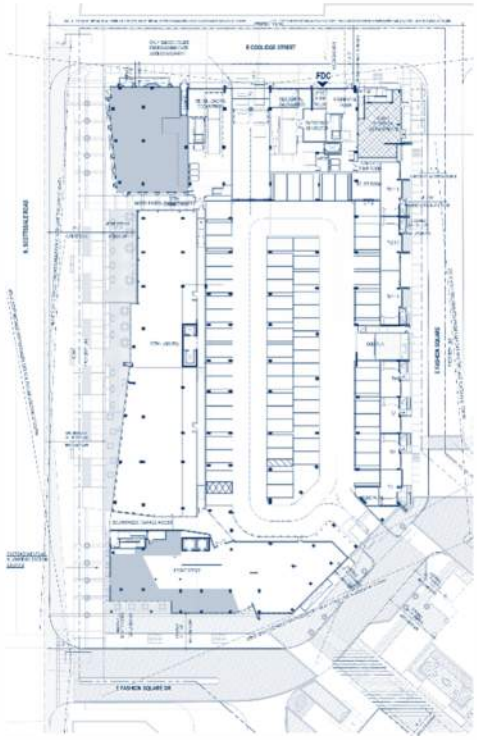
Hazel and Azure

Transportation Impact & Mitigation Analysis – Category II



Registered Professional Engineer (Civil)
CERTIFICATE NO.
51806
SHELLY A.
SORENSEN
Date Signed: 03/25/22
ARIZONA, U.S.A.

Prepared for:

ZT Scottsdale Owner, LLC
2001 Summit Park Drive, Suite 300
Orlando, FL 32810

Prepared by:

Lōkahi, LLC
4657 E. Cotton Gin Loop, Suite 102
Phoenix, AZ 85040

Project Number: 21.5209
March 25, 2022

Table of Contents:

Figures:

Tables:

Appendices:

1. Introduction and Executive Summary

1.1. Purpose of Report and Study Objectives

Lōkahi, LLC (Lōkahi) was retained by ZT Scottsdale Owner, LLC to complete a Transportation Impact & Mitigation Analysis (TIMA) – Category II for the proposed Hazel and Azure development. The proposed mixed-use multifamily buildings development will be located on the northeast corner (NEC) of Fashion Square Drive and Scottsdale Road in Scottsdale, Arizona.

The proposed development will consist of two (2) buildings. Throughout the remainder of the report, these buildings will be referred to as Building A and Building B. Building A will be located along the north side of Fashion Square Drive and will consist of a total of 362 residential units with 2,109 square feet of office and 13,685 square feet of retail. Building B will be on located on the south side of Fashion Square Drive and will consist of 170 residential units. See **Figure 2** and **Appendix A** for the proposed site plan.

The objective of this Transportation Impact & Mitigation Analysis is to analyze the traffic related impacts of the proposed development to the adjacent roadway network.

1.2. Executive Summary

This report presents the analyses and the results of a Transportation Impact & Mitigation Analysis – Category II prepared for the proposed Hazel and Azure development. The proposed mixed-use multifamily residential and retail development will consist of a total of 532 residential units, with 13,685 square feet of retail, and 2,109 square feet of office and is located on northeast corner (NEC) of Fashion Square Drive and Scottsdale Road in Scottsdale, Arizona.

This Transportation Impact & Mitigation Analysis includes:

- Existing Conditions
  - AM and PM peak hour traffic volumes
  - AM and PM peak hour level of service analysis
- Collision History
- Trip Generation
  - Proposed Development
- Trip Distribution & Assignment
- Traffic Volumes for the opening year (2023) weekday AM and PM peak hours for the No Build and Build scenarios

- Level of service analysis for the opening year (2023) weekday AM and PM peak hours for the No Build and Build scenarios

The following seven (7) intersections are included in this study:

- Scottsdale Road and Highland Avenue (1)
- Scottsdale Road and Coolidge Street (2)
- Scottsdale Road and Fashion Square Drive (3)
- Scottsdale Road and Camelback Road (4)
- Fashion Square Drive and Driveway 66' east of Scottsdale Road (5)
- Coolidge Street and Fashion Square Drive (6)
- Fashion Square Drive and Driveway 300' northeast of Scottsdale Road (7)

Existing Conditions

The capacity and level of service for the study area intersection were evaluated for the existing conditions. All study area intersections operate with movements at a LOS D or better, with the exception of:

Scottsdale Road and Fashion Square Drive (3)

- Eastbound shared through-right AM peak hour operates at LOS E
- Westbound shared left-through-right AM peak hour operates at LOS E

Scottsdale Road and Camelback Road (4)

- Eastbound left AM and PM peak hours operate at LOS E
- Westbound left AM peak hour operates at LOS E
- Northbound left AM peak hour operates at LOS E
- Southbound left AM and PM peak hours operates at LOS E

Trip Generation – Proposed Development

The proposed mixed-use multifamily residential and retail development will consist of a total of 362 residential units with 2,109 square feet of office and 13,685 square feet of retail. Building B will be on located on the south side of Fashion Square Drive and will consist of 170 residential units. Therefore, the trip generation was calculated utilizing ITE Land Use 221 – Multifamily Housing (Mid-Rise), ITE Lane Use 712 – Small Office Building, and ITE Land Use 822 – Strip Retail Plaza (<40k).

Trip Generation – Proposed Development

Land Use	ITE Code	Qty	Unit	Weekday	AM Peak Hour			PM Peak Hour		
				Total	Total	In	Out	Total	In	Out
Multifamily Housing (Mid-Rise)	221	532	Dwelling Units	2,415	197	45	152	207	126	81
Strip Retail Plaza (<40k)	822	13.7	1000 SF GFA	745	32	19	13	90	45	45
Small Office Building	712	2.1	1000 SF GFA	30	4	3	1	5	2	3
			Total	3,190	233	67	166	302	173	129
			Iternal Capture	242	6	3	3	38	19	19
			Total	2,948	227	64	163	264	154	110

Future Conditions

The proposed Transportation Impact & Mitigation Analysis – Category II development is anticipated to be built out by year 2023.

According to the 2019 Maricopa Association of Government (MAG) socioeconomic projections within the proposed study area, it is estimated that in the year 2030 the population within the Regional Analysis Zone (RAZ) will be approximately 79,910. MAG estimates that the 2018 population of the surrounding area to be 68,987. This results in an approximate annual growth rate of 1.23%. To be conservative, the annual growth rate of 2.0% was utilized to project the existing traffic volumes through the year 2023.

Year 2023 No Build

The year 2023 no build analysis includes the annual growth rate applied to the background traffic volumes, with the nearby developments, and without the buildout of the proposed Hazel and Azure development.

The capacity and level of service for the study area intersection were evaluated for the year 2023 no build traffic volumes. All study area intersections operate with movements at a LOS D or better, or at the same level of service as the existing condition.

Year 2023 Build

The year 2023 build analysis includes the build out of the proposed Hazel and Azure development. All study area intersections operate with movements at a LOS D or better, or at the same level of service as the 2023 no-build condition.

Recommendations

In the summary and as included in the discussion and analyses above, the following are the recommended transportation related improvements:

- **Scottsdale Road and Fashion Square Drive (3)**
  Buildout of east leg of intersection to provide a dedicated left turn lane and a shared through-right turn lane.

- **Fashion Square Drive and Driveway (5)**
  With the buildout of the proposed development, the existing intersection was moved 180 feet east of Scottsdale Road (centerline to centerline).

- **Fashion Square Drive and Driveway A (8)**
  Buildout of a full access driveway

- **Fashion Square Drive and Driveway B (9)**
  Buildout of a full access driveway

- **Coolidge Street and Driveway A (10)**
  Buildout of a full access driveway

2. Proposed Development

The proposed Transportation Impact & Mitigation Analysis – Category II development is located on the NEC of Fashion Square Drive and Scottsdale Road. The site is bordered by Scottsdale Road to the west, the Arizona Canal to the east, Safari Drive I Condominium multi-family residential to the north-east, and Arcadia Country Mart commercial development to the south, and approximately 2.5 miles east of Arizona State Route 101 (SR 101). The site will be comprised of two buildings. Building A will be located on the north side of Fashion Square Drive and will consist of 362 residential units with 2,109 square feet of office and 13,685 square feet of retail. Building B will be on located on the south side of Fashion Square Drive and will consist of 170 residential units. The proposed development is anticipated to be completed by the year 2023. See **Figure 2** and **Appendix A** for the proposed site plan.

There are two (2) proposed access points to the proposed Hazel and Azure development along Fashion Square Drive.

Fashion Square Drive and Building A Driveway (8) is located approximately 275 feet east of Scottsdale Road and will be a full access driveway allowing all movement into and out of the parking lot for the commercial portion of Building A of the proposed development.

Fashion Square Drive and Building B Driveway (9) is located approximately 350 feet east of Scottsdale Road and will be a full access driveway allowing all movement into and out of Building B of the proposed development.

Coolidge Street and Building A Driveway (10) is located approximately 160 feet east of Scottsdale Road and will be a full access driveway allowing all movements into and out of the parking garage for the residential portion of Building A of the proposed development.

See **Figure 3** for the proposed study area.

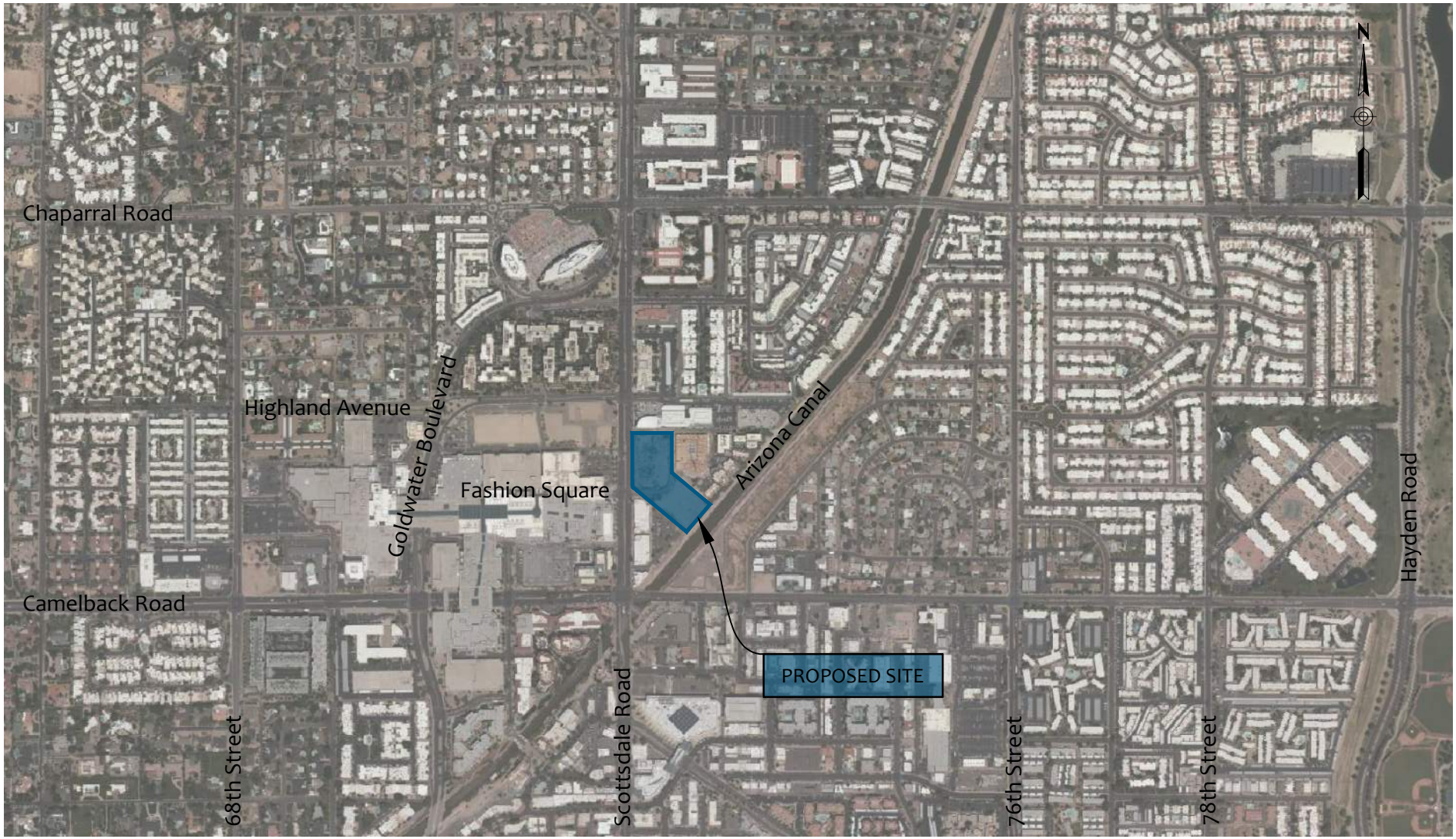


FIGURE 1 | VICINITY MAP

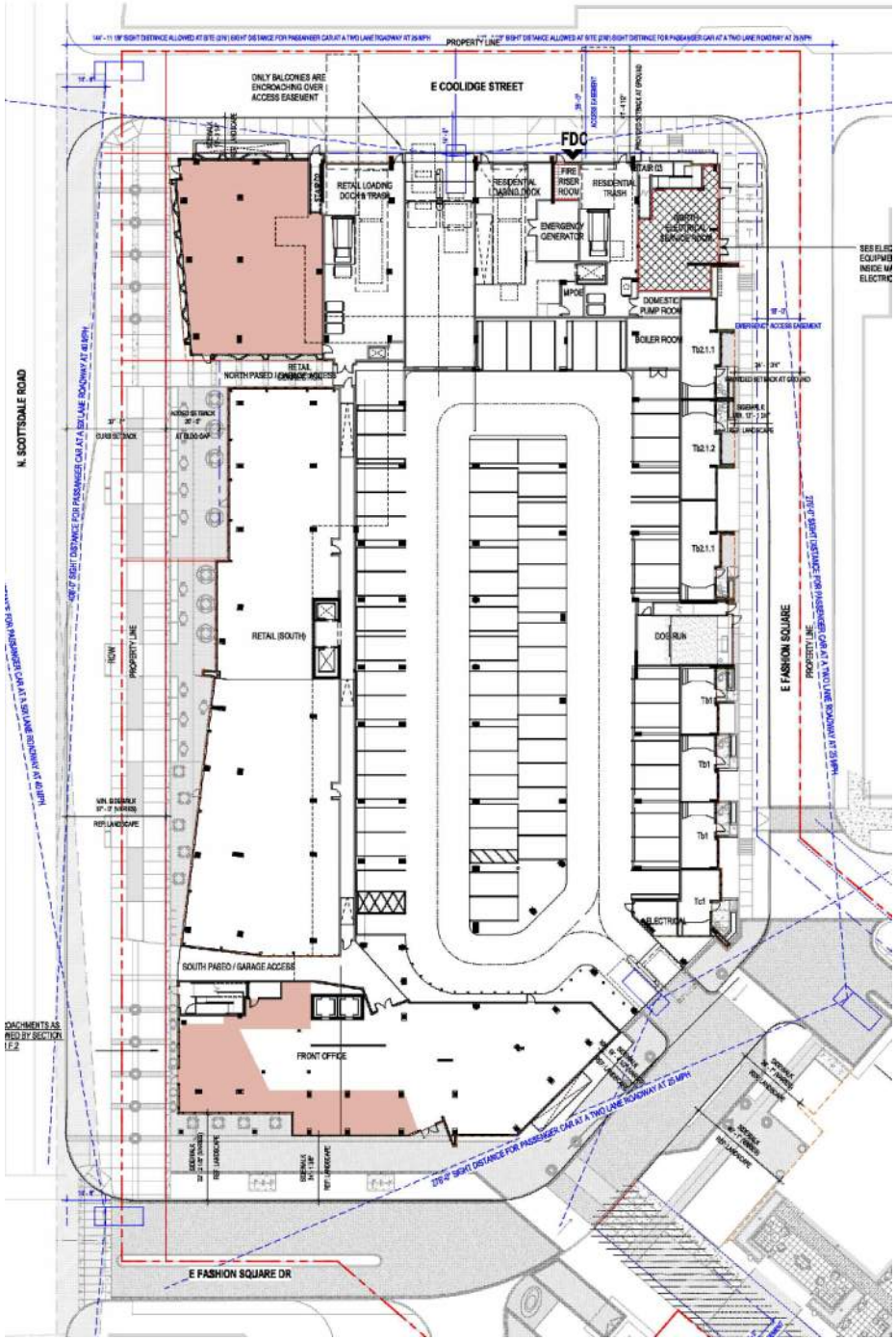


FIGURE 2 | SITE PLAN

FIGURE 3 | STUDY AREA

3. Area Conditions

The study area is located in the City of Scottsdale, Arizona. **Section 3.1** and **Section 3.2** provides detailed descriptions of the study roadway segments and intersections. See **Figure 3** for the proposed study area.

3.1. Study Roadway Segments

Scottsdale Road runs north-south and in the vicinity of the site provides three (3) through lanes for each directions of travel, with a raised landscaped median. There is a posted speed limit of 40 miles per hour (mph). The City of Scottsdale classifies Scottsdale Road as a major collector within the study area, according to *The Scottsdale Master Transportation Plan,* dated July 2016. The City of Scottsdale's *2020 Average Daily Segment Traffic (ADT) Volumes* map reports an ADT of 29,700 vehicles per day (vpd) along Scottsdale Road, between Camelback Road and Chaparral Road.

Camelback Road runs east-west and in the vicinity of the site provides two (2) through lanes for each direction of travel, with a raised landscaped median west of Scottsdale Road and with a two-way left-turn lane (TWLTL) east of Scottsdale Road. West of Scottsdale Road there is a posted speed limit of 35 mph. East of Scottsdale Road there are variable speed limit signs. The speed limit it typically posted at 35 mph but is lowered to 25 mph on Friday and Saturday from 9:00 PM to 3:00 AM. The City of Scottsdale classifies Camelback Road as a minor arterial within the study area, according to *The Scottsdale Master Transportation Plan*, dated July 2016. The City of Scottsdale's *2020 Average Daily Segment Traffic (ADT) Volumes* map reports an ADT of 18,200 vpd along Camelback Road, between Goldwater Boulevard and Scottsdale Road and an ADT of 20,400 vpd along Camelback Road, between Scottsdale Road and Miller Road.

Highland Avenue is an east-west roadway that generally provides two (2) through lanes in each direction of travel, with a raised landscaped median, in the vicinity of the study area. Approximately 250 feet east of Scottsdale Road, Highland Avenue terminates into a driveway for a car dealership parking lot. There is a posted speed limit of 35 mph.

Coolidge Street runs east-west and in the vicinity of the site provides one (1) through lane for each direction of travel. There is an unposted speed limit of 25 mph. On-street parking is provided on the north side of the roadway.

Fashion Square Drive runs east-west and in the vicinity of the site provides one (1) through lane for each direction of travel. There is an unposted speed limit of 25 mph. Fashion Square Drive west of Scottsdale Road provides access to Fashion Square Mall parking lot. Fashion Square Drive east of

Scottsdale Road terminates into an unpaved roadway. As part of this project, the east side of Fashion Square Drive will turn north and connect to Coolidge Street.

3.2. Study Intersections

Scottsdale Road and Highland Avenue (1) currently operates as a signalized intersection. The eastbound approach provides two (2) dedicated left turn lanes and one (1) shared through-right turn lane. The westbound approach provides one (1) dedicated left turn lane, and one (1) shared through-right turn lane. The northbound approach provides one (1) dedicated left turn lane, two (2) through lanes, and one (1) shared through-right turn lane. The southbound approach provides one (1) dedicated left turn lane, three (3) through lanes, and one (1) dedicated right turn lane.

Scottsdale Road and Coolidge Street (2) currently operates as a one-way stop-controlled T-intersection, with the stop control on the westbound approach. The westbound approach provides one (1) dedicated right turn lane. The northbound approach provides three (3) through lanes, and one (1) dedicated right turn lane.

Scottsdale Road and Fashion Square Drive (3) currently operates as a signalized intersection. The eastbound approach provides one (1) shared left-through turn lane and one (1) dedicated right turn lane. The westbound approach provides one (1) shared left-through-right turn lane. The northbound approach provides one (1) dedicated left turn lane, two (2) through lanes, and one (1) shared through-right turn lane. The southbound approach provides one (1) dedicated left turn lane, three (3) through lanes, and one (1) dedicated right turn lane.

Scottsdale Road and Camelback Road (4) currently operates as a signalized intersection. The eastbound approach provides two (2) dedicated left turn lanes, two (2) through lanes, and one (1) dedicated right turn lane. The westbound approach provides one (1) dedicated left turn lane, one (1) through lane, and one (1) shared through-right turn lane. The northbound approach provides two (2) dedicated left turn lanes, two (2) through lanes, and one (1) shared through-right turn lane. The southbound approach provides two (2) dedicated left turn lanes, two (2) through lanes, and one (1) dedicated right turn lane.

Fashion Square Drive and Driveway 66' east of Scottsdale Road (5) currently operates as a one-way stop-controlled T-intersection, with the stop control on the northbound approach. The northbound approach provides one (1) shared left-right turn lane. The westbound approach provides one (1) shared through-right turn lane. The eastbound approach provides one (1) shared through-left turn lane.

Fashion Square Drive and Driveway 300' northeast of Scottsdale Road (6) currently operates as a one-way stop-controlled T-intersection, with the stop control on the westbound approach. The

westbound approach provides one (1) shared left-right turn lane. The northbound approach provides one (1) shared through-right turn lane. The southbound approach provides one (1) shared through-left turn lane.

Coolidge Street and Fashion Square Drive (7) currently operates as a one-way stop-controlled T-intersection, with the stop control on the northbound approach. The northbound approach provides one (1) shared left-right turn lane. The eastbound approach provides one (1) shared through-right turn lane. The westbound approach provides one (1) shared through-left turn lane.

3.3. Site Accessibility

Roadway System

The study area is located in the City of Scottsdale, Arizona approximately two and one-third miles west of the SR 101L and four and two-third miles north of SR 202L. Scottsdale's street network is generally built as a one-mile grid system. Within the vicinity of the proposed site there is a well-developed roadway network which include the Goldwater Boulevard and Drinkwater Boulevard couplet system. The surrounding roadway network provides convenient access to SR 101L freeway interchange.

Pedestrian Facilities

Within the study area, sidewalks are provided along the east and west side of Scottsdale Road, along the north side of Coolidge Street and currently no sidewalks along Fashion Square Drive. There is an existing multi-use path located along the Arizona Canal just south of the proposed development. Pedestrian access will be provided to the multi-use path.

Bicycle Facilities

Currently, no bike lanes are provided, within the study area.

Transit Facilities

Within the study area, transit facilities are provided along the east and west side of Scottsdale Road.

3.4. Collision Rates

The City of Scottsdale's 2020 Traffic Volume and Collision Rate Data report provides collision rate and traffic volume information on major roadway segments and at major intersections within the City. Segment collisions are collisions that occur on a major street more than 100 feet from the major intersections that define the segment, including at minor intersections within the segment. Intersection collisions are collisions that occur at or within 100 feet of a major intersection.

The collision rates and city-wide rankings for the study roadway segments are shown in **Table 1**. The collision rates and city-wide rankings for the study intersections are shown in **Table 2**.

Table 1 – Collision Rates – Study Roadway Segments

Segment	From	To	Collision Rate	Rank
Scottsdale Road	Camelback Road	Chapparral Road	4.52	15
Camelback Road	Goldwater Boulevard	Scottsdale Road	6.08	8
2018 City of Scottsdale Average Segment Collision Rate			1.36	

Table 2 – Collision Rates – Study Intersections

Intersection	Collision Rate	Rank
Scottsdale Road and Camelback Road	1.37	10
2018 City of Scottsdale Average Intersection Collision Rate	0.54	

4. Existing Conditions

4.1. Existing Land Use

According to Maricopa County Assessor's website, the proposed site will occupy two (2) existing parcels, 173-38-407 and 173-38-408. Currently, the two (2) existing parcels are vacant land existing zoned for Planned Block Development district (D/RCO-2) – Downtown/Regional Commercial/Office, Type 2 land uses. See **Appendix B** for detailed parcel information.

4.2. Existing Traffic Counts

A local data collection firm, Field Data Services of Arizona, Inc., was utilized to collect traffic counts. On Thursday, May 20, 2021, turning movement counts were obtained from 7:00 to 9:00 am and from 4:00 to 6:00 pm at the following locations:

- Scottsdale Road and Highland Avenue (1)
- Scottsdale Road and Coolidge Street (2)
- Scottsdale Road and Fashion Square Drive (3)
- Scottsdale Road and Camelback Road (4)
- Fashion Square Drive and Driveway (5)
- Coolidge Street and Fashion Square Drive (6)
- Fashion Square Drive and Driveway (7)

Additionally, on Thursday, May 20, 2021, bi-directional tube counts for 24-hours in 15-minute intervals were collected along the following five (5) roadway segments:

- Highland Ave, east of Scottsdale Road
- Highland Avenue, west of Scottsdale Road
- Coolidge Street, east of Scottsdale Road
- Fashion Square Drive, east of Scottsdale Road
- Scottsdale Road, south of Highland Avenue

The turning movement counts were then analyzed for the highest 1-hour within each time period. The following peak hours were analyzed throughout this study.

AM Peak Hour	8:00 am – 9:00 am
PM Peak Hour	4:30 pm – 5:30 pm

The City of Scottsdale seasonal adjustment factors were used to adjust the traffic counts. The traffic volumes were adjusted based on the month the counts were taken. Additionally, per direction received from the City of Scottsdale, a 10% Covid adjustment factor was used to account for the reduction in traffic due to the Covid-19 pandemic and the closures associated with it. See **Appendix C** for detailed traffic count data.

See **Figure 4** for the existing weekday AM and PM peak hour traffic volumes.

4.3. Existing Capacity Analysis

The existing conditions capacity analysis was completed for the seven (7) existing study intersections. The capacity and level of service for the study area intersections were evaluated using the methodology presented in the 6th *Edition of the Highway Capacity Manual*. For the signalized intersections without typical NEMA phasing, the methodology presented in the *2000 Highway Capacity Manual* was utilized. Traffic analysis software, Synchro Version 10.3, was used to perform the analyses using the existing Peak Hour Factor (PHF) obtained from the traffic counts, and the existing signal timing provided by the City of Scottsdale. See **Appendix D** for the existing signal timing.

Table 3 is from the 6th *Edition of the Highway Capacity Manual* Exhibit 19-8 and 20-2, which lists the Level of Service (LOS) thresholds for signalized and two-way stop-controlled intersections.

Table 3 – Level of Service Criteria

Level of Service (LOS)	Control Delay per Vehicle (s/veh)	
	Signalized Intersection	Unsignalized Intersection
A	≤ 10	0 - 10
B	> 10-20	> 10-15
C	> 20-35	> 15-25
D	> 35-55	> 25-35
E	> 55-80	> 35-50
F	> 80	> 50

The existing AM and PM peak hour level of service, and delay for the study the signalized and unsignalized intersections are shown in **Table 4**, and **Table 5**, respectively. See **Figure 5** for the existing AM and PM peak hour capacity analysis.

All study area intersections operate with movements at a LOS D or better, with the exception of:

Scottsdale Road and Fashion Square Drive (3)

- Eastbound shared through-right AM peak hour operates at LOS E
- Westbound shared left-through-right AM peak hour operates at LOS E

Scottsdale Road and Camelback Road (4)

- Eastbound left AM and PM peak hours operate at LOS E
- Westbound left AM peak hour operates at LOS E
- Northbound left AM peak hour operates at LOS E
- Southbound left AM and PM peak hours operates at LOS E

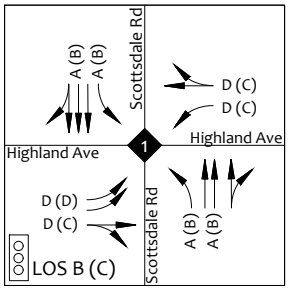
The detailed existing capacity analysis sheets can be found in **Appendix E.**

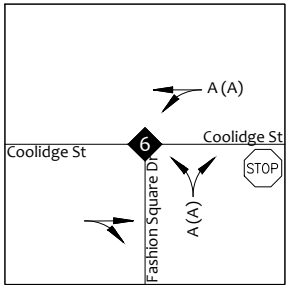
Table 4 – Existing Level of Service and Delay – Signalized Intersections

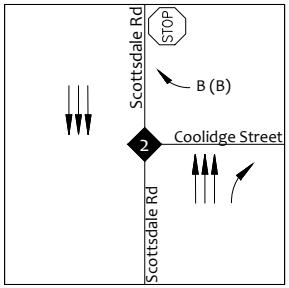
Intersection	Existing Conditions			
	AM PEAK		PM PEAK	
Signalized Intersections	LOS	DELAY	LOS	DELAY
Scottsdale Road and Highland Avenue (1)				
Oveall Intersection	B	14.3	B	20.0
Eastbound Dual Left	D	51.4	D	47.8
Eastbound Shared Through-Right	D	44.3	C	32.1
Westbound Left	D	45.4	C	34.1
Westbound Shared Through-Right	D	44.2	C	32.4
Northbound Left	A	4.6	B	14.6
Northbound Shared Through-Right	A	4.2	B	11.0
Southbound Left	A	5.1	B	14.0
Southbound Shared Through-Right	A	4.1	B	11.0
Scottsdale Road and Fashion Square Drive (3)				
Oveall Intersection	A	1.8	B	14.4
Eastbound Left	D	55.0	D	47.4
Eastbound Shared Through-Right	E	55.5	D	48.5
Westbound Shared Left-Through-Right	E	56.5	D	53.8
Northbound Left	A	1.8	B	10.8
Northbound Shared Through-Right	A	0.3	A	0.5
Southbound Left	A	7.1	A	4.6
Southbound Through	A	0.1	C	21.2
Southbound Shared Right	A	0.0	B	15.4
Scottsdale Road and Camelback Road (4)				
Oveall Intersection	D	35.8	D	42.4
Eastbound Dual Left	E	60.3	E	63.9
Eastbound Through	D	45.1	D	49.1
Eastbound Right	D	44.0	D	50.2
Westbound Left	E	72.3	D	49.3
Westbound Through	D	50.2	D	53.5
Westbound Shared Through-Right	D	50.8	D	54.8
Northbound Dual Left	E	58.6	D	38.9
Northbound Through	B	14.0	C	24.4
Northbound Shared Through-Right	B	14.3	C	25.2
Southbound Dual Left	E	61.7	E	59.6
Southbound Through	B	13.6	D	37.1
Southbound Right	B	12.6	C	23.3

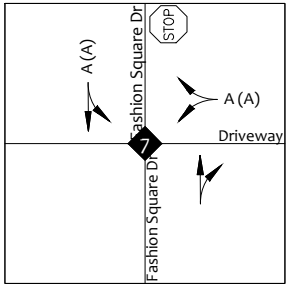
Table 5 – Existing Level of Service and Delay – Unsignalized Intersections

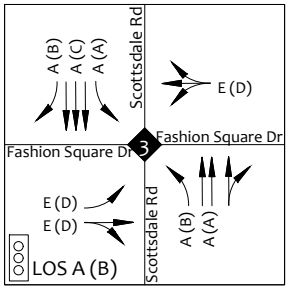
Intersection	Existing Conditions			
	AM PEAK		PM PEAK	
Unsignalized Intersections	LOS	DELAY	LOS	DELAY
Scottsdale Road and Coolidge Street (2)				
Westbound Right	B	11.6	B	13.9
Fashion Square Drive and Driveway 66' e/o Scottsdale Road (5)				
Northbound Shared Left-Right	A	8.7	A	9.4
Westbound Shared Left-Through	A	7.3	A	0.0
Coolidge Street and Fashion Square Drive (6)				
Northbound Shared Left-Right	A	8.4	A	8.7
Westbound Shared Left-Through	A	0.0	A	0.0
Fashion Square Drive and Driveway 300' ne/o Scottsdale Road (7)				
Westbound Shared Left-Right	A	8.7	A	8.6
Southbound Shared Left-Through	A	0.0	A	0.0

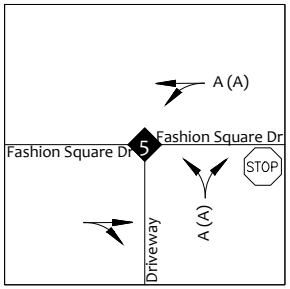


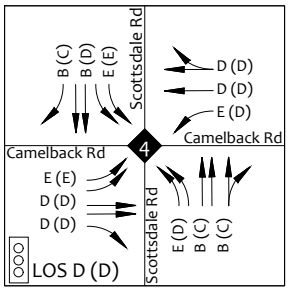












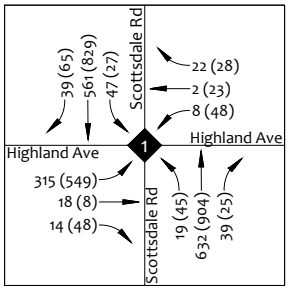
LEGEND

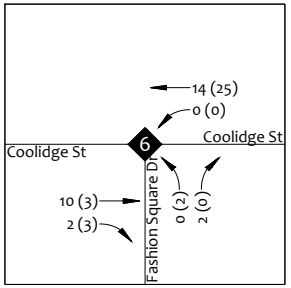
AM (PM) Peak Hour Traffic Volumes

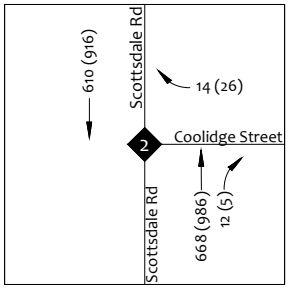
Intersection

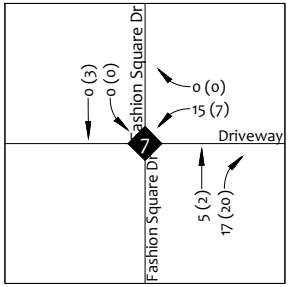
Lane Configuration

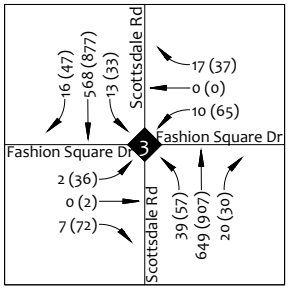
FIGURE 5 | EXISTING CAPACITY ANALYSIS

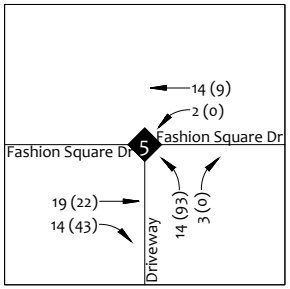


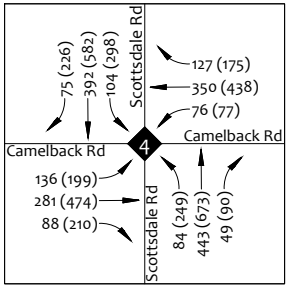












LEGEND

AM (PM)	Peak Hour Traffic Volumes
X	Intersection
<ADT>	Average Daily Traffic

FIGURE 4 | EXISTING TRAFFIC VOLUMES

5. Projected Traffic

5.1. Trip Generation – Proposed Development

The trip generation for the proposed development was calculated utilizing the Institute of Transportation Engineers (ITE) publication entitled *Trip Generation, 11th Edition*. The ITE rates are based on studies that measured the trip generation characteristics for various types of land uses. The rates are expressed in terms of trips per unit of land use type. This publication is considered to be the standard for the transportation engineering profession.

The proposed development consists of two buildings. Building A will be located on the north side of Fashion Square Drive and will consist of consist of 362 residential units with 2,109 square feet of office and 13,685 square feet of retail. Building B will be on located on the south side of Fashion Square Drive and will consist of 170 residential. The trip generation was calculated utilizing ITE Land Use 221 – Multifamily Housing (Mid-Rise), ITE Lane Use 712 – Small Office Building, and ITE Land Use 822 – Strip Retail Plaza (<40k).

Internal Capture

Given the mixed-use nature of the proposed development which includes residential, retail, and office land uses, it is anticipated that some of the trips will be internal, i.e. beginning and ending within the development. Based on the NCHRP Report 684 – Enhancing Internal Trip Capture Estimation of Mixed-Use Developments, the internal capture rates for trip origins and trip destinations within a multi-use development were applied for weekday AM and PM hours.

Trip generation calculations are shown in **Table 6** below. See **Appendix F** for detailed trip generation calculations.

Table 6 – Trip Generation – Proposed Development

Land Use	ITE Code	Qty	Unit	Weekday	AM Peak Hour			PM Peak Hour		
				Total	Total	In	Out	Total	In	Out
Multifamily Housing (Mid-Rise)	221	532	Dwelling Units	2,415	197	45	152	207	126	81
Strip Retail Plaza (<40k)	822	13.7	1000 SF GFA	745	32	19	13	90	45	45
Small Office Building	712	2.1	1000 SF GFA	30	4	3	1	5	2	3
Total				3,190	233	67	166	302	173	129
Iternal Capture				242	6	3	3	38	19	19
Total				2,948	227	64	163	264	154	110

Based on the average calculations shown in **Appendix F**, the proposed development is anticipated to generate 2,948 weekday trips, with 227 trips during the AM peak hour, and 264 trips in the PM peak hour.

Directly east of the proposed development, is the Gramercy Scottsdale development, which is a multi-family development with 160 units. At the time of this report it was determined that the development was at 98% capacity. At the recommendation of the City, the trips for the additional 2% capacity were added to the site traffic. The trip generation was calculated utilizing ITE Land Use 221 – Multifamily Housing (Mid-Rise). Trip generation calculations are shown in **Table 7** below. See **Appendix F** for detailed trip generation calculations.

Table 7 – Trip Generation – Gramercy Development

Land Use	ITE Code	Qty	Unit	Weekday	AM Peak Hour			PM Peak Hour		
				Total	Total	In	Out	Total	In	Out
Multifamily Housing (Mid-Rise)	221	4	Dwelling Units	18	1	0	1	2	1	1

Based on the average calculations shown in **Appendix F**, the remaining residential units for the existing Gramercy Scottsdale development are anticipated to generate 18 weekday trips, with 1 trip during the AM peak hour, and 2 trips in the PM peak hour.

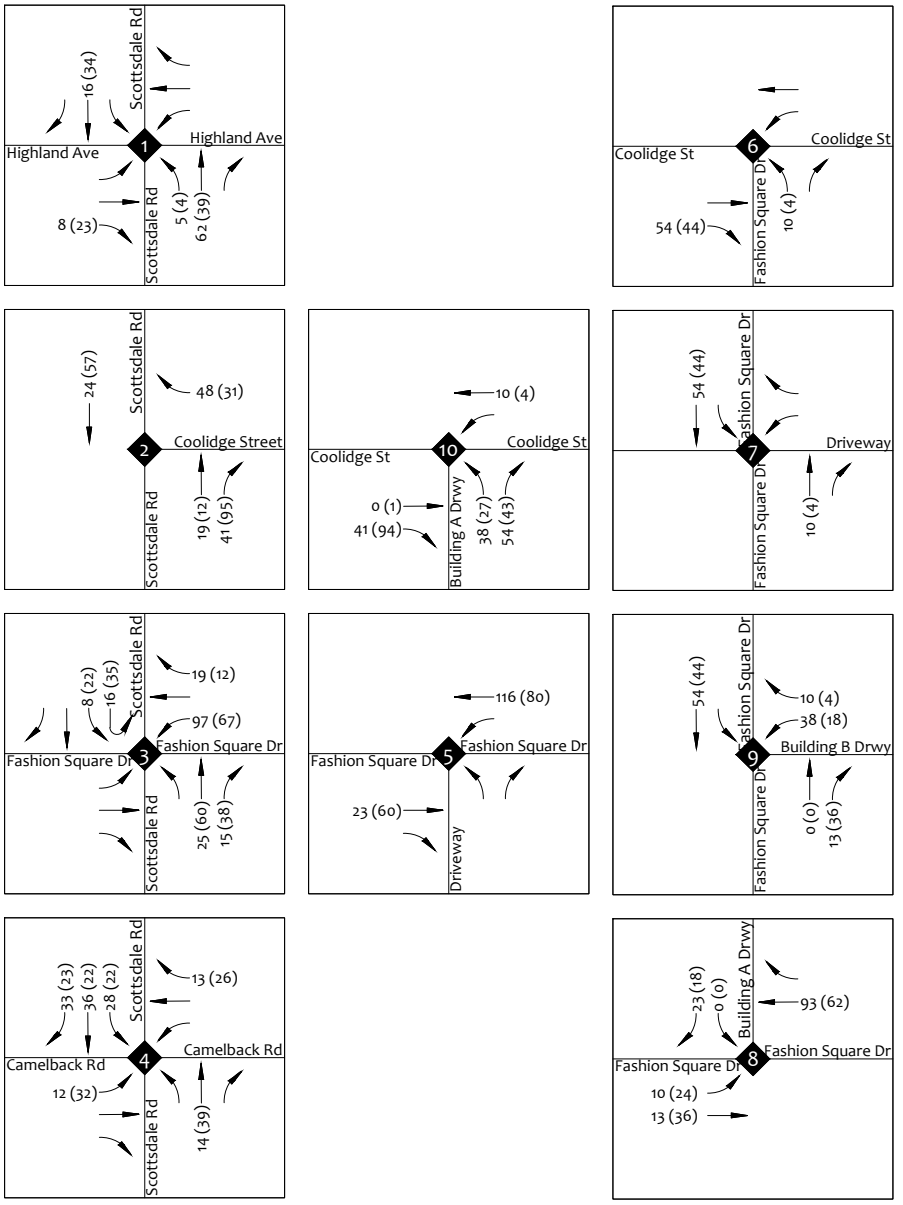
5.2. Trip Distribution and Assignment

The trip distribution procedure determines the general pattern of travel for vehicles entering and leaving the proposed development. The trip distribution and trip assignment for the proposed Hazel and Azure development is based on the surrounding roadway network, permitted movements at the proposed site driveway, and probable routes. The trip distribution is shown in **Figure 6**. The site generated traffic volumes are shown in **Figure 7**.

Legend

Ingress (Egress)	Inbound Trip Distribution Percentages
Ingress (Egress)	Outbound Trip Distribution Percentages
X	Intersection

FIGURE 6 | TRIP DISTRIBUTION



LEGEND

AM (PM)	Peak Hour Traffic Volumes
X	Intersection
<ADT>	Average Daily Traffic

FIGURE 7 | SITE TRAFFIC VOLUMES

6. Future Conditions (Year 2023)

The proposed Hazel and Azure development is anticipated to be built out by the year 2023. This section analyzes the traffic related impacts of the proposed development on the surrounding roadway network in the year 2023.

6.1. Year 2023 Background Traffic Volumes

According to the 2019 Maricopa Association of Government (MAG) socioeconomic projections within the proposed study area, it is estimated that in the year 2030 the population within the Regional Analysis Zone (RAZ) will be approximately 79,910. MAG estimates that the 2018 population of the surrounding area to be 68,987. This results in an approximate annual growth rate of 1.23%.

As a conservative approach, the annual growth rate of 2.0% was utilized. See **Appendix G** for the MAG socioeconomic projections. See **Figure 8** for the year 2023 background traffic volumes.

6.2. Year 2023 Build Traffic Volumes

To determine year 2023 build traffic volumes, the site traffic volumes (**Figure 7**) were added to the year 2023 background traffic volumes (**Figure 8**). This represents year 2023 traffic volumes with the buildout of the proposed Hazel and Azure development. See **Figure 9** for the year 2023 AM and PM peak hour traffic volumes.

6.3. Year 2023 No Build Capacity Analysis

The capacity and level of service for the study area intersections were evaluated for the 2023 no build scenario. The signal timing splits were optimized and adjusted for the future traffic volumes. PHF was assumed to be 0.92.

The year 2023 no build AM and PM peak hour level of service and delay for signalized and unsignalized intersections are shown in **Table 8**, and **Table 9**, respectively. The detailed capacity analysis sheets can be found in **Appendix H**. The results of the year 2023 no build capacity analysis are shown in **Figure 10**.

All study area intersections operate with movements at a LOS D or better, or at the same level of service as the existing condition.

6.4. Year 2023 Build Capacity Analysis

The capacity and level of service for the study area intersections were evaluated for the year 2023 build traffic volumes. See **Figure 9**. The signal timing splits were optimized and adjusted for the future traffic volumes, and a PHF of 0.92 was used.

The following improvements were included in the year 2023 capacity analysis:

- **Scottsdale Road and Fashion Square Drive (3)**
  Buildout of east leg of intersection to provide a dedicated left turn lane and a shared through-right turn lane.

- **Fashion Square Drive and Driveway (5)**
  With the buildout of the proposed development, the existing intersection was moved 180 feet east of Scottsdale Road (centerline to centerline).

- **Fashion Square Drive and Driveway A (8)**
  Buildout of a full access driveway

- **Fashion Square Drive and Driveway B (9)**
  Buildout of a full access driveway

- **Coolidge Street and Driveway A (10)**
  Buildout of a full access driveway

The year 2023 build AM and PM peak hour level of service and delay for signalized and unsignalized intersections are shown in **Table 8**, and **Table 9**, respectively. The detailed capacity analysis sheets can be found in **Appendix I**.

The results of the year 2023 build capacity analysis are shown in **Figure 11**.

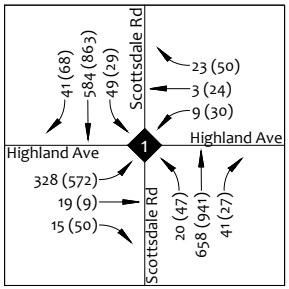
All movements operate at a LOS D or better, or at the same level of service as the 2023 no-build condition.

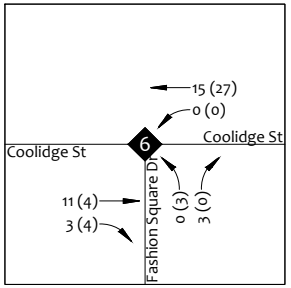
Table 8 – Year 2023 Level of Service and Delay – Signalized Intersections

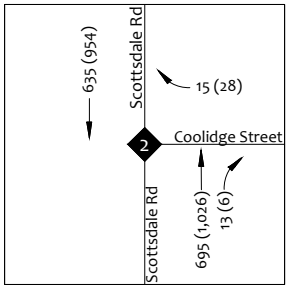
Intersection	2023 No Build Conditions				2023 Build Conditions			
	AM PEAK		PM PEAK		AM PEAK		PM PEAK	
Signalized Intersections	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY
Scottsdale Road and Highland Avenue (1)								
Oveall Intersection	B	14.8	C	20.5	B	14.4	C	20.6
Eastbound Dual Left	D	50.5	D	47.8	D	50.6	D	47.3
Eastbound Shared Through-Right	D	42.2	C	31.2	D	43.0	C	31.3
Westbound Left	D	43.3	C	33.3	D	44.4	C	33.9
Westbound Shared Through-Right	D	42.0	C	31.5	D	42.7	C	31.1
Northbound Left	A	5.6	B	15.9	A	5.5	B	17.0
Northbound Shared Through-Right	A	5.1	B	11.8	A	5.0	B	12.3
Southbound Left	A	6.4	B	15.3	A	6.4	B	16.1
Southbound Shared Through-Right	A	5.0	B	11.7	A	4.8	B	12.2
Scottsdale Road and Fashion Square Drive (3)								
Oveall Intersection	B	12.3	B	15.7	A	6.2	C	20.8
Eastbound Left	D	54.9	D	46.4	D	49.7	D	47.7
Eastbound Shared Through-Right	E	55.8	D	47.6	D	47.3	D	46.1
Westbound Shared Left-Through-Right	E	57.2	D	53.5	-	-	-	-
Westbound Left	-	-	-	-	D	54.9	D	53.9
Westbound Shared Through-Right	-	-	-	-	D	48.9	D	44.9
Northbound Left	A	4.3	B	12.0	A	3.4	A	7.9
Northbound Shared Through-Right	A	0.3	A	0.6	A	0.4	A	0.6
Southbound Left	A	7.7	A	5.2	B	10.9	C	28.5
Southbound Through	C	24.0	C	24.1	A	0.2	D	36.3
Southbound Shared Right	B	19.2	B	17.6	A	0.0	C	28.5
Scottsdale Road and Camelback Road (4)								
Oveall Intersection	D	36.7	D	43.9	D	37.7	D	45
Eastbound Dual Left	E	62.1	E	66.0	E	64.1	E	72.2
Eastbound Through	D	44.2	D	49.3	D	43.2	D	48.9
Eastbound Right	D	43.0	D	51.3	D	42.1	D	50.5
Westbound Left	E	76.5	D	48.6	E	76.5	D	46.7
Westbound Through	D	50.5	D	55.0	D	50.9	D	54.8
Westbound Shared Through-Right	D	51.7	E	56.3	D	52.2	E	56.1
Northbound Dual Left	E	58.4	D	41.1	E	58.4	D	42.9
Northbound Through	B	15.5	C	27.1	B	16.3	C	29.8
Northbound Shared Through-Right	B	15.7	C	28.1	B	16.6	C	31.0
Southbound Dual Left	E	63.7	E	61.1	E	76.9	E	61.9
Southbound Through	B	15.0	D	38.0	B	15.8	D	38.4
Southbound Right	B	13.9	C	23.7	B	14.8	C	24.1

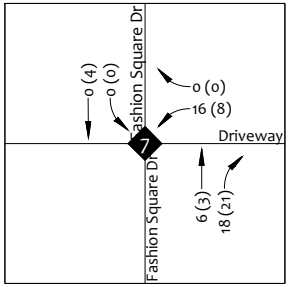
Table 9 – Year 2023 Level of Service and Delay – Unsignalized Intersections

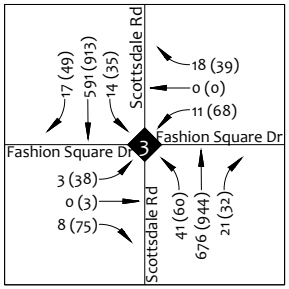
Intersection	2023 No Build Conditions				2023 Build Conditions			
	AM PEAK		PM PEAK		AM PEAK		PM PEAK	
Unsignalized Intersections	LOS	DELAY	LOS	DELAY	LOS	DELAY	LOS	DELAY
Scottsdale Road and Coolidge Street (2)								
Westbound Right	B	12.0	B	14.6	B	12.9	C	15.8
Fashion Square Drive and Driveway 66' e/o Scottsdale Road (5)								
Northbound Shared Left-Right	A	8.8	A	9.3	A	9.5	B	10.1
Westbound Shared Left-Through	A	7.3	A	0.0	A	7.3	A	0.0
Coolidge Street and Fashion Square Drive (6)								
Northbound Shared Left-Right	A	8.4	A	8.7	A	8.8	A	8.8
Westbound Shared Left-Through	A	0.0	A	0.0	A	0.0	A	0.0
Fashion Square Drive and Driveway 300' ne/o Scottsdale Road (7)								
Westbound Shared Left-Right	A	8.7	A	8.6	A	9.0	A	8.9
Southbound Shared Left-Through	A	0.0	A	0.0	A	0.0	B	0.0
Fashion Square Drive and Building A Driveway (8)								
Eastbound Shared Left-Through	-	-	-	-	A	7.3	A	7.5
Southbound Shared Left-Right	-	-	-	-	A	8.5	A	9.0
Fashion Square Drive and Building B Driveway (9)								
Westbound Shared Left-Right	-	-	-	-	A	9.5	A	9.2
Southbound Shared Left-Through	-	-	-	-	A	0.0	A	7.4
Cooliedge Street and Building A Driveway (10)								
Northbound Shared Left-Right	-	-	-	-	A	9.0	A	9.1
Westbound Shared Left-Through	-	-	-	-	A	0.0	A	0.0

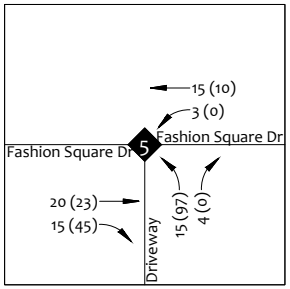


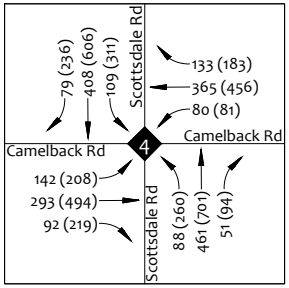








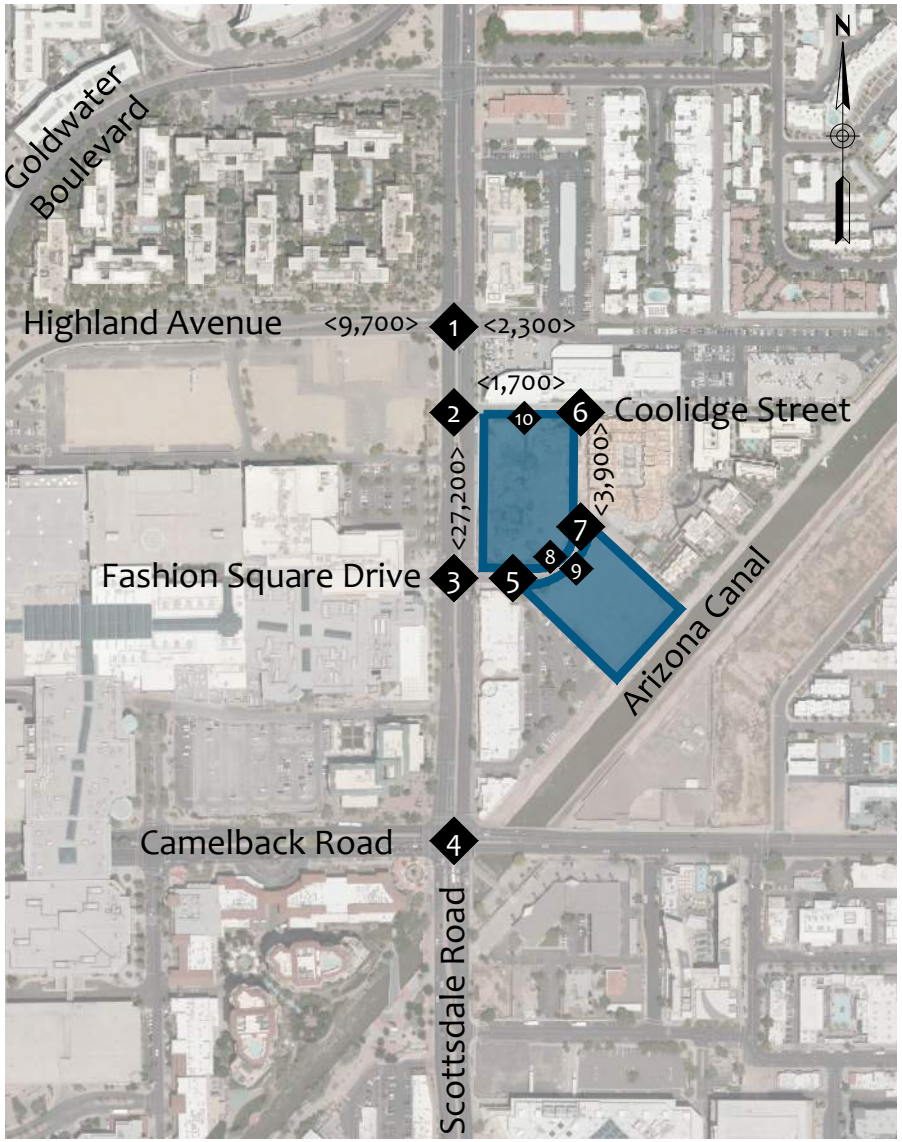


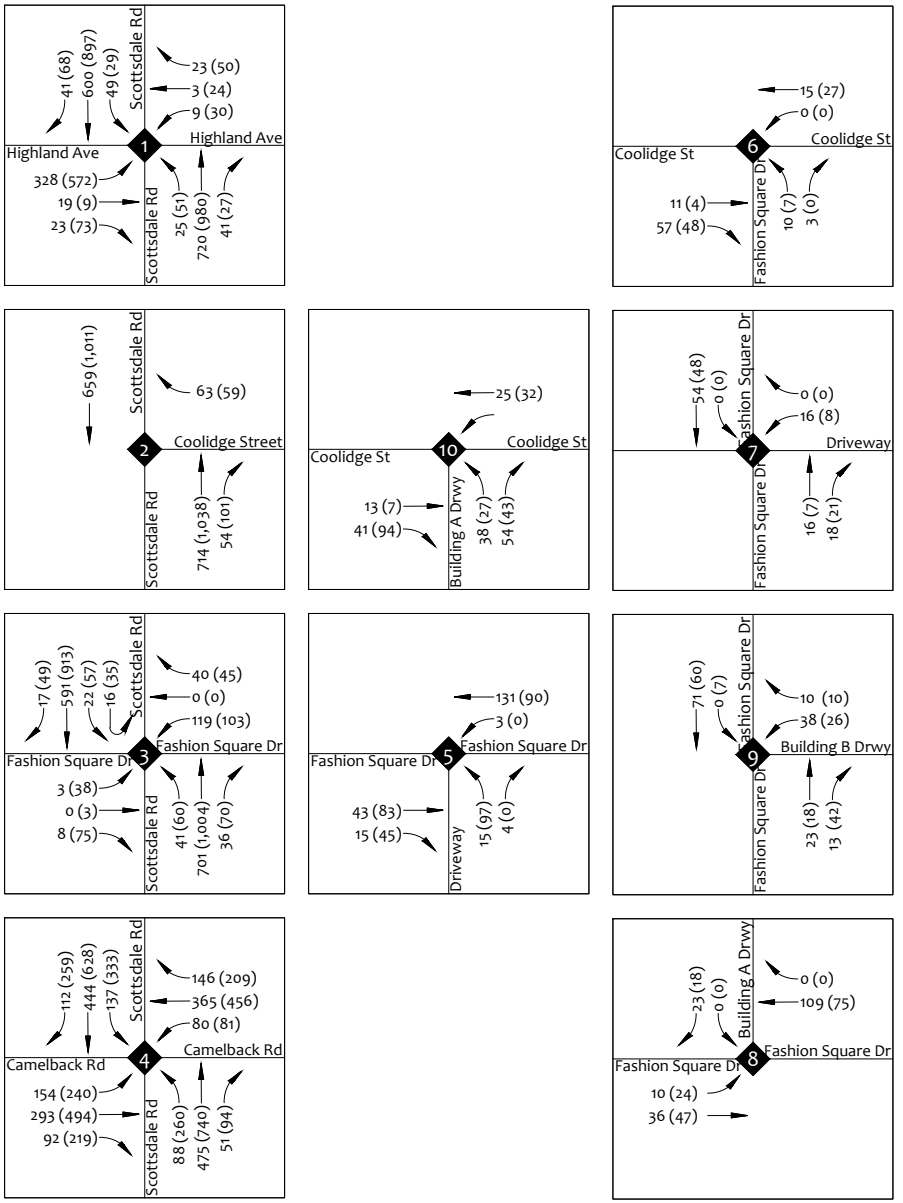


LEGEND

AM (PM)	Peak Hour Traffic Volumes
X	Intersection
<ADT>	Average Daily Traffic

FIGURE 8 | YEAR 2023 BACKGROUND TRAFFIC VOLUMES

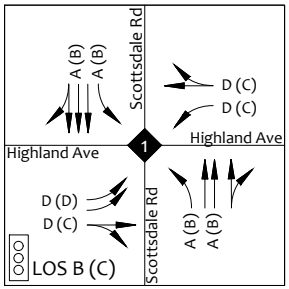


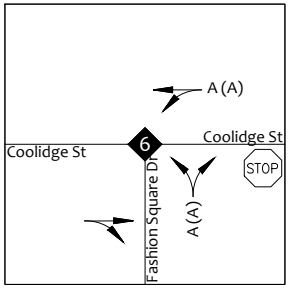


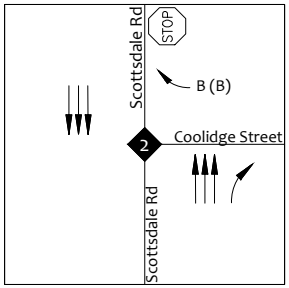
LEGEND

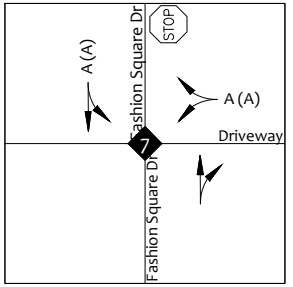
AM (PM)	Peak Hour Traffic Volumes
X	Intersection
<ADT>	Average Daily Traffic

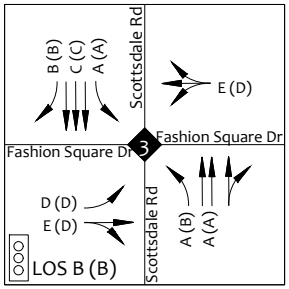
FIGURE 9 | YEAR 2023 BUILD TRAFFIC VOLUMES

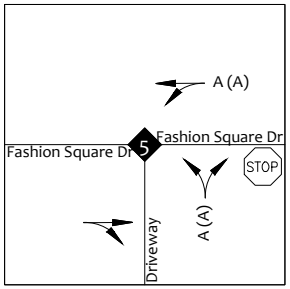


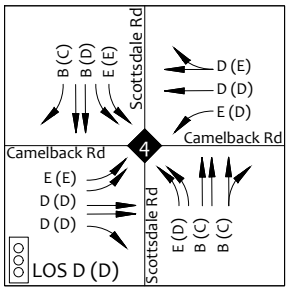












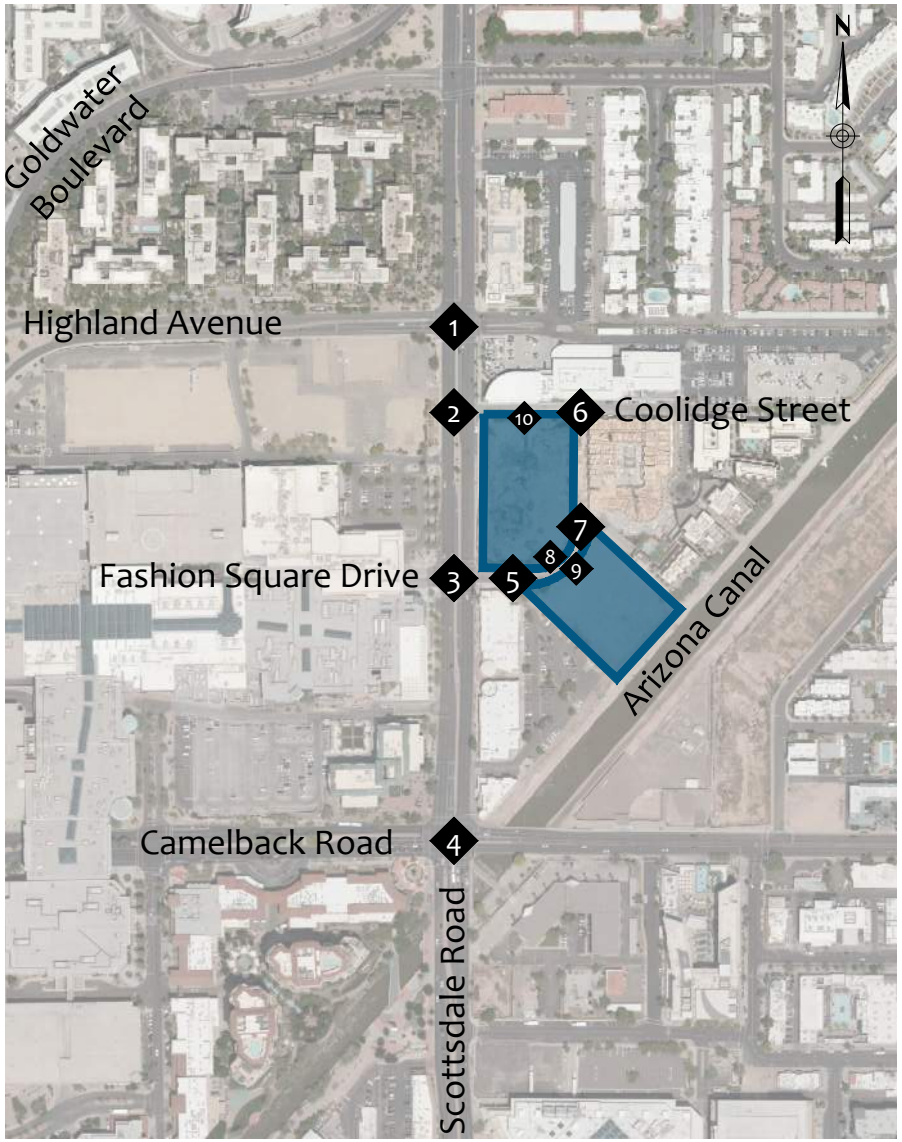
LEGEND

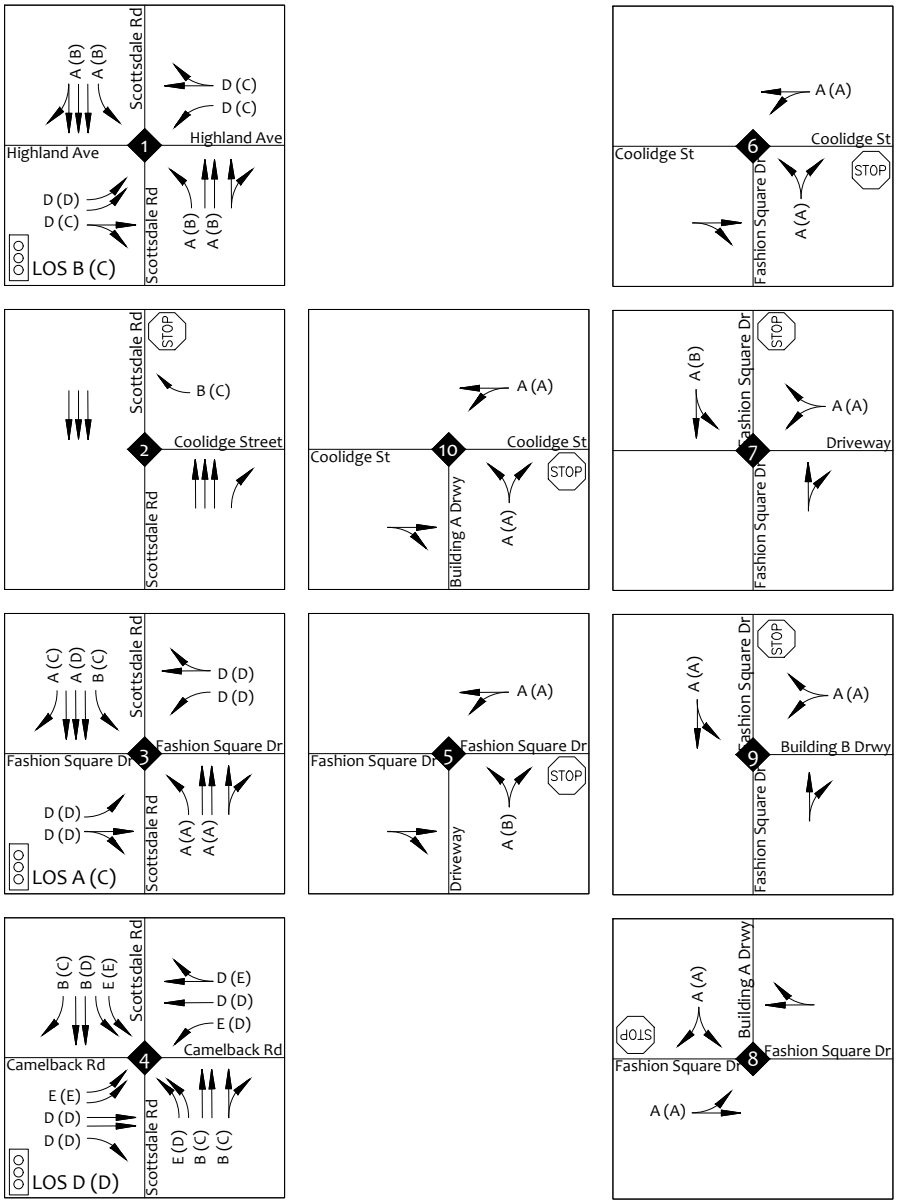
AM (PM) Peak Hour Traffic Volumes

Intersection

Lane Configuration

FIGURE 10 | YEAR 2023 NO BUILD CAPACITY ANALYSIS





LEGEND

AM (PM) Peak Hour Traffic Volumes

Intersection

Lane Configuration

FIGURE 11 | YEAR 2023 BUILD CAPACITY ANALYSIS

7. Turn Lane Analysis

7.1. Right Turn Lanes

Turn lanes or deceleration lanes, allow vehicles exiting a roadway to slow to a reduced speed to execute a turn without impeding the main flow of traffic.

The City of Scottsdale 2018 *Design Standards & Policies Manual* Section 5.3.206 deceleration lane criteria is analyzed below for the study intersections where traffic volumes were available.

Right Turn Lane
Deceleration lanes are required at all new driveways on major arterials and at new commercial/retail driveways on minor arterials. To determine the need for a deceleration lane on streets classified as a minor arterial or collector, use the following criteria:

- At least 5,000 vehicle per day are expected to be using the street.
- The roadway's 85th percentile speed limit is at least 35 mph.
- At least 30 vehicles will make right-turns into the driveway during a 1-hour period.

Using the above criteria, a right turn lane would be required at the following study intersections:

- Scottsdale Road and Coolidge Street (2) – northbound right turn lane. There is an existing 150 foot right turn lane.
- Scottsdale Road and Fashion Square Drive (3) – northbound right turn lane. Although a right turn lane is required here, this project does not have access to the property to construct the required turn lane.

7.2. Queue Analysis

The 95th percentile queue reported by Synchro was used to calculate the required storage length for each turn lane. See **Table 10** for the turn bay storage for each required turn lane.

Table 10 – Turn Bay Storage Lengths

Intersection	Movement	Existing Storage	Existing Storage Length	95th Percentile Queue (Ft)		Storage Length
				AM Peak Hour	PM Peak Hour	
Scottsdale Road and Coolidge Street (2)	WB Right	Travel Lane	-	10'	15'	-
	NB RIght	Turn Lane	150'	-	-	150'
Scottsdale Road and Fashion Square Drive (3)	EB Left	Travel Lane	50'	11'	61'	-
	EB Thru-Right	Travel Lane	-	-	47'	-
	WB Left	-	-	154'	140'	-
	WB Thru-Right	Travel Lane	-	-	-	-
	NB Left	Turn Lane	150'	13'	46'	150'
	NB Thru-Right	Turn Lane	-	-	-	-
	SB Left	Turn Lane	140'	12'	109'	140'
	SB Right	Turn Lane	75'	-	48'	75'

Scottsdale Road and Coolidge Street (2)

Per discussion with the City the existing northbound right turn lane at the intersection of Scottsdale Road and Coolidge (2) can be shorted. Based on the queue analysis since there is no queue created for this movement the right turn lane could be shortened to the minimum 100'.

Scottsdale Road and Fashion Square Drive (3)

Per the queue analysis it appears that the existing northbound left, southbound left and southbound right turn lanes are sufficient to store the queue that would possibly be there. The westbound left would be constructed as part of this development.

As part of the proposed development, Fashion Square Drive and Driveway (5) was moved east to be perpendicular to Fashion Square Drive. The new alignment will allow for approximately 130 feet of storage for the left turn lane. The results of the above calculated queue for the westbound left turn at the intersection of Scottsdale Road and Fashion Square Drive (3) shows that during the AM and PM peak hours there is 154 feet and 140 feet of queuing, respectively. It is assumed that although the proposed queue will pass the proposed location of the driveway it will occur during the peak hour, drivers familiar with the area often choose to use alternative routes during peak hours or drive at different times to avoid potential delay due to the queue.

8. Recommendations & Conclusions

The proposed Hazel and Azure development is located on the NEC of Fashion Square Drive and Scottsdale Road in Scottsdale, Arizona. The site will be comprised of two buildings. Building A will be located on the north side of Fashion Square Drive and will consist of 362 residential units with 2,109 square feet of office and 13,685 square feet of retail. Building B will be on located on the south side of Fashion Square Drive and will consist of 170 residential. The proposed development is anticipated to be completed by the year 2023.

In summary and as included in the discussion and analyses throughout this report, the following are the recommended improvements:

- **Scottsdale Road and Fashion Square Drive (3)**
  Buildout of east leg of intersection to provide a dedicated left turn lane and a shared through-right turn lane.

- **Fashion Square Drive and Driveway (5)**
  With the buildout of the proposed development, the existing intersection was moved 180 feet east of Scottsdale Road (centerline to centerline).

- **Fashion Square Drive and Driveway A (8)**
  Buildout of a full access driveway

- **Fashion Square Drive and Driveway B (9)**
  Buildout of a full access driveway

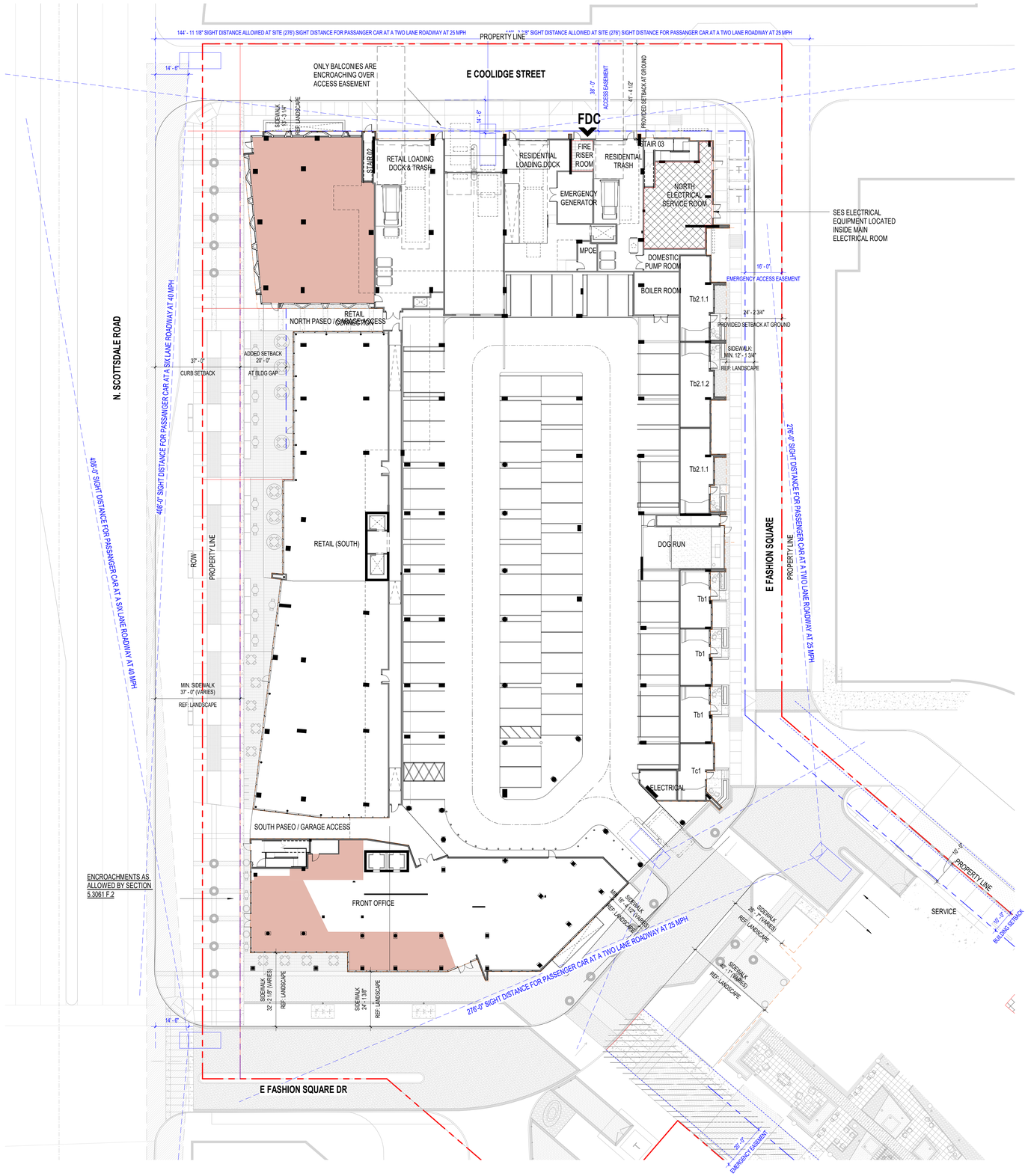
- **Coolidge Street and Driveway A (10)**
  Buildout of a full access driveway

Appendix A – Proposed Site Plan

SITE PLAN LEGEND

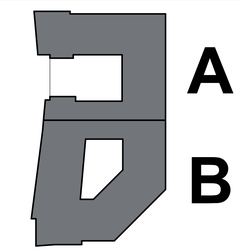
REFER TO CIVIL & LANDSCAPE DWGS FOR ADDITIONAL INFO

- GAS METER
- FIRE HYDRANT
- PEDESTRIAN LIGHT POLE
- STREET LIGHT FIXTURE
- BACKFLOW PREVENTER (BFP)
- ACCESSIBLE ROUTE AND ENTRANCE
- PDE PRIVATE DEVELOPMENT EASEMENT
- FDC FIRE DEPARTMENT CONNECTION
- OVERHANG ABOVE
- CENTERLINE OF STREET
- PROPERTY LINE
- FUTURE DEVELOPEMENT
- WALL / STRUCTURE
- FIRE LANE



① ARCHITECTURAL SITE PLAN
1" = 20'-0"

KEY PLAN



CALLISONRTKL

CallisonRTKL Inc.
1717 PACIFIC AVENUE
DALLAS, TX 75201
Tel: 1.214.468.7600
Fax: 1.214.468.7601

Consultant

CAMELBACK

HAZEL
4605 N SCOTTSDALE ROAD
SCOTTSDALE, ARIZONA

DOCUMENT ISSUE 01

Owner

LOM LIVING

Issue Drawing Log

REV #	DATE (YYYY-MMDD)	ISSUE NAME
	01.31.2022	DI-01

Seal

Sheet Identification

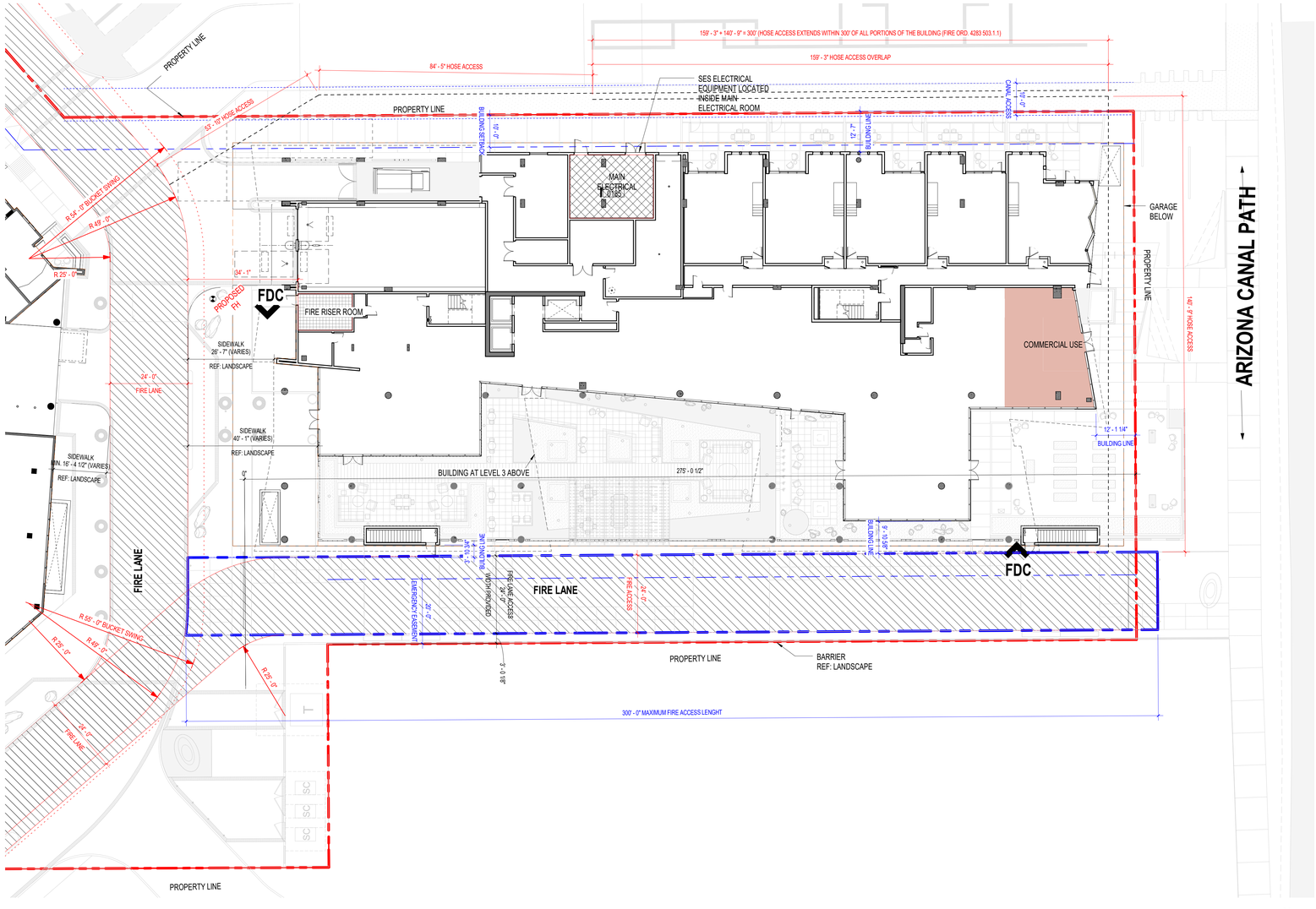
ARCHITECTURAL SITE PLAN

A-101

3/24/2022 4:04:37 PM

SITE PLAN LEGEND - REFER TO CIVIL & LANDSCAPE DWGS FOR ADDITIONAL INFO

- GAS METER
- FH FIRE HYDRANT
- PEDESTRIAN LIGHT POLE
- STREET LIGHT FIXTURE
- BFP BACKFLOW PREVENTER
- ACCESSIBLE ROUTE AND ENTRANCE
- PDE PRIVATE DEVELOPMENT EASEMENT
- FDC FIRE DEPARTMENT CONNECTION
- OVERHANG ABOVE
- CENTERLINE OF STREET
- PROPERTY LINE
- FUTURE DEVELOPEMENT
- WALL



1 LEVEL 01 ARCHITECTURAL SITE PLAN
1/16" = 1'-0"

TRUE NORTH
PLAN NORTH

CallisonRTKL Inc.
1717 PACIFIC AVENUE
DALLAS,TX 75201
Tel: 1.214.468.7600
Fax: 1.214.468.7601

Consultant

CAMELBACK AZURE

4605 N SCOTTSDALE ROAD
SCOTTSDALE, ARIZONA

DOCUMENT ISSUE 01

Owner

Issue Drawing Log

REV #	DATE (YYYY-MMDD)	ISSUE NAME
	01.31.2022	DI-01

Seal

NOT FOR REGULATORY APPROVAL, PERMITTING, OR CONSTRUCTION

Sh

ARCHITECTURAL SITE PLAN

A-102

3/24/2022 4:03:36 PM

Appendix B – Parcel Information

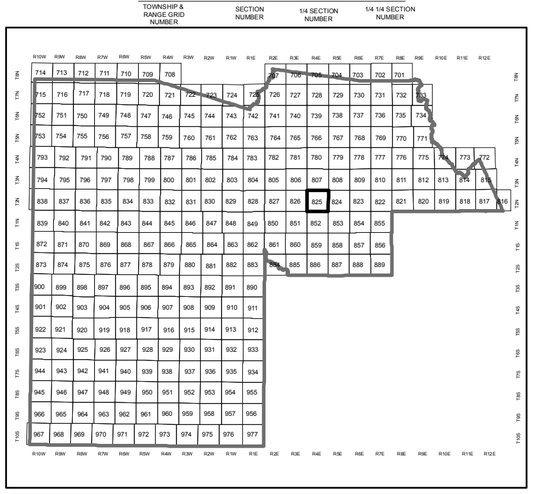
MARICOPA COUNTY

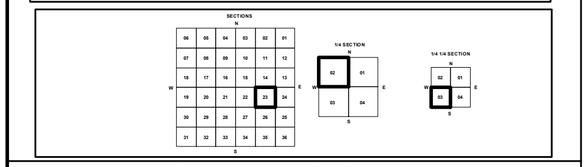
STATE OF ARIZONA

PT. SECTION 23 T02N R04E

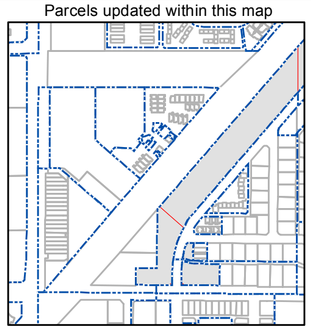
825 - 23 - 02 - 03

TOWNSHIP & RANGE GRID NUMBER | SECTION NUMBER | 1/4 SECTION NUMBER | 1/4 1/4 SECTION NUMBER





Parcels updated within this map



0 45 90 180 270 360 Feet

N

MARICOPA COUNTY
ASSESSOR'S OFFICE
301 W. Jefferson Street
Phoenix, AZ 85003
Date: 09/12/2019

https://mcassessor.maricopa.gov

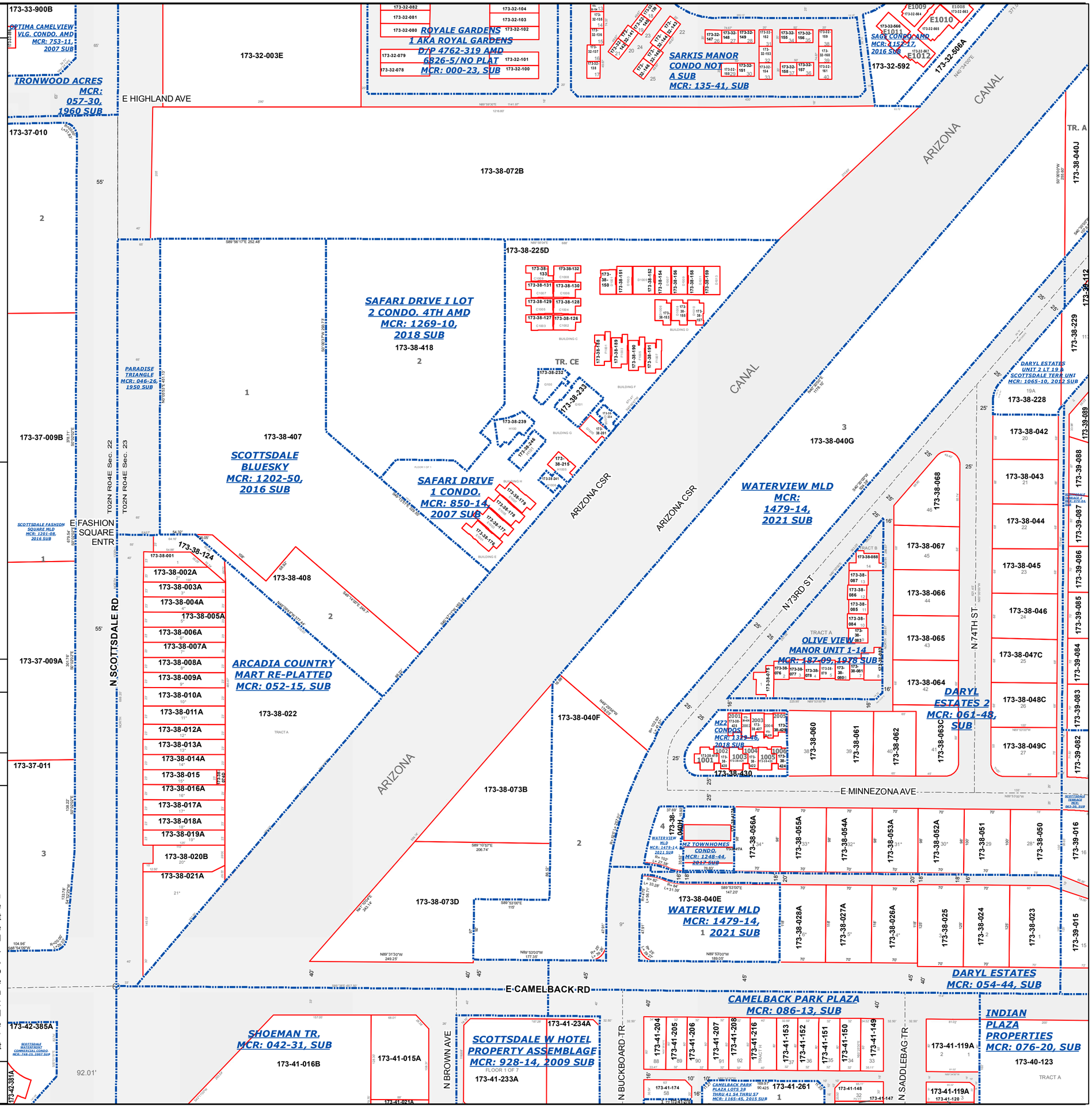
LEGEND: Parcels, Lots, Section Corners, Subdivisions, Sections, Centerlines

Disclaimer - Indemnification

CAUTION! USERS SHOULD INDEPENDENTLY RESEARCH AND VERIFY INFORMATION WITHIN THIS DATASET OR MAP BEFORE RELYING ON IT.

The Assessor's Office has compiled information within this dataset or map that it uses to identify, classify, and value real and personal property. Please contact the Assessor's Office at 602 506-3406 if you believe any information is incomplete, out-of date, or incorrect so that appropriate corrections can be addressed. Please note that a statutory process is also available to correct errors pursuant to Arizona Revised Statutes 42-16254.

The Assessor does not guarantee that any information contained within this dataset or map is accurate, complete or current. In many instances, the Assessor has gathered information from independent sources and made it available within this dataset or map, and the original information may have contained errors and omissions. Errors and omissions may have occurred in the process of gathering, interpreting, and reporting the information. Information within this dataset or map is not updated "real time." In addition, Users are cautioned that the process used within this dataset or map to illustrate the boundaries of adjacent parcels is not always consistent with the recorded documents for such parcels. The parcel boundaries depicted within this dataset or maps are for illustrative purposes only, and the exact relationship of adjacent parcels should be independently researched and verified. The information provided within this dataset or map is not the equivalent of a title report or a real estate survey. Users should independently research, investigate, and verify all information before relying on it or using it in the preparation of legal documents.



173-38-407 Land Parcel

This is a Land parcel located at 4605 N SCOTTSDALE RD SCOTTSDALE 85251. The current owner is ZT SCOTTSDALE OWNER LLC. It is located in the SCOTTSDALE BLUESKY subdivision, and MCR 120250. Its current year full cash value is $14,670,100.

MAPS | PICTOMETRY | $ VIEW/PAY TAX BILL | DEED

OWNER | VALUATIONS | MAP FERRET | SIMILAR PARCELS

PROPERTY INFORMATION

4605 N SCOTTSDALE RD SCOTTSDALE 85251

MCR #	120250
Description	SCOTTSDALE BLUESKY MCR 1202-50
Long/Lat	|
Lot Size	163,002 sq ft.
Zoning	D/RCO-2
Lot #	1
High School District	SCOTTSDALE UNIFIED #48
Elementary School District	SCOTTSDALE UNIFIED SCHOOL DISTRICT
Local Jurisdiction	SCOTTSDALE
S/T/R	23 2N 4E
Market Area/Neighborhood	00/
Subdivision (2 Parcels)	SCOTTSDALE BLUESKY

OWNER INFORMATION

ZT SCOTTSDALE OWNER LLC

Mailing Address	1909 WOODALL RODGERS FWY STE 400, DALLAS, TX 75201
Deed Number	210052186
Last Deed Date	01/15/2021

Sale Date	n/a
Sale Price	n/a

VALUATION INFORMATION

We provide valuation information for the past 5 years. For mobile display, we only show 1 year of valuation information. Should you need more data, please look at our data sales.

The Valuation Information displayed below may not reflect the taxable value used on the tax bill due to any special valuation relief program. CLICK HERE TO PAY YOUR TAXES OR VIEW YOUR TAX BILL

Tax Year	2022	2021	2020	2019	2018
Full Cash Value	$14,670,100	$14,670,100	$14,613,900	$13,741,900	$11,713,400
Limited Value	$5,834,321	$5,556,496	$5,291,901	$5,039,906	$4,799,910
Legal Class	2.R	2.R	2.R	2.R	2.R
Description	AG / VACANT LAND / NON-PROFIT R/P	AG / VACANT LAND / NON-PROFIT R/P	AG / VACANT LAND / NON-PROFIT R/P	AG / VACANT LAND / NON-PROFIT R/P	AG / VACANT LAND / NON-PROFIT R/P
Assessment Ratio	15.0%	15.0%	15.0%	15.0%	15.0%
Assessed LPV	$875,148	$833,474	$793,785	$755,986	$719,987
Property Use Code	0021	0021	0021	0021	0021
PU Description	Vacant Commercial Land	Vacant Commercial Land	Vacant Commercial Land	Vacant Commercial Land	Vacant Commercial Land
Tax Area Code	481400	481400	481400	481400	481400
Valuation Source	Notice	Notice	Notice	Notice	Notice

MAP FERRET MAPS

Mapferret maps, also known as MapId maps, pdf maps, or output maps are now available here without having to search.

- Parcel Maps (1)
- Subdivision Maps (1)
- MCR Maps (1)
- Book/Map Maps (4)

CAUTION! USERS SHOULD INDEPENDENTLY RESEARCH AND VERIFY INFORMATION ON THIS WEBSITE BEFORE RELYING ON IT.

The Assessor's Office has compiled information on this website that it uses to identify, classify, and value real and personal property. Please contact the Maricopa County S.T.A.R. Center at (602) 506-3406 if you believe any information is incomplete, out of date, or incorrect so that appropriate corrections can be addressed. Please note that a statutory process is also available to correct errors pursuant to Arizona Revised Statutes 42-16254.

The Assessor does not guarantee that any information provided on this website is accurate, complete, or current. In many instances, the Assessor has gathered information from independent sources and made it available on this site, and the original information may have contained errors and omissions. Errors and omissions may also have occurred in the process of gathering, interpreting, and reporting the information. Information on the website is not updated in "real time". In addition, users are cautioned that the process used on this site to illustrate the boundaries of the adjacent parcels is not always consistent with the recorded documents for such parcels. The parcel boundaries depicted on this site are for illustrative purposes only, and the exact relationship of adjacent parcels should be independently researched and verified. The information provided on this site is not the equivalent of a title report or a real estate survey. Users should independently research, investigate and verify all information before relying on it or in the preparation of legal documents.

By using this website, you acknowledge having read the above and waive any right you may have to claim against Maricopa County, its officers, employees, and contractors arising out of my reliance on or the use of the information provided on this website.

173-38-408 Land Parcel

This is a Land parcel located at 4575 N SCOTTSDALE RD SCOTTSDALE 85251. The current owner is EMERALD EQUITIES L L C. It is located in the SCOTTSDALE BLUESKY subdivision, and MCR 120250. Its current year full cash value is $2,114,500.

MAPS | PICTOMETRY | $ VIEW/PAY TAX BILL | DEED

OWNER | VALUATIONS | MAP FERRET | SIMILAR PARCELS

PROPERTY INFORMATION

4575 N SCOTTSDALE RD SCOTTSDALE 85251

MCR #	120250
Description	SCOTTSDALE BLUESKY MCR 1202-50
Lat/Long	33.503803 | -111.925032
Lot Size	23,495 sq ft.
Zoning	D/RCO-2
Lot #	2
High School District	SCOTTSDALE UNIFIED #48
Elementary School District	SCOTTSDALE UNIFIED SCHOOL DISTRICT
Local Jurisdiction	SCOTTSDALE
S/T/R	23 2N 4E
Market Area/Neighborhood	00/
Subdivision (2 Parcels)	SCOTTSDALE BLUESKY

OWNER INFORMATION

EMERALD EQUITIES L L C

Mailing Address	4501 N SCOTTSDALE RD STE 201, SCOTTSDALE, AZ 85251
Deed Number	201035464
Last Deed Date	10/27/2020
Sale Date	n/a
Sale Price	n/a

VALUATION INFORMATION

We provide valuation information for the past 5 years. For mobile display, we only show 1 year of valuation information. Should you need more data, please look at our data sales.

The Valuation Information displayed below may not reflect the taxable value used on the tax bill due to any special valuation relief program. CLICK HERE TO PAY YOUR TAXES OR VIEW YOUR TAX BILL

Tax Year	2022	2021	2020	2019	2018
Full Cash Value	$2,114,500	$2,114,500	$2,035,300	$1,872,300	$1,676,200
Limited Value	$931,534	$887,175	$844,929	$804,694	$766,375
Legal Class	2.R	2.R	2.R	2.R	2.R
Description	AG / VACANT LAND / NON-PROFIT R/P	AG / VACANT LAND / NON-PROFIT R/P	AG / VACANT LAND / NON-PROFIT R/P	AG / VACANT LAND / NON-PROFIT R/P	AG / VACANT LAND / NON-PROFIT R/P
Assessment Ratio	15.0%	15.0%	15.0%	15.0%	15.0%
Assessed LPV	$139,730	$133,076	$126,739	$120,704	$114,956
Property Use Code	0021	0021	0021	0021	0021
PU Description	Vacant Commercial Land	Vacant Commercial Land	Vacant Commercial Land	Vacant Commercial Land	Vacant Commercial Land
Tax Area Code	481400	481400	481400	481400	481400
Valuation Source	Notice	Notice	Notice	Notice	Notice

MAP FERRET MAPS

Mapferret maps, also known as MapId maps, pdf maps, or output maps are now available here without having to search.

- Parcel Maps (1)
- Subdivision Maps (1)
- MCR Maps (1)
- Book/Map Maps (4)

CAUTION! USERS SHOULD INDEPENDENTLY RESEARCH AND VERIFY INFORMATION ON THIS WEBSITE BEFORE RELYING ON IT.

The Assessor's Office has compiled information on this website that it uses to identify, classify, and value real and personal property. Please contact the Maricopa County S.T.A.R. Center at (602) 506-3406 if you believe any information is incomplete, out of date, or incorrect so that appropriate corrections can be addressed. Please note that a statutory process is also available to

correct errors pursuant to Arizona Revised Statutes 42-16254.

The Assessor does not guarantee that any information provided on this website is accurate, complete, or current. In many instances, the Assessor has gathered information from independent sources and made it available on this site, and the original information may have contained errors and omissions. Errors and omissions may also have occurred in the process of gathering, interpreting, and reporting the information. Information on the website is not updated in "real time". In addition, users are cautioned that the process used on this site to illustrate the boundaries of the adjacent parcels is not always consistent with the recorded documents for such parcels. The parcel boundaries depicted on this site are for illustrative purposes only, and the exact relationship of adjacent parcels should be independently researched and verified. The information provided on this site is not the equivalent of a title report or a real estate survey. Users should independently research, investigate and verify all information before relying on it or in the preparation of legal documents.

By using this website, you acknowledge having read the above and waive any right you may have to claim against Maricopa County, its officers, employees, and contractors arising out of my reliance on or the use of the information provided on this website.

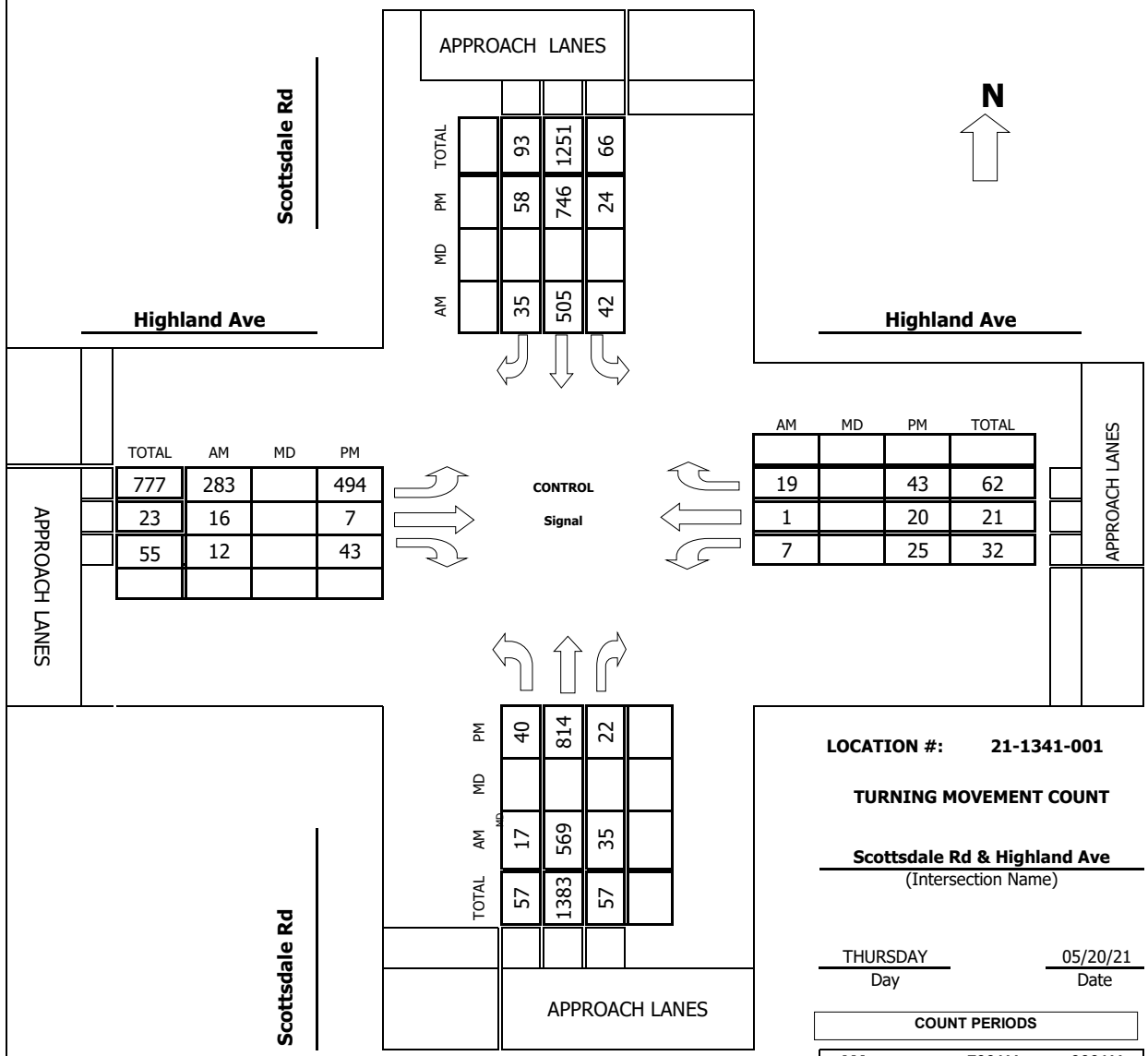
Appendix C – Traffic Count Data

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

Project #: 21-1341-001

TMC SUMMARY OF Scottsdale Rd & Highland Ave



LOCATION #: 21-1341-001

TURNING MOVEMENT COUNT

Scottsdale Rd & Highland Ave
(Intersection Name)

THURSDAY (Day) 05/20/21 (Date)

COUNT PERIODS

AM	700AM	-	900AM
NOON		-	
PM	400PM	-	600PM

AM PEAK HOUR 800 AM

NOON PEAK HOUR

PM PEAK HOUR 430 PM

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Scottsdale Rd	DATE:	05/20/21	LOCATION:	Scottsdale
E-W STREET:	Highland Ave	DAY:	THURSDAY	PROJECT#	21-1341-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	3	0	2	1	0	1	1	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	4	105	7	6	81	10	27	2	2	1	0	1	246
7:15 AM	2	99	3	2	87	5	59	1	2	4	1	3	268
7:30 AM	3	126	6	3	80	10	49	2	3	0	0	1	283
7:45 AM	11	140	5	1	136	7	83	2	3	1	1	2	392
8:00 AM	2	150	7	8	127	6	73	2	3	0	0	1	379
8:15 AM	4	153	7	8	110	10	75	5	1	5	0	8	386
8:30 AM	8	154	11	18	116	6	60	4	1	0	1	3	382
8:45 AM	3	112	10	8	152	13	75	5	7	2	0	7	394
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	37	1039	56	54	889	67	501	23	22	13	3	26	2730
Approach %	3.27	91.78	4.95	5.35	88.02	6.63	91.76	4.21	4.03	30.95	7.14	61.90	
App/Depart	1132	/	1566	1010	/	924	546	/	133	42	/	107	

AM Peak Hr Begins at: 800 AM

PEAK													
Volumes	17	569	35	42	505	35	283	16	12	7	1	19	1541
Approach %	2.74	91.63	5.64	7.22	86.77	6.01	91.00	5.14	3.86	25.93	3.70	70.37	
PEAK HR. FACTOR:		0.897			0.841			0.894			0.519		0.978

CONTROL: Signal
COMMENT 1:
GPS: 33.505990, -111.926092

Intersection Turning Movement

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Scottsdale Rd 0	DATE:	05/20/21	LOCATION:	Scottsdale
E-W STREET:	Highland Ave	DAY:	THURSDAY	PROJECT#	21-1341-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	3	0	2	1	0	1	1	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	10	194	7	7	164	19	147	6	9	11	4	17	595
4:15 PM	9	237	5	5	193	14	107	0	11	5	5	17	608
4:30 PM	11	179	3	5	188	16	110	3	8	3	1	10	537
4:45 PM	10	185	6	9	190	16	108	2	13	7	4	14	564
5:00 PM	3	211	3	4	179	17	147	0	10	7	10	9	600
5:15 PM	16	239	10	6	189	9	129	2	12	8	5	10	635
5:30 PM	9	182	3	9	173	11	142	2	11	8	2	8	
5:45 PM	11	190	6	7	223	13	111	2	14	5	3	10	595
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	79	1617	43	52	1499	115	1001	17	88	54	34	95	4694
Approach %	4.54	92.98	2.47	3.12	89.98	6.90	90.51	1.54	7.96	29.51	18.58	51.91	
App/Depart	1739	/	2713	1666	/	1641	1106	/	112	183	/	228	

PM Peak Hr Begins at: 430 PM

PEAK													
Volumes	40	814	22	24	746	58	494	7	43	25	20	43	2336
Approach %	4.57	92.92	2.51	2.90	90.10	7.00	90.81	1.29	7.90	28.41	22.73	48.86	
PEAK HR. FACTOR:		0.826			0.963			0.866			0.846		0.920

CONTROL: Signal
COMMENT 1: 0
GPS: 33.505990, -111.926092

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

Pedestrian & Bicycle Study

N-S STREET: Scottsdale Rd
E-W STREET: Highland Ave

Date: 05/20/21
Day: THURSDAY

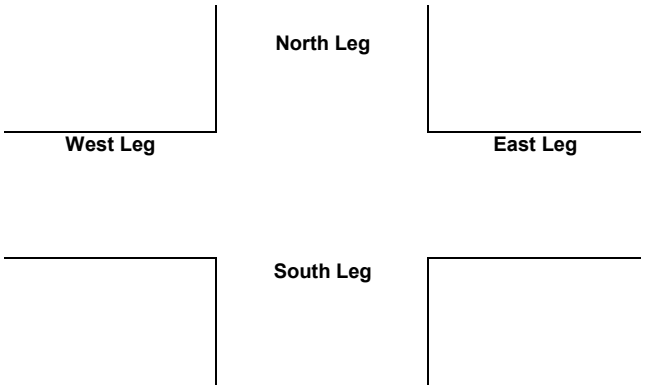
City: Scottsdale
Project #: 21-1341-001

	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	0	1	4	2
7:15 AM	0	1	1	0
7:30 AM	0	0	1	3
7:45 AM	0	0	2	4
8:00 AM	0	0	8	2
8:15 AM	0	1	3	2
8:30 AM	0	2	0	4
8:45 AM	0	1	2	5
TOTAL	**0**	**6**	**21**	**22**

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	0	0	0	0
7:15 AM	0	0	0	1
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	1	0	0	0
TOTAL	**1**	**0**	**0**	**1**

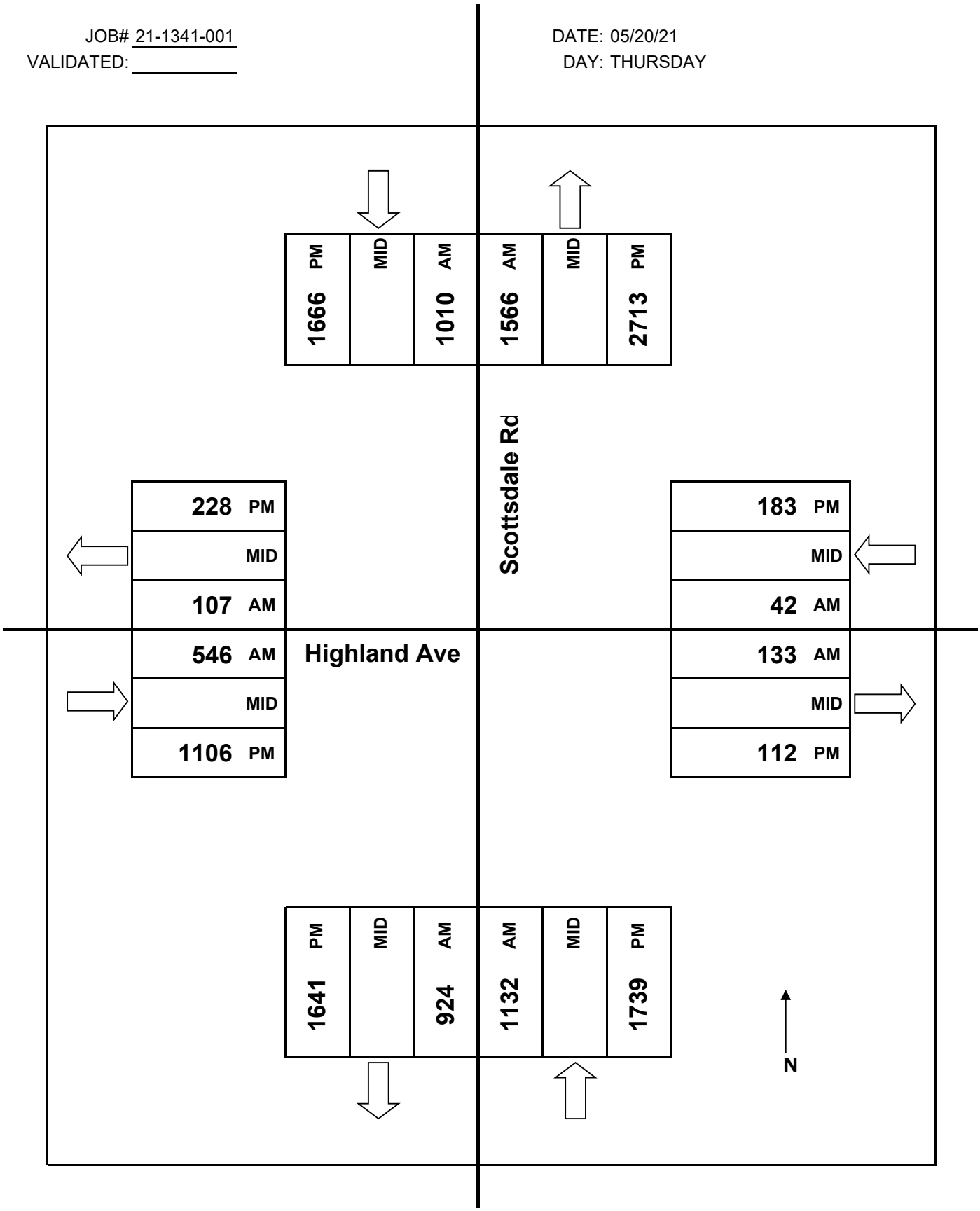
	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	0	1	1	1
4:15 PM	1	1	2	1
4:30 PM	0	2	4	3
4:45 PM	0	0	3	1
5:00 PM	0	2	3	0
5:15 PM	0	3	8	5
5:30 PM	0	0	2	0
5:45 PM	0	0	9	3
TOTAL	**1**	**9**	**32**	**14**

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	0	0	2	0
4:15 PM	0	0	1	1
4:30 PM	0	0	0	1
4:45 PM	0	0	0	0
5:00 PM	0	0	0	1
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
TOTAL	**0**	**0**	**3**	**3**



JOB# 21-1341-001
VALIDATED: _____

DATE: 05/20/21
DAY: THURSDAY

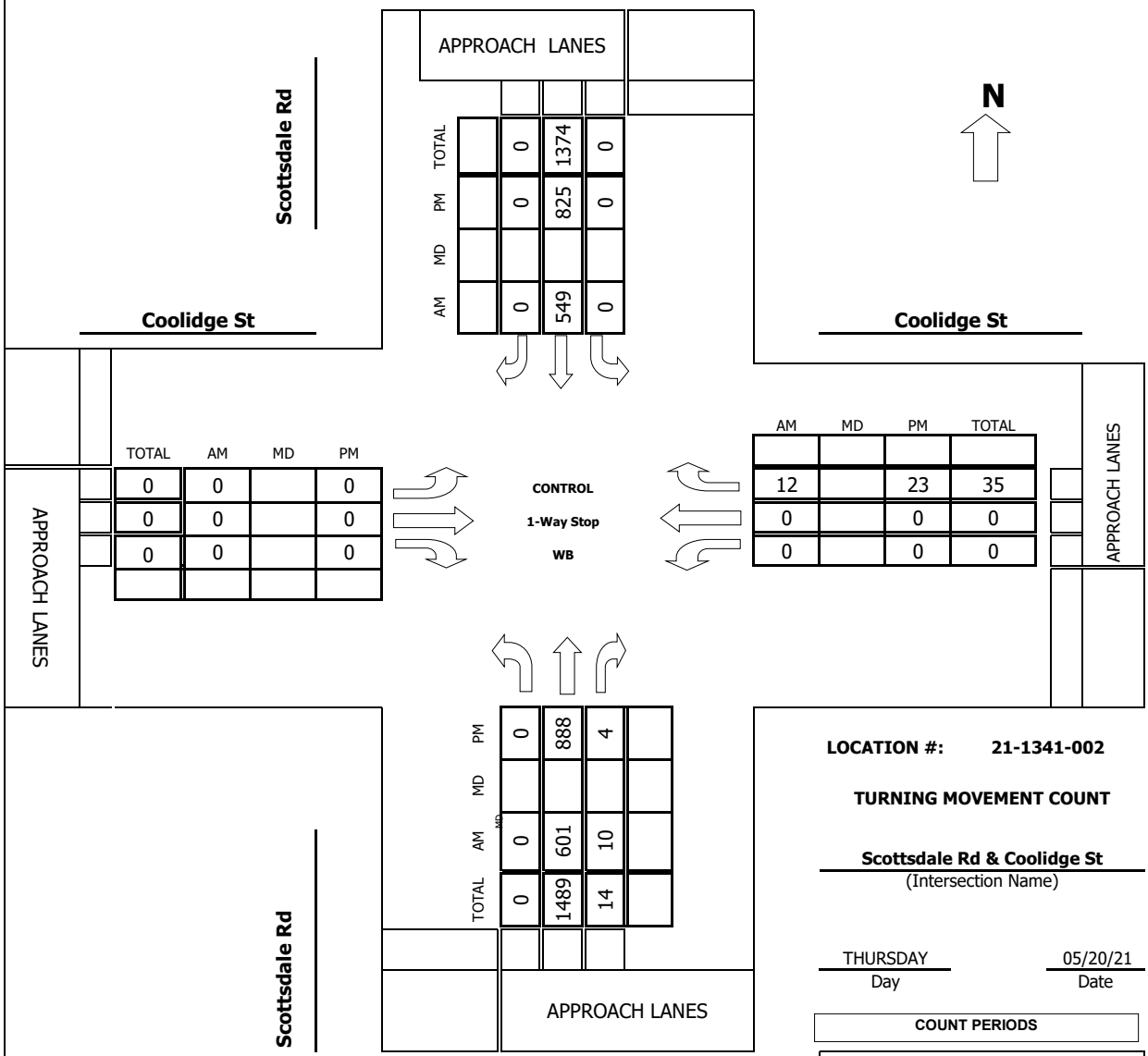


Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

Project #: 21-1341-002

TMC SUMMARY OF Scottsdale Rd & Coolidge St



LOCATION #: 21-1341-002

TURNING MOVEMENT COUNT

Scottsdale Rd & Coolidge St
(Intersection Name)

THURSDAY (Day) 05/20/21 (Date)

COUNT PERIODS			
AM	700AM	-	900AM
NOON		-	
PM	400PM	-	600PM

AM PEAK HOUR 800 AM

NOON PEAK HOUR

PM PEAK HOUR 430 PM

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Scottsdale Rd	DATE:	05/20/21	LOCATION:	Scottsdale
E-W STREET:	Coolidge St	DAY:	THURSDAY	PROJECT#	21-1341-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	3	1	0	3	0	0	0	0	0	0	1	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	0	107	2	0	83	0	0	0	0	0	0	1	193
7:15 AM	0	125	3	0	88	0	0	0	0	0	0	1	217
7:30 AM	0	153	1	0	114	0	0	0	0	0	0	1	269
7:45 AM	0	172	3	0	136	0	0	0	0	0	0	1	
8:00 AM	0	155	4	0	129	0	0	0	0	0	0	2	290
8:15 AM	0	169	2	0	109	0	0	0	0	0	0	3	283
8:30 AM	0	145	1	0	149	0	0	0	0	0	0	4	299
8:45 AM	0	132	3	0	162	0	0	0	0	0	0	3	300
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	0	1158	19	0	970	0	0	0	0	0	0	16	2163
Approach %	0.00	98.39	1.61	0.00	100.00	0.00	####	####	####	0.00	0.00	100.00	
App/Depart	1177	/	1174	970	/	970	0	/	19	16	/	0	

AM Peak Hr Begins at: 800 AM

PEAK													
Volumes	0	601	10	0	549	0	0	0	0	0	0	12	1172
Approach %	0.00	98.36	1.64	0.00	100.00	0.00	####	####	####	0.00	0.00	100.00	
PEAK HR. FACTOR:		0.893			0.847			0.000			0.750		0.977

CONTROL:	1-Way Stop (WB)
COMMENT 1:	
GPS:	33.505363, -111.926109

Intersection Turning Movement

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Scottsdale Rd 0	DATE:	05/20/21	LOCATION:	Scottsdale
E-W STREET:	Coolidge St	DAY:	THURSDAY	PROJECT#	21-1341-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	3	1	0	3	0	0	0	0	0	0	1	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	0	229	1	0	194	0	0	0	0	0	0	2	426
4:15 PM	0	225	4	0	211	0	0	0	0	0	0	5	445
4:30 PM	0	194	1	0	200	0	0	0	0	0	0	5	400
4:45 PM	0	210	1	0	221	0	0	0	0	0	0	8	440
5:00 PM	0	240	2	0	198	0	0	0	0	0	0	6	446
5:15 PM	0	244	0	0	206	0	0	0	0	0	0	4	454
5:30 PM	0	187	1	0	209	0	0	0	0	0	0	0	
5:45 PM	0	204	2	0	236	0	0	0	0	0	0	4	446
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	0	1733	12	0	1675	0	0	0	0	0	0	34	3454
Approach %	0.00	99.31	0.69	0.00	100.00	0.00	####	####	####	0.00	0.00	100.00	
App/Depart	1745	/	1767	1675	/	1675	0	/	12	34	/	0	

PM Peak Hr Begins at: 430 PM

PEAK													
Volumes	0	888	4	0	825	0	0	0	0	0	0	23	1740
Approach %	0.00	99.55	0.45	0.00	100.00	0.00	####	####	####	0.00	0.00	100.00	

PEAK HR. FACTOR:	0.914	0.933	0.000	0.719	0.958

CONTROL: 1-Way Stop (WB)
COMMENT 1: 0
GPS: 33.505363, -111.926109

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

Pedestrian & Bicycle Study

N-S STREET: Scottsdale Rd
E-W STREET: Coolidge St

Date: 05/20/21
Day: THURSDAY

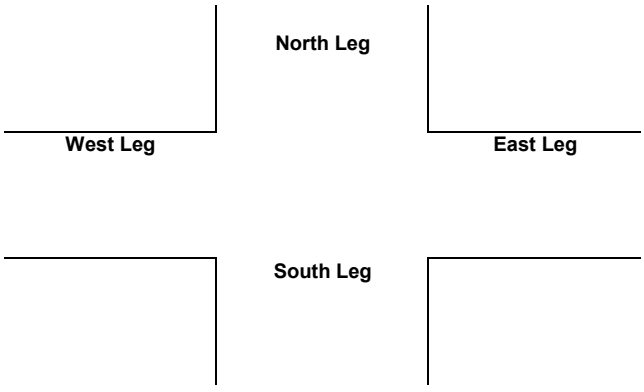
City: Scottsdale
Project #: 21-1341-002

	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	0	0	1	0
7:15 AM	0	0	0	0
7:30 AM	0	0	1	0
7:45 AM	0	0	6	0
8:00 AM	0	0	1	0
8:15 AM	1	1	2	0
8:30 AM	1	1	3	0
8:45 AM	0	0	0	0
TOTAL	**2**	**2**	**14**	**0**

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**

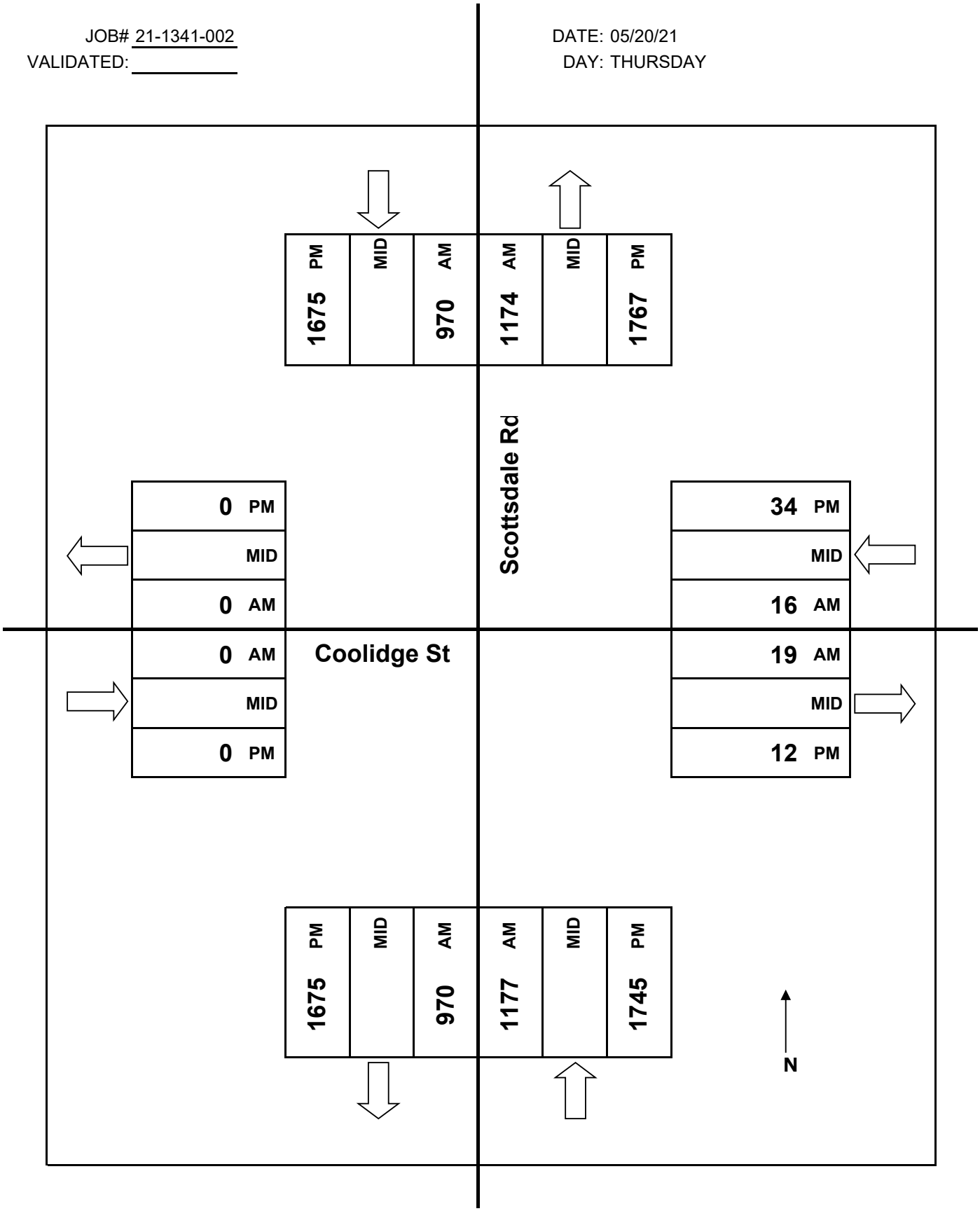
	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	0	0	3	0
4:15 PM	0	0	3	0
4:30 PM	0	0	2	0
4:45 PM	0	0	2	0
5:00 PM	0	0	0	0
5:15 PM	0	0	8	0
5:30 PM	0	0	6	0
5:45 PM	0	0	24	0
TOTAL	**0**	**0**	**48**	**0**

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**



JOB# 21-1341-002
VALIDATED: _____

DATE: 05/20/21
DAY: THURSDAY

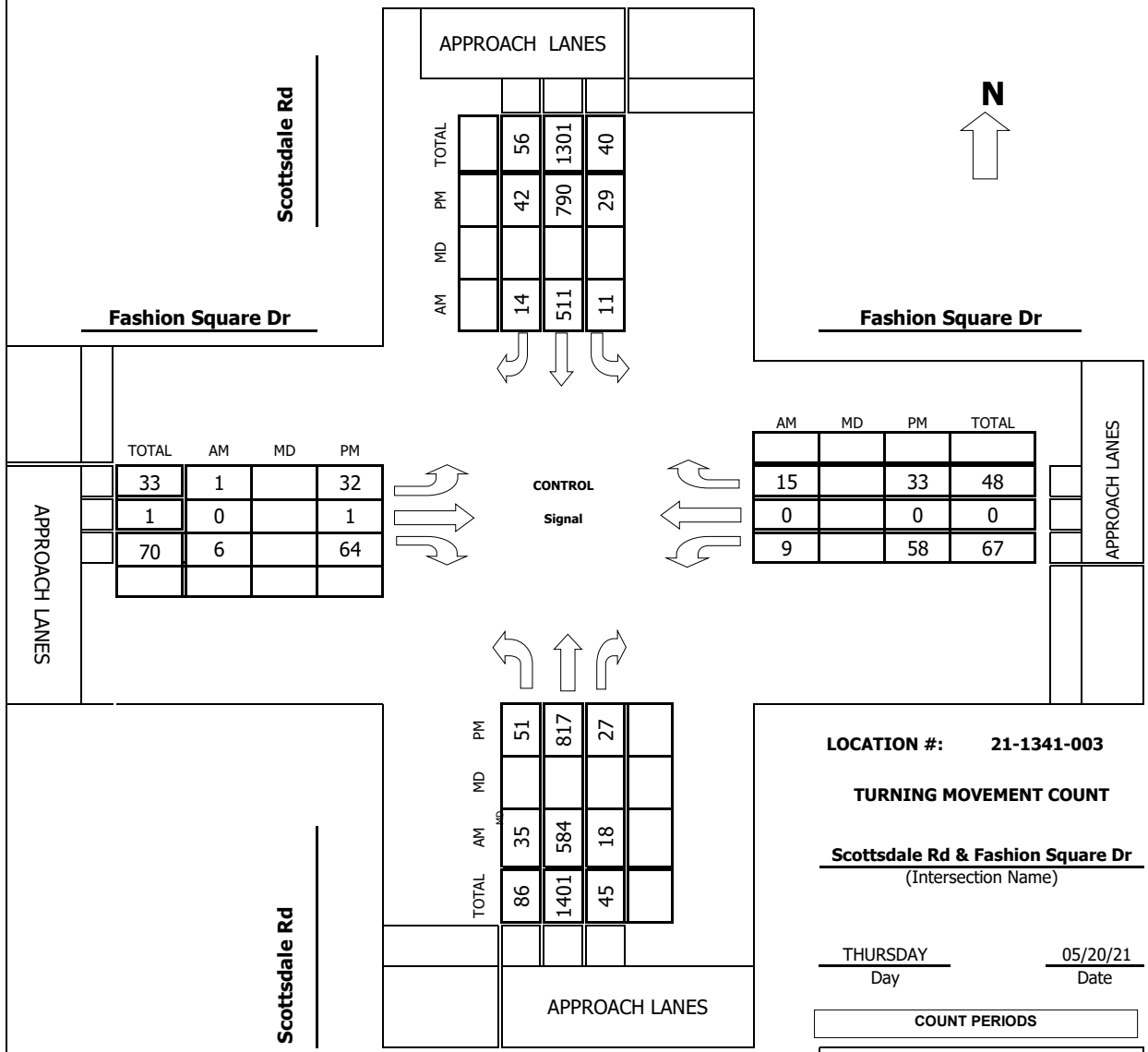


Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

Project #: 21-1341-003

TMC SUMMARY OF Scottsdale Rd & Fashion Square Dr



LOCATION #: 21-1341-003

TURNING MOVEMENT COUNT

Scottsdale Rd & Fashion Square Dr
(Intersection Name)

THURSDAY (Day) 05/20/21 (Date)

COUNT PERIODS			
AM	700AM	-	900AM
NOON		-	
PM	400PM	-	600PM

AM PEAK HOUR 800 AM

NOON PEAK HOUR

PM PEAK HOUR 430 PM

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Scottsdale Rd	DATE:	05/20/21	LOCATION:	Scottsdale
E-W STREET:	Fashion Square Dr	DAY:	THURSDAY	PROJECT#	21-1341-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	3	1	0	1	0	0	1	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	1	111	3	2	74	2	0	0	0	1	0	1	195
7:15 AM	2	130	0	2	89	1	0	0	0	2	0	4	230
7:30 AM	2	149	1	1	102	2	0	0	0	4	0	4	265
7:45 AM	11	176	3	3	121	2	0	0	1	2	0	3	322
8:00 AM	1	154	2	2	127	2	0	0	0	1	0	3	292
8:15 AM	10	149	7	3	107	3	1	0	3	2	0	6	291
8:30 AM	10	124	6	3	135	2	0	0	1	5	0	3	289
8:45 AM	14	157	3	3	142	7	0	0	2	1	0	3	332
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	51	1150	25	19	897	21	1	0	7	18	0	27	2216
Approach %	4.16	93.80	2.04	2.03	95.73	2.24	12.50	0.00	87.50	40.00	0.00	60.00	
App/Depart	1226	/	1178	937	/	922	8	/	44	45	/	72	

AM Peak Hr Begins at: 800 AM

PEAK													
Volumes	35	584	18	11	511	14	1	0	6	9	0	15	1204
Approach %	5.49	91.68	2.83	2.05	95.34	2.61	14.29	0.00	85.71	37.50	0.00	62.50	
PEAK HR. FACTOR:		0.915			0.882			0.438			0.750		0.907

CONTROL: Signal
COMMENT 1:
GPS: 33.504159, -111.926135

Intersection Turning Movement

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Scottsdale Rd 0	DATE:	05/20/21	LOCATION:	Scottsdale
E-W STREET:	Fashion Square Dr	DAY:	THURSDAY	PROJECT#	21-1341-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	3	1	0	1	0	0	1	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	9	214	1	15	188	16	10	1	17	8	0	7	486
4:15 PM	15	180	11	6	213	11	8	0	19	9	0	13	485
4:30 PM	18	200	6	12	176	13	6	0	16	13	0	4	464
4:45 PM	15	188	8	9	211	9	5	1	14	15	0	7	482
5:00 PM	8	232	5	3	190	9	13	0	17	18	0	10	505
5:15 PM	10	197	8	5	213	11	8	0	17	12	0	12	493
5:30 PM	15	168	1	8	206	15	9	0	24	14	0	6	
5:45 PM	17	190	5	6	209	8	10	0	17	16	1	10	489
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	107	1569	45	64	1606	92	69	2	141	105	1	69	3870
Approach %	6.22	91.17	2.61	3.63	91.15	5.22	32.55	0.94	66.51	60.00	0.57	39.43	
App/Depart	1721	/	1707	1762	/	1852	212	/	111	175	/	200	

PM Peak Hr Begins at: 430 PM

PEAK													
Volumes	51	817	27	29	790	42	32	1	64	58	0	33	1944
Approach %	5.70	91.28	3.02	3.37	91.75	4.88	32.99	1.03	65.98	63.74	0.00	36.26	

PEAK HR. FACTOR:	0.913	0.940	0.808	0.813	0.962

CONTROL: Signal
COMMENT 1: 0
GPS: 33.504159, -111.926135

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

Pedestrian & Bicycle Study

N-S STREET: Scottsdale Rd
E-W STREET: Fashion Square Dr

Date: 05/20/21
Day: THURSDAY

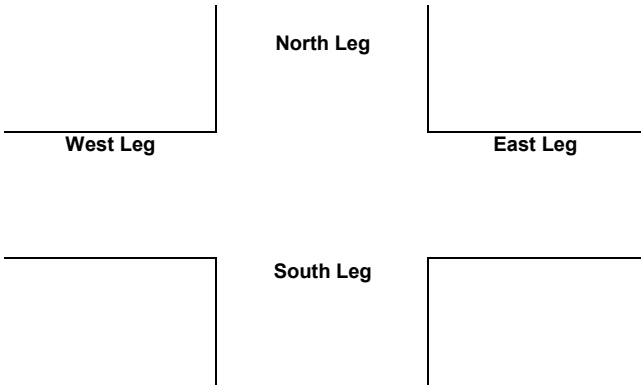
City: Scottsdale
Project #: 21-1341-003

	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	1	0	1	1
7:15 AM	0	1	1	0
7:30 AM	0	0	1	0
7:45 AM	0	1	5	0
8:00 AM	0	1	5	0
8:15 AM	0	0	0	0
8:30 AM	0	2	3	0
8:45 AM	0	1	0	0
TOTAL	**1**	**6**	**16**	**1**

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	1	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
TOTAL	**1**	**0**	**0**	**0**

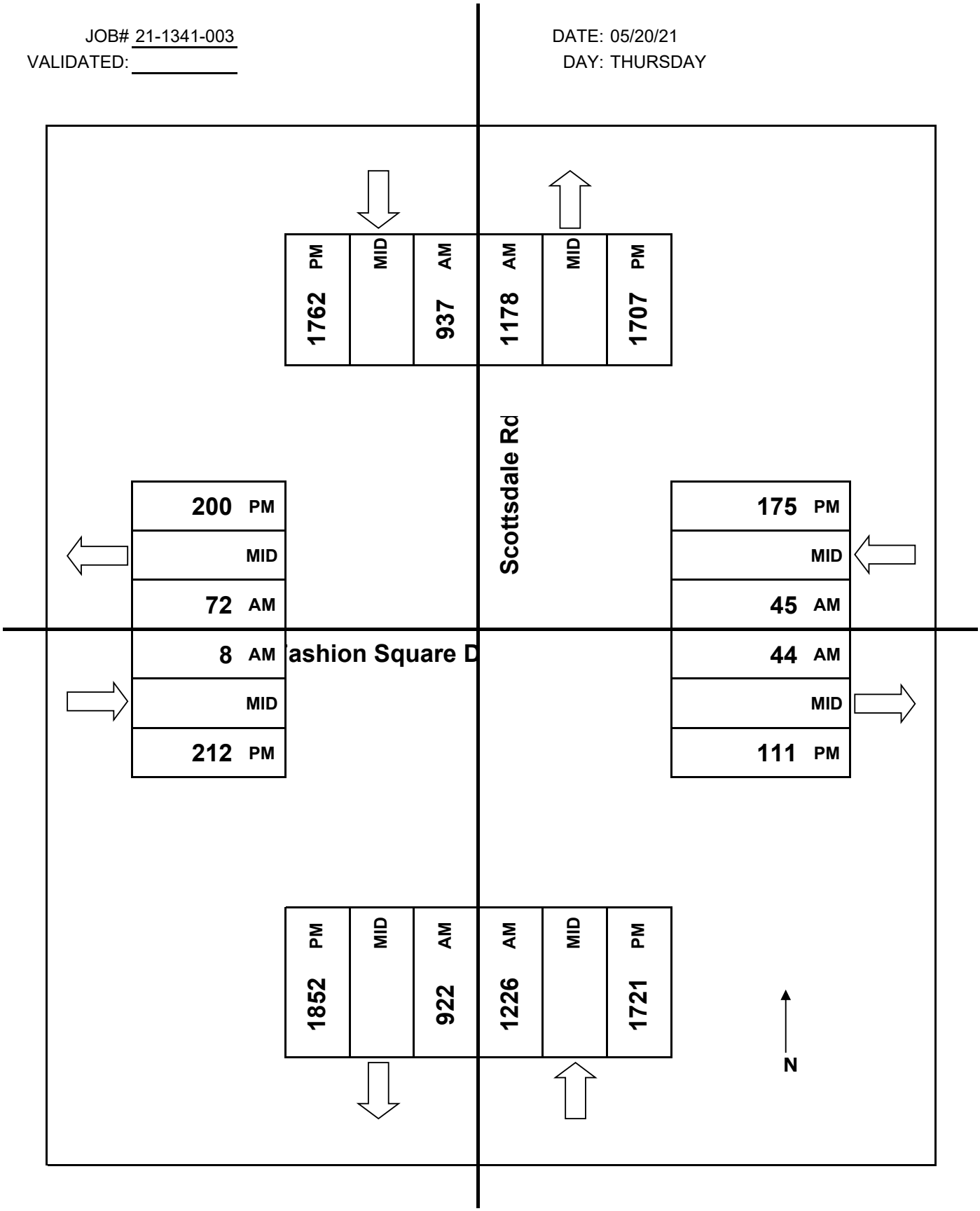
	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	0	1	1	0
4:15 PM	0	2	1	0
4:30 PM	2	0	0	0
4:45 PM	0	2	2	0
5:00 PM	0	1	0	0
5:15 PM	0	1	5	0
5:30 PM	1	0	4	0
5:45 PM	1	0	10	0
TOTAL	**4**	**7**	**23**	**0**

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	0	0	0	0
4:15 PM	0	0	1	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
TOTAL	**0**	**0**	**1**	**0**



JOB# 21-1341-003
VALIDATED: _____

DATE: 05/20/21
DAY: THURSDAY

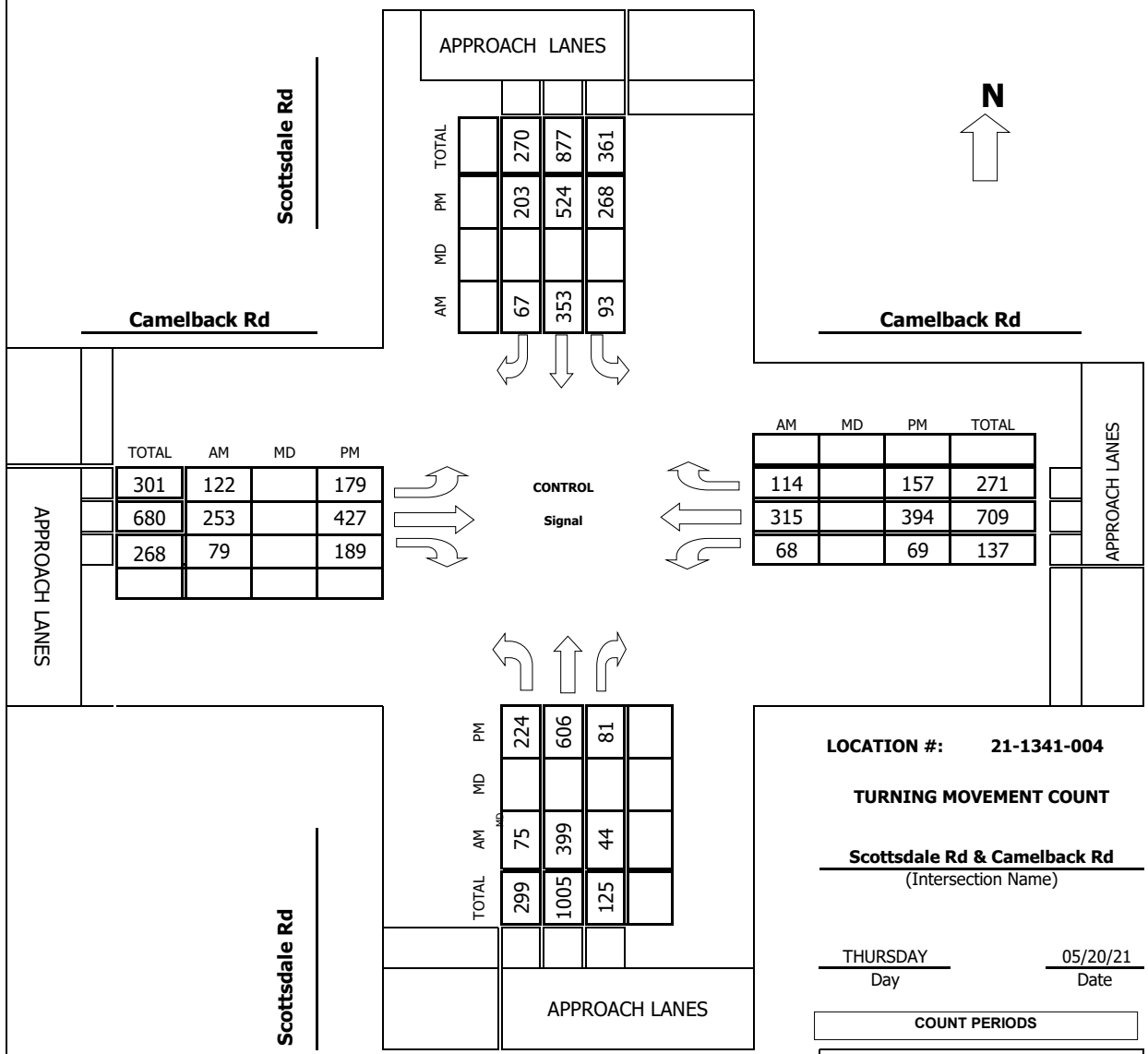


Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

Project #: 21-1341-004

TMC SUMMARY OF Scottsdale Rd & Camelback Rd



LOCATION #: 21-1341-004

TURNING MOVEMENT COUNT

Scottsdale Rd & Camelback Rd
(Intersection Name)

THURSDAY (Day) 05/20/21 (Date)

COUNT PERIODS

AM	700AM	-	900AM
NOON		-	
PM	400PM	-	600PM

AM PEAK HOUR 800 AM

NOON PEAK HOUR

PM PEAK HOUR 430 PM

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Scottsdale Rd	DATE:	05/20/21	LOCATION:	Scottsdale
E-W STREET:	Camelback Rd	DAY:	THURSDAY	PROJECT#	21-1341-004

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	3	0	2	2	1	2	2	1	1	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	10	78	1	8	55	10	25	44	25	6	51	19	332
7:15 AM	9	83	4	12	74	8	29	56	15	9	74	15	388
7:30 AM	9	106	10	15	54	14	31	70	17	12	89	21	448
7:45 AM	23	110	8	24	70	19	37	58	22	14	91	41	517
8:00 AM	23	110	11	22	74	13	26	65	17	13	80	23	477
8:15 AM	19	96	8	17	78	16	34	59	21	17	80	37	482
8:30 AM	16	98	11	23	95	21	29	73	22	14	78	25	505
8:45 AM	17	95	14	31	106	17	33	56	19	24	77	29	518
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	126	776	67	152	606	118	244	481	158	109	620	210	3667
Approach %	13.00	80.08	6.91	17.35	69.18	13.47	27.63	54.47	17.89	11.61	66.03	22.36	
App/Depart	969	/	1230	876	/	873	883	/	700	939	/	864	

AM Peak Hr Begins at: 800 AM

PEAK													
Volumes	75	399	44	93	353	67	122	253	79	68	315	114	1982
Approach %	14.48	77.03	8.49	18.13	68.81	13.06	26.87	55.73	17.40	13.68	63.38	22.94	
PEAK HR. FACTOR:		0.899			0.833			0.915			0.927		0.957

CONTROL: Signal
COMMENT 1:
GPS: 33.502256, -111.926143

Intersection Turning Movement

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Scottsdale Rd 0	DATE:	05/20/21	LOCATION:	Scottsdale
E-W STREET:	Camelback Rd	DAY:	THURSDAY	PROJECT#	21-1341-004

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	3	0	2	2	1	2	2	1	1	2	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	55	132	19	47	149	58	52	103	58	13	98	40	824
4:15 PM	43	146	22	71	120	47	35	93	50	10	83	30	750
4:30 PM	54	147	21	66	123	54	44	98	42	21	97	47	814
4:45 PM	46	145	18	55	139	52	44	111	45	14	98	33	800
5:00 PM	57	170	25	73	138	48	44	107	48	17	106	37	870
5:15 PM	67	144	17	74	124	49	47	111	54	17	93	40	837
5:30 PM	49	103	18	75	141	64	51	89	56	19	93	34	792
5:45 PM	48	122	19	64	138	56	39	120	52	22	78	61	819
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	419	1109	159	525	1072	428	356	832	405	133	746	322	6506
Approach %	24.84	65.74	9.43	25.93	52.94	21.14	22.35	52.23	25.42	11.07	62.11	26.81	
App/Depart	1687	/	1787	2025	/	1610	1593	/	1516	1201	/	1593	

PM Peak Hr Begins at: 430 PM

PEAK													
Volumes	224	606	81	268	524	203	179	427	189	69	394	157	3321
Approach %	24.59	66.52	8.89	26.93	52.66	20.40	22.52	53.71	23.77	11.13	63.55	25.32	
PEAK HR. FACTOR:		0.904			0.960			0.938			0.939		0.954

CONTROL: Signal
COMMENT 1: 0
GPS: 33.502256, -111.926143

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

Pedestrian & Bicycle Study

N-S STREET: Scottsdale Rd
E-W STREET: Camelback Rd

Date: 05/20/21
Day: THURSDAY

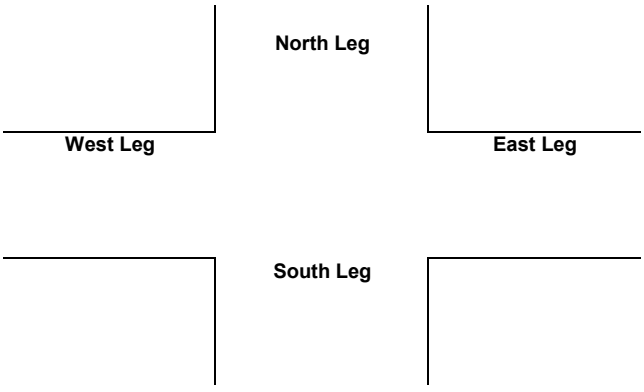
City: Scottsdale
Project #: 21-1341-004

	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	4	4	2	5
7:15 AM	3	2	1	7
7:30 AM	6	2	5	7
7:45 AM	3	5	7	6
8:00 AM	3	7	16	6
8:15 AM	4	5	2	5
8:30 AM	6	3	2	12
8:45 AM	3	3	1	4
TOTAL	**32**	**31**	**36**	**52**

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	2	0	3	0
7:15 AM	1	1	2	2
7:30 AM	1	4	7	2
7:45 AM	6	3	3	5
8:00 AM	8	2	2	9
8:15 AM	2	3	3	2
8:30 AM	2	1	2	2
8:45 AM	1	0	2	1
TOTAL	**23**	**14**	**24**	**23**

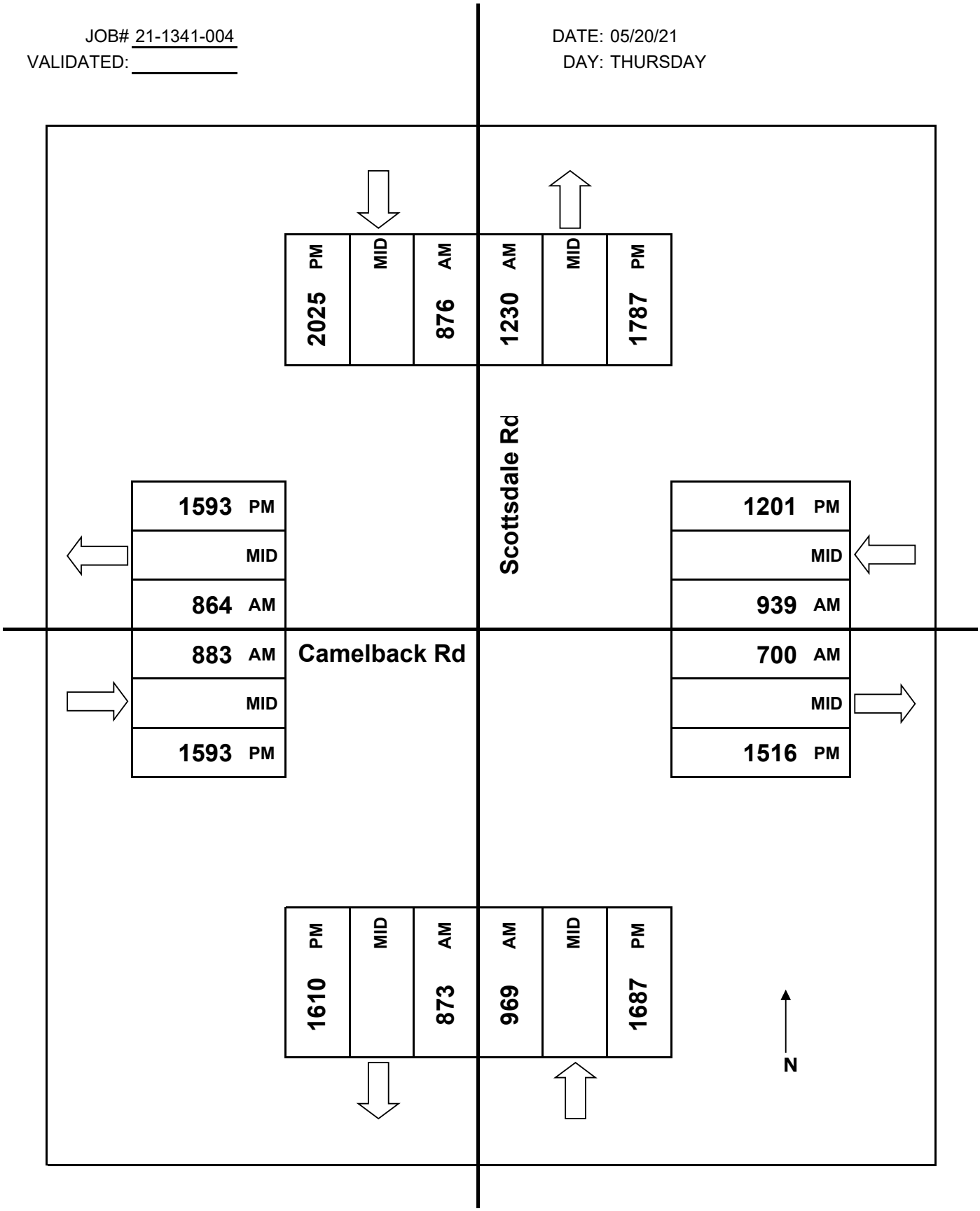
	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	1	0	2	16
4:15 PM	8	2	2	13
4:30 PM	4	8	4	6
4:45 PM	8	2	3	6
5:00 PM	8	6	3	6
5:15 PM	3	10	4	7
5:30 PM	4	7	5	19
5:45 PM	17	6	13	16
TOTAL	**53**	**41**	**36**	**89**

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	1	2	3	1
4:15 PM	4	0	1	3
4:30 PM	0	4	2	0
4:45 PM	3	0	0	3
5:00 PM	0	2	1	2
5:15 PM	6	2	2	4
5:30 PM	2	1	2	3
5:45 PM	2	0	1	2
TOTAL	**18**	**11**	**12**	**18**



JOB# 21-1341-004
VALIDATED: _____

DATE: 05/20/21
DAY: THURSDAY

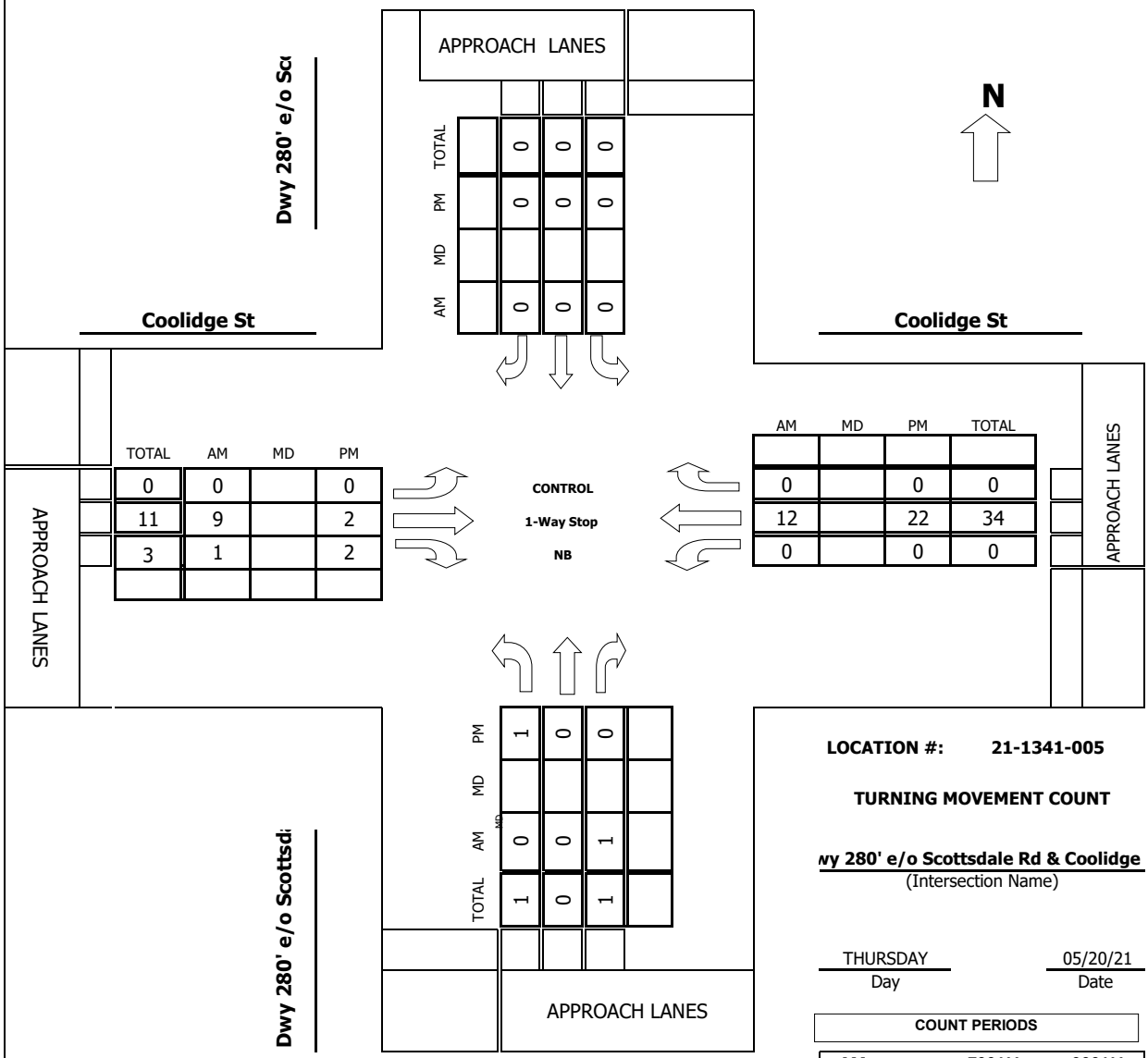


Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

Project #: 21-1341-005

TMC SUMMARY OF Dwy 280' e/o Scottsdale Rd & Coolidge St



LOCATION #: 21-1341-005

TURNING MOVEMENT COUNT

wy 280' e/o Scottsdale Rd & Coolidge
(Intersection Name)

THURSDAY (Day) 05/20/21 (Date)

COUNT PERIODS			
AM	700AM	-	900AM
NOON		-	
PM	400PM	-	600PM

AM PEAK HOUR	800 AM
NOON PEAK HOUR	
PM PEAK HOUR	430 PM

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Dwy 280' e/o Scottsdale Rd	DATE:	05/20/21	LOCATION:	Scottsdale
E-W STREET:	Coolidge St	DAY:	THURSDAY	PROJECT#	21-1341-005

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	1	0	0	1	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	0	0	0	0	0	0	0	2	0	0	1	0	3
7:15 AM	0	0	0	0	0	0	0	1	2	0	1	0	4
7:30 AM	0	0	0	0	0	0	0	1	0	2	1	0	4
7:45 AM	0	0	0	0	0	0	0	2	1	0	1	0	4
8:00 AM	0	0	0	0	0	0	0	4	0	0	2	0	6
8:15 AM	0	0	0	0	0	0	0	2	0	0	3	0	5
8:30 AM	0	0	0	0	0	0	0	0	1	0	4	0	5
8:45 AM	0	0	1	0	0	0	0	3	0	0	3	0	7
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	0	0	1	0	0	0	0	15	4	2	16	0	38
Approach %	0.00	0.00	100.00	####	####	####	0.00	78.95	21.05	11.11	88.89	0.00	
App/Depart	1	/	0	0	/	6	19	/	16	18	/	16	

AM Peak Hr Begins at: 800 AM

PEAK													
Volumes	0	0	1	0	0	0	0	9	1	0	12	0	23
Approach %	0.00	0.00	100.00	####	####	####	0.00	90.00	10.00	0.00	100.00	0.00	
PEAK HR. FACTOR:		0.250			0.000			0.625			0.750		0.821

CONTROL: 1-Way Stop (NB)
COMMENT 1:
GPS: 33.505350, -111.925040

Intersection Turning Movement

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Dwy 280' e/o Scottsdale Rd 0	DATE:	05/20/21	LOCATION:	Scottsdale
E-W STREET:	Coolidge St	DAY:	THURSDAY	PROJECT#	21-1341-005

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	1	0	0	1	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
4:15 PM	0	0	0	0	0	0	0	4	0	0	5	0	
4:30 PM	0	0	0	0	0	0	0	1	0	0	5	0	6
4:45 PM	1	0	0	0	0	0	0	0	1	0	7	0	9
5:00 PM	0	0	0	0	0	0	0	1	1	0	6	0	8
5:15 PM	0	0	0	0	0	0	0	0	0	0	4	0	4
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	2	0	0	4	0	6
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	1	0	0	0	0	0	0	10	2	0	33	0	46
Approach %	100.00	0.00	0.00	####	####	####	0.00	83.33	16.67	0.00	100.00	0.00	
App/Depart	1	/	0	0	/	2	12	/	10	33	/	34	

PM Peak Hr Begins at: 430 PM

PEAK													
Volumes	1	0	0	0	0	0	0	2	2	0	22	0	27
Approach %	100.00	0.00	0.00	####	####	####	0.00	50.00	50.00	0.00	100.00	0.00	

PEAK HR. FACTOR:	0.250	0.000	0.500	0.786	0.750

CONTROL: 1-Way Stop (NB)
COMMENT 1: 0
GPS: 33.505350, -111.925040

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

Pedestrian & Bicycle Study

N-S STREET: Dwy 280' e/o Scottsdale Rd
E-W STREET: Coolidge St

Date: 05/20/21
Day: THURSDAY

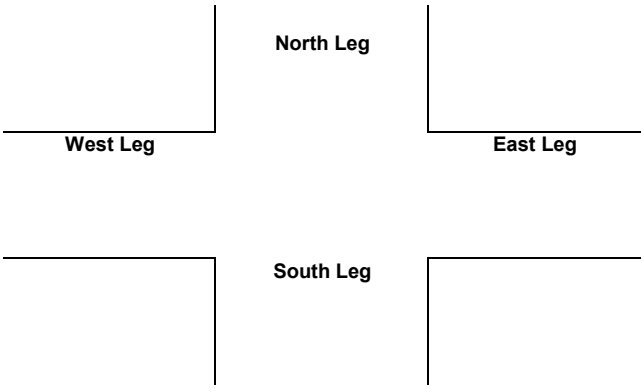
City: Scottsdale
Project #: 21-1341-005

	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**

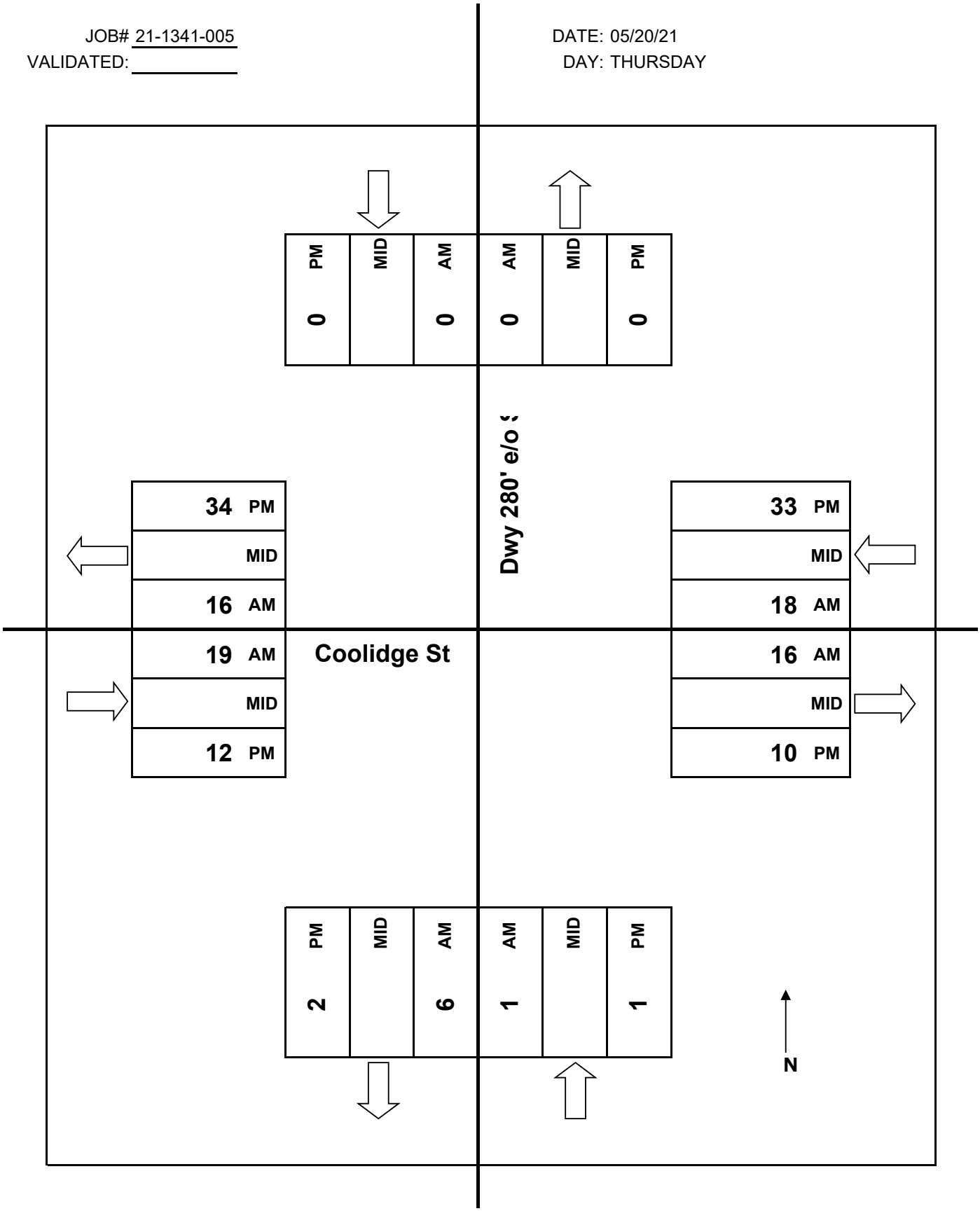
	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**



JOB# 21-1341-005
VALIDATED: _____

DATE: 05/20/21
DAY: THURSDAY

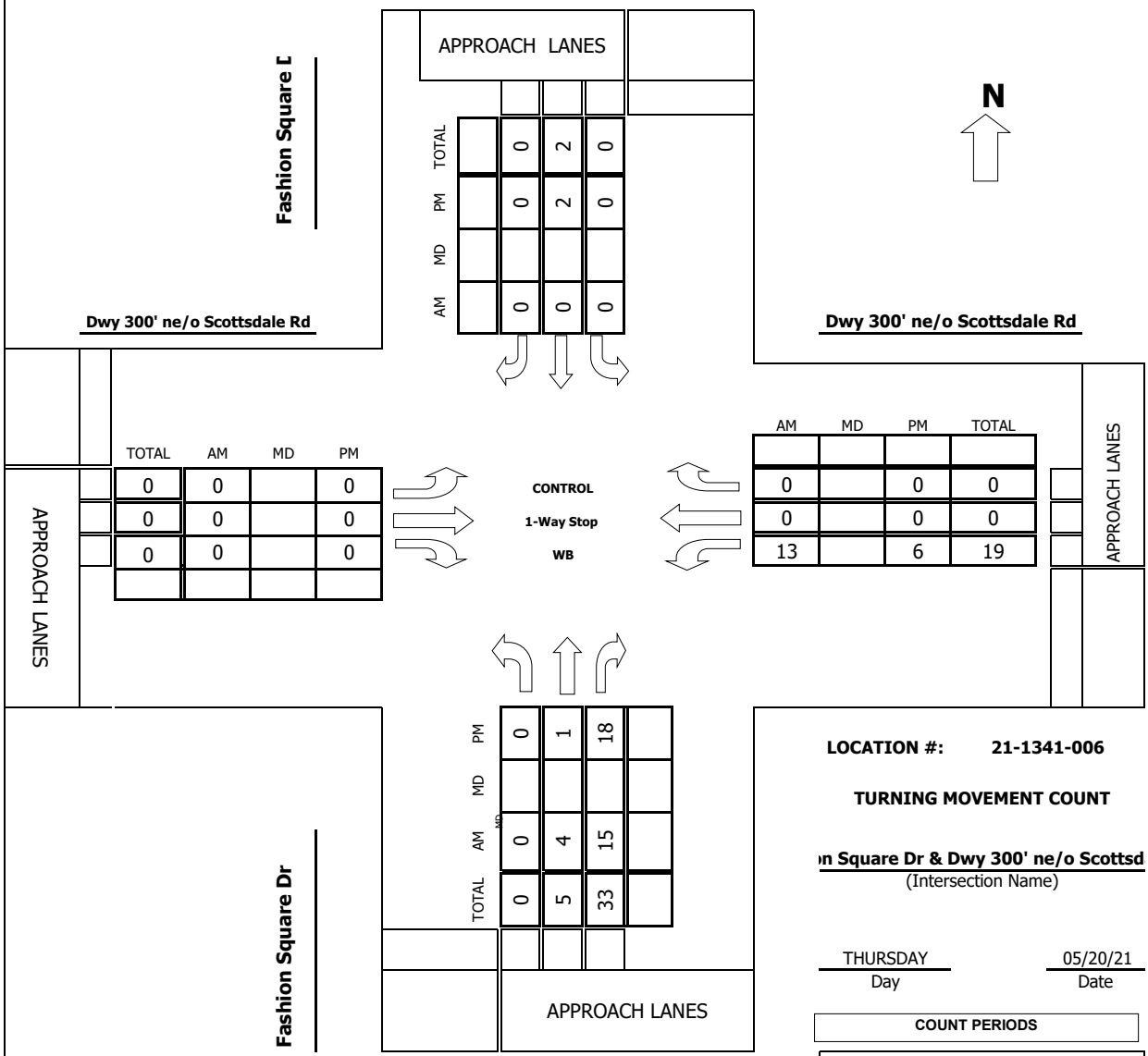


Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

Project #: 21-1341-006

TMC SUMMARY OF Fashion Square Dr & Dwy 300' ne/o Scottsdale Rd



LOCATION #: 21-1341-006

TURNING MOVEMENT COUNT

n Square Dr & Dwy 300' ne/o Scottsd
(Intersection Name)

THURSDAY (Day) 05/20/21 (Date)

COUNT PERIODS			
AM	700AM	-	900AM
NOON		-	
PM	400PM	-	600PM

AM PEAK HOUR 800 AM

NOON PEAK HOUR

PM PEAK HOUR 430 PM

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Fashion Square Dr	DATE:	05/20/21	LOCATION:	Scottsdale
E-W STREET:	Dwy 300' ne/o Scottsdale Rd	DAY:	THURSDAY	PROJECT#	21-1341-006

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	0	0	0	1	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	0	1	2	0	0	0	0	0	0	2	0	0	5
7:15 AM	0	0	2	0	0	0	0	0	0	4	0	0	6
7:30 AM	0	0	1	0	1	0	0	0	0	7	0	0	9
7:45 AM	0	1	0	0	1	0	0	0	0	3	0	0	5
8:00 AM	0	2	0	0	0	0	0	0	0	2	0	0	4
8:15 AM	0	1	4	0	0	0	0	0	0	6	0	0	11
8:30 AM	0	0	7	0	0	0	0	0	0	3	0	0	10
8:45 AM	0	1	4	0	0	0	0	0	0	2	0	0	7
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	0	6	20	0	2	0	0	0	0	29	0	0	57
Approach %	0.00	23.08	76.92	0.00	100.00	0.00	####	####	####	100.00	0.00	0.00	
App/Depart	26	/	6	2	/	31	0	/	20	29	/	0	

AM Peak Hr Begins at: 800 AM

PEAK													
Volumes	0	4	15	0	0	0	0	0	0	13	0	0	32
Approach %	0.00	21.05	78.95	####	####	####	####	####	####	100.00	0.00	0.00	
PEAK HR. FACTOR:		0.679			0.000			0.000			0.542		0.727

CONTROL:	1-Way Stop (WB)
COMMENT 1:	
GPS:	33.504549, -111.925019

Intersection Turning Movement

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Fashion Square Dr 0	DATE:	05/20/21	LOCATION:	Scottsdale
E-W STREET:	Dwy 300' ne/o Scottsdale Rd	DAY:	THURSDAY	PROJECT#	21-1341-006

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	0	0	0	1	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	0	1	8	0	0	0	0	0	0	3	0	0	
4:15 PM	0	0	4	0	0	0	0	0	0	1	0	0	5
4:30 PM	0	0	4	0	1	0	0	0	0	2	0	0	7
4:45 PM	0	0	5	0	0	0	0	0	0	1	0	0	6
5:00 PM	0	1	3	0	0	0	0	0	0	1	0	0	5
5:15 PM	0	0	6	0	1	0	0	0	0	2	0	0	9
5:30 PM	0	0	3	0	0	0	0	0	0	3	0	0	6
5:45 PM	0	0	5	0	0	0	0	0	0	1	0	0	6
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	0	2	38	0	2	0	0	0	0	14	0	0	56
Approach %	0.00	5.00	95.00	0.00	100.00	0.00	####	####	####	100.00	0.00	0.00	
App/Depart	40	/	2	2	/	16	0	/	38	14	/	0	

PM Peak Hr Begins at: 430 PM

PEAK													
Volumes	0	1	18	0	2	0	0	0	0	6	0	0	27
Approach %	0.00	5.26	94.74	0.00	100.00	0.00	####	####	####	100.00	0.00	0.00	
PEAK HR. FACTOR:		0.792			0.500			0.000			0.750		0.750

CONTROL:	1-Way Stop (WB)
COMMENT 1:	0
GPS:	33.504549, -111.925019

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

Pedestrian & Bicycle Study

N-S STREET: Fashion Square Dr
E-W STREET: Dwy 300' ne/o Scottsdale Rd

Date: 05/20/21
Day: THURSDAY

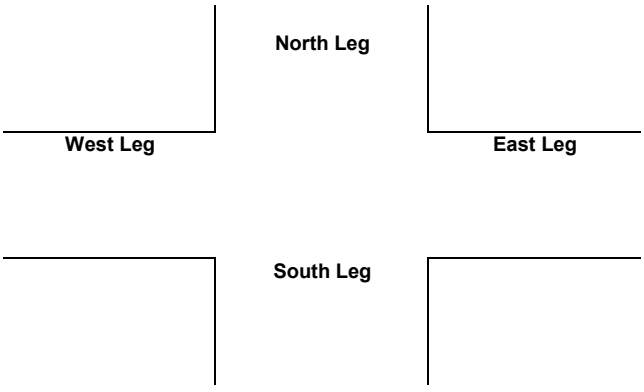
City: Scottsdale
Project #: 21-1341-006

	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**

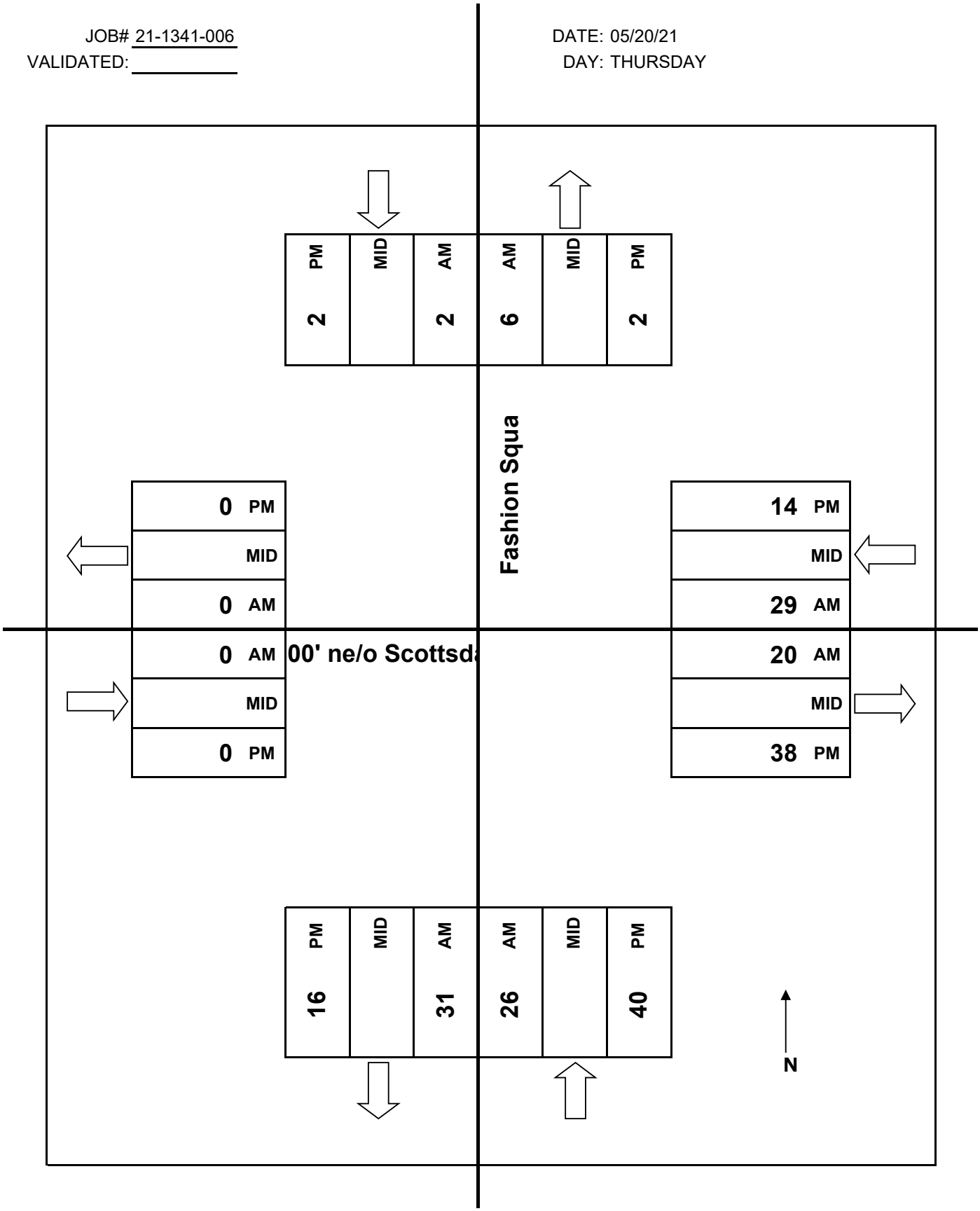
	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**



JOB# 21-1341-006
VALIDATED: _____

DATE: 05/20/21
DAY: THURSDAY

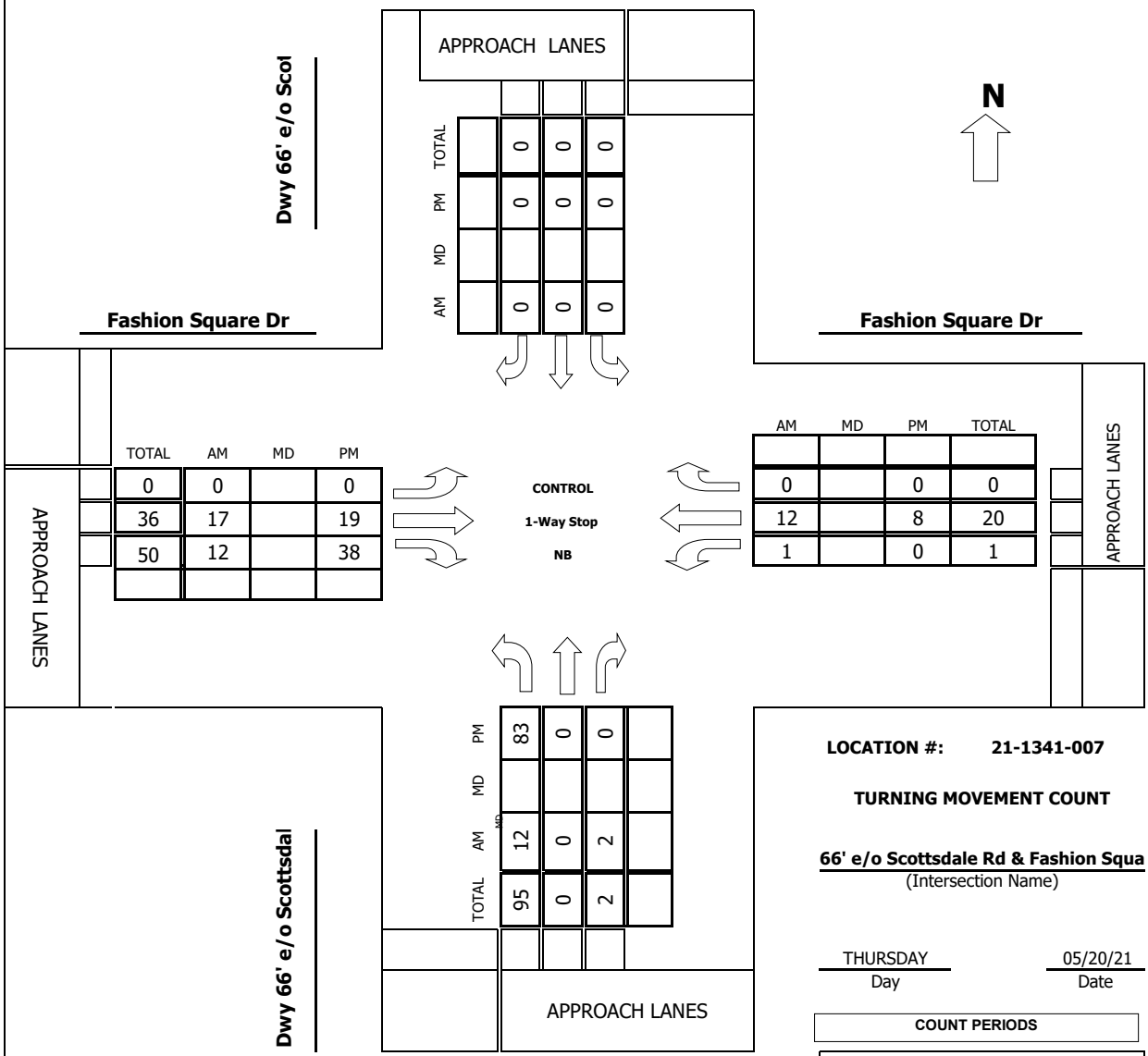


Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

Project #: 21-1341-007

TMC SUMMARY OF Dwy 66' e/o Scottsdale Rd & Fashion Square Dr



LOCATION #: 21-1341-007

TURNING MOVEMENT COUNT

66' e/o Scottsdale Rd & Fashion Squa
(Intersection Name)

THURSDAY (Day) 05/20/21 (Date)

COUNT PERIODS			
AM	700AM	-	900AM
NOON		-	
PM	400PM	-	600PM

AM PEAK HOUR 800 AM

NOON PEAK HOUR

PM PEAK HOUR 430 PM

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Dwy 66' e/o Scottsdale Rd	DATE:	05/20/21	LOCATION:	Scottsdale
E-W STREET:	Fashion Square Dr	DAY:	THURSDAY	PROJECT#	21-1341-007

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	1	0	0	1	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	0	0	0	0	0	0	0	3	2	0	2	0	7
7:15 AM	2	0	0	0	0	0	0	2	0	0	4	0	8
7:30 AM	0	0	0	0	0	0	0	1	1	0	8	0	10
7:45 AM	2	0	0	0	0	0	0	1	5	1	3	0	12
8:00 AM	2	0	0	0	0	0	0	2	2	0	2	0	8
8:15 AM	2	0	0	0	0	0	0	5	5	0	6	0	18
8:30 AM	6	0	0	0	0	0	0	7	2	1	2	0	18
8:45 AM	2	0	2	0	0	0	0	3	3	0	2	0	12
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	16	0	2	0	0	0	0	24	20	2	29	0	93
Approach %	88.89	0.00	11.11	####	####	####	0.00	54.55	45.45	6.45	93.55	0.00	
App/Depart	18	/	0	0	/	22	44	/	26	31	/	45	

AM Peak Hr Begins at: 800 AM

PEAK													
Volumes	12	0	2	0	0	0	0	17	12	1	12	0	56
Approach %	85.71	0.00	14.29	####	####	####	0.00	58.62	41.38	7.69	92.31	0.00	
PEAK HR. FACTOR:		0.583			0.000			0.725			0.542		0.778

CONTROL: 1-Way Stop (NB)
COMMENT 1:
GPS: 33.504155, -111.925696

Intersection Turning Movement

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Dwy 66' e/o Scottsdale Rd 0	DATE:	05/20/21	LOCATION:	Scottsdale
E-W STREET:	Fashion Square Dr	DAY:	THURSDAY	PROJECT#	21-1341-007

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	0	0	0	1	0	0	1	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	12	0	0	0	0	0	0	9	8	0	3	0	32
4:15 PM	21	0	0	0	0	0	0	4	13	0	1	0	
4:30 PM	14	0	0	0	0	0	0	4	14	0	3	0	35
4:45 PM	21	0	0	0	0	0	0	5	13	0	1	0	40
5:00 PM	27	0	0	0	0	0	0	4	4	0	1	0	36
5:15 PM	21	0	0	0	0	0	0	6	7	0	3	0	37
5:30 PM	17	0	0	0	0	0	0	3	6	0	3	0	29
5:45 PM	26	0	0	0	0	0	0	5	6	0	1	0	38
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	159	0	0	0	0	0	0	40	71	0	16	0	286
Approach %	100.00	0.00	0.00	####	####	####	0.00	36.04	63.96	0.00	100.00	0.00	
App/Depart	159	/	0	0	/	71	111	/	40	16	/	175	

PM Peak Hr Begins at: 430 PM

PEAK													
Volumes	83	0	0	0	0	0	0	19	38	0	8	0	148
Approach %	100.00	0.00	0.00	####	####	####	0.00	33.33	66.67	0.00	100.00	0.00	

PEAK HR. FACTOR:	0.769	0.000	0.792	0.667	0.925

CONTROL: 1-Way Stop (NB)
COMMENT 1: 0
GPS: 33.504155, -111.925696

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

Pedestrian & Bicycle Study

N-S STREET: Dwy 66' e/o Scottsdale Rd
E-W STREET: Fashion Square Dr

Date: 05/20/21
Day: THURSDAY

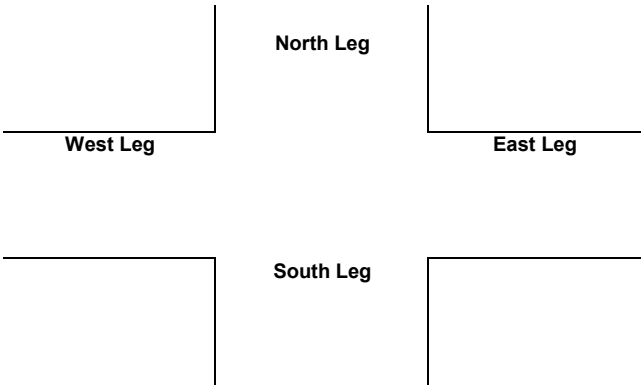
City: Scottsdale
Project #: 21-1341-007

	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	0	0	0	0
7:15 AM	0	1	0	0
7:30 AM	0	0	1	0
7:45 AM	0	1	0	0
8:00 AM	0	3	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	1	0	0
TOTAL	**0**	**6**	**1**	**0**

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**

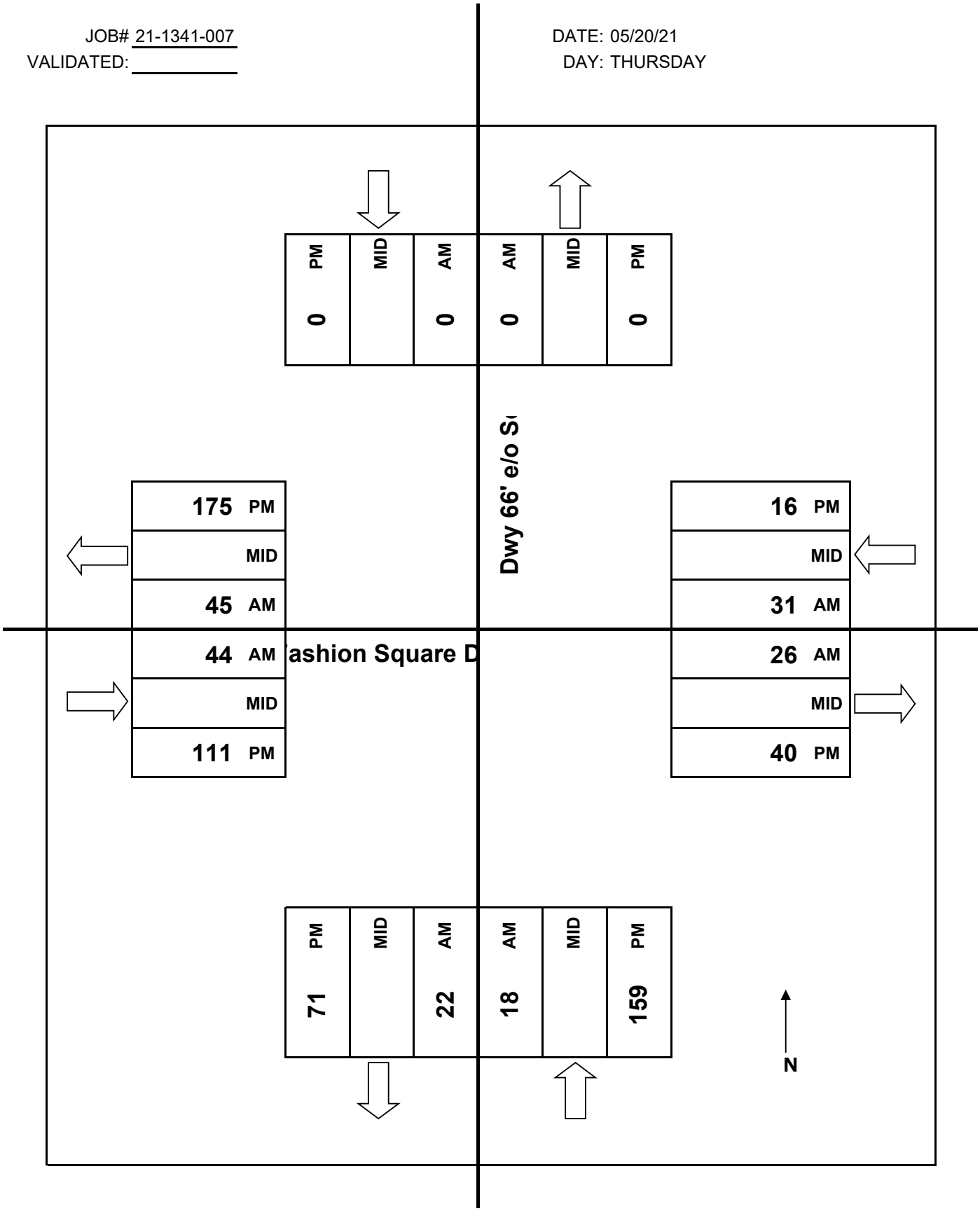
	PEDESTRIANS			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	0	1	0	0
4:15 PM	0	1	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	1	0	0
5:15 PM	0	3	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
TOTAL	**0**	**6**	**0**	**0**

	BICYCLES			
	N-LEG	S-LEG	E-LEG	W-LEG
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**



JOB# 21-1341-007
VALIDATED: _____

DATE: 05/20/21
DAY: THURSDAY



Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Thursday, May 20, 2021 City: Scottsdale Project #: 21-1341-008

Location: Highland Ave east of Scottsdale Rd

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			0		1			12:00			26		25		
00:15			0		0			12:15			28		25		
00:30			0		0			12:30			25		18		
00:45			0	0	0	1	1	12:45			23	102	20	88	190
01:00			0		0			13:00			23		12		
01:15			0		1			13:15			26		26		
01:30			1		0			13:30			25		26		
01:45			1	2	0	1	3	13:45			12	86	26	90	176
02:00			0		0			14:00			25		13		
02:15			0		1			14:15			14		20		
02:30			2		1			14:30			17		23		
02:45			0	2	0	2	4	14:45			17	73	15	71	144
03:00			0		1			15:00			24		19		
03:15			0		0			15:15			15		21		
03:30			0		0			15:30			22		16		
03:45			0	0	0	1	1	15:45			20	81	14	70	151
04:00			0		0			16:00			20		32		
04:15			0		0			16:15			10		27		
04:30			1		0			16:30			11		14		
04:45			0	1	0	0	1	16:45			17	58	25	98	156
05:00			1		0			17:00			7		26		
05:15			1		0			17:15			18		23		
05:30			2		0			17:30			14		18		
05:45			2	6	2	2	8	17:45			15	54	18	85	139
06:00			2		0			18:00			18		24		
06:15			6		1			18:15			7		10		
06:30			5		0			18:30			7		14		
06:45			24	37	2	3	40	18:45			7	39	7	55	94
07:00			15		2			19:00			13		16		
07:15			6		8			19:15			16		14		
07:30			11		1			19:30			16		13		
07:45			8	40	4	15	55	19:45			7	52	9	52	104
08:00			17		1			20:00			8		13		
08:15			20		13			20:15			5		7		
08:30			33		4			20:30			4		8		
08:45			23	93	9	27	120	20:45			6	23	6	34	57
09:00			32		14			21:00			6		6		
09:15			19		19			21:15			2		6		
09:30			16		5			21:30			1		6		
09:45			29	96	21	59	155	21:45			0	9	4	22	31
10:00			22		7			22:00			1		2		
10:15			6		14			22:15			1		7		
10:30			17		15			22:30			0		0		
10:45			21	66	17	53	119	22:45			1	3	2	11	14
11:00			27		21			23:00			1		2		
11:15			18		17			23:15			1		5		
11:30			23		21			23:30			0		1		
11:45			28	96	19	78	174	23:45			0	2	0	8	10
Total Vol.			439		242		**681**				582		684		**1266**

GPS Coordinates: 33.505948, -111.925540

Daily Totals

NB	SB	EB	WB	Combined
		1021	926	**1947**

	AM			PM		
Split %	64.5%	35.5%	**35.0%**	46.0%	54.0%	**65.0%**
Peak Hour	08:15	11:30	**11:30**	12:00	16:00	**12:00**
Volume	108	90	**195**	102	98	**190**
P.H.F.	0.82	0.90	**0.92**	0.91	0.77	**0.90**

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Thursday, May 20, 2021 City: Scottsdale Project #: 21-1341-009

Location: Highland Ave west of Scottsdale Rd

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			7		0			12:00			102		40		
00:15			4		0			12:15			113		30		
00:30			4		0			12:30			125		33		
00:45			5	20	0	0	20	12:45			140	480	39	142	622
01:00			5		0			13:00			159		30		
01:15			2		3			13:15			143		36		
01:30			2		0			13:30			119		25		
01:45			5	14	1	4	18	13:45			139	560	38	129	689
02:00			5		0			14:00			141		29		
02:15			5		1			14:15			134		22		
02:30			4		1			14:30			152		34		
02:45			2	16	1	3	19	14:45			157	584	26	111	695
03:00			1		0			15:00			142		34		
03:15			4		1			15:15			125		20		
03:30			0		0			15:30			155		24		
03:45			2	7	0	1	8	15:45			132	554	24	102	656
04:00			2		1			16:00			162		33		
04:15			2		3			16:15			118		28		
04:30			2		1			16:30			121		28		
04:45			4	10	1	6	16	16:45			123	524	30	119	643
05:00			8		3			17:00			157		30		
05:15			13		3			17:15			143		30		
05:30			11		2			17:30			155		22		
05:45			19	51	4	12	63	17:45			127	582	27	109	691
06:00			22		3			18:00			115		23		
06:15			31		4			18:15			112		29		
06:30			26		7			18:30			144		29		
06:45			51	130	7	21	151	18:45			98	469	25	106	575
07:00			31		14			19:00			140		20		
07:15			62		8			19:15			121		19		
07:30			54		13			19:30			105		34		
07:45			88	235	19	54	289	19:45			76	442	12	85	527
08:00			78		8			20:00			107		18		
08:15			81		14			20:15			62		19		
08:30			65		15			20:30			81		13		
08:45			87	311	16	53	364	20:45			66	316	12	62	378
09:00			64		22			21:00			67		20		
09:15			65		19			21:15			78		5		
09:30			56		19			21:30			40		8		
09:45			89	274	17	77	351	21:45			51	236	16	49	285
10:00			44		16			22:00			55		10		
10:15			57		19			22:15			28		9		
10:30			71		21			22:30			17		1		
10:45			102	274	22	78	352	22:45			24	124	2	22	146
11:00			87		34			23:00			19		6		
11:15			101		23			23:15			18		5		
11:30			105		35			23:30			15		6		
11:45			134	427	31	123	550	23:45			15	67	5	22	89
Total Vol.				1769		432	**2201**					4938		1058	**5996**

GPS Coordinates: 33.505977, -111.926624

Daily Totals

NB	SB	EB	WB	Combined
		6707	1490	**8197**

	AM			PM		
Split %	80.4%	19.6%	**26.9%**	82.4%	17.6%	**73.1%**
Peak Hour	11:45	11:30	**11:45**	14:15	12:00	**12:30**
Volume	474	136	**608**	585	142	**705**
P.H.F.	0.88	0.85	**0.92**	0.93	0.89	**0.93**

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Thursday, May 20, 2021 City: Scottsdale Project #: 21-1341-010

Location: Coolidge St east of Scottsdale Rd

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			0		0			12:00			3		3		
00:15			0		0			12:15			3		2		
00:30			0		0			12:30			3		10		
00:45			0	0	0	0		12:45			0	9	2	17	26
01:00			0		1			13:00			1		2		
01:15			0		0			13:15			7		5		
01:30			1		1			13:30			4		4		
01:45			1	2	0	2	4	13:45			3	15	3	14	29
02:00			0		0			14:00			2		4		
02:15			0		0			14:15			5		4		
02:30			0		0			14:30			2		5		
02:45			0	0	1	1	1	14:45			2	11	3	16	27
03:00			0		0			15:00			3		4		
03:15			0		0			15:15			1		2		
03:30			0		0			15:30			0		5		
03:45			0	0	0	0		15:45			3	7	3	14	21
04:00			0		0			16:00			1		2		
04:15			0		0			16:15			4		5		
04:30			0		0			16:30			1		5		
04:45			0	0	0	0		16:45			1	7	8	20	27
05:00			0		0			17:00			2		6		
05:15			0		2			17:15			0		4		
05:30			0		0			17:30			1		0		
05:45			1	1	0	2	3	17:45			2	5	4	14	19
06:00			1		3			18:00			3		3		
06:15			0		0			18:15			3		2		
06:30			2		1			18:30			2		1		
06:45			0	3	1	5	8	18:45			1	9	2	8	17
07:00			2		1			19:00			2		1		
07:15			3		1			19:15			1		1		
07:30			1		1			19:30			0		2		
07:45			3	9	1	4	13	19:45			0	3	1	5	8
08:00			4		2			20:00			1		2		
08:15			2		3			20:15			0		2		
08:30			1		4			20:30			1		0		
08:45			3	10	3	12	22	20:45			0	2	4	8	10
09:00			2		3			21:00			1		2		
09:15			3		4			21:15			0		1		
09:30			2		2			21:30			0		0		
09:45			3	10	3	12	22	21:45			0	1	1	4	5
10:00			1		0			22:00			0		0		
10:15			3		1			22:15			1		0		
10:30			1		3			22:30			0		0		
10:45			2	7	3	7	14	22:45			1	2	0	0	2
11:00			3		3			23:00			0		0		
11:15			5		4			23:15			0		0		
11:30			1		2			23:30			1		0		
11:45			5	14	5	14	28	23:45			0	1	0	0	1
Total Vol.				56		59	**115**					72		120	**192**

GPS Coordinates: 33.505366, -111.925613

Daily Totals

NB	SB	EB	WB	Combined
		128	179	**307**

	AM			PM		
Split %	48.7%	51.3%	**37.5%**	37.5%	62.5%	**62.5%**
Peak Hour	11:00	11:45	**11:45**	13:15	16:15	**13:15**
Volume	14	20	**34**	16	24	**32**
P.H.F.	0.70	0.50	**0.65**	0.57	0.75	**0.67**

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Thursday, May 20, 2021 City: Scottsdale Project #: 21-1341-011

Location: Fashion Square Dr east of Scottsdale Rd

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			0		1			12:00			16		29		
00:15			0		0			12:15			21		32		
00:30			0		0			12:30			25		37		
00:45			0	0	0	1	1	12:45			11	73	33	131	204
01:00			1		0			13:00			9		26		
01:15			0		0			13:15			19		34		
01:30			2		2			13:30			15		26		
01:45			0	3	1	3	6	13:45			14	57	29	115	172
02:00			0		0			14:00			7		25		
02:15			1		0			14:15			16		27		
02:30			0		0			14:30			11		28		
02:45			1	2	0	0	2	14:45			11	45	24	104	149
03:00			0		0			15:00			8		18		
03:15			0		1			15:15			18		22		
03:30			0		0			15:30			8		28		
03:45			1	1	0	1	2	15:45			7	41	16	84	125
04:00			1		0			16:00			17		15		
04:15			0		0			16:15			17		22		
04:30			0		0			16:30			18		17		
04:45			1	2	0	0	2	16:45			18	70	22	76	146
05:00			2		0			17:00			8		28		
05:15			0		2			17:15			13		24		
05:30			3		0			17:30			9		20		
05:45			1	6	1	3	9	17:45			11	41	27	99	140
06:00			4		1			18:00			20		18		
06:15			2		1			18:15			13		24		
06:30			4		5			18:30			15		23		
06:45			3	13	7	14	27	18:45			9	57	23	88	145
07:00			5		2			19:00			15		21		
07:15			2		6			19:15			12		16		
07:30			2		8			19:30			14		18		
07:45			6	15	5	21	36	19:45			7	48	13	68	116
08:00			4		4			20:00			9		13		
08:15			10		8			20:15			11		7		
08:30			9		8			20:30			9		7		
08:45			6	29	4	24	53	20:45			5	34	11	38	72
09:00			11		14			21:00			3		16		
09:15			3		6			21:15			5		4		
09:30			4		9			21:30			3		5		
09:45			5	23	7	36	59	21:45			1	12	2	27	39
10:00			10		6			22:00			1		2		
10:15			10		18			22:15			1		3		
10:30			11		17			22:30			1		0		
10:45			19	50	25	66	116	22:45			2	5	1	6	11
11:00			11		24			23:00			1		3		
11:15			13		20			23:15			1		3		
11:30			15		17			23:30			4		0		
11:45			17	56	32	93	149	23:45			0	6	0	6	12
Total Vol.				200		262	**462**					489		842	**1331**

GPS Coordinates: 33.504154, -111.925567

Daily Totals

NB	SB	EB	WB	Combined
		689	1104	**1793**

	AM			PM		
Split %	43.3%	56.7%	**25.8%**	36.7%	63.3%	**74.2%**
Peak Hour	11:45	11:45	**11:45**	12:00	12:00	**12:00**
Volume	79	130	**209**	73	131	**204**
P.H.F.	0.79	0.88	**0.84**	0.73	0.89	**0.82**

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Thursday, May 20, 2021 City: Scottsdale Project #: 21-1341-012

Location: Scottsdale Rd south of Highland Ave

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	19		14					12:00	213		197				
00:15	18		14					12:15	205		233				
00:30	18		6					12:30	249		245				
00:45	16	71	10	44			115	12:45	222	889	222	897			1786
01:00	11		10					13:00	239		196				
01:15	8		2					13:15	216		193				
01:30	19		6					13:30	205		206				
01:45	7	45	12	30			75	13:45	189	849	193	788			1637
02:00	12		9					14:00	244		210				
02:15	16		10					14:15	224		198				
02:30	12		8					14:30	215		181				
02:45	10	50	5	32			82	14:45	214	897	222	811			1708
03:00	6		6					15:00	206		174				
03:15	10		5					15:15	212		211				
03:30	6		3					15:30	189		161				
03:45	7	29	6	20			49	15:45	205	812	218	764			1576
04:00	8		6					16:00	211		184				
04:15	20		3					16:15	251		209				
04:30	13		6					16:30	193		199				
04:45	20	61	9	24			85	16:45	201	856	210	802			1658
05:00	20		8					17:00	217		196				
05:15	26		14					17:15	265		209				
05:30	35		25					17:30	194		192				
05:45	37	118	39	86			204	17:45	207	883	242	839			1722
06:00	30		28					18:00	211		186				
06:15	49		44					18:15	192		216				
06:30	75		43					18:30	162		160				
06:45	90	244	63	178			422	18:45	175	740	162	724			1464
07:00	116		84					19:00	165		144				
07:15	104		93					19:15	177		155				
07:30	135		83					19:30	162		120				
07:45	156	511	140	400			911	19:45	167	671	122	541			1212
08:00	159		130					20:00	136		103				
08:15	164		116					20:15	150		109				
08:30	173		117					20:30	125		103				
08:45	125	621	161	524			1145	20:45	137	548	90	405			953
09:00	150		157					21:00	127		72				
09:15	145		140					21:15	97		68				
09:30	179		141					21:30	75		64				
09:45	167	641	173	611			1252	21:45	94	393	73	277			670
10:00	149		142					22:00	86		56				
10:15	162		173					22:15	69		49				
10:30	175		197					22:30	54		34				
10:45	182	668	179	691			1359	22:45	48	257	33	172			429
11:00	186		219					23:00	37		34				
11:15	188		216					23:15	39		37				
11:30	179		199					23:30	22		32				
11:45	233	786	221	855			1641	23:45	34	132	21	124			256
Total Vol.		3845		3495			**7340**			7927		7144			**15071**

GPS Coordinates: 33.505547, -111.926130

Daily Totals

NB	SB	EB	WB	**Combined**
11772	10639			**22411**

	AM			**PM**		
Split %	52.4%	47.6%	**32.8%**	52.6%	47.4%	**67.2%**
Peak Hour	11:45	11:45	**11:45**	12:30	12:00	**12:15**
Volume	900	896	**1796**	926	897	**1811**
P.H.F.	0.90	0.91	**0.91**	0.93	0.92	**0.92**

Appendix D – Existing Signal Timing

D

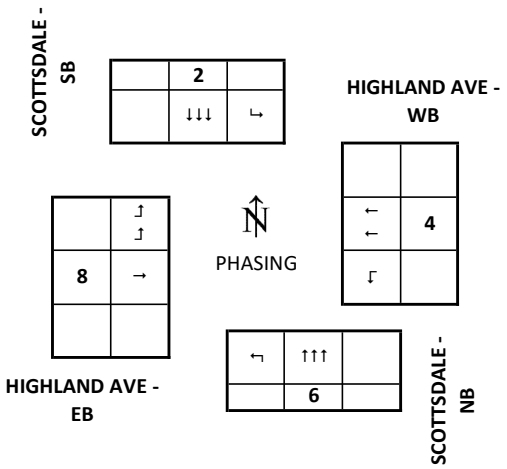
SCOTTSDALE & HIGHLAND AVE

System # 64

BASIC TIMING PLAN

Section #	I.P. Address	Date Designed
	MM1-5-1	
	172.27.10.64	6/21/2021

	Phase		2		4		6		8
	Movement		SBT		WBT		NBT		EBT
	NOTES		COORD				COORD		
TIMING PLAN - MM-2-1	MIN GRN		10		7		10		7
	BK MGRN								
	CS MGRN								
	DLY GRN								
	WALK		8		0		7		9
	WALK2								
	WLK MAX								
	PED CLR/FDW		17		-		16		24
	PD CLR2								
	PC MAX								
	PED CO								
	VEH EXT		1		1		1		1
	VH EXT2								
	MAX 1		70		20		70		40
	MAX 2		75		35		75		50
	MAX 3								
	DYM MAX								
	DYM STP								
	YELLOW		4.4		3.6		4.4		3.6
	RED CLR		1.3		1.5		1.3		1.5
	RED MAX								
	RED RVT		2		2		2		2
	ACT B4								
	SEC/ACT								
	MAX INT								
	TIME B4								
	CARS WT								
	STPTDUC								
	TTREDUC								
	MIN GAP								
RECALLS - MM-2-8	LOCK DET								
	VEH RECALL		X				X		
	PED RECALL								
	MAX RECALL								
	SOFT RECALL								
	NO REST								
	ADD INIT CAL								



PHASING SEQUENCES

TOD: MORNING

R1	2		4	8
R2	6		0	
		B		B

Use Timing plan:

TOD: MIDDAY

R1	2		4	8
R2	6		0	
		B		B

Use Timing plan:

TOD: EVENING

R1	2		4	8
R2	6		0	
		B		B

Use Timing plan:

TOD: NIGHT

R1	2		4	8
R2	6		0	
		B		B

Use Timing plan:

FREE

R1	2		4	8
R2	6			
		B		B

Use Timing plan: 254

NOTES

Approved By

Effective Date 6/21/2021

SCOTTSDALE & HIGHLAND AVE

System #	64

COORDINATOR	Section #	Date Updated
	0	6/21/2021

PHASE	1	2	3	4	5	6	7	8
FDW		17		-		16		24
YELLOW		4.4		3.6		4.4		3.6
ALL RED		1.3		1.5		1.3		1.5
WALK		17		-		16		24

PLAN 1 AM PLAN OPERATIVE TIMES 6:00

									COORD PATTERN	OFFSET
R1	2	↓			4	←	8	→		
R2	6	↑			0	↑↑↑			Balanced	54
	RING 1				RING 2					
PHASE		2		4		6		8		
SPLIT		60		20		60		40	Target Cycle Length	
COORD		X				X			120	
RECALLS		V				V			Actual Cycle Length	
GREEN		54.3		14.9		54.3		34.9	120	

PLAN 2 MIDDAY PLAN OPERATIVE TIMES 9:00

									COORD PATTERN	OFFSET
R1	2	↓			4	←	8	→		
R2	6	↑			0	↑↑↑			Balanced	62
	RING 1				RING 2					
PHASE		2		4		6		8		
SPLIT		52		18		52		38	Target Cycle Length	
COORD		X				X			108	
RECALLS		V				V			Actual Cycle Length	
GREEN		46.3		12.9		46.3		32.9	108	

PLAN 3 PM PLAN OPERATIVE TIMES 15:00

									COORD PATTERN	OFFSET
R1	2	↓			4	←	8	→		
R2	6	↑			0	↑↑↑			Balanced	13
	RING 1				RING 2					
PHASE		2		4		6		8		
SPLIT		56		20		56		44	Target Cycle Length	
COORD		X				X			120	
RECALLS		V				V			Actual Cycle Length	
GREEN		50.3		14.9		50.3		38.9	120	

PLAN 10 MIDNIGHT PLAN OPERATIVE TIMES

									COORD PATTERN	OFFSET
R1	2	↓			4	←	8	→		
R2	6	↑			0	↑↑↑			Balanced	62
	RING 1				RING 2					
PHASE		2		4		6		8		
SPLIT		43		15		43		32	Target Cycle Length	
COORD		X				X			90	
RECALLS		V				V			Actual Cycle Length	
GREEN		37.3		9.9		37.3		26.9	90	

SCOTTSDALE & FASHION SQUARE

System # 63

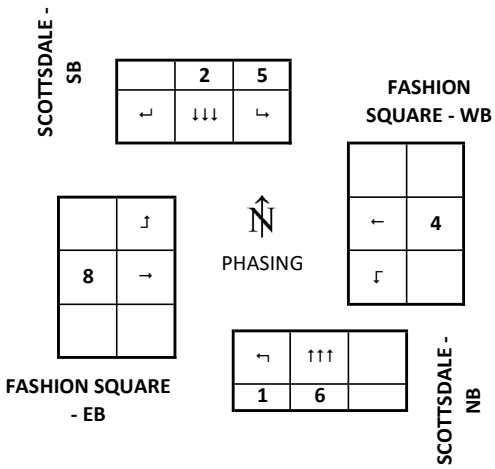
BASIC TIMING PLAN

Section #	I.P. Address	Date Designed
	MM1-5-1	
	172.27.10.63	6/29/2021

	Phase	1	2		4	5	6		8
	Movement	NBL	SBT		WBT	SBL	NBT		EBT
	NOTES	L-P&p	COORD			L-P&p	COORD		
	MIN GRN	5	10		7	5	10		7
	BK MGRN								
	CS MGRN								
	DLY GRN								
	WALK		7		7		7		7
	WALK2								
	WLK MAX								
	PED CLR/FDW		11		27		8		21
	PD CLR2								
	PC MAX								
	PED CO								
	VEH EXT	2	1		2	2	1		2
	VH EXT2								
	MAX 1	15	65		45	15	65		45
	MAX 2	30	80		50	30	80		50
	MAX 3								
	DYM MAX								
	DYM STP								
	YELLOW	3.6	4.4		3.3	3.6	4.4		3.3
	RED CLR	2	1.2		2.1	2	1.2		2.1
	RED MAX								
	RED RVT	2	2		2	2	2		2
	ACT B4								
	SEC/ACT								
	MAX INT								
	TIME B4								
	CARS WT								
	STPTDUC								
	TTREDUC								
	MIN GAP								
	LOCK DET								
	VEH RECALL		X				X		
	PED RECALL								
	MAX RECALL								
	SOFT RECALL								
	NO REST								
	ADD INIT CAL								

TIMING PLAN - MM-2-1

RECALLS - MM-2-8



PHASING SEQUENCES

TOD: MORNING
R1: 2 1 4
R2: 6 5 8
B B
Use Timing plan:

TOD: MIDDAY
R1: 2 1 4
R2: 6 5 8
B B
Use Timing plan:

TOD: EVENING
R1: 2 1 4
R2: 6 5 8
B B
Use Timing plan:

TOD: NIGHT
R1: 2 1 4
R2: 6 5 8
B B
Use Timing plan:

FREE
R1: 2 1 4
R2: 6 5 8
B B
Use Timing plan: 254

NOTES

Approved By

Effective Date 6/29/2021

SCOTTSDALE & FASHION SQUARE

System #	63

COORDINATOR	Section #	Date Updated
	0	6/29/2021

	PHASE	1	2	3	4	5	6	7	8
	FDW		11		27		8		21
	YELLOW	3.6	4.4		3.3	3.6	4.4		3.3
	ALL RED	2	1.2		2.1	2	1.2		2.1
	WALK		11		27		8		21

PLAN 1 AM PLAN OPERATIVE TIMES 6:00	R1	2	↓	1	↰	4	←			COORD PATTERN	OFFSET
	R2	6	↑	5	↳	8	→			Balanced	38
		RING 1				RING 2					
	PHASE	1	2		4	5	6		8		
	SPLIT	11	48		41	11	68		41	Target Cycle Length	
	COORD		X				X			120	
	RECALLS		V				V			Actual Cycle Length	
	GREEN	5.4	42.4		35.6	5.4	62.4		35.6	120	

PLAN 2 MIDDAY PLAN OPERATIVE TIMES 9:00	R1	2	↓	1	↰	4	←			COORD PATTERN	OFFSET
	R2	6	↑	5	↳	8	→			Balanced	67
		RING 1				RING 2					
	PHASE	1	2		4	5	6		8		
	SPLIT	15	49		44	15	49		44	Target Cycle Length	
	COORD		X				X			108	
	RECALLS		V				V			Actual Cycle Length	
	GREEN	9.4	43.4		38.6	9.4	43.4		38.6	108	

PLAN 3 PM PLAN OPERATIVE TIMES 15:00	R1	2	↓	1	↰	4	←			COORD PATTERN	OFFSET
	R2	6	↑	5	↳	8	→			Balanced	12
		RING 1				RING 2					
	PHASE	1	2		4	5	6		8		
	SPLIT	14	62		44	14	62		44	Target Cycle Length	
	COORD		X				X			120	
	RECALLS		V				V			Actual Cycle Length	
	GREEN	8.4	56.4		38.6	8.4	56.4		38.6	120	

PLAN 10 MIDNIGHT PLAN OPERATIVE TIMES	R1	2	↓	1	↰	4	←			COORD PATTERN	OFFSET
	R2	6	↑	5	↳	8	→			Balanced	89
		RING 1				RING 2					
	PHASE	1	2		4	5	6		8		
	SPLIT	12	50		28	12	50		28	Target Cycle Length	
	COORD		X				X			90	
	RECALLS		V				V			Actual Cycle Length	
	GREEN	6.4	44.4		22.6	6.4	44.4		22.6	90	

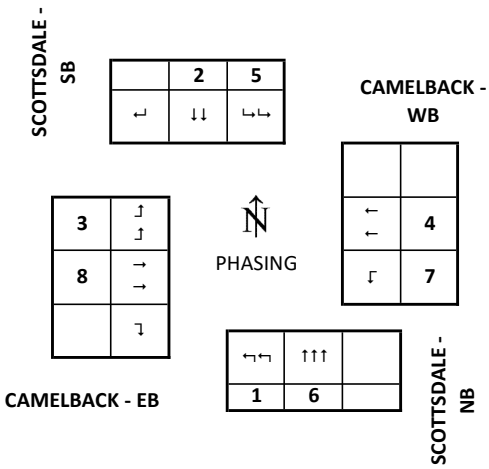
SCOTTSDALE & CAMELBACK

System # 59

BASIC TIMING PLAN

Section #	I.P. Address	Date Designed
	MM1-5-1	
	172.27.10.59	6/21/2021

	Phase	1	2	3	4	5	6	7	8
TIMING PLAN - MM-2-1	Movement	NBL	SBT	EBL	WBT	SBL	NBT	WBL	EBT
	NOTES	PROT	COORD	PROT		PROT	COORD	PROT	
	MIN GRN	5	10	5	7	5	10	5	7
	BK MGRN								
	CS MGRN								
	DLY GRN		5		5		5		5
	WALK		4		4		4		4
	WALK2								
	WLK MAX								
	PED CLR/FDW		23		30		24		25
	PD CLR2								
	PC MAX								
	PED CO								
	VEH EXT	2	2	2	2	2	2	2	2
	VH EXT2								
	MAX 1	20	50	20	50	20	50	20	50
	MAX 2	35	65	40	65	35	65	40	65
	MAX 3								
	DYM MAX								
	DYM STP								
	YELLOW	3	4.4	3.3	4	3.6	3.6	3.3	4
	RED CLR	2	1.0	2	1.5	2	1.4	2	1.5
	RED MAX								
	RED RVT	2	2	2	2	2	2	2	2
	ACT B4								
	SEC/ACT								
	MAX INT								
	TIME B4								
	CARS WT								
	STPTDUC								
	TTREDUC								
	MIN GAP								
RECALLS - MM-2-8	LOCK DET								
	VEH RECALL		X				X		
	PED RECALL								
	MAX RECALL								
	SOFT RECALL								
	NO REST								
	ADD INIT CAL								



PHASING SEQUENCES

TOD: MORNING

R1	1	2	4	3
R2	6	5	8	7
		B		B

Use Timing plan:

TOD: MIDDAY

R1	1	2	4	3
R2	6	5	8	7
		B		B

Use Timing plan:

TOD: EVENING

R1	1	2	4	3
R2	6	5	8	7
		B		B

Use Timing plan:

TOD: NIGHT

R1	2	2	4	3
R2	5	6	8	7
		B		B

Use Timing plan:

FREE

R1	1	2	4	3
R2	6	5	8	7
		B		B

Use Timing plan: 254

NOTES

Approved By

Effective Date 6/21/2021

SCOTTSDALE & CAMELBACK

System #	59

COORDINATOR

Section #	Date Updated
0	6/21/2021

PHASE	1	2	3	4	5	6	7	8
FDW		23		30		24		25
YELLOW	3	4.4	3.3	4	3.6	3.6	3.3	4
ALL RED	2	1	2	1.5	2	1.4	2	1.5
WALK		23		30		24		25

PLAN 1 AM PLAN OPERATIVE TIMES 6:00

R1	1	↰	2	↓	4	←	3	↥	COORD PATTERN	OFFSET
R2	6	↑	5	↳	8	→	7	↱	Balanced	27

	RING 1				RING 2				
PHASE	1	2	3	4	5	6	7	8	
SPLIT	12	53	14	41	12	53	14	41	Target Cycle Length
COORD		X				X			120
RECALLS		V				V			Actual Cycle Length
GREEN	7.0	47.6	8.7	35.5	6.4	48.0	8.7	35.5	120

PLAN 2 MIDDAY PLAN OPERATIVE TIMES 9:00

R1	1	↰	2	↓	4	←	3	↥	COORD PATTERN	OFFSET
R2	6	↑	5	↳	8	→	7	↱	Balanced	43

	RING 1				RING 2				
PHASE	1	2	3	4	5	6	7	8	
SPLIT	17	38	13	40	14	41	13	40	Target Cycle Length
COORD		X				X			108
RECALLS		V				V			Actual Cycle Length
GREEN	12.0	32.6	7.7	34.5	8.4	36.0	7.7	34.5	108

PLAN 3 PM PLAN OPERATIVE TIMES 15:00

R1	1	↰	2	↓	4	←	3	↥	COORD PATTERN	OFFSET
R2	6	↑	5	↳	8	→	7	↱	Balanced	104

	RING 1				RING 2				
PHASE	1	2	3	4	5	6	7	8	
SPLIT	21	42	16	41	23	40	18	39	Target Cycle Length
COORD		X				X			120
RECALLS		V				V			Actual Cycle Length
GREEN	16.0	36.6	###	35.5	###	35.0	12.7	33.5	120

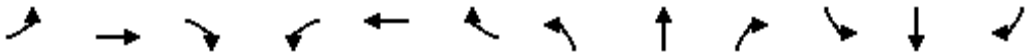
PLAN 10 MIDNIGHT PLAN OPERATIVE TIMES

R1	2	↓	2	↓	4	←	3	↥	COORD PATTERN	OFFSET
R2	5	↳	6	↑	8	→	7	↱	Balanced	88

	RING 1				RING 2				
PHASE		2	3	4	5	6	7	8	
SPLIT	17	33	15	25	15	35	14	26	Target Cycle Length
COORD		X				X			90
RECALLS		V				V			Actual Cycle Length
GREEN	12.0	27.6	9.7	19.5	9.4	30.0	8.7	20.5	90

Appendix E – Existing Capacity Analysis

E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	315	18	14	8	2	22	19	632	39	47	561	39
Future Volume (veh/h)	315	18	14	8	2	22	19	632	39	47	561	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	321	18	14	8	2	22	19	645	40	48	572	40
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	486	145	113	243	20	219	650	3741	231	608	3710	257
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.76	0.76	0.76	0.76	0.76	0.76
Sat Flow, veh/h	2691	975	759	1377	134	1472	810	4917	303	757	4875	338
Grp Volume(v), veh/h	321	0	32	8	0	24	19	445	240	48	398	214
Grp Sat Flow(s),veh/h/ln	1346	0	1734	1377	0	1605	810	1702	1816	757	1702	1809
Q Serve(g_s), s	14.0	0.0	1.9	0.6	0.0	1.5	0.8	4.3	4.4	2.2	3.8	3.8
Cycle Q Clear(g_c), s	15.6	0.0	1.9	2.5	0.0	1.5	4.6	4.3	4.4	6.6	3.8	3.8
Prop In Lane	1.00		0.44	1.00		0.92	1.00		0.17	1.00		0.19
Lane Grp Cap(c), veh/h	486	0	258	243	0	239	650	2590	1382	608	2590	1377
V/C Ratio(X)	0.66	0.00	0.12	0.03	0.00	0.10	0.03	0.17	0.17	0.08	0.15	0.16
Avail Cap(c_a), veh/h	868	0	504	243	0	239	650	2590	1382	608	2590	1377
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.8	0.0	44.3	45.4	0.0	44.1	4.5	3.9	3.9	4.9	3.9	3.9
Incr Delay (d2), s/veh	0.6	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.3	0.3	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	0.0	0.8	0.2	0.0	0.6	0.1	1.2	1.4	0.3	1.1	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.4	0.0	44.3	45.4	0.0	44.2	4.6	4.1	4.2	5.1	4.0	4.1
LnGrp LOS	D	A	D	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h		353			32			704			660	
Approach Delay, s/veh		50.8			44.5			4.1			4.1	
Approach LOS		D			D			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		97.0		23.0		97.0		23.0				
Change Period (Y+Rc), s		* 5.7		5.1		* 5.7		5.1				
Max Green Setting (Gmax), s		* 54		14.9		* 54		34.9				
Max Q Clear Time (g_c+I1), s		8.6		4.5		6.6		17.6				
Green Ext Time (p_c), s		1.4		0.0		1.5		0.3				

Intersection Summary												
HCM 6th Ctrl Delay			14.3									
HCM 6th LOS			B									

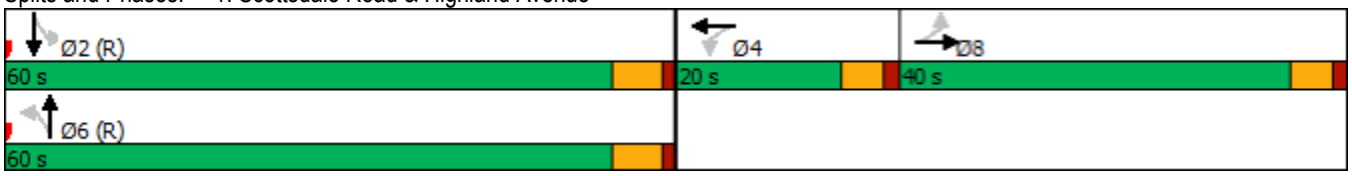
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Phase Number	2	4	6	8
Movement	SBTL	WBTL	NBTL	EBTL
Lead/Lag		Lead		Lag
Lead-Lag Optimize		Yes		Yes
Recall Mode	C-Max	None	C-Max	None
Maximum Split (s)	60	20	60	40
Maximum Split (%)	50.0%	16.7%	50.0%	33.3%
Minimum Split (s)	60	20	60	40
Yellow Time (s)	4.4	3.6	4.4	3.6
All-Red Time (s)	1.3	1.5	1.3	1.5
Minimum Initial (s)	10	7	10	7
Vehicle Extension (s)	1	1	1	1
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	14		14	7
Flash Dont Walk (s)	17		16	24
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	60	0	80
End Time (s)	60	80	60	0
Yield/Force Off (s)	54.3	74.9	54.3	114.9
Yield/Force Off 170(s)	37.3	74.9	38.3	90.9
Local Start Time (s)	0	60	0	80
Local Yield (s)	54.3	74.9	54.3	114.9
Local Yield 170(s)	37.3	74.9	38.3	90.9

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	120
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	

Splits and Phases: 1: Scottsdale Road & Highland Avenue



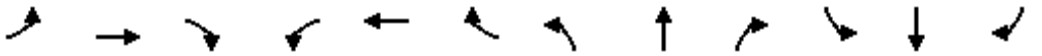
Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	14	668	12	0	610
Future Vol, veh/h	0	14	668	12	0	610
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	-	200	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	14	682	12	0	622

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	341	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	559	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	559	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	559	-
HCM Lane V/C Ratio	-	-	0.026	-
HCM Control Delay (s)	-	-	11.6	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	0	7	10	0	17	39	649	20	13	568	16
Future Volume (veh/h)	2	0	7	10	0	17	39	649	20	13	568	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2	0	8	11	0	19	43	713	22	14	624	18
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	127	0	68	59	6	42	899	3955	122	575	3117	967
Arrive On Green	0.04	0.00	0.04	0.04	0.00	0.04	0.42	1.00	1.00	0.08	1.00	1.00
Sat Flow, veh/h	1393	0	1585	419	151	985	1781	5090	157	1781	5106	1585
Grp Volume(v), veh/h	2	0	8	30	0	0	43	476	259	14	624	18
Grp Sat Flow(s),veh/h/ln	1393	0	1585	1555	0	0	1781	1702	1842	1781	1702	1585
Q Serve(g_s), s	0.0	0.0	0.6	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	0.0	0.6	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	0.37		0.63	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	127	0	68	108	0	0	899	2645	1431	575	3117	967
V/C Ratio(X)	0.02	0.00	0.12	0.28	0.00	0.00	0.05	0.18	0.18	0.02	0.20	0.02
Avail Cap(c_a), veh/h	480	0	470	492	0	0	899	2645	1431	581	3117	967
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.0	0.0	55.2	56.0	0.0	0.0	1.8	0.0	0.0	7.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.1	0.3	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.2	0.9	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.0	0.0	55.5	56.5	0.0	0.0	1.8	0.1	0.3	7.1	0.1	0.0
LnGrp LOS	E	A	E	E	A	A	A	A	A	A	A	A
Approach Vol, veh/h		10			30			778			656	
Approach Delay, s/veh		55.4			56.5			0.3			0.3	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	30.6	78.8		10.6	10.6	98.8		10.6				
Change Period (Y+Rc), s	* 5.6	5.6		* 5.4	* 5.6	5.6		* 5.4				
Max Green Setting (Gmax), s	* 5.4	42.4		* 36	* 5.4	62.4		* 36				
Max Q Clear Time (g_c+I1), s	2.0	2.0		4.2	2.0	2.0		2.6				
Green Ext Time (p_c), s	0.0	1.5		0.1	0.0	1.6		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	1.8
HCM 6th LOS	A

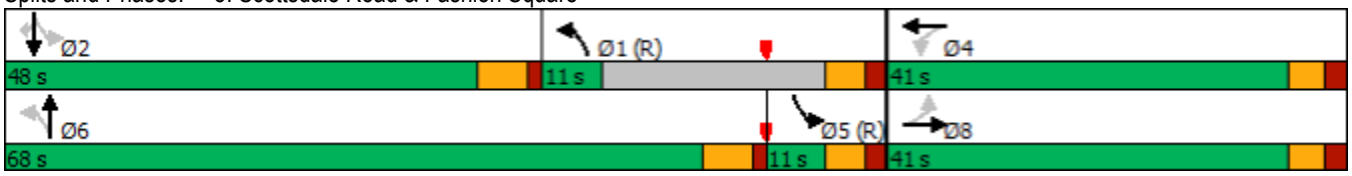
Notes

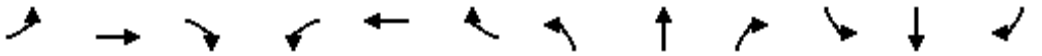
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Phase Number	1	2	4	5	6	8
Movement	NBL	SBTL	WBTL	SBL	NBTL	EBTL
Lead/Lag	Lag	Lead		Lag	Lead	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	C-Max	Max	None	C-Max	Max	None
Maximum Split (s)	11	48	41	11	68	41
Maximum Split (%)	9.2%	40.0%	34.2%	9.2%	56.7%	34.2%
Minimum Split (s)	11	48	41	11	68	41
Yellow Time (s)	3.6	4.4	3.3	3.6	4.4	3.3
All-Red Time (s)	2	1.2	2.1	2	1.2	2.1
Minimum Initial (s)	5	10	7	5	10	7
Vehicle Extension (s)	2	1	2	2	1	2
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Dont Walk (s)		11	27		8	20
Dual Entry	Yes	Yes	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	18	90	49	38	90	49
End Time (s)	49	18	90	49	38	90
Yield/Force Off (s)	43.4	12.4	84.6	43.4	32.4	84.6
Yield/Force Off 170(s)	43.4	1.4	57.6	43.4	24.4	64.6
Local Start Time (s)	100	52	11	0	52	11
Local Yield (s)	5.4	94.4	46.6	5.4	114.4	46.6
Local Yield 170(s)	5.4	83.4	19.6	5.4	106.4	26.6

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	120
Offset: 38 (32%), Referenced to phase 1:NBL and 5:SBL, Start of Green	

Splits and Phases: 3: Scottsdale Road & Fashion Square





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	136	281	88	76	350	127	84	443	49	104	392	75
Future Volume (veh/h)	136	281	88	76	350	127	84	443	49	104	392	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	142	293	92	79	365	132	88	461	51	108	408	78
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	197	610	272	100	439	156	137	2544	277	160	1975	881
Arrive On Green	0.06	0.17	0.17	0.06	0.17	0.17	0.04	0.54	0.54	0.05	0.56	0.56
Sat Flow, veh/h	3456	3554	1585	1781	2568	915	3456	4674	509	3456	3554	1585
Grp Volume(v), veh/h	142	293	92	79	251	246	88	334	178	108	408	78
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1706	1728	1702	1779	1728	1777	1585
Q Serve(g_s), s	4.8	8.9	6.1	5.3	16.4	16.8	3.0	5.9	6.1	3.7	6.9	2.8
Cycle Q Clear(g_c), s	4.8	8.9	6.1	5.3	16.4	16.8	3.0	5.9	6.1	3.7	6.9	2.8
Prop In Lane	1.00		1.00	1.00		0.54	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	197	610	272	100	304	291	137	1853	968	160	1975	881
V/C Ratio(X)	0.72	0.48	0.34	0.79	0.83	0.84	0.64	0.18	0.18	0.68	0.21	0.09
Avail Cap(c_a), veh/h	251	1051	469	129	526	505	202	1853	968	184	1975	881
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	55.7	44.9	43.7	55.9	48.0	48.2	56.8	13.8	13.8	56.3	13.4	12.4
Incr Delay (d2), s/veh	4.7	0.2	0.3	16.4	2.2	2.6	1.9	0.2	0.4	5.4	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	3.9	2.4	2.8	7.4	7.3	1.3	2.2	2.5	1.7	2.7	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.3	45.1	44.0	72.3	50.2	50.8	58.6	14.0	14.3	61.7	13.6	12.6
LnGrp LOS	E	D	D	E	D	D	E	B	B	E	B	B
Approach Vol, veh/h		527			576			600			594	
Approach Delay, s/veh		49.0			53.5			20.6			22.2	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	72.1	12.1	26.0	11.1	70.7	12.0	26.1
Change Period (Y+Rc), s	5.0	5.4	* 5.3	5.5	5.6	* 5.4	* 5.3	5.5
Max Green Setting (Gmax), s	7.0	47.6	* 8.7	35.5	6.4	* 48	* 8.7	35.5
Max Q Clear Time (g_c+I1), s	5.0	8.9	6.8	18.8	5.7	8.1	7.3	10.9
Green Ext Time (p_c), s	0.0	1.8	0.0	1.7	0.0	2.0	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	35.8
HCM 6th LOS	D

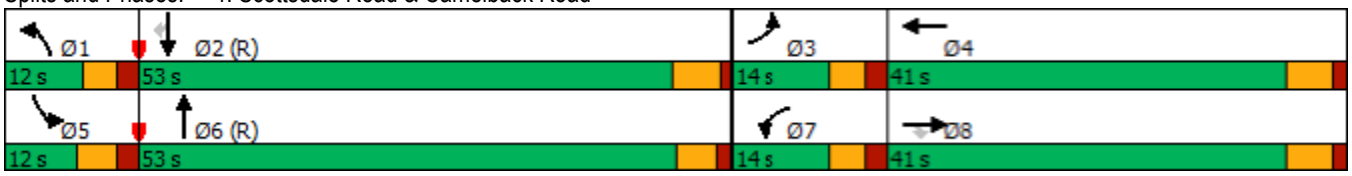
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBT	EBL	WBT	SBL	NBT	WBL	EBT
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	C-Max	None	None
Maximum Split (s)	12	53	14	41	12	53	14	41
Maximum Split (%)	10.0%	44.2%	11.7%	34.2%	10.0%	44.2%	11.7%	34.2%
Minimum Split (s)	12	53	14	41	12	53	14	41
Yellow Time (s)	3	4.4	3.3	4	3.6	3.6	3.3	4
All-Red Time (s)	2	1	2	1.5	2	1.4	2	1.5
Minimum Initial (s)	5	10	5	7	5	10	5	7
Vehicle Extension (s)	2	2	2	2	2	2	2	2
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		4		4		4		4
Flash Dont Walk (s)		23		30		24		25
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	15	27	80	94	15	27	80	94
End Time (s)	27	80	94	15	27	80	94	15
Yield/Force Off (s)	22	74.6	88.7	9.5	21.4	75	88.7	9.5
Yield/Force Off 170(s)	22	51.6	88.7	99.5	21.4	51	88.7	104.5
Local Start Time (s)	108	0	53	67	108	0	53	67
Local Yield (s)	115	47.6	61.7	102.5	114.4	48	61.7	102.5
Local Yield 170(s)	115	24.6	61.7	72.5	114.4	24	61.7	77.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	120
Offset: 27 (23%), Referenced to phase 2:SBT and 6:NBT, Start of Green	

Splits and Phases: 4: Scottsdale Road & Camelback Road



Intersection	
Int Delay, s/veh	2.5

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Vol, veh/h	19	14	2	14	14	3
Future Vol, veh/h	19	14	2	14	14	3
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	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	15	2	15	15	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	35	0	47	28
Stage 1	-	-	-	-	28	-
Stage 2	-	-	-	-	19	-
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	-	-	1579	-	969	1054
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	1004	-
Platoon blocked, %	-	-	1	-	1	1
Mov Cap-1 Maneuver	-	-	1579	-	968	1054
Mov Cap-2 Maneuver	-	-	-	-	968	-
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	1003	-

Approach	EB	WB	NW
HCM Control Delay, s	0	0.9	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NWLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	982	-	-	1579	-
HCM Lane V/C Ratio	0.019	-	-	0.001	-
HCM Control Delay (s)	8.7	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	10	2	0	14	0	2
Future Vol, veh/h	10	2	0	14	0	2
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	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	2	0	17	0	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	14	0	30	13
Stage 1	-	-	-	-	13	-
Stage 2	-	-	-	-	17	-
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	-	-	1604	-	984	1067
Stage 1	-	-	-	-	1010	-
Stage 2	-	-	-	-	1006	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1604	-	984	1067
Mov Cap-2 Maneuver	-	-	-	-	984	-
Stage 1	-	-	-	-	1010	-
Stage 2	-	-	-	-	1006	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1067	-	-	1604	-
HCM Lane V/C Ratio	0.002	-	-	-	-
HCM Control Delay (s)	8.4	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

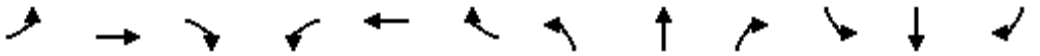
Intersection	
Int Delay, s/veh	3.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	0	5	17	0	0
Future Vol, veh/h	15	0	5	17	0	0
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	73	73	73	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	0	7	23	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	20	19	0	0	30	0
Stage 1	19	-	-	-	-	-
Stage 2	1	-	-	-	-	-
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	997	1059	-	-	1583	-
Stage 1	1004	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	997	1059	-	-	1583	-
Mov Cap-2 Maneuver	997	-	-	-	-	-
Stage 1	1004	-	-	-	-	-
Stage 2	1022	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	997	1583	-
HCM Lane V/C Ratio	-	-	0.021	-	-
HCM Control Delay (s)	-	-	8.7	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	549	8	48	28	23	48	45	904	25	27	829	65
Future Volume (veh/h)	549	8	48	28	23	48	45	904	25	27	829	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	597	9	52	30	25	52	49	983	27	29	901	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	758	68	392	402	153	319	373	3202	88	360	3025	238
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.63	0.63	0.63	0.63	0.63	0.63
Sat Flow, veh/h	2565	239	1382	1341	541	1126	578	5109	140	558	4827	379
Grp Volume(v), veh/h	597	0	61	30	0	77	49	655	355	29	635	337
Grp Sat Flow(s),veh/h/ln	1283	0	1622	1341	0	1668	578	1702	1845	558	1702	1802
Q Serve(g_s), s	27.4	0.0	3.4	2.0	0.0	4.2	5.1	10.7	10.7	3.0	10.3	10.3
Cycle Q Clear(g_c), s	31.5	0.0	3.4	5.4	0.0	4.2	15.4	10.7	10.7	13.7	10.3	10.3
Prop In Lane	1.00		0.85	1.00		0.68	1.00		0.08	1.00		0.21
Lane Grp Cap(c), veh/h	758	0	459	402	0	472	373	2133	1156	360	2133	1129
V/C Ratio(X)	0.79	0.00	0.13	0.07	0.00	0.16	0.13	0.31	0.31	0.08	0.30	0.30
Avail Cap(c_a), veh/h	863	0	526	402	0	472	373	2133	1156	360	2133	1129
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.1	0.0	32.0	34.0	0.0	32.3	13.8	10.4	10.4	13.5	10.3	10.3
Incr Delay (d2), s/veh	3.7	0.0	0.0	0.0	0.0	0.1	0.7	0.4	0.7	0.4	0.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	0.0	1.3	0.7	0.0	1.7	0.7	3.8	4.2	0.4	3.6	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.8	0.0	32.1	34.1	0.0	32.4	14.6	10.7	11.0	14.0	10.6	11.0
LnGrp LOS	D	A	C	C	A	C	B	B	B	B	B	B
Approach Vol, veh/h		658			107			1059			1001	
Approach Delay, s/veh		46.4			32.8			11.0			10.8	
Approach LOS		D			C			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		80.9		39.1		80.9		39.1				
Change Period (Y+Rc), s		* 5.7		5.1		* 5.7		5.1				
Max Green Setting (Gmax), s		* 50		14.9		* 50		38.9				
Max Q Clear Time (g_c+I1), s		15.7		7.4		17.4		33.5				
Green Ext Time (p_c), s		2.4		0.1		2.5		0.5				

Intersection Summary												
HCM 6th Ctrl Delay			20.0									
HCM 6th LOS			C									

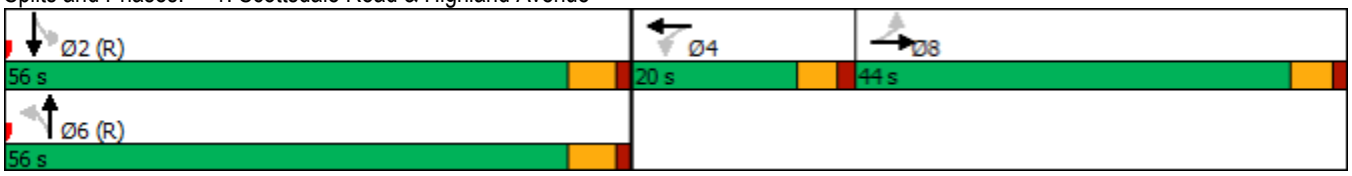
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Phase Number	2	4	6	8
Movement	SBTL	WBTL	NBTL	EBTL
Lead/Lag		Lead		Lag
Lead-Lag Optimize		Yes		Yes
Recall Mode	C-Max	None	C-Max	None
Maximum Split (s)	56	20	56	44
Maximum Split (%)	46.7%	16.7%	46.7%	36.7%
Minimum Split (s)	56	20	56	44
Yellow Time (s)	4.4	3.6	4.4	3.6
All-Red Time (s)	1.3	1.5	1.3	1.5
Minimum Initial (s)	10	7	10	7
Vehicle Extension (s)	1	1	1	1
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	8		7	9
Flash Dont Walk (s)	17		16	24
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	13	69	13	89
End Time (s)	69	89	69	13
Yield/Force Off (s)	63.3	83.9	63.3	7.9
Yield/Force Off 170(s)	46.3	83.9	47.3	103.9
Local Start Time (s)	0	56	0	76
Local Yield (s)	50.3	70.9	50.3	114.9
Local Yield 170(s)	33.3	70.9	34.3	90.9

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	120
Offset: 13 (11%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	

Splits and Phases: 1: Scottsdale Road & Highland Avenue



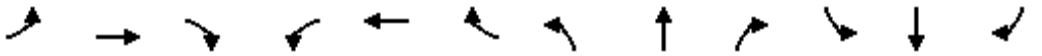
Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	26	986	5	0	916
Future Vol, veh/h	0	26	986	5	0	916
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	-	200	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	27	1027	5	0	954

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	514	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	433	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	433	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	433	-
HCM Lane V/C Ratio	-	-	0.063	-
HCM Control Delay (s)	-	-	13.9	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.2	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	2	72	65	0	37	57	907	30	33	877	47
Future Volume (veh/h)	36	2	72	65	0	37	57	907	30	33	877	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	38	2	75	68	0	39	59	945	31	34	914	49
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	218	5	196	123	11	48	453	3521	115	534	3540	1099
Arrive On Green	0.13	0.13	0.13	0.13	0.00	0.13	0.08	1.00	1.00	0.01	0.23	0.23
Sat Flow, veh/h	1368	41	1550	581	84	381	1781	5078	166	1781	5106	1585
Grp Volume(v), veh/h	38	0	77	107	0	0	59	633	343	34	914	49
Grp Sat Flow(s),veh/h/ln	1368	0	1591	1046	0	0	1781	1702	1840	1781	1702	1585
Q Serve(g_s), s	0.0	0.0	5.3	7.5	0.0	0.0	0.0	0.0	0.0	0.0	17.6	2.9
Cycle Q Clear(g_c), s	3.4	0.0	5.3	12.8	0.0	0.0	0.0	0.0	0.0	0.0	17.6	2.9
Prop In Lane	1.00		0.97	0.64		0.36	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	218	0	202	182	0	0	453	2360	1276	534	3540	1099
V/C Ratio(X)	0.17	0.00	0.38	0.59	0.00	0.00	0.13	0.27	0.27	0.06	0.26	0.04
Avail Cap(c_a), veh/h	485	0	512	456	0	0	504	2360	1276	584	3540	1099
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.88	0.88	0.88	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	0.0	48.1	52.7	0.0	0.0	10.8	0.0	0.0	4.6	21.0	15.3
Incr Delay (d2), s/veh	0.1	0.0	0.4	1.1	0.0	0.0	0.0	0.2	0.5	0.0	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	2.1	3.2	0.0	0.0	0.7	0.1	0.2	0.2	8.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.4	0.0	48.5	53.8	0.0	0.0	10.8	0.2	0.5	4.6	21.2	15.4
LnGrp LOS	D	A	D	D	A	A	B	A	A	A	C	B
Approach Vol, veh/h		115			107			1035			997	
Approach Delay, s/veh		48.1			53.8			0.9			20.3	
Approach LOS		D			D			A			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.6	88.8		20.6	10.6	88.8		20.6				
Change Period (Y+Rc), s	* 5.6	5.6		* 5.4	* 5.6	5.6		* 5.4				
Max Green Setting (Gmax), s	* 8.4	56.4		* 39	* 8.4	56.4		* 39				
Max Q Clear Time (g_c+I1), s	2.0	19.6		14.8	2.0	2.0		7.3				
Green Ext Time (p_c), s	0.0	2.4		0.4	0.0	2.2		0.3				

Intersection Summary	
HCM 6th Ctrl Delay	14.4
HCM 6th LOS	B

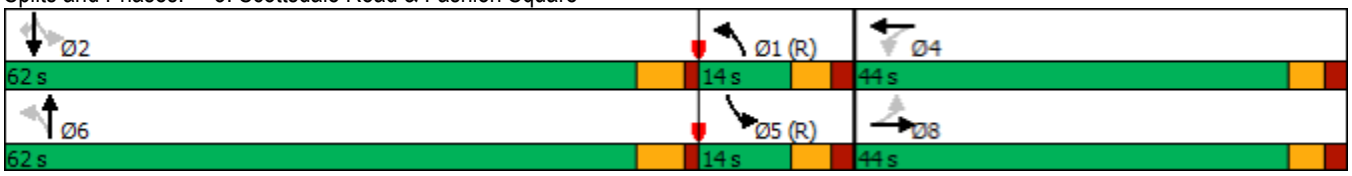
Notes

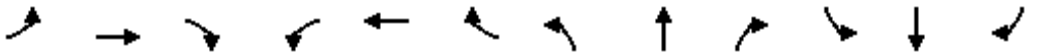
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Phase Number	1	2	4	5	6	8
Movement	NBL	SBTL	WBTL	SBL	NBTL	EBTL
Lead/Lag	Lag	Lead		Lag	Lead	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	C-Max	Max	None	C-Max	Max	None
Maximum Split (s)	14	62	44	14	62	44
Maximum Split (%)	11.7%	51.7%	36.7%	11.7%	51.7%	36.7%
Minimum Split (s)	14	62	44	14	62	44
Yellow Time (s)	3.6	4.4	3.3	3.6	4.4	3.3
All-Red Time (s)	2	1.2	2.1	2	1.2	2.1
Minimum Initial (s)	5	10	7	5	10	7
Vehicle Extension (s)	2	1	2	2	1	2
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		0	6		20	6
Flash Dont Walk (s)		10	20		10	20
Dual Entry	Yes	Yes	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	12	70	26	12	70	26
End Time (s)	26	12	70	26	12	70
Yield/Force Off (s)	20.4	6.4	64.6	20.4	6.4	64.6
Yield/Force Off 170(s)	20.4	116.4	44.6	20.4	116.4	44.6
Local Start Time (s)	0	58	14	0	58	14
Local Yield (s)	8.4	114.4	52.6	8.4	114.4	52.6
Local Yield 170(s)	8.4	104.4	32.6	8.4	104.4	32.6

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	120
Offset: 12 (10%), Referenced to phase 1:NBL and 5:SBL, Start of Green	

Splits and Phases: 3: Scottsdale Road & Fashion Square





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	199	474	210	77	438	175	249	673	90	298	582	226
Future Volume (veh/h)	199	474	210	77	438	175	249	673	90	298	582	226
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	209	499	221	81	461	184	262	708	95	314	613	238
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	265	608	271	211	533	211	785	1926	256	374	1084	483
Arrive On Green	0.08	0.17	0.17	0.12	0.21	0.21	0.23	0.42	0.42	0.11	0.31	0.31
Sat Flow, veh/h	3456	3554	1585	1781	2486	984	3456	4559	606	3456	3554	1585
Grp Volume(v), veh/h	209	499	221	81	329	316	262	527	276	314	613	238
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1693	1728	1702	1761	1728	1777	1585
Q Serve(g_s), s	7.1	16.2	16.1	5.0	21.4	21.7	7.6	12.7	12.9	10.7	17.4	11.2
Cycle Q Clear(g_c), s	7.1	16.2	16.1	5.0	21.4	21.7	7.6	12.7	12.9	10.7	17.4	11.2
Prop In Lane	1.00		1.00	1.00		0.58	1.00		0.34	1.00		1.00
Lane Grp Cap(c), veh/h	265	608	271	211	381	363	785	1438	744	374	1084	483
V/C Ratio(X)	0.79	0.82	0.82	0.38	0.86	0.87	0.33	0.37	0.37	0.84	0.57	0.49
Avail Cap(c_a), veh/h	308	992	442	211	526	501	785	1438	744	501	1084	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	54.5	48.0	47.9	48.8	45.4	45.5	38.8	23.7	23.7	52.5	35.0	19.8
Incr Delay (d2), s/veh	9.4	1.1	2.3	0.4	8.1	9.3	0.1	0.7	1.4	7.1	2.1	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	7.2	6.5	2.3	10.2	9.9	3.2	5.1	5.5	4.9	7.6	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.9	49.1	50.2	49.3	53.5	54.8	38.9	24.4	25.2	59.6	37.1	23.3
LnGrp LOS	E	D	D	D	D	D	D	C	C	E	D	C
Approach Vol, veh/h		929			726			1065			1165	
Approach Delay, s/veh		52.7			53.6			28.2			40.3	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	32.3	42.0	14.5	31.2	18.6	55.7	19.7	26.0
Change Period (Y+Rc), s	5.0	5.4	* 5.3	5.5	5.6	* 5	5.5	* 5.5
Max Green Setting (Gmax), s	16.0	36.6	* 11	35.5	17.4	* 35	12.7	* 34
Max Q Clear Time (g_c+I1), s	9.6	19.4	9.1	23.7	12.7	14.9	7.0	18.2
Green Ext Time (p_c), s	0.3	2.8	0.1	2.1	0.3	3.2	0.0	2.3

Intersection Summary	
HCM 6th Ctrl Delay	42.4
HCM 6th LOS	D

Notes

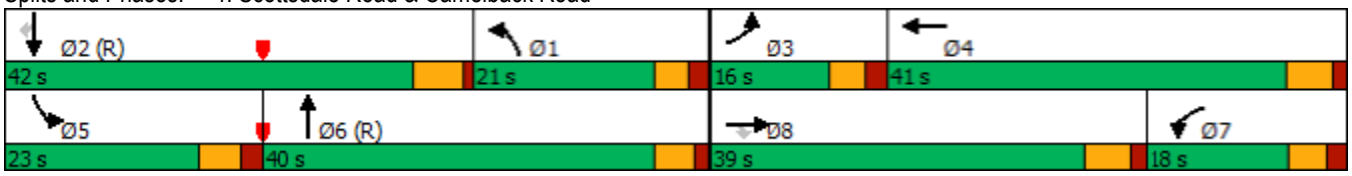
User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBT	EBL	WBT	SBL	NBT	WBL	EBT
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lag	Lead
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	C-Max	None	None
Maximum Split (s)	21	42	16	41	23	40	18	39
Maximum Split (%)	17.5%	35.0%	13.3%	34.2%	19.2%	33.3%	15.0%	32.5%
Minimum Split (s)	21	42	16	41	23	40	18	39
Yellow Time (s)	3	4.4	3.3	4	3.6	3.6	3.3	4
All-Red Time (s)	2	1	2	1.5	2	1.4	2	1.5
Minimum Initial (s)	5	10	5	7	5	10	5	7
Vehicle Extension (s)	2	2	2	2	2	2	2	2
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		7		7		7		7
Flash Dont Walk (s)		23		30		24		25
Dual Entry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	3	81	24	40	81	104	63	24
End Time (s)	24	3	40	81	104	24	81	63
Yield/Force Off (s)	19	117.6	34.7	75.5	98.4	19	75.7	57.5
Yield/Force Off 170(s)	19	94.6	34.7	45.5	98.4	115	75.7	32.5
Local Start Time (s)	19	97	40	56	97	0	79	40
Local Yield (s)	35	13.6	50.7	91.5	114.4	35	91.7	73.5
Local Yield 170(s)	35	110.6	50.7	61.5	114.4	11	91.7	48.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	120
Offset: 104 (87%), Referenced to phase 2:SBT and 6:NBT, Start of Green	

Splits and Phases: 4: Scottsdale Road & Camelback Road



Intersection	
Int Delay, s/veh	5.2

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Vol, veh/h	22	43	0	9	93	0
Future Vol, veh/h	22	43	0	9	93	0
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	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	55	0	12	119	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	83	0	68	56
Stage 1	-	-	-	-	56	-
Stage 2	-	-	-	-	12	-
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	-	-	1516	-	942	1017
Stage 1	-	-	-	-	970	-
Stage 2	-	-	-	-	1011	-
Platoon blocked, %	-	-	1	-	1	1
Mov Cap-1 Maneuver	-	-	1516	-	942	1017
Mov Cap-2 Maneuver	-	-	-	-	942	-
Stage 1	-	-	-	-	970	-
Stage 2	-	-	-	-	1011	-

Approach	EB	WB	NW
HCM Control Delay, s	0	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NWLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	942	-	-	1516	-
HCM Lane V/C Ratio	0.127	-	-	-	-
HCM Control Delay (s)	9.4	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	3	3	0	25	2	0
Future Vol, veh/h	3	3	0	25	2	0
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	75	75	75	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	4	0	33	3	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	8	0	39	6
Stage 1	-	-	-	-	6	-
Stage 2	-	-	-	-	33	-
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	-	-	1612	-	973	1077
Stage 1	-	-	-	-	1017	-
Stage 2	-	-	-	-	989	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1612	-	973	1077
Mov Cap-2 Maneuver	-	-	-	-	973	-
Stage 1	-	-	-	-	1017	-
Stage 2	-	-	-	-	989	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	973	-	-	1612	-
HCM Lane V/C Ratio	0.003	-	-	-	-
HCM Control Delay (s)	8.7	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	0	2	20	0	3
Future Vol, veh/h	7	0	2	20	0	3
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	75	75	75	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	0	3	27	0	4

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	21	17	0	0	30	0
Stage 1	17	-	-	-	-	-
Stage 2	4	-	-	-	-	-
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	996	1062	-	-	1583	-
Stage 1	1006	-	-	-	-	-
Stage 2	1019	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	996	1062	-	-	1583	-
Mov Cap-2 Maneuver	996	-	-	-	-	-
Stage 1	1006	-	-	-	-	-
Stage 2	1019	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	996	1583	-
HCM Lane V/C Ratio	-	-	0.009	-	-
HCM Control Delay (s)	-	-	8.6	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Appendix F – Trip Generation

Hazel and Azure
Zom Living

Completed: SS 12/21/2021
Checked:

Trip Generation Calculations
11th Edition

Building A Residential

230 Low-Rise Residential with Ground-Floor Commercial GFA (1-25k)

Land Use	ITE Code	Qty	Unit	Weekday Rate	Weekday % In	Weekday % Out	AM Peak Hour Rate	AM Peak Hour % In	AM Peak Hour % Out	PM Peak Hour Rate	PM Peak Hour % In	PM Peak Hour % Out	Weekday Total	Weekday In	Weekday Out	AM Peak Hour Total	AM Peak Hour In	AM Peak Hour Out	PM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	
Low-Rise Residential with Ground-Floor Commercial GFA (1-25k)	230	362	Dwelling Units	3.44	50%	50%	0.44	23%	77%	0.36	71%	29%	1,245	623	622	159	37	122	130	92	38	Average
Low-Rise Residential with Ground-Floor Commercial GFA (1-25k)	230	362	Dwelling Units	3.44	50%	50%	0.27	23%	77%	0.3	71%	29%	1,245	623	622	98	23	75	109	77	32	Minimum
Low-Rise Residential with Ground-Floor Commercial GFA (1-25k)	230	362	Dwelling Units	3.44	50%	50%	0.67	23%	77%	0.44	71%	29%	1,245	623	622	243	56	187	159	113	46	Maximum
Land Use	ITE Code	Qty	Unit	Weekday Equation	Weekday % In	Weekday % Out	AM Peak Hour Equation	AM Peak Hour % In	AM Peak Hour % Out	PM Peak Hour Equation	PM Peak Hour % In	PM Peak Hour % Out	Weekday Total	Weekday In	Weekday Out	AM Peak Hour Total	AM Peak Hour In	AM Peak Hour Out	PM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	
Low-Rise Residential with Ground-Floor Commercial GFA (1-25k)	230	362	Dwelling Units	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Equation

Low-Rise Residential with Ground-Floor Commercial GFA (1-25k)	Standard Deviation	N/A	N/A	N/A
	Number of Studies	1	2	2
	Average Size	422	365	365
	R^2	N/A	N/A	N/A

220 - Multifamily Housing (Mid-Rise) (Three to Ten Levels)

Land Use	ITE Code	Qty	Unit	Weekday Rate	Weekday % In	Weekday % Out	AM Peak Hour Rate	AM Peak Hour % In	AM Peak Hour % Out	PM Peak Hour Rate	PM Peak Hour % In	PM Peak Hour % Out	Weekday Total	Weekday In	Weekday Out	AM Peak Hour Total	AM Peak Hour In	AM Peak Hour Out	PM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	
Multifamily Housing (Mid-Rise)	221	362	Dwelling Units	4.54	50%	50%	0.37	23%	77%	0.39	61%	39%	1,643	822	821	134	31	103	141	86	55	Average
Multifamily Housing (Mid-Rise)	221	362	Dwelling Units	3.76	50%	50%	0.15	23%	77%	0.19	61%	39%	1,361	681	680	54	12	42	69	42	27	Minimum
Multifamily Housing (Mid-Rise)	221	362	Dwelling Units	5.40	50%	50%	0.53	23%	77%	0.57	61%	39%	1,955	978	977	192	44	148	206	126	80	Maximum
Land Use	ITE Code	Qty	Unit	Weekday Equation	Weekday % In	Weekday % Out	AM Peak Hour Equation	AM Peak Hour % In	AM Peak Hour % Out	PM Peak Hour Equation	PM Peak Hour % In	PM Peak Hour % Out	Weekday Total	Weekday In	Weekday Out	AM Peak Hour Total	AM Peak Hour In	AM Peak Hour Out	PM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	
Multifamily Housing (Mid-Rise)	221	362	Dwelling Units	T=4.77(X)-46.46	50%	50%	T=0.44(X)-11.61	23%	77%	T=0.39(X)+0.34	61%	39%	1,680	840	840	148	34	114	142	87	55	Equation

Multifamily Housing (Mid-Rise)	Standard Deviation	0.51	0.09	0.08
	Number of Studies	11	30	31
	Average Size	201	173	169
	R^2	0.93	0.91	0.91

822 Strip Retail Plaza (<40k)

Land Use	ITE Code	Qty	Unit	Weekday Rate	Weekday % In	Weekday % Out	AM Peak Hour Rate	AM Peak Hour % In	AM Peak Hour % Out	PM Peak Hour Rate	PM Peak Hour % In	PM Peak Hour % Out	Weekday Total	Weekday In	Weekday Out	AM Peak Hour Total	AM Peak Hour In	AM Peak Hour Out	PM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	
Strip Retail Plaza (<40k)	822	13.7	1000 SF GFA	54.45	50%	50%	2.36	60%	40%	6.59	50%	50%	745	373	372	32	19	13	90	45	45	Average
Strip Retail Plaza (<40k)	822	13.7	1000 SF GFA	47.86	50%	50%	1.60	60%	40%	2.81	50%	50%	655	328	327	22	13	9	38	19	19	Minimum
Strip Retail Plaza (<40k)	822	13.7	1000 SF GFA	65.07	50%	50%	3.73	60%	40%	15.2	50%	50%	890	445	445	51	31	20	208	104	104	Maximum
Land Use	ITE Code	Qty	Unit	Weekday Equation	Weekday % In	Weekday % Out	AM Peak Hour Equation	AM Peak Hour % In	AM Peak Hour % Out	PM Peak Hour Equation	PM Peak Hour % In	PM Peak Hour % Out	Weekday Total	Weekday In	Weekday Out	AM Peak Hour Total	AM Peak Hour In	AM Peak Hour Out	PM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	
Strip Retail Plaza (<40k)	822	13.7	1000 SF GFA	T=42.20(X)+229.68	50%	50%	Ln(T)=0.66Ln(X)+1.84	60%	40%	Ln(T)=0.71Ln(X)+2.72	50%	50%	807	404	403	35	21	14	97	49	48	Equation

Strip Retail Plaza (<40k)	Standard Deviation	7.81	0.94	2.94
	Number of Studies	4	5	25
	Average Size	19	18	21
	R^2	0.96	0.57	0.56

712 Small Office Building

Land Use	ITE Code	Qty	Unit	Weekday Rate	Weekday % In	Weekday % Out	AM Peak Hour Rate	AM Peak Hour % In	AM Peak Hour % Out	PM Peak Hour Rate	PM Peak Hour % In	PM Peak Hour % Out	Weekday Total	Weekday In	Weekday Out	AM Peak Hour Total	AM Peak Hour In	AM Peak Hour Out	PM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	
Small Office Building	**712**	**2.1**	**1000 SF GFA**	**14.39**	**50%**	**50%**	**1.67**	**82%**	**18%**	**2.16**	**48%**	**52%**	**30**	**15**	**15**	**4**	**3**	**1**	**5**	**2**	**3**	**Average**
Small Office Building	712	2.1	1000 SF GFA	4.44	50%	50%	0.76	82%	18%	0.56	48%	52%	9	5	4	2	2	0	1	0	1	Minimum
Small Office Building	712	2.1	1000 SF GFA	50.91	50%	50%	4.12	82%	18%	5.5	48%	52%	107	54	53	9	7	2	12	6	6	Maximum
Land Use	ITE Code	Qty	Unit	Weekday Equation	Weekday % In	Weekday % Out	AM Peak Hour Equation	AM Peak Hour % In	AM Peak Hour % Out	PM Peak Hour Equation	PM Peak Hour % In	PM Peak Hour % Out	Weekday Total	Weekday In	Weekday Out	AM Peak Hour Total	AM Peak Hour In	AM Peak Hour Out	PM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	
Small Office Building	712	2.1	1000 SF GFA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Equation

Small Office Building	Standard Deviation	10.16	0.88	1.26
	Number of Studies	21	21	21
	Average Size	3	3	3
	R^2	N/A	N/A	N/A

Building B Residential

230 Low-Rise Residential with Ground-Floor Commercial GFA (1-25k)

Land Use	ITE Code	Qty	Unit	Weekday Rate	Weekday % In	Weekday % Out	AM Peak Hour Rate	AM Peak Hour % In	AM Peak Hour % Out	PM Peak Hour Rate	PM Peak Hour % In	PM Peak Hour % Out	Weekday Total	Weekday In	Weekday Out	AM Peak Hour Total	AM Peak Hour In	AM Peak Hour Out	PM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	
Low-Rise Residential with Ground-Floor Commercial GFA (1-25k)	230	170	Dwelling Units	3.44	50%	50%	0.44	23%	77%	0.36	71%	29%	585	293	292	75	17	58	61	43	18	Average
Low-Rise Residential with Ground-Floor Commercial GFA (1-25k)	230	170	Dwelling Units	3.44	50%	50%	0.27	23%	77%	0.3	71%	29%	585	293	292	46	11	35	51	36	15	Minimum
Low-Rise Residential with Ground-Floor Commercial GFA (1-25k)	230	170	Dwelling Units	3.44	50%	50%	0.67	23%	77%	0.44	71%	29%	585	293	292	114	26	88	75	53	22	Maximum
Land Use	ITE Code	Qty	Unit	Weekday Equation	Weekday % In	Weekday % Out	AM Peak Hour Equation	AM Peak Hour % In	AM Peak Hour % Out	PM Peak Hour Equation	PM Peak Hour % In	PM Peak Hour % Out	Weekday Total	Weekday In	Weekday Out	AM Peak Hour Total	AM Peak Hour In	AM Peak Hour Out	PM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	
Low-Rise Residential with Ground-Floor Commercial GFA (1-25k)	230	170	Dwelling Units	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Equation

Low-Rise Residential with Ground-Floor Commercial GFA (1-25k)	Standard Deviation	N/A	N/A	N/A
	Number of Studies	1	2	2
	Average Size	422	365	365
	R^2	N/A	N/A	N/A

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Hazel and Azure	**Organization:**	Lokahi
Project Location:	City of Scottsdale	**Performed By:**	SS
Scenario Description:		**Date:**	3/15/2022
Analysis Year:		**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	712	2,109	1000 SF GLA	4	3	1
Retail	822	13,685	1000 SF GLA	32	19	13
Restaurant				0		
Cinema/Entertainment				0		
Residential	221	532	Units	197	45	152
Hotel				0		
All Other Land Uses[2]				0		
Total				233	67	166

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						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
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	1	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	2	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	233	67	166
Internal Capture Percentage	3%	4%	2%
External Vehicle-Trips[3]	227	64	163
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	0%	0%
Retail	11%	8%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	2%	1%
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:	Hazel and Azure
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	3	3	1.00	1	1
Retail	1.00	19	19	1.00	13	13
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	45	45	1.00	152	152
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	1	0	0	0
Retail	4		2	0	2	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	3	2	30	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		6	0	0	0	0
Retail	0		0	0	1	0
Restaurant	0	2		0	2	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	3	0	0		0
Hotel	0	1	0	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	3	3	3	0	0
Retail	2	17	19	17	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	1	44	45	44	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	1	1	1	0	0
Retail	1	12	13	12	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	2	150	152	150	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:	Hazel and Azure	**Organization:**	Lokahi
Project Location:	City of Scottsdale	**Performed By:**	SS
Scenario Description:		**Date:**	3/15/2022
Analysis Year:		**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	712	2,109	1000 SF GLA	5	2	3
Retail	822	13,685	1000 SF GLA	90	45	45
Restaurant				0		
Cinema/Entertainment				0		
Residential	221	532	Units	207	126	81
Hotel				0		
All Other Land Uses[2]				0		
Total				302	173	129

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						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
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		1	0	0	0	0
Retail	0		0	0	12	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	5	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	302	173	129
Internal Capture Percentage	13%	11%	15%
External Vehicle-Trips[3]	264	154	110
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

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

Land Use	Entering Trips	Exiting Trips
Office	50%	33%
Retail	13%	27%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	10%	7%
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:	Hazel and Azure
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	2	2	1.00	3	3
Retail	1.00	45	45	1.00	45	45
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	126	126	1.00	81	81
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		1	0	0	0	0
Retail	1		13	2	12	2
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	3	34	17	0		2
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		4	0	0	5	0
Retail	1		0	0	58	0
Restaurant	1	23		0	20	0
Cinema/Entertainment	0	2	0		5	0
Residential	1	5	0	0		0
Hotel	0	1	0	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	1	1	2	1	0	0
Retail	6	39	45	39	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	12	114	126	114	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	1	2	3	2	0	0
Retail	12	33	45	33	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	6	75	81	75	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.

Appendix G – MAG Socioeconomic Projections

G

Socioeconomic Projections

Population and Employment

by Municipal Planning Area, Jurisdiction, and Regional Analysis Zone

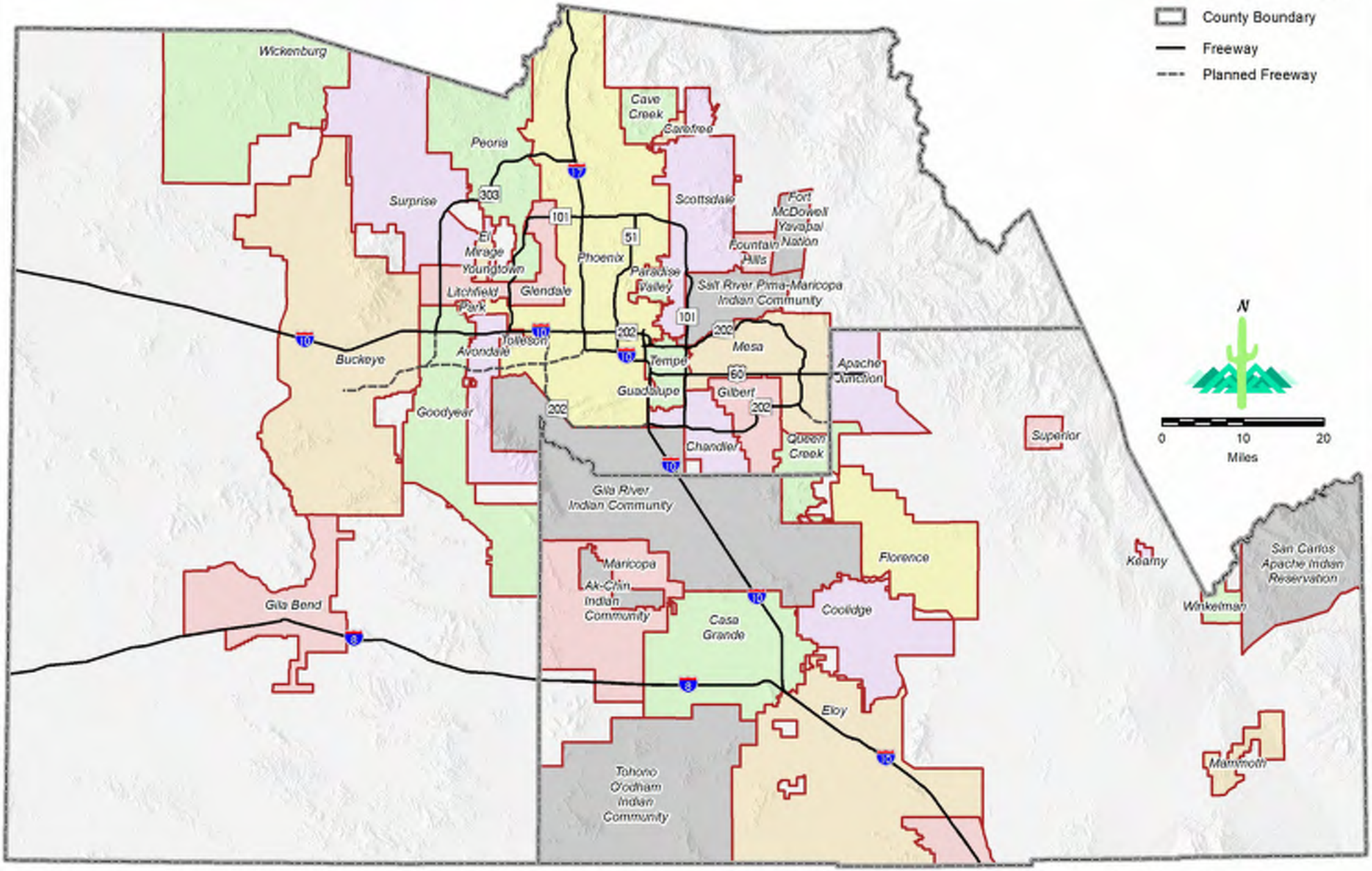
June 2019

MARICOPA ASSOCIATION of GOVERNMENTS

302 North 1st Avenue, Suite 300
Phoenix, Arizona 85003
(602) 254-6300

Municipal Planning Areas (MPA), 2019
Maricopa and Pinal Counties, Arizona

MARICOPA ASSOCIATION of GOVERNMENTS



Source: MAG and the MAG member agencies, CAG and the CAG member agencies

Date: May 2019

Maricopa Association of Governments
Table 1: Total Population by Municipal Planning Area
July 1, 2018 and Projections July 1, 2020 to July 1, 2055

Municipal Planning Area	Total Population					
	2018	2020	2030	2040	2050	2055
Apache Junction	59,000	60,800	70,000	92,000	117,100	132,600
Avondale	84,200	86,700	101,800	111,900	119,000	122,100
Buckeye	89,000	97,700	186,600	305,400	409,900	459,300
Carefree	3,700	3,800	4,100	4,200	4,200	4,300
Cave Creek	5,900	6,000	6,500	7,000	7,200	7,300
Chandler	270,300	279,500	309,100	321,100	329,000	332,400
El Mirage	34,300	35,100	36,500	36,900	37,200	37,200
Florence	79,400	85,500	120,300	160,500	209,900	231,400
Fort McDowell Yavapai Native Nation	1,000	1,100	1,100	1,100	1,100	1,100
Fountain Hills	24,000	24,700	26,200	26,600	26,900	27,000
Gila Bend	2,500	2,700	3,700	3,700	3,900	4,200
Gila River Indian Native Nation	12,000	12,200	12,300	12,300	12,300	12,300
Gilbert	256,500	265,900	293,500	308,800	318,100	321,400
Glendale	272,200	279,100	306,400	323,400	333,200	338,800
Goodyear	87,300	92,100	140,300	192,200	228,600	247,900
Guadalupe	6,300	6,400	6,700	6,800	6,800	6,800
Litchfield Park	13,300	14,000	15,400	15,700	16,100	16,400
Maricopa	59,800	67,000	90,800	106,400	121,600	128,900
Mesa	533,400	552,800	607,500	649,400	680,000	690,300
Paradise Valley	14,000	14,100	14,700	15,100	15,200	15,300
Peoria	188,500	196,600	232,400	273,700	312,600	329,900
Phoenix	1,653,500	1,697,700	1,881,900	2,019,300	2,117,400	2,155,300
Queen Creek	58,700	65,000	90,900	109,000	120,900	128,500
Salt River Pima-Maricopa Native Nation	6,800	6,100	5,700	5,800	5,800	5,800
Scottsdale	245,500	253,800	281,900	299,400	311,400	316,700
Surprise	144,000	150,300	216,700	307,500	383,300	417,200
Tempe	185,300	190,000	217,100	247,000	272,400	282,200
Tolleson	7,000	7,100	8,600	10,300	11,400	11,800
Unicorporated Pinal County	66,800	68,600	79,100	93,700	110,800	122,700
Unincorporated Maricopa County	97,900	101,200	110,500	116,800	137,000	152,600
Wickenburg	8,200	8,500	9,400	9,500	9,800	10,000
Youngtown	6,600	6,800	7,300	7,700	7,800	7,800

Notes: Numbers rounded to the nearest 100. These projections include both the Maricopa County and Pinal County portions for Apache Junction, Queen Creek, and the Gila River Indian Community. Peoria and Wickenburg include only the Maricopa County portion.

Source: Maricopa Association of Governments (MAG) Socioeconomic Projections of Population and Employment by Municipal Planning Area (MPA) and Regional Analysis Zone (RAZ), June 2019

For explanation of variables and complete notation on this series, please refer to the Notes and Caveats in Appendix A.

Maricopa Association of Governments
Table 2: Total Employment by Municipal Planning Area
July 1, 2018 and Projections July 1, 2020 to July 1, 2055

	Total Employment					
Municipal Planning Area	2018	2020	2030	2040	2050	2055
Apache Junction	7,800	8,800	13,100	17,800	26,400	30,500
Avondale	22,400	23,200	30,400	36,200	42,800	45,400
Buckeye	21,600	26,900	42,900	64,500	98,000	128,900
Carefree	1,600	1,600	2,100	2,400	2,500	2,600
Cave Creek	2,200	2,400	2,700	2,900	3,000	3,200
Chandler	145,500	154,700	182,300	202,100	215,200	222,000
El Mirage	5,000	5,100	6,500	7,200	8,000	8,900
Florence	11,000	12,100	17,000	26,400	40,900	51,100
Fort McDowell Yavapai Native Nation	2,200	2,400	2,400	2,500	2,600	2,600
Fountain Hills	7,100	7,700	9,100	9,800	10,200	10,300
Gila Bend	900	900	1,200	1,300	1,500	1,700
Gila River Indian Native Nation	10,500	10,700	11,500	13,100	14,800	15,500
Gilbert	92,800	98,600	120,200	135,900	146,600	152,200
Glendale	103,800	111,400	134,000	153,100	168,900	175,900
Goodyear	35,900	37,200	50,600	69,000	92,600	102,500
Guadalupe	1,300	1,300	1,500	1,600	1,600	1,600
Litchfield Park	3,800	4,400	5,200	5,900	6,400	6,700
Maricopa	6,200	7,100	11,400	18,200	28,200	33,500
Mesa	197,200	205,900	249,000	296,000	333,700	351,000
Paradise Valley	6,300	6,300	6,800	7,100	7,500	7,700
Peoria	58,200	62,400	73,100	84,800	91,900	96,300
Phoenix	897,700	937,600	1,084,000	1,189,200	1,264,900	1,298,900
Queen Creek	15,500	16,400	19,900	24,000	28,900	31,100
Salt River Pima-Maricopa Native Nation	21,200	22,900	28,200	33,900	35,900	36,400
Scottsdale	197,200	207,400	235,500	252,000	261,700	267,000
Surprise	33,600	36,400	59,500	86,400	113,400	130,500
Tempe	190,000	200,500	231,200	257,700	280,000	290,900
Tolleson	17,700	18,300	21,200	23,900	26,000	26,700
Unicorporated Pinal County	3,500	3,900	6,000	8,900	13,500	17,800
Unincorporated Maricopa County	28,600	31,500	35,500	41,100	51,200	58,400
Wickenburg	4,400	4,600	5,200	5,600	6,000	6,200
Youngtown	1,500	1,800	2,200	2,700	2,800	3,100

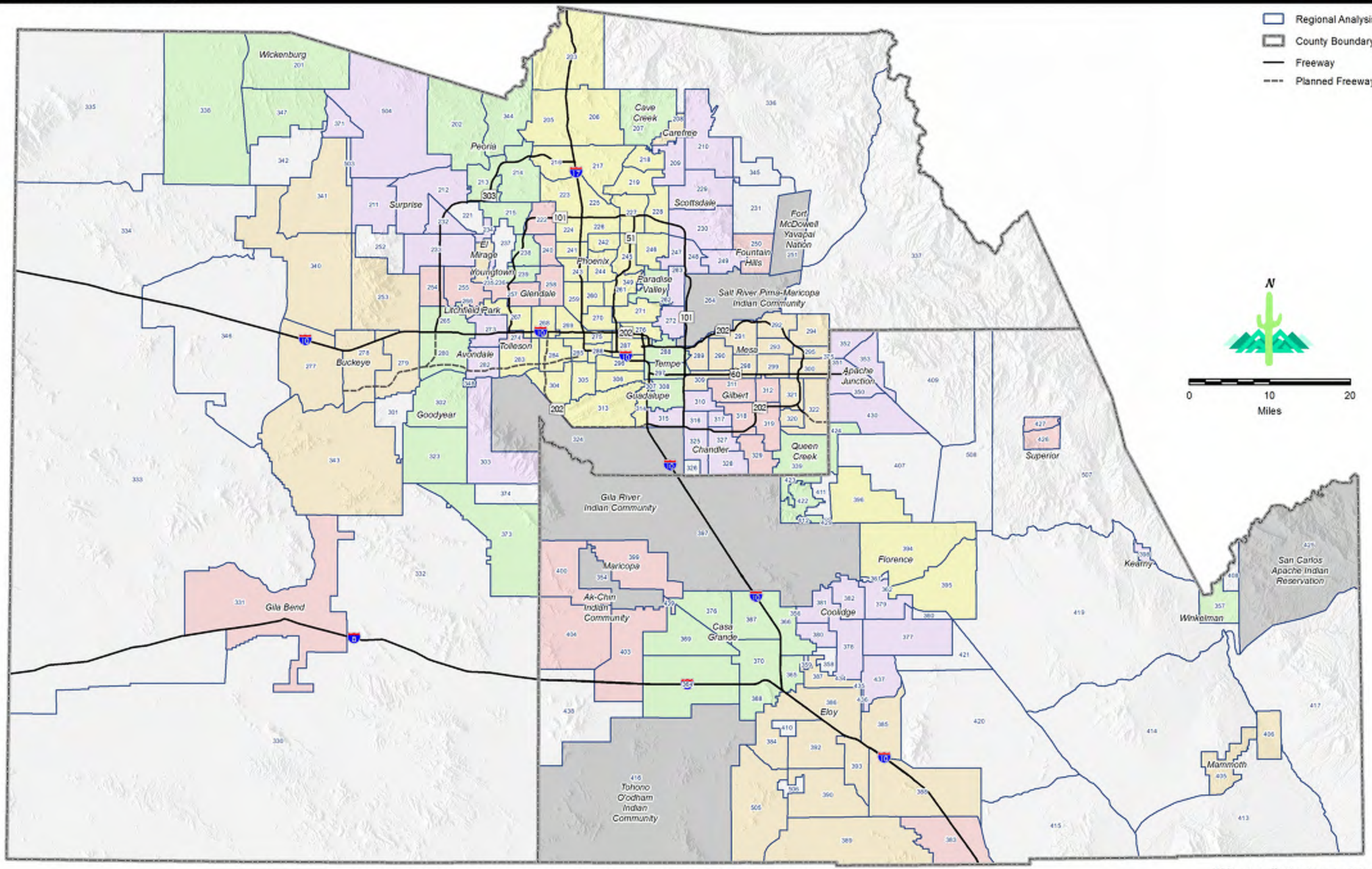
Notes: Numbers rounded to the nearest 100. These projections include both the Maricopa County and Pinal County portions for Apache Junction, Queen Creek, and the Gila River Indian Community. Peoria and Wickenburg include only the Maricopa County portion.

Source: Maricopa Association of Governments (MAG) Socioeconomic Projections of Population and Employment by Municipal Planning Area (MPA) and Regional Analysis Zone (RAZ), June 2019

For explanation of variables and complete notation on this series, please refer to the Notes and Caveats in Appendix A.

Regional Analysis Zones (RAZ), 2019
Maricopa and Pinal Counties, Arizona

MARICOPA ASSOCIATION of GOVERNMENTS



Source: MAG and the MAG member agencies, CAG and the CAG member agencies

Date: May 2019

Maricopa Association of Governments
Table 4: Population by Regional Analysis Zone (RAZ) by MPA
July 1, 2018 and Projections July 1, 2020 to July 1, 2055

RAZ	County	Total Population					
		2018	2020	2030	2040	2050	2055
	Total	1,653,469	1,697,722	1,881,876	2,019,269	2,117,427	2,155,333
Queen Creek MPA							
339	Maricopa County	49,781	53,579	72,670	82,172	87,155	89,586
422	Pinal County	13	13	300	437	564	638
423	Pinal County	1,286	1,410	3,714	6,136	7,457	8,686
424	Pinal County	7,642	10,003	14,200	20,287	25,759	29,586
	Total	58,722	65,005	90,884	109,032	120,935	128,496
Salt River Pima-Maricopa Native Nation MPA							
264	Maricopa County	6,798	6,073	5,708	5,820	5,820	5,820
	Total	6,798	6,073	5,708	5,820	5,820	5,820
Scottsdale MPA							
209	Maricopa County	12,188	12,605	13,961	14,512	14,984	15,255
210	Maricopa County	6,013	6,591	10,463	12,339	13,491	13,961
229	Maricopa County	20,542	21,269	25,221	27,864	29,698	30,229
230	Maricopa County	32,232	33,028	38,882	43,580	46,789	48,510
247	Maricopa County	13,549	13,858	15,420	16,342	16,871	17,019
248	Maricopa County	36,178	37,227	38,468	38,807	39,048	39,143
249	Maricopa County	20,903	21,410	22,543	22,768	22,839	22,848
263	Maricopa County	34,908	35,814	37,002	37,252	37,584	37,773
272	Maricopa County	68,987	71,970	79,910	85,942	90,054	91,927
	Total	245,500	253,772	281,870	299,406	311,358	316,665
Surprise MPA							
211	Maricopa County	863	884	4,471	23,112	36,704	40,737
212	Maricopa County	10,265	11,365	37,615	69,296	85,862	93,806
232	Maricopa County	29,296	30,200	34,506	37,144	37,927	38,313
233	Maricopa County	87,834	91,276	111,822	119,384	123,777	126,523
234	Maricopa County	8,969	9,467	10,460	10,878	11,335	11,488
371	Maricopa County	342	344	434	734	2,584	4,316
504	Maricopa County	6,460	6,718	17,425	46,912	85,127	102,004
	Total	144,029	150,254	216,733	307,460	383,316	417,187
Tempe MPA							
288	Maricopa County	73,442	76,444	100,651	129,202	150,094	157,410
297	Maricopa County	53,146	54,092	56,336	57,432	61,780	64,273
308	Maricopa County	58,756	59,473	60,120	60,348	60,476	60,559
	Total	185,344	190,009	217,107	246,982	272,350	282,242

Notes: Numbers rounded to the nearest 100. These projections include both the Maricopa County and Pinal County portions for Apache Junction, Queen Creek, and the Gila River Indian Community. Peoria and Wickenburg include only the Maricopa County portion.

Source: Maricopa Association of Governments (MAG) Socioeconomic Projections of Population and Employment by Municipal Planning Area (MPA) and Regional Analysis Zone (RAZ), May 2019

For explanation of variables and complete notation on this series, please refer to the Notes and Caveats in Appendix A.

Maricopa Association of Governments
Table 5: Employment by Regional Analysis Zone (RAZ) by MPA
July 1, 2018 and Projections July 1, 2020 to July 1, 2055

RAZ	County	Total Employment					
		2018	2020	2030	2040	2050	2055
	Total	897,713	937,622	1,083,980	1,189,209	1,264,941	1,298,903
Queen Creek MPA							
339	Maricopa County	13,933	14,696	16,482	18,825	20,733	21,151
422	Pinal County	9	8	18	22	31	39
423	Pinal County	89	109	351	620	1,068	1,639
424	Pinal County	1,435	1,576	3,073	4,571	7,020	8,309
	Total	15,466	16,389	19,924	24,038	28,852	31,138
Salt River Pima-Maricopa Native Nation MPA							
264	Maricopa County	21,160	22,869	28,215	33,871	35,903	36,442
	Total	21,160	22,869	28,215	33,871	35,903	36,442
Scottsdale MPA							
209	Maricopa County	4,488	4,659	4,851	5,174	5,161	5,344
210	Maricopa County	2,386	3,018	2,759	3,091	3,139	3,191
229	Maricopa County	9,604	10,005	11,231	11,962	12,193	12,896
230	Maricopa County	23,272	24,919	32,112	36,968	40,834	42,136
247	Maricopa County	44,254	47,089	52,652	54,822	55,679	56,105
248	Maricopa County	29,603	30,901	33,285	34,001	34,234	34,548
249	Maricopa County	7,409	7,692	8,179	8,684	8,906	9,045
263	Maricopa County	26,351	26,961	28,903	30,245	30,919	31,381
272	Maricopa County	49,833	52,185	61,540	67,039	70,676	72,330
	Total	197,200	207,429	235,512	251,986	261,741	266,976
Surprise MPA							
211	Maricopa County	60	53	1,560	3,172	4,766	7,017
212	Maricopa County	2,008	2,338	5,821	9,965	13,362	15,709
232	Maricopa County	8,349	9,228	11,297	12,187	12,875	13,116
233	Maricopa County	19,943	21,079	32,661	44,032	52,007	57,402
234	Maricopa County	2,588	2,711	3,354	3,922	4,239	4,386
371	Maricopa County	18	20	327	423	2,381	2,937
504	Maricopa County	677	1,020	4,460	12,695	23,763	29,886
	Total	33,643	36,449	59,480	86,396	113,393	130,453
Tempe MPA							
288	Maricopa County	88,927	94,229	111,010	128,894	144,714	152,703
297	Maricopa County	44,730	47,069	53,149	57,125	60,725	62,552
308	Maricopa County	56,380	59,208	67,052	71,701	74,542	75,596
	Total	190,037	200,506	231,211	257,720	279,981	290,851

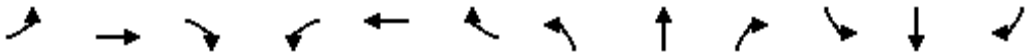
Notes: Numbers rounded to the nearest 100. These projections include both the Maricopa County and Pinal County portions for Apache Junction, Queen Creek, and the Gila River Indian Community. Peoria and Wickenburg include only the Maricopa County portion.

Source: Maricopa Association of Governments (MAG) Socioeconomic Projections of Population and Employment by Municipal Planning Area (MPA) and Regional Analysis Zone (RAZ), May 2019

For explanation of variables and complete notation on this series, please refer to the Notes and Caveats in Appendix A.

Appendix H – Year 2023 No Build Capacity Analysis

H



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	328	19	15	9	3	23	20	658	41	49	584	41
Future Volume (veh/h)	328	19	15	9	3	23	20	658	41	49	584	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	357	21	16	10	3	25	22	715	45	53	635	45
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	543	170	129	271	30	248	593	3635	228	551	3605	254
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.74	0.74	0.74	0.74	0.74	0.74
Sat Flow, veh/h	2681	985	750	1371	173	1439	760	4911	308	706	4870	343
Grp Volume(v), veh/h	357	0	37	10	0	28	22	495	265	53	443	237
Grp Sat Flow(s),veh/h/ln	1341	0	1735	1371	0	1611	760	1702	1815	706	1702	1809
Q Serve(g_s), s	15.5	0.0	2.2	0.7	0.0	1.8	1.1	5.3	5.3	3.0	4.7	4.7
Cycle Q Clear(g_c), s	17.3	0.0	2.2	2.9	0.0	1.8	5.8	5.3	5.3	8.3	4.7	4.7
Prop In Lane	1.00		0.43	1.00		0.89	1.00		0.17	1.00		0.19
Lane Grp Cap(c), veh/h	543	0	299	271	0	278	593	2520	1343	551	2520	1339
V/C Ratio(X)	0.66	0.00	0.12	0.04	0.00	0.10	0.04	0.20	0.20	0.10	0.18	0.18
Avail Cap(c_a), veh/h	874	0	513	271	0	278	593	2520	1343	551	2520	1339
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.1	0.0	42.0	43.2	0.0	41.8	5.5	4.7	4.7	6.0	4.7	4.7
Incr Delay (d2), s/veh	1.4	0.0	0.2	0.1	0.0	0.2	0.1	0.2	0.3	0.3	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.0	0.9	0.3	0.0	0.7	0.2	1.6	1.8	0.4	1.4	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.5	0.0	42.2	43.3	0.0	42.0	5.6	4.9	5.1	6.4	4.8	5.0
LnGrp LOS	D	A	D	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h		394			38			782			733	
Approach Delay, s/veh		49.7			42.3			5.0			5.0	
Approach LOS		D			D			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		94.8		25.2		94.8		25.2				
Change Period (Y+Rc), s		* 6		4.5		* 6		4.5				
Max Green Setting (Gmax), s		* 54		15.5		* 54		35.5				
Max Q Clear Time (g_c+I1), s		10.3		4.9		7.8		19.3				
Green Ext Time (p_c), s		5.2		0.1		5.5		1.4				

Intersection Summary		
HCM 6th Ctrl Delay		14.8
HCM 6th LOS		B

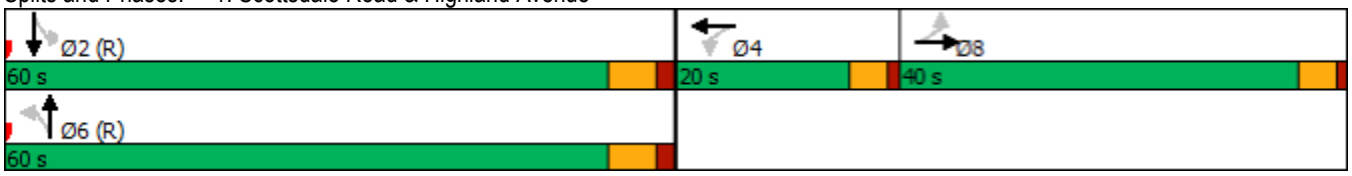
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Phase Number	2	4	6	8
Movement	SBTL	WBTL	NBTL	EBTL
Lead/Lag		Lead		Lag
Lead-Lag Optimize		Yes		Yes
Recall Mode	C-Max	None	C-Max	None
Maximum Split (s)	60	20	60	40
Maximum Split (%)	50.0%	16.7%	50.0%	33.3%
Minimum Split (s)	60	20	60	40
Yellow Time (s)	4.2	3.5	4.2	3.5
All-Red Time (s)	1.8	1	1.8	1
Minimum Initial (s)	10	7	10	7
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	8		7	9
Flash Dont Walk (s)	17		16	24
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	54	114	54	14
End Time (s)	114	14	114	54
Yield/Force Off (s)	108	9.5	108	49.5
Yield/Force Off 170(s)	91	9.5	92	25.5
Local Start Time (s)	0	60	0	80
Local Yield (s)	54	75.5	54	115.5
Local Yield 170(s)	37	75.5	38	91.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	120
Offset: 54 (45%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	

Splits and Phases: 1: Scottsdale Road & Highland Avenue



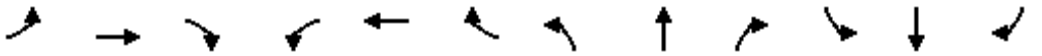
Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	15	695	13	0	635
Future Vol, veh/h	0	15	695	13	0	635
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	-	200	-	-
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	0	16	755	14	0	690

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	378	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	529	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	529	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	529	-
HCM Lane V/C Ratio	-	-	0.031	-
HCM Control Delay (s)	-	-	12	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	0	8	11	0	18	41	676	21	14	591	17
Future Volume (veh/h)	3	0	8	11	0	18	41	676	21	14	591	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3	0	9	12	0	20	45	735	23	15	642	18
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	130	0	71	60	7	44	808	3943	123	564	3107	964
Arrive On Green	0.04	0.00	0.04	0.04	0.00	0.04	0.42	1.00	1.00	0.01	0.20	0.20
Sat Flow, veh/h	1392	0	1585	428	155	971	1781	5087	159	1781	5106	1585
Grp Volume(v), veh/h	3	0	9	32	0	0	45	491	267	15	642	18
Grp Sat Flow(s),veh/h/ln	1392	0	1585	1554	0	0	1781	1702	1842	1781	1702	1585
Q Serve(g_s), s	0.0	0.0	0.7	1.0	0.0	0.0	0.0	0.0	0.0	0.0	12.6	1.1
Cycle Q Clear(g_c), s	0.2	0.0	0.7	2.3	0.0	0.0	0.0	0.0	0.0	0.0	12.6	1.1
Prop In Lane	1.00		1.00	0.37		0.62	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	130	0	71	111	0	0	808	2639	1428	564	3107	964
V/C Ratio(X)	0.02	0.00	0.13	0.29	0.00	0.00	0.06	0.19	0.19	0.03	0.21	0.02
Avail Cap(c_a), veh/h	481	0	470	492	0	0	808	2639	1428	570	3107	964
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.8	0.0	55.0	55.8	0.0	0.0	4.3	0.0	0.0	7.7	23.8	19.2
Incr Delay (d2), s/veh	0.1	0.0	0.8	1.4	0.0	0.0	0.0	0.1	0.3	0.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.3	1.0	0.0	0.0	0.2	0.1	0.1	0.1	5.7	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.9	0.0	55.8	57.2	0.0	0.0	4.3	0.1	0.3	7.7	24.0	19.2
LnGrp LOS	D	A	E	E	A	A	A	A	A	A	C	B
Approach Vol, veh/h		12			32			803			675	
Approach Delay, s/veh		55.6			57.2			0.4			23.5	
Approach LOS		E			E			A			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	30.6	78.6		10.8	10.6	98.6		10.8				
Change Period (Y+Rc), s	* 5.6	5.6		* 5.4	* 5.6	5.6		* 5.4				
Max Green Setting (Gmax), s	* 5.4	42.4		* 36	* 5.4	62.4		* 36				
Max Q Clear Time (g_c+I1), s	2.0	14.6		4.3	2.0	2.0		2.7				
Green Ext Time (p_c), s	0.0	4.5		0.1	0.0	5.3		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	12.3
HCM 6th LOS	B

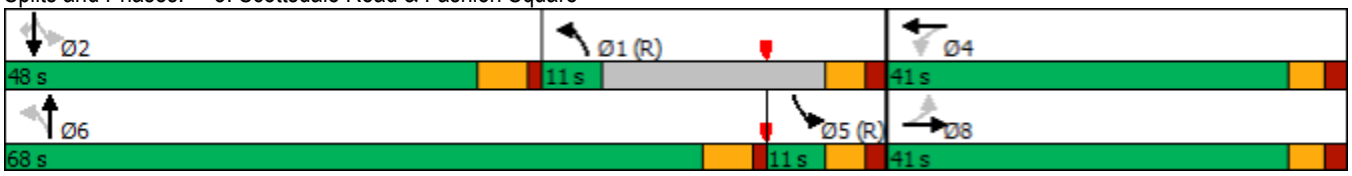
Notes

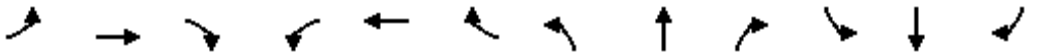
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Phase Number	1	2	4	5	6	8
Movement	NBL	SBTL	WBTL	SBL	NBTL	EBTL
Lead/Lag	Lag	Lead		Lag	Lead	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	C-Max	Max	None	C-Max	Max	None
Maximum Split (s)	11	48	41	11	68	41
Maximum Split (%)	9.2%	40.0%	34.2%	9.2%	56.7%	34.2%
Minimum Split (s)	11	48	41	11	68	41
Yellow Time (s)	3.6	4.4	3.3	3.6	4.4	3.3
All-Red Time (s)	2	1.2	2.1	2	1.2	2.1
Minimum Initial (s)	5	10	7	5	10	7
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Dont Walk (s)		11	27		8	21
Dual Entry	Yes	Yes	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	18	90	49	38	90	49
End Time (s)	49	18	90	49	38	90
Yield/Force Off (s)	43.4	12.4	84.6	43.4	32.4	84.6
Yield/Force Off 170(s)	43.4	1.4	57.6	43.4	24.4	63.6
Local Start Time (s)	100	52	11	0	52	11
Local Yield (s)	5.4	94.4	46.6	5.4	114.4	46.6
Local Yield 170(s)	5.4	83.4	19.6	5.4	106.4	25.6

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	120
Offset: 38 (32%), Referenced to phase 1:NBL and 5:SBL, Start of Green	

Splits and Phases: 3: Scottsdale Road & Fashion Square





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	293	92	80	365	133	88	461	51	109	408	79
Future Volume (veh/h)	142	293	92	80	365	133	88	461	51	109	408	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	154	318	100	87	397	145	96	501	55	118	443	86
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	209	651	291	109	471	170	146	2452	266	171	1906	850
Arrive On Green	0.06	0.18	0.18	0.06	0.18	0.18	0.04	0.52	0.52	0.05	0.54	0.54
Sat Flow, veh/h	3456	3554	1585	1781	2558	923	3456	4677	506	3456	3554	1585
Grp Volume(v), veh/h	154	318	100	87	274	268	96	363	193	118	443	86
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1704	1728	1702	1779	1728	1777	1585
Q Serve(g_s), s	5.3	9.6	6.6	5.8	17.9	18.2	3.3	6.8	7.0	4.0	7.9	3.2
Cycle Q Clear(g_c), s	5.3	9.6	6.6	5.8	17.9	18.2	3.3	6.8	7.0	4.0	7.9	3.2
Prop In Lane	1.00		1.00	1.00		0.54	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	209	651	291	109	327	314	146	1785	933	171	1906	850
V/C Ratio(X)	0.74	0.49	0.34	0.80	0.84	0.85	0.66	0.20	0.21	0.69	0.23	0.10
Avail Cap(c_a), veh/h	251	1051	469	129	526	504	202	1785	933	184	1906	850
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	55.4	44.0	42.7	55.6	47.2	47.4	56.6	15.2	15.2	56.1	14.7	13.6
Incr Delay (d2), s/veh	6.7	0.2	0.3	20.9	3.3	4.3	1.9	0.3	0.5	7.5	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	4.2	2.6	3.2	8.1	8.0	1.4	2.6	2.8	1.9	3.1	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.1	44.2	43.0	76.5	50.5	51.7	58.4	15.5	15.7	63.7	15.0	13.9
LnGrp LOS	E	D	D	E	D	D	E	B	B	E	B	B
Approach Vol, veh/h		572			629			652			647	
Approach Delay, s/veh		48.8			54.6			21.9			23.7	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.1	69.8	12.6	27.6	11.5	68.3	12.7	27.5
Change Period (Y+Rc), s	5.0	5.4	* 5.3	5.5	5.6	* 5.4	* 5.3	5.5
Max Green Setting (Gmax), s	7.0	47.6	* 8.7	35.5	6.4	* 48	* 8.7	35.5
Max Q Clear Time (g_c+I1), s	5.3	9.9	7.3	20.2	6.0	9.0	7.8	11.6
Green Ext Time (p_c), s	0.0	2.0	0.0	1.9	0.0	2.2	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	36.7
HCM 6th LOS	D

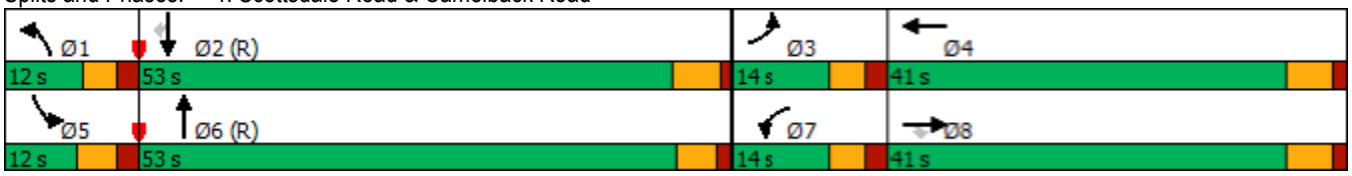
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBT	EBL	WBT	SBL	NBT	WBL	EBT
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	C-Max	None	None
Maximum Split (s)	12	53	14	41	12	53	14	41
Maximum Split (%)	10.0%	44.2%	11.7%	34.2%	10.0%	44.2%	11.7%	34.2%
Minimum Split (s)	12	53	14	41	12	53	14	41
Yellow Time (s)	3	4.4	3.3	4	3.6	3.6	3.3	4
All-Red Time (s)	2	1	2	1.5	2	1.4	2	1.5
Minimum Initial (s)	5	10	5	7	5	10	5	7
Vehicle Extension (s)	2	2	2	2	2	2	2	2
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		4		4		4		4
Flash Dont Walk (s)		23		30		24		25
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	15	27	80	94	15	27	80	94
End Time (s)	27	80	94	15	27	80	94	15
Yield/Force Off (s)	22	74.6	88.7	9.5	21.4	75	88.7	9.5
Yield/Force Off 170(s)	22	51.6	88.7	99.5	21.4	51	88.7	104.5
Local Start Time (s)	108	0	53	67	108	0	53	67
Local Yield (s)	115	47.6	61.7	102.5	114.4	48	61.7	102.5
Local Yield 170(s)	115	24.6	61.7	72.5	114.4	24	61.7	77.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	120
Offset: 27 (23%), Referenced to phase 2:SBT and 6:NBT, Start of Green	

Splits and Phases: 4: Scottsdale Road & Camelback Road



Intersection	
Int Delay, s/veh	2.6

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Vol, veh/h	20	15	3	15	15	4
Future Vol, veh/h	20	15	3	15	15	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	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	22	16	3	16	16	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	38	0	52	30
Stage 1	-	-	-	-	30	-
Stage 2	-	-	-	-	22	-
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	-	-	1575	-	962	1051
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	1001	-
Platoon blocked, %	-	-	1	-	1	1
Mov Cap-1 Maneuver	-	-	1575	-	960	1051
Mov Cap-2 Maneuver	-	-	-	-	960	-
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	999	-

Approach	EB	WB	NW
HCM Control Delay, s	0	1.2	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NWLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	978	-	-	1575	-
HCM Lane V/C Ratio	0.021	-	-	0.002	-
HCM Control Delay (s)	8.8	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	11	3	0	15	0	3
Future Vol, veh/h	11	3	0	15	0	3
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	12	3	0	16	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	15	0	30	14
Stage 1	-	-	-	-	14	-
Stage 2	-	-	-	-	16	-
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	-	-	1603	-	984	1066
Stage 1	-	-	-	-	1009	-
Stage 2	-	-	-	-	1007	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1603	-	984	1066
Mov Cap-2 Maneuver	-	-	-	-	984	-
Stage 1	-	-	-	-	1009	-
Stage 2	-	-	-	-	1007	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1066	-	-	1603	-
HCM Lane V/C Ratio	0.003	-	-	-	-
HCM Control Delay (s)	8.4	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

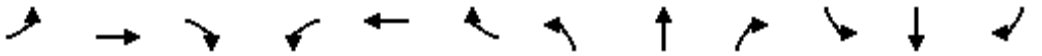
Intersection	
Int Delay, s/veh	3.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	0	6	18	0	0
Future Vol, veh/h	16	0	6	18	0	0
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	17	0	7	20	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	18	17	0	0	27	0
Stage 1	17	-	-	-	-	-
Stage 2	1	-	-	-	-	-
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	1000	1062	-	-	1587	-
Stage 1	1006	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1000	1062	-	-	1587	-
Mov Cap-2 Maneuver	1000	-	-	-	-	-
Stage 1	1006	-	-	-	-	-
Stage 2	1022	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1000	1587	-
HCM Lane V/C Ratio	-	-	0.017	-	-
HCM Control Delay (s)	-	-	8.7	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	572	9	50	30	24	50	47	941	27	29	863	68
Future Volume (veh/h)	572	9	50	30	24	50	47	941	27	29	863	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	622	10	54	33	26	54	51	1023	29	32	938	74
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	781	75	403	415	159	331	351	3143	89	339	2973	234
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.62	0.62	0.62	0.62	0.62	0.62
Sat Flow, veh/h	2558	254	1370	1338	542	1126	557	5104	145	536	4826	380
Grp Volume(v), veh/h	622	0	64	33	0	80	51	682	370	32	661	351
Grp Sat Flow(s),veh/h/ln	1279	0	1624	1338	0	1668	557	1702	1844	536	1702	1802
Q Serve(g_s), s	28.6	0.0	3.5	2.2	0.0	4.3	5.8	11.5	11.6	3.7	11.1	11.2
Cycle Q Clear(g_c), s	32.9	0.0	3.5	5.7	0.0	4.3	16.9	11.5	11.6	15.2	11.1	11.2
Prop In Lane	1.00		0.84	1.00		0.68	1.00		0.08	1.00		0.21
Lane Grp Cap(c), veh/h	781	0	478	415	0	490	351	2097	1136	339	2097	1110
V/C Ratio(X)	0.80	0.00	0.13	0.08	0.00	0.16	0.15	0.33	0.33	0.09	0.32	0.32
Avail Cap(c_a), veh/h	858	0	526	415	0	490	351	2097	1136	339	2097	1110
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.6	0.0	31.1	33.2	0.0	31.4	15.0	11.1	11.1	14.7	11.0	11.0
Incr Delay (d2), s/veh	4.2	0.0	0.0	0.0	0.0	0.1	0.9	0.4	0.8	0.6	0.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	0.0	1.4	0.7	0.0	1.7	0.8	4.1	4.6	0.5	4.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.8	0.0	31.2	33.3	0.0	31.5	15.9	11.5	11.8	15.3	11.4	11.7
LnGrp LOS	D	A	C	C	A	C	B	B	B	B	B	B
Approach Vol, veh/h		686			113			1103			1044	
Approach Delay, s/veh		46.3			32.0			11.8			11.6	
Approach LOS		D			C			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		79.6		40.4		79.6		40.4				
Change Period (Y+Rc), s		* 5.7		5.1		* 5.7		5.1				
Max Green Setting (Gmax), s		* 50		14.9		* 50		38.9				
Max Q Clear Time (g_c+I1), s		17.2		7.7		18.9		34.9				
Green Ext Time (p_c), s		2.5		0.1		2.7		0.4				

Intersection Summary												
HCM 6th Ctrl Delay			20.5									
HCM 6th LOS			C									

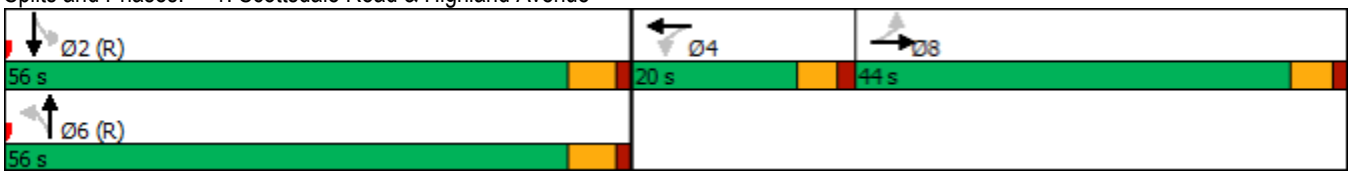
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Phase Number	2	4	6	8
Movement	SBTL	WBTL	NBTL	EBTL
Lead/Lag		Lead		Lag
Lead-Lag Optimize		Yes		Yes
Recall Mode	C-Max	None	C-Max	None
Maximum Split (s)	56	20	56	44
Maximum Split (%)	46.7%	16.7%	46.7%	36.7%
Minimum Split (s)	56	20	56	44
Yellow Time (s)	4.4	3.6	4.4	3.6
All-Red Time (s)	1.3	1.5	1.3	1.5
Minimum Initial (s)	10	7	10	7
Vehicle Extension (s)	1	1	1	1
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	8		7	9
Flash Dont Walk (s)	17		16	24
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	13	69	13	89
End Time (s)	69	89	69	13
Yield/Force Off (s)	63.3	83.9	63.3	7.9
Yield/Force Off 170(s)	46.3	83.9	47.3	103.9
Local Start Time (s)	0	56	0	76
Local Yield (s)	50.3	70.9	50.3	114.9
Local Yield 170(s)	33.3	70.9	34.3	90.9

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	120
Offset: 13 (11%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	

Splits and Phases: 1: Scottsdale Road & Highland Avenue



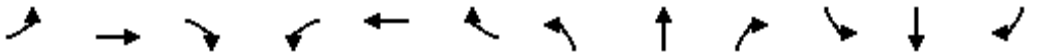
Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	28	1026	6	0	954
Future Vol, veh/h	0	28	1026	6	0	954
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	-	200	-	-
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	0	30	1115	7	0	1037

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	558	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	405	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	405	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	405	-
HCM Lane V/C Ratio	-	-	0.075	-
HCM Control Delay (s)	-	-	14.6	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.2	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	3	75	68	0	39	60	944	32	35	913	49
Future Volume (veh/h)	38	3	75	68	0	39	60	944	32	35	913	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	3	82	74	0	42	65	1026	35	38	992	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	230	8	211	128	11	51	450	3318	113	533	3342	1037
Arrive On Green	0.14	0.14	0.14	0.14	0.00	0.14	0.14	1.00	1.00	0.02	0.22	0.22
Sat Flow, veh/h	1365	56	1537	577	77	371	1781	5070	173	1781	5106	1585
Grp Volume(v), veh/h	41	0	85	116	0	0	65	689	372	38	992	53
Grp Sat Flow(s),veh/h/ln	1365	0	1594	1025	0	0	1781	1702	1839	1781	1702	1585
Q Serve(g_s), s	0.0	0.0	5.8	8.3	0.0	0.0	0.0	0.0	0.0	0.0	19.5	3.2
Cycle Q Clear(g_c), s	3.6	0.0	5.8	14.2	0.0	0.0	0.0	0.0	0.0	0.0	19.5	3.2
Prop In Lane	1.00		0.96	0.64		0.36	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	230	0	219	190	0	0	450	2228	1204	533	3342	1037
V/C Ratio(X)	0.18	0.00	0.39	0.61	0.00	0.00	0.14	0.31	0.31	0.07	0.30	0.05
Avail Cap(c_a), veh/h	481	0	513	448	0	0	450	2228	1204	533	3342	1037
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.84	0.84	0.84	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.2	0.0	47.2	52.3	0.0	0.0	12.0	0.0	0.0	5.2	23.9	17.5
Incr Delay (d2), s/veh	0.1	0.0	0.4	1.2	0.0	0.0	0.0	0.3	0.6	0.0	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	2.3	3.5	0.0	0.0	0.8	0.1	0.2	0.3	8.9	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.4	0.0	47.6	53.5	0.0	0.0	12.0	0.3	0.6	5.2	24.1	17.6
LnGrp LOS	D	A	D	D	A	A	B	A	A	A	C	B
Approach Vol, veh/h		126			116			1126			1083	
Approach Delay, s/veh		47.2			53.5			1.1			23.2	
Approach LOS		D			D			A			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.0	84.1		21.9	14.0	84.1		21.9				
Change Period (Y+Rc), s	* 5.6	5.6		* 5.4	* 5.6	5.6		* 5.4				
Max Green Setting (Gmax), s	* 8.4	56.4		* 39	* 8.4	56.4		* 39				
Max Q Clear Time (g_c+I1), s	2.0	21.5		16.2	2.0	2.0		7.8				
Green Ext Time (p_c), s	0.0	1.3		0.3	0.0	1.1		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		15.7	
HCM 6th LOS		B	

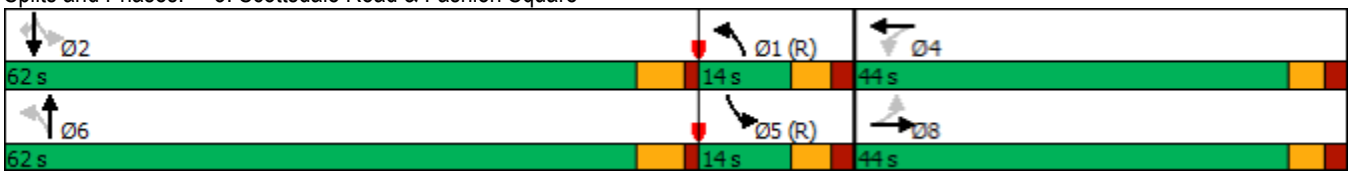
Notes

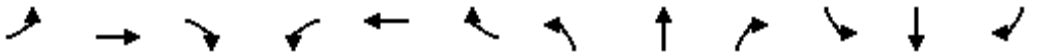
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Phase Number	1	2	4	5	6	8
Movement	NBL	SBTL	WBTL	SBL	NBTL	EBTL
Lead/Lag	Lag	Lead		Lag	Lead	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	C-Max	Max	None	C-Max	Max	None
Maximum Split (s)	14	62	44	14	62	44
Maximum Split (%)	11.7%	51.7%	36.7%	11.7%	51.7%	36.7%
Minimum Split (s)	14	62	44	14	62	44
Yellow Time (s)	3.6	4.4	3.3	3.6	4.4	3.3
All-Red Time (s)	2	1.2	2.1	2	1.2	2.1
Minimum Initial (s)	8.4	7	5	8.4	7	13
Vehicle Extension (s)	0.2	0.2	1.5	0.2	0.2	1.5
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Dont Walk (s)		11	27		8	21
Dual Entry	Yes	Yes	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	12	70	26	12	70	26
End Time (s)	26	12	70	26	12	70
Yield/Force Off (s)	20.4	6.4	64.6	20.4	6.4	64.6
Yield/Force Off 170(s)	20.4	115.4	37.6	20.4	118.4	43.6
Local Start Time (s)	0	58	14	0	58	14
Local Yield (s)	8.4	114.4	52.6	8.4	114.4	52.6
Local Yield 170(s)	8.4	103.4	25.6	8.4	106.4	31.6

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	120
Offset: 12 (10%), Referenced to phase 1:NBL and 5:SBL, Start of Green	

Splits and Phases: 3: Scottsdale Road & Fashion Square





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	208	494	219	81	456	183	260	701	94	311	606	236
Future Volume (veh/h)	208	494	219	81	456	183	260	701	94	311	606	236
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	226	537	238	88	496	199	283	762	102	338	659	257
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	281	648	289	224	567	226	720	1810	241	397	1084	483
Arrive On Green	0.08	0.18	0.18	0.13	0.23	0.23	0.21	0.40	0.40	0.11	0.31	0.31
Sat Flow, veh/h	3456	3554	1585	1781	2480	989	3456	4559	606	3456	3554	1585
Grp Volume(v), veh/h	226	537	238	88	355	340	283	567	297	338	659	257
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1692	1728	1702	1761	1728	1777	1585
Q Serve(g_s), s	7.7	17.5	17.3	5.5	23.1	23.3	8.5	14.5	14.6	11.5	19.0	12.2
Cycle Q Clear(g_c), s	7.7	17.5	17.3	5.5	23.1	23.3	8.5	14.5	14.6	11.5	19.0	12.2
Prop In Lane	1.00		1.00	1.00		0.58	1.00		0.34	1.00		1.00
Lane Grp Cap(c), veh/h	281	648	289	224	406	387	720	1351	699	397	1084	483
V/C Ratio(X)	0.80	0.83	0.82	0.39	0.87	0.88	0.39	0.42	0.42	0.85	0.61	0.53
Avail Cap(c_a), veh/h	308	992	442	224	526	501	720	1351	699	501	1084	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97
Uniform Delay (d), s/veh	54.2	47.3	47.2	48.2	44.6	44.7	40.9	26.2	26.2	52.1	35.6	19.7
Incr Delay (d2), s/veh	11.8	2.0	4.1	0.4	10.4	11.6	0.1	1.0	1.9	9.0	2.5	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	7.8	7.1	2.4	11.2	10.9	3.6	5.9	6.3	5.4	8.4	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.0	49.3	51.3	48.6	55.0	56.3	41.1	27.1	28.1	61.1	38.0	23.7
LnGrp LOS	E	D	D	D	D	E	D	C	C	E	D	C
Approach Vol, veh/h		1001			783			1147			1254	
Approach Delay, s/veh		53.6			54.8			30.8			41.3	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.0	42.0	15.1	32.9	19.4	52.6	20.6	27.4
Change Period (Y+Rc), s	5.0	5.4	* 5.3	5.5	5.6	* 5	5.5	* 5.5
Max Green Setting (Gmax), s	16.0	36.6	* 11	35.5	17.4	* 35	12.7	* 34
Max Q Clear Time (g_c+I1), s	10.5	21.0	9.7	25.3	13.5	16.6	7.5	19.5
Green Ext Time (p_c), s	0.3	2.9	0.0	2.1	0.3	3.4	0.0	2.4

Intersection Summary	
HCM 6th Ctrl Delay	43.9
HCM 6th LOS	D

Notes

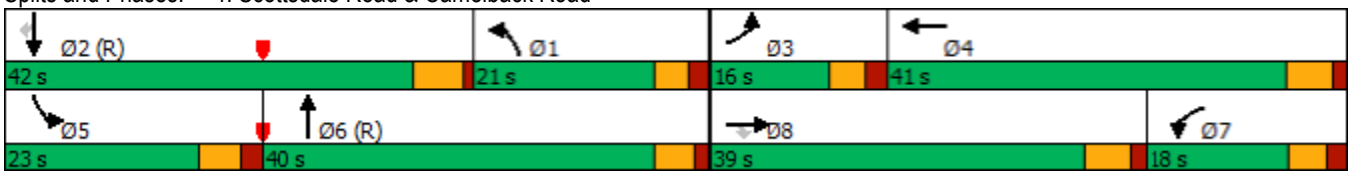
User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBT	EBL	WBT	SBL	NBT	WBL	EBT
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lag	Lead
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	C-Max	None	None
Maximum Split (s)	21	42	16	41	23	40	18	39
Maximum Split (%)	17.5%	35.0%	13.3%	34.2%	19.2%	33.3%	15.0%	32.5%
Minimum Split (s)	21	42	16	41	23	40	18	39
Yellow Time (s)	3	4.4	3.3	4	3.6	3.6	3.3	4
All-Red Time (s)	2	1	2	1.5	2	1.4	2	1.5
Minimum Initial (s)	5	10	5	7	5	10	5	7
Vehicle Extension (s)	2	2	2	2	2	2	2	2
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		4		4		4		4
Flash Dont Walk (s)		23		30		24		25
Dual Entry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	3	81	24	40	81	104	63	24
End Time (s)	24	3	40	81	104	24	81	63
Yield/Force Off (s)	19	117.6	34.7	75.5	98.4	19	75.7	57.5
Yield/Force Off 170(s)	19	94.6	34.7	45.5	98.4	115	75.7	32.5
Local Start Time (s)	19	97	40	56	97	0	79	40
Local Yield (s)	35	13.6	50.7	91.5	114.4	35	91.7	73.5
Local Yield 170(s)	35	110.6	50.7	61.5	114.4	11	91.7	48.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	120
Offset: 104 (87%), Referenced to phase 2:SBT and 6:NBT, Start of Green	

Splits and Phases: 4: Scottsdale Road & Camelback Road



Intersection	
Int Delay, s/veh	5.2

Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Vol, veh/h	23	45	0	10	97	0
Future Vol, veh/h	23	45	0	10	97	0
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	25	49	0	11	105	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	74	0	61	50
Stage 1	-	-	-	-	50	-
Stage 2	-	-	-	-	11	-
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	-	-	1527	-	951	1025
Stage 1	-	-	-	-	976	-
Stage 2	-	-	-	-	1012	-
Platoon blocked, %	-	-	1	-	1	1
Mov Cap-1 Maneuver	-	-	1527	-	951	1025
Mov Cap-2 Maneuver	-	-	-	-	951	-
Stage 1	-	-	-	-	976	-
Stage 2	-	-	-	-	1012	-

Approach	EB	WB	NW
HCM Control Delay, s	0	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NWLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	951	-	-	1527	-
HCM Lane V/C Ratio	0.111	-	-	-	-
HCM Control Delay (s)	9.3	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	4	4	0	27	3	0
Future Vol, veh/h	4	4	0	27	3	0
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	4	4	0	29	3	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	8	0	35	6
Stage 1	-	-	-	-	6	-
Stage 2	-	-	-	-	29	-
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	-	-	1612	-	978	1077
Stage 1	-	-	-	-	1017	-
Stage 2	-	-	-	-	994	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1612	-	978	1077
Mov Cap-2 Maneuver	-	-	-	-	978	-
Stage 1	-	-	-	-	1017	-
Stage 2	-	-	-	-	994	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	978	-	-	1612	-
HCM Lane V/C Ratio	0.003	-	-	-	-
HCM Control Delay (s)	8.7	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	0	3	21	0	4
Future Vol, veh/h	8	0	3	21	0	4
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	9	0	3	23	0	4

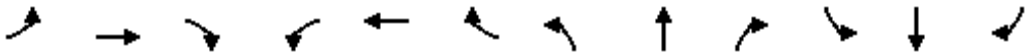
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	19	15	0	0	26	0
Stage 1	15	-	-	-	-	-
Stage 2	4	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	998	1065	-	-	1588	-
Stage 1	1008	-	-	-	-	-
Stage 2	1019	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	998	1065	-	-	1588	-
Mov Cap-2 Maneuver	998	-	-	-	-	-
Stage 1	1008	-	-	-	-	-
Stage 2	1019	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	998	1588	-
HCM Lane V/C Ratio	-	-	0.009	-	-
HCM Control Delay (s)	-	-	8.6	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Appendix I – Year 2023 Build Capacity Analysis

Lokahi



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	328	19	21	9	3	23	25	720	41	49	600	41
Future Volume (veh/h)	328	19	21	9	3	23	25	720	41	49	600	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	357	21	23	10	3	25	27	783	45	53	652	45
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	522	135	147	255	28	237	588	3681	211	521	3636	249
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.75	0.75	0.75	0.75	0.75	0.75
Sat Flow, veh/h	2681	816	894	1362	173	1439	748	4941	283	662	4879	335
Grp Volume(v), veh/h	357	0	44	10	0	28	27	539	289	53	454	243
Grp Sat Flow(s),veh/h/ln	1341	0	1710	1362	0	1611	748	1702	1819	662	1702	1810
Q Serve(g_s), s	15.7	0.0	2.6	0.8	0.0	1.8	1.3	5.7	5.8	3.2	4.7	4.8
Cycle Q Clear(g_c), s	17.4	0.0	2.6	3.4	0.0	1.8	6.1	5.7	5.8	8.9	4.7	4.8
Prop In Lane	1.00		0.52	1.00		0.89	1.00		0.16	1.00		0.18
Lane Grp Cap(c), veh/h	522	0	282	255	0	266	588	2536	1356	521	2536	1349
V/C Ratio(X)	0.68	0.00	0.16	0.04	0.00	0.11	0.05	0.21	0.21	0.10	0.18	0.18
Avail Cap(c_a), veh/h	860	0	497	255	0	266	588	2536	1356	521	2536	1349
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.0	0.0	43.0	44.4	0.0	42.6	5.4	4.6	4.6	6.0	4.5	4.5
Incr Delay (d2), s/veh	0.6	0.0	0.1	0.0	0.0	0.1	0.1	0.2	0.4	0.4	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.0	1.1	0.3	0.0	0.7	0.2	1.7	1.9	0.4	1.4	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.6	0.0	43.0	44.4	0.0	42.7	5.5	4.8	5.0	6.4	4.7	4.8
LnGrp LOS	D	A	D	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h		401			38			855			750	
Approach Delay, s/veh		49.8			43.1			4.9			4.8	
Approach LOS		D			D			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		95.1		24.9		95.1		24.9				
Change Period (Y+Rc), s		* 5.7		5.1		* 5.7		5.1				
Max Green Setting (Gmax), s		* 54		14.9		* 54		34.9				
Max Q Clear Time (g_c+I1), s		10.9		5.4		8.1		19.4				
Green Ext Time (p_c), s		1.7		0.0		1.9		0.3				

Intersection Summary												
HCM 6th Ctrl Delay			14.4									
HCM 6th LOS			B									

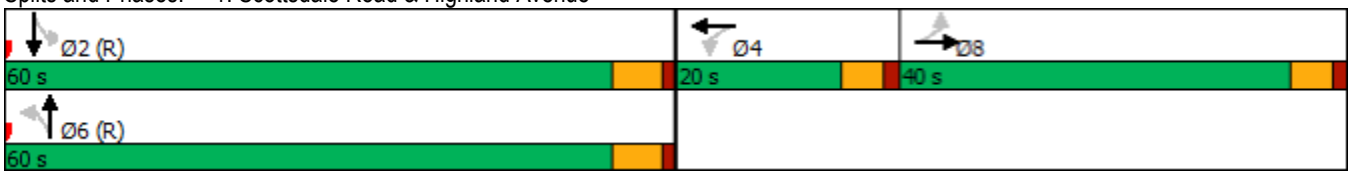
Notes

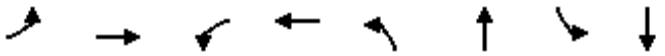
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Phase Number	2	4	6	8
Movement	SBTL	WBTL	NBTL	EBTL
Lead/Lag		Lead		Lag
Lead-Lag Optimize		Yes		Yes
Recall Mode	C-Max	None	C-Max	None
Maximum Split (s)	60	20	60	40
Maximum Split (%)	50.0%	16.7%	50.0%	33.3%
Minimum Split (s)	60	20	60	40
Yellow Time (s)	4.4	3.6	4.4	3.6
All-Red Time (s)	1.3	1.5	1.3	1.5
Minimum Initial (s)	10	7	10	7
Vehicle Extension (s)	1	1	1	1
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	8		7	9
Flash Dont Walk (s)	17		16	24
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	54	114	54	14
End Time (s)	114	14	114	54
Yield/Force Off (s)	108.3	8.9	108.3	48.9
Yield/Force Off 170(s)	91.3	8.9	92.3	24.9
Local Start Time (s)	0	60	0	80
Local Yield (s)	54.3	74.9	54.3	114.9
Local Yield 170(s)	37.3	74.9	38.3	90.9

Intersection Summary		
Cycle Length	120	
Control Type	Actuated-Coordinated	
Natural Cycle	120	
Offset: 54 (45%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green		

Splits and Phases: 1: Scottsdale Road & Highland Avenue





Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	357	44	10	28	27	828	53	697
v/c Ratio	0.82	0.15	0.11	0.22	0.06	0.24	0.13	0.20
Control Delay	63.1	24.5	54.0	24.8	5.0	4.3	11.1	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.1	24.5	54.0	24.8	5.0	4.3	11.1	8.7
Queue Length 50th (ft)	139	14	8	2	7	95	15	73
Queue Length 95th (ft)	181	45	25	32	22	118	42	118
Internal Link Dist (ft)		863		210		150		318
Turn Bay Length (ft)	250		65		190		90	
Base Capacity (vph)	776	515	177	222	466	3417	399	3411
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.09	0.06	0.13	0.06	0.24	0.13	0.20

Intersection Summary

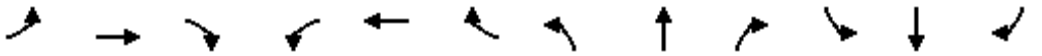
Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	63	714	54	0	659
Future Vol, veh/h	0	63	714	54	0	659
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	-	200	-	-
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	0	68	776	59	0	716

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	388	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	522	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	522	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	522	-
HCM Lane V/C Ratio	-	-	0.131	-
HCM Control Delay (s)	-	-	12.9	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.4	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	0	8	119	0	40	41	701	36	38	591	17
Future Volume (veh/h)	3	0	8	119	0	40	41	701	36	38	591	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	3	0	9	129	0	43	45	762	39	41	642	18
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	184	0	184	216	0	184	834	3503	179	499	2744	852
Arrive On Green	0.12	0.00	0.12	0.12	0.00	0.12	0.42	1.00	1.00	0.08	1.00	1.00
Sat Flow, veh/h	1364	0	1585	1406	0	1585	1781	4975	254	1781	5106	1585
Grp Volume(v), veh/h	3	0	9	129	0	43	45	521	280	41	642	18
Grp Sat Flow(s),veh/h/ln	1364	0	1585	1406	0	1585	1781	1702	1825	1781	1702	1585
Q Serve(g_s), s	0.2	0.0	0.6	10.8	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.2	0.0	0.6	11.4	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	184	0	184	216	0	184	834	2397	1285	499	2744	852
V/C Ratio(X)	0.02	0.00	0.05	0.60	0.00	0.23	0.05	0.22	0.22	0.08	0.23	0.02
Avail Cap(c_a), veh/h	431	0	470	470	0	470	834	2397	1285	505	2744	852
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.7	0.0	47.2	52.2	0.0	48.2	3.4	0.0	0.0	10.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	2.6	0.0	0.6	0.0	0.2	0.4	0.1	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.2	4.0	0.0	1.2	0.2	0.1	0.1	0.5	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.7	0.0	47.3	54.9	0.0	48.9	3.4	0.2	0.4	10.9	0.2	0.0
LnGrp LOS	D	A	D	D	A	D	A	A	A	B	A	A
Approach Vol, veh/h		12			172			846			701	
Approach Delay, s/veh		47.9			53.4			0.4			0.8	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	30.6	70.1		19.3	10.6	90.1		19.3				
Change Period (Y+Rc), s	* 5.6	5.6		* 5.4	* 5.6	5.6		* 5.4				
Max Green Setting (Gmax), s	* 5.4	42.4		* 36	* 5.4	62.4		* 36				
Max Q Clear Time (g_c+I1), s	2.0	2.0		13.4	2.0	2.0		5.2				
Green Ext Time (p_c), s	0.0	4.7		0.6	0.0	5.7		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	6.2
HCM 6th LOS	A

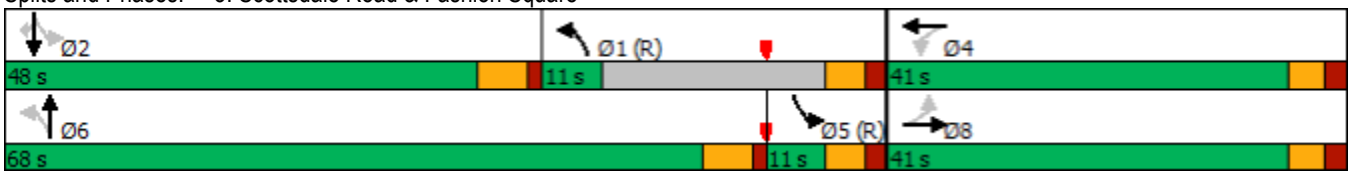
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Phase Number	1	2	4	5	6	8
Movement	NBL	SBTL	WBTL	SBL	NBTL	EBTL
Lead/Lag	Lag	Lead		Lag	Lead	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	C-Max	Max	None	C-Max	Max	None
Maximum Split (s)	11	48	41	11	68	41
Maximum Split (%)	9.2%	40.0%	34.2%	9.2%	56.7%	34.2%
Minimum Split (s)	11	48	41	11	68	41
Yellow Time (s)	3.6	4.4	3.3	3.6	4.4	3.3
All-Red Time (s)	2	1.2	2.1	2	1.2	2.1
Minimum Initial (s)	5	10	7	5	10	7
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		20	7
Flash Dont Walk (s)		11	27		8	21
Dual Entry	Yes	Yes	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	76	28	107	96	28	107
End Time (s)	107	76	28	107	96	28
Yield/Force Off (s)	101.4	70.4	22.6	101.4	90.4	22.6
Yield/Force Off 170(s)	101.4	59.4	115.6	101.4	82.4	1.6
Local Start Time (s)	100	52	11	0	52	11
Local Yield (s)	5.4	94.4	46.6	5.4	114.4	46.6
Local Yield 170(s)	5.4	83.4	19.6	5.4	106.4	25.6

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	120
Offset: 96 (80%), Referenced to phase 1:NBL and 5:SBL, Start of Green	

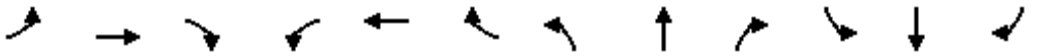
Splits and Phases: 3: Scottsdale Road & Fashion Square



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	3	9	129	43	45	801	41	642	18
v/c Ratio	0.02	0.02	0.67	0.10	0.06	0.23	0.10	0.25	0.02
Control Delay	41.0	0.0	65.5	0.5	3.2	11.2	6.8	15.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.0	0.0	65.5	0.5	3.2	11.2	6.8	15.6	0.1
Queue Length 50th (ft)	2	0	96	0	6	92	6	82	0
Queue Length 95th (ft)	11	0	154	0	m13	110	12	100	0
Internal Link Dist (ft)		130		74		600		351	
Turn Bay Length (ft)					160		140		140
Base Capacity (vph)	402	760	415	638	768	3435	392	2608	872
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.01	0.31	0.07	0.06	0.23	0.10	0.25	0.02

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	293	92	80	365	146	88	475	51	137	444	112
Future Volume (veh/h)	154	293	92	80	365	146	88	475	51	137	444	112
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	167	318	100	87	397	159	96	516	55	149	483	122
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	222	681	304	109	470	186	146	2402	253	184	1876	837
Arrive On Green	0.06	0.19	0.19	0.06	0.19	0.19	0.04	0.51	0.51	0.05	0.53	0.53
Sat Flow, veh/h	3456	3554	1585	1781	2487	984	3456	4692	494	3456	3554	1585
Grp Volume(v), veh/h	167	318	100	87	282	274	96	373	198	149	483	122
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1693	1728	1702	1781	1728	1777	1585
Q Serve(g_s), s	5.7	9.5	6.5	5.8	18.4	18.8	3.3	7.2	7.3	5.1	8.9	4.7
Cycle Q Clear(g_c), s	5.7	9.5	6.5	5.8	18.4	18.8	3.3	7.2	7.3	5.1	8.9	4.7
Prop In Lane	1.00		1.00	1.00		0.58	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	222	681	304	109	336	320	146	1743	912	184	1876	837
V/C Ratio(X)	0.75	0.47	0.33	0.80	0.84	0.86	0.66	0.21	0.22	0.81	0.26	0.15
Avail Cap(c_a), veh/h	251	1051	469	129	526	501	202	1743	912	184	1876	837
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96
Uniform Delay (d), s/veh	55.2	43.0	41.8	55.6	46.9	47.1	56.6	16.1	16.1	56.2	15.5	14.5
Incr Delay (d2), s/veh	8.9	0.2	0.2	20.9	4.0	5.1	1.9	0.3	0.5	20.7	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	4.2	2.6	3.2	8.4	8.3	1.4	2.8	3.0	2.7	3.5	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.1	43.2	42.1	76.5	50.9	52.2	58.4	16.3	16.6	76.9	15.8	14.8
LnGrp LOS	E	D	D	E	D	D	E	B	B	E	B	B
Approach Vol, veh/h		585			643			667			754	
Approach Delay, s/veh		49.0			54.9			22.5			27.7	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.1	68.7	13.0	28.2	12.0	66.8	12.7	28.5
Change Period (Y+Rc), s	5.0	5.4	* 5.3	5.5	5.6	* 5.4	* 5.3	5.5
Max Green Setting (Gmax), s	7.0	47.6	* 8.7	35.5	6.4	* 48	* 8.7	35.5
Max Q Clear Time (g_c+I1), s	5.3	10.9	7.7	20.8	7.1	9.3	7.8	11.5
Green Ext Time (p_c), s	0.0	2.2	0.0	1.9	0.0	2.3	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	37.7
HCM 6th LOS	D

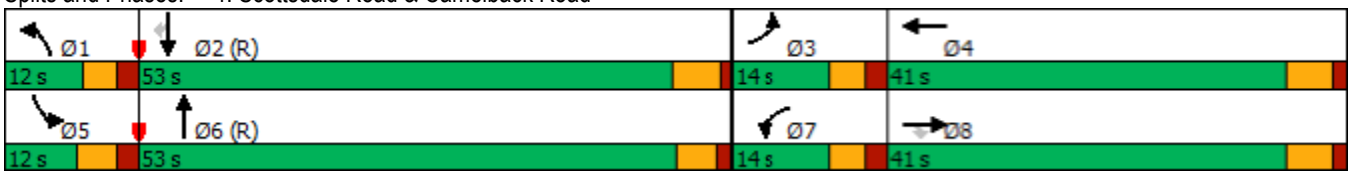
Notes

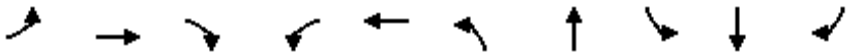
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBT	EBL	WBT	SBL	NBT	WBL	EBT
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	C-Max	None	None
Maximum Split (s)	12	53	14	41	12	53	14	41
Maximum Split (%)	10.0%	44.2%	11.7%	34.2%	10.0%	44.2%	11.7%	34.2%
Minimum Split (s)	12	53	14	41	12	53	14	41
Yellow Time (s)	3	4.4	3.3	4	3.6	3.6	3.3	4
All-Red Time (s)	2	1	2	1.5	2	1.4	2	1.5
Minimum Initial (s)	5	10	5	7	5	10	5	7
Vehicle Extension (s)	2	2	2	2	2	2	2	2
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		5		5		5		5
Flash Dont Walk (s)		23		30		24		25
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	15	27	80	94	15	27	80	94
End Time (s)	27	80	94	15	27	80	94	15
Yield/Force Off (s)	22	74.6	88.7	9.5	21.4	75	88.7	9.5
Yield/Force Off 170(s)	22	51.6	88.7	99.5	21.4	51	88.7	104.5
Local Start Time (s)	108	0	53	67	108	0	53	67
Local Yield (s)	115	47.6	61.7	102.5	114.4	48	61.7	102.5
Local Yield 170(s)	115	24.6	61.7	72.5	114.4	24	61.7	77.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	120
Offset: 27 (23%), Referenced to phase 2:SBT and 6:NBT, Start of Green	

Splits and Phases: 4: Scottsdale Road & Camelback Road





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	167	318	100	87	556	96	571	149	483	122
v/c Ratio	0.70	0.47	0.25	0.72	0.81	0.43	0.24	0.52	0.27	0.14
Control Delay	70.3	44.7	5.6	85.9	51.6	59.7	19.2	74.5	6.1	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.3	44.7	5.6	85.9	51.6	59.7	19.2	74.5	6.1	1.2
Queue Length 50th (ft)	65	116	0	67	200	37	90	55	46	3
Queue Length 95th (ft)	#108	151	30	#145	247	64	134	95	62	8
Internal Link Dist (ft)		649			757		707		600	
Turn Bay Length (ft)	160		160	100		190		140		
Base Capacity (vph)	248	1046	553	128	1037	231	2404	286	1763	850
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.30	0.18	0.68	0.54	0.42	0.24	0.52	0.27	0.14

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	43	15	3	131	15	4
Future Vol, veh/h	43	15	3	131	15	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	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	47	16	3	142	16	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	63	0	203	55
Stage 1	-	-	-	-	55	-
Stage 2	-	-	-	-	148	-
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	-	-	1542	-	789	1018
Stage 1	-	-	-	-	971	-
Stage 2	-	-	-	-	880	-
Platoon blocked, %	-	-	1	-	1	1
Mov Cap-1 Maneuver	-	-	1542	-	788	1018
Mov Cap-2 Maneuver	-	-	-	-	788	-
Stage 1	-	-	-	-	971	-
Stage 2	-	-	-	-	878	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	827	-	-	1542	-
HCM Lane V/C Ratio	0.025	-	-	0.002	-
HCM Control Delay (s)	9.5	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	11	57	0	15	10	3
Future Vol, veh/h	11	57	0	15	10	3
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	12	62	0	16	11	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	74	0	59	43
Stage 1	-	-	-	-	43	-
Stage 2	-	-	-	-	16	-
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	-	-	1526	-	948	1027
Stage 1	-	-	-	-	979	-
Stage 2	-	-	-	-	1007	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1526	-	948	1027
Mov Cap-2 Maneuver	-	-	-	-	948	-
Stage 1	-	-	-	-	979	-
Stage 2	-	-	-	-	1007	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	965	-	-	1526	-
HCM Lane V/C Ratio	0.015	-	-	-	-
HCM Control Delay (s)	8.8	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	0	16	18	0	54
Future Vol, veh/h	16	0	16	18	0	54
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	17	0	17	20	0	59

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	86	27	0	0	37	0
Stage 1	27	-	-	-	-	-
Stage 2	59	-	-	-	-	-
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	915	1048	-	-	1574	-
Stage 1	996	-	-	-	-	-
Stage 2	964	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	915	1048	-	-	1574	-
Mov Cap-2 Maneuver	915	-	-	-	-	-
Stage 1	996	-	-	-	-	-
Stage 2	964	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	915	1574	-
HCM Lane V/C Ratio	-	-	0.019	-	-
HCM Control Delay (s)	-	-	9	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	2.6

Movement	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Traffic Vol, veh/h	10	36	23	13	0	23
Future Vol, veh/h	10	36	23	13	0	23
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	11	39	25	14	0	25

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	39	0	-	0	93	32
Stage 1	-	-	-	-	32	-
Stage 2	-	-	-	-	61	-
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	1571	-	-	-	907	1042
Stage 1	-	-	-	-	991	-
Stage 2	-	-	-	-	962	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1571	-	-	-	901	1042
Mov Cap-2 Maneuver	-	-	-	-	901	-
Stage 1	-	-	-	-	984	-
Stage 2	-	-	-	-	962	-

Approach	NB	SB	SE
HCM Control Delay, s	1.6	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NBL	NBT	SELn1	SBT	SBR
Capacity (veh/h)	1571	-	1042	-	-
HCM Lane V/C Ratio	0.007	-	0.024	-	-
HCM Control Delay (s)	7.3	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Traffic Vol, veh/h	109	0	0	71	23	13
Future Vol, veh/h	109	0	0	71	23	13
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	118	0	0	77	25	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	118	0	195	118
Stage 1	-	-	-	-	118	-
Stage 2	-	-	-	-	77	-
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	-	-	1470	-	794	934
Stage 1	-	-	-	-	907	-
Stage 2	-	-	-	-	946	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1470	-	794	934
Mov Cap-2 Maneuver	-	-	-	-	794	-
Stage 1	-	-	-	-	907	-
Stage 2	-	-	-	-	946	-

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

Minor Lane/Major Mvmt	NBT	NBR	NWLn1	SBL	SBT
Capacity (veh/h)	-	-	839	1470	-
HCM Lane V/C Ratio	-	-	0.047	-	-
HCM Control Delay (s)	-	-	9.5	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

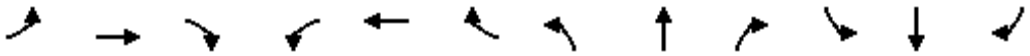
Intersection	
Int Delay, s/veh	4.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	13	41	0	25	38	54
Future Vol, veh/h	13	41	0	25	38	54
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	14	45	0	27	41	59

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	59	0	64	37
Stage 1	-	-	-	-	37	-
Stage 2	-	-	-	-	27	-
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	-	-	1545	-	942	1035
Stage 1	-	-	-	-	985	-
Stage 2	-	-	-	-	996	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1545	-	942	1035
Mov Cap-2 Maneuver	-	-	-	-	942	-
Stage 1	-	-	-	-	985	-
Stage 2	-	-	-	-	996	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	994	-	-	1545	-
HCM Lane V/C Ratio	0.101	-	-	-	-
HCM Control Delay (s)	9	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	572	9	73	30	24	50	51	980	27	29	897	68
Future Volume (veh/h)	572	9	73	30	24	50	51	980	27	29	897	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	622	10	79	33	26	54	55	1065	29	32	975	74
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	796	54	429	398	162	337	335	3119	85	322	2955	224
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	2558	181	1431	1308	542	1126	538	5110	139	515	4842	367
Grp Volume(v), veh/h	622	0	89	33	0	80	55	709	385	32	685	364
Grp Sat Flow(s),veh/h/ln	1279	0	1613	1308	0	1668	538	1702	1845	515	1702	1804
Q Serve(g_s), s	28.4	0.0	4.9	2.3	0.0	4.2	6.7	12.3	12.3	3.9	11.8	11.8
Cycle Q Clear(g_c), s	32.6	0.0	4.9	7.2	0.0	4.2	18.5	12.3	12.3	16.2	11.8	11.8
Prop In Lane	1.00		0.89	1.00		0.68	1.00		0.08	1.00		0.20
Lane Grp Cap(c), veh/h	796	0	483	398	0	500	335	2077	1126	322	2077	1101
V/C Ratio(X)	0.78	0.00	0.18	0.08	0.00	0.16	0.16	0.34	0.34	0.10	0.33	0.33
Avail Cap(c_a), veh/h	859	0	523	398	0	500	335	2077	1126	322	2077	1101
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.9	0.0	31.1	33.8	0.0	30.9	15.9	11.5	11.5	15.5	11.4	11.4
Incr Delay (d2), s/veh	4.4	0.0	0.2	0.1	0.0	0.1	1.1	0.4	0.8	0.6	0.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	0.0	2.0	0.7	0.0	1.7	0.9	4.5	5.0	0.5	4.3	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.3	0.0	31.3	33.9	0.0	31.1	17.0	12.0	12.3	16.1	11.8	12.2
LnGrp LOS	D	A	C	C	A	C	B	B	B	B	B	B
Approach Vol, veh/h		711			113			1149			1081	
Approach Delay, s/veh		45.3			31.9			12.3			12.1	
Approach LOS		D			C			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		78.9		41.1		78.9		41.1				
Change Period (Y+Rc), s		* 5.7		5.1		* 5.7		5.1				
Max Green Setting (Gmax), s		* 50		14.9		* 50		38.9				
Max Q Clear Time (g_c+I1), s		18.2		9.2		20.5		34.6				
Green Ext Time (p_c), s		8.2		0.2		8.7		1.4				

Intersection Summary												
HCM 6th Ctrl Delay			20.6									
HCM 6th LOS			C									

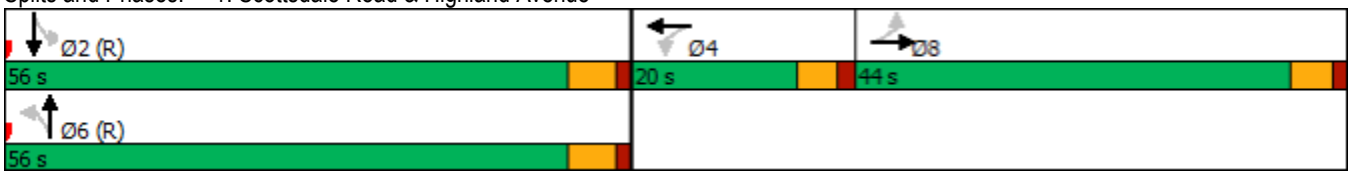
Notes

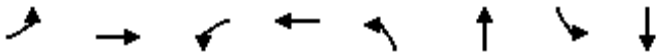
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Phase Number	2	4	6	8
Movement	SBTL	WBTL	NBTL	EBTL
Lead/Lag		Lead		Lag
Lead-Lag Optimize		Yes		Yes
Recall Mode	C-Max	None	C-Max	None
Maximum Split (s)	56	20	56	44
Maximum Split (%)	46.7%	16.7%	46.7%	36.7%
Minimum Split (s)	56	20	56	44
Yellow Time (s)	4.4	3.6	4.4	3.6
All-Red Time (s)	1.3	1.5	1.3	1.5
Minimum Initial (s)	10	7	10	7
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	8		7	9
Flash Dont Walk (s)	17		16	24
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	13	69	13	89
End Time (s)	69	89	69	13
Yield/Force Off (s)	63.3	83.9	63.3	7.9
Yield/Force Off 170(s)	46.3	83.9	47.3	103.9
Local Start Time (s)	0	56	0	76
Local Yield (s)	50.3	70.9	50.3	114.9
Local Yield 170(s)	33.3	70.9	34.3	90.9

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	120
Offset: 13 (11%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	

Splits and Phases: 1: Scottsdale Road & Highland Avenue





Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	622	89	33	80	55	1094	32	1049
v/c Ratio	0.85	0.17	0.47	0.37	0.28	0.43	0.17	0.42
Control Delay	51.5	8.6	71.7	24.9	14.5	10.4	24.6	21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.5	8.6	71.7	24.9	14.5	10.4	24.6	21.4
Queue Length 50th (ft)	229	6	24	18	11	81	15	198
Queue Length 95th (ft)	292	43	60	66	23	95	42	254
Internal Link Dist (ft)		863		210		150		318
Turn Bay Length (ft)	250		65		190		90	
Base Capacity (vph)	825	576	86	255	196	2524	184	2510
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.15	0.38	0.31	0.28	0.43	0.17	0.42

Intersection Summary

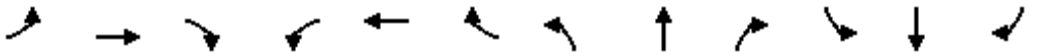
Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	63	1038	101	0	1011
Future Vol, veh/h	0	63	1038	101	0	1011
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	-	200	-	-
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	0	68	1128	110	0	1099

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	564	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	402	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	402	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.8	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	402	-
HCM Lane V/C Ratio	-	-	0.17	-
HCM Control Delay (s)	-	-	15.8	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.6	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	3	75	103	0	45	60	1004	70	92	913	49
Future Volume (veh/h)	38	3	75	103	0	45	60	1004	70	92	913	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	3	82	112	0	49	65	1091	76	100	992	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	227	8	231	194	0	238	588	3143	219	342	2400	745
Arrive On Green	0.15	0.15	0.15	0.15	0.00	0.15	0.48	1.00	1.00	0.02	0.16	0.16
Sat Flow, veh/h	1356	56	1537	1313	0	1585	1781	4874	339	1781	5106	1585
Grp Volume(v), veh/h	41	0	85	112	0	49	65	762	405	100	992	53
Grp Sat Flow(s),veh/h/ln	1356	0	1594	1313	0	1585	1781	1702	1809	1781	1702	1585
Q Serve(g_s), s	3.3	0.0	5.7	10.0	0.0	3.3	1.2	0.0	0.0	0.0	21.0	3.4
Cycle Q Clear(g_c), s	6.5	0.0	5.7	15.8	0.0	3.3	1.2	0.0	0.0	0.0	21.0	3.4
Prop In Lane	1.00		0.96	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	227	0	239	194	0	238	588	2195	1167	342	2400	745
V/C Ratio(X)	0.18	0.00	0.36	0.58	0.00	0.21	0.11	0.35	0.35	0.29	0.41	0.07
Avail Cap(c_a), veh/h	459	0	513	419	0	510	588	2195	1167	348	2400	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.79	0.79	0.79	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.6	0.0	45.8	52.9	0.0	44.7	7.9	0.0	0.0	28.3	35.8	28.3
Incr Delay (d2), s/veh	0.1	0.0	0.3	1.0	0.0	0.2	0.0	0.3	0.6	0.2	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	2.3	3.4	0.0	1.3	0.4	0.1	0.2	2.2	9.7	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.7	0.0	46.1	53.9	0.0	44.9	7.9	0.3	0.6	28.5	36.3	28.5
LnGrp LOS	D	A	D	D	A	D	A	A	A	C	D	C
Approach Vol, veh/h		126			161			1232			1145	
Approach Delay, s/veh		46.6			51.1			0.8			35.2	
Approach LOS		D			D			A			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	34.6	62.0		23.4	13.6	83.0		23.4				
Change Period (Y+Rc), s	5.6	* 5.6		* 5.4	* 5.6	5.6		* 5.4				
Max Green Setting (Gmax), s	8.4	* 56		* 39	* 8.4	56.4		* 39				
Max Q Clear Time (g_c+I1), s	3.2	23.0		17.8	2.0	2.0		8.5				
Green Ext Time (p_c), s	0.0	1.3		0.2	0.0	1.3		0.3				

Intersection Summary		
HCM 6th Ctrl Delay		20.8
HCM 6th LOS		C

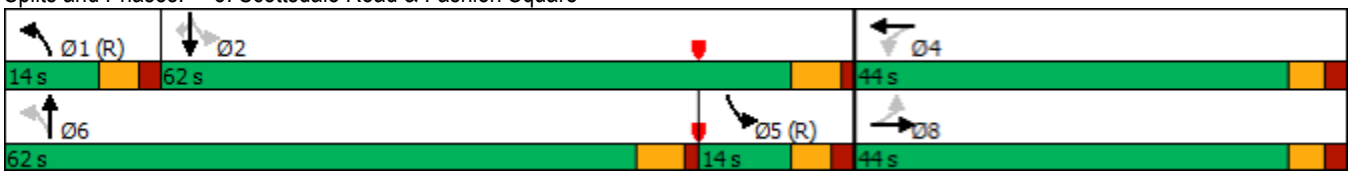
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Phase Number	1	2	4	5	6	8
Movement	NBL	SBTL	WBTL	SBL	NBTL	EBTL
Lead/Lag	Lead	Lag		Lag	Lead	
Lead-Lag Optimize	Yes	Yes		Yes	Yes	
Recall Mode	C-Max	Max	None	C-Max	Max	None
Maximum Split (s)	14	62	44	14	62	44
Maximum Split (%)	11.7%	51.7%	36.7%	11.7%	51.7%	36.7%
Minimum Split (s)	14	62	44	14	62	44
Yellow Time (s)	3.6	4.4	3.3	3.6	4.4	3.3
All-Red Time (s)	2	1.2	2.1	2	1.2	2.1
Minimum Initial (s)	8	7	5	8	7	13
Vehicle Extension (s)	0.2	0.2	1.5	0.2	0.2	1.5
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)		7	7		7	7
Flash Dont Walk (s)		11	27		8	21
Dual Entry	Yes	Yes	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	37	51	113	99	37	113
End Time (s)	51	113	37	113	99	37
Yield/Force Off (s)	45.4	107.4	31.6	107.4	93.4	31.6
Yield/Force Off 170(s)	45.4	96.4	4.6	107.4	85.4	10.6
Local Start Time (s)	58	72	14	0	58	14
Local Yield (s)	66.4	8.4	52.6	8.4	114.4	52.6
Local Yield 170(s)	66.4	117.4	25.6	8.4	106.4	31.6

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	120
Offset: 99 (83%), Referenced to phase 1:NBL and 5:SBL, Start of Green	

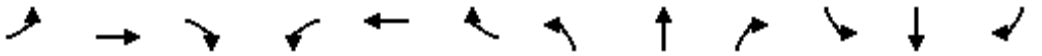
Splits and Phases: 3: Scottsdale Road & Fashion Square



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	41	85	112	49	65	1167	100	992	53
v/c Ratio	0.23	0.30	0.65	0.13	0.11	0.35	0.34	0.42	0.07
Control Delay	48.7	13.1	67.2	0.7	8.8	13.6	31.1	25.8	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.7	13.1	67.2	0.7	8.8	13.6	31.1	25.8	8.7
Queue Length 50th (ft)	29	2	85	0	28	205	61	259	13
Queue Length 95th (ft)	61	47	140	0	m46	250	109	306	48
Internal Link Dist (ft)		130		83		600		351	
Turn Bay Length (ft)					160		140		140
Base Capacity (vph)	434	568	420	642	598	3329	295	2389	782
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.15	0.27	0.08	0.11	0.35	0.34	0.42	0.07

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	240	494	219	81	456	209	260	740	94	333	628	259
Future Volume (veh/h)	240	494	219	81	456	209	260	740	94	333	628	259
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	261	537	238	88	496	227	283	804	102	362	683	282
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	308	649	290	254	565	257	661	1713	216	420	1084	483
Arrive On Green	0.09	0.18	0.18	0.14	0.24	0.24	0.19	0.37	0.37	0.12	0.31	0.31
Sat Flow, veh/h	3456	3554	1585	1781	2373	1080	3456	4591	579	3456	3554	1585
Grp Volume(v), veh/h	261	537	238	88	371	352	283	595	311	362	683	282
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1676	1728	1702	1766	1728	1777	1585
Q Serve(g_s), s	8.9	17.5	17.3	5.3	24.1	24.3	8.7	15.9	16.1	12.3	19.8	13.4
Cycle Q Clear(g_c), s	8.9	17.5	17.3	5.3	24.1	24.3	8.7	15.9	16.1	12.3	19.8	13.4
Prop In Lane	1.00		1.00	1.00		0.64	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	308	649	290	254	423	399	661	1270	659	420	1084	483
V/C Ratio(X)	0.85	0.83	0.82	0.35	0.88	0.88	0.43	0.47	0.47	0.86	0.63	0.58
Avail Cap(c_a), veh/h	308	1022	456	254	540	510	661	1270	659	501	1084	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	0.90	0.90
Uniform Delay (d), s/veh	53.8	47.2	47.2	46.4	44.0	44.1	42.7	28.6	28.6	51.7	35.9	19.5
Incr Delay (d2), s/veh	18.4	1.7	3.3	0.3	10.7	12.0	0.2	1.2	2.4	10.2	2.5	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	7.8	7.0	2.4	11.7	11.3	3.7	6.5	7.1	5.8	8.8	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.2	48.9	50.5	46.7	54.8	56.1	42.9	29.8	31.0	61.9	38.4	24.1
LnGrp LOS	E	D	D	D	D	E	D	C	C	E	D	C
Approach Vol, veh/h		1036			811			1189			1327	
Approach Delay, s/veh		55.1			54.5			33.3			41.8	
Approach LOS		E			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.9	42.0	16.0	34.1	20.2	49.8	22.6	27.4
Change Period (Y+Rc), s	5.0	5.4	* 5.3	5.5	5.6	* 5	5.5	* 5.5
Max Green Setting (Gmax), s	15.0	36.6	* 11	36.5	17.4	* 34	12.7	* 35
Max Q Clear Time (g_c+I1), s	10.7	21.8	10.9	26.3	14.3	18.1	7.3	19.5
Green Ext Time (p_c), s	0.2	3.0	0.0	2.2	0.2	3.4	0.0	2.5

Intersection Summary	
HCM 6th Ctrl Delay	45.0
HCM 6th LOS	D

Notes

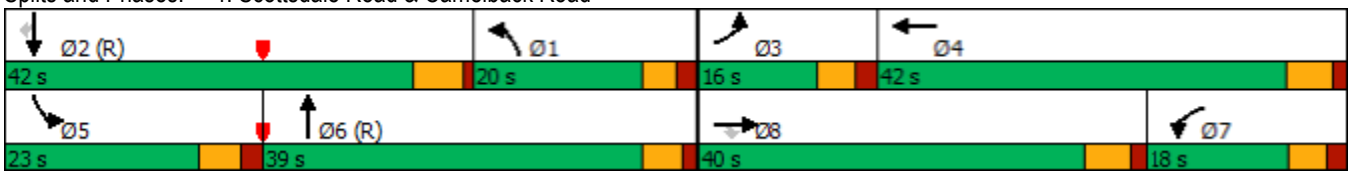
User approved pedestrian interval to be less than phase max green.

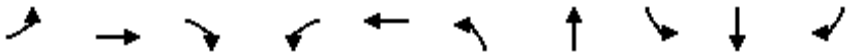
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBT	EBL	WBT	SBL	NBT	WBL	EBT
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lag	Lag	Lead
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	C-Max	None	None
Maximum Split (s)	20	42	16	42	23	39	18	40
Maximum Split (%)	16.7%	35.0%	13.3%	35.0%	19.2%	32.5%	15.0%	33.3%
Minimum Split (s)	21	42	16	41	23	40	18	39
Yellow Time (s)	3	4.4	3.3	4	3.6	3.6	3.3	4
All-Red Time (s)	2	1	2	1.5	2	1.4	2	1.5
Minimum Initial (s)	5	10	5	7	5	10	5	7
Vehicle Extension (s)	2	2	2	2	2	2	2	2
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		4		4		4		4
Flash Dont Walk (s)		23		30		24		25
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	3	81	23	39	81	104	63	23
End Time (s)	23	3	39	81	104	23	81	63
Yield/Force Off (s)	18	117.6	33.7	75.5	98.4	18	75.7	57.5
Yield/Force Off 170(s)	18	94.6	33.7	45.5	98.4	114	75.7	32.5
Local Start Time (s)	19	97	39	55	97	0	79	39
Local Yield (s)	34	13.6	49.7	91.5	114.4	34	91.7	73.5
Local Yield 170(s)	34	110.6	49.7	61.5	114.4	10	91.7	48.5

Intersection Summary	
Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	120
Offset: 104 (87%), Referenced to phase 2:SBT and 6:NBT, Start of Green	

Splits and Phases: 4: Scottsdale Road & Camelback Road





Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	261	537	238	88	723	283	906	362	683	282
v/c Ratio	0.86	0.79	0.48	0.36	0.84	0.66	0.51	0.79	0.53	0.37
Control Delay	80.0	54.2	8.0	51.8	48.1	58.2	32.1	37.6	22.1	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.0	54.2	8.0	51.8	48.1	58.2	32.1	37.6	22.1	6.5
Queue Length 50th (ft)	104	208	0	63	258	109	198	115	273	65
Queue Length 95th (ft)	#176	255	63	115	306	156	268	201	343	202
Internal Link Dist (ft)		649			757		707		600	
Turn Bay Length (ft)	160		160	100		190		140		
Base Capacity (vph)	306	1017	624	243	1070	429	1793	507	1300	760
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.53	0.38	0.36	0.68	0.66	0.51	0.71	0.53	0.37

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	3.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	83	45	0	90	97	0
Future Vol, veh/h	83	45	0	90	97	0
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	90	49	0	98	105	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	139	0	213	115
Stage 1	-	-	-	-	115	-
Stage 2	-	-	-	-	98	-
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	-	-	1459	-	808	982
Stage 1	-	-	-	-	934	-
Stage 2	-	-	-	-	926	-
Platoon blocked, %	-	-	1	-	1	1
Mov Cap-1 Maneuver	-	-	1459	-	808	982
Mov Cap-2 Maneuver	-	-	-	-	808	-
Stage 1	-	-	-	-	934	-
Stage 2	-	-	-	-	926	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	808	-	-	1459	-
HCM Lane V/C Ratio	0.13	-	-	-	-
HCM Control Delay (s)	10.1	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	4	48	0	27	7	0
Future Vol, veh/h	4	48	0	27	7	0
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	4	52	0	29	8	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	56	0	59	30
Stage 1	-	-	-	-	30	-
Stage 2	-	-	-	-	29	-
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	-	-	1549	-	948	1044
Stage 1	-	-	-	-	993	-
Stage 2	-	-	-	-	994	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1549	-	948	1044
Mov Cap-2 Maneuver	-	-	-	-	948	-
Stage 1	-	-	-	-	993	-
Stage 2	-	-	-	-	994	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	948	-	-	1549	-
HCM Lane V/C Ratio	0.008	-	-	-	-
HCM Control Delay (s)	8.8	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	0	7	21	0	48
Future Vol, veh/h	8	0	7	21	0	48
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	9	0	8	23	0	52

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	72	20	0	0	31	0
Stage 1	20	-	-	-	-	-
Stage 2	52	-	-	-	-	-
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	932	1058	-	-	1582	-
Stage 1	1003	-	-	-	-	-
Stage 2	970	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	932	1058	-	-	1582	-
Mov Cap-2 Maneuver	932	-	-	-	-	-
Stage 1	1003	-	-	-	-	-
Stage 2	970	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	932	1582	-
HCM Lane V/C Ratio	-	-	0.009	-	-
HCM Control Delay (s)	-	-	8.9	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	24	47	109	0	0	23
Future Vol, veh/h	24	47	109	0	0	23
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	26	51	118	0	0	25

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	118	0	-	0	221	118
Stage 1	-	-	-	-	118	-
Stage 2	-	-	-	-	103	-
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	1470	-	-	-	767	934
Stage 1	-	-	-	-	907	-
Stage 2	-	-	-	-	921	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1470	-	-	-	753	934
Mov Cap-2 Maneuver	-	-	-	-	753	-
Stage 1	-	-	-	-	891	-
Stage 2	-	-	-	-	921	-

Approach	EB	WB	SB
HCM Control Delay, s	2.5	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1470	-	-	-	934
HCM Lane V/C Ratio	0.018	-	-	-	0.027
HCM Control Delay (s)	7.5	0	-	-	9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Intersection	
Int Delay, s/veh	2.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	10	18	42	7	60
Future Vol, veh/h	26	10	18	42	7	60
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	28	11	20	46	8	65

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	124	43	0	0	66	0
Stage 1	43	-	-	-	-	-
Stage 2	81	-	-	-	-	-
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	871	1027	-	-	1536	-
Stage 1	979	-	-	-	-	-
Stage 2	942	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	867	1027	-	-	1536	-
Mov Cap-2 Maneuver	867	-	-	-	-	-
Stage 1	979	-	-	-	-	-
Stage 2	937	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	0.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	906	1536	-
HCM Lane V/C Ratio	-	-	0.043	0.005	-
HCM Control Delay (s)	-	-	9.2	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	3.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	7	94	0	32	27	43
Future Vol, veh/h	7	94	0	32	27	43
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	8	102	0	35	29	47

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	110	0	94	59
Stage 1	-	-	-	-	59	-
Stage 2	-	-	-	-	35	-
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	-	-	1480	-	906	1007
Stage 1	-	-	-	-	964	-
Stage 2	-	-	-	-	987	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1480	-	906	1007
Mov Cap-2 Maneuver	-	-	-	-	906	-
Stage 1	-	-	-	-	964	-
Stage 2	-	-	-	-	987	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	965	-	-	1480	-
HCM Lane V/C Ratio	0.079	-	-	-	-
HCM Control Delay (s)	9.1	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-