

September 20, 2017

Chris Klecka, PLC
Five Star Development
6720 N. Scottsdale Road, Suite 130
Scottsdale, AZ 85253

RE: Indian Bend Road Traffic Statement – ADT Comparison with Traffic Calming Design Concepts

Dear Mr. Klecka:

CivTech has been retained to evaluate the effect of the traffic calming concepts of Indian Bend Road, west of Scottsdale Road. At the request of the Town of Paradise Valley, the developer of the Palmeraie development and related Ritz Carlton development consulted with the Town, City of Scottsdale and CivTech for traffic calming options. A "swoop" concept was previously selected to move forward in Concept Design plans. Upon further discussion with the Town, additional traffic calming concepts are also being considered for this segment of Indian Bend Road.

Current Concepts

This evaluation considers a 'no traffic calming' condition and three (3) traffic calming concepts that modify various aspects of Indian Bend Road, particularly how the Ritz Carlton and Palmeraie developments access Indian Bend Road. The concepts are labeled A, B and D and are included within the **Attachments**. All concepts include improvements/reconstruction of the existing roundabout to allow connection with the future Ritz Carlton Boulevard.

No Traffic Calming: Includes a full access, 2-way stop intersection at the Palmeraie Access. The existing roundabout to the west of the future Palmeraie access will remain in its existing condition. The Palmeraie access intersection is designed as had been proposed in earlier concepts for the Ritz Carlton development. The stop-controlled northbound approach consists of a shared left-turn/through lane and a right-turn lane. The north leg is a driveway for the Scottsdale Plaza Resort and its approach consists of a single lane. The eastbound approach consists of a left-turn lane and a shared through/right-turn lane. The westbound approach consists of a left-turn lane, a through lane and a right-turn lane.

Concept A: Includes the "swoop design" at the Palmeraie access. The swoop design brings all westbound traffic on Indian Bend Road from Scottsdale Road to enter the Palmeraie/Ritz Carlton development unless making a turn to stay on Indian Bend Road. All traffic on Indian Bend Road eastbound will be required to stop at the "tee" intersection with the swoop and turn left to continue on Indian Bend Road.

The swoop redesign of Indian Bend Road will still allow 2-way traffic but will require westbound vehicles to turn right (yielding to pedestrians) and eastbound vehicles to turn left (stop

controlled). Thus, westbound vehicles will not be required to stop unless pedestrians are present, while eastbound vehicles are required to stop and will be delayed by vehicles entering/exiting the Palmeraie development. As such, vehicles traveling eastbound through will be more affected by the redesign than westbound vehicles.

The Town of Paradise Valley indicated that some vehicles currently using Indian Bend Road are cut-through traffic that use Mockingbird Lane and Invergordon Road to bypass congested portions of Scottsdale Road. The redesign of Indian Bend Road has the potential to influence cut-through traffic to use Cheney Drive or Hummingbird Lane instead of Indian Bend Road. It is also possible that some cut-through traffic will discontinue using Town streets altogether due to traffic calming on Indian Bend Road and the residential nature of both Cheney Drive and Hummingbird Lane. Trips to/from Ritz Carlton and Palmeraie have access to the roundabout west of the planned swoop. These development related trips are not expected to use Cheney Drive or Hummingbird Lane as a cut-through route. Most eastbound traffic, which is the direction most delayed by the swoop design, traveling towards Loop 101 is expected to occur in the morning hours. Fortunately, the delay of eastbound vehicles at the stop sign is less in the morning than in the evening as Palmeraie's retail components will generate less conflicting traffic in the morning.

Concept B: Includes a partially restricted roundabout at the Palmeraie access and removes the existing roundabout west of the Palmeraie access in favor of a 3-legged, 1-way stop-controlled intersection. The conceptual Palmeraie access roundabout features a single egress lane on all legs. The north and west legs provide a single ingress lane, whereas the south leg provides a by-pass right-turn only and the east leg provides an exclusive left-turn lane and a shared through/right-turn lane.

This concept is similar in effect to the swoop design in that northbound approaching vehicles at the Palmeraie access may only turn right onto Indian Bend Road eastbound towards Scottsdale Road. Access into Palmeraie from the west leg is promoted as the movement would not be required to yield to eastbound through movements. Unlike Concept A, the westbound to southbound movement is required to yield to other traffic due to the roundabout. Concept B will have less impact on westbound through traffic than Concept A, having a reduced expectation to cause cut-through traffic on other roadways.

Concept C: Includes reconstructing the intersection of Indian Bend Road and Mockingbird Lane as a single-lane roundabout and multiple chicanes on Indian Bend Road between the proposed and existing roundabouts. The Palmeraie access intersection in Concept C includes a full access, 2-way stop. The Palmeraie access intersection is designed as had been proposed in earlier concepts for the Ritz Carlton development. The traffic calming method in this concept is the new roundabout at Mockingbird Lane and the chicanes. The proposed roundabout at the Mockingbird Lane intersection shifts the westbound approach to the south breaking the direct visibility of the intersection from vehicles approaching from the east. Visual contrast is a psychological method to cause the driver (along Indian Bend Road) to perceive the appropriate speed to be less than a straight roadway. The chicanes also provide visual breaks in otherwise straight roads with potentially landscaped curbs (landscaped islands if a bike lane bypass is provided) and horizontal deflection. Horizontal deflections associated with chicanes influence drivers to slow due to driver comfort with lateral momentum.

Concepts A, B and C provide different strategies for traffic calming on Indian Bend with varying effects. **Table 1** presents a simplified summary of the benefits of each concept.

Table 1: Roadway Segment Volume Thresholds for LOS by Classification

Concept	Benefit Ranking 1 (most beneficial) through 6 (least beneficial)					
	Reduce Speeds on Indian Bend Road		Reduce Palmeraie Traffic on Indian Bend Road		Cut-Through Trips on Other Streets	
	Base	4	Base condition	4	Base condition	1
A	1	Keeps existing traffic circle at (future) Ritz Carlton Boulevard. Introduce stop controlled eastbound movement along Indian Bend at Palmeraie Entrance	1/2	Forced NB right at Palmeraie access, Ritz Carlton Boulevard may still be used	4	Induced EB through delay may cause some drivers to divert
B	3	Removes existing traffic circle at (future) Ritz Carlton Boulevard and adds a new roundabout at the Palmeraie entrance	1/2	Forced NB right at Palmeraie access, Ritz Carlton Boulevard may still be used	2	Some drivers may divert to avoid the roundabout.
C	2	Keeps existing traffic circle at (future) Ritz Carlton Boulevard, new roundabout at Mockingbird Lane and chicanes	3	Some Palmeraie trips may avoid roundabout and chicanes	3	Some drivers may divert to avoid the roundabout and chicanes.

Projected Daily Traffic Volumes

Traffic volume counts were observed over a 24-hour period on Thursday, May 11, 2017, on Indian Bend Road east of Mockingbird Lane and on Cheney Drive east of Mockingbird Lane. Traffic volumes were estimated on Hummingbird Lane due to ongoing construction. At the observed locations, 3,190 daily vehicles were recorded on Indian Bend Road and 2,635 daily vehicles were recorded on Cheney Drive. It may be noted that the Cheney Drive traffic count volume may be larger than typical due to the construction on Hummingbird Lane. The typical daily volume on Hummingbird Lane is estimated to be 50 percent of the traffic observed on Cheney Drive which calculates to approximately 1,320 vehicles. Based on observations of the area roads the week of May 22, the estimated count is assumed to be very conservative. The Town did not request Mockingbird Lane to have traffic counted, though it is considered within this study using the 5,000 average daily traffic (ADT) indicated within the *Ritz Carlton Traffic Impact Analysis*. Since obtaining the traffic counts, the Town has requested projections for traffic volumes at additional locations. This study uses estimates within the *Ritz Carlton Traffic Impact Analysis* and the *Palmeraie Traffic Impact and Mitigation Analysis*.

Ritz Carlton and Palmeraie Volume Changes with Traffic Calming Concepts

Traffic calming Concepts A and B are expected to reduce Palmeraie trips to/from Lincoln Drive via Indian Bend Road and Mockingbird Lane by approximately 1,510 daily trips compared to no traffic calming. These trips are expected to instead travel south to Lincoln Drive via Scottsdale Road (1,130 daily trips) or through internal connections to Quail Run Lane (380 daily trips). Concept C is anticipated to have negligible effect on development traffic using Indian Bend Road and Mockingbird Lane.

Existing Volume Changes with Traffic Calming Concepts

Concept A has the potential to influence cut-through traffic to use Cheney Drive or Hummingbird Lane instead of Indian Bend Road while reducing the traffic on Indian Bend Road west of Palmeraie. It is also possible that some cut-through traffic will discontinue using Town streets altogether due to traffic calming on Indian Bend Road and the residential nature of both Cheney Drive and Hummingbird Lane.

Concept A considers 320 of the existing trips on Indian Bend Road (approximately 10 percent) to be cut-through type trips. It is anticipated that up to half (160) of the cut-through trips, predominantly westbound, may divert through Cheney Drive or Hummingbird Lane with implementation of Concept A. Cheney Drive, which is signalized at Scottsdale Road and is classified by the Town as a collector roadway, is expected to facilitate 80 daily cut-through trips (traffic increase of 3 percent). Hummingbird Lane, which is classified as a local roadway, is expected to facilitate a lesser amount – 40 daily cut-through trips (traffic increase of 3 percent). The remaining 40 daily trips are anticipated to use Lincoln Drive (not considered cut-through trips).

Concept B will provide redirection of the Palermaie trips away from the residential area of Indian Bend Road, west of the site (similar to Concept A). This concept allows for the through movement of eastbound and westbound traffic without the need to stop the eastbound vehicles. While a reduction in traffic is anticipated, it is likely that some cars may utilize Cheney Drive or Hummingbird Lane to avoid the roundabout and traffic due to Palmeraie. The amount of cut through traffic in Concept B is assumed to be similar to the cut through anticipated in Concept C.

Concept C does not prevent exiting Palermaie traffic from heading west on Indian Bend Road increasing access and traffic volumes along the corridor. This concept provides a new roundabout at the Mockingbird and Indian Bend intersection. Some traffic is anticipated to divert on to Cheney Drive or Mockingbird Lane to avoid the roundabout or to avoid the additional traffic on Indian Bend due to Palmeraie. The addition of the chicanes could cause some drivers to find alternate routes. Chicanes create the appearance of a narrower roadway which is not comfortable for all drivers. The primary purpose of chicanes is speed reduction.

The future total ADT, with the addition of trips to/from Ritz Carlton, Palermaie and other background growth, are depicted in **Exhibit A** for the projected conditions without traffic calming, **Exhibit B** depicts the anticipated daily volumes for the “swoop” design. **Exhibit C** depicts the daily volumes for the Palermaie directional roundabout. **Exhibit D** depicts the daily volumes for the roundabout at Mockingbird Lane with the addition of chicanes.

Projected Roadway Levels-of Service

Paradise Valley evaluates roadway segment levels-of-service (LOS) based on roadway classification, number of lanes, ADT and volume thresholds within Table 4 within *Traffic Impact Analysis (TIA) Criteria and Traffic Impact Statement (TIS) Criteria*, dated May 2015. A portion of the table is copied below as **Table 2**.

Table 2: Roadway Segment Volume Thresholds for LOS by Classification

Roadway (Urban Area)	# of Travel Lanes	LOS A	LOS B	LOS C	LOS D	LOS E
Major Arterial	3	14,880	17,360	19,840	22,320	24,800
	4	24,540	28,630	32,720	36,810	40,900
	5	30,480	35,560	40,640	45,720	50,800
	6	36,480	42,560	48,640	54,720	60,800
Minor Arterial	2	11,280	13,160	15,040	16,920	18,800
	3	12,960	15,120	17,280	19,440	21,600
	4	21,540	25,130	28,720	32,310	35,900
	5	22,080	25,760	29,440	33,120	36,800
Major Collector	2	5,100	5,950	6,800	7,650	8,500
	3	8,520	9,940	11,360	12,780	14,200
	4	10,560	12,320	14,080	15,840	17,600
Minor Collector	2	3,360	3,920	4,480	5,040	5,600
Local Street	2	1,200	1,400	1,600	1,800	2,000

Source: *Traffic Impact Analysis (TIA) Criteria and Traffic Impact Statement (TIS) Criteria, Paradise Valley, Table 4*

The projected ADT and LOS for each roadway considered is summarized in **Table 3**. Except on Indian Bend Road, the LOS ratings at the locations evaluated were unchanged with the traffic calming.

Indian Bend Road is anticipated to operate at LOS C or better for all scenarios. Indian Bend Road near Mockingbird Lane is projected to operate at LOS C without traffic calming or with the implementation of Concepts C, D or E; projected conditions with implementation of Concepts A or B is projected to operate at LOS A. Indian Bend Road near Scottsdale Road is projected to operate at LOS B without traffic calming or with the implementation of Concept D; projected conditions with implementation of Concepts A or B is projected to operate at LOS C.

Cheney Road is anticipated to operate at LOS A with or without traffic calming on Indian Bend Road. The potential traffic volume increase with Concept A is not enough to affect the projected ADT. The segment would need 740 added vehicles (instead of 80) for the segment to be evaluated at LOS B and 1,840 added vehicles for the segment to be evaluated at LOS D. This would require an unlikely scenario that more than half of all vehicles using Indian Bend Road would divert to Cheney Drive.

Hummingbird Lane is anticipated to operate at LOS B with or without traffic calming on Indian Bend Road. The potential traffic volume increase with Concept A is not enough to affect the projected ADT. The segment would need 80 added vehicles (instead of 40) for the segment to be evaluated at LOS C and 280 added vehicles for the segment to be evaluated at LOS D.

It is expected that the Town of Paradise Valley will wish to monitor traffic volumes before and after any reconstruction of Indian Bend Road. CivTech recommends conducting future traffic counts after construction on Hummingbird Lane finishes and before the Ritz Carlton Resort or other portions of the overall development opens. This will provide a baseline for traffic comparison without unusual traffic conditions due to construction work.

Should traffic volumes increase to more than desired and traffic calming on Hummingbird lane or Cheney Drive is desired, it is recommended that the Town considers options that enhance the roadway character such as landscaped chicanes or chockers.

Table 3: Roadway Segment LOS Summary

Roadway	Location Reference	Classification	# of Travel Lanes	Projected LOS and ADT					
				No Calming or Concept D		Concept A		Concept B	
Cheney Drive	East of Mockingbird Lane	Collector (Minor) ⁽¹⁾	2	A	2,640	A	2,720	A	2,640
Hummingbird Lane ⁽³⁾	East of Mockingbird Lane	Local	2	B	1,320	B	1,360	B	1,320
Indian Bend Road	East of Mockingbird Lane	Collector (Major) ⁽¹⁾	2	C	6,120	A	4,840	A	5,000
Indian Bend Road	West of Scottsdale Road	Collector (Major) ⁽¹⁾	4 ⁽²⁾	B	11,410	C	12,590	C	12,750
Mockingbird Lane ⁽⁴⁾	North of Indian Bend Road	Minor Arterial	2	A	7,610	A	7,290	A	7,410
Mockingbird Lane ⁽⁴⁾	South of Indian Bend Road	Minor Arterial	2	A	8,140	A	7,270	A	7,230
Lincoln Drive ⁽⁴⁾	West of Mockingbird Lane	Major Arterial	4	A	22,970	A	22,970	A	22,970
Lincoln Drive ⁽⁴⁾	East of Mockingbird Lane	Major Arterial	4	A	19,780	A	20,650	A	20,610
Scottsdale Road ⁽⁴⁾	South of Cheney Drive	Major Arterial	6	C	46,130	C	46,490	C	46,410
Scottsdale Road ⁽⁴⁾	South of Indian Bend Road	Major Arterial	6	D	50,320	D	52,860	D	52,900

(1) "Minor" or "Major" designation is not indicated within the Town's classification map. This study presumes Cheney Drive is a Minor Collector and Indian Bend Road is a Major Collector.

(2) The Ritz Carlton and Palmeraie developments will construct half-street improvements.

(3) Count could not be conducted due to road construction, volume was estimated using Cheney Drive as a reference.

(4) Base volume retrieved from associated studies.

CONCLUSIONS

General

- At the request of the Town of Paradise Valley, the developer of the Palmeraie development and related Ritz Carlton development consulted with the Town, City of Scottsdale and CivTech for traffic calming options. Three traffic calming concepts are evaluated herein. Concept A includes a previously proposed "Swoop" design.
- Concepts A, B and D provide different strategies for traffic calming on Indian Bend with varying effects. **Table 1** presents a simplified summary of the benefits of each concept.

Projected Daily Traffic Volumes

- Traffic calming Concepts A and B are expected to reduce Palmeraie trips to/from Lincoln Drive via Indian Bend Road and Mockingbird Lane by approximately 1,510 daily trips compared to no traffic calming. These trips are expected to instead travel south to Lincoln Drive via Scottsdale Road (1,130 daily trips) or through internal connections to Quail Run Lane (380 daily trips). Concepts D is anticipated to have negligible effect on development traffic using Indian Bend Road and Mockingbird Lane but should reduce speed.
- All traffic calming options have the potential to influence cut-through traffic to use Cheney Drive or Hummingbird Lane instead of Indian Bend Road. It is also likely that some cut-through traffic will discontinue using Town streets altogether due to traffic calming on Indian Bend Road and the residential nature of both Cheney Drive and Hummingbird Lane.
- Concepts A and B redirect traffic away from Mockingbird Lane and reduce traffic on Indian Bend Road west of Palmeraie. These options create the most calming on Indian Bend Road but have the highest propensity to move some of the existing traffic along Indian Bend Road to Cheney Drive or Hummingbird Lane.
- This evaluation considers 320 of the trips on Indian Bend Road (approximately 10 percent) to be cut-through type trips. It is anticipated that up to half (160) of the cut-through trips, predominantly westbound, may divert through Cheney Drive or Hummingbird Lane with Concept A.
 - Cheney Drive, which is signalized at Scottsdale Road and is classified by the Town as a collector roadway, is expected to facilitate 80 daily cut-through trips (traffic increase of up to 3 percent).
 - Hummingbird Lane, which is classified as a local roadway, is expected to facilitate a lesser amount – 60 daily cut-through trips (traffic increase of up to 4 percent).
- Concept C provides a new roundabout at Mockingbird Lane and Indian Bend Road to facilitate traffic flow and reduce delay from stopping at ‘stop-controlled’ intersections. The chicanes along Indian Bend Road will create the visual appearance of smaller lanes and congestion. This concept is likely to produce higher traffic volumes along Indian Bend Road and Mockingbird Lane (Palmeraie driveway would allow exiting traffic to head west directly on Indian Bend Road) but should reduce speeds. Less trips would be diverted to Cheney Drive and Hummingbird Lane although some traffic diversion is anticipated from drivers who avoid using roundabouts.

Projected Roadway Levels-of-Service

- Except on Indian Bend Road, the LOS ratings at the locations evaluated were unchanged with the traffic calming.
 - Indian Bend Road is anticipated to operate at LOS C or better for all scenarios. Indian Bend Road near Mockingbird Lane is projected to operate at LOS C without traffic calming or with the implementation of Concept D; projected conditions with implementation of Concepts A or B is projected to operate at LOS A. Indian Bend Road near Scottsdale Road is projected to operate at LOS B without traffic calming or with the implementation of Concept D; projected conditions with implementation of Concepts A or B is projected to operate at LOS C.

- Cheney Road is anticipated to operate at LOS A with or without traffic calming on Indian Bend Road. The potential traffic volume increase with Concept A is not enough to affect the projected ADT.
 - The segment would need 720 added vehicles (instead of 80 with Concept A) for the segment to be evaluated at LOS B and 1,840 added vehicles for the segment to be evaluated at LOS D. This would require an unlikely scenario that more than half of all vehicles using Indian Bend Road would divert to Cheney Drive.
- Hummingbird Lane is anticipated to operate at LOS B with or without traffic calming on Indian Bend Road. The potential traffic volume increase with Concept A is not enough to affect the projected ADT.
 - The segment would need 80 added vehicles (instead of 40 with Concept A) for the segment to be evaluated at LOS C and 280 added vehicles for the segment to be evaluated at LOS D.
- It is expected that the Town of Paradise Valley will wish to monitor traffic volumes before and after any reconstruction of Indian Bend Road. CivTech accordingly recommends conducting future traffic counts after construction on Hummingbird Lane finishes and before the Ritz Carlton Resort or other portions of the overall development opens. This will provide a baseline for traffic comparison without unusual traffic conditions due to construction work.
- Should traffic volumes increase to more than desired and traffic calming on Hummingbird lane or Cheney Drive is desired, it is recommended that the Town considers options that enhance the roadway character such as landscaped chicanes or landscaped chokers.

Projected Intersection Levels-of-Service

- The level of service anticipated at the intersection of Scottsdale Road and Lincoln Drive is anticipate to remain consistent at a LOS D for all concepts presented including the base condition.
- The level of service at the intersection of Mockingbird Lane and Indian Bend Road currently operates overall at an A. The future base condition analysis, without traffic calming, suggests that it will operate overall at a LOS B if left with the stop signs in place. Concepts A and B continue to provide an LOS A at the intersection due to their redirection of traffic exiting the Palmeraie. Analysis conducted for a roundabout at this location indicates the intersection will operate at overall LOS A with the additional traffic projected from Concept C.

Attachments:

Exhibit A: 2023 Projected Conditions, No Traffic Calming
Exhibit B: 2023 Projected Conditions, Concept A
Exhibit C: 2023 Projected Conditions, Concept B
Exhibit D: 2023 Projected Conditions, Concept C
Design Concept A
Design Concept B
Design Concept C
Traffic Counts

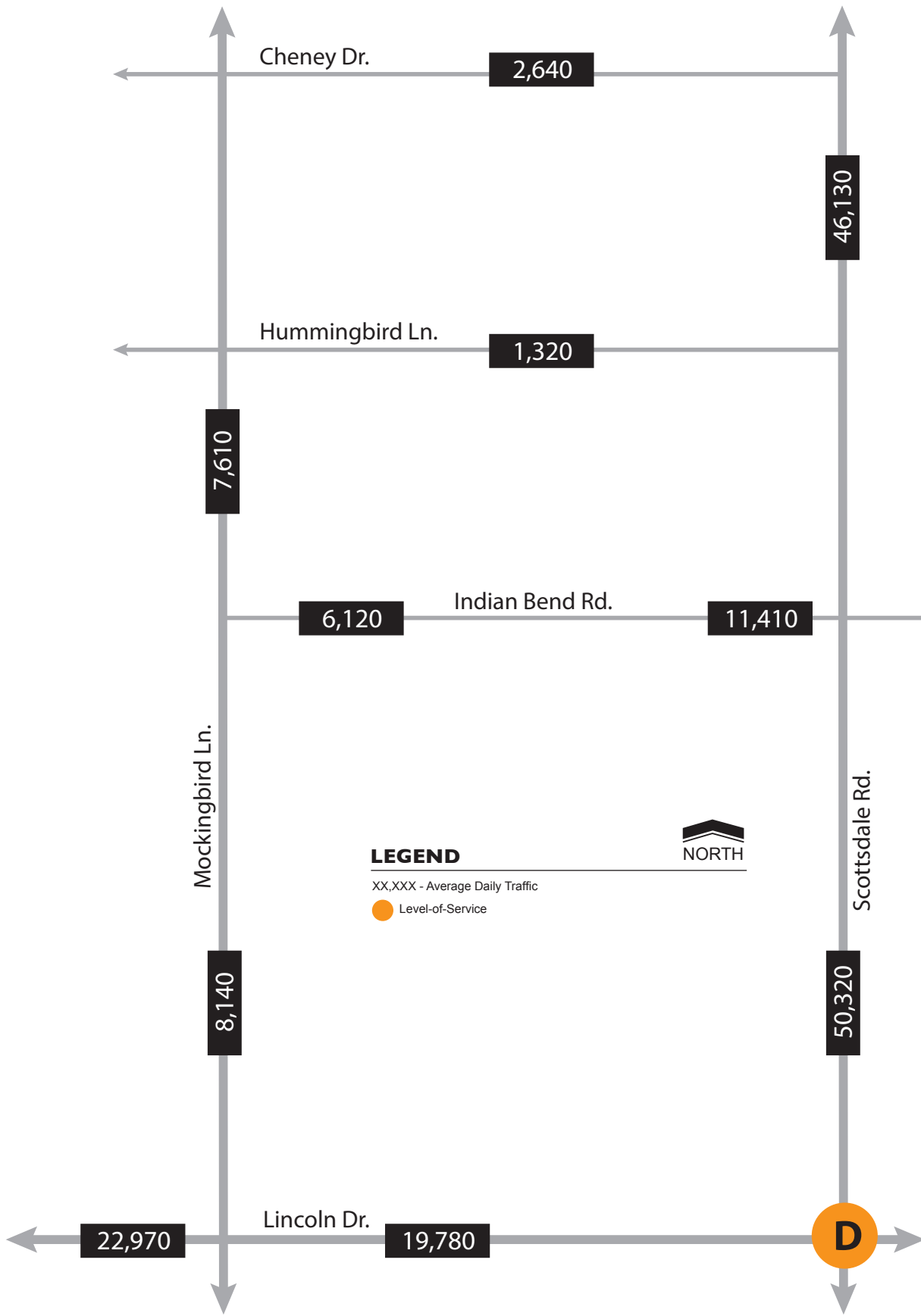


Exhibit A: 2023 Projected Conditions
No Traffic Calming

Source: CivTech, Inc. 2017

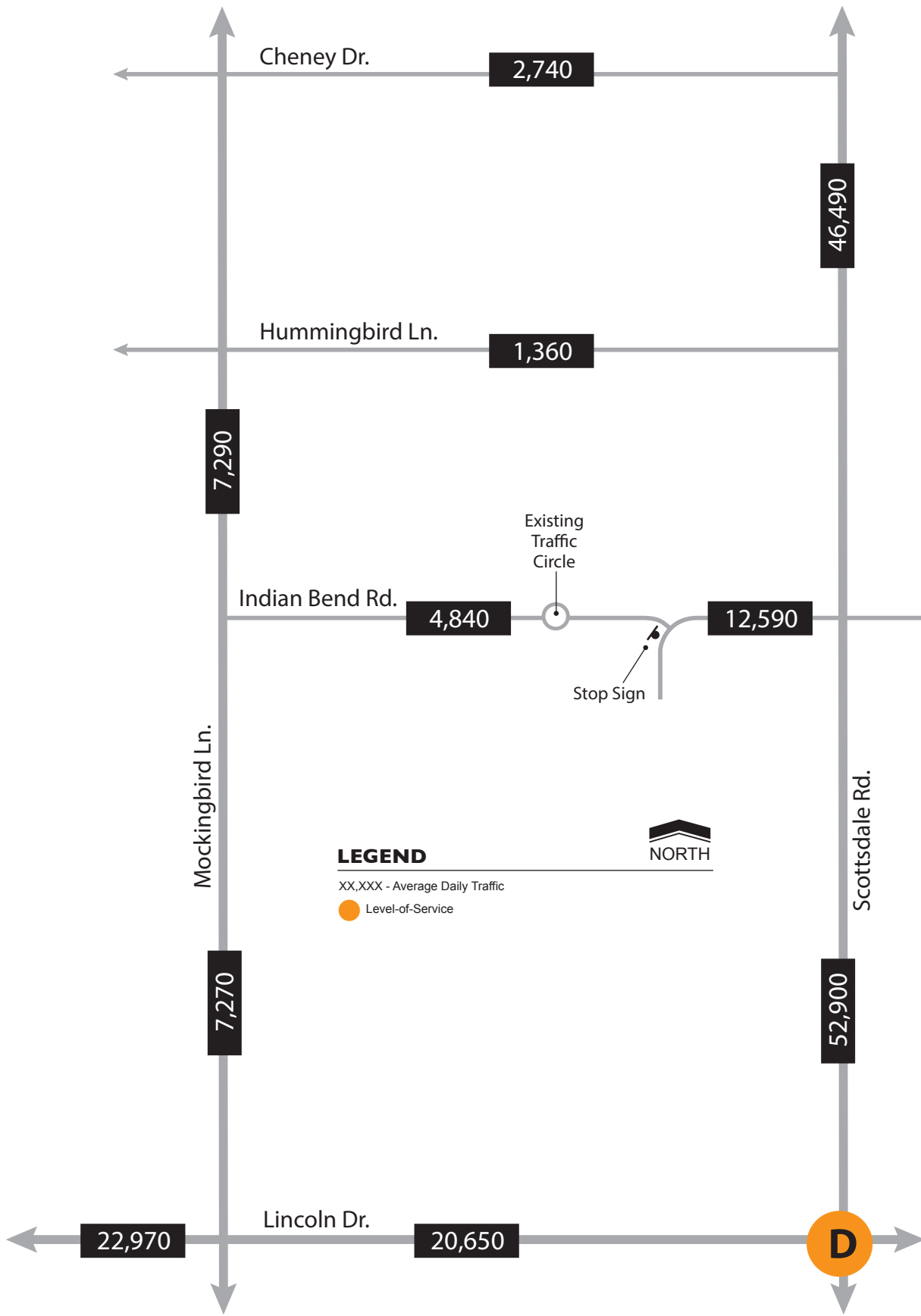


Exhibit B: 2023 Projected Conditions Concept A

Source: CivTech, Inc. 2017

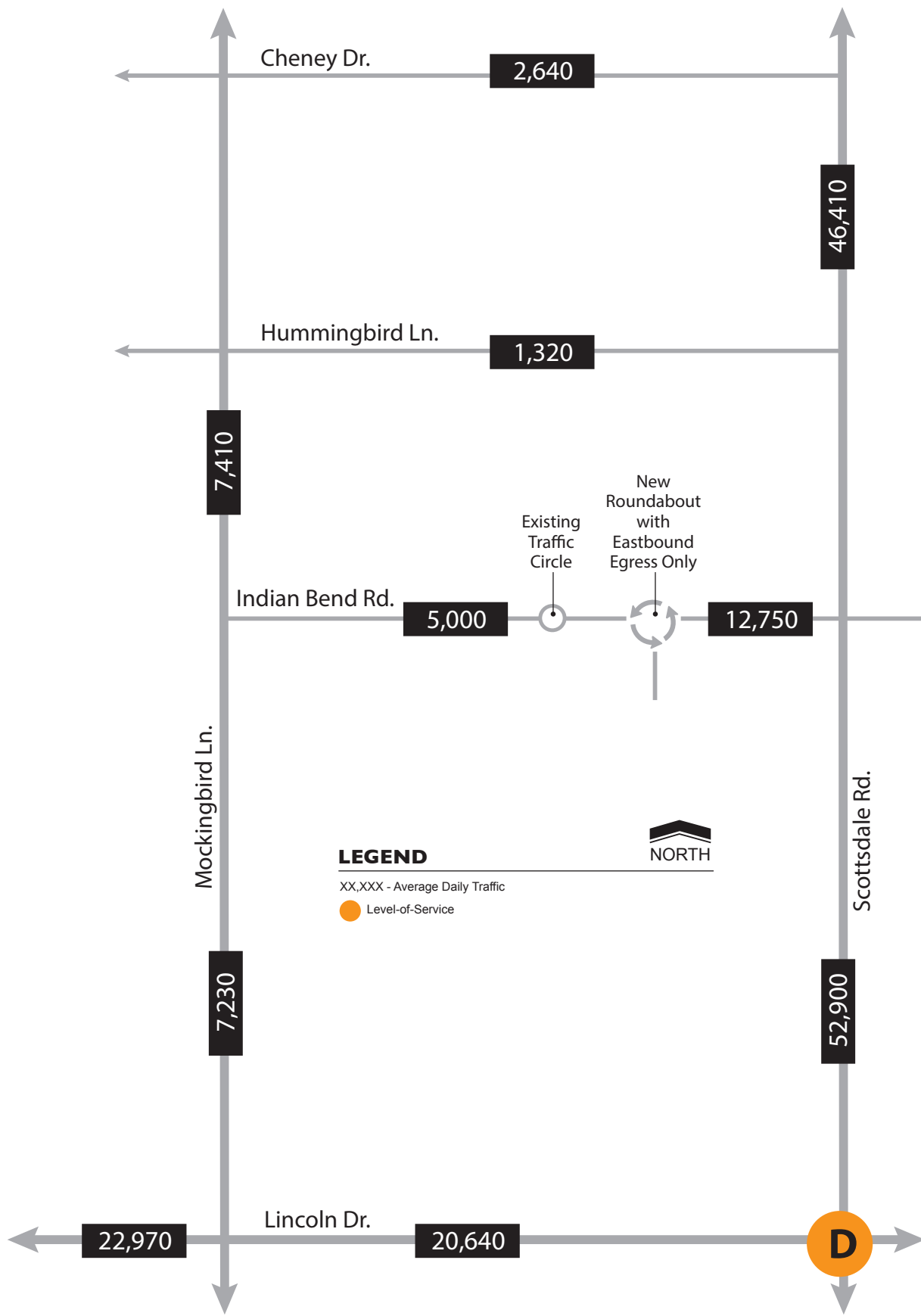
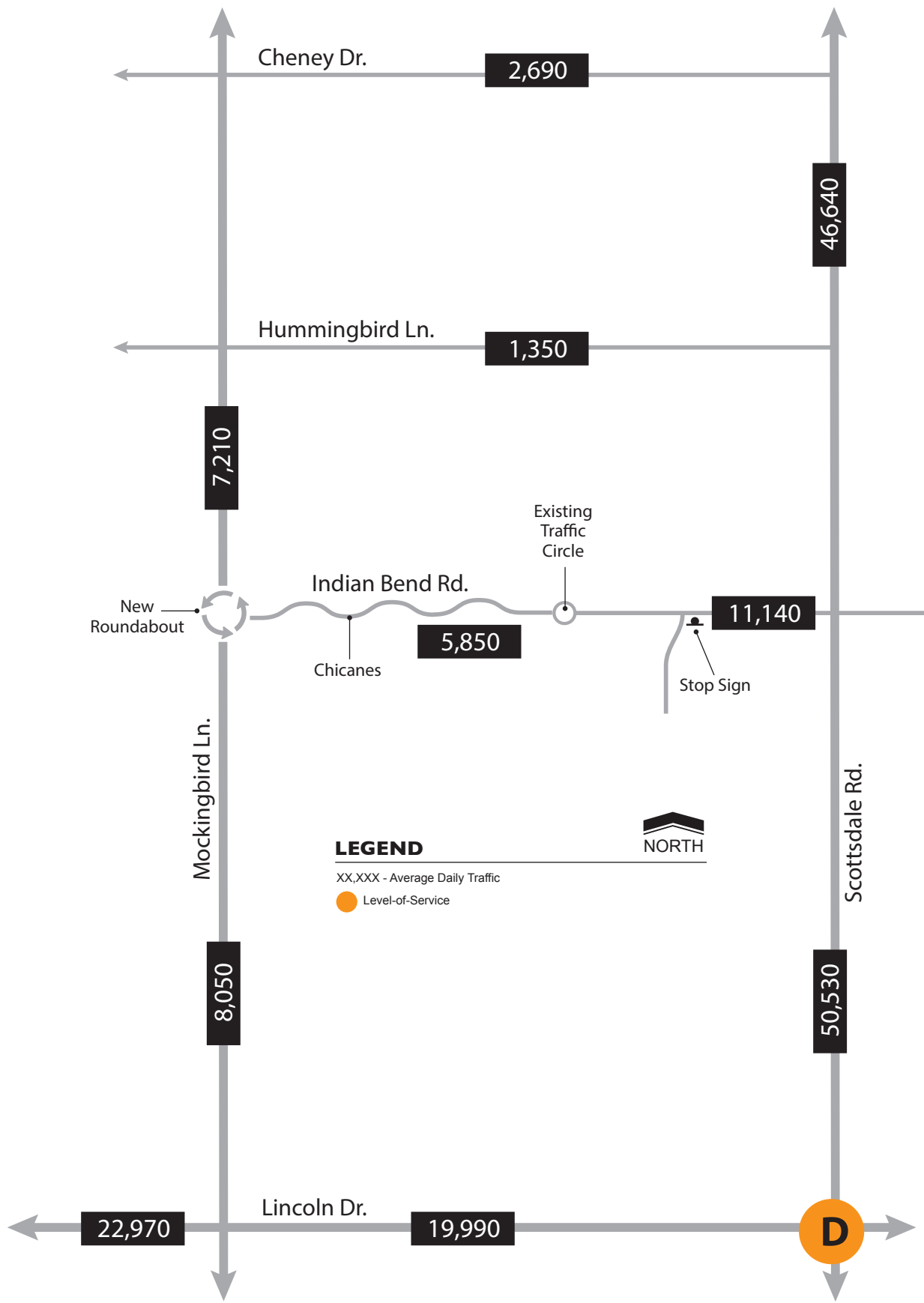


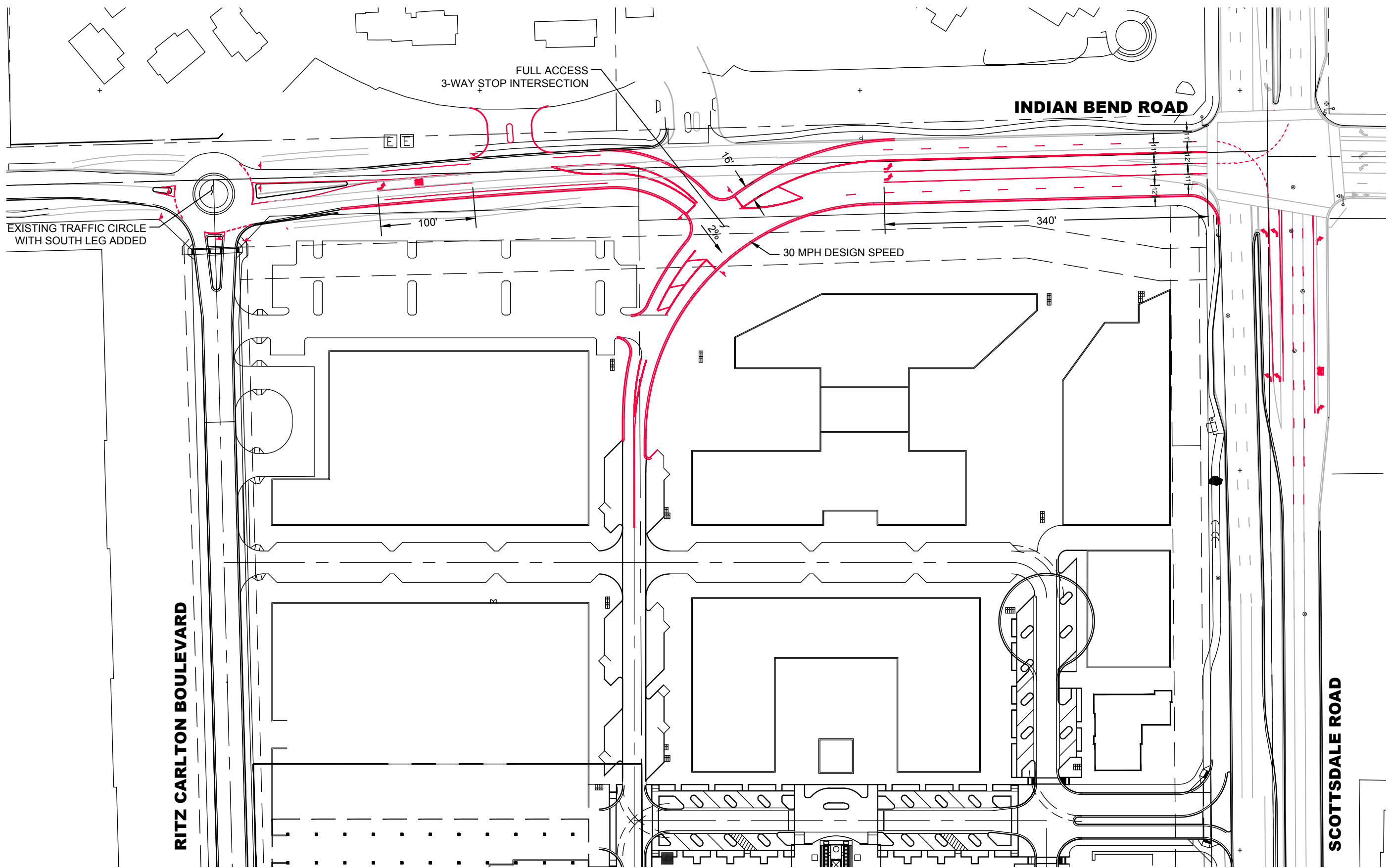
Exhibit C: 2023 Projected Conditions Concept B

Source: CivTech, Inc. 2017



**Exhibit D: 2023 Projected Conditions
 Concept C**

Source: CivTech, Inc. 2017



PROPOSED STREET MODIFICATION

SCALE: 1"=100'

SCALE: 1"=100'



JOB NO:	16-###
1ST SUBMITTAL:	8/2017
2ND SUBMITTAL:	-
SCALE:	1"=100'
DESIGN:	G. WHITE
DRAWN:	G. WHITE
CHECKED:	D. CARTER

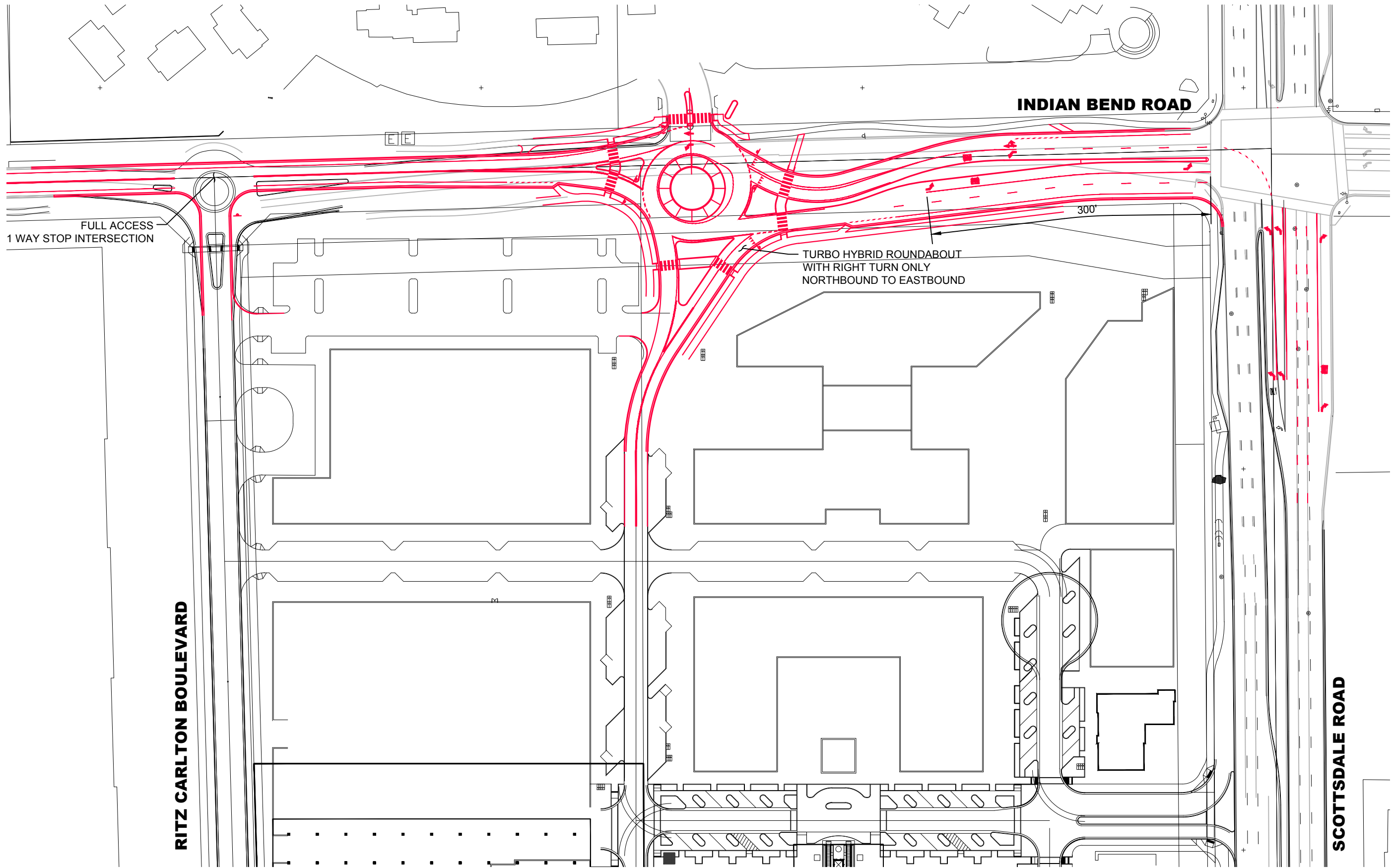
SCOTTSDALE ROAD & 6750 NORTH
PALMERAIE

PRELIMINARY
REVIEW
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CONSTRUCTION
OR RECORDING

SHEET
FIG-A
1 OF 5



CivTech Inc.
10605 N. Hayden Rd.
Suite 140
Scottsdale, AZ 85260
480.659.4250 p
480.659.0566 f
info@civtech.com



INDIAN BEND ROAD

FULL ACCESS
1 WAY STOP INTERSECTION

TURBO HYBRID ROUNDABOUT
WITH RIGHT TURN ONLY
NORTHBOUND TO EASTBOUND

RITZ CARLTON BOULEVARD

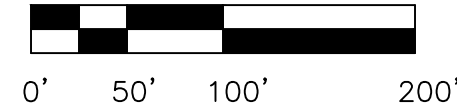
SCOTTSDALE ROAD

300'

PROPOSED STREET MODIFICATION

SCALE: 1"=100'

SCALE: 1"=100'



JOB NO:	16-###
1ST SUBMITTAL:	08/2017
2ND SUBMITTAL:	
SCALE:	1"=100'
DESIGN:	G. WHITE
DRAWN:	G. WHITE
CHECKED:	D. CARTER

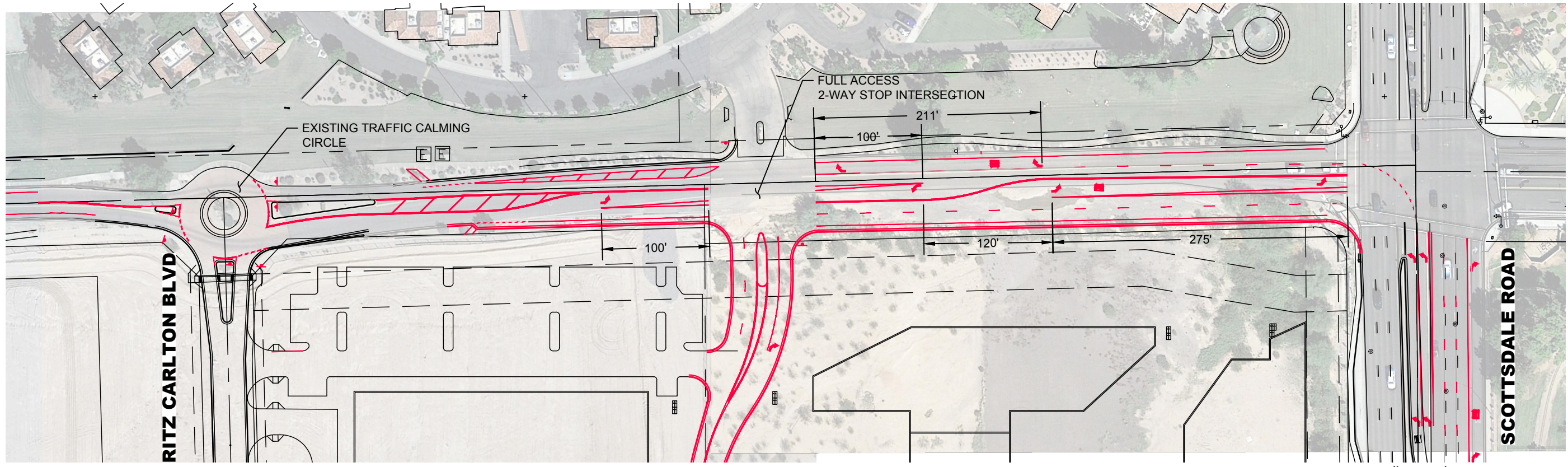
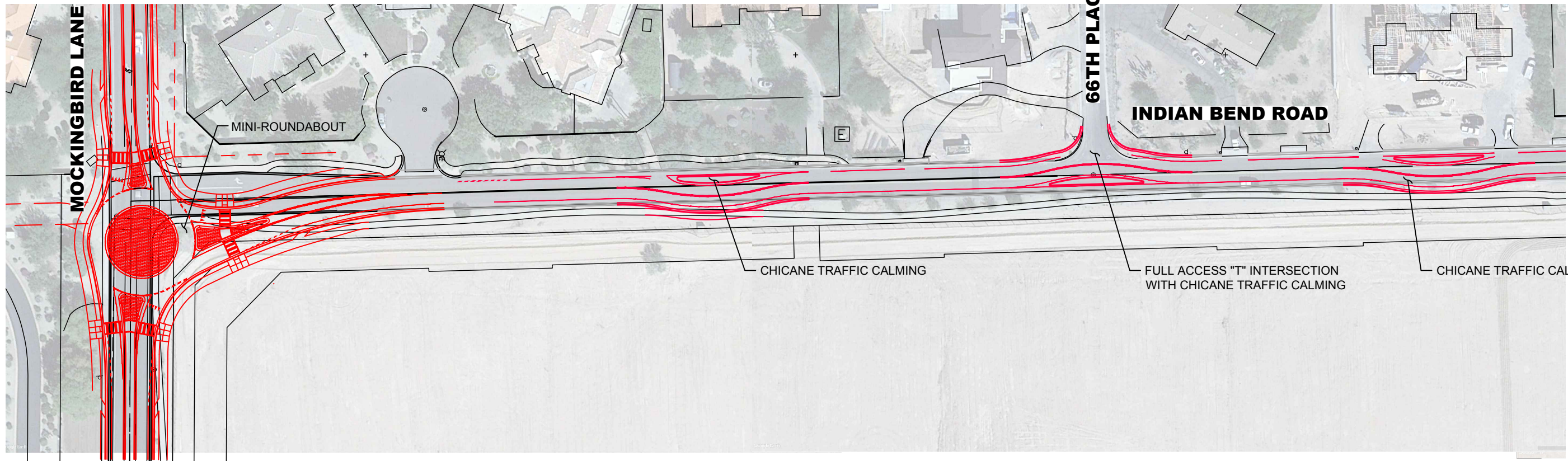
SCOTTSDALE ROAD & 6750 NORTH

PALMERAIE

PRELIMINARY
REVIEW
NOT FOR
CONSTRUCTION
OR RECORDING

SHEET
FIG-B
2 OF 5

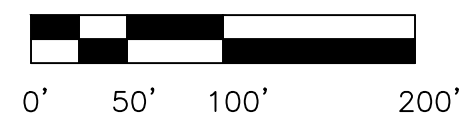
CivTech Inc.
10605 N. Hayden Rd. 480.659.4250 p
Suite 140 480.659.0566 f
Scottsdale, AZ 85260 info@civtech.com



PROPOSED STREET MODIFICATION

SCALE: 1"=100'

SCALE: 1"=100'



JOB NO:	16-###
1ST SUBMITTAL:	09/2017
2ND SUBMITTAL:	
SCALE:	1"=100'
DESIGN:	G. WHITE
DRAWN:	G. WHITE
CHECKED:	D. CARTER

SCOTTSDALE ROAD & 6750 NORTH

PALMERAIE

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OR RECORDING

SHEET
FIG-C
4 OF 5

CivTech Inc.
10605 N. Hayden Rd.
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info@civtech.com

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

Volumes for: Thursday, May 11, 2017

City: Scottsdale

Project #: 17-1215-001

Location: Cheney Dr. btwn. Scottsdale Rd. & Mockingbird Ln.

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB			
00:00			0	0	12:00			21	21			
00:15			0	1	12:15			18	25			
00:30			0	0	12:30			35	27			
00:45			0	0	12:45			17	91	28	101	192
01:00			0	0	13:00			36	16			
01:15			0	0	13:15			33	26			
01:30			2	0	13:30			19	32			
01:45			0	2	13:45			25	113	29	103	216
02:00			0	0	14:00			24	22			
02:15			0	0	14:15			23	22			
02:30			0	0	14:30			32	25			
02:45			0	0	14:45			23	102	36	105	207
03:00			0	0	15:00			16	26			
03:15			0	0	15:15			22	26			
03:30			1	1	15:30			24	29			
03:45			0	1	15:45			21	83	21	102	185
04:00			0	0	16:00			28	23			
04:15			1	0	16:15			25	20			
04:30			1	3	16:30			29	20			
04:45			4	6	16:45			24	106	20	83	189
05:00			1	1	17:00			28	26			
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09:15			15	27	21:15			8	4			
09:30			25	33	21:30			4	5			
09:45			22	83	21:45			5	30	3	22	52
10:00			18	19	22:00			0	3			
10:15			19	20	22:15			4	1			
10:30			19	35	22:30			2	3			
10:45			19	75	22:45			0	6	1	8	14
11:00			16	18	23:00			0	1			
11:15			21	25	23:15			1	0			
11:30			15	20	23:30			2	0			
11:45			19	71	23:45			2	5	2	3	8

Total Vol. 464 583 **1047** 806 782 **1588**

GPS Coordinates: 33.545930, -111.933325

	Daily Totals					
	NB	SB	EB	WB	Combined	
			1270	1365	2635	
Split %	AM		PM			
	44.3%	55.7%	50.8%	49.2%	60.3%	
Peak Hour	08:15	07:45	07:45	12:30	14:45	12:30
Volume	97	129	219	121	117	218
P.H.F.	0.81	0.85	0.81	0.84	0.81	0.88

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

Volumes for: Thursday, May 11, 2017

City: Scottsdale

Project #: 17-1215-003

Location: Indian Bend Rd. btwn. Scottsdale Rd. & Mockingbird Ln.

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB				
00:00			3	1	12:00			19	30				
00:15			0	2	12:15			23	28				
00:30			1	0	12:30			15	41				
00:45			0	4	0	3	7	12:45	33	90	32	131	221
01:00			1	1	13:00			28	37				
01:15			0	0	13:15			29	25				
01:30			0	0	13:30			21	31				
01:45			1	2	1	2	4	13:45	20	98	23	116	214
02:00			1	1	14:00			27	21				
02:15			0	0	14:15			31	24				
02:30			1	0	14:30			31	39				
02:45			0	2	0	1	3	14:45	31	120	36	120	240
03:00			0	0	15:00			19	31				
03:15			0	0	15:15			32	31				
03:30			0	0	15:30			24	40				
03:45			0	0	0	0		15:45	35	110	37	139	249
04:00			0	0	16:00			25	30				
04:15			0	1	16:15			23	26				
04:30			1	0	16:30			33	32				
04:45			2	3	1	2	5	16:45	26	107	23	111	218
05:00			2	1	17:00			34	43				
05:15			1	2	17:15			52	40				
05:30			10	3	17:30			42	25				
05:45			9	22	9	15	37	17:45	37	165	29	137	302
06:00			8	8	18:00			26	43				
06:15			7	6	18:15			19	21				
06:30			8	15	18:30			22	29				
06:45			17	40	22	51	91	18:45	16	83	19	112	195
07:00			18	31	19:00			11	21				
07:15			29	22	19:15			10	25				
07:30			36	35	19:30			17	20				
07:45			37	120	22	110	230	19:45	5	43	18	84	127
08:00			30	34	20:00			9	18				
08:15			37	33	20:15			9	16				
08:30			31	32	20:30			4	10				
08:45			31	129	23	122	251	20:45	6	28	9	53	81
09:00			24	21	21:00			3	14				
09:15			26	23	21:15			6	13				
09:30			23	18	21:30			7	9				
09:45			30	103	31	93	196	21:45	8	24	10	46	70
10:00			17	23	22:00			7	9				
10:15			27	24	22:15			3	7				
10:30			31	30	22:30			5	2				
10:45			26	101	28	105	206	22:45	1	16	0	18	34
11:00			21	19	23:00			0	3				
11:15			23	20	23:15			1	4				
11:30			21	29	23:30			0	2				
11:45			32	97	32	100	197	23:45	0	1	2	11	12

Total Vol. 623 604 **1227** 885 1078 **1963**

GPS Coordinates: 33.538606, -111.932359

	Daily Totals					
	NB	SB	EB	WB	Combined	
			1508	1682	3190	
	AM		PM			
Split %	50.8%	49.2%	38.5%	45.1%	54.9%	61.5%
Peak Hour	07:30	11:45	07:30	17:00	15:00	17:00
Volume	140	131	264	165	139	302
P.H.F.	0.95	0.80	0.93	0.79	0.87	0.82