

BASIS OF BEARINGS

THE BEARINGS SHOWN UPON THIS DRAWING ARE BASED ON THE EASTERLY RIGHT OF WAY LINE OF NORTH GALENA ROAD BEING N04°00'13"E AS DETERMINED BY GPS OBSERVATION USING OHIO STATE PLANE COORDINATE SYSTEM, NORTH ZONE, NAD 83 WITH 2011 NSRS ADJUSTMENT.

BENCHMARKS

SOURCE THE PROJECT IS BASED ON STATE PLANE COORDINATES OHIO NORTH ZONE NAD 83 WITH 2011 NSRS ADJUSTMENT. ELEVATIONS ARE BASED ON NAVD 1988

B.M. #1 5/8" x 30" IRON REBAR WITH YELLOW PLASTIC CAP MARKED PROJECT CONTROL
NORTHING 222812.81
EASTING 1854731.11
ELEV.=957.77 (NAVD 88)E

B.M. #7 5/8" x 30" IRON REBAR WITH YELLOW PLASTIC CAP MARKED PROJECT CONTROL
NORTHING 223951.52
EASTING 1856419.43
ELEV.=936.67 (NAVD 88)

B.M. #8 BRASS TABLET SET IN CONCRETE AND STAMPED "97-179"
NORTHING 224008.23
EASTING 1854852.14
ELEV.=950.15 (NAVD 88)

B.M. #9 EXISTING #3 SANITARY MANHOLE LID
NORTHING 223614.53
EASTING 1856078.09
ELEV.=932.13 (NAVD 88)

FLOODPLAIN NOTE

THE SITE IS LOCATED IN FLOOD ZONE "X" PER F.E.M.A. COMMUNITY PANEL NO. 39041C0142K & 39041C0144K DATED APRIL 16, 2009 & UN-PRINTED F.E.M.A. COMMUNITY PANEL NO. 39041C0145K.

EXISTING UTILITY NOTES

THE IDENTITY AND LOCATION OF THE EXISTING UNDERGROUND UTILITY FACILITIES KNOWN TO BE LOCATED IN THE CONSTRUCTION AREA HAVE BEEN SHOWN ON THE PLANS BASED ON FIELD OBSERVATIONS, AS WELL AS AS-BUILT DRAWINGS PROVIDED BY DEL-CO AND DELAWARE COUNTY. DELAWARE COUNTY AND/OR THE DESIGN ENGINEER ASSUMES NO RESPONSIBILITY AS TO THE ACCURACY OF THE UNDERGROUND FACILITIES SHOWN ON THE PLANS. SUPPORT, PROTECTION AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS ITEMS.

THE CONTRACTOR SHALL CAUSE NOTICE TO BE GIVEN TO THE REGISTERED UNDERGROUND UTILITY PROTECTION SERVICES (TELEPHONE 800-362-2764 - TOLL FREE) AND THE OWNER'S OF UNDERGROUND UTILITY FACILITIES SHOWN ON THE PLANS WHO ARE NOT MEMBERS OF A REGISTERED UNDERGROUND PROTECTION SERVICE IN ACCORDANCE WITH SECTION 153.64 OF THE REVISED CODE. THE ABOVE MENTIONED NOTICE SHALL BE GIVEN AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

THE FOLLOWING UTILITY COMPANIES MAY HAVE FACILITIES LOCATED WITHIN THE PROJECT LIMITS:

WATER
DEL-CO WATER COMPANY, INC.
BILL HAMILTON
6658 OLENTANGY RIVER ROAD
DELAWARE, OH 43015
P: 740.548.7746
F: 740.548.6203

ELECTRIC
AMERICAN ELECTRIC POWER
215 NORTH FRONT STREET
COLUMBUS, OH 43215
P: 614.836.2570

TELEPHONE
DEE REED
441 WEST BROAD STREET
PATASKALA, OHIO 43062
P: 740.927.8282

SANITARY
DELAWARE CO. SANITARY
ENGINEER
50 CHANNING STREET
DELAWARE, OH 43015
P: 740.833.2240
F: 740.833.2239

CABLE
SPECTRUM
DOUGLAS KUHN
3760 INTERCHANGE ROAD
COLUMBUS, OH 43204
P: 614.255.6337
C: 614.348.2923

GAS
COLUMBIA GAS OF OHIO
TODD SCHWARZ
290 WEST NATIONWIDE BLVD.
COLUMBUS, OHIO 43215
P: 614.460.5071
C: 614.506.7023
F: 1.866.213.4377

FRONTIER
ROBERT CHANDLER
2780 LIBERTY ROAD
DELAWARE, OHIO 43015
P: 740.369.0826

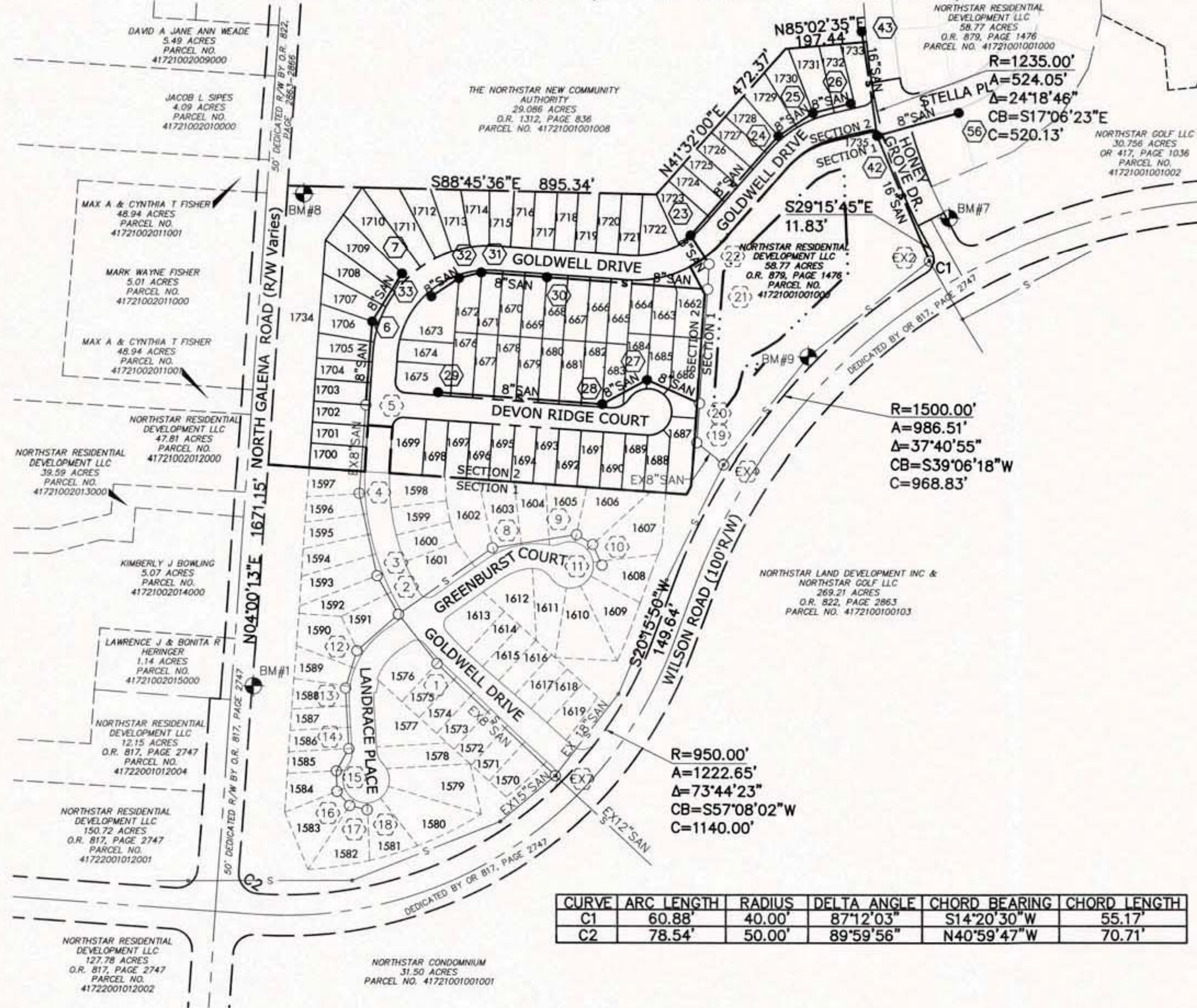


NORTHSTAR - GOLDWELL NEIGHBORHOOD

SECTION 2

58.77 ACRE TRACT

BEING PART OF FARM LOT 1 (EASTERN TIER),
QUARTER-TOWNSHIP 2, TOWNSHIP 4, RANGE 17,
UNITED STATES MILITARY LANDS
BERKSHIRE TOWNSHIP, DELAWARE COUNTY, OHIO



INDEX MAP

SCALE: 1" = 200'

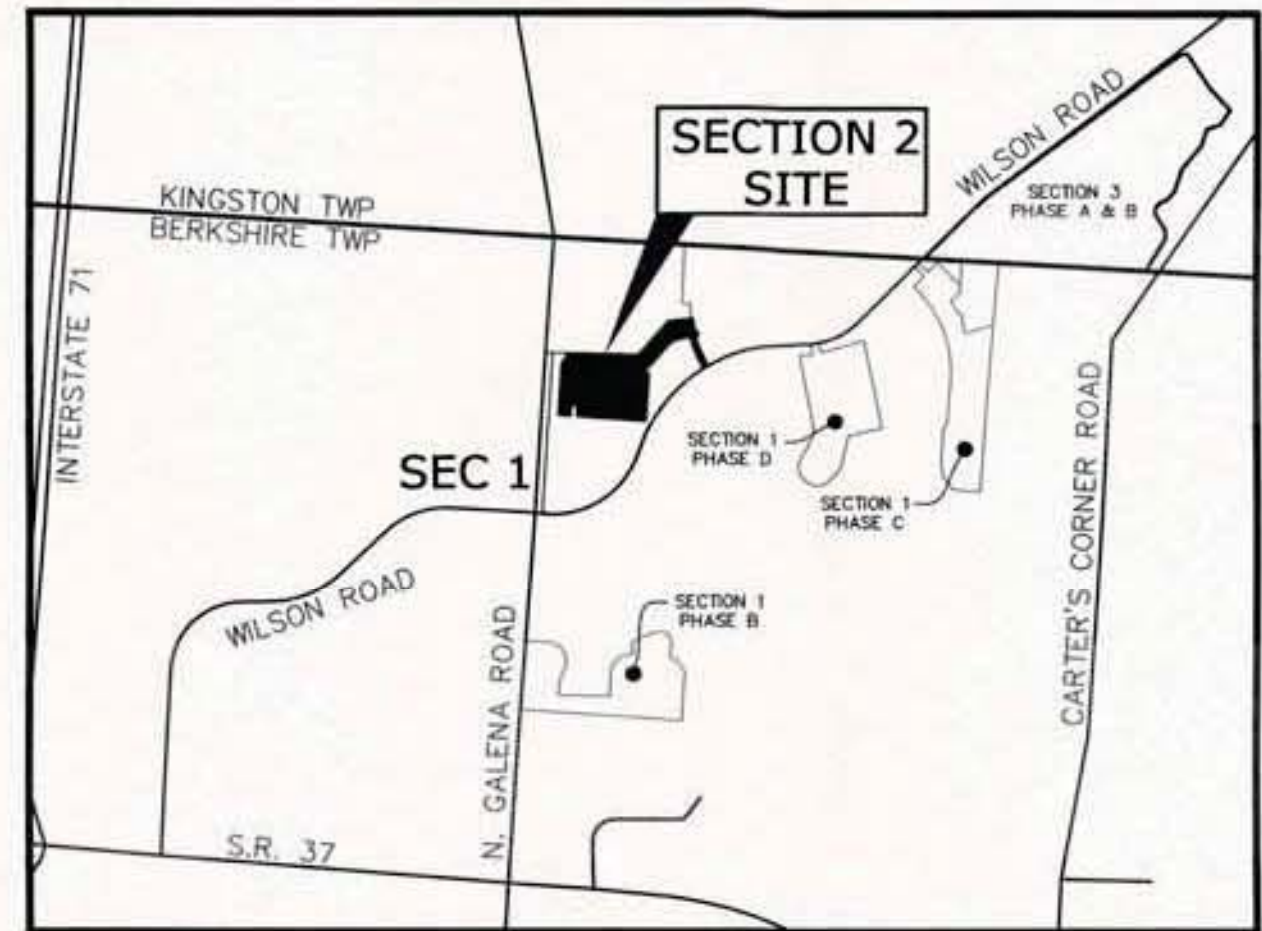
STANDARD DRAWINGS

THE FOLLOWING STANDARD DRAWINGS SHALL BE CONSIDERED A PART OF THIS PLAN:

Sa S-1
Sa S-2
Sa S-3
Sa S-5
Sa S-7
Sa S-8
Sa S-11
Sa S-15

SHEET INDEX

1 COVER
2 GENERAL NOTES, QUANTITIES, AND DETAILS
3-4 DETAILS
5 SANITARY TRIBUTARY MAP
6 HONEY GROVE SANITARY TRIBUTARY MAP
7-11 SANITARY SEWER PLAN AND PROFILE



LOCATION MAP
NO SCALE

SURVEYOR

KORDA
ATTN: TONY MEACHAM PS
1650 WATERMARK DRIVE
COLUMBUS, OHIO 43215
P: 614-487-1650
C: 614-905-7128
EMAIL: Tony.meacham@korda.com

DEVELOPER:

NORTHSTAR RESIDENTIAL DEVELOPMENT, LLC
ATTN: STEVE LARK
375 NORTH FRONT STREET SUITE 200
COLUMBUS, OH 43215
P: 614-221-5312
C: 614-905-7128
EMAIL: larks@nationwide.com

DELAWARE COUNTY APPROVAL:

THE DELAWARE COUNTY SIGNATURE ON THIS PLAN SIGNIFIES ONLY CONCURRENCE WITH THE GENERAL PURPOSE AND LOCATION OF THE PROPOSED IMPROVEMENTS. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER WHO PREPARED AND CERTIFIED THESE PLANS.

Chris Bauderman M.E. 04/21/2021

DELAWARE COUNTY ENGINEER DATE

Tiffany Maag 04/20/2021

DELAWARE COUNTY SANITARY ENGINEER DATE

W.A. Jiro 04/21/2021

COUNTY ADMINISTRATOR, PURSUANT TO RESOLUTION NO.20-971, SECTION 1(S) DATE

ENGINEER STATEMENT:

THIS IS TO CERTIFY THAT GOOD ENGINEERING PRACTICES HAVE BEEN UTILIZED IN THE DESIGN OF THIS PROJECT AND THAT ALL OF THE MINIMUM STANDARDS FOR DELAWARE COUNTY HAVE BEEN MET, INCLUDING THOSE STANDARDS GREATER THAN MINIMUM WHERE, IN MY OPINION, THEY ARE NEEDED TO PROTECT THE SAFETY OF THE PUBLIC. ANY VARIANCES TO THE ABOVE STANDARDS ARE CONSISTENT WITH SOUND ENGINEERING PRACTICES AND ARE NOT DETRIMENTAL TO THE PUBLIC SAFETY AND CONVENIENCE. THESE VARIANCES HAVE BEEN LISTED HEREIN AND HAVE BEEN APPROVED BY THE DELAWARE COUNTY SANITARY ENGINEER.



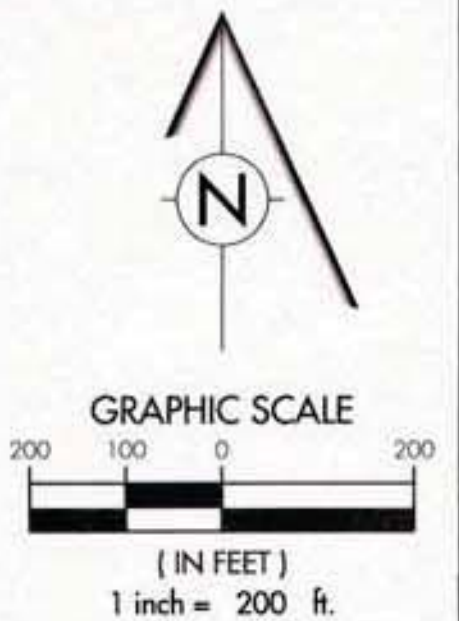
REGISTERED PROFESSIONAL ENGINEER

63572

4-8-21

NO.

DATE



DATE	BY	DESCRIPTION OF CHANGE
7/28/21	CMK	1 REVISED SHEET 9
8/23/21	CMK	2 REVISED SHEET 11

Terrain Evolution
Your bridge between Vision and Success
720 East Broad Street | Suite 203 | Columbus, OH 43215
P: 614.385.1090 | F: 614.385.1085 | E: info@terrainevolution.com

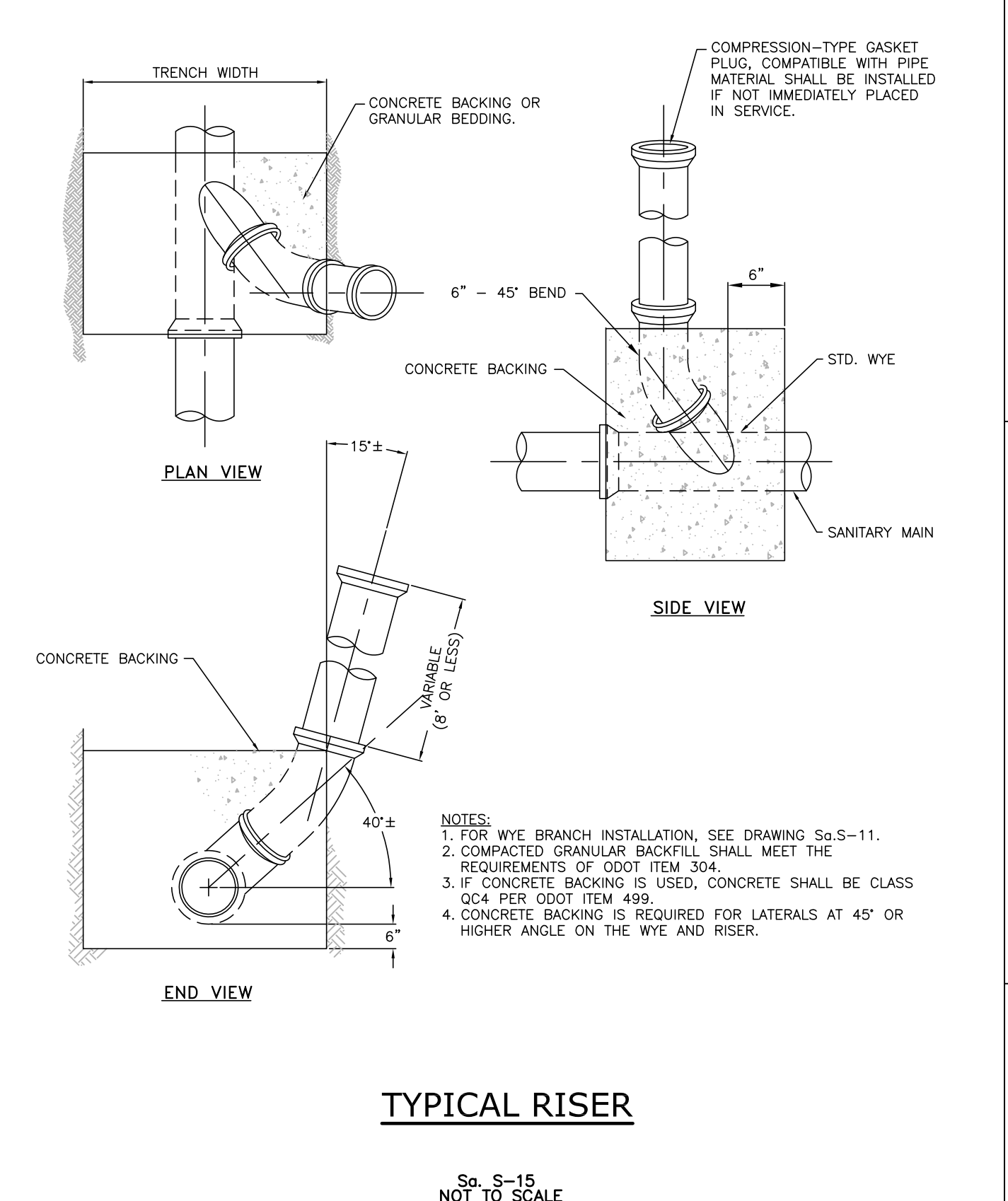
DELAWARE COUNTY, OHIO
NORTHSTAR - GOLDWELL NEIGHBORHOOD
SANITARY SEWER IMPROVEMENTS SECTION 2
COVER

DRAWING SET STATUS:		
☐	PRELIMINARY ENGINEERING SET	
☐	AGENCY REVIEW SET	
☐	CONSTRUCTION DOCUMENT SET	
☒	AS-BUILT DOCUMENT SET	
DESIGN	DRAFT	CHECK
DMW	CMK	MSW
PROJECT NO.: 20-043		
DATE: JANUARY, 2021		
SCALE:		
HORIZONTAL:		1" = 200'
VERTICAL:		N/A
SHEET NO.: 1/11		

GENERAL NOTES:

1. THE CURRENT COUNTY OF DELAWARE REQUIREMENTS, TOGETHER WITH THE SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING ALL SUPPLEMENTS THERETO, AND THE DCRSD CONSTRUCTION AND MATERIAL SPECIFICATIONS (CMS) AND STANDARD DRAWINGS SHALL GOVERN ALL MATERIALS, METHODS OF CONSTRUCTION AND WORKMANSHIP INVOLVED IN THE IMPROVEMENTS THAT ARE A PART OF THIS PLAN.
2. APPROVAL OF THESE PLANS IS CONTINGENT UPON ALL REQUIRED SANITARY SEWER EASEMENTS BEING APPROVED BY THE DCRSD AND RECORDED WITH THE PROJECT FINAL PLAT OR AS DIRECTED BY THE SANITARY ENGINEER PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR SHALL NOTIFY THE SANITARY ENGINEER'S OFFICE FORTY-EIGHT (48) HOURS PRIOR TO CONSTRUCTION.
4. ANY MODIFICATIONS TO THE WORK AS SHOWN ON THESE DRAWINGS SHALL HAVE PRIOR WRITTEN APPROVAL BY THE SANITARY ENGINEER.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE INVESTIGATION, LOCATION, SUPPORT, PROTECTION, AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES WHETHER SHOWN ON THESE PLANS OR NOT. THE CONTRACTOR SHALL EXPOSE ALL UTILITIES OR STRUCTURES PRIOR TO CONSTRUCTION TO VERIFY THE VERTICAL AND HORIZONTAL EFFECT ON PROPOSED CONSTRUCTION. THE CONTRACTOR SHALL CALL, TOLL FREE, THE OHIO UTILITIES PROTECTION SERVICE (1-800-362-2764) FORTY-EIGHT (48) HOURS PRIOR TO CONSTRUCTION AND SHALL NOTIFY ALL UTILITY COMPANIES AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO WORK IN THE VICINITY OF THEIR UNDERGROUND LINES. THE IDENTITY AND LOCATION OF THE EXISTING UNDERGROUND UTILITY FACILITIES KNOWN TO BE LOCATED IN THE CONSTRUCTION AREA HAVE BEEN SHOWN ON THE PLANS AS ACCURATELY AS PROVIDED BY THE OWNER OF THE UNDERGROUND UTILITY. THE COUNTY OF DELAWARE AND THE SANITARY ENGINEER ASSUME NO RESPONSIBILITY AS TO THE ACCURACY OF THE UNDERGROUND FACILITIES SHOWN ON THE PLANS.
6. THE FOLLOWING UTILITIES AND/OR OWNERS ARE LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT AND DO NOT SUBSCRIBE TO A REGISTERED UNDERGROUND UTILITY PROTECTION SERVICE. (UTILITY OWNER-PROVIDE NAME AND PHONE NUMBERS: TELEPHONE, WATER, STORM SEWERS, SANITARY SEWERS, ETC.).
7. THE CONTRACTOR SHALL CONFINE HIS ACTIVITIES TO THE PROJECT SITE UNDER DEVELOPMENT, EXISTING RIGHTS-OF-WAY, CONSTRUCTION EASEMENTS AND PERMANENT EASEMENTS, AND SHALL NOT TRESPASS UPON OTHER PRIVATE PROPERTY WITHOUT THE WRITTEN CONSENT OF THE PROPERTY OWNER.
8. COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AS AMENDED, AND APPLICABLE OSHA REGULATIONS IS REQUIRED OF ALL CONTRACTORS ON THE PROJECT. EACH CONTRACTOR AND SUBCONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING, MAINTAINING, AND SUPERVISING ALL SAFETY REQUIREMENTS, PRECAUTIONS, AND PROGRAMS IN CONNECTION WITH THE WORK.
9. THE TRACKING OF MUD, DIRT, AND DEBRIS UPON ANY PUBLIC ROADWAY IS PROHIBITED AND ANY SUCH OCCURRENCE SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR. THE CONTRACTOR SHALL CLEAN UP ALL DEBRIS AND MATERIALS RESULTING FROM CONSTRUCTION OPERATIONS AND RESTORE ALL SURFACES, STRUCTURES, DITCHES, AND PROPERTY TO ITS ORIGINAL CONDITION AND TO THE SATISFACTION OF THE SANITARY ENGINEER.
10. ANY TREES OR LANDSCAPING IN EXISTING EASEMENTS OR PUBLIC RIGHT-OF-WAY SHALL BE PROTECTED AND NOT IMPACTED BY CONSTRUCTION ACTIVITIES UNLESS PRIOR APPROVAL IS OBTAINED BY THE SANITARY ENGINEER. ANY TREES OR LANDSCAPING THAT ARE APPROVED TO BE REMOVED ARE REQUIRED TO BE REPLACED TO THE SATISFACTION OF THE SANITARY ENGINEER.
11. THE CONTRACTOR SHALL OBTAIN ANY AND ALL NECESSARY PERMITS PRIOR TO BEGINNING CONSTRUCTION. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS AND REQUIREMENTS.
12. WHERE IT IS ANTICIPATED THAT THE UTILITY WORK WILL CLOSE A STREET, THE CONTRACTOR SHALL INFORM RESIDENTS TO BE AFFECTED, THE COUNTY SHERIFF'S OFFICE OR LOCAL POLICE DEPARTMENT, THE FIRE DEPARTMENT, THE SANITARY ENGINEER, THE COUNTY ENGINEER, THE APPLICABLE SCHOOL DISTRICT, AND OTHER APPLICABLE ENTITIES AS TO THE EXTENT, NATURE, AND TIME OF THE ANTICIPATED WORK.
13. PROHIBITED CONSTRUCTION ACTIVITIES: THE FOLLOWING CONSTRUCTION ACTIVITIES ARE PROHIBITED ON THE PROJECT:
 - USING ANY SUBSTANCE OTHER THAN WATER TO CONTROL DUST.
 - TRACKING OF MUD, DIRT AND DEBRIS ONTO ANY PUBLIC ROADWAY.
 - OPEN BURNING OF PROJECT DEBRIS WITHOUT A PERMIT. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE PERMIT OR DISPOSING OF TREES AND STUMPS.
 - PUMPING OF SEDIMENT-LADEN WATER FROM TRENCHES OR OTHER EXCAVATIONS INTO ANY SURFACE WATERS, ANY STREAM CORRIDORS, ANY WETLANDS, OR STORM SEWERS.
 - DISCHARGING POLLUTANTS, SUCH AS CHEMICALS, FUELS, LUBRICANTS, BITUMINOUS MATERIALS, RAW SEWAGE, AND OTHER HARMFUL WASTE INTO OR ALONGSIDE RIVERS, STREAMS, IMPOUNDMENTS, OR INTO NATURAL OR MAN-MADE CHANNELS LEADING THERETO.
 - STORING CONSTRUCTION EQUIPMENT AND VEHICLES AND/OR STOCKPILING CONSTRUCTION MATERIALS ON PROPERTY, PUBLIC OR PRIVATE, NOT PREVIOUSLY SPECIFIED FOR SAID PURPOSES.
 - DISPOSING OF EXCESS OR UNSUITABLE EXCAVATED MATERIAL IN WETLANDS OR FLOODPLAINS, EVEN WITH THE PERMISSION OF THE PROPERTY OWNER.
 - INDISCRIMINATE, ARBITRARY, OR CAPRICIOUS OPERATION OF EQUIPMENT IN ANY STREAM CORRIDORS, WETLANDS, SURFACE WATERS, OR OUTSIDE THE EASEMENT AREA.
 - PERMANENT OR UNSPECIFIED ALTERATION OF THE FLOW LINE OF A STREAM.
 - REMOVAL OF TREES AND SHRUBS, OR DAMAGING VEGETATION OUTSIDE THE LIMITS OF THE CONSTRUCTION AREA.
 - DISPOSAL OF TREES, BRUSH AND OTHER DEBRIS IN STREAM CORRIDORS, WETLANDS, SURFACE WATERS, OR AT UNSPECIFIED LOCATIONS.
14. SEDIMENT AND EROSION CONTROL. THE CONTRACTOR SHALL SUBMIT A COPY OF THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) TO THE SANITARY ENGINEER THAT HAS BEEN APPROVED BY THE GOVERNING STORM WATER AUTHORITY (I.E., DELAWARE COUNTY ENGINEER'S OFFICE, CITY OF POWELL, VILLAGE OF SUNBURY, ETC.) PRIOR TO THE PRE-CONSTRUCTION MEETING FOR THE SANITARY SEWER. ADDITIONAL EROSION AND SEDIMENTATION CONTROLS MAY BE REQUIRED AT THE DISCRETION OF THE SANITARY ENGINEER BEFORE AND/OR DURING CONSTRUCTION ACTIVITIES.

3. ALL SANITARY SEWERS SHALL BE SEPARATED A MINIMUM OF 10 FEET HORIZONTALLY AND 1.5 FEET VERTICALLY FROM ALL WATER MAINS.
2. WHEREVER A SANITARY SEWER MUST CROSS AN EXISTING WATER MAIN, THE ELEVATION OF THE CROWN OF THE SEWER SHALL BE AT LEAST 1.5 FEET MINIMUM, MEASURED BETWEEN THE OUTSIDE PIPE WALLS, BELOW THE BOTTOM OF THE WATER MAIN.
3. ALL GRAVITY SANITARY MAINS (8 INCHES THROUGH 15 INCHES) AND SERVICES (6 INCH) SHALL BE PVC PIPE MEETING THE REQUIREMENTS OF ASTM D-3034, SDR 35, CELL CLASS 12454, UNLESS OTHERWISE NOTED. PVC SEWER JOINTS SHALL MEET ASTM D-3212 SPECIFICATIONS. FOR PIPE SIZES OF 16", PVC PIPE SHALL CONFORM TO AWWA C-905, WITH A CELL CLASSIFICATION OF 12454. PVC SEWER JOINTS SHALL MEET ASTM D-3139 SPECIFICATIONS. FOR PIPE SIZES 18 INCHES AND LARGER, PVC PIPE SHALL CONFORM TO ASTM F 679, WITH A CELL CLASSIFICATION OF 12454. PIPE AND FITTINGS SHALL BE SDR 26 OR PS 115 FOR DEPTHS GREATER THAN 20 FEET. FOR PIPES WITH DEPTHS GREATER THAN 28 FEET, PLEASE SEE THE DISTRICT CMS.
4. THERE SHALL BE NO STORM OR CLEAN WATER CONNECTIONS TO THE SANITARY SEWER (ROOF DRAINS, FOOTER DRAINS, ETC.)
5. ALL SANITARY SEWER WYE FITTINGS SHALL HAVE A 10-FOOT MINIMUM SERVICE EXTENSION INSTALLED PRIOR TO THE SERVICE BEING CAPPED AND BACKFILL BEING PLACED OVER THE MAINLINE AND LATERAL SEWER.
6. TRENCH DAMS ARE REQUIRED FOR ALL SANITARY SERVICES AND SHALL BE CONSTRUCTED OF NATIVE CLAY OR IMPERVIOUS SOIL ACROSS AND ALONG THE TRENCH UPSTREAM OF THE MAIN LINE SEWER TO RETARD AND RESIST THE MOVEMENT OF GROUNDWATER THROUGH THE TRENCH BEDDING OR BACKFILL MATERIAL. COMPACT THE TRENCH DAMS TO 6 FEET IN LENGTH, AS MEASURED ALONG THE SERVICE CENTERLINE TO A LIMIT OF 36 INCHES ABOVE THE TOP OF PIPE.
7. SEWER TRENCHES SHALL BE DE-WATERED TO 2 INCHES BELOW THE BELL OF PIPE PRIOR TO INSTALLATION OF PIPE.
8. THE CONTRACTOR SHALL PROVIDE AND INSTALL WYE POLES AT ALL WYE LOCATIONS AS CONSTRUCTED. WYE POLES SHALL EXTEND ABOVE THE EXISTING OR PROPOSED GRADE, WHICHEVER IS HIGHER, A MINIMUM OF 2 FEET.
9. ANY FIELD TILE DISTURBED DURING CONSTRUCTION SHALL BE REPLACED AS DIRECTED BY THE SANITARY ENGINEER WITH PVC PIPE SPANNING THE TRENCH. THE TRENCH SHALL BE FILLED WITH COMPACTED GRANULAR BACKFILL.
10. FINISH GRADE AT ALL SANITARY MANHOLES SHALL BE AT LEAST 6 INCHES BELOW TOP OF CASTING TO AVOID UNNECESSARY INFILTRATION INTO THE SANITARY SEWER SYSTEM.
11. ALL SANITARY SERVICES SHALL BE INSTALLED WITH A MINIMUM 2.08% SLOPE UNLESS OTHERWISE NOTED ON PLANS.
12. BACKFILL SHALL BE INSTALLED PER TYPICAL TRENCH DETAIL S.A.S.-2.
13. SERVICE RISERS SHALL BE INSTALLED WHERE DEPTHS FROM THE WYE TO THE EXISTING OR PROPOSED ELEVATION EXCEEDS 12 FEET. THE TOPS OF RISERS SHALL BE NO MORE THAN 10 FEET BELOW EXISTING OR PROPOSED SURFACE ELEVATION, WHICHEVER IS HIGHER, UNLESS OTHERWISE NOTED.
14. CONTRACTOR SHALL INSTALL PLUGS IN THE UPSTREAM AND DOWNSTREAM INVERTS OF THE CONNECTION MANHOLE. THE PLUGS SHALL BE INSPECTED BY THE CONTRACTOR ON A WEEKLY BASIS AND AFTER RAINFALL EVENTS.
15. SANITARY SEWERS SHALL BE TESTED BY AIR TESTING METHOD. AIR TESTING SHALL BE MADE IN ACCORDANCE WITH ASTM F1417-92. ALLOWABLE LEAKAGE SHALL NOT EXCEED THE LIMITS AS SHOWN IN CMS ITEM 409.01. CONTRACTOR SHALL COOPERATE WITH THE SANITARY ENGINEER AND PROVIDE ALL NECESSARY EQUIPMENT TO PERFORM THE TESTING.
16. SANITARY MANHOLES SHALL BE TESTED USING VACUUM TEST METHODS PER CMS ITEM 409.02.
17. WHEN PVC PIPE IS USED A DEFLECTION TEST SHALL BE PERFORMED. PIPE DEFLECTION SHALL NOT EXCEED 5 PERCENT IF TESTED AFTER 30 DAYS, OR 7.5 PERCENT IF TESTED AFTER 90 DAYS FROM THE TRENCH BEING BACKFILLED TO FINISH GRADE. THE METHOD OF TESTING SHALL BE SUBJECT TO THE APPROVAL OF THE SANITARY ENGINEER. IF RIGID BALLS OR MANDRELS ARE USED TO TEST THE PIPE DEFLECTION, NO MECHANICAL PULLING DEVICES SHALL BE USED. ANY LINES WHICH FAIL THE TEST MUST BE REPAIRED AND RETESTED BY THE CONTRACTOR AT NO COST TO THE DCRSD.
18. ALL SANITARY MANHOLES SHALL BE STAMPED 'DELAWARE COUNTY REGIONAL SEWER DISTRICT'. ALL WATERTIGHT MANHOLES SHALL HAVE A T-GASKET AND CONCEALED PICK HOLES. ALL SANITARY MANHOLES SHALL BE NEEHAH R-1760A WITH 'DELAWARE COUNTY REGIONAL SEWER DISTRICT' CAST IN THE MANHOLE.
19. THE FOLLOWING SET OF TOOLS AND SPARE PARTS SHALL BE DELIVERED TO THE SANITARY ENGINEER'S OFFICE PRIOR TO FINAL ACCEPTANCE OF THE PROJECT: FIVE (5) CONCRETE GRADE RINGS; ONE (1) MANHOLE LIFTING HOOK; AND ONE (1) COMPLETE MANHOLE CASTING (FRAME AND LID). AN ADDITIONAL SET OF SPARE PARTS SHALL BE PROVIDED FOR EVERY TEN (10) MANHOLES.



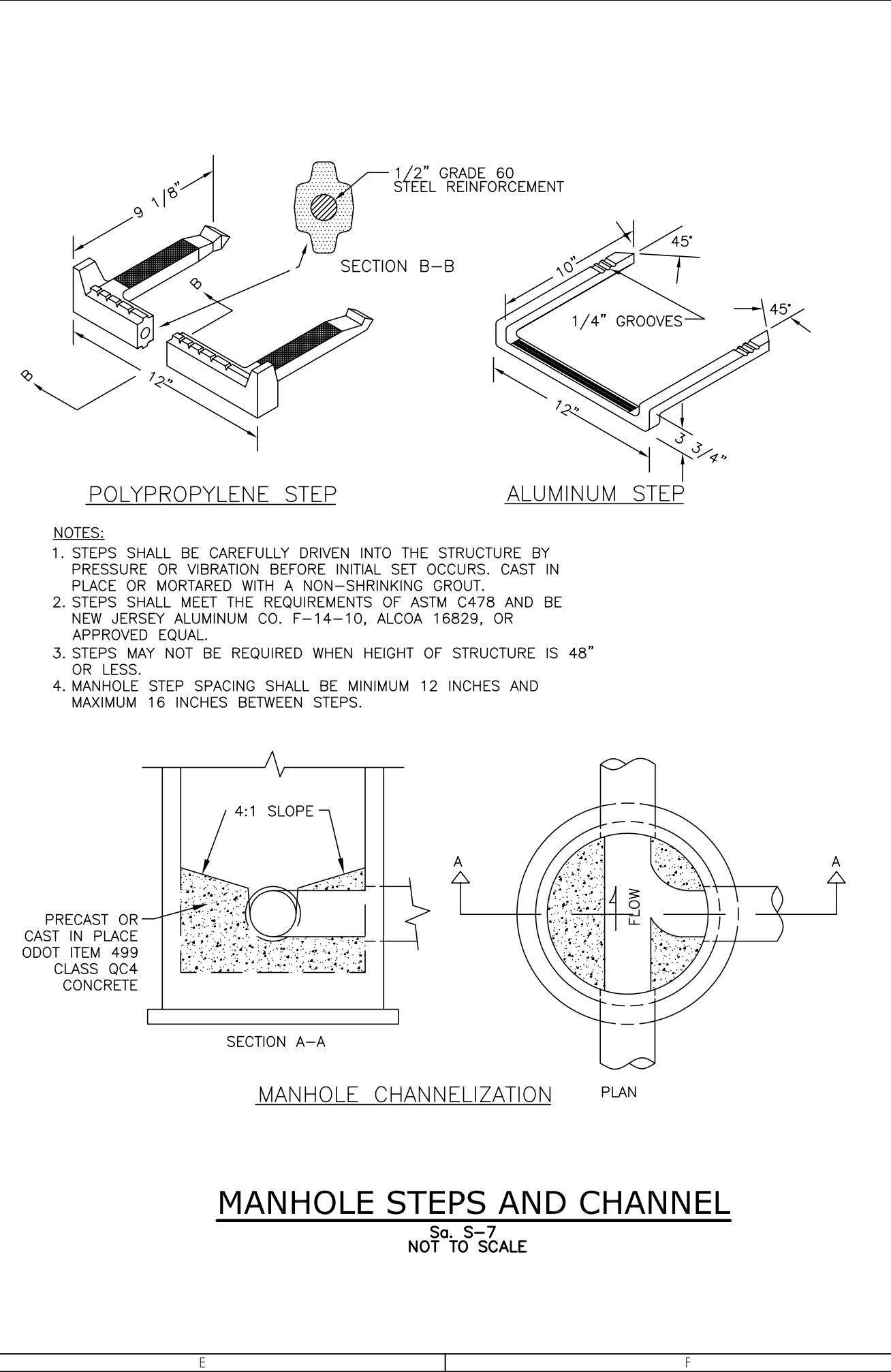
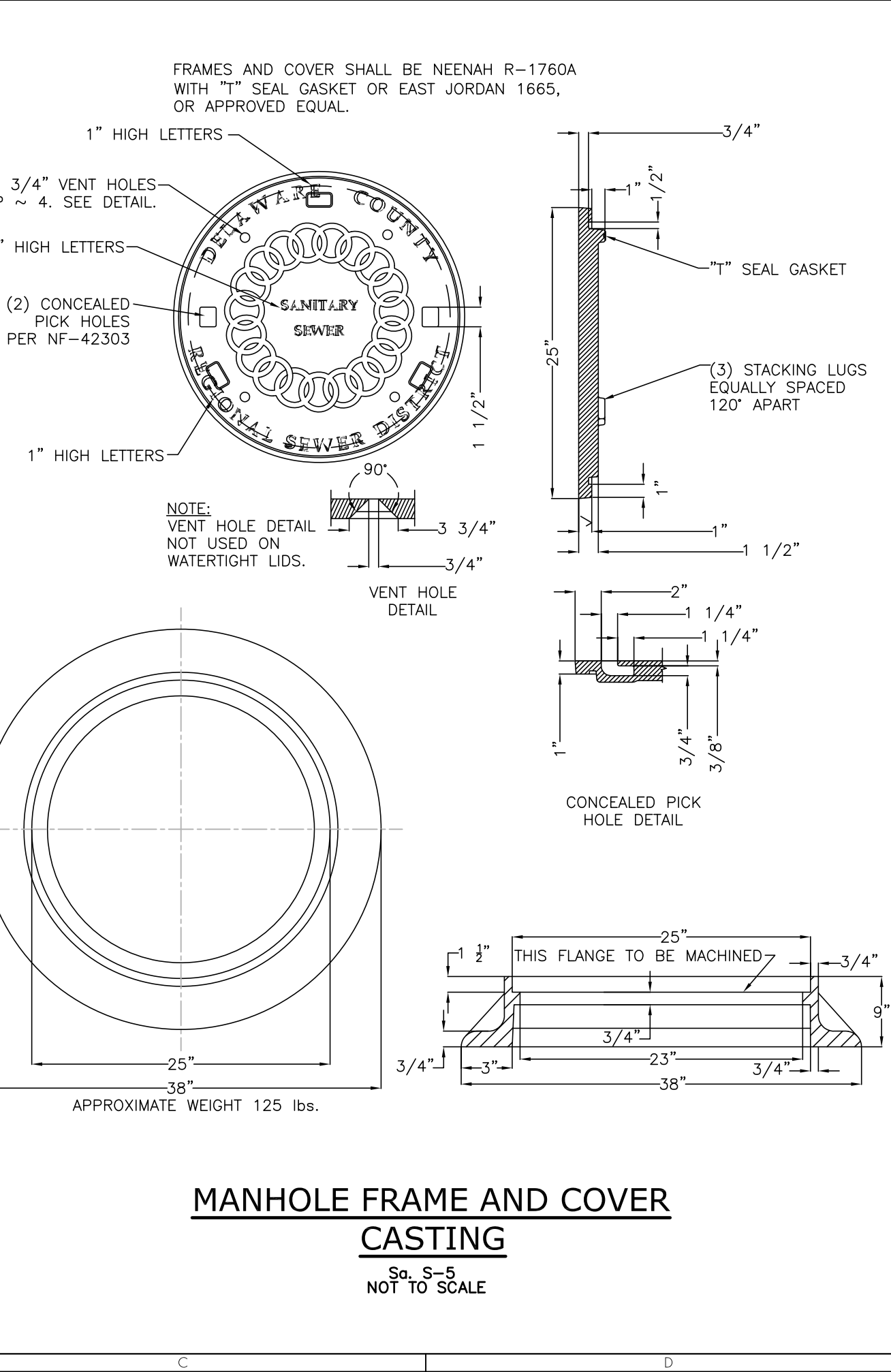
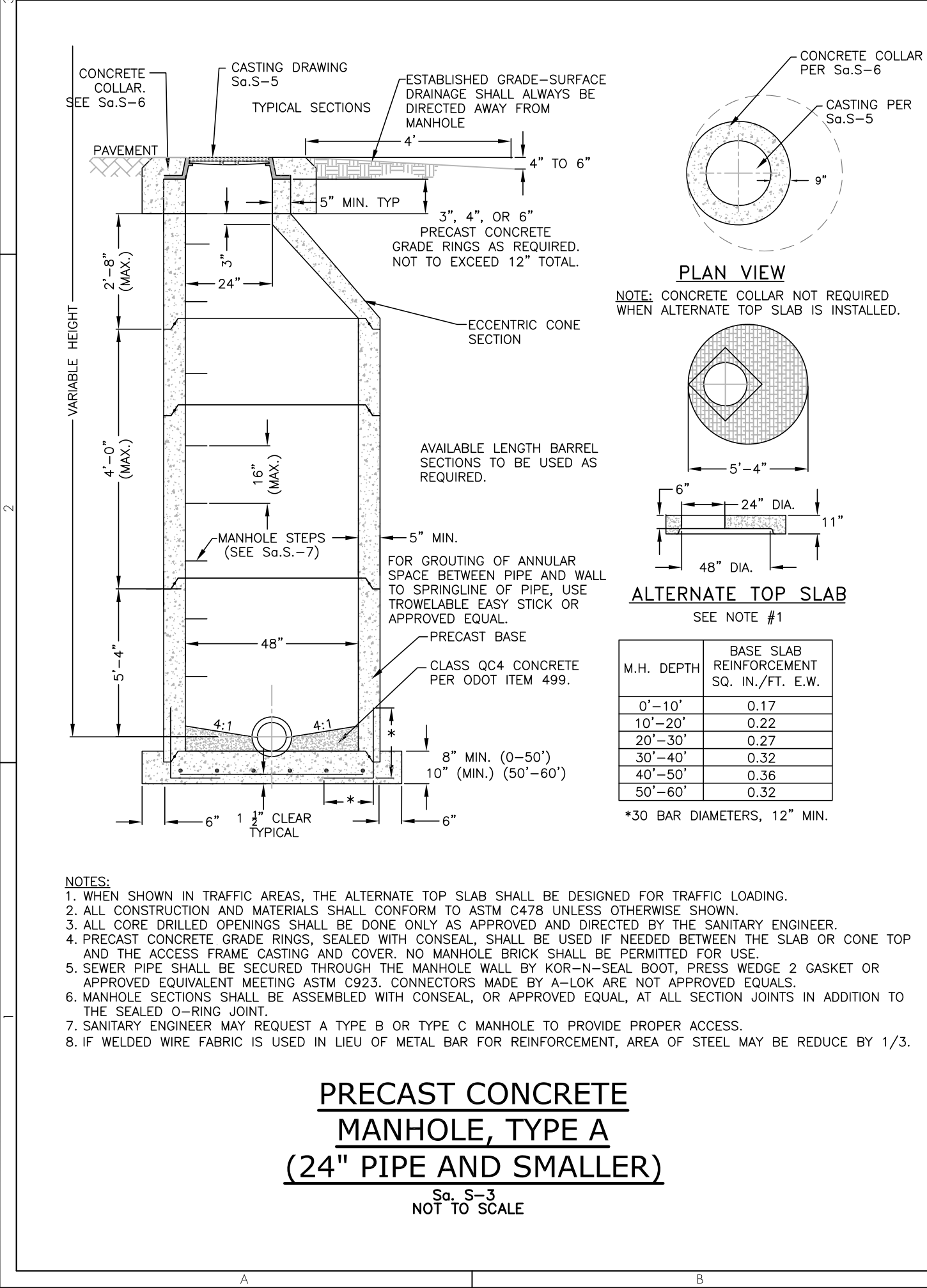
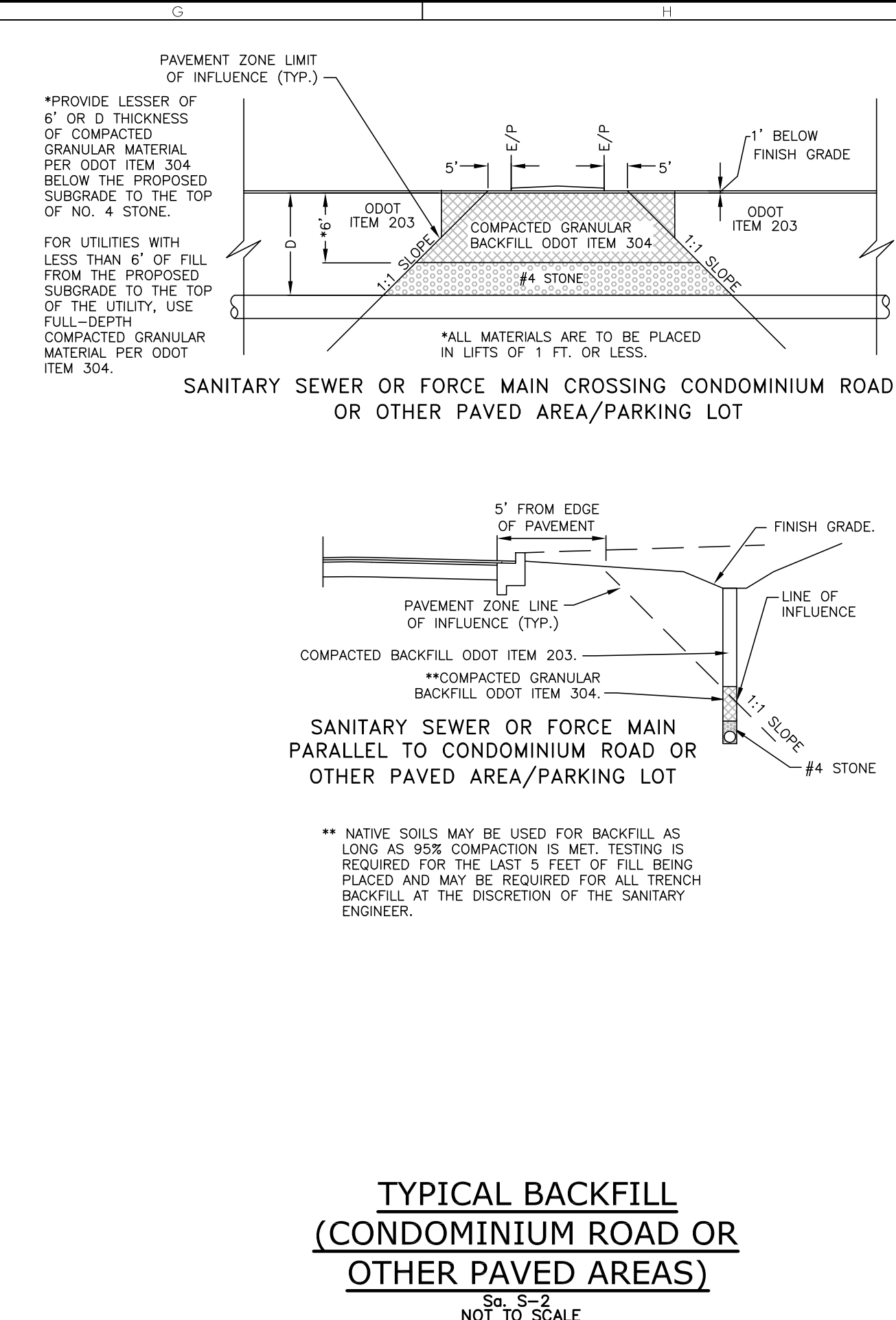
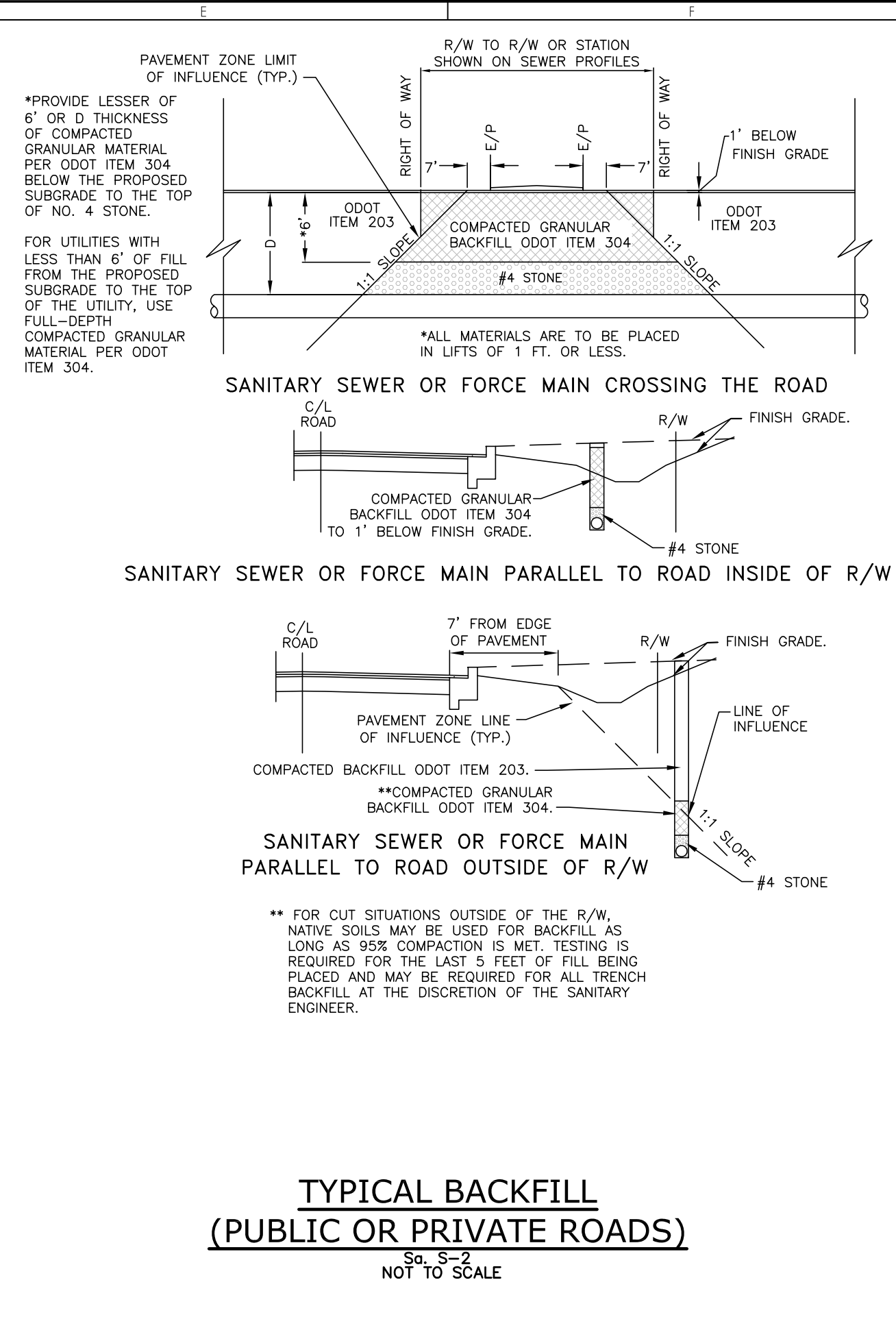
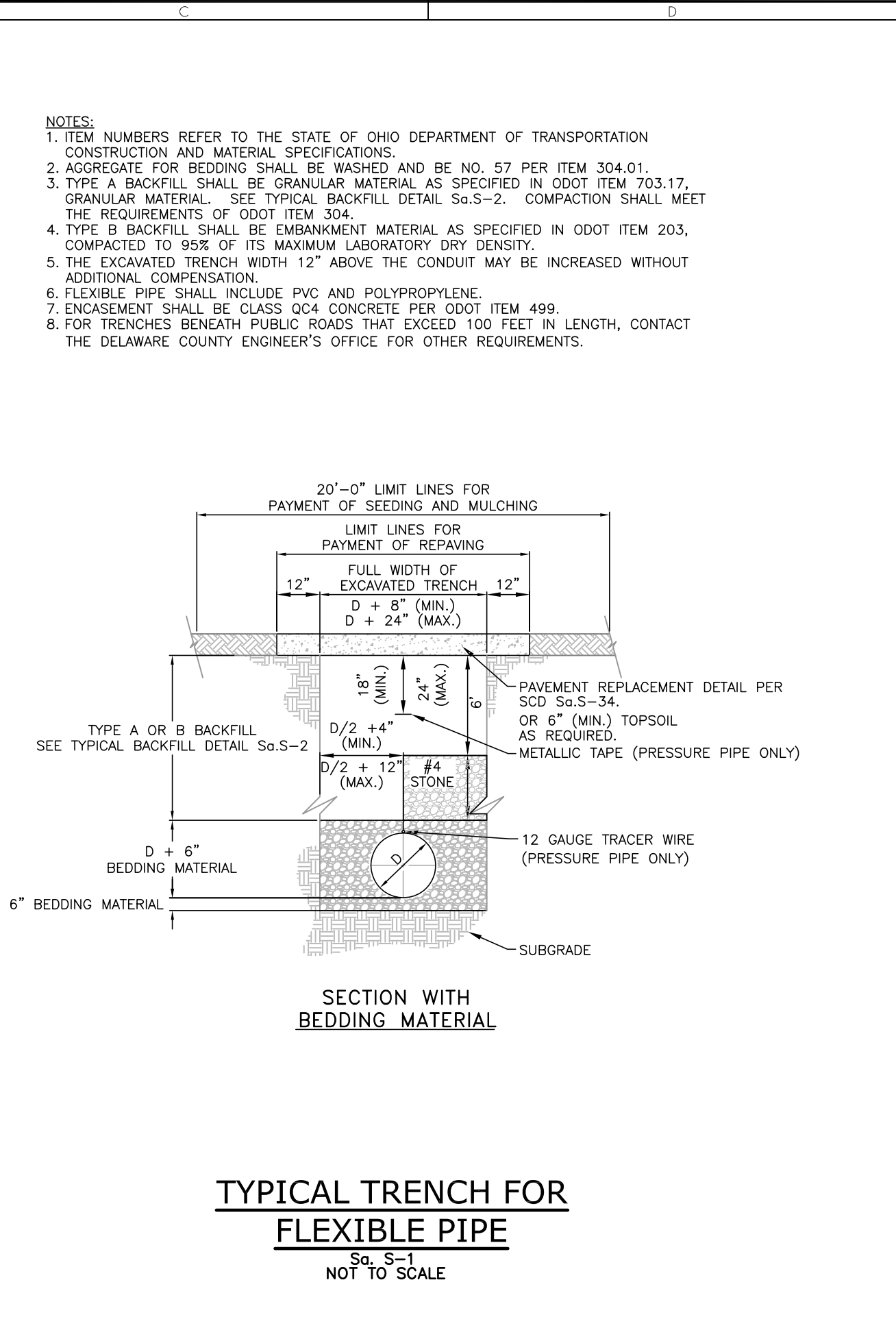
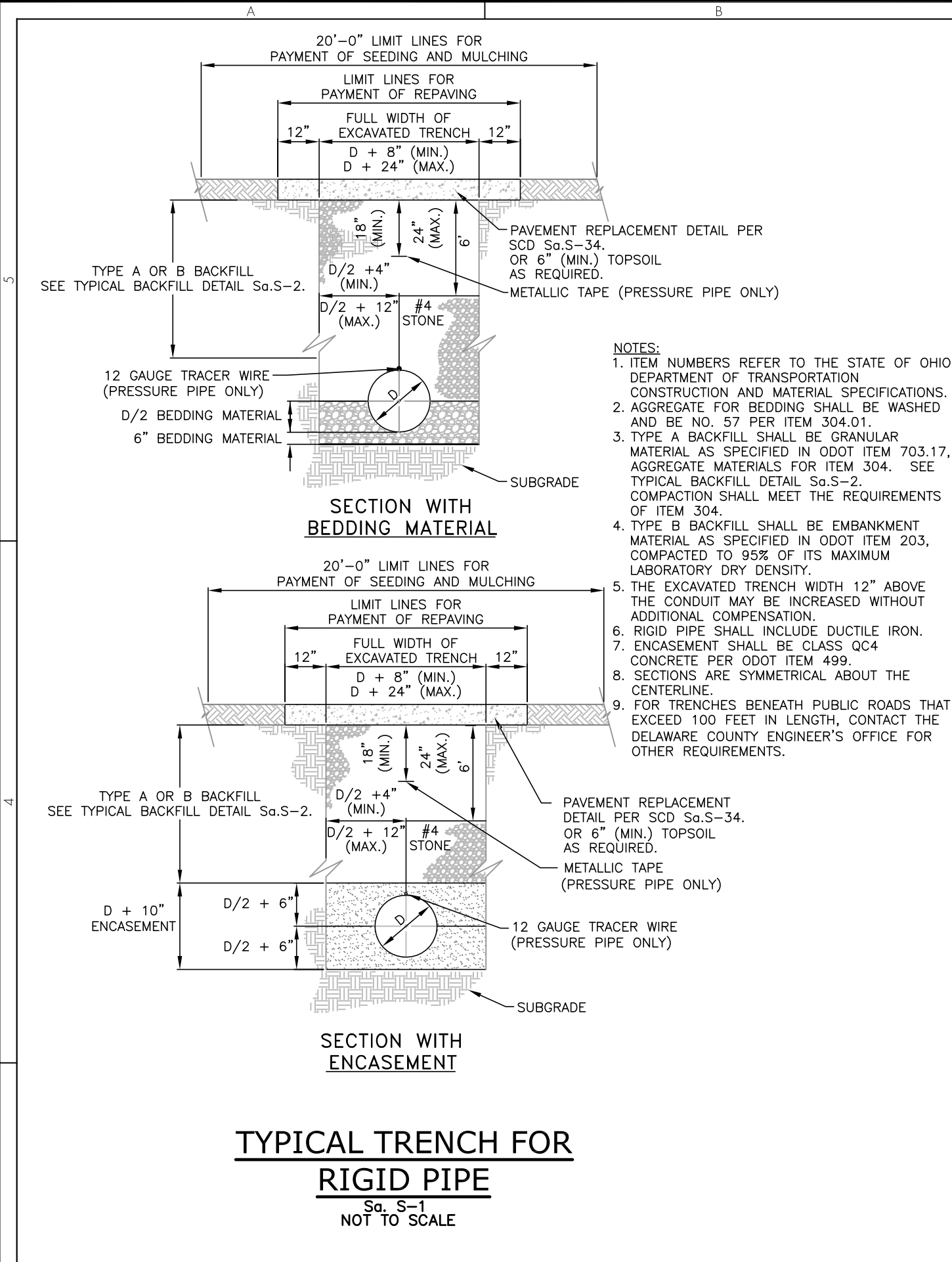
* QUANTITY LISTED REPRESENTS LENGTH OF PIPE NOT LENGTH OF TRENCH.

NOTES:
QUANTITIES LISTED ABOVE ARE ESTIMATES AND SUBJECT TO REVISION DURING CONSTRUCTION. THE
CONTRACTOR IS DIRECTED TO VERIFY ALL QUANTITIES PRIOR TO PREPARING AND SUBMITTING HIS BID.

ALL ITEMS OF WORK CALLED FOR ON THIS PLAN FOR WHICH NO SPECIFIC METHOD OF PAYMENT IS INDICATED SHALL BE PERFORMED BY THE CONTRACTOR AND THE COST OF SUCH WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE VARIOUS ITEMS.

THE CONTRACTOR SHALL INCLUDE IN HIS BID THE ADJUSTMENT OF PROPOSED MANHOLE CASTINGS 3" TO 6" AS NECESSARY, BASED ON WALK-THROUGH COMMENTS.

[illegible]



CHANGE ORDER SCHEDULE		DATE		DESCRIPTION OF CHANGE	
#	BY	DATE			

TerrainEvolution		Your bridge between <i>Vision</i> and <i>Success</i>	
720 East Broad Street Suite 203 Columbus, OH 43215		P: 614.385.1090 F: 614.385.1085 E: info@terrainevolution.com	

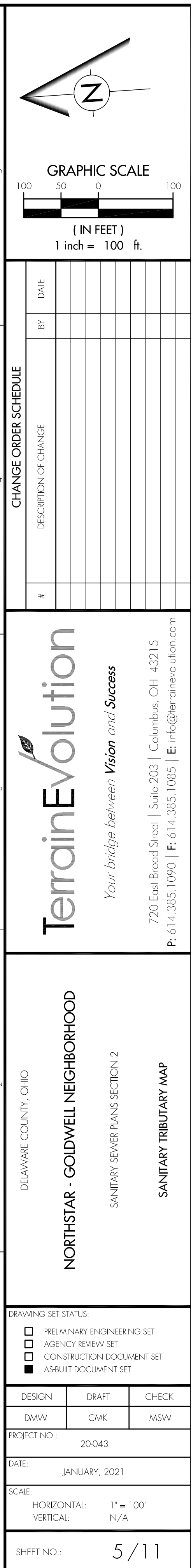
DELAWARE COUNTY, OHIO		NORTHSTAR - GOLDWELL NEIGHBORHOOD	
SANITARY SEWER TRANS SECTION 2		DETAILS	

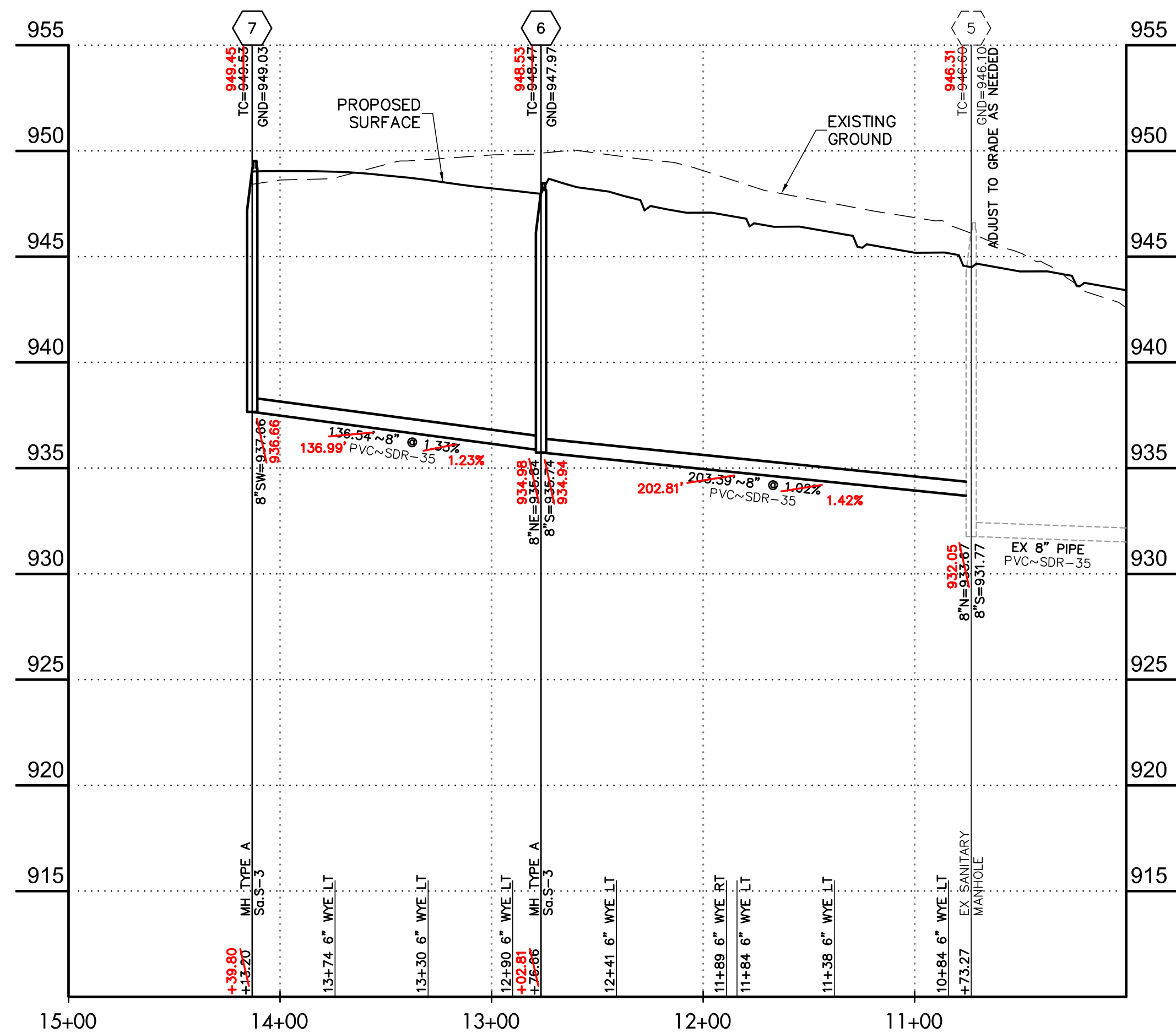
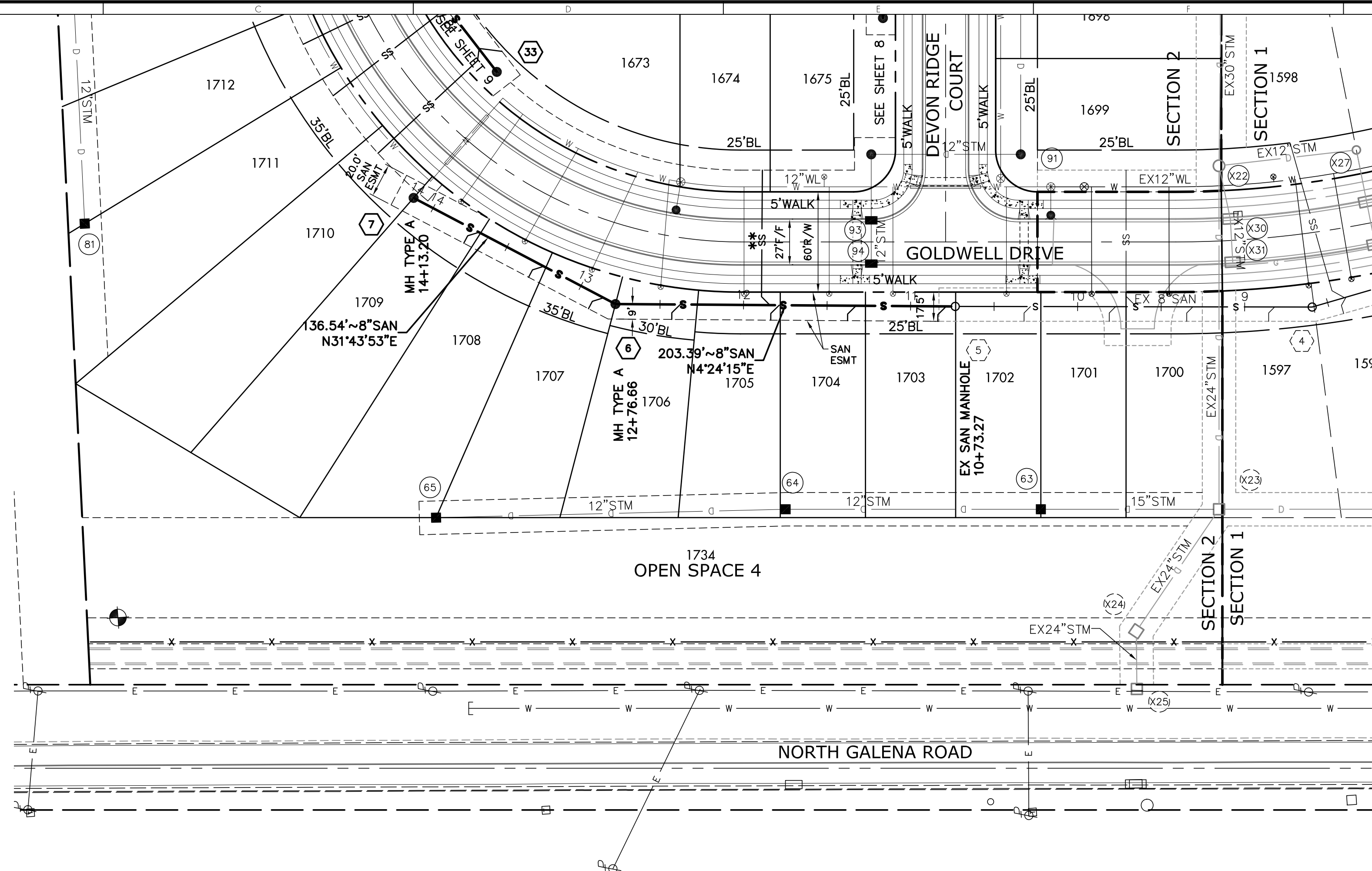
DRAWING SET STATUS:		
☐	PRELIMINARY ENGINEERING SET	
☐	AGENCY REVIEW SET	
☐	CONSTRUCTION DOCUMENT SET	
☒	ASBUILT DOCUMENT SET	

DESIGN	DRAFT	CHECK
DMW	CAK	MSW

PROJECT NO.:	20-043
DATE:	JANUARY, 2021
SCALE:	HORIZONTAL: N/A VERTICAL: N/A

SHEET NO.:	3/11
------------	------





LEGEND

EXISTING:

RIGHT-OF-WAY

ROADWAY CENTERLINE

UTILITY EASEMENT

EX.XX"WL	W	WATERLINE	W	W
EX.XX"STM	D	STORM SEWER	D	D
EX.XX"STM	S	SANITARY SEWER	S	S
	E	ELECTRIC	E	E
	T	TELEPHONE	T	T
	G	GAS	G	G

PROPOSED:

RIGHT-OF-WAY

ROADWAY CENTERLINE

UTILITY EASEMENT

XX"B/L		BUILDING SETBACK LINE		
	W	WATERLINE	W	W
	W	WATER VALVE	W	W
	W	REDUCER	W	W
	W	FIRE HYDRANT	W	W
		WATER SERVICE		
	D	STORM SEWER	D	D
	D	STORM SEWER MANHOLE	D	D
	D	STORM SEWER CATCH BASIN	D	D
	D	STORM SEWER CURB INLET	D	D
	S	SANITARY SEWER	S	S
	S	SANITARY MANHOLE	S	S
		SANITARY SERVICE		

** COMPACTED GRANULAR BACKFILL

EXISTING BENCHMARKS		
REFERENCE NORTHING AND EASTING		
REFERENCE POINTS	NORTHING	EASTING
BM #1	222812.81	1854731.11
BM #7	223951.52	1856419.43
BM #8	224008.23	1854852.14
BM #9	223614.53	1856078.09

SANITARY STRUCTURE COORDINATE TABLE				
NO.	NORTHING	EASTING	AS-BUILT NORTHING	AS-BUILT EASTING
6	223698.0300	1855018.5408	223697.56	1855017.01
7	223814.1575	1855090.3505	223813.86	1855089.41

[illegible]

 TerrainEvolution

Your bridge between Vision and Success

720 East Broad Street | Suite 203 | Columbus, OH 43215
P: 614.385.1090 | F: 614.385.1085 | E: info@terrainrevolution.com

NORTHSTAR - GOLDWELL NEIGHBORHOOD
DELAWARE COUNTY, OHIO
SANITARY SEWER PLANS SECTION 2
SANITARY SEWER PLAN AND PROFILE

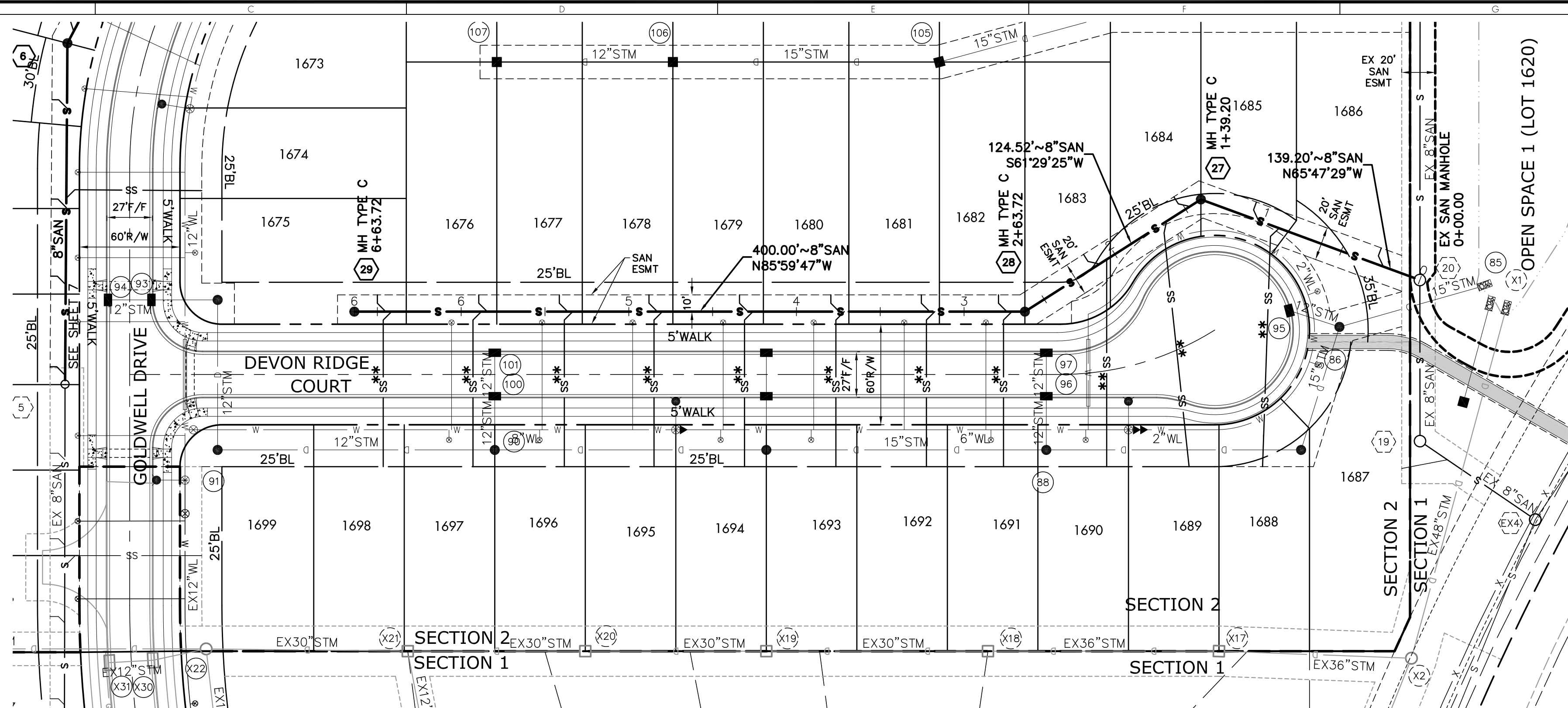
DRAWING SET STATUS:		
☐	PRELIMINARY ENGINEERING SET	
☐	AGENCY REVIEW SET	
☐	CONSTRUCTION DOCUMENT SET	
☒	AS-BUILT DOCUMENT SET	

DESIGN	DRAFT	CHECK
DWW	CMK	MSW

PROJECT NO.:	20-043
DATE:	JANUARY, 2021

SCALE:	HORIZONTAL: 1" = 50' VERTICAL: 1" = 5'
--------	---

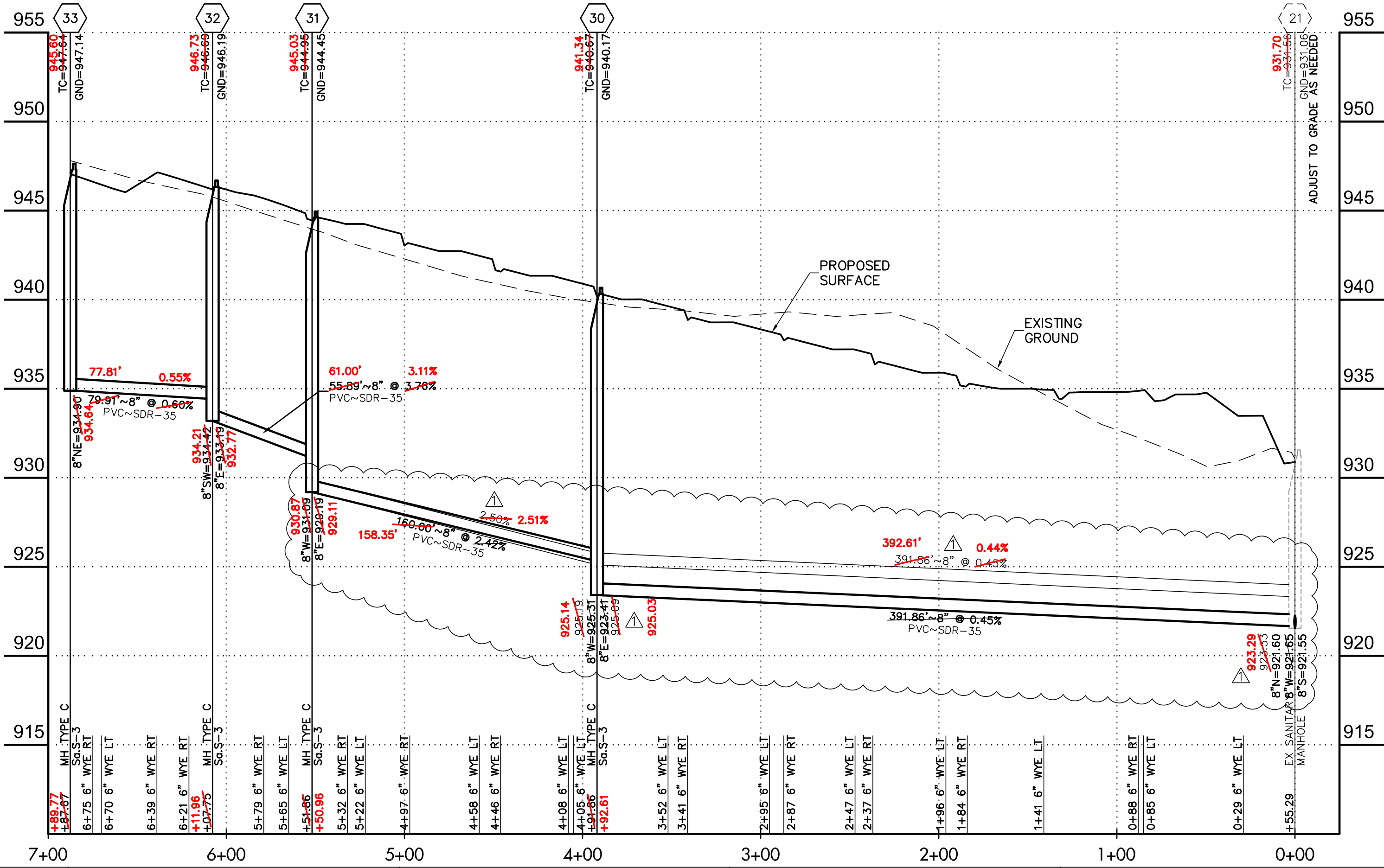
SHEET NO.:	7 / 11
------------	--------

[illegible]

EXISTING BENCHMARKS REFERENCE NORTHING AND EASTING		
REFERENCE POINTS	NORTHING	EASTING
BM #1	222812.81	1854731.11
BM #7	223951.52	1856419.43
BM #8	224008.23	1854852.14
BM #9	223614.53	1856078.09

SANITARY STRUCTURE COORDINATE TABLE				
NO.	NORTHING	EASTING	AS-BUILT NORTHING	AS-BUILT EASTING
30	223806.4009	1855442.2990	223808.23	1855441.69
31	223817.5722	1855282.6895	223818.35	1855283.66
32	223803.5755	1855228.5802	223803.35	1855224.53
33	223759.2039	1855162.1180	223757.94	1855161.35

MANHOLE NUMBER	LOT NUMBER	WYE STATION @ MAIN LINE	WYE STATION @ MAIN LINE AS-BUILT	6" SERVICE LENGTH	6" SERVICE LENGTH AS-BUILT	SERVICE SLOPE (%)	PAD ELEVATION	SERVICE INVERT @ END	SERVICE INVERT @ END AS-BUILT	RISER HEIGHT @ MAIN LINE	RISER HEIGHT @ MAIN LINE AS-BUILT	END OF SERVICE STATION AND OFFSET	END OF SERVICE STATION AND OFFSET AS-BUILT	RISER ANGLE
21														
	1662 LT	0+29	0+29	7	0	2.08%	935.40	925.34	924.24	3' 0"	11	0+29, 10' LT	N/A	45°
	1663 LT	0+85	0+85	7	0	2.08%	935.90	925.82	924.59	3' 0"	11	0+85, 10' LT	N/A	45°
	1722 RT	0+88	0+88	108	108	2.08%	936.60	924.96	926.64	0	0	1+28, 101' RT	N/A	45°
	1664 LT	1+41	1+41	7	0	2.08%	936.40	926.28	924.84	3' 0"	11	1+41, 10' LT	N/A	45°
	1721 RT	1+84	1+84	98	98	2.08%	936.60	925.18	926.84	0	0	1+84, 98' RT	N/A	45°
	1665 LT	1+96	1+96	6	0	2.08%	937.60	927.45	927.35	4' 2"	11	1+96, 10' LT	N/A	45°
	1720 RT	2+37	2+37	92	92	2.08%	939.00	928.96	927.08	4' 0"	0	2+37, 96' RT	N/A	45°
	1666 LT	2+47	2+47	5	0	2.08%	939.00	928.85	928.85	3' 4"	11	2+47, 10' LT	N/A	45°
	1719 RT	2+87	2+87	88	89	2.08%	940.40	930.32	930.29	3' 3"	3	2+87, 93' RT	N/A	45°
	1667 LT	2+95	2+95	4	0	2.08%	939.60	929.45	929.42	6' 4"	11	2+95, 10' LT	N/A	45°
	1718 RT	3+47	3+47	88	????	2.08%	941.30	931.30	????	3' 4"	????	3+47, 93' RT	N/A	45°
	1668 LT	3+52	3+52	3	0	2.08%	940.90	930.75	930.73	7' 5"	11	3+52, 10' LT	N/A	45°
30														
	1669 LT	4+05	4+05	4	0	2.08%	942.30	932.13	932.08	6'	11	4+05, 10' LT	N/A	45°
	1717 LT	4+08	4+08	88	88	2.08%	942.70	932.70	932.60	4' 0"	0	4+08, 92' RT	N/A	45°
	1716 RT	4+46	4+46	87	87	2.08%	944.00	934.00	933.98	3'	2	4+46, 92' RT	N/A	45°
	1670 LT	4+58	4+58	4	0	2.08%	943.90	933.73	933.69	6'	11	4+58, 10' LT	N/A	45°
	1715 RT	4+97	4+97	87	87	2.08%	945.40	935.40	935.34	5'	0	4+97, 92' RT	N/A	45°
	1671 LT	5+22	5+22	4	0	2.08%	945.80	935.61	935.51	6'	11	5+22, 10' LT	N/A	45°
	1714 RT	5+32	5+32	76	76	2.08%	946.20	935.85	935.78	5'	0	5+48, 79' RT	N/A	45°
31														
	1672 LT	5+65	5+65	10	0	2.08%	947.20	936.78	936.78	4'	11	5+75, 10' LT	N/A	45°
	1713 RT	5+79	5+79	78	78	2.08%	948.10	937.64	937.56	3'	1.5	5+79, 81' RT	N/A	45°
32														
	1712 RT	6+21	6+21	83	83	2.08%	949.00	936.89	936.82	0'	1.5	6+21, 83' RT	N/A	45°
	1711 RT	6+39	6+39	84	84	2.08%	950.80	939.53	939.49	2'	0	6+39, 86' RT	N/A	45°
	1673 LT	6+70	6+70	11	11.5	2.08%	950.00	938.67	938.52	3'	1.5	6+80, 10' LT	N/A	45°
	1710 RT	6+75	6+75	83	83	2.08%	951.70	940.43	940.37	3'	1.5	6+83, 86' RT	N/A	45°
33														



- NOTES:
- ** COMPACTED GRANULAR BACKFILL PER BACKFILL IN R/W DETAIL, SEE SHEET 3
 - SEE SHEET # FOR SANITARY SERVICE TABLE

TerrainEvolution

Your bridge between Vision and Success

720 East Broad Street | Suite 203 | Columbus, OH 43215
P: 614.385.1090 | F: 614.385.1085 | E: info@terrainevolution.com

NORTHSTAR - GOLDWELL NEIGHBORHOOD

SANITARY SEWER TRANS SECTION 2

SANITARY SEWER PLAN AND PROFILE

DRAWING SET STATUS:

- ☐ PRELIMINARY ENGINEERING SET
☐ AGENCY REVIEW SET
☐ CONSTRUCTION DOCUMENT SET
☒ AS-BUILT DOCUMENT SET

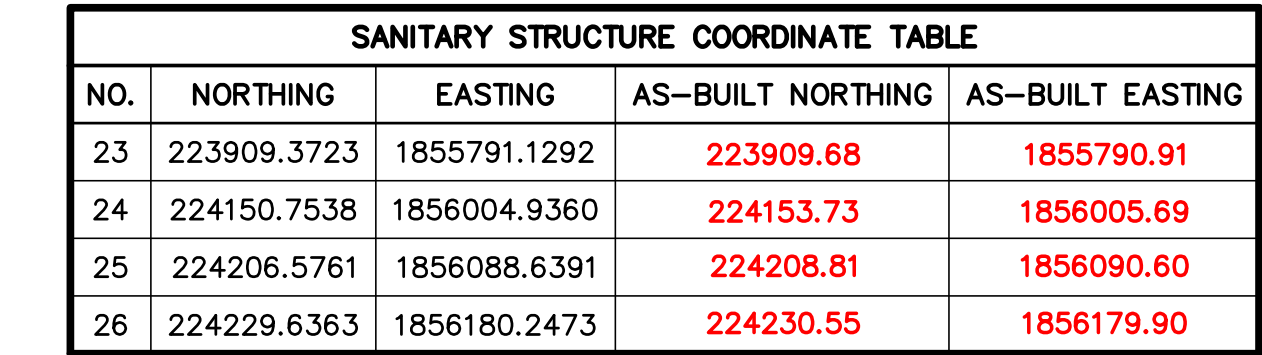
DESIGN: DMW DRAFT: CMK CHECK: MSW

PROJECT NO.: 20-043

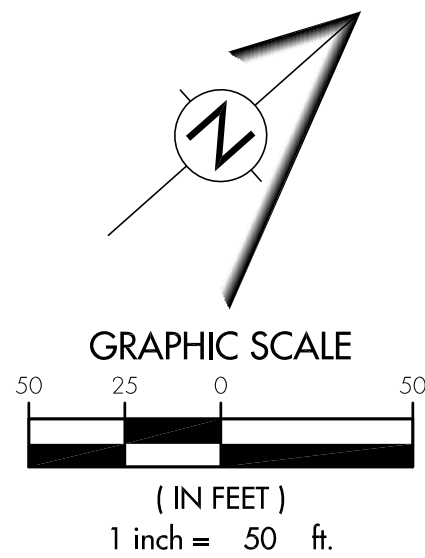
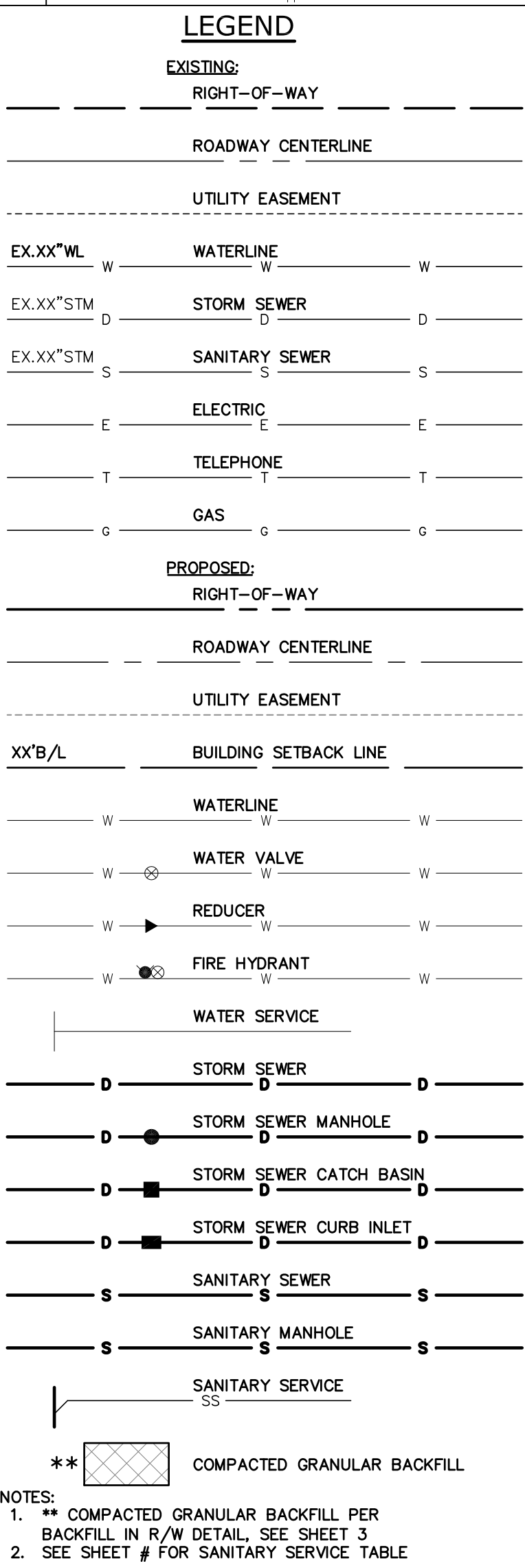
DATE: JANUARY, 2021

SCALE:
HORIZONTAL: 1" = 50'
VERTICAL: 1" = 5'

SHEET NO.: 9/11



EXISTING BENCHMARKS REFERENCE NORTHING AND EASTING		
REFERENCE POINTS	NORTHING	EASTING
BM #1	222812.81	1854731.11
BM #7	223951.52	1856419.43
BM #8	224008.23	1854852.14
BM #9	223614.53	1856078.09

[illegible][illegible]

 **TerrainEvolution**

Your bridge between Vision and Success

720 East Broad Street | Suite 203 | Columbus, OH 43215
P: 614.382.1090 | F: 614.382.1085 | E: info@terrainevolution.com

DELAWARE COUNTY, OHIO

NORTHSTAR - GOLDWELL NEIGHBORHOOD

SANITARY SEWER PLANS SECTION 2

SANITARY SEWER PLAN AND PROFILE

DRAWING SET STATUS:		
☐	PRELIMINARY ENGINEERING SET	
☐	AGENCY REVIEW SET	
☐	CONSTRUCTION DOCUMENT SET	
☒	AS-BUILT DOCUMENT SET	

DESIGN	DRAFT	CHECK
DWV	CMV	MSW

PROJECT NO.: 20-043

DATE: JANUARY, 2021

SCALE:

HORIZONTAL:	1" = 50'
VERTICAL:	1" = 5'

SHEET NO.: 10/11

