

URBAN COLLECTION AT PALMER VILLAGE

SITUATED IN THE NORTHWEST QUARTER OF SECTION 5,
TOWNSHIP 14 SOUTH, RANGE 65 WEST OF SIXTH PRINCIPAL MERIDIAN
COUNTY OF EL PASO, STATE OF COLORADO
WASTEWATER CONSTRUCTION PLAN

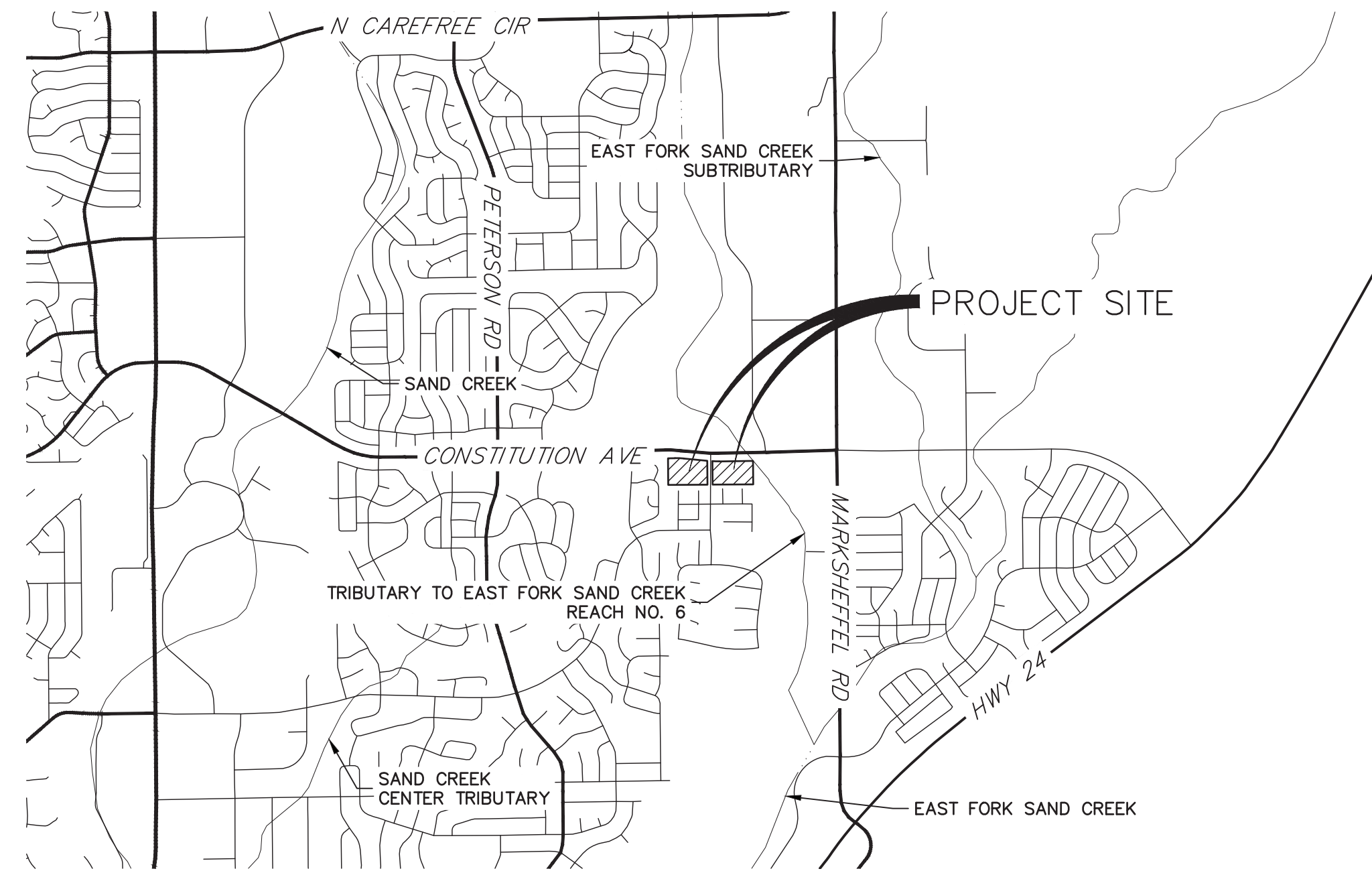


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PREPARED FOR
MDC HOLDINGS
RICHMOND AMERICAN HOMES
4350 S. MONACO STREET
DENVER, CO 80237
ATTN: JASON POCK
720-977-3827

J.R. ENGINEERING
A Western Company
Central 303-740-9888 • Colorado Springs 719-583-2583
Fort Collins 970-491-9888 • www.jrengineering.com



VICINITY MAP
SCALE: 1"=2000'

CONTACTS:

OWNER/DEVELOPER MDC HOLDINGS – RICHMOND AMERICAN HOMES
4350 S. MONACO STREET
DENVER, CO 80237
JASON POCK
P~(720)-977-3827

ENGINEER/SURVEYOR JR ENGINEERING, LLC
ATTN: GLENN D. ELLIS
5475 TECH CENTER DRIVE, SUITE 235
COLORADO SPRINGS, CO 80919
P~(719) 593-2593

FIRE PROTECTION DISTRICT FALCON FIRE PROTECTION DISTRICT
730 OLD MERIDIAN ROAD
REYTON, CO 80831
TRENT HARWIG
P~(719) 495-4050

WATER AND SEWER DISTRICT CHEROKEE METRO DISTRICT
6250 PALMER PARK BLVD
COLORADO SPRINGS, CO 80915
CONTACT: KEVIN BROWN
P~(719) 322-4339

JURISDICTION EL PASO COUNTY PCD
P~(719)-520-6300
EL PASO COUNTY DPW
P~(719)-520-6460

SHEET INDEX

- 1 - COVER SHEET
- 2 - LEGEND
- 3 - TYPICAL SECTIONS
- 4-6 - SANITARY SEWER PLAN & PROFILE
- 7-8 - DETAILS

BASIS OF BEARING

BEARINGS SHOWN HEREON ARE REFERENCED TO THE NORTH LINE OF NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 5, TOWNSHIP 14 SOUTH, RANGE 65 WEST, ASSUMED TO BEAR NORTH 89°09'25" EAST BETWEEN THE MONUMENTS SHOWN HEREON.

BENCHMARK

FIMS MOUNMENT SR06 IS A 2 INCH DIAMETER ALUMINUM CAP ON TOP OF THE SOUTH CURB OF PONY TRACKS DRIVE, APPROXIMATELY 850 FEET EASTERLY OF THE CENTERLINE OF PETERSON ROAD, 125 FEET EASTERLY OF THE EAST CURB OF BANKSIDE DRIVE, AND 10 FEET EASTERLY OF AN ELECTRICAL VAULT.

ELEVATION = 6523.04 (NGVD 29)

OWNER/DEVELOPER STATEMENT

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN AND ALL OF THE REQUIREMENTS SPECIFIED IN THESE DETAILED PLANS AND SPECIFICATIONS.

Jason J.W. Pock 7-16-2021
JASON POCK DATE

MDC HOLDINGS – RICHMOND AMERICAN HOMES
4359 S. MONACO STREET
DENVER, CO 80237

EL PASO COUNTY STATEMENT

COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND ENGINEERING CRITERIA MANUAL AS AMENDED.

IN ACCORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTORS DISCRETION.

Approved
by Jeff Rice
El Paso County Planning and Community Development
in favor of Elizabeth Myrnes, Engineering Service Manager
09/07/2021 10:47:56 AM DATE

CHEROKEE METROPOLITAN DISTRICT
WASTEWATER PLAN APPROVAL
THE CHEROKEE METROPOLITAN DISTRICT RECOGNIZES THE DESIGN PROFESSIONAL OF RECORD AS THE LICENSED ENGINEER HAVING RESPONSIBILITY FOR THE SUBMITTED DESIGN AND THE DISTRICT HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY. AS SUCH, THE APPROVAL GRANTED HEREIN IS FOR THE CONSTRUCTION OF THE FACILITIES AS REPRESENTED ON THESE DOCUMENTS. APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE BELOW AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.
APPROVED BY: _____ DATE: _____

JENNIFER IRVINE, P.E.
COUNTY ENGINEER/ECM ADMINISTRATOR

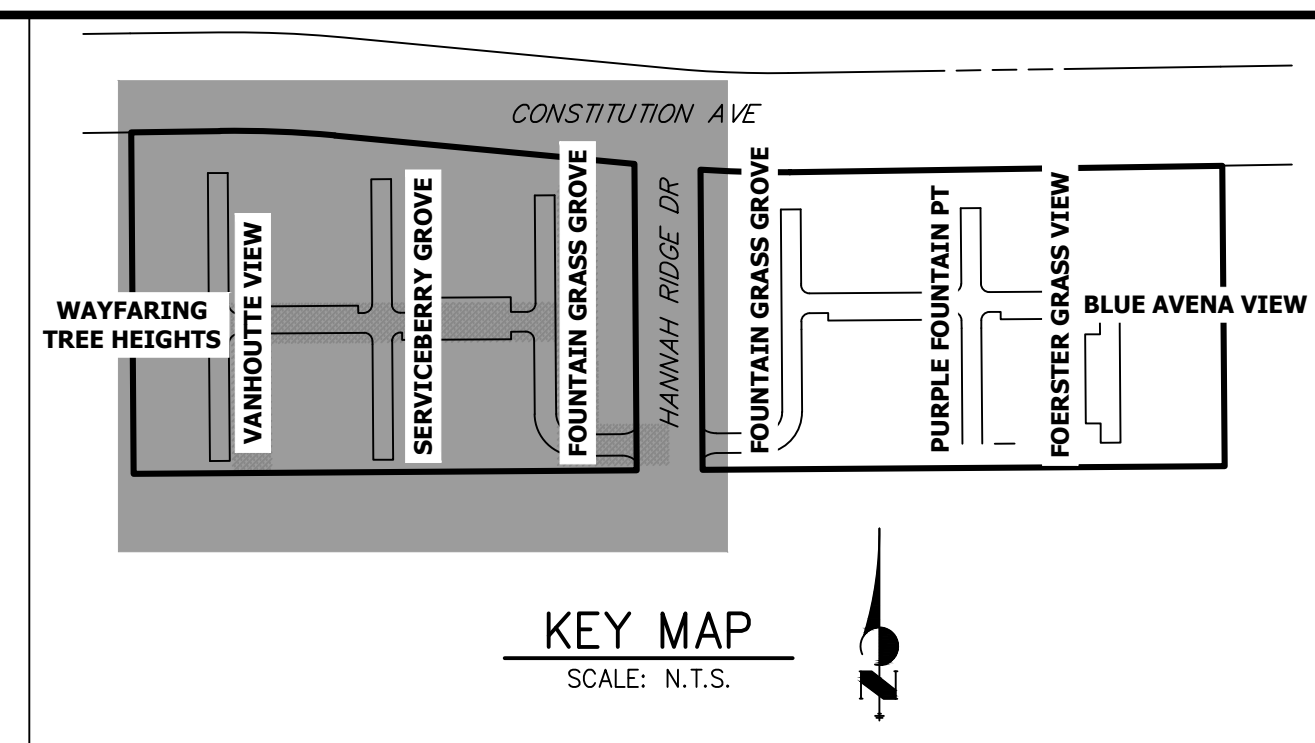
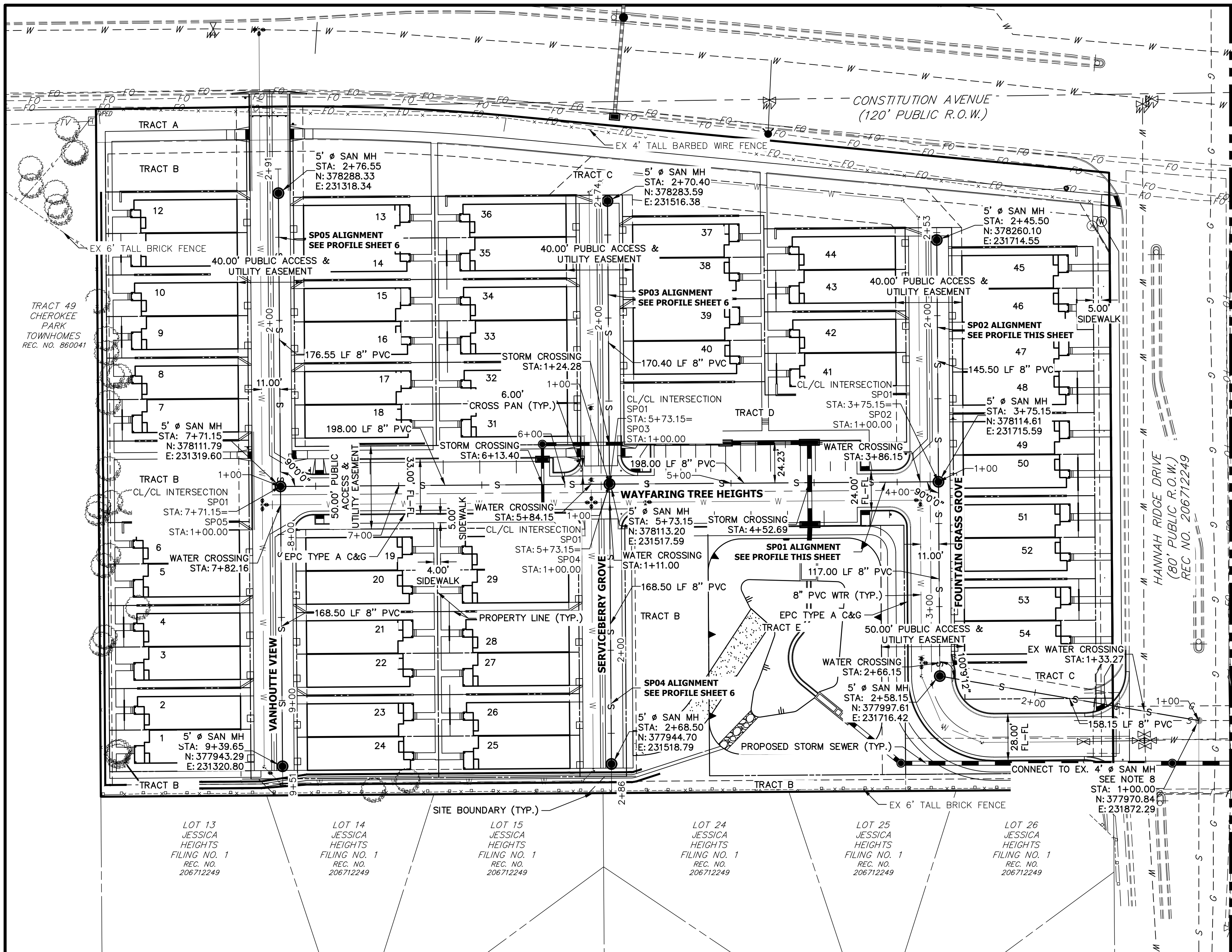
ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

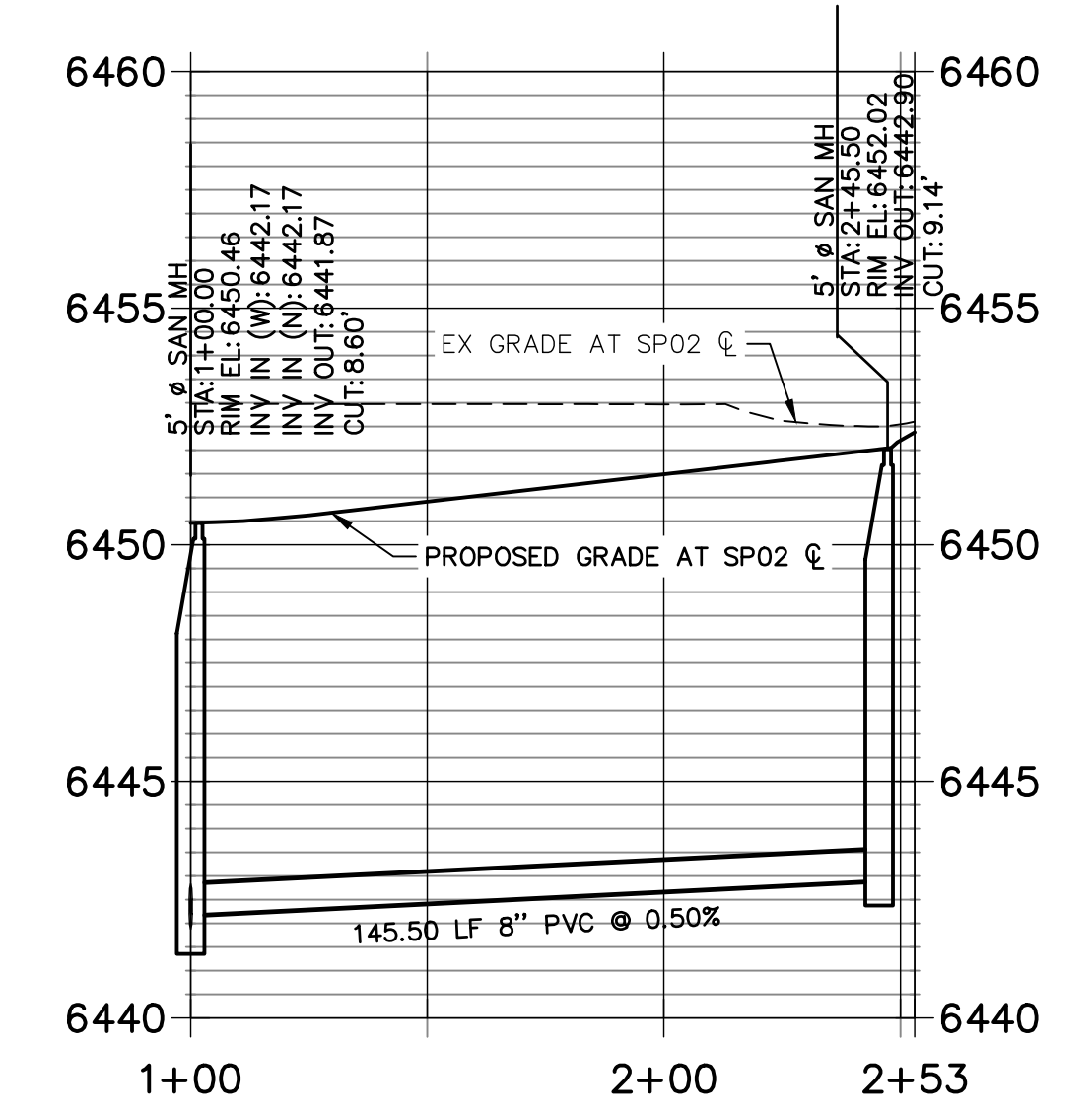
GLENN D. ELLIS, P.E.
COLORADO P.E. 38861
FOR AND ON BEHALF OF JR ENGINEERING
07/15/2021 DATE

BY	DATE	REVISION	H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
			N/A	N/A	01-04-21	APL	APL	

URBAN COLLECTION AT PALMER VILLAGE
COVER SHEET
WASTEWATER CONSTRUCTION PLAN
SHEET 1 OF 8
JOB NO. 25149.01

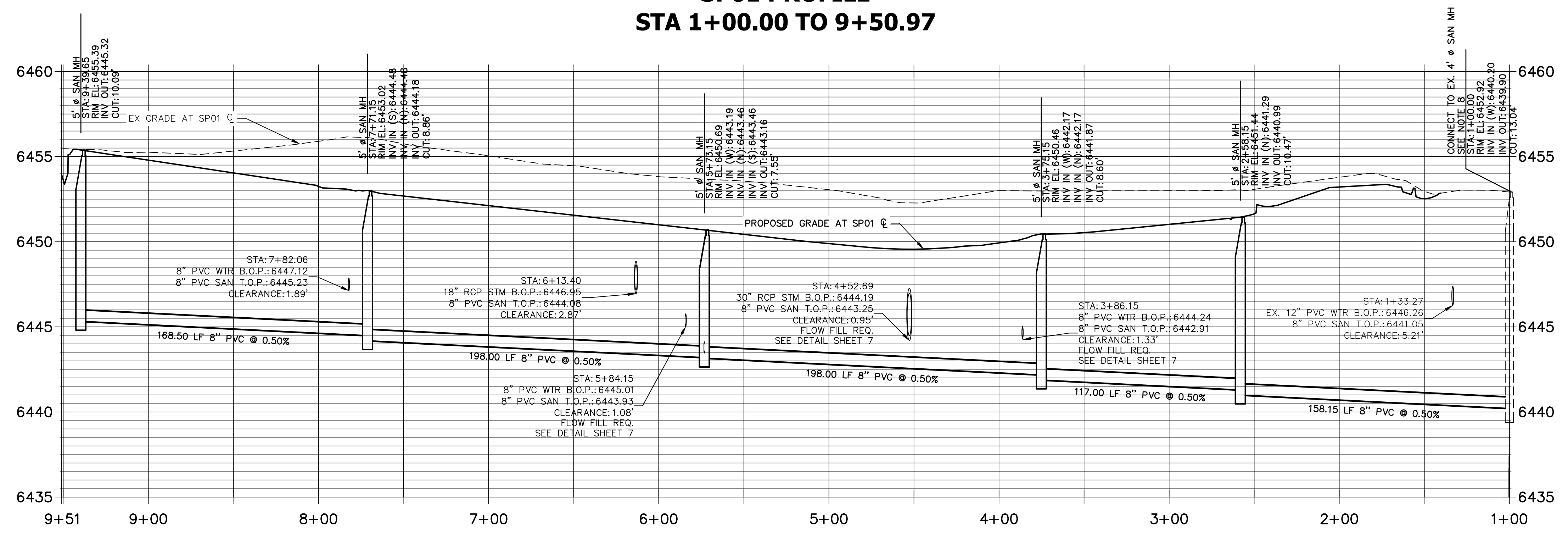


**SP02 PROFILE
STA 1+00.00 TO 2+53.00**



- NOTES:**
1. ALL PROPOSED SANITARY SEWER ON THESE PLANS IS PUBLIC, UNLESS OTHERWISE NOTED.
 2. SEE PROFILE VIEW FOR PIPE SLOPES AND GRADE.
 3. SEE PROFILE VIEW FOR MANHOLE RIM ELEVATIONS AND INVERT ELEVATIONS.
 4. SEE JR POTABLE WATER PLANS FOR WATER DESIGN AND DETAILS.
 5. SEE JR UTILITY SERVICE PLANS FOR WATER AND SANITARY SEWER SERVICE CONNECTIONS.
 6. SEE JR STREET, STORM, AND GESC PLANS FOR SURFACE IMPROVEMENTS, GRADING, AND STORM WATER SYSTEM DESIGNS.
 7. ALL PIPES SHALL BE SDR-35, EXCEPT AS NOTED ON THE PLANS.
 8. FOR SLOPES LESS THAN 1.04% SELECT BEDDING IS REQUIRED.
 9. CONTRACTOR TO REMOVE THE EXISTING SECTION OF 8" SANITARY SEWER THAT IS STUBBED ONTO THE SITE (WEST SIDE).
 10. TRACE WIRE TO BE INSTALLED PER COLORADO SPRINGS UTILITY STANDARDS AND DETAIL D1-4.

**SP01 PROFILE
STA 1+00.00 TO 9+50.97**



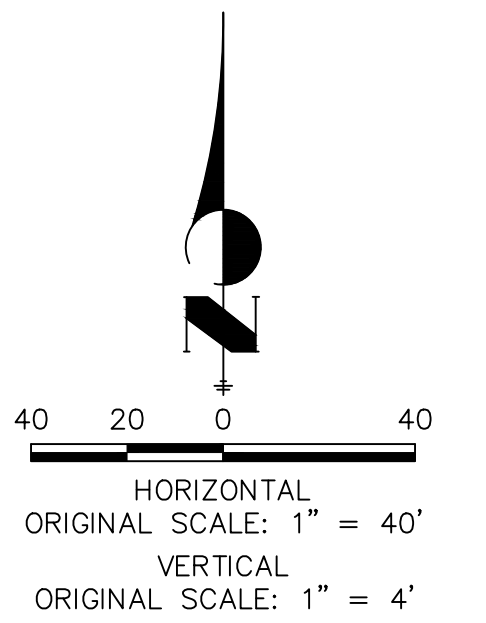
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ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

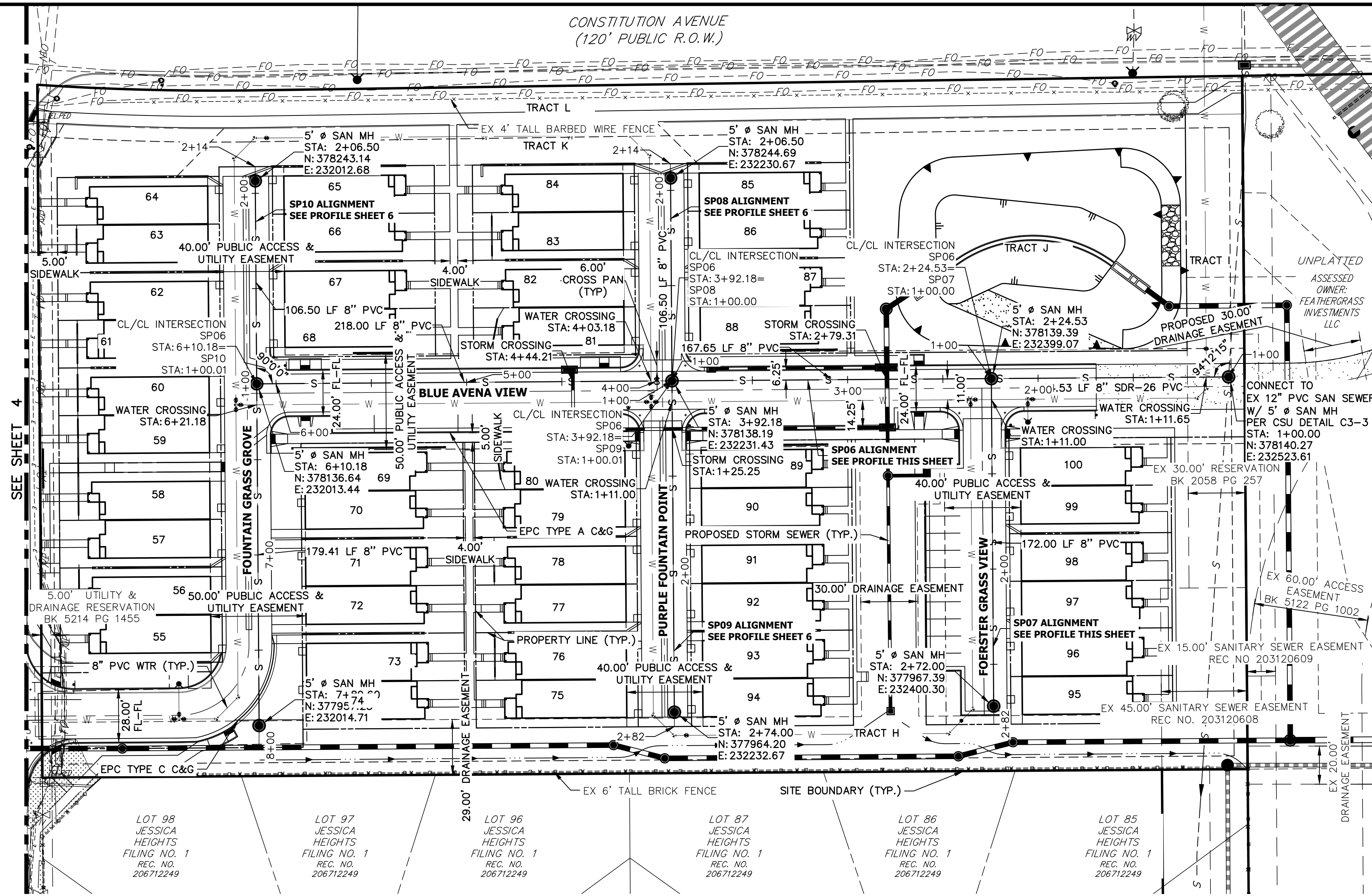
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07/15/2021 DATE

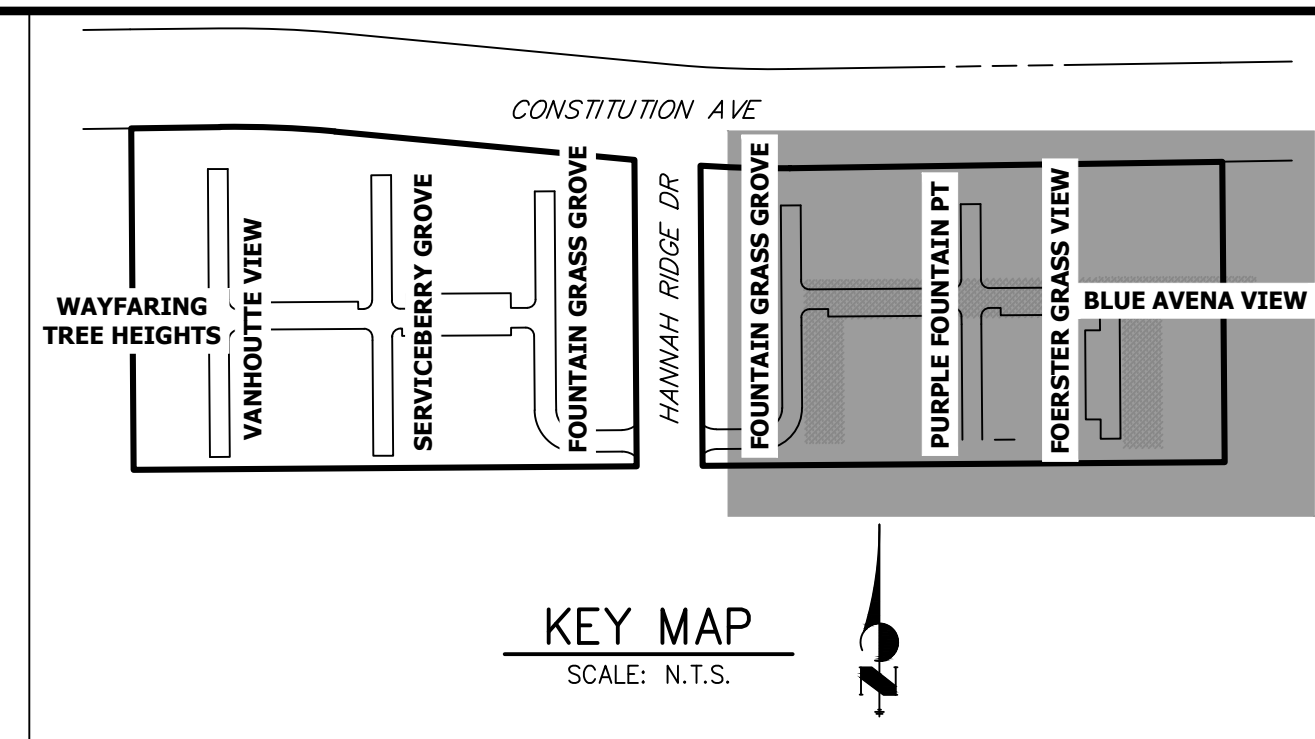
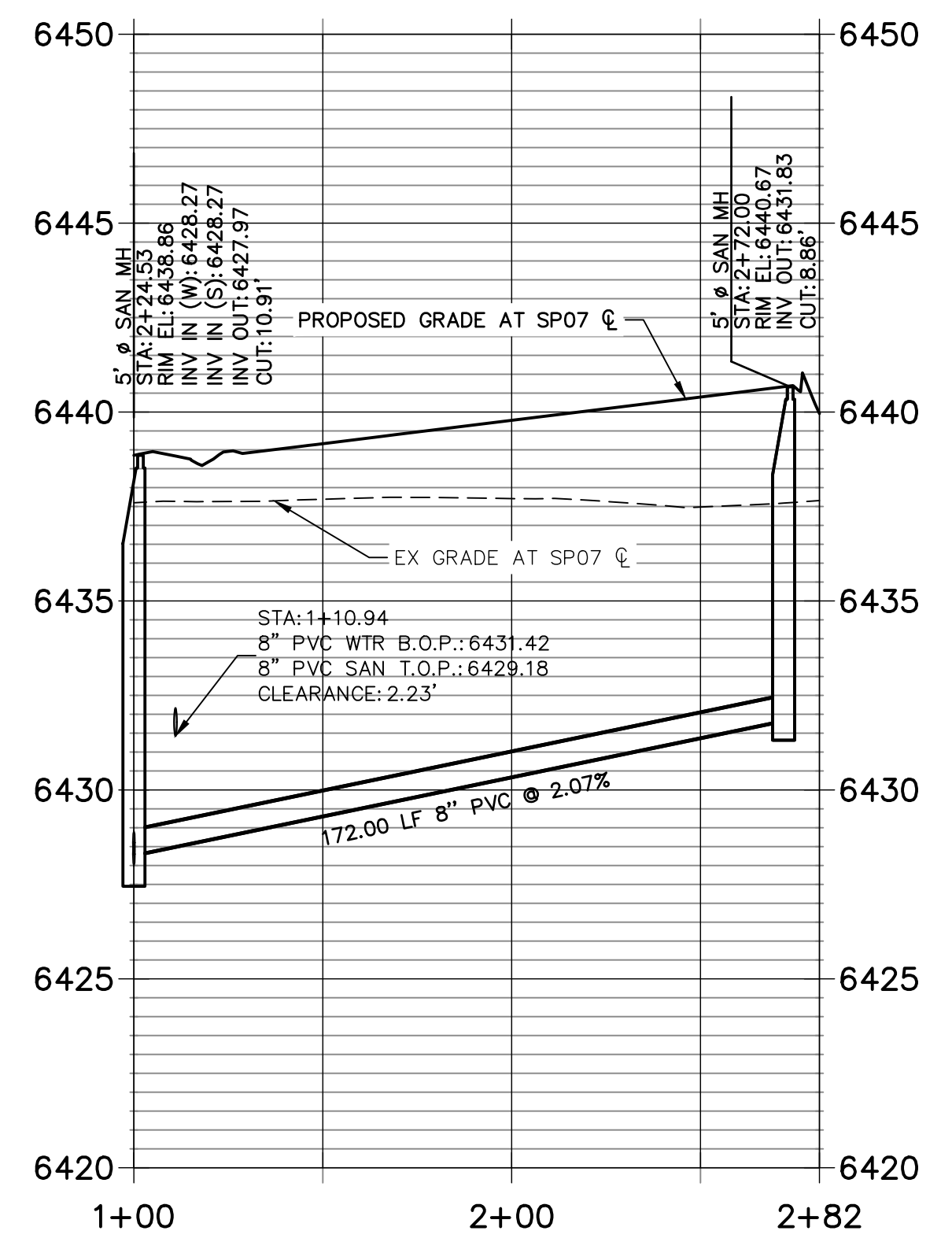


THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.

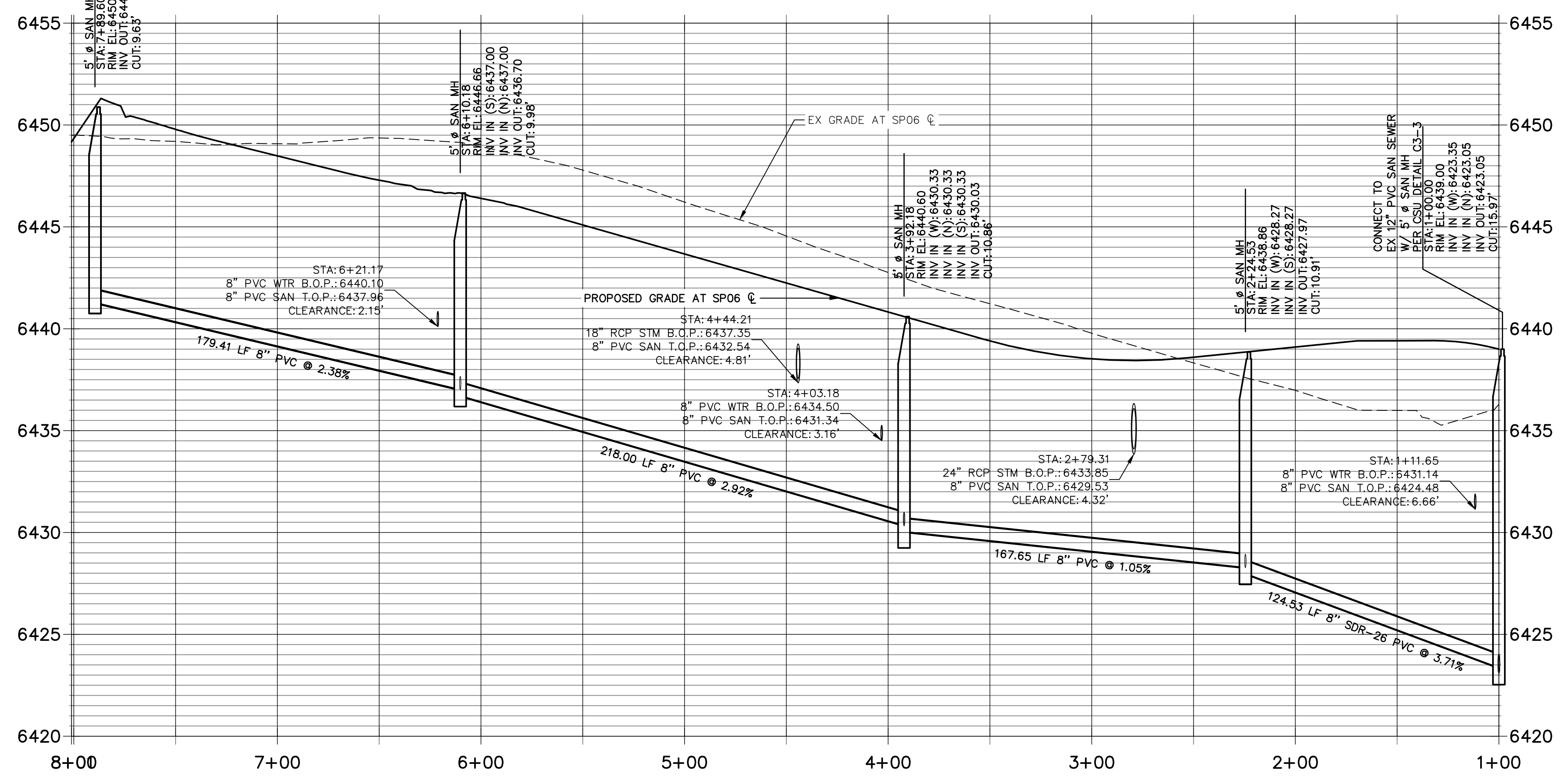
PREPARED FOR MDC HOLDINGS RICHMOND AMERICAN HOMES 4350 S. MONACO STREET DENVER, CO 80237 ATTN: JASON POCK 720-977-3827	 A Westman Company Central 303-740-9888 • Colorado Springs 719-583-2593 Fort Collins 970-491-9888 • www.jrengineering.com	BY	DATE
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H-SCALE	1"=40'	DESIGNED BY	APL
V-SCALE	1"=4'	DRAWN BY	APL
DATE	01-04-21	CHECKED BY	
URBAN COLLECTION AT PALMER VILLAGE		SANITARY SEWER PLAN & PROFILE	
SHEET 4 OF 8		WASTEWATER CONSTRUCTION PLAN	
JOB NO. 25149.01			



SP07 PROFILE
STA 1+00.00 TO 2+81.50



SP06 PROFILE
STA 1+00.00 TO 8+01.15



- NOTES:**
- ALL PROPOSED SANITARY SEWER ON THESE PLANS IS PUBLIC, UNLESS OTHERWISE NOTED.
 - SEE PROFILE VIEW FOR PIPE SLOPES AND GRADE.
 - SEE PROFILE VIEW FOR MANHOLE RIM ELEVATIONS AND INVERT ELEVATIONS.
 - SEE JR POTABLE WATER PLANS FOR WATER DESIGN AND DETAILS.
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ENGINEER'S STATEMENT
PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

GLENN D. ELLIS, P.E.
COLORADO P.E. 38861
FOR AND ON BEHALF OF JR ENGINEERING, INC.

07/15/2021 DATE

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PREPARED FOR
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4350 S. MONACO STREET
DENVER, CO 80237
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720-977-3827

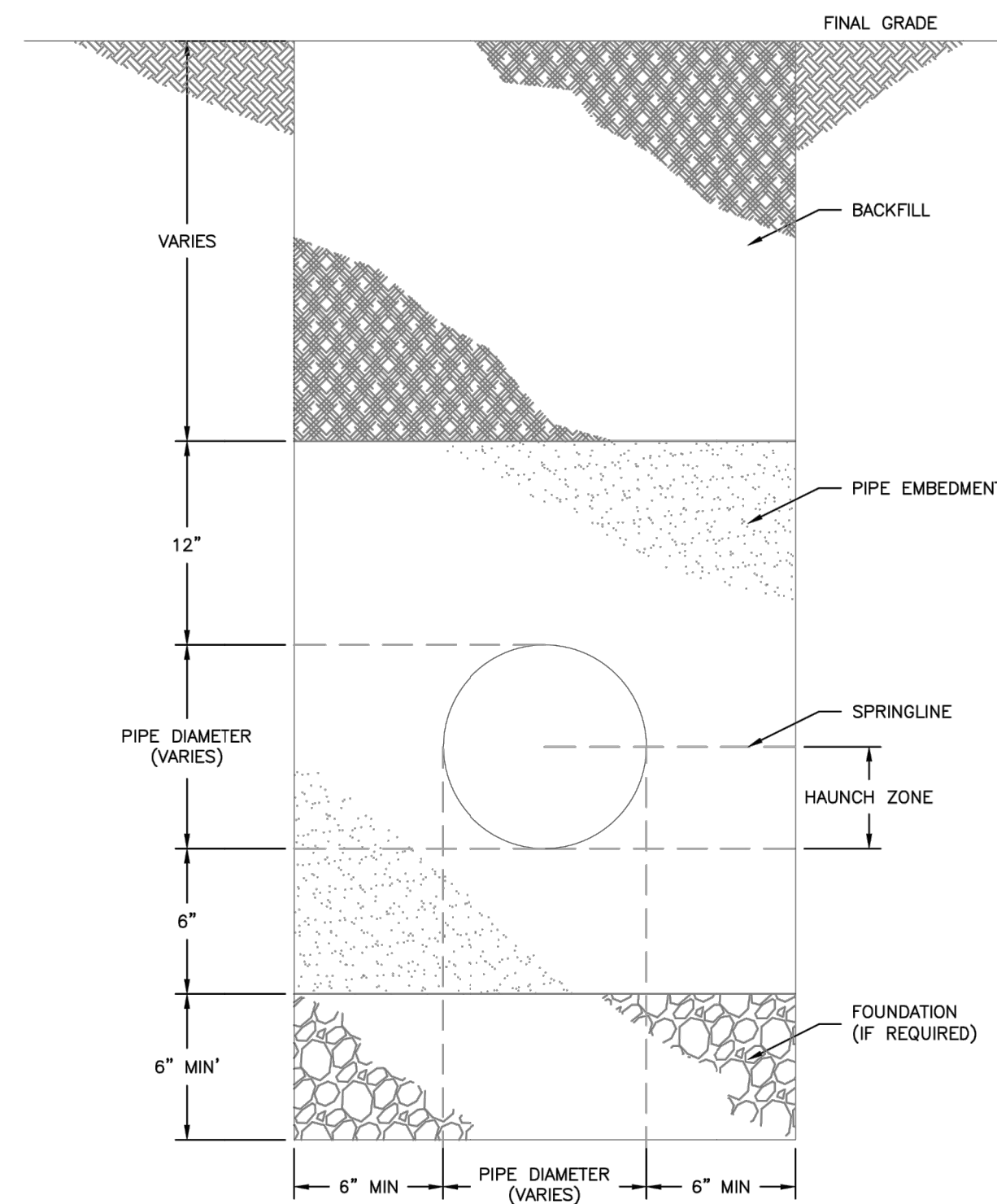
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BY	DATE	No.	REVISION

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DATE 01-04-21
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URBAN COLLECTION AT PALMER VILLAGE
SANITARY SEWER PLAN & PROFILE
WASTEWATER CONSTRUCTION PLAN

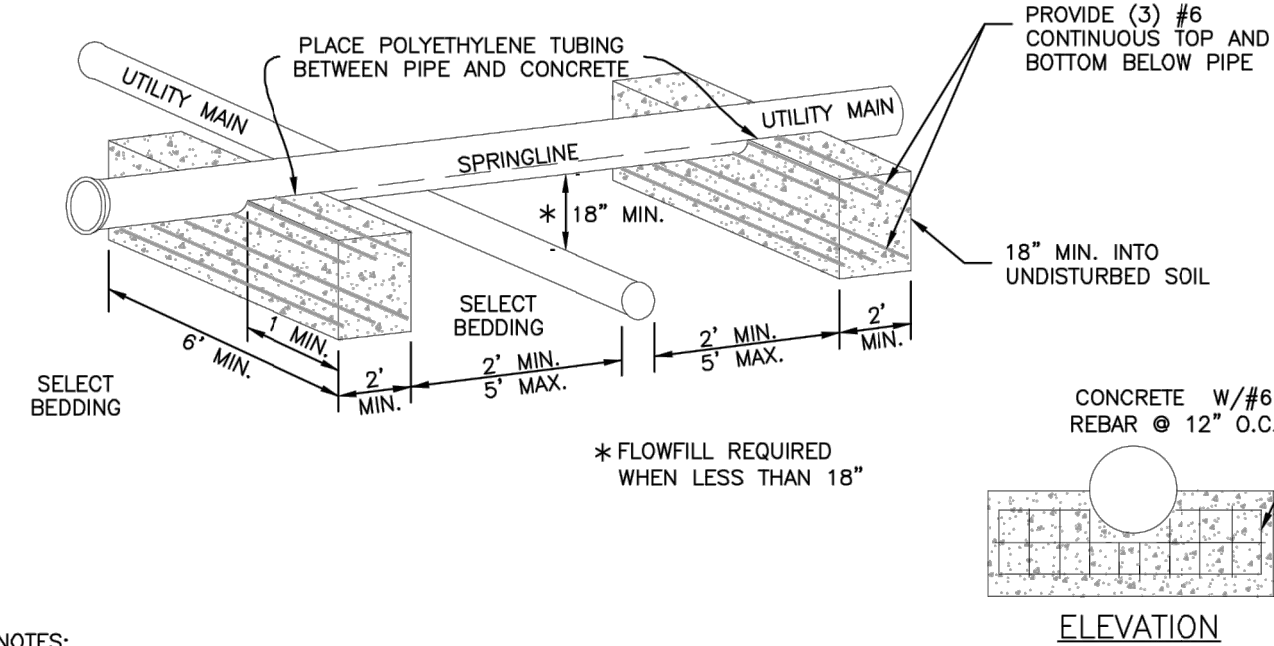
SHEET 5 OF 8
JOB NO. 25149.01



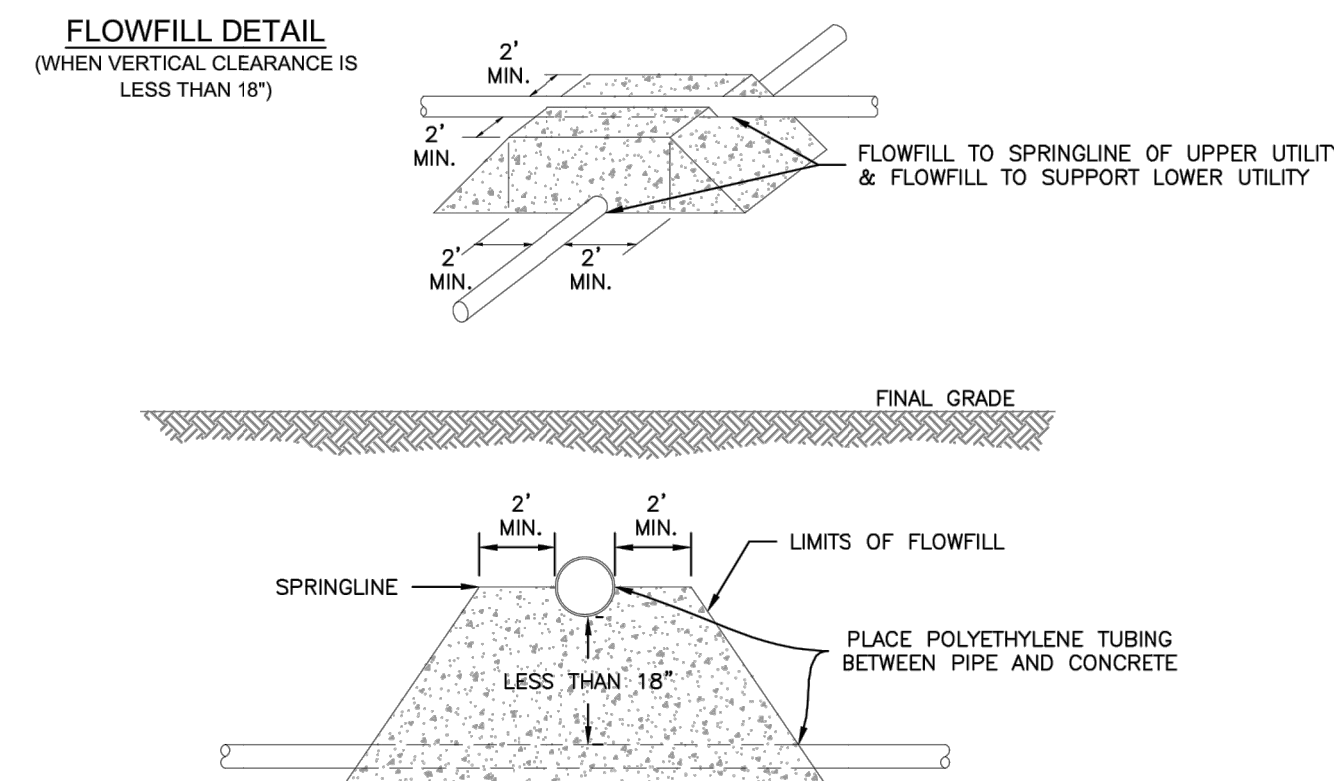
- NOTE:
- TRENCH BACKFILL SHALL CONFORM TO THE SPECIFICATIONS OF THE AUTHORITY HAVING JURISDICTION AND ASTM D2321.

PIPE SIZE AND MATERIAL	ALLOWABLE DEFLECTION	PIPE LENGTH AND CORRESPONDING RADIUS									
		20'	18'	16'	14'	12'	10'	8'	6'	4'	
4" - 12" DIP	4"00'	286'	258'	229'	200'	172'	143'	115'	100'	100'	
14" - 16" DIP	3"12'	358'	322'	287'	251'	215'	179'	143'	107'	100'	
18" - 36" DIP	2"24'	477'	430'	382'	334'	286'	239'	191'	143'	100'	
4" - 36" SDR 35 PVC	3"00'	382'	344'	306'	267'	230'	191'	153'	115'	100'	

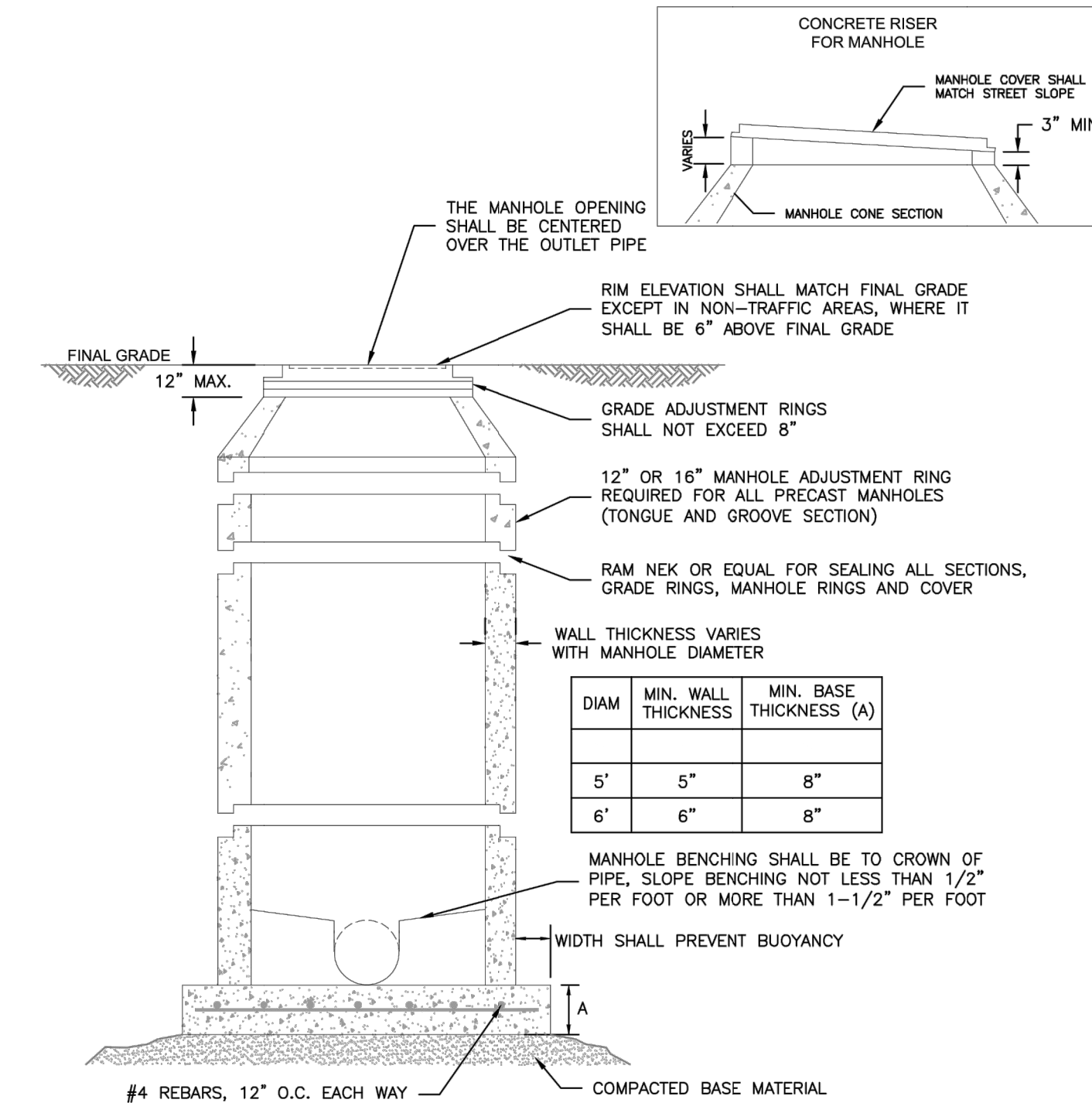
- NOTES:
- COLORADO SPRINGS UTILITIES USES A 1.25 SAFETY FACTOR FOR DIP SLIP JOINT DEFLECTION FROM THE MANUFACTURERS ALLOWABLE DEFLECTION.
 - SDR 35 PVC SHALL NOT BE DEFLECTED WITHOUT THE USE OF FABRICATED 3' BENDS.
 - MINIMUM RADIUS FOR DIP AND SDR 35 PVC SHALL BE 100'.



- NOTES:
- NO JOINTS OF UTILITY MAIN SHALL BE ALLOWED BETWEEN CONCRETE BRIDGING BLOCKS.
 - CONCRETE AND REINFORCEMENT MATERIALS SHALL BE IN ACCORDANCE WITH CHAPTER 4.



- NOTES:
- ALL FLOWABLE-FILL SHALL BE IN CONFORMANCE WITH CHAPTER 4.
 - SEE SECTION 2.5.F.3 FOR UTILITY CROSSING REQUIREMENTS.



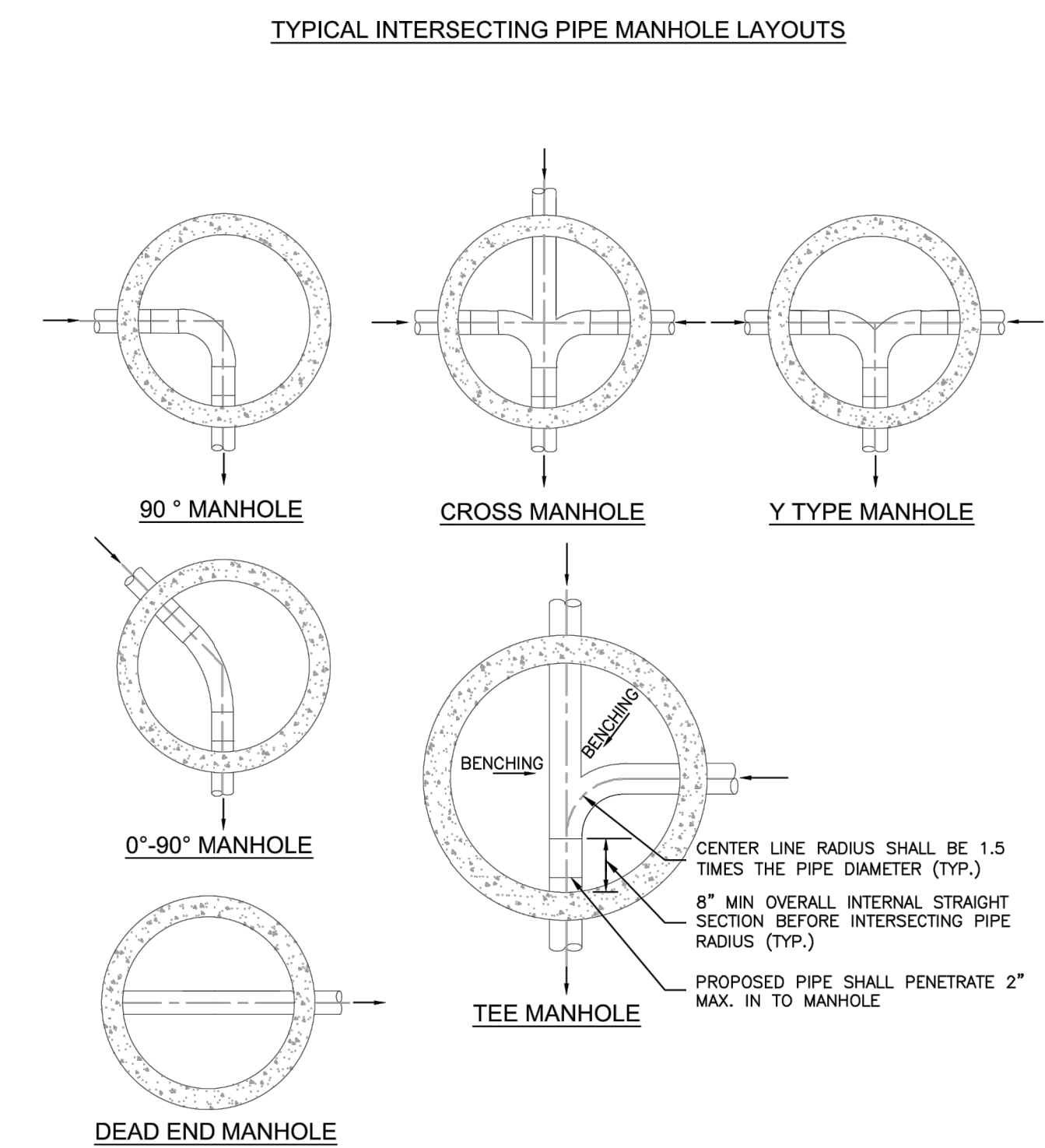
- NOTES:
- ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 4000 PSI @ 28 DAYS AND DESIGNED FOR HS-20 LOADING CONDITIONS.
 - ALL CONCRETE SHALL BE MECHANICALLY VIBRATED.
 - FOR CAST IN PLACE MANHOLES, DO NOT DROP CONCRETE A DISTANCE OF MORE THAN 5' UNLESS APPROVED BY COLORADO SPRINGS UTILITIES.
 - 3/4" CRUSHED ROCK REQUIRED UNDER BASE TO A DEPTH OF 6" UP TO SPRINGLINE OF PIPE, 2'-3' RADIUS AROUND BASE.
 - NON-METAL STEPS SHALL BE INSTALLED IN ALL PRECAST MANHOLES.
 - STRUCTURAL REINFORCEMENT SHALL COMPLY TO ASTM C-478. ASTM C-478 SHALL BE STAMPED ON THE OUTSIDE OF THE MANHOLE.
 - COAT EXTERIOR SURFACES OF THE MANHOLE. SEE NOTE 8 ON SHEET 2.

Colorado Springs Utilities
TYPICAL TRENCH SECTION
C2-1
DATED 5/2015

Colorado Springs Utilities
MINIMUM RADIUS FOR DIP AND PVC PIPE
C2-2
DATED 5/2015

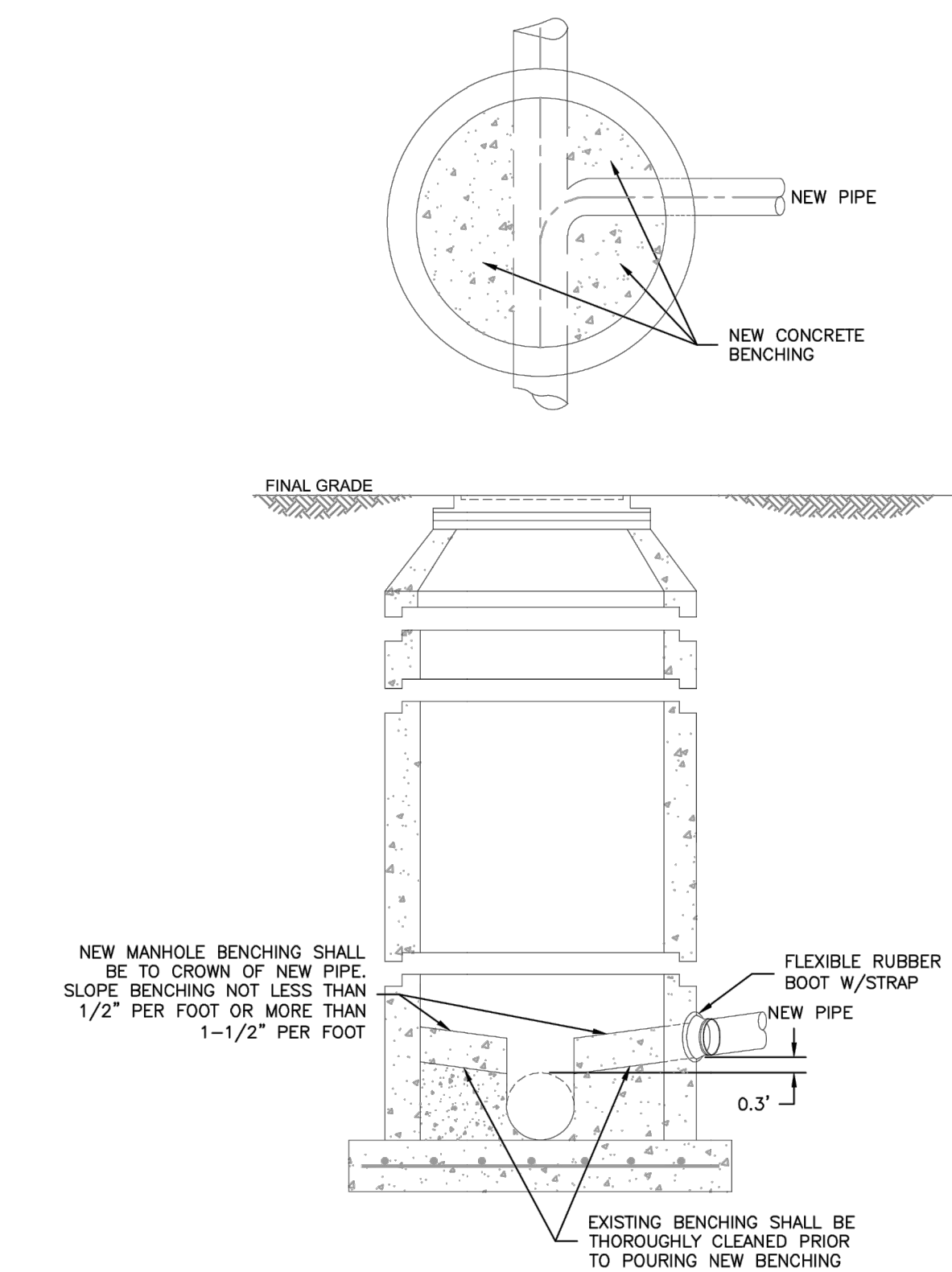
Colorado Springs Utilities
PIPE BRIDGING DETAIL W/CONCRETE CRADLES
C2-7
DATED 5/2015

Colorado Springs Utilities
STANDARD CONCRETE MANHOLE
C3-1
DATED 5/2015



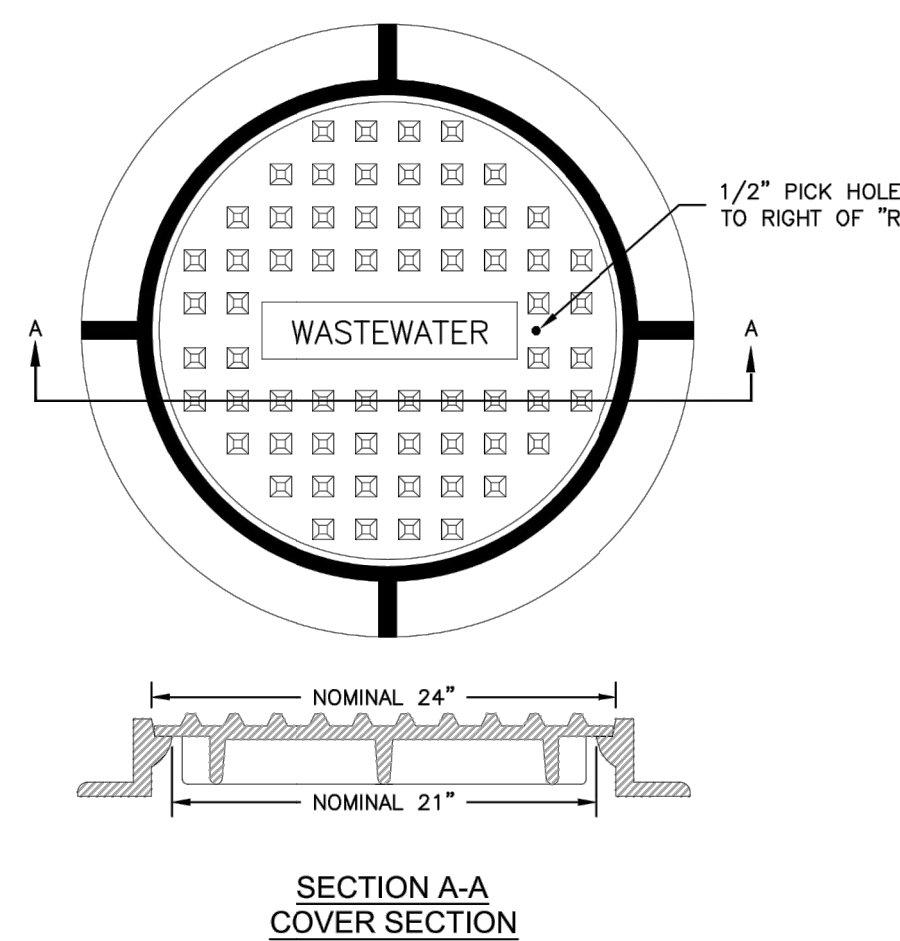
- NOTES:
- SEE DETAIL DRAWING C3-1 FOR MANHOLE REQUIREMENTS.
 - LAYOUTS SHOWN ARE FOR 8"-12" PIPES; LAYOUTS FOR LARGER DIAMETER PIPELINES AND MANHOLES SHALL BE DESIGNED BY THE DESIGN ENGINEER AND APPROVED BY COLORADO SPRINGS UTILITIES.
 - TO BE READ IN CONJUNCTION WITH CHAPTER 2, MANHOLE SIZES.

Colorado Springs Utilities
TYPICAL MANHOLE LAYOUTS AND INTERSECTIONS
C3-2
DATED 5/2015



- NOTES:
- SEE DETAIL DRAWING C3-1 FOR MANHOLE REQUIREMENTS.

Colorado Springs Utilities
CORE DRILLING INTO AN EXISTING MANHOLE
C3-3
DATED 5/2015



- NOTES:
- SEE CHAPTER 4 FOR ADDITIONAL INFORMATION AND SPECIFIC DIMENSIONS.

Colorado Springs Utilities
STANDARD MANHOLE RING AND COVER IN TRAFFIC AREAS
C3-9
DATED 5/2015

ENGINEER'S STATEMENT
PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING
GLENN D. ELLIS, P.E.
COLORADO P.E. 38861
FOR AND ON BEHALF OF JR ENGINEERING, L.L.C.
07/15/2021 DATE

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RICHMOND AMERICAN HOMES
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URBAN COLLECTION AT PALMER VILLAGE
DETAILS
WASTEWATER CONSTRUCTION PLAN

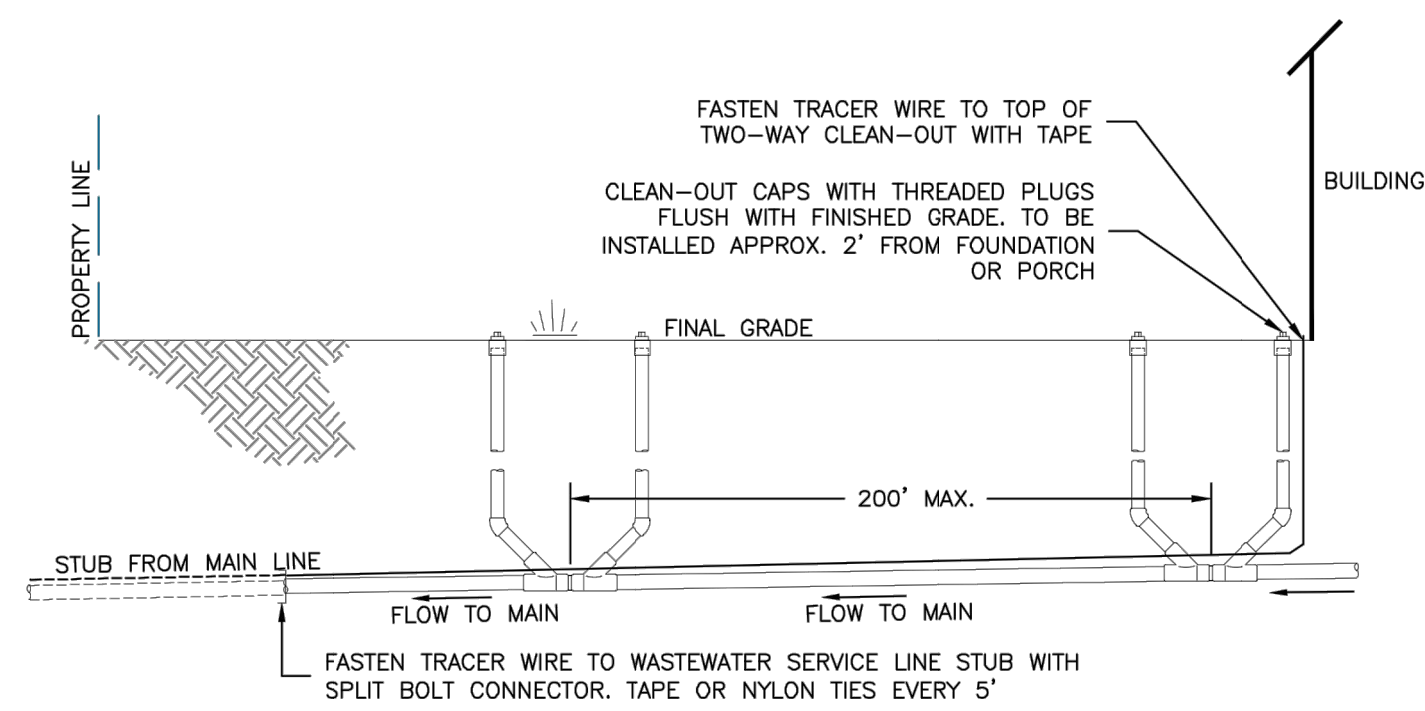
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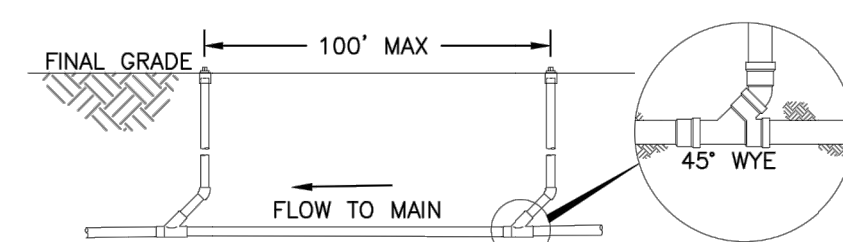
01-04-21
APL
APL

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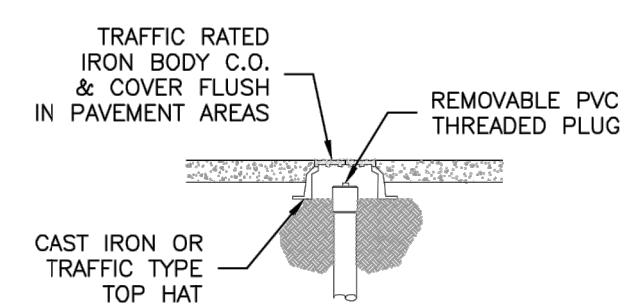
SHEET 7 OF 8
JOB NO. 25149.01



TWO-WAY CLEAN-OUT INSTALLATION



SINGLE CLEAN-OUT INSTALLATION



CLEAN-OUT INSTALLATION IN PAVEMENT

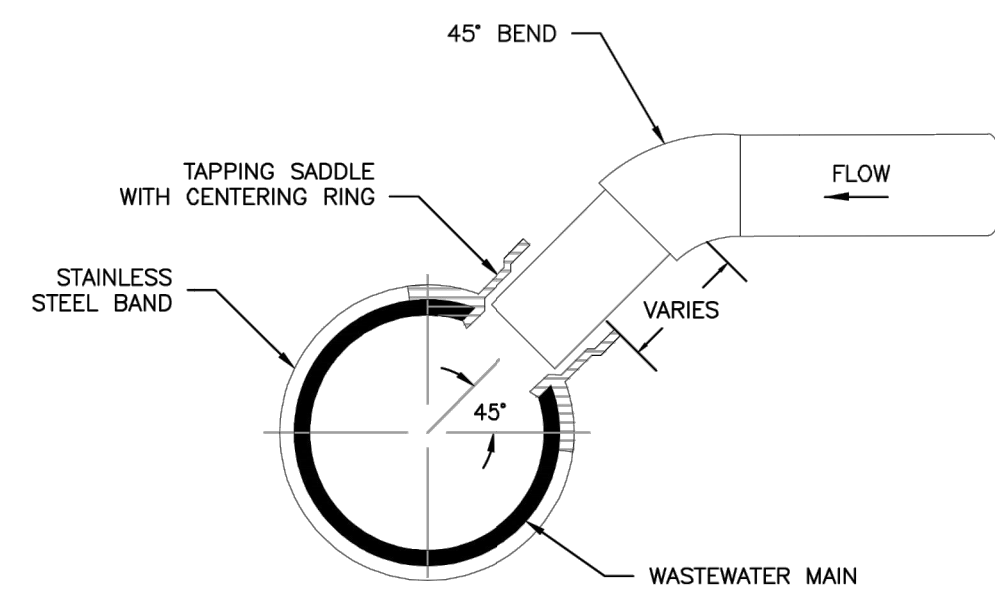
NOTES:

1. SINGLE CLEAN-OUT TO BE PLACED AT 100' INTERVALS, TWO-WAY CLEAN-OUTS AT 200' INTERVALS (100' EACH WAY CLEANING).
2. TRACER WIRE TO BE CONTINUOUSLY CONNECTED FROM THE MAIN LINE TO THE CLEAN-OUT LOCATED AT THE BUILDING.



TYPICAL WASTEWATER SERVICE LINE WITH TRACER WIRE AND CLEAN-OUTS

D1-4
DATED: 5/2015



TYPICAL WASTEWATER SERVICE TAPPING SADDLE

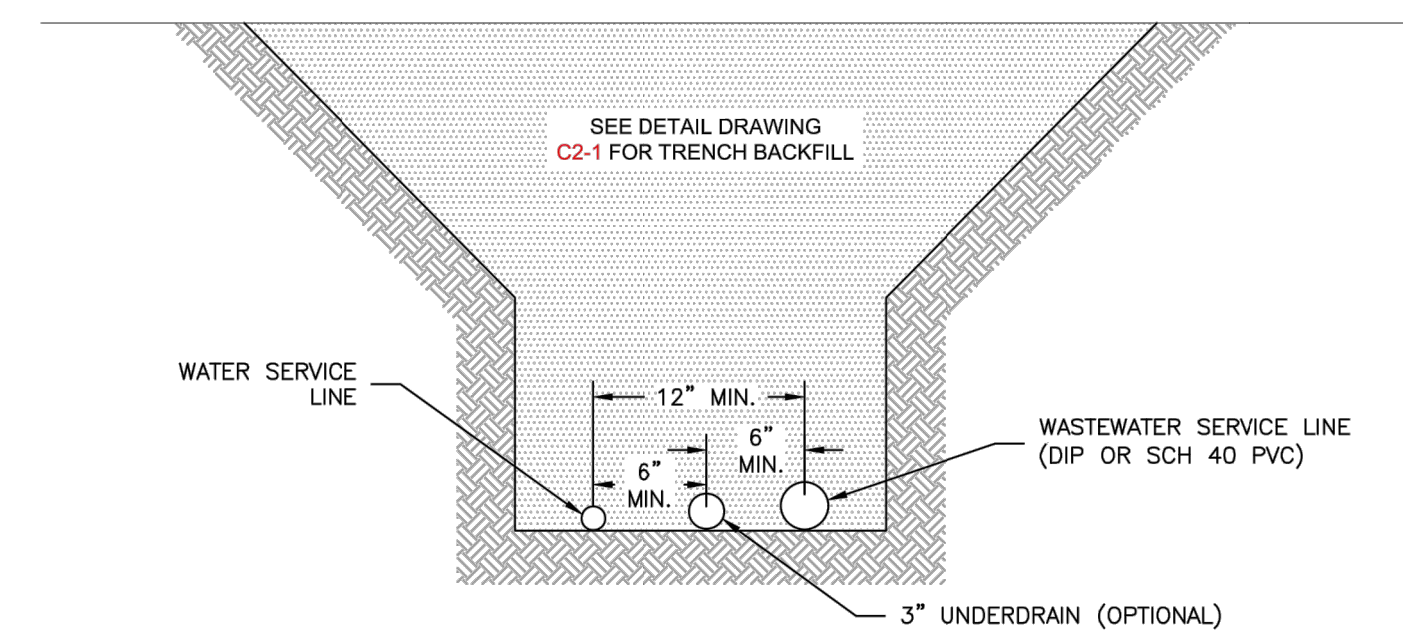
NOTES:

1. WHEN THE WASTEWATER MAIN IS VCP, USE THE SDR 35 PVC SADDLE WITH A LARGER SKIRT. SADDLE SHALL BE ONE NOMINAL SIZE LARGER THAN THE WASTEWATER MAIN.
2. PIPE WILL BE CUT WITH AN O.D. HOLE SAW OR TAPPING MACHINE. A 4-1/2" O.D. HOLE SAW SHALL BE USED FOR 4" TAPS AND A 6-1/2" O.D. HOLE SAW SHALL BE USED FOR 6" TAPS.
3. ONLY 4" AND 6" TAP SIZES ARE ALLOWED.
4. WASTEWATER TAPPING SADDLES SHALL HAVE A CENTERING RING.
5. A GASKET SHALL BE USED TO ENSURE AN AIRTIGHT SEAL BETWEEN THE SADDLE AND THE PIPE.

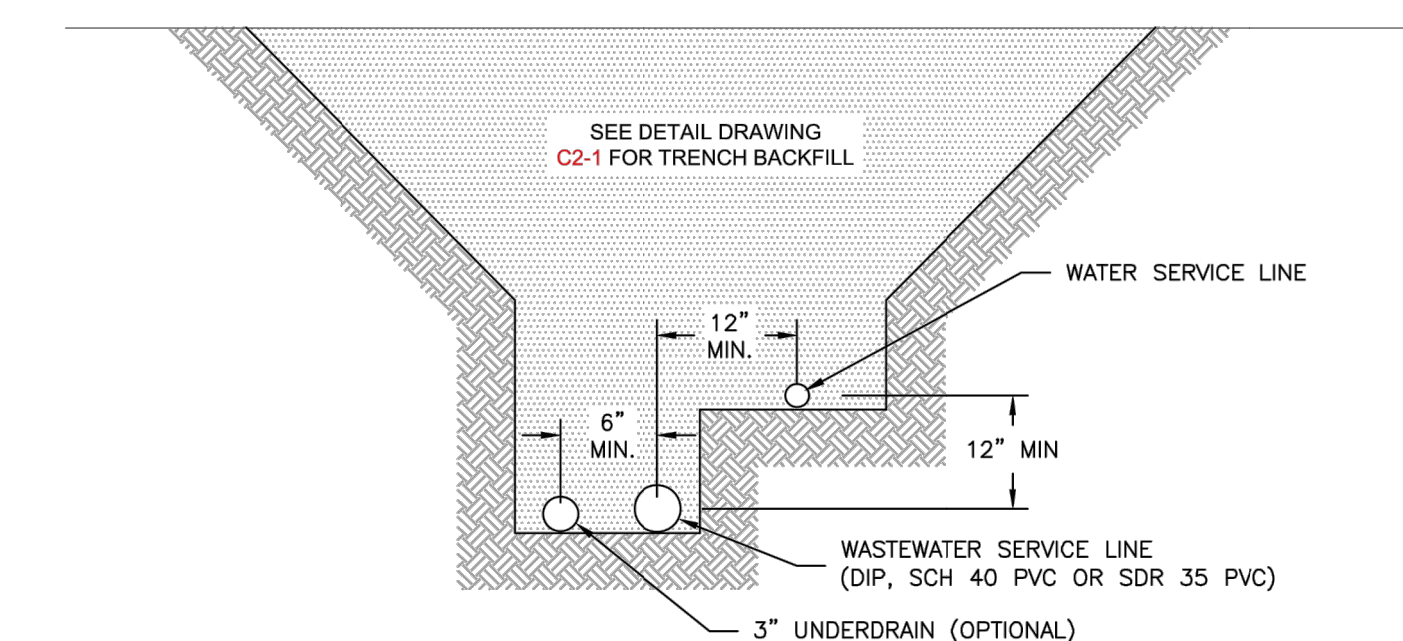


TYPICAL WASTEWATER SERVICE LINE TAPPING METHOD

D1-6
DATED: 5/2015



ALTERNATE 1



ALTERNATE 2



TYPICAL COMMON SERVICE TRENCH SECTION

D1-5
DATED: 5/2015

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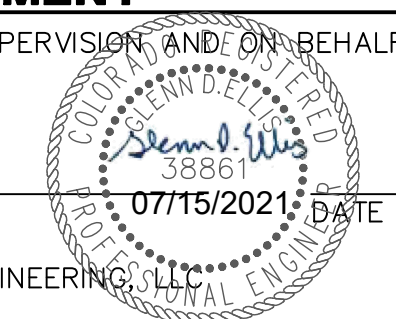
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				V-SCALE	N/A			
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				DATE	01-04-21			
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				DRAWN BY	APL			
				CHECKED BY				
URBAN COLLECTION AT PALMER VILLAGE DETAILS								
WASTEWATER CONSTRUCTION PLAN								

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING



GLENN D. ELLIS, P.E.
COLORADO P.E. 38861
FOR AND ON BEHALF OF JR ENGINEERING

SHEET 8 OF 8
JOB NO. 25149.01

