



PLANS FOR
A
LARGE SCALE DEVELOPMENT
TO SERVE
ASPEN HEIGHTS
IN THE CITY OF
TONTITOWN, ARKANSAS

CABLE COMPANY: COX COMMUNICATION
CONTACT: MICHAEL MOORE
4901 SOUTH 48TH STREET
SPRINGDALE, AR 72762
PH: 479-717-3730
FAX: 479-872-0174
EMAIL: MICHAEL.MOORE3@COX.COM

TELEPHONE COMPANY: AT&T
CONTACT: JOHN HILL
PH. 479-442-1963
EMAIL: JH7313@ATT.COM

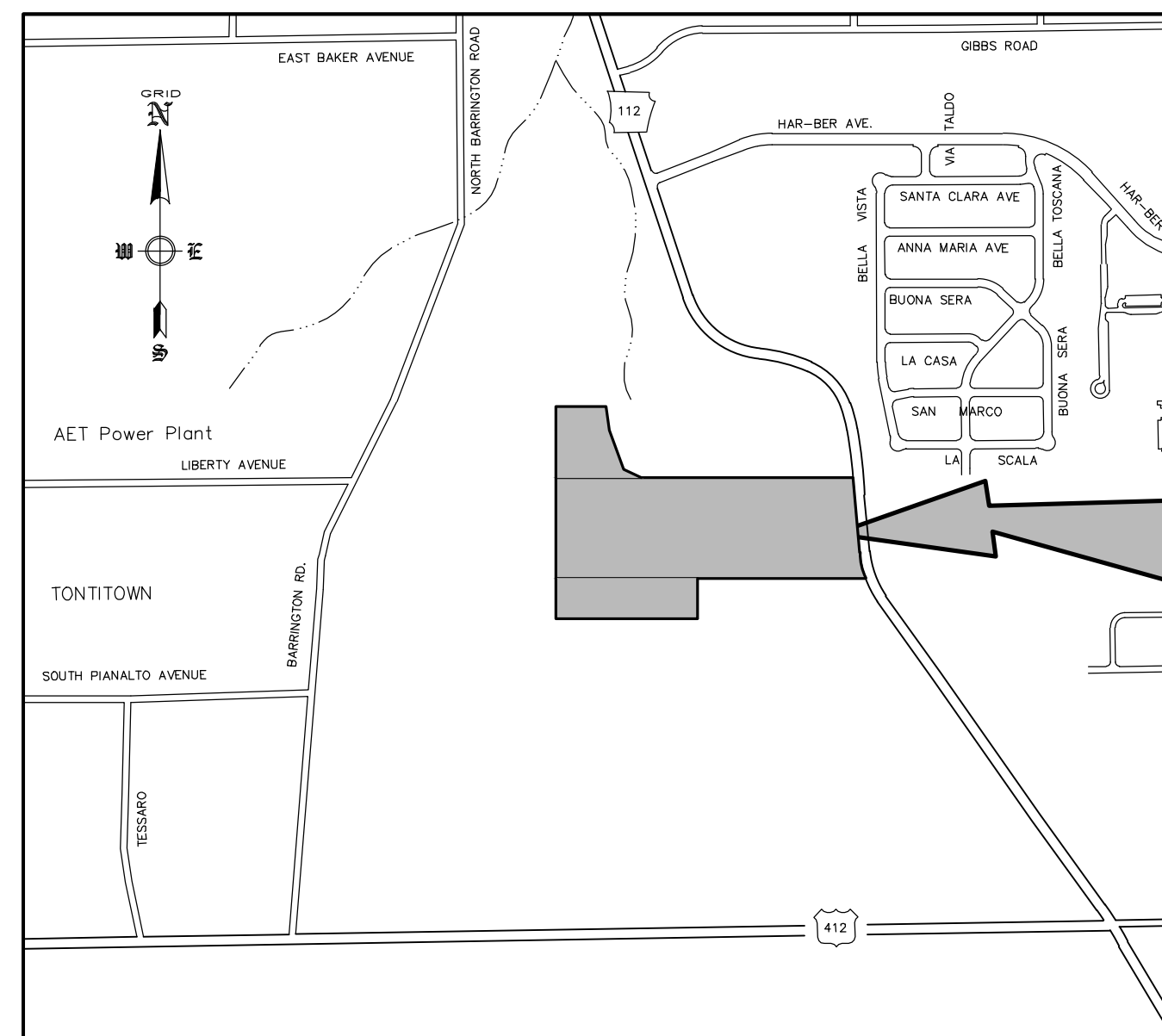
GAS COMPANY: BLACK HILLS ENERGY
CONTACT: BRANDON STOKES
PH. 479-225-3726

ELECTRIC COMPANY: OZARKS ELECTRIC
CONTACT: WES MAHAFFEY
PH. 479-684-4949
EMAIL: WMHAFFEY@OZARKSECC.COM

WATER /SEWER DEPARTMENT: TONTITOWN WATER UTILITIES
201 E HENRI DE TONTI BLVD
TONTITOWN, AR 72770
PH. 479-361-2996
FAX: 501-421-8774

PLANNING DEPARTMENT: PLANNING AND ZONING DEPARTMENT
235 E. HENRI DE TONTI
TONTITOWN, AR 72770
PH. 479-361-9702
FAX 501-421-0012

BUILDING DEPARTMENT: CITY OF TONTITOWN'S BUILDING DEPT.
235 E. HENRI DE TONTI
TONTITOWN, AR 72770
PH. 479-361-9702
FAX 501-421-0012



VICINITY MAP

*PROJECT
LOCATION*

May 22, 2019

BY
ENGINEERING SERVICES INC.



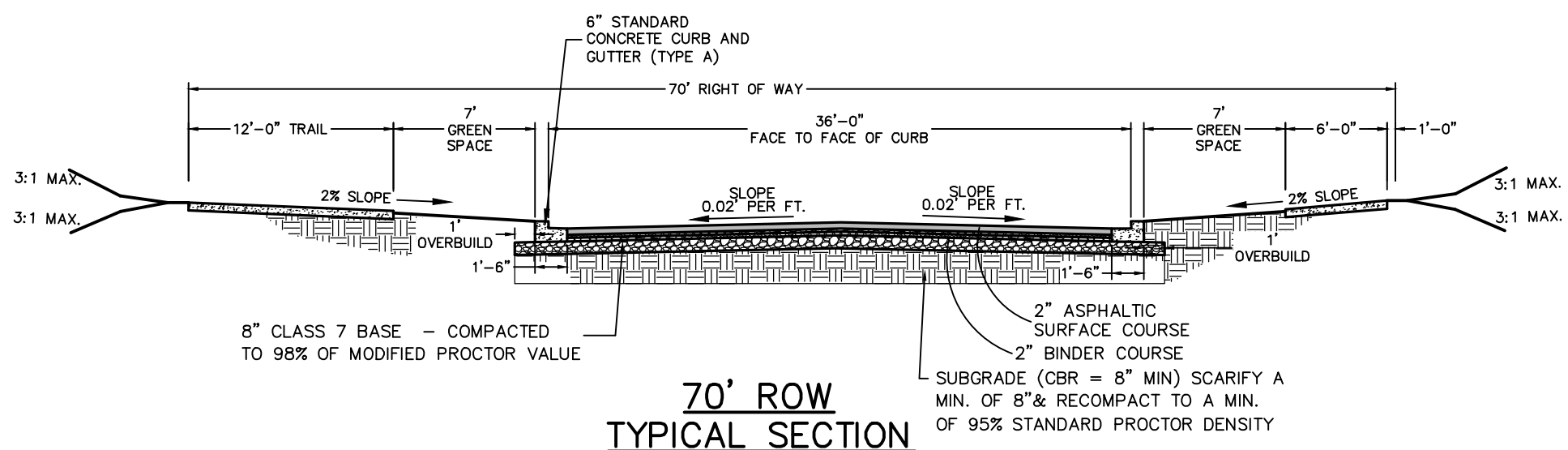
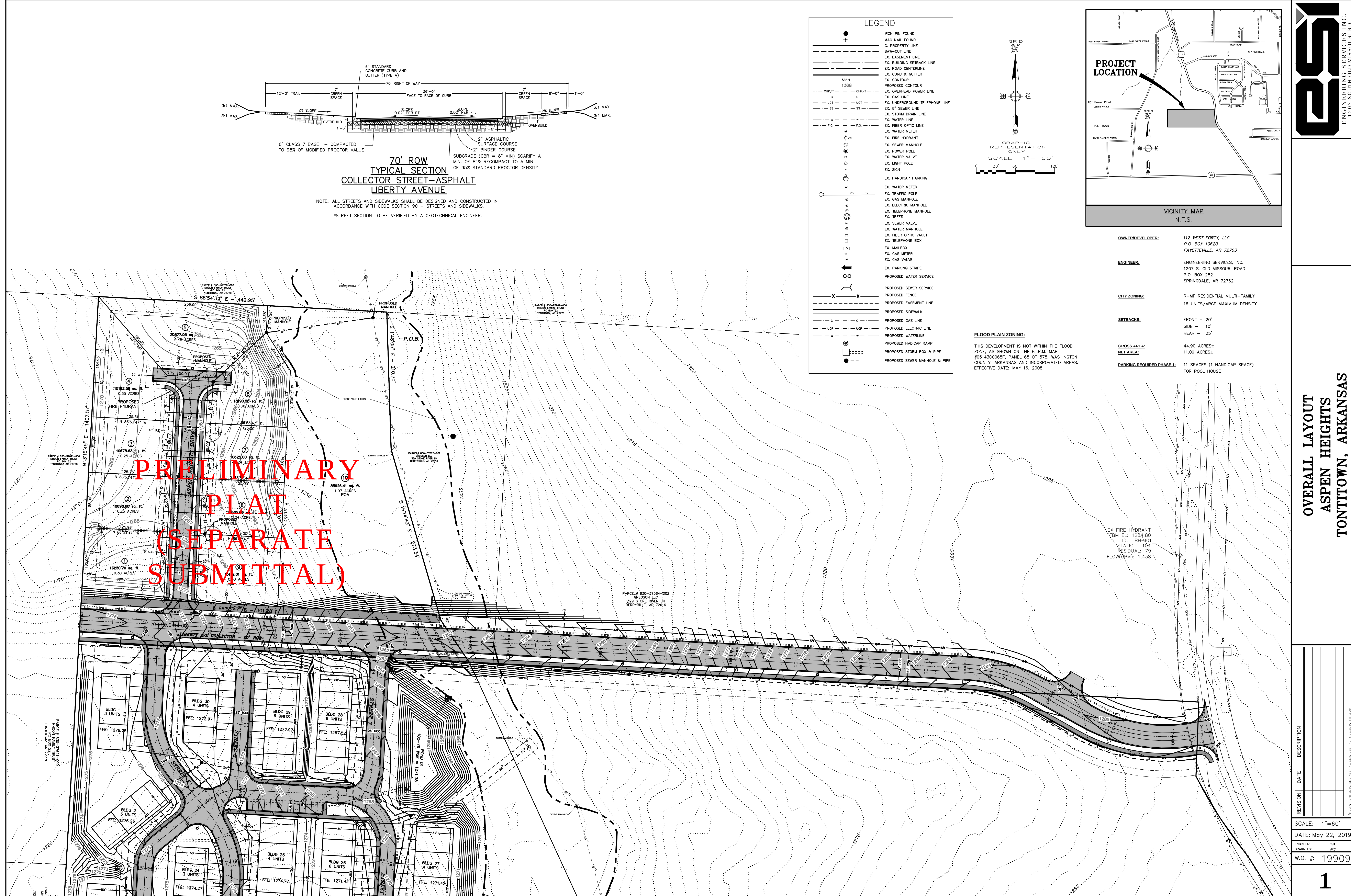
CONSULTING ENGINEERS
SPRINGDALE, ARKANSAS
PHONE: 479-751-8733
FAX: 479-751-8746
WWW.ENGINEERINGSERVICES.COM

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THOMAS J. APPEL, P.E. No. 13828
ENGINEERING SERVICES, INC.

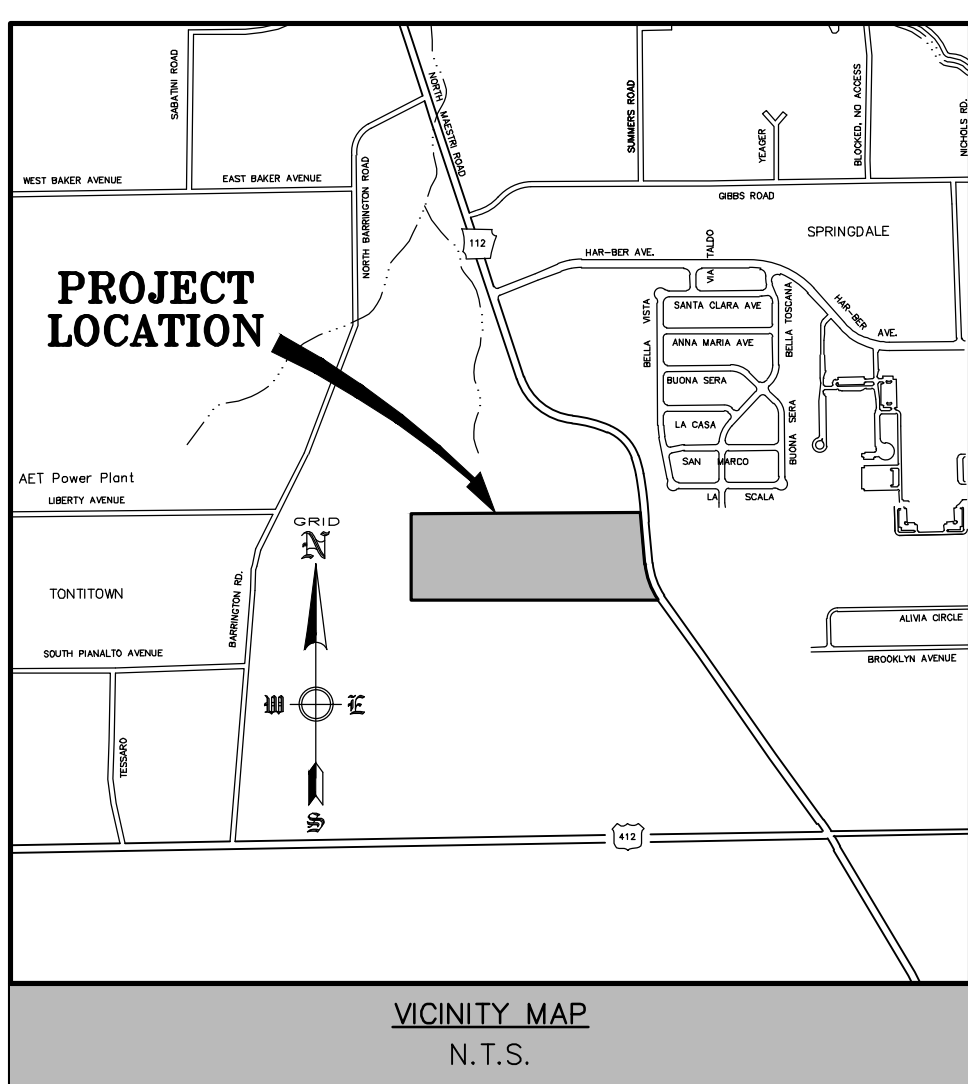
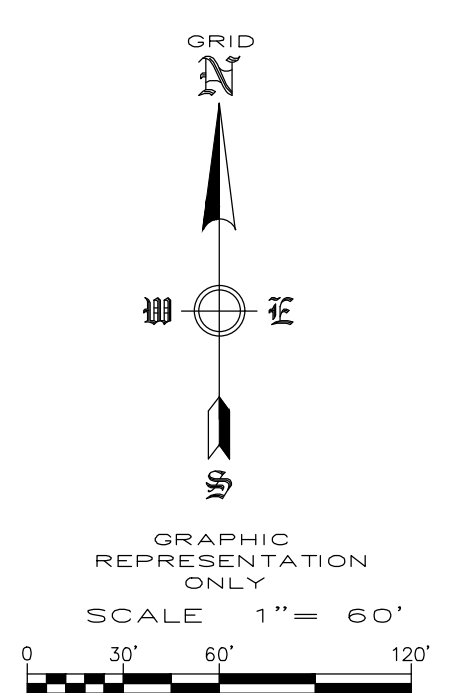
NOTES:

- 1) ALL STREET AND DRAINAGE CONSTRUCTION MUST COMPLY WITH THE REQUIREMENTS OF THE CITY OF TONTITOWN, ARKANSAS.
- 2) ALL WATER AND SEWER CONSTRUCTION MUST COMPLY WITH THE SPECIFICATION REQUIREMENTS (ORDINANCE 2013-06-429, ADOPTED JUNE 4, 2013, REVISED APRIL 5, 2016) FOR THE CONSTRUCTION OF WATER AND SEWER FACILITIES OF THE CITY OF TONTITOWN WATER UTILITIES.
- 3) TRAFFIC SAFETY CONTROL FEATURES ARE TO BE PROVIDED BY THE CONTRACTOR.
- 4) ANY STREET CLOSURES ARE TO BE COORDINATED WITH THE CITY OF TONTITOWN 48 HOURS PRIOR TO WORK.
- 5) THERE ARE NO KNOWN WETLANDS ON THIS PROPERTY.
- 6) NO KNOWN EROSION PROBLEMS EXIST ON THIS SITE
- 7) THERE ARE NO KNOWN EXISTING OR ABANDONED WATER WELLS, SUMPS, CESSPOOLS, SPRINGS, WATER IMPOUNDMENTS, OR UNDERGROUND STRUCTURES ON THIS PROPERTY.
- 8) THERE ARE NO KNOWN POTENTIALLY DANGEROUS AREAS.
- 9) THERE ARE NO KNOWN EXISTING OR PROPOSED GROUND LEASES OR ACCESS AGREEMENTS.
- 10) THIS PROPERTY IS WITHIN THE FLOOD PLAIN ZONE 'X', (NO SHADING) DESIGNATED AS AN AREA DETERMINED TO BE OUTSIDE OF 0.2% ANNUAL CHANCE FLOODPLAIN, AS SHOWN ON THE F.I.R.M. MAP #05143C0065 F, PANEL 65 OF 575, WASHINGTON COUNTY, ARKANSAS & INCORPORATED AREAS. EFFECTIVE DATE: MAY 16, 2008.



NOTE: ALL STREETS AND SIDEWALKS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH CODE SECTION 90 - STREETS AND SIDEWALKS.
*STREET SECTION TO BE VERIFIED BY A GEOTECHNICAL ENGINEER.

LEGEND	
	IRON PIN FOUND
	MAG NAIL FOUND
	C. PROPERTY LINE
	SAW-CUT LINE
	EX. EASEMENT LINE
	EX. BUILDING SETBACK LINE
	EX. ROAD CENTERLINE
	EX. CURB & GUTTER
	EX. CONTOUR
	PROPOSED CONTOUR
	EX. OVERHEAD POWER LINE
	EX. GAS LINE
	EX. UNDERGROUND TELEPHONE LINE
	EX. 8" SEWER LINE
	EX. STORM DRAIN LINE
	EX. WATER LINE
	EX. FIBER OPTIC LINE
	EX. WATER METER
	EX. FIRE HYDRANT
	EX. SEWER MANHOLE
	EX. POWER POLE
	EX. WATER VALVE
	EX. LIGHT POLE
	EX. SIGN
	EX. HANDICAP PARKING
	EX. TRAFFIC POLE
	EX. GAS MANHOLE
	EX. ELECTRIC MANHOLE
	EX. TELEPHONE MANHOLE
	EX. SEWER VALVE
	EX. WATER MANHOLE
	EX. FIBER OPTIC VAULT
	EX. TELEPHONE BOX
	EX. MAILBOX
	EX. GAS METER
	EX. GAS VALVE
	EX. PARKING STRIPE
	PROPOSED WATER SERVICE
	PROPOSED SEWER SERVICE
	PROPOSED FENCE
	PROPOSED EASEMENT LINE
	PROPOSED SIDEWALK
	PROPOSED GAS LINE
	PROPOSED ELECTRIC LINE
	PROPOSED WATERLINE
	PROPOSED HANDICAP RAMP
	PROPOSED STORM BOX & PIPE
	PROPOSED SEWER MANHOLE & PIPE



OWNER/DEVELOPER: 112 WEST FORTY, LLC
P.O. BOX 10620
FAYETTEVILLE, AR 72703

ENGINEER: ENGINEERING SERVICES, INC.
1207 S. OLD MISSOURI ROAD
P.O. BOX 282
SPRINGDALE, AR 72762

CITY ZONING: R-MF RESIDENTIAL MULTI-FAMILY
16 UNITS/ACRE MAXIMUM DENSITY

SETBACKS: FRONT - 20'
SIDE - 10'
REAR - 25'

GROSS AREA: 44.90 ACRES±
NET AREA: 11.09 ACRES±

PARKING REQUIRED PHASE 1: 11 SPACES (1 HANDICAP SPACE)
FOR POOL HOUSE

FLOOD PLAIN ZONING:
THIS DEVELOPMENT IS NOT WITHIN THE FLOOD ZONE, AS SHOWN ON THE F.I.R.M. MAP #05143C0065F, PANEL 65 OF 575, WASHINGTON COUNTY, ARKANSAS AND INCORPORATED AREAS. EFFECTIVE DATE: MAY 16, 2008.

EX FIRE HYDRANT
JBM EL: 1264.80
ID: BH-101
STATIC: 104
RESIDUAL: 79
FLOW (GPM): 1,438

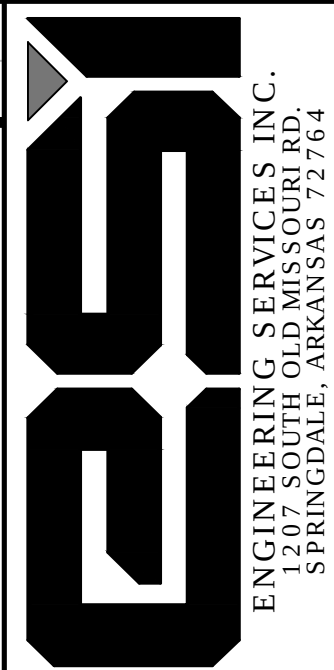
ENGINEERING SERVICES, INC.
1207 S. OLD MISSOURI ROAD
SPRINGDALE, ARKANSAS 72764

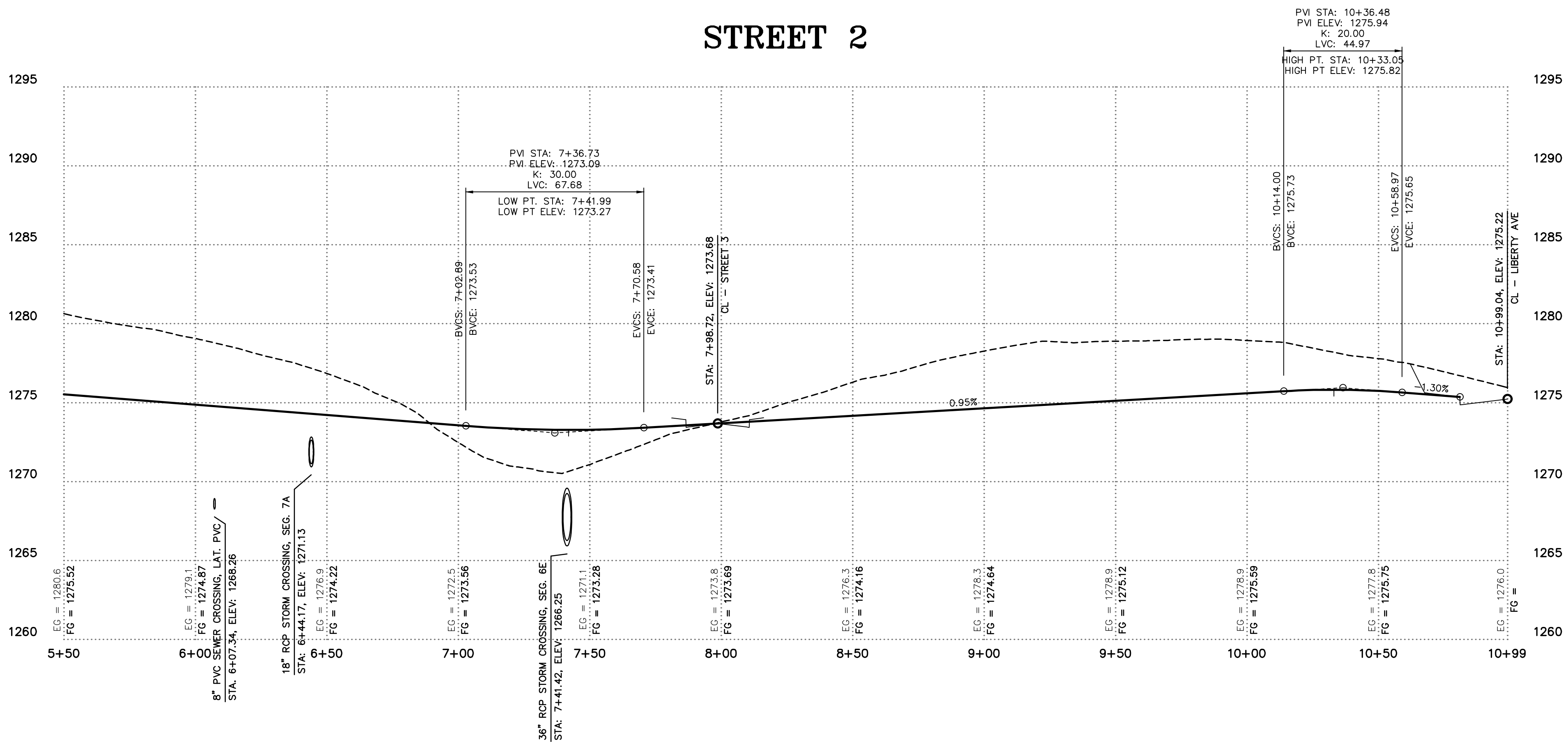
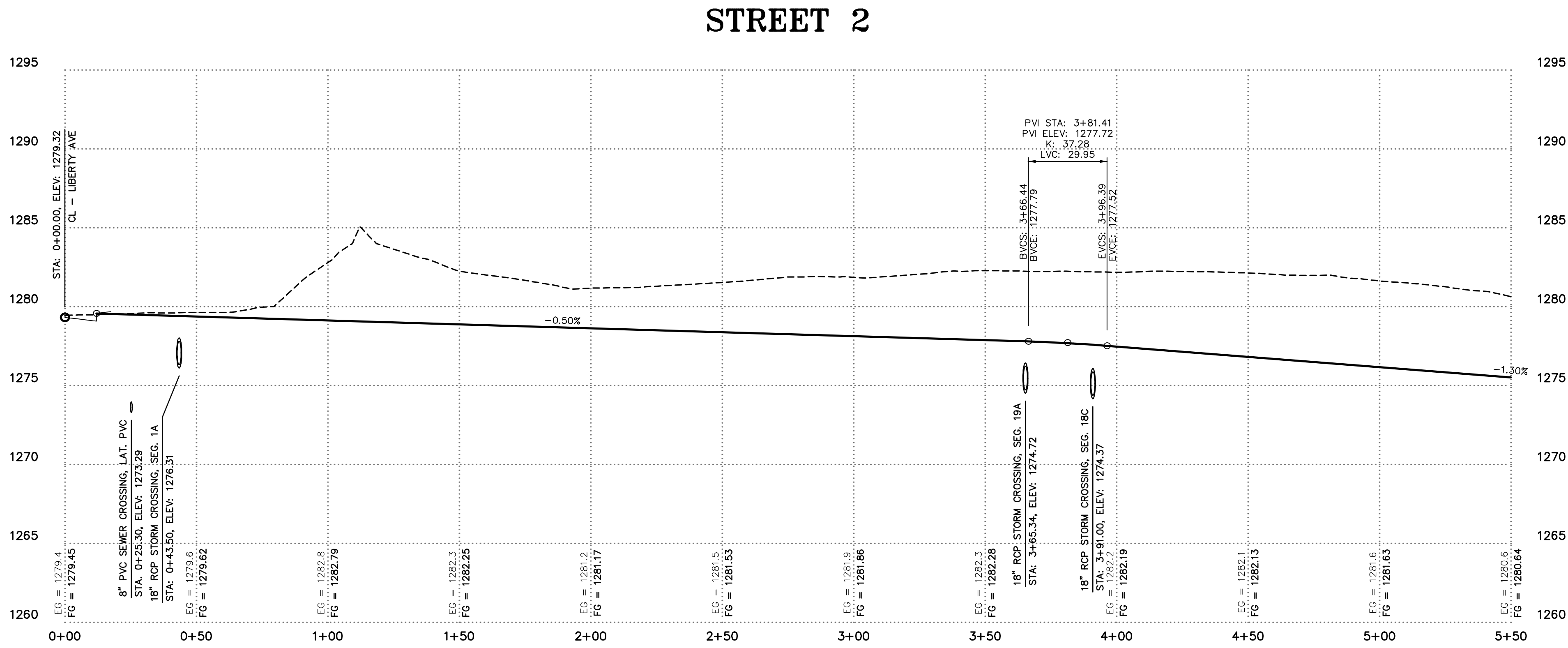
OVERALL LAYOUT
ASPEN HEIGHTS
TONTITOWN, ARKANSAS

REVISION	DATE	DESCRIPTION

SCALE: 1"=60'
DATE: May 22, 2019
ENGINEER: TJA
DRAWN BY: JRC
W.O. #: 19909

1

[illegible]

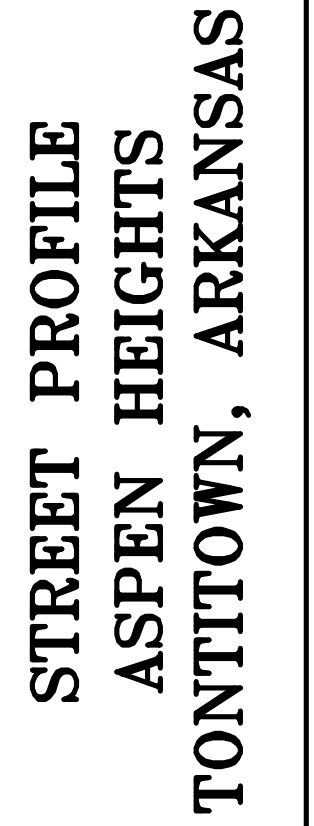


The profile view displays the roadway's vertical alignment. The horizontal axis represents stationing from 0+00 to 7+00. The vertical axis shows elevation in feet, ranging from 1265 to 1300. A solid line represents the proposed roadway profile, and a dashed line represents the existing ground profile. Key features include:

- Vertical Curve Data:**
 - Curve 1:** PVI STA: 4+05.18, PVI ELEV: 1278.06, K: 30.00, LVC: 24.12. BVC STA: 3+93.12, BVC ELEV: 1278.00. EVC STA: 4+17.24, EVC ELEV: 1278.21.
 - Curve 2:** PVI STA: 7+42.72, PVI ELEV: 1282.46, K: 59.30, LVC: 151.84. BVC STA: 6+46.80, BVC ELEV: 1281.47.
- Storm Sewer Crossings:**
 - 18" RCP Storm Crossing, Seg. 3A:** STA: 0+02.50, ELEV: 1273.03.
 - 8" PVC Sewer Crossing, Lat. PVC:** STA: 2+69.66, ELEV: 1268.88.
 - 18" RCP Storm Crossing, Seg. 2A:** STA: 4+87.13, ELEV: 1276.09.
- Elevation Data Points:**
 - EG = 1274.4, FG = 1276.03 at STA 0+00.
 - EG = 1277.8, FG = 1276.28 at STA 0+50.
 - EG = 1280.9, FG = 1276.53 at STA 1+00.
 - EG = 1280.9, FG = 1276.78 at STA 1+50.
 - EG = 1280.1, FG = 1277.03 at STA 2+00.
 - EG = 1278.6, FG = 1277.28 at STA 2+50.
 - EG = 1278.7, FG = 1277.53 at STA 3+00.
 - EG = 1278.5, FG = 1277.78 at STA 3+50.
 - EG = 1277.2, FG = 1278.04 at STA 4+00.
 - EG = 1278.3, FG = 1278.64 at STA 4+50.
 - EG = 1280.9, FG = 1279.94 at STA 5+00.
 - EG = 1282.2, FG = 1280.60 at STA 6+00.
 - EG = 1283.5, FG = 1281.25 at STA 6+50.
 - EG = 1284.3, FG = 1281.81 at STA 7+00.
- Grades:** 0.50% and 1.30% are indicated on the profile.

Profile view of a proposed road section. The horizontal axis represents stationing from 7+00 to 14+00. The vertical axis represents elevation in feet, ranging from 1260 to 1295. The profile includes a solid line for the existing ground (EG) and a dashed line for the proposed road grade. Key features include a vertical curve (VC) with a length of 151.84 feet, a high point at station 7+44.13 with an elevation of 1281.97 feet, and a low point at station 9+83.34 with an elevation of 1276.30 feet. The profile also shows a 1.26% downward grade. Two storm crossings are indicated: a 18" RCP storm crossing at station 9+83.34 and a 36" RCP storm crossing at station 13+00. The profile is labeled with various data points including Elevation (E), Grade (G), and Stationing (STA).

Station	Elevation (ft)	Grade (%)	Notes
7+00	1281.47		BVCS: 6+68.80
7+44.13	1281.97		HIGH PT. STA: 7+44.13 HIGH PT. ELEV: 1281.97
9+83.34	1276.30		18" RCP STORM CROSSING, SEC. 18A STA: 9+83.34, ELEV: 1276.30
13+00	1274.45		36" RCP STORM CROSSING, SEC. 6B STA: 12+98.15, ELEV: 1270.65
14+00	1274.20		



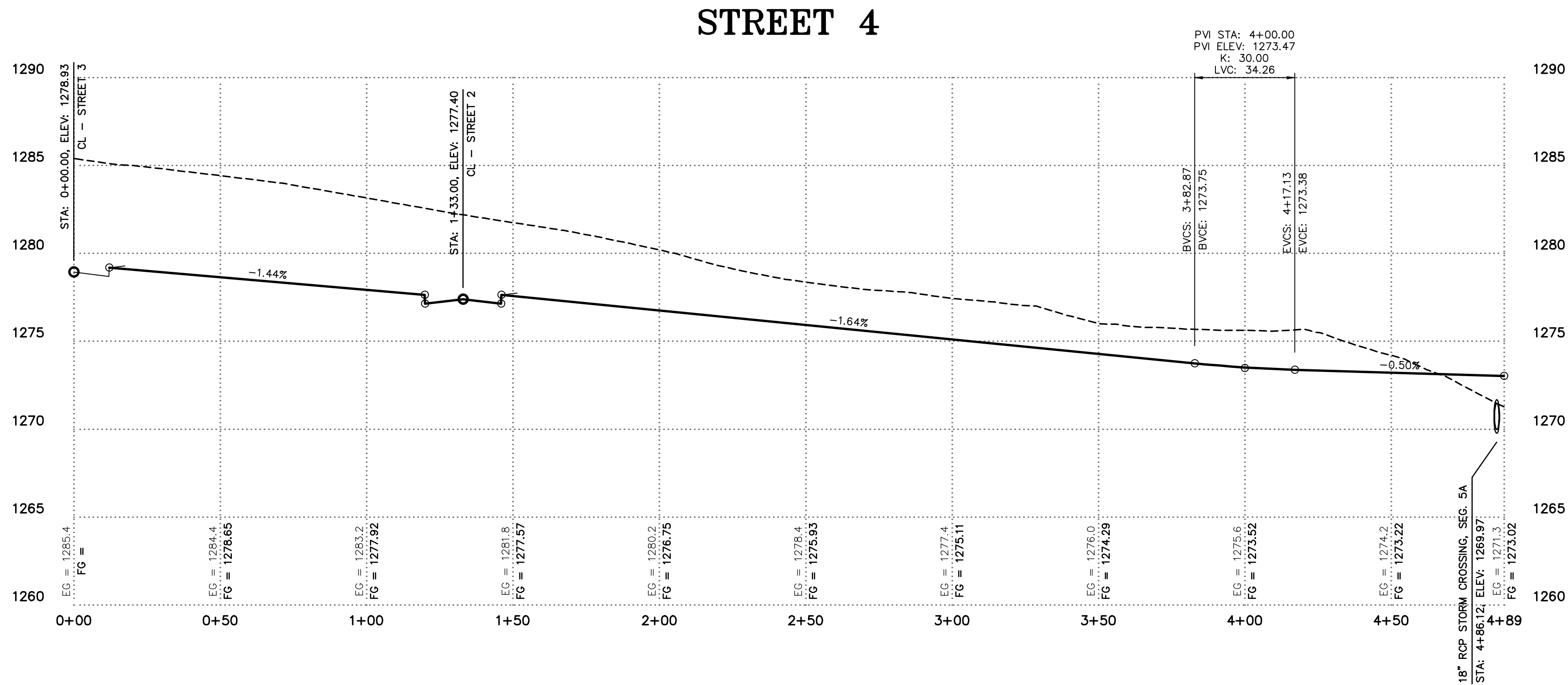
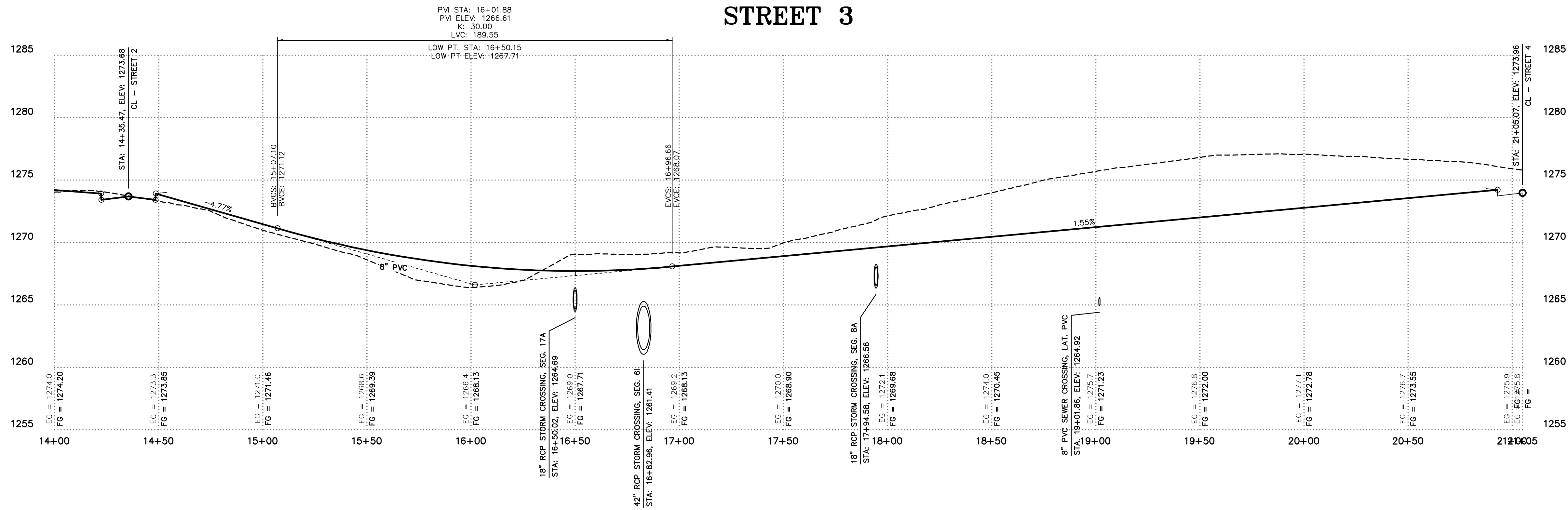
REVISION	DATE	DESCRIPTION

SCALE: 1"=20'

DRAWN BY: JRC
ENGINEERED BY: TJA

JULY 22, 2019

© COPYRIGHT AS / A ENGINEERS SERVICE, INC. 5-22-2019 1:29 AM
 Z:\JULY 2019\1 - 12 NEW PUMP LCLD 1000'S - STREET BOX

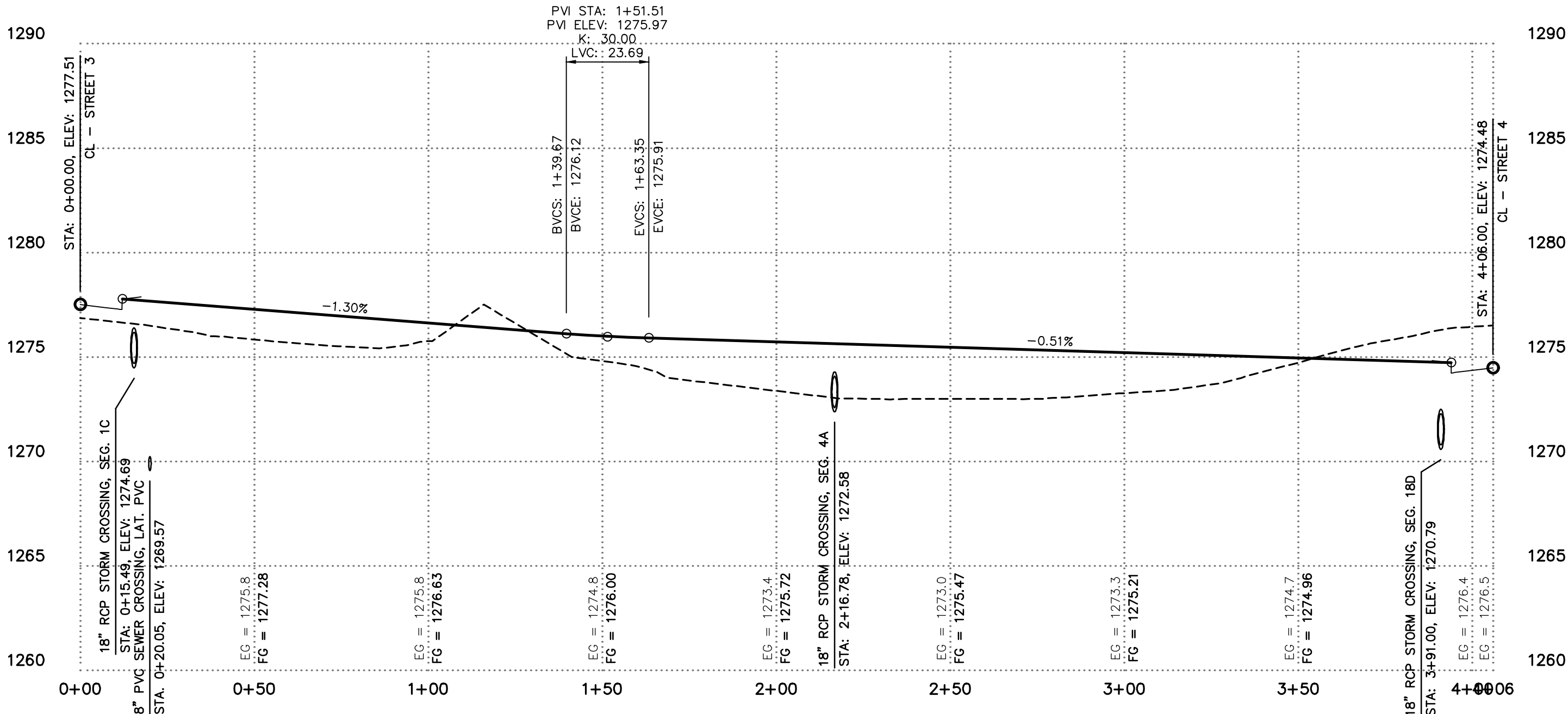


STREET PROFILE
ASPEN HEIGHTS
TONTITOWN, ARKANSAS

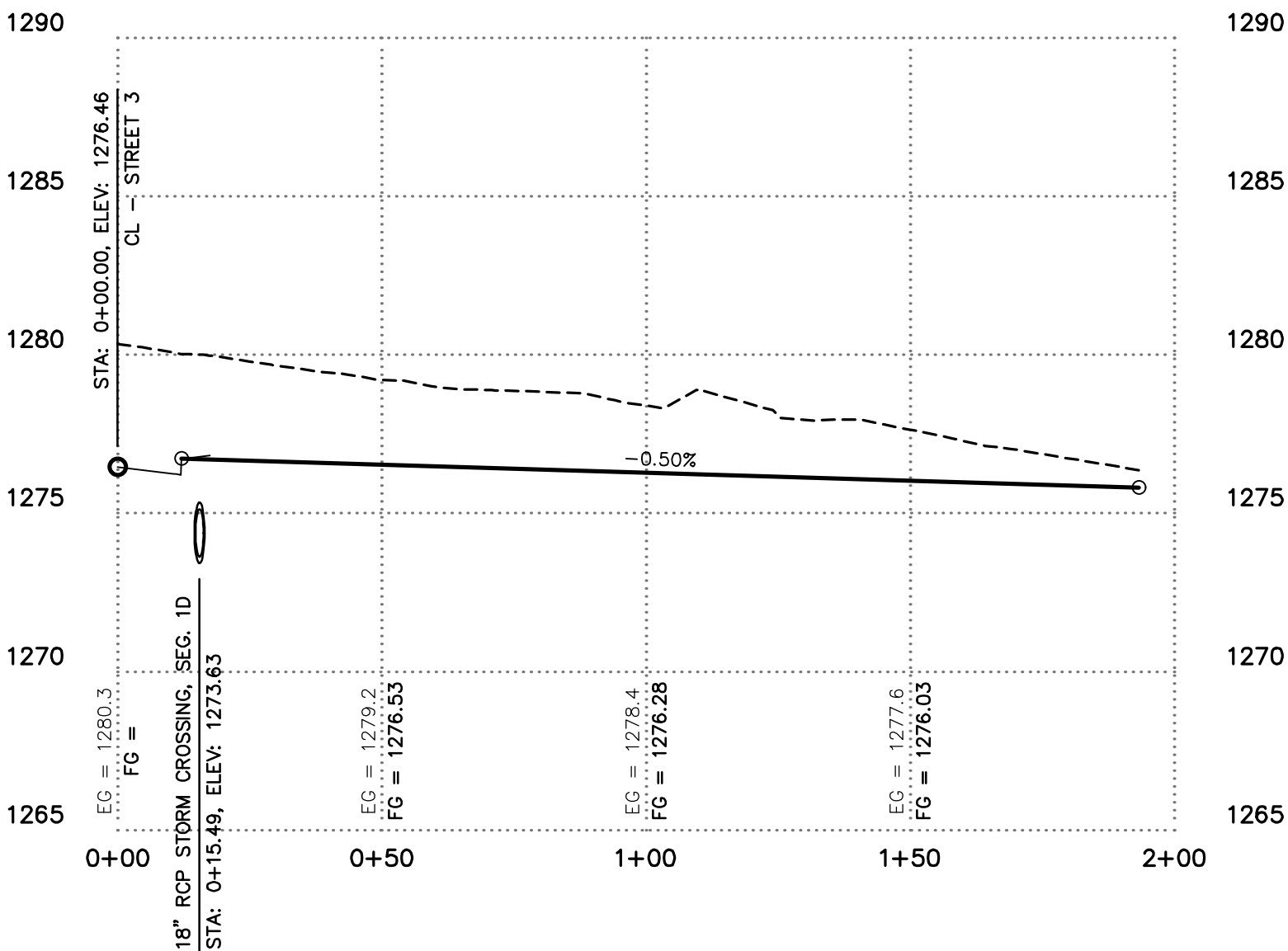
REVISION	DATE	DESCRIPTION

SCALE: 1"=20'
DATE: May 22, 2019
ENGINEER: TJA
DRAWN BY: JRC
W.O. #: 19909

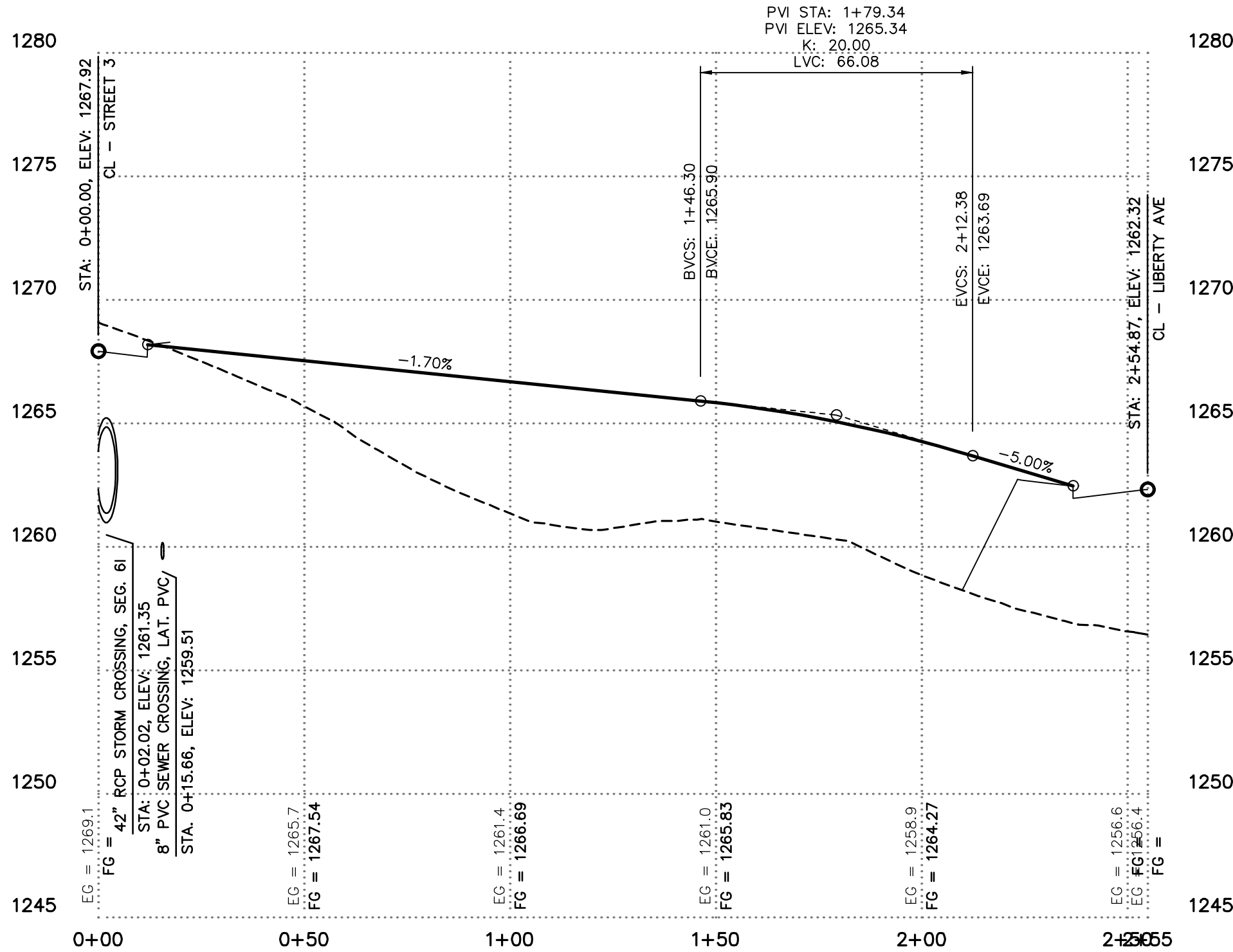
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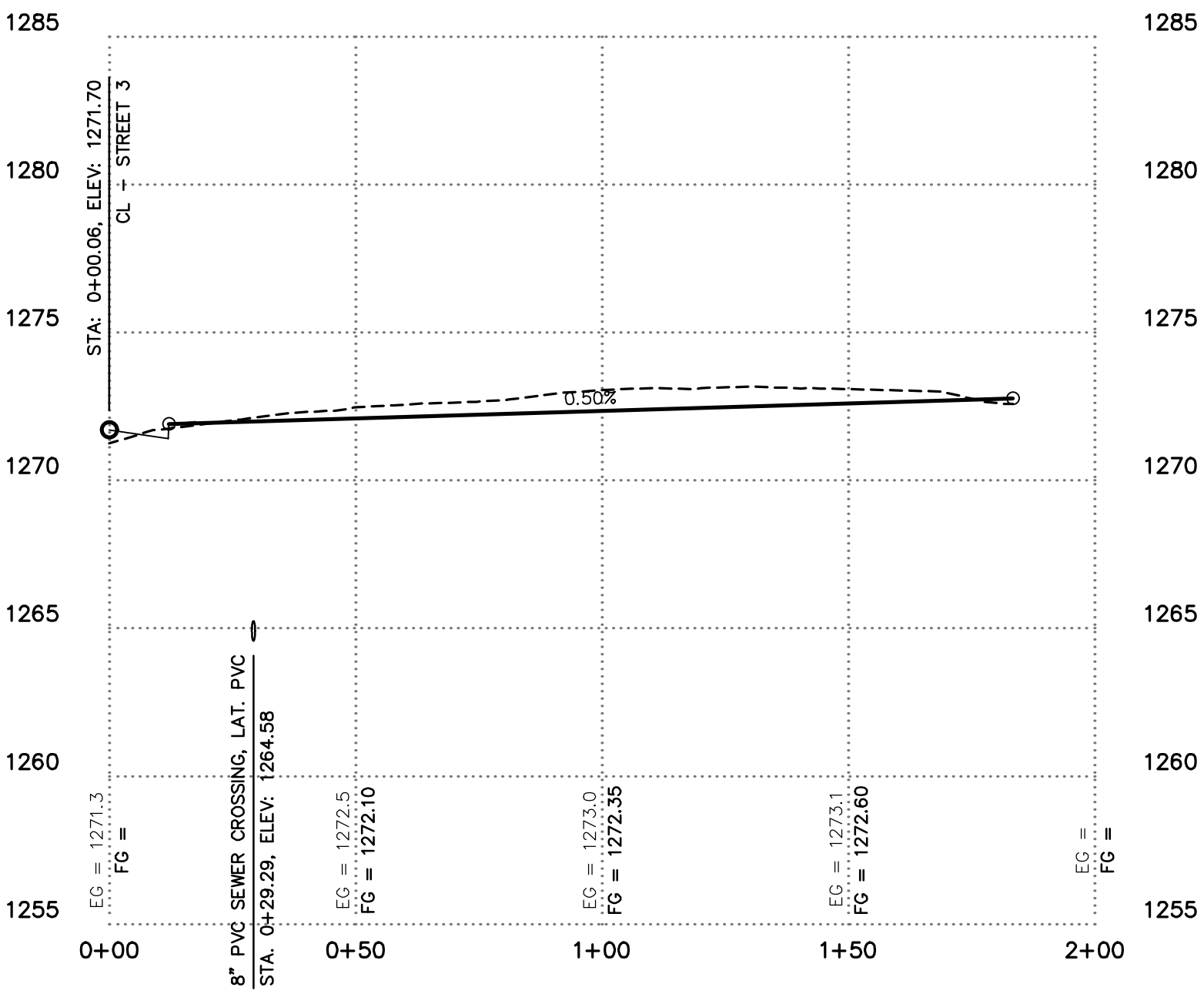
STREET 6



STREET 7



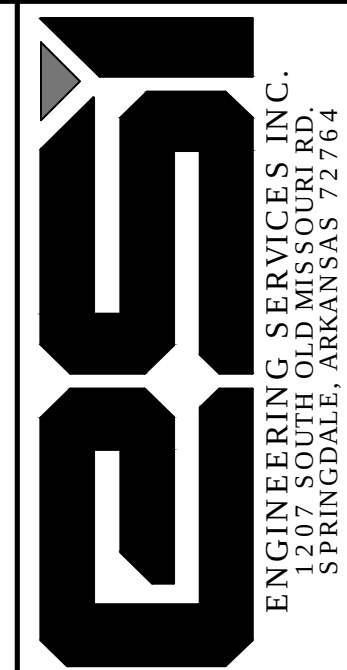
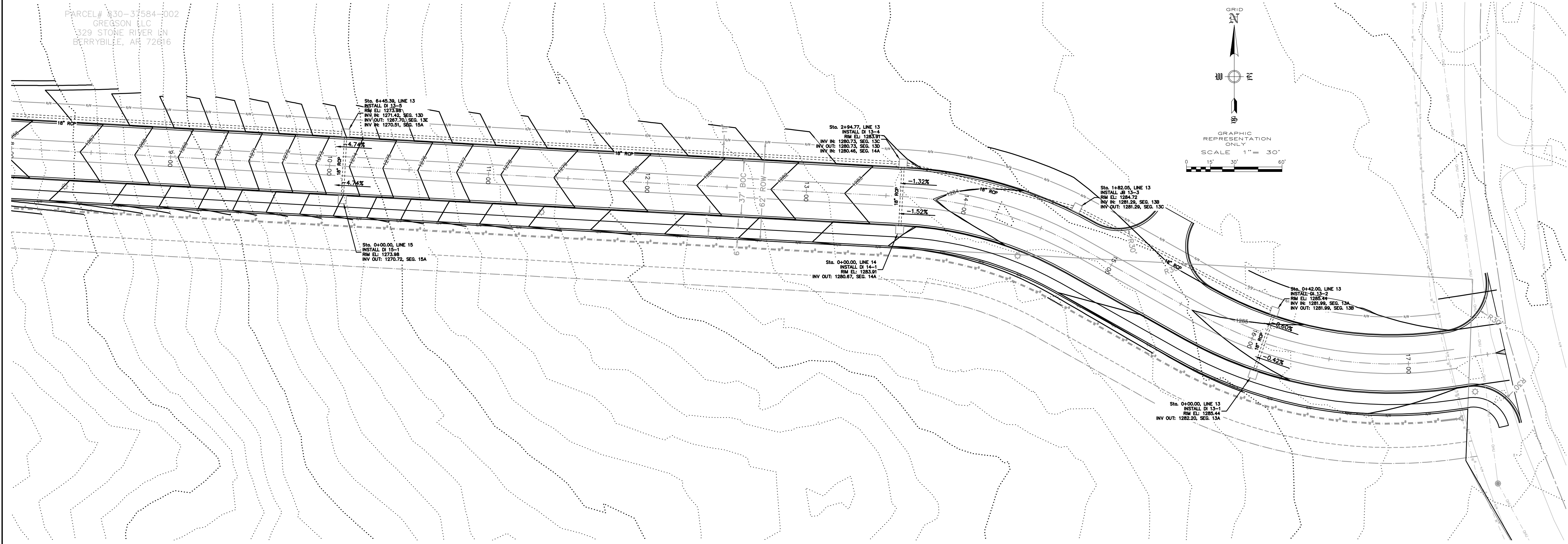
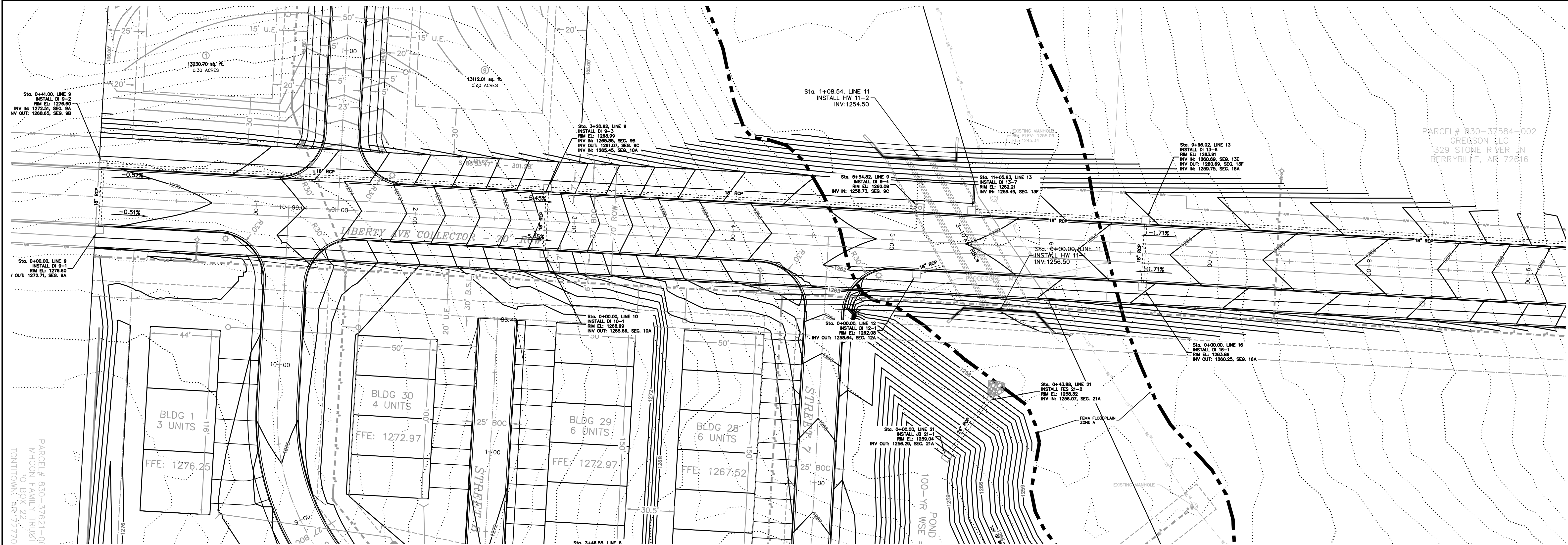
STREET 8



STREET PROFILE
ASPEN HEIGHTS
TONTITOWN, ARKANSAS

REVISION	DATE	DESCRIPTION

SCALE: 1"=20'
DATE: May 22, 2019
ENGINEER: TJA
DRAWN BY: JRC
W.O. #: 19909



STORM DRAINAGE PLAN
ASPEN HEIGHTS
TONTITOWN, ARKANSAS

REVISION	DATE	DESCRIPTION

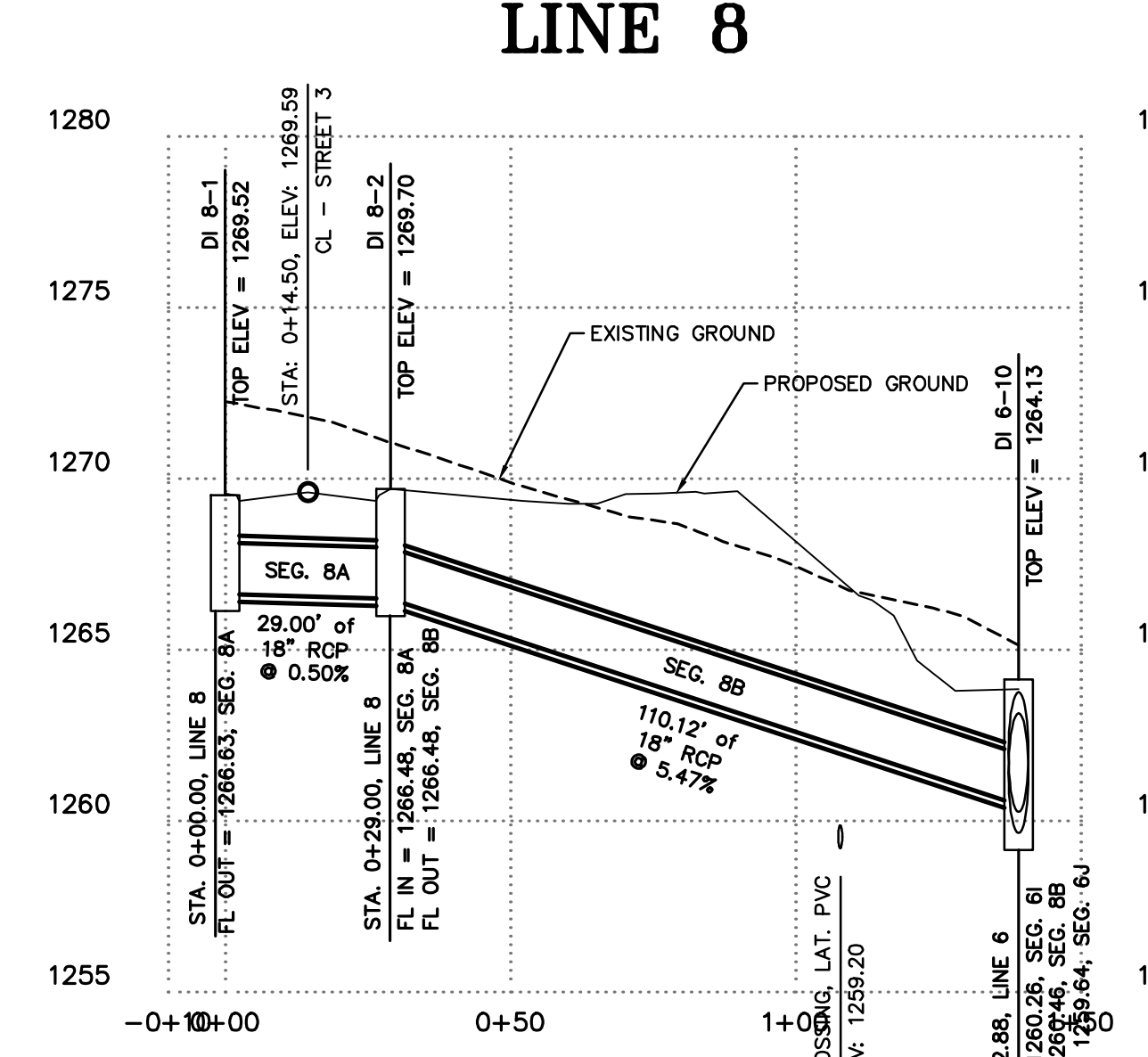
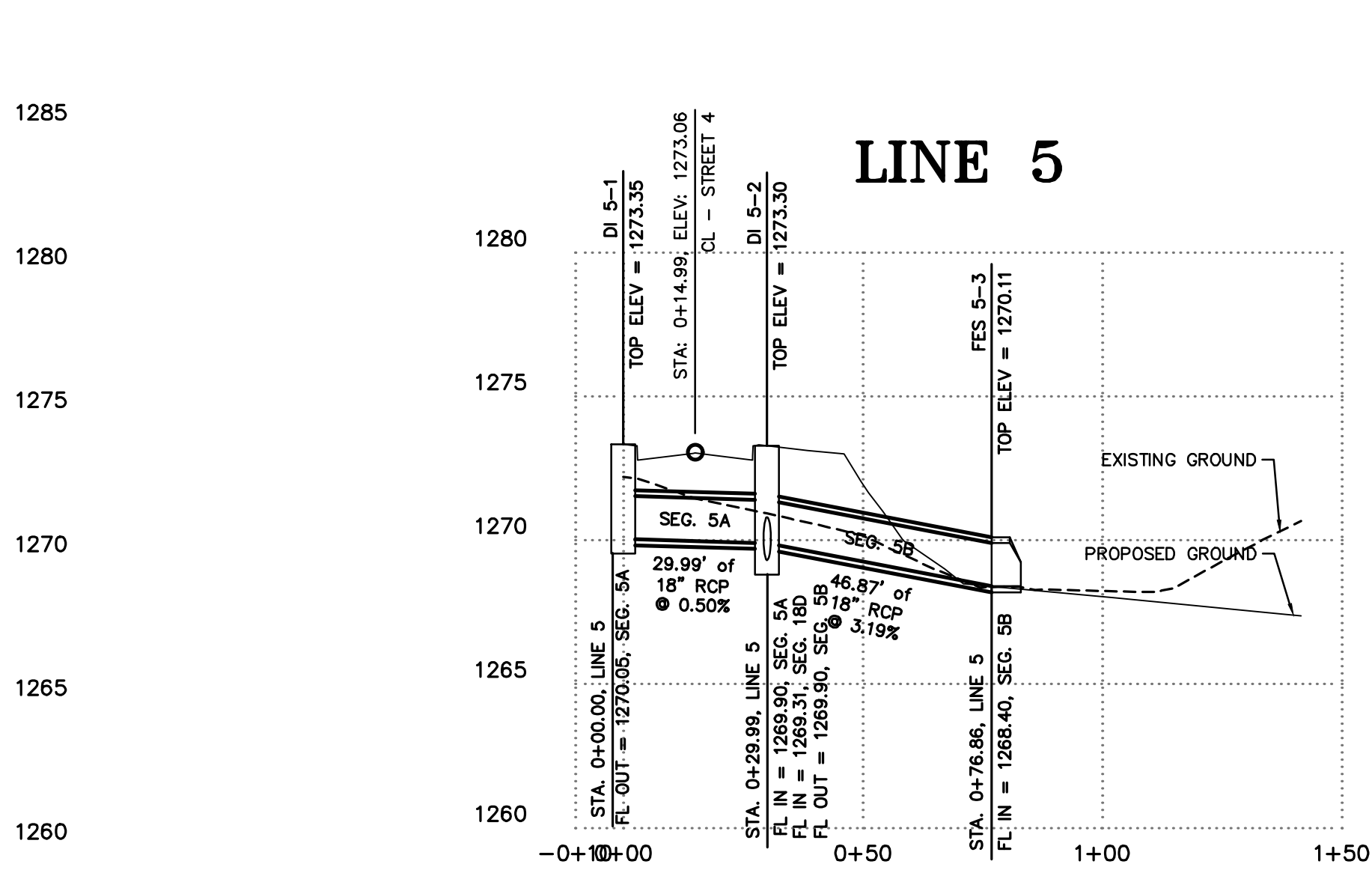
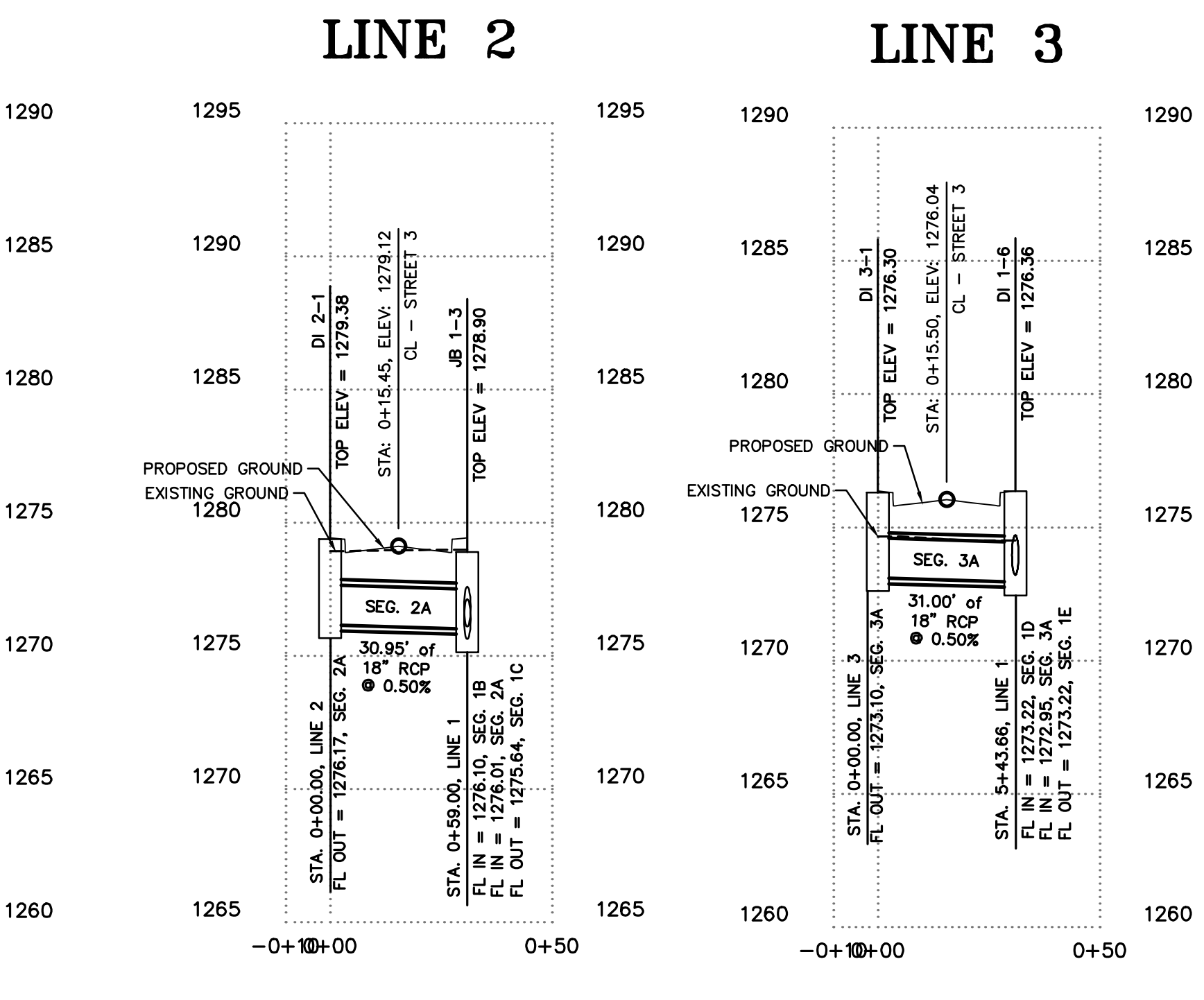
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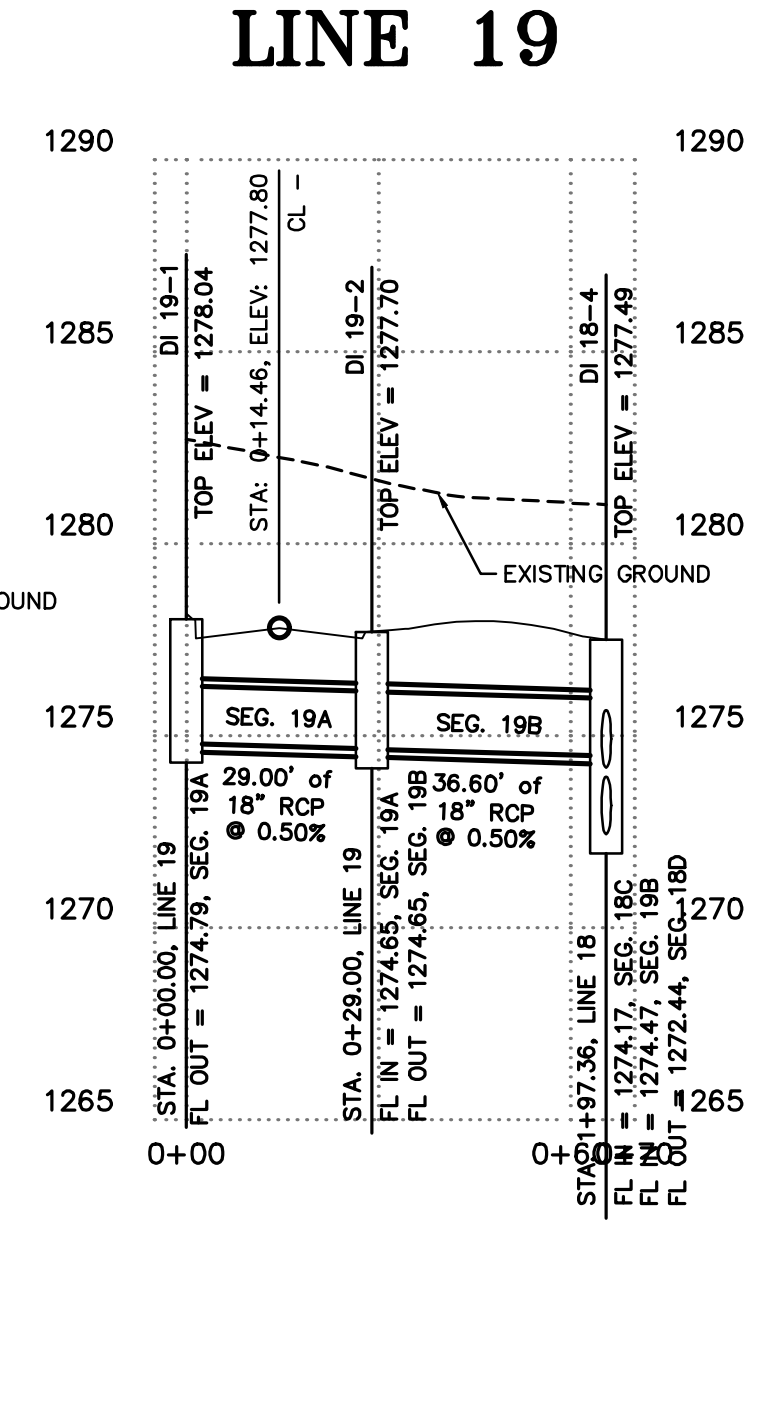
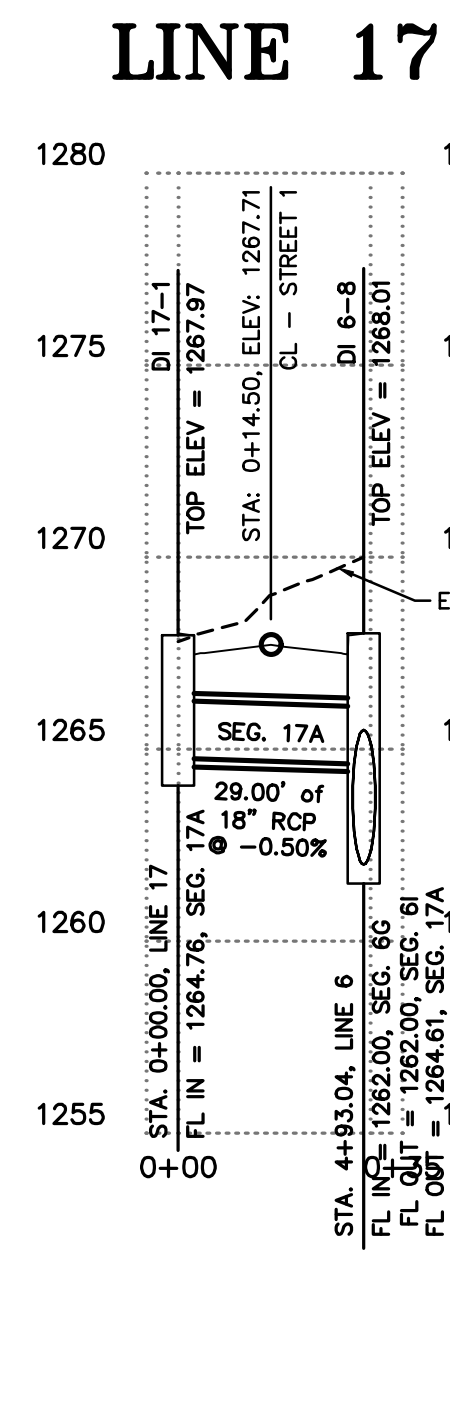
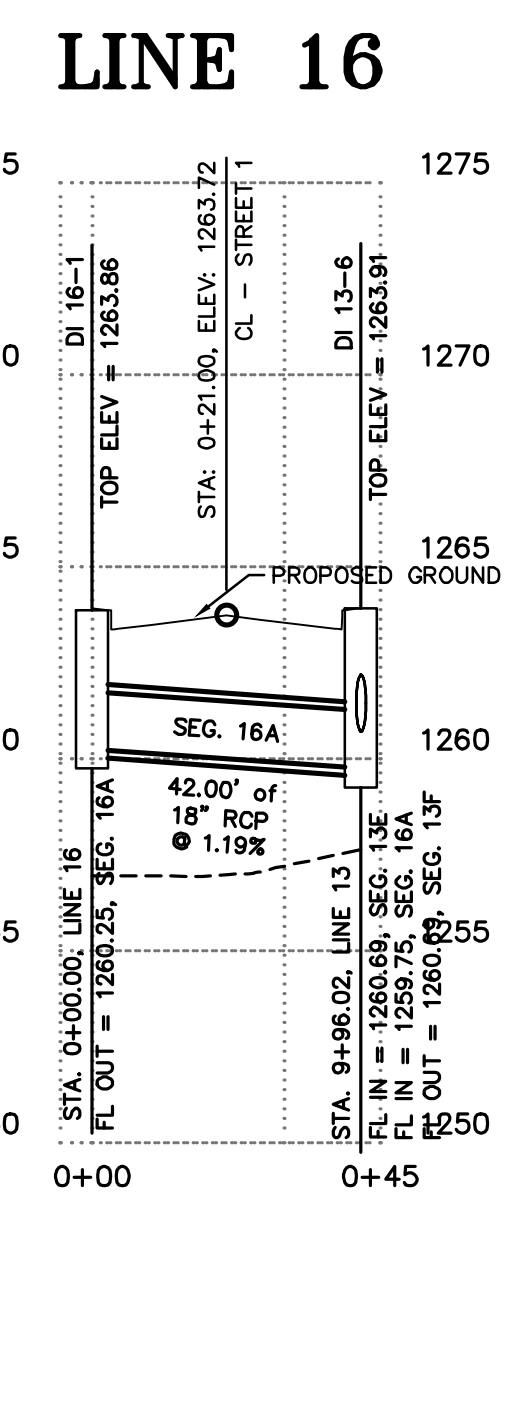
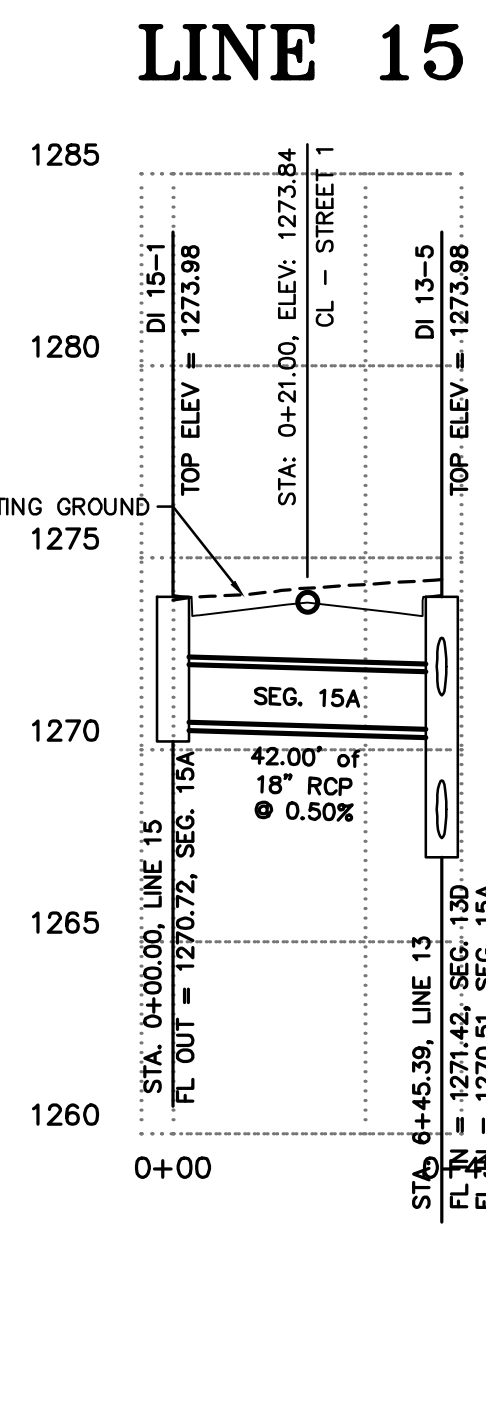
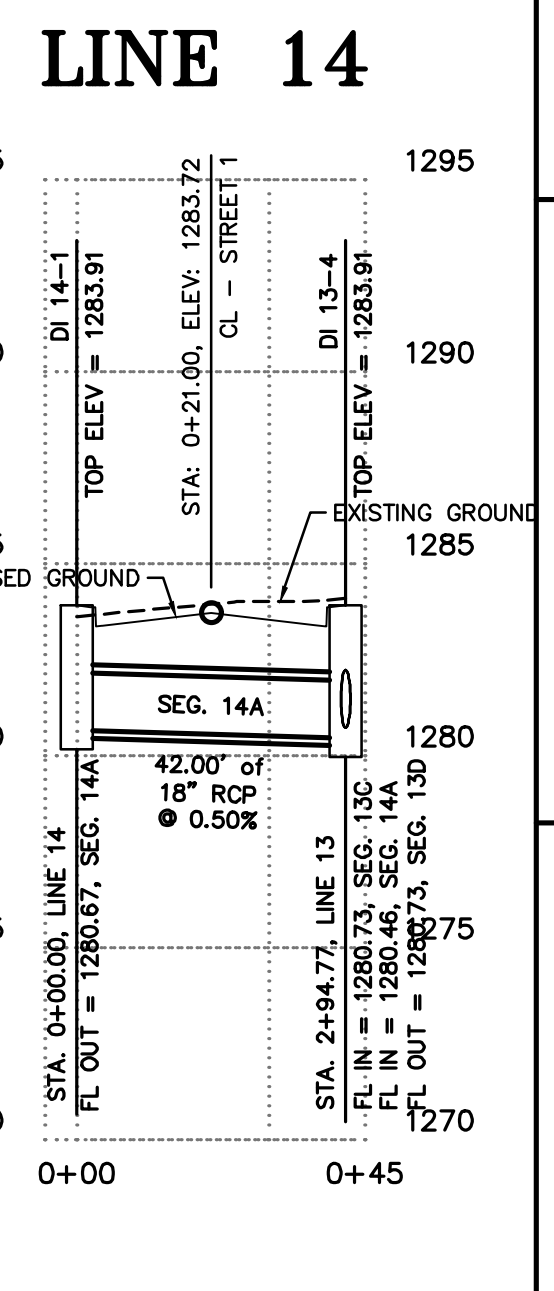
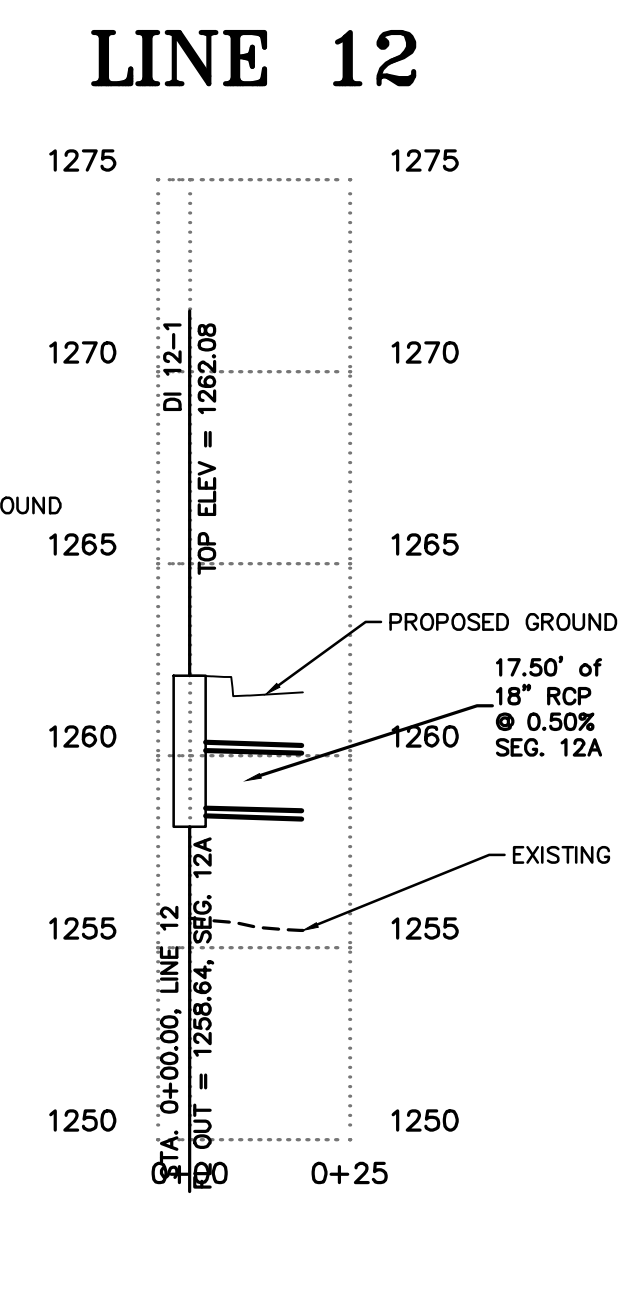
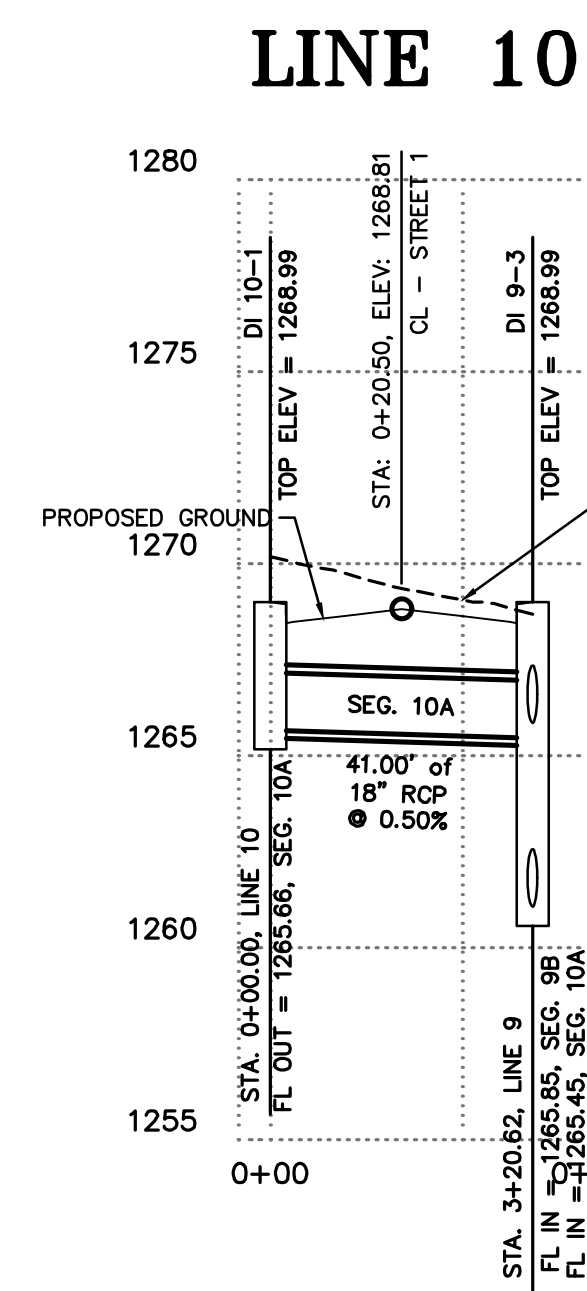
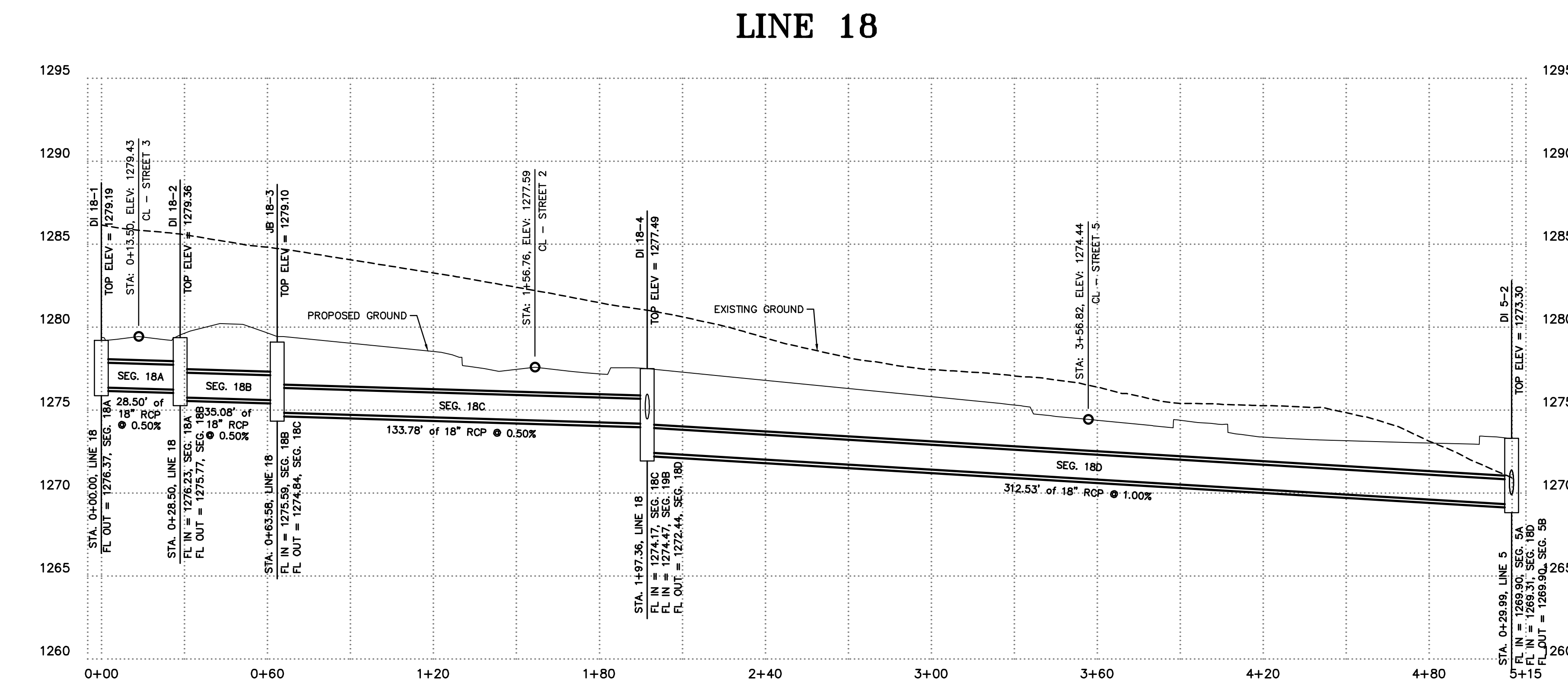
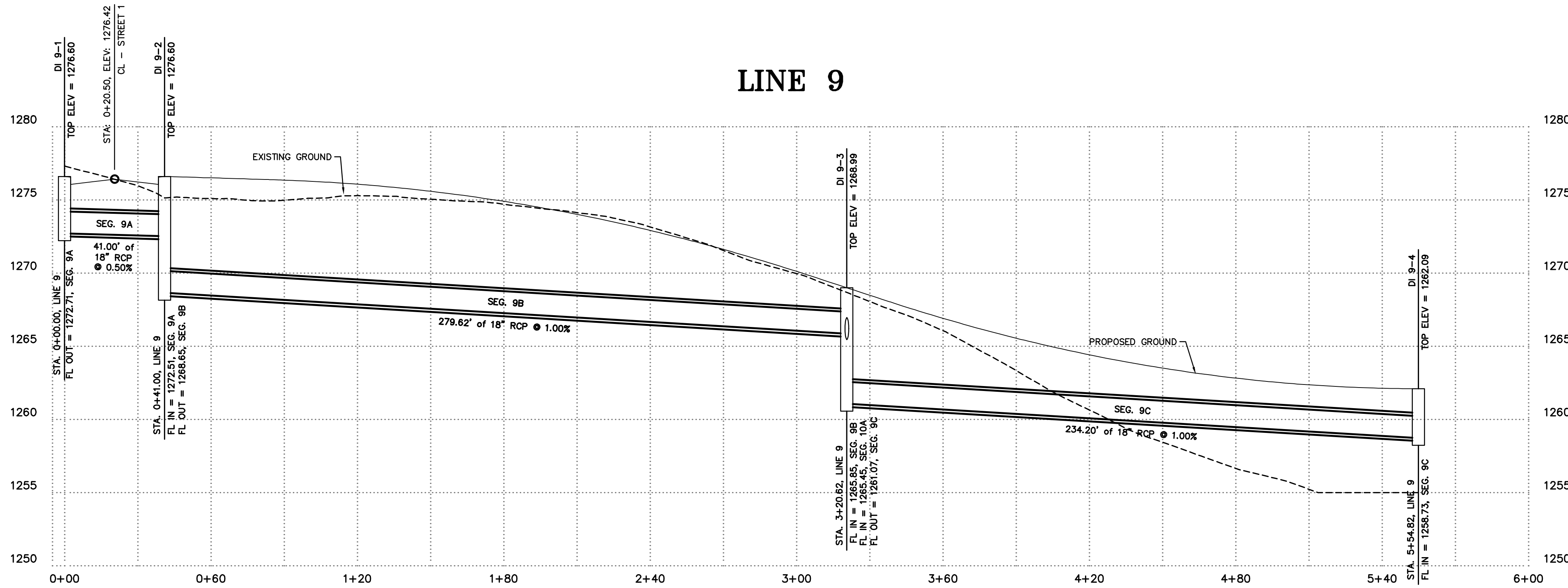
DATE: May 22, 2019

ENGINEER: TJA

DRAWN BY: BAW

W.O. #: 19909

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STORM DRAINAGE PROFILE
ASPEN HEIGHTS
TONTITOWN, ARKANSAS

REVISION	DATE	DESCRIPTION

SCALE: 1"=30'
DATE: May 22, 2019
ENGINEER: TJA
DRAWN BY: MCH
W.O. #: 19909

12

ENGINEERING SERVICES, INC.
1000 N. UNIVERSITY
SPRINGDALE, ARKANSAS 72764



SCALE: 1"=30'

DATE: May 22, 2019

ENGINEER:
DRAWMAN:

W.O. :

W.O. #: 19909



POND SHEET
ASPEN HEIGHTS
TONTITOWN, ARKANSAS

[illegible]

SCALE: SHOWN

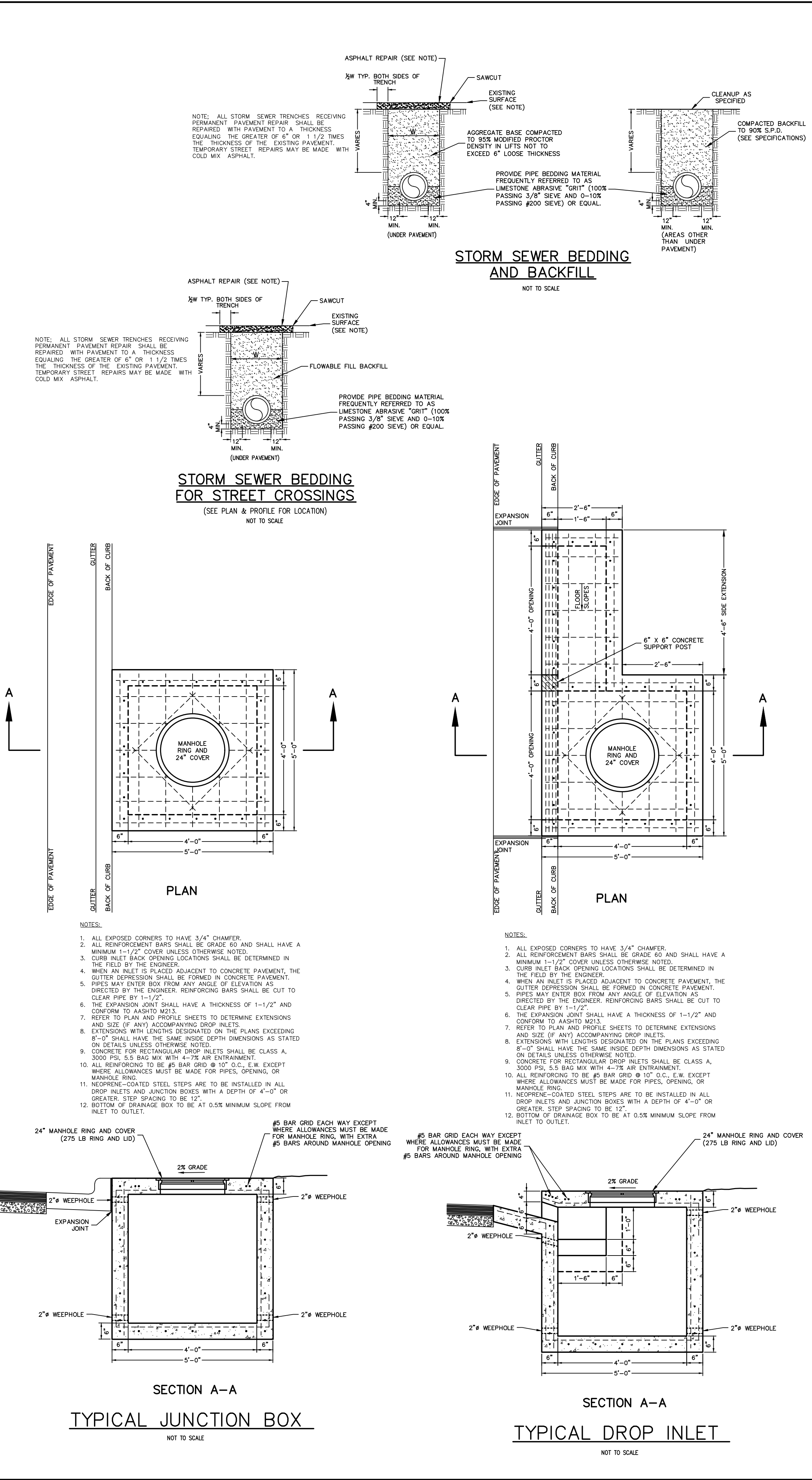
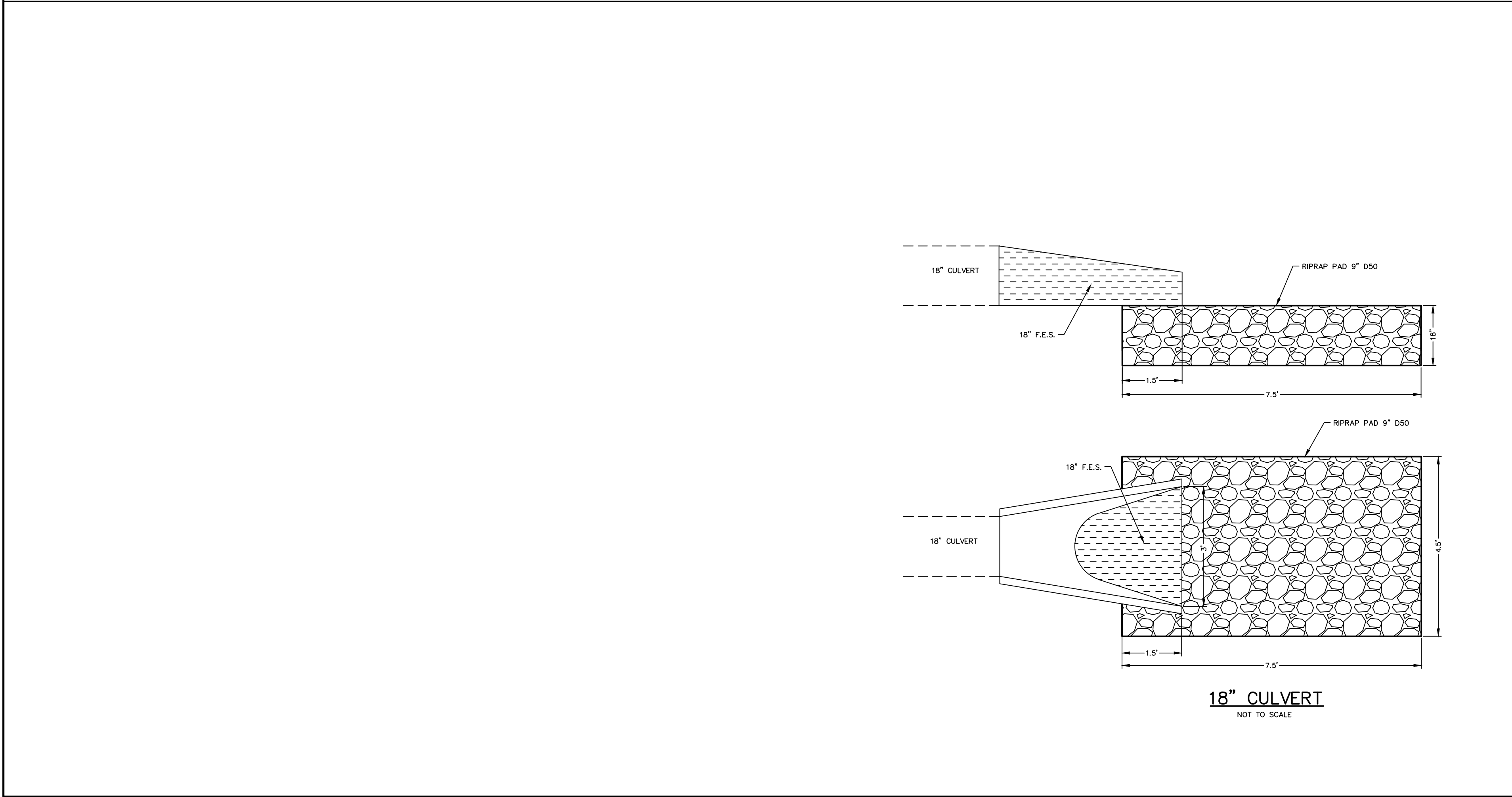
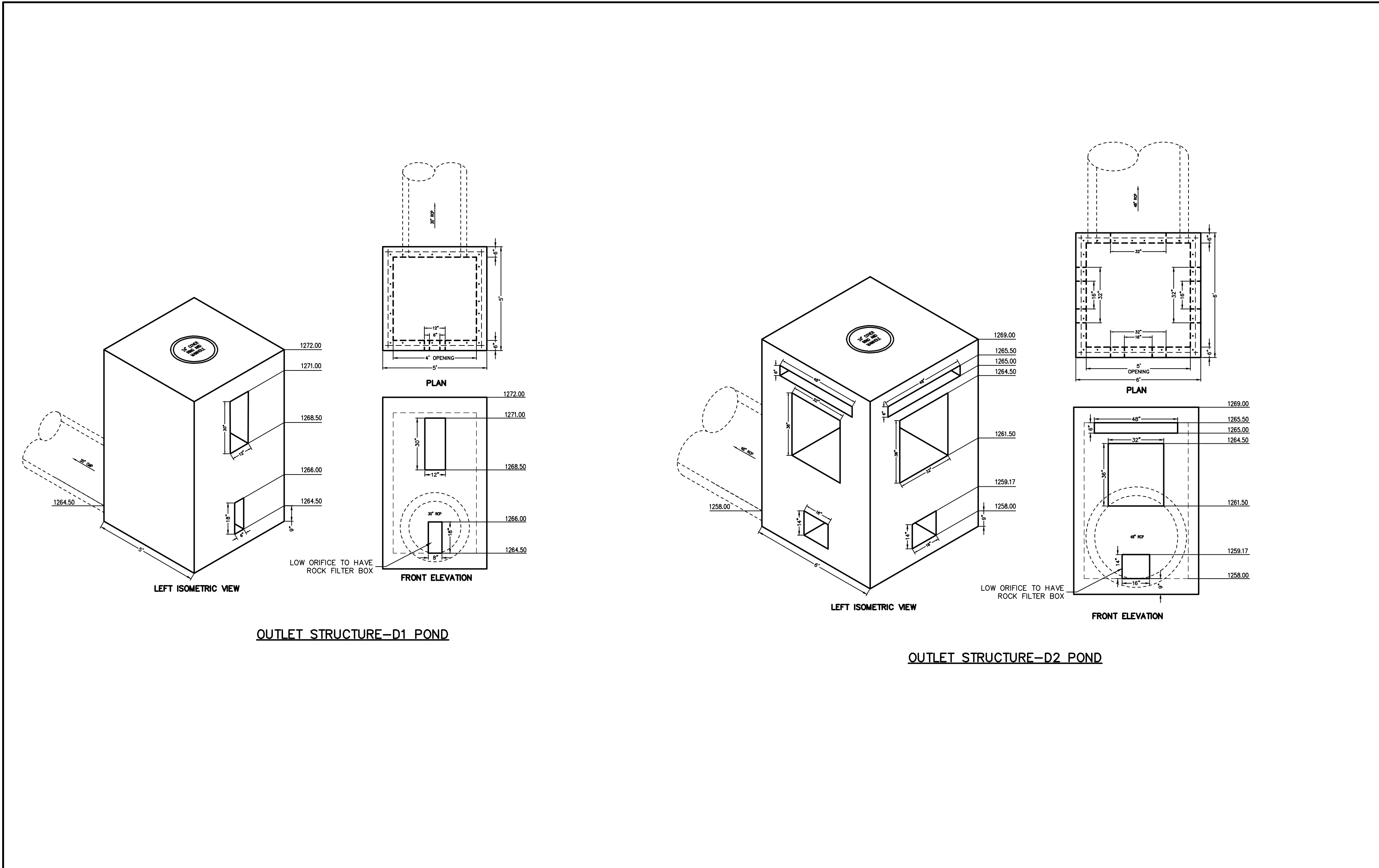
DATE: May 22, 2019

ENGINEER: TJA
DRAWN BY: MCH

W.O. #: 19909

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ENGINEERING SERVICES, INC.
1000 N. SPRINGDALE
SPRINGDALE, ARKANSAS 72764

TYPICAL DETAILS
ASPEN HEIGHTS
TONTITOWN, ARKANSAS

REVISION	DATE	DESCRIPTION

SCALE: N.T.S.
DATE: May 22, 2019
ENGINEER: TJA
DRAWN BY: JRC
W.O. #: 19909

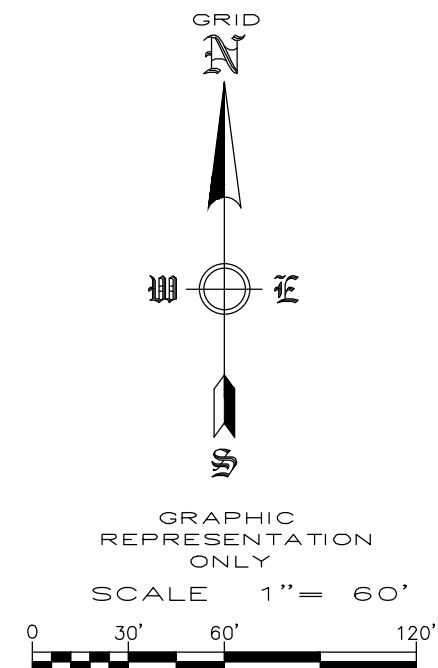
16



UTILITY PLAN
ASPEN HEIGHTS
TONTITOWN, ARKANSAS

EX FIRE HYDRANT
ID: 1264.80
STATIC: 104
RESIDUAL: 79
FLOW(GPM): 1,438

STA. 0+00.00, LINE 1
INSTALL 8" TAPPING SLEEVE
AND VALVE,
TIE TO EX 8" WATER MAIN,
BEGIN LINE 1



LEGEND	
	IRON PIN FOUND
	MAG NAIL FOUND
	C. PROPERTY LINE
	SAW-CUT LINE
	EX. EASEMENT LINE
	EX. BUILDING SETBACK LINE
	EX. ROAD CENTERLINE
	EX. CURB & GUTTER
	EX. CONTOUR
	PROPOSED CONTOUR
	EX. OVERHEAD POWER LINE
	EX. GAS LINE
	EX. UNDERGROUND TELEPHONE LINE
	EX. 8" SEWER LINE
	EX. STORM DRAIN LINE
	EX. WATER LINE
	EX. FIBER OPTIC LINE
	EX. WATER METER
	EX. FIRE HYDRANT
	EX. SEWER MANHOLE
	EX. POWER POLE
	EX. WATER VALVE
	EX. LIGHT POLE
	EX. SIGN
	EX. HANDICAP PARKING
	EX. WATER METER
	EX. TRAFFIC POLE
	EX. GAS MANHOLE
	EX. ELECTRIC MANHOLE
	EX. TELEPHONE MANHOLE
	EX. TREE
	EX. SEWER VALVE
	EX. WATER MANHOLE
	EX. FIBER OPTIC VAULT
	EX. TELEPHONE BOX
	EX. MAILBOX
	EX. GAS METER
	EX. GAS VALVE
	EX. PARKING STRIPE
	PROPOSED SEWER SERVICE
	PROPOSED FENCE
	PROPOSED EASEMENT LINE
	PROPOSED SIDEWALK
	PROPOSED GAS LINE
	PROPOSED ELECTRIC LINE
	PROPOSED WATERLINE
	PROPOSED SIDEWALK RAMP
	PROPOSED STORM BOX & PIPE
	PROPOSED SEWER MANHOLE & PIPE

REVISION	DATE	DESCRIPTION

SCALE: 1"=60'

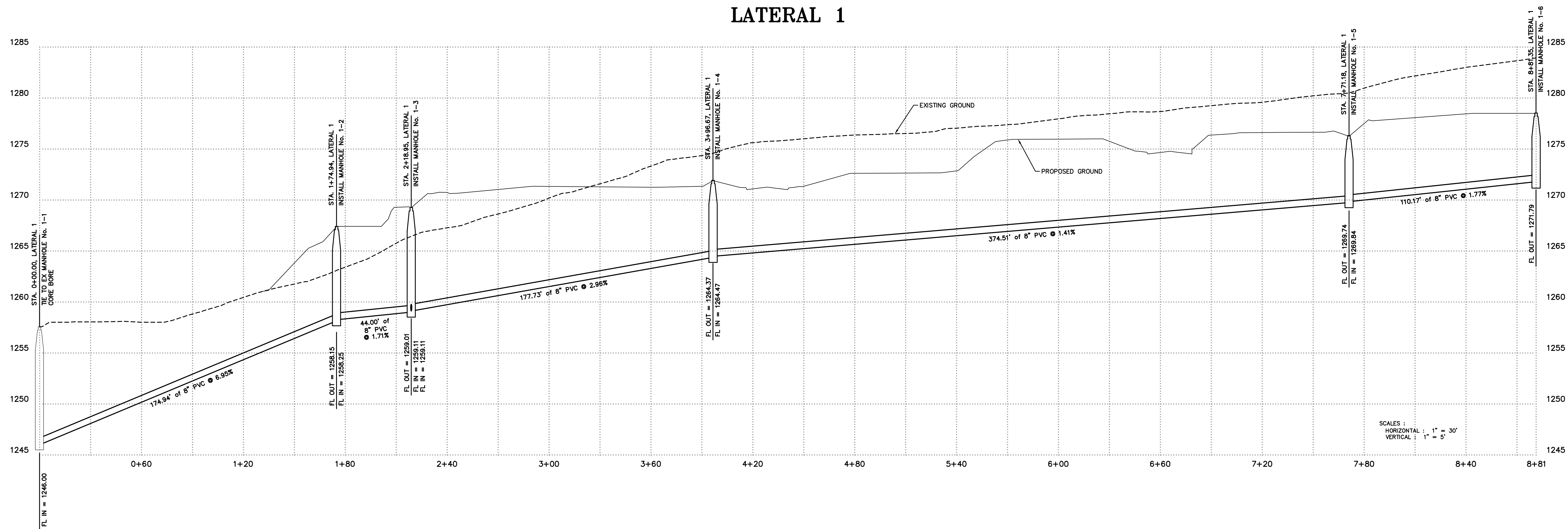
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ENGINEER: TJA

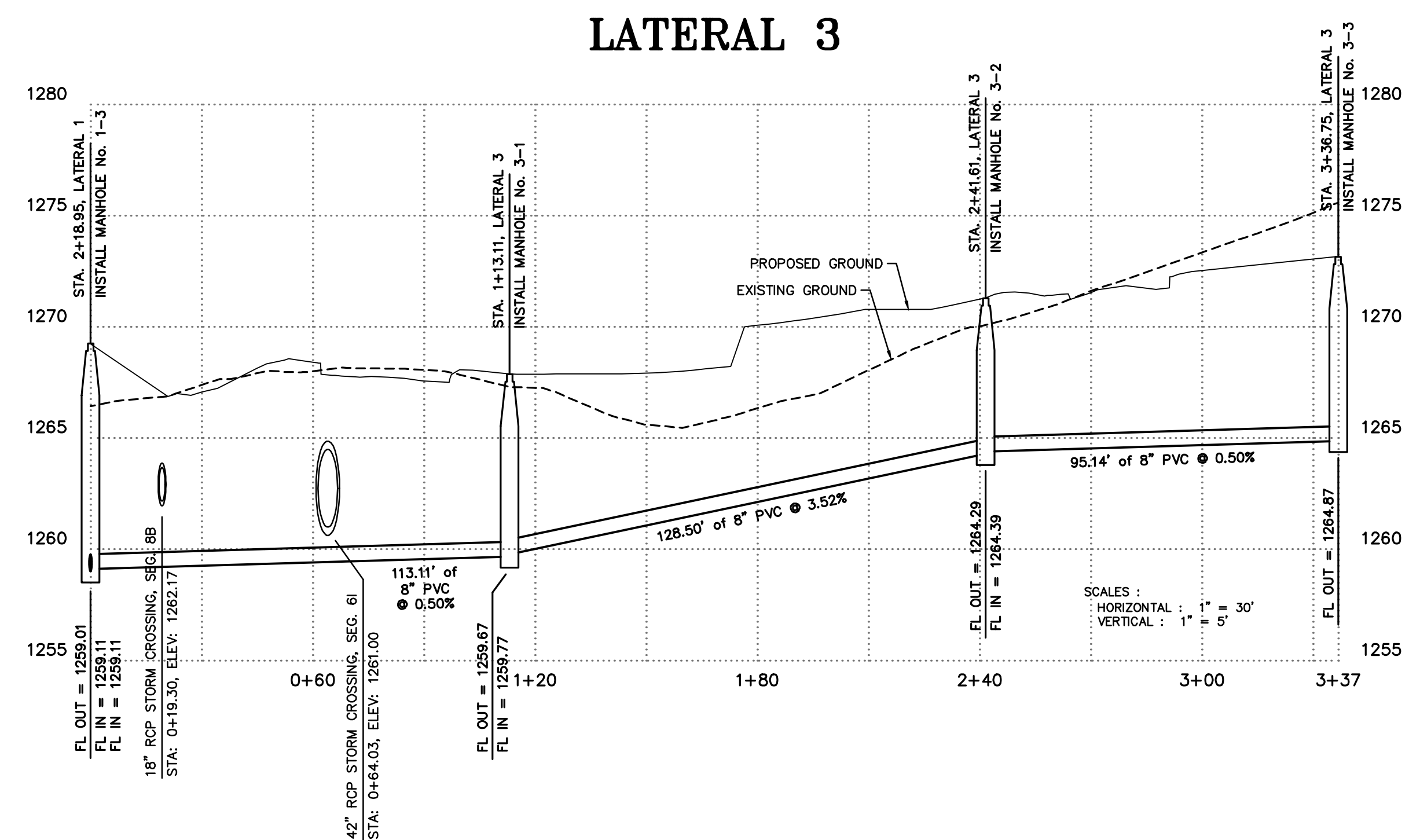
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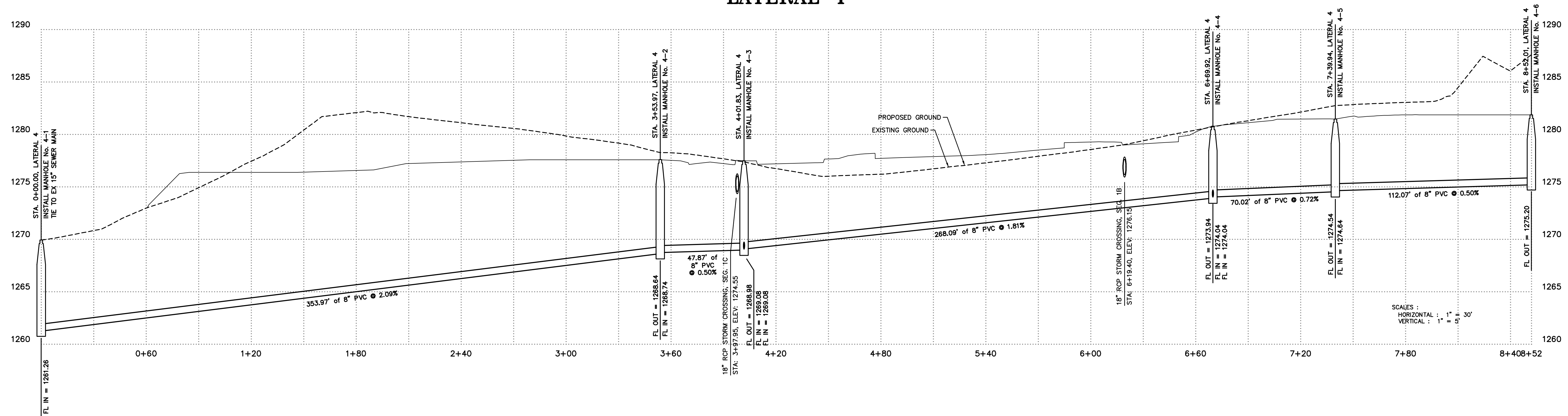
LATERAL 1



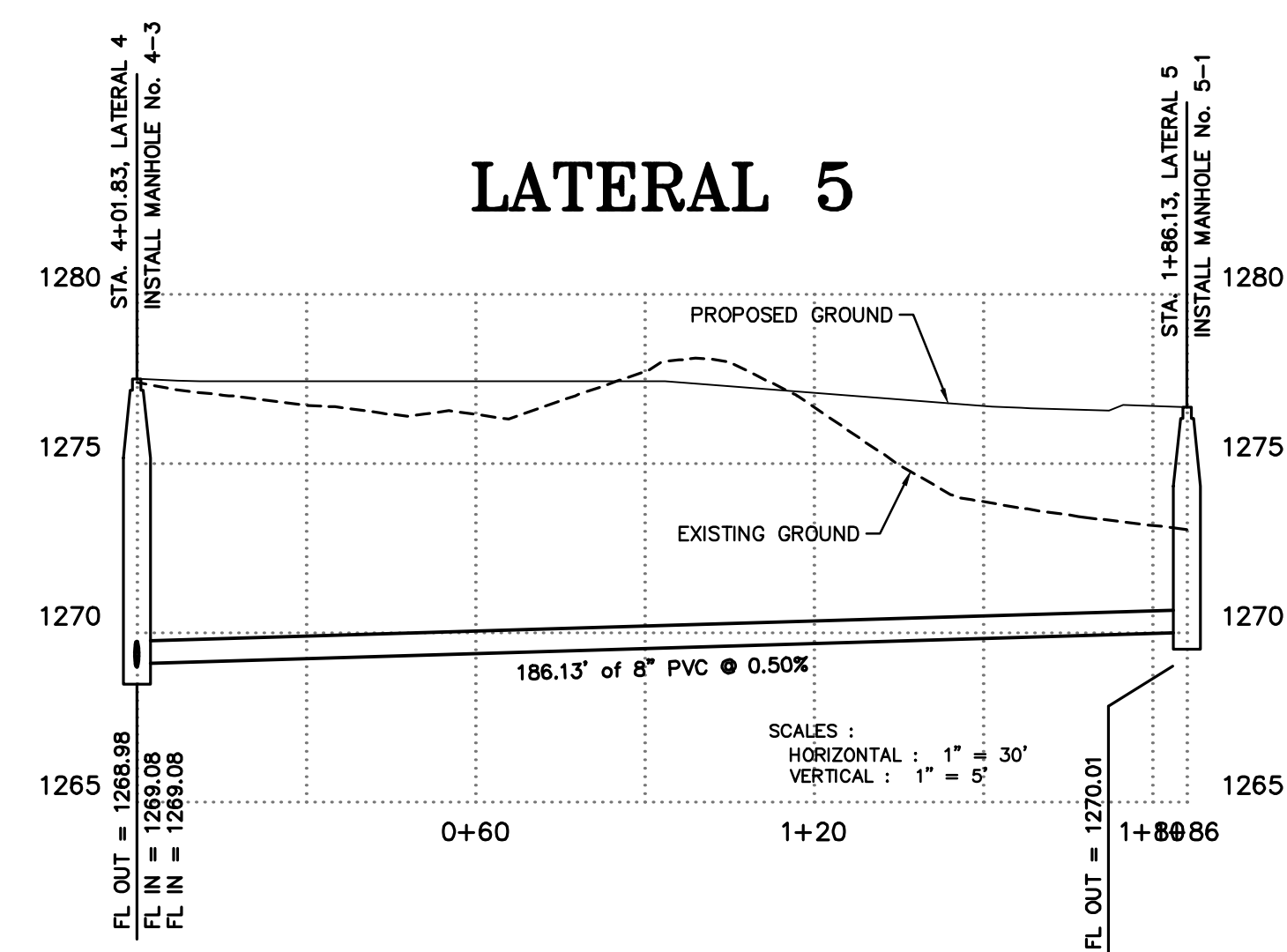
LATERAL 3

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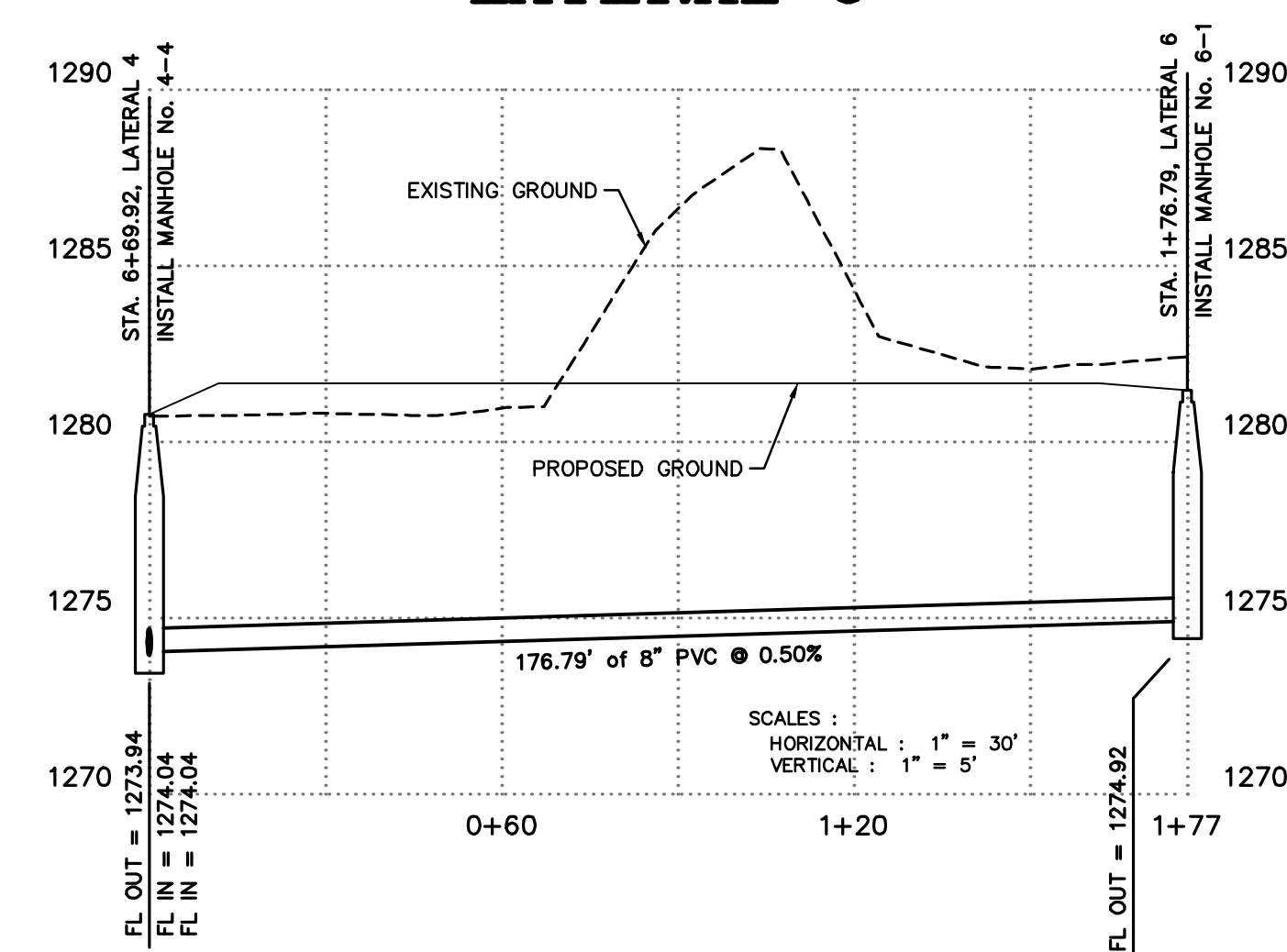
LATERAL 4



LATERAL 5



LATERAL 6



SCALE: X"=XX'	
DATE: May 22, 2019	
DRAWN BY: TJA	DATE: TJA
CHECKED BY: XXX	DATE: XXX
O. #: 19909	
@ COPYRIGHT 2019, ENGINEERING SERVICES, INC. 5.232.010 10.50 AM 5.23.21.000001 - 1.0000 5.23.21.000001 - 1.0000 5.23.21.000001 - 1.0000	

Diagram illustrating the ELEVATION VIEW of a manhole assembly. Key components and dimensions shown include:

- CURB**: The top edge of the manhole structure.
- DUCTILE IRON PIPE W/ RETAINER GLANDS**: The vertical pipe section.
- CLASS 67 GRAVEL (8 CU. FT.)**: The bedding material surrounding the pipe.
- CONCRETE THRUST BLOCKING**: The base structure supporting the pipe.
- 6" M.J. VALVE W/ BOX**: The access point for the valve.
- #14 TRACER WIRE REQUIRED**: A wire for locating the pipe.
- SEE NOTE 7/A**: Reference to additional specifications.
- Dimensions**:
 - Top width: $36" \pm 4"$ MIN.
 - Height from curb to top of pipe: $18" \pm 4"$

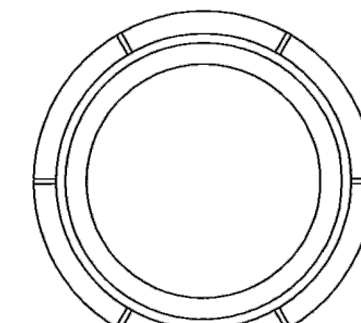
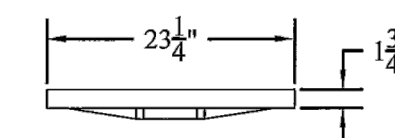
NOTES:

- MANHOLE SHALL BE CURBED IN PLACE
- P.S.I. CONCRETE (MIN. 12" THICK)

1. DRAINAGE BED SHALL CONSIST OF 8 CU FT OF CLASS 67 GRAVEL.
2. USE 6" D.I. NIPPLE WITH M.J. RETAINER GLANDS IF DISTANCE BETWEEN VALVE AND HYDRANT MUST BE GREATER THAN 13" SWIVEL ADAPTER.
3. FIRE HYDRANT TO BE BLOCKED AGAINST FIRM SOIL AS SHOWN.
4. ALL HYDRANTS SHALL BE INSTALLED PLUMB.
5. LARGE NOZZLE SHALL FACE CURB UNLESS OTHER-WISE NOTED. ROTATE BARREL AS REQUIRED.
6. HYDRANT SHOULD NOT BE SET CLOSER THAN 4.0' TO OBSTRUCTIONS THAT ARE IN LINE WITH NOZZLE.
7. M.J. ANCHOR TEE, TAPPING SLEEVE OR TAPPING SADDLE MAY BE USED (SEE MATERIAL SPECIFICATIONS)
8. HYDRANTS TO BE SET AT DEPTHS GREATER THAN 6.0' SHALL BE SET WITH A MODIFIED FIRE HYDRANT SETTING.
(CONTACT TOWNTOWN WATER DEPT. FOR DETAILED DRAWING FOR DEEP DEPTH FIRE HYDRANT SETTINGS).
9. POLYWRAP ENTIRE HYDRANT ASSEMBLY, DO NOT COVER WEEP HOLE DRAIN.
10. HYDRANTS WILL BE SET AT A MINIMUM OF 36" ±4" BACK OF CURB, BUT NOT IN SIDEWALK,
OR AS DIRECTED BY CITY.
11. SINGLE #14 GAUGE TYPE INSULATED TRACER WIRE IS REQUIRED ON ALL MAINS, PE WATER SERVICES
OR OTHER APPURTENANCES.

CITY OF TONTITOWN		WATER DETAIL: W04	
		LAST REVISION DATE: 08/29/02	
DRAWN BY: CRB	CHECKED BY:	APPROVED:	DATE: 09/01/05

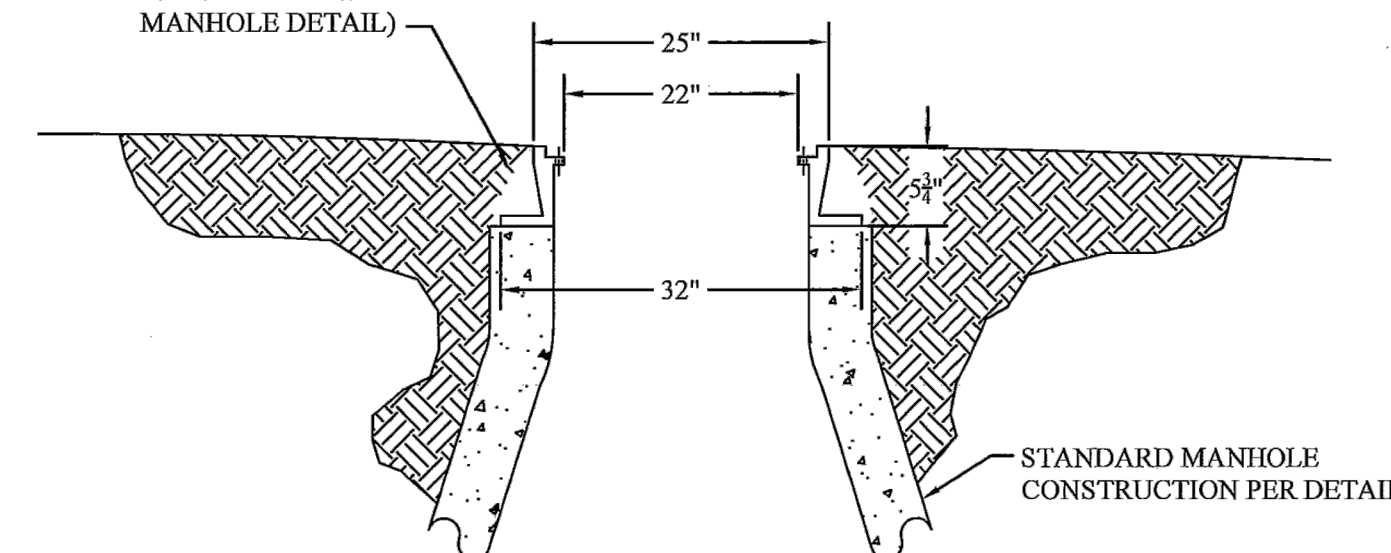
A diagram of a sanitary sewer cross-section. It consists of several concentric circles. The outermost ring is labeled "SANITARY" at the top and "SEWER" at the bottom. Two lines, one on the left and one on the right, point to small gaps between the rings, each labeled "CONCEALED PICKHOLE".



USA MANUFACTURED
RING AND LID
ASSEMBLY REQUIRED

* SEE PLANS FOR
PROPER MANHOLE ELEVATION

CONCRETE MANHOLE FRAME
TO MANHOLE AT SAME
TIME MANHOLE IS CAST.
(SEE CAST-IN-PLACE
SANITARY SEWER
MANHOLE DETAIL)



— STANDARD MANHOLE
CONSTRUCTION PER DETAIL

CITY OF
TONTITOWN

DRAWN BY: FCN	CHECKED BY: TWO
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SANITARY SEWER DETAIL: SS04

LAST REVISION DATE: 03/27/13

APPROVED: _____	DATE: 09/01/05
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SIZE	REQUIRED SQ. FT. OF UNDISTURBED EARTH WALL FOR REACTION BACKING					
	TYPE OF FITTINGS					
	TEE	90°	45°	22 1/2°	11 1/4°	PLUG
2"	1	1	1	1	1	1
3"	1	1	1	1	1	1
4"	1	2	1	1	1	2
6"	3	3	2	1	1	3
8"	4	6	3	2	1	4
10"	6	8	5	3	1	6
12"	8	12	6	3	2	8
14"	11	16	9	4	2	11
16"	14	20	11	6	3	14
18"	18	25	14	7	4	18
20"	22	31	17	9	4	22
24"	32	45	24	12	6	32
30"	48	68	37	19	10	48
36"	69	98	53	27	14	69

1. ALL FITTINGS SHALL BE MECHANICAL JOINTS.
2. DO NOT COVER BELLS OR FLANGES WITH CONCRETE.
3. WRAP ALL FITTINGS WITH POLY WRAP.
4. BACK ALL TEES ACCORDING TO SIZE OF BRANCH.
5. BACKING FUTURE LINE EXTENSIONS SHALL BE SUCH THAT LATER REMOVAL IS POSSIBLE.
6. ALL BENDS WHERE FITTINGS ARE USED, BOTH HORIZONTAL OR VERTICAL, SHALL BE BACKED.
7. REACTION BACKING TABLE IS BASED ON 150 PSI AND SOIL BEARING PRESSURE OF 2,000 LB/SQ. FT. ADDITIONAL BACKING MAY BE REQUIRED IN SOME AREAS AS REQUIRED BY CITY WATER DEPARTMENT.

CITY OF TONTITOWN		GEN. WATER/SEWER DETAIL: GWS-10	
		LAST REVISION DATE: 08/29/02	
DRAWN BY: CRB	CHECKED BY:	APPROVED:	DATE: 09/01/05

THRUST BLOCKING

GROUND SURFACE
1/4" S.S. SADDLE STRAPS
HELD W/ 1/4" S.S. HEX NUT
AND LOCK WASHER

3/8" S.S. ALL-THREAD
12" MIN. EMBEDMENT

OVERSIZED S.S. FLAT WASHER OR
S.S. PLATE JAMMED BETWEEN
1/4" S.S. LOCK NUTS

GROUND SURFACE

1/4" S.S. SADDLE STRAPS
HELD W/ 1/4" S.S. HEX NUT
AND LOCK WASHER

3/8" S.S. ALL-THREAD
12" MIN. EMBEDMENT

OVERSIZED S.S. FLAT WASHER OR
S.S. PLATE JAMMED BETWEEN
1/4" S.S. LOCK NUTS

**TYPICAL BLOCKING
FOR VERTICAL BENDS**

**TYPICAL SECTION OF CROSS & 2 PLUG BLOCKING
(WHEN DIRECTED BY WATER DEPT.)**

**TYPICAL BLOCKING
FOR HORIZONTAL BENDS**

**TYPICAL SECTION OF CROSS & PLUG BLOCKING
(WHEN DIRECTED BY WATER DEPT.)**

**THRUST SUPPORT FOR REDUCER
(SIZE TO BE DETERMINED BY WATER DEPT.)**

REINFORCING BARS

PUSH JOINT REDUCER

1. ALL BLOCKING SHALL BE AGAINST UNDERPINNING. USE 1.00 PSI CONCRETE.
2. WHERE SIZE CONDITIONS MAKE IT NECESSARY TO POUR CONCRETE OVER JOINTS, THE ENDS OF THE ADJACENT PILES MUST HAVE A FIRST BLOCK TO RESIST MOVEMENT OF THESE JOINTS.
3. WEIGHT CALCULATIONS TO BE BASED ON REACTION RACKING TABLE (SEE GWS10).
4. WHEN BLOCKING AGAINST FITTINGS, FITTINGS SHALL BE COVERED WITH POLYETHYLENE TUBING TO PREVENT BONDING OF CONCRETE.
5. WHERE SHEAR DEPENDS ON A PROBLEM REINFORCING MUST BE INSTALLED INTO THE BLOCKINGS.
6. CLEARANCE BETWEEN PILES A MINIMUM OF 6" BETWEEN PILE AND OBSTRUCTIONS.

CITY OF TONTITOWN		GEN. WATER/SEWER DETAIL: GWS02	
		LAST REVISION DATE: 08/29/02	
DRAWN BY: CRB	CHECKED BY:	APPROVED:	DATE: 09/03/05

7.5"

9"

FINISH GRADE

16"

16" MIN

COMPACTED SOIL

#14 TRACER WIRE

LIST OF MATERIAL

1. CAST IRON COVER
2. CAST IRON TOP SECTION
3. CAST IRON EXTENSION PIECE
4. CAST IRON BOTTOM SECTION

7.5"

1.0" MIN
5.0" MAX

GRADE

16" MIN

COMPACTED SOIL

#14 TRACER WIRE

1. IF EXTENSION PIECE IS USED, ANOTHER VALVE BOX BOTTOM SECTION SHALL BE USED.
2. EXTENSION PIECE CAN BE CUT TO LENGTH REQUIRED.
3. SINGLE #14 GAUGE TYPE INSULATED COPPER TRACER WIRE IS REQUIRED ON ALL MAINS, PE WATER SERVICES OR OTHER APPURTENANCES

* PROVIDE VALVE STEM EXTENSION WITH CENTERING DEVICE IF GREATER THAN 4.0' DEEP.

CITY OF
TONTITOWN

DRAWN BY: CRB	CHECKED BY:
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WATER DETAIL: W07

LAST REVISION DATE: 08/29/02

APPROVED:	DATE: 09/01/05
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6' MIN. 12" MAX.

6' MIN. 12" MAX.

EXISTING FINISH GRADE

COMPACTED SB-2 BACKFILL

CLASS 67

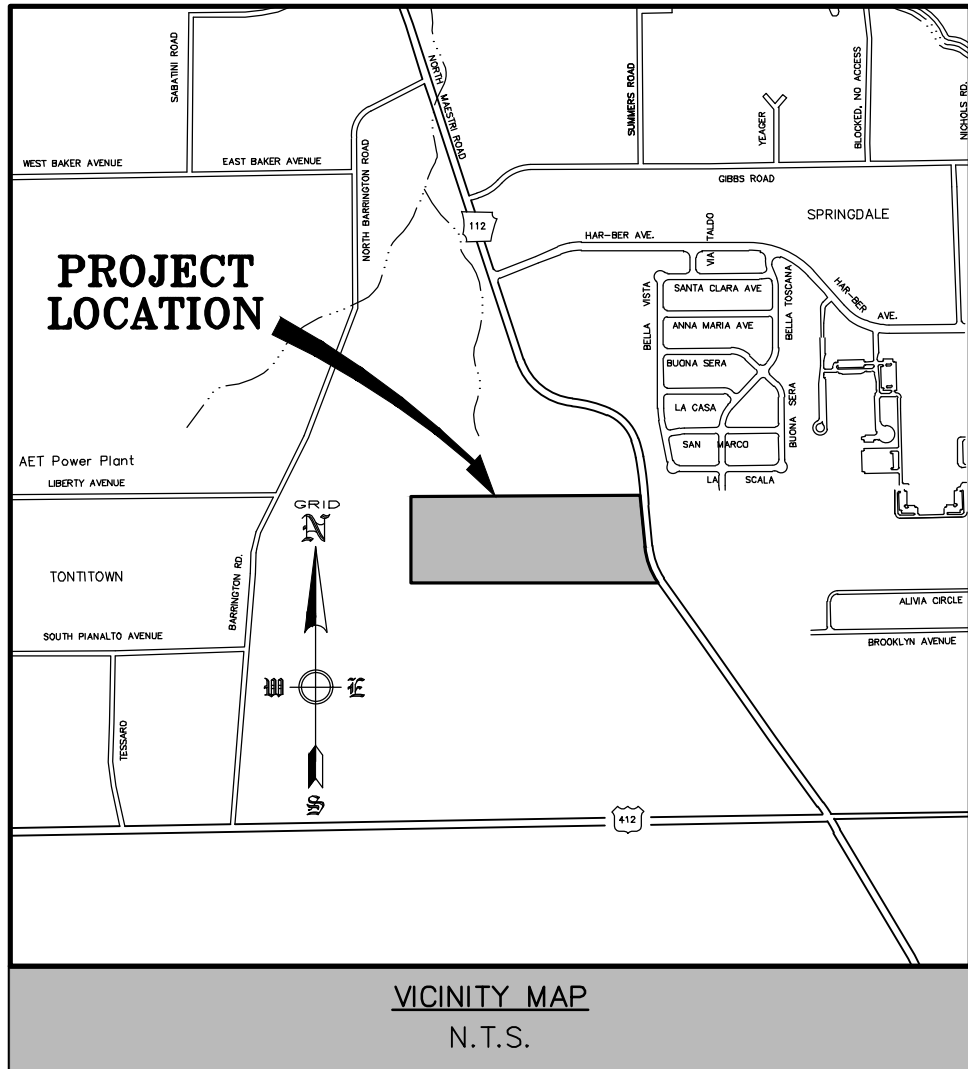
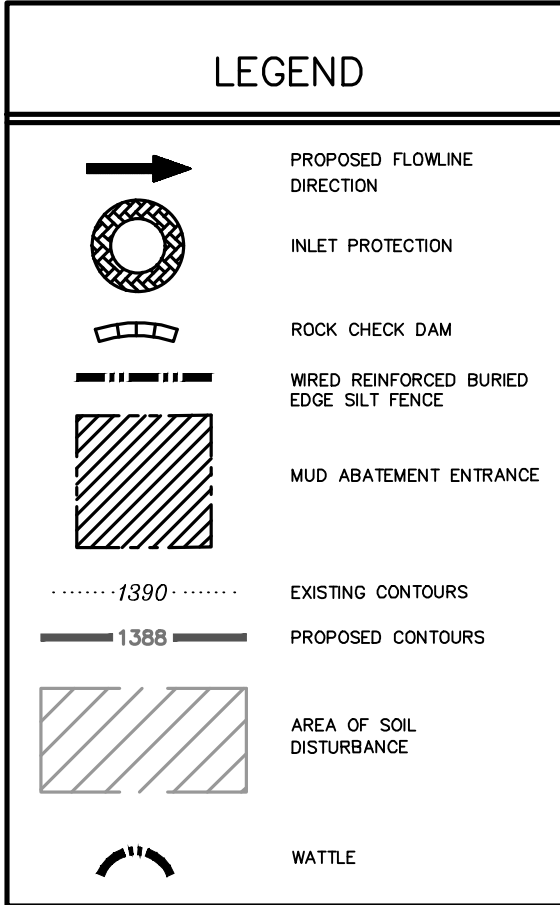
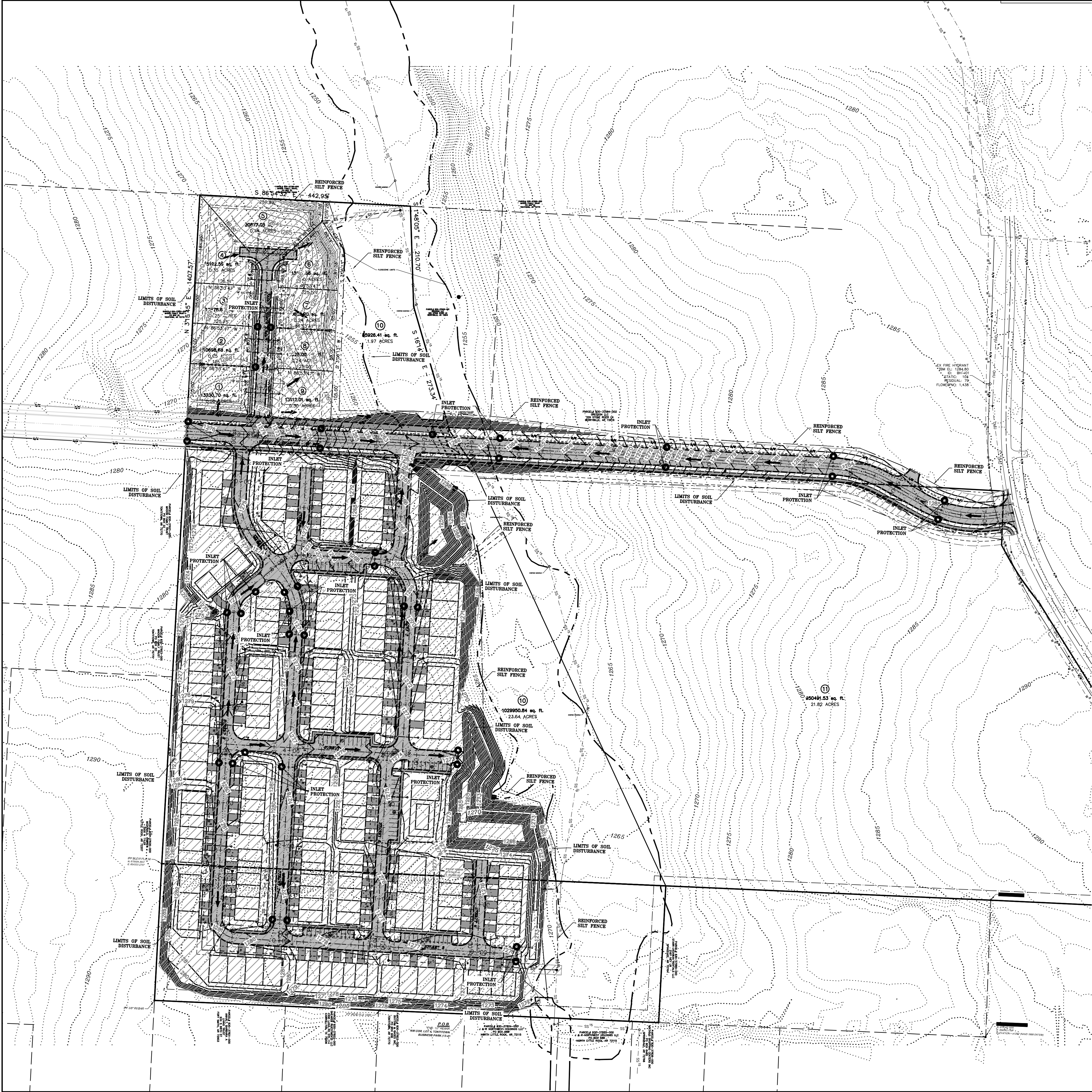
6'

4'

IF IN ROCK 6" MIN. CLASS #67 STONE REQUIRED.
 ** IMPROVED PRIVATE DRIVEWAYS AND PARKING AREAS BACKFILLED AS SHOWN ABOVE.
 SUBSURFACE MATERIAL TO EQUAL OR EXCEED EXISTING SURFACE.
 ASPHALTIC CONCRETE WALKS - MINIMUM THICKNESS 4"
 CONCRETE DRIVES OR PARKING AREAS - MINIMUM THICKNESS 6".

NOTE: PRIVATE PARKING AREAS, DRIVEWAYS & WALKS-SEE UNIMPROVED ROADS

CITY OF TONTITOWN		GEN. WATER/SEWER DETAIL: GWS09	
		LAST REVISION DATE: 08/29/02	
DRAWN BY: CRB	CHECKED BY:	APPROVED:	DATE: 09/01/05



TOTAL DISTURBED
AREA: 24.75 ACRES

- NOTES:**
- 1) NATURAL VEGETATION SHALL BE RETAINED WHEREVER POSSIBLE.
 - 2) SEED AND MULCH SHALL BE PLACED (BY OWNER) IN ALL AREAS WHERE VEGETATION IS DISTURBED.
 - 3) STRAW AND WOOD CHIPS SHALL BE PLACED TO PROVIDE TEMPORARY PROTECTION WHILE FINAL GRADING IS BEING COMPLETED.
 - 4) PLACE FILTER FABRIC ON ALL CURB INLETS.

*SILT FENCE ARE USED AS ENERGY DISSIPATION DEVICES
*SILT FENCE ARE USED TO CONTROL POLLUTANTS DURING STORM WATER DISCHARGE
*SILT FENCE MUST BE MAINTAINED UNTIL SITE IS PERMANENTLY STABILIZED
AREA OF SOIL DISTURBANCE: 24.75 ACRES

OWNER/DEVELOPER: 112 WEST FORTY, LLC
P.O. BOX 10620
FAYETTEVILLE, AR 72703

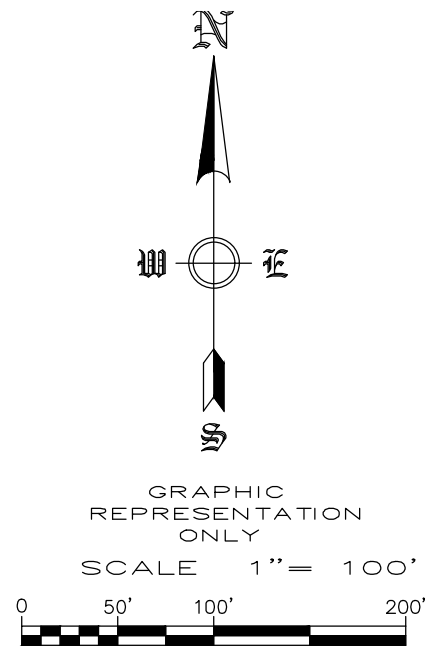
ENGINEER: ENGINEERING SERVICES, INC.
1207 S. OLD MISSOURI ROAD
P.O. BOX 282
SPRINGDALE, AR 72762

CITY ZONING: R-MF RESIDENTIAL MULTI-FAMILY
16 UNITS/ARCE MAXIMUM DENSITY

SETBACKS: FRONT - 20'
SIDE - 10'
REAR - 25'

GROSS AREA: 44.90 ACRES±
NET AREA: 11.09 ACRES±

PARKING REQUIRED PHASE 1: 11 SPACES (1 HANDICAP SPACE)
FOR POOL HOUSE



- NOTES:**
- 1) ALL DISTURBED AREAS SHALL RECEIVE 4 INCHES OF TOP SOIL AND RE-VEGETATED PER SECTION 169.06 OF THE UDC. VEGETATION MUST BE ESTABLISHED TO MINIMIZE EROSION PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY.
 - 2) STRIP EXISTING TOP SOIL.
 - 3) PREPARE SUB-GRADE AND BASE MATERIAL.
 - 4) POUR CONCRETE AND ASPHALT.
 - 5) FINAL GRADING AND ESTABLISH VEGETATION.
 - 6) RE-VEGETATION, RE-VEGETATION SHALL BE REQUIRED TO MEET THE FOLLOWING PERFORMANCE STANDARDS (SEDIMENT CONTROLS SHALL REMAIN IN PLACE UNTIL RE-VEGETATION IS ESTABLISHED) UNLESS OTHERWISE ALLOWED BY THE CITY ENGINEER:
 - TOPSOIL: A MINIMUM OF 4 INCHES OF TOPSOIL SHALL BE REQUIRED TO BE EITHER EXISTING OR INSTALLED IN AREAS TO BE REVEGETATED AS SET FORTH IN §169.06(F)(6) BELOW. ANY APPLICATION OF TOPSOIL AND SEEDING UNDER THE DRIP LINE OF A TREE SHOULD BE MINIMIZED TO 3 INCHES SO AS NOT TO DAMAGE THE TREE'S ROOT SYSTEM.
 - ZERO TO 10% GRADE: RE-VEGETATION SHALL BE A MINIMUM OF SEEDING AND MULCHING. SAID SEEDING SHALL PROVIDE COMPLETE AND UNIFORM COVERAGE THAT MINIMIZES EROSION AND RUNOFF.
 - 10% TO 4:1 GRADE: RE-VEGETATION SHALL BE A MINIMUM OF HYDRO-SEEDING WITH MULCH AND FERTILIZER, SOD, OR GROUND COVER. SAID PLANTING SHALL PROVIDE COMPLETE AND UNIFORM COVERAGE THAT MINIMIZES EROSION AND RUNOFF.
 - 4:1 TO 3:1 GRADE: THE SLOPE SHALL BE COVERED WITH LANDSCAPE FABRIC AND HYDRO-SEEDING WITH MULCH AND FERTILIZER, OR STAKED SOIL OR GROUND COVER. SAID PLANTING SHALL PROVIDE COMPLETE AND UNIFORM COVERAGE THAT MINIMIZES EROSION AND RUNOFF.
 - MORE THAN 3:1 GRADE: ANY FINISH GRADE OVER 3:1 SHALL BE STABILIZED WITH ONE OR MORE OF THE FOLLOWING:
 - RETAINING WALLS; CRIBBING WITH LANDSCAPE FABRIC; TERRACING WITH GROUND COVER; RIPRAP; STAKED SOD (UP TO 2:1 SLOPE)
 - IF CRIBBING, TERRACING, OR RIPRAP IS USED, THE SLOPE'S STABILITY AND ERODIBILITY MUST BE EQUIVALENT TO OR BETTER THAN ITS PREDEVELOPMENT STATE.
 - 7) PERMANENT EROSION CONTROL. THE DEVELOPER SHALL INCORPORATE PERMANENT EROSION CONTROL FEATURES AT THE EARLIEST PRACTICAL TIME. TEMPORARY EROSION CONTROL MEASURES WILL BE USED TO CORRECT CONDITIONS THAT DEVELOP DURING CONSTRUCTION THAT WERE UNFORESEEN DURING THE DESIGN STAGE, THAT ARE NEEDED PRIOR TO INSTALLATION OF PERMANENT EROSION CONTROL FEATURES, OR THAT ARE NEEDED TEMPORARILY TO CONTROL EROSION THAT DEVELOPS DURING NORMAL CONSTRUCTION PROJECTS, BUT ARE NOT ASSOCIATED WITH PERMANENT CONTROL FEATURES ON THE PROJECT.
 - 8) DUST: WHERE EXCESSIVE DUST MAY BECOME A PROBLEM, A PLAN FOR SPRAYING WATER ON HEAVILY TRAVELED DIRT AREAS SHALL BE ADDRESSED.
 - 9) CONSTRUCTION EXITS: A STABILIZED ROCK EXIT IS REQUIRED ON CONSTRUCTION SITES. ROCK EXITS MUST BE AT LEAST 20' WIDE BY 50' LONG BY 6" THICK STABILIZED ROCK HAVING A MINIMUM AVERAGE DIAMETER OF 3/4". IF THERE IS AN EXISTING CURB, LOOSE MATERIAL SUCH AS FILL DIRT OR GRAVEL SHALL NOT BE USED TO RAMP UP TO IT FROM THE STREET. TEMPORARY WOODEN RAMPS IN FRONT OF CURBS ARE ACCEPTABLE.
 - 10) DEBRIS, MUD, AND SOIL IN PUBLIC STREETS, DEBRIS, MUD AND SOIL SHALL NOT BE ALLOWED ON PUBLIC STREETS BUT IF ANY DEBRIS, MUD, OR SOIL FROM DEVELOPMENT SITES REACHES THE PUBLIC STREET IT SHALL BE IMMEDIATELY REMOVED VIA SWEEPING OR OTHER METHODS OF PHYSICAL REMOVAL. DEBRIS, MUD, OR SOIL IN THE STREET MAY NOT BE WASHED OFF THE STREET OR WASHED INTO THE STORM DRAINAGE SYSTEM. STORM DRAINAGE SYSTEMS DOWNSTREAM OF A DEVELOPMENT SITE SHOULD BE PROTECTED FROM DEBRIS, MUD, OR SOIL IN THE EVENT THAT DEBRIS, MUD, OR SOIL REACHES THE DRAINAGE SYSTEM.
 - 11) FRANCHISE AND PRIVATE UTILITIES. THE PROPERTY OWNER OR MAIN CONTRACTOR ON SITE WILL BE RESPONSIBLE FOR RESTORING ALL EROSION AND SEDIMENT CONTROL SYSTEMS AND PUBLIC INFRASTRUCTURE DAMAGED OR DISTURBED BY UNDERGROUND PRIVATE OR FRANCHISE UTILITY CONSTRUCTION SUCH AS WATER AND SEWER SERVICE LEADS, TELEPHONE, GAS, CABLE, ETC. EROSION AND SEDIMENT CONTROL SYSTEMS MUST BE IMMEDIATELY RESTORED AFTER EACH UTILITY CONSTRUCTION.

FLOOD PLAIN ZONING:

THIS DEVELOPMENT IS WITHIN FLOOD ZONE, "X" AS SHOWN ON THE F.I.R.M. MAP #051430018 C, PANEL 65 OF 575, WASHINGTON COUNTY, ARKANSAS AND INCORPORATED AREAS. EFFECTIVE DATE: MAY 16, 2008.

STORM WATER POLLUTION PREVENTION PLAN
ASPEN HEIGHTS
TONTITOWN, ARKANSAS

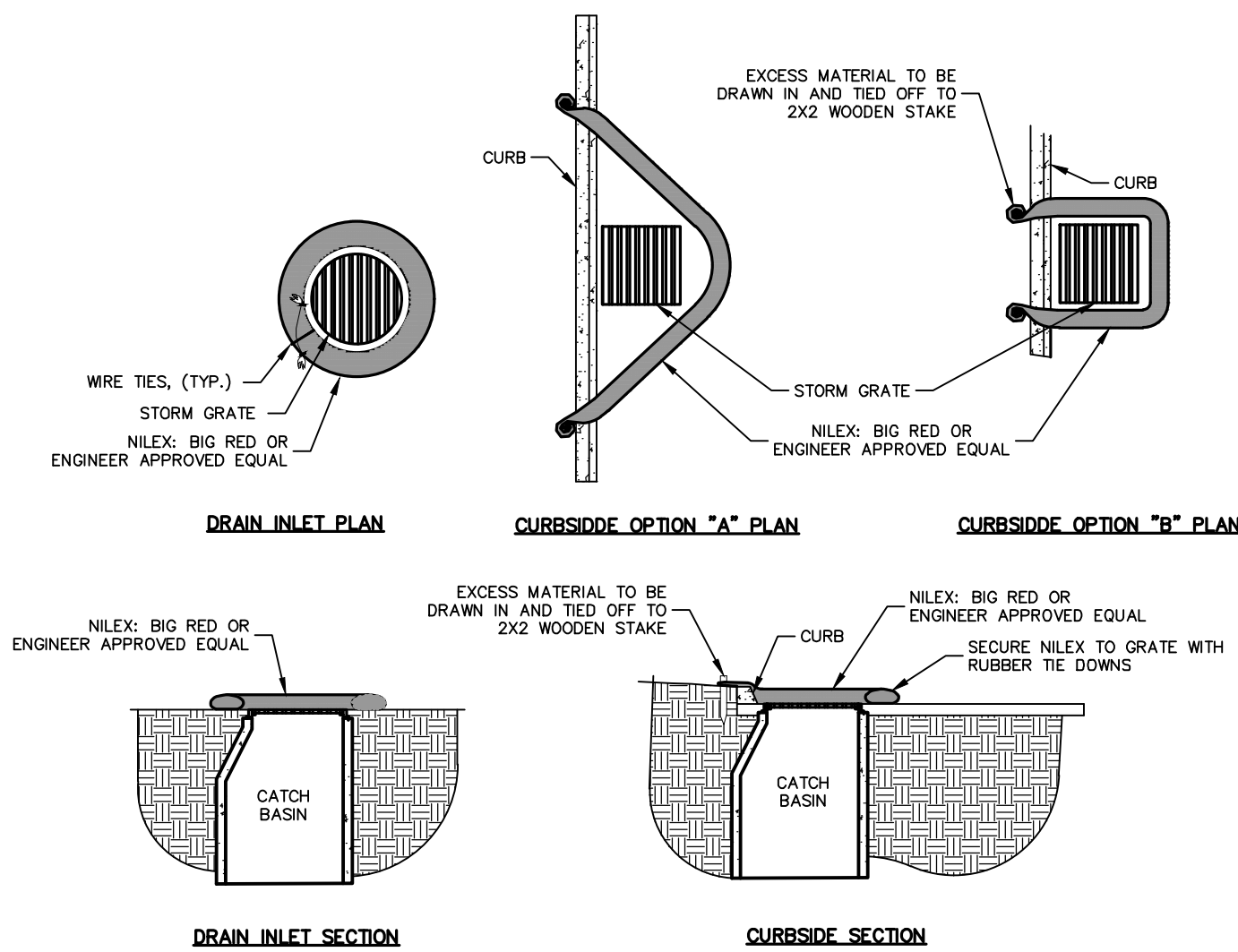
REVISION	DATE	DESCRIPTION

SCALE: 1"=50'

DATE: May 22, 2019

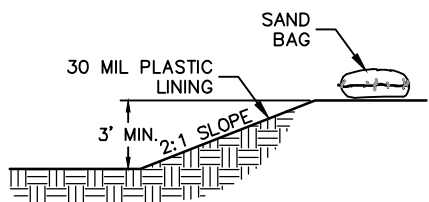
ENGINEER: TJA
DRAWN BY: JRC

W.O. #: 19909

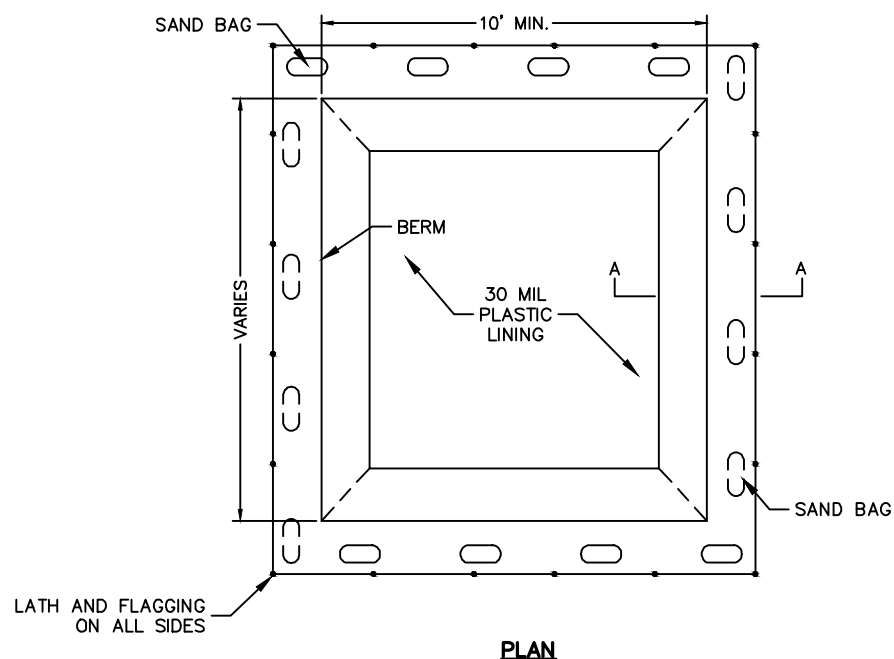


- NOTES:
- 1) ALL MATERIAL TO MEET SPECIFICATIONS.
 - 2) NILEX-BIG RED TO MEET APPLICATION REQUIREMENTS.
 - 3) COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

INLET PROTECTION
NOT TO SCALE

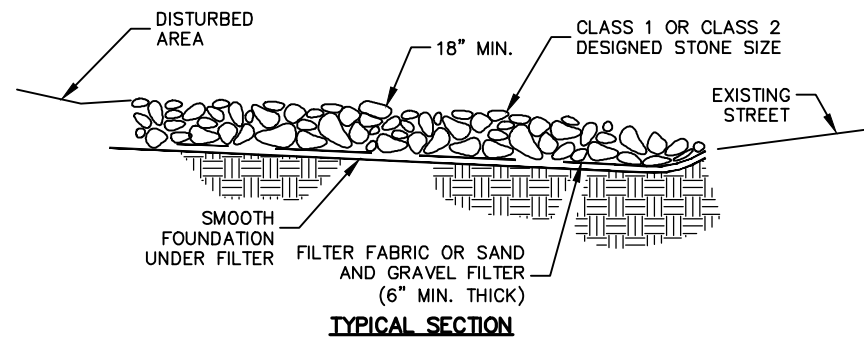


SECTION A - A



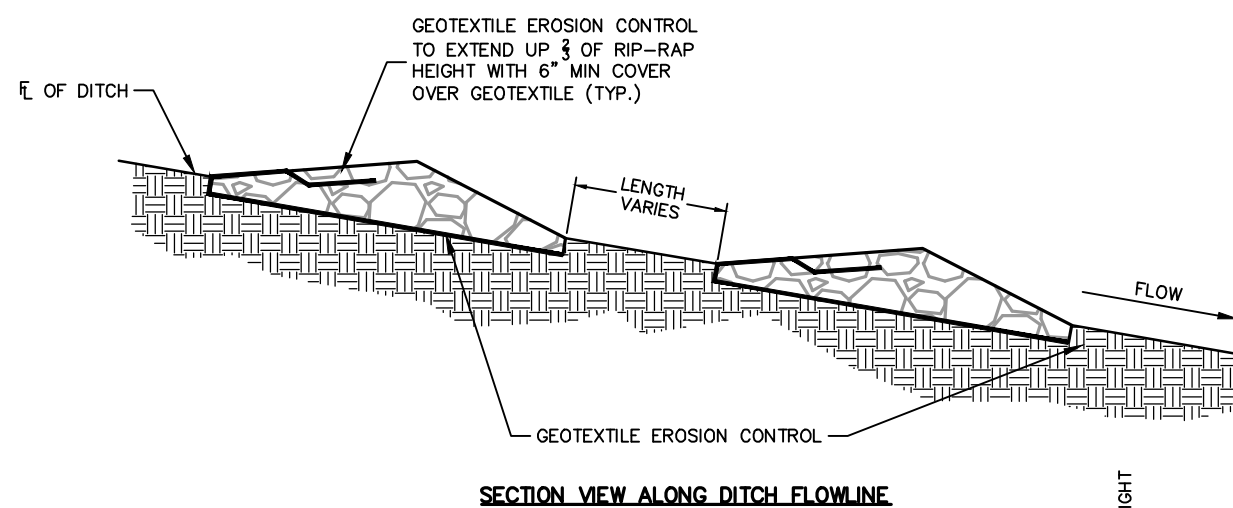
- NOTES:
- 1) LATH AND FLAGGING SHOULD BE COMMERCIAL TYPE.
 - 2) PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 30 MIL POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.

CONCRETE WASH-OUT AREA
NOT TO SCALE

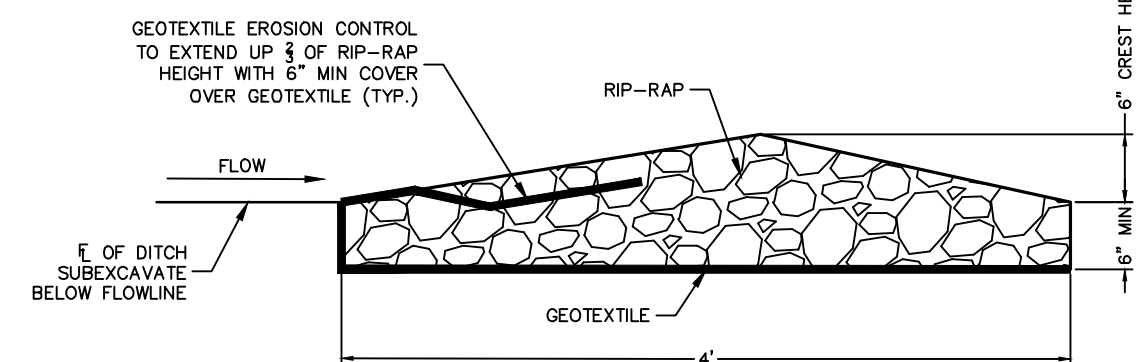


- NOTES:
- 1) MINIMUM THICKNESS SHALL BE 18", THE STONE DIAMETER, NEVER LESS THAN 6".
 - 2) MINIMUM LENGTH SHALL BE 50'

MUD ABATEMENT ENTRANCE
NOT TO SCALE



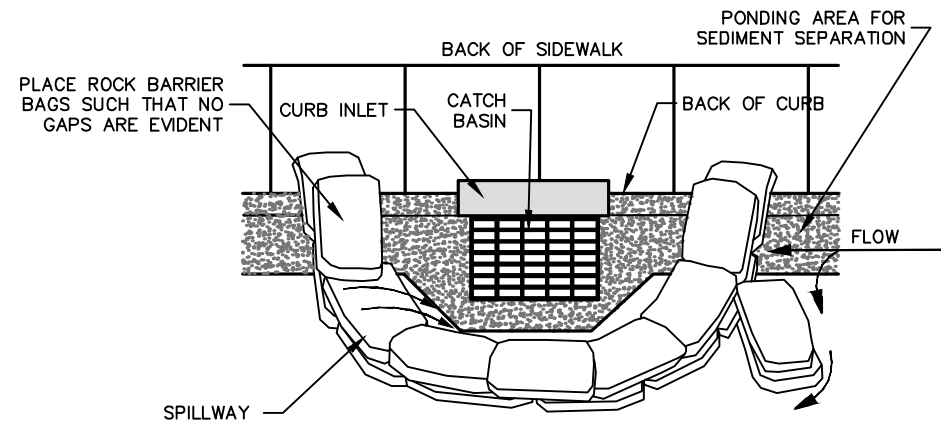
SECTION VIEW ALONG DITCH FLOWLINE



SECTION VIEW OF CHECK DAM

- NOTES:
1. RIP-RAP SIZE D50 = 6" OR AS SHOWN ON THE PLANS.

ROCK CHECK DAM

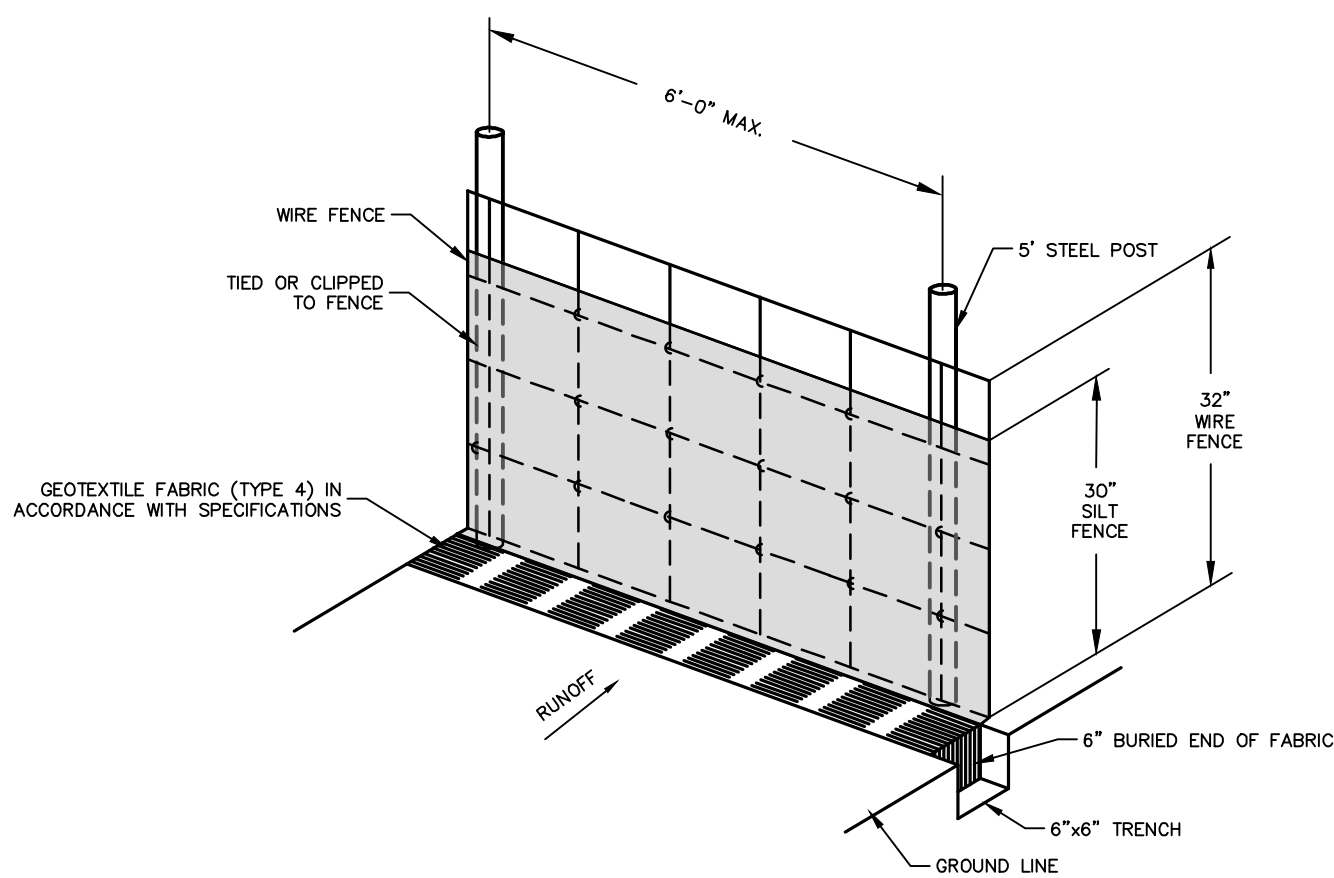


- NOTES:
- 1) BAGS OF WOVEN GEOTEXTILE FABRIC, FILLED WITH GRAVEL MUST BE LAYERED SUCH THAT NO GAPS ARE EVIDENT.
 - 2) LEAVE ONE SANDBAG GAP IN THE TOP ROW ON THE SIDE AWAY FROM FLOW, TO PROVIDE A SPILLWAY, OR IN THE CENTER IF PONDING IS NEEDED ON BOTH SIDES.
 - 3) INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT, SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.

CURB INLET PROTECTION SETUP
NOT TO SCALE

Slope - Percent	Maximum Slope Length (ft) Above Fence	
	Standard (18" High) Silt Fence	Reinforced (30" High) Silt Fence
2 (or less)	150	250
5	100	250
10	50	150
15	35	100
20	25	70
25	20	55
30	15	45
35	15	40
40	15	35
45	10	30
50	10	25

- NOTES:
1. THE SLOPE LENGTH SHOWN IS THE DISTANCE FROM THE FENCE TO THE DRAINAGE DIVIDE OR THE NEAREST UPSLOPE CHANNEL.
 2. SLOPE LENGTH CANNOT BE ADDRESSED BY USE OF MULTIPLE ROWS OF SILT FENCE.



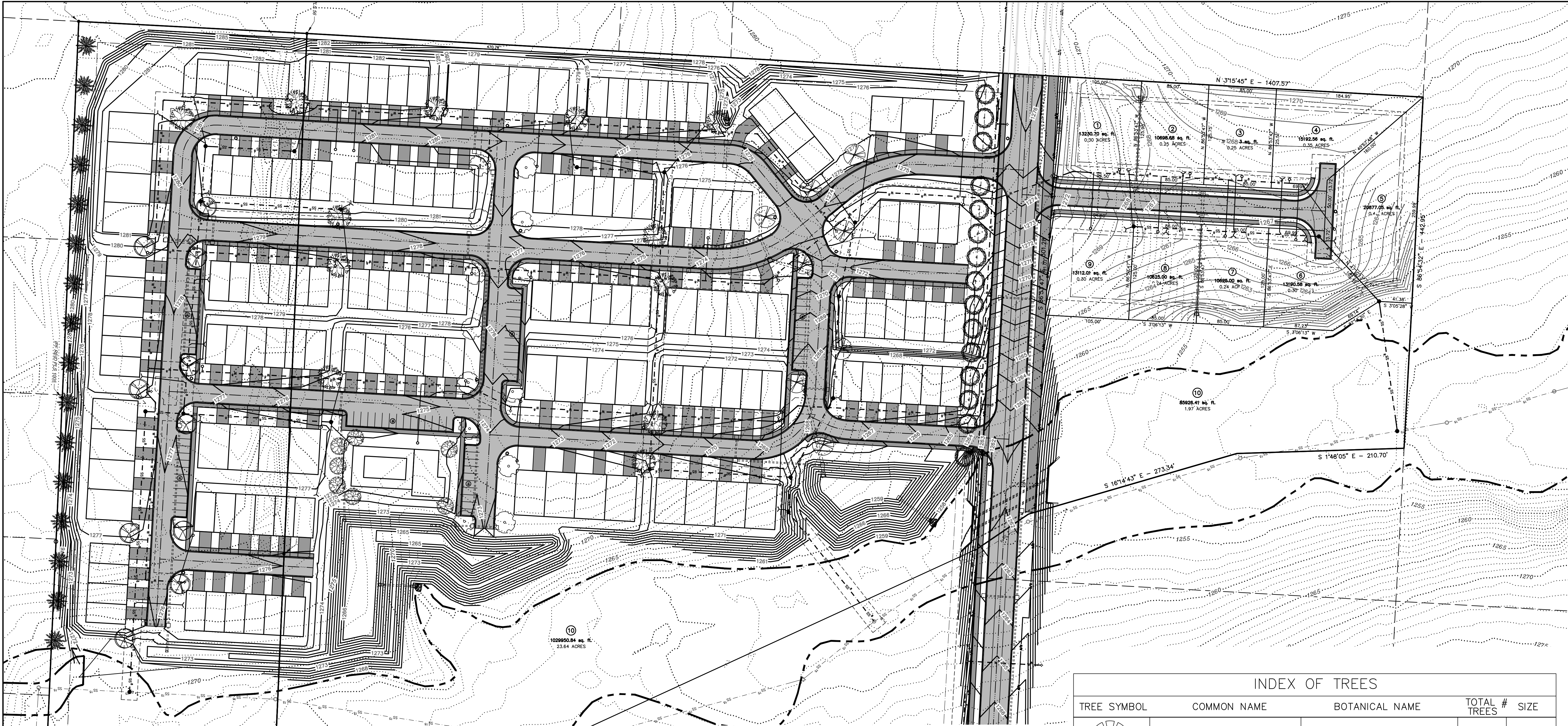
SILT FENCE NOTES

1. POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.
2. THE TIE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. HERE FENCE CANNOT BE TRENCHED IN (ON PAVEMENT), WEIGHT FABRIC FLAP WITH ROCK ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH SUPPORT POST OR TO WOVEN WIRE, WHICH IN TURN IS ATTACHED TO THE FENCE POST. THERE SHALL BE A 3 FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
5. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF HALF THE HEIGHT OF THE FENCE. THE SILT SHALL BE DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

WIRED REINFORCED BURIED EDGE SILT FENCE
NOT TO SCALE

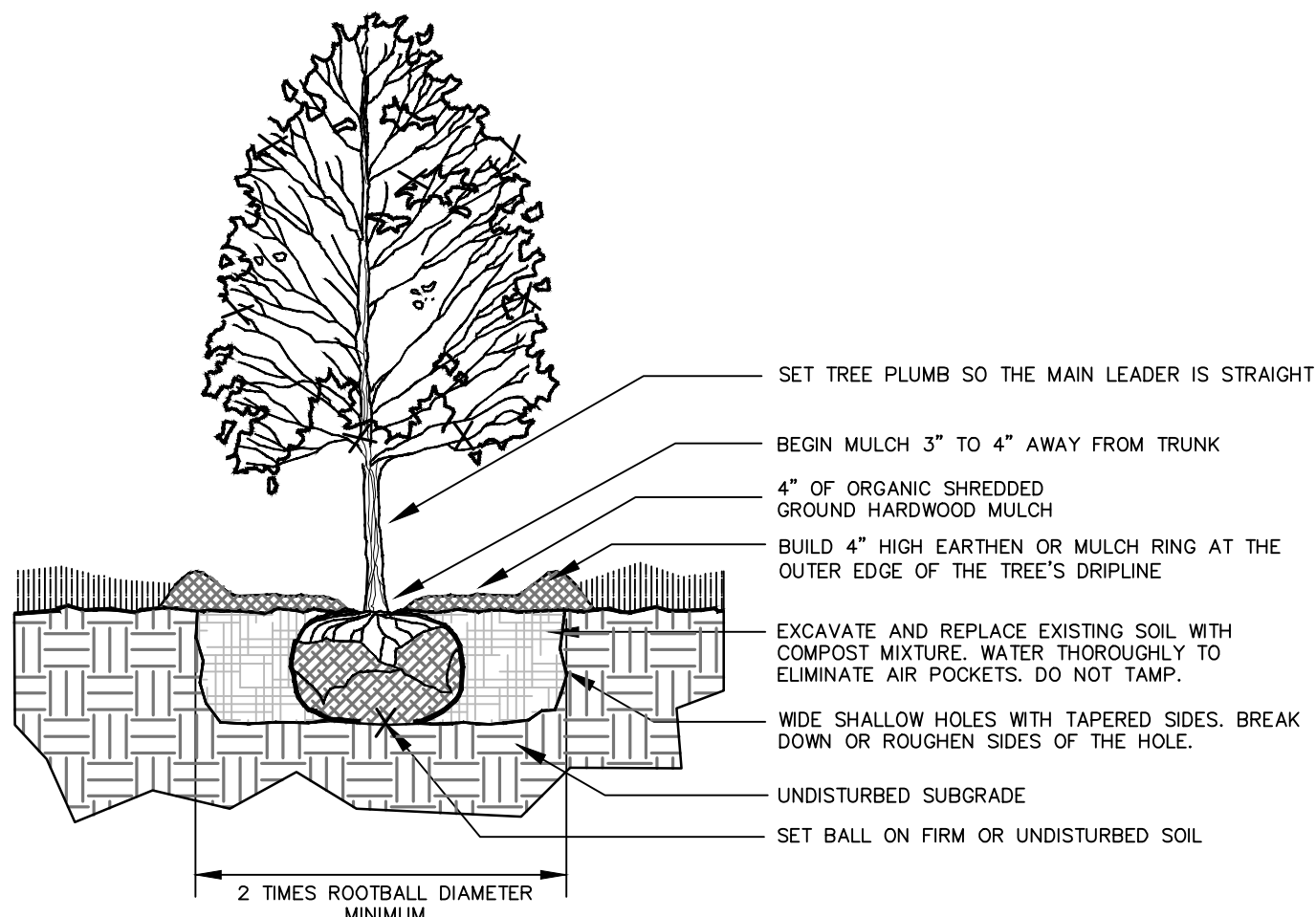
REVISION	DATE	DESCRIPTION

SCALE: N.T.S.
DATE: May 22, 2019
ENGINEER: TJA
DRAWN BY: JRC
W.O. #: 19909



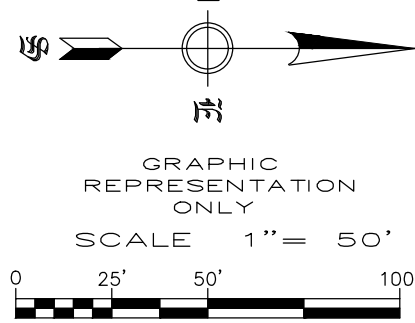
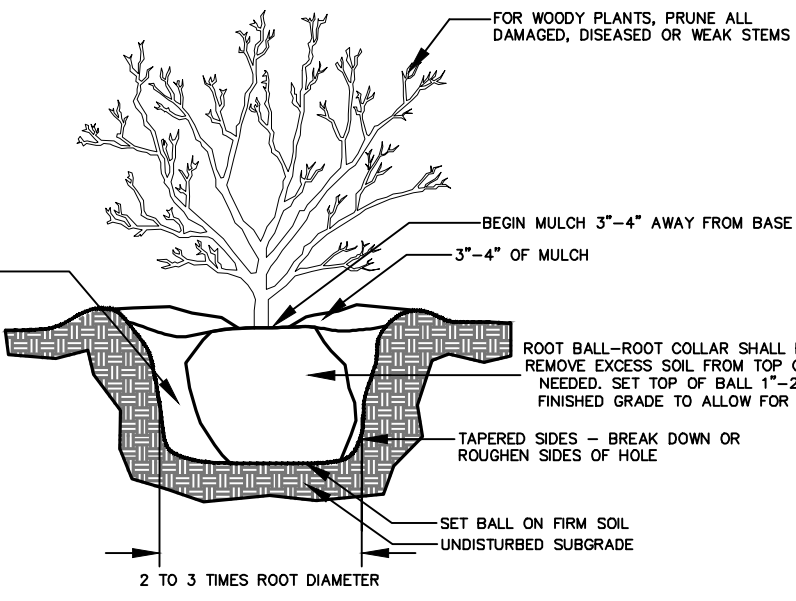
LANDSCAPE NOTES:

1. AUTOMATIC IRRIGATION SYSTEM OR HOSE BIBS WILL BE PROVIDED FOR ALL LANDSCAPED AREAS
2. SOIL SHALL BE AMENDED AND ALL ROCKS AND FOREIGN MATERIAL SHALL BE REMOVED PRIOR TO ANY LANDSCAPE INSTALLATION
3. NOTE THE SIZE OF LANDSCAPE TREES AND MATERIALS AT TIME OF PLANTING
4. WIRE BASKETS AND BURLAP TO BE REMOVED DURING TREE PLANTING
5. ALL PLANTING BEDS SHALL RECEIVE 6" OF TOPSOIL FREE OF ROCKS/WEEDS/DEBRIS PRIOR TO INSTALLATION OF PLANT MATERIAL
6. ALL PLANTING BEDS SHALL RECEIVE RIVER ROCK OR ORGANIC MULCH AT TIME OF INSTALLATION
7. ALL PLANTING BEDS SHALL BE CONTAINED BY EDGING OR MATERIAL OTHER THAN VEGETATION/SOD
8. SHADE TREES SHALL HAVE A MIN. CALIPER OF 3" AND A HEIGHT OF 8'
9. ONCE INSTALLED LANDSCAPING SHALL BE MAINTAINED IN A HEALTHY LIVING CONDITION, AND IF PLANT MATERIAL DIES IT SHALL BE REPLACED WITHIN THE NEXT APPROPRIATE GROWING SEASON
10. IF CONFLICTS WITH PROPOSED LIGHTS, FIRE HYDRANTS, OR OTHER SITE FEATURES EXIST, TREES OR SHRUBS SHALL BE MOVED AND SHALL NOT INTERFERE WITH PROPOSED FEATURES
11. TREES SHALL BE STAKED AS NECESSARY TO PREVENT LEANING OR FALLING OVER
12. TREES SHALL BE AT LEAST 5 FEET FROM ANY UTILITY MAIN LINES



NOTES:

1. TREES SHALL BE 1-1/2" OR 2" CALIPER AS SPECIFIED.
2. THE HOLE FOR THE TREE SHALL BE EXCAVATED 2-3 TIMES THE SIZE OF THE ROOT BALL.
3. REMOVE ANY TWINE, ROPE, FLAGGING, WRAPPING, OR GUARDS FROM TREE.
4. PRUNE ONLY DEAD OR BROKEN BRANCHES OR DOUBLE LEADERS AT TIME OF PLANTING.
5. ROOTBALL - ROOT COLLAR SHALL BE VISIBLE. REMOVE EXCESS SOIL FROM TOP OF BALL IF NEEDED. AFTER LOCATING AND SETTING BALL IN PLANTING HOLE, CUT AWAY OR REMOVE THE ENTIRE WIRE BASKET, CUT OR REMOVE ALL ROPES OR TWINE FROM BALL, CUT AWAY OR REMOVE BURLAP. IF ROOTBALL BEGINS FALLING APART DURING INSTALLATION OR WHILE REMOVING THE WIRE BASKET, CUT AWAY ONLY HALF OF THE BURLAP. ENSURE THAT NONE OF THE ROOTBALL IS EXPOSED TO AIR.
6. REFER TO THE TREE STAKING AND WRAPPING DETAIL FOR ADDITIONAL INSTALLATION REQUIREMENTS



INDEX OF TREES

TREE SYMBOL	COMMON NAME	BOTANICAL NAME	TOTAL # TREES	SIZE
	LACEBARK ELM	Ulmus parvifolia	7	2" Cal B & B
	LITTLE LEAF LINDEN	Tilia cordata	12	2" Cal B & B
	FRONTIER ELM	Ulmus 'Frontier'	13	2" Cal B & B
	SHUMARD OAK	Quercus shumardi	9	2" Cal B & B
	WILLOW OAK	Quercus phellos	7	2" Cal B & B
	LITTLE GEM MAGNOLIA	Magnolia x 'Little Gem'	7	2" Cal B & B
	EASTERN WHITE PINE	Pinus strobus	26	2" Cal B & B