

**LINKING AGREEMENT  
FOR COOPERATIVE PURCHASE**

M. R. TANNER DEVELOPMENT AND CONSTRUCTION, INC.

**EXHIBIT B**  
JOB ORDER NO. 3  
CURB REPLACEMENT – MCDONALD DR. & 45TH ST.

See the following pages

**TOWN OF PARADISE VALLEY  
JOB ORDER CONTRACTING AGREEMENT  
WITH  
M. R. TANNER DEVELOPMENT AND CONSTRUCTION, INC.**

JOB ORDER NO. 3  
CURB REPLACEMENT – MCDONALD DR. & 45TH ST.

This Job Order No. 3 (this “**Job Order**”) is entered into on this \_\_\_\_ day of \_\_\_\_\_, 2026 (the “**Effective Date**”), by and between the Town of Paradise Valley, an Arizona municipal corporation (the “**Town**”) and M.R. Tanner Development and Construction, Inc., an Arizona corporation authorized to do business in Arizona (the “**Contractor**”). This Job Order is subject to and governed by the terms and conditions of the City of Buckeye Contract No. 2025081 (the “**Base Agreement**”) and of Town of Paradise Valley Linking Agreement for Cooperative Purchase No. CON-25-031-PBW (the “**Agreement**”).

**ARTICLE 1  
Scope of Work**

The JOC shall furnish all labor, materials, and equipment, as more fully set forth in Curb Replacement – McDonald Dr. & 45th St. Proposal, which is attached hereto as **Attachment 1** and incorporated as if fully set forth herein (the “**Work**”), as set forth in the Plans and Specifications, which are attached hereto as **Attachment 2** and incorporated as if fully set forth herein (the “**Project**”).

**ARTICLE 2  
Schedule of Completion**

The Contractor shall commence work within 10 days from issuance by the Town of a Notice to Proceed and shall complete the Work within 45 calendar days. In view of the difficulty or impossibility of determining the Town’s damages from delay, should the JOC fail to achieve Substantial Completion within the above number of calendar days, as may be extended by any Town-approved Change Orders, the JOC agrees to pay and will pay to the Town, in addition to all other sums owed pursuant to the Agreement, the sum of \$280 for each calendar day of delay as liquidated damages for such delay and not as a penalty. This sum may be withheld from the balance of the cost of the Work as it becomes due. Should liquidated damages exceed the cost of the Work due or to become due, then the JOC shall pay the Town the difference within three days of receipt of written demand.

**ARTICLE 3  
Cost of the Work**

The JOC shall complete the Work for the prices set forth in **Attachment 1**. The total cost to complete the Work under this Job Order shall not exceed **\$510,221**. This amount includes an owner’s contingency of **\$90,000**, which shall not be obligated or spent without the express, written prior approval of the Town Engineer.

**ARTICLE 4  
Bonds**

Payment and Performance Bonds are required for this Project and are attached hereto as **Attachment 3** and incorporated as if fully set forth herein.

**ARTICLE 5  
Additional Terms**

This Job Order is subject to the terms and conditions of the Agreement and the Base Agreement and may be canceled pursuant to the provisions of A.R.S. § 38-511.

By executing this Job Order, the JOC certifies its compliance with A.R.S. § 35-393.01.

To the extent applicable under A.R.S. § 35-394, the JOC certifies that it does not, and will not, for the duration of the Agreement, use the forced labor, any goods or services produced by the forced labor, or any contractors, subcontractors, or suppliers that use the forced labor or any goods or services produced by the forced labor of ethnic Uyghurs in the People's Republic of China.

In the event of any conflict or discrepancy between the terms of this Job Order, the Agreement, the Base Agreement, **Attachment 2** to this Job Order, and **Attachment 1** to this Job Order, the documents shall govern in that order.

**ARTICLE 6  
Attachments**

This Job Order includes and incorporates the following Attachments:

- Attachment 1** – Proposal
- Attachment 2** – Plans and Specifications
- Attachment 3** – Payment and Performance Bonds

IN WITNESS WHEREOF, the Parties have hereunto subscribed their names.

**TOWN OF PARADISE VALLEY,**  
an Arizona municipal corporation:

**M.R. TANNER DEVELOPMENT AND  
CONSTRUCTION, INC.,** an Arizona  
corporation:

\_\_\_\_\_  
Andrew Ching, Town Manager

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

ATTEST:

\_\_\_\_\_  
Duncan Miller, Town Clerk

APPROVED AS TO FORM:

\_\_\_\_\_  
Andrew J. McGuire, Town Attorney

**ATTACHMENT 1  
TO  
JOB ORDER NO. 3**

**PROPOSAL  
CURB REPLACEMENT – MCDONALD DR. & 45TH ST.**

See the following page.



1327 West San Pedro Street · Gilbert, Arizona 85233-2403  
 Phone (480) 633-8500 · Fax (480) 633-8111

## CONTRACT/ PROPOSAL

CLASS A LICENSE NO. 111576-A  
*An Equal Opportunity Employer*

Date 1/30/2026

To Town of Paradise Valley  
 \_\_\_\_\_  
 Attention Sam Kayat  
 \_\_\_\_\_

Job Name Curb Replacement  
 Location McDonald Dr., 45th St.  
 Architect- Engineer \_\_\_\_\_  
 Plans Dated \_\_\_\_\_  
 Soil Engineer \_\_\_\_\_  
 Report Date \_\_\_\_\_

We propose to furnish all labor and material necessary to complete the work as described per our unit prices. All work will be done in accordance with the plans, specifications, and per the requirements of the governing municipality.

Thank you for the opportunity of submitting a bid on the above- described job.

### PROPOSAL OF WORK TO BE FURNISHED

NO.	ITEM DESCRIBED	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1	<b>Mobilization</b>	1.00	L.S.	5,000.00	5,000.00
2	Riprap, D50=5"	88.00	C.Y.	680.00	59,840.00
3	Riprap, D50=6"	13.00	C.Y.	680.00	8,840.00
4	Subgrade Prep	5,686.00	S.Y.	0.50	2,843.00
5	Vertical Curb & Gutter, Type A, H=6", MAG Det. 220	6,050.00	L.F.	38.00	229,900.00
6	Vertical Curb & Gutter, Type A, H=2", MAG Det. 220	212.00	L.F.	33.00	6,996.00
7	Concrete Ribbon Curb, Type B, MAG Det.220	597.00	L.F.	20.00	11,940.00
8	Saw Cut, and Remove Single Curb and Asphalt	6,859.00	L.F.	5.00	\$ 34,295.00
9	Traffic Control	1.00	L.S.	15,000.00	\$ 15,000.00
10	Reflectorized Raised Pavement Marker	40.00	Ea.	12.00	\$ 480.00
11	Construction Surveying and As-Built Drawings	1.00	L.S.	9000	\$ 9,000.00
12	Allowance for Public Information and Notification	1.00	AL	2500	\$ 2,500.00
13	Contractor Quality Control	1.00	L.S.	7,500.00	\$ 7,500.00
	<b>Subtotal</b>				<b>\$ 394,134.00</b>
	<b>Sales Tax</b>				<b>\$ 22,544.46</b>
	<b>Subtotal with Tax</b>				<b>\$ 416,678.46</b>
	<b>Bond</b>				<b>\$ 3,541.77</b>
	<b>Total Bid</b>				<b>\$ 420,220.23</b>

Payment to be based on actual field-measured quantities unless otherwise stated. 90% monthly progress draws on completed work with the final 10% due 30 days after final completion and acceptance of our work. Interest will be charged at the rate of 1.5% per month on all late balances. Any and all costs or fees necessarily incurred in the pursuit of the collection of this account will be paid by the owner.

### ACCEPTANCE OF CONTRACT/ PROPOSAL

The above prices, specifications and conditions on the front and back of this proposal are satisfactory and are hereby accepted, giving M.R. TANNER CONSTRUCTION authorization to complete work as specified. Funding verification and further payment term conditions to be established prior to execution of contract agreement or commencement of work.

**M. R. TANNER CONSTRUCTION**

Firm Name: \_\_\_\_\_

By: \_\_\_\_\_

Accepted by: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

**ATTACHMENT 2  
TO  
JOB ORDER NO. 3  
PLANS AND SPECIFICATIONS**

See the following pages

**ATTACHMENT 3  
TO  
JOB ORDER NO. 3**

**PAYMENT AND PERFORMANCE BONDS**

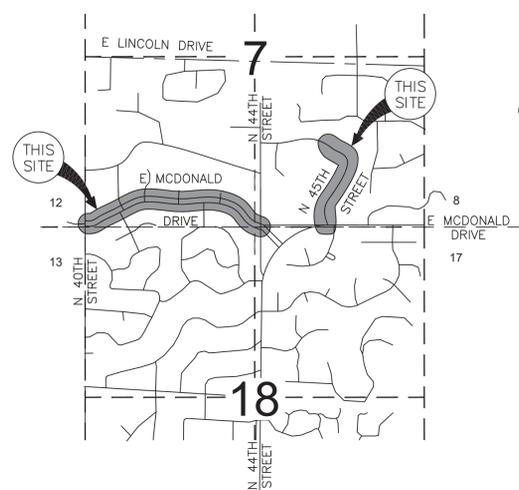
See the following pages.

# TOWN OF PARADISE VALLEY

## ENGINEERING / COMMUNITY DEVELOPMENT DEPARTMENT

### CURB REPLACEMENT PROJECTS

MCDONALD DRIVE: 40TH STREET TO 44TH STREET,  
 CIP PROJECT NUMBER 2020-09  
 45TH STREET: MCDONALD DRIVE TO VALLEY VISTA LANE,  
 CIP PROJECT NUMBER 2020-07



**VICINITY MAP**  
 T02N R04E NTS



**ENGINEER**  
 BOSE THIRUMURUGAN, P.E.  
 MICHAEL BAKER INTERNATIONAL

**TOWN ENGINEER**  
 SHAR JOHNSON  
 6401 EAST LINCOLN ROAD  
 PARADISE VALLEY, AZ 85253  
 (480) 348-3681

**MAYOR** MARK STANTON      **VICE-MAYOR** CHRISTINE LABELLE

**TOWN MANAGER**  
 ANDREW CHING

**TOWN COUNCIL MEMEBERS**  
 ELLEN ANDEEN-KELLER  
 KAREN LIEPMANN  
 SCOTT MOORE  
 JULIE PACE  
 ANNA THOMASSON

**TOWN OF PARADISE VALLEY APPROVAL SIGNATURES:**

APPROVED \_\_\_\_\_ DATE \_\_\_\_\_  
 SHAR JOHNSON, PE, TOWN ENGINEER

THIS SET OF PLANS HAS BEEN REVIEWED FOR COMPLIANCE WITH TOWN OF PARADISE VALLEY REQUIREMENTS PRIOR TO ISSUANCE OF PERMIT. THE TOWN NEITHER ACCEPTS NOR ASSUMES ANY LIABILITY FOR ERRORS OR OMISSIONS. THIS COMPLIANCE APPROVAL SHALL NOT PREVENT THE TOWN ENGINEER FROM REQUIRING CORRECTIONS OF ERRORS OR OMISSIONS IN THE PLANS TO BE FOUND IN VIOLATION OF LAWS AND ORDINANCES.

**AS-BUILT CERTIFICATION**

I HEREBY CERTIFY THAT THE "AS-BUILT" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY SUPERVISION OR AS NOTED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED PROFESSIONAL LAND SURVEYOR/ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_  
 REGISTRATION NUMBER \_\_\_\_\_

**UTILITY PROVIDERS**

WATER/SEWER	ELECTRICITY	INTERNET/TELEPHONE	INTERNET/TELEVISION	NATURAL GAS
CITY OF PHOENIX WATER 602-261-8000 ARIZONA 811 EMERGENCY	APS 602-371-7171 ARIZONA 811 EMERGENCY	CENTURY LINK 480-237-9742 ARIZONA 811 EMERGENCY	COX COMMUNICATIONS 1-800-778-9140 ARIZONA 811 EMERGENCY	SOUTHWEST GAS 602-271-4277 ARIZONA 811 EMERGENCY
EPCOR 602-882-4846 ARIZONA 811 EMERGENCY	SRP 800-258-4777 ARIZONA 811 EMERGENCY	CROWN CASTLE 925-201-5802 ARIZONA 811 EMERGENCY		

**SHEET INDEX**

01	G-001	COVER
02	G-002	GENERAL NOTES, ABBREVIATIONS AND LEGEND
03	CS100	KEY MAP
04	CS101	E MCDONALD DRIVE PLAN - STA 0+00 TO STA 8+80
05	CS102	E MCDONALD DRIVE PLAN - STA 8+80 TO STA 18+00
06	CS103	E MCDONALD DRIVE PLAN - STA 18+00 TO STA 27+00
07	CS104	E MCDONALD DRIVE PLAN - STA 27+00 TO STA 31+50
08	CS105	N 45TH STEET PLAN
09	CS301	TYPICAL SECTIONS
10	CS501	DETAILS

DESIGNED: ASN	DRAWN: JRN	CHECKED: BT	PROJ NO: 2020-09 & 2020-07	SHEET NO: 1	TOTAL SHEETS: 10
DATE: MARCH 05, 2026			MBI PROJ NO: 207533		
<b>COVER SHEET</b>					<b>G-001</b>

W:\WaterWastewater\Proj\207533-PV-Curb Replacement\CADD\Water\DW\Sheets\207533-PV-G-001.dwg Nunez, Jose 3/5/26 11:43:12 AM

MCDONALD DR: 40TH ST TO 44TH ST, 2020-09 / 45TH ST: MCDONALD DR TO VALLEY VISTA LN, 2020-07

**GENERAL NOTES:**

- ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH CONTRACT SPECIFICATIONS; PLANS; (MAG) STANDARD SPECIFICATIONS AND DETAILS; IN THAT ORDER OF PRECEDENCE, AT THE TIME OF CONSTRUCTION BID.
- ALL CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF THE MARICOPA ASSOCIATION OF GOVERNMENTS' (MAG) UNIFORM STANDARD SPECIFICATIONS AND DETAILS FOR PUBLIC WORKS CONSTRUCTION.
- THE PLANS FOR THIS PROJECT HAVE BEEN REVIEWED FOR COMPLIANCE WITH TOWN REQUIREMENTS PRIOR TO ISSUANCE OF PERMITS. AN APPROVED SET OF PLANS AS WELL AS ALL PERMITS ISSUED MUST BE AVAILABLE ON THE JOB SITE AT ALL TIMES. DEVIATIONS FROM THE PLAN MUST BE PRECEDED BY AN APPROVED PLAN REVISION. THE DESIGN IS APPROVED BY THE TOWN IN SCOPE BUT NOT IN THE DETAIL. APPROVAL OF THESE PLANS IS FOR PERMIT PURPOSES ONLY. HOWEVER, SUCH REVIEW SHALL NOT PREVENT THE TOWN FROM REQUIRING CORRECTIONS OF ERRORS OR OMISSIONS IN PLANS FOUND TO BE IN VIOLATION OF ANY LAW OR ORDINANCE. CONSTRUCTION QUANTITIES ON THE THESE PLANS ARE NOT VERIFIED BY THE TOWN.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERMITS NECESSARY FOR SALVAGE OR DISPOSAL OF PROTECTED NATIVE PLANTS, AS SHOWN ON THE LANDSCAPE PLANS. TREES AND SHRUBBERY IN THE RIGHT-OF-WAY THAT CONFLICT WITH PROPOSED IMPROVEMENTS SHALL BE REMOVED AS INDICATED ON THE LANDSCAPE PLANS.
- PER THE MARICOPA COUNTY AIR POLLUTION CONTROL RULES AND REGULATIONS ON THE EARTH MOVING EQUIPMENT PERMITS, NO PERSON SHALL CAUSE OR PERMIT THE USE OF ANY POWER OF MECHANICAL EQUIPMENT FOR COMMERCIAL PURPOSES TO CLEAR, EXCAVATE OR LEVEL LAND, INCLUDING BUT NOT LIMITED TO DEMOLITION, ROAD AND STREET CONSTRUCTION, TRENCHING, VEGETATION REMOVAL, OR ENGAGE IN ANY OTHER EARTH MOVING ACTIVITIES WITHOUT FIRST OBTAINING A PERMIT FROM THE MARICOPA COUNTY ENVIRONMENTAL SERVICES DEPARTMENT. THE CONTRACTOR WILL BE RESPONSIBLE FOR ACQUIRING THE PERMIT.
- CONTRACTOR SHALL OBTAIN ANY AND ALL PERMITS AS REQUIRED BY THE TOWN OF PARADISE VALLEY, AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR IS RESPONSIBLE TO OBTAIN A NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT IN ACCORDANCE WITH FEDERAL AND STATE REGULATIONS, INCLUDING NOTICE OF INTENT (NOI), NOTICE OF TERMINATION, AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP). A COPY OF THE (NOI) AND (SWPPP) SHALL BE AVAILABLE ON THE JOB SITE AT ALL TIMES.
- THE CONTRACTOR SHALL OBTAIN A FIRE HYDRANT METER FOR CONSTRUCTION FROM THE CITY OF PHOENIX. CONTACT PHOENIX WATER SERVICES TO SCHEDULE ANY RELOCATION OF HYDRANT METERS. CONTRACTORS SHALL NOT RELOCATE ANY HYDRANTS METERS.
- CONTRACTOR MUST PROVIDE TO THE TOWN THE LOCATION FOR WASTE MATERIAL AND A LETTER FROM OWNER GIVING PERMISSION FOR DUMPING PRIOR TO STARTING CONSTRUCTION.
- THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN (TCP) PER THE PHOENIX TRAFFIC BARRICADE MANUAL WHEN IN RIGHT-OF-WAY, PUBLIC UTILITY EASEMENT, OR WHEN REQUIRED BY THE TOWN ENGINEER. BARRICADES MUST BE CONTINUALLY MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT.
  - IF ANY PART OF THE (TCP) FALLS WITHIN 300' IF A SIGNALIZED INTERSECTION, AN OFF-DUTY OFFICER WILL BE REQUIRED FOR TRAFFIC CONTROL. POLICE OFFICERS CAN BE RESERVED BY SUBMITTING A REQUEST THROUGH OFF-DUTY MANAGEMENT'S WEB SITE. [HTTP://ODM.OFFICERTRACK.COM/Paradise-Valley-PD-AZ](http://ODM.OFFICERTRACK.COM/Paradise-Valley-PD-AZ) OR CALL OFF-DUTY MANAGEMENT 24/7 AT (480) 378-1070.
  - A (TCP) SHALL BE SUBMITTED TO THE ENGINEERING DEPARTMENT AND ACCEPTED A MINIMUM OF THREE WORKING DAYS; 72-HOURS PRIOR TO CONSTRUCTION. AN ACCEPTED TCP WILL BE STAMPED AND A COPY RETURNED TO THE CONTRACTOR. A COPY OF THE ACCEPTED PLAN MUST REMAIN ON THE JOB SITE AT ALL TIMES.
- ALL TRAFFIC SING POSTS SHALL BE FOREST GREEN.
- ALL PEDESTRIAN RAMPS SHALL BE FURNISHED WITH DETECTABLE WARNING DOMES IN TERRACOTA COLOR.

**PAVING NOTES:**

- THE TOWN OF PARADISE VALLEY ENGINEERING DIVISION SHALL BE NOTIFIED 24-HOURS PRIOR TO ANY CONSTRUCTION WORK BY TELEPHONE AT (480) 348-3695. ANY WORK CONCEALED WITHOUT INSPECTION SHALL BE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
- WITHIN A PHASE OF THE WORK:
  - OBSTRUCTION TO PROPOSED IMPROVEMENTS IN THE RIGHT-OF-WAY SHALL BE REMOVED OR RELOCATED BEFORE BEGINNING CONSTRUCTION OF PROPOSED IMPROVEMENTS.
  - CONSTRUCTION SURFACE IMPROVEMENTS SHALL NOT BEGIN UNTIL CONFLICTING UNDERGROUND UTILITY CONSTRUCTION IS COMPLETED AND SERVICE CONNECTIONS TO ALL LOTS WITHIN THE PHASE OF WORK HAVE BEEN ADEQUATELY RELOCATED.
  - IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO VERIFY THE PRESENCE AND LOCATION OF ALL EXISTING OVERHEAD AND/OR UNDERGROUND UTILITIES THAT MAY INTERFERE WITH THIS CONSTRUCTION, WHETHER OR NOT SAID UTILITIES ARE SHOWN ON THE CONSTRUCTION PLANS FOR THIS PROJECT AND TO ADEQUATELY PROTECT AND MAINTAIN ANY SUCH UTILITIES.
  - IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ARRANGE FOR THE RELOCATION AND RELOCATION COSTS OF ALL UTILITIES, AND SUBMIT A UTILITY RELOCATION SCHEDULE PRIOR TO THE ISSUANCE OF (NTP).
  - RELOCATION OF WATER METERS SHALL BE DONE BY CITY OF PHOENIX OR BERNEIL WATER AFTER PAYMENT OF PREVAILING FEES BY THE CONTRACTOR.
  - RELOCATION OF CITY OF PHOENIX OR BERNEIL WATER FIRE HYDRANTS REQUIRES A SEPARATE PERMIT.
- THE PROCEDURES AND METHODS USED TO SAMPLE, TEST MATERIALS, AND REPORT TEST RESULT WILL BE DETERMINED BY THE ENGINEERING DIVISION. FOR ALL PHASES OF CONSTRUCTION, THE TYPE, SCHEDULING, FREQUENCY AND LOCATION OF ALL MATERIALS TESTING AND SAMPLING SHALL BE DETERMINED BY THE ENGINEERING DIVISION. ALL TEST RESULT SHALL BE REPORTED DIRECTLY (IN WRITING) TO THE ENGINEERING DIVISION. FOR EACH PHASE OF CONSTRUCTION, TEST RESULT (IN WRITING) MUST BE RECEIVED FROM THE TESTING LABORATORY, PRIOR TO START OF THE NEXT PHASE OF CONSTRUCTION.
- THE CONTRACTOR SHALL CONTACT BLUE STAKE (602) 263-1100 PRIOR TO CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN CURRENT BLUE STAKE MARKINGS THROUGHOUT CONSTRUCTION.
- EXISTING OR NEWLY DAMAGED AND/OR DISPLACED CONCRETE CURB, GUTTER, SIDEWALK, OR DRIVEWAY SLAB THAT IS WITHIN THE RIGHT-OF-WAY SHALL BE REPAIRED OR REPLACED, AS NOTED BY TOWN INSPECTORS, BEFORE FINAL ACCEPTANCE OF THE WORK.
- ALL NEW OR RELOCATED UTILITIES SHALL BE REPLACED UNDERGROUND. DURING CONSTRUCTION OPERATIONS, HEAVY EQUIPMENT MAY CROSS EXISTING OR PROPOSED PIPE. IN THIS CASE, AN EARTH FILL SHOULD BE CONSTRUCTED TO AT LEAST THREE- FEET ABOVE PIPE. THE FILL MUST BE SUFFICIENT TO PREVENT THE LATERAL DISPLACEMENT OF THE PIPE.
- THE ACTUAL POINT OF PAVEMENT MATCHING, TERMINATION AND/OR OVERLAY SHALL BE DETERMINED IN THE FIELD BY THE TOWN OF PARADISE VALLEY ENGINEERING DIVISION INSPECTOR.
- IN ALL AREAS WHERE NEW CONSTRUCTION OF CURB, GUTTER, SIDEWALKS, AND DRIVEWAYS IS REQUIRED, AND THE TESTING LABORATORY DETERMINES THE EXISTING GRADE TO CONSIST OF SOILS WITH SWELLING CHARACTERISTICS, THE MOISTURE CONTENT SHALL BE BROUGHT AS CLOSE AS POSSIBLE TO OPTIMUM REQUIRED FOR COMPACTED TO MEET MAG STANDARD SPECIFICATIONS.
- ALL FRAMES, COVERS, VALVE BOXES, AND MANHOLE COVERS SHALL BE ADJUSTED TO FINISH GRADE PRIOR TO COMPLETION OF PAVING OR RELATED CONSTRUCTION.
- UNLESS OTHERWISE NOTED, PIPE TRENCHES SHALL BE BACK FILLED IN ACCORDANCE WITH (MAG) SPECIFICATIONS.
- ALL EXISTING DRIVEWAYS SHALL BE GRADED TO MATCH THE NEW WORK IN ACCORDANCE WITH (COP) STD. DETAIL P-1164, UNLESS OTHERWISE SPECIFIED. EXISTING SURFACING SHALL BE REMOVED AND REPLACED IN KIND AS NECESSARY.
- ALL RAMPS MUST MEET 2010 (ADA) STANDARDS FOR ACCESSIBLE DESIGN.
- THIS PROJECT'S WORK HOURS ARE GOVERNED BY TOWN CODE SECTION 10-7-5 AS FOLLOWS:
  - WORK INVOLVING PILE DRIVERS, POWER SHOVELS, DRILL OR AUGERS, LOADERS, PNEUMATIC OR HYDRAULIC HAMMERS, OR BULLDOZERS IS ALLOWED BETWEEN SUNRISE AND SUNSET ON MONDAY THROUGH FRIDAY, EXCEPT DESIGNATED LEGAL HOLIDAYS.
  - WORK INVOLVING THE MAINTENANCE OR SERVICING OF CONSTRUCTION VEHICLES OR EQUIPMENT OR DELIVERY OF CONSTRUCTION EQUIPMENT OR MATERIALS TO THE SITE AND WORK INVOLVING ANY DEVICE WHICH CREATES NOISE LEVEL EXCEEDING 45 DB(A) IS ALLOWED BETWEEN SUNRISE AND SUNSET MONDAY THROUGH SATURDAY, AND AT ALL TIMES ON SUNDAYS AND DESIGNATED LEGAL HOLIDAYS.

**MARICOPA COUNTY FLOOD CONTROL DISTRICT NOTES:**

- ALL WORK PERFORMED WITHIN FLOOD CONTROL DISTRICT OF MARICOPA COUNTY (DISTRICT) RIGHT-OF-WAY (ROW) SHALL CONFORM TO THE LATEST DISTRICT STANDARD PROCEDURES AND DETAILS AS PUBLISHED ON THE DISTRICT'S WEB SITE.
- THE PERMITTEE SHALL OBTAIN A COPY OF THE EXECUTED DISTRICT (ROW) USE PERMIT PRIOR TO COMMENCEMENT OF WORK WITHIN DISTRICT RIGHT-OF-WAY, MAINTAIN A COPY OF THE PERMIT AND STAMPED APPROVED PLANS ON THE PROJECT SITE AT ALL TIMES, AND SHALL BE AVAILABLE UPON REQUEST.
- THE PERMITTEE SHALL NOTIFY THE DISTRICT'S ASSIGNED OPERATIONS AND MAINTENANCE (O&M) INSPECTOR OR DAM SAFETY INSPECTOR AT LEAST 48 HOURS IN ADVANCE PRIOR TO ANY EXCAVATION, BACKFILL, SLURRY, CONCRETE, AND/OR RIPRAP REPLACEMENT BEING PERFORMED WITHIN THE DISTRICT'S (ROW). REFER TO THE EXECUTED DISTRICT PERMIT FOR THE (O&M) INSPECTOR'S CONTACT INFORMATION. IF WORK IS IMPACTING A DISTRICT LEVEE, DAM OR FLOOD RETARDING STRUCTURE (FRS), REFER TO THE EXECUTED DISTRICT PERMIT FOR THE LEVEE/DAM SAFETY INSPECTOR'S CONTACT INFORMATION.
- THE PERMITTEE PERFORMING EXCAVATION OPERATIONS IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL UNDERGROUND UTILITIES. TO EXPEDITE THIS PROCESS, THE PERMITTEE SHALL CALL ARIZONA 811 (FORMALLY ARIZONA BLUE STAKE) AT 811 OR 1-800-782-5348 TO IDENTIFY UNDERGROUND UTILITIES AT LEAST 48 HOURS IN ADVANCE PRIOR TO START OF THE WORK.
- ANY DAMAGE OR DISTURBANCE TO DISTRICT STRUCTURES, EQUIPMENT, MATERIALS, VEGETATION, OR SURROUNDING DISTRICT (ROW) SHALL BE REPLACED OR REPAIRED, IN-KIND, TO THE SATISFACTION OF THE DISTRICT'S (O&M) INSPECTORS OR LEVEE/DAM SAFETY INSPECTOR.
- IN THE EVENT THE TERMS AND CONDITIONS IN THE DISTRICT'S PERMIT ARE NOT CONSISTENT WITH THE DISTRICT-APPROVED PLANS, THE DISTRICTS' PERMIT WILL HAVE PRECEDENCE.
- IN ORDER TO CLOSE OUT THE DISTRICT'S PERMIT AND RELEASE PERFORMANCE BONDS, ALL WORK (INCLUDED ASSOCIATED PUNCH-LIST ITEMS) MUST BE COMPLETED IN FULL TO THE SATISFACTION OF THE DISTRICT'S INSPECTOR AND ENGINEER. CERTIFIED AS-BUILT PLANS ALONG WITH REQUIRED QUALITY ASSURANCE TEST MUST BE PROVIDED AND ACCEPTED BY THE DISTRICT, AND ALL EASEMENTS REQUIRED BY THE PROJECT MUST BE RECORDED PRIOR TO PERMIT CLOSEOUT. IF THE WORK ONLY INVOLVES GEOTECHNICAL ANALYSIS, SITE INVESTIGATIONS, SURVEYS, OR FLOOD RELATED STUDIES, THEN FINALIZED REPORTS, STUDIES AND/OR SURVEY PLANS MUST BE PROVIDED AND ACCEPTED BY THE DISTRICT PRIOR TO PERMIT CLOSEOUT.

**ABBREVIATIONS:**

APS	ARIZONA PUBLIC SERVICE ELECTRIC	UNK	UNKNOWN
BOC	BACK OF CURB	VCP	VITRIFIED CLAY PIPE
CATV	CABLE TELEVISION	W	WATER
CL OR C/L	CENTERLINE	YR	YEAR
CLINK	CENTURY LINK	&	AND
CMU	CONCRETE MASONRY UNIT		
CO	CURB OPENING		
COMM	COMMUNICATION		
CONST	CONSTRUCTION		
COPY	CITY OF PARADISE VALLEY		
COX	COX COMMUNICATIONS		
CFS	CUBIC FEET PER SECOND		
DIA	DIAMETER		
DTL	DETAIL		
DTLS	DETAILS		
E	UNDERGROUND ELECTRIC		
EOP	EDGE OF PAVEMENT		
EX	EXISTING		
FH	FIRE HYDRANT		
FND	FOUND		
G	GAS		
INV	INVERT		
IRR	IRRIGATION		
LF	LINEAR FEET		
LT	LEFT		
MAG	MARICOPA ASSOCIATION OF GOVERNMENTS		
MIN	MINIMUM		
OFF	OFFSET		
PCCP	PRESTRESSED CONCRETE		
CYLINDER	PIPE		
PH	POTHOLE		
PROP	PROPOSED		
Q	PEAK DISCHARGE		
R	RADIUS		
RCP	REINFORCED CONCRETE PIPE		
RT	RIGHT		
R/W	RIGHT OF WAY		
S	SEWER		
SD	STORM DRAIN		
SHT	SHEET		
SRP	SALT RIVER PROJECT		
STA	STATION		
STD	STANDARD		
STL	STEEL		
S/W	SIDEWALK		
T	TELEPHONE		
TRAF	UNDERGROUND TRAFFIC SIGNAL		

**SPECIFICATIONS:**

- UNLESS NOTED OTHERWISE HEREIN, ALL MATERIAL AND INSTALLATION PER "MARICOPA ASSOCIATION OF GOVERNMENTS (MAG) UNIFORM STANDARD SPECIFICATIONS AND DETAILS FOR PUBLIC WORKS CONSTRUCTION", CURRENT EDITION.
- CLEARING AND GRUBBING SHALL CONFORM TO SECTION 201.
- STRUCTURAL EXCAVATION AND BACKFILL SHALL CONFORM TO SECTION 206, 604 AND 728.
- EARTHWORK SHALL CONFORM TO SECTION 215.
- BACKFILL AND COMPACTION SHALL CONFORM TO SECTION 211 AND 601.
- RIP RAP SHALL CONFORM TO SECTION 220 AND 703.
- SUBGRADE PREPARATION SHALL CONFORM TO SECTION 301.
- AGGREGATE AND BASE SHALL CONFORM TO SECTION 310, 701, AND 702.
- PORTLAND CEMENT CONCRETE PAVEMENT (PCCP) SHALL CONFORM TO SECTION 324.
- PAVEMENT MATCHING AND SURFACE REPLACEMENT SHALL CONFORM TO SECTION 336.
- REMOVAL OF EXISTING SHALL CONFORM TO SECTION 350.
- TRAFFIC CONTROL SHALL CONFORM TO SECTION 401.
- CONCRETE STRUCTURES SHALL CONFORM TO SECTION 505.
- CONCRETE SHALL CONFORM TO SECTION 725 AND 726.
- STEEL REINFORCEMENT SHALL CONFORM TO SECTION 727 AND ASTM A615, GRADE 60.
- EXPANSION JOINT FILLER SHALL CONFORM TO SECTION 729.
- FILTER FABRIC SHALL CONFORM TO SECTION 796.

CONSTRUCTION QUANTITIES		
BID ITEM DESCRIPTION	UNITS	TOTAL
SAWCUT, DEMO AND REMOVE EXISTING CURB	LF	6,859
REPLACEMENT 2" VERTICAL CURB & GUTTER, TYPE A	LF	212
REPLACEMENT 6" VERTICAL CURB & GUTTER, TYPE B	LF	6,050
CONCRETE RIBBON CURB, TYPE B	LF	597
REFLECTORIZED RAISED PAVEMENT MARKER (DAGMAR)	EA	40
D50=5" RIPRAP	CY	88
D50=6" RIPRAP	CY	13

**Michael Baker INTERNATIONAL**  
 2929 N. CENTRAL AVE, SUITE 700  
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**LEGEND:**

	BENCHMARK
	EXISTING SURVEY MONUMENT - M.A.G. DETAIL 120-1 TYPE "B"
	EXISTING AREA LIGHT
	EXISTING WATER VALVE
	EXISTING FIRE HYDRANT
	EXISTING WATER METER
	EXISTING WATER RISER
	EXISTING GAS MARKER
	EXISTING GAS VALVE
	EXISTING TELEVISION PEDESTAL
	EXISTING COMMUNICATION PEDESTAL
	EXISTING UTILITY VAULT
	EXISTING UTILITY POLE
	EXISTING STREET OR TRAFFIC SIGN
	EXISTING SEWER MANHOLE
	EXISTING WATERLINE
	EDGE OF PAVEMENT AND CURB
	EXISTING GUY WIRE
	EXISTING UNDERGROUND LIGHT
	EXISTING BOULDER
	EXISTING MAIL BOX
	EXISTING CACTUS
	EXISTING PALM TREE
	EXISTING TREE
	EXISTING BUSH
	EXISTING FLOW PATH
	PROPOSED FLOW PATH
	PROPOSED CURB & GUTTER
	PROPOSED RIBBON CURB
	PROTECT IN PLACE
	CONSTRUCTION LIMITS



**TOWN OF PARADISE VALLEY ARIZONA**

**CURB REPLACEMENT PROJECTS**

McDonald Drive: 40th Street to 44th Street, CIP Project No. 2020-09  
 45th Street: McDonald Drive to Valley Vista Lane, CIP Project No. 2020-07

DESIGNED: ASN	DRAWN: JRN	CHECKED: BT	PROJ NO: 2020-09 & 2020-07	SHEET NO: TOTAL SHEETS:
DATE: MARCH 05, 2026	MBI PROJ NO: 207533	2	10	

**GENERAL NOTES, ABBREVIATIONS AND LEGEND G-002**

**Michael Baker**  
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 MBAKERINTL.COM



*Rjonn Burns*



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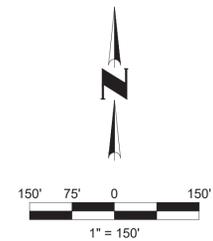
**TOWN OF PARADISE VALLEY**  
**ARIZONA**

**CURB REPLACEMENT PROJECTS**  
 McDonald Drive: 40th Street to 44th Street, CIP Project No. 2020-09  
 45th Street: McDonald Drive to Valley Vista Lane, CIP Project No. 2020-07

DESIGNED: ASN	DRAWN: JRN	CHECKED: BT	PROJ NO: 2020-09 & 2020-07	SHEET NO: 3	TOTAL SHEETS: 10
DATE: MARCH 05, 2026	MBI PROJ NO: 207533				

**KEY MAP**

**CS100**

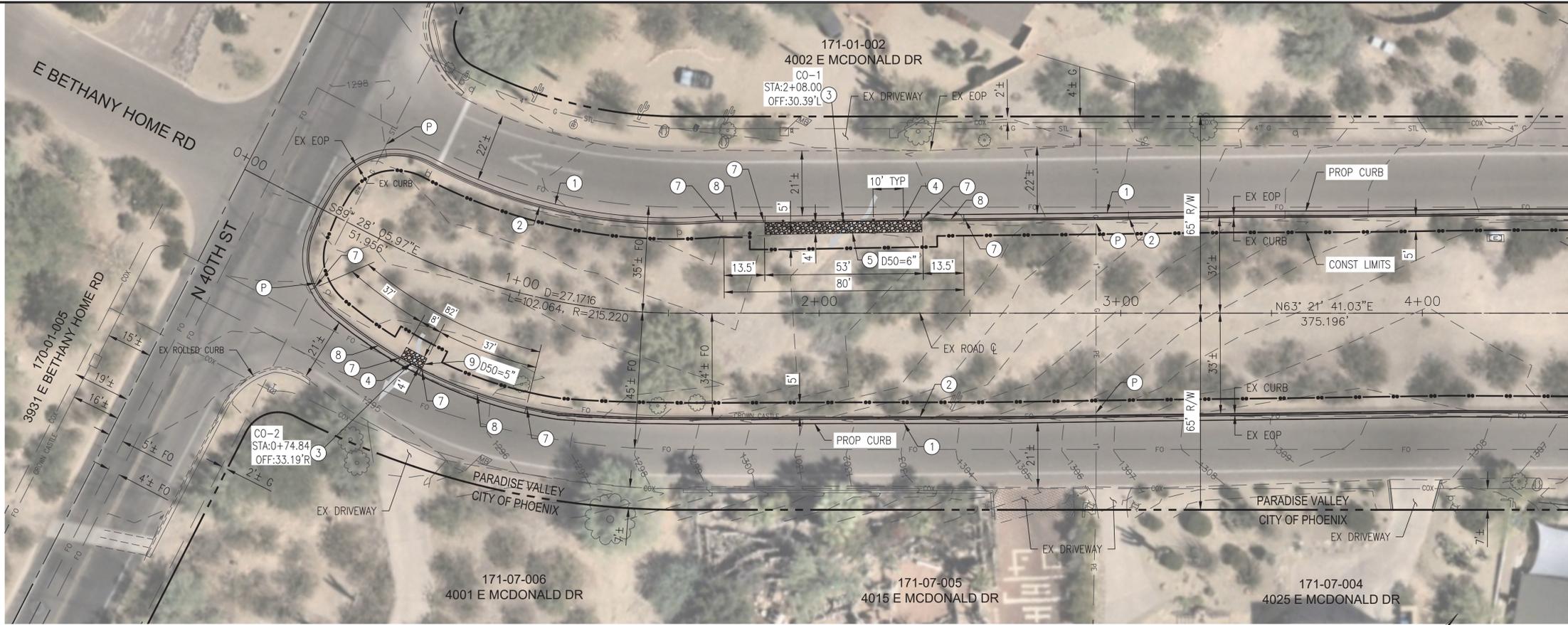


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MCDONALD DR: 40TH ST TO 44TH ST, 2020-09 / 45TH ST: MCDONALD DR TO VALLEY VISTA LN, 2020-07

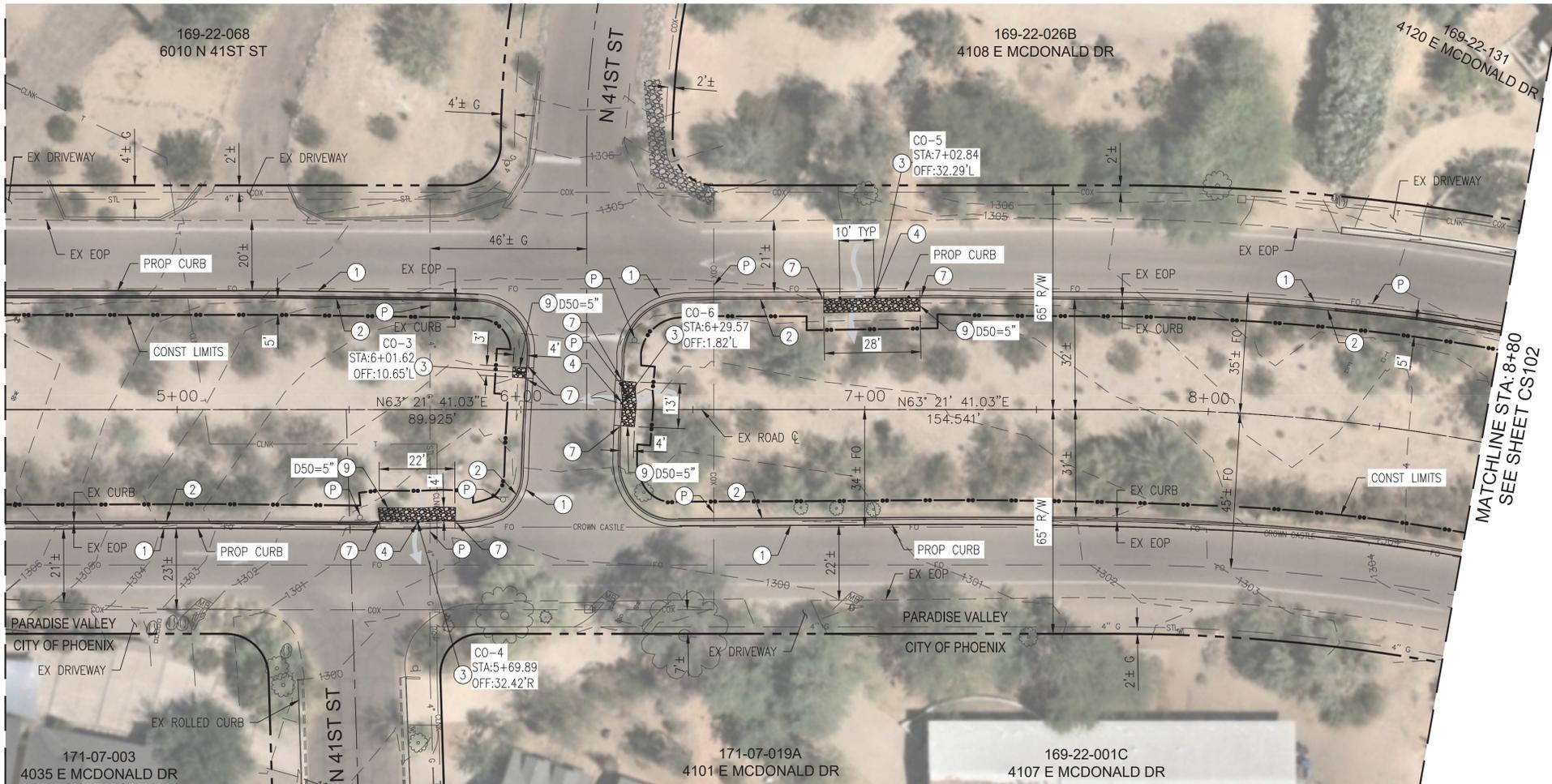
**CONSTRUCTION NOTES**

- ① SAWCUT EXISTING ASPHALT PAVEMENT TO FULL DEPTH TO PROVIDE A NEAT AND CLEAN EDGE FOR THE NEW CURB AND GUTTER SUCH THAT THE VERTICAL FACE OF THE INSTALLED CURB IS LOCATED IN THE SAME HORIZONTAL PLACEMENT AS THE EXISTING CURB FACE.
- ② CONSTRUCT 6" CURB AND GUTTER PER MAG STD DTL 220-1, TYPE 'A', SUCH THAT THE VERTICAL FACE OF THE INSTALLED CURB IS LOCATED IN THE SAME HORIZONTAL PLACEMENT AS THE EXISTING CURB FACE.
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- ⑤ INSTALL RIP-RAP WITH A DEPTH OF 1.65'
- ⑥ CONSTRUCT CURB TRANSITION PER MODIFIED MAG STD DTL 222.
- ⑦ CONSTRUCT 2" CURB AND GUTTER PER MAG STD DTL 220-1, TYPE 'A', SUCH THAT THE VERTICAL FACE OF THE INSTALLED CURB IS LOCATED IN THE SAME HORIZONTAL PLACEMENT AS THE EXISTING CURB FACE.
- ⑧ INSTALL RIP-RAP WITH A DEPTH OF 1.47'
- ⑨ PROTECT-IN-PLACE



MATCHLINE STA: 4+50  
SEE SHEET BELOW

**E MCDONALD DRIVE**



SEE SHEET ABOVE  
MATCHLINE STA: 4+50

MATCHLINE STA: 8+80  
SEE SHEET CS102



REVISIONS BY TOWN OF PARADISE VALLEY

NO	DESCRIPTION	REV BY	CKD BY	DATE



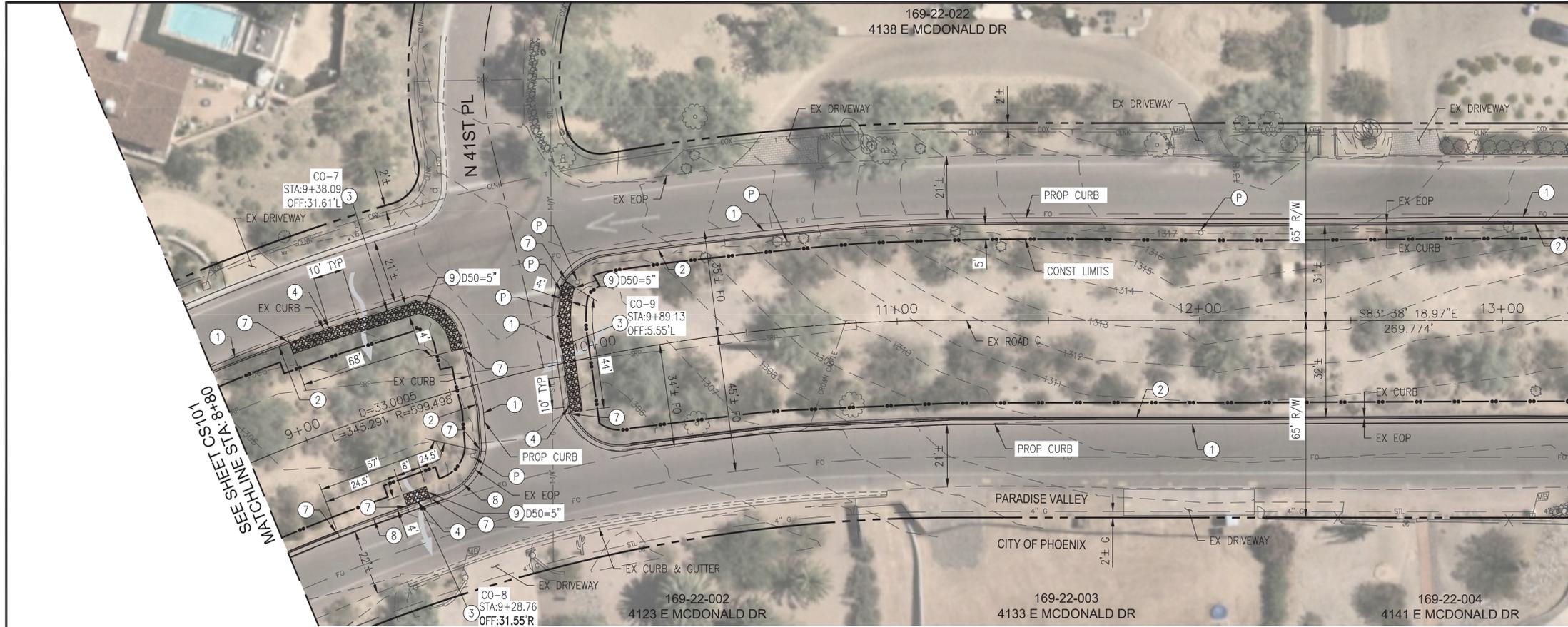
**CURB REPLACEMENT PROJECTS**  
 McDonald Drive: 40th Street to 44th Street, CIP Project No. 2020-09  
 45th Street: McDonald Drive to Valley Vista Lane, CIP Project No. 2020-07

DESIGNED: ASN	DRAWN: JRN	CHECKED: BT	PROJ NO: 2020-09 & 2020-07	SHEET NO: 4	TOTAL SHEETS: 10
DATE: MARCH 05, 2026	MBI PROJ NO: 207533				

PLAN VIEW CS101

**CONSTRUCTION NOTES**

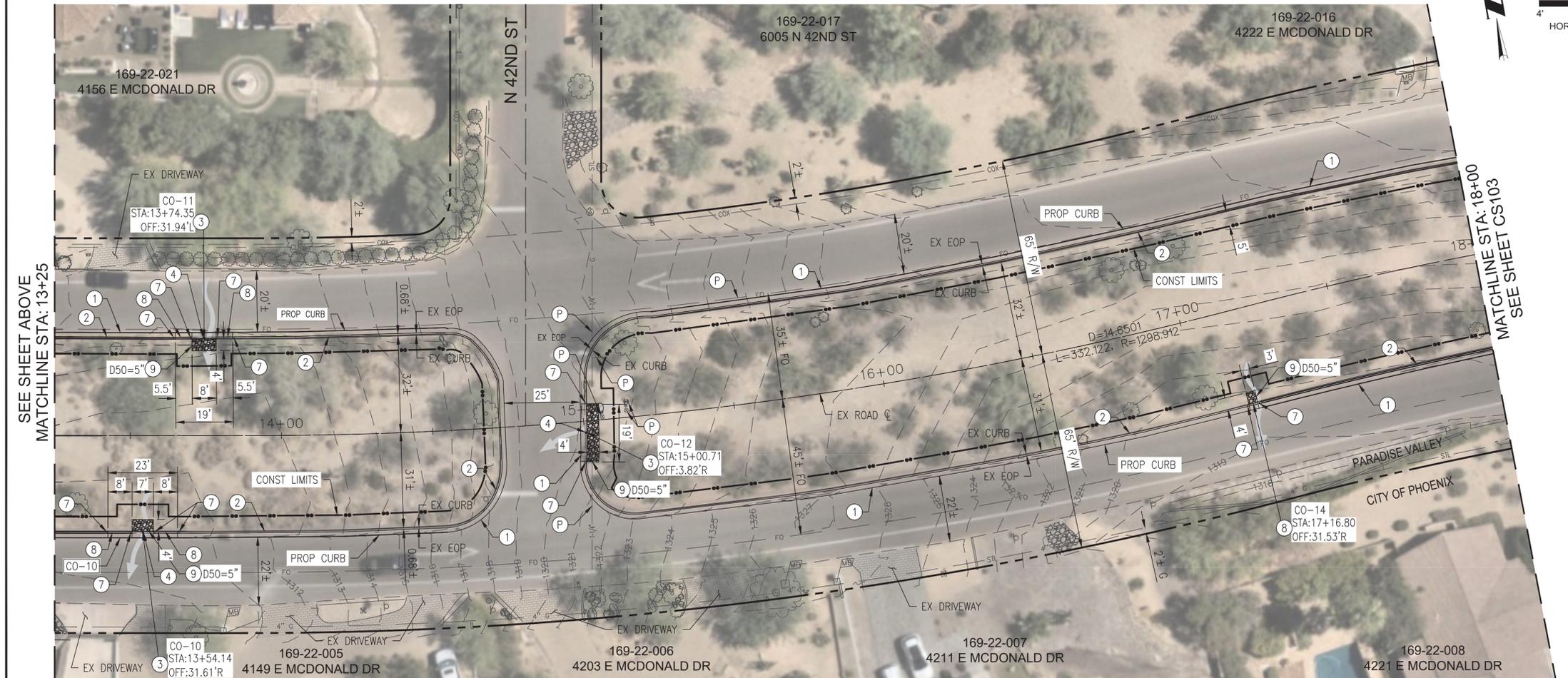
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- ⑨ INSTALL RIP-RAP WITH A DEPTH OF 1.47'
- (P) PROTECT-IN-PLACE



MATCHLINE STA: 13+25  
SEE SHEET BELOW

MATCHLINE STA: 8+00  
SEE SHEET CS101

**E MCDONALD DRIVE**



MATCHLINE STA: 18+00  
SEE SHEET CS103

MATCHLINE STA: 13+25  
SEE SHEET ABOVE



REVISIONS BY TOWN OF PARADISE VALLEY

NO	DESCRIPTION	REV BY	CKD BY	DATE



**TOWN OF PARADISE VALLEY**  
**ARIZONA**

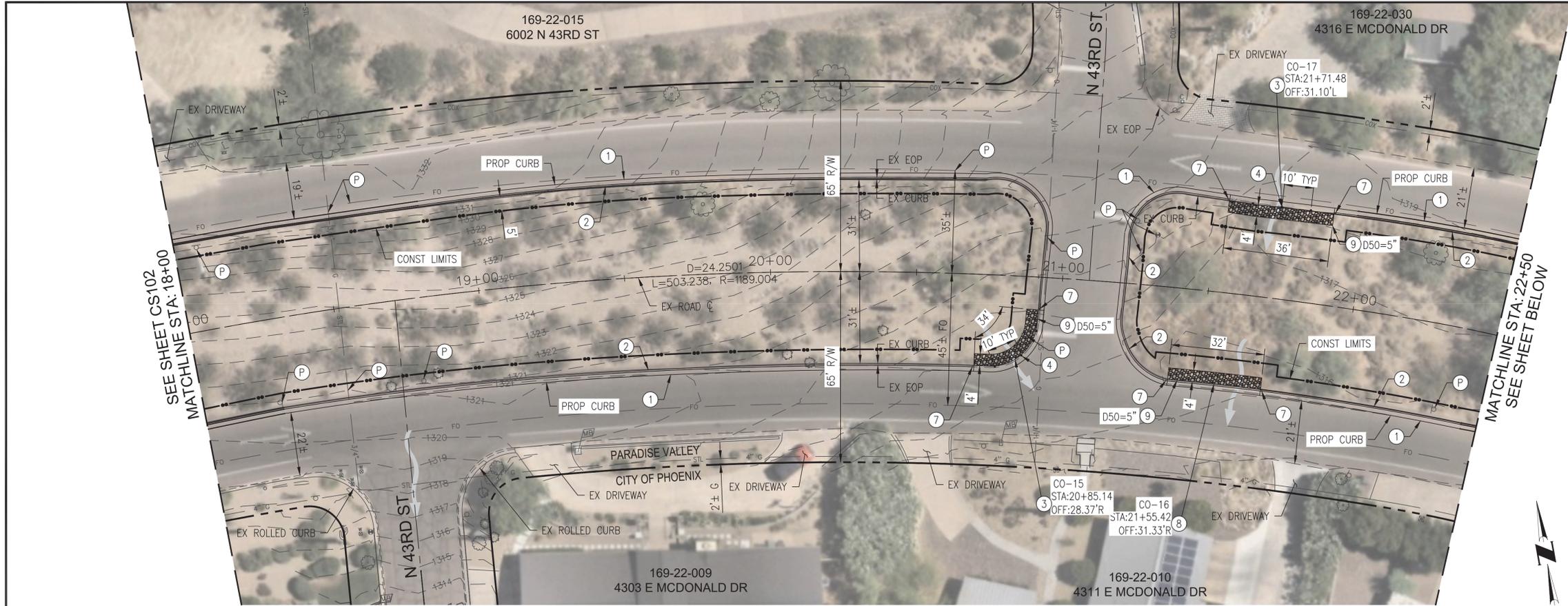
**CURB REPLACEMENT PROJECTS**  
 McDonald Drive: 40th Street to 44th Street, CIP Project No. 2020-09  
 45th Street: McDonald Drive to Valley Vista Lane, CIP Project No. 2020-07

DESIGNED: ASN	DRAWN: JRN	CHECKED: BT	PROJ NO: 2020-09 & 2020-07	SHEET NO: 5	TOTAL SHEETS: 10
DATE: MARCH 05, 2026	MBI PROJ NO: 207533				

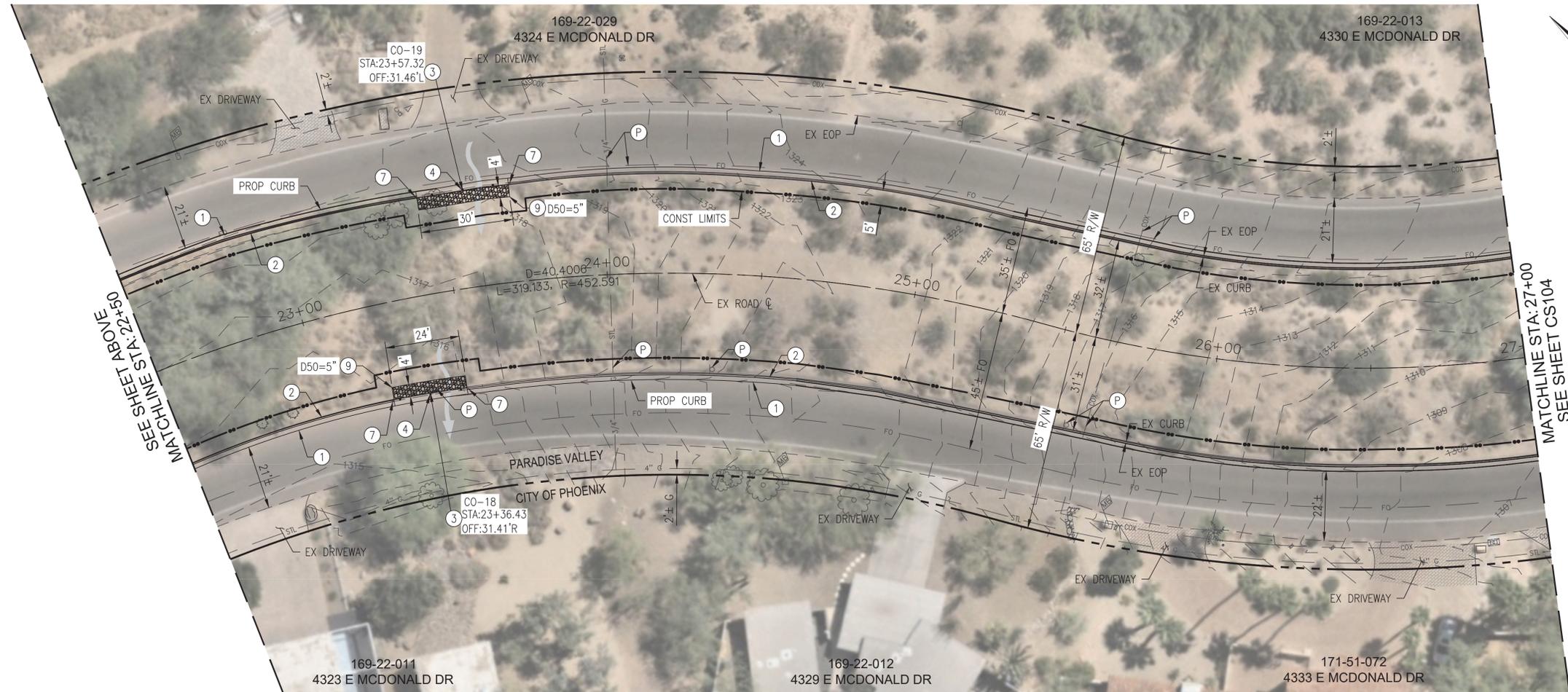
**PLAN VIEW** **CS102**

**CONSTRUCTION NOTES**

- ① SAWCUT EXISTING ASPHALT PAVEMENT TO FULL DEPTH TO PROVIDE A NEAT AND CLEAN EDGE FOR THE NEW CURB AND GUTTER SUCH THAT THE VERTICAL FACE OF THE INSTALLED CURB IS LOCATED IN THE SAME HORIZONTAL PLACEMENT AS THE EXISTING CURB FACE.
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- ⑨ INSTALL RIP-RAP WITH A DEPTH OF 1.47'
- Ⓟ PROTECT-IN-PLACE



**E MCDONALD DRIVE**



Contact Arizona 811 at least two full working days before you begin excavation

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REVISIONS BY TOWN OF PARADISE VALLEY

NO	DESCRIPTION	REV BY	CKD BY	DATE

**TOWN OF PARADISE VALLEY ARIZONA**

**CURB REPLACEMENT PROJECTS**  
 McDonald Drive: 40th Street to 44th Street, CIP Project No. 2020-09  
 45th Street: McDonald Drive to Valley Vista Lane, CIP Project No. 2020-07

DESIGNED: ASN	DRAWN: JRN	CHECKED: BT	PROJ NO: 2020-09 & 2020-07	SHEET NO: 6	TOTAL SHEETS: 10
DATE: MARCH 05, 2026	MBI PROJ NO: 207533				

**PLAN VIEW CS103**

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MCDONALD DR: 40TH ST TO 44TH ST, 2020-09 / 45TH ST: MCDONALD DR TO VALLEY VISTA LN, 2020-07

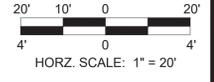
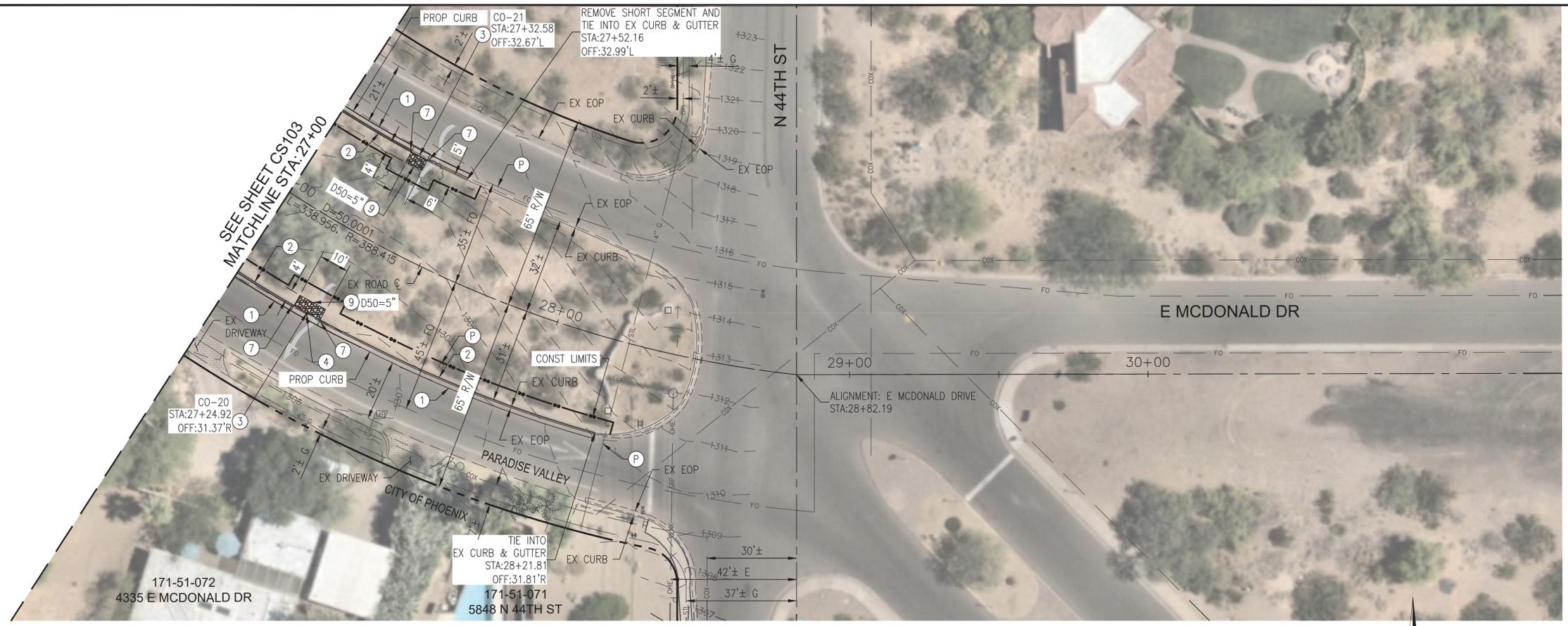
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 PHOENIX, AZ 85012  
 PHONE: (602) 279-1234  
 MBAKERINTL.COM



**CONSTRUCTION NOTES**

- ① SAWCUT EXISTING ASPHALT PAVEMENT TO FULL DEPTH TO PROVIDE A NEAT AND CLEAN EDGE FOR THE NEW CURB AND GUTTER SUCH THAT THE VERTICAL FACE OF THE INSTALLED CURB IS LOCATED IN THE SAME HORIZONTAL PLACEMENT AS THE EXISTING CURB FACE.
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- ⑨ INSTALL RIP-RAP WITH A DEPTH OF 1.47'
- (P) PROTECT-IN-PLACE



**E MCDONALD DRIVE**



REVISIONS BY TOWN OF PARADISE VALLEY

NO	DESCRIPTION	REV BY	CKD BY	DATE



**TOWN OF PARADISE VALLEY ARIZONA**

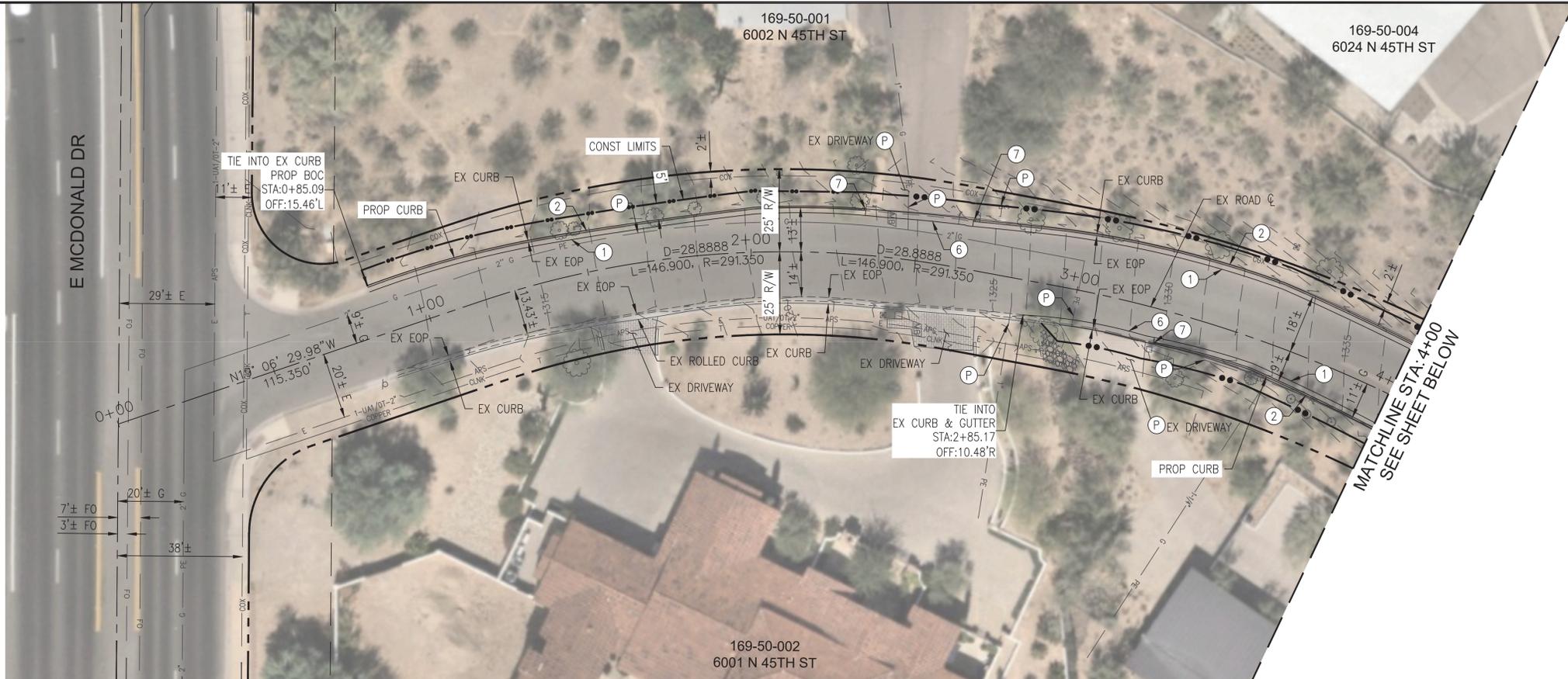
**CURB REPLACEMENT PROJECTS**  
 McDonald Drive: 40th Street to 44th Street, CIP Project No. 2020-09  
 45th Street: McDonald Drive to Valley Vista Lane, CIP Project No. 2020-07

DESIGNED: ASN	DRAWN: JRN	CHECKED: BT	PROJ NO: 2020-09 & 2020-07	SHEET NO: 7	TOTAL SHEETS: 10
DATE: MARCH 05, 2026	MBI PROJ NO: 207533				

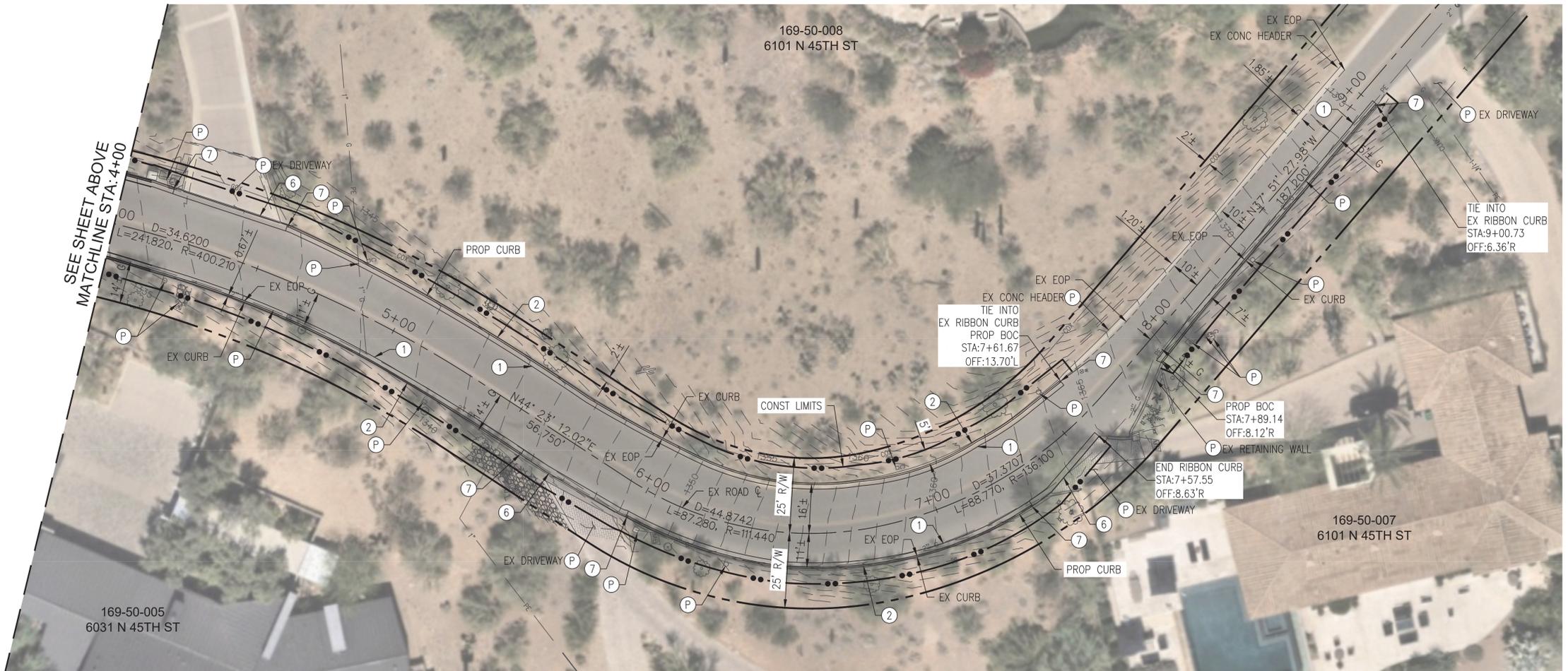
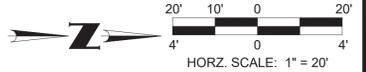
**PLAN VIEW CS104**

MCDONALD DR: 40TH ST TO 44TH ST, 2020-09 / 45TH ST: MCDONALD DR TO VALLEY VISTA LN, 2020-07

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N 45TH STREET



REVISIONS BY TOWN OF PARADISE VALLEY

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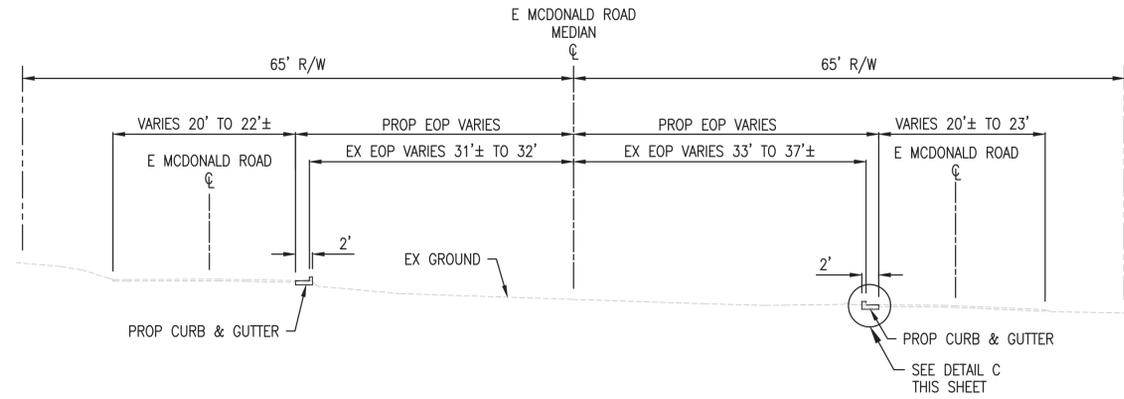
CURB REPLACEMENT PROJECTS  
 McDonald Drive: 40th Street to 44th Street, CIP Project No. 2020-09  
 45th Street: McDonald Drive to Valley Vista Lane, CIP Project No. 2020-07

DESIGNED: ASN	DRAWN: JRN	CHECKED: BT	PROJ NO: 2020-09 & 2020-07	SHEET NO: 8	TOTAL SHEETS: 10
DATE: MARCH 05, 2026	MBI PROJ NO: 207533				

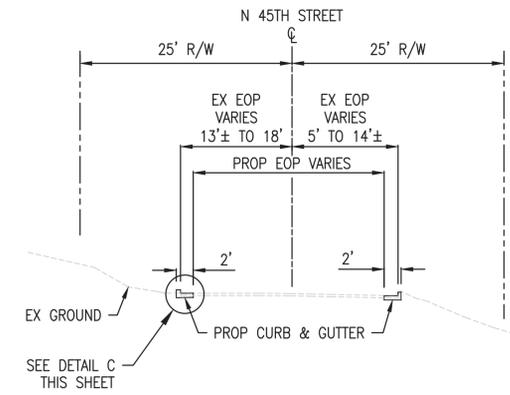
PLAN VIEW CS105

MCDONALD DR: 40TH ST TO 44TH ST, 2020-09 / 45TH ST: MCDONALD DR TO VALLEY VISTA LN, 2020-07

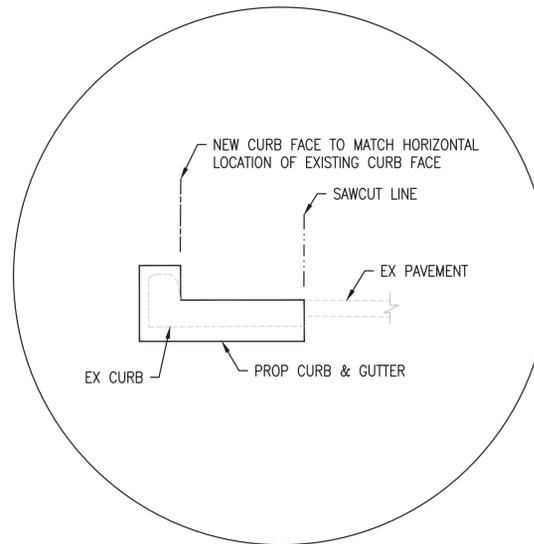
*R. J. Burns*



**A** TYPICAL SECTION - E MCDONALD ROAD



**B** TYPICAL SECTION - N 45TH STREET



**C** ENLARGED CURB DETAIL

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REVISIONS BY TOWN OF PARADISE VALLEY				
NO	DESCRIPTION	REV BY	CKD BY	DATE

	<b>TOWN OF PARADISE VALLEY</b> <b>ARIZONA</b>		
	<b>CURB REPLACEMENT PROJECTS</b> McDonald Drive: 40th Street to 44th Street, CIP Project No. 2020-09 45th Street: McDonald Drive to Valley Vista Lane, CIP Project No. 2020-07		
DESIGNED: ASN DATE: MARCH 05, 2026	DRAWN: JRN CHECKED: BT	PROJ NO: 2020-09 & 2020-07 MBI PROJ NO: 207533	SHEET NO: 9 TOTAL SHEETS: 10
<b>TYPICAL SECTIONS</b>			<b>CS301</b>

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**NOTES: (TYPE A)**

- ALL EXPOSED SURFACES TO BE TROWEL FINISHED EXCEPT AS SHOWN. SEE SECT. 340.
- H=4\" OR AS SPECIFIED ON PLANS.
- CONTRACTION JOINT SPACING 10' MAXIMUM.
- EXPANSION JOINTS AS PER SECT. 340.
- CLASS 'B' CONCRETE PER 725.
- WHEN THE ADJACENT PAVEMENT SECTION SLOPES AWAY FROM THE GUTTER, THE SLOPE OF THE GUTTER PAN SHALL MATCH PAVEMENT CROSS SLOPE.

**NOTES: (TYPE B)**

- CONSTRUCT CURB AND INSTALL 1/2\" MASTIC EXPANSION JOINTS, A.S.T.M. D-1751, SECT. 340.
- BROOM FINISH ALL SURFACES.
- RIBBON CURB MAY SLOPE TOWARDS PAVEMENT OR PARKWAY AS INDICATED ON PLANS.
- CONTRACTION JOINT SPACING 10' MAXIMUM.
- CONCRETE SHALL BE CLASS 'B' PER SECT. 725 AND INSTALLED PER SECT. 505.

**NOTES: (C & D)**

- ALL WORK AND MATERIALS SHALL CONFORM TO SECT. 340, 505 AND 725. BROOM FINISH TO EXPOSED SURFACE.
- CONTRACTION JOINT SPACING 10' MAXIMUM.
- EXPANSION JOINTS AS PER SECT. 340.
- CLASS 'B' CONCRETE PER 725.

DETAIL NO. 220-1 MARIICOPA ASSOCIATION OF GOVERNMENTS STANDARD DETAIL ENGLISH CURB AND GUTTER TYPES A, B, C AND D REVISED 01-01-2021 DETAIL NO. 220-1

**NOTES:**

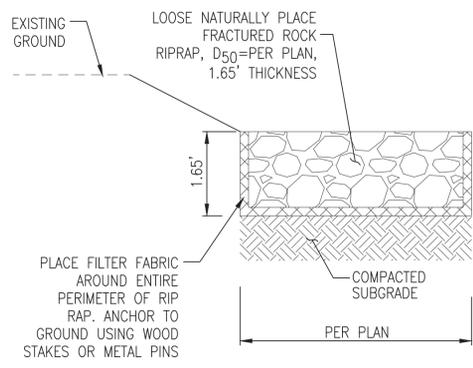
- ALL VERTICAL SURFACES TO BE FORMED.
- VERTICAL SURFACES DOWN FROM 2\" BELOW UNDISTURBED SOIL MAY BE PLACED AGAINST NEAT CUT IF APPROVED BY THE ENGINEER AND CONCRETE WILL NOT EXTEND MORE THAN 1\" BEYOND THEORETICAL FACE.
- ALL EXPOSED SURFACES TO BE STRIPPED GREEN AND TROWEL FINISHED.
- CONCRETE CURBS CONFORM TO SECT. 340.
- MAXIMUM SPACING OF CONTRACTION JOINTS IS 10'.
- CONCRETE TO BE CLASS 'B' PER SECT. 725.
- WHEN PAVEMENT AND BASE COURSE EQUALS OR EXCEEDS 10\" IN DEPTH, THE ENTIRE ROADWAY SIDE OF THE CURB SHALL BE FORMED. THE TOTAL CURB HEIGHT REMAINS 18\" UNLESS NOTED OTHERWISE.
- H=6\" OR AS SPECIFIED ON PLANS.

TYPICAL CURB TRANSITION

DETAIL NO. 222 MARIICOPA ASSOCIATION OF GOVERNMENTS STANDARD DETAIL ENGLISH SINGLE CURB - TYPES A, B AND MODIFIED TRANSITION REVISED 01-01-2008 DETAIL NO. 222

**Michael Baker INTERNATIONAL**  
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 PHOENIX, AZ 85012  
 PHONE: (602) 279-1234  
 MBAKERINTL.COM

Professional Engineer  
 CERTIFICATE NO. 73568  
 R. JONN BURNS  
 State Expired 03/05/26  
 ARIZONA, U.S.A.



DESIGN GRADATION FOR RIPRAP			
GRADATION		RIPRAP (D50)	
SIZE	% PASSING	6"	9"
2.0 D50	100	12"	18"
1.5 D50	85-100	9"	14"
1.0 D50	10-30	6"	9"
0.67 D50	0-10	4"	6"
0.33 D50	0-5	2"	3"

3 RIP RAP DETAIL  
N.T.S.

Contact Arizona 811 at least two full working days before you begin excavation

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REVISIONS BY TOWN OF PARADISE VALLEY

NO	DESCRIPTION	REV BY	CKD BY	DATE

**TOWN OF PARADISE VALLEY ARIZONA**

CURB REPLACEMENT PROJECTS  
 McDonald Drive: 40th Street to 44th Street, CIP Project No. 2020-09  
 45th Street: McDonald Drive to Valley Vista Lane, CIP Project No. 2020-07

DESIGNED: ASN DRAWN: JRN CHECKED: BT PROJ NO: 2020-09 & 2020-07 SHEET NO: TOTAL SHEETS: 10 10  
 DATE: MARCH 05, 2026 MBI PROJ NO: 207533

**DETAILS CS501**

MCDONALD DR: 40TH ST TO 44TH ST, 2020-09 / 45TH ST: MCDONALD DR TO VALLEY VISTA LN, 2020-07

## TECHNICAL SPECIFICATIONS FOR CONSTRUCTION

### TOWN OF PARADISE VALLEY Curb Replacement Projects

McDonald Drive: 40th Street to 44th Street,  
CIP Project No. 2020-09

45th Street: McDonald Drive to Valley Vista Lane,  
CIP Project No. 2020-07



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## **TECHNICAL SPECIFICATIONS**

The work described herein and shown on the Plans for this project shall be performed in accordance with the Maricopa Association of Governments (MAG) Uniform Standard Specifications and Uniform Standard Details for Public Works Construction, 2025 Edition, and additional Special Conditions that follow. In the event a conflict exists on the plans or between the plans and referenced specifications or these construction technical specifications, the order of precedence shall be as follows:

1. Change Orders
2. Addenda
3. The Technical Specifications for Construction
4. The Project Plans
5. MAG Uniform Standard Specifications and Details for Public Works Construction
6. 2009 Manual on Uniform Traffic Control Devices (MUTCD) with Supplements

### **LOCATION OF THE WORK:**

The McDonald Drive and 45<sup>th</sup> Street Curb Replacement Project is located in the Town of Paradise Valley. The first segment runs along East McDonald Drive between North 40<sup>th</sup> Street and North 44<sup>th</sup> Street, covering roughly 2800-ft. The second segment begins at the intersection of East McDonald Drive and North 45<sup>th</sup> Street, extending approximately 1000 feet north along North 45<sup>th</sup> Street.

### **PROPOSED WORK:**

The work consists of the replacement of existing asphalt curb with new concrete curb and gutter with curb openings to accommodate stormwater flows.

### **GEOTECHNICAL REPORT:**

A Geotechnical Engineering Report was not completed for this project. The Contractor, at their sole cost, may make arrangements they deem necessary to become familiar with underground soils conditions prior to beginning construction.

## **CONTRACT STANDARD SPECIFICATIONS AND DRAWINGS:**

**The following Standard Specifications and Standard Drawings referenced in the project contract documents are required for construction of this project:**

- MAG Uniform Specifications and Details for Public Works Construction, 2025 Edition
- Manual on Uniform Traffic Control Devices (MUTCD), 2009 Edition with latest Supplements

**The following conditions or items are not considered for separate measurement or payment and are therefore considered incidental to an item to which it is closely associated.**

### **WORKING HOURS:**

Work on this project shall not begin before 7:00 a.m. and shall conclude prior to 5:00 p.m. each weekday unless otherwise approved by the Town. With a waiver granted by the Town Manager, work on this project may be revised to between 7:00 a.m. and 7:00 p.m. Work at times other than those specified, such as during summer months, will be considered by the Town and subject to the duration and type of activity proposed and the resulting impact on adjacent residential and commercial areas.

If the Contractor is permitted to work between the hours of 7:00 p.m. and 7:00 a.m., the Town will determine what measures the Contractor will be required to make to inform the affected public.

Hours for hauling operations shall be subject to approval by, and if necessary, permits from the Town of Paradise Valley, Maricopa County and other applicable municipalities, in accordance with local ordinances.

### **NOISE MITIGATION:**

The Contractor is responsible for any construction noise mitigation measures needed to meet the noise ordinances of the Town of Paradise Valley (Town Code Section 8-10) and Maricopa County.

### **BUSINESS, UTILITY FACILITIES, AND PRIVATE PROPERTY ACCESS:**

Emergency vehicle, postal delivery, garbage/recycling pickup, school bus routes, and driveway accesses to businesses, utility facilities, and private property shall be maintained at all times. Short-term closures may be permitted subject to prior approval by the Construction Manager and property owner. Contractor shall notify property owners ten calendar days in advance of any construction on driveways or streets that result in lane restrictions or closures.

### **DEWATERING:**

It is the Contractor's responsibility to make provisions for the removal and/or control of surface and subsurface water infiltrating into the work areas during construction. No direct payment will

be made for dewatering accumulated ground or surface water, or water of any origin including irrigation water, costs for this work shall be included in the total bid price for the project.

**SAWCUTTING:**

Saw cuts at locations where new improvements abut existing asphalt pavement or concrete surfaces will be required. This shall include existing bituminous pavements, sidewalks, driveways, and curbs and gutters where new construction shall match the elevation of existing surfaces that are to remain. Saw cut lines may be subject to change by direction of the Construction Manager to best fit the conditions found in the field.

Saw cuts shall be made to full depth to ensure a straight, neat, and clean vertical edge. The Contractor is responsible to create a straight edge and will be responsible to maintain the proper curb width, and will not be paid for additional curb width. No measurement or payment will be made for saw cutting. The cost shall be included in the respective price for bid items to remove asphalt or concrete.

**POWER LINES:**

There are underground power lines within the project limits. All work at or in close proximity to said lines shall be performed in accordance with all Federal, State, and local laws and regulations, including but not limited to:

- A. Arizona law regarding "Underground Facilities" (A.R.S. 40-360.21, .22, .24, .26 and .28).
- B. Arizona law regarding "High Voltage Power Lines and Safety Restrictions" (A.R.S. 40-360.41 - .45).
- C. The Occupational Safety and Health Administration.
- D. The National Electric Safety Code.

**PERMITS:**

Contractor is responsible for obtaining all other necessary permits from appropriate governing agencies and paying applicable fees prior to starting construction activities. Samples of permits could include:

- A. Right-of-Way
- B. Dust control
- C. Storm water pollution control
- D. Signing and striping improvements
- E. Floodplain Use Permit
- F. Other permits required by other agencies and/or private utilities (i.e. Berneil Water, etc.)

**CONDITION OF MATERIALS:**

All materials incorporated into the project are expected to be placed into service in new, clean and unblemished condition. Any materials stored unprotected from their original manufacturer's packaging shall be cleaned of any foreign matter prior to use. All stored materials shall be

protected from surface scarring, dents, sun and weather damage. All materials found to deviate from manufacture's original size, shape or condition may be subject to reorder at the discretion of the Construction Manager.

**EARTHWORK:**

Subgrade preparation will be measured for payment per MAG Subsection 301.7.

Scarifying, regrading and compacting existing subgrade for new paving improvements will not be measured for separate payment but shall be considered incidental to subgrade preparation.

All other excavation along with all grading, backfill, borrow, embankment, or fill construction required on the project will not be measured for separate payment but shall be considered incidental to other contract bid items.

**MAG Uniform Standard Specifications are hereby modified to more accurately conform to the needs of this project as follows:**

## **MAG SECTION 101 ABBREVIATIONS AND DEFINITIONS**

### **101.2 DEFINITIONS AND TERMS: ENGINEER:**

This section is modified to add “Construction Manager” as a duly authorized representative.

### **101.2 DEFINITIONS AND TERMS:**

*This section is modified to add the following terms:*

- TOWN: the Town of Paradise Valley

## **MAG SECTION 105 CONTROL OF WORK**

### **105.6 COOPERATION WITH UTILITIES:**

*This section is modified to add:*

The locations of underground utilities as shown on the plans are based on the best available information gathered from as-builts, field observations, and Blue Stake markings. The Contractor shall not assume that this represents an exact location of the indicated utility or that all utilities are shown on the plans. No guarantee is made to the accuracy of the location shown on the plans. It is the responsibility of the Contractor to verify and determine the exact location of all utilities and protect them in-place.

The following utilities are expected to be located within the limits of this project:

<b>Utility</b>	<b>Contact</b>	<b>Phone Number</b>
APS Electric	APS Locate Department	602-493-4225
SRP Electric	SRP Bluestake	602-236-8026
City of Phoenix Water, Wastewater, Storm Drain	Hector Lepur	602-534-8342

Cox Communications	ELM Utility Services	406-728-9343
CenturyLink/Lumen	Jesus Soriano	623-300-4692
Southwest Gas	ELM Locating Dispatch	623-780-3350
Crown Castle	Fiber Dig Team	800-654-3110
EPCOR	Lee Huddleston	602-882-4846

**ADD 105.6.1 APS ELECTRIC:**

APS has existing underground distribution facilities along the east side of 45<sup>th</sup> St behind the curb. The contractor shall protect in place all APS facilities.

**ADD 105.6.2 SRP ELECTRIC:**

SRP has existing underground distribution facilities along the median of McDonald Dr beyond the curb. The contractor shall protect in place all SRP facilities.

**ADD 105.6.3 CITY OF PHOENIX:**

City of Phoenix has infrastructure south of McDonald Dr and has responded they have no conflicts with the project.

**ADD 105.6.5 COX COMMUNICATIONS:**

Cox has underground facilities along the north side of the east bound lane of 45<sup>th</sup> St and along the north and south sides of McDonald Dr. The contractor shall protect in place all COX facilities.

**ADD 105.6.5 CROWN CASTLE:**

Crown Castle has underground facilities along the north side of the east bound lane of McDonald Dr in the median. The contractor shall protect in place all Crown Castle facilities.

**ADD 105.6.3 EPCOR:**

EPCOR has responded they have no conflicts with the project.

**ADD 105.6.6 CENTURY LINK/LUMEN:**

CenturyLink/Lumen has underground facilities running along the north side of the west bound lane of McDonald Dr between 41<sup>st</sup> St and 42<sup>nd</sup> St, a north to south crossing of McDonald Dr west of the intersection with 41<sup>st</sup> St., and the east side of 45<sup>th</sup> St behind the curb. They also have an aerial crossing of the east bound lane of McDonald Dr at the intersection with 44<sup>th</sup> St. The Contractor shall protect in place all CenturyLink/Lumen facilities.

**ADD 105.6.7 SOUTHWEST GAS (SWG):**

SWG has a 4" steel line along the south side of the east bound lane of McDonald Dr with multiple south to north crossings at intersections between 41<sup>st</sup> St and 44<sup>th</sup> St and along the north side of the west bound lane of McDonald Dr between 40<sup>th</sup> St and 41<sup>st</sup> St. SWG has a 2" line running up 45<sup>th</sup> St 5' to 11' feet off of centerline with services crossing the work area. The Contractor shall protect in place all gas facilities.

**105.8 CONSTRUCTION STAKES, LINES, AND GRADES:**

*This section is deleted in its entirety and replaced with the following:*

Contractor shall be responsible for creating red-lines for "Record Drawing" preparation. All alterations from the plans must be approved by the Construction Manager prior to the work being done and subsequently documented on the record drawings. The Contractor shall keep accurate data and field notes as construction progresses for preparation of the "Record Drawings". Contractor shall submit redlined drawings to the Construction Manager for preliminary review. Contractor shall make all corrections required and resubmit a new copy to the Construction Manager for review and approval. Final payment will be made upon Construction Manager's acceptance of the redlined "Record Drawings". These final red-lined "Record Drawings" must be certified by a licensed Arizona Land Surveyor or an Arizona Registered Professional Engineer by signing the cover sheet of the plans.

Contractor shall furnish all materials, personnel, tools, and equipment necessary to perform all surveying, construction staking, establishment of all excavation boundaries, and verification of the accuracy of all existing control points which have been provided by the Town. Contractor shall furnish sufficient construction stakes, lines, and grades to accomplish the work as indicated on the plans. Contractor shall verify all horizontal and vertical controls and establish secondary points and/or benchmarks for construction. The control point verification process shall include locating and making ties to all section lines, right-of-ways, and roadway monuments in the vicinity of the proposed work. Included in this work shall be all calculations required for the satisfactory completion of the project in conformance with the plans and these specifications. The work shall be done under the direction of a registered professional engineer or a registered land surveyor employed by the contractor. The crew chief shall be NSPS Certified Level III, NICET Certified Level III, or a registered Land Surveyor-in-Training. A minimum of 50 percent of the survey crew shall be either NSPS Certified Level II or NICET Certified Level II.

If errors are discovered during the verification process, and control points do not agree with the geometrics shown in the plans, the contractor shall promptly notify the Construction Manager in writing and explain the problem in detail. The Construction Manager will advise the Contractor within five working days of any corrective actions which may be deemed necessary.

The Contractor shall carefully preserve all construction stakes, reference points and other survey points, and in the case of their loss or destruction, shall replace them at the direction of the Construction Manager. Wooden lath or stakes used during construction shall be removed as part

Existing cadastral corners, such as section corners, quarter corners, intersecting street centerline monuments, and property corners that are destroyed by the Contractor shall be re-established by a registered land surveyor employed by the Contractor.

Where utility adjustments are required, the Contractor shall perform all layout work and set all control points, stakes and references necessary for carrying out all such adjustments.

The Contractor shall furnish all traffic control, including flagging for survey and staking operations. Traffic control devices and procedures for construction surveying shall be in accordance with the requirements of the MUTCD.

Prior to beginning any survey operations, the Contractor shall furnish to the Construction Manager, for approval, a written outline detailing the method of staking, marking of stakes, grade control for various courses of materials, referencing, structure control, pavement markings, and any other procedures and controls necessary for survey completion. A part of this outline shall also be a schedule which will show the sequencing of the survey and layout work, throughout the course of the contract, listing a percentage of completion for each month.

**ADD 105.8.1 MEASUREMENT:**

Measurement for construction staking and preparation of red-lines for record drawings will be measured as a single complete unit of work on a lump sum basis under the bid item **CONSTRUCTION STAKES, LINES, AND GRADES**. The work shall include all materials, equipment, tools, and labor necessary to facilitate construction, staking of right-of-ways and easements and preparation of record drawings.

**ADD 105.8.2 PAYMENT:**

Payment for **CONSTRUCTION STAKES, LINES, AND GRADES** will be by the lump sum and will be made as follows:

The approved schedule showing the sequencing and percentage of the survey and layout work shall be the basis on which monthly progress payments shall be made. The schedule shall be subject to periodic review, at the request of either party, if the survey and layout work lags or accelerates. If necessary, the schedule shall be revised to reflect changes in survey and layout progress. When approved, the revised schedule will become the basis of payment. Final payment will not be made until the Contractor's red-line record drawings and monthly schedule updates are received and approved by the Construction Manager.

## **MAG SECTION 106 CONTROL OF MATERIALS**

**106.2 SAMPLES AND TESTING OF MATERIALS:**

*This section is modified as follows:*

**ADD 106.2.1 CONTRACTOR QUALITY CONTROL:**

The Contracting Agency shall be responsible for furnishing all personnel, materials, supplies, facilities and equipment necessary to provide an acceptable quality in the production, handling and placement of all materials. The Contracting Agency shall establish and maintain an effective quality control program that includes, but is not limited to, the establishment of a quality control plan and the utilization of an approved Quality Control Laboratory and approved Quality Control Personnel.

**(A) Samples and Tests of Materials:** The second, third, and fourth paragraphs of Section 106.2 in the 2025 Edition of MAG, has been revised to read:

The sampling, testing and acceptance of materials shall be in accordance with the requirements of the project specifications, in conjunction with the applicable Federal, AASHTO, ASTM, ARIZ, or other nationally recognized test method designations. Unless otherwise specified, whenever reference is made to a test method, it shall mean the test method in effect on the bid opening date.

**(B) Definitions:**

**Contractor Quality Control (CQC) Testing** - Testing performed either by the Contractor, or by a subcontracted firm under the direction of the Contractor, to determine that material being incorporated into the construction project complies with the contract document requirements. Information generated through CQC activities is expected to be evaluated by the Contractor during construction to confirm that material compliance is being achieved. Where compliance is not initially confirmed, the Contractor is expected to rework, replace, and/or otherwise adjust the construction operations, material components, and methods as necessary until material compliance is achieved and confirmed by CQC testing.

**Quality Assurance (QA) Testing** - Testing performed by the Owner, or by a firm under contract to the Owner, intended to verify and validate the accuracy and applicability of the CQC testing results, and to ultimately ascertain whether or not material being incorporated into the construction project complies with the contract document requirements.

**(C) Contractor Quality Control Requirements:** The Contractor shall be responsible for establishing an effective construction quality control program that includes all measures necessary for achieving contract compliance with regard to the production, handling and placement of construction materials incorporated into the final construction project. The Contractor's program shall include the following:

**(D) Quality Control Plan (QCP):** A written QCP shall be submitted at the preconstruction conference and work shall not begin until the quality control program has been reviewed and accepted by the Construction Manager. The QCP shall at a minimum address the following:

- a. The QCP shall contain an organizational chart, with written commentary, that defines the roles and hierarchy of the parties involved in the Contractor's construction quality control program. This chart shall clearly identify the individual Contractor employee who will serve as the construction Quality Control Manager (QCM) for the project, along with the Quality Control Laboratory (QCL), the Quality Control Supervisor (QCS), and the intended Quality Control

Technician(s) (QCT). In addition, this section shall include resumes, and where required for the position, certifications for the individuals identified on the organizational chart. The QCL shall meet the requirements defined in Section 106.2(B)(2) and personnel within the Contactor's quality control organization shall meet the requirements defined in Section 106.2(B)(3), and where applicable, Table 106-1.

- b. The QCP shall include a Quality Control Sampling and Testing Plan specific to the project bid item quantities that is developed in accordance with the requirements of Section 106.2(B)(4) and Table 106-2 of this specification.
- c. The QCP shall define the procedures and deliverables associated with Quality Control Reporting and Recordkeeping in accordance with the requirements of Section 106.2(B)(5).
- d. The QCP shall define the corrective action procedures for material that does not meet the specified quality requirements.
- e. The QCP shall address the manner in which subcontractor and commercial supplier quality is assured.

**(E) Quality Control Laboratory:** All field and laboratory sampling and testing shall be performed by a Quality Control Laboratory (QCL) that is accredited through the AASHTO Accreditation Program (AAP). In addition, when Arizona Department of Transportation (ADOT) test methods are required on the project, the QCL shall also be listed in the most current "ADOT Directory of Approved Materials Testing Laboratories." Evidence shall be provided showing that the current AASHTO Accreditation scope, or ADOT Approval scope when applicable, extends to each specific test method that will be conducted for the project. Commercial suppliers providing quality control services to the project shall also satisfy these QCL requirements as appropriate for their specific scope of work.

**(F) Quality Control Personnel:** The Contractor shall designate a construction Quality Control Manager (QCM) to be responsible for implementing and monitoring compliance with the QCP, and when necessary, adjusting the construction processes to achieve acceptable product quality. The QCM shall be a management level employee of the Contractor with authority to adjust the construction operations on the project as they relate to quality. The QCM's responsibility to comply with the QCP may not be assigned to an external third party.

The Quality Control Laboratory (QCL) shall designate a Quality Control Supervisor (QCS) for the project. The QCS shall coordinate and oversee all QCL field and laboratory activities, collect and review all materials testing results, prepare all individual test reports and required periodic summary reports, and work with the QCM to assure compliance with the Minimum Sampling and Testing Plan throughout the project. The QCS shall satisfy the requirements for Field Sampling & Testing shown in Table 106-1 and shall have a minimum of 5 years of experience performing, coordinating and/or overseeing materials testing services on roadway projects.

Quality Control Technicians (QCT) performing either field sampling and testing or laboratory testing shall be employees of the QCL and shall be certified as appropriate by the Arizona Technical Testing Institute (ATTI) and/or the American Concrete Institute (ACI) per Table 106-1. Technicians working for commercial suppliers must also meet the appropriate certification requirements.

<b>Table 106-1 Quality Control Technician Requirements</b>		
<b>Material</b>	<b>Field Requirements</b>	<b>Laboratory Requirements</b>
Soils and Aggregate	ATTI Field Certification	ATTI Laboratory Soils and Aggregate Certification
Concrete	ACI Concrete Field Testing Technician – Grade 1 Certification	ACI Concrete Strength Testing Technician Certification
Asphaltic Concrete	ATTI Field Certification	ATTI Asphalt Certification

**(G) Quality Control Sampling and Testing Plan:** The Contractor shall develop a Quality Control Sampling and Testing Plan (QCSTP) that defines the minimum frequencies for quality control sampling and testing materials, and the approximate numbers of tests that will be conducted on the project. The minimum frequencies shall comply with Table 106-2. For each specific material that is listed in Table 106-2, and that is applicable to the project, a unique Material Code (MC) shall be assigned such that all future project samples, and all tests associated with those samples, can be reported and grouped by MC on quality control documentation. In some cases, such as Asphalt Concrete Pavement, there may be different types of the same material on the project, each having a different set of acceptance criteria. In such cases, a unique MC shall be assigned for each unique material type. Using the contract bid item quantities, supplemented by other means where appropriate, the Contractor shall determine the approximate quantities for each unique material. The QCSTP shall show each unique material, along with an approximate quantity and the anticipated total number of each type test that will be conducted for that material. Additional sampling and testing may be required due to retests that become necessary for failure resolution, correlation testing, or as otherwise directed by the City Representative, but these tests are considered above and beyond those approximated in the QCSTP. During the project, the QCM, or defined delegate, is responsible for tracking the actual constructed quantities and coordinating with the QCS to ensure that the minimum frequencies are being met for each material type in accordance with the QCSTP.

**(H) Quality Control Reporting and Recordkeeping:** The Contractor QCM shall submit weekly quality control reports to the City Representative. The weekly quality control reports shall present the materials that were sampled, tested and incorporated into the project, grouped

by MC, during the reporting period. All test results shall clearly identify the acceptance criteria used to determine compliance and shall show a definitive pass or fail status. In the case of failing tests, the measures taken to resolve the deficiency shall be noted, and when applicable, reference shall be made to the follow-up test(s) that resolved the failure. Any failing test that is not resolved within the reporting period shall be clearly identified such that resolution of the failure can be verified in a later report.

A uniform methodology for identifying tests and samples shall be identified in the QCP and used during the project. All reported tests and samples shall be clearly identified with information that includes, but is not limited to: the Material Code (MC), sample identification number, sample date and technician name; the sample location consisting of roadway reference line, station, offset, elevation, lift, or other descriptive information as appropriate for the specific case; and the material description, material use, and control requirements or acceptance criteria.

Daily diaries for each QCT working on the project shall also be included in the weekly report. Daily diaries should clearly note the types of construction operations in progress, the material samples collected and/or the tests taken, and any other quality control oriented observations.

The reporting period for weekly quality control reports shall end on Friday at 11:59 PM and the reports shall be submitted to the City Representative by the following Wednesday.

Prior to final acceptance of the project, a final quality control report shall be submitted to the City Representative that includes a summary of all quality control activities performed for the project. This report shall be stamped by a Professional Engineer registered in the State of Arizona and knowledgeable with regard to the materials testing performed for the specific project.

- (I) Measurement and Payment: CONTRACTOR QUALITY CONTROL** will be measured for payment on a lump sum basis as a single unit of work and paid on a monthly basis based on the approved schedule and percentage of work complete, which price shall be for full compensation for the work, complete as described herein to the satisfaction of the Construction Manager. In the event that there are additional contractor quality control costs associated with agency approved changes in construction scope, such costs shall be included in the resulting change orders and added activities in the progress Schedule.

**Table 106-2 Materials Sampling and Testing Requirements**

<b>Material</b>	<b>Type of Test</b>	<b>Test Method</b>	<b>Sampling Point</b>	<b>Minimum Sampling/Testing Frequency<sup>1</sup></b>
<b>Structure Backfill (MAG 206) (MAG 702)</b>	Gradation	AASHTO T311/T11	Source	One per 2,000 tons
	PI	AASHTO T89/T90	Source	One per 2,000 tons
	Proctor Density	AASHTO T99	Source	One at start of production, then as material changes
	Field Density	AASHTO T310 <sup>2</sup> or AASHTO T191 <sup>2</sup>	In-Place	One per 200 CY, minimum one per shift
<b>Imported Borrow (MAG 210)</b>	Gradation	AASHTO T311/T11	Source	One per soil type per source
	PI	AASHTO T89/T90	Source	One per soil type per source
	Proctor Density	AASHTO T99	Source	One per soil type
	Field Density	AASHTO T310 <sup>2</sup> or AASHTO T191 <sup>2</sup>	In-Place	One per 800 CY, minimum one per shift
<b>Fill Construction (MAG 211)</b>	Proctor Density	AASHTO T99	Source	One per soil type
	Field Density	AASHTO T310 <sup>2</sup> or AASHTO T191 <sup>2</sup>	In-Place	One per 800 CY, minimum one per shift
<b>Subgrade (MAG 301)</b>	Gradation	AASHTO T311/T11	Source	One per soil type
	PI	AASHTO T89/T90	Source	One per soil type
	Proctor Density	AASHTO T99	Source	One per soil type
	Swell Test	ASTM D4546	In-Place	As requested by engineer (curb, gutter, and sidewalk only)
	Field Density	AASHTO T310 <sup>2</sup> or AASHTO T191 <sup>2</sup>	In-Place	One per 1,500 LF per lane pass (2,000 SY) One per 500 LF for curb, gutter and sidewalk
<b>Aggregate Base</b>	Gradation	AASHTO T311/T11	Source	One per 2,000 tons per source
	PI	AASHTO T89/T90	Source	One per 2,000 tons per source

<b>Table 106-2 Materials Sampling and Testing Requirements</b>				
<b>(MAG 310) (MAG 702)</b>	Fractured Faces	ASTM D5821	Source	One per 10,000 tons per source
	Abrasion	AASHTO T96	Source	One per source <sup>3</sup>
	Proctor Density	AASHTO T99	Source	One at start of production, then as material changes
	Field Density	AASHTO T310 <sup>2</sup> or AASHTO T191 <sup>2</sup>	In-Place	One per 1,000 LF per lane lift (1,300 SY)
<b>Asphalt Concrete Pavement (MAG 321) (MAG 325) (MAG 710)</b>	Mix Design			One per mix
	% Asphalt	AASHTO T308	Lay-Down	One per subplot (four per lot)
	Gradation	AASHTO T30	Lay-Down	One per subplot (four per lot)
	Rice Density	AASHTO T209	Lay-Down	One per lot
	% Laboratory Voids	AASHTO T269	Lay-Down	One per lot
	Field Density	ASTM D2950	Roadway	Establish rolling pattern Minimum one per 500 LF per paving pass
	% In-Place Air Voids	AASHTO T269	Roadway	Two locations per subplot (two cores per location)
<b>Pipe Bedding (MAG 601)</b>	Gradation	AASHTO T311/T11	Source	One per 2,000 tons per source
	PI	AASHTO T89/T90	Source	One per 2,000 tons per source
	Proctor Density	AASHTO T99	Source	One at start of production, then as material changes
	Field Density	AASHTO T310 <sup>2</sup> or AASHTO T191 <sup>2</sup>	In-Place	One per 200 CY
<b>Trench Backfill (MAG 601)</b>	Proctor Density	AASHTO T99	Source	One per soil type
	Field Density	AASHTO T310 <sup>2</sup> or AASHTO T191 <sup>2</sup>	In-Place	One per 500 LF per lift
	Gradation	AASHTO T311/T11	Source	One per source

<b>Table 106-2 Materials Sampling and Testing Requirements</b>				
<b>Decomposed Granite (MAG 704)</b>	PI	AASHTO T89/T90	Source	One per source
<b>Riprap (MAG 704)</b>	Gradation	AASHTO T27 (Visual)	Source	One per source
<b>Portland Cement Concrete (MAG 725)</b>	Mix Design			One per mix
	Slump	ASTM C143	Discharge	One per 100 CY
	Temperature	ASTM C1064	Discharge	One per 100 CY
	Compressive Strength	ASTM C39	Discharge	One set of 4 cylinders per 100 CY or fraction thereof, minimum one set per day

**Notes:**

- Note 1: The Construction Manager may require additional tests as necessary
- Note 2: Density Tests shall be rock corrected for oversize material per MAG Detail 190
- Note 3: Historical data may be used if acceptable to the Construction Manager

**MAG SECTION 107 LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC**

**107.12 FURNISHING RIGHT-OF-WAY:**

*This section is modified to add:*

Before utilizing any TCE on residential property, the Contractor shall provide written notice of intent to utilize the easement to the residents of the property a minimum of 48 hours in advance. This notice shall include a brief description of the type of work to be performed, and the expected duration of the work. This notice shall also include a contact name and phone number for the convenience of the residents, in case of emergency or complaints. In addition, Contractor shall photograph and document existing conditions prior to starting work on individual properties. This documentation shall be signed off by the Construction Manager prior to beginning work on that property.

**ADD 107.15 PUBLIC INFORMATION AND NOTIFICATION:**

**ADD 107.15.1 DESCRIPTION:**

The Contractor shall implement a community relations program for this project, including, but not be limited to:

- a. Documenting existing property conditions prior to starting construction.
- b. Assisting with information for printing and mailing of public notices.
- c. Preparing, erecting and maintaining information signs.
- d. Assist the Town with information for telephone "Hot Line" 24-hour service.
- e. Providing the Construction Manager information to be distributed.
- f. Personal contact with residents and businesses prior to project closures.
- g. Attending special meetings as required by the Construction Manager.

The Contractor shall use these or other means to inform the local citizens, businesses, and Town officials of necessary operations which create high noise levels, street closures, detour locations, haul route and material delivery routes, hours of construction, disruption of school bus routes, mail delivery or emergency vehicle access or disruption of utility services.

Disruption to utility services shall be avoided. Safety is the principal concern at all times. Anticipated utility disruption shall be kept to a minimum and proper 2-day advanced notification provided.

Fourteen (14) days or more prior to the start of construction, the Contractor shall furnish and install two professionally prepared information signs to give drivers the option of taking alternate routes around the construction area. The Contractor shall obtain Town of Paradise Valley permits necessary to install the signs. Contractor shall coordinate and obtain approval of the sign locations and messages from the Construction Manager before they are installed. The information signs shall be four feet high by eight feet wide (32 square feet) with white nonreflective lettering on a green non-reflective background as shown in the detail below. Each sign shall have two yellow Type 'A' low intensity flashing warning lights, two orange 16 inch square or larger flags, be constructed of suitable material and be supported safely for the duration of the project. Contractor shall maintain the information signs in good condition throughout the duration of construction and remove them at the end of the project, at which time the signs shall become Town of Paradise Valley's property. The Construction Manager will provide the Contractor the Town address of where the signs are to be delivered.

Typical project identification sign letter height and spacing shall be as shown on the attached detail. Lettering shall be manufactured according to the Federal Manual on Uniform Traffic Control Devices (MUTCD) using Type "C" letters. Sign shall list the following information:

- Project Name
- Project Dates (Scheduled beginning and ending dates.)
- Construction Contractor Name
- Contractor hotline number for project and Town email address

The hotline number for the project will be supplied by Contractor. The hotline is intended to be an answering service that actually answers the phone 24/7, not a 24 hour "answering machine". The Contractor shall have a contact that is familiar with the project and will be reachable 24/7 to respond to any emergency that may arise in off-work hours.

Contractor shall submit a layout drawing to the Construction Manager for approval showing the location, size and color of lettering and logos.

Sign supports shall be 4-inch by 4-inch pressure treated posts, set a minimum of 2-feet in the ground. The bottom of the sign shall be a minimum of 4-feet above the ground.

The following is an example project information board:



**ADD 107.15.2 EXISTING SITE CONDITIONS:**

Prior to starting construction, the Contractor shall document existing street and property conditions. Acceptable documentation shall be a video-recorded tape, supplemented with digital photographs. The videotape shall not be made from a moving vehicle. One (1) copy of the documentation package shall be given to the Construction Manager. Documentation of existing conditions shall extend a minimum of 500' past the construction limits of all roadways and at proposed retention basin locations.

**ADD 107.15.3 MEASUREMENT:**

Measurement for all work related to public information will be measured on a lump sum basis under the bid item **PUBLIC INFORMATION AND NOTIFICATION**. The work that is anticipated to be involved includes: progress report meetings, meetings with impacted businesses or residents, assisting the Town with the preparation and distribution of flyers, project information signs, temporary signs for local access, providing a copy of the existing conditions documentation package to the Construction Manager, and assisting the Town with the 24-hour "hotline" for complaints. The Contractor shall coordinate with the Town to determine the population to be notified of meetings and to receive flyers.

**ADD 107.15.4 PAYMENT:**

Payment for **PUBLIC INFORMATION AND NOTIFICATION** will be by the lump sum and will be made as follows:

The approved schedule showing the sequencing and percentage of public information items required shall be the basis on which monthly progress payments shall be made. The schedule shall be subject to periodic review, at the request of either party, if the need for public information items lags or accelerates. If necessary, the schedule shall be revised to reflect changes in construction that impact the use of these items. When approved, the revised schedule will become the basis of payment. Final payment will not be made until the Contractor has completed all work and updated the approved schedule.

## **MAG SECTION 109 MEASUREMENTS AND PAYMENTS:**

### **109.10 PAYMENT FOR MOBILIZATION/DEMOBILIZATION:**

*This section is modified to add:*

Measurement and payment for **MOBILIZATION/DEMOBILIZATION** will be made as a Lump Sum which includes compensation to the Contractor for expenses to set up marshalling yards, to relocate equipment to and from the project site, and to perform final cleanup. Payment shall be compensation in full for all related items and all incidental work not specifically covered in other pay items. The Town shall compensate the Contractor for a one-time, round trip mobilization/demobilization of the contractor's personnel equipment, supplies and incidentals, establishment of a marshalling yard, and other facilities required for the performance of the work on the project, as well as preparatory work and operations prior to the commencement of the work on the project site.

Payment, measured as provided above, will be made at the contract lump sum price as a single complete unit of work. Payment shall be made in two equal portions. The first payment shall be paid with the Contractor's initial billing and shall be made for ½ of the total line item price. The final payment shall be paid as part of the final payment due the Contractor once the project has been accepted as complete by the Town.

## **MAG SECTION 205 ROADWAY EXCAVATION**

Conform to MAG Section 205 except as modified herein.

Replace Section 205.1 Description with the following:

Roadway excavation shall consist of excavation or fill construction required or part of the grading and construction of roadways, sidewalks, ramps, medians, scuppers, spillways, driveways, driveway tie-ins, private drives, maintenance roads, matching existing behind back of walks,

adjacent to existing parcels, or at edges of pavement (except for retention basins and roadside swales/ditches), & restoring landscape areas. Contractor is responsible for utilizing material from excavations (from or for roadway & drainage) or new material in the construction of roadway structural sections in fill construction situations. Roadway excavation includes finished grading against all hardscape items, such as curb, sidewalk, edge of pavement, headwalls, ramps, driveways, pull boxes, equipment, equipment pads, pole foundations, utility vaults/manholes/valves, etc. and shall extend to any and all tie-in or match existing grades/locations. Work under this item shall be level with back of walkgrade.

All stockpile/compaction work for excess material and/or any haul off (including dump fees) is included in this section. Excavated material from retention basin, wash, roadside swale, etc. shall be utilized for roadway excavation/grading. Excess material should be stockpiled relatively close to where excavation occurred. Contractor shall contact landowners adjacent to excavation and receive permission of where to place stockpile materials prior to hauling the material to another location. Placement shall not adversely impact the existing condition, specifically drainage patterns, and shall be placed, compacted, moisture conditioned, etc. per Town of Paradise Valley requirements or MAG Specifications.

No separate Measurement or Payment for roadway excavations shall be included in the Contractor's bid. The costs shall be considered in the price bid for the construction or installations of the items that roadway excavation is incidental or appurtenant for the completion of that construction item.

## **MAG SECTION 210 BORROW EXCAVATION**

**210.4 MEASUREMENT:**, is revised to read:

Quantities of borrow excavation will NOT be measured.

### **210.5 PAYMENT**

Is revised to read:

No separate payment will be made for Borrow Excavation. Any work required under this or any related, item shall be included in the cost of adjacent work items.

## **MAG SECTION 211 FILL CONSTRUCTION**

**211.5 MEASUREMENT,** is revised to read:

Quantities of fill construction will NOT be measured.

**211.6 PAYMENT**, is revised to read:

No separate payment will be made for Fill Construction. Any work required under this or any related, item shall be included in the cost of adjacent work items.

*Add the following Section to Part 200 – EARTHWORK*

## **MAG SECTION 230 DUST PALLIATIVE APPLICATION**

### **230.8 MEASUREMENT:**

*This section is deleted and replaced with the following:*

No measurement will be made for dust palliative application. Such materials, equipment and labor are considered incidental to excavation, grading, trenching, subgrade preparation, and other contract bid items.

### **230.9 PAYMENT:**

*This section is deleted and replaced with the following:*

No separate payment will be made for dust palliative materials or application.

## **MAG SECTION 301 SUBGRADE PREPARATION**

### **301.6 PROTECTION OF EXISTING FACILITIES:**

*This section is modified to add:*

The Contractor shall exercise extreme caution when excavating and scarifying and compacting subgrade to prevent any damage to existing utilities. Contractor shall locate all utilities and if necessary, manually compact subgrade around shallow utilities to maintain 12-inches of cover during construction activities.

*MAG Section 301.7 is revised to read:*

Measurement for grading under pavement will not be measured separately.

*MAG Section 301.8 is replaced with the following:*

There will be no separate measurement and payment for grading and surface preparation of areas outside of roadway pavement, the work being included in the cost of adjacent work items.

## **MAG SECTION 321 PLACEMENT AND CONSTRUCTION OF ASPHALT CONCRETE PAVEMENT**

**321.2 MATERIALS AND MANUFACTURE:**

*This section is modified to add:*

The mix designs shall be 2-in surface course, ½-in Marshall Mix with 3-in base course, ¾-in Marshall Mix.

**MAG SECTION 340 CONCRETE CURB, GUTTER, SIDEWALK, CURB  
RAMPS, DRIVEWAY, AND ALLEY ENTRANCE**

**340.2 MATERIALS:**

*This section is modified to add:*

The Contractor shall provide color sample for all sidewalk and driveways for approval by the Town, color shall be San Diego Buff.

**340.3 CONSTRUCTION METHODS:**

*This section is modified to add:*

Contractor shall make all sawcuts at existing expansion or tooled joints unless otherwise approved by the Construction Manager.

**340.5 MEASUREMENT:**

*This section is modified to add:*

Curb and gutter terminations and transitions will be measured for payment as the same type of curb that it abuts.

**MAG SECTION 350 REMOVAL OF EXISTING IMPROVEMENTS**

**350.1 DESCRIPTION:**

*This section is modified to add:*

The work under this item shall consist of removing existing features and specialty items to accommodate project construction. Relocation is the horizontal change in location of an existing item to a different location, as shown or described on the project plans. Adjustment is a change in the vertical position of an existing feature or item, typically required to accommodate a change in grade at the location of the existing feature. Abandonment is the combination of removal, modification, and change of function of an existing item.

**350.2 CONSTRUCTION METHODS:**

*This section is modified to add:*

Removal of concrete sidewalk, driveways, slabs, curb and gutter, and single curb shall be to the

nearest expansion or tooled joints. Selected tooled joints shall then be saw cut. If adjacent curb or sidewalk has previously been cracked or damaged by no fault of the Contractor, and with direction of the Construction Manager, additional sections may be removed and replaced.

Some features may be moved in such a manner that the moved elements and all remaining unmoved portions previously attached to that feature are not damaged. All portions of moved or remaining features that are damaged during the relocation or adjustment shall be repaired, or replaced in kind by the Contractor, as approved by the Construction Manager, at the Contractor's expense.

All relocated or adjusted features shall exhibit the same quality and integrity, function, and appearance as the original undisturbed feature. New, connecting improvements to either a relocated, adjusted or unmoved portion of a feature shall be of the same type, quality, and strength as the original feature.

If for any reason a feature cannot be relocated or adjusted within the same working day, the removed portion shall be secured from theft and damage until such time that it can be permanently installed in its final configuration. Whenever applicable, if the move cannot be accomplished within the same working day, a temporary substitute facility shall be provided to secure the enclosure, as approved by the Construction Manager.

For the relocation and reconstruction of mailboxes, the Contractor is advised to contact the local Postmaster for the correct height and set back before moving the mailboxes to the new locations.

All work shall be completed in accordance with MAG Uniform Standard Specifications Section 350.

#### **350.4 MEASUREMENT AND PAYMENT:**

*This section is modified to add:*

Where existing features need to be removed to construct new improvements and the bid schedule does not contain a bid item for the removal, the removal shall be considered incidental to the new improvement bid item for which it is associated with.

Measurement and payment for the removal of concrete curb and gutter and single curb shall be per linear foot, including disposal, at the unit price bid per linear foot which price shall be full compensation of the work, complete in place.

Measurement and payment for the removal of existing concrete sidewalks, driveways, and slabs, shall be per square foot, including disposal, at the unit price bid per square foot which price shall be full compensation of the work, complete in place.

Measurement and payment for the removal of asphalt concrete payment shall be per square yard, including disposal, at the unit price bid per square yard which price shall be full compensation of the work, complete in place.

## **MAG SECTION 401 TRAFFIC CONTROL**

### **401.1 DESCRIPTION:**

*This section is modified to add:*

Traffic control shall be in accordance with the City of Phoenix Traffic Barricade Manual, the Manual on Uniform Traffic Control Devices (2023 Edition) and Supplement Part 6.

The Contractor shall designate an employee other than the superintendent to be the Traffic Control Supervisor (TCS) responsible for implementing and maintaining the approved Traffic Control Plans (TCP). This employee will have access to all emergency numbers, barricade company contacts and coordination with the Construction Manager. This individual will also hold current certification as a Traffic Control Supervisor issued by American Traffic Safety Services Association (ATSSA) or equivalent. The TCS shall maintain a daily log of work zone conditions by date and time. Such log shall be stored on-site and be available to Town of Paradise Valley representatives. Items which should appear in the daily log include: if the site had been checked before or after each work day, if any maintenance of devices or temporary alterations were conducted, by whom, any evidence of accidents or device damages.

The maximum posted speed through a restricted construction zone shall be 25 mph or as directed by the Town Engineer.

The Contractor shall provide and maintain all necessary traffic controls, to protect and guide traffic for all work in construction areas.

The Contractor shall maintain all existing traffic signs erect, clean and in full view of the intended traffic at all times throughout the project. If any signs interfere with construction, the Contractor shall notify the Construction Manager so that appropriate permission can be given to the Contractor to remove said signs. Signs will be stored in a safe environment so that the integrity of the sign can be maintained until the sign can be reset. The Contractor shall be responsible for having all temporary traffic control signs installed and maintained during construction.

Existing driveways and access to residences, alleys, parking lots, utility facilities and private property shall be maintained at all times. Short-term closures may be permitted subject to

notification to the owner seven calendar days in advance of the proposed closure and the approval of the Construction Manager. No direct payment will be made for maintaining access to businesses and private property during construction. Costs for this work shall be considered as included in the respective bid items.

The Contractor shall be required to provide a uniformed off-duty Town of Paradise Valley police officer to assist with traffic control whenever work is occurring within 300' of an activated signalized intersection or traffic in any one direction is restricted to one lane approaching an activated signalized intersection or at other locations if it should become necessary to improve safety or congestion in the opinion of the Town Engineer. The Town Engineer may require that additional off-duty police officers be placed at surrounding signalized or non-signalized intersections to assist with traffic during construction outside of those required in the Traffic Control Plan. The Contractor must provide evidence of workmen's compensation coverage for the officer before any officer will be permitted to work. The Contractor must arrange for a police officer five business days in advance of planning construction activities by calling the Town's off-duty Police request line at 480-348-3577.

All traffic flaggers used on the project must be ATSSA (American Traffic Safety Services Association) certified or approved equivalent, or an off-duty Town of Paradise Valley police officer when approved as called out below. When construction activities take place within 500 feet of a non-signalized intersection during peak weekday hours of 6 to 9 AM and 3 to 6 PM, and traffic lanes are restricted or lines of sights are obstructed by the work, a uniformed Town of Paradise Valley police officer shall be present for all construction activities or as directed by the Town Engineer.

The Contractor shall prepare traffic control plans for the project and submit them along with the Right-of-Way Permit Application for review and approval at least seven (7) working days before the pre-construction conference to the Town Engineering Department. The Town can take up to 20 days to review the plan, then an additional 10 days to notify the traveling public of the road restrictions associated with the TCP. The TCP shall include all items necessary to safely control traffic in and around the work area, and address how local access to adjacent properties will be handled in accordance with the specifications herein. Any changes to the traffic control plan during construction shall be submitted to the Town Engineer for approval at least seventy-two (72) hours before implementation.

The Contractor is responsible for maintaining accurate dates on all traffic control signs placed on the project.

**NOTIFICATIONS:**

The Contractor shall inform all agencies and residents affected by the project work of the construction schedule, traffic restrictions and detours. The notification shall include but not be limited to the following: emergency services, Town of Paradise Valley Sanitation, all affected

Town School Districts, Postal Service, businesses and other agencies as required. All coordination shall be completed and documented in writing to the Town Engineer. Copies will be provided to the Construction Manager.

**CONSTRUCTION TRAFFIC CONTROL REQUIREMENTS:**

The Contractor shall provide the Town with traffic control sequence drawings for review and approval a minimum of three (3) weeks prior to the start of construction. The plans need to show the placement of traffic control devices and the work area.

Contractor shall be required to obtain permits from the Town of Paradise Valley for any detours, closures and flagging operations.

**401.6 MEASUREMENT:**

*This section is hereby revised to read:*

Measurement for **MAINTENANCE OF TRAFFIC** shall be made on a lump sum basis. This lump sum measurement shall include all materials, equipment and labor necessary to facilitate traffic control per the contract documents. Items of traffic control include but are not limited to traffic control plans, the obliteration of existing and temporary pavement markings used for traffic control, flagmen, barricades, sign panels, sign stands, warning lights, message & arrow boards, pilot cars, and related temporary pavements and steel plates.

No direct measurement of individual traffic control elements or devices will be made. All traffic control devices, unless otherwise noted, shall be considered as included in the lump sum measurement for **MAINTENANCE OF TRAFFIC** bid item.

No direct measurement for temporary pavements or removal of such will be made. All sawcutting, grading, aggregate base course materials, asphaltic concrete pavement, labor, and equipment for temporary pavements shall be considered as included in the lump sum measurement for **MAINTENANCE OF TRAFFIC** bid item.

**401.7 PAYMENT:**

*This section is hereby revised to read:*

Payment for **MAINTENANCE OF TRAFFIC** shall not exceed the contract lump sum price for the work. The Town of Paradise Valley will allow monthly equal payments prorated over the duration of the project based upon the total project schedule provided by the Contractor at the pre-construction meeting and approved by the Construction Manager. The lump sum price shall include all costs associated with providing all traffic control for the project including; approved traffic control sequence drawings; coordination with the property owners, Town of Paradise Valley and other agencies listed above; temporary detours, trench plates for traffic crossings; temporary driveway access openings and providing all temporary traffic control devices and signs required for the project; maintaining existing signs and/or remove and replace existing signs conflicting with construction operations, and all labor, flagmen, materials, traffic control devices,

Traffic control devices and signs shall consist of providing, erecting and maintaining necessary and adequate devices for the protection of the work area and the traveling public, as well as, informing the traveling public of the work areas for the project duration and as deemed necessary by the Town Engineer. Non-compliance with maintaining these devices will be grounds for withholding payment on a monthly basis caused by these deficiencies. All deficiencies must be corrected within one shift of being notified of non-compliance or lack of maintenance on devices, such as; dirty panels, burned out lights, missing flags, or devices being damaged or removed.

The Contractor will coordinate and schedule off-duty police officers with the Town of Paradise Valley as a part of the Contractor's traffic control work. The Town will pay for the officers directly with no payment to the Contractor for this item. The Contractor will be required to present an overall estimate of off duty officer hours required with the submission of his master schedule for the project. Officers charge a minimum of four hours to the project if scheduled. In the event that the Contractor fails to prosecute the work in a timely and orderly fashion, the Town shall notify the Contractor and reserves the right to negotiate a corresponding deductive change order with the Contractor based upon the cost of \$65/hour/officer that the Town will incur for the off-duty officers.

## **MAG SECTION 430 LANDSCAPING AND PLANTING**

*Add the following Section to Part 400 – RIGHT-OF-WAY AND TRAFFIC CONTROL*

## **MAG SECTION 432 LANDSCAPE AND IRRIGATION RESTORATION**

### **432.1 GENERAL:**

Contractor shall verify exact limits of disturbance with Construction Manager in areas designated on the Project Plans as Landscape and Irrigation Restoration Areas. All work shall be in accordance with these specifications and standard Sections 430 and 440.

Contractor shall provide new decomposed granite and salvage and reset all boulders in all disturbed areas as shown on the project plans. Contractor shall match color and gradation of any decomposed granite in restoration areas, and supply new granite as necessary to bring disturbed areas back to original condition that shall be a minimum of 2 inches in depth and comply with the project plans, details, and special conditions. Contractor shall contact Construction Manager for review and approval of all Landscape and Irrigation Restoration material samples.

Contractor shall replace any existing concrete sidewalk, header, lighting and electrical components, etc. in all disturbed areas. Contractor shall match color, finish, and size of any concrete in these Landscape and Irrigation Restoration Areas and supply any concrete as necessary to bring disturbed areas back to original condition and shall be in compliance with the project plans, details, and special conditions. All replacement concrete shall be a minimum of

MAG Class 'A' and shall be in accordance with MAG Standard Sections 300 and 700. All replacement lighting components and fixtures shall match in-kind with existing components and fixtures. Contractor shall contact Construction Manager for review and approval of Landscape and Irrigation Restoration materials. All electrical work shall be in conformance with MAG, NEC latest standards, and these Special Conditions.

The work shall also consist of reconstructing or repairing the existing irrigation system in areas designated on the plans. The Contractor shall be required to repair and or replace all disturbed or damaged irrigation components, returning their operation to 100 percent within 24 hours following initial disturbance of any of the irrigation components. The existing irrigation system that will be impacted includes the drip irrigation system for the trees, shrubs and ground covers and turf irrigation spray systems. The work shall include furnishing and installing the various irrigation sleeving, piping, drip emitters, sprinklers, gate valves, electric control valves, wiring, and valve boxes, including required excavation and backfill at the designated locations shown on the project plans or as directed by the Construction Manager. All work shall be in accordance with the details shown on the project plans, or as directed by the Construction Manager and the requirements of these Special Conditions. The existing irrigation components shall be protected and maintained in their current condition where feasible or repaired, replaced, extended and reconnected in areas including but not limited to, those areas that are disturbed during the construction, areas shown on the project plans or as directed by the Construction Manager. The Contractor shall be required to maintain water to all existing plant materials throughout the duration of the contract using repairs, reconnections, replacements or rerouting of the system as approved by the Construction Manager. The Contractor shall ensure that the entire existing and new irrigation systems within the project limits are operational and functional and shall test and receive approval from the Construction Manager prior to proceeding with any other related work. The Construction Manager shall inspect and give approval prior to backfilling.

Construct the irrigation system using the emitters, sprinklers, valves, piping, fittings, controllers, wiring, and other components, of sizes and types to match existing equipment and as called for in these specifications. The system shall be constructed to grades and conform to areas and locations as shown on the drawings.

All replacement or repair materials shall match the existing damaged materials. Irrigation materials and components shall be from the same manufacturer as originally installed. Emitters shall have the same volume output as original. PVC pipe may be from a different manufacturer but the grade shall be the same as originally installed. All mainline fittings shall be Schedule 80; all lateral fittings shall be Schedule 40.

#### **432.2 CONSTRUCTION REQUIREMENTS:**

##### **432.2.1 PROTECTION OF EXISTING VEGETATION:**

The work shall include the protection of all existing plant material. Contractor shall take great care to protect in place all existing plant material. Contractor shall replace in like kind and size

existing plant material removed, damaged, or destroyed at no cost to the Town and to the satisfaction of the Construction Manager. The Contractor shall identify and the Construction Manager shall review existing plant materials within the disturbance areas. If not identified in the Native Plant Preservation Plans, the Contractor shall salvage and relocate or replace all plant material in conflict with the construction as designated in Landscape and Irrigation Restoration Areas in like kind and size per the direction of the Construction Manager.

Identify, protect, and maintain existing vegetation within the protected areas indicated on the Project Plans during the Contract from the Notice-To-Proceed to Final Acceptance. Perform the work of this section in accordance with the standards of the Tree Care Industry Association (TCIA). Do not perform work within the protected areas unless approved by the Construction Manager. Do not store materials within the protected areas. Do not permit vehicle parking, foot traffic, or other activity not approved in writing by the Construction Manager within the protected areas. Provide labor and new and undamaged materials that constitute "Best Practice" to meet the letter and intent of this Contract. Follow the safety requirements of ANSI Z133.1.

#### **432.2.2 VERIFICATION OF CONDITIONS:**

Prior to the start of construction, the Contractor shall conduct onsite inspections of plants and vegetation with the Construction Manager, and identify and inventory the plants and vegetation that are to remain in place during this area tour. Field measure and stake project improvements as needed for establishing the location and limits of disturbance.

#### **432.2.3 CONSTRUCTION WITHIN PROTECTED AREAS:**

##### **432.2.3.1 Demolition and Construction Activities:**

Contractor shall perform demolition and construction activities within protected areas in a manner that minimizes damage to tree roots and branches. Use hand tools where necessary. Make minimal use of construction equipment within the protected areas. Use such equipment within the protected area only when approved by the Construction Manager. Tree pruning shall be performed by a Certified Arborist. Notify the Construction Manager 72 hours prior to the use of the equipment within the protected areas. Provide bridging materials, such as protective planking, in protected areas where construction equipment operates. When utilities must be installed within protected areas, bore under the protected areas whenever possible instead of digging open trenches through them.

##### **432.2.3.2 Excavating Around Trees and Shrubs:**

Contractor shall excavate around trees and shrubs within protected areas only where indicated on the Project Plans. When work that may impact protected plants occurs, plan the work to assure minimal disturbance to the plants, follow good horticultural practices, and direct pruning and wound treatment in accordance with this Section.

##### **432.2.3.3 Protecting Root Systems:**

Contractor shall protect root systems from damage due to runoff or spillage of noxious materials

in solution during storage or construction activities. Protect root systems from flooding or soil erosion. Provide a minimum of two layers of untreated burlap as a covering over exposed root face areas. Do not disturb or excavate protected root zone areas unless specifically authorized to do so by the Construction Manager. Where trenching for utilities is required within protected areas, excavate under or over roots by hand digging under the authority of the Construction Manager. If large roots are encountered, or if a condition potentially fatal to the plant is observed, notify the Construction Manager prior to continuing or commencing work. Do not cut main lateral roots or taproots, those 2-1/2 inches in diameter or greater; however, smaller roots that interfere with the installation of new work may be cut. Cut smaller roots with sharp pruning instruments, but do not break or chop roots. Excavate root systems by hand in areas where new construction is required within protected areas. Use a narrow-tine spading fork to expose roots. Cut exposed roots back from the new construction. Do not permit exposed roots to dry out before permanent backfills is placed. Provide temporary earth cover, or pack the roots with peat moss, and wrap the roots with burlap. Water and maintain the roots in a moist condition, and temporarily support and protect them from damage until they are permanently relocated and covered with backfill. Provide imported topsoil backfill to cover exposed roots in soil cuts. Do not overload root zones by placing backfill above the existing grade.

#### **432.2.3.4 Protecting, Restoring, or Modifying Irrigation System:**

The work under this item shall consist of testing, reconstructing, or modifying the existing irrigation systems that are damaged by the construction or as designated on the Project Plans for modification.

Prior to construction activities, the contractor shall stake areas that are designated to be disturbed. The contractor, along with the Construction Manager, shall meet with the maintenance representative, owner, or owner's representative, for each area within the project that is designated to be disturbed to determine where the existing and functioning irrigation system is located and how it is operated. The contractor shall be required to repair and or replace all disturbed or damaged irrigation components to 100 percent operational. Contractor shall ensure that all reconnections (water and power) have been tested and approved by the Construction Manager prior to back filling.

Prior to final acceptance and during the maintenance period specified, the contractor and the Construction Manager shall meet again with the designated representative to engage each and every irrigation system that has been disturbed or that is adjacent to this project. The contractor shall ensure that each system has been returned to a fully operational and functional system and that all deficiencies have been corrected. All work shall comply with these plans and Technical Specifications.

The underground location of the irrigation facilities is unknown. The contractor shall take care to minimize disturbance to these areas.

All construction shall be coordinated to ensure that the existing irrigation system and its

associated electrical controls are fully functional within 24 hours of modifications. Work activities that require more than 24 hours of outage shall be coordinated with the Construction Manager for approval and alternate irrigation methods such as truck watering or temporary “rain or rent” systems shall be required as directed by the Construction Manager. The cost of alternate irrigation methods necessary due to extended irrigation system outages will be at the contractor’s expense, at no cost to the Town.

All work shall be in accordance with the details shown on the Project Plans, or as directed by the Construction Manager and the requirements of these Specifications. All work shall be inspected and approved by the Construction Manager prior to backfilling.

**432.2.4 REPAIR/RESTORATION:**

**432.2.4.1 Repairing Damaged Plants:**

Where damage to vegetation has occurred, contractor shall prune plants in accordance with Tree Care Industry Association (TCIA) standards to remove branches from the work area, and where needed to maintain the health of the plant. Remove material in a manner that yields minimal impact and is approved by the Construction Manager.

**432.2.4.2 Replacing Damaged Plants:**

Contractor shall remove plants that were identified by the Construction Manager to remain in place, but that are damaged during the course of the work to an extent that they cannot be repaired; and replace the damaged plants with new plants of the same type and value. Remove and replace damaged plants as directed by the Construction Manager. Base the value of plants that are to be replaced on the criteria found in the Council of Tree and Landscape Appraisers’ “Guide for Plant Appraisal”, as evaluated by the Construction Manager. Contractor shall remove and replace damaged plants at no additional cost to the Town. Plants shall be replaced at the following sizes or as directed by the Construction Manager:

<u>Existing Plant Material Size</u>	<u>Replacement Size</u>
Trees:	
2” Caliper	24” Box
4” Caliper	36” Box
6” Caliper	54” Box
Shrubs:	
All Existing Shrubs	5 Gallon

**432.2.5 CLEANING:**

Clean up the ground areas under plants remaining in place as directed by the Construction Manager. Wash off foliage that becomes soiled, or when directed to do so by the Construction Manager. Remove materials that fall or flow into protected areas. Provide protective barriers as needed or as directed by the Construction Manager to prevent materials from falling or flowing into protected areas.

**432.2.5.1 Waste Management:**

Contractor shall gather and dispose of spoils and vegetative waste, including dead and damaged plants and the trimmings accumulated from the operations to clear and remove existing vegetation. Dispose of spoils and vegetative waste off-site in conformance with the regulations imposed by the local authorities, and in an area approved for such disposal by the local authorities.

**432.2.5.2 Maintenance of Vegetation:**

Contractor shall care for and maintain existing vegetation within protected areas as indicated on the Project Plans. Provide water and labor as needed for plant health, growth, and for washing down soiled foliage. Provide fertilizer, deep root fertilization, pesticides, anti-desiccants, and other materials and labor as needed to maintain the existing plants in a healthy and growing condition. Provide plant maintenance for the duration of the Contract, until Final Acceptance.

**432.2.5.3 Record Drawings:**

The contractor shall keep and maintain separate record drawings (“field redlined record drawings”), corrected shop drawings, or other drawings necessary for the Construction Manager to show the landscape and irrigation work as constructed. These field redlined record drawings shall be kept on the worksite and they shall be maintained clear, accurate and current as changes occur that may differ with the bid set construction documents and addenda. All landscape and irrigation related elements buried or backfilled shall be recorded in the “field redlined record drawings” prior to burial and backfilling occurs. The Contractor shall submit the updated field redlined record drawings with monthly pay estimates to the Construction Manager. Complete field redlined record drawings that the contractor maintains shall be submitted to the Construction Manager in a format that will allow the Construction Manager to create the formal record drawings. The contractor shall submit the field redlined record drawings to the Construction Manager prior to the end of each construction phase. No extra measurement or direct payment will be made for this work; the cost being considered included in the price of the contract items.

*Add the following Section to Part 400 – RIGHT-OF-WAY AND TRAFFIC CONTROL*

## **MAG SECTION 463 RAISED PAVEMENT MARKERS**

### **463.1 DESCRIPTION:**

Raised pavement markers shall be installed per requirements of ADOT Standard Specifications Section 706, latest edition.

### **463.2 MEASUREMENT AND PAYMENT:**

Measurement and payment for Reflectorized Raised Pavement Markers will be at the contract unit price bid per each and shall be full compensation for the item complete in place.