MAYER DOMESTIC WATER IMPROVEMENT DISTRICT

MAYER, ARIZONA

2024 WATER MAIN IMPROVEMENTS

JULY 2024

MATERIALS/QUANTITY LIST

BASE BID	
MATERIALS	QUANTITY
6–INCH C900 PIPE	3,280 LF
4–INCH C900 PIPE	20 LF
1–INCH PE SERVICE TUBING	1,250 LF
6–INCH GATE VALVE AND BOX	14
1–INCH AIR RELEASE VALVE	3
SERVICE LINE CONNECTIONS	41
BID ALTERNATE 1	
MATERIALS	QUANTITY
8–INCH C900 PIPE	20 LF
6–INCH C900 PIPE	2,960 LF
1–INCH PE SERVICE TUBING	650 LF
6–INCH GATE VALVE AND BOX	5
1–INCH AIR RELEASE VALVE	1
SERVICE LINE CONNECTIONS	10
BID ALTERNATE 2	
MATERIALS	QUANTITY
6–INCH C900 PIPE	2,300 LF
4–INCH C900 PIPE	20 LF
1–INCH PE SERVICE TUBING	785 LF
6–INCH GATE VALVE AND BOX	7
1–INCH AIR RELEASE VALVE	1
SERVICE LINE CONNECTIONS	27

BASIS OF BEARING
THE SITE IS LOCATED WITHIN MAYER, ARIZONA AT THE RESPECTIVE COORDINATES:
LAT 34°23'40.8"N, LONG 112°13'46.4"W.
THE TOWNSHIP IS 12N 1W, SECTION 26.
THE SITE IS NOT LOCATED WITHIN THE 100–YEAR FLOOD ZONE.



LOCATION PLAN
NOT TO SCALE

TATA & HOWARD

SHEET INDEX

GENERAL
G-1 - LEGEND, ABBREVIATIONS, AND NOTES

BASE BID
C-1 - EAST MAIN STREET STA. 0+00 TO STA. 20+75,
KOFA ROAD STA. 0+00 TO STA. 1+40,
& MOHAWK DRIVE STA. 1+10 TO STA. 2+50
C-2 - SUMMIT AVENUE STA. 0+00 TO STA. 4+30,
KOFA ROAD STA. 1+40 TO STA. 2+50,
& MOHAWK DRIVE STA. 0+00 TO STA. 1+10

BID ALTERNATE 1
C-3 - SUMMIT AVENUE STA. 0+00 TO STA. 10+30
& EAST MAIN STREET STA. 0+00 TO STA. 1+60
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DETAILS
C-6 - DETAIL SHEET I
C-7 - DETAIL SHEET II

Registered Professional Engineer
CERTIFICATE NO.
23576
RANDALL PELLATZ
7/17/24
EXPIRES 12/24

LEGEND

EXISTING	DESCRIPTION	PROPOSED
W	WATER MAIN	W
W	WATER SERVICE	W W
	GATE VALVE	
	REDUCER	
	SOLID SLEEVE	
	TRANSITION COUPLING	H
	PIPE FITTINGS	
	CAP	
	THRUST BLOCK	
	CURB STOP	
W	WATER MANHOLE	
D	DRAIN MANHOLE	
	CATCH BASIN	
GM	GAS METER	
W	WATER METER	W
	AIR RELEASE VALVE	A
OHE	ELEC. OH. WIRE	
C	COMM. MANHOLE	
C	COMMUNICATIONS BOX	
C	COMMUNICATIONS LINE	
	UTILITY POLE	
NG	GAS LINE	
G	GAS VALVE	
	TREE LINE	
	SHRUB/BUSH LINE	
	TREE	
	SHRUB	
	ROCK	
	WETLANDS	
	WETLAND FLAG	
	WETLAND BUFFER	
	DITCH / SWALE	
	LIMITS OF CONSTRUCTION	
	STATIONING	0+00
	FENCE – CHAIN LINK	
	RETAINING WALL	
	PROPERTY LINE	
	SIGN POST	
	BUILDING	
	ASPHALT ROAD	
	GRAVEL AREA	
	CONCRETE	
	TEST PIT	

ABBREVIATIONS

APPROX.	APPROXIMATE
CB	CATCH BASIN
CONC.	CONCRETE
DIA.	DIAMETER
DMH	DRAIN MANHOLE
DWGS	DRAWINGS
ELEV.	ELEVATION
GV	GATE VALVE
HDPE	HIGH DENSITY POLYETHYLENE
HYD	HYDRANT
INV.	INVERT
MAX.	MAXIMUM
MIN.	MINIMUM
PE	POLYETHYLENE
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
TYP.	TYPICAL
VERT.	VERTICAL

GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MARICOPA ASSOCIATION OF GOVERNMENTS (MAG) STANDARDS AND THE MAYER DOMESTIC WATER IMPROVEMENT DISTRICT (DWID) STANDARDS. ALL EXCAVATION AND RESTORATION SHALL MEET MAG AND MAYER DWID STANDARDS.
2. THE ENGINEER MAY DIRECT THE CONTRACTOR TO VARY THE PROPOSED WORK DURING CONSTRUCTION TO MEET EXISTING CONDITIONS.
3. STATIONING ALONG THE LENGTH OF THE WATER MAIN IS INTENDED FOR GENERAL REFERENCE. WHERE PRECISE GROUND LOCATION IS REQUIRED, REFER TO ACTUAL FIELD MEASUREMENTS FOR ACTUAL DISTANCES FROM EXISTING GROUND FEATURES.
4. STAGING AREA LOCATIONS SHALL BE COORDINATED WITH AND APPROVED BY THE OWNER.
5. STOCKPILES SHALL BE LOCATED AS NEEDED, WITHIN THE LIMIT OF WORK, IN AREAS OF MINIMAL IMPACT.
6. THE CONTRACTOR, AT HIS EXPENSE SHALL BRACE UTILITY POLES IF REQUIRED, AND REPAIR ANY DAMAGE TO EXISTING SIDEWALKS, CURBS, PAVING, SHRUBS, TREES, STONE WALLS, LAWNS, ETC. ALL EXCAVATED MATERIALS SHALL BE RETURNED TO EQUAL OR BETTER THAN PRIOR CONDITION BY THE CONTRACTOR.
7. ALL EXISTING CONCRETE AND ASPHALT PAVEMENT SHALL BE SAW-CUT PRIOR TO EXCAVATION IN ORDER TO PROVIDE UNIFORM ASPHALT REPLACEMENT.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF PAVEMENT MARKINGS, TRAFFIC SIGN LOOPS, STRIPING, ARROWS, CROSSWALKS, ETC.

EROSION & SEDIMENT CONTROL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE AND REPAIR OF ALL EROSION CONTROL DEVICES ON-SITE. ALL EROSION CONTROL DEVICES SHALL BE REGULARLY INSPECTED.
2. IN THE STAGING AREA, THE CONTRACTOR SHALL HAVE A STOCKPILE OF MATERIALS REQUIRED TO CONTROL EROSION ON-SITE TO BE USED TO SUPPLEMENT OR REPAIR EROSION CONTROL DEVICES. THESE MATERIALS SHALL INCLUDE, BUT ARE NOT LIMITED TO, HAY BALES, SILT FENCE AND CRUSHED STONE.
3. IF A STOCKPILE IS LOCATED ON A SLOPE, THE RUNOFF SHALL BE DIRECTED AWAY FROM THE PILE. STOCKPILES SHALL BE CONTAINED WITHIN STRAW DIKES.
4. AT NO TIME SHALL SILT-LADEN WATER BE ALLOWED TO ENTER SENSITIVE AREAS (WETLANDS, OFF-SITE AREA AND DRAINAGE SYSTEMS). ANY RUNOFF FROM DISTURBED SURFACES SHALL BE DIRECTED THROUGH SETTLING BASINS AND EROSION CONTROL BARRIERS PRIOR TO ENTERING ANY SENSITIVE AREAS.
5. NO MATERIALS SHALL BE DISPOSED OF INTO ANY WETLANDS OR EXISTING OR PROPOSED DRAINAGE SYSTEMS.
6. ANY REFUELING OF CONSTRUCTION VEHICLES AND EQUIPMENT SHALL TAKE PLACE OUTSIDE OF ANY 100-FOOT BUFFER ZONE TO ANY WETLANDS.
7. IF INTENSE RAINFALL IS ANTICIPATED, THE INSTALLATION OF SUPPLEMENTAL STRAW DIKES, SILT FENCES, OR ARMORED DIKES SHALL BE UTILIZED. ADDITIONAL TEMPORARY SETTLING BASINS ARE REQUIRED TO BE LOCATED WITHIN THE DISTRIBUTED AREA, TO MINIMIZE THE TRIBUTARY AREAS.

SURVEY NOTES

1. BASE PLANS AND PROPERTY LINE DETERMINATIONS WERE PREPARED BY GRANITE BASIN ENGINEERING, INC. (1981 COMMERCE CENTER CIRCLE SUITE B, PRESCOTT, AZ 86301) USING AN ON-GROUND SURVEY AND AERIAL PHOTOGRAPHY IN NOVEMBER 2023.
2. THE LOCATION OF THE EXISTING UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE AND ARE INTENDED ONLY TO ADVISE THE CONTRACTOR OF THEIR PRESENCE. CALL "ARIZONA 811" (1-602-659-7500) FOR FIELD LOCATIONS OF ALL EXISTING UTILITIES.
3. BENCHMARKS MAY HAVE BEEN ESTABLISHED BY THE SURVEYOR PRIOR TO THE START OF CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ALL BENCHMARKS THROUGHOUT CONSTRUCTION. ANY COST TO RE-ESTABLISH THESE ITEMS WILL BE AT NO COST TO THE OWNER.

GEOTECHNICAL NOTES

1. FOR EARTH EXCAVATION, BACKFILL, FILL AND GRADING, SEE SPECIFICATION 02200.
2. FOR DEWATERING SEE SPECIFICATION 02140.
3. FOR TEMPORARY EXCAVATION SUPPORT SYSTEM SEE SPECIFICATION 02160.

WATER MAIN NOTES

1. THE CONTRACTOR SHALL MAKE EVERY EFFORT NOT TO DISTURB THE EXISTING WATER SYSTEM. NO ADDITIONAL PAYMENT SHALL BE MADE FOR DAMAGE CREATED FOR THE CONVENIENCE OF THE CONTRACTOR.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEARING & GRUBBING TREES WHERE THEY CONFLICT WITH THE PROPOSED WATER MAIN INSTALLATION.
3. UNLESS OTHERWISE NOTED OR APPROVED BY THE ENGINEER, THE NEW WATER MAIN SHALL PASS UNDER EXISTING UTILITIES.
4. ALL WATER MAINS ARE TO BE LAID WITH A MINIMUM OF 4'-0" COVER.
5. CONTRACTOR SHALL MAINTAIN A MINIMUM VERTICAL CLEARANCE OF 18 INCHES BETWEEN NEW WATER MAIN AND EXISTING UTILITIES.
6. ALL BENDS, TEE, CAPS AND HYDRANTS SHALL BE BACKED WITH CONCRETE THRUST BLOCKS AS INDICATED ON THE CONTRACT DRAWINGS. ALL BENDS, TEE, CAPS, VALVES AND MISCELLANEOUS FITTINGS SHALL BE RESTRAINED AS SPECIFIED.
7. CONTRACTOR SHALL USE A WATER TIGHT PLUG DURING THE WATER MAIN INSTALLATION. PLUG SHALL REMAIN IN PLACE AT ALL TIMES.
8. THE CONTRACTOR SHALL NOT CONNECT TO THE EXISTING WATER MAIN UNTIL IT HAS BEEN PRESSURE TESTED AND CHLORINATED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
9. WATER MAIN FLUSHING AND DECHLORINATION SHALL BE DONE IN COMPLIANCE WITH YAVAPAI COUINTY PUBLIC WORKS STANDARDS.
10. THE CONTRACTOR SHALL PROVIDE ADDITIONAL TAPS IF REQUIRED FOR CHLORINATING AND HYDROSTATIC TESTING AT HIS EXPENSE. TAPS SHALL BE REMOVED AND THE WATER MAIN PLUGGED AFTER TESTING IS COMPLETE.
11. CONTRACTOR SHALL UTILIZE EXISTING WATER MAIN SLEEVES INSTALLED PREVIOUSLY BY OWNER. LOCATION OF THE EXISTING SLEEVES ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY CONTRACTOR.
12. ALL MATERIALS AND CHEMICALS CONFORM TO NSF 60 AND 61.
13. ALL NEW COMPONENTS DISINFECTED PER ADEQ BULLETIN NO. 8.
14. ALL MATERIALS MUST MEET YAVAPAI STANDARDS.
15. ALL MATERIALS MUST MEET MAG STANDARDS.
16. ALL NEW WATER MAIN AND SERVICES SHALL BE INSTALLED AT LEAST SIX (6) FEET AWAY FROM ALL EXISTING UTILITY POLES.
17. IF ASBESTOS MATERIALS ARE ENCOUNTERED DURING THE WORK, THE CONTRACTOR SHALL COMPLY FULLY WITH ARIZONA ADMINISTRATIVE CODE, A.A.C. R18-2-901 AND NOTIFY THE ENGINEER.
18. MINIMUM VERTICAL AND HORIZONTAL SEPARATION BETWEEN WATER MAINS AND SEWER LINES SHALL BE PER SECTION 610.5 OF THE MAG STANDARDS.
19. ALL NEW WATER MAINS SHALL BE PRESSURE AND LEAKAGE TESTED PER SECTION 611.2.2 OF THE MAG STANDARDS.

BASIS OF BEARING

1. THE SITE IS LOCATED WITHIN MAYER, ARIZONA AT THE RESPECTIVE COORDINATES: LAT 34°23'40.8"N, LONG 112°13'46.4"W.
2. THE TOWNSHIP IS 12N 1W, SECTION 26.
3. THE SITE IS NOT LOCATED WITHIN THE 100-YEAR FLOOD ZONE.

MAYER DOMESTIC WATER IMPROVEMENT DISTRICT
MAYER, ARIZONA

2024 WATER MAIN IMPROVEMENTS

LEGEND, ABBREVIATIONS & NOTES

Drawn By: MJK/AAF | Designed By: MJK/AAF | Checked By: JHV/AMS | Approved By: RP

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Rev.	Date	Description



TATA & HOWARD

T&H NO.: 7599
DATE: JULY 2024
SCALE: AS NOTED

G-1

CONNECT TO EXISTING 4" AC WATER MAIN

(2) 6" 45° BENDS
6"X6" TEE
(2) 6" GATE VALVES
(2) 6"X4" REDUCERS
(2) 4" COUPLINGS

1" WATER SERVICE (TYP.)

6" C900 PVC WATER MAIN

APPROX. LOCATION OF 12" WATER MAIN SLEEVE

CONTINUATION SHOWN IN BID ALTERNATE NO. 2 ON SHEET C-5, IF SELECTED BY OWNER

LIMIT OF BASE BID WORK

POPLAR STREET

PINE STREET

FIR STREET

E MAIN STREET

CONFIRM SIZE AND LOCATION OF 12" WATER MAIN SLEEVE

CONNECT TO EXISTING 2" GALV. WATER MAIN

EX. 2" GALVANIZED WATER MAIN

6"X6" TEE
6" 45° BENDS
(2) 6" 22.5° BENDS
6"x2" REDUCER
2" CAP
2" COUPLING
6" C900 PVC WATER MAIN

CONFIRM SIZE AND LOCATION OF 12" WATER MAIN SLEEVE

6"X6" TEE
6" 11.25° BEND
(2) 6" GATE VALVES
6" C900 PVC WATER MAIN

ABANDON EX. 2" GALV WATER MAIN IN PLACE

EX. 2" GALV WATER MAIN

6" 45° BEND
6" CAP AND THRUST BLOCK
6" C900 PVC WATER MAIN

CONFIRM SIZE AND LOCATION OF 8" WATER MAIN SLEEVE

AIR RELEASE VALVE

CONNECT TO EXISTING SERVICES FOR 13159, 13191, AND 13201 EAST MAIN STREET

MATCHLINE A – SEE THIS SHEET

EAST MAIN STREET STA. 0+00 TO STA. 12+00

0 40' 80'
SCALE: 1" = 40'

DONE

MATCHLINE A – SEE THIS SHEET

ABANDON EX. 2" GALV WATER MAIN IN PLACE

1" WATER SERVICE (TYP.)

6" 11.25° BEND

6" 22.5° BEND

6" 11.25° BEND

6" C900 PVC WATER MAIN

6"x6" TEE
(2) 6" GATE VALVES
6" C900 PVC WATER MAIN

END OF EX. 2" GALV WATER MAIN

APPROX. LOCATION OF EXISTING 12" WATER MAIN SLEEVE

MATCHLINE B – SEE SHEET C-2

KOFA ROAD

6" 22.5° BEND
6" 11.25° BEND

AIR RELEASE VALVE

ABANDON EX. 2" GALV WATER MAIN IN PLACE

EX. 2" GALV WATER MAIN

6"X6" TEE
6" GATE VALVE
6" CAP AND THRUST BLOCK
6" C900 PVC WATER MAIN

CONFIRM SIZE AND LOCATION OF WATER MAIN SLEEVE

MATCHLINE C – SEE SHEET C-2

6" 11.25° BEND

MOHAWK DRIVE

SAGUARO DRIVE

6"x6" TEE
(2) 6" GATE VALVES
6"X4" REDUCER
(2) 6" 45° BENDS
4" TRANSITION COUPLING
4" CAP
6" C900 PVC WATER MAIN
4" C900 PVC WATER MAIN

CONNECT TO EXISTING 4" PVC WATER MAIN

LIMIT OF BASE BID WORK

EAST MAIN STREET STA. 12+00 TO STA. 20+75, KOFA ROAD STA. 0+00 TO STA. 1+40, & MOHAWK DRIVE STA. 1+10 TO STA. 2+50

0 40' 80'
SCALE: 1" = 40'

MAYER DOMESTIC WATER IMPROVEMENT DISTRICT
MAYER, ARIZONA

2024 WATER MAIN IMPROVEMENTS

BASE BID
EAST MAIN ST. STA. 0+00 TO STA. 20+75,
KOFA RD. STA. 0+00 TO STA. 1+40,
& MOHAWK DR. STA. 1+10 TO STA. 2+50

Drawn By: MJK/KAF | Designed By: MJK/KAF | Checked By: JVH/AMS | Approved By: RP

Rev.	Date	Description

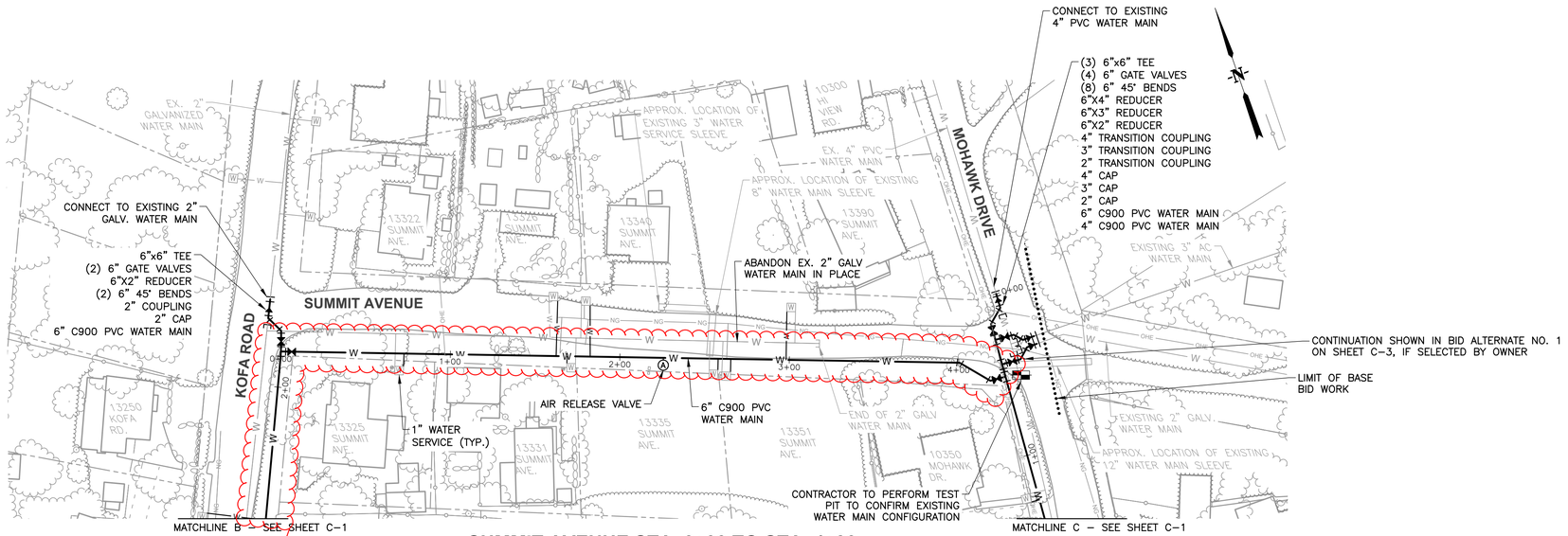
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REGISTERED PROFESSIONAL ENGINEER
CERTIFICATE NO. 67172
RANDALL PELLATZ
7/17/24
EXPIRES 12/24

TATA & HOWARD

T&H NO.: 7599
DATE: JULY 2024
SCALE: AS NOTED

C-1



SUMMIT AVENUE STA. 0+00 TO STA. 4+30,
KOFA ROAD STA. 1+40 TO STA. 2+50,
& MOHAWK DRIVE STA. 0+00 TO STA. 1+10

0 40' 80'
SCALE: 1" = 40'

DONE

MAYER DOMESTIC WATER IMPROVEMENT DISTRICT
MAYER, ARIZONA

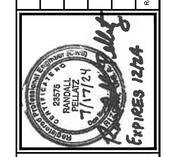
2024 WATER MAIN IMPROVEMENTS

BASE BID
SUMMIT AVE. STA. 0+00 TO STA. 4+30,
KOFA RD. STA. 1+40 TO STA. 2+50,
& MOHAWK DR. STA. 0+00 TO STA. 1+10

Rev.	Date	Description

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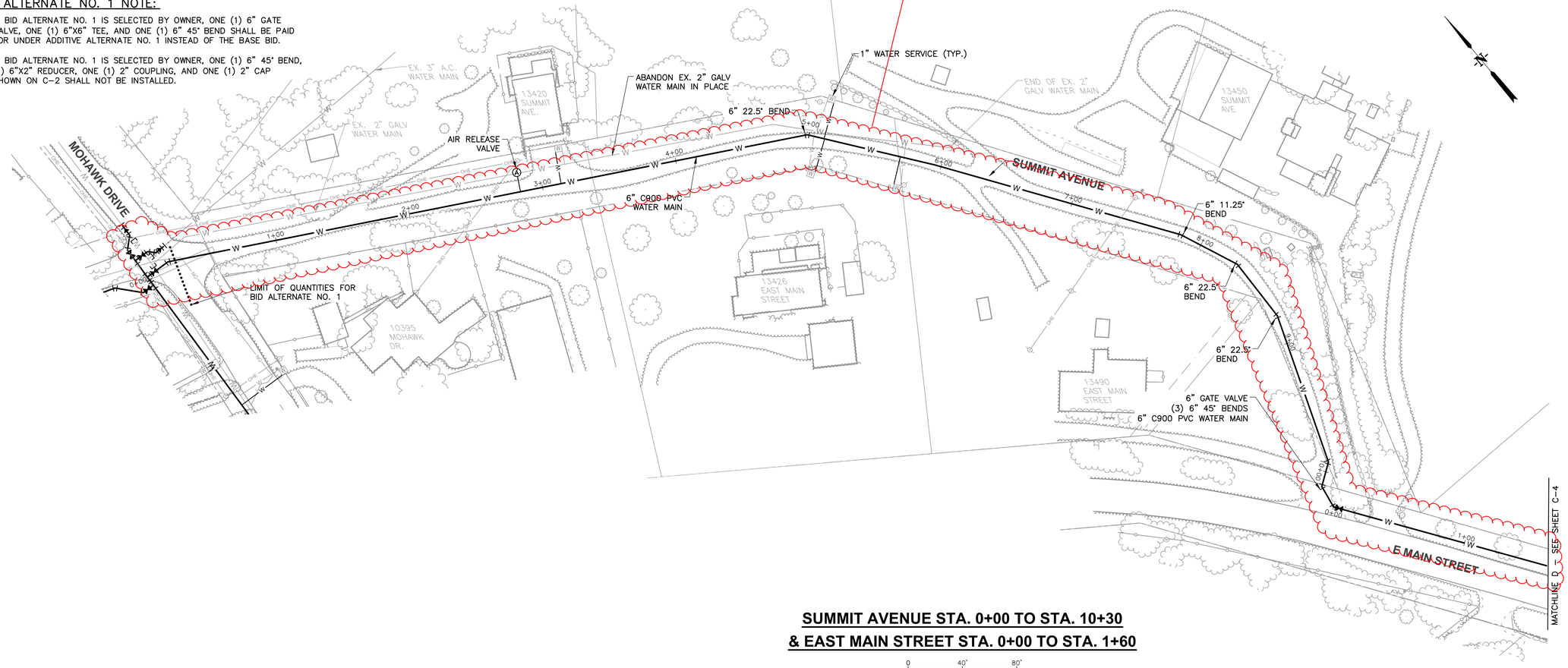
T&H NO.: 7599
DATE: JULY 2024
SCALE: AS NOTED

C-2

DONE

BID ALTERNATE NO. 1 NOTE:

1. IF BID ALTERNATE NO. 1 IS SELECTED BY OWNER, ONE (1) 6" GATE VALVE, ONE (1) 6"X6" TEE, AND ONE (1) 6" 45° BEND SHALL BE PAID FOR UNDER ADDITIVE ALTERNATE NO. 1 INSTEAD OF THE BASE BID.
2. IF BID ALTERNATE NO. 1 IS SELECTED BY OWNER, ONE (1) 6" 45° BEND, (1) 6"X2" REDUCER, ONE (1) 2" COUPLING, AND ONE (1) 2" CAP SHOWN ON C-2 SHALL NOT BE INSTALLED.



SUMMIT AVENUE STA. 0+00 TO STA. 10+30
& EAST MAIN STREET STA. 0+00 TO STA. 1+60

0 40' 80'
SCALE: 1" = 40'

MAYER DOMESTIC WATER IMPROVEMENT DISTRICT
MAYER, ARIZONA

2024 WATER MAIN IMPROVEMENTS

BID ALTERNATE 1
SUMMIT AVE. STA. 0+00 TO STA. 10+30
& E. MAIN ST. STA. 0+00 TO STA. 1+60

Drawn By: MJK/KAF | Designed By: MJK/KAF | Checked By: JVH/AMS | Approved By: RP

Rev.	Date	Description

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RESIDENT CERTIFIED ENGINEER R-20570 RAYMOND PELLAZ 7-17-24 Date
EXPIRES 12/24

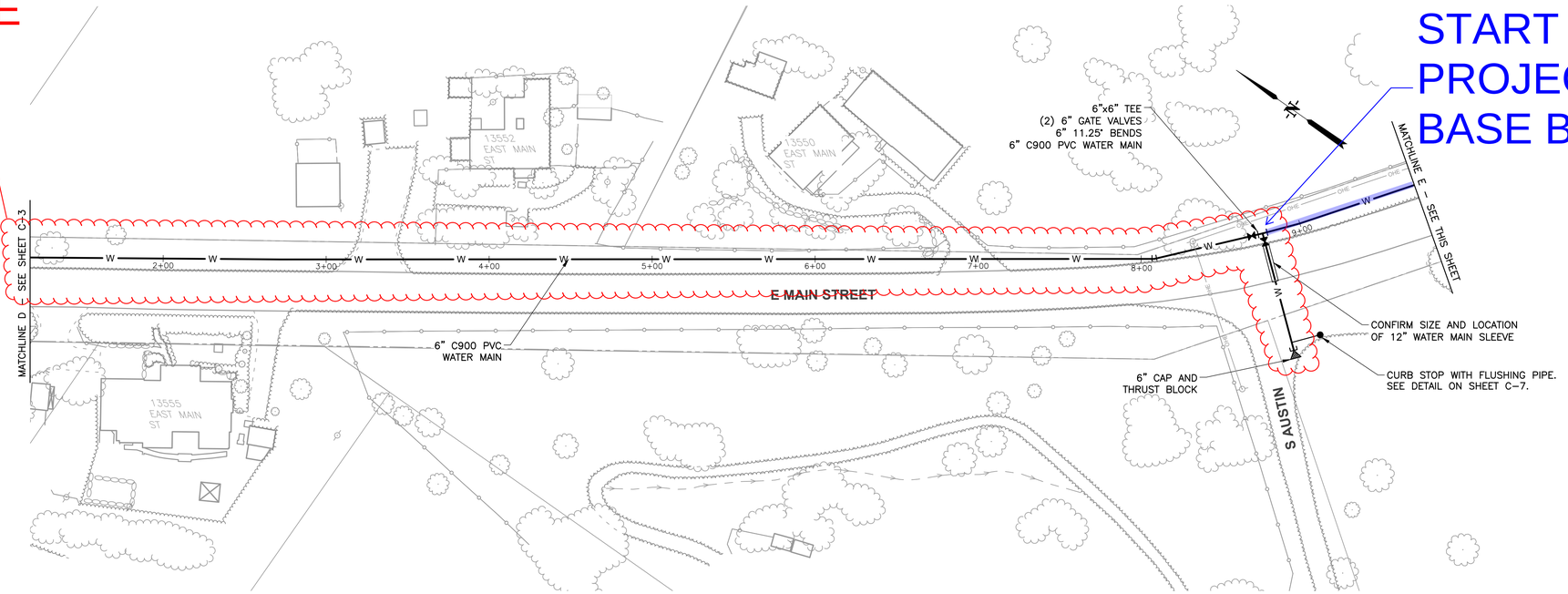
TATA & HOWARD

T&H NO.: 7599
DATE: JULY 2024
SCALE: AS NOTED

C-3

DONE

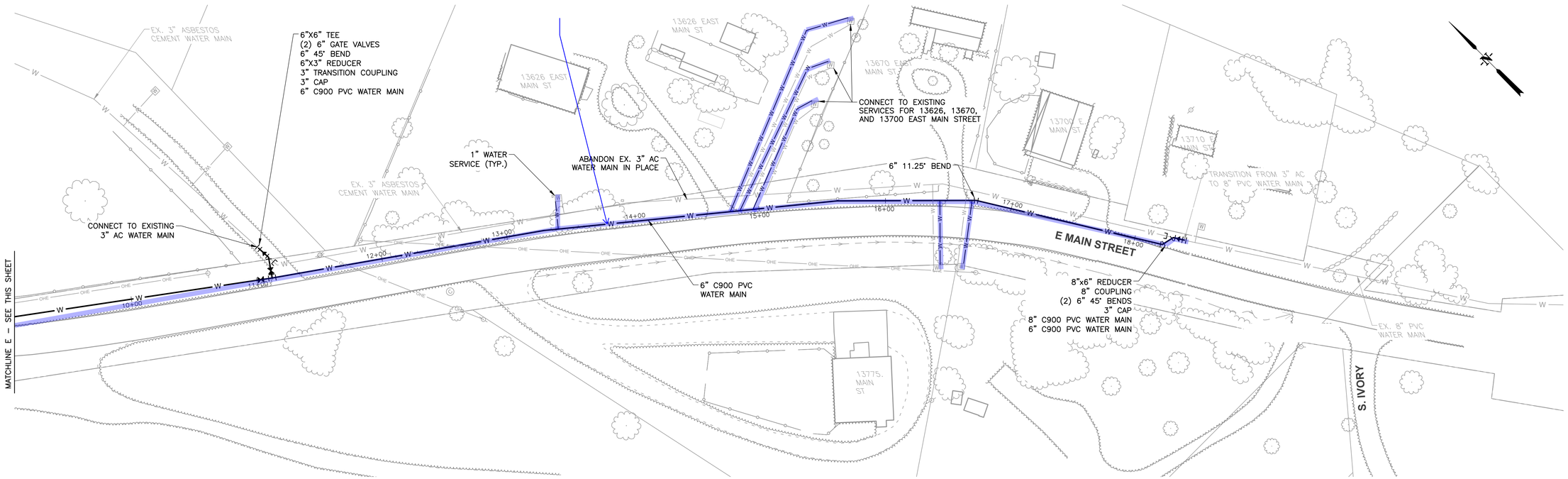
START OF PROJECT BASE BID



EAST MAIN STREET STA. 1+60 TO STA. 9+75

SCALE: 1" = 40'

BASE BID



EAST MAIN STREET STA. 9+75 TO STA. 18+40

SCALE: 1" = 40'

MAYER DOMESTIC WATER IMPROVEMENT DISTRICT
MAYER, ARIZONA

2024 WATER MAIN IMPROVEMENTS

BID ALTERNATE 1
EAST MAIN STREET
STA. 1+60 TO STA. 18+40

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Rev. | Date | Description

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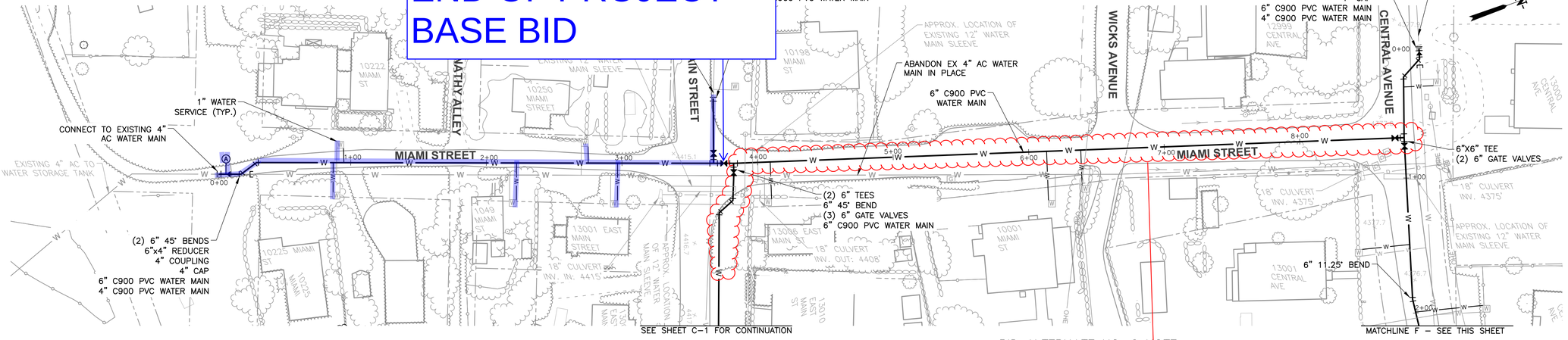
REGISTERED PROFESSIONAL ENGINEER
23576
RAMIRO J. PELUFFO
7/17/24
EXPIRES 12/24

TATA & HOWARD

T&H NO.: 7599
DATE: JULY 2024
SCALE: AS NOTED

C-4

END OF PROJECT
BASE BID



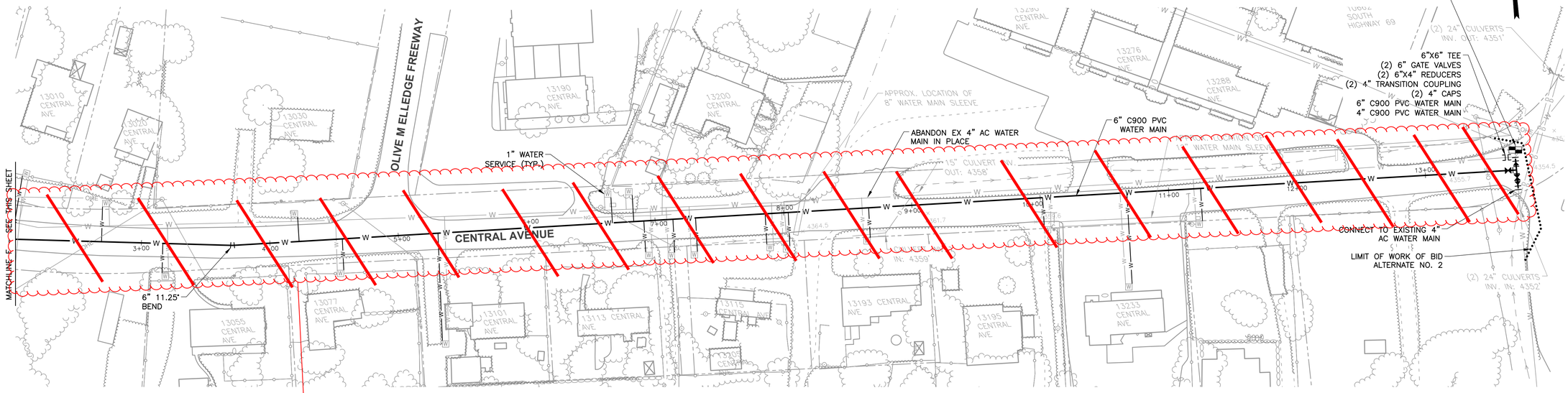
MIAMI STREET STA. 0+00 TO STA. 8+75
& CENTRAL AVENUE STA. 0+00 TO STA. 2+10

0 40' 80'
SCALE: 1" = 40'

BID ALTERNATE NO. 2 NOTE:

1. IF BID ALTERNATE NO. 2 IS SELECTED BY OWNER, TWO (2) 6" GATE VALVES SHALL BE PAID FOR UNDER ADDITIVE ALTERNATE NO. 2 INSTEAD OF THE BASE BID.
2. IF BID ALTERNATE NO. 2 IS SELECTED BY OWNER, THE (2) 6"X4" REDUCERS AND (2) 4" COUPLINGS SHOWN ON C-1 SHALL NOT BE INSTALLED.

BID ALT 1



CENTRAL AVENUE STA. 2+10 TO STA. 13+70

0 40' 80'
SCALE: 1" = 40'

NOT IN PROJECT

MAYER DOMESTIC WATER IMPROVEMENT DISTRICT
MAYER, ARIZONA

2024 WATER MAIN IMPROVEMENTS

BID ALTERNATE 2
MIAMI ST. STA. 0+00 TO STA. 8+75
& CENTRAL AVE. STA. 0+00 TO 13+70

Approved By: RP
Checked By: JVH/AMS
Designed By: MJK/KAF
Drawn By: MJK/KAF

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Rev.	Date	Description

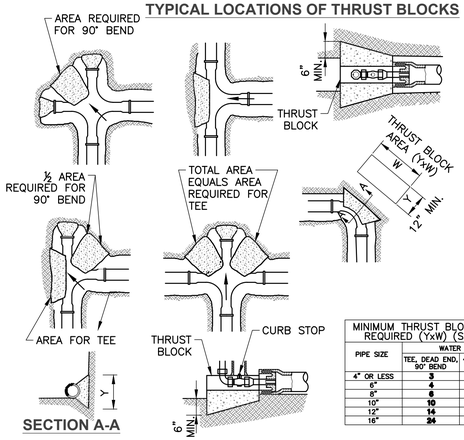
REGISTERED ENGINEER
KEITH RANDALL PELLATZ
11-7-24
EXPIRES 12/24

TATA & HOWARD

T&H NO.: 7599
DATE: JULY 2024
SCALE: AS NOTED

C-5

TYPICAL LOCATIONS OF THRUST BLOCKS



NOTES:

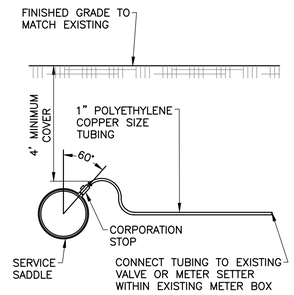
1. TABLE IS BASED ON 200 P.S.I. TEST PRESSURE AND 3,000 LBS/SQ. FT. SOIL. IF CONDITIONS ARE FOUND TO INDICATE SOIL BEARING IS LESS, THE AREAS SHALL BE INCREASED ACCORDINGLY.
2. AREAS FOR PIPES LARGER THAN 16" SHALL BE CALCULATED FOR EACH PROJECT.
3. FORM ALL NON-BEARING VERTICAL SURFACES.
4. THRUST BLOCKS ARE TO EXTEND TO UNDISTURBED GROUND. CONCRETE TO BE CLASS 'C', SECTION 02650.

MINIMUM THRUST BLOCK AREA REQUIRED (YxW) (SQ. FT.)

PIPE SIZE	WATER PIPE	
	TEE, DEAD END, 90° BEND	45° & 22.1/2° BENDS
4" OR LESS	3	3
6"	4	3
8"	6	3
10"	10	6
12"	14	7
16"	24	12

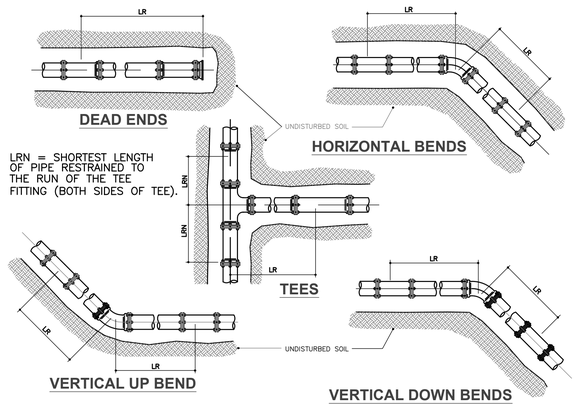
THRUST BLOCK LOCATIONS FOR WATER MAINS

SCALE: NONE



SERVICE CONNECTION

SCALE: NONE



RESTRAINED LENGTHS, LR, FOR DUCTILE IRON WITH POLYETHYLENE WRAP AND PVC PIPE

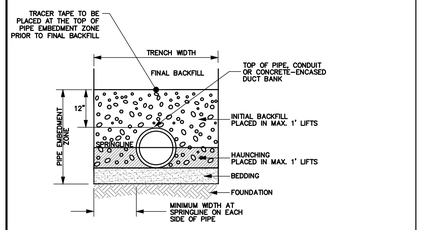
NOMINAL PIPE SIZE INCHES	HORIZONTAL BENDS			TEES		VERTICAL OFFSETS						DEAD ENDS
						90° BEND FITTINGS		45° BEND FITTINGS		22-1/2° BEND FITTINGS		
	90°	45°	22-1/2°	LRN=0'	LRN=10'	DOWN BEND	UP BEND	DOWN BEND	UP BEND	DOWN BEND	UP BEND	
4	38	11	5	69	18	73	38	30	11	14	5	72
6	38	15	7	98	47	102	38	42	15	20	7	102
8	47	19	9	130	76	133	47	55	19	28	9	133
10	56	23	11	157	103	160	56	68	23	32	11	159
12	65	27	13	185	131	187	65	77	27	37	13	187
14	74	31	15	211	158	214	74	89	31	42	15	214
16	82	34	16	238	185	241	82	100	34	48	16	241
18	90	37	18	263	207	286	90	110	38	53	18	288
20	98	41	20	289	233	282	98	121	41	58	20	282
24	113	47	22	337	280	340	113	141	47	68	22	340

NOTES:

1. ALL JOINTS WITHIN THE SPECIFIED LENGTH LR MUST BE RESTRAINED. ALL LENGTHS ARE GIVEN IN FEET.
2. THE MAXIMUM TEST PRESSURE SHALL NOT EXCEED 200 PSI.
3. THE MINIMUM DEPTH OF BURY SHALL BE 3' TO TOP OF PIPE.
4. RESTRAINED LENGTHS SHALL BE REDUCED WHEN SUPPORTED BY ENGINEERING CALCULATIONS.

JOINT RESTRAINT FOR PVC WATER PIPES

SCALE: NONE



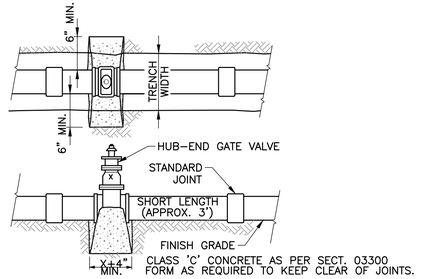
TRENCH-CROSS SECTION DETAIL FLEXIBLE PIPE

NOTES

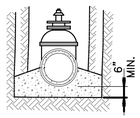
1. BEDDING, HAUNCHING AND INITIAL BACKFILL MATERIAL SHALL BE ABC PER SECTION 02200. SEE SECTION 02222 FOR ALTERNATIVE MATERIALS TO BE USED WITH AGENCY APPROVAL INCLUDING MAXIMUM 1-1/2" NATIVE MATERIAL FOR CONCRETE PIPE INITIAL BACKFILL.
2. SEE SECTION 02222 FOR ADDITIONAL TRNECH WIDTH, EXCAVATION, BACKFILLING AND COMPACTION REQUIREMENTS.
3. SEE SECTION 02620 FOR PIPE MATERIALS CONSIDERED AS RIGID OR FLEXIBLE.

TRENCH-CROSS SECTION

SCALE: NONE



CLASS 'C' CONCRETE AS PER SECT. 03300 FORM AS REQUIRED TO KEEP CLEAR OF JOINTS.



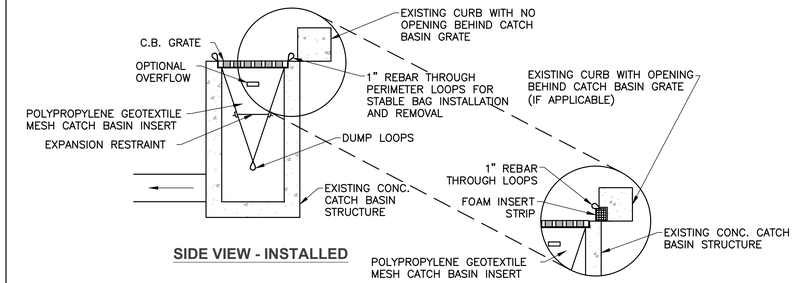
NOTE:

1. THIS DETAIL COVERS WATER GATE VALVES, 4" TO 12" INCLUSIVE REGARDLESS OF TYPE OF PIPE USED. LARGER LINES TO BE DETAILED ON PLANS.

WATER GATE VALVE

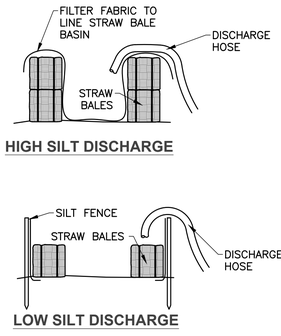
BLOCKING FOR WATER GATE

SCALE: NONE



CATCH BASIN SILTATION CONTROL INSERT

SCALE: NONE



NOTES:

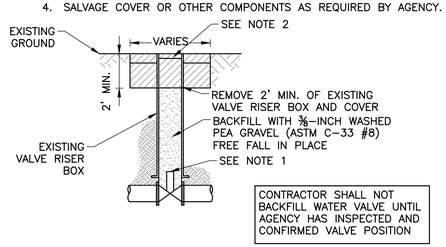
1. STRAW BALES SHALL BE STACKED 1 OR 2 ROWS HIGH AS REQUIRED TO MITIGATE THE FLOW.
2. THE BASIN SHALL BE SIZED TO FILTER THE FLOW BEING DISCHARGED TO THE BASIN.

SEDIMENTATION DISCHARGE CONTROL BASIN

SCALE: NONE

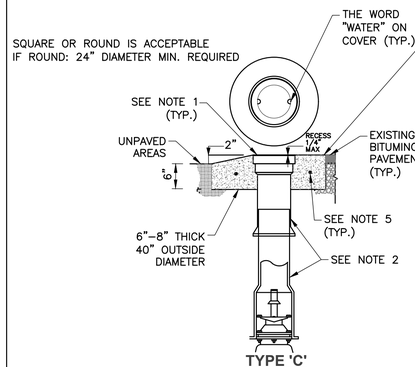
NOTES:

1. EXISTING VALVE TO BE ABANDONED IN PLACE. THE FINAL POSITION OF THE VALVE, OPEN OR CLOSED, SHALL BE PER PROJECT SPECIFICATIONS AND PLANS.
2. MATCH EXISTING GRADE. FINAL LAYER THICKNESS AND TYPE TO MATCH EXISTING NATIVE, AC, OR CONCRETE. ABANDONMENT IN AC PAVEMENT SHALL BE PER DETAIL ON SHEET C-8, "T-TOP" MODIFIED AS SHOWN FOR REQUIRED EXCAVATION WIDTH AND DEPTH.
3. RESTORE ANY DISTURBED LANDSCAPE OR PROPERTY PER SECTION 02900.
4. SALVAGE COVER OR OTHER COMPONENTS AS REQUIRED BY AGENCY.



EXISTING WATER VALVE ABANDONMENT

SCALE: NONE



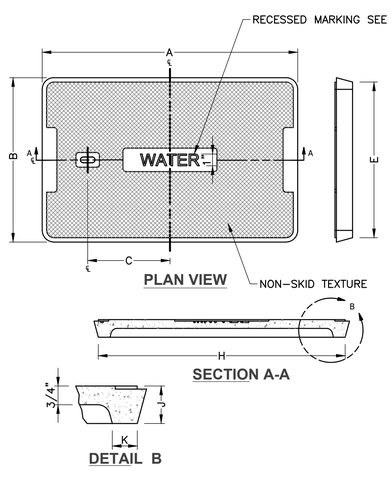
8" THICK CONCRETE RING W/30" OUTSIDE DIAMETER MEDIUM BROOM FINISH WITH RADIALLY SCORED MARKS (4 MIN) (TYP)

NOTES

1. VALVE BOX OR FRAME SHALL BE ADJUSTED TO THE FINISHED GRADE PRIOR TO PLACEMENT OF CONCRETE.
2. USE DEEP SKIRTED LID (4" OR MORE) TYPE, SLIDING ADJUSTABLE CAST IRON VALVE BOX C.I. MIN 30,000 P.S.I.
3. GROUND BELOW CONCRETE RING AND CONCRETE RISER PAD TO BE COMPACTED TO 95% MAXIMUM DENSITY.
4. CUT RISER PIPE TO LENGTH IN FIELD. **CAUTION**: IF EXISTING RISER IS ASBESTOS-CEMENT PIPE (ACP) FOLLOW OSHA GUIDELINES FOR WORKING WITH ACP.
5. #4 REINFORCING STEEL HOOP EQUALLY CENTERED HORIZONTALLY & VERTICALLY.
6. CONCRETE SHALL BE CLASS "AA" PER SECTION 03300.
7. WATER VALVE EXTENSIONS SHALL BE INSTALLED WHEN THE DIMENSION FROM FINISH GRADE TO THE TOP OF THE OPERATING NUT EXCEEDS 5 FEET. SEE THE WATER VALVE EXTENSIONS DETAIL FOR VALVE EXTENSION.

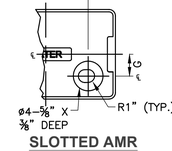
VALVE BOX INSTALLATION AND GRADE ADJUSTMENT

SCALE: NONE



POLYMER CONCRETE COVER DIMENSIONS

DIMS	COVER NUMBER			
	1	2	3	4
A	15-3/4"	21-7/8"	26"	30-3/8"
B	9"	14"	15"	19-1/2"
C	5"	7"	9"	10"
D	¾"	1"	⅜"	⅜"
E	8-1/2"	13-1/4"	14-1/8"	19"
F	4-3/8"	6-5/8"	8"	10-3/4"
G	¾"	3-3/8"	3-3/4"	6-1/4"
H	15-3/8"	21"	25-1/8"	29-1/2"
I	⅜"	½"	1"	¼"
J	1-1/2"	1-1/2"	2-1/4"	1-1/2"
K	¾"	1"	1"	1"



SLOTTED AMR DETAIL OPTION

NOTES:

1. POTABLE WATER COVER TINTED GRAY AND RECLAIMED WATER COVER TINTED PANTONE PURPLE 512.
2. DIMENSIONS SHOWN SHALL NOT VARY MORE THAN A 1/16 OF AN INCH.
3. ACCEPTABLE ALTERNATIVES INCLUDE "SHEET MOLDED COMPOUND" (SMC), AND "BULK MOLDED COMPOUND" (BMC). PLASTICS ARE NOT ACCEPTABLE MATERIALS.
4. SLOTTED AUTOMATIC METER READING (AMR) HOLE PER AGENCY OR STANDARD SPECIFICATION.
5. MARKING PER AGENCY AND/OR UTILITY.
6. REFER TO DETAIL NON-TRAFFIC RATED WATER METER BOXES ON SHEET C-8 FOR VERTICAL LOAD RATING.

POLYMER CONCRETE WATER METER BOX COVER

SCALE: NONE

MAYER DOMESTIC WATER IMPROVEMENT DISTRICT
MAYER, ARIZONA

2024 WATER MAIN IMPROVEMENTS

CIVIL
DETAIL SHEET I

Rev.	Date	Description

Approved By: RP
Checked By: JVH/AMS
Designed By: MJK/KAF
Drawn By: MJK/KAF

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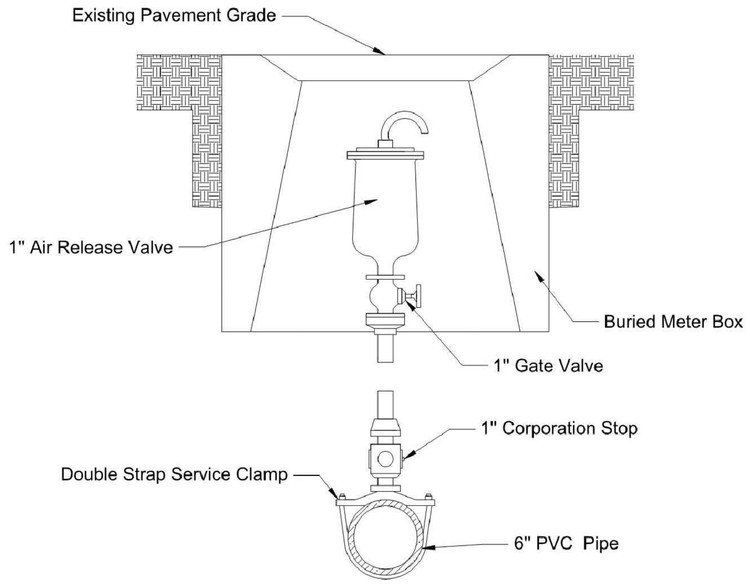
REGISTERED PROFESSIONAL ENGINEER
MICHAEL J. KELLY
23570
ARIZONA
7-1-24
EXPIRES 12/24

TATA & HOWARD

T&H NO.: 7599
DATE: JULY 2024
SCALE: AS NOTED

C-6

P:\ADD\7488 Mayer DWD Water Mains\ADD\7599\C\7599-C-Details.dwg 7/19/2024 8:47 PM MKACZOWKA



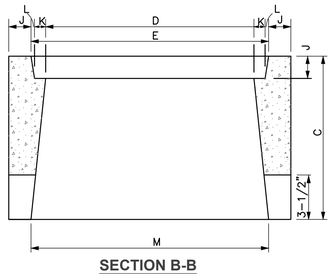
AIR RELEASE VALVE

SCALE: NONE

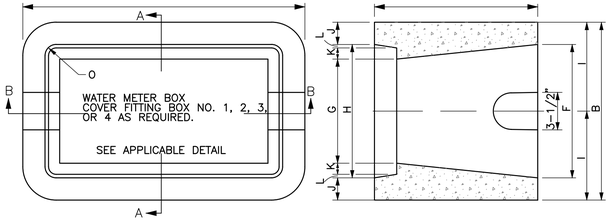
NOTES:

1. THE METER BOXES SHALL CONFORM TO DIMENSIONS AS SHOWN AND SHALL NOT VARY MORE THAN A 1/16 OF AN INCH.
2. THE METER BOXES SHALL BE MADE OF CLASS 'AA' CONCRETE PER SECT. 03301. ACCEPTABLE ALTERNATIVE MATERIALS INCLUDE "POLYMER CONCRETE", "SHEET MOLDED COMPOUND" (SMC), "BULK MOLDED COMPOUND" (BMC), AND POLYETHYLENE WITH POLYMER CONCRETE FRAME.
3. MINIMUM VERTICAL LOAD RATING PER TIER 5 ANSI/SCTE77 TESTING STANDARD FOR GRADE LEVEL ENCLOSURES AND COVERS.

METER BOX DIMENSIONS				
DIMS	BOX NUMBER			
	1	2	3	4
A	18-1/2"	25"	28-3/8"	33-1/8"
B	11-3/4"	17-1/4"	17-5/8"	22-3/8"
C	12"	12"	12"	12"
D	14"	20"	24"	27-3/4"
E	16"	22-1/8"	26-1/4"	30-5/8"
F	9-1/4"	14-1/2"	15-1/8"	19-3/4"
G	7"	12-1/2"	13"	17"
H	9-1/4"	14-1/4"	15-1/4"	19-3/4"
I	5-7/8"	8-5/8"	8-7/8"	11-1/8"
J	1-1/2"	1-1/2"	2-1/4"	1-1/2"
K	¾"	½"	¾"	⅝"
L	¼"	½"	½"	⅝"
M	16"	21-7/8"	26"	30-1/2"
N	½"	½"	½"	½"
	⅝" OR ¾" METER	1" METER	1-1/2" METER	2" METER



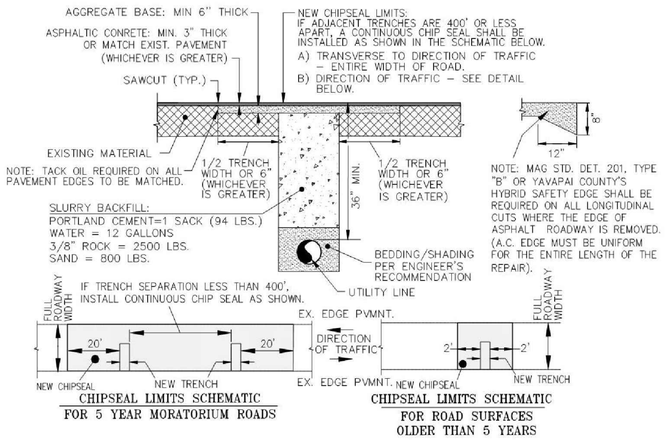
SECTION B-B



PLAN VIEW SECTION A-A

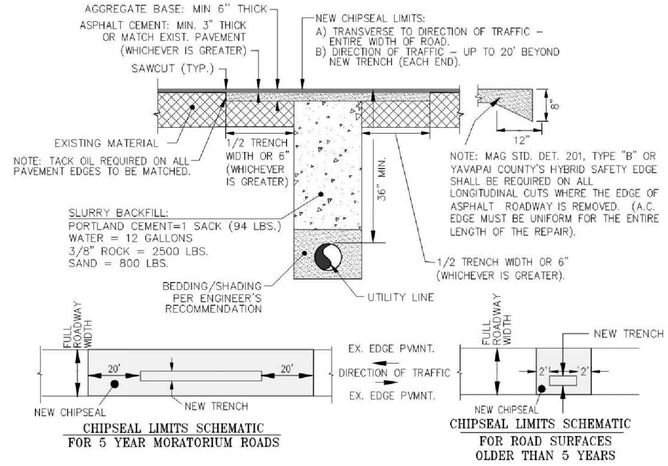
NON TRAFFIC RATED WATER METER BOXES

SCALE: NONE



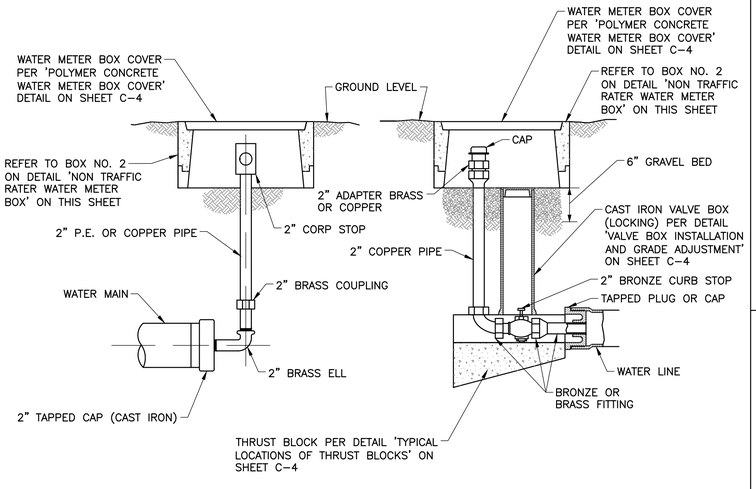
TRENCH BACKFILL AND SURFACE REPLACEMENT T-TOP TRANSVERSE TRENCH

SCALE: NONE



TRENCH BACKFILL AND SURFACE REPLACEMENT T-TOP LONGITUDINAL TRENCH

SCALE: NONE

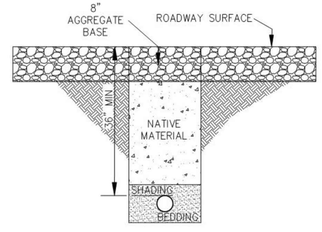


NOTES:

1. VALVE BOX LOCATION MAY VARY IF APPROVED BY THE CITY ENGINEER.

CURB STOP WITH FLUSHING PIPE

SCALE: NONE



NOTES:

1. TOP OF UTILITY MUST BE A MINIMUM OF 36" FROM THE LOWEST ADJACENT AREA.
2. TRENCH BACKFILL MUST BE MECHANICALLY COMPACTED TO 95% OF RELATIVE COMPACTION WITHIN THE RIGHT-OF-WAY.
3. ANY AND ALL VARIANCES TO THIS DETAIL MUST BE APPROVED BY THE YAVAPAI COUNTY ENGINEER.
4. OVERSATURATED SPOILS MAY NOT BE USED AS TRENCH BACKFILL AND MUST BE REMOVED FROM THE RIGHT-OF-WAY.

TRENCH BACKFILL AND SURFACE REPLACEMENT UNPAVED PATCH

SCALE: NONE

NOTES:

1. AN APPROVED NON-SHRINK SLURRY BACKFILL WILL BE REQUIRED FOR THE ENTIRE TRENCH LENGTH FOR TRENCH CUTS WITHIN THE LIMITS OF AN ASPHALT ROAD, WITHIN TWO FEET OF AN ASPHALT ROAD, OR ON ROADS SCHEDULED FOR IMMEDIATE PAVING.
2. MIN. 3" THICK ASPHALT CONCRETE, OR MATCH EXIST. (WHICHEVER IS GREATER).
3. CLEAN OR SWEEP ENTIRE WIDTH OF ROADWAY PRIOR TO ACCEPTANCE.
4. LIMITS OF CHIPSEAL: (SEE SCHEMATIC)
   A) TRANSVERSE TO DIRECTION OF TRAFFIC – ENTIRE WIDTH OF ROAD.
   B) LONGITUDINAL TO DIRECTION OF TRAFFIC – UP TO 20' BEYOND NEW TRENCH (EACH END) FOR 5-YEAR MORATORIUM ROAD.
   – UP TO 2' BEYOND NEW TRENCH (EACH END) FOR ROAD SURFACES OLDER THAN 5 YEARS.
5. TEMPORARY A.C. PAVEMENT PATCH REQUIRED UNTIL PERMANENT PATCH IS PERFORMED.
6. ALL PAVEMENT PAINT STRIPING SHALL BE RESTORED. TEMPORARY PAVEMENT MARKERS SHALL BE USED AS REQUIRED BY THE ENGINEER.
7. NO TRACKED EQUIPMENT SHALL BE ALLOWED ON EXISTING PAVEMENT WITHOUT APPROPRIATE PROTECTION AND A COUNTY INSPECTOR BEING PRESENT.
8. ANY AND ALL VARIANCES TO THIS DETAIL MUST FIRST BE SUBMITTED IN WRITING TO THE COUNTY ENGINEER FOR REVIEW AND APPROVAL.
9. ASPHALT CUTS OR WORK THAT CREATES AN ORPHANED SECTION OF ASPHALT LESS THAN 3 FEET FROM THE EDGE OF THE PAVED ROADWAY MUST BE REMOVED AND REPAVED WITH AND APPROVED PAVEMENT EDGE TREATMENT.
10. OVERSATURATED MATERIALS MAY NOT BE USED AS TRENCH BACKFILL AND MUST BE REMOVED FROM THE RIGHT-OF-WAY.

TRENCH BACKFILL AND SURFACE REPLACEMENT NOTES

SCALE: NONE

MAYER DOMESTIC WATER IMPROVEMENT DISTRICT
MAYER, ARIZONA

2024 WATER MAIN IMPROVEMENTS

DETAIL SHEET II

Approved By: RP
Checked By: JVH/AMS
Designed By: MJK/KAF
Drawn By: MJK/KAF

No.	Description	Date

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TATA & HOWARD

T&H NO.: 7599
DATE: JULY 2024
SCALE: AS NOTED

C-7

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