

City Centre Improvement District

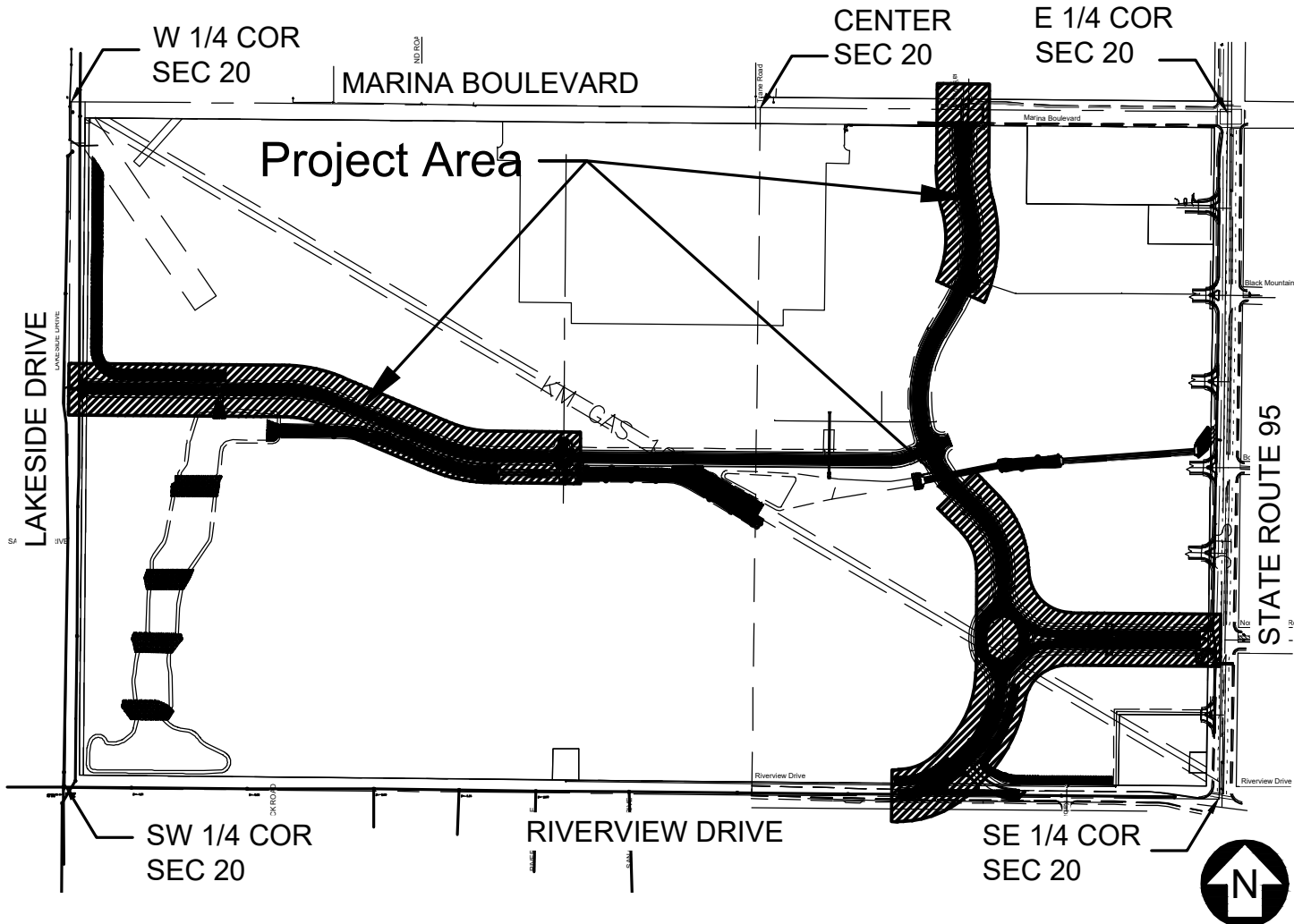
Sewer Plan 26-PW-002

Sewer Notes

- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE CORRECT PERMITS FROM THE RESPONSIBLE GOVERNMENT AGENCY. ALL ONSITE CONSTRUCTION WILL BE INSPECTED BY THE COMMUNITY DEVELOPMENT DEPARTMENT. JURISDICTION FOR ALL OFFSITE CONSTRUCTION IN THE PUBLIC RIGHT-OF-WAY IS INSPECTED BY THE BULLHEAD CITY PUBLIC WORKS DEPARTMENT.
- ALL CONSTRUCTION SHALL CONFORM TO THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, MARICOPA ASSOCIATION OF GOVERNMENTS AND THE UNIFORM STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION, MARICOPA ASSOCIATION OF GOVERNMENTS MOST RECENT ADDITION (M.A.G. SPEC & M.A.G. DETAIL), ARIZONA ADMINISTRATIVE CODE, AND THE ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING BULLETIN NO. 11.
- BEDDING MATERIAL SHALL NOT BE LARGER THAN 3/4 INCH IN SIZE.
- ALL FACILITIES, MATERIALS, AND WORKMANSHIP ARE SUBJECT TO THE APPROVAL AND ACCEPTANCE OF THE CITY ENGINEER IN ORDER TO ASSURE THE INTEGRITY OF THE COLLECTION SYSTEM.
- ANY WORK PERFORMED WITHOUT THE APPROVAL OF THE CITY ENGINEER AND/OR ALL WORK AND MATERIALS NOT IN CONFORMANCE WITH THE SPECIFICATIONS IS SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
- ANY DEVIATION FROM THE PLANS AND SPECIFICATIONS MUST BE APPROVED IN WRITING BY THE ENGINEER PRIOR TO ACCEPTANCE.
- THE ENGINEERING DEPT. SHALL BE NOTIFIED 24 HOURS PRIOR TO CONSTRUCTION FOR SCHEDULING INSPECTIONS.
- THE CONTRACTOR WILL UNCOVER ALL EXISTING LINES BEING TIED INTO TO VERIFY THEIR LOCATION PRIOR TO TRENCHING. THE CONTRACTOR WILL LOCATE OR HAVE LOCATED ALL EXISTING UNDERGROUND PIPELINES, TELEPHONE AND ELECTRIC CONDUITS, AND STRUCTURES IN ADVANCE OF CONSTRUCTION AND WILL OBSERVE ALL POSSIBLE PRECAUTIONS TO AVOID DAMAGE TO THE SAME.
- TRAFFIC CONTROL SHALL BE MAINTAINED IN ACCORDANCE WITH M.A.G. SPECIFICATION 401, MANUAL OF TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (LATEST EDITION).
- BACKFILLING IN THE RIGHT-OF-WAY SHALL NOT BE STARTED UNTIL ALL LINES ARE APPROVED BY THE INSPECTOR.
- THE ENGINEER WILL DETERMINE THE LOCATION OF THE REQUIRED COMPACTION TESTS. THE CONTRACTOR WILL NOTIFY THE TESTING LAB AND COORDINATE WITH THE INSPECTOR AND TESTING LAB. COPIES OF TEST RESULTS SHALL BE SENT TO BOTH THE ENGINEER AND THE CITY OF BULLHEAD CITY.
- ALL MANHOLES SHALL BE WATER TESTED AND ALL SEWER LINES WILL BE AIR TESTED AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH THE OPTIONS OUTLINED IN RULE: A.A.C. R18-9-E301. 4.01 GENERAL PERMIT: SEWAGE COLLECTION (D)(3)(f).
- ANY PREVIOUSLY TESTED SEWER LINE BROKEN DURING THE INSTALLATION OF OTHER ADJACENT UTILITIES WILL BE REPAIRED AND RETESTED TO THE SATISFACTION OF THE ENGINEER.
- ACCEPTANCE OF THE COMPLETED IMPROVEMENTS WILL NOT BE GIVEN UNTIL ALL RELATED DIGITAL FORMAT CAD DRAWING FILES (e-Transmit) AND DIGITAL FORMAT "PDF" PLAN SET HAVE BEEN SUBMITTED TO AND APPROVED BY THE CITY.
- NON-SHRINK GROUT SHALL BE USED IN THE CONSTRUCTION OF ALL MANHOLES.
- ALL SANITARY SEWER PIPE SHALL BE POLYVINYL CHLORIDE (P.V.C.), UNLESS OTHERWISE NOTED, IN ACCORDANCE WITH M.A.G. SPECIFICATION. A CERTIFICATION SHALL BE FURNISHED FROM THE MANUFACTURER ATTESTING THAT THE PIPE MEETS THE REQUIRED ASTM REQUIREMENTS, PVC PIPE SDR-35, ASTM D3034.
- COMPLIANCE WITH ALL CITY, COUNTY, STATE AND FEDERAL RULES AND REGULATION PERTAINING TO JOB SAFETY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR IS TO VERIFY THE ELEVATION OF THE EXISTING SEWER LINE PRIOR TO INSTALLATION OF PROPOSED SYSTEMS.
- WHEN WATER PIPE AND SEWER PIPE ARE LAID PARALLEL TO EACH OTHER, THE HORIZONTAL DISTANCE BETWEEN THE TWO LINES SHALL NOT BE LESS THAN SIX FEET. EACH LINE SHALL BE LAID IN A SEPARATE TRENCH OR THE SPACE IN BETWEEN SHALL BE FILLED WITH COMPACTED SOIL.
- THE CONTRACTOR SHALL KEEP SUITABLE EQUIPMENT ON HAND AT THE JOB SITE FOR MAINTAINING DUST CONTROL, AND SHALL CONTROL DUST AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS FOR CLEANING TRUCKS AND/OR OTHER EQUIPMENT OF MUD PRIOR TO ENTERING PUBLIC STREETS, AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN STREETS, ALLAY DUST, AND TAKE WHATEVER MEASURES ARE NECESSARY TO INSURE THAT THE ROADS ARE MAINTAINED IN A CLEAN, MUD AND DUST FREE CONDITION AT ALL TIMES.
- THE CONTRACTOR PERFORMING EXCAVATIONS IS RESPONSIBLE FOR LOCATING AND PROTECTION OF ALL UNDERGROUND UTILITIES.
- THE CONTRACTOR IS TO CONTACT THE ENGINEER PRIOR TO CONSTRUCTION IF A CONFLICT OR DISCREPANCY IS FOUND IN THESE PLANS.
- SEWER LINES, MANHOLES & SEWER SERVICES ARE STATIONED ALONG THE SEWER LINE.
- DEFLECTION TESTING SHOULD BE DONE TO 100% OF THE PVC PIPES.
- WATER/SEWER SEPARATION MUST CONFORM TO ARIZONA ADMINISTRATION CODE (AAC) R18-5-502 (c)(1).
- ALL SEWER LINES SHALL HAVE A MINIMUM OF 3 FEET COVER OVER THE TOP OF PIPE AND INSTALLATION OF PVC COMPLY WITH ASTM STANDARD SPECIFICATION D2321.
- ALL SEWER SERVICES ARE STATIONED TO THE CLOSEST DOWNSTREAM MANHOLE.
- THE TOTAL LENGTH OF SEWER LINES SHALL BE TESTED FOR UNIFORM SLOPE BY LAMP LIGHTING, REMOTE CAMERA OR SIMILAR METHODS APPROVED BY ADEQ. THE RESULTS ARE TO BE RECORDED. SLOPE TESTING MUST CONFORM TO (A.A.C.) R18-9-E302(D)(2)(k).
- ALL MANHOLE FRAMES AND COVERS ARE TO BE PURCHASED DIRECTLY FROM THE BULLHEAD CITY UTILITIES DEPARTMENT.

Testing and Construction Notes

- LEAKAGE TESTING SHALL BE LOW PRESSURE AIR TEST IN ACCORDANCE WITH A.A.C. R18-9-E301(D)(2)(j), FOR PVC GRAVITY SEWER THE METHOD IS ASTM F1417.
- MANHOLE WATER TIGHTNESS TEST IN ACCORDANCE WITH A.A.C. R18-9-E301(D)(3)(e).
- ALL DEFLECTION TESTING SHALL BE IN ACCORDANCE WITH A.A.C. R18-9-E301(D)(2)(i).
- UNIFORM SLOPE TESTING FOR ALL GRAVITY SEWER LINES IN ACCORDANCE WITH A.A.C. R18-9-E301(D)(2)(k).
- PERFORM ONE OF THE THREE TESTING METHODOLOGIES MENTIONED IN (i) THROUGH (iii) OF A.A.C. R18-9-E301(D)(3)(e).
- TRENCH AND BEDDING STANDARD SPECIFICATION IS AS PER MAG 601.
- ALL SEWER, DRINKING WATER AND RECLAIMED WATER SEPARATION SHALL BE IN ACCORDANCE WITH A.A.C. R18-5-502, A.A.C. R18-9-E301(D)(1)(d), & A.A.C. R18-9-E301(D)(1)(e).



Location Map

Sheet Index

- COVER SHEET
- DETAILS
- PLAN & PROFILE

Assessor's Parcel No.

220-01-031

Developer

CSQ H95 LLLP
2580 HWY 95, SUITE 215
BULLHEAD CITY, AZ 86442

Project Engineer

DON N. ANDERSON
P.E. NO. 11289
R.L.S. NO. 16098

ANDERSON-NELSON, INC.
4143 N. 12TH STREET
PHOENIX, AZ 85014
PHONE: (602) 273-1850

Quantities

8" PVC SEWER LINE	4,955 L.F.
4' SEWER MANHOLE	23 EA.
SAWCUT ASPHALT	806 S.Y.

Safety Notice to Contractor

IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE DUTY OF THE ENGINEER TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON, OR NEAR THE CONSTRUCTION SITE.

Engineers Notice to Contractor

THE EXISTENCE, AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE DRAWINGS, ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE DRAWINGS. AND WE ASSUME NO RESPONSIBILITY AS TO THE ACCURACY OF THEIR DEPICTED LOCATION ON THESE DRAWINGS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN, AND ALL OTHER LINES NOT OF RECORD OR NOT SHOWN ON THESE DRAWINGS BY VERIFICATION OF THEIR LOCATION IN THE FIELD PRIOR TO THE INSTIGATION OF THE ACTUAL PORTION OF THEIR WORK ATTRIBUTED TO THEIR LOCATION. THE QUANTITIES SHOWN ON THESE PLANS ARE FOR INFORMATION PURPOSES ONLY, AND ARE NOT TO BE USED FOR BIDDING OR CONSTRUCTION PURPOSES.

Survey Control

ALL BEARINGS AND DISTANCES SHOWN HEREON ARE DERIVED BY FIELD OBSERVED MEASUREMENTS, UTILIZING STATIC AND RTK METHODS.

COORDINATE SYSTEM: ARIZONA STATE PLANE
COORDINATES-ARIZONA WEST ZONE (0203)
DATUM: NORTH AMERICAN DATUM OF 1983.
GEOID MODEL: GEOID2018.
GRID, INTERNATIONAL FEET

Benchmark

BENCHMARK IS A BRASS CAP IN HAND HOLE AT THE INTERSECTION OF TRANE ROAD AND MARINA BLVD.
577.63 N.A.V.D. 88

Basis of Bearing

THE BEARING SOUTH 00°31'40" WEST BEING THE SOUTHWEST, WEST QUARTER SECTION LINE OF SECTION 20, TOWNSHIP 20 NORTH, RANGE 22 WEST, OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MOHAVE COUNTY, ARIZONA; ALSO BEING THE CENTERLINE OF LAKESIDE DRIVE BASED ON MOHAVE COUNTY ASSESSOR'S MAP "LEASED B.L.M. LAND." BOOK 220 OF MAPS 01 AS RECORDED IN THE MOHAVE COUNTY RECORDERS OFFICE.

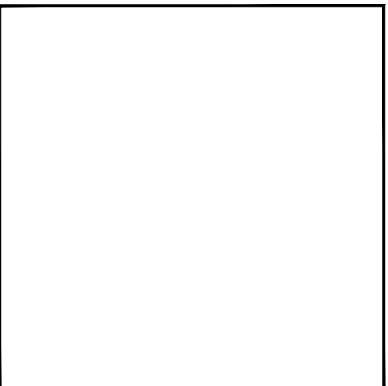
FEMA Requirements

PROPERTY IS LOCATED IN ZONE "X" AS DEPICTED ON THE FIRM COMMUNITY PANEL NUMBER 04015C4751G, DATED NOVEMBER 18, 2009.

Water/Sewer "As-Built" Certification

I HEREBY CERTIFY THAT THE "AS-BUILT" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY SUPERVISION OR AS NOTED, AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AFTER DUE REVIEW. ADDITIONALLY, I HEREBY CERTIFY THAT ALL MAINS AND SERVICES HAVE BEEN INSTALLED WITHIN THE LIMITS OF DEDICATED EASEMENTS OR INSIDE DEDICATED STREET RIGHTS-OF-WAY OR PUBLIC UTILITY EASEMENTS.

Seal



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City Centre Improvement District

4143 N. 12th St., Suite 200
Phoenix, Arizona 85014
(602) 273-1850
Bullhead City, AZ (928) 704-4677

Anderson - Nelson, Inc.
Engineering - Surveying - Site Grading Plans - Subdivision Development - Hydrology
Construction Management - Computer Services

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WFO	DNA		01-28-26
REVISIONS	DATE	BY	



EXPIRES 03-31-29
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(OUTSIDE MARICOPA COUNTY)

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City Centre Improvement District

Sewer Plan
26-PW-002

SEWER SYSTEM MATERIAL SPECIFICATION

COLLECTION MAINS:

- SEWER MAINS SHALL BE SDR35 PVC SEWER PIPE AND SHALL BE INSTALLED IN ACCORDANCE WITH MAG SPECIFICATIONS, PIPE SHALL MEET ASTM D-3034, AND ASTM F-679 STD.

SEWER SERVICE:

- SEWER SERVICE LINES SHALL BE SDR35 PVC SEWER PIPE AND SHALL BE INSTALLED IN ACCORDANCE WITH MAG SPECIFICATIONS PIPE MATERIAL SHALL MEET ASTM D-3034 STD.

MANHOLES:

- MANHOLES SHALL BE INSTALLED IN ACCORDANCE WITH MAG SPECIFICATIONS, EXCEPT THAT NO STEPS SHALL BE INSTALLED IN ANY MANHOLES.
 - STANDARD CONCRETE MANHOLE: SEWER MAIN 8" - 10"
 - ARMOROCK POLYMER CONCRETE MANHOLE OR APPROVED EQUIVALENT: 12" AND LARGER
 - PIPES OVER 30" MUST BE APPROVED BY THE CITY

MANHOLE COVER:

- MANHOLE COVERS FOR SEWER LINES 10" AND SMALLER SHALL HAVE A 24" FRAME AND COVER, SEWER LINES 12" AND GREATER SHALL HAVE A 30" FRAME AND COVER. LIDS AND FRAMES SHALL BE PURCHASED THROUGH BULLHEAD CITY.
- POLYMER MANHOLES WILL REQUIRE CORROSION RESISTANT GRADE RINGS
- COMPOSITE LIDS AND FRAMES SHALL BE PURCHASED THROUGH BULLHEAD CITY.

ALL OTHER ITEMS:

- IN ACCORDANCE WITH MAG STD.

FORCE MAINS:

- PVC PRESSURE PIPE MANUFACTURED IN ACCORDANCE WITH AWWA C900 OR C905 OR US PIPE PROTECTO 401 LINED DUCTILE IRON PIPE AND FITTINGS MIN. PRESSURE CLASS 150. ALL DUCTILE IRON PIPE SHALL BE POLYETHYLENE WRAPPED FOR THE ENTIRE LENGTH IN ACCORDANCE WITH MAG SEC. 610.6. ALL CUT ENDS MUST BE RECOATED PER MANUFACTURERS SPECIFICATIONS.
- ALL VALVES ON FORCE MAINS SHALL BE PLUG VALVES.
- AIR/VACUUM RELEASE VALVES ARE REQUIRED AT ALL HIGHPOINTS AND AT VERTICAL REALIGNMENTS OF THE SEWER FORCE MAIN.

LOCATION MARKERS:

- SEE THE CITY STD. DET. 350-1. LOCATING BALLS MANUFACTURED BY OMNI, 3M OR APPROVED EQUAL SHALL BE PLACED AT PROPERTY LINE ABOVE SEWER SERVICES AT DEPTHS NO GREATER THAN 4'.

MARKING TAPE:

- SEE THE CITY'S STD. DET. 350-1. DETECTABLE MARKING TAPE MUST BE USED FOR ALL SEWER LINES AND SERVICES.

MARKING POSTS:

- CARSONITE MARKING POSTS ARE REQUIRED FOR ALL SEWER MANHOLES, MAINS, AND FORCE MAINS OUTSIDE OF ROW AND OUTSIDE OF PAVED AREAS AND ARE REQUIRED FOR ALL FORCE MAINS.

ALL OTHER ITEMS:

- DIP WILL NOT BE ALLOWED IN GRAVITY SEWER MAINS.
- IN ACCORDANCE WITH MAG SPECIFICATIONS
- WHERE CITY STANDARDS ARE SPECIFIED, THOSE STANDARDS SUPERSEDE MAG STANDARDS REGARDLESS OF PROJECT LOCATION.
- ALL DIP SECTIONS SHALL BE CONSTRUCTED OF RESTRAINED DUCTILE IRON PIPE (DIP) PER THE CITY'S STD. DET. 370-1. ALL DIP SECTIONS SHALL BE PROTECTO 401 LINED DUCTILE IRON PIPE. JOINT RESTRAINED DIP WITH POLYETHYLENE WRAP FOR THE ENTIRE LENGTH PER MAG SEC. 610.6. JOINT RESTRAINED LENGTHS WILL FOLLOW MAG STD. DET. 303-1 AND 303-2. ANCHOR BLOCKS/THRUST BLOCKS MUST BE INSTALLED FOR VERTICAL BENDS PER MAG STD. DET. 381. AIR/VACUUM RELEASE VALVES ARE REQUIRED AT ALL HIGHPOINTS AND AT VERTICAL REALIGNMENTS OF THE FORCE MAIN.
- LOCATING BALLS SHALL BE PLACED EVERY 500 FEET AND ABOVE EVERY BEND ON ALL FORCE MAINS.
- THE CONTRACTOR IS REQUIRED TO UNIFORM SLOPE TEST ALL SEWER LINES BY VIDEO AND VACUUM TEST ALL MANHOLES IN ACCORDANCE WITH AAC R18-9-E301. DEFLECTION TESTING SHALL BE PERFORMED PER MAG SEC. 615.11. TESTING DOCUMENTATION AND FLASH DRIVES SHALL BE SUBMITTED TO THE CITY INSPECTOR FOR APPROVAL PRIOR TO ACCEPTANCE. ALL REQUIRED REPAIRS ARE THE RESPONSIBILITY OF THE CONTRACTOR AND MUST BE COORDINATED WITH THE CITY INSPECTORS.
- SEWER TESTING: ALL SEWER MAINS AND LATERALS SHALL BE PRESSURE TESTED AND ALL MAINS VIDEO TESTED. ALL SEWER MAINS SHALL ALSO BE MANDRILL TESTED ACCORDING TO MAG STD. 611.4C. THE MAXIMUM ALLOWABLE SEWER LINE SAG IS 0.5 INCHES.
- WHEN USING MECHANICAL PLUGS TO TEST SEWER MAINS/MANHOLES CONTRACTOR MUST FOLLOW THE CITY STD. DET. 420.

BACKFILL

- IN NON-SAW CUT AREAS TO BE NATIVE MATERIAL SCREENED AT 4" OR LESS.
- IN SAW CUT AREAS TO BE ONE SACK ABC SLURRY OR AS SPECIFIED BY CITY.
- COMPACTION TESTING REQUIRED TO 95%

DETECTABLE LOCATING BALLS

- SEE THE CITY'S STD. DET. 350-1. LOCATING BALLS MANUFACTURED BY OMNI, 3M OR APPROVED EQUAL MUST BE PLACED AT WATER MAIN ABOVE WATER SERVICE LINE.
- LOCATING BALLS SHOULD BE PLACED NO DEEPER THAN 4' BELOW GROUND SURFACE.

PIPE ZONE

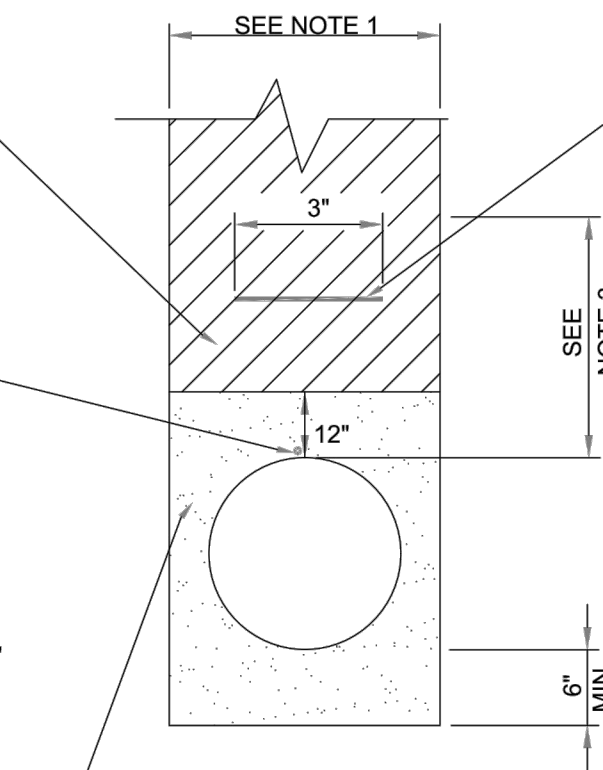
FROM MIN. 6" BELOW BOTTOM OF PIPE TO MIN. 12" ABOVE TOP OF PIPE BACKFILL WITH THE FOLLOWING PER NOTE 4:

- FROM MIN. 6" BELOW BOTTOM OF PIPE TO MIN. 12" ABOVE TOP OF PIPE BACKFILL WITH THE FOLLOWING PER NOTE 4:
- WATER LINES
 - SAND PER MAG 701.3
 - RECLAIMED WATER LINES
 - SAND PER MAG 701.3
 - SEWER FORCE MAIN
 - SAND PER MAG 701.3
 - GRAVITY SEWER LINES
 - ALL SERVICE AREAS - 3/4" MINUS ABC CRUSHED ROCK (NO REJECTS)

WATER AND SEWER SERVICES

(ALL UTILITY SERVICE AREAS)

MINIMUM 6" SAND BEDDING AND 6" SAND SHADING. BACKFILL AS PER DETAIL.



PIPE MARKING TAPE

DETECTIBLE MARKING TAPE SHALL BE LOCATED 18 INCHES BELOW GROUND SURFACE.

WORDING PER M.A.G. SEC. 616 TO BE USED FOR ALL WATER, & RECLAIMED WATER LINES, AND SERVICES. THE MARKING TAPE SHALL BE PRINTED ON STANDARD COLORED DETECTABLE TAPE. LETTERING SHALL BE BLACK, 1-1/2" HEIGHT MINIMUM.

RECLAIMED WATER LINES SHALL USE PURPLE TAPE & SHALL READ "CAUTION: RECLAIMED WATER LINE"

POTABLE WATER LINES SHALL USE BLUE TAPE & SHALL READ "CAUTION: POTABLE WATER LINE"

RAW & NON-POTABLE WATER LINES SHALL USE YELLOW TAPE & SHALL READ "RAW WATER MAINS" AND/OR "NON-POTABLE WATER MAINS".

SEWER AND SERVICE LINES SHALL USE GREEN TAPE & SHALL READ "CAUTION: SEWER LINE".

NOTES:

- TRENCH WILL BE IN ACCORDANCE WITH MAG SECTION 601.
- ONE SACK ABC SLURRY (CLSM) TO BE IN ACCORDANCE WITH MAG SECTION 728.
- DEPTH OF BURY TO BE MIN. 48" IN ALL STREETS. DEPTH OF BURY FOR WATER LINES IN OTHER AREAS TO BE AS FOLLOWS:
 - 36" MIN. FOR MAINS 8" DIAMETER AND SMALLER
 - 48" MIN. FOR MAINS 10" DIAMETER AND LARGER
- WASHED, CRUSHED ROCK TO BE IN ACCORDANCE WITH MAG SECTION 716.2 AND TABLE 716-2.
 - SAND TO BE IN ACCORDANCE WITH MAG SECTION 701.3.
 - ABC TO BE IN ACCORDANCE WITH MAG SECTION 702.2 AND TABLE 702-1.
- SEE THE CITY'S STD. DET. 350-1. LOCATING BALLS MANUFACTURED BY OMNI, 3M OR APPROVED EQUAL MUST BE PLACED AT WATER MAIN ABOVE WATER SERVICE LINE.
- LOCATING BALLS SHOULD BE PLACED NO DEEPER THAN 4' BELOW GROUND SURFACE.

Date:
November 2022



2355 Trane Rd.
Bullhead City, AZ. 86442
(928) 763-9400

SEWER SYSTEM MATERIAL SPECIFICATION

Detail No.
100-4

Date:
November 2022



2355 Trane Rd.
Bullhead City, AZ. 86442
(928) 763-9400

PIPE TRENCH DETAIL

Detail No.
350-1

City Centre Improvement District

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Construction Management - Computer Services

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Phoenix, Arizona 85014
(602) 273-1850
Bullhead City, AZ (928) 704-4677

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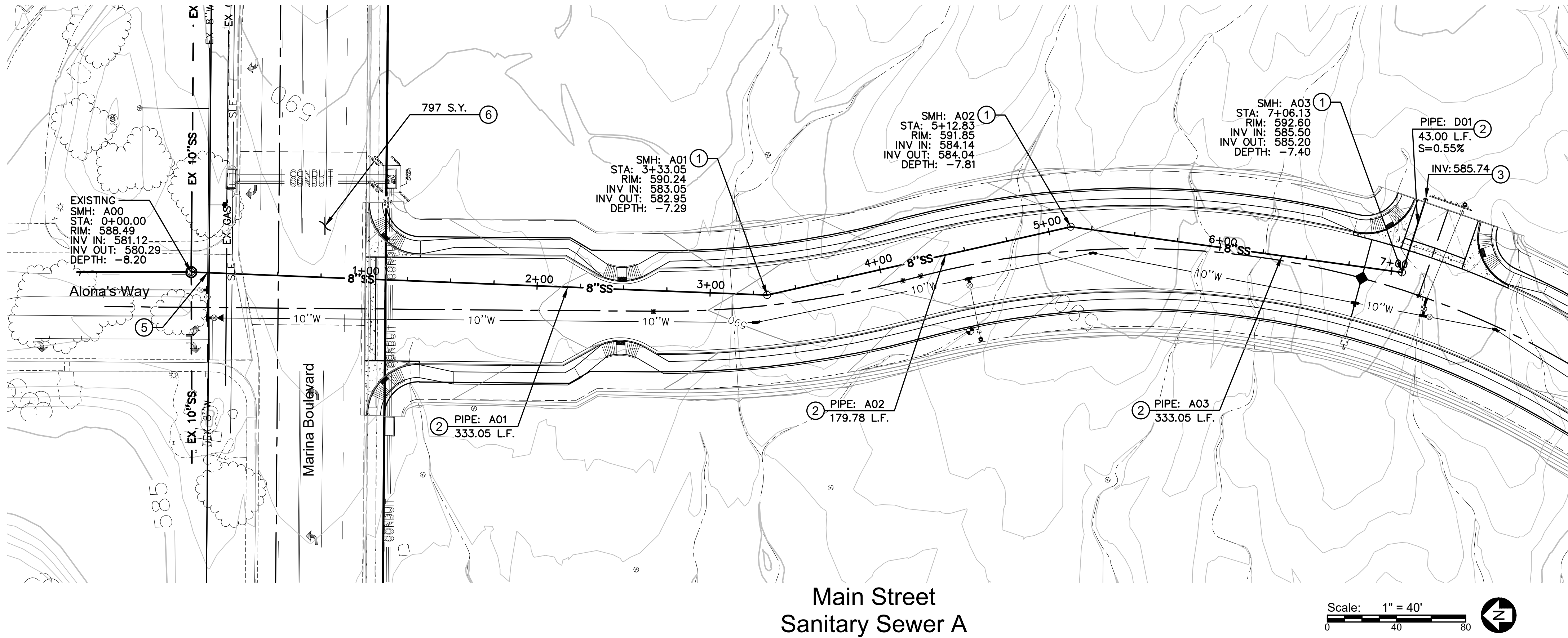
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Sewer Plan
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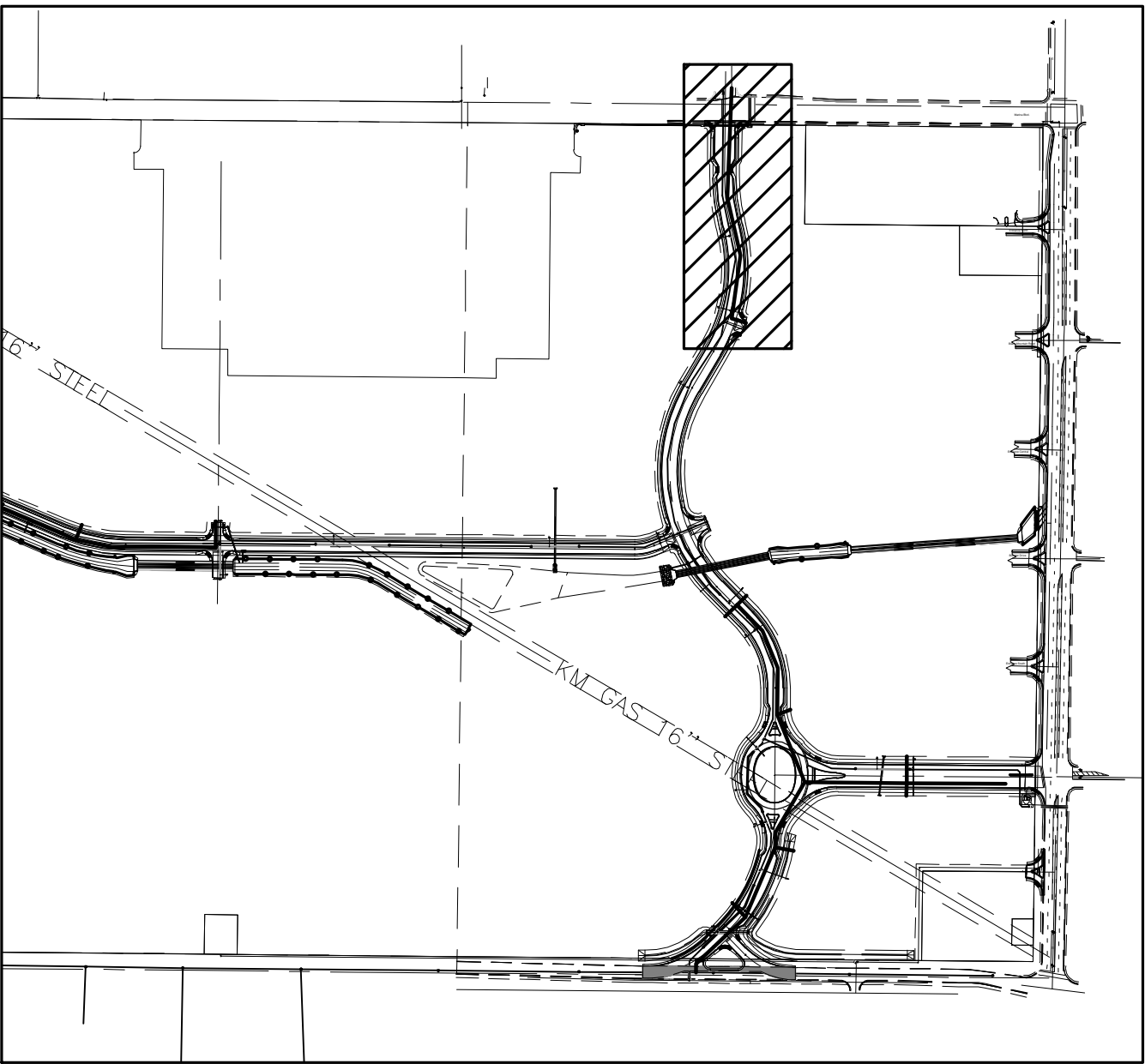
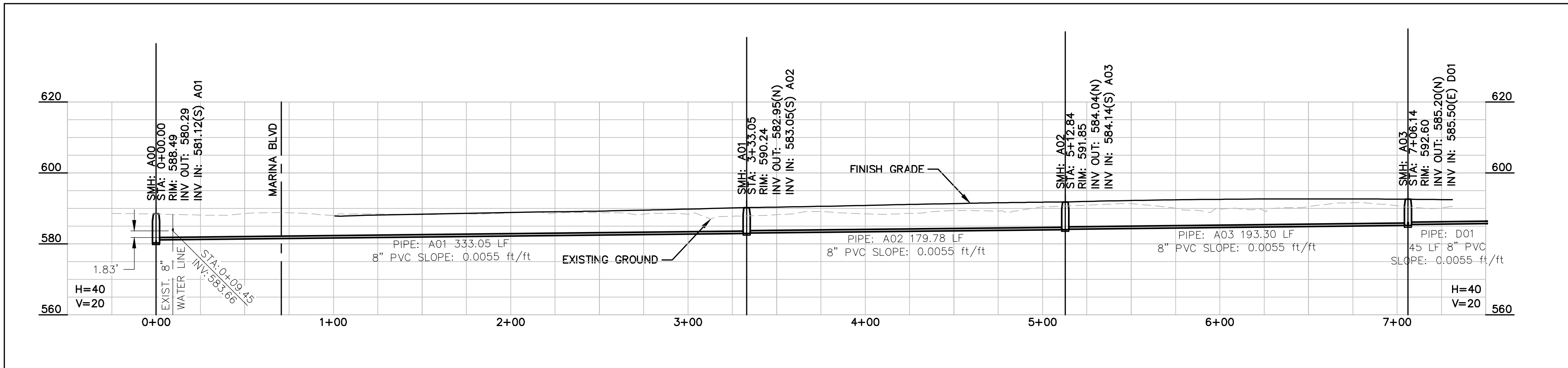


Sewer Construction Notes

1. INSTALL 48" DIA. SEWER MANHOLE WITH 24" FRAME & COVER PER M.A.G. STD. DET. 420-1.
2. INSTALL 8" DIAMETER PVC SEWER LINE
3. INSTALL CAP.
4. INSTALL 8" STUB OUT AND PLUG PER M.A.G. STD. DET. 427
5. WATER AND SANITARY SEWER SEPARATION AND PROTECTION PER M.A.G. STD. DET. 404.
6. SAWCUT, REMOVE AND REPLACE EXISTING ASPHALT PAVEMENT AS NECESSARY FOR INSTALLATION OF ELECTRICAL, SEWER & WATER, 50 FEET TO EITHER SIDE OF MIDWAY POINT OF CONSTRUCTION.
7. INSTALL 60" ID POLYMER CONCRETE SEWER MANHOLE PER M.A.G. STD. DET. 419.

Legend

- 6"W WATER LINE
- EX. FIRE HYDRANT
- EX. UTILITY POLE
- EX. WATER METER
- EX. WATER LINE
- CHAIN LINK FENCE
- L.F. LINEAR FEET
- S.F. SQUARE FEET
- FT. FEET
- INV. INVERT
- EX. EXISTING
- APN ASSESSOR'S PARCEL NUMBER
- P.U.E. PUBLIC UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- R.O.W. RIGHT-OF-WAY
- SMH SEWER MANHOLE
- CO SEWER CLEANOUT



Key Map

1"=50'

City Centre Improvement District

Anderson - Nelson, Inc.
Engineering - Surveying - Site Grading Plans - Subdivision Development - Hydrology
Construction Management - Computer Services

4143 N. 12th St., Suite 200
Phoenix, Arizona 85014
(602) 273-1850
Bullhead City, AZ (928) 704-4677

BY DATE

Sewer Plan

DESIGNED	DRAWN	INFORMED	APPROVED	DATE
				01-29-26



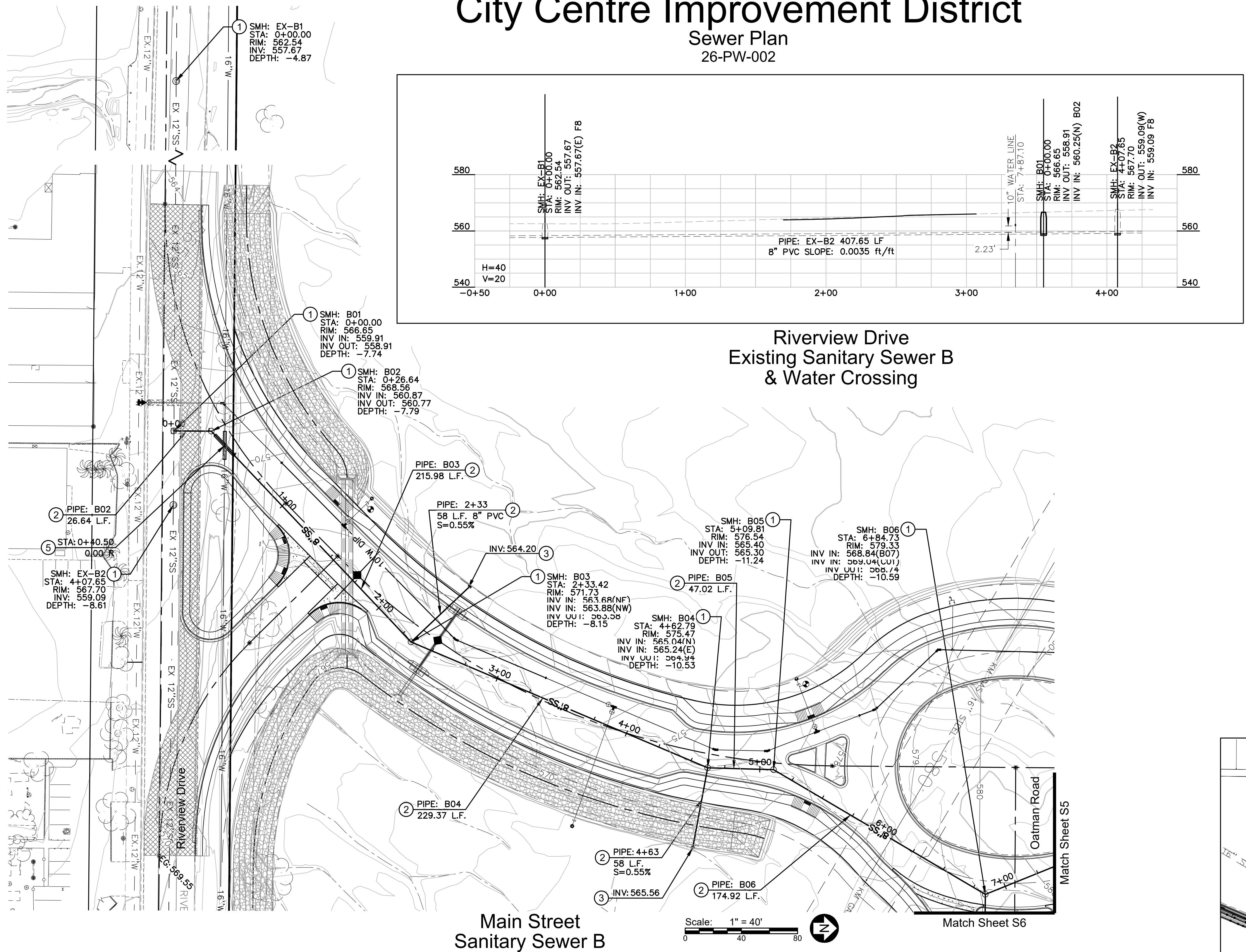
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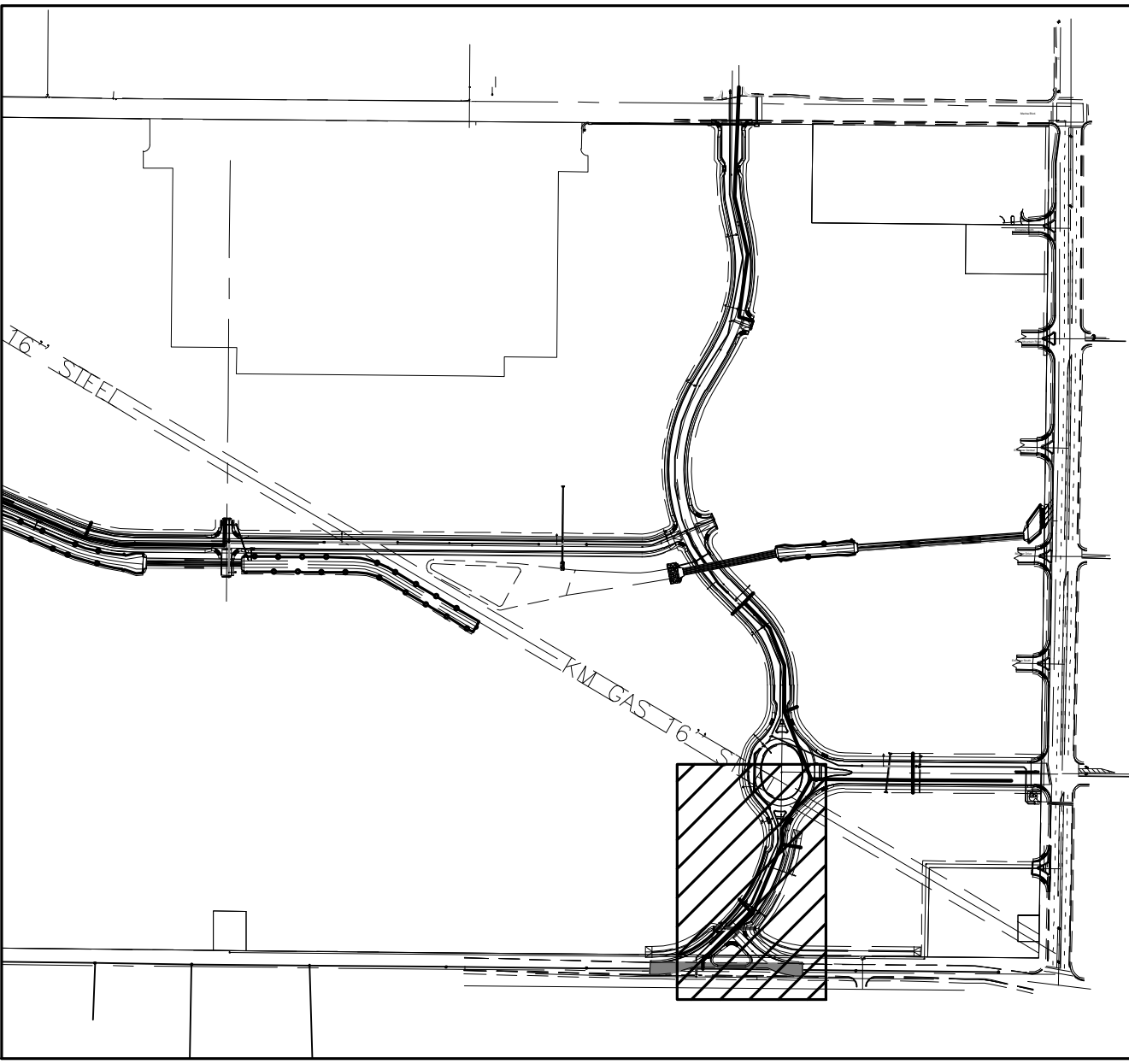


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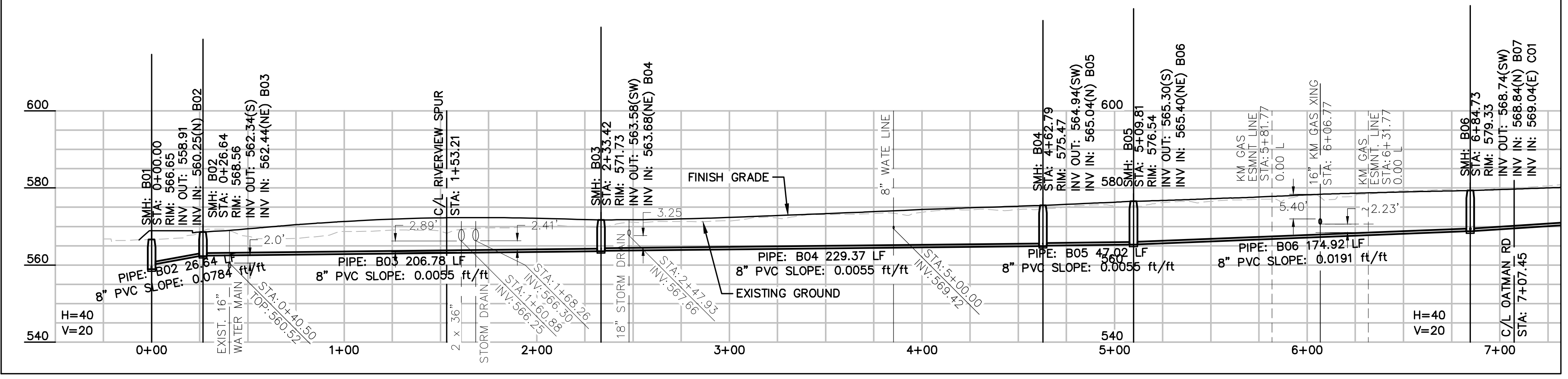
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Legend

- 6"W WATER LINE
- WATER VALVE
- EX. FIRE HYDRANT
- EX. UTILITY POLE
- EX. WATER METER
- EX. WATER LINE
- CHAIN LINK FENCE
- LINEAR FEET
- SQUARE FEET
- FEET
- INVERT
- EXISTING
- APN
- P.U.E.
- D.E.
- R.O.W.
- SMH
- CO
- ASSESSOR'S PARCEL NUMBER
- PUBLIC UTILITY EASEMENT
- DRAINAGE EASEMENT
- RIGHT-OF-WAY
- SEWER MANHOLE
- SEWER CLEANOUT



Key Map
1"=500'



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DESIGNED	DRAWN	APPROVED	DATE	BY	DATE
WFO	DNA		01-29-26		
SHEET S4 OF 9					
PROJ.# 8242.1 BOX _____ TUBE _____					

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1 800 782-5348
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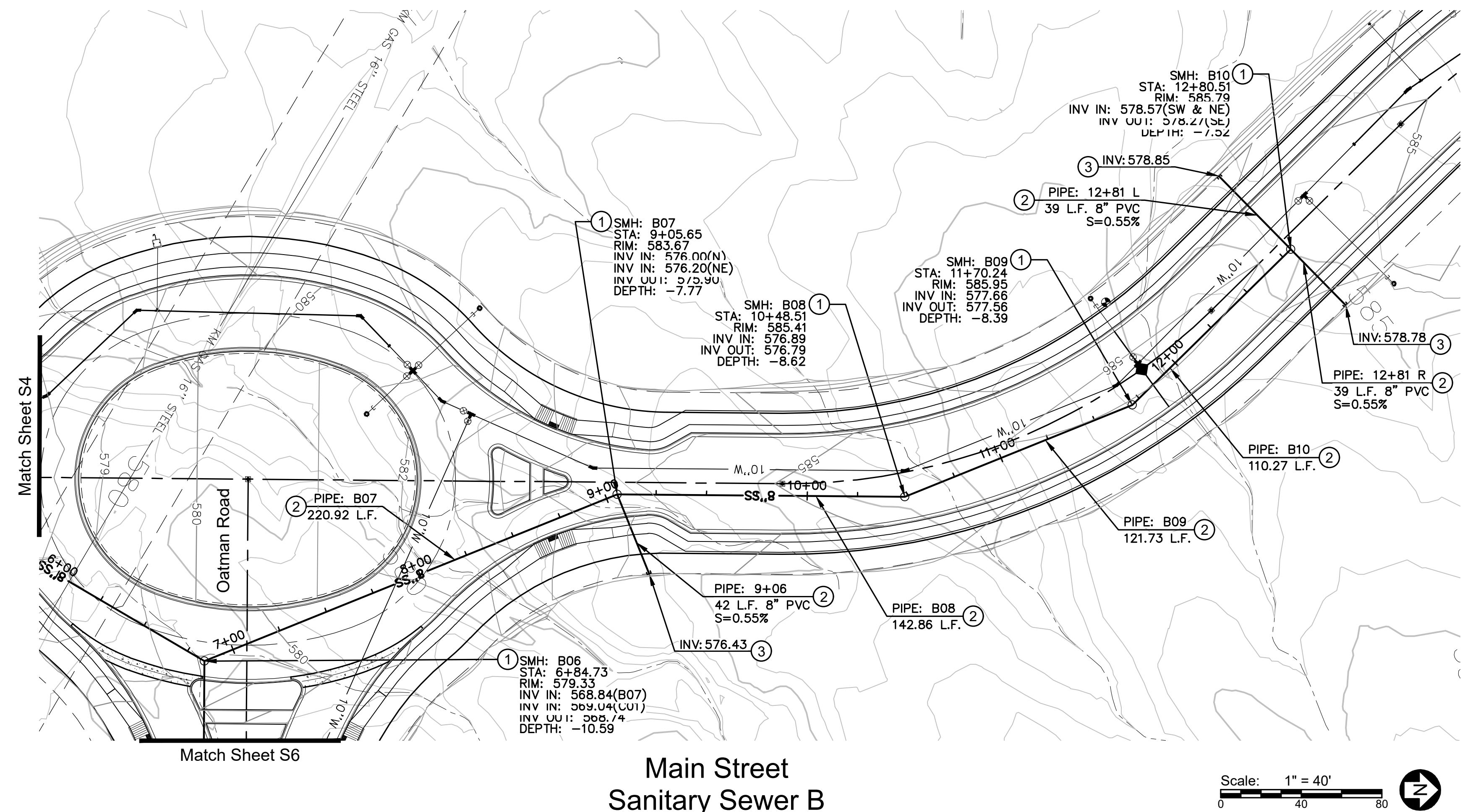
EXPIRES 03-31-29

Arizona Professional Engineer
No. 11289
ANDERSON, JR.
08-04-26
Arizona, U.S.A.

City Center Master Utility & Drainage (8242) mSEW.dwg LAYOUT: SEW (04) 08-04-26 2:56 P.M.

City Centre Improvement District

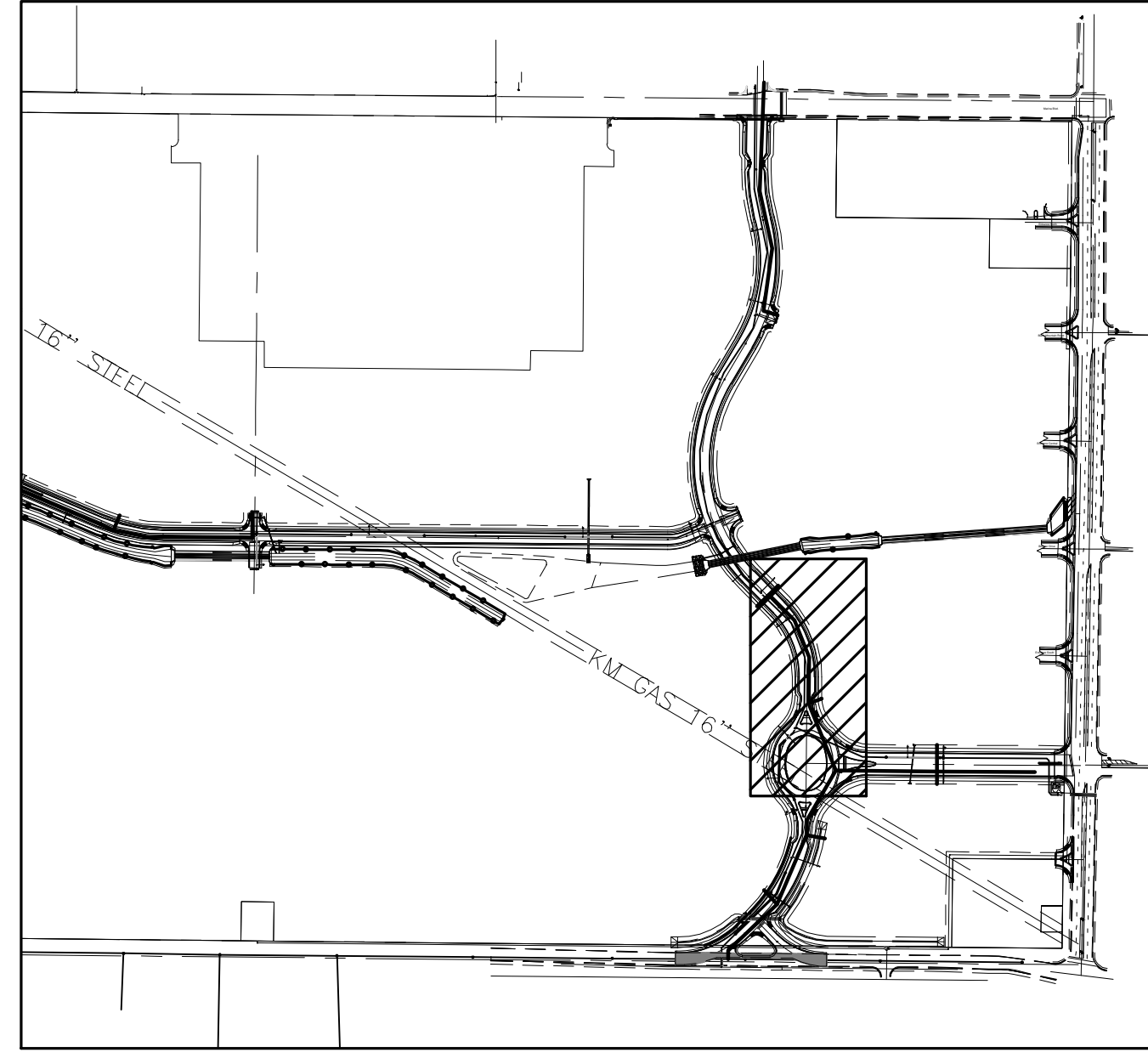
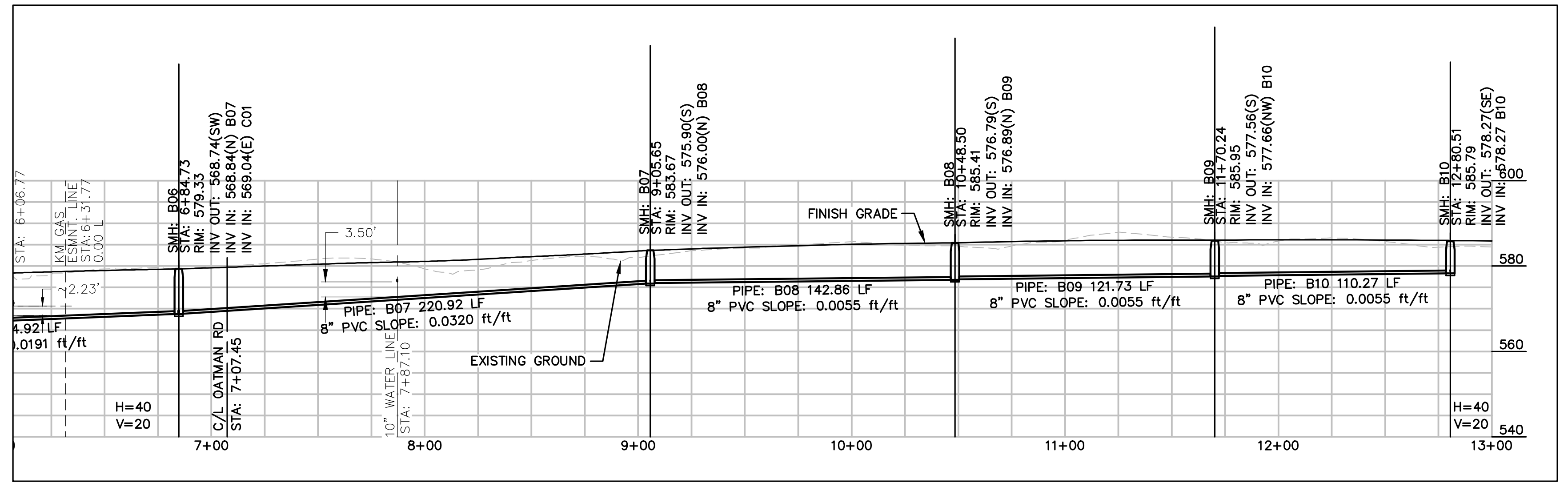
Sewer Plan
26-PW-002



- Sewer Construction Notes**
1. INSTALL 48" DIA. SEWER MANHOLE WITH 24" FRAME & COVER PER M.A.G. STD. DET. 420-1.
 2. INSTALL 8" DIAMETER PVC SEWER LINE
 3. INSTALL CAP.
 4. INSTALL 8" STUB OUT AND PLUG PER M.A.G. STD. DET. 427
 5. WATER AND SANITARY SEWER SEPARATION AND PROTECTION PER M.A.G. STD. DET. 404.
 6. SAWCUT, REMOVE AND REPLACE EXISTING ASPHALT PAVEMENT AS NECESSARY FOR INSTALLATION OF ELECTRICAL, SEWER & WATER, 50 FEET TO EITHER SIDE OF MIDWAY POINT OF CONSTRUCTION.
 7. INSTALL 60" ID POLYMER CONCRETE SEWER MANHOLE PER M.A.G. STD. DET. 419.

Legend

6"W	WATER LINE
⊗	WATER VALVE
⊙	EX. FIRE HYDRANT
⊕	EX. UTILITY POLE
⊗	EX. WATER METER
EX. 6"W	EX. WATER LINE
—	CHAIN LINK FENCE
L.F.	LINEAR FEET
S.F.	SQUARE FEET
FT.	FEET
INV.	INVERT
EX.	EXISTING
APN	ASSESSOR'S PARCEL NUMBER
P.U.E.	PUBLIC UTILITY EASEMENT
D.E.	DRAINAGE EASEMENT
R.O.W.	RIGHT-OF-WAY
SMH	SEWER MANHOLE
CO	SEWER CLEANOUT



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DESIGNED	DRAWN	APPROVED	DATE
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Sewer Plan

EXPIRES 03-31-29

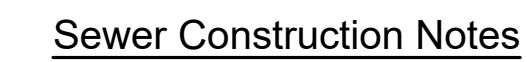
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SHEET 5 OF 9

PROJ.# 8242.1
BOX TUBE

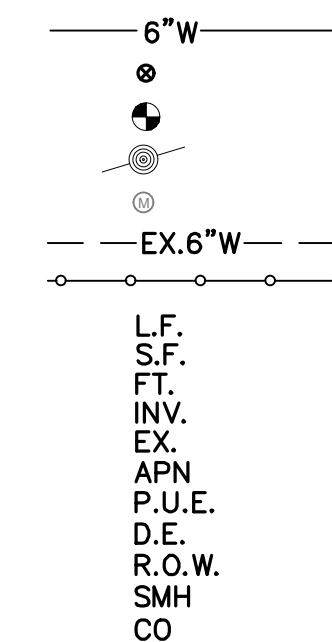
Sewer Plan

26-PW-002

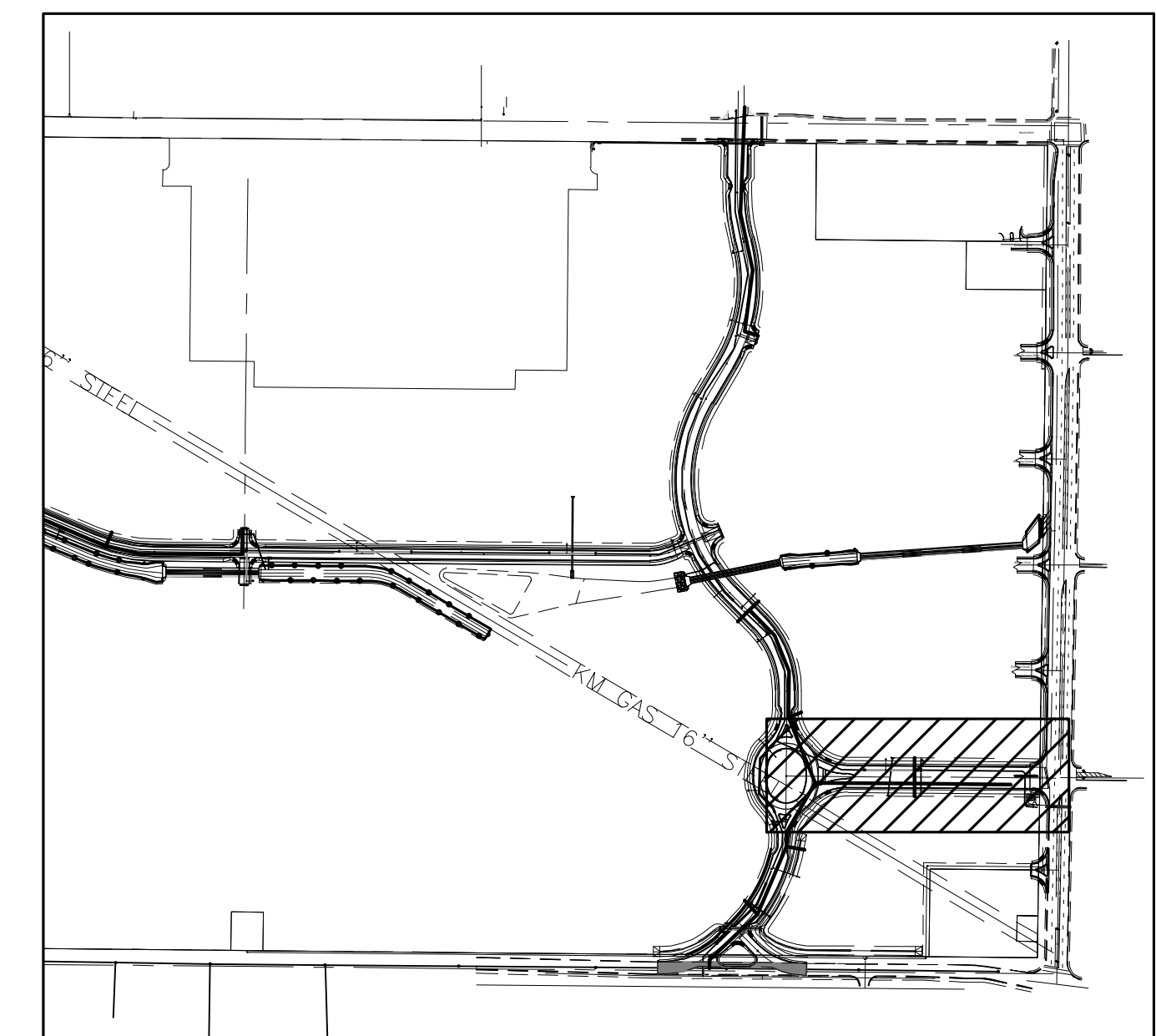
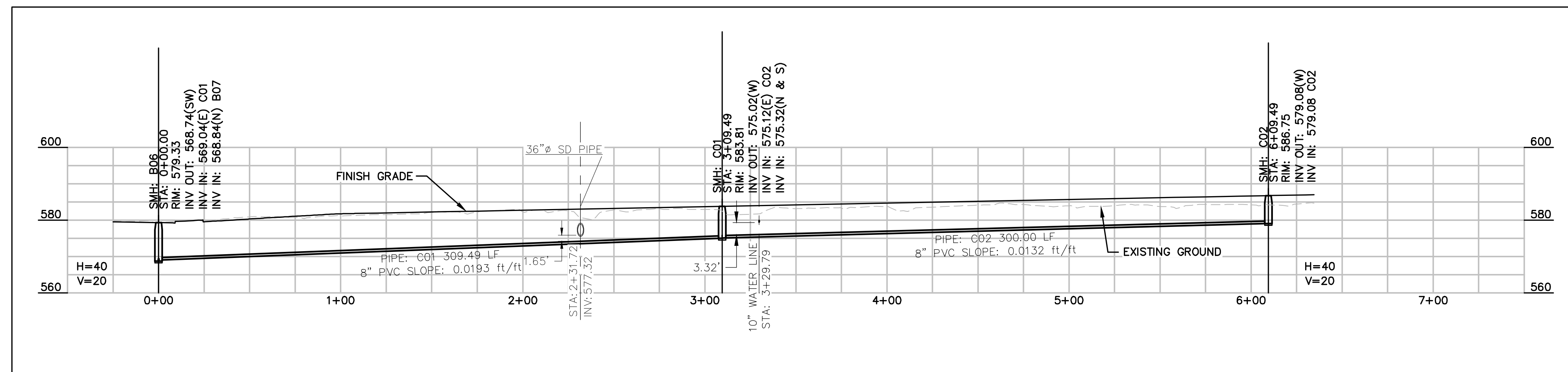


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- ④ INSTALL 4" STUB OUT AND PLUG PER M.A.G. STD. DET. 427
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- ⑦ INSTALL 60" ID POLYMER CONCRETE SEWER MANHOLE PER M.A.G. STD. DET. 419.

Legend



WATER LINE
WATER VALVE
EX. FIRE HYDRANT
EX. UTILITY POLE
EX. WATER METER
EX. WATER LINE
CHAIN LINK FENCE
LINEAR FEET
SQUARE FEET
FEET
INVERT
EXISTING
ASSESSOR'S PARCEL NUMBER
PUBLIC UTILITY EASEMENT
DRAINAGE EASEMENT
RIGHT-OF-WAY
SEWER MANHOLE
SEWER CLEANOUT

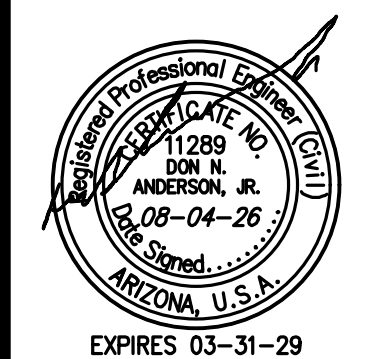


Key Map



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DESIGNED	REVISIONS	DATE	BY
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DRAWN			
APPROVED			
DATE			



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 Construction Management - Computer Services

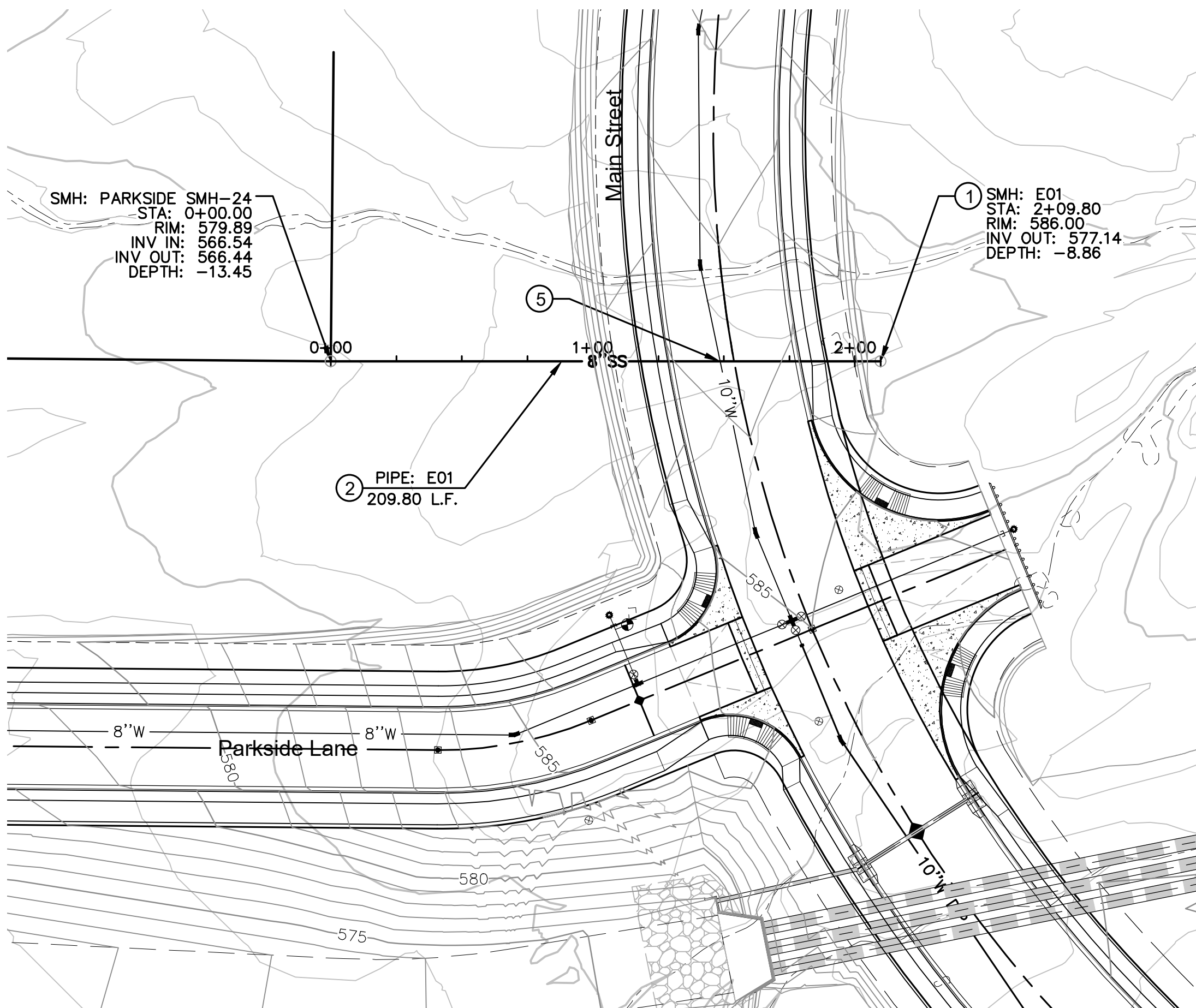
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 Phoenix, Arizona 85014
 (602) 273-1850
 Bullhead City, AZ (928) 704-4677

Sewer Plan

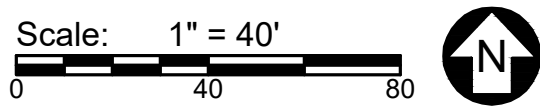
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City Centre Improvement District

Sewer Plan
26-PW-002



Parkside Phase 3 Connection
Sanitary Sewer E

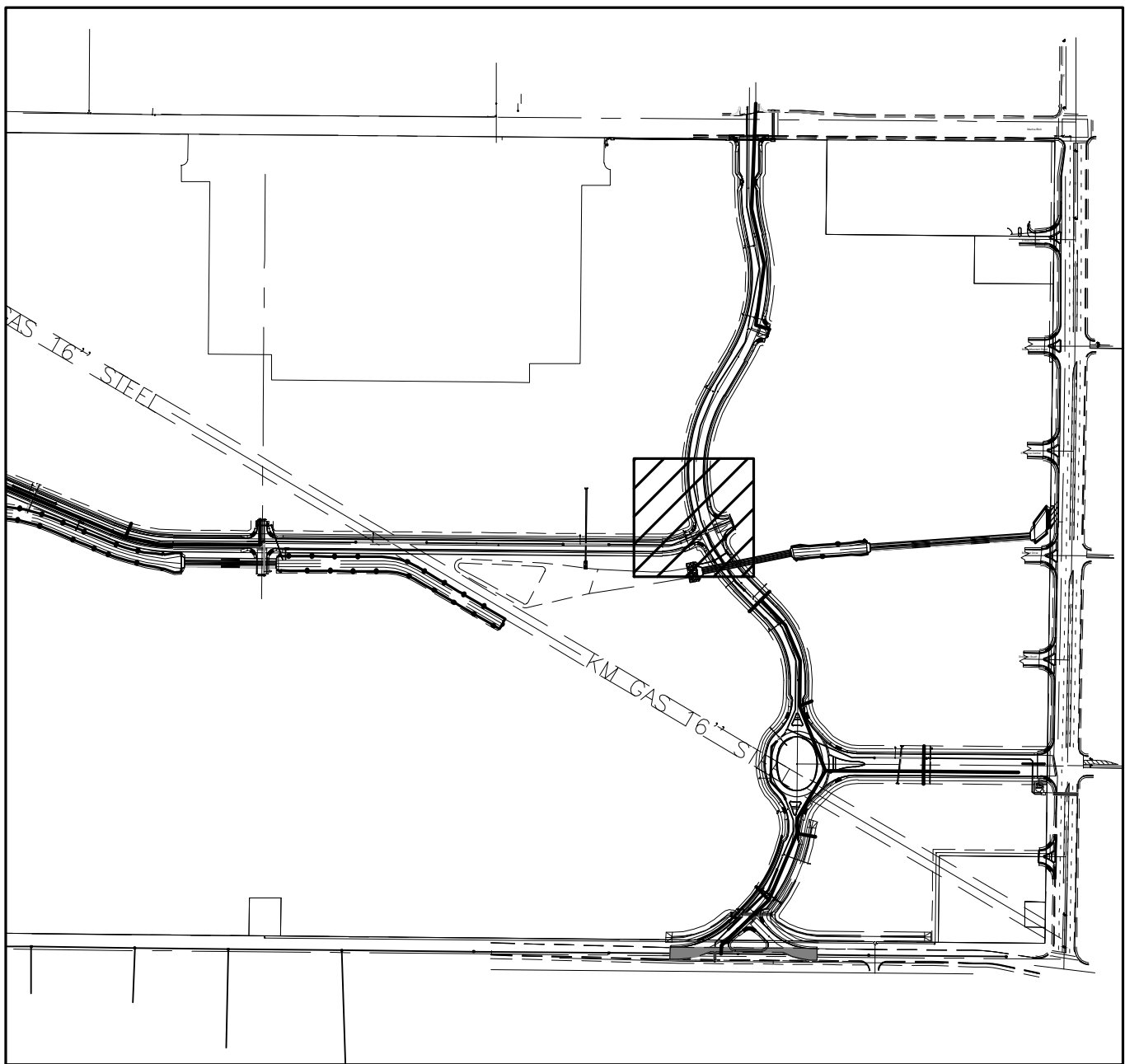
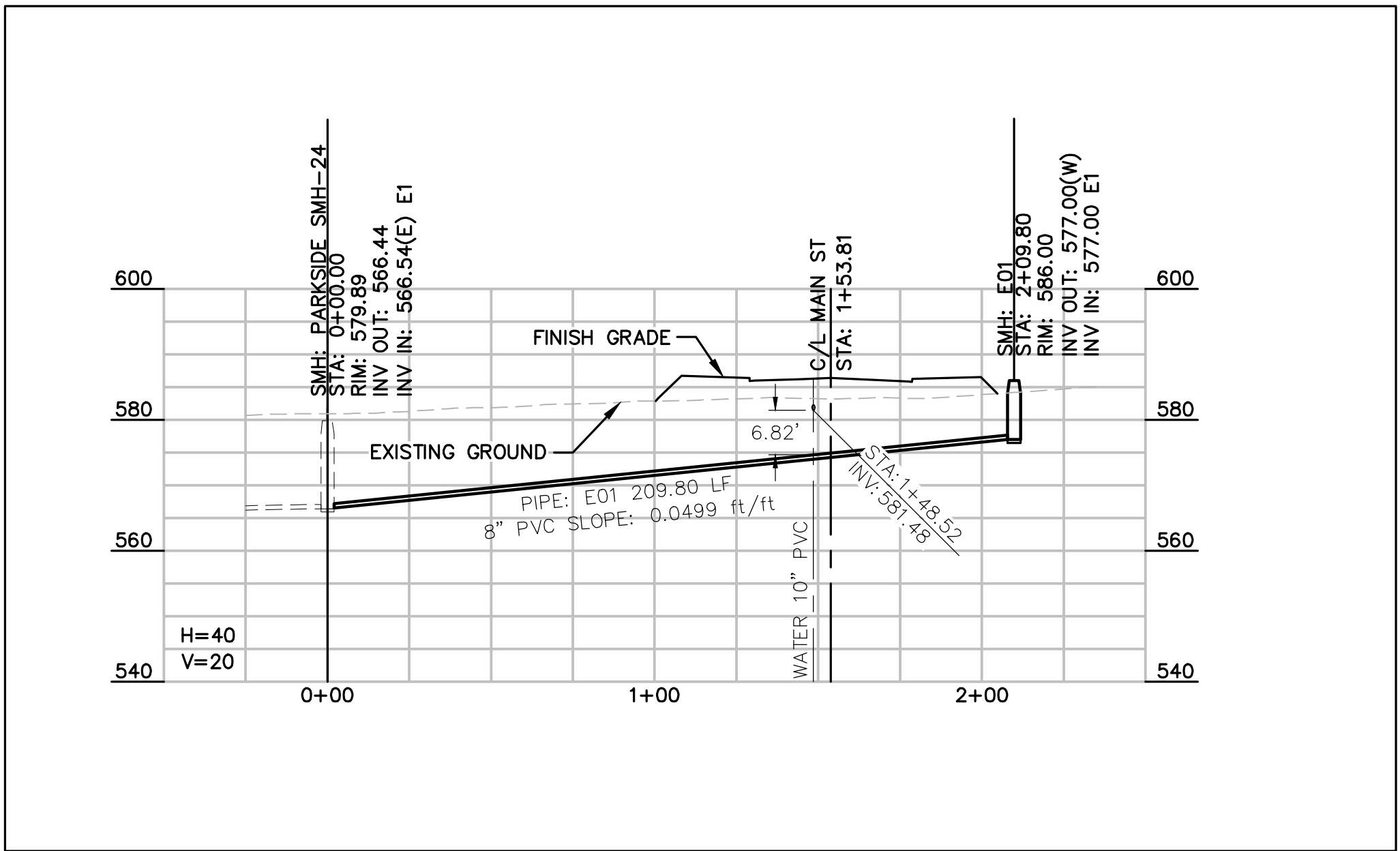


Sewer Construction Notes

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7. INSTALL 60" ID POLYMER CONCRETE SEWER MANHOLE PER M.A.G. STD. DET. 419.

Legend

6"W	WATER LINE
Water Valve Symbol	WATER VALVE
Fire Hydrant Symbol	EX. FIRE HYDRANT
Utility Pole Symbol	EX. UTILITY POLE
Water Meter Symbol	EX. WATER METER
EX. 6"W	EX. WATER LINE
Chain Link Fence Symbol	CHAIN LINK FENCE
L.F.	LINEAR FEET
S.F.	SQUARE FEET
FT.	FEET
INV.	INVERT
EX.	EXISTING
APN	ASSESSOR'S PARCEL NUMBER
P.U.E.	PUBLIC UTILITY EASEMENT
D.E.	DRAINAGE EASEMENT
R.O.W.	RIGHT-OF-WAY
SMH	SEWER MANHOLE
CO	SEWER CLEANOUT



Key Map



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Sewer Plan			
DESIGNED	DRAWN	APPROVED	DATE
	WFO	DNA	01-29-26
REVISIONS			
BY			
DATE			

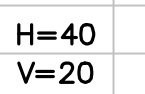
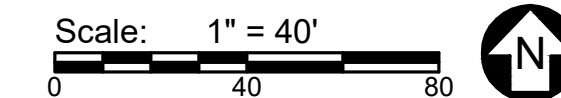


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S7 OF 9
PROJ.# 8242.1
BOX TUBE

Sewer Plan

26-PW-002



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6" W

EX. 6" W

L.F.
S.F.
FT.
INV.
EX.
APN
P.U.E.
D.E.
R.O.W.
SMH
CO

WATER LINE
WATER VALVE
EX. FIRE HYDRANT
EX. UTILITY POLE
EX. WATER METER
EX. WATER LINE
CHAIN LINK FENCE
LINEAR FEET
SQUARE FEET
FEET
INVERT
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ASSESSOR'S PARCEL NUMBER
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DRAINAGE EASEMENT
RIGHT-OF-WAY
SEWER MANHOLE
SEWER CLEANOUT



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Construction Management - Computer Services

Sewer Plan

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03-08-04-26
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DATE

Bill X: 8242, City Center Master Utility & Drainage\82421.mxd SEW.dwg | AVOUT: SEW (08) 08-04-26 3:04 P.M.

City Centre Improvement District

Sewer Plan
26-PW-002



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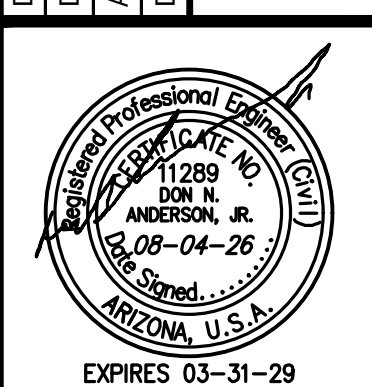
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SHEET
S9 OF 9

PROJ.# 8242.1
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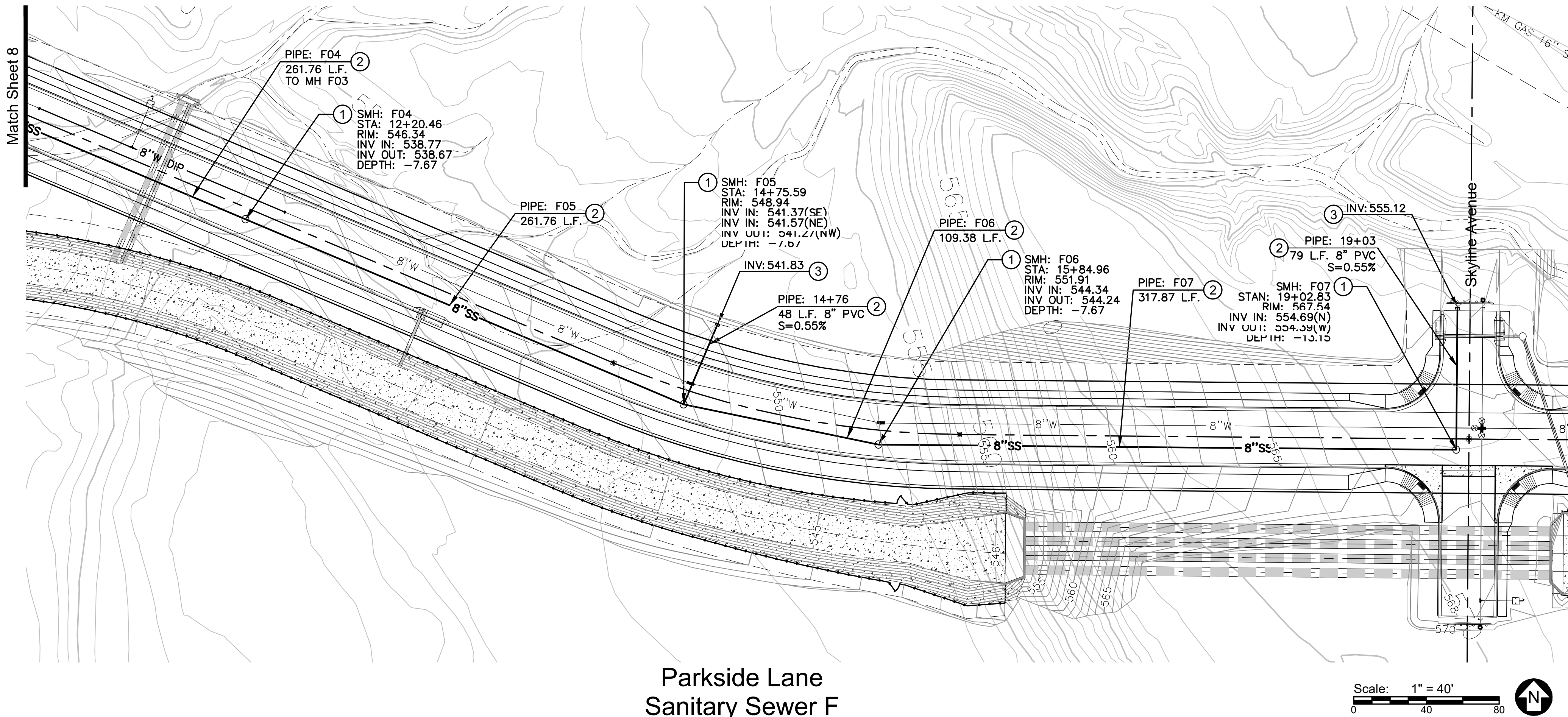
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Sewer Construction Notes

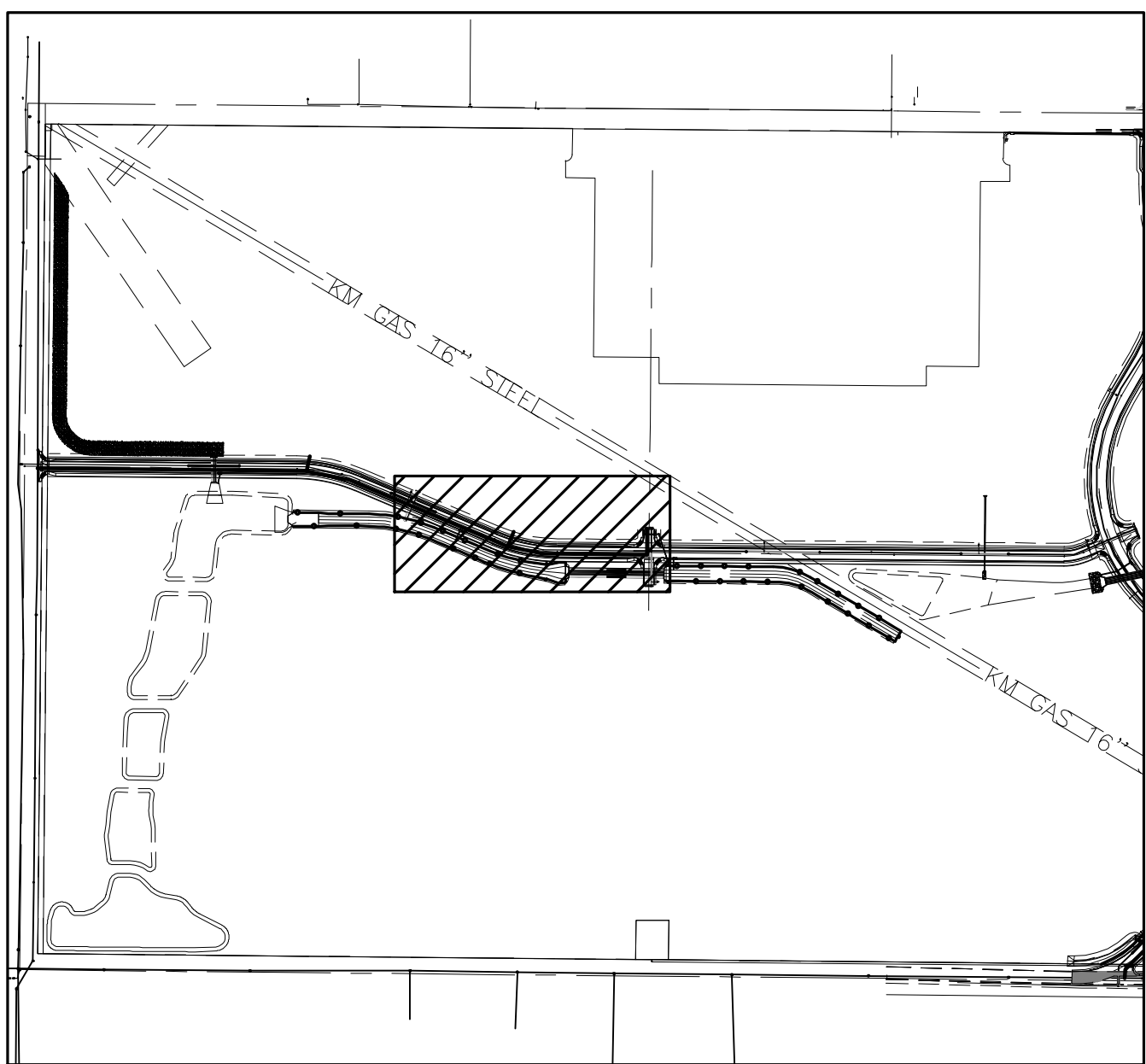
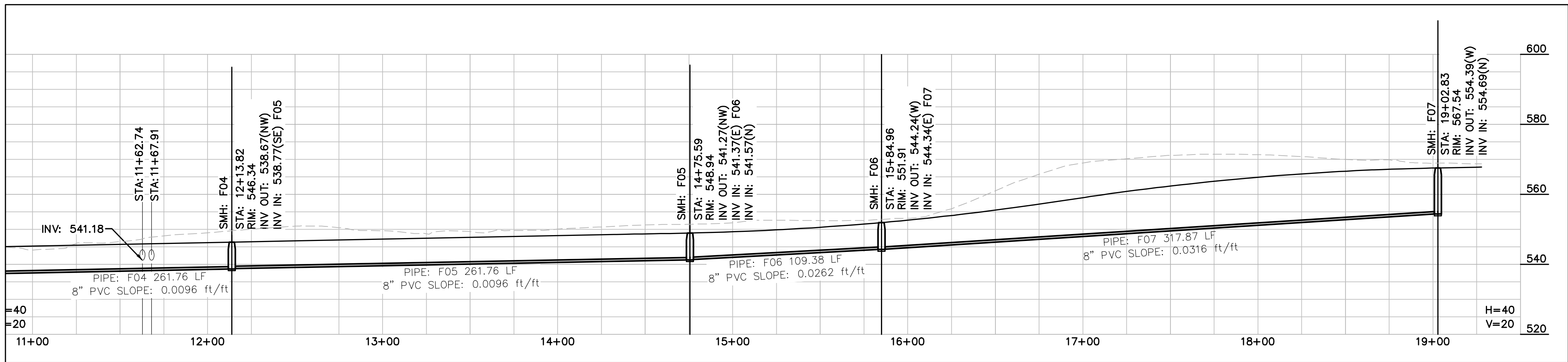
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Legend

6"W	WATER LINE
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EX. UTILITY POLE	EX. UTILITY POLE
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CO	SEWER CLEANOUT



Parkside Lane
Sanitary Sewer F



Key Map

1"=500'

