

TOMBSTONE PUBLIC WORKS DEPARTMENT

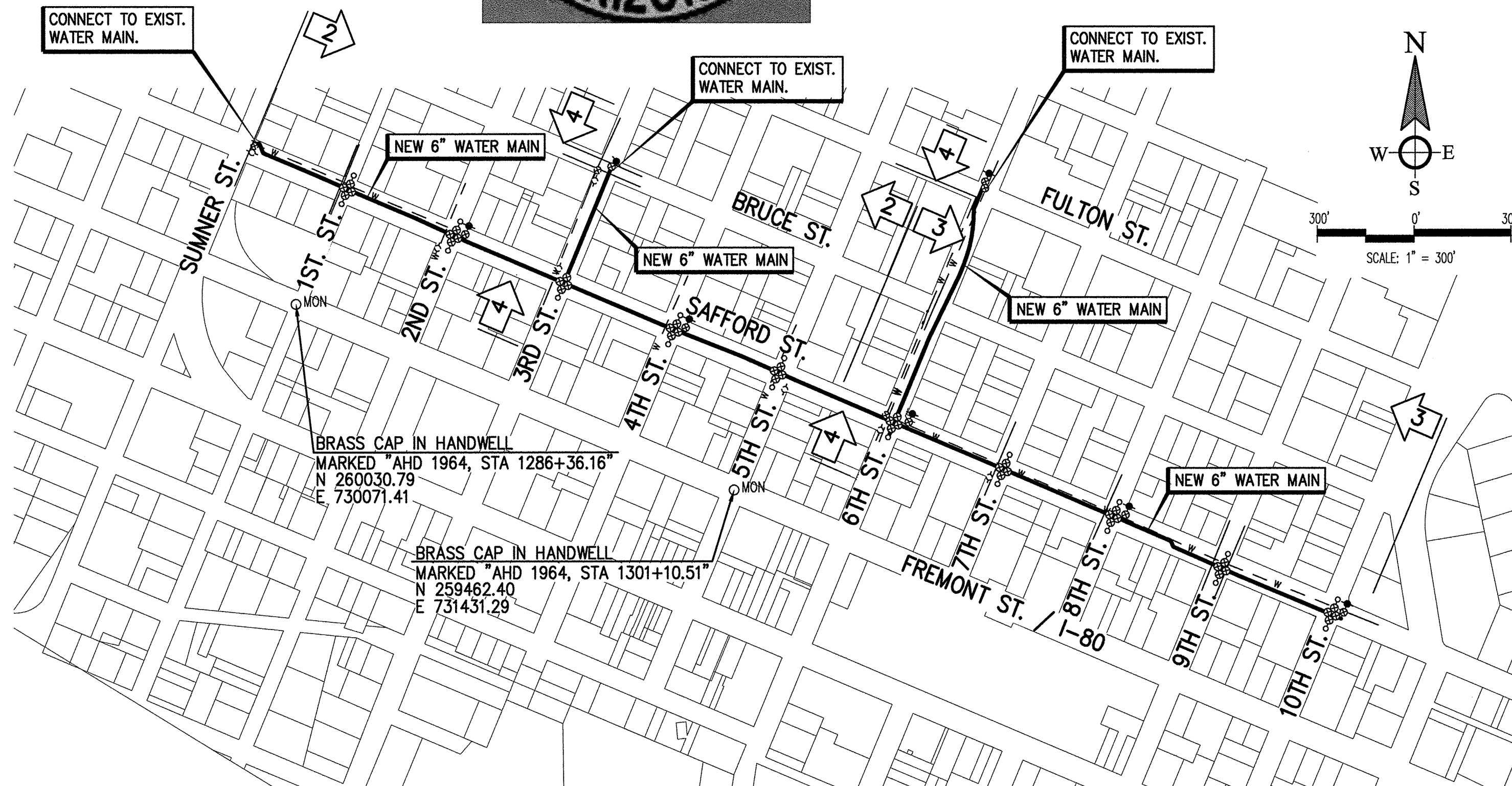
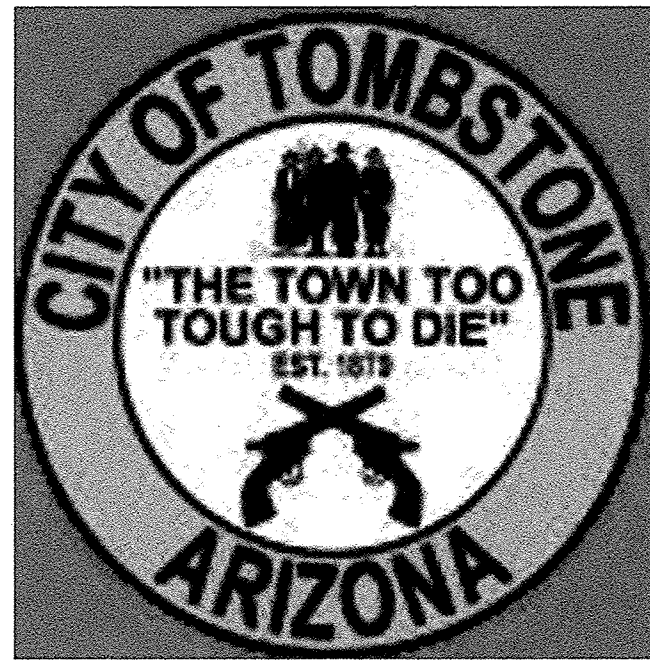
SAFFORD STREET

3RD. STREET AND 6TH. STREET

WATER MAIN IMPROVEMENT PLANS

GENERAL NOTES

1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF STANDARD SPECIFICATIONS FOR CONSTRUCTION FOR TOMBSTONE PUBLIC WORKS DEPARTMENT, THE ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY BULLETIN NO. 10, MARICOPA ASSOCIATION OF GOVERNMENTS (MAG), AND COCHISE COUNTY HIGHWAY AND FLOODPLAIN ROAD DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS FOR PUBLIC IMPROVEMENTS.
2. THE CONTRACTOR SHALL SUPPLY ALL STAKES SET FOR THE LINES, LEVELS OR MEASUREMENTS OF THE WORK IN THEIR PROPER PLACES AND IT SHALL BE CERTIFIED BY A "REGISTERED LAND SURVEYOR". ANY EXPENSE INCURRED IN REPLACING ANY STAKES WHICH THE CONTRACTOR OR HIS SUBORDINATES MAY HAVE FAILED TO PRESERVE SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CARE, MAINTENANCE, REPAIR OR REPLACEMENT OF EXISTING IMPROVEMENTS IN THE WORK AREA WHICH HAVE BEEN REMOVED OR DAMAGED DURING THE COURSE OF CONSTRUCTION. ALL REPAIR, REPLACEMENT, OR CLEANUP SHALL BE DONE TO THE SATISFACTION OF THE OWNER.
4. THE CONTRACTOR IS REQUIRED TO CONTACT "BLUE STAKE" (1-800-782-5348) 48 HOURS PRIOR TO ANY EXCAVATION TO DETERMINE ACCURATE UTILITY LOCATIONS.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FURNISH, HAUL AND APPLY ALL WATER REQUIRED FOR COMPACTION AND THE CONTROL OF DUST FROM CONSTRUCTION ACTIVITY. THE COST THEREOF IS TO BE INCLUDED IN THE PIPE INSTALLATION PRICE. UNIT PRICES FOR IMPORTED FILL SHALL BE FOR FILL COMPACTED IN PLACE.
6. THE CONTRACTOR SHALL EMPLOY A GEOTECHNICAL ENGINEER TO OBSERVE, INSPECT AND TEST ALL GRADING OPERATIONS. THE SAID ENGINEER SHALL CERTIFY THAT ALL GRADING OPERATIONS WERE PERFORMED IN ACCORDANCE WITH APPLICABLE PLANS.
7. TOMBSTONE PUBLIC WORKS DEPARTMENT AND THEIR ENGINEER SHALL REVIEW ALL SHOP DRAWINGS AND EQUIPMENT SUBMITTALS FOR COMPLIANCE WITH PLANS AND SPECIFICATIONS.
8. ALL GRADING SHALL BE IN CONFORMANCE WITH THE COCHISE COUNTY GRADING ORDINANCE, LATEST EDITION.
9. ALL WATER PIPE SHALL BE PVC C900 200 PSI IN ACCORDANCE WITH A.W.W.A. C900-07 AND INSTALLED PER M.A.G. STANDARD SPECIFICATION 610.
10. ALL NEW WATER MAINS SHALL HAVE A MINIMUM OF 36 INCHES OF COVER UNLESS OTHERWISE NOTED.
11. ALL BELOW GROUND PIPING TO BE MECHANICAL JOINT RESTRAINED FITTINGS (MEGA LUG, LOK-FAST OR EQUAL) UNLESS OTHERWISE NOTED. RESTRAINED JOINT LENGTHS TO BE PER EBAA IRON RESTRAINED JOINT CALCULATOR, LATEST EDITION.
12. ALL GATE VALVES SHALL CONFORM TO A.W.W.A. C-509.
13. UNLESS OTHERWISE NOTED, ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI.
14. ALL FOREIGN MATERIALS ENCOUNTERED AS A RESULT OF CONSTRUCTING THIS PROJECT INCLUDING BUT NOT LIMITED TO ROCK, ORGANIC DEBRIS AND EXISTING MATERIALS OR CONCRETE SHALL BE REMOVED AND LAWFULLY DISPOSED OF. COST FOR SAID ACTIVITY SHALL BE INCIDENTAL TO THE CONTRACTORS UNIT PRICE BID.
15. UPON COMMENCEMENT OF WORK, TRAFFIC CONTROL DEVICES SHALL BE POSTED AND MAINTAINED BY THE CONTRACTOR UNTIL SUCH TIME AS THE WORK IS COMPLETED. ALL WARNING SIGNS, BARRICADES ETC. SHALL BE IN ACCORDANCE THE MANUAL FOR UNIFORM TRAFFIC CONTROL AND APPROPRIATE GOVERNMENT AGENCY SUPPLEMENTS.
16. CONTRACTOR TO COORDINATE AND PAY ALL RE-TESTING FEES REQUIRED FOR CONFORMANCE.
17. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE OCCUPATION SAFETY AND HEALTH ADMINISTRATION REGULATIONS.
18. CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED BY GOVERNMENTAL AGENCIES.
19. OMISSIONS OR CONFLICTS BETWEEN VARIOUS ELEMENTS OF THE DRAWING NOTES AND DETAILS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND RESOLVED BEFORE PROCEEDING WITH THE WORK.
20. A COPY OF THIS PLAN SHALL BE KEPT IN AN EASILY ACCESSIBLE LOCATION ON THE SITE AT ALL TIMES DURING CONSTRUCTION.
21. THE CONTRACTOR SHALL GRADE ALL AREAS DISTURBED BY THE PIPELINE INSTALLATION TO MATCH THE SURROUNDING CONTOURS.
22. CONTRACTOR TO PROVIDE EROSION CONTROL AND STORM WATER POLLUTION PREVENTION PLAN AND INSTALL AND MAINTAIN REQUIRED SWPP FEATURES DURING CONSTRUCTION. SAID WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACTOR'S UNIT PRICES FOR THE PROJECT.
23. CONTRACTOR TO CONTACT SOUTHWEST GAS WHEN WORKING WITHIN 10 FEET OF A HIGH PRESSURE GAS MAIN OR DISTRIBUTION FACILITY 6" OR GREATER, CONTACT SOUTHWEST GAS AT (520) 794-6021.
24. CONTRACTOR TO VISIT SITE AND FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS PRIOR TO SUBMITTING A BID FOR THE PROJECT.
25. EXISTING UTILITIES SHALL BE POTHOLED PRIOR TO ANY CONSTRUCTION, SEE SPECIFICATIONS.



SITE MAP
1"=300'

ADEQ WATER NOTES:

1. ALL WATERLINES AND FITTINGS SHALL HAVE NATIONAL SANITATION FOUNDATION (NSF) SEAL AND COMPLY WITH A.A.C. R-18-4-213.C STANDARDS.
2. ALL MATERIALS AND PRODUCTS USED IN THE DRINKING WATER SYSTEM SHALL CONFORM TO NSF STANDARD 61.
3. CONSTRUCTION MATERIALS USED IN THE WATER SYSTEM SHALL BE LEAD FREE AS IN ACCORDANCE WITH A.A.C. R18-5-504 AND R18-5-101.
4. WATER LINES SHALL BE PRESSURE AND LEAKAGE TESTED IN ACCORDANCE WITH A.W.W.A. C605-94.
5. PRESSURE AND LEAKAGE TESTING RESULTS MUST BE PROVIDED WITH THE APPROVAL OF CONSTRUCTION (AOC) APPLICATION IN ORDER FOR THE AOC PERMIT TO BE ISSUED. DATA REQUIRED FOR THE ENGINEERING CERTIFICATE OF COMPLETION (ECC) AND THE AOC CAN BE FOUND AT <http://www.azdeq.gov/enviro/water/dw/download/data.pdf>
6. WATER LINES SHALL BE DISINFECTED BY CHLORINATION IN ACCORDANCE WITH A.W.W.A. C601 STANDARD OR A.D.E.Q. BULLETIN NO. 8.
7. DISINFECTION RESULTS FROM AN ARIZONA STATE ACCREDITED LABORATORY MUST BE PROVIDED WITH THE APPROVAL OF CONSTRUCTION (AOC) APPLICATION IN ORDER FOR THE AOC PERMIT TO BE ISSUED.
8. WATER/SEWER LINE SEPARATION SHALL BE IN ACCORDANCE WITH A.A.C. R-18-5-502.C.
9. ALL FITTINGS, VALVES, FLEXIBLE COUPLINGS, AND REPAIR CLAMPS SHALL BE ENCASED WITH A 10 MIL POLYETHYLENE IN ACCORDANCE WITH A.W.W.A. C-105 METHOD C.

OWNER/DEVELOPER

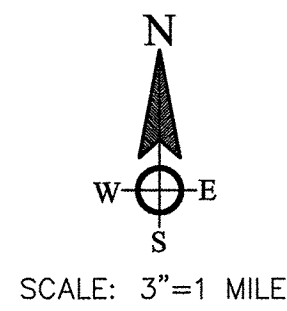
TOMBSTONE PUBLIC WORKS DEPARTMENT
611 E. ALLEN ST.
TOMBSTONE, ARIZONA 85638
PHONE: 520-457-3415
CONTACT: ALEX GRADILLAS

ACCEPTED:

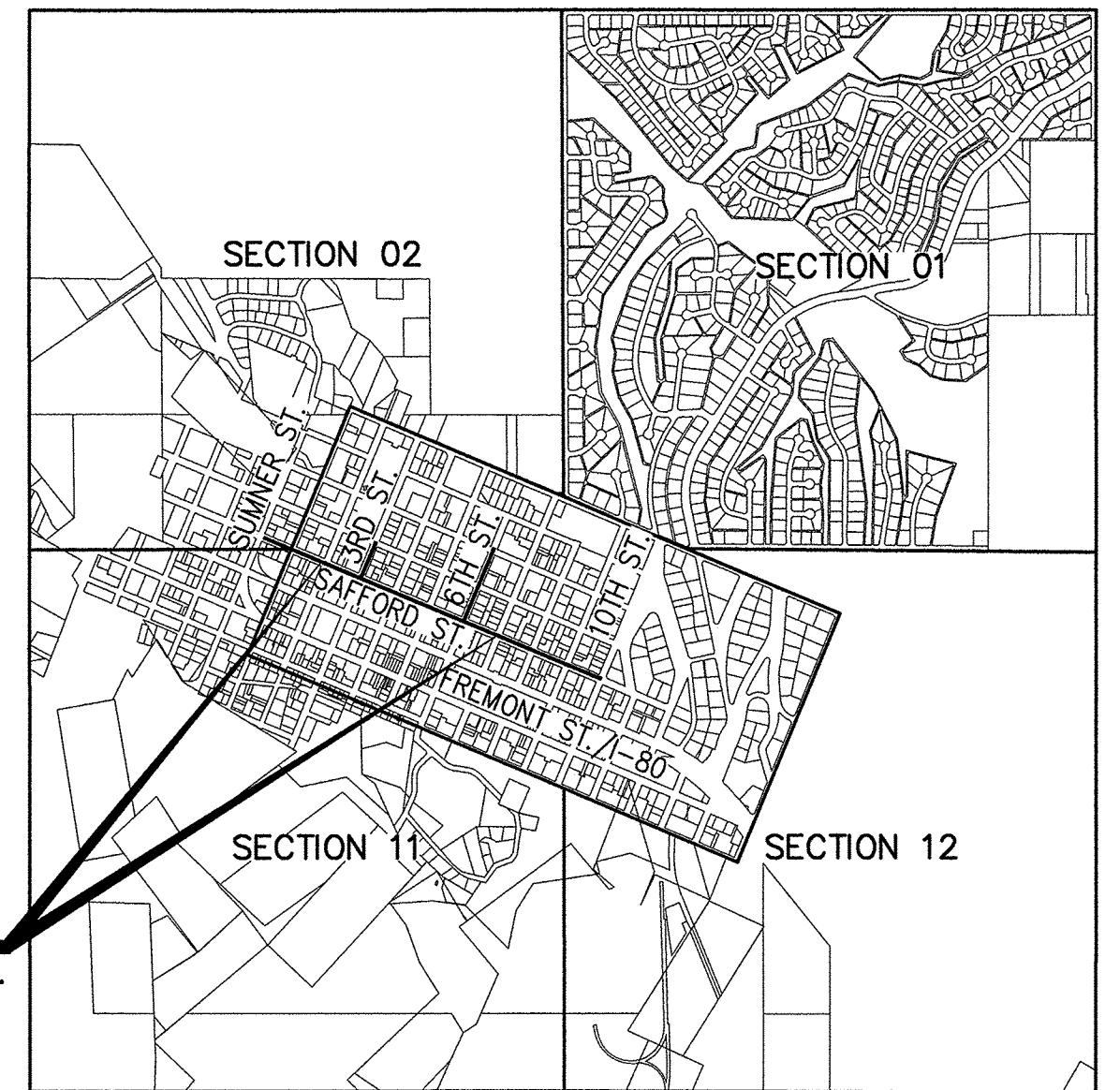
TOMBSTONE PUBLIC WORKS DEPARTMENT DATE

BASIS OF COORDINATES AND ELEVATION

BASIS OF COORDINATES IS THE ARIZONA STATE PLANE GRID. SURVEY BASED UPON GPS OBSERVATIONS USING PUBLISHED DATA AT NGS POINT "AIRPORT":
N 244730.89 (SPC) E 741989.44 (SPC) ARIZONA EAST ZONE
ELEVATION = 4753.40 (NAVD 88)
MONUMENT DESCRIBED AS 3" BRASS CAP MARKED "COCHISE COUNTY AND FLOOD PLAIN - AIRPORT 2006"



THIS PROJECT



LOCATION MAP
A PORTION OF SECTION 11
T-20-S R-22-E, G&SRM
COCHISE COUNTY, ARIZONA

LEGEND

	EXISTING PAVEMENT
	EXISTING FIRE RISER
	EXISTING WATER METER
	EXISTING GAS METER
	SURVEY PIN
	EXISTING SIGN
	EXISTING UTILITY POLE
	NEW WATER MAIN AND VALVE
	NEW CURB STOP WITH FLUSHING PIPE
	EXISTING GAS LINE
	EXISTING TELEPHONE LINE
	EXISTING WATER MAIN AND VALVE
	EXISTING SEWER MAIN AND MANHOLE
	HORIZONTAL CONTROL POINT
	DETAIL NUMBER
	SHEET NUMBER
	SHEET INDEX NUMBER

SHEET INDEX

SHEET 1COVER SHEET
SHEET 2-4.....WATER MAIN PLAN SHEETS
SHEET 5DETAIL SHEET

MATERIAL QUANTITIES LIST

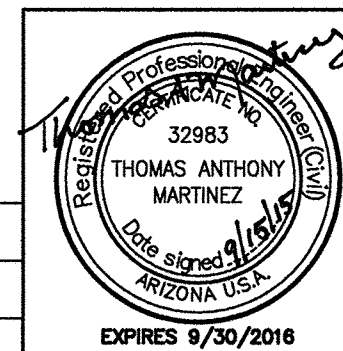
6" WATER MAIN	5578 L.F.
6" GATE VALVES	49 EA.
CURB STOP WITH FLUSHING PIPE	18 EA.

QUANTITIES ARE APPROXIMATE. CONTRACTOR IS RESPONSIBLE FOR CALCULATING THEIR OWN QUANTITIES

UTILITY STATEMENT

EXISTING ABOVE AND BELOW GROUND UTILITIES HAVE BEEN DELINEATED ON THESE PLANS BASED UPON FIELD SURVEY INFORMATION AS WELL AS FROM BLUE STAKE MARKINGS AND UTILITY BASE MAPS (AS MADE AVAILABLE) THEREFORE THE ENGINEER MAKES NO GUARANTEE OF THE ACCURACY OR COMPLETENESS OF THE UTILITY LOCATIONS OR OF THE EXISTENCE OR NONEXISTENCE OF ANY UTILITY OR UNDERGROUND STRUCTURES SHOWN. THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONARY MEANS NECESSARY TO PROTECT ANY UTILITY. THE CONTRACTOR SHALL VERIFY LOCATIONS AND ELEVATIONS OF ALL UTILITIES PRIOR TO ANY CONSTRUCTION. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR DAMAGE TO EXISTING ABOVE OR UNDERGROUND UTILITIES, INCLUDING THOSE NOT SHOWN ON THESE PLANS.

WestLand Resources, Inc.
Tucson • Phoenix • Flagstaff
4001 E. Paradise Falls Drive
Tucson, Arizona 85712 (520) 206-9585



TOMBSTONE PUBLIC WORKS DEPARTMENT
SAFFORD STREET
3RD STREET & 6TH STREET
WATER MAIN IMPROVEMENT PLANS
COVER SHEET

DESIGNED BY: G.G.F.	DRAWN BY: G.G.F.	CHECKED BY: T.A.M.	SHEET 1 OF 5
DATE SEPTEMBER 15, 2015	PROJECT NO. 1918.02-A-8000	SCALE: HORIZ: 1"=300'	
WESTLAND RESOURCES DRAWING PATH M:\Jobs\19007\A\1918.02\ENG\SAFFORD\1918 02-SAFFORD-TW-01.dwg		VERT:	

\\Jobs\1900a\1918.02\ENG\SAFFORD\1918 02-SAFFORD-TW-02.dwg Sep 03, 2015 - 8:18am garrick

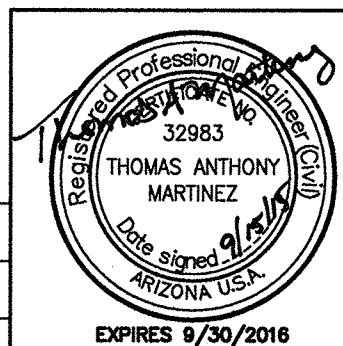
WestLand Resources, Inc.
Tucson • Phoenix • Flagstaff
4001 E. Paradise Falls Drive
Tucson, Arizona 85712 (520) 206-9585

NOTE:
1. ALL WATER MAIN STATIONING IS BASED ON CENTERLINE OF THE WATER MAIN UNLESS OTHERWISE NOTED.

UTILITY STATEMENT

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NO.	DATE	BY	REVISION	APP.	DATE



TOMBSTONE PUBLIC WORKS DEPARTMENT

SAFFORD STREET 3RD STREET & 6TH STREET WATER MAIN IMPROVEMENT PLANS WATER MAIN PLAN SHEET

DESIGNED BY:	G.G.F.	DRAWN BY:	G.G.F.	CHECKED BY:	T.A.M.	SHEET
DATE	SEPTEMBER 03, 2015	PROJECT NO.	1918.02-A-8000	SCALE:	HORIZ: 1"=40'	2
WESTLAND RESOURCES DRAWING PATH	\\Jobs\1900a\1918.02\ENG\SAFFORD\1918 02-SAFFORD-TW-02.dwg			VERT:		OF 5

BEGIN PROJECT
STA. 10+00.00
CONNECT TO EXIST. 6" WATER MAIN.
CONTRACTOR TO VERIFY LOCATION,
SIZE AND ELEVATION PRIOR TO
CONSTRUCTION

CAUTION:
EXISTING GAS LINE
CONTRACTOR TO USE
CAUTION IN THIS AREA.

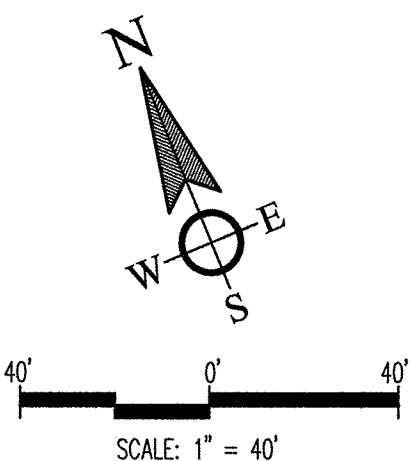
SUMNER ST.
HWY 80

1ST STREET

SAFFORD ST.

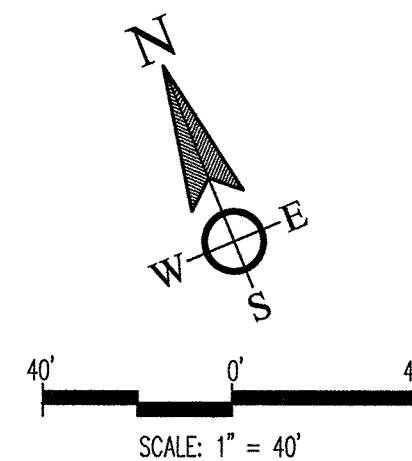
2ND STREET

MATCH LINE STA. 20+00.00 SEE BELOW LEFT



HORIZONTAL CONTROL

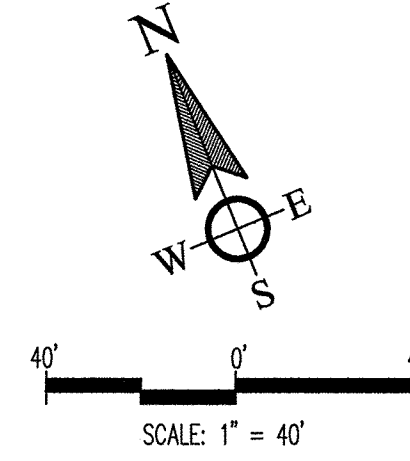
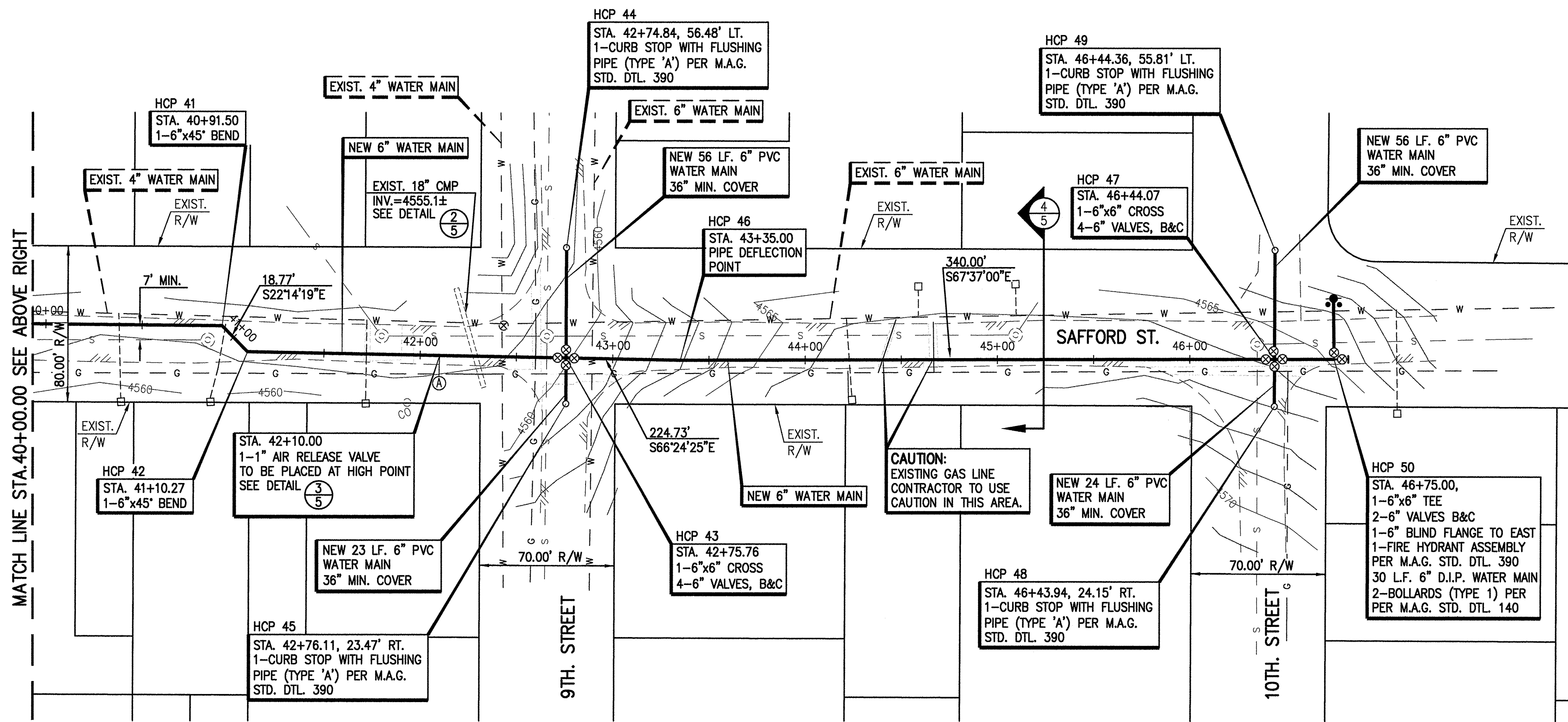
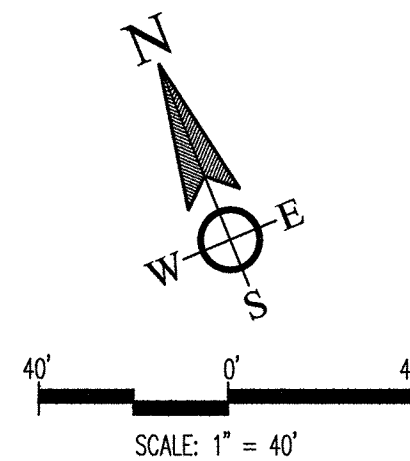
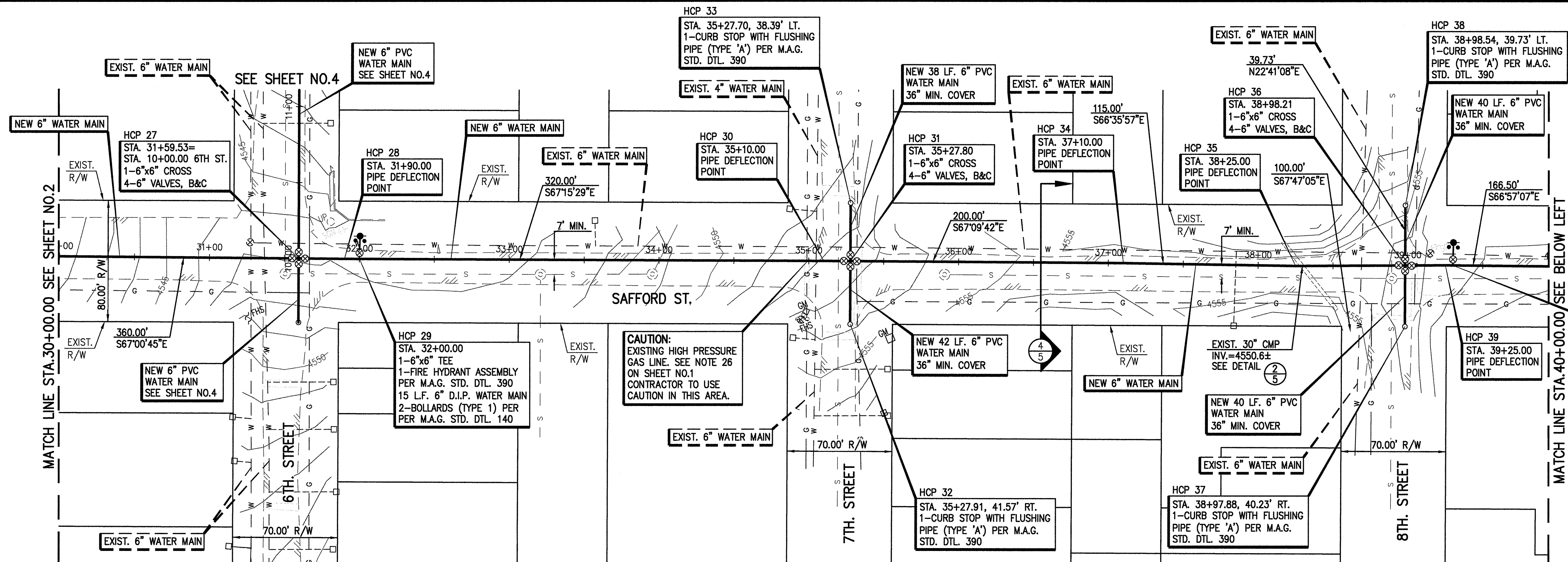
NO.	NORTHING	EASTING
1	260522.31	729954.07
2	260520.94	729957.38
3	260492.07	729969.47
4	260424.98	730131.22
5	260381.20	730231.58
6	260339.24	730214.04
7	260412.01	730244.46
8	260369.00	730259.54
9	260291.87	730444.07
10	260238.83	730562.17
11	260200.47	730546.14
12	260274.25	730576.98
13	260220.18	730603.71
14	260226.59	730589.44
15	260102.41	730885.06
16	260094.81	730903.19
17	259969.08	731203.25
18	259952.51	731245.60
19	259914.72	731229.80
20	259988.50	731260.64
21	259941.75	731273.10
22	259868.87	731459.34
23	259821.59	731568.40
24	259780.40	731551.18
25	259854.17	731582.01
26	259797.28	731624.50



MATCH LINE STA. 20+00.00 SEE ABOVE RIGHT

MATCH LINE STA. 30+00.00 SEE SHEET NO.3

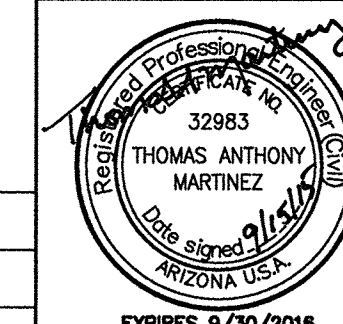
Call at least two full working days
before you begin excavation.
ARIZONA 811
Arizona's Free Service
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602)263-1100



HORIZONTAL CONTROL		
NO.	NORTHING	EASTING
27	259668.58	731927.86
28	259656.69	731955.91
29	259652.82	731965.13
30	259532.98	732251.03
31	259526.07	732267.43
32	259487.72	732251.40
33	259561.49	732282.24
34	259455.35	732435.35
35	259409.68	732540.89
36	259382.00	732608.67
37	259344.88	732593.15
38	259418.65	732623.99
39	259371.87	732633.47
40	259369.91	732638.07
41	259306.69	732786.68
42	259289.31	732793.78
43	259223.08	732945.42
44	259201.42	732936.36
45	259275.20	732967.20
46	259199.36	732999.72
47	259081.67	733285.51
48	259059.38	733276.19
49	259133.16	733307.03
50	259069.89	733314.11

UTILITY STATEMENT
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NOTE:
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TOMBSTONE PUBLIC WORKS DEPARTMENT

**SAFFORD STREET
 3RD STREET & 6TH STREET
 WATER MAIN IMPROVEMENT PLANS**

WATER MAIN PLAN SHEET

DESIGNED BY: G.G.F.	DRAWN BY: G.G.F.	CHECKED BY: T.A.M.	SHEET 3 OF 5
DATE: SEPTEMBER 03, 2015		PROJECT NO. 1918.02-A-8000	SCALE: HORIZ: 1"=40' VERT:
DRAWN BY: WESTLAND RESOURCES DRAWING PATH M:\Jobs\1900\1918.02\ENG\SAFFORD\1918 02-SAFFORD-TW-03.dwg			

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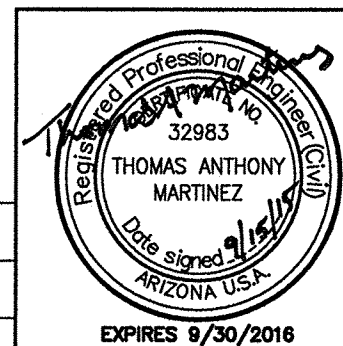
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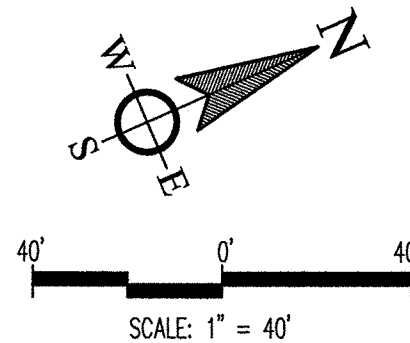
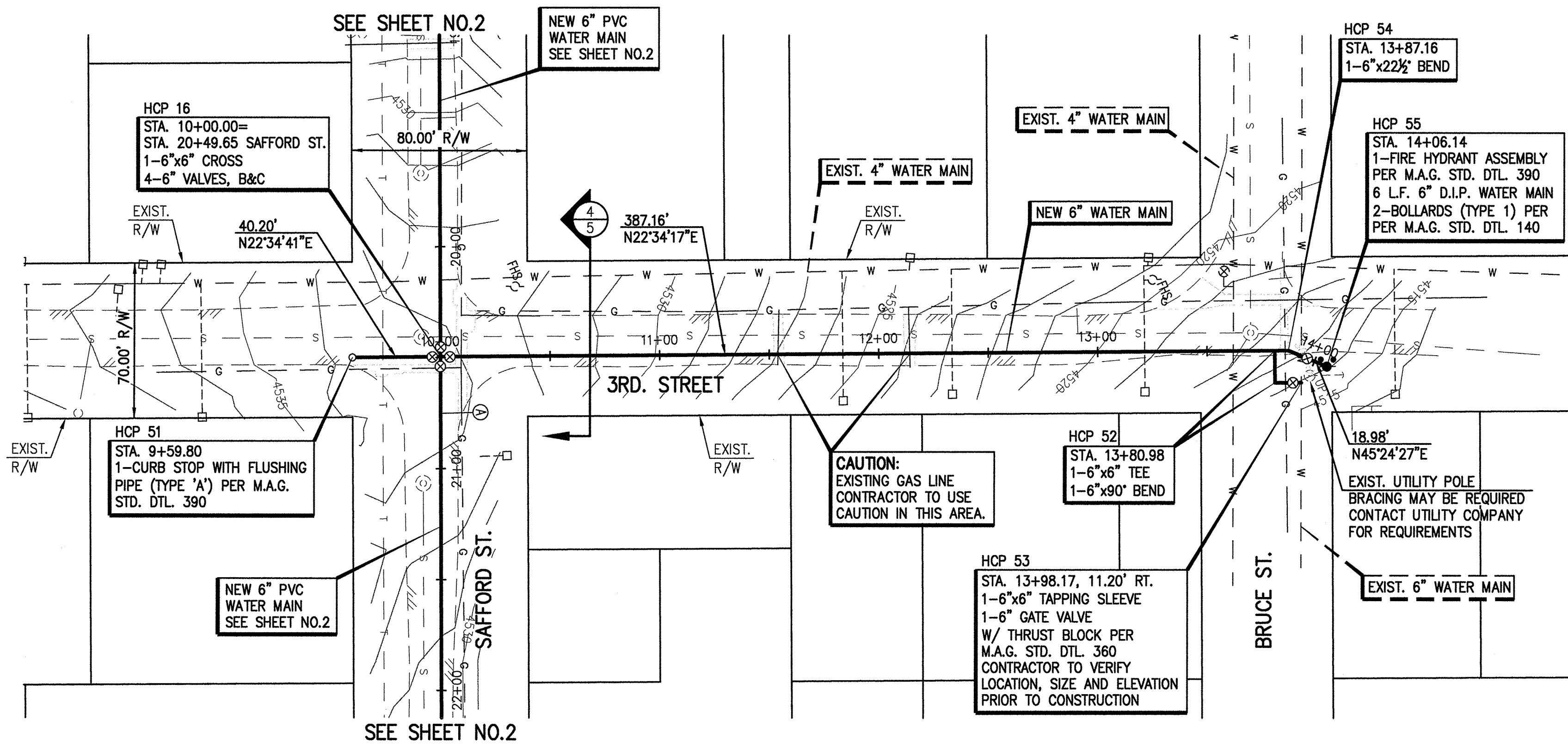
NO.	DATE	BY	REVISION	APP.	DATE



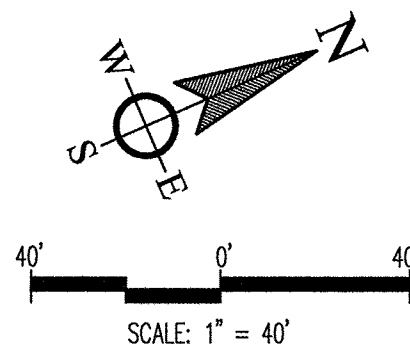
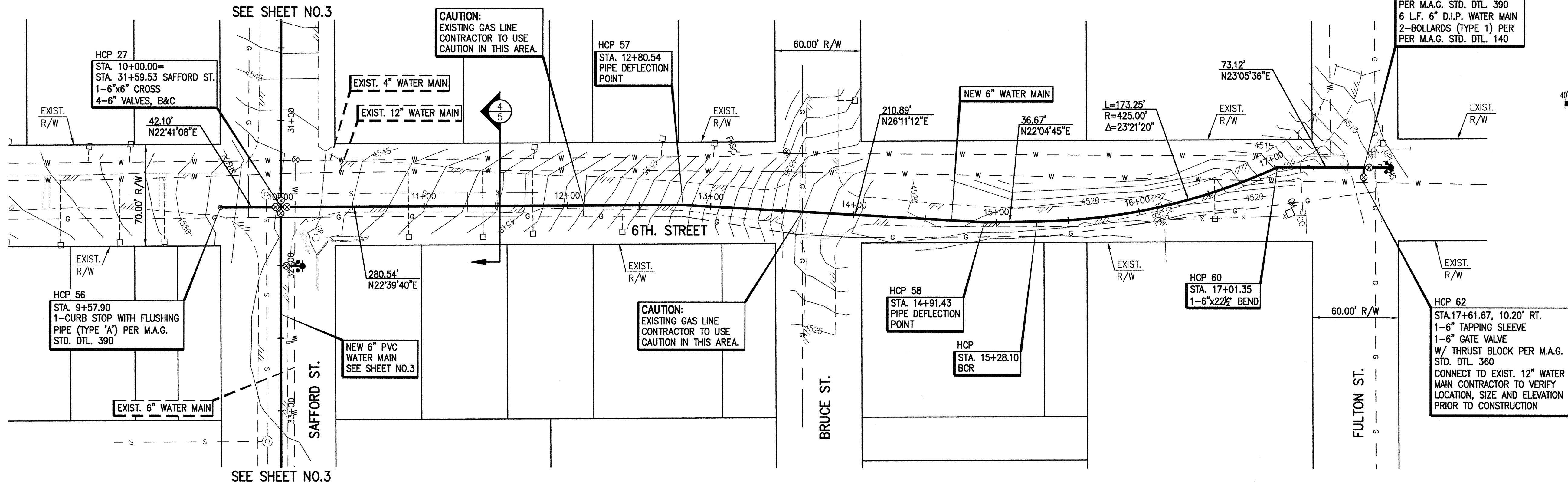
TOMBSTONE PUBLIC WORKS DEPARTMENT

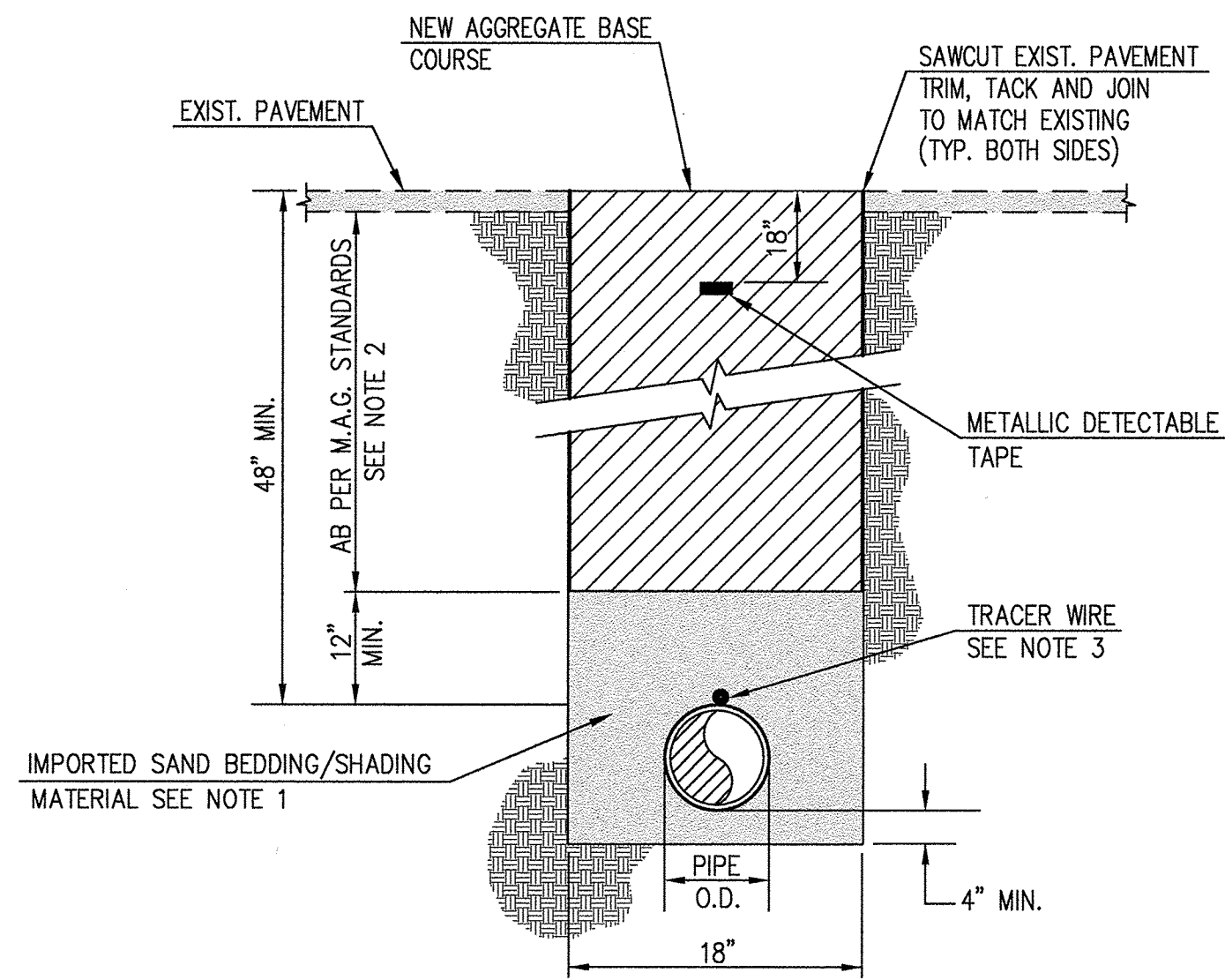
SAFFORD STREET 3RD STREET & 6TH STREET WATER MAIN IMPROVEMENT PLANS WATER MAIN PLAN SHEET

DESIGNED BY: G.G.F.	DRAWN BY: G.G.F.	CHECKED BY: T.A.M.	SHEET 4 OF 5
DATE SEPTEMBER 03, 2015	PROJECT NO. 1918.02-A-8000	SCALE: HORIZ: 1"=40' VERT: 1"=40'	
WESTLAND RESOURCES DRAWING PATH M:\Jobs\1900\1918.02\ENG\SAFFORD\1918 02-SAFFORD-TW-04.dwg			



NO.	NORTHING	EASTING
16	260094.81	730903.19
27	259668.58	731927.86
51	260057.69	730887.75
52	260446.61	731049.42
53	260452.08	731067.49
54	260452.32	731051.79
55	260465.64	731065.31
56	259629.74	731911.63
57	259927.47	732035.95
58	260116.71	732129.02
59	260150.70	732142.80
60	260319.92	732173.86
61	260375.41	732197.52
62	260371.26	732206.84

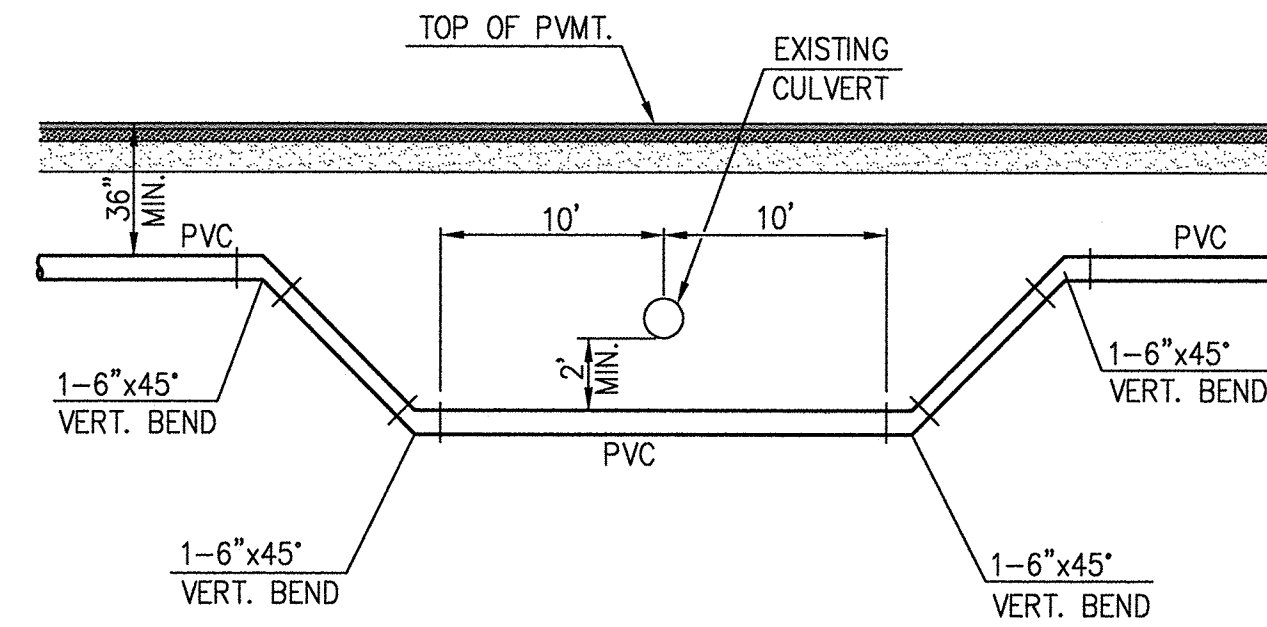




1 TRENCH DETAIL
5 N.T.S.

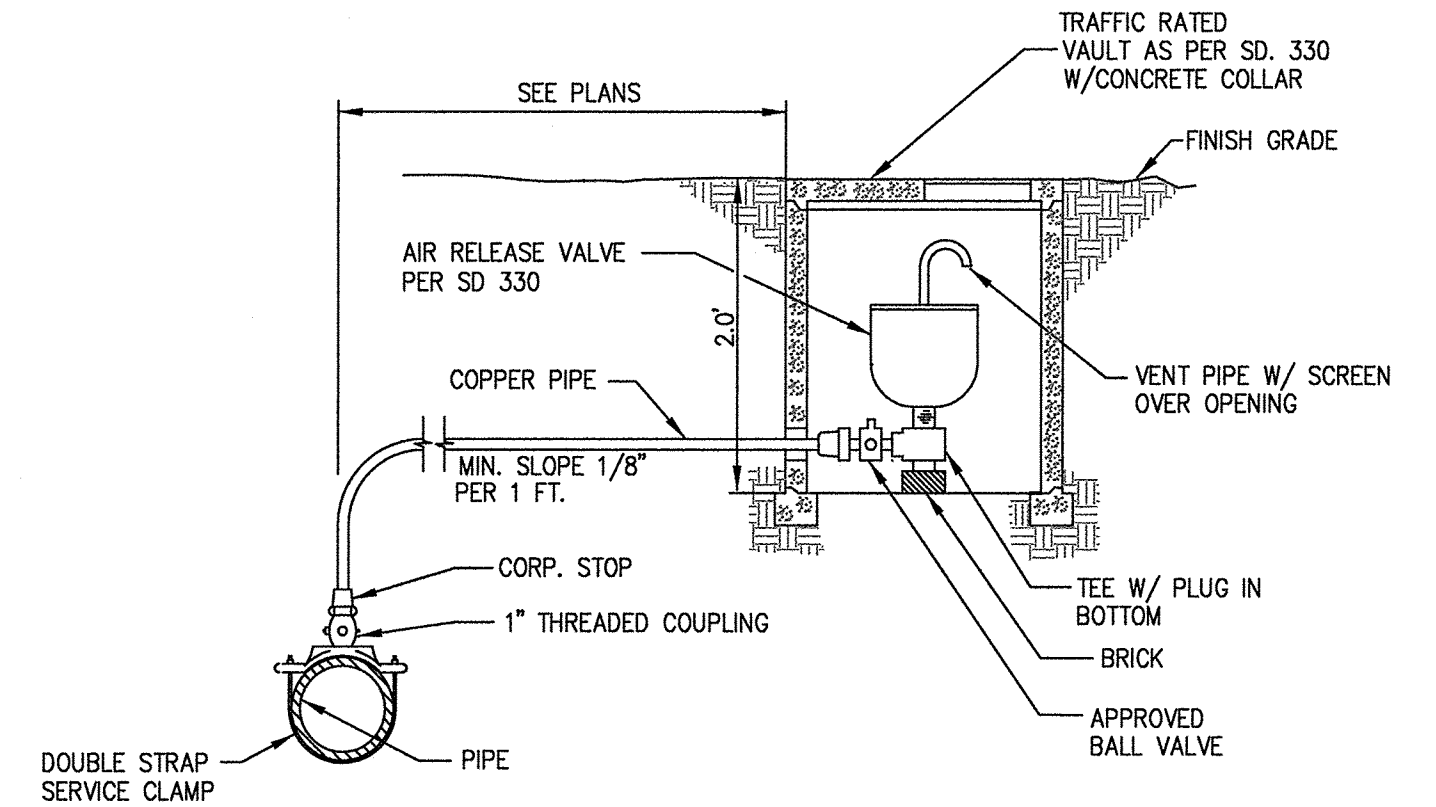
NOTES:

- IMPORTED SAND BEDDING/BACKFILLING AND COMPACTION SHALL BE REQUIRED AND SHALL MEET THE MARICOPA ASSOCIATION OF GOVERNMENTS (M.A.G.) SPECIFICATIONS 601.
- AGGREGATE BASE COUSE SHALL BE PER M.A.G. STANDARDS SPECIFICATIONS 310 AND 702.
- CONTRACTOR IS REQUIRED TO INSTALL ONE #12 UF STANDARD DIRECT BURIAL WIRE TAPED TO THE TOP OF PVC PIPE OR BAGGED DIP WITH 3' LOOPS BROUGHT UP AROUND VALVE RISERS. THE TRACER WIRE SHALL BE CERTIFIED BY A LICENSED ELECTRICAL CONTRACTOR FOR CONTINUITY. SPLICES SHALL BE MADE WITH SILICON SPLICE AND SHALL BE INSPECTED. SIGNAL INDUCED TEST RESULTS WILL NOT BE ACCEPTED. TRACER WIRE TO BE BROUGHT UP ON ALL DRAIN VALVE ASSEMBLIES AND IN-LINE VALVES. TRACER WIRE REQUIRED FOR ALL WATER MAIN LINES. WIRE SHALL BE TAPED TO THE WATER MAIN WITH 10 MIL. TAPE EVERY 60 FEET, INCLUDING SERVICE LINES.



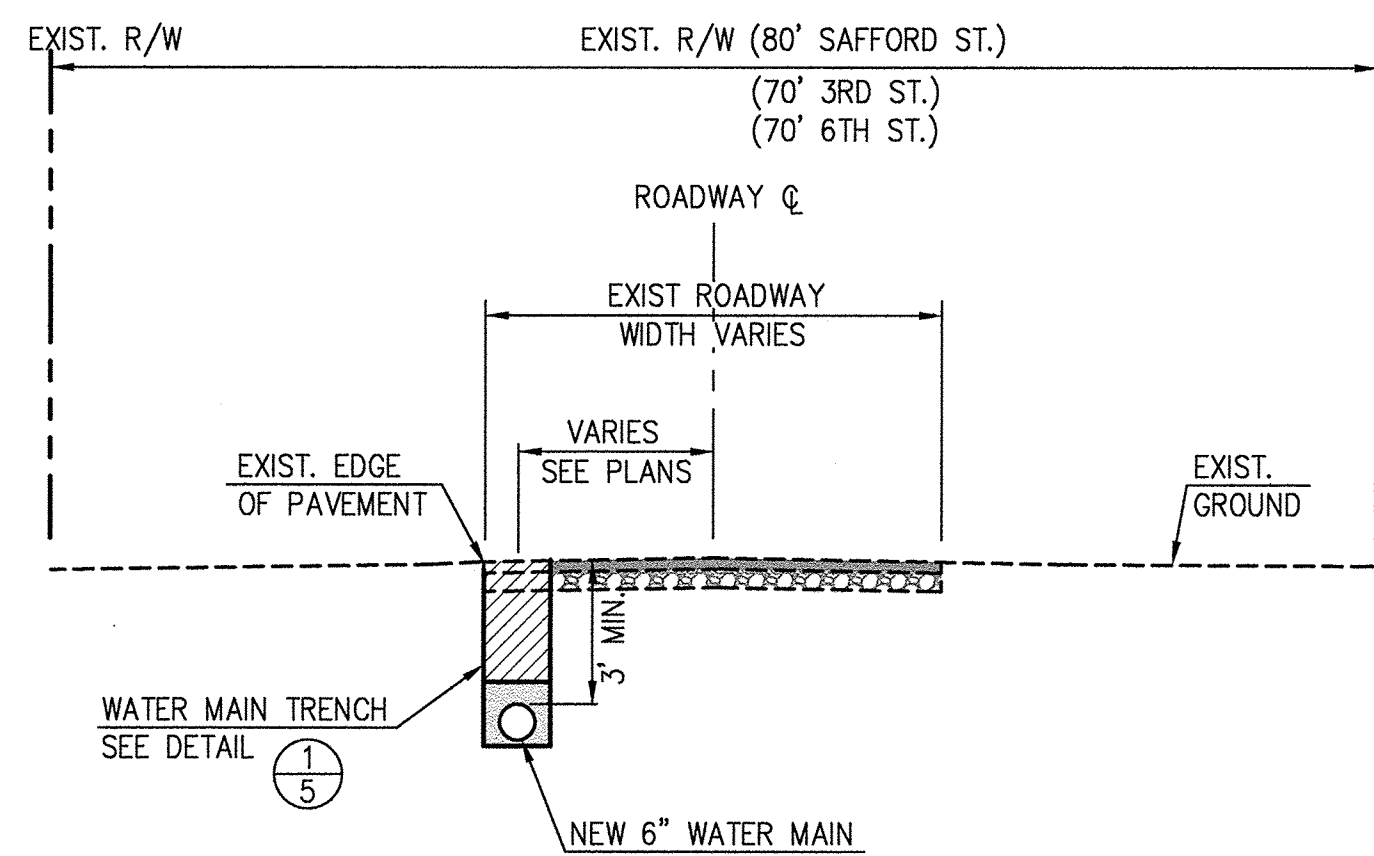
NOTE:
CONTRACTOR TO INSTALL 1" COMBINATION AIR RELEASE/AIR VACUUM VALVES AT ALL HIGH POINTS. SEE PLANS FOR PROPOSED LOCATIONS.

2 DRAINAGE CROSSING
5 N.T.S.

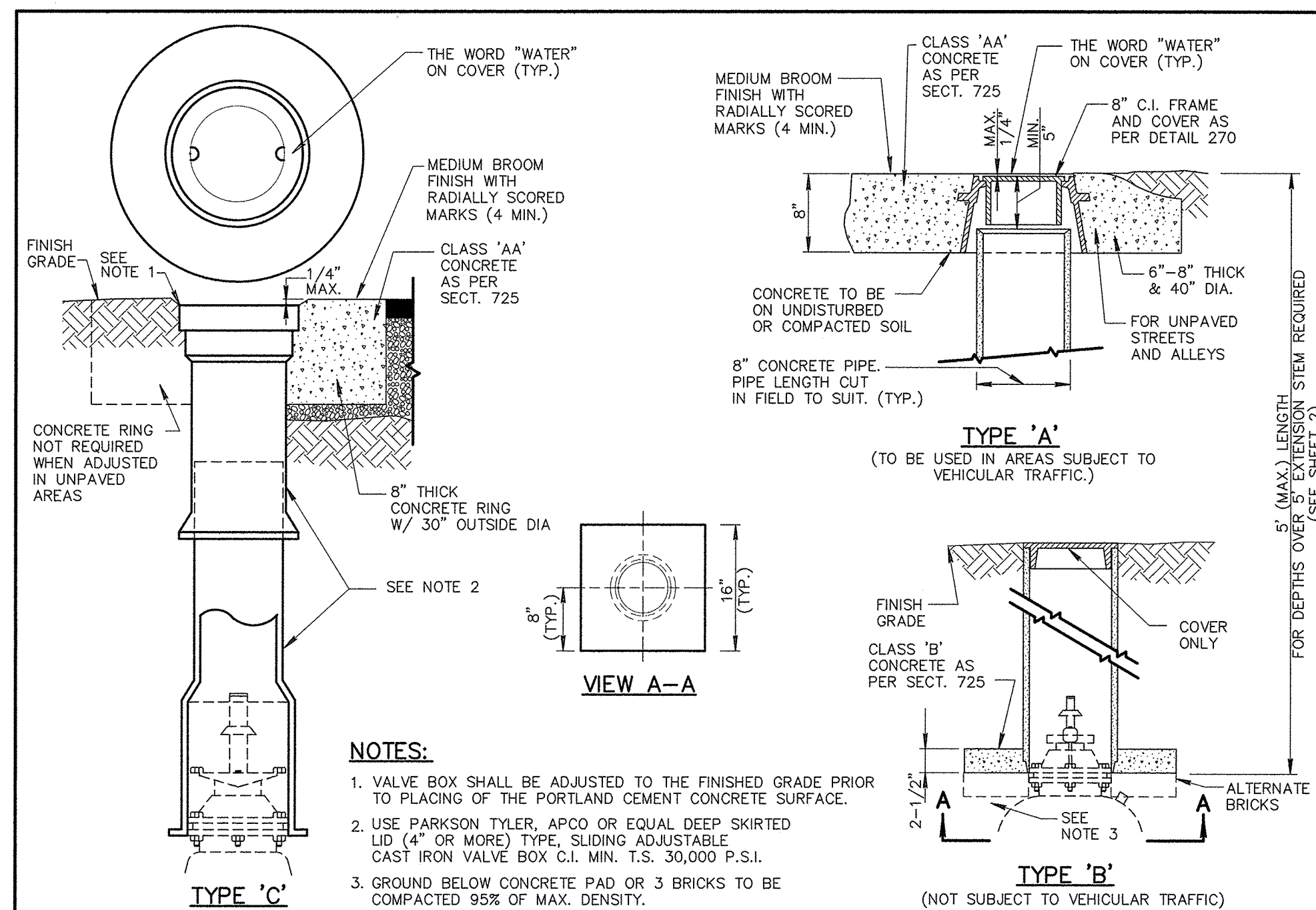


3 AIR RELEASE VALVE DETAIL
5 N.T.S.

SD-330 AND SD-331 REFERS TO STANDARD DETAIL NUMBER FROM "TUCSON WATER STANDARD SPECIFICATIONS AND DETAILS", LATEST EDITION.

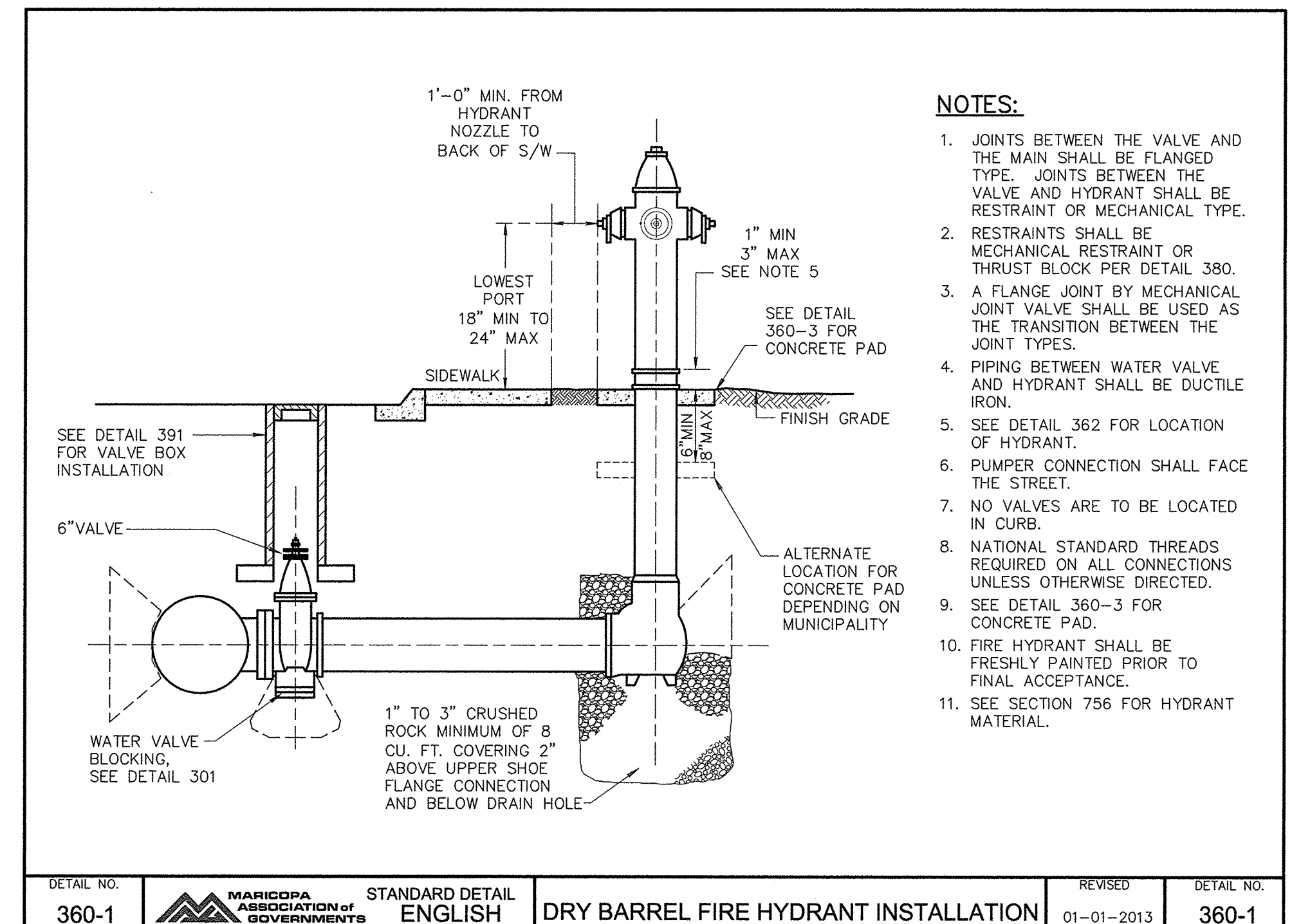


4 TYPICAL ROADWAY SECTION
5 N.T.S.



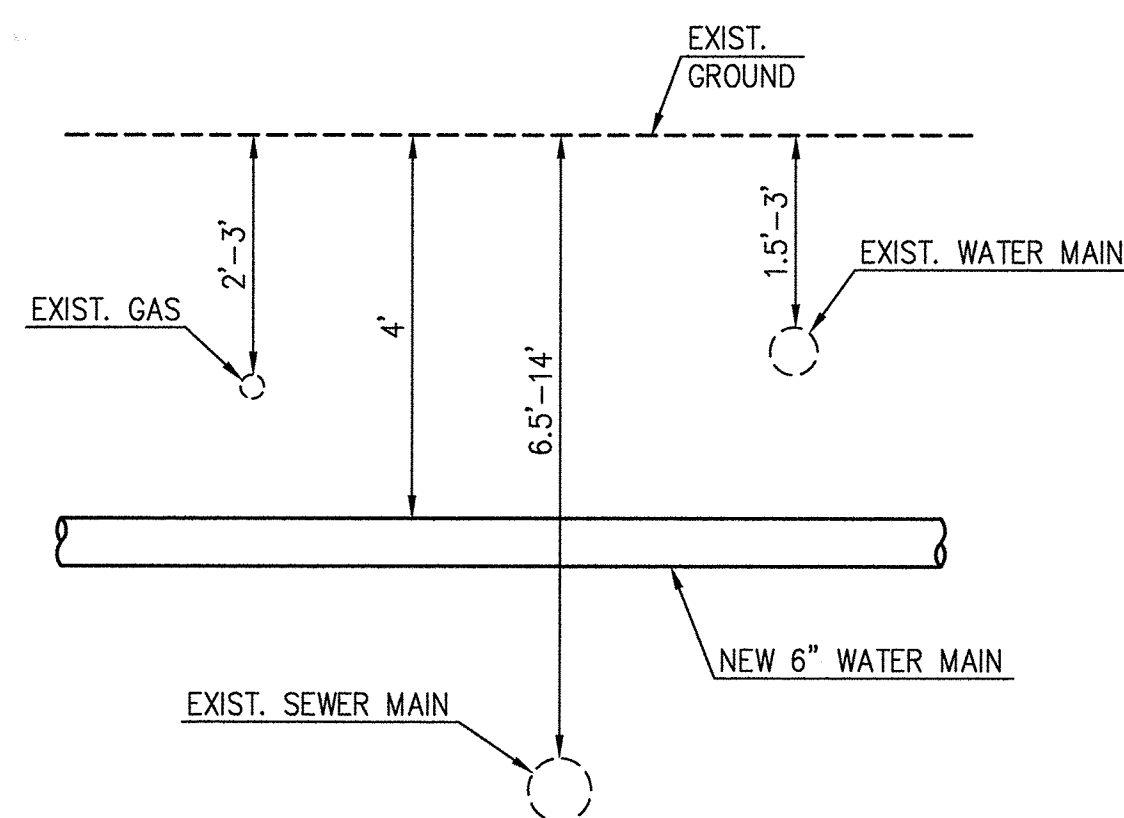
DETAIL NO. 391-1 MARICOPA ASSOCIATION OF GOVERNMENTS STANDARD DETAIL ENGLISH VALVE BOX INSTALLATION AND GRADE ADJUSTMENT REVISED 01-01-2014 DETAIL NO. 391-1

5 VALVE BOX DETAIL
5 N.T.S.



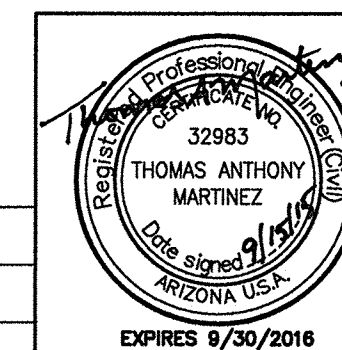
DETAIL NO. 360-1 MARICOPA ASSOCIATION OF GOVERNMENTS STANDARD DETAIL ENGLISH DRY BARREL FIRE HYDRANT INSTALLATION REVISED 01-01-2013 DETAIL NO. 360-1

6 FIRE HYDRANT DETAIL
5 N.T.S.



7 UTILITY CROSSING DETAIL
5 DEPTHS ARE APPROXIMATE N.T.S.

Westland Resources, Inc.
Tucson • Phoenix • Flagstaff
4001 E. Paradise Falls Drive
Tucson, Arizona 85712 (520) 206-9585



Call at least two full working days before you begin excavation
ARIZONA811
Arizona 811
Dial 8-1-1 or 1-800-874-4477 (782-6348)
In Maricopa County: (602)283-1100

TOMBSTONE PUBLIC WORKS DEPARTMENT
**SAFFORD STREET
3RD STREET & 6TH STREET
WATER MAIN IMPROVEMENT PLANS
DETAIL SHEET**

DESIGNED BY: G.G.F.	DRAWN BY: G.G.F.	CHECKED BY: T.A.M.	SHEET 5 OF 5
DATE SEPTEMBER 03, 2015	PROJECT NO. 1918.02-A-8000	SCALE: HORIZ: VERT:	
WESTLAND RESOURCES DRAWING PATH M:\Jobs\19002\1918.02\ENG\SAFFORD\1918.02-SAFFORD-TW-05.dwg			

NO.	DATE	BY	REVISION	APP.	DATE