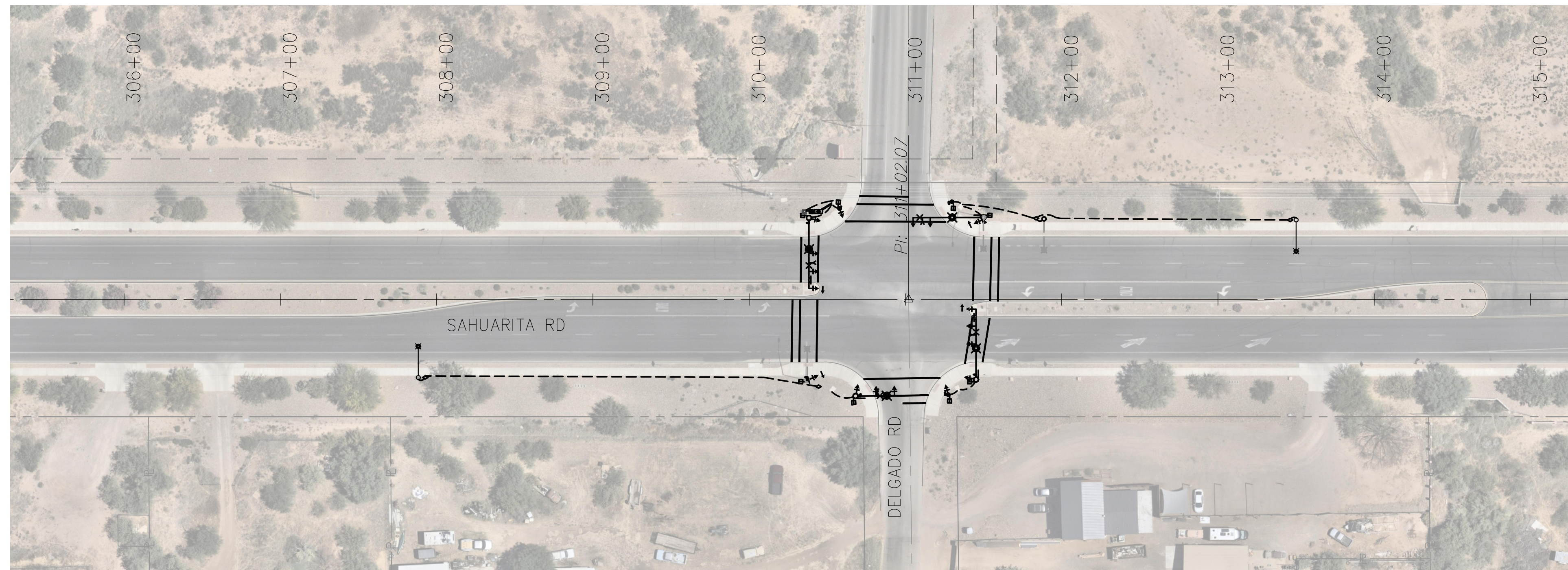


TRAFFIC SIGNAL IMPROVEMENTS

Intersection improvements at E Sahuarita Rd and S Delgado Rd. Improvements include new pavement markings for pedestrian crosswalks, new signage and pavement markings to support new traffic signal, roadway lighting, new signal poles, and a new signal controller and cabinet.


INDEX OF SHEETS

<u>Page No.</u>	<u>Sheet No.</u>	<u>Sheet Description</u>
1	CV 01	Cover
2	NT 01	General Notes
3	DT 01	Design Details
4	HZ 01	Horizontal Control
5-7	MS 01-03	Marking and Signing Plan
8-11	TS 01-04	Traffic Signal Notes, Plan, Pole & Conductor Schedules



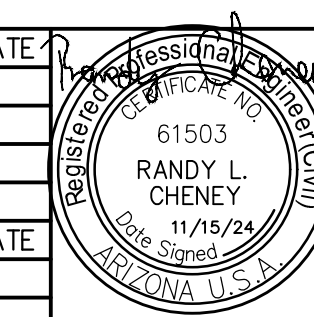
TOWN COUNCIL MEMBERS: BILL BRACCO
KARA EGBERT (VICE MAYOR)
DEBORAH MORALES
STEVEN GILLESPIE
DIANE PRIOLO
SIMON DAVIS

TOWN OF SAHUARITA
DEPARTMENT OF PUBLIC WORKS
375 W. SAHUARITA CENTER WAY SAHUARITA, ARIZONA 85629
GALOVALE GALOVALE, P.E. PUBLIC WORKS DIRECTOR/TOWN ENGINEER

	REVIEWED BY		ENGINEER	DATE
	MGR. DESIGN ENGR.			
	MGR. TRAFFIC ENGR.			
	MGR. FIELD ENGR.			
SCALES:		HORIZ. N/A VERT. N/A	SHEET CV1 OF CV1	PAGE 1 OF 11

P S O M A S

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Tucson, AZ 85705
(520) 292-2300 (520) 292-1290 fax
www.psomas.com



NO.	REVIEWED BY	ENGINEER	DATE
NO.	AS BUILT	ENGINEER	DATE

TOWN OF SAHUARITA PROJECT NO. 23S03

I:\754\14240202\TRANSP\SHEETS\G-SD_NT.dwg NT01 Randy Cheney Thu, 14 Nov 2024, 6:00pm Lst. Saved By: RandyCheney

GENERAL NOTES

1. Construction shall be in conformance with the Pima Association of Governments (PAG) Specifications and Details, 2015 Edition, except as modified by these Plans and Special Provisions. In addition, the construction shall be in conformance to all other specifications and details listed in the Special Provisions.
2. Utility locations shown on the plans were compiled based on the best information available to the Department. Utility locations are not intended to be exact or complete. Prior to commencing construction, the contractor shall verify the location of all utilities with the appropriate organizations. Contact Arizona 811 at 1-800-782-5348 two full working days prior to beginning construction (Saturdays and Sundays are not considered working days).
3. Right-of-way encroachments shall be removed only by order of the Town of Sahuarita, unless otherwise noted.
4. Removal of all cacti and native plants shall be in accordance with the provisions of the "Arizona Native Plant Law" A.R.S., Chapter 7.
5. The contractor shall adjust all water meters, valve boxes, storm drain manholes, and sewer manholes and cleanouts to finish grade. This work shall be considered incidental to the other items of work, except when the bidding schedule contains specific items on a unit basis
6. Horizontal Control: This project is based upon the Arizona coordinate system, 1983 (ACS 83), NAD83 reference frame, uses international feet, and is located in the central zone of said coordinate system.
7. The contractor shall maintain access to all driveways, alleys, and mailboxes during construction. The contractor will not restrict emergency vehicles, U.S. Postal delivery, solid waste collections, and/or access to the adjacent properties, except as approved by the Engineer.
8. Omissions or conflicts between the various elements of the drawings, notes, or details shall be brought to the attention of the Engineer and resolved before proceeding with the work.
9. All stationing shown on the plans and profiles is along the construction centerline unless otherwise noted.
10. Existing utilities include, but may not be limited to, overhead and underground electric, telephone, television, sewer, gas, and water, and shall be moved by others unless otherwise noted and shown in these plans.
11. Existing topographic conditions shown on plan sheets reflect conditions as of May 2024.
12. The contractor shall be responsible for contacting all facility owners to verify and protect all existing public and private facilities in place, unless otherwise noted in these plans or specified in the special provisions. Damage to existing facilities during construction shall be repaired or replaced by the contractor.
13. The contractor shall comply with all applicable Occupational Safety and Health Administration Regulations.
14. Prior to commencement of work, contractor shall acquire and maintain all of the required permits from the appropriate governmental agencies. Required permits may include, but are not limited to, right-of-way use permit, Type II grading permit, Form A, and Form B, Concrete & Drainage, ADEQ NOI, PDEQ Air Quality Activity Form, etc.
15. The contractor, before undertaking any grading or construction work within the public right-of-way, shall obtain a right-of-way permit from the Town of Sahuarita. The contractor shall contact the Town of Sahuarita Public Works Department for permit information and to schedule a pre-construction meeting.
16. The contractor shall provide traffic control in accordance with the Federal Highway Administration's "Manual on Uniform Traffic Control Devices for Streets and Highways". Traffic control devices shall be posted and maintained by the contractor in accordance with the MUTCD.
17. Conflicting structures and obstructions shall be removed by the contractor, as noted on the plans.
18. The contractor is responsible for all aspects of pavement marking and signing, including obliteration of existing markings where necessary, layout and application of new markings, and installation of raised pavement markers.
19. At the direction of the Town of Sahuarita, the contractor shall remove and relocate all miscellaneous signs, posts, pipe, etc., within the right-of-way and construction easement areas. Removal and relocation of these items shall be considered incidental to related items of work. No separate payment shall be made, unless the bidding schedule contains specific items for removal and relocation.

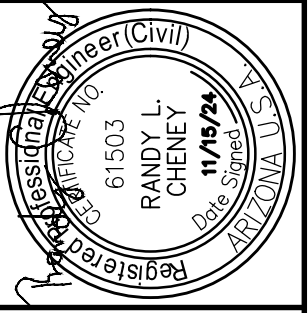
GENERAL NOTES (Cont)

20. All construction test methods shall be in conformance with the PAG Standard Specifications for Public Improvements. Asphalt shall conform to PAG SSPI Section 406. Concrete shall comply with PAG SSPI Section 1006, Class "B", Compressive Strength at 28 days, unless otherwise specified.
21. An accepted copy of this plan shall be kept in an easily accessible location on the site at all times during construction.
22. The contractor shall be responsible for submitting a proposed sequence of operations and a compatible method of maintaining traffic. Construction zone traffic control shall conform to the requirements of the Manual on Uniform Traffic Control Devices (MUTCD) 2009 edition and amendments. Upon commencement of work, traffic control devices shall be posted and maintained by the contractor until such a time as the work is complete.
23. The contractor shall develop, submit, and obtain approval of a traffic control plan that maintains access during all construction phases. Pedestrian access shall be maintained throughout all phases of construction and temporary signing shall be erected to redirect pedestrians away from the construction zone. Note that payment for maintenance and protection of traffic shall be included under 7010001 – Maintenance and Protection of Traffic.
24. The design speed is 50 mph and the posted speed is 45 mph for Sahuarita Rd.
25. The contractor shall obtain all applicable permits, locate all utilities, and verify survey control. The contractor shall coordinate with the Town of Sahuarita regarding utilities.
26. The contractor shall prepare and submit contract material list(s), associated shop drawings, and specifications to the Town of Sahuarita, and shall obtain approval prior to placing any material orders. The contractor shall submit any value engineering measures that may reduce schedule prior to start of construction.



GENERAL NOTES
FOR
SAHUARITA RD/SAHUARITA PARK
RD/DELGADO RD
INTERSECTION IMPROVEMENTS

PSOMAS
333 E. Wetmore Road, Suite 450
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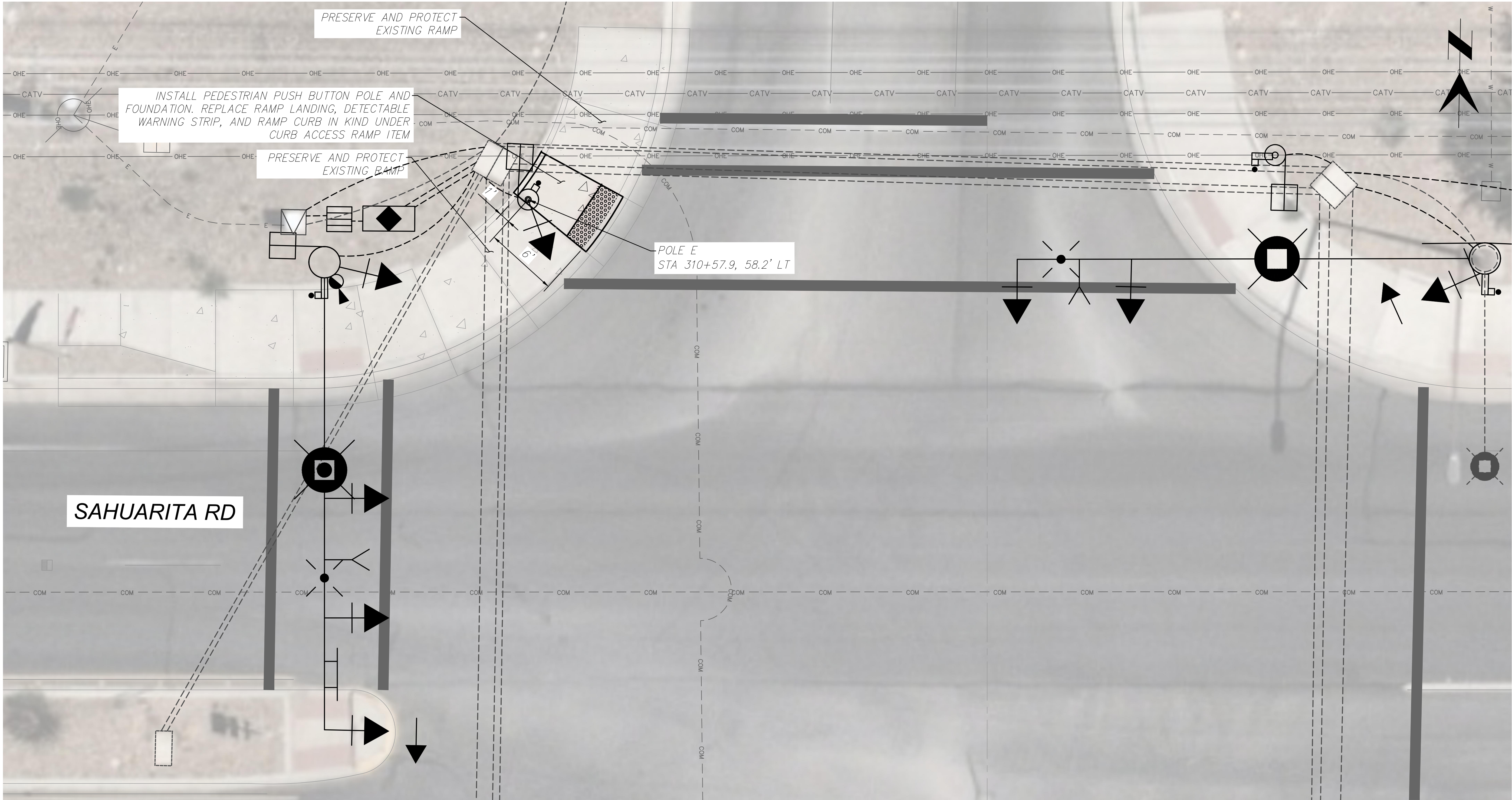


NO.	REVISION	DESCRIPTION	DIV.	ENGINEER	DATE

DESIGNED:	DATE
DRAWN:	DATE
AEH	11/24
CHECKED:	DATE
JAV	11/24
PROJ. ENG.:	DATE
RC	11/24

GALOVALE GALOVALE, P.E., PUBLIC WORKS DIRECTOR/TOWN ENGINEER

I:\75414240202\TRANSP\SHEETS\C-S0_DT1.dwg DT01 Randy Cheney Thu, 14 Nov 2024, 6:01pm Last Saved By: Randy Cheney



DETAIL A1

CURB ACCESS RAMP
PER MODIFICATION

1"=5'



TOWN OF SAHUARITA, PUBLIC WORKS

DESIGN DETAILS FOR

SAHUARITA RD/SAHUARITA PARK RD/DELGADO RD INTERSECTION IMPROVEMENTS

GALOVALE GALOVALE, P.E., PUBLIC WORKS DIRECTOR/TOWN ENGINEER

NO.

REVISION DESCRIPTION

DIV. ENGINEER

DATE

DESIGNED:

DRAWN:

CHECKED:

PROJ. ENG.:

DATE

AEH

JAV

RC

61503

RANDY L. CHENEY

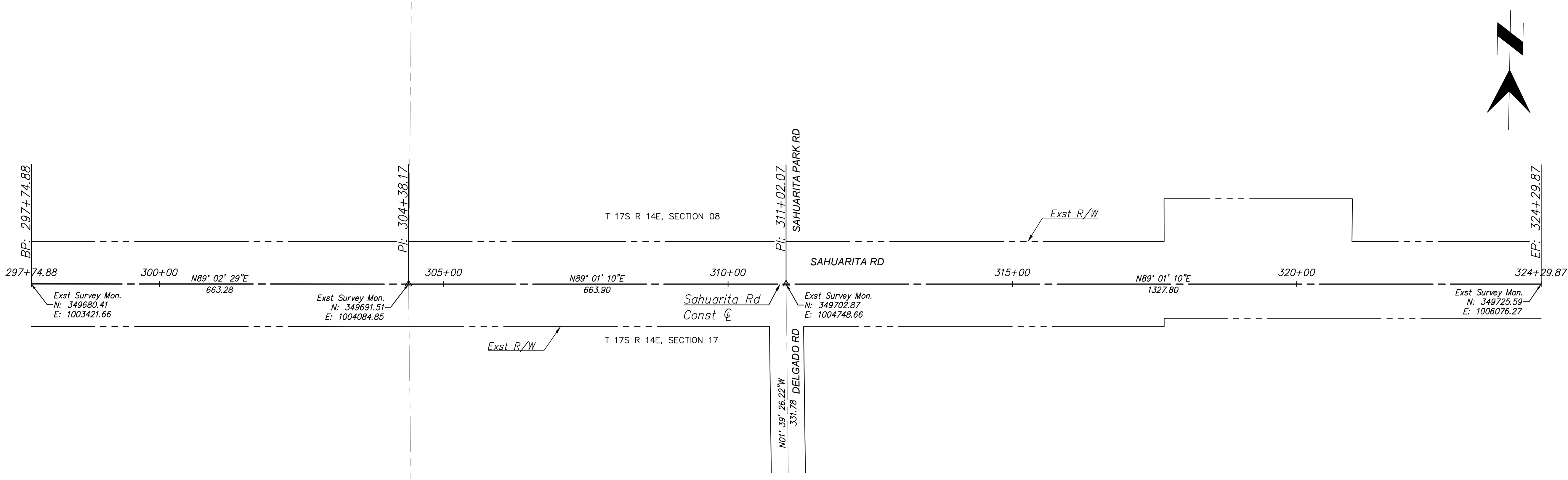
11/19/24

REGISTERED PROFESSIONAL ENGINEER (CIVIL)

PSOMAS

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I:\754\H240202\TRANSP\SHETS\C-SD-HZ.dwg HZ01 Randy Cheney Thu, 14 Nov 2024, 6:01pm Lst: Saved By: RandyCheney



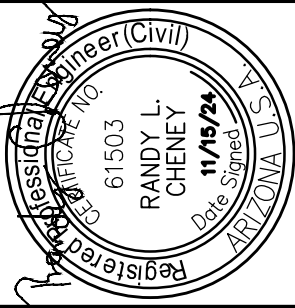
SCALES:	HORIZ.	N/A
	VERT.	N/A

SHEET HZ01 OF HZ01

TOWN OF SAHUARITA, PUBLIC WORKS
HORIZONTAL CONTROL
FOR
SAHUARITA RD/SAHUARITA PARK
RD/DELGADO RD
INTERSECTION IMPROVEMENTS

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NO.	REVISION DESCRIPTION	DIV. ENGINEER	DATE

DESIGNED:		DATE	
DRAWN:	AEH		11/24
CHECKED:	JAV		11/24
PROJ. ENG:	RC		11/24

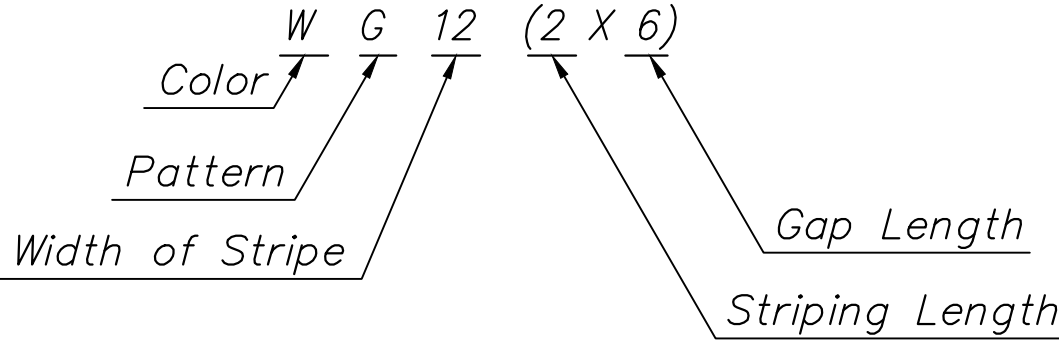
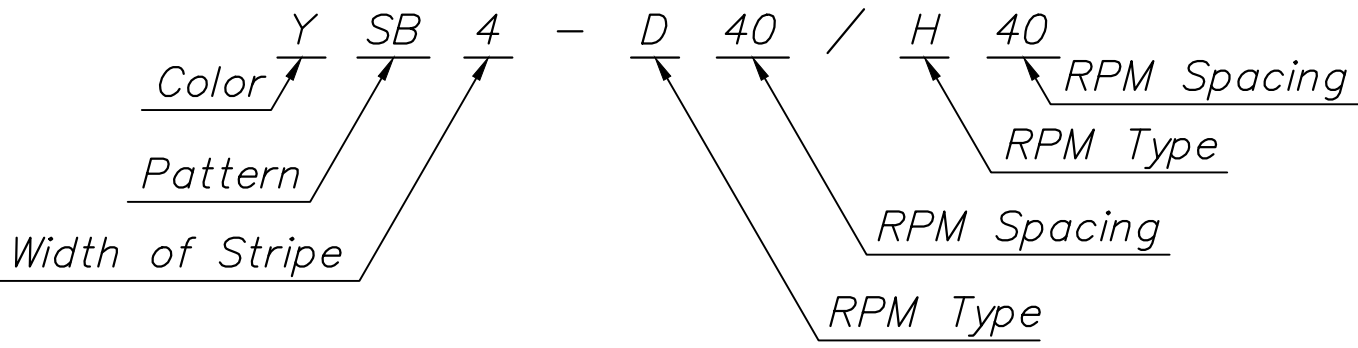
GALOVALE GALOVALE, P.E., PUBLIC WORKS DIRECTOR/TOWN ENGINEER

PAGE 4 OF 11

I:\754\4240202\TRANSP\SHEETS\G-S01-MS.dwg MS01 Randy Cheney Thu, 14 Nov 2024, 6:01pm Last Saved By: RandyCheney

PAVEMENT MARKING GENERAL NOTES

1. All pavement markings shall conform to PAG Standard Specifications for Public Improvements, 2015 Edition.
2. The striping contractor shall contact the Town of Sahuarita Operation Division Manager Paul Burton, (520-344-7114) at least 3 working days in advance of any pavement marking layout being installed to schedule inspection and approval of pavement marking.
3. Upon approval of the pavement marking layout, the Town of Sahuarita Operation Division Manager will issue written authorization to the contractor to proceed with installing all pavement markings and associated reflective raised pavement markings.
4. The permanent pavement markings may be modified as directed by the Traffic Engineer or Designee.
5. The design speed for Sahuarita Road is 50 MPH. The posted speed limit is 45 MPH.
6. All lane and crosswalk dimensions are from center of lane line, center of double lane line, center of stripe, face of curb, or edge of pavement unless otherwise noted.
7. The pavement marking drawings are schematic only. The contractor shall follow all dimensions, details, and standards when installing pavement striping, markings, and markers.
8. The final longitudinal striping shall be 90 mil (0.090”) thick hot-sprayed thermoplastic reflectorized striping placed over the temporary striping within 14 to 30 calendar days after completion of the final pavement surface, or as directed by the Traffic Engineer. All other markings shall be applied at the same time. Temporary striping shall be paint.
9. All final transverse markings (except crosswalks) shall be hot-sprayed 90 mil thermoplastic striping (0.090”). All pavement arrows and legends shall be hot-sprayed 90 mil thermoplastic pavement marking (0.090”). Extruded thermoplastic or preformed applications may be used if approved by the Traffic Engineer.
10. Pavement marking symbols (turn arrows and ONLY) and crosswalks shall be PreMark pavement symbols from Ennis-Flint or equivalent. Crosswalks shall include ViziGrip feature.
11. The Contractor shall be responsible for the layout and installation of pavement markings on final surface course following control points that have been set no more than 50 feet apart along the lines to be striped. In tangent sections of a road where the pavement marking pattern does not change, control points can be set at 200 ft apart. The layout and inspection of all pavement markings shall be approved by the Traffic Engineer prior to the application of materials.
12. It is the contractor’s responsibility to ensure that the final surface course is placed so that the striping is offset more than one foot clear of the construction joint, unless otherwise directed by the Traffic Engineer.
13. The contractor shall clean the roadway surface to the satisfaction of the Traffic Engineer by sweeping and air-jet blowing immediately prior to the placement of all pavement markings. The temperature shall not be less than 50 degrees F. for the placement of hot spray thermoplastic striping, and 40 degrees F. for the placement of RPMs.
14. All existing striping is to remain unless it is conflicting with the proposed striping.
15. All removal of existing pavement markings shall be accomplished in accordance with Section 701 of the PAG Standard Specifications. Painting over existing striping does not constitute approved striping obliteration.
16. Unless otherwise noted, all pavement markings shall be installed by the contractor.
17. The contractor shall be responsible for maintaining all striping until project is approved for "construction acceptance" by Town of Sahuarita (fully open to traffic, all punchlist items are completed, and one year warranties begin).
18. Final inspection/acceptance of Pavement Markings shall be performed by the Traffic Engineer.
19. Upon final inspection, a written acceptance or itemized punchlist of missing or unacceptable pavement markings shall be submitted to the contractor and Town of Sahuarita by the Traffic Signal Operations Manager or designated representative.
20. The Engineer of Record shall be required to produce as-built striping plans within 90 days of striping completion.
21. The PC/COT Signing & Pavement Marking Manual is available online at <https://www.pima.gov/969/Design>



LINE STYLE DESIGNATION

See PC/COT Signing & Pavement Marking Manual for Further Descriptions.
NTS

PAVEMENT MARKING QUANTITIES				
ITEM		UNIT	QUANT	ITEM NO.
PERMANENT THERMOPLASTIC PAVEMENT MARKINGS	4" WHITE (0.090")	LIN FT	0	7040005
	4" YELLOW (0.090")	LIN FT	0	7040006
	4" WHITE TRANSVERSE (0.090")	LIN FT	1821	7040130
TEMPORARY TRAFFIC PAINT	PAINTED PAVEMENT MARKING	LIN FT	0	7080001
	PAINTED PAVEMENT SYMBOL/LEGEND	EACH	0	7080010
OBLITERATE PAVEMENT MARKING		LIN FT	87	7010260
OBLITERATE PAVEMENT SYMBOLS		EACH	0	7010262



TOWN OF SAHUARITA, PUBLIC WORKS

MARKING AND SIGNING PLAN

FOR

SAHUARITA RD/SAHUARITA PARK RD/DELGADO RD

INTERSECTION IMPROVEMENTS

DESIGNED: AEH

DRAWN: JAV

PROJ. ENG.: RC

DATE: 11/24

DATE: 11/24

DATE: 11/24

NO.

REVISION DESCRIPTION

DATE

DIV. ENGINEER

DATE

REGISTERED PROFESSIONAL ENGINEER (CIVIL)

61503

RANDY L. CHENEY

11/16/2019

PSOMAS

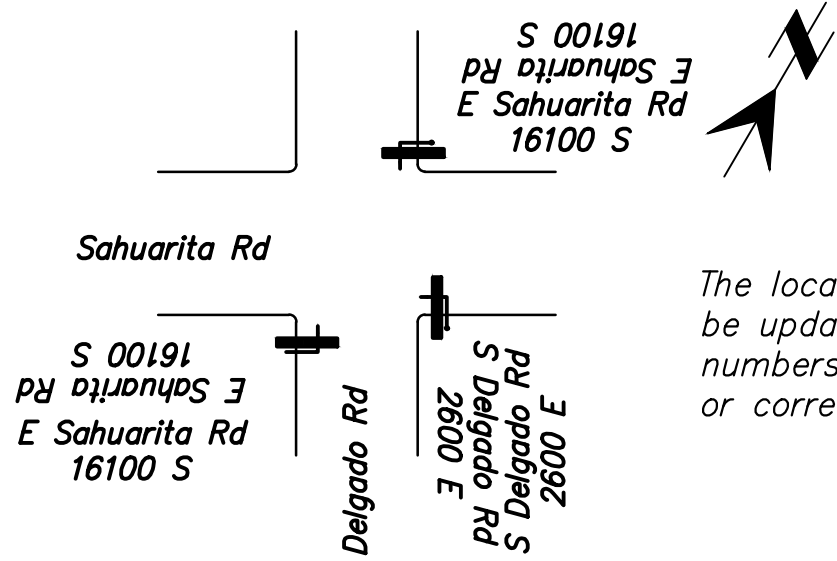
333 E. Wetmore Road, Suite 450
Tucson, AZ 85705
(520) 292-2300 (520) 292-1290 fax
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I:\7544240202\TRANSP\SHETS\C-SD_MS.dwg MS02 Randy Cheney Thu, 14 Nov 2024, 6:07pm Last Saved By: Randy Cheney

METRO STREET NAME SIGNS

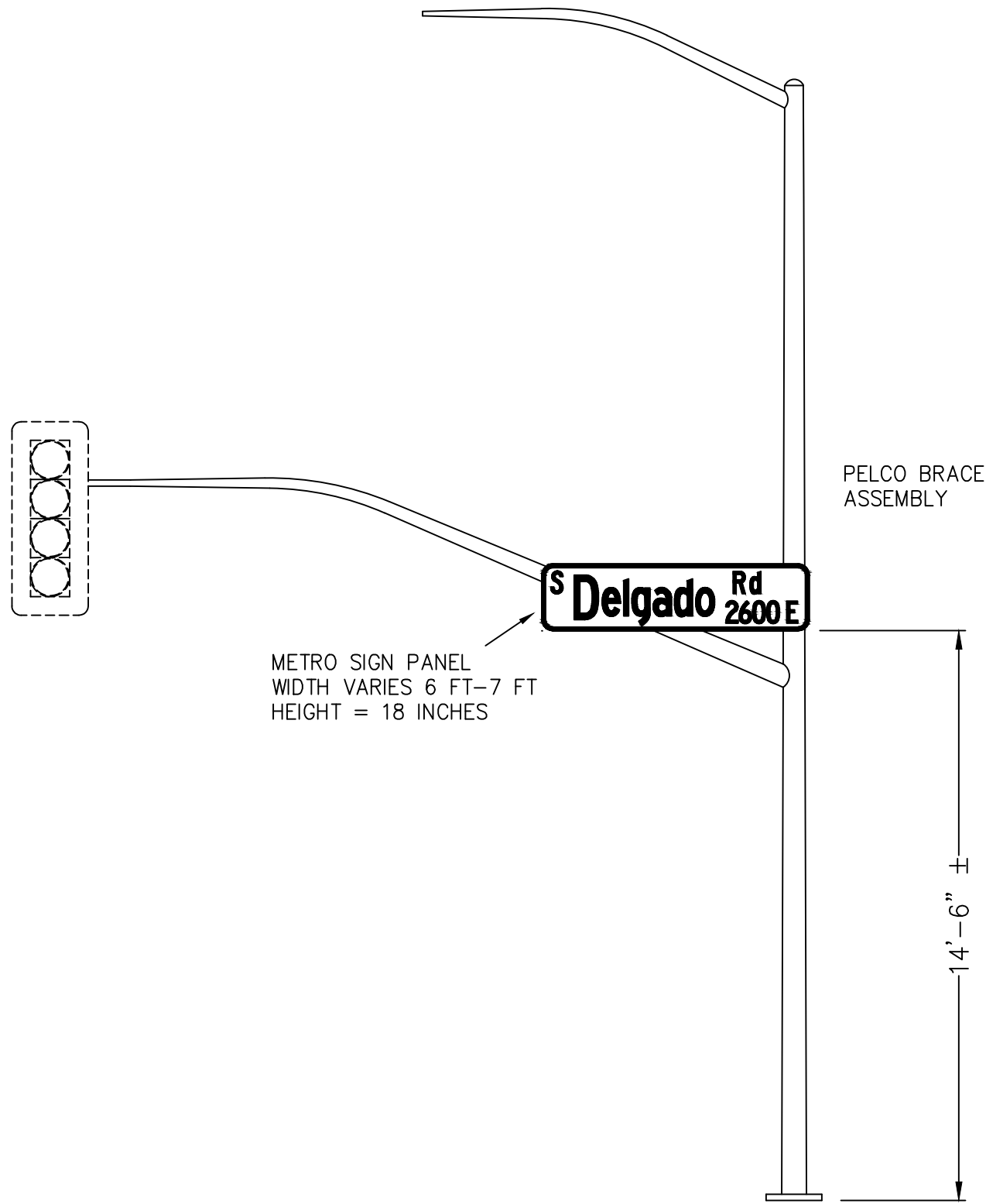
The street name sign panels shall be straight and true with no bowing prior to and after applying the sheeting material.

Metro street name signs shall be mounted to the traffic signal pole and mast arm with Pelco brace assembly. Minimum mounting height shall be 15 ft from roadway surface to the horizontal sign support. See mounting detail.



The location diagram will be updated after street numbers are confirmed or corrected.

METRO SIGN LOCATIONS



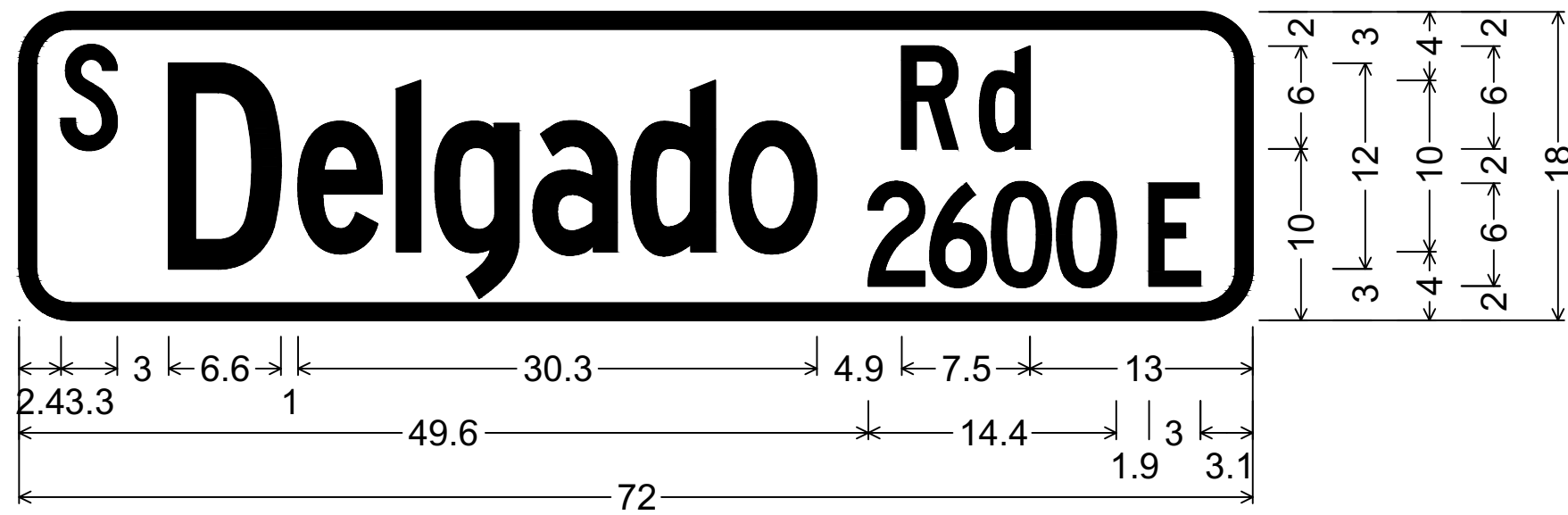
METRO SIGN MOUNTING DETAIL

SIGN QUANTITIES

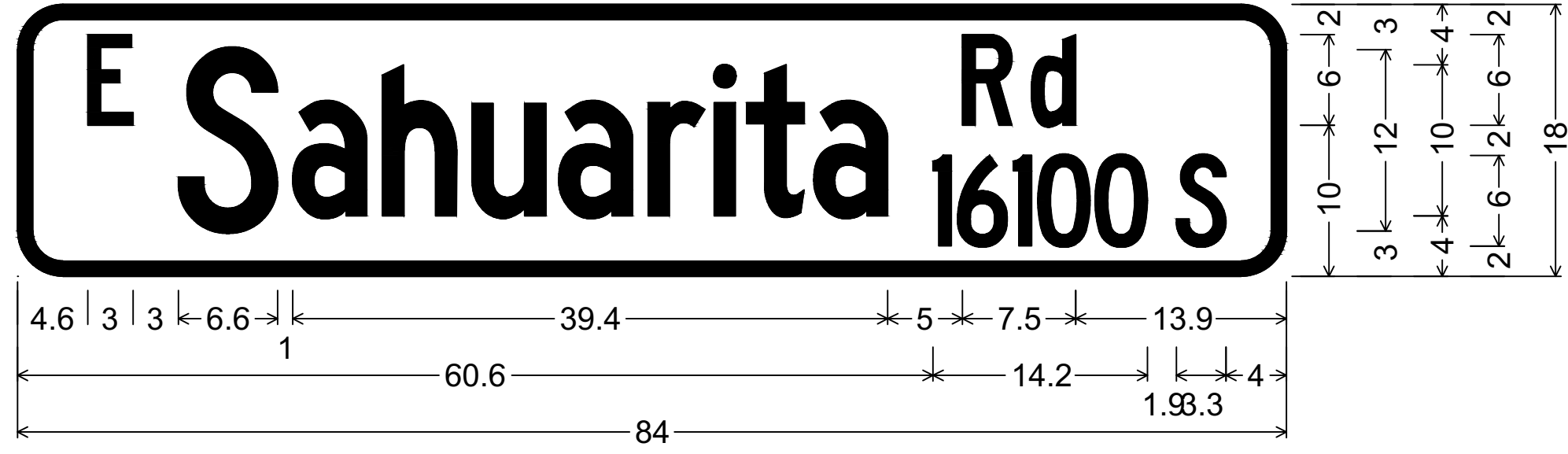
ITEM #	DESCRIPTION	UNIT	QTY
6061015	SIGN MOUNT ASSEMBLY	EACH	4
6072001	SIGN MOUNT ASSEMBLY (POLE MOUNTED)(METRO SIGNS)	EACH	3
6080020	SIGN PANEL (TRAFFIC CONTROL)(PERMANENT)(DIAMOND GRADE)	S.F.	30
6080051	METRO STREET NAME SIGN PANEL	S.F.	30

SIGNING GENERAL NOTES

- All signs shall be in compliance with the 2009 Edition of the Manual on Uniform Traffic Control Devices, current Edition of the Pima County and City of Tucson Traffic Signing Design Manual, the current Supplemental Specifications, these Plans, and the Special Provisions.
- Signs may be modified and locations adjusted to fit conditions as directed by the Engineer or Designee.
- All signs shown on these plans are to be new unless noted as existing.
- Post lengths and sign mounting heights shall meet the requirements of the PC/COT Signing Design Manual.
- All sign posts shall be installed in a concrete foundation unless otherwise directed by the jurisdiction Engineer or Designee.
- All sign station locations are approximate. The contractor shall verify actual sign locations with the jurisdiction Engineer or Designee prior to the installation of all signs.
- The contractor shall be responsible for coordinating all work with Arizona 811 and for installing all traffic signs in the field.
- Unless otherwise determined by the jurisdiction Engineer or Designee, retroreflective sheeting on sign panels shall be Type XI Diamond Grade. Prior to ordering overhead street name signs, provide the Town with a proof for approval.
- All new signs shall have 0.125 gauge aluminum backing, unless otherwise specified.
- All existing signs to be removed as part of this project are to be delivered to the Town of Sahuarita at 14311-1 South Rancho Sahuarita Boulevard. The contractor is responsible for unloading the salvaged material. Any salvaged sign that is to be reused shall be temporarily stored in a safe location until reinstallation.
- Removal shall be in accordance with section 202-3.06 of the 2015 PAG standard specifications for public improvements.
- Final inspection/acceptance of signing shall be performed by the jurisdiction Engineer or Designee.
- End of road markers shall be mounted at a height of at least 4' above the pavement elevation.
- The design speed for E Sahuarita Rd is 50 MPH. The posted speed limit is 45 MPH. Sign placement shall be based on the posted speed limit.



Metro OST;
3.0" Radius, 1.0" Border, White on Green;
"S", C; "D", C; "elgado", C 33% spacing; "Rd", C; " ", D;
"2600 E", C 32% spacing;



Metro OST;
3.0" Radius, 1.0" Border, White on Green;
"E", C; "S", C; "ahuarita", C 33% spacing; "Rd", C; " ", D;
"16100 S", C 32% spacing;



TOWN OF SAHUARITA, PUBLIC WORKS

MARKING AND SIGNING PLAN

FOR

SAHUARITA RD/SAHUARITA PARK RD/DELGADO RD

INTERSECTION IMPROVEMENTS

GALOVALE GALOVALE, P.E., PUBLIC WORKS DIRECTOR/TOWN ENGINEER

DESIGNED: AEL

DRAWN: JAV

CHECKED: RC

PROJ. ENG:

DATE

11/24

11/24

11/24

NO.

REVISION DESCRIPTION

DIV. ENGINEER

DATE

REGISTERED PROFESSIONAL ENGINEER (CIVIL)

61503

RANDY L. CHENEY

11/19/21

PSOMAS

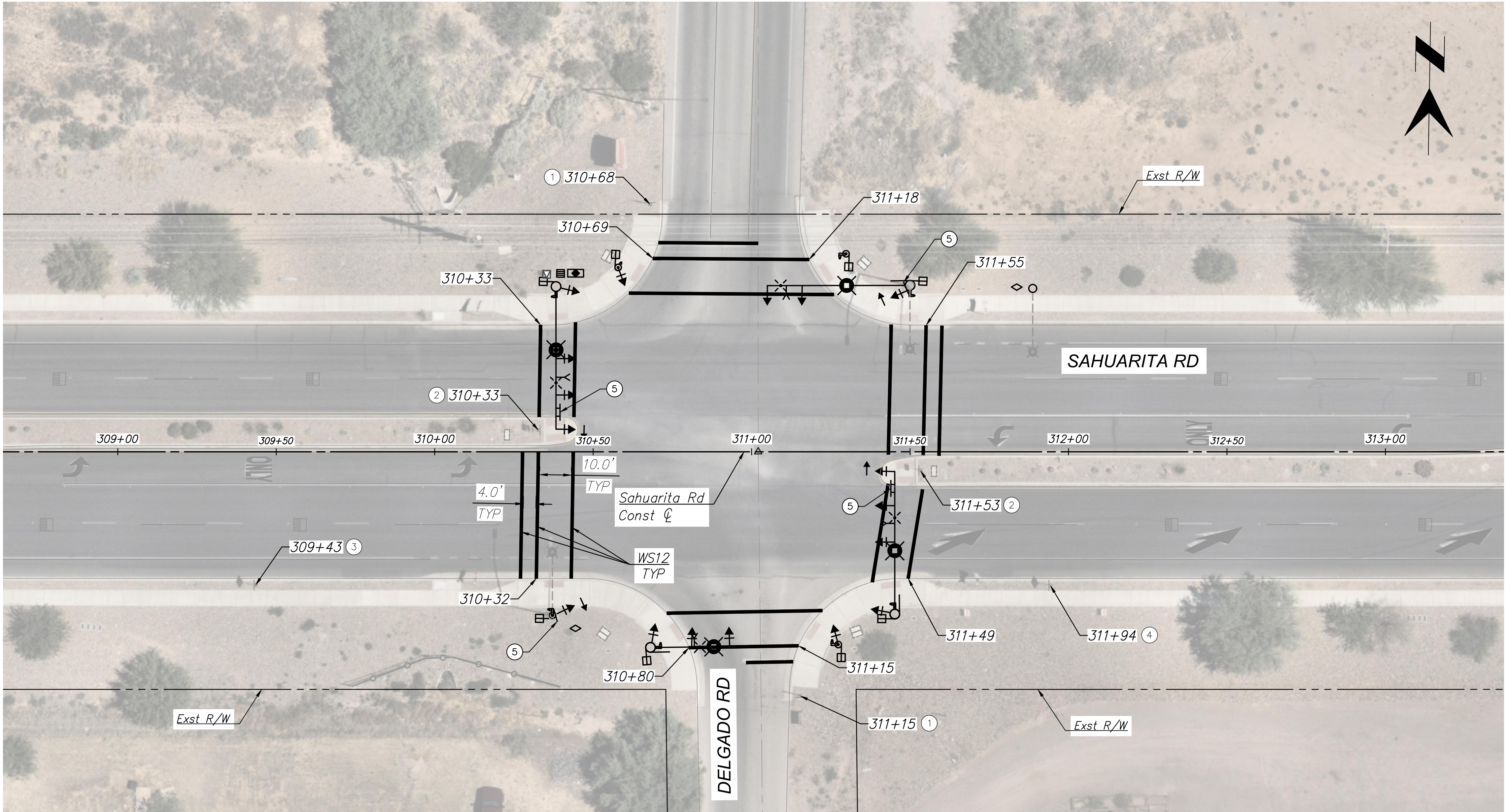
333 E. Wetmore Road, Suite 450

Tucson, AZ 85705

(520) 292-2300 (520) 292-1290 fax

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I:\75414240202\TRANSP\SHETS\C-SD_MIS.dwg MS03 Randy Cheney Fri, 15 Nov 2024, 9:12am Last Saved By: Randy.cheney



1

Exst R1-1
To Be Removed

2

Exst R4-7
To Remain

3

Exst W4-7L
To Remain

4

Exst W9-2L
To Remain

5

Mount New
R10-101 On Mast
Arm or Signal Pole
See Sheet TS03



TOWN OF SAHUARITA, PUBLIC WORKS

MARKING AND SIGNING PLAN

FOR

SAHUARITA RD/SAHUARITA PARK RD/DELGADO RD

INTERSECTION IMPROVEMENTS

DESIGNED: ACH

DRAWN: JAV

CHECKED: RC

PROJ. ENG:

DATE: 11/24

NO.

REVISION DESCRIPTION

DIV. ENGINEER

DATE

61503

61503

RANDY L. CHENEY

11/19/24

REGISTERED PROFESSIONAL ENGINEER (CIVIL)

STATE OF ARIZONA

P S O M A S

333 E. Wetmore Road, Suite 450
Tucson, AZ 85705
(520) 292-2300 (520) 292-1290 fax
www.psomas.com

T:\754\4240202\TRANSP\SHEETS\G-S01-TS.dwg TS01 Randy Cheney Thu, 14 Nov 2024, 6:01pm Last Saved By: RandyCheney

TRAFFIC SIGNAL GENERAL NOTES

1. All equipment/materials and construction shall meet or exceed the requirements contained in the current Pima Association of Governments (PAG) "Standard Specifications for Public Improvements" and "Standard Details for Public Improvements", the Additional Contract Documents, the Special Provisions, and the plans. Arizona Department of Transportation (ADOT) Signal and Lighting Standard (SLS) Drawings are applicable, where noted, for Type A Traffic Signal Poles.
2. The exact location of each new pole foundation, new pullbox, and electric service pedestal foundation shall be approved by the Engineer prior to installation.

UTILITIES

3. The location of Utilities shown on the plans is approximate. The contractor is responsible for potholing underground utilities in the vicinity of the proposed pole foundations.
4. The contractor shall contact Arizona 811 at 1-800-782-5348 a minimum of 48 hours prior to any excavation.
5. Pole foundations close to existing water mains, sewer lines and manholes, and gas lines shall maintain a minimum of five (5) feet horizontal distance from the outside of foundation wall to the outside of the pipe wall. PCRWRD requires the Contractor to submit a WasteWater Flow Management Plan for new pole foundations that encroach the sewer impact zone. See the PCRWRD SSDC 2012, Section 2.2.1 for more information.

CABINETS, POLES, AND SIGNALS

6. The Contractor shall ensure that the top of the finished pole foundation cap shall be flush with any adjacent sidewalk or edge of ramp. Tops of foundations away from sidewalks and ramps shall extend no more than 4 inches above surrounding finish grade.
7. All pedestrian push button assemblies shall be APS pushbutton, Campbell Company Guardian or approved equal. The signs to be used are identified in the 2009 MUTCD as R10-3e in Fig. 2B-26.
8. All signal indications shall be LED.
9. See Cabinet and Pole Schedule Notes for additional requirements.

CONDUIT AND PULLBOXES

10. Only new conduit shall be installed.
11. All conduit shall be installed a minimum of 30 inches below finished grade.
12. Any conduit installed shallower than 30 inches below finished grade shall be encased in concrete per Standard Specification No. 732-3.01(G).
13. All conduits shall be cleaned by compressed air and a properly sized conduit piston or mandrel prior to cable installation.
14. Conduit installed under existing pavement that is not scheduled to be reconstructed shall be installed by means of boring.
15. Pull boxes shall not be installed within concrete curb access ramps. In addition, any pull boxes installed behind curbs shall be installed between the curb and the proposed / future sidewalk or beyond the proposed / future sidewalk. An exception to this note would be pull boxes installed in a median. Any pull boxes installed along an uncurbed roadway shall be installed adjacent to, but not within, the shoulder.

CONDUCTORS

16. Only new conductors and cables shall be installed.
17. The high voltage cables shall be separated from the low voltage cables as much as possible.
18. The #14 AWG IMSA 19-1-1984 16- and 7-conductor solid wire cables shall be installed from the control cabinet to each signalized pole un-spliced with three feet of slack in each pull box. At each pole contractor will include enough cable to reach side mounted termination blocks for splicing IMSA cables. The outer jackets shall NOT be removed from cables at hand hole. Conductors SHALL be terminated as needed in mountings or as directed by the engineer.
19. Two XHHW conductors shall be installed from each luminaire to the concrete pull box adjacent to the pole foundation, leaving three feet of slack for each conductor (measured from the top

TRAFFIC SIGNAL GENERAL NOTES, CONTINUED

- of the pull box) in the pull box. A 5-amp in-line LP-CC-5 low-peak Class CC fuse shall be installed for each luminaire in the associated pull box. Fuse holders shall be Cooper-Bussman HEB-AA.
20. Poles with pedestrian signals and push button stations and without vehicle signals shall use one 7-conductor cable for both the push button station and the pedestrian signal unless noted otherwise. The outer cable jacket shall NOT be removed at the hand hole height. Two conductors shall be routed to the push button station and the remaining conductors shall be routed to the pedestrian signal.
21. The emergency vehicle pre-emption sensor cable shall be Tomar Detector Cable Model No. M913, and shall run unspliced from the sensor to the cabinet.

22. The conductors for the emergency vehicle pre-emption beacon shall be routed to a mount six feet from the traffic signal head at the mast arm tip. The emergency vehicle pre-emption sensor shall be mounted on the signal arm aligned with the lane line between the #1 and #2 lanes.
23. See Conduit and Conductor Schedule Notes for additional requirements.

LUMINAIRES

24. Each luminaire in traffic signal systems shall operate at 120V and shall have an IESNA Type 3 distribution or similar distribution, 3000K Correlated Color Temperature, 7-pin Photocell Receptacle option, adequate surge protection, and a 10-year warranty. The Contractor shall contact the Town of Sahuarita a minimum of three weeks prior to ordering to verify the type of luminaire that the Town will want to have installed.

25. LED's shall be Dialight or approved equal

RESPONSIBILITIES

1. The Contractor shall supply and install the following equipment and materials as specified on the plans: steel pole anchor bolts (with nuts and washers), concrete pole foundations with reinforcement (where specified), concrete pull boxes, electrical conduit, ground rods and connectors, bare bond wire and all other conductors, traffic signals and mounting assemblies, pedestrian signals and mounting assemblies, pedestrian push button stations with signs, luminaires, photo cells, traffic signal controller cabinet and concrete foundation, fully wired traffic signal controller, EV sensors, EV optical sensor processor, beacons, video detection, battery back up system cabinet, inverter, and batteries along with and the all other appurtenances necessary for the operation of the traffic signal installation, except as noted otherwise or modified in the plans.
2. The contractor shall carefully disassemble and salvage all existing traffic signal and street lighting equipment that is not to remain or be relocated. All equipment shall be returned to the Town of Sahuarita Streets and Traffic Maintenance Division Yard. The contractor shall unload all the equipment. Contact Paul Burton (520-262-2138) at least 48 hours to delivering the equipment.

Traffic Signal Equipment		
Exst	New	
		Meter Pedestal
		Uninterruptible Power Supply
		Controller
		#7 Pullbox with Extension
		#7 Pullbox
		#3 1/2 Pullbox
-----	-----	Underground Signal or Light Conduit
		Lighting Conduit / Conductor #
		Signal Conduit / Conductor #
		Signal or Light Pole and Foundation
		Pole or Cabinet Keynote
		Vehicle Signal Head
		Turn Arrow
		Pedestrian Signal Head
		Bike Signal Head
		Pedestrian or Bike Pushbutton
		Vehicle Signal Phase x
		Pedestrian Signal Phase x
		Luminaire
		Luminaire with Photocell
		Lighting Circuit Number x
		EVP Sensor
		EVP Beacon
		Video Detection
		Sign Mounted on Mast Arm
		Metro Street Name Sign Pole Mount

LIGHTING CONDUIT AND CONDUCTOR SCHEDULE											
	Conduit Run	A	B	C	D	E	F	G	H	I	J
	CONDUIT SIZE (INCHES)	Exst 4	Exst 3	Exst 4	Exst 3	Exst 4	Exst 3	2	2	2	Exst 4
	Exst LTG See Note 1	EXST LIGHTING POWER SEE NOTE 4	1	1	1	1	1	LIGHTING POWER			See Note 2
AWG	#8								2		
	#10									2	
	#12										
	#8 Bare								1	1	
	Total								3	3	

NOTES:

1. The existing Intersection Lighting Conductors (LTG) information is based on as-built schematic. Existing AWG of lighting conductors is unknown.
2. It is unknown if there are existing conductors in this conduit run.
3. 120/240V power is in Conduit A and shall be relocated to Conduit G.
4. The existing lighting power shall be relocated from Conduit A to Conduit G so that the new traffic signal controller and UPS can be located adjacent to the existing service meter.



GALOVALE GALOVALE, P.E., PUBLIC WORKS DIRECTOR/TOWN ENGINEER

NO. REVISION DESCRIPTION

DIV. ENGINEER

DATE

DESIGNED: AEH

DRAWN: JAV

CHECKED: RC

PROJ. ENG.: 11/24

DATE

11/24

11/24

11/24

REGISTERED PROFESSIONAL ENGINEER (CIVIL)

61503

RANDY L. CHENEY

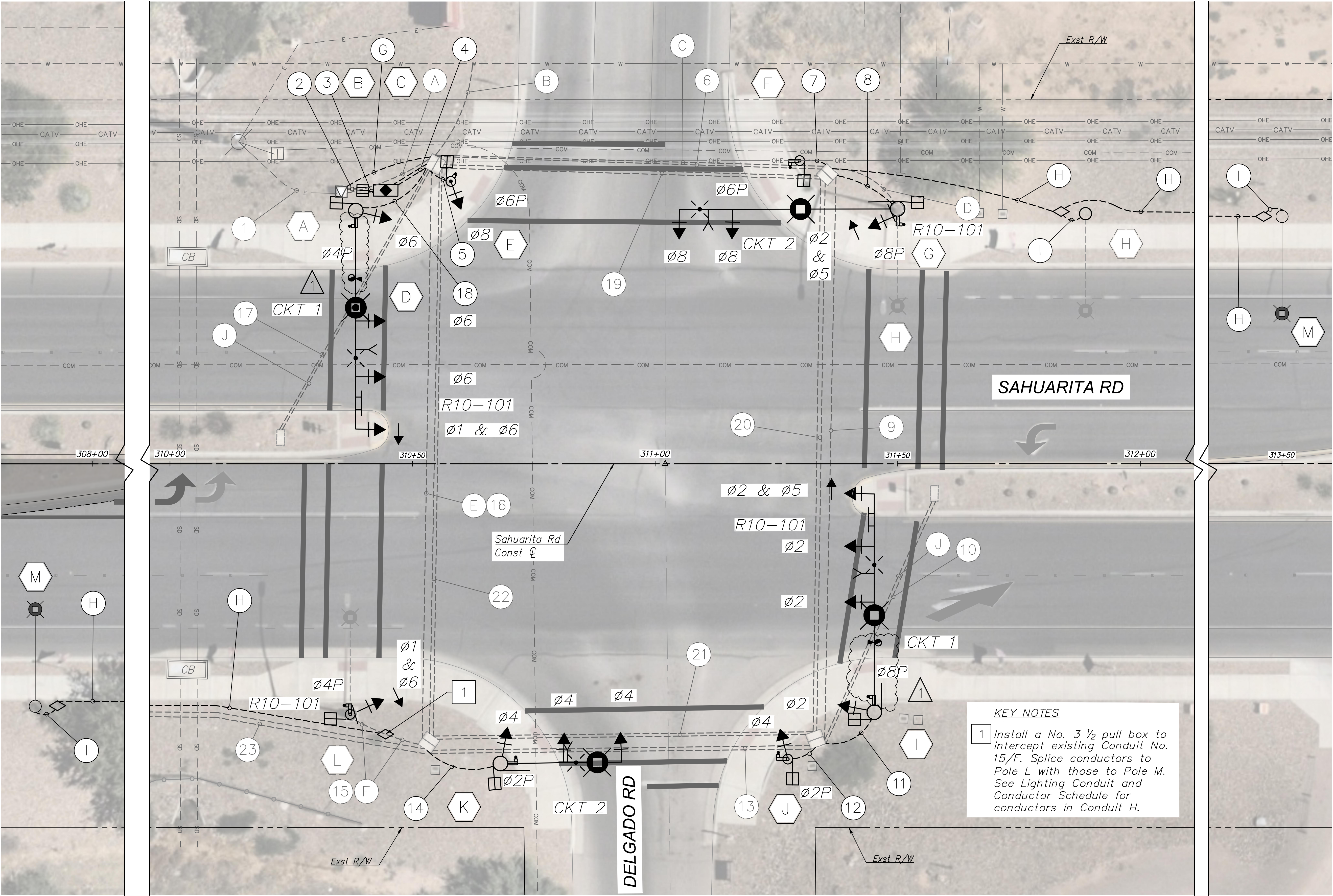
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P S O M A S

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KEY NOTES

1 Install a No. 3 1/2 pull box to intercept existing Conduit No. 15/F. Splice conductors to Pole L with those to Pole M. See Lighting Conduit and Conductor Schedule for conductors in Conduit H.



TOWN OF SAHUARITA, PUBLIC WORKS

FOR

TRAFFIC SIGNAL

SAHUARITA RD/SAHUARITA PARK RD/DELGADO RD INTERSECTION IMPROVEMENTS

DESIGNED: AEL

DRAWN: JAV

CHECKED: JAV

PROJ. ENG.: RC

DATE: 05/25

DATE: 05/25

DATE: 05/25

DATE: 05/25

NO. 1

REVISION DESCRIPTION

1

Revision 360 location

DATE: 06/17/25

DIV. ENGINEER: JAV

DESIGNED BY: RANDY L. CHENEY

REGISTERED PROFESSIONAL ENGINEER (CIVIL)

61503

05/25







PSOMAS

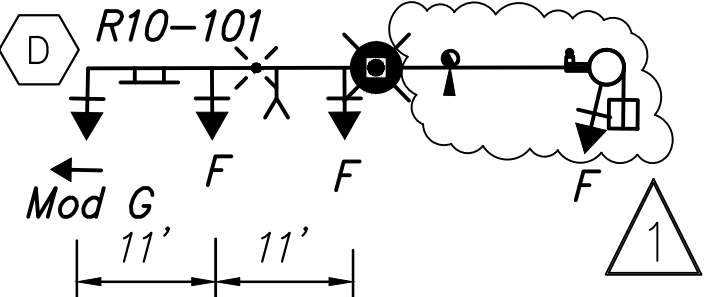

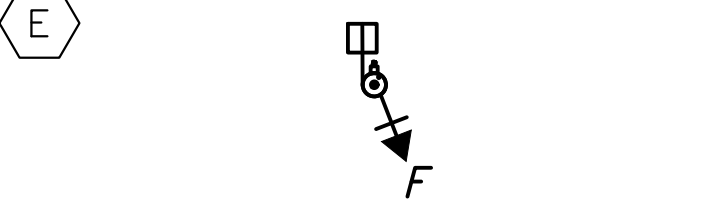
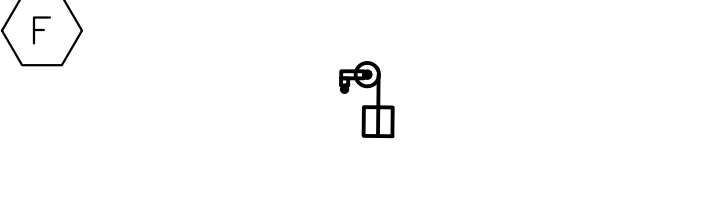
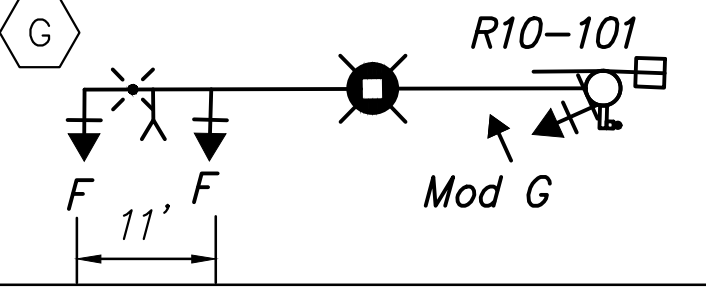


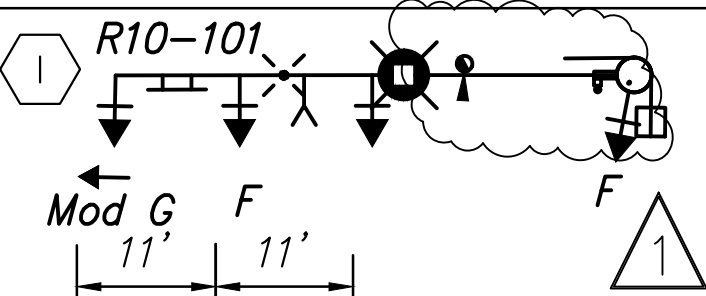

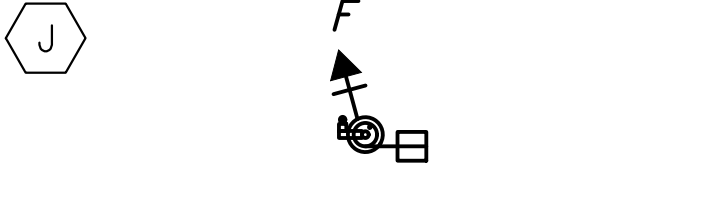
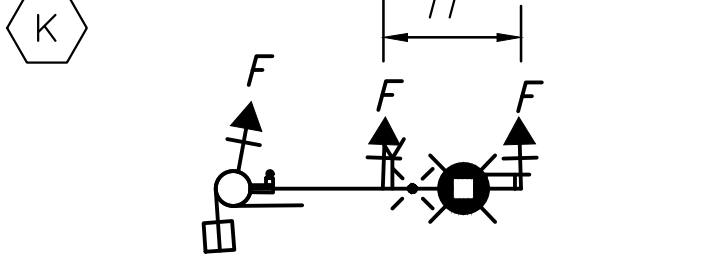

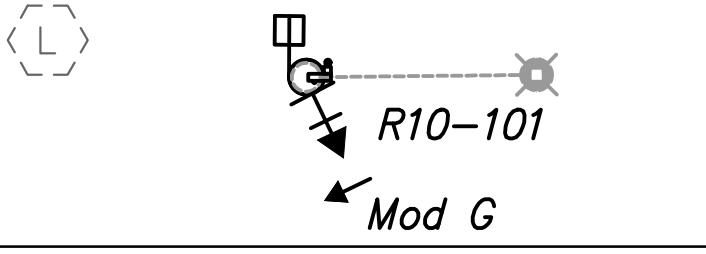
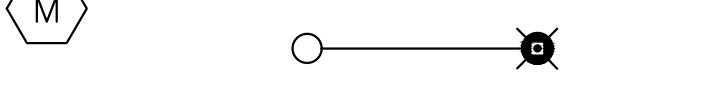
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Tucson, AZ 85718
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GALOVALE GALOVALE, P.E., PUBLIC WORKS DIRECTOR/TOWN ENGINEER

DATE: 05/25

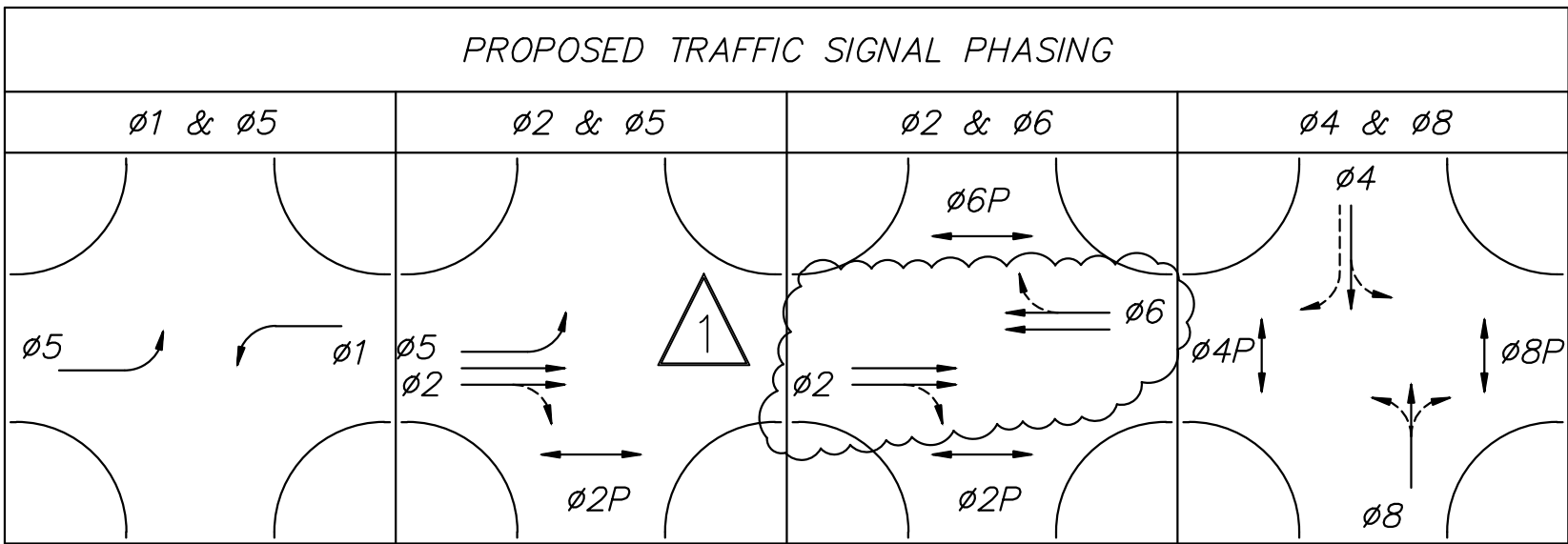
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CABINET AND POLE SCHEDULE						
CABINET	TYPE	CONTROLLER	AUX CONTROLLER	FOUNDATION	REMARKS	Location
 A 	-	EXST METER PEDESTAL		-	EXST MYERS 125 AMP 120/140 V MUEG16-125WTB (1) SINGLE POLE 50 AMP (1) SINGLE POLE 30 AMP (1) SINGLE POLE 20 AMP	2611 E. SAHUARITA RD
 B 		UNINTERUPED POWER SOURCE UPD			UPS CABINET TO BE SET ON CONTROLLER FOUNDATION INSTALL UPS IN ALPHA UPE-6 CABINET	
 C 	ATCC STANDARD 340 (67"H x 44"W x 26" D)	ECONOLITE EOS	-	MOD TYPE V T 203 SEE NOTE 13	-	310+44.5 56.4 Lt

POLE		MAST ARMS		SIGNALS		PED & BIKE PUSHBUTTON TYPE/SIGN	LUMINAIRE	REMARKS	Location
NUMBER	TYPE	SIGNAL	LUMIN.	MTG	FACE				
	R T 413	45'	20'	(3) II T 901 (1) V T903 (1) XI T 909	(3) F T 801 (1) Mod G T801 (1) PED T804	(1) 2" APS WITH R10-3e(R) SIGN, SEE NOTES 7,8,9	SEE NOTE 6 	INSTALL MIOVISION 360 VIDEO CAMERA ON LUMINAIRE MAST ARM PRE-EMT & BEACON PHOTO CELL SEE NOTE 12	310+38.3 52.2' Lt
	A 10' ADOT T-SL 4.01	-	-	(1) V T903 (1) XI T 909	(1) F T 801 (1) PED T804	(1) 2" APS WITH R10-3e(L) SIGN SEE NOTES 7,8	-	-	See Detail Sheet DT01 for location
	A 10' ADOT T-SL 4.01	-	-	(1) XI T 909	(1) PED T804	(1) 2" APS WITH R10-3e(L) SIGN, SEE NOTES 7,8,9	-	POTHOLE/LOCATE COMMUNICATION CABLE. SHIFT FOUNDATION TO AVOID CONFLICT. NEW LOCATION AS APPROVED BY ENGINEER.	311+29.8 62.5' Lt
	R T 413	45'	20'	(2) II T 901 (1) V T903 (1) XI T 909	(2) F T 801 Mod G T801 (1) PED T804	(1) 2" APS WITH R10-3e(L) SIGN, SEE NOTES 7,8,9	SEE NOTE 6 	PRE-EMT & BEACON SEE NOTE 12	311+50.1 52.2' Lt
	EXST G	-	-	-	-	-	-	RELOCATE EXISTING POLE TO NEW FOUNDATION	311+88.7 51.6 Lt
	R T 413	45'	20'	(3) II T 901 (1) V T903 (1) XI T 909	(3) F T 801 Mod G T801 (1) PED T804	(1) 2" APS WITH R10-3e(L) SIGN, SEE NOTES 7,8,9	SEE NOTE 6 	INSTALL MIOVISION 360 VIDEO CAMERA ON LUMINAIRE MAST ARM PRE-EMT & BEACON SEE NOTE 12	311+45.2 51.2' Rt
	A 10' ADOT T-SL 4.01	-	-	(1) V T903 (1) XI T 909	(1) F T 801 (1) PED T804	(1) 2" APS WITH R10-3e(R) SIGN, SEE NOTES 7,8,9	-	-	311+27.3 60.9' Rt
	Q T 412	25'	20'	(2) II T 901 (1) V T903 (1) XI T 909	(3) F T 801 (1) PED T804	(1) 2" APS WITH R10-3e(L) SIGN, SEE NOTES 7,8,9	SEE NOTE 6 	PRE-EMT & BEACON	310+68.1 61.8 Rt
	EXST G	-	-	(1) V T903 (1) XI T 909	(1) Mod G T 801 (1) PED T 804	(1) 2" APS WITH R10-3e(L) SIGN, SEE NOTES 7,8,9	-	SEE NOTE 12	310+37.2 51.7' Rt
	G T 407	-	20'	-	-	-	SEE NOTE 6	-	307+88.2 50.0' Rt, 313+50 50.9' Lt

CABINET AND POLE SCHEDULE NOTES

- The Contractor shall have the site Blue Staked prior to beginning any excavation work. If clearances of less than 5' from underground lines are discovered, Contractor shall pothole to verify the exact clearance.
- All equipment, materials, and construction shall meet or exceed the current PAG "Standard Specifications for Public Improvements" and "Standard Details for Public Improvements."
- Power cables shall be separated from signal cables as much as possible.
- All traffic signal housing shall be aluminum and black. All backplates shall be five inches (5"), black, louvered aluminum with reinforced 90-degree bent edges. All back plates shall have a two-inch (2") yellow retroreflective border. All visors shall be painted black and of materials approved by the Traffic Engineer or his/her designee prior to ordering and installing
- All signal indications shall be LED. Pedestrian signals shall be countdown style.
- Luminaries shall have 7-pin photocell receptacles. See Traffic Signal General Note 24.
- Pedestrian push buttons shall be audible vibrotactile Campbell AGPS or equal. All push buttons shall be mounted at 42 inches above finish grade to center of push button. Locations and accessibility of push buttons shall comply with requirements of the Americans with Disabilities Act (ADA).
- Furnish and install pedestrian push button sign R10-3e as shown in Figure 2B-26 in section 2B.51 of the 2009 MUTCD.
- PedSafety Universal Extension Brackets (13" to 24" telescoping) with 90 degree Adapters shall be used to locate the pedestrian push buttons within the range of ADA requirements.
- All new pole foundations shall be flush with adjacent new/exst ramp or ramp curb, which ever is applicable.
- See contractor responsibilities traffic signal general note 2 for remove and salvage materials.
- Add "LEFT TURN YIELD ON FLASHING" sign to mast arm or signal pole.
- Traffic Signal Controller Foundation shall be a Type V foundation modified to fit the Econolite ATCC Standard 340 foundation.
- Optical Signal Processor shall be Tomar Model 4080V2-4 Integrated beacon shall be Model 4090-1-ST-IC-W or approved equal.
- Furnish and install video cameras on signal poles, unless noted otherwise. Video camera mounts to be Miovision Universal Smartview 360 Mount (Candy-Cane Style) or approved equal

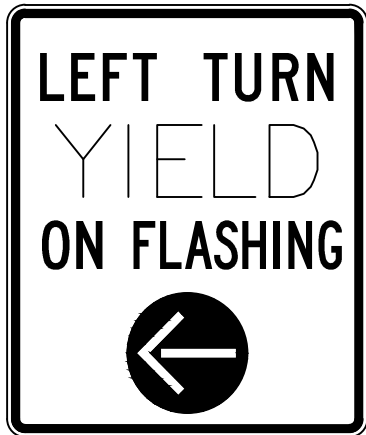


REGULATORY SIGNS

On signal arms, mount between the signal head at the tip of the mast arm and the next inboard signal head.

On poles without signal arms, mount on pole above vehicle signal head.

R10-101 signs shall face left-turn traffic on the intended approach.



R10-101
(4) 30" x 36"

TYPE MOD G

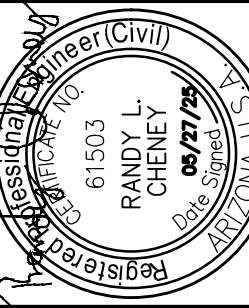


- Steady red arrow
- Steady yellow arrow
- Flashing yellow arrow
- Steady green arrow



DATE	05/25
DESIGNED:	AEH
DRAWN:	JAV
CHECKED:	RC
PROJ. ENG.:	

NO.	REVISION	DESCRIPTION	DIV.	ENGINEER	DATE
1		Phasing, Miovision360, sign	JAV		06/17/25

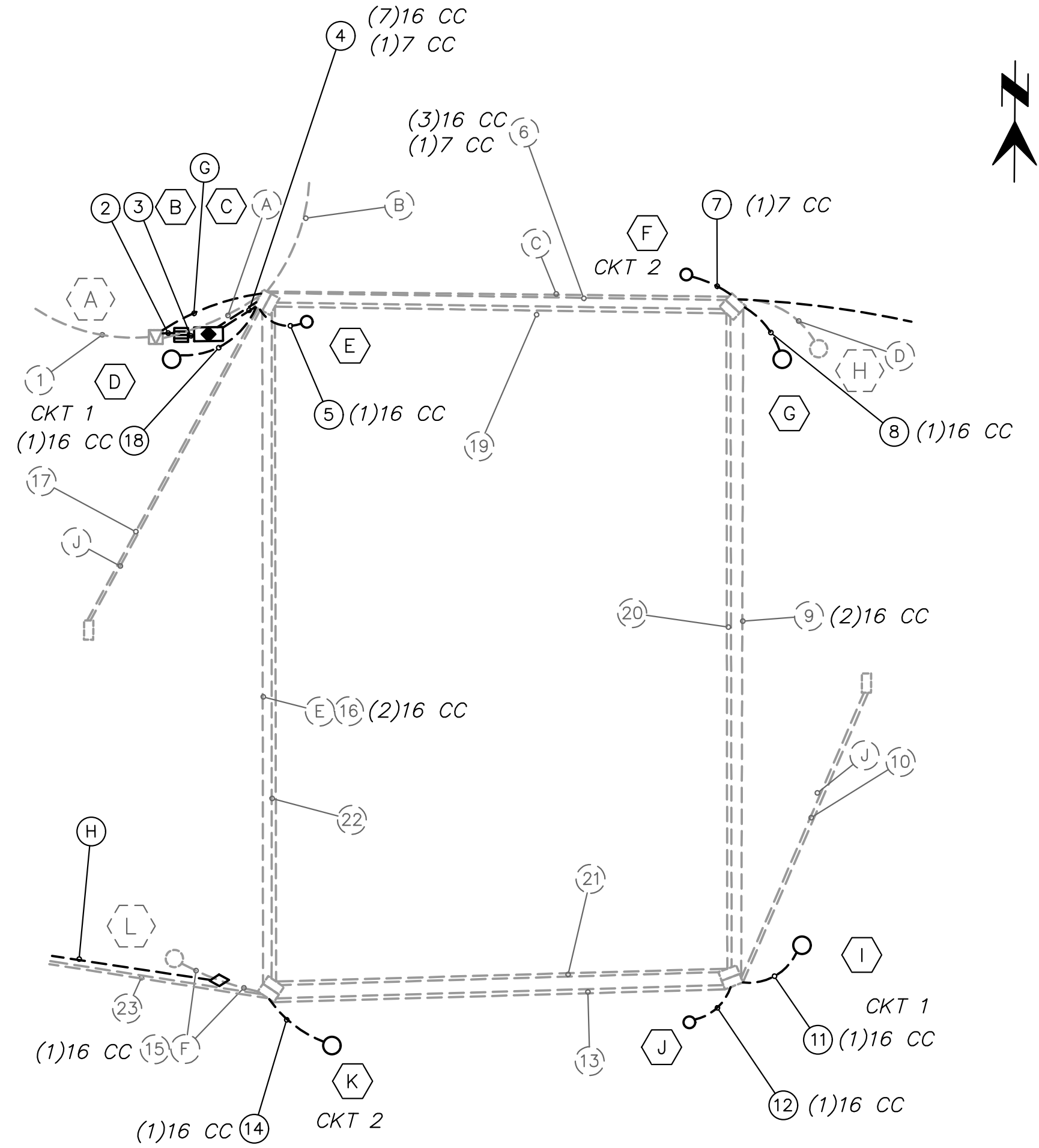


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SAHUARITA RD/SAHUARITA PARK
RD/DELGADO RD
INTERSECTION IMPROVEMENTS

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CONDUIT AND CONDUCTOR SCHEDULE																									
		CONDUIT-CONDUCTOR RUN NUMBER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
		CONDUIT SIZE (INCHES)	-	2	2	2-4	3	Exst 4	3	3	Exst 4	Exst 2	3	3	Exst (2)-4	3	Exst 3	Exst 4	Exst 2	3	Exst (2)-4	Exst (2)-4	Exst (2)-4	Exst (2)-4	Exst (2)-4
#14 AWG IMSA 19-1		# OF IMSA 16-CONDUCTOR CABLES (NOTE 1)				7	1	3		1	2		1	1		1	1	2		1					
		# OF IMSA 7-CONDUCTOR CABLES (NOTE 1)				1		1	1																
		# OF IMSA 4-CONDUCTOR CABLES (NOTE 4)																							
AWG	COLOR/ TRACER	CIRCUIT PHASE																							
#14 AWG IMSA 19-1 MULTI-CONDUCTOR CABLE	BLK	PED SIGNAL WALK	EXST SERVICE CONDUCTORS	SIGNAL AND LIGHTING POWER	SIGNAL AND LIGHTING POWER	(7) 16 CC, POLES D, E, G, I, J, K, L (1) 7CC POLE F	(1) 16 CC, POLE E	(3) 16 CC, POLE G, I, J (1) 7 CC POLE F	(1) 7 CC POLE F	(1) 16 CC, POLE G	(2) 16 CC, POLES I, J	FUTURE SIGNAL	(1) 16 CC, POLE I	(1) 16 CC, POLE J	FUTURE SIGNAL & LIGHTING	(1) 16 CC, POLE K	(1) 16 CC, POLE L	(2) 16 CC, POLES K, L	FUTURE SIGNAL	(1) 16 CC, POLE D	(1) No. 8 THW, (4) 1" INNERDUCTS, (5) MT	(1) No. 8 THW, (4) 1" INNERDUCTS, (5) MT	(1) No. 8 THW, (4) 1" INNERDUCTS, (5) MT	(1) No. 8 THW, (4) 1" INNERDUCTS, (5) MT	(1) No. 8 THW, (4) 1" INNERDUCTS, (5) MT
	WHT	SIGNAL COMMON																							
	RED	ØA SIGNAL RED																							
	GRN	ØA SIGNAL GREEN																							
	ORG	PED. PUSHBUTTON																							
	BLU	ØA YELLOW																							
	WHT/BLK	LOW VOLTAGE COMMON																							
	RED/BLK	ØA AUX. SIGNAL RED																							
	GRN/BLK	ØA AUX. SIGNAL GREEN																							
	ORG/BLK	SPARE (PED. PUSHBUTTON)																							
	BLU/BLK	ØA AUX. SIGNAL YELLOW																							
	BLK/WHT	PED. SIGNAL DON'T WALK																							
	RED/WHT	SPARE																							
	GRN/WHT	SPARES																							
	BLU/WHT	ØB LEFT TURN SIGNAL GREEN																							
BLK/RED	ØB LEFT TURN SIGNAL YELLOW																								
#10 (NOTE 4)		CONDUIT-CONDUCTOR RUN NUMBER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	BLK	STREET LIGHT CIRCUIT #1 HOT				1		1			1		1							1					
	RED	STREET LIGHT CIRCUIT #2 HOT				1		1		1						1		1							
	WHT	STREET LIGHT COMMON				1		1		1	1		1			1		1		1					
#6 XHHW	BLK, RED	SIGNAL POWER HOT	1	1	1																				
	WHT	SIGNAL POWER NEUTRAL	1	1	1																				
IMSA 3-COND. CABLE		PHOTOCELL				1														1					
#8	(1) GREEN	APS PUSH BUTTON TO PED HEAD																							
	(2) BLUE	SEE NOTE 4																							
	(1) BLACK																								
	(1) WHITE																								
TOMAR M913 CABLE	3-CONDUCTOR	PRE-EMPT SENSOR N BOUND				1		1		1								1		1					
		PRE-EMPT SENSOR S BOUND				1											1		1						
		PRE-EMPT SENSOR E BOUND				1		1			1		1												
		PRE-EMPT SENSOR W BOUND				1														1					
ECONOLITE TERRA CABLE	3-CONDUCTOR	VIDEO DETECTION WB NB BOUND																							
		VIDEO DETECTION EB SB BOUND																							
#8	BARE	EQUIPMENT BOND		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1					



MULTI-CONDUCTOR SIGNAL CABLE DIAGRAM
CC = CONDUCTOR CABLE

CONDUIT AND CONDUCTOR SCHEDULE GENERAL NOTES

- The IMSA 16-conductor and 7-conductor cables shall be continuous and unspliced from the controller cabinet to the side-mounted signal terminal block on the pole. The mast arms' 7-conductor cables shall then run from each signal head to the terminal block. All pole signal head splicing shall occur solely at the terminal block.
- A crimp connection shall be used for splicing lighting common (white) and insulated bond (green) or bare bond conductors in pull boxes.
- Lighting wiring from controller to pullboxes shall be Type THW. Lighting wiring from pullboxes to luminaires shall be Type XHHW.
- An 18-gauge 4-conductor shielded cable shall be run unspliced from each pedestrian station to the nearest pedestrian head associated with the pedestrian station's phase.



TOWN OF SAHUARITA, PUBLIC WORKS

FOR
TRAFFIC SIGNAL

SAHUARITA RD/SAHUARITA PARK
RD/DELGADO RD
INTERSECTION IMPROVEMENTS

DESIGNED: AEH
DRAWN: JAV
CHECKED: RC
PROJ. ENG.: RC

DATE
11/24
11/24
11/24

NO. REVISION DESCRIPTION

DIV. ENGINEER

DATE

REGISTERED PROFESSIONAL ENGINEER (CIVIL)
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