Traffic Impact Study for Zhou B. Art Center

SEC of Woodland Avenue and E. 18th Street
Kansas City, Missouri

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for
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Introduction

Proposed Redevelopment

The proposed ***Zhou B. Art Center*** is a redevelopment project to repurpose the former *Crispus Attucks School* located on the southeast corner of the intersection of Woodland Avenue and E. 18th Street in Kansas City, Missouri (See ***Figure 1 of Appendix I***). The site is occupied by the historic school building that is currently vacant; and is bounded by E. 19th Street to the south, Woodland Avenue to the west, E. 18th Street to the north and a light industrial development to the east and is.

Under the proposed redevelopment plan, the existing 60,000 sq. ft. school building will be renovated to provide a hub for the creation and sharing of visual and performance arts, along with a smaller mix of community-oriented uses. A new entrance addition with gross floor area (GFA) of approximately 6,000 sq. ft. will also be constructed as illustrated on the Site Plan, ***Figure 2 of Appendix I***.

According to the information provided by the development team, there are two primary uses for the Zhou B Art Center. The first primary use is a set of seven large art gallery spaces (both interior and exterior) that can be rented for private events and gatherings. It is possible they may be concurrently occupied, although it is more likely that only a few will be in use at a given time, and mostly during the evenings and on weekends. Possible uses for these event/gallery spaces are weddings and other family gatherings, awards banquets, and professional retreats. These spaces may also be used for art exhibitions and performances.

The other primary use for the Zhou B Art Center is as working studios for artists. Each studio may be used by a single artist or shared by two or three artists, depending on the size of the space. Most artists in Kansas City are not full-time practicing artists, and so they will be using their studio spaces for only part of the day while they balance their practice with other commitments, such as their job(s). This also means that artists will likely be accessing the building at all hours of the day, unlike a school or a business office which is occupied for a discrete window of time typically during business hours. Occasionally, perhaps once a month (similar to the First Friday openings in the

Crossroads Arts District), these studios will be open for the public to engage with the artists and their work. The maximum occupancies calculated for the studio areas reflect this type of event, which we can assume might happen between 5pm and 10pm on one Friday evening each month; for the remainder of the month, the studio occupancies will be much less. The spatial allocation and occupancy loads are described in the following paragraphs.

- **Basement -**
  Storage, restrooms
- **Level 1 -**
  Level 1 gallery: 660 maximum occupancy space for the display of visual art, which can be rented for private events.
  Exterior sculpture gallery (former playground) event space: 500 maximum occupancy
  Small retail space (such as a coffee shop): 49 maximum occupancy.
  Art studios: Total of 4 (The total maximum calculated occupancy is 60, however that would only be achieved during an “open studio” or “First Friday” type of event. Majority of the time, only one or two artists will be working per studio, typically 4-8 hours a day.)
- **Level 2 -**
  Level 2 east gallery: 60 maximum occupancy; a space for the display of visual art, which can be rented for private events.
  Level 2 west gallery: 380 maximum occupancy space for the display of visual art, which can be rented for private events.
  Level 2 auditorium: 100 seats; to be used as a rented event space and for occasional art/music performances.
  Art studios: Total of 7 (The total maximum calculated occupancy is 140, however that would only be achieved during an “open studio” or “First Friday” type of event. Majority of the time, only one or two artists will be working per studio, typically 4-8 hours a day.)

- **Level 3 -**
  Art studios: Total of 32 (The total maximum calculated occupancy is 370, however that would only be achieved during an "open studio" or "First Friday" type of event. Majority of the time, only one or two artists will be working per studio, typically 4-8 hours a day.)
- **Level 4 -**
  Exterior roof deck: 120 maximum occupancy sculpture gallery which can be rented for private events.
  Attic event space: 170 maximum occupancy space which can be rented for private events, particularly banquets.

In summary, the project is comprised of seven indoor/outdoor art gallery/event space for a maximum occupancy of 1,930; and 43 art studios for a maximum occupancy of 570. It is *highly unlikely* for all these spaces to be occupied simultaneously at full capacity. Moreover, *under typical circumstances*, vast majority of the events and studio uses will occur during off peak-hours in the evenings.

Parking for the project is provided on site with 183 regular and 8 ADA marked stalls as illustrated in ***Figure 2 of Appendix I.***

Access

The site is currently served by three access drives as described below:

- A 26 ft. (b/c – b/c) wide driveway on E. 18th Street with its centerline approximately 395 ft. east of Woodland Avenue. This driveway has an offset distance of approximately 70 ft. from Michigan Avenue across the street.
- A 26 ft. (b/c – b/c) wide driveway on Woodland Avenue with its centerline approximately 170 ft. south of E. 18th Street.
- A 26 ft. (b/c – b/c) wide driveway on E. 19th Street with its centerline approximately 415 ft. east of Woodland Avenue.

Under the proposed redevelopment plan, the existing driveways will remain at their current locations to serve the project site.

Study Area

Per communication with the staff at the *Street & Traffic Division of the Public Works Department*, the following intersections are identified for analysis:

- E. 18th Street and Woodland Avenue.
- E. 18th Street and The Paseo.

Furthermore, the project site is in an area identified as *Neighborhood Activity Centers and Corridors* by the *FOCUS Kansas City Plan*. Per communication with the staff at the *Planning and Development Department,* a walkability analysis is also included in this study. Moreover, pedestrian, bicycle and transit routes along the perimeter streets are identified, and their linkage to the project site and connection with the front entrance of the buildings are assessed.

Purpose

The purpose of this study is to:

1. Evaluate existing operating conditions of traffic at the subject intersections ("Existing" Case Scenario) and recommend mitigation measures as needed.
2. Assess impact of trips generated by the project on the subject intersections ("Existing + Project" Case Scenario) and recommend off-site improvements as direct result of the proposed redevelopment project.
3. Assess cumulative impact of the proposed redevelopment project and other approved developments in the proximity of this site (as identified by the City staff), and recommend off-site improvements as needed ("Existing + Project + Approved Projects" Case Scenario).
4. Evaluate operating conditions of traffic in the study area for target year 2040 ("Future" Case Scenario).
5. Conduct a walkability analysis using the criteria identified in the *Kansas City Walkability Plan*.
6. Include a discussion on multimodal aspects of the study area including availability of transit services and bike facilities.

Data Collection and Summary

Roadway Network Geometry & Operational Characteristics

- E. 18th Street, in front of the project site, is a 40 ft. wide roadway with posted speed limit of 35 mph. It is designated as "Commerce/Mixed Use" on the *City's Major Street Plan* with one (1) through lane in each direction. It is also designated as *"Signed Bike Route"* on the *City's Bike KC Map*. On-street parking is not prohibited on either side of street.
- E. 19th Street, in front of the project site, is a 30 ft. wide roadway with posted speed limit of 30 mph. It is designated as "Local Link" on the *City's Major Street Plan* with one through lane in each direction. On street parking is prohibited on the south side of the street.
- Woodland Avenue, in front of the project site, is a 36 ft. wide roadway with no posted speed limit. It is designated as "Local Link" on the *City's Major Street Plan* with one through lane in each direction. On-street parking is prohibited on the east side of the street.
- The Paseo is designated as *"Established Boulevard"* on the *City's Major Street Plan* with three 10 ft. lanes in each direction and posted speed limit of 35 mph. North of E. 18th Street, it is divided with a raised grass median of variable width (15 ft. - 120 ft.) South of E. 18th Street, it has a 120 ft. long raised concrete median changing to an undivided street with three lanes in each direction to a point approximately 270 ft. south of E. 19th Street, thence transitions to two lanes in each direction. On-street parking is prohibited on the west side of the street and restricted on the east side between 7:00 – 9:00 a.m. (Mon. – Fri.) Furthermore, The Paseo is designated as *"Signed Bike Route"* on the *City's Bike KC Map.*
- The intersection of Woodland and E. 18th Street is controlled by a pre-timed traffic signal, operating under *permissive* left-turn with pedestrian signal indications on the east leg only. All approaches have marked crosswalks and consist of one shared lane.
- The intersection of Woodland Avenue and E. 19th Street is an all-way stop-controlled intersection with marked crosswalks on all approaches.

- The intersection of E. 18th Street and The Paseo is controlled by a signal operating under *permissive* phasing with pedestrian indications and marked crosswalks on all approaches. Except for the southbound approach that has a dedicated channelized right-turn lane - controlled by a *yield* sign – no other auxiliary lanes are provided on other approaches. Furthermore, northbound left-turn movement (from The Paseo onto E. 18th Street) is prohibited at all time, except for buses.

Traffic Counts

Currently, due to the Covid-19 pandemic, traffic patterns and volumes on street networks throughout the country have been disrupted since early 2020 resulting in skewed traffic counts. For this analysis, most recent (pre-pandemic) traffic count data from the city records were utilized. A summary of these counts is included in ***Appendix IV*** and illustrated in ***Figures 3 and 4 of Appendix I.***

- The intersection of E. 18th Street and Woodland Avenue was last counted on a typical weekday in May 2017 from 7:00 to 9:00 a.m. and 3:00 to 6:00 p.m. According to these counts:
  - Morning peak occurs from 7:00 to 8:00 a.m.
  - Afternoon peak occurs from 4:45 to 5:45 p.m.
  - E. 18th Street, east of Woodland Avenue, carries approximately 255 vph during morning peak-hour with directional distribution of approximately 63% - 37% (westbound – eastbound); and approximately 465 vph during afternoon peak-hour with directional distribution of approximately 28% - 72% (westbound – eastbound).
  - Woodland Avenue, south of E. 18th Street, carries approximately 215 vph during morning peak-hour with directional distribution of approximately 53% - 47% (northbound – southbound); and approximately 145 vph during afternoon peak-hour with directional distribution of approximately 48% - 52% (northbound – southbound).
  - The intersection of E. 18th St. and Woodland Avenue carries approximately 450 and 605 vph during morning and afternoon peak-hours, respectively.

- The intersection of E. 18th Street and The Paseo was last counted on a typical weekday in July 2019 from 6:00 a.m. to 6:00 p.m. According to these counts:
  - Morning peak occurs from 7:30 to 8:30 a.m.
  - Afternoon peak occurs from 4:45 to 5:45 p.m.
  - E. 18th Street, east of The Paseo, carries approximately 195 vph during morning peak-hour with directional distribution of approximately 73% - 27% (westbound – eastbound); and approximately 250 vph during afternoon peak-hour with directional distribution of approximately 51% - 49% (westbound – eastbound).
  - The Paseo, south of E. 18th Street, carries approximately 575 vph during morning peak-hour with directional distribution of approximately 52% - 48% (northbound – southbound); and approximately 1090 vph during afternoon peak-hour with directional distribution of approximately 45% - 55% (northbound – southbound).
  - The intersection of E. 18th Street and The Paseo carries approximately 845 and 1,365 vph during morning and afternoon peak-hours, respectively.
- Because traffic count data for the intersection of E. 19th Street and Woodland Avenue were not available at the time of this study, this intersection is excluded from the analysis per direction from the city staff.

Traffic Signal Data

Based on the information obtained from the City, traffic signals at both study intersections currently operate under "*max recall"* mode with no detection system. These timing plans are utilized for this analysis (See details in ***Appendix V***).

Evaluation of Existing (Baseline) Operating Conditions

Volume/Capacity Analysis

A volume/capacity analysis (using *Synchro 10 Software* and methodologies outlined in the *2010 Highway Capacity Manual (HCM) published by the Transportation Research Board*) was conducted to determine level-of-service (LOS) for all movements at the subject signalized intersections during both morning and afternoon peak-hours of a typical weekday. Level-of-service, as defined in the HCM, describes the quality of traffic operating conditions and ranges from "A" to "F", with LOS "A" representing the best (most desirable with minimum delay) conditions and LOS "F" the worst (severely congested with excessive delays). The following chart outlines the level-of-service criteria for unsignalized and signalized intersections.

Level-Of-Service	Control Delay for Unsignalized Intersections (seconds/vehicle)	Control Delay for Signalized Intersections (seconds/vehicle)
A	0 – 10	0 - 10
B	> 10 – 15	> 10 - 20
C	> 15 – 25	> 20 – 35
D	> 25 – 35	> 35 – 55
E	> 35 – 50	> 55 – 80
F	> 50	> 80

Results, as summarized in ***Table 1*** and shown in ***Appendix II***, indicate that under the existing (baseline) traffic volumes, existing lane configurations, and current signal timing and phasing:

- The intersection of E. 18th Street and Woodland Avenue operates at LOS "B" during both peak hours with the individual movements operating at LOS "B" and higher, except for southbound movement that operates at LOS "C" during morning peak-hour.
- The intersection of E. 18th Street and The Paseo also operates at LOS "B" during both peak hours with the individual movements operating at LOS "B" and higher, except for eastbound movement that operates at LOS "C" during morning peak-hour.

Table 1 - Summary of V/C[1] Analysis
(Existing "Traffic Volumes, Lane Configurations and Signal Operating Conditions")

Intersection	Movement	(Typical Weekday)					
		Morning Peak-Hour			Afternoon Peak-Hour		
		LOS[2]	V/C[1]	95% Queue (ft)	LOS[2]	V/C[1]	95% Queue (ft)
E. 18th Street and The Paseo **(Signalized)**	EB (LTR)	C	0.05	27	B	0.19	20
	WB (LTR)	B	0.23	96	B	0.27	52
	NB (LTR)	B	0.16	48	B	0.35	82
	SB (LT)	B	0.15	45	B	0.38	104
	SB (R)	A	0.15	27	A	0.09	12
	Intersection	B	Delay:	12.1 (sec/veh)	B	Delay:	14.1 (sec/veh)
E. 18th Street and Woodland Avenue **(Signalized)**	EB (LTR)	A	0.10	39	A	0.36	164
	WB (LTR)	A	0.23	65	A	0.24	47
	NB (LTR)	B	0.30	71	B	0.18	43
	SB (LTR)	C	0.31	74	B	0.23	57
	Intersection	B	Delay:	14.6 (sec/veh)	B	Delay:	11.3 (sec/Veh)
E. 19th Street and Woodland Avenue **(All-Way Stop)**	EB (LTR)						
	WB (LTR)						
	NB (LTR)						
	SB (LTR)						
	Intersection						

1. V/C = Volume/Capacity Ratio 2. LOS = Level-Of-Service

Trip Generation Analysis

Trip generation of a proposed land development project is typically estimated using trip generation rates suggested by the latest edition of the *Trip Generation Manual published by the Institute of Transportation Engineers (ITE), Currently 10th Edition*. However, because the *Manual* does not provide trip data for the land use proposed by this project, several assumptions are made to estimate trip numbers for this project as described in the following paragraphs:

- **Trip Generation for Event Spaces**
  - For each event, assume 75% of the capacity will be used.
  - For each event, assume 90% of the capacity would be arriving during the one hour before the event with the 10% being venders, wedding parties, and event organizers.
  - For each event assume an average vehicle occupancy of 2.5 person per vehicle.
  - Using these assumptions, trip generation rate for each event is calculated at 0.27 trips per person [(0.75 x 0.9)/2.5].
  - Directional distribution of these trips (inbound vs. outbound) can vary depending on the type of event. For instance, in case of a wedding ceremony, it is likely that guests will stay at the event longer than one hour with 100% of the trips arriving before the event and 100% departing after the event. Whereas, in case of an art gallery event, it is likely that patrons will stay less than an hour with possible directional distribution of 50% - 50% (inbound-outbound) within an hour. For this study, 50% - 50% distribution is assumed.
  - As stated earlier in the report, it is *highly unlikely* for all event/gallery spaces to be occupied simultaneously. Moreover, *under typical circumstances*, vast majority of events will occur during off peak-hours in the evenings. Given this information, it is reasonable to assume that only a small percentage of the trips generated by the event spaces of the site (assume 30%) will likely occur during the afternoon peak-hour of adjacent street network when the background traffic is at its peak.

Based on these assumptions, on a typical weekday, trips generated by the event spaces are estimated at 156 vph [1,930 x 0.30 x 2.7] during afternoon peak-hour of adjacent street network with 50% - 50% directional distribution (78 inbound, 78 outbound).

- **Trip Generation for Art Studios**
  - Assume an average occupancy of 1.5 artists per studio.
  - Assume an average vehicle occupancy of 1.0 artist per vehicle.
  - Using these assumptions, trip generation rate for the studio is calculated at 1.5 trips per studio [(1.5 x 1.0)].
  - Assume 50% of the studios occupied during afternoon peak-hour of adjacent street network.

  Based on these assumptions, on a typical weekday, trips generated by the studios are estimated at 32 vph [42 x 0.5 x 1.5] during afternoon peak-hour of adjacent street network with 50% - 50% directional distribution (16 inbound – 16 outbound).
- **Trip Generation for Coffee Shop**

  For the proposed 1,264 sq. ft. coffee shop on the first level, the *ITE Land Use Code 936 (Coffee/Donut Shop without Drive-Through Window)* with gross floor area (GFA) as the independent variable was selected. Results of the analysis, as shown in ***Appendix III***, indicate that, on a typical weekday, the coffee shop will likely generate:
  - On average, 128 trip-ends (65 inbound – 63 outbound) during morning peak-hour of adjacent street network; and
  - On average, 46 trip-ends (23 inbound – 23 outbound).
- **Adjustment for Internal Trip Capture**

  The proposed redevelopment project is predominately an entertainment development that includes a small retail space with potential for internal trip capture; typically estimated using the information published in the *ITE Trip Generation Handbook, 3rd Edition* and the *NCHRP 684 Internal Trip Capture Estimation Tool*. For this study, the internal trip capture rates, are shown in the last pages of ***Appendix III*** and summarized below:

  - 0% during morning peak-hour of adjacent street network.
  - 3% (3% inbound – 3% outbound) during afternoon peak-hour of adjacent street network.

- **Adjustment for Multi-Modal Use**

  The Kansas City Area Transit Authority (KCATA) provides transit services in the study area via (See ***Appendix VIII*** for route maps).

  - *Metro Line #18 (Indiana)* with stops on E. 18th Street at Woodland Avenue in both directions.
  - *Metro Line #10 (Woodland-Brooklyn)* with nearest stops on Woodland south of E. 18th Street in both directions. This route is currently suspended due to the Covid-19 pandemic.

  It is anticipated that a portion of the trips generated by the project site will be utilized by the public transportation mode. For this study, a value of 10% is assumed as a reasonable mode share rate for the entire development. This value is then used as the input parameter in the *NCHRP 684 Internal Trip Capture Estimation Tool* for calculation purposes (See last pages of ***Appendix III*** for details).

In summary, *adjusted external trips* likely to be generated by the proposed ***Zhou B. Art Center***, on a typical weekday, are as follows:

- On average, 128 new trip-ends (65 inbound – 63 outbound) during morning peak-hour of adjacent street network; and
- On average, 192 new trip-ends (96 inbound - 96 outbound) during afternoon peak-hour of adjacent street network.

Critical Analysis Period - An overview of the existing background traffic volumes in the study area and their peak characteristics, in conjunction with estimated trips generated by the proposed redevelopment during peak-hours of adjacent streets, indicate that the afternoon peak-hour of a typical weekday - having combined higher volumes - is the critical period for analysis. Therefore, this study focuses on the afternoon peak-hour as the worse-case scenario.

Trip Distribution and Assignment Analysis

Distribution of trips generated by the proposed redevelopment project is assumed to follow the existing traffic patterns in the study area; predominantly following the directional distribution patterns of traffic on adjacent street network with consideration given to the location and number of driveways to the site. Following paragraphs describe these distribution patterns in detail.

- 35% using access drive on E. 18th Street.
    - 24% to/from west
    - 11% to/from east
- 35% using access drive on Woodland Avenue.
    - 18% to/from north
    - 17% to/from south
- 30% using access drive on E. 19th Street.
    - 15% to/from west
    - 15% to/from east

Figures 5 - 7 of Appendix I illustrate site trip distribution and assignment, respectively.

Impact Analysis for "Existing + Project at Build-Out" Case Scenario

Volume/Capacity Analysis

Following the same procedure mentioned earlier, a volume/capacity analysis was conducted to determine level-of-service for "Baseline + Project (Build-Out)" case scenario. Results, as summarized in ***Table 2*** and shown in ***Appendix II***, indicate that under the existing lane configurations, and current signal timing and phasing, level-of-service for the individual movements at the signalized intersections will remain unchanged with only nominal increase in delay values. Furthermore, all movements at the site access drives operate at LOS "B" and higher.

Table 2
Summary of V/C[1] Analysis for "Baseline + Project (Build-Out)" Case Scenario
(Existing Lane Configurations with Current Signal Timing and Phasing")

Intersection	Movement	(Typical Weekday)					
		Morning Peak-Hour			Afternoon Peak-Hour		
		LOS[2]	V/C[1]	95% Queue (ft)	LOS[2]	V/C[1]	95% Queue (ft)
E. 18th Street and The Paseo **(Signalized)**	EB (LTR)				B	0.20	21
	WB (LTR)				B	0.29	55
	NB (LTR)				B	0.35	82
	SB (LT)				B	0.39	105
	SB (R)				A	0.09	12
	Intersection				B	Delay:	14.1 (sec/veh)
E. 18th Street and Woodland Avenue **(Signalized)**	EB (LTR)				A	0.37	110
	WB (LTR)				A	0.29	51
	NB (LTR)				B	0.23	59
	SB (LTR)				C	0.35	81
	Intersection				B	Delay:	11.8 (sec/Veh)
E. 19th Street and Woodland Avenue **(All-Way Stop)**	EB (LTR)						
	WB (LTR)						
	NB (LTR)						
	SB (LTR)						
	Intersection						

2. V/C = Volume/Capacity Ratio 2. LOS = Level-Of-Service

Table 2 (Cont'd)
Summary of V/C[1] Analysis for "Baseline + Project (Build-Out)" Case Scenario
(Existing Lane Configurations and Traffic Control Devices)

Intersection	Movement	(Typical Weekday)					
		Morning Peak-Hour			Afternoon Peak-Hour		
		LOS[2]	V/C[1]	95% Queue (veh)	LOS[2]	V/C[1]	95% Queue (veh)
E. 18th Street and Site Access Drive	EB (TR)				A	*	*
	WB (LT)				A	0.01	1
	NB (LR)				B	0.07	1
Woodland Avenue and Site Access Drive	WB (LR)				A	0.04	1
	NB (TR)				A	*	*
	SB (LT)				A	0.01	1
E. 19th Street and Site Access Drive	EB (LT)						
	WB (TR)						
	SB (LR)						

1. V/C = Volume/Capacity Ratio 2. LOS = Level-Of-Service * Free Flow Movement

Auxiliary Lane Analysis

A dedicated turn lane analysis was conducted, using the *MoDOT Engineering Policy Guide (EPG)* guidelines for 2-lane roadways with posted speed limit of less than 40 mph, to determine the need for provision of turn lanes at the driveway locations to the site. Results indicate that dedicated turn lanes are not warranted at any of the driveway locations.

Impact Analysis for "Existing + Project (Build-Out) + Approved Projects" Case Scenario

Based on the information provided by the city staff, currently, there are no other approved development projects near the study area.

Impact Analysis for Target Year 2040 (Future Case Scenario)

Volume/Capacity Analysis

Because the site is in a mostly developed dense-urban area, an annual growth rate of 1.0% was assumed to estimate the background traffic volumes for target year 2040. The forecasted volumes were used to conduct a volume/capacity analysis at the intersections under study for the critical analysis period (i.e. afternoon peak-hour of a typical weekday). Results, as shown in ***Appendix II***, indicate that under the existing lane configurations, and current signal timing and phasing, level-of-service for the individual movements at the signalized intersections will remain unchanged with only nominal increase in delay values. Furthermore, all movements at the site access drives will likely operate at LOS "B" and higher.

Walkability Analysis

The *FOCUS Kansas City Strategic and Comprehensive Plan* promote choice in transportation and emphasize the importance of all modes. In specific, the *Walkability Plan* (prepared in March 2003) addresses the pedestrian mode. The purpose of conducting a walkability analysis is to ensure that impacts to pedestrians be assessed in addition to other traffic impacts resulted by a development. This analysis is conducted using procedures outlined in Appendix C of the *KCMO Walkability Plan* entitled *"Pedestrian Level-of-Service Analysis Methodology and Procedures for Development Proposals"* as follows:

Step 1: Pedestrian Area Type

The pedestrian area type for a development project is determined by the type of the development and its impact area within the city. Six pedestrian area types are listed in the *KCMO Walkability Plan* as described in the chart below.

Pedestrian Area Type	Description
Pedestrian-Oriented Zones, Great Streets and Boulevards	These areas reflect locations within the city where the community desires the highest pedestrian environment.
Mixed-Use and Multimodal Transportation Centers, Transit Impact Zones	Existing and potential mixed-use and transit regional and community centers and zones different than above-mentioned Pedestrian-Oriented Zones.
Neighborhood Activity Centers and Corridors	**Numerous smaller commercial and service activity centers and corridors throughout the city.**
Schools/Parks/Community Centers/ Libraries/Hospitals/Health Care Facilities	Pedestrian connections to these types of facilities require higher level-of-service in the categories of continuity, street crossings, and security.
Transit Corridors	Areas that are within ¼ mile from transit stops and require a high level-of-service in the categories of directness, continuity, and street crossings.
Other Areas Within the City	To promote pedestrian mobility throughout the city, all areas within the city should provide for adequate level-of-service.

The site for this project is in an area identified as *Neighborhood Activity Centers and Corridors*. The study area is defined as the perimeter streets surrounding the project site including E. 18th Street, E. 19th Street and Woodland Avenue.

Step 2: Pedestrian Level-Of-Service

Five pedestrian level-of-service measurements are defined as part of the *KCMO Walkability Plan – Directness, Continuity, Street Crossings, Visual Interest & Amenity, and Security*. Following chart shows minimum level-of-service requirements for each Pedestrian Area Type. For this study, the applicable minimum level-of-service (LOS) for all categories is "B", except for "Street Crossing" category with required minimum LOS of "C".

Pedestrian Area Type	Directness	Continuity	Street Crossings	Visual Interest & Amenity	Security
Pedestrian-Oriented Zones, Great Streets and Boulevards	A	A	B	B	B
Mixed-Use & Multimodal Transportation Centers, Transit Impact Zones	A	B	B	B	B
Neighborhood Activity Centers & Corridors	**B**	**B**	**C**	**B**	**B**
Schools/Parks/Community Centers/ Libraries/Hospitals/Health Care Facilities	C	B	B	C	B
Transit Corridors	B	C	C	C	B
Other Areas Within the City	C	C	C	C	C

Step 3: Pedestrian Destination Areas

The staff at the City Planning and Development Department has identified the following pedestrian destination points for this project:

- D1: Gregg-Klice Community Center at 1600 Buck O'Neil (0.2 mile away).
- D2: Lincoln College Preparatory Academy at 22nd and Woodland Avenue (0.25 mile away).
- D3: Crossroads District (greater than 0.25 mile)
- D4: Other areas of the 18th & Vine Jazz District including restaurants, residential housing and businesses (within 0.25 mile).

Step 4: Pedestrian Level-Of-Service Assessment

Using the *KCMO Development Proposal Pedestrian Level-Of-Service Worksheets*, current and proposed pedestrian level-of-services in the designated area of the project

site were assessed by field investigation and measurements. In general, for project approval, proposed after-development measurements should never degrade current pedestrian level-of-service measurements. A field survey was conducted to do an inventory of the existing pedestrian facility in the study area to/from the identified destination areas. Results are summarized in the following paragraphs.

- *Sidewalks*
  - There are sidewalks on both sides of E. 18th Street, Woodland Avenue and E. 19th Street.
  - Sidewalk on the south side of E. 18th Street (along the frontage of the project site) is 5 ft. wide and in *good* condition with pedestrian LOS "A". There are no ADA accessible ramps at the site access drive.
  - Sidewalk on the east side of Woodland Avenue (along the frontage of the project site) is 6 ft. wide and in *good* condition with pedestrian LOS "A". There are no ADA accessible ramps at the site access drive.
  - Sidewalk on the north side of E. 19th Street (along the frontage of the project site) is 5 ft. wide and in *fair to poor* condition with pedestrian LOS "C/D". There are no ADA accessible ramps at the site access drive.
  - All four corners of the intersection of E. 18th Street and Woodland Avenue have ADA accessible ramps. The ones on the southeast and northeast corners are of *transition* type and the ones on southwest and northwest corners are of *directional* type.
  - At the intersection of E. 19th Street and Woodland Avenue, northeast and northwest corners have ADA accessible ramps of *transition* type; and southeast and southwest corners have ramps that are not ADA compliant.
- *Crosswalks*
  - There are marked crosswalks on all approaches at the intersection of Woodland Avenue and E. 18th Street that are in *good* conditions.
  - There are marked crosswalks on all approaches at the intersection of Woodland Avenue and E. 19th Street that are in *fair* conditions.
  - There are marked crosswalks on all approaches at the intersection of The Paseo and E. 18th Street that are in *good* conditions.

- *Pedestrian Signal*
  - The intersection of Woodland Avenue and E. 18th Street has pedestrian signal indications equipped with single face "walk man/don't walk hand symbol (with no countdown)" for pedestrians crossing the *east leg only* with no push button. Other crossings at this intersection do not have pedestrian signal indications.
  - The intersection of The Paseo and E. 18th Street has pedestrian signal indications equipped with single face "walk man/don't walk hand symbol" on all approaches with push buttons. There are ADA compliant ramps on all four corners of the intersection including the median.

Under the proposed redevelopment plan, sidewalk on the north side of E. 19th Street, along the frontage of the project site, will be repaired to city standards. Furthermore, ADA ramps will be constructed at all three access drives to the site. Additional enhancement to the site will make this project an attractive and pedestrian/bicycle-friendly area. Results of the walkability analysis for current and proposed conditions are shown in ***Appendix VII***.

According to the *KCMO Walkability Plan*, pedestrian destination points should be within ¼ mile from edge of a development project with exception of schools that a longer distance may be justified. One of the pedestrian destinations identified by the City staff for this project (*Crossroads District*) is located outside the ¼ mile range from edge of the project site. Access to this destination will more likely take place by other modes such as transit services in the study area.

Multimodal Discussion

Pedestrian

The project site is in an area designated as a *Neighborhood Activity Centers and Corridors* with public transportation service within a ¼ mile radius of the site.

Bike Routes

According to the *Bike KC Map*, E. 18th Street in the study area is designated as *"Signed Bike Route"* and Woodland Avenue with no designation.

Transit Services

Kansas City Area Transit Authority (KCATA) provides transit services in the study area via (See ***Appendix VIII*** for route maps and schedules).

- *Metro Line #18 (Indiana)* with stops on E. 18th Street at Woodland Avenue in both directions.
- *Metro Line #10 (Woodland-Brooklyn)* with nearest stops on Woodland south of E. 18th Street in both directions. This route is currently suspended due to the Covid-19 pandemic.

Summary & Recommendations

This study evaluates existing operating conditions of traffic at the key intersections identified by the city staff within the study area. Results of the analysis are summarized in ***Table 1*** with additional details in ***Appendix II***. The study also documents impact of traffic generated by the proposed *"Zhou B. Art Center"* redevelopment on the said identified intersections. Results of the trip-generation/distribution/assignment analyses are summarized in ***Figures 5 - 7 of Appendix I*** with additional details in ***Appendix III***. Results of the operational analysis for the "Existing + Project" case scenario are summarized in ***Table 2*** with additional details in ***Appendices II***. Furthermore, per the city's requirements, a walkability analysis and a multi-modal discussion are also included with results summarized in ***Appendices VII - VIII.***

Existing Conditions

Due to impact of the COVID-19 national pandemic, resulting in skewed traffic patterns, traffic volume counts were not conducted in the field. For this analysis, most recent peak-hour traffic counts at the key signalized intersections were obtained from the city records. No counts were available for the unsignalized intersections in the study area.

Results of the volume/capacity analysis indicate that, under the existing traffic lane geometry and current signal timing plan and phasing scheme, there is no evidence of any operational deficiency in the study area; individual movements at the key intersections (E. 18th Street with Woodland Avenue and The Paseo) operate at LOS "B" and higher during both peak-hours of a typical weekday, except for the southbound approach on Woodland Avenue at E. 18th Street; and eastbound approach on E. 18th Street at The Paseo that operate at LOS "C" during morning peak-hour. Results also indicate that the volume/capacity ratios for the individual movements range from 0.05 to 0.38 with ample reserve capacity.

Proposed "Zhou B. Art Center" Redevelopment

- Results of the operational analysis indicate that with added traffic generated by the proposed redevelopment project, level-of-service for individual movements at the subject intersections remain unchanged with nominal increase in delay values while maintaining current signal timing plan and phasing scheme. Results also indicate that the requirements for provision of dedicated turn lanes at the proposed driveway locations to the site are not met; hence turn lanes are not warranted.
- Currently, there are sidewalks with minimum width of 5 ft. on both sides of the streets surrounding the project site. Sidewalks along the frontage of the site on E. 18th Street and Woodland Avenue are in *good* conditions with level-of-service "A". However, sidewalk along the frontage of the site on E. 19th Street is in fair to poor (west to east) conditions and in need of repair and/or partial replacement.
- Currently, there are ADA accessible sidewalk ramps at all four corners of the intersections of E. 18th Street with Woodland Avenue and The Paseo. The

intersection of E. 19th Street and Woodland Avenue has ADA accessible sidewalk ramps on the northeast and northwest corners with standard sidewalk ramps of the southeast and southwest corners. Furthermore, there are no ADA sidewalk ramps at any of the site access drives.

Recommended Mitigation Measures –

- Repair/replace sidewalk on the north side of E. 19th Street along the frontage of the site.
- Construct ADA accessible sidewalk ramps at all three site access drives.
- Construct ADA accessible sidewalk ramp on the southeast corner of the intersection of E. 19th Street and Woodland Avenue.

Future Conditions for Target Year 2040

As the background traffic in the study area grows (@ 1% per year), signalized intersections in the study area will likely operate at current LOS "B" during both peak-hours with individual movements at LOS "C" and higher.

Recommended Mitigation Measures –

- Monitor signal timing and traffic volumes along the E. 18th Street corridor periodically to assess the need for signal timing modifications.

APPENDIX I

Figures

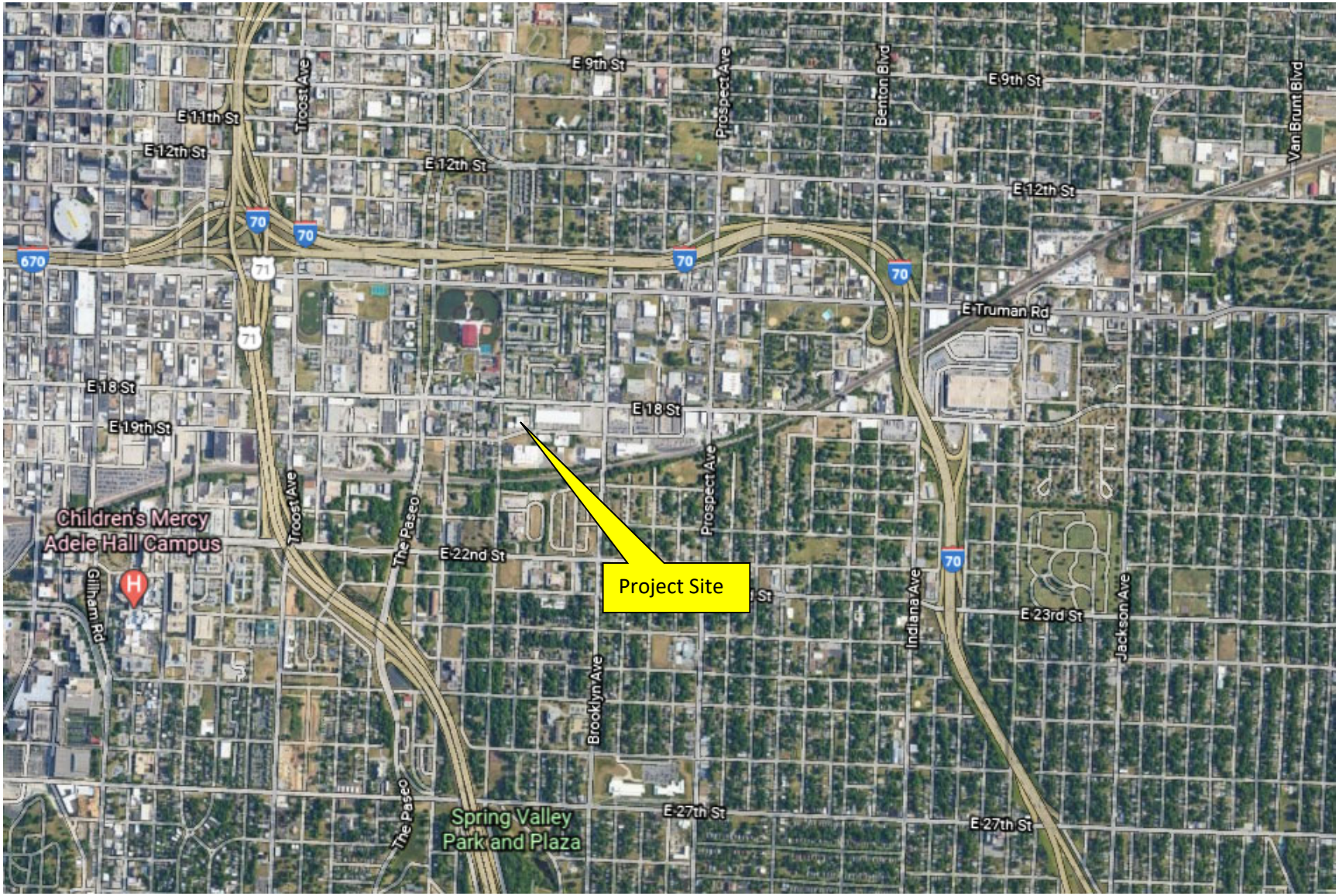
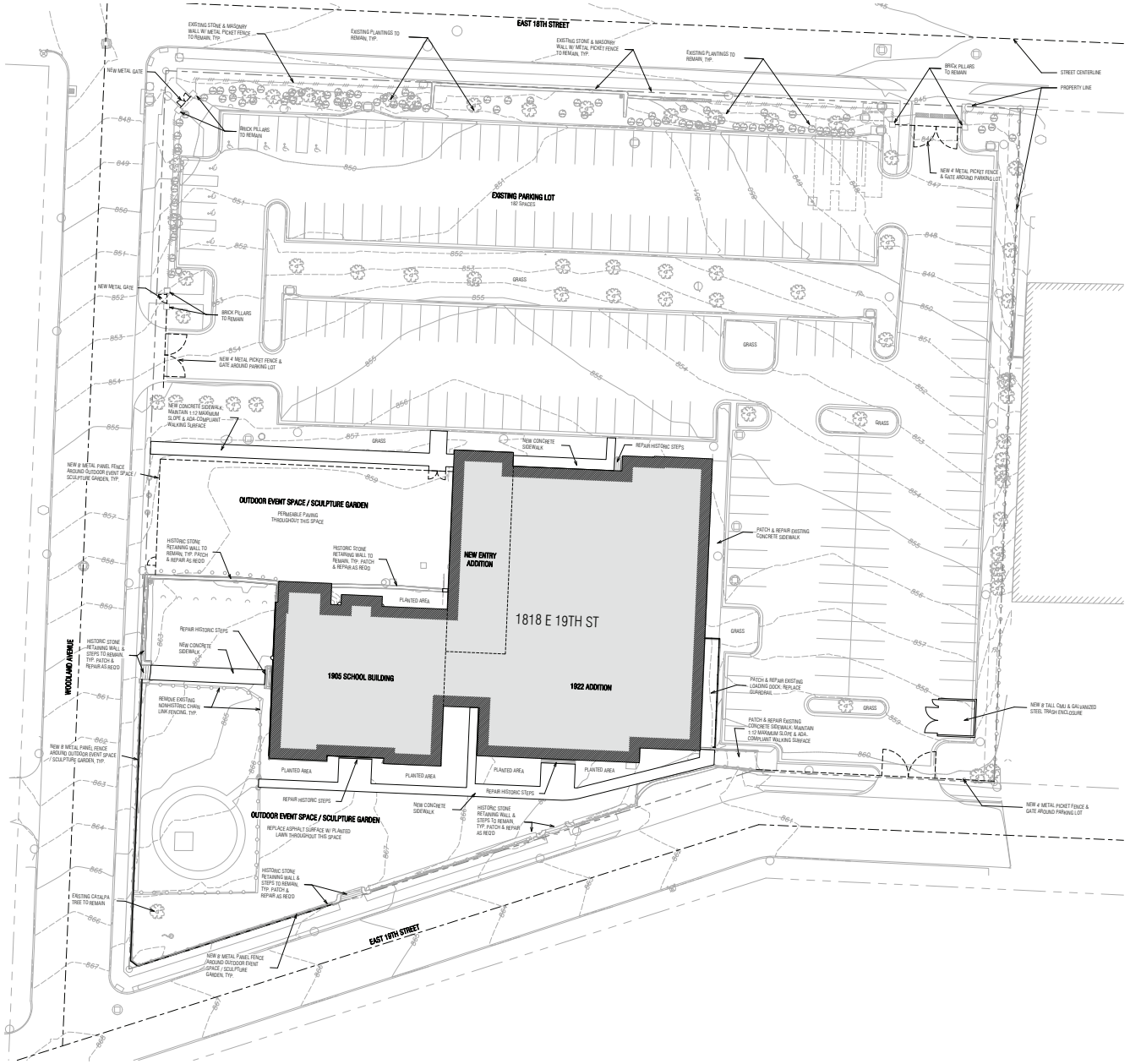


Figure 1 – Location Map



A1 **Proposed Site Plan**
1" = 20'-0"

bnim

BNIM Architects — Architect
2460 East Pershing Road, Suite 100, Jackson County, Kansas City MO 64108
p.816.783.1500 f.816.783.1501
MO State Certificate of Authority #000235006

Rosin Preservation — Historic Preservation
1712 Holmes Street, Kansas City, MO 4108
p.816.472.4950

Tatlatorro & Bowne — Structural + Civil
1020 E 8th St, Kansas City, MO 64108
p.816.283.3456

Integral Group — MEP
11120 Rockville Rd, Suite 110, Glen Allen, VA 23059
p.804.474.7800

FP&C Consultants Inc — Code Consultant
3770 Broadway Street, Kansas City, MO 64111
p.816.931.3377

Zhou B Art Center

1818 E 19th St
Kansas City, MO 64127

Project No: 19028.00

Abatement & Demolition

Issued: May 18, 2020

Rev. #	Description	Date Issued

Key Plan

Seal

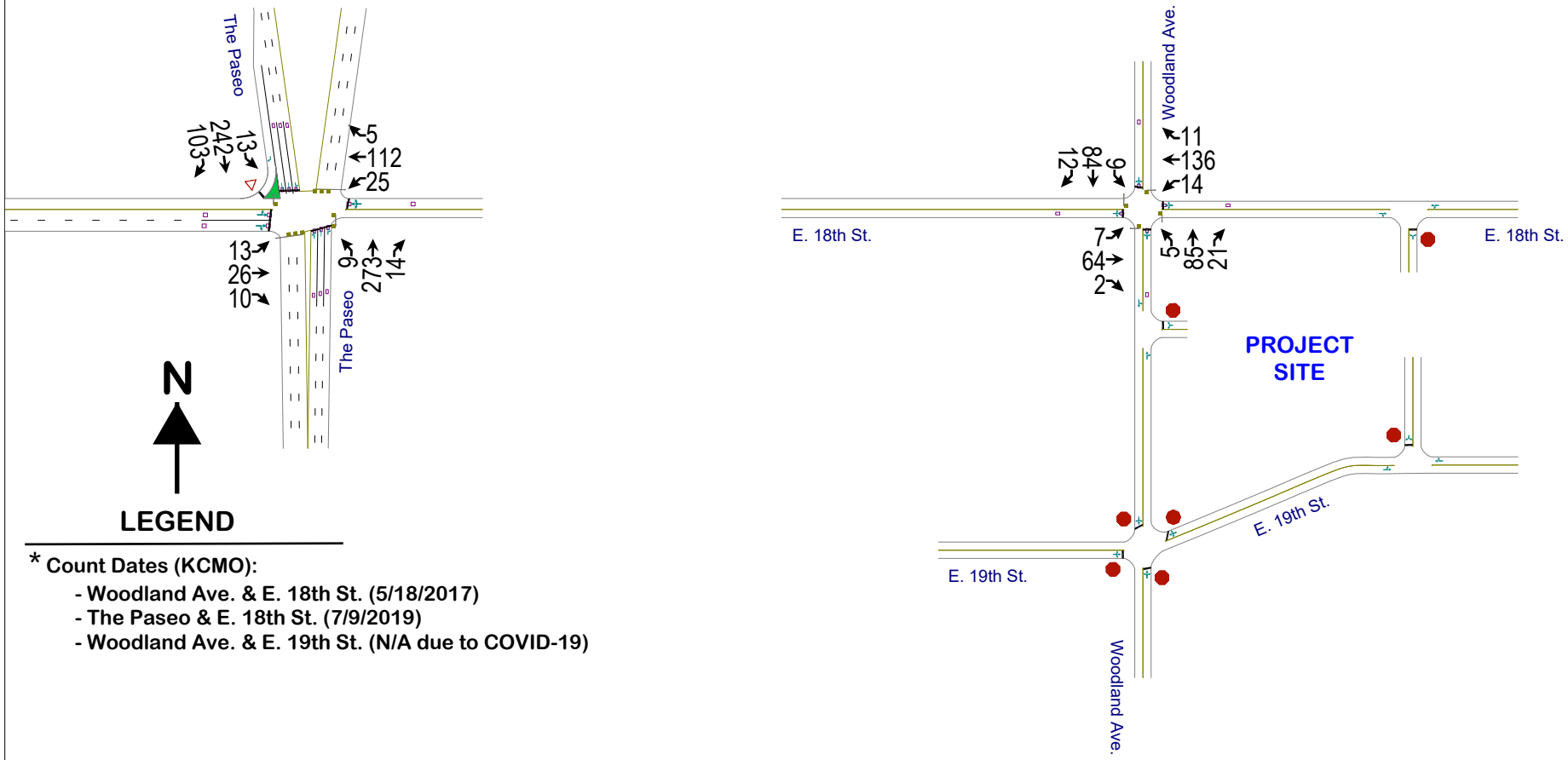
PRELIMINARY NOT FOR CONSTRUCTION

SITE PLAN

A050

5/18/2020 4:40:27 PM

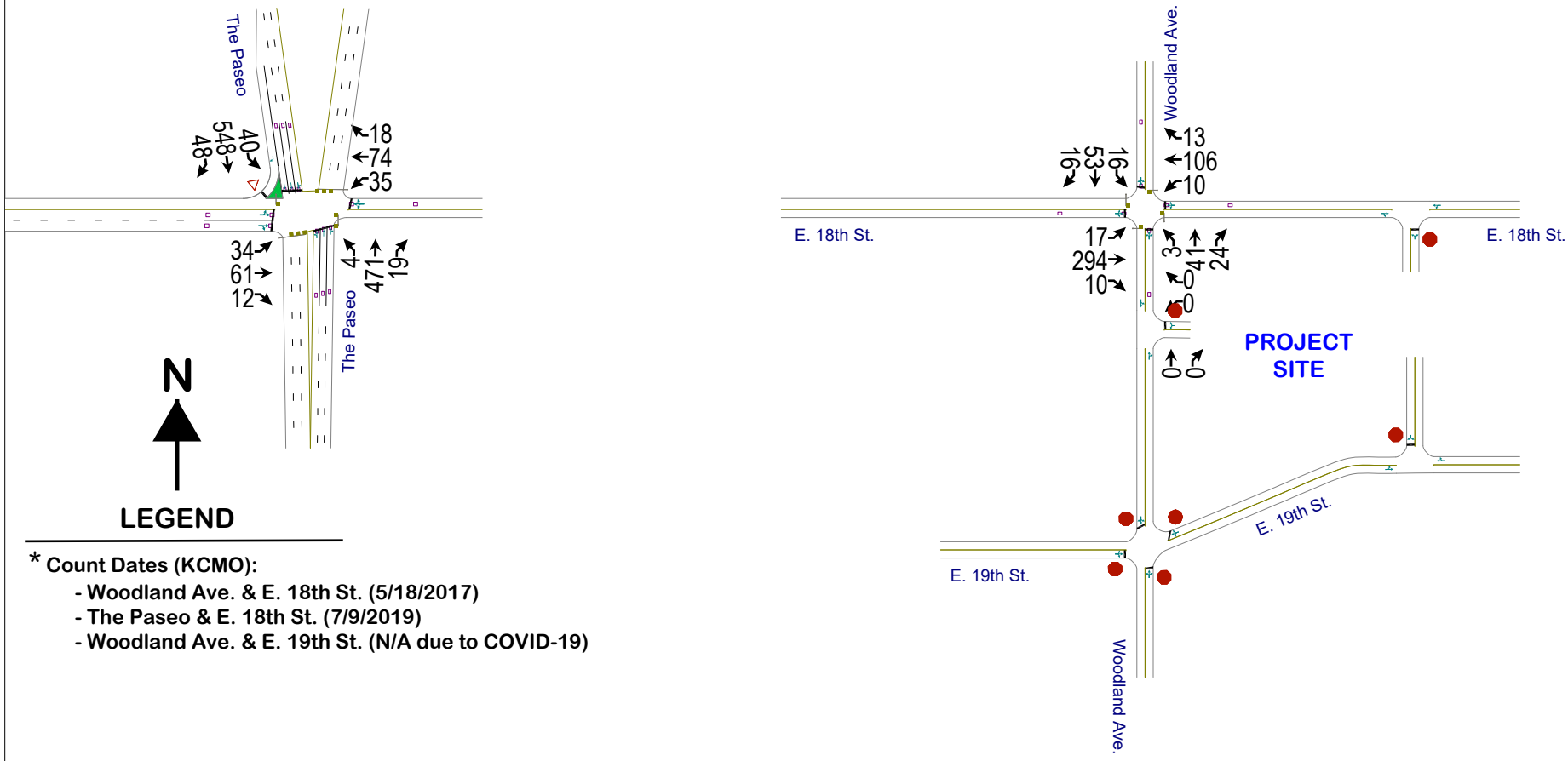
Figure 3 - Existing (Baseline) Traffic Volumes* (Morning Peak-hour, Typical Weekday)



* Count Dates (KCMO):

- Woodland Ave. & E. 18th St. (5/18/2017)
- The Paseo & E. 18th St. (7/9/2019)
- Woodland Ave. & E. 19th St. (N/A due to COVID-19)

Figure 4 - Existing (Baseline) Traffic Volumes* (Afternoon Peak-hour, Typical Weekday)



* Count Dates (KCMO):

- Woodland Ave. & E. 18th St. (5/18/2017)
- The Paseo & E. 18th St. (7/9/2019)
- Woodland Ave. & E. 19th St. (N/A due to COVID-19)

Figure 5 - Trip Distribution Patterns for Zhou B. Art Center (Afternoon Peak-hour, Typical Weekday)

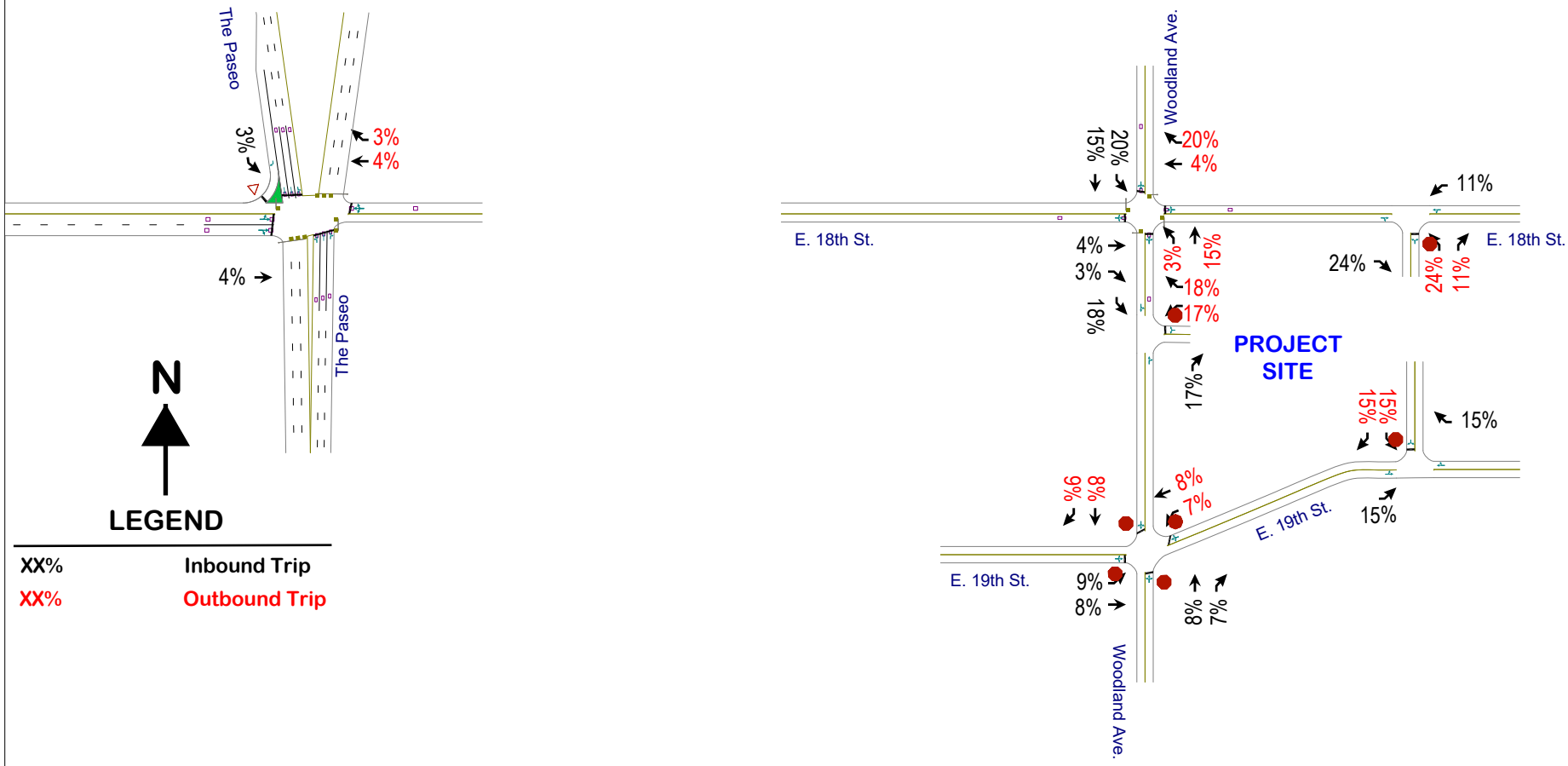


Figure 6 - Site-Generated Trips for Zhou B. Art Center (Afternoon Peak-hour, Typical Weekday)

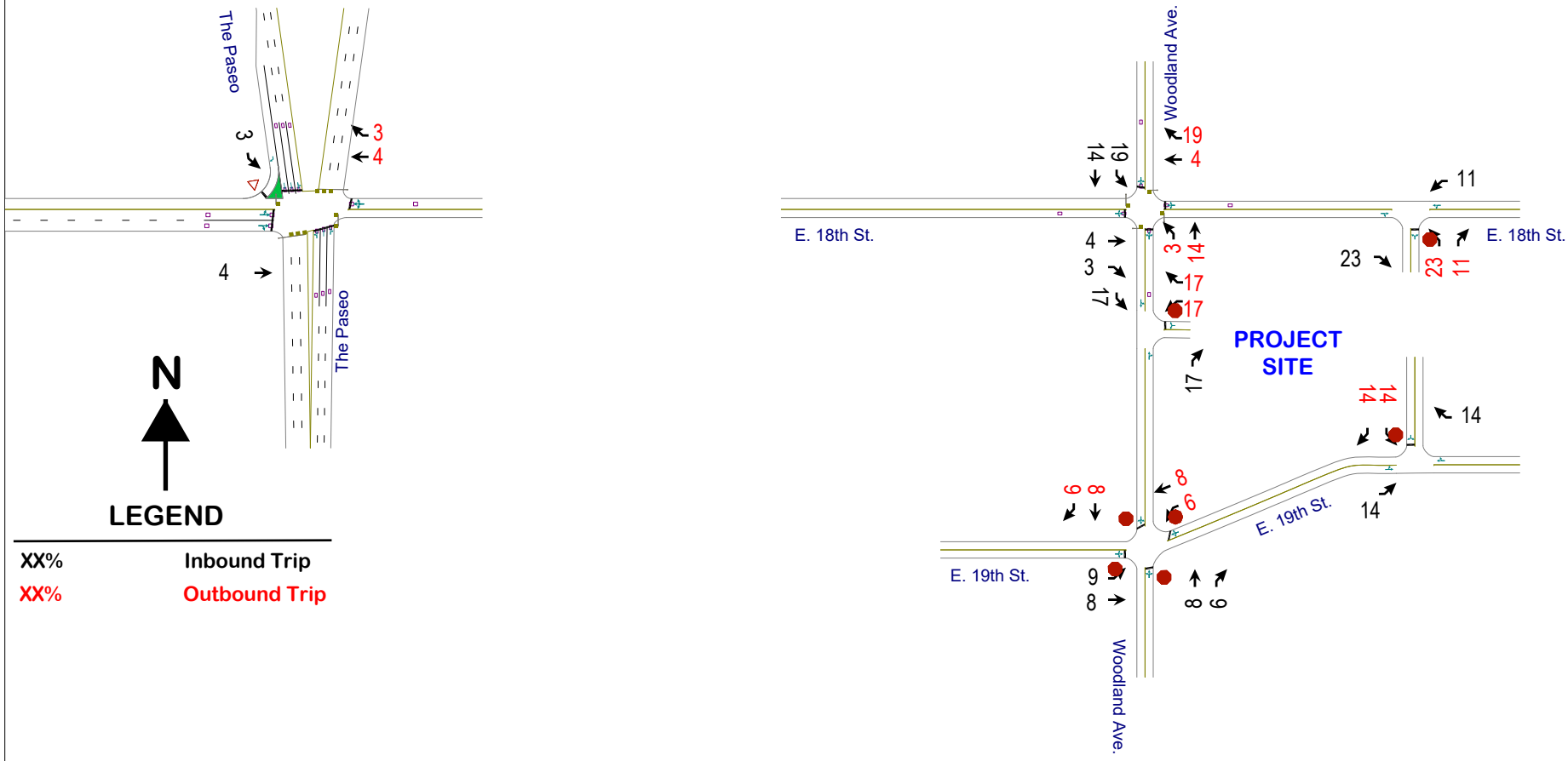
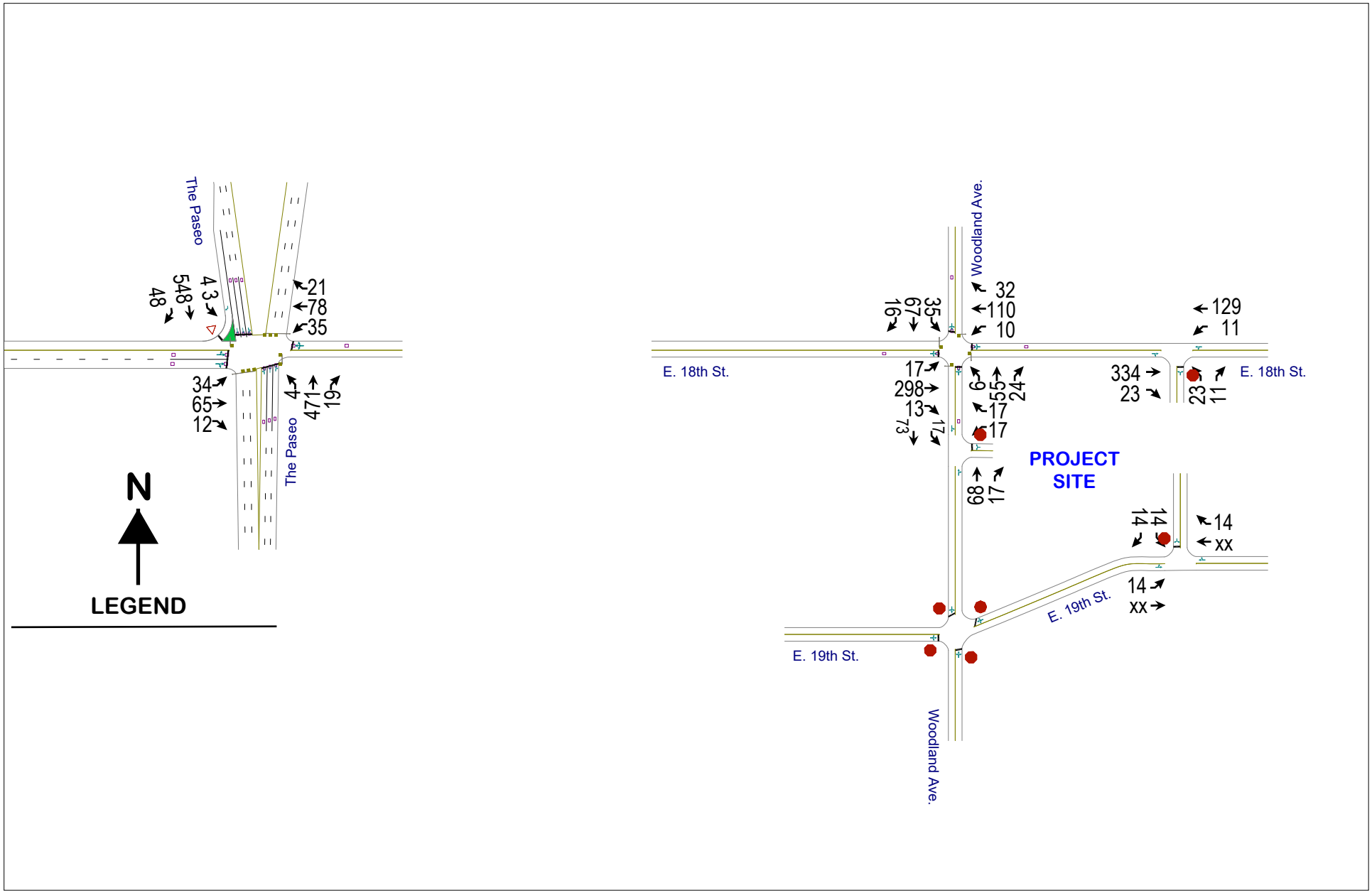


Figure 7 - "Existing (Baseline) + Zhou B. Art Center" Traffic Volumes (Afternoon Peak-hour, Typ. Weekday)



APPENDIX II

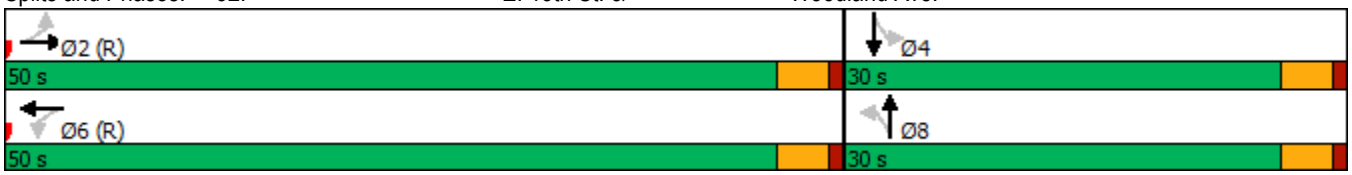
Results of Highway Capacity Analysis
using
Synchro 10 Software
(HCM 6th Edition Methodology)

“EXISTING” TRAFFIC CONDITIONS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	64	2	14	136	11	5	85	21	9	84	12
Future Volume (vph)	7	64	2	14	136	11	5	85	21	9	84	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.986			0.972			0.985	
Flt Protected		0.994			0.995			0.998			0.993	
Satd. Flow (prot)	0	1842	0	0	1827	0	0	1807	0	0	1822	0
Flt Permitted		0.967			0.973			0.989			0.951	
Satd. Flow (perm)	0	1792	0	0	1787	0	0	1791	0	0	1745	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			12			17			9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1225			396			170			217	
Travel Time (s)		27.8			9.0			3.9			4.9	
Peak Hour Factor	0.58	0.73	0.50	0.58	0.71	0.46	0.63	0.63	0.57	0.38	0.64	0.60
Adj. Flow (vph)	12	88	4	24	192	24	8	135	37	24	131	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	104	0	0	240	0	0	180	0	0	175	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Minimum Split (s)	50.0	50.0		50.0	50.0		30.0	30.0		30.0	30.0	
Total Split (s)	50.0	50.0		50.0	50.0		30.0	30.0		30.0	30.0	
Total Split (%)	62.5%	62.5%		62.5%	62.5%		37.5%	37.5%		37.5%	37.5%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
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	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		46.0			46.0			26.0			26.0	
Actuated g/C Ratio		0.58			0.58			0.32			0.32	
v/c Ratio		0.10			0.23			0.30			0.31	
Control Delay		8.8			8.6			19.9			21.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		8.8			8.6			19.9			21.0	
LOS		A			A			B			C	
Approach Delay		8.8			8.6			19.9			21.0	
Approach LOS		A			A			B			C	
Queue Length 50th (ft)		25			51			60			61	
Queue Length 95th (ft)		39			65			71			74	
Internal Link Dist (ft)		1145			316			90			137	
Turn Bay Length (ft)												
Base Capacity (vph)		1032			1032			593			573	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.10			0.23			0.30			0.31	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 30 (38%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 80			
Control Type: Pretimed			
Maximum v/c Ratio: 0.31			
Intersection Signal Delay: 14.6		Intersection LOS: B	
Intersection Capacity Utilization 26.3%		ICU Level of Service A	
Analysis Period (min) 15			

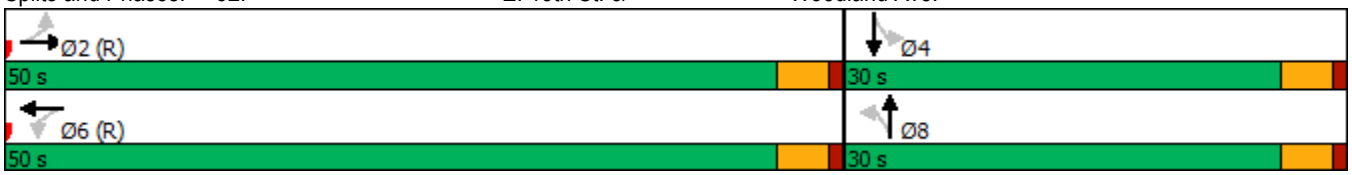
Splits and Phases: 32: E. 18th St. & Woodland Ave.

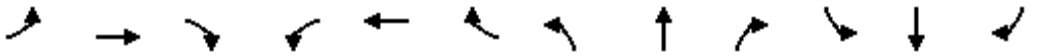


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	294	10	10	106	13	3	41	24	16	53	16
Future Volume (vph)	17	294	10	10	106	13	3	41	24	16	53	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.985			0.945			0.979	
Flt Protected		0.996			0.996			0.996			0.989	
Satd. Flow (prot)	0	1844	0	0	1827	0	0	1753	0	0	1804	0
Flt Permitted		0.969			0.962			0.983			0.934	
Satd. Flow (perm)	0	1794	0	0	1765	0	0	1730	0	0	1703	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			14			44			12	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1225			396			170			217	
Travel Time (s)		27.8			9.0			3.9			4.9	
Peak Hour Factor	0.61	0.90	0.63	0.50	0.54	0.46	0.38	0.73	0.55	0.57	0.66	0.80
Adj. Flow (vph)	28	327	16	20	196	28	8	56	44	28	80	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	371	0	0	244	0	0	108	0	0	128	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Minimum Split (s)	50.0	50.0		50.0	50.0		30.0	30.0		30.0	30.0	
Total Split (s)	50.0	50.0		50.0	50.0		30.0	30.0		30.0	30.0	
Total Split (%)	62.5%	62.5%		62.5%	62.5%		37.5%	37.5%		37.5%	37.5%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
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	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		46.0			46.0			26.0			26.0	
Actuated g/C Ratio		0.58			0.58			0.32			0.32	
v/c Ratio		0.36			0.24			0.18			0.23	
Control Delay		9.8			8.6			13.1			19.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		9.8			8.6			13.1			19.1	
LOS		A			A			B			B	
Approach Delay		9.8			8.6			13.1			19.1	
Approach LOS		A			A			B			B	
Queue Length 50th (ft)		106			52			22			41	
Queue Length 95th (ft)		164			47			43			57	
Internal Link Dist (ft)		1145			316			90			137	
Turn Bay Length (ft)												
Base Capacity (vph)		1033			1020			591			561	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.36			0.24			0.18			0.23	

Intersection Summary		
Area Type:	Other	
Cycle Length: 80		
Actuated Cycle Length: 80		
Offset: 22.5 (28%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green		
Natural Cycle: 80		
Control Type: Pretimed		
Maximum v/c Ratio: 0.36		
Intersection Signal Delay: 11.3		Intersection LOS: B
Intersection Capacity Utilization 37.6%		ICU Level of Service A
Analysis Period (min) 15		

Splits and Phases: 32: E. 18th St. & Woodland Ave.



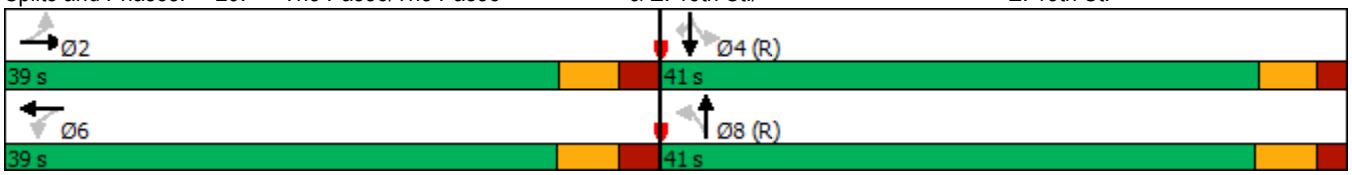


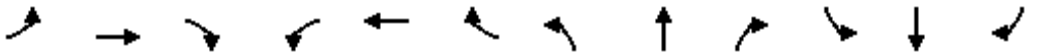
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	26	10	25	112	5	9	273	14	13	242	103
Future Volume (vph)	13	26	10	25	112	5	9	273	14	13	242	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	16	12	12	10	12	12	10	12
Storage Length (ft)	0		0	0		0	0		0	0		185
Storage Lanes	0		0	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	0.91	0.91	0.91	0.91	0.91	1.00
Frt		0.965			0.991			0.990				0.850
Flt Protected		0.986			0.990			0.997			0.996	
Satd. Flow (prot)	0	3817	0	0	2071	0	0	4685	0	0	4727	1583
Flt Permitted		0.871			0.939			0.918			0.907	
Satd. Flow (perm)	0	3371	0	0	1964	0	0	4314	0	0	4305	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			5			17				112
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1650			1225			350			300	
Travel Time (s)		37.5			27.8			8.0			6.8	
Peak Hour Factor	0.65	0.81	0.63	0.69	0.82	0.42	0.56	0.98	0.70	0.65	0.92	0.92
Adj. Flow (vph)	20	32	16	36	137	12	16	279	20	20	263	112
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	68	0	0	185	0	0	315	0	0	283	112
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Detector Phase	2	2		6	6		8	8		4	4	4
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	39.0	39.0		39.0	39.0		41.0	41.0		41.0	41.0	41.0
Total Split (s)	39.0	39.0		39.0	39.0		41.0	41.0		41.0	41.0	41.0
Total Split (%)	48.8%	48.8%		48.8%	48.8%		51.3%	51.3%		51.3%	51.3%	51.3%
Yellow Time (s)	3.5	3.5		3.6	3.6		3.7	3.7		3.4	3.4	3.4
All-Red Time (s)	2.5	2.5		2.5	2.5		1.9	1.9		1.9	1.9	1.9
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	0.0
Total Lost Time (s)		6.0			6.1			5.6			5.3	5.3
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		Max	Max		C-Max	C-Max		C-Max	C-Max	C-Max
Act Effct Green (s)		33.0			32.9			35.4			35.7	35.7
Actuated g/C Ratio		0.41			0.41			0.44			0.45	0.45
v/c Ratio		0.05			0.23			0.16			0.15	0.15
Control Delay		20.2			11.0			12.9			13.4	3.3
Queue Delay		0.0			0.0			0.0			0.0	0.0
Total Delay		20.2			11.0			12.9			13.4	3.3
LOS		C			B			B			B	A
Approach Delay		20.2			11.0			12.9			10.5	
Approach LOS		C			B			B			B	
Queue Length 50th (ft)		15			63			31			29	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 95th (ft)		27			96			48			45	27
Internal Link Dist (ft)		1570			1145			270			220	
Turn Bay Length (ft)												185
Base Capacity (vph)		1399			810			1918			1921	768
Starvation Cap Reductn		0			0			0			0	0
Spillback Cap Reductn		0			0			0			0	0
Storage Cap Reductn		0			0			0			0	0
Reduced v/c Ratio		0.05			0.23			0.16			0.15	0.15

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 24 (30%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.23			
Intersection Signal Delay: 12.1		Intersection LOS: B	
Intersection Capacity Utilization 38.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 29: The Paseo/The Paseo & E. 18th St./ E. 18th St.



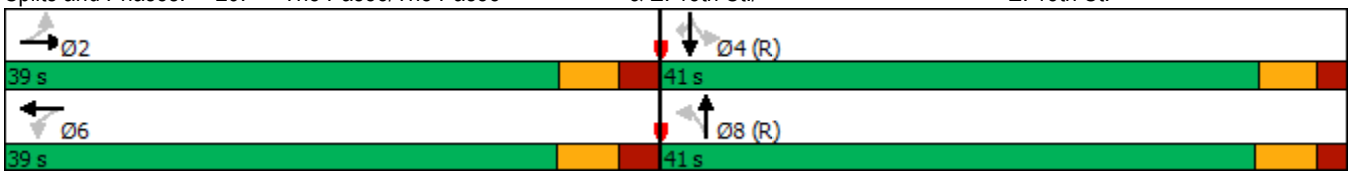


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	61	12	35	74	18	4	471	19	40	548	48
Future Volume (vph)	34	61	12	35	74	18	4	471	19	40	548	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	16	12	12	10	12	12	10	12
Storage Length (ft)	0		0	0		0	0		0	0		185
Storage Lanes	0		0	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	0.91	0.91	0.91	0.91	0.91	1.00
Frt		0.981			0.981			0.994				0.850
Flt Protected		0.983			0.986			0.999			0.996	
Satd. Flow (prot)	0	3868	0	0	2042	0	0	4713	0	0	4727	1583
Flt Permitted		0.799			0.849			0.925			0.839	
Satd. Flow (perm)	0	3144	0	0	1758	0	0	4364	0	0	3982	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			12			10				68
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1650			1225			350			300	
Travel Time (s)		37.5			27.8			8.0			6.8	
Peak Hour Factor	0.39	0.46	0.38	0.63	0.64	0.64	0.33	0.73	0.68	0.77	0.88	0.71
Adj. Flow (vph)	87	133	32	56	116	28	12	645	28	52	623	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	252	0	0	200	0	0	685	0	0	675	68
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Detector Phase	2	2		6	6		8	8		4	4	4
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	39.0	39.0		39.0	39.0		41.0	41.0		41.0	41.0	41.0
Total Split (s)	39.0	39.0		39.0	39.0		41.0	41.0		41.0	41.0	41.0
Total Split (%)	48.8%	48.8%		48.8%	48.8%		51.3%	51.3%		51.3%	51.3%	51.3%
Yellow Time (s)	3.5	3.5		3.6	3.6		3.7	3.7		3.4	3.4	3.4
All-Red Time (s)	2.5	2.5		2.5	2.5		1.9	1.9		1.9	1.9	1.9
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	0.0
Total Lost Time (s)		6.0			6.1			5.6			5.3	5.3
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		Max	Max		C-Max	C-Max		C-Max	C-Max	C-Max
Act Effct Green (s)		33.0			32.9			35.4			35.7	35.7
Actuated g/C Ratio		0.41			0.41			0.44			0.45	0.45
v/c Ratio		0.19			0.27			0.35			0.38	0.09
Control Delay		11.0			12.9			15.2			15.6	4.0
Queue Delay		0.0			0.0			0.0			0.0	0.0
Total Delay		11.0			12.9			15.2			15.6	4.0
LOS		B			B			B			B	A
Approach Delay		11.0			12.9			15.2			14.5	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)		27			45			78			79	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 95th (ft)		20			52			82			104	12
Internal Link Dist (ft)		1570			1145			270			220	
Turn Bay Length (ft)												185
Base Capacity (vph)		1311			730			1936			1776	744
Starvation Cap Reductn		0			0			0			0	0
Spillback Cap Reductn		0			0			0			0	0
Storage Cap Reductn		0			0			0			0	0
Reduced v/c Ratio		0.19			0.27			0.35			0.38	0.09

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 72 (90%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.38			
Intersection Signal Delay: 14.1		Intersection LOS: B	
Intersection Capacity Utilization 48.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 29: The Paseo/The Paseo & E. 18th St./ E. 18th St.



“EXISTING + PROJECT (BUILD-OUT)” CASE SCENARIO

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	298	13	10	110	32	6	55	24	35	67	16
Future Volume (vph)	17	298	13	10	110	32	6	55	24	35	67	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.968			0.956			0.985	
Flt Protected		0.996			0.997			0.994			0.984	
Satd. Flow (prot)	0	1842	0	0	1798	0	0	1770	0	0	1805	0
Flt Permitted		0.966			0.968			0.962			0.869	
Satd. Flow (perm)	0	1787	0	0	1745	0	0	1713	0	0	1594	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			33			32			8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1225			396			170			217	
Travel Time (s)		27.8			9.0			3.9			4.9	
Peak Hour Factor	0.61	0.90	0.63	0.50	0.54	0.46	0.38	0.73	0.55	0.57	0.66	0.80
Adj. Flow (vph)	28	331	21	20	204	70	16	75	44	61	102	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	380	0	0	294	0	0	135	0	0	183	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Minimum Split (s)	50.0	50.0		50.0	50.0		30.0	30.0		30.0	30.0	
Total Split (s)	50.0	50.0		50.0	50.0		30.0	30.0		30.0	30.0	
Total Split (%)	62.5%	62.5%		62.5%	62.5%		37.5%	37.5%		37.5%	37.5%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
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	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		46.0			46.0			26.0			26.0	
Actuated g/C Ratio		0.58			0.58			0.32			0.32	
v/c Ratio		0.37			0.29			0.23			0.35	
Control Delay		7.9			8.5			16.2			22.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		7.9			8.5			16.2			22.0	
LOS		A			A			B			C	
Approach Delay		7.9			8.5			16.2			22.0	
Approach LOS		A			A			B			C	
Queue Length 50th (ft)		65			60			37			65	
Queue Length 95th (ft)		110			51			59			81	
Internal Link Dist (ft)		1145			316			90			137	
Turn Bay Length (ft)												
Base Capacity (vph)		1030			1017			578			523	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.37			0.29			0.23			0.35	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 22.5 (28%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 80			
Control Type: Pretimed			
Maximum v/c Ratio: 0.37			
Intersection Signal Delay: 11.8		Intersection LOS: B	
Intersection Capacity Utilization 41.1%		ICU Level of Service A	
Analysis Period (min) 15			

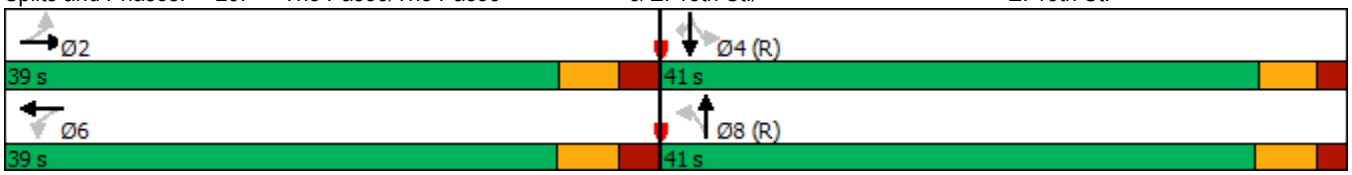
Splits and Phases: 32: E. 18th St. & Woodland Ave.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	65	12	35	78	21	4	471	19	43	548	48
Future Volume (vph)	34	65	12	35	78	21	4	471	19	43	548	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	16	12	12	10	12	12	10	12
Storage Length (ft)	0		0	0		0	0		0	0		185
Storage Lanes	0		0	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	0.91	0.91	0.91	0.91	0.91	1.00
Frt		0.982			0.979			0.994				0.850
Flt Protected		0.984			0.987			0.999			0.996	
Satd. Flow (prot)	0	3876	0	0	2040	0	0	4713	0	0	4727	1583
Flt Permitted		0.798			0.853			0.925			0.831	
Satd. Flow (perm)	0	3143	0	0	1763	0	0	4364	0	0	3944	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23			14			10				68
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1650			1225			350			300	
Travel Time (s)		37.5			27.8			8.0			6.8	
Peak Hour Factor	0.39	0.46	0.38	0.63	0.64	0.64	0.33	0.73	0.68	0.77	0.88	0.71
Adj. Flow (vph)	87	141	32	56	122	33	12	645	28	56	623	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	260	0	0	211	0	0	685	0	0	679	68
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Detector Phase	2	2		6	6		8	8		4	4	4
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	39.0	39.0		39.0	39.0		41.0	41.0		41.0	41.0	41.0
Total Split (s)	39.0	39.0		39.0	39.0		41.0	41.0		41.0	41.0	41.0
Total Split (%)	48.8%	48.8%		48.8%	48.8%		51.3%	51.3%		51.3%	51.3%	51.3%
Yellow Time (s)	3.5	3.5		3.6	3.6		3.7	3.7		3.4	3.4	3.4
All-Red Time (s)	2.5	2.5		2.5	2.5		1.9	1.9		1.9	1.9	1.9
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	0.0
Total Lost Time (s)		6.0			6.1			5.6			5.3	5.3
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		Max	Max		C-Max	C-Max		C-Max	C-Max	C-Max
Act Effct Green (s)		33.0			32.9			35.4			35.7	35.7
Actuated g/C Ratio		0.41			0.41			0.44			0.45	0.45
v/c Ratio		0.20			0.29			0.35			0.39	0.09
Control Delay		11.2			12.8			15.2			15.6	4.0
Queue Delay		0.0			0.0			0.0			0.0	0.0
Total Delay		11.2			12.8			15.2			15.6	4.0
LOS		B			B			B			B	A
Approach Delay		11.2			12.8			15.2			14.6	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)		29			49			78			80	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 95th (ft)		21			55			82			105	12
Internal Link Dist (ft)		1570			1145			270			220	
Turn Bay Length (ft)												185
Base Capacity (vph)		1310			733			1936			1760	744
Starvation Cap Reductn		0			0			0			0	0
Spillback Cap Reductn		0			0			0			0	0
Storage Cap Reductn		0			0			0			0	0
Reduced v/c Ratio		0.20			0.29			0.35			0.39	0.09

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 72 (90%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.39			
Intersection Signal Delay: 14.1		Intersection LOS: B	
Intersection Capacity Utilization 49.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 29: The Paseo/The Paseo & E. 18th St./ E. 18th St.



Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	334	23	11	129	23	11
Future Vol, veh/h	334	23	11	129	23	11
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	363	25	12	140	25	12

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	388	0	540	376
Stage 1	-	-	-	-	376	-
Stage 2	-	-	-	-	164	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1170	-	503	670
Stage 1	-	-	-	-	694	-
Stage 2	-	-	-	-	865	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1170	-	497	670
Mov Cap-2 Maneuver	-	-	-	-	497	-
Stage 1	-	-	-	-	694	-
Stage 2	-	-	-	-	855	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	12.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	542	-	-	1170	-
HCM Lane V/C Ratio	0.068	-	-	0.01	-
HCM Control Delay (s)	12.1	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	2.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	17	17	68	17	17	73
Future Vol, veh/h	17	17	68	17	17	73
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	18	18	74	18	18	79

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	198	83	0	0	92	0
Stage 1	83	-	-	-	-	-
Stage 2	115	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	791	976	-	-	1503	-
Stage 1	940	-	-	-	-	-
Stage 2	910	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	781	976	-	-	1503	-
Mov Cap-2 Maneuver	781	-	-	-	-	-
Stage 1	940	-	-	-	-	-
Stage 2	898	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	1.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	868	1503	-
HCM Lane V/C Ratio	-	-	0.043	0.012	-
HCM Control Delay (s)	-	-	9.3	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

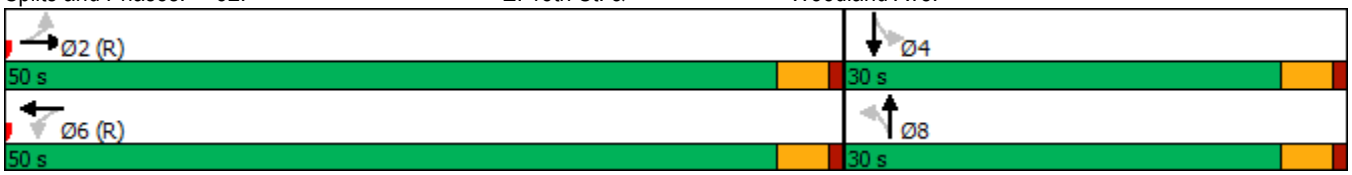
“FUTURE” TRAFFIC CONDITIONS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	298	13	10	110	32	6	55	24	35	67	16
Future Volume (vph)	17	298	13	10	110	32	6	55	24	35	67	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.968			0.956			0.985	
Flt Protected		0.996			0.997			0.994			0.984	
Satd. Flow (prot)	0	1842	0	0	1798	0	0	1770	0	0	1805	0
Flt Permitted		0.958			0.958			0.955			0.863	
Satd. Flow (perm)	0	1772	0	0	1727	0	0	1701	0	0	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			33			32			8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1225			396			170			217	
Travel Time (s)		27.8			9.0			3.9			4.9	
Peak Hour Factor	0.61	0.90	0.63	0.50	0.54	0.46	0.38	0.73	0.55	0.57	0.66	0.80
Growth Factor	126%	126%	126%	126%	126%	126%	126%	126%	126%	126%	126%	126%
Adj. Flow (vph)	35	417	26	25	257	88	20	95	55	77	128	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	478	0	0	370	0	0	170	0	0	230	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Minimum Split (s)	50.0	50.0		50.0	50.0		30.0	30.0		30.0	30.0	
Total Split (s)	50.0	50.0		50.0	50.0		30.0	30.0		30.0	30.0	
Total Split (%)	62.5%	62.5%		62.5%	62.5%		37.5%	37.5%		37.5%	37.5%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
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	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		46.0			46.0			26.0			26.0	
Actuated g/C Ratio		0.58			0.58			0.32			0.32	
v/c Ratio		0.47			0.37			0.30			0.44	
Control Delay		9.3			9.5			17.9			23.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		9.3			9.5			17.9			23.8	
LOS		A			A			B			C	
Approach Delay		9.3			9.5			17.9			23.8	
Approach LOS		A			A			B			C	
Queue Length 50th (ft)		91			82			50			86	
Queue Length 95th (ft)		160			65			74			101	
Internal Link Dist (ft)		1145			316			90			137	
Turn Bay Length (ft)												
Base Capacity (vph)		1021			1007			574			519	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Reduced v/c Ratio		0.47			0.37			0.30			0.44	

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 22.5 (28%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 80			
Control Type: Pretimed			
Maximum v/c Ratio: 0.47			
Intersection Signal Delay: 13.2		Intersection LOS: B	
Intersection Capacity Utilization 48.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 32: E. 18th St. & Woodland Ave.

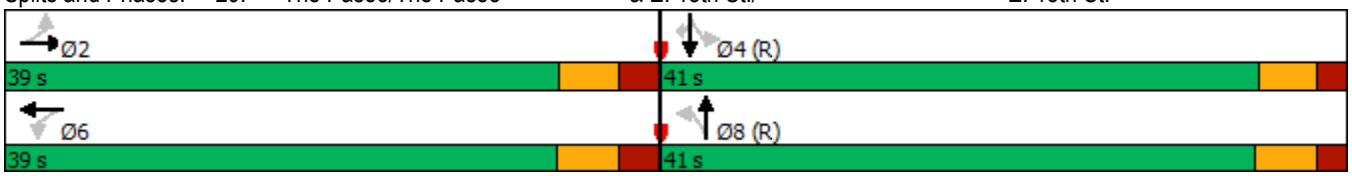


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	65	12	35	78	21	4	471	19	43	548	48
Future Volume (vph)	34	65	12	35	78	21	4	471	19	43	548	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	16	12	12	10	12	12	10	12
Storage Length (ft)	0		0	0		0	0		0	0		185
Storage Lanes	0		0	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	0.91	0.91	0.91	0.91	0.91	1.00
Frt		0.982			0.979			0.994				0.850
Flt Protected		0.984			0.987			0.999			0.996	
Satd. Flow (prot)	0	3876	0	0	2040	0	0	4713	0	0	4727	1583
Flt Permitted		0.751			0.828			0.918			0.799	
Satd. Flow (perm)	0	2958	0	0	1711	0	0	4331	0	0	3792	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23			14			10				83
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1650			1225			350			300	
Travel Time (s)		37.5			27.8			8.0			6.8	
Peak Hour Factor	0.39	0.46	0.38	0.63	0.64	0.64	0.33	0.73	0.68	0.77	0.88	0.71
Growth Factor	123%	123%	123%	123%	123%	123%	123%	123%	123%	123%	123%	123%
Adj. Flow (vph)	107	174	39	68	150	40	15	794	34	69	766	83
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	320	0	0	258	0	0	843	0	0	835	83
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Detector Phase	2	2		6	6		8	8		4	4	4
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	39.0	39.0		39.0	39.0		41.0	41.0		41.0	41.0	41.0
Total Split (s)	39.0	39.0		39.0	39.0		41.0	41.0		41.0	41.0	41.0
Total Split (%)	48.8%	48.8%		48.8%	48.8%		51.3%	51.3%		51.3%	51.3%	51.3%
Yellow Time (s)	3.5	3.5		3.6	3.6		3.7	3.7		3.4	3.4	3.4
All-Red Time (s)	2.5	2.5		2.5	2.5		1.9	1.9		1.9	1.9	1.9
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	0.0
Total Lost Time (s)		6.0			6.1			5.6			5.3	5.3
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		Max	Max		C-Max	C-Max		C-Max	C-Max	C-Max
Act Effct Green (s)		33.0			32.9			35.4			35.7	35.7
Actuated g/C Ratio		0.41			0.41			0.44			0.45	0.45
v/c Ratio		0.26			0.36			0.44			0.49	0.11
Control Delay		12.6			13.5			16.1			17.0	3.7
Queue Delay		0.0			0.0			0.0			0.0	0.0
Total Delay		12.6			13.5			16.1			17.0	3.7
LOS		B			B			B			B	A
Approach Delay		12.6			13.5			16.1			15.8	
Approach LOS		B			B			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		40			61			101			104	0
Queue Length 95th (ft)		27			64			102			135	13
Internal Link Dist (ft)		1570			1145			270			220	
Turn Bay Length (ft)												185
Base Capacity (vph)		1233			711			1922			1692	752
Starvation Cap Reductn		0			0			0			0	0
Spillback Cap Reductn		0			0			0			0	0
Storage Cap Reductn		0			0			0			0	0
Reduced v/c Ratio		0.26			0.36			0.44			0.49	0.11

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 72 (90%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay: 15.2		Intersection LOS: B	
Intersection Capacity Utilization 55.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 29: The Paseo/The Paseo & E. 18th St./ E. 18th St.



Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	334	23	11	129	23	11
Future Vol, veh/h	334	23	11	129	23	11
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	457	25	15	140	25	12

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	482	0	640	470
Stage 1	-	-	-	-	470	-
Stage 2	-	-	-	-	170	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1081	-	440	594
Stage 1	-	-	-	-	629	-
Stage 2	-	-	-	-	860	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1081	-	433	594
Mov Cap-2 Maneuver	-	-	-	-	433	-
Stage 1	-	-	-	-	629	-
Stage 2	-	-	-	-	847	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	13.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	475	-	-	1081	-
HCM Lane V/C Ratio	0.078	-	-	0.014	-
HCM Control Delay (s)	13.2	-	-	8.4	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	17	17	68	17	17	73
Future Vol, veh/h	17	17	68	17	17	73
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	18	18	93	18	18	100

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	238	102	0	0	111	0
Stage 1	102	-	-	-	-	-
Stage 2	136	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	750	953	-	-	1479	-
Stage 1	922	-	-	-	-	-
Stage 2	890	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	740	953	-	-	1479	-
Mov Cap-2 Maneuver	740	-	-	-	-	-
Stage 1	922	-	-	-	-	-
Stage 2	878	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	1.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	833	1479	-
HCM Lane V/C Ratio	-	-	0.044	0.012	-
HCM Control Delay (s)	-	-	9.5	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

APPENDIX III

Results of Trip Generation Analysis
Using
The ITE Trip Generation Manual, 10th Edition

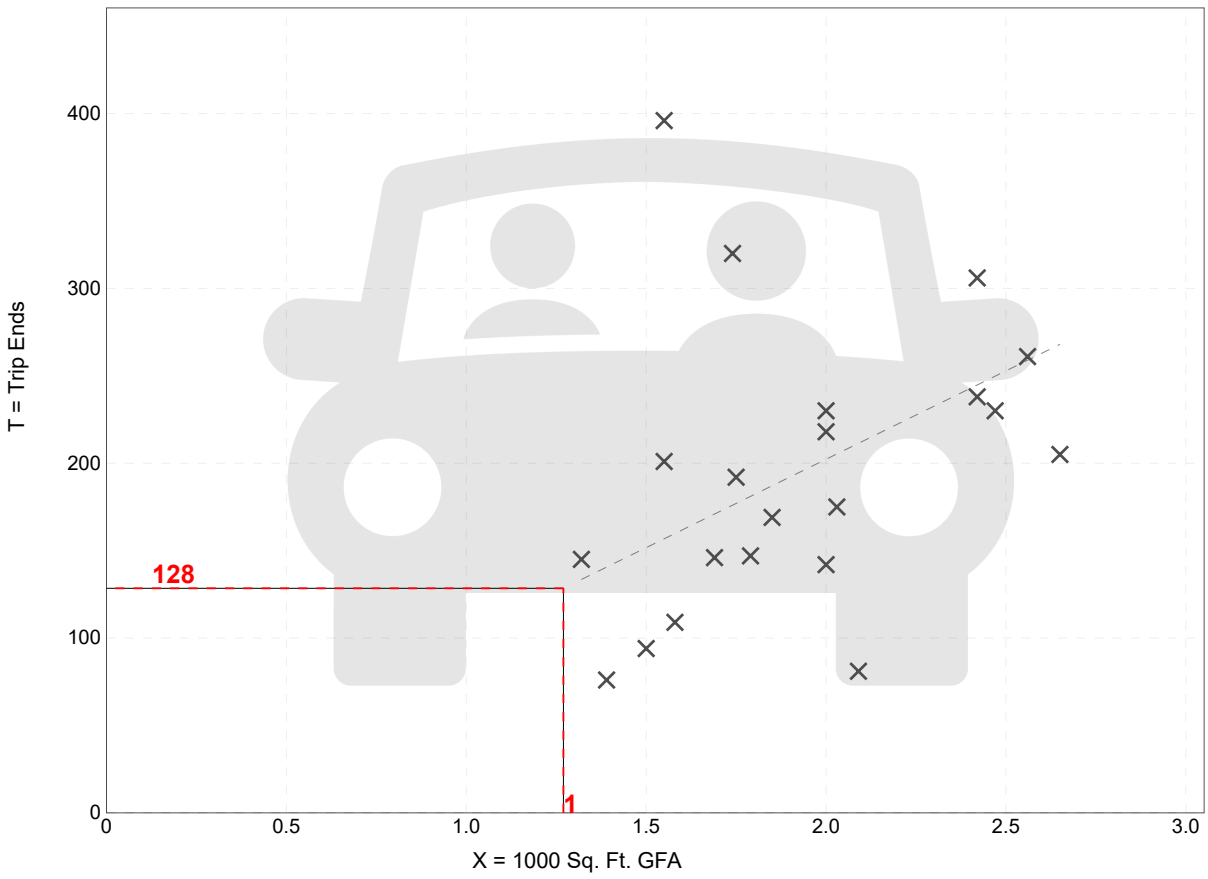
Coffee/Donut Shop without Drive-Through Window
(936)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 21
Avg. 1000 Sq. Ft. GFA: 2
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
101.14	38.76 - 255.48	43.44

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= **

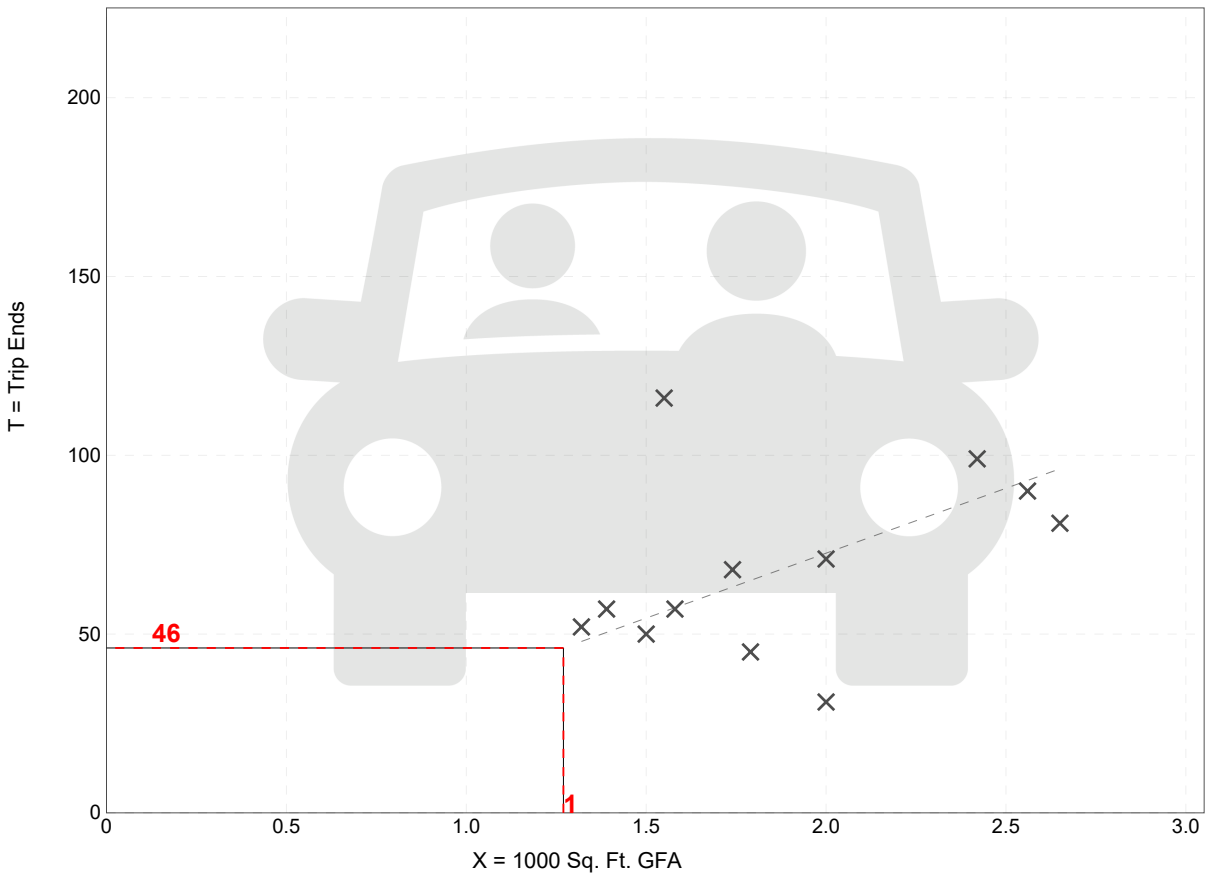
Coffee/Donut Shop without Drive-Through Window
(936)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 12
Avg. 1000 Sq. Ft. GFA: 2
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
36.31	15.50 - 74.84	13.22

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= **

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Zhou B. Art Center	**Organization:**	MGS
Project Location:	KCMO	**Performed By:**	MG
Scenario Description:	"Existing + Project"	**Date:**	1/8/2021
Analysis Year:	2021	**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail				0		
Restaurant	936	1,264	sq. ft..(GFA)	128	65	63
Cinema/Entertainment	Events			0	0	0
Residential				0		
Hotel				0		
All Other Land Uses[2]				0		
Total				128	65	63

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office	1.00	0%	0%	1.00	0%	0%
Retail	1.00	0%	0%	1.00	0%	0%
Restaurant	1.00	0%	0%	1.00	0%	0%
Cinema/Entertainment	1.00	0%	10%	1.00	0%	10%
Residential	1.00	0%	0%	1.00	0%	0%
Hotel	1.00	0%	0%	1.00	0%	0%
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	128	65	63
Internal Capture Percentage	0%	0%	0%
External Vehicle-Trips[3]	128	65	63
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	N/A	N/A
Restaurant	0%	0%
Cinema/Entertainment	N/A	N/A
Residential	N/A	N/A
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Zhou B. Art Center
Analysis Period:	**AM Street Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	0	0	1.00	0	0
Restaurant	1.00	65	65	1.00	63	63
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	0	0	1.00	0	0
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	0	0
Restaurant	20	9		0	3	2
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	15	0	0	0
Retail	0		33	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	13	0		0
Hotel	0	0	4	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	0	0	0	0	0	0
Restaurant	0	65	65	65	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	0	0	0	0	0	0
Restaurant	0	63	63	63	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Zhou B. Art Center	**Organization:**	MGS
Project Location:	KCMO	**Performed By:**	MG
Scenario Description:	"Existing + Project"	**Date:**	1/8/2021
Analysis Year:	2021	**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail				0		
Restaurant	936	1,264	sq. ft..(GFA)	46	23	23
Cinema/Entertainment	Events			188	94	94
Residential				0		
Hotel				0		
All Other Land Uses[2]				0		
Total				234	117	117

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office	1.00	0%	0%	1.00	0%	0%
Retail	1.00	0%	0%	1.00	0%	0%
Restaurant	1.00	0%	0%	1.00	0%	0%
Cinema/Entertainment	1.00	10%	10%	1.00	10%	10%
Residential	1.00	0%	0%	1.00	0%	0%
Hotel	1.00	0%	0%	1.00	0%	0%
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	0	0
Restaurant	0	0		2	0	0
Cinema/Entertainment	0	0	1		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	234	117	117
Internal Capture Percentage	3%	3%	3%
External Vehicle-Trips[3]	192	96	96
External Transit-Trips[4]	18	9	9
External Non-Motorized Trips[4]	18	9	9

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	N/A	N/A
Restaurant	4%	9%
Cinema/Entertainment	2%	1%
Residential	N/A	N/A
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Zhou B. Art Center
Analysis Period:	**PM Street Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	0	0	1.00	0	0
Restaurant	1.00	23	23	1.00	23	23
Cinema/Entertainment	1.00	94	94	1.00	94	94
Residential	1.00	0	0	1.00	0	0
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	0	0
Restaurant	1	9		2	4	2
Cinema/Entertainment	2	20	29		8	2
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	1	0	0
Retail	0		7	24	0	0
Restaurant	0	0		30	0	0
Cinema/Entertainment	0	0	1		0	0
Residential	0	0	3	0		0
Hotel	0	0	1	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	0	0	0	0	0	0
Restaurant	1	22	23	22	0	0
Cinema/Entertainment	2	92	94	74	9	9
Residential	0	0	0	0	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	0	0	0	0	0	0
Restaurant	2	21	23	21	0	0
Cinema/Entertainment	1	93	94	75	9	9
Residential	0	0	0	0	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

Trip Generation Estimation
for
the existing developments surrounding the project site

APPENDIX IV

Summary of Peak-Hour Traffic Counts

Kansas City Missouri Public Works

5310 Municipal Ave
Kansas City, Mo. 64120

Woodland Ave and E 18th St
Weather: Clear Road: Dry
Counted BY: GH
3 Yr Count Program / LOC_696

File Name : WOODLAND18
Site Code : 30011904
Start Date : 5/18/2017
Page No : 1

Groups Printed- Unshifted - Bank 1

	WOODLAND AVENUE From North					E 18TH STREET From East					WOODLAND AVENUE From South					E 18TH STREET From West							
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	3	33	0	1	36	1	22	4	0	27	6	23	2	0	31	1	13	1	0	15	1	109	110
07:15 AM	2	30	2	4	34	4	48	6	3	58	8	34	1	3	43	1	13	2	3	16	13	151	164
07:30 AM	2	10	1	0	13	6	34	1	0	41	2	14	1	0	17	0	22	3	0	25	0	96	96
07:45 AM	5	11	6	1	22	0	32	3	1	35	5	14	1	0	20	0	16	1	0	17	2	94	96
Total	12	84	9	6	105	11	136	14	4	161	21	85	5	3	111	2	64	7	3	73	16	450	466
08:00 AM	2	7	1	0	10	4	18	2	2	24	3	7	1	1	11	1	17	3	0	21	3	66	69
08:15 AM	6	7	0	1	13	3	22	2	0	27	4	9	0	0	13	2	15	1	0	18	1	71	72
08:30 AM	3	11	2	0	16	3	31	6	0	40	2	15	1	1	18	0	7	0	0	7	1	81	82
08:45 AM	2	8	1	0	11	3	16	1	0	20	1	9	2	0	12	3	8	0	0	11	0	54	54
Total	13	33	4	1	50	13	87	11	2	111	10	40	4	2	54	6	47	4	0	57	5	272	277
****BREAK****																							
03:00 PM	8	20	4	1	32	2	37	4	0	43	6	2	0	0	8	1	31	3	0	35	1	118	119
03:15 PM	5	6	3	2	14	6	50	2	1	58	4	12	1	1	17	4	50	3	0	57	4	146	150
03:30 PM	6	26	6	4	38	2	49	2	0	53	5	4	2	0	11	0	63	5	0	68	4	170	174
03:45 PM	4	15	3	0	22	2	10	1	1	13	3	6	0	0	9	1	45	4	0	50	1	94	95
Total	23	67	16	7	106	12	146	9	2	167	18	24	3	1	45	6	189	15	0	210	10	528	538
04:00 PM	5	13	3	0	21	1	46	5	0	52	5	5	2	1	12	2	57	3	1	62	2	147	149
04:15 PM	3	18	1	0	22	0	11	2	0	13	3	5	1	1	9	2	51	6	1	59	2	103	105
04:30 PM	1	18	5	1	24	2	11	1	2	14	11	3	1	2	15	1	85	3	1	89	6	142	148
04:45 PM	4	14	2	0	20	1	13	2	0	16	5	10	1	0	16	1	82	4	0	87	0	139	139
Total	13	63	11	1	87	4	81	10	2	95	24	23	5	4	52	6	275	16	3	297	10	531	541
05:00 PM	3	20	7	2	30	3	14	5	0	22	1	5	0	1	6	2	75	7	0	84	3	142	145
05:15 PM	5	10	4	0	19	2	30	1	0	33	11	12	0	0	23	3	81	4	2	88	2	163	165
05:30 PM	4	9	3	0	16	7	49	2	0	58	7	14	2	0	23	4	56	2	0	62	0	159	159
05:45 PM	5	19	1	1	25	0	10	8	0	18	0	6	1	0	7	1	41	2	0	44	1	94	95
Total	17	58	15	3	90	12	103	16	0	131	19	37	3	1	59	10	253	15	2	278	6	558	564
Grand Total	78	305	55	18	438	52	553	60	10	665	92	209	20	11	321	30	828	57	8	915	47	2339	2386
Apprch %	17.8	69.6	12.6			7.8	83.2	9			28.7	65.1	6.2			3.3	90.5	6.2					
Total %	3.3	13	2.4		18.7	2.2	23.6	2.6		28.4	3.9	8.9	0.9		13.7	1.3	35.4	2.4		39.1	2	98	
Unshifted	78	305	55		456	52	553	60		675	92	208	20		331	30	826	57		921	0	0	2383
% Unshifted	100	100	100	100	100	100	100	100	100	100	100	99.5	100	100	99.7	100	99.8	100	100	99.8	0	0	99.9
Bank 1	0	0	0		0	0	0	0		0	0	1	0		1	0	2	0		2	0	0	3
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0.3	0	0.2	0	0	0.2	0	0	0.1

Kansas City Missouri Public Works
5310 Municipal Ave
Kansas City, Mo. 64120

Woodland Ave and E 18th St
Weather: Clear Road: Dry
Counted BY: GH
3 Yr Count Program / LOC_696

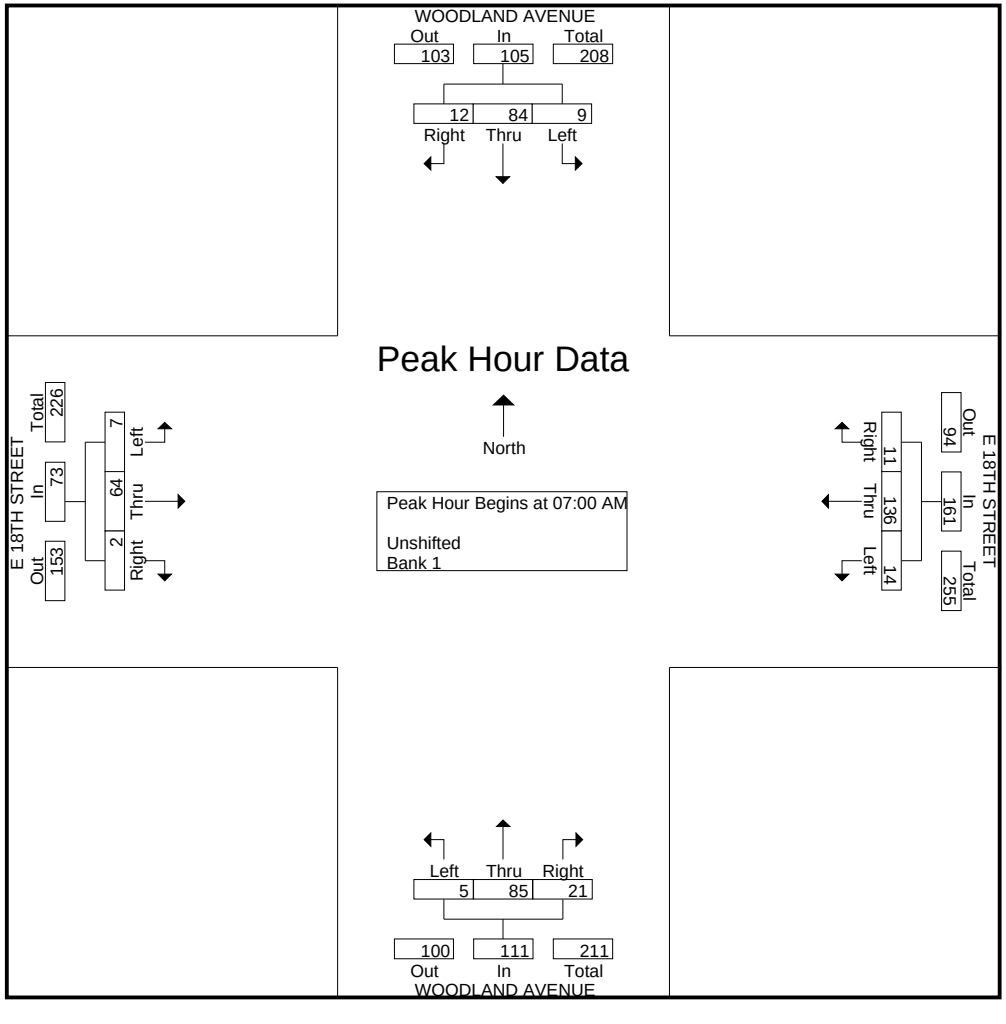
File Name : WOODLAND18
Site Code : 30011904
Start Date : 5/18/2017
Page No : 4

	WOODLAND AVENUE From North				E 18TH STREET From East				WOODLAND AVENUE From South				E 18TH STREET From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	3	**33**	0	**36**	1	22	4	27	6	23	**2**	31	**1**	13	1	15	109
07:15 AM	2	30	2	34	4	**48**	**6**	**58**	**8**	**34**	1	**43**	1	13	2	16	**151**
07:30 AM	2	10	1	13	**6**	34	1	41	2	14	1	17	0	**22**	**3**	**25**	96
07:45 AM	**5**	11	**6**	22	0	32	3	35	5	14	1	20	0	16	1	17	94
Total Volume	12	84	9	105	11	136	14	161	21	85	5	111	2	64	7	73	450
% App. Total	11.4	80	8.6		6.8	84.5	8.7		18.9	76.6	4.5		2.7	87.7	9.6		
PHF	.600	.636	.375	.729	.458	.708	.583	.694	.656	.625	.625	.645	.500	.727	.583	.730	.745

Kansas City Missouri Public Works
5310 Municipal Ave
Kansas City, Mo. 64120

Woodland Ave and E 18th St
Weather: Clear Road: Dry
Counted BY: GH
3 Yr Count Program / LOC_696

File Name : WOODLAND18
Site Code : 30011904
Start Date : 5/18/2017
Page No : 5



Kansas City Missouri Public Works
5310 Municipal Ave
Kansas City, Mo. 64120

Woodland Ave and E 18th St
Weather: Clear Road: Dry
Counted BY: GH
3 Yr Count Program / LOC_696

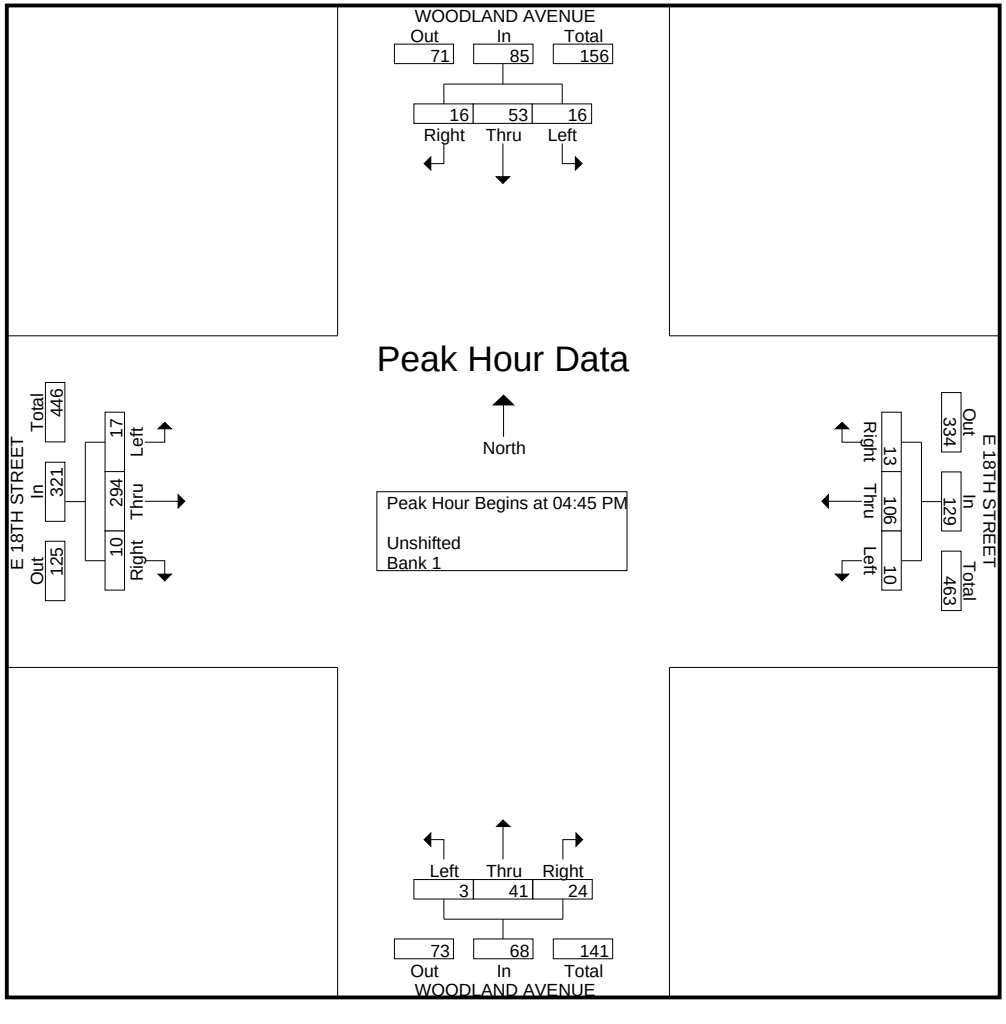
File Name : WOODLAND18
Site Code : 30011904
Start Date : 5/18/2017

	WOODLAND AVENUE From North				E 18TH STREET From East				WOODLAND AVENUE From South				E 18TH STREET From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	4	14	2	20	1	13	2	16	5	10	1	16	1	**82**	4	87	139
05:00 PM	3	**20**	**7**	**30**	3	14	**5**	22	1	5	0	6	2	75	**7**	84	142
05:15 PM	**5**	10	4	19	2	30	1	33	**11**	12	0	**23**	3	81	4	**88**	**163**
05:30 PM	4	9	3	16	**7**	**49**	2	**58**	7	**14**	**2**	23	**4**	56	2	62	159
Total Volume	16	53	16	85	13	106	10	129	24	41	3	68	10	294	17	321	603
% App. Total	18.8	62.4	18.8		10.1	82.2	7.8		35.3	60.3	4.4		3.1	91.6	5.3		
PHF	.800	.663	.571	.708	.464	.541	.500	.556	.545	.732	.375	.739	.625	.896	.607	.912	.925

Kansas City Missouri Public Works
5310 Municipal Ave
Kansas City, Mo. 64120

Woodland Ave and E 18th St
Weather: Clear Road: Dry
Counted BY: GH
3 Yr Count Program / LOC_696

File Name : WOODLAND18
Site Code : 30011904
Start Date : 5/18/2017
Page No : 7



Kansas City Missouri Public Works
5310 Municipal Ave.
Kansas City Mo 64120

Paseo Blvd and E 18th St
Weather: Clear Road: Dry
Counted By: DJ / CH / AN / JW
REQUESTED BY: M.KEARNEY

File Name : PASEO18
Site Code : 10001326
Start Date : 7/9/2019
Page No : 1

Groups Printed- Unshifted - Bank 1:Bikes - Bank 2

	PASEO BLVD From North					E 18TH ST From East					PASEO BLVD From South					E 18TH ST From West							
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
06:00 AM	7	18	0	1	25	1	13	2	0	16	1	21	0	0	22	2	4	5	0	11	1	74	75
06:15 AM	9	16	1	1	26	0	12	4	0	16	3	25	0	0	28	3	4	5	0	12	1	82	83
06:30 AM	10	33	1	1	44	0	15	3	1	18	3	23	1	1	27	2	6	7	1	15	4	104	108
06:45 AM	26	37	1	0	64	0	26	4	1	30	6	36	2	1	44	1	5	6	0	12	2	150	152
Total	52	104	3	3	159	1	66	13	2	80	13	105	3	2	121	8	19	23	1	50	8	410	418
07:00 AM	19	35	4	1	58	1	23	1	0	25	0	27	0	1	27	1	3	1	0	5	2	115	117
07:15 AM	22	48	1	1	71	2	26	7	0	35	0	7	0	0	7	0	0	1	0	1	1	114	115
07:30 AM	26	61	2	0	89	0	34	9	1	43	1	67	0	0	68	2	6	3	0	11	1	211	212
07:45 AM	26	65	3	0	94	1	32	5	0	38	5	69	4	1	78	2	5	5	0	12	1	222	223
Total	93	209	10	2	312	4	115	22	1	141	6	170	4	2	180	5	14	10	0	29	5	662	667
08:00 AM	28	66	3	0	97	1	23	8	0	32	5	67	2	0	74	4	7	2	0	13	0	216	216
08:15 AM	23	50	5	0	78	3	23	3	0	29	3	70	3	0	76	2	8	3	0	13	0	196	196
08:30 AM	33	47	5	2	85	1	16	4	0	21	9	58	2	0	69	4	6	6	0	16	2	191	193
08:45 AM	25	38	6	2	69	2	19	3	1	24	5	58	2	0	65	1	13	6	1	20	4	178	182
Total	109	201	19	4	329	7	81	18	1	106	22	253	9	0	284	11	34	17	1	62	6	781	787
09:00 AM	13	53	4	4	70	1	10	5	1	16	6	50	2	0	58	2	11	1	0	14	5	158	163
09:15 AM	9	42	1	2	52	3	10	5	0	18	1	24	0	0	25	0	8	0	0	8	2	103	105
09:30 AM	14	50	3	2	67	3	22	5	3	30	2	39	0	1	41	5	10	3	0	18	6	156	162
09:45 AM	7	46	5	2	58	5	19	2	1	26	5	36	2	0	43	1	7	1	0	9	3	136	139
Total	43	191	13	10	247	12	61	17	5	90	14	149	4	1	167	8	36	5	0	49	16	553	569
10:00 AM	14	41	8	4	63	2	15	2	3	19	0	13	0	0	13	2	2	0	0	4	7	99	106
10:15 AM	9	41	10	1	60	3	16	5	1	24	0	32	1	0	33	4	7	1	0	12	2	129	131
10:30 AM	9	41	8	2	58	4	21	2	1	27	4	22	0	0	26	4	7	4	0	15	3	126	129
10:45 AM	12	56	9	0	77	3	16	10	2	29	3	16	1	1	20	2	5	4	0	11	3	137	140
Total	44	179	35	7	258	12	68	19	7	99	7	83	2	1	92	12	21	9	0	42	15	491	506
11:00 AM	10	38	8	1	56	2	24	3	2	29	4	29	0	1	33	2	4	0	0	6	4	124	128
11:15 AM	17	52	9	1	78	2	16	3	2	21	3	42	0	0	45	8	9	1	0	18	3	162	165
11:30 AM	10	57	8	5	75	2	23	4	1	29	7	65	2	0	74	0	4	3	0	7	6	185	191
11:45 AM	8	52	7	3	67	6	20	5	3	31	3	29	2	0	34	0	8	1	0	9	6	141	147
Total	45	199	32	10	276	12	83	15	8	110	17	165	4	1	186	10	25	5	0	40	19	612	631
12:00 PM	20	50	5	1	75	5	10	8	0	23	9	49	2	0	60	9	28	7	1	44	2	202	204
12:15 PM	15	56	12	1	83	2	25	8	0	35	11	67	1	1	79	8	19	11	1	38	3	235	238
12:30 PM	11	59	6	0	76	4	28	3	0	35	13	67	0	0	80	6	21	5	1	32	1	223	224
12:45 PM	17	67	8	2	92	5	34	10	0	49	7	82	4	0	93	9	18	11	0	38	2	272	274
Total	63	232	31	4	326	16	97	29	0	142	40	265	7	1	312	32	86	34	3	152	8	932	940

Kansas City Missouri Public Works
5310 Municipal Ave.
Kansas City Mo 64120

Paseo Blvd and E 18th St
Weather: Clear Road: Dry
Counted By: DJ / CH / AN / JW
REQUESTED BY: M.KEARNEY

File Name : PASEO18
Site Code : 10001326
Start Date : 7/9/2019
Page No : 2

Groups Printed- Unshifted - Bank 1:Bikes - Bank 2

	PASEO BLVD From North					E 18TH ST From East					PASEO BLVD From South					E 18TH ST From West							
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
01:00 PM	12	40	5	0	57	3	29	7	2	39	10	66	3	0	79	5	14	8	0	27	2	202	204
01:15 PM	20	46	12	2	78	5	26	7	0	38	9	68	1	1	78	5	19	5	0	29	3	223	226
01:30 PM	9	89	8	0	106	2	16	7	0	25	7	62	2	0	71	5	19	6	0	30	0	232	232
01:45 PM	15	64	5	1	84	2	15	2	1	19	6	55	1	1	62	3	23	8	0	34	3	199	202
Total	56	239	30	3	325	12	86	23	3	121	32	251	7	2	290	18	75	27	0	120	8	856	864
02:00 PM	12	55	9	2	76	3	8	7	0	18	6	58	2	0	66	4	15	6	1	25	3	185	188
02:15 PM	13	57	9	0	79	3	17	9	0	29	6	75	3	0	84	4	21	5	0	30	0	222	222
02:30 PM	24	95	9	0	128	4	17	1	0	22	8	71	0	0	79	3	11	7	0	21	0	250	250
02:45 PM	15	92	6	1	113	6	14	9	0	29	4	51	0	1	55	1	24	8	0	33	2	230	232
Total	64	299	33	3	396	16	56	26	0	98	24	255	5	1	284	12	71	26	1	109	5	887	892
03:00 PM	11	87	11	0	109	4	18	7	0	29	7	79	1	0	87	14	25	7	0	46	0	271	271
03:15 PM	15	74	7	2	96	6	20	5	2	31	3	70	0	0	73	4	12	10	0	26	4	226	230
03:30 PM	13	74	9	2	96	4	23	10	4	37	6	70	1	2	77	6	19	10	0	35	8	245	253
03:45 PM	12	96	7	0	115	2	18	9	0	29	10	84	1	0	95	5	23	15	0	43	0	282	282
Total	51	331	34	4	416	16	79	31	6	126	26	303	3	2	332	29	79	42	0	150	12	1024	1036
04:00 PM	19	89	14	6	122	5	15	7	2	27	3	92	0	0	95	3	15	10	0	28	8	272	280
04:15 PM	16	117	8	1	141	4	19	9	2	32	8	119	0	0	127	2	12	9	0	23	3	323	326
04:30 PM	8	107	8	1	123	2	18	8	0	28	2	50	18	0	70	1	2	5	0	8	1	229	230
04:45 PM	12	145	12	1	169	7	16	7	1	30	3	114	0	0	117	2	12	4	0	18	2	334	336
Total	55	458	42	9	555	18	68	31	5	117	16	375	18	0	409	8	41	28	0	77	14	1158	1172
05:00 PM	9	155	10	0	174	4	12	14	2	30	6	137	0	2	143	8	33	22	1	63	5	410	415
05:15 PM	17	143	13	1	173	2	17	7	1	26	7	162	1	1	170	1	11	3	0	15	3	384	387
05:30 PM	10	105	5	1	120	5	29	7	1	41	3	58	3	1	64	1	5	5	0	11	3	236	239
05:45 PM	20	89	10	0	119	4	22	6	0	32	2	76	2	0	80	0	3	3	0	6	0	237	237
Total	56	492	38	2	586	15	80	34	4	129	18	433	6	4	457	10	52	33	1	95	11	1267	1278
Grand Total	731	3134	320	61	4185	141	940	278	42	1359	235	2807	72	17	3114	163	553	259	7	975	127	9633	9760
Apprch %	17.5	74.9	7.6			10.4	69.2	20.5			7.5	90.1	2.3			16.7	56.7	26.6					
Total %	7.6	32.5	3.3		43.4	1.5	9.8	2.9		14.1	2.4	29.1	0.7		32.3	1.7	5.7	2.7		10.1	1.3	98.7	
Unshifted	731	3131	320		4243	141	939	277		1399	235	2807	72		3131	163	553	259		982	0	0	9755
% Unshifted	100	99.9	100	100	99.9	100	99.9	99.6	100	99.9	100	100	100	100	100	100	100	100	100	100	0	0	99.9
Bank 1:Bikes	0	3	0		3	0	0	0		0	0	0	0		0	0	0	0		0	0	0	3
% Bank 1:Bikes	0	0.1	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 2	0	0	0		0	0	1	1		2	0	0	0		0	0	0	0		0	0	0	2
% Bank 2	0	0	0	0	0	0	0.1	0.4	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0

Kansas City Missouri Public Works
5310 Municipal Ave.
Kansas City Mo 64120

Paseo Blvd and E 18th St
Weather: Clear Road: Dry
Counted By: DJ / CH / AN / JW
REQUESTED BY: M.KEARNEY

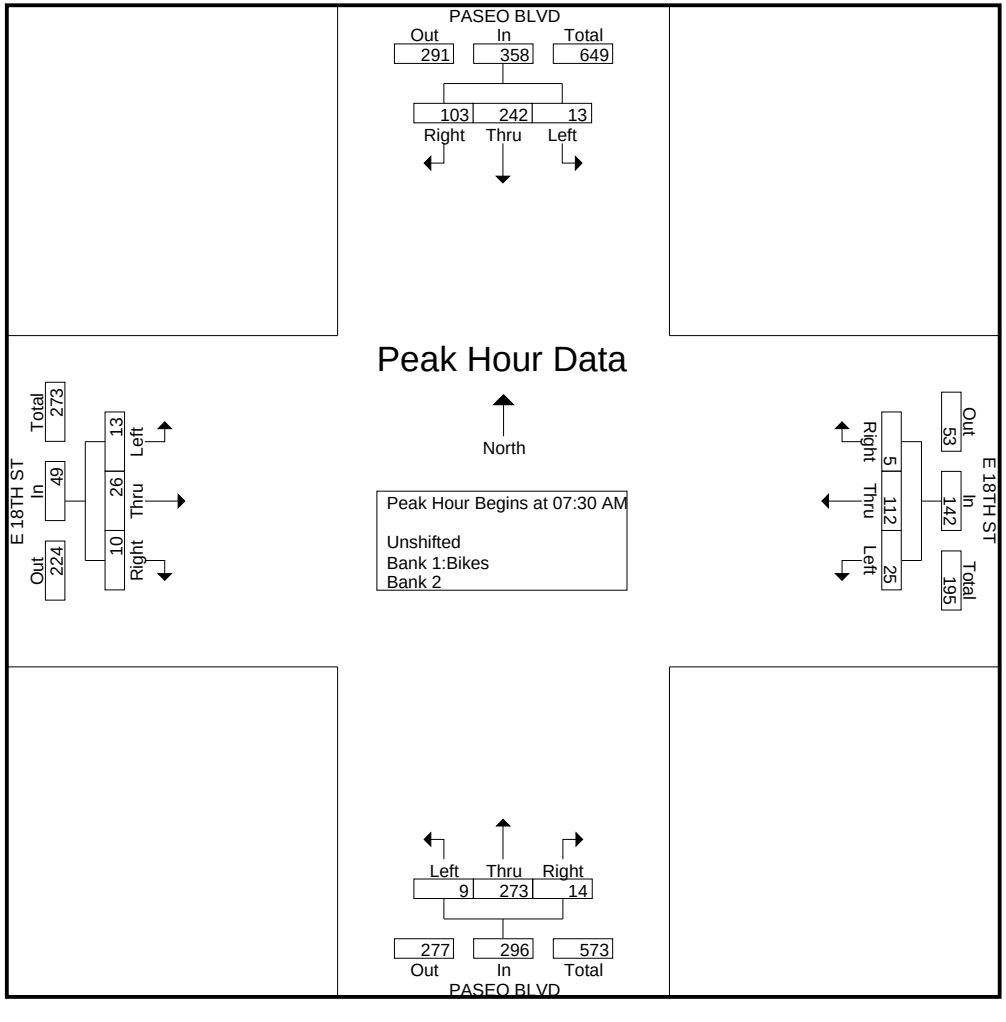
File Name : PASEO18
Site Code : 10001326
Start Date : 7/9/2019

	PASEO BLVD From North				E 18TH ST From East				PASEO BLVD From South				E 18TH ST From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	26	61	2	89	0	**34**	**9**	**43**	1	67	0	68	2	6	3	11	211
07:45 AM	26	65	3	94	1	32	5	38	**5**	69	**4**	**78**	2	5	**5**	12	**222**
08:00 AM	**28**	**66**	3	**97**	1	23	8	32	5	67	2	74	**4**	7	2	**13**	216
08:15 AM	23	50	**5**	78	**3**	23	3	29	3	**70**	3	76	2	**8**	3	13	196
Total Volume	103	242	13	358	5	112	25	142	14	273	9	296	10	26	13	49	845
% App. Total	28.8	67.6	3.6		3.5	78.9	17.6		4.7	92.2	3		20.4	53.1	26.5		
PHF	.920	.917	.650	.923	.417	.824	.694	.826	.700	.975	.563	.949	.625	.813	.650	.942	.952

Kansas City Missouri Public Works
5310 Municipal Ave.
Kansas City Mo 64120

Paseo Blvd and E 18th St
Weather: Clear Road: Dry
Counted By: DJ / CH / AN / JW
REQUESTED BY: M.KEARNEY

File Name : PASEO18
Site Code : 10001326
Start Date : 7/9/2019
Page No : 6



Kansas City Missouri Public Works
5310 Municipal Ave.
Kansas City Mo 64120

Paseo Blvd and E 18th St
Weather: Clear Road: Dry
Counted By: DJ / CH / AN / JW
REQUESTED BY: M.KEARNEY

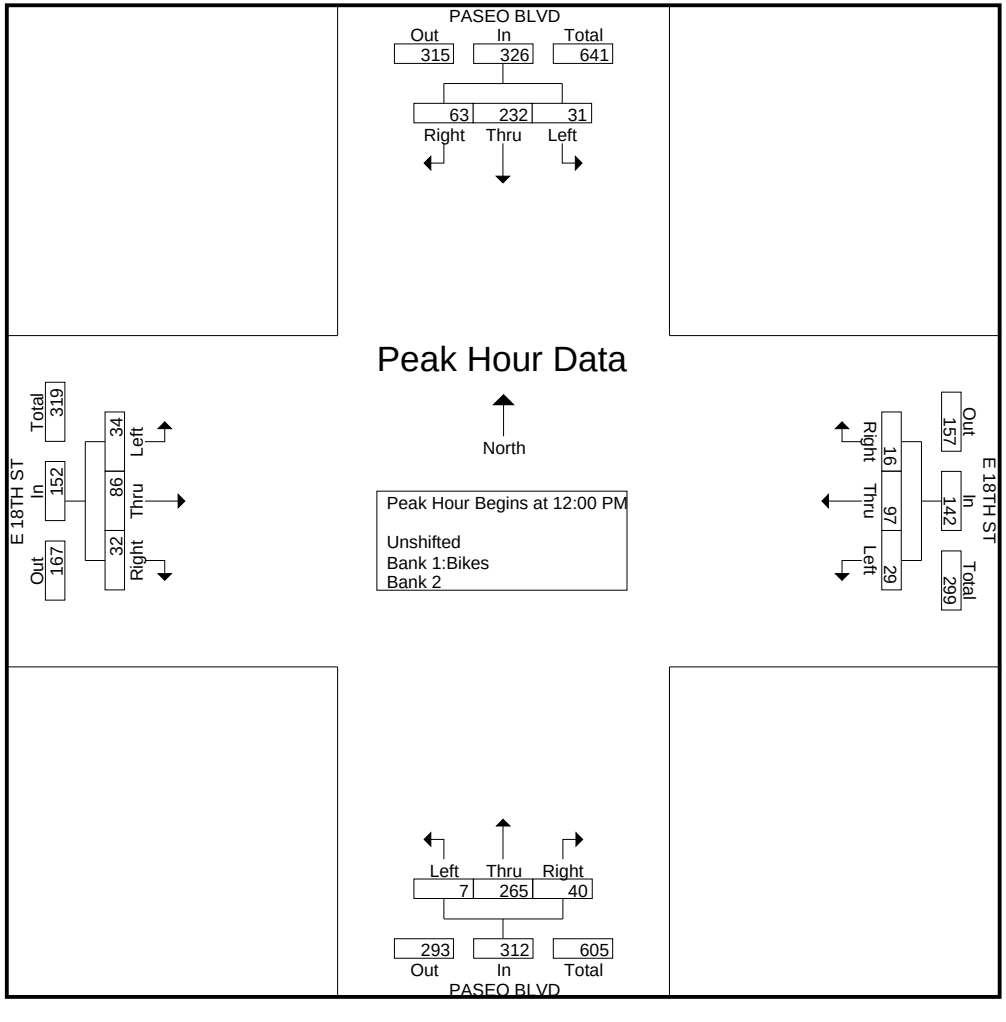
File Name : PASEO18
Site Code : 10001326
Start Date : 7/9/2019

	PASEO BLVD From North				E 18TH ST From East				PASEO BLVD From South				E 18TH ST From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:00 PM																	
12:00 PM	**20**	50	5	75	**5**	10	8	23	9	49	2	60	**9**	**28**	7	**44**	202
12:15 PM	15	56	**12**	83	2	25	8	35	11	67	1	79	8	19	**11**	38	235
12:30 PM	11	59	6	76	4	28	3	35	**13**	67	0	80	6	21	5	32	223
12:45 PM	17	**67**	8	**92**	5	**34**	**10**	**49**	7	**82**	**4**	**93**	9	18	11	38	**272**
Total Volume	63	232	31	326	16	97	29	142	40	265	7	312	32	86	34	152	932
% App. Total	19.3	71.2	9.5		11.3	68.3	20.4		12.8	84.9	2.2		21.1	56.6	22.4		
PHF	.788	.866	.646	.886	.800	.713	.725	.724	.769	.808	.438	.839	.889	.768	.773	.864	.857

Kansas City Missouri Public Works
5310 Municipal Ave.
Kansas City Mo 64120

Paseo Blvd and E 18th St
Weather: Clear Road: Dry
Counted By: DJ / CH / AN / JW
REQUESTED BY: M.KEARNEY

File Name : PASEO18
Site Code : 10001326
Start Date : 7/9/2019
Page No : 8



Kansas City Missouri Public Works
5310 Municipal Ave.
Kansas City Mo 64120

Paseo Blvd and E 18th St
Weather: Clear Road: Dry
Counted By: DJ / CH / AN / JW
REQUESTED BY: M.KEARNEY

File Name : PASEO18
Site Code : 10001326
Start Date : 7/9/2019
Page No : 9

	PASEO BLVD From North				E 18TH ST From East				PASEO BLVD From South				E 18TH ST From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	12	145	12	169	**7**	16	7	30	3	114	0	117	2	12	4	18	334
05:00 PM	9	**155**	10	**174**	4	12	**14**	30	6	137	0	143	**8**	**33**	**22**	**63**	**410**
05:15 PM	**17**	143	**13**	173	2	17	7	26	**7**	**162**	1	**170**	1	11	3	15	384
05:30 PM	10	105	5	120	5	**29**	7	**41**	3	58	**3**	64	1	5	5	11	236
Total Volume	48	548	40	636	18	74	35	127	19	471	4	494	12	61	34	107	1364
% App. Total	7.5	86.2	6.3		14.2	58.3	27.6		3.8	95.3	0.8		11.2	57	31.8		
PHF	.706	.884	.769	.914	.643	.638	.625	.774	.679	.727	.333	.726	.375	.462	.386	.425	.832

Kansas City Missouri Public Works
5310 Municipal Ave.
Kansas City Mo 64120

Paseo Blvd and E 18th St
Weather: Clear Road: Dry
Counted By: DJ / CH / AN / JW
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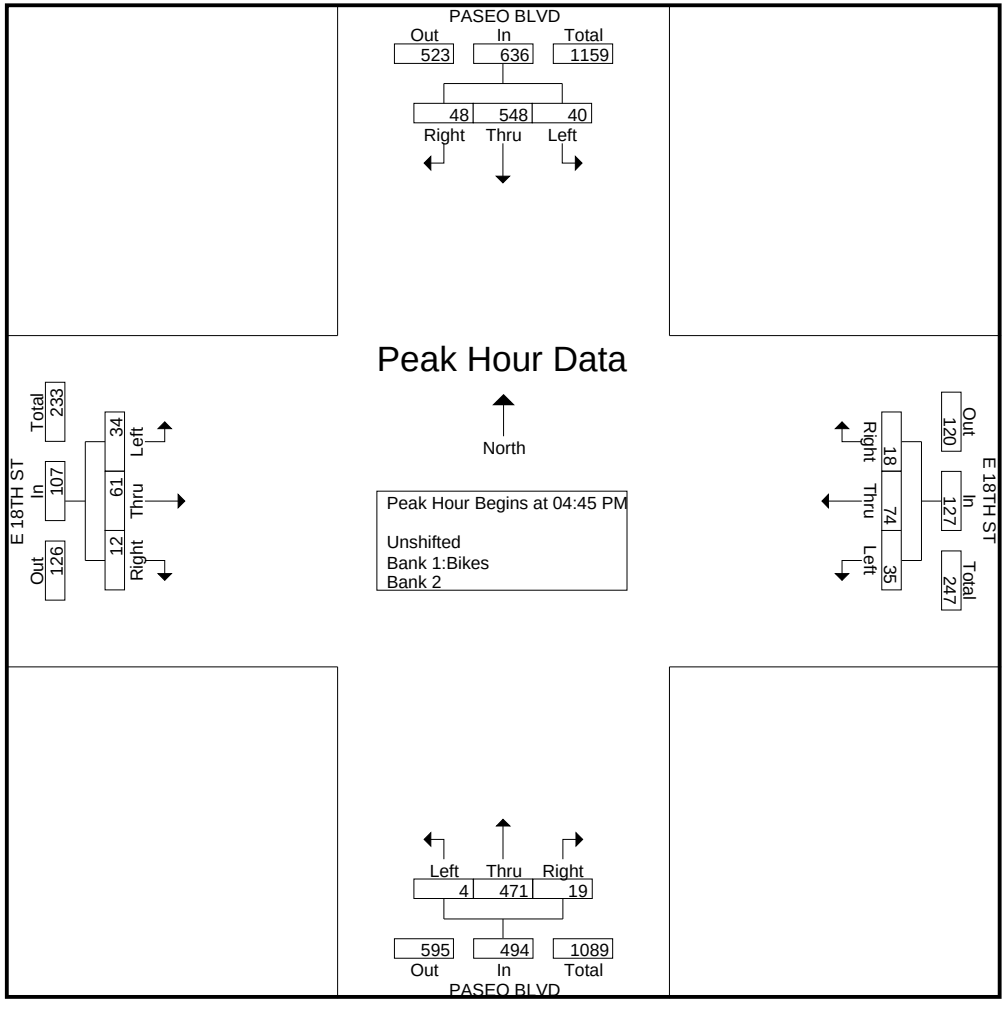
File Name : PASEO18
Site Code : 10001326
Start Date : 7/9/2019
Page No : 10



APPENDIX V

Existing Traffic Signal Timing Plans
(Source: KCMO Street and Traffic Division)

W4IKS Table 1 Page 0
Date: Wednesday, November 18, 2015 Time: 09:48 AM
Intersection #018 Woodland @ 18th

(0+KEY)

FUNCTIONS	KEY	12345678
Veh Recall	0	_2___6__
Ped Recall	1	___4____
Red Lock	2	________
Yellow Lock	3	________
Permit	4	_2_4_6_8
Ped Phases	5	___4____
Lead Phases	6	1_3_5_7_
Double Entry	7	_2_4_6_8
Sequential Timing	8	________
Startup Green	9	_2___6__
Overlap A	A	________
Overlap B	B	________
Overlap C	C	________
Overlap D	D	________
Exclusive	E	________
Simultaneous Gap	F	_2_4_6_8

(PHASE+KEY)

			EB		SB		WB		NB
FUNCTIONS	KEY	PH1	PH2	PH3	PH4	PH5	PH6	PH7	PH8
Max I	0	0	35	0	30	0	35	0	30
Max II	1	0	0	0	0	0	0	0	0
Walk	2	0	0	0	7	0	0	0	0
Flash DW	3	0	0	0	13	0	0	0	0
Max Initial	4	0	8	0	6	0	8	0	6
Min Green	5	0	8	0	6	0	8	0	6
TBR	6	0	0	0	0	0	0	0	0
TTR	7	0	0	0	0	0	0	0	0
Observe Gap	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Passage	9	0.0	3.0	0.0	3.0	0.0	3.0	0.0	3.0
Min Gap	A	0.0	3.0	0.0	3.0	0.0	3.0	0.0	3.0
Added Actuation	B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	C	0.0	3.0	0.0	3.0	0.0	3.0	0.0	3.0
Red Clear	D	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0
Red Revert	E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walk II	F	0	0	0	0	0	0	0	0

W4IKS Table 1 Page 1
Date: Wednesday, November 18, 2015 Time: 09:48 AM
Intersection #018 Woodland @ 18th

(D+C+0+KEY)

FUNCTIONS	KEY	12345678
Veh Recall	0	_2___6__
Ped Recall	1	___4____
Red Lock	2	________
Yellow Lock	3	________
Permit	4	_2_4_6_8
Ped Phases	5	___4____
Lead Phases	6	1_3_5_7_
Double Entry	7	_2_4_6_8
Sequential Timing	8	________
Startup Green	9	_2___6__
Overlap A	A	________
Overlap B	B	________
Overlap C	C	________
Overlap D	D	________
Exclusive	E	________
Simultaneous Gap	F	_2_4_6_8

(D+C+PHASE+KEY)

			EB		SB		WB		NB
FUNCTIONS	KEY	PH1	PH2	PH3	PH4	PH5	PH6	PH7	PH8
Max I	0	0	50	0	35	0	50	0	35
Max II	1	0	0	0	0	0	0	0	0
Walk	2	0	0	0	7	0	0	0	0
Flash DW	3	0	0	0	13	0	0	0	0
Max Initial	4	0	10	0	10	0	10	0	10
Min Green	5	0	10	0	10	0	10	0	10
TBR	6	0	0	0	0	0	0	0	0
TTR	7	0	0	0	0	0	0	0	0
Observe Gap	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Passage	9	0.0	3.0	0.0	3.0	0.0	3.0	0.0	3.0
Min Gap	A	0.0	3.0	0.0	3.0	0.0	3.0	0.0	3.0
Added Actuation	B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	C	0.0	3.0	0.0	3.0	0.0	3.0	0.0	3.0
Red Clear	D	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0
Red Revert	E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walk II	F	0	0	0	0	0	0	0	0

W4IKS Table 1 Page 2
Date: Wednesday, November 18, 2015 Time: 09:48 AM
Intersection #018 Woodland @ 18th

(D+D+0+KEY)

FUNCTIONS	KEY	12345678
Veh Recall	0	_2___6__
Ped Recall	1	___4____
Red Lock	2	________
Yellow Lock	3	________
Permit	4	_2_4_6_8
Ped Phases	5	___4____
Lead Phases	6	1_3_5_7_
Double Entry	7	_2_4_6_8
Sequential Timing	8	________
Startup Green	9	_2___6__
Overlap A	A	________
Overlap B	B	________
Overlap C	C	________
Overlap D	D	________
Exclusive	E	________
Simultaneous Gap	F	_2_4_6_8

(D+D+PHASE+KEY)

			EB		SB		WB		NB
FUNCTIONS	KEY	PH1	PH2	PH3	PH4	PH5	PH6	PH7	PH8
Max I	0	0	50	0	30	0	50	0	30
Max II	1	0	0	0	0	0	0	0	0
Walk	2	0	0	0	7	0	0	0	0
Flash DW	3	0	0	0	13	0	0	0	0
Max Initial	4	0	10	0	10	0	10	0	10
Min Green	5	0	10	0	10	0	10	0	10
TBR	6	0	0	0	0	0	0	0	0
TTR	7	0	0	0	0	0	0	0	0
Observe Gap	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Passage	9	0.0	3.0	0.0	3.0	0.0	3.0	0.0	3.0
Min Gap	A	0.0	3.0	0.0	3.0	0.0	3.0	0.0	3.0
Added Actuation	B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	C	0.0	3.0	0.0	3.0	0.0	3.0	0.0	3.0
Red Clear	D	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0
Red Revert	E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Walk II	F	0	0	0	0	0	0	0	0

W4IKS Table 2 Page 0
Date: Wednesday, November 18, 2015 Time: 09:48 AM
Intersection #018 Woodland @ 18th

(9+KEY)

FUNCTIONS	KEY	VALUE
Short Power Down	0	1
Long Power Down	1	4
EVA Delay Type	2	0
EVB Delay Type	3	0
EVC Delay Type	4	0
EVD Delay Type	5	0
RR Delay Type	6	0
Ped Inhibit	7	0
OLA Green	8	0.0
OLA Yellow	9	0.0
OLB Green	A	0.0
OLB Yellow	B	0.0
OLC Green	C	0.0
OLC Yellow	D	0.0
OLD Green	E	0.0
OLD Yellow	F	0.0

(C+F+KEY)

FUNCTIONS	KEY	VALUE
Page ID	0	0
Future	1	0
Future	2	0
Future	3	0
OLA Red	4	0.0
OLB Red	5	0.0
OLC Red	6	0.0
OLD Red	7	0.0
Overlap E	8	
Overlap F	9	
Red Rest	A	
Max Recall	B	_2_4_6_8
Flash Green	C	
Flash Walk	D	
Advance Walk	E	
Restrictive Phase	F	

W4IKS Table 2 Page 1
Date: Wednesday, November 18, 2015 Time: 09:48 AM
Intersection #018 Woodland @ 18th

(D+C+9+KEY)

FUNCTIONS	KEY	VALUE
Short Power Down	0	1
Long Power Down	1	4
EVA Delay Type	2	0
EVB Delay Type	3	0
EVC Delay Type	4	0
EVD Delay Type	5	0
RR Delay Type	6	0
Ped Inhibit	7	0
OLA Green	8	0.0
OLA Yellow	9	0.0
OLB Green	A	0.0
OLB Yellow	B	0.0
OLC Green	C	0.0
OLC Yellow	D	0.0
OLD Green	E	0.0
OLD Yellow	F	0.0

(D+C+B+KEY)

FUNCTIONS	KEY	VALUE
Page ID	0	1
Future	1	0
Future	2	0
Future	3	0
OLA Red	4	0.0
OLB Red	5	0.0
OLC Red	6	0.0
OLD Red	7	0.0
Overlap E	8	
Overlap F	9	
Red Rest	A	
Max Recall	B	_2_4_6_8
Flash Green	C	
Flash Walk	D	
Advance Walk	E	
Restrictive Phase	F	

W4IKS Table 2 Page 2
Date: Wednesday, November 18, 2015 Time: 09:48 AM
Intersection #018 Woodland @ 18th

(D+D+9+KEY)

FUNCTIONS	KEY	VALUE
Short Power Down	0	1
Long Power Down	1	4
EVA Delay Type	2	0
EVB Delay Type	3	0
EVC Delay Type	4	0
EVD Delay Type	5	0
RR Delay Type	6	0
Ped Inhibit	7	0
OLA Green	8	0.0
OLA Yellow	9	0.0
OLB Green	A	0.0
OLB Yellow	B	0.0
OLC Green	C	0.0
OLC Yellow	D	0.0
OLD Green	E	0.0
OLD Yellow	F	0.0

(D+D+B+KEY)

FUNCTIONS	KEY	VALUE
Page ID	0	2
Future	1	0
Future	2	0
Future	3	0
OLA Red	4	0.0
OLB Red	5	0.0
OLC Red	6	0.0
OLD Red	7	0.0
Overlap E	8	
Overlap F	9	
Red Rest	A	
Max Recall	B	_2_4_6_8
Flash Green	C	
Flash Walk	D	
Advance Walk	E	
Restrictive Phase	F	

W4IKS Table 3
Date: Wednesday, November 18, 2015 Time: 09:48 AM
Intersection #018 Woodland @ 18th

(C+KEY)

FUNCTIONS	KEY	VALUE
Year	0	15
Month	1	11
Day of Month	2	17
Day of Week	3	3
Hour	4	11
Minute	5	5
Second	6	0
Reserved	7	0
Trigs On In Flash	8	1
Startup Yellow	9	
EVA Phases	A	
EVB Phases	B	
EVC Phases	C	
EVD Phases	D	
Handicap Ped	E	

(E+KEY)

FUNCTIONS	KEY	VALUE
EVA Delay	0	0
EVA Min	1	0
EVB Delay	2	0
EVB Min	3	0
EVC Delay	4	0
EVC Min	5	0
EVD Delay	6	0
EVD Min	7	0
OL Red Revert	8	0.0
RR Delay	9	0
RR Clear	A	0
RR Clear Phases	B	
RR Permit	C	
RR OL Permit	D	
NEMA Hold Phases	E	

W4IKS Table 5 Sheet 1
Date: Wednesday, November 18, 2015 Time: 09:48 AM
Intersection #018 Woodland @ 18th

(A+CODE)

EVENT	1234567	HR	MIN	FUNC	CODE	EVENT	1234567	HR	MIN	FUNC	CODE
1	_234567	6	0	1	80-83	17	_____	0	0	0	C0-C3
2	_234567	6	1	100	84-87	18	_____	0	0	0	C4-C7
3	_23456_	6	30	3	88-8B	19	_____	0	0	0	C8-CB
4	_23456_	6	31	101	8C-8F	20	_____	0	0	0	CC-CF
5	_23456_	9	0	1	90-93	21	_____	0	0	0	D0-D3
6	_23456_	9	1	100	94-97	22	_____	0	0	0	D4-D7
7	_23456_	15	30	3	98-9B	23	_____	0	0	0	D8-DB
8	_23456_	15	31	102	9C-9F	24	_____	0	0	0	DC-DF
9	_23456_	18	0	1	A0-A3	25	_____	0	0	0	E0-E3
10	_23456_	18	1	100	A4-A7	26	_____	0	0	0	E4-E7
11	1234567	22	0	33	A8-AB	27	_____	0	0	0	E8-EB
12	_234567	5	59	32	AC-AF	28	_____	0	0	0	EC-EF
13	_____	0	0	0	B0-B3	29	_____	0	0	0	F0-F3
14	_____	0	0	0	B4-B7	30	_____	0	0	0	F4-F7
15	_____	0	0	0	B8-BB	31	_____	0	0	0	F8-FB
16	_____	0	0	0	BC-BF	32	_____	0	0	0	FC-FF

W4IKS Table 6
Date: Wednesday, November 18, 2015 Time: 09:48 AM
Intersection #018 Woodland @ 18th

(B+0+KEY)

FUNCTIONS	KEY	VALUE
Present Plan	0	0
TOD/DOW Plan	1	0
Hardwire Plan	2	0
Modem Plan	3	0
Mode (0-4)	4	1
Master (0-OFF)	5	1
Master Clock	6	0
Local Clock	7	0
Dwell Clock	8	0
Future	9	0
Future	A	0
Future	B	0
Future	C	_____
NEMA CNA Phases	D	_____
Adv Warning Phases	E	_____
MRI Phases	F	_____

(D+KEY1+KEY2)

FUNCTIONS	KEY	VALUE
Floating Ped	2E	0
ID Number	2F	18
No Coord Ped Recall	3E	1
Rest In Walk	3F	0
Adv Warning EOG	4E	0
Adv Warning SOG	4F	0
RR Red Clear	5E	0
RR Clear Color	5F	0
Bus Delay	6D	0.0
Bus Free T1	6E	0
Bus Free T3	6F	0
EV Min Aft Clear	7E	0
EV Indicators	7F	0
NEMA Inputs	66	0.0

W4IKS Table 7 Sheet 1
Date: Wednesday, November 18, 2015 Time: 09:48 AM
Intersection #018 Woodland @ 18th

(B+PLAN+KEY)

FUNCTION	KEY	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
Cycle Length	0	50	70	70	0	0	0	0	0	0
Forceoff 01	1	0	0	0	0	0	0	0	0	0
Forceoff 02	2	0	0	0	0	0	0	0	0	0
Forceoff 03	3	0	0	0	0	0	0	0	0	0
Forceoff 04	4	28	33	33	0	0	0	0	0	0
Forceoff 05	5	0	0	0	0	0	0	0	0	0
Forceoff 06	6	0	0	0	0	0	0	0	0	0
Forceoff 07	7	0	0	0	0	0	0	0	0	0
Forceoff 08	8	28	33	33	0	0	0	0	0	0
Offset	9	0	28	33	0	0	0	0	0	0
Perm Length	A	1	1	1	0	0	0	0	0	0
Max Dwell	B	15	15	15	0	0	0	0	0	0
Lead Phases	C	1_3_5_7_	1_3_5_7_	1_3_5_7_						
Coord Phases	D	_2___6__	_2___6__	_2___6__						
Perm 2 Phases	E									
Min Recall	F									

W4IKS Table 8
Date: Wednesday, November 18, 2015 Time: 09:48 AM
Intersection #018 Woodland @ 18th

(B+A+KEY)

FUNCTIONS	KEY	VALUE
Bus P1 T1	0	0
Bus P1 T2	1	0
Bus P1 T3	2	0
Bus P2 T1	3	0
Bus P2 T2	4	0
Bus P2 T3	5	0
Bus P3 T1	6	0
Bus P3 T2	7	0
Bus P3 T3	8	0
Perm 2 P1	9	0
Perm 2 P2	A	0
Perm 2 P3	B	0
Flash Yellow	C	_2___6__
Flash Circuit	D	_2_4_6_8
TOD/DOW Max	E	
OLB Switchpack	F	

(B+B+KEY)

FUNCTIONS	KEY	VALUE
Bus P4 T1	0	0
Bus P4 T2	1	0
Bus P4 T3	2	0
Bus P5 T1	3	0
Bus P5 T2	4	0
Bus P5 T3	5	0
Bus P6 T1	6	0
Bus P6 T2	7	0
Bus P6 T3	8	0
Perm 2 P4	9	0
Perm 2 P5	A	0
Perm 2 P6	B	0
OL Flash Yellow	C	
OL Flash Clear	D	
TOD/DOW Ped	E	
OLC Switchpack	F	

(B+C+KEY)

FUNCTIONS	KEY	VALUE
Bus P7 T1	0	0
Bus P7 T2	1	0
Bus P7 T3	2	0
Bus P8 T1	3	0
Bus P8 T2	4	0
Bus P8 T3	5	0
Bus P9 T1	6	0
Bus P9 T2	7	0
Bus P9 T3	8	0
Perm 2 P7	9	0
Perm 2 P8	A	0
Perm 2 P9	B	0
Coord Max	C	
TOD Red Rest	D	
OLA Switchpack	E	
OLD Switchpack	F	

W4IKS Table 13
Date: Wednesday, November 18, 2015 Time: 09:48 AM
Intersection #018 Woodland @ 18th

(D+9+0+KEY)

FUNCTION	KEY	VALUE
Overlap H	0	
Overlap J	1	
Overlap K	2	
Overlap L	3	
OLH Switchpack	4	
OLJ Switchpack	5	
OLK Switchpack	6	
OLL Switchpack	7	
Reserved	8	
Reserved	9	
All Red Before EV	A	

(D+9+3+KEY)

FUNCTION	KEY	VALUE
OLH Green	0	0.0
OLH Yellow	1	0.0
OLH Red	2	0.0
OLJ Green	3	0.0
OLJ Yellow	4	0.0
OLJ Red	5	0.0
OLK Green	6	0.0
OLK Yellow	7	0.0
OLK Red	8	0.0
OLL Green	9	0.0
OLL Yellow	A	0.0
OLL Red	B	0.0

(E+F+KEY)

FUNCTION	KEY	VALUE
RR Max II	0	0
Ped Perm Pl 1	1	0
Ped Perm Pl 2	2	0
Ped Perm Pl 3	3	0
Ped Perm Pl 4	4	0
Ped Perm Pl 5	5	0
Ped Perm Pl 6	6	0
Ped Perm Pl 7	7	0
Ped Perm Pl 8	8	0
Ped Perm Pl 9	9	0
# of Lng Pwrouts	A	0
# pf Sht Pwrouts	B	0
Failed Det	C	0
Max II On	D	0
No Daylite Save	E	1
Revision Level	F	58

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Configuration Data

Controller Sequence

Sequence 1 Ring 1	1, 2, 3, 4							
Sequence 1 Ring 2	5, 6, 7, 8							
Phase Number	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Phase Concurrency	5, 6	5, 6	7, 8	7, 8	1, 2	1, 2	3, 4	3, 4
Phase Ring	1	1	1	1	2	2	2	2

Phases in Use

Phase	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Phase in Use		X		X		X		X
Exclusive Ped	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

Phase to Load Switch Assign

Load Switch	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Signal Driver (Phase/OL)	Ph 1 or OL-A	Ph 2 or OL-B	Ph 3 or OL-C	Ph 4 or OL-D	Ph 5 or OL-E	Ph 6 or OL-F	Ph 7 or OL-G	Ph 8 or OL-H
Control Type	Phase Veh	Phase Veh	Phase Veh	Phase Veh	Phase Veh	Phase Veh	Phase Veh	Phase Veh
Load Switch	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Signal Driver (Phase/OL)	Ph 2 or OL-B	Ph 4 or OL-D	Ph 6 or OL-F	Ph 8 or OL-H	Ph 13 or OL-M	Ph 14 or OL-N	Ph 15 or OL-O	Ph 16 or OL-P
Control Type	Phase Ped	Phase Ped	Phase Ped	Phase Ped	Overlap	Overlap	Overlap	Overlap

SDLC Options

BIU Number	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Term & Facility	(Not accessible via NTCIP)							
Det Rack	(Not accessible via NTCIP)							
Type 2 Runs as Type 1	(Not accessible via NTCIP)							
MMU Disable	YES (MMU Disabled)							
Diagnostic Enable	(Not accessible via NTCIP)							
Peer to Peer Settings	(Not accessible via NTCIP)							

Port 2 Configuration

Protocol	AB3418
Enable	false
Terminal Data Rate	1200
Data Parity Stop	7, Even, 1
Address	0
Group Address	0
Response Delay	0
Single Flag	false
Drop Out Time	0
Special Function Select	0

Port 3 Configuration

Protocol	AB3418
Enable	false
Duplex	0
Modem Data Rate	1200
Data Parity Stop	8, Odd, 1
Telemetry Address	1
Sys Detector Address	1
Telem Response Delay	31
Address	0
Group Address	0
Response Delay	0
Single Flag	false
Drop Out Time	0

Enable Logging

Enable Logging	CRITRFE, NONCRITRFE, DET, COORD, MMUFLASH, LOCFLASH, PREEMPT, POWER, LOWBATT

Options

Supervisor Access Code	(Not accessible via NTCIP)
Data Change Access Code	(Not accessible via NTCIP)

MMU Program

Channel	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Channel Compatibility	0, 0, 0, 0, 0	0, 0, 0, 0, 0	0, 0, 0, 0, 0	0, 0, 0, 0, 0	0, 0, 0, 0, 0	0, 0, 0, 0, 0	0, 0, 0, 0, 0	0, 0, 0, 0, 0
Channel	**9**	**10**	**11**	**12**	**13**	**14**	**15**	
Channel Compatibility	0, 0, 0, 0, 0	0, 0, 0, 0, 0	0, 0, 0, 0, 0	0, 0, 0, 0, 0	0, 0, 0, 0, 0	0, 0, 0, 0, 0	0, 0, 0, 0, 0	

Controller Data (Phase Timing Function Plan 1)

Timing Data

Phase Number	1	2	3	4	5	6	7	8
Minimum Green	0	6	0	10	0	6	0	10
Bike Min Green (BIKE GRN)	0	0	0	0	0	0	0	0
Cond Svc Min Green (CSMGRN)	0	0	0	0	0	0	0	0
Walk	0	8	0	7	0	7	0	7
Pedestrian Clear	0	24	0	18	0	22	0	15
Passage (VEH EXT)	0.0	3.0	0.0	3.0	0.0	3.0	0.0	0.0
Passage 2 (VEH EXT2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Grn Extension (MAX EXT)	0	0	0	0	0	0	0	0
Maximum 1	0	35	0	55	0	35	0	0
Phase Maximum 2	0	40	0	40	0	40	0	0
Maximum 3	0	0	0	0	0	0	0	0
Det Fail Max (DET MAX)	0	0	0	0	0	0	0	0
Yellow Change	3.0	3.5	3.0	3.4	3.0	3.6	3.0	3.7
Red Clear	0.0	2.5	0.0	1.9	0.0	2.5	0.0	1.9
Actuations Before (ACT B4)	0	0	0	0	0	0	0	0
Added Initial (SEC/ACT)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum Initial	0	30	0	30	0	30	0	0
Time B4 Reduction (TIME B4)	0	0	0	0	0	0	0	0
Cars B4 Reduction (CARS WT)	0	0	0	0	0	0	0	0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time To Reduce (TTREDUC)	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Controller Data (Phase Timing Function Plan 2)

Timing Data

Phase Number	1	2	3	4	5	6	7	8
Minimum Green	5	5	5	5	5	5	5	5
Bike Min Green (BIKE GRN)	0	0	0	0	0	0	0	0
Cond Svc Min Green (CSMGRN)	0	0	0	0	0	0	0	0
Walk	0	10	0	10	0	10	0	10
Pedestrian Clear	0	16	0	16	0	16	0	16
Passage (VEH EXT)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Passage 2 (VEH EXT2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Grn Extension (MAX EXT)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Maximum 1	35	35	35	35	35	35	35	35
Phase Maximum 2	40	40	40	40	40	40	40	40
Maximum 3	0	0	0	0	0	0	0	0
Det Fail Max (DET MAX)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Yellow Change	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Actuations Before (ACT B4)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Added Initial (SEC/ACT)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum Initial	30	30	30	30	30	30	30	30
Time B4 Reduction (TIME B4)	0	0	0	0	0	0	0	0
Cars B4 Reduction (CARS WT)	0	0	0	0	0	0	0	0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time To Reduce (TTREDUC)	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: Values displayed as *10* are values duplicated from the first phase timing function page

Controller Data (Phase Timing Function Plan 3)

Timing Data

Phase Number	1	2	3	4	5	6	7	8
Minimum Green	5	5	5	5	5	5	5	5
Bike Min Green (BIKE GRN)	0	0	0	0	0	0	0	0
Cond Svc Min Green (CSMGRN)	0	0	0	0	0	0	0	0
Walk	0	10	0	10	0	10	0	10
Pedestrian Clear	0	16	0	16	0	16	0	16
Passage (VEH EXT)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Passage 2 (VEH EXT2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Grn Extension (MAX EXT)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Maximum 1	35	35	35	35	35	35	35	35
Phase Maximum 2	40	40	40	40	40	40	40	40
Maximum 3	0	0	0	0	0	0	0	0
Det Fail Max (DET MAX)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Yellow Change	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Actuations Before (ACT B4)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Added Initial (SEC/ACT)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum Initial	30	30	30	30	30	30	30	30
Time B4 Reduction (TIME B4)	0	0	0	0	0	0	0	0
Cars B4 Reduction (CARS WT)	0	0	0	0	0	0	0	0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time To Reduce (TTREDUC)	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Controller Data (Phase Timing Function Plan 4)

Timing Data

Phase Number	1	2	3	4	5	6	7	8
Minimum Green	5	5	5	5	5	5	5	5
Bike Min Green (BIKE GRN)	0	0	0	0	0	0	0	0
Cond Svc Min Green (CSMGRN)	0	0	0	0	0	0	0	0
Walk	0	10	0	10	0	10	0	10
Pedestrian Clear	0	16	0	16	0	16	0	16
Passage (VEH EXT)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Passage 2 (VEH EXT2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Grn Extension (MAX EXT)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Maximum 1	35	35	35	35	35	35	35	35
Phase Maximum 2	40	40	40	40	40	40	40	40
Maximum 3	0	0	0	0	0	0	0	0
Det Fail Max (DET MAX)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Yellow Change	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Actuations Before (ACT B4)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Added Initial (SEC/ACT)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum Initial	30	30	30	30	30	30	30	30
Time B4 Reduction (TIME B4)	0	0	0	0	0	0	0	0
Cars B4 Reduction (CARS WT)	0	0	0	0	0	0	0	0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Time To Reduce (TTREDUC)	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: Values displayed as *10* are values duplicated from the first phase timing function page

Controller Data (Overlaps)

Phases as Overlap

OVLP Phase	1	2	3	4	5	6	7	8
Consists of Phases	1	2	3	4	5	6	7	8

Ped Timing Carryover

Phase Number	1	2	3	4	5	6	7	8
Ped Carrys over into phase	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

Recall Data (See Per-Phase Options Below)

Overlaps

Overlap Number	1	2	3	4
Included Phases	0, 0, 0, 0, 0	0, 0, 0, 0, 0	0, 0, 0, 0, 0	0, 0, 0, 0, 0
Modifier/Protected Phases	0, 0, 0, 0, 0	0, 0, 0, 0, 0	0, 0, 0, 0, 0	0, 0, 0, 0, 0
Permitted Phases	0, 0, 0, 0, 0	0, 0, 0, 0, 0	0, 0, 0, 0, 0	0, 0, 0, 0, 0
Lag Phases	0, 0, 0, 0, 0	0, 0, 0, 0, 0	0, 0, 0, 0, 0	0, 0, 0, 0, 0
Lead Phases	0, 0, 0, 0, 0	0, 0, 0, 0, 0	0, 0, 0, 0, 0	0, 0, 0, 0, 0
Advance Green Time	0.0	0.0	0.0	0.0
Trail Green	0.0	0.0	0.0	0.0
Trail Yellow	0.0	0.0	0.0	0.0
Trail Red	0.0	0.0	0.0	0.0

Controller Data (cont.)

Start/Flash Data

Phase Number	1	2	3	4	5	6	7	8
Phase Startup	phaseNotOn	phaseNotOn	phaseNotOn	greenWalk	phaseNotOn	phaseNotOn	phaseNotOn	greenWalk
Entry and Exit Phases								
Flash Yellow	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON
Flash Together Phases	(Not currently available from TransSuite)							
Flash Together OLAPS	(Not currently available from TransSuite)							
Power Start All Red	5							
Power Start Flash	10							
Out of Flash Interval	red							
Min Recall before Flash	FALSE							
Flash Through Load Switches	true							
Cycle thru before Flash	FALSE							

No Serve Phases

Phase Number	1	2	3	4	5	6	7	8
Cannot serve with	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

Dimming

Load Switch	1	2	3	4	5	6	7	8
Dim Green	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Dim Yellow	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Dim Red	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Load Switch	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Dim Green	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Dim Yellow	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Dim Red	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

Options

Per-Phase Options

Phase Number	1	2	3	4	5	6	7	8
Enabled Phases	OFF	ON	OFF	ON	OFF	ON	OFF	ON
Flash Entry	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Flash Exit	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Non-Act 1	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Non-Act 2	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Non Locking	ON	ON	ON	ON	ON	ON	ON	ON
Min Recall	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Max Recall	OFF	ON	OFF	ON	OFF	ON	OFF	ON
Ped Recall	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Soft Recall	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Dual Entry	OFF	ON	OFF	ON	OFF	ON	OFF	ON
Simul Gap Dis	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Guar Passage	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Rest in Walk	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Cond Service	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Density Timing	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Conditional Reservice	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Exclusive Pedestrian	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Flashing Walk	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Don't Rest Here	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Ped Colors Dark if No Call	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

Per-Controller Options

Phase Group	5 & 2	7 & 4	1 & 6	3 & 8
Five Section Head	X			
Options	DUALENTRY, NOCOMMTOMMUTS22			
Auto Ped Clear	enable			
Backup Prevention and Simultaneous Gap Settings	NONE			
Unit Backup Time	0			
Unit Red Revert	2.0			

Coordinator Data

Coord Options

Split Units	seconds
Offset Units	seconds
Interconnect Format	plan
Interconnect Source	nic
Resync Count	0
Correction Mode	smooth
Dwell Period	0
Act Coord Phase	TRUE
Act Rest in Walk	FALSE
Maximum Inhibit	FALSE
Maximum 2 Select	FALSE
Multi Sync Mode	single-sync
Force Mode	fixed
Free Alternate Sequence	NONE

Split Demand

	Demand 1	Demand 2
Call Time	0	0
Cycle Count	0	0
Demand Phases	NONE	NONE

Auto Permissive Min Green

Phase	1	2	3	4	5	6	7	8
Time	0	0	0	0	0	0	0	0

Pattern Data

Coord Patterns 1-8

Pattern Number	1	2	3	4	5	6	7	8
Cycle Time	60	90	90	0	0	0	0	0
Offset time	16	5	55	0	0	0	0	0
Veh Perm1	0	0	0	0	0	0	0	0
Veh Perm2	0	0	0	0	0	0	0	0
Veh Perm2 Disp	0	0	0	0	0	0	0	0
Phase Reservice	false	false	false	false	false	false	false	false
Split Ext1	0	0	0	0	0	0	0	0
Split Ext2	0	0	0	0	0	0	0	0
Spl Dmd Ptn 1	0	0	0	0	0	0	0	0
Spl Dmd Ptn 2	0	0	0	0	0	0	0	0
Crossing Atery	0	0	0	0	0	0	0	0
Coord Phase	4, 8	4, 8	4, 8	NONE	NONE	NONE	NONE	NONE
Vehicle Call	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Vehicle Max Call	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Pedestrian Call	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Phase Omit	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Spare	0	0	0	0	0	0	0	0
Alt Sequence	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

Coord Patterns 9-16

Pattern Number	9	10	11	12	13	14	15	16
Cycle Time	0	0	80	80	80	0	0	0
Offset time	0	0	72	40	24	0	0	0
Veh Perm1	0	0	0	0	0	0	0	0
Veh Perm2	0	0	0	0	0	0	0	0
Veh Perm2 Disp	0	0	0	0	0	0	0	0
Phase Reservice	false	false	false	false	false	false	false	false
Split Ext1	0	0	0	0	0	0	0	0
Split Ext2	0	0	0	0	0	0	0	0
Spl Dmd Ptn 1	0	0	0	0	0	0	0	0
Spl Dmd Ptn 2	0	0	0	0	0	0	0	0
Crossing Atery	0	0	0	0	0	0	0	0
Coord Phase	NONE	NONE	4, 8	4, 8	4, 8	NONE	NONE	NONE
Vehicle Call	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Vehicle Max Call	NONE	NONE	2, 6	2, 6	2, 6	NONE	NONE	NONE
Pedestrian Call	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Phase Omit	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Spare	0	0	0	0	0	0	0	0
Alt Sequence	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

Coordinator Data (cont.)

Coord Patterns 17-24

Pattern Number	17	18	19	20	21	22	23	24
Cycle Time	0	0	0	0	0	0	0	0
Offset time	0	0	0	0	0	0	0	0
Veh Perm1	0	0 Yearly Schedule	0	0	0	0	0	0
Veh Perm2	0	0	0	0	0	0	0	0
Veh Perm2 Disp	0	0	0	0	0	0	0	0
Phase Reservice	false	false	false	false	false	false	false	false
Split Ext1	0	0	0	0	0	0	0	0
Split Ext2	0	0	0	0	0	0	0	0
Spl Dmd Ptn 1	0	0	0	0	0	0	0	0
Spl Dmd Ptn 2	0	0	0	0	0	0	0	0
Crossing Atery	0	0	0	0	0	0	0	0
Coord Phase	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Vehicle Call	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Vehicle Max Call	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Pedestrian Call	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Phase Omit	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Spare	0	0	0	0	0	0	0	0
Alt Sequence	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

Splits 1-24

Phase		1	2	3	4	5	6	7	8
Pattern	1	0	24	0	36	0	24	0	36
	2	0	35	0	55	0	35	0	55
	3	0	35	0	55	0	35	0	55
	4	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0
	6	0	0	0	0	0	0	0	0
	7	0	0	0	0	0	0	0	0
	8	0	0	0	0	0	0	0	0
	9	0	0	0	0	0	0	0	0
	10	0	0	0	0	0	0	0	0
	11	0	39	0	41	0	39	0	41
	12	0	40	0	40	0	40	0	40
	13	0	35	0	45	0	35	0	45
	14	0	0	0	0	0	0	0	0
	15	0	0	0	0	0	0	0	0
	16	0	0	0	0	0	0	0	0
	17	0	0	0	0	0	0	0	0
	18	0	0	0	0	0	0	0	0
	19	0	0	0	0	0	0	0	0
	20	0	0	0	0	0	0	0	0
	21	0	0	0	0	0	0	0	0
	22	0	0	0	0	0	0	0	0
	23	0	0	0	0	0	0	0	0
	24	0	0	0	0	0	0	0	0

Preemptor Data

Preemptor Data

Preemption Number	1	2	3	4	5	6
Term Ovlp Phases	NONE	NONE	NONE	NONE	NONE	NONE
Track Clear Phases	NONE	NONE	NONE	NONE	NONE	NONE
Hold Phases	NONE	NONE	NONE	NONE	NONE	NONE
Exit Phases	NONE	NONE	NONE	NONE	NONE	NONE
Exit Calls	NONE	NONE	NONE	NONE	NONE	NONE
Term Overlaps	NONE	NONE	NONE	NONE	NONE	NONE
Options 1	NONE	NONE	NONE	NONE	NONE	NONE
Options 2	NONE	NONE	NONE	NONE	NONE	NONE
Out of Flash	0	0	0	0	0	0

Interval Times

Preemption Number	1	2	3	4	5	6
Max Time	0	0	0	0	0	0
Min Hold Time	0	0	0	0	0	0
Min Ped Clear	0	0	0	0	0	0
Exit Max	0	0	0	0	0	0
Duration Time	0	0	0	0	0	0
Delay Time	0	0	0	0	0	0
Inhibit Time	0	0	0	0	0	0
Hold Delay Time	0	0	0	0	0	0
Min Green	0	0	0	0	0	0
Min Yellow	0.0	0.0	0.0	0.0	0.0	0.0
Min Red	0.0	0.0	0.0	0.0	0.0	0.0
Track Clear Green	0	0	0	0	0	0
Track Clear Yellow	0.0	0.0	0.0	0.0	0.0	0.0
Track Clear Red	0.0	0.0	0.0	0.0	0.0	0.0
Hold Yellow	0.0	0.0	0.0	0.0	0.0	0.0
Hold Red	0.0	0.0	0.0	0.0	0.0	0.0
Link	0	0	0	0	0	0

Bus Preemptors

Bus Preemption Number	1	2	3	4
Options	NONE	NONE	NONE	NONE
Maximum Time	0	0	0	0
Reservice time	0	0	0	0
Delay Time	0	0	0	0
Inhibit Time	0	0	0	0
Entrance Green	0	0	0	0
Entrance Ped Clear	0	0	0	0
Entrance Yellow	0.0	0.0	0.0	0.0
Entrance Red	0.0	0.0	0.0	0.0
Minimum Hold Time	0	0	0	0
Hold Phases	NONE	NONE	NONE	NONE

Options Key						
	Active	Priority	Detector Lock	Hold/Flash	Ped Dark	Ped Active
	A	P	DL	HF	PD	PA
	Zero Ped Clr Time	Ped Clear thru Yel	Term Olap ASAP	Terminate Phases	Don't O-ride Flash	Flash All Outputs
	ZPCT	PCY	TOASAP	TP	DOF	FAO
	Y-R Goes Green	Enable Max P Time	Act Only Dur Hold	No CVM in Flash	Fast Flash Grn on Hold	
	YRGG	EMPT	AODH	NCVMF	FFGH	

NIC/TOD Data

Clock/Calendar

NIC Manual Step	0	
TOD Manual Step	0	
TOD Sync Reference Time	00:00	Must be midnight (0:00) for OGL.
TOD Sync Reference	Reference Time	Must be "Reference time" for OGL.
Week 1 begins on 1st Sunday	false	Yearly Schedule
Disable Daylight Savings	Yes (disabled)	Must be "Yes" for OGL. Field not currently accessible in TransSuite
DST begins last Sunday	No (disabled)	Must be "No" for OGL. Field not currently accessible in TransSuite

Weekly Program

Weekly Program	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Sunday Daily Program	2	1	1	1	1	1	1	1	1	1
Monday Daily Program	1	1	1	1	1	1	1	1	1	1
Tuesday Daily Program	1	1	1	1	1	1	1	1	1	1
Wednesday Daily Program	1	1	1	1	1	1	1	1	1	1
Thursday Daily Program	1	1	1	1	1	1	1	1	1	1
Friday Daily Program	1	1	1	1	1	1	1	1	1	1
Saturday Daily Program	2	1	1	1	1	1	1	1	1	1

Yearly Program

Week Of Year	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Weekly Program	1	1	1	1	1	1	1	1	1	1
Week Of Year	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
Weekly Program	1	1	1	1	1	1	1	1	1	1
Week Of Year	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Weekly Program	1	1	1	1	1	1	1	1	1	1
Week Of Year	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**
Weekly Program	1	1	1	1	1	1	1	1	1	1
Week Of Year	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**	**50**
Weekly Program	1	1	1	1	1	1	1	1	1	1
Week Of Year	**51**	**52**	**53**							
Weekly Program	1	1	1							

Holidays

Holiday Program Number	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Program Type	fixed	fixed	fixed	fixed	fixed	fixed	fixed	fixed	fixed
Month	0	0	0	0	0	0	0	0	0
DOW (float) or DOM (fixed)	0	0	0	0	0	0	0	0	0
WOM (float) or Year (fixed)	0	0	0	0	0	0	0	0	0
Day Program #	0	0	0	0	0	0	0	0	0
Holiday Program Number	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**
Program Type	fixed	fixed	fixed	fixed	fixed	fixed	fixed	fixed	fixed
Month	0	0	0	0	0	0	0	0	0
DOW (float) or DOM (fixed)	0	0	0	0	0	0	0	0	0
WOM (float) or Year (fixed)	0	0	0	0	0	0	0	0	0
Day Program #	0	0	0	0	0	0	0	0	0

NIC/TOD Data (cont.)

NIC Program Steps

Step	1	2	3	4	5	6	7	8	9	10
Day Program Number	1	1	1	1	1	1	1	2	2	2
Start Time	00:01	06:00	06:30	09:00	15:30	18:30	21:00	00:01	08:00	21:00
Coord Pattern	1	11	13	11	12	11	1	1	11	1
Override	false	false	false	false	false	false	false	false	false	false

Step	11	12	13	14	15	16	17	18	19	20
Day Program Number	0	0	0	0	0	0	0	0	0	0
Start Time	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00
Coord Pattern	0	0	0	0	0	0	0	0	0	0
Override	false	false	false	false	false	false	false	false	false	false

Step	21	22	23	24	25	26	27	28	29	30
Day Program Number	0	0	0	0	0	0	0	0	0	0
Start Time	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00
Coord Pattern	0	0	0	0	0	0	0	0	0	0
Override	false	false	false	false	false	false	false	false	false	false

Step	31	32	33	34	35	36	37	38	39	40
Day Program Number	0	0	0	0	0	0	0	0	0	0
Start Time	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00
Coord Pattern	0	0	0	0	0	0	0	0	0	0
Override	false	false	false	false	false	false	false	false	false	false

Step	41	42	43	44	45	46	47	48	49	50
Day Program Number	0	0	0	0	0	0	0	0	0	0
Start Time	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00
Coord Pattern	0	0	0	0	0	0	0	0	0	0
Override	false	false	false	false	false	false	false	false	false	false

Step	51	52	53	54	55	56	57	58	59	60
Day Program Number	0	0	0	0	0	0	0	0	0	0
Start Time	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00
Coord Pattern	0	0	0	0	0	0	0	0	0	0
Override	false	false	false	false	false	false	false	false	false	false

Step	61	62	63	64	65	66	67	68	69	70
Day Program Number	0	0	0	0	0	0	0	0	0	0
Start Time	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00
Coord Pattern	0	0	0	0	0	0	0	0	0	0
Override	false	false	false	false	false	false	false	false	false	false

Step	71	72	73	74	75	76	77	78	79	80
Day Program Number	0	0	0	0	0	0	0	0	0	0
Start Time	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00
Coord Pattern	0	0	0	0	0	0	0	0	0	0
Override	false	false	false	false	false	false	false	false	false	false

NIC/TOD Data (cont.)

TOD Program Steps

Step	1	2	3	4	5	6	7	8	9	10
Day Program Number	1	1	2	2	0	0	0	0	0	0
Start Time	02:00	06:00	02:00	06:00	00:00	00:00	00:00	00:00	00:00	00:00
Options	AF	NONE	AF	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Det Diag Plan	0	0	0	0	0	0	0	0	0	0
Alt Sequence	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Max 2 Enable	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Max 3 Enable	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Vehicle Call	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Vehicle Max Call	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Pedestrian Call	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Cond Service Inhibit	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Phase Omit	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Special Function	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

Step	11	12	13	14	15	16	17	18	19	20
Day Program Number	0	0	0	0	0	0	0	0	0	0
Start Time	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00
Options	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Det Diag Plan	0	0	0	0	0	0	0	0	0	0
Alt Sequence	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Max 2 Enable	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Max 3 Enable	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Vehicle Call	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Vehicle Max Call	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Pedestrian Call	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Cond Service Inhibit	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Phase Omit	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Special Function	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE

Options Key	AF	RR	DE	AVE	DDE	DLE
	Flash	Red Rest	Dim Enable	Alt Veh Ext	Det Delay Enable	Detector Log Enable
	TB0	TB1	FB0		FB1	
	Timing Bank 0	Timing Bank 1	Function Bank 0		Function Bank 1	

Detector Data

Detector Setup

Detector Log Interval	logNone

Detector Number	1	2	3	4	5	6	7	8
Extend	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Options	P	P	P	P	P	P	P	P
Queue Limit	0	0	0	0	0	0	0	0
Fail Time	0	0	0	0	0	0	0	0
Call Phase	1	2	3	4	5	6	7	8
Switch Phase	0	0	0	0	0	0	0	0
Diagnostics								
No Activity	0	0	0	0	0	0	0	0
Max Presence	0	0	0	0	0	0	0	0
Erratic Counts	0	0	0	0	0	0	0	0

Detector Number	9	10	11	12	13	14	15	16
Extend	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Options	P	P	P	P	P	P	P	P
Queue Limit	0	0	0	0	0	0	0	0
Fail Time	0	0	0	0	0	0	0	0
Call Phase	2	2	4	4	6	6	8	8
Switch Phase	0	0	0	0	0	0	0	0
Diagnostics								
No Activity	0	0	0	0	0	0	0	0
Max Presence	0	0	0	0	0	0	0	0
Erratic Counts	0	0	0	0	0	0	0	0

Detector Number	17	18	19	20	21	22	23	24
Extend	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Options	P	P	P	P	P	P	P	P
Queue Limit	0	0	0	0	0	0	0	0
Fail Time	0	0	0	0	0	0	0	0
Call Phase	1	2	3	4	5	6	7	8
Switch Phase	0	0	0	0	0	0	0	0
Diagnostics								
No Activity	0	0	0	0	0	0	0	0
Max Presence	0	0	0	0	0	0	0	0
Erratic Counts	0	0	0	0	0	0	0	0

Detector Number	25	26	27	28	29	30	31	32
Extend	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Options	P	P	P	P	P	P	P	P
Queue Limit	0	0	0	0	0	0	0	0
Fail Time	0	0	0	0	0	0	0	0
Call Phase	2	4	6	8	0	0	0	0
Switch Phase	0	0	0	0	0	0	0	0
Diagnostics								
No Activity	0	0	0	0	0	0	0	0
Max Presence	0	0	0	0	0	0	0	0
Erratic Counts	0	0	0	0	0	0	0	0
Options Key	VD	OD	YLC	RLC	P	AI	Q	C
	Volume Det	Occupancy Det	Yellow Lock	Red Lock	Passage	Added Init	Queue	Call

Volume Det and Occupancy Det are controlled by "System Log Enable" via the front panel

Detector Data (cont.)

Speed Detectors

Detector Log Interval	logNone
Detector Length Units	inches

Speed Detector Number	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Detector 1 Number								
Vehicle Length								
Loop Length								
Detector 2 Number								
Trap Distance								
Speed Log Enable								
Speed Detector Number	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Detector 1 Number								
Vehicle Length								
Loop Length								
Detector 2 Number								
Trap Distance								
Speed Log Enable								

Pedestrian Detectors

Ped Det Number	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Call Phase								
Erratic Counts								
No Activity								
Max Presence								

APPENDIX VI

Guidelines for Right-Turn and Left-Turn
Treatments at
Unsignalized Intersection and Driveways

(Sources: MoDOT, Engineering Policy Guide and HRR #211)

940.9.1 Left Turn Lane Guidelines for Two-Lane Roads less than or equal to 40 mph

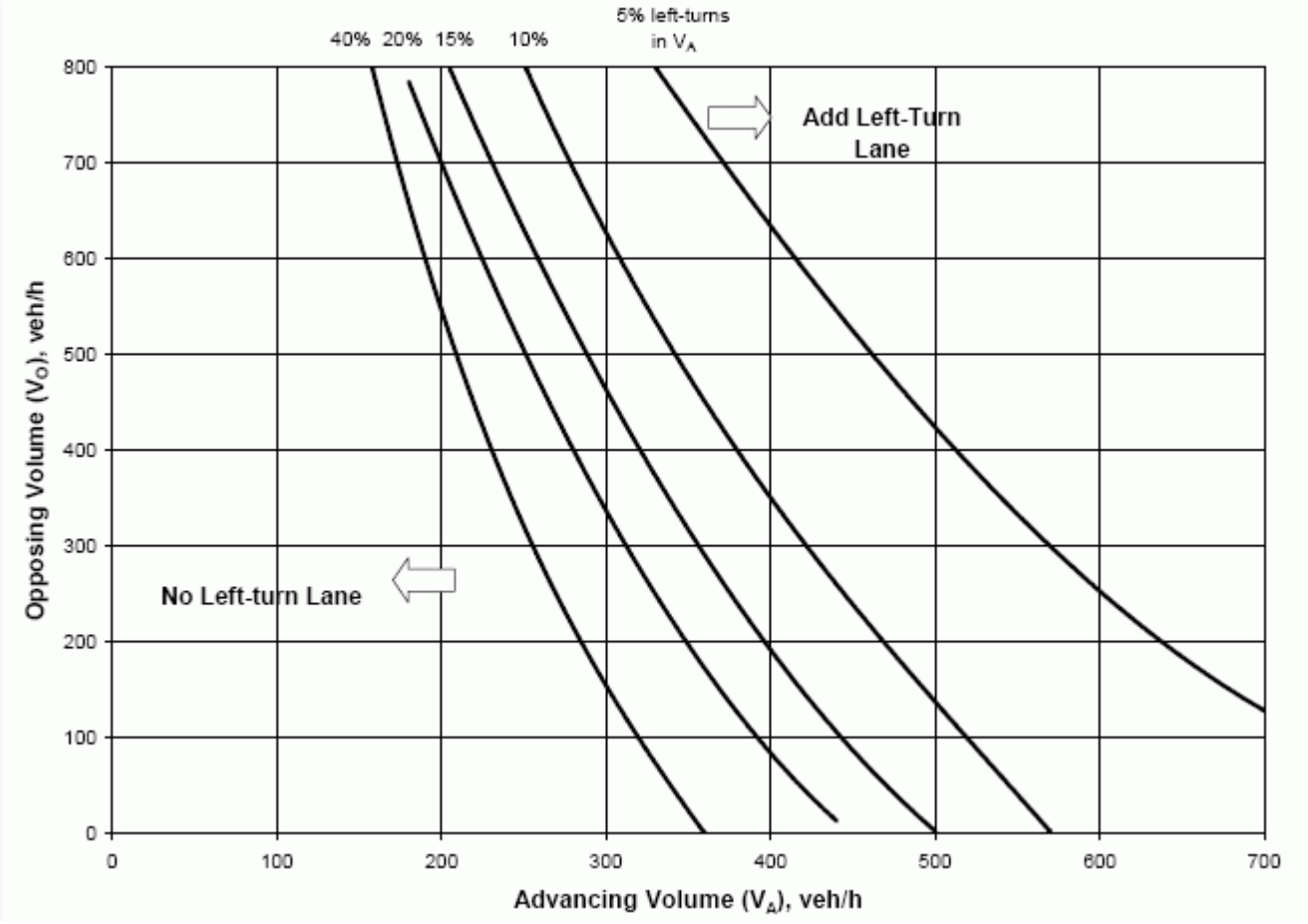


Figure 940.9.1, Left Turn Lane Guidelines for Two-Lane Road less than or equal to 40 mph

The following data are required:

1. Opposing Volume (veh/hr) - VO - The opposing volume is to include only the right-turn and through movements in the opposite direction of the left turning vehicle.

2. Advancing Volume (veh/hr) - VA - The advancing volume is to include the right-turn, left-turn and through movements in the same direction as the left turning vehicle.

3. Operating Speed (mph) - The greatest of anticipated operating speed, measured 85th percentile speed or posted speed.

4. Percentage of left turns in VA

Left turn lane is not needed for left turn volume less than 10 vph. However, criteria other than volume, such as crash experience, may be used to justify a left turn lane.

The appropriate trend line is identified on the basis of the percentage of left-turns in the advancing volume, rounded up to the nearest percentage trend line. If the advancing and opposing volume combination intersects above or to the right of this trend line, a left-turn lane is appropriate.

940.9.8 Right Turn Lane Guidelines for Two-Lane Roadways

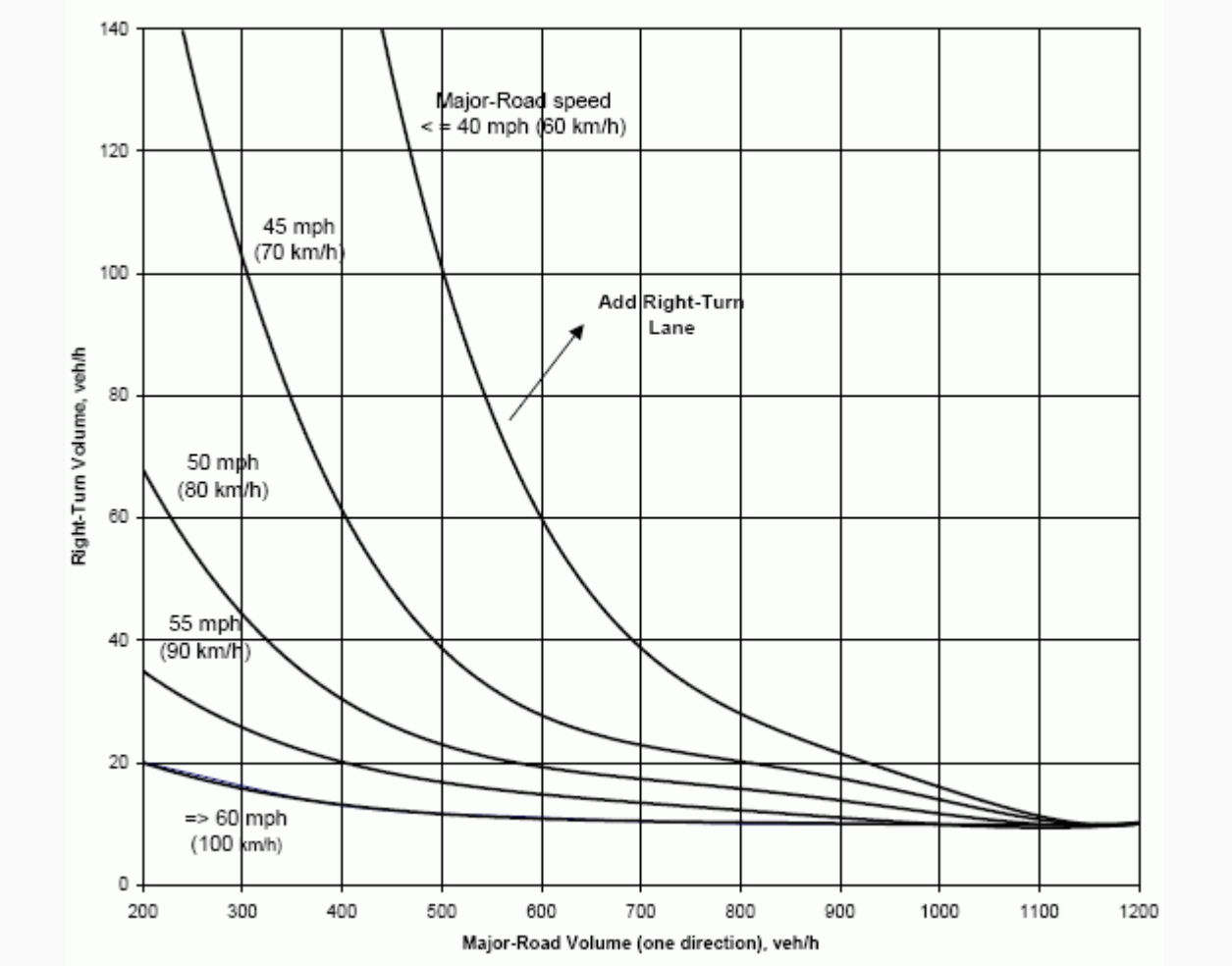


Figure 940.9.8 Right Turn Lane Guidelines for Two-Lane Roadways

The following data are required:

1. Advancing Volume (veh/hr) - The advancing volume is to include the right-turn, left-turn and through movements in the same direction as the right turning vehicle.

2. Right Turning Volume (veh/hr) - The right turning volume is the number of advancing vehicles turning right.

3. Operating Speed (mph) - The greatest of anticipated operating speed, measured 85th percentile speed or posted speed.

Note: Right turn lane is not needed for right turn volume less than 10 vph. However, criteria other than volume, e.g. crash experience, may be used to justify a right turn lane.

If the combination of major road approach volume and right-turn volume intersects above or to the right of the speed trend line corresponding the major road operating speed, then a right-turn lane is appropriate.

APPENDIX VII

Walkability Study Worksheets

City of Kansas City, MO Development Proposal, Pedestrian Level of Service Worksheet

Project Name: Zhou B. Art Center, SEC of E. 18th Street and Woodland Avenue, KCMO

Project Location Classification (see text): Neighborhood Activity Centers and Corridors

Contact Person & Title: Mehrdad Givechi, PE, PTOE; mgivechi@sunflower.com

	Description of applicable destination area within 1,320 ft. (0.25 mi.) of proposed development edge	Destination Area Classification (see text) -- Internal or External to Site	Minimum level of service based on project location classification					
				Directness	Continuity	Street Crossings	Visual Interest and Amenity	Security
			Minimum LOS >>>>>>>>>>>>>>>	**B**	**B**	**C**	**B**	**B**
	Development Site		Current On Site to Internal Destination	N/A	N/A	N/A	N/A	N/A
			Proposed On Site to Internal Destination	N/A	N/A	N/A	N/A	N/A
			Current On Site to Edge	B	B	N/A	B	B
			Proposed On Site to Edge	B	B	N/A	B	B
D1	Gregg-Klice Community Center (1600 Buck O'Neil) (0.2 mile away)	External	Current Edge to Destination	A (A/M = 1.0)	A	A/B	A/B	A
			Proposed Edge to Destination	A (A/M = 1.0)	A	A/B	A/B	A
D2	Lincoln College Preparatory Academy (22nd and Woodland) (0.25 mile away)	External	Current Edge to Destination	A (A/M = 1.0)	A	B/C	B	B
			Proposed Edge to Destination	A (A/M = 1.0)	A	B/C	B	B
D3	Crossroads District (> 0.25 mile away)	External	Current Edge to Destination	A (A/M = 1.0)	A	B/C	B	B
			Proposed Edge to Destination	A (A/M = 1.0)	A	B/C	B	B
D4	Jazz District (18th and Vine) (within 0.25 mile away)	External	Current Edge to Destination	A (A/M = 1.0)	A	A/B	A/B	A
			Proposed Edge to Destination	A (A/M = 1.0)	N/A	A/B	A/B	A
	Summary		Current On Site to Edge	B	B	N/A	B	B
			Current Edge to Destination	A	A	A/B	A/B	A/B
			Proposed Edge to Destination	A	A	A/B	A/B	A/B

KANSAS CITY PEDESTRIAN LEVELS OF SERVICE

Measurement	A	B	C	D	F
Directness	Pedestrian has a direct, clear, understandable linear public path to destination, generally with more than one alternative route. (A/M Ratio <1.2)*	Pedestrian has at least one direct, clear, understandable linear public path to destination with only minor deviations. (A/M Ratio 1.2 to 1.4)*	Minimum acceptable directness and connectivity standard; path to destination lacks linearity, and is less clear and understandable. (A/M Ratio 1.4 to 1.6)*	Increasing lack of directness, connectivity and linearity with incoherent and confusing direction and visual connection to pedestrian destinations. (A/M Ratio 1.6 to 2}*	No directness or connectivity. Total pedestrian disorientation, no linearity and confusing. (A/M Ratio >2.0)*
Continuity	ADA accessible Pedestrian sidewalk in good condition with landscaped parkway appears as a single entity connected to and within a major activity area or public open space.	Continuous stretches of ADA accessible sidewalks in generally good condition (10% or less need maintenance) that are physically separated by a landscaped parkway.	Continuous stretches of sidewalks that may have variable widths, with and without landscaped parkways; maintenance problems occur in less than 20% of sidewalk.	Pedestrian corridors are not well connected with several breaches or barriers in the pedestrian network; maintenance needed over 50% of sidewalk.	Complete breakdown in pedestrian traffic flow as each pedestrian selects a different route, as no pedestrian network exists.
Street Crossings: Signalized**	3 or fewer lanes to cross or 4 or 5 lanes to cross with raised pedestrian refuge median and/or reduced lane widths or slower traffic speeds; total crossing width no greater than 72 feet. signal has clear vehicular and pedestrian indications; well marked crosswalks; good lighting levels; standard curb ramps; maximum curb radii in Pedestrian Areas ***of 20 feet. automatic pedestrian signal phase; amenities, signing, sidewalk, and roadway character strongly suggest the presence of a pedestrian crossing; drivers and pedestrians have unobstructed views of each other.	4 or 5 lanes to cross or 6 or more lanes to cross with raised pedestrian refuge median and/or reduced lane widths or slower traffic speeds; total crossing width no greater than 84 feet. signal has clear vehicular and pedestrian indications; well marked crosswalks; good lighting levels; pedestrian refuge area: raised medians at least 6' wide with low plantings or features; standard curb ramps; maximum curb radii in Pedestrian Areas*** of 20 feet. automatic pedestrian signal phase; amenities, signing sidewalk, and roadway character strongly suggest the presence of a pedestrian crossing; drivers and pedestrians have unobstructed views of each other. Missing 2 elements of A	6 or more lanes to cross; total crossing width no greater than 96 feet. signal has clear vehicular and pedestrian indications; well-marked crosswalks; good lighting levels; pedestrian refuge area: raised median at least 6' wide with low plantings or features; standard curb ramps; maximum curb radii in Pedestrian Areas*** of 20 feet. automatic pedestrian signal phase; amenities, signing, sidewalk, and roadway character strongly suggest the presence of a pedestrian crossing; drivers and pedestrians have unobstructed views of each other. Missing 4 elements of A Missing 2 elements of B	Missing 5-6 elements of A Missing 4-5 elements of B Missing 2-3 elements of C	Missing 7 elements of A Missing 6 elements of B Missing 5 elements of C
Street Crossings: Unsignalized, Crossing the Major Street****	3 or fewer lanes to cross or 4 or 5 lanes to cross with raised pedestrian refuge median and/or reduced lane widths or slower traffic speeds; total crossing width no greater than 72 feet. Well-marked crosswalks; good lighting levels; standard curb ramps; maximum curb radii in Pedestrian Areas ***of 20 feet. amenities, signing, sidewalk, and roadway character strongly suggest the presence of a pedestrian crossing; drivers and pedestrians have unobstructed views of each other.	4 or 5 lanes to cross or 6 or more lanes to cross with raised pedestrian refuge median and/or reduced lane widths or slower traffic speeds; total crossing width no greater than 84 feet. Well-marked crosswalks; good lighting levels; pedestrian refuge area: raised median at least 6' wide with low plantings or features; standard curb ramps; maximum curb radii in Pedestrian Areas ***of 20 feet. amenities, signing, sidewalk, and roadway character strongly suggest the presence of a pedestrian crossing; drivers and pedestrians have unobstructed views of each other. Missing 1 element of A	6 or more lanes to cross; Well-marked crosswalks; good lighting levels; pedestrian refuge area: raised median at least 6' wide with low plantings or features; standard curb ramps; maximum curb radii in Pedestrian Areas ***of 20 feet. amenities, signing, sidewalk, and roadway character strongly suggest the presence of a pedestrian crossing; drivers and pedestrians have unobstructed views of each other. Missing 2 elements of A Missing 1 element of B	Missing 3-4 elements of A Missing 2-3 elements of B Missing 1-2 elements of C	Missing 5 elements of A Missing 4 elements of B Missing 3 elements of C
Street Crossings: Unsignalized, Crossing the Minor Street****	Well-marked crosswalks; good lighting levels; standard curb ramps; maximum curb radii in Pedestrian Areas ***of 20 feet. amenities, signing, sidewalk, and roadway character strongly suggest the presence of a pedestrian crossing; drivers and pedestrians have unobstructed views of each other.	Missing 1 element of A	Missing 2 elements of A	Missing 3-4 elements of A	Missing 5 elements of A
Street Crossings: Mid-Block Major Street Crossing****	3 or fewer lanes to cross or 4 or 5 lanes to cross with raised pedestrian refuge median, and reduced lane widths and/or slower traffic speeds; total crossing width no greater than 72 feet. amenities, signing and sidewalk and roadway character strongly suggest the presence of a pedestrian crossing; drivers and pedestrians have unobstructed views of each other; well marked crosswalks; good lighting levels; standard curb ramps.	4 or 5 lanes to cross or 6 or more lanes to cross with raised pedestrian median, and reduced lane widths and/or slower traffic speeds; total crossing width no greater than 84 feet. Raised median at least 10' wide with low plantings or features; amenities, signing and sidewalk and roadway character strongly suggest the presence of a pedestrian crossing; drivers and pedestrians have unobstructed views of each other; well marked crosswalks; good lighting levels; standard curb ramps. Missing 1 element of A	6 or more lanes to cross; Raised median at least 10' wide with low plantings or features; amenities, signing and sidewalk and roadway character strongly suggest the presence of a pedestrian crossing; drivers and pedestrians have unobstructed views of each other; well marked crosswalks; good lighting levels; standard curb ramps. Missing 2 elements of A Missing 1 element of B	Missing 3-4 elements of A Missing 2-3 elements of B Missing 1-2 element of C	Missing 5 elements of A Missing 4 elements of B Missing 3 elements of C
Visual Interest and Amenity	Visually appealing and compatible with local architecture. Generous sidewalk width, active building frontages. Good protection from elements by street trees or awnings; quality street furniture including frequent seating.	Generous sidewalks, visual clarity, some street furniture and landscaping, no blank street walls. Protection from elements available over 50% of block on average. Seating or resting places average once every 2 blocks.	Functionally operational with less importance to visual interest or amenity. Protection from elements available over 25% of block on average. Seating or resting places averages once every 3 to 4 blocks.	Design ignores pedestrian with negative mental image. Protection from elements averages less than 10% of block. No seating or resting places within ¼ mile.	Total discomfort and intimidation. No protection from elements in multi-block area. No seating or resting places.
Security	Sense of security enhanced by presence of other people using sidewalks and being overlooking from adjacent buildings. Good pedestrian lighting on pedestrian routes and clear sight lines. Good separation from vehicular traffic by parkway with trees/planters.	Good, if uneven, lighting levels on pedestrian routes and unobstructed lines of sight. Street edge of sidewalk separated from the street by at least 5 feet.	Generally good lighting levels on pedestrian routes with occasional short intervals of lower lighting; generally unobstructed lines of sight. Potential for separation from traffic of at least 5 feet.	Sidewalk configuration and parked cars may inhibit vigilance from the street. Separation from vehicular traffic available only at multi-block intervals.	Streetscape is pedestrian intolerant due to uses, building configurations, no protection from heavy traffic, no eyes on the street.

* A/M Ratio: Actual distance between pedestrian origin/destination divided by minimum distance defined by a right angle grid street system.
** A signalized intersection LOS will go up one level of service with a dedicated pedestrian signal phase and/or a colored or textured crosswalk.
*** Pedestrian Areas are potential high pedestrian use areas based on the Kansas City Walkability Plan and as defined in the ***Pedestrian LOS Impact Analysis Manual for Development Proposals***.
****Unsignalized crossing at intersection of major street (minor arterial to major arterial) and minor street (local, connector and collector).

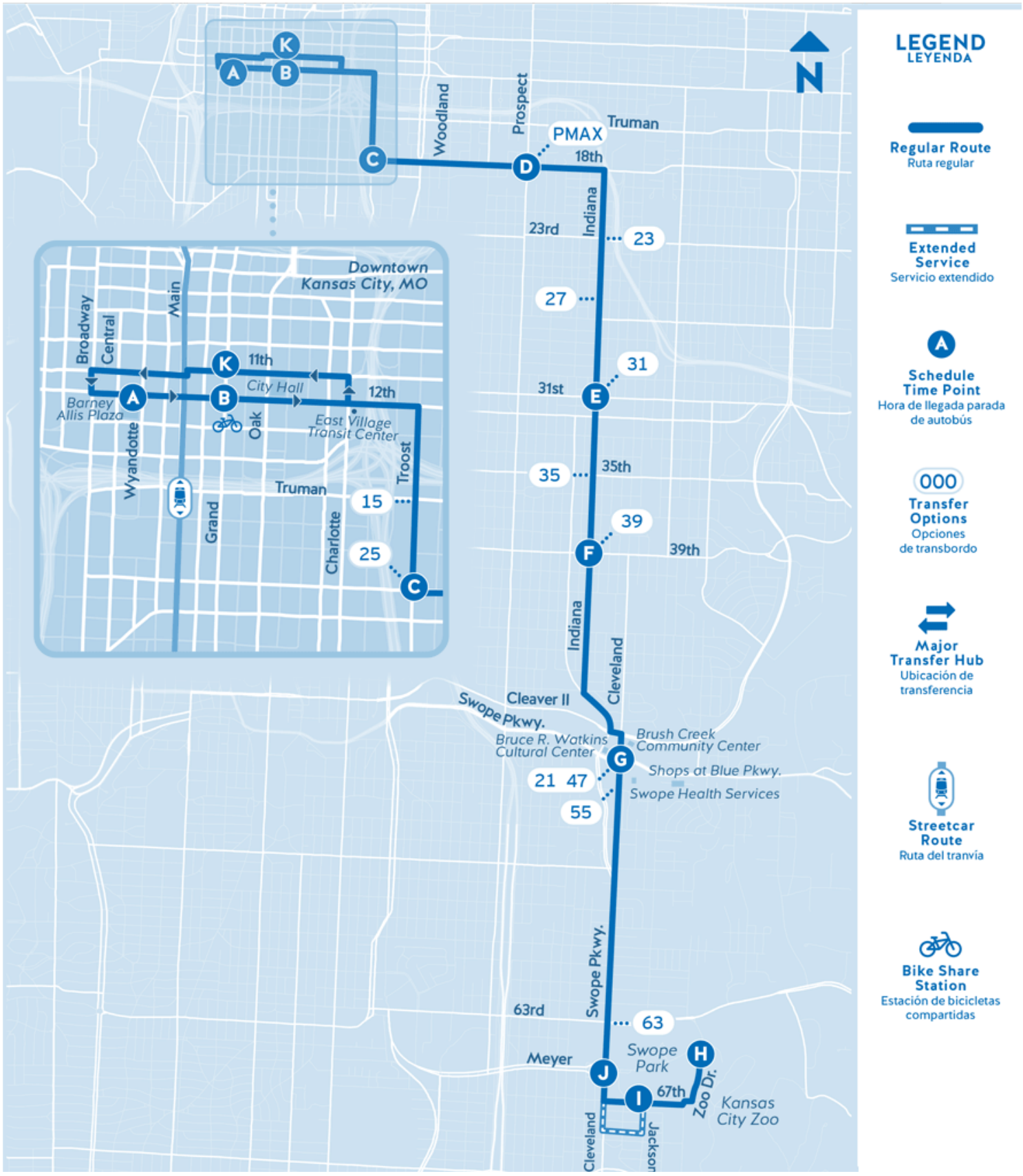
APPENDIX VIII

Ride KC and Bike KC Maps

(Source: KCMO Website)

18 Indiana

Temporary schedule during the COVID-19 pandemic
Horario temporal durante la pandemia de COVID-19



LEGEND
LEYENDA

Regular Route
Ruta regular

Extended Service
Servicio extendido

Schedule Time Point
Hora de llegada parada de autobús

Transfer Options
Opciones de transbordo

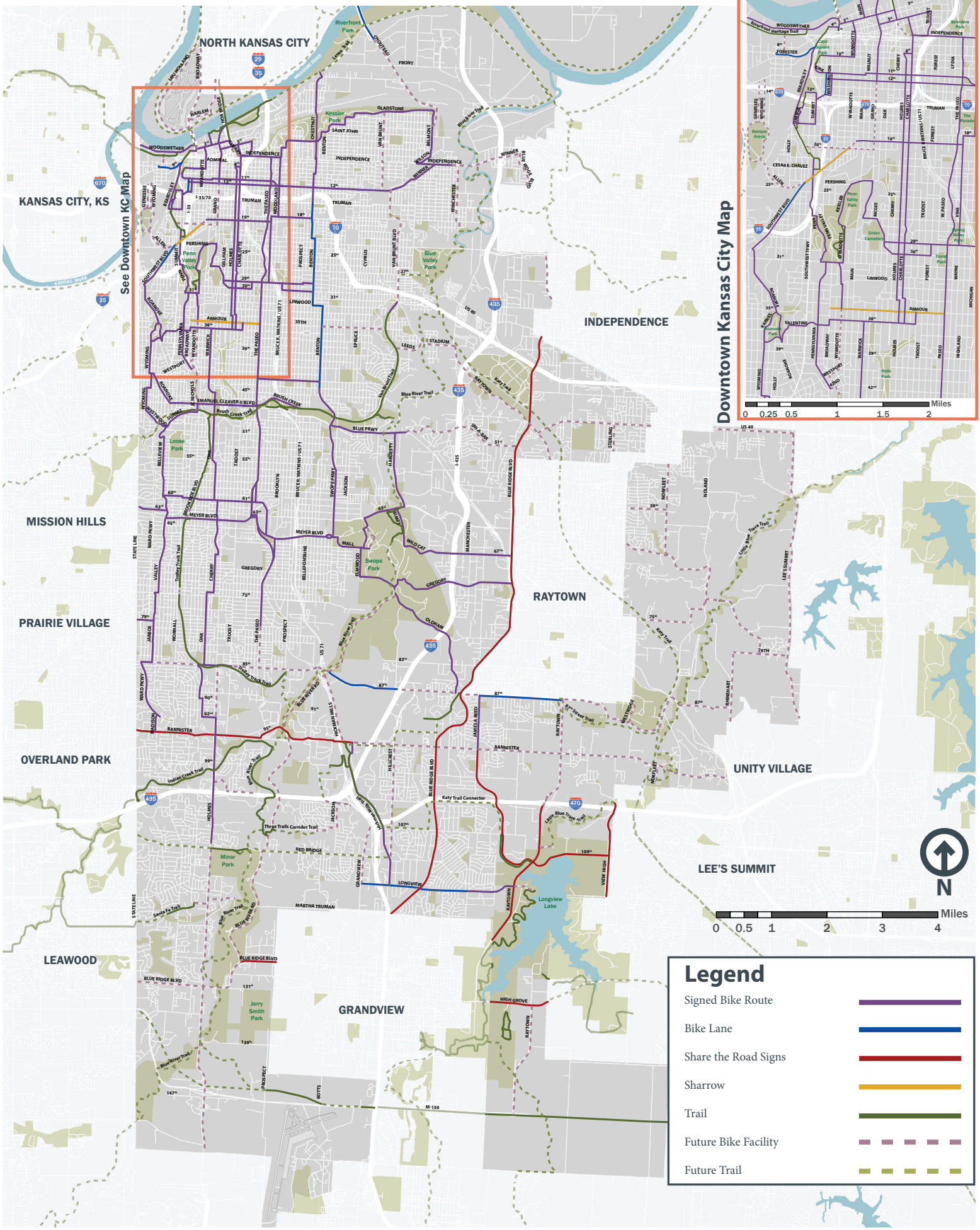
Major Transfer Hub
Ubicación de transferencia

Streetcar Route
Ruta del tranvía

Bike Share Station
Estación de bicicletas compartidas

South of the River Bike Map

Kansas City, Missouri



Legend

- Signed Bike Route
- Bike Lane
- Share the Road Signs
- Sharrow
- Trail
- Future Bike Facility
- Future Trail