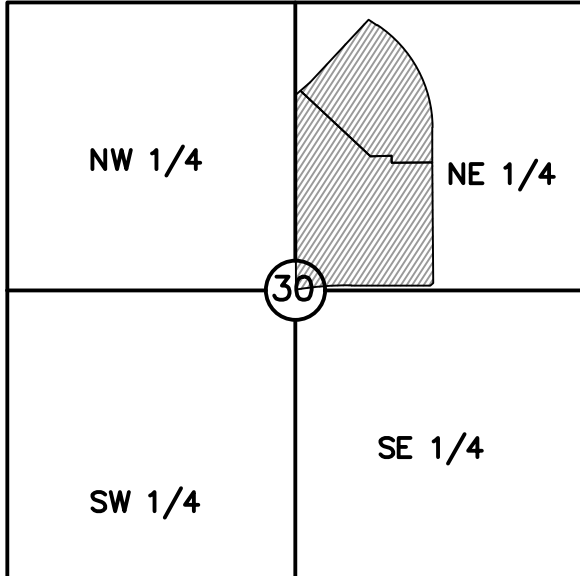


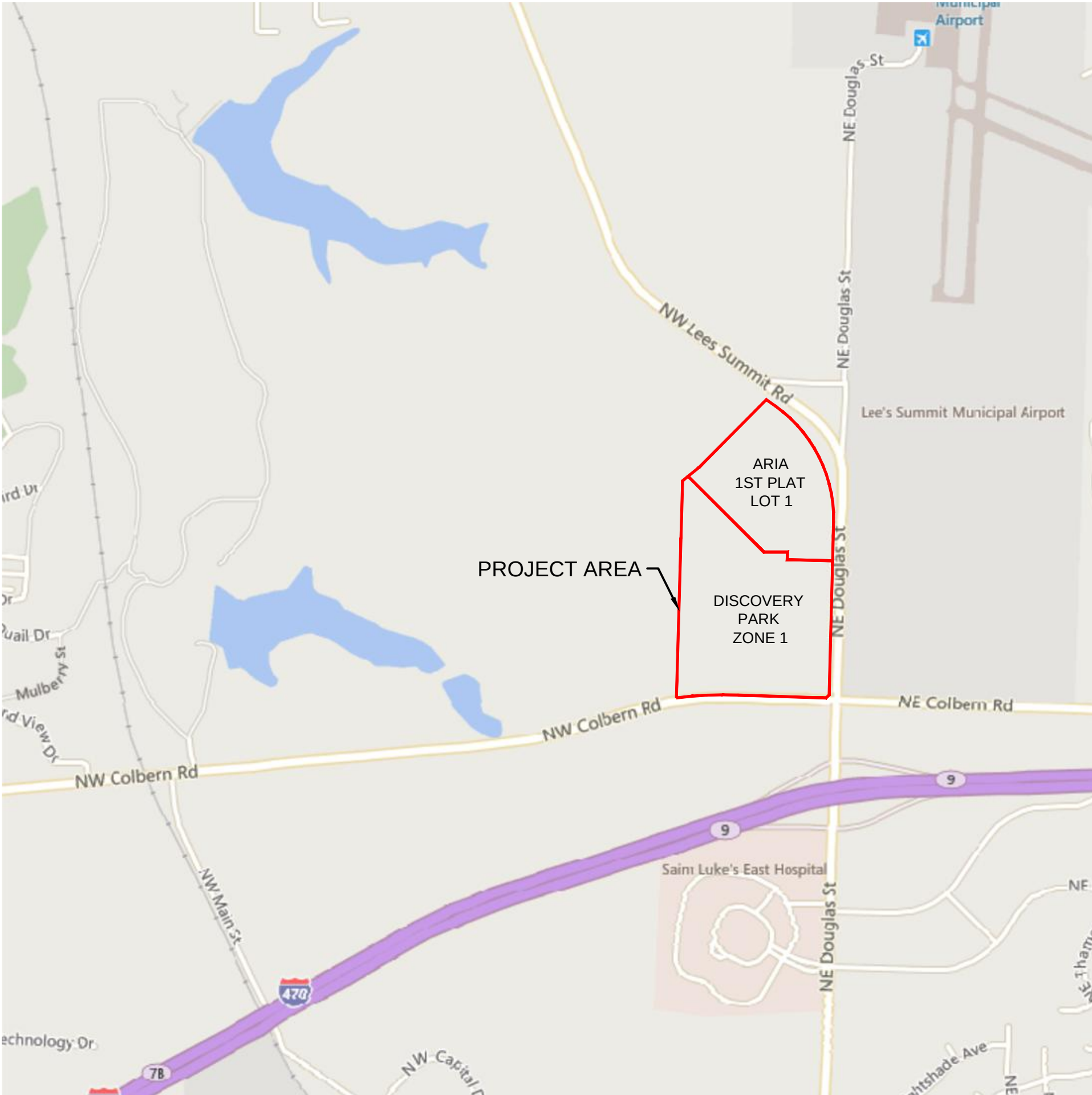
THE VILLAGE AT DISCOVERY PARK ZONE 1 & ARIA APARTMENTS

SECTION 25, TOWNSHIP 48N, RANGE 32W
SECTION 30, TOWNSHIP 48N, RANGE 31W
IN LEE'S SUMMIT, JACKSON COUNTY, MO



S25, T48N, R32W
S30, T48N, R31W
N.T.S.
VICINITY MAP

PROJECT TEAM & UTILITY CONTACT LIST	
<u>OWNER/DEVELOPER</u> INTRINSIC DEVELOPMENT 3622 ENDEAVOR AVE. STE. 101 COLUMBIA, MO 65201 CONTACT: JOHN ODLE PHONE: 573.615.2252	<u>UTILITY SERVICE NUMBERS</u> NAME: LEE'S SUMMIT PUBLIC WORKS PHONE: 816-969-1800 NAME: LEE'S SUMMIT WATER UTILITIES PHONE: 816-969-1900
<u>ENGINEER</u> OLSSON 1301 BURLINGTON, SUITE 100 NORTH KANSAS CITY, MO 64116 CONTACT: DAVID EICKMAN PHONE: 816.854.9315 EMAIL: DEICKMAN@OLSSON.COM	NAME: SPIRE PHONE: 314-342-0500 NAME: AT&T PHONE: 800-286-8313 NAME: EVERGY PHONE: 816-471-5275
<u>SURVEYOR</u> OLSSON 1301 BURLINGTON, SUITE 100 NORTH KANSAS CITY, MO 64116 CONTACT: JASON ROUDEBUSH PHONE: 816.361.1177 EMAIL: JROUDEBUSH@OLSSON.COM	NAME: SPECTRUM PHONE: 877-772-2253 NAME: GOOGLE FIBER PHONE: 877-454-6959



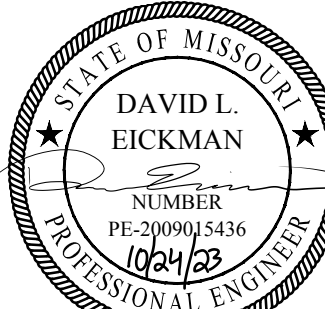
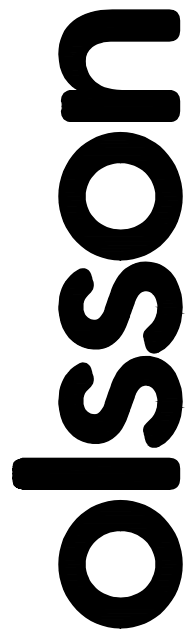
Sheet Number	Sheet Title
C300	TITLE SHEET
C301	GENERAL NOTES
C302	EXISTING CONDITIONS
C303	SURVEY CONTROL PLAN
C310	GRADING PLAN
C311	GRADING PLAN (NORTH)
C312	GRADING PLAN (SOUTH)
C313	SPILLWAY DETAIL PLAN
C314	SPILLWAY DETAILS
C320	DETENTION BASIN PLAN (NORTH WEST)
C321	DETENTION BASIN PLAN (SOUTH WEST)
C322	DETENTION BASIN PLAN (SOUTH EAST)
C323	STORM SEWER PLAN & PROFILES
C324	STORM SEWER PLAN & PROFILES
C325	STORM SEWER PLAN & PROFILES
C326	STORM SEWER PLAN & PROFILES
C330	EROSION CONTROL PLAN (PHASE A)
C340	PHASE A SEDIMENT TRAP DETAILS
C341	PHASE A SEDIMENT TRAP DETAILS (CONT'D)
C350	EROSION CONTROL PLAN (PHASE B)
C351	PHASE B SEDIMENT TRAP DETAILS
C352	PHASE B SEDIMENT TRAP DETAILS
C370	EROSION CONTROL PLAN (PHASE C)
C380	DETAIL SHEET
C381	DETAIL SHEET (CONT'D)
C382	DETAIL SHEET ((CONT'D))

OIL/GAS WELLS:

NO OIL OR GAS WELLS ARE LOCATED WITHIN PROJECT LIMITS.
INFORMATION OBTAINED FROM THE MISSOURI DEPARTMENT OF NATURAL RESOURCES,
GEOLOGICAL SURVEY GEOSCIENCES TECHNICAL RESOURCE ASSESSMENT TOOL (GEOSTRAT).

FLOOD CERTIFICATION:

THE ENTIRE SITE IS LOCATED WITHIN ZONE X "AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OF WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM THE 1% ANNUAL CHANCE FLOOD" AS DEPICTED ON THE FEMA FLOOD INSURANCE RATE MAP (FIRM) MAP NUMBER 29095C0409G, REVISION DATE JANUARY 20, 2017.



DAVID EICKMAN, F
MO# 2009015436

[illegible]

TITLE SHEET

MASS GRADING & EROSION AND SEDIMENT CONTROL PLANS

THE VILLAGE AT DISCOVERY PARK ZONE 1 & ARIA APARTMENTS
NW COI BERN RD & NE DOUGLAS ST

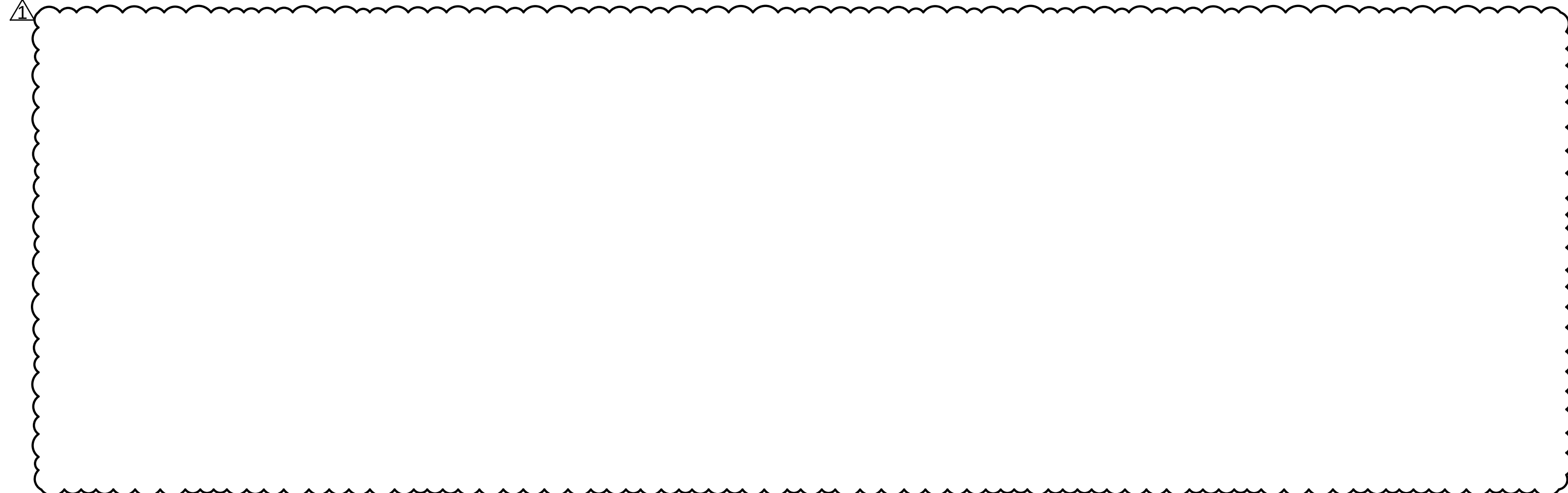
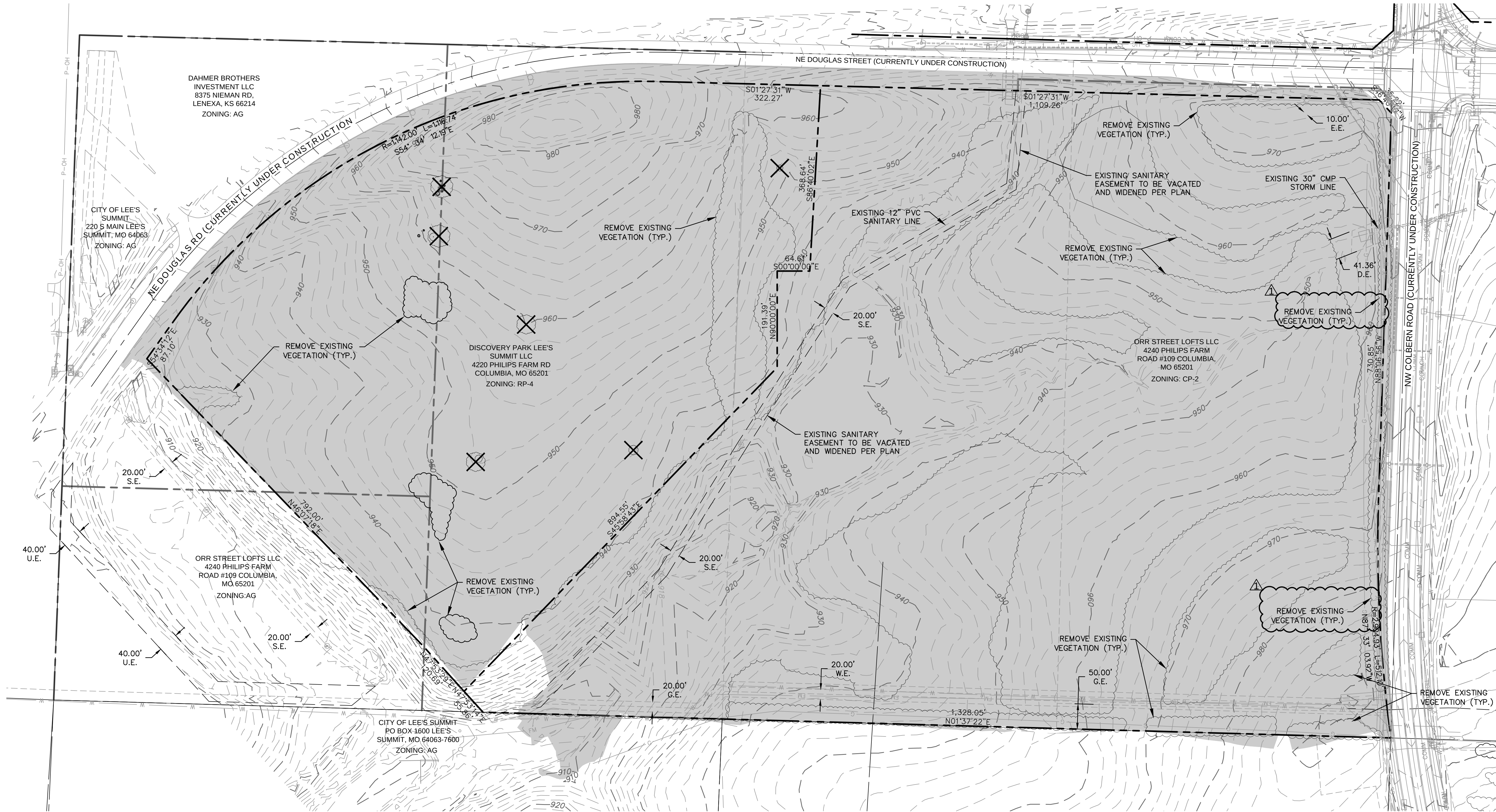
EE'S SUMMIT MISSOURI

2023

drawn by: _____ GS/OS/J
checked by: _____ AR/J
approved by: _____ D
QA/QC by: _____ JS/N
project no.: _____ D21-0464
drawing no.: C TTL01 D210464
date: _____ 10.17.2021

SHEET
C300

DWG: F:\2021\04501-05000\021-04643-d\40-design\AutoCAD\final\plans\Sheets\GNV\Site Disturbance Plans\C_EXC01_D2104643.dwg USER: arcmanov
DATE: Oct 17, 2023 10:22am XREFS: C_XALT1-B2104643 C_PTBLK-D2104643 C_PBNBY-D2104643 C_FROAD-D2104643



EXISTING CONDITIONS LEGEND

*THIS LEGEND APPLIES TO ALL SHEETS UNLESS EXPLICITLY SHOWN OTHERWISE ON EACH SHEET.

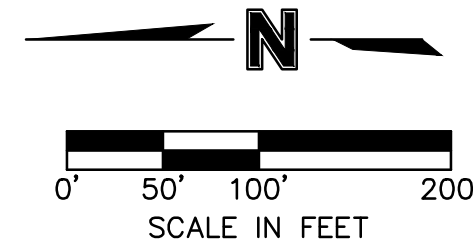
- | | |
|-----|---------------------------|
| --- | PROPERTY BOUNDARIES |
| --- | EASEMENT/SETBACK LINE |
| --- | EXISTING STORM SEWER |
| --- | EXISTING PRESSURE PIPE |
| --- | EXISTING SANITARY SEWER |
| --- | EXISTING POWER SERVICE |
| --- | EXISTING WATER PIPE |
| --- | EXISTING TELECOM SERVICE |
| --- | EXISTING NATURAL GAS PIPE |



LIMITS OF DISTURBANCE

- ✕ REMOVE EXISTING TREE
- EXISTING LIGHT POLE
- ⬢ EXISTING SIGN
- ⊠ EXISTING SPRINKLER BOX
- ⊕ EXISTING SPRINKLER CONTROL VALVE
- ⊕ EXISTING WATER VALVE
- ⊕ EXISTING FIRE HYDRANT
- ⊕ EXISTING WATER METER
- ⊕ EXISTING ELECTRIC BOX
- ⊕ EXISTING ELECTRIC VAULT
- ⊕ EXISTING ELECTRIC METER
- ⊕ EXISTING ELECTRIC RISER
- EXISTING ELECTRIC MANHOLE

*SCALE MAY AFFECT THE SIZE OF SURVEY SYMBOLS IN PLAN, BUT SHAPE WILL BE RETAINED.



EXISTING CONDITIONS
MASS GRADING & EROSION AND SEDIMENT CONTROL PLANS

THE VILLAGE AT DISCOVERY PARK ZONE 1 & ARIA APARTMENTS
NW COLBERN RD & NE DOUGLAS ST

LEE'S SUMMIT, MISSOURI

2023

drawn by: GS/SJS/JN
checked by: AR/JN
approved by: DE
QA/QC by: JS/NH
project no.: D21-04643
drawing no.: C_EXC01_D2104643
date: 10/17/2023

SHEET
C302



DAVID EICKMAN, P.E.
MOR 2009015436

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	10/11/2023	RFI-SURVEY CONTROL	

REVISIONS

olsson

Olsson - Civil Engineering
Missouri Certificate of Authority #001592
1301 Burlington Street
North Kansas City, MO 64116
TEL 816.361.1177
www.olson.com

CPT#50: 1/2" IB/CAP ON THE NORTH SIDE OF NW COLBERN ROAD. IT IS IN THE 1ST FIELD ENTRANCE WEST OF NE DOUGLAS STREET

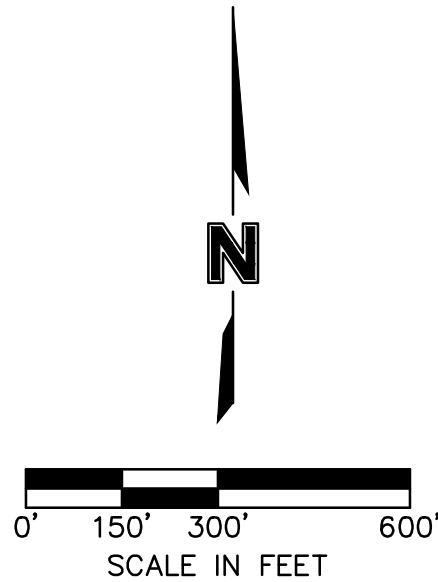
CPT#51: SET 1/2" IB/CAP ON THE SW CORNER OF COLBERN ROAD AND MAIN STREET

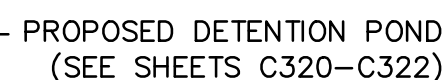
CPT#52: SET 1/2" IB/CAP ON THE SOUTH SIDE OF MAIN STREET WHERE MAIN STREET TURNS EAST ON THE SOUTH SIDE OF 1470

CPT#53: SET 1/2" IB/CAP ON THE EAST SIDE OF DOUGLAS JUST SOUTH OF THE 1470 INTERCHANGE. IN THE NW CORNER OF THE PARKING LOT TO THE OLD OUTBACK

CPT#54: SET 1/2" IB/CAP ON THE SOUTH SIDE OF NE DOUGLAS ST. (OLD) WHERE IT BEND BACK NORTH AT THE SE CORNER OF "THE CURE" CHURCH

CPT#55: SET 1/2" IB/CAP ON THE EAST SIDE OF DOUGLAS AT DRIVEWAY FOR HOUSE 2545





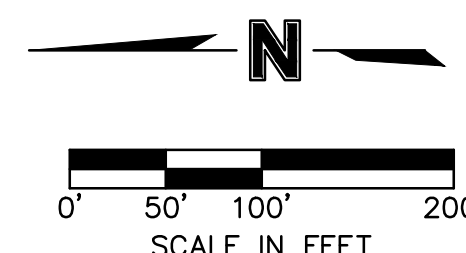
EARTHWORK QUANTITIES NOTES:

1. EARTHWORK QUANTITIES FOR DISCOVERY PARK ZONE 1 ARE BASED ON FINISHED GRADE SURFACE AND DO NOT INCLUDE ADJUSTMENTS FOR TOPSOIL AND SHRINKAGE.
2. EARTHWORK QUANTITIES FOR ARIA APARTMENTS ARE BASED ON SUBGRADE SURFACE (ASSUME 12 IN. BELOW FINISHED GRADE ACROSS THE SITE) AND DO NOT INCLUDE ADJUSTMENTS FOR TOPSOIL AND SHRINKAGE.
3. EARTHWORK QUANTITIES DO NOT TAKE INTO CONSIDERATION EXCAVATION, REMOVAL, AND DISPOSAL OF MATERIAL DEEMED UNSUITABLE BY A GEOTECHNICAL ENGINEER. THE EARTHWORK CONTRACTOR IS RESPONSIBLE FOR EXCAVATION, REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL AND FOR REPLACING IT WITH SUITABLE MATERIAL.
4. ELEVATIONS SHOWN ON DISCOVERY PARK ZONE 1 ARE TO TOP OF PAVEMENT OF FINISHED GRADE. VOLUMES SHOWN DO NOT REFLECT PAVEMENT DEPTHS, SPOILS, TRENCH FILL, OR ANY OTHER ADJUSTMENTS. SEE SHEET C232 ON PRIVATE SITE DEVELOPMENT PLANS FOR PAVEMENT SECTION DETAILS.
5. ELEVATIONS SHOWN ON ARIA APARTMENTS ARE TO SUBGRADE (12 IN. BELOW FINISHED GRADE ACROSS THE SITE). VOLUMES APPROXIMATELY REFLECT PAVEMENT DEPTHS, BUT DO NOT REFLECT SPOILS, TRENCH FILL, OR ANY OTHER ADJUSTMENTS. SEE SEPARATE SITE DEVELOPMENT PLANS FOR ARIA APARTMENTS FOR MORE DETAILS.

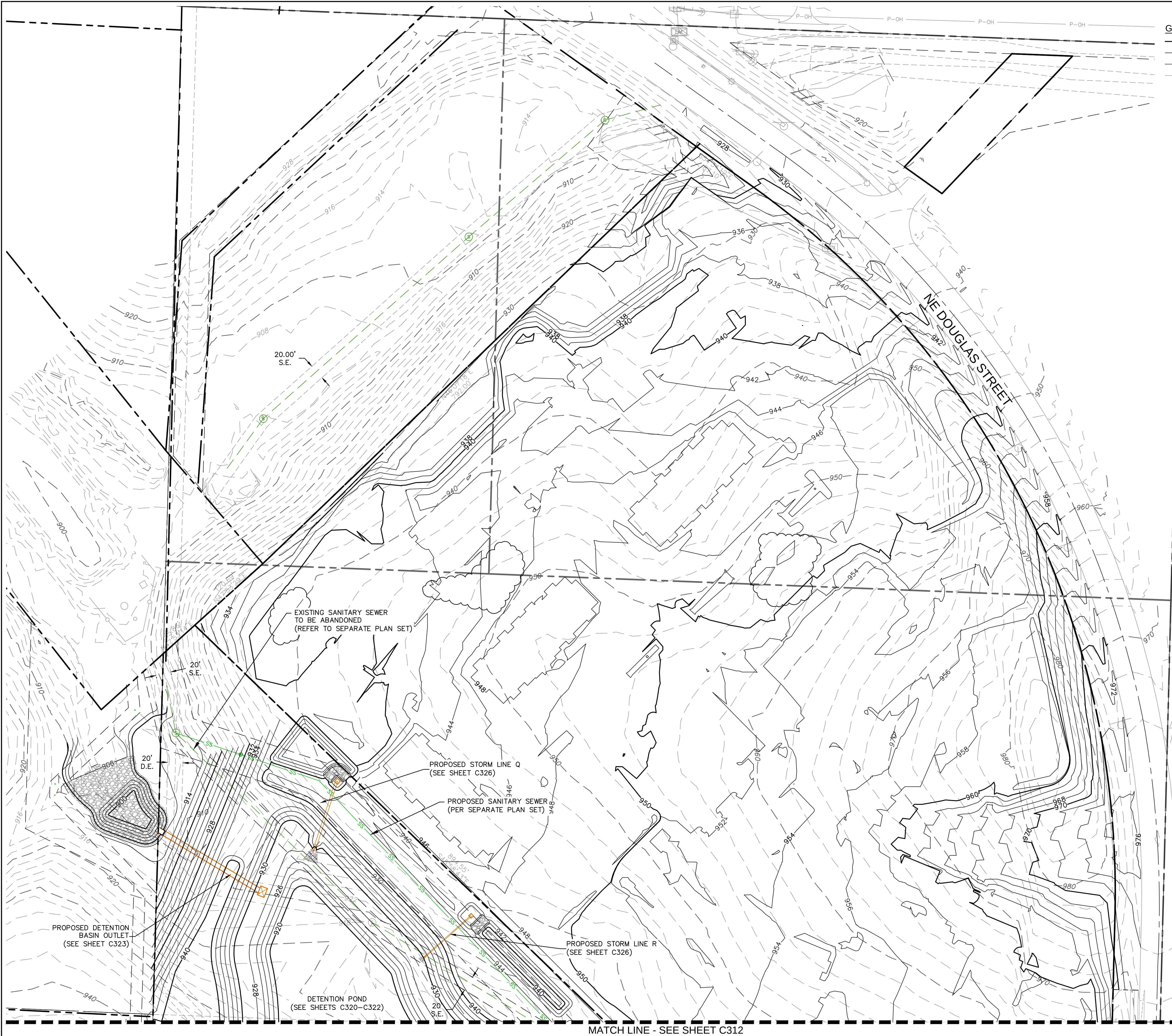
- FINISHED GRADE MAJOR CONTOUR
- FINISHED GRADE MINOR CONTOUR
- EXISTING GRADE MAJOR CONTOUR
- EXISTING GRADE MINOR CONTOUR
- PROPOSED STORM SEWER
- PROPOSED SANITARY SEWER TO BE RELOCATED
- EXISTING SANITARY SEWER

EARTHWORK QUANTITIES		
LOCATION	CUT (C.Y.)	FILL (C.Y.)
ARIA APARTMENTS	139,557	70,893
ZONE 1	91,058	393,869

LIMITS OF DISTURBANCE



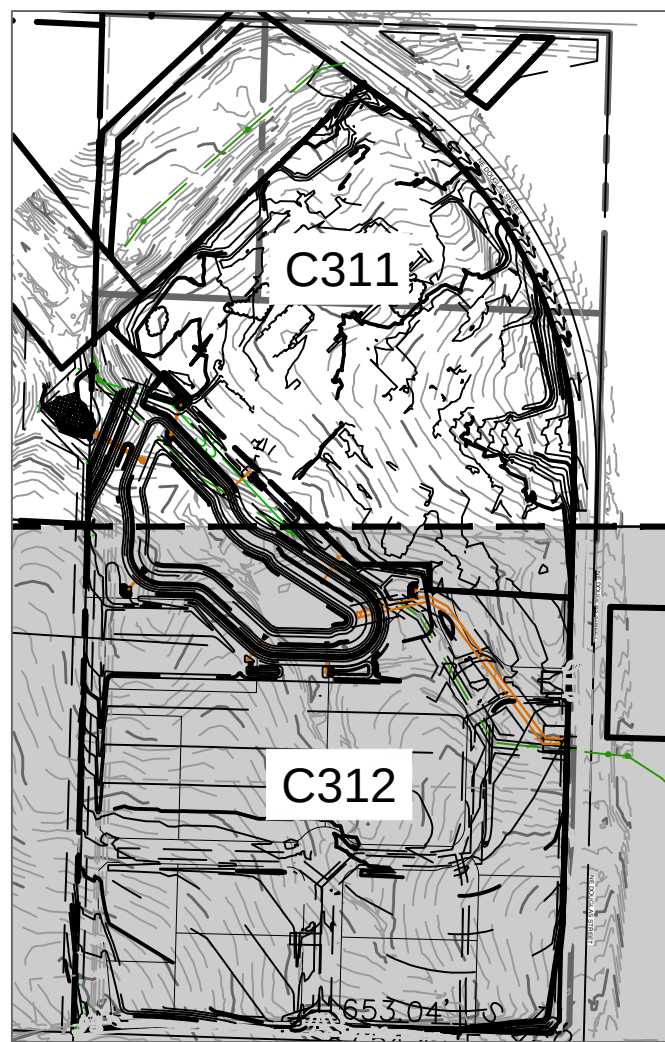
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USER: arcmanov



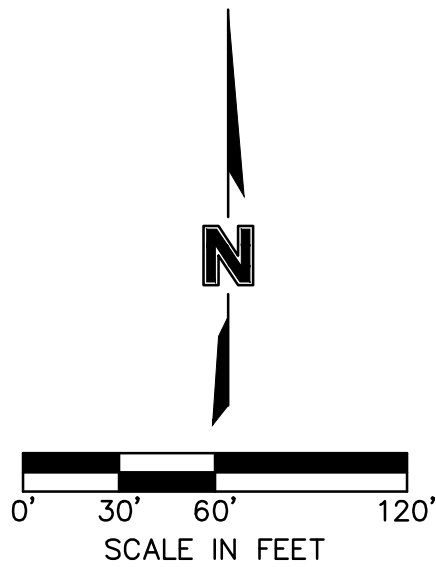
GRADING LEGEND

- 999 FINISHED GRADE MAJOR CONTOUR
- 999 FINISHED GRADE MINOR CONTOUR
- 999 EXISTING GRADE MAJOR CONTOUR
- 999 EXISTING GRADE MINOR CONTOUR
- PROPOSED STORM SEWER
- SS PROPOSED SANITARY SEWER TO BE RELOCATED
- EXISTING SANITARY SEWER

NOTE: PAVEMENT AND OTHER INFRASTRUCTURE IMPROVEMENTS NOT EXPLICITLY DETAILED WITHIN THIS PLAN SET ARE SHOWN FOR REFERENCE ONLY AND WILL BE REVIEWED AND PERMITTED SEPARATELY.



SITE KEY



MATCH LINE - SEE SHEET C312

olsson

Olsson - Civil Engineering
Missouri Certificate of Authority #001592
1301 Burlington Street
North Kansas City, MO 64116
TEL 816.361.1177
www.olsson.com

STATE OF MISSOURI
DAVID L. EICKMAN
NUMBER
PE-2009015436
PROFESSIONAL ENGINEER
DAVID EICKMAN, P.E.
MOR 2009015436

BY
REV. NO.
DATE
REVISIONS DESCRIPTION
REVISIONS

2023

GRADING PLAN (NORTH)
MASS GRADING & EROSION AND SEDIMENT CONTROL PLANS
THE VILLAGE AT DISCOVERY PARK ZONE 1 & ARIA APARTMENTS
NW COLBURN RD & NE DOUGLAS ST
LEE'S SUMMIT, MISSOURI

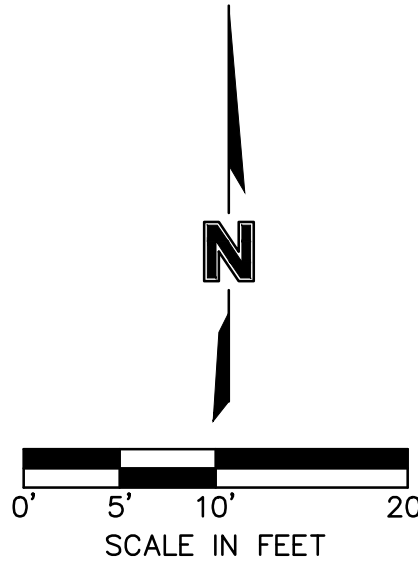
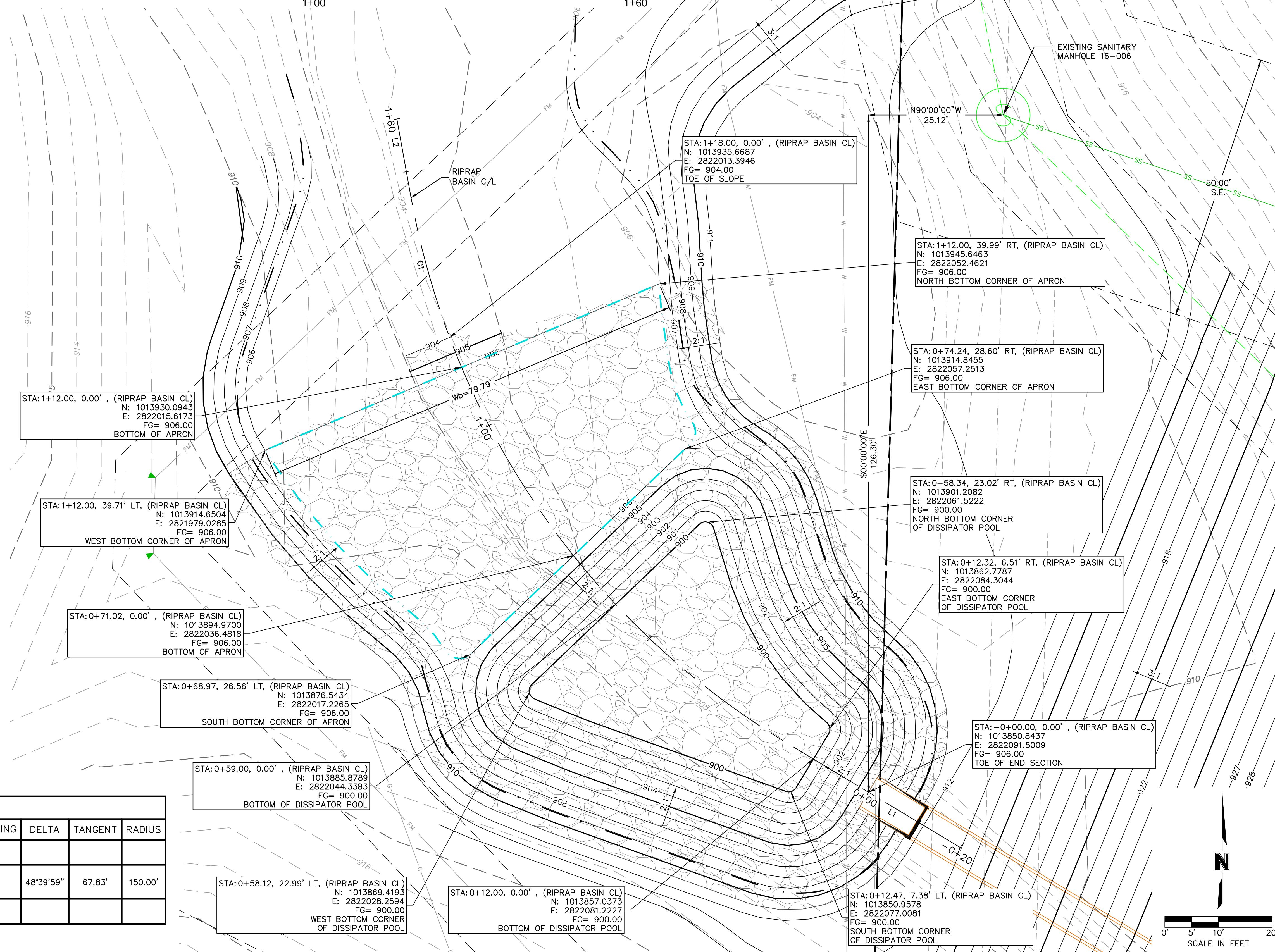
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checked by: AR/JUN
approved by: DE
QA/QC by: JS/NH
project no.: D21-04643
drawing no.: C_GRD01_D2104643
date: 10.17.2023

SHEET
C311



2.50' d_{50} ROCK

RIPRAP BASIN CL									
NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L1		0+20.00 0+17.64	1013840.5211 1013859.9485	2822108.6311 2822076.3915	37.64'	N58°55'37"W			
C1	PC= PI= PT=	0+17.64 0+85.47 1+45.05	1013859.9485 1013894.9588 1013961.7062	2822076.3915 2822018.2926 2822006.2099	127.41'	N34°35'38"W	48°39'59"	67.83'	150.00'
L2		1+45.05 1+60.00	1013961.7062 1013976.4183	2822006.2099 2822003.5467	14.95'	N10°15'38"W			



DAVID EICKMAN, P.E.
MO# 2009015436

[illegible]

SPILLWAY DETAIL PLAN MASS GRADING & EROSION AND SEDIMENT CONTROL PLANS	2023
THE VILLAGE AT DISCOVERY PARK ZONE 1 & ARIA APARTMENTS NW COLBORN RD & NE DOUGLAS ST	
EE'S SUMMIT, MISSOURI	

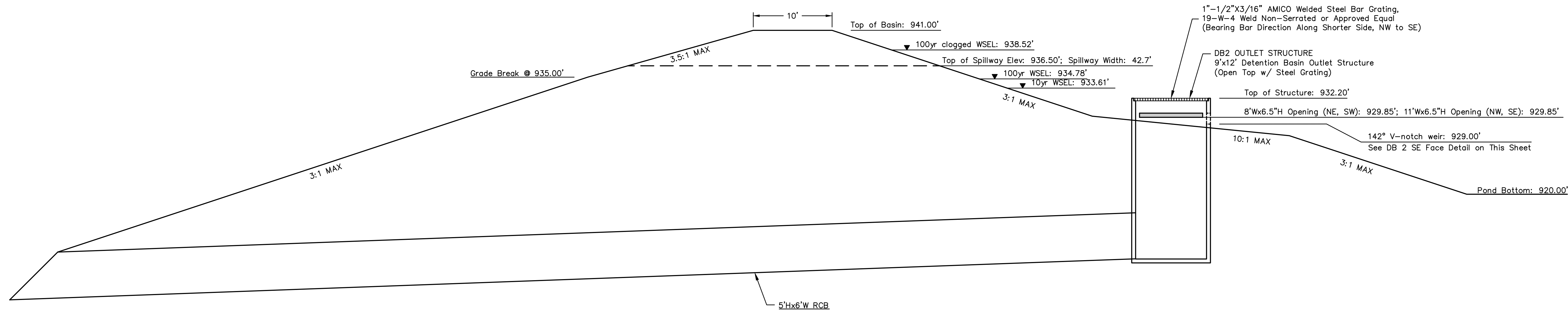
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drawing no.: C GRD02 D2104643
date: 10.17.2023

SHEET
C313

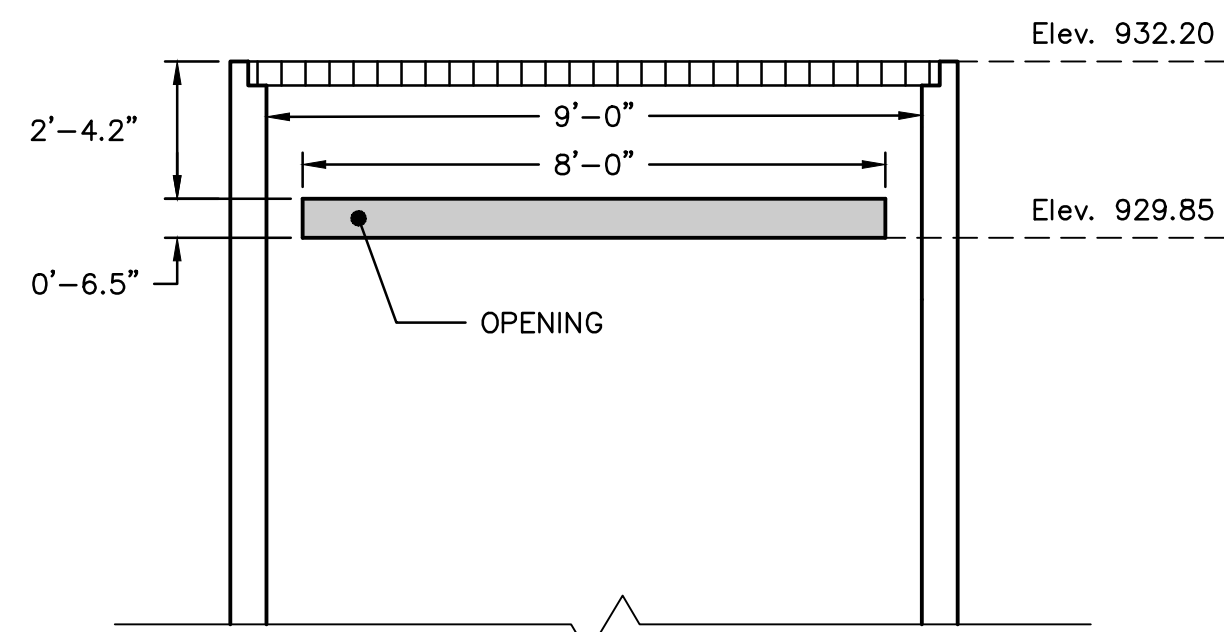
olsson

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1301 Burlington Street
North Kansas City, MO 64116
TEL 816.361.1177
www.olsson.com

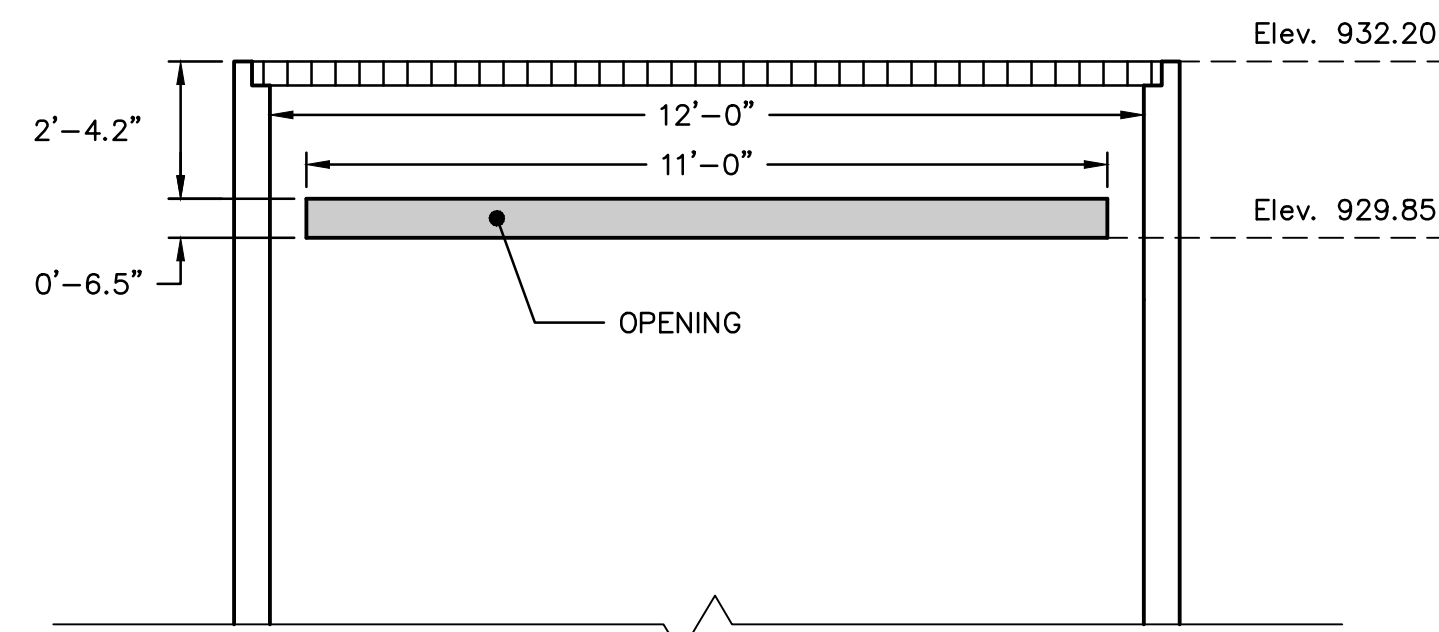
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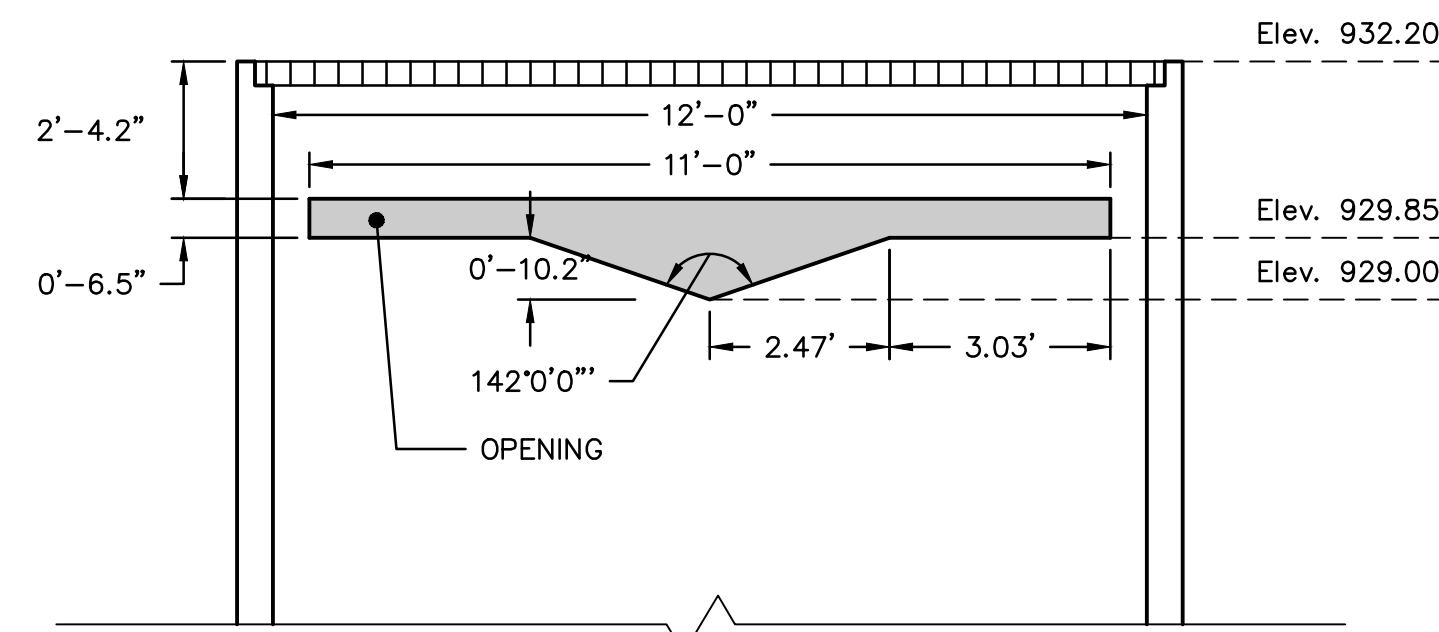
DETENTION BASIN OUTLET STRUCTURE DETAIL
NOT TO SCALE



DB2 NE & SW FACES DETAIL
NOT TO SCALE



DB2 NW FACE DETAIL
NOT TO SCALE



DB2 SE FACE DETAIL
NOT TO SCALE

<u>BASIN DETAILS</u>	
<u>BASIN EMERGENCY SPILLWAY DETAILS</u>	
TYPE	RECTANGULAR BROAD CRESTED WEIR
LENGTH	87.0'
WIDTH	42.7'
ELEVATION	936.50'
DEPTH	4.50'
TOP ELEVATION	941.00'
100-YR FLOW	0.00 CFS
100-YR CLOGGED FLOW	750.46 CFS (AT 2.02' FLOW DEPTH)
<u>BASIN HYDROLOGIC DETAILS</u>	
PERMANENT POOL ELEVATION	929.00'
10-YR FLOW, WSEL, DEPTH, STORAGE	423.35 CFS, 933.61', 4.61 FT, 16.83 AC-FT
100-YR FLOW, WSEL, DEPTH, STORAGE	767.11 CFS, 934.78', 5.78 FT, 21.71 AC-FT
100-YR CLOGGED FLOW, WSEL, DEPTH, STORAGE	750.46 CFS, 938.52', 9.52 FT, 38.45 AC-FT

SPILLWAY DETAILS

MASS GRADING & EROSION AND SEDIMENT CONTROL PLANS

THE VILLAGE AT DISCOVERY PARK ZONE 1 & ARIA APARTMENTS
NW COLBERN RD & NE DOUGLAS ST

LEE'S SUMMIT, MISSOURI

2023

[illegible]

DAVID EICKMAN, P.E.
MO# 2009015436

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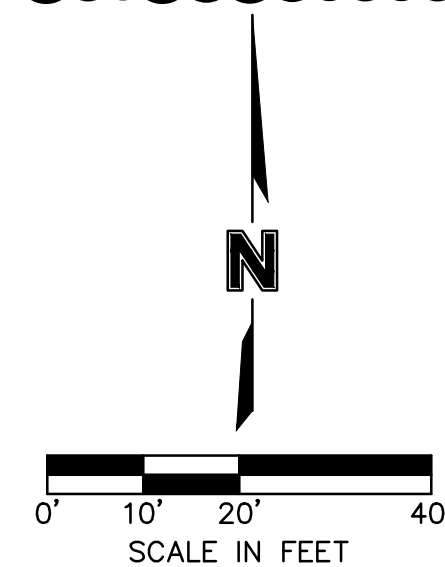
EMBANKMENT FILL AND COMPACTION REQUIREMENTS

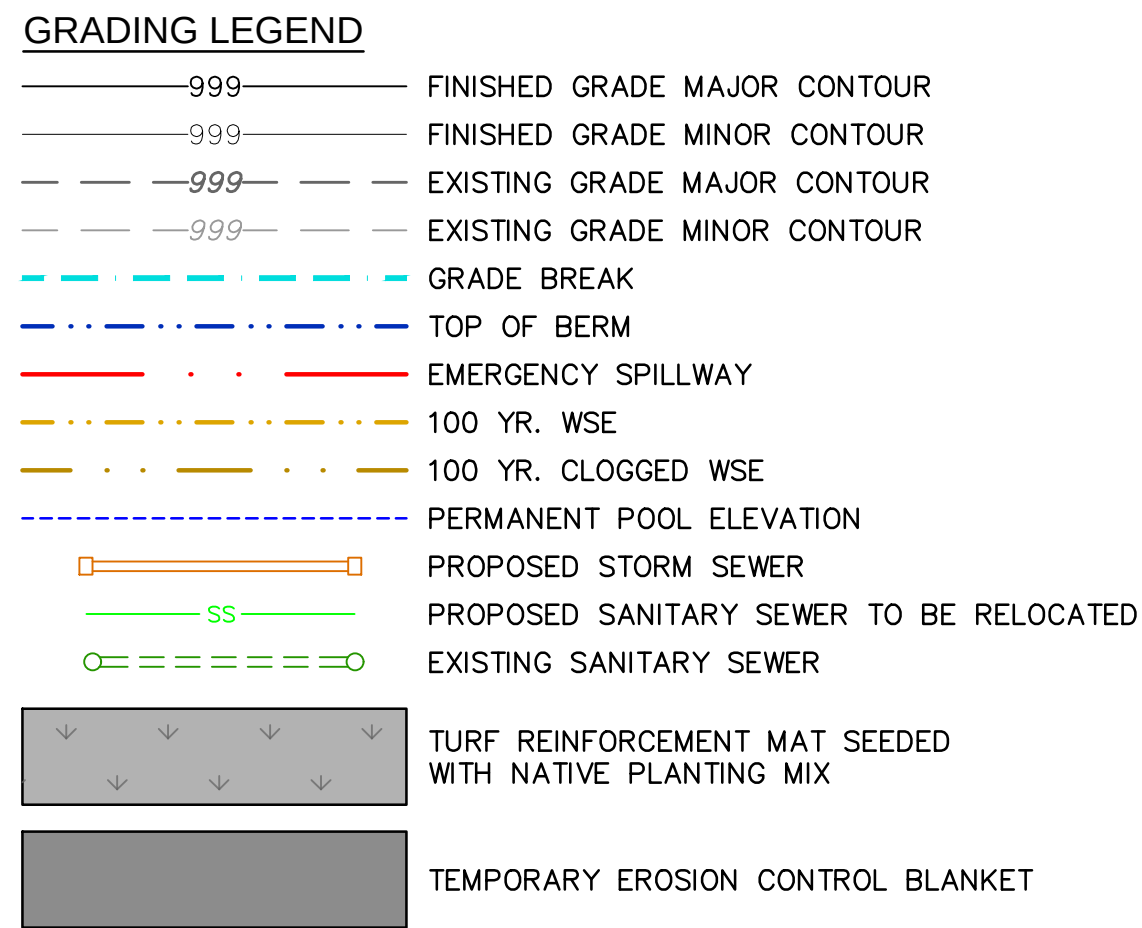
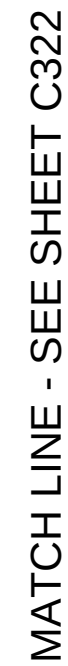
1. THIRD PARTY TESTING REQUIRED FOR CONSTRUCTION OF THE DETENTION BASIN.
2. REMOVE TOPSOIL AND ORGANIC DIRT FROM THE AREA.
3. PROOF ROLL TO CHECK THE SUBGRADE. REMOVE OR REPAIR ANY UNSTABLE AREA IN ACCORDANCE WITH THIRD PARTY TESTER.
4. ALL EMBANKMENT FILLS SHOULD CONSIST OF APPROVED MATERIALS:
 - MAXIMUM ORGANIC CONTENT: 4%
 - LIQUID LIMIT, LL: $30 < LL < 50$
 - MAXIMUM STANDARD PERMEABILITY, Ks: $1.5E-05$ CM/SEC
5. AS DEFINED ABOVE, SUITABLE FILL MATERIALS SHOULD BE PLACED IN LOOSE LIFTS OF 8 INCHES OR LESS AND COMPACTED USING APPROPRIATELY SIZED AND TYPE EQUIPMENT. EMBANKMENT FILL SHOULD BE COMPACTED TO AT LEAST 95 PERCENT OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY AT A MOISTURE CONTENT BETWEEN ONE (1) PERCENT BELOW OPTIMUM MOISTURE CONTENT AND FOUR (4) PERCENT ABOVE OPTIMUM MOISTURE CONTENT.
6. WHERE REQUIRED, SLOPES SHOULD BE FLATTENED TO AT LEAST 3H:1V AND SUITABLY BENCHED PRIOR TO PLACEMENT OF NEW FILLS. IF CUTBACKS INTO EXISTING SLOPES ARE REQUIRED TO REMOVE DISTURBED OR OTHERWISE UNSUITABLE MATERIAL, THE BENCHES SHOULD BE CUT PARALLEL TO THE EXISTING SITE CONTOURS. THE BENCHES SHOULD HAVE MAXIMUM VERTICAL FACE HEIGHTS OF THREE (3) FEET AND MINIMUM VERTICAL FACE HEIGHTS OF ONE (1) FOOT.

NOTE

1. DEVELOPER TO PROVIDE EMERGENCY DRAWDOWN FOR THE BASIN IF NECESSARY IN THE FUTURE BY MEANS OF PUMPING.

1. DEVELOPER TO PROVIDE EMERGENCY DRAWDOWN FOR THE BASIN IF NECESSARY IN THE FUTURE BY MEANS OF PUMPING.



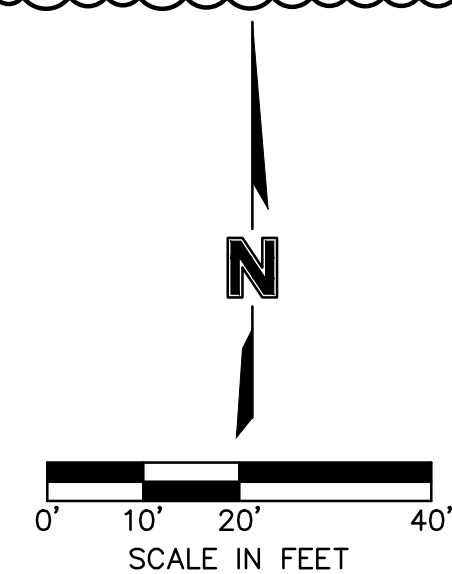


- ## EMBANKMENT FILL AND COMPACTION REQUIREMENTS

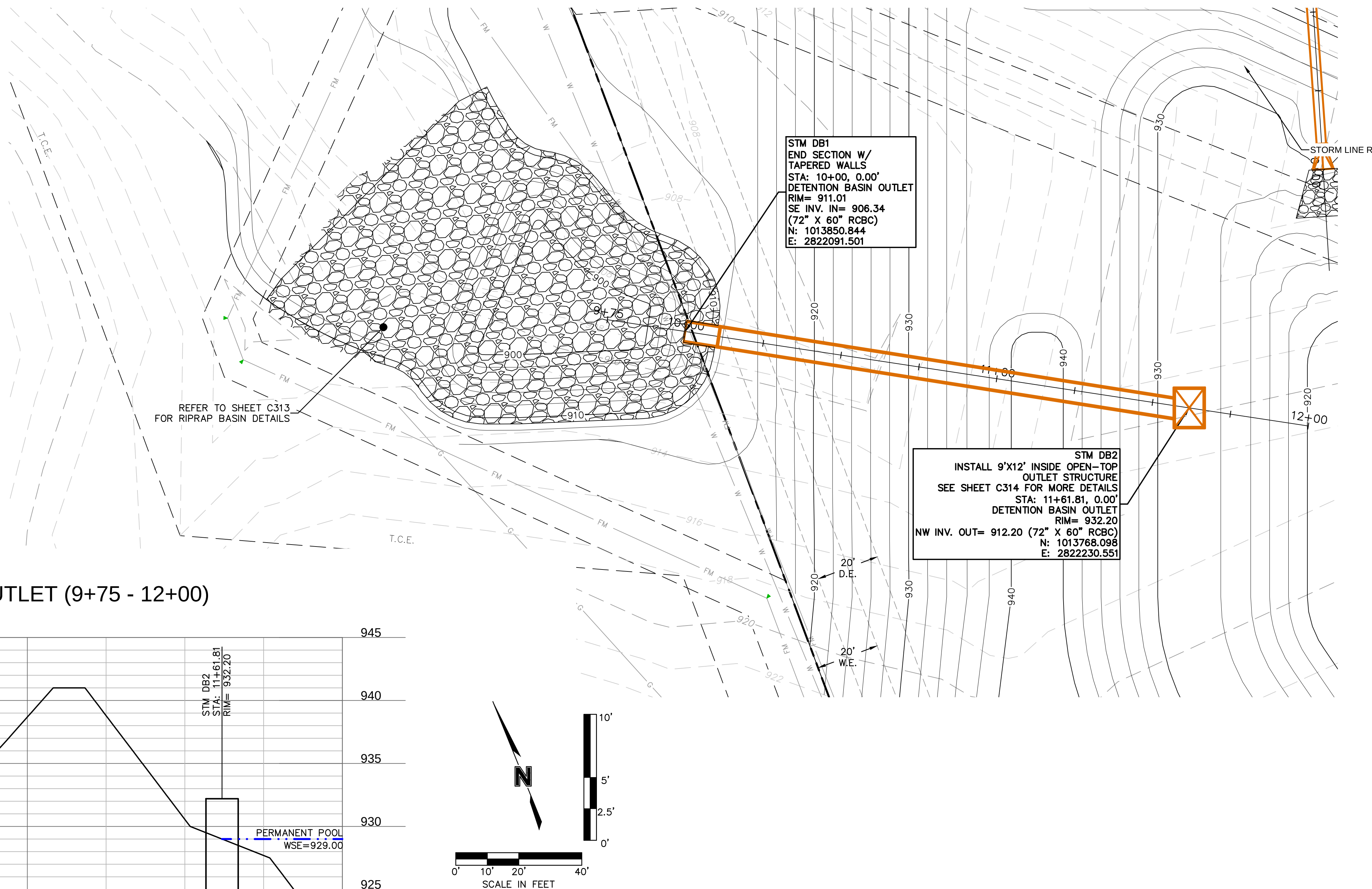
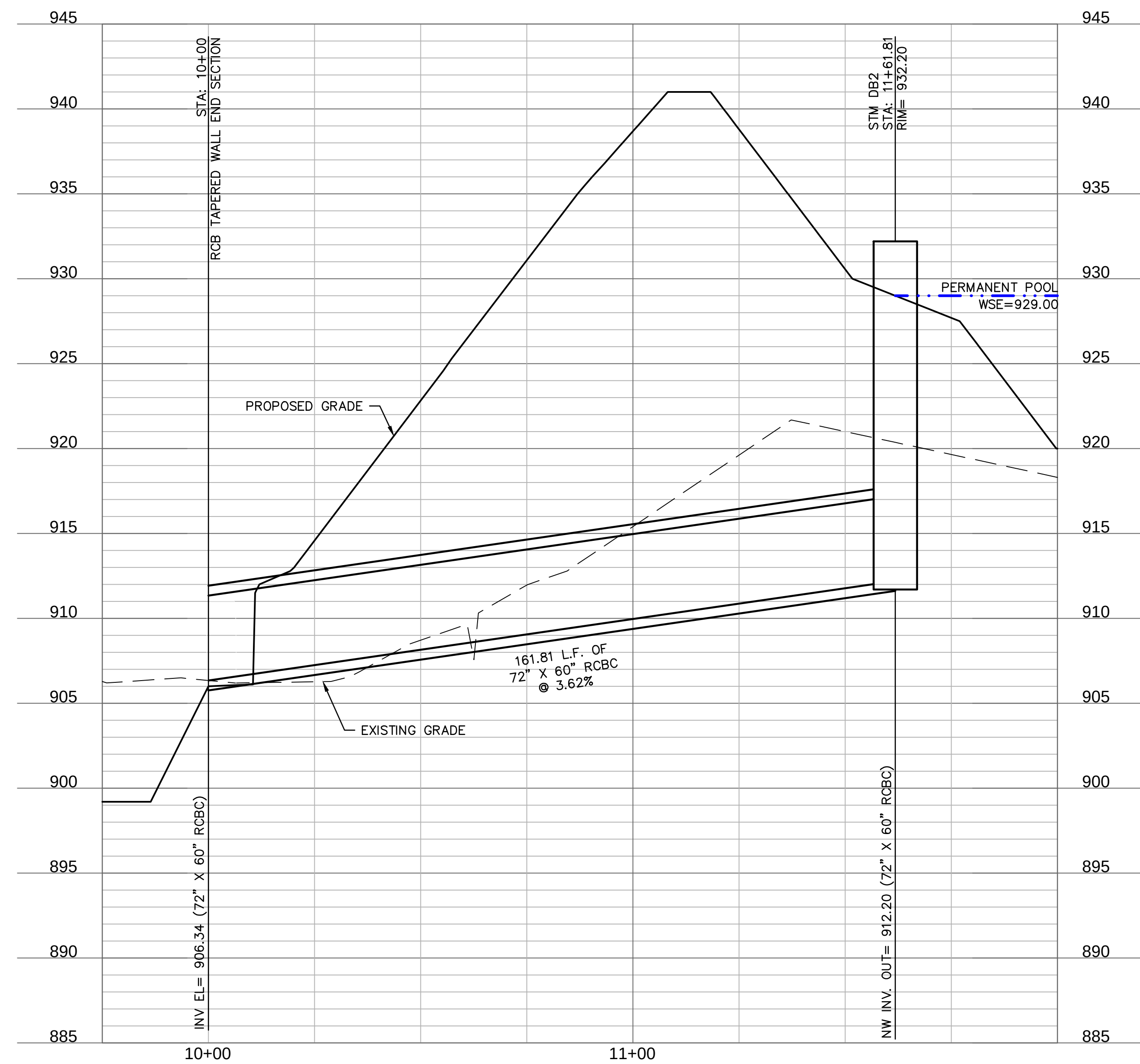
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2. REMOVE TOPSOIL AND ORGANIC DIRT FROM THE AREA.
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4. ALL EMBANKMENT FILLS SHOULD CONSIST OF APPROVED MATERIALS:
 - MAXIMUM ORGANIC CONTENT: 4%
 - LIQUID LIMIT, $LL_{30} \leq LL \leq 60$
 - MAXIMUM STANDARD PERMEABILITY, $K_s: 1.5E-05$ CM/SEC
5. AS DEFINED ABOVE, SUITABLE FILL MATERIALS SHOULD BE PLACED IN LOOSE LIFTS OF 8 INCHES OR LESS AND COMPACTED USING APPROPRIATELY SIZED AND TYPE EQUIPMENT. EMBANKMENT FILL SHOULD BE COMPACTED TO AT LEAST 95 PERCENT OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY AT A MOISTURE CONTENT BETWEEN ONE (1) PERCENT BELOW OPTIMUM MOISTURE CONTENT AND FOUR (4) PERCENT ABOVE OPTIMUM MOISTURE CONTENT.
6. WHERE REQUIRED, SLOPES SHOULD BE FLATTENED TO AT LEAST 3H:1V AND SUITABLY BENDED PRIOR TO PLACEMENT OF NEW FILL IF CUTS ARE INTO EXISTING SLOPES ARE REQUIRED TO REMOVE DISTURBED OR OTHERWISE UNSUITABLE MATERIAL. THE BENCHES SHOULD BE CUT PARALLEL TO THE EXISTING SITE CONTOURS. THE BENCHES SHOULD HAVE MAXIMUM VERTICAL FACE HEIGHTS OF THREE (3) FEET AND MINIMUM VERTICAL FACE HEIGHTS OF ONE (1) FOOT.

NOTE

1. DEVELOPER TO PROVIDE EMERGENCY DRAWDOWN FOR THE BASIN IF NECESSARY IN THE FUTURE BY MEANS OF PUMPING.



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STORM SEWER PLAN & PROFILES
MASS GRADING & EROSION AND SEDIMENT CONTROL PLANS

THE VILLAGE AT DISCOVERY PARK ZONE 1 & ARIA APARTMENTS
NW COLBERN RD & NE DOUGLAS ST

LEE'S SUMMIT, MISSOURI

r: _____ GS/OS/JN
 by: _____ AR/JN
 d by: _____ DE
 by: _____ JS/NH
 o.: _____ D21-04643
 no.: C DBP02 D2104643
 10.17.2023

SHEET
C323

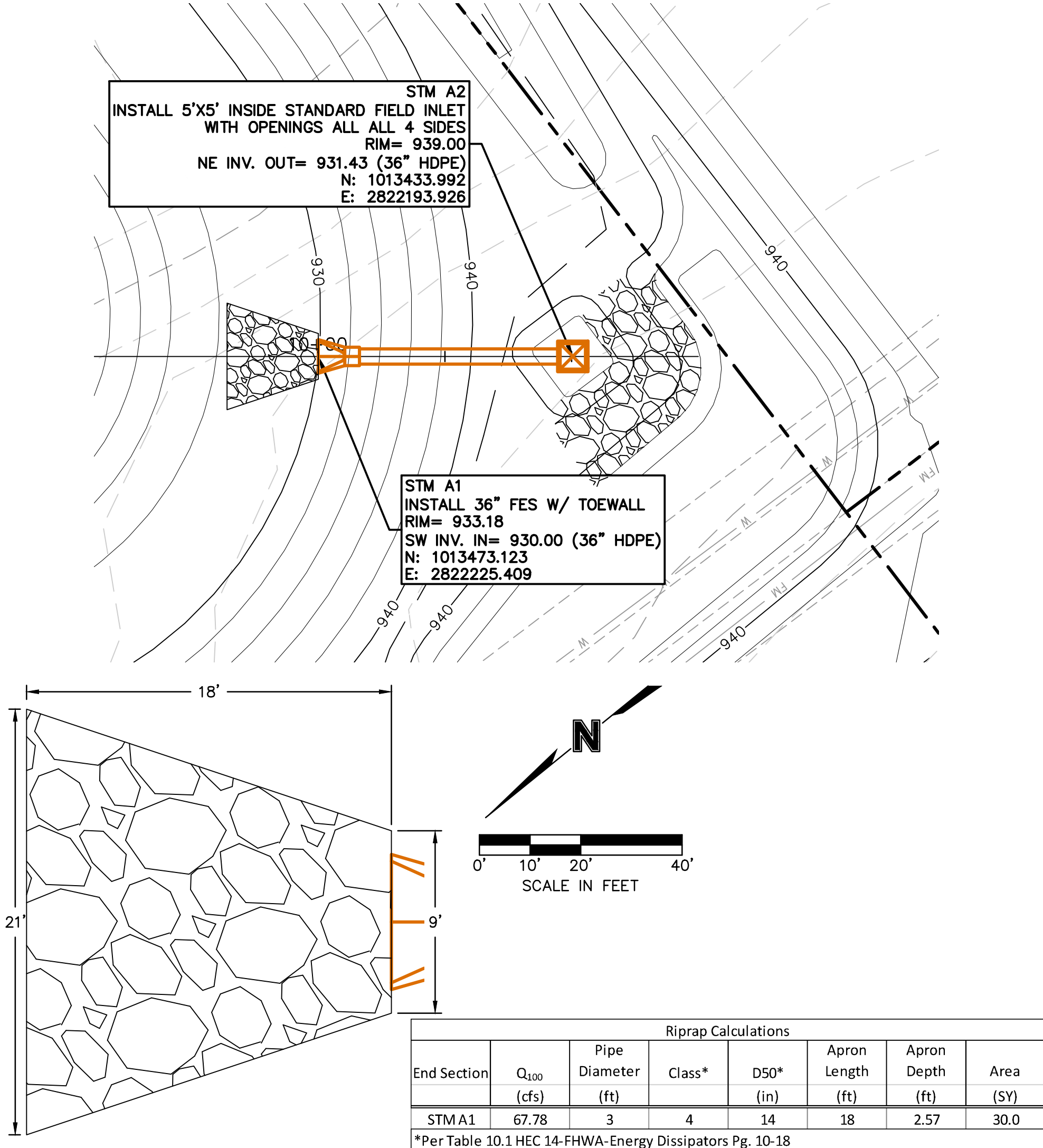
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DAVID EICKMAN, P.E.
MO# 2009015436

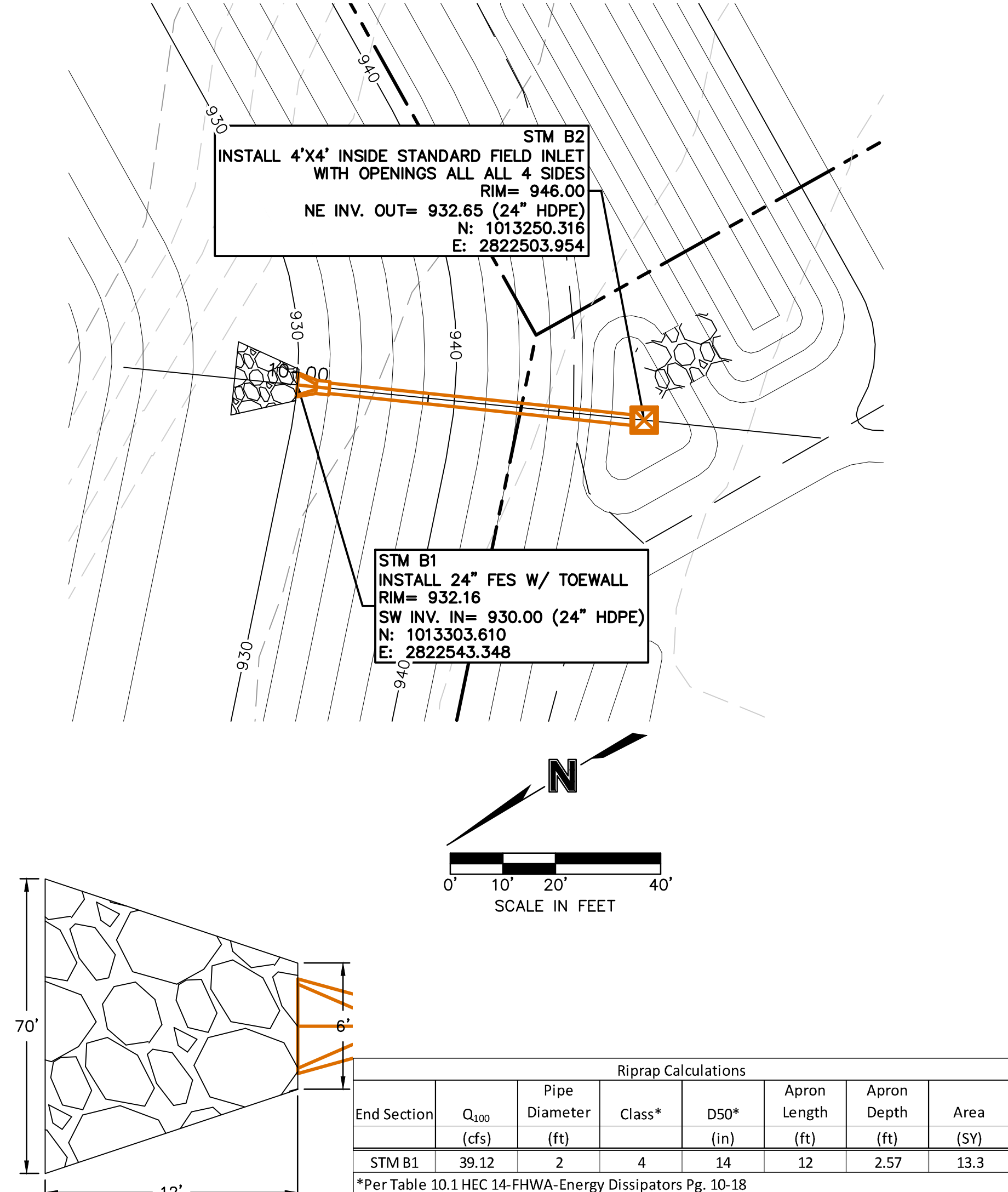
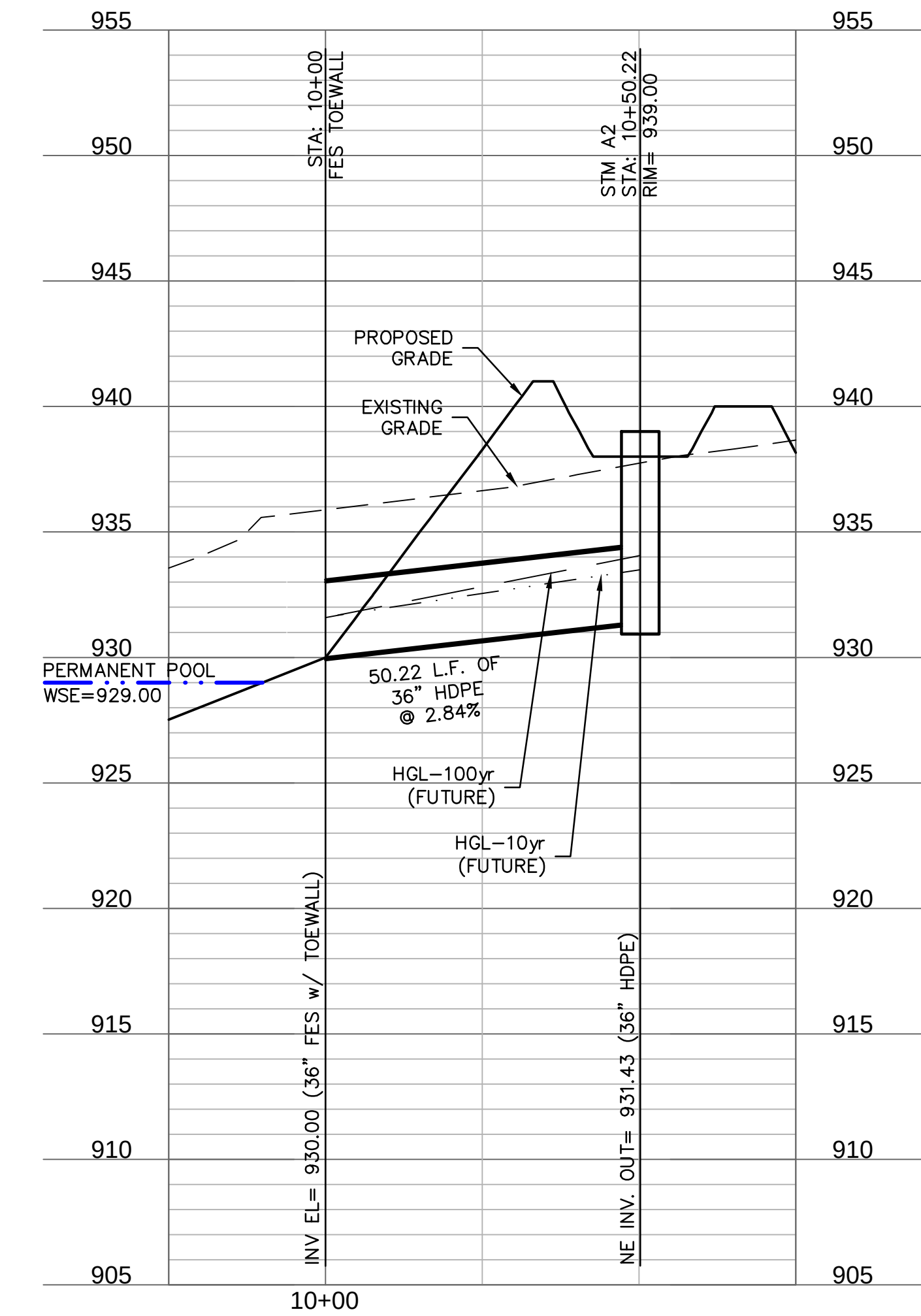
olsson

Olsson - Civil Engineering
Missouri Certificate of Authority #001592
1301 Burlington Street
North Kansas City, MO 64116
TEL 816.361.1177
www.olsosn.com

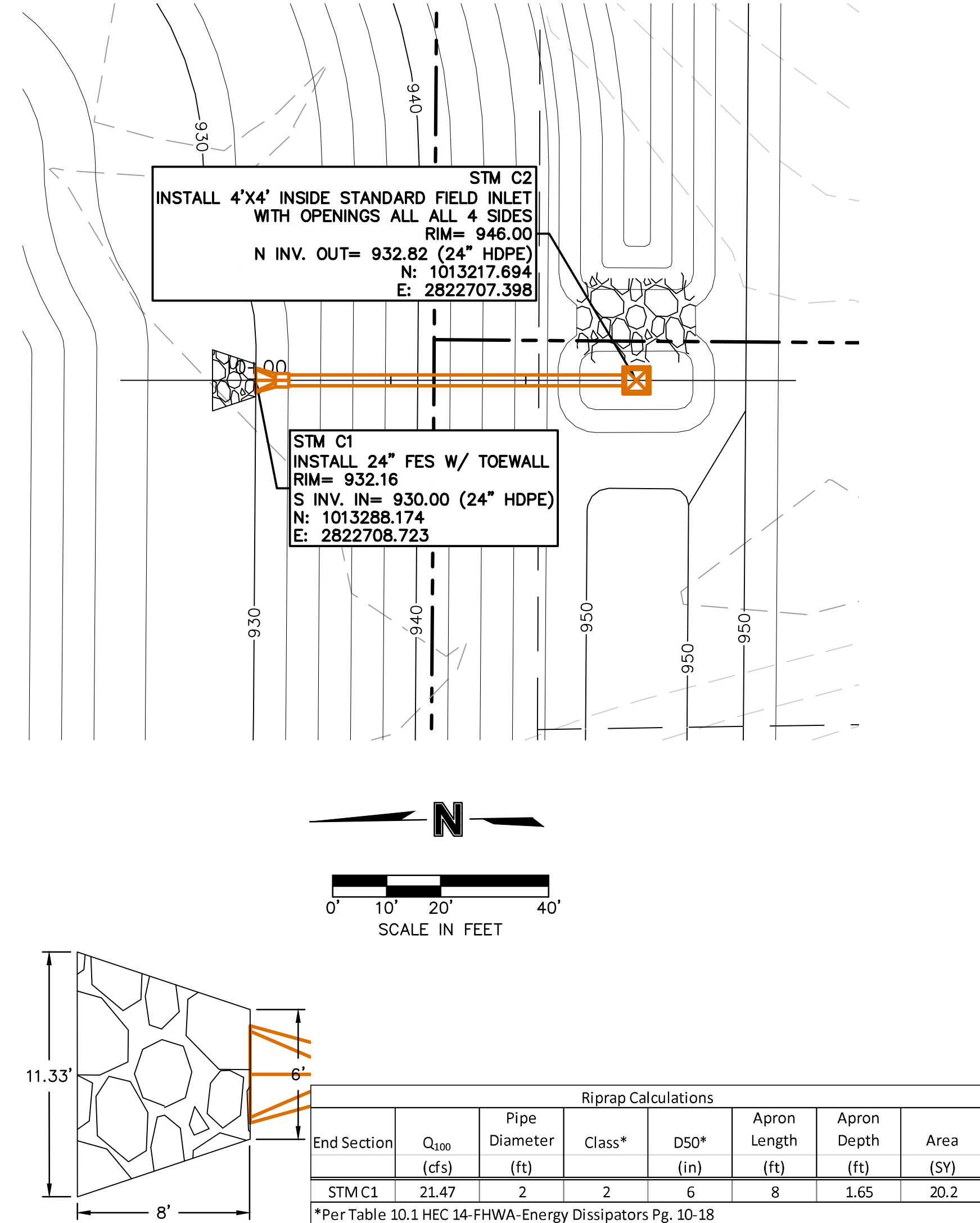
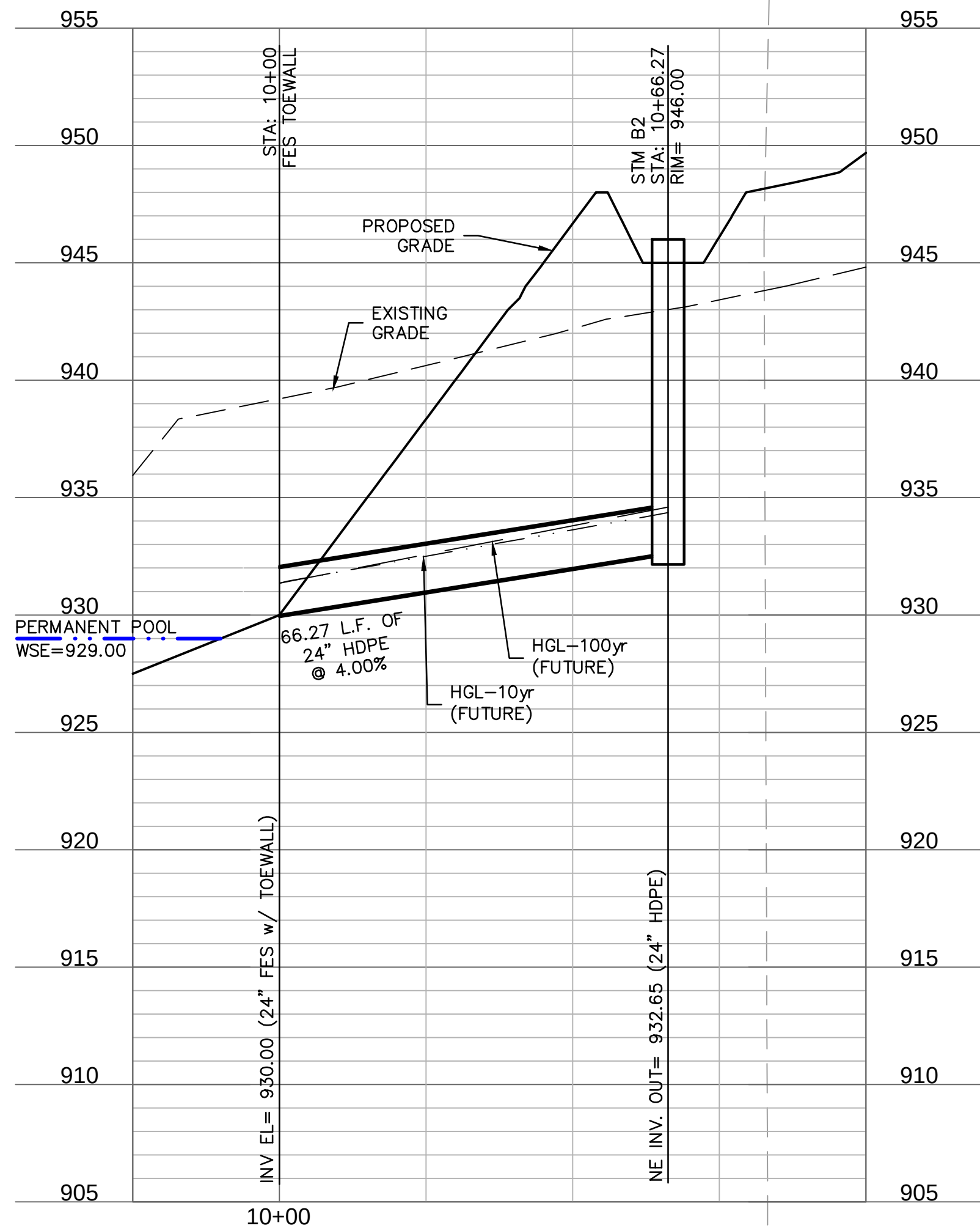
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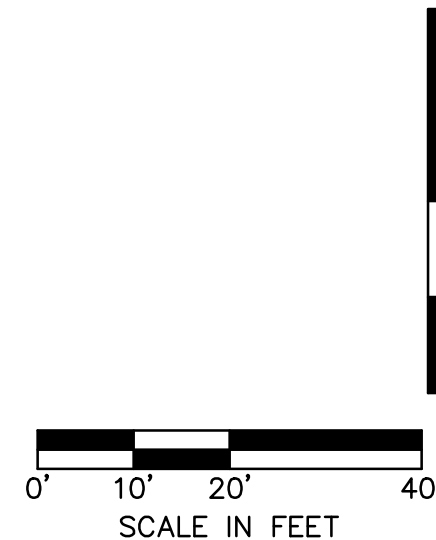
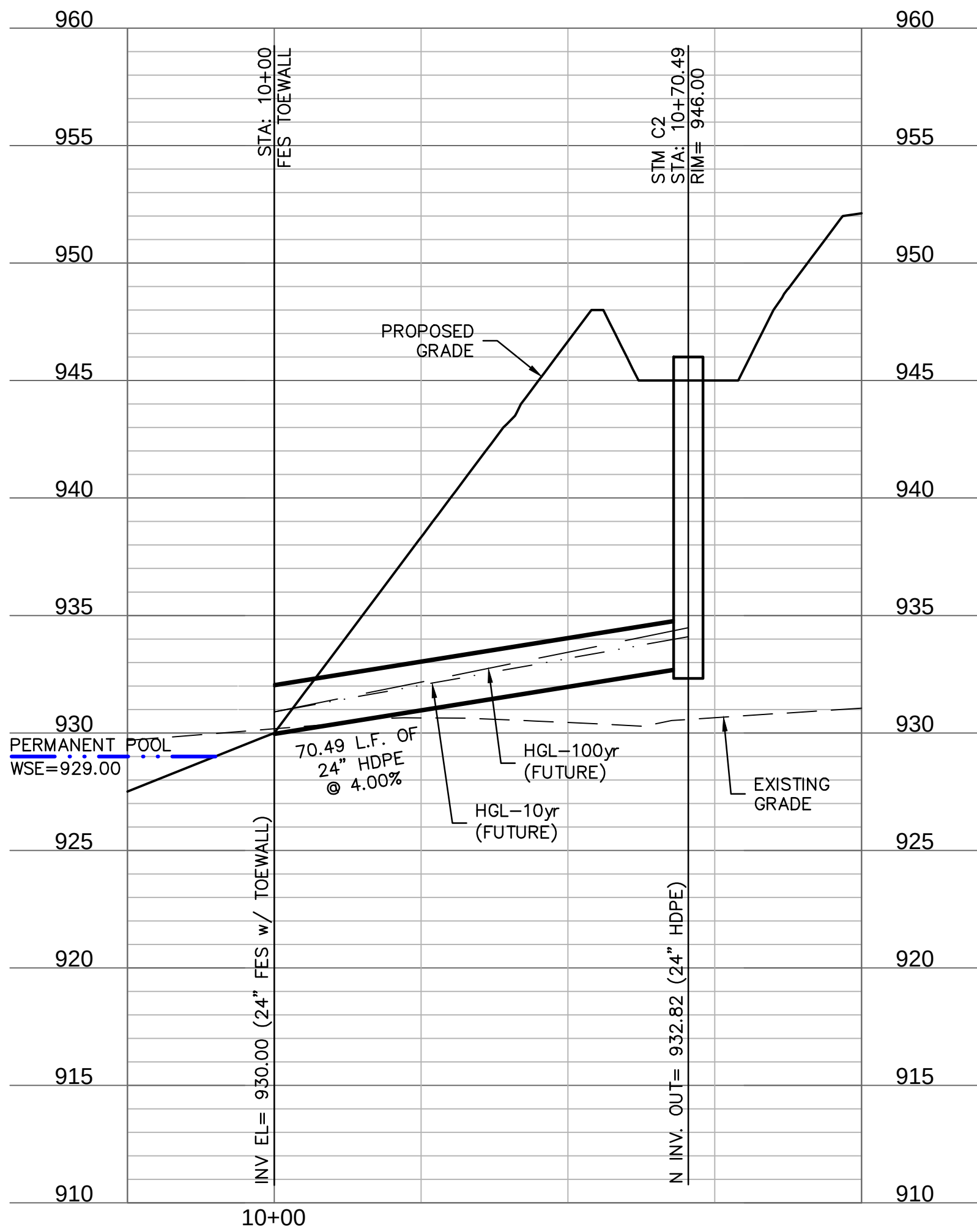
STORM LINE A (9+75 - 10+75)



STORM LINE B (9+75 - 11+00)



STORM LINE C (9+75 - 11+00)



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STATE OF MISSOURI
DAVID L. EICKMAN
NUMBER
PE-2009015436
08/21/20
PROFESSIONAL ENGINEER

DAVID EICKMAN, P.E.
MOR 2009015436

BY

REVISIONS DESCRIPTION

DATE

REV. NO.

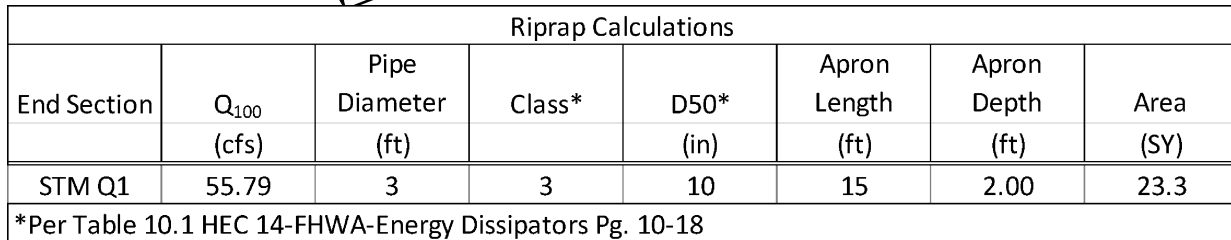
REVISIONS

2023

STORM SEWER PLAN & PROFILES
MASS GRADING & EROSION AND SEDIMENT CONTROL PLANS
THE VILLAGE AT DISCOVERY PARK ZONE 1 & ARIA APARTMENTS
NW COLBURN RD & NE DOUGLAS ST
LEE'S SUMMIT, MISSOURI

drawn by: GS/SOSUN
checked by: AR/JUN
approved by: DE
QA/QC by: JS/NH
project no.: D21-04643
drawing no.: C_DBP02_D2104643
date: 10.17.2023

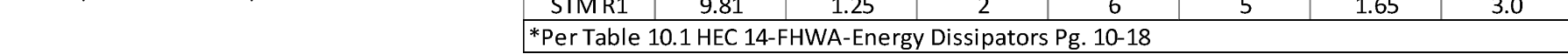
SHEET
C324



Profile view of a sanitary sewer line. The vertical axis shows elevation from 905 to 955 feet. The horizontal axis shows stationing from 10+00 to 11+00.

Key features and labels:

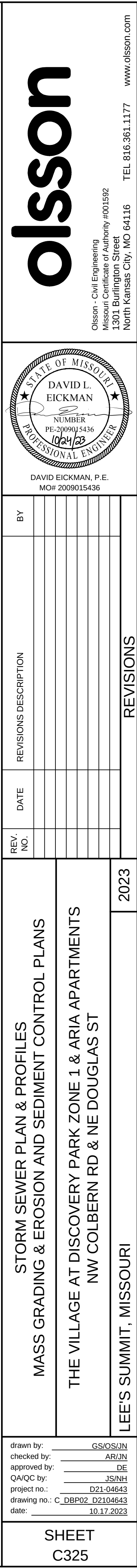
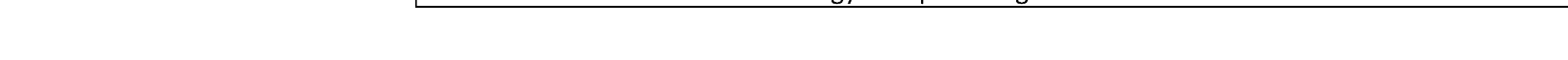
- PROVIDE 18" MIN. OF COVER**: Label pointing to the proposed grade line.
- EXISTING GRADE**: Label pointing to the existing ground line.
- PROPOSED GRADE**: Label pointing to the proposed sewer line.
- PERMANENT POOL**: Label pointing to a blue line at WSE=929.00.
- 96.13 L.F. OF 36" HDPE @ 0.80%**: Label pointing to the sewer line segment.
- 12" PVC SDR-21 SANITARY SEWER INV. EL.= 919.90**: Label pointing to the sewer line.
- STA: 10+00 FES TOEWALL**: Stationing label at the left end.
- STM 02 STA: 10+96.13 RIM= 938.00**: Stationing label at the right end.
- INV EL.= 929.00 (36" FES w/ TOEWALL)**: Invert elevation label at the left end.
- S INV. OUT= 929.77 (36" HDPE)**: Invert elevation label at the right end.



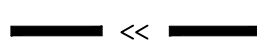
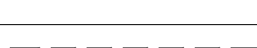
Profile view of a sewer line. The vertical axis shows elevation from 905 to 955 feet. The horizontal axis shows stationing from 10+00 to 10+83.55.

Key features and data points:

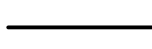
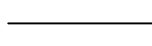
- STM R1:** STA: 10+00, NE INV. EL= 930.00 (15" HDPE)
- STM R2:** STA: 10+83.55, RIM= 942.00
- PROPOSED GRADE:** Solid line showing the planned ground surface.
- EXISTING GRADE:** Dashed line showing the current ground surface.
- PERMANENT POOL:** Indicated by a blue line at WSE=929.00.
- 83.55 L.F. OF 15" HDPE @ 5.75%:** Segment of the sewer pipe between the two manholes.
- 12" PVC SDR-21 SANITARY SEWER:** Pipe segment with INV EL= 921.50.
- SW INV. OUT= 934.80 (15" HDPE):** Stormwater inlet structure.



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LEGEND	
PHASE A	
	SILT FENCE
	TEMPORARY DIVERSION BERM
	CONCRETE WASHOUT
	TEMPORARY STONE CONSTRUCTION ENTRANCE
	DRAINAGE AREA TO BASIN/TRAP
	LIMITS OF DISTURBANCE

GRADING LEGEND

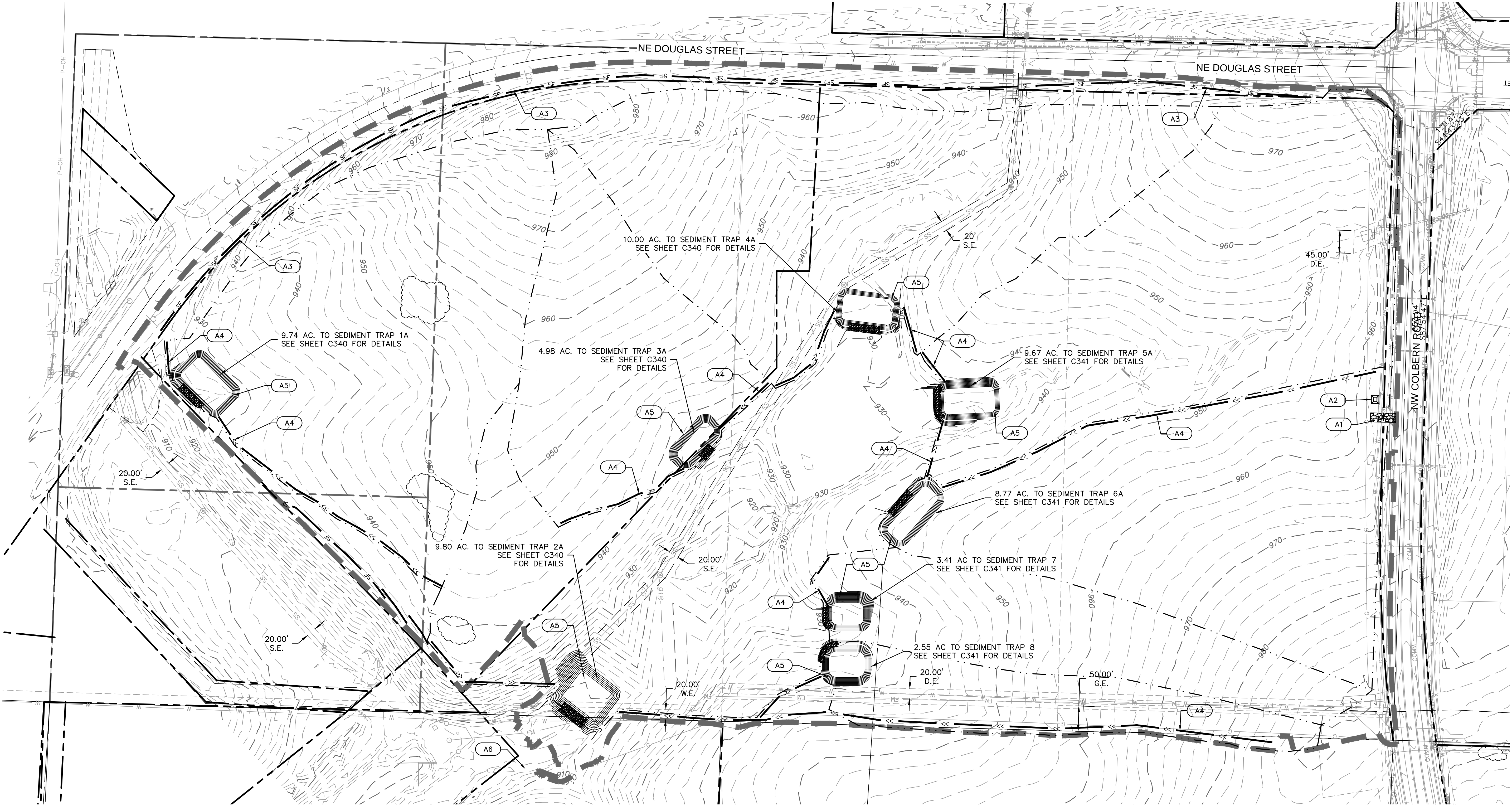
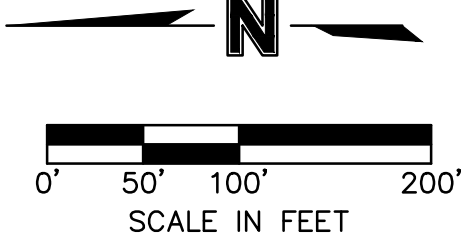
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	FINISHED GRADE MINOR CONTOUR
	EXISTING GRADE MAJOR CONTOUR
	EXISTING GRADE MINOR CONTOUR

NOTE:
THE SITE DISTURBANCE PLANS INDICATES THE FINAL PLACEMENT OF EROSION CONTROL DEVICES. THE CONTRACTOR(S) MAY PROCEED WITH THE CONSTRUCTION PRIOR TO THE FINAL PLACEMENT OF THESE DEVICES BY PROVIDING ADDITIONAL DEVICES TO CONTROL EROSION ON THEIR ITEMS OF WORK. THESE DEVICES SHALL BE MAINTAINED UNTIL THE FINAL DEVICES ARE IN PLACE.

CONTRACTOR TO KEEP SWPPP REPORTS AND MDNR PERMIT IN THE ON-SITE CONSTRUCTION OFFICE TRAILER. TRAILER LOCATION TO BE DETERMINED BY CONTRACTOR

SEDIMENT TRAPS MUST BE FULLY INSTALLED PRIOR TO ANY SITE DISTURBANCE WITHIN THE TRIBUTARY AREA.

SEDIMENT TRAPS ARE SHOWN AS NEEDED PRIOR TO DISTURBING THE SITE. CONTRACTOR IS RESPONSIBLE FOR CONTROLLING ALL SEDIMENT RUNOFF DURING TRANSITION TO FINAL CONDITIONS AS SHOWN ON SHEET C370.



EROSION CONTROL PHASING CHART				
PROJECT PHASE	EROSION CONTROL BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER PHASE	NOTES:
A - PRE-MASS GRADING	A1	CONSTRUCTION ENTRANCE	D	INSTALL PER APWA DETAIL ESC-01, PRIOR TO PERFORMING ANY OTHER ACTIVITIES ON SITE
	A2	CONCRETE WASHOUT	D	INSTALL PER APWA DETAIL ESC-01, PRIOR TO PERFORMING ANY OTHER ACTIVITIES ON SITE
	A3	SILT FENCE	D	INSTALL PER APWA DETAIL ESC-03, PRIOR TO PERFORMING ANY OTHER ACTIVITIES ON SITE
	A4	DIVERSION BERM	D	INSTALL PER APWA DETAIL ESC-05, AND CONTRACTOR SHALL ADJUST AS NECESSARY THROUGHOUT CONSTRUCTION TO ENSURE SEDIMENT REMAINS CONTROLLED ON SITE.
	A5	SEDIMENT TRAP	D	INSTALL PER APWA DETAIL ESC-08
	A6	ROCK CHECK DAM	D	INSTALL PER APWA DETAIL ESC-10
UPON REMOVAL CONTRACTOR TO OVER-EXCAVATE SEDIMENT TRAPS, FULLY REMOVING ALL SILT, AND FILLING IN CONTROLLED LIFTS TO PREVENT VOIDS OR EXCESSIVE SETTLING THAT COULD IMPACT BUILDING FOUNDATIONS.				
B - INTERIM	B1	EROSION CONTROL BLANKET/TRM	D	INSTALL PER APWA DETAIL ESC-02
	B2	SILT FENCE	D	INSTALL PER APWA DETAIL ESC-03
	B3	DIVERSION BERM	D	INSTALL PER APWA DETAIL ESC-05
	B4	SEDIMENT TRAP	D	INSTALL PER APWA DETAIL ESC-08
	B5	AREA INLET PROTECTION	D	INSTALL PER APWA DETAIL ESC-07
	B6	ROCK CHECK DAM	D	INSTALL PER APWA DETAIL ESC-10
	B7	SLOPE INTERRUPTS	D	INTALL PER APWA DETAIL ESC-09 OR APPROVED EQUAL
MAINTAIN ALL INSTALLED EROSION CONTROL DEVICES				
C - DISTURBED AREA STABILIZATION	C1	ESTABLISH SEEDING AND STABILIZATION OUTSIDE OF SEDIMENT BASIN AND TRAPS		SITE STABILIZATION PER LOCAL CODES AND ORDINANCES. AT A MINIMUM STABILIZATION SHALL CONFORM WITH APWA SECTION 2406. COORDINATE ALL STABILIZATION WITH EROSION CONTROL MEASURES INDICATED IN SITE DEVELOPMENT PLANS.

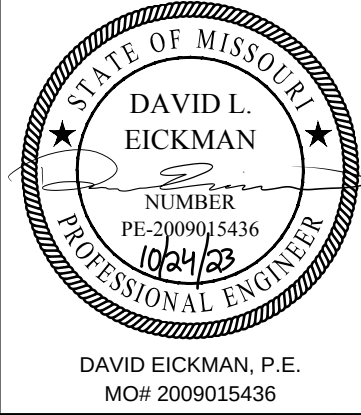
EROSION CONTROL PLAN (PHASE A)
MASS GRADING & EROSION AND SEDIMENT CONTROL PLANS

THE VILLAGE AT DISCOVERY PARK ZONE 1 & ARIA APARTMENTS
NW COLBERN RD & NE DOUGLAS ST

LEE'S SUMMIT, MISSOURI

drawn by: GS/SOS/JN
checked by: AR/JN
approved by: DE
QA/QC by: DE
project no.: D21-04643
drawing no.:
date: 06-02-2023

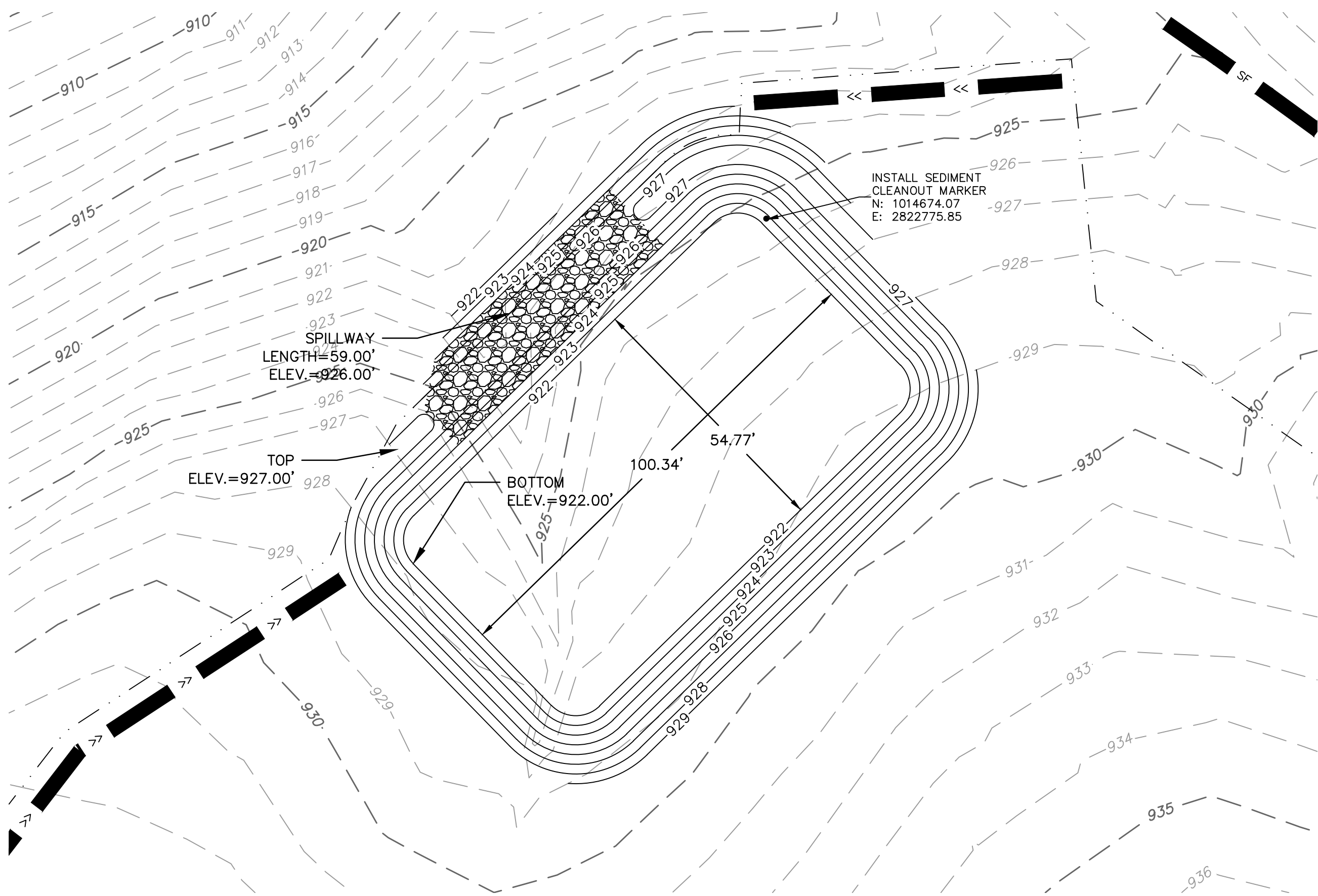
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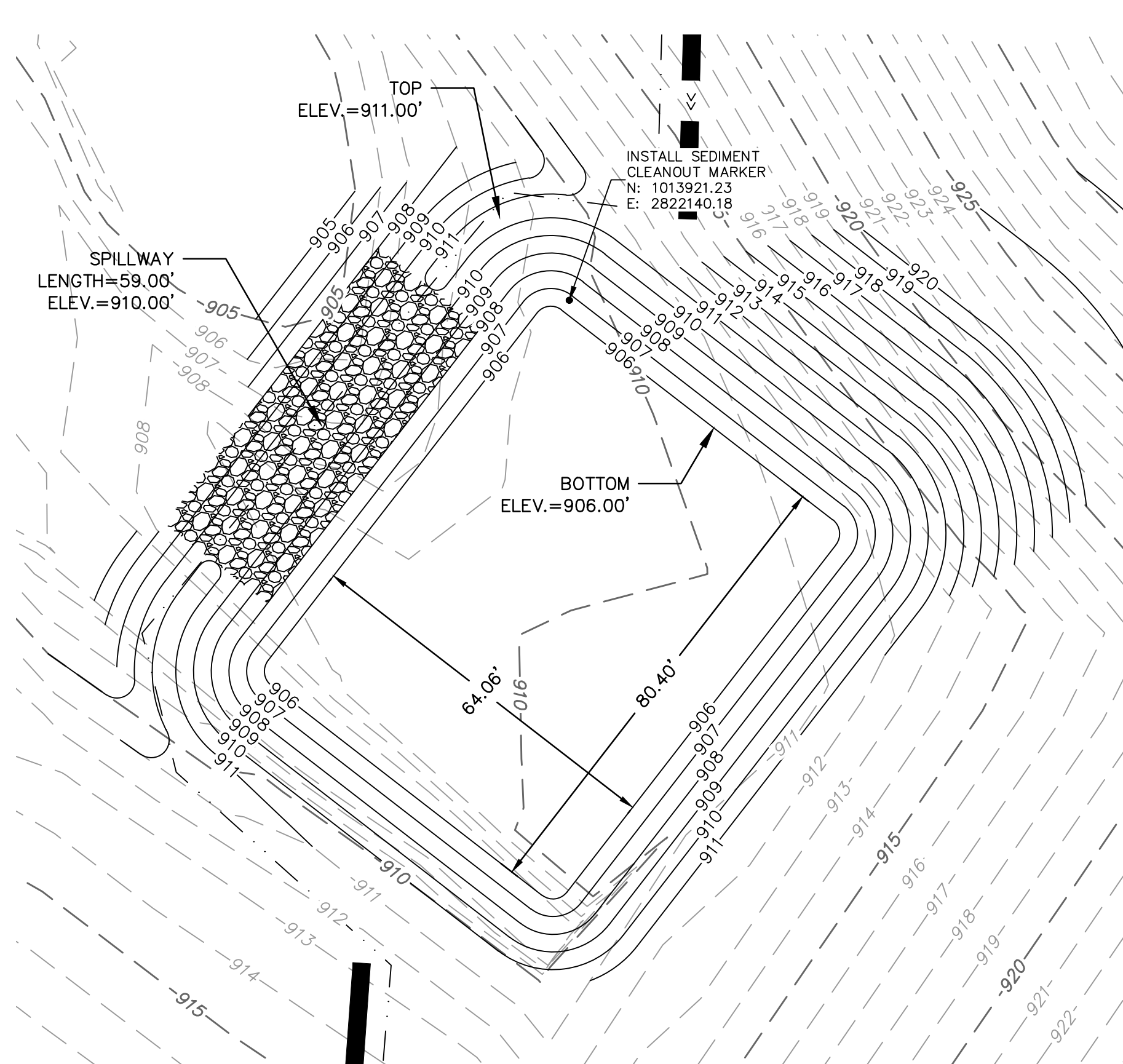
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REVISIONS

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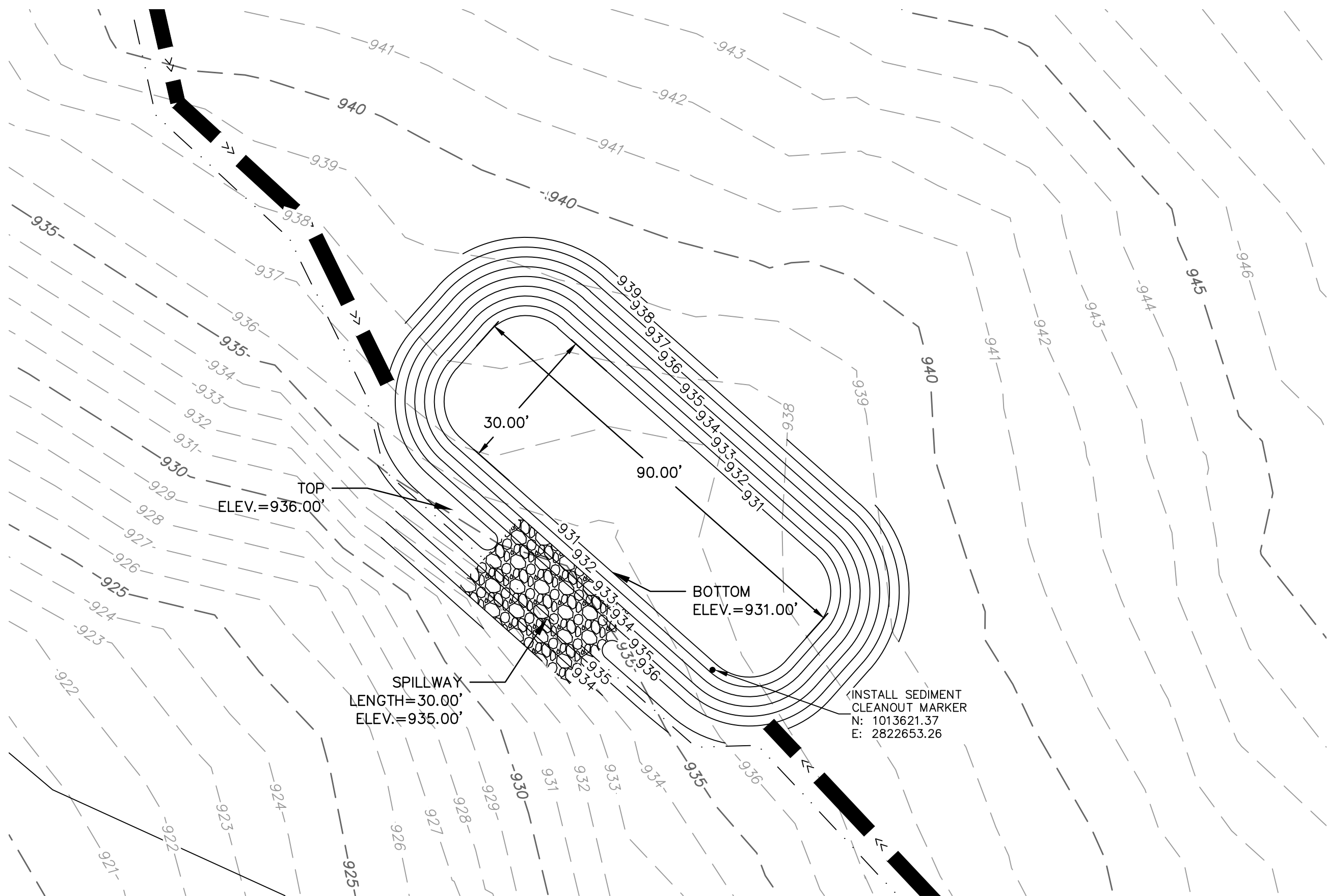
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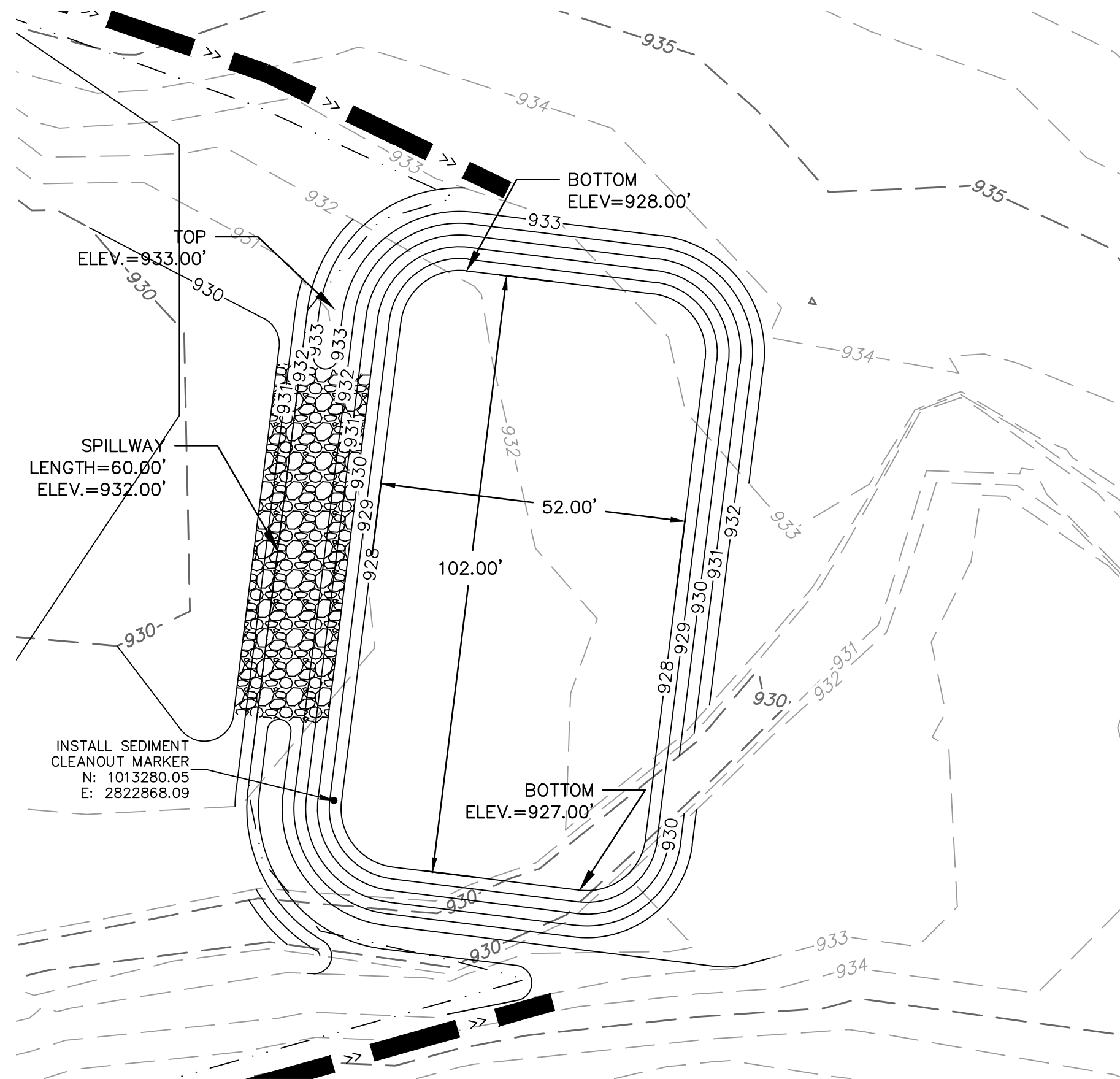
SEDIMENT TRAP 2A

EROSION CONTROL PLAN LEGEND

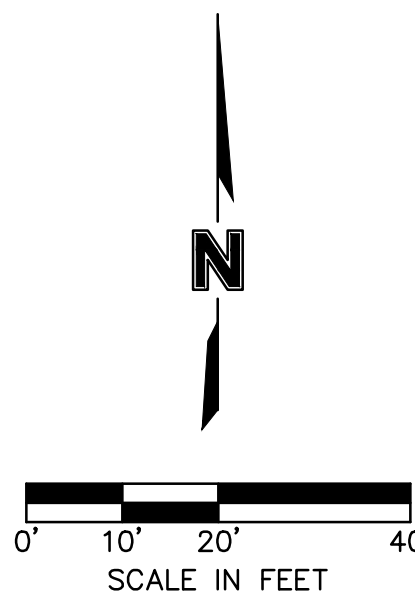
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- DRAINAGE AREA
- SF SILT FENCE
- << DIVERSION BERM



SEDIMENT TRAP 3A



SEDIMENT TRAP 4A



PHASE A SEDIMENT TRAP DETAILS

MASS GRADING & EROSION AND SEDIMENT CONTROL PLANS

THE VILLAGE AT DISCOVERY PARK ZONE 1 & ARIA APARTMENTS

NW COLBURN RD & NE DOUGLAS ST

LEE'S SUMMIT, MISSOURI

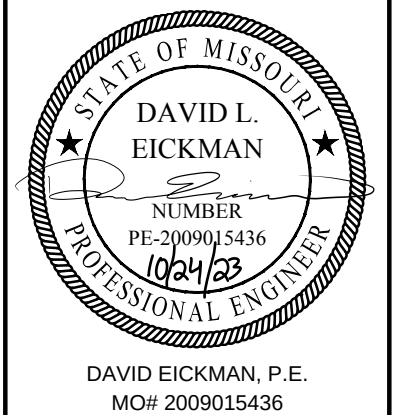
2023

drawn by: GS/SJS/JN
checked by: AR/JN
approved by: DE
QA/QC by: JS/NH
project no.: D21-04643
drawing no.: C_ERC01A_D2104643
date: 10.17.2023

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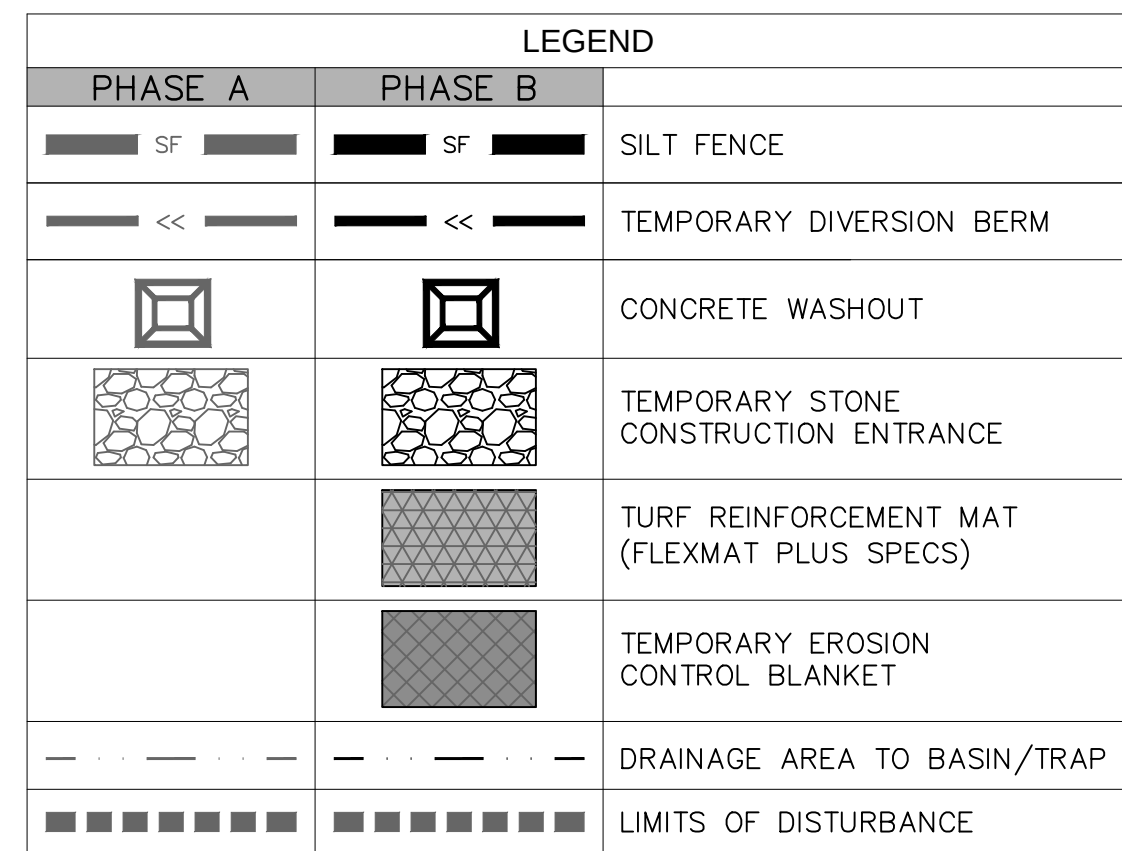
REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS



olsson

Olsson - Civil Engineering
Missouri Certificate of Authority #001592
1301 Burlington Street
North Kansas City, MO 64116
TEL 816.361.1177
www.olson.com



NOTE:
THE SITE DISTURBANCE PLANS INDICATES THE FINAL PLACEMENT OF EROSION CONTROL DEVICES. THE CONTRACTOR(S) MAY PROCEED WITH THE CONSTRUCTION OF THE FINAL PLACEMENT OF THESE DEVICES BY PROVIDING ADDITIONAL DEVICES TO CONTROL EROSION ON THEIR ITEMS OF WORK. THESE DEVICES SHALL BE MAINTAINED UNTIL THE FINAL DEVICES ARE IN PLACE.

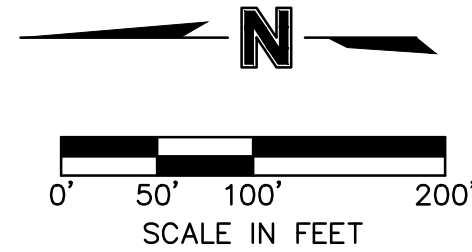
CONTRACTOR TO KEEP SWPPP REPORTS AND MDMR PERMIT IN THE ON-SITE CONSTRUCTION OFFICE TRAILER. TRAILER LOCATION TO BE DETERMINED BY CONTRACTOR

SEDIMENT TRAPS MUST BE FULLY INSTALLED PRIOR TO ANY SITE DISTURBANCE WITHIN THE TRIBUTARY AREA.

SEDIMENT TRAPS ARE SHOWN AS NEEDED PRIOR TO
DISTURBING THE SITE. CONTRACTOR IS RESPONSIBLE FOR
CONTROLLING ALL SEDIMENT RUNOFF DURING TRANSITION
TO FINAL CONDITIONS AS SHOWN ON SHEET C370.

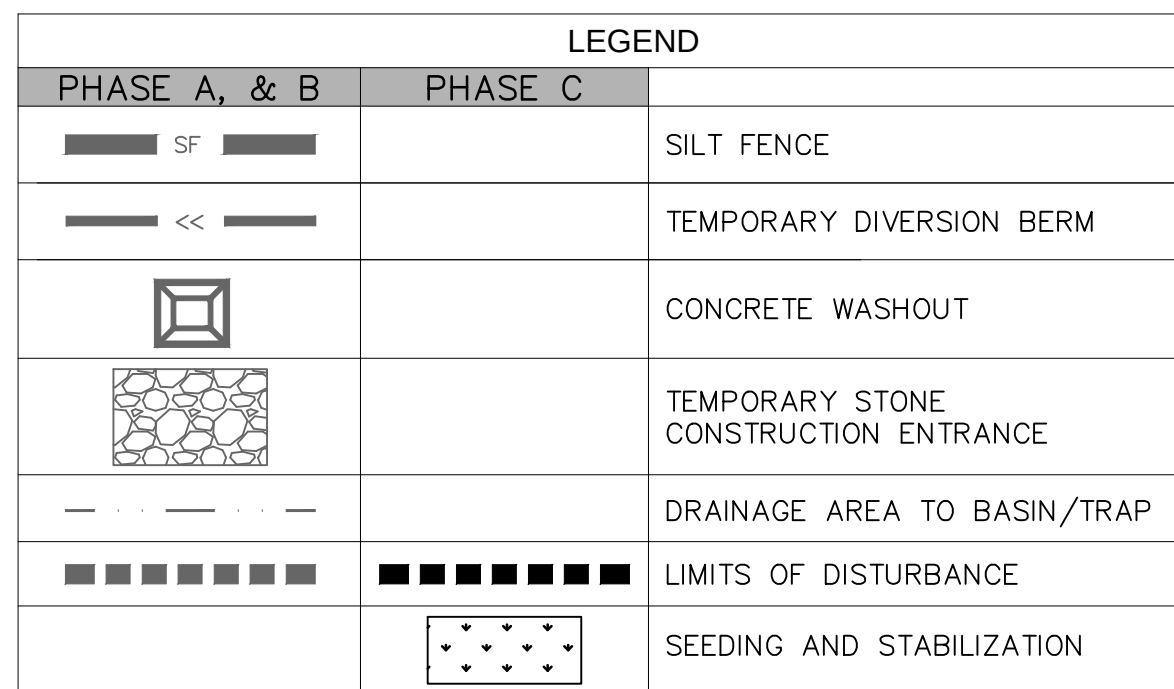
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999	FINISHED GRADE MINOR CONTOUR
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999	EXISTING GRADE MINOR CONTOUR



EROSION CONTROL PHASING CHART				
PROJECT PHASE	EROSION CONTROL BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER PHASE	NOTES:
A – PRE-MASS GRADING	A1	CONSTRUCTION ENTRANCE	D	INSTALL PER APWA DETAIL ESC-01, PRIOR TO PERFORMING ANY OTHER ACTIVITIES ON SITE
	A2	CONCRETE WASHOUT	D	INSTALL PER APWA DETAIL ESC-01, PRIOR TO PERFORMING ANY OTHER ACTIVITIES ON SITE
	A3	SILT FENCE	D	INSTALL PER APWA DETAIL ESC-03, PRIOR TO PERFORMING ANY OTHER ACTIVITIES ON SITE
	A4	DIVERSION BERM	D	INSTALL PER APWA DETAIL ESC-05, AND CONTRACTOR SHALL ADJUST AS NECESSARY THROUGHOUT CONSTRUCTION TO ENSURE SEDIMENT REMAINS CONTROLLED ON SITE.
	A5	SEDIMENT TRAP	D	INSTALL PER APWA DETAILS ESC-08
	A6	ROCK CHECK DAM	D	INSTALL PER APWA DETAIL ESC-10
UPON REMOVAL CONTRACTOR TO OVER-EXCAVATE SEDIMENT TRAPS, FULLY REMOVING ALL SILT, AND FILLING IN CONTROLLED LIFTS TO PREVENT VOIDS OR EXCESSIVE SETTLING THAT COULD IMPACT BUILDING FOUNDATIONS.				
B – INTERIM (64.66 AC DISTURBED)	B1	EROSION CONTROL BLANKET/TRM	D	INSTALL PER APWA DETAIL ESC-02
	B2	SILT FENCE	D	INSTALL PER APWA DETAIL ESC-03
	B3	DIVERSION BERM	D	INSTALL PER APWA DETAIL ESC-05
	B4	SEDIMENT TRAP	D	INSTALL PER APWA DETAIL ESC-08
	B5	AREA INLET PROTECTION	D	INSTALL PER APWA DETAIL ESC-07
	B6	ROCK CHECK DAM	D	INSTALL PER APWA DETAIL ESC-10
	B7	SLOPE INTERRUPTS	D	INTALL PER APWA DETAIL ESC-09 OR APPROVED EQUAL
	MAINTAIN ALL INSTALLED EROSION CONTROL DEVICES			
C – DISTURBED AREA STABILIZATION	C1	ESTABLISH SEEDING AND STABILIZATION OUTSIDE OF SEDIMENT BASIN AND TRAPS		SITE STABILIZATION PER LOCAL CODES AND ORDINANCES. AT A MINIMUM STABILIZATION SHALL CONFORM WITH APWA SECTION 2406. COORDINATE ALL STABILIZATION WITH EROSION CONTROL MEASURES INDICATED IN SITE DEVELOPMENT PLANS.

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GRADING LEGEND

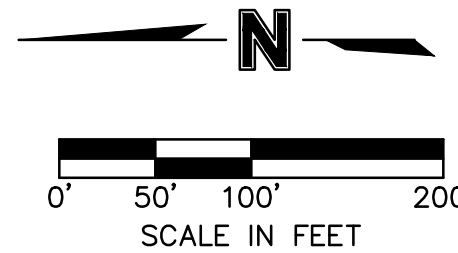
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	999	EXISTING GRADE MAJOR CONTOUR
	999	EXISTING GRADE MINOR CONTOUR

NOTE:
THE SITE DISTURBANCE PLANS INDICATES THE FINAL PLACEMENT OF EROSION CONTROL DEVICES. THE CONTRACTOR(S) MAY PROCEED WITH THE CONSTRUCTION PRIOR TO THE FINAL PLACEMENT OF THESE DEVICES BY PROVIDING ADDITIONAL DEVICES TO CONTROL EROSION ON THEIR ITEMS OF WORK. THESE DEVICES SHALL BE MAINTAINED UNTIL THE FINAL DEVICES ARE IN PLACE.

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EROSION CONTROL PHASING CHART				
PROJECT PHASE	EROSION CONTROL BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER PHASE	NOTES:
A – PRE-MASS GRADING	A1	CONSTRUCTION ENTRANCE	D	INSTALL PER APWA DETAIL ESC-01, PRIOR TO PERFORMING ANY OTHER ACTIVITIES ON SITE
	A2	CONCRETE WASHOUT	D	INSTALL PER APWA DETAIL ESC-01, PRIOR TO PERFORMING ANY OTHER ACTIVITIES ON SITE
	A3	SILT FENCE	D	INSTALL PER APWA DETAIL ESC-03, PRIOR TO PERFORMING ANY OTHER ACTIVITIES ON SITE
	A4	DIVERSION BERM	D	INSTALL PER APWA DETAIL ESC-05, AND CONTRACTOR SHALL ADJUST AS NECESSARY THROUGHOUT CONSTRUCTION TO ENSURE SEDIMENT REMAINS CONTROLLED ON SITE.
	A5	SEDIMENT TRAP	D	INSTALL PER APWA DETAIL ESC-08
	A6	ROCK CHECK DAM	D	INSTALL PER APWA DETAIL ESC-10
UPON REMOVAL CONTRACTOR TO OVER-EXCAVATE SEDIMENT TRAPS, FULLY REMOVING ALL SILT, AND FILLING IN CONTROLLED LIFTS TO PREVENT VOIDS OR EXCESSIVE SETTLING THAT COULD IMPACT BUILDING FOUNDATIONS.				
B – INTERIM	B1	EROSION CONTROL BLANKET/TRM	D	INSTALL PER APWA DETAIL ESC-02
	B2	SILT FENCE	D	INSTALL PER APWA DETAIL ESC-03
	B3	DIVERSION BERM	D	INSTALL PER APWA DETAIL ESC-05
	B4	SEDIMENT TRAP	D	INSTALL PER APWA DETAIL ESC-08
	B5	AREA INLET PROTECTION	D	INSTALL PER APWA DETAIL ESC-07
	B6	ROCK CHECK DAM	D	INSTALL PER APWA DETAIL ESC-10
	B7	SLOPE INTERRUPTS	D	INTALL PER APWA DETAIL ESC-09 OR APPROVED EQUAL
MAINTAIN ALL INSTALLED EROSION CONTROL DEVICES				
C – DISTURBED AREA STABILIZATION	C1	ESTABLISH SEEDING AND STABILIZATION OUTSIDE OF SEDIMENT BASIN AND TRAPS		SITE STABILIZATION PER LOCAL CODES AND ORDINANCES. AT A MINIMUM STABILIZATION SHALL CONFORM WITH APWA SECTION 2406. COORDINATE ALL STABILIZATION WITH EROSION CONTROL MEASURES INDICATED IN SITE DEVELOPMENT PLANS.

EROSION CONTROL PLAN (PHASE C)
MASS GRADING & EROSION AND SEDIMENT CONTROL PLANS

THE VILLAGE AT DISCOVERY PARK ZONE 1 & ARIA APARTMENT;
NW COLBERN RD & NE DOUGLAS ST

LEE'S SUMMIT, MISSOURI

drawn by: GS/OS/JN
checked by: AR/JN
approved by: DE
QA/QC by: JS/NH
project no.: D21-04643
drawing no. C_ERC01C D2104643
date: 10.17.2023

SHEET
C370



DAVID L. EICKMAN
 NUMBER
 PE-2009015436
 10/24/23
 PROFESSIONAL ENGINEER

DAVID EICKMAN, P.E.
 MO# 2009015436

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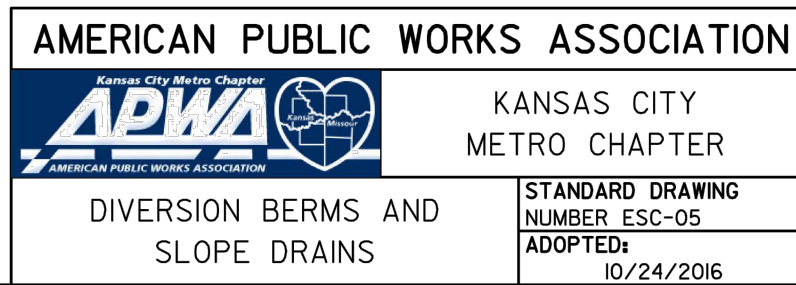
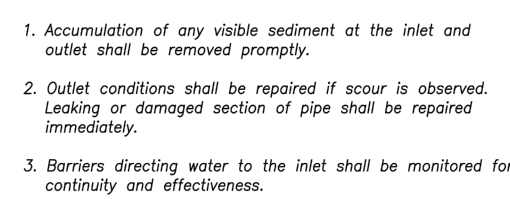
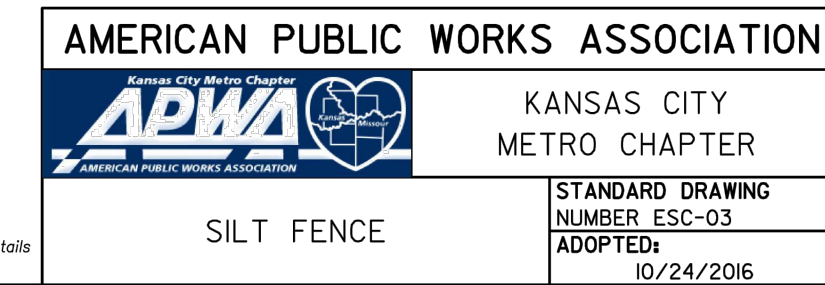
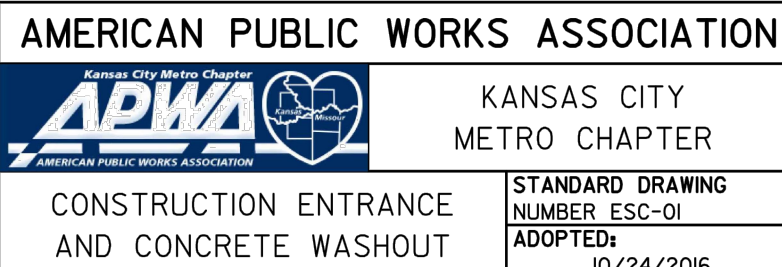
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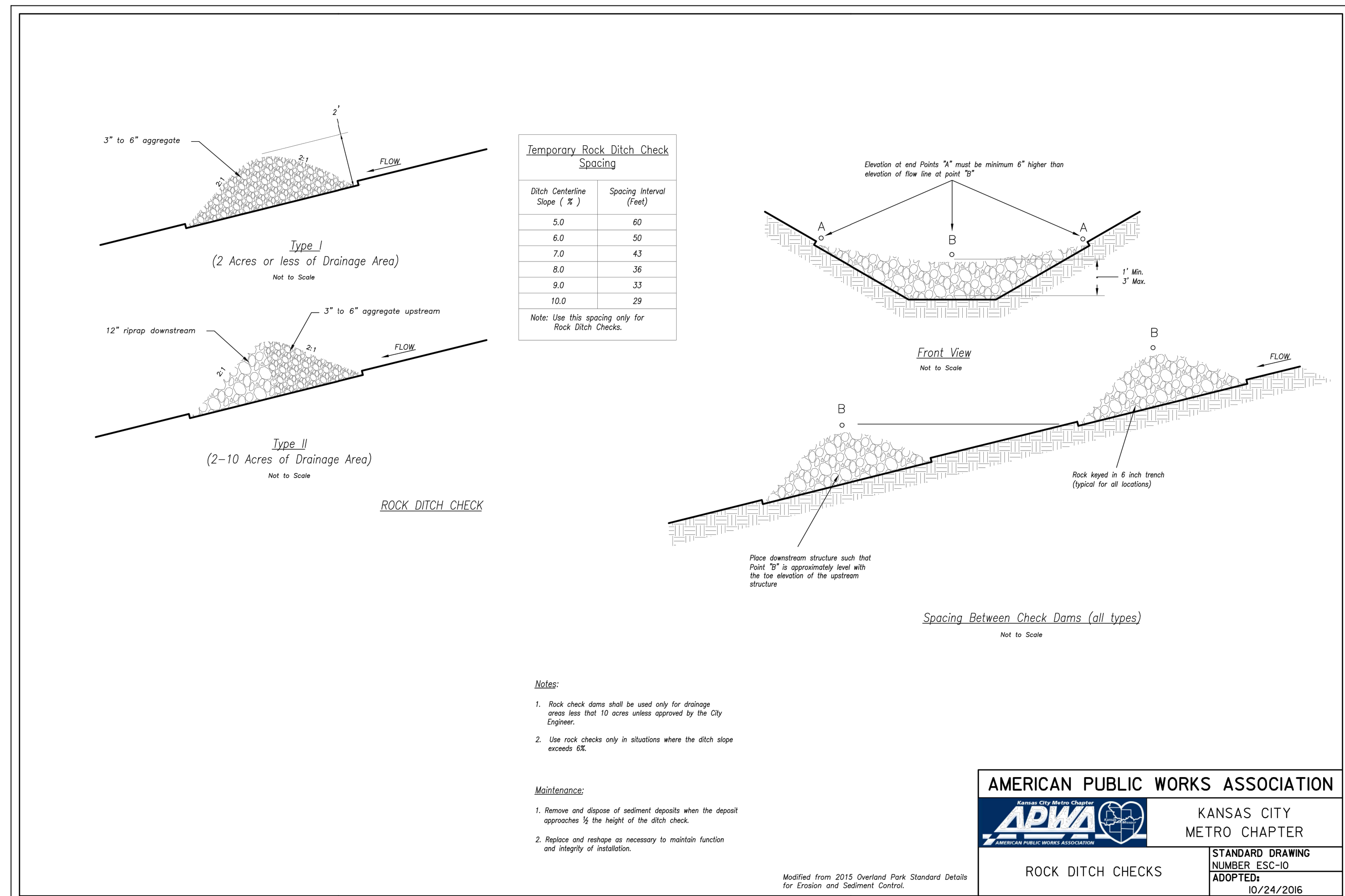
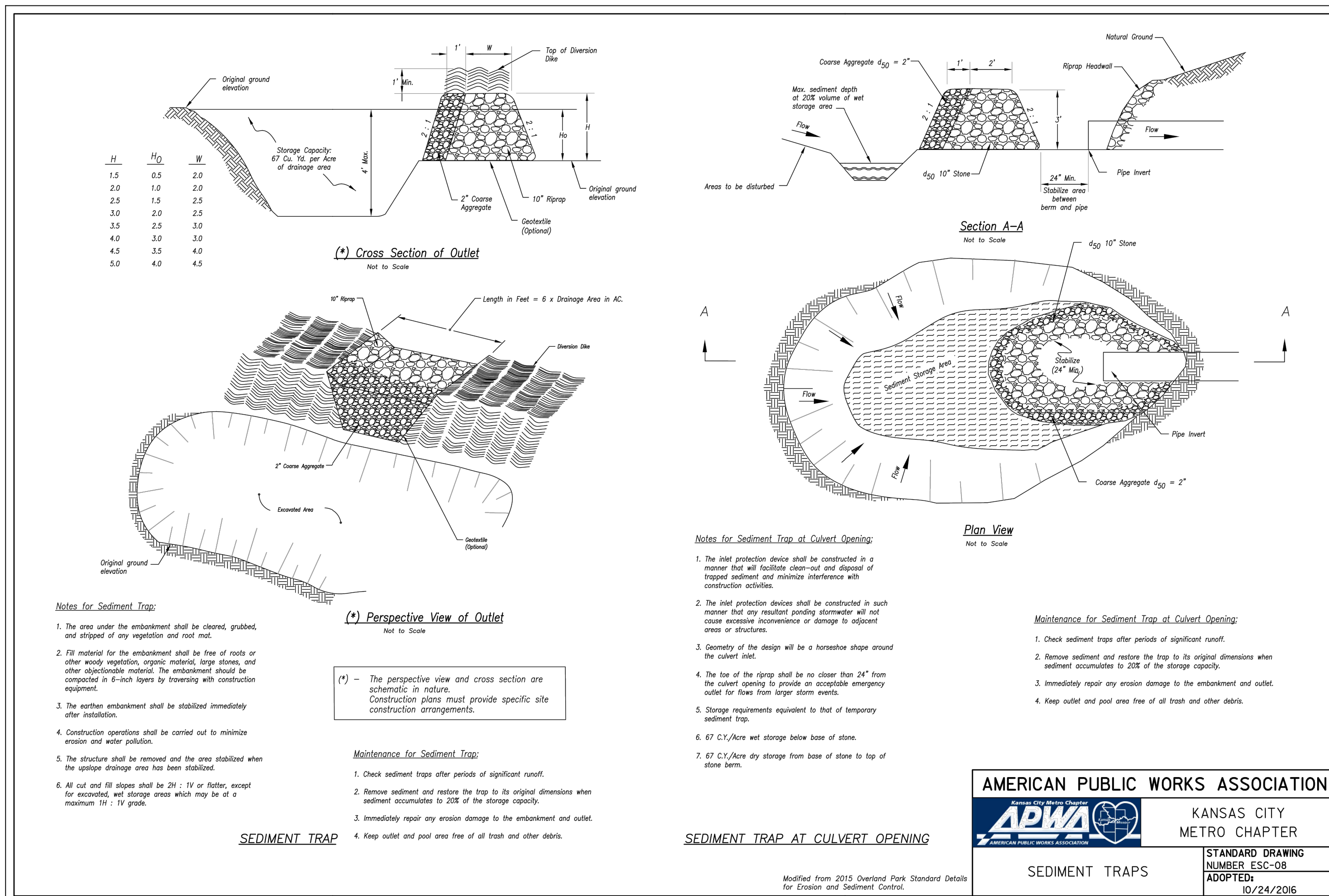
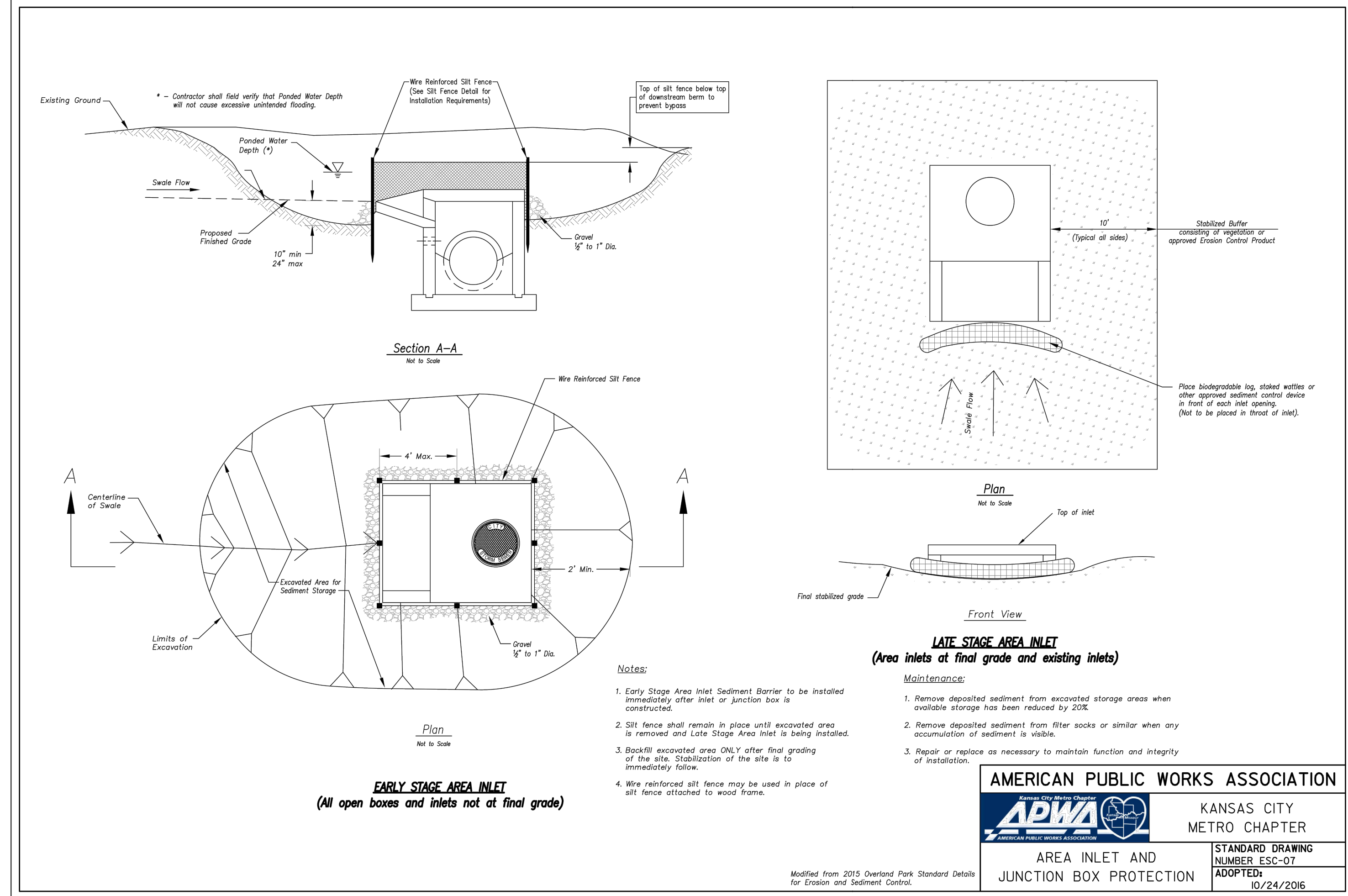
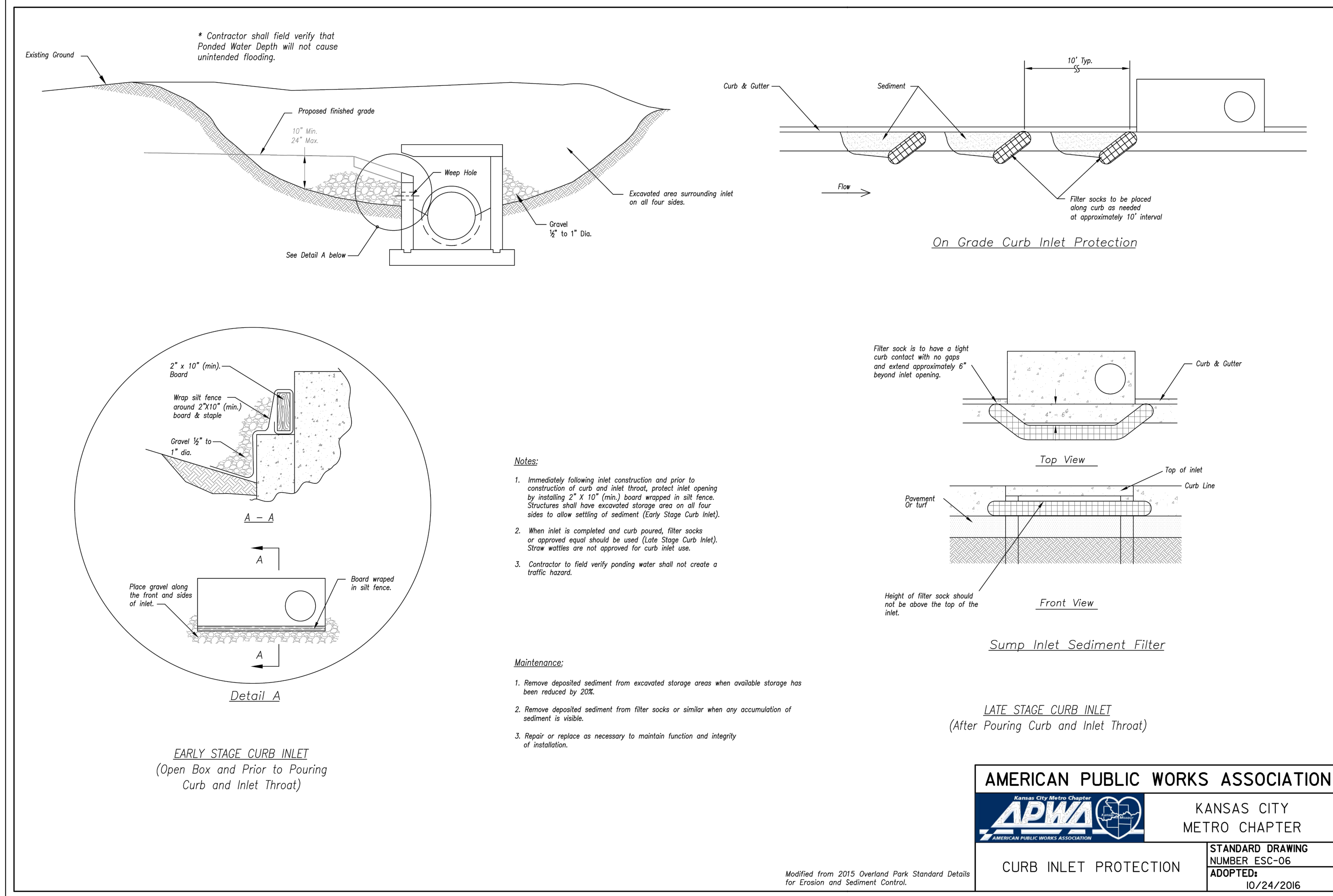
olsson

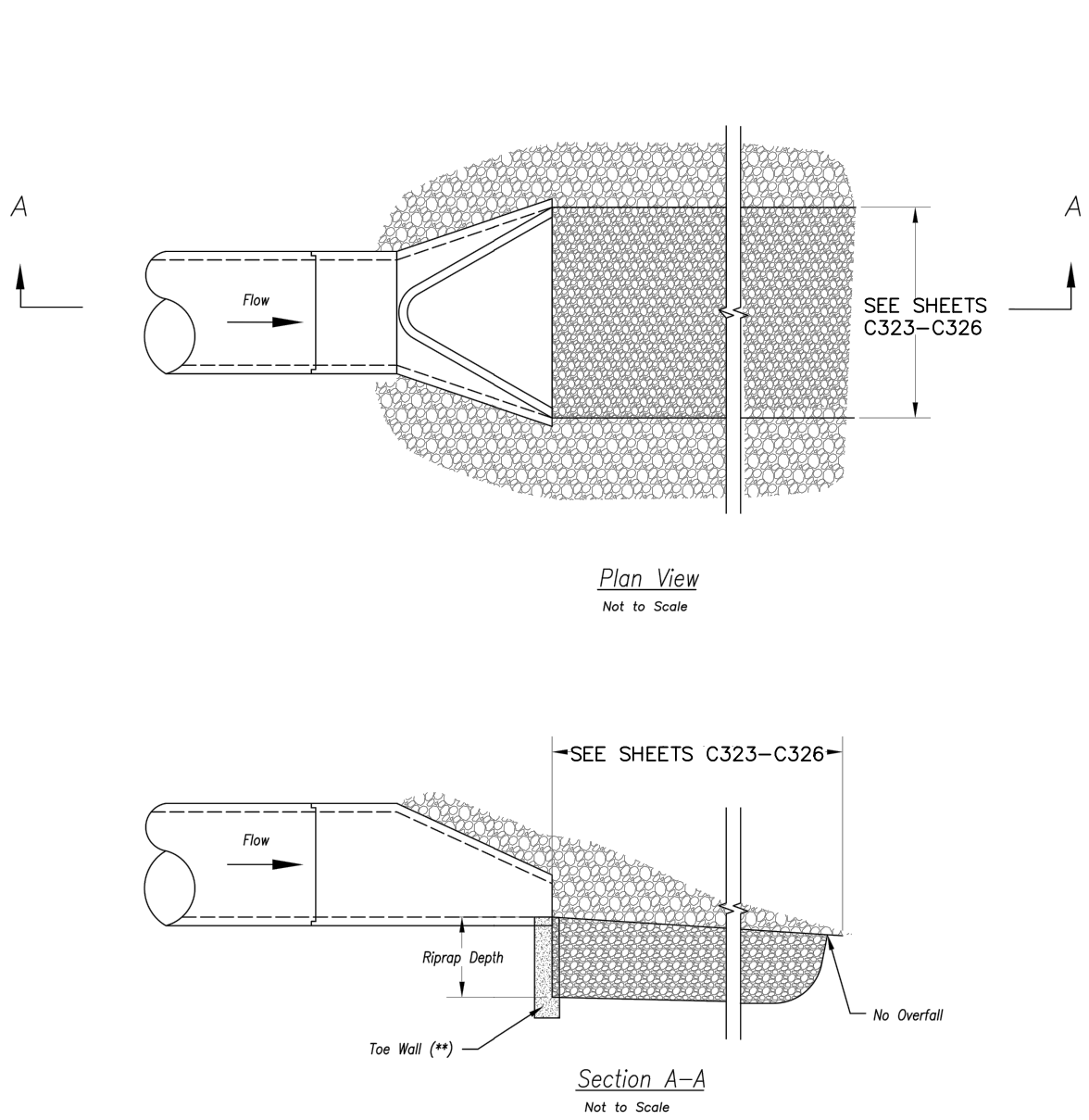
Olsson - Civil Engineering
Missouri Certificate of Authority #001592
1301 Burlington Street
North Kansas City, MO 64116
TEL 816.361.1177
www.



1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for wasted concrete.
3. Concrete washout water, wasted pieces of concrete and all other debris in the subsurface pit shall be transported from the job site in a water-tight container and disposed of properly.
4. Concrete washout areas shall remain in place until all concrete for the project is placed.
5. When concrete washout areas are removed, excavations shall be filled with compacted approved backfill and topsoil, any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.







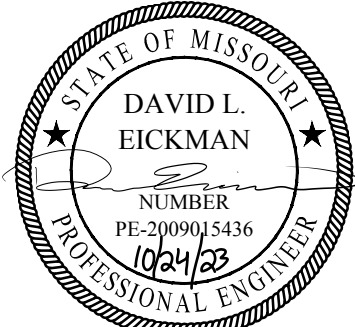
Notes:

1. Rock all sides steeper than 3:1.
2. Stabilize all disturbed areas downstream of outlet to the limits of disturbance.
3. Alternative outlet protection and slope stabilization measures may be used with approval by the Engineer.
4. Install riprap apron so that it is no higher than flowline of pipe.
5. Reference APWA Specification 2650 for rock type, size, and placement.

AMERICAN PUBLIC WORKS ASSOCIATION Kansas City Metro Chapter APWA AMERICAN PUBLIC WORKS ASSOCIATION  KANSAS CITY METRO CHAPTER	
OUTLET PROTECTION	STANDARD DRAWING NUMBER ESC-14 ADOPTED: 10/24/2016

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10/24/23
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