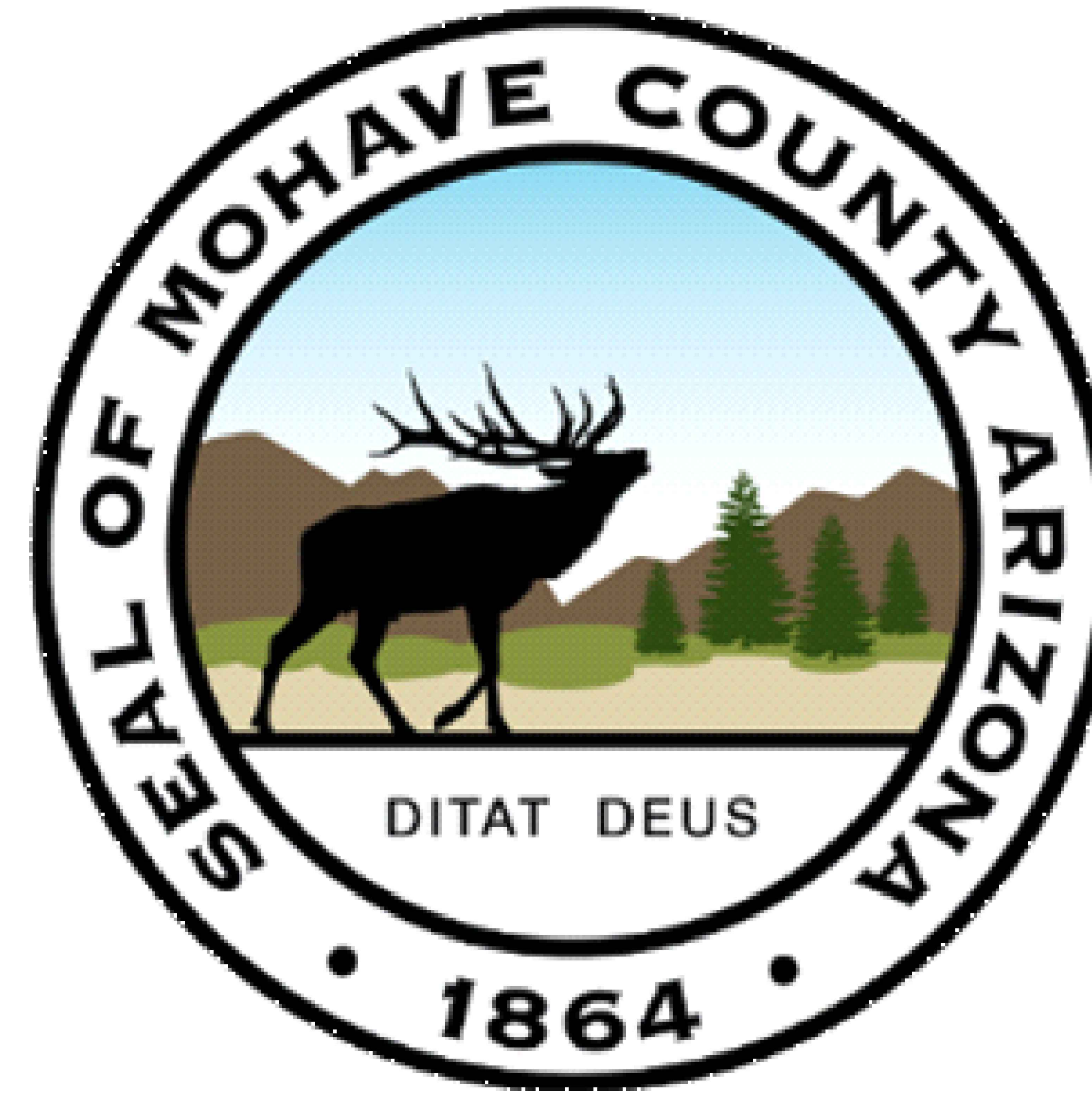


23B07 EXHIBIT 2: APPROVED PLANS

MOHAVE COUNTY
 NEW KINGMAN-BUTLER SEWER
 COLLEGE DRIVE TO DEVLIN AVENUE
 N SIERRA ROAD TO N BANK STREET
 CONTRACT NO. 21PS12

SPECIFICATIONS

- ENGINEERING DEPARTMENT'S CIVIL/SITE INSPECTION STAFF SHALL BE NOTIFIED 48 HOURS BEFORE ANY CONSTRUCTION BEGINS TELEPHONE (928) 753-8195.
- ANY SEWER MAIN 15" IN SIZE OR 12" IN DEPTH, OR GREATER, REQUIRES 5' MANHOLES.
- ALL CONSTRUCTION TO CONFORM TO MAG SPECIFICATIONS AND DETAILS AND CITY OF KINGMAN SUPPLEMENT TO MAG SPECIFICATION AND DETAILS, UNLESS MODIFIED ON THE PLANS.
- COMPACTION SHALL COMPLY WITH MAG SECTION 601 & CITY OF KINGMAN SUPPLEMENTS.
- NEW SEWER LINES ARE TO BE BUILT IN STANDARD UTILITY LOCATIONS PER CITY OF KINGMAN DETAIL 120.
- THIS SET OF PLANS HAS BEEN INITIALLY REVIEWED BY THE CITY OF KINGMAN. 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 KINGMAN'S FINAL DETERMINATION AS TO THE ACCEPTABILITY OF THE PLANS, NOR SHALL IT PREVENT THE CITY OF KINGMAN 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.
- ALL LINES MUST BE TESTED FOR UNIFORM SLOPE BY LAMP LIGHTING OR REMOTE CAMERA BEFORE THEY ARE ACCEPTED AS COMPLETE. TESTING METHOD MUST BE APPROVED IN ADVANCE BY THE ENGINEERING DEPARTMENT. THE RESULTS SHALL BE RECORDED AND SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.
- DEFLECTION TESTING FOR THE ENTIRE LENGTH OF PVC SEWER LINES SHALL BE PERFORMED IN ACCORDANCE WITH MAG STANDARD SPECIFICATION 615.11(C) AND AAC R18-9-E301(D)(2)(i).
- ALL MANHOLES SHALL BE TESTED USING ONE OF THE FOLLOWING PROCEDURES:
 A. WATER TESTING IN ACCORDANCE WITH AAC R-18-9-E301(D)(3)(E), THE ENTIRE MANHOLE SHALL BE FILLED WITH WATER AND EXFILTRATION SHALL BE LIMITED TO 0.0034 OF THE TOTAL MANHOLE VOLUME IN ONE HOUR.
 B. VACUUM TESTING IN ACCORDANCE WITH AAC R-18-9-E301(D)(3)(E), MANHOLES SHALL BE TESTED IN ACCORDANCE WITH ASTM C1244-02, "STANDARD TEST METHOD FOR CONCRETE SEWER MANHOLES BY NEGATIVE AIR PRESSURE (VACUUM) TEST PRIOR TO BACKFILL".
- THE CONTRACTOR SHALL PERFORM MANHOLE TESTING AFTER INSTALLATION OF THE MANHOLE CONE TO VERIFY WATER TIGHTNESS OF THE MANHOLE FROM THE TOP CONE DOWN. UPON SATISFACTORY TEST RESULTS, THE CONTRACTOR SHALL INSTALL THE MANHOLE RINGS AND SPACERS, COMPLETE WITH THE JOINTS AND SEAL THE MANHOLE TO A WATER TIGHT CONDITION.
- THE ENTIRE SEWER LINE SHALL BE TESTED FOR TIGHTNESS FOR EACH PIPE MATERIAL IN ACCORDANCE WITH AAC R18-9-E301(D)(2)(J).
- ALL WORK MUST COMPLY WITH REQUIREMENTS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- NEW MANHOLES ARE TO BE BUILT WITHOUT STEPS.
- A SIX (6) FOOT MINIMUM HORIZONTAL SEPARATION FROM ANY UNDERGROUND UTILITY SHALL BE PROVIDED FOR SEWER MAINS, AND WATER MAINS. THE MINIMUM HORIZONTAL SEPARATION IS MEASURED FROM OUTSIDE OF SEWER MAIN, OR WATER MAIN TO OUTSIDE OF UNDERGROUND UTILITY.
- 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.
- A TWO (2) FOOT MINIMUM VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN ANY WATER MAIN OR STORM DRAIN CROSSING A SEWER MAIN. THE MINIMUM VERTICAL SEPARATION IS MEASURED FROM OUTSIDE OF SEWER MAIN TO OUTSIDE OF WATER MAIN OR STORM DRAIN MAIN. SEE CITY OF KINGMAN STANDARD DETAIL 404 FOR ADDITIONAL INFORMATION AND/OR PROVISIONS FOR CLEARANCE.
- 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.
- WATER/SEWER SEPARATION SHALL CONFORM TO MAG SPECIFICATION 610, MAG STANDARD DETAILS 404, 1-3 AND SHALL MEET THE REQUIREMENTS OF THE LATEST REVISIONS OF AAC R18-5-502.
- ANY AND ALL MORE STRINGENT REQUIREMENTS REQUIRED BY FEDERAL, STATE, COUNTY, OR LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
- ANY SEWER LINES THAT ARE INSTALLED WITH LESS THAN .004 FT/FT SLOPE MUST BE INSTALLED USING A LASER.
- WHEN DIP SEWER PIPE IS USED, AN EPOXY LINING IS REQUIRED AS APPROVED BY THE CITY ENGINEER.
- CONCRETE OR ASPHALT DAMAGED DURING THE COURSE OF CONSTRUCTION SHALL BE REMOVED AND REPLACED IN KIND AND THICKNESS PRIOR TO FINAL INSPECTION.
- PLAN APPROVAL IS VALID FOR ONE YEAR.



2022

INDEX OF SHEETS

1	COVER SHEET
2-3	GENERAL NOTES, LEGEND & ABBREVIATIONS
4	SHEET INDEX
5-7	HORIZONTAL CONTROL
8-25	SEWER LINE PLANS
26-28	DETAILS

AS-BUILT CERTIFICATION

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

REGISTERED ENGINEER / LAND SURVEYOR DATE

REGISTRATION NUMBER

UTILITY CONTACTS

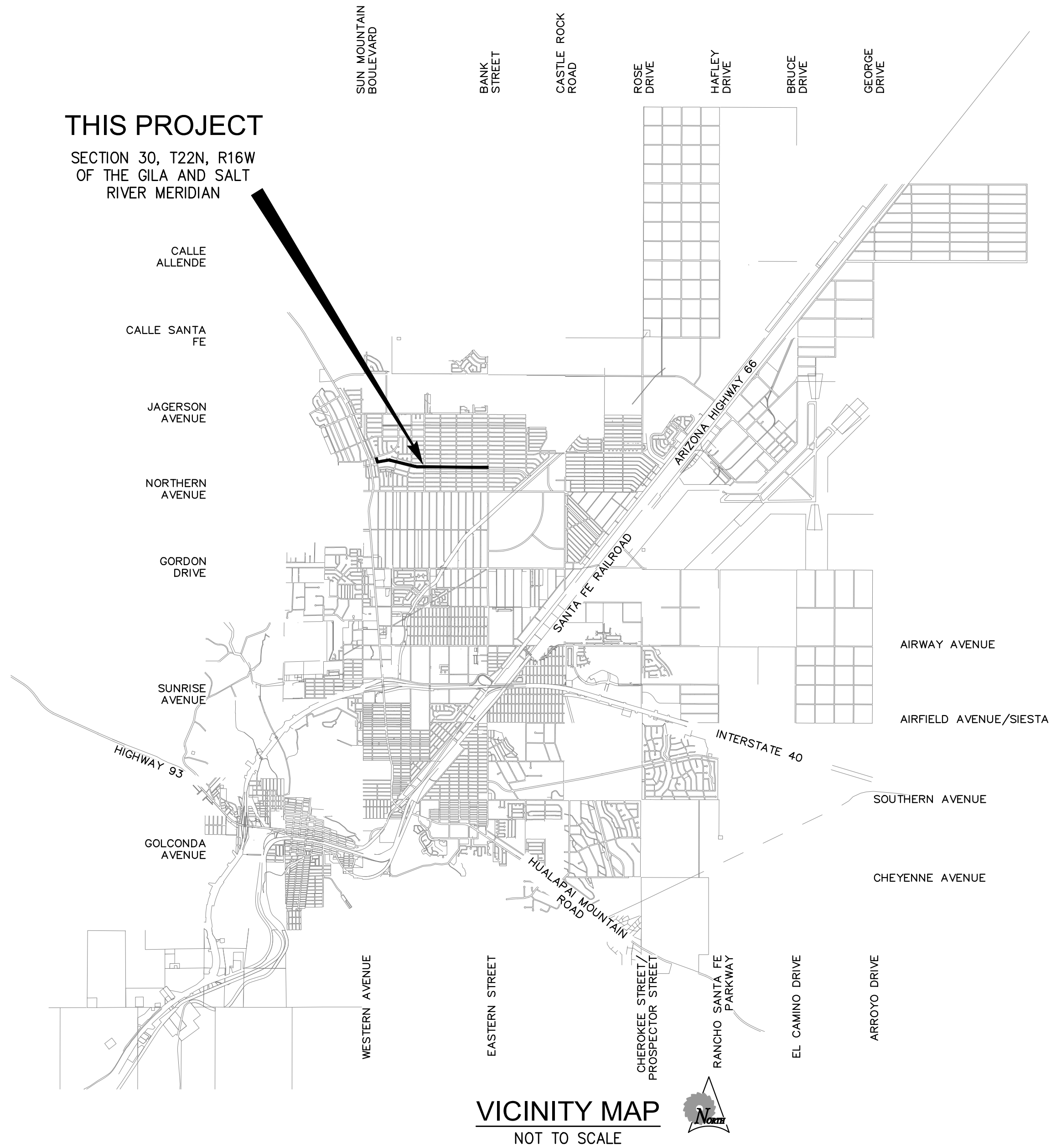
SERVICE	UTILITY COMPANY	NAME OF COMPANY REPRESENTATIVE	TELEPHONE NUMBER/ EMAIL
TELCOM/FIBER	FRONTIER COMMUNICATIONS	MARC LOREQUE	(928) 727-6077
CABLE/FIBER	SUDDENLINK COMMUNICATION	SANFORD YAZZIE	(928) 606-2464
ELECTRIC	UNISOURCE ENERGY SERVICES	PAUL MARTIN	(928) 681-8924
GAS	UNISOURCE ENERGY SERVICES	REBECCA SCHUSTER	(928) 681-6506
WATER	CITY OF KINGMAN	CARLOS RODRIGUEZ	(928) 716-5545

APPROVED FOR: **Sewer Only**
 THE CITY OF KINGMAN

CITY ENGINEER (OR DESIGNEE)

9/8/2022

DATE



VICINITY MAP
 NOT TO SCALE

OWNER:
 MOHAVE COUNTY DEVELOPMENT SERVICES
 3250 E KINO AVE
 KINGMAN, AZ 86409
 TELEPHONE: (928) 757-0903
 CONTACT: JO-ANNE BARCELLANO

ENGINEER:
 SUNRISE ENGINEERING, INC
 2045 S VINEYARD, SUITE 101
 MESA, AZ 85210
 TELEPHONE: (480) 768-8600
 CONTACT: JUSTIN VAN DE GRAAFF, PE

BENCHMARK:

THE BENCHMARK IS A 2" CITY OF KINGMAN BRASS DISC LOCATED IN THE TOP OF CURB ON THE SOUTH SIDE OF POTTER AVENUE, APPROXIMATELY 30' FROM THE INTERSECTION OF POTTER AVENUE AND STOCKHILL ROAD, HAVING A NGVD 1929 ELEVATION OF 3455.65 U.S. SURVEY FOOT.



CONTRACT NO. 21PS12

REV. NO.	COMMENT	DATE

JUSTIN VAN DE GRAAFF
 09/30/2022
 ARIZONA, U.S.A.
 Expires 9/30/2022

SUNRISE ENGINEERING
 2045 SOUTH VINEYARD, SUITE 101
 MESA, ARIZONA 85210
 TEL 480.768.8600
 www.sunrise-eng.com

MOHAVE COUNTY
NEW KINGMAN-BUTLER SEWER

COVER SHEET

SET NO. 08433	DESIGNED IDS	DRAWN IDS	CHECKED JV	COV	1 of 28
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SEI GRAVITY SEWER NOTES

1. THE CONTRACTOR IS TO FIELD VERIFY THE LOCATIONS, THE INVERT ELEVATIONS AND THE MATERIALS OF ALL EXISTING SEWER PIPES OR MANHOLES AT THE POINTS OF TIE-IN PRIOR TO COMMENCING ANY NEW SEWER CONSTRUCTION. SHOULD ANY LOCATION, ELEVATION OR MATERIAL DIFFER FROM THAT SHOWN ON THESE PLANS, THE CONTRACTOR IS TO CONTACT THE ENGINEER FOR DIRECTION.
2. ALL 4 INCH THROUGH 15 INCH PVC (POLYVINYL CHLORIDE) PLASTIC SEWER PIPE AND FITTINGS SHALL BE IN CONFORMANCE WITH MAG STANDARD SPECIFICATION 745 AND SHALL BE INSTALLED PER THESE PLANS, MAG STANDARD SPECIFICATIONS 601, 602 & 615 AND THE PIPE MANUFACTURER'S RECOMMENDATIONS.
3. ALL 18 INCH THROUGH 120 INCH HDPE (HIGH DENSITY POLYETHYLENE) PLASTIC SEWER PIPE AND FITTINGS SHALL BE IN CONFORMANCE WITH MAG STANDARD SPECIFICATION 738 AND SHALL BE INSTALLED PER THESE PLANS, MAG STANDARD SPECIFICATIONS 601, 602, 603 & 615 AND THE PIPE MANUFACTURER'S RECOMMENDATIONS.
4. ALL 4 INCH THROUGH 24 INCH VCP (VITRIFIED CLAY PIPE) SEWER PIPE AND FITTINGS SHALL BE IN CONFORMANCE WITH MAG STANDARD SPECIFICATION 743 AND SHALL BE INSTALLED PER THESE PLANS, MAG STANDARD SPECIFICATIONS 601, 602 & 615 AND THE PIPE MANUFACTURER'S RECOMMENDATIONS.
5. PIPES AND FITTINGS SHALL BE INSTALLED PER THESE PLANS, MAG STANDARD SPECIFICATIONS 601, 602 & 615 AND THE PIPE MANUFACTURER'S RECOMMENDATIONS.
6. ALL MANHOLE BASES, RISERS, GRADE RINGS AND TOPS SHALL BE PRECAST REINFORCED CONCRETE IN CONFORMANCE WITH ASTM C478 (LATEST REVISION), THESE PLANS, AND MAG STANDARD DETAIL 420. MANHOLE BASES AND BENCHES MAY BE CAST IN PLACE. APPROVED WATERSTOPS ARE TO BE PROVIDED AT ALL JOINTS. THE INTERIOR CONCRETE RISER WALLS AND TOPS (100%) ARE TO BE COATED WITH AN APPROVED WATERPROOF CORROSION RESISTANT SEALANT. MANHOLE ACCESS FRAMES AND COVERS SHALL BE CAST IRON IN CONFORMANCE WITH MAG STANDARD SPECIFICATION 787 AND MAG STANDARD DETAILS 423 AND 424. LETTERING ON COVERS IS TO READ "SANITARY SEWER". MANHOLE INSTALLATIONS SHALL BE IN ACCORDANCE WITH THESE PLANS AND MAG STANDARD SPECIFICATIONS 601 & 625.
7. THE INLET AND OUTLET PIPE CONNECTIONS TO MANHOLES SHALL BE MADE BY THE USE OF FLEXIBLE COMPRESSION JOINTS NO CLOSER THAN 12 INCHES TO, AND NOT FARTHER THAN 36 INCHES FROM, THE MANHOLE WALL. NO FLEXIBLE COMPRESSION JOINTS SHALL BE EMBEDDED IN THE MANHOLE BASE OR BENCH.
8. THE CONSTRUCTION INSPECTOR IS ANY AGENT OF THE CONTRACTING PARTY THAT HAS BEEN RETAINED TO ASSURE THAT THE WORK COVERED BY THESE PLANS IS PERFORMED CORRECTLY AND COMPLIES WITH THESE PLANS AND ANY APPLICABLE SPECIFICATIONS.
9. PER ADEQ REQUIREMENTS, A MINIMUM COVER OF 36 INCHES SHALL BE MAINTAINED OVER ALL SEWER PIPE, AS MEASURED TO FINISH GRADE, UNLESS DUCTILE IRON PIPE IS USED.
10. ALL GRAVITY SEWER PIPE SHALL BE INSTALLED STARTING AT THE LOWEST DOWNSTREAM POINT AND THEN PIPE IS TO BE LAID AS INSTALLATION PROGRESSES UPSTREAM. THE BELL END FOR EACH LENGTH OF PIPE, SHALL BE AT THE UPSTREAM END AND THE SPIGOT END SHALL BE AT THE DOWNSTREAM END.
11. ANY LOT, WHICH HAS A FINISH FLOOR ELEVATION LOWER THAN THE UPSTREAM MANHOLE/CLEAN OUT RIM ELEVATION, AS DETERMINED FROM THE SEWER SERVICE CONNECTION POINT, IS TO HAVE AN APPROVED BACKFLOW PREVENTER INSTALLED ON THAT LOT'S SEWER SERVICE LINE AT THE POINT OF TERMINATION.
12. SEWER PIPE JOINT DEFLECTION SHALL NOT EXCEED PIPE MANUFACTURER'S RECOMMENDATION. PIPES SHALL NOT BE DEFLECTED AT JOINTS UNLESS CALLED FOR IN THESE PLANS.
13. A THOROUGH ATTEMPT HAS BEEN MADE TO SHOW THE LOCATIONS OF ALL UNDERGROUND OBSTRUCTIONS AND UTILITY LINES IN THE WORK AREA. HOWEVER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO OBSTRUCTIONS AND UTILITY LINES ENCOUNTERED DURING CONSTRUCTION AND SHALL DETERMINE THE EXACT LOCATION OF UTILITIES IN ADVANCE OF TRENCHING. THE ENGINEER WILL NOT GUARANTEE ANY ELEVATIONS AT LOCATIONS OF THE EXISTING UNDERGROUND UTILITIES SHOWN ON THESE PLANS.

SEI GENERAL NOTES

1. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING PERMITS, RENEWAL OF LAPSED PERMITS, AND OBTAINING ANY NEW PERMITS, INCLUDING, BUT NOT LIMITED TO A DUST CONTROL PERMIT, AND TRAFFIC CONTROL PERMITS AS REQUIRED BY THE JHA.
2. THE CONTRACTOR IS RESPONSIBLE FOR MAKING ARRANGEMENTS FOR INSPECTION AND TESTING.
3. THE CONTRACTOR SHALL NOTIFY THE JHA'S INSPECTION DEPARTMENT 48 HOURS PRIOR TO CONSTRUCTION. CONSTRUCTION CONCEALED WITHOUT THE REQUIRED INSPECTION SHALL BE SUBJECT TO EXPOSURE AT THE CONTRACTOR'S EXPENSE.
4. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. CALL BLUE STAKE AT (800) 782-5348 AT LEAST 48 HOURS BEFORE ANY CONSTRUCTION BEGINS.
5. THE CONTRACTOR SHALL FOLLOW GUIDELINES AND REGULATIONS SET FORTH BY O.S.H.A. SUNRISE ENGINEERING, INC. WILL NOT BE RESPONSIBLE FOR JOB-SITE SAFETY PROCEDURES OR CONDITIONS.
6. THE CONTRACTOR IS RESPONSIBLE FOR HIS OWN TAKEOFF QUANTITIES. QUANTITIES IF SHOWN HEREON ARE ESTIMATES ONLY AND AS SUCH ARE NOT TO BE USED FOR BID PURPOSES.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE NOTIFICATION OF THE PROPER AUTHORITY(S) IF THERE ARE OBSTRUCTIONS TO PROPOSED IMPROVEMENTS AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY EXISTING ITEM REMOVED TO FACILITATE CONSTRUCTION SHALL BE REPLACED IN THE SAME OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE.
8. THE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES FOR LOCATION OF SERVICE AND/OR RELOCATION OF UTILITIES IN CONFLICT WITH PROPOSED CONSTRUCTION. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR COORDINATING THE RELOCATION OF UTILITIES, POWER POLES, ETC.
9. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE AND SAFELY DISPOSE OF ALL REMOVAL MATERIAL AND DEBRIS DEEMED UNSALVAGEABLE BY THE ENGINEER PER THE PROVISIONS SET FORTH IN MAG SPECIFICATION 350.
10. THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL ON AND AROUND THE CONSTRUCTION SITE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
11. 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, AND TAKE WHATEVER MEASURES ARE NECESSARY TO INSURE THAT ALL ROADS ARE MAINTAINED IN A CLEAN, MUD AND DUST FREE CONDITION AT ALL TIMES. NO WORK WILL BE CONSIDERED COMPLETE UNTIL ALL PAVEMENTS HAVE BEEN SWEEP CLEAN OF DIRT AND DEBRIS.
12. PRIOR TO MOVING OR DESTROYING PROTECTED NATIVE PLANT SPECIES, THE CONTRACTOR SHALL FILE A FORMAL NOTICE OF INTENT WITH THE ARIZONA DEPARTMENT OF AGRICULTURE NATIVE PLANTS (602) 542-3292.
13. A THOROUGH ATTEMPT HAS BEEN MADE TO SHOW THE LOCATIONS OF ALL UNDERGROUND OBSTRUCTIONS AND UTILITY LINES IN THE WORK AREA. HOWEVER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO OBSTRUCTIONS AND UTILITY LINES ENCOUNTERED DURING CONSTRUCTION AND SHALL DETERMINE THE EXACT LOCATION OF UTILITIES IN ADVANCE OF TRENCHING. THE ENGINEER WILL NOT GUARANTEE ANY ELEVATIONS AT LOCATIONS OF THE EXISTING UNDERGROUND UTILITIES SHOWN ON THESE PLANS.
14. THE CONTRACTOR SHALL PROVIDE A LICENSED SURVEYOR FOR THE SURVEYING/CONSTRUCTION STAKING OF ALIGNMENT AND GRADE FOR EACH MAIN AND/OR FACILITY AS SHOWN ON THE PLANS.
15. EXACT POINT OF MATCHING, TERMINATION AND OVERLAY, IF NECESSARY, MAY BE DETERMINED IN THE FIELD BY THE ENGINEER OF RECORD OR THE RESIDENT ENGINEER OVERSEEING THE PROJECT CONSTRUCTION.
16. ANY AMBIGUITIES OR DEFICIENCIES DISCOVERED ON THESE PLANS ARE TO BE RESOLVED BY SUNRISE ENGINEERING OR ITS APPOINTED REPRESENTATIVE. ANY MODIFICATIONS TO THESE PLANS MADE BY ANYONE OTHER THAN SUNRISE ENGINEERING OR ITS APPOINTED REPRESENTATIVE IS SOLELY RESPONSIBLE FOR THOSE MODIFICATIONS.
17. THE CONTRACTOR SHALL RE-GRADE ALL EARTHEN DRIVEWAYS DISTURBED WITHIN THE RIGHT-OF-WAY DURING THE CONSTRUCTION AND RE-COMPACT THE TOP 1- FEET OF SURFACE MATERIAL TO A MINIMUM COMPACTION OF 90% MAXIMUM DRY DENSITY. THE RE-GRADED DRIVEWAYS SHALL BE OVERLAID WITH A 0.5" LAYER OF HALF-INCH MINUS ROADWAY GRAVEL AND RAKED SMOOTH.

18. THE CONTRACTOR SHALL PROVIDE ALL TRAFFIC CONTROL AND BARRICADES FOR WORK IN THE RIGHT-OF-WAY PER THE STANDARDS SET FORTH BY THE JHA.
19. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL VERIFY INVERT ELEVATION, LOCATION, SIZE AND MATERIAL OF EXISTING WATER, SEWER, STORM DRAIN OR ANY OTHER UTILITIES AS SHOWN ON THE PLANS. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN THE PLANS AND EXISTING CONDITIONS. CONNECTIONS TO EXISTING UTILITIES SHALL NOT BE MADE UNTIL DISCREPANCIES ARE RESOLVED WITH THE ENGINEER.
20. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL VERIFY EXISTING CONCRETE AND PAVEMENT ELEVATIONS AT TIE-INS/SAWCUT LINES AND VERIFY CROSS SLOPES WITH THE PROPOSED PLANS. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN THE PLANS AND EXISTING CONDITIONS. CONCRETE AND PAVEMENT ITEMS SHALL NOT BE CONSTRUCTED UNTIL DISCREPANCIES ARE RESOLVED WITH THE ENGINEER.
21. ALL ASPHALT REMOVAL AND REPLACEMENT WIDTHS FOR NEW UTILITY INSTALLATION HAS BEEN DETERMINED BY MINIMUM WIDTHS AS DEFINED BY ASPHALT REMOVAL/REPLACEMENT DETAILS OF THE JURISDICTION HAVING AUTHORITY (JHA) AND/OR AS DIRECTED BY THE JHA. ANY ASPHALT REMOVAL AND REPLACEMENT WIDTHS GREATER THAN WHAT IS DEPICTED IN THESE PLANS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, UNLESS PREVIOUSLY APPROVED BY THE JHA.



CONTRACT NO. 21PS12

REV NO.	COMMENT	DATE

K. JUSTIN VAN DE GRAAFF
Professional Engineer
License No. 60459
Exp. 01/30/22
Arizona, USA
Expires 9/30/25

SUNRISE ENGINEERING

2045 SOUTH VINEYARD, SUITE 101
MESA, ARIZONA 85210
TEL 480.768.8600
www.sunrise-eng.com

MOHAVE COUNTY

NEW KINGMAN-BUTLER SEWER

GENERAL NOTES

SEI NO. 08433	DESIGNED IDS	DRAWN IDS	CHECKED JV	GN1	2 of 28
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P:\Mohave County\08433 Kingman-New Butler Sewer\Draw\Plan Sets\NBS-GN1.dwg Aug 29, 2022 4:30pm jvandegraaff

QUANTITIES		
DESCRIPTION	QTY	UNITS
REMOVAL		
1 SAWCUT & REMOVE EXISTING ASPHALT	1017	SY
2 SAWCUT & REMOVE EXISTING CURB & GUTTER AT THE JOINTS	20	LF
3 REMOVE & SALVAGE EXISTING STREET SIGN	14	EA
4 REMOVE EXISTING DRIVEWAY CULVERT	2	EA
5 REMOVE CONCRETE DRAINAGE APRON	782	SF
HARDSCAPE		
6A ASPHALT REPLACEMENT PER MODIFIED MOHAVE COUNTY STD DETAIL 200-1 & DETAIL A, SHEET 26	476	SY
6B ASPHALT REPLACEMENT PER MODIFIED MAG STD DETAIL 200-1/200-2 & DETAIL A, SHEET 26	536	SY
7 CURB & GUTTER REPLACEMENT PER MAG STD DETAIL 220-1	20	LF
8 REPLACE SALVAGED STREET SIGN PER MOHAVE COUNTY STD DETAIL 131-2	14	EA
9 REPLACE DRIVEWAY CULVERT. MATCH EXISTING SIZE & LENGTH	2	EA
10 7' WIDE CONCRETE DRAINAGE APRON. THICKNESS & SLOPE TO MATCH EXISTING	782	SF
12 REPLACE EXISTING SURVEY MONUMENT PER MAG STD DETAIL 120, TYPE B	3	EA
GRAVITY SEWER		
13 8" PVC SDR 35 GRAVITY SEWER LINE. SLOPE & LENGTH PER PROFILE. SEWER PIPE TRENCHING & BACKFILL PER DETAIL A, SHEET 25. TRACER WIRE TO BE INSTALLED OVER ALL SECTIONS OF PIPE	2895	LF
14 12" PVC SDR 35 GRAVITY SEWER LINE. SLOPE & LENGTH PER PROFILE. SEWER PIPE TRENCHING & BACKFILL PER DETAIL A, SHEET 25. TRACER WIRE TO BE INSTALLED OVER ALL SECTIONS OF PIPE	5384	LF
15 4' DIAMETER PRE-CAST CONCRETE MANHOLE. BASE, 30" FRAME & COVER PER COK STD DETAIL 420-1 & MAG STD DETAIL 423-2. INVERT NOTED PER PROFILE	28	EA
16 CONNECT TO EXISTING SEWER STUB. CONTRACTOR TO VERIFY INVERT OF EXISTING STUB	1	EA
17 SEWER STUB PER CITY OF KINGMAN STD DETAIL 427. SIZE, LENGTH & SLOPE PER PLAN	7	EA
18 SEWER LATERAL PER COK STD DETAIL 440-3. STATION AND DEPTH OF SEWER LATERAL INVERT PER PLAN	6465	LF
19 WATER/SEWER SEPARATION/PROTECTION PER COK STD DETAIL 404-1	1	EA
20 SEWER LATERAL PER COK STD DETAIL 440-3. TAP MANHOLE AND FORM MANHOLE BASE WITH INVERT OF SERVICE LINE MATCHING INVERT OF OUTGOING PIPE. STATION AND DEPTH OF SEWER LATERAL INVERT PER PLAN	49	LF

LEGEND

	EXISTING CONCRETE		PROPOSED CONCRETE
	EXISTING PAVEMENT		PROPOSED CHIP SEAL
	EXISTING SEWER		PROPOSED SAWCUT LIMITS
	EXISTING WATER LINE		PROPOSED WATER LINE
	EXISTING UNDERGROUND ELECTRIC		PROPOSED UTILITY, TYPE & SIZE PER PLAN
	EXISTING OVERHEAD ELECTRIC		PROPOSED GATE VALVE
	EXISTING GAS LINE		PROPOSED SEWER MANHOLE
	EXISTING UNDERGROUND TELEPHONE		PROPOSED TEE
	EXISTING CABLE LINE		PROPOSED ELBOW
	EXISTING IRRIGATION LINE		BRASS CAP MONUMENT
	EXISTING UTILITY, TYPE & SIZE PER PLAN		PLAN, SECTION OR DETAIL LABEL
	EXISTING PROPERTY LINE		DRAWING TITLE/SHEET NUMBER
	EXISTING BARBED WIRE FENCE		
	EXISTING WALL		
	EXISTING FLOWLINE		
	EXISTING CONTOUR		
	EXISTING SIGN		
	EXISTING AIR RELEASE VALVE		
	EXISTING GATE VALVE		
	EXISTING FIRE HYDRANT		
	EXISTING WATER METER		
	EXISTING POWER POLE		
	EXISTING GUY WIRE		
	EXISTING LIGHT POLE		
	EXISTING CABLE MANHOLE		
	EXISTING ELECTRIC MANHOLE		
	EXISTING GAS MANHOLE		
	EXISTING GAS METER		
	EXISTING GAS RISER		
	EXISTING GAS VALVE		
	EXISTING SEWER MANHOLE		
	EXISTING CATCH BASIN		
	EXISTING STORM DRAIN AND STRUCTURE		
	EXISTING VEGETATION		
	EXISTING MAILBOX		
	EASEMENT		
	ROADWAY CENTERLINE		
	SECTION LINE		

ABBREVIATIONS

ABC	AGGREGATE BASE COURSE
AC	ASPHALT CONCRETE
BC	BACK OF CURB
BCF	BRASS CAP FLUSH
BCHH	BRASS CAP IN HAND HOLE
BCR	BEGIN CURB RETURN
BM	BENCHMARK
BTM	BOTTOM
CB	CATCH BASIN
C/L	CENTERLINE
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
COK	CITY OF KINGMAN
CONC	CONCRETE
CONST	CONSTRUCTION
CY	CUBIC YARD
D/W	DRIVEWAY
DWG	DRAWING
DTL	DETAIL
E	EAST
ECR	END CURB RETURN
ELEV	ELEVATION
EP	EDGE OF PAVEMENT
ESMT	EASEMENT
EX, EXIST	EXISTING
FC	FACE OF CURB
FF	FINISHED FLOOR
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLANGE
FND	FOUND
FO	FIBER OPTIC
FPS	FEET PER SECOND
FT	FOOT, FEET
G	GAS, GUTTER, GRADE
GB	GRADE BREAK
GPM	GALLONS PER MINUTE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HP	HIGH POINT
HW	HIGHWATER
IN.	INCH, INCHES
INV	INVERT
IRRIG	IRRIGATION
JHA	JURISDICTION HAVING AUTHORITY
L	LENGTH
LF	LINEAR FEET
LT	LEFT
MAG	MARICOPA ASSOCIATION OF GOVERNMENTS
MC	MOHAVE COUNTY
MH	MANHOLE
MJ	MECHANICAL JOINT
MUTE	MULTI-USE TRAIL EASEMENT
N	NORTH
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO.	NUMBER
OHE	OVERHEAD ELECTRIC
OPNG	OPENING
P/L	PROPERTY LINE
PAE	PUBLIC ACCESS EASEMENT
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVE
PCC	PORTLAND CEMENT CONCRETE
PRC	POINT OF REVERSE CURVE
PT	POINT OF TANGENCY
PUAE	PUBLIC UTILITY & ACCESS EASEMENT
PUE	PUBLIC UTILITY EASEMENT
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS
R/W	RIGHT-OF-WAY
RGRCP	RUBBER GASKETED REINFORCED CONCRETE PIPE
RJ	RESTRAINED JOINT
RT	RIGHT
S	SEWER, SLOPE, SOUTH
S/M	SAWCUT AND MATCH
SDMH	STORM DRAIN MANHOLE
SF	SQUARE FEET
SSMH	SANITARY SEWER MANHOLE
STA	STATION
STD	STANDARD
SWK	SIDEWALK
SY	SQUARE YARD
TAN	TANGENT
TBC	TOP BACK OF CURB
TC	TOP OF CURB
T, TEL	TELEPHONE
TL	TRUE LENGTH
TYP	TYPICAL
UGE	UNDERGROUND ELECTRIC
UGC	UNDERGROUND CABLE
VNAE	VEHICLE NON-ACCESS EASEMENT
Vr	VOLUME REQUIRED
Vp	VOLUME PROVIDED
W	WATER, WEST, WITH
XFMR	TRANSFORMER



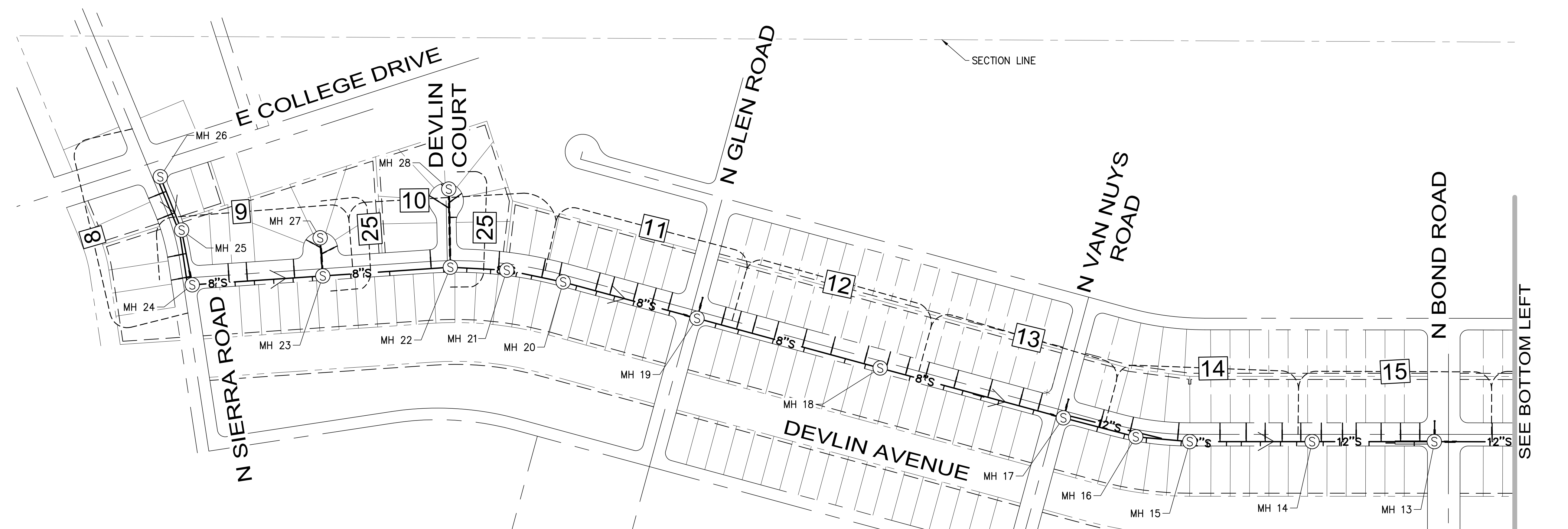
CONTRACT NO. 21PS12

REV. NO.	COMMENT	DATE

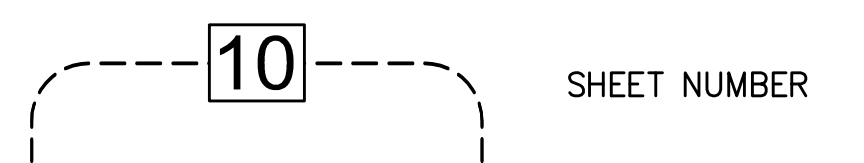
		SUNRISE ENGINEERING 2045 SOUTH VINEYARD, SUITE 101 MESA, ARIZONA 85210 TEL 480.768.8600 www.sunrise-eng.com
		MOHAVE COUNTY NEW KINGMAN-BUTLER SEWER

QUANTITIES, LEGEND & ABBREVIATIONS												
<table border="1"> <tr> <th>SET NO.</th> <th>DESIGNED</th> <th>DRAWN</th> <th>CHECKED</th> <th>DRAWN</th> <th>CHECKED</th> </tr> <tr> <td>08433</td> <td>IDS</td> <td>IDS</td> <td>JV</td> <td>GN2</td> <td>3 of 28</td> </tr> </table>	SET NO.	DESIGNED	DRAWN	CHECKED	DRAWN	CHECKED	08433	IDS	IDS	JV	GN2	3 of 28
SET NO.	DESIGNED	DRAWN	CHECKED	DRAWN	CHECKED							
08433	IDS	IDS	JV	GN2	3 of 28							

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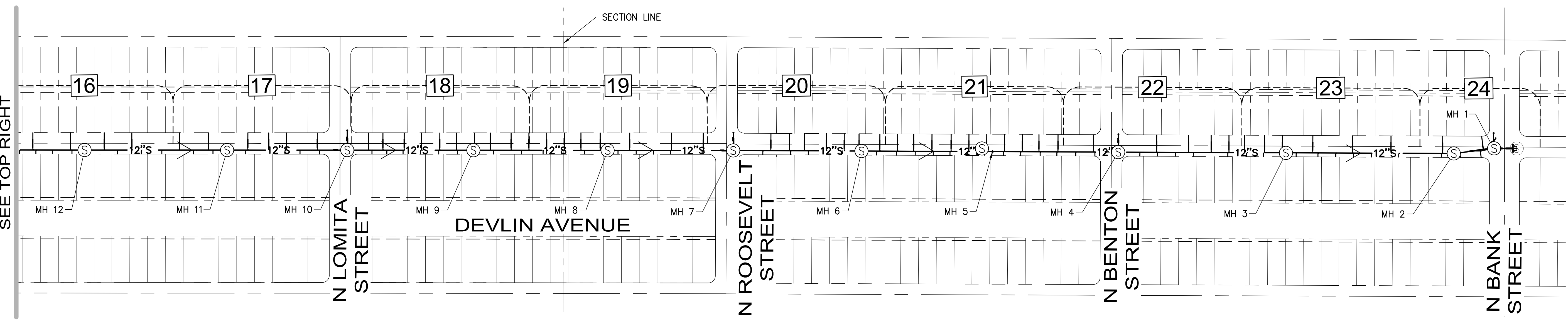


SHEET INDEX LEGEND



LEGEND

-
-
-
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SCALE
150' 300'

HORIZ: 1" = 150'

CONTRACT NO. 21PS12

REV. NO.	COMMENT	DATE

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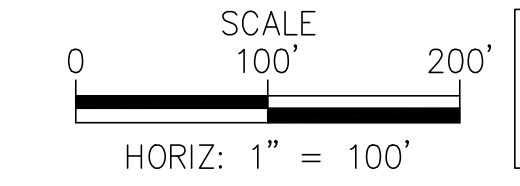
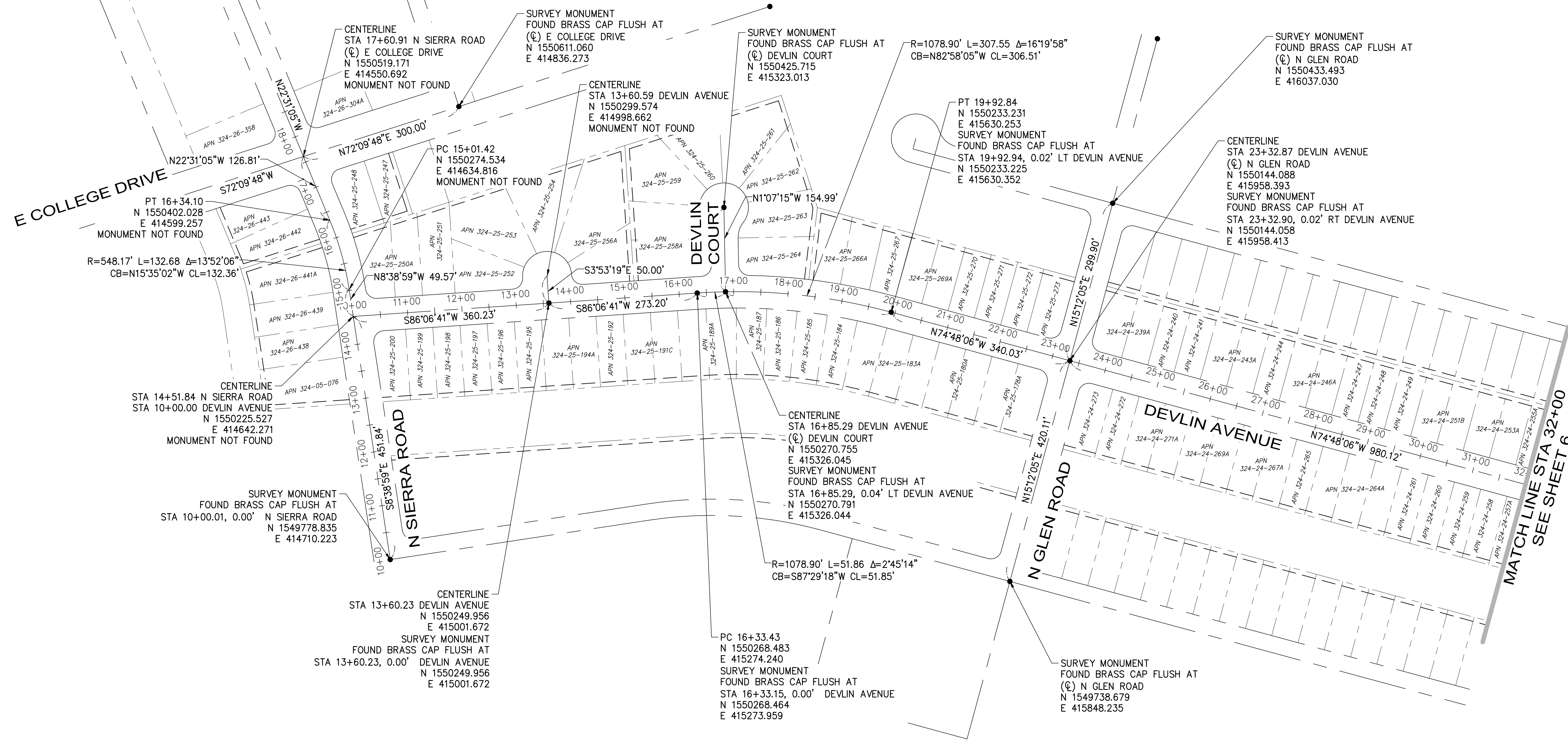
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 TEL 480.768.8600
 www.sunrise-eng.com

MOHAVE COUNTY
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SHEET INDEX

SEI NO. 08433	DESIGNED IDS	DRAWN IDS	CHECKED JV	IND	4 of 28
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REV NO.	COMMENT	DATE

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MESA, ARIZONA 85210
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www.sunrise-eng.com

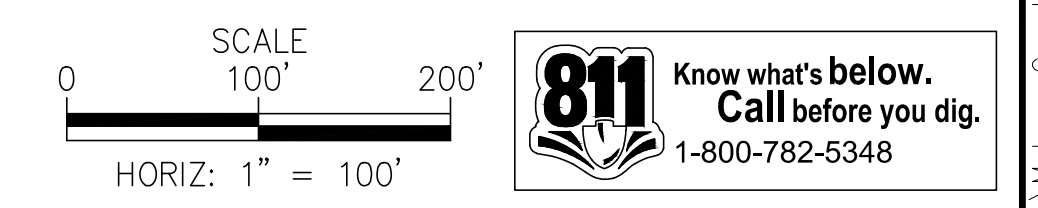
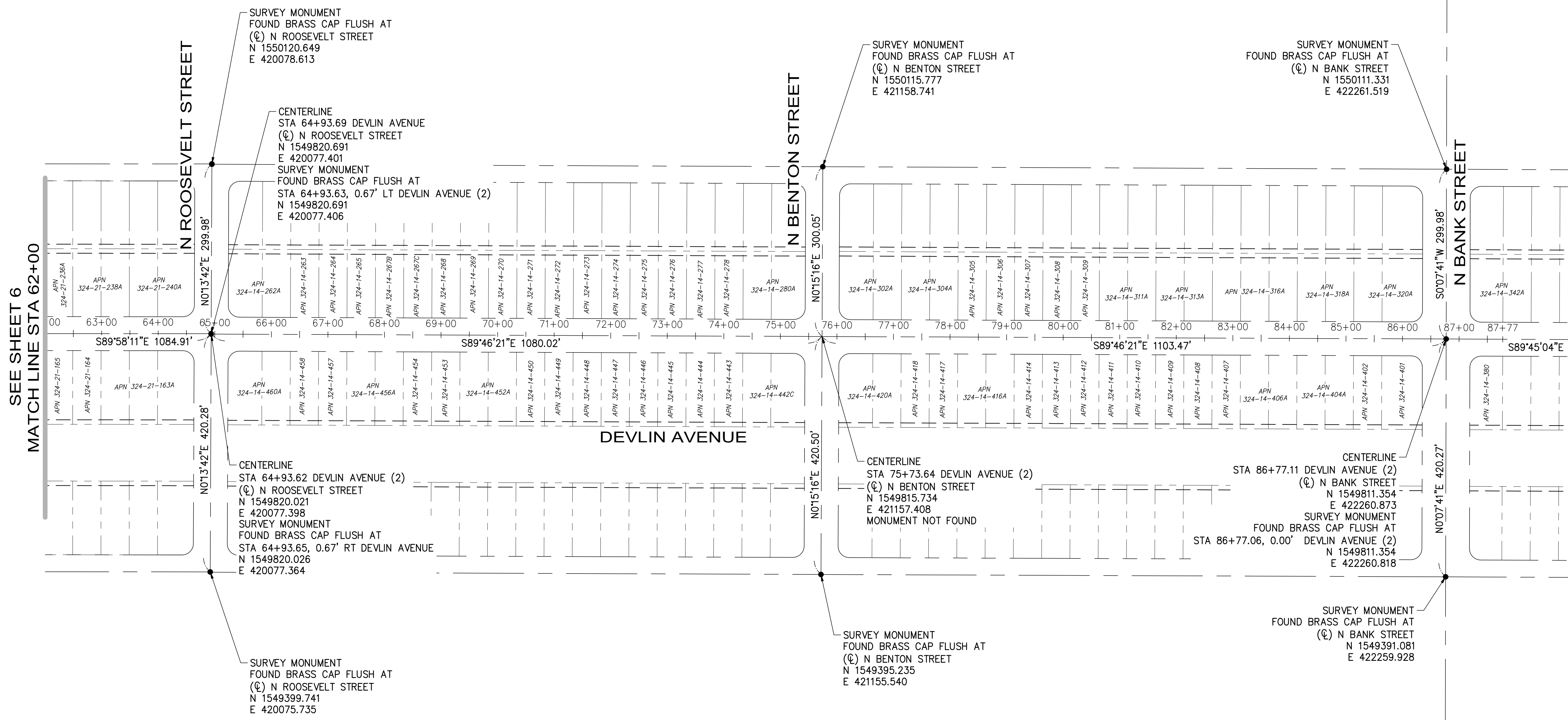
MOHAVE COUNTY
NEW KINGMAN-BUTLER SEWER

HORIZONTAL CONTROL

SEI NO. 08433	DESIGNED IDS	DRAWN IDS	CHECKED JV	HC1	5 of 28
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CONTRACT NO. 21PS12

REV. NO.	COMMENT	DATE

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MOHAVE COUNTY
NEW KINGMAN-BUTLER SEWER

HORIZONTAL CONTROL

SEI NO. 08433	DESIGNED IDS	DRAWN IDS	CHECKED JV	HC3	7 of 28
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P: \\Mohave County\08433 Kingman-New Butler Sewer\Draw\Plan Sets\NBS-HC3.dwg Aug 29, 2022 4:30pm jvandegraaff

CONSTRUCTION NOTES

- REMOVAL**
- 1 SAWCUT & REMOVE EXISTING ASPHALT 45 SY
- HARDSCAPE**
- 6A ASPHALT REPLACEMENT PER MODIFIED MOHAVE COUNTY STD DETAIL 200-1 & DETAIL A, SHEET 26 24 SY
- 6B ASPHALT REPLACEMENT PER MODIFIED MAG STD DETAIL 200-1/200-2 & DETAIL A, SHEET 26 21 SY
- GRAVITY SEWER**
- 13 8" PVC SDR 35 GRAVITY SEWER LINE. SLOPE & LENGTH PER PROFILE. SEWER PIPE TRENCHING & BACKFILL PER DETAIL A, SHEET 25. TRACER WIRE TO BE INSTALLED OVER ALL SECTIONS OF PIPE 292 LF
- 15 4' DIAMETER PRE-CAST CONCRETE MANHOLE, BASE, 30" FRAME & COVER PER COK STD DETAIL 420-1 & MAG STD DETAIL 423-2. INVERT NOTED PER PROFILE 3 EA
- 18 SEWER LATERAL PER COK STD DETAIL 440-3. STATION AND DEPTH OF SEWER LATERAL INVERT PER PLAN 195 LF

GENERAL NOTES


1. SEWER LENGTHS NOTED IN PROFILE ARE CENTER OF MANHOLE TO CENTER OF MANHOLE.
2. WATER/SEWER SEPARATION SHALL CONFORM TO MAG SPECIFICATION 610 AND MAG STANDARD DETAILS 404-1.
3. ALL SEWER SERVICE LINES SHALL HAVE A MINIMUM DEPTH OF 4- FEET AT THE PROPERTY LINE.

SCALE
 0 20' 40'
 HORIZ: 1" = 20'
 VERT: 1" = 2'

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 Call before you dig.
 1-800-782-5348

CONTRACT NO. 21PS12

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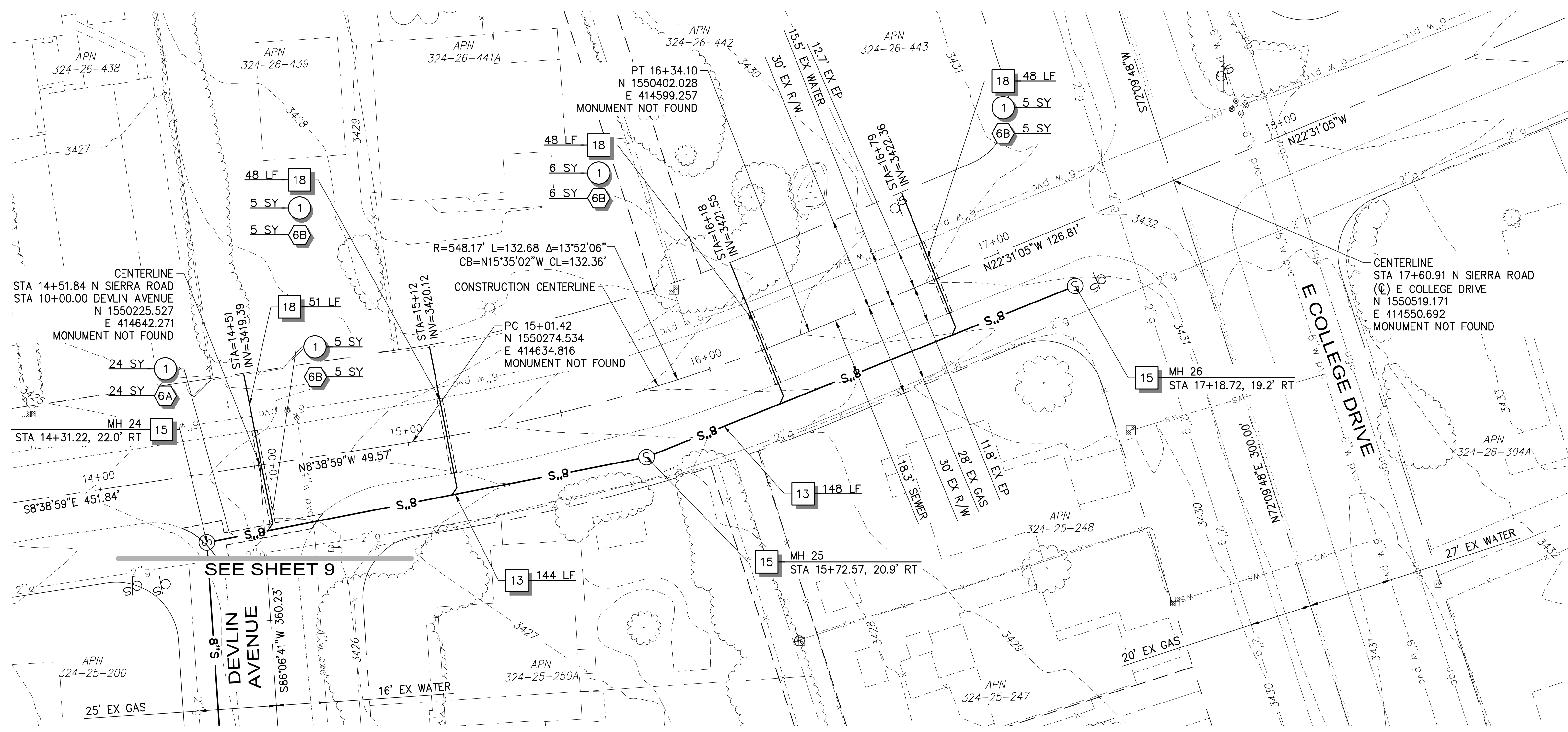
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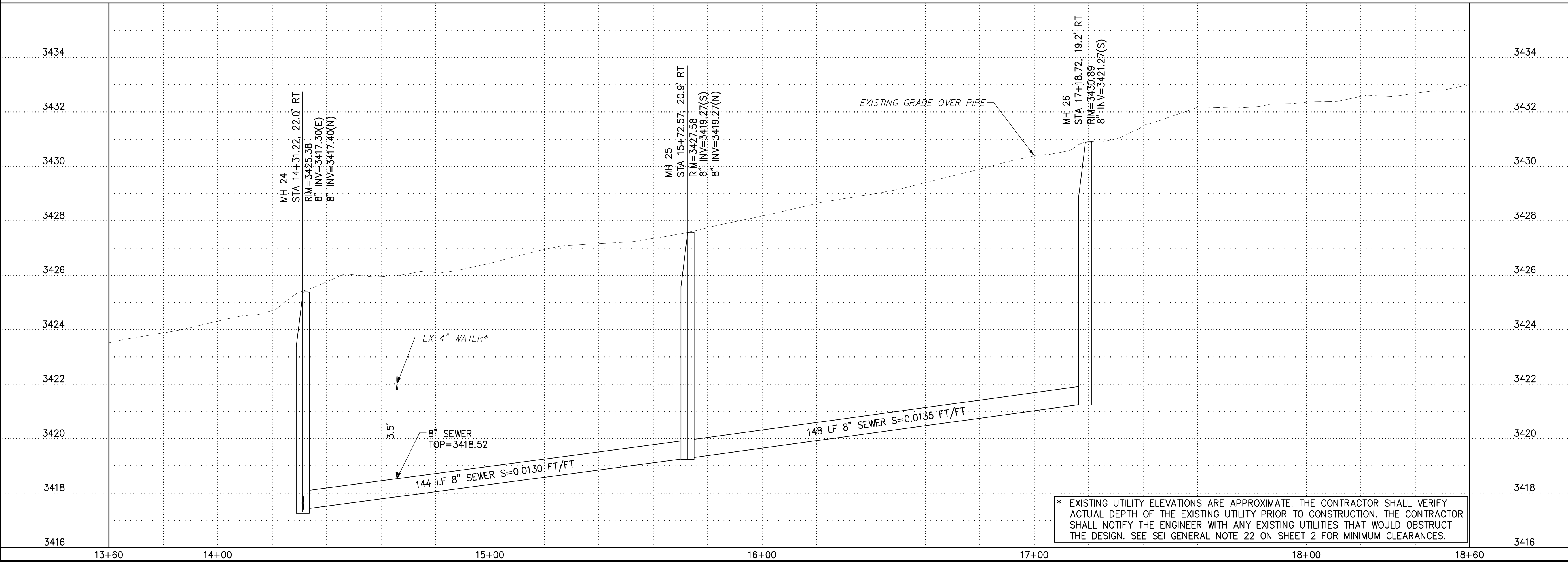
MOHAVE COUNTY
NEW KINGMAN-BUTLER SEWER

N SIERRA ROAD

SEI NO. 08433 DESIGNED IDS DRAWN IDS CHECKED JV S1 8 of 28



N SIERRA ROAD



* EXISTING UTILITY ELEVATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ACTUAL DEPTH OF THE EXISTING UTILITY PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER WITH ANY EXISTING UTILITIES THAT WOULD OBSTRUCT THE DESIGN. SEE SEI GENERAL NOTE 22 ON SHEET 2 FOR MINIMUM CLEARANCES.

P: Mohave County\08433 Kingman-New Butler Sewer\Draw\Plan\Seis\NBS-ST.dwg Aug 29, 2022 4:30pm jvandegraaff

CONSTRUCTION NOTES

- REMOVAL**
- 1 SAWCUT & REMOVE EXISTING ASPHALT 15 SY
 - HARDSCAPE**
 - 6B ASPHALT REPLACEMENT PER MODIFIED MAG STD DETAIL 200-1/200-2 & DETAIL A, SHEET 26 15 SY
 - 12 REPLACE EXISTING SURVEY MONUMENT PER MAG STD DETAIL 120, TYPE B 2 EA

GRAVITY SEWER

 - 13 8" PVC SDR 35 GRAVITY SEWER LINE. SLOPE & LENGTH PER PROFILE. SEWER PIPE TRENCHING & BACKFILL PER DETAIL A, SHEET 25. TRACER WIRE TO BE INSTALLED OVER ALL SECTIONS OF PIPE 416 LF
 - 15 4' DIAMETER PRE-CAST CONCRETE MANHOLE, BASE, 30" FRAME & COVER PER COK STD DETAIL 420-1 & MAG STD DETAIL 423-2. INVERT NOTED PER PROFILE 1 EA
 - 18 SEWER LATERAL PER COK STD DETAIL 440-3. STATION AND DEPTH OF SEWER LATERAL INVERT PER PLAN 224 LF

GENERAL NOTES

1. SEWER LENGTHS NOTED IN PROFILE ARE CENTER OF MANHOLE TO CENTER OF MANHOLE.
2. WATER/SEWER SEPARATION SHALL CONFORM TO MAG SPECIFICATION 610 AND MAG STANDARD DETAILS 404-1.
3. ALL SEWER SERVICE LINES SHALL HAVE A MINIMUM DEPTH OF 4- FEET AT THE PROPERTY LINE.

SCALE
0 20' 40'

HORIZ: 1" = 20'
VERT: 1" = 2'

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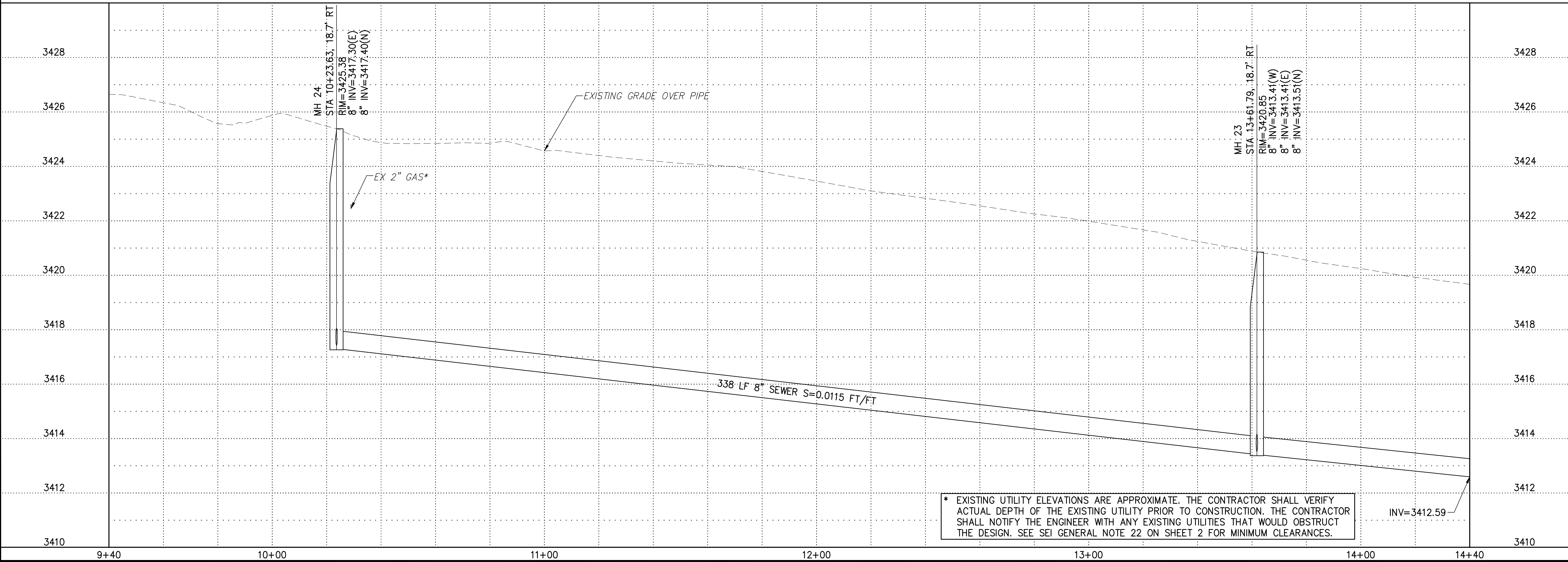
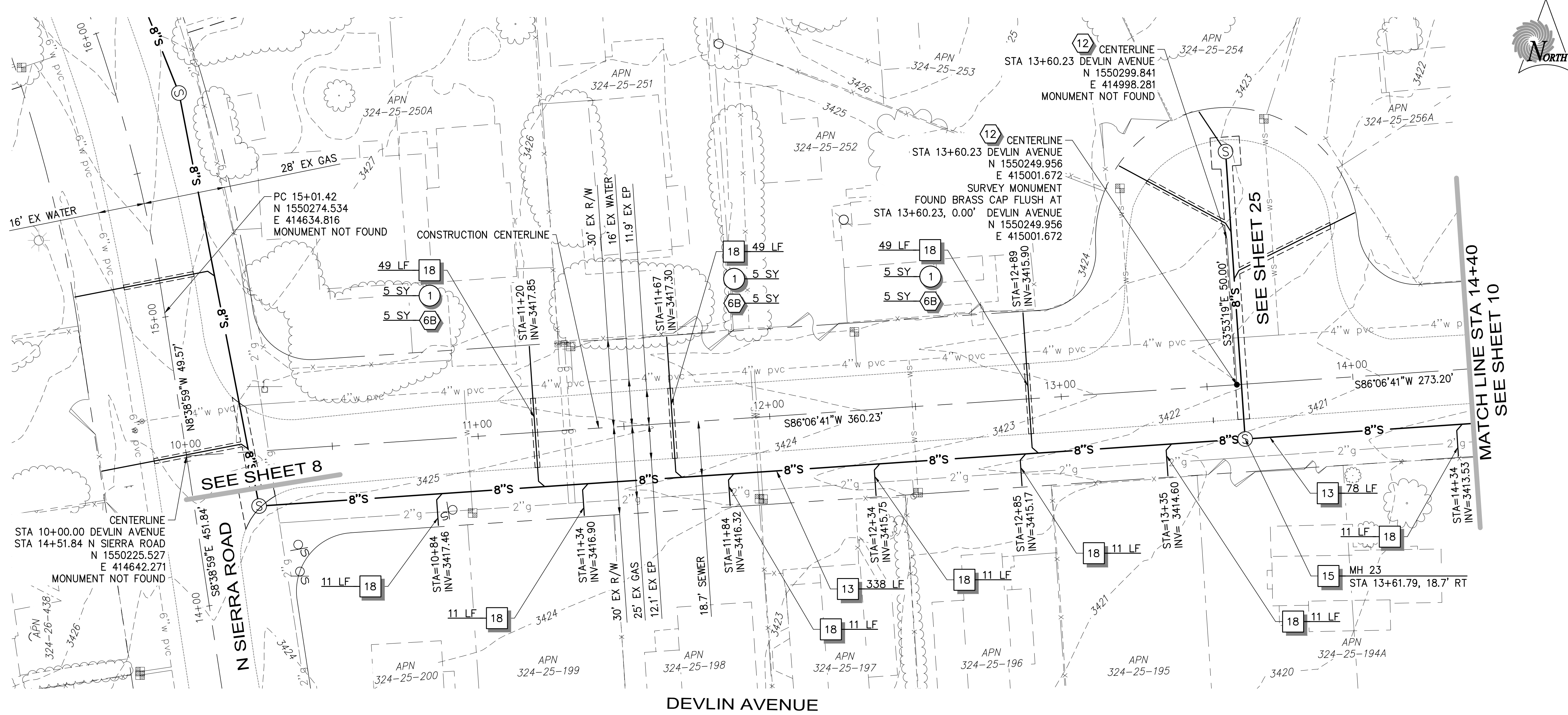
REV NO.	COMMENT	DATE

SUNRISE ENGINEERING
2045 SOUTH VINEYARD, SUITE 101
MESA, ARIZONA 85210
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DEVLIN AVENUE

SEI NO. 08433 DESIGNED IDS DRAWN IDS CHECKED JV S2 9 of 28



* EXISTING UTILITY ELEVATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ACTUAL DEPTH OF THE EXISTING UTILITY PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER WITH ANY EXISTING UTILITIES THAT WOULD OBSTRUCT THE DESIGN. SEE SEI GENERAL NOTE 22 ON SHEET 2 FOR MINIMUM CLEARANCES.

CONSTRUCTION NOTES

- REMOVAL**
- 1 SAWCUT & REMOVE EXISTING ASPHALT 15 SY
- HARDSCAPE**
- 6B ASPHALT REPLACEMENT PER MODIFIED MAG STD DETAIL 200-1/200-2 & DETAIL A, SHEET 26 15 SY
- GRAVITY SEWER**
- 13 8" PVC SDR 35 GRAVITY SEWER LINE, SLOPE & LENGTH PER PROFILE. SEWER PIPE TRENCHING & BACKFILL PER DETAIL A, SHEET 25. TRACER WIRE TO BE INSTALLED OVER ALL SECTIONS OF PIPE 496 LF
 - 15 4' DIAMETER PRE-CAST CONCRETE MANHOLE, BASE, 30" FRAME & COVER PER COK STD DETAIL 420-1 & MAG STD DETAIL 423-2. INVERT NOTED PER PROFILE 2 EA
 - 18 SEWER LATERAL PER COK STD DETAIL 440-3. STATION AND DEPTH OF SEWER LATERAL INVERT PER PLAN 225 LF

GENERAL NOTES

1. SEWER LENGTHS NOTED IN PROFILE ARE CENTER OF MANHOLE TO CENTER OF MANHOLE.
2. WATER/SEWER SEPARATION SHALL CONFORM TO MAG SPECIFICATION 610 AND MAG STANDARD DETAILS 404-1.
3. ALL SEWER SERVICE LINES SHALL HAVE A MINIMUM DEPTH OF 4'-FEET AT THE PROPERTY LINE.

SCALE
0 20' 40'

HORIZ: 1" = 20'
VERT: 1" = 2'

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CONTRACT NO. 21PS12

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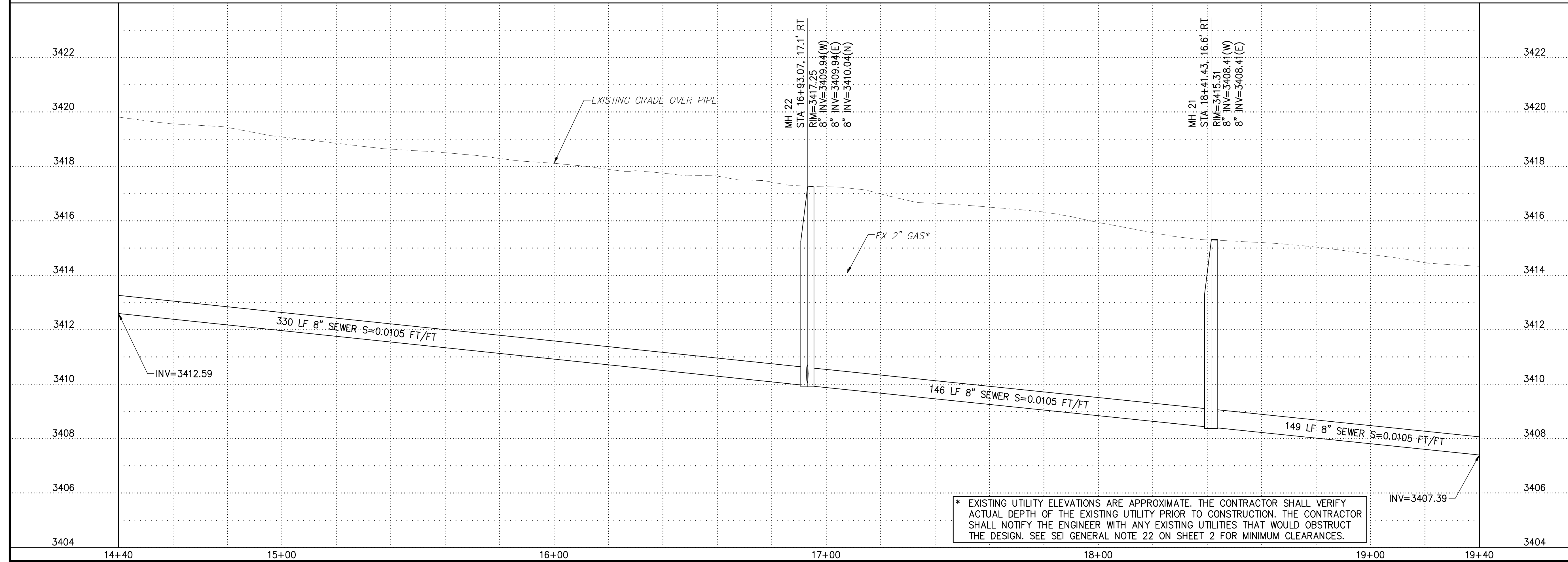
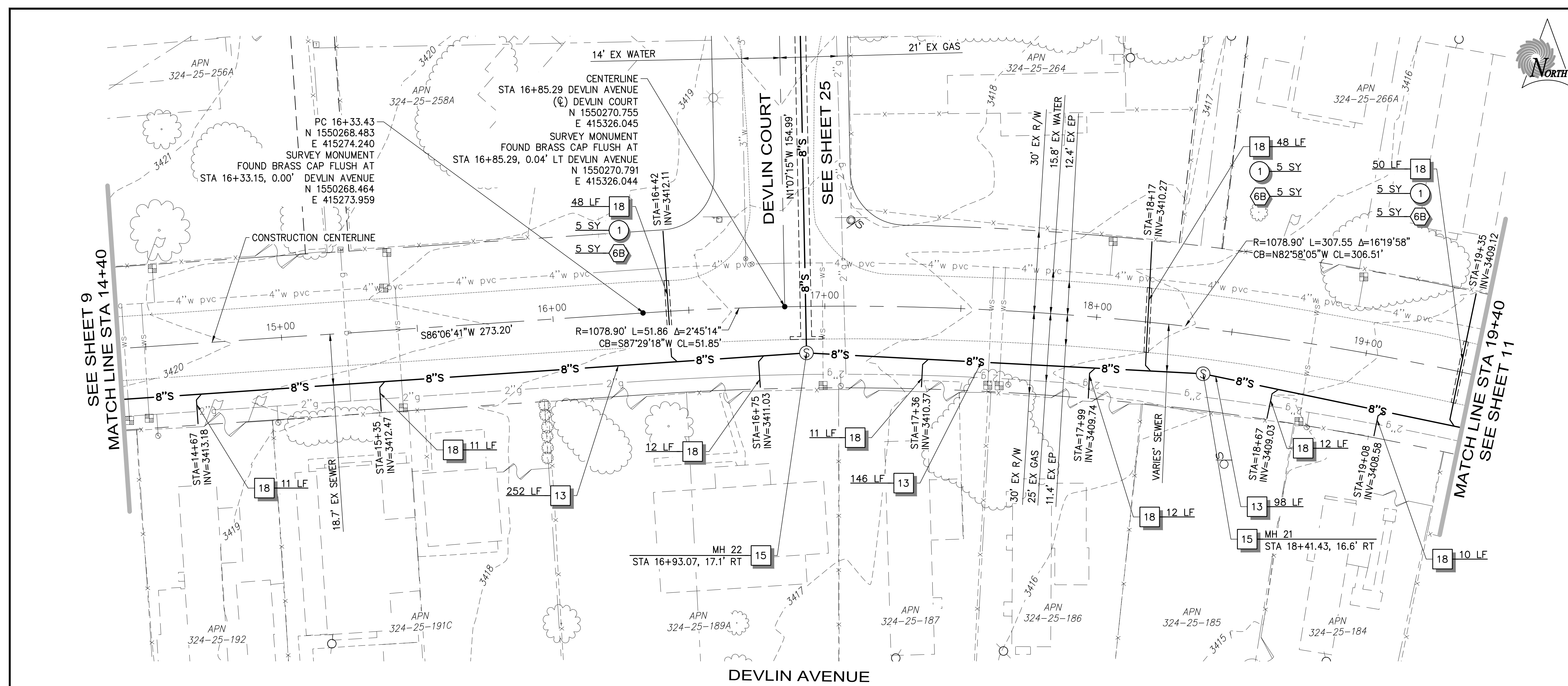
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SEI NO. 08433 DESIGNED IDS DRAWN IDS CHECKED JV **S3 10 of 28**

ENG22-0064



* EXISTING UTILITY ELEVATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ACTUAL DEPTH OF THE EXISTING UTILITY PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER WITH ANY EXISTING UTILITIES THAT WOULD OBSTRUCT THE DESIGN. SEE SEI GENERAL NOTE 22 ON SHEET 2 FOR MINIMUM CLEARANCES.

CONSTRUCTION NOTES

- REMOVAL**
- 1 SAWCUT & REMOVE EXISTING ASPHALT 74 SY
- HARDSCAPE**
- 6A ASPHALT REPLACEMENT PER MODIFIED MOHAVE COUNTY STD DETAIL 200-1 & DETAIL A, SHEET 26 39 SY
 - 6B ASPHALT REPLACEMENT PER MODIFIED MAG STD DETAIL 200-1/200-2 & DETAIL A, SHEET 26 35 SY
- GRAVITY SEWER**
- 13 8" PVC SDR 35 GRAVITY SEWER LINE. SLOPE & LENGTH PER PROFILE. SEWER PIPE TRENCHING & BACKFILL PER DETAIL A, SHEET 25. TRACER WIRE TO BE INSTALLED OVER ALL SECTIONS OF PIPE 498 LF
 - 15 4' DIAMETER PRE-CAST CONCRETE MANHOLE, BASE, 30" FRAME & COVER PER COK STD DETAIL 420-1 & MAG STD DETAIL 423-2. INVERT NOTED PER PROFILE 2 EA
 - 17 SEWER STUB PER CITY OF KINGMAN STD DETAIL 427. SIZE, LENGTH & SLOPE PER PLAN 1 EA
 - 18 SEWER LATERAL PER COK STD DETAIL 440-3. STATION AND DEPTH OF SEWER LATERAL INVERT PER PLAN 421 LF

GENERAL NOTES

1. SEWER LENGTHS NOTED IN PROFILE ARE CENTER OF MANHOLE TO CENTER OF MANHOLE.
2. WATER/SEWER SEPARATION SHALL CONFORM TO MAG SPECIFICATION 610 AND MAG STANDARD DETAILS 404-1.
3. ALL SEWER SERVICE LINES SHALL HAVE A MINIMUM DEPTH OF 4'-FEET AT THE PROPERTY LINE.

SCALE
0 20' 40'

HORIZ: 1" = 20'
VERT: 1" = 2'

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CONTRACT NO. 21PS12

REV NO.	COMMENT	DATE

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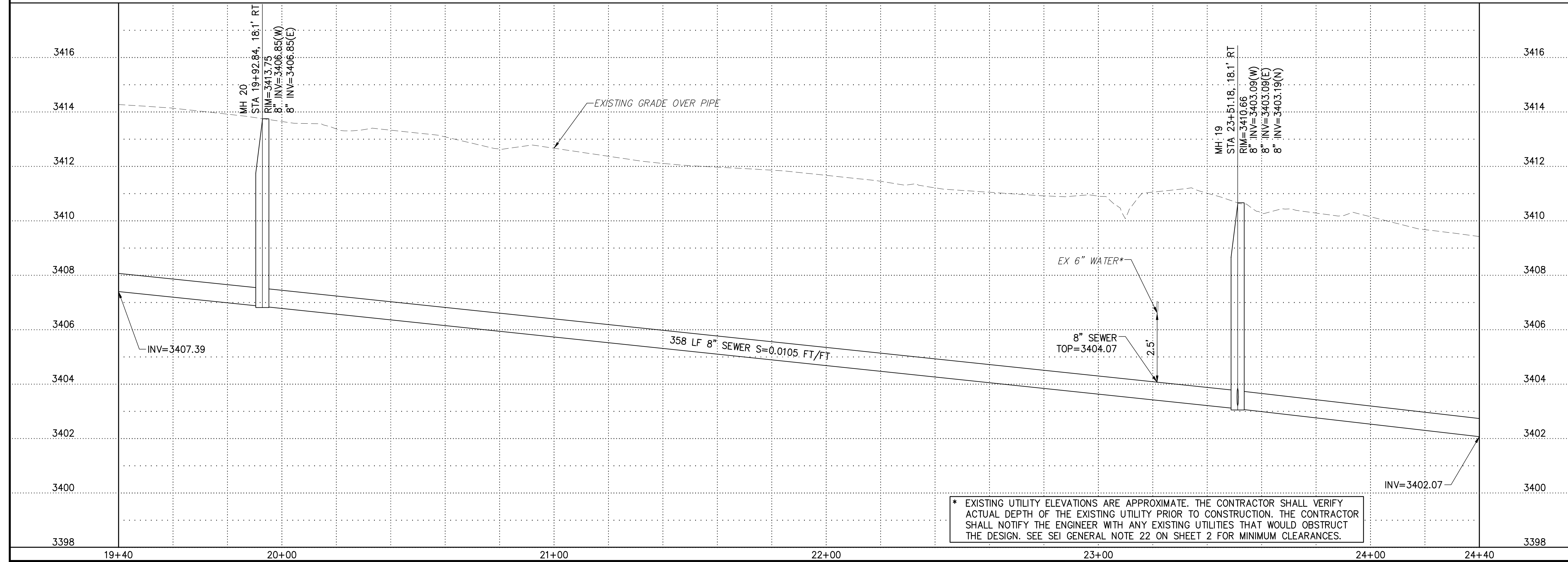
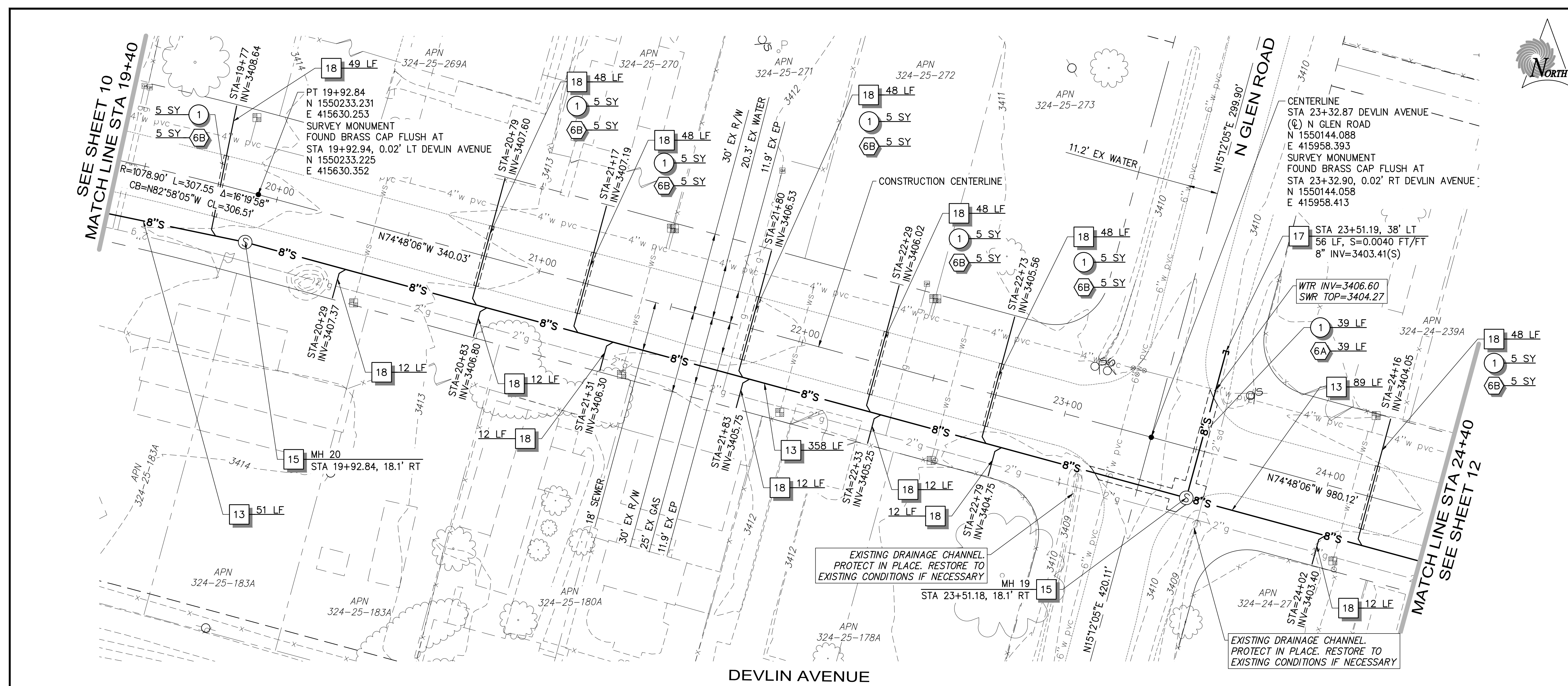
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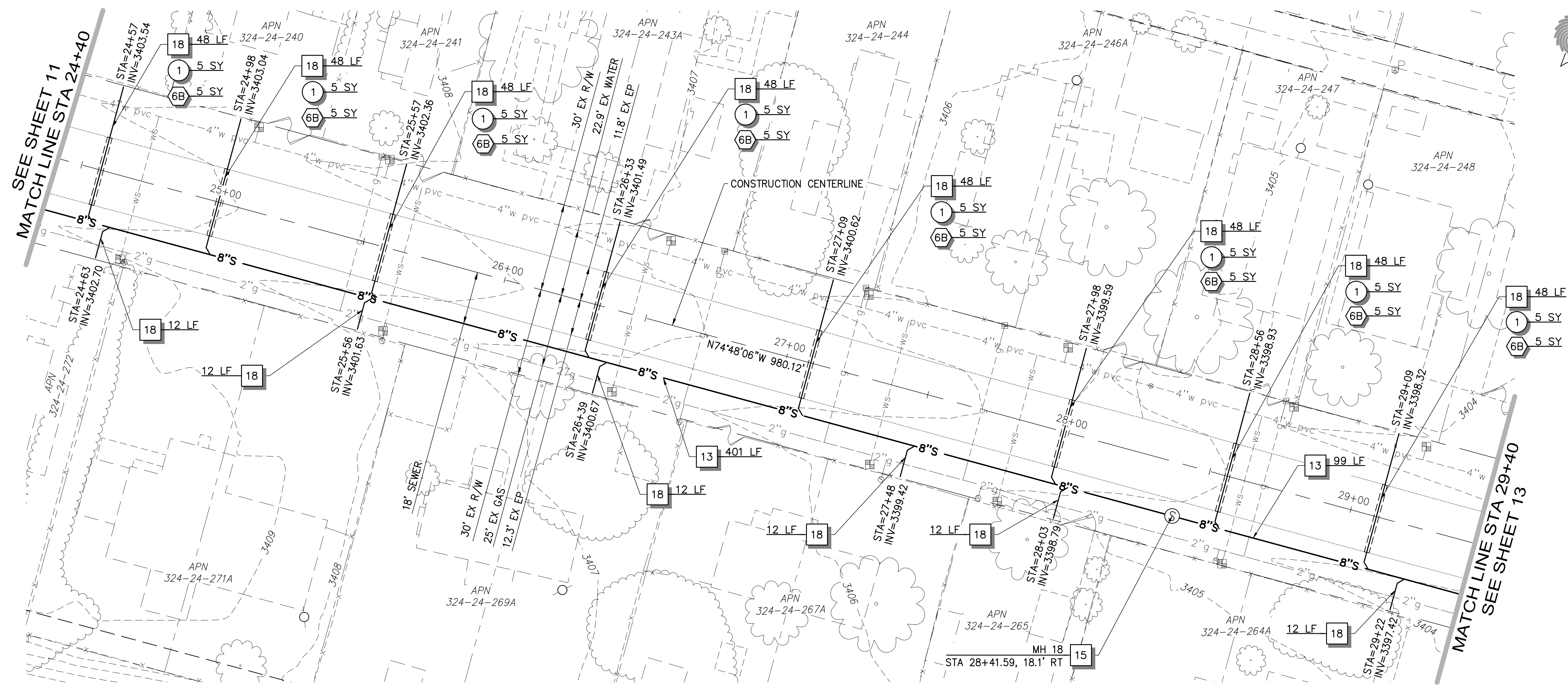
S4 11 of 28

ENG22-0064



* EXISTING UTILITY ELEVATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ACTUAL DEPTH OF THE EXISTING UTILITY PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER WITH ANY EXISTING UTILITIES THAT WOULD OBSTRUCT THE DESIGN. SEE SEI GENERAL NOTE 22 ON SHEET 2 FOR MINIMUM CLEARANCES.

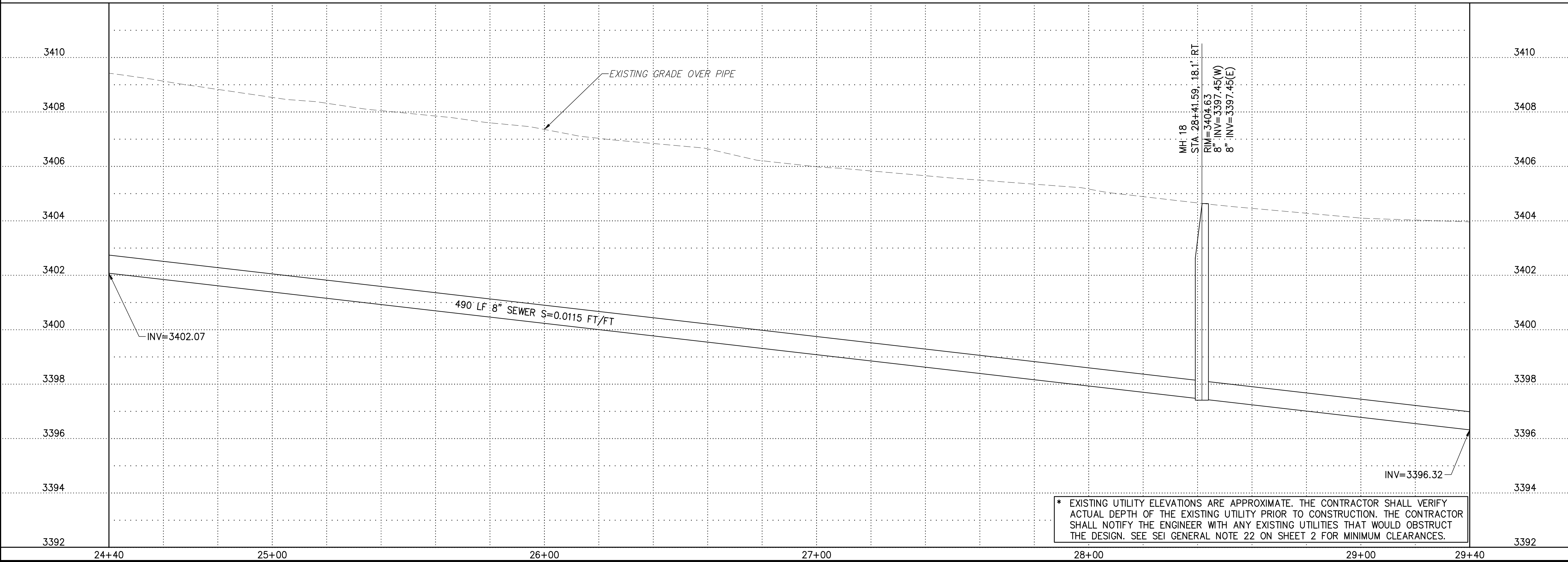
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CONSTRUCTION NOTES

- REMOVAL**
- 1 SAWCUT & REMOVE EXISTING ASPHALT 40 SY
- HARDSCAPE**
- 6B ASPHALT REPLACEMENT PER MODIFIED MAG STD DETAIL 200-1/200-2 & DETAIL A, SHEET 26 40 SY
- GRAVITY SEWER**
- 13 8" PVC SDR 35 GRAVITY SEWER LINE. SLOPE & LENGTH PER PROFILE. SEWER PIPE TRENCHING & BACKFILL PER DETAIL A, SHEET 25. TRACER WIRE TO BE INSTALLED OVER ALL SECTIONS OF PIPE 500 LF
 - 15 4' DIAMETER PRE-CAST CONCRETE MANHOLE, BASE, 30" FRAME & COVER PER COK STD DETAIL 420-1 & MAG STD DETAIL 423-2. INVERT NOTED PER PROFILE 1 EA
 - 18 SEWER LATERAL PER COK STD DETAIL 440-3. STATION AND DEPTH OF SEWER LATERAL INVERT PER PLAN 456 LF

DEVLIN AVENUE



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GENERAL NOTES

1. SEWER LENGTHS NOTED IN PROFILE ARE CENTER OF MANHOLE TO CENTER OF MANHOLE.
2. WATER/SEWER SEPARATION SHALL CONFORM TO MAG SPECIFICATION 610 AND MAG STANDARD DETAILS 404-1.
3. ALL SEWER SERVICE LINES SHALL HAVE A MINIMUM DEPTH OF 4'-FEET AT THE PROPERTY LINE.

SCALE
0 20' 40'

HORIZ: 1" = 20'
VERT: 1" = 2'

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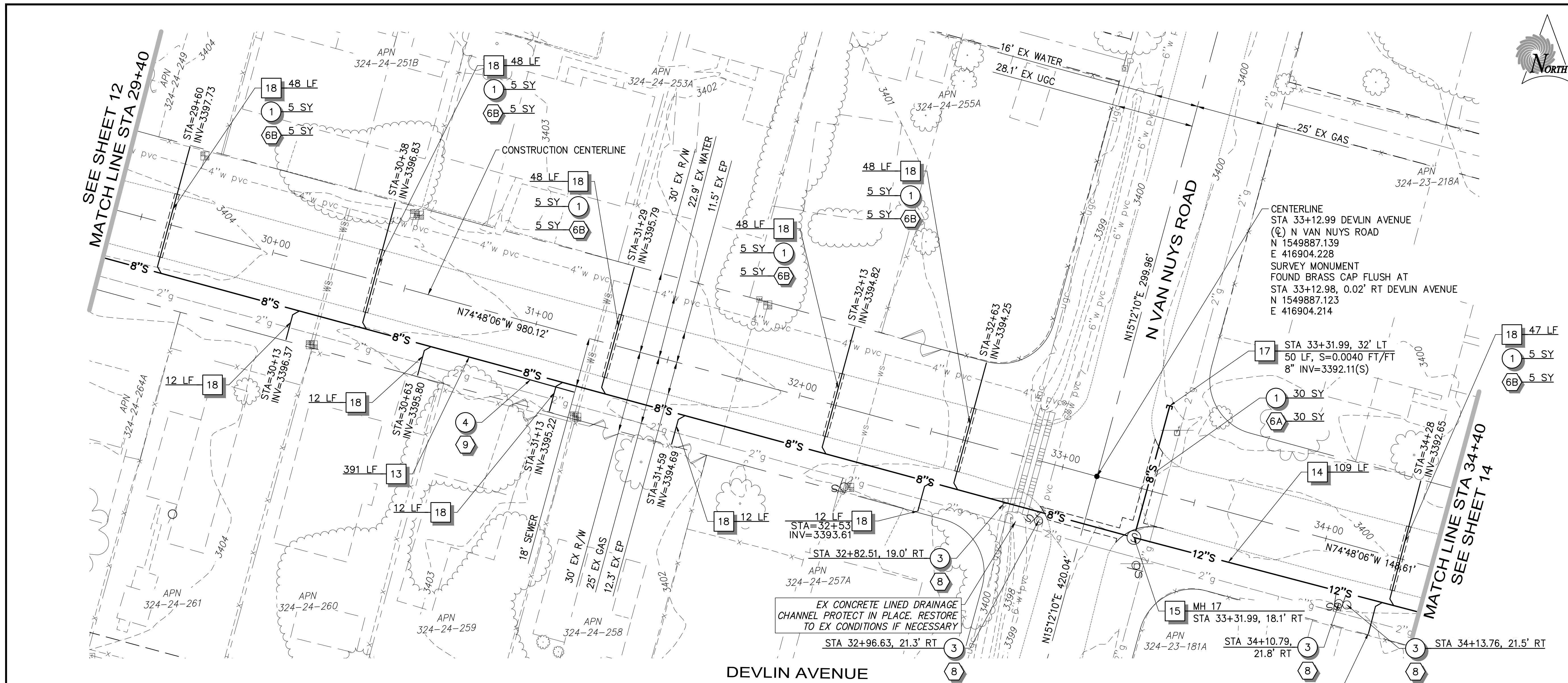
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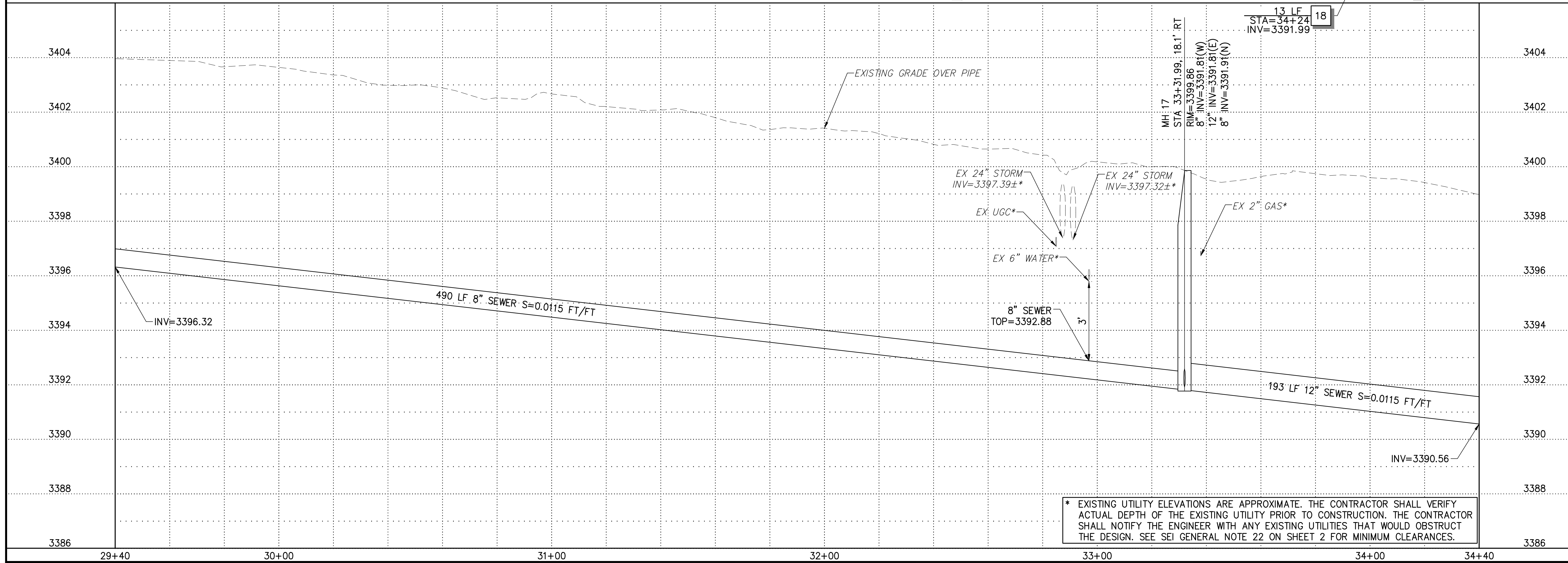
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CONSTRUCTION NOTES

REMOVAL		
1	SAWCUT & REMOVE EXISTING ASPHALT	60 SY
3	REMOVE & SALVAGE EXISTING STREET SIGN	4 EA
4	REMOVE EXISTING DRIVEWAY CULVERT	1 EA
HARDSCAPE		
6A	ASPHALT REPLACEMENT PER MODIFIED MOHAVE COUNTY STD DETAIL 200-1 & DETAIL A, SHEET 26	30 SY
6B	ASPHALT REPLACEMENT PER MODIFIED MAG STD DETAIL 200-1/200-2 & DETAIL A, SHEET 26	30 SY
8	REPLACE SALVAGED STREET SIGN PER MOHAVE COUNTY STD DETAIL 131-2	4 EA
9	REPLACE DRIVEWAY CULVERT. MATCH EXISTING SIZE & LENGTH	1 EA
GRAVITY SEWER		
13	8" PVC SDR 35 GRAVITY SEWER LINE. SLOPE & LENGTH PER PROFILE. SEWER PIPE TRENCHING & BACKFILL PER DETAIL A, SHEET 25. TRACER WIRE TO BE INSTALLED OVER ALL SECTIONS OF PIPE	391 LF
14	12" PVC SDR 35 GRAVITY SEWER LINE. SLOPE & LENGTH PER PROFILE. SEWER PIPE TRENCHING & BACKFILL PER DETAIL A, SHEET 25. TRACER WIRE TO BE INSTALLED OVER ALL SECTIONS OF PIPE	109 LF
15	4' DIAMETER PRE-CAST CONCRETE MANHOLE, BASE, 30" FRAME & COVER PER COK STD DETAIL 420-1 & MAG STD DETAIL 423-2. INVERT NOTED PER PROFILE	1 EA
17	SEWER STUB PER CITY OF KINGMAN STD DETAIL 427. SIZE, LENGTH & SLOPE PER PLAN	1 EA
18	SEWER LATERAL PER COK STD DETAIL 440-3. STATION AND DEPTH OF SEWER LATERAL INVERT PER PLAN	360 LF



GENERAL NOTES

- SEWER LENGTHS NOTED IN PROFILE ARE CENTER OF MANHOLE TO CENTER OF MANHOLE.
- WATER/SEWER SEPARATION SHALL CONFORM TO MAG SPECIFICATION 610 AND MAG STANDARD DETAILS 404-1.
- ALL SEWER SERVICE LINES SHALL HAVE A MINIMUM DEPTH OF 4'-FEET AT THE PROPERTY LINE.

SCALE
0 20' 40'

HORIZ: 1" = 20'
VERT: 1" = 2'

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CONTRACT NO. 21PS12

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DEVLIN AVENUE

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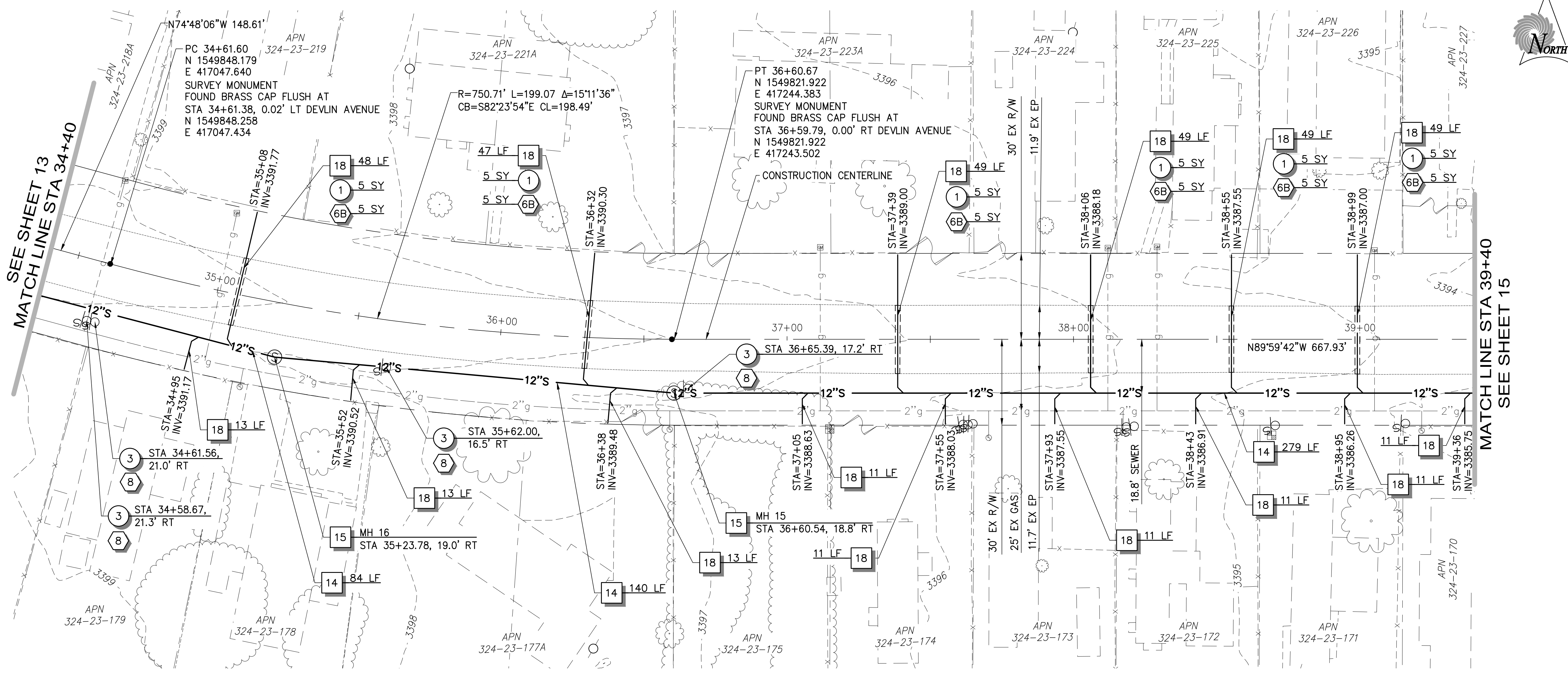
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ENG22-0064

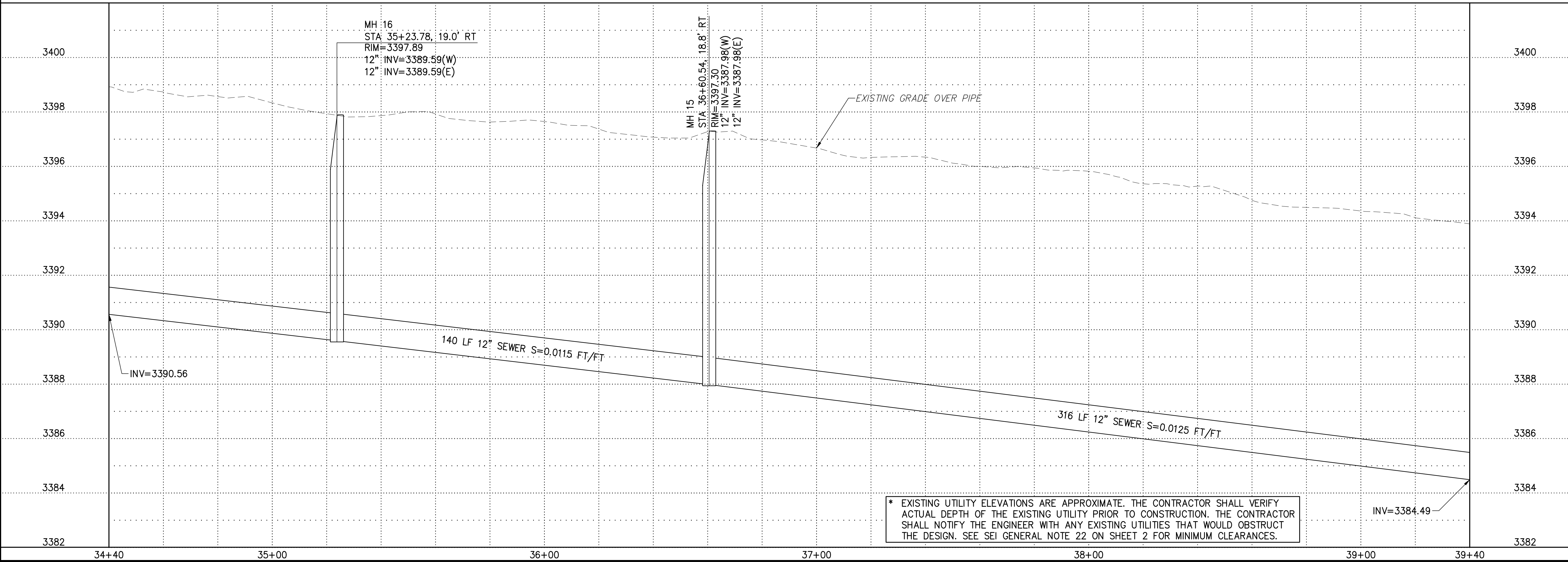
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CONSTRUCTION NOTES

- REMOVAL**
- 1 SAWCUT & REMOVE EXISTING ASPHALT 30 SY
 - 3 REMOVE & SALVAGE EXISTING STREET SIGN 4 EA
- HARDSCAPE**
- 6B ASPHALT REPLACEMENT PER MODIFIED MAG STD DETAIL 200-1/200-2 & DETAIL A, SHEET 26 30 SY
 - 8 REPLACE SALVAGED STREET SIGN PER MOHAVE COUNTY STD DETAIL 131-2 4 EA
- GRAVITY SEWER**
- 14 12" PVC SDR 35 GRAVITY SEWER LINE. SLOPE & LENGTH PER PROFILE. SEWER PIPE TRENCHING & BACKFILL PER DETAIL A, SHEET 25. TRACER WIRE TO BE INSTALLED OVER ALL SECTIONS OF PIPE 503 LF
 - 15 4' DIAMETER PRE-CAST CONCRETE MANHOLE, BASE, 30" FRAME & COVER PER COK STD DETAIL 420-1 & MAG STD DETAIL 423-2. INVERT NOTED PER PROFILE 2 EA
 - 18 SEWER LATERAL PER COK STD DETAIL 440-3. STATION AND DEPTH OF SEWER LATERAL INVERT PER PLAN 396 LF



DEVLIN AVENUE



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GENERAL NOTES

1. SEWER LENGTHS NOTED IN PROFILE ARE CENTER OF MANHOLE TO CENTER OF MANHOLE.
2. WATER/SEWER SEPARATION SHALL CONFORM TO MAG SPECIFICATION 610 AND MAG STANDARD DETAILS 404-1.
3. ALL SEWER SERVICE LINES SHALL HAVE A MINIMUM DEPTH OF 4- FEET AT THE PROPERTY LINE.

SCALE
0 20' 40'

HORIZ: 1" = 20'
VERT: 1" = 2'

811 Know what's below. Call before you dig. 1-800-782-5348

CONTRACT NO. 21PS12

REV NO.	COMMENT	DATE

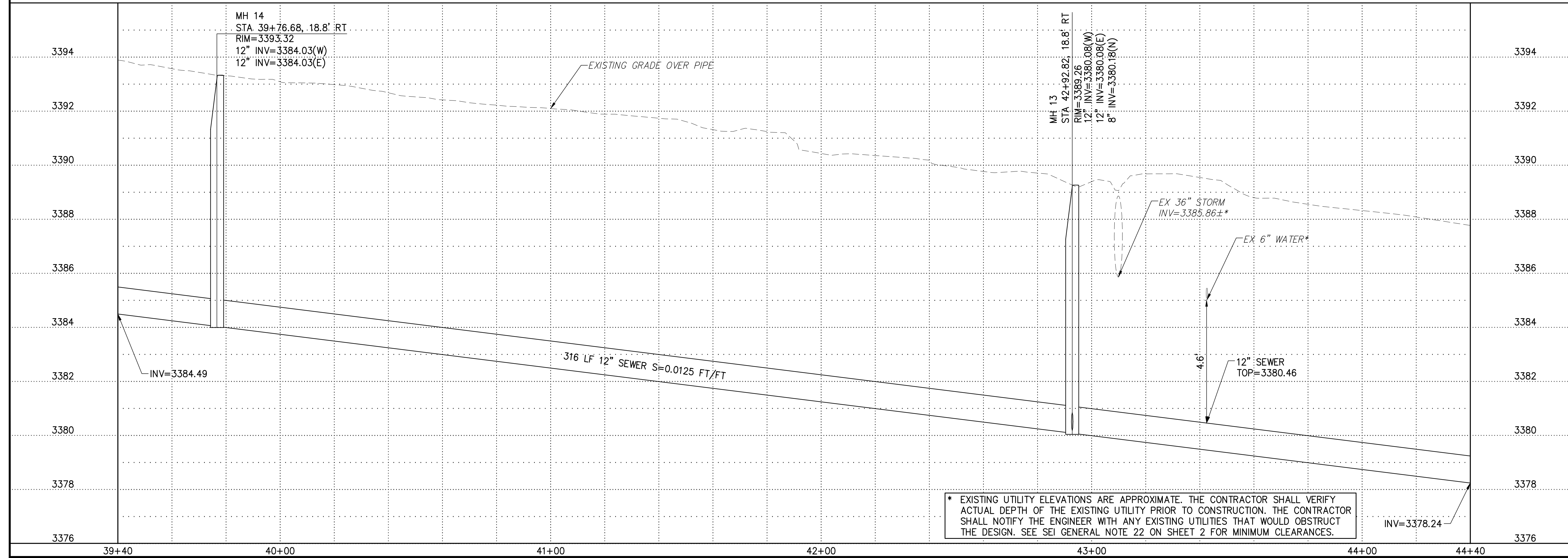
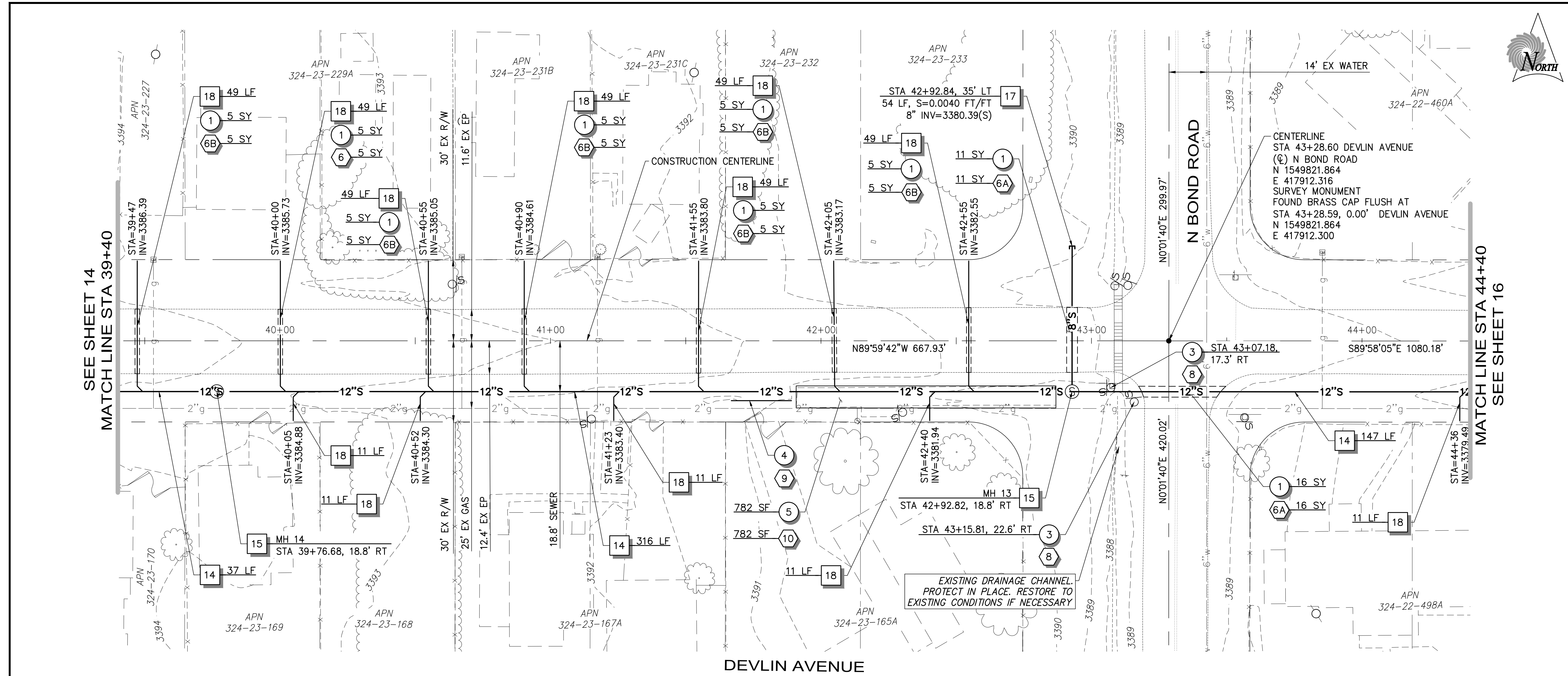
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MOHAVE COUNTY
NEW KINGMAN-BUTLER SEWER

DEVLIN AVENUE

CONSTRUCTION NOTES

- REMOVAL**
- 1 SAWCUT & REMOVE EXISTING ASPHALT 62 SY
 - 3 REMOVE & SALVAGE EXISTING STREET SIGN 2 EA
 - 4 REMOVE EXISTING DRIVEWAY CULVERT 1 EA
 - 5 REMOVE CONCRETE DRAINAGE APRON 782 SF
- HARDSCAPE**
- 6A ASPHALT REPLACEMENT PER MODIFIED MOHAVE COUNTY STD DETAIL 200-1 & DETAIL A, SHEET 26 27 SY
 - 6B ASPHALT REPLACEMENT PER MODIFIED MAG STD DETAIL 200-1/200-2 & DETAIL A, SHEET 26 30 SY
 - 8 REPLACE SALVAGED STREET SIGN PER MOHAVE COUNTY STD DETAIL 131-2 2 EA
 - 9 REPLACE DRIVEWAY CULVERT. MATCH EXISTING SIZE & LENGTH 1 EA
 - 10 7' WIDE CONCRETE DRAINAGE APRON. THICKNESS & SLOPE TO MATCH EXISTING 782 SF
- GRAVITY SEWER**
- 14 12" PVC SDR 35 GRAVITY SEWER LINE. SLOPE & LENGTH PER PROFILE. SEWER PIPE TRENCHING & BACKFILL PER DETAIL A, SHEET 25. TRACER WIRE TO BE INSTALLED OVER ALL SECTIONS OF PIPE 500 LF
 - 15 4' DIAMETER PRE-CAST CONCRETE MANHOLE, BASE, 30" FRAME & COVER PER COK STD DETAIL 420-1 & MAG STD DETAIL 423-2. INVERT NOTED PER PROFILE 2 EA
 - 17 SEWER STUB PER CITY OF KINGMAN STD DETAIL 427. SIZE, LENGTH & SLOPE PER PLAN 1 EA
 - 18 SEWER LATERAL PER COK STD DETAIL 440-3. STATION AND DEPTH OF SEWER LATERAL INVERT PER PLAN 398 LF



GENERAL NOTES

1. SEWER LENGTHS NOTED IN PROFILE ARE CENTER OF MANHOLE TO CENTER OF MANHOLE.
2. WATER/SEWER SEPARATION SHALL CONFORM TO MAG SPECIFICATION 610 AND MAG STANDARD DETAILS 404-1.
3. ALL SEWER SERVICE LINES SHALL HAVE A MINIMUM DEPTH OF 4- FEET AT THE PROPERTY LINE.

SCALE
0 20' 40'

HORIZ: 1" = 20'
VERT: 1" = 2'

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CONTRACT NO. 21PS12

REV NO.	COMMENT	DATE

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CONSTRUCTION NOTES

- REMOVAL**
- 1 SAWCUT & REMOVE EXISTING ASPHALT 25 SY
 - 3 REMOVE & SALVAGE EXISTING STREET SIGN 1 EA
- HARDSCAPE**
- 6B ASPHALT REPLACEMENT PER MODIFIED MAG STD DETAIL 200-1/200-2 & DETAIL A, SHEET 26 25 SY
 - 8 REPLACE SALVAGED STREET SIGN PER MOHAVE COUNTY STD DETAIL 131-2 1 EA
- GRAVITY SEWER**
- 14 12" PVC SDR 35 GRAVITY SEWER LINE. SLOPE & LENGTH PER PROFILE. SEWER PIPE TRENCHING & BACKFILL PER DETAIL A, SHEET 25. TRACER WIRE TO BE INSTALLED OVER ALL SECTIONS OF PIPE 500 LF
 - 15 4' DIAMETER PRE-CAST CONCRETE MANHOLE, BASE, 30" FRAME & COVER PER COK STD DETAIL 420-1 & MAG STD DETAIL 423-2. INVERT NOTED PER PROFILE 1 EA
 - 18 SEWER LATERAL PER COK STD DETAIL 440-3. STATION AND DEPTH OF SEWER LATERAL INVERT PER PLAN 324 LF

GENERAL NOTES

1. SEWER LENGTHS NOTED IN PROFILE ARE CENTER OF MANHOLE TO CENTER OF MANHOLE.
2. WATER/SEWER SEPARATION SHALL CONFORM TO MAG SPECIFICATION 610 AND MAG STANDARD DETAILS 404-1.
3. ALL SEWER SERVICE LINES SHALL HAVE A MINIMUM DEPTH OF 4'-FEET AT THE PROPERTY LINE.


SCALE
0 20' 40'

HORIZ: 1" = 20'
VERT: 1" = 2'

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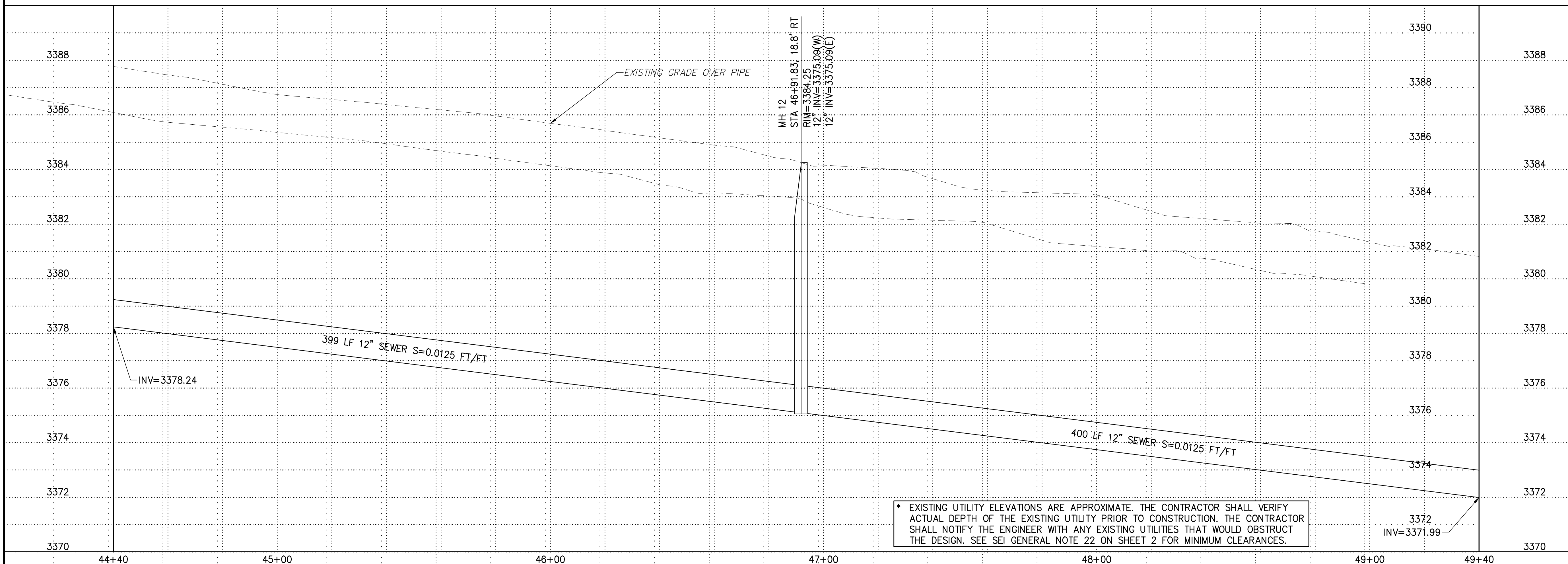
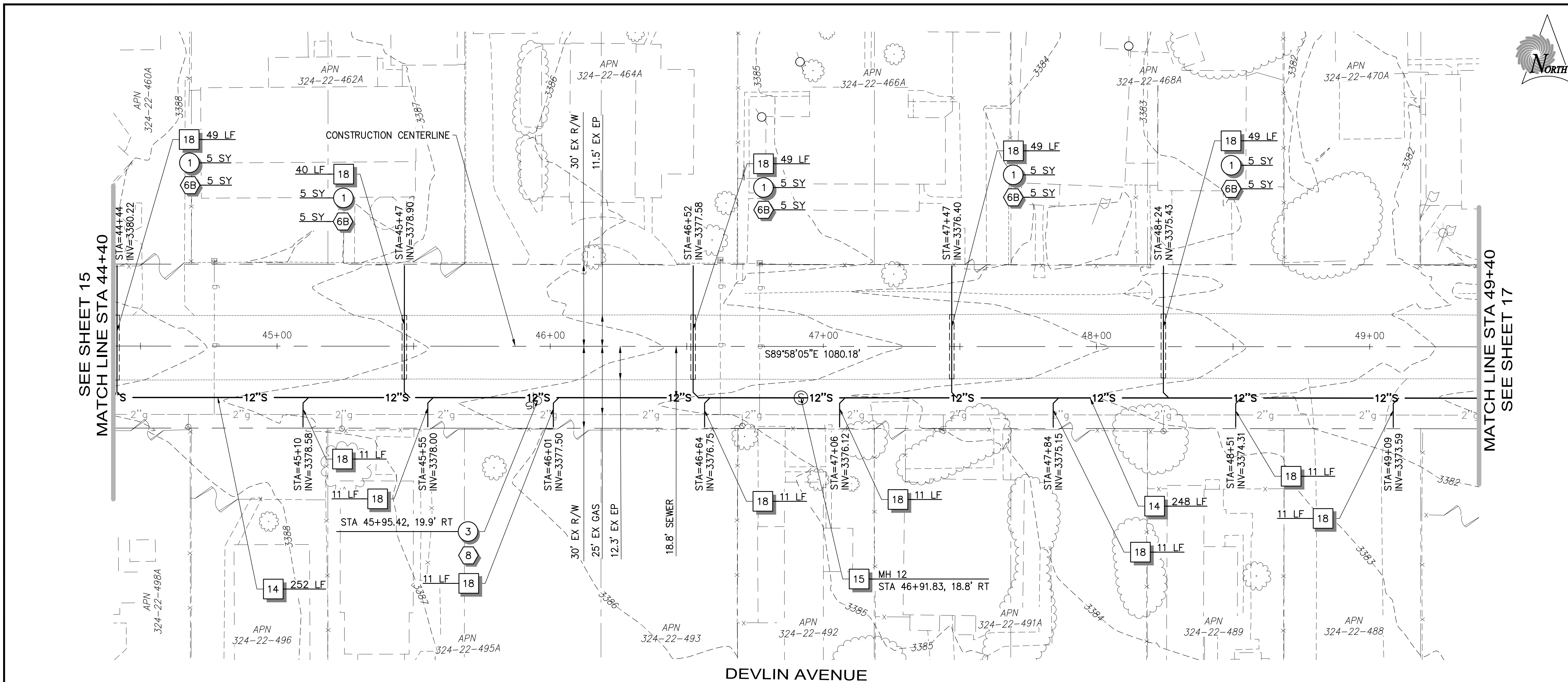
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NEW KINGMAN-BUTLER SEWER**

DEVLIN AVENUE

SEI NO. 08433 DESIGNED IDS DRAWN IDS CHECKED JV

S9 16 of 28

ENG22-0064



* EXISTING UTILITY ELEVATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ACTUAL DEPTH OF THE EXISTING UTILITY PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER WITH ANY EXISTING UTILITIES THAT WOULD OBSTRUCT THE DESIGN. SEE SEI GENERAL NOTE 22 ON SHEET 2 FOR MINIMUM CLEARANCES.

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CONSTRUCTION NOTES

- REMOVAL**
- 1 SAWCUT & REMOVE EXISTING ASPHALT 64 SY
 - 3 REMOVE & SALVAGE EXISTING STREET SIGN 1 EA
- HARDSCAPE**
- 6A ASPHALT REPLACEMENT PER MODIFIED MOHAVE COUNTY STD DETAIL 200-1 & DETAIL A, SHEET 26 34 SY
 - 6B ASPHALT REPLACEMENT PER MODIFIED MAG STD DETAIL 200-1/200-2 & DETAIL A, SHEET 26 30 SY
 - 8 REPLACE SALVAGED STREET SIGN PER MOHAVE COUNTY STD DETAIL 131-2 1 EA
- GRAVITY SEWER**
- 14 12" PVC SDR 35 GRAVITY SEWER LINE. SLOPE & LENGTH PER PROFILE. SEWER PIPE TRENCHING & BACKFILL PER DETAIL A, SHEET 25. TRACER WIRE TO BE INSTALLED OVER ALL SECTIONS OF PIPE 500 LF
 - 15 4' DIAMETER PRE-CAST CONCRETE MANHOLE, BASE, 30" FRAME & COVER PER COK STD DETAIL 420-1 & MAG STD DETAIL 423-2. INVERT NOTED PER PROFILE 2 EA
 - 17 SEWER STUB PER CITY OF KINGMAN STD DETAIL 427. SIZE, LENGTH & SLOPE PER PLAN 1 EA
 - 18 SEWER LATERAL PER COK STD DETAIL 440-3. STATION AND DEPTH OF SEWER LATERAL INVERT PER PLAN 360 LF

GENERAL NOTES

1. SEWER LENGTHS NOTED IN PROFILE ARE CENTER OF MANHOLE TO CENTER OF MANHOLE.
2. WATER/SEWER SEPARATION SHALL CONFORM TO MAG SPECIFICATION 610 AND MAG STANDARD DETAILS 404-1.
3. ALL SEWER SERVICE LINES SHALL HAVE A MINIMUM DEPTH OF 4'-FEET AT THE PROPERTY LINE.

SCALE
0 20' 40'

HORIZ: 1" = 20'
VERT: 1" = 2'

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CONTRACT NO. 21PS12

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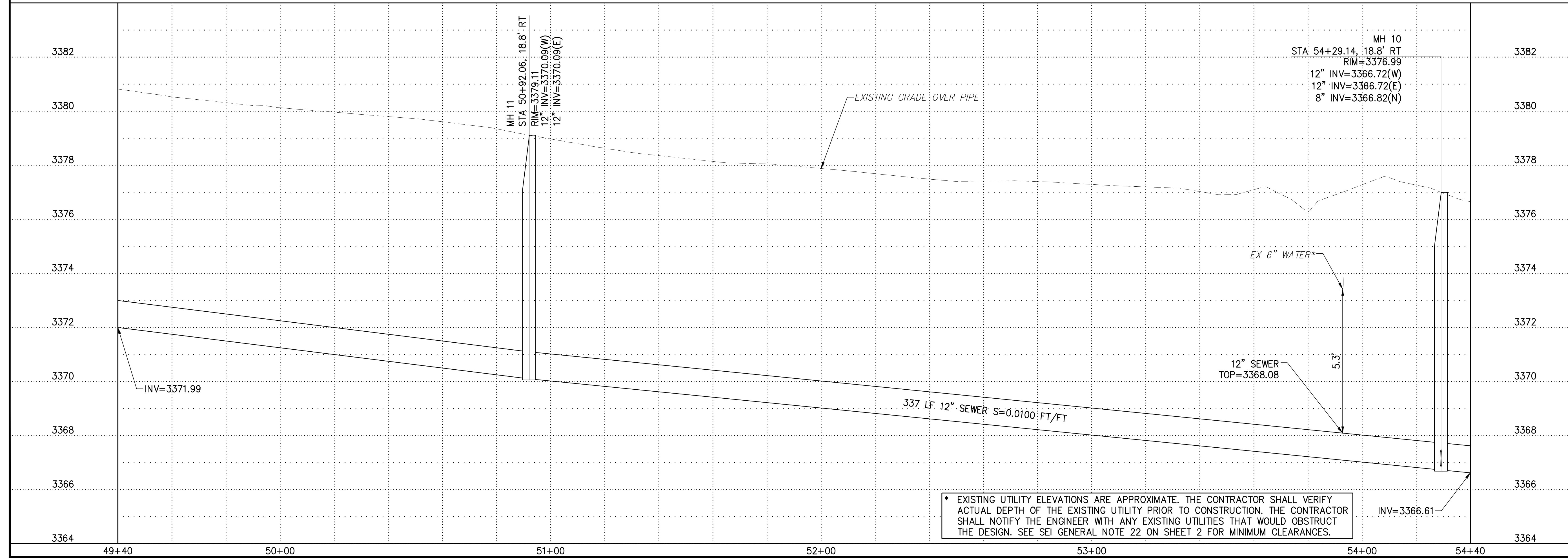
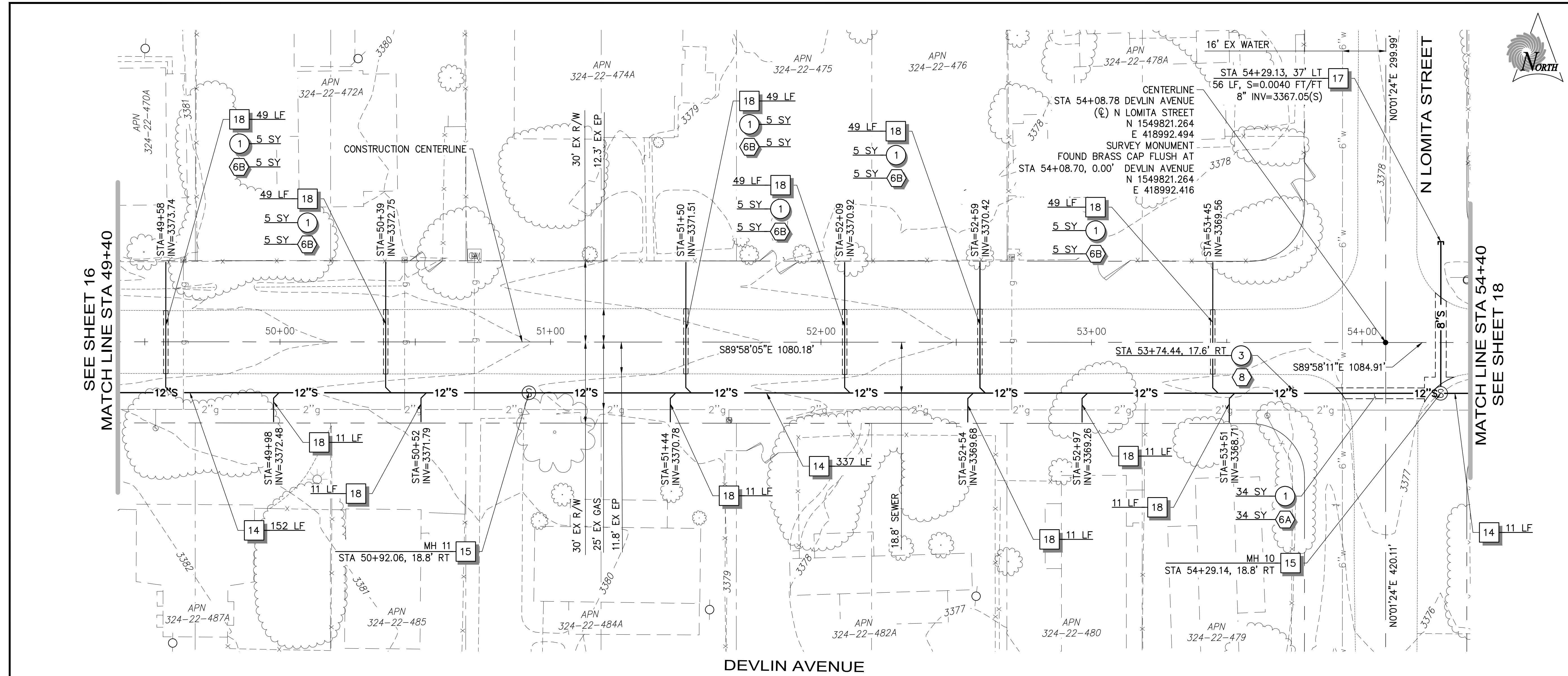
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NEW KINGMAN-BUTLER SEWER**

DEVLIN AVENUE

SEI NO. 08433 DESIGNED IDS DRAWN IDS CHECKED JV

S10 | 17 of 28

ENG22-0064



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SEE SHEET 16
MATCH LINE STA 49+40

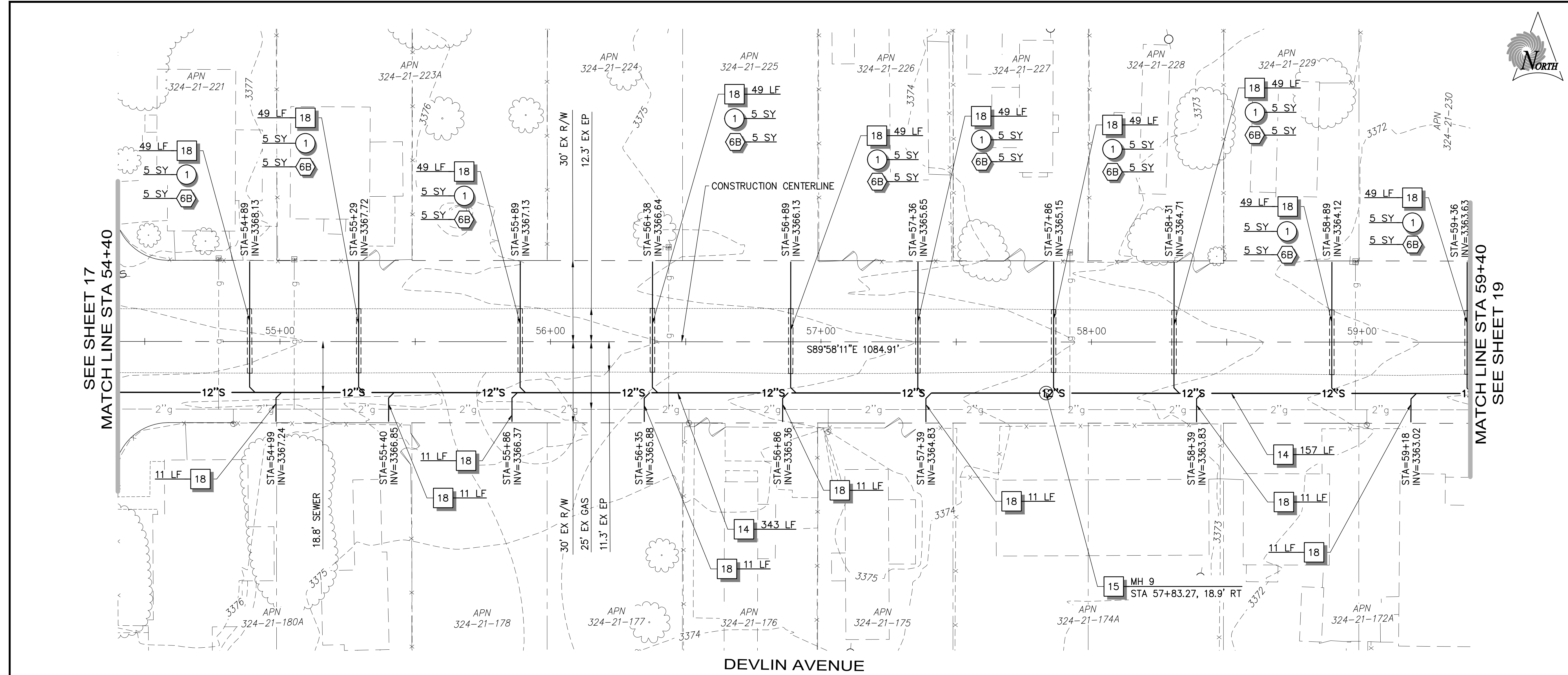
MATCH LINE STA 54+40
SEE SHEET 18



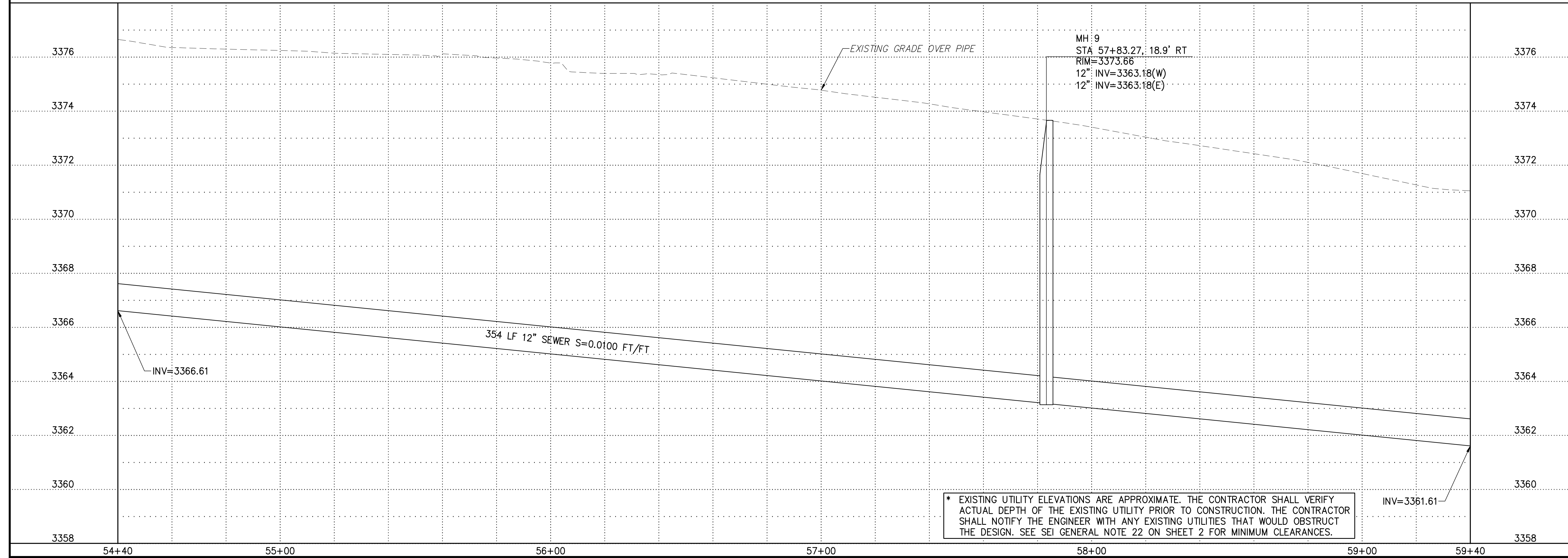
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CONSTRUCTION NOTES

- REMOVAL**
- 1 SAWCUT & REMOVE EXISTING ASPHALT 50 SY
- HARDSCAPE**
- 6B ASPHALT REPLACEMENT PER MODIFIED MAG STD DETAIL 200-1/200-2 & DETAIL A, SHEET 26 50 SY
- GRAVITY SEWER**
- 14 12" PVC SDR 35 GRAVITY SEWER LINE. SLOPE & LENGTH PER PROFILE. SEWER PIPE TRENCHING & BACKFILL PER DETAIL A, SHEET 25. TRACER WIRE TO BE INSTALLED OVER ALL SECTIONS OF PIPE 500 LF
 - 15 4' DIAMETER PRE-CAST CONCRETE MANHOLE, BASE, 30" FRAME & COVER PER COK STD DETAIL 420-1 & MAG STD DETAIL 423-2. INVERT NOTED PER PROFILE 1 EA
 - 18 SEWER LATERAL PER COK STD DETAIL 440-3. STATION AND DEPTH OF SEWER LATERAL INVERT PER PLAN 578 LF



DEVLIN AVENUE



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GENERAL NOTES

1. SEWER LENGTHS NOTED IN PROFILE ARE CENTER OF MANHOLE TO CENTER OF MANHOLE.
2. WATER/SEWER SEPARATION SHALL CONFORM TO MAG SPECIFICATION 610 AND MAG STANDARD DETAILS 404-1.
3. ALL SEWER SERVICE LINES SHALL HAVE A MINIMUM DEPTH OF 4'-FEET AT THE PROPERTY LINE.

SCALE
0 20' 40'

HORIZ: 1" = 20'
VERT: 1" = 2'

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CONSTRUCTION NOTES

- REMOVAL**
- 1 SAWCUT & REMOVE EXISTING ASPHALT 35 SY
- HARDSCAPE**
- 6B ASPHALT REPLACEMENT PER MODIFIED MAG STD DETAIL 200-1/200-2 & DETAIL A, SHEET 26 35 SY
- GRAVITY SEWER**
- 14 12" PVC SDR 35 GRAVITY SEWER LINE. SLOPE & LENGTH PER PROFILE. SEWER PIPE TRENCHING & BACKFILL PER DETAIL A, SHEET 25. TRACER WIRE TO BE INSTALLED OVER ALL SECTIONS OF PIPE 500 LF
 - 15 4' DIAMETER PRE-CAST CONCRETE MANHOLE, BASE, 30" FRAME & COVER PER COK STD DETAIL 420-1 & MAG STD DETAIL 423-2. INVERT NOTED PER PROFILE 1 EA
 - 18 SEWER LATERAL PER COK STD DETAIL 440-3. STATION AND DEPTH OF SEWER LATERAL INVERT PER PLAN 431 LF

GENERAL NOTES

1. SEWER LENGTHS NOTED IN PROFILE ARE CENTER OF MANHOLE TO CENTER OF MANHOLE.
2. WATER/SEWER SEPARATION SHALL CONFORM TO MAG SPECIFICATION 610 AND MAG STANDARD DETAILS 404-1.
3. ALL SEWER SERVICE LINES SHALL HAVE A MINIMUM DEPTH OF 4'-FEET AT THE PROPERTY LINE.

SCALE
0 20' 40'

HORIZ: 1" = 20'
VERT: 1" = 2'

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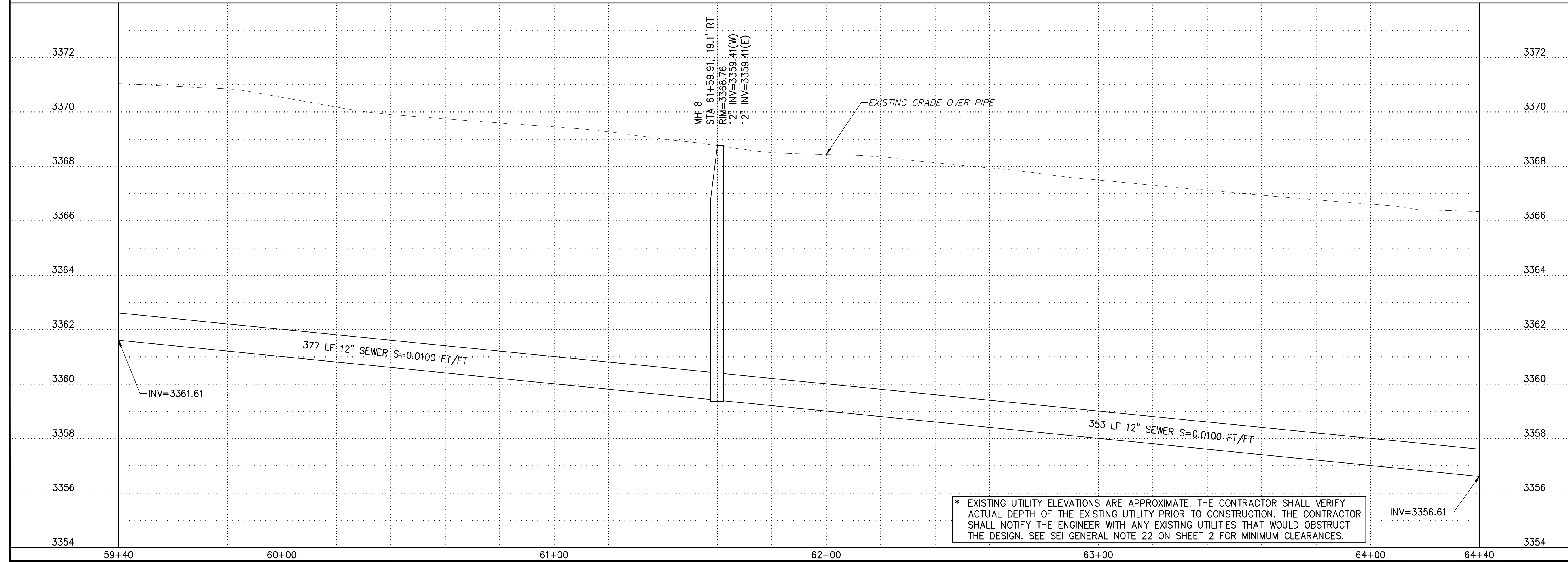
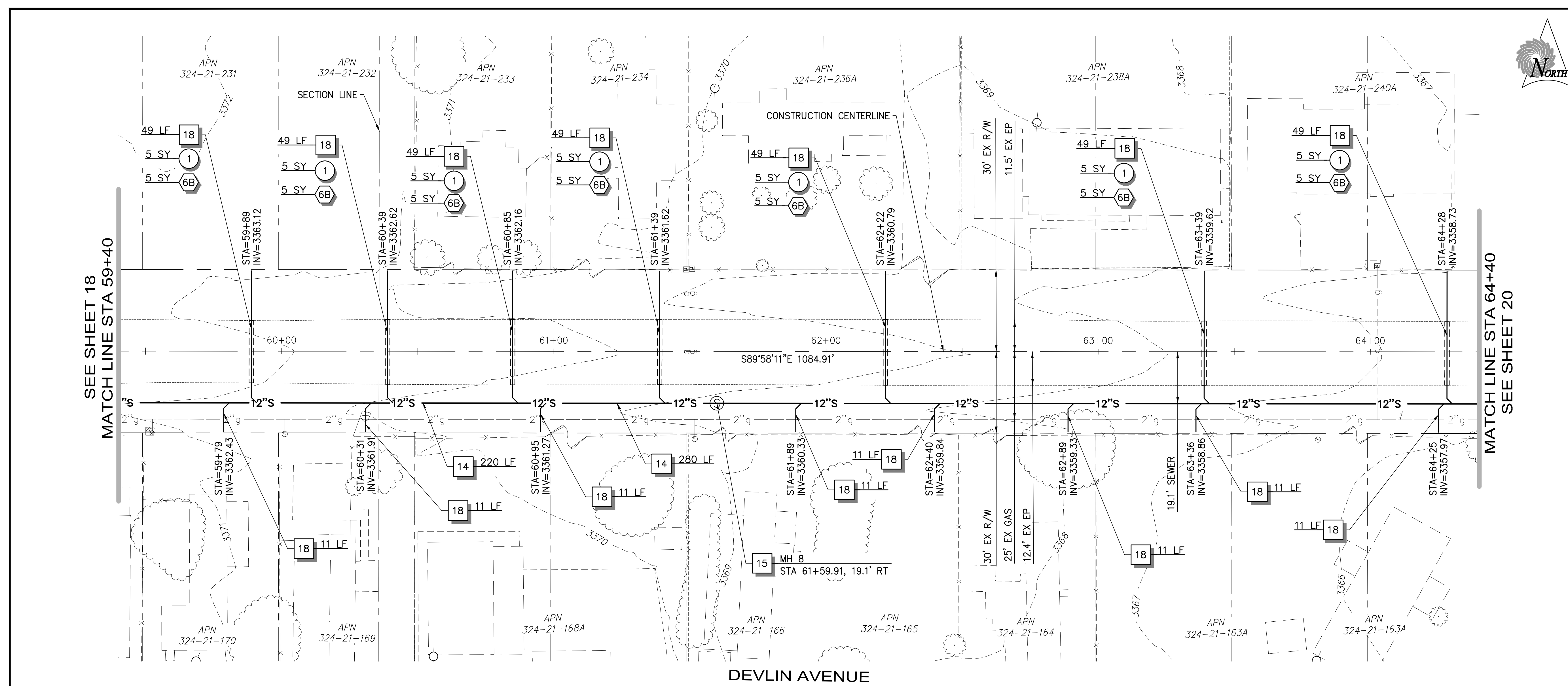
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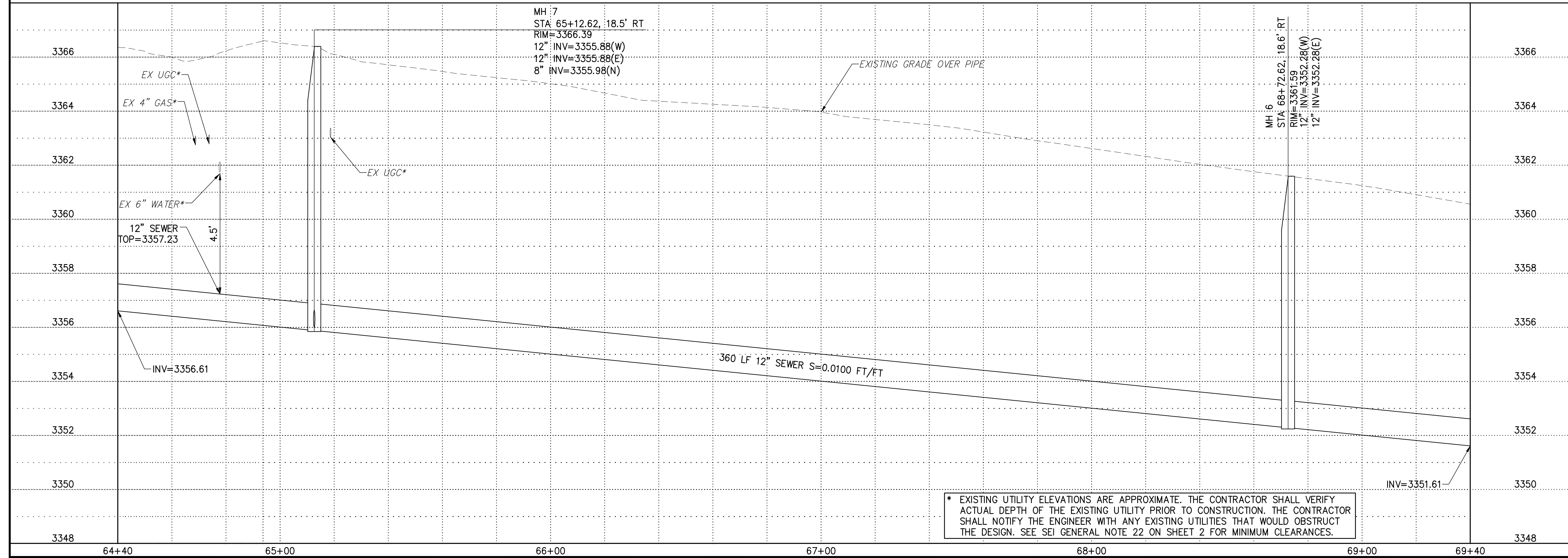
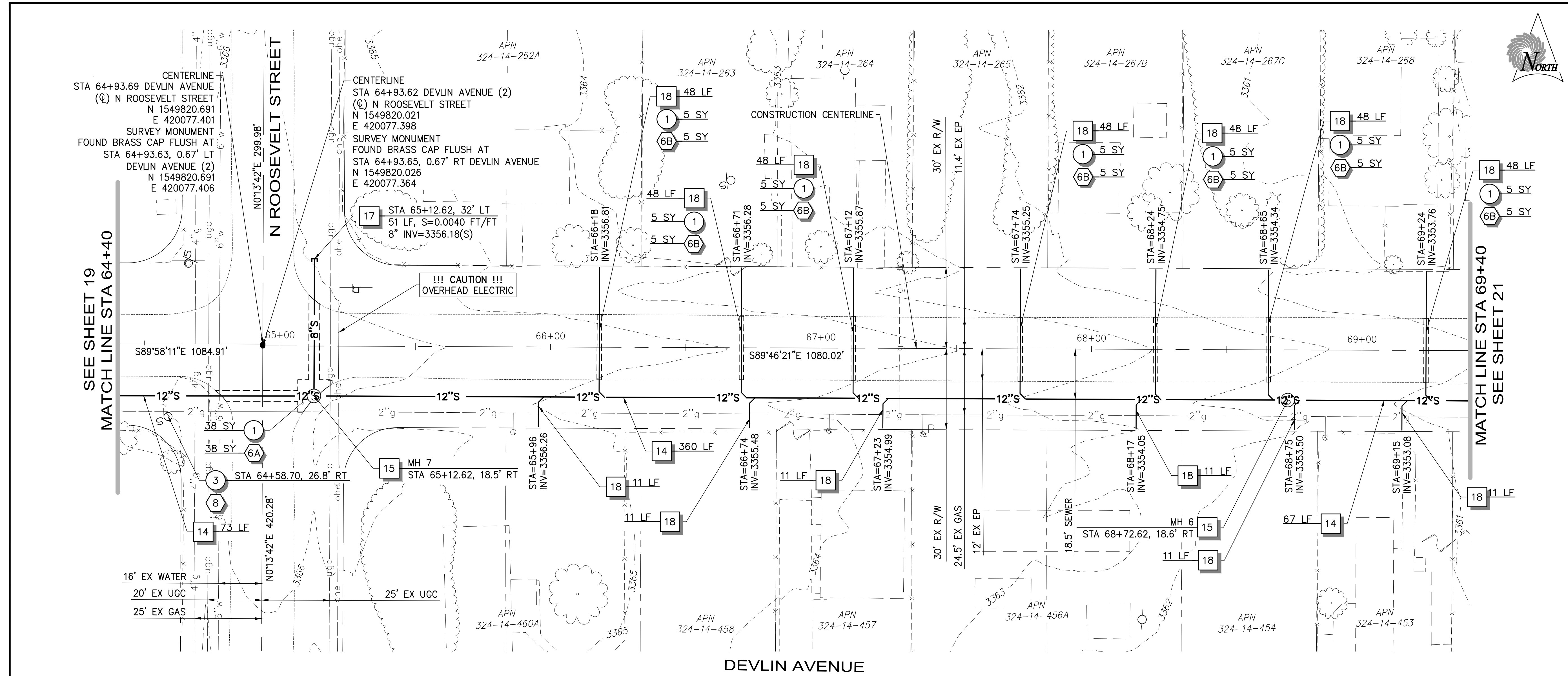


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CONSTRUCTION NOTES

- REMOVAL**
- 1 SAWCUT & REMOVE EXISTING ASPHALT 73 SY
 - 3 REMOVE & SALVAGE EXISTING STREET SIGN 1 EA
- HARDSCAPE**
- 6A ASPHALT REPLACEMENT PER MODIFIED MOHAVE COUNTY STD DETAIL 200-1 & DETAIL A, SHEET 26 38 SY
 - 6B ASPHALT REPLACEMENT PER MODIFIED MAG STD DETAIL 200-1/200-2 & DETAIL A, SHEET 26 35 SY
 - 8 REPLACE SALVAGED STREET SIGN PER MOHAVE COUNTY STD DETAIL 131-2 1 EA
- GRAVITY SEWER**
- 14 12" PVC SDR 35 GRAVITY SEWER LINE. SLOPE & LENGTH PER PROFILE. SEWER PIPE TRENCHING & BACKFILL PER DETAIL A, SHEET 25. TRACER WIRE TO BE INSTALLED OVER ALL SECTIONS OF PIPE 500 LF
 - 15 4' DIAMETER PRE-CAST CONCRETE MANHOLE, BASE, 30" FRAME & COVER PER COK STD DETAIL 420-1 & MAG STD DETAIL 423-2. INVERT NOTED PER PROFILE 2 EA
 - 17 SEWER STUB PER CITY OF KINGMAN STD DETAIL 427. SIZE, LENGTH & SLOPE PER PLAN 1 EA
 - 18 SEWER LATERAL PER COK STD DETAIL 440-3. STATION AND DEPTH OF SEWER LATERAL INVERT PER PLAN 402 LF



GENERAL NOTES

- SEWER LENGTHS NOTED IN PROFILE ARE CENTER OF MANHOLE TO CENTER OF MANHOLE.
- WATER/SEWER SEPARATION SHALL CONFORM TO MAG SPECIFICATION 610 AND MAG STANDARD DETAILS 404-1.
- ALL SEWER SERVICE LINES SHALL HAVE A MINIMUM DEPTH OF 4'-FEET AT THE PROPERTY LINE.

SCALE
 0 20' 40'
 HORIZ: 1" = 20'
 VERT: 1" = 2'

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CONTRACT NO. 21PS12

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SEI NO. 08433 DESIGNED IDS DRAWN IDS CHECKED JV
S13 20 of 28
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CONSTRUCTION NOTES

- REMOVAL**
- 1 SAWCUT & REMOVE EXISTING ASPHALT 50 SY
- HARDSCAPE**
- 6B ASPHALT REPLACEMENT PER MODIFIED MAG STD DETAIL 200-1/200-2 & DETAIL A, SHEET 26 50 SY
- GRAVITY SEWER**
- 14 12" PVC SDR 35 GRAVITY SEWER LINE. SLOPE & LENGTH PER PROFILE. SEWER PIPE TRENCHING & BACKFILL PER DETAIL A, SHEET 25. TRACER WIRE TO BE INSTALLED OVER ALL SECTIONS OF PIPE 500 LF
 - 15 4' DIAMETER PRE-CAST CONCRETE MANHOLE, BASE, 30" FRAME & COVER PER COK STD DETAIL 420-1 & MAG STD DETAIL 423-2. INVERT NOTED PER PROFILE 1 EA
 - 18 SEWER LATERAL PER COK STD DETAIL 440-3. STATION AND DEPTH OF SEWER LATERAL INVERT PER PLAN 600 LF

GENERAL NOTES

1. SEWER LENGTHS NOTED IN PROFILE ARE CENTER OF MANHOLE TO CENTER OF MANHOLE.
2. WATER/SEWER SEPARATION SHALL CONFORM TO MAG SPECIFICATION 610 AND MAG STANDARD DETAILS 404-1.
3. ALL SEWER SERVICE LINES SHALL HAVE A MINIMUM DEPTH OF 4'-FEET AT THE PROPERTY LINE.

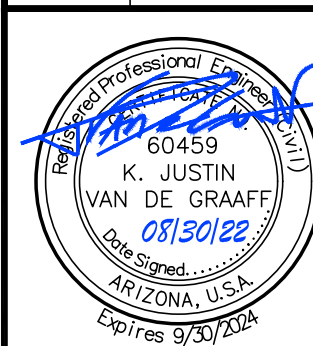
SCALE
0 20' 40'

HORIZ: 1" = 20'
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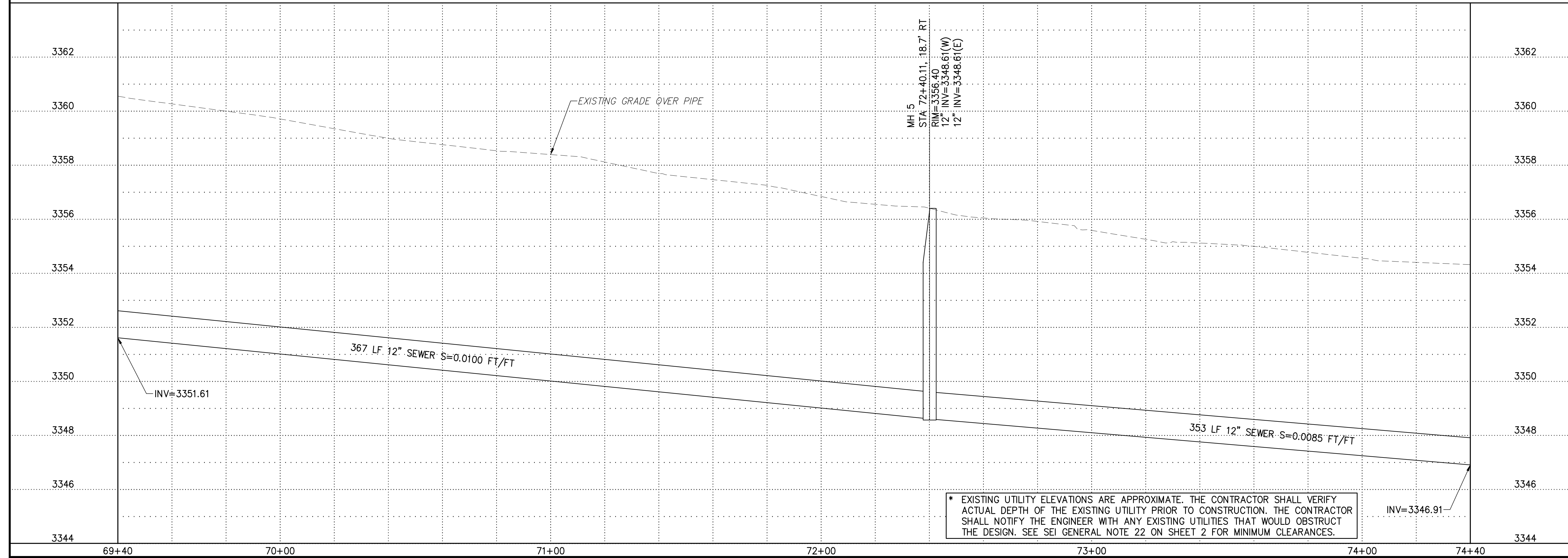
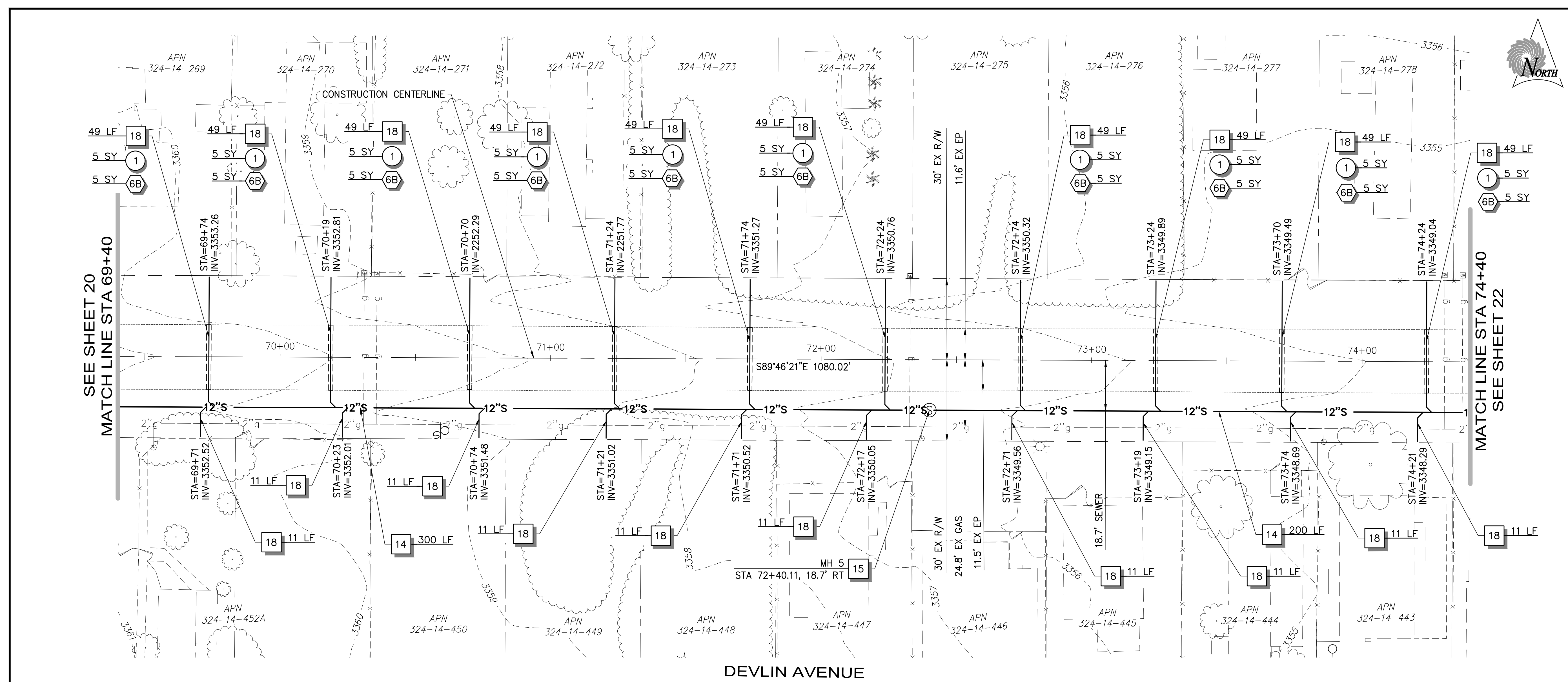
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ENG22-0064

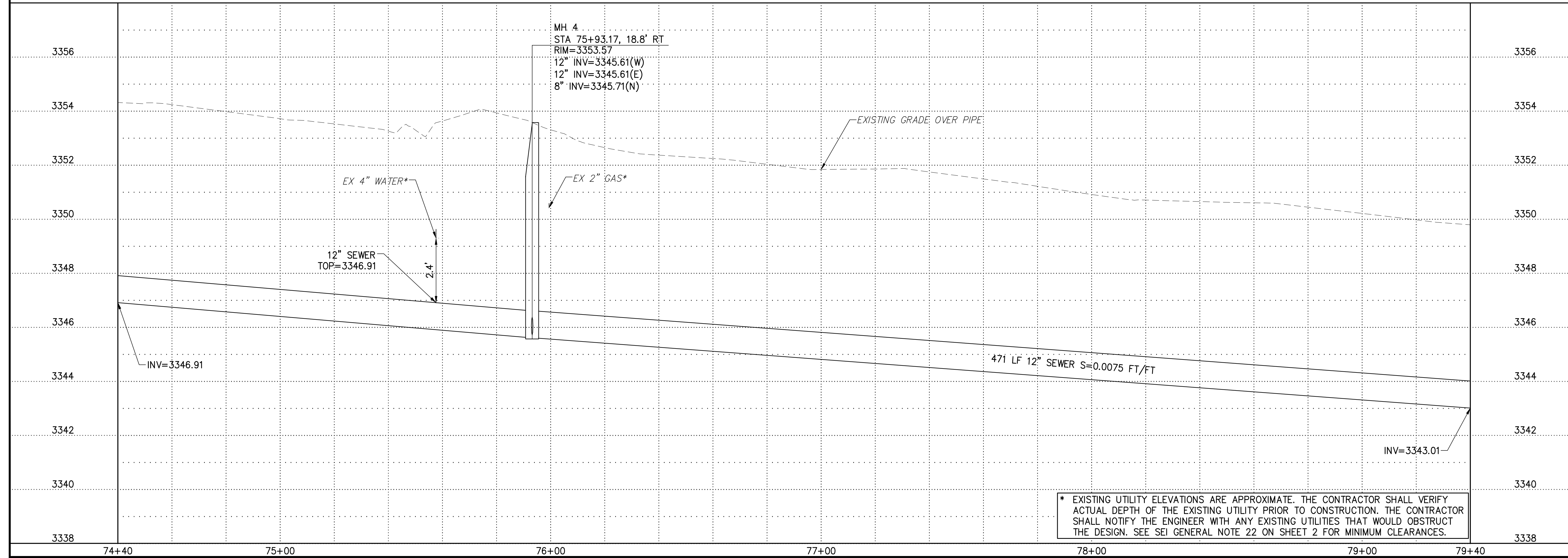
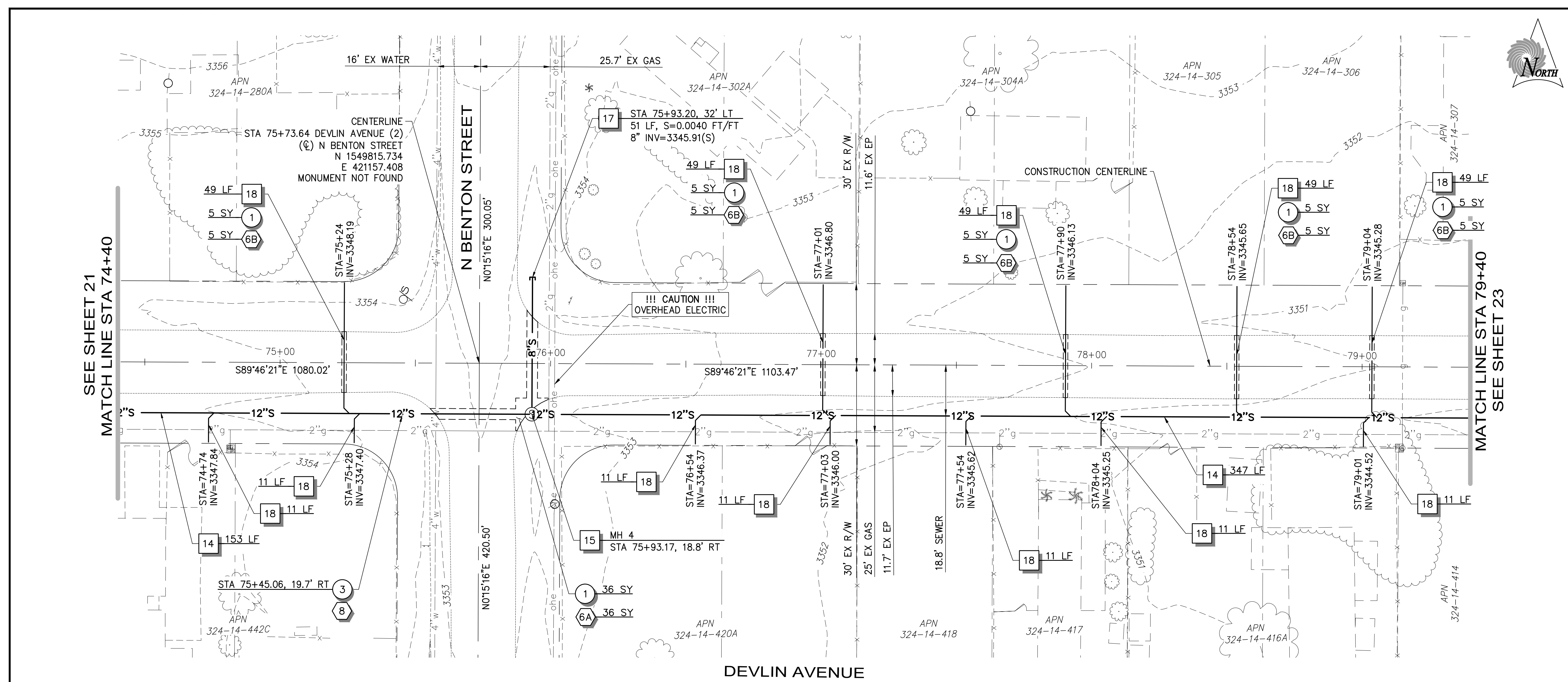


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CONSTRUCTION NOTES

- REMOVAL**
- 1 SAWCUT & REMOVE EXISTING ASPHALT 61 SY
 - 3 REMOVE & SALVAGE EXISTING STREET SIGN 1 EA
- HARDSCAPE**
- 6A ASPHALT REPLACEMENT PER MODIFIED MOHAVE COUNTY STD DETAIL 200-1 & DETAIL A, SHEET 26 36 SY
 - 6B ASPHALT REPLACEMENT PER MODIFIED MAG STD DETAIL 200-1/200-2 & DETAIL A, SHEET 26 25 SY
 - 8 REPLACE SALVAGED STREET SIGN PER MOHAVE COUNTY STD DETAIL 131-2 1 EA
- GRAVITY SEWER**
- 14 12" PVC SDR 35 GRAVITY SEWER LINE. SLOPE & LENGTH PER PROFILE. SEWER PIPE TRENCHING & BACKFILL PER DETAIL A, SHEET 25. TRACER WIRE TO BE INSTALLED OVER ALL SECTIONS OF PIPE 500 LF
 - 15 4' DIAMETER PRE-CAST CONCRETE MANHOLE, BASE, 30" FRAME & COVER PER COK STD DETAIL 420-1 & MAG STD DETAIL 423-2. INVERT NOTED PER PROFILE 1 EA
 - 17 SEWER STUB PER CITY OF KINGMAN STD DETAIL 427. SIZE, LENGTH & SLOPE PER PLAN 1 EA
 - 18 SEWER LATERAL PER COK STD DETAIL 440-3. STATION AND DEPTH OF SEWER LATERAL INVERT PER PLAN 322 LF



GENERAL NOTES

- SEWER LENGTHS NOTED IN PROFILE ARE CENTER OF MANHOLE TO CENTER OF MANHOLE.
- WATER/SEWER SEPARATION SHALL CONFORM TO MAG SPECIFICATION 610 AND MAG STANDARD DETAILS 404-1.
- ALL SEWER SERVICE LINES SHALL HAVE A MINIMUM DEPTH OF 4- FEET AT THE PROPERTY LINE.

SCALE
0 20' 40'

HORIZ: 1" = 20'
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SEI NO. 08433 DESIGNED IDS DRAWN IDS CHECKED JV **S15 22 of 28**

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CONSTRUCTION NOTES

- REMOVAL**
- 1 SAWCUT & REMOVE EXISTING ASPHALT 30 SY
- HARDSCAPE**
- 6B ASPHALT REPLACEMENT PER MODIFIED MAG STD DETAIL 200-1/200-2 & DETAIL A, SHEET 26 30 SY
- GRAVITY SEWER**
- 14 12" PVC SDR 35 GRAVITY SEWER LINE. SLOPE & LENGTH PER PROFILE. SEWER PIPE TRENCHING & BACKFILL PER DETAIL A, SHEET 25. TRACER WIRE TO BE INSTALLED OVER ALL SECTIONS OF PIPE 500 LF
 - 15 4' DIAMETER PRE-CAST CONCRETE MANHOLE, BASE, 30" FRAME & COVER PER COK STD DETAIL 420-1 & MAG STD DETAIL 423-2. INVERT NOTED PER PROFILE 1 EA
 - 18 SEWER LATERAL PER COK STD DETAIL 440-3. STATION AND DEPTH OF SEWER LATERAL INVERT PER PLAN 393 LF

GENERAL NOTES

1. SEWER LENGTHS NOTED IN PROFILE ARE CENTER OF MANHOLE TO CENTER OF MANHOLE.
2. WATER/SEWER SEPARATION SHALL CONFORM TO MAG SPECIFICATION 610 AND MAG STANDARD DETAILS 404-1.
3. ALL SEWER SERVICE LINES SHALL HAVE A MINIMUM DEPTH OF 4- FEET AT THE PROPERTY LINE.

SCALE
0 20' 40'

HORIZ: 1" = 20'
VERT: 1" = 2'

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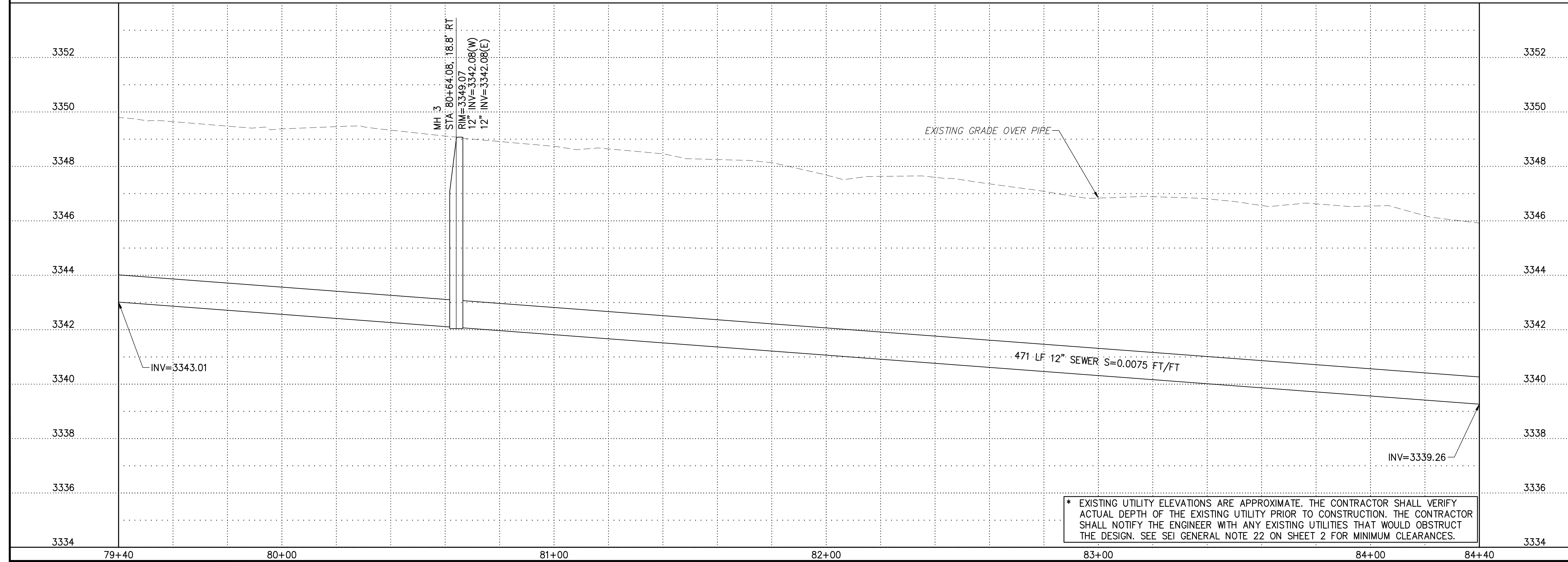
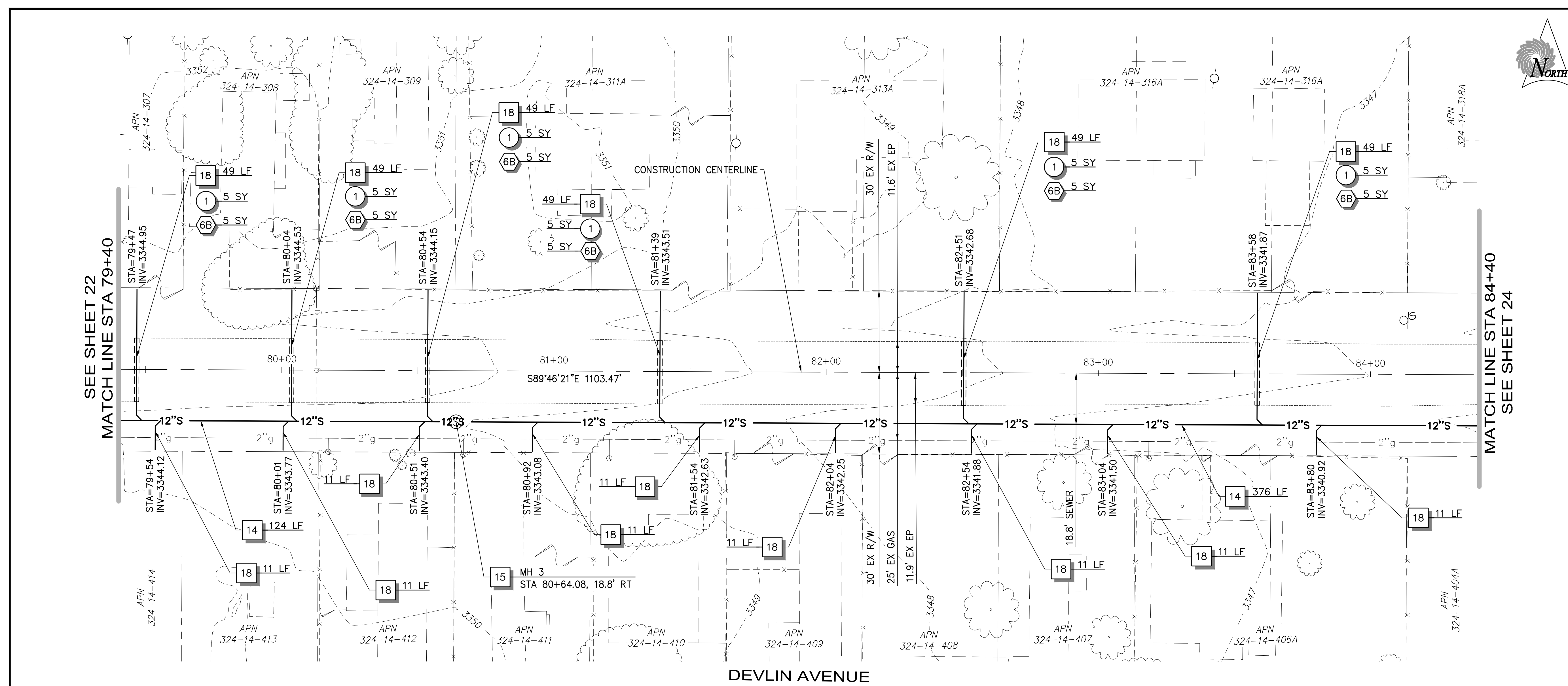
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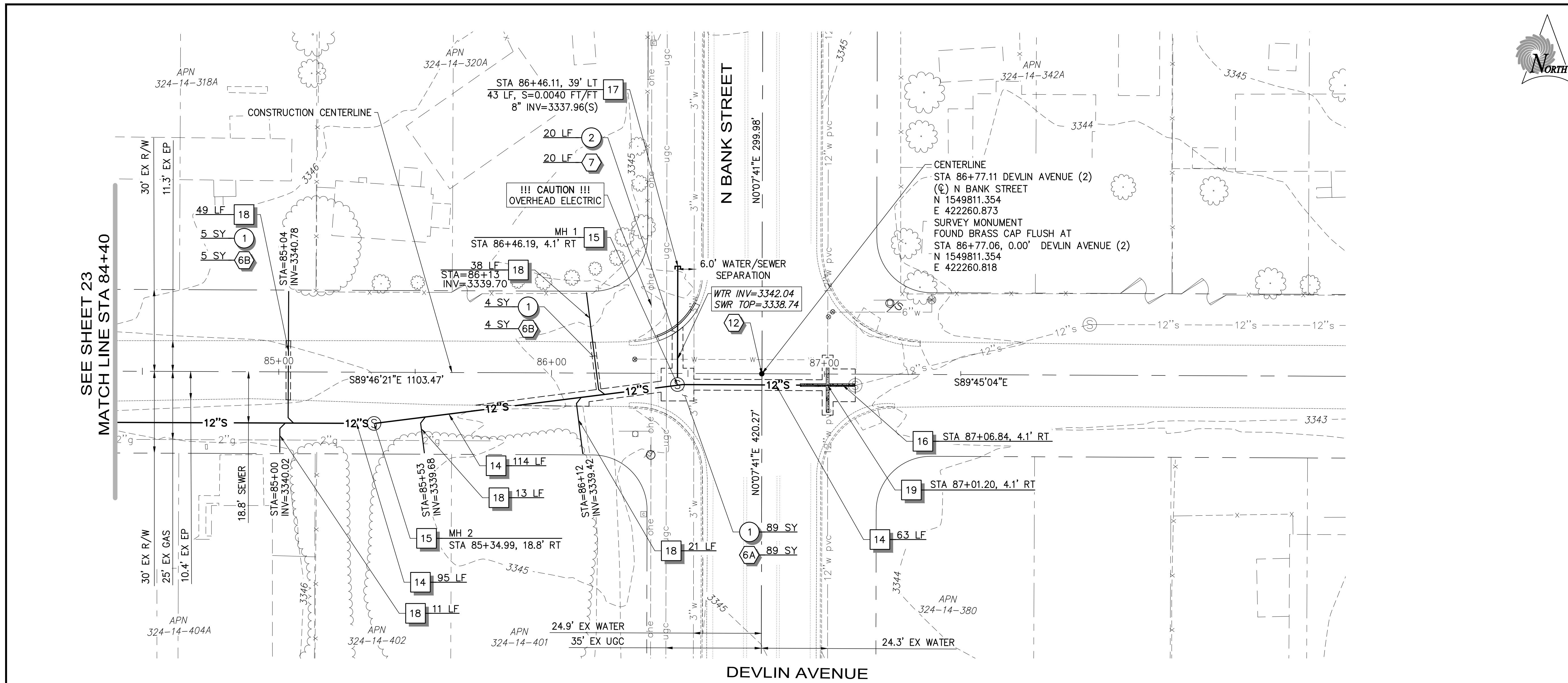
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SEI NO. 08433 DESIGNED IDS DRAWN IDS CHECKED JV **S16 23 of 28**

ENG22-0064

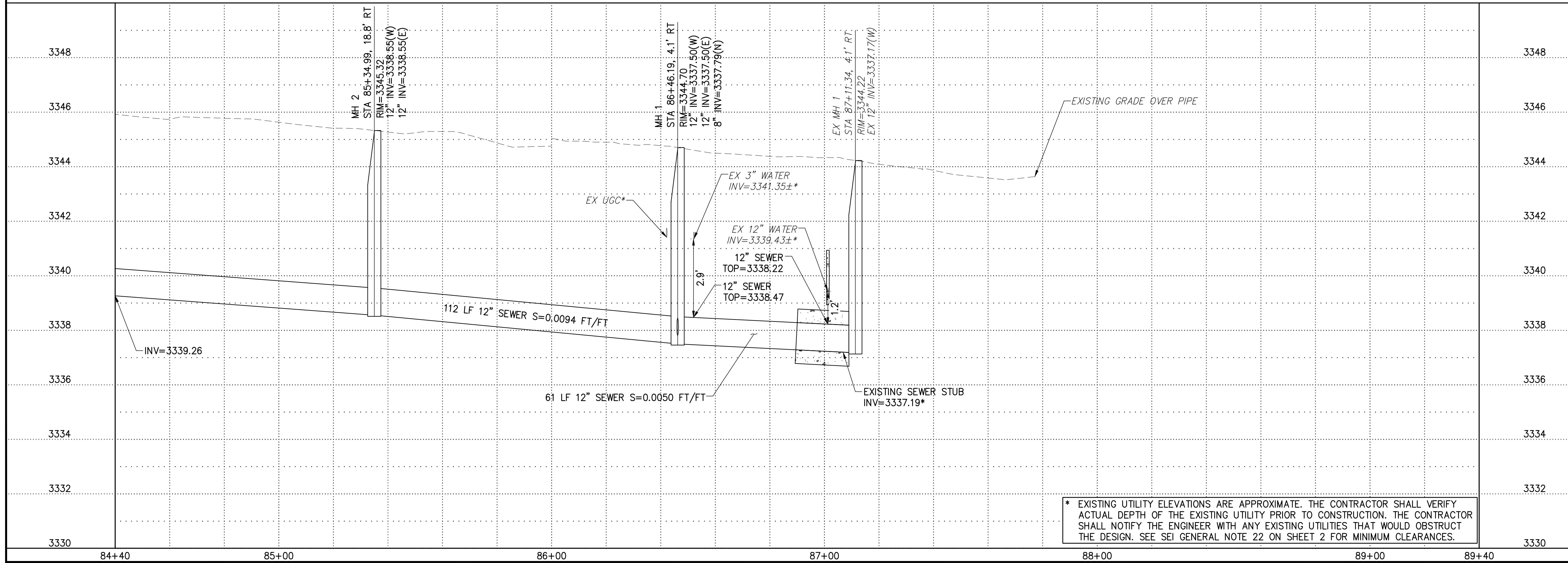


* EXISTING UTILITY ELEVATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ACTUAL DEPTH OF THE EXISTING UTILITY PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER WITH ANY EXISTING UTILITIES THAT WOULD OBSTRUCT THE DESIGN. SEE SEI GENERAL NOTE 22 ON SHEET 2 FOR MINIMUM CLEARANCES.



CONSTRUCTION NOTES

REMOVAL		
1	SAWCUT & REMOVE EXISTING ASPHALT	98 SY
2	SAWCUT & REMOVE EXISTING CURB & GUTTER AT THE JOINTS	20 LF
HARDSCAPE		
6A	ASPHALT REPLACEMENT PER MODIFIED MOHAVE COUNTY STD DETAIL 200-1 & DETAIL A, SHEET 26	89 SY
6B	ASPHALT REPLACEMENT PER MODIFIED MAG STD DETAIL 200-1/200-2 & DETAIL A, SHEET 26	9 SY
7	CURB & GUTTER REPLACEMENT PER MAG STD DETAIL 220-1	20 LF
12	REPLACE EXISTING SURVEY MONUMENT PER MAG STD DETAIL 120, TYPE B	1 EA
GRAVITY SEWER		
14	12" PVC SDR 35 GRAVITY SEWER LINE. SLOPE & LENGTH PER PROFILE. SEWER PIPE TRENCHING & BACKFILL PER DETAIL A, SHEET 25. TRACER WIRE TO BE INSTALLED OVER ALL SECTIONS OF PIPE	272 LF
15	4' DIAMETER PRE-CAST CONCRETE MANHOLE, BASE, 30" FRAME & COVER PER COK STD DETAIL 420-1 & MAG STD DETAIL 423-2. INVERT NOTED PER PROFILE	2 EA
16	CONNECT TO EXISTING SEWER STUB. CONTRACTOR TO VERIFY INVERT OF EXISTING STUB	1 EA
17	SEWER STUB PER CITY OF KINGMAN STD DETAIL 427. SIZE, LENGTH & SLOPE PER PLAN	1 EA
18	SEWER LATERAL PER COK STD DETAIL 440-3. STATION AND DEPTH OF SEWER LATERAL INVERT PER PLAN	132 LF
19	WATER/SEWER SEPARATION/PROTECTION PER COK STD DETAIL 404-1	1 EA



GENERAL NOTES

- SEWER LENGTHS NOTED IN PROFILE ARE CENTER OF MANHOLE TO CENTER OF MANHOLE.
- WATER/SEWER SEPARATION SHALL CONFORM TO MAG SPECIFICATION 610 AND MAG STANDARD DETAILS 404-1.
- ALL SEWER SERVICE LINES SHALL HAVE A MINIMUM DEPTH OF 4'-FEET AT THE PROPERTY LINE.

SCALE
0 20' 40'

HORIZ: 1" = 20'
VERT: 1" = 2'

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CONTRACT NO. 21PS12

REV NO.	COMMENT	DATE

SUNRISE ENGINEERING

2045 SOUTH VINEYARD, SUITE 101
MESA, ARIZONA 85210
TEL 480.768.8600
www.sunrise-eng.com

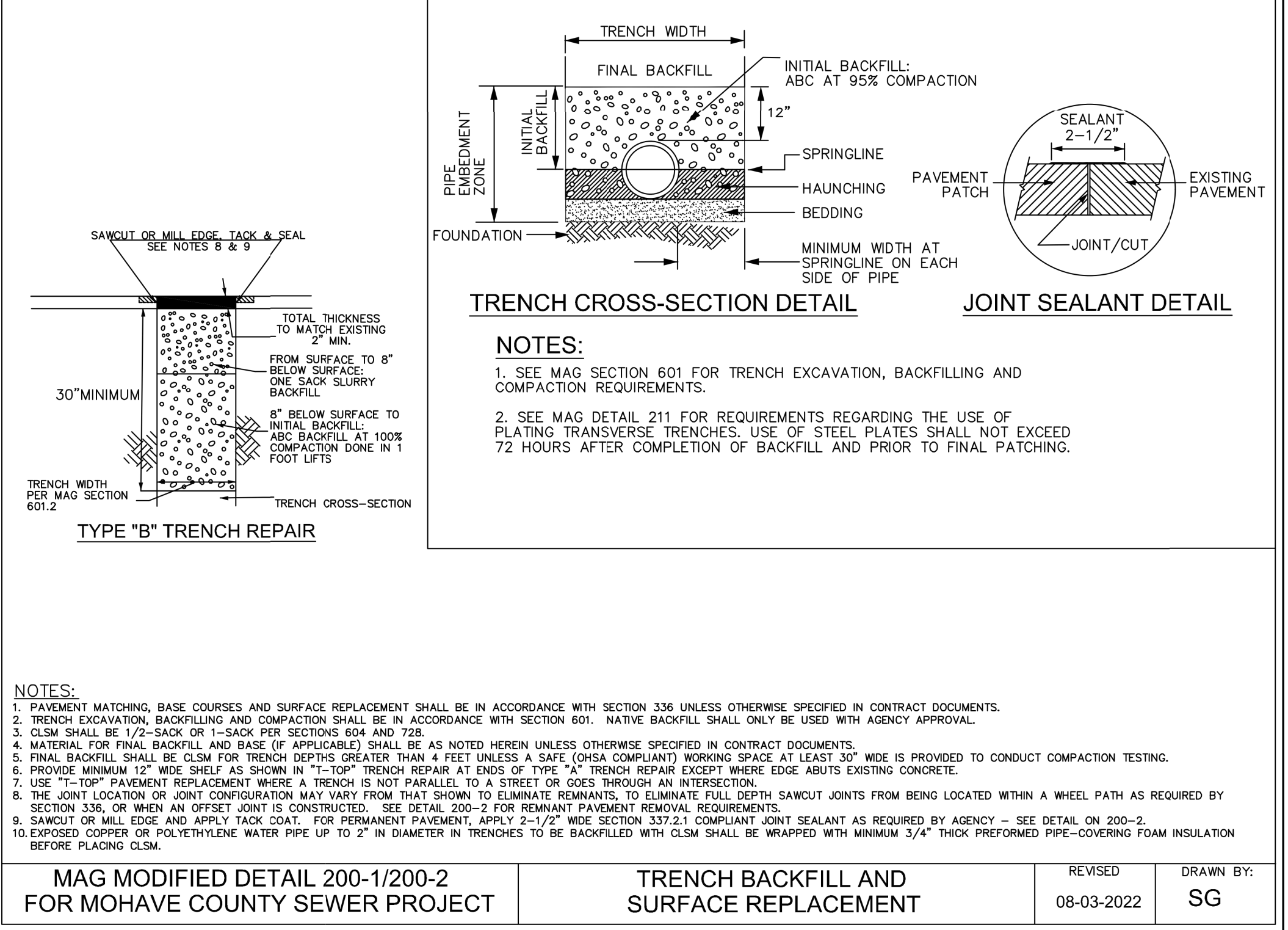
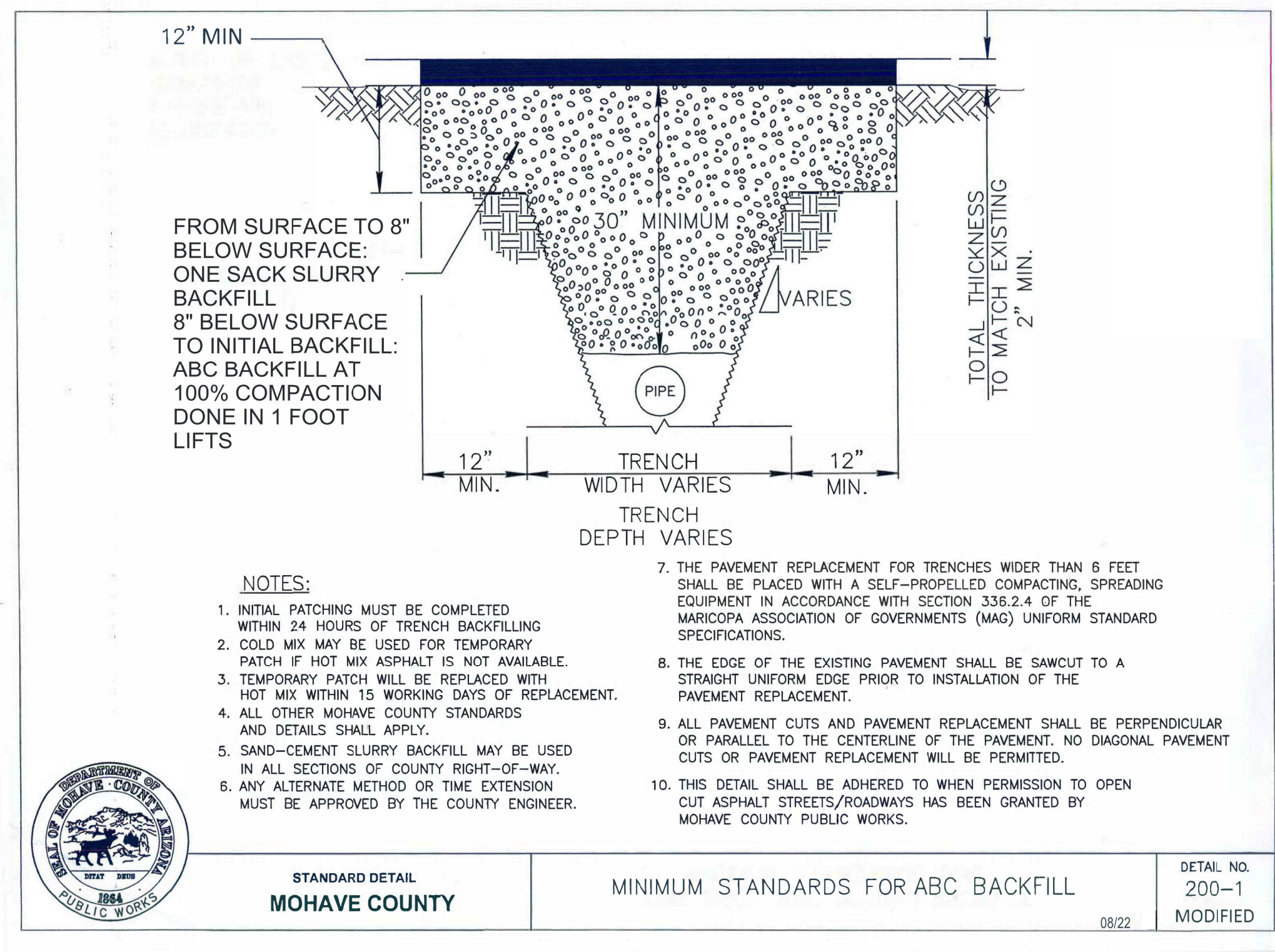
MOHAVE COUNTY
NEW KINGMAN-BUTLER SEWER

DEVLIN AVENUE

SEI NO. 08433	DESIGNED IDS	DRAWN IDS	CHECKED JV	S17 24 of 28
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MINIMUM STANDARDS for NON-CURB ROADWAY DESIGN

CLASSIFICATION	ITEM	A	B	C	D	E	DESIGN SPEED
C	COUNTY HIGHWAY	100'	12'	8'	4'	3:1	40-60 M.P.H.
	ARTERIALS	84'	12'	8'	4'	3:1	40-50 M.P.H.
D	COLLECTORS/DISTRIBUTORS	70'	12'	8'	4'	3:1	30-40 M.P.H.
	LOCAL	50'	12'	8'	-	3:1	30 M.P.H.
	CUL-DE-SAC	50'	12'	8'	-	3:1	25 M.P.H.
E	HILLSIDE/FRONTAGE	50'	12'	2'	-	3:1	30 M.P.H.

NOTES:

ROADWAY CLASSIFICATION TO BE APPROVED BY THE COUNTY ENGINEER

DESIGN SPEED SHALL BE THE MAXIMUM SPEED SHOWN UNLESS DOCUMENTATION IS SUBMITTED TO AND IS APPROVED BY THE COUNTY ENGINEER FOR A LESSER DESIGN SPEED.

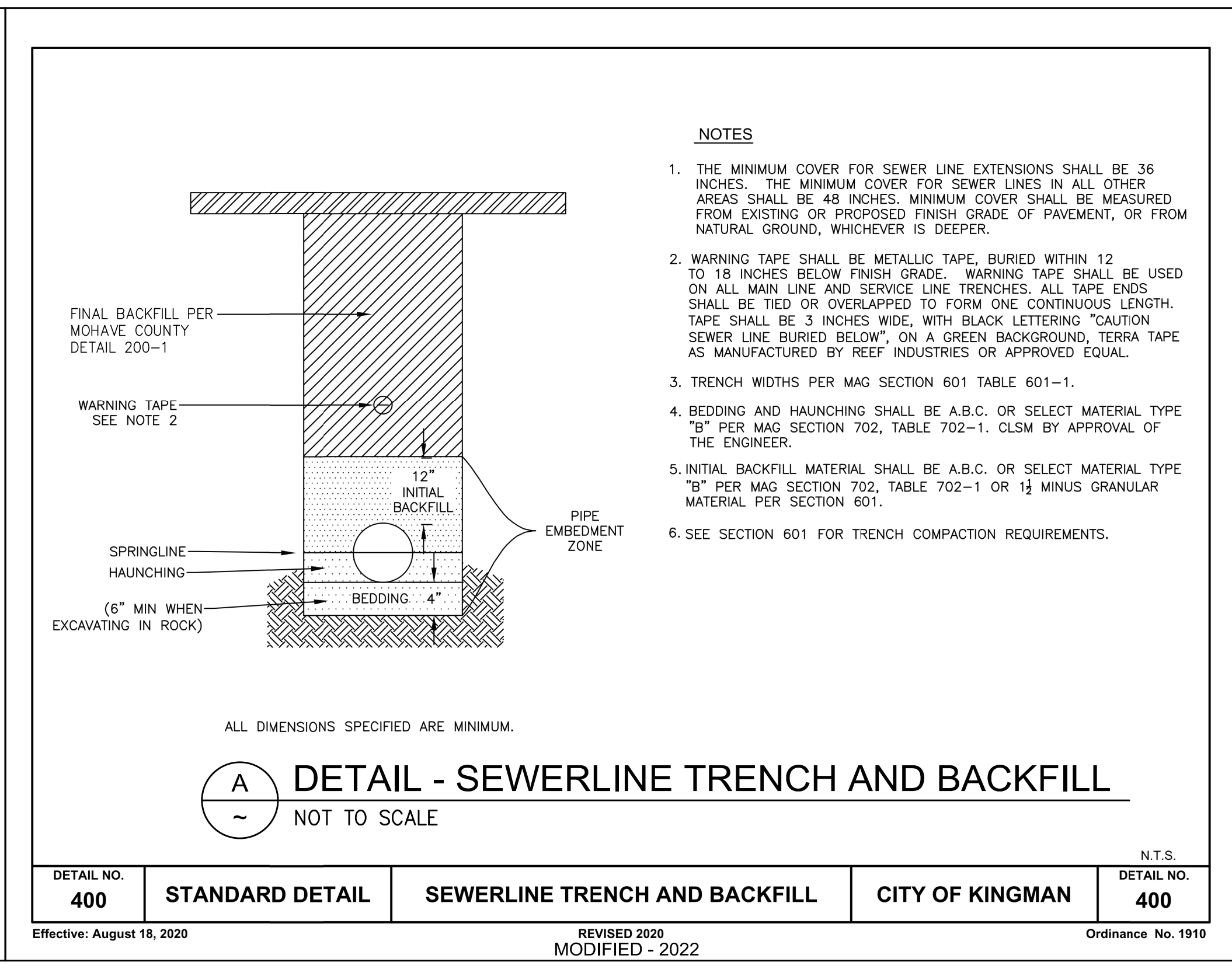
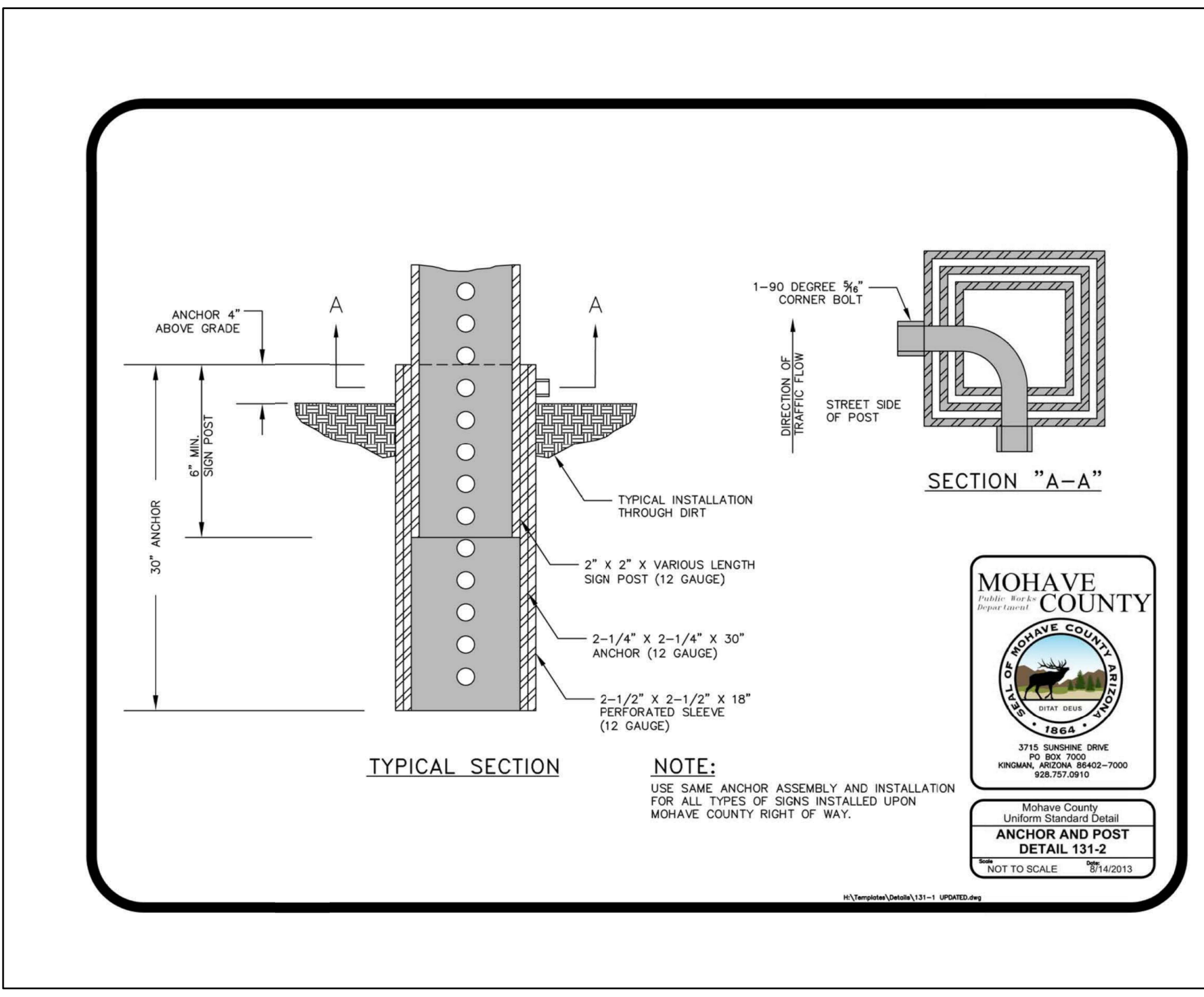
ROADWAY DESIGN SHALL CONFORM TO THE STANDARDS OUTLINED IN THE CURRENT EDITION OF THE AASHTO POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS.

ALL RIGHT-OF-WAY WIDTHS SHOWN ARE MINIMUMS. FINAL DESIGN MAY REQUIRE ADDITIONAL RIGHT OF WAY FOR SUBDIVISIONS RECORDED PRIOR TO SEPT. 7, 1965. THE MINIMUM WIDTH SHALL BE 40 FEET, WHEN A REQUEST FOR MAINTENANCE IS BEING CONSIDERED.

THE 10-YEAR DESIGN STORM MUST BE CONTAINED WITHIN THE IMPROVED DITCH SECTION REMOVED FROM THE SHOULDER. THE 100-YEAR DESIGN STORM CAN NOT OVERTOP THE CENTERLINE OF THE ROAD.

MOHAVE COUNTY
Public Works Department
3715 SANGHVI DRIVE
KINGMAN, ARIZONA 86402-7000
928.757.0910

MoHAVE County
Uniform Standard Detail
STANDARD DETAIL No. 60
NOT TO SCALE



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CONTRACT NO. 21PS12

REV. NO.	COMMENT	DATE

Professional Engineer
K. JUSTIN VAN DE GRAAFF
08/30/22

SUNRISE ENGINEERING

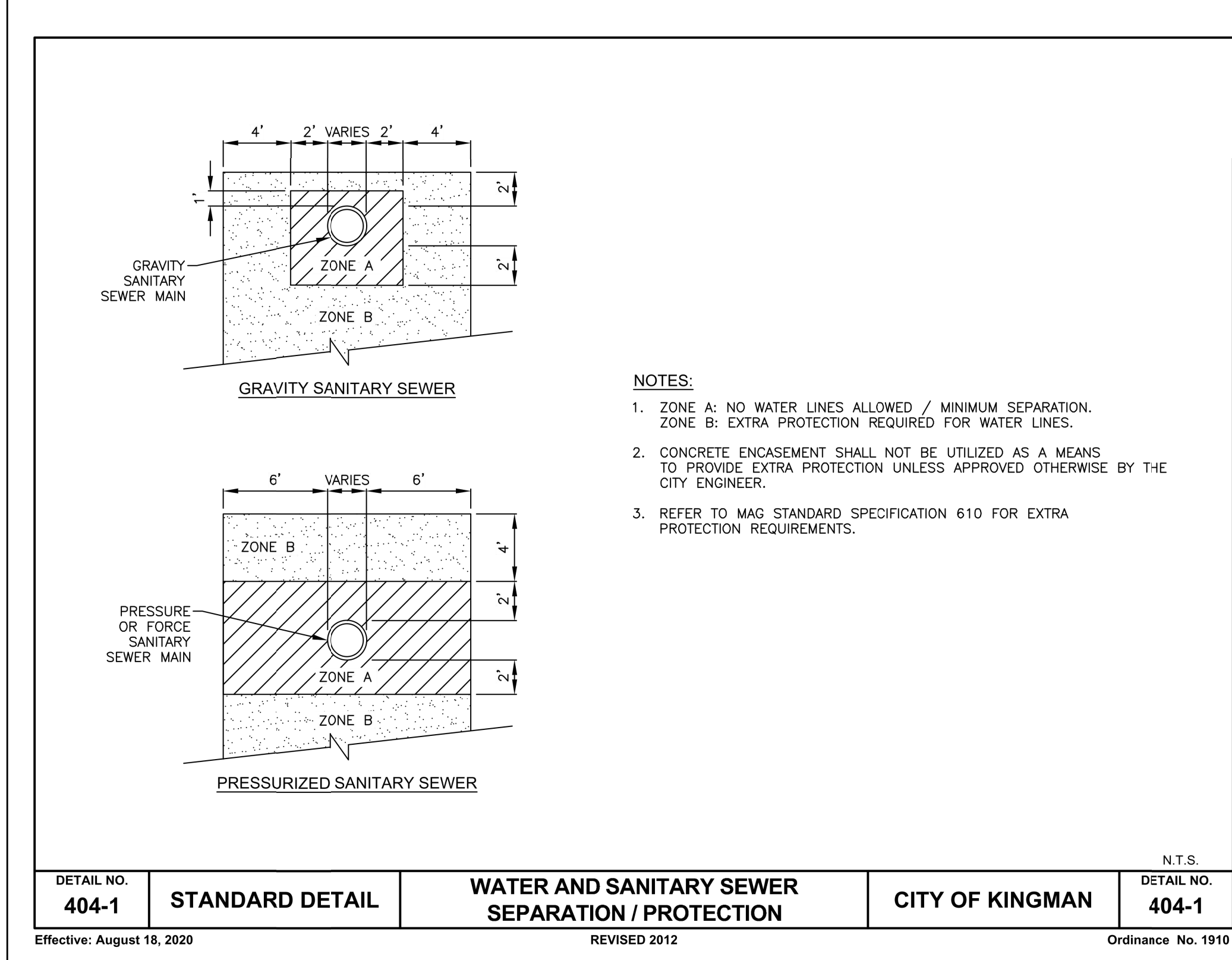
2045 SOUTH VINEYARD, SUITE 101
MESA, ARIZONA 85210
TEL 480.768.8600
www.sunrise-eng.com

MOHAVE COUNTY
NEW KINGMAN-BUTLER SEWER

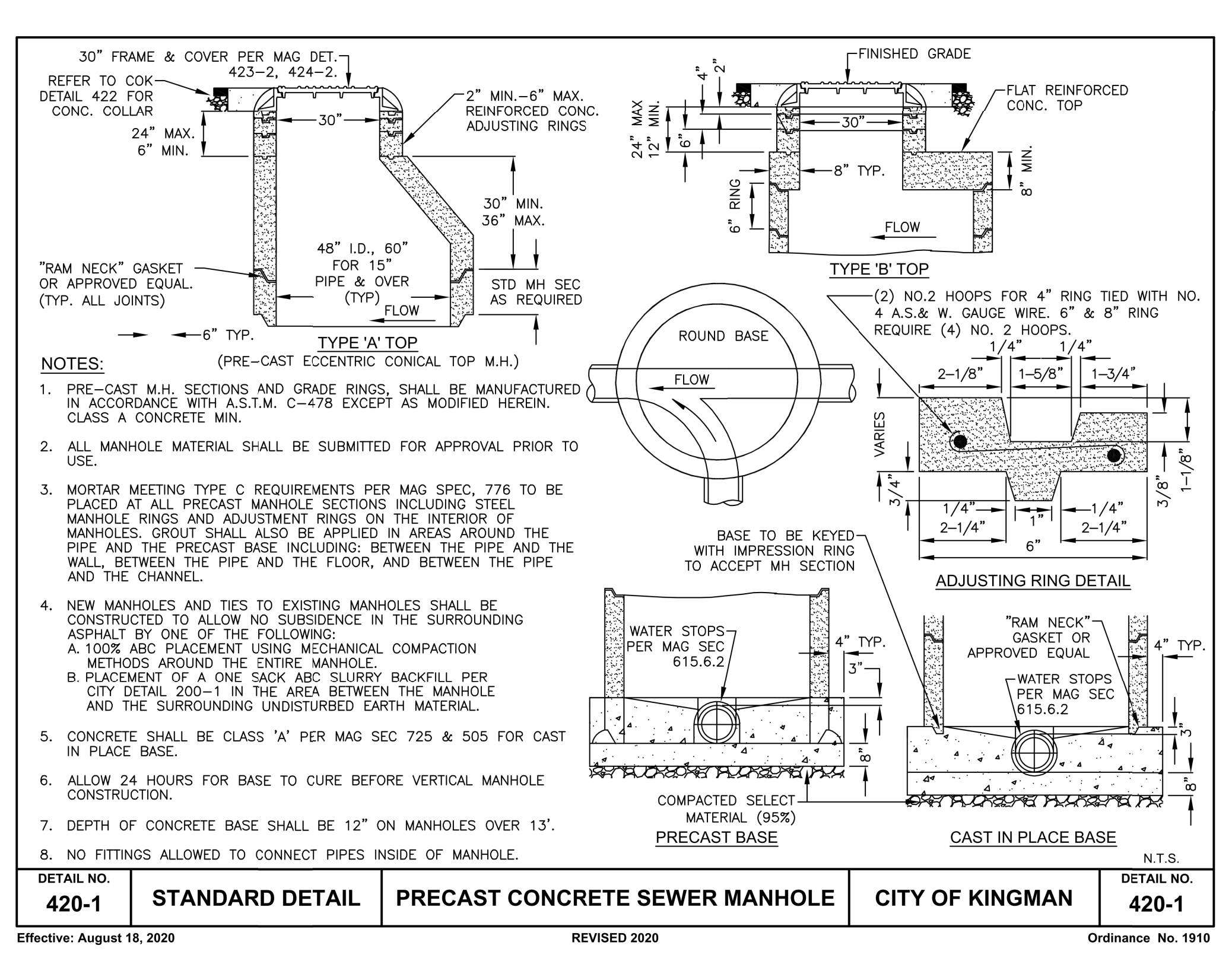
DETAILS

SET NO. 08433	DESIGNED IDS	DRAWN IDS	CHECKED JV	DT1	26 of 28
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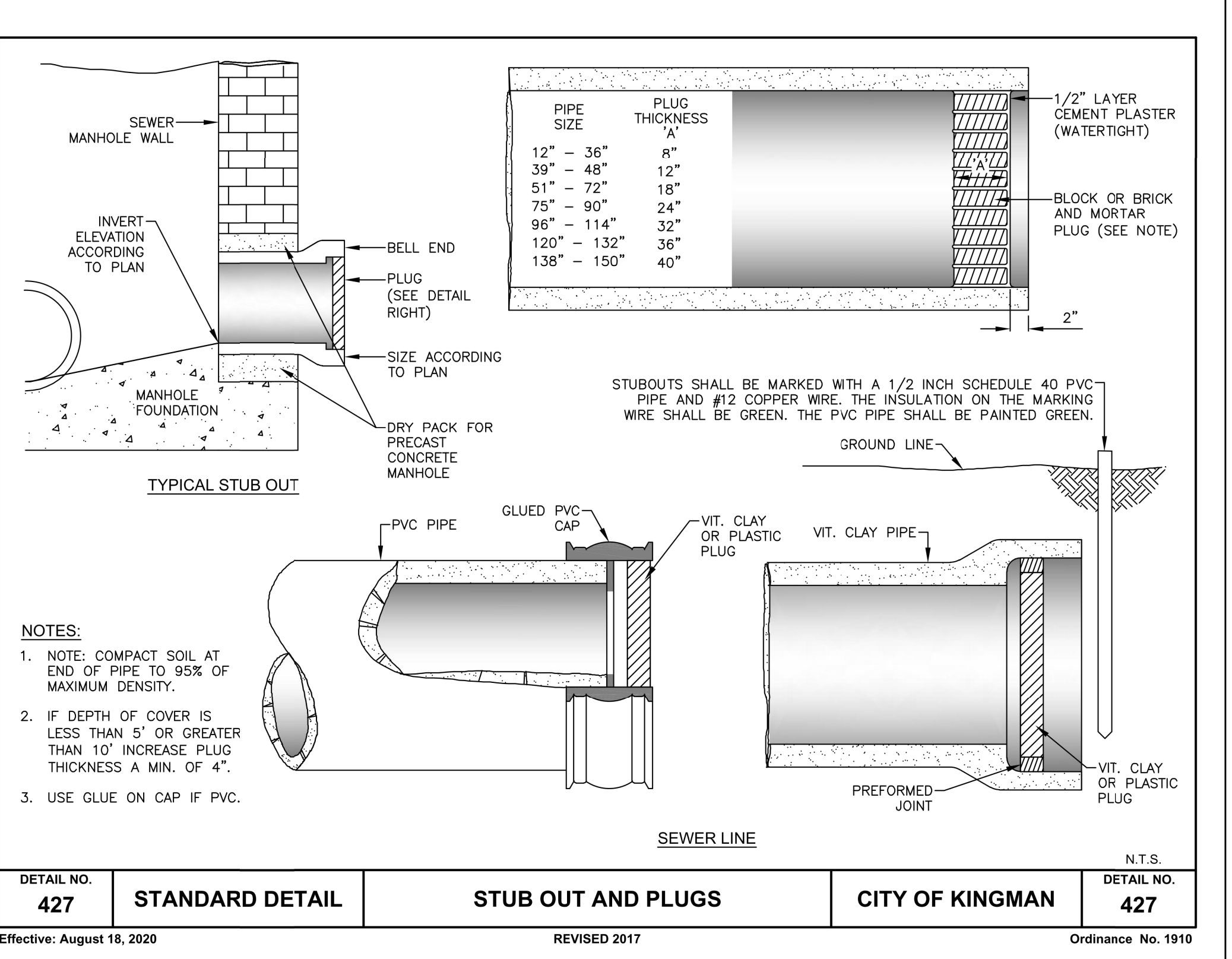
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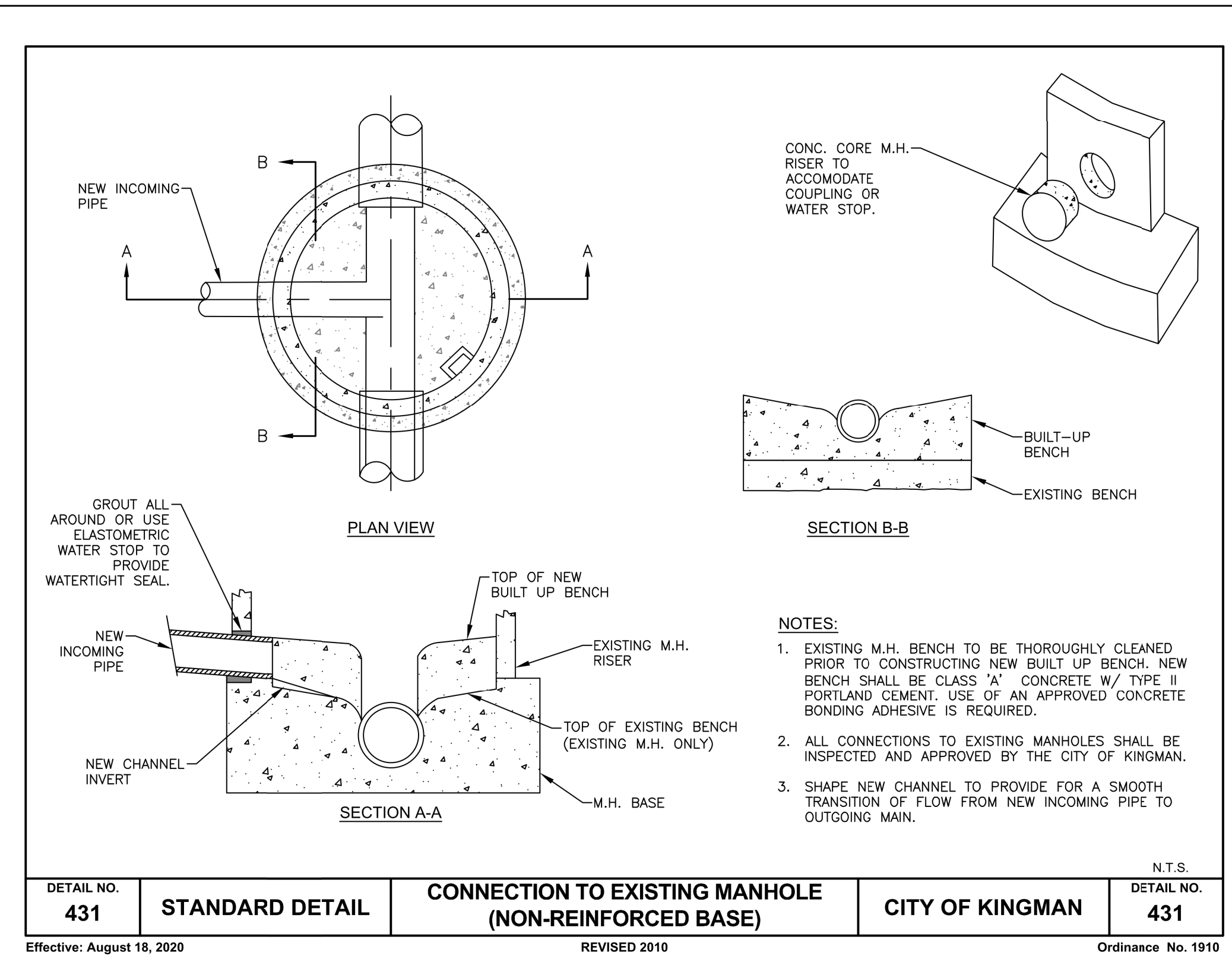
DETAIL NO. 404-1	STANDARD DETAIL	WATER AND SANITARY SEWER SEPARATION / PROTECTION	CITY OF KINGMAN	DETAIL NO. 404-1
Effective: August 18, 2020		REVISED 2012	Ordinance No. 319	



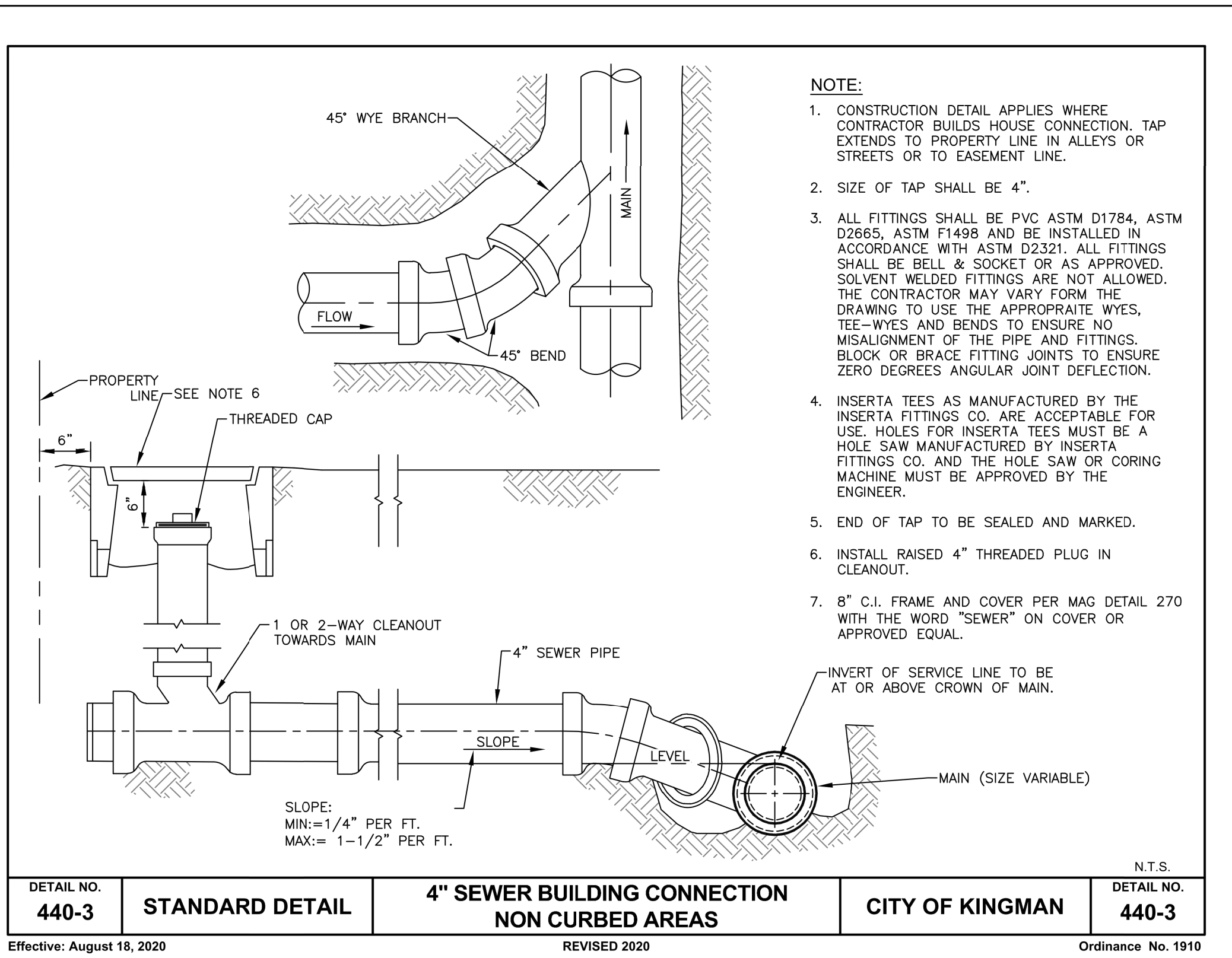
DETAIL NO. 420-1	STANDARD DETAIL	PRECAST CONCRETE SEWER MANHOLE	CITY OF KINGMAN	DETAIL NO. 420-1
Effective: August 18, 2020		REVISED 2020	Ordinance No. 610	



DETAIL NO. 427	STANDARD DETAIL	STUB OUT AND PLUGS	CITY OF KINGMAN	DETAIL NO. 427
Effective: August 18, 2020		REVISED 2017	Ordinance No. 1910	



DETAIL NO. 431	STANDARD DETAIL	CONNECTION TO EXISTING MANHOLE (NON-REINFORCED BASE)	CITY OF KINGMAN	DETAIL NO. 431
Effective: August 18, 2020		REVISED 2010	Ordinance No. 1910	



DETAIL NO. 440-3	STANDARD DETAIL	4" SEWER BUILDING CONNECTION NON CURBED AREAS	CITY OF KINGMAN	DETAIL NO. 440-3
Effective: August 18, 2020		REVISED 2020	Ordinance No. 1910	

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CONTRACT NO. 21PS12

REV. NO.	COMMENT	DATE

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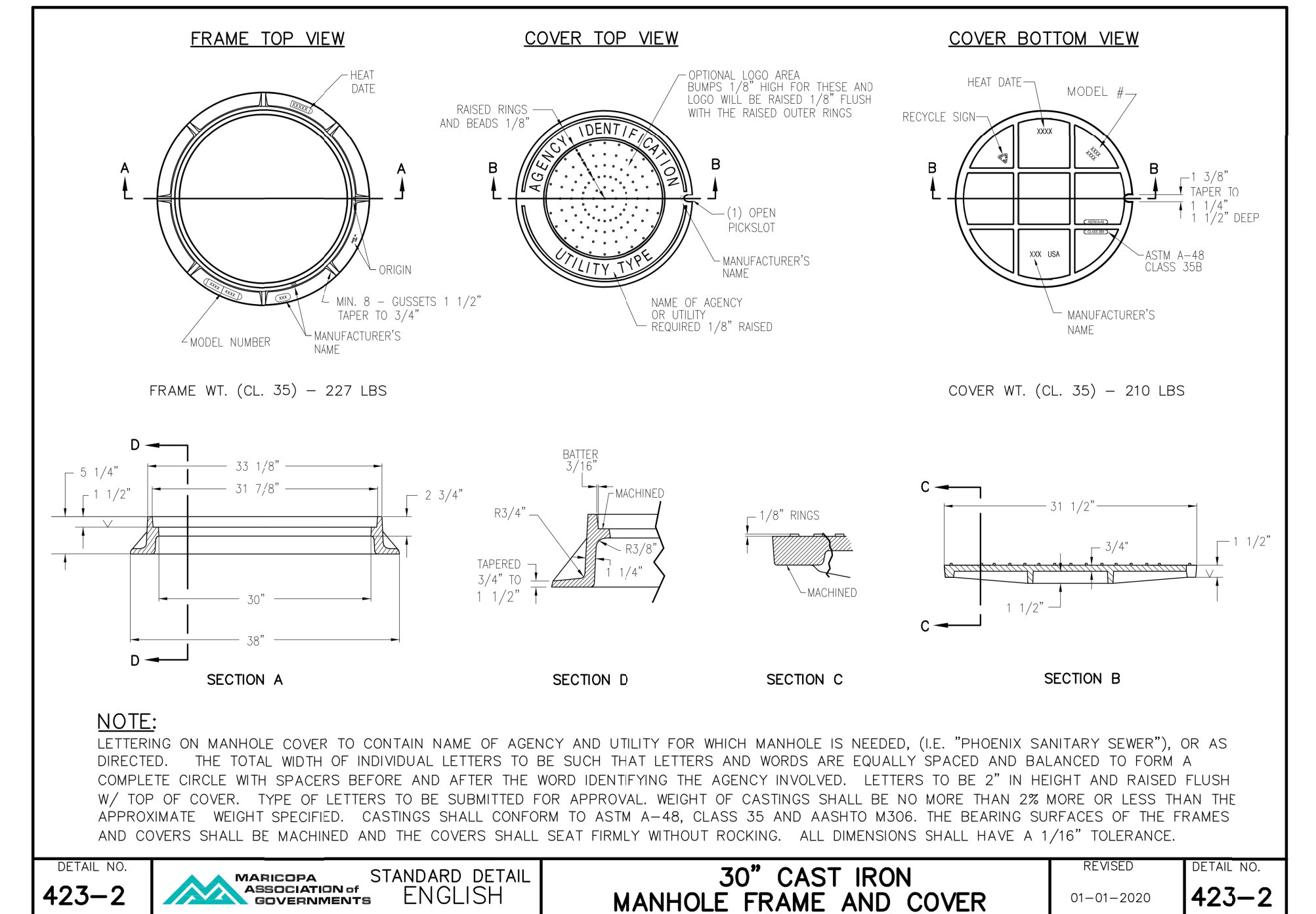
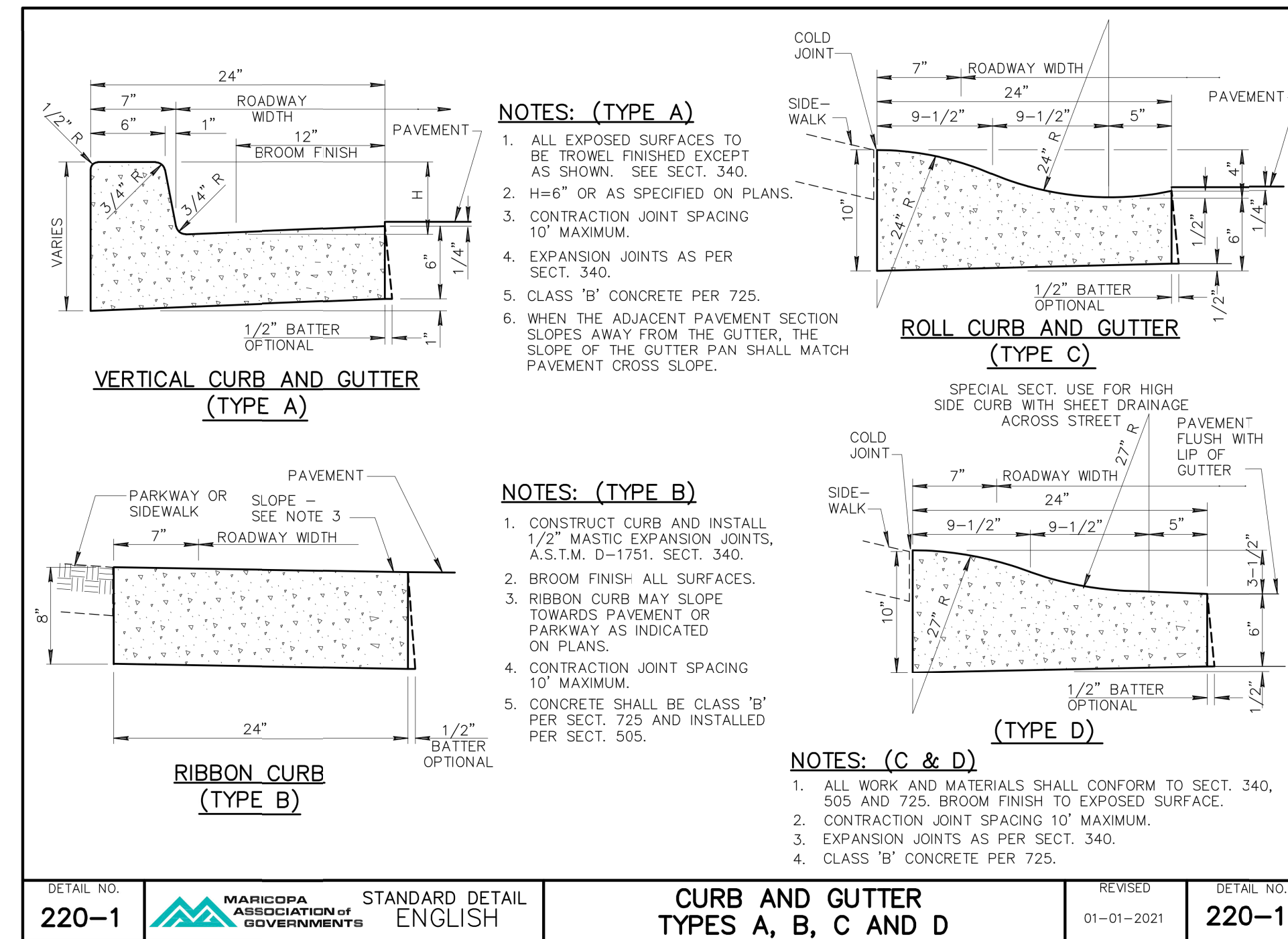
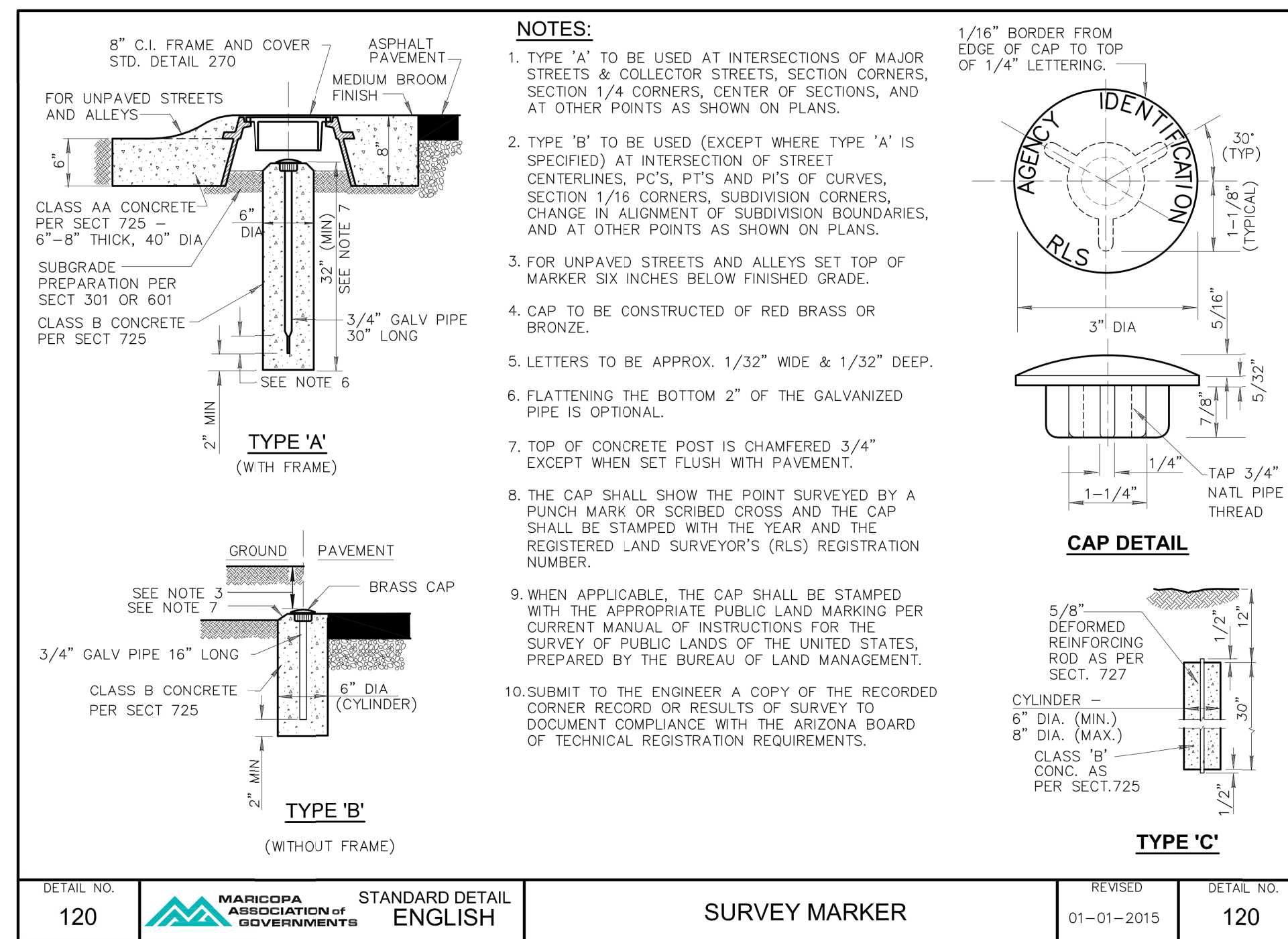
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DETAILS

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CONTRACT NO. 21PS12

REV. NO.	COMMENT	DATE

**K. JUSTIN
VAN DE GRAAFF**
08/30/22
Arizona, USA
Exp. 08/30/25

**SUNRISE
ENGINEERING**

2045 SOUTH VINEYARD, SUITE 101
MESA, ARIZONA 85210
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DETAILS

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