

VICINITY MAP  
NTS

APPROVED E. J. [Signature] 08/14/2023  
PHOENIX CITY ENGINEER DATE

APPROVED D. [Signature] 08/08/2023  
PHOENIX WATER SERVICES DEPARTMENT DATE

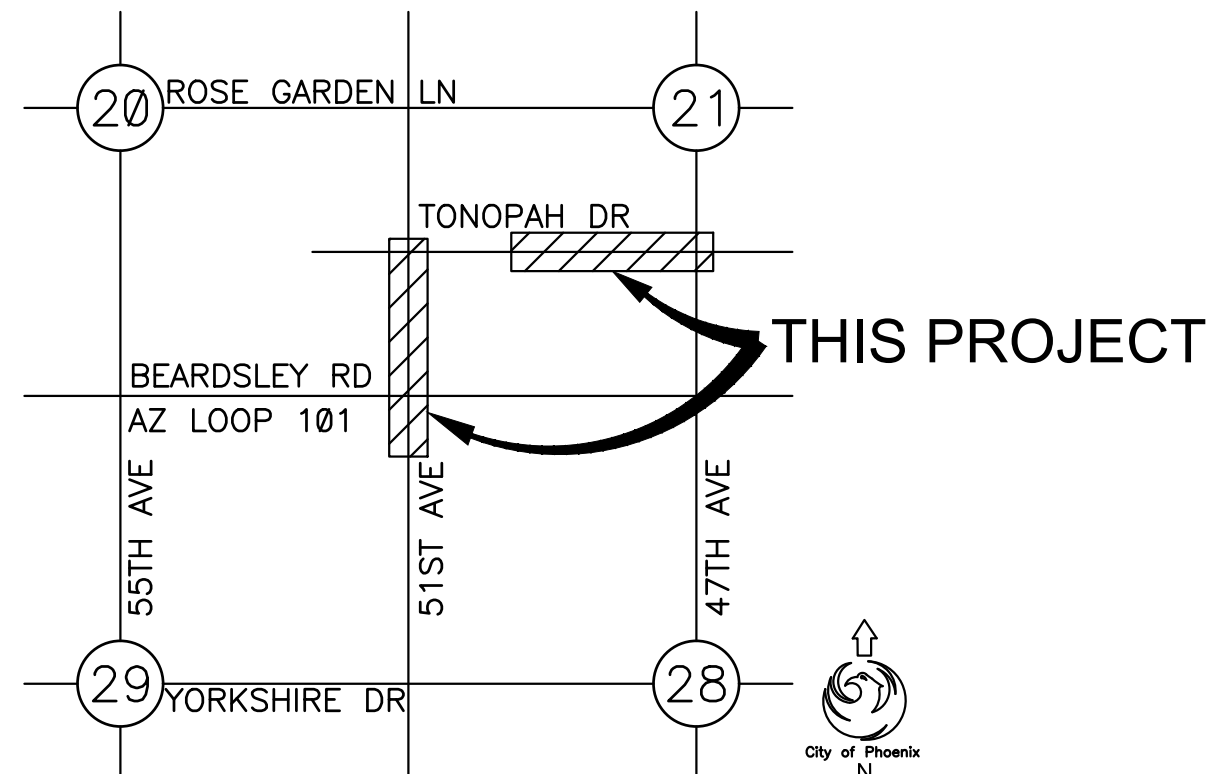
APPROVED \_\_\_\_\_ DATE  
ARIZONA DEPARTMENT OF TRANSPORTATION

APPROVED [Signature] DWR-23-00488 08-03-2023  
MARICOPA COUNTY ENVIRONMENTAL SERVICES DEPT. DATE

APPROVED \_\_\_\_\_ DATE  
MARICOPA COUNTY FLOOD CONTROL DISTRICT

**CITY OF GLENDALE APPROVAL**  
THE CITY OF GLENDALE ACCEPTS THESE PLANS FOR CONSTRUCTION, AS BEING IN GENERAL COMPLIANCE WITH PLAN PREPARATION REQUIREMENTS OF THE CITY. RESPONSIBILITY FOR THE COMPLETENESS AND ACCURACY OF THE PLANS AND RELATED DESIGNS RESIDE WITH THE ENGINEER AND THE ENGINEERING FIRM OF RECORD.

CITY ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



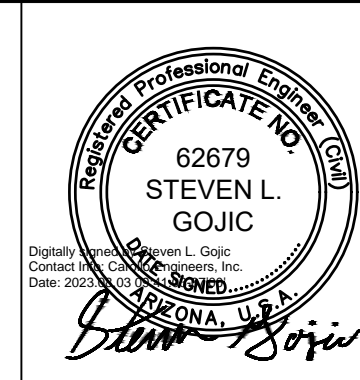
PROJECT LOCATION

SE 1/4, SEC 20, T4N, R2E  
SW 1/4, SEC 21, T4N, R2E  
NW 1/4, SEC 28, T4N, R2E  
NE 1/4, SEC 29, T4N, R2E  
COP QS# 40-17 & 41-17

CITY OF PHOENIX  
WATER SERVICES DEPARTMENT  
HEDGEPEETH WATERLINE IMPROVEMENT DISTRICT  
51st AVENUE TO 47th AVENUE  
BEHREND DRIVE TO TONOPAH DRIVE  
WS85503001-2  
VOLUME 3 OF 3



100% DESIGN  
2023  
REBID



F.H.W.A. REGION	STATE	PROJ. NO.	NO.	TOTAL	AS BUILT
9	ARIZ.	WS85503001-2			
CAROLLO ENGINEERS CONSULTING ENGINEER					
DES: SLG	DR: SLG	CK: ET	DATE: 06/21/2023		

MAYOR  
KATE GALLEG0  
CITY MANAGER  
JEFF BARTON  
CITY ENGINEER  
ERIC FROBERG, P.E.  
WATER SERVICES DIRECTOR  
TROY HAYES, P.E.  
CITY COUNCIL

DISTRICT NO 1.	ANN O'BRIEN
DISTRICT NO 2.	JIM WARING
DISTRICT NO 3.	DEBRA STARK
DISTRICT NO 4.	LAURA PASTOR
DISTRICT NO 5.	BETTY GUARDADO
DISTRICT NO 6.	KEVIN ROBINSON
DISTRICT NO 7.	YASSAMIN ANSARI
DISTRICT NO 8.	KESHA HODGE WASHINGTON

DRAWING INDEX

SHT. NO.	DWG. NO.	TITLE
<b>GENERAL DRAWINGS</b>		
1	G 01	COVER SHEET/SHEET INDEX
2	G 02	SURVEY CONTROL & SHEET KEYMAP
3	G 03	LEGEND, SYMBOLS, ABBREVIATIONS, & UTILITY LOCATING TABLE
4	G 04	GENERAL NOTES
5	G 05	UTILITY LOCATING TABLE
<b>CIVIL DETAILS</b>		
6	CD 01	CIVIL DETAILS I
7	CD 02	CIVIL DETAILS II
8	CD 03	CIVIL DETAILS III
9	CD 04	CONCRETE PAVEMENT JOINT STAKING PLAN
<b>CIVIL DRAWINGS</b>		
10	C 01	51ST AVENUE - 12" WATER MAIN I
11	C 02	51ST AVENUE - 12" WATER MAIN II
12	C 03	51ST AVENUE - 12" WATER MAIN III
13	C 04	51ST AVENUE - 12" WATER MAIN IV
14	C 05	TONOPAH DRIVE - 12" WATER MAIN I
15	C 06	TONOPAH DRIVE - 12" WATER MAIN II
16	C 07	TONOPAH DRIVE - 12" WATER MAIN III

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE 'RECORD DRAWING' MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY SUPERVISION OR AS NOTED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF

REGISTERED ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_  
REGISTRATION NUMBER \_\_\_\_\_

COP INSPECTION STAMP

CITY PROJECT MANAGER \_\_\_\_\_  
CITY INSPECTOR \_\_\_\_\_  
CONTRACTOR \_\_\_\_\_  
DATE OF FINAL COMPLETION \_\_\_\_\_  
MANUFACTURE/TYPE OF VALVES \_\_\_\_\_  
TYPE OF PIPE INSTALLED \_\_\_\_\_



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WSR# WS85503001-2  
QS# 40-17 & 41-17

Q.S.# 40-17 & 41-17

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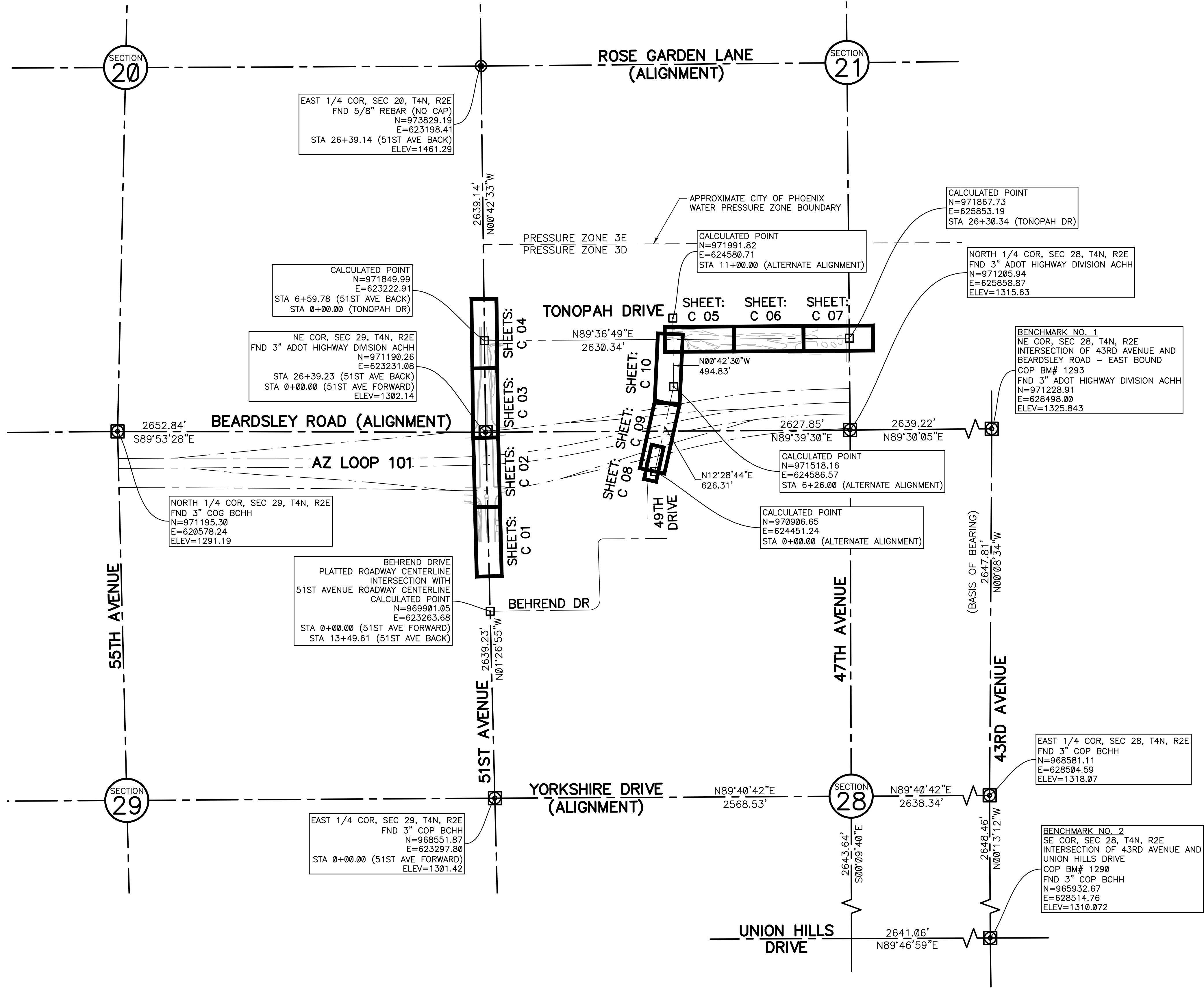
WS85503001-2

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TOPOGRAPHIC SURVEY COMPLETED BY RITTOCH-POWELL & ASSOCIATES,  
SEPTEMBER 2019.

#### BASIS OF SURVEY

THE FOLLOWING PARAMETERS WERE SET FOR THE BASIS OF THIS SURVEY:

SYSTEM: UNITED STATES STATE PLANE NAD83  
ZONE: ARIZONA CENTRAL  
DATUM: NORTH AMERICAN 1983

UNITS = INTERNATIONAL FEET (1 FOOT =0.3048 METERS EXACTLY)  
TRIMBLE R8 / R10 GPS EQUIPMENT AND TRIMBLE S6/S7 ROBOTICS WERE  
USED FOR ALL FIELD MEASUREMENTS. DIRECT SATELLITE MEASUREMENTS  
WERE MADE ON EACH POINT ON THE NORTH AMERICAN DATUM OF 1983  
WITH AUTOMATIC TRANSLATIONS MADE TO THE STATE PLANE GRID SYSTEM.

GPS CALIBRATION AND TRANSLATION TO THE SURFACE WAS PERFORMED BY  
LAND SURVEY SOFTWARE. A GRID ADJUSTMENT FACTOR OF 1.00016 AND  
SCALE ORIGIN VALUES OF N=0.00, E=0.00

ALL BEARINGS ARE GROUND/GRID BEARINGS  
ALL DISTANCES ARE GROUND DISTANCES (INTERNATIONAL FEET)  
ALL COORDINATES ARE GROUND VALUES (INTERNATIONAL FEET)

#### BASIS OF BEARING

FOR THIS PROJECT IS N00°08'34"W FOR THE EAST LINE OF THE  
NORTHEAST QUARTER OF SECTION 28, TOWNSHIP 4 NORTH, RANGE 2 EAST  
OF THE GILA & SALT RIVER MERIDIAN AS CALCULATED FROM AN AMENDED  
PLSS SUBDIVISION RECORD OF SURVEY MARICOPA COUNTY GEODETIC  
DENSIFICATION AND CADASTRAL SURVEY RECORDED IN BOOK 1115, PAGE  
4, MARICOPA COUNTY RECORDS.

#### CITY OF PHOENIX BENCHMARKS

**BENCHMARK NO. 1**  
ADOT HIGHWAY DIVISION BRASS CAP IN HANDHOLE - COP BM# 1293 AT  
THE INTERSECTION OF 43RD AVENUE AND BEARDSLEY ROAD - EAST  
BOUND  
(COP NGVD29) ELEVATION=1325.843

**BENCHMARK NO. 2**  
CITY OF PHOENIX BRASS CAP IN HANDHOLE - COP BM# 1290 AT  
THE INTERSECTION OF 43RD AVENUE AND UNION HILLS  
(COP NGVD29) ELEVATION=1310.072

#### ARIZONA DEPARTMENT OF TRANSPORTATION LIMITS

THE SCOPE OF WORK FOR THIS PROJECT THAT LIES WITHIN ADOT RIGHT  
OF WAY BEGINS APPROXIMATELY AT STATION 19+00 AND ENDS  
APPROXIMATELY AT STATION 4+60 ALONG 51ST AVENUE.

#### CITY OF GLENDALE LIMITS

THE SCOPE OF WORK FOR THIS PROJECT THAT LIES WITHIN CITY OF  
GLENDALE RIGHT OF WAY BEGINS APPROXIMATELY AT STATION 4+60 AND  
ENDS APPROXIMATELY AT STATION 6+60 ALONG 51ST AVENUE.



carollo

11564B.10

REVISIONS					REMARKS
NO.	BY	DATE	CKD		
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DES  
SLG  
DWN  
SLG  
CKD  
ET



CITY OF PHOENIX  
WATER SERVICES DEPARTMENT  
  
HEDGEPEETH WATERLINE  
IMPROVEMENT DISTRICT

GENERAL

SURVEY CONTROL & SHEET KEYMAP

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CITY PROJECT NO. WS85503001-2

DATE: 12/3/2021

G SHEET 02

CAD FILE: 11564B\_C-02

FOR CITY OF PHOENIX USE ONLY - REFERENCE CID NUMBER: #

REVISION ENGINEERING COMPANY PROJECT NO. PROJECT NAME DATE CAD FILE NAME REMARKS

# # #

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LINE TYPE LEGEND			SYMBOLS LEGEND		ABBREVIATIONS				
	NEW	EXISTING	NEW	EXISTING	DESCRIPTION			STD(S)	STANDARD(S)
STRUCTURE					FOUND/SET PROJECT BENCHMARK	ABAND	ABANDONED	L	LENGTH
					FOUND REBAR CAPPED	ABC	AGGREGATE BASE COURSE	LC	LONGITUDINAL CONSTRUCTION
					CALCULATED POINT	AC	ASPHALT CONCRETE	LF	LINEAR FEET
					FOUND REBAR AS NOTED	ACHH	ALUMINUM CAP IN HAND HOLE	LANE	LN
					FOUND SURVEY CAP IN HAND HOLE	ACP	ASBESTOS CEMENT PIPE, ASPHALT CONCRETE PAVEMENT	LP	LIGHT POLE
					FOUND BRASS CAP FLUSH	ADOT	ARIZONA DEPARTMENT OF TRANSPORTATION	LSCP	LANDSCAPE
					UTILITY TEST HOLE LOCATION	APPROX	APPROXIMATE	LT	LEFT, LIGHT
					SOIL BORING LOCATION	ARV	AIR RELEASE VALVE	LWP	LONGITUDINAL WEAKENED PLANE
					ELECTRIC MANHOLE	B&C	BOX AND COVER	MAG	MARICOPA ASSOCIATION OF GOVERNMENTS
					SANITARY SEWER MANHOLE	BC, B/C	BACK OF CURB	MATL	MATERIAL
					STORM DRAIN MANHOLE	BCF	BRASS CAP FLUSS	MB	MAILBOX
					TELEPHONE MANHOLE	BCHH	BRASS CAP IN HAND HOLE	MCDOT	MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
					DRY WELL	BFP	BACKFLOW PREVENTER	MCESD	MARICOPA COUNTY ENVIRONMENTAL SERVICES DEPARTMENT
					SEWER CLEAN OUT	BM	BENCHMARK	MCHD	MARICOPA COUNTY HIGHWAY DEPARTMENT
					GAS VALVE	BOC	BACK OF CURB	MH	MANHOLE
					WATER VALVE	BOTT	BOTTOM	MIP	MALE IRON PIPE THREAD
					FIRE HYDRANT	CL	CENTERLINE	MJ	MECHANICAL JOINT
					WATER METER	CL	CENTERLINE	MON	MONUMENT
					WATER AIR RELEASE VALVE	CATV	CABLE TELEVISION	MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
					WATER STUB OUT	CB	CATCH BASIN	N	NORTH
					WATER BACK FLOW PREVENTER	CIPP	CURED IN PLACE PIPE	NG	NATURAL GRADE
					IRRIGATION CONTROL VALVE	CLD	CONCRETE LINE DITCH	NO. , #	NUMBER
					ELECTRIC METER	CLSM	CONTROLLED LOW STRENGTH MATERIAL	N.T.S.	NOT TO SCALE
					ELECTRIC JUNCTION BOX	COG	CITY OF GLENDALE	OD	OUTSIDE DIAMETER
					ELECTRIC TRANSFORMER	COP	CITY OF PHOENIX	OSHA	OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION
					ELECTRIC PULL BOX	COMMS	COMMUNICATIONS	OHE	OVERHEAD ELECTRICAL
					ELECTRIC PANEL	CONC	CONCRETE	OHT	OVERHEAD TELEPHONE
					ELECTRIC CABINET	CONST	CONSTRUCTION	P	PAVEMENT
					ELECTRIC PEDESTAL	COPP	COPPER	PC	POINT OF CURVATURE
					ELECTRIC OUTLET BOX	CP	CONTROL POINT	PCC	PORTLAND CEMENT CONCRETE
					TRAFFIC CONTROL BOX	CPS	COTTON PICKER SPINDLE	PCCP	PORTLAND CEMENT CONCRETE PAVEMENT, PORTLAND CEMENT CONCRETE PIPE
					TRAFFIC SIGNAL UTILITY BOX	CTL	CONTROL	PE	POLYETHYLENE, PLAIN END
					TELEPHONE PEDESTAL	CY	CUBIC YARD	PI	POINT OF INTERSECTION
					TELEPHONE PANEL	DEMO	DEMOLITION	PT	POINT OF TANGENCY
					TELEPHONE VAULT	DET	DETAIL	PUE	PUBLIC UTILITY EASEMENT
					ELECTRIC STUB OUT	DI	DUCTILE IRON	PVC	POLYVINYL CHLORIDE
					UTILITY POLE	DIA	DIAMETER	PVMT	PAVEMENT
					GUY ANCHOR	DIP	DUCTILE IRON PIPE	PP	POWER POLE
					LIGHT POLE W/ARM	DR	DRIVE, DIMENSION RATIO	PW	POTABLE WATER
					LIGHT POLE W/ DOUBLE ARM	DWG	DRAWING	R	RADIUS, RANGE
					LIGHT POLE	E	EAST, ELECTRICAL, EXPANSION	RBAR	REBAR
					LANDSCAPE LIGHT	EA	EACH	RCP	REINFORCED CONCRETE PIPE
					TRAFFIC SIGNAL WITH ARM	EJB	ELECTRICAL JUNCTION BOX	RCW	RECLAIMED WATER
					TRAFFIC SIGNAL	EL	ELEVATION	REQ'D	REQUIRED
					SIGN - SINGLE POST	ELEC	ELECTRICAL	RGRCP	RUBBER GASKETED REINFORCED CONCRETE PIPE
					SIGN - DOUBLE POST	ELEV	ELEVATION	RID	ROOSEVELT IRRIGATION DISTRICT
					BOLLARD OR POST	EOP	EDGE OF PAVEMENT	RLS	REGISTERED LAND SURVEYOR
					SAGURO CACTUS	EP, E/P	EDGE OF PAVEMENT	ROW	RIGHT OF WAY
					TREE	ESMT	EASEMENT	RP	RADIUS POINT
					BUSH/SHRUB	EX	EXISTING	RPPBA	REDUCED PRESSURE PRINCIPAL BACKFLOW ASSEMBLY
					CACTUS	EXIST	EXISTING	RT	RIGHT
					LANDSCAPE BOULDER AS NOTED	FC, F/C	FACE OF CURB	R/W	RIGHT OF WAY
						FD	FOUND	RWL	RECLAIMED WATER LINE
						FH	FIRE HYDRANT	S	SOUTH, SLOPE, SANITARY SEWER, SECTION, EDGE SEAL
						FIP	FEMALE IRON PIPE THREAD	SCH	SCHEDULE
						FL	FLANGE	SD	STORM DRAIN
						FLG	FLANGE	SDR	STANDARD DIMENSION RATIO
						FM	FORCE MAIN	SEC	SECTION
						FND	FOUND	SECT	SECTION
						FOC	FACE OF CURB	SF	SQUARE FEET
						FT	FOOT	SGN	SIGN
						G	GAS, GUTTER	SHT	SHEET
						GPM	GALLONS PER MINUTE	SPEC	SPECIFICATIONS
						GR	GRADE, GRATE	SRP	SALT RIVER PROJECT
						GRD	GROUND, GRADE	SS	SANITARY SEWER MAIN, SANITARY SEWER SERVICE
						GV	GAS VALVE	SSMH	SANITARY SEWER MANHOLE
						GW	GROUND WATER	STA	STATION
						HH	HANDHOLE		
						HORIZ	HORIZONTAL		
						H&T	HUB AND TACK		
						HWY	HIGHWAY		
						ICV	IRRIGATION CONTROL VALVE		
						ID	INSIDE DIAMETER		
						IN	INCH(ES)		
						INV	INVERT		
						IP	IRON PIPE		
						IRR	IRRIGATION		

  11564B.10	REVISIONS					DES SLG	 <b>City of Phoenix</b>	CITY OF PHOENIX WATER SERVICES DEPARTMENT	GENERAL	COPYRIGHT © 2007-JANUARY
	NO.	BY	DATE	CKD	REMARKS	DWN SLG				CITY PROJECT NO. WS85503001-2
	*									DATE: 04/12/2022
	*									G SHEET 03
	*									CAD FILE: 11564B_G-03
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						CKD ET	HEDGEPEETH WATERLINE IMPROVEMENT DISTRICT	LEGEND, SYMBOLS, ABBREVIATIONS, & UTILITY LOCATING TABLE		

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CITY OF PHOENIX WATER SERVICES DEPT. WATER PLAN GENERAL NOTES

1. CITY OF PHOENIX INSPECTION STAFF SHALL BE NOTIFIED 48 HOURS BEFORE ANY CONSTRUCTION BEGINS, TELEPHONE (602) 262-6251.
2. CONTRACTOR MUST OBTAIN PERMITS FROM THE ARIZONA DEPARTMENT OF TRANSPORTATION (ADOT), CITY OF GLENDALE, AND CITY OF PHOENIX PRIOR TO START OF CONSTRUCTION. AN ENCROACHMENT PERMIT SHALL BE ISSUED BY ADOT, RIGHT OF WAY PERMIT ISSUED BY THE CITY OF GLENDALE, AND PERMIT FOR INSPECTION OF WATER MAIN TO BE ISSUED BY CITY OF PHOENIX WATER SERVICES DEPARTMENT.
3. DISTRIBUTION WATER MAIN SHUTDOWN – FOR SHUTDOWNS NECESSARY TO ACCOMPLISH APPROVED WORK, THE CONTRACTOR SHALL CONTACT THE PROJECT INSPECTOR EARLY IN THE PROJECT TO COORDINATE A SHUTDOWN WITH THE WATER SERVICES DEPARTMENT, FIELD DISTRIBUTION & COLLECTIONS STAFF. THE CONTRACTOR SHALL HAVE ALL MATERIALS AND EQUIPMENT ON THE PROJECT SITE TO COMPLETE THE CONNECTION(S) PRIOR TO THE SHUTDOWN.

ONCE THE EXISTING WATER PIPE IS CUT, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO KEEP THE PIPE CLEAN AND FREE OF DIRT AND DEBRIS BY CAPPING THE ENDS UNTIL THE FINAL CONNECTIONS CAN BE COMPLETED. PRIOR TO THE FINAL CONNECTIONS, THE EXISTING PIPE SHALL BE SWABBED WITH A MINIMUM 50 PPM CHLORINE SOLUTION FOR A DISTANCE OF 10 FEET FROM THE OPENING.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE ACCESSIBILITY TO THE VALVE OPERATING NUT FOR ALL VALVES, WITHIN THE SHUTDOWN BOUNDARIES. FAILURE TO MAINTAIN ACCESSIBILITY TO VALVES SHALL BE CAUSE FOR CANCELING THE SHUTDOWN AND THE CONTRACTOR MUST PROPERLY REQUEST A SCHEDULE REVISION.

THE WATER SERVICES DEPARTMENT IS INDEMNIFIED FOR ANY AND ALL RESULTANT COSTS INCURRED BY THE CONTRACTOR SUCH AS, BUT NOT LIMITED TO TRAFFIC CONTROL, DELAYS, LOSS OF INCENTIVES, STANDBY AND PENALTIES IF THE CONTRACTOR DID NOT PROPERLY REQUEST A SHUTDOWN; OR FAILED TO MAINTAIN ACCESSIBILITY TO VALVES; OR ON THE SCHEDULED DATE WORK HAD NOT PROGRESSED TO THE POINT AT WHICH THE SHUTDOWN WAS NEEDED.

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY GENERAL NOTES

1. ALL CONSTRUCTION WITHIN FLOOD CONTROL DISTRICT (DISTRICT) RIGHTS-OF-WAY JURISDICTION SHALL CONFORM TO THE LATEST DISTRICT STANDARDS AND SPECIFICATIONS AS PUBLISHED ON THE DISTRICT'S WEB SITE.
2. CONTRACTOR MUST OBTAIN NECESSARY DISTRICT PERMIT PRIOR TO COMMENCEMENT OF CONSTRUCTION WITHIN DISTRICT RIGHT-OF-WAY AND MAINTAIN A COPY OF THE PERMIT ON THE PROJECT SITE AT ALL TIMES.
3. NOTIFY THE DISTRICT'S PERMITS INSPECTOR AT 602-525-7913 OR IF WORKING AT A DISTRICT DAM CALL 602-506-4722 AT LEAST 48 HRS PRIOR TO ANY WORK BEING PERFORMED IN THE DISTRICT'S RIGHTS-OF-WAY.
4. CONTRACTOR PERFORMING EXCAVATION OPERATIONS IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL UNDERGROUND UTILITIES.
5. ANY DAMAGE TO DISTRICT'S STRUCTURES, EQUIPMENT, MATERIALS, VEGETATION, AND/OR PROPERTY SHALL BE REPLACED AND/OR REPAIRED IN-KIND TO THE SATISFACTION OF THE DISTRICT.
6. IN THE EVENT THE TERMS AND CONDITIONS IN THE DISTRICT'S PERMIT ARE NOT CONSISTENT WITH THE DISTRICT-APPROVED PLANS, THE DISTRICT'S PERMIT WILL HAVE PRIORITY.
7. IN ORDER TO CLOSE THE DISTRICT'S PERMIT AND RELEASE BONDS, THE WORK ON THE PROJECT SITE WILL HAVE TO BE COMPLETE AS DETERMINED BY THE DISTRICT'S INSPECTOR, CERTIFIED AS-BUILT PLANS ALONG WITH REQUIRED QUALITY ASSURANCE TESTS WILL HAVE TO BE PROVIDED AND ACCEPTED BY THE DISTRICT, AND ALL EASEMENTS REQUIRED BY THE PROJECT RECORDED.

CITY OF PHOENIX PLANNING AND DEVELOPMENT DEPT. WATER PLAN GENERAL NOTES

1. ALL WATER VALVE BOXES SHALL BE PER CITY OF PHOENIX SUPPLEMENT TO M.A.G. SPECIFICATIONS AND DETAILS P1391, TYPE A ONLY.
2. ALL CONSTRUCTION IN CITY OF PHOENIX RIGHT-OF-WAY, OR EASEMENT, IS TO CONFORM TO M.A.G. SPECIFICATIONS AND DETAILS AND CITY OF PHOENIX SUPPLEMENT TO M.A.G. SPECIFICATIONS AND DETAILS, UNLESS MODIFIED ON THE PLANS.
3. ALL DUCTILE IRON PIPE WATER MAIN VALVES, FITTINGS, AND BENDS SHALL BE RESTRAINED. RESTRAINED JOINT REQUIREMENTS AND APPROVED RESTRAINING SYSTEM ARE SHOWN IN CITY OF PHOENIX SUPPLEMENT TO M.A.G. SPECIFICATIONS, SECTION 750.3. THE LENGTH OF THE RESTRAINTS MUST BE PER M.A.G. STANDARD DETAIL 303-1 AND 303-2. THRUST BLOCKS ARE NOT ALLOWED TO BE USED IN LIEU OF APPROVED RESTRAINED JOINT SYSTEMS. THRUST BLOCKS CAN BE USED IN ADDITION TO THE APPROVED RESTRAINED JOINT SYSTEMS WHERE A SPECIFIC CITY OF PHOENIX SUPPLEMENT TO M.A.G. STANDARD DETAIL CALLS OUT FOR THRUST BLOCKING, SUCH AS CURRENT DETAILS, P1343, P1351, AND P1360 OR WHEN OTHERWISE APPROVED BY THE WATER SERVICES DEPARTMENT.
4. THE FOLLOWING M.A.G. DETAILS ARE SPECIFICALLY NOT APPROVED:

302-1

JOINT RESTRAINT WITH TIE RODS

302-2

JOINT RESTRAINT WITH TIE RODS – ANCHOR BLOCKS

321

STANDARD WATER METER VAULT

345-1

3", 4", AND 6" WATER METER

345-2

4" AND 6" WATER METER WITH ON-SITE FIRE HYDRANTS

370

VERTICAL REALIGNMENT OF WATER MAINS

381

ANCHOR BLOCKS FOR VERTICAL BENDS

390

CURB STOP WITH FLUSHING PIPE

391-1

VALVE BOX INSTALLATION
5. COMPACTION SHALL COMPLY WITH M.A.G. SECTION 601 & CITY OF PHOENIX SUPPLEMENTS.
6. NEW WATER LINES ARE TO BE BUILT IN ACCORDANCE WITH THE CITY OF PHOENIX "STANDARD UTILITY LOCATIONS".
7. THIS SET OF PLANS HAS BEEN INITIALLY REVIEWED BY THE CITY OF PHOENIX. SUCH REVIEW IS PART OF THE PROCESS THAT DEVELOPER(S)/CONTRACTOR(S) MUST GO THROUGH IN ORDER TO OBTAIN A CONSTRUCTION PERMIT. THE RESULTS OF SUCH INITIAL REVIEW SHALL NOT DICTATE THE CITY OF PHOENIX'S FINAL DETERMINATION AS TO THE ACCEPTABILITY OF THE PLANS, NOR SHALL IT PREVENT THE CITY OF PHOENIX FROM REQUIRING ERRORS AND OMISSIONS, AS FOUND ON PLANS, BE ADDRESSED BY DEVELOPER(S) /CONTRACTOR(S), WHERE SUCH ERRORS AND OMISSIONS CAUSE THE PLANS TO BE IN VIOLATION OF OR INADEQUATE UNDER APPLICABLE FEDERAL/STATE/COUNTY/LOCAL CODES, ORDINANCES, REGULATIONS, OR OTHER LAWS. THIS REVIEWED AND STAMPED SET OF PLANS MUST BE KEPT AT THE CONSTRUCTION SITE AT ALL TIMES.
8. PIPE DEFLECTION SHALL BE PER MANUFACTURERS' RECOMMENDATIONS.
9. ALL WORK MUST COMPLY WITH REQUIREMENTS OF THE CURRENT CITY OF PHOENIX "TRAFFIC BARRICADE MANUAL".
10. THE CONTRACTOR IS TO NOTIFY THE PUBLIC THAT WILL BE AFFECTED BY ANY SHUTDOWNS A MINIMUM OF 48 HOURS IN ADVANCE.
11. A SIX (6) FOOT MINIMUM HORIZONTAL SEPARATION FROM ANY UNDERGROUND UTILITY SHALL BE PROVIDED FOR SEWER MAINS, SEWER SERVICES, WATER MAINS, AND WATER SERVICES. THE MINIMUM HORIZONTAL SEPARATION IS MEASURED FROM OUTSIDE OF SEWER MAIN, SEWER SERVICE, WATER MAIN, OR WATER SERVICE TO OUTSIDE OF UNDERGROUND UTILITY.
12. A ONE (1) FOOT MINIMUM VERTICAL SEPARATION FROM ANY DRY UNDERGROUND UTILITY CROSSING SHALL BE PROVIDED FOR SEWER MAINS, SEWER SERVICES, WATER MAINS, AND WATER SERVICES. THE MINIMUM VERTICAL SEPARATION IS MEASURED FROM OUTSIDE OF SEWER MAIN, SEWER SERVICE, WATER MAIN, OR WATER SERVICE TO OUTSIDE OF DRY UNDERGROUND UTILITY.
13. A TWO (2) FOOT MINIMUM VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN ANY SEWER MAIN AND STORM DRAIN CROSSING A WATER MAIN. THE MINIMUM VERTICAL SEPARATION IS MEASURED FROM OUTSIDE OF WATER MAIN TO OUTSIDE OF SEWER MAIN OR STORM DRAIN MAIN. SEE M.A.G. STANDARD DETAIL 404 FOR ADDITIONAL INFORMATION AND/OR PROVISIONS FOR CLEARANCE.
14. EXCEPTIONS OR DEVIATIONS FROM THE ABOVE MINIMUM CLEARANCES MUST BE APPROVED AND SHOWN ON THE APPROVED WATER AND SEWER PLANS. WHEN UTILITY CONFLICTS ARE FOUND DURING CONSTRUCTION, ALL CHANGES AND REVISIONS MUST BE PRECEDED BY AN APPROVED PLAN REVISION.
15. ANY AND ALL MORE STRINGENT REQUIREMENTS REQUIRED BY FEDERAL, STATE, COUNTY, OR LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
16. WATER SERVICES SHALL BE INSTALLED PERPENDICULAR TO THE WATER MAIN. WATER SERVICES AT THE END OF CUL-DE-SACS MAY VARY AS NECESSARY, BUT WILL BE APPROVED ON A CASE BY CASE BASIS.
17. ALL SERVICES SHALL RUN IN A STRAIGHT LINE FROM THE WATER MAIN TO THE METER BOX.
18. NEITHER WATER SERVICE METER BOX NOR ANY PORTION OF A WATER SERVICE SHALL BE INSTALLED UNDER AN EXISTING OR PROPOSED DRIVEWAY OR SIDEWALK RAMP.
19. CONCRETE OR ASPHALT DAMAGED DURING THE COURSE OF CONSTRUCTION SHALL BE REMOVED AND REPLACED IN KIND PRIOR TO FINAL INSPECTION.
20. RECORD DRAWING SUBMITTALS MUST COMPLY PER THE WATER SERVICES DEPARTMENT ENGINEERING POLICY P-68 AND P-85. A COPY OF THE POLICY CAN BE OBTAINED IN THE DEPARTMENT'S WEBSITE: [HTTP://PHOENIX.GOV/WATERSERVICES/DESIGN/ENGPOLICIES/INDEX.HTML](http://PHOENIX.GOV/WATERSERVICES/DESIGN/ENGPOLICIES/INDEX.HTML)
21. IN ACCORDANCE WITH AAC R-18-4-213, ALL MATERIALS ADDED AFTER JANUARY 1, 1993 WHICH MAY COME INTO CONTACT WITH DRINKING WATER SHALL CONFORM TO NATIONAL SANITATION FOUNDATION STANDARDS 60 AND 61.
22. IN ACCORDANCE WITH TRT 00164 AND ORDINANCE G-6308, IF A PAVEMENT CUT OF ANY SIZE IS MADE TO A STREET OTHER THAN A NEW STREET, THE PERMITTEE MUST APPLY A SLURRY SEAL PAVEMENT TREATMENT TO THE HALF WIDTH OF AN ARTERIAL OR COLLECTOR STREET, OR THE FULL WIDTH OF A LOCAL STREET. THE TREATMENT MUST EXTEND A MINIMUM OF 25 FEET IN BOTH DIRECTIONS FROM THE PAVEMENT CUT(S). FOR PURPOSES OF THIS SECTION, THE PERMITTEE MUST APPLY TYPE IV SLURRY SEAL TO AN ARTERIAL OR COLLECTOR STREET, OR TYPE III SLURRY SEAL TO A LOCAL STREET.

ENGINEER'S WATER PLAN GENERAL NOTES

1. THE FOLLOWING NOTES ARE GENERAL AND APPLY TO ALL SHEETS OF THESE CONTRACT DOCUMENTS AS IF THEY WERE WRITTEN IN THEIR ENTIRETY ON EACH SHEET.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE STARTING WORK AND SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS INCLUDING LOCATION AND DIMENSIONS OF ALL EXISTING CONSTRUCTION AND UTILITIES. CONTRACTOR SHALL NOTIFY ENGINEER IF THERE IS A CONFLICT BETWEEN THE CONTRACT DOCUMENTS AND EXISTING CONSTRUCTION BEFORE PROCEEDING WITH WORK.
3. UNLESS DETAILED, SPECIFIED, OR OTHERWISE INDICATED ON THE DRAWINGS, CONSTRUCTION SHALL BE AS INDICATED IN THE APPLICABLE TYPICAL DETAILS AND GENERAL NOTES. TYPICAL DETAILS SHALL APPLY EVEN THOUGH NOT REFERENCED AT SPECIFIC LOCATIONS ON DRAWINGS.
4. WHERE NO CONSTRUCTION DETAILS ARE SHOWN OR NOTED FOR ANY PART OF WORK. DETAILS SHALL BE IN THE SAME AS FOR OTHER SIMILAR WORK.
5. CONTRACTOR SHALL COMPLY WITH LOCAL CONSTRUCTION STORM WATER DISCHARGE REGULATIONS AND REQUIREMENTS.
6. ALL PIPELINES 12" AND LARGER SHALL HAVE A MINIMUM COVER OF 48" UNLESS THE COVER DEPTH IS SPECIFICALLY INDICATED ON THE DRAWINGS. PIPE SMALLER THAN 12" SHALL HAVE A MINIMUM COVER OF 36" UNLESS NOTED OTHERWISE. PIPES SHALL BE ROUTED AS SHOWN UNLESS MINOR REVISIONS ARE NECESSARY TO MISS EXISTING PIPES, STRUCTURES, ETC. CONTRACTOR SHALL CLEARLY NOTE ANY MINOR REVISIONS FROM THE DRAWINGS ON AS-BUILT RECORDS. CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL FITTINGS AND ADAPTERS REQUIRED TO MAKE THE ROUTING CHANGES AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL INCLUDE COST FOR THIS IN THE BID.
7. EXISTING FACILITY AND UTILITY INFORMATION SHOWN ON THE DRAWINGS WERE OBTAINED FROM AVAILABLE RECORDS, ELECTRONIC FILES, OR POTHOLING, WHERE NO ELEVATIONS ARE SHOWN, NO INFORMATION WAS AVAILABLE DURING THE DESIGN PERIOD. NEITHER THE OWNER NOR ENGINEER ASSUMES ANY RESPONSIBILITY FOR FACILITIES AND UTILITIES NOT SHOWN OR NOT IN THE LOCATION SHOWN. THE CONTRACTOR SHALL FIELD VERIFY ALL LOCATIONS, SIZES, MATERIAL TYPES, AND ELEVATIONS SHOWN AROUND OR NEAR AREAS OF NEW CONSTRUCTION PRIOR TO START OF CONSTRUCTION.
8. SOME UTILITY SERVICES MAY NOT BE SHOWN ON THESE DRAWINGS. THE CONTRACTOR SHALL TAKE NECESSARY MEASURES TO LOCATE AND PROTECT SERVICE DURING CONSTRUCTION.
9. EXISTING UTILITIES IN THE PROJECT MAY BE IN A FRAGILE CONDITION. THE CONTRACTOR SHALL EXERCISE NECESSARY CAUTION WHEN WORKING NEAR EXISTING UTILITIES.
10. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT FROM DAMAGE EXISTING FACILITIES AND UTILITIES SHOWN OR NOT SHOWN THAT ARE TO REMAIN IN PLACE. ALL FACILITIES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE EXPEDITIOUSLY REPAIRED OR RECONSTRUCTED TO THE ORIGINAL OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE WITHOUT ADDITIONAL COMPENSATION.
11. CONTRACTOR SHALL MAKE CONNECTIONS TO EXISTING PIPE, EQUIPMENT, ETC. AS REQUIRED AND SHALL PROVIDE ALL FITTINGS, ADAPTERS, AND APPURTENANCES REQUIRED TO MAKE THE CONNECTIONS. PROVIDE ALL SUPPORTS REQUIRED FOR A RIGIDLY SUPPORTED COMPLETE AND WORKING SYSTEM.
12. ADJUST ALL VALVE BOXES, VAULTS, PULL BOXES, AND MANHOLES TO FINISHED GRADE UNLESS OTHER-WISE SHOWN OR DIRECTED.
13. THE CONTRACTOR SHALL CONTACT ARIZONA 811 (FORMERLY BLUE STAKE) AT LEAST 2 WORKING DAYS PRIOR TO EXCAVATION TO LOCATE AND MARK EXISTING UTILITIES.
14. ARIZONA 811 PHONE NUMBERS:

1-602-263-1100

(IF CALLING FROM WITHIN ARIZONA)

1-800-782-5348

(IF CALLING FROM OUTSIDE ARIZONA)
15. CONTRACTOR SHALL VERIFY THAT PIPING SHOWN AS PREVIOUSLY ABANDONED ARE NO LONGER IN SERVICE AND COORDINATE WITH THE UTILITY OWNER BEFORE CUTTING OR REMOVING.
16. PROVIDE ALL SHEETING/SHORING REQUIRED TO PROTECT EXISTING STRUCTURES, PIPES AND FACILITIES.
17. CONTRACTOR SHALL MAINTAIN A MINIMUM CLEARANCE OF 6 FEET HORIZONTAL AND 3 FEET VERTICAL BETWEEN EXISTING SEWER, STORM DRAIN, OR IRRIGATION LINES AND THE PROPOSED WATER LINES.
18. REFER TO THE GEOTECHNICAL REPORT LOCATED IN THE APPENDIX OF THE SPECIFICATIONS FOR ADDITIONAL INFORMATION ON THE GEOTECHNICAL CONDITIONS AND BORING INFORMATION.
19. IN ALL LOCATIONS WHERE TRENCH PLATE IS USED FOR VEHICULAR OR PEDESTRIAN TRAFFIC, THE CONTRACTOR SHALL APPLY SKID RESISTANT COATING ON THE TRENCH PLATES AND COLD MIX ASPHALT CONCRETE AT THE EDGES. THE TRENCH PLATES SHALL BE NOTCHED INTO THE ASPHALT, CONCRETE, OR TRAVELED SURFACE TO PREVENT SLIPPAGE AND ROCKING UNDER TRAFFIC.
20. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES ADJACENT TO THE WORK, THROUGHOUT THE CONSTRUCTION PERIOD.
21. ALL OPEN TRENCHES, WORK AREAS AND SHAFTS SHALL HAVE A SHORING SYSTEM IN ACCORDANCE WITH OSHA, STATE AND LOCAL REQUIREMENTS.
22. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, COUNTY, AND LOCAL LAWS AND ORDINANCES RELATING TO THE SAFETY AND CHARACTER OF WORK, EQUIPMENT AND PERSONNEL. THIS INCLUDES BUT IS NOT LIMITED TO SHEETING, SHORING, BRACING, VENTILATION, CONFORMANCE WITH TRAFFIC CONTROL AND MAINTENANCE OF BARRICADES AND WARNING DEVICES.
23. CONTRACTOR SHALL TAKE ALL PRACTICAL PRECAUTIONS TO MINIMIZE DISTURBANCES TO STREAMS, VEGETATION, TREES AND CROP LANDS. WHEREVER PRACTICAL LEAVE EXISTING TREES AND VEGETATED AREAS UNDISTURBED.
24. ALL PIPES, FITTINGS, VALVES, FIRE HYDRANTS AND OTHER APPURTENANCES SHALL CONFORM TO CURRENT AWWA, ASTM, AND NSF STANDARDS. (PER ADEQ ENGINEERING BULLETIN 10, CHAP. 7, SECTION B).
25. ALL MATERIAL THAT COMES INTO CONTACT WITH WATER SHALL CONFORM TO ANSI/NSF STANDARD 61. (PER ARIZONA ADMINISTRATIVE CODE R18-4-213.B)

ADOT GENERAL NOTES

1. ALL WORK SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH A.D.O.T. 2008 EDITION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND CURRENT EDITION OF THE CONSTRUCTION STANDARD DRAWINGS AND SIGNING & MARKING STANDARD DRAWINGS WITH CURRENT REVISIONS.
2. TRAFFIC SHALL BE PROTECTED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 2009 EDITION WITH REVISIONS 1 & 2 DATED MAY 2012, THE ARIZONA SUPPLEMENTS TO THE MUTCD 2009 EDITION, AND THE A.D.O.T. TRAFFIC CONTROL GUIDELINES. ALL SIGNS, PLACEMENT OF SIGNS, THE NECESSITY OF FLAG PERSONS AND UNIFORMED OFFICERS ARE THE RESPONSIBILITY OF THE PERMITTEE.
3. THE CONTRACTOR SHALL STRIPE THE PROJECT ROADWAY IN ACCORDANCE WITH THE CURRENT EDITION OF THE SIGNING AND MARKING STANDARD DRAWINGS (M&S – SERIES).
4. EXISTING UTILITY LOCATIONS ARE APPROXIMATE; THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTH OF ALL UNDERGROUND FACILITIES.
5. ALL RIGHT OF WAY MARKERS, DISTURBED, DESTROYED, OR REMOVED SHALL BE REPLACED BY A R.L.S. PER CONSTRUCTION STANDARD DRAWING C-21.10.
6. ALL WORK NOT IN CONFORMANCE WITH THESE PLANS AND A.D.O.T. SPECIFICATIONS SHALL BE REMOVED AT THE CONTRACTOR'S EXPENSE.
7. ALL DISTURBED AREA SHALL BE SEEDED PER A.D.O.T. SPECIFICATIONS.

CITY OF GLENDALE GENERAL NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST MAG STANDARD DETAILS AND SPECIFICATIONS AND THE CITY'S CURRENT ENGINEERING DESIGN AND CONSTRUCTION STANDARDS.
2. THIS SET OF PLANS HAS BEEN REVIEWED FOR COMPLIANCE WITH CITY REQUIREMENTS PRIOR TO ISSUANCE OF CONSTRUCTION PERMITS. HOWEVER, SUCH REVIEW AND ACCEPTANCE SHALL NOT PREVENT THE CITY FROM REQUIRING CORRECTION OF ERRORS IN SAID PLANS AND/OR CONSTRUCTION WHEN IN VIOLATION OF ANY LAWS, ORDINANCES, CODES OR STANDARDS THAT ARE IN EFFECT. REVIEW AND ACCEPTANCE OF PLANS DOES NOT RELEASE A DEVELOPER OR ENGINEER FROM RESPONSIBILITY FOR ERRORS OR OMISSIONS ON SAID PLANS.
3. THE CITY DOES NOT WARRANT ANY QUANTITIES SHOWN ON THESE PLANS.
4. THE CITY PLANS ACCEPTANCE IS FOR GENERAL LAYOUT IN THE RIGHT-OF-WAY ONLY. THIS ACCEPTANCE IS VALID FOR A PERIOD OF SIX MONTHS. CONSTRUCTION PERMITS SHALL BE OBTAINED DURING THIS PERIOD OR THE PLANS SHALL BE RESUBMITTED FOR REVIEW.
5. A CITY ACCEPTED SET OF PLANS SHALL BE AVAILABLE ON THE JOB SITE AT ALL TIMES.
6. THE CITY SHALL BE NOTIFIED 48 HOURS PRIOR TO ANY CONSTRUCTION WORK. CONSTRUCTION WORK CONCEALED WITHOUT INSPECTION BY THE CITY SHALL BE SUBJECT TO EXPOSURE AT THE CONTRACTOR'S EXPENSE.
7. A RIGHT-OF-WAY CONSTRUCTION PERMIT IS REQUIRED FOR ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY OR WITHIN A CITY EASEMENT. A 100% PERFORMANCE BOND OR EQUIVALENT FORM OF FINANCIAL SURETY MAY BE REQUIRED FOR ALL WORK WITHIN THE RIGHT-OF-WAY PRIOR TO THE ISSUANCE OF ANY RIGHT-OF-WAY CONSTRUCTION PERMIT(S). ALL WORK WITHIN THE RIGHT-OF-WAY SHALL BE INSPECTED AND APPROVED BY THE CITY'S ENGINEERING DIVISION.
8. IMPROVEMENTS SHALL NOT BE ACCEPTED UNTIL "AS-BUILT" PLANS AND ELECTRONIC (AUTOCAD) FILES HAVE BEEN SUBMITTED AND APPROVED BY THE CITY.
9. THE DEVELOPER IS RESPONSIBLE FOR ALL COSTS AND WORK RELATED TO THE REMOVAL, RELOCATION OR ABANDONMENT OF ALL OBSTRUCTIONS AND/OR UTILITIES WITHIN THE RIGHT-OF-WAY THAT CONFLICT WITH THE NEW IMPROVEMENTS.
10. THE DEVELOPER IS RESPONSIBLE FOR OBTAINING OR DEDICATING ALL REQUIRED RIGHTS-OF-WAY AND EASEMENTS TO THE CITY PRIOR TO ISSUANCE OF THE BUILDING'S CERTIFICATE OF OCCUPANCY.
11. THE CONTRACTOR SHALL CONTACT ARIZONA 811 (602-263-1100) 48 HOURS PRIOR TO CONSTRUCTION.
12. THE CONTRACTOR SHALL BARRICADE CONSTRUCTION SITES AT ALL TIMES PER THE CITY OF PHOENIX TRAFFIC BARRICADE MANUAL. WHEN REQUIRED BY THE CITY, A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED FOR APPROVAL A MINIMUM OF 72 HOURS IN ADVANCE OF CONSTRUCTION.
13. THE CONTRACTOR MAY OBTAIN A FIRE HYDRANT METER FOR CONSTRUCTION WATER FROM THE CITY WATER SERVICES DEPARTMENT. THE UNLAWFUL REMOVAL OF WATER FROM A FIRE HYDRANT IS A VIOLATION OF THE MUNICIPAL CODE, PUNISHABLE BY FINE AND/OR IMPRISONMENT.
14. DAMAGE CAUSED BY THE DEVELOPER DURING CONSTRUCTION TO CITY INFRASTRUCTURE OR FACILITIES SHALL BE REPAIRED OR REPLACED BY THE DEVELOPER, AT HIS EXPENSE, IN A MANNER ACCEPTABLE TO THE CITY.
15. THERE SHALL BE NO DIRT RAMPS OVER SIDEWALKS DURING CONSTRUCTION.
16. AN AZPDES PERMIT IS REQUIRED FOR ALL CONSTRUCTION THAT DISTURBS LAND OVER ONE (1) ACRE IN SIZE. PRIOR TO START OF ANY CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A NOTICE OF INTENT (NOI) TO THE ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY (ADEQ) AND A COPY TO THE CITY OF GLENDALE AND HAVE A COPY OF THE SWPPP ON SITE AT ALL TIMES.

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CITY OF PHOENIX  
WATER SERVICES DEPARTMENT

HEDGEPEETH WATERLINE  
IMPROVEMENT DISTRICT

GENERAL

GENERAL NOTES

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CITY PROJECT NO. WS85503001-2

DATE: 04/12/2022

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51ST AVENUE UTILITY POT HOLE TABLE														
POT HOLE #	UTILITY TYPE	OWNER	SURFACE ELEV	TOP DEPTH (FT)	TOP ELEV	BOTTOM DEPTH (FT)	BOTTOM ELEV	51ST AVE STATION	51ST AVE OFFSET	NORTHING	EASTING	MATERIAL	UTILITY WIDTH	COMMENTS
01	12" WATER	PHOENIX	1302.21	4.53	1297.68	5.53	1296.68	18+97.96	24.67' RT	970439.85	623274.73	DIP	12"	12" METAL PIPE RUNNING N/S – MARKED AS WATER
02	ELEC	APS	1302.33	–	–	–	–	18+99.91	21.29' LT	970450.63	623228.49	–	–	DUG 9.44' DEEP 2' WIDE & DID NOT LOCATE UTILITY – COULD NOT GO DEEPER DUE TO HARD & ROCKY SOIL CONDITIONS. MARKED AS ELECTRIC
03	ELEC	APS	1302.85	9.11	1293.74	10.6	1292.25	21+52.77	25.27' LT	970703.31	623218.12	PVC	13"	(4) 5.5" PLASTIC CONDUIT PIPES LAID 13" WIDE RUNNING E/W – MARKED AS ELECTRIC – BOTTOM OF UTILITY IS APPARENT BOTTOM; ADDITIONAL MATERIAL AND/OR UTILITIES MAY EXIST BELOW APPARENT BOTTOM
04	ELEC	ADOT	1302.14	2.42	1299.72	2.71	1299.43	0+27.80	24.81' LT	971217.75	623205.93	PVC	3.5"	3.5" PLASTIC CONDUIT PIPE RUNNING E/W – MARKED AS ELECTRIC
05	COMMS	CENTURYLINK	1302.20	4.96	1297.24	–	–	0+53.11	24.64' LT	971243.06	623205.79	PVC	6.5"	3.5" & 2" PLASTIC CONDUIT PIPES LAID 6.5" WIDE RUNNING E/W – MARKED AS FMS COMMUNICATIONS – A THIRD PIPE BELOW – DUE TO SOIL CONDITIONS WAS UNABLE TO DETERMINE SIZE AND BOTTOM – BOTTOM OF UTILITY IS APPARENT BOTTOM; ADDITIONAL MATERIAL AND/OR UTILITIES MAY EXIST BELOW APPARENT BOTTOM
06	ELEC	APS	1302.14	1.69	1300.45	–	–	1+10.71	21.75' LT	971300.69	623207.96	CONC ENC	24"	EXPOSED 24" OF CONCRETE ENCASEMENT MARKED AS ELECTRIC – UNABLE TO EXPOSE NORTH EDGE OR THE BOTTOM DUE TO SIZE OF ENCASEMENT
07	COMMS	CENTURYLINK	1302.06	–	–	–	–	1+24.34	21.7' LT	971314.32	623207.84	–	–	NO CONFLICT PER USIC LOCATOR – SWEEPED AREA WITH NO SIGNAL DETECTED
08	ELEC	APS	1301.97	–	–	–	–	1+74.28	20.06' LT	971364.27	623208.86	–	–	NO CONFLICT – NO BLUE STAKE – SWEEPED AREA WITH NO SIGNAL DETECTED
09	12" WATER	GLENDALE	1301.12	4.93	1296.19	5.93	1295.19	3+69.37	20.72' LT	971559.34	623205.79	DIP	12"	12" METAL PIPE RUNNING N/S – MARKED AS WATER
10	12" WATER	GLENDALE	1300.90	4.92	1295.98	5.92	1294.98	4+68.06	13.22' LT	971658.12	623212.06	DIP	12"	12" METAL PIPE RUNNING N/S – MARKED AS WATER
11	COMMS	COX	1300.83	–	–	–	–	4+95.75	16.98' RT	971686.18	623241.92	–	–	NO CONFLICT – PER BLUE STAKE – SWEEPED ARE ELECTRONICALLY WITH NO SIGNAL DETECTED
12	12" WATER	GLENDALE	1300.50	3.06	1297.44	4.06	1296.44	6+11.99	18.34' RT	971802.43	623241.84	DIP	12"	12" WRAPPED METAL PIPE RUNNING E/W – MARKED AS WATER
13	ELEC	APS	1300.39	8.12	1292.27	8.54	1291.85	0+33.94	3.96' LT	971854.18	623256.83	PVC	14"	2", 5", & 4" PLASTIC CONDUIT PIPES LAID 14" WIDE RUNNING N/S – MARKED AS ELECTRIC – BOTTOM OF UTILITY IS APPARENT BOTTOM; ADDITIONAL MATERIAL AND/OR UTILITIES MAY EXIST BELOW APPARENT BOTTOM
14	12" WATER	PHOENIX	1301.16	4.12	1297.04	5.12	1296.04	0+87.62	2.75' LT	971853.33	623310.52	DIP	12"	12" METAL PIPE RUNNING N/S – MARKED AS WATER

TONOPAH DRIVE UTILITY POT HOLE TABLE														
POT HOLE #	UTILITY TYPE	OWNER	SURFACE ELEV	TOP DEPTH (FT)	TOP ELEV	BOTTOM DEPTH (FT)	BOTTOM ELEV	TONOPAH DRIVE STATION	TONOPAH DRIVE OFFSET	NORTHING	EASTING	MATERIAL	UTILITY WIDTH	COMMENTS
15	12" WATER	PHOENIX	1310.21	4.48	1305.73	5.48	1304.73	14+46.33	5.48' LT	971865.23	624669.17	DIP	12"	12" METAL PIPE RUNNING E/W – MARKED AS WATER
16	12" WATER	PHOENIX	1318.82	–	–	–	–	26+18.84	14.61' LT	971882.26	625841.59	–	–	DRY HOLE – DUG ON BLUE STAKE AND HIT CONCRETE AT 8.36' – UNABLE TO BREAK THROUGH – MARKED AS WATER
17	ELEC	APS	1318.41	6.43	1311.98	8.11	1310.30	26+27.30	11.85' LT	971879.56	625850.07	CONC ENC	36"	36" CONCRETE ENCASEMENT RUNNING N/S – MARKED AS ELECTRIC – SEE 17.1 AND 17.2 FOR ADDITIONAL UTILITIES FOUND IN HOLE – BOTTOM OF UTILITY IS APPARENT BOTTOM; ADDITIONAL MATERIAL AND/OR UTILITIES MAY EXIST BELOW APPARENT BOTTOM
17.1	UNKNOWN	UNKNOWN	1318.39	6.03	1312.36	6.11	1312.28	26+26.02	11.89' LT	971879.59	625848.80	PVC	1"	1" PLASTIC PIPE RUNNING N/S – UNKN UTILITY – FOUND WITH HOLE #17 BOTTOM OF UTILITY IS APPARENT BOTTOM; ADDITIONAL MATERIAL AND/OR UTILITIES MAY EXIST BELOW APPARENT BOTTOM
17.2	42" WATER	PHOENIX	1318.47	5.75	1312.72	9.25	1309.22	26+24.71	11.99' LT	971879.68	625847.48	CONC PIPE	42"	42" (PER RECORD) CONCRETE PIPE RUNNING N/S – MARKED AS WATER – COULD ONLY EXPOSE 26" – FOUND IN HOLE #17 – BOTTOM OF UTILITY IS APPARENT BOTTOM; ADDITIONAL MATERIAL AND/OR UTILITIES MAY EXIST BELOW APPARENT BOTTOM

NOTES:  
1. UTILITY LOCATING PERFORMED BY CARDNO FOR THE CITY OF PHOENIX PROJECT # WS85503001–2. UTILITY LOCATING RESULTS DATA PROVIDED ON 05/05/2020.



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CITY OF PHOENIX  
WATER SERVICES DEPARTMENT  
  
HEDGE PETH WATERLINE  
IMPROVEMENT DISTRICT

GENERAL

UTILITY LOCATING TABLE

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CITY PROJECT NO. WS85503001–2  
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HEDGEPEETH WATERLINE  
IMPROVEMENT DISTRICT

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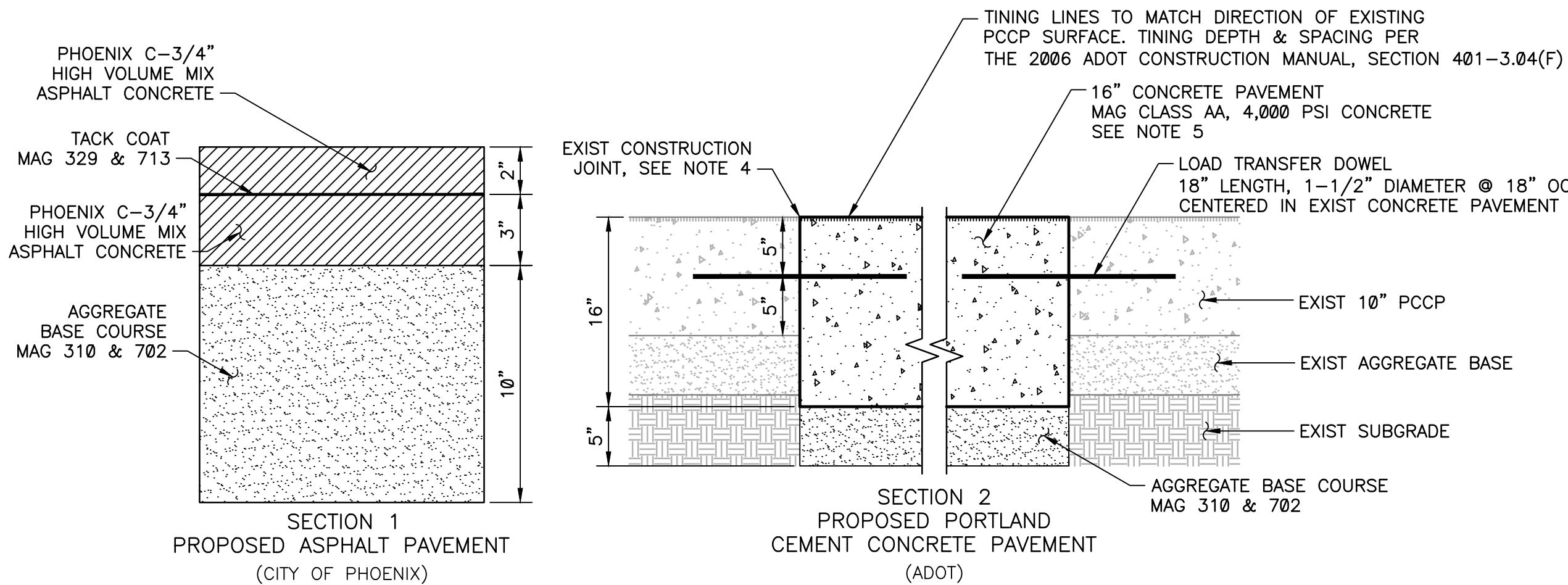
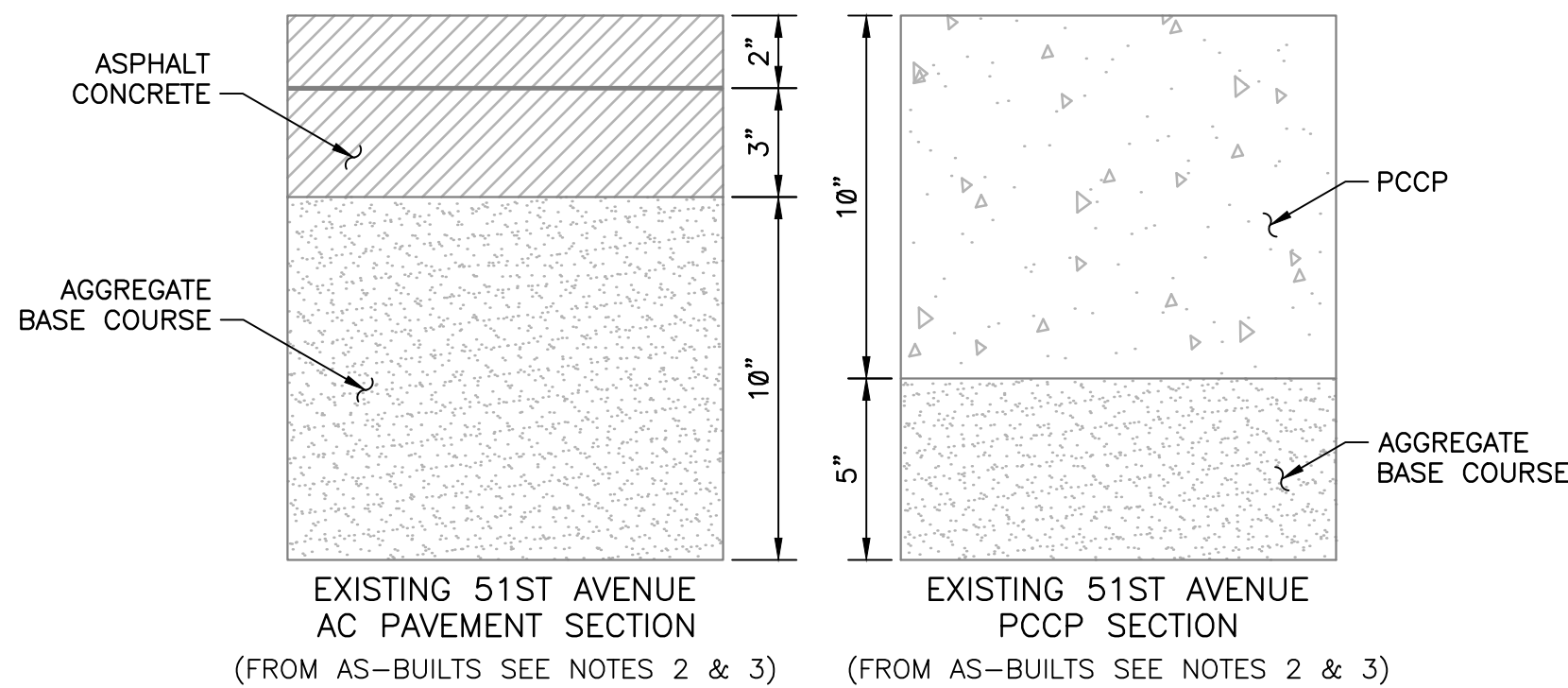
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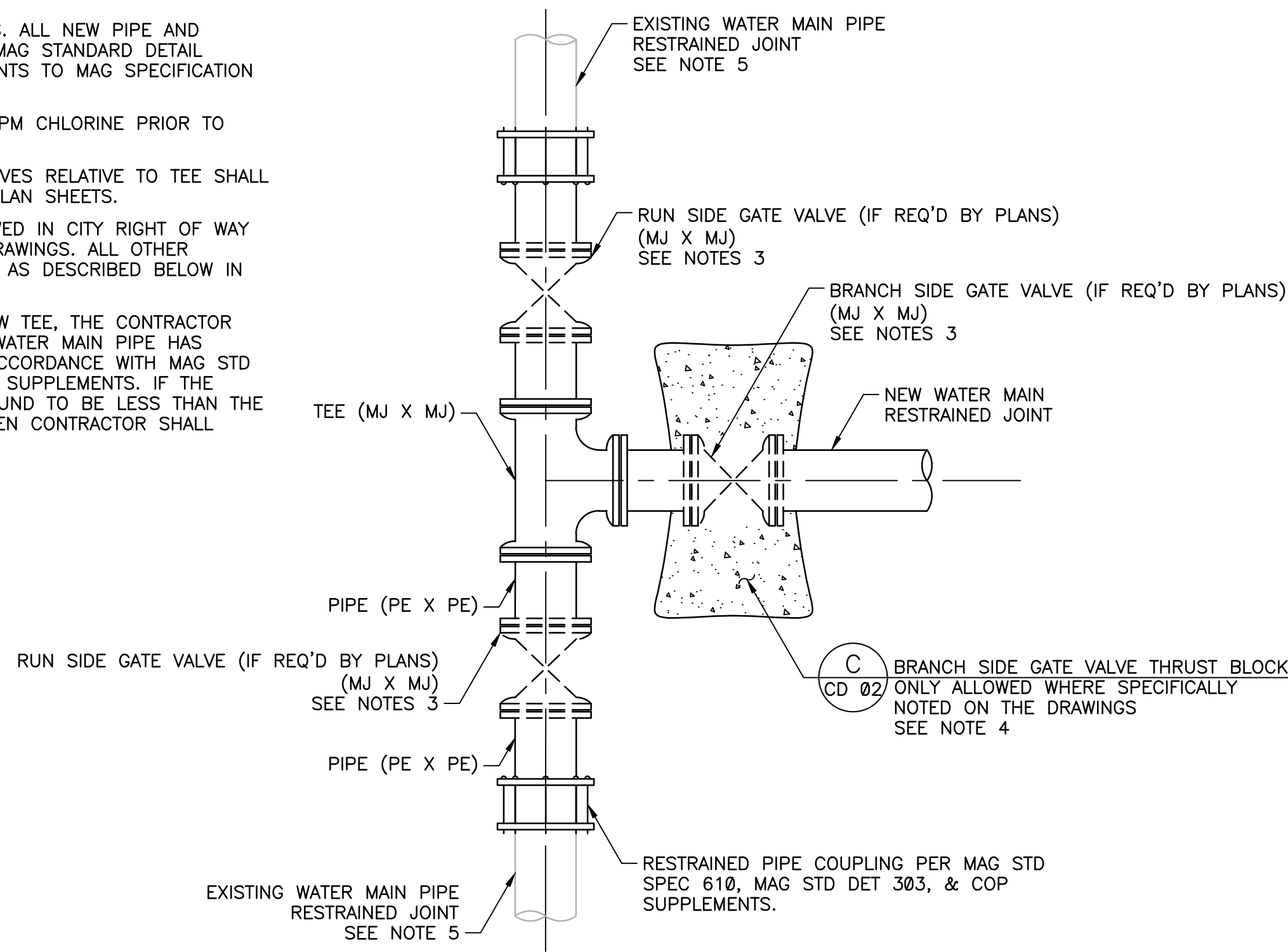
NOTES:

- ALL MAG REFERENCES INCLUDES COP SUPPLEMENTAL SPECIFICATIONS AND DETAILS.
- PAVEMENT AND AGGREGATE BASE DEPTHS SHALL BE AS SHOWN OR MATCH EXISTING THICKNESSES, WHICHEVER IS GREATER. CONTRACTOR SHALL ACCOUNT FOR VARYING PAVEMENT DEPTH IN BID ESTIMATES.
- THE EXISTING PAVEMENT SECTIONS SHOWN ABOVE IS BASED ON ADOT SR-101 EXPANSION CONSTRUCTION DRAWINGS (RBM-600-0-504). FIELD CONDITIONS MUST BE VERIFIED.
- ANY PCCP REMOVED WILL REQUIRE FULL REPLACEMENT OF THE SLAB TO THE NEAREST EXISTING CONSTRUCTION JOINTS. NEW PCCP SLAB SHALL BE A MINIMUM OF 6" GREATER THAN THE EXISTING SLAB THICKNESS.
- PORTLAND CEMENT CONCRETE PAVEMENT WILL CONFORM TO SECTION 401 OF THE "STATE OF ARIZONA DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", EXCEPT FOR PAYMENT PROVISION.

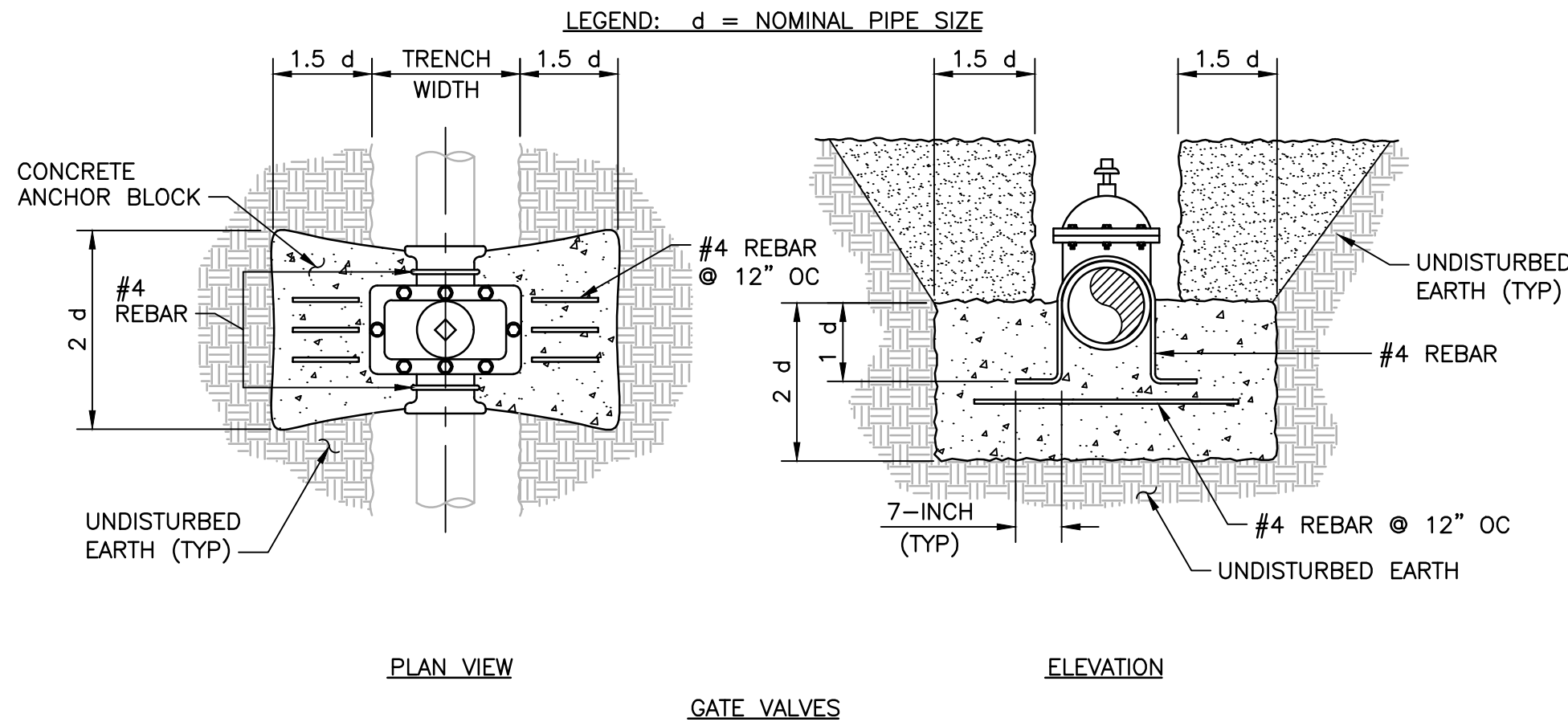
**A** PAVEMENT SECTIONS DETAIL  
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NOTES:

- FITTINGS & PIPE SIZES AS SHOWN IN DRAWINGS. ALL NEW PIPE AND FITTINGS SHALL HAVE RESTRAINED JOINTS PER MAG STANDARD DETAIL 303-1, 303-2, & CITY OF PHOENIX SUPPLEMENTS TO MAG SPECIFICATION SECTION 750.3.
- CLEAN AND DISINFECT BY SWABBING WITH 75 PPM CHLORINE PRIOR TO CONNECTION.
- THE LOCATION AND QUANTITY OF NEW GATE VALVES RELATIVE TO TEE SHALL BE AS SHOWN ON THE PROPOSED WATERLINE PLAN SHEETS.
- CONCRETE THRUST BLOCKS WILL NOT BE ALLOWED IN CITY RIGHT OF WAY EXCEPT WHERE SPECIFICALLY NOTED ON THE DRAWINGS. ALL OTHER CONNECTIONS MUST BE RESTRAINED JOINT PIPE AS DESCRIBED BELOW IN NOTE 5.
- WHEN NO THRUST BLOCK IS NOTED AT THE NEW TEE, THE CONTRACTOR MUST EXPOSE & CONFIRM THAT THE EXISTING WATER MAIN PIPE HAS MINIMUM RESTRAINED JOINT PIPE LENGTHS IN ACCORDANCE WITH MAG STD DET 303, MAG STD SPEC SECTION 610, & COP SUPPLEMENTS. IF THE EXISTING PIPE RESTRAINED JOINT LENGTH IS FOUND TO BE LESS THAN THE DISTANCES SPECIFIED IN MAG STD DET 303, THEN CONTRACTOR SHALL APPLY EXTERNAL JOINT RESTRAINTS.



**B** CONNECTION TO EXISTING WATER MAIN DETAIL  
CD 02  
SCALE: NTS  
FILE: 11564B\_CD-02.DWG



NOTES:

- CONCRETE THRUST BLOCKS WILL NOT BE ALLOWED IN CITY RIGHT OF WAY EXCEPT WHERE SPECIFICALLY NOTED ON THE DRAWINGS AND CAN ONLY BE USED IN CONJUNCTION WITH RESTRAINED JOINT FITTINGS AND PIPE. ALL OTHER CONNECTIONS WILL BE RESTRAINED JOINT PIPE LENGTHS IN ACCORDANCE WITH MAG STANDARD DETAIL 303, MAG STANDARD SPECIFICATION SECTION 610, & CITY OF PHOENIX SUPPLEMENTS.
- THRUST BLOCKS TO EXTEND TO UNDISTURBED GROUND, CONCRETE TO BE TYPE C PER MAG STD SPEC 610, MAG STD DET 301, & COP SUPPLEMENTS.
- FORM ALL NON-BEARING VERTICAL SURFACES.
- EXPOSED (NOT ENCASED IN CONCRETE) REBAR SHALL BE WRAPPED IN 10 MIL DIELECTRIC TAPE.
- REBAR SHALL BE FORMED AND INSTALLED TO PROVIDE FULL CONTACT ON THE FITTING TO BE RESTRAINED.
- MINIMUM BEARING AREA FOR 12-INCH VALVE IS 14 SF.

**C** SINGLE GATE VALVE THRUST BLOCK  
CD 02  
SCALE: NTS  
FILE: 11564B\_CD-02.DWG



carollo

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HEDGEPEETH WATERLINE  
IMPROVEMENT DISTRICT

CIVIL

CIVIL DETAILS II

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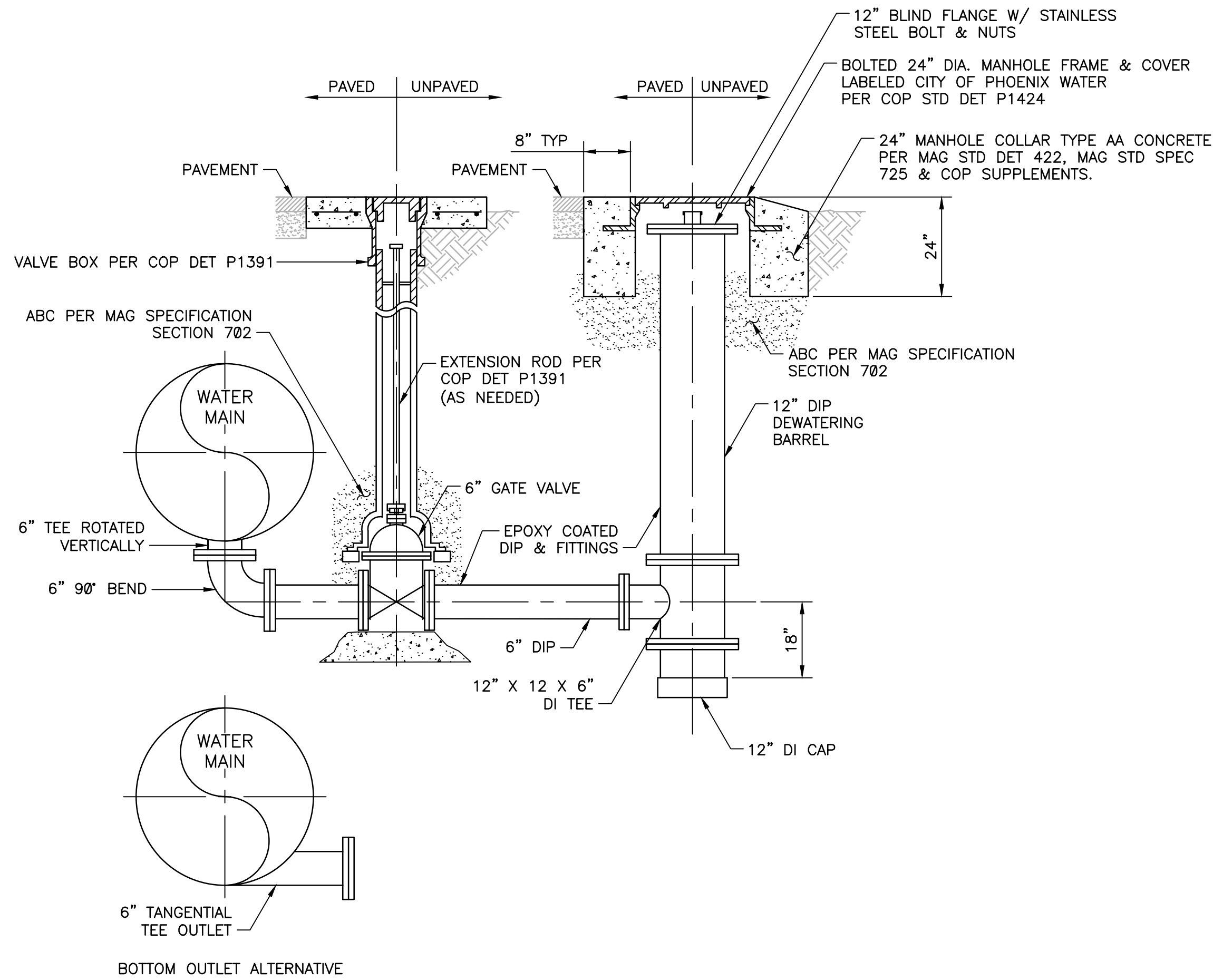
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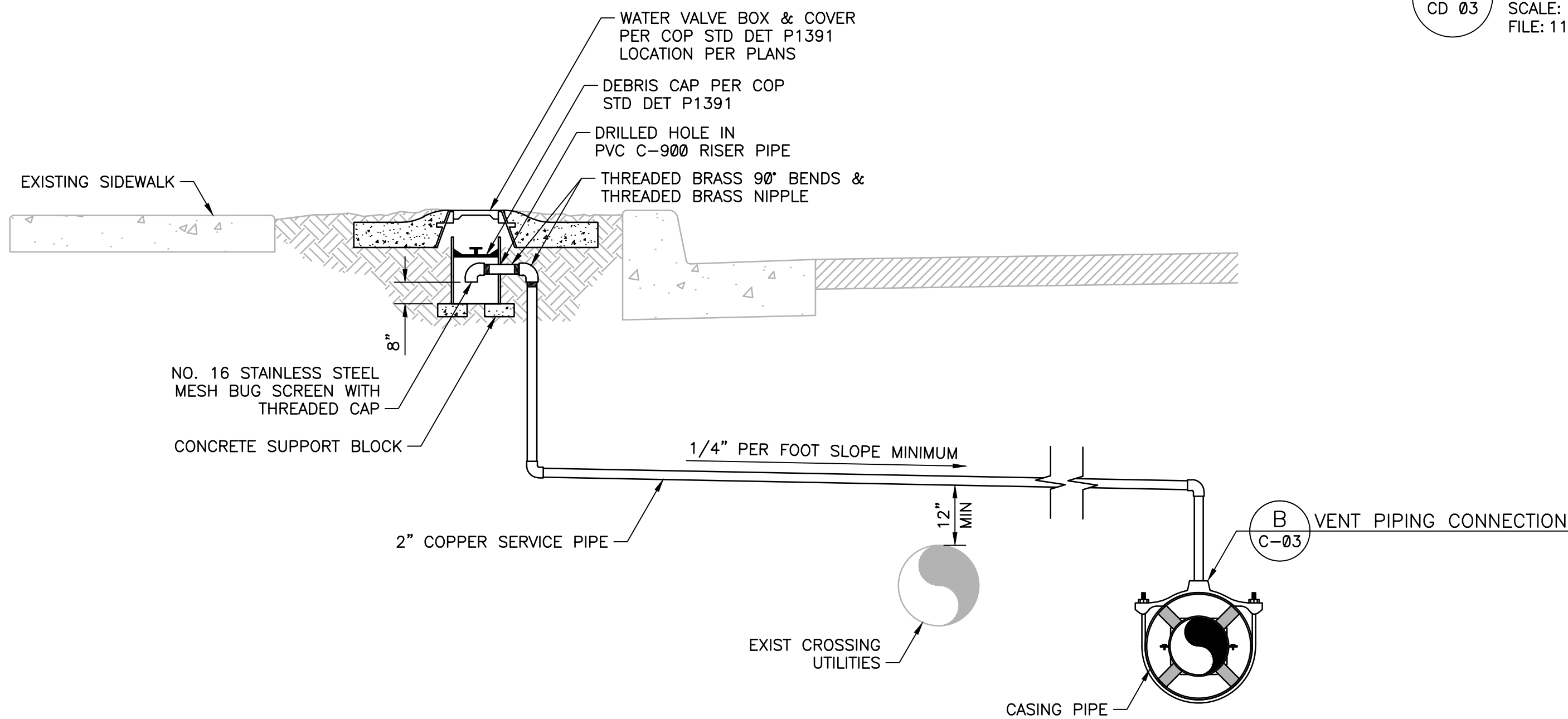
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**A** BLOWOFF - DIRECT BURY DETAIL  
CD 03 SCALE: NTS  
FILE: 11564B\_CD-03.DWG



**C** STEEL CASING PIPE VENT DETAIL  
CD 03 SCALE: NTS  
FILE: 11564B\_CD-03.DWG

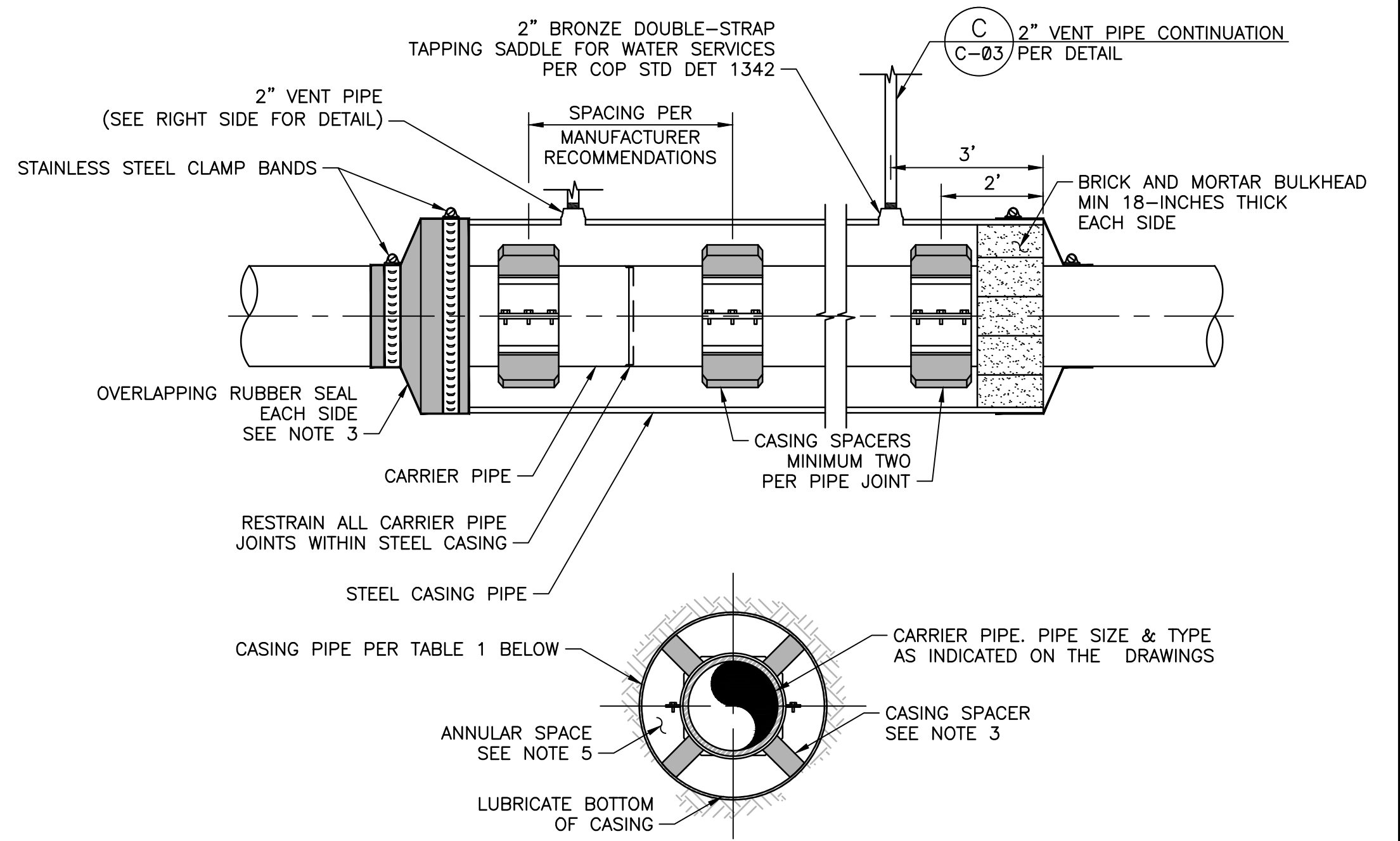


TABLE 1		
CARRIER PIPE SIZE	CASING ID	MIN THICKNESS
12"	24"	0.375"
12"	30"	0.375"

- NOTES:
- STEEL CASING PIPE MATERIAL & JOINTS PER MAG SPEC 602.
  - CASING PIPE SHALL BE LAID TRUE TO LINE AND GRADE WITH NO BENDS OR CHANGES IN GRADE FOR THE FULL LENGTH OF THE CASING EXCEPT WHERE INDICATED ON THE DRAWINGS.
  - ADVANCE PRODUCTS AND SYSTEMS, INC., OR EQUAL, CASING SPACERS AND END SEALS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS TO ACCOMMODATE INSERTION GEOMETRY AND LENGTH OF THE CASING AND THE REQUIRED INSERTION LENGTHS.
  - ALL PIPE JOINTS WITHIN THE CASING ARE TO BE FULLY RESTRAINED.
  - CASING PIPE ANNULAR SPACE SHALL NOT BE FILLED WITH SAND, GRAVEL, GROUT, OR ANY OTHER FILLER MATERIAL.

**B** STEEL CASING PIPE DETAIL  
CD 03 SCALE: NTS  
FILE: 11564B\_CD-03.DWG

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CITY OF PHOENIX  
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HEDGEPEETH WATERLINE  
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CIVIL

CIVIL DETAILS III

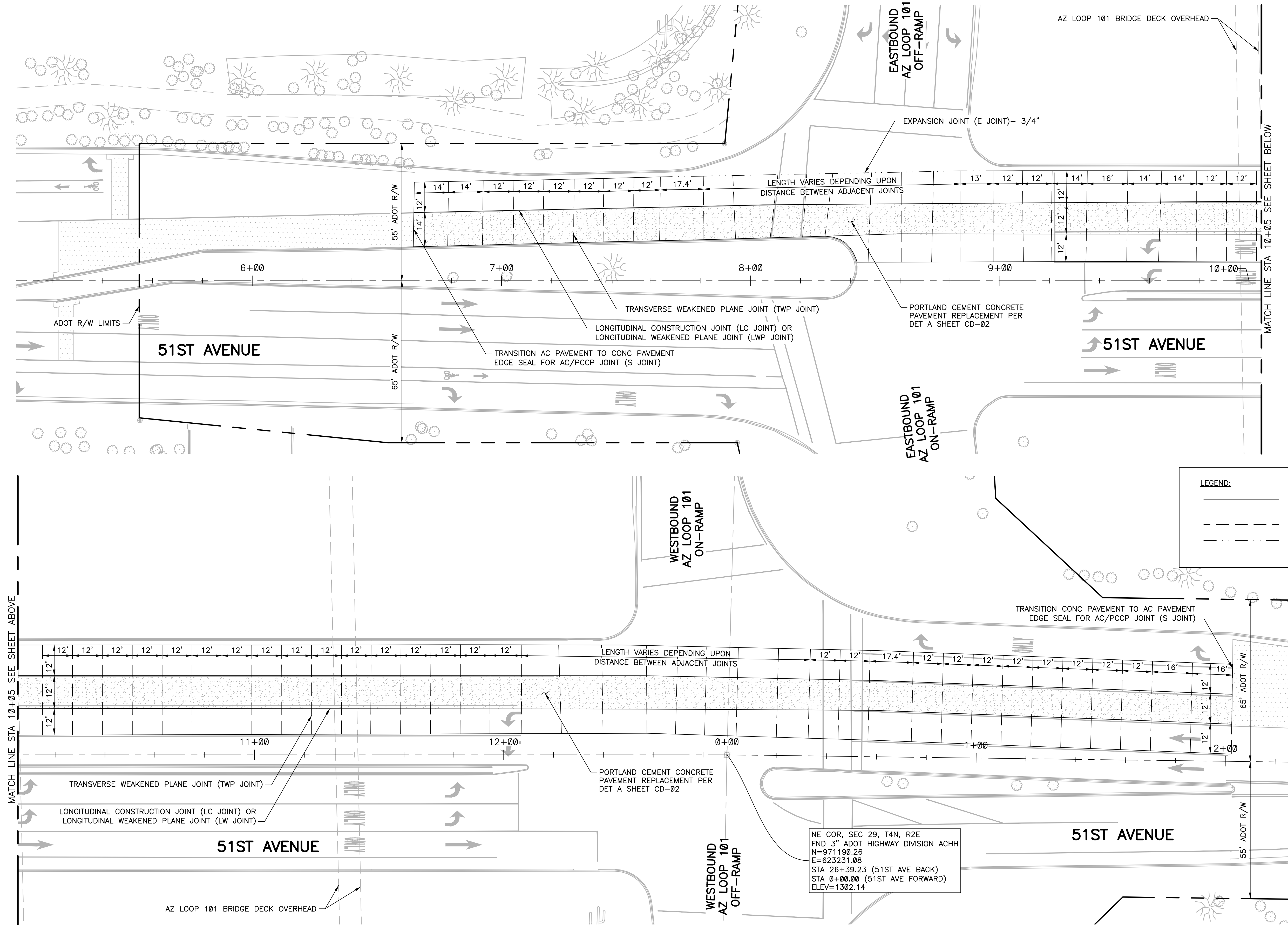
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NOTES:

- EXISTING JOINT LOCATIONS SHOWN BASED ON STATE HIGHWAY AGUA FRIA FREEWAY (101L), RBM-600-8-504, 101L MA 16, PART B RECORD DRAWINGS. CONTRACTOR TO VERIFY JOINT LOCATIONS.
- FOR PCCP JOINT DETAILS, REFER TO ADOT CONSTRUCTION STANDARD DRAWINGS, C-07.01, DATED MAY 2012.
- ALL JOINTS BETWEEN PCCP AND CURB AND GUTTER SHALL BE G JOINTS PER ADOT CONSTRUCTION STANDARD DRAWINGS.

LEGEND:

- LONGITUDINAL CONSTRUCTION JOINT (LC JOINT) OR LONGITUDINAL WEAKENED PLANE JOINT (LWP JOINT)
- TRANSVERSE WEAKENED PLANE JOINT (TWP JOINT)
- EXPANSION JOINT (E JOINT) - 3/4"

NE COR, SEC 29, T4N, R2E  
FND 3" ADOT HIGHWAY DIVISION ACHH  
N=971190.26  
E=623231.08  
STA 26+39.23 (51ST AVE BACK)  
STA 0+00.00 (51ST AVE FORWARD)  
ELEV=1302.14



carollo

11564B.10

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CITY OF PHOENIX  
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CIVIL  
  
51ST AVENUE  
CONCRETE PAVEMENT JOINT STAKING PLAN

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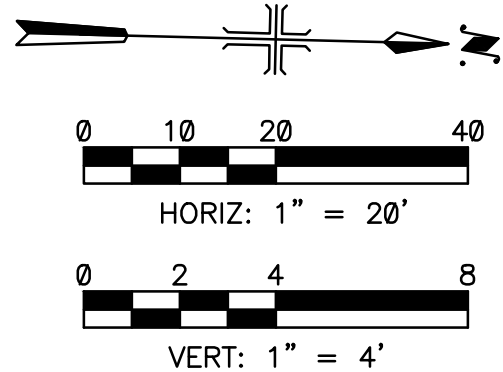
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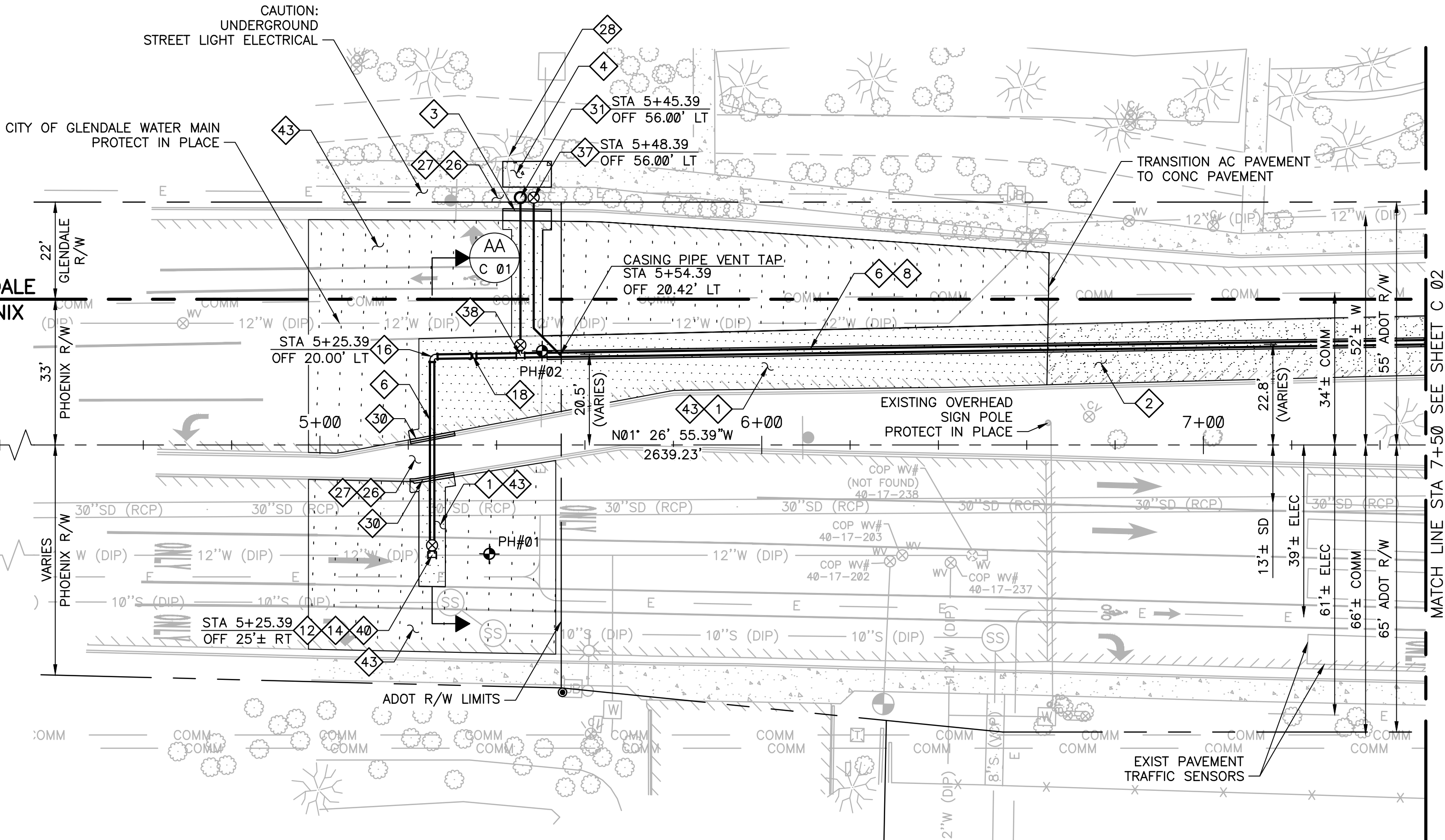
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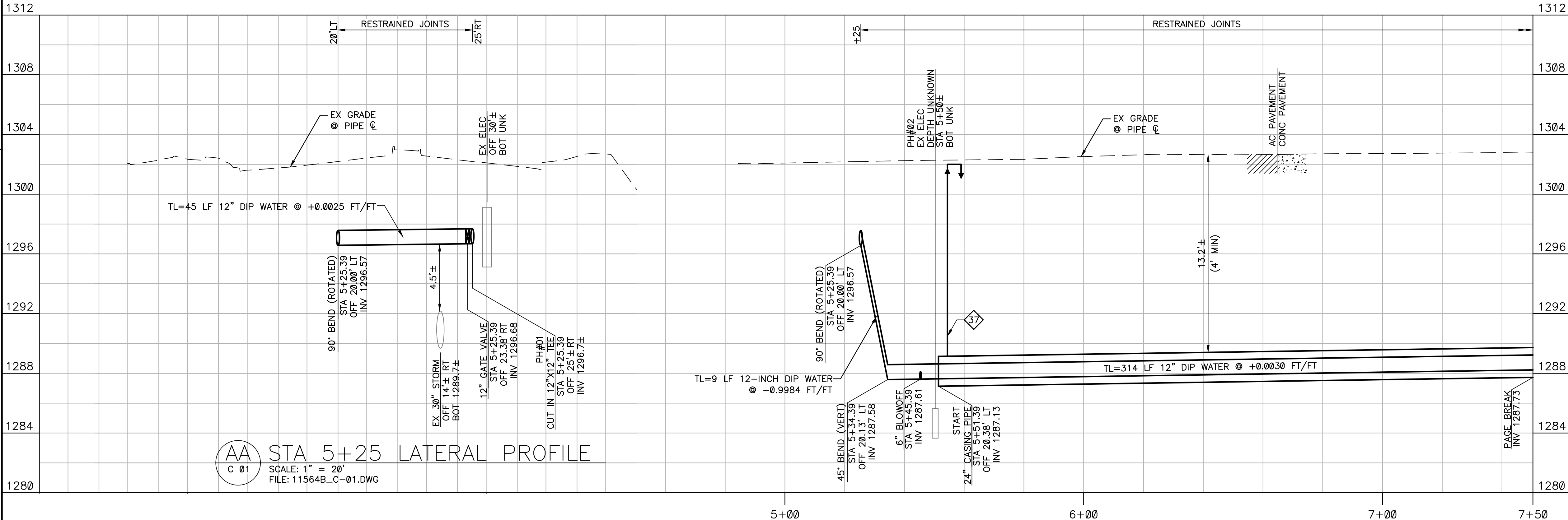


BEHREND DRIVE  
PLATTED ROADWAY CENTERLINE  
INTERSECTION WITH  
51ST AVENUE ROADWAY CENTERLINE  
CALCULATED POINT  
N=969901.05  
E=623263.68  
STA 0+00.00 (51ST AVE FORWARD)  
STA 13+49.61 (51ST AVE BACK)

COP WV#  
40-17-103  
APPROXIMATELY 1530 FEET  
SOUTH OF PAGE LIMITS



### 51ST AVENUE



AA STA 5+25 LATERAL PROFILE  
C 01  
SCALE: 1" = 20'  
FILE: 11564B\_C-01.DWG

#### GENERAL NOTES:

- REFER TO DET B SHEET CD-01 FOR TRENCH WIDTHS AND BACKFILL REQUIREMENTS. ALL UTILITY TRENCHES TRANSVERSE TO TRAFFIC AND THROUGH ROADWAY INTERSECTIONS WILL REQUIRE CLSM BACKFILL.
- TL = TRUE LENGTH BETWEEN FITTINGS OR DEFLECTIONS.
- UNLESS SPECIFICALLY NOTED, ALL EXISTING UTILITIES SHALL BE PROTECTED IN PLACE. AT THE EXPENSE OF THE CONTRACTOR, ALL DAMAGED UTILITIES SHALL BE REPLACED TO THE FACILITY OWNER'S SATISFACTION.
- CITY OF GLENDALE WATER MAIN SHALL BE PROTECTED IN PLACE. WATER MAIN MUST REMAIN IN SERVICE DURING CONSTRUCTION.
- ALL PIPES, FITTINGS, VALVES, FIRE HYDRANTS AND OTHER APPURTENANCES SHALL CONFORM TO CURRENT AWWA, ASTM, AND NSF STANDARDS. (PER ADEQ ENGINEERING BULLETIN 10, CHAP. 7, SECTION B).
- ALL MATERIAL THAT COMES INTO CONTACT WITH WATER SHALL CONFORM TO ANSI/NSF STANDARD 61. (PER ARIZONA ADMINISTRATIVE CODE R18-4-213.B).

#### KEY NOTES:

- SAWCUT, REMOVE, & REPLACE AC PAVEMENT PER MAG SECTION 336, & DET A SHEET CD-01 277 SY
- PORTLAND CEMENT CONCRETE PAVEMENT REPLACEMENT PER DET A SHEET CD-02 129 SY
- REMOVE & REPLACE CURB & GUTTER TO THE NEAREST JOINT, MAG STD DET 220, TYPE A 10 LF
- REMOVE & REPLACE SIDEWALK TO THE NEAREST JOINT, COP STD DET P1230 59 SF
- 12" DIP, CLASS 350, RESTRAINED JOINTS, POLYETHYLENE WRAP PER COP SUPPLEMENT TO MAG SPEC 750.2 & MAG SPEC 610.6.2 & 610.6.3 270 LF
- 24" STEEL CASING PIPE, 0.375" MIN WALL THICKNESS. STEEL CASING PIPE, WELDED JOINTS, INSTALLATION, & TESTING PER MAG STD SPEC 602. SEE DET B SHEET CD-03 196 LF
- CUT-IN TEE, 12". CONNECTION TO EXISTING WATERLINE PER DETAIL B SHEET CD-02. 1 EA
- 12" GATE VALVE, BOX & COVER PER COP STD DET P1391 TYPE A, P1391-1, & COP SUPPLEMENTS TO MAG SPEC 750.3 1 EA
- 12" 90° BEND WITH RESTRAINED JOINTS PER MAG STD DET 303-1, 303-2, & COP SUPPLEMENT TO MAG SPEC 750.3 1 EA
- 12" 45° BEND WITH RESTRAINED JOINTS PER MAG STD DET 303-1, 303-2, & COP SUPPLEMENT TO MAG SPEC 750.3 1 EA
- SALVAGE & STOCKPILE EXISTING LANDSCAPING DECOMPOSED GRANITE ON-SITE FOR REUSE. IF DECOMPOSED GRANITE AFTER REPLACEMENT IS LESS THAN 2" IN DEPTH, ADD ADDITIONAL MATERIAL OF MATCHING COLOR AND TYPE
- REPAIR LANDSCAPE IRRIGATION PIPE & DRIP SYSTEM IF DAMAGED BY EXCAVATION
- EXISTING TREE, PROTECT IN PLACE 1 EA
- REMOVE & REPLACE SINGLE CURB, TYPE A1, ADOT STD DET C-05.10, H=6" 20 LF
- 6" BLOWOFF VALVE ASSEMBLY, INCLUDING ALL NECESSARY FITTINGS AND APPURTENANCES PER DET A SHEET CD-03 1 EA
- CASING PIPE VENT VALVE BOX PER DET B, SHEET CD-03 1 EA
- 12"x6" TEE WITH RESTRAINED JOINTS PER MAG STD DET 303-1, 303-2, & COP SUPPLEMENT TO MAG SPEC 750.3 1 EA
- GATE VALVE THRUST BLOCK PER DET B & C, SHEET CD-02 1 EA
- APPLY CRACK SEAL AND MICROSURFACING PER CITY CODE (CHAPTER 31, ARTICLE III, SECTION 31-49.1) 986 SY

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CITY OF PHOENIX  
WATER SERVICES DEPARTMENT  
  
HEDGEPEETH WATERLINE  
IMPROVEMENT DISTRICT

CIVIL  
  
51ST AVENUE  
12" WATER MAIN I  
STA 5+00 TO STA 7+50

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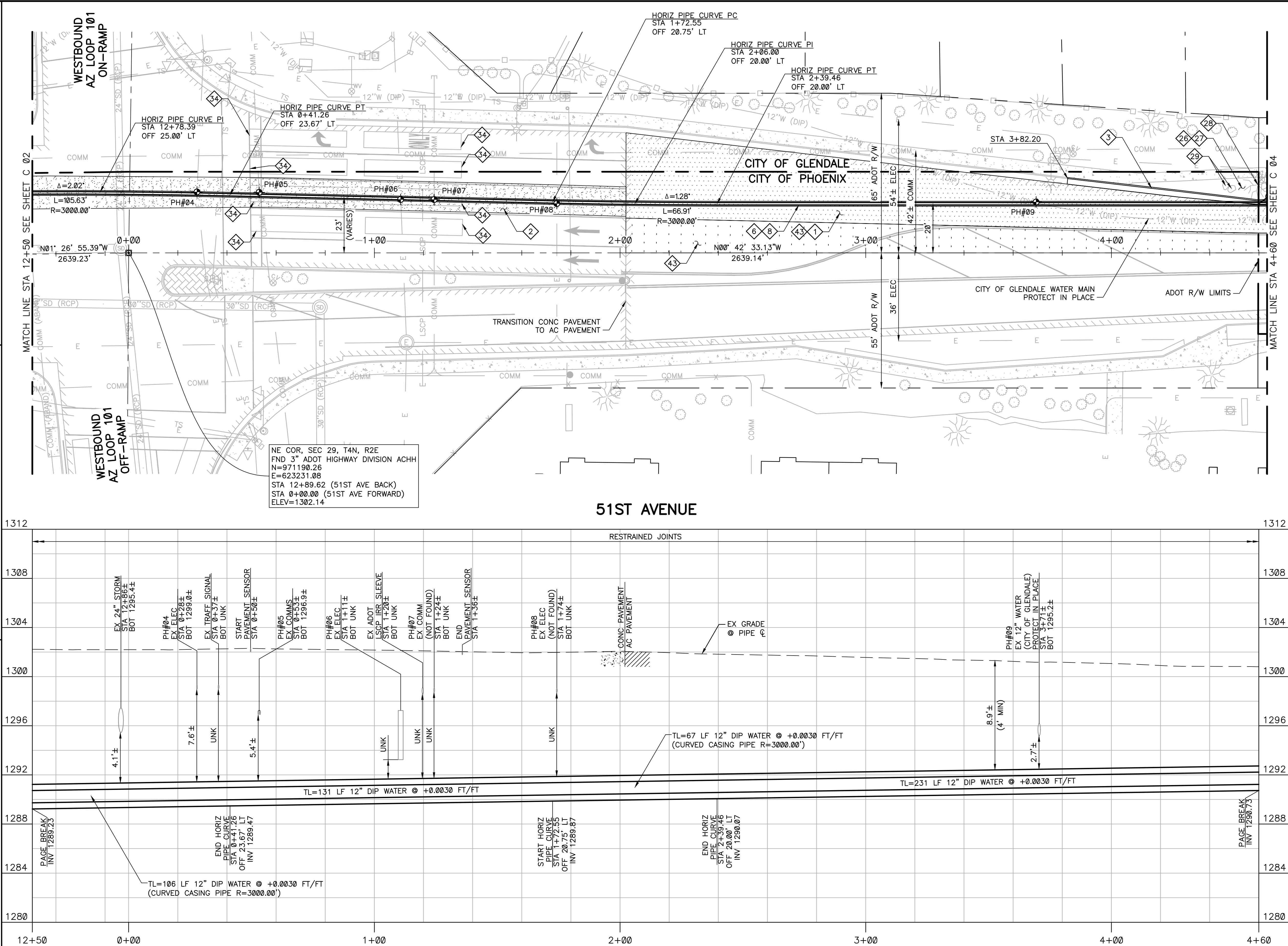


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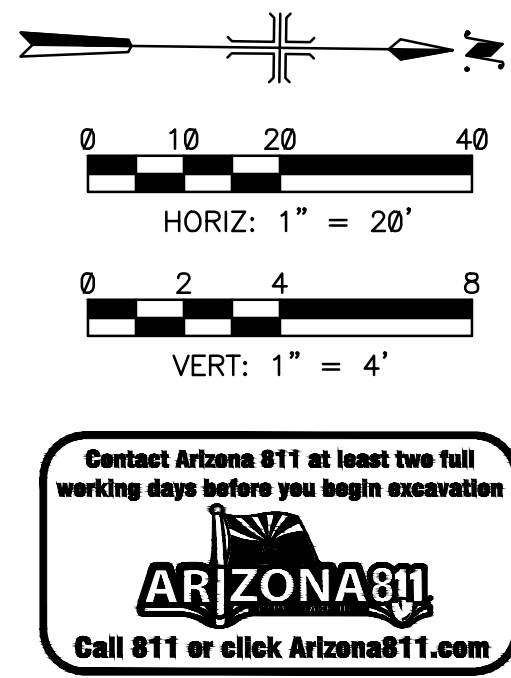


GENERAL NOTES:

- REFER TO DET B SHEET CD-01 FOR TRENCH WIDTHS AND BACKFILL REQUIREMENTS. ALL UTILITY TRENCHES TRANSVERSE TO TRAFFIC AND THROUGH ROADWAY INTERSECTIONS WILL REQUIRE CLSM BACKFILL.
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- ALL MATERIAL THAT COMES INTO CONTACT WITH WATER SHALL CONFORM TO ANSI/NSF STANDARD 61. (PER ARIZONA ADMINISTRATIVE CODE R18-4-213.B).

KEY NOTES:

- SAWCUT, REMOVE, & REPLACE AC PAVEMENT PER MAG SECTION 336, & DET A SHEET CD-01 652 SY
- PORTLAND CEMENT CONCRETE PAVEMENT REPLACEMENT PER DET A SHEET CD-02 324 SY
- REMOVE & REPLACE CURB & GUTTER TO THE NEAREST JOINT, MAG STD DET 220, TYPE A 78 LF
- 12" DIP, CLASS 350, RESTRAINED JOINTS, POLYETHYLENE WRAP PER COP SUPPLEMENT TO MAG SPEC 750.2 & MAG SPEC 610.6.2 & 610.6.3 500 LF
- 24" STEEL CASING PIPE, 0.375" MIN WALL THICKNESS. STEEL CASING PIPE, WELDED JOINTS, INSTALLATION, & TESTING PER MAG STD SPEC 602. SEE DET B SHEET CD-03 500 LF
- SALVAGE & STOCKPILE EXISTING LANDSCAPING DECOMPOSED GRANITE ON-SITE FOR REUSE. IF DECOMPOSED GRANITE AFTER REPLACEMENT IS LESS THAN 2" IN DEPTH, ADD ADDITIONAL MATERIAL OF MATCHING COLOR AND TYPE
- REPAIR LANDSCAPE IRRIGATION PIPE & DRIP SYSTEM IF DAMAGED BY EXCAVATION
- EXISTING TREE, PROTECT IN PLACE 1 EA
- SALVAGE & STOCKPILE EXISTING LANDSCAPING BOULDER ON-SITE FOR REUSE 2 EA
- CONTRACTOR RESPONSIBLE FOR REPAIRS TO TRAFFIC SIGNAL LOOP DETECTORS DAMAGED DURING EXCAVATION. REPAIRS TO BE INSPECTED & APPROVED BY ADOT & COP STREET DEPARTMENT
- APPLY CRACK SEAL AND MICROSURFACING PER CITY CODE (CHAPTER 31, ARTICLE III, SECTION 31-49.1) 971 SY



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CITY OF PHOENIX  
WATER SERVICES DEPARTMENT

HEDGEPEETH WATERLINE  
IMPROVEMENT DISTRICT

CIVIL

51ST AVENUE  
12" WATER MAIN III  
STA 12+50 TO STA 4+60

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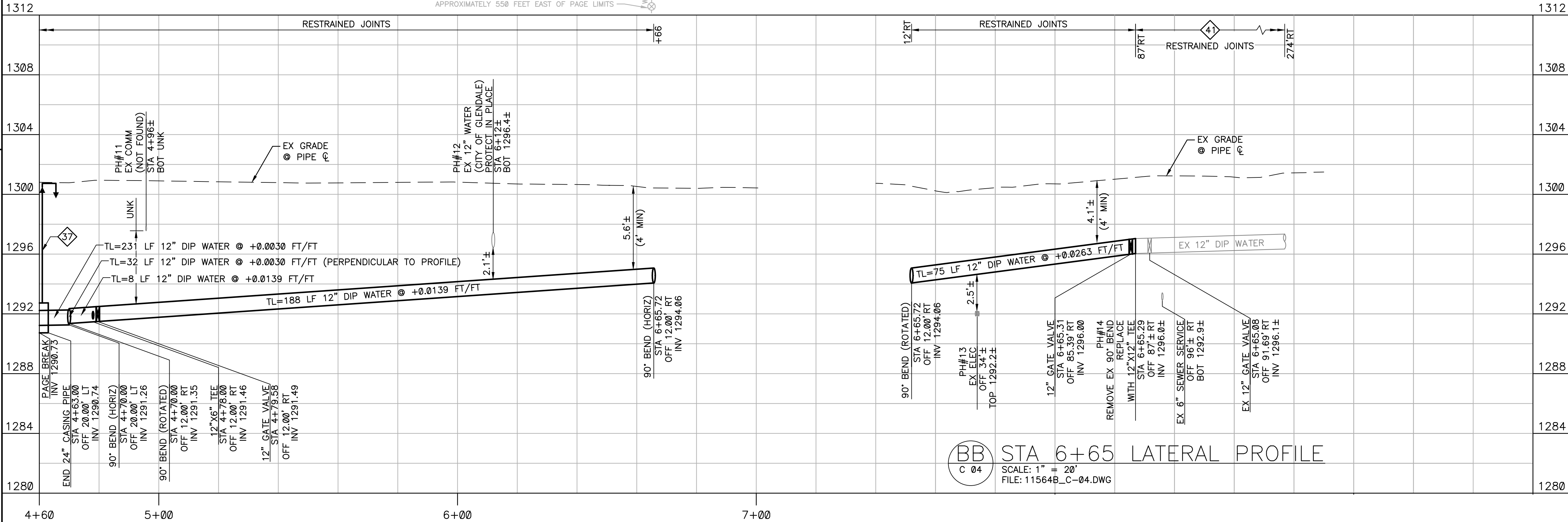
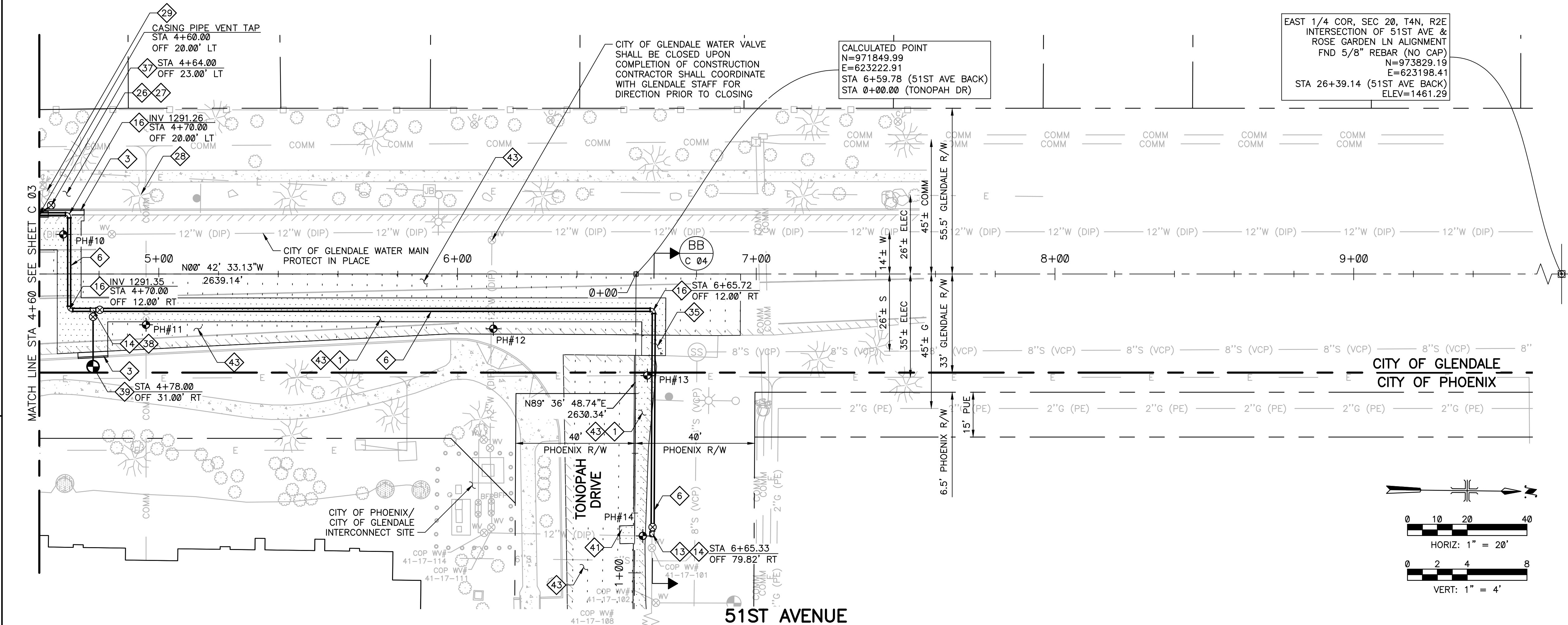
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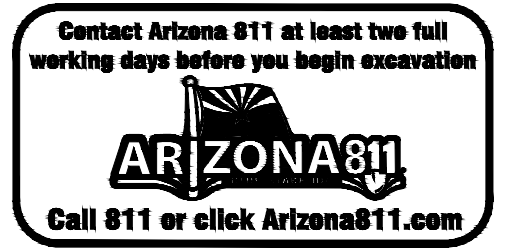


GENERAL NOTES:

1. REFER TO DET B SHEET CD--01 FOR TRENCH WIDTHS AND BACKFILL REQUIREMENTS. ALL UTILITY TRENCHES TRANSVERSE TO TRAFFIC AND THROUGH ROADWAY INTERSECTIONS WILL REQUIRE CLSM BACKFILL.
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4. CITY OF GLENDALE WATER MAIN SHALL BE PROTECTED IN PLACE. WATER MAIN MUST REMAIN IN SERVICE DURING CONSTRUCTION.
5. ALL PIPES, FITTINGS, VALVES, FIRE HYDRANTS AND OTHER APPURTENANCES SHALL CONFORM TO CURRENT AWWA, ASTM, AND NSF STANDARDS. (PER ADEQ ENGINEERING BULLETIN 10, CHAP. 7, SECTION B).
6. ALL MATERIAL THAT COMES INTO CONTACT WITH WATER SHALL CONFORM TO ANSI/NSF STANDARD 61. (PER ARIZONA ADMINISTRATIVE CODE R18-4--213.B).

### KEY NOTES:

- |    |   |         |
|----|---|---------|
|    | SAWCUT, REMOVE, & REPLACE AC PAVEMENT PER MAG SECTION 336, & DET A SHEET CD-01  | 421 SY  |
| 3  | REMOVE & REPLACE CURB & GUTTER TO THE NEAREST JOINT, MAG STD DET 220, TYPE A  | 25 LF   |
| 6  | 12" DIP, CLASS 350, RESTRAINED JOINTS, POLYETHYLENE WRAP PER COP SUPPLEMENT TO MAG SPEC 750.2 & MAG SPEC 610.6.2 & 610.6.3  | 313 LF  |
| 13 | REMOVE EXISTING 90° BEND & REPLACE W/ 12" TEE. CONNECT TO EXISTING WATERLINE PER DET B SHEET CD-02  | 1 EA    |
| 14 | 12" GATE VALVE, BOX & COVER PER COP STD DET P1391 TYPE A, P1391-1, & COP SUPPLEMENTS TO MAG SPEC 750.3  | 2 EA    |
| 16 | 12" 90° BEND WITH RESTRAINED JOINTS PER MAG STD DET 303-1, 303-2, & COP SUPPLEMENT TO MAG SPEC 750.3  | 3 EA    |
| 26 | SALVAGE & STOCKPILE EXISTING LANDSCAPING DECOMPOSED GRANITE ON-SITE FOR REUSE. IF DECOMPOSED GRANITE AFTER REPLACEMENT IS LESS THAN 2" IN DEPTH, ADD ADDITIONAL MATERIAL OF MATCHING COLOR AND TYPE |         |
| 27 | REPAIR LANDSCAPE IRRIGATION PIPE & DRIP SYSTEM IF DAMAGED BY EXCAVATION   |         |
| 28 | EXISTING TREE, PROTECT IN PLACE   | 1 EA    |
| 29 | SALVAGE & STOCKPILE EXISTING LANDSCAPING BOULDER ON-SITE FOR REUSE  | 1 EA    |
| 35 | REMOVE & REPLACE VALLEY GUTTER TO NEAREST JOINT PER COP STD DET P1021   | 55 SF   |
| 38 | 12"x6" TEE WITH RESTRAINED JOINTS PER MAG STD DET 303-1, 303-2, & COP SUPPLEMENT TO MAG SPEC 750.3  | 1 EA    |
| 39 | FIRE HYDRANT ASSEMBLY, INCLUDING 6" GATE VALVE, 6" DIP, HYDRANT, & ALL NECESSARY FITTINGS & APPURTENANCES PER COP STD DET P1360 & P1361   | 1 EA    |
| 37 | CASING PIPE VENT VALVE BOX PER DET B, SHEET CD-03   | 1 EA    |
| 41 | EXPOSE & CONFIRM EXISTING PIPE HAS MINIMUM RESTRAINED JOINT PIPE LENGTHS PER DET B SHEET CD-02  | NPI     |
| 43 | APPLY CRACK SEAL AND MICROSURFACING PER CITY CODE (CHAPTER 31, ARTICLE III, SECTION 31-49.1)  | 1353 SY |
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WATER SERVICES DEPARTMENT

HEDGE PETH WATERLINE  
IMPROVEMENT DISTRICT

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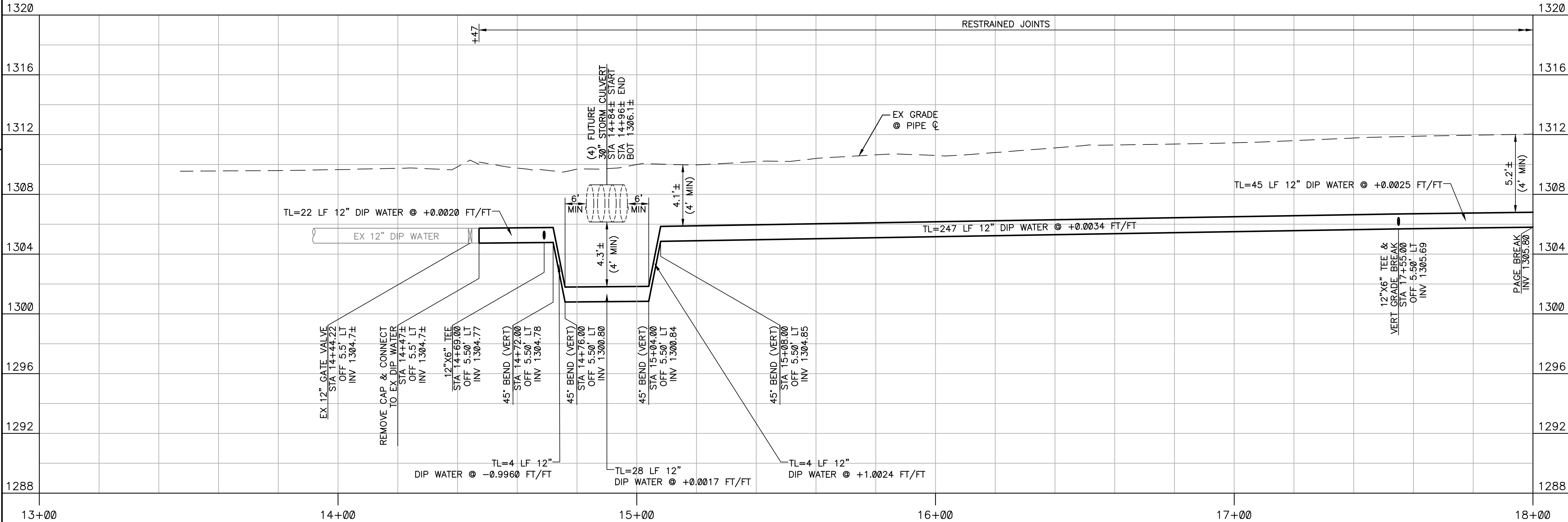
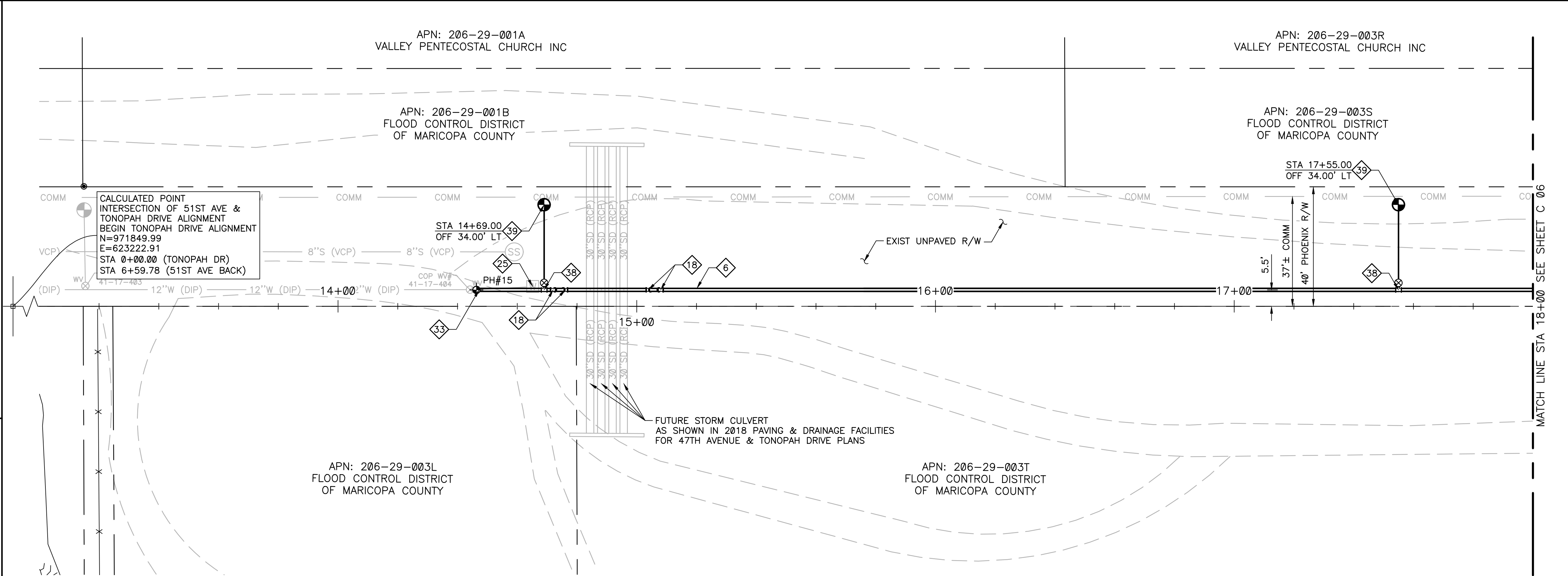
51ST AVENUE  
12" WATER MAIN IV  
STA 4+60 TO STA 7+00

XREFS: XG-11564B\_C-NOTE; XDS-11564B\_C-SURV; XDS-11564B\_C-UTIL; XDS-11564B\_C-PROP; XDS-11564B\_C-HATC; XDS-11564B\_C-OVL; XDS-11564B\_C-CSD; D\_BDR\_Full; XDS-11564B\_C-SURV-ALT  
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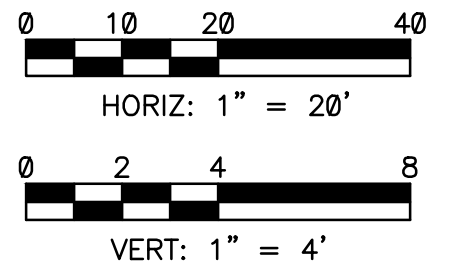


#### GENERAL NOTES:

- REFER TO DET B SHEET CD-01 FOR TRENCH WIDTHS AND BACKFILL REQUIREMENTS. ALL UTILITY TRENCHES TRANSVERSE TO TRAFFIC AND THROUGH ROADWAY INTERSECTIONS WILL REQUIRE CLSM BACKFILL.
- TL = TRUE LENGTH BETWEEN FITTINGS OR DEFLECTIONS.
- UNLESS SPECIFICALLY NOTED, ALL EXISTING UTILITIES SHALL BE PROTECTED IN PLACE. AT THE EXPENSE OF THE CONTRACTOR, ALL DAMAGED UTILITIES SHALL BE REPLACED TO THE FACILITY OWNER'S SATISFACTION.
- FOR AREAS WITHIN FLOOD CONTROL DISTRICT R/W, BACKFILL MUST BE PLACED IN 6-INCH LIFTS AND COMPACTED TO AT LEAST 95% OF STANDARD PROCTOR WITH COMPACTION TESTS ON EVERY OTHER LIFT AND AT LEAST ONE PER EVERY 300 FEET OF TRENCH. 1/2 SACK CLSM SLURRY CAN BE USED INSTEAD OF COMPACTED BACKFILL.
- ALL PIPES, FITTINGS, VALVES, FIRE HYDRANTS AND OTHER APPURTENANCES SHALL CONFORM TO CURRENT AWWA, ASTM, AND NSF STANDARDS. (PER ADEQ ENGINEERING BULLETIN 10, CHAP. 7, SECTION B).
- ALL MATERIAL THAT COMES INTO CONTACT WITH WATER SHALL CONFORM TO ANSI/NSF STANDARD 61. (PER ARIZONA ADMINISTRATIVE CODE R18-4-213.B).

#### KEY NOTES:

- |    |   |        |
|----|---|--------|
| 6  | 12" DIP, CLASS 350, RESTRAINED JOINTS, POLYETHYLENE WRAP PER COP SUPPLEMENT TO MAG SPEC 750.2 & MAG SPEC 610.6.2 & 610.6.3              | 353 LF |
| 18 | 12" 45° BEND WITH RESTRAINED JOINTS PER MAG STD DET 303-1, 303-2, & COP SUPPLEMENT TO MAG SPEC 750.3                                    | 4 EA   |
| 25 | REMOVE FLUSHING PIPE & METER BOX  | 1 EA   |
| 33 | CONNECT TO EXIST WATERLINE  | 1 EA   |
| 38 | 12"x6" TEE WITH RESTRAINED JOINTS PER MAG STD DET 303-1, 303-2, & COP SUPPLEMENT TO MAG SPEC 750.3                                      | 2 EA   |
| 39 | FIRE HYDRANT ASSEMBLY, INCLUDING 6" GATE VALVE, 6" DIP, HYDRANT, & ALL NECESSARY FITTINGS & APPURTENANCES PER COP STD DET P1360 & P1361 | 2 EA   |



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CITY OF PHOENIX  
WATER SERVICES DEPARTMENT  
HEDGEPEETH WATERLINE  
IMPROVEMENT DISTRICT

CIVIL  
TONOPAH DRIVE  
12" WATER MAIN I  
STA 13+00 TO STA 18+00

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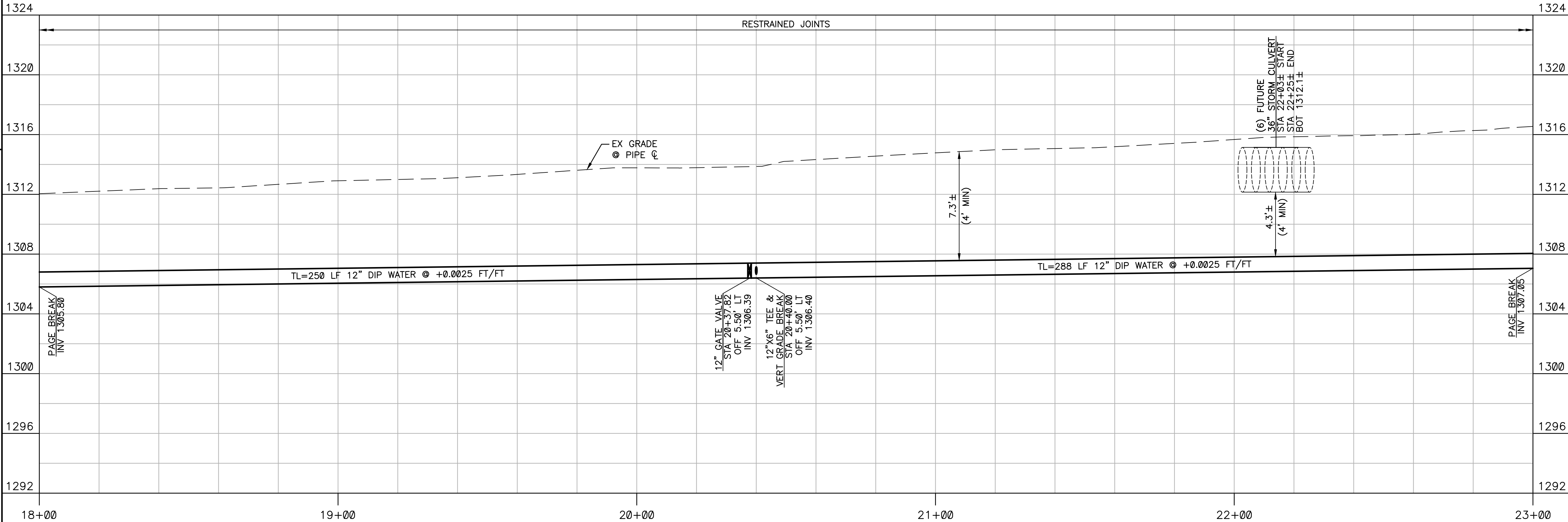
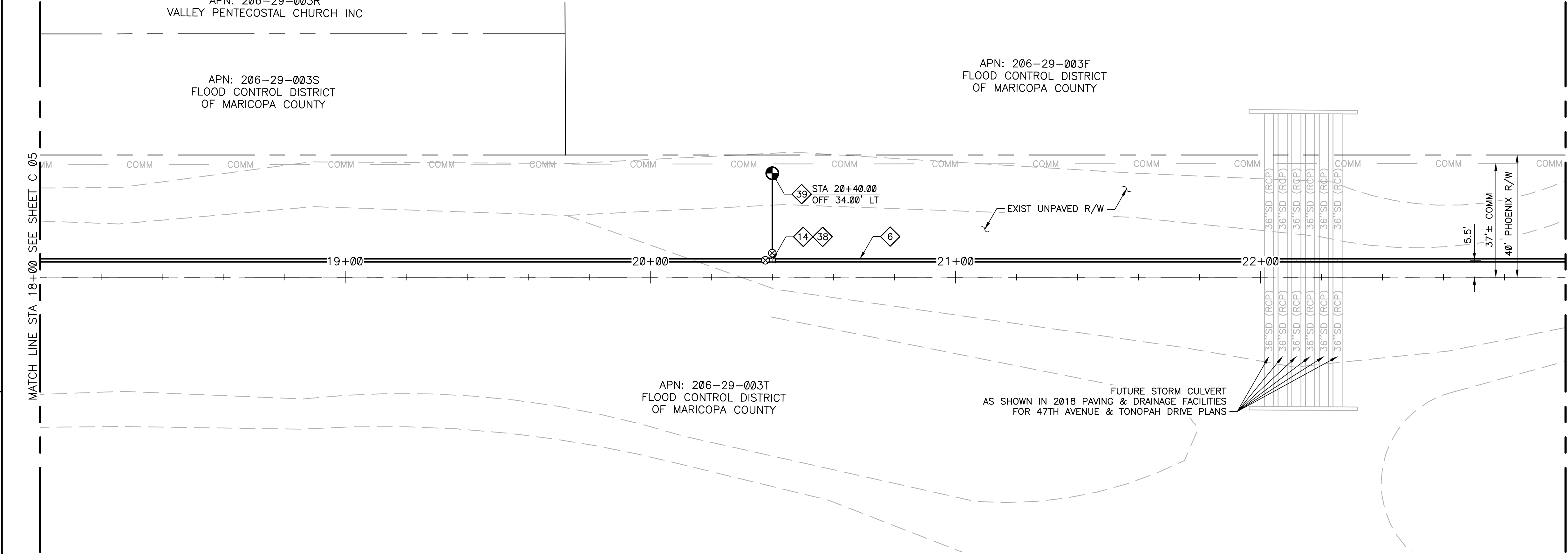
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XREFS: XG-11564B\_G-NOTE; XDS-11564B\_C-SURV; XDS-11564B\_C-UTLI; XDS-11564B\_C-PROP; XDS-11564B\_C-HATC; XDS-11564B\_C-OVL; XDS-11564B\_C-CSD; D\_BDR\_Full; XDS-11564B\_C-SURV-ALT  
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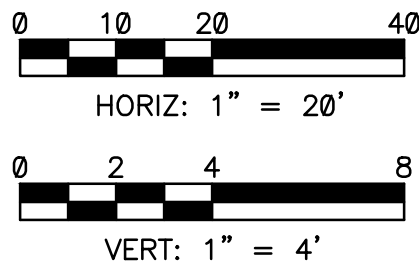
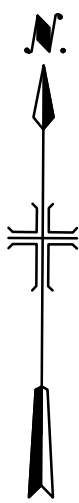
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- GENERAL NOTES:**
- REFER TO DET B SHEET CD-01 FOR TRENCH WIDTHS AND BACKFILL REQUIREMENTS. ALL UTILITY TRENCHES TRANSVERSE TO TRAFFIC AND THROUGH ROADWAY INTERSECTIONS WILL REQUIRE CLSM BACKFILL.
  - TL = TRUE LENGTH BETWEEN FITTINGS OR DEFLECTIONS.
  - UNLESS SPECIFICALLY NOTED, ALL EXISTING UTILITIES SHALL BE PROTECTED IN PLACE. AT THE EXPENSE OF THE CONTRACTOR, ALL DAMAGED UTILITIES SHALL BE REPLACED TO THE FACILITY OWNER'S SATISFACTION.
  - FOR AREAS WITHIN FLOOD CONTROL DISTRICT R/W, BACKFILL MUST BE PLACED IN 6-INCH LIFTS AND COMPACTED TO AT LEAST 95% OF STANDARD PROCTOR WITH COMPACTION TESTS ON EVERY OTHER LIFT AND AT LEAST ONE PER EVERY 300 FEET OF TRENCH. 1/2 SACK CLSM SLURRY CAN BE USED INSTEAD OF COMPACTED BACKFILL.
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  - ALL MATERIAL THAT COMES INTO CONTACT WITH WATER SHALL CONFORM TO ANSI/NSF STANDARD 61. (PER ARIZONA ADMINISTRATIVE CODE R18-4-213.B).

- KEY NOTES:**
- |    |   |        |
|----|---|--------|
| 6  | 12" DIP, CLASS 350, RESTRAINED JOINTS, POLYETHYLENE WRAP PER COP SUPPLEMENT TO MAG SPEC 750.2 & MAG SPEC 610.6.2 & 610.6.3              | 500 LF |
| 14 | 12" GATE VALVE, BOX & COVER PER COP STD DET P1391 TYPE A, P1391-1, & COP SUPPLEMENTS TO MAG SPEC 750.3                                  | 1 EA   |
| 38 | 12"x6" TEE WITH RESTRAINED JOINTS PER MAG STD DET 303-1, 303-2, & COP SUPPLEMENT TO MAG SPEC 750.3                                      | 1 EA   |
| 39 | FIRE HYDRANT ASSEMBLY, INCLUDING 6" GATE VALVE, 6" DIP, HYDRANT, & ALL NECESSARY FITTINGS & APPURTENANCES PER COP STD DET P1360 & P1361 | 1 EA   |



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City of Phoenix

CITY OF PHOENIX  
WATER SERVICES DEPARTMENT

HEDGEPEETH WATERLINE  
IMPROVEMENT DISTRICT

CIVIL

TONOPAH DRIVE  
12" WATER MAIN II  
STA 18+00 TO STA 23+00

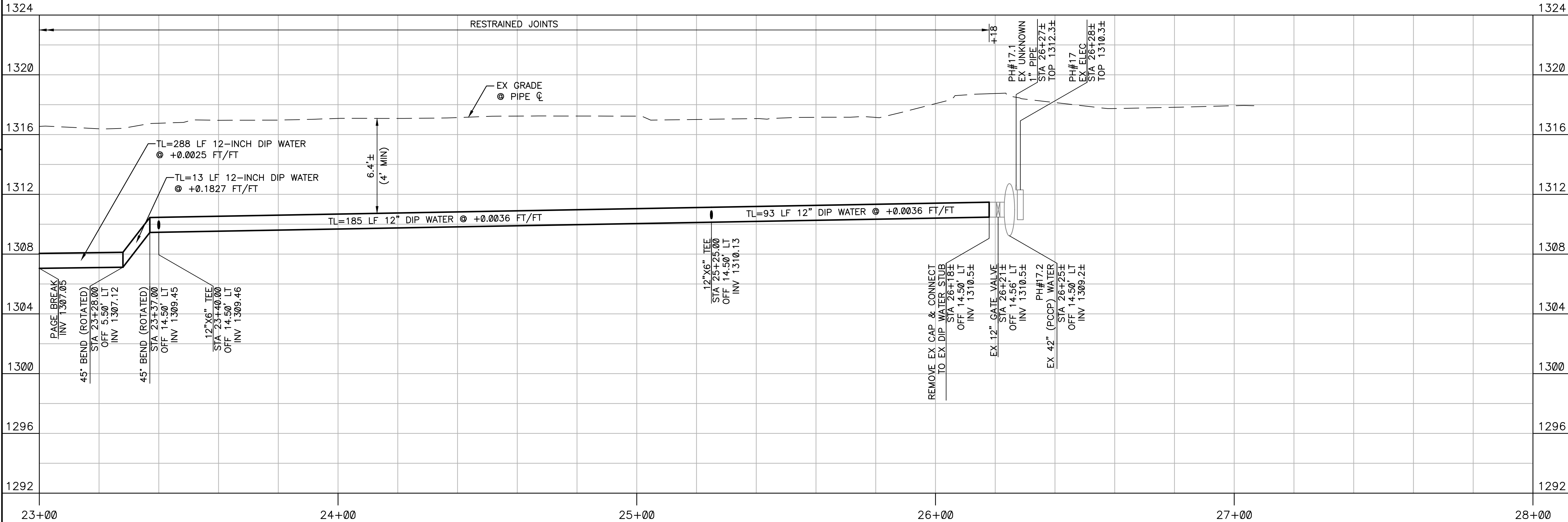
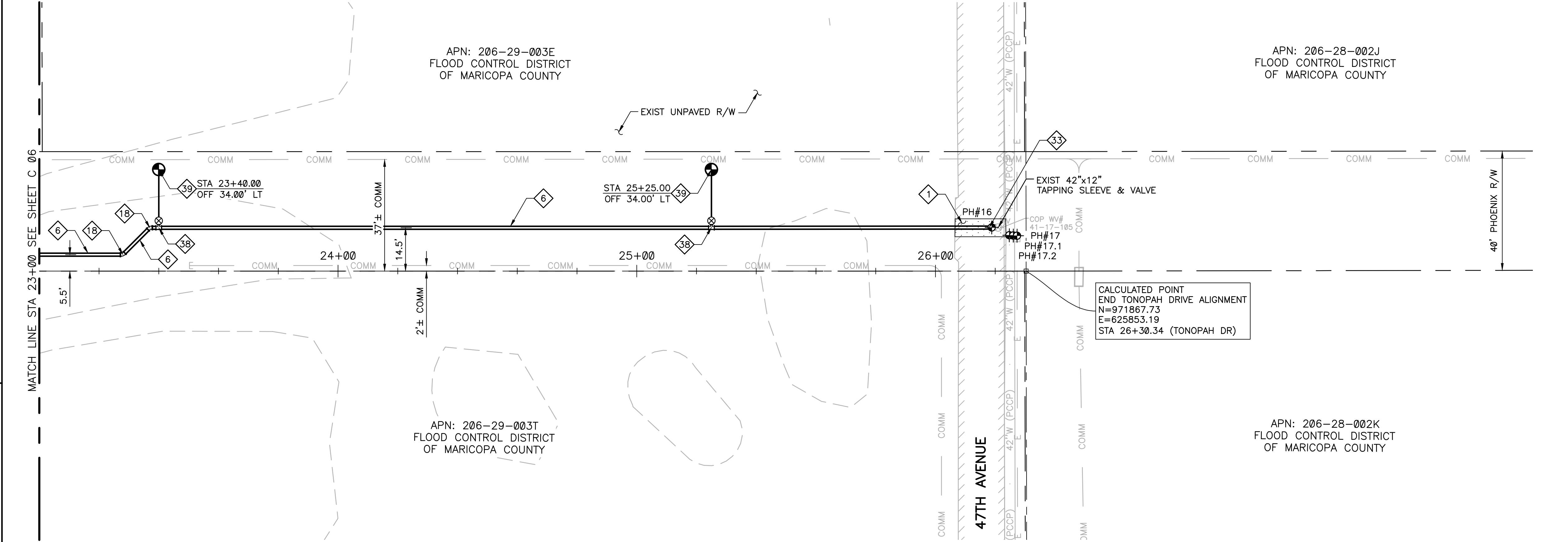
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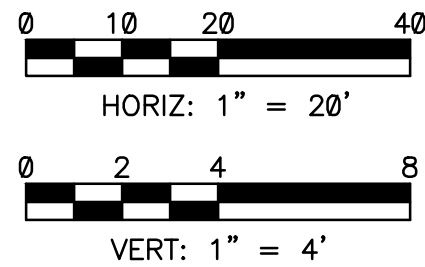


#### GENERAL NOTES:

1. REFER TO DET B SHEET CD-01 FOR TRENCH WIDTHS AND BACKFILL REQUIREMENTS. ALL UTILITY TRENCHES TRANSVERSE TO TRAFFIC AND THROUGH ROADWAY INTERSECTIONS WILL REQUIRE CLSM BACKFILL.
2. TL = TRUE LENGTH BETWEEN FITTINGS OR DEFLECTIONS.
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4. FOR AREAS WITHIN FLOOD CONTROL DISTRICT R/W, BACKFILL MUST BE PLACED IN 6-INCH LIFTS AND COMPACTED TO AT LEAST 95% OF STANDARD PROCTOR WITH COMPACTION TESTS ON EVERY OTHER LIFT AND AT LEAST ONE PER EVERY 300 FEET OF TRENCH. 1/2 SACK CLSM SLURRY CAN BE USED INSTEAD OF COMPACTED BACKFILL.
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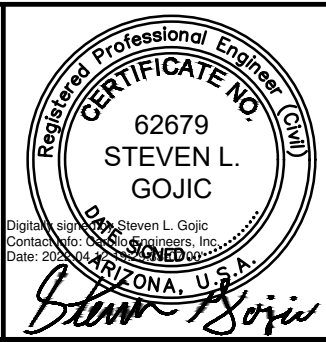
#### KEY NOTES:

- | ITEM | DESCRIPTION  | QUANTITY |
|------|--|----------|
| 1    | SAWCUT, REMOVE, & REPLACE AC PAVEMENT PER MAG SECTION 336, & DET A SHEET CD-01   | 12 SY    |
| 6    | 12" DIP, CLASS 350, RESTRAINED JOINTS, POLYETHYLENE WRAP PER COP SUPPLEMENT TO MAG SPEC 750.2 & MAG SPEC 610.6.2 & 610.6.3             | 322 LF   |
| 18   | 12" 45° BEND WITH RESTRAINED JOINTS PER MAG STD DET 303-1, 303-2, & COP SUPPLEMENT TO MAG SPEC 750.3                                   | 2 EA     |
| 33   | CONNECT TO EXIST WATERLINE   | 1 EA     |
| 38   | 12"x6" TEE WITH RESTRAINED JOINTS PER MAG STD DET 303-1, 303-2, & COP SUPPLEMENT TO MAG SPEC 750.3                                     | 2 EA     |
| 39   | FIRE HYDRANT ASSEMBLY, INCLUDING 6" GATE VALVE, 6" DIP HYDRANT, & ALL NECESSARY FITTINGS & APPURTENANCES PER COP STD DET P1360 & P1361 | 2 EA     |



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CITY OF PHOENIX  
WATER SERVICES DEPARTMENT  
  
HEDGEPEETH WATERLINE  
IMPROVEMENT DISTRICT

CIVIL

TONOPAH DRIVE  
12" WATER MAIN III  
STA 23+00 TO STA 28+00

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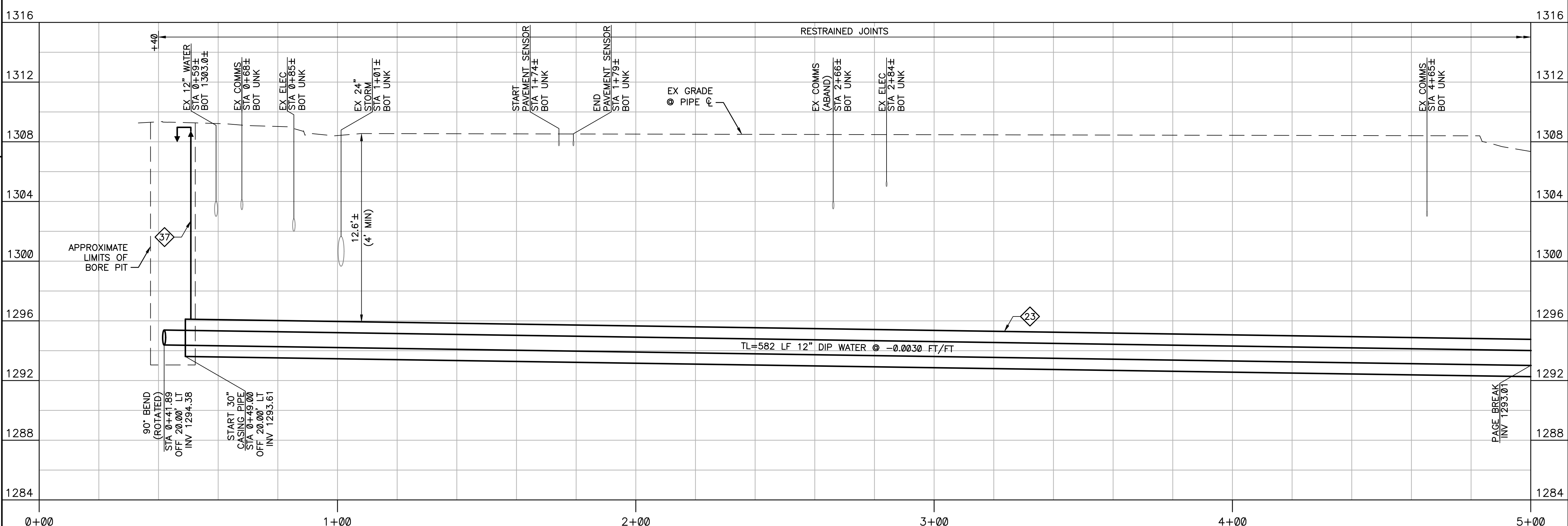
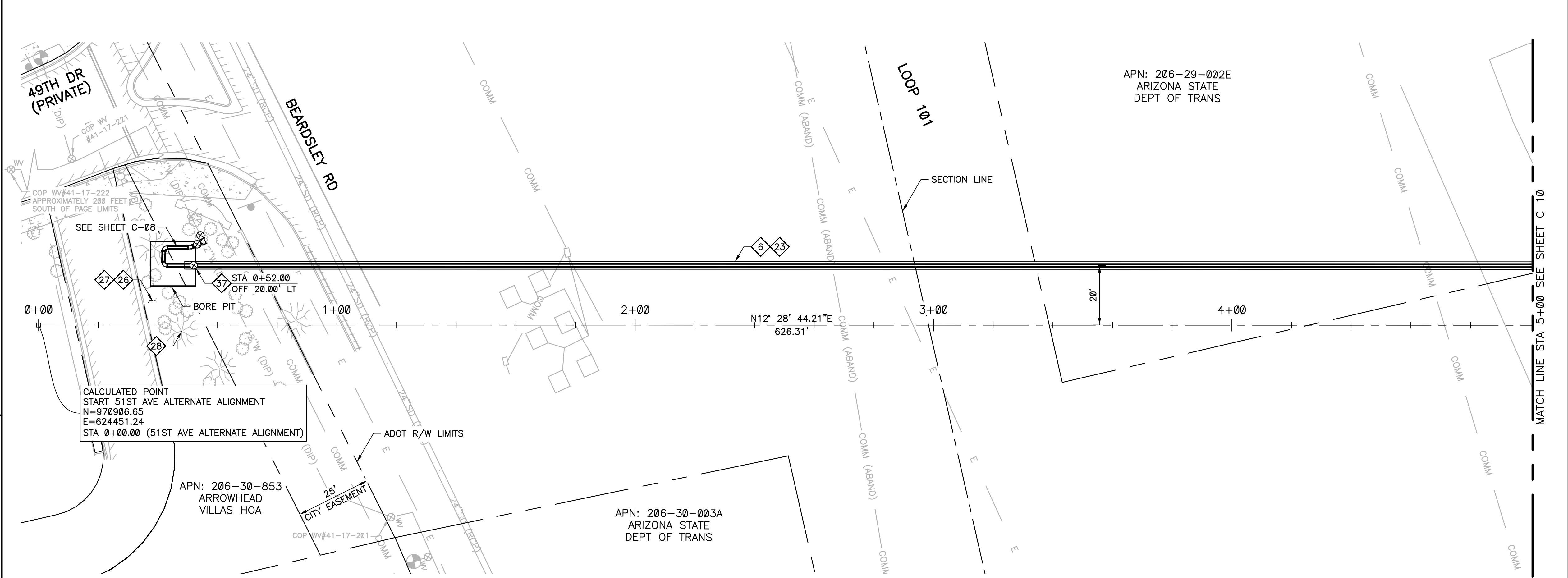
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- CONTRACTOR SHALL NOTIFY ARROWHEAD VILLAS HOA MANAGER, LILLI FOSTER, AT 602-216-7514 AND RECEIVE APPROVAL AT A MINIMUM OF 14 DAYS PRIOR TO BEGINNING OF WORK. CONTRACTOR TO OBTAIN TEMPORARY CONSTRUCTION EASEMENT.

**KEY NOTES:**

6	12" DIP, CLASS 350, RESTRAINED JOINTS, POLYETHYLENE WRAP PER COP SUPPLEMENT TO MAG SPEC 750.2 & MAG SPEC 610.6.2 & 610.6.3	458 LF
23	30" STEEL CASING PIPE, 0.375" MIN WALL THICKNESS, TRENCHLESS INSTALLATION VIA JACK & BORE PER MAG STD SPEC SECTION 602	451 LF
26	SALVAGE & STOCKPILE EXISTING LANDSCAPING DECOMPOSED GRANITE ON-SITE FOR REUSE. IF DECOMPOSED GRANITE AFTER REPLACEMENT IS LESS THAN 2" IN DEPTH, ADD ADDITIONAL MATERIAL OF MATCHING COLOR AND TYPE	NPI
27	REPAIR LANDSCAPE IRRIGATION PIPE & DRIP SYSTEM IF DAMAGED BY EXCAVATION	NPI
28	EXISTING TREE, PROTECT IN PLACE	1 EA
37	CASING PIPE VENT VALVE BOX PER DET B, SHEET CD-03	1 EA

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CONTACT ARIZONA 811 AT LEAST TWO FULL WORKING DAYS BEFORE YOU BEGIN EXCAVATION

**ARIZONA811**

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CITY OF PHOENIX  
WATER SERVICES DEPARTMENT

HEDGEPEETH WATERLINE  
IMPROVEMENT DISTRICT

CIVIL

49TH DR DESIGN ALTERNATIVE  
12" WATER MAIN II  
STA 0+00 TO STA 5+00

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DATE: 8/13/2021

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City of Phoenix

CITY OF PHOENIX  
WATER SERVICES DEPARTMENT

HEDGEPEETH WATERLINE  
IMPROVEMENT DISTRICT

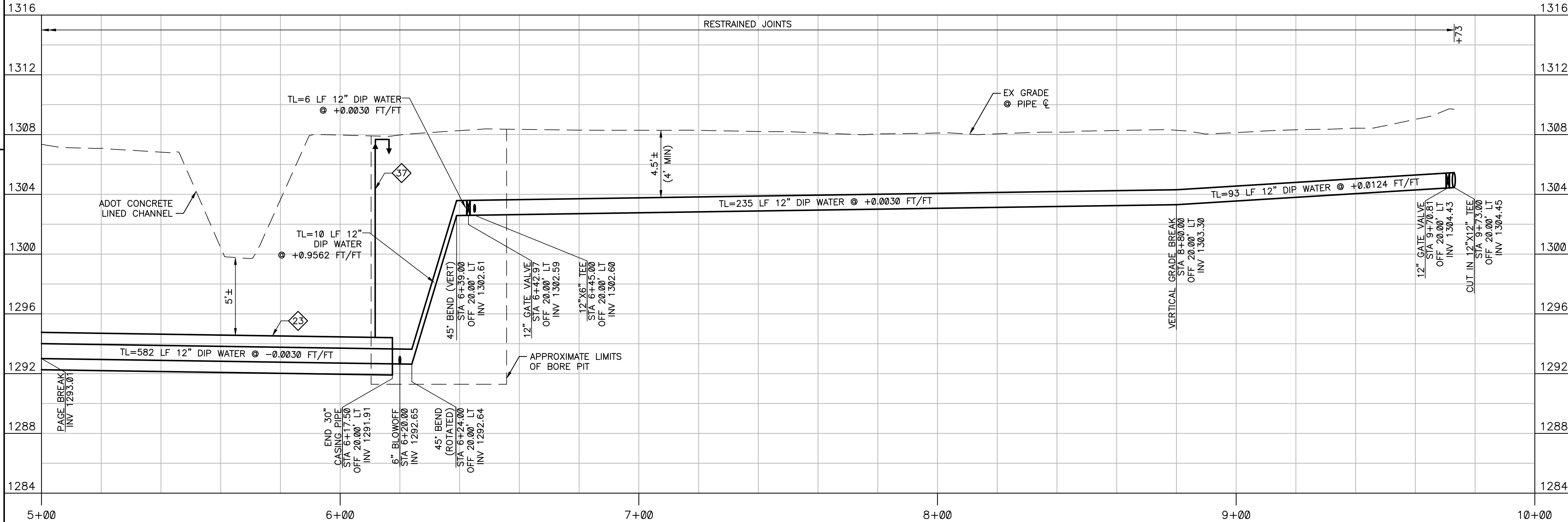
CIVIL

49TH DR DESIGN ALTERNATIVE  
12" WATER MAIN II  
STA 0+00 TO STA 5+00

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**ARIZONA811**

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DATE: 8/13/2021

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