FINAL DESIGN CONCEPT REPORT

FOR

35TH AVENUE: I-10 TO CAMELBACK ROAD

City of Phoenix Project Number: ST89340634-1

FEBRUARY 2021

(REVISED AUGUST 2021)

Prepared For and Approved By:

Prepared By

T·Y·LIN INTERNATIONAL

Greenlight Traffic Engineering

FINAL DESIGN CONCEPT REPORT

FOR

35TH AVENUE: I-10 TO CAMELBACK ROAD

City of Phoenix Project Number: ST89340634-1

February 2021

Revised - August 2021

Prepared For and Approved by:

Prepared by:

T·Y·LIN INTERNATIONAL

and

Greenlight Traffic Engineering

Table of Contents

1.0 INTRODUCTION 1

1.1 Project Overview 1

1.2 Project Purpose and Need 1

1.3 Project Goals and Objectives 1

1.4 Study Area/Characteristics of the Corridor 1

1.5 Other Studies in the Area 1

1.6 Agency and Public Scoping 5

2.0 PROJECT DESCRIPTION 2

2.1 Project Location 2

2.2 Existing Conditions 2

2.3 Existing Improvements 3

2.4 Safety 4

3. PROJECT SCOPE 5

3.1 Temporary Traffic Control 5

4.0 PROPOSED SAFETY IMPROVEMENTS 5

4.1 Pedestrian Hybrid Beacons 5

4.2 Street Lighting 5

4.3 Pavement Treatment 6

4.4 Traffic Signal Intersection Improvements 6

4.5 Raised Medians 7

4.6 ITS/Fiber Optic Communications 7

4.7 Green Wave Dynamic Message Speed Signs 7

5.0 UTILITY IMPACTS 8

5.1 Existing Utilities 8

5.2 Identified Locations of Possible Conflicts 8

5.3 Mitigation Alternatives 9

6.0 RIGHT OF WAY IMPACTS 10

6.1 Existing Right of Way 10

6.2 Identified Locations of Right of Way Impacts 10

7.0 INNOVATION AND PARTNERSHIPS 10

7.1 Existing and Emerging Traffic Signal Technology and Vendors 10

7.1.1 3rd Party Big Data and Analytics 10

7.1.2 Automated Traffic Signal Performance Measures 11

7.1.3 Traffic Responsive Plan Selection 11

7.1.4 Adaptive Traffic Signal Control 11

7.1.5 Vehicle to Everything Devices 12

7.1.6 Green Wave Audi Traffic Light Information System 12

7.2 Open Source Technology 12

7.3 Transit Signal Priority 13

7.4 Maintenance and Operations Challenges 13

7.5 Project Support 13

8.0 COORDINATION WITH CITY STAFF 13

8.1 Pedestrian and Bicycle Mobility 13

9.0 COORDINATION WITH PROJECT STAKEHOLDERS 13

9.1 ADOT/MAG Involvement 13

9.2 Innovation and Partnerships 14

9.3 Project Support 14

10.0 PUBLIC MEETINGS 14

11.0 BUILD GRANT PERFORMANCE CRITERIA 14

12.0 PRELIMINARY PROJECT SCHEDULE 15

13.0 PRELIMINARY OPINION OF PROBABLE COST AND PROGRAMMING ESTIMATES 15

14.0 APPLICABLE DESIGN CRITERIA 16

15.0 SOCIAL, ECONOMIC, AND ENVIRONMENTAL COMPONENTS 17

16.0 PROJECT CONTACTS 19

List of Appendices

Appendix A – Site Photo Log

Appendix B – 15% Conceptual Plans

Appendix C – Preliminary Opinion of Probable Cost

Appendix D – Programming Schedule

Appendix E – Meeting Minutes

Appendix F – Letters of Support

Appendix G – Utility Conflict Reviews

Appendix H – Draft DCR Review Comments

Appendix I – Public Involvement Plan

Appendix J – City of Phoenix Comments

1.0 INTRODUCTION

1.1 Project Overview

The City of Phoenix (City) Project No. ST89340634-1, 35th Avenue: I-10 to Camelback Road project is evaluating safety improvements along 35th Avenue from Interstate 10 (I-10) to Camelback Road. The project will further develop the improvements identified in the 35th Avenue Safety Corridor Project Build Grant Application and enable the City to plan the project more accurately with respect to scope, schedule and budget, obtain funding and advance to the final design and construction phases.

1.2 Project Purpose and Need

The primary purpose for this Design Concept Report (DCR) is to evaluate safety improvements that target current pedestrian and vehicular concerns along 35th Avenue and determine the impacts associated with the improvements. This will enable the City to obtain funding and program the project for final design and construction as well as identify anticipated operations and maintenance costs. The proposed safety improvements to be assessed include three pedestrian hybrid beacons, new raised concrete medians, upgrading signal equipment at nine signalized intersections, installation of LED street lighting along the west side of 35th Avenue, pavement rehabilitation utilizing mill and overlay between McDowell Road and Camelback Road, installation of broadband fiber optic cable, installation of six green wave signs and updating signal programming to optimize efficiency.

The project has been selected to receive funding through the Better Utilizing Investments to Leverage Development or BUILD Grant funds.

1.3 Project Goals and Objectives

The primary goal of this DCR is to provide the City with recommended safety improvements to address transportation challenges along the corridor to create a safe and efficient facility for all modes. The DCR will identify the preferred locations for the enhancements identified in the BUILD Grant and determine the associated impacts to utilities, right-of-way, environmental considerations, and life cycle operations and maintenance costs.

1.4 Study Area/Characteristics of the Corridor

The project is located in west Phoenix, within the Phoenix Mesa Urbanized Area and serves the nation's 5th most populated city and 3rd fastest growing economy. The project spans 3.2 miles along 35th Avenue between I-10 and Camelback Road. 35th Avenue is classified as a major arterial roadway and is an alternate route to Interstate 17 (I-17), the primary north-south high-capacity freeway within Phoenix, and regularly brings significant commuter travel through the corridor.

There are several schools in the project vicinity located on both sides of 35th Avenue. There are also a mix of residential developments and businesses located on both sides of 35th Avenue. This presents many opportunities where high volumes of pedestrian traffic crosses 35th Avenue to access schools, businesses, and residences.

The adjacent area has a diverse population, with over 88% of the neighboring population identified as part of a minority population. 35th Avenue serves many people through various modes of transportation, including one of the highest ridership bus routes in Phoenix which serves 5,200 daily riders. The City has identified this corridor as a potential route for Bus Rapid Transit (BRT).

1.5 Other Studies in the Area

US 60 (Grand Avenue), 35th Avenue, & Indian School Road Intersection Design Concept Report – June 2021.
The ADOT DCR is currently at the Tier 2B stage of the alternative evaluation process. Below is an outline of the process along with graphics showing the three Tier 2B Concepts being evaluated. Current information on this project can be found here: https://azdot.gov/planning/transportation-studies/grand-35-study

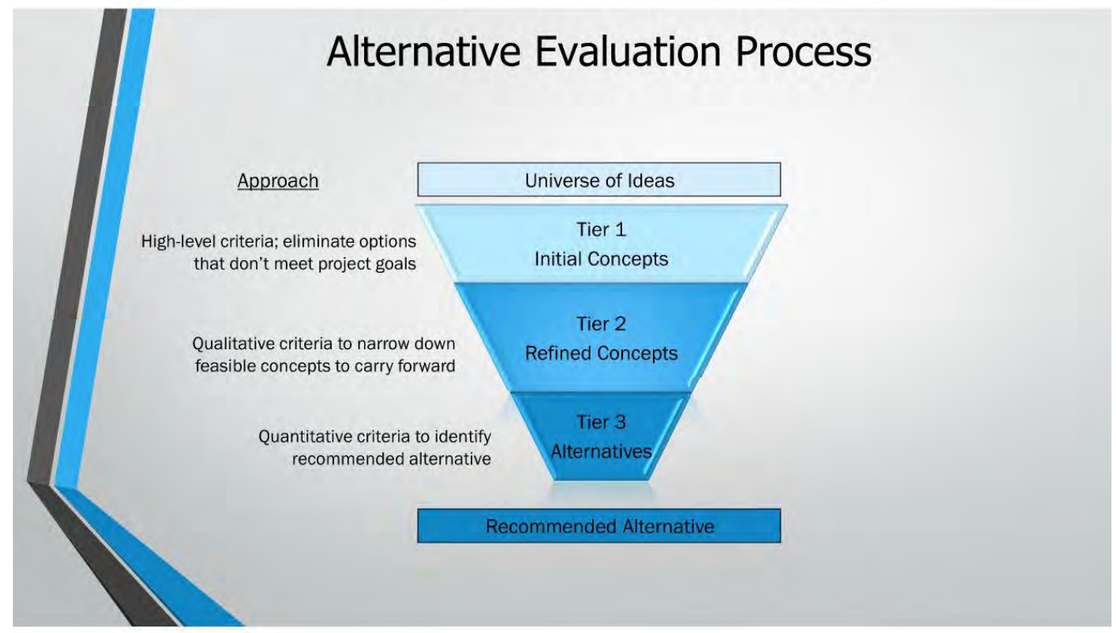


Figure 2 – Concept A

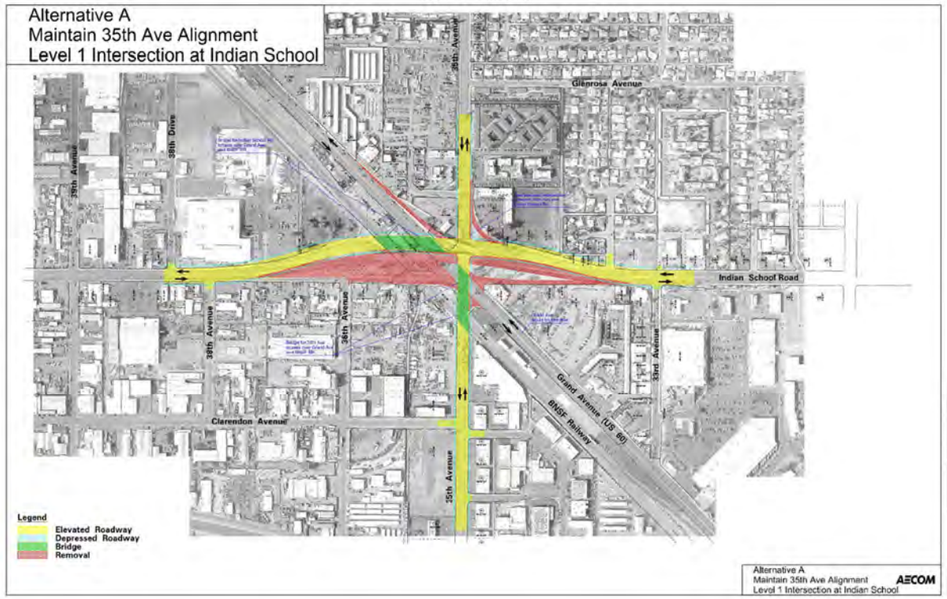


Figure 3 – Concept E

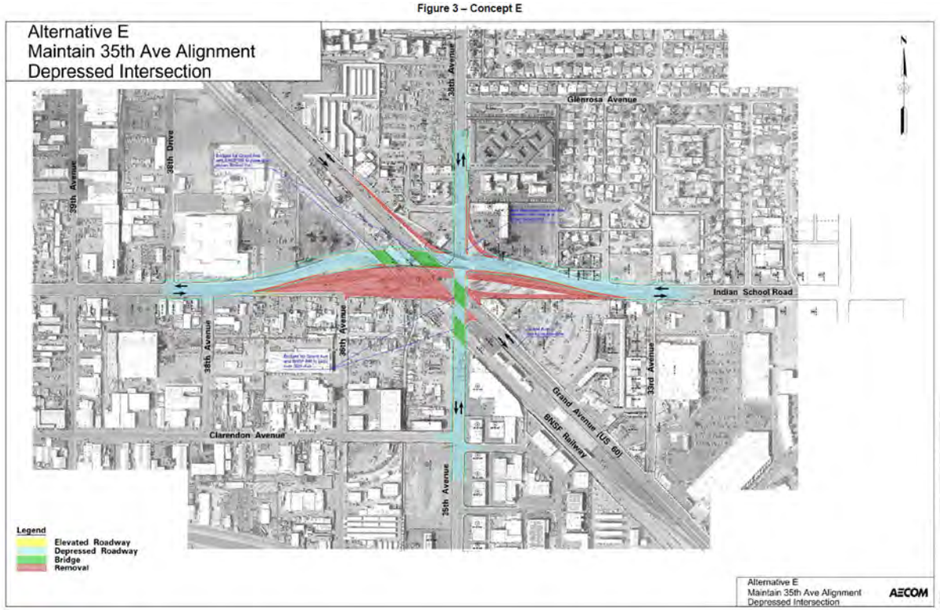
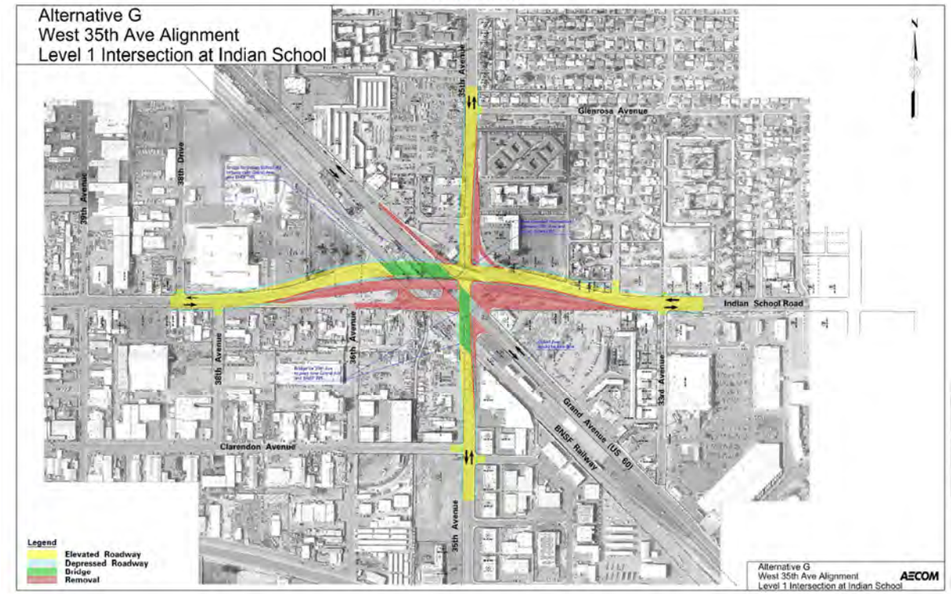
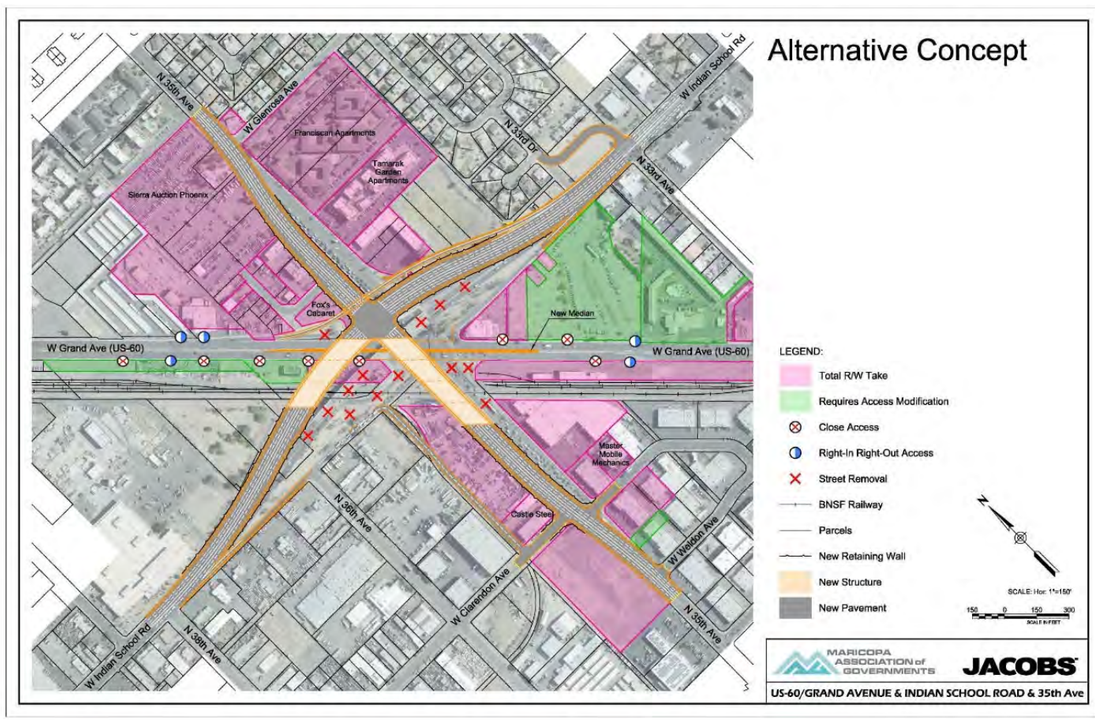


Figure 4 – Concept G



Grand Avenue/35th Avenue/Indian School Road Intersection Concept Design Review and Cost Estimate – December 2018. The Maricopa Association of Governments (MAG) prepared a study to analyze the COMPASS recommended design concept at the intersection of Grand Avenue, 35th Avenue and Indian School Road intersection. The purpose of this study is to propose any potential changes or functional enhancements and estimate the total development costs. The results of this study indicate that the grade separation concept is feasible and can be implemented with an estimated probable cost of $155M (2018 dollars). An alternative alignment was also developed as part of this study to reduce the project costs to $143M (2018 dollars).



City of Phoenix Bus Rapid Transit Study – May 2021. At the direction of Phoenix's Citizens Transportation Commission and City Council (CTC), the first effort of the BRT program is to reevaluate the corridors in the T2050 plan and identify other potential corridors for consideration.

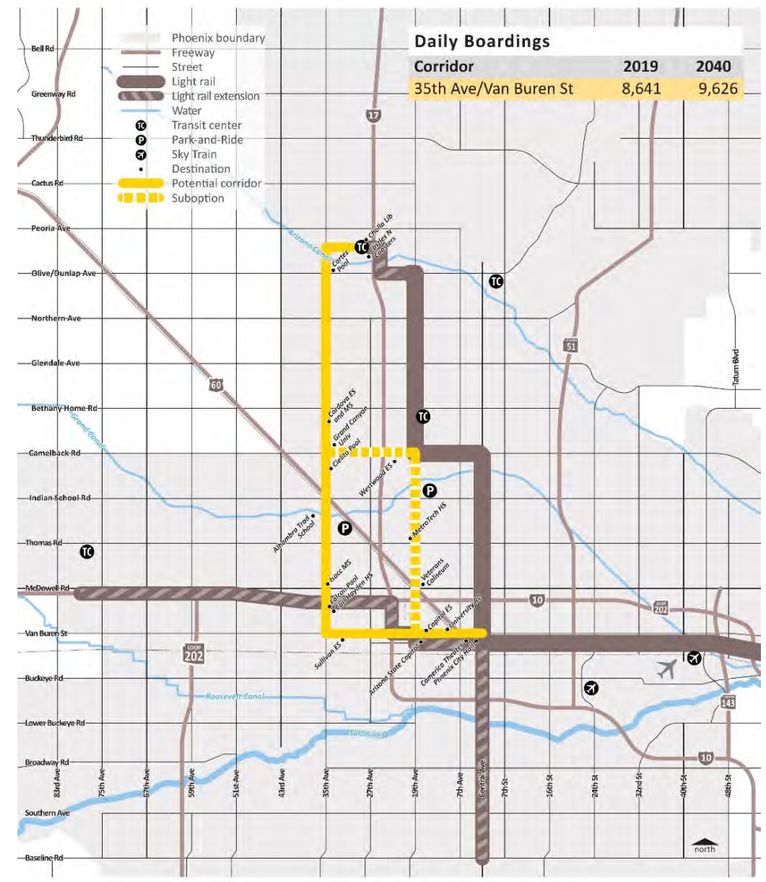
Utilizing recent data, this evaluation considered many factors including demographic and socioeconomic data, transit performance and forecasted ridership.

The outcome yielded the following six potential candidates for Phoenix BRT corridors.

- Camelback Road and 24th Street
- Indian School Road and 24th Street
- Thomas Road and 44th Street
- McDowell Road and 44th Street
- 19th Avenue and Van Buren Street
- 35th Avenue and Van Buren Street

The City successfully conducted the community education and engagement outreach between February and December 2020. A Community Engagement Summary was prepared which details the efforts as well as the feedback the City received from the public. The BRT design team presented the final recommendation to the Citizens Transportation Commission (CTC) on May 27, 2021. The Public Transit Department requested the CTC recommend City Council approval of an initial Bus Rapid Transit corridor of 35th Avenue/Van Buren Street, which passed with a unanimous vote (11-0). The next steps include refining the program schedule, begin corridor planning (both operations and capital), establish corridor specific outreach, and identify a funding plan.

There is a strong preference to utilize dedicated lanes for the BRT route. This should be coordinated during final design of this project. The final design phases for 35th Avenue and final design for the 35th Ave/Van Buren Street BRT route will overlap which allow for coordination between the two projects. Please contact Sara Kotecki at Sara.Kotecki@phoenix.gov or 602.256.3531. Current information on this project can be found here: https://www.phoenix.gov/publictransit/brt



PHX T2050 35th Avenue/Van Buren Street

Capitol/I-10 West Light Rail Extension: The Environmental Assessment (EA) for the project is being drafted, which includes a detailed analysis of how light rail would operate along the route. Early design work, including identifying station locations is also expected to begin during this phase. Valley Metro and the city of Phoenix will continue to reach out to the community for public input throughout the project. Following approval of the Environmental Assessment, Valley Metro and the city of Phoenix will be eligible to compete for additional federal funding. Those funds could be used for the design, construction, and operation of Phase I of the project and provide opportunities to accelerate the Phase II schedule. Phase I (from downtown Phoenix to the Capitol area) is anticipated to be complete in 2024 as part of the first wave of extensions in the Transportation 2050 (T2050) program, setting the stage and momentum to complete Phase II by 2030. Learn more about T2050 here. Contact: Victoria Bray, Community Outreach Coordinator at (602) 495-8284 or vbray@valleymetro.org. Current information on this project can be found here: https://www.valleymetro.org/project/capitol-extension

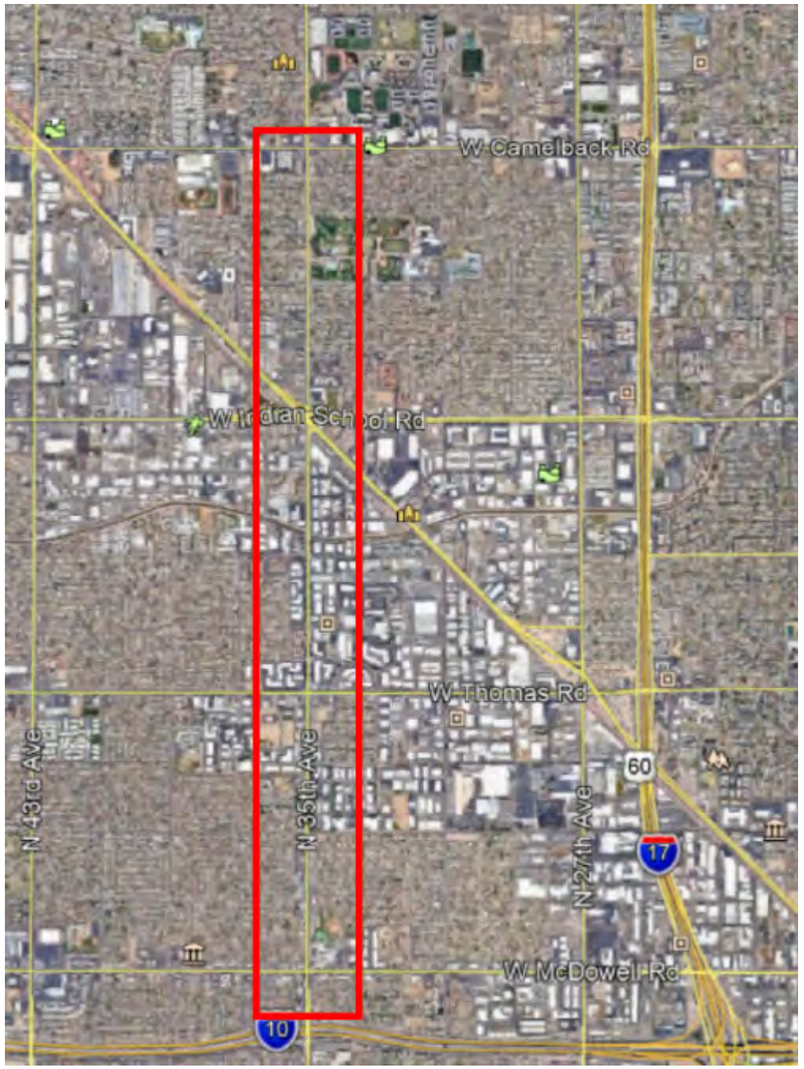
1.6 Agency and Public Scoping

The Public Scoping plan for the project has been produced throughout the development of the DCR. A copy of the plan is included in Appendix I.

2.0 PROJECT DESCRIPTION

2.1 Project Location

The project spans 3.2 miles along 35th Avenue, the southern project limit is I-10 and the northern project limit is Camelback Road.



Project Location

2.2 Existing Conditions

35th Avenue is classified as a major arterial roadway. The existing roadway configuration along 35th Avenue includes 3 northbound lanes, 2 southbound travel lanes and a two-way left turn lane which becomes a dedicated left turn lane at intersections. There are no bike lanes present within the project limits. Curb and gutter exist on the outside shoulders with attached sidewalk of varying width throughout the corridor. See image of 35th Avenue looking to the north shown below. Generally, the roadway is 64 foot wide throughout the project limits from face of curb to face of curb. The outside travel lanes are 12-foot-wide, and the remaining interior lanes are 10-foot-wide.

The posted speed limit along 35th Avenue throughout most of the corridor is 40 MPH. The portion from I-10 to approximately 0.6 miles north of McDowell Road has a posted speed limit of 35 MPH in the vicinity of Isaac Middle School.

During the development of the DCR the team performed a site visit to review existing conditions. The vast majority of existing sidewalk ramps throughout the corridor have been upgraded to meet the Americans with Disabilities Act (ADA). The sidewalk ramps in the southern portion of the project, south of Indian School Road were rehabilitated in 2010. The ramps in the northern portion, north of Indian School Road were rehabilitated in 2019. See image on the following page.

During the site visit some heaving or severe cracking was observed on several sidewalk panel locations. It could be considered to replace these isolated panels to ensure the vertical lip meets ADA requirements and provides a smooth traversable surface at the joints.

There are an extensive number of driveways throughout the corridor that provide access to businesses and residents. Some of these driveways lead to nowhere as new features have been constructed such as walls or chain link fences. Nearly all these driveways do not meet ADA requirements. See the image on the right which illustrates several existing residential driveways along 35th Avenue.

2.3 Existing Improvements

The existing right-of-way width varies throughout the corridor. The City provided quarter section maps were used to layout the existing right of way from the section line established from the aerial imagery. Below is a table showing the general right of way widths left and right of the section line throughout the project limits.

Beginning Street Name	Ending Street Name	Existing ROW Left (Ft)	Existing ROW Right (Ft)
I-10	McDowell Rd	50	40
McDowell Rd	Palm Lane	44	33
Palm Lane	Roanoke Ave	40	40
Roanoke Ave	Thomas Rd	50-60	40
Thomas Rd	Indian School Rd	40	40
Indian School Rd	Campbell Ave	40	40
Campbell Ave	Hazelwood St	65	40
Hazelwood St	Elm St	40	40
Elm St	Mariposa St	70	40
Mariposa St	Camelback Rd	42	42

Utility mapping was provided by the City at the project inception. These maps were referenced to develop a CAD utility base map for the project. The utility base map is shown on the DCR plans as part of this project. The utility mapping provided by facility owners varies in quality, some maps include dimensions to the utility while others are more schematic and only show graphical representation. The CAD utility base map attempts to reconcile the information contained in the utility owner mapping with the aerial imagery overlay that indicates certain topographic features. Combining the information in the utility mapping provided by facility

owners with the aerial results in quality level C for underground facilities as defined by the American Society of Civil Engineers (ASCE) Subsurface Utility Engineering Guidelines, ASCE 38-02.

The following table is a list of existing utility companies with facilities located within the project area.

Utility Company	Type	Description
APS	Electric	Overhead and Underground
CenturyLink	Communications	UG and OH
City of Phoenix	Storm Drain	Underground Pipe
City of Phoenix	Water	Underground Pipe
City of Phoenix	Sewer	Underground Pipe
City of Phoenix	Communications	UG Conduit
Cox	Communications	UG and OH
SRP	Irrigation	Underground pipe
SRP	Electric	UG and OH
Southwest Gas	Gas	6” and smaller UG

2.4 Safety

Every year, the City of Phoenix obtains raw crash data from the Arizona Department of Transportation’s (ADOT) *Arizona Crash Information System* (ACIS) database. This database is developed from information entered on the standard Arizona Crash Report form by law enforcement officers responding to each crash incident. Upon receiving the date from ADOT, City staff perform a series of post-processing routines to scrub the data. The scrubbing process includes:

- Removal on non-City related crashes;
- Cataloging intersection related crashes;
- Identifying pedestrian and bicycle crashes;
- Capturing violations and crash characteristics; and
- Determining the City-specific crash metrics

Crashes do not include those that occurred on freeways, highways, interstate ramps, and other ADOT maintained facilities. Crashes that occurred within unincorporated Maricopa county land were also excluded from the safety assessment.

Between 2014 and 2018 there have been 40 pedestrian-involved crashes resulting in 7 fatalities and 11 serious injuries within the project corridor. Of these crashes, 26 occurred while the person was crossing the street, 26 occurred during dark hours and 20 occurred when the person crossed at an unmarked location.

The 35th Avenue Project is expected to reduce the frequency and severity of crashes along the corridor through the targeted implementation of safety countermeasures at high incident locations. The planned countermeasures are expected to prevent 567 property damage only crashes and 260 injury or fatality crashes over a 20-year period.

Within just 5 years after construction, crashes within the corridor are expected to be reduced by 12%. This equates to $4.88 million in societal costs that benefit the City and its residents.

35th Avenue traffic safety elements and countermeasures include:

- 9 traffic signal rebuilds that will use flashing yellow left-turn operation
- 3 new pedestrian hybrid beacons (PHBs) to provide additional controlled pedestrian crossing locations
- New street lighting to improve roadway light levels and uniformity
- Median islands for pedestrian refuge
- Improved pavement conditions

3. PROJECT SCOPE

The project includes construction of the following safety enhancements along 35th Avenue. Installation of 3 Pedestrian Hybrid Beacons along 35th Avenue near the Grand Canal, Glenrosa Avenue and near Cielito Park to increase mid-block pedestrian crossing opportunities. LED Street light installation along the west side of 35th Avenue which completes the dual-sided lighting throughout the corridor and increases the roadway conspicuity and public safety. Perform pavement rehabilitation from I-10 to Camelback Rd. Rebuild 9 signalized intersections to modern standards that are compatible with new traffic technologies. Construction of raised concrete medians at various locations to provide greater vehicle separation and pedestrian refuge locations without restricting existing traffic movements. Installation of broadband fiber optic cable to improve the corridor's capacity for safety data sharing and allow for efficiency of autonomous and innovative technology integration. Update signal programming to improve roadway efficiency utilizing Green Wave technology.

3.1 Temporary Traffic Control

Appropriate design and maintenance of temporary traffic control (TTC) during construction activities is critical to providing a safe and efficient work zone. In addition, access to residences, businesses, schools, transit facilities, and other services will need to be maintained for the duration of project construction.

Although development of TTC plans will not occur during preliminary and final design stages, contractor TTC shall conform with the following documents:

- Arizona Supplement to the 2009 Manual on Uniform Traffic Control Devices (MUTCD), and latest revisions
- City of Phoenix Traffic Barricade Manual, 9th Edition (2017)

Potential traffic control setups for the anticipated work include:

- 1-lane inside or outside closures
- Mobile striping setup
- Off duty enforcement point control

4.0 PROPOSED SAFETY IMPROVEMENTS

4.1 Pedestrian Hybrid Beacons

Pedestrian hybrid beacons (PHBs) exist at the following 35th Avenue corridor locations:

1. 35th Avenue/Palm Lane
2. 35th Avenue/Monterosa Street

To enhance mobility and safety, new PHBs will be constructed at the following 35th Avenue locations:

1. 35th Avenue/Grand Canal North (Midblock)
2. 35th Avenue/Cielito Park (260 feet south of Elm Street Midblock)
3. 35th Avenue/Glenrosa Avenue (Midblock)

4.2 Street Lighting

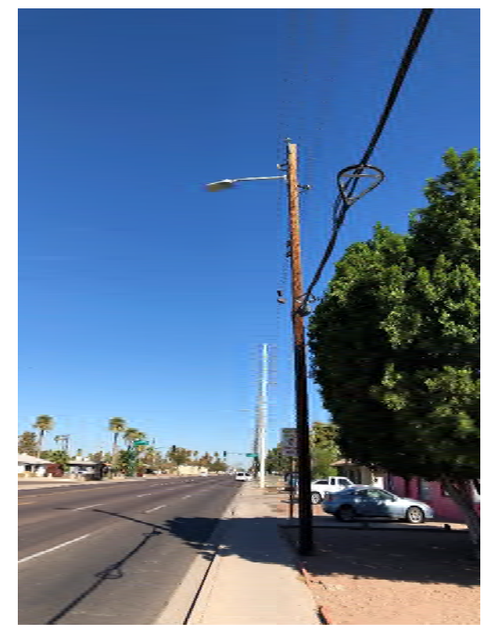
Street lights that use LED luminaires currently exists on both sides of 35th Avenue; however, lights are more predominant on the east side. There is a mix of electric pole-mounted luminaire mast arms, as well as standalone street light poles. All street lights are powered by overhead electric feeder wires.

New lighting is generally located on the west side of the road, as most of the existing lighting is on the east side of the road. To maintain the City's standard 200-foot staggard spacing and appropriate light level uniformity, several existing lights attached to electric poles have been identified for removal.

Generally, right-of-way is constrained at the back of the sidewalk. Available easements may need to be investigated for pole placement.

During final design, a photometric analysis should be performed to ensure the target level of light is attained throughout the corridor and the existing lighting along the east side meets the project needs.

See the image of the existing undermount lighting on the east side of 35th Avenue.



4.3 Pavement Treatment

The existing pavement within the corridor is showing signs of fatigue and deterioration. It is recommended to rehabilitate the pavement within the project limits with the project to improve the corridor's state of good repair and reduce future maintenance needs. Below are 2 images illustrating the existing pavement conditions.

A one-inch mill and overlay is assumed to estimate costs during the DCR stage. During final design a thorough Pavement Design Report and Materials Design Report should be completed by the final design Consultant to determine the pavement rehabilitation measures. Hot in place recycled (HIPR) asphalt could be considered to perform the pavement rehabilitation. HIPR is a more environmentally friendly method to rehabilitate pavement as the existing asphalt material is recycled and reused. Caution should be exercised in utilization of HIPR because areas where existing pavement has severely degraded (crack greater than one half inch) may require full depth repairs and would not be remedied with HIPR.

Where the medians are being installed a two-foot sawcut will be made from the face of proposed curb, the asphalt will be removed, and full depth replacement will be constructed after the curb is placed. For cost estimating purposes, six inches of asphalt over eight inches of aggregate base is assumed. The asphalt within the new medians will be removed to allow the area to drain.

The table to the right shows pavement condition data and International Roughness Index (IRI) from 2019.

Street	From	To	IRI	PCI	PCI Date
35 AVE	PAPAGO FRWY	MCDOWELL RD	384	57	2019-01-14
35 AVE	MCDOWELL RD	PAPAGO FRWY	469	46	2019-01-23
35 AVE	MCDOWELL RD	ENCANTO BLVD	149	71	2019-01-14
35 AVE	ENCANTO BLVD	MCDOWELL RD	247	60	2019-01-23
35 AVE	ENCANTO BLVD	THOMAS RD	166	62	2019-01-14
35 AVE	THOMAS RD	ENCANTO BLVD	185	62	2019-01-23
35 AVE	THOMAS RD	OSBORN RD	204	72	2019-01-14
35 AVE	OSBORN RD	THOMAS RD	213	62	2019-01-23
35 AVE	OSBORN RD	INDIAN SCHOOL RD	214	72	2019-01-14
35 AVE	INDIAN SCHOOL RD	OSBORN RD	261	56	2019-01-23
35 AVE	INDIAN SCHOOL RD	CAMPBELL AVE	213	55	2019-01-14
35 AVE	CAMPBELL AVE	INDIAN SCHOOL RD	351	47	2019-01-23
35 AVE	CAMPBELL AVE	CAMELBACK RD	169	58	2019-01-14
35 AVE	CAMELBACK RD	CAMPBELL AVE	329	47	2019-01-23

4.4 Traffic Signal Intersection Improvements

Existing traffic signals along the 35th Avenue corridor will be rebuilt to increase mobility, meet applicable compliance standards, and modernize intersection control.

Applicable traffic signal and mobility standards include:

- Pole and mast arm equipment that complies with the latest American Association of State Highway Transportation Officials (AASHTO) Load and Resistance Factor Design (LRFD) Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, and latest revisions.
- Pedestrian push button (PPB) equipment, PPB location, and ramp modifications that complies with Americans with Disabilities Act (ADA) requirements.
- Yellow clearance, all red clearance and pedestrian walk/don't walk timing that meets the latest ITE recommended practices.

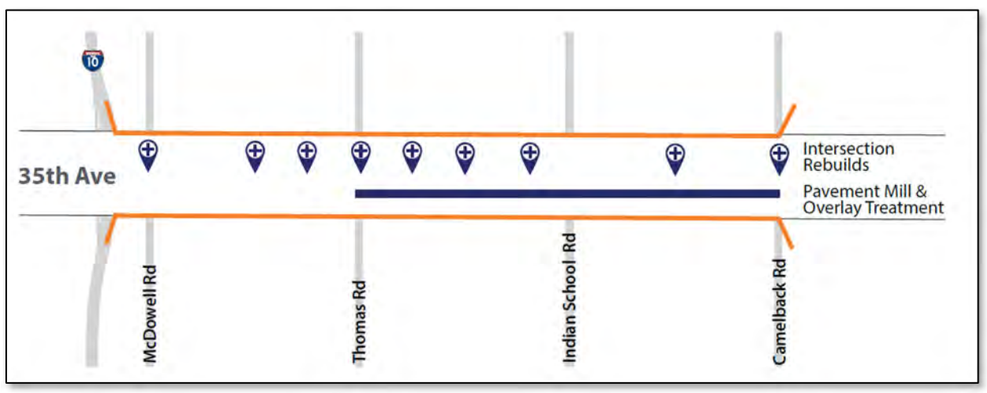
Potential modernizations include:

- New control equipment that will enable modern and future Intelligent Transportation Systems (ITS) applications.

Traffic signals that will be rebuilt include:

1. 35th Avenue/McDowell Road (4-Leg)
2. 35th Avenue/Encanto Boulevard (4-Leg)
3. 35th Avenue/Virginia Avenue (3-Leg)
4. 35th Avenue/Thomas Road (4-Leg)
5. 35th Avenue/Earll Drive (4-Leg)
6. 35th Avenue/Osborn Road (4-Leg)
7. 35th Avenue/Clarendon Avenue (3-Leg)
8. 35th Avenue/Campbell Avenue (4-Leg)
9. 35th Avenue/Camelback Road (4-Leg)

35th Avenue Traffic Signal Rebuild Locations



4.5 Raised Medians

The Build Grant Application indicated 19 locations where raised medians be installed. Each of these locations has been reviewed during the DCR development and the design has been refined to minimize impacts to adjacent business and local street access. Depending on which design criteria is utilized will drive the number and size of raised medians that can be constructed. For the Draft DCR stage two alternatives were used to develop the median layouts and solicit input from the team.

One alternative assumed the left turn lane at crossroad locations meet criteria outlined in Section 3.1 of The City of Phoenix Street and Planning Guidelines is utilized. The guideline stipulates that 250-foot length be provided, comprised of 100 foot from the curb return of the crossroad and 150-foot deceleration taper.

The second alternative assumed 100 foot is provided from the curb return of the crossroad for vehicles to make left turns at crossroad locations. The second alternative allows more median to be implemented. In both alternatives, avoiding impacts to adjacent side streets and businesses was a primary objective.

During the development of the Final DCR the team discussed the two design options for laying out the medians, see Appendix E for detailed Meeting Minutes. The team decided it was best to utilize the second alternative which allows approximately 100 foot from the curb return for vehicles to make left turns. The team noted that if the left turn services a larger development or higher volumes of traffic then the 100-foot opening could be extended based on engineering judgement.

Further, raised medians should be given careful consideration, the City has stated this portion of 35th Avenue could potentially become a bus rapid transit (BRT) route. Discussions with the BRT team indicate 35th Avenue as a leading candidate. In addition, dedicated BRT lanes may be desirable which would require additional curbs to be constructed within the existing 64 foot wide 35th Avenue.

Median widths are designed to be 8 foot wide. This provides 1 foot of shy from the adjacent existing lane line to the face of curb. Standard bull nose and median treatments should be constructed at the beginning and end of each median treatment.

Some other options for the center two way turn lane that could be considered include pavement treatments such as asphalt stamped texture or addition of color surface treatments to help delineate the areas upstream or downstream of the new medians and introduce a level of friction to encourage drivers to slow down in the corridor.

The median aesthetic treatment should be considered during final design. The medians could be hardscaped to minimize maintenance costs or they could be landscaped to provide a different feel throughout the corridor.

4.6 ITS/Fiber Optic Communications

New conduit (2-1.25”), pull boxes, vaults, and 144-strand single mode fiber optic (SMFO) will be installed from McDowell Road to Camelback Road. Conduit was generally located on the west side of 35th Avenue to avoid utility conflicts and minimize the number of roadway crossings. 12-strand SMFO will be used to connect individual traffic signal cabinets to the fiber trunk line.

Connections to existing fiber infrastructure will be made at the following locations:

- NE Corner of 35th Avenue and McDowell Road
- NE Corner of 35th Avenue and Indian School Road

4.7 Green Wave Dynamic Message Speed Signs

Six Green Wave Dynamic Message Speed Signs will be installed along 35th Avenue from I-10 to Camelback Road. These signs will provide information to drivers that indicate the appropriate travel speed needed to avoid red lights based on ambient, real-time traffic flows. This technology will use connected vehicle information (V2I) and other potential sensor data to broadcast dynamically adjusted speeds to all motorists. This technology will provide motorists without V2I-equipped vehicles essential information to efficiently travel through the corridor. The new signing promotes reliability through the corridor and allows more continuous flow of traffic.

5.0 UTILITY IMPACTS

5.1 Existing Utilities

There are large amounts of existing utilities within the 35th Avenue corridor. These facilities include underground and overhead electric, irrigation, water, sewer, storm drain, gas, and communications.

In general, APS electric runs along the east side of 35th Avenue between I-10 and Indian School Road. South of Thomas Road these facilities are generally overhead and run immediately behind the sidewalk near the existing right of way line. Between Thomas Road and Osborn Road theses APS electric facilities are underground. Between Osborn Road and Indian School Road they are overhead along the back of sidewalk. There are no APS electric facilities between Indian School Road and Camelback Road

SRP electric generally runs along the west side of 35th Avenue between I-10 and Indian School. South of Thomas Road these facilities are overhead and run immediately behind the sidewalk near the existing right of way line. Between Thomas Road and Osborn Road these SRP electric facilities are underground. Between Osborn Road and Indian School Road the electric facilities are located overhead. To the north of Indian School Road, the SRP electric is located along the east side of 35th Avenue and are overhead from Indian School Road to Campbell Avenue. Between Campbell Avenue and Hazelwood Street where SRP's Valencia substation is located, these power facilities are both underground and overhead. There is a short run of 69kV overhead from Campbell Avenue to the Valencia substation. Between the substation and Camelback Road SRP's electric facilities are overhead and run along the east side of 35th Avenue.

SRP irrigation appears to run through a large portion of the project limits near the west sidewalk of 35th Avenue. Several irrigation structures exist behind the sidewalk on the west side of 35th Avenue.

There is existing lighting throughout the project limits along the east side of 35th Avenue. Where overhead power exists, the lights are typically installed on the power pole and underbuilt. Where underground power exists, direct bury light poles are present.

Southwest Gas owns and operates underground gas lines throughout the project limits. These facilities vary in size from 1 1/4-inch laterals to 6-inch steel underground lines. From I-10 to the Grand Canal the existing gas line main is generally near the east gutter lip of 35th Avenue. Between the Grand Canal and Camelback Road, the existing gas line main is generally near the west gutter lip of 35th Avenue. Numerous laterals tee off these mains to distribute gas to residents and businesses in the area.

City of Phoenix water exists throughout the project limits. Generally, the main runs in the 35th Avenue pavement and is less than 18 inches. Laterals tee off the main to deliver water to area residents and businesses. In addition, there is a large 48-inch PCCP water line located near the section line under the 35th Avenue pavement, this facility runs through the project limits.

City of Phoenix sewer exists throughout the project limits. The sewer main is generally located under the existing pavement on the east side of the section line within 35th Avenue. Sewer laterals tee off the main to service adjacent residents and businesses.

CenturyLink and Cox own existing communication facilities throughout the project limits. See Appendix G for the utility conflict reviews received.

5.2 Identified Locations of Possible Conflicts

Below is a general description of possible utility conflicts identified at this stage. These potential conflicts are highlighted with callouts in the 15% Conceptual Plans in Appendix B.

Overhead power runs throughout the corridor along the back of sidewalk. This creates numerous potential conflicts with the proposed lighting as well as with several of the proposed traffic signals, see below the overhead facilities attached to the existing signal pole.

Existing SRP irrigation is in the vicinity of the sidewalk along the west side of 35th Avenue. These facilities may conflict with some of the proposed light poles, see below approximate location of SRP irrigation.

Between Thomas Road and Osborn Road proposed lighting conflicts with large trees along the west side behind the sidewalk, see photo below showing these large trees.

Existing 48-inch storm drain along the west side of 35th Avenue near Earll Drive is near the proposed traffic signal foundations on both the north and south side. In addition, there is a 36-inch storm drain that may conflict with the proposed traffic signals at the southeast corner of 35th Avenue and Thomas Road.

The new ITS conduit creates possible conflicts with numerous water, sewer, underground electric, communications and gas laterals that tee of the mains and service adjacent residents and businesses.

Several of the proposed medians are located over existing water lines. Depending on the depth of excavation, the median curb and pavement construction could potentially conflict with the water lines.

5.3 Mitigation Alternatives

Mitigation measures to avoid lighting conflicts with the overhead power lines throughout the corridor include utilizing a combination of strategies. One strategy could be to utilize giraffe style light poles that

allow the mast arm and luminaire to avoid the overhead power. Another strategy could be to adjust the location of the lighting to avoid these facilities. As long as the slight adjustment did not have adverse effects on the light output.

If conflicts with the SRP irrigation are confirmed, the location of the lighting could be adjusted to avoid the irrigation. The light could potentially be offset slightly to avoid the irrigation facilities or shifted to the north or south slightly.

The large trees observed between Thomas Road and Osborn Road as well as a few other isolated locations should be trimmed or removed to mitigate the conflict with the proposed lighting. The lighting location could also be shifted slightly to minimize impacts to the existing vegetation.

Once the location of the storm drain is confirmed the signal design at Earll Drive and Thomas Road could be evaluated to determine if slight location adjustments would mitigate these potential conflicts.

The new ITS conduit could be installed in a manner that avoids the existing utilities throughout the corridor. Where open trench construction is not practical, the conduit should be installed with directional boring.

The medians are not anticipated to propose any utility conflicts; however, the utilities located beneath these locations should be potholed to confirm. Depending on the geotechnical design, the excavation should be around 2 foot in depth. The existing utilities are anticipated to be greater than 2 foot deep.

6.0 RIGHT OF WAY IMPACTS

6.1 Existing Right of Way

The existing right of way is limited and generally is at the back of existing sidewalk on both the east and west sides of 35th Avenue. At the major intersections the existing right of way flares out to accommodate the existing turning lanes and bus bays.

6.2 Identified Locations of Right of Way Impacts

The limited availability of existing right of way imposes constrained areas where new signal poles or new lights may encroach outside the available right of way. These areas include the following locations along 35th Avenue:

- Southwest corner of McDowell Road
- Northeast corner of McDowell Road
- Northeast corner of Encanto Boulevard
- Southwest corner of Lewis Avenue
- West side at Virginia Avenue
- Southeast corner of Virginia Avenue
- Northeast corner of Virginia Avenue
- Northeast corner of Thomas Road
- West side between Turney Avenue and Campbell Avenue
- Northeast corner of Camelback Road

In addition, there are several locations throughout the corridor where right of way is constrained near proposed street light locations. These locations are shown on the Conceptual Plans in Appendix B.

7.0 INNOVATION AND PARTNERSHIPS

The City would like to position the 35th Avenue corridor to take advantage of the latest advances in traffic signal technologies. This includes installing equipment that will enable advanced traffic signal management applications, as well as “vehicle to everything” (V2X) functionality for connected and automated vehicles (CAV). The following sections provide background on the various technologies, from most to least mature. It should be noted that traffic signal technology hardware and software is currently making rapid advances. Research and development by both private and public organizations will continue to drive innovation in the transportation space. The following information represents some of the more recent information gathered at the time this study was prepared.

The final design team shall evaluate the different options and determine the best option to be used for this project.

7.1 Existing and Emerging Traffic Signal Technology and Vendors

7.1.1 3rd Party Big Data and Analytics

Although “big data” may not directly inform connected traffic signal systems, it can be useful for monitoring congestion metrics and provide decision support for transportation professionals. During COVID-19, traffic patterns were dramatically altered from “typical” conditions, especially during “shelter-in-place” orders. With many projects still ongoing, both agencies and private companies have turned to big data providers to obtain historical average daily traffic (ADT), turning movement counts (TMCs), and a host of other performance metrics to complete planning studies, as well as to help understand COVID-19 impacts to travel.

As mobile devices and in-vehicle telematics have become more prevalent, private companies that aggregate this “big data” have emerged. As of the writing of this document, some of the most prominent companies include:

- INRIX
- HERE
- StreetLight Data
- Wejo

Each of these vendors has their own web portal platform that allow users to explore, query, and visualize data. Pricing for access to the data generally varies based on the desired metrics and subscription tiers; however, some vendors will provide a bid proposal based on the project specifications. Data sources vary based on the vendor, with some claiming to have exclusive agreements with vehicle original equipment

manufacturers (OEMs) for telematics data. In addition, raw data sets can be downloaded and further analyzed; however, the resolution and available data fields varies.

The City is currently utilizing Inrix data for several purposes. The City's access to Inrix is provided via a cooperative contract through the Arizona Department of Transportation (ADOT). ADOT's contract with Inrix was executed in 2019 and is set to expire in 2021. Local agencies accessing Inrix data and analytics have expressed concerns about becoming overly reliant on the platform, as there is uncertainty regarding renewal of ADOT's statewide contract and the long-term commitment to a single vendor.

7.1.2 Automated Traffic Signal Performance Measures

Advances in traffic signal monitoring have made significant strides in the past 5 years. The Federal Highway Administration (FHWA) defines automated traffic signal performance measures (ATSPMs) as:

> *"A suite of performance measures, data collection, and data analysis tools to support objectives and performance-based approaches to traffic signal operations, maintenance, management and design to improve the safety, mobility and efficiency of signalized intersections for all users."*

Implementing ATSPMs requires collection and processing of high-resolution traffic signal data, as well as implementation of software to calculate, measures, and visualize results. The keys to being able to acquire high-resolution data is ensuring that traffic signal controller equipment meets advanced transportation controller (ATC) standards, and that detection technology is capable of capturing lane-by-lane and advance detection.

There are several vendors that provide capabilities to monitor and manage ATSPMs. Several of these vendors are traffic signal controller OEMs that additionally provide software for analysis; while others provide equipment that connects to traffic signal controllers and upload data to the cloud where it is processed and can be analyzed through a web portal. Prominent vendors providing products in the ATSPM space include:

- Cubic | Trafficware
- Econolite
- Intelight
- Iteris
- Miovision
- Traffop

As the field of ASTPMs advances, many agencies have implemented Utah DOT's open source ATSPMs software. This software is free and utilizes existing modern signal control and detection infrastructure. Because it is open source, the software can be customized to the agencies' needs. Implementation and customization are highly technical and requires skilled labor. Agencies that have implemented Utah DOT's software include:

- Georgia DOT (GDOT)
- Indiana DOT (INDOT)
- Nevada DOT (NDOT)

Challenges with implementing ATSPMs typically revolve around having the resources to review data periodically, identify insights into problem areas, and apply fixes. Vendors are becoming more sophisticated in their approach to this. For instance, Miovision has recently launched a tool that automatically identifies suboptimal green splits, phase termination issues, and poor coordination quality. These types of features will become more prevalent as vendors continues to develop useful applications based on end user feedback. Advances in data science, artificial intelligence, and machine learning continue to advance, and will enable more and better functionality of ATSPM platforms.

The City is installing traffic signal controller and detection technology that enables logging and storage of data needed to analyze ATSPMs. The final design process will need to confirm that selected traffic signal technology will be compatible with the City's current and future plans for ATSPMs.

7.1.3 Traffic Responsive Plan Selection

Traffic responsive plan selection (TRPS) uses detection of traffic to select predefined timing or plans based on prevailing conditions. Split cycle offset optimization technique (SCOOT) and Sydney coordinated adaptive traffic system (SCATS) are examples of some of the first generation of successful TRPS systems.

One traffic responsive feature that has become more popular is dynamic maximum green adjustment (aka dynamic max). The operation was defined in the National Transportation Communications for Intelligent Transportation Protocol (NTCIP) 1202 standard in 1996.

The dynamic max feature allows the local traffic signal controller to determine if a phase failed to serve all waiting vehicles and adjusts its timing split accordingly in subsequent cycles. For traffic signal corridors that are not good candidates for traffic signal progression due to irregular traffic patterns and less than ideal traffic signal spacing, use of the dynamic max functionality appears to be gaining greater adoption. The City of Peoria has had success in using this feature.

The City performs phasing and timing plan development internally. The necessity for or use of any TRPS will likely be evaluated following project construction.

7.1.4 Adaptive Traffic Signal Control

Adaptive traffic signal control (ATSC) adapts traffic signal timing to measured traffic in real time. Using corridor detection, traffic is measured and predicted, then used to implement timing changes on the fly. There are no stored traffic signal timing plans with ATSC. Generally, ATSC works best on corridors, although they can function well in closed networks. Agencies will typically investigate an ATSC implementation when a corridor begins to approach or exceed capacity.

There are many vendors in the ATCS space, and new systems are emerging frequently. It is highly recommended that the City understand the general traffic patterns on the roadway and identify the performance measures that should be optimized before selecting any system. The following list includes vendors that provide ATCS systems. Each system has its own unique set of benefits and drawbacks.

- ACS-Lite
- Centracs Adaptive
- LA ATCS
- Q-Free/Intelight Adaptive
- Rhythm InSync
- OPAC (Optimization Policies for Adaptive Control)
- QuicTrac
- Rapidflow
- RHODES (Real-Time Hierarchical Optimized Distributed and Effective System)
- SCATS
- SCOOT
- SPOT (System for Priority and Optimization of Traffic)
- NoTraffic

The City does not install adaptive traffic signal technology as a standard practice; however, this technology is not precluded from consideration. Prior to implementing, the City will need to evaluate the technology goodness of fit for the corridor, as well as consider the benefits, costs, and ongoing maintenance associated with implementation.

7.1.5 Vehicle to Everything Devices

There are an increasing number of cutting-edge options for implementation of V2X technologies enabled by advances in the Internet of Things (IoT) space. IoT refers to the networking of physical equipment through embedded sensors, actuators, and other devices that can collect and send real-time data. IoT technology is making significant advances given its high growth potential in the private market.

In vehicle IoT technology continues to improve and gain adoption in both personal and fleet vehicles. Automotive Original Equipment Manufacturers (OEMs) began installing in-car telematics as early as 1996 with the debut of OnStar as a dealer-installed device in Cadillacs. Ford has announced that it will be installing cellular V2X technology in its vehicles in 2022. In 2020, an estimated 150 million OEM cars have active embedded car telematics worldwide. This number is projected to rise to nearly 300 million by 2024. Telematics have documented benefits for safety, fuel efficiency, and vehicle maintenance, which is why these devices are seeing such rapid growth.

This emerging technology can enable speed harmonization, which increases corridor capacity. Potential locations for dynamic speed signs that can be used by drivers of non-V2X vehicles is shown on the plans.

V2X communications technology is also developing; however, it is unknown whether cellular networks or dedicated short-range communications (DSRC) radios will be the dominant communications platform in the future. It should be noted that many device manufacturers are including equipment that can accommodate both cellular and DSRC communications in order to “future-proof” their technology. In addition, there is also an ongoing United States Department of Transportation (USDOT) and industry concern with the Federal Communications Commission (FCC) decision to limit the 5.9 GHz safety band to 30 MHz dedicated for transportation users. The general consensus is that the limited bandwidth will not be sufficient to support current and future V2X applications.

V2X technology is primarily being installed in new vehicles. In addition, aftermarket telematics are being installed in fleet vehicles to streamline fleet management. The individuals that own a personal vehicle with V2X technology likely skew toward a higher income demographic. It is unlikely that a large portion of vehicles owned by residents within the neighborhood adjacent to 35th Avenue corridor will have vehicles equipped with V2X technology given the socio-economic context. Selection of technologies and applications will need to consider how both V2X and non-V2X enabled vehicles will be accommodated.

7.1.6 Green Wave Audi Traffic Light Information System

Audi has developed partnerships with 10 cities, including Phoenix, to enable their Traffic Light Information (TLI) system. This system allows select Audi models to communicate with traffic signal infrastructure. Motorists will be provided with “time-to-green” information, indicating how many seconds until a red light will turn green.

As the Audi vehicle approaches a connected traffic signal, it receives real-time traffic signal information via the on-board 4G LTE data connection. When the light is red, the TLI feature will display the time remaining until the signal changes to green in the instrument cluster in front of the driver or in the head-up display (if equipped). This “time-to-green” information helps reduce stress by letting the driver know approximately how much time remains before the light changes.

Future uses could include integration within the vehicle’s start/stop function, Green Light Optimized Speed Advisory (GLOSA), optimized navigation routing, and other predictive services.

Phoenix and Audi have successfully implemented the TLI System. It is currently operating and providing real-time data to drivers where available.

7.2 Open Source Technology

Interoperability of traffic signal equipment has been an ongoing issue for many years. Proprietary information contained in traffic signal Management Information Bases (MIBs), the logic that runs the controller, is specific to each manufacturer. Recently, there has been a push for manufactures to publish MIBs to provide open-source products. Vendors QFree/Intelight and NoTraffic (open API) are the most prominent vendors claiming to provide open traffic signal technology. Other traffic signal vendors appear to be making strides toward joining this trend.

As a standard practice, the City is installing the latest traffic signal controller technology with new and rebuilt traffic signals, including closed-circuit television (CCTV) cameras, network switches, and wireless communications devices where a fiber communications connection is not available. In order to maintain consistency and serviceability, the City does not currently utilize any open-source traffic signal controller equipment. Use of this equipment will need to be evaluated on a case-by-case basis, as it is primarily utilized under a research application.

7.3 Transit Signal Priority

This corridor is expected to have a bus rapid transit (BRT) route. Traffic signal controller equipment that enables transit signal priority (TSP) will be installed. The TSP architecture and system selection should be coordinated with the City prior to design to ensure interoperability with existing technology.

7.4 Maintenance and Operations Challenges

Investment in technology to improve safety and efficiency of the transportation system can provide significant societal benefits. However, there are be costs associated with implementation and ongoing operations and maintenance. Not only are there costs to procure equipment, licenses, and/or subscriptions to implement new technology, but it is critical to invest in the staff that will be responsible for it. Allocation of dedicated staff, as well as staff training, is critical to ensure that technology is appropriately operated and maintained. The increasing complexity of software-driven traffic signals requires a more robust set of skills than ever before. Fine tuning, troubleshooting, replacing, reviewing, and monitoring of system components requires more time and effort than ever before.

7.5 Project Support

The 35th Avenue project has received an extensive amount of support from governmental agencies. Support letters were received from United States Senators Krysten Sinema and Martha McSally; Gail Barney, Chair of MAG Regional Council; Brent Cain, ADOT's Transportation Systems Management and Operations Director; Donna Homher from the Cordova Neighborhood Association; Jeff Spellman from the Violence Impact Project Coalition; Brian Mueller, President of Grand Canyon University; Lori Singleton, President and CEO of Arizona Forward; K. Larry Head Ph.D. Interim Dean from The University of Arizona College of Engineering; Yingyan Lou Ph.D. Associate Professor from The Arizona State University; Edward J. Smaglik Ph.D. Professor from Northern Arizona University; Mary Obrochta, President of the Ocotillo Glen Neighborhood Association; and Mark A. Yslas, Superintendent of Alhambra Elementary School District. Copies of these letters are shown in Appendix F.

8.0 COORDINATION WITH CITY STAFF

Prior to the Draft DCR submittal the team held two calls with City staff to discuss the project and coordinate. On November 8, 2020 the team joined in the weekly Phoenix Traffic Meeting. Below are some items that were discussed:

- 3 PHB's will be provided in the DCR design. Potential locations and existing PHB's were discussed. Phoenix Traffic provided the initial locations and subsequently refined these locations to be Grand Canal, Elm Street and Glenrosa Avenue.
- Discuss background information on the Build Grant development.
- Phoenix Traffic indicated they would perform pedestrian counts to confirm PHB locations.
- Phoenix Traffic was asked about other studies in the area so information could be incorporated into the DCR.

On November 17, 2020 Kelly Murray set a meeting with the DCR design team and the BRT planning team to discuss the two projects and the potential for them to interface. It was stated that 35th Avenue is a leading contender for the City's BRT north-south route. There is a strong preference for dedicated BRT lanes which would install additional curb within the existing 64-foot-wide 35th Avenue roadway. The BRT team is performing public outreach through December 2020. In Spring 2021 the BRT team will review concepts with the Phoenix CTC for approval. After CTC the team will identify phasing and prioritize which routes will be constructed first. BRT design could begin in early summer of 2021. At that time the BRT design team could coordinate with the 35th Avenue Build Grant final design team. The Draft DCR was provided to the BRT team for review and comment, see Appendix H for a list of comments received. The BRT team should follow up with the 35th Avenue Build Grant final design once CTC approval is obtained. The DCR is anticipated to be completed in February 2021, so it is not likely that coordination can occur during the DCR phase.

The Draft DCR was submitted in early December. On December 16, 2020 the team held Progress Meeting 2 to discuss any questions that may have arisen from the Draft DCR review. A high level summary of the design components was provided to the review team to aid in their review. A copy of these detailed Meeting Minutes can be found in Appendix E.

On January 14, 2021 the team held Progress Meeting 3 which also was utilized as the Draft DCR Comment Resolution Meeting. At this meeting the PHB locations and the raised concrete median design criteria was confirmed. A copy of these detailed Meeting Minutes can be found in Appendix E.

8.1 Pedestrian and Bicycle Mobility

The Capitol/I-10 West Light Rail Transit (LRT) Extension has identified a proposed station at 35th Avenue/I-10. Ensuring that pedestrian and bicycle connectivity and access is provided to the new station is an important feature to the City. The following items should be addressed to ensure mobility:

- Identification and removal of physical barriers to accommodate pedestrian access along 35th Avenue
- Potential for bicycle facilities
- Access to micromobility options

The ultimate 35th Avenue corridor design will need to review the existing crosswalk at Mariposa Street on the south leg of the intersection. The location does not appear to comply with ADA requirements; therefore, the City and designer will need to make a determination regarding whether the crossing can be modified to comply with ADA requirements, or if it will need to be eliminated.

9.0 COORDINATION WITH PROJECT STAKEHOLDERS

9.1 ADOT/MAG Involvement

During the development of the DCR the team discussed the status of ADOT's 35th Avenue & Grand Avenue/Indian School Road DCR. ADOT's project is currently in the process of evaluating the Tier 2 Alternatives. These will be evaluated and refined until a consensus has been reached to identify the Preferred Alternative. During final design of the 35th Avenue Build Grant project the team should consider

adjusting the limits of the project improvements to avoid conflicts with ADOT's 35th Avenue & Grand Avenue/Indian School Road project.

9.2 Innovation and Partnerships

During the development of the Build Grant discussions were held with the Universities and other technical experts regarding innovation that could be utilized within the 35th Avenue corridor. The DCR team anticipates providing the DCR to these technical experts to solicit feedback on the proposed traffic and safety enhancements.

9.3 Project Support

As indicated in Section 7.3 above. Letters of support of the project have been received from numerous project stakeholders. Copies of these letters can be found in Appendix F.

10.0 PUBLIC MEETINGS

At this time no public meeting for this project has been held. This will be evaluated prior to and during final design. See Appendix I for a copy of the Public Involvement Plan and the Public Announcement that was completed during the DCR.

11.0 BUILD GRANT PERFORMANCE CRITERIA

During the project development the design team and City will coordinate with the Arizona Division of Federal Highways to verify the performance criteria and ensure compliance with the Build Grant criteria.

Transportation Performance Measures (TPMs) will be developed in cooperation with the Arizona Division of Federal Highways. It is anticipated that performance measures will include safety, pavement condition, and Congestion Mitigation Air Quality (CMAQ) metrics. Below is a list of the current Federal TPMs that Metropolitan Planning Organizations (MPOs) are required to report on annually.

- Safety PM (23 CFR 490.207)
  - Number of Fatalities
  - Rate of Fatalities
  - Number of Serious Injuries
  - Rate of Serious Injuries
  - Number of Non-motorized Fatalities and Serious Injuries
- Pavement PM (23 CFR 490.307)
  - Percentage of pavements of the Interstate System in Good condition;
  - Percentage of pavements of the Interstate System in Poor condition;
  - Percentage of pavements of the non-Interstate NHS in Good condition; and
  - Percentage of pavements of the non-Interstate NHS in Poor condition.
- Congestion Mitigation Air Quality (CMAQ)–Traffic Congestion PM (23 CFR 490.707)
  - Annual Hours of Peak Hour Excessive Delay (PHED) Per Capita (referred to as the PHED measure); and
  - Percent of Non-SOV Travel.

12.0 PRELIMINARY PROJECT SCHEDULE

Below is a preliminary project schedule, which outlines the major milestones associated with the final design and construction phases of this project.

PROJECT MILESTONE	COMPLETION DATE
NTP FINAL DESIGN	**10/15/2021**
40% PLAN SUBMITTAL	Not required
70% PLANS SUBMITTAL	12/31/2021
NEPA CLEARANCE	**2/28/2022**
100% PLANS SUBMITTAL	4/1/2022
ROW CLEARANCE	7/1/2022
UTILITY CLEARANCE	7/1/2022
FINAL PS&E SUBMITTAL	7/1/2022
FHWA FUNDING OBLIGATION	**9/30/2022**
ADVERTISE FOR CONSTRUCTION	11/30/2022
BEGIN CONSTRUCTION	2/1/2023
COMPLETE CONSTRUCTION	12/1/2023

13.0 PRELIMINARY OPINION OF PROBABLE COST AND PROGRAMMING ESTIMATES

An evaluation of preliminary project costs was performed during the preparation of the DCR. The programming schedule has also been evaluated and is shown in Appendix D. Below is a summary of the anticipated project costs.

PRELIMINARY PROJECT COST ESTIMATE

Item	Description	Total Cost	Local Funds*	BUILD Funds
1	Design	$3,803,437	$1,141,031	$2,662,406
2	Right-of-Way	$2,093,078	$618,742	$1,474,336
3	Construction	$17,420,326	$5,226,098	$12,194,228
4	Environmental	$250,000	$75,000	$175,000
5	Testing and Materials	$142,718	$42,815	$99,903
6	Utilities	$921,633	$276,490	$645,143
7	Construction Administration	$245,000	$73,500	$171,500
	Total Project Cost	**$24,876,192**	**$7,453,677**	**$17,422,515**

14.0 APPLICABLE DESIGN CRITERIA

During the Draft DCR stage two versions of median designs were provided. One version provides a minimum 250-foot length for deceleration and storage per City of Phoenix Street Planning and Design Guidelines Section 3.12. The other version reduces the 250-foot length to 100-foot-long deceleration and storage. During the development of the Final DCR the team decided to move forward with the 100-foot-long deceleration and storge which will allow longer runs of raised concrete median.

Median openings have been designed per Table 9-25, 9-26 or 9-27, Minimum Design of Median Openings, in the AASHTO Green Book, A Policy on Geometric Design of Highways and Streets. The crossroad was reviewed to determine what type of area the roadway serviced to identify the appropriate table to reference for the minimum median opening design.

The right of way and utility mapping have limitations with their accuracy as they rely on the established section line, they should be developed further during final design. Field survey was not performed to collect section monumentation. The section line was established from available GIS data and refined with the aerial imagery, as a result, there is a small margin of tolerance that should be realized. The right of way line was laid out using the established section line and the dimensions provided in the City of Phoenix quarter section maps. Areas where right of way is constrained should be evaluated closer during final design to determine the exact impacts.

15.0 SOCIAL, ECONOMIC, AND ENVIRONMENTAL COMPONENTS

The following section was developed by City of Phoenix staff:

Public/Agency Scoping

COP anticipates holding public meetings to solicit community comments, input, and feedback to inform and guide the scope and design development for this project. Public meetings and outreach would be consistent with the COP Street Transportation Department's (STR) established processes and its Public Involvement Plan (July 2018). NEPA scoping letters would be distributed to applicable agencies to provide notification of the proposed project and solicit comments, input, and feedback.

Socioeconomic Impacts

Acquisition of temporary construction easements and permanent easements are anticipated; however, relocations, displacements, or access changes would not occur.

Localized traffic congestion and delays to adjacent landowners/tenants and the traveling public are anticipated throughout construction. Street closures are not anticipated, and access will be maintained.

No adverse or permanent effects on businesses, residents, or the surrounding community is anticipated. Therefore, the presence of Title VI/environmental justice populations is not anticipated to be assessed.

Biological Resources

Preparation of a Biological Evaluation Short Form (BESF) is anticipated. Species lists from the U.S. Fish and Wildlife Service's Information, Planning, and Conservation system and the Arizona Game and Fish Department's Online Environmental Review tool would be queried and reviewed by a qualified biologist. Potential impacts to species would be assessed and recommendations for applicable mitigation measures would be made.

COP environmental staff completed an initial assessment in October 2020 as summarized below:

- Landscaped vegetation may provide suitable habitat for active nests protected under the Migratory Bird Treaty Act (MBTA). Impacts to vegetation should be avoided to the extent practicable. The COP Street Transportation Department's MBTA construction flyer would be provided to the contractor prior to the start of work.
- If impacts will occur on the canal bridge between February and May, a survey to check for active cliff swallow nests will be needed. If work will occur on the bridge over the canal, the COP Street Transportation Department's cliff swallow construction flyer would be provided to the contractor prior to the start of construction.
- Scattered vacant lots are present along the project corridor. Burrowing owls are not expected to be present due to the low habitat quality; however, the COP Street Transportation Department's BUOW construction flyer would be provided to the contractor prior to the start of construction.

Clean Water Act Sections 404/401 and 402

Potential Waters of the U.S. (Grand Canal) are present in the project area; however, no impacts within the canal are currently expected. Prior to 60% design, COP environmental staff will review project information and preliminary plans to determine the appropriate course of action or permitting.

No unique or impaired waters are known to be located within 0.25-mile of the project area.

During final design, ground disturbance would be calculated. It is likely that ground disturbance would exceed 1 acre; therefore, COP STR's construction contractor would prepare a Storm Water Pollution Prevention Plan following Arizona Pollutant Discharge Elimination System construction general permit requirements.

Additionally, the contractor would still need to comply with the requirements of Phoenix City Code 32C regarding stormwater quality protection and appropriate best management practices would need to be implemented prior to ground-disturbing activities.

Floodplains

A review of the Federal Emergency Management Agency's Flood Insurance Rate Maps has determined the project is located in a shaded Zone X (0.2 percent annual chance flood hazard; areas of one percent annual chance flood with average depth less than one foot or with drainage areas of less than one square mile), panels 04013C2185L and 04013C1720L, dated October 16, 2013.

Cultural Resources

As this project would utilize federal funds, it is considered an undertaking pursuant to Section 106 of the National Historic Preservation Act of 1966. COP would assist FHWA with Section 106 consultation and related administrative procedures.

As part of COP's standard compliance review process, an assessment, similar to a Class I records review, was completed by the COP Archaeology Office in October 2020. The City of Phoenix Archaeology Office recommends archaeological monitoring of ground-disturbing activities associated with this project within an archaeological site and its buffer and within a 50 foot radius of prehistoric canals. Archaeological data recovery excavations may be necessary based upon the results of the monitoring. A qualified archaeologist must make this determination in consultation with FHWA and the City of Phoenix Archaeologist.

An assessment was also completed by the COP Historic Preservation Office in October 2020. The Grand Canal is eligible for the Phoenix Historic Property Register and National Register of Historic Places. However, no involvement with or impacts to the canal are anticipated; therefore, a no adverse effect would be recommended.

Section 4(f) Resources

Section 4(f) of the U.S. Department of Transportation Act of 1966, states that the FHWA "may approve a transportation program or project requiring publicly owned land of a public park, recreation area, or wildlife

and waterfowl refuge of national, state or local significance, or land of a historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if there is not prudent or feasible alternative to using that land and the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use." (49 U.S.C. 303).

Several potential Section 4(f) resources were identified in the project area: Falcon Park, Bret Tarver Learning Center, Isaac Middle School, Desiderata High School, Academy of Mathematics and Science South, Grand Canal, Cielito Park, and Grand Canyon University. The design process will consider ways to avoid impacts/involvement with and/or minimize harm to any potential Section 4(f) resource.

Scenic or Historic Routes

No scenic or historic routes are located within or adjacent to the project area.

Section 6(f) Resources

Section 6(f) of the Land & Water Conservation Fund Act (L&WCF) exists to ensure that the federal investment of L&WCF Act funds is being maintained in public outdoor recreation use. No Section 6(f) resources appear to be located within or adjacent to the project area; therefore, no involvement with or impact to these resources are anticipated. However, presence of 6(f) resources would be further evaluated during the environmental clearance process.

Visual

The visual quality of the project area would be altered by the pr0posed construction/improvements; however, these additions/modifications would be consistent with the current visual quality of the area.

Hazardous Materials

Environmental regulatory database reports would be ordered and reviewed, and a Preliminary Initial Site Assessment would be prepared during the environmental clearance process. Additionally, it is anticipated that a site visit would be necessary to collect suspect materials for testing of lead-based paint (LBP) and asbestos-containing material (ACM) from potentially impacted structures and roadway striping. A hazardous materials evaluation report would be prepared documenting the sampling methodology and summarizing the laboratory test results of the suspected LBP and ACM samples.

Noise

Sensitive noise receptors are located within and adjacent to the project area. The proposed project would not involve adding traffic capacity to existing roadway or altering roadway alignments; therefore, quantitative analyses and/or consideration of noise abatement measures is not anticipated. Construction noise would be temporary and controlled by appropriate means and methods.

Air Quality

The proposed project is located in the Phoenix carbon monoxide maintenance area, the Phoenix ozone 8-hour non-attainment area, and the Phoenix PM10 non-attainment area.

It is listed in the Maricopa Association of Governments' Transportation Improvement Program under number PHX20-106DZ.

COP environmental staff would coordinate closely with FHWA to evaluate if the proposed project would have localized air quality impacts. However, given the nature of the proposed improvements, neither a project-level conformity nor a quantitative analysis is anticipated.

Sole Source Aquifer

The proposed project is not located within a sole source aquifer; therefore, no impacts to sole source aquifers would occur.

16.0 PROJECT CONTACTS

Michael A. Cano, P.E.
City of Phoenix Project Manager
City of Phoenix Street Transportation Department
1034 E. Madison Street
Phoenix, AZ 85034
(602) 262-4054
michael.canoa@phoenix.gov

Jose M. Rodriguez, P.E.
City of Phoenix Project Manager
City of Phoenix Street Transportation Department
1034 E. Madison Street
Phoenix, AZ 85034
(602) 262-4054
jose.m.rodriguez@phoenix.gov

Bruce E. Littleton, P.E.
Traffic Engineering Supervisor
City of Phoenix Street Transportation Department
Traffic Services
200 W. Washington Street
Phoenix, AZ 85003
(602) 495-0336
bruce.littleton@phoenix.gov

Leticia Vargas, P.E.
Special Projects Administrator
City of Phoenix Street Transportation Department
1034 E. Madison Street
Phoenix, AZ 85034
(602) 534-9529
Leticia.vargas@phoenix.gov

Mario L. Brown, P.E.
Special Projects Administrator
City of Phoenix Street Transportation Department
1034 E. Madison Street
Phoenix, AZ 85034
Mario.brown@phoenix.gov

Mailen Pankiewicz
Pedestrian Safety Coordinator
City of Phoenix Street Transportation Department
1034 E. Madison Street
Phoenix, AZ 85034
(602) 495-7065
Mailen.pankiewicz@phoenix.gov

Myesha Harris, CCM, CFM
Special Projects Administrator Freeway Management
City of Phoenix Street Transportation Department
200 W. Washington Street, 5th floor
Phoenix, AZ 85003
(602) 262-6871
Myesha.harris@phoenix.gov

Carl Langford, P.E.
Traffic Operations Engineering Supervisor
City of Phoenix Street Transportation Department
1034 E. Madison Street
Phoenix, AZ 85034
(602) 262-4613
Carl.langford@phoenix.gov

Greta Halle
Planner III
City of Phoenix Street Transportation Department
Traffic Services
200 W. Washington Street
Phoenix, AZ 85003
(602) 534-6030
Greta.halle@phoenix.gov

Carlos Sanchez Soria, P.E.
Senior Associate/Senior Project Manager
TY Lin International
60 E. Rio Salado Parkway, Suite 501
Tempe, AZ 85281
(480) 333-4406
Carlos.sanchez-soria@tylin.com

Scott M. Kelley, P.E., PTOE
Principal
Greenlight Traffic Engineering
14050 N. 83rd Avenue, Suite 290
Peoria, AZ 85381
(602) 499-1339
scottk@greenlightte.com

Brenan Poe, P.E.
Project Manager
TY Lin International
60 E. Rio Salado Parkway, Suite 501
Tempe, AZ 85281
(480) 356-0694
brenan.poe@tylin.com

Appendix A – Site Photo Log

CITY COM

6" H.P. SWG
5422

G.W.

STORM
SEWER

SCHOOL

AHEAD
SCHOOL

35th Ave

35th Ave
Jack

10 East
Tucson
LEFT LANE
10 West
Los Angeles
GUERO
GIGANTE
35

WATSON
VoteWatson.com

Dowell
WATSON
VoteWatson.com

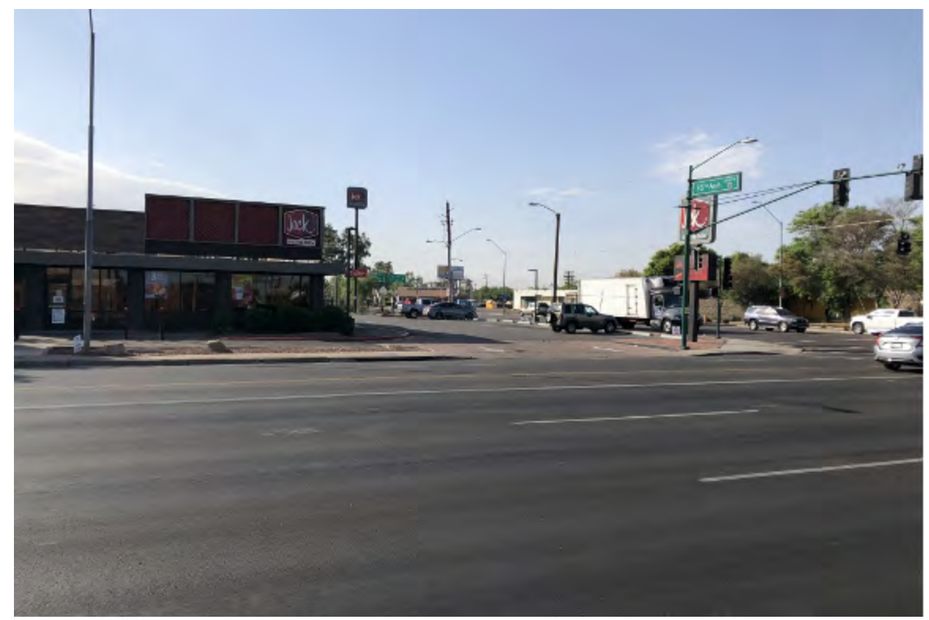
SALT RIVER PROJECT
IRRIGATION

SANITARY
BE WEB

Welcome to
Maryvale
A Vibrant Village

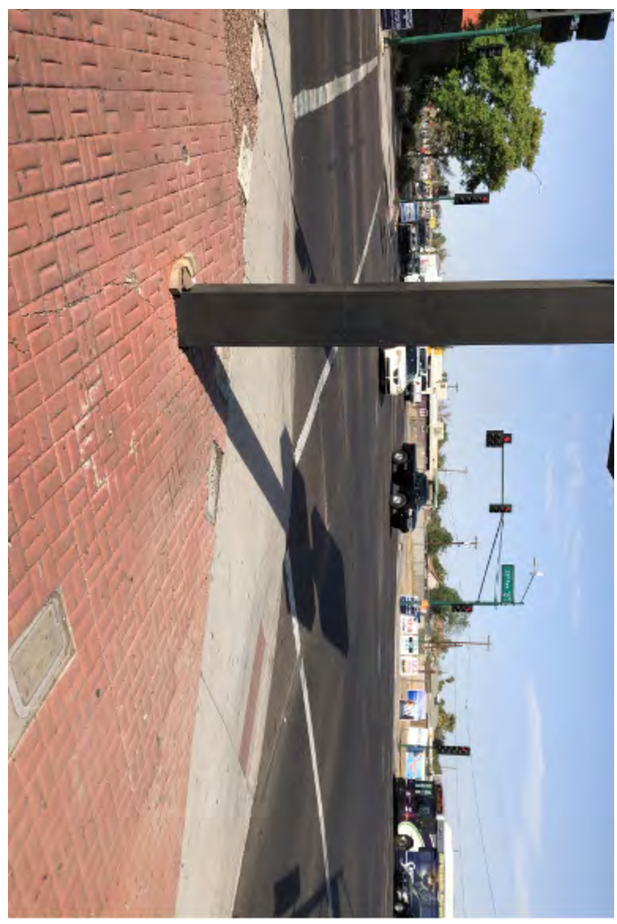
ISAAC MIDDLE SCHOOL

FedEx
CCIDENT
LAW GROUP

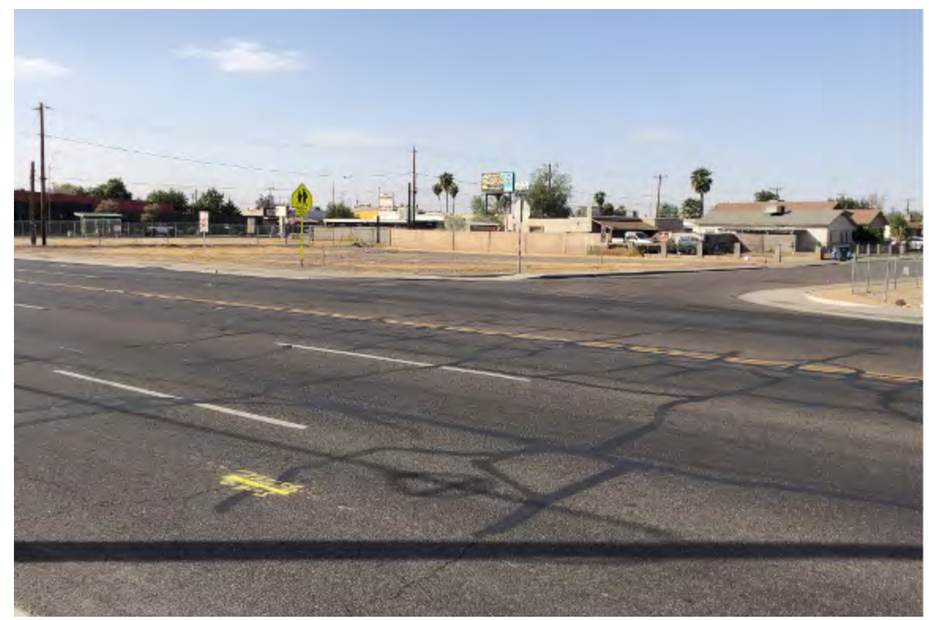


TO REPORT
TRAFFIC SIGNAL
PROBLEMS CALL
602-262-6021
WARNING

ISAAC MIDDLE SCHOOL
WARNING

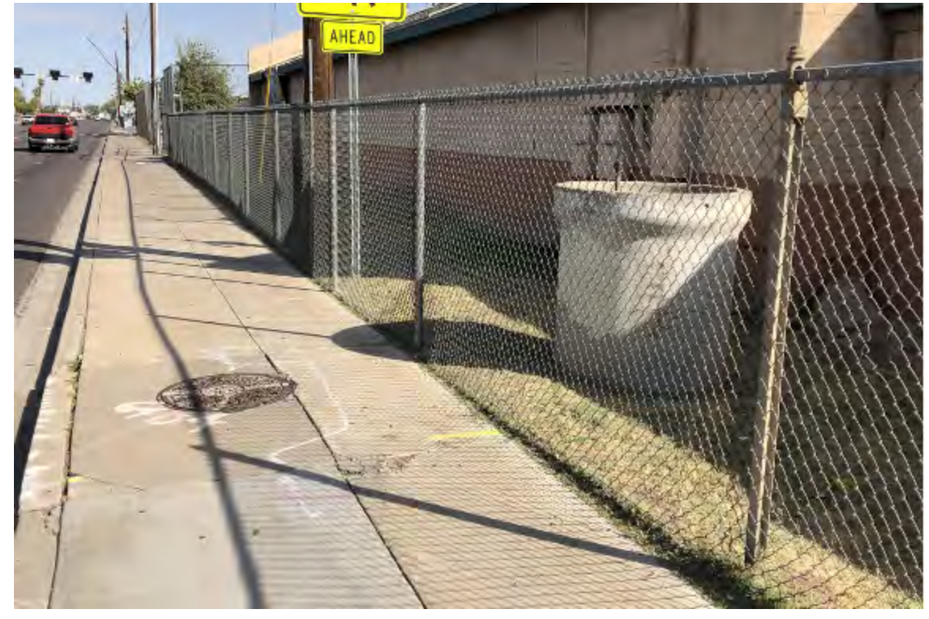


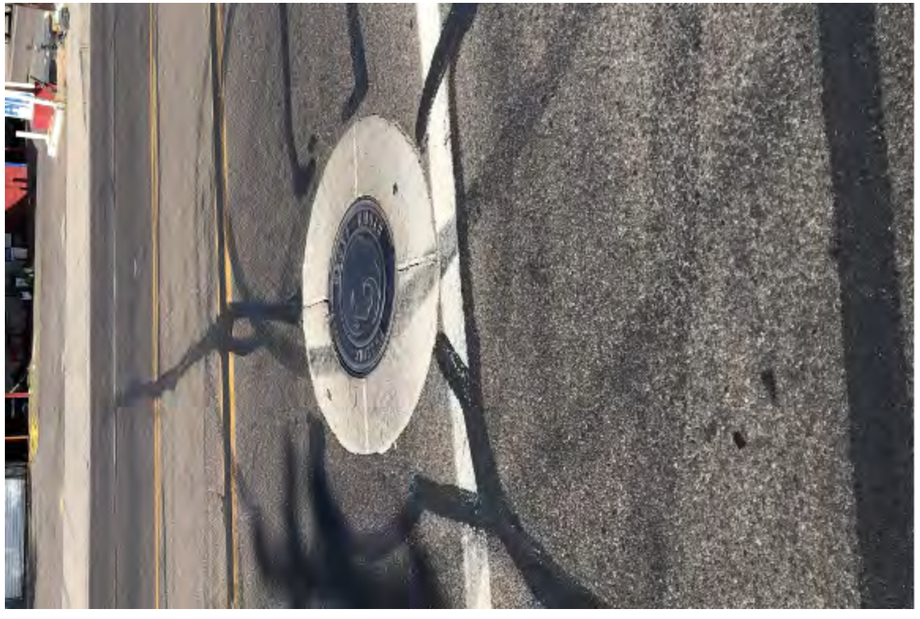
BEI



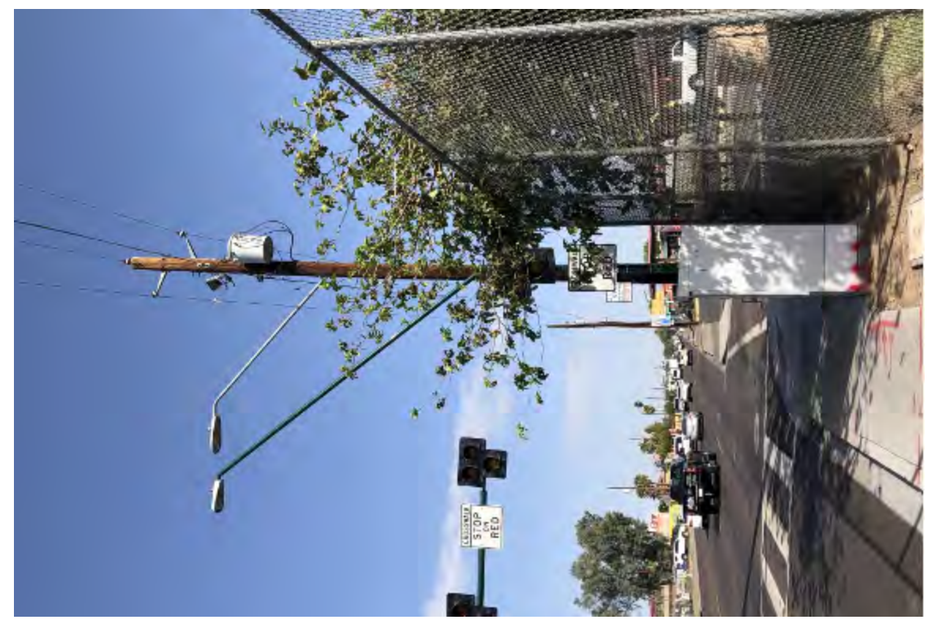
Left
Only

CENTER LANE
ONLY
SPEED LIMIT
35


AHEAD

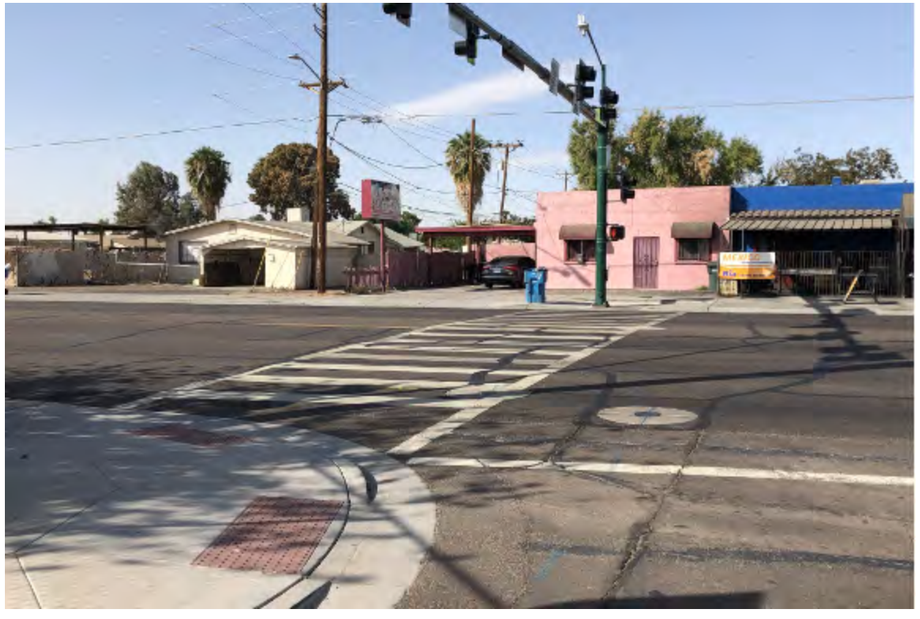


TRAFFIC
SIGNAL

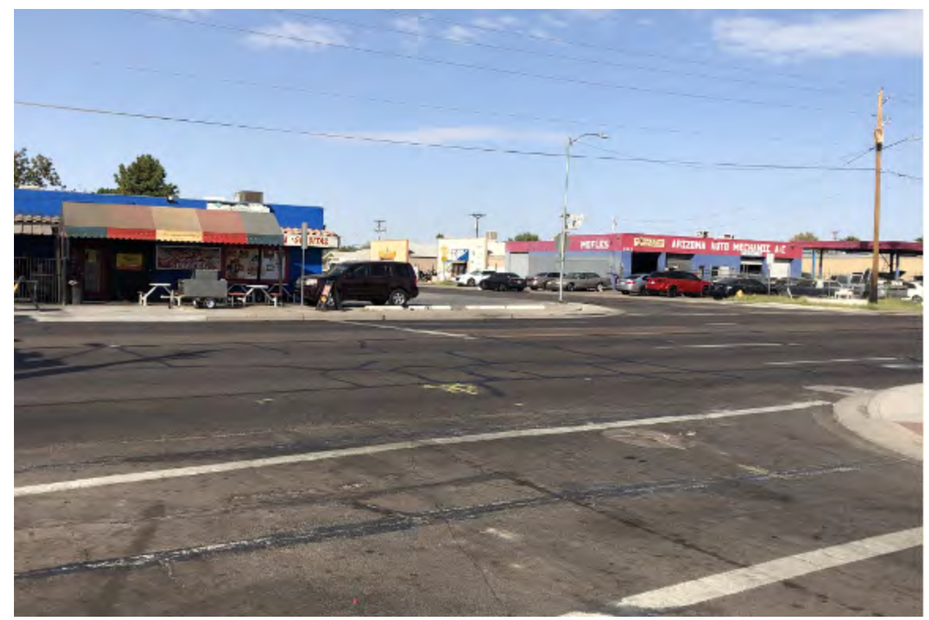


START CROSSING
Watch For
Vehicles
DON'T START
Finish Crossing
If Started
DON'T CROSS
PUSH BUTTON
TO CROSS

AHEAD
NO
THRU
TRUCKS



Palm
STOP
MECANICA
A/C
FRIZONAS
21 AUDIO
STEREO


MUFLERS
ARIZONA AUTO MECHANIC A/C

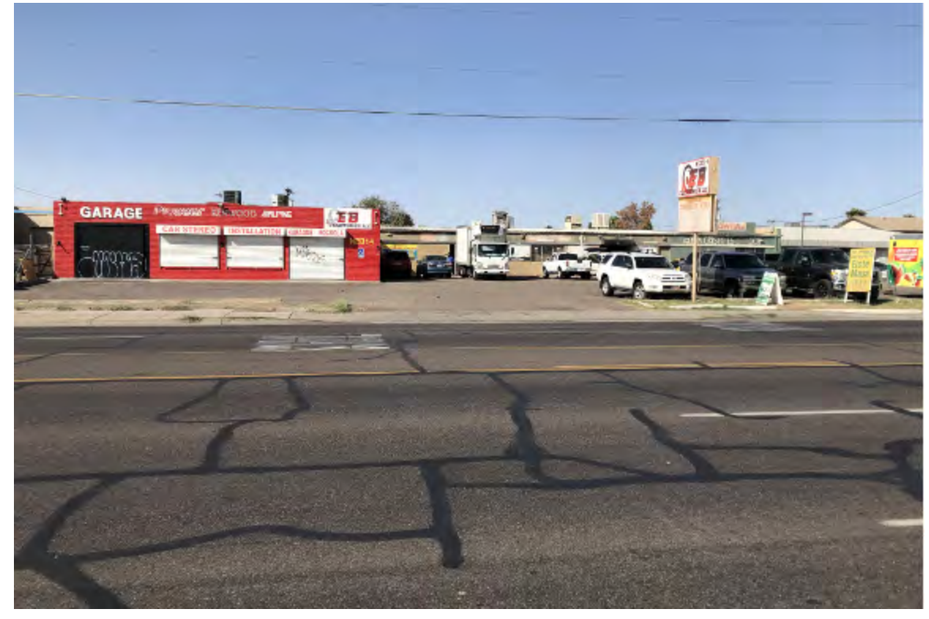
NESBITT
CONTRACTING
2010

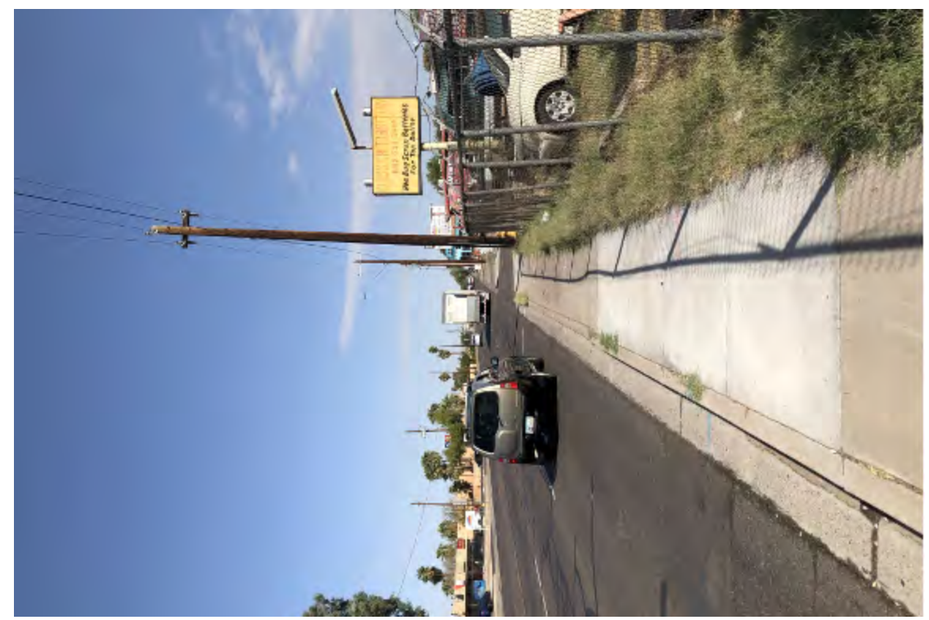
WATER

GAS

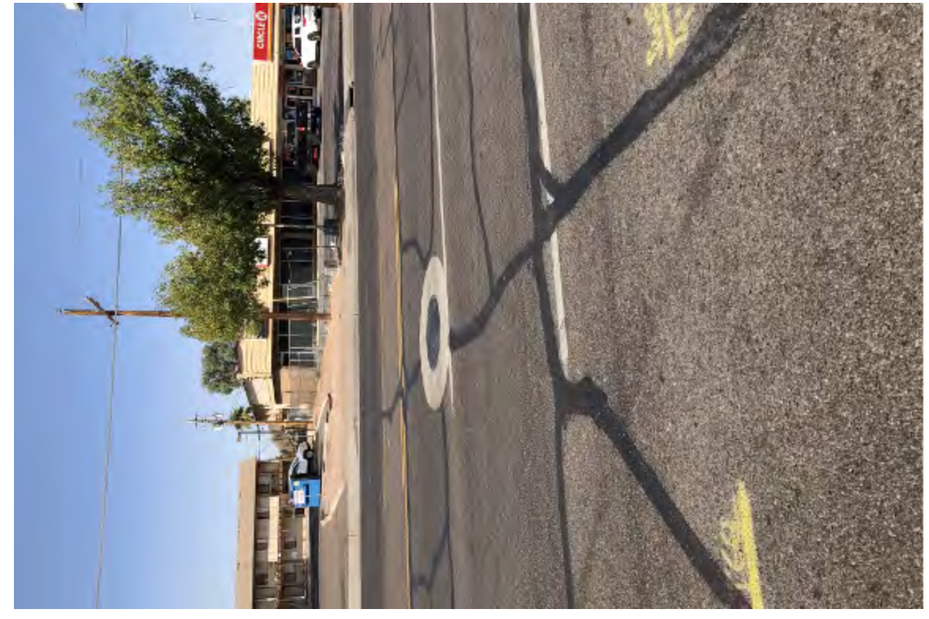
PHOENIX SANITARY SEWER

SPEED
LIMIT
35
BUS


GARAGE



SMOKE SHOP

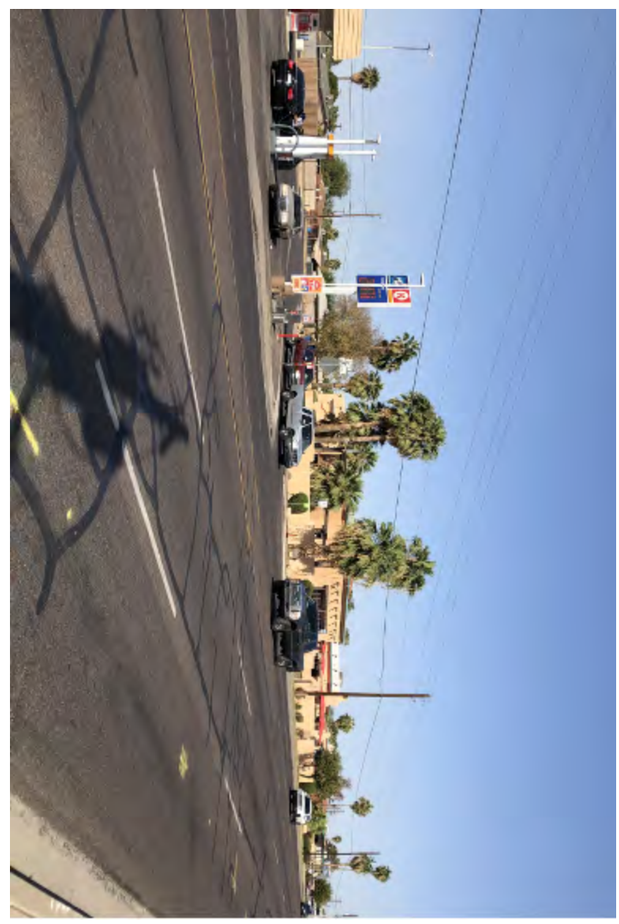


Armando's
MECHANIC
602-278-5556

PHOENIX
SEWER MANHOLE

CIRCLE K

PHOENIX
SANITARY SEWER



MARISCOS
LAS ISLITAS
DE SAN BLAS

Monte Vista

A.C

NOT IN SERVICE

HERRERA'S
Auto Repair
AUTO ELECTRIC
A/C SERVICE
602.723.9117
AZ
MOFLES

SANITARY SEWER
PHOENIX

35th Auto Repair
BARBER
Shop

Rafi Law Group

WARNING

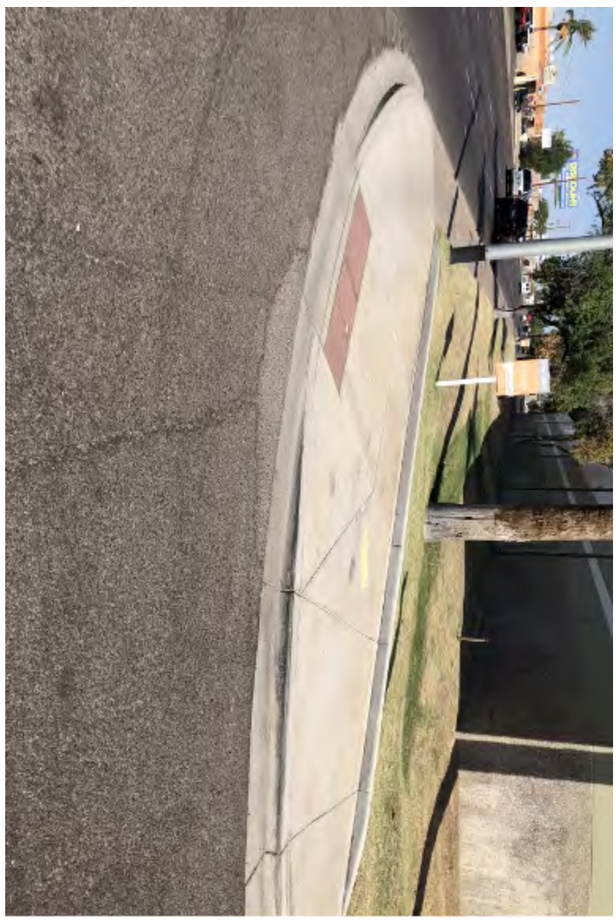
Encanto

PHOENIX
STORM SEWER

Encanto

PHOENIX STORM SEWER

CENTER LANE
ONLY
SPEED LIMIT
40



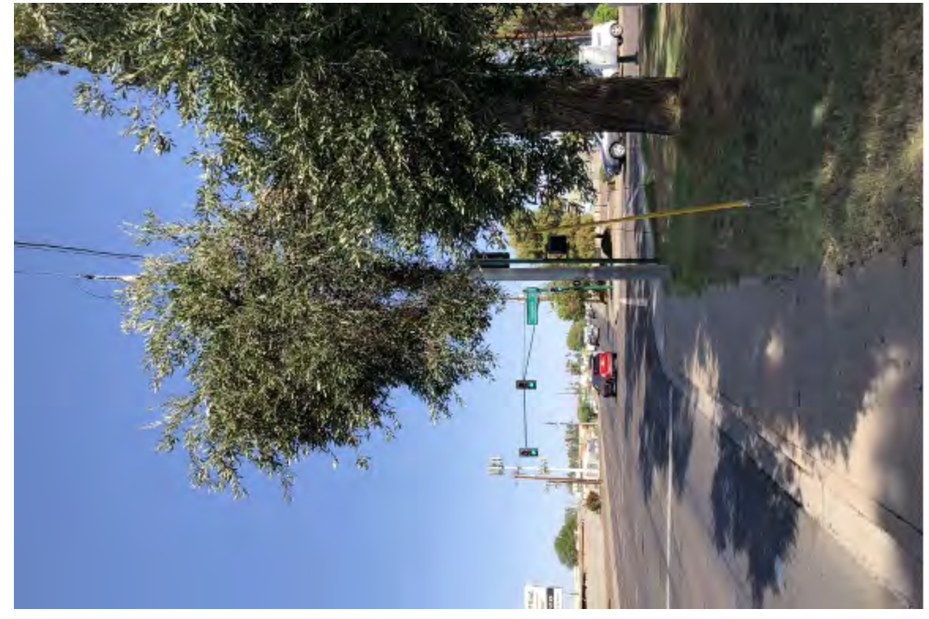
DISCOUNT
AVAILABLE
citywide
313-1000

DISCOUNT

FLES Y LLANTERA
602-272-0464
DISCOUNT

DISCOUNT

SCOUNT



DIS COUNT

DISCOUNT

USE
CROSSWALK

WARNING

DISCOUNT
ACADEMY LIMITED
Lath & Stucco

WE
ACCEPT
EBT

Virginia

WE
ACCEPT
EBT

Lath

PLASTERING
INC.
2-484-0080
Stucco
Lic. # ROC 161874

35th Ave.

BUS

AMERICA

Complete
AUTO CARE
2600
KENYON PLASTERING

40

SANITARY
SEWER
PHOENIX

STOP ON
RED!

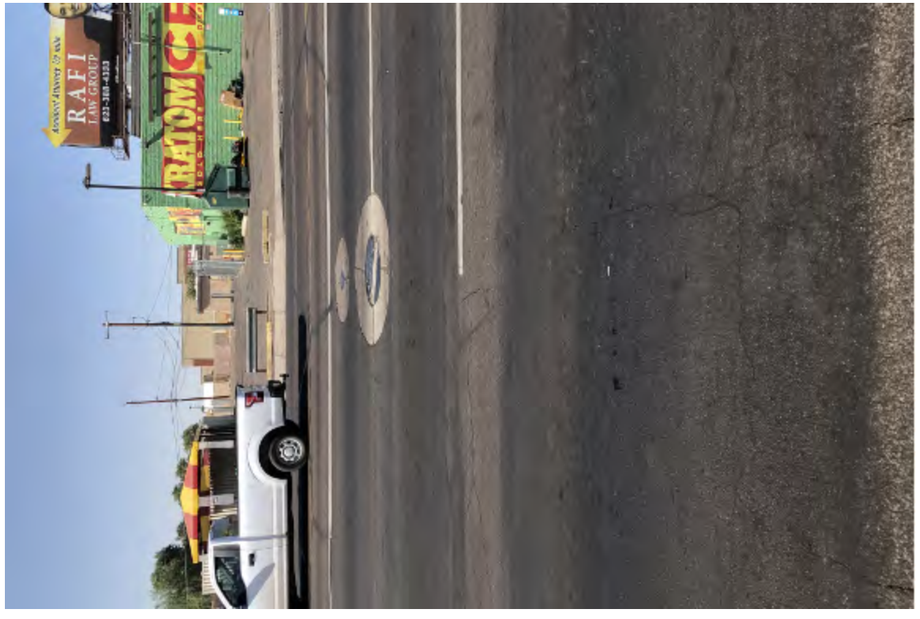
GORMAN

GORMAN

RAW CBD

GORMAN
COOLER SUPPLY

GORMAN
COOLER SUPPLY
RAFI
LAW GROUP


RAFI
LAW GROUP
KRATOM CBD

SCORE BOARD

RAFI
LAW GROUP
KRATOM CBD

YES
208
TEXT
TO

YES
208

Thomas
SMOKE
VAPE
SHOP

RE-EL
SHERI
PENA

F
ONE
HIP
NERIN

ADOPT
A
STREET
DIVORCIO

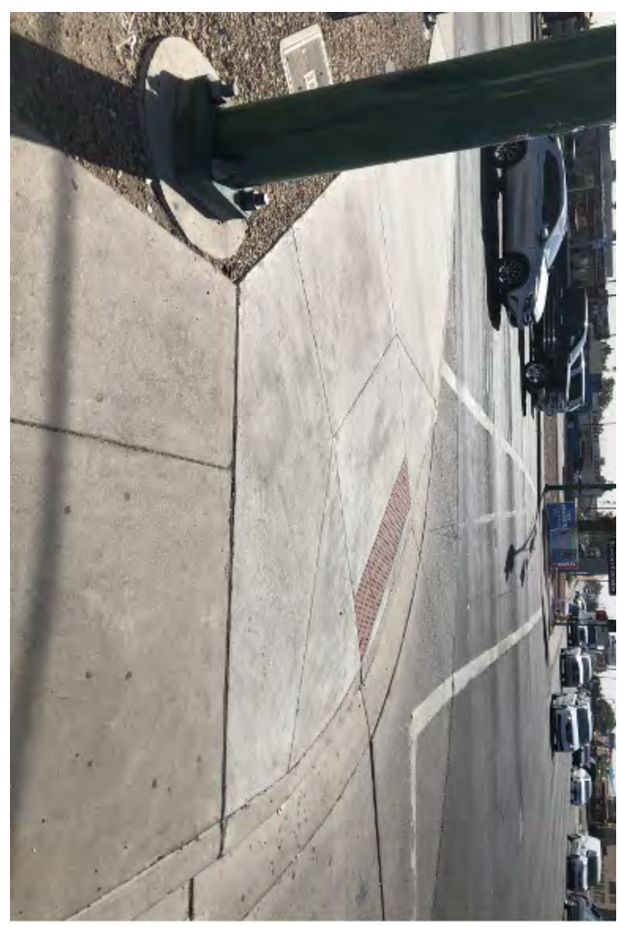
ARIZONA
SERVICE

ARIZONA
PUBLIC
SERVICE
G.V.I.S.

PUBLIC SERVICE
ARIZONA

Mobil

CASH
FOR DIABETIC
TEST STRIPS
CALL OR TEXT
602 507-2562



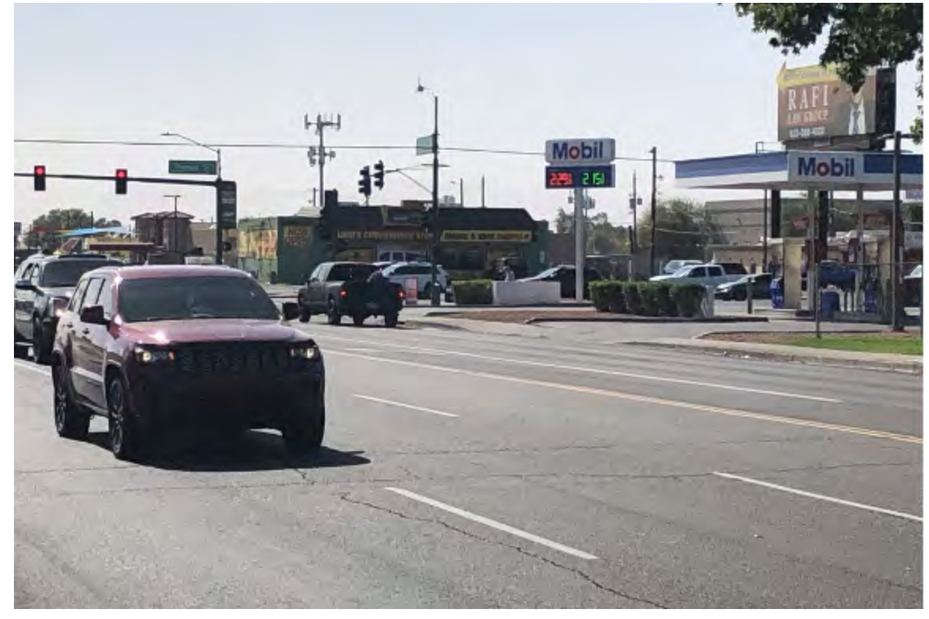
RAFI

SANITARY SEWER
PHOENIX

RAFI

PLAZA
CHECK
LOANS

35th Ave.


Mobil
Mobil

CENTER
LANE
ONLY
SPEED
LIMIT
40

Owest

A.P.S.
ELECTRIC

AVAILABLE

Earll Dr.

STOP

Earll Dr.

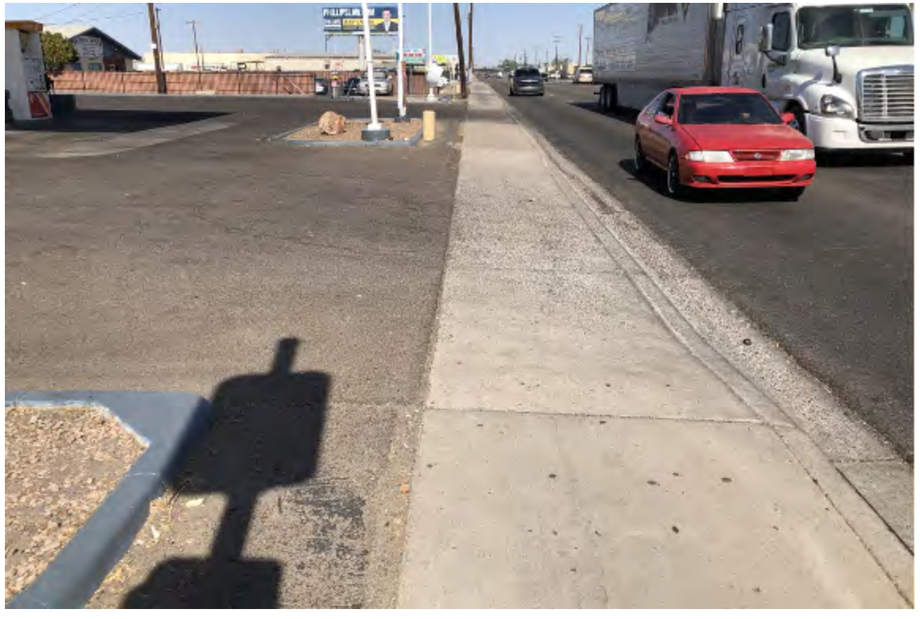
COMMUNICATIONS

35th Ave.

Unl.

35th Ave.
Unl.

Osborn
2400 N
PHILLIPSLAW.COM



Edgefield
$ 4.99
CHILDCARE

PHILLIPSLAW.COM
CHILDCARE

PHILLIPSLAW.COM
PHILLIPS
INJURY LAWYERS

AVAILABLE
5,000 sq ft +-
602-323-6399
602-799-5797
PHILLIPSLAW.COM
PHILLIPS
INJURY LAWYERS

SRP
DIS

MARISCO

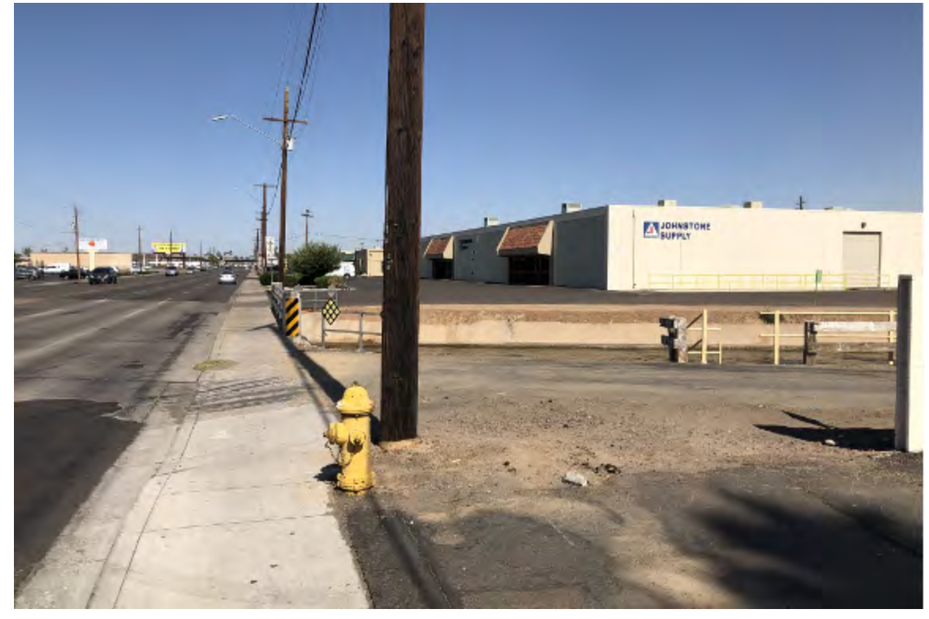
ISCOS

STORM
SEWER
PHOENIX

IL CHANGE
BIODE
KES
KE
ANGE

7'-0"
18"

BIG Mattress SALE
MATTRESS SALE


JOHNSTONE
SUPPLY

PHILLIPSLAW.Com

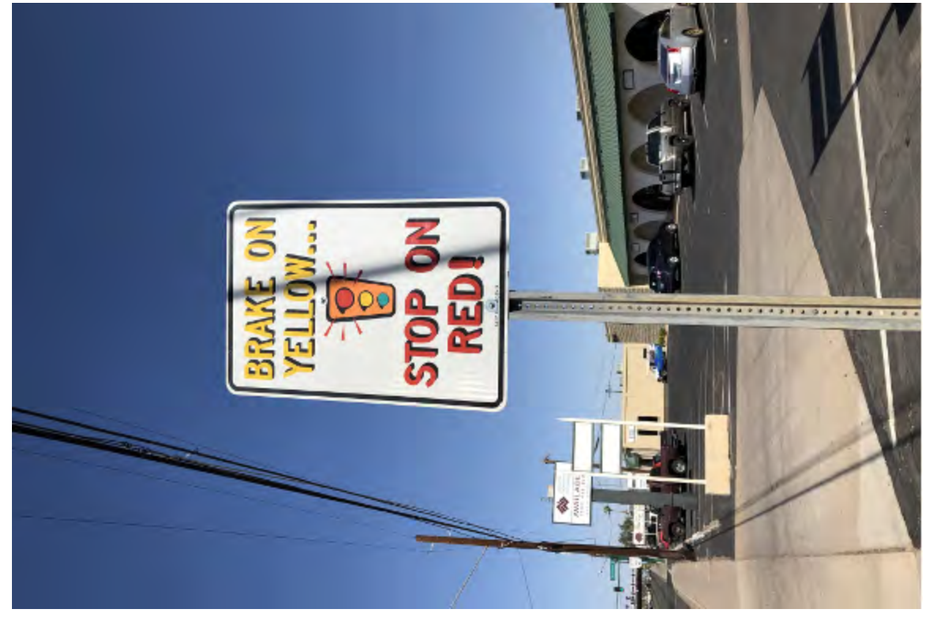
PHILLIPSLAW.Com

Whitton

SALE
MATTRESS
SALE
V-Dub Furniture

LIFT TRUCK PARTS

LERNER&ROWE
977-1900


BRAKE ON
YELLOW...
STOP ON
RED!

LERNER&ROWE
977-1900

LERNER&ROWE
977-1900

CANTON FIRE
EXTINGUISHER

CANYON FIRE
EXTINGUISHER

WARNING
WARNING

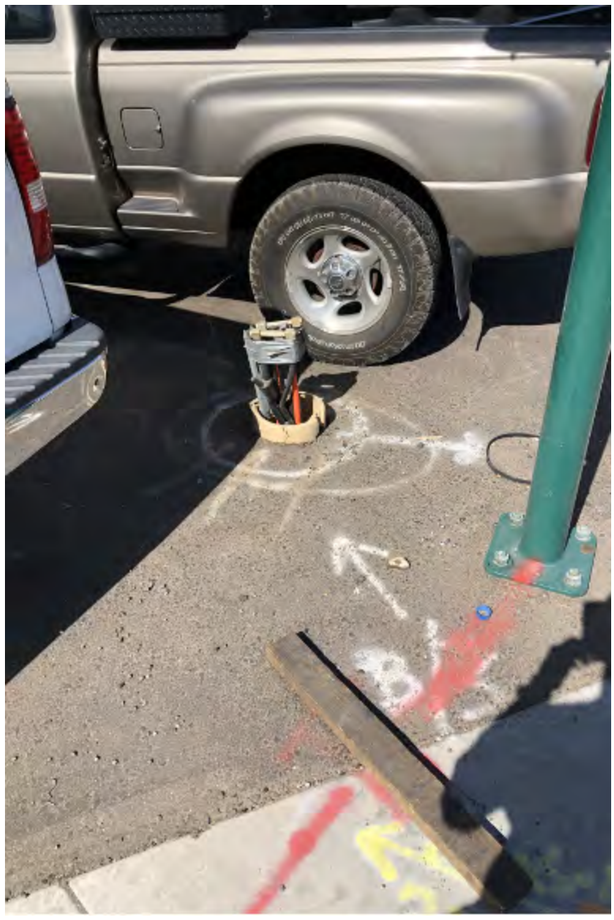
Clarendon
Arizona
Industrial
Properties

3807-

Clarendon
Arizona
Industrial
Properties
3807

PHOENIX
SANITARY
SEWER

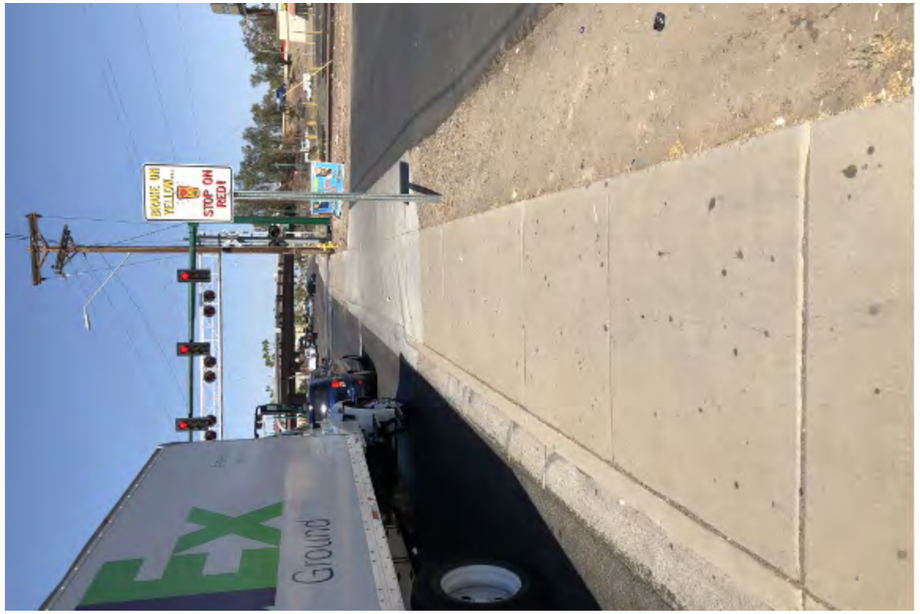
G.V.



Prepárese para

35 N
6640

FedEx


BRAKE ON YELLOW...
STOP ON RED!
JTX
Group

RAILROAD
CROSSING

LUMBER

LUMBER

BIG SKY
PAWN

STOP
HERE ON
RED

GREEN
ARROW
ONLY
Grand Ave
Indian School
Road

BIG SKY
PAWN

BIG SKY
SUPER PAWN
JEWELRY CENTER

SUZUKI
LAW OFFICES

BIG SKY
PAWN
JEWELRY CENTER

SUZUKI
LAW OFFICES

SUZUKI
LAW OFFICES

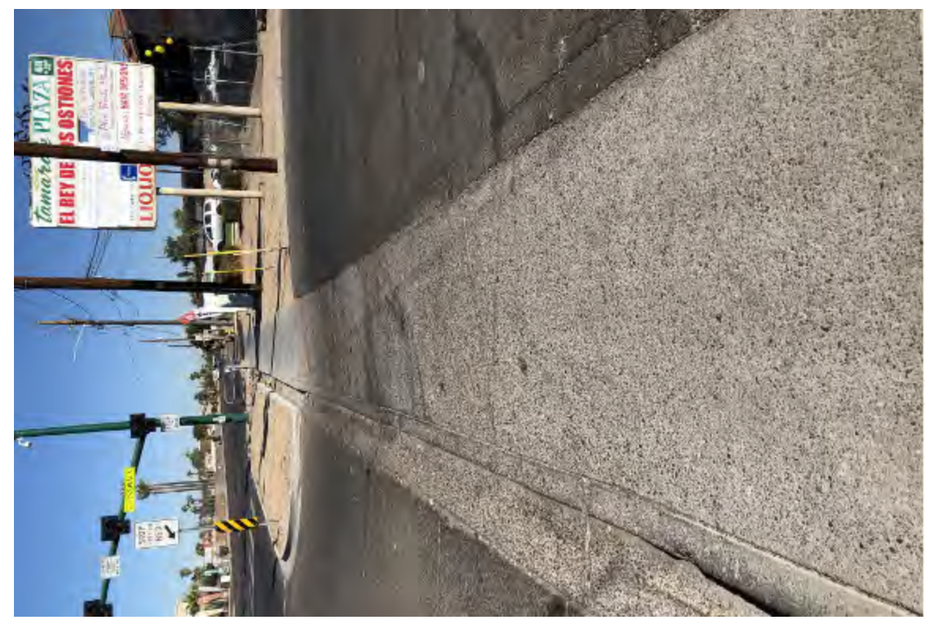
SUZUKI
LAW OFFICES

16FT.-0IN.

SUZUKI
LAW OFFICES

SMART
START

PLAZA
EL REY DE LOS OSTIONES
LIQUOR



LIQU
MARKET
LIQUOR

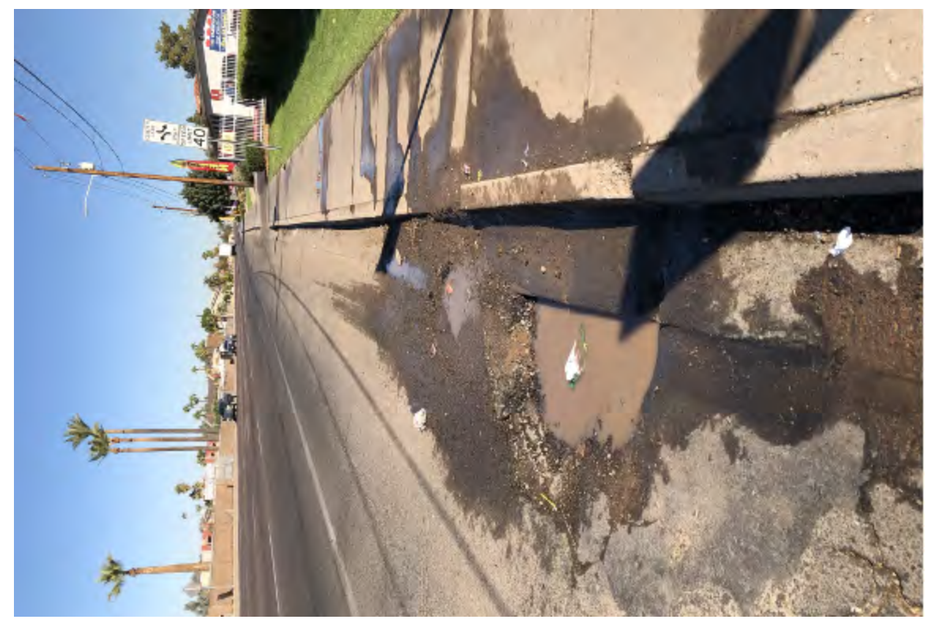
STOP
RED
CROSSWALK

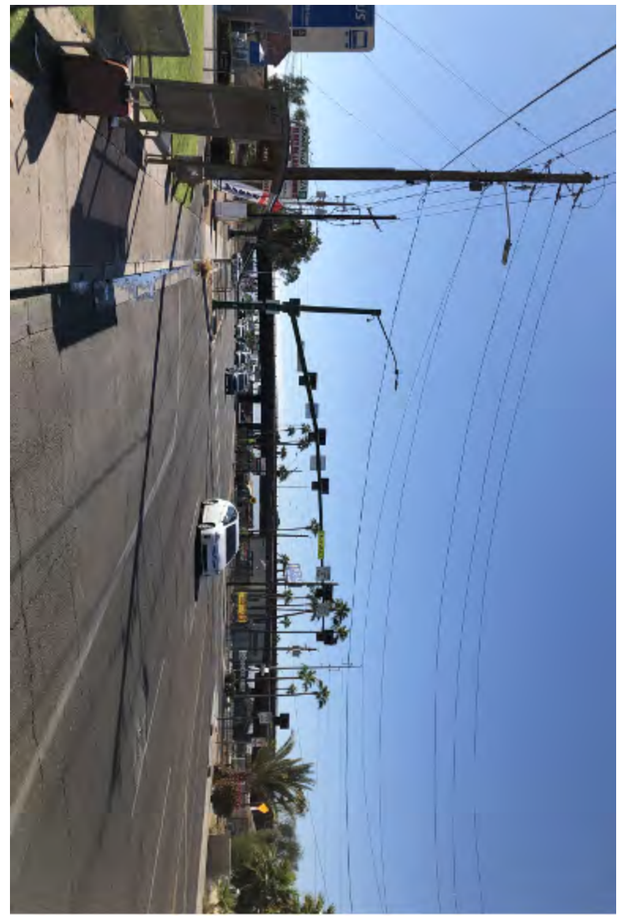
CROSSWALK
STOP

s Amigos
MARKET
LIQU

TRAFFIC
SIGNAL

PUSH BUTTON
FOR

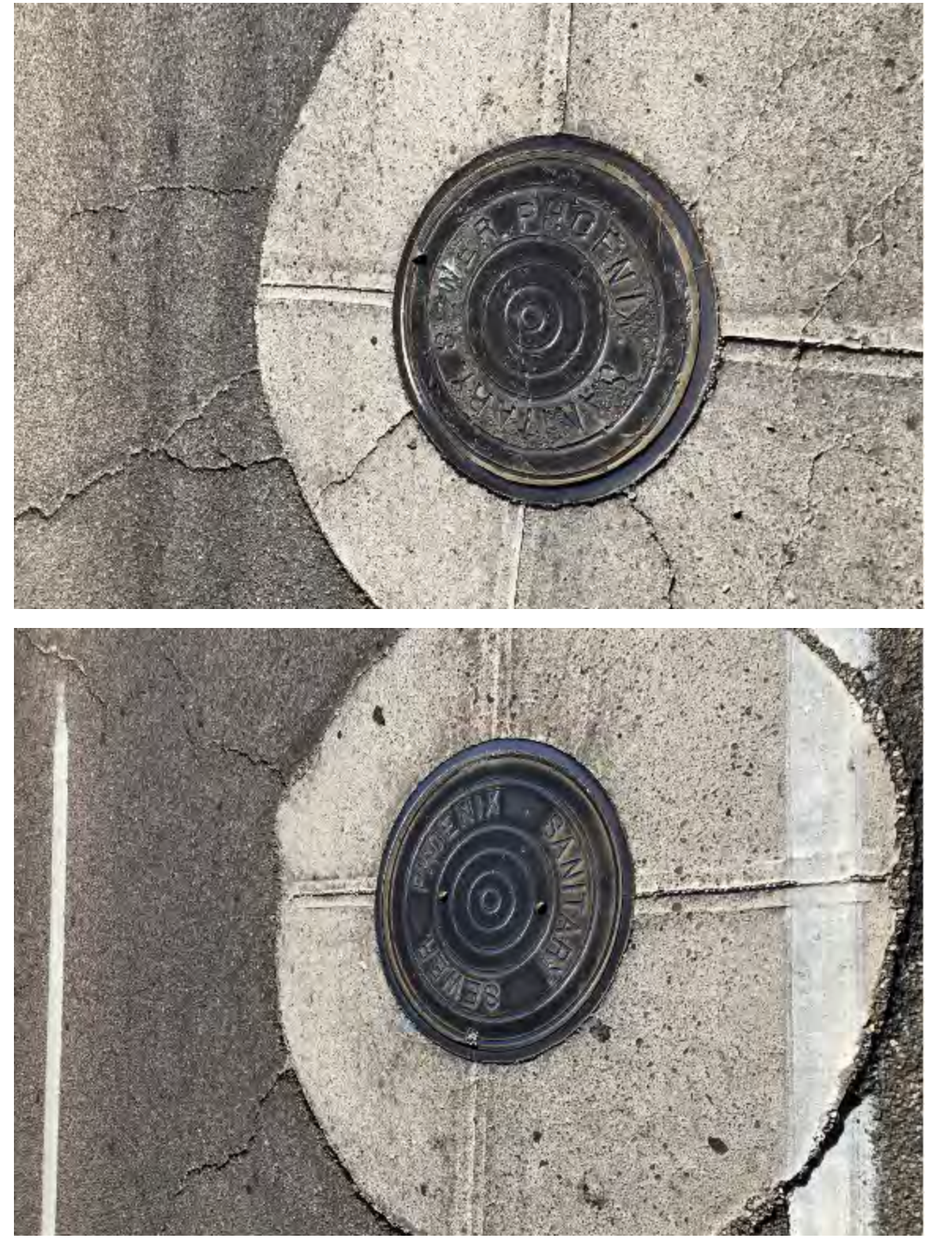


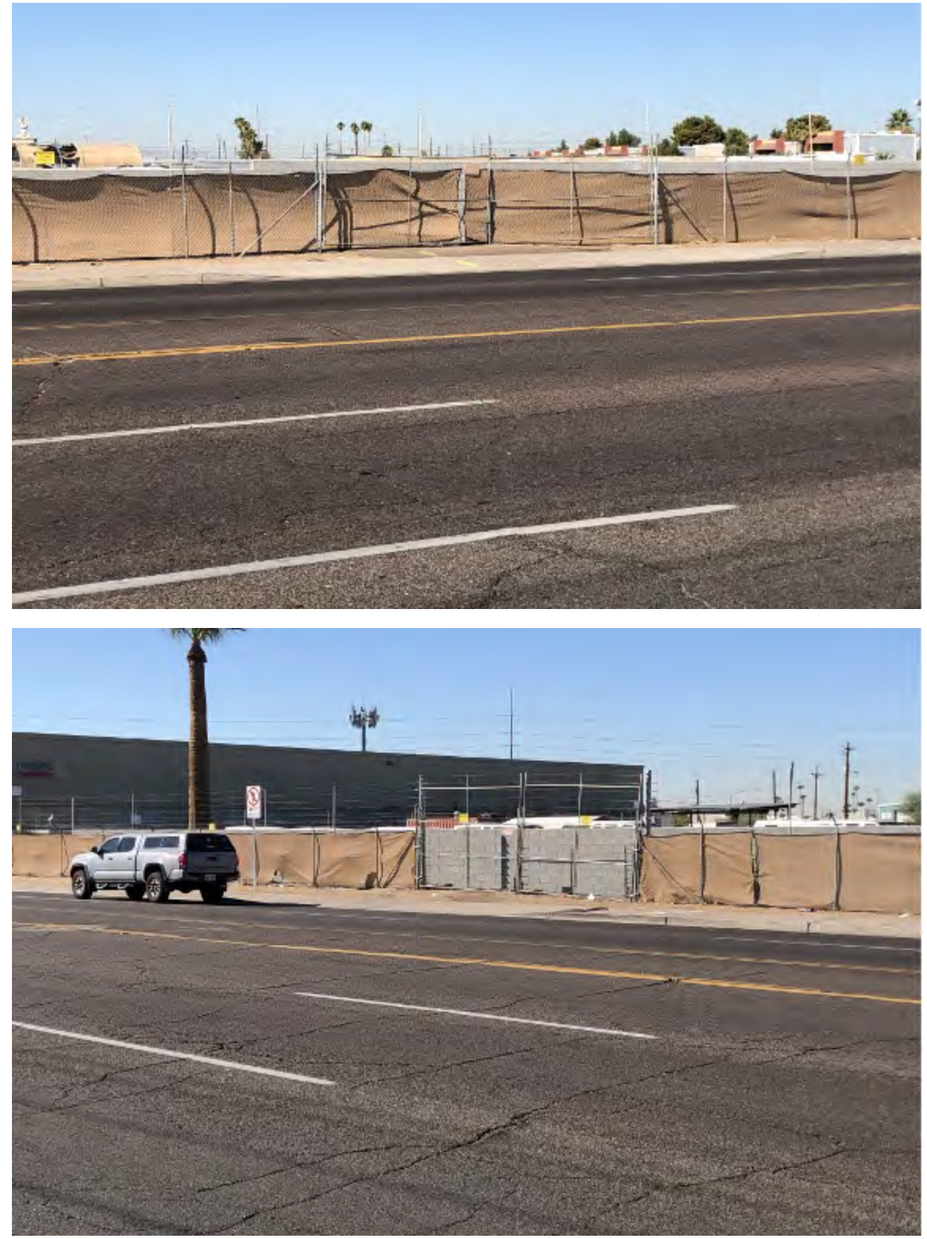


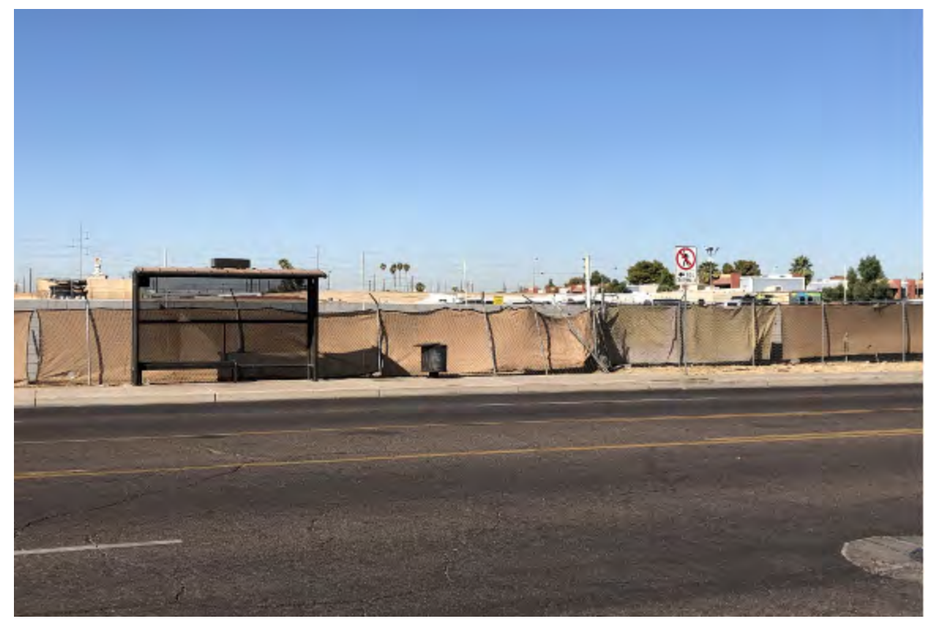
CENTER
LANE
ONLY
SPEED
LIMIT
40

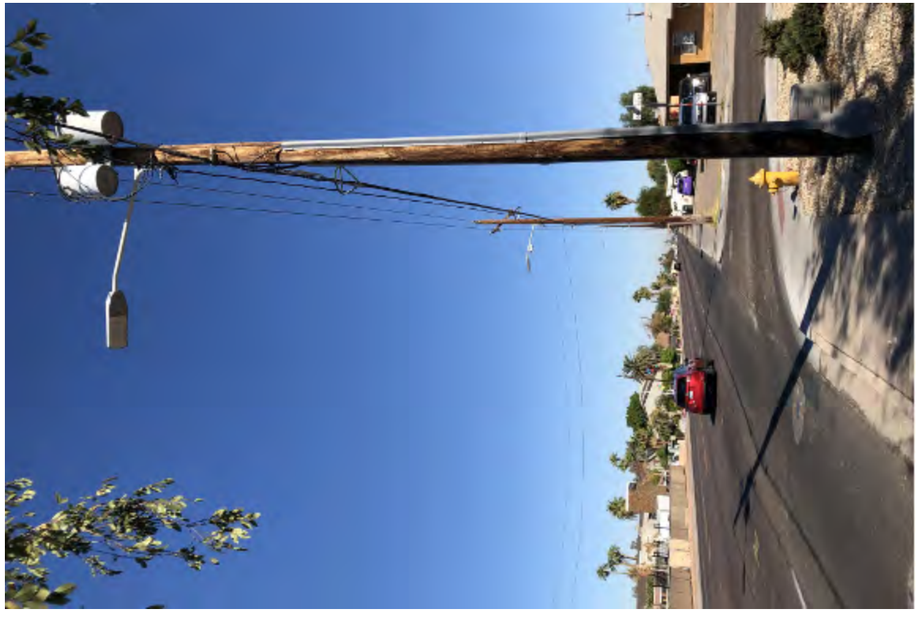
metro

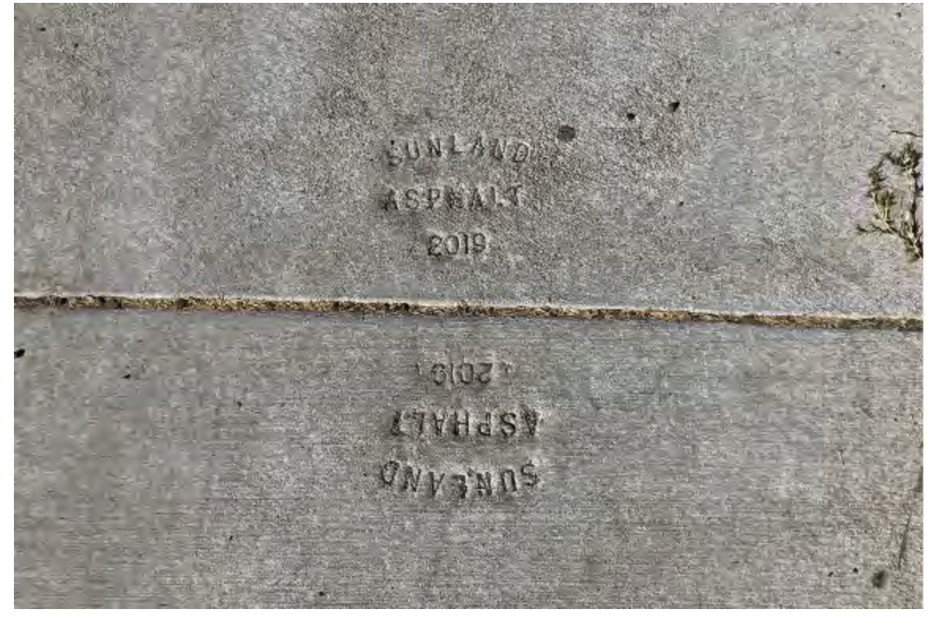
SANITARY SEWER
PHOENIX

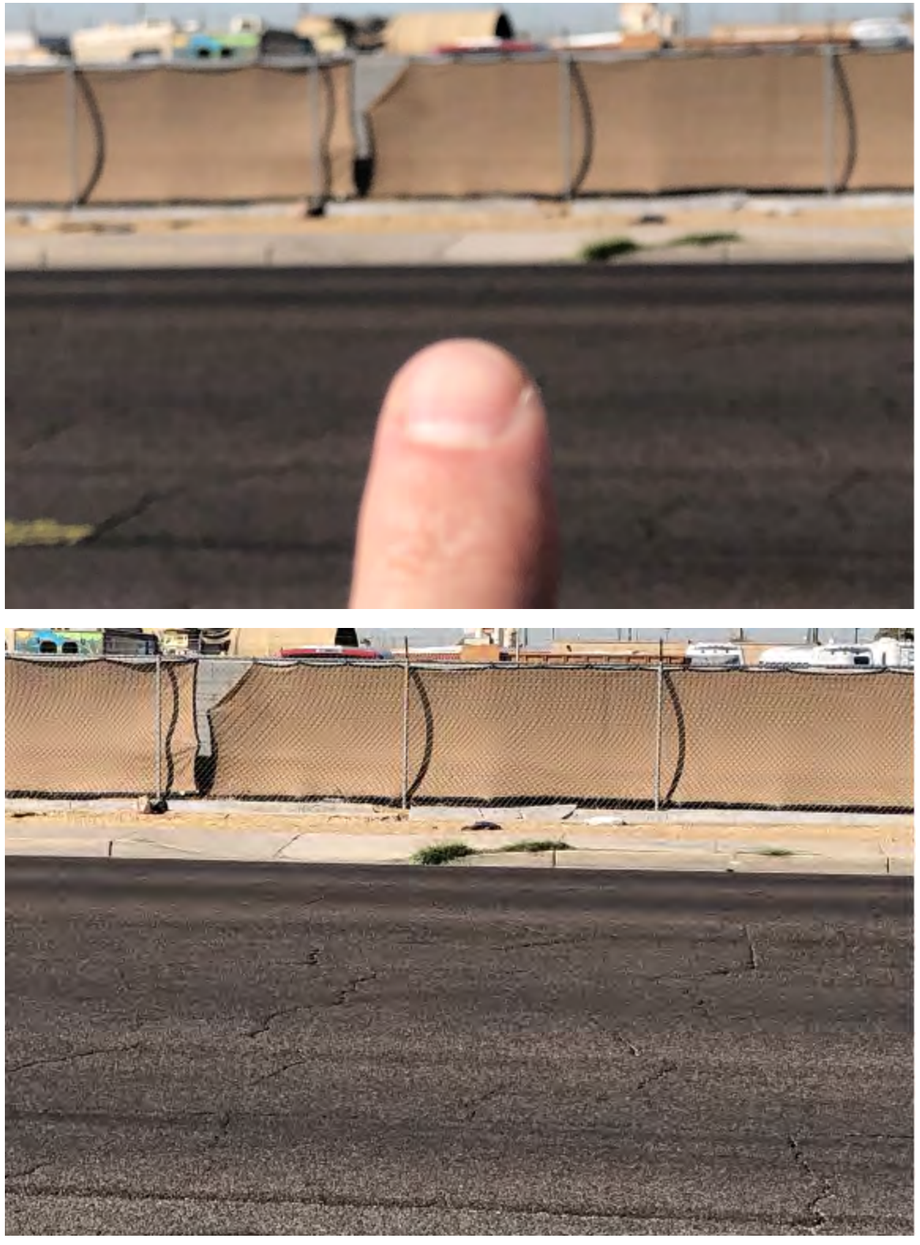

SANITARY SEWER
PHOENIX

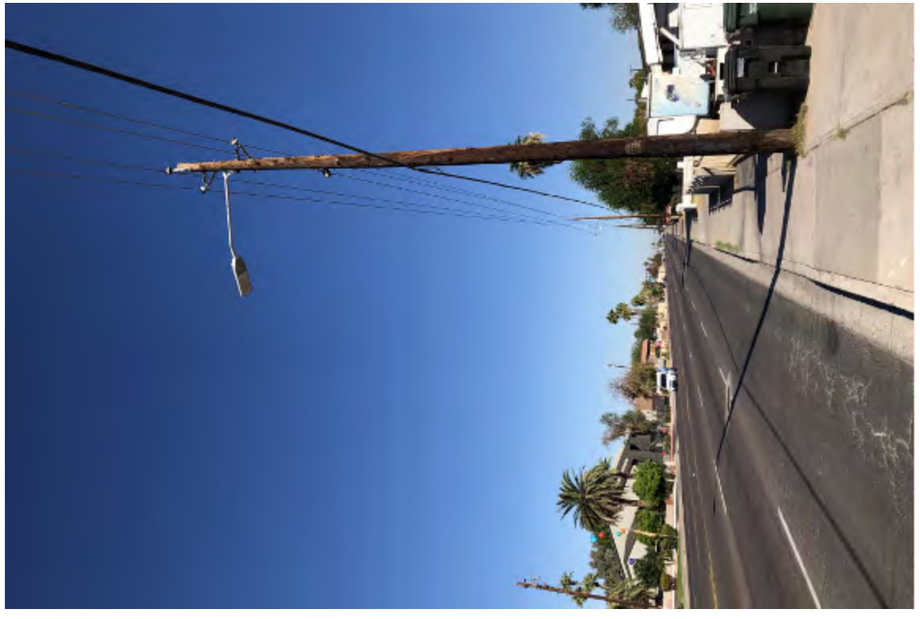






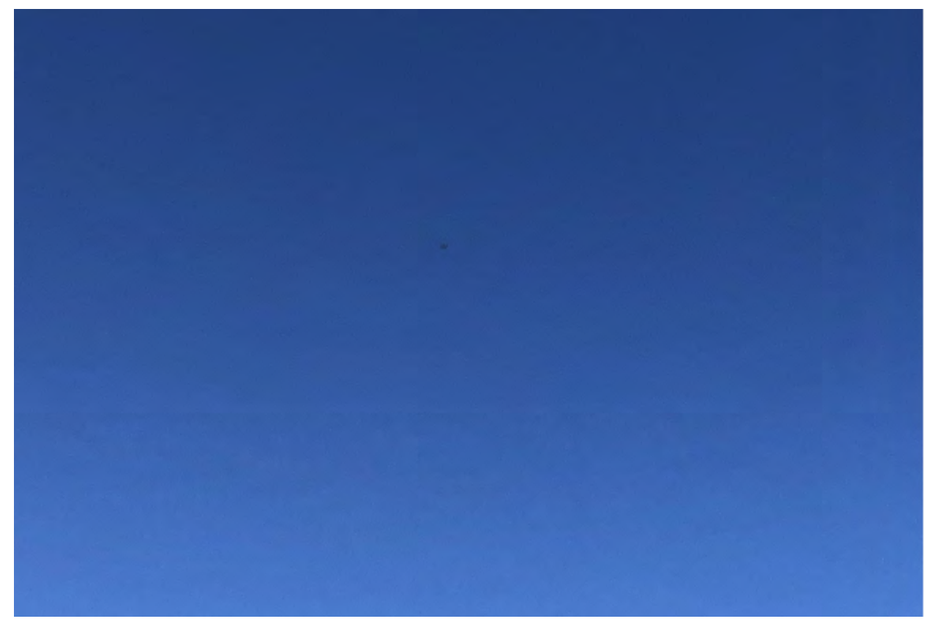

SUNLAND
ASPHALT
2019



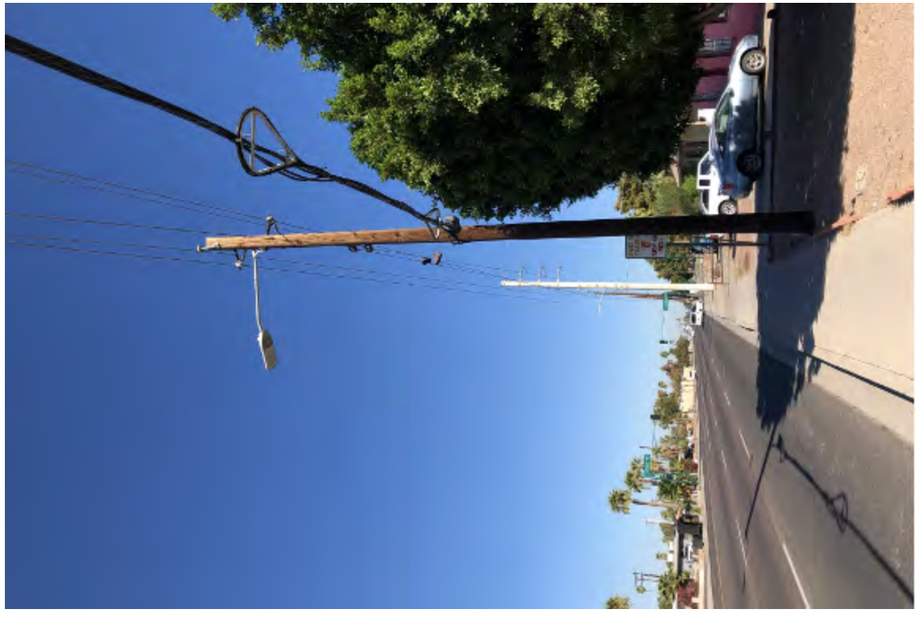


SANITARY
SEWER
PHOENIX

STOP



40



STOP ON
RED!

ERING

WARNING

TRAFFIC
SIGNAL

Campbell

TRAFFIC
SIGNAL

35th Ave.

SPEED
LIMIT
40

SALT
RIVER
POWER
ELECTRIC

PD0511
VA104
PD0511
5069783153 0lbs

VALENCIA

GRP
VALENCIA

SEWER

40

SPEED
LIMIT
40

Mariposa

PHO VINH LONG
LAUNDROMAT

BRAKE ON
YELLOW...
STOP ON
RED!

AUTO REPAIR

AUTO REPAIR

OPEN 24 HRS.
BREAKFAST ALL DAY

Chevron

Chevron

Chevron

OPEN 24 HR
BREAKFAST ALL D

TRAFFIC SIGNAL

35th Ave.
OPEN 24 HRS.
BREAKFAST ALL DAY

OPEN 24 HRS.

Camelback

TONY
WARRETE
WATSON

WATSON
TONY
WARRETE
STATE SENATE
WRITE IN
CARMONA
ADEL

Chevron

Camelback

Chevron
YOU MAKE STAND

Chevron

WARNING

Appendix B – 15% Conceptual Plans

PRELIMINARY 15% NOT FOR CONSTRUCTION OR RECORDING	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL	AS BUILT
	9	ARIZ.	ST89340634-1			
	T.Y. LIN INTERNATIONAL engineers | planners | scientists			T.Y.LIN INTERNATIONAL CONSULTING ENGINEER		
	DES: BP	DR: OG	CK: CSS	DATE: 2/21		

CITY OF PHOENIX
STREET TRANSPORTATION DEPARTMENT
PROGRAMMING AND PROJECT DELIVERY DIVISION
35TH AVENUE
I-10 TO CAMELBACK ROAD
ST89340634-1

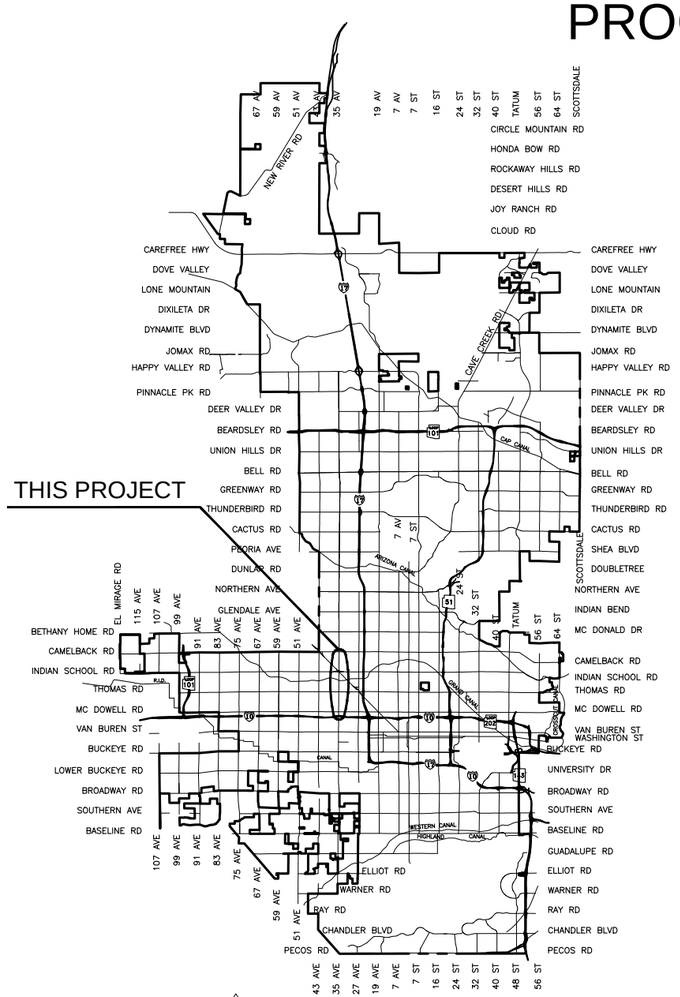
2021

MAYOR
KATE GALLEGO

CITY MANAGER
ED ZUERCHER

CITY COUNCIL

DISTRICT NO 1.	THELDA WILLIAMS
DISTRICT NO 2.	JIM WARING
DISTRICT NO 3.	DEBRA STARK
DISTRICT NO 4.	LAURA PASTOR
DISTRICT NO 5.	BETTY GARDADA
DISTRICT NO 6.	SAL DICICCIO
DISTRICT NO 7.	MICHAEL NOWAKOWSKI
DISTRICT NO 8.	CARLOS GARCIA



VICINITY MAP
NTS

APPROVED _____ _____
ASSISTANT STREET TRANSPORTATION DIRECTOR DATE

APPROVED _____ _____
DEPUTY STREET TRANSPORTATION DIRECTOR DATE

INDEX OF SHEETS

1	COVER SHEET
2	LEGEND AND NOTE SHEET
3	KEY MAP
4 - 15	PAVING SHEETS
16 - 27	SIGNAL SHEETS

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY & MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

PROJECT NUMBER: ST89340634-1 35TH AVENUE, I-10 TO CAMELBACK - FINAL DCR

35TH AVE

I-10 TO

CAMELBACK RD

LEGEND AND NOTES

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL	AS BUILT
9	ARIZ.	ST89340634-1			

T.Y. LIN INTERNATIONAL engineers | planners | scientists — T.Y.LIN INTERNATIONAL CONSULTING ENGINEER

DES: BP | DR: OG | CK: CSS | DATE: 2/21

PRELIMINARY

15%

NOT FOR CONSTRUCTION OR RECORDING

LEGEND

- BENCHMARK
- NEW SURVEY MONUMENT – M.A.G. DETAIL 120-1 TYPE "B"
- NEW SURVEY MONUMENT – M.A.G. DETAIL 120-1 TYPE "A"
- EXISTING SURVEY MONUMENT – M.A.G. DETAIL 120-1 TYPE "B"
- COMBINED CURB & GUTTER – M.A.G. DETAIL 220 TYPE "A"
- B 10 — BACKFILL TYPE & SQ. YD. PVMT. REPLACEMENT – C.O.P. DETAIL P1200
- EXISTING CONCRETE PAVEMENT OR SIDEWALK
- NEW CONCRETE SIDEWALK – STD. DETAIL P-1230
- NEW CONCRETE DRIVEWAY OR ALLEY ENT. PER DETAIL NO. ON PLANS
- NEW CONCRETE SIDEWALK RAMP PER DETAIL ON PLANS
- AVERAGE GROUND ELEVATION AT R/W LINE
- EXISTING DITCH
- 24" IRR (SRP) — EXISTING IRRIGATION LINE W/SIZE (NOTE PRIVATE, SALT RIVER OR R.I.D.)
- EXISTING IRRIGATION STRUCTURE
- EXISTING IRRIGATION STANDPIPE
- NEW IRRIGATION STANDPIPE – M.A.G. DETAIL 503
- NEW IRRIGATION VALVE – M.A.G. DETAIL 506 W/ CONC. SCOURING BASIN
- IRRIGATION BERM
- NEW IRRIGATION STRUCTURE PER DETAIL ON PLANS
- 12" DIP W — EXISTING WATER LINE W/SIZE & TYPE (12" AND SMALLER)
- 36" DIP W — EXISTING WATER LINE W/SIZE & TYPE (GREATER THAN 12")
- ADJUST EXIST. WATER VALVE BOX – C.O.P. DETAIL P1391
- 3/4" W — WATER SERVICE W/SIZE AND WATER METER BOX
- EXISTING FIRE HYDRANT
- NEW OR RELOCATED FIRE HYDRANT BY CONTRACTOR
- T.N.= — EXISTING WATER VALVE W/TOP OF OPERATING NUT ELEVATION
- 8" VCP S — EXISTING SANITARY SEWER LINE W/SIZE & TYPE (12" AND SMALLER)
- 30" VCP S — EXISTING SANITARY SEWER LINE W/SIZE & TYPE (GREATER THAN 12")
- EXISTING MANHOLE
- M — NEW MANHOLE
- CATCH BASIN, GUTTER INLET (LENGTH TO SCALE)
- CATCH BASIN, CURB INLET (LENGTH TO SCALE)
- CATCH BASIN, CURB & GUTTER INLET (LENGTH TO SCALE)
- 30" SD (RCP) — EXISTING STORM DRAIN LINE W/SIZE & TYPE (GREATER THAN 12")
- NEW PIPE FOR STORM DRAIN OR IRRIGATION LINE
- 4"G — EXISTING GAS LINE W/SIZE
- E — EXISTING UNDERGROUND ELECTRIC CABLE OR SINGLE CONDUIT
- E-4D — EXISTING UNDERGROUND ELECTRIC DUCT (SPECIFY NUMBER)
- T — EXISTING TELEPHONE BURIED CABLE OR SINGLE CONDUIT
- T-4D — EXISTING UNDERGROUND TELEPHONE DUCT (SPECIFY NUMBER)
- CATV — EXISTING UNDERGROUND CABLE TV
- FO — EXISTING UNDERGROUND FIBER OPTIC LINE
- EXISTING TRAFFIC SIGNAL POLE W/MAST ARM & SIGNAL INDICATIONS
- NEW TRAFFIC SIGNAL POLE W/MAST ARM & SIGNAL INDICATIONS
- EXISTING STREET OR TRAFFIC SIGN
- EXISTING UTILITY POLE W/LINE INDICATING WIRE DIRECTION
- EXISTING WIRE FENCE
- EXISTING BLOCK FENCE
- EXISTING WOOD FENCE
- MAIL BOX
- EXISTING POWER POLE DOWN GUY ANCHOR
- EXISTING STREET LIGHT & POLE
- EXISTING TREE OR STUMP TO BE REMOVED – MORE THAN 12" DIA.
- EXISTING TREE TO BE TRANSPLANTED BY CONTRACTOR
- EASEMENT LINE
- EXISTING OR NEW R/W LINE
- PAVEMENT CENTER LINE OR MONUMENT LINE
- EXISTING TREE TO BE REMOVED (NON PAY ITEM)
- EXISTING TREE TO REMAIN

NOTES

ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH CONTRACT SPECIAL PROVISIONS AND DETAILS, CITY OF PHOENIX SUPPLEMENTS TO MAG STANDARD SPECIFICATIONS AND DETAILS, AND MAG STANDARD SPECIFICATIONS AND DETAILS, IN THAT ORDER OF PRECEDENCE, AT THE TIME OF CONSTUCTION BID.

ALL STORM SEWER MANHOLES ARE TO BE CONSTRUCTED WITHOUT STEPS.

PIPE CONNECTIONS TO EXISTING CONCRETE PIPE MAINS SHALL BE MADE IN ACCORDANCE WITH DETAILS CALLED OUT ON THE PLANS. CONNECTION TO MAINS SHALL NOT BE CLOSER THAN 5', CENTER TO CENTER.

PIPE CONNECTIONS TO NEW PRECAST CONCRETE PIPE MAINS, SHALL BE MADE WITH FACTORY MADE WYES OR TEES. THE DETAIL OF THE FITTINGS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO MANUFACTURE. PIPE CONNECTIONS TO NEW CAST IN PLACE CONCRETE PIPE MAINS SHALL BE MADE PER C.O.P. DETAIL P-1576.

CATCH BASIN CONNECTOR PIPES SHALL BE LAID ON A STRAIGHT ALIGNMENT AND SLOPE UNLESS OTHERWISE SPECIFIED. IF BREAKS IN ALIGNMENT OR SLOPE ARE NECESSARY TO MEET FIELD CONDITIONS. THE MAXIMUM DEFLECTION SHALL BE 22-1/2 . THE BEND SHALL BE COLLARED ACCORDING TO M.A.G. DETAIL 505. ANY ANGLE BENDS GREATER THAN 22-1/2 SHALL BE PREFABRICATED.

CONNECTOR PIPES SHALL CONNECT TO CATCH BASIN WALLS AT AN ANGLE NOT TO EXCEED 22-1/2 FROM PERPENDICULAR.

FACILITIES WHICH ARE NOT SPECIFICALLY LOCATED WITH ACTUAL VERTICAL AND HORIZONTAL CONTROLS, ARE LOCATED ONLY APPROXIMATELY AND TO THE BEST AVAILABLE INFORMATION PROVIDED BY VARIOUS OWNERS OF THE FACILITIES, AND SUPPLEMENTED BY VISUAL SURFACE INFORMATION WHERE APPROPRIATE. ACCURACY, LOCATION AND COMPLETENESS OF THIS INFORMATION SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO INITIATION OF CONSTRUCTION.

TWO WORKING DAYS BEFORE CONSTRUCTION, THE CONTRACTOR SHALL CONTACT BLUESTAKE TO FIND AND FLAG UNDERGROUND UTILITIES. THE CONTRACTOR SHALL CONTACT OTHER APPROPRIATE UTILITIES DIRECTLY IF THEY ARE NOT ON BLUESTAKE SYSTEM.

VERTICAL CONTROL IS BASED ON PHOENIX DATUM NGVD-29

UNLESS OTHERWISE NOTED, STATIONS SHOWN ON PIPE PROFILES ARE ALONG CENTERLINE OF PIPE.

UNLESS OTHERWISE NOTED, PIPE SHALL BE BEDDED IN ACCORDANCE WITH CITY OF PHOENIX DETAIL P1200.

CATCH BASINS ARE STATIONED PERPENDICULAR TO THE CENTERLINE OF THE STREET AT THE CENTERLINE OF THE MAINTENANCE BASIN.

SANITARY SEWER MAINS AND TAPS CROSSING OVER STORM DRAIN MAINS SHALL BE SUPPORTED PER M.A.G. DETAIL 403-1, 403-2, OR 403-3.

ALL EXISTING PRECAST CONCRETE SAFETY CURBS AND ALL EXISTING WOODEN PARKING CURBS, WHICH ARE INSIDE THE RIGHT OF WAY AND APPROXIMATELY PARALLEL TO THE NEW CURB LINE, SHALL BE RESET ON THE RIGHT OF WAY DIRECTLY OPPOSITE THEIR EXISTING LOCATION, WITH THE BACK EDGE ON THE RIGHT OF WAY LINE. ALL OTHER PRECAST CONCRETE SAFETY CURBS INSIDE THE STREET RIGHT OF WAY SHALL BE SALVAGED AND STOCK PILED FOR THE OWNER AT THE RIGHT OF WAY LINE.

EXISTING PRECAST CONCRETE SAFETY CURBS OUTSIDE THE RIGHT OF WAY, WHICH ARE DISTURBED BY NEW CONSTRUCTION SHALL BE RESET IN THEIR ORIGINAL POSITION BY THE CONTRACTOR.

ALL EXISTING DRIVEWAYS AND ALL EXISTING ALLEYS SHALL BE GRADED TO MATCH THE NEW WORK IN ACCORDANCE WITH STD. DETAIL P-1164, UNLESS OTHERWISE SPECIFIED. EXISTING SURFACING SHALL BE REMOVED AND REPLACED AS NECESSARY.

UNLESS OTHERWISE PROVIDED ON THE PLANS, EXISTING A.C. OR P.C.C. DRIVEWAYS AND SIDEWALKS WHICH FALL WITHIN OR ABUT THE RIGHT OF WAY SHALL BE CONNECTED TO THE NEW WORK AS FOLLOWS:

THE SPACE BETWEEN THE BACK OF NEW DRIVEWAY ENTRANCES AND EXISTING A.C. DRIVEWAYS SHALL BE FILLED WITH A MINIMUM OF 3" A.C.S.C. ON 100% COMPACTED NATIVE SOIL. WHERE EXISTING PAVEMENT AND BASE THICKNESS EXCEED THE MINIMUMS, MATCH THE EXISTING.

THE SPACE BETWEEN THE BACK OF NEW SIDEWALKS AND EXISTING PRIVATE SIDEWALKS, AND THE SPACE BETWEEN THE BACK OF NEW DRIVEWAY ENTRANCES AND EXISTING P.C.C. DRIVEWAYS SHALL BE FILLED WITH P.C.C.. THE THICKNESS AND CLASS SHALL MATCH THAT OF THE NEW SIDEWALK OR DRIVEWAY ENTRANCE.

UNLESS OTHERWISE PROVIDED ON THE PLANS, THE SPACE BETWEEN THE BACK OF THE NEW SIDEWALKS, AND EXISTING A.C. PARKING LOTS, WHICH FALL WITHIN OR ABUT THE R/W SHALL BE FILLED WITH 2" A.C.S.C. ON 100% COMPACTED NATIVE SOIL.

EXISTING IRRIGATION BERMS DISTURBED BY NEW CONSTRUCTION SHALL BE RECONSTRUCTED AS SHOWN ON PLANS.

M.A.G. ALLEY ENTRANCE DETAILS 260, 261, 262 AND 263, WHICH ARE INDICATED TO BE MODIFIED ON THESE PLANS SHALL BE CONSTRUCTED ACCORDING TO THE DETAIL NUMBER EXCEPT THAT THE SLAB SHALL BE 9" THICK. DRIVEWAYS DESIGNATED ON THE PLANS AS M.A.G. DETAILS 250 AND 251 SHALL BE RESIDENTIAL DRIVEWAYS 5" THICK. ALL OTHER DRIVEWAYS SHALL BE CITY OF PHOENIX DETAILS P1255.

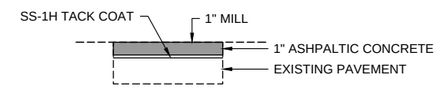
CATCH BASIN ACCESS FRAME AND COVERS SHALL BE CONSTRUCTED PER C.O.P. DETAIL P1561.

STRUCTURAL NOTES

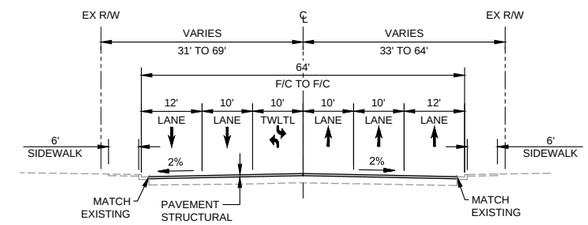
"CLEAR" DIMENSIONS FOR DEPTH OF REINFORCING STEEL ARE FROM FACE OF CONCRETE TO FACE OF BARS.

ALL EXPOSED EDGES OF CONCRETE SHALL BE BEVELED OR ROUNDED.

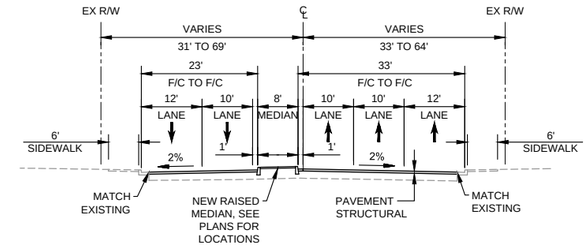
ALL EXPOSED CONCRETE SURFACES SHALL BE FINISHED IN ACCORDANCE WITH ARIZONA DEPT. OF TRANSPORTATION STANDARD SPECIFICATION 601-3.05 – FINISHING FORMED CONCRETE, UNLESS OTHERWISE SPECIFIED.



ROADWAY - PAVEMENT STRUCTURAL SECTION
NTS



TYPICAL SECTION
NTS



TYPICAL SECTION W/MEDIAN
NTS

Call at least two full working days before you begin excavation.
ARIZONA 811 Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

- LED Luminaire – 5
- Pedestrian Head – 6
- Pedestrian Push Button – 6
- Illuminated Street Sign – 4
- EPV Device – 4
- CCTV Camera – 1
- Wireless Radio –1
- Video Detection – 4

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ELEVATIONS FOR ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS.

"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX."

LEGEND AND NOTES

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD
ST89340634-1

DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS	AS BUILT
DATE: 2/21	DATE: 2/21	DATE: 2/21			
SCALE: N.T.S. 1"=60' H			2	27	

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE

TY Lin Half Scale.ctb
Omar Gloria
7/15/2021 5:26:21 PM
T:\Tempe\Projects\21053\06600_CADD\05_Official\Sheets\ST89340634-1_GENERAL NOTES.dwg

35TH AVE
I-10 TO
CAMELBACK RD

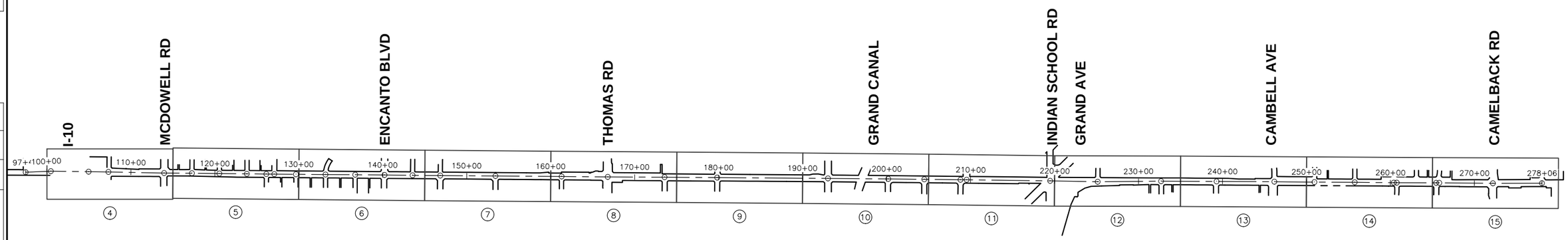
F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL	AS BUILT
9	ARIZ.	ST89340634-1			

T.Y. LIN INTERNATIONAL engineers | planners | scientists
T.Y.LIN INTERNATIONAL CONSULTING ENGINEER

DES: BP	DR: OG	CK: CSS	DATE: 2/21

PRELIMINARY
15%
NOT FOR CONSTRUCTION OR RECORDING

City of Phoenix
N



35TH AVENUE

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

600 0 600 1200 1800
SCALE: 1" = 600'

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ELEVATIONS FOR ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS.

"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX."

KEYMAP

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD
ST89340634-1

DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS	AS BUILT
DATE:2/21	DATE: 2/21	DATE: 2/21			
SCALE:	1"=600' H		3	27	

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE

T:\Tempe\Projects\221953.06\600_CADD\05_Official\Sheets\ST89340634-1_KEYMAP.dwg
2/25/2021 3:17:17 PM Omar Gloria TY Lin Half Scale.ctb

35TH AVE
I-10 TO
CAMELBACK RD

PRELIMINARY
15%
NOT FOR CONSTRUCTION OR RECORDING

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL	AS BUILT
9	ARIZ.	ST89340634-1			

T.Y. LIN INTERNATIONAL engineers | planners | scientists — T.Y.LIN INTERNATIONAL CONSULTING ENGINEER

DES: BP | DR: OG | CK: CSS | DATE: 2/21

REVISION BY CITY OF PHOENIX

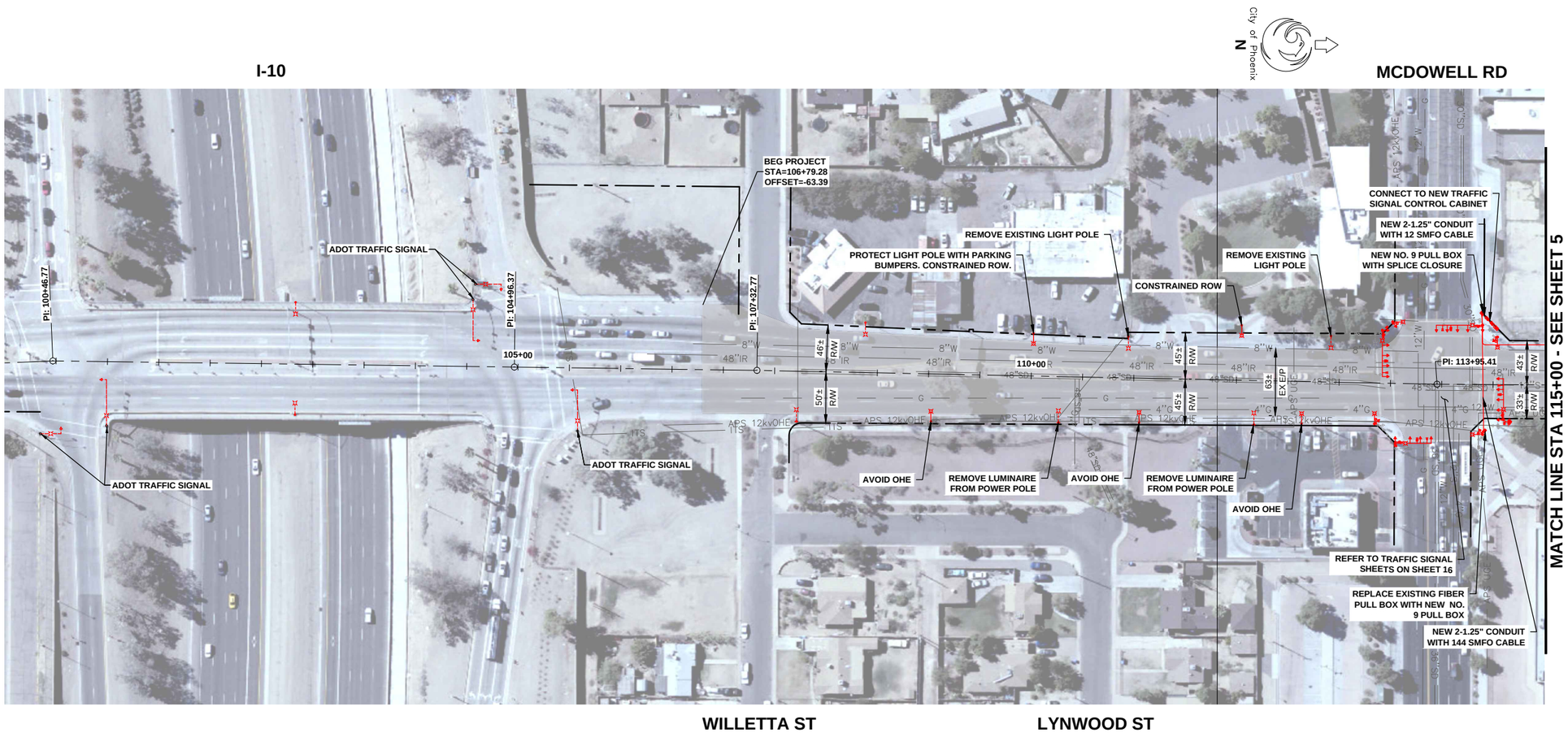
NO.	DESCRIPTION	REV BY	CKD BY	DATE

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE



Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

60 0 60 120 180
SCALE: 1" = 60'

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ELEVATIONS FOR ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS.

"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX."

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD
ST89340634-1

DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS	AS BUILT
DATE:2/21	DATE: 2/21	DATE: 2/21			
SCALE: 1"=60' H			4	27	

T:\Tempe\Projects\21853.06\600_CADD\05_Official\Sheets\ST89340634-1_ROADWAY.dwg
7/15/2021 2:05:34 PM Omar Gloria TY Lin Half Scale.ctb

35TH AVE
I-10 TO
CAMELBACK RD

PRELIMINARY
15%
NOT FOR CONSTRUCTION OR RECORDING

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL	AS BUILT
9	ARIZ.	ST89340634-1			

T.Y. LIN INTERNATIONAL engineers | planners | scientists — T.Y.LIN INTERNATIONAL CONSULTING ENGINEER

DES: BP | DR: OG | CK: CSS | DATE: 2/21

REVISION BY CITY OF PHOENIX

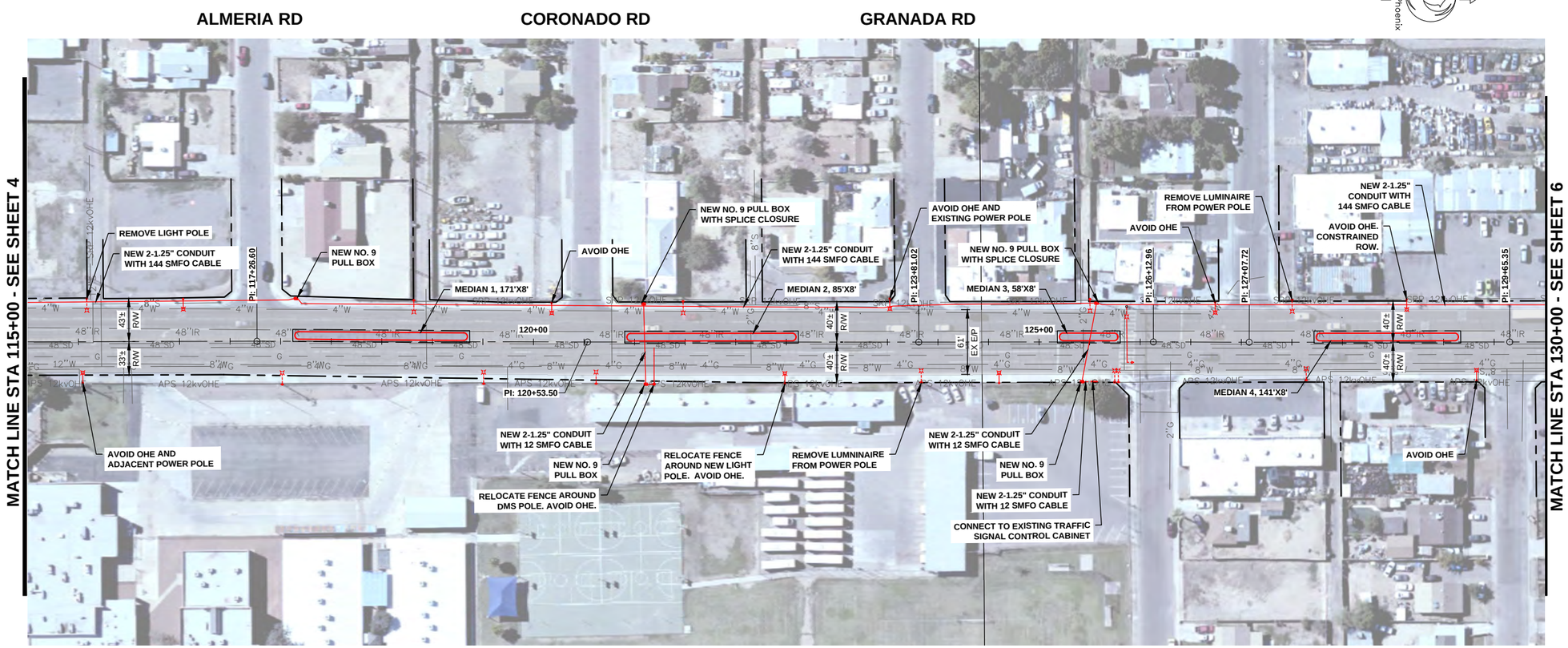
NO.	DESCRIPTION	REV BY	CKD BY	DATE

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE



City of Phoenix N

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

60 0 60 120 180
SCALE: 1" = 60'

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ELEVATIONS FOR ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS.

"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX."

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD
ST89340634-1

DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS	AS BUILT
DATE: 2/21	DATE: 2/21	DATE: 2/21			
SCALE: 1"=60' H			5	27	

T:\Tempe\Projects\221853.00\600_CAD\D05_Official\Sheets\ST89340634-1_ROADWAY.dwg
7/15/2021 2:05:41 PM Omar Gloria TY Lin Half Scale.ctb

35TH AVE
I-10 TO
CAMELBACK RD

PRELIMINARY
15%
NOT FOR CONSTRUCTION OR RECORDING

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL	AS BUILT
9	ARIZ.	ST89340634-1			

T.Y. LIN INTERNATIONAL engineers | planners | scientists — T.Y.LIN INTERNATIONAL CONSULTING ENGINEER

DES: BP	DR: OG	CK: CSS	DATE: 2/21

REVISION BY CITY OF PHOENIX

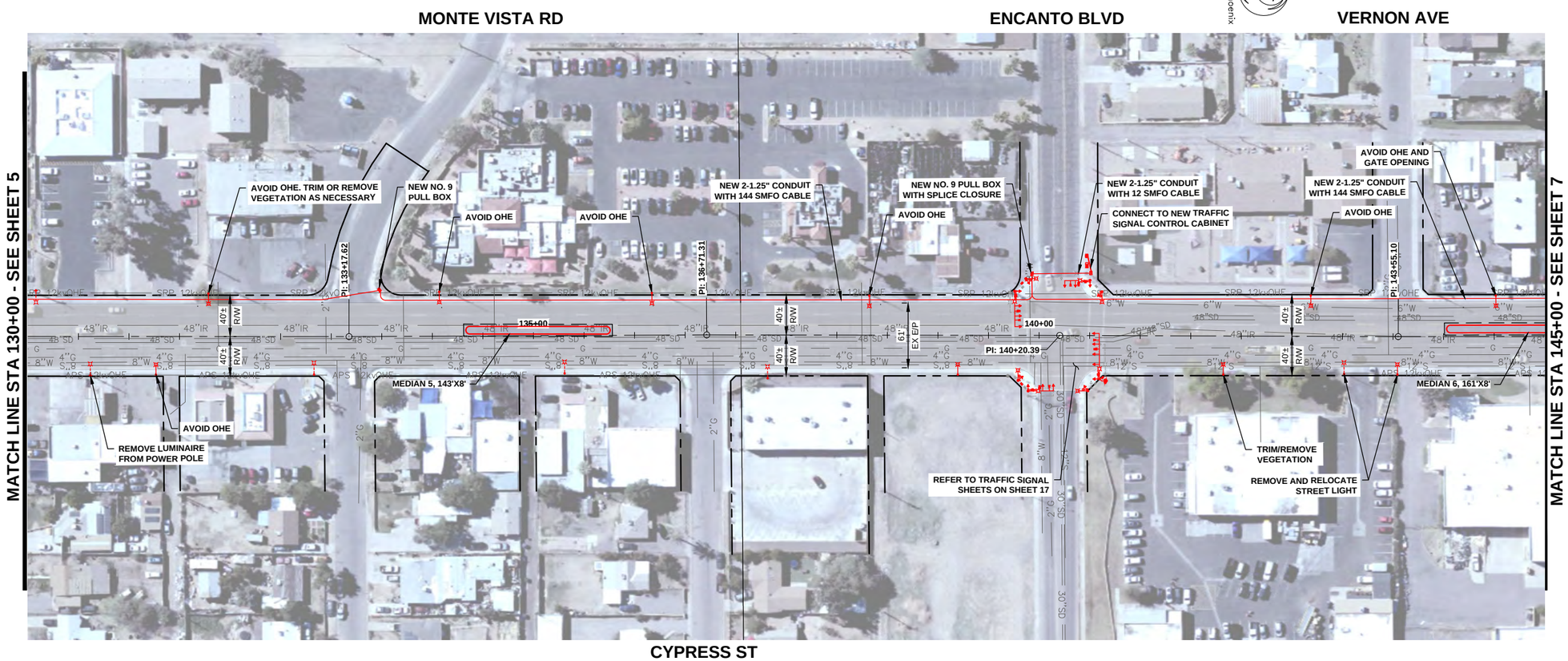
NO.	DESCRIPTION	REV BY	CKD BY	DATE

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE



Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

60 0 60 120 180
SCALE: 1" = 60'

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ELEVATIONS FOR ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS.

"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX."

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD
ST89340634-1

DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS	AS BUILT
DATE:2/21	DATE: 2/21	DATE: 2/21			
SCALE:	1"=60' H		6	27	

T:\Tempe\Projects\22\1953.001\00_CAD\05_Official\Sheets\ST89340634-1_ROADWAY.dwg
7/15/2021 2:05:46 PM
Omar Gloria
TY Lin Half Scale.ctb

35TH AVE
I-10 TO
CAMELBACK RD

PRELIMINARY
15%
NOT FOR CONSTRUCTION OR RECORDING

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL	AS BUILT
9	ARIZ.	ST89340634-1			

T.Y. LIN INTERNATIONAL engineers | planners | scientists — T.Y.LIN INTERNATIONAL CONSULTING ENGINEER

DES: BP	DR: OG	CK: CSS	DATE: 2/21

REVISION BY CITY OF PHOENIX

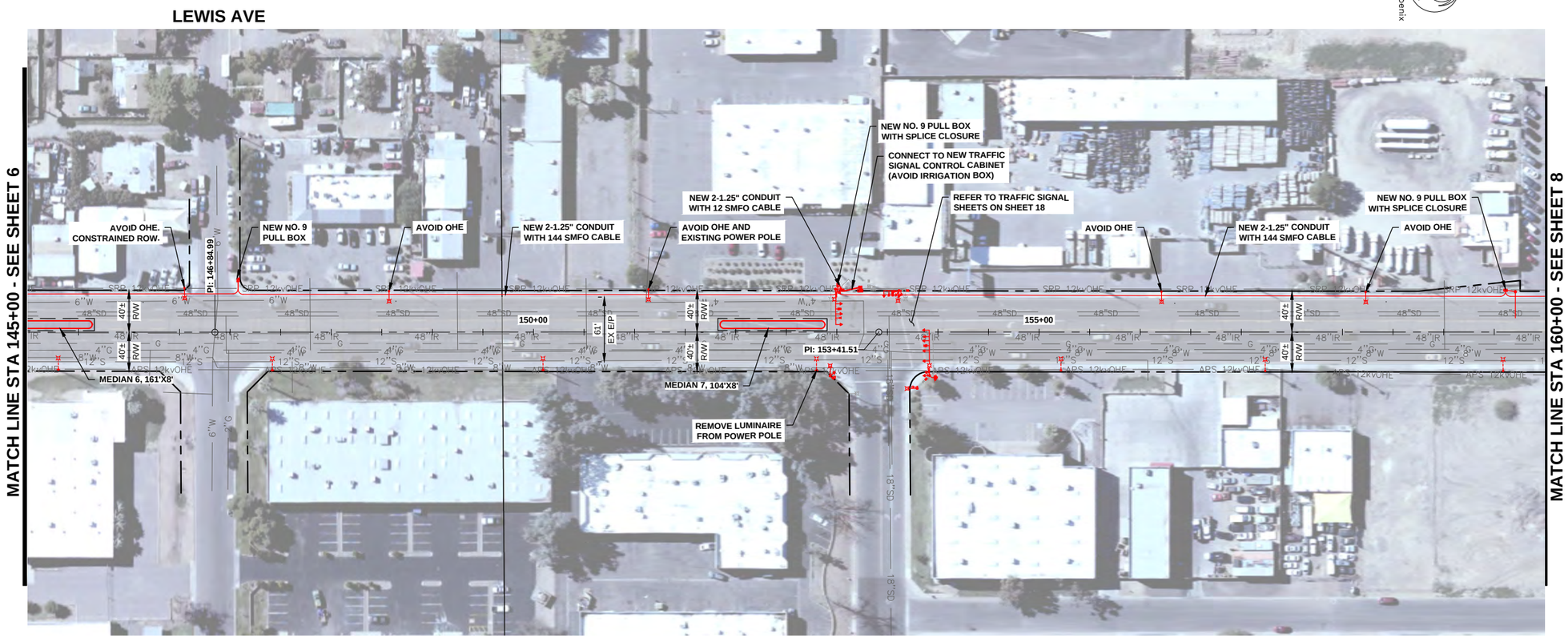
NO.	DESCRIPTION	REV BY	CKD BY	DATE

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE



Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

60 0 60 120 180
SCALE: 1" = 60'

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ELEVATIONS FOR ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS.

"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX."

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD
ST89340634-1

DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS	AS BUILT
DATE: 2/21	DATE: 2/21	DATE: 2/21			
SCALE: 1"=60' H			7	27	

T:\Tempe\Projects\21853.06\600_CADD\05_Official\Sheets\ST89340634-1_ROADWAY.dwg
7/15/2021 2:05:56 PM
Omar Gloria
TY Lin Half Scale.ctb

35TH AVE
I-10 TO
CAMELBACK RD

PRELIMINARY
15%
NOT FOR CONSTRUCTION OR RECORDING

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL	AS BUILT
9	ARIZ.	ST89340634-1			

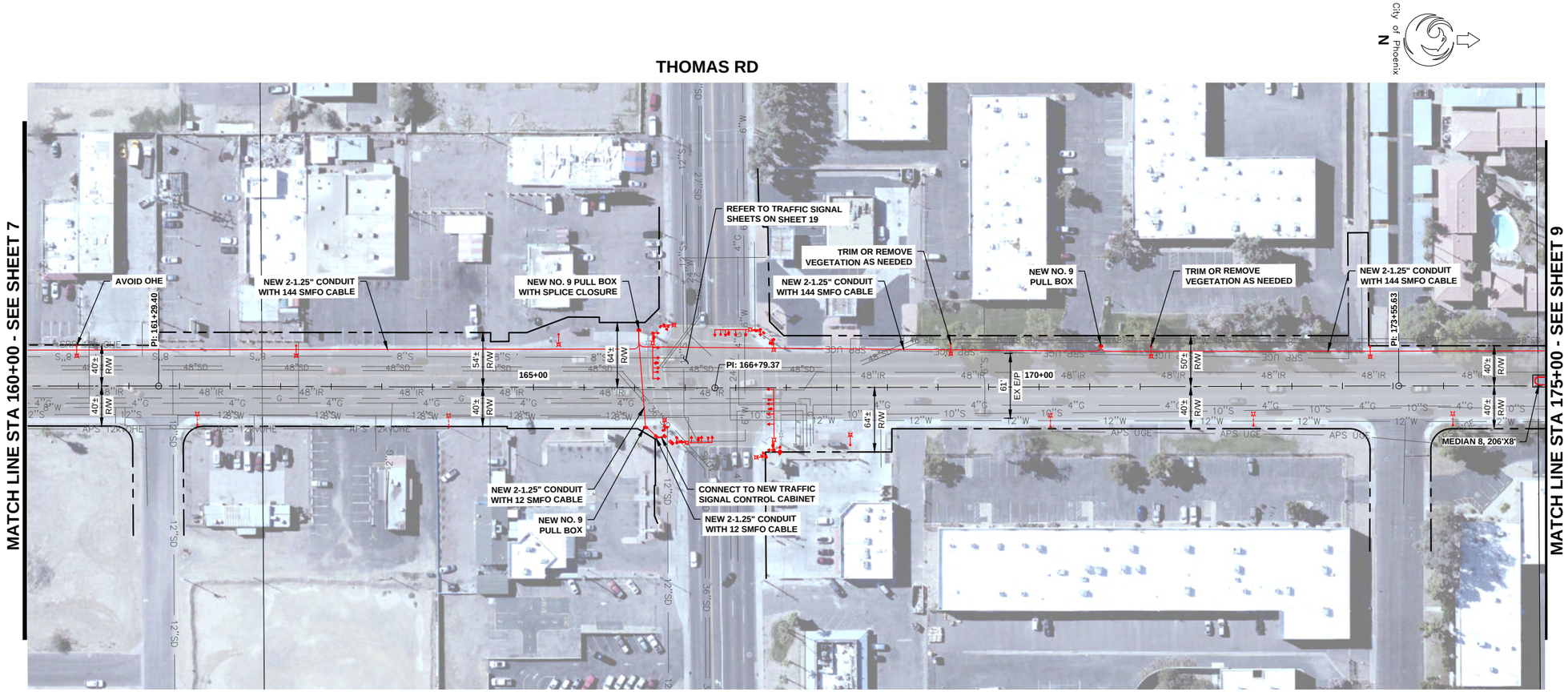
T.Y. LIN INTERNATIONAL engineers | planners | scientists — T.Y.LIN INTERNATIONAL CONSULTING ENGINEER

DES: BP	DR: OG	CK: CSS	DATE: 2/21

REVISION BY CITY OF PHOENIX					
NO.	DESCRIPTION	REV BY	CKD BY	DATE	

REVISION BY CITY OF PHOENIX					
NO.	DESCRIPTION	REV BY	CKD BY	DATE	

REVISION BY CITY OF PHOENIX					
NO.	DESCRIPTION	REV BY	CKD BY	DATE	



Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

60 0 60 120 180
SCALE: 1" = 60'

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ELEVATIONS FOR ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS.

"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28. THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX."

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD
ST89340634-1

DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS	AS BUILT
DATE:2/21	DATE: 2/21	DATE: 2/21			
SCALE:	1"=60' H		8	27	

T:\Tempe\Projects\221853.00\600_CADD\05_Official\Sheets\ST89340634-1_ROADWAY.dwg
7/15/2021 2:06:06 PM Omar Gloria TY Lin Half Scale.ctb

35TH AVE
I-10 TO
CAMELBACK RD

PRELIMINARY
15%
NOT FOR CONSTRUCTION OR RECORDING

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL	AS BUILT
9	ARIZ.	ST89340634-1			

T.Y. LIN INTERNATIONAL engineers | planners | scientists — T.Y.LIN INTERNATIONAL CONSULTING ENGINEER

DES: BP	DR: OG	CK: CSS	DATE: 2/21

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE

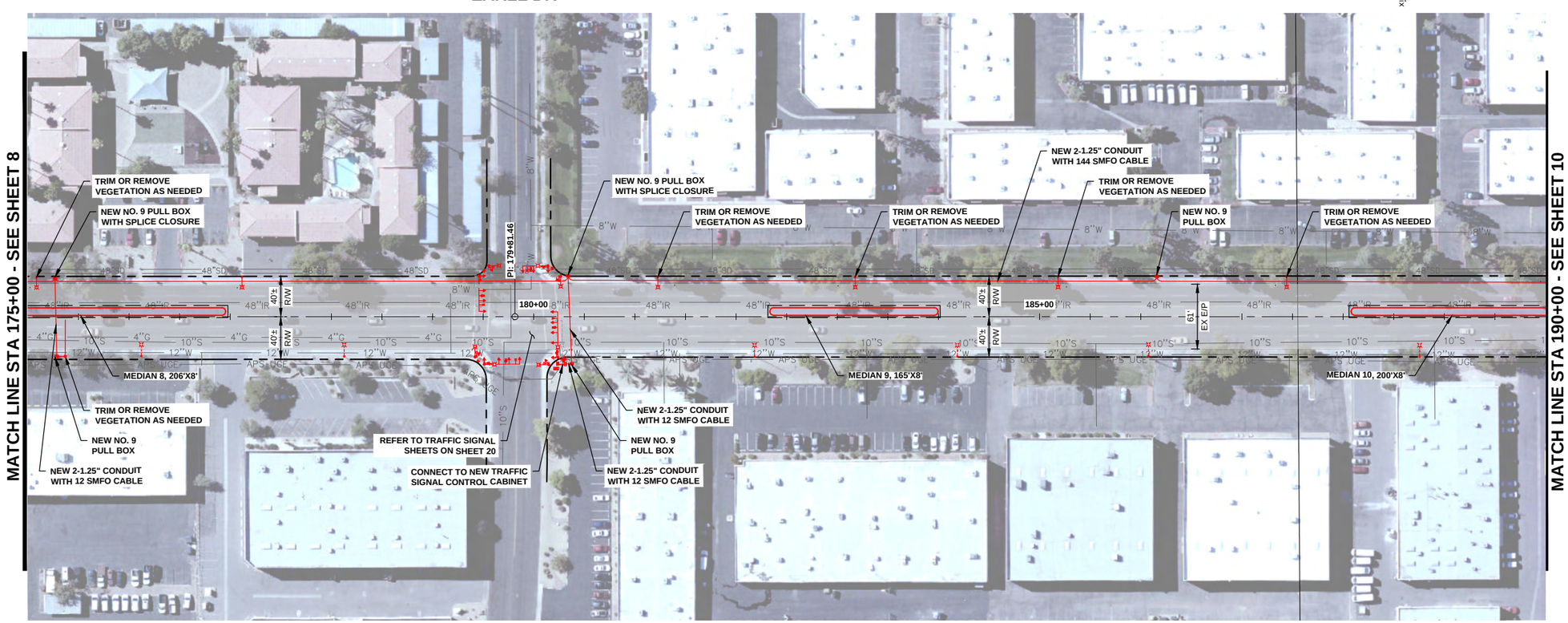
REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE

EARLL DR



35TH AVE

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

60 0 60 120 180
SCALE: 1" = 60'

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ELEVATIONS FOR ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS.

"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX."

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD
ST89340634-1

DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS	AS BUILT
DATE:2/21	DATE: 2/21	DATE: 2/21			
SCALE:	1"=60' H		9	27	

T:\Tempe\Projects\21853.06600_CADD\05_Official\Sheets\ST89340634-1_ROADWAY.dwg
7/15/2021 2:06:46 PM Omar Gloria TY Lin Half Scale.ctb

35TH AVE
I-10 TO
CAMELBACK RD

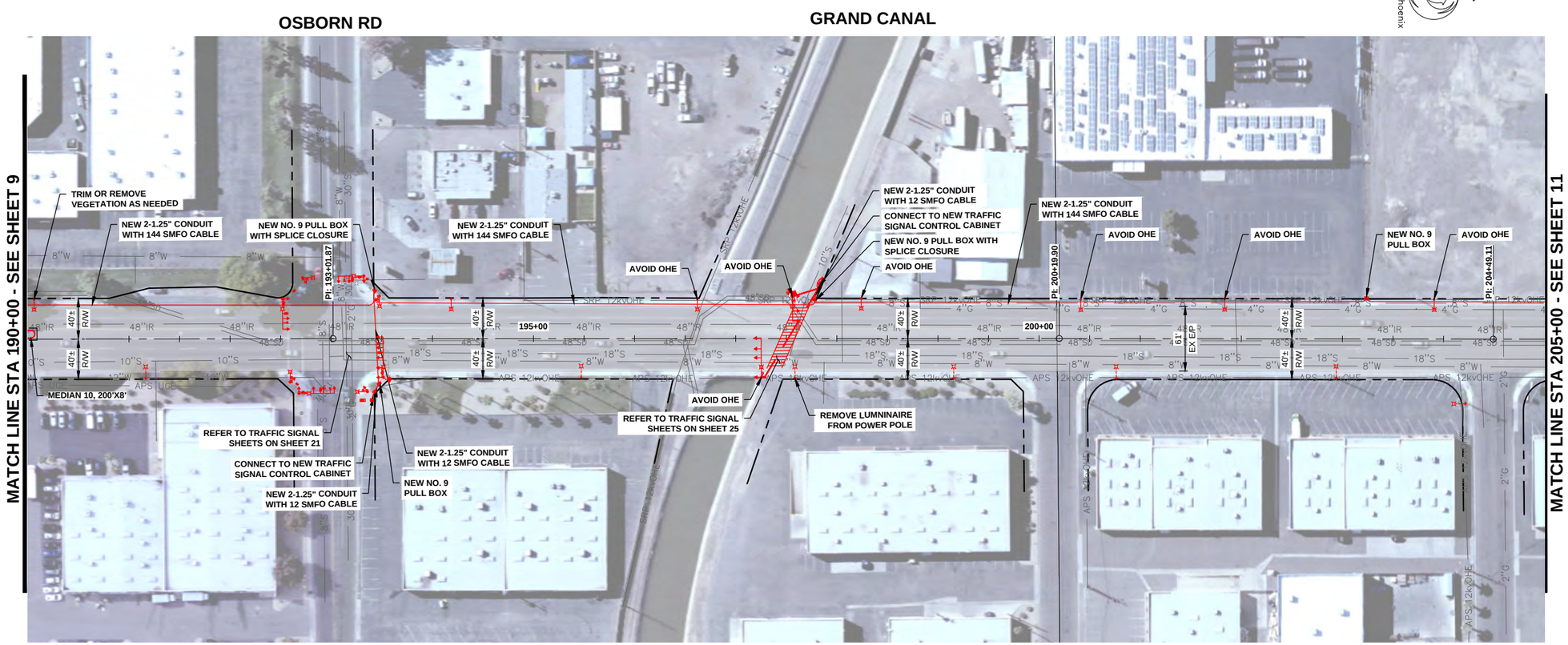
PRELIMINARY
15%
NOT FOR CONSTRUCTION OR RECORDING

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL	AS BUILT
9	ARIZ.	ST89340634-1			

T.Y. LIN INTERNATIONAL engineers | planners | scientists — T.Y.LIN INTERNATIONAL CONSULTING ENGINEER

DES: BP	DR: OG	CK: CSS	DATE: 2/21

REVISION BY CITY OF PHOENIX					
NO.	DESCRIPTION	REV BY	CKD BY	DATE	



Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

60 0 60 120 180
SCALE: 1" = 60'

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ELEVATIONS FOR ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS.

"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28. THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX."

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD
ST89340634-1

DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS	AS BUILT
DATE:2/21	DATE: 2/21	DATE: 2/21			
SCALE:	1"=60' H		10	27	

T:\Tempe\Projects\221853.00\600_CADD\05_Official\Sheets\ST89340634-1_ROADWAY.dwg
7/15/2021 2:01:21 PM Omar Gloria TY Lin Half Scale.ctb

35TH AVE
I-10 TO
CAMELBACK RD

PRELIMINARY
15%
NOT FOR CONSTRUCTION OR RECORDING

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL	AS BUILT
9	ARIZ.	ST89340634-1			

T.Y. LIN INTERNATIONAL engineers | planners | scientists — T.Y.LIN INTERNATIONAL CONSULTING ENGINEER

DES: BP	DR: OG	CK: CSS	DATE: 2/21

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE

REVISION BY CITY OF PHOENIX

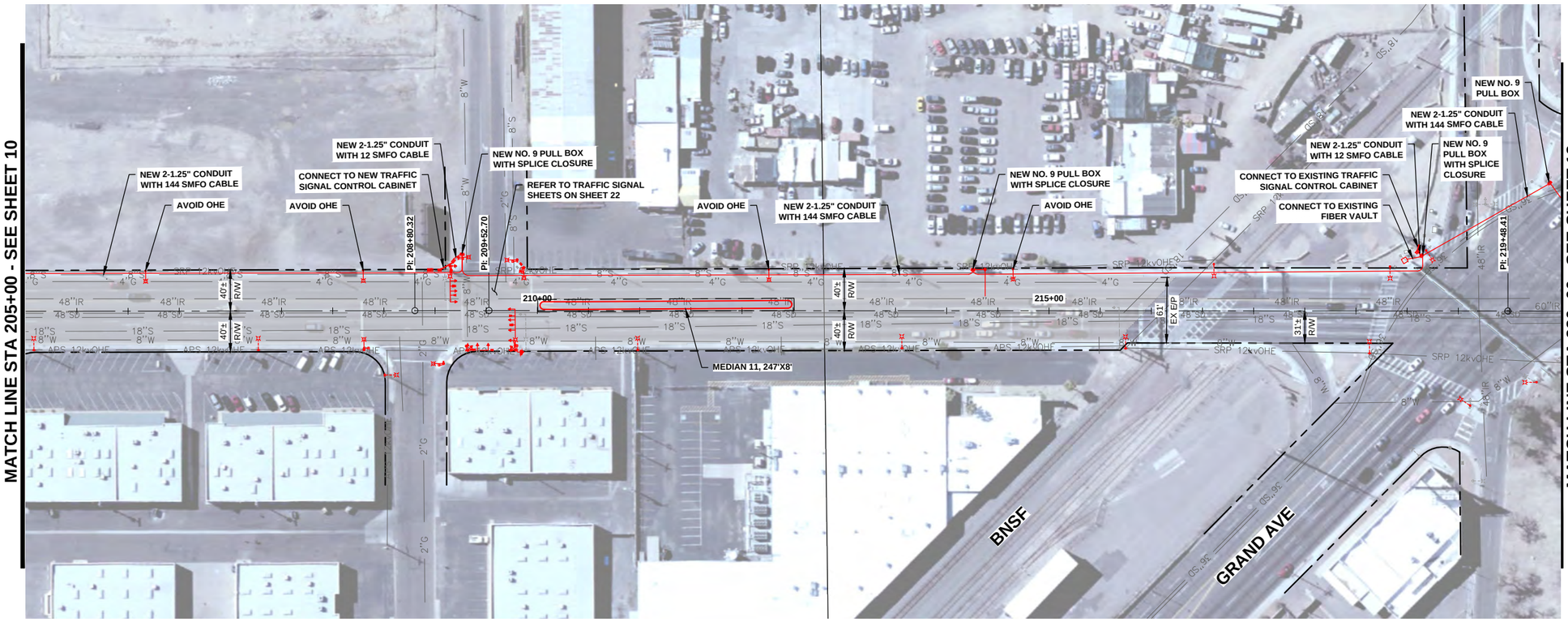
NO.	DESCRIPTION	REV BY	CKD BY	DATE

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE

CLARENDON AVE

MATCH LINE STA 205+00 - SEE SHEET 10



MATCH LINE STA 220+00 - SEE SHEET 12

35TH AVE

City of Phoenix
N

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

60 0 60 120 180
SCALE: 1" = 60'

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ELEVATIONS FOR ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS.

"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX."

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD
ST89340634-1

DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS	AS BUILT
DATE:2/21	DATE: 2/21	DATE: 2/21			
SCALE:	1"=60' H		11	27	

T:\Tempe\Projects\22\153.001\00_CADD\05_Official\Sheets\ST89340634-1_ROADWAY.dwg
7/15/2021 2:01:46 PM Omar Gloria TY Lin Half Scale.ctb

35TH AVE
I-10 TO
CAMELBACK RD

PRELIMINARY
15%
NOT FOR CONSTRUCTION OR RECORDING

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL	AS BUILT
9	ARIZ.	ST89340634-1			

T.Y. LIN INTERNATIONAL engineers | planners | scientists — T.Y.LIN INTERNATIONAL CONSULTING ENGINEER

DES: BP	DR: OG	CK: CSS	DATE: 2/21

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE

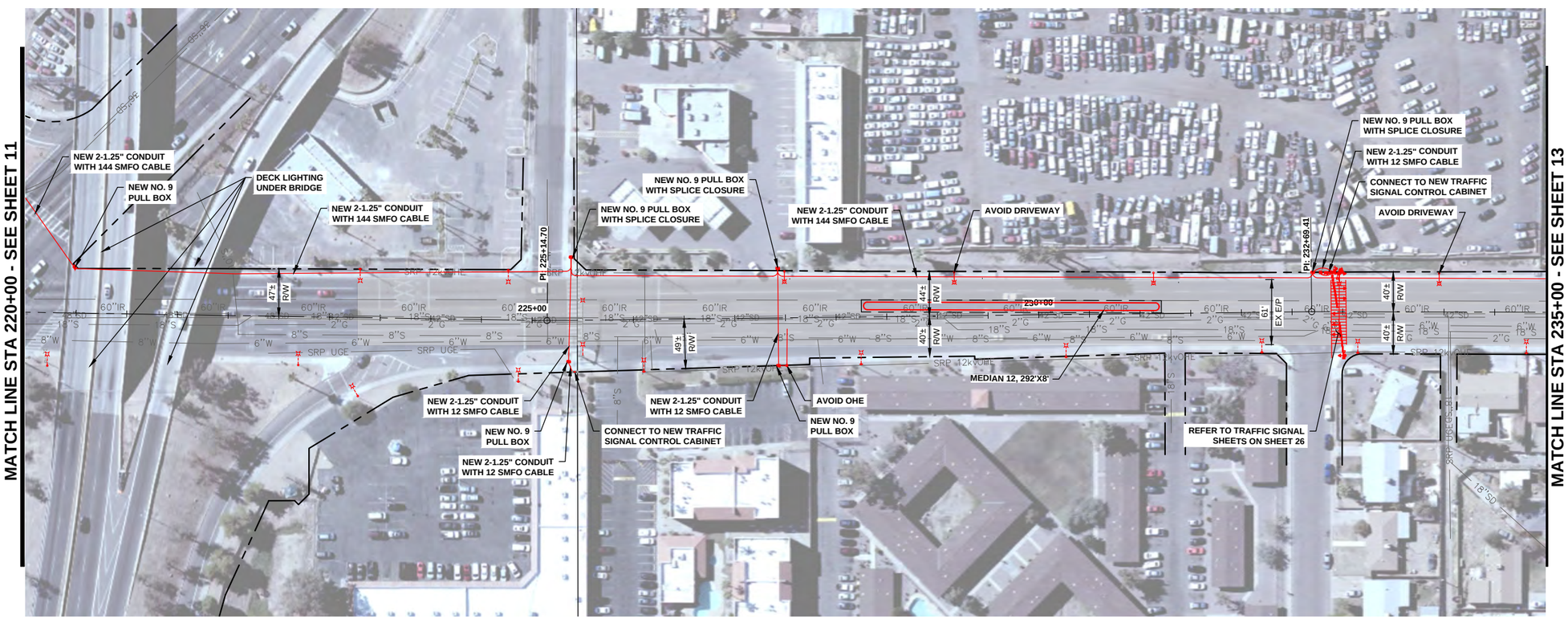
REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE

INDIAN SCHOOL RD



GLENROSA AVE

35TH AVE

City of Phoenix
N

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

60 0 60 120 180
SCALE: 1" = 60'

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ELEVATIONS FOR ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS.

"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX."

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD
ST89340634-1

DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS	AS BUILT
DATE:2/21	DATE: 2/21	DATE: 2/21			
SCALE:	1"=60' H		12	27	

T:\Tempe\Projects\221853.00\600_CAD\D05_Official\Sheets\ST89340634-1_ROADWAY.dwg
7/15/2021 2:08:11 PM
Omar Gloria
TY Lin Half Scale.ctb

35TH AVE
I-10 TO
CAMELBACK RD

PRELIMINARY
15%
NOT FOR CONSTRUCTION OR RECORDING

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL	AS BUILT
9	ARIZ.	ST89340634-1			

T.Y. LIN INTERNATIONAL engineers | planners | scientists — T.Y.LIN INTERNATIONAL CONSULTING ENGINEER

DES: BP | DR: OG | CK: CSS | DATE: 2/21

REVISION BY CITY OF PHOENIX

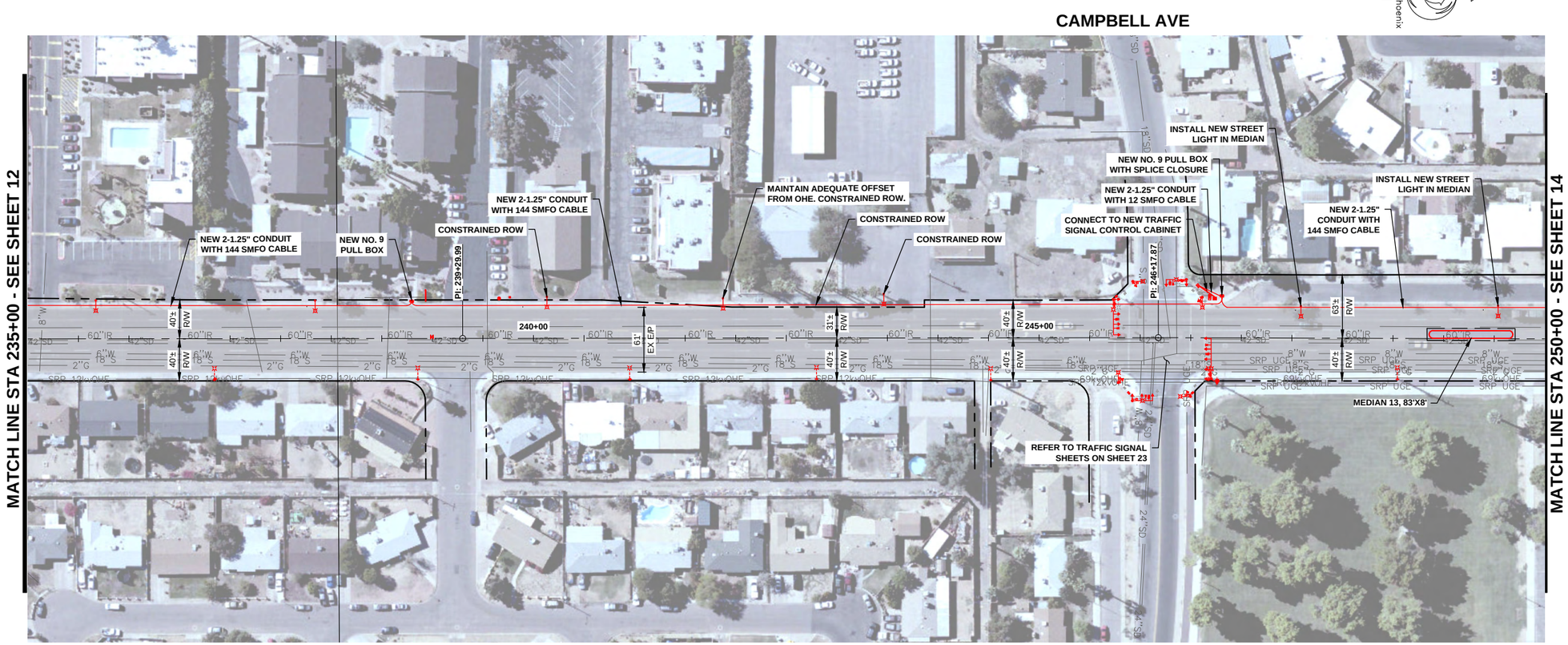
NO.	DESCRIPTION	REV BY	CKD BY	DATE

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE



Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

60 0 60 120 180
SCALE: 1" = 60'

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ELEVATIONS FOR ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS.

"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX."

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD
ST89340634-1

DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS	AS BUILT
DATE:2/21	DATE: 2/21	DATE: 2/21			
SCALE:	1"=60' H		13	27	

T:\Tempe\Projects\22153.06\600_CADD\05_Official\Sheets\ST89340634-1_ROADWAY.dwg
7/15/2021 2:08:51 PM Omar Gloria TY Lin Half Scale.ctb

35TH AVE
I-10 TO
CAMELBACK RD

PRELIMINARY
15%
NOT FOR CONSTRUCTION OR RECORDING

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL	AS BUILT
9	ARIZ.	ST89340634-1			

T.Y. LIN INTERNATIONAL engineers | planners | scientists — T.Y.LIN INTERNATIONAL CONSULTING ENGINEER

DES: BP | DR: OG | CK: CSS | DATE: 2/21

REVISION BY CITY OF PHOENIX

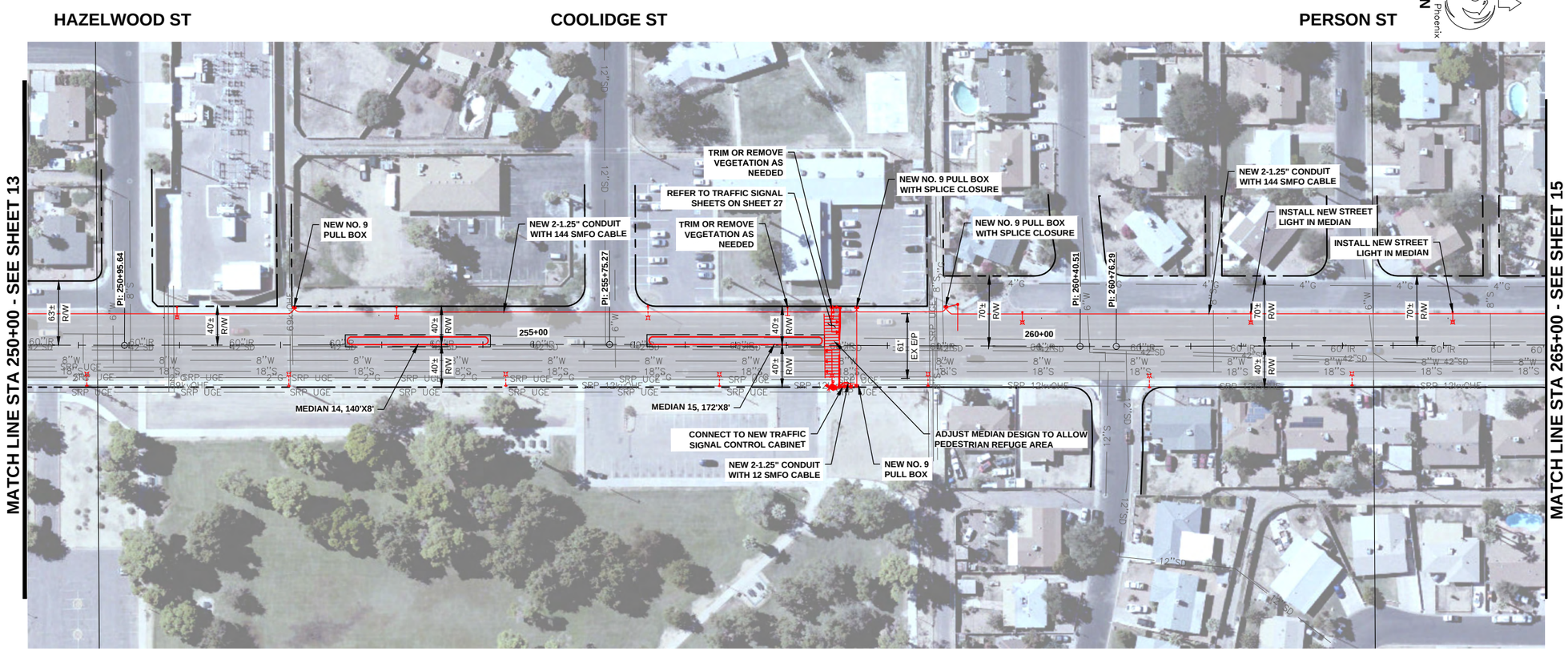
NO.	DESCRIPTION	REV BY	CKD BY	DATE

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE



Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

60 0 60 120 180
SCALE: 1" = 60'

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ELEVATIONS FOR ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS.

"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX."

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD
ST89340634-1

DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS	AS BUILT
DATE: 2/21	DATE: 2/21	DATE: 2/21			
SCALE: 1"=60' H			14	27	

T:\Tempe\Projects\21853.06\600_CADD\05_Official\Sheets\ST89340634-1_ROADWAY.dwg
7/15/2021 2:04:31 PM Omar Gloria TY Lin Half Scale.ctb

35TH AVE
I-10 TO
CAMELBACK RD

PRELIMINARY
15%
NOT FOR CONSTRUCTION OR RECORDING

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL	AS BUILT
9	ARIZ.	ST89340634-1			

T.Y. LIN INTERNATIONAL
engineers | planners | scientists
T.Y.LIN INTERNATIONAL CONSULTING ENGINEER

DES: BP	DR: OG	CK: CSS	DATE: 2/21

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE

REVISION BY CITY OF PHOENIX

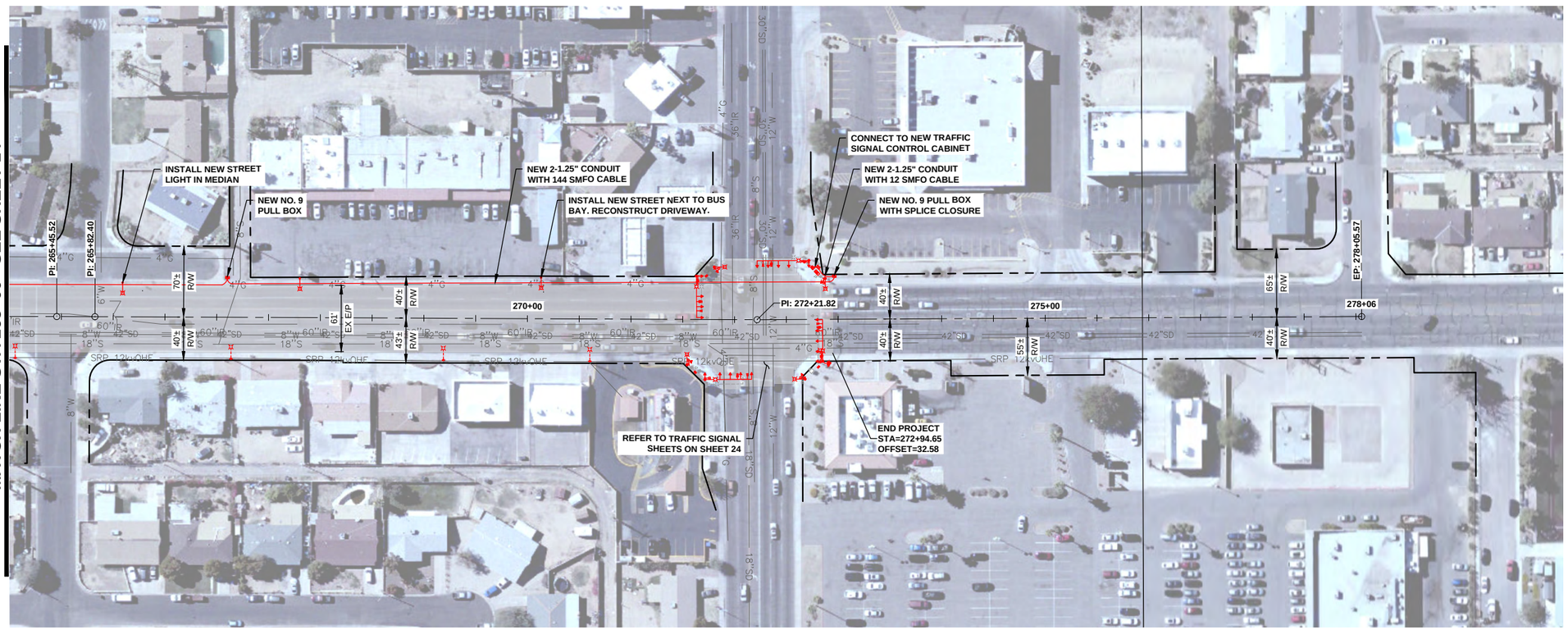
NO.	DESCRIPTION	REV BY	CKD BY	DATE

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE

MARIPOSA ST **CAMELBACK RD**

MATCH LINE STA 265+00 - SEE SHEET 14



35TH AVE

N
City of Phoenix

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

60 0 60 120 180
SCALE: 1" = 60'

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ELEVATIONS FOR ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS.

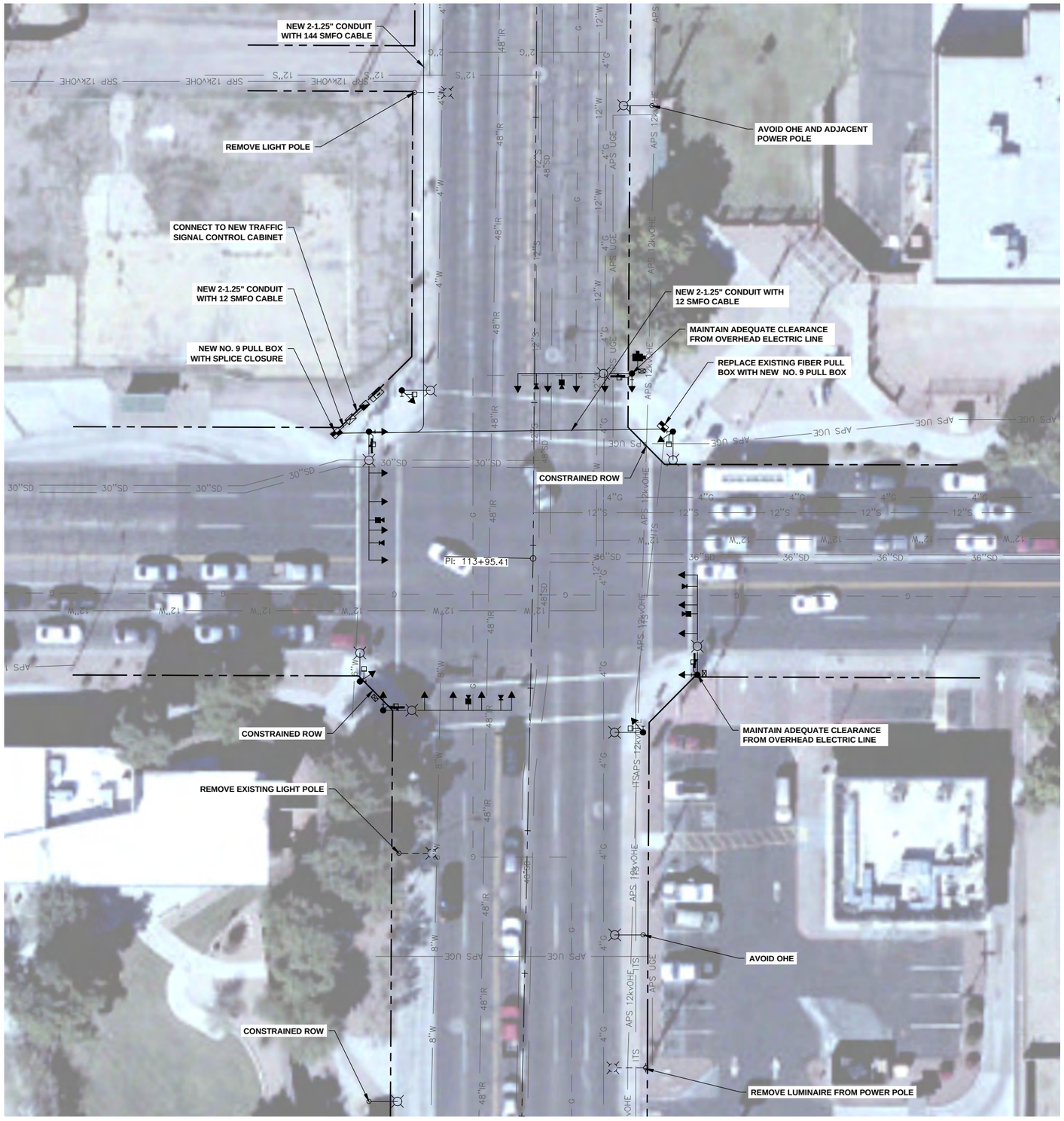
"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX."

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD
ST89340634-1

DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS	AS BUILT
DATE:2/21	DATE: 2/21	DATE: 2/21			
SCALE:	1"=60' H		15	27	

T:\Tempe\Projects\21853.06\600_CADD\05_Official\Sheets\ST89340634-1_ROADWAY.dwg
Omar Gloria
7/15/2021 2:10:11 PM
TY Lin Half Scale.ctb



PRELIMINARY 15% NOT FOR CONSTRUCTION OR RECORDING	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
	9	ARIZ.	ST89340634-1		
	Greenlight Traffic Engineering				
	DR:	DES:	CK:	DATE:	

1. GM ENERAL NOTES:

1.1 The contractor shall notify the City Of Phoenix Traffic Signal Shop (602-262-6733) a minimum of fourteen (14) calendar days prior to beginning any traffic signal work. Submittals of all equipment shall be furnished to the Signal Shop and approved prior to the ordering of any traffic signal equipment. The contractor shall verify that they have the most current set of drawings prior to start and ordering o f any equipment.

1.2 Foundation elevations must be within 1/4" of finished sidewalk grade.

1.3 The Contractor shall layout of all ADA ramps, junction boxes and foundation locations for approval by the traffic signal representative. All ADA ramps shall be layed out in white marking paint to determine best traffic signal pole locations.

1.4 A minimum of four (4) feet of clearance is required between all traffic signal poles and the back edge of sidewalk pedestrian ramps.

1.5 Traffic Signal Plan approval is valid for 365 calendar days from date sealed. If signal construction has not begun prior to the 365 days elapsing, the signal plans must be re-submitted for approval or an extension granted by the Deputy Director Traffic Services or an authorized representative to ensure that existing traffic signal equipment locations and standard detail references are current.

1.6 The contractor shall have a competent supervisor capable of reading and thoroughly understanding the plans and specifications and thoroughly experienced in the construction of traffic signals assigned to the project. The Contractor's supervisor or lead shall possess a current International Municipal Signal Association (IMSA) Level II Traffic Signal Electrician Certification and must be on site during any traffic signal construction activities. The Contractor shall have a complete set of construction drawings including current City of Phoenix standards and Traffic Signal Details on site at all times during signal & lighting systems construction.

2. CONTRACTOR NOTE FOR CITY OF PHOENIX TRAFFIC SIGNAL POLES

2.1 The contractor shall provide and install all foundations per C.O.P. Street Transportation drawing #10164. City to provide all anchor cages, nuts bolts.

3. WORK TO BE PERFORMED BY THE CONTRACTOR

The contractor shall provide the traffic signal equipment as indicated in note 2.1 The contractor is to provide all underground work including, but not limited to:

3.1 - All demolition work, unless otherwise noted
- All trenching
- All foundations (pole, controller and power service pedestal)
- All junction boxes with 18" of sump
- All conduit runs
- Provide and install conduit runs from PSP to Utility Company feed

3.2 All underground conduits shall be schedule 40 rigid polyvinyl chloride (PVC) installed 24 inches to 30 inches below finished grade with the exception of loop lead-in conduits, which shall be schedule 40 rigid PVC installed in accordance with the latest City of Phoenix Standard Detail Sheet. All conduits shall be installed in straight lines (unless approved by the Signal Shop Inspector) junction box to junction box or junction box to signal equipment foundation with one 90 degree sweep on each end as specified in the plans. All conduits entering junction boxes shall be vertical. Conduits in all foundations shall be located as close as possible to center of the foundation and vertical with foundation below the bottom of the cover. All conduit ends except those in the controller cabinet foundation will be provided with a "bell end" fitting of appropriate size.

3.3 Removal of existing streetlights:
The contractor shall:
- Request de-energization of all streetlights listed for removal,
- Provide complete removal of streetlight pole, mast arm and luminaire
- Properly dispose of all streetlight material

4. WORK TO BE PERFORMED BY CITY OF PHOENIX SIGNAL CREWS

The City of Phoenix traffic signal crews will provide and install all above ground traffic signal equipment including:

- All poles and mast arms
- All pole anchor cages, nuts and bolts
- Provide and install the power service pedestal
- All signal heads
- All pedestrian heads
- All APS push buttons
- All controllers
- All LED luminaires
- All illuminated street signs
- All signal wiring
- All loop and non-invasive detectors
- All pole grouting
- All cameras
- All radios

PER PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE FURNISHED FOR INSPECTION OR COPYING, EXCEPT AS SPECIFICALLY STATED IN THE CITY CODE, OR AS REQUIRED BY LAW

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click ArizonaBlue811.com

City of Phoenix
N

APPROVED BY:

TRAFFIC SIGNAL ENGINEER _____ DATE:

STREET TRANSPORTATION TRAFFIC SERVICES DEPUTY DIRECTOR _____ DATE:

TRAFFIC SIGNAL PLAN

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD

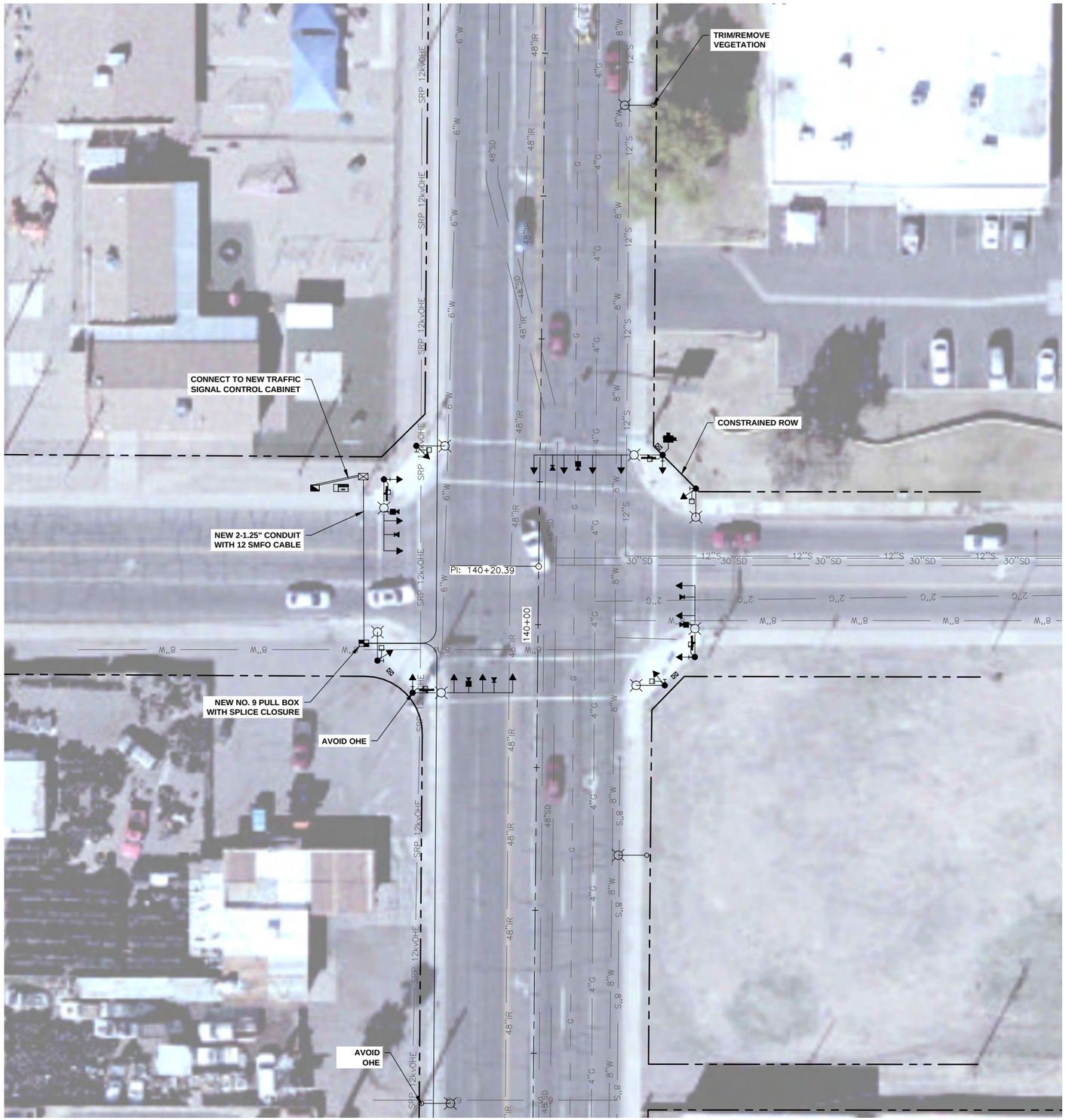
PROJECT #: ST89340634-1			FILE NO: XX	
DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS
DATE: 2/21	DATE: 2/21	DATE: 2/21		
SCALE: 1" = 20'		QS. #:	16	27

TRAFFIC SIGNAL: 35TH AVE - I-10 TO CAMELBACK RD

PROJECT #: ST89340634-1

FILE #: XX

DATE SAVED: 2/22/21 T:\TEMP\PROJECTS\22 1953 06\600_CADD\05_OFFICIAL\SHEETS\ST89340634-1_SIGNALS.DWG



PRELIMINARY 15% NOT FOR CONSTRUCTION OR RECORDING	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
	9	ARIZ.	ST89340634-1		

Greenlight Traffic Engineering

DR: | DES: | CK: | DATE:

1. GM ENERAL NOTES:

1.1 The contractor shall notify the City Of Phoenix Traffic Signal Shop (602-262-6733) a minimum of fourteen (14) calendar days prior to beginning any traffic signal work. Submittals of all equipment shall be furnished to the Signal Shop and approved prior to the ordering of any traffic signal equipment. The contractor shall verify that they have the most current set of drawings prior to start and ordering o f any equipment.

1.2 Foundation elevations must be within 1/4" of finished sidewalk grade.

1.3 The Contractor shall layout of all ADA ramps, junction boxes and foundation locations for approval by the traffic signal representative. All ADA ramps shall be layed out in white marking paint to determine best traffic signal pole locations.

1.4 A minimum of four (4) feet of clearance is required between all traffic signal poles and the back edge of sidewalk pedestrian ramps.

1.5 Traffic Signal Plan approval is valid for 365 calendar days from date sealed. If signal construction has not begun prior to the 365 days elapsing, the signal plans must be re-submitted for approval or an extension granted by the Deputy Director Traffic Services or an authorized representative to ensure that existing traffic signal equipment locations and standard detail references are current.

1.6 The contractor shall have a competent supervisor capable of reading and thoroughly understanding the plans and specifications and thoroughly experienced in the construction of traffic signals assigned to the project. The Contractor's supervisor or lead shall possess a current International Municipal Signal Association (IMSA) Level II Traffic Signal Electrician Certification and must be on site during any traffic signal construction activities. The Contractor shall have a complete set of construction drawings including current City of Phoenix standards and Traffic Signal Details on site at all times during signal & lighting systems construction.

2. CONTRACTOR NOTE FOR CITY OF PHOENIX TRAFFIC SIGNAL POLES

2.1 The contractor shall provide and install all foundations per C.O.P. Street Transportation drawing #10164. City to provide all anchor cages, nuts bolts.

3. WORK TO BE PERFORMED BY THE CONTRACTOR

The contractor shall provide the traffic signal equipment as indicated in note 2.1 The contractor is to provide all underground work including, but not limited to:

3.1 - All demolition work, unless otherwise noted
- All trenching
- All foundations (pole, controller and power service pedestal)
- All junction boxes with 18" of sump
- All conduit runs
- Provide and install conduit runs from PSP to Utility Company feed

3.2 All underground conduits shall be schedule 40 rigid polyvinyl chloride (PVC) installed 24 inches to 30 inches below finished grade with the exception of loop lead-in conduits, which shall be schedule 40 rigid PVC installed in accordance with the latest City of Phoenix Standard Detail Sheet. All conduits shall be installed in straight lines (unless approved by the Signal Shop Inspector) junction box to junction box or junction box to signal equipment foundation with one 90 degree sweep on each end as specified in the plans. All conduits entering junction boxes shall be vertical. Conduits in all foundations shall be located as close as possible to center of the foundation and vertical with foundation below the bottom of the cover. All conduit ends except those in the controller cabinet foundation will be provided with a "bell end" fitting of appropriate size.

3.3 Removal of existing streetlights:
The contractor shall:
- Request de-energization of all streetlights listed for removal,
- Provide complete removal of streetlight pole, mast arm and luminaire
- Properly dispose of all streetlight material

4. WORK TO BE PERFORMED BY CITY OF PHOENIX SIGNAL CREWS

The City of Phoenix traffic signal crews will provide and install all above ground traffic signal equipment including:

- All poles and mast arms
- All pole anchor cages, nuts and bolts
- Provide and install the power service pedestal
- All signal heads
- All pedestrian heads
- All APS push buttons
- All controllers
- All LED luminaires
- All illuminated street signs
- All signal wiring
- All loop and non-invasive detectors
- All pole grouting
- All cameras
- All radios

PER PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE FURNISHED FOR INSPECTION OR COPYING, EXCEPT AS SPECIFICALLY STATED IN THE CITY CODE, OR AS REQUIRED BY LAW

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

City of Phoenix
N

APPROVED BY:

TRAFFIC SIGNAL ENGINEER _____ DATE:

STREET TRANSPORTATION TRAFFIC SERVICES DEPUTY DIRECTOR _____ DATE:

TRAFFIC SIGNAL PLAN

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD

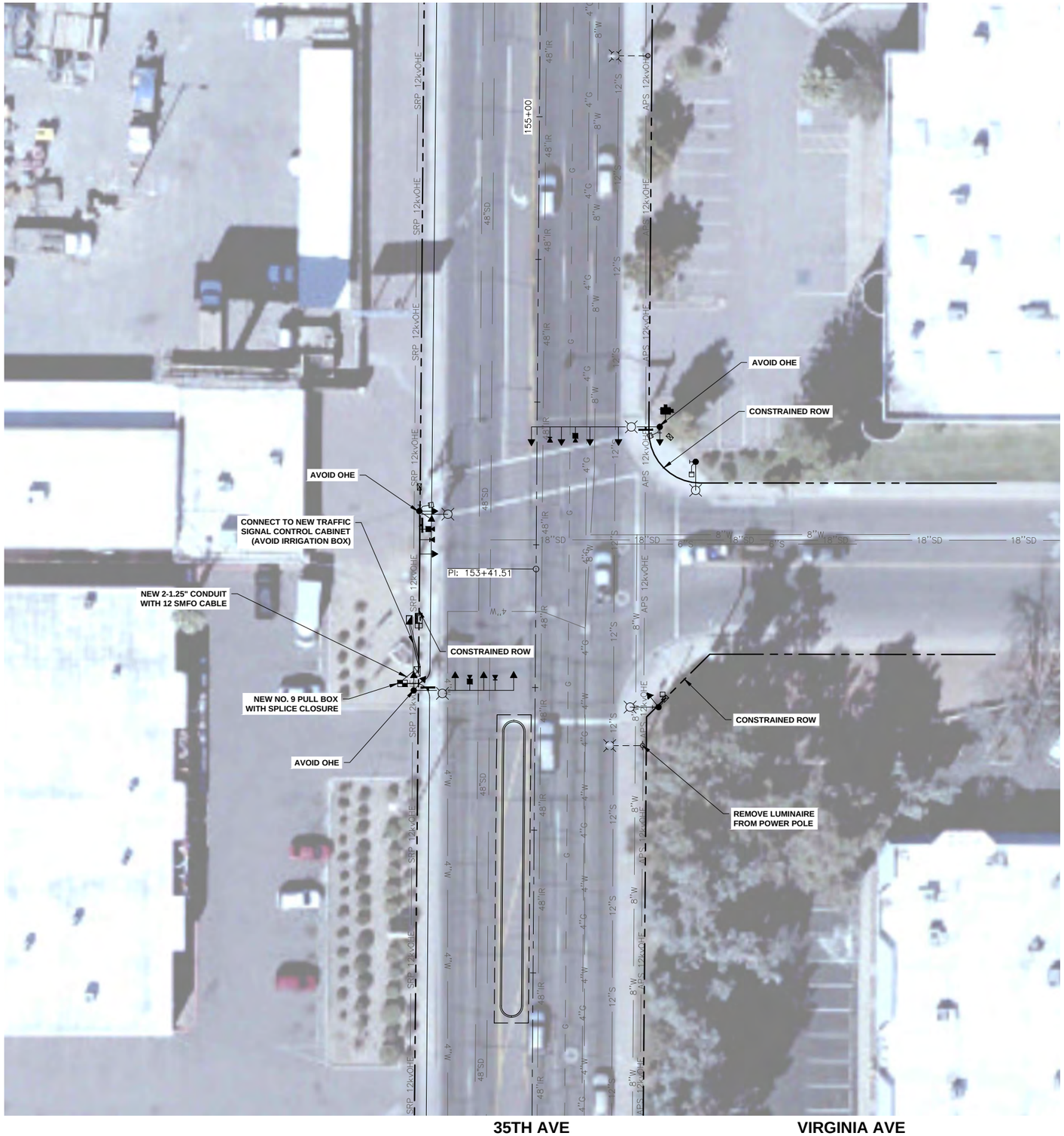
PROJECT #: ST89340634-1				FILE NO: XX	
DR: OG	DES: BP	CK: CSS		SHEET NO:	TOTAL SHEETS
DATE: 2/21	DATE: 2/21	DATE: 2/21			
SCALE: 1" = 20'			QS. #:	17	27

TRAFFIC SIGNAL: 35TH AVE - I-10 TO CAMELBACK RD

PROJECT #: ST89340634-1

FILE #: XX

DATE SAVED: 2/22/21 T:\TEMP\PROJECTS\221953.06\600_CADD\05_OFFICIAL\SHEETS\ST89340634-1_SIGNAL5.DWG



PRELIMINARY 15% NOT FOR CONSTRUCTION OR RECORDING	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
	9	ARIZ.	ST89340634-1		

Greenlight Traffic Engineering

DR: | DES: | CK: | DATE:

1. GM ENERAL NOTES:

1.1 The contractor shall notify the City Of Phoenix Traffic Signal Shop (602-262-6733) a minimum of fourteen (14) calendar days prior to beginning any traffic signal work. Submittals of all equipment shall be furnished to the Signal Shop and approved prior to the ordering of any traffic signal equipment. The contractor shall verify that they have the most current set of drawings prior to start and ordering o f any equipment.

1.2 Foundation elevations must be within 1/4" of finished sidewalk grade.

1.3 The Contractor shall layout of all ADA ramps, junction boxes and foundation locations for approval by the traffic signal representative. All ADA ramps shall be layed out in white marking paint to determine best traffic signal pole locations.

1.4 A minimum of four (4) feet of clearance is required between all traffic signal poles and the back edge of sidewalk pedestrian ramps.

1.5 Traffic Signal Plan approval is valid for 365 calendar days from date sealed. If signal construction has not begun prior to the 365 days elapsing, the signal plans must be re-submitted for approval or an extension granted by the Deputy Director Traffic Services or an authorized representative to ensure that existing traffic signal equipment locations and standard detail references are current.

1.6 The contractor shall have a competent supervisor capable of reading and thoroughly understanding the plans and specifications and thoroughly experienced in the construction of traffic signals assigned to the project. The Contractor's supervisor or lead shall possess a current International Municipal Signal Association (IMSA) Level II Traffic Signal Electrician Certification and must be on site during any traffic signal construction activities. The Contractor shall have a complete set of construction drawings including current City of Phoenix standards and Traffic Signal Details on site at all times during signal & lighting systems construction.

2. CONTRACTOR NOTE FOR CITY OF PHOENIX TRAFFIC SIGNAL POLES

2.1 The contractor shall provide and install all foundations per C.O.P. Street Transportation drawing #10164. City to provide all anchor cages, nuts bolts.

3. WORK TO BE PERFORMED BY THE CONTRACTOR

The contractor shall provide the traffic signal equipment as indicated in note 2.1 The contractor is to provide all underground work including, but not limited to:

3.1 - All demolition work, unless otherwise noted
- All trenching
- All foundations (pole, controller and power service pedestal)
- All junction boxes with 18" of sump
- All conduit runs
- Provide and install conduit runs from PSP to Utility Company feed

3.2 All underground conduits shall be schedule 40 rigid polyvinyl chloride (PVC) installed 24 inches to 30 inches below finished grade with the exception of loop lead-in conduits, which shall be schedule 40 rigid PVC installed in accordance with the latest City of Phoenix Standard Detail Sheet. All conduits shall be installed in straight lines (unless approved by the Signal Shop Inspector) junction box to junction box or junction box to signal equipment foundation with one 90 degree sweep on each end as specified in the plans. All conduits entering junction boxes shall be vertical. Conduits in all foundations shall be located as close as possible to center of the foundation and vertical with foundation below the bottom of the cover. All conduit ends except those in the controller cabinet foundation will be provided with a "bell end" fitting of appropriate size.

3.3 Removal of existing streetlights:
The contractor shall:
- Request de-energization of all streetlights listed for removal,
- Provide complete removal of streetlight pole, mast arm and luminaire
- Properly dispose of all streetlight material

4. WORK TO BE PERFORMED BY CITY OF PHOENIX SIGNAL CREWS

The City of Phoenix traffic signal crews will provide and install all above ground traffic signal equipment including:

- All poles and mast arms
- All pole anchor cages, nuts and bolts
- Provide and install the power service pedestal
- All signal heads
- All pedestrian heads
- All APS push buttons
- All controllers
- All LED luminaires
- All illuminated street signs
- All signal wiring
- All loop and non-invasive detectors
- All pole grouting
- All cameras
- All radios

PER PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE FURNISHED FOR INSPECTION OR COPYING, EXCEPT AS SPECIFICALLY STATED IN THE CITY CODE, OR AS REQUIRED BY LAW

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

City of Phoenix
N

APPROVED BY:

TRAFFIC SIGNAL ENGINEER _____ DATE:

STREET TRANSPORTATION TRAFFIC SERVICES DEPUTY DIRECTOR _____ DATE:

TRAFFIC SIGNAL PLAN

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD

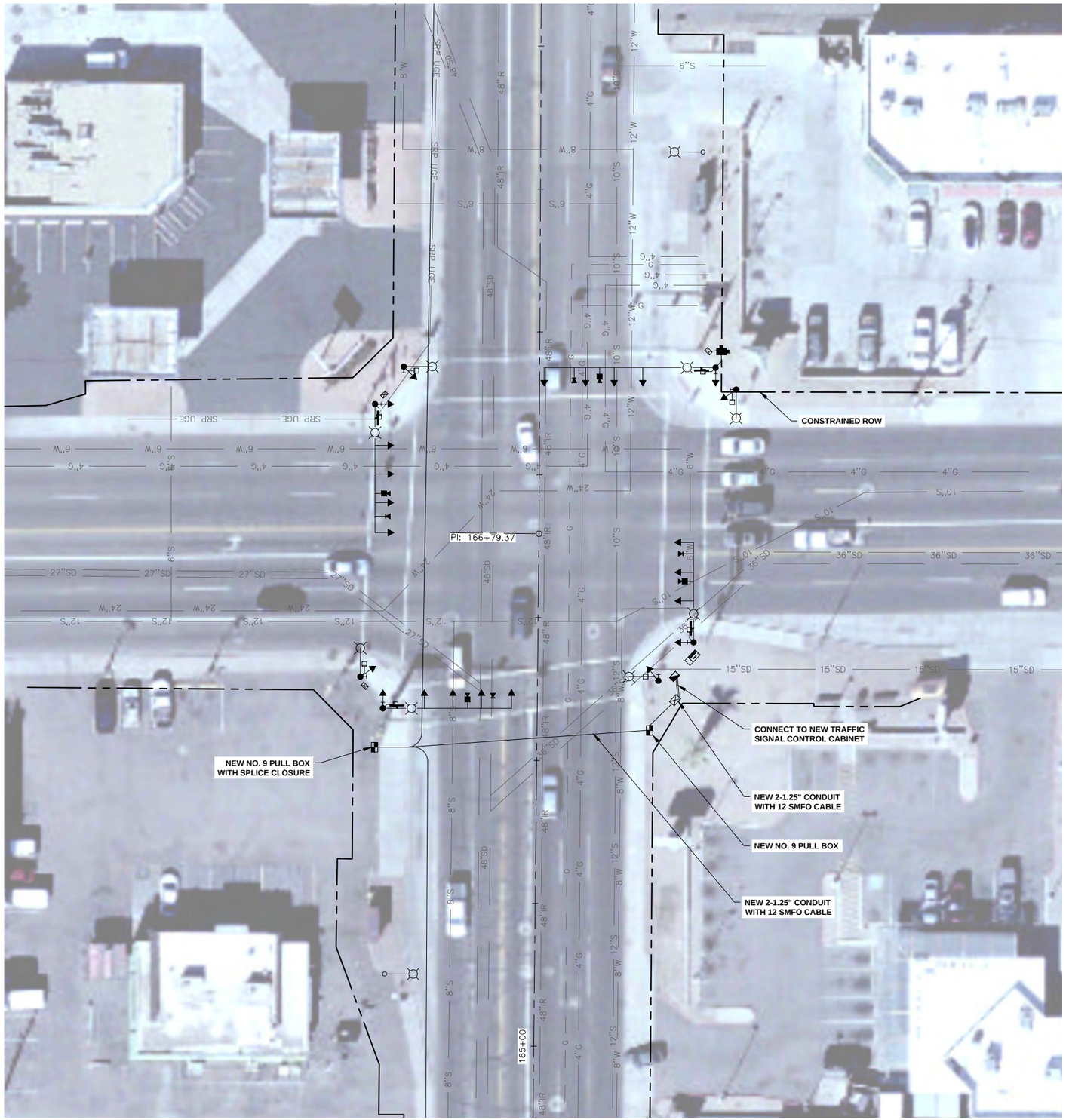
PROJECT #: ST89340634-1			FILE NO: XX	
DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS
DATE: 2/21	DATE: 2/21	DATE: 2/21		
SCALE: 1" = 20'		Q5. #:	18	27

TRAFFIC SIGNAL: 35TH AVE - I-10 TO CAMELBACK RD

PROJECT #: ST89340634-1

FILE #: XX

DATE SAVED: 2/22/21 T:\TEMP\PROJECTS\221953.06\600_CADD\05_OFFICIAL\SHEETS\ST89340634-1_SIGNAL5.DWG



PRELIMINARY 15% NOT FOR CONSTRUCTION OR RECORDING	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
	9	ARIZ.	ST89340634-1		

Greenlight Traffic Engineering

DR:	DES:	CK:	DATE:

1. GM ENERAL NOTES:

1.1 The contractor shall notify the City Of Phoenix Traffic Signal Shop (602-262-6733) a minimum of fourteen (14) calendar days prior to beginning any traffic signal work. Submittals of all equipment shall be furnished to the Signal Shop and approved prior to the ordering of any traffic signal equipment. The contractor shall verify that they have the most current set of drawings prior to start and ordering o f any equipment.

1.2 Foundation elevations must be within 1/4" of finished sidewalk grade.

1.3 The Contractor shall layout of all ADA ramps, junction boxes and foundation locations for approval by the traffic signal representative. All ADA ramps shall be layed out in white marking paint to determine best traffic signal pole locations.

1.4 A minimum of four (4) feet of clearance is required between all traffic signal poles and the back edge of sidewalk pedestnan ramps.

1.5 Traffic Signal Plan approval is valid for 365 calendar days from date sealed. If signal construction has not begun prior to the 365 days elapsing, the signal plans must be re-submitted for approval or an extension granted by the Deputy Director Traffic Services or an authonzed representative to ensure that existing traffic signal equipment locations and standard detail references are current.

1.6 The contractor shall have a competent supervisor capable of reading and thoroughly understanding the plans and specifications and thoroughly experienced in the construction of traffic signals assigned to the project. The Contractor's supervisor or lead shall possess a current International Municipal Signal Association (IMSA) Level II Traffic Signal Electnician Certification and must be on site during any traffic signal construction activities. The Contractor shall have a complete set of construction drawings including current City of Phoenix standards and Traffic Signal Details on site at all times during signal & lighting systems construction.

2. CONTRACTOR NOTE FOR CITY OF PHOENIX TRAFFIC SIGNAL POLES

2.1 The contractor shall provide and install all foundations per C.O.P. Street Transportation drawing #10164. City to provide all anchor cages, nuts bolts.

3. WORK TO BE PERFORMED BY THE CONTRACTOR

The contractor shall provide the traffic signal equipment as indicated in note 2.1 The contractor is to provide all underground work including, but not limited to:

3.1 - All demolition work, unless otherwise noted
- All trenching
- All foundations (pole, controller and power service pedestal)
- All junction boxes with 18" of sump
- All conduit runs
- Provide and install conduit runs from PSP to Utility Company feed

3.2 All underground conduits shall be schedule 40 rigid polyvinyl chlonde (PVC) installed 24 inches to 30 inches below finished grade with the exception of loop lead-in conduits, which shall be schedule 40 rigid PVC installed in accordance with the latest City of Phoenix Standard Detail Sheet. All conduits shall be installed in straight lines (unless approved by the Signal Shop Inspector) junction box to junction box or junction box to signal equipment foundation with one 90 degree sweep on each end as specified in the plans. All conduits entering junction boxes shall be vertical. Conduits in all foundations shall be located as close as possible to center of the foundation and vertical with foundation below the bottom of the cover. All conduit ends except those in the controller cabinet foundation will be provided with a "bell end" fitting of appropnate size.

3.3 Removal of existing streetlights:
The contractor shall:
- Request de-energization of all streetlights listed for removal,
- Provide complete removal of streetlight pole, mast arm and luminaire
- Properly dispose of all streetlight matenal

4. WORK TO BE PERFORMED BY CITY OF PHOENIX SIGNAL CREWS

The City of Phoenix traffic signal crews will provide and install all above ground traffic signal equipment including:

- All poles and mast arms
- All pole anchor cages, nuts and bolts
- Provide and install the power service pedestal
- All signal heads
- All pedestrian heads
- All APS push buttons
- All controllers
- All LED luminaires
- All illuminated street signs
- All signal wiring
- All loop and non-invasive detectors
- All pole grouting
- All cameras
- All radios

City of Phoenix
N

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

PER PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE FURNISHED FOR INSPECTION OR COPYING, EXCEPT AS SPECIFICALLY STATED IN THE CITY CODE, OR AS REQUIRED BY LAW

TRAFFIC SIGNAL PLAN

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD

APPROVED BY:

TRAFFIC SIGNAL ENGINEER _____ DATE:

STREET TRANSPORTATION TRAFFIC SERVICES DEPUTY DIRECTOR _____ DATE:

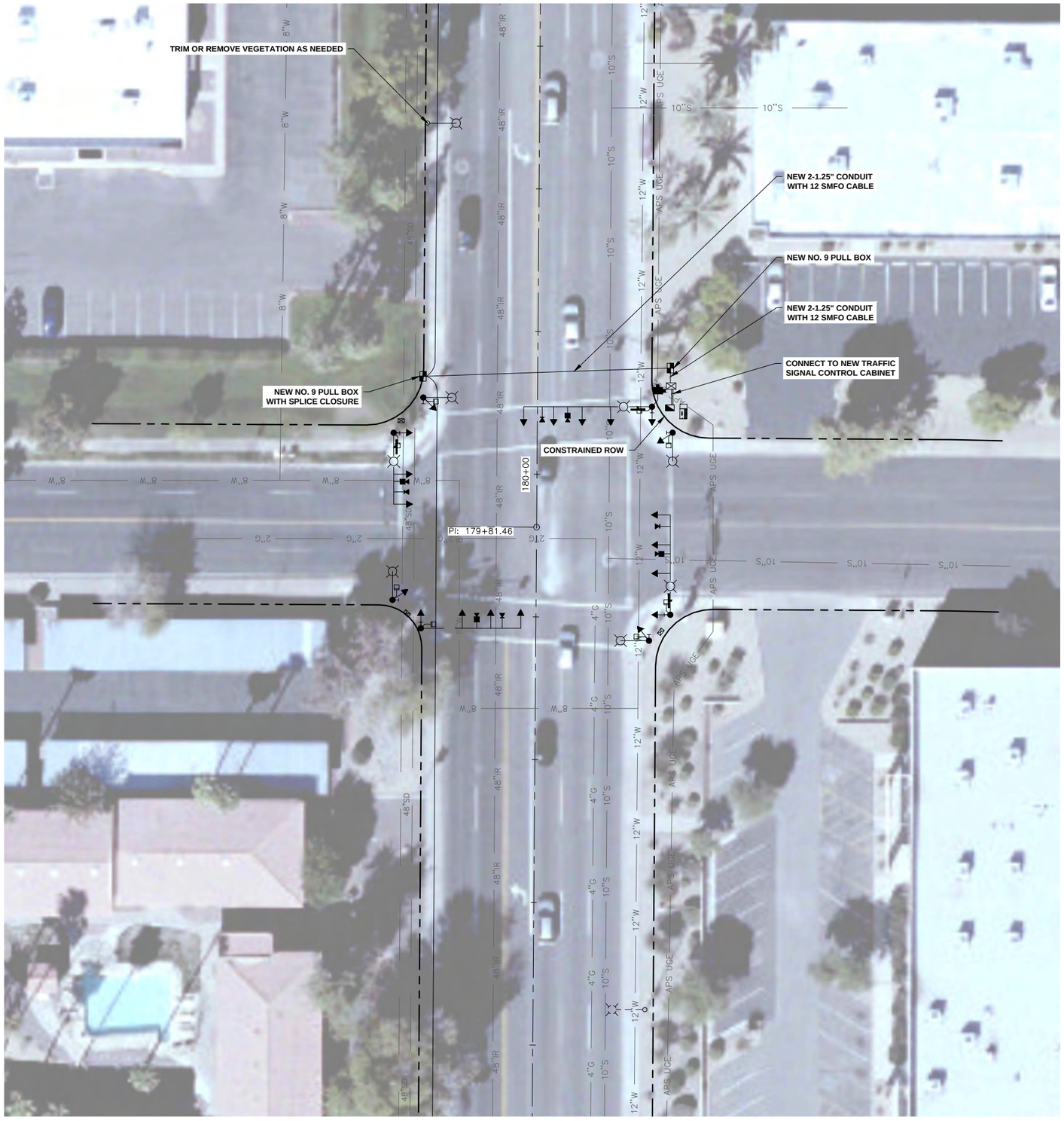
PROJECT #: ST89340634-1			FILE NO: XX	
DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS
DATE: 2/21	DATE: 2/21	DATE: 2/21		
SCALE: 1" = 20'		QS. #:	19	27

TRAFFIC SIGNAL: 35TH AVE - I-10 TO CAMELBACK RD

PROJECT #: ST89340634-1

FILE #: XX

DATE SAVED: 2/22/21 T:\TEMP\PROJECTS\221953.06\600_CADD\05_OFFICIAL\SHEETS\ST89340634-1_SIGNALS.DWG



PRELIMINARY 15% NOT FOR CONSTRUCTION OR RECORDING	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
	9	ARIZ.	ST89340634-1		

Greenlight Traffic Engineering

DR: | DES: | CK: | DATE:

1. GM ENERAL NOTES:

1.1 The contractor shall notify the City Of Phoenix Traffic Signal Shop (602-262-6733) a minimum of fourteen (14) calendar days prior to beginning any traffic signal work. Submittals of all equipment shall be furnished to the Signal Shop and approved prior to the ordering of any traffic signal equipment. The contractor shall verify that they have the most current set of drawings prior to start and ordering o f any equipment.

1.2 Foundation elevations must be within 1/4" of finished sidewalk grade.

1.3 The Contractor shall layout of all ADA ramps, junction boxes and foundation locations for approval by the traffic signal representative. All ADA ramps shall be layed out in white marking paint to determine best traffic signal pole locations.

1.4 A minimum of four (4) feet of clearance is required between all traffic signal poles and the back edge of sidewalk pedestrian ramps.

1.5 Traffic Signal Plan approval is valid for 365 calendar days from date sealed. If signal construction has not begun prior to the 365 days elapsing, the signal plans must be re-submitted for approval or an extension granted by the Deputy Director Traffic Services or an authorized representative to ensure that existing traffic signal equipment locations and standard detail references are current.

1.6 The contractor shall have a competent supervisor capable of reading and thoroughly understanding the plans and specifications and thoroughly experienced in the construction of traffic signals assigned to the project. The Contractor's supervisor or lead shall possess a current International Municipal Signal Association (IMSA) Level II Traffic Signal Electrician Certification and must be on site during any traffic signal construction activities. The Contractor shall have a complete set of construction drawings including current City of Phoenix standards and Traffic Signal Details on site at all times during signal & lighting systems construction.

2. CONTRACTOR NOTE FOR CITY OF PHOENIX TRAFFIC SIGNAL POLES

2.1 The contractor shall provide and install all foundations per C.O.P. Street Transportation drawing #10164. City to provide all anchor cages, nuts bolts.

3. WORK TO BE PERFORMED BY THE CONTRACTOR

The contractor shall provide the traffic signal equipment as indicated in note 2.1 The contractor is to provide all underground work including, but not limited to:

3.1 - All demolition work, unless otherwise noted
- All trenching
- All foundations (pole, controller and power service pedestal)
- All junction boxes with 18" of sump
- All conduit runs
- Provide and install conduit runs from PSP to Utility Company feed

3.2 All underground conduits shall be schedule 40 rigid polyvinyl chloride (PVC) installed 24 inches to 30 inches below finished grade with the exception of loop lead-in conduits, which shall be schedule 40 rigid PVC installed in accordance with the latest City of Phoenix Standard Detail Sheet. All conduits shall be installed in straight lines (unless approved by the Signal Shop Inspector) junction box to junction box or junction box to signal equipment foundation with one 90 degree sweep on each end as specified in the plans. All conduits entering junction boxes shall be vertical. Conduits in all foundations shall be located as close as possible to center of the foundation and vertical with foundation below the bottom of the cover. All conduit ends except those in the controller cabinet foundation will be provided with a "bell end" fitting of appropriate size.

3.3 Removal of existing streetlights:
The contractor shall:
- Request de-energization of all streetlights listed for removal,
- Provide complete removal of streetlight pole, mast arm and luminaire
- Properly dispose of all streetlight material

4. WORK TO BE PERFORMED BY CITY OF PHOENIX SIGNAL CREWS

The City of Phoenix traffic signal crews will provide and install all above ground traffic signal equipment including:

- All poles and mast arms
- All pole anchor cages, nuts and bolts
- Provide and install the power service pedestal
- All signal heads
- All pedestrian heads
- All APS push buttons
- All controllers
- All LED luminaires
- All illuminated street signs
- All signal wiring
- All loop and non-invasive detectors
- All pole grouting
- All cameras
- All radios

City of Phoenix
N

PER PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE FURNISHED FOR INSPECTION OR COPYING, EXCEPT AS SPECIFICALLY STATED IN THE CITY CODE, OR AS REQUIRED BY LAW

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

APPROVED BY:

TRAFFIC SIGNAL ENGINEER _____ DATE:

STREET TRANSPORTATION TRAFFIC SERVICES DEPUTY DIRECTOR _____ DATE:

TRAFFIC SIGNAL PLAN

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD

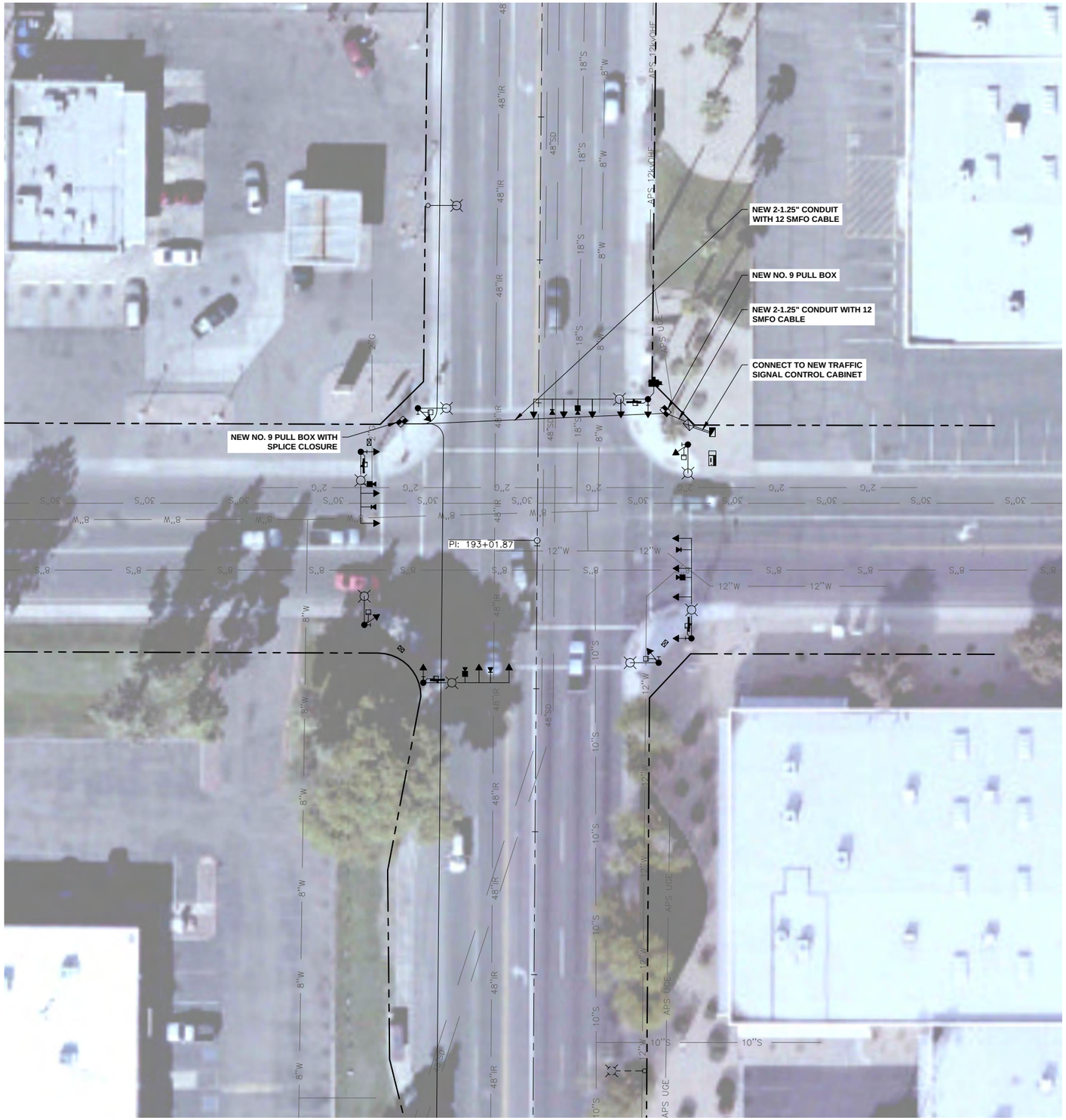
PROJECT #: ST89340634-1			FILE NO: XX	
DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS
DATE: 2/21	DATE: 2/21	DATE: 2/21		
SCALE: 1" = 20'		QS. #:	20	27

TRAFFIC SIGNAL: 35TH AVE - I-10 TO CAMELBACK RD

PROJECT #: ST89340634-1

FILE #: XX

DATE SAVED: 2/22/21 T:\TEMP\PROJECTS\221953.06\600_CADD\05_OFFICIAL\SHEETS\ST89340634-1_SIGNALS.DWG



PRELIMINARY 15% NOT FOR CONSTRUCTION OR RECORDING	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
	9	ARIZ.	ST89340634-1		

Greenlight Traffic Engineering

DR: | DES: | CK: | DATE:

1. GM ENERAL NOTES:

1.1 The contractor shall notify the City Of Phoenix Traffic Signal Shop (602-262-6733) a minimum of fourteen (14) calendar days prior to beginning any traffic signal work. Submittals of all equipment shall be furnished to the Signal Shop and approved prior to the ordering of any traffic signal equipment. The contractor shall verify that they have the most current set of drawings prior to start and ordering o f any equipment.

1.2 Foundation elevations must be within 1/4" of finished sidewalk grade.

1.3 The Contractor shall layout of all ADA ramps, junction boxes and foundation locations for approval by the traffic signal representative. All ADA ramps shall be layed out in white marking paint to determine best traffic signal pole locations.

1.4 A minimum of four (4) feet of clearance is required between all traffic signal poles and the back edge of sidewalk pedestrian ramps.

1.5 Traffic Signal Plan approval is valid for 365 calendar days from date sealed. If signal construction has not begun prior to the 365 days elapsing, the signal plans must be re-submitted for approval or an extension granted by the Deputy Director Traffic Services or an authorized representative to ensure that existing traffic signal equipment locations and standard detail references are current.

1.6 The contractor shall have a competent supervisor capable of reading and thoroughly understanding the plans and specifications and thoroughly experienced in the construction of traffic signals assigned to the project. The Contractor's supervisor or lead shall possess a current International Municipal Signal Association (IMSA) Level II Traffic Signal Electrician Certification and must be on site during any traffic signal construction activities. The Contractor shall have a complete set of construction drawings including current City of Phoenix standards and Traffic Signal Details on site at all times during signal & lighting systems construction.

2. CONTRACTOR NOTE FOR CITY OF PHOENIX TRAFFIC SIGNAL POLES

2.1 The contractor shall provide and install all foundations per C.O.P. Street Transportation drawing #10164. City to provide all anchor cages, nuts bolts.

3. WORK TO BE PERFORMED BY THE CONTRACTOR

The contractor shall provide the traffic signal equipment as indicated in note 2.1 The contractor is to provide all underground work including, but not limited to:

3.1 - All demolition work, unless otherwise noted
- All trenching
- All foundations (pole, controller and power service pedestal)
- All junction boxes with 18" of sump
- All conduit runs
- Provide and install conduit runs from PSP to Utility Company feed

3.2 All underground conduits shall be schedule 40 rigid polyvinyl chloride (PVC) installed 24 inches to 30 inches below finished grade with the exception of loop lead-in conduits, which shall be schedule 40 rigid PVC installed in accordance with the latest City of Phoenix Standard Detail Sheet. All conduits shall be installed in straight lines (unless approved by the Signal Shop Inspector) junction box to junction box or junction box to signal equipment foundation with one 90 degree sweep on each end as specified in the plans. All conduits entering junction boxes shall be vertical. Conduits in all foundations shall be located as close as possible to center of the foundation and vertical with foundation below the bottom of the cover. All conduit ends except those in the controller cabinet foundation will be provided with a "bell end" fitting of appropriate size.

3.3 Removal of existing streetlights:
The contractor shall:
- Request de-energization of all streetlights listed for removal,
- Provide complete removal of streetlight pole, mast arm and luminaire
- Properly dispose of all streetlight material

4. WORK TO BE PERFORMED BY CITY OF PHOENIX SIGNAL CREWS

The City of Phoenix traffic signal crews will provide and install all above ground traffic signal equipment including:

- All poles and mast arms
- All pole anchor cages, nuts and bolts
- Provide and install the power service pedestal
- All signal heads
- All pedestrian heads
- All APS push buttons
- All controllers
- All LED luminaires
- All illuminated street signs
- All signal wiring
- All loop and non-invasive detectors
- All pole grouting
- All cameras
- All radios

City of Phoenix
N

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

APPROVED BY:

TRAFFIC SIGNAL ENGINEER _____ DATE:

STREET TRANSPORTATION TRAFFIC SERVICES DEPUTY DIRECTOR _____ DATE:

PER PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE FURNISHED FOR INSPECTION OR COPYING, EXCEPT AS SPECIFICALLY STATED IN THE CITY CODE, OR AS REQUIRED BY LAW

TRAFFIC SIGNAL PLAN

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD

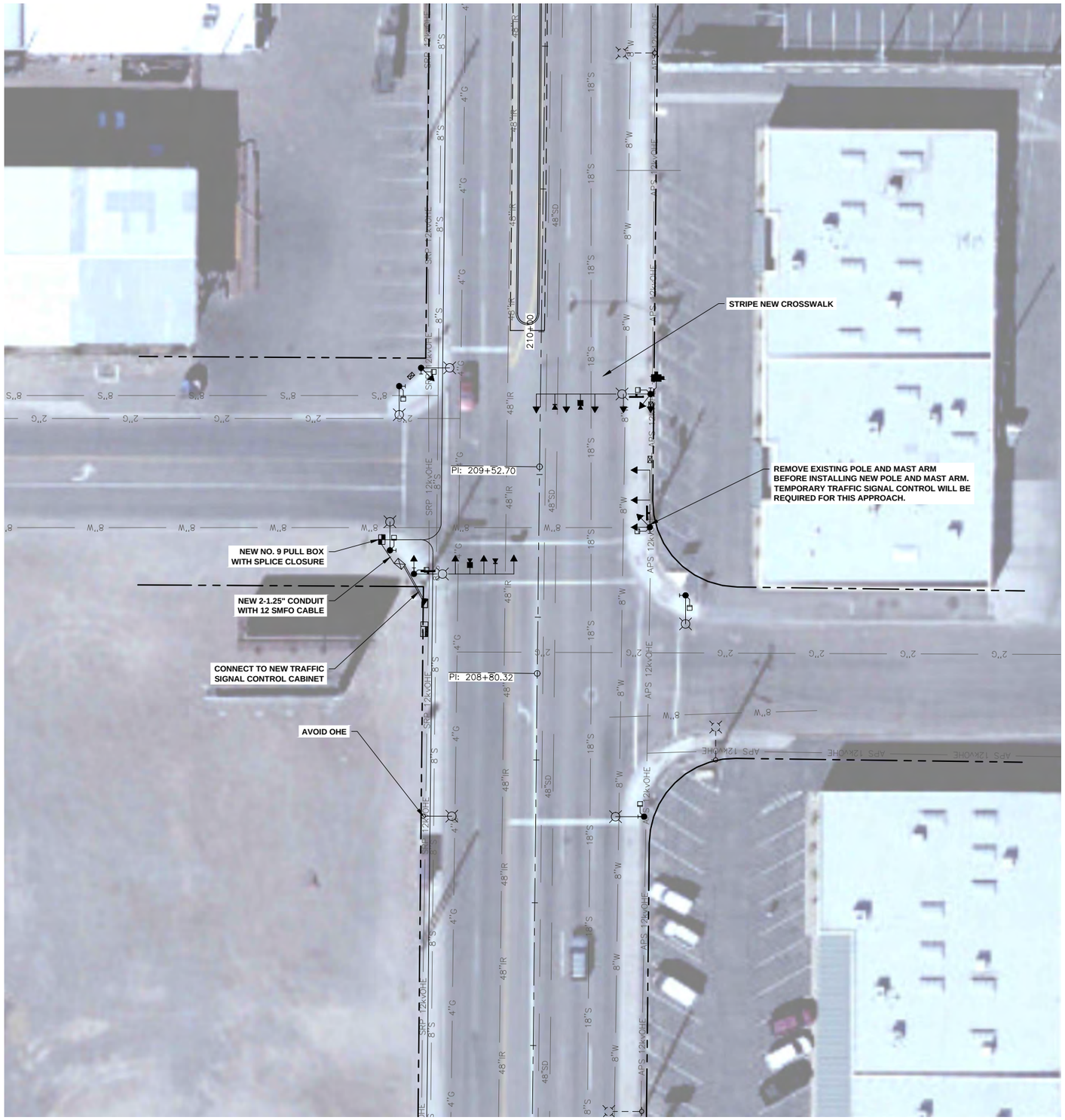
PROJECT #: ST89340634-1			FILE NO: XX	
DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS
DATE: 2/21	DATE: 2/21	DATE: 2/21		
SCALE: 1" = 20'		QS. #:	21	27

TRAFFIC SIGNAL: 35TH AVE - I-10 TO CAMELBACK RD

PROJECT #: ST89340634-1

FILE #: XX

DATE SAVED: 2/22/21 T:\TEMP\PROJECTS\221953.06\600_CADD\05_OFFICIAL\SHEETS\ST89340634-1_SIGNAL5.DWG



PRELIMINARY 15% NOT FOR CONSTRUCTION OR RECORDING	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
	9	ARIZ.	ST89340634-1		

Greenlight Traffic Engineering

DR:	DES:	CK:	DATE:

1. GM ENERAL NOTES:

1.1 The contractor shall notify the City Of Phoenix Traffic Signal Shop (602-262-6733) a minimum of fourteen (14) calendar days prior to beginning any traffic signal work. Submittals of all equipment shall be furnished to the Signal Shop and approved prior to the ordering of any traffic signal equipment. The contractor shall verify that they have the most current set of drawings prior to start and ordering o f any equipment.

1.2 Foundation elevations must be within 1/4" of finished sidewalk grade.

1.3 The Contractor shall layout of all ADA ramps, junction boxes and foundation locations for approval by the traffic signal representative. All ADA ramps shall be layed out in white marking paint to determine best traffic signal pole locations.

1.4 A minimum of four (4) feet of clearance is required between all traffic signal poles and the back edge of sidewalk pedestrian ramps.

1.5 Traffic Signal Plan approval is valid for 365 calendar days from date sealed. If signal construction has not begun prior to the 365 days elapsing, the signal plans must be re-submitted for approval or an extension granted by the Deputy Director Traffic Services or an authorized representative to ensure that existing traffic signal equipment locations and standard detail references are current.

1.6 The contractor shall have a competent supervisor capable of reading and thoroughly understanding the plans and specifications and thoroughly experienced in the construction of traffic signals assigned to the project. The Contractor's supervisor or lead shall possess a current International Municipal Signal Association (IMSA) Level II Traffic Signal Electrician Certification and must be on site during any traffic signal construction activities. The Contractor shall have a complete set of construction drawings including current City of Phoenix standards and Traffic Signal Details on site at all times during signal & lighting systems construction.

2. CONTRACTOR NOTE FOR CITY OF PHOENIX TRAFFIC SIGNAL POLES

2.1 The contractor shall provide and install all foundations per C.O.P. Street Transportation drawing #10164. City to provide all anchor cages, nuts bolts.

3. WORK TO BE PERFORMED BY THE CONTRACTOR

The contractor shall provide the traffic signal equipment as indicated in note 2.1 The contractor is to provide all underground work including, but not limited to:

3.1 - All demolition work, unless otherwise noted
- All trenching
- All foundations (pole, controller and power service pedestal)
- All junction boxes with 18" of sump
- All conduit runs
- Provide and install conduit runs from PSP to Utility Company feed

3.2 All underground conduits shall be schedule 40 rigid polyvinyl chloride (PVC) installed 24 inches to 30 inches below finished grade with the exception of loop lead-in conduits, which shall be schedule 40 rigid PVC installed in accordance with the latest City of Phoenix Standard Detail Sheet. All conduits shall be installed in straight lines (unless approved by the Signal Shop Inspector) junction box to junction box or junction box to signal equipment foundation with one 90 degree sweep on each end as specified in the plans. All conduits entering junction boxes shall be vertical. Conduits in all foundations shall be located as close as possible to center of the foundation and vertical with foundation below the bottom of the cover. All conduit ends except those in the controller cabinet foundation will be provided with a "bell end" fitting of appropriate size.

3.3 Removal of existing streetlights:
The contractor shall:
- Request de-energization of all streetlights listed for removal,
- Provide complete removal of streetlight pole, mast arm and luminaire
- Properly dispose of all streetlight material

4. WORK TO BE PERFORMED BY CITY OF PHOENIX SIGNAL CREWS

The City of Phoenix traffic signal crews will provide and install all above ground traffic signal equipment including:

- All poles and mast arms
- All pole anchor cages, nuts and bolts
- Provide and install the power service pedestal
- All signal heads
- All pedestrian heads
- All APS push buttons
- All controllers
- All LED luminaires
- All illuminated street signs
- All signal wiring
- All loop and non-invasive detectors
- All pole grouting
- All cameras
- All radios

PER PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE FURNISHED FOR INSPECTION OR COPYING, EXCEPT AS SPECIFICALLY STATED IN THE CITY CODE, OR AS REQUIRED BY LAW

Contact Arizona 811 at least two full working days before you begin excavating
ARIZONA811
Call 811 or click Arizona811.com

City of Phoenix
N

APPROVED BY:

TRAFFIC SIGNAL ENGINEER _____ DATE:

STREET TRANSPORTATION TRAFFIC SERVICES DEPUTY DIRECTOR _____ DATE:

TRAFFIC SIGNAL PLAN

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD

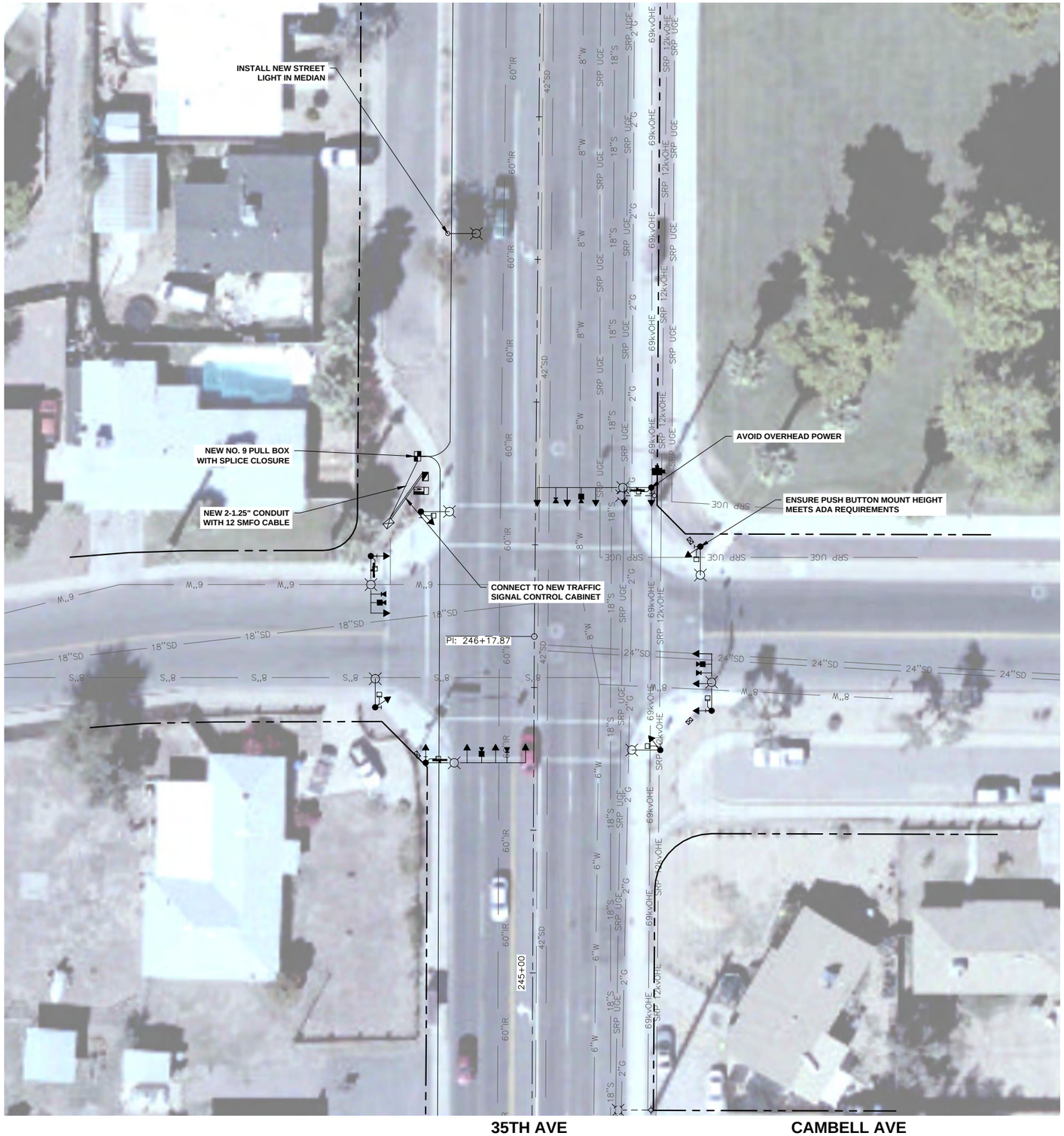
PROJECT #: ST89340634-1			FILE NO: XX	
DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS
DATE: 2/21	DATE: 2/21	DATE: 2/21		
SCALE: 1" = 20'		QS. #:	22	27

TRAFFIC SIGNAL: 35TH AVE - I-10 TO CAMELBACK RD

PROJECT #: ST89340634-1

FILE #: XX

DATE SAVED: 2/22/21 T:\TEMP\PROJECTS\221953.06\600_CADD\05_OFFICIAL\SHEETS\ST89340634-1_SIGNAL5.DWG



4. WORK TO BE PERFORMED BY CITY OF PHOENIX SIGNAL CREWS

The City of Phoenix traffic signal crews will provide and install all above ground traffic signal equipment including:

- All poles and mast arms
- All pole anchor cages, nuts and bolts
- Provide and install the power service pedestal
- All signal heads
- All pedestrian heads
- All APS push buttons
- All controllers
- All LED luminaires
- All illuminated street signs
- All signal wiring
- All loop and non-invasive detectors
- All pole grouting
- All cameras
- All radios

City of Phoenix
N

PRELIMINARY 15% NOT FOR CONSTRUCTION OR RECORDING	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
	9	ARIZ.	ST89340634-1		

Greenlight Traffic Engineering

DR:	DES:	CK:	DATE:

1. GM ENERAL NOTES:

1.1 The contractor shall notify the City Of Phoenix Traffic Signal Shop (602-262-6733) a minimum of fourteen (14) calendar days prior to beginning any traffic signal work. Submittals of all equipment shall be furnished to the Signal Shop and approved prior to the ordering of any traffic signal equipment. The contractor shall verify that they have the most current set of drawings prior to start and ordering o f any equipment.

1.2 Foundation elevations must be within 1/4" of finished sidewalk grade.

1.3 The Contractor shall layout of all ADA ramps, junction boxes and foundation locations for approval by the traffic signal representative. All ADA ramps shall be layed out in white marking paint to determine best traffic signal pole locations.

1.4 A minimum of four (4) feet of clearance is required between all traffic signal poles and the back edge of sidewalk pedestrian ramps.

1.5 Traffic Signal Plan approval is valid for 365 calendar days from date sealed. If signal construction has not begun prior to the 365 days elapsing, the signal plans must be re-submitted for approval or an extension granted by the Deputy Director Traffic Services or an authorized representative to ensure that existing traffic signal equipment locations and standard detail references are current.

1.6 The contractor shall have a competent supervisor capable of reading and thoroughly understanding the plans and specifications and thoroughly experienced in the construction of traffic signals assigned to the project. The Contractor's supervisor or lead shall possess a current International Municipal Signal Association (IMSA) Level II Traffic Signal Electrician Certification and must be on site during any traffic signal construction activities. The Contractor shall have a complete set of construction drawings including current City of Phoenix standards and Traffic Signal Details on site at all times during signal & lighting systems construction.

2. CONTRACTOR NOTE FOR CITY OF PHOENIX TRAFFIC SIGNAL POLES

2.1 The contractor shall provide and install all foundations per C.O.P. Street Transportation drawing #10164. City to provide all anchor cages, nuts bolts.

3. WORK TO BE PERFORMED BY THE CONTRACTOR

The contractor shall provide the traffic signal equipment as indicated in note 2.1 The contractor is to provide all underground work including, but not limited to:

3.1 - All demolition work, unless otherwise noted
- All trenching
- All foundations (pole, controller and power service pedestal)
- All junction boxes with 18" of sump
- All conduit runs
- Provide and install conduit runs from PSP to Utility Company feed

3.2 All underground conduits shall be schedule 40 rigid polyvinyl chloride (PVC) installed 24 inches to 30 inches below finished grade with the exception of loop lead-in conduits, which shall be schedule 40 rigid PVC installed in accordance with the latest City of Phoenix Standard Detail Sheet. All conduits shall be installed in straight lines (unless approved by the Signal Shop Inspector) junction box to junction box or junction box to signal equipment foundation with one 90 degree sweep on each end as specified in the plans. All conduits entering junction boxes shall be vertical. Conduits in all foundations shall be located as close as possible to center of the foundation and vertical with foundation below the bottom of the cover. All conduit ends except those in the controller cabinet foundation will be provided with a "bell end" fitting of appropriate size.

3.3 Removal of existing streetlights:
The contractor shall:
- Request de-energization of all streetlights listed for removal,
- Provide complete removal of streetlight pole, mast arm and luminaire
- Properly dispose of all streetlight material

PER PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE FURNISHED FOR INSPECTION OR COPYING, EXCEPT AS SPECIFICALLY STATED IN THE CITY CODE, OR AS REQUIRED BY LAW

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

TRAFFIC SIGNAL PLAN

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD

APPROVED BY:

TRAFFIC SIGNAL ENGINEER _____ DATE:

STREET TRANSPORTATION TRAFFIC SERVICES DEPUTY DIRECTOR _____ DATE:

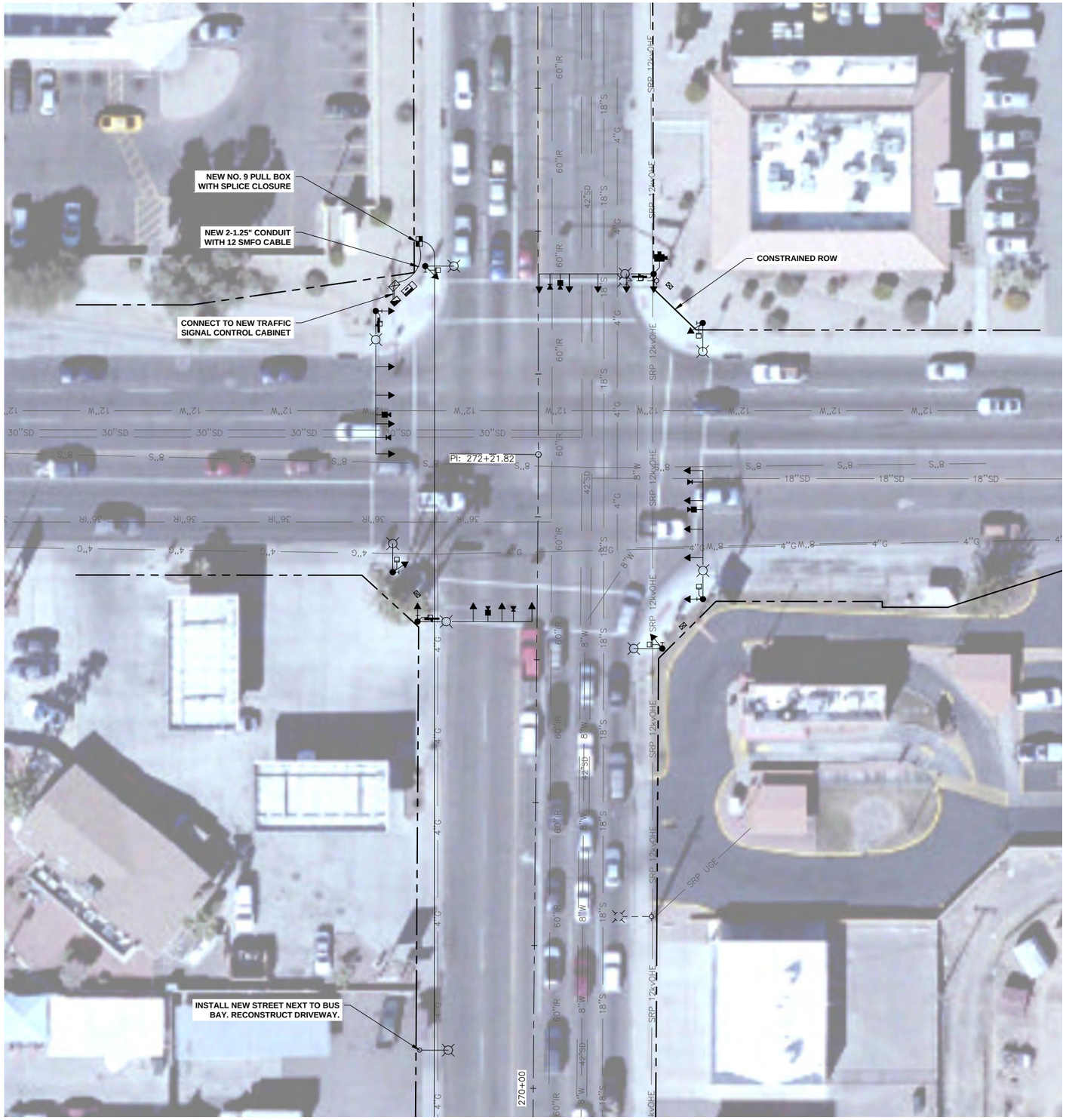
PROJECT #: ST89340634-1			FILE NO: XX	
DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS
DATE: 2/21	DATE: 2/21	DATE: 2/21		
SCALE: 1" = 20'		QS. #:	23	27

TRAFFIC SIGNAL: 35TH AVE - I-10 TO CAMELBACK RD

PROJECT #: ST89340634-1

FILE #: XX

DATE SAVED: 2/22/21 T:\TEMPEPROJECTS\221953.061600_CADD\05_OFFICIALSHEETS\ST89340634-1_SIGNAL5.DWG



PRELIMINARY 15% NOT FOR CONSTRUCTION OR RECORDING	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
	9	ARIZ.	ST89340634-1		

Greenlight Traffic Engineering

DR: | DES: | CK: | DATE:

1. GM ENERAL NOTES:

1.1 The contractor shall notify the City Of Phoenix Traffic Signal Shop (602-262-6733) a minimum of fourteen (14) calendar days prior to beginning any traffic signal work. Submittals of all equipment shall be furnished to the Signal Shop and approved prior to the ordering of any traffic signal equipment. The contractor shall verify that they have the most current set of drawings prior to start and ordering o f any equipment.

1.2 Foundation elevations must be within 1/4" of finished sidewalk grade.

1.3 The Contractor shall layout of all ADA ramps, junction boxes and foundation locations for approval by the traffic signal representative. All ADA ramps shall be layed out in white marking paint to determine best traffic signal pole locations.

1.4 A minimum of four (4) feet of clearance is required between all traffic signal poles and the back edge of sidewalk pedestrian ramps.

1.5 Traffic Signal Plan approval is valid for 365 calendar days from date sealed. If signal construction has not begun prior to the 365 days elapsing, the signal plans must be re-submitted for approval or an extension granted by the Deputy Director Traffic Services or an authorized representative to ensure that existing traffic signal equipment locations and standard detail references are current.

1.6 The contractor shall have a competent supervisor capable of reading and thoroughly understanding the plans and specifications and thoroughly experienced in the construction of traffic signals assigned to the project. The Contractor's supervisor or lead shall possess a current International Municipal Signal Association (IMSA) Level II Traffic Signal Electrician Certification and must be on site during any traffic signal construction activities. The Contractor shall have a complete set of construction drawings including current City of Phoenix standards and Traffic Signal Details on site at all times during signal & lighting systems construction.

2. CONTRACTOR NOTE FOR CITY OF PHOENIX TRAFFIC SIGNAL POLES

2.1 The contractor shall provide and install all foundations per C.O.P. Street Transportation drawing #10164. City to provide all anchor cages, nuts bolts.

3. WORK TO BE PERFORMED BY THE CONTRACTOR

The contractor shall provide the traffic signal equipment as indicated in note 2.1 The contractor is to provide all underground work including, but not limited to:

3.1 - All demolition work, unless otherwise noted
- All trenching
- All foundations (pole, controller and power service pedestal)
- All junction boxes with 18" of sump
- All conduit runs
- Provide and install conduit runs from PSP to Utility Company feed

3.2 All underground conduits shall be schedule 40 rigid polyvinyl chloride (PVC) installed 24 inches to 30 inches below finished grade with the exception of loop lead-in conduits, which shall be schedule 40 rigid PVC installed in accordance with the latest City of Phoenix Standard Detail Sheet. All conduits shall be installed in straight lines (unless approved by the Signal Shop Inspector) junction box to junction box or junction box to signal equipment foundation with one 90 degree sweep on each end as specified in the plans. All conduits entering junction boxes shall be vertical. Conduits in all foundations shall be located as close as possible to center of the foundation and vertical with foundation below the bottom of the cover. All conduit ends except those in the controller cabinet foundation will be provided with a "bell end" fitting of appropriate size.

3.3 Removal of existing streetlights:
The contractor shall:
- Request de-energization of all streetlights listed for removal,
- Provide complete removal of streetlight pole, mast arm and luminaire
- Properly dispose of all streetlight material

4. WORK TO BE PERFORMED BY CITY OF PHOENIX SIGNAL CREWS

The City of Phoenix traffic signal crews will provide and install all above ground traffic signal equipment including:

- All poles and mast arms
- All pole anchor cages, nuts and bolts
- Provide and install the power service pedestal
- All signal heads
- All pedestrian heads
- All APS push buttons
- All controllers
- All LED luminaires
- All illuminated street signs
- All signal wiring
- All loop and non-invasive detectors
- All pole grouting
- All cameras
- All radios

PER PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE FURNISHED FOR INSPECTION OR COPYING, EXCEPT AS SPECIFICALLY STATED IN THE CITY CODE, OR AS REQUIRED BY LAW

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

City of Phoenix
N

APPROVED BY:

TRAFFIC SIGNAL ENGINEER _____ DATE:

STREET TRANSPORTATION TRAFFIC SERVICES DEPUTY DIRECTOR _____ DATE:

TRAFFIC SIGNAL PLAN

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD

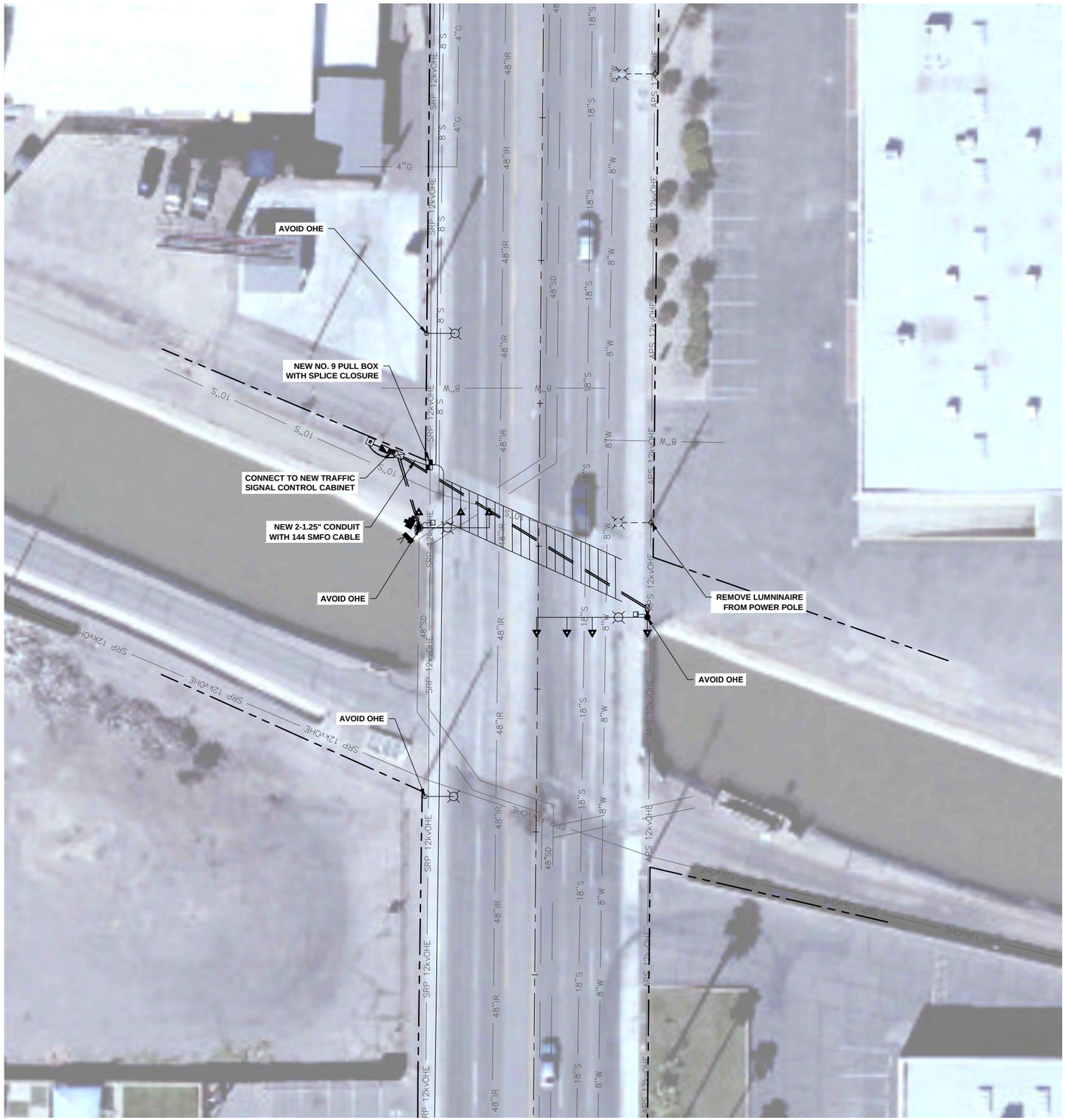
PROJECT #: ST89340634-1			FILE NO: XX	
DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS
DATE: 2/21	DATE: 2/21	DATE: 2/21		
SCALE: 1" = 20'		QS. #:	24	27

TRAFFIC SIGNAL: 35TH AVE - I-10 TO CAMELBACK RD

PROJECT #: ST89340634-1

FILE #: XX

DATE SAVED: 2/22/21 T:\TEMP\PROJECTS\221953.OG\600_CADD\05_OFFICIAL\SHEETS\ST89340634-1_SIGNAL5.DWG



PRELIMINARY 15% NOT FOR CONSTRUCTION OR RECORDING	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
	9	ARIZ.	ST89340634-1		

Greenlight Traffic Engineering

DR:	DES:	CK:	DATE:

1. GM ENERAL NOTES:

1.1 The contractor shall notify the City Of Phoenix Traffic Signal Shop (602-262-6733) a minimum of fourteen (14) calendar days prior to beginning any traffic signal work. Submittals of all equipment shall be furnished to the Signal Shop and approved prior to the ordering of any traffic signal equipment. The contractor shall verify that they have the most current set of drawings prior to start and ordering o f any equipment.

1.2 Foundation elevations must be within 1/4" of finished sidewalk grade.

1.3 The Contractor shall layout of all ADA ramps, junction boxes and foundation locations for approval by the traffic signal representative. All ADA ramps shall be layed out in white marking paint to determine best traffic signal pole locations.

1.4 A minimum of four (4) feet of clearance is required between all traffic signal poles and the back edge of sidewalk pedestrian ramps.

1.5 Traffic Signal Plan approval is valid for 365 calendar days from date sealed. If signal construction has not begun prior to the 365 days elapsing, the signal plans must be re-submitted for approval or an extension granted by the Deputy Director Traffic Services or an authorized representative to ensure that existing traffic signal equipment locations and standard detail references are current.

1.6 The contractor shall have a competent supervisor capable of reading and thoroughly understanding the plans and specifications and thoroughly expenenced in the construction of traffic signals assigned to the project. The Contractor's supervisor or lead shall possess a current International Municipal Signal Association (IMSA) Level II Traffic Signal Electrician Certification and must be on site during any traffic signal construction activities. The Contractor shall have a complete set of construction drawings including current City of Phoenix standards and Traffic Signal Details on site at all times during signal & lighting systems construction.

2. CONTRACTOR NOTE FOR CITY OF PHOENIX TRAFFIC SIGNAL POLES

2.1 The contractor shall provide and install all foundations per C.O.P. Street Transportation drawing #10164. City to provide all anchor cages, nuts bolts.

3. WORK TO BE PERFORMED BY THE CONTRACTOR

The contractor shall provide the traffic signal equipment as indicated in note 2.1 The contractor is to provide all underground work including, but not limited to:

3.1 - All demolition work, unless otherwise noted
- All trenching
- All foundations (pole, controller and power service pedestal)
- All junction boxes with 18" of sump
- All conduit runs
- Provide and install conduit runs from PSP to Utility Company feed

3.2 All underground conduits shall be schedule 40 rigid polyvinyl chloride (PVC) installed 24 inches to 30 inches below finished grade with the exception of loop lead-in conduits, which shall be schedule 40 rigid PVC installed in accordance with the latest City of Phoenix Standard Detail Sheet. All conduits shall be installed in straight lines (unless approved by the Signal Shop Inspector) junction box to junction box or junction box to signal equipment foundation with one 90 degree sweep on each end as specified in the plans. All conduits entering junction boxes shall be vertical. Conduits in all foundations shall be located as close as possible to center of the foundation and vertical with foundation below the bottom of the cover. All conduit ends except those in the controller cabinet foundation will be provided with a "bell end" fitting of appropriate size.

3.3 Removal of existing streetlights:
The contractor shall:
- Request de-energization of all streetlights listed for removal,
- Provide complete removal of streetlight pole, mast arm and luminaire
- Properly dispose of all streetlight material

4. WORK TO BE PERFORMED BY CITY OF PHOENIX SIGNAL CREWS

The City of Phoenix traffic signal crews will provide and install all above ground traffic signal equipment including:

- All poles and mast arms
- All pole anchor cages, nuts and bolts
- Provide and install the power service pedestal
- All signal heads
- All pedestrian heads
- All APS push buttons
- All controllers
- All LED luminaires
- All illuminated street signs
- All signal wiring
- All loop and non-invasive detectors
- All pole grouting
- All cameras
- All radios

PER PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE FURNISHED FOR INSPECTION OR COPYING, EXCEPT AS SPECIFICALLY STATED IN THE CITY CODE, OR AS REQUIRED BY LAW

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

City of Phoenix
N

APPROVED BY:

TRAFFIC SIGNAL ENGINEER _____ DATE:

STREET TRANSPORTATION TRAFFIC SERVICES DEPUTY DIRECTOR _____ DATE:

TRAFFIC SIGNAL PLAN

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD

PROJECT #: ST89340634-1			FILE NO: XX	
DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS
DATE: 2/21	DATE: 2/21	DATE: 2/21		
SCALE: 1" = 20'		QS. #:	25	27

TRAFFIC SIGNAL: 35TH AVE - I-10 TO CAMELBACK RD

PROJECT #: ST89340634-1

FILE #: XX

DATE SAVED: 2/22/21 T:\TEMP\PROJECTS\221953.06\600_CAD\05_OFFICIAL\SHEETS\ST89340634-1_SIGNALS.DWG

PRELIMINARY 15% NOT FOR CONSTRUCTION OR RECORDING	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
	9	ARIZ.	ST89340634-1		

Greenlight Traffic Engineering

DR:	DES:	CK:	DATE:

1. GM ENERAL NOTES:

1.1 The contractor shall notify the City Of Phoenix Traffic Signal Shop (602-262-6733) a minimum of fourteen (14) calendar days prior to beginning any traffic signal work. Submittals of all equipment shall be furnished to the Signal Shop and approved prior to the ordering of any traffic signal equipment. The contractor shall verify that they have the most current set of drawings prior to start and ordering o f any equipment.

1.2 Foundation elevations must be within 1/4" of finished sidewalk grade.

1.3 The Contractor shall layout of all ADA ramps, junction boxes and foundation locations for approval by the traffic signal representative. All ADA ramps shall be layed out in white marking paint to determine best traffic signal pole locations.

1.4 A minimum of four (4) feet of clearance is required between all traffic signal poles and the back edge of sidewalk pedestnan ramps.

1.5 Traffic Signal Plan approval is valid for 365 calendar days from date sealed. If signal construction has not begun prior to the 365 days elapsing, the signal plans must be re-submitted for approval or an extension granted by the Deputy Director Traffic Services or an authonzed representative to ensure that existing traffic signal equipment locations and standard detail references are current.

1.6 The contractor shall have a competent supervisor capable of reading and thoroughly understanding the plans and specifications and thoroughly experienced in the construction of traffic signals assigned to the project. The Contractor's supervisor or lead shall possess a current International Municipal Signal Association (IMSA) Level II Traffic Signal Electnician Certification and must be on site during any traffic signal construction activities. The Contractor shall have a complete set of construction drawings including current City of Phoenix standards and Traffic Signal Details on site at all times during signal & lighting systems construction.

2. CONTRACTOR NOTE FOR CITY OF PHOENIX TRAFFIC SIGNAL POLES

2.1 The contractor shall provide and install all foundations per C.O.P. Street Transportation drawing #10164. City to provide all anchor cages, nuts bolts.

3. WORK TO BE PERFORMED BY THE CONTRACTOR

The contractor shall provide the traffic signal equipment as indicated in note 2.1 The contractor is to provide all underground work including, but not limited to:

3.1 - All demolition work, unless otherwise noted
- All trenching
- All foundations (pole, controller and power service pedestal)
- All junction boxes with 18" of sump
- All conduit runs
- Provide and install conduit runs from PSP to Utility Company feed

3.2 All underground conduits shall be schedule 40 rigid polyvinyl chlonde (PVC) installed 24 inches to 30 inches below finished grade with the exception of loop lead-in conduits, which shall be schedule 40 rigid PVC installed in accordance with the latest City of Phoenix Standard Detail Sheet. All conduits shall be installed in straight lines (unless approved by the Signal Shop Inspector) junction box to junction box or junction box to signal equipment foundation with one 90 degree sweep on each end as specified in the plans. All conduits entering junction boxes shall be vertical. Conduits in all foundations shall be located as close as possible to center of the foundation and vertical with foundation below the bottom of the cover. All conduit ends except those in the controller cabinet foundation will be provided with a "bell end" fitting of appropnate size.

3.3 Removal of existing streetlights:
The contractor shall:
- Request de-energization of all streetlights listed for removal,
- Provide complete removal of streetlight pole, mast arm and luminaire
- Properly dispose of all streetlight matenal

4. WORK TO BE PERFORMED BY CITY OF PHOENIX SIGNAL CREWS

The City of Phoenix traffic signal crews will provide and install all above ground traffic signal equipment including:

- All poles and mast arms
- All pole anchor cages, nuts and bolts
- Provide and install the power service pedestal
- All signal heads
- All pedestrian heads
- All APS push buttons
- All controllers
- All LED luminaires
- All illuminated street signs
- All signal wiring
- All loop and non-invasive detectors
- All pole grouting
- All cameras
- All radios

PER PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE FURNISHED FOR INSPECTION OR COPYING, EXCEPT AS SPECIFICALLY STATED IN THE CITY CODE, OR AS REQUIRED BY LAW

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

City of Phoenix
N

APPROVED BY:

TRAFFIC SIGNAL ENGINEER _____ DATE:

STREET TRANSPORTATION TRAFFIC SERVICES DEPUTY DIRECTOR _____ DATE:

TRAFFIC SIGNAL PLAN

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD

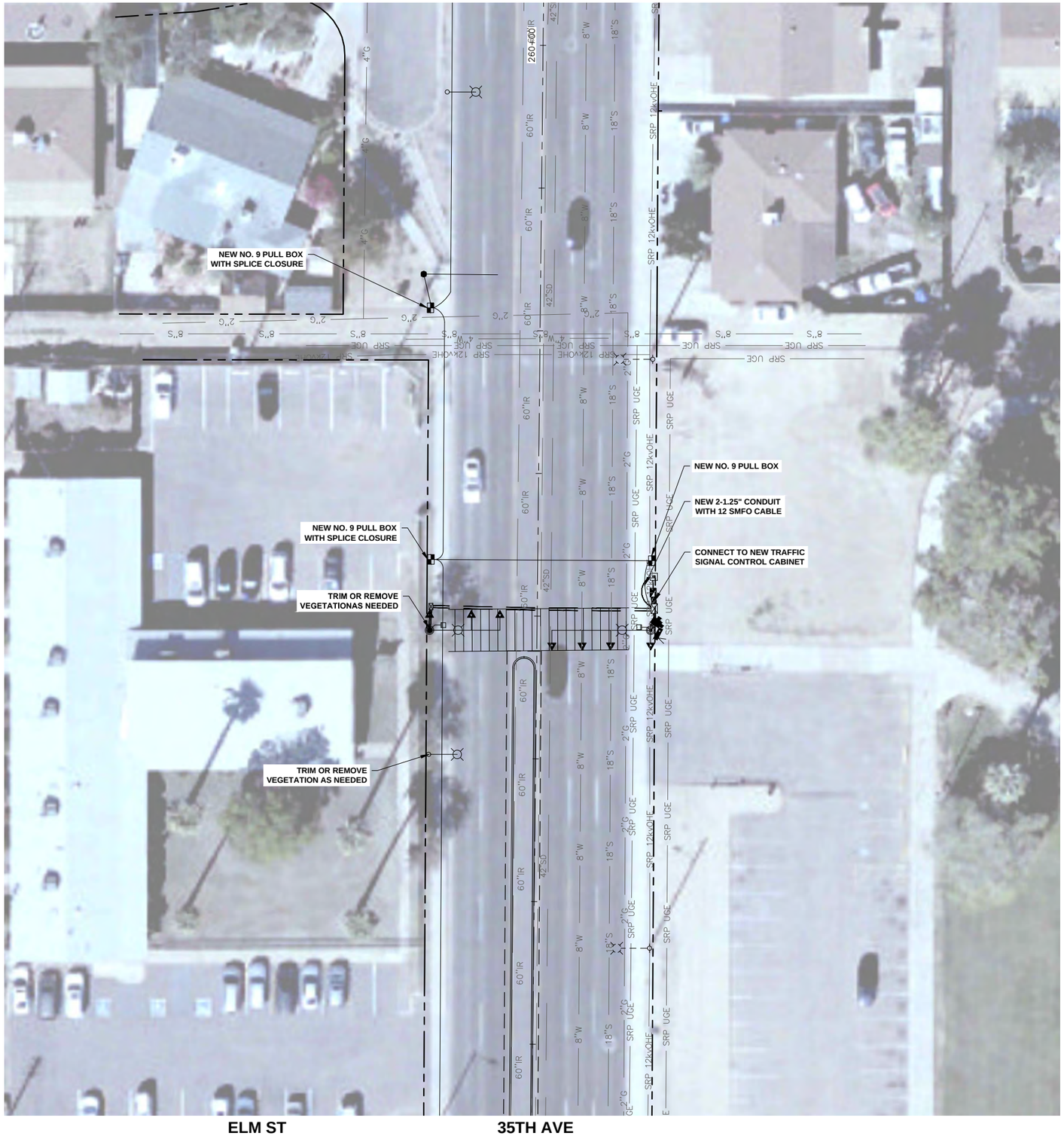
PROJECT #: ST89340634-1			FILE NO: XX	
DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS
DATE: 2/21	DATE: 2/21	DATE: 2/21		
SCALE: 1" = 20'		QS. #:	26	27

TRAFFIC SIGNAL: 35TH AVE - I-10 TO CAMELBACK RD

PROJECT #: ST89340634-1

FILE #: XX

DATE SAVED: 2/22/21 T:\TEMP\PROJECTS\221953.06\600_CADD\05_OFFICIAL\SHEETS\ST89340634-1_SIGNALS.DWG



PRELIMINARY 15% NOT FOR CONSTRUCTION OR RECORDING	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL
	9	ARIZ.	ST89340634-1		

Greenlight Traffic Engineering

DR:	DES:	CK:	DATE:

1. GM ENERAL NOTES:

1.1 The contractor shall notify the City Of Phoenix Traffic Signal Shop (602-262-6733) a minimum of fourteen (14) calendar days prior to beginning any traffic signal work. Submittals of all equipment shall be furnished to the Signal Shop and approved prior to the ordering of any traffic signal equipment. The contractor shall verify that they have the most current set of drawings prior to start and ordering o f any equipment.

1.2 Foundation elevations must be within 1/4" of finished sidewalk grade.

1.3 The Contractor shall layout of all ADA ramps, junction boxes and foundation locations for approval by the traffic signal representative. All ADA ramps shall be layed out in white marking paint to determine best traffic signal pole locations.

1.4 A minimum of four (4) feet of clearance is required between all traffic signal poles and the back edge of sidewalk pedestrian ramps.

1.5 Traffic Signal Plan approval is valid for 365 calendar days from date sealed. If signal construction has not begun prior to the 365 days elapsing, the signal plans must be re-submitted for approval or an extension granted by the Deputy Director Traffic Services or an authorized representative to ensure that existing traffic signal equipment locations and standard detail references are current.

1.6 The contractor shall have a competent supervisor capable of reading and thoroughly understanding the plans and specifications and thoroughly experienced in the construction of traffic signals assigned to the project. The Contractor's supervisor or lead shall possess a current International Municipal Signal Association (IMSA) Level II Traffic Signal Electrician Certification and must be on site during any traffic signal construction activities. The Contractor shall have a complete set of construction drawings including current City of Phoenix standards and Traffic Signal Details on site at all times during signal & lighting systems construction.

2. CONTRACTOR NOTE FOR CITY OF PHOENIX TRAFFIC SIGNAL POLES

2.1 The contractor shall provide and install all foundations per C.O.P. Street Transportation drawing #10164. City to provide all anchor cages, nuts bolts.

3. WORK TO BE PERFORMED BY THE CONTRACTOR

The contractor shall provide the traffic signal equipment as indicated in note 2.1 The contractor is to provide all underground work including, but not limited to:

3.1 - All demolition work, unless otherwise noted
- All trenching
- All foundations (pole, controller and power service pedestal)
- All junction boxes with 18" of sump
- All conduit runs
- Provide and install conduit runs from PSP to Utility Company feed

3.2 All underground conduits shall be schedule 40 rigid polyvinyl chloride (PVC) installed 24 inches to 30 inches below finished grade with the exception of loop lead-in conduits, which shall be schedule 40 rigid PVC installed in accordance with the latest City of Phoenix Standard Detail Sheet. All conduits shall be installed in straight lines (unless approved by the Signal Shop Inspector) junction box to junction box or junction box to signal equipment foundation with one 90 degree sweep on each end as specified in the plans. All conduits entering junction boxes shall be vertical. Conduits in all foundations shall be located as close as possible to center of the foundation and vertical with foundation below the bottom of the cover. All conduit ends except those in the controller cabinet foundation will be provided with a "bell end" fitting of appropriate size.

3.3 Removal of existing streetlights:
The contractor shall:
- Request de-energization of all streetlights listed for removal,
- Provide complete removal of streetlight pole, mast arm and luminaire
- Properly dispose of all streetlight material

4. WORK TO BE PERFORMED BY CITY OF PHOENIX SIGNAL CREWS

The City of Phoenix traffic signal crews will provide and install all above ground traffic signal equipment including:

- All poles and mast arms
- All pole anchor cages, nuts and bolts
- Provide and install the power service pedestal
- All signal heads
- All pedestrian heads
- All APS push buttons
- All controllers
- All LED luminaires
- All illuminated street signs
- All signal wiring
- All loop and non-invasive detectors
- All pole grouting
- All cameras
- All radios

PER PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE FURNISHED FOR INSPECTION OR COPYING, EXCEPT AS SPECIFICALLY STATED IN THE CITY CODE, OR AS REQUIRED BY LAW

Contact Arizona 811 at least two full working days before you begin excavating
ARIZONA811
Call 811 or click Arizona811.com

City of Phoenix
N

APPROVED BY:

TRAFFIC SIGNAL ENGINEER _____ DATE:

STREET TRANSPORTATION TRAFTIC SERVICES DEPUTY DIRECTOR _____ DATE:

TRAFFIC SIGNAL PLAN

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD

PROJECT #: ST89340634-1			FILE NO: XX	
DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS
DATE: 2/21	DATE: 2/21	DATE: 2/21		
SCALE: 1" = 20'		QS. #:	27	27

TRAFFIC SIGNAL: 35TH AVE - I-10 TO CAMELBACK RD

PROJECT #: ST89340634-1

FILE #: XX

DATE SAVED: 2/22/21 T:\TEMP\PROJECTS\221953.06\600_CADD\05_OFFICIAL\SHEETS\ST89340634-1_SIGNAL5.DWG

Appendix C – Preliminary Opinion of Probable Costs (Including Breakdown by Fiscal Year)

CITY OF PHOENIX STREET TRANSPORTATION DEPARTMENT
PROGRAMMING AND PROJECT DELIVERY DIVISION
35TH AVENUE: I-10 TO CAMELBACK ROAD DCR - ST89340634-1
TOTAL PROJECT COSTS
DATE: AUGUST 6, 2021

Item No.	Description	Unit	Quantity	Unit Cost	Total
1	DESIGN	JOB	**1**	$3,803,437.00	$3,803,437
2	RIGHT OF WAY	JOB	**1**	$2,093,078.00	$2,093,078
3	CONSTRUCTION	JOB	**1**	$17,420,326.00	$17,420,326
4	ENVIRONMENTAL	JOB	**1**	$250,000.00	$250,000
5	TESTING AND MATERIALS	JOB	**1**	$142,718.00	$142,718
6	UTILITIES	JOB	**1**	$921,633.00	$921,633
7	CONSTRUCTION ADMINISTRATION	JOB	**1**	$245,000.00	$245,000
				TOTAL FOR PROJECT ST89340634-1	***$24,876,192***

CITY OF PHOENIX STREET TRANSPORTATION DEPARTMENT
PROGRAMMING AND PROJECT DELIVERY DIVISION
35TH AVENUE: I-10 TO CAMELBACK ROAD DCR - ST89340634-1
PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST
DATE: AUGUST 6, 2021

	Item No.	Description	Unit	Quantity	Unit Cost	Total
1	M1002005	Mobilization	JOB	**1**	$400,000.00	$400,000.00
2	M1042005	Allowance for Extra Work	JOB	**1**	$100,000.00	$100,000.00
3	M1042007	Allowance for Extra Landscape Work	JOB	**1**	$250,000.00	$250,000.00
4	E6992000	Allowance for Storm Water Pollution Prevention Best Management Practice	JOB	**1**	$100,000.00	$100,000.00
5	M1058000	Construction Survey and Layout	JOB	**1**	$75,000.00	$75,000.00
6	M3000051	Asphalt Concrete Pavement Milling (1 in depth)	SY	**119,000**	$5.00	$595,000.00
7	M3010001	Subgrade Preparation	SY	**3,450**	$40.00	$138,000.00
8	M3210109	Allowance to Rehabilitate Deteriorated Pavement	JOB	**1**	$200,000.00	$200,000.00
9	M3210113	Asphalt Concrete Surface Course, Type D 1/2, 1" Thick	TON	**6,600**	$175.00	$1,155,000.00
10	M3210130	Asphalt Concrete Surface Course, Type D 1/2, 3" Thick	TON	**400**	$175.00	$70,000.00
11	M3210380	Asphalt Concrete Base Course, Type A 1-1/2, 8" Thick	TON	**500**	$125.00	$62,500.00
12	M3290100	Emulsified Asphalt For Tack Coat, Type SS-1h	TON	**50.0**	$1,500.00	$75,000.00
13	M3400010	Concrete Median	SF	**17,400.0**	$35.00	$609,000.00
14	M3400445	Replace Concrete Sidewalk	SF	**2,000.0**	$30.00	$60,000.00
15	M3402221	Concrete Single Curb, Std. Detail 222, Type "A"	Lin. Feet	**5,200**	$45.00	$234,000.00
16	M3500060	Remove Asphalt Concrete Pavement	SY	**3,450**	$15.00	$51,750.00
17	M3500300	Miscellaneous Removal and Other Work	JOB	**1**	$150,000.00	$150,000.00
18	M3500303.01	Remove and Salvage Existing Traffic Signals (35th Avenue and McDowell Road)	JOB	**1**	$150,000.00	$150,000.00
19	M3500303.02	Remove and Salvage Existing Traffic Signals (35th Avenue and Encanto Boulevard)	JOB	**1**	$150,000.00	$150,000.00
20	M3500303.03	Remove and Salvage Existing Traffic Signals (35th Avenue and West Virginia Avenue)	JOB	**1**	$150,000.00	$150,000.00
21	M3500303.04	Remove and Salvage Existing Traffic Signals (35th Avenue and Thomas Road)	JOB	**1**	$150,000.00	$150,000.00

CITY OF PHOENIX STREET TRANSPORTATION DEPARTMENT
PROGRAMMING AND PROJECT DELIVERY DIVISION
35TH AVENUE: I-10 TO CAMELBACK ROAD DCR - ST89340634-1
PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST
DATE: AUGUST 6, 2021

	Item No.	Description	Unit	Quantity	Unit Cost	Total
22	M3500303.05	Remove and Salvage Existing Traffic Signals (35th Avenue and Earll Drive)	JOB	**1**	$150,000.00	$150,000.00
23	M3500303.06	Remove and Salvage Existing Traffic Signals (35th Avenue and Osborn Road)	JOB	**1**	$150,000.00	$150,000.00
24	M3500303.07	Remove and Salvage Existing Traffic Signals (35th Avenue and Clarendon Avenue)	JOB	**1**	$150,000.00	$150,000.00
25	M3500303.08	Remove and Salvage Existing Traffic Signals (35th Avenue and Campbell Avenue)	JOB	**1**	$150,000.00	$150,000.00
26	M3500303.09	Remove and Salvage Existing Traffic Signals (35th Avenue and Camelback Road)	JOB	**1**	$150,000.00	$150,000.00
27	M3515044	Relocate Existing Light Poles	EACH	**1**	$5,000.00	$5,000.00
28	M3515045.01	Remove Existing Light Poles Standard, Per Plan	EACH	**3**	$2,000.00	$6,000.00
29	M3515045.02	Remove Existing Luminaires from Power Pole	EACH	**6**	$1,500.00	$9,000.00
30	M3513516.01	Traffic Signals and Lighting (35th Avenue and McDowell Road)	JOB	**1**	$450,000.00	$450,000.00
31	M3513516.02	Traffic Signals and Lighting (35th Avenue and Encanto Boulevard)	JOB	**1**	$435,000.00	$435,000.00
32	M3513516.03	Traffic Signals and Lighting (35th Avenue and West Virginia Avenue)	JOB	**1**	$400,000.00	$400,000.00
33	M3513516.04	Traffic Signals and Lighting (35th Avenue and Thomas Road)	JOB	**1**	$475,000.00	$475,000.00
34	M3513516.05	Traffic Signals and Lighting (35th Avenue and Earll Drive)	JOB	**1**	$435,000.00	$435,000.00
35	M3513516.06	Traffic Signals and Lighting (35th Avenue and Osborn Road)	JOB	**1**	$420,000.00	$420,000.00
36	M3513516.07	Traffic Signals and Lighting (Pedestrian Hybrid Beacon: 35th Avenue and Grand Canal Trail)	JOB	**1**	$410,000.00	$410,000.00
37	M3513516.08	Traffic Signals and Lighting (35th Avenue and Clarendon Avenue)	JOB	**1**	$400,000.00	$400,000.00
38	M3513516.09	Traffic Signals and Lighting (Pedestrian Hybrid Beacon: 35th Avenue and Glenrosa Avenue)	JOB	**1**	$400,000.00	$400,000.00
39	M3513516.10	Traffic Signals and Lighting (35th Avenue and Campbell Avenue)	JOB	**1**	$410,000.00	$410,000.00
40	M3513516.11	Traffic Signals and Lighting (Pedestrian Hybrid Beacon: 35th Avenue and Elm Street)	JOB	**1**	$400,000.00	$400,000.00
41	M3513516.12	Traffic Signals and Lighting (35th Avenue and Camelback Road)	JOB	**1**	$475,000.00	$475,000.00
42	M3515085	Furnish and Install LED Street Light 115W 13,400 Lumen (Arterial Street) per COP Street Lighting Procedures, Standards, and Specifications Manual	Each	**71**	$6,500.00	$461,500.00

CITY OF PHOENIX STREET TRANSPORTATION DEPARTMENT
PROGRAMMING AND PROJECT DELIVERY DIVISION
35TH AVENUE: I-10 TO CAMELBACK ROAD DCR - ST89340634-1
PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST
DATE: AUGUST 6, 2021

	Item No.	Description	Unit	Quantity	Unit Cost	Total
43	M3600600.01	Furnish and Install Fiber Optic Pull Box (No. 9 Pull Box)	Each	**22**	$6,000.00	$132,000.00
44	M3600600.02	Furnish and Install Fiber Optic Pull Box (No. 9 Pull Box with Splice Closure)	Each	**21**	$6,500.00	$136,500.00
45	M3513128	2-1.25" Conduit for Traffic Signals with 12 SMFO Cable	Lin. Feet	**1,285**	$30.00	$38,550.00
46	M3513129	2-1.25" Conduit for Traffic Signals with 144 SMFO Cable	Lin. Feet	**16,915**	$30.00	$507,450.00
47	M3600500.01	Dynamic Message Sign with 25' Mast Arm	Each	**3**	$185,000.00	$555,000.00
48	M3600500.02	Dynamic Message Sign with 35' Mast Arm	Each	**3**	$200,000.00	$600,000.00
49	M4004116	Signing	JOB	**1**	$150,000.00	$150,000.00
50	M4004117	Pavement Marking	JOB	**1**	$75,000.00	$75,000.00
51	M4012000	Traffic Control Devices	JOB	**1**	$290,000.00	$290,000.00
52	M4013000	Allowance for Uniformed, Off-duty Law Enforcement Officer	JOB	**1**	$25,000.00	$25,000.00
53	M4309005	Tree Trimming	Each	**12**	$2,000.00	$24,000.00
					SUB-TOTAL CONSTRUCTION	***$13,400,250.00***
					CONTINGENCY (30%)	***$4,020,076.00***
					TOTAL CONSTRUCTION FOR PROJECT ST89340634-1	***$17,420,326.00***

Appendix D – Programming Schedule

PROGRAMMING SCHEDULE			
DESCRIPTION	**FISCAL YEAR '22**	**FISCAL YEAR '23**	**TOTAL COST**
1 DESIGN	$3,803,437		$3,803,437
2 RIGHT OF WAY	$2,093,078		$2,093,078
3 CONSTRUCTION		$17,420,326	$17,420,326
4 ENVIRONMENTAL	$250,000		$250,000
5 TESTING AND MATERIALS		$142,718	$142,718
6 UTILITIES	$921,633		$921,633
7 CONSTRUCTION ADMIN		$245,000	$245,000
SUB-TOTAL PER FISCAL YEAR	$7,068,148	$17,808,044	
	TOTAL FOR ST89340634-1		***$24,876,192***

Appendix E – Meeting Minutes

TYLIN INTERNATIONAL
engineers | planners | scientists

MEETING TITLE	35th Ave DCR: I-10 to Camelback Road (ST89340634-1)
DATE AND TIME	11/24/20, 10:30 am
ATTENDEES	Jose M Rodriguez, Greta Halle, Scott Kelley, Carlos Sanchez Soria and Brenan Poe
ORGANIZED BY	Jose M Rodriguez, City of Phoenix

MEETING DISCUSSIONS

1) Project Status Update from DCR Team
   - Utilities have been mapped for those that have been provided. Team is missing maps from: SRP Irrigation, CenturyLink and Cox.
   - Signals, PHB's and lighting have been designed.
   - Raised median conceptual layouts have been developed.
2) Other Studies Available:
   - Speed Study
   - RSA
   - Boarding info from Valley Metro
   - Available pedestrian counts
   - TYLIN will follow up with an email to Jose to inquire on additional studies/data to confirm designs.
3) Corridor Feel/Median Design:
   - Design speed/vehicle. Posted at 40 mph.
     - Team will use best judgement at the Draft DCR stage for design vehicle and speed. The type of crossroad will determine the design vehicle for the minimum median opening widths. This will be discussed in more detail at subsequent team meetings.
   - Including full deceleration eliminates possibility of adding certain medians without impacting existing access. Could provide minimum median opening lengths, potential flush median or pavement treatment and stripe as 2-way left-turn lane.
     - Layout will be done per City of Phoenix standards. Callouts/highlights will be provided on the plan sheets to identify major items that drive the layout of medians to aid in the City's review.
     - One of the goals of the DCR is to define exact median locations.
     - TYLIN will reach out to AECOM for supporting information on median layouts.
   - Recommend a 6-8' median (6' min per AASHTO). More roadway friction vs less.
     - 8-foot medians will be laid out for the Draft DCR for the initial review.
     - The existing 2-way left-turn lane is 10' wide, as a result there is not enough width for a 2' median to run along the edge of the left-turn lane storage without adjusting all lanes. The medians will likely need to end outside of the left-turn lane opening and storage.
     - Managing business and local access are usually one of the most controversial items when installing medians. The goal is to minimize impacts with median installations.
   - BRT dedicated lane impacts.
     - BRT route will be documented as well as possibility of side running or center running with dedicated lanes.
   - Evaluate desire lines of existing pedestrian traffic.
     - Once median design is laid out the team will perform a field visit to evaluate proposed medians and the desire lines of the pedestrian traffic in the area.
4) Bicycle lanes
   - Do bicycle lanes need to be included in the design?
     - Team will review the bicycle master plan and provide documentation in the DCR per the guidance in the master plan.
5) ADOT's DCR:

- Team will include the 6 Tier 2 alternatives for the 35th Ave/Grand/Indian School intersection.
- Impacts at Clarendon, others.
    - Signal improvements will be included at Clarendon. Note the potential impacts by ADOT's DCR for potential future exclusion due to project overlap.
    - Realignment of Clarendon was discussed, and the City would prefer to maintain the existing alignment.

6) Pavement Treatment
    - Limits and scope
        - Much of the pavement appears to be showing signs of stress and deterioration. The full project length from I-10 north side PCCP limits to Camelback Road will be rehabilitated with a 1-inch mill and overlay.
        - A 2-foot sawcut and full depth asphalt replacement for median construction will be designed at this stage and costs accounted for this work.
        - Include allowance for removal/replacement of spot locations of deteriorated pavement.
7) I-10 Cap West transit stop location
    - This will be listed as a coordination item until more details become available.
8) Public Involvement
    - The City's PI consultant should have NTP in the next couple of days to help.
    - Begin to identify key members that should be notified while the City is reviewing the Draft DCR.
    - Evaluate for Title VI compliance and requirements.
9) Build Grant Performance Criteria
    - The Build Grant content will be utilized for this section of the DCR at this time. The team hopes to engage the FHWA during the Draft DCR review to identify more details on requirements. An existing set of applicable performance measures will be included in the text as reference material.
10) Environmental
    - Greta will develop the initial Environmental summary write up that includes the necessary subjects for the Draft DCR submittal. This will be preliminary and will be developed further between the Draft and Final DCR and completed by mid-February for the Final DCR. The team will potentially coordinate a review with FHWA.
    - Greta asked if FHWA will review during the DCR. Discussions have not been initiated with the FHWA at this time. The environmental portion of the DCR will act as a programming document to define the scope and timeline for Environmental activities to ensure there is a clear understanding of what needs to happen to obtain funding and meet deadlines required with the Build Grant.
    - 9/30/2022 is the anticipated deadline for funding obligation. Environmental clearance will be needed prior.
    - The Public Involvement Consultant will help Greta with review/development of that portion of the DCR.
    - Ensure the project is in the MAG TIP. Jose to review and confirm.
    - Team will follow up with Greta on the Agency/Public Scoping portion of the DCR
11) Next Meeting to be held around 12/15/20.
    - Discuss content of Draft DCR and determine what other input is needed from the team.

It was my intention that these notes reflect the general discussion during the meeting. Please contact me regarding any additions, deletions, or changes to these notes.

Brenan Poe, P.E.
Project Manager

T:\TEMPE\PROJECTS\221953.06\300_CORR\10_MEETINGS\ST89340634-1 MEETING MINUTES 11-24-2020.DOCX

TY·LIN INTERNATIONAL
engineers | planners | scientists

MEETING TITLE	35th Ave DCR: I-10 to Camelback Road (ST89340634-1)
DATE AND TIME	12/16/20, 1:00 PM
ATTENDEES	Jose Rodriguez Diaz, Bruce Littleton, Jason Fernandez, Mailen Pankiewicz, Mario Brown, Michael Cano, Scott Kelley, Brenan Poe
ORGANIZED BY	Brenan Poe, TY Lin International

MEETING AGENDA – PROGRESS MEETING 2

1) Draft DCR Discussion – *An overview of the project status and schedule was discussed with the team. The Draft DCR was submitted on 12/4/20. Review comments are due 1/22/21.*
   - Median Locations, Design Criteria, pavement marking, aesthetics
     - *The Draft DCR median design process was described to the team. The team received the .shp files from AECOM/Build Grant which had 19 medians developed in coordination with City of Phoenix Traffic Services. We refined the median design to avoid conflicts with crossroad and driveway access which eliminated 4 medians. Two median design alternatives were provided in the Draft DCR. One alternative provides 250 ft for the left turn per City of Phoenix Street Guidelines and the other alternative provides 100 ft for the left turn. City of Phoenix Traffic Services will review the median designs and let the team know the preferred alternative with the Draft DCR review process.*
     - *Transverse crosswalk marking will not be provided at raised median locations. Crosswalks will only be provided at PHB locations. Double yellow offset, bullnose and typical delineation markings will be provided.*
     - *The medians should be hardscaped. Stamped concrete should be considered as a low maintenance option. Landscaping is the least preferred option due to the ongoing maintenance required.*
     - *Combo raised median with lowered areas like other locations on 35th Avenue were discussed as an option. This allows the raised median for a short run and a delineated area to maintain the 250 ft for the left turns. Phoenix Traffic suggested this is a decision on how the City wants the corridor to feel as both options are viable.*
   - Signal's/PHB's
     - *The PHB at the Grand Canal will be shifted from the south to the north side of the canal to align with adjacent future potential projects. General guidance for the Grand Canal pathway is based on the location. As a rule of thumb, the pathway is along the north side of the canal when the canal is located on the north side of Salt River. The pathway is along the south side of the canal when the canal is located on the south side of Salt River.*
     - *Right of way is constrained throughout the corridor. To mitigate conflicts with communications or power, new right of way may be needed at the new signal and potentially some lighting locations.*
   - Lighting
     - *Existing combo poles are in place throughout the corridor. Phoenix is trying to get lights removed from these existing poles.*
   - ITS
     - *The project will implement a comprehensive ITS system for the City of Phoenix use throughout the project limits.*
     - *The City has fiber that runs from I-10 to the northeast corner of McDowell. This is where our project will tie into the existing infrastructure.*
     - *There is no need to run fiber south of McDowell as ITS already exists.*
   - Distribution to Stakeholders/Others
     - BRT design team

        - *Sara Kotecki was provided a copy.*
    - Utility Owners
        - *The City will provide plans to utility owners for review.*
    - Universities
        - *YPMO, the City's subconsultant will coordinate outreach with Stakeholders.*

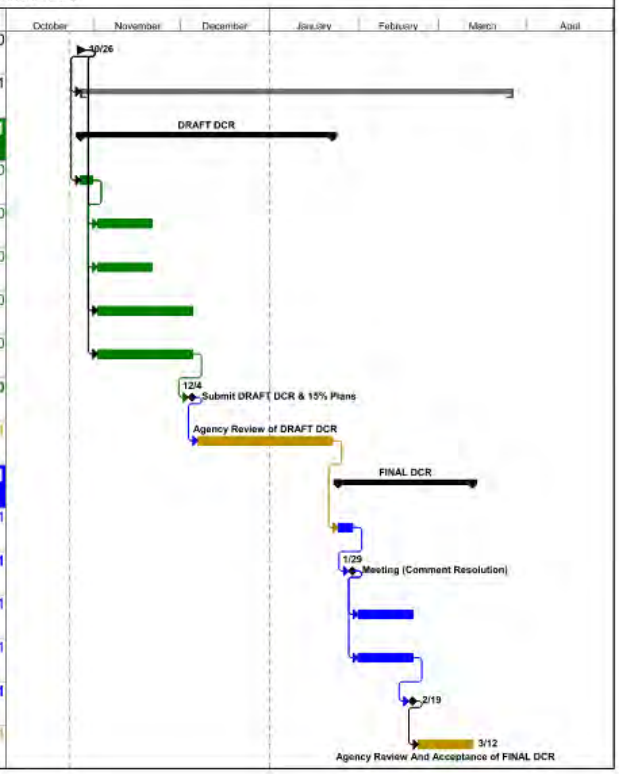
2) Other Studies/Data Available:
    - Speed Study
        - *No separate speed study is available at this time. The team should reference the RSA.*
    - RSA
        - *The City of Phoenix has completed an abbreviated RSA. This was provided to the team at the meeting.*
    - Boarding info from Valley Metro
        - *This is available from Valley Metro and is also shown on a layer in the City's Public Transit mapping for 2019 boarding, no de-boarding is available at this time.*
    - Available pedestrian counts
        - *Ped counts performed for the PHB analysis was provided to the team for information only. This data will not be included in the DCR document.*
3) Bicycle lanes
    - *The existing roadway is 64 ft throughout most of the corridor. Lanes would need to be removed to implement bicycle lanes.*
    - *City of Phoenix will provide comments related to bicycle lanes as needed when they review the Draft DCR.*
4) Public Involvement
    - *YPMO is generating a public outreach plan. Flyers will be sent to Schools and any business/resident immediately adjacent to a proposed PHB location.*
    - *The first phase during the DCR will be reaching out to major stakeholders. Once final design begins community input will be solicited.*
5) Build Grant Performance Criteria
    - *TY Lin will review what has been implemented on similar projects in Pinal County and let Phoenix know those metrics.*
    - *The performance metrics shown in the Draft DCR are the general Federal rules for MPO's. This was meant to be a starting place to initiate discussions.*
6) Environmental
    - *A brief write up was provided in the Draft DCR to initiate this process. This will be developed further for the Final DCR. Tentative NEPA clearance in anticipated to be required in early 2022 to meet funding requirements.*
7) Outstanding items
    - SRP irrigation, Cox, and CenturyLink utility base maps
        - *These base maps were provided to TY Lin after the meeting. These will be added to the utility cadd base map.*
8) Other Items/Open Discussion
    - *Overhead communication lines could create conflicts with proposed designs. These are to be evaluated on a case by case basis. No set distance is used to determine conflicts. If overhead facilities will need to be installed underground the team needs to initiate this process in the near future.*
    - *An overview of the advanced traffic technology in the Draft DCR was discussed. Subsequent discussion with the FHWA will help determine which of these tech systems will be implemented with the project. Phoenix Traffic is receptive to evaluating new technology with this project.*
    - *Does Phoenix Traffic have a preference on the single vs dual arm mast arms?*
        - *This was evaluated during the Draft DCR, either could be accommodated. Either option is acceptable to Phoenix Traffic. The design should be based on minimizing impacts to existing infrastructure.*

- Below is the current project schedule:

T·Y·LIN INTERNATIONAL

EXHIBIT "C" - PROJECT SCHEDULE - 10/23/2020 - PRELIMINARY
35TH AVENUE: I-10 TO CAMELBACK ROAD
DESIGN CONCEPT REPORT
ST89340634-1

ID	Task Name	Start	Finish
1	**NOTICE TO PROCEED**	**Mon 10/26/20**	Mon 10/26/20
2	Project Management & Coordination	Tue 10/27/20	Fri 3/26/21
3	**DRAFT DCR**	**Tue 10/27/20**	**Fri 1/22/21**
4	Site Visit and Data Acquisition	Tue 10/27/20	Fri 10/30/20
5	Aerial Base Mapping and Right of Way	Mon 11/2/20	Fri 11/20/20
6	Utility Research and Mapping	Mon 11/2/20	Fri 11/20/20
7	DRAFT DCR	Mon 11/2/20	Fri 12/4/20
8	15% Plans and Estimate	Mon 11/2/20	Fri 12/4/20
9	**Submit DRAFT DCR & 15% Plans**	**Fri 12/4/20**	**Fri 12/4/20**
10	Agency Review of DRAFT DCR	Mon 12/7/20	Fri 1/22/21
11	**FINAL DCR**	**Mon 1/25/21**	**Fri 3/12/21**
12	Compile & Address Comments	Mon 1/25/21	Fri 1/29/21
13	**Meeting (Comment Resolution)**	**Fri 1/29/21**	**Fri 1/29/21**
14	FINAL DCR	Mon 2/1/21	Fri 2/19/21
15	15% Plans and Estimate	Mon 2/1/21	Fri 2/19/21
16	**Submit FINAL DCR & 15% Plans**	**Fri 2/19/21**	**Fri 2/19/21**
17	Agency Review And Acceptance of FINAL DCR	Mon 2/22/21	Fri 3/12/21



9) *The next meeting will be a comment resolution meeting in January. An invite will be sent to the team.*

It was my intention that these notes reflect the general discussion during the meeting. Please contact me regarding any additions, deletions, or changes to these notes.

Brenan Poe

Brenan Poe, P.E.
Project Manager

TY·LIN INTERNATIONAL
engineers | planners | scientists

MEETING TITLE	35th Ave DCR: I-10 to Camelback Road (ST89340634-1)
DATE AND TIME	1/14/21, 11:00 AM
ATTENDEES	Michael Cano, CIP Staff including: Bruce Littleton, Carl Langford, Mailen Pankiewicz; Scott Kelley, Brenan Poe
ORGANIZED BY	Brenan Poe, TY Lin International

MEETING AGENDA – PROGRESS MEETING 3

1) Confirm PHB Locations
    - 35th Avenue/Grand Canal (Midblock)
        i. The Draft DCR design was reviewed/discussed. The team reached consensus on shifting the PHB to the north side of canal to algin with SRP general guidance provided by Phoenix at the 12/16/2020 Progress Meeting 2.
    - 35th Avenue/Elm Street (Midblock)
        i. The Draft DCR design was reviewed/discussed. The team reached consensus on shifting the PHB slightly to the south to align more closely with the sidewalk coming from the Cielito Park. The sidewalk design will be adjusted to deliver pedestrians directly to the PHB location.
    - 35th Avenue/Glenrosa Avenue (Midblock)
        i. The Draft DCR design was reviewed/discussed. The team reached consensus on the design layout shown in the DCR. Providing the PHB on the north side is more desirable so left turn movements departing Glenrosa will not conflict with pedestrians.
2) Raised Concrete Median Design Criteria
    - The design constraints were discussed with the team regarding City of Phoenix Street Planning and Design Guidelines Section 3.12. Phoenix agreed to allow less than 250 feet for the left turn movement and raised concrete median design and will allow 100 feet to be used to control the design. In locations where larger business developments are served the Phoenix asked that the 100 feet be increased based on engineering judgement. The raised concrete median designs will be updated accordingly.
    - Design development was discussed. DCR team used the .shp files developed during the Build Grant in which Phoenix Traffic and AECOM determined 19 raised concrete median locations. TYLIN evaluated these locations and removed 4 raised concrete median locations to avoid restricting side street or business access. Phoenix agreed with this process.
3) ITS/Signals/Lighting Comment Status
    - Phoenix will provide comments by the 1/22/21 deadline for the lighting and ITS.
    - Phoenix asserted some concern with the level of technology that will need to be implemented to meet the Build Grant criteria. Current phoenix standards are not fully adaptive technology. The Build Grant criteria does not explicitly state what is required but does discuss adaptive/vehicle to vehicle technology. The team should consider reaching out to the FHWA to confirm these requirements.

4) Below is the current project schedule presented to the team:

T·Y·LIN INTERNATIONAL

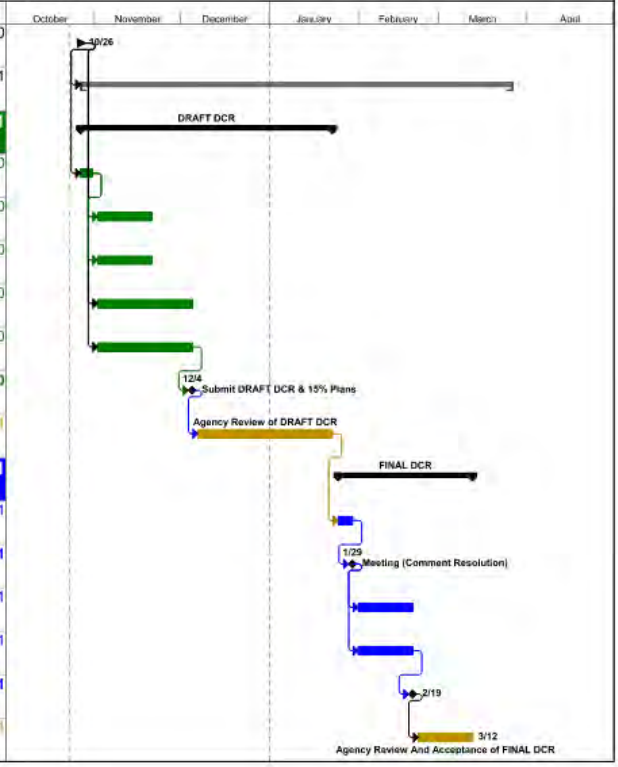
EXHIBIT "C" - PROJECT SCHEDULE - 10/23/2020 - PRELIMINARY

35TH AVENUE: I-10 TO CAMELBACK ROAD

DESIGN CONCEPT REPORT

ST89340634-1

ID	Task Name	Start	Finish
1	**NOTICE TO PROCEED**	**Mon 10/26/20**	Mon 10/26/20
2	Project Management & Coordination	Tue 10/27/20	Fri 3/26/21
3	**DRAFT DCR**	**Tue 10/27/20**	**Fri 1/22/21**
4	Site Visit and Data Acquisition	Tue 10/27/20	Fri 10/30/20
5	Aerial Base Mapping and Right of Way	Mon 11/2/20	Fri 11/20/20
6	Utility Research and Mapping	Mon 11/2/20	Fri 11/20/20
7	DRAFT DCR	Mon 11/2/20	Fri 12/4/20
8	15% Plans and Estimate	Mon 11/2/20	Fri 12/4/20
9	**Submit DRAFT DCR & 15% Plans**	**Fri 12/4/20**	**Fri 12/4/20**
10	Agency Review of DRAFT DCR	Mon 12/7/20	Fri 1/22/21
11	**FINAL DCR**	**Mon 1/25/21**	**Fri 3/12/21**
12	Compile & Address Comments	Mon 1/25/21	Fri 1/29/21
13	**Meeting (Comment Resolution)**	**Fri 1/29/21**	**Fri 1/29/21**
14	FINAL DCR	Mon 2/1/21	Fri 2/19/21
15	15% Plans and Estimate	Mon 2/1/21	Fri 2/19/21
16	**Submit FINAL DCR & 15% Plans**	**Fri 2/19/21**	**Fri 2/19/21**
17	Agency Review And Acceptance of FINAL DCR	Mon 2/22/21	Fri 3/12/21



It was my intention that these notes reflect the general discussion during the meeting. Please contact me regarding any additions, deletions, or changes to these notes.

Brenan Poe

Brenan Poe, P.E.
Project Manager

Appendix F – Letters of Support

KYRSTEN SINEMA
ARIZONA

COMMITTEES

BANKING, HOUSING, AND URBAN AFFAIRS

COMMERCE, SCIENCE, AND TRANSPORTATION

HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS

VETERANS' AFFAIRS

SPECIAL COMMITTEE ON AGING

United States Senate

SH-317
HART BUILDING
WASHINGTON, DC 20510
(202) 224-4521

ARIZONA

2200 E. CAMELBACK RD, SUITE 120
PHOENIX, AZ 85016
(602) 598-7327

http://sinema.senate.gov

June 18, 2019

The Honorable Elaine L. Chao
Secretary
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao:

I write regarding the application submitted by the City of Phoenix for a grant through the Department of Transportation's (DOT) Better Utilizing Investments to Leverage Development (BUILD) grant program to fund the 35th Avenue Innovation Corridor Pilot Project.

Between 2013 and 2017, the segment of 35th Avenue between I-10 and Camelback Road in Phoenix has seen more than 1,300 crashes, including 53 with fatal or incapacitating injuries. The corridor is also home to 13 schools and a key access point to Grand Canyon University, a major employer in Phoenix. Modernizing the 35th Avenue corridor is essential to improve commute times, support economic development opportunities within the corridor, and provide safe access for all transportation modes.

The 35th Avenue Innovation Corridor Pilot Project will create a safe, efficient, and modern corridor for all modes of transportation. By adding pedestrian crosswalks and improved street lighting, the project will guarantee the safety of children in the surrounding schools, including Grand Canyon University. By updating traffic signals, enhancing medians, and making general road improvements, the project will improve traffic flows and reduce the risk of accidents. By installing fiber optic cables along the corridor, the project will provide residents and businesses access to high-speed internet, supporting economic development in the area. Overall, the project will ultimately create a more resilient community by implementing infrastructure that will continuously benefit our city for many years into the future.

The 35th Avenue Innovation Corridor Pilot Project will modernize and improve a high crash corridor in Phoenix, while supporting continued economic development and an improved quality of life for Phoenix residents. In accordance with all existing agency rules, regulations, and ethical guidelines, I urge you to give this proposal full and fair consideration as you make this important funding decision.

Sincerely,

Kyrsten Sinema
United States Senator

MARTHA McSALLY
ARIZONA

United States Senate

COMMITTEES:
ENERGY AND NATURAL RESOURCES
CHAIRWOMAN, WATER AND POWER SUBCOMMITTEE
ARMED SERVICES
BANKING, HOUSING, AND URBAN AFFAIRS
INDIAN AFFAIRS
SPECIAL COMMITTEE ON AGING

June 15, 2019

The Honorable Elaine L. Chao
Secretary
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Re: City of Phoenix/Better Utilizing Investments to Leverage Development Transportation grants program

Dear Secretary Chao,

I am writing in support of the application submitted by the City of Phoenix for $15,909,221 in funds under the FY 2019 Better Utilizing Investments to Leverage Development (BUILD) Transportation grants program.

This proposal seeks to initiate the 35th Avenue Innovation Corridor Pilot Project, an infrastructure project that aims to leverage emerging technologies to improve safety and adapt to future automation systems. In addition, this project seeks physical improvements along 35th Avenue between Interstate-10 and Camelback Road, a high-use corridor among my constituents that includes Opportunity Zones.

As part of this proposal, Phoenix seeks additional features for pedestrians and bicyclists, including upgraded traffic signals, additional street lights, new mid-block crossings, and added medians to provide safe stopping points. The introduction of optimized signal timing aims to further improve safety by reducing congestion and helping motorists determine appropriate and safe speeds. Such technology advancements would enable Phoenix to prepare for the future of transportation in many forms, a cornerstone of the local economy.

I appreciate your review of this important project for Phoenix and ask that you give this request full and fair consideration.

Sincerely,

Martha McSally

Martha McSally
United States Senator

WASHINGTON, DC
404 RUSSELL SENATE OFFICE BUILDING
WASHINGTON, DC 20515
PHONE: (202) 224–2235

PHOENIX
2201 E. CAMELBACK ROAD
SUITE 115
PHOENIX, AZ 85016
PHONE: (602) 952–2410

TUCSON
407 W. CONGRESS STREET
SUITE 103
TUCSON, AZ 85701
PHONE: (520) 670–6334

MARICOPA ASSOCIATION of GOVERNMENTS
302 North 1st Avenue, Suite 300 ▲ Phoenix, Arizona 85003
Phone (602) 254-6300 ▲ FAX (602) 254-6490
E-mail: mag@azmag.gov ▲ Web site: www.azmag.gov

June 17, 2019

The Honorable Elaine L. Chao
Secretary, U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, D.C. 20590-0001

RE: Letter of Support for City of Phoenix 35th Avenue Innovation Corridor Pilot Project

Dear Secretary Chao:

The Maricopa Association of Governments (MAG) is pleased to support the City of Phoenix application for the fiscal year (FY) 2019 Better Utilizing Investments to Leverage Development (BUILD) discretionary grant funding. MAG is a council of governments and the designated metropolitan planning organization in the greater Phoenix region. On June 17, 2019, the MAG Regional Council Executive Committee voted in unanimous support of this BUILD grant application.

This project would deploy a series of safety countermeasures along this high-crash segment of 35th Avenue. Improvements would include signalized mid-bock pedestrian crossings, installing additional street lighting, adding yellow flashing arrows to traffic signals, and installing medians that can serve as pedestrian refuge areas. The project would also upgrade traffic controllers and install fiber optic cables to enable future technology applications, such as automated and connected vehicles or bus rapid transit. Finally, the project will optimize signal timing and add signage to indicate safe and appropriate speeds to progress through the corridor and make successive green lights.

The MAG Regional Council supports the FY 2019 BUILD application for the City of Phoenix 35th Avenue Innovation Corridor Pilot Project. These improvements are aligned with regional transportation goals and objectives for the region. The Maricopa Association of Governments appreciates your favorable consideration of this BUILD grant application.

Sincerely,

Gail Barney
Chair, MAG Regional Council
Mayor of Queen Creek

ADOT
An Arizona Management System Agency
Transportation Systems Management and Operations
Douglas A. Ducey, Governor
John S. Halikowski, Director
Dallas Hammit, State Engineer
Brent Cain, Division Director

June 6, 2019

Office of Infrastructure Finance and Innovation
Office of the Secretary of Transportation
1200 New Jersey Avenue SE
Washington, DC 20590

Dear Honorable Secretary Chao,

I am writing on behalf of the Arizona Department of Transportation to express our support for the 35th Avenue Innovation Corridor Pilot Project. The project will create a safe, attractive, and comfortable corridor for all modes of transportation by implementing safety countermeasures, contributing to the state of good repair, encouraging economic development, promoting environmental sustainability, and providing access to essential community services.

The 35th Avenue Innovation Corridor Pilot Project prepares for the future of transportation by opening up opportunities for advanced applications of Intelligent Transportation Systems. The project will ultimately create a more resilient community by implementing infrastructure that will continuously benefit our city for many years into the future.

For the 35th Avenue Innovation Corridor Pilot Project, the agency will:

- *Support education and outreach efforts to promote awareness of infrastructure improvements and innovative technologies*
- *Collaborate with partners for coordinated operation strategies*

This project supports the mission and goals of our agency by:

- *Providing safe access across all transportation modes to education opportunities, job centers, and healthcare*
- *Utilizing innovative traffic management strategies to reduce traffic collisions and alleviate congestion*

I strongly support the US Department of Transportation granting this award to the city of Phoenix, and by doing so, support the continued economic development and improved quality of life within the Phoenix Metro area.

Sincerely,

Brent Cain, PE
Division Director, Transportation Systems Management and Operations

Cordova Neighborhood Association

June 5, 2019

Office of Infrastructure Finance and Innovation
Office of the Secretary of Transportation
1200 New Jersey Ave. SE
Washington, DC 20590

RE: 35th Avenue Innovation Corridor Pilot Project in Phoenix, AZ

Dear Honorable Secretary Chao:

After learning of this project, I contacted multiple members of the Cordova Neighborhood Association. Of those contacted, the majority is in full support of a project that will make traveling 35th Avenue safe. The few that had questions, are in support since their concerns were clarified.

CNA takes pride in learning what is happening in and around our city. To support education and outreach awareness of this Pilot Project is something the residents can embrace. The residents have made small steps to better their neighborhood and understand the importance of learning about opportunities for the future.

Transportation in Phoenix has grown and caused opportunities that will enhance family living. Therefore, we stand together in support of the US Department of Transportation granting this award to the City of Phoenix, and, by doing so, supporting the continued economic development and improving quality of life within the Phoenix Metro area.

Please recognize the Cordova Neighborhood Association as being "in full" support of this grant being awarded to the City of Phoenix.

Sincerely,

Donna Homher

DONNA HOMHER
Community Volunteer

Little Canyon Trail

Live. Enjoy. Relax. Play.

Like Us on Facebook at https://www.facebook.com/CordovaNeighborhood.
Please visit nextdoor.com or smart phone users can download the Next Door app to read what the local area is posting.

SAVE OUR LITTLE CANYON PARK

Violence Impact Project Coalition

VISION: ***An Active, safe and welcoming community with vibrant retail and sustainable housing.***
The Coalition will focus on education, partnerships, outreach and strategic planning within the VIP boundaries of Dunlap to Indian School and 19th Avenue to 35th Avenue.

Office of Infrastructure Finance and Innovation
Office of the Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590
Attn: John Augustine

Dear Honorable Secretary Chao,

I am writing on behalf of the Violence Impact Project Coalition to express our support for the 35th Avenue Innovation Corridor Pilot Project. The project will create a safe, attractive, and comfortable corridor for all modes of transportation by implementing safety countermeasures, contributing to the state of good repair, encouraging economic development, promoting environmental sustainability, and providing access to essential community services.

The 35th Avenue Innovation Corridor Pilot Project prepares for the future of transportation by opening up opportunities for advanced applications of Intelligent Transportation Systems. The project will ultimately create a more resilient community by implementing infrastructure that will continuously benefit our city for many years into the future.

For the 35th Avenue Innovation Corridor Pilot Project, our neighborhood group will:

- *Support education and outreach efforts to promote awareness of the infrastructure improvements and innovative technologies*

This project supports the mission and goals of the VIP Coalition by:

- *Providing safe access across all transportation modes to education opportunities, job centers, and healthcare*
- *Utilizing innovative traffic management strategies to reduce traffic collisions and alleviate congestion*

I strongly support the US Department of Transportation granting this award to the city of Phoenix, and, by doing so, supporting the continued economic development and improving quality of life within the Phoenix Metro area.

Sincerely,

Jeff Spellman
phoenixvipcoalition@gmail.com
602-499-2038

GRAND CANYON UNIVERSITY
3300 West Camelback Road | Phoenix, Arizona 85017 | 602.639.7500 | Toll Free 800.800.9776 | www.gcu.edu

Office of Infrastructure Finance and Innovation
Office of the Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Dear Honorable Secretary Chao,

I am writing on behalf of the Grand Canyon University to express our support for the 35th Avenue Innovation Corridor Pilot Project. The project will create a safe, attractive, and comfortable corridor for all modes of transportation by implementing safety countermeasures, contributing to the state of good repair, encouraging economic development, promoting environmental sustainability, and providing access to essential community services.

The 35th Avenue Innovation Corridor Pilot Project prepares for the future of transportation by opening up opportunities for advanced applications of Intelligent Transportation Systems. The project will ultimately create a more resilient community by implementing infrastructure that will continuously benefit our city for many years into the future.

For the 35th Avenue Innovation Corridor Pilot Project, Grand Canyon University will:

- *Support education and outreach efforts to promote awareness of the infrastructure improvements and innovative technologies*

This project supports the mission and goals of our university by:

- *Providing safe access across all transportation modes to education opportunities, job centers, and healthcare.*
- *Advancing educational and research opportunities for students*
- *Improving commute times and investing in multimodal opportunities*

I strongly support the US Department of Transportation granting this award to the city of Phoenix, and, by doing so, supporting the continued economic development and improving quality of life within the Phoenix Metro area.

Sincerely,

Brian Mueller
President
Grand Canyon University

ARIZONA FORWARD

June 25, 2019

Office of Infrastructure Finance and Innovation
Office of the Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Dear Honorable Secretary Chao,

I am writing on behalf of Arizona Forward to express our support for the 35th Avenue Innovation Corridor Pilot Project. The project will create a safe, attractive, and comfortable corridor for all modes of transportation by implementing safety countermeasures, contributing to the state of good repair, encouraging economic development, promoting environmental sustainability, and providing access to essential community services.

The 35th Avenue Innovation Corridor Pilot Project prepares for the future of transportation by opening up opportunities for advanced applications of Intelligent Transportation Systems. The project will ultimately create a more resilient community by implementing infrastructure that will continuously benefit our city for many years into the future.

For the 35th Avenue Innovation Corridor Pilot Project, Arizona Forward will:

- *Support education and outreach efforts to promote awareness of the infrastructure improvements and innovative technologies*

This project supports the mission and goals of Arizona Forward by:

- *Employing ITS technology and engineering best practices to improve corridor safety and travel efficiency for all users*
- *Advancing educational and research opportunities for Universities; and*
- *Setting the stage for the deployment of autonomous vehicles in the Phoenix Metro area.*

I strongly support the US Department of Transportation granting this award to the city of Phoenix, and, by doing so, supporting the continued economic development and improving quality of life within the Phoenix Metro area.

Sincerely,

Lori Singleton

Lori Singleton
President and CEO
Arizona Forward

3800 N. Central Avenue, Suite 1030, Phoenix, AZ 85012 | 602.240.2408 | arizonaforward.org | info@arizonaforward.org

OFFICE OF THE DEAN
COLLEGE OF ENGINEERING
Civil Engineering Building Room 100
1209 E. 2nd Street
PO Box 210072
Tucson, AZ 8572-0072

Ofc: 520-621-6595

URL: http://www.engineering.arizona.edu

May 31, 2019

Office of Infrastructure Finance and Innovation
Office of the Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Dear Honorable Secretary Chao,

I am writing on behalf of the University of Arizona to express our support for the 35th Avenue Innovation Corridor Pilot Project. The project will create a safe, attractive, and comfortable corridor for all modes of transportation by implementing safety countermeasures, contributing to the state of good repair, encouraging economic development, promoting environmental sustainability, and providing access to essential community services.

The 35th Avenue Innovation Corridor Pilot Project prepares for the future of transportation by opening up opportunities for advanced applications of Intelligent Transportation Systems. The project will ultimately create a more resilient community by implementing infrastructure that will continuously benefit our city for many years into the future.

For the 35th Avenue Innovation Corridor Pilot Project, University of Arizona will:

- *Support education and outreach efforts to promote awareness of the infrastructure improvements and innovative technologies*

This project supports the mission and goals of University of Arizona by:

- *Providing safe access across all transportation modes to education opportunities, job centers, and healthcare*
- *Utilizing innovative traffic management strategies to reduce traffic collisions and alleviate congestion*
- *Building success on the strong partnership between the city of Phoenix and the University of Arizona.*

I strongly support the US Department of Transportation granting this award to the city of Phoenix, and, by doing so, supporting the continued economic development and improving quality of life within the Phoenix Metro area.

Sincerely,

K. Larry Head, Ph.D.
Interim Dean, College of Engineering
Director, University of Arizona Transportation Research Institute
Professor, Systems and Industrial Engineering

THE UNIVERSITY OF ARIZONA
College of Engineering

IRA A. FULTON SCHOOLS OF engineering
ARIZONA STATE UNIVERSITY

Office of Infrastructure Finance and Innovation
Office of the Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590
Attn: John Augustine

Dear Honorable Secretary Chao,

I am writing on behalf of Arizona State University to express our support for the 35th Avenue Innovation Corridor Pilot Project. The project will create a safe, attractive, and comfortable corridor for all modes of transportation by implementing safety countermeasures, contributing to the state of good repair, encouraging economic development, promoting environmental sustainability, and providing access to essential community services.

The 35th Avenue Innovation Corridor Pilot Project prepares for the future of transportation by opening up opportunities for advanced applications of Intelligent Transportation Systems. The project will ultimately create a more resilient community by implementing infrastructure that will continuously benefit our city for many years into the future.

For the 35th Avenue Innovation Corridor Pilot Project, Arizona State University will:

- Support education and outreach efforts to promote awareness of the infrastructure improvements and innovative technologies

This project supports the mission and goals of Arizona State University by:

- Providing safe access across all transportation modes to education opportunities, job centers, and healthcare
- Utilizing innovative traffic management strategies to reduce traffic collisions and alleviate congestion

I strongly support the US Department of Transportation granting this award to the city of Phoenix, and, by doing so, supporting the continued economic development and improving quality of life within the Phoenix Metro area.

Sincerely,

Yingyan Lou, Ph.D.
Associate Professor
Email: yingyan.lou@asu.edu
Tel: 480-965-6361
https://webapp4.asu.edu/directory/person/2182615

School of Sustainable Engineering and the Built Environment
College Avenue Commons
660 S. College Avenue
P. O. Box 873005
Tempe, AZ 85287-3005
(480) 965-3589 FAX (480) 965-0557

NAU NORTHERN ARIZONA UNIVERSITY

Civil and Environmental Engineering

Office of Infrastructure Finance and Innovation
Office of the Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Dear Honorable Secretary Chao,

I am writing on behalf of **AZ***Trans* and Northern Arizona University to express our support for the 35th Avenue Innovation Corridor Pilot Project. The project will create a safe, attractive, and comfortable corridor for all modes of transportation by implementing safety countermeasures, contributing to the state of good repair, encouraging economic development, promoting environmental sustainability, and providing access to essential community services.

The 35th Avenue Innovation Corridor Pilot Project prepares for the future of transportation by opening up opportunities for advanced applications of Intelligent Transportation Systems. The project will ultimately create a more resilient community by implementing infrastructure that will continuously benefit the city for many years into the future.

For the 35th Avenue Innovation Corridor Pilot Project, Northern Arizona University will:

- *Support education and outreach efforts to promote awareness of the infrastructure improvements and innovative technologies*
- *Within the confines of existing efforts, collaborate on the implementation of safety countermeasures and corridor management practices*

This project supports the mission and goals of AZ*Trans* **by:**

- *Providing safe access across all transportation modes to education opportunities, job centers, and healthcare*
- *Utilizing innovative traffic management strategies to reduce traffic collisions and alleviate congestion*

I strongly support the US Department of Transportation granting this award to the city of Phoenix, and, by doing so, supporting the continued economic development and improving quality of life within the Phoenix Metro area.

Sincerely,

Edward J. Smaglik, Ph.D., P.E.
Professor and Director of **AZ***Trans*: The Arizona Laboratory for Applied Transportation Research
https://nau.edu/aztrans/
Department of Civil Engineering, Construction Management, and Environmental Engineering
Northern Arizona University

Ocotillo Glen Neighborhood Association
P.O. Box 39339
Phoenix, AZ 85051
ocotilloglen@yahoo.com

June 18, 2019

Office of Infrastructure Finance and Innovation
Office of the Secretary of Transportation
1200 New Jersey Ave., SE
Washington, DC 20590

Dear Honorable Secretary Chao:

This letter is to express our support of the Better Utilizing Investments to Leverage Development (BUILD) grant for the City of Phoenix to fund infrastructure improvements on 35th Avenue between I-10 and Camelback Road. This area has been sorely forgotten during improvement projects and residents would benefit tremendously from the attention and revitalization of transportation along 35th Avenue.

My neighborhood, Ocotillo Glen borders on the north end of the proposed BUILD project which would also benefit my neighborhood and residents alike.

In closing Ocotillo Glen strongly supports the Department of Transportation granting this award to the City of Phoenix.

Regards,

Mary Obrochta, President
Ocotillo Glen Neighborhood Association
602-741-4406

Help to solve the problem by becoming a part of the solution!

Office of Infrastructure Finance and Innovation
Office of the Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590
Attn: John Augustine

Dear Mr. Augustine,

I am writing on behalf of Alhambra Elementary School District to express our support for the 35th Avenue Innovation Corridor Pilot Project. The project will create a safe, attractive, and comfortable corridor for all modes of transportation by implementing safety countermeasures, contributing to the state of good repair, encouraging economic development, promoting environmental sustainability, and providing access to essential community services.

The 35th Avenue Innovation Corridor Pilot Project prepares for the future of transportation by opening up opportunities for advanced applications of Intelligent Transportation Systems. The project will ultimately create a more resilient community by implementing infrastructure that will continuously benefit our city for many years into the future.

For the 35th Avenue Innovation Corridor Pilot Project, our Alhambra Elementary School District will:

- *Support education and outreach efforts to promote awareness of the infrastructure improvements and innovative technologies*

This project supports the mission and goals of Alhambra Elementary School District by:

- *Providing safe access across all transportation modes to education opportunities, job centers, and healthcare*
- *Utilizing innovative traffic management strategies to reduce traffic collisions and alleviate congestion*

I strongly support the US Department of Transportation granting this award to the city of Phoenix, and, by doing so, supporting the continued economic development and improving quality of life within the Phoenix Metro area.

Sincerely,

Mark A. Yslas
Superintendent
Alhambra Elementary School District

Office of Infrastructure Finance and Innovation
Office of the Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Dear Honorable Secretary Chao,

I am writing on behalf of the Alhambra Neighborhood Association to express our support for the 35th Avenue Innovation Corridor Pilot Project. The project will create a safe, attractive, and comfortable corridor for all modes of transportation by implementing safety countermeasures, contributing to the state of good repair, encouraging economic development, promoting environmental sustainability, and providing access to essential community services.

The 35th Avenue Innovation Corridor Pilot Project prepares for the future of transportation by opening up opportunities for advanced applications of Intelligent Transportation Systems. The project will ultimately create a more resilient community by implementing infrastructure that will continuously benefit our city for many years into the future.

For the 35th Avenue Innovation Corridor Pilot Project, the Alhambra Neighborhood Association will:

- *Support education and outreach efforts to promote awareness of the innovative technologies and systems*

This project supports the mission and goals of our neighborhood group by:

- *Providing safe access across all transportation modes to education opportunities, job centers, and healthcare.*
- *Utilizing innovative traffic management strategies to reduce traffic collisions and alleviate congestion*

I strongly support the US Department of Transportation granting this award to the city of Phoenix, and, by doing so, supporting the continued economic development and improving quality of life within the Phoenix Metro area.

Sincerely,

Shelby M Dieckow
Acting President
Alhambra Neighborhood Association
Phx Az
602-501-0591, alhambraneighborhoodassn@gmail.com

Office of Infrastructure Finance and Innovation

Office of the Secretary of Transportation

1200 New Jersey Ave, SE

Washington, DC 20590

Dear Honorable Secretary Chao,

I am writing on behalf of D27 to express our support for the 35 th Avenue Innovation Corridor Pilot Project. The project will create a safe, attractive, and comfortable corridor for all modes of transportation by implementing safety countermeasures, contributing to the state of good repair, encouraging economic development, promoting environmental sustainability, and providing access to essential community services.

The 35 th Avenue Innovation Corridor Pilot Project prepares for the future of transportation by opening up opportunities for advanced applications of Intelligent Transportation Systems. The project will ultimately create a more resilient community by implementing infrastructure that will continuously benefit our city for many years into the future.

For the 35 th Avenue Innovation Corridor Pilot Project, our company Genesis Insurance LLC neighborhood group will:

Support education and outreach efforts to promote awareness of the infrastructure improvements and innovative technologies

This project supports the mission and goals of our Genesis Insurance LLC neighborhood group by: Providing safe access across all transportation modes to education opportunities, job centers, and healthcare Utilizing innovative traffic management strategies to reduce traffic collisions and alleviate congestion

I strongly support the US Department of Transportation granting this award to the city of Phoenix, and, by doing so, supporting the continued economic development and improving quality of life within the Phoenix Metro area.

Sincerely,

Josh Nixon

Office of Infrastructure Finance and Innovation
Office of the Secretary of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Dear Honorable Secretary Chao,

I am writing on behalf Community Medical Services to express our support for the 35th Avenue Innovation Corridor Pilot Project. The project will create a safe, attractive, and comfortable corridor for all modes of transportation by implementing safety countermeasures, contributing to the state of good repair, encouraging economic development, promoting environmental sustainability, and providing access to essential community services. It would help for our clients as we provide Opioid Addiction Treatment to have easier access to the treatment that they need.

The 35th Avenue Innovation Corridor Pilot Project prepares for the future of transportation by opening up opportunities for advanced applications of Intelligent Transportation Systems. The project will ultimately create a more resilient community by implementing infrastructure that will continuously benefit our city for many years into the future.

For the 35th Avenue Innovation Corridor Pilot Project Community Medical Services will:

- *Support education and outreach efforts to promote awareness of the infrastructure improvements and innovative technologies*

This project supports the mission and goals of Community Medical Services.

- *Providing safe access across all transportation modes to education opportunities, job centers, and healthcare*
- *Utilizing innovative traffic management strategies to reduce traffic collisions and alleviate congestion*

I strongly support the US Department of Transportation granting this award to the city of Phoenix, and, by doing so, supporting the continued economic development and improving quality of life within the Phoenix Metro area.

Sincerely,
John A. Koch
Community Impact Manager
Community Medical Services
Cell: 815-735-1546

Appendix G – Utility Conflict Reviews

Date: 2/21/2021

David Nieto
City of Phoenix
200 W Washignton Street
Phoenix AZ, 85003

To Whom It May Concern,

Reference Number: CR- 20439
Referenced Project: 25th Ave I-10 to Camelback
Response: NO CONFLICTS IDENTIFIED

Cox Communications (Cox) has received and reviewed the 30% design stage plans you submitted for the above-referenced Project. Based on the documentation you submitted, Cox finds that there is no conflict between the proposed Project and Cox infrastructure and/or communication facilities (Facilities) within the identified area of Project construction or development. Cox's NO CONFLICT determination is based entirely on the drawings, plans and other materials you have submitted.

Please note, Cox has made no determination as to the accuracy of the drawings or plans you submitted. You are solely responsible for complying with all utility locate laws (IE., 811 Locate Services, One Call, etc.) to verify the location of all utilities, including Cox Facilities, which may be in the area of the Project. Throughout the duration of the Project, should construction activities occur outside the identified area and near Cox Facilities, it will be your responsibility to assure such Cox Facilities are supported, protected or otherwise remain undisturbed by construction activity.

Should project activities occur in the immediate vicinity of Cox Facilities it will be your responsibility to conduct potholing and to properly protect Cox's Facilities. Cox requests that a minimum of 12 inches of vertical and horizontal separation from existing Cox Facilities be maintained at all times. Should the scope of the Project change, please contact Cox via the below email address. Please understand that relocation of Facilities, including siting appropriate non-conflicted locations, may take at least 90 days from the date agreed on in the relocation plans.
If you have any questions or require additional information, please contact our Corporate Traffic Management center at Natlconsttrafficmgmtteam@cox.com.

Sincerely,

Cox Communications' Construction Engineering Team

PRELIMINARY 15% NOT FOR CONSTRUCTION OR RECORDING	F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL	AS BUILT
	9	ARIZ.	ST89340634-1			
	T.Y. LIN INTERNATIONAL engineers | planners | scientists			T.Y.LIN INTERNATIONAL CONSULTING ENGINEER		
	DES: BP	DR: OG	CK: CSS	DATE: 12/20		

CITY OF PHOENIX
STREET TRANSPORTATION DEPARTMENT
PROGRAMMING AND PROJECT DELIVERY DIVISION

35TH AVENUE
I-10 TO CAMELBACK ROAD
ST89340634-1

2021

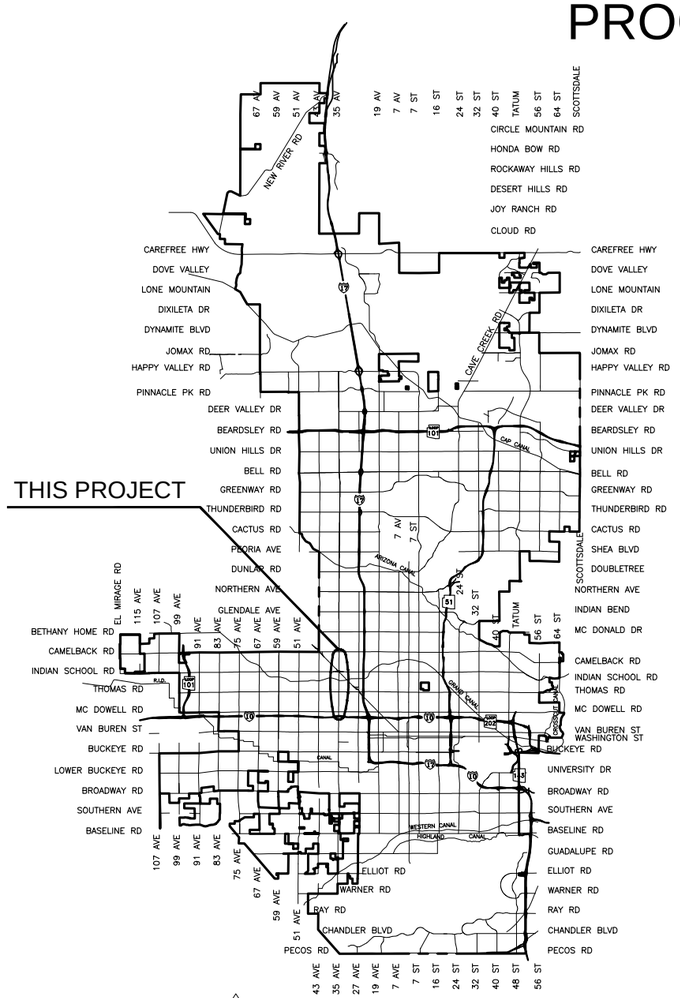
COX Markups

MAYOR
KATE GALLEGO

CITY MANAGER
ED ZUERCHER

CITY COUNCIL

DISTRICT NO 1.	THELDA WILLIAMS
DISTRICT NO 2.	JIM WARING
DISTRICT NO 3.	DEBRA STARK
DISTRICT NO 4.	LAURA PASTOR
DISTRICT NO 5.	BETTY GARDADA
DISTRICT NO 6.	SAL DICICCIO
DISTRICT NO 7.	MICHAEL NOWAKOWSKI
DISTRICT NO 8.	CARLOS GARCIA



VICINITY MAP
NTS

APPROVED _____ _____
ASSISTANT STREET TRANSPORTATION DIRECTOR DATE

APPROVED _____ _____
DEPUTY STREET TRANSPORTATION DIRECTOR DATE

INDEX OF SHEETS

1	COVER SHEET
2	LEGEND AND NOTE SHEET
3	KEY MAP
4 - 15	PAVING SHEETS

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY & MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

PROJECT NUMBER: ST89340634-1 35TH AVENUE, I-10 TO CAMELBACK – DRAFT DCR

35TH AVE
I-10 TO
CAMELBACK RD

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL	AS BUILT
9	ARIZ.	ST89340634-1			

T.Y. LIN INTERNATIONAL
engineers | planners | scientists
T.Y.LIN INTERNATIONAL CONSULTING ENGINEER

DES: BP	DR: OG	CK: CSS	DATE: 12/20

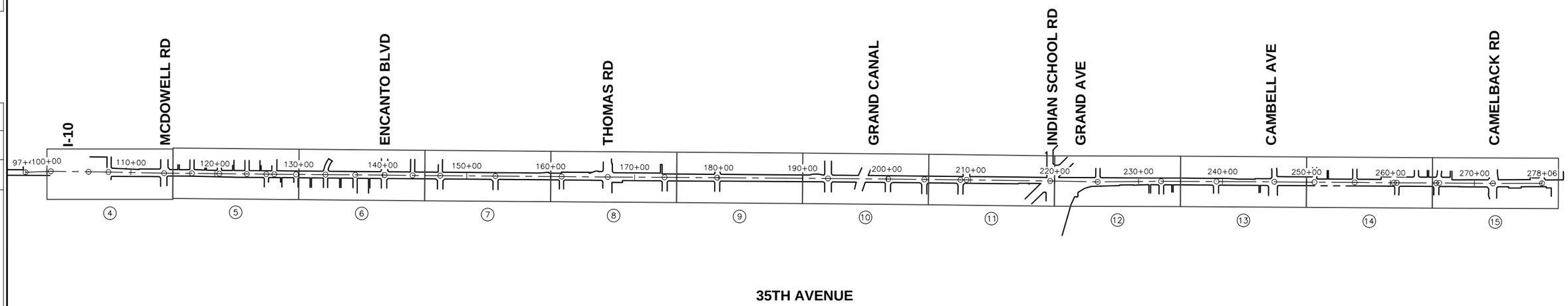
PRELIMINARY
15%
NOT FOR CONSTRUCTION OR RECORDING

N
City of Phoenix

REVISION BY CITY OF PHOENIX					
NO.	DESCRIPTION	REV BY	CKD BY	DATE	

REVISION BY CITY OF PHOENIX					
NO.	DESCRIPTION	REV BY	CKD BY	DATE	

REVISION BY CITY OF PHOENIX					
NO.	DESCRIPTION	REV BY	CKD BY	DATE	



Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

600 0 600 1200 1800
SCALE: 1" = 600'

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ELEVATIONS FOR ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS.

"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX."

KEYMAP

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD
ST89340634-1

DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS	AS BUILT
DATE:12/20	DATE: 12/20	DATE: 12/20			
SCALE:	1"=600' H		3	27	

T:\Tempe\Projects\22\1553.001\000_CAD\05_Official\Sheets\ST89340634-1_KEYMAP.dwg
12/4/2020 1:03:24 PM
Brenan Poe
TY Lin Half Scale.ctb

35TH AVE
I-10 TO
CAMELBACK RD

PRELIMINARY
15%
NOT FOR CONSTRUCTION OR RECORDING

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL	AS BUILT
9	ARIZ.	ST89340634-1			

T.Y. LIN INTERNATIONAL engineers | planners | scientists — T.Y.LIN INTERNATIONAL CONSULTING ENGINEER

DES: BP | DR: OG | CK: CSS | DATE: 12/20

REVISION BY CITY OF PHOENIX

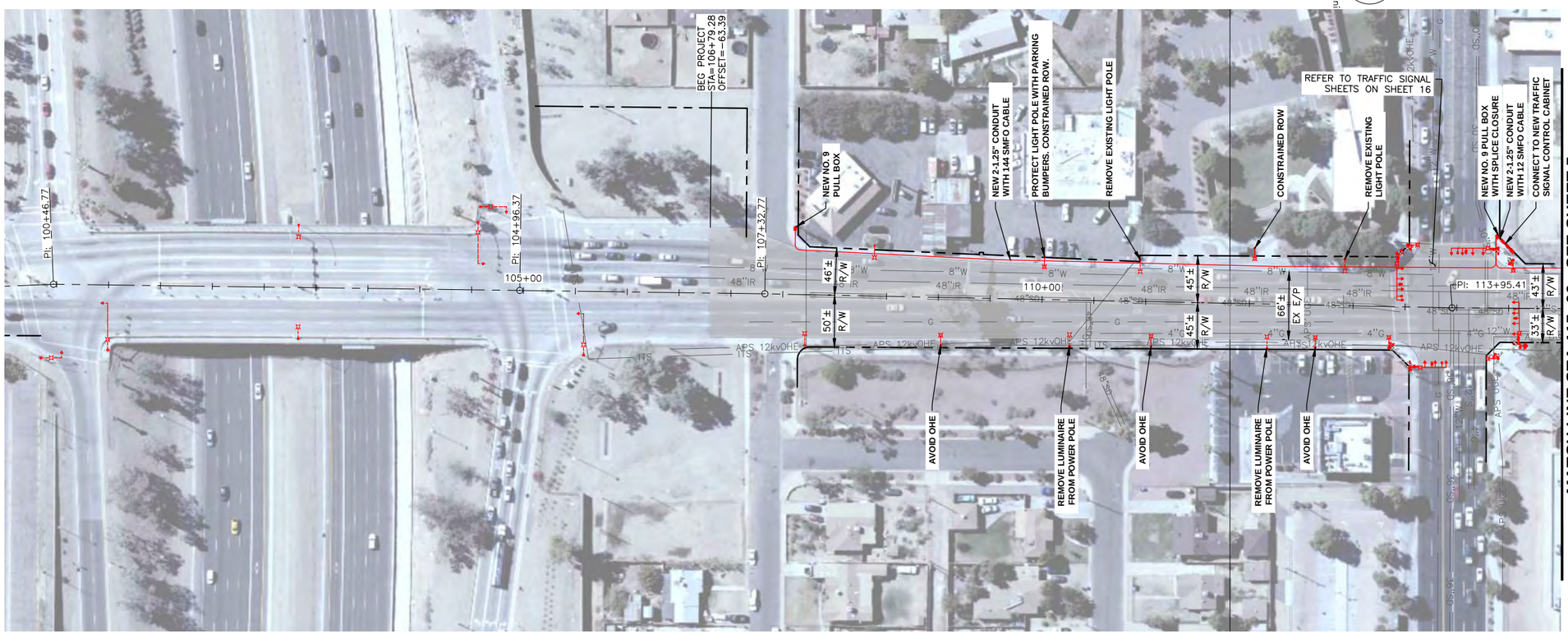
NO.	DESCRIPTION	REV BY	CKD BY	DATE

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE



Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

60 0 60 120 180
SCALE: 1" = 60'

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ELEVATIONS FOR ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS.

"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28. THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX."

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD
ST89340634-1

DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS	AS BUILT
DATE:12/20	DATE: 12/20	DATE: 12/20			
SCALE:	1"=60' H		4	27	

T:\Tempe\Projects\221853.00\00_CADD\05_Official\Sheets\ST89340634-1_ROADWAY.dwg
12/4/2020 1:04:03 PM Brenan Poe TY Lin Half Scale.ctb

35TH AVE
I-10 TO
CAMELBACK RD

COX®

Legend

- Lock Box
- Man Hole
- Pull Box
- Vault
- Pedestal
- Cox Pole
- Joint Pole
- Pole W/XFM
- Anchor
- Overhead Guy
- Riser (25')

ROUTE LINETYPES

- Overhead Route
- Underground Route

Number of Conduits → 2-2" ← Conduit Size
Footer → 182'

VAULT CENTER LINE

	Feet	DIR		Landmark
X AXIS	10'	N	of	50TH ST CURB
Y AXIS	25'	E	of	FIRE HYDRANT

Legend Version 1.0

PRELIMINARY
15%
NOT FOR CONSTRUCTION OR RECORDING

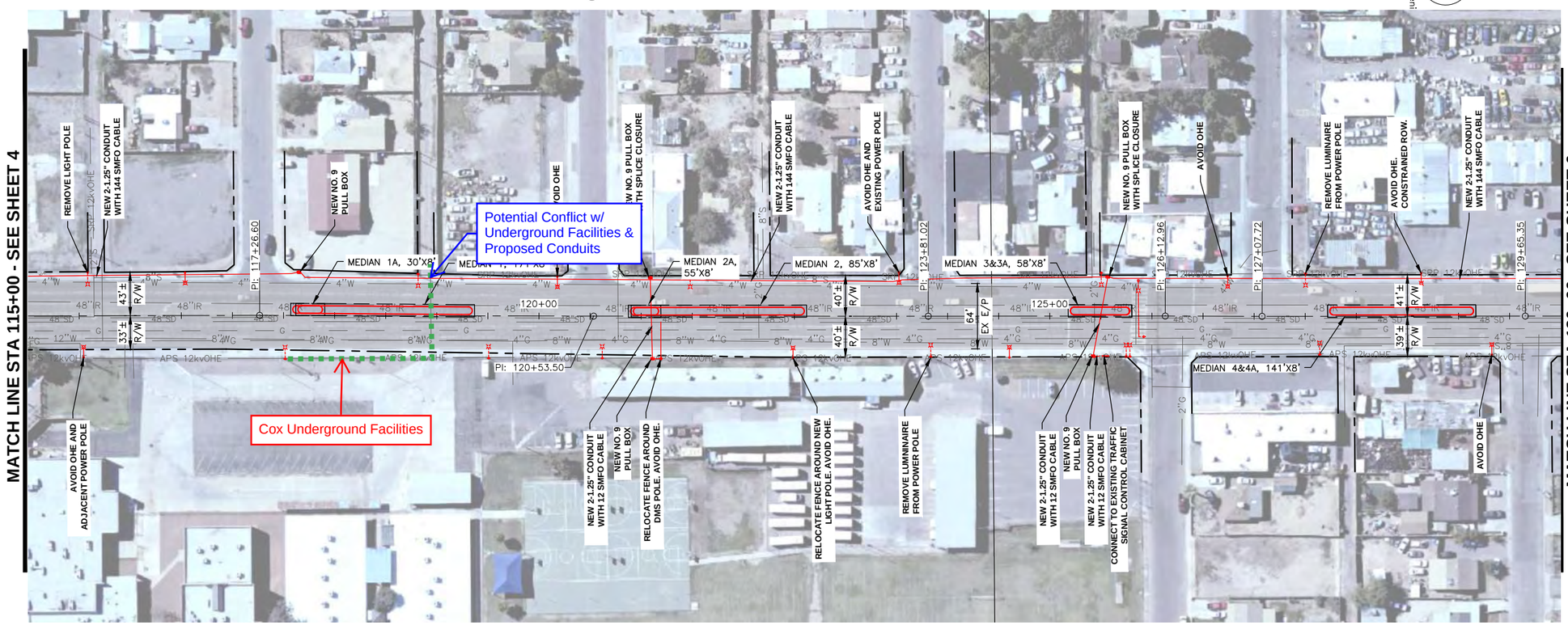
F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL	AS BUILT
9	ARIZ.	ST89340634-1			

T.Y. LIN INTERNATIONAL engineers | planners | scientists — T.Y.LIN INTERNATIONAL CONSULTING ENGINEER

DES: BP | DR: OG | CK: CSS | DATE: 12/20

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE



Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

60 0 60 120 180
SCALE: 1" = 60'

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ELEVATIONS FOR ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS.

"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX."

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD
ST89340634-1

DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS	AS BUILT
DATE:12/20	DATE: 12/20	DATE: 12/20			
SCALE: 1"=60' H			5	27	

T:\Tempe\Projects\221853.00\600_CAD\DWG_Official\Sheets\ST89340634-1_ROADWAY.dwg
12/4/2020 1:04:56 PM
Brenan Poe
TY Lin Half Scale.ctb

35TH AVE
I-10 TO
CAMELBACK RD

PRELIMINARY
15%
NOT FOR CONSTRUCTION OR RECORDING

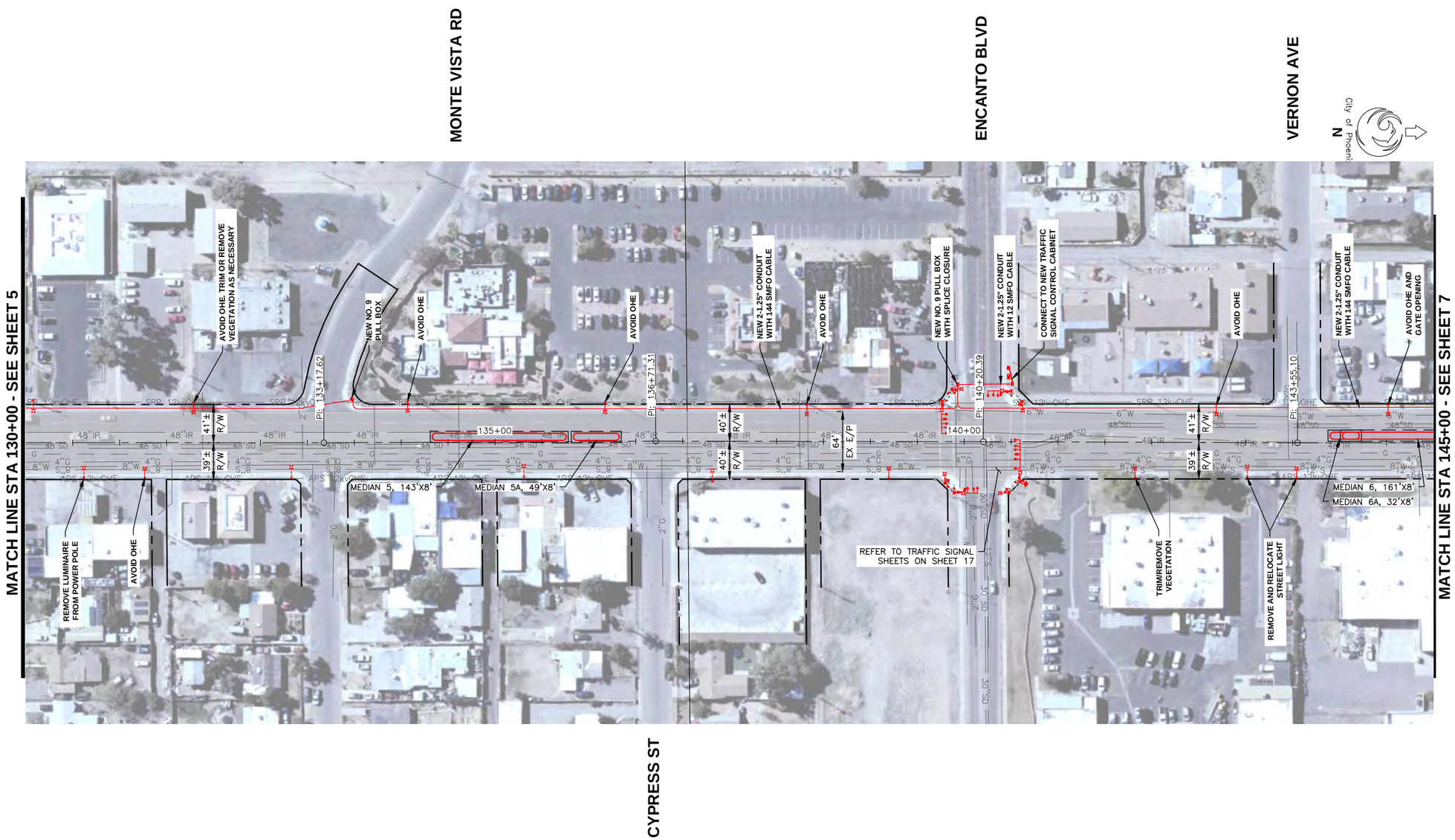
F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL	AS BUILT
9	ARIZ.	ST89340634-1			

T.Y. LIN INTERNATIONAL engineers | planners | scientists — T.Y.LIN INTERNATIONAL CONSULTING ENGINEER

DES: BP	DR: OG	CK: CSS	DATE: 12/20

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE



Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

60 0 60 120 180
SCALE: 1" = 60'

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ELEVATIONS FOR ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS.

"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX."

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD
ST89340634-1

DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS	AS BUILT
DATE:12/20	DATE: 12/20	DATE: 12/20			
SCALE: 1"=60' H			6	27	

T:\Tempe\Projects\22\153.001\00_CADD\05_Official\Sheets\ST89340634-1_ROADWAY.dwg
12/4/2020 1:05:46 PM Brenan Poe TY Lin Half Scale.ctb

35TH AVE
I-10 TO
CAMELBACK RD

COX

Legend

- Lock Box
- Man Hole
- Pull Box
- Vault
- Pedestal
- Cox Pole
- Joint Pole
- Pole W/XFM
- Anchor
- Overhead Guy
- Riser 25'

ROUTE LINETYPES

- Overhead Route
- Underground Route
- Number of Conduits → 2-2" ← Conduit Size; Footer → 182'

VAULT CENTER LINE

	Feet	DIR		Landmark
X AXIS	10'	N	of	50TH ST CURB
Y AXIS	25'	E	of	FIRE HYDRANT

Legend Version 1.0

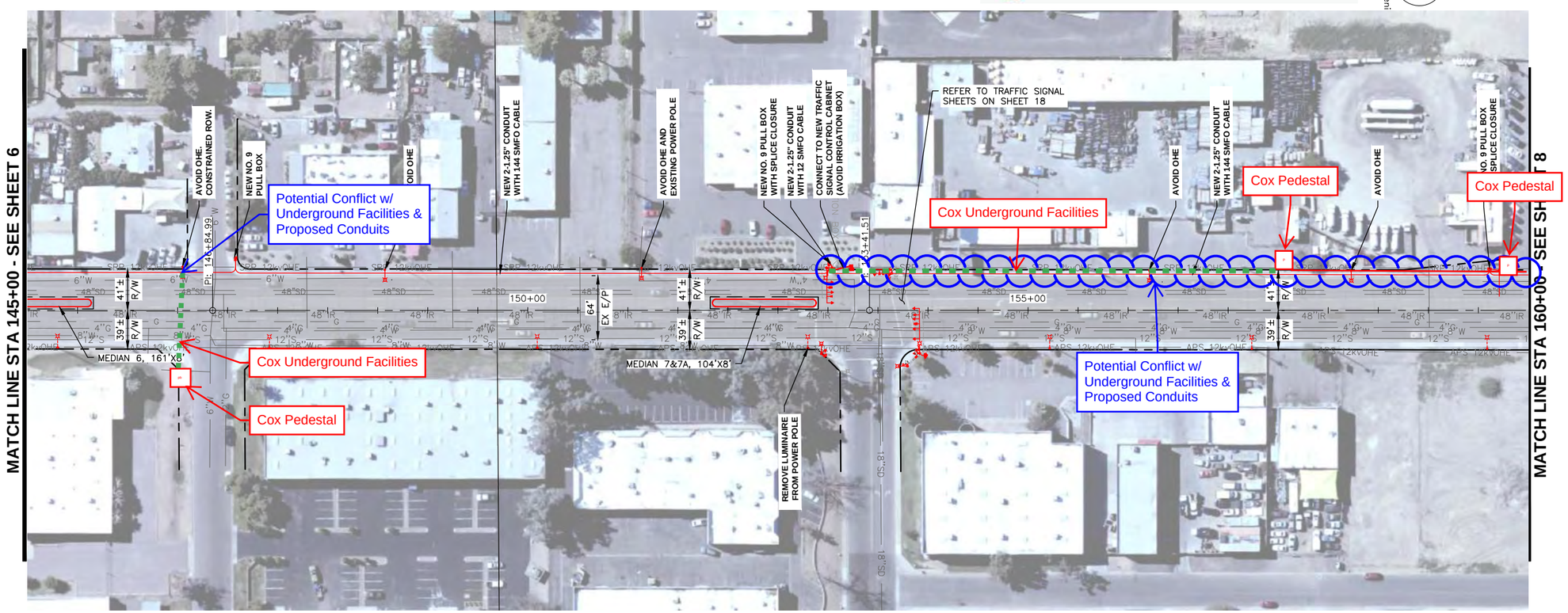
PRELIMINARY
15%
NOT FOR CONSTRUCTION OR RECORDING

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL	AS BUILT
9	ARIZ.	ST89340634-1			

T.Y. LIN INTERNATIONAL engineers | planners | scientists — T.Y.LIN INTERNATIONAL CONSULTING ENGINEER

DES: BP | DR: OG | CK: CSS | DATE: 12/20

LEWIS AVE



Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

60 0 60 120 180
SCALE: 1" = 60'

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ELEVATIONS FOR ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS.

"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX."

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD
ST89340634-1

DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS	AS BUILT
DATE:12/20	DATE: 12/20	DATE: 12/20			
SCALE: 1"=60' H			7	27	

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE

T:\Tempe\Projects\21853.06\600_CADD\05_Official\Sheets\ST89340634-1_ROADWAY.dwg
12/4/2020 1:06:41 PM
Brenan Poe
TY Lin Half Scale.ctb

35TH AVE
I-10 TO
CAMELBACK RD

COX

Legend

- Lock Box
- Man Hole
- Pull Box
- Vault
- Pedestal
- Cox Pole
- Joint Pole
- Pole W/XFM
- Anchor
- Overhead Guy
- Riser 25'

ROUTE LINETYPES

- Overhead Route
- Underground Route
- Number of Conduits: 2-2"
- Footage: 182'
- Conduit Size

VAULT CENTER LINE

	Feet	DIR		Landmark
X AXIS	10'	N	of	50TH ST CURB
Y AXIS	25'	E	of	FIRE HYDRANT

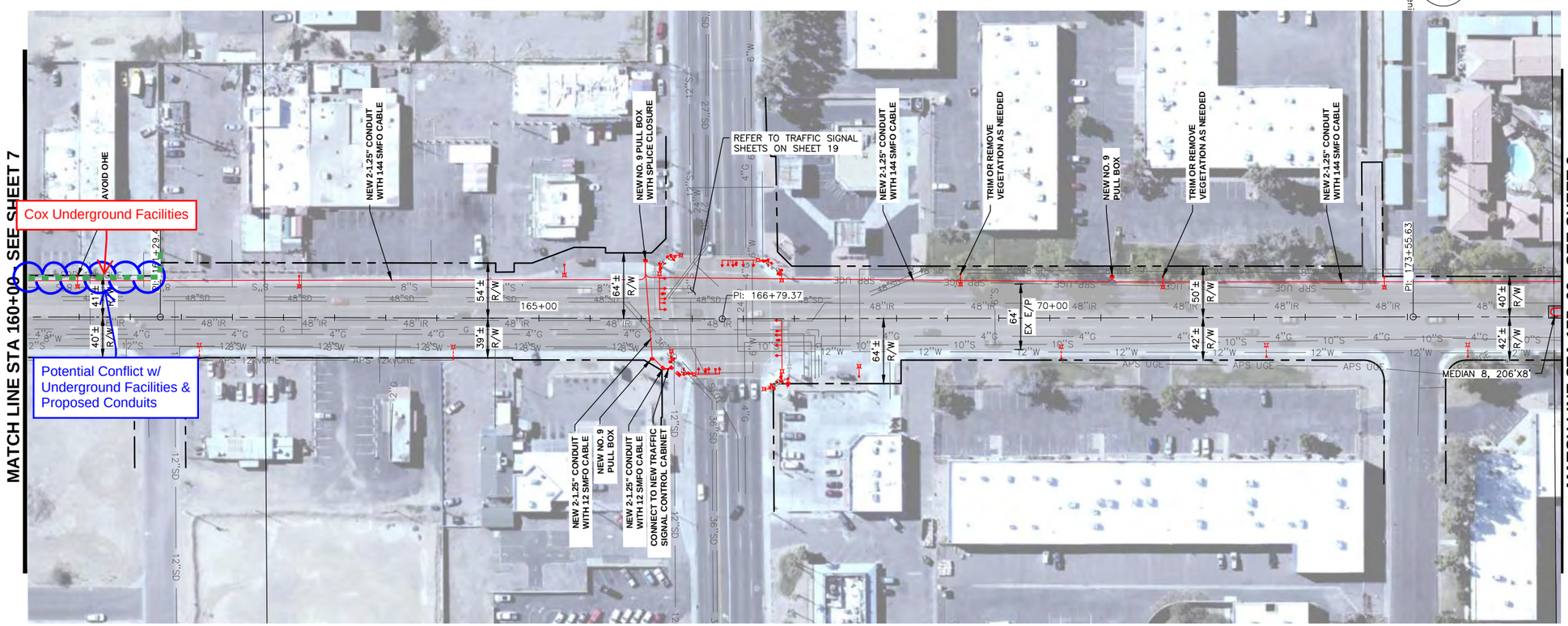
Legend Version 1.0

PRELIMINARY
15%
NOT FOR CONSTRUCTION OR RECORDING

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL	AS BUILT
9	ARIZ.	ST89340634-1			

T.Y. LIN INTERNATIONAL engineers | planners | scientists
T.Y.LIN INTERNATIONAL CONSULTING ENGINEER

DES: BP	DR: OG	CK: CSS	DATE: 12/20



Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

60 0 60 120 180
SCALE: 1" = 60'

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ELEVATIONS FOR ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS.

"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX."

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD
ST89340634-1

DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS	AS BUILT
DATE:12/20	DATE: 12/20	DATE: 12/20			
SCALE: 1"=60' H			8	27	

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE

T:\Temp\Projects\221853.00\600_CADD\05_Official\Sheets\ST89340634-1_ROADWAY.dwg
12/4/2020 1:01:36 PM
Brenan Poe
TY Lin Half Scale.ctb

35TH AVE
I-10 TO
CAMELBACK RD

COX

Legend

- Lock Box
- Man Hole
- Pull Box
- Vault
- Pedestal
- Cox Pole
- Joint Pole
- Pole W/XFM
- Anchor
- Overhead Guy
- Riser 25'

ROUTE LINETYPES

- Overhead Route
- Underground Route

Number of Conduits → 2-2" ← Conduit Size
Footage → 182'

VAULT CENTER LINE

	Feet	DIR		Landmark
X AXIS	90'	N	of	50TH ST CURB
Y AXIS	25'	E	of	FIRE HYDRANT

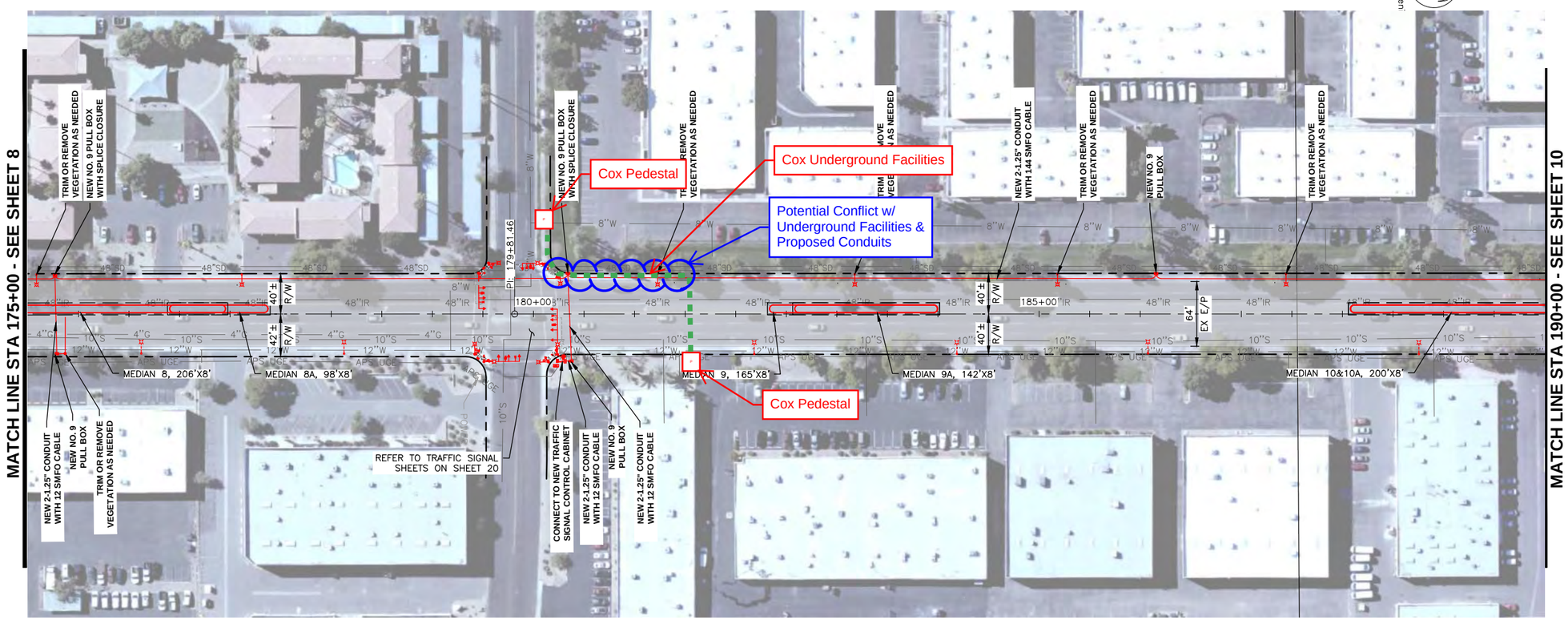
Legend Version 1.0

PRELIMINARY
15%
NOT FOR CONSTRUCTION OR RECORDING

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL	AS BUILT
9	ARIZ.	ST89340634-1			

T.Y. LIN INTERNATIONAL engineers | planners | scientists — T.Y.LIN INTERNATIONAL CONSULTING ENGINEER

DES: BP | DR: OG | CK: CSS | DATE: 12/20



35TH AVE

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

60 0 60 120 180
SCALE: 1" = 60'

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ELEVATIONS FOR ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS.

"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX."

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD
ST89340634-1

DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS	AS BUILT
DATE: 12/20	DATE: 12/20	DATE: 12/20			
SCALE: 1"=60' H			9	27	

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE

T:\Tempe\Projects\21853.06600_CADD\05_Official\Sheets\ST89340634-1_ROADWAY.dwg
12/4/2020 1:08:32 PM
Brenan Poe
TY Lin Half Scale.ctb

35TH AVE
I-10 TO
CAMELBACK RD

COX

Legend

- Lock Box
- Man Hole
- Pull Box
- Vault
- Pedestal
- Cox Pole
- Joint Pole
- Pole W/XFM
- Anchor
- Overhead Guy
- Riser

ROUTE LINETYPES

- Overhead Route
- Underground Route

Number of Conduits → 2-2" ← Conduit Size
Footage → 182'

VAULT CENTER LINE

	Feet	DIR		Landmark
X AXIS	90'	N	of	50TH ST CURB
Y AXIS	25'	E	of	FIRE HYDRANT

Legend Version 1.0

PRELIMINARY
15%
NOT FOR CONSTRUCTION OR RECORDING

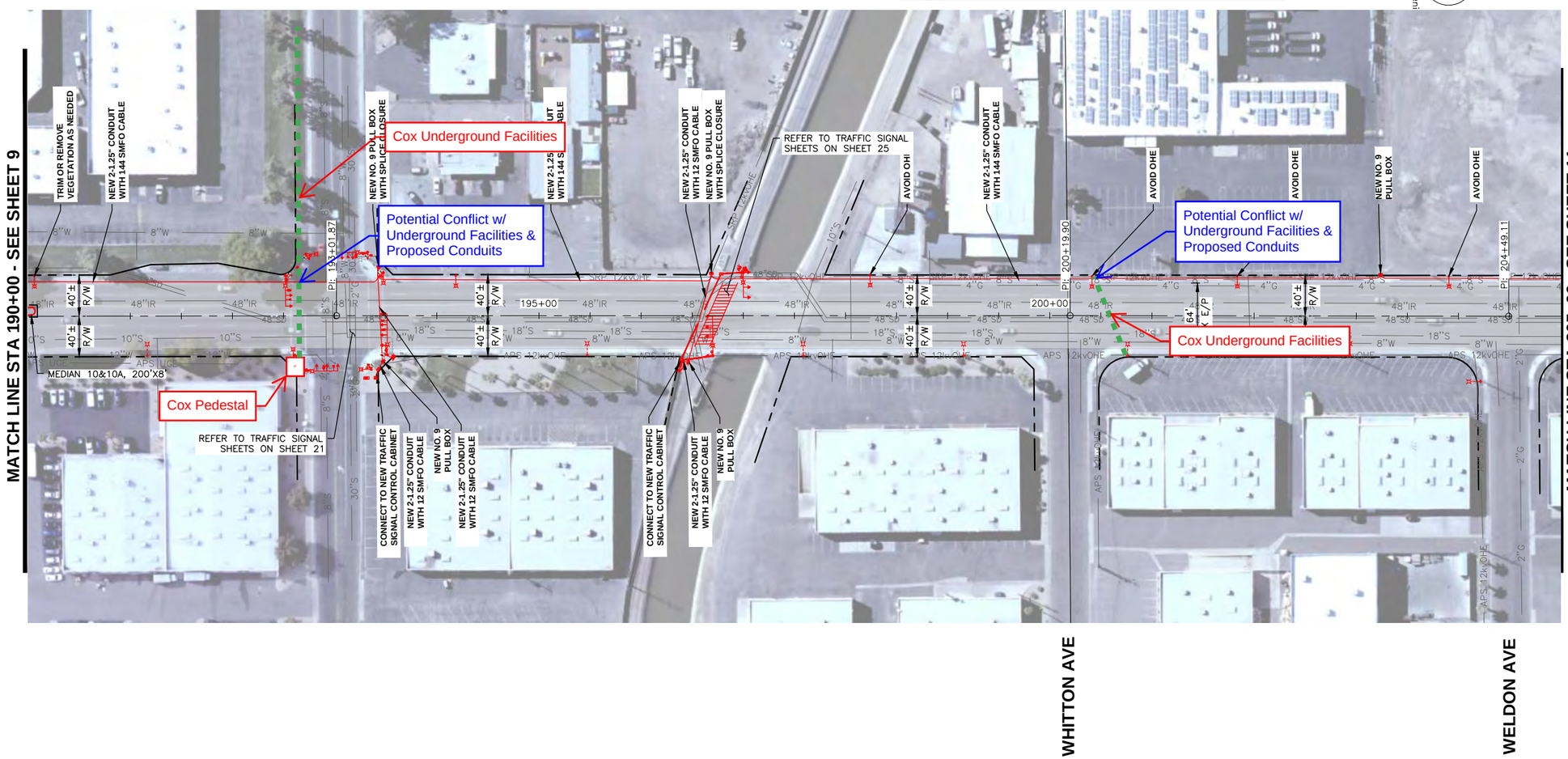
F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL	AS BUILT
9	ARIZ.	ST89340634-1			

T.Y. LIN INTERNATIONAL engineers | planners | scientists — T.Y.LIN INTERNATIONAL CONSULTING ENGINEER

DES: BP | DR: OG | CK: CSS | DATE: 12/20

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE



Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

60 0 60 120 180
SCALE: 1" = 60'

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ELEVATIONS FOR ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS.

"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX."

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD
ST89340634-1

DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS	AS BUILT
DATE: 12/20	DATE: 12/20	DATE: 12/20			
SCALE: 1"=60' H			10	27	

T:\Tempe\Projects\22\153.00\00_CADD\05_Official\Sheets\ST89340634-1_ROADWAY.dwg
12/4/2020 1:04:21 PM
Brenan Poe
TY Lin Half Scale.ctb

35TH AVE
I-10 TO
CAMELBACK RD

COX

Legend

- Lock Box
- Man Hole
- Pull Box
- Vault
- Pedestal
- Cox Pole
- Joint Pole
- Pole W/XFM
- Anchor
- Overhead Guy
- Riser

ROUTE LINETYPES

- Overhead Route
- Underground Route

Number of Conduits → 2-2" ← Conduit Size
Footage → 182'

VAULT CENTER LINE

	Feet	DIR		Landmark
X AXIS	10'	N	of	50TH ST CURB
Y AXIS	25'	E	of	FIRE HYDRANT

Legend Version 1.0

PRELIMINARY
15%
NOT FOR CONSTRUCTION OR RECORDING

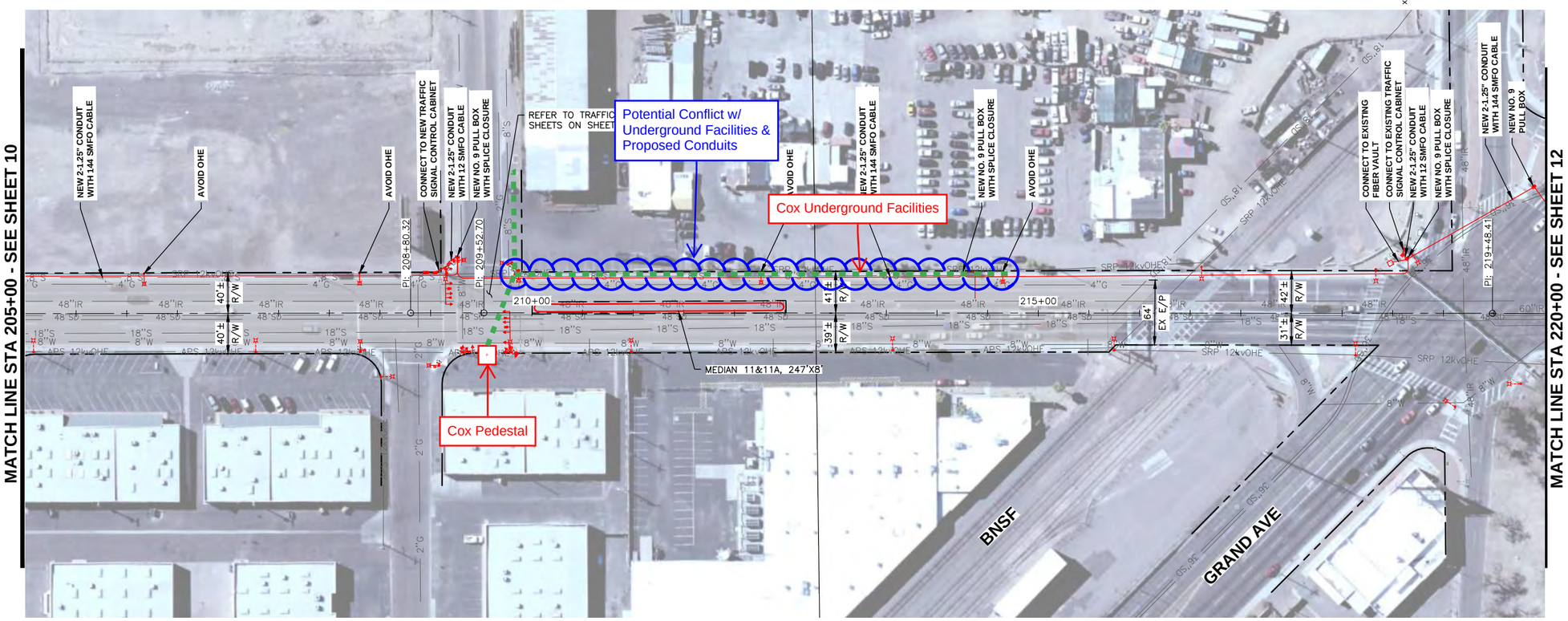
F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL	AS BUILT
9	ARIZ.	ST89340634-1			

T.Y. LIN INTERNATIONAL engineers | planners | scientists — T.Y.LIN INTERNATIONAL CONSULTING ENGINEER

DES: BP | DR: OG | CK: CSS | DATE: 12/20

NO.	DESCRIPTION	REV BY	CKD BY	DATE

REVISION BY CITY OF PHOENIX



Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

60 0 60 120 180
SCALE: 1" = 60'

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ELEVATIONS FOR ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS.

"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX."

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD
ST89340634-1

DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS	AS BUILT
DATE:12/20	DATE: 12/20	DATE: 12/20			
SCALE: 1"=60' H			11	27	

T:\Tempe\Projects\22\153.001\00_CADD\05_Official\Sheets\ST89340634-1_ROADWAY.dwg
12/4/2020 11:10:22 PM
Brenan Poe
TY Lin Half Scale.ctb

35TH AVE
I-10 TO
CAMELBACK RD

COX

Legend

- Lock Box
- Man Hole
- Pull Box
- Vault
- Pedestal
- Cox Pole
- Joint Pole
- Pole W/XFM
- Anchor
- Overhead Guy
- Riser 25'

ROUTE LINETYPES

- Overhead Route
- Underground Route

Number of Conduits → 2-2" ← Conduit Size
Footage → 182'

VAULT CENTER LINE

	Feet	DIR		Landmark
X AXIS	10'	N	of	50TH ST CURB
Y AXIS	25'	E	of	FIRE HYDRANT

Legend Version 1.0

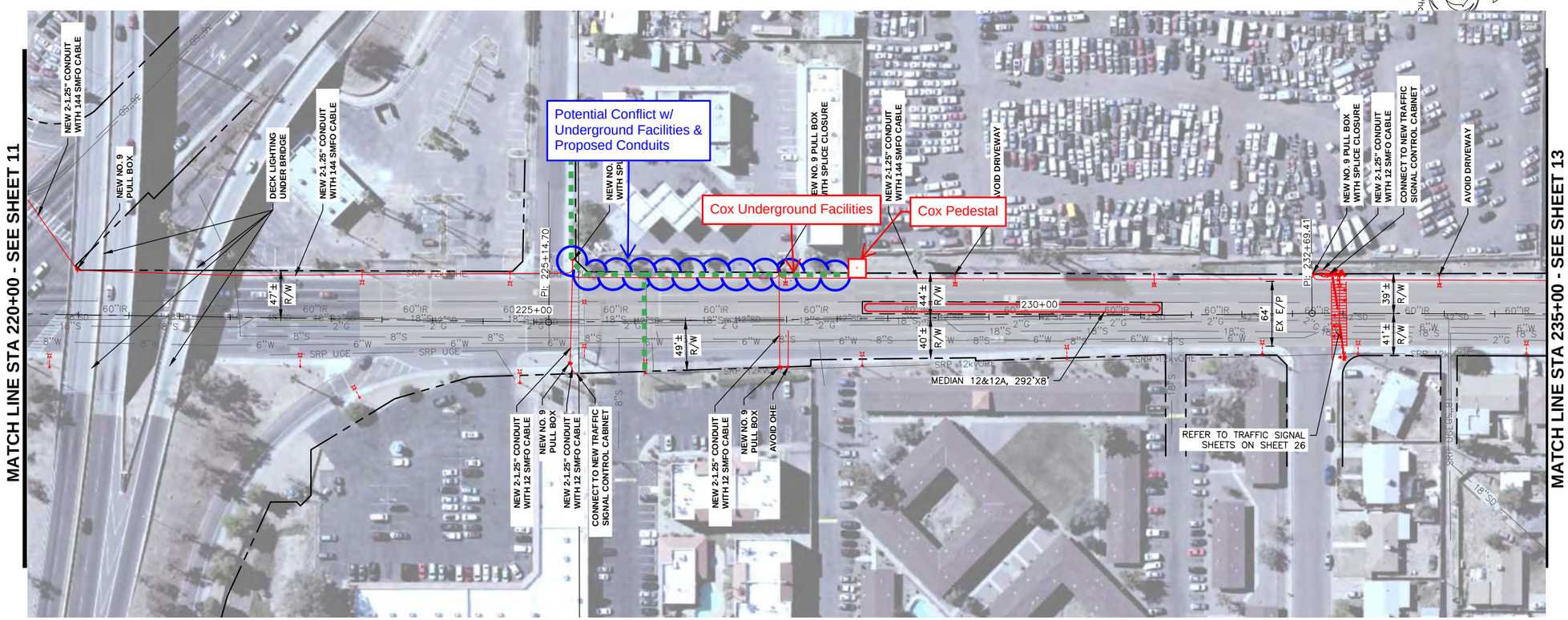
PRELIMINARY
15%
NOT FOR CONSTRUCTION OR RECORDING

F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL	AS BUILT
9	ARIZ.	ST89340634-1			

T.Y. LIN INTERNATIONAL engineers | planners | scientists — T.Y.LIN INTERNATIONAL CONSULTING ENGINEER

DES: BP | DR: OG | CK: CSS | DATE: 12/20

INDIAN SCHOOL RD



GLENROSA AVE

35TH AVE

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

60 0 60 120 180
SCALE: 1" = 60'

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ELEVATIONS FOR ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS.

"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX."

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD
ST89340634-1

DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS	AS BUILT
DATE:12/20	DATE: 12/20	DATE: 12/20			
SCALE:	1"=60' H		12	27	

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE

T:\Tempe\Projects\221853.00\600_CAD\D05_Official\Sheets\ST89340634-1_ROADWAY.dwg
12/24/2020 11:11 PM
Brenan Poe
TY Lin Half Scale.ctb

35TH AVE
I-10 TO
CAMELBACK RD

COX

Legend

- Lock Box
- Man Hole
- Pull Box
- Vault
- Pedestal
- Cox Pole
- Joint Pole
- Pole
- W/XFM
- Anchor
- Overhead
- Guy
- Riser (25')

ROUTE LINETYPES

- Overhead Route
- Underground Route

Number of Conduits → 2-2" ← Conduit Size
Footage → 182'

VAULT CENTER LINE

	Feet	DIR		Landmark
X AXIS	10'	N	of	56TH ST CURB
Y AXIS	25'	E	of	FIRE HYDRANT

Legend Version 1.0

PRELIMINARY
15%
NOT FOR CONSTRUCTION OR RECORDING

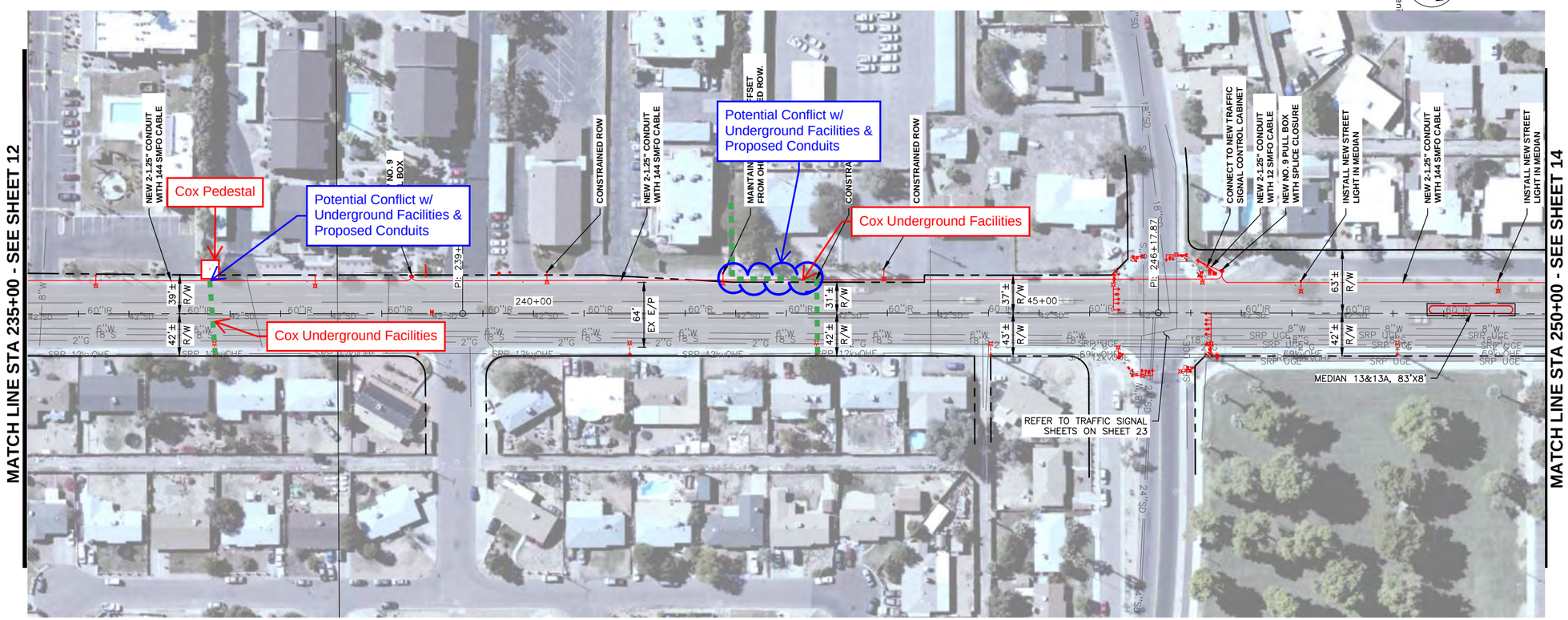
F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL	AS BUILT
9	ARIZ.	ST89340634-1			

T.Y. LIN INTERNATIONAL engineers | planners | scientists — T.Y.LIN INTERNATIONAL CONSULTING ENGINEER

DES: BP | DR: OG | CK: CSS | DATE: 12/20

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE



Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

60 0 60 120 180
SCALE: 1" = 60'

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ELEVATIONS FOR ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS.

"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX."

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD
ST89340634-1

DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS	AS BUILT
DATE:12/20	DATE: 12/20	DATE: 12/20			
SCALE: 1"=60' H			13	27	

T:\Tempe\Projects\221853.00\600_CADD\05_Official\Sheets\ST89340634-1_ROADWAY.dwg
12/4/2020 1:12:01 PM Brenan Poe TY Lin Half Scale.ctb

35TH AVE
I-10 TO
CAMELBACK RD

COX

Legend

- Lock Box
- Man Hole
- Pull Box
- Vault
- Pedestal
- Cox Pole
- Joint Pole
- Pole
- W/XFM
- Anchor
- Overhead Guy
- Riser 25'

ROUTE LINETYPES

- Overhead Route
- Underground Route
- Number of Conduits → 2-2" ← Conduit Size; Footage → 182'

VAULT CENTER LINE

	Feet	DIR		Landmark
X AXIS	10'	N	of	50TH ST CURB
Y AXIS	25'	E	of	FIRE HYDRANT

Legend Version 1.0

PRELIMINARY
15%
NOT FOR CONSTRUCTION OR RECORDING

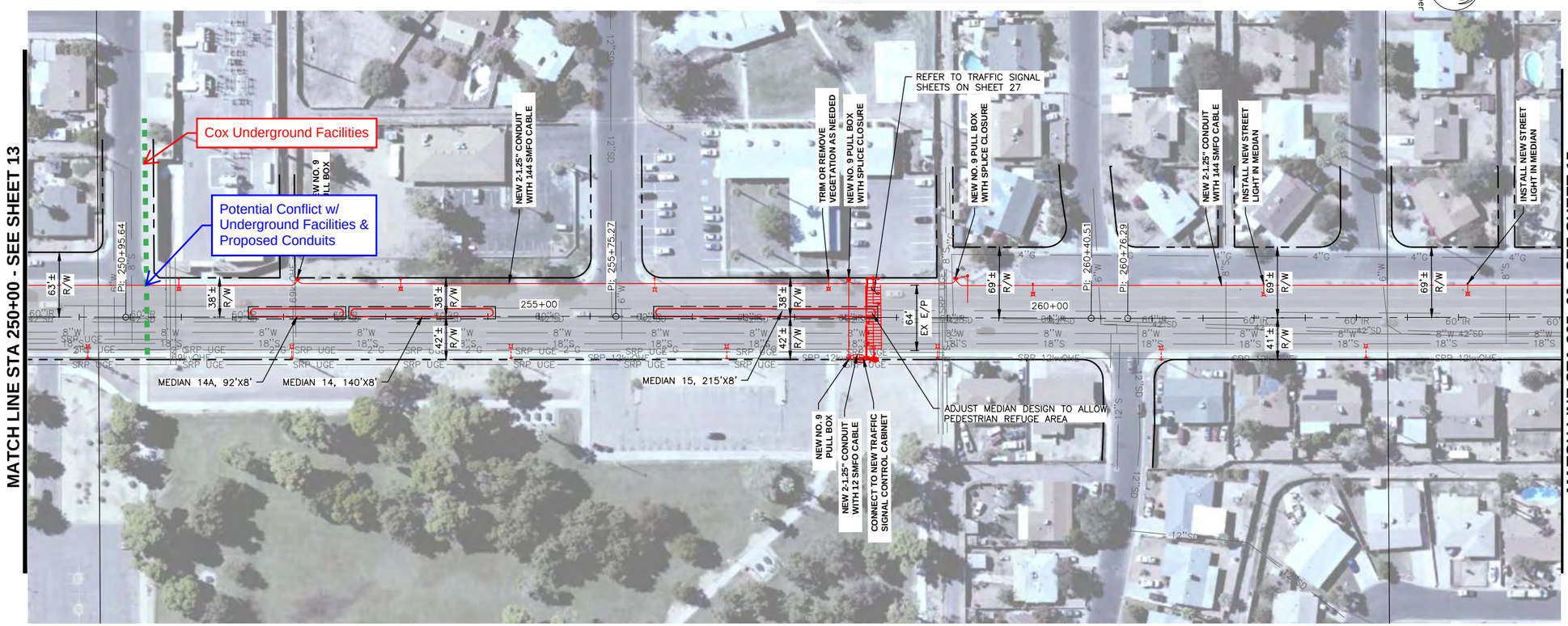
F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL	AS BUILT
9	ARIZ.	ST89340634-1			

T.Y. LIN INTERNATIONAL engineers | planners | scientists — T.Y.LIN INTERNATIONAL CONSULTING ENGINEER

DES: BP | DR: OG | CK: CSS | DATE: 12/20

REVISION BY CITY OF PHOENIX

NO.	DESCRIPTION	REV BY	CKD BY	DATE



Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

60 0 60 120 180
SCALE: 1" = 60'

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ELEVATIONS FOR ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS.

"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX."

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD
ST89340634-1

DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS	AS BUILT
DATE: 12/20	DATE: 12/20	DATE: 12/20			
SCALE: 1"=60' H			14	27	

T:\Tempe\Projects\221453.00\600_CADD\05_Official\Sheets\ST89340634-1_ROADWAY.dwg
Brenan Poe
12/4/2020 1:13:01 PM
TY Lin Half Scale.ctb

35TH AVE
I-10 TO
CAMELBACK RD

PRELIMINARY
15%
NOT FOR CONSTRUCTION OR RECORDING

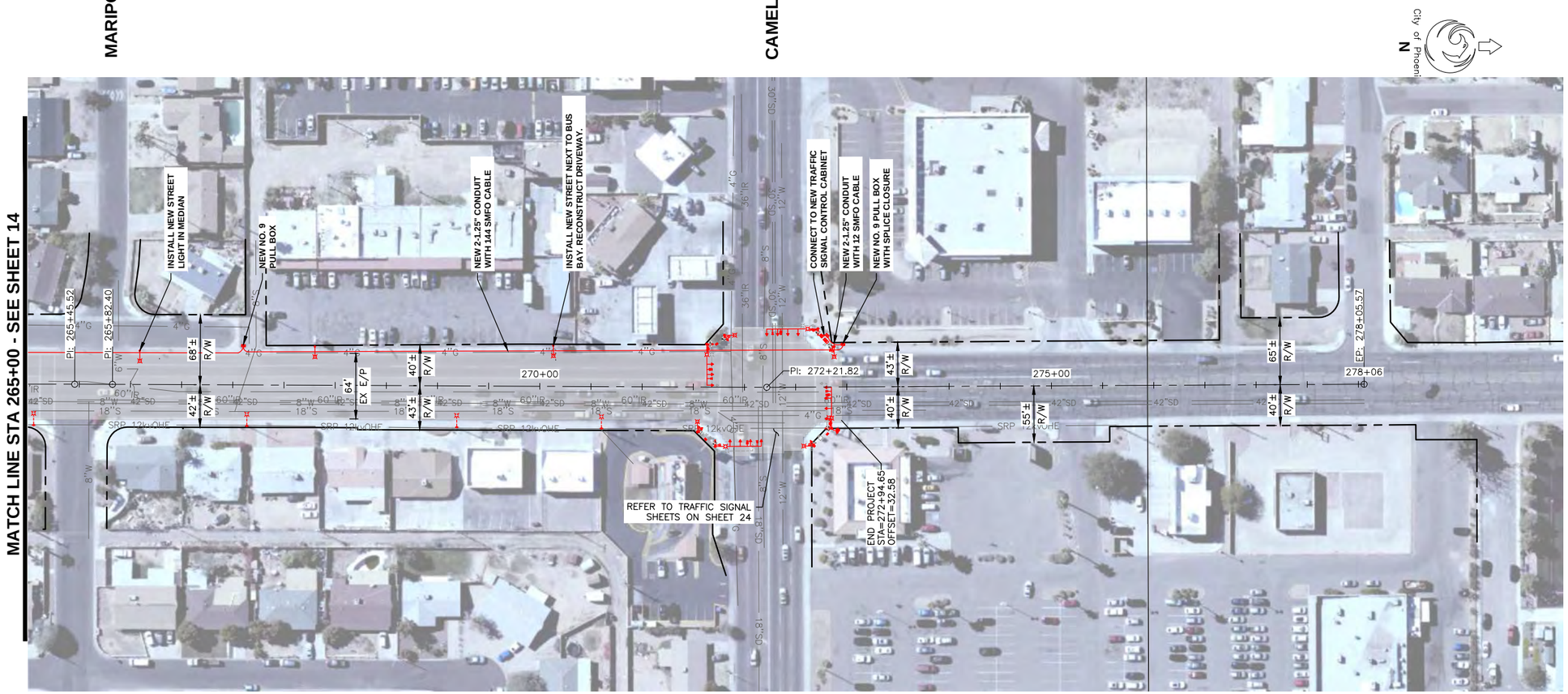
F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL	AS BUILT
9	ARIZ.	ST89340634-1			

T.Y. LIN INTERNATIONAL engineers | planners | scientists — T.Y.LIN INTERNATIONAL CONSULTING ENGINEER

DES: BP	DR: OG	CK: CSS	DATE: 12/20

NO.	DESCRIPTION	REV BY	CKD BY	DATE

REVISION BY CITY OF PHOENIX



35TH AVE

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

60 0 60 120 180
SCALE: 1" = 60'

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ELEVATIONS FOR ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS.

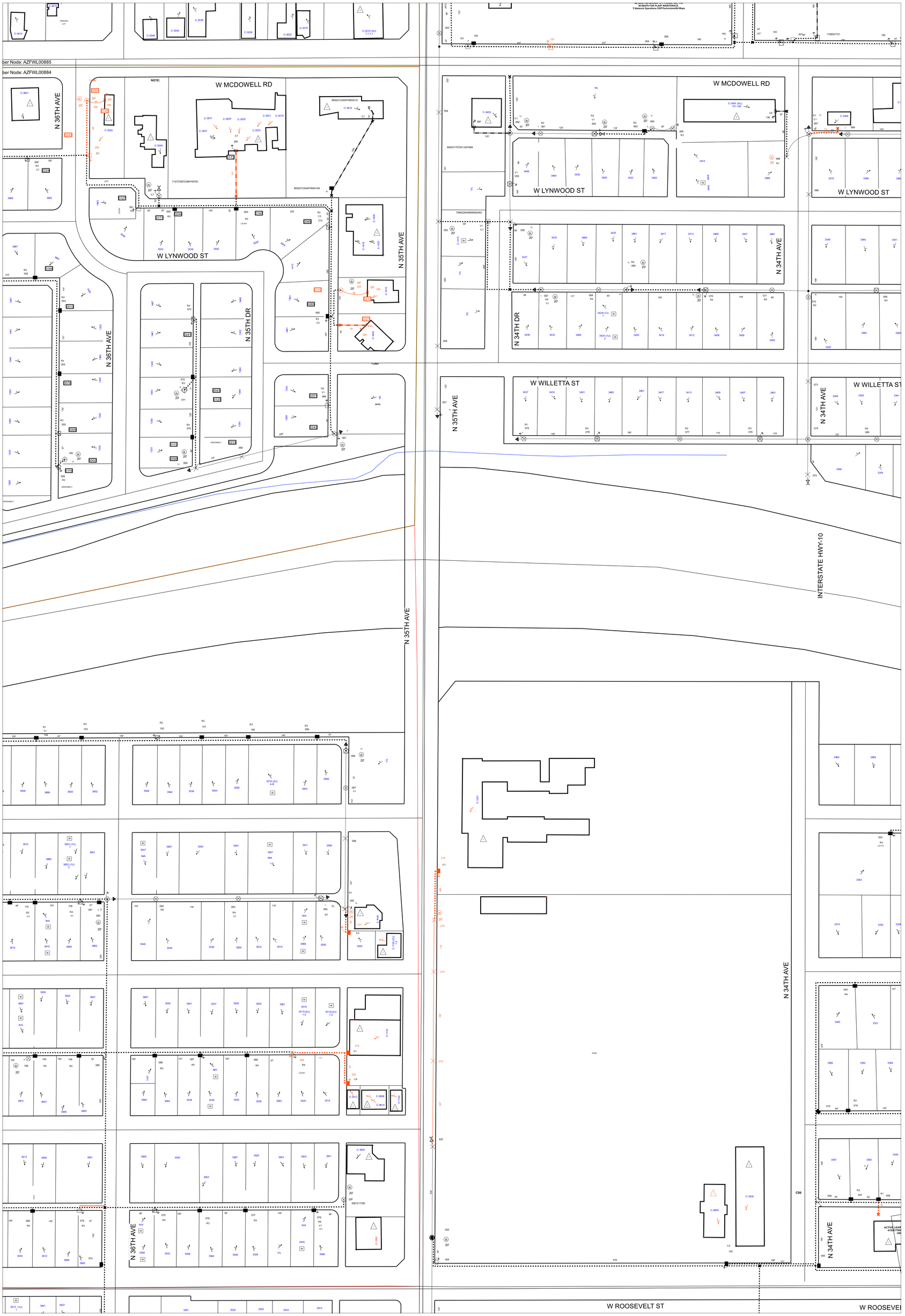
"PER CITY OF PHOENIX CITY CODE CHAPTER 2, SECTION 2-28, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF THE CONTRACTOR'S CONTRACT WITH THE CITY OF PHOENIX."

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPARTMENT

35TH AVE
I-10 TO CAMELBACK RD
ST89340634-1

DR: OG	DES: BP	CK: CSS	SHEET NO:	TOTAL SHEETS	AS BUILT
DATE:12/20	DATE: 12/20	DATE: 12/20			
SCALE:	1"=60' H		15	27	

T:\Tempe\Projects\21853.06\600_CADD\05_Official\Sheets\ST89340634-1_ROADWAY.dwg
12/4/2020 1:13:51 PM Brenan Poe TY Lin Half Scale.ctb



Notes:

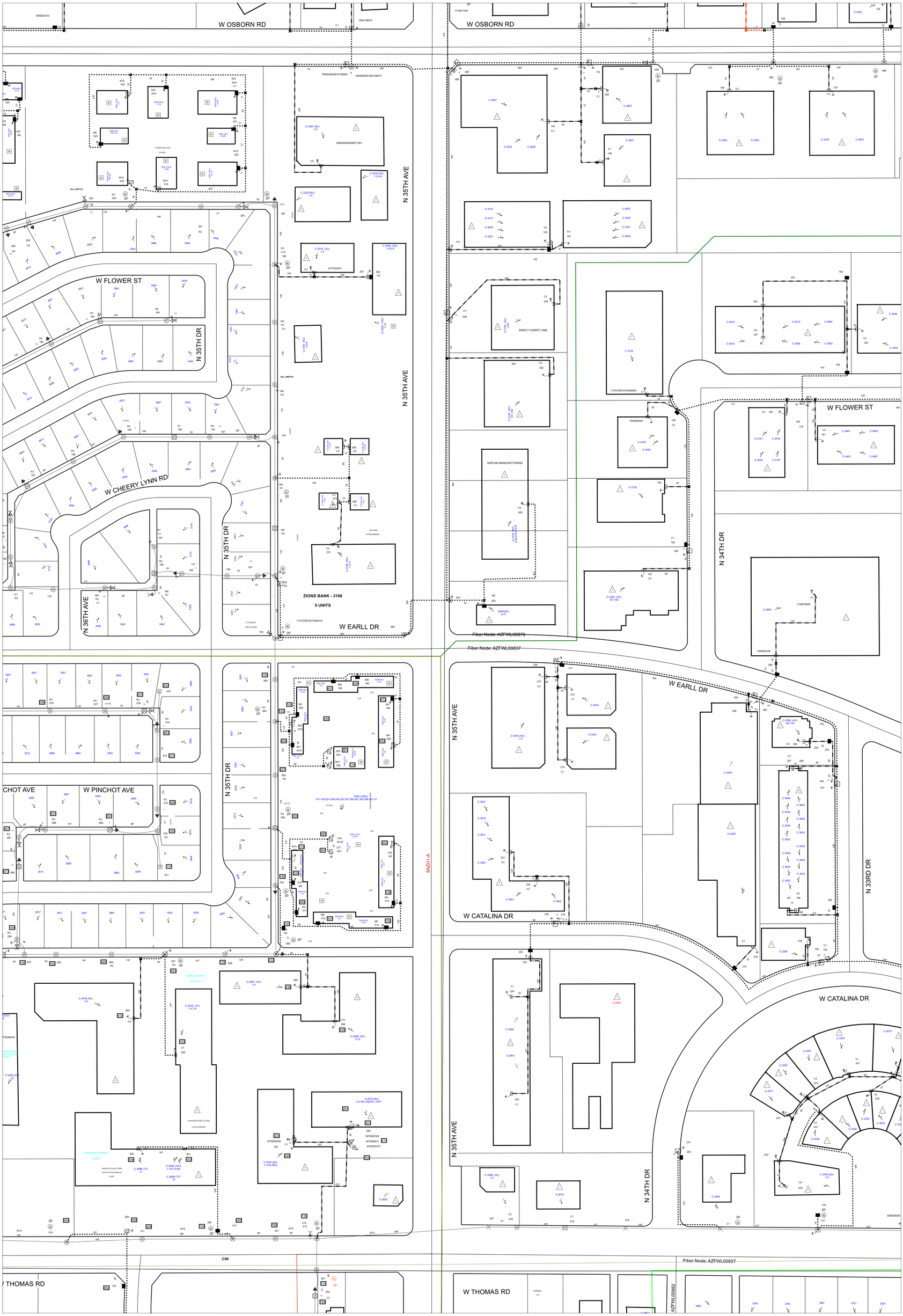
Date Created : 02/08/2021 07:34:13

Notes:

Date Created : 02/08/2021 07:50:19

Notes:

Date Created : 02/09/2021 07:40:16

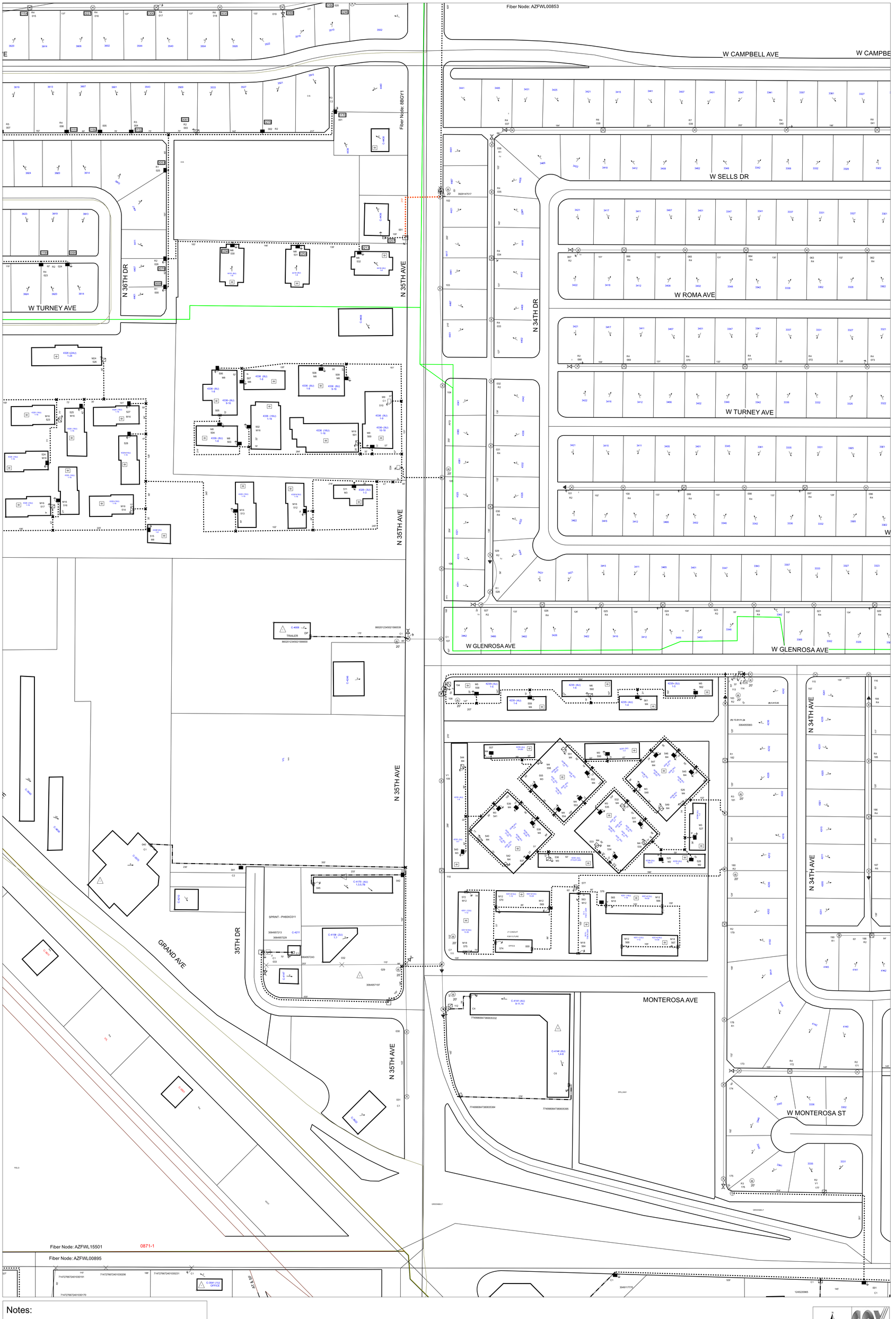


Notes:

Date Created : 02/09/2021 07:40:18

Notes:

Date Created : 02/08/2021 07:40:13



Notes:

Date Created : 02/09/2021 07:40:44

Notes:

Date Created : 02/08/2021 07:40:43

UTILITY CLEARANCE FORM

35th Avenue: I-10 to Camelback Road
PROJECT NO. ST89340634
15%SUBMITTAL
CONST: Fall 2022

*1. Name of Utility Company_Zayo

*2. Facilities within the project: Yes ___X___ No _____

*3. Are facilities shown correctly on plans? Yes ___X___ No _____ If NO, provide "as built" drawings

*4. Are facilities in conflict? Yes _____ No ___X___

*a) If yes, describe: _____

_____

_____

*b) Date when conflicts will begin to be relocated _____

*c) Date when relocations will be complete_____

5. Will some facilities require minor relocations/adjustments during construction (i.e., manhole or valve covers, cable relocations for each basin, etc.)? Yes _____ No _____

a) If yes, describe: _____

_____

_____

b) Name of person to be contacted_____

c) Phone Number _____

d) Email address _____

e) Advance notice required_____

PLEASE PROVIDE TO THIS OFFICE IN WRITING ANY INFORMATION RELATING TO THIS PROJECT

Signed: _Matt Burke

Print name: Matt Burke Date: _12/22/2020

Email address phoenixmaint@zayo.com

Please return this form to: City of Phoenix Street Transportation Department
200 W. Washington St, 6th Floor, Phoenix, AZ 85003, Attention: David Nieto by January 11, 2021
PHONE: 602.262.4976 EMAIL: David.Nieto@Phoenix.gov
*** Required fields (must have relocation dates at 90% submittal)**

Appendix H – Draft DCR Review Comments and Responses

35TH AVENUE: I-10 TO CAMELBACK ROAD
DRAFT DESIGN CONCEPT REPORT
SUMMARY OF REVIEW COMMENTS & ACTIONS

January 25, 2021

No.	Page No.	Reviewer	Comment	Initial Resp	Response Clarification	Final Resp
		Items discussed/decisions from City of Phoenix CIP Meeting held 1/14/2021 at 11 AM.				
1.	Overall Design	1) Confirm PHB Locations • 35th Avenue/Grand Canal (Midblock) i. The Draft DCR design was reviewed/discussed. The team reached consensus on shifting the PHB to the north side of canal to algin with SRP general guidance provided by Phoenix at the 12/16/2020 Progress Meeting 2. • 35th Avenue/Elm Street (Midblock) i. The Draft DCR design was reviewed/discussed. The team reached consensus on shifting the PHB slightly to the south to align more closely with the sidewalk coming from the Cielito Park. The sidewalk design will be adjusted to deliver pedestrians directly to the PHB location. • 35th Avenue/Glenrosa Avenue (Midblock) i. The Draft DCR design was reviewed/discussed. The team reached consensus on the design layout shown in the DCR. Providing the PHB on the north side is more desirable so left turn movements departing Glenrosa will not conflict with pedestrians	A	Design will be updated for Final DCR submittal.	A
2.	Overall Design	2) Raised Concrete Median Design Criteria • The design constraints were discussed with the team regarding City of Phoenix Street Planning and Design Guidelines Section 3.12. Phoenix agreed to allow less than 250 feet for the left turn movement and raised concrete median design and will allow 100 feet to be used to control the design. In locations where larger business developments are served the Phoenix asked	A	Design will be updated for Final DCR submittal.	A

A. Add or Correct
B. Clarify or Evaluate
C. Additional Information Needed
D. Consultant Recommends No Further Action

No.	Page No.	Reviewer	Comment	Initial Resp	Response Clarification	Final Resp
			that the 100 feet be increased based on engineering judgement. The raised concrete median designs will be updated accordingly. • Design development was discussed. DCR team used the .shp files developed during the Build Grant in which Phoenix Traffic and AECOM determined 19 raised concrete median locations. TYLIN evaluated these locations and removed 4 raised concrete median locations to avoid restricting side street or business access. Phoenix agreed with this process			
3.			3) ITS/Signals/Lighting Comment Status • Phoenix will provide comments by the 1/22/21 deadline for lighting and ITS. • Phoenix asserted some concern with the level of technology that will need to be implemented to meet the Build Grant criteria. Current Phoenix standards are not fully adaptive technology. The Build Grant criteria does not explicitly state what is required but does discuss adaptive/vehicle to vehicle technology.	B/C	Awaiting forthcoming comments on the lighting and ITS design. The team should consider reaching out to the FHWA to confirm the Build Grant requirements.	A
		Items discussed/decisions from City of Phoenix CIP Meeting held 12/16/2021 at 1 PM.				
4.			4) ITS Design • The City has fiber that runs from I-10 to the northeast corner of McDowell. This is the No. 9 pullbox where our project will tie into existing infrastructure. • There is no need to run fiber south of McDowell as ITS already exists.	A/C	The ITS design will be updated to connect to the existing pullbox on the NEC of 35th Ave and McDowell. The existing pullbox appears to be more like a No. 7 or No. 8 ITS junction box. We may want to show a new No. 9 vault at this corner to be installed with the ITS.	A

A. Add or Correct
B. Clarify or Evaluate
C. Additional Information Needed
D. Consultant Recommends No Further Action

No.	Page No.	Reviewer	Comment	Initial Resp	Response Clarification	Final Resp
		Cox permit sent to design team on 1/4/21.				
5.		5)	Review the permit for potential conflicts with the proposed alignment of the fiber optic line.	A/B	The permit will be evaluated for potential conflicts and the proposed fiber optic line will be adjusted as necessary.	A
		Robert Gonzales Jr. (City of Phoenix – Public Transit)				
6.	Overall Design	No Comments		A		A
		Peter Rupal, PE (City of Phoenix – Materials Lab & Survey Sections)				
7.	Pavement Design	Are we sure the pavement condition is conducive to a 1" mill and overlay? From photos and "driving" the project on EzMap, there appears to be a lot of cracking and rutting. I think it may be prudent to retain a geotechnical consultant to provide a review of the site, perhaps drill some borings to determine the thickness of the existing pavement structure and subgrade, provide an overall pavement assessment, and provide options for the pavement, be it mill and overlay, remove and replace, surface treatment (slurry or microseal), etc		A	This recommendation will be added to the DCR for the Final Design team to incorporate into their scope of work for pavement remediation prior to the mill and fill.	A
		City of Phoenix – Bus Rapid Transit (BRT) Team				
8.	Overall Design	General comments from the Phoenix BRT project team: As described in DCR, 35th Ave is a potential BRT corridor. The BRT alignment and stations have not been determined. The general assumption is BRT could operate side running (using the curb lane) or center running (using the left lane and/or median). The station locations would be located approximately every mile with a		A	Language will be added to the DCR so the final design team is aware of these items and can address them with their scope of work.	A

A. Add or Correct
B. Clarify or Evaluate
C. Additional Information Needed
D. Consultant Recommends No Further Action

No.	Page No.	Reviewer	Comment	Initial Resp	Response Clarification	Final Resp
			few half-mile station locations. It has also not been determined whether BRT will operate in mixed traffic and/or dedicated lanes. The alignment, stations, and runningways will be determined once the BRT corridors are approved by CTC and City Council and the project moves into detailed corridor planning and conceptual design. Most of the elements of the DCR are very complimentary to BRT and transit in general. The primary comment for this plan set is on the installation of medians, as this could preclude a center running operation using the median. That said, these medians could be integrated in the design of a side running or center running alternative (using the left lane) that operates in mixed traffic. There are no comments on the location of the medians identified, just concerns about the potential impact on a BRT cross-section if a center running option using the median is selected.			
9.	Overall Design		Potential BRT stations locations in the DCR study area are shown below. These station locations were identified during the prelimiary ridership analysis. Final BRT station locations will be determined once the BRT corridors are approved by CTC and City Council and the project moves into detailed corridor planning and conceptual design. I-10 McDowell Thomas Osborn Indian School Campbell Camelback	A	Language will be added to the DCR so the final design team is aware of these items and can address them with their scope of work.	A
10.	10 of 27 / Plans		There is a potential BRT station at Osborn. If BRT is center-running, there is an opportunity to use the Grand Canal signal to create a double-entry station	A	Language will be added to the DCR so the final design team is aware of these items and can address them with their scope of work.	A

A. Add or Correct
B. Clarify or Evaluate
C. Additional Information Needed
D. Consultant Recommends No Further Action

No.	Page No.	Reviewer	Comment	Initial Resp	Response Clarification	Final Resp
11.	12 of 27 / Plans	While not part of the DCR, would like to acknowledge need for pedestrian infrastructure on potential overpass. Specifically the need to facilitate transfers between 35th Ave and Indian School. If pedestrian infrastructure (horizontal and vertical circulation) is not provided on then overpass, then BRT station may need to be shifted from this location.		A	Language will be added to the DCR so the final design team is aware of these items and can address them with their scope of work.	A
		Ryan Stevens, PE (City of Phoenix – Street Transportation Department)				
12.	Pavement Design	Since this is a CIP project, and includes many items in the scope, the pavement treatment / restoration should have the same level of attention. I am concerned that we've defaulted to a 1" mill & overlay where additional work might be needed. I see that for the 1" overlay, the D ½" asphalt mix design is estimated (M3210113 Asphalt Concrete Surface Course, Type D 1/2, 1" Thick). If only using a D ½" mix on an arterial street I strongly suggest using a polymer modified asphalt binder. Was an analysis conducted to know that at 1" overlay will provide adequate structural capacity? Was existing pavement structure (thickness) compared to the needed pavement structure?		A	No analysis conducted with DCR. Info will be added to include this scope for Final Design. See response to Comment 4.	A
13.	Pavement Design	I see the allowance to rehab severely deteriorated pavement (M3210109 Allowance to Rehabilitate Deteriorated Pavement) ; was this estimated from the site visit or some other method?		A	This allowance was discussed with the project team and utilized for the DCR level. See response to comment 4, this will be included with Final Design.	A
14.	11 & 12 of 27 / Plans	On plan sheets 11 and Sheet 12, where we interface with Grand Ave and Indian School Road, is the shading for pavement replacement covering all the way to ADOT maintenance limits? I want to be sure we are not missing short pieces of pavement that we are responsible to maintain. I know Grand Ave is ADOT's here, but I am not confident on where the City's maintenance stops approaching that intersection.		A	Coordination with ADOT's Indian School/Grand Ave/35th Ave Intersection project is ongoing. Language is included in the DCR that these limits need to be coordinated further during final design once ADOT has selected the preferred alternative.	A

A. Add or Correct
B. Clarify or Evaluate
C. Additional Information Needed
D. Consultant Recommends No Further Action

Appendix I –Public Involvement Plan

CITY OF PHOENIX

STREET TRANSPORTATION DEPARTMENT

35th Avenue: I-10 to Camelback Road

Project No. ST89340634-3

PUBLIC INFORMATION & OUTREACH PLAN

Revised January 6, 2021

Prepared for: City of Phoenix

YourProject M.O.
Marketing and Outreach

7600 N. 16TH STREET, SUITE 112, PHOENIX, AZ 85020 | TEL: (602) 795-1515

TABLE OF CONTENTS

Scope of Work / Project Objectives 1

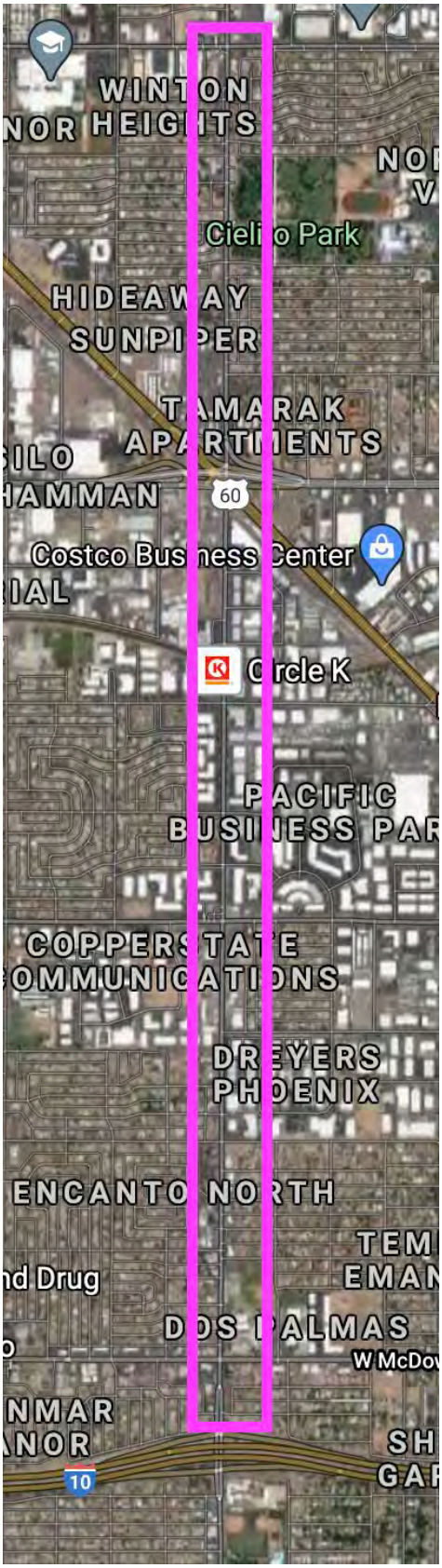
Design Phase Services

PIO Objectives 2

Outreach Plan 3

Survey Questionnaire 6

Design Phase Services 14



Project Overview

The City of Phoenix (City) Project No. ST89340634-1, 35th Avenue: I-10 to Camelback Road project is evaluating safety improvements along 35th Avenue from Interstate 10 (I-10) to Camelback Road. The project will further develop the improvements identified in the 35th Avenue Safety Corridor Project Build Grant Application and enable the City to more accurately plan the project with respect to scope, schedule and budget, obtain funding and advance to the final design and construction phases.

The project spans 3.2 miles along 35th Avenue between I-10 and Camelback Road. 35th Avenue is classified as a major arterial roadway and is an alternate route to Interstate 17 (I-17), the primary north-south high-capacity freeway within Phoenix, and regularly brings significant commuter travel through the corridor.

Safety Issues

Between 2014 and 2018 there have been 40 pedestrian-involved crashes resulting in 7 fatalities and 11 serious injuries within the project corridor. Of these crashes, 26 occurred while the person was crossing the street, 26 occurred during dark hours and 20 occurred when the person crossed at an unmarked location.

The 35th Avenue Project is expected to reduce the frequency and severity of crashes along the corridor through the targeted implementation of safety countermeasures at high incident locations. The planned countermeasures are expected to prevent 567 property damage only crashes and 260 injury or fatality crashes over a 20-year period.

Within just 5 years after construction, crashes within the corridor are expected to be reduced by 12%. This equates to $4.88 million in societal costs that benefit the City and its residents.

35th Avenue traffic safety elements and countermeasures include:

- 9 traffic signal rebuilds that will use flashing yellow left-turn operation
- 3 new pedestrian hybrid beacons (PHBs) to provide additional controlled pedestrian crossing locations
- New street lighting to improve roadway light levels and uniformity
- Median islands for pedestrian refuge
- Improved pavement conditions

Project Support

The 35th Avenue project has received an extensive amount of support from governmental agencies. Support letters were received from United States Senators Krysten Sinema and Martha McSally; Gail Barney, Chair of MAG Regional Council; Brent Cain, ADOT's Transportation Systems Management and Operations Director; Donna Homher from the Cordova Neighborhood

Association; Jeff Spellman from the Violence Impact Project Coalition; Brian Mueller, President of Grand Canyon University; Lori Singleton, President and CEO of Arizona Forward; K. Larry Head Ph.D. Interim Dean from The University of Arizona College of Engineering; Yingyan Lou Ph.D. Associate Professor from The Arizona State University; Edward J. Smaglik Ph.D. Professor from Northern Arizona University; Mary Obrochta, President of the Ocotillo Glen Neighborhood Association; and Mark A. Yslas, Superintendent of Alhambra Elementary School District.

PRE-DESIGN PHASE SERVICES

The City anticipates holding public meetings to solicit community comments, input, and feedback to inform and guide the scope and design development for this project. Public meetings and outreach would be consistent with the COP Street Transportation Department's (STR) established processes and its Public Involvement Plan (July 2018). NEPA scoping letters would be distributed to applicable agencies to provide notification of the proposed project and solicit comments, input, and feedback.

Design Phase PIO activities will include:

- Attending design phase kick-off and progress meetings
- Preparing the Public Information and Outreach (PIO) Plan
- Develop Stakeholder Database
- Prepare and Initiate Electronic Public Survey
- Preparing informational materials for distribution during canvassing
- Prepare Summary Report, including participants and comments
- Communication with stakeholders, as needed

The DCR is anticipated to be completed by March 2021 with the Design Phase continuing through May 2022. Construction is anticipated to start in November 2022 and continue through 2024.

Design Concept Report (DCR)

The primary goal of this DCR is to provide is to provide the City with recommended safety improvements to address transportation challenges along the corridor to create a safe and efficient facility for all modes. The DCR will identify the preferred locations for the enhancements identified in the BUILD Grant and determine the associated impacts to utilities, right-of-way, environmental considerations, and life cycle operations and maintenance costs.

PUBLIC INFORMATION & OUTREACH OBJECTIVES

Your Project Marketing & Outreach (YPMO) was selected to provide public information and outreach services for the pre-design and design phase of this project. There are several schools in the project vicinity located on both sides of 35th Avenue. There are also a mix of residential developments and businesses located on both sides of 35th Avenue. This presents many opportunities where high volumes of pedestrian traffic crosses 35th Avenue to access schools, businesses, and residences.

During the Pre-Design Phase, PIO activities will occur over the first two weeks of January 2021 to solicit comments from the primary stakeholders in the area. The project team requested that the PIO effort provide information for:

1. Agency and Public Scoping is a section in the DCR. We would like help on the text for this portion. Typically, this is to discuss the letters that are sent out to notify the public and solicit input.

2. Public outreach strategy, both for this DCR and moving forward into Final Design and Construction. We'd like to develop a plan and schedule for the folks who will be developing the next phases of the project.

3. Coordination with City (Greta) for support on the Environmental portion of the DCR. She requested a review/comment related to PIO.

4. Stakeholders we'd like to engage at this stage include:
   i. Area Schools
   ii. Adjacent business/residents
   iii. Neighborhood groups
   iv. Violence Impact Project Coalition
   v. Arizona Forward

A public survey will be developed to communicate the planned improvements and will allow comments to be collected both electronically and via phone interviews. The survey will be reviewed and approved by the City's team prior to execution.

The survey will provide information on improvement areas in which the team needs additional information to move forward with the Design Phase planning. These areas include:

- Pedestrian Hybrid Beacon – 3 new Locations
- Street Lighting – Spaced 200-Feet apart
- Traffic Signal Improvements
- Pedestrian and Bicycle Mobility *Optional information for comment*

The survey will be designed to provide information about each type of improvement, the existing infrastructure, the planned locations for the new infrastructure, along with photos depicting the locations/infrastructure for their review and comment.

We anticipate the survey link will be provided to approximately 149 key stakeholders in early January 2021 with a deadline for review and comment by January 22. YPMO will review the submittals and make follow-up reminder calls the week of January 18.

In addition to the surveys collected electronically, YPMO will make in-person contact with properties fronting 35th Avenue* at the ***proposed locations of the new PHBs***. The survey will be printed for in-person discussions (with COVID social distancing precautions). During the canvassing, YPMO will ask for an email to send the appropriate interviewee the link to the survey.

Upon completion of the survey period, YPMO will prepare a report including information on survey respondents, frequent comments, and a list of all public comments.

*TBD – See attached Stakeholder Excel File
Project Team to Determine Public Contact Needed

PUBLIC SURVEY *[ROUGH DRAFT]* SCREEN CAPTURES

PHOENIX TRANSPORTATION 2050

Stakeholder Survey

BUILD Grant: 35th Avenue, I-10 to Camelback Road
Pre-Design Phase

Project No.: ST89340634

The City of Phoenix is requesting your participation in the survey below to help our project team develop an understanding of community known safety issues along the 35th Avenue corridor from Interstate 10 (I-10) to Camelback Road. We are requesting your participation because, as a teacher, business owner, community leader, or resident/property owner along 35th Avenue, you are an important stakeholder for the corridor improvements.

Please read and consider the project information below prior to beginning the survey.

Project Information:

The 35th Avenue, I-10 to Camelback Road, corridor has experienced a significant number of pedestrian-involved crashes resulting in some fatalities and serious injuries. These incidents occurred during day and night while pedestrians were crossing at marked and unmarked crossing locations.

As part of our commitment to improving public safety in the corridor, the City of Phoenix is preparing improvements that include three (3) Pedestrian Hybrid Beacons (PHB), median islands, street lighting (on west side), nine (9) Intersection Improvements, timing upgrades and fiber enhancement along the entire corridor. This project is expected to significantly reduce traffic accidents, property damage, and injuries.

As part of the City of Phoenix Transportation (T2050) program, this project is currently in Pre-Design Phase. We anticipate the Design Phase to begin in Spring 2021 and include virtual public meetings. Construction is anticipated to begin in Fall 2022.

Survey Instructions

You will be asked to respond to several questions regarding each planned improved and its proposed location.

☑ I have read and understand the project information.

BEGIN

PHOENIX TRANSPORTATION 2050

Stakeholder Survey

BUILD Grant: 35th Avenue, I-10 to Camelback Road
Pre-Design Phase

Project No.: ST89340634

New Pedestrian Hybrid Crossings

The City of Phoenix is planning to install Pedestrian Hybrid Beacons (PHB) with pedestrian refuge islands on 35th Avenue at Grand Canal, Elm Street, and Glenrosa Avenue. The adjacent images are examples of PHBs (figure 1) and pedestrian refuge islands (figure 2) located in Phoenix.

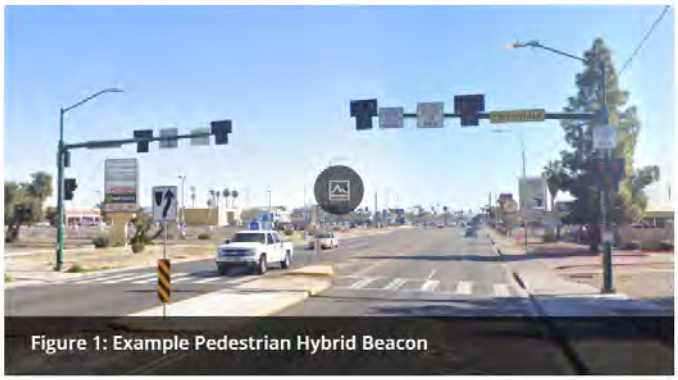


Figure 1: Example Pedestrian Hybrid Beacon

Figure 2: Example Pedestrian Refuge Island

What is a Pedestrian Hybrid Beacon (PHB)?

A pedestrian hybrid beacon (PHB) is a traffic control device used to stop road traffic and allow pedestrians to cross. These beacons remain dark when not in use and may be activated by a pedestrian to increase driver awareness of pedestrians crossing at marked crosswalk locations without traffic signals. When activated, the beacon displays a flashing then steady yellow lights, a steady red light during the pedestrian walk interval, alternating flashing red lights to during the clearing interval, before returning to a dark and inactive state.

What is a Pedestrian Refuge Island?

Pedestrian refuge islands consist of a section of raised median in the middle of a roadway that provide pedestrians a safe place to stand while crossing a wide or busy street. Pedestrian refuge islands improve safety by reducing the number of lanes that must be crossed consecutively, allowing pedestrians to cross one half of a street at a time.

On a scale of 1 -5, with one (1) being "strongly disagree" and five (5) being "strongly agree", please indicate the degree to which you agree with the following statements.

I believe the proposed pedestrian hybrid beacon will improve pedestrian safety at 35th Avenue and Grand Canal (figure 3).

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Please provide any comment you have regarding the proposed pedestrian hybrid beacon at 35th Avenue and Grand Canal (figure 3).

I believe the proposed pedestrian hybrid beacon will improve pedestrian safety at 35th Avenue and Elm Street (figure 4).

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Please provide any comment you have regarding the proposed pedestrian hybrid beacon at 35th Avenue and Elm Street (figure 4).

I believe the proposed pedestrian hybrid beacon will improve pedestrian safety at 35th Avenue and Glenrosa Avenue (figure 5).

Proposed Pedestrian Hybrid Beacon Location

Figure 3: Grand Canal Trail

Figure 4: Elm Street

Figure 5: Glenrosa Avenue

I believe the proposed pedestrian hybrid beacon will improve pedestrian safety at 35th Avenue and Glenrosa Avenue (figure 5).

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Please provide any comment you have regarding the proposed pedestrian hybrid beacon at 35th Avenue and Glenrosa Avenue (figure 5).

NEXT STEP

PHOENIX TRANSPORTATION 2050

Stakeholder Survey

BUILD Grant: 35th Avenue, I-10 to Camelback Road
Pre-Design Phase

Project No.: ST89340634

New Street Lights

The City of Phoenix is proposing installing new streetlights and upgrading existing streetlights with light-emitting diode (LED) luminaries on the west side of 35th Avenue at the locations in the adjacent image (figure 6). These new lights are expected to improve safety for pedestrians traveling on 35th Avenue.

On a scale of 1 -5, with one (1) being "strongly disagree" and five (5) being "strongly agree", please indicate the degree to which you agree with the following statements.

I believe the additional lighting is needed on the west side of 35th Avenue, between I-10 and Camelback Road.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Please provide any comment you have regarding the proposed locations for new and upgraded street lights (figure 6).

NEXT STEP

Figure 6: Corridor Lighting

PHOENIX TRANSPORTATION 2050

Stakeholder Survey

BUILD Grant: 35th Avenue, I-10 to Camelback Road
Pre-Design Phase

Project No.: ST89340634

Traffic Signal Rebuilds

Existing traffic signals along the 35th Avenue corridor will be rebuilt to increase mobility, meet applicable compliance standards, and modernize intersection control.

Applicable traffic signal and mobility standards include

- Pole and mast arm equipment that complies with the latest American Association of State Highway Transportation Officials (AASHTO) Load and Resistance Factor Design (LRFD) Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, and latest revisions.
- Pedestrian push button (PPB) equipment, PPB location, and ramp modifications that complies with Americans with Disabilities Act (ADA) requirements.
- Yellow clearance, all red clearance and pedestrian walk/don't walk timing that meets the latest Institute of Transportation Engineers (ITE) recommended practices.

Potential modernizations include:

- New control equipment that will enable modern and future Intelligent Transportation Systems (ITS) applications.

Figure 7: McDowell Road

Figure 8: Encanto Boulevard

Figure 9: Virginia Avenue

Figure 10: Thomas Road

Figure 11: Earll Drive

Figure 12: Osborn Road

Traffic signals that will be rebuilt include:

1. 35th Avenue/McDowell Road (figure 7)
2. 35th Avenue/Encanto Boulevard (figure 8)
3. 35th Avenue/Virginia Avenue (figure 9)
4. 35th Avenue/Thomas Road (figure 10)
5. 35th Avenue/Earll Drive (figure 11)
6. 35th Avenue/Osborn Road (figure 12)
7. 35th Avenue/Clarendon Avenue (figure 13)
8. 35th Avenue/Campbell Avenue (figure 14)
9. 35th Avenue/Camelback Road (figure 15)

Please provide any comment you have regarding the proposed locations rebuilding traffic signals (figure 6).

NEXT STEP

Figure 13: Clarendon Ave

Figure 14: Campbell Avenue

Figure 15: Camelback Road

PHOENIX TRANSPORTATION 2050

Stakeholder Survey

BUILD Grant: 35th Avenue, I-10 to Camelback Road
Pre-Design Phase

Project No.: ST89340634

Thank you!

Thank you for taking the time to participate in this very important project. The pre-design team is looking forward to reviewing your comments.

First Name _____ Last Name _____

Phone Number _____ Email Address _____

May we contact you if we have questions about your comments? ◉ Yes ○ No

Would you like to subscribe to email updates on this project? ◉ Yes ○ No

What best describes you? (Check all that apply)

☐ K-12 Faculty ☐ K-12 School Administrator ☐ College/University Faculty ☐ College/University Administrator ☐ Business Owner
☐ Area Resident ☐ Community Organizer ☐ Community Leader ☐ Neighborhood Organization Member
☐ Owner of 35th Ave Property ☐ Other (please describe) _____

Please provide any additional comments you would like the pre-design team to consider prior to the Design Phase.

FINISH

DESIGN PHASE SERVICES

Design Phase PIO activities will include:

- Attending design phase kick-off and progress meetings
- Preparing the Public Information and Outreach (PIO) Plan – Design Phase
- TBD - Planning and facilitating a virtual public meeting
- Preparing and mailing an invitation to a virtual public meeting
- Preparing informational materials for distribution during a virtual public meeting
- Communication with the public, as needed

TO BE DEVELOPED DURING PRE-DESIGN PHASE

Streets PHX
STREET TRANSPORTATION DEPARTMENT

35th Avenue BUILD Grant Project Improvements from I-10 to Camelback Road

PROJECT NOTIFICATION

The City of Phoenix received a federal grant to make a comprehensive array of safety improvements along 35th Avenue between I-10 and Camelback Road. This part of 35th Avenue has experienced a significant number of pedestrian-involved collisions resulting in fatalities and serious injuries. These incidents occurred during day and night, while pedestrians were crossing at marked and unmarked crossings.

Safety improvements funded by the grant include installation of: three (3) pedestrian-activated crossing signals known as pedestrian hybrid beacons (PHB), median islands, street lighting, nine (9) intersection improvements, timing upgrades and new fiber optic cable along the entire corridor. The fiber optic cable will improve capacity for data sharing and enhance economic opportunity in the project area.

This project is expected to significantly reduce traffic collisions, property damage, and injuries. As part of the City of Phoenix Transportation (T2050) program, this project is currently in the Pre-Design Phase. We anticipate the Design Phase to begin in Spring 2021 and include virtual public meetings. Construction is anticipated to begin in Fall 2022.

ANTICIPATED PROJECT SCHEDULE

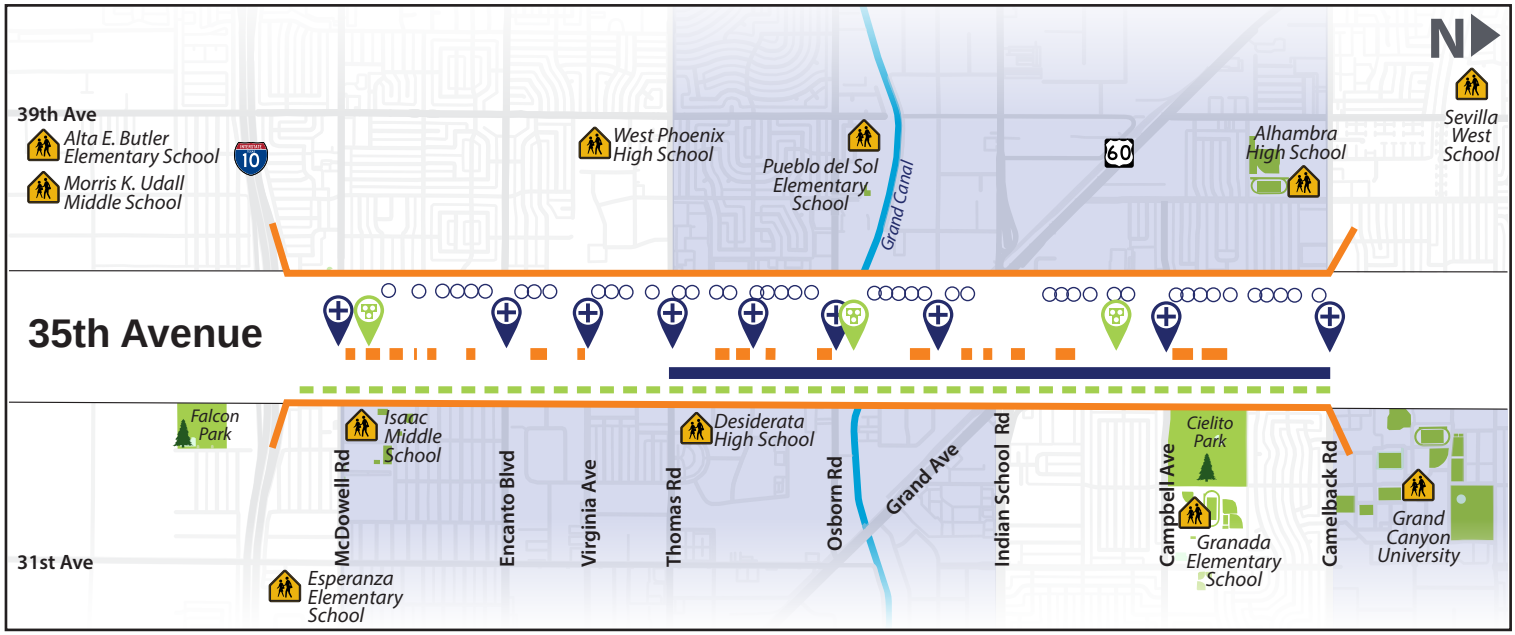
DESIGN PHASE
March 2021 - September 2022

CONSTRUCTION PHASE
October 2022 - July 2023

Project Highlights:

- New pedestrian hybrid crossings
- Raised medians
- New LED street lighting along the west side of 35th Avenue
- Traffic signal rebuilds
- Broadband fiber optic cable
- Mill and overlay street resurfacing

PROJECT ELEMENTS AND GOALS



Project Goals	Proposed PHB Location	Raised Center Median	Intersection Rebuild	Street Lighting	Pavement Mill & Overlay	Install Fiber Optic Cable
Safety Improvement	✓	✓	✓	✓		
Smart Investment	✓		✓		✓	✓
Preparation for the Future			✓			✓

Legend

- Project Length
- School
- Opportunity Zones

Contact Us With Any Questions

Project Information Line: (602) 235-2300
Email: Anne@YourProjectMO.com

SCAN HERE

Watch for additional notifications about the upcoming Design-Phase Virtual Public Meeting and future construction activities.

Visit the City's website to learn more about the improvements and let us know if you have any questions.

phoenix.gov/streets/35thavesafety

Streets PHX
DEPARTAMENTO DE TRANSPORTE

Proyecto de Subvención BUILD en Avenida 35
Mejoras de la I-10 a Camelback Road

NOTIFICACIÓN DEL PROYECTO

La ciudad de Phoenix recibió una subvención federal para hacer una amplia gama de mejoras de seguridad a lo largo de 35th Avenue entre la I-10 y Camelback Road. Esta parte de la 35th Avenue ha experimentado un número significativo de colisiones relacionados con peatones que resultaron en muertes y lesiones graves. Estos incidentes ocurrieron durante el día y la noche, mientras que los peatones cruzaban en sendas peatonales designadas y en cruces sin marcar.

Las mejoras de seguridad financiadas por la subvención incluyen la instalación de: Tres (3) señales de cruce activadas por peatones conocidas como avisadores luminosos híbridos peatonales (PHB), Islas separando los carriles opuestos, iluminación de calles, nueve (9) mejoras de intersección, mejoras de sincronización de semáforos y nuevo cable de fibra óptica a lo largo de todo el corredor. El cable de fibra óptica mejorará la capacidad para compartir datos y mejorará las oportunidades económicas en el área del proyecto.

Se espera que este proyecto reduzca significativamente los colisiones de tráfico, los daños a la propiedad y las lesiones. Como parte del programa de Transporte de la Ciudad de Phoenix (T2050), este proyecto se encuentra actualmente en la fase de Pre-Diseño. Esperamos que la fase de diseño comience en la primavera de 2021 e incluya reuniones públicas virtuales. Se prevé que la construcción comenzará en otoño de 2022.

PROGRAMACIÓN ANTICIPADA DEL PROYECTO

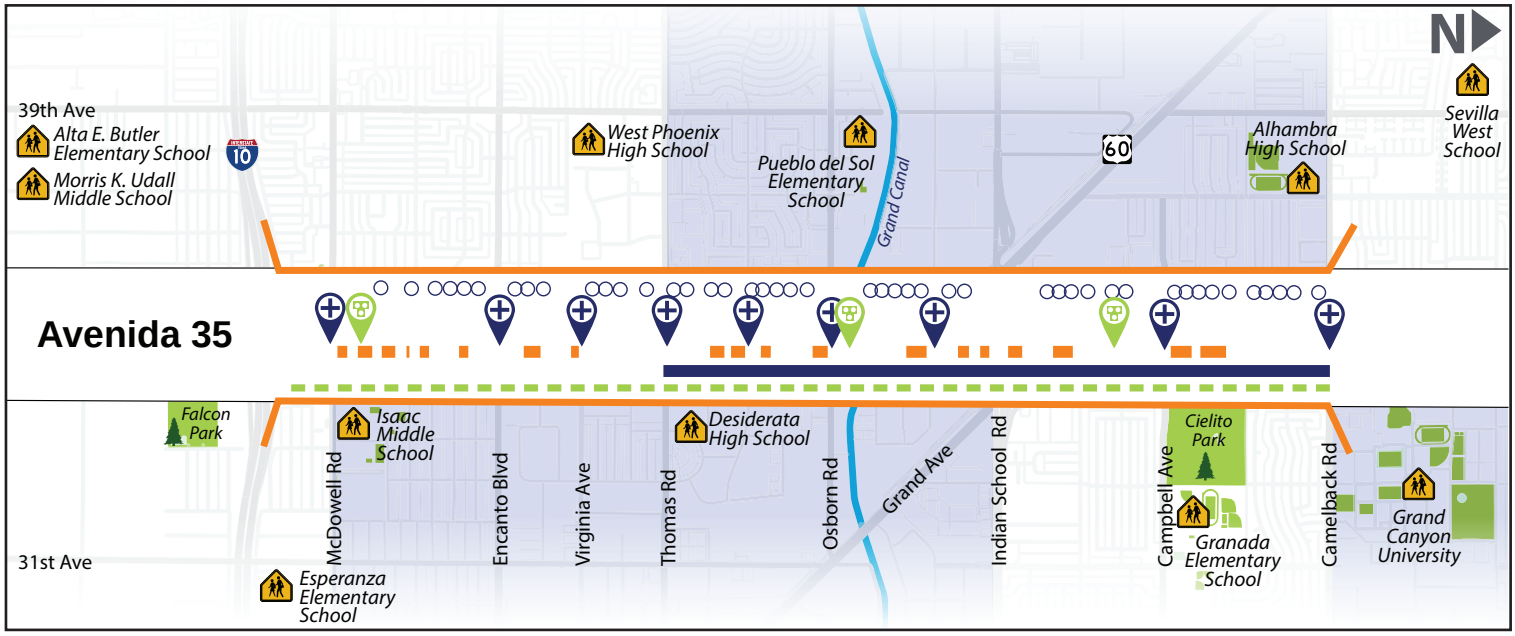
FASE DE DISEÑO
marzo 2021 - septiembre 2022

FASE DE CONSTRUCCIÓN
octubre 2022 - julio 2023

Aspectos destacados del proyecto:

- Nuevos cruces híbridos peatonales
- Separaciones de carriles opuestos
- Nueva iluminación de LED a lo largo del lado oeste de la avenida 35
- Reconstrucciones de señales de tráfico
- Cable de fibra óptica de alta velocidad
- Molido y superposición del asfalto de la calle

ELEMENTOS Y OBJETIVOS DEL PROYECTO



Objetivos del Proyecto	Ubicación Propuesta de PBH	Mediana del Centro Elevado	Reconstrucción de Intersección	Iluminación de Calles	Molido y Superposición del Asfalto	Instalar Cable de Fibra Óptica
Mejora de Seguridad	✓	✓	✓	✓		
Inversión Inteligente	✓		✓		✓	✓
Preparación para el Futuro			✓			✓

Legend

- Longitud del Proyecto
- Escuela
- Zonas de Oportunidad

Contáctenos con Cualquier Pregunta

Línea De Información Del Proyecto: (602)235-2300
Email: Anne@YourProjectMO.com

ESCANEE

Esté atento a las notificaciones adicionales sobre la próxima reunión pública virtual de la fase de Diseño y las futuras actividades de construcción.

Visite el sitio web de la ciudad para obtener más información sobre las mejoras y háganos saber si tiene alguna pregunta.

phoenix.gov/streets/35thavesafety

Appendix J – City of Phoenix Additional Comments

City of Phoenix Additional Comments to be discussed with final design team

City PM will forward the final DCR to Public Works for their review regarding the medians close to alley entrances

City PM and final design team will continue to evaluate of left turn collision patterns and movements, also, to consider the determination of medians and if additional raised medians at the entrance such as "pork chop" islands are needed

The fiber design may consider using the Indian School conduit layout to avoid crossing the railroad and Grand Avenue

Note any other projects that is this scope will connect, such as ADOT's project and Camelback Rd project.

Glenrosa to Monte Rosa, may add screen wall or other type of barrier in the median

Add scope for fiber to the parks and schools

Section 4.7 – Why 6 signs? How was that number determined?

1 northbound and 1 southbound sign were assumed for installation every mile for the limits of the 35th Avenue corridor.

Section 7. 0 – State the latest advances in traffic signal technologies that the consultant recommends for the City.

This item was specially discussed with the City. Per Bruce Littleton, the City would like to use the current standard equipment being installed at traffic signal rebuilds.

Section 7.1.2 – State specifically how the recommended automated traffic signal performance measures (ATSPM) will revolutionize the management of traffic signals by providing the high-resolution data needed to actively manage performance.

In addition to providing high-resolution data, ATSPMs are maturing with features that can be set to trigger alerts to notify when an intersection or corridor is degrading beyond a certain threshold. Various ATSPM vendors are also developing software that is able to aggregate data from other devices owned by an agency to create a more robust way for agencies to explore data for insights, or utilize machine learning to identify potential insights.

Section 7.1.3 – Note who will be evaluating the necessary use of any TRPS.

The DCR recommended evaluation following project construction. This was recommended primarily due to the City already having a predetermined set of technology that they would like to implement

with the 35th Avenue final design. There would be no issue If the City would like to evaluate more advanced traffic signal technology options prior to project construction. If this is the case, it is recommended that a study task be included as part of the final design to evaluate and recommend any non-typical signal technology. These recommendations would ideally be based on prevailing vehicular, bicycle, and pedestrian traffic patterns, as well as the latest plans for transit and multimodal future infrastructure plans.

Section 7.1.2 - can you address what steps will be made to ensure there are frequent pedestrian crossing opportunities even during rush hour? This type of optimization often uses long signal phases to move cars efficiently. However, those long phases can result in pedestrians waiting for several minutes to cross a street.

1 existing and 3 new midblock pedestrian hybrid beacons (PHB), also known as HAWKs, will exist along the 35th Avenue corridor when project is fully constructed. Many agencies do not coordinate PHBs with the adjacent traffic signals, as pedestrian compliance tends to drop when the PHB is not activated shortly after a pedestrian presses the push button. These PHBs will improve opportunities for pedestrians to cross midblock. In terms of the ability for pedestrians to cross at major signalized intersections, shorter cycle lengths will provide pedestrians with more frequent opportunities to cross 35th Avenue; however, the tradeoff is that this will reduce the green band for the corridor. Analysis can be performed to help make informed decisions on how to balance safety and capacity; however, final direction typically comes down to a values decision by management and elected officials. To help minimize traffic signal cycle length, it is recommended that the City consider analyzing progression using lead/lag left-turn phasing to help improve bi-directional coordination. In addition, shorter cycle lengths can be used for progression, but any pedestrian actuations may force the system out of coordination for a significant number of cycles.