

STAUNTON CROSSING DOWNSTREAM SEWER UPGRADES

STAUNTON, VIRGINIA
PUBLIC WORKS DEPARTMENT

JANUARY 2024

**BEFORE YOU DIG CALL
"MISS UTILITY"
OF VIRGINIA
811**

[illegible]

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310 FIRST STREET, SUITE 400
ROANOKE, VIRGINIA 24011
(P) 540 682-7570 (F) 844 890-1689

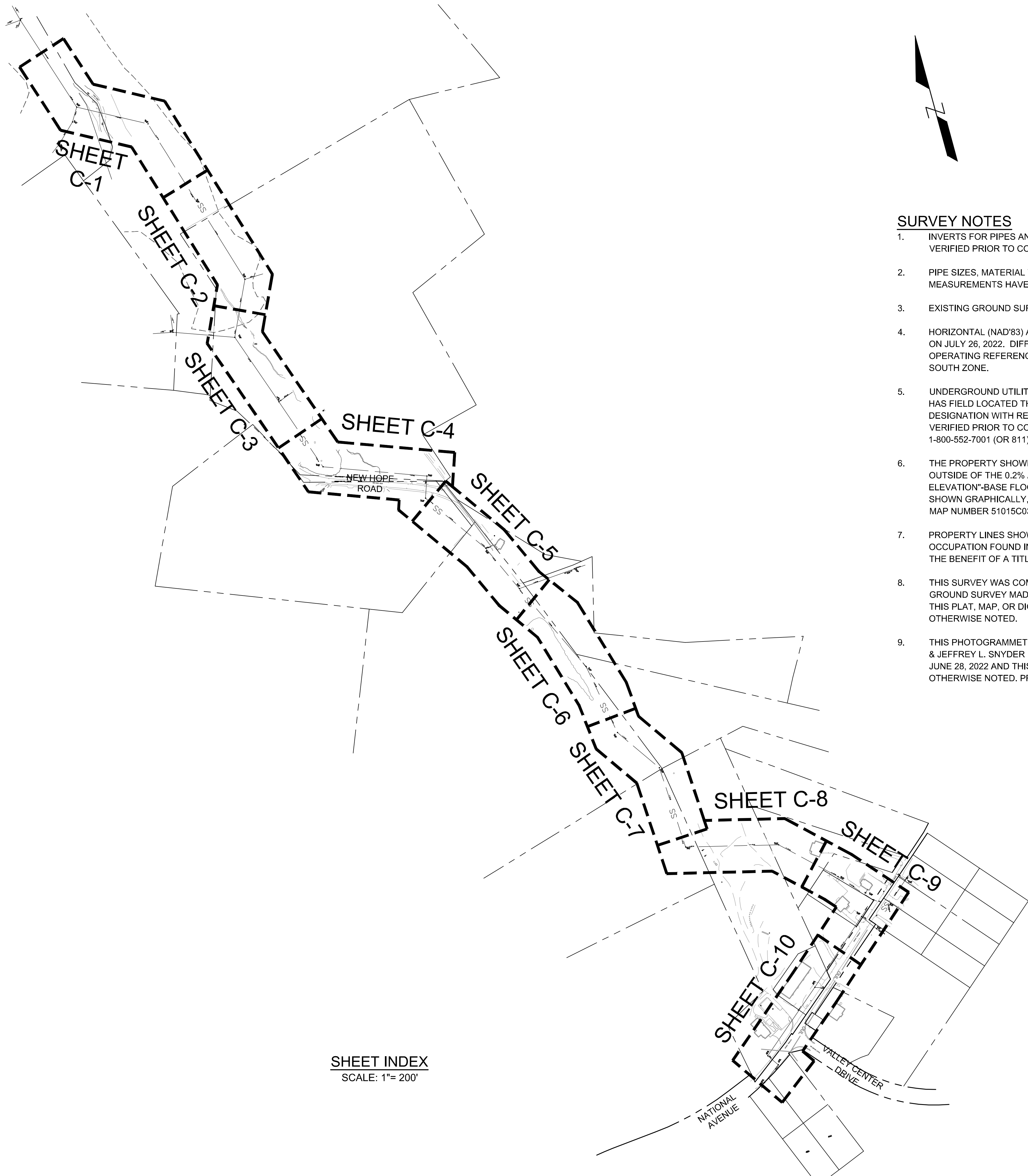


RKK
Engineers | Construction Managers | Planners | Scientists

RUMMEL, KLEPPER & KAHL, LLP

DATE: JANUARY 2024	STAUNTON CROSSING DOWNSTREAM SEWER UPGRADES STAUNTON, VIRGINIA	SHEET	PLAN REVISIONS -
ENGINEER: AAD		T-1	
CHECKED: STW		1 OF 17	
CAD: PCP		SCALE	
JOB#: 22190	COVER SHEET	AS NOTED	

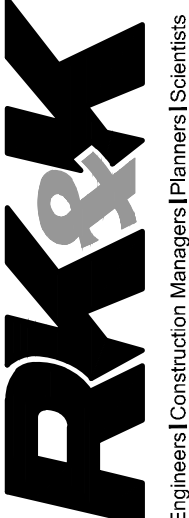
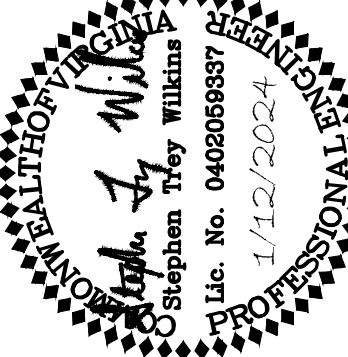
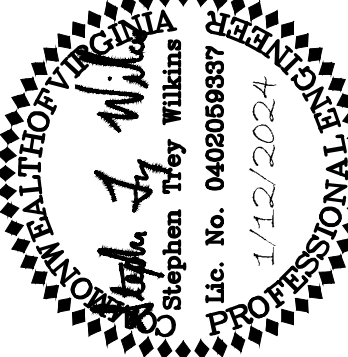
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SHEET INDEX
SCALE: 1"= 200'

SURVEY NOTES

1. INVERTS FOR PIPES AND STRUCTURES SHOWN HEREON ARE BASED ON FIELD MEASUREMENTS, HOWEVER THEY SHOULD BE VERIFIED PRIOR TO CONSTRUCTION.
2. PIPE SIZES, MATERIAL TYPE AND INVERT ELEVATIONS AS INDICATED ARE BASED UPON OBSERVATIONS MADE ABOVE GROUND. NO MEASUREMENTS HAVE BEEN PERFORMED BY PERSONNEL IN A CONFINED SPACE SITUATION.
3. EXISTING GROUND SURFACE LOCATION PERFORMED BY CONVENTIONAL INSTRUMENT SURVEY.
4. HORIZONTAL (NAD'83) AND VERTICAL (NAVD'88) DATUM ESTABLISHED THROUGH REAL TIME KINEMATIC (RTK) GPS OBSERVATIONS ON JULY 26, 2022. DIFFERENTIAL CORRECTIONS WERE DERIVED FROM NATIONAL GEODETIC SURVEY (NGS) CONTINUALLY OPERATING REFERENCE STATION (CORS) "VAAD". COORDINATE VALUES, IF SHOWN HEREON, ARE BASED ON VIRGINIA STATE GRID, SOUTH ZONE.
5. UNDERGROUND UTILITIES WERE DESIGNATED (PAINTED) BY ACCUMARK ON AUGUST 11, 2022. H & B SURVEYING AND MAPPING, LLC HAS FIELD LOCATED THE DESIGNATED LINES AS PAINTED AND IS NOT RESPONSIBLE FOR THE ACCURACY OF THE PAINT DESIGNATION WITH RESPECT TO THE EXISTING UTILITY. UTILITY INFORMATION ON THIS DRAWING WILL NEED TO BE FIELD VERIFIED PRIOR TO CONSTRUCTION. INDIVIDUALS ARE REQUIRED BY VIRGINIA LAW TO CONTACT MISS UTILITY OF VIRGINIA AT 1-800-552-7001 (OR 811) 2 BUSINESS DAYS (48 HOURS) PRIOR TO CONSTRUCTION OR EXCAVATION ACTIVITIES.
6. THE PROPERTY SHOWN HEREON FALLS IN THE FOLLOWING FLOOD HAZARD ZONES: "X"(UNSHADED)-AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOOD PLAIN, "X"(SHADED)-AREAS IN THE 0.2% ANNUAL CHANCE FLOOD PLAIN, AND "AE ELEVATION"-BASE FLOOD ELEVATIONS DETERMINED (NAVD'88). THE APPROXIMATE BOUNDARY LIMITS OF THESE AREAS ARE SHOWN GRAPHICALLY, IF THEY FALL WITHIN THE LIMITS OF THIS SURVEY, AS SCALED FROM FEMA FLOOD INSURANCE RATE MAP, MAP NUMBER 51015C0343D, EFFECTIVE DATE: 09-28-2007.
7. PROPERTY LINES SHOWN HEREON ARE TAKEN FROM COURT HOUSE RECORDS, EVIDENCE OF MONUMENTATION AND OCCUPATION FOUND IN THE FIELD. THIS SURVEY DOES NOT CONSTITUTE A BOUNDARY SURVEY AND WAS PREPARED WITHOUT THE BENEFIT OF A TITLE COMMITMENT, THEREFORE ALL EASEMENTS MAY NOT BE SHOWN ON THIS SURVEY.
8. THIS SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF ALISON W. HANSON, LS FROM AN ACTUAL GROUND SURVEY MADE UNDER HER SUPERVISION. THE IMAGERY AND/OR ORIGINAL DATA WAS OBTAINED ON AUGUST 20, 2022. THIS PLAT, MAP, OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.
9. THIS PHOTOGRAMMETRIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF, MALCOLM C. MCKENZIE & JEFFREY L. SNYDER FROM AN ACTUAL AIRBORNE SURVEY MADE UNDER OUR SUPERVISION; THE IMAGERY WAS OBTAINED ON JUNE 28, 2022 AND THIS DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED. PREPARED FOR H&B SURVEYING.

 Engineers Construction Managers Planners Scientists	310 FIRST STREET, SUITE 400 ROANOKE, VIRGINIA 24011 (P) 540 682-7570 (F) 844 890-1689		RUMMEL, KLEPPER & KAHL, LLP	
				
	DATE: JANUARY 2024	ENGINEER: AAD	CHECKED: STW	CAD: PCP
				JOB#: 22190
STAUNTON CROSSING DOWNSTREAM SEWER UPGRADES		SHEET T-2 2 OF 17		SCALE 1" = 200'
STAUNTON, VIRGINIA		SHEET INDEX		

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GENERAL NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE DEPARTMENT OF PUBLIC WORKS (DPW) TO SCHEDULE A PRE-CONSTRUCTION MEETING AT LEAST 48 HOURS (TWO WORKING DAYS) PRIOR TO STARTING ANY WORK ON THIS PROJECT. THE CONTRACTOR SHALL PAY FOR AND OBTAIN ALL REQUIRED PERMITS AND DELIVER COPIES TO THE OWNER AT THE PRE-CONSTRUCTION MEETING.
2. CONTRACTOR SHALL NOTIFY PROPERTY OWNERS (IN WRITING) OF ANY WORK SCHEDULED ADJACENT TO OR THROUGH THEIR PROPERTY A MINIMUM OF ONE WEEK IN ADVANCE PRIOR TO THE COMMENCEMENT OF ANY STAKING OR CONSTRUCTION ACTIVITY.
3. STAKING FOR CONSTRUCTION, TO ASSURE PROPER LOCATION OF PROJECT COMPONENTS SHALL BE PERFORMED BY A LICENSED LAND SURVEYOR.
4. ALL EXISTING PROPERTY MARKERS ARE TO REMAIN UNDISTURBED. IF DISTURBANCE OCCURS, REPLACEMENT MUST BE PERFORMED BY A LICENSED LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE.
5. PREVIOUSLY ARRANGED ACCESS EASEMENTS, STAGING AREAS, STORAGE AREAS, ETC., IF ANY, ARE SHOWN ON THE DRAWINGS. ADDITIONAL LAND USE RIGHTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
6. WORK AREAS SHALL BE KEPT, AT ALL TIMES, FREE OF DEBRIS AND HAZARDOUS MATERIAL TO THE SATISFACTION OF THE INSPECTOR.
7. THE CONTRACTOR SHALL COORDINATE STORAGE OF MATERIALS, PARKING OF VEHICLES, AND RESTRICTIONS OF WORK WITH THE INSPECTOR.
8. THE CONTRACTOR IS RESPONSIBLE FOR DAILY AS-BUILT PLANS ON ALL CONSTRUCTION. ALL LATERALS AND APPURTENANCES SHALL BE REFERENCED FROM THE NEAREST MANHOLE.
9. ANY ITEM OF WORK NOT SPECIFICALLY SHOWN OR NOTED BUT NECESSARY FOR THE PROPER CONSTRUCTION, ACCEPTANCE, AND APPROVAL OF THIS PROJECT IS HEREBY IMPLIED.
10. CONTRACTOR IS RESPONSIBLE FOR RESTORATION OF ALL EXISTING FEATURES (EXCEPT TREES), SUCH AS GUARDRAIL, SIDEWALKS, BRICKWORK, CULVERTS, FENCES, SHRUBS, PLANTERS, ETC. TO THEIR ORIGINAL LOCATION AND CONDITION WHICH EXISTED PRIOR TO CONSTRUCTION. TOTAL REPLACEMENT MAY BE NECESSARY.
11. CONTRACTOR SHALL CALL "MISS UTILITY" TOLL FREE AT 811 PRIOR TO START OF CONSTRUCTION.
12. THE CONTRACTOR SHALL INCLUDE IN HIS BID PRICE THE COST OF LOCATING ALL UNDERGROUND LINES AND STRUCTURES AS NECESSARY TO COMPLETE THE WORK. NO CLAIMS FOR DAMAGES OR EXTRA COMPENSATION SHALL ACCRUE TO THE CONTRACTOR DUE TO THE PRESENCE OF EXISTING UTILITIES OR FROM ANY DELAY DUE TO REMOVAL OR REARRANGEMENT OF THE SAME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED TO UNDERGROUND STRUCTURES.
13. THE LOCATION OF EXISTING UTILITIES ACROSS OR ALONG THE ROUTE OF THE PROPOSED WORK IS NOT NECESSARILY SHOWN ON THE PLANS, AND WHEN SHOWN, IS ONLY APPROXIMATELY CORRECT. IN ADDITION TO CONTACTING MISS UTILITY PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL, ON HIS OWN INITIATIVE, HORIZONTALLY AND VERTICALLY LOCATED ALL EXISTING UNDERGROUND LINES, FACILITIES, AND STRUCTURES. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY UNDERGROUND LINES, FACILITIES, AND STRUCTURES DAMAGED.
14. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATIONS OF ALL UNDERGROUND UTILITIES SHOWN ON PLANS IN AREAS OF CONSTRUCTION PRIOR TO STARTING WORK.CONTACT ENGINEER IMMEDIATELY IF LOCATION OR ELEVATION IS DIFFERENT FROM THAT SHOWN ON PLAN. IF THERE APPEARS TO BE A CONFLICT, OR UPON DISCOVERY OF ANY UTILITY NOT SHOWN ON THIS PLAN, CALL "MISS UTILITY" AT 811.
15. THE CONTRACTOR SHALL VERIFY THE ELEVATIONS OF ALL POINTS OF CONNECTION OR PROPOSED WORK TO EXISTING CURBS, SANITARY LINES, WATER LINES, ETC., PRIOR TO CONSTRUCTION.
16. CONTRACTOR SHALL COORDINATE WITH THE LOCAL UTILITY COMPANIES PRIOR TO CONSTRUCTING PORTIONS OF WORK IMMEDIATELY ADJACENT TO UTILITY STRUCTURES. THE COSTS OF POLE AND/OR OTHER STRUCTURE STABILIZATION DURING WORK SHALL BE BORNE BY THE CONTRACTOR.
17. ALL WORK SHALL BE SUBJECT TO INSPECTION BY BOTH STATE AND LOCAL INSPECTORS.
18. FINAL ACCEPTANCE BY THE OWNER WILL NOT BE MADE UNTIL ALL WORK SHOWN ON THE APPROVED CONTRACT DOCUMENTS IS COMPLETED, INCLUDING CURB AND GUTTER, PAVING, GRADING, RESTORATION AND ALL ADJUSTMENTS.
19. CONTRACTOR SHALL RESTORE EXISTING DITCH TO ORIGINAL CONDITION AND ENSURE THAT POSITIVE DRAINAGE IS MAINTAINED WITHIN THE DITCH. PAVEMENT AND SHOULDERS MUST ALSO BE RESTORED TO THEIR ORIGINAL CONDITION.
20. CONTRACTOR SHALL ENSURE THAT PUBLIC AND PRIVATE ENTRANCE CULVERTS ARE FREE OF ANY CONSTRUCTION DEBRIS.
21. ALL MATERIALS AND CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION'S ROAD AND BRIDGE SPECIFICATIONS, ROAD AND BRIDGE STANDARDS AND WORK AREA PROTECTION MANUAL.
22. ANY RIGHT-OF-WAY OR ROADSIDE WORK THAT MAY AFFECT TRAFFIC WILL REQUIRE A TRAFFIC MAINTENANCE PLAN, AND MUST BE SUBMITTED TO AND APPROVED BY DEPARTMENT OF PUBLIC WORKS PRIOR TO ANY WORK THAT MAY AFFECT TRAFFIC.
23. SOIL STABILIZATION IS REQUIRED WITHIN 7 DAYS FOR ALL AREAS WHERE CLEARING, GRADING, EXCAVATION OR OTHER LAND DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED OR WHERE LAND DISTURBANCE ACTIVITIES HAVE BEEN TEMPORARILY SUSPENDED FOR AN ANTICIPATED DURATION OF GREATER THAN 7 DAYS, OR UPON COMPLETION OF GRADING OPERATIONS FOR A SPECIFIED AREA. SOIL STABILIZATION SHALL BEGIN AS SOON AS PRACTICABLE, BUT NOT LATER THAN THE SEVEN DAYS FOLLOWING THE DAY WHEN LAND DISTURBING ACTIVITIES TEMPORARILY OR PERMANENTLY CEASED.

SEWER NOTES:

1. ALL CONSTRUCTION, MATERIALS AND INSTALLATIONS SHALL CONFORM TO THE LATEST EDITION OF STANDARDS AND SPECIFICATIONS, DEPARTMENT OF PUBLIC WORKS (DPW), CITY OF STAUNTON, VIRGINIA.
2. CONTRACTOR SHALL SHALL SUBMIT SHOP DRAWINGS AND SPECIFICATIONS FOR ALL PROPOSED PRODUCTS TO BE USED DURING UTILITY CONSTRUCTION TO DPW FOR REVIEW AND CONCURRENCE PRIOR TO PROCURING ANY MATERIALS. USING MARKINGS, HIGHLIGHTING AND/OR NOTES, SUBMITTAL SHEETS SHALL CLEARLY IDENTIFY THE SPECIFIC PRODUCT TO BE USED, AND THE PURPOSE TO WHICH IT IS TO BE PUT.
3. MINIMUM DESIGN COVER OVER GRAVITY SEWER LINES IS 3 FEET. EXCEPTIONS DUE TO UNUSUAL CIRCUMSTANCES IN THE FIELD MUST BE APPROVED BY DPW. DUCTILE IRON PIPE (DIP) MUST BE USED WHERE COVER IS LESS THAN 3 FEET, AND WHERE COVER IS MORE THAN 15 FEET IN OTHER AREAS.
4. MINIMUM DESIGN COVER OVER SANITARY SEWER FORCE MAINS IS 3.0 FEET. EXCEPTIONS DUE TO UNUSUAL CIRCUMSTANCES IN THE FIELD MUST BE APPROVED BY DPW.
5. A SANITARY SEWER CLEANOUT SHALL BE INSTALLED ON EACH SEWER SERVICE LATERAL AT THE EDGE OF THE RIGHT-OF-WAY/UTILITY EASEMENT, IN ACCORDANCE WITH DPW STANDARDS.
6. DETECTABLE MARKING TAPE IS REQUIRED ON ALL BURIED LINES.
7. COPPER TRACER WIRE AND TRACER WIRE ACCESS BOXES SHALL BE INSTALLED ON ALL WATER MAINS AND ALL SEWAGE FORCE MAINS.
8. SEWAGE FORCE MAINS TRACER WIRE ACCESS BOXES SHALL BE INSTALLED AT THE FOLLOWING LOCATIONS:

A. ADJACENT TO THE BYPASS CONNECTION RISER ON THE PUMP STATION SITE.

B. ADJACENT TO THE DISCHARGE MANHOLE FOR THE FORCE MAIN.

C. OTHER INTERMEDIATE LOCATIONS AS DETERMINED BY DPW AND SHOWN ON THE PLANS.
9. GRAVITY SEWERS WHICH RECEIVE PUMPED FLOW SHALL BE PROTECTED AGAINST SULFIDE ATTACK FOR A DISTANCE OF 2,000 FEET DOWNSTREAM FROM THE POINT OF ENTRY OF THE PUMPED FLOW. THIS SHALL BE ACCOMPLISHED BY THE USE OF ACID-RESISTANT PIPE AND MANHOLES IN ACCORDANCE WITH DPW STANDARDS.
10. EXISTING FRAME AND COVERS SCHEDULED FOR REPLACEMENT SHALL BE DELIVERED TO STAUNTON PUBLIC WORKS FOR SALVAGE.
11. PRIOR TO REQUESTING ANY ACCEPTANCE INSPECTION, CONTRACTOR SHALL FLUSH AND CLEAN OUT GRAVITY SEWER MAINS AS NEEDED, PERFORM CCTV RECORDINGS OF ALL GRAVITY SEWER MAINS AND MANHOLES, AND SUBMIT CCTV RECORDINGS TO DPW FOR REVIEW.

UTILITY NOTES:

1. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT AND MAINTAIN UNINTERRUPTED SERVICE EXCEPT AS ALLOWED BY THE INSPECTOR.
2. ANY DAMAGE TO EXISTING STRUCTURES SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE INSPECTOR, AT THE CONTRACTOR'S EXPENSE.
3. ALL TIE-IN CONNECTIONS SHALL BE APPROVED BY THE INSPECTOR PRIOR TO BACKFILLING.
4. AFTER BACKFILLING, FINISHED GRADE ABOVE TRENCH SHALL BE RESTORED TO AS GOOD OR BETTER THAN EXISTING CONDITIONS WHICH EXISTED PRIOR TO CONSTRUCTION.
5. BLASTING OF ROCK IS STRICTLY PROHIBITED WITHOUT WRITTEN PRIOR AUTHORIZATION FROM THE OWNER.
6. TRENCHES WITHIN PRIVATE AND PUBLIC PAVED AREAS (GRAVEL, ASPHALT, CONCRETE, ETC.) SUBJECT TO VEHICULAR LOADS SHALL BE FULLY BACKFILLED WITH SELECT AGGREGATE MATERIAL (VDOT 21A OR 21B).

RESTRAINED JOINT NOTES:

THRUST RESTRAINTS SHALL BE PROVIDED ON ALL VALVES, FITTINGS, BENDS, TEES AND DEAD ENDS. THRUST RESTRAINTS SHALL BE PROVIDED AS INDICATED ON THE CONTRACT DRAWINGS. THRUST RESTRAINTS SHALL BE MANUFACTURED BY EBAA IRON OR APPROVED EQUAL AND THE SERIES INDICATED BELOW:

DUCTILE IRON PIPE MECHANICAL JOINTS: SERIES 1100
DUCTILE IRON PIPE PUSH-ON JOINTS: SERIES 1700

BURIED DUCTILE IRON PIPE NOTES:

POLYETHYLENE ENCASEMENT, WHERE REQUIRED, SHALL CONFORM TO AWWA C105 AND ANSI A21.5. THE POLYETHYLENE SHALL HAVE A MINIMUM THICKNESS OF 8 MIL., SHALL BE TUBING TYPE AND SHALL BE MANUFACTURED OF VIRGIN MATERIAL. THE TAPE USED FOR INSTALLATION OF POLYETHYLENE TUBING SHALL BE PLASTIC-BACKED ADHESIVE WITH A THICKNESS OF 12 MILS AND A MINIMUM WIDTH OF 1-1/2". THE TAPE SHALL BE CAPABLE OF BONDING TO METAL, BITUMINOUS COATINGS AND POLYETHYLENE AT A TEMPERATURE RANGE OF 32 TO 120 DEGREES FAHRENHEIT.

EXISTING	LEGEND	PROPOSED
	BUILDING	
	EDGE OF PAVEMENT/CONCRETE	
	EDGE OF GRAVEL	
	PROPERTY/RIGHT-OF-WAY LINE	
	EASEMENT LINE	
	SANITARY FORCE MAIN	
	SANITARY GRAVITY MAIN	
	SANITARY MANHOLE	
	SANITARY LATERAL AND CLEANOUT	
	WATER MAIN	
	WATER VALVE	
	FIRE HYDRANT	
	WATER METER & SERVICE LINE	
	OVERHEAD UTILITY LINE	
	POWER POLE W/LIGHT & GUY	
	UNDERGROUND ELECTRIC LINE	
	NATURAL GAS LINE	
	GAS VALVE	
	TELEPHONE PEDESTAL	
	STORM DRAIN STRUCTURE	
	STORM DRAIN LINE	
	SIGN	
	BOLLARD	
	POST	
	MAILBOX	
	TREE/SHRUB	
	TREE LINE	
	FENCE	
	WETLANDS	
	WATERS OF THE U.S. (WOUS)	
	CONTOUR	
	RESOURCE PROTECTION AREA (RPA)	
	RESOURCE MANAGEMENT AREA (RMA)	
	SOIL BORING	
	TEST HOLE	
	LINE ABANDONMENT	
	PAVEMENT MILL & OVERLAY	
	PAVEMENT TRENCH REPAIR	
	SILT FENCE	
	TREE PROTECTION	
	TREE REMOVAL	
	SUPER SILT FENCE	
	INLET/CULVERT INLET PROTECTION	
	CONSTRUCTION ENTRANCE	
	ROCK CHECK DAM	
	LIMITS OF DISTURBANCE	

PLAN REVISIONS -

SHEET

T-3

3 OF 17

SCALE

N/A

STAUNTON CROSSING

DOWNSTREAM SEWER UPGRADES

STAUNTON, VIRGINIA

GENERAL NOTES AND LEGEND

DATE: JANUARY 2024

ENGINEER: AAD

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CAD: PCP

JOB#: 22190

310 FIRST STREET, SUITE 400

ROANOKE, VIRGINIA 24011

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RK&K

Engineers | Construction Managers | Planners | Scientists

RUMMEL, KLEPPER & KAHL, LLP

1. THE SURVEY DOES NOT GUARANTEE THE EXISTENCE, STATUS OR LOCATION OF ALL SANITARY SEWER LATERALS AND PRIVATE CONNECTIONS TO THE SANITARY MAIN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN SERVICE TO ALL CONNECTED PROPERTIES THROUGHOUT THE CONSTRUCTION PROCESS. PROVIDE SEPARATE CONNECTION TO NEW MAIN FOR EACH SERVICE. SEE SEWER NOTES DRAWING T-3 FOR MORE INFORMATION.

HIGH PRESSURE GAS MAIN -
COLUMBIA GAS OF VIRGINIA (PER
PLANS) CALL 614-809-2092 AT LEAST
THREE BUSINESS DAYS' NOTICE
BEFORE DIGGING/WORKING IN THIS
AREA (UTILITY NOT FIELD VERIFIED)

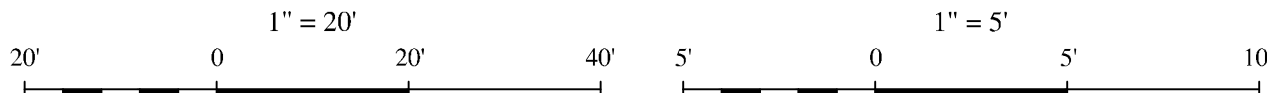
CUMBERLAND, LLC
INSTR. # 200001484 (B.L.A. PLAT
INSTR. # 200001483
PARCEL ID: 10410
581 NEW HOPE ROAD
53.495 AC.

SMX 2296 (#9042)
SANITARY MH
RIM=1286.57'
GROUND ELEV= 1286.43'
INV. IN=1282.01' (10" PVC FROM #9045)
INV. OUT=1281.71' (10" IRON TO #9048)

SMX 3476 (#9048)
SANITARY MH
RIM=1288.38'
GROUND ELEV= 1287.28'
INV. IN=1280.69' (10" IRON FROM #9042)
INV. IN=1279.53' (36" CONC FROM #9051)
INV. OUT=1279.38' (30" CONC TO #9047)

SMX 3477 (#9051)
SANITARY MH
RIM=1289.16'
GROUND ELEV= 1287.28'
INV. IN=1280.33' (36" CONC FROM #9053)
INV. OUT=1280.44' (36" CONC TO #9048)

SCALES: HORIZ. 1" = 20'
VERT. 1" = 5'



GRAPHIC SCALES

RK&K 310 FIRST STREET, SUITE 400 ROANOKE, VIRGINIA 24011 (P) 540 682-7570 (F) 844 890-1689 Engineer/Construction Manager Professional Scientists RUMMEL, KLEPPER & KAHL, LLP	STEPHEN T. KELLY Professional Engineer 1/11/2024 0402059337 U.S. No. 0402059337 State of Virginia 12/31/2024 Professional Engineer 1/12/2024	DATE: JANUARY 2024	STAUNTON CROSSING	SHEET	PLAN REVISIONS -
	ENGINEER: AAD	DOWNSTREAM SEWER UPGRADES	C-1		
	CHECKED: STW	STAUNTON, VIRGINIA	4 OF 17		
	CAD: PCP	STAUNTON CROSSING GRAVITY SEWER	SCALE		
	JOB#: 22190	- STA. 10+00 TO STA. 15+50	1" = 20' 1" = 5'		

NOTE:

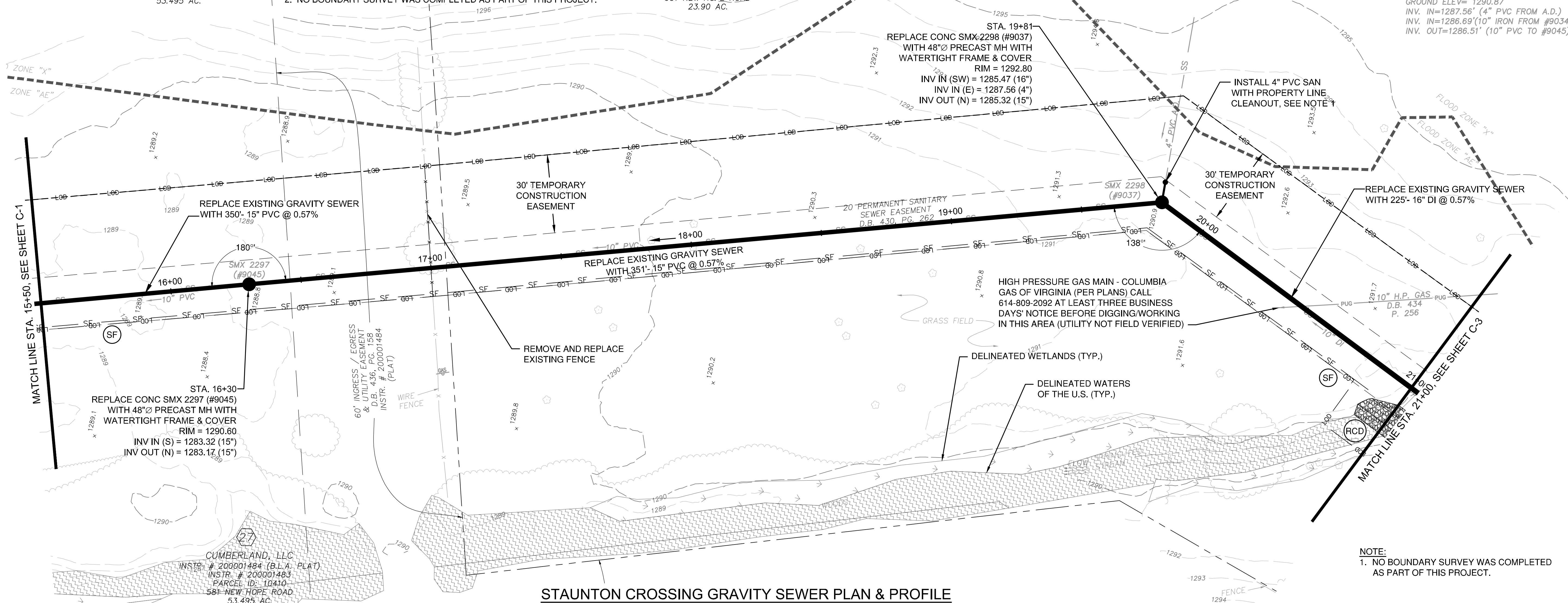
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2. NO BOUNDARY SURVEY WAS COMPLETED AS PART OF THIS PROJECT.

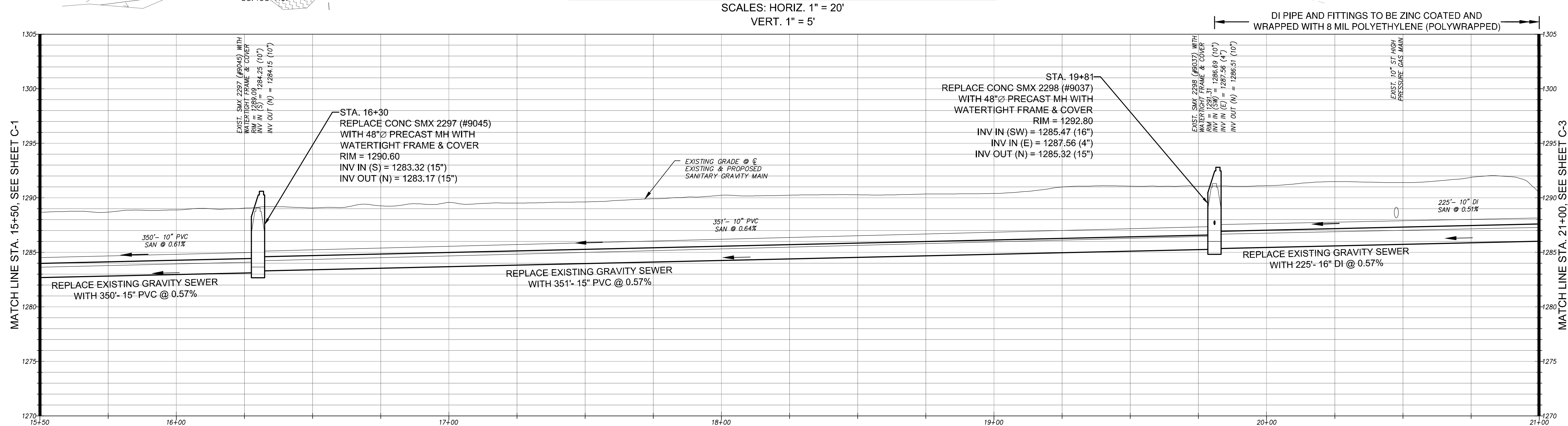

 PARK W. THOMPSON
 AND
 SANDRA H. THOMPSON
 D.B. 773, PG. 325
 D.B. 471, PG. 389 (PLAT)
 D.B. 773, PG. 323 (L&E)
 PARCEL ID: 10369
 601 NEW HOPE ROAD
 23.90 AC.

SMX 2297 (#9045)
SANITARY MH
RIM=1289.09'
GROUND ELEV= 1288.82'
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INV. OUT=1284.15' (10" PVC TO #9042)

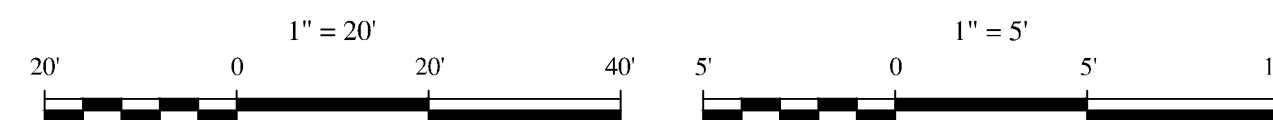
SMX 2298 (#9037)
SANITARY MH
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GROUND ELEV= 1290.87'
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INV. IN=1286.69' (10" IRON FROM #9034)
INV. OUT=1286.51' (10" PVC TO #9045)



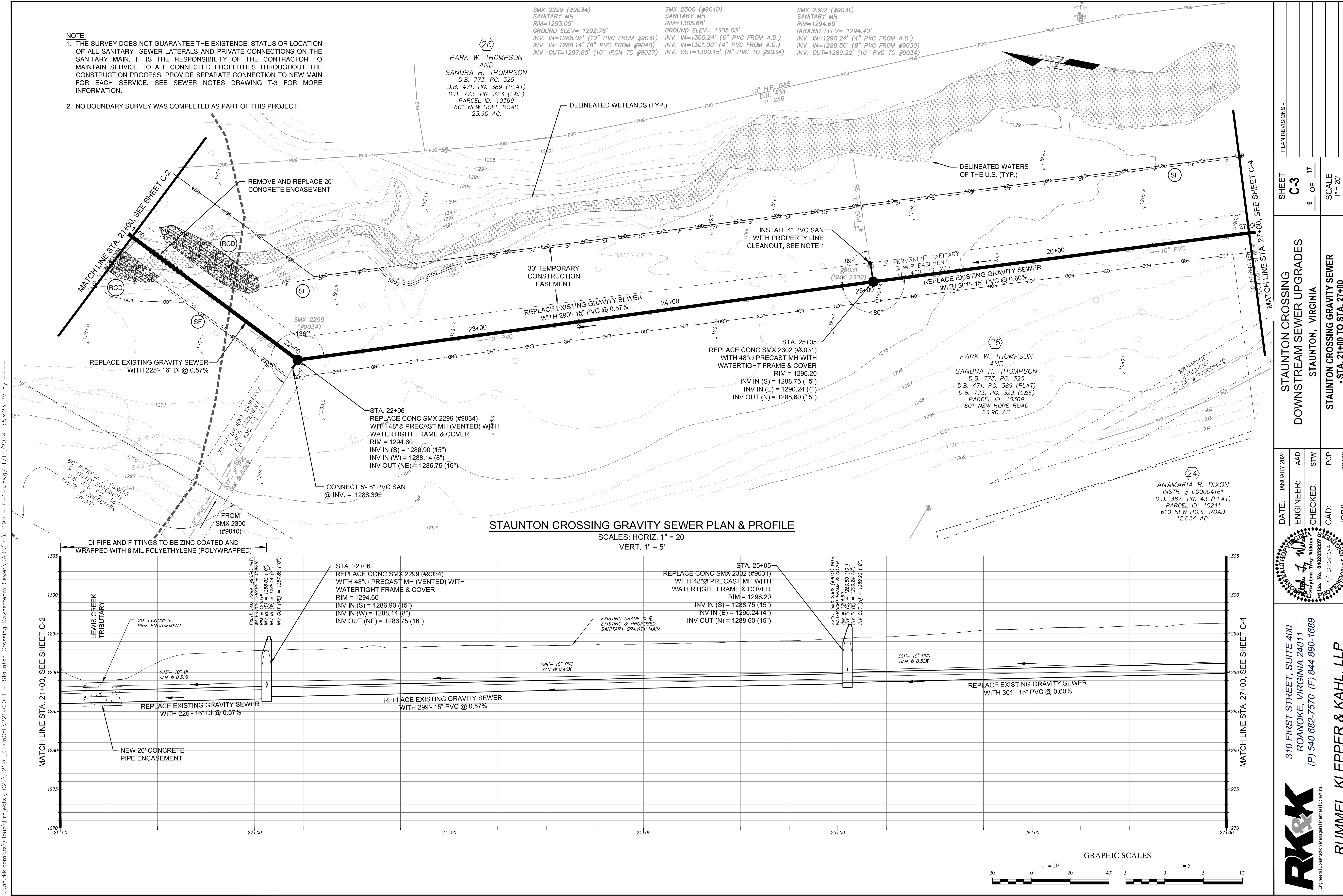
NOTE:
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AS PART OF THIS PROJECT.



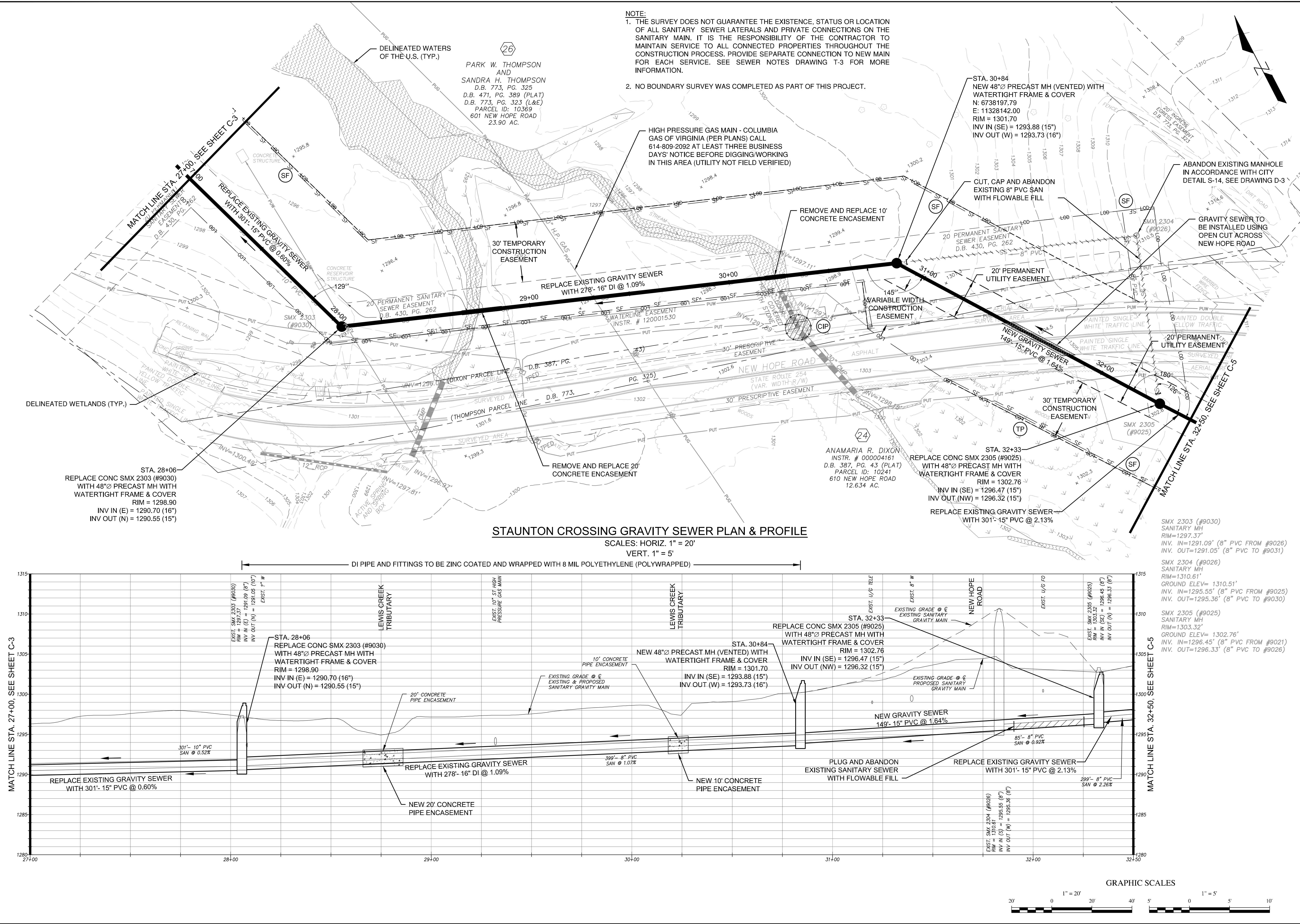
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		CHECKED: STW			
		CAD: POP	STAUNTON CROSSING GRAVITY SEWER -STA. 15+50 TO STA. 21+00	SCALE 1" = 20' 1" = 5'	
		JOB#: 22190			



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PLAN REVISIONS -	SHEET	SCALE
	C-4	1" = 20'
	7 OF 17	1" = 5'
STAUNTON CROSSING	DOWNSTREAM SEWER UPGRADES	STAUNTON, VIRGINIA
DATE: JANUARY 2024	ENGINEER: AAD	CHECKED: STW
	PCP	22190
	JOB#:	
310 FIRST STREET, SUITE 400 ROANOKE, VIRGINIA 24011 (P) 540 682-7570 (F) 844 890-1689	RUMMEL, KLEPPER & KAHL, LLP	

1. THE SURVEY DOES NOT GUARANTEE THE EXISTENCE, STATUS OR LOCATION OF ALL SANITARY SEWER LATERALS AND PRIVATE CONNECTIONS ON THE SANITARY MAIN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN SERVICE TO ALL CONNECTED PROPERTIES THROUGHOUT THE CONSTRUCTION PROCESS. PROVIDE SEPARATE CONNECTION TO NEW MAINS FOR EACH SERVICE. SEE SEWER NOTES DRAWING T-3 FOR MORE INFORMATION.


 APPOMATTOX LIME
 COMPANY
 D.B. 623, PG. 39
 D.B. 608, PG. 502 (PLAT)
 PARCEL ID: 10213
 620 NEW HOPE ROAD
 0.97 AC.

DELINEATED WATERS
OF THE U.S. (TYP.)

FROM
SMX 2308
(#9024)

INSTALL 4" PVC SAN-
WITH PROPERTY LINE
CLEANOUT, SEE NOTE 1

REMOVE AND REPL

CONNECT 5'- 8" PVC SAN-
@ INV. = 1306.15±

VARIABLE WIDTH
TEMPORARY
CONSTRUCTION
EASEMENT

MATCH LINE STA. 38+00, SEE SHEET

MATCH LINE SEE: 

REPLACE EXISTING GRAVITY SEWER
WITH 30" - 15" PVC @ 2.13%

30' TEMPORARY
CONSTRUCTION
EASEMENT

ANAMARIA R. DIXON
INSTR. # 000004161
D.B. 387, PG. 43 (PLAT.
PARCEL ID: 10241
610 NEW HOPE ROAD
12.634 AC.

DELINEATED WETLANDS (TYP.)

19
APPOMATTOX LIME
COMPANY
D.B. 623, PG. 39
D.B. 608, PG. 502 (PLAT)
PARCEL ID: 10215
215 NATIONAL AVENUE
25.135 AC.

STA. 35+34
REPLACE CONC. SMX 2306 (#90)
WITH 48" Ø PRECAST MH WITH
STANDARD FRAME & COVER
N: 6737830.26
E: 11328401.97
RIM = 1313.50
INV IN (SE) = 1303.05 (15")
INV IN (E) = 1304.08 (4")
INV OUT (NW) = 1302.90 (15")

REPLACE CONC SMX 2307 (#9022)
WITH 48"Ø PRECAST MH WITH
STANDARD FRAME & COVER
N: 6737646.60
E: 11328484.52
RIM = 1316.05
INV IN (SE) = 1304.78 (15')
INV IN (E) = 1305.81 (8")
INV OUT (NW) = 1304.63 (15')

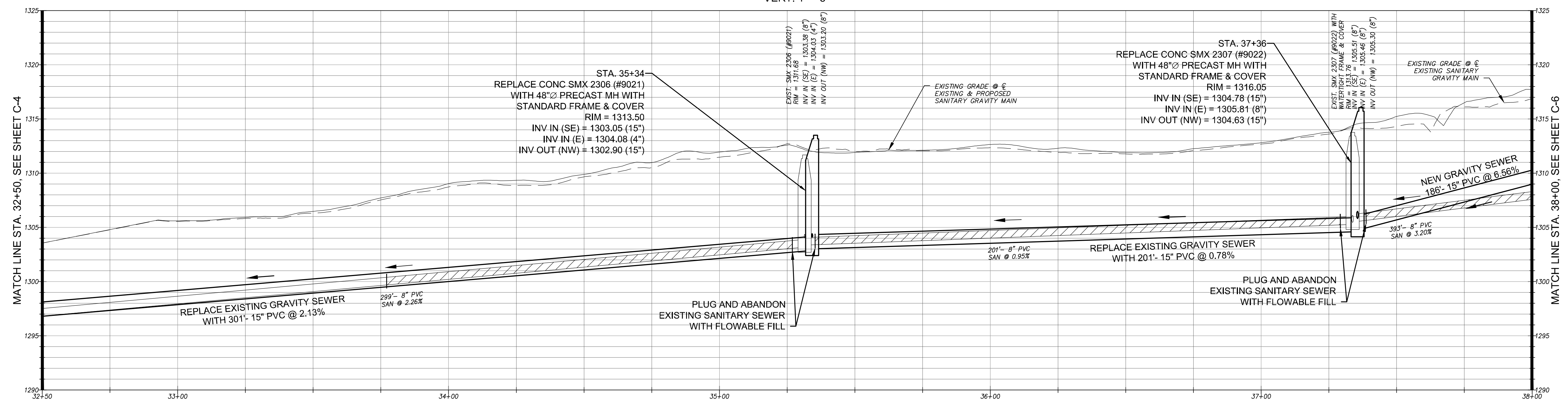
PLUG AND ABANDON
EXISTING SANITARY S
WITH FLOWABLE FILL

SM# 2307 (#9022)
SANITARY MH
RIM=1313.76'
GROUND ELEV=1313.60'
INV. IN=1305.51' (8" PVC FROM #9017)
INV. IN=1305.46' (8" PVC FROM #9024)
INV. OUT=1305.30' (8" PVC TO #9021)

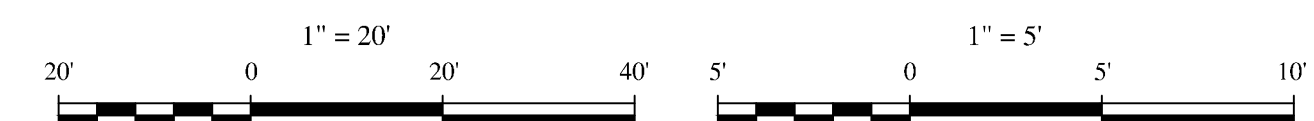
SMX 2308 (#9024)
SANITARY MH
RIM=1328.70'
GROUND ELEV= 1328.36'
INV. IN=1322.16' (8" PVC FROM A.D.)
INV. OUT=1320.34' (8" PVC TO #9022)

STAUNTON CROSSING GRAVITY SEWER PLAN & PROFILE

SCALES: HORIZ. 1" = 20'
VERT. 1" = 5'



GRAPHIC SCALES



PLAIN REVISIONS -

8 OF 1

STAUNTON CROSSING
DOWNSTREAM SEWER UPGRADES
STAUNTON, VIRGINIA

DATE: JANUARY 4, 2007

ENGINEER: AAD

1000

CAD:	BCD
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CAD.

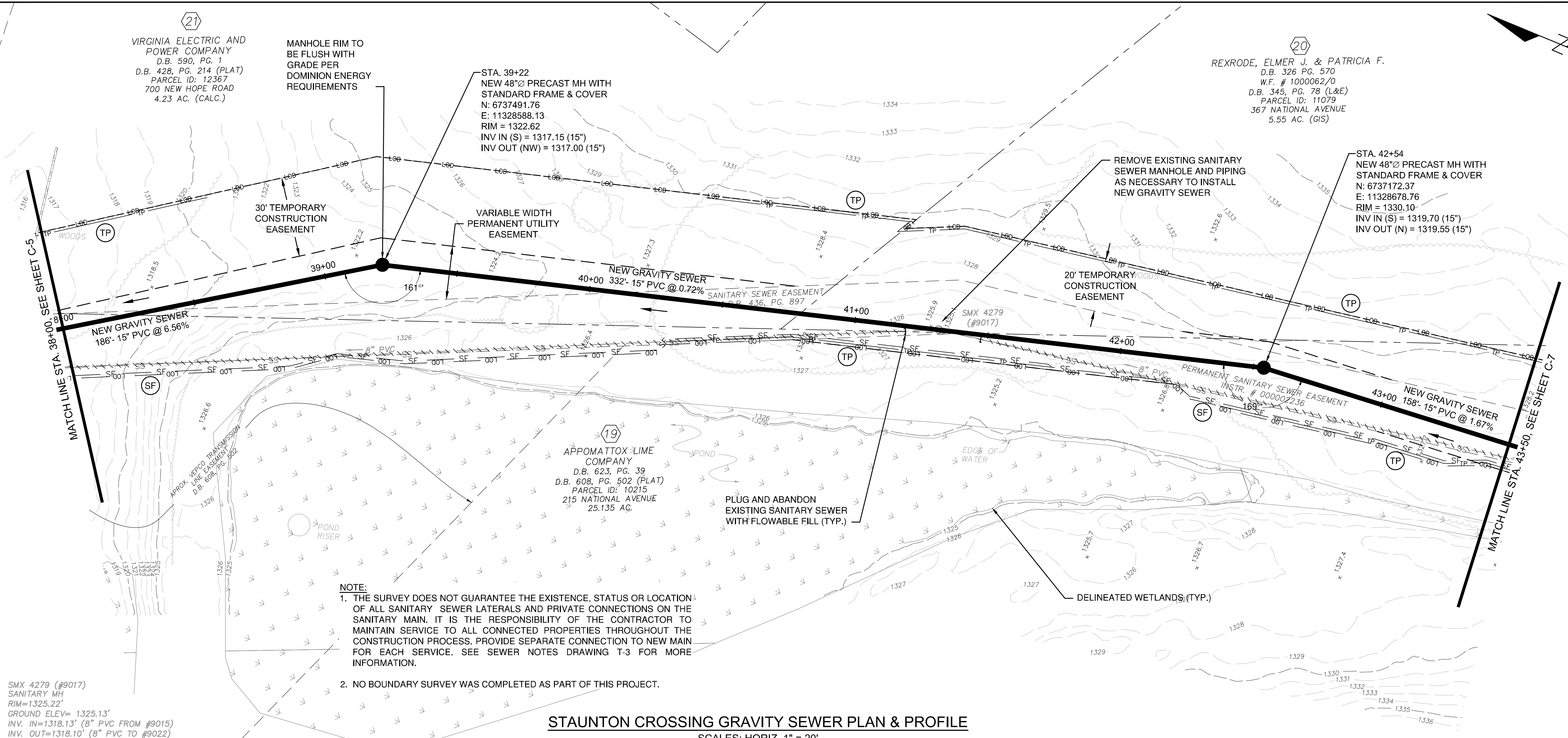


310 FIRST STREET, SUITE 400
ROANOKE, VIRGINIA 24011
P) 540 682-7570 (F) 844 890-1689

RKK

RUMMEL, KLEPPER & KAHL, LLP

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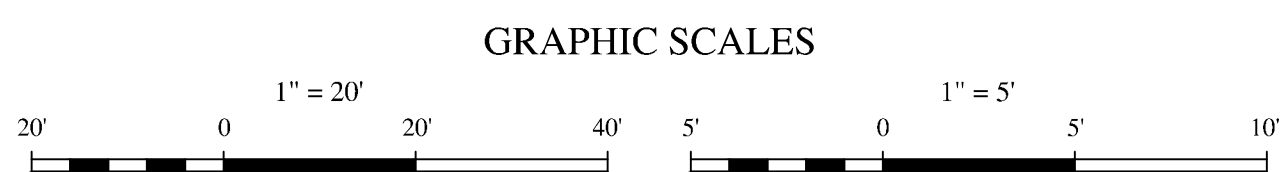
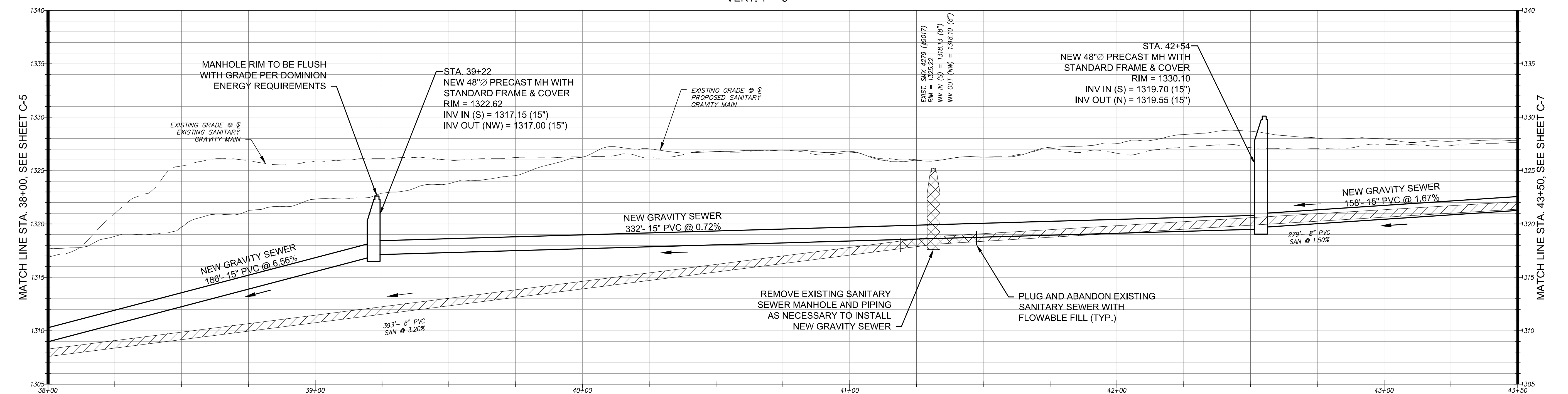


SMX 4279 (#9017)
SANITARY MH
RIM=1325.22'
GROUND ELEV= 1325.13'
INV. IN=1318.13' (8" PVC FROM #9015)
INV. OUT=1318.10' (8" PVC TO #9022)

- NOTE:
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 2. NO BOUNDARY SURVEY WAS COMPLETED AS PART OF THIS PROJECT.

STAUNTON CROSSING GRAVITY SEWER PLAN & PROFILE

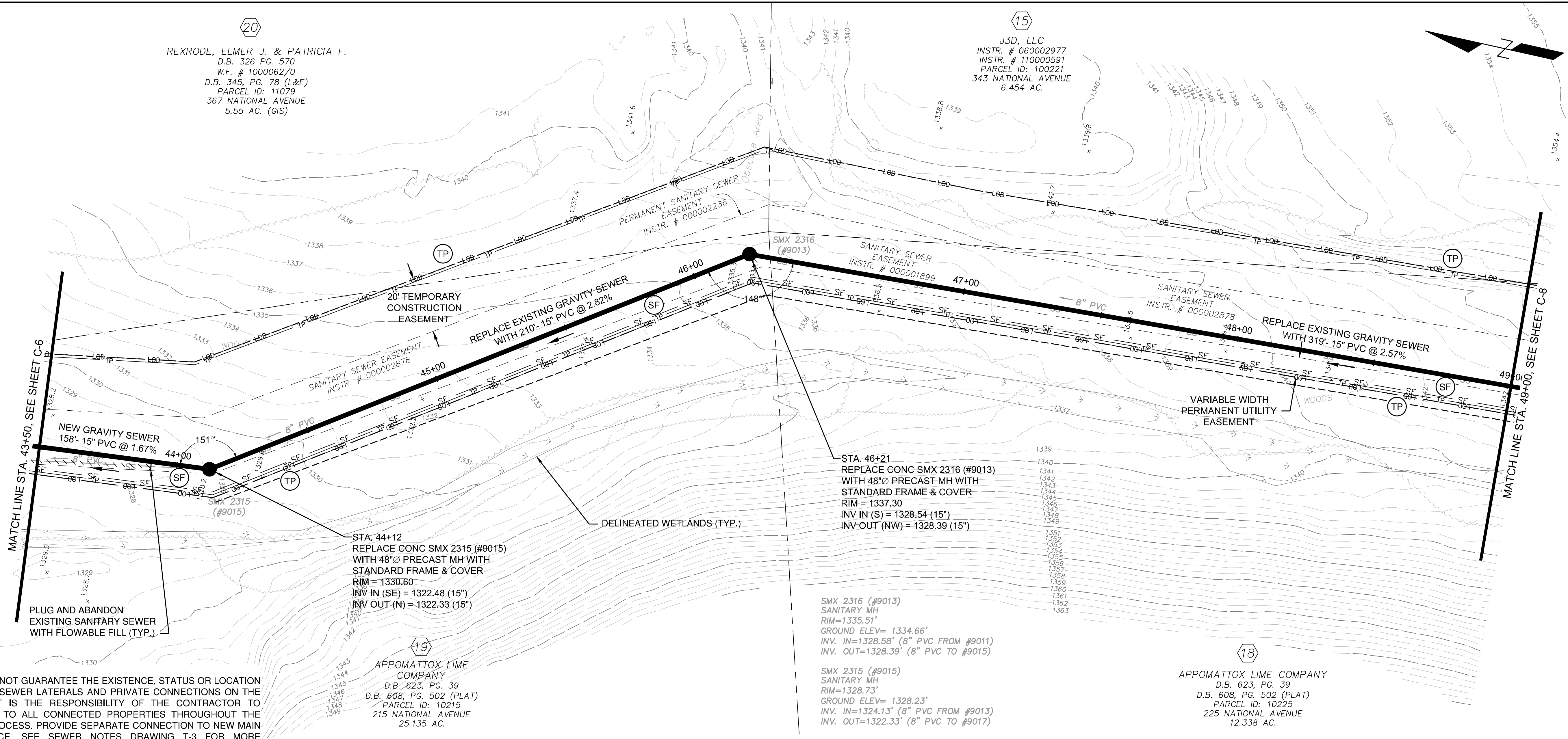
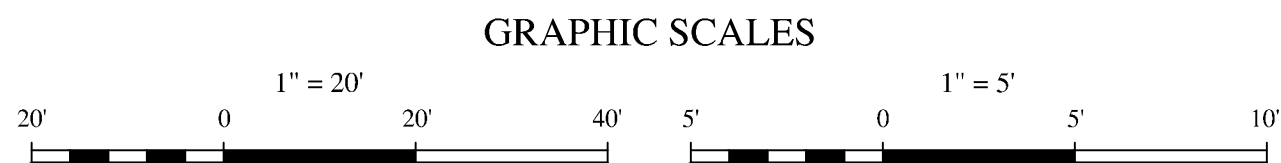
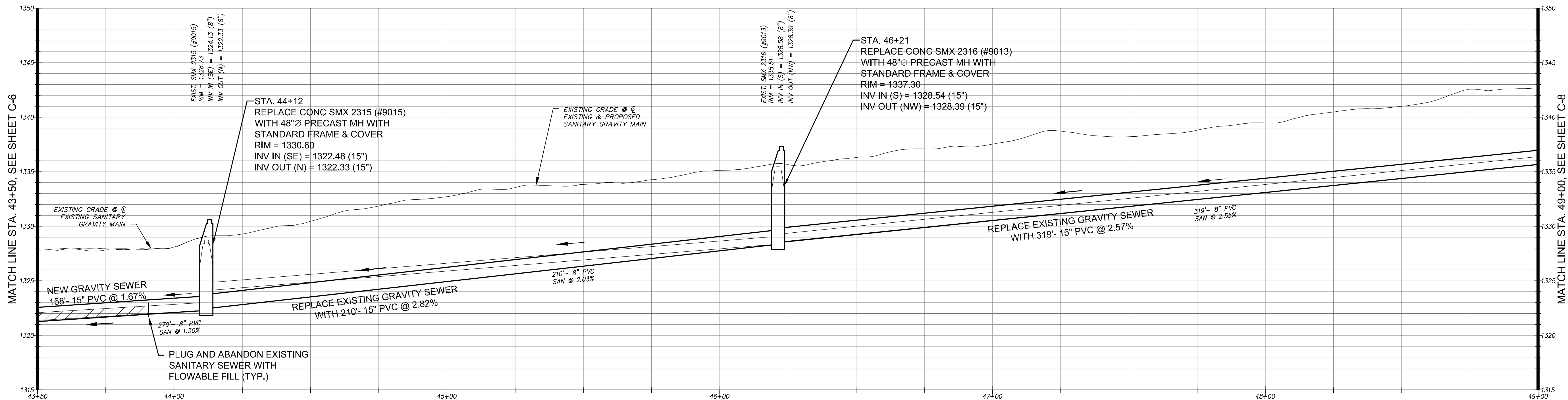
SCALES: HORIZ. 1" = 20'
VERT. 1" = 5'



PLAN REVISIONS -		SHEET C-6 OF 17		SCALE 1" = 20' 1" = 5'	
STAUNTON CROSSING DOWNSTREAM SEWER UPGRADES STAUNTON, VIRGINIA				STAUNTON CROSSING GRAVITY SEWER - STA. 38+00 TO STA. 43+50	
DATE: JANUARY 2024	ENGINEER: AAD	CHECKED: STW	PCP	JOB#: 22190	
310 FIRST STREET, SUITE 400 ROANOKE, VIRGINIA 24011 (P) 540 682-7570 (F) 844 890-1689 RUMMEL, KLEPPER & KAHL, LLP Engineers/Construction Managers/Planners/Scientists					

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 2. NO BOUNDARY SURVEY WAS COMPLETED AS PART OF THIS PROJECT.

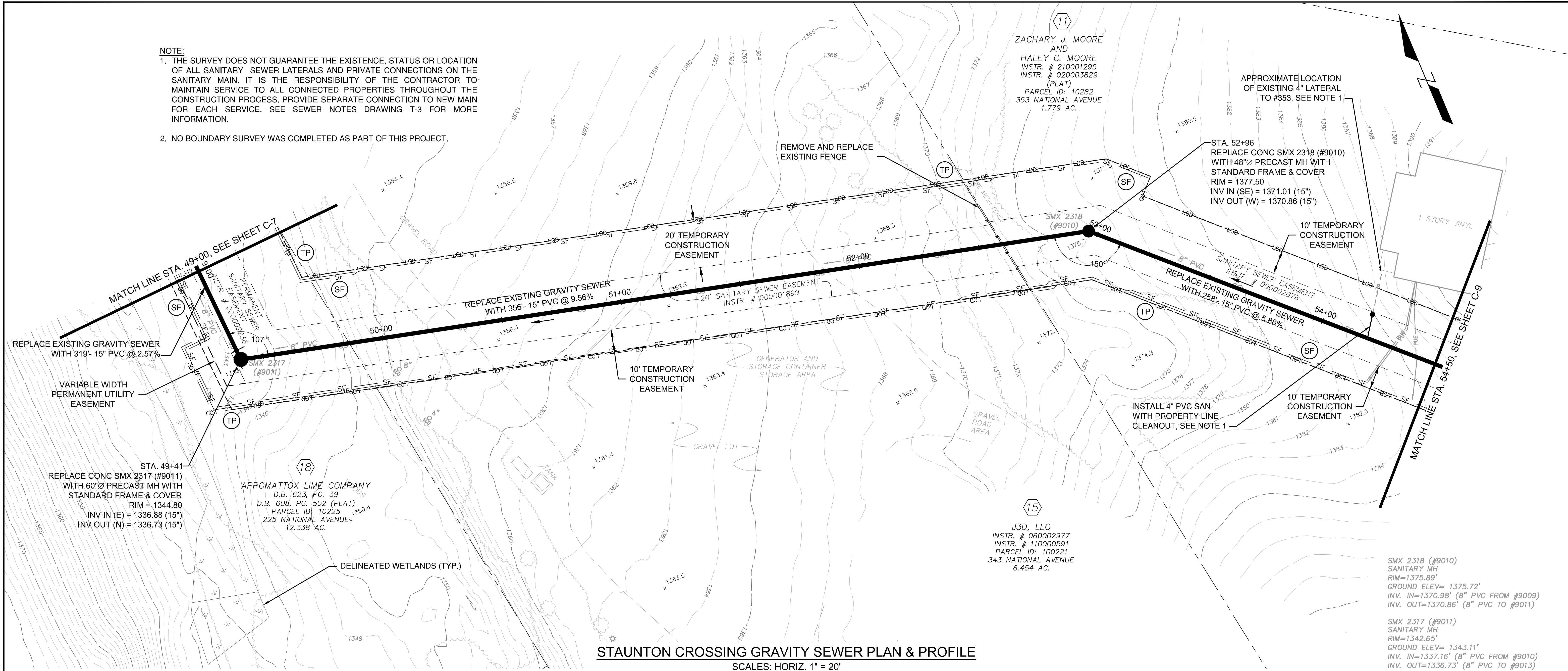


STAUNTON CROSSING GRAVITY SEWER PLAN & PROFILE

SCALES: HORIZ. 1" = 20'
VERT. 1" = 5'

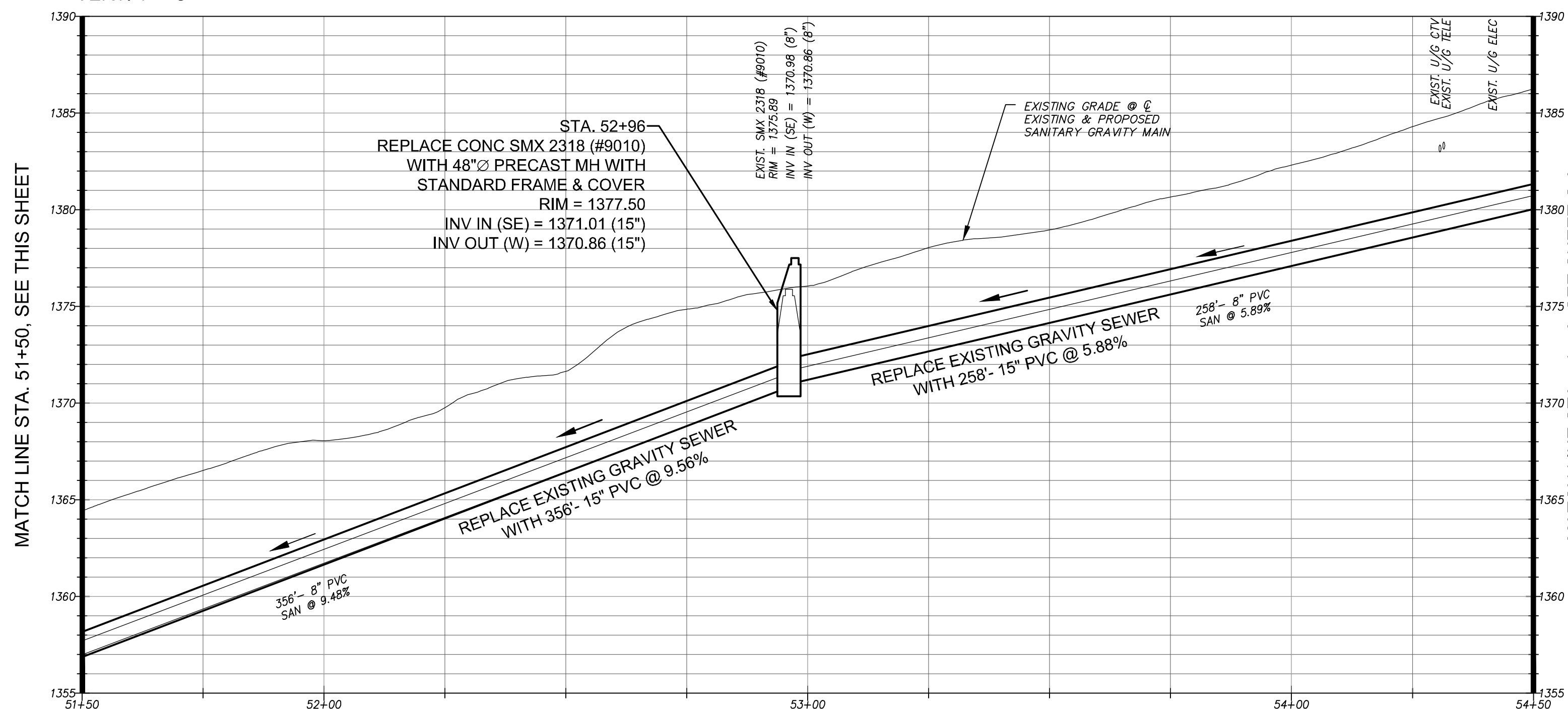
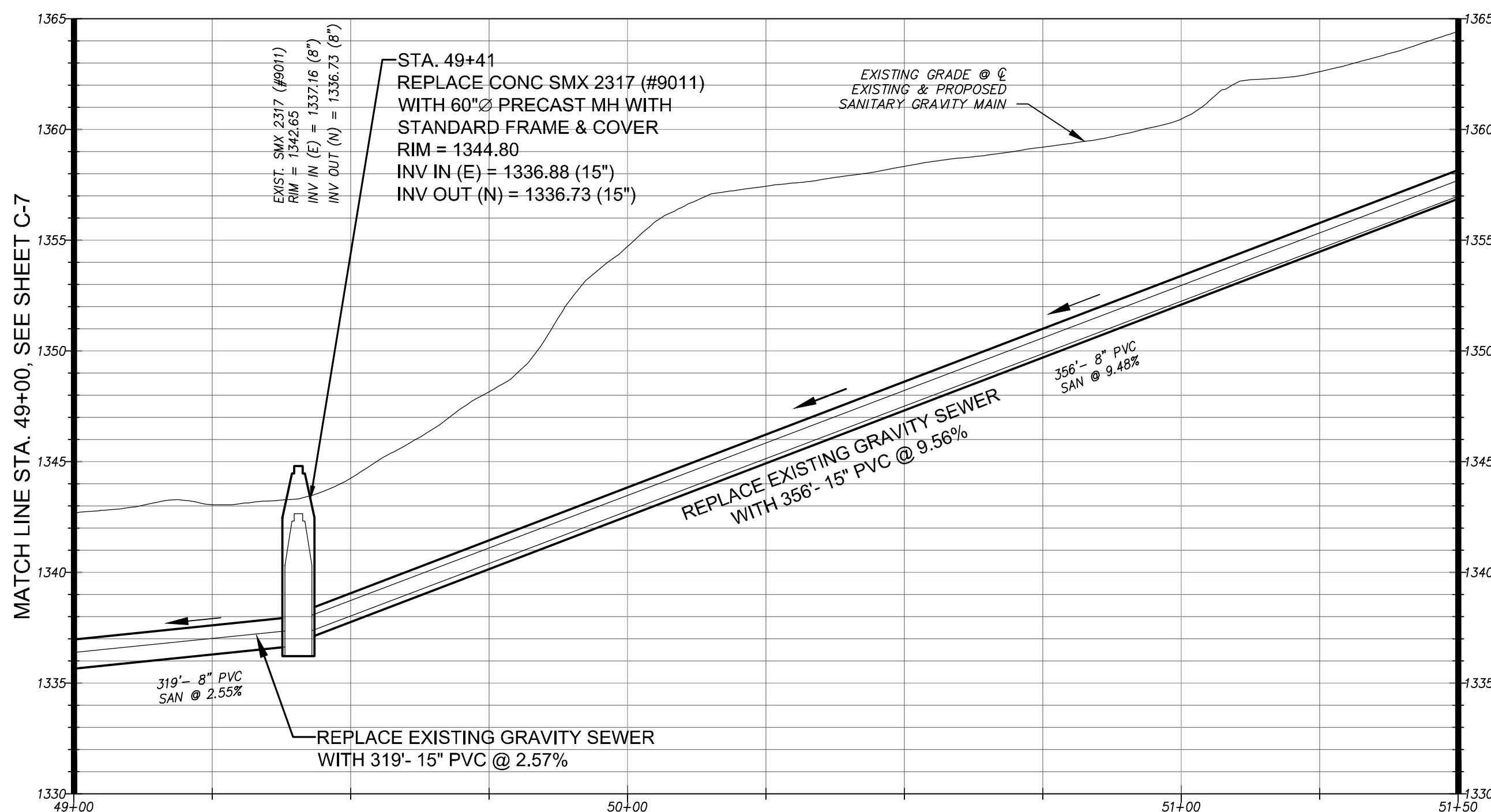
PLAN REVISIONS -	
SHEET	C-7
10 OF 17	SCALE 1" = 20' 1" = 5'
STAUNTON CROSSING DOWNSTREAM SEWER UPGRADES STAUNTON, VIRGINIA	
STAUNTON CROSSING GRAVITY SEWER - STA. 43+50 TO STA. 49+00	
DATE: JANUARY 2024	ENGINEER: AAD
CHECKED: STW	CAD: PCP
JOB#: 22190	
310 FIRST STREET, SUITE 400 ROANOKE, VIRGINIA 24011 (P) 540 682-7570 (F) 844 890-1689	
RUMMEL, KLEPPER & KAHL, LLP Engineers/Construction Managers/Planners/Scientists	

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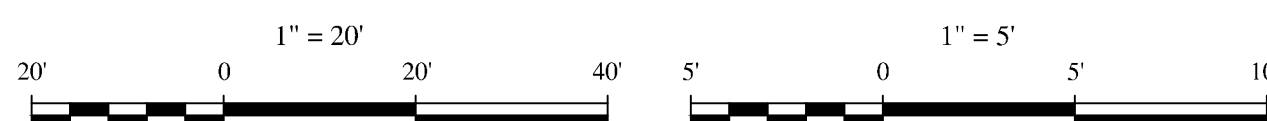


STAUNTON CROSSING GRAVITY SEWER PLAN & PROFILE

SCALES: HORIZ. 1" = 20'
VERT. 1" = 5'

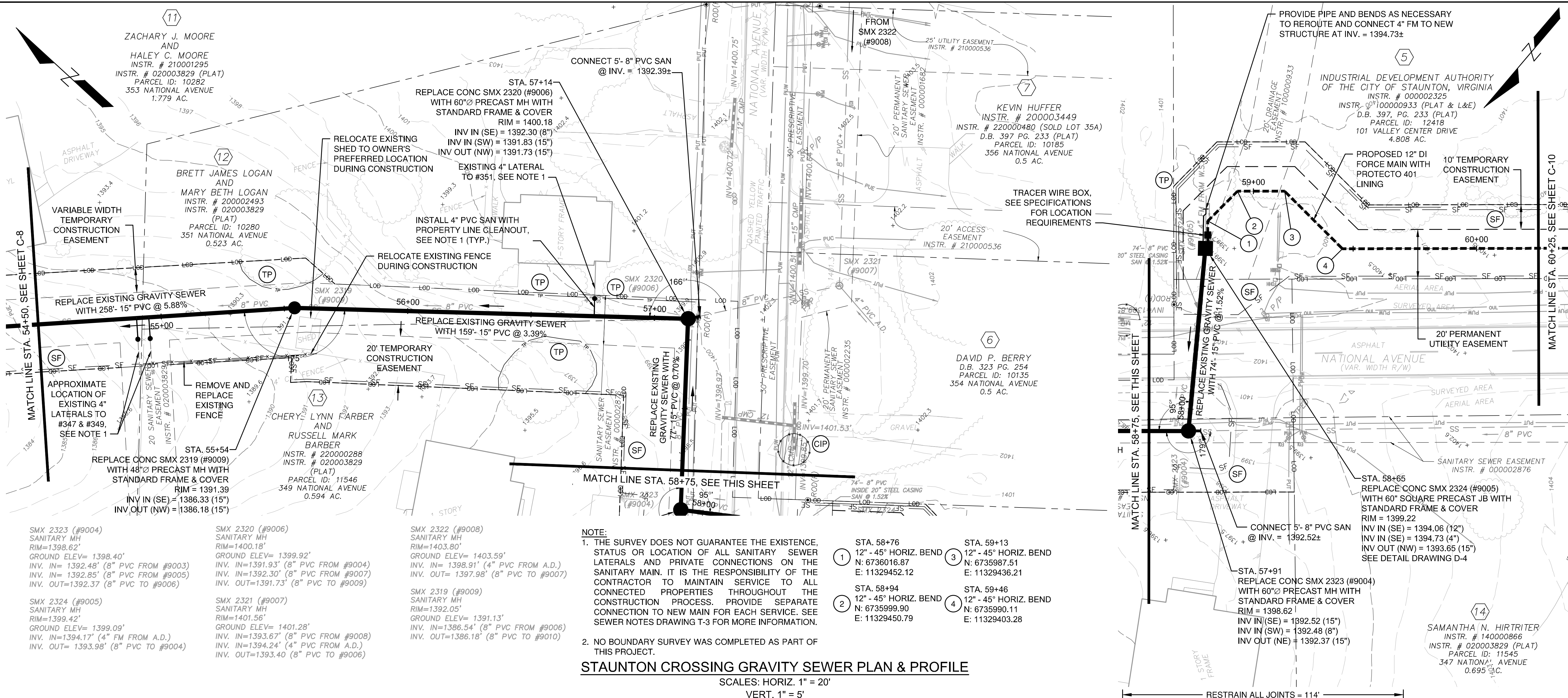


GRAPHIC SCALES



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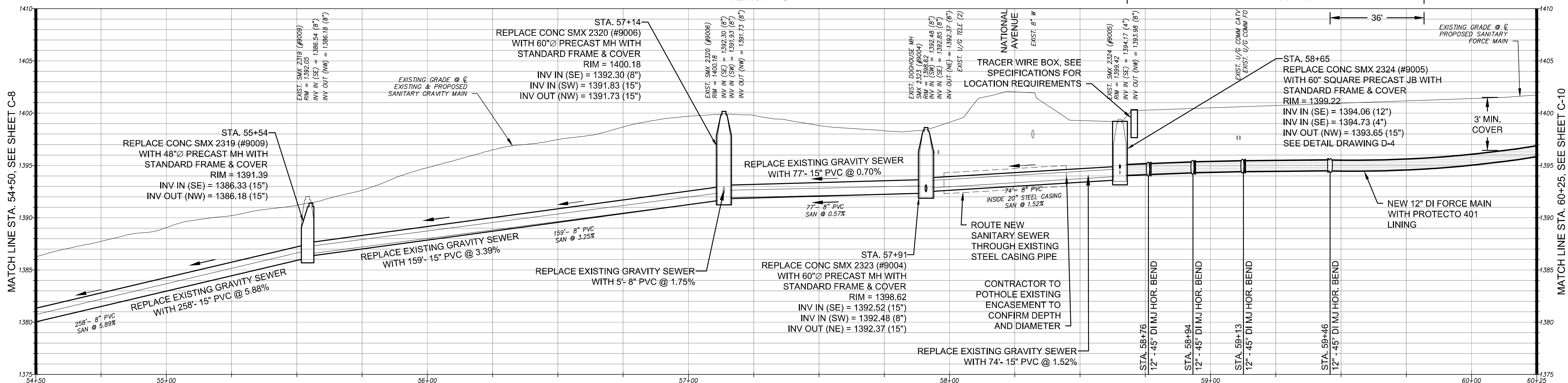
\\ad.rkk.com\fs\Cloud\Projects\2022\22190_CSOnCall\22190.001 - Staunton Crossing Downstream Sewer\CAD\02\22190 - C-1-x.dwg/ 1/12/2024 2:55:22 PM by ---



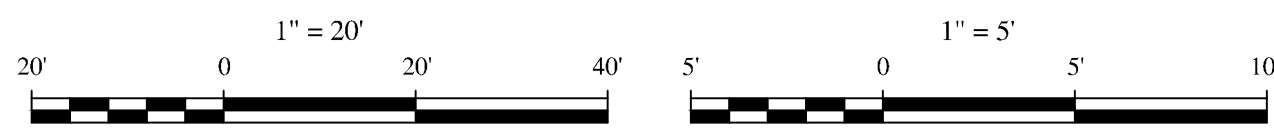
- NOTE:**
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 2. NO BOUNDARY SURVEY WAS COMPLETED AS PART OF THIS PROJECT.

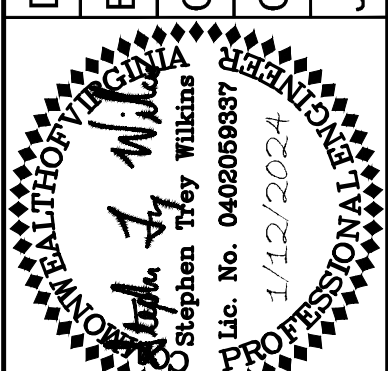
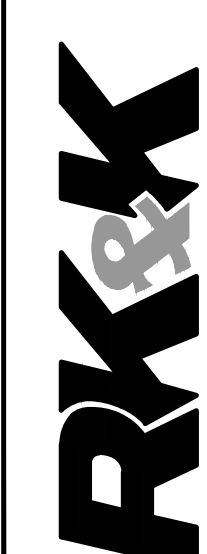
STAUNTON CROSSING GRAVITY SEWER PLAN & PROFILE

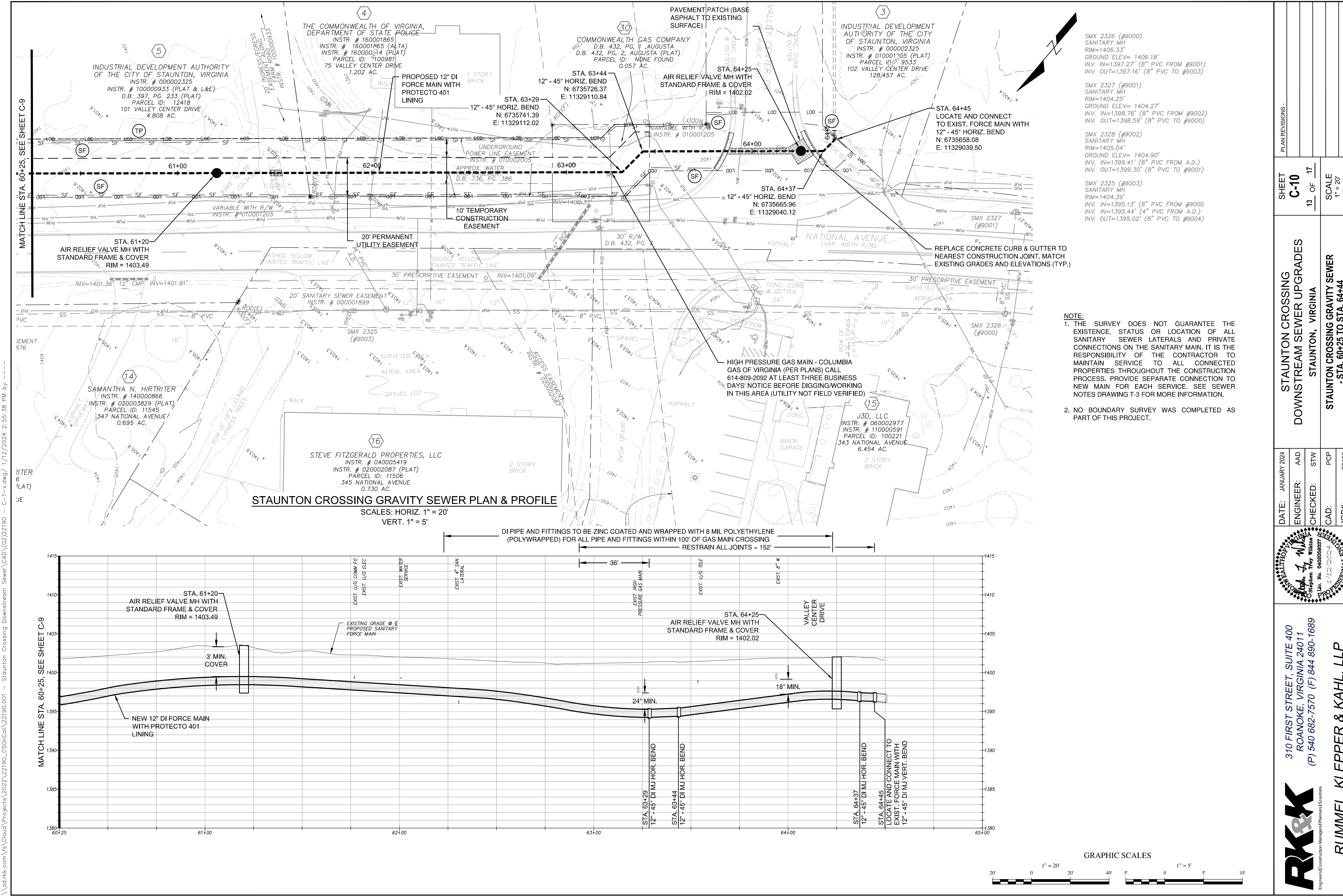
SCALES: HORIZ. 1" = 20'
VERT. 1" = 5'



GRAPHIC SCALES



PLAN REVISIONS		SHEET C-9 OF 17		SCALE 1" = 20' 1" = 5'	
STAUNTON CROSSING DOWNSTREAM SEWER UPGRADES		STAUNTON, VIRGINIA		STAUNTON CROSSING GRAVITY SEWER - STA. 54+50 TO STA. 60+25	
DATE: JANUARY 2024	ENGINEER: AAD	CHECKED: STW	CAD: PCP	JOB#: 22190	
310 FIRST STREET, SUITE 400 ROANOKE, VIRGINIA 24011 (P) 540 682-7570 (F) 844 890-1689					
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- a. CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DISCHARGED DIRECTLY INTO AN ADEQUATE NATURAL OR MAN-MADE RECEIVING CHANNEL, PIPE OR STORM SEWER SYSTEM. FOR THOSE SITES WHERE RUNOFF IS DISCHARGED INTO A PIPE OR PIPE SYSTEM, DOWNSTREAM STABILITY ANALYSES AT THE OUTFALL OF THE PIPE OR PIPE SYSTEM SHALL BE PERFORMED.
- b. ADEQUACY OF ALL CHANNELS AND PIPES SHALL BE VERIFIED IN THE FOLLOWING MANNER:
 - (1) THE APPLICANT SHALL DEMONSTRATE THAT THE TOTAL DRAINAGE AREA TO THE POINT OF ANALYSIS WITHIN THE CHANNEL IS 100 TIMES GREATER THAN THE CONTRIBUTING DRAINAGE AREA OF THE PROJECT IN QUESTION;
 - (2) (a) NATURAL CHANNELS SHALL BE ANALYZED BY THE USE OF A TWO-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP CHANNEL BANKS NOR CAUSE EROSION OF CHANNEL BED OR BANKS.

NOTE: FILTER BAGS ARE REQUIRED FOR ALL DEWATERING PUMP DISCHARGE.

Labels:

- FILTER BAG PLACED ON AGGREGATE OR STRAW
- HIGH STRENGTH DOUBLE STITCHED "J" TYPE SEAMS
- SEWN IN SPOUT
- HIGH STRENGTH STRAPPING FOR HOLDING HOSE IN PLACE
- WATER FLOW FROM PUMP
- PUMP DISCHARGE HOSE (UP TO 4")
- AGGREGATE OR STRAW UNDERLAYMENT

Dimensions:

- WIDTH
- LENGTH

Views:

- TOP VIEW
- ELEVATION

DEWATERING STRUCTURE FILTER BAG

PLAN REVISIONS -	

SHEET
D-1
14 OF 17

SCALE
N/A

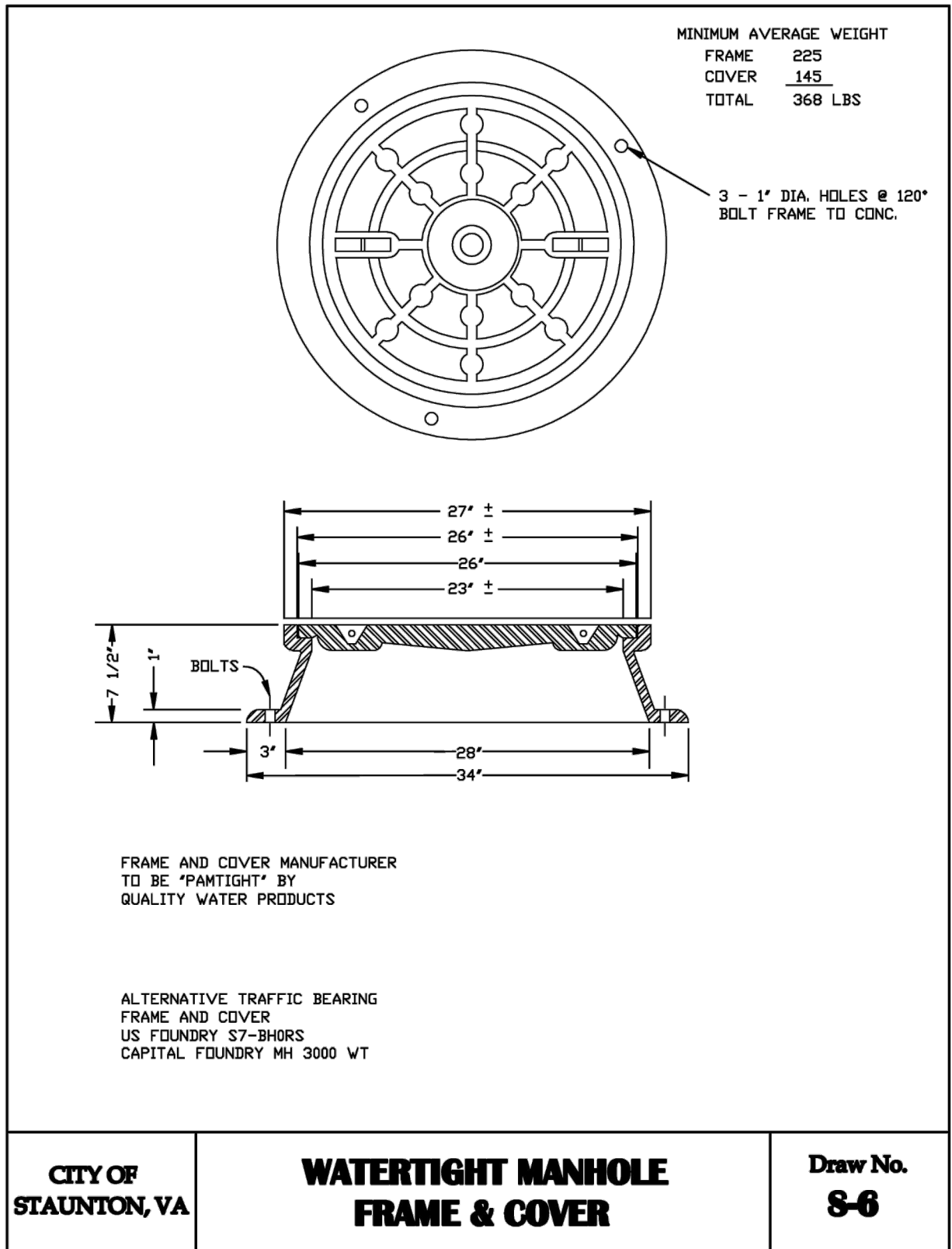
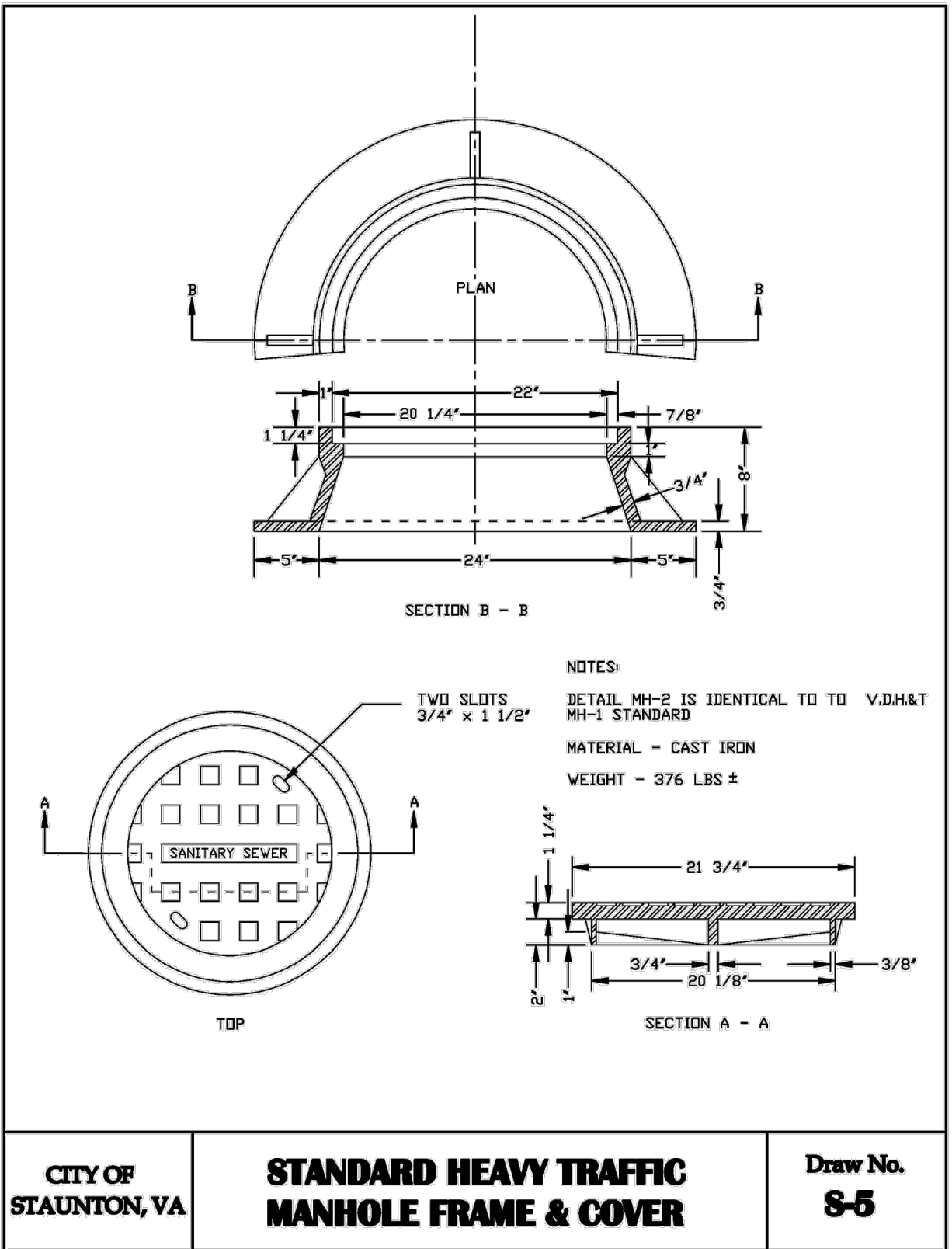
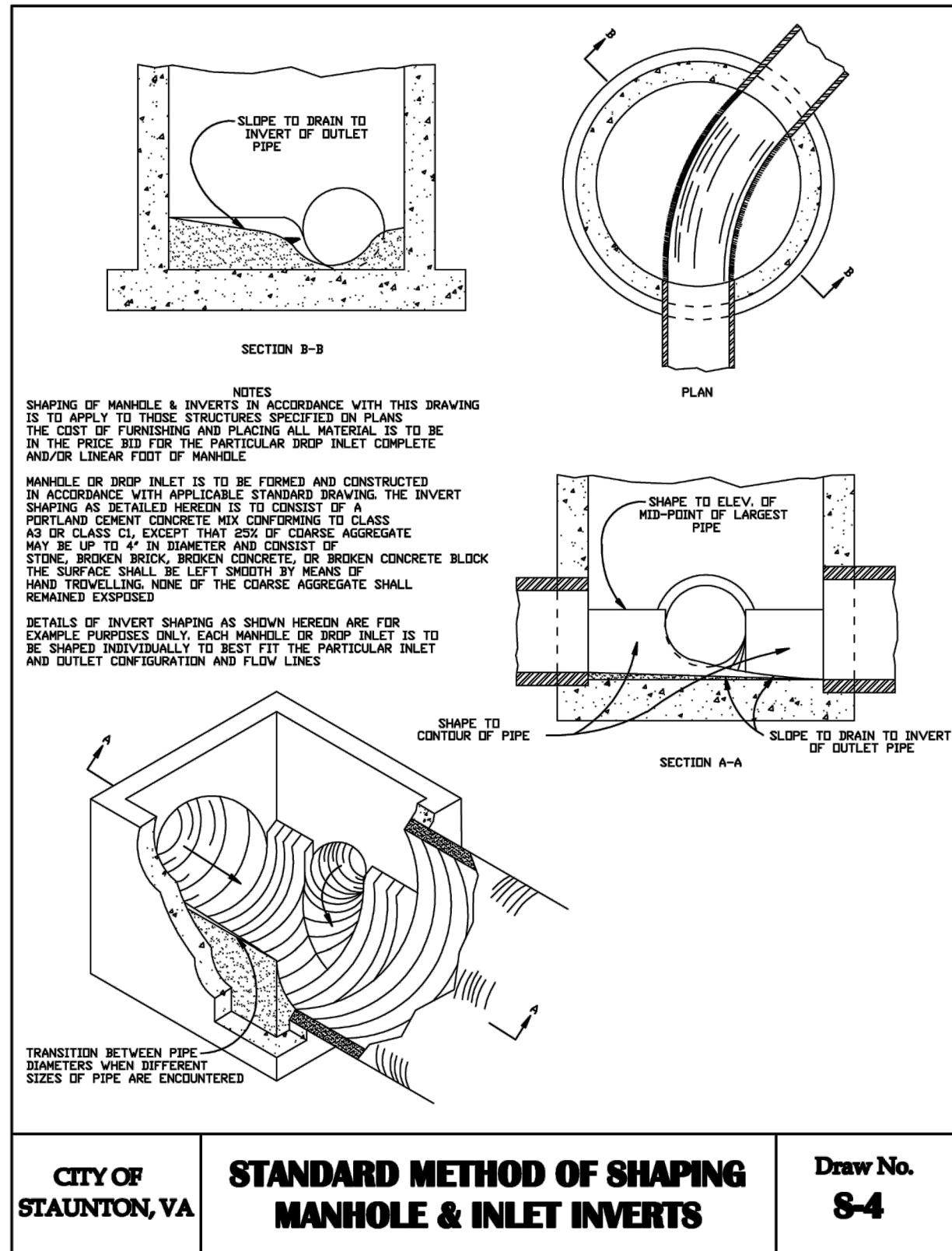
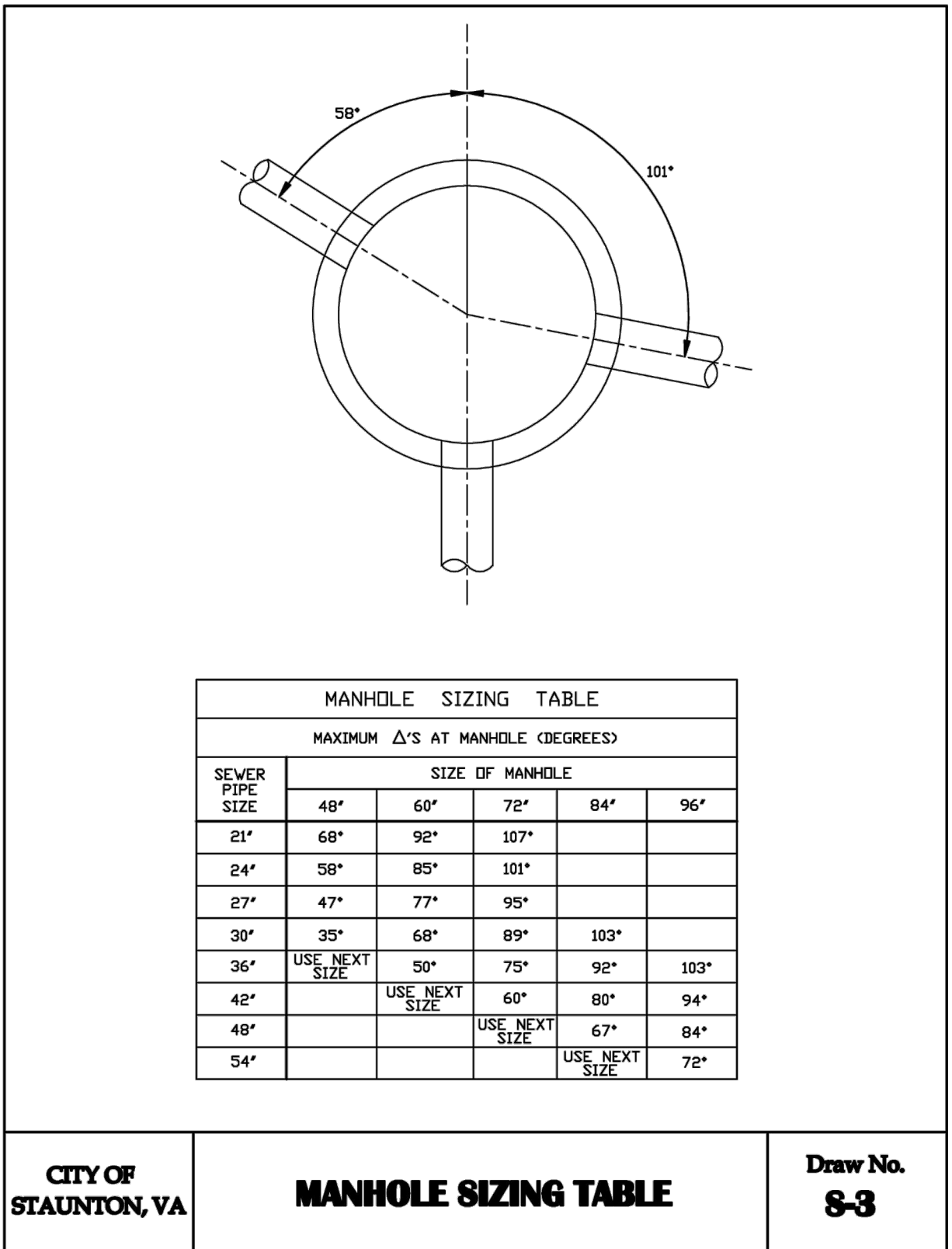
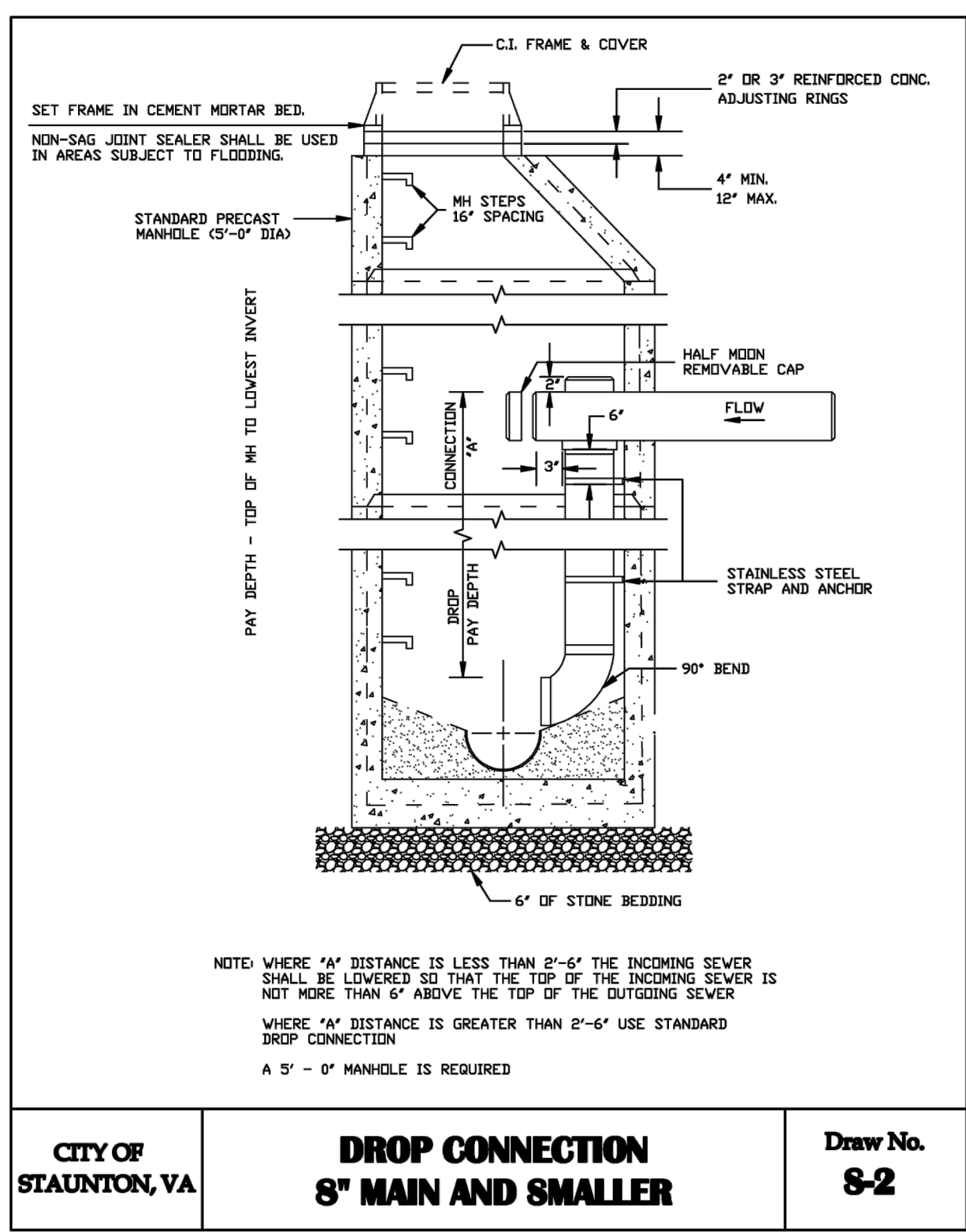
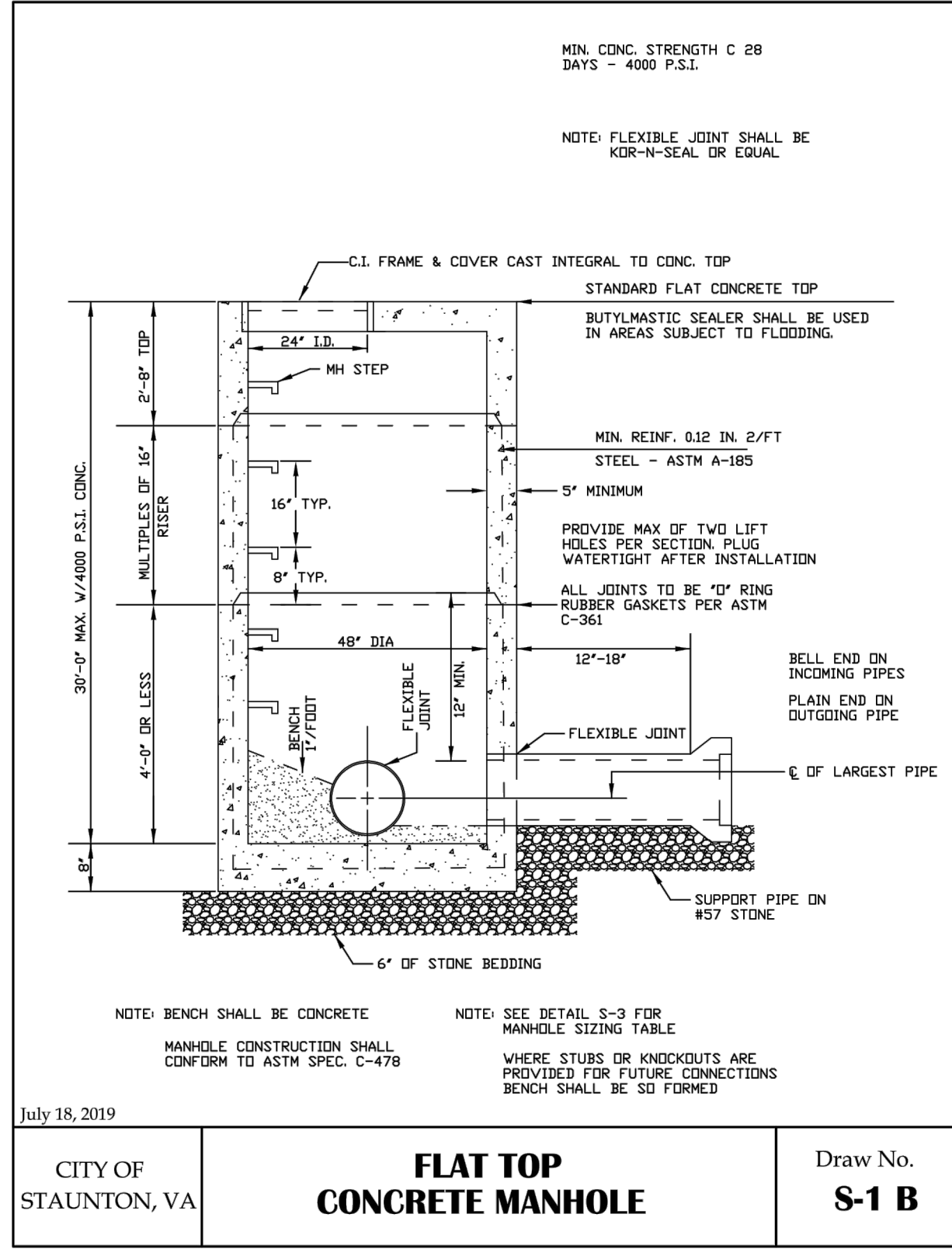
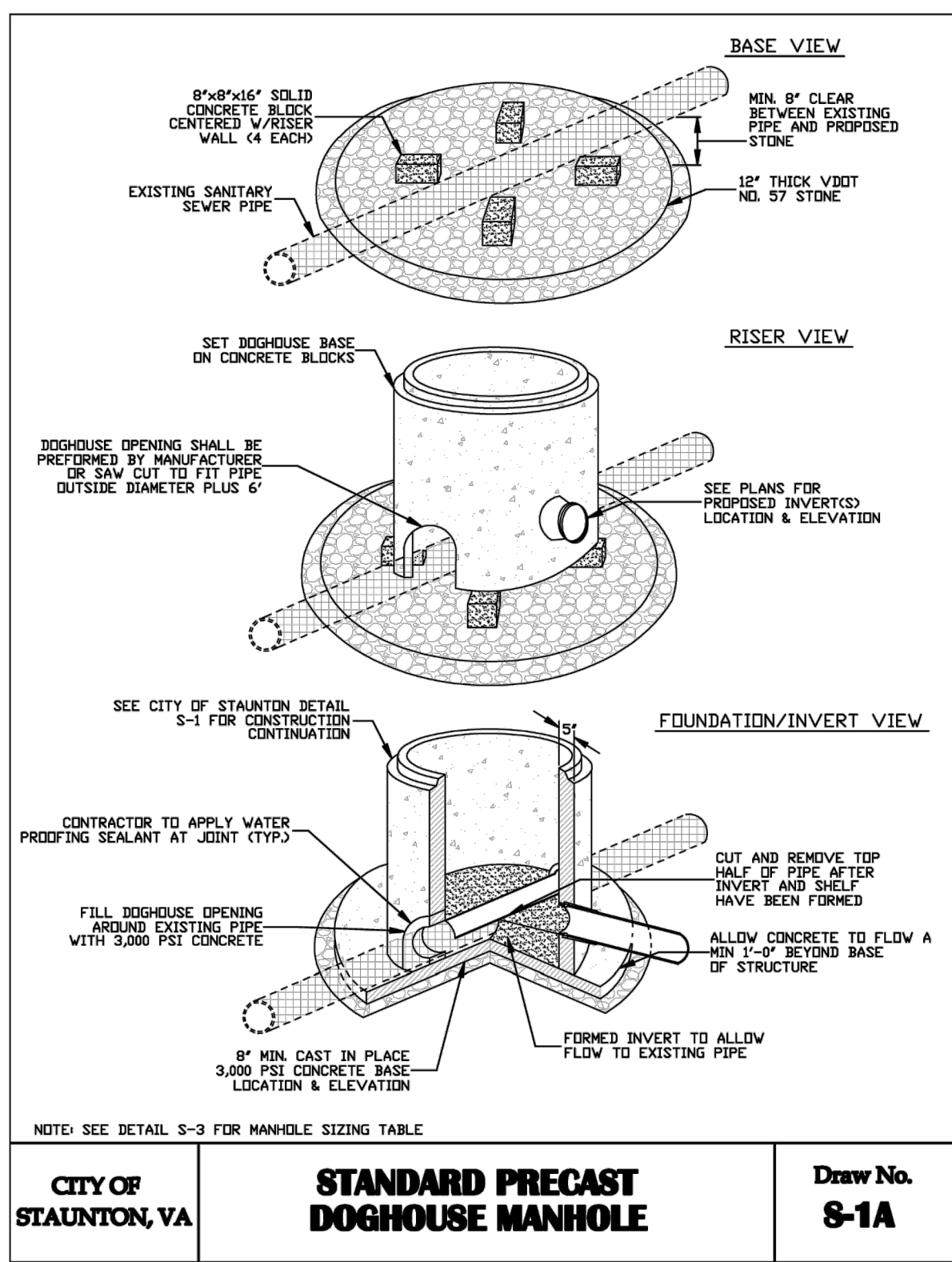
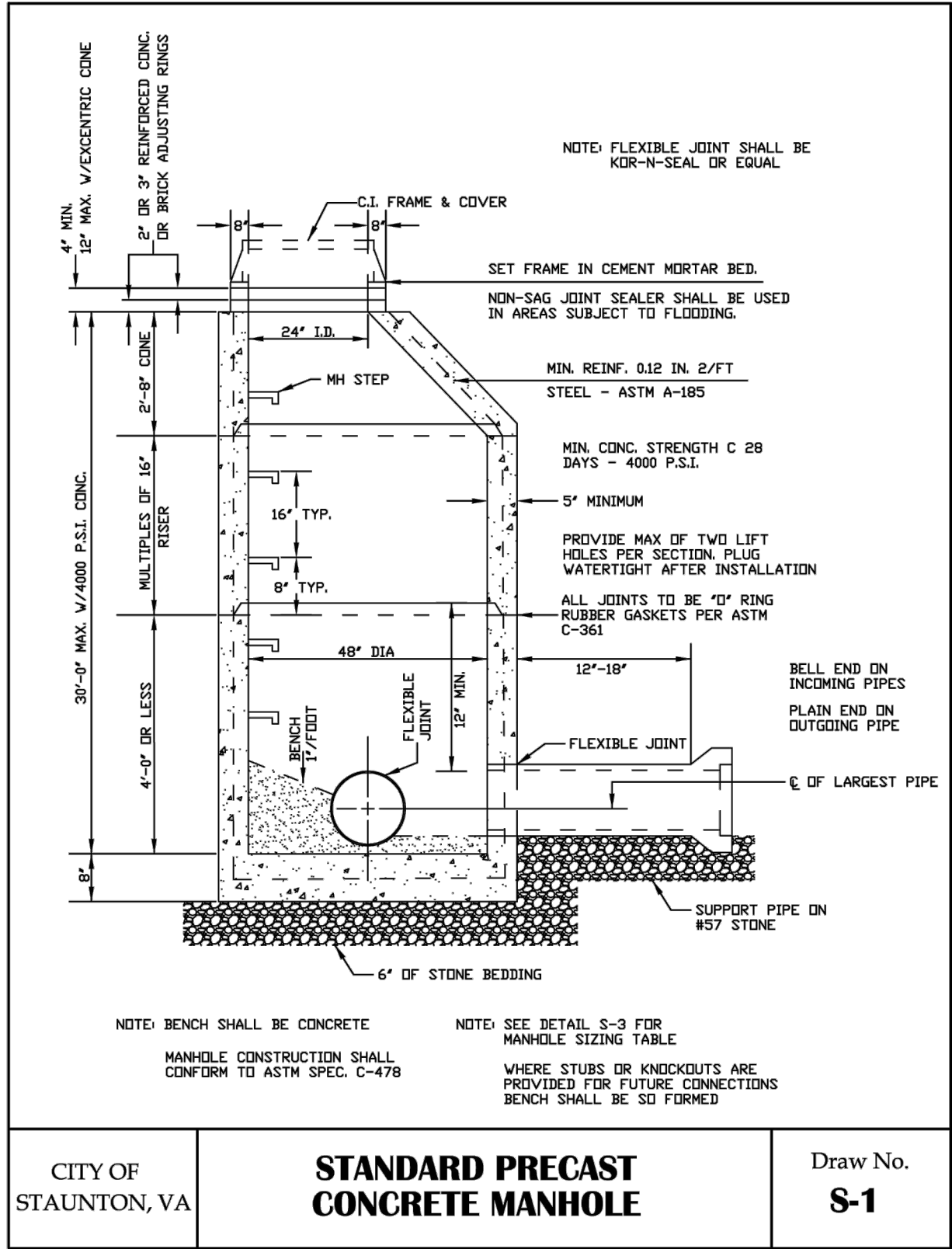
STAUNTON CROSSING DOWNSTREAM SEWER UPGRADES STAUNTON, VIRGINIA	EROSION AND SEDIMENT CONTROL NOTES AND DETAILS
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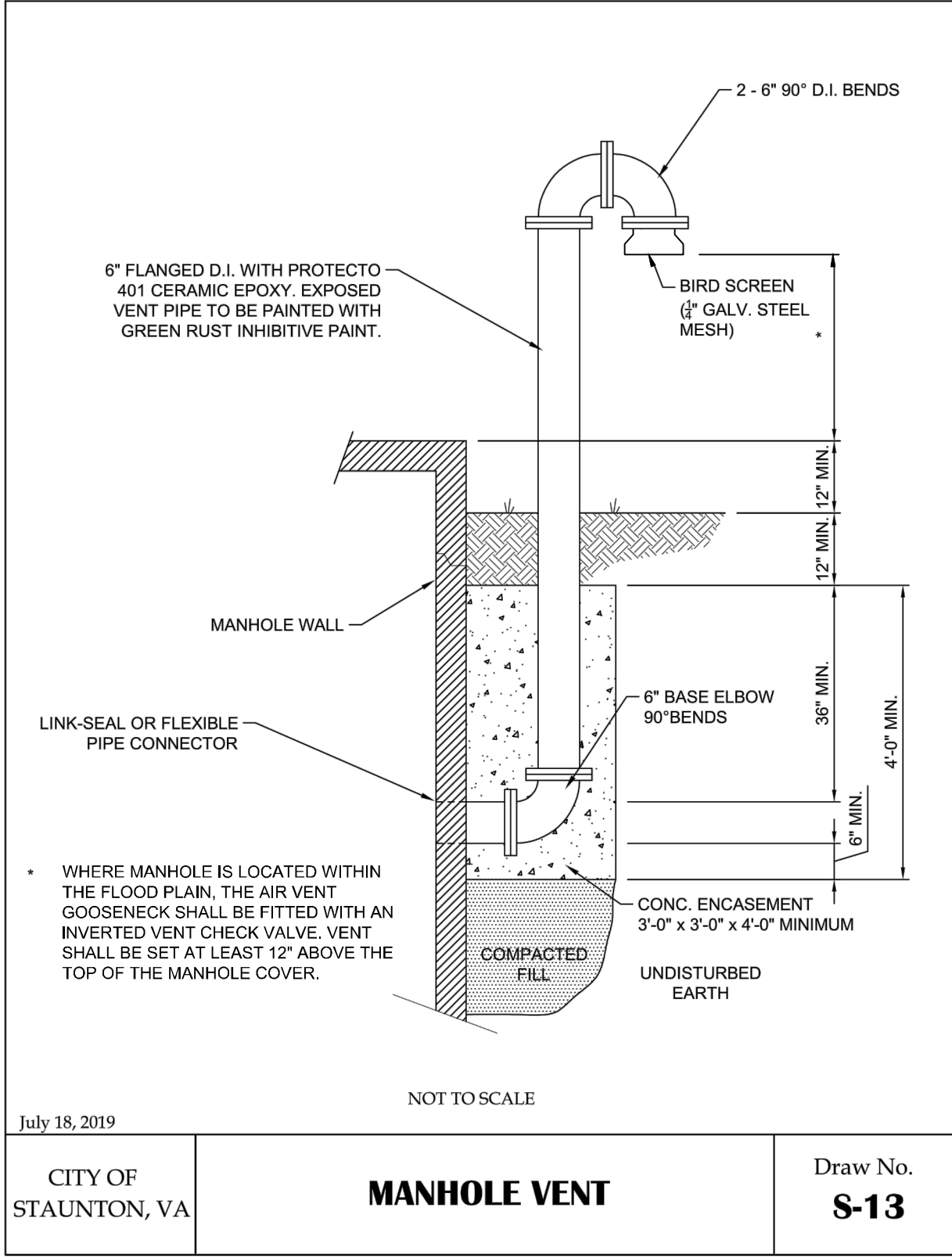
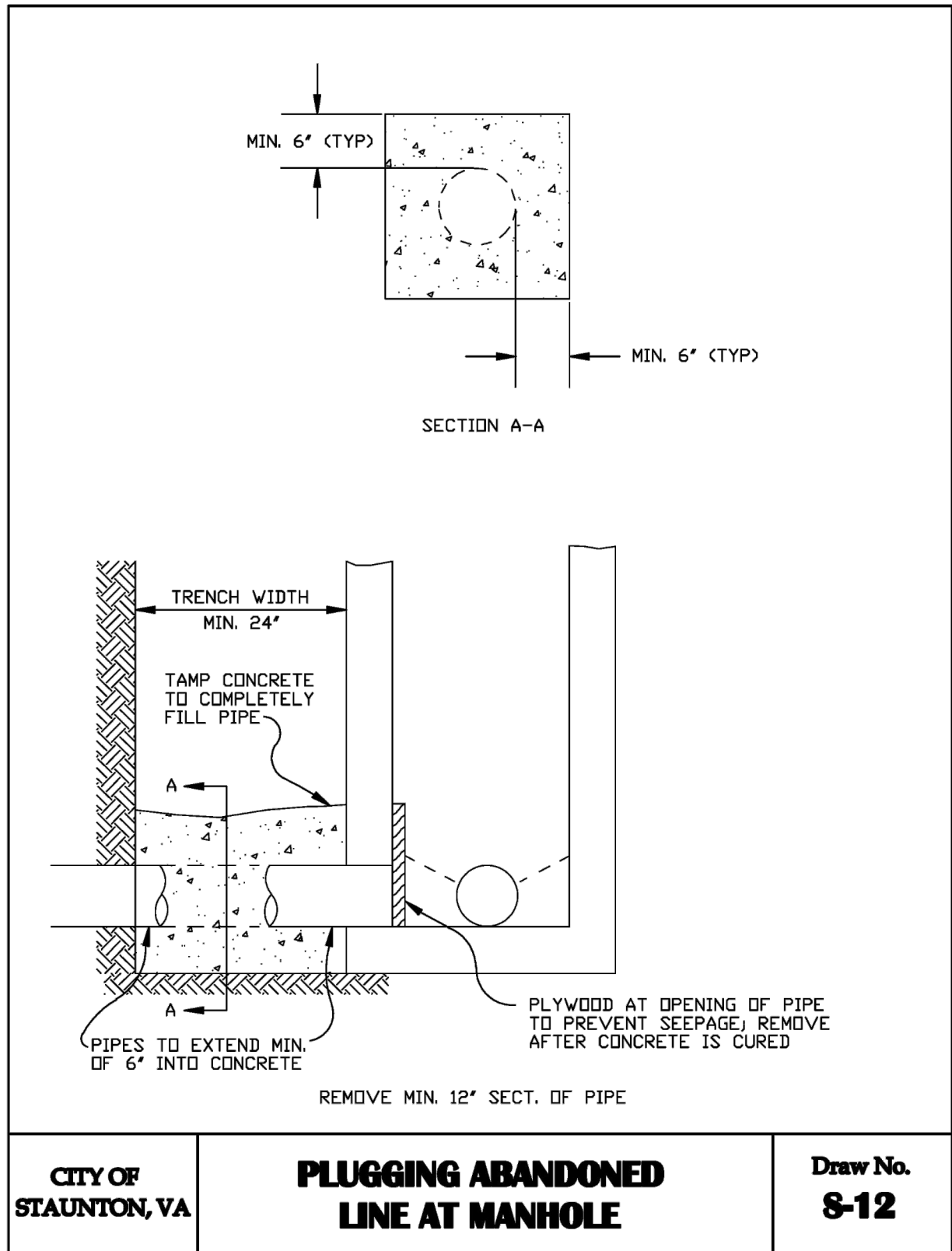
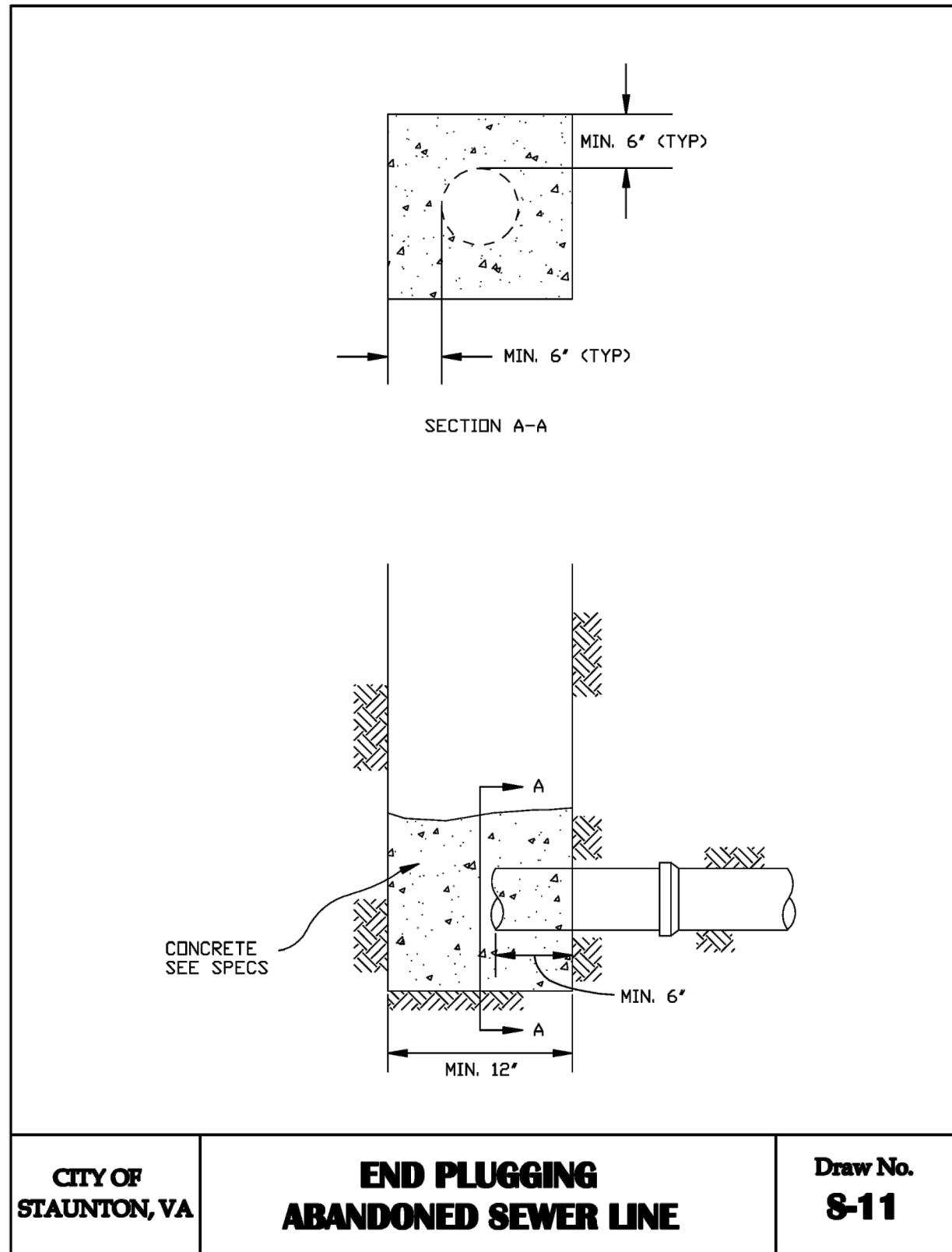
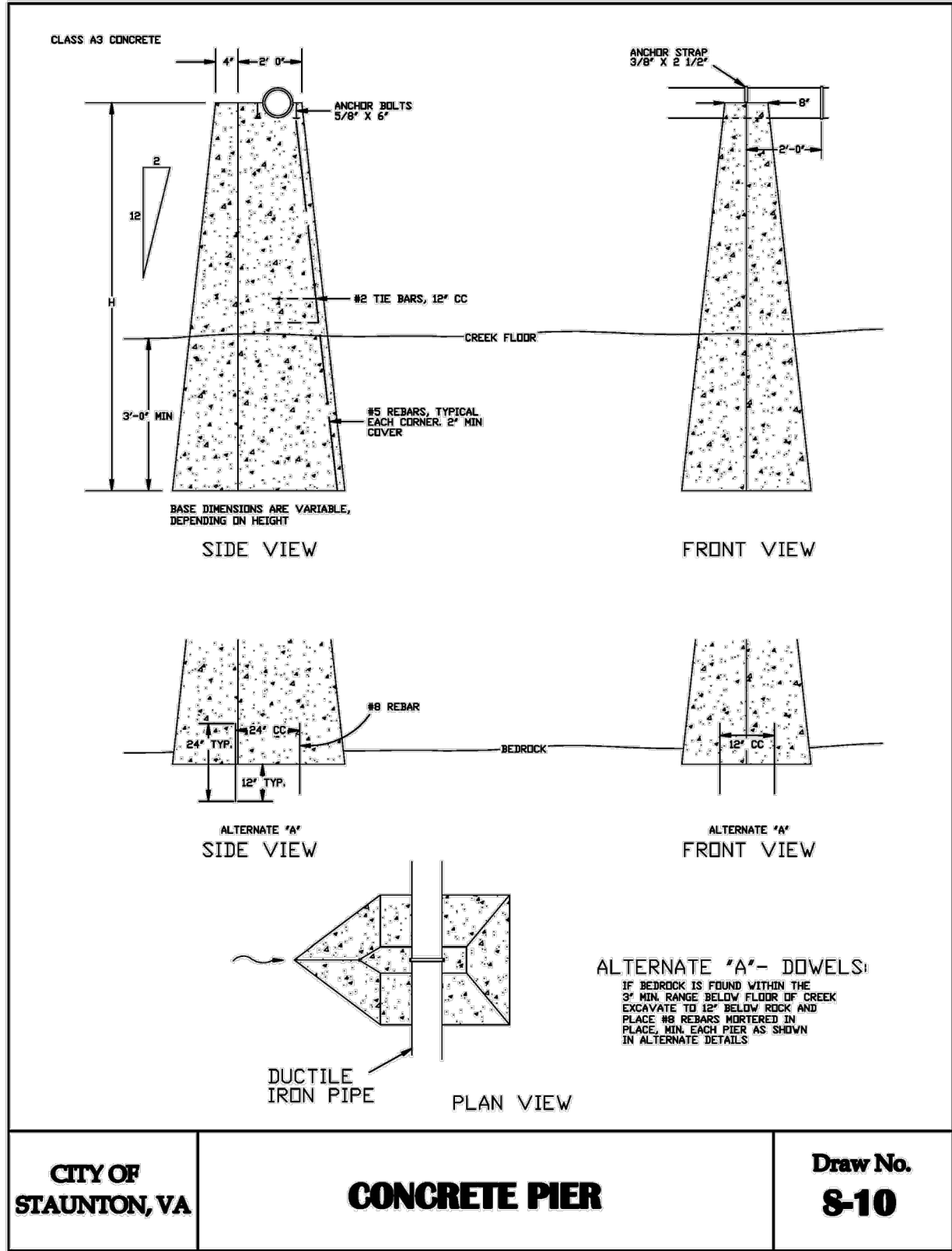
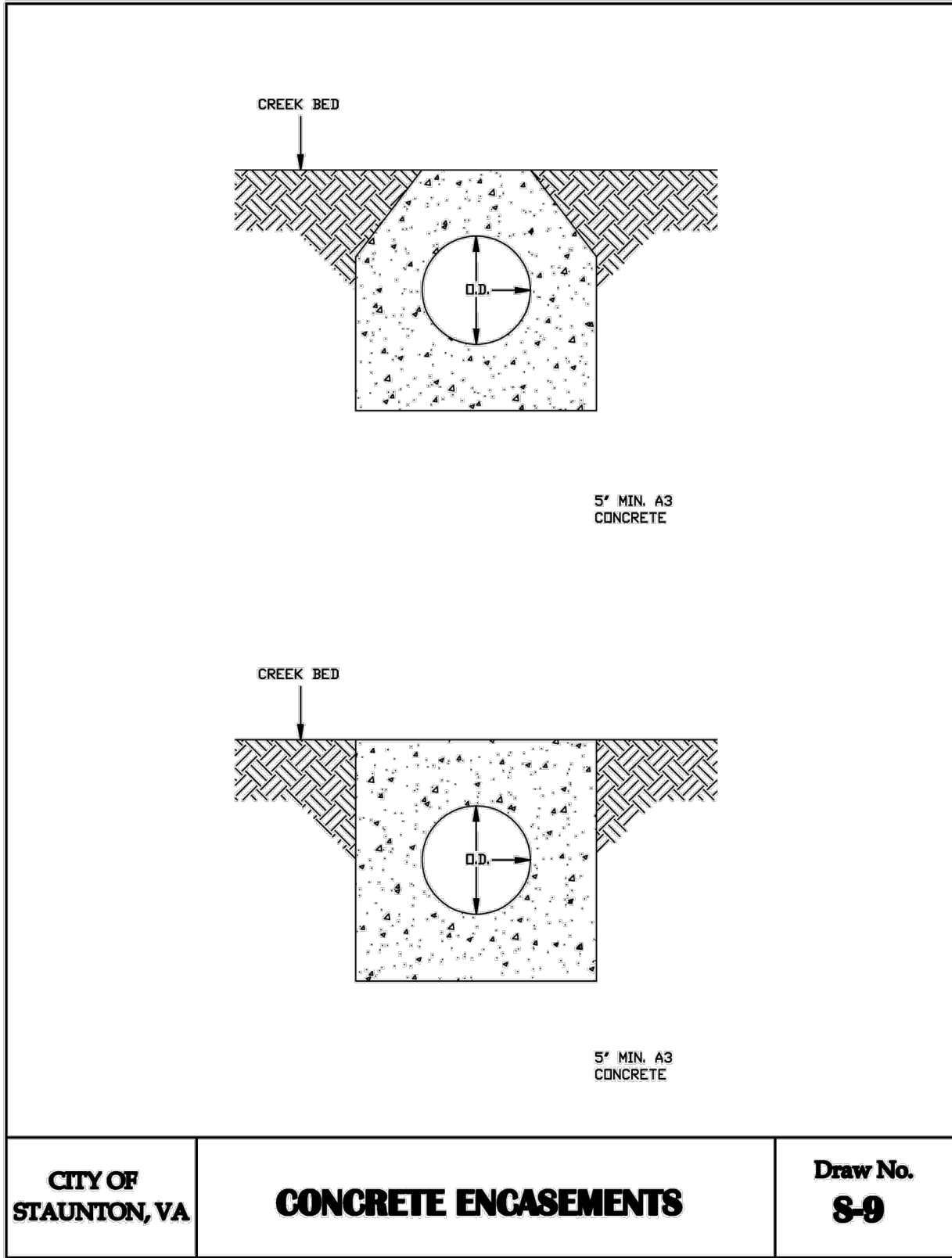
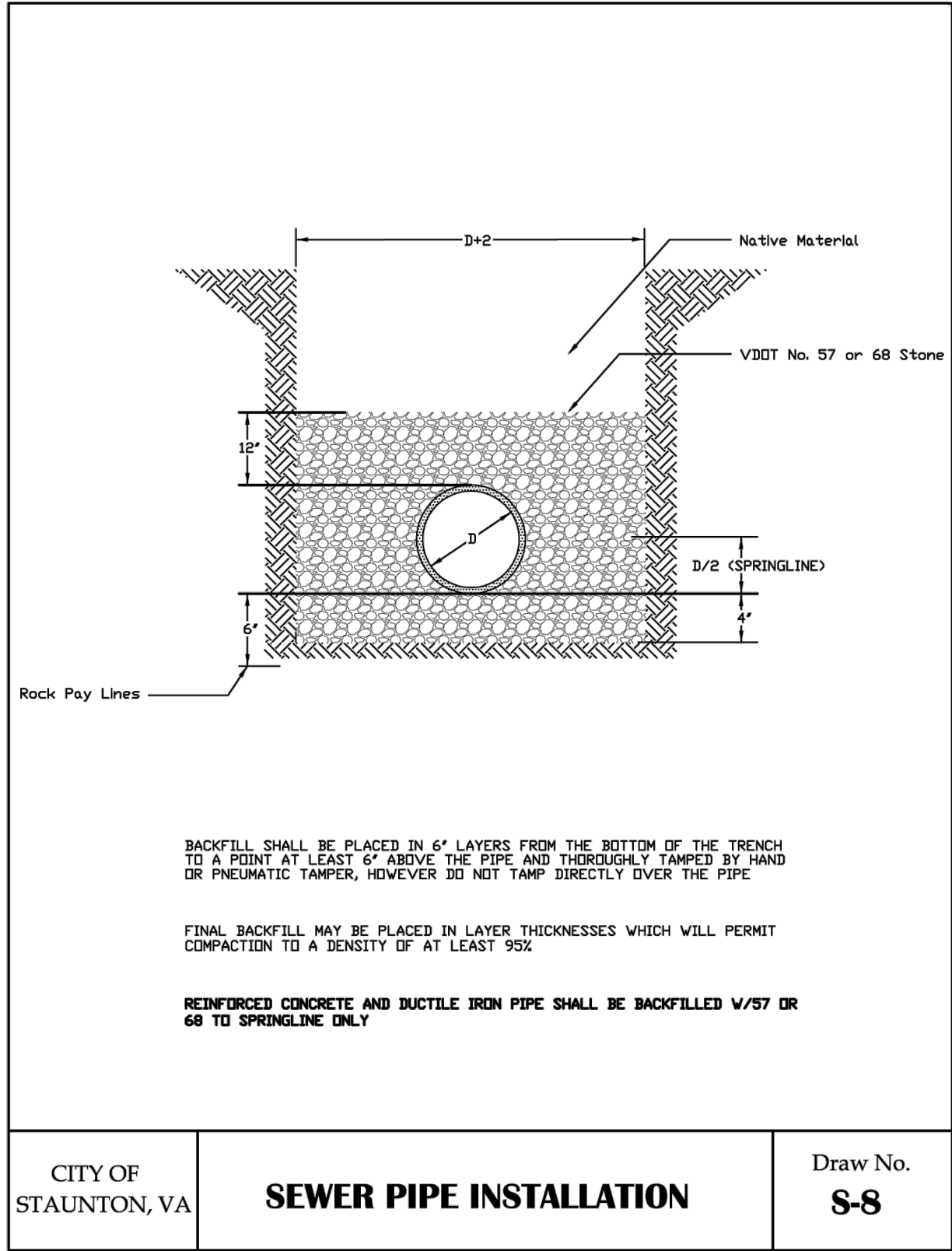
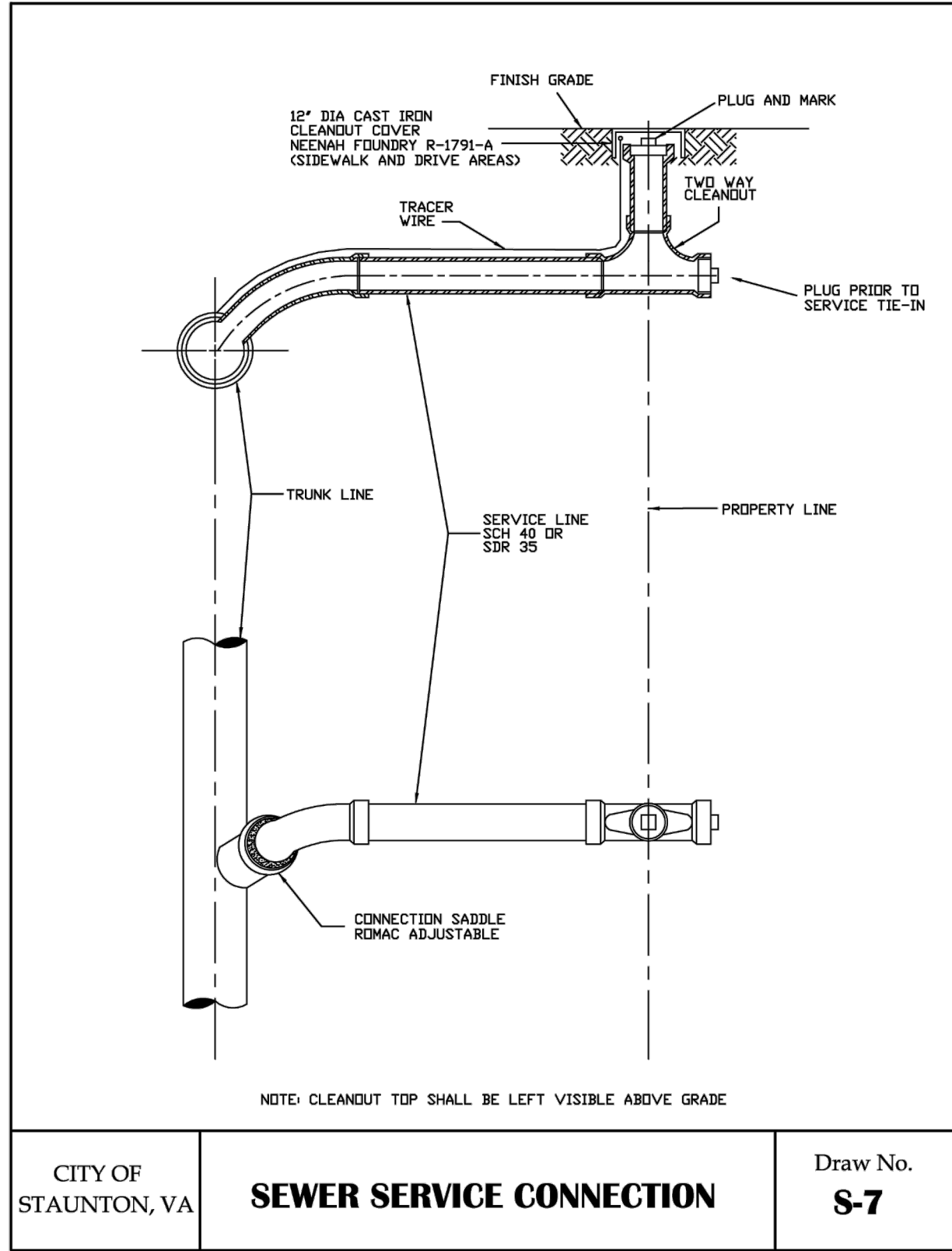
DATE:	JANUARY 2024
ENGINEER:	AAD
CHECKED:	STW
CAD:	PCP
JOB#:	22190

RK&K
Engineers/Construction Managers/Planners/Scientists

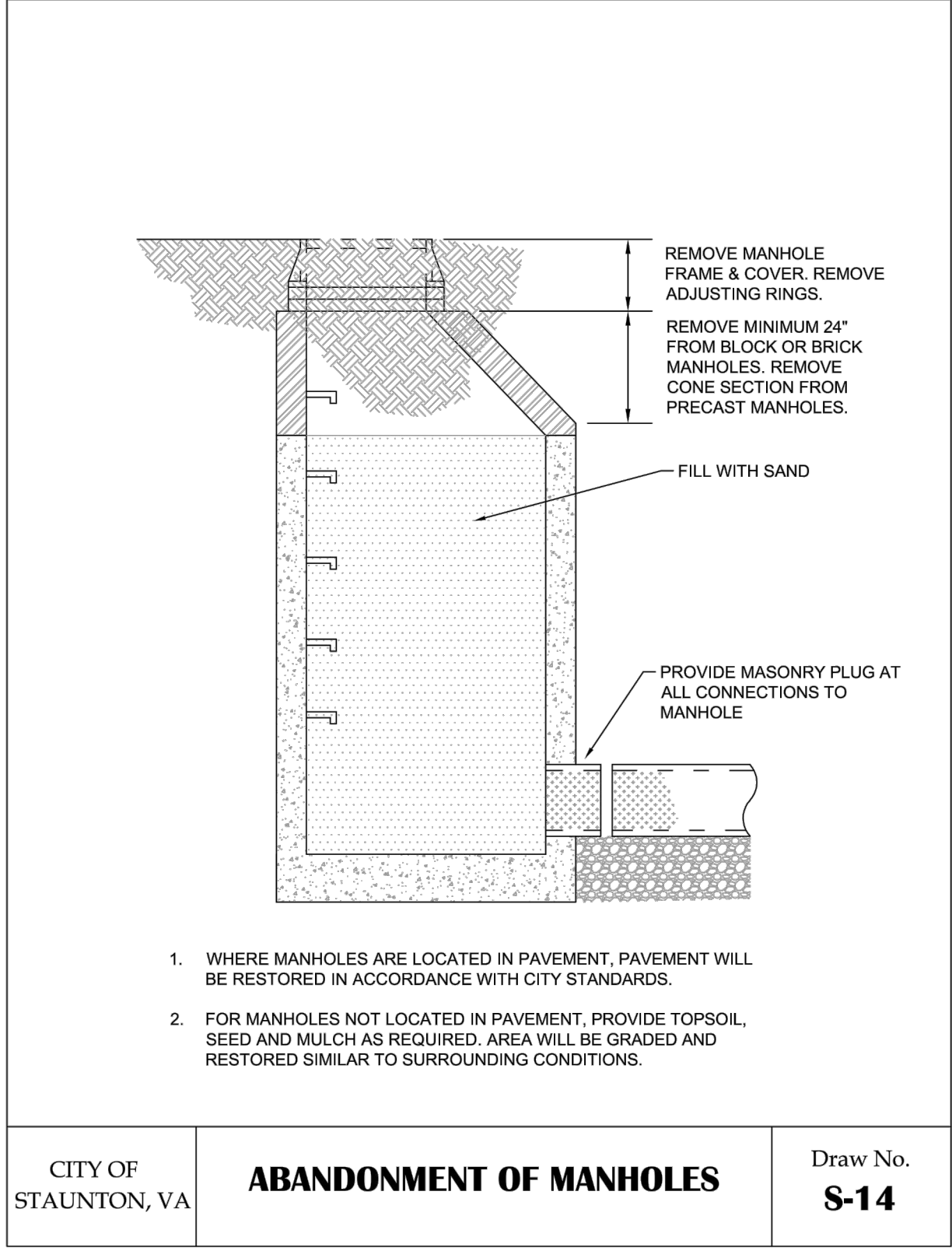
310 FIRST STREET, SUITE 400
ROANOKE, VIRGINIA 24011
(P) 540 682-7570 (F) 844 890-1689

RUMMEL, KLEPPER & KAHL, LLP





(MODIFIED)



PLAN REVISIONS -		SHEET D-3 OF 17		SCALE N/A	
STAUNTON CROSSING DOWNSTREAM SEWER UPGRADES		STAUNTON, VIRGINIA		CITY OF STAUNTON SANITARY SEWER DETAILS	
DATE: JANUARY 2024	ENGINEER: AAD	CHECKED: STW	CAD: PCP	JOB#: 22190	
PROFESSIONAL SEAL STEPHEN T. WILKINS 1/12/2024 0402005937 REGISTERED PROFESSIONAL 310 FIRST STREET, SUITE 400 ROANOKE, VIRGINIA 24011 (P) 540 682-7570 (F) 844 890-1689					
RUMMEL, KLEPPER & KAHL, LLP Engineers Construction Managers Planners Scientists					

