

**SR 303L, 51ST AVENUE AND 43RD AVENUE TRAFFIC INTERCHANGES
MILEPOST 135.74 TO MILEPOST 138.60**

FINAL PROJECT ASSESSMENT

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1. INTRODUCTION

ADOT has retained Jacobs Engineering Inc. to prepare a Project Assessment and conceptual design for the State Route 303 Loop (SR 303L) SR 303L, 51st Avenue and 43rd Avenue Traffic Interchanges (TI's) between MP 135.74 and MP 138.60.

SR 303L (Bob Stump Memorial Freeway) is located in the Northern Phoenix Metropolitan area within Maricopa County, Arizona, in the ADOT Central District. SR 303L is an urban freeway on the National Highway System with an open median between Lake Pleasant Parkway and Interstate 17 (I-17). The current freeway has been constructed as an interim facility with two 12-foot lanes in each direction of travel with 10-foot outside shoulders and 12-foot inside shoulders between the future crossroad locations. At the future crossroad locations of Pyramid Peak Parkway (67th Avenue alignment), 51st Avenue, and 43rd Avenue, the mainline lanes have not been constructed and traffic is using the crossroad ramps and the two-lane frontage road from the future 43rd Avenue to the I-17/Sonoran Desert Drive TI. The ultimate SR 303L facility is planned to provide four general-purpose lanes and one high occupancy vehicle lane (HOV) lane in each direction of travel, include service TI's at major cross streets and a full system TI at I-17 with direct connecting ramps between SR 303L and I-17.

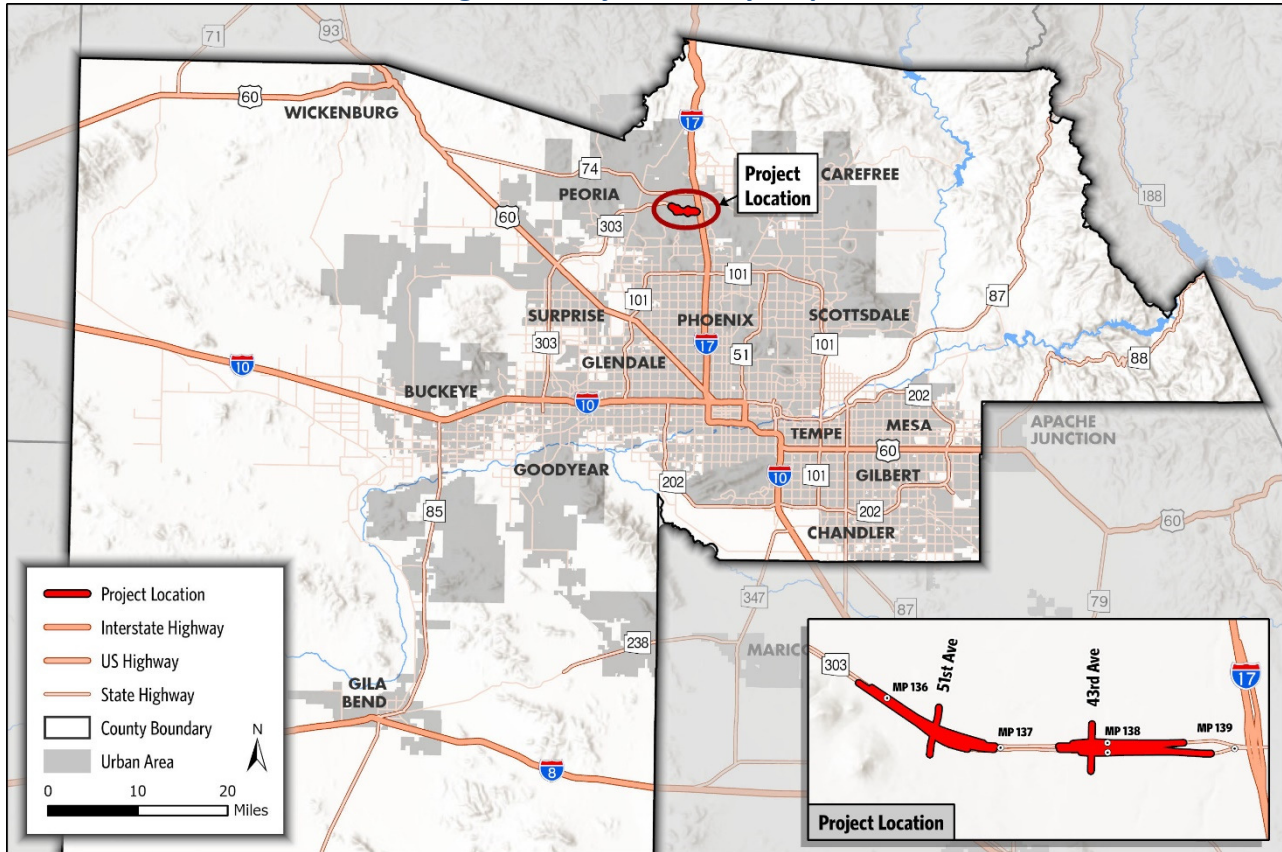
The Taiwan Semiconductor Manufacturing Company, Inc. (TSMC) is a planned facility located on the north side of SR 303L between 51st Avenue and 43rd Avenue to the west and east, respectively, and SR 303L and Dove Valley Road from the south and north, respectively. TSMC began construction of their new facility in April 2021. Access to the TSMC facility from the ADOT freeway system is planned through a combination of TI and arterial street access at I-17/Dove Valley Road, and the future SR 303L TIs at 51st Avenue and 43rd Avenue. The City of Phoenix (City) is planning arterial street improvements that would construct the portions of Dove Valley Parkway, 51st Avenue and 43rd Avenue from the TI's to the TSMC facility. TSMC has an agreement in place to purchase and develop the land with the Arizona State Land Department (ASLD). TSMC has made initial payments to ASLD, with subsequent payments to be made over the next few years. At that time, the land will be deeded over to TSMC. All the other land within the project vicinity is managed by the Arizona State Land Department.

The *Final Design Concept Report Estrella Freeway (SR 303L), Happy Valley Road to I-17*, Arizona Department of Transportation (2006) herein after called the DCR, identified the footprint and conceptual alignment for SR 303L from Happy Valley Road to I-17.

This Project Assessment details the anticipated scope of work to design the SR 303L 51st Avenue and 43rd Avenue TI's and includes a preliminary project design, construction schedule, and opinion of construction costs. This Project Assessment includes details about the development considerations, required actions and background data that may be relevant to the project, will provide the basis for initiating the various Federal and ADOT project numbers, and will be the basis for establishing the funding for the project.

The project location and the limits are shown in **Figure 1: Project Vicinity Map**.

Figure 1: Project Vicinity Map



2. BACKGROUND DATA

2.1 Recent Highway Projects

The most recent (2011-2021) highway improvement projects that have been completed within the project limits are shown in **Table 1: Previously completed projects (2011 to 2021)**.

Table 1: Previously completed projects (2011-2021)

Project #	Beg. MP	End MP	Construction Date	Description
H717501C 303-A(200)A	131.53	139.01	2011	Lake Pleasant Parkway to I-17 Original construction
H760701C 303-A-NFA	131.53	139.01	2011	Lake Pleasant Parkway to I-17 Landscape establishment

Source: ADOT Engineering Records ROAD Portal

2.2 Programmed Highway Projects

Table 2: Programmed Projects within or near the project limits identifies all of the highway improvement projects within or near the project limits within the ADOT Five-Year Transportation Facilities Construction Program for Fiscal Year (FY) 2021-2025.

Table 2: Programmed Projects within or near the project limits

Item #/ TRACS	Location	Type of Work	Programmed / Construction Amount
9140	Happy Valley Parkway – Lake	Freeway	\$20,329,911.29
F0116 01C	Pleasant Parkway	Widening	Bid result 10-20-2020

Source: <http://www.azdot.gov/planning/transportation-programming/current-five-year-program> or the award by the State Transportation Board

2.3 Existing Conditions

2.3.1 Traffic

This section of SR 303L is an urban freeway, located in the northern Phoenix metropolitan area. There are two 12-foot lanes in each direction of travel with 10-foot outside shoulders and 12-foot inside shoulders between the future crossroad locations. At the future crossroad locations (Pyramid Peak Parkway, 51st Avenue, and 43rd Avenue), the mainline has not been constructed and the traffic is using the existing ramps or the two-lane frontage roads. The posted speed limit on SR 303L mainline is 65 miles per hour (mph) and the posted speed on the frontage road and interim portion (from I-17 west through the existing 51st Avenue ramps) is 55 mph.

The Average Annual Daily Traffic (AADT) at MP 135.85 from 2015 to 2019 and the design year is presented in **Table 3: Average Annual Daily Traffic at MP 135.85**.

The project traffic volumes using the current MAG model for the SR 303L, 51st Avenue, and 43rd Avenue are included in the Draft Traffic Report, Appendix B.

Table 3: Average Annual Daily Traffic at MP 135.85

Year	NB AADT	SB AADT	Total AADT	K Factor %	D Factor %	T Factor %
2015	6,032	6,326	12,357	12	80	10.5
2016	7,051	6,122	13,172	13	80	7
2017	7,312	6,349	13,659	12	80	7
2018	13,533	12,407	25,940	13	80	16.5
2019	13,400	12,700	26,433	13	70	9.9
2040 design yr	45,300	47,000	92,300	13	70	11

Traffic crash data was obtained for the five-year period from January 1, 2015 to December 31, 2019. The data shows that there was a total of 51 crashes reported on SR 303L between MP 135.74 and MP 138.80 including two serious injury crashes and no fatal crashes.

Table 4: Accident Data - Injury Severity and **Table 5: Accident Data - Collision Manner** show the injury severity and collision manner by year, respectively.

Table 4: Accident Data-Injury Severity

Injury Severity	Year					Total
	2015	2016	2017	2018	2019	
No Injury	3	5	5	12	2	37
Possible Injury	2	0	0	0	4	6
Suspected Minor Injury	0	2	1	3	0	6
Suspected Serious Injury	0	1	0	0	1	2
Total	5	8	6	15	17	51

Table 5: Accident Data – Collision Manner

Collision Manner	Year					Total
	2015	2016	2017	2018	2019	
Other	0	0	0	1	1	2
Rear End	1	2	2	2	2	9
Sideswipe (same direction)	0	0	4	5	1	10
Single Vehicle	4	6	0	7	13	30
Total	5	8	6	15	17	51

2.3.2 Roadway

This section of SR 303L is an urban freeway with a typical section of two 12-foot traffic lanes in each direction of travel with 10-foot outside shoulders and 12-foot inside shoulders between the future crossroad locations. There is a 74-foot open median, exclusive of shoulders, that can eventually be closed to facilitate two additional general-purpose lanes and one HOV lane in each direction of travel. At 51st Avenue and 43rd Avenue the mainline has not been constructed and the traffic is using the existing ramps or the two-lane frontage roads between Sonoran Desert Drive TI and 43rd Avenue. The existing ramps for 51st Avenue and 43rd Avenue have two 12-foot travel lanes and a two-foot inside and outside shoulder, with temporary connections from exit ramp to entrance ramp in place of crossroad pavement. The frontage roads between 43rd Avenue and I-17 have two 12-foot travel lanes, a two-foot inside shoulder, and a four-foot outside shoulder. The naming convention from the DCR, the original H715701C SR 303L, Lake Pleasant Parkway – I-17 record drawings and current signage is used for this Project Assessment. The Northbound Frontage Road is heading east from 43rd Avenue to I-17, and the Southbound Frontage Road is heading west within the project limits.

The normal roadway cross slope on the mainline, ramps, and frontage roads is 2.00%. There is one mainline horizontal curve superelevated to 3.00%. Within the project limits there are two horizontal curves on the northbound frontage road with a normal 2.00% cross slope and one horizontal curve with 4.00% superelevation. Within the project limits there is one horizontal curve on the southbound frontage road with a normal 2.00% cross slope and two horizontal curves with up to 3.90% superelevation. The existing 51st Avenue ramps have a total of six horizontal curves with superelevation ranging between 2.00% and 4.00%. The existing 43rd Avenue ramps have a total of two curves, both

have a 2.00% normal cross slope. The superelevation rates on all the existing horizontal curves within the project limits meet the current ADOT Roadway Design Guidelines rates for the various design speeds using the 6% maximum superelevation table.

There is one existing vertical curve on the Southbound Frontage Road (Sta. 20+50) which does not meet the sight distance criteria for the posted 55 mph speed when adjusted for grade. The existing curve does meet the sight distance criteria for the listed 50 mph design speed in the record drawings.

A Summary of AASHTO Controlling Design Criteria is included as Appendix A.

The SR 303L mainline pavement is comprised of Portland cement concrete pavement (PCCP) and aggregate base course (AB) and has a pavement structural section of 11" PCCP on 4" AB (Class 2). Mainline ramps have a pavement structural section of 10" PCCP on 4" AB (Class 2). The northbound and southbound Frontage Roads have a pavement section of ½" asphalt rubber-asphaltic concrete friction course (AR-ACFC) on 5" of (¾") asphaltic concrete (AC) on 6" AB (Class 2). In the areas of the original 51st Avenue and 43rd Avenue crossroads the pavement section for the existing temporary connection is 4" AC (¾") on 6" AB (Class 2).

The average project elevation is 1,520 feet and the terrain is level.

2.3.3 Drainage

The natural topography generally slopes from east to west and north to south. In the area of 51st Avenue the SR 303L passes through the saddle between two hills and there is off-site drainage from both the north and south. Offsite flows are tributaries to Deadman Wash. The major components of the existing offsite drainage system are channels and ditches located along the upstream side of the freeway, ramps, and frontage roads to collect offsite runoff. Storm water reaches the freeway system in the form of sheet flow or concentrated flow through shallow braided washes. Sheet flow is collected with a system of channels and ditches and discharged to the nearest major drainage way. Onsite drainage systems include median area inlets, gutter freeway catch basins, barrier freeway catch basins, and storm drain.

West of 51st Avenue, offsite flow from the north is directed west along the freeway and ramp embankments to the concrete lined channel west of the project and outlet into Deadman Wash.

East of 51st Avenue, offsite flow from the north is directed east along the freeway and ramp embankments and directed to the concrete lined channel N3 and two existing bridges pass the freeway over the channel. These offsite flows are generally described as the Biscuit Flats area washes including CAP wash tributaries, Upper Buchanan Wash, and unnamed washes. Offsite flow from the north between 51st Avenue and Upper Buchanan Wash is directed by the freeway and ramp embankments west to channel N3. Between Upper Buchanan Wash and 43rd Avenue offsite flow from the north is directed by the freeway and ramp embankments to a four barrel 10'x6' reinforced concrete box culvert where it passes under SR 303L. Between 43rd Avenue and I-17 offsite flow is collected in three separate concrete lined channels, and outlet to the existing washes south of the freeway utilizing reinforced box culverts.

West of 51st Avenue, offsite flow from the south is collected in a concrete lined channel and directed west and outlet into the existing wash.

The on-site drainage consists of freeway catch basins and storm drain systems to capture the pavement runoff and convey it to the nearest outfall location, such as a roadway ditch, channel, or natural stream crossing.

The freeway is classified as design Drainage Class 1.

2.3.4 Utilities & Railroads

Based on initial research (sources: Final DCR, Estrella Freeway, SR 303L. Happy Valley Road to I-17, completed by URS in December, 2006 as well as record drawings and CAD files for SR 303L, Lake Pleasant Parkway to I-17) the utility companies identified to be within and/or adjacent to the project limits are presented in **Table 6: Utilities within and adjacent to the project limits**.

Table 6: Utilities within and adjacent to the project limits

UTILITY TYPE	LOCATION
Arizona Public Service (APS)	
69 kV transmission line	Overhead crosses SR 303L near Sta. 2052+90, the proposed 51 st Avenue ramp D near 108+20, and the Access Road SB to 51 st Avenue near 109+65. The new SR 303L mainline, ramps, and access roads will cross under but not impact the line. APS is planning on relocating the line to the west, and continued coordination will be required.
230 kV transmission line	Overhead crosses SR 303L near Sta. 2134+90, NB FR near 35+60, and SB FR near 35+55. The new temporary connections from the frontage roads to the SR 303L mainline will cross under but not impact the line.
Qwest	
To be verified during final design	ASLD GIS database indicates a permit for Qwest along the section line corresponding to the old 51 st Avenue alignment.
City of Phoenix	
To be verified during final design	ASLD GIS database indicates a permit for the City of Phoenix along the section line corresponding to the old 51 st Avenue alignment.

There are no railroad crossings within the study area.

2.3.5 Right of Way

The existing SR 303L facility resides within a Highway Use Easement (hereafter referred to as right of way) acquired from the Arizona State Land Department (ASLD) prior to the initial construction phase, and the ASLD continues to be the underlying landowner. Based on initial research (sources: CAD files for SR 303L, Lake Pleasant Parkway to I-17, and right of way project S 303-A-700) the existing right-of-way widths within the project limits are presented in **Table 7: Existing Right of Way widths**.

The existing right of way width is highly variable due to the significant number of drainage channels, drainage outfall energy dissipators, and the original ramps and frontage roads.

The original right of way was obtained for the planned location of 51st Avenue, but as shown with the preliminary design, the 51st Avenue alignment has been shifted to the west. New right of way is required for the relocation of 51st Avenue for the crossroad as well as for the proposed 51st Avenue ramps. New right of way is also required for the design for the TSMC access road stub-out on the north side of SR 303L between 51st Avenue and 43rd Avenue. New right of way is required along 43rd Avenue from both TSMC and ASLD to address the FEMA floodplain north of the SR 303L as discussed in Section 3.6 Drainage Design of this Project Assessment.

Table 7: Existing Right of Way widths

From	To	Right of Way Width (feet)	Comments
Sta 2008+60.83 Lt	Sta 2069+02.60 Lt	132.63 - 268.92	Relocated 51 st Ave TI area
Sta 2020+00.00 Rt	Sta 2068+68.00 Rt	189.37 - 230.68	Relocated 51 st Ave TI area
Sta 2053+54.34 Lt	Sta 2056+35.65 Rt	637.37 - 631.23	Existing 51 st Ave crossroad
Sta 2095+80.00 Lt	Sta 2148+10.90 Lt	209.15 - 300.75	43 rd Avenue TI area
Sta 2096+16.00 Rt	Sta 2156+19.32 Rt	490 - 341.57	43 rd Avenue TI area
Sta 2109+50.66 Lt	Sta 2109+15.97 Rt	639.76 - 615.76	Existing 43 rd Ave crossroad

TSMC has an agreement in place to purchase and develop the land with the Arizona State Land Department. TSMC has made initial payments to ASLD, with subsequent payments to be made over the next few years. At that time, the land will be deeded over to TSMC. The SR 303L in this area is surrounded by land managed by the Arizona State Land Department except for the TSMC site north of the SR 303L between 51st Avenue and 43rd Avenue.

2.3.6 Structures

Based on record drawings there are no traffic underpass or overpass structures within the project limits. There are two bridges spanning a drainage channel and one large box culvert near the project limits as listed in **Table 8: Existing Structures**.

None of the listed existing structures are within the proposed construction limits.

Table 8: Existing Structures

Structure Location	Structure No.	Milepost	Inventory Rating	Sufficiency Rating
Channel N3 Bridge NB	2920	137.14	53	97.5
Channel N3 Bridge SB	2921	137.14	53	97.5
RCBC Sta 2091+53.44 4-10'x6'x365', skew 45 ^o Rt				

2.3.7 Hazardous Materials

There are no known hazardous material sites within the project limits.

3. PROJECT SCOPE OF WORK

The scope of this project is to construct new traffic interchanges at 51st Avenue and 43rd Avenue on the SR 303L freeway and to construct two SR 303L general purpose lanes with shoulders in each direction of travel at these two locations.

The 43rd Avenue TI can mostly be constructed within the existing right of way. The TSMC access road stub-out near 43rd Avenue as well as the culvert to address the FEMA floodplain at 43rd Avenue will require small amounts of additional new right of way to allow for future ADOT maintenance access within the ADOT right of way.

The 51st Avenue TI is being relocated approximately 1,200 feet to the west and will require new right of way for the crossroad, ramps, concrete lined channel modifications, and the access road stub-out.

The TSMC access road north of the SR 303L between 43rd Avenue and 51st Avenue will not be constructed by this project, but the stub-outs within the ADOT access control will be constructed.

Temporary connector ramps are required from the new mainline SR 303L pavement east of 43rd Avenue to the existing frontage road system. These connector ramps are not part of the ultimate freeway but will be in place until the I-17/SR 303L System Interchange ramps are constructed in the future. Since the timing of the system ramps are not programmed for construction, the temporary ramps are anticipated to be in place for many years and will be designed for two lanes of traffic and will be designed using freeway ramp criteria.

The design for this project will conform to the latest versions of the ADOT Roadway Design Guidelines (RDG), ADOT Highway Drainage Design Manual Hydrology, ADOT Highway Drainage Design Manual, Hydraulics, ADOT Traffic Design Standards, ADOT Traffic Control Design Guidelines, the Manual of Uniform Traffic Control Devices (MUTCD), AASHTO A Policy on Geometric Design of Highways and Streets, 2018 (Green Book), and City of Phoenix standards for the crossroads beyond the ADOT right of way.

3.1 Data Collection – Location Survey

Aerial mapping of the project was acquired in January 2021 for the limits of this project and will be used for this design. Supplemental field surveys will be required during final design to confirm horizontal location and elevations based on the final connection points. Due to the 51st Avenue alignment change additional topographic mapping for the areas is needed. The design for this Project Assessment was based on record drawings and coordination with the City of Phoenix design consultant for the 51st and 43rd Avenue crossroads.

3.2 Materials Design

Geotechnical investigation is currently underway by Ethos Engineering, LLC (Ethos) to verify the pavement design and to obtain data required for the foundation design of the two bridges.

A Materials Design Report is currently underway by Ethos and will be available during final design.

The design for this Project Assessment was based on the record drawings which estimated excavated material would shrink 15% when utilized for embankment.

Over-excavation is indicated in the record drawings, and the need to over-excavate is being evaluated by Ethos and the final designer will include over excavation details and quantities in the final design as appropriate. No attempt has been made to quantify over-excavation for this Project Assessment.

3.3 Pavement Design

A Pavement Design Summary is underway by Ethos and is being prepared in accordance with the Pavement Design Manual. The pavement design summary will be available during final design.

The design for this Project Assessment was based on the record drawings. The new SR 303L mainline and ramps assume a pavement structural section of 11" and 10" PCCP, respectively, on 4" AB (Class 2).

The temporary connector ramps to and from the existing frontage road system assume a pavement section of 5" AC (3/4") on 6" AB (Class 2). Widening of the frontage roads will match the pavement section of ½" AR-ACFC on 5" AC (3/4") on 6" AB (Class 2) as shown in the record drawings.

In the areas of the original 51st Avenue and 43rd Avenue crossroads the existing AC pavement section for the temporary connections will be removed and replaced with new pavement.

Temporary pavement for detours, temporary roadway widening, or interim AC shoulder in the median to facilitate traffic control and future third general purpose lane in each direction is assumed to be 4" AC on 6" AB (Class 2).

3.4 Environmental Considerations

The project may include Federal funds and must therefore comply with the National Environmental Policy Act. During the environmental process, public and agencies will be notified of the project and the input received will be used to help identify environmental concerns. This project is located within the existing ADOT right of way and easements except for small portions of 43rd Avenue, 43rd Avenue Ramp A and TSMC stub-out, and the relocated 51st Avenue crossroad and ramps where new right of way is required. The project is anticipated to meet the criteria for Categorical Exclusion under 23 CFR 771.115 for an Individual CE. The Individual CE will be approved under the 327 Memorandum of Understanding (MOU). The project is adjacent to land under the jurisdiction of the Arizona State Land Department.

Additional hazardous materials work will be done to prepare the Preliminary Initial Site Assessment (PISA) and to identify the presence of any asbestos containing material or lead-based paint. There are no known hazardous material sites within the existing right of way.

No noise, air quality, impaired/outstanding waters, prime or unique farmland, or Section 4(f) or Section 6(f) resource impacts are anticipated to occur in the area of the relocation of 51st Avenue, but a thorough review will be required during the environmental clearance process to confirm any potential impacts and mitigation requirements.

The existing right of way and the proposed new right of way areas will require a biological review.

The new right of way areas will be evaluated for the presence of cultural resources sites and any potential impacts and mitigation requirements will be presented in a Section 106 Consultation Letter.

The environmental clearance will be completed during final design.

3.5 Utilities and Railroad

The final designer will be responsible for verifying there are no conflicts with the utilities currently within the project limits that may be existing at the time of advertisement or will be installed concurrently with the project.

The Arizona State Land Department GIS database indicates permits for Qwest and City of Phoenix along the section line corresponding to the old 51st Avenue alignment. The final designer will verify what if any utilities are present for both permits.

The City of Phoenix is planning a new sewer system with a lift station on the northwest corner of SR 303L and 51st Avenue. There will be new sewer and water infrastructure north of the SR 303L right of way crossing 51st Avenue and 43rd Avenue within the ADOT access control limits which is not expected to be in conflict. The final designer shall work with the City and their designer to coordinate the design efforts and show the layout on the project plans.

APS has overhead transmission lines crossing the SR 303L at two locations. No conflicts are anticipated at either location. APS is planning to relocate the 69 kV transmission line crossing near the old 51st Avenue alignment to the west. It is anticipated the pole south of SR 303L will remain, and the pole(s) north of SR 303L will be relocated. APS will need to continue to provide power service to the existing ADOT FMS infrastructure. These activities will require continued coordination during final design.

The final designer, in coordination with ADOT U&RR will need to coordinate with all relevant utility agencies to identify their existing and future planned utility infrastructure. Sleeves at various locations within the SR 303L corridor will likely be required, particularly at 51st and 43rd Avenues.

It is anticipated the final designer will utilize the Utility Coordination Guide for Design Consultants, the Utility Report Template, and the appropriate SUE Phase Checklist available on the Utility and Railroad Engineering section of the ADOT website.

The final designer will provide the recommendation for utility clearance to ADOT Utilities and Railroad Group who will provide the final Utility Clearance Letter.

3.6 Drainage Design

Drainage analyses will be performed to design the off-site flow culvert crossings and the on-site storm drain system for the new or revised freeway section, ramps, access road stub-outs, the relocated 51st Avenue, 43rd Avenue, and the connector ramps to the frontage road system east of 43rd Avenue. The layout is assumed to be similar to the concept shown in the original DCR, the record drawings, as well as the other TI locations on the SR 303L corridor. Existing culverts and catch basins will be utilized when possible and supplemented as needed. Removal of some existing catch basins and pipes may be required and will be shown on the design plans.

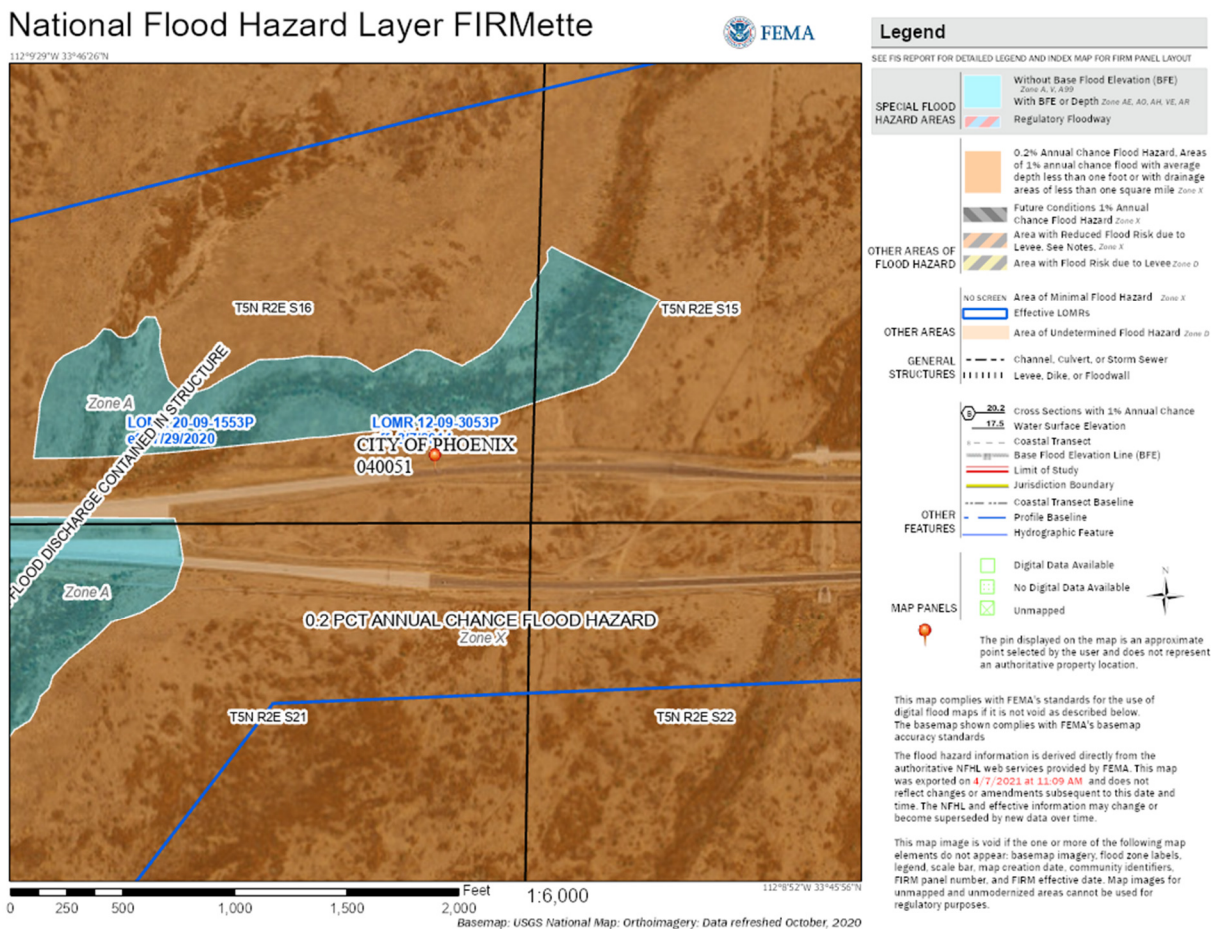
The relocation of 51st Avenue impacts the existing concrete lined channel system on the south side of SR 303L and may impact the north side channel. These locations will be evaluated and coordinated with the TSMC drainage plan, and it is anticipated that concrete lined channels will be installed outside the limits of the ramp and mainline embankment and connect into the existing concrete lined channels. New right of way will accommodate maintenance access where channel realignments occur.

The 43rd Avenue interchange layout requires a new culvert crossing north of SR 303L to convey Upper Buchanan Wash under 43rd Avenue as shown in the previous DCR. Upper Buchanan Wash is a mapped FEMA floodplain as shown in **Figure 2: FIRMette for 43rd Avenue**.

The existing wash floodplain west of 43rd Avenue is mostly on the TSMC property and likely extends into the ADOT right of way until the flow passes under SR 303L in the existing multi-barreled box culvert. The

final designer will coordinate with the TSMC site designer, City of Phoenix designer for 43rd Avenue, Arizona State Land Department, and City of Phoenix floodplain managers on any mapping revisions needed for the new culvert crossing and channelization. A Conditional Letter of Map Revision (CLOMR) or Letter of Map Revision (LOMR) will be prepared by the ADOT final design consultant to address and revise the floodplain incorporating all the proposed revisions from the various designers and addressing the review comments of the agencies. Due to the lengthy review time this will need to be confirmed and addressed appropriately early during final design to meet the project schedule. If the information is not provided by City of Phoenix or TSMC, they will be responsible for preparing another CLOMR/LOMR for their floodplain impacts.

Figure 2: FIRMette for 43rd Avenue



3.7 Roadway Design

The project will construct new mainline paving in the areas of 51st Avenue and 43rd Avenue consisting of two 12-foot travel lanes, a 12-foot inside shoulder, and 10-foot outside shoulder in each direction of travel. The roadway design includes removal and reconstruction of a portion of the existing SR 303L mainline paving west of the relocated 51st Avenue and also at the existing 51st Avenue gores to the east.

This Project Assessment has attempted to lower the SR 303L mainline profile to reduce the substantial volume of borrow associated with the relocation of 51st Avenue. Separate mainline profiles are required at 51st Avenue to tie into the existing mainline pavement but are brought together to aid in lowering mainline. Structure type was selected to reduce the structure depth allowing a further lowering of the mainline profiles. Some widening of the ditches between mainline and the ramps or frontage road have been incorporated throughout the project to reduce the borrow, and further refinement is anticipated during final design, balancing the reduction in earthwork with mainline barrier that would be required. Retaining walls were investigated for the mainline in the 51st Avenue relocation area but the additional cost was not offset by the reduced cost of borrow.

Where roadway improvements tie midway into existing vertical curves constructed with the previous project, new vertical curves are extended at the same rate of curvature to achieve recommended total curve length between existing and new pavement. Where extending existing vertical curves was not feasible, the existing vertical curves were either removed or are shown to remain in their entirety. Breaking into the existing vertical curves could result in very short vertical curves or short broken curves with substantially different rates of curvature and was not pursued as part of this Project Assessment. Traffic control and phasing were a key factor in setting the limits of profile change, as well as the desire to retain existing concrete barriers, existing anchor slabs, and existing PCCP when feasible.

Section 3.6 Drainage Design includes discussion of the Upper Buchanan Wash FEMA floodplain and the challenges to be met by the final designer. The ultimate resolution of the FEMA floodplain issue will likely require a rolling profile for 43rd Avenue. The current 43rd Avenue profile has been designed to meet a 45 mph design speed with a four barrel 10'x6' reinforced concrete box culvert under 43rd Avenue. The final designer may refine the 43rd Avenue profile based on the final structure size and type, and may require associated revisions to other profiles.

The extent of the eastern limit of mainline paving east of 43rd Avenue has been shown to allow the temporary connector ramps to be designed and constructed as long-term ramps while providing a mainline paving stub-out that will ease construction phasing when the ultimate freeway is constructed to I-17. The final designer will need to verify the ultimate eastern limit of mainline construction and the associated profile, balancing the mainline profile needs with the temporary connectors to the frontage road system, and ensuring geometric compatibility with the future extension of the SR 303L to I-17 with the associated system interchange ramps.

The existing vertical curve on the Southbound Frontage Road (Sta. 20+50) which does not meet the stopping sight distance criteria for the posted 55 mph will be removed. The new vertical curve will exceed the stopping sight distance for the 50 mph design speed as well as a 55 mph posted speed.

The temporary connector ramps are designed as freeway ramps connecting to the existing frontage road system. Each connector will have two 12-foot travel lanes, an eight-foot outside shoulder, and a two-foot inside shoulder. These temporary connectors will be removed when the SR 303L / I-17 system interchange is constructed with all the associated traffic movements. The final designer will coordinate

with ADOT to reduce costs associated with these temporary connectors, such as not installing paved gores, and limiting curb and gutter as appropriate.

Table 9: Roadway Design Controls reflect the controlling design elements for the various roadways.

SR 303L ramps shall be designed for 60 mph at exit gores, 55 mph at entrance gores, and 35 mph at crossroad termini, in accordance with the ADOT RDG. Additional design requirements and guidance from the ADOT RDG not listed in the table shall be followed.

Table 9: Roadway Design Controls

	SR 303L	Connectors	Ramps	Crossroad
Design Speed	65 mph	50 mph	50 mph	45 mph
Travel Lane Width	12'	12'	12'	Per Phoenix standard
Number of Travel Lanes (each direction)	2	2	1 or 2	3
Normal Cross Slope	2%	2%	2%	2%, 1.5% at TI
Inside Shoulder Width	12'	2'	Varies, 2' Min	N/A
Outside Shoulder Width	10'	8'	Varies, 2' Min	6'
Design Vehicle	WB-67	WB-67	WB-67	WB-67
Maximum Profile Grade	3%	4% up 5% down	4% up 5% down	Per Phoenix standard
Desired Minimum Profile Grade	0.4%	0.4%	0.4%	0.4%
Sight Distance (adjust for grade per ADOT RDG)	644'	423'	423'	AASHTO
Maximum Superelevation	6%	6%	6%	4%
Superelevation Runout	ADOT	ADOT	ADOT	AASHTO
Maximum Break without Horizontal Curve	0°45'	0°45'	0°45'	0°45'
Maximum Break without Vertical Curve	0.2%	0.2%	0.2%	AASHTO

The crossroads within ADOT access control match City of Phoenix standard Cross Section “A” – Major Arterial section for lanes and shoulders. The crossroads will be designed using the ADOT Roadway Design Guidelines, except the roadways will be designed as a low speed urban street with a 45 mph design speed in accordance with the AASHTO Green Book.

All new guardrail is to be MASH compliant. Existing guardrail to remain is to be MASH or NCHRP 350 compliant.

3.8 Bridge Design

New traffic interchanges will be required at the SR 303L intersections with 51st and 43rd Avenues to accommodate the proposed SR 303L mainline configurations. The profiles have been evaluated for overpass and underpass options and an overpass is recommended for constructability, traffic control considerations, and to enable connecting with existing ultimate ramp and mainline infrastructure. Underpass options would require removal of segments of constructed ramps, mainline, and other infrastructure.

The proposed 43rd and 51st Avenue crossroad lane configurations represent ultimate conditions, and the City of Phoenix and ADOT do not require the bridge span configurations to consider future widening. A shallow structure depth is proposed to minimize roadway profile, borrow for embankment, and associated costs. A continuous, two-span, cast-in-place, post-tensioned (CIP/PT) concrete girder bridge constructed on soffit fill is recommended for the interim bridge condition to minimize current construction costs. The cost reductions are found through elimination of falsework, girder transport and crane operations, reduced earthwork costs through compact superstructure depth and lowered roadway profiles and leveraging of borrow already required for the mainline embankment. Full height abutments can be used to shorten spans and further reduce structure depth. The abutment face is shown 13'-0" from face of curb to allow an offset sidewalk and provide sufficient sight distance for turning crossroad traffic.

To limit up-front costs, overpasses would be constructed for the interim width. A 24'-0" inside shoulder is preferred by ADOT to allow a third lane to be added without need for widening and to enable retaining two lanes of traffic during construction of the future widening for the ultimate condition.

The proposed SR 303L mainline structure has adequate vertical clearance to account for future widening with pre-cast, pre-stressed (PC/PS) 42" Utah Bulb Tee girders. A minimum 16'-6" vertical clearance is required, however a 6" rise in roadway would enable widening with CIP/PT including 3'-0" falsework. Following are roadway profile heights above crossroad at vertical clearance pinch points for the recommended span lengths:

$$20.1' = 16.5' \text{ vertical clearance} + 3.6' \text{ CIP/PT depth}^{**}$$

$$20.9' = 16.5' \text{ vertical clearance} + 42'' \text{ Utah Bulb Tee girder} + 3'' \text{ haunch} + 8'' \text{ deck}$$

** Recommended for low cost of construction on fill and reduced risk of truck impact provided with higher vertical clearance.

Flanking retaining walls with stepped footings are assumed for this Project Assessment. These may be left in place during future widening for the ultimate condition but should incorporate details which facilitate tying in with the new structure.

Twin structures are shown in this Project Assessment to limit transverse thermal structural loads experienced by very wide bridges. Additionally, separation of structures by flow direction facilitates future programming of bridge and pavement maintenance, as pavement preservation projects are often funded by direction, and deck and pavement often receive higher wear in one direction (e.g. eastbound, loaded trucks from California). Structure types will be confirmed during final design through preparation of a Structure Selection Report. The structure types and features evaluated for planning purposes in this Project Assessment are shown in **Table 10: Structure features for the Project Assessment**.

Table 10: Structure features for the Project Assessment

Structure Location	Structure Type	Spans	Width	Length	Depth	Skew	Section
51st Ave OP NB & 51st Ave OP SB	CIP/PT	2	62.75 ft	169 ft	3.6 ft	13°30'	3% Superelevation
43rd Ave OP NB & 43rd Ave OP SB	CIP/PT	2	62.75 ft	169 ft	3.6 ft	0°	2% crown

Bridge design criteria reflected in this Project Assessment and required in final design include:

- 16'-6" Vertical Clearance
- 16'-0" Falsework Clearance over traffic
- TL-4 single slope (38") barriers
- SR 303L lane configuration on the structure (each direction)- Two 12'-0" thru lanes with 10'-0" outside and 22'-0" inside shoulders + 2'-0" offset to barrier
- Crossroads lane configuration: City of Phoenix standard, Cross Section "A" – Major Arterial modified to allow for dual left turns each direction and clearance to center pier

Aesthetic treatments will be applied to exposed structural concrete. ADOT Roadside Development developed Aesthetic Guidelines for the SR 303L corridor which include standard vertical rustication on abutments and wingwalls and large icons on bridge piers. Barriers include a rustication pattern as well. Exposed structural concrete will be painted. All aesthetic treatments will be reviewed and approved by ADOT Roadside Development and ADOT Central District.

3.9 Traffic Design

Traffic modeling and analyses were conducted to evaluate the operations of the TI's and determine the lane configurations and storage lengths at the intersections. The level of service (LOS) analysis shows that both intersections operate at an acceptable LOS during both the AM and PM peak hours for the horizon year 2040. The Draft Traffic Report can be found in Appendix B.

The traffic signage will include extruded and flat sheet aluminum sign panels and be in accordance with the current version of the Manual on Uniform Traffic Control Devices (MUTCD), and the Arizona Manual of Approved Signs (MOAS). Eleven new tubular cantilever sign structures and one tubular sign structure will be needed for advance and exit guide signs for the 43rd Avenue and 51st Avenue exits. The existing tubular sign structure (DMS) and tapered tube sign structure in the northbound direction can remain. The existing tapered tube sign structure in the southbound direction will be relocated to align with the 43rd Avenue off-ramp. New tapered tube sign structures will be installed on 43rd Avenue and 51st Avenue in the northbound and southbound directions approaching the SR 303L interchange.

The pavement will be marked with thermoplastic striping for the edge lines and intersection marking. The SR 303L center line and gore lines will be marked with Type I, preformed, contrast, white 6" tape as utilized by the adjacent project currently under construction and subject to review by ADOT.

There will be four signalized intersections, and these will be designed in accordance with the current ADOT standards or current City of Phoenix standards depending on the development of an operations and maintenance Intergovernmental Agreement (IGA) which will define the responsibilities for operations and maintenance of the traffic signal.

New lighting (LED), including the intersection lighting as part of the traffic signal, will be designed in accordance with the current ADOT standards and include photometric analysis.

The FMS will be designed per the latest ITS Standard Drawings & ITS Design Guide and in coordination with ADOT's Systems Technology Group. The existing FMS structures will remain.

Traffic control requirements will be in accordance with the current edition of the MUTCD, all revisions to the current edition, the Arizona Supplement to the current edition of the MUTCD, the current edition of the ADOT Temporary Traffic Control Design Guidelines, and/or by special provisions.

The SR 303L mainline section at 43rd Avenue, the mainline section east of 51st Avenue, as well as the bridges for 51st Avenue and 43rd Avenue can be constructed with traffic in the existing configuration.

There will be traffic control and construction phasing challenges to be addressed during final design west of the new 51st Avenue crossroad due to the shifted crossroad alignment, SR 303L profile change and associated ramp revisions. The Project Assessment has assumed temporary AC pavement to the median side of SR 303L for the area west of 51st Avenue with inside shoulder and lane of mainline PCCP constructed with traffic on the existing 51st Avenue Ramps A and B. The existing 51st Avenue Ramps A and B can be removed, and new Ramps A and B constructed, along with remaining mainline PCCP and outside shoulder treatments, once traffic is switched to the newly constructed inside mainline pavement. The mainline reprofiling to the east of 51st Avenue has been extended into the gores of Ramp C and Ramp D. Traffic can remain on the existing ramps as some of the existing mainline PCCP is removed and replaced with a new profile.

The temporary connector ramps from the SR 303L mainline to the existing frontage road system are anticipated to be completed with traffic on the existing frontage roads with temporary pavement

widening, lane and shoulder width reductions implemented, or reducing down to one through lane in each direction. This will be evaluated during final design. When the traffic is shifted to the temporary connector ramps and the new mainline SR 303L, the existing ramps can be reconstructed as needed without traffic adjacent to the work zone.

The City of Phoenix plans to complete the 51st and 43 Avenue arterial improvements by 2022. Traffic access to the new TIs would be prohibited until construction is complete and the TIs are open to traffic in 2023. Traffic control is anticipated to be minimal for these locations. The final designer should coordinate with the TSMC construction that may be on-going and in different stages during the design and construction of this project. The final designer should stay current on temporary construction access to the TSMC site and provide traffic control plans tailored to the conditions at that time.

3.10 Landscaping, Seeding, and Erosion Control

Landscaping and seeding plans will be prepared for the new embankment areas. Opportunities to salvage existing landscaping and native vegetation in the areas of the relocated 51st Avenue and the associated ramp revisions at 51st Avenue and 43rd Avenue will be reviewed during final design to determine if anything can be salvaged and included in the new landscaping plans.

SWPP plans will be prepared in accordance with ADOT design criteria and current details.

3.11 Various Design Stage Submittals

A plans, specifications, and estimate (PS&E) package is anticipated to be submitted at the following design stages for this project:

- Stage II design (30%) for review and comment, including a comment resolution meeting
- Stage III design (60%) for review and comment, including a comment resolution meeting
- Stage IV design (95%) for review and comment, including a comment resolution meeting
- Stage V (100%) for review
- Final sealed PS&E design package for advertisement

In addition to submitting PS&E packages to ADOT for review, the same will be submitted to the City of Phoenix, Arizona State Land Department, and each utility company having facilities within the project limits for a conflict review.

A Value Engineering workshop is anticipated to be completed prior to the Stage III submittal.

All necessary approvals and clearance letters are to be coordinated and obtained from ADOT Utility, Right of Way, and Environment Planning groups prior to the Stage V (100%) submittal.

4. PROJECT DEVELOPMENT CONSIDERATIONS

Due to the amount of existing SR 303L facilities and the short time frame to complete the design and construction of these improvements there are limited options available and a Design Concept Report (DCR) is not warranted.

Design exceptions are not required for the project. In the area west of 51st Avenue, temporary AC paving has been shown to aid in phasing traffic during reprofiling of SR 303L. To remain in-place as part of any

future widening, using a similar concept as the Happy Valley to Lake Pleasant Parkway project currently under construction. A compacted, graded AB shoulder would need to be included adjacent to the AC widening and the combined width would need to be at least ten feet and a design exception requested.

The following environmental studies and/or evaluations are anticipated as part of this project:

- A Biological Evaluation (BE) for the project will be prepared by the final design consultant and submitted for review and approval.
- Cultural Resources documentation: The final design consultant will perform a review of cultural resources data from online AZSITE, Arizona's Electronic Cultural Resources Database, the ADOT Historic Preservation Team (HPT) Portal, Arizona State Land cultural resource records, the National Register of Historic Places, the Phoenix Historic Preservation Office, and the Phoenix Pueblo Grande Museum. New surveys may be required for areas that are outside of existing right of way.

The final design consultant will provide the findings, maps, other details as needed, and recommendations to ADOT Environmental Planning Group who will write and distribute the Section 106 consultation letter. Following the close of project consultation, the final design consultant will upload any report and concurrences to the HPT Portal and close out the project with the Arizona State Museum (ASM).

- Hazardous Materials Assessment: A Preliminary Initial Site Assessment (PISA) is anticipated.
- Environmental Clearance: ADOT Environmental Planning Group will prepare an Individual CE under the 327 MOU and coordinate with the Federal Highway Administration (FHWA) as needed.

The anticipated new right of way for 51st Avenue south of the SR 303L is managed by the Arizona State Land Department, and a right of entry should be obtained prior to any field work approved or directed by the Department. ADOT's Central District should be notified of work conducted in their ROW and the TSMC notified since field work is needed on the private parcel.

New right-of-way is required for this project. New right of way is needed for revisions to existing 43rd Avenue ramps and for the stub-out for the TSMC access road near 43rd Avenue. This will ultimately need to be dedicated from TSMC who has purchased the property from the Arizona State Land Department. It is estimated 0.51 acres of new right of way will be required from TSMC for the stub-out, and possibly a temporary construction easement (TCE) to construct the access road stub-out. New right of way is needed on both sides of 43rd Avenue to address the FEMA floodplain with an estimated 0.12 acres from TSMC on the west and an estimated 0.16 acres from Arizona State Land Department on the east.

New right of way is required for the relocated 51st Avenue crossroad, the TSMC access road stub-out, revisions to ramps associated with the revised 51st Avenue location, and impacts to the drainage channels. This right of way will come from the Arizona State Land Department south of the SR 303L and from TSMC north of the SR 303L. An estimated 10.04 acres of new right of way is anticipated, with 5.65

acres dedicated from TSMC and 4.39 acres of easement from the Arizona State Land Department. TCE's are not anticipated at this location.

The following access control limits were requested by ADOT during the development of this Project Assessment and vary from the guidance provided in the 2021 ADOT RDG.

Access control requirements for the north and south legs 43rd Avenue are as follows:

- Entrance ramp side
 - 330 ft full access control
 - 930 ft right-in-right-out
 - 1,260 ft total
- Exit ramp side
 - 660 ft full access control
 - 600 ft right-in-right-out
 - 1,260 ft total

Access control for the south leg of 51st Avenue is as follows:

- Entrance ramp side
 - 330 ft full access control
 - 930 ft right-in-right-out
 - 1,260 ft total
- Exit ramp side
 - 660 ft full access control
 - 600 ft right-in-right-out
 - 1,260 ft total

Access control for the north leg of 51st Avenue is as follows:

- Entrance ramp side
 - 330 ft full access control
 - 603 ft right-in-right-out
 - 933 ft total
- Exit ramp side
 - 660 ft full access control
 - 273 ft right-in-right-out
 - 933 ft total

The final designer will coordinate with the TSMC site designer, City designer for 43rd Avenue, Arizona State Land Department, and City floodplain managers on the CLOMR/LOMR to address and revise the FEMA floodplain. If the information is not provided by City of Phoenix or TSMC, they will be responsible for preparing another CLOMR/LOMR for their floodplain impacts.

Any excavated material removed from Arizona State Trust Land must be permitted by Arizona State Land Department.

Continued and on-going coordination will be required with the Arizona State Land Department which will actively review draft and final versions of Section 404 jurisdictional delineation, nationwide permit documentation, the drainage report, and the CLOMR/LOMR.

APS is planning to relocate the existing 69 kV overhead transmission lines near the old 51st Avenue alignment to the west. Continued coordination will be required during final design. No other utility relocation is anticipated for this project. The extent of impacts to existing utilities should be further evaluated during the final design phase of the project.

Coordination with APS will be required during final design to provide power to the 51st Avenue and 43rd Avenue intersections and the ramp gore lighting at the TI's.

The City of Phoenix is planning a new sewer lift station at the northwest corner of the new 51st Avenue location. The associated sewer and accompanying water infrastructure improvements will cross both 51st and 43rd Avenues. Improvements are also anticipated north of and parallel to the SR 303L existing right of way and extend beyond I-17.

Development of the TSMC parcel may initiate new utilities in the area that will be constructed prior to bid advertisement of the project or may require construction of new utility facilities as part of this construction. Continued coordination of new utilities will be required. Sleeves for future utilities will need to be included and the final designer shall coordinate with utility agencies and the Arizona State Land Department to identify the needs and locations of sleeves.

It is anticipated that there will be involvement with critical outside agencies. These agencies include, but are not limited to, the Maricopa Association of Governments, the City of Phoenix, the Arizona State Land Department, the Federal Highway Administration, and the Federal Emergency Management Agency.

The project is located in a PM10 – Nonattainment area according to the ADEQ website.

Any striping removal will require representative testing for lead prior to construction, and removal of concrete will require testing for asbestos.

Construction staging areas are not anticipated as the contractor may use the SR 303L mainline area that is not constructed between the temporary connector ramps to the frontage road and I-17.

5. OTHER REQUIREMENTS

The project is not currently listed in the ADOT Five Year Transportation Facilities Program.

It is anticipated this project will be State of Arizona and federally funded.

The project has not been scheduled by PPMS.

The project will be consultant designed.

To have the 51st Avenue and 43rd Avenue TI's open to traffic by the end of Summer 2023, the construction schedule for those associated items will be less than one year. It is suggested the contract time be based on a calendar day completion and use quickstart special provisions. Compression of the

design schedule may be required if additional construction time is needed and will be evaluated during the consultant negotiation process. A+B bidding may be considered for this project to provide added schedule assurance for ADOT.

6. PRELIMINARY COST ESTIMATE

A preliminary cost estimate for the project based on current E2C2 data and the adjacent project currently under construction is presented in **Table 11: Preliminary Cost Estimate**.

The estimate reflects lower costs on several key items. Costs for materials and for the labor have fluctuated recently due to large construction projects in the Phoenix metropolitan area and are currently, generally, decreasing over their highs from a couple of years ago. If another large project(s) is scheduled the same time as this project, the costs will need to be reviewed and possibly revised.

The estimate does not account for A+B bidding.

Table 11: Preliminary Cost Estimate

Major Item Description	Costs
Clearing and Removals	\$741,100
Roadway Excavation & Drainage Excavation	\$935,600
Borrow	\$9,078,700
Furnish Water	\$344,000
Aggregate Base	\$715,200
PCCP (10" or 11")	\$7,190,200
AC Paving (5")	\$689,400
AR-ACFC (Frontage Roads)	\$102,000
Drainage System (Closed)	\$2,386,600
Concrete Channels	\$464,300
Reinforce Concrete Box Culverts	\$1,034,600
51 st Avenue Overpass (Lump Sum)	\$1,912,100
43 rd Avenue Overpass (Lump Sum)	\$1,912,100
Signing and Pavement Marking	\$1,143,100
Lighting and ITS	\$950,000
Traffic Signals	\$1,100,000
Seeding or Landscaping	\$533,300
Roadway Appurtenances (Curbs, Barriers, Guardrail Items, etc.)	\$1,882,900
Maintenance of Traffic	\$993,500
Mobilization (8%)	\$2,649,200
Erosion Control, Survey, Quality Control	\$1,159,100
Misc. Items	\$288,800
Unidentified Items (20%)	\$6,623,000
Roadway Construction Subtotal	\$ 44,828,800
Contingencies (5% of Construction Subtotal)	\$2,241,400
Construction Engineering (8% of Construction Subtotal)	\$3,586,300
Post Design (1% of Construction Subtotal)	\$448,300
Communications	\$30,000
Design	\$3,810,400
Utility Relocation	\$0
Right of Way	\$1,698,300
Project Subtotal	\$56,867,000
ICAP (9.90% of Project Subtotal)	\$5,607,300
Estimated Project Cost (With ICAP)	\$62,251,100

7. PROJECT SCHEDULE

The project schedule has been developed to meet the bid advertisement date in the first quarter of fiscal year 2023.

Table 12: Project Schedule presents the preliminary project schedule.

Table 12: Project Schedule

Task/ Milestone	Date
Initial Project Assessment	April 9, 2021
Final Project Assessment	April 30, 2021
01D Advertisement for Final Design	May 7, 2021
Proposals Due	June 4, 2021
Consultant Selection	July 2, 2021
Notice to Proceed	August 20, 2021
Design Kick-off Meeting	September 3, 2021
Stage II (30%) PSE Submittal	November 26, 2021
Value Engineering Study	December 2021
Stage III (60%) PS&E Submittal	February 4, 2022
Environmental Clearance	February 11, 2022
Stage IV (95%) PS&E Submittal	April 15, 2022
Utility and Railroad Clearance	May 13, 2022
Stage V (100%) PS&E Submittal	June 23, 2022
Right of Way Clearance	July 15, 2022
Bid Ready	July 22, 2022
Project Advertise	August 18, 2022
Bid Opening	September 9, 2022
Board Award	October 20, 2022
Start Construction	November 20, 2022
Open 51 st and 43 rd Avenue TI's to Traffic	September 22, 2023

8. ACTION REQUIRED

Action is required by the Priority Planning Advisory Committee (PPAC), Project Review Board (PRB), and Arizona State Transportation Board to program and fund the project.

9. SERVICE INVOLVEMENT

Please see **Table 13: Service Involvement Table** indicating the anticipated involvement of various ADOT groups and other project stakeholders for this project.

Table 13: Service Involvement Table

Field Review	Contacted	Service Involvement	Significant	Minimum	None	Unknown	Comments- Issues Which Make Involvement Significant Or Minimal
		Project Management Group	X				Consultant Design, ADOT PM is Tom O'Reilly (602) 712-2587, toreilly@azdot.gov
		Central District	X				Stage reviews and construction administration
		Right-of-Way	X				Right of way plans, obtain right of way, clearance letter
		Traffic Engineering	X				Stage reviews, report reviews
		Drainage Design	X				Stage reviews, report reviews, review CLOMR/LOMR
		Bridge/Structure Design	X				Stage reviews, report reviews
		Materials		X			Stage reviews, report reviews
		Pavement Design		X			Stage reviews, report reviews
		Geotechnical Services		X			Approve consultant Geotechnical Report
		Environmental Planning	X				Stage reviews, provide CE and clearance
		Roadway Design Section	X				Stage reviews
		Utility and Railroad	X				Stage reviews, clearance letter
		Engineering Survey Section			X		
		Roadside Development	X				Stage reviews, seeding specifications, landscaping plan review, aesthetics review
		Contracts and Specs	X				Stage reviews, advertise and bid project
		FHWA		X			Federal funding
		Arizona State Land Department		X			Visual requirements, new right of way easement south of SR 303L at 51 st Avenue and east of 43 rd Avenue, review of preliminary and final CLOMR/LOMR, stage reviews, review preliminary and final Section 404 documents
		City of Phoenix		X			Stage reviews, crossroads beyond ADOT right of way, floodplain at 43 rd Avenue, new utility infrastructure
		FEMA		X			Approve CLOMR/LOMR for floodplain at 43 rd Avenue