715 | 221 | 5 | 208 | 7 | 77 | 413 | 161 |
| Confl. Peds. (#/hr) | 130 | | | | | | | | | | | |
| Peak Hour Factor | 0.78 | 0.82 | 0.69 | 0.54 | 0.93 | 0.86 | 0.50 | 0.87 | 0.50 | 0.83 | 0.90 | 0.73 |
| Adj. Flow (vph) | 137 | 188 | 42 | 33 | 769 | 257 | 10 | 239 | 14 | 93 | 459 | 221 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 137 | 230 | 0 | 33 | 1026 | 0 | 10 | 253 | 0 | 93 | 680 | 0 |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | |
| Protected Phases | 1 | 6 | | 5 | 2 | | 7 | 4 | | 3 | 8 | |
| Permitted Phases | 6 | | | 2 | | | 4 | | | 8 | | |
| Detector Phase | 1 | 6 | | 5 | 2 | | 7 | 4 | | 3 | 8 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Minimum Split (s) | 9.5 | 22.5 | | 9.5 | 22.5 | | 9.5 | 22.5 | | 9.5 | 22.5 | |
| Total Split (s) | 21.0 | 63.0 | | 21.0 | 63.0 | | 10.0 | 23.0 | | 10.0 | 23.0 | |
| Total Split (%) | 17.9% | 53.8% | | 17.9% | 53.8% | | 8.5% | 19.7% | | 8.5% | 19.7% | |
| Yellow Time (s) | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Recall Mode | None | C-Max | | None | C-Max | | None | None | | None | None | |
| Act Effect Green (s) | 78.6 | 72.8 | | 72.6 | 66.3 | | 24.0 | 18.5 | | 27.6 | 26.5 | |
| Actuated g/C Ratio | 0.67 | 0.62 | | 0.62 | 0.57 | | 0.21 | 0.16 | | 0.24 | 0.23 | |
| v/c Ratio | 0.39 | 0.07 | | 0.05 | 0.36 | | 0.07 | 0.45 | | 0.40 | 0.84 | |
| Control Delay | 9.8 | 7.9 | | 6.6 | 12.8 | | 35.0 | 46.9 | | 41.8 | 50.5 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 9.8 | 7.9 | | 6.6 | 12.8 | | 35.0 | 46.9 | | 41.8 | 50.5 | |
| LOS | A | A | | A | B | | C | D | | D | D | |
| Approach Delay | 8.6 | | | 12.6 | | | 46.4 | | | 49.5 | | |
| Approach LOS | A | | | B | | | D | | | D | | |
| Queue Length 50th (ft) | 33 | 20 | | 7 | 130 | | 6 | 90 | | 56 | 233 | |
| Queue Length 95th (ft) | 47 | 30 | | 10 | 168 | | 12 | 127 | | 94 | #424 | |
| Internal Link Dist (ft) | 164 | | | 443 | | | 332 | | | 494 | | |
| Turn Bay Length (ft) | 130 | | | 80 | | | 70 | | | 109 | | |
| Base Capacity (vph) | 451 | 3096 | | 853 | 2818 | | 136 | 558 | | 233 | 807 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.30 | 0.07 | | 0.04 | 0.36 | | 0.07 | 0.45 | | 0.40 | 0.84 | |

Intersection Summary
 Cycle Length: 117
 Actuated Cycle Length: 117
 Offset: 21 (18%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated

2: Oak Lawn Avenue & Market Center Boulevard
5431-22.460

Horizon
Timing Plan: AM

Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 27.2
 Intersection LOS: C
 Intersection Capacity Utilization 60.4%
 ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.



3: Turtle Creek Boulevard & Market Center Boulevard
5431-22.460

Horizon
Timing Plan: AM

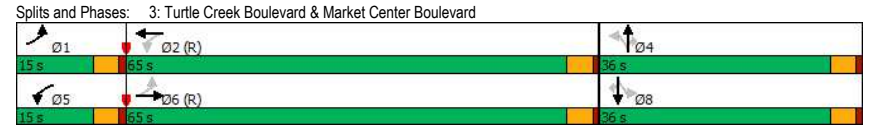
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↔ | ↕↕ | ↔ | ↔ | ↕↕ | ↔ | ↔ | ↕↕ | ↔ | ↔ | ↕ | ↔ |
| Traffic Volume (vph) | 18 | 373 | 97 | 12 | 571 | 7 | 58 | 32 | 16 | 12 | 59 | 77 |
| Future Volume (vph) | 18 | 373 | 97 | 12 | 571 | 7 | 58 | 32 | 16 | 12 | 59 | 77 |
| Peak Hour Factor | 0.50 | 0.96 | 0.85 | 0.63 | 0.88 | 0.75 | 0.67 | 0.96 | 0.50 | 0.63 | 0.78 | 0.69 |
| Adj. Flow (vph) | 36 | 389 | 114 | 19 | 649 | 9 | 87 | 33 | 32 | 19 | 76 | 112 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 36 | 503 | 0 | 19 | 658 | 0 | 87 | 33 | 32 | 19 | 76 | 112 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | NA | Perm | Perm | Perm | NA | Perm | Perm |
| Protected Phases | 1 | 6 | 5 | 2 | 4 | 4 | 4 | 4 | 8 | 8 | 8 | 8 |
| Permitted Phases | 6 | | 2 | | 4 | 4 | 4 | 4 | 8 | 8 | 8 | 8 |
| Detector Phase | 1 | 6 | 5 | 2 | 4 | 4 | 4 | 4 | 8 | 8 | 8 | 8 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Total Split (s) | 15.0 | 65.0 | 15.0 | 65.0 | 36.0 | 36.0 | 36.0 | 36.0 | 36.0 | 36.0 | 36.0 | 36.0 |
| Total Split (%) | 12.9% | 56.0% | 12.9% | 56.0% | 31.0% | 31.0% | 31.0% | 31.0% | 31.0% | 31.0% | 31.0% | 31.0% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lead | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Min | None | C-Min | None | C-Min | None | C-Min | None | C-Min | None | C-Min |
| Act Effct Green (s) | 92.3 | 89.7 | 91.1 | 87.5 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| Actuated g/C Ratio | 0.80 | 0.77 | 0.79 | 0.75 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| v/c Ratio | 0.06 | 0.13 | 0.03 | 0.17 | 0.59 | 0.08 | 0.14 | 0.12 | 0.36 | 0.40 | 0.40 | 0.40 |
| Control Delay | 3.1 | 3.5 | 3.0 | 5.0 | 64.3 | 44.2 | 5.2 | 45.7 | 51.1 | 12.6 | 12.6 | 12.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 3.1 | 3.5 | 3.0 | 5.0 | 64.3 | 44.2 | 5.2 | 45.7 | 51.1 | 12.6 | 12.6 | 12.6 |
| LOS | A | A | A | A | E | D | A | D | D | D | B | B |
| Approach Delay | | 3.5 | | 5.0 | | 47.5 | | 29.8 | | | | |
| Approach LOS | | A | | A | | D | | C | | | | |
| Queue Length 50th (ft) | 4 | 17 | 2 | 50 | 63 | 11 | 0 | 13 | 53 | 0 | 0 | 0 |
| Queue Length 95th (ft) | 7 | 50 | 6 | 78 | 80 | 26 | 0 | 24 | 83 | 21 | 21 | 21 |
| Internal Link Dist (ft) | | 527 | | 443 | | 954 | | 698 | | | | |
| Turn Bay Length (ft) | 210 | | 113 | | 110 | 100 | 135 | | | | | |
| Base Capacity (vph) | 673 | 3821 | 771 | 3829 | 356 | 961 | 470 | 371 | 505 | 511 | 511 | 511 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.05 | 0.13 | 0.02 | 0.17 | 0.24 | 0.03 | 0.07 | 0.05 | 0.15 | 0.22 | 0.22 | 0.22 |

Intersection Summary
 Cycle Length: 116
 Actuated Cycle Length: 116
 Offset: 15 (13%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.59

3: Turtle Creek Boulevard & Market Center Boulevard
5431-22.460

Horizon
Timing Plan: AM

Intersection Signal Delay: 11.8 Intersection LOS: B
 Intersection Capacity Utilization 32.3% ICU Level of Service A
 Analysis Period (min) 15



8: Turtle Creek Boulevard & Irving Boulevard
5431-22.460

Horizon
Timing Plan: AM

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↔ | ↕↕↕ | ↔ | ↔ | ↕↕↕ | ↔ | ↔ | ↕ | ↕ | ↔ | ↕ | ↕ |
| Traffic Volume (vph) | 69 | 525 | 13 | 21 | 769 | 28 | 13 | 18 | 26 | 34 | 25 | 96 |
| Future Volume (vph) | 69 | 525 | 13 | 21 | 769 | 28 | 13 | 18 | 26 | 34 | 25 | 96 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 75 | 571 | 14 | 23 | 836 | 30 | 14 | 20 | 28 | 37 | 27 | 104 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 75 | 585 | 0 | 23 | 866 | 0 | 0 | 34 | 28 | 0 | 64 | 104 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | NA | Perm | Perm | Perm | NA | Perm | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | 8 | 4 | | 4 |
| Detector Phase | 5 | 2 | | 1 | 6 | | 8 | 8 | 8 | 4 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | | 9.5 | 22.5 | | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Total Split (s) | 22.0 | 64.0 | | 16.0 | 58.0 | | 37.0 | 37.0 | 37.0 | 37.0 | 37.0 | 37.0 |
| Total Split (%) | 18.8% | 54.7% | | 13.7% | 49.6% | | 31.6% | 31.6% | 31.6% | 31.6% | 31.6% | 31.6% |
| Yellow Time (s) | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lead | | Lag | Lag | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Recall Mode | None | C-Max | | None | C-Max | | None | None | None | None | None | None |
| Act Effct Green (s) | 88.3 | 88.3 | | 88.4 | 88.4 | | 10.1 | 10.1 | | 10.1 | 10.1 | |
| Actuated g/C Ratio | 0.75 | 0.75 | | 0.76 | 0.76 | | 0.09 | 0.09 | | 0.09 | 0.09 | |
| v/c Ratio | 0.16 | 0.15 | | 0.03 | 0.23 | | 0.25 | 0.12 | | 0.50 | 0.45 | |
| Control Delay | 6.2 | 5.1 | | 5.3 | 5.0 | | 52.7 | 1.1 | | 63.3 | 15.6 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 6.2 | 5.1 | | 5.3 | 5.0 | | 52.7 | 1.1 | | 63.3 | 15.6 | |
| LOS | A | A | | A | A | | D | A | | E | B | |
| Approach Delay | | 5.3 | | | 5.0 | | 29.4 | | | 33.8 | | |
| Approach LOS | | A | | | A | | C | | | C | | |
| Queue Length 50th (ft) | 16 | 48 | | 4 | 64 | | 24 | 0 | | 47 | 0 | |
| Queue Length 95th (ft) | 35 | 71 | | 13 | 98 | | 55 | 0 | | 90 | 51 | |
| Internal Link Dist (ft) | | 330 | | | 590 | | 366 | | | 954 | | |
| Turn Bay Length (ft) | 133 | | | 75 | | | | | | | | |
| Base Capacity (vph) | 592 | 3822 | | 689 | 3824 | | 445 | 510 | | 415 | 514 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.13 | 0.15 | | 0.03 | 0.23 | | 0.08 | 0.05 | | 0.15 | 0.20 | |

Intersection Summary

Cycle Length: 117
 Actuated Cycle Length: 117
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.50

8: Turtle Creek Boulevard & Irving Boulevard
5431-22.460

Horizon
Timing Plan: AM

Intersection Signal Delay: 8.7
 Intersection Capacity Utilization 40.8%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 8: Turtle Creek Boulevard & Irving Boulevard



1: Oak Lawn Avenue & Irving Boulevard
5431-22.460

Horizon
Timing Plan: PM

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↔ | ↔↔ | ↔ | ↔ | ↔↔ | ↔ | ↔ | ↔ | ↔ | ↔ | ↔ | ↔ |
| Traffic Volume (vph) | 305 | 1443 | 9 | 9 | 416 | 13 | 16 | 89 | 23 | 77 | 33 | 330 |
| Future Volume (vph) | 305 | 1443 | 9 | 9 | 416 | 13 | 16 | 89 | 23 | 77 | 33 | 330 |
| Peak Hour Factor | 0.73 | 0.88 | 0.67 | 0.50 | 0.89 | 0.69 | 0.70 | 0.58 | 0.56 | 0.87 | 0.64 | 0.78 |
| Adj. Flow (vph) | 418 | 1640 | 13 | 18 | 467 | 19 | 23 | 153 | 41 | 89 | 52 | 423 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 418 | 1653 | 0 | 18 | 486 | 0 | 23 | 194 | 0 | 89 | 52 | 423 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | NA | Perm | NA | Perm | NA | Perm | Perm |
| Protected Phases | 7 | 4 | 3 | 8 | | | 2 | 2 | | 6 | 6 | |
| Permitted Phases | 4 | | 8 | | | | 2 | | | 6 | | 6 |
| Detector Phase | 7 | 4 | 3 | 8 | | | 2 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 9.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Total Split (s) | 10.0 | 40.0 | 10.0 | 40.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 |
| Total Split (%) | 14.3% | 57.1% | 14.3% | 57.1% | 28.6% | 28.6% | 28.6% | 28.6% | 28.6% | 28.6% | 28.6% | 28.6% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | | | | | | | | |
| Recall Mode | None | None | None | None | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s) | 35.2 | 34.1 | 31.6 | 26.1 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 |
| Actuated g/C Ratio | 0.50 | 0.49 | 0.45 | 0.37 | 0.36 | 0.36 | 0.36 | 0.36 | 0.36 | 0.36 | 0.36 | 0.36 |
| v/c Ratio | 0.91 | 0.67 | 0.08 | 0.26 | 0.05 | 0.30 | 0.23 | 0.08 | 0.51 | | | |
| Control Delay | 39.3 | 14.9 | 6.9 | 14.3 | 19.1 | 18.6 | 8.7 | 6.8 | 6.2 | | | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | |
| Total Delay | 39.3 | 14.9 | 6.9 | 14.3 | 19.1 | 18.6 | 8.7 | 6.8 | 6.2 | | | |
| LOS | D | B | A | B | B | B | A | A | A | | | |
| Approach Delay | | 19.8 | | 14.0 | | 18.6 | | 6.6 | | | | |
| Approach LOS | | B | | B | | B | | A | | | | |
| Queue Length 50th (ft) | 109 | 178 | 4 | 51 | 6 | 52 | 6 | 3 | 15 | | | |
| Queue Length 95th (ft) | 85 | 215 | 4 | 54 | 20 | 72 | m35 | m13 | 182 | | | |
| Internal Link Dist (ft) | | 192 | | 382 | | 653 | | 332 | | | | |
| Turn Bay Length (ft) | 84 | | 85 | | | | 60 | | 140 | | | |
| Base Capacity (vph) | 459 | 2619 | 232 | 2569 | 478 | 652 | 393 | 662 | 835 | | | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Reduced v/c Ratio | 0.91 | 0.63 | 0.08 | 0.19 | 0.05 | 0.30 | 0.23 | 0.08 | 0.51 | | | |

Intersection Summary

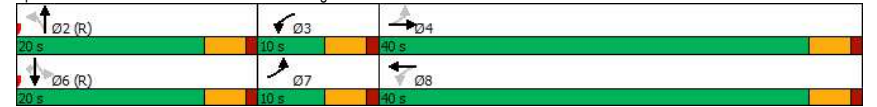
Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.91

1: Oak Lawn Avenue & Irving Boulevard
5431-22.460

Horizon
Timing Plan: PM

Intersection Signal Delay: 16.7
 Intersection LOS: B
 Intersection Capacity Utilization 54.4%
 ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Oak Lawn Avenue & Irving Boulevard



2: Oak Lawn Avenue & Market Center Boulevard
5431-22.460

Horizon
Timing Plan: PM

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|
| Lane Configurations | ↔ | ↕ | ↔ | ↔ | ↕ | ↔ | ↔ | ↕ | ↔ | ↔ | ↕ | ↔ |
| Traffic Volume (vph) | 275 | 393 | 20 | 21 | 369 | 152 | 41 | 352 | 9 | 214 | 400 | 134 |
| Future Volume (vph) | 275 | 393 | 20 | 21 | 369 | 152 | 41 | 352 | 9 | 214 | 400 | 134 |
| Confl. Peds. (#/hr) | 130 | | | | | | | | | | | |
| Peak Hour Factor | 0.85 | 0.88 | 0.61 | 0.56 | 0.87 | 0.86 | 0.73 | 0.79 | 0.67 | 0.85 | 0.83 | 0.74 |
| Adj. Flow (vph) | 324 | 447 | 33 | 38 | 424 | 177 | 56 | 446 | 13 | 252 | 482 | 181 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 324 | 480 | 0 | 38 | 601 | 0 | 56 | 459 | 0 | 252 | 663 | 0 |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | |
| Protected Phases | 1 | 6 | | 5 | 2 | | 7 | 4 | | 3 | 8 | |
| Permitted Phases | 6 | | | 2 | | | 4 | | | 8 | | |
| Detector Phase | 1 | 6 | | 5 | 2 | | 7 | 4 | | 3 | 8 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Minimum Split (s) | 9.5 | 22.5 | | 9.5 | 22.5 | | 9.5 | 22.5 | | 9.5 | 22.5 | |
| Total Split (s) | 15.0 | 27.0 | | 15.0 | 27.0 | | 10.0 | 18.0 | | 10.0 | 18.0 | |
| Total Split (%) | 21.4% | 38.6% | | 21.4% | 38.6% | | 14.3% | 25.7% | | 14.3% | 25.7% | |
| Yellow Time (s) | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 | 4.5 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Recall Mode | None | C-Max | | None | C-Max | | None | None | | None | None | |
| Act Effect Green (s) | 37.9 | 33.7 | | 29.9 | 23.6 | | 18.2 | 12.7 | | 20.0 | 16.7 | |
| Actuated g/C Ratio | 0.54 | 0.48 | | 0.43 | 0.34 | | 0.26 | 0.18 | | 0.29 | 0.24 | |
| v/c Ratio | 0.69 | 0.20 | | 0.08 | 0.34 | | 0.24 | 0.71 | | 0.98 | 0.77 | |
| Control Delay | 21.4 | 6.6 | | 8.7 | 13.5 | | 15.8 | 28.7 | | 79.1 | 31.7 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 21.4 | 6.6 | | 8.7 | 13.5 | | 15.8 | 28.7 | | 79.1 | 31.7 | |
| LOS | C | A | | A | B | | B | C | | E | C | |
| Approach Delay | 12.6 | | | 13.2 | | | 27.3 | | | 44.8 | | |
| Approach LOS | B | | | B | | | C | | | D | | |
| Queue Length 50th (ft) | 41 | 19 | | 7 | 51 | | 14 | 101 | | -84 | 134 | |
| Queue Length 95th (ft) | 115 | 35 | | 12 | 74 | | m21 | m110 | | #175 | #203 | |
| Internal Link Dist (ft) | 164 | | 443 | | 332 | | 494 | | | | | |
| Turn Bay Length (ft) | 130 | | | 80 | | | 70 | | | 109 | | |
| Base Capacity (vph) | 477 | 2433 | | 559 | 1746 | | 232 | 683 | | 256 | 862 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.68 | 0.20 | | 0.07 | 0.34 | | 0.24 | 0.67 | | 0.98 | 0.77 | |

Intersection Summary

Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 15 (21%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated

2: Oak Lawn Avenue & Market Center Boulevard
5431-22.460

Horizon
Timing Plan: PM

Maximum v/c Ratio: 0.98
 Intersection Signal Delay: 25.6
 Intersection Capacity Utilization 62.6%
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 ~ Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 ~ Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Oak Lawn Avenue & Market Center Boulevard



3: Turtle Creek Boulevard & Market Center Boulevard
5431-22.460

Horizon
Timing Plan: PM

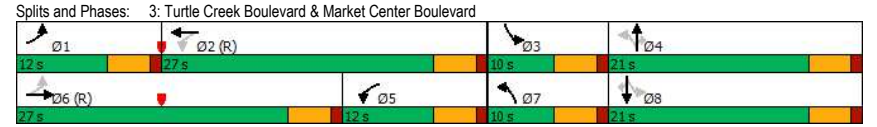
| | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↔ | ↕ | ↔ | ↔ | ↕ | ↔ | ↔ | ↕ | ↔ | ↔ | ↕ | ↔ |
| Traffic Volume (vph) | 36 | 418 | 71 | 25 | 366 | 15 | 256 | 74 | 25 | 12 | 46 | 80 |
| Future Volume (vph) | 36 | 418 | 71 | 25 | 366 | 15 | 256 | 74 | 25 | 12 | 46 | 80 |
| Peak Hour Factor | 0.78 | 0.89 | 0.70 | 0.75 | 0.89 | 0.50 | 0.79 | 0.88 | 0.75 | 0.63 | 0.75 | 0.81 |
| Adj. Flow (vph) | 46 | 470 | 101 | 33 | 411 | 30 | 324 | 84 | 33 | 19 | 61 | 99 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 46 | 571 | 0 | 33 | 441 | 0 | 324 | 84 | 33 | 19 | 61 | 99 |
| Turn Type | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm | NA | Perm |
| Protected Phases | 1 | 6 | 5 | 2 | 7 | 4 | 4 | 8 | 3 | 8 | | |
| Permitted Phases | 6 | | 2 | | 4 | | 4 | 8 | | 8 | | 8 |
| Detector Phase | 1 | 6 | 5 | 2 | 7 | 4 | 4 | 3 | 8 | 8 | | 8 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 | 22.5 | 9.5 | 22.5 | 9.5 | 22.5 | 22.5 |
| Total Split (s) | 12.0 | 27.0 | 12.0 | 27.0 | 10.0 | 21.0 | 21.0 | 10.0 | 21.0 | 10.0 | 21.0 | 21.0 |
| Total Split (%) | 17.1% | 38.6% | 17.1% | 38.6% | 14.3% | 30.0% | 30.0% | 14.3% | 30.0% | 30.0% | 30.0% | 30.0% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Min | None | C-Min | None | None | None | None | None | None | None | None |
| Act Effct Green (s) | 31.3 | 31.3 | 28.3 | 28.3 | 25.5 | 23.2 | 23.2 | 12.7 | 7.8 | 7.8 | | |
| Actuated g/C Ratio | 0.45 | 0.45 | 0.40 | 0.40 | 0.36 | 0.33 | 0.33 | 0.18 | 0.11 | 0.11 | | |
| v/c Ratio | 0.11 | 0.25 | 0.08 | 0.22 | 0.63 | 0.07 | 0.05 | 0.07 | 0.30 | 0.26 | | |
| Control Delay | 16.2 | 13.0 | 23.8 | 19.5 | 22.2 | 15.8 | 0.1 | 14.1 | 31.7 | 1.6 | | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| Total Delay | 16.2 | 13.0 | 23.8 | 19.5 | 22.2 | 15.8 | 0.1 | 14.1 | 31.7 | 1.6 | | |
| LOS | B | B | C | B | C | B | A | B | C | A | | |
| Approach Delay | | 13.3 | | 19.8 | | 19.3 | | 13.2 | | | | |
| Approach LOS | | B | | B | | B | | B | | | | |
| Queue Length 50th (ft) | 11 | 47 | 11 | 50 | 93 | 10 | 0 | 5 | 25 | 0 | | |
| Queue Length 95th (ft) | 30 | 84 | m24 | m87 | 136 | 30 | 0 | 11 | 46 | 0 | | |
| Internal Link Dist (ft) | | 527 | | 443 | | 956 | | 698 | | | | |
| Turn Bay Length (ft) | 210 | | 113 | | 110 | 100 | 135 | | | | | |
| Base Capacity (vph) | 431 | 2273 | 436 | 2167 | 517 | 1219 | 698 | 276 | 439 | 551 | | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Reduced v/c Ratio | 0.11 | 0.25 | 0.08 | 0.20 | 0.63 | 0.07 | 0.05 | 0.07 | 0.14 | 0.18 | | |

Intersection Summary
 Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 12 (17%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.63

3: Turtle Creek Boulevard & Market Center Boulevard
5431-22.460

Horizon
Timing Plan: PM

Intersection Signal Delay: 16.6 Intersection LOS: B
 Intersection Capacity Utilization 45.9% ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.



8: Turtle Creek Boulevard & Irving Boulevard
5431-22.460

Horizon
Timing Plan: PM

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|-------|-------|-------|-------|------|------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↔ | ↔↔↔ | ↔ | ↔ | ↔↔↔ | ↔ | ↔ | ↔ | ↔ | ↔ | ↔ | ↔ |
| Traffic Volume (vph) | 112 | 1375 | 40 | 50 | 614 | 151 | 38 | 58 | 59 | 20 | 29 | 86 |
| Future Volume (vph) | 112 | 1375 | 40 | 50 | 614 | 151 | 38 | 58 | 59 | 20 | 29 | 86 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 122 | 1495 | 43 | 54 | 667 | 164 | 41 | 63 | 64 | 22 | 32 | 93 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 122 | 1538 | 0 | 54 | 831 | 0 | 0 | 104 | 64 | 0 | 54 | 93 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | NA | Perm | Perm | Perm | NA | Perm | Perm |
| Protected Phases | 5 | 2 | 1 | 6 | | | 8 | 8 | 8 | 4 | 4 | 4 |
| Permitted Phases | 2 | | 6 | | 8 | | 8 | 8 | 8 | 4 | 4 | 4 |
| Detector Phase | 5 | 2 | 1 | 6 | | | 8 | 8 | 8 | 4 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 9.5 | 22.5 | 22.5 | 22.5 | | | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| Total Split (s) | 22.0 | 87.0 | 16.0 | 81.0 | | | 41.0 | 41.0 | 41.0 | 41.0 | 41.0 | 41.0 |
| Total Split (%) | 15.3% | 60.4% | 11.1% | 56.3% | | | 28.5% | 28.5% | 28.5% | 28.5% | 28.5% | 28.5% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | | | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | | | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | Lead | Lag | Lag | | | Yes | Yes | Yes | Yes | Yes | Yes |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | | | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Max | None | C-Max | | | Max | Max | Max | Max | Max | Max |
| Act Effct Green (s) | 85.7 | 85.7 | 84.0 | 84.0 | | | 36.5 | 36.5 | 36.5 | 36.5 | 36.5 | 36.5 |
| Actuated g/C Ratio | 0.60 | 0.60 | 0.58 | 0.58 | | | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 |
| v/c Ratio | 0.31 | 0.51 | 0.21 | 0.29 | | | 0.25 | 0.14 | 0.13 | 0.13 | 0.20 | 0.20 |
| Control Delay | 15.9 | 18.2 | 20.4 | 14.3 | | | 44.9 | 5.7 | 42.6 | 8.7 | 8.7 | 8.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 15.9 | 18.2 | 20.4 | 14.3 | | | 44.9 | 5.7 | 42.6 | 8.7 | 8.7 | 8.7 |
| LOS | B | B | C | B | | | D | A | D | D | A | A |
| Approach Delay | | 18.0 | | 14.6 | | | 30.0 | | | | 21.2 | |
| Approach LOS | | B | | B | | | C | | | | C | |
| Queue Length 50th (ft) | 51 | 310 | 21 | 126 | | | 78 | 0 | 39 | 0 | 0 | 0 |
| Queue Length 95th (ft) | 83 | 352 | 43 | 160 | | | 133 | 27 | 78 | 46 | 46 | 46 |
| Internal Link Dist (ft) | | 339 | | 581 | | | 352 | | 956 | | | |
| Turn Bay Length (ft) | 133 | | 75 | | | | | | | | | |
| Base Capacity (vph) | 455 | 3016 | 271 | 2903 | | | 413 | 460 | 415 | 470 | 470 | 470 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | | | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | | | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | | | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.27 | 0.51 | 0.20 | 0.29 | | | 0.25 | 0.14 | 0.13 | 0.20 | 0.20 | 0.20 |

Intersection Summary

Cycle Length: 144
 Actuated Cycle Length: 144
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.51

8: Turtle Creek Boulevard & Irving Boulevard
5431-22.460

Horizon
Timing Plan: PM

Intersection Signal Delay: 17.8
 Intersection LOS: B
 Intersection Capacity Utilization 54.7%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 8: Turtle Creek Boulevard & Irving Boulevard



| Intersection | | | | | | | | | | | | |
|--------------------------|-------|------|------|-------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 4.6 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↵ ↑↑↑ | | | ↵ ↑↑↑ | | | ↵ | ↵ | | ↕ | | |
| Traffic Vol, veh/h | 31 | 449 | 45 | 154 | 758 | 151 | 2 | 1 | 33 | 22 | 0 | 24 |
| Future Vol, veh/h | 31 | 449 | 45 | 154 | 758 | 151 | 2 | 1 | 33 | 22 | 0 | 24 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 43 | - | - | 60 | - | - | 150 | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 50 | 91 | 75 | 52 | 94 | 50 | 50 | 50 | 58 | 92 | 92 | 50 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 62 | 493 | 60 | 296 | 806 | 302 | 4 | 2 | 57 | 24 | 0 | 48 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|------|------|--------|------|------|
| Conflicting Flow All | 1108 | 0 | 0 | 553 | 0 | 0 | 1561 | 2347 | 277 | 1871 | 2226 | 554 |
| Stage 1 | - | - | - | - | - | - | 647 | 647 | - | 1549 | 1549 | - |
| Stage 2 | - | - | - | - | - | - | 914 | 1700 | - | 322 | 677 | - |
| Critical Hdwy | 5.34 | - | - | 5.34 | - | - | 6.44 | 6.54 | 7.14 | 6.44 | 6.54 | 7.14 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 7.34 | 5.54 | - | 7.34 | 5.54 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.74 | 5.54 | - | 6.74 | 5.54 | - |
| Follow-up Hdwy | 3.12 | - | - | 3.12 | - | - | 3.82 | 4.02 | 3.92 | 3.82 | 4.02 | 3.92 |
| Pot Cap-1 Maneuver | 641 | - | - | 933 | - | - | 118 | 36 | *822 | *76 | 43 | *753 |
| Stage 1 | - | - | - | - | - | - | 621 | 656 | - | *190 | 290 | - |
| Stage 2 | - | - | - | - | - | - | 648 | 238 | - | *844 | 635 | - |
| Platoon blocked, % | 1 | - | - | 1 | - | - | - | - | 1 | - | - | 1 |
| Mov Cap-1 Maneuver | 641 | - | - | 933 | - | - | 78 | 22 | *822 | *46 | 27 | *753 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 78 | 22 | - | *46 | 27 | - |
| Stage 1 | - | - | - | - | - | - | 560 | 593 | - | *172 | 198 | - |
| Stage 2 | - | - | - | - | - | - | 414 | 163 | - | *707 | 573 | - |

| Approach | EB | | | WB | | | NB | | | SB | | |
|----------------------|-----|--|--|-----|--|--|----|--|--|----|--|--|
| HCM Control Delay, s | 1.1 | | | 2.2 | | | 19 | | | 69 | | |
| HCM LOS | | | | | | | C | | | F | | |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 78 | 368 | 641 | - | - | 933 | - | - | 123 |
| HCM Lane V/C Ratio | 0.051 | 0.16 | 0.097 | - | - | 0.317 | - | - | 0.585 |
| HCM Control Delay (s) | 53.6 | 16.6 | 11.2 | - | - | 10.6 | - | - | 69 |
| HCM Lane LOS | F | C | B | - | - | B | - | - | F |
| HCM 95th %tile Q(veh) | 0.2 | 0.6 | 0.3 | - | - | 1.4 | - | - | 2.9 |

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

| Intersection | | | | | | | | | | | | |
|--------------------------|-------|------|------|-------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 416.5 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↵ ↑↑↑ | | | ↵ ↑↑↑ | | | ↵ | ↵ | | ↕ | | |
| Traffic Vol, veh/h | 17 | 1324 | 31 | 66 | 561 | 85 | 6 | 0 | 145 | 162 | 0 | 161 |
| Future Vol, veh/h | 17 | 1324 | 31 | 66 | 561 | 85 | 6 | 0 | 145 | 162 | 0 | 161 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 43 | - | - | 60 | - | - | 150 | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 85 | 50 | 61 | 92 | 92 | 75 | 92 | 58 | 50 | 50 | 50 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 18 | 1558 | 62 | 108 | 610 | 92 | 8 | 0 | 250 | 324 | 0 | 322 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|------|------|--------|------|------|
| Conflicting Flow All | 702 | 0 | 0 | 1620 | 0 | 0 | 2085 | 2543 | 810 | 1531 | 2528 | 351 |
| Stage 1 | - | - | - | - | - | - | 1625 | 1625 | - | 872 | 872 | - |
| Stage 2 | - | - | - | - | - | - | 460 | 918 | - | 659 | 1656 | - |
| Critical Hdwy | 5.34 | - | - | 5.34 | - | - | 6.44 | 6.54 | 7.14 | 6.44 | 6.54 | 7.14 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 7.34 | 5.54 | - | 7.34 | 5.54 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.74 | 5.54 | - | 6.74 | 5.54 | - |
| Follow-up Hdwy | 3.12 | - | - | 3.12 | - | - | 3.82 | 4.02 | 3.92 | 3.82 | 4.02 | 3.92 |
| Pot Cap-1 Maneuver | 878 | - | - | 661 | - | - | *56 | 27 | *605 | *~ 123 | 27 | *796 |
| Stage 1 | - | - | - | - | - | - | *501 | 514 | - | *502 | 565 | - |
| Stage 2 | - | - | - | - | - | - | *817 | 535 | - | *621 | 490 | - |
| Platoon blocked, % | 1 | - | - | 1 | - | - | | | 1 | | | 1 |
| Mov Cap-1 Maneuver | 878 | - | - | 661 | - | - | *29 | 22 | *605 | *~ 62 | 22 | *796 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | *29 | 22 | - | *~ 62 | 22 | - |
| Stage 1 | - | - | - | - | - | - | *491 | 503 | - | *491 | 473 | - |
| Stage 2 | - | - | - | - | - | - | *407 | 448 | - | *357 | 480 | - |

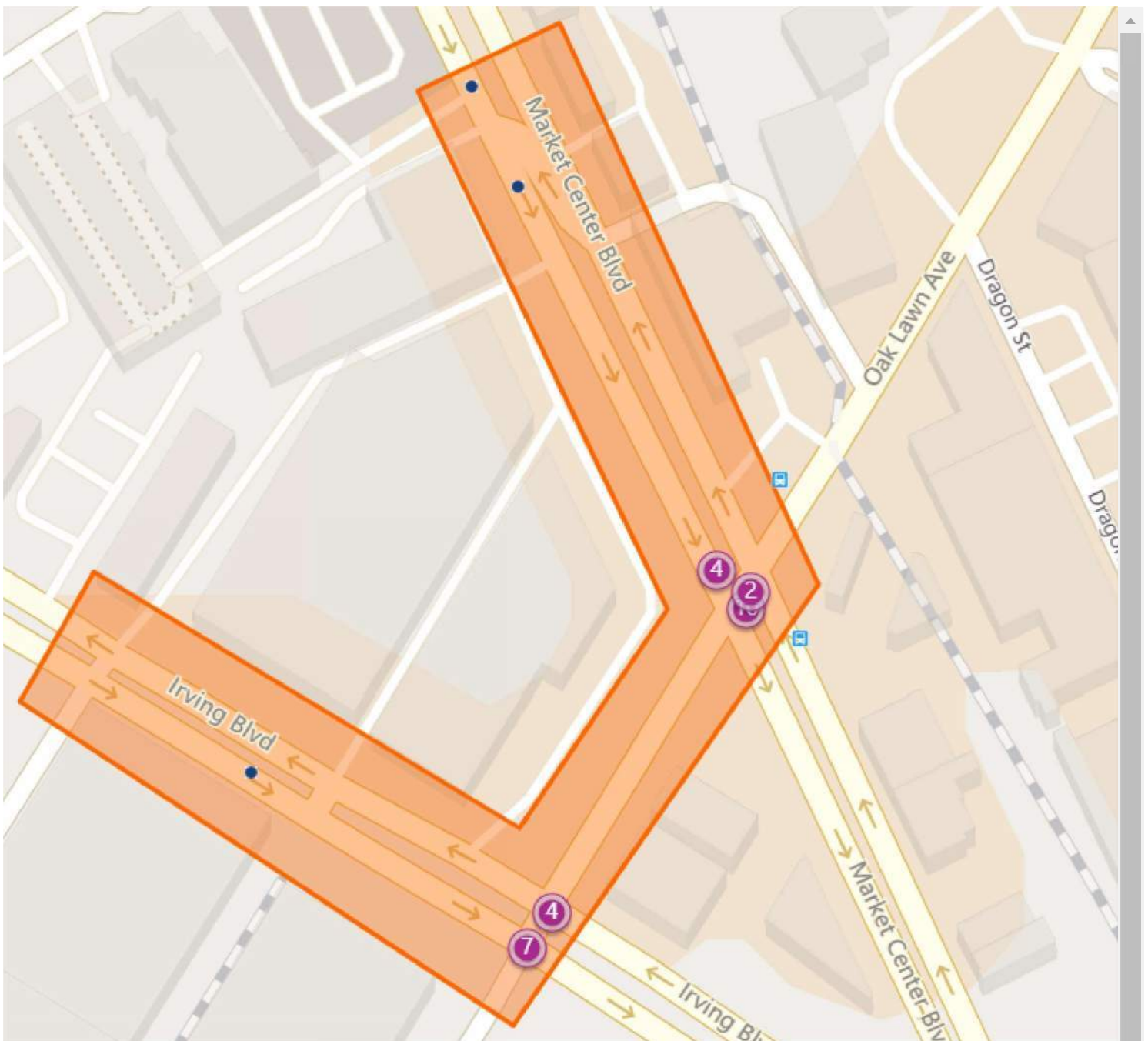
| Approach | EB | WB | NB | SB |
|----------------------|-----|-----|------|-----------|
| HCM Control Delay, s | 0.1 | 1.5 | 19.9 | \$ 2151.5 |
| HCM LOS | | | C | F |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-------|-----|-----|-------|-----|-----|----------|
| Capacity (veh/h) | 29 | 605 | 878 | - | - | 661 | - | - | 115 |
| HCM Lane V/C Ratio | 0.276 | 0.413 | 0.021 | - | - | 0.164 | - | - | 5.617 |
| HCM Control Delay (s) | 171 | 15.1 | 9.2 | - | - | 11.5 | - | - | \$2151.5 |
| HCM Lane LOS | F | C | A | - | - | B | - | - | F |
| HCM 95th %tile Q(veh) | 0.9 | 2 | 0.1 | - | - | 0.6 | - | - | 69.8 |

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

APPENDIX E. Site Access Evaluation Supplement

All crash data available using this tool represents reportable data collected from Texas Peace Officer's Crash Reports (CR-3) received and processed by the Texas Department of Transportation (Department) as of 08/01/2022. The Department makes no warranty, representation or guaranty as to the content, accuracy, timeliness or completeness of any of the information provided as a result of your query. Any opinions and conclusions resulting from analysis performed on the crash data must be represented as your own and not those of the State of Texas or the Department.



All crash data available using this tool represents reportable data collected from Texas Peace Officer's Crash Reports (CR-3) received and processed by the Texas Department of Transportation (Department) as of 08/01/2023. The Department makes no warranty, representation or guaranty as to the content, accuracy, timeliness or completeness of any of the information provided as a result of your query. Any opinions and conclusions resulting from analysis performed on the crash data must be represented as your own and not those of the State of Texas or the Department.

Query Result Counts:
 Your query returned a total of 30 Crashes containing 59 Injuries and 66 Persons

Filters Applied to current Query:
 Crash Year Is in 2019 or 2020 or 2021

| Crash ID | Contributing Factors | Crash Date | Crash Death Count | Crash Severity | Crash Time | Day of Week | First Harmful Event | Light Condition | Manner of Collision | Object Struck | Other Factor | Physical Feature 1 | Surface Condition | Weather Condition | Contributing Factor 1 | Contributing Factor 2 | Driver Alcohol Result |
|----------|---|------------|-------------------|------------------------------|----------------|----------------|--|-------------------|---|---------------------------------|---|---|-------------------|-------------------|---|--------------------------------|-----------------------|
| 1697655 | FAILED TO CONTROL SPEED | 2/18/2019 | 0 | N - NOT INJURED | 1733 MONDAY | 1733 MONDAY | MOTOR VEHICLE IN TRANSPORT 1 - DAYLIGHT | DAYLIGHT | SAME DIRECTION - BOTH GOING STRAIGHT-REAR END | NOT APPLICABLE | SLOWING/STOPPING TO MAKE RIGHT TURN | PARKING AREA WITHIN RIGHT OF WAY | 1 - DRY | 1 - CLEAR | 22 - FAILED TO CONTROL SPEED | No Data | No Data |
| 1697655 | FAILED TO CONTROL SPEED | 2/18/2019 | 0 | N - NOT INJURED | 1733 MONDAY | 1733 MONDAY | MOTOR VEHICLE IN TRANSPORT 2 - DAYLIGHT | DAYLIGHT | SAME DIRECTION - BOTH GOING STRAIGHT-REAR END | NOT APPLICABLE | SLOWING/STOPPING TO MAKE RIGHT TURN | PARKING AREA WITHIN RIGHT OF WAY | 1 - DRY | 1 - CLEAR | No Data | No Data | No Data |
| 1703155 | TURNED WHEN UNSAFE | 2/20/2019 | 0 | 99 - UNKNOWN | 531 WEDNESDAY | 531 WEDNESDAY | FIXED OBJECT | 3 - DARK, LIGHTED | ONE MOTOR VEHICLE - GOING STRAIGHT | HIT TRAFFIC SIGNAL POLE OR POST | NOT APPLICABLE | HIT TRAFFIC SIGNAL POLE OR POST | 1 - DRY | 1 - CLEAR | 66 - TURNED WHEN UNSAFE | No Data | No Data |
| 1695038 | TURNED IMPROPERLY - WRONG LANE | 2/28/2019 | 0 | N - NOT INJURED | 1856 THURSDAY | 1856 THURSDAY | MOTOR VEHICLE IN TRANSPORT 3 - DARK, LIGHTED | DAYLIGHT | SAME DIRECTION - BOTH RIGHT TURN | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | 65 - TURNED IMPROPERLY - WRONG LANE | No Data | No Data |
| 1695038 | TURNED IMPROPERLY - WRONG LANE | 2/28/2019 | 0 | N - NOT INJURED | 1856 THURSDAY | 1856 THURSDAY | MOTOR VEHICLE IN TRANSPORT 3 - DARK, LIGHTED | DAYLIGHT | SAME DIRECTION - BOTH RIGHT TURN | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | No Data | No Data | No Data |
| 1694964 | TURNED WHEN UNSAFE | 3/8/2019 | 0 | N - NOT INJURED | 645 FRIDAY | 645 FRIDAY | MOTOR VEHICLE IN TRANSPORT 2 - DARK, NOT LIGHTED | DAYLIGHT | ANGLE - ONE RIGHT TURN-ONE STOPPED | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | 66 - TURNED WHEN UNSAFE | No Data | No Data |
| 1694964 | TURNED WHEN UNSAFE | 3/8/2019 | 0 | N - NOT INJURED | 645 FRIDAY | 645 FRIDAY | MOTOR VEHICLE IN TRANSPORT 2 - DARK, NOT LIGHTED | DAYLIGHT | ANGLE - ONE RIGHT TURN-ONE STOPPED | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | No Data | No Data | No Data |
| 1714373 | FAILED TO YIELD RIGHT OF WAY - STOP SIGN | 5/30/2019 | 0 | N - NOT INJURED | 1230 THURSDAY | 1230 THURSDAY | MOTOR VEHICLE IN TRANSPORT 1 - DAYLIGHT | DAYLIGHT | ANGLE - BOTH GOING STRAIGHT | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | 35 - FAILED TO YIELD RIGHT OF WAY - STOP SIGN | No Data | No Data |
| 1714373 | FAILED TO YIELD RIGHT OF WAY - STOP SIGN | 5/30/2019 | 0 | N - NOT INJURED | 1230 THURSDAY | 1230 THURSDAY | MOTOR VEHICLE IN TRANSPORT 1 - DAYLIGHT | DAYLIGHT | ANGLE - BOTH GOING STRAIGHT | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | No Data | No Data | No Data |
| 1720019 | DISREGARD STOP SIGN OR LIGHT | 7/26/2019 | 0 | A - SUSPECTED SERIOUS INJURY | 300 FRIDAY | 300 FRIDAY | MOTOR VEHICLE IN TRANSPORT 3 - DARK, LIGHTED | DAYLIGHT | ANGLE - BOTH GOING STRAIGHT | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | 16 - DISREGARD STOP SIGN OR LIGHT | No Data | No Data |
| 1720019 | DISREGARD STOP SIGN OR LIGHT | 7/26/2019 | 0 | A - SUSPECTED SERIOUS INJURY | 300 FRIDAY | 300 FRIDAY | MOTOR VEHICLE IN TRANSPORT 3 - DARK, LIGHTED | DAYLIGHT | ANGLE - BOTH GOING STRAIGHT | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | No Data | No Data | No Data |
| 1720019 | DISREGARD STOP SIGN OR LIGHT | 7/26/2019 | 0 | A - SUSPECTED SERIOUS INJURY | 300 FRIDAY | 300 FRIDAY | MOTOR VEHICLE IN TRANSPORT 3 - DARK, LIGHTED | DAYLIGHT | ANGLE - BOTH GOING STRAIGHT | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | No Data | No Data | No Data |
| 1736508 | CHANGED LANE WHEN UNSAFE | 10/25/2019 | 0 | N - NOT INJURED | 645 FRIDAY | 645 FRIDAY | MOTOR VEHICLE IN TRANSPORT 1 - DAYLIGHT | DAYLIGHT | SAME DIRECTION - BOTH GOING STRAIGHT-SIDESWPE | NOT APPLICABLE | VEHICLE CHANGING LANES | VEHICLE CHANGING LANES | 2 - WET | 3 - RAIN | 4 - CHANGED LANE WHEN UNSAFE | No Data | No Data |
| 1736508 | CHANGED LANE WHEN UNSAFE | 10/25/2019 | 0 | N - NOT INJURED | 645 FRIDAY | 645 FRIDAY | MOTOR VEHICLE IN TRANSPORT 1 - DAYLIGHT | DAYLIGHT | SAME DIRECTION - BOTH GOING STRAIGHT-SIDESWPE | NOT APPLICABLE | VEHICLE CHANGING LANES | VEHICLE CHANGING LANES | 2 - WET | 3 - RAIN | No Data | No Data | No Data |
| 1742002 | FAILED TO YIELD RIGHT OF WAY - STOP SIGN | 11/22/2019 | 0 | B - SUSPECTED MINOR INJURY | 2323 FRIDAY | 2323 FRIDAY | MOTOR VEHICLE IN TRANSPORT 3 - DARK, LIGHTED | DAYLIGHT | ANGLE - BOTH GOING STRAIGHT | HIT RETAINING WALL | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | 35 - FAILED TO YIELD RIGHT OF WAY - STOP SIGN | No Data | No Data |
| 1742002 | FAILED TO YIELD RIGHT OF WAY - STOP SIGN | 11/22/2019 | 0 | B - SUSPECTED MINOR INJURY | 2323 FRIDAY | 2323 FRIDAY | MOTOR VEHICLE IN TRANSPORT 3 - DARK, LIGHTED | DAYLIGHT | ANGLE - BOTH GOING STRAIGHT | HIT RETAINING WALL | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | No Data | No Data | No Data |
| 1743781 | DISREGARD STOP AND GO SIGNAL | 12/13/2019 | 0 | N - NOT INJURED | 1750 FRIDAY | 1750 FRIDAY | MOTOR VEHICLE IN TRANSPORT 3 - DARK, LIGHTED | DAYLIGHT | ANGLE - BOTH GOING STRAIGHT | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | 15 - DISREGARD STOP AND GO SIGNAL | No Data | No Data |
| 1743781 | DISREGARD STOP AND GO SIGNAL | 12/13/2019 | 0 | N - NOT INJURED | 1750 FRIDAY | 1750 FRIDAY | MOTOR VEHICLE IN TRANSPORT 3 - DARK, LIGHTED | DAYLIGHT | ANGLE - BOTH GOING STRAIGHT | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | No Data | No Data | No Data |
| 1771803 | FAILED TO CONTROL SPEED- UNDER INFLUENCE - ALCOHOL | 6/19/2020 | 0 | N - NOT INJURED | 2354 FRIDAY | 2354 FRIDAY | MOTOR VEHICLE IN TRANSPORT 3 - DARK, LIGHTED | DAYLIGHT | SAME DIRECTION - BOTH GOING STRAIGHT-REAR END | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 2 - WET | 3 - RAIN | 22 - FAILED TO CONTROL SPEED | 67 - UNDER INFLUENCE - ALCOHOL | 1 - POSITIVE |
| 1771803 | FAILED TO CONTROL SPEED- UNDER INFLUENCE - ALCOHOL | 6/19/2020 | 0 | N - NOT INJURED | 2354 FRIDAY | 2354 FRIDAY | MOTOR VEHICLE IN TRANSPORT 3 - DARK, LIGHTED | DAYLIGHT | SAME DIRECTION - BOTH GOING STRAIGHT-REAR END | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 2 - WET | 3 - RAIN | No Data | No Data | No Data |
| 1771815 | FAILED TO YIELD RIGHT OF WAY - STOP SIGN | 6/20/2020 | 0 | N - NOT INJURED | 53 SATURDAY | 53 SATURDAY | MOTOR VEHICLE IN TRANSPORT 3 - DARK, LIGHTED | DAYLIGHT | ANGLE - BOTH GOING STRAIGHT | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 2 - WET | 3 - RAIN | 25 - FAILED TO YIELD RIGHT OF WAY - STOP SIGN | No Data | No Data |
| 1771815 | FAILED TO YIELD RIGHT OF WAY - STOP SIGN | 6/20/2020 | 0 | N - NOT INJURED | 53 SATURDAY | 53 SATURDAY | MOTOR VEHICLE IN TRANSPORT 3 - DARK, LIGHTED | DAYLIGHT | ANGLE - BOTH GOING STRAIGHT | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 2 - WET | 3 - RAIN | No Data | No Data | No Data |
| 1791787 | FAILED TO CONTROL SPEED | 10/20/2020 | 0 | N - NOT INJURED | 230 TUESDAY | 230 TUESDAY | MOTOR VEHICLE IN TRANSPORT 1 - DAYLIGHT | DAYLIGHT | SAME DIRECTION - ONE STRAIGHT-ONE STOPPED | NOT APPLICABLE | SLOWING/STOPPING - FOR OFFICER, FLAGMAN, OR TRAFFIC CONTROL | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | 22 - FAILED TO CONTROL SPEED | No Data | No Data |
| 1791787 | FAILED TO CONTROL SPEED | 10/20/2020 | 0 | N - NOT INJURED | 230 TUESDAY | 230 TUESDAY | MOTOR VEHICLE IN TRANSPORT 3 - DARK, LIGHTED | DAYLIGHT | SAME DIRECTION - ONE STRAIGHT-ONE STOPPED | NOT APPLICABLE | SLOWING/STOPPING - FOR OFFICER, FLAGMAN, OR TRAFFIC CONTROL | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | No Data | No Data | No Data |
| 1798978 | DISREGARD STOP AND GO SIGNAL | 12/4/2020 | 0 | B - SUSPECTED MINOR INJURY | 1239 FRIDAY | 1239 FRIDAY | MOTOR VEHICLE IN TRANSPORT 1 - DAYLIGHT | DAYLIGHT | ANGLE - BOTH GOING STRAIGHT | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | 15 - DISREGARD STOP AND GO SIGNAL | No Data | No Data |
| 1798978 | DISREGARD STOP AND GO SIGNAL | 12/4/2020 | 0 | B - SUSPECTED MINOR INJURY | 1239 FRIDAY | 1239 FRIDAY | MOTOR VEHICLE IN TRANSPORT 1 - DAYLIGHT | DAYLIGHT | ANGLE - BOTH GOING STRAIGHT | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | No Data | No Data | No Data |
| 1804033 | TURNED WHEN UNSAFE | 1/1/2021 | 0 | 99 - UNKNOWN | 500 FRIDAY | 500 FRIDAY | FIXED OBJECT | 3 - DARK, LIGHTED | ONE MOTOR VEHICLE - TURNING RIGHT | HIT TREE, SHRUB, LANDSCAPING | ONE VEHICLE LEAVING DRIVEWAY | ENTRANCE TO OR EXIT FROM PRIVATE PROPERTY OR DRIVEWAY | 1 - DRY | 1 - CLEAR | 66 - TURNED WHEN UNSAFE | No Data | No Data |
| 1804033 | TURNED WHEN UNSAFE | 1/1/2021 | 0 | 99 - UNKNOWN | 500 FRIDAY | 500 FRIDAY | FIXED OBJECT | 3 - DARK, LIGHTED | ONE MOTOR VEHICLE - TURNING RIGHT | HIT TREE, SHRUB, LANDSCAPING | ONE VEHICLE LEAVING DRIVEWAY | ENTRANCE TO OR EXIT FROM PRIVATE PROPERTY OR DRIVEWAY | 1 - DRY | 1 - CLEAR | No Data | No Data | No Data |
| 1805489 | DISREGARD STOP AND GO SIGNAL | 11/1/2021 | 0 | N - NOT INJURED | 1223 MONDAY | 1223 MONDAY | MOTOR VEHICLE IN TRANSPORT 1 - DAYLIGHT | DAYLIGHT | ANGLE - BOTH GOING STRAIGHT | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | 15 - DISREGARD STOP AND GO SIGNAL | No Data | No Data |
| 1805489 | DISREGARD STOP AND GO SIGNAL | 11/1/2021 | 0 | N - NOT INJURED | 1223 MONDAY | 1223 MONDAY | MOTOR VEHICLE IN TRANSPORT 1 - DAYLIGHT | DAYLIGHT | ANGLE - BOTH GOING STRAIGHT | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | No Data | No Data | No Data |
| 1812037 | DISREGARD TURN MARKS AT INTERSECTION | 4/1/2021 | 0 | N - NOT INJURED | 1453 THURSDAY | 1453 THURSDAY | MOTOR VEHICLE IN TRANSPORT 1 - DAYLIGHT | DAYLIGHT | SAME DIRECTION - BOTH GOING STRAIGHT-SIDESWPE | NOT APPLICABLE | VEHICLE CHANGING LANES | VEHICLE CHANGING LANES | 1 - DRY | 1 - CLEAR | 17 - DISREGARD TURN MARKS AT INTERSECTION | No Data | No Data |
| 1812037 | DISREGARD TURN MARKS AT INTERSECTION | 4/1/2021 | 0 | N - NOT INJURED | 1453 THURSDAY | 1453 THURSDAY | MOTOR VEHICLE IN TRANSPORT 1 - DAYLIGHT | DAYLIGHT | SAME DIRECTION - BOTH GOING STRAIGHT-SIDESWPE | NOT APPLICABLE | VEHICLE CHANGING LANES | VEHICLE CHANGING LANES | 1 - DRY | 1 - CLEAR | No Data | No Data | No Data |
| 1822062 | DISREGARD STOP AND GO SIGNAL | 4/19/2021 | 0 | N - NOT INJURED | 545 MONDAY | 545 MONDAY | MOTOR VEHICLE IN TRANSPORT 3 - DARK, LIGHTED | DAYLIGHT | ANGLE - BOTH GOING STRAIGHT | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | 15 - DISREGARD STOP AND GO SIGNAL | No Data | No Data |
| 1822062 | DISREGARD STOP AND GO SIGNAL | 4/19/2021 | 0 | N - NOT INJURED | 545 MONDAY | 545 MONDAY | MOTOR VEHICLE IN TRANSPORT 3 - DARK, LIGHTED | DAYLIGHT | ANGLE - BOTH GOING STRAIGHT | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | No Data | No Data | No Data |
| 1824616 | DISREGARD STOP AND GO SIGNAL | 5/10/2021 | 0 | N - NOT INJURED | 700 MONDAY | 700 MONDAY | MOTOR VEHICLE IN TRANSPORT 1 - DAYLIGHT | DAYLIGHT | ANGLE - BOTH GOING STRAIGHT | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 2 - CLOUDY | 15 - DISREGARD STOP AND GO SIGNAL | No Data | No Data |
| 1824616 | DISREGARD STOP AND GO SIGNAL | 5/10/2021 | 0 | N - NOT INJURED | 700 MONDAY | 700 MONDAY | MOTOR VEHICLE IN TRANSPORT 1 - DAYLIGHT | DAYLIGHT | ANGLE - BOTH GOING STRAIGHT | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 2 - CLOUDY | No Data | No Data | No Data |
| 1830768 | OTHER (EXPLAIN IN NARRATIVE) | 6/5/2021 | 0 | B - SUSPECTED MINOR INJURY | 1000 SATURDAY | 1000 SATURDAY | MOTOR VEHICLE IN TRANSPORT 1 - DAYLIGHT | DAYLIGHT | ANGLE - BOTH GOING STRAIGHT | OVERTURNED | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | 98 - OTHER (EXPLAIN IN NARRATIVE) | No Data | No Data |
| 1830768 | OTHER (EXPLAIN IN NARRATIVE) | 6/5/2021 | 0 | B - SUSPECTED MINOR INJURY | 1000 SATURDAY | 1000 SATURDAY | MOTOR VEHICLE IN TRANSPORT 1 - DAYLIGHT | DAYLIGHT | ANGLE - BOTH GOING STRAIGHT | OVERTURNED | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | No Data | No Data | No Data |
| 1831659 | FAILED TO CONTROL SPEED- OTHER (EXPLAIN IN NARRATIVE) | 6/11/2021 | 0 | N - NOT INJURED | 2310 FRIDAY | 2310 FRIDAY | MOTOR VEHICLE IN TRANSPORT 3 - DARK, LIGHTED | DAYLIGHT | SAME DIRECTION - BOTH GOING STRAIGHT-REAR END | HIT CURB | VEHICLE CHANGING LANES | VEHICLE CHANGING LANES | 1 - DRY | 1 - CLEAR | 98 - OTHER (EXPLAIN IN NARRATIVE) | No Data | No Data |
| 1831659 | FAILED TO CONTROL SPEED- OTHER (EXPLAIN IN NARRATIVE) | 6/11/2021 | 0 | N - NOT INJURED | 2310 FRIDAY | 2310 FRIDAY | MOTOR VEHICLE IN TRANSPORT 3 - DARK, LIGHTED | DAYLIGHT | SAME DIRECTION - BOTH GOING STRAIGHT-REAR END | HIT CURB | VEHICLE CHANGING LANES | VEHICLE CHANGING LANES | 1 - DRY | 1 - CLEAR | No Data | No Data | No Data |
| 1832544 | FAILED TO YIELD RIGHT OF WAY - PRIVATE DRIVE | 6/18/2021 | 0 | C - POSSIBLE INJURY | 2158 FRIDAY | 2158 FRIDAY | MOTOR VEHICLE IN TRANSPORT 3 - DARK, LIGHTED | DAYLIGHT | ANGLE - ONE STRAIGHT-ONE LEFT TURN | NOT APPLICABLE | ONE VEHICLE LEAVING DRIVEWAY | ENTRANCE TO OR EXIT FROM PRIVATE PROPERTY OR DRIVEWAY | 1 - DRY | 1 - CLEAR | 24 - FAILED TO YIELD RIGHT OF WAY - PRIVATE DRIVE | No Data | No Data |
| 1832544 | FAILED TO YIELD RIGHT OF WAY - PRIVATE DRIVE | 6/18/2021 | 0 | C - POSSIBLE INJURY | 2158 FRIDAY | 2158 FRIDAY | MOTOR VEHICLE IN TRANSPORT 3 - DARK, LIGHTED | DAYLIGHT | ANGLE - ONE STRAIGHT-ONE LEFT TURN | NOT APPLICABLE | ONE VEHICLE LEAVING DRIVEWAY | ENTRANCE TO OR EXIT FROM PRIVATE PROPERTY OR DRIVEWAY | 1 - DRY | 1 - CLEAR | No Data | No Data | No Data |
| 1831948 | DISREGARD STOP AND GO SIGNAL | 6/19/2021 | 0 | N - NOT INJURED | 0 SATURDAY | 0 SATURDAY | MOTOR VEHICLE IN TRANSPORT 3 - DARK, LIGHTED | DAYLIGHT | ANGLE - BOTH GOING STRAIGHT | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | 15 - DISREGARD STOP AND GO SIGNAL | No Data | No Data |
| 1831948 | DISREGARD STOP AND GO SIGNAL | 6/19/2021 | 0 | N - NOT INJURED | 0 SATURDAY | 0 SATURDAY | MOTOR VEHICLE IN TRANSPORT 3 - DARK, LIGHTED | DAYLIGHT | ANGLE - BOTH GOING STRAIGHT | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | No Data | No Data | No Data |
| 1843859 | DISREGARD STOP AND GO SIGNAL | 8/22/2021 | 0 | C - POSSIBLE INJURY | 1636 SUNDAY | 1636 SUNDAY | MOTOR VEHICLE IN TRANSPORT 1 - DAYLIGHT | DAYLIGHT | ANGLE - BOTH GOING STRAIGHT | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | 15 - DISREGARD STOP AND GO SIGNAL | No Data | No Data |
| 1843859 | DISREGARD STOP AND GO SIGNAL | 8/22/2021 | 0 | C - POSSIBLE INJURY | 1636 SUNDAY | 1636 SUNDAY | MOTOR VEHICLE IN TRANSPORT 1 - DAYLIGHT | DAYLIGHT | ANGLE - BOTH GOING STRAIGHT | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | No Data | No Data | No Data |
| 1843292 | FAILED TO YIELD RIGHT OF WAY - STOP SIGN | 9/1/2021 | 0 | C - POSSIBLE INJURY | 2310 WEDNESDAY | 2310 WEDNESDAY | MOTOR VEHICLE IN TRANSPORT 3 - DARK, LIGHTED | DAYLIGHT | ANGLE - ONE STRAIGHT-ONE LEFT TURN | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | 35 - FAILED TO YIELD RIGHT OF WAY - STOP SIGN | No Data | No Data |
| 1843292 | FAILED TO YIELD RIGHT OF WAY - STOP SIGN | 9/1/2021 | 0 | C - POSSIBLE INJURY | 2310 WEDNESDAY | 2310 WEDNESDAY | MOTOR VEHICLE IN TRANSPORT 3 - DARK, LIGHTED | DAYLIGHT | ANGLE - ONE STRAIGHT-ONE LEFT TURN | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | No Data | No Data | No Data |
| 1848267 | FAULTY EVASIVE ACTION | 9/12/2021 | 0 | N - NOT INJURED | 2030 SUNDAY | 2030 SUNDAY | FIXED OBJECT | 3 - DARK, LIGHTED | ONE MOTOR VEHICLE - GOING STRAIGHT | HIT OTHER FIXED OBJECT | SWERVED OR VEERED-AVOIDING VEHICLE PASSING, CHANGING LANES | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | 41 - FAULTY EVASIVE ACTION | No Data | No Data |
| 1851373 | FAILED TO CONTROL SPEED | 10/14/2021 | 0 | N - NOT INJURED | 1100 THURSDAY | 1100 THURSDAY | MOTOR VEHICLE IN TRANSPORT 1 - DAYLIGHT | DAYLIGHT | ANGLE - BOTH GOING STRAIGHT | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | 22 - FAILED TO CONTROL SPEED | No Data | No Data |
| 1851373 | FAILED TO CONTROL SPEED | 10/14/2021 | 0 | N - NOT INJURED | 1100 THURSDAY | 1100 THURSDAY | MOTOR VEHICLE IN TRANSPORT 1 - DAYLIGHT | DAYLIGHT | ANGLE - BOTH GOING STRAIGHT | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | No Data | No Data | No Data |
| 1851373 | FAILED TO CONTROL SPEED | 10/14/2021 | 0 | N - NOT INJURED | 1100 THURSDAY | 1100 THURSDAY | MOTOR VEHICLE IN TRANSPORT 1 - DAYLIGHT | DAYLIGHT | ANGLE - BOTH GOING STRAIGHT | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | No Data | No Data | No Data |
| 1856662 | DRIVER INATTENTION | 10/16/2021 | 0 | N - NOT INJURED | 1310 SATURDAY | 1310 SATURDAY | MOTOR VEHICLE IN TRANSPORT 1 - DAYLIGHT | DAYLIGHT | SAME DIRECTION - ONE STRAIGHT-ONE STOPPED | NOT APPLICABLE | SLOWING/STOPPING - FOR OFFICER, FLAGMAN, OR TRAFFIC CONTROL | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | 20 - DRIVER INATTENTION | No Data | No Data |
| 1856662 | DRIVER INATTENTION | 10/16/2021 | 0 | N - NOT INJURED | 1310 SATURDAY | 1310 SATURDAY | MOTOR VEHICLE IN TRANSPORT 1 - DAYLIGHT | DAYLIGHT | SAME DIRECTION - ONE STRAIGHT-ONE STOPPED | NOT APPLICABLE | SLOWING/STOPPING - FOR OFFICER, FLAGMAN, OR TRAFFIC CONTROL | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | No Data | No Data | No Data |
| 1862724 | OTHER (EXPLAIN IN NARRATIVE) | 10/29/2021 | 0 | N - NOT INJURED | 1020 FRIDAY | 1020 FRIDAY | MOTOR VEHICLE IN TRANSPORT 1 - DAYLIGHT | DAYLIGHT | ANGLE - BOTH GOING STRAIGHT | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | 98 - OTHER (EXPLAIN IN NARRATIVE) | No Data | No Data |
| 1862724 | OTHER (EXPLAIN IN NARRATIVE) | 10/29/2021 | 0 | N - NOT INJURED | 1020 FRIDAY | 1020 FRIDAY | MOTOR VEHICLE IN TRANSPORT 1 - DAYLIGHT | DAYLIGHT | ANGLE - BOTH GOING STRAIGHT | NOT APPLICABLE | NOT APPLICABLE | NOT APPLICABLE | 1 - DRY | 1 - CLEAR | No Data | No Data</ | |