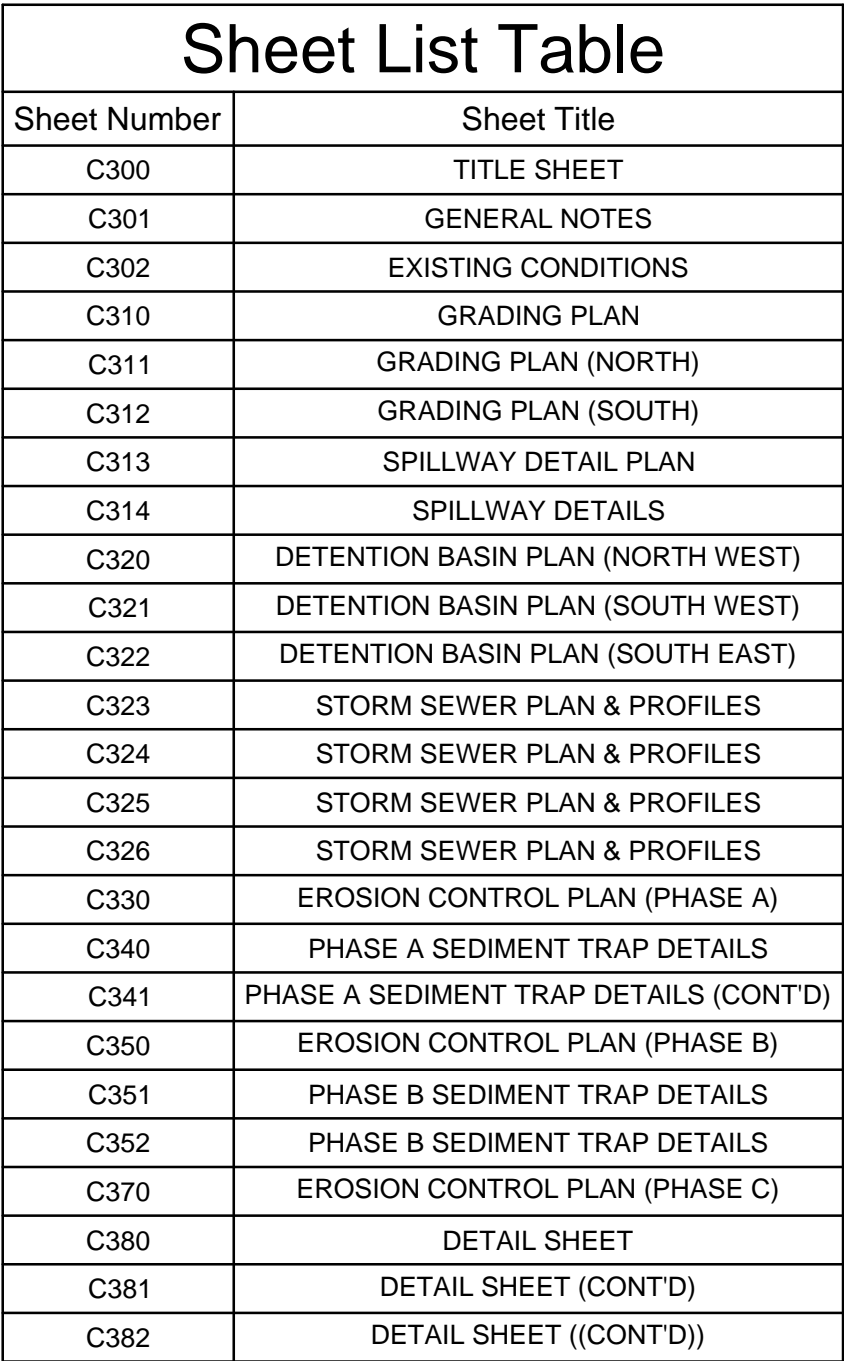


SECTION 25, TOWNSHIP 48N, RANGE 32W  
SECTION 30, TOWNSHIP 48N, RANGE 31W  
IN LEE'S SUMMIT, JACKSON COUNTY, MO



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).

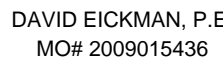
THE ENTIRE SITE IS LOCATED WITHIN ZONE X "AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM THE 1% ANNUAL CHANCE FLOOD" AS DEPICTED ON THE FEMA FLOOD INSURANCE RATE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

ARIA FIRST PLAT LOT 1:  
AS PROVIDED BY STEWART TITLE GUARANTY COMPANY:  
TRACT OF LAND IN THE NORTHEAST QUARTER OF SECTION 30 TOWNSHIP 48 NORTH, RANGE 31 WEST OF THE 5TH PRINCIPAL MERIDIAN IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI BEING BOUNDED AND DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SAID NORTHEAST QUARTER SECTION; THENCE SOUTH 03 DEGREES 37 MINUTES 50 SECONDS WEST, ON THE WEST LINE OF SAID QUARTER SECTION, 853.75 FEET TO A POINT ON THE SOUTHEAST LOT LINE OF LOT 14 IN SAID QUARTER SECTION; THENCE SOUTHWESTERLY ALONG SAID LOT LINE TO THE SOUTHWEST CORNER OF SAID QUARTER SECTION, 116.89 FEET; THENCE SOUTH 90 IN THE JACKSON COUNTY RECORDER OF DEEDS OFFICE; THENCE NORTH 50 DEGREES 41 MINUTES 15 SECONDS EAST, ON SAID SOUTHEAST LOT LINE, 59.22 FEET; TO THE POINT OF BEGINNING OF THE TRACT OF LAND TO BE HEREIN DESCRIBED; THENCE CONTINUING NORTH 50 DEGREES 41 MINUTES 15 SECONDS EAST ALONG SAID LINE, 116.89 FEET; THENCE NORTH 44 DEGREES 49 MINUTES 51 SECONDS EAST, 792.38 FEET TO A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF NW LEE'S SUMMIT ROAD AS ESTABLISHED BY DOCUMENT NUMBER 2015E0017982 IN THE JACKSON COUNTY RECORDER OF DEEDS OFFICE; THENCE ON SAID WESTERLY RIGHT-OF-WAY LINE, SOUTH 54 DEGREES 34 MINUTES 12 SECONDS EAST, 95.69 FEET; THENCE SOUTHEASTERLY ALONG A CURVE TO THE RIGHT BEING TANGENT TO THE LAST DESCRIBED COURSE WITH A RADIUS OF 1,142.00 FEET, A CENTRAL ANGLE OF 56 DEGREES 01 MINUTES 43 SECONDS AND AN ARC LENGTH OF 1,044.54 FEET TO THE SOUTHWEST CORNER OF SAID QUARTER SECTION, 31 SECONDS WEST, 122.27 FEET; THENCE SOUTHWESTERLY ALONG SAID RIGHT-OF-WAY LINE, NORTH 88 DEGREES 32 MINUTIA 29 SECONDS WEST, 375.74 FEET; THENCE NORTH 01 DEGREES 27 MINUTES 27 SECONDS EAST, 62.94 FEET; THENCE SOUTH 90 DEGREES 00 MINUTES 00 SECONDS WEST, 195.68 FEET; THENCE NORTH 45 DEGREES 00 MINUTES 00 SECONDS WEST, 889.18 FEET TO THE POINT OF BEGINNING, CONTAINING 979,968 SQUARE FEET OR 22.50 ACRES, MORE OR LESS

DISCOVERY PARK ZONE 1:

A TRACT OF LAND IN THE NORTHEAST QUARTER OF SECTION 30 TOWNSHIP 48 NORTH, RANGE 31 WEST OF THE 5TH PRINCIPAL MERIDIAN IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI BEING BOUNDED AND DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SAID NORTHEAST QUARTER SECTION; THENCE SOUTH 01°37'50" WEST, ON THE WEST LINE OF SAID QUARTER SECTION, 853.75 FEET TO A POINT ON THE SOUTHEAST LOT LINE OF LOT 1, LEE'S SUMMIT ROAD PUMP STATION, A SUBDIVISION RECORDED IN BOOK 1 51 AT PAGE 90 IN THE JACKSON COUNTY RECORDER OF DEEDS OFFICE, AND THE POINT OF BEGINNING OF THE TRACT OF LAND TO BE HEREIN DESCRIBED; THENCE NORTH 50°41'15" EAST, ON SAID SOUTHEAST LOT LINE, 59.22 FEET; THENCE LEAVING SAID LOT LINE, SOUTH 45°00'00" EAST, 889.18 FEET; THENCE NORTH 90°00'00" EAST, 195.68 FEET; THENCE SOUTH 01°27'27" WEST, 62.94 FEET; THENCE NORTH 88°32'29" EAST, 375.74 FEET TO A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF NE DOUGLAS STREET AS ESTABLISHED BY DOCUMENT NUMBER 2015E0011982 IN THE JACKSON COUNTY RECORDER OF DEEDS OFFICE; THENCE ON SAID WESTERLY RIGHT-OF-WAY LINE, SOUTH 01°27'31" WEST, 1,114.58 FEET; THENCE SOUTH 46°40'17" WEST, 35.22 FEET TO THE INTERSECTION OF THE NORTHERLY RIGHT-OF-WAY LINE OF NE COLBURN ROAD AS ESTABLISHED BY A SURVEY PROVIDED BY HAMILTON STERRETT AND DOOLEY, PROJECT NUMBER 99021; THENCE ON SAID NORTHERLY RIGHT-OF-WAY LINE NORTH 88°06'56" WEST, 730.85 FEET; THENCE WESTERLY ALONG A CURVE TO THE LEFT HAVING AN INITIAL TANGENT BEARING OF NORTH 87°33'04" WEST WITH A RADIUS OF 2,904.93 FEET, A CENTRAL ANGLE OF 10°06'02" AND AN ARC DISTANCE OF 512.10 FEET TO THE SOUTHWEST CORNER OF THE SAID NORTHEAST QUARTER; THENCE NORTH 01°37'22" EAST, ON THE WEST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 30, A DISTANCE OF 1,328.05 FEET TO THE NORTHWEST CORNER OF THE SOUTHWEST QUARTER OF THE SAID NORTHEAST QUARTER; THENCE CONTINUING ON THE SAID WEST LINE, NORTH 01°37'50" EAST, 473.96 FEET TO THE POINT OF BEGINNING. CONTAINING 1,717,197 SQUARE FEET OR 39.42 ACRES, MORE OR LESS.

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North Kansas City, MO 64116



<p align="center">TITLE SHEET</p> <p align="center">MASS GRADING &amp; EROSION AND SEDIMENT CONTROL PLANS</p> <p align="center">THE VILLAGE AT DISCOVERY PARK ZONE 1 &amp; ARIA APARTMENTS NW COLBERN RD &amp; NE DOUGLAS ST</p>		2023
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 TTL01 D2104643  
date: 07.14.2023

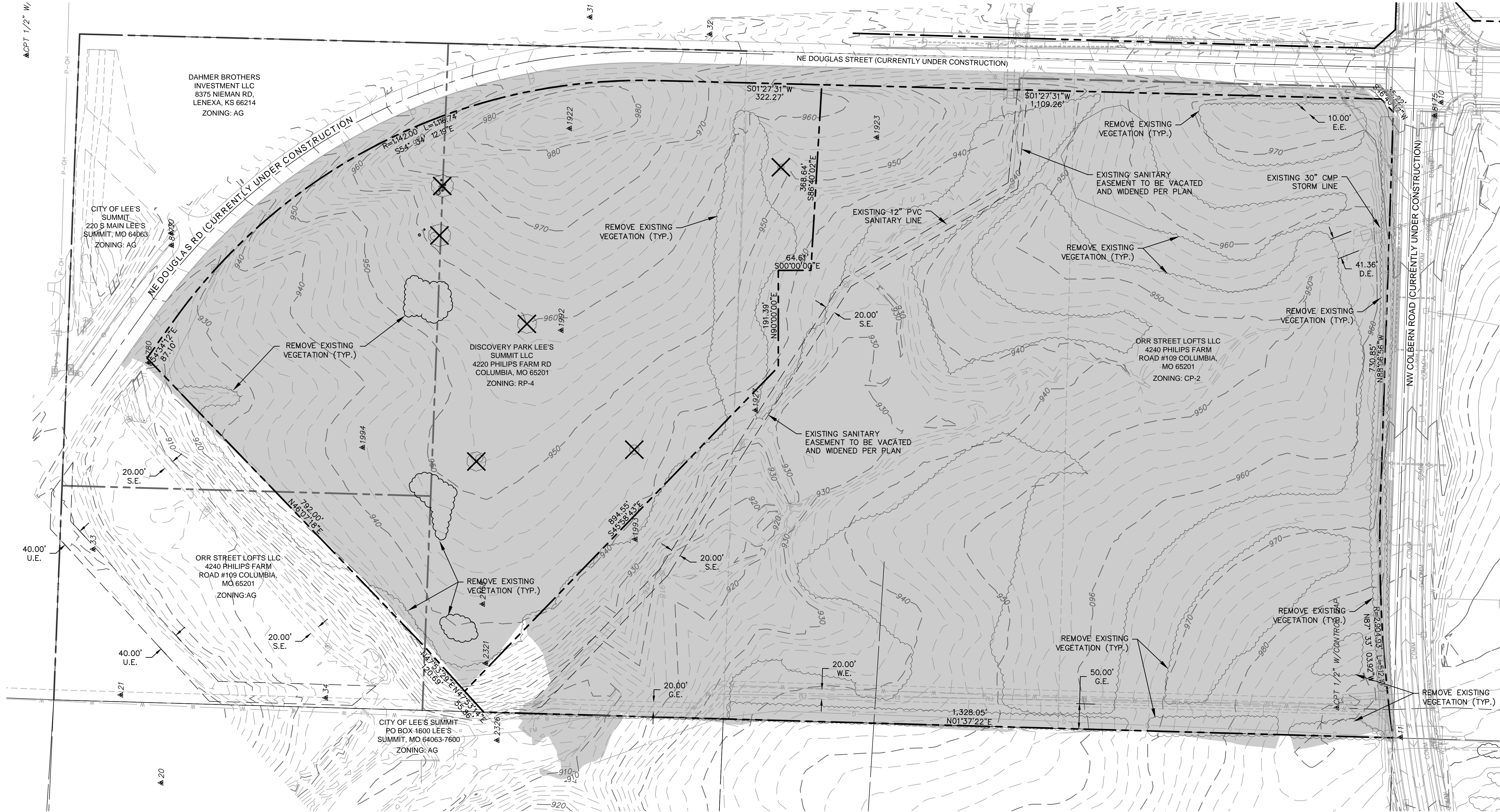
SHEET  
C300



SHEET  
C301



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USER: arcmanov  
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POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	FULL DESCRIPTION
10	1012183.1810	2823309.3060	982.032	CTL IB3CONCAP
11	1012263.3886	2822050.3556	984.472	CTL IB3CONCAP
20	1014720.8109	2821959.9084	931.642	CTL 60D
21	1014800.6805	2822134.3364	938.619	CTL 60D
30	1014700.8927	2823050.0451	932.433	CTL IB3CAP
31	1013870.3509	2823478.4777	981.044	CTL IB3CAP
32	1013632.5713	2823444.5928	972.448	CTL IB3CAP
33	1014855.4436	2822423.2331	929.324	CTL IB3CAP
34	1014394.5412	2822128.5531	907.079	CTL IB3CAP
35	1014607.4024	2821781.3351	902.219	CTL IB3CAP
1780	1014745.6930	2822793.1640	922.175	CTL 60D

POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	FULL DESCRIPTION
1922	1013910.9320	2823257.7240	986.639	CTL 60D
1923	1013301.9140	2823240.0500	956.352	CTL 60D
1927	1013542.2660	2822698.8750	936.292	CTL 60D
1992	1013927.5320	2822857.4500	959.400	CTL 60D
1993	1013780.6490	2822442.8070	937.257	CTL 60D
1994	1014321.2550	2822625.1060	944.103	CTL 60D
2158	1014083.2650	2822314.4510	941.622	CTL 60D
2321	1014077.0070	2822196.9780	937.570	CTL 60D
2326	1014054.6210	2822044.3360	905.594	CTL 60D
8175	1012195.5307	2823282.8905	982.458	BMK
8177	1014699.7206	2823025.8627	932.314	BMK

#### EXISTING CONDITIONS LEGEND

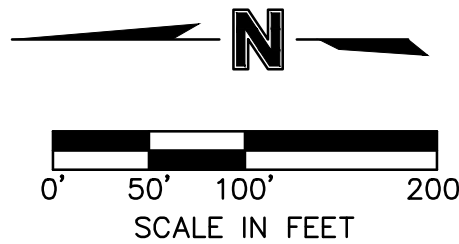
\*THIS LEGEND APPLIES TO ALL SHEETS UNLESS EXPLICITLY SHOWN OTHERWISE ON EACH SHEET.

	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

drawn by: GS/SOS/JUN  
checked by: AR/JUN  
approved by: DE  
QA/QC by: JS/NH  
project no.: D21-04643  
drawing no.: C\_EXC01\_D2104643  
date: 08.07.2023

SHEET  
C302



DAVID EICKMAN, P.E.  
MOR 2009015436

REV. NO.	DATE	REVISIONS DESCRIPTION

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



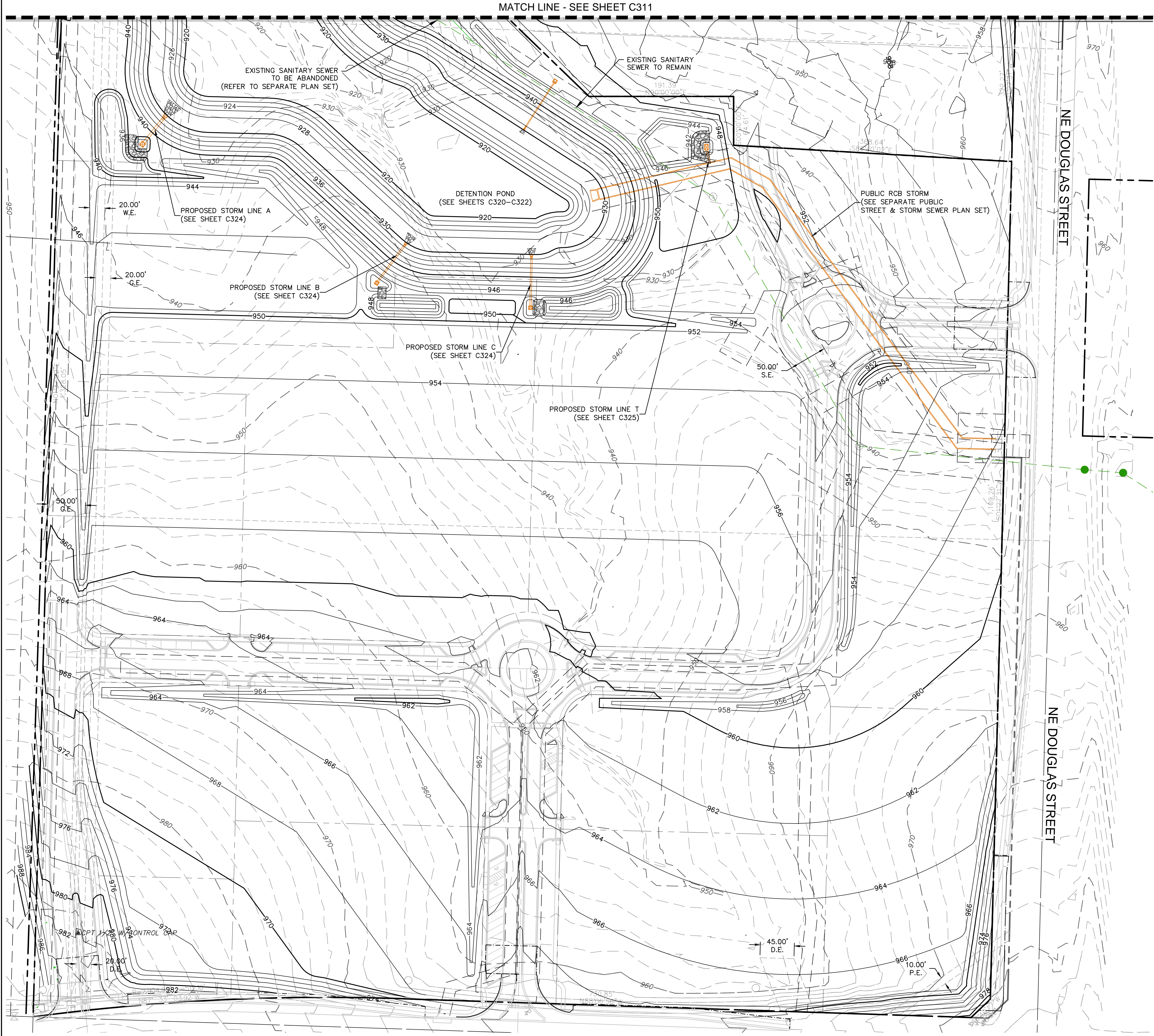








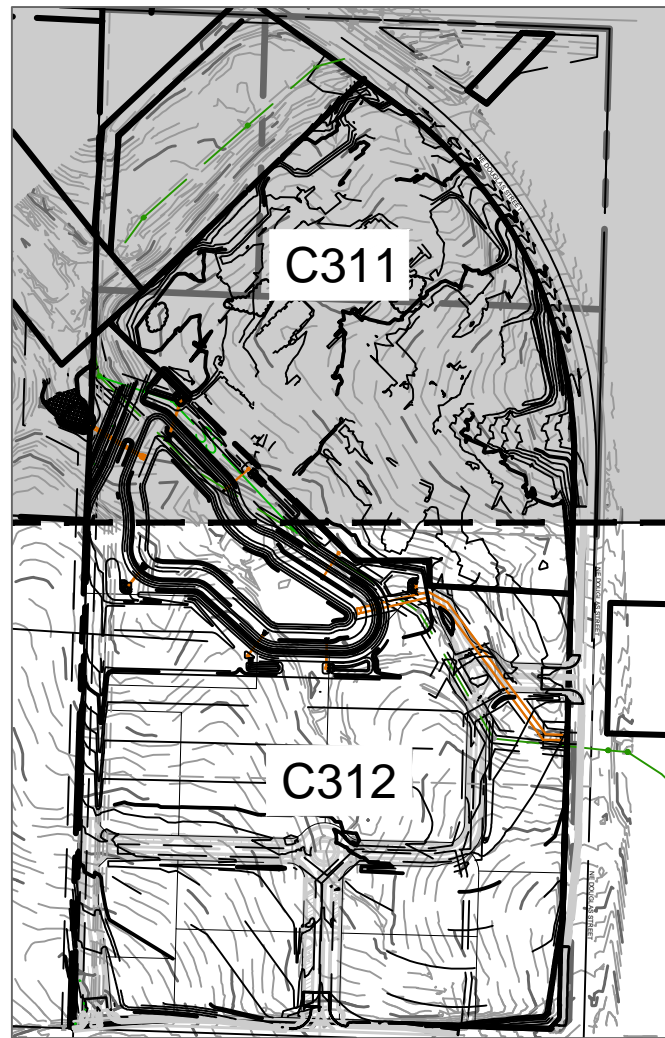
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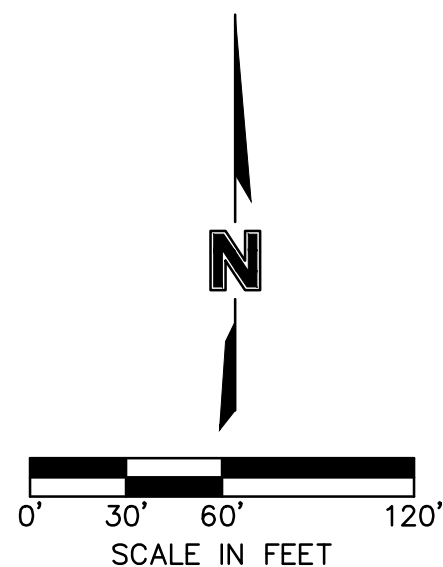
**GRADING LEGEND**

- 999 FINISHED GRADE MAJOR CONTOUR
- 999 FINISHED GRADE MINOR CONTOUR
- 999 EXISTING GRADE MAJOR CONTOUR
- 999 EXISTING GRADE MINOR CONTOUR
- SS 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



GRADING PLAN (SOUTH)		BY	
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/IN		REV. NO.	
checked by: AR/JN		DATE	
approved by: DE		REVISIONS DESCRIPTION	
QA/QC by: JS/NH			
project no.: D21-04643			
drawing no.: C_GRD01_D2104643			
date: 07.14.2023			
SHEET C312			

DAVID L. EICKMAN  
PE-2009015436  
9/3/23  
PROFESSIONAL ENGINEER

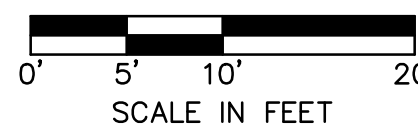
Olsson - Civil Engineering  
Missouri Certificate of Authority #001592  
1301 Burlington Street  
North Kansas City, MO 64116  
TEL 816.361.1177  
www.olsson.com



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			

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			

STA: 0+12.47, 7.38' LT, (RIPRAP BASIN CL  
N: 1013850.9578  
E: 2822077.0081  
FG= 900.00  
SOUTH BOTTOM CORNER  
OF DISSIPATOR POOL



drawn by: GS/OS/JN  
checked by: AR/JN  
approved by: DE  
QA/QC by: JS/NH  
project no.: D21-04643  
drawing no.: C\_GRD02 D2104643  
date: 07.14.2023

SHEET  
C313

project no.: D21-  
drawing no.: C\_GRD02\_D21

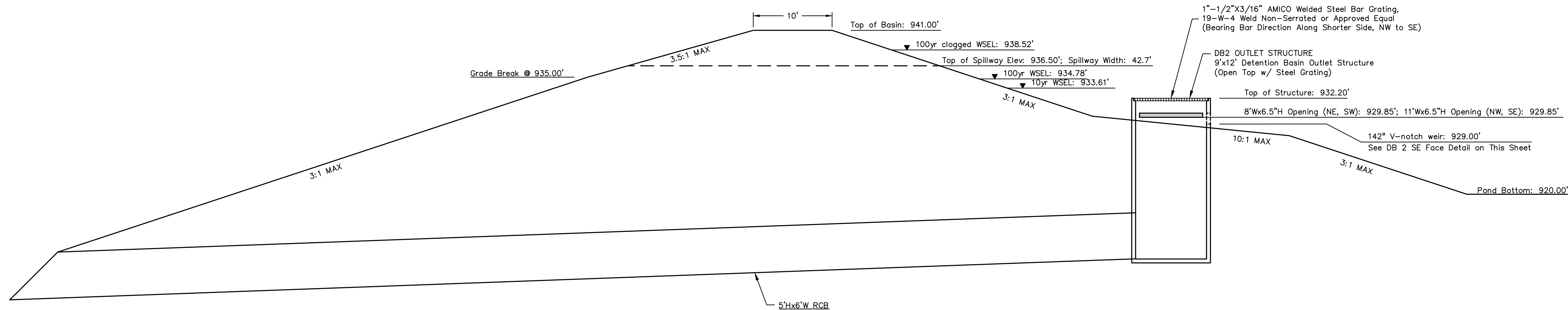
**olsor**

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North Kansas City, MO 64116

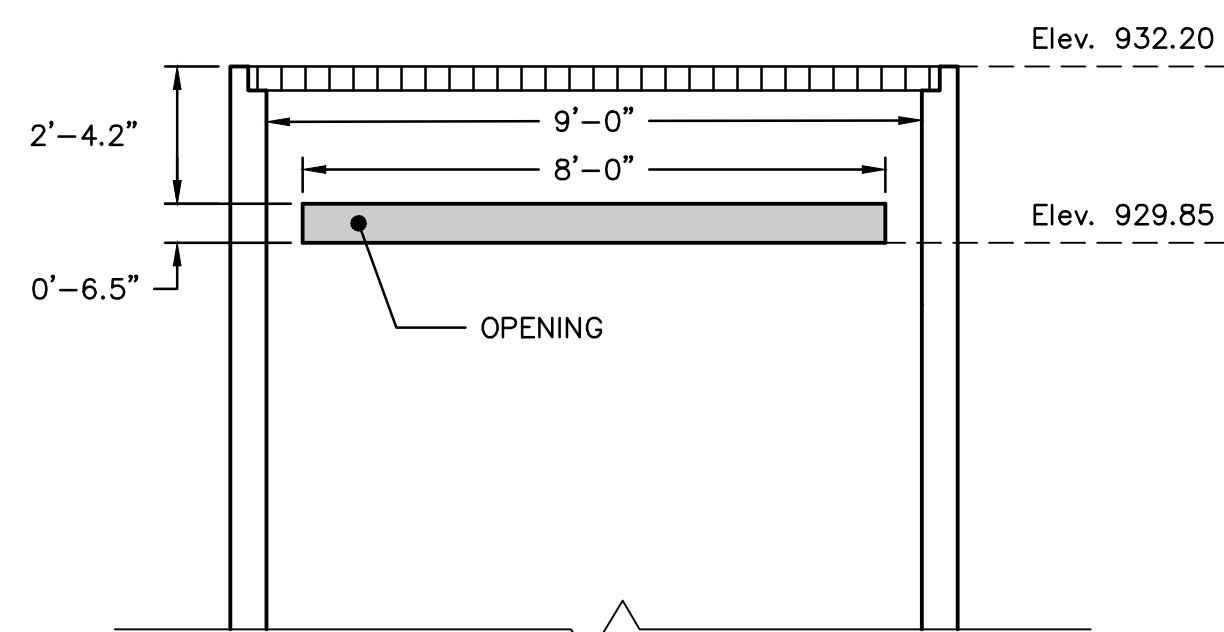
TEL 816.361.1177      www.olsson.com



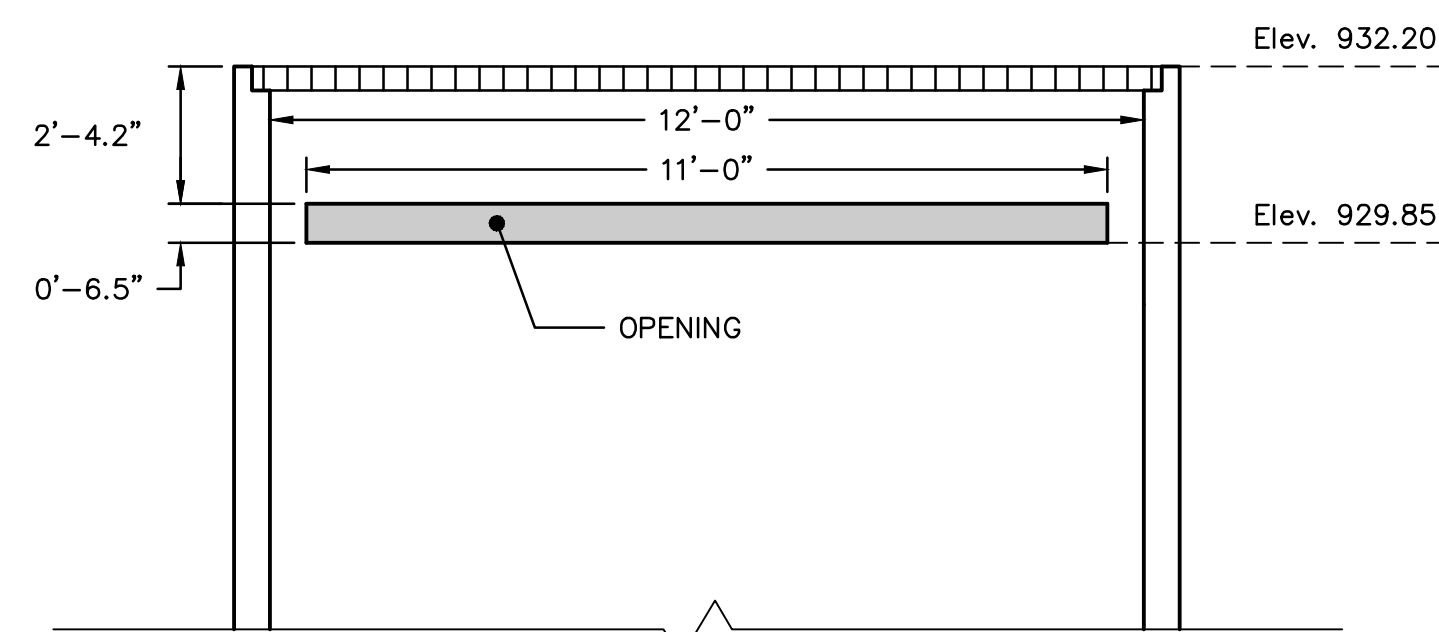
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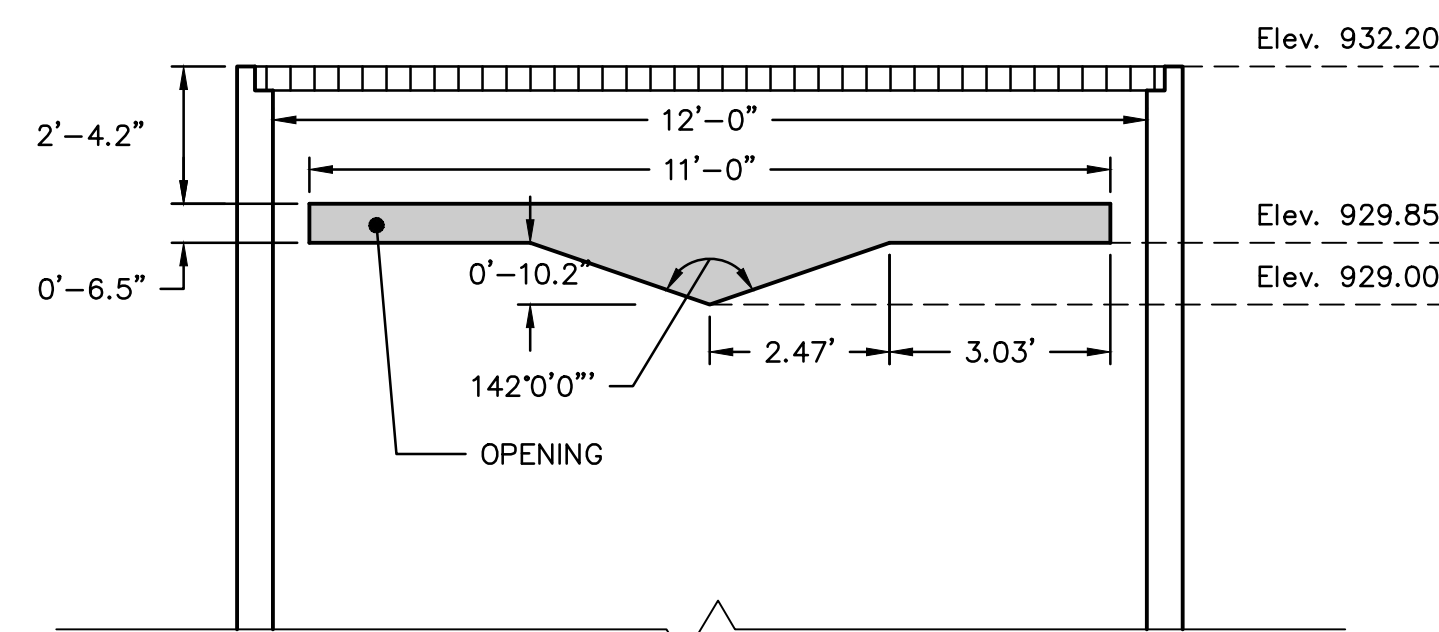
DETENTION BASIN OUTLET STRUCTURE DETAIL  
NOT TO SCALE



DB2 NE & SW FACES DETAIL  
NOT TO SCALE



DB2 NW FACE DETAIL  
NOT TO SCALE



DB2 SE FACE DETAIL  
NOT TO SCALE

<b><u>BASIN DETAILS</u></b>	
<b><u>BASIN EMERGENCY SPILLWAY DETAILS</u></b>	
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)
<b><u>BASIN HYDROLOGIC DETAILS</u></b>	
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

drawn by: GS/OS/JN  
checked by: AR/JN  
approved by: DE  
QA/QC by: JS/NH  
project no.: D21-04643  
drawing no.: C\_GRD02\_D2104643  
date: 07.14.2023

SHEET  
C314

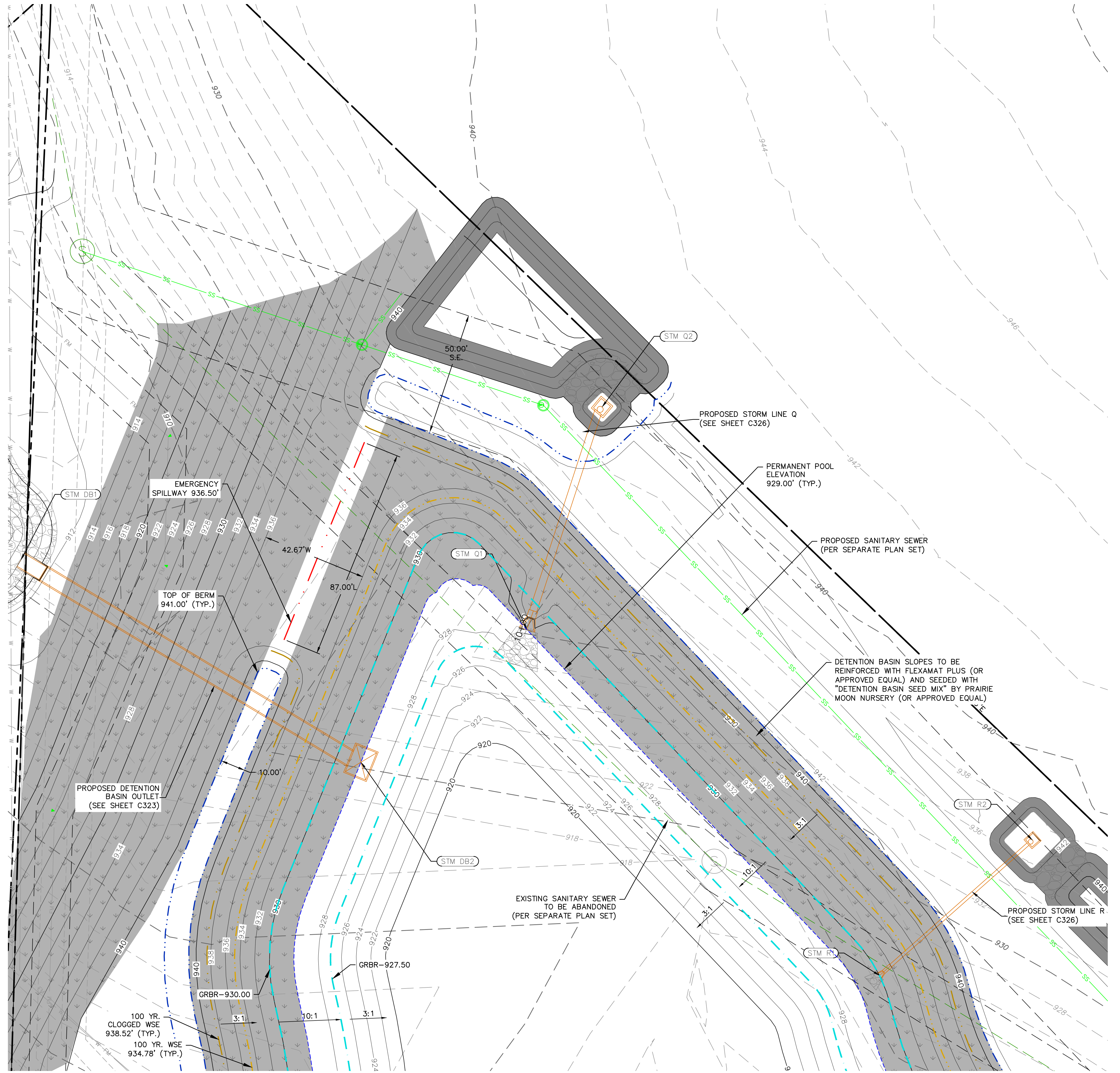
STATE OF MISSOURI  
DAVID L. EICKMAN  
NUMBER  
PE-2009015436  
9/8/23  
PROFESSIONAL ENGINEER

DAVID EICKMAN, P.E.  
MO# 2009015436

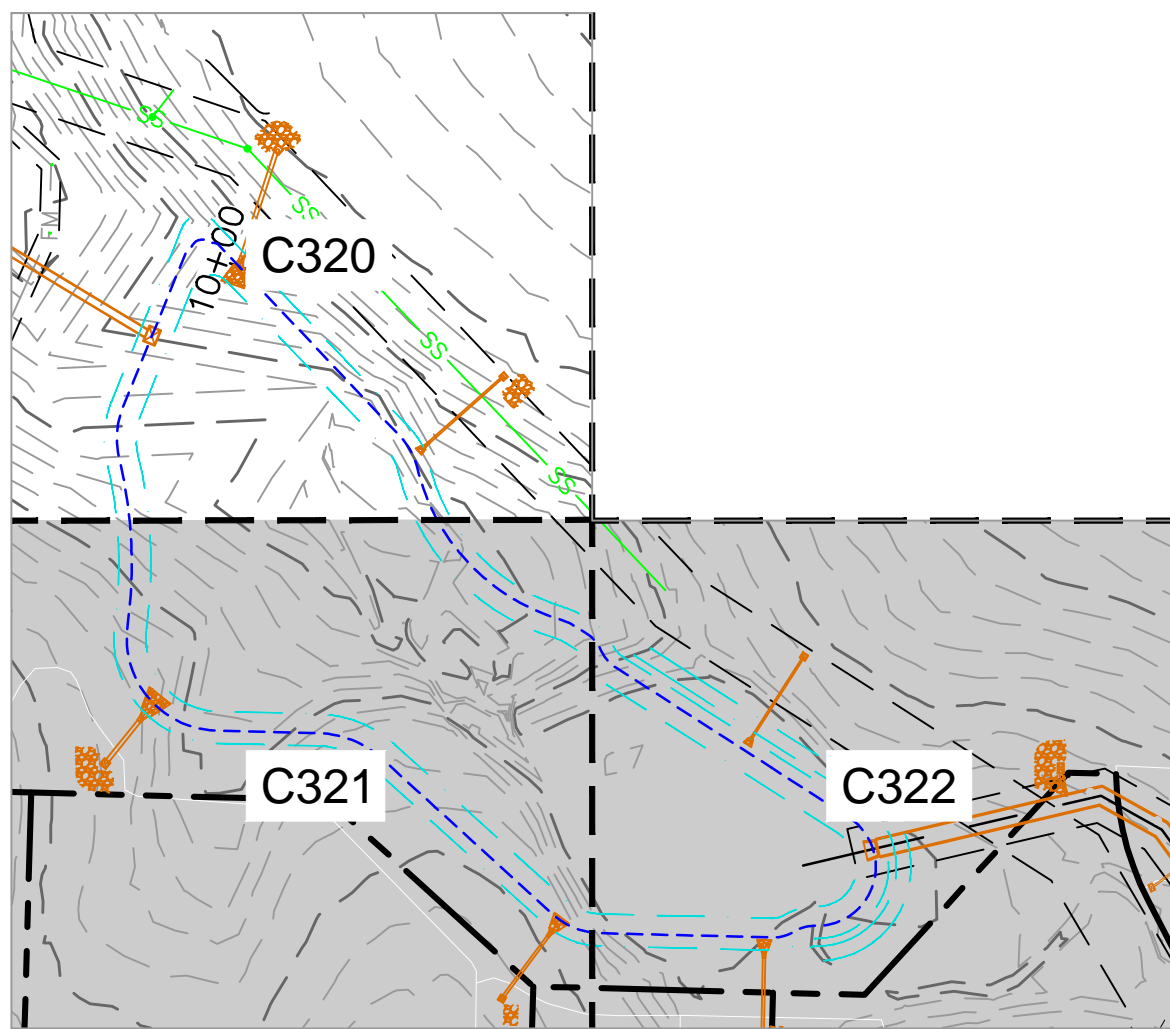
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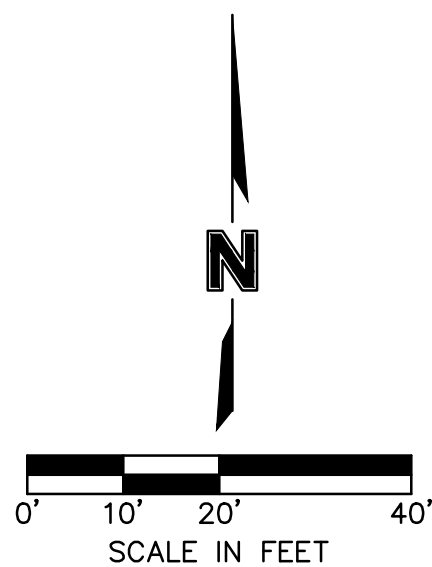
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USER: eromany



- GRADING LEGEND**
- 999 FINISHED GRADE MAJOR CONTOUR
  - 999 FINISHED GRADE MINOR CONTOUR
  - 999 EXISTING GRADE MAJOR CONTOUR
  - 999 EXISTING GRADE MINOR CONTOUR
  - GRADE BREAK
  - TOP OF BERM
  - EMERGENCY SPILLWAY
  - 100 YR. WSE
  - 100 YR. CLOGGED WSE
  - PERMANENT POOL ELEVATION
  - PROPOSED STORM SEWER
  - PROPOSED SANITARY SEWER TO BE RELOCATED
  - EXISTING SANITARY SEWER
  - TURF REINFORCEMENT MAT SEEDED WITH NATIVE PLANTING MIX
  - TEMPORARY EROSION CONTROL BLANKET



SITE KEY



DETENTION BASIN PLAN (NORTH WEST)

MASS GRADING & EROSION AND SEDIMENT CONTROL PLANS

THE VILLAGE AT DISCOVERY PARK ZONE 1 & ARIA APARTMENTS

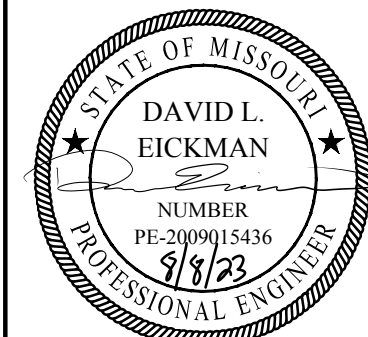
NW COLBURN RD & NE DOUGLAS ST

LEE'S SUMMIT, MISSOURI

2023

drawn by: GS/SOS/JN  
checked by: AR/JN  
approved by: DE  
QA/QC by: JS/NH  
project no.: D21-04643  
drawing no.: C\_DBP01\_D2104643  
date: 07/14/2023

SHEET  
C320



DAVID EICKMAN, P.E.  
MOR 2009015436

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

**olsson**

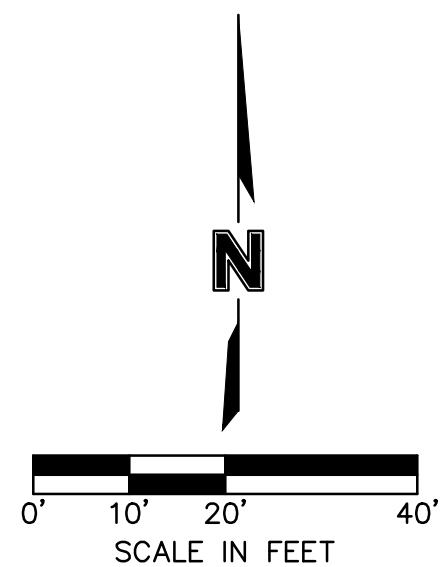
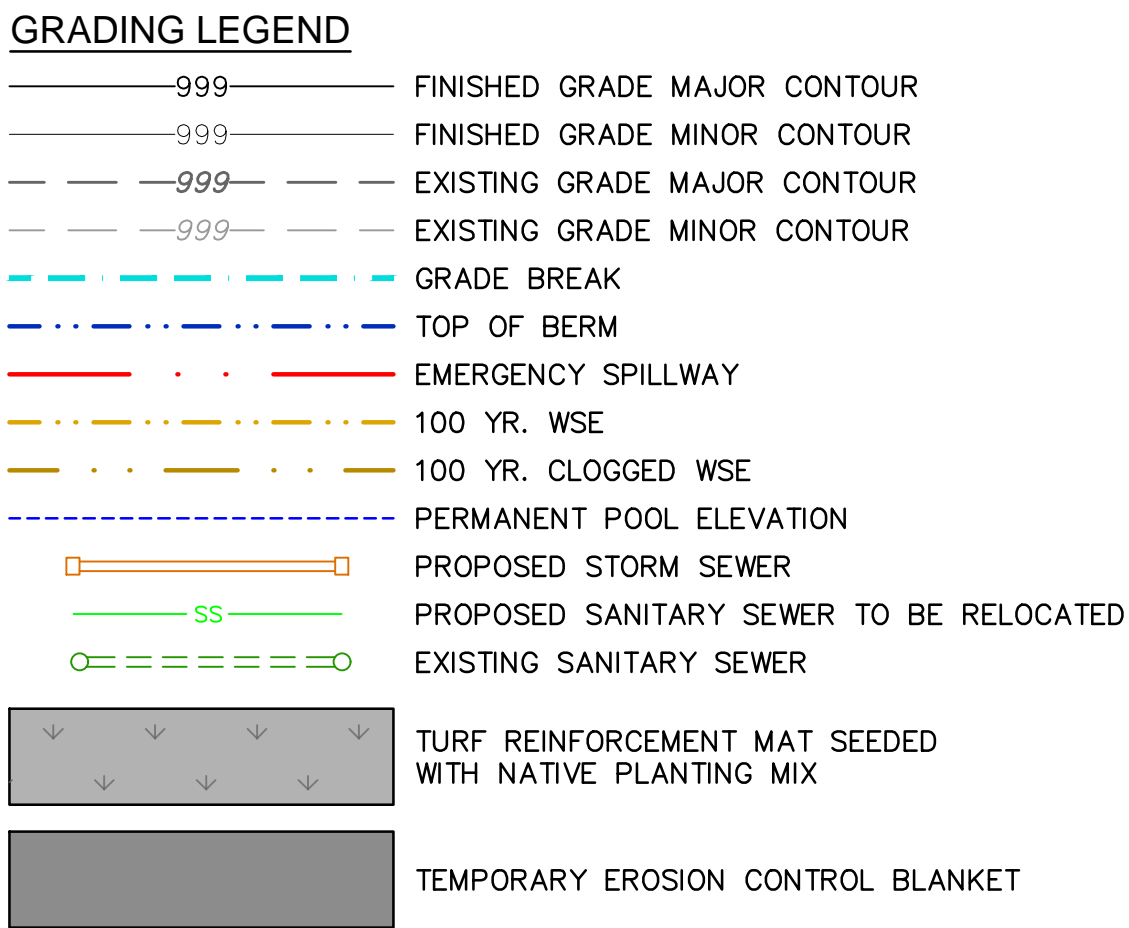
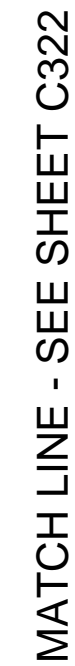
Olsson - Civil Engineering  
Missouri Certificate of Authority #001592  
1301 Burlington Street  
North Kansas City, MO 64116

TEL 816.361.1177  
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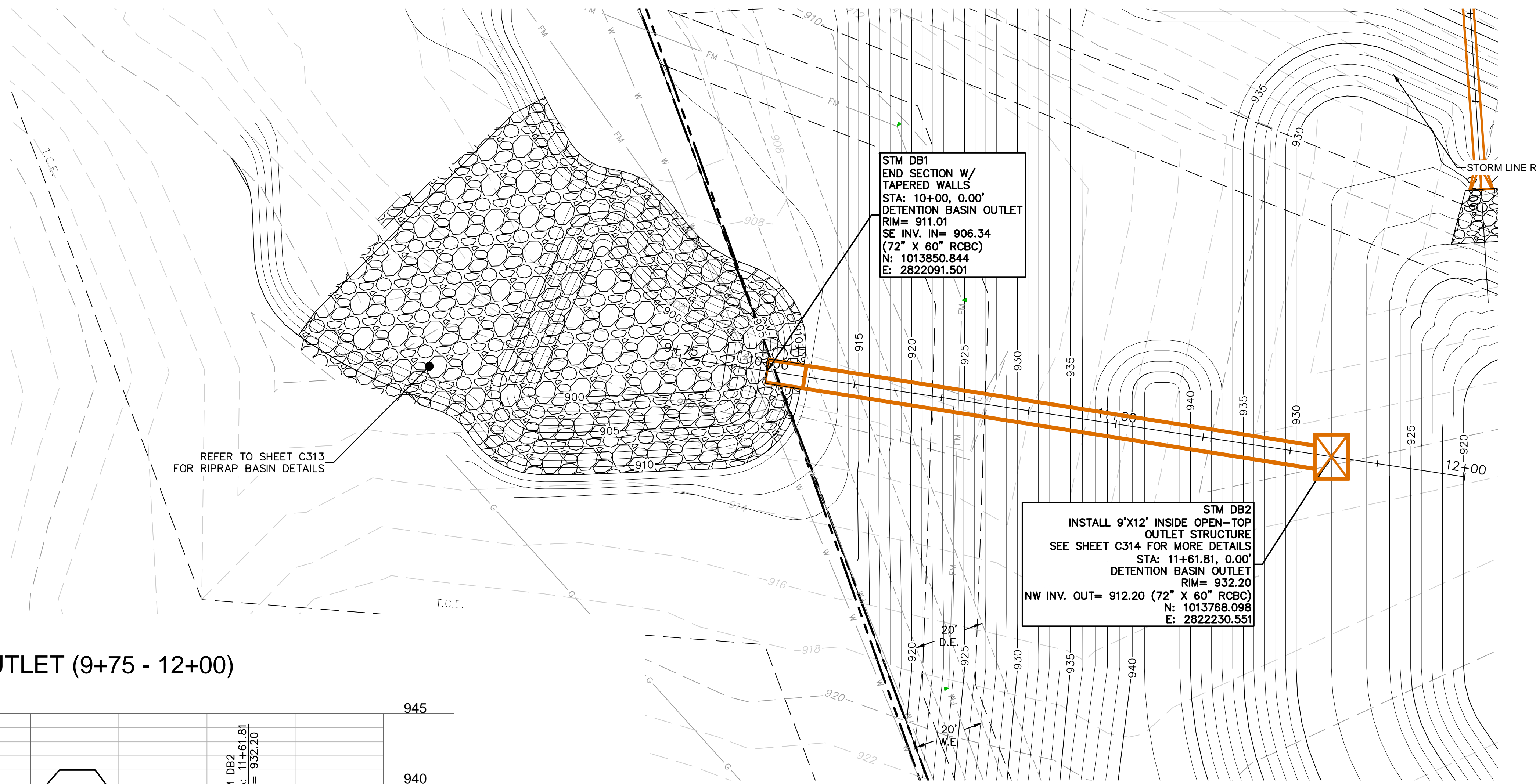
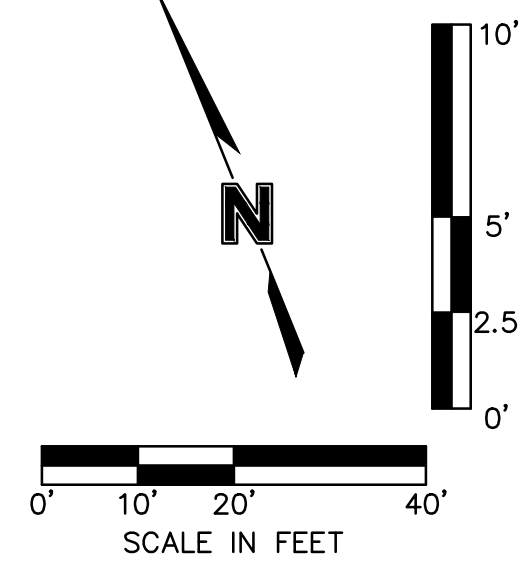
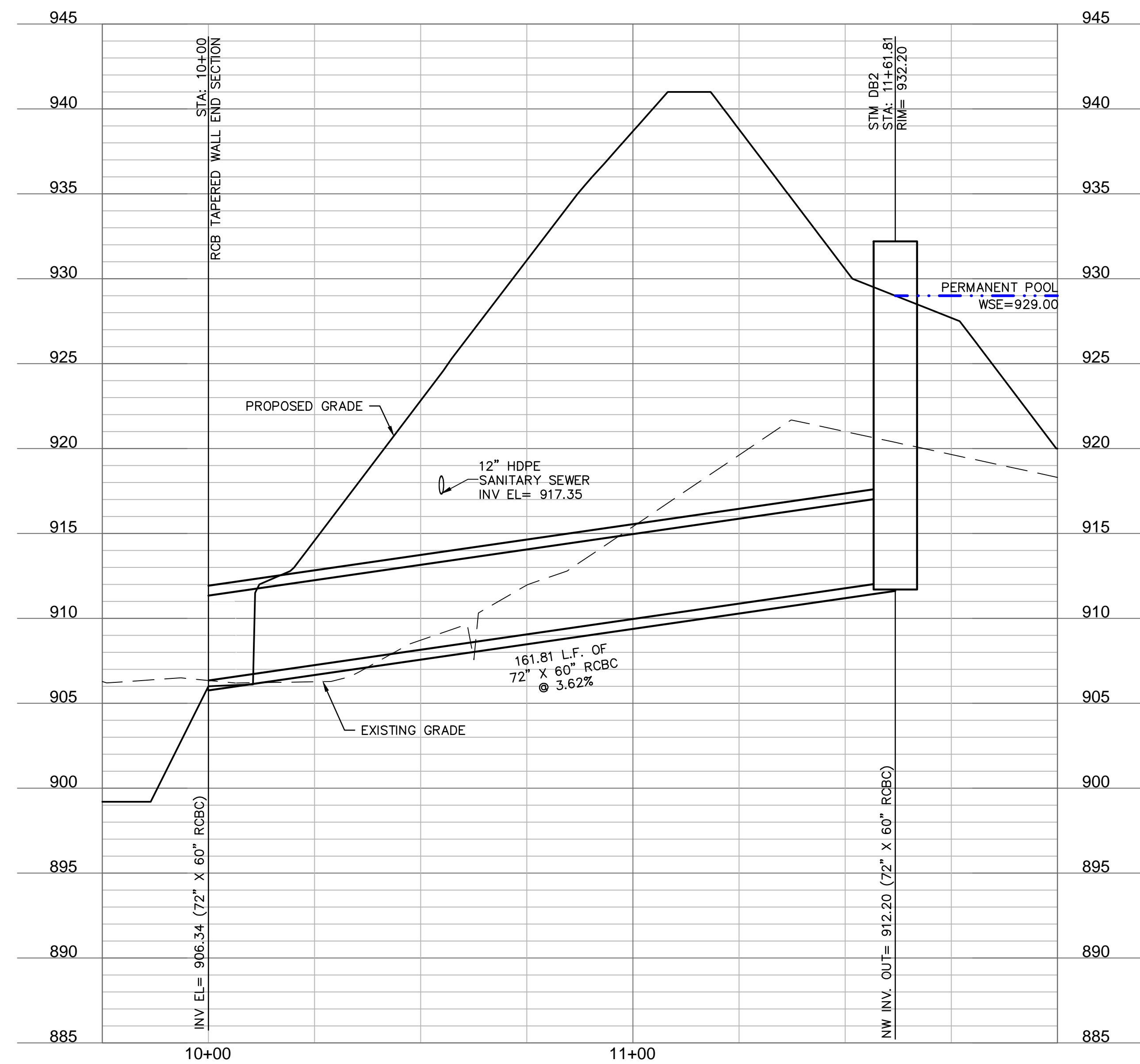








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USER: aromanov C\_PBASE\_D2104643 C\_PSTRM\_D2104643



<p>drawn by: _____ GS/COS/JUN</p> <p>checked by: _____ AR/JUN</p> <p>approved by: _____ DE</p> <p>QA/QC by: _____ JSN/ML</p> <p>project no.: D21-04643</p> <p>drawing no.: C_DBP02 D2104643</p> <p>date: 07.14.2023</p>	<p>STORM SEWER PLAN &amp; PROFILES</p> <p>MASS GRADING &amp; EROSION AND SEDIMENT CONTROL PLANS</p>		<p>2023</p>
	<p>THE VILLAGE AT DISCOVERY PARK ZONE 1 &amp; ARIA APARTMENTS</p> <p>NW COLBURN RD &amp; NE DOUGLAS ST</p>		
	<p>LEE'S SUMMIT, MISSOURI</p>		
	<p>SHEET</p> <p>C323</p>		

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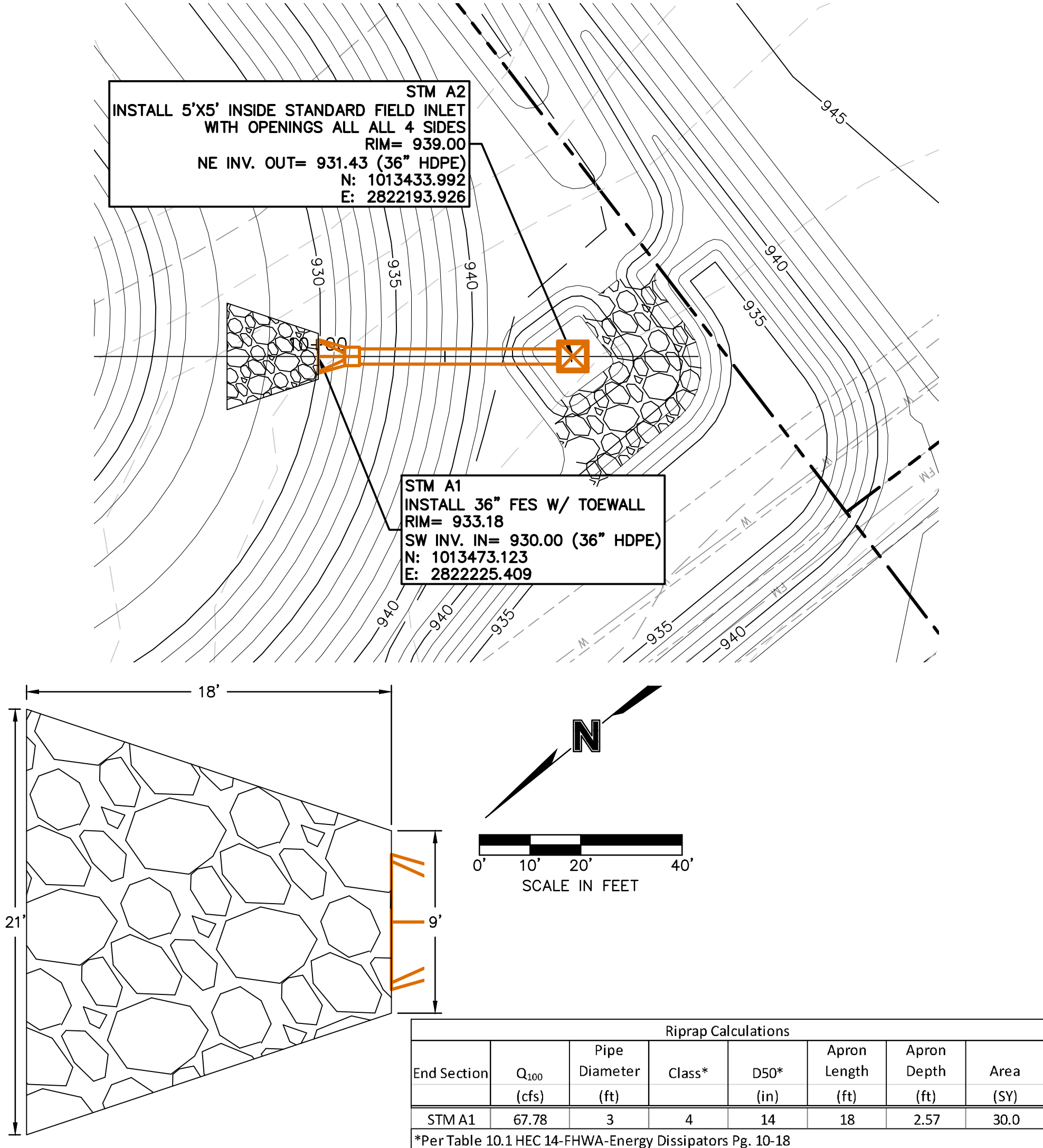
DAVID EICKMAN, P.E.  
MO# 2009015436

**olsson**

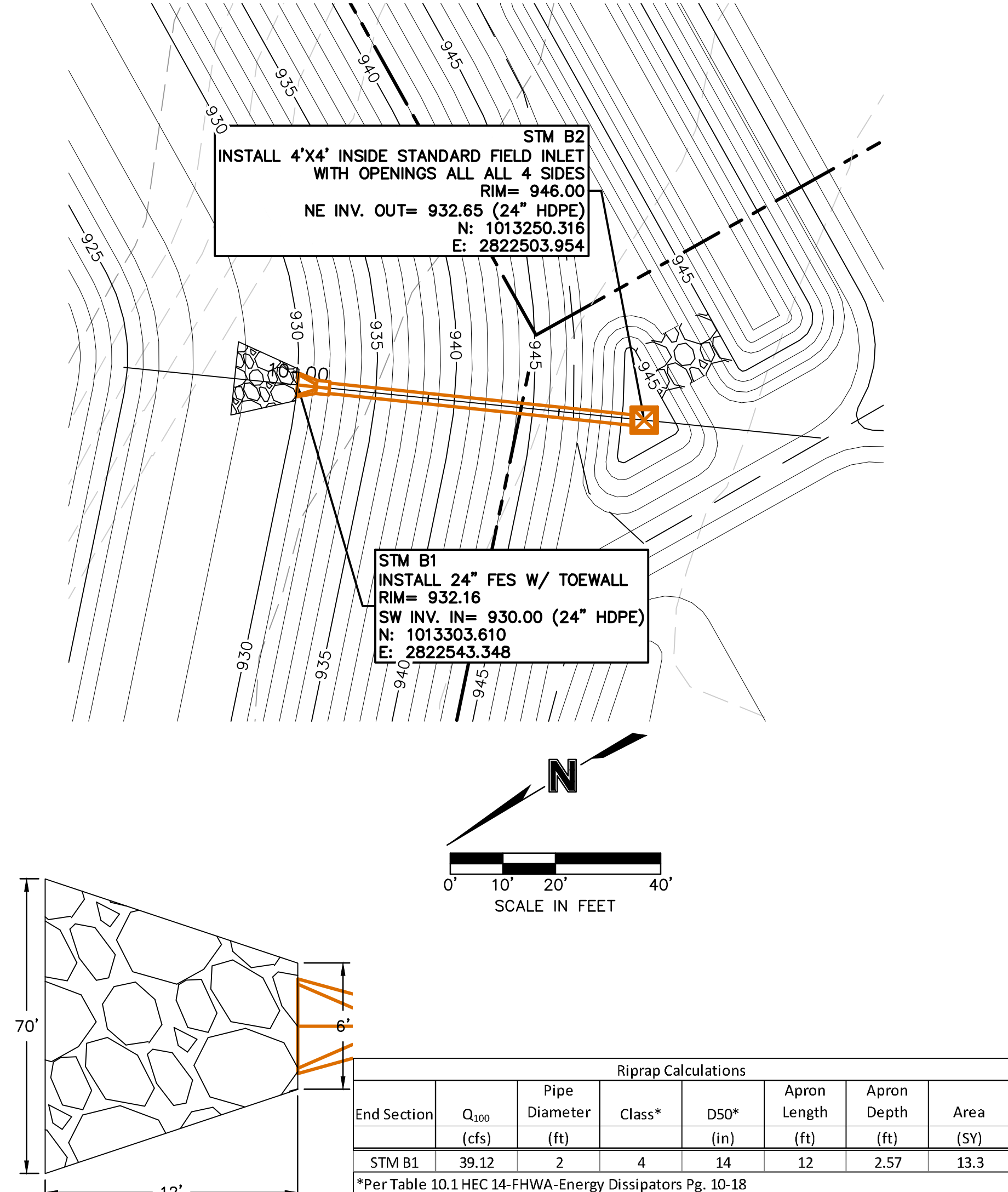
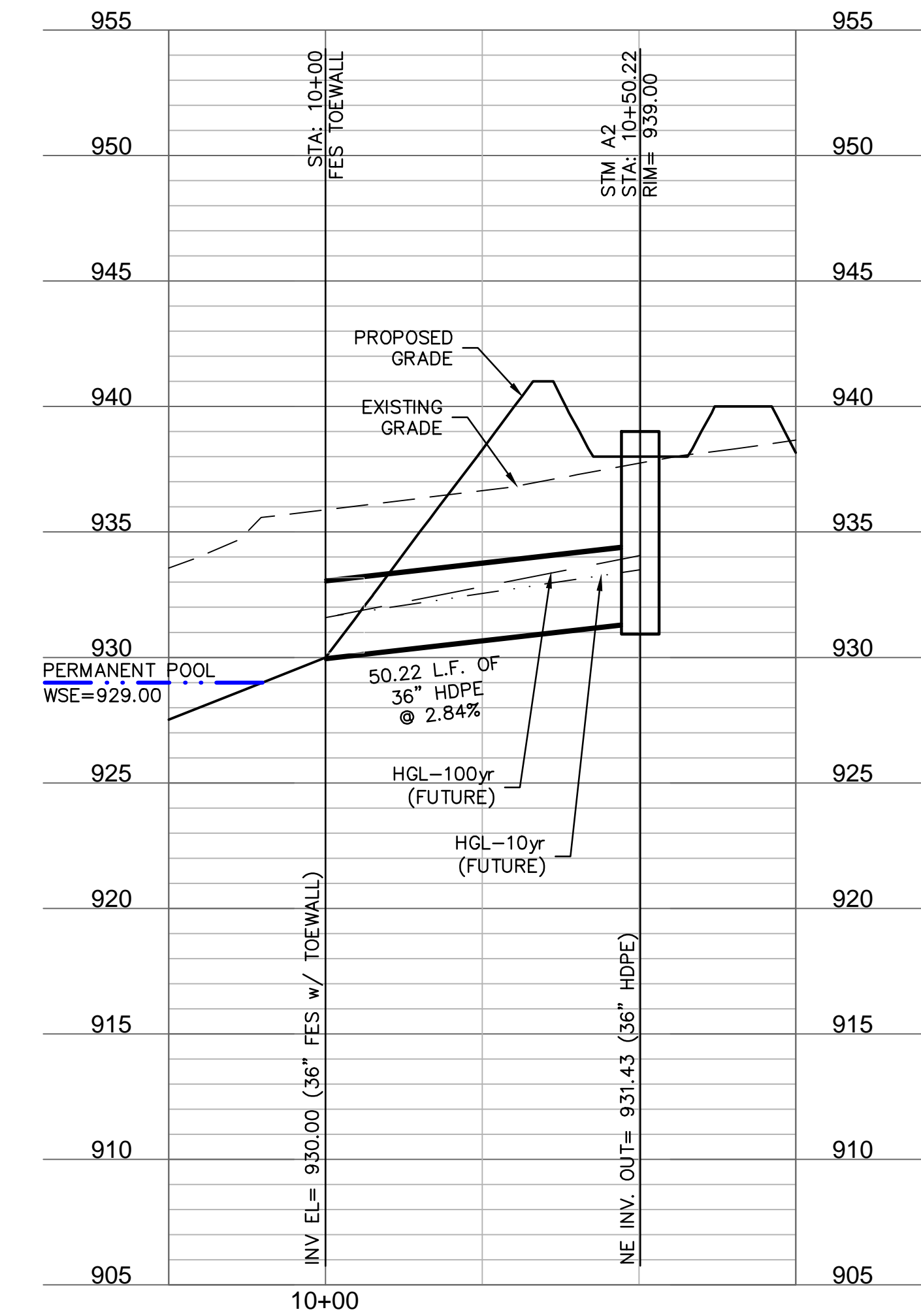
Olsson - Civil Engineering  
Missouri Certificate of Authority #001592  
1301 Burlington Street  
North Kansas City, MO 64116  
TEL 816.361.1177  
www.



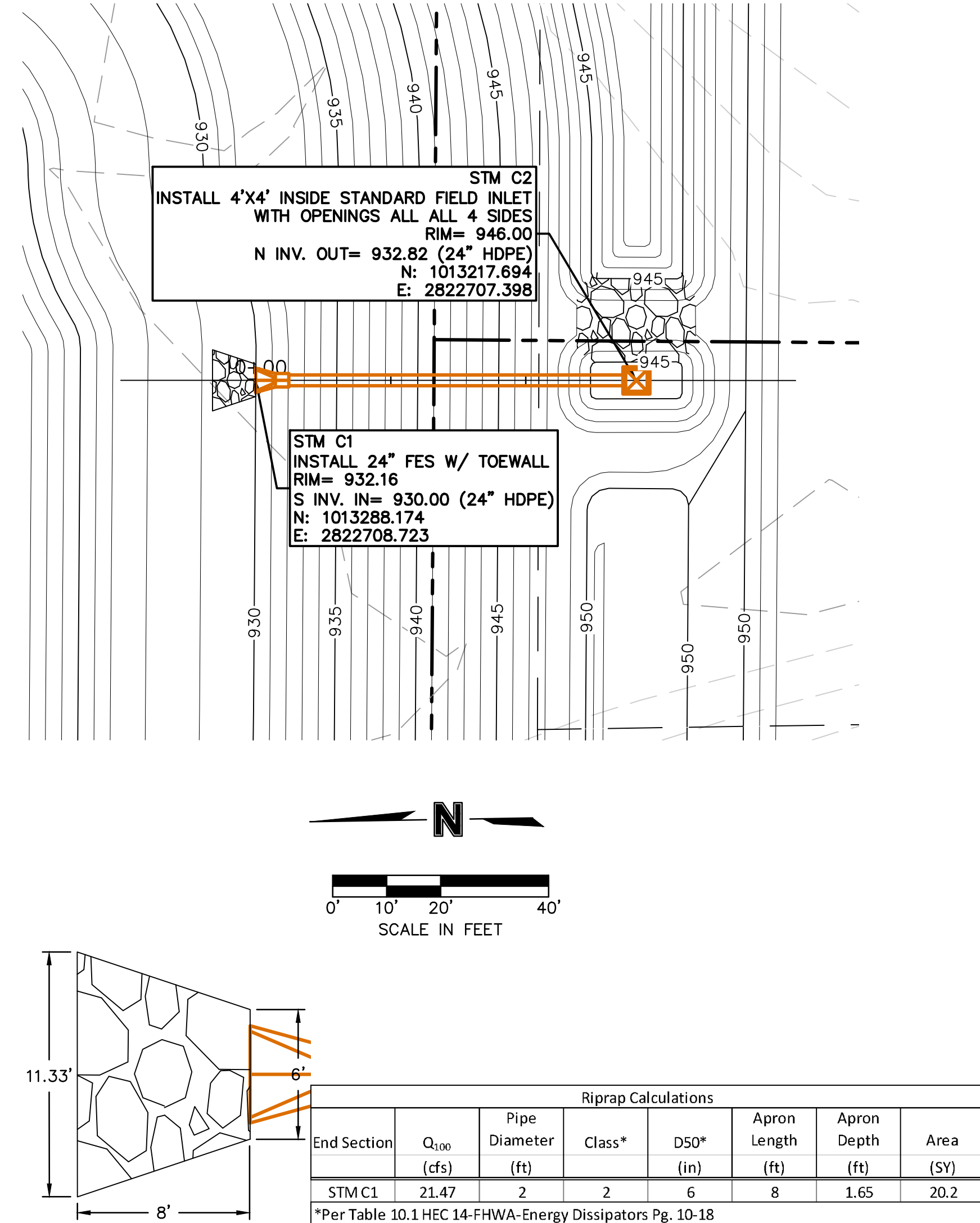
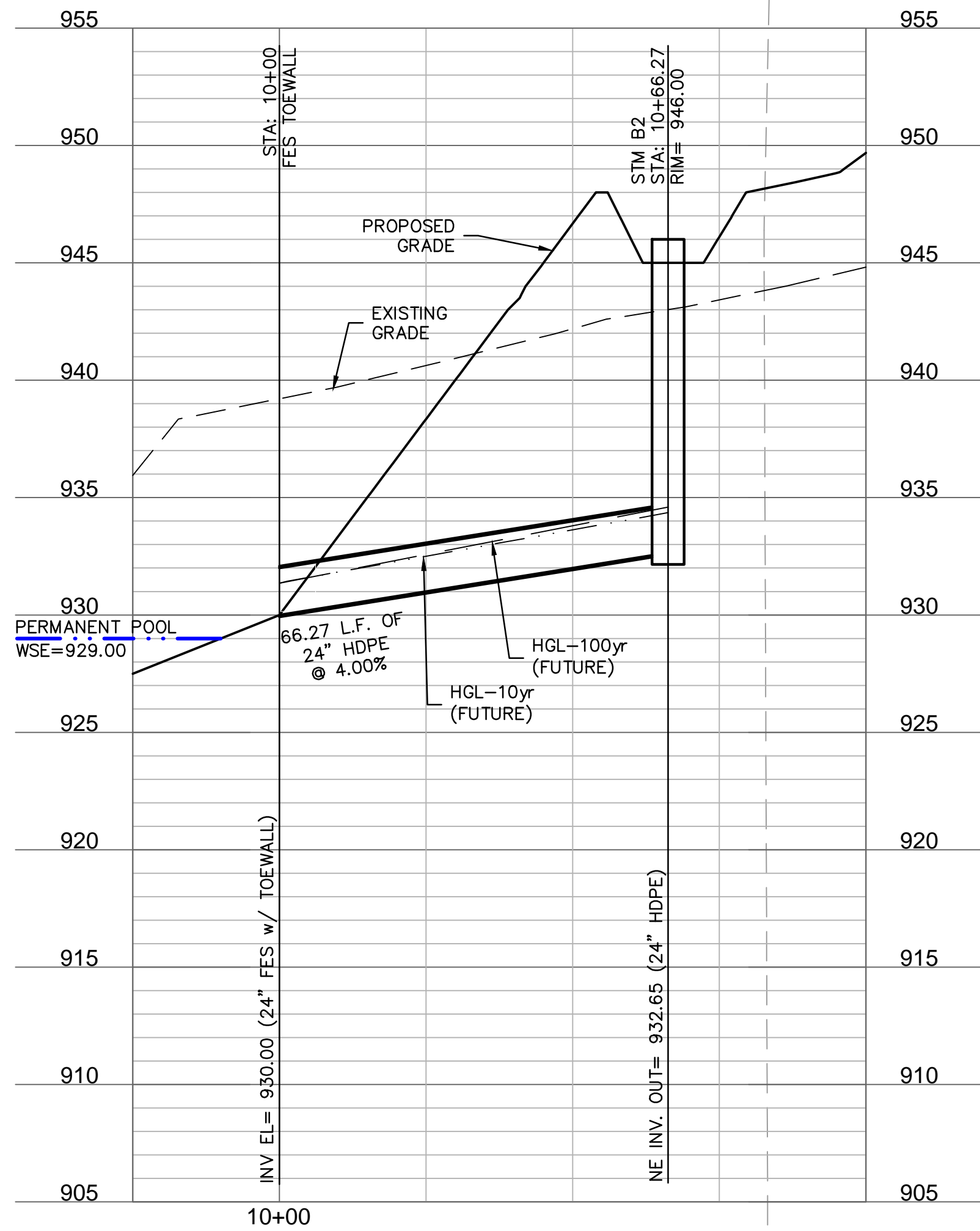
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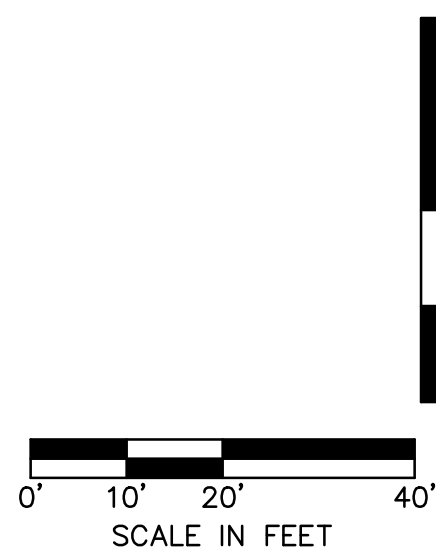
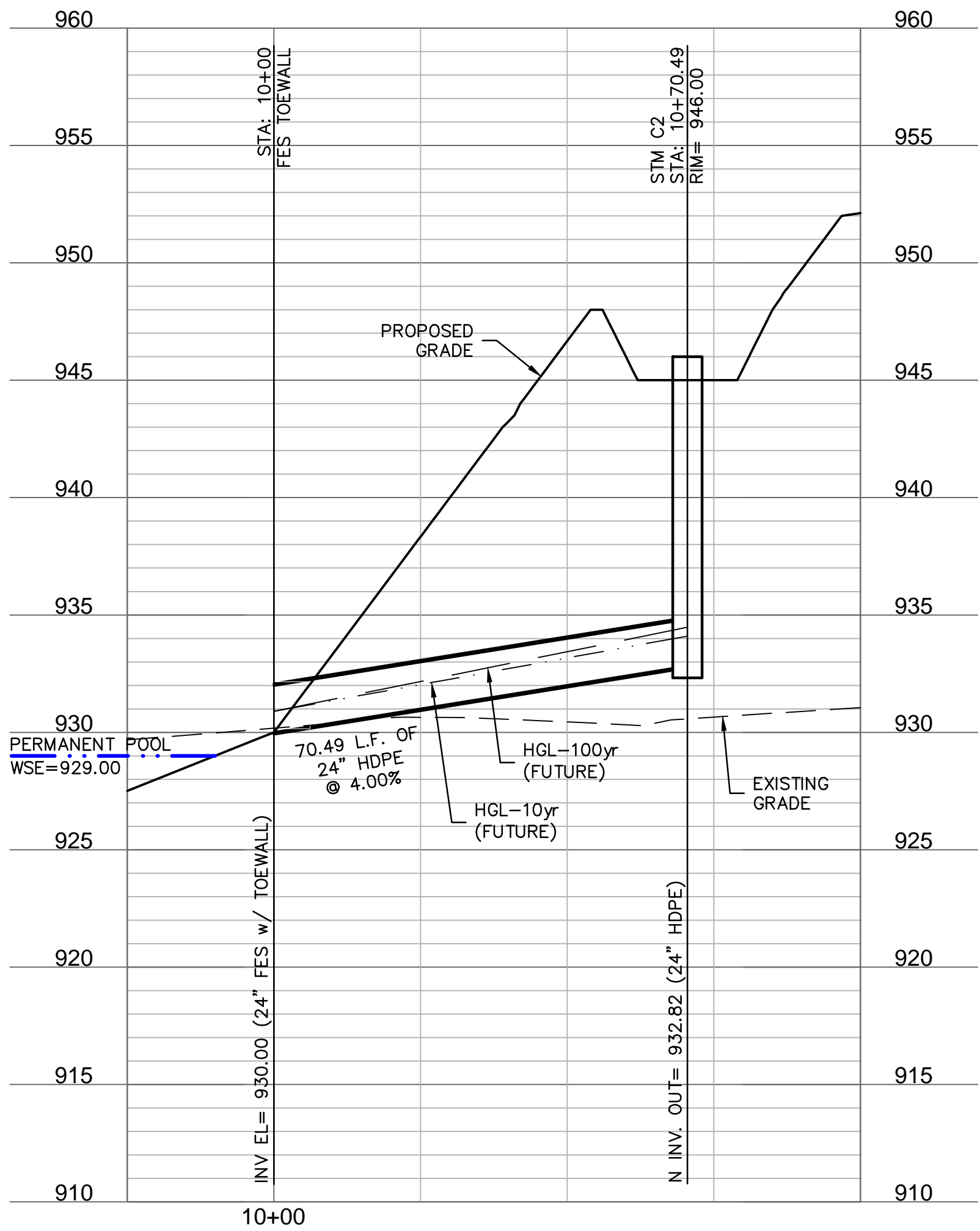
STORM LINE A (9+75 - 10+75)



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



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



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TEL 816.361.1177  
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STATE OF MISSOURI  
DAVID L. EICKMAN  
PROFESSIONAL ENGINEER  
NUMBER  
PE-2009015436  
9/3/23

DAVID EICKMAN, P.E.  
MOR 2009015436

BY

REVISIONS DESCRIPTION

DATE

REV. NO.

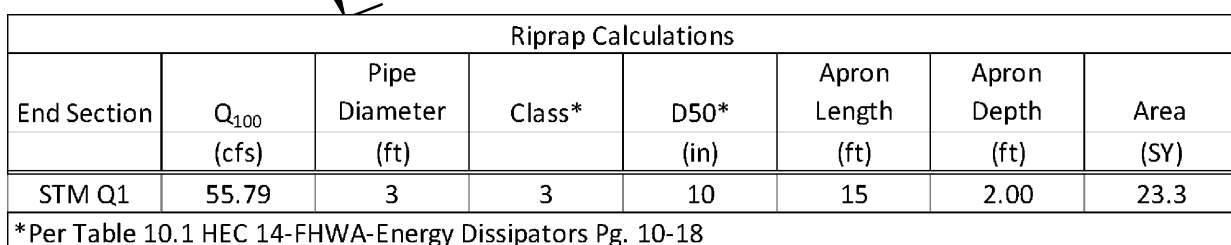
STORM SEWER PLAN & PROFILES  
MASS GRADING & EROSION AND SEDIMENT CONTROL PLANS  
THE VILLAGE AT DISCOVERY PARK ZONE 1 & ARIA APARTMENTS  
NW COLBURN RD & NE DOUGLAS ST  
LEE'S SUMMIT, MISSOURI

2023

drawn by: GS/SJS/IN  
checked by: AR/JN  
approved by: DE  
QA/QC by: JS/NH  
project no.: D21-04643  
drawing no.: C\_DBP02\_D2104643  
date: 07.14.2023

SHEET  
C324

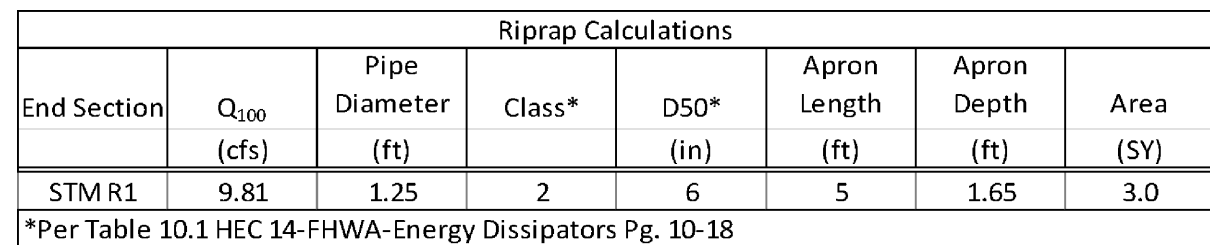




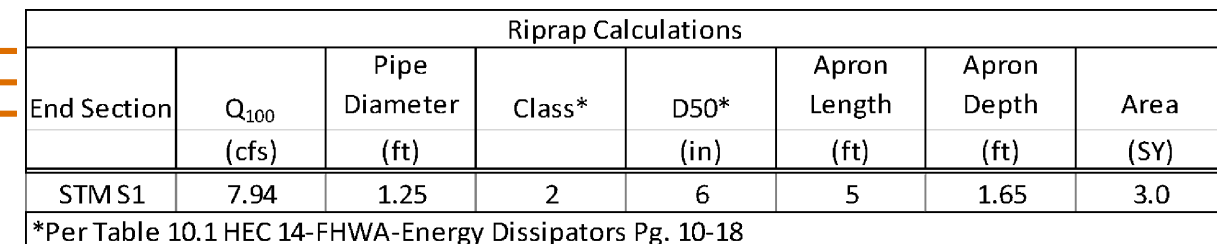
Profile view of a sewer line. The vertical axis shows elevation from 905 to 955. The horizontal axis shows stationing from 10+00 to 11+00.

Key features and labels:

- PROPOSED GRADE**: Solid line showing the proposed ground surface.
- EXISTING GRADE**: Dashed line showing the existing ground surface.
- PROVIDE 18" MIN. OF COVER**: Annotation pointing to the proposed grade line.
- PERMANENT POOL**: Annotation pointing to a blue line at elevation 929.00.
- WSE=929.00**: Water Surface Elevation.
- 96.13 L.F. OF 36" HDPE @ 0.80%**: Pipe segment description.
- 12" PVC SDR-21 SANITARY SEWER INV. EL= 919.90**: Invert elevation for the 12-inch sanitary sewer.
- STA. 10+00 FES TOEWALL**: Station 10+00 FES TOEWALL.
- INV EL= 929.00 (36" FES w/ TOEWALL)**: Invert elevation for the 36-inch FES w/ TOEWALL.
- STM Q2 STA: 10+96.13 RIM= 938.00**: Station 10+96.13 RIM= 938.00.
- S INV. OUT= 929.77 (36" HDPE)**: Sewer Invert Out for the 36-inch HDPE pipe.

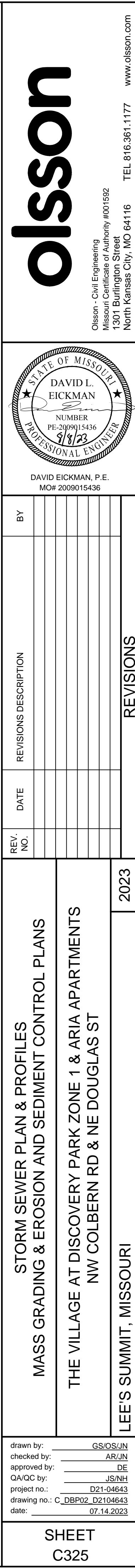


Profile view of a proposed sanitary sewer line. The vertical axis shows elevation from 905 to 955 feet. The horizontal axis shows stationing from 10+00 to 10+40. The profile includes a proposed sewer line (solid line) and an existing sewer line (dashed line). A manhole is shown at station 10+35.55. A permanent pool is indicated at station 10+00. The sewer line is labeled "12" PVC SDR-21 SANITARY SEWER INV. EL.= 921.50". The existing sewer line is labeled "83.55 L.F. OF 12" HDPE @ 5.75%". The proposed sewer line is labeled "12" HDPE". The manhole is labeled "STM R2 STA: 10+35.55 RIM= 942.00". The existing sewer line is labeled "STM R1 STA: 10+00".



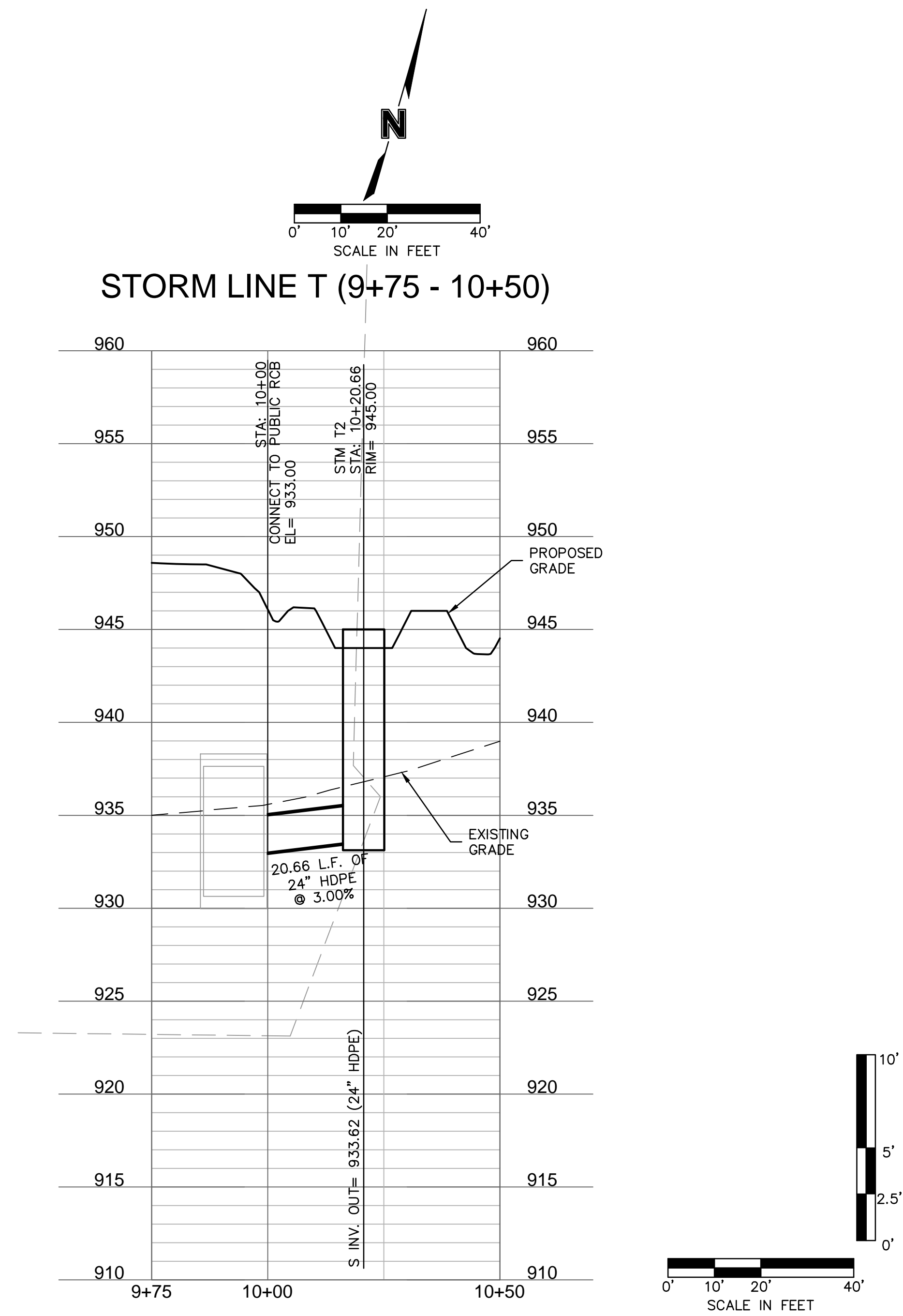
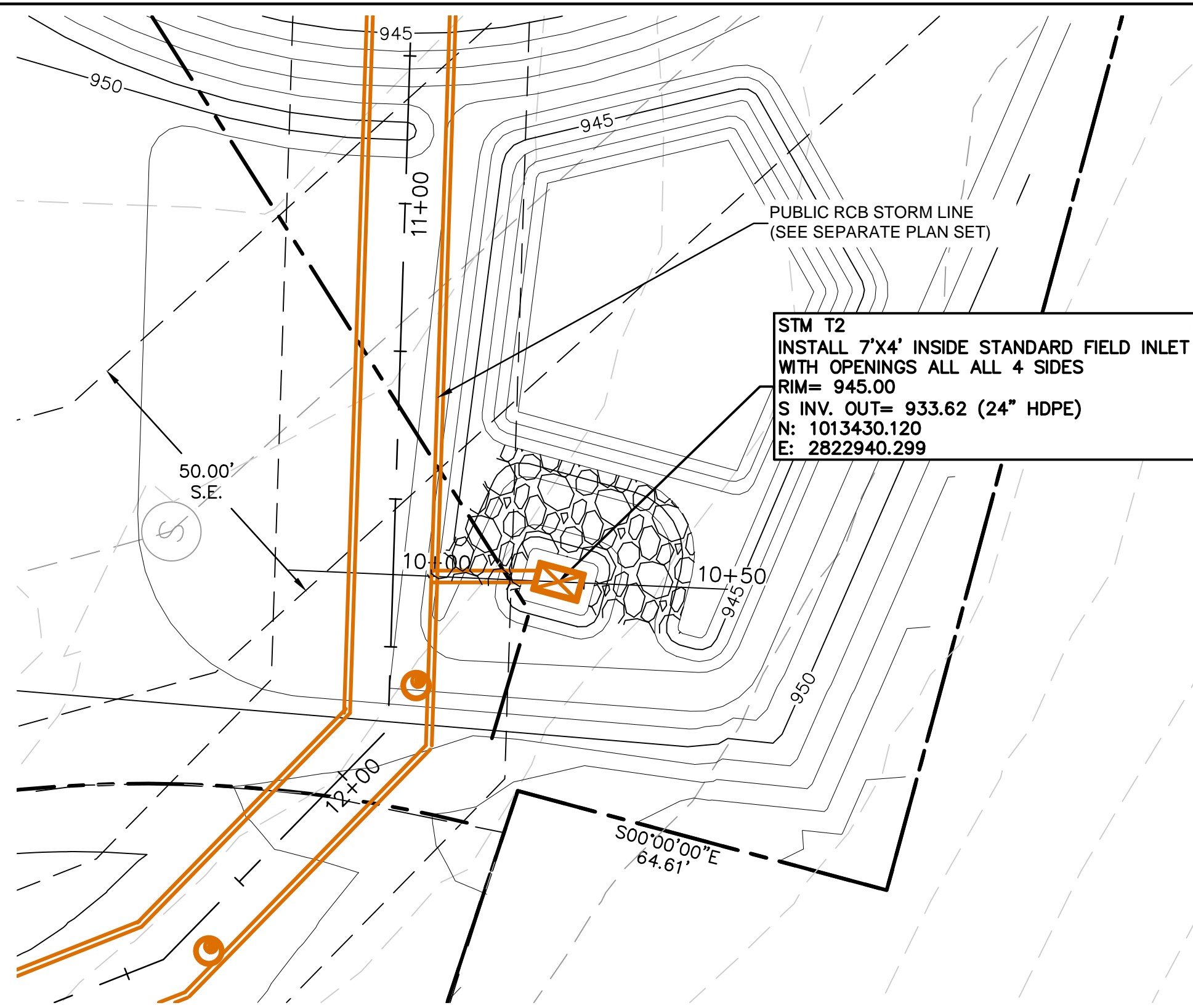
Profile view of the proposed sanitary sewer line. The vertical axis shows elevation from 905 to 955 feet. The horizontal axis shows stationing from 10+00 to 10+76.65. The profile includes the existing ground surface (dashed line), the proposed sewer grade (solid line), and the sewer invert (thick solid line). A manhole is shown at station 10+76.65. A pool is indicated at station 10+00 with a permanent water surface elevation (WSE) of 929.00. The sewer is 15 inches of HDPE with a 4.00% slope. A 12-inch PVC sanitary sewer is shown at an invert elevation of 924.37.

Station	Proposed Grade (ft)	Existing Grade (ft)	Invert (ft)
10+00	928.00	928.00	928.00
10+76.65	947.76	938.00	933.07





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USER: aromanov



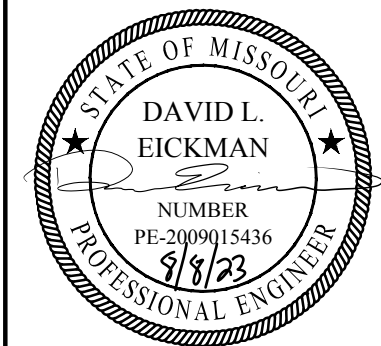
STORM SEWER PLAN & PROFILES  
MASS GRADING & EROSION AND SEDIMENT CONTROL PLANS

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

LEE'S SUMMIT, MISSOURI

drawn by: GS/OS/JN  
checked by: AR/JN  
approved by: DE  
QA/QC by: JS/NH  
project no.: D21-04643  
drawing no.: C DBP02 D2104643  
date: 07.14.2023

SHEET  
C326

[illegible]

DAVID EICKMAN, P.E.  
MO# 2009015436

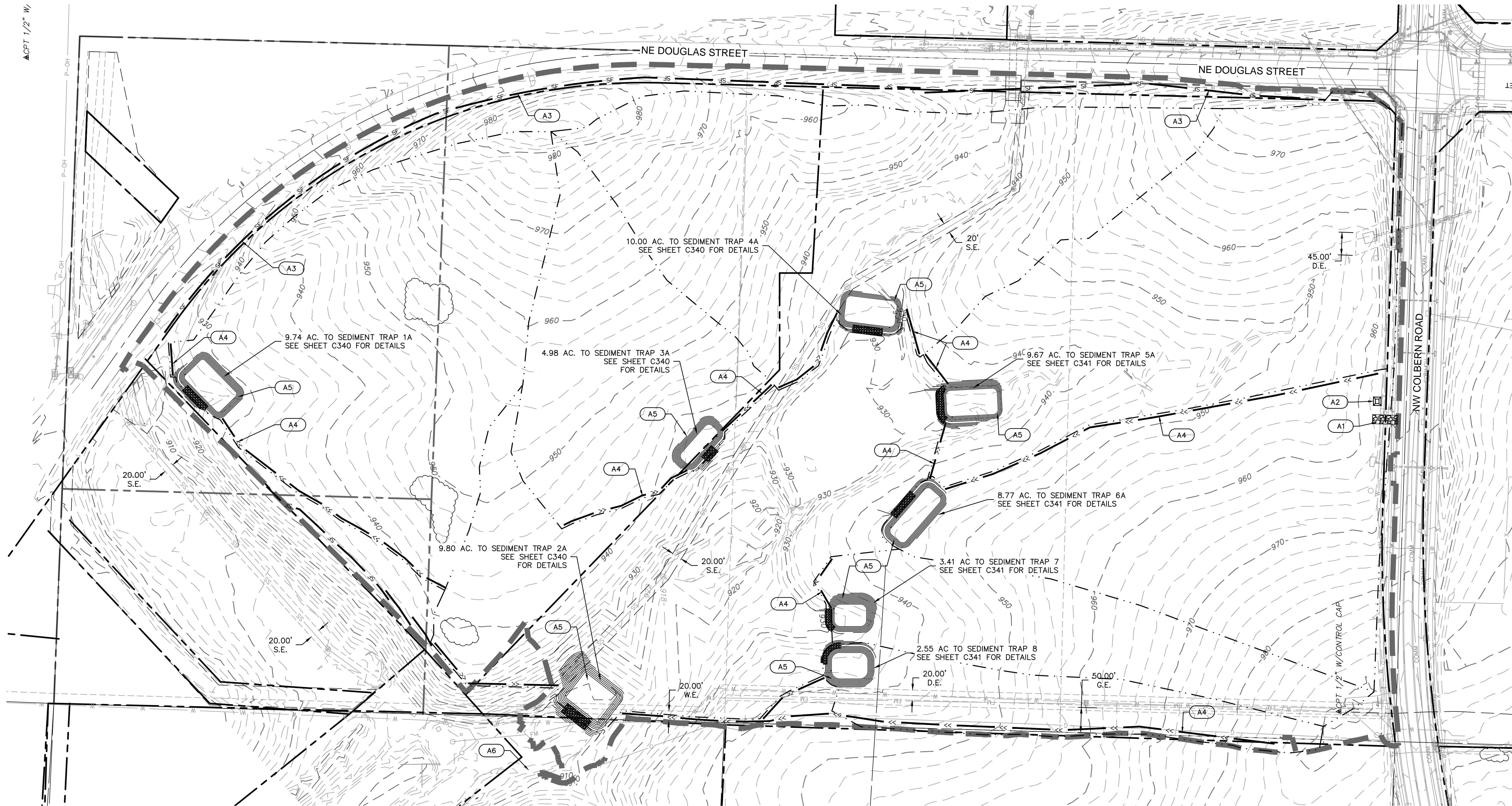
**olsson**











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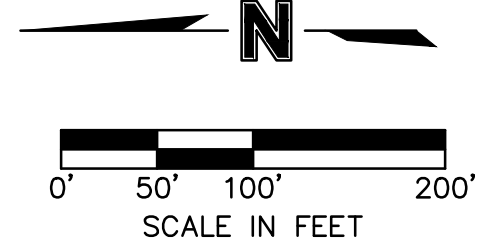
LEGEND	
<b>PHASE A</b>	
 <b>SF</b> 	SILT FENCE
 <b>&lt;&lt;</b> 	TEMPORARY DIVERSION BERM
	CONCRETE WASHOUT
	TEMPORARY STONE CONSTRUCTION ENTRANCE
 <b>---</b> 	DRAINAGE AREA TO BASIN/TRAP
 	LIMITS OF DISTURBANCE

**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 THOSE 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

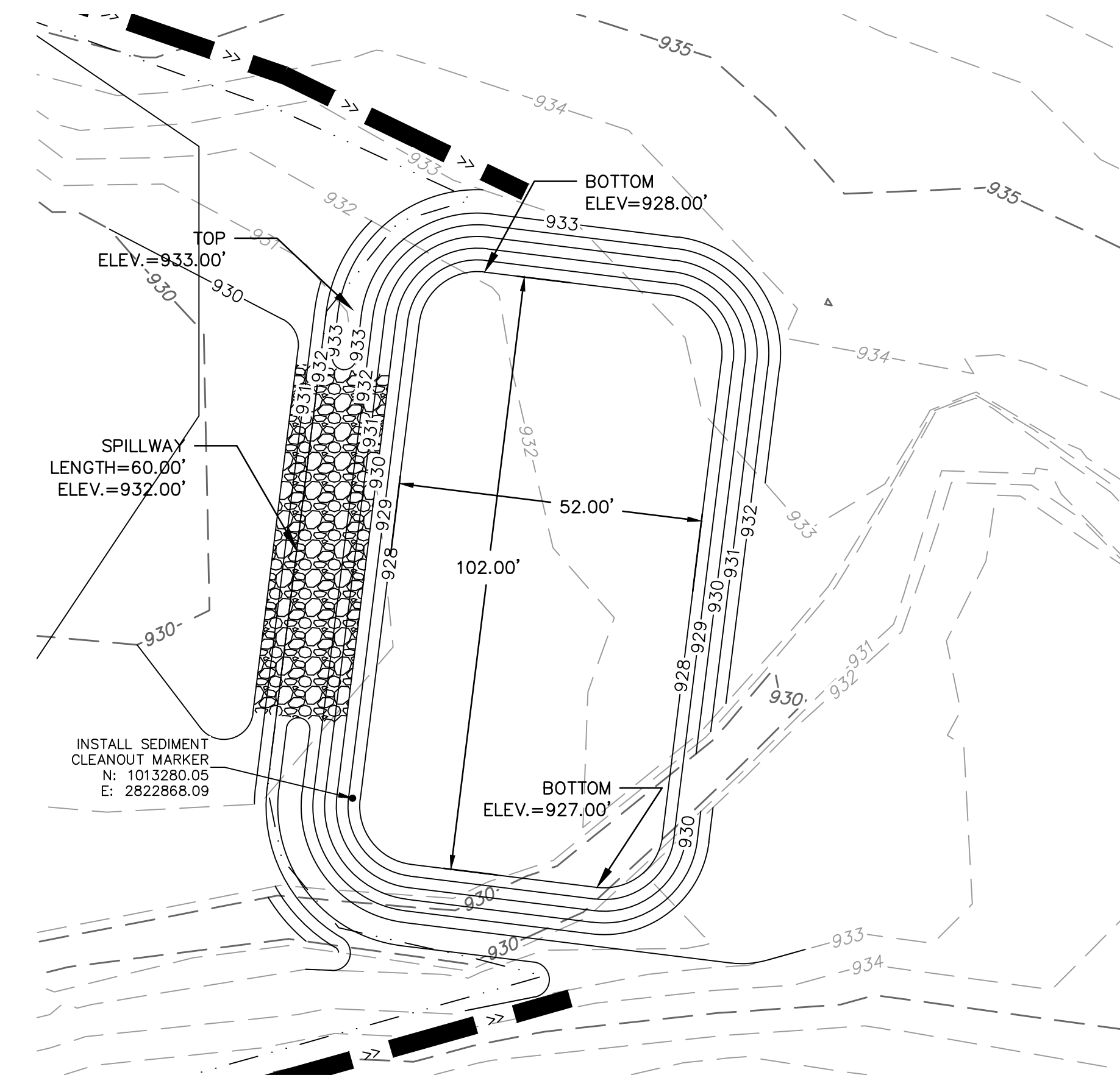
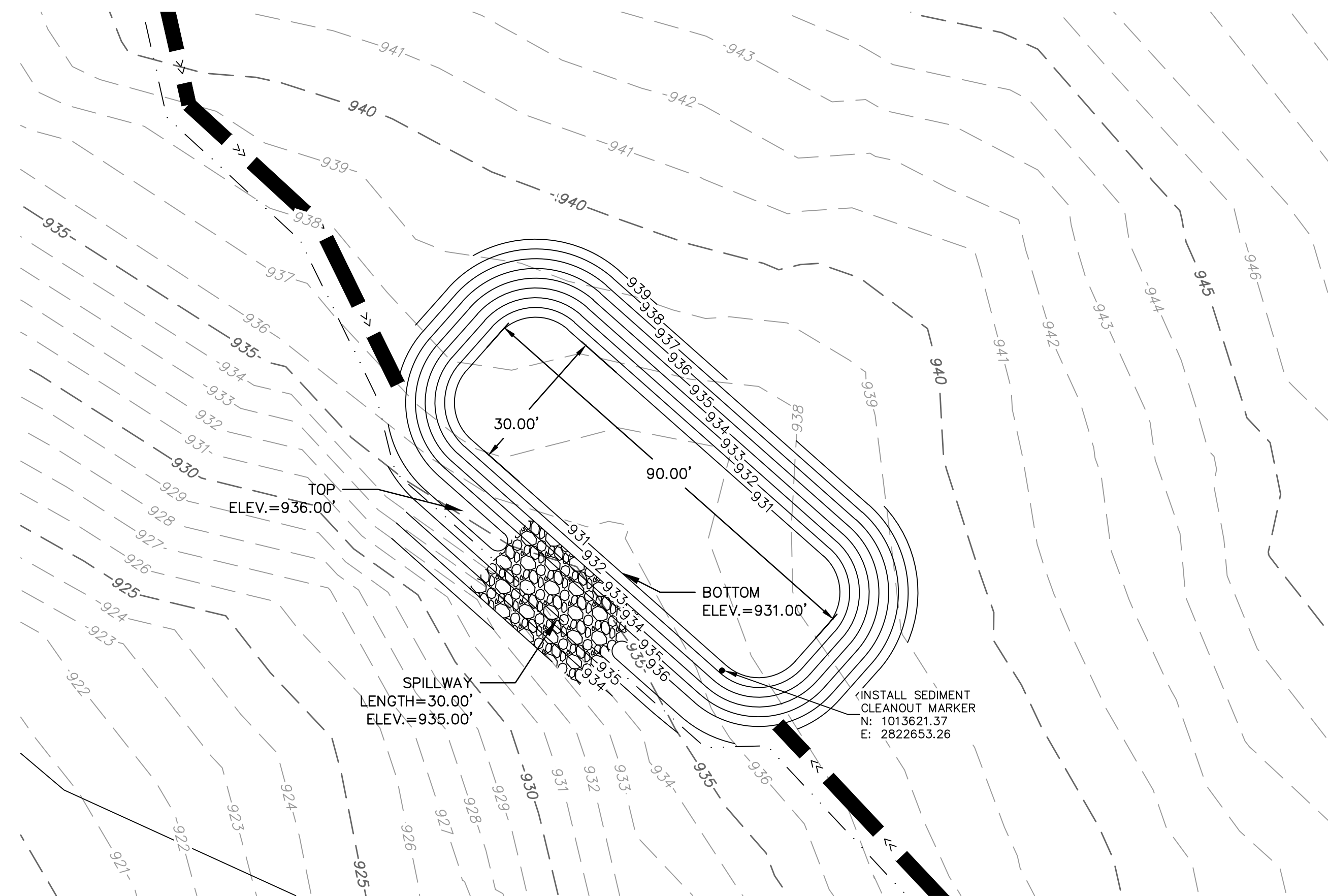
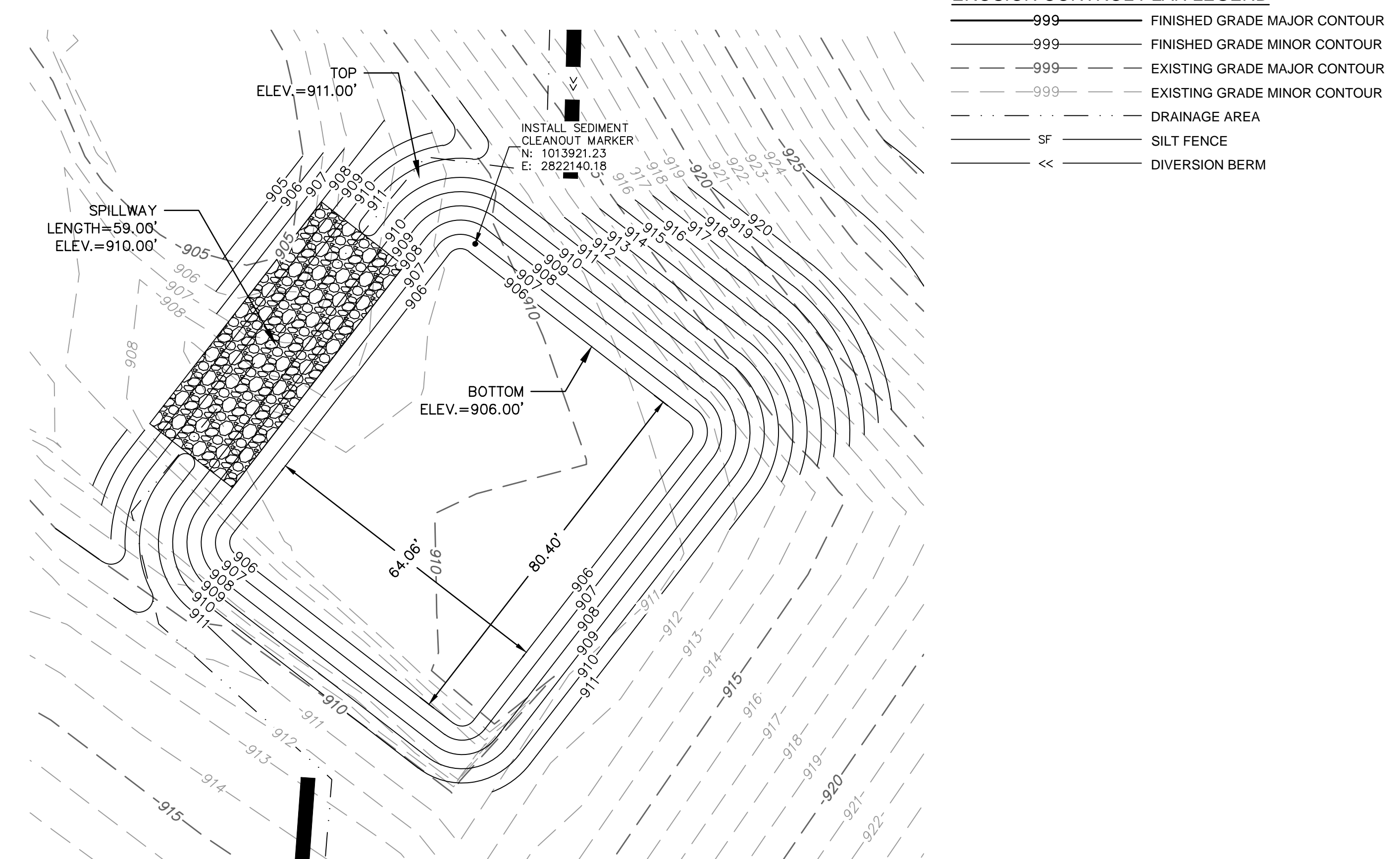
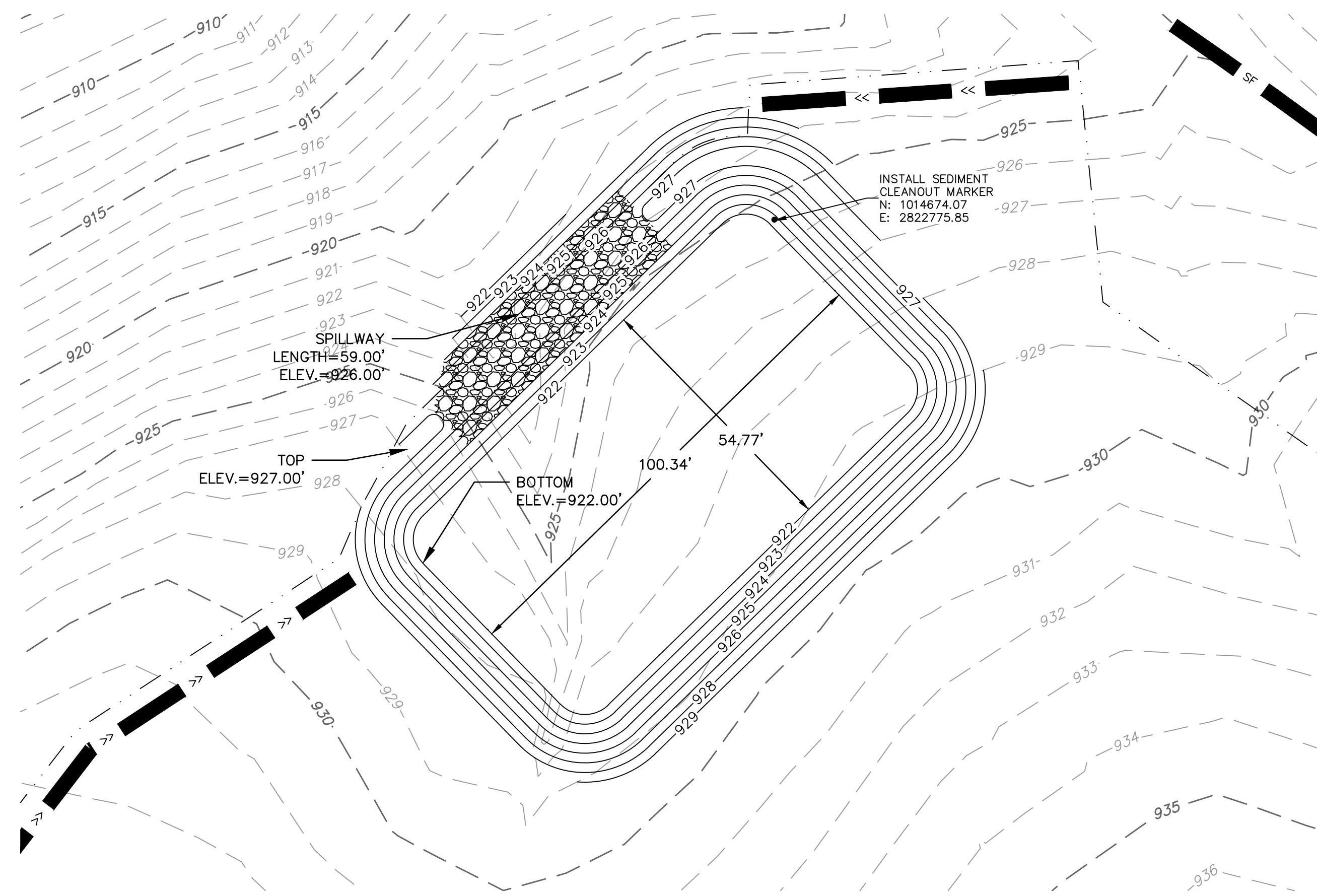
SEDIMENT TRAPS MUST BE FULLY INSTALLED PRIOR TO ANY SITE DISTURBANCE WITHIN THE TRIBUTARY AREA.

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 LEGEND

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 ————999———— FINISHED GRADE MINOR CONTOUR  
 ————999———— EXISTING GRADE MAJOR CONTOUR  
 - - - - -999- - - - - EXISTING GRADE MINOR CONTOUR  
 . . . . . DRAINAGE AREA  
 ————SF———— SILT FENCE  
 ————<<———— DIVERSION BERM

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1301 Burlington Street  
North Kansas City, MO 64116



DAVID EICKMAN, P.E.  
MO# 2009015436

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## PHASE A SEDIMENT TRAP DETAILS

### MASS GRADING & EROSION AND SEDIMENT CONTROL PLANS

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

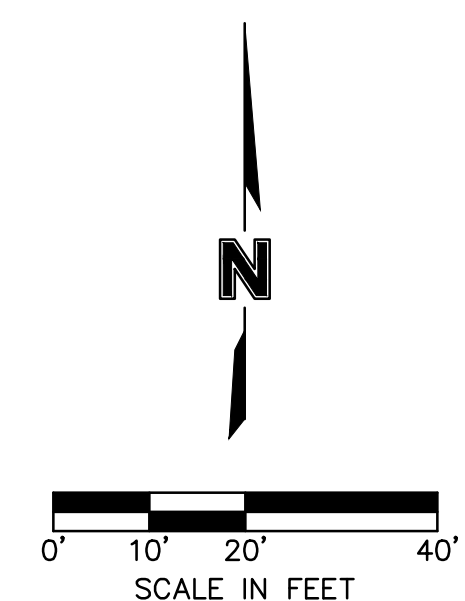
LEE'S SUMMIT, MISSOURI

2023

drawn by: GS/OS/JN  
checked by: AR/JN  
approved by: DE  
QA/QC by: JS/NH  
project no.: D21-04643  
drawing no. C\_ERC01A\_D2104643  
date: 07.14.2023

SHEET  
C340

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C\_PBASE\_D2104643 C\_PSTRM\_D2104643 I\_PBASE\_D2104643 C\_PBASE\_D2104643

LEGEND		
PHASE A	PHASE B	
		SILT FENCE
		TEMPORARY DIVERSION BERM
		CONCRETE WASHOUT
		TEMPORARY STONE CONSTRUCTION ENTRANCE
		TURF REINFORCEMENT MAT (FLEXMAT PLUS SPECS)
		TEMPORARY EROSION CONTROL BLANKET
		DRAINAGE AREA TO BASIN/TRAP
		LIMITS OF DISTURBANCE

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.

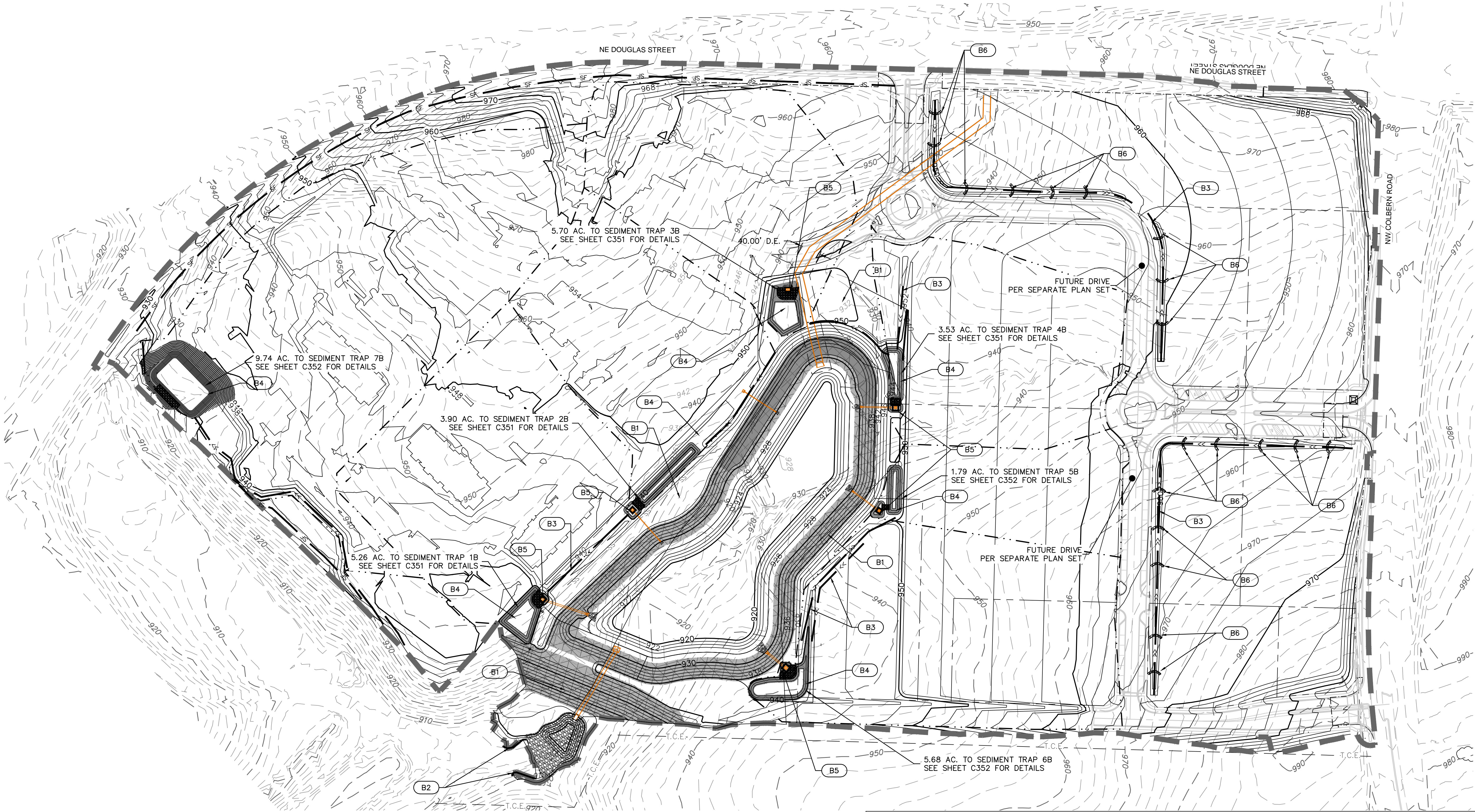
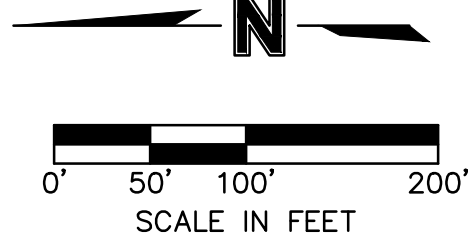
CONTRACTOR TO KEEP SWPPP REPORTS AND MDNR PERMIT IN THE ON-SITE CONSTRUCTION OFFICE TRAILER. TRAILER LOCATION TO BE DETERMINED BY CONTRACTOR

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.

GRADING LEGEND

—999— FINISHED GRADE MAJOR CONTOUR  
- - -999- FINISHED GRADE MINOR CONTOUR  
- - -999- EXISTING GRADE MAJOR CONTOUR  
- - -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.

EROSION CONTROL PLAN (PHASE B)  
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/SJS/JN  
checked by: AR/JN  
approved by: DE  
QA/QC by: JS/NH  
project no.: D21-04643  
drawing no.: C\_ERC02\_D2104643  
date: 07.14.2023

SHEET  
C350



DAVID EICKMAN, P.E.  
MOR 2009015436

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



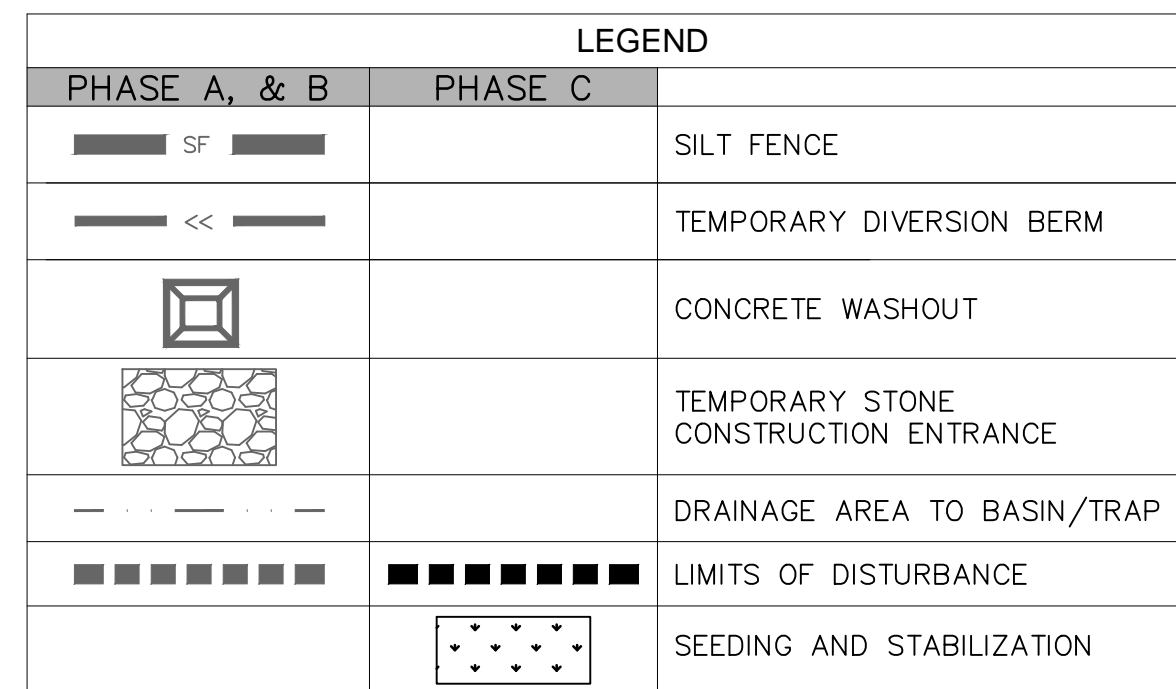








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### GRADING LEGEND

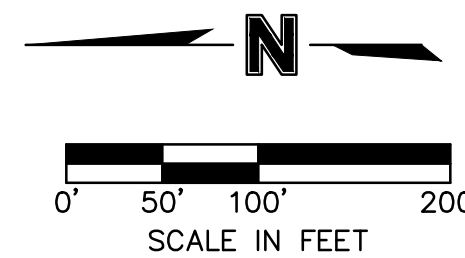
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— — —999— — —	EXISTING GRADE MINOR CONTOUR

**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.

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 THIS SHEET.



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 APARTMENTS  
NW COLBERN RD & NE DOUGLAS ST

LEE'S SUMMIT, MISSOURI

2023

REVISIONS



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