

# CLOSURE OF INACTIVE NABORS LANDFILL

## NABORS LANDFILL

1320 RLH LANDFILL ROAD  
MOUNTAIN HOME, AR 72653

Solid Waste Permit No. 0249-S4 and 0249-S1-R2  
ABA Contract No. 4600033394  
July 2015

PREPARED FOR



5301 NORTSHORE DRIVE  
NORTH LITTLE ROCK, AR 72118

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C-605	Class 4 Stormwater Control Plan
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PREPARED BY

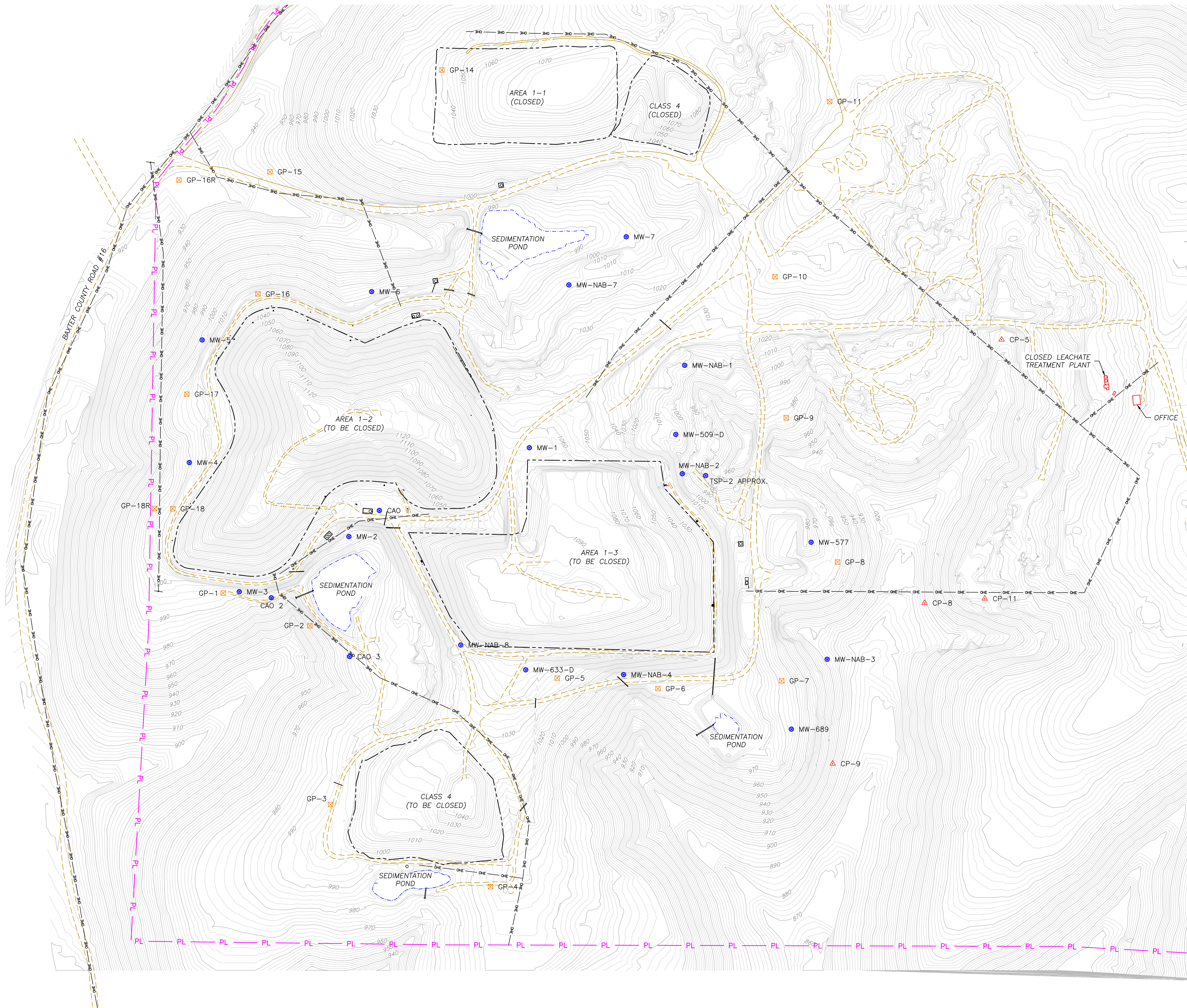
## SCS AQUATERRA

7311 WEST 130th STREET, SUITE 100  
OVERLAND PARK, KANSAS 66213-3117  
(913) 681-0030 FAX (913) 681-0012  
PROJECT NO. 27214218.01

FOR BIDDING PURPOSES ONLY  
NOT FOR CONSTRUCTION

T-100





**LEGEND:**

—————	EXISTING 2' MINOR CONTOUR
—————1025—————	EXISTING 10' MAJOR CONTOUR
————— PL —————	PROPERTY BOUNDARY (APPROX.)
—————	EXISTING ROAD
— OHE — OHE —	EXISTING OVERHEAD ELECTRIC
— - - - -	DISPOSAL BOUNDARY (APPROXIMATE)
— - - - -	EXISTING BODY OF WATER
=====	EXISTING DRAINAGE PIPE/CULVERT
● MW - 2	EXISTING MONITORING WELL
⚠ GP - 16	EXISTING GAS PROBE
ⓧ CP# 5	EXISTING CONTROL POINT

NOTES:

1. EXISTING TOPOGRAPHY BASED ON AERIAL SURVEY PERFORMED BY M.J. HARDEN ASSOCIATES, INC ON AUGUST 17, 2010. UPDATES TO THE TOPOGRAPHY AND SITE FEATURES FOR AREA 1-2, AREA 1-3, AND SOUTH CLASS 4 DISPOSAL UNITS SURVEYED BY CONSOLIDATED LAND SERVICES, INC BETWEEN DECEMBER 2014 AND JANUARY 2015.
2. SURVEY DATA BASED ON THE NAD83 ARKANSAS STATE PLANE NORTH COORDINATE SYSTEM.
3. MAJOR CLOSURE ACTIVITIES INCLUDE WASTE RELOCATION, LEACHATE FOREMAN INSTALLATION, CENTRALIZED TANK FARM CONSTRUCTION, GAS COLLECTION AND CONTROL SYSTEM INSTALLATION, AND FINAL COVER CONSTRUCTION (CLASS 1 AND CLASS 4).

CONTROL POINT TABLE			
CONTROL POINT	NORTHING	EASTING	ELEVATION
CP-4	776034.65	1183865.35	1054.93
CP-5	775123.00	1182832.40	1065.34
CP-8	774009.09	1182506.62	1030.49
CP-9	773329.69	1182117.90	991.71
CP-11	774027.86	1182761.01	1039.02
CP-13	774063.64	1183688.83	989.88
CP-14	774817.85	1183686.86	996.14

<b>SCS AQUATERRA</b> 7311 W. 130th St. Ste. 100 Overland Park, Kansas 66213 PH. (913) 681-0030 FAX. (913) 681-0012		DWG. BY: DMB PROJ. NO.: 14218.01		G/A RW BY: DMB PROJ. MGR:	
		DATE: 7/9/15	CHK. BY: DMB	PROJ. MGR:	DMB
CADD FILE: C-100 - SITE LAYOUT.DWG		DATE: 7/9/15		PROJ. NO.: 14218.01	
DRAWING NO. <b>C-100</b>		DATE: 7/9/15		PROJ. NO.: 14218.01	




**NOTES:**

1. EXISTING TOPOGRAPHY BASED ON AERIAL SURVEY PERFORMED BY M.J. HARDEN ASSOCIATES, INC ON AUGUST 17, 2010. UPDATES TO THE TOPOGRAPHY AND SITE FEASIBILITY FOR AREAS 1-2, AREA 1-3, AND SOUTH CLASS 4 DISPOSAL UNITS SURVEYED BY CONSOLIDATED LAND SERVICES, INC BETWEEN DECEMBER 2014 AND JANUARY 2015.
2. SURVEY DATA BASED ON THE NAD83 ARKANSAS STATE PLANE NORTH COORDINATE SYSTEM.
3. DEMOLITION OF EXISTING STRUCTURES TO BE PERFORMED TO FACILITATE CLOSURE CONSTRUCTION. DISPOSAL OF THE DEMOLITION SHALL BE PERFORMED IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.
4. UNUSED ROLL OFF'S SHALL BE RE-LOCATED TO THE AREAS DEPICTED ON THIS DRAWING.

Demolition Schedule		
Item	Structures	Notes
Demo 1	2 - Leachate Storage Tanks, 1 Concrete Reinforced Secondary Containment	Demolition to be performed after proposed leachate forcemain is installed and operational.
Demo 2	1 - Leachate Storage Tank, 1 Concrete Reinforced Secondary Containment	Demolition to be performed after proposed leachate forcemain is installed and operational.
Demo 3	1 - Leachate Storage Tank, 1 Concrete Reinforced Secondary Containment	Demolition to be performed after proposed leachate forcemain is installed and operational.
Demo 4	2 - Leachate Storage Tanks, 1 Concrete Reinforced Secondary Containment	Demolition to be performed after proposed leachate forcemain is installed and operational.
Demo 5	1 - Leachate Storage Tank	Demolition to be performed after proposed leachate forcemain is installed and operational.
Demo 6	1 - Leachate Storage Tank, 2 Reinforced Concrete Pads	Demolition to be performed after proposed leachate forcemain is installed and operational.
Demo 7	1 - Leachate Storage Tank, 1 Concrete Reinforced Secondary Containment	Demolition to be performed after proposed leachate forcemain is installed and operational.
Demo 8	1 - Leachate Storage Tank, 1 Concrete Reinforced Secondary Containment	Demolition to be performed after proposed leachate forcemain is installed and operational.

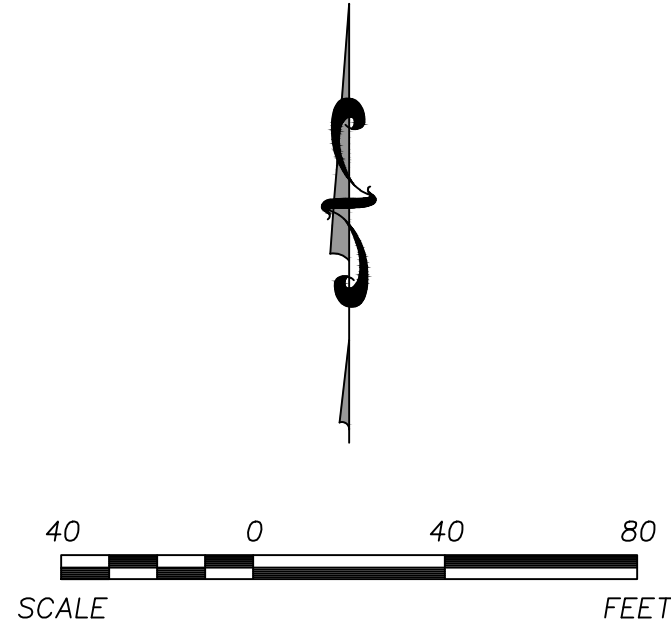
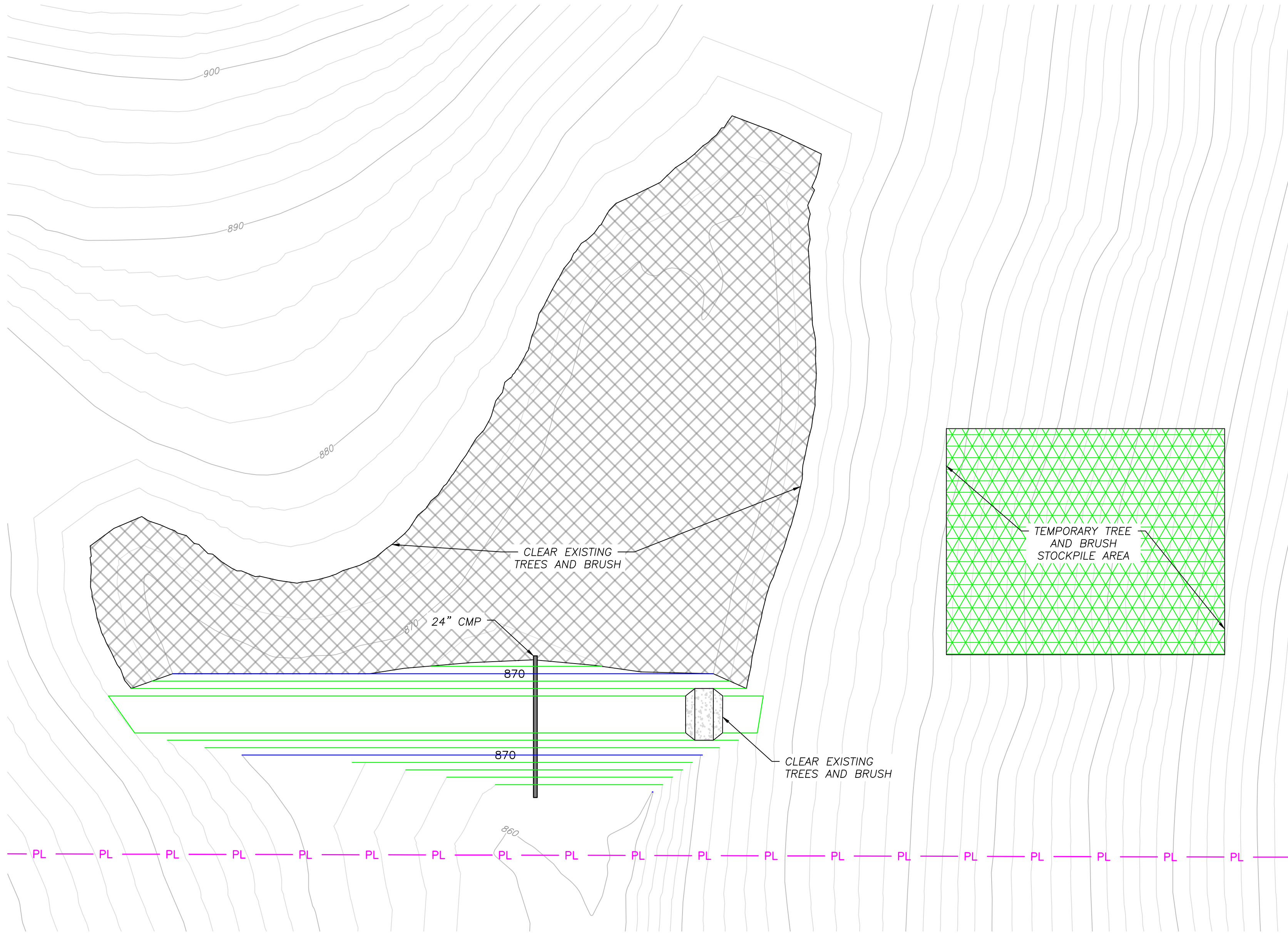
75% SUBMITTAL



A horizontal scale bar with alternating black and white segments. Above the bar, the numbers 200, 0, 200, and 400 are marked. Below the bar, the word "SCALE" is on the left and "FEET" is on the right.

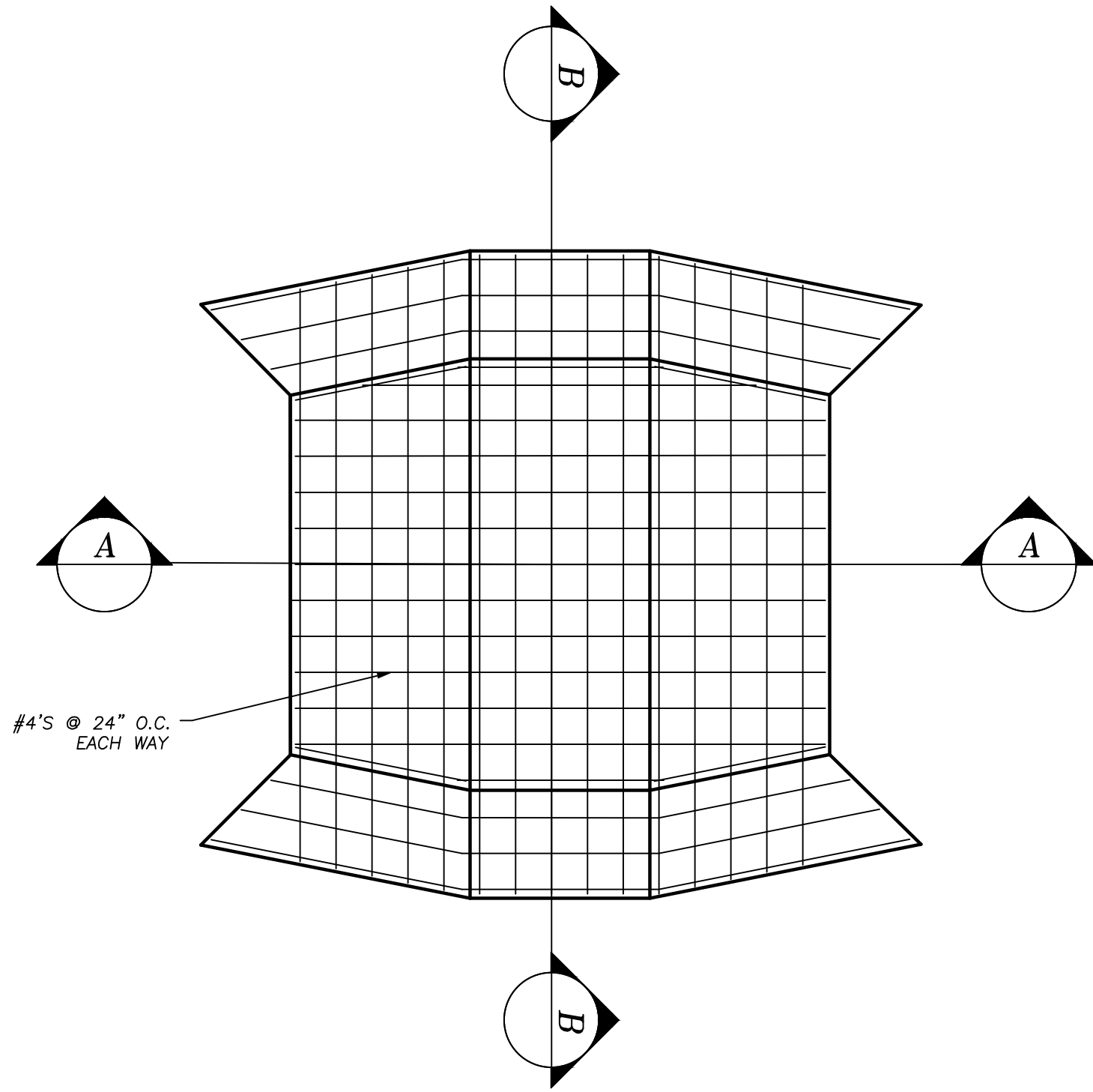


\\KAN-FS01\Clients\ADEQ\Projects\27214218.01 - Closure Contract - 2014\Task 2 - Design and Procurement\Sedimentation Pond Design\Task 2 - Design and Procurement\Sedimentation Pond Grading Plan.dwg Jul 09, 2015 - 8:54pm Layout Name: Proposed Sedimentation Pond Grading Plan By: 3726dmb

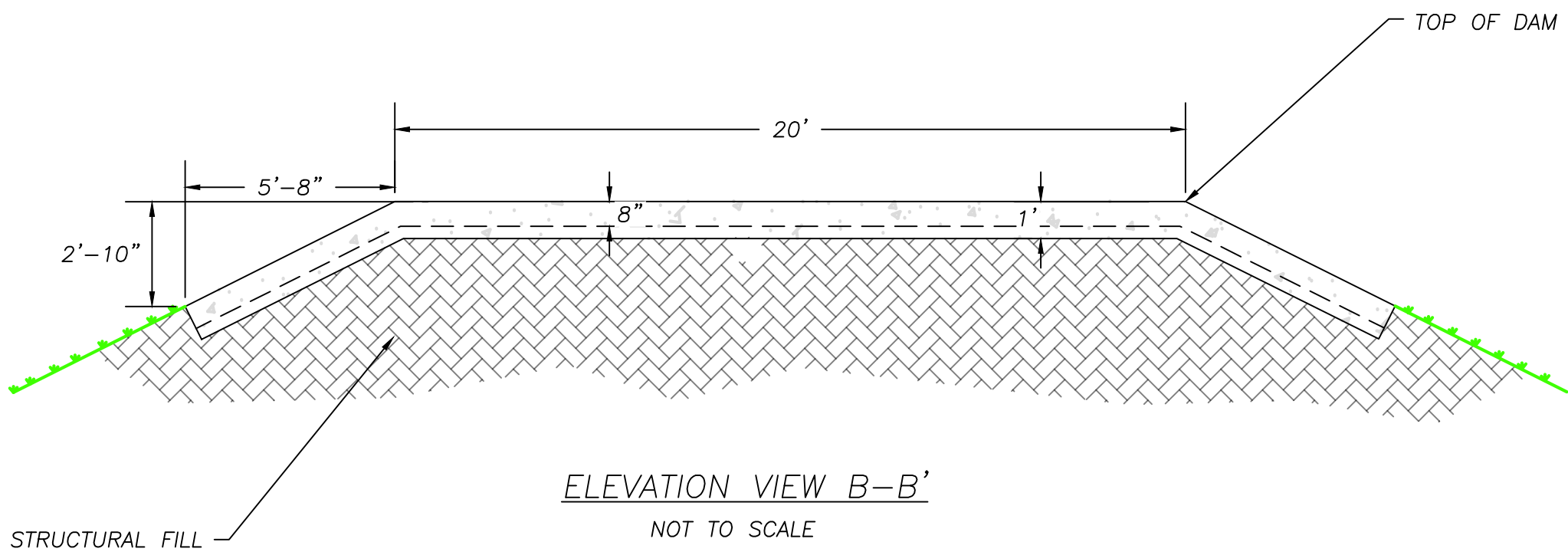


- LEGEND:**
- EXISTING 2' MINOR CONTOUR
  - EXISTING 10' MAJOR CONTOUR
  - PROPOSED 2' TOP OF DAM CONTOUR
  - PROPOSED 10' TOP OF DAM CONTOUR
  - PROPERTY BOUNDARY

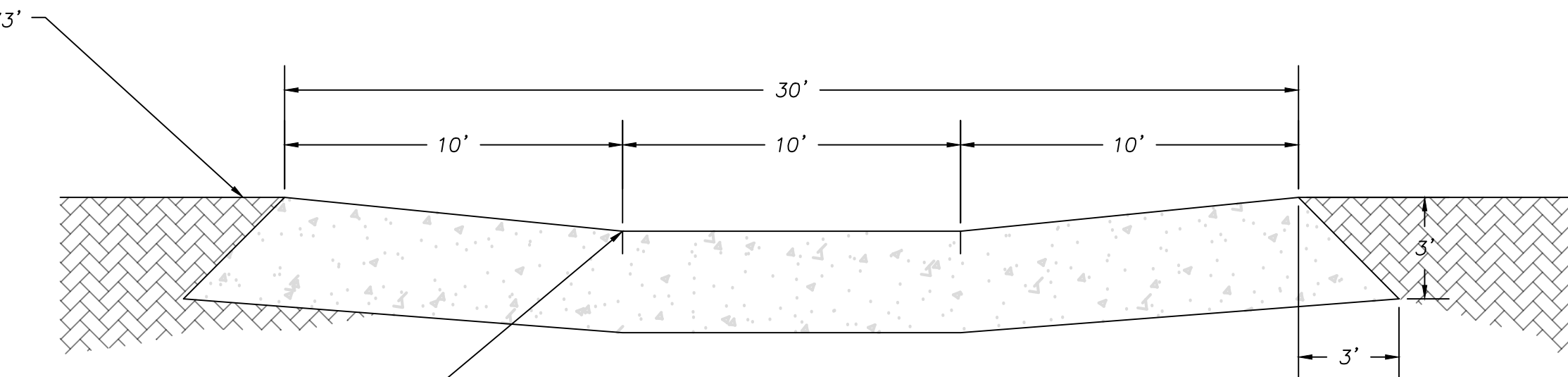
- NOTES:**
- EXISTING TOPOGRAPHY BASED ON AERIAL SURVEY PERFORMED BY M.J. HARDEN ASSOCIATES, INC ON AUGUST 17, 2010. UPDATES TO THE TOPOGRAPHY AND SITE FEATURES FOR AREA 1-2, AREA 1-3, AND SOUTH CLASS 4 DISPOSAL UNITS SURVEYED BY CONSOLIDATED LAND SERVICES, INC BETWEEN DECEMBER 2014 AND JANUARY 2015.
  - SURVEY DATA BASED ON THE NAD83 ARKANSAS STATE PLANE NORTH COORDINATE SYSTEM.
  - STRIP AND CLEAR EXISTING TREES AND BRUSH IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS. STOCKPILE STRIPPED VEGETATION AT THE LOCATION INDICATED ON THIS DRAWING PRIOR TO DISPOSAL. DISPOSE OF VEGETATION IN ACCORDANCE WITH LOCAL REGULATIONS.
  - CONSTRUCTION SEQUENCE: SEDIMENTATION BASIN TO BE CONSTRUCTED PRIOR TO EXCAVATION OF THE BORROW AREA.



OVERFLOW WEIR AREIAL VIEW  
NOT TO SCALE



ELEVATION VIEW B-B'  
NOT TO SCALE



ELEVATION VIEW A-A'  
NOT TO SCALE

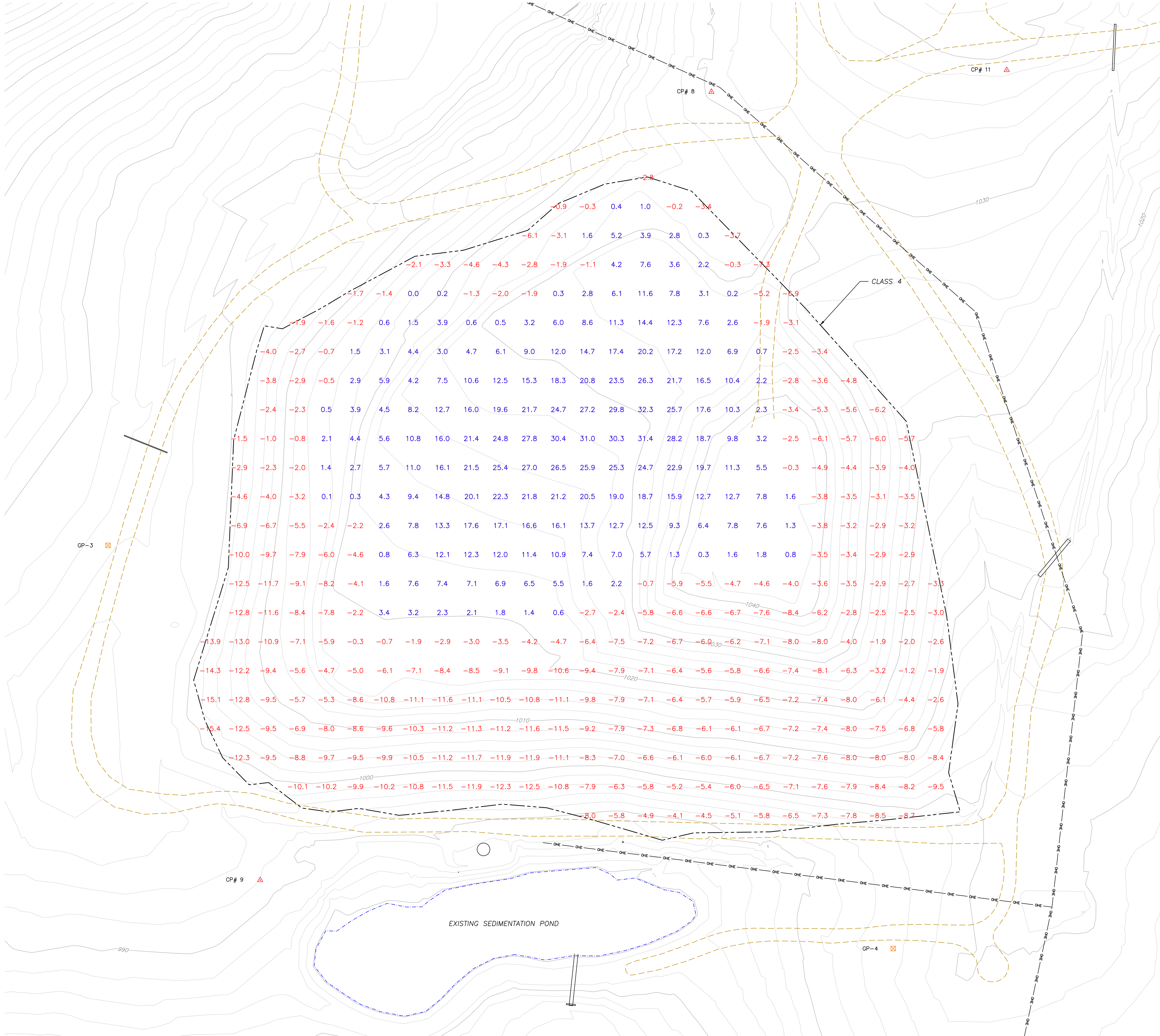
75% SUBMITTAL

CLIENT	<b>SCS AQUATERRA</b> 7311 W. 130th St. Ste. 100 Overland Park, Kansas 66213 PH. (913) 681-0030 FAX. (913) 681-0012		PROJ. NO. 4218.01		DWN. BY: DMB	G/A R/W BY: DMB
			DSGN. BY: DMB	CHK. BY: FEC	PRDCT. MARK. FEC	
CADD FILE:						
C-200 - SEDIMENTATION POND GRADING PLAN.DWG						
DATE:		7/9/15				
DRAWING NO.						
<b>C-200</b>						

SHEET TITLE	PROPOSED SEDIMENTATION POND GRADING PLAN				
	PROJECT TITLE				
CLOSURE OF INACTIVE NABORS LANDFILL		REV. DATE	DESCRIPTION	CK BY	
		1	7/2015	75% SUBMITTAL	FEC
		0	5/2015	50% SUBMITTAL	FEC



\\KAN-FS01\Clients\ADEQ\Projects\27214218.01 - Closure Contract - 2014\Task 2 - Design and Procurement\Waste Relocation\C-300 - Class 4 Waste Relocation Plan By: 372edmb



- LEGEND:**
- EXISTING 2' MINOR CONTOUR
  - EXISTING 10' MAJOR CONTOUR
  - PROPOSED 2' TOP OF INTERMEDIATE COVER CONTOUR
  - PROPOSED 10' TOP OF INTERMEDIATE COVER CONTOUR
  - EXISTING ROAD
  - EXISTING OVERHEAD ELECTRIC
  - DISPOSAL BOUNDARY (APPROXIMATE)
  - EXISTING BODY OF WATER
  - EXISTING DRAINAGE PIPE/CULVERT
  - EXISTING MONITORING WELL
  - EXISTING GAS PROBE
  - EXISTING CONTROL POINT

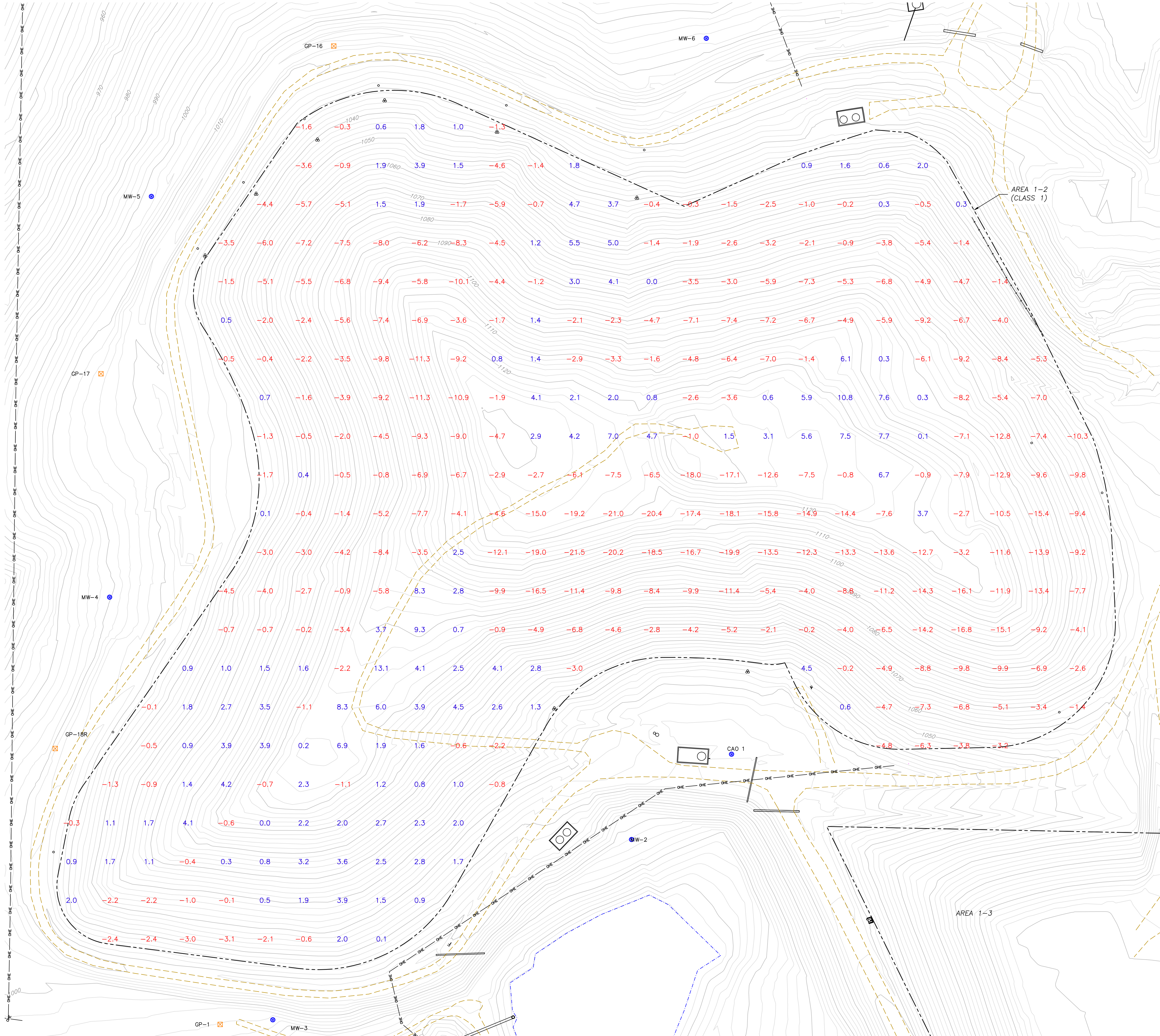
- NOTES:**
- EXISTING TOPOGRAPHY BASED ON AERIAL SURVEY PERFORMED BY M.J. HARDEN ASSOCIATES, INC ON AUGUST 17, 2010. UPDATES TO THE TOPOGRAPHY AND SITE FEATURES FOR AREA 1-2, AREA 1-3, AND SOUTH CLASS 4 DISPOSAL UNITS SURVEYED BY CONSOLIDATED LAND SERVICES, INC BETWEEN DECEMBER 2014 AND JANUARY 2015.
  - SURVEY DATA BASED ON THE NAD83 ARKANSAS STATE PLANE NORTH COORDINATE SYSTEM.
  - PROPOSED FINAL COVER CONTOURS BASED ON SHEET 1 OF 1 AS SHOWN IN ADEQ DOCUMENT #58185 PREPARED BY SCS ENGINEERS ON AUGUST 25, 2010.
  - WASTE RELOCATION TO BE PERFORMED PRIOR TO FINAL COVER INSTALLATION OF THE CLASS 4 DISPOSAL UNIT.
  - WASTE RELOCATION IN CLASS 4 SHALL CONSIST OF REGRADING THE OVERFILLED AREAS INTO THE AREAS WITH AIRSPACE REMAINING AS INDICATED BY THE CUT/FILL NUMBERS ON THIS DRAWING.

**75% SUBMITTAL**

SCALE 40 0 40 80 FEET

CLIENT				SHEET TITLE				CK BY	
<div>SCS AQUATERRA</div> <div>7311 W. 130th St. Ste. 100</div> <div>Overland Park, Kansas 66213</div> <div>PH. (913) 681-0030 FAX. (913) 681-0012</div>				CLASS 4 WASTE RELOCATION PLAN				DESCRIPTION	
				PROJECT TITLE				REV. DATE	
<div>A R K A N S A S</div> <div>Department of Environmental Quality</div>				CLOSURE OF INACTIVE NABORS LANDFILL				FEC	
								FEC	
CADD FILE:				DWN. BY: DMB				O/A R/W BY: WJB	
DATE:				CHK. BY: FEC				PRG. MGR: FEC	
DRAWING NO.				DSN. BY: DMB				FEC	
C-300								75% SUBMITTAL	
								50% SUBMITTAL	
								FEC	





- LEGEND:
- EXISTING 2' MINOR CONTOUR
  - EXISTING 10' MAJOR CONTOUR
  - PROPOSED 2' TOP OF INTERMEDIATE COVER CONTOUR
  - PROPOSED 10' TOP OF INTERMEDIATE COVER CONTOUR
  - EXISTING ROAD
  - EXISTING OVERHEAD ELECTRIC
  - DISPOSAL BOUNDARY (APPROXIMATE)
  - EXISTING BODY OF WATER
  - EXISTING DRAINAGE PIPE/CULVERT
  - EXISTING MONITORING WELL
  - EXISTING GAS PROBE
  - EXISTING CONTROL POINT

- NOTES:
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  - SURVEY DATA BASED ON THE NAD83 ARKANSAS STATE PLANE NORTH COORDINATE SYSTEM.
  - PROPOSED FINAL COVER CONTOURS BASED ON SHEET 5 OF 13 AS SHOWN IN ADEQ DOCUMENT #28209 PREPARED BY NORTHSTAR ENGINEERING CONSULTANT, INC. ON MAY 17, 2005.
  - WASTE RELOCATION TO BE PERFORMED PRIOR TO FINAL COVER INSTALLATION OF THE AREA 1-2 DISPOSAL UNIT.
  - ESTIMATED VOLUME OF WASTE TO BE RELOCATED TO AREA 1-3 IS APPROXIMATELY 147,000 CUBIC YARDS AS OF JANUARY 2015. ACTUAL VOLUME RELOCATED DURING CONSTRUCTION MAY BE DIFFERENT.

75% SUBMITTAL

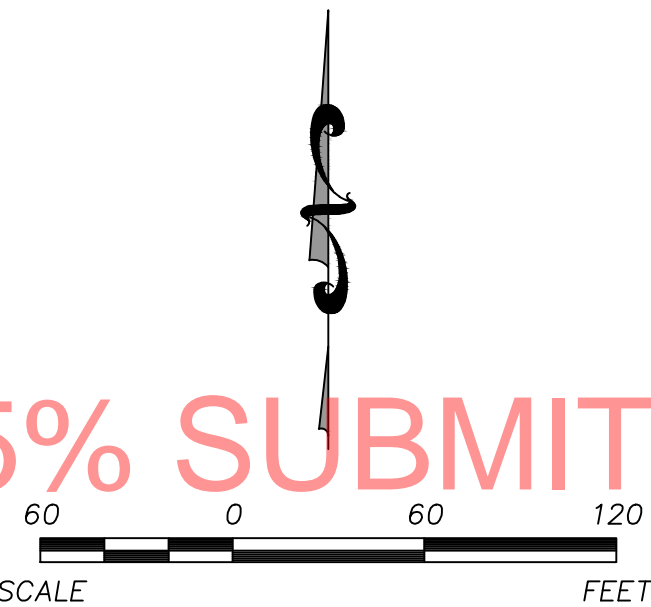
SCALE 60 0 60 120 FEET

CLIENT		SCS AQUATERRA		CADD FILE:		C-301 - AREA 1-2 WASTE RELOCATION PLAN.DWG	
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PROJ. NO. 4218.01		CHK. BY: DMB		G/A R/W BY: WVB		PROJ. MARK: FEC	
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EXISTING 2' MINOR CONTOUR  
EXISTING 10' MAJOR CONTOUR  
PROPOSED 2' TOP OF INTERMEDIATE COVER CONTOUR  
PROPOSED 10' TOP OF INTERMEDIATE COVER CONTOUR  
EXISTING ROAD  
EXISTING OVERHEAD ELECTRIC  
DISPOSAL BOUNDARY (APPROXIMATE)  
EXISTING BODY OF WATER  
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EXISTING CONTROL POINT

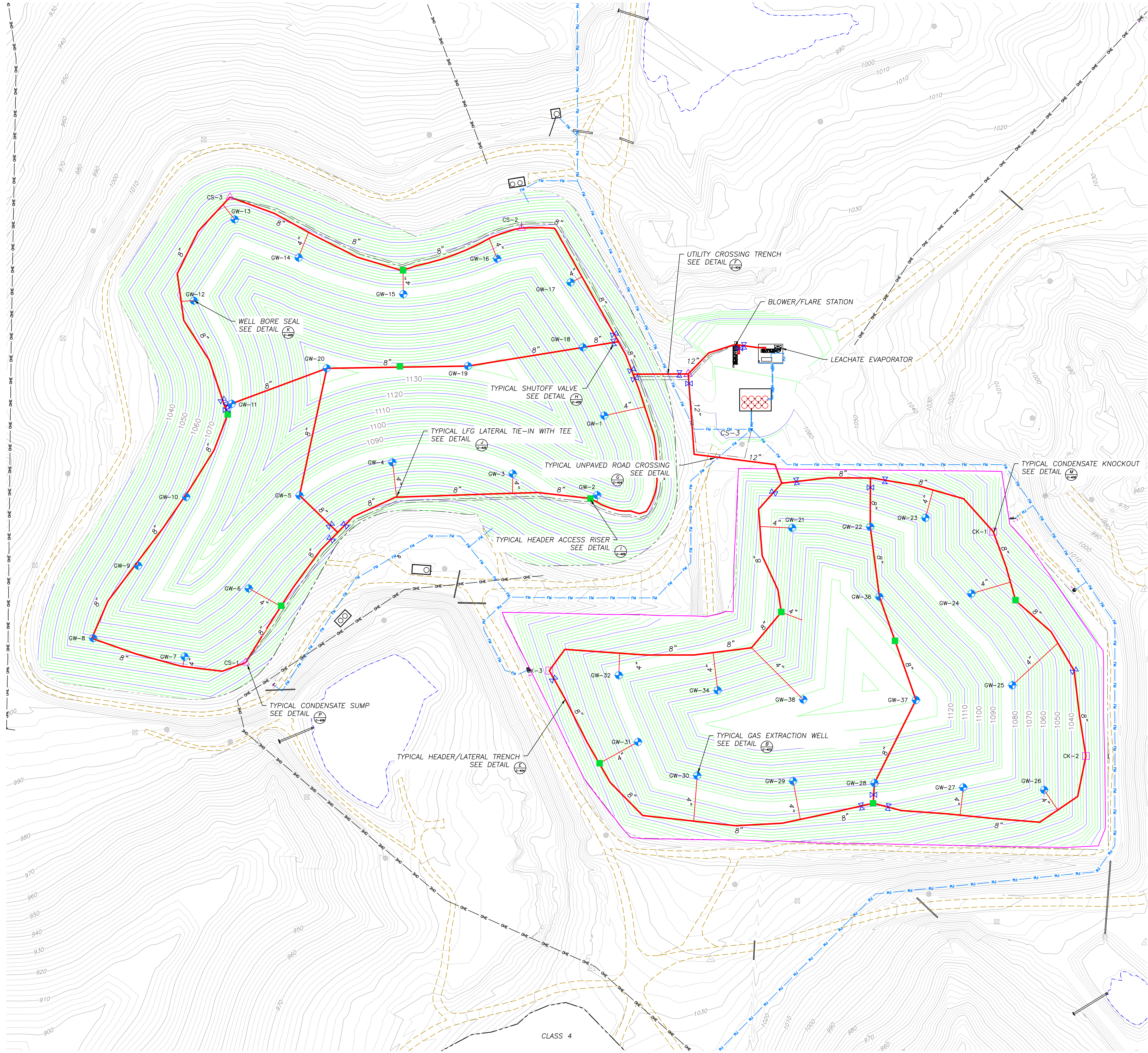
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2. SURVEY DATA BASED ON THE NAD83 ARKANSAS STATE PLANE NORTH COORDINATE SYSTEM.
3. PROPOSED FINAL COVER CONTOURS REVISED BY SCS AQUATERRA IN JULY 2015.
4. WASTE RELOCATION TO BE PERFORMED PRIOR TO FINAL COVER INSTALLATION OF THE AREA 1-3 DISPOSAL UNIT.
5. AREA 1-3 TO ACCEPT WASTE RELOCATED FROM AREA 1-2.



CLIENT <b>SCS AQUATERRA</b> 7311 W. 130th St. Ste. 100 Overland Park, Kansas 66213 PH. (913) 681-0030 FAX. (913) 681-0012	CADD FILE: C-302 - AREA 1-3 WASTE RELOCATION PLANS.DWG		PROJ. NO.: 4218.01 DSN. BY: DMB CHK. BY:		G/A R/W BY: DMB PROJ. MGR: FEC	
	DATE: 7/7/15		DWN. BY: DMB CHK. BY: FEC		PROJ. MGR: FEC	
DRAWING NO. <b>C-302</b>			SHEET TITLE <b>AREA 1-3 WASTE RELOCATION PLAN</b>			
PROJECT TITLE <b>CLOSURE OF INACTIVE NABORS LANDFILL</b>			REV.	DATE	DESCRIPTION	CK. BY
			1	7/2015	75% SUBMITTAL	FEC
			0	5/2015	50% SUBMITTAL	FEC



\\KAN-FS01\Clients\ADEQ\Projects\27214218.01 - Closure Contract - 2014\Task 2 - Design and Procurement\GCCS Design\GCCS Layout.dwg Jul 09, 2015 - 9:16pm Layout Name: GCCS Layout By: 372edmb



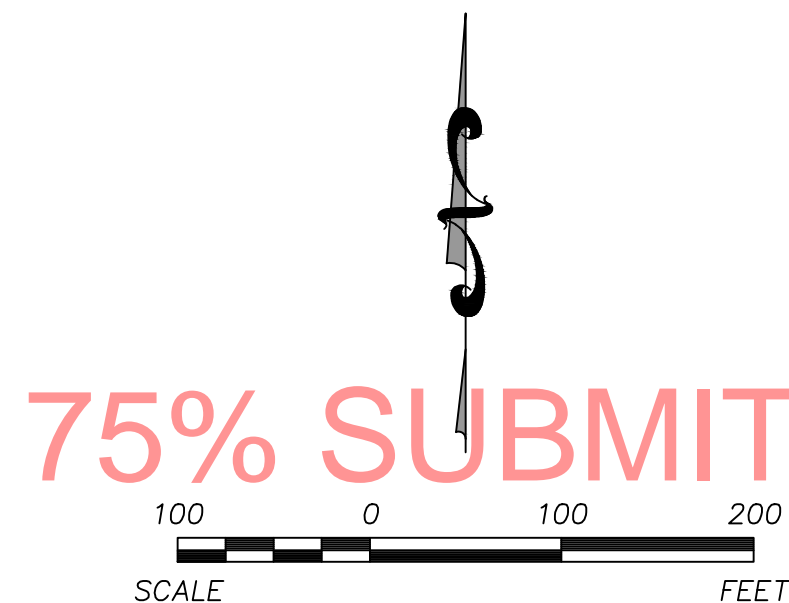
- LEGEND:**
- EXISTING 5' MINOR CONTOUR
  - EXISTING 25' MAJOR CONTOUR
  - PROPOSED 2' TOP OF FINAL COVER CONTOUR
  - PROPOSED 10' TOP OF FINAL COVER CONTOUR
  - APPROXIMATE LIMITS OF CELL/DISPOSAL UNIT
  - PROPOSED LANDFILL GAS HEADER
  - PROPOSED LANDFILL GAS LATERAL
  - PROPOSED 2" CONDENSATE LINE
  - PROPOSED 2" AIR LINE
  - PROPOSED FORCEMAIN
  - EXISTING UNPAVED ROAD
  - EXISTING MONITORING WELL
  - EXISTING GAS PROBE
  - PROPOSED GAS EXTRACTION WELL WITH WELL BORE SEAL
  - PROPOSED CONDENSATE SUMP
  - PROPOSED CONDENSATE KNOCKOUT
  - PROPOSED SHUTOFF VALVE
  - PROPOSED HEADER ACCESS RISER

- NOTES:**
- CONDENSATE SUMPS/KNOCKOUTS TO BE PLACED AT LOW POINTS IN THE HEADER LINE. A MINIMUM 3 PERCENT SLOPE SHALL BE MAINTAINED ON HEADER AND LATERAL LINES WITHIN THE LIMITS OF WASTE UNLESS OTHERWISE NOTED. A MINIMUM 1.5 PERCENT SLOPE SHALL BE MAINTAINED ON HEADER LINES OUTSIDE THE LIMITS OF WASTE.
  - WELL BORE SEALS TO BE INSTALLED ON ALL GAS EXTRACTION WELLS.
  - CONDENSATE AND AIR SUPPLY LINE PIPING SHOWN FOR GENERAL LAYOUT PURPOSES. PIPING SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS ON SHEET C-404
  - CONDENSATE PRODUCED COLLECTED IN AREA 1-3 WILL DRAIN BACK INTO THE WASTE MASS AND BE HANDLED BY THE LEACHATE COLLECTION SYSTEM.
  - SEE SHEETS C-500 AND C-501 FOR ADDITIONAL INFORMATION REGARDING THE PROPOSED LEACHATE FORCEMAIN.

CLIENT  <b>SCS AQUATERRA</b> 7311 W. 130th St. Ste. 100 Overland Park, Kansas 66213 PH. (913) 681-0030 FAX. (913) 681-0012 <small>PROJ. NO. 27214218.01 Q/A R/W BY: DMB          DSK. BY: DMB CHK. BY: FEC PROJ. MOD. BY: FEC</small>	SHEET TITLE <b>GAS COLLECTION AND CONTROL SYSTEM LAYOUT</b>		CK BY
	PROJECT TITLE <b>CLOSURE OF INACTIVE NABORS LANDFILL</b>		REV. DATE 1 7/2015 0 5/2015
CADD FILE: C-400 - GCCS LAYOUT.DWG		DATE: 7/9/15	
DRAWING NO. <b>C-400</b>		FEC 75% SUBMITTAL 50% SUBMITTAL	



1. CONDENSATE SUMPS/KNOCKOUTS TO BE PLACED AT LOW POINTS IN THE HEADER LINE. A MINIMUM 3 PERCENT SLOPE SHALL BE MAINTAINED ON HEADER AND LATERAL LINES WITHIN THE LIMITS OF WASTE UNLESS OTHERWISE NOTED. A MINIMUM 1.5 PERCENT SLOPE SHALL BE MAINTAINED ON HEADER LINES OUTSIDE THE LIMITS OF WASTE.
2. WELL BORE SEALS TO BE INSTALLED ON ALL GAS EXTRACTION WELLS.
3. CONDENSATE AND AIR SUPPLY LINE PIPING SHOWN FOR GENERAL LAYOUT PURPOSES. PIPING SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS ON SHEET C-404
4. CONDENSATE PRODUCED COLLECTED IN AREA 1-3 WILL DRAIN BACK INTO THE WASTE MASS AND BE HANDLED BY THE LEACHATE COLLECTION SYSTEM.
5. SEE SHEETS C-500 AND C-501 FOR ADDITIONAL INFORMATION REGARDING THE PROPOSED LEACHATE FORCEMAIN.



<b>SCS AQUATERRA</b> 7311 W. 130th St. Ste. 100 Overland Park, Kansas 66213 PH. (913) 681-0030 FAX. (913) 681-0012		CLIENT <div style="font-size: 48pt; font-weight: bold; text-align: center;">ADEQ</div> <div style="text-align: center;"> <b>A R K A N S A S</b>          Department of Environmental Quality       </div>		SHEET TITLE <div style="text-align: center; font-weight: bold;">GCCS CONSTRUCTION POINTS</div>		CK, BY <div style="text-align: center;">DESCRIPTION</div>	
CADD FILE: C-400 - GCCS LAYOUT.DWG		DWN. BY: DMB CHK. BY: FEC PROJ. NO. 4218.01 DSN. BY: DMB PROJ. MGR. FEC		REV. DATE <div style="text-align: center;">1 7/2015</div> <div style="text-align: center;">0 5/2015</div>		PROJECT TITLE <div style="text-align: center; font-weight: bold;">CLOSURE OF INACTIVE NABORS LANDFILL</div>	
DATE: 7/9/15							
DRAWING NO.							
<div style="font-size: 48pt; font-weight: bold;">C-401</div>							



\\KAN-FS01\Clients\ADEQ\Projects\27214218.01 - Closure Contract - 2014\Task 2 - Design and Procurement\GCCS Design\C-400 - GCCS Layout.dwg Jul 09, 2015 - 9:30pm Layout Name: Point Table By: 372edmb

Point Table			
Point #	Northing	Easting	Description
1	774726.85	1180541.21	GW-1
2	774557.30	1180526.31	GW-2
3	774602.72	1180346.19	GW-3
4	774627.20	1180089.41	GW-4
5	774556.76	1179891.29	GW-5
6	774358.22	1179783.04	GW-6
7	774212.54	1179646.23	GW-7
8	774252.12	1179451.20	GW-8
9	774406.94	1179546.96	GW-9
10	774553.35	1179649.70	GW-10
11	774752.13	1179746.73	GW-11
12	774972.26	1179665.88	GW-12
13	775145.63	1179753.18	GW-13
14	775064.08	1179889.41	GW-14
15	774986.34	1180112.82	GW-15
16	775062.00	1180312.90	GW-16
17	775011.42	1180469.57	GW-17
18	774872.56	1180495.92	GW-18
19	774832.72	1180250.86	GW-19
20	774828.00	1179949.45	GW-20
21	774487.18	1180942.13	GW-21
22	774489.84	1181108.79	GW-22
23	774508.97	1181226.61	GW-23
33	774290.96	1180963.17	GW-33
37	774347.30	1181324.49	GW-24
38	774151.78	1181411.90	GW-25
39	773928.34	1181479.74	GW-26
40	773933.59	1181307.20	GW-27
41	773942.95	1181117.75	GW-28
42	773947.16	1180944.10	GW-29
43	773958.92	1180739.62	GW-30
44	774030.76	1180613.44	GW-31
45	774172.90	1180572.40	GW-32
47	774140.70	1180783.33	GW-34
49	774340.40	1181128.21	GW-36
50	774120.27	1181206.19	GW-37

NOTE:

1. SEE WELL SCHEDULE FOR ADDITIONAL GAS EXTRACTION WELL DRILLING INFORMATION.

Point Table			
Point #	Northing	Easting	Description
51	774121.07	1180965.98	GW-38
200	774815.22	1180603.00	Tee: Area 1-2 Header to Flare
201	774745.77	1180627.53	Tee: Area 1-2 Header with Lateral
202	774558.48	1180648.66	Area 1-2 Header
203	774517.96	1180616.77	Area 1-2 Header
204	774542.22	1180526.03	Tee: Area 1-2 Header with Lateral
205	774561.28	1180345.55	Tee: Area 1-2 Header with Lateral
206	774550.23	1180512.01	Area 1-2 Header: Access Riser
207	774553.03	1180098.33	Tee: Area 1-2 Header with Lateral
208	774510.99	1180005.15	Area 1-2 Header
209	774477.72	1179972.74	Tee: Area 1-2 Header to Second Jumper
210	774319.96	1179851.72	Tee: Area 1-2 Header with Lateral and Access Riser
211	774199.97	1179776.31	Area 1-2 Header: Condensate Sump 1
212	774191.91	1179642.05	Tee: Area 1-2 Header with Lateral
216	774728.88	1179737.77	Area 1-2 Header: Access Riser
217	774746.56	1179731.84	Tee: Area 1-2 Header to Main Jumper
218	774845.48	1179698.64	Area 1-2 Header
219	774971.01	1179638.66	Tee: Area 1-2 Header with Lateral
220	775029.87	1179630.40	Area 1-2 Header
222	775192.94	1179742.77	Area 1-2 Header: Condensate Sump 3
223	775118.32	1179910.61	Tee: Area 1-2 Header with Lateral
224	775036.78	1180111.93	Tee: Area 1-2 Header Lateral and Access Riser
225	775104.42	1180294.77	Tee: Area 1-2 Header with Lateral
226	775127.32	1180364.59	Area 1-2 Header: Condensate Sump 2
227	775126.96	1180434.33	Area 1-2 Header
228	775023.37	1180493.77	Tee: Area 1-2 Header with Lateral
229	774883.46	1180572.29	Tee: Area 1-2 Header to Main Jumper
233	774698.68	1179921.72	Area 1-2 Second Jumper
235	774582.80	1180919.99	Tee: Area 1-3 Header to Flare
236	774594.51	1181019.49	Area 1-3 Header
237	774593.79	1181109.13	Tee: Area 1-3 Header to Jumper
238	774568.48	1181242.50	Tee: Area 1-3 Header with Lateral
239	774549.67	1181308.05	Area 1-3 Header
240	774479.41	1181371.05	Area 1-3 Header: Condensate Knockout 1
241	774371.74	1181407.75	Tee: Area 1-3 Header with Lateral
242	774332.34	1181418.97	Area 1-3 Header: Access Riser

Point Table			
Point #	Northing	Easting	Description
243	774241.52	1181508.91	Tee: Area 1-3 Header with Lateral
244	774183.01	1181543.68	Area 1-3 Header
245	774000.77	1181568.74	Area 1-3 Header: Condensate Knockout 2
246	773885.65	1181508.82	Tee: Area 1-3 Header with Lateral
247	773865.49	1180959.64	Tee: Area 1-3 Header with Lateral
248	773874.49	1181300.37	Tee: Area 1-3 Header with Lateral
249	773899.97	1181114.91	Tee: Area 1-3 Header to Jumper and Access Riser
250	774246.24	1181161.36	Area 1-3 Jumper: Access Riser
251	774490.50	1180873.38	Tee: Area 1-3 Header with Lateral
252	773861.78	1180732.03	Tee: Area 1-3 Header with Lateral
253	773891.63	1180605.78	Area 1-3 Header
254	773984.97	1180530.62	Tee: Area 1-3 Header with Lateral and Access Riser
255	774220.20	1180574.03	Tee: Area 1-3 Header with Lateral
256	774121.83	1180458.23	Area 1-3 Header
257	774182.87	1180424.09	Area 1-3 Header Condensate Knockout 3
258	774228.32	1180457.30	Area 1-3 Header
259	774221.39	1180773.47	Tee: Area 1-3 Header with Lateral
260	774231.56	1180855.47	Tee: Area 1-3 Header with Lateral
261	774307.64	1180919.10	Tee: Area 1-3 Header with Lateral and Access Riser
262	774355.36	1180911.72	Area 1-3 Header
263	774527.12	1180870.50	Area 1-3 Header
268	774622.59	1180905.81	Flare Input
269	774644.51	1180733.09	Flare Input
270	774816.00	1180720.47	Flare Input Condensate Sump
271	774860.74	1180764.03	Flare Input
272	774877.62	1180816.09	Flare Input
273	774877.61	1180829.31	Tee: Flare Input or Evaporator
274	774859.34	1180829.23	Flare Input
275	774859.34	1180825.47	Flare Connection
276	774872.16	1180869.44	Evaporator Input
277	774872.16	1180885.17	Evaporator Input
278	774869.37	1180885.16	Evaporator Connection
279	775177.23	1179728.01	Tee: Area 1-3 Header with Lateral
280	774830.83	1180105.35	Area 1-2 Jumper: Access Riser

75% SUBMITTAL

CLIENT

SCS AQUATERRA

7311 W. 130th St. Ste. 100  
Overland Park, Kansas 66213  
PH: (913) 681-0030 FAX: (913) 681-0012

PROJ. NO. 27214218.01  
DSK. BY: DMB

DWN. BY: DMB  
CHK. BY: FEC

Q/A R/W BY: DMB  
PROJ. MGR. FEC

CADD FILE:  
C-400 - GCCS LAYOUT.DWG

DATE:  
7/9/15

DRAWING NO.  
C-402

SHEET TITLE  
GCCS POINT TABLE

PROJECT TITLE  
CLOSURE OF INACTIVE NABORS LANDFILL

REV. DATE

DESCRIPTION

CK BY

17/2015  
05/2015

75% SUBMITTAL  
50% SUBMITTAL

FEC  
FEC

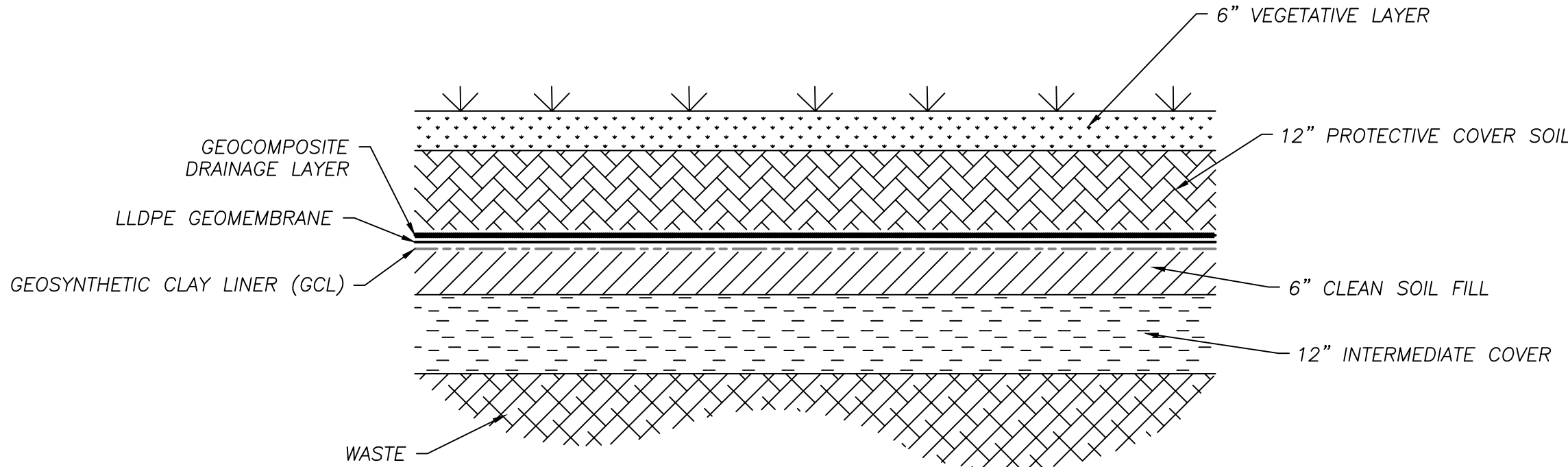


\\KAN-FS01\Clients\ADEQ\Projects\272142\18.01 - Closure Contract - 2014\Task 2 - Design and Procurement\GCCS Design\C-403 - Well Schedule.dwg Jul 09, 2015 - 9:36pm Layout Name: Well Schedule By: 3726dmb

NABORS AREA 1-2 AND AREA 1-3 GAS WELL SCHEDULE												
Vertical Extraction Well Designation	AR State Plane		Proposed Final Grade Elevation (MSL)	Existing Surface Grade Elevation (MSL)	Difference In Surface Elevation (FT.)	Top Of Base Liner Grade Elevation (MSL)	Required Depth Above Base Liner System (FT.)	Available Drilling Depth (FT.)	Proposed Drilling Depth (FT.)	8" PVC Under Ground Solid Pipe (FT.)	8" CPVC Perforated Pipe (FT.)	8" PVC Above Ground Solid Pipe Pipe (FT.)
	North Zone											
	Coordinates North	Coordinates East										
GW-1	774,726.85	1,180,541.21	1,098.54	1,096.54	2.00	1,059.42	15	22.0	22.0	10.0	11.0	4.0
GW-2	774,557.30	1,180,526.31	1,089.84	1,087.84	2.00	1,053.01	15	20.0	20.0	10.0	9.0	4.0
GW-3	774,602.72	1,180,346.19	1,082.07	1,080.07	2.00	1,047.89	15	17.0	17.0	10.0	6.0	4.0
GW-4	774,627.20	1,180,089.41	1,078.23	1,076.23	2.00	1,038.06	15	23.0	23.0	10.0	12.0	4.0
GW-5	774,556.76	1,179,891.29	1,082.39	1,080.39	2.00	1,021.53	15	44.0	44.0	16.0	27.0	4.0
GW-6	774,358.22	1,179,783.04	1,066.23	1,064.23	2.00	1,004.19	15	45.0	45.0	16.0	28.0	4.0
GW-7	774,212.54	1,179,646.23	1,045.16	1,043.16	2.00	995.00	15	33.0	33.0	16.0	16.0	4.0
GW-8	774,252.12	1,179,451.20	1,048.09	1,046.09	2.00	999.67	15	31.0	31.0	10.0	20.0	4.0
GW-9	774,406.94	1,179,546.96	1,065.47	1,063.47	2.00	1,006.66	15	42.0	42.0	16.0	25.0	4.0
GW-10	774,553.35	1,179,649.70	1,071.84	1,069.84	2.00	1,019.95	15	35.0	35.0	16.0	18.0	4.0
GW-11	774,752.13	1,179,746.73	1,082.01	1,080.01	2.00	1,033.76	15	31.0	31.0	10.0	20.0	4.0
GW-12	774,972.26	1,179,665.88	1,078.70	1,076.70	2.00	1,032.59	15	29.0	29.0	10.0	18.0	4.0
GW-13	775,145.63	1,179,753.18	1,070.18	1,068.18	2.00	1,029.48	15	24.0	24.0	10.0	13.0	4.0
GW-14	775,064.08	1,179,889.41	1,080.90	1,078.90	2.00	1,031.93	15	32.0	32.0	16.0	15.0	4.0
GW-15	774,986.34	1,180,112.82	1,082.70	1,080.70	2.00	1,038.41	15	27.0	27.0	16.0	10.0	4.0
GW-16	775,062.00	1,180,312.90	1,077.55	1,075.55	2.00	1,040.86	15	20.0	20.0	10.0	9.0	4.0
GW-17	775,011.42	1,180,469.57	1,074.94	1,072.94	2.00	1,039.92	15	18.0	18.0	10.0	7.0	4.0
GW-18	774,872.56	1,180,495.92	1,088.24	1,086.24	2.00	1,048.51	15	23.0	23.0	10.0	12.0	4.0
GW-19	774,832.72	1,180,250.86	1,133.77	1,131.77	2.00	1,046.00	15	71.0	71.0	16.0	54.0	4.0
GW-20	774,828.00	1,179,949.45	1,134.38	1,132.38	2.00	1,037.91	15	79.0	79.0	16.0	62.0	4.0
GW-21	774,487.18	1,180,942.13	1,096.54	1,094.54	2.00	1,059.96	15	20.0	20.0	10.0	9.0	4.0
GW-22	774,489.84	1,181,108.79	1,087.23	1,085.23	2.00	1,054.00	15	16.0	16.0	10.0	5.0	4.0
GW-23	774,508.97	1,181,226.61	1,074.00	1,072.00	2.00	1,040.05	15	17.0	17.0	10.0	6.0	4.0
GW-24	774,347.30	1,181,324.49	1,067.17	1,065.17	2.00	1,029.63	15	21.0	21.0	10.0	10.0	4.0
GW-25	774,151.78	1,181,411.90	1,081.65	1,079.65	2.00	1,020.65	15	44.0	44.0	16.0	27.0	4.0
GW-26	773,928.34	1,181,479.74	1,059.85	1,057.85	2.00	1,012.00	15	31.0	31.0	10.0	20.0	4.0
GW-27	773,933.59	1,181,307.20	1,081.72	1,079.72	2.00	1,029.18	15	36.0	36.0	16.0	19.0	4.0
GW-28	773,942.95	1,181,117.75	1,090.67	1,088.67	2.00	1,049.33	15	24.0	24.0	10.0	13.0	4.0
GW-29	773,947.16	1,180,944.10	1,097.32	1,095.32	2.00	1,057.05	15	23.0	23.0	10.0	12.0	4.0
GW-30	773,958.92	1,180,739.62	1,092.75	1,090.75	2.00	1,054.88	15	21.0	21.0	10.0	10.0	4.0
GW-31	774,030.76	1,180,613.44	1,082.51	1,080.51	2.00	1,048.80	15	17.0	17.0	10.0	6.0	4.0
GW-32	774,172.90	1,180,572.40	1,084.00	1,082.00	2.00	1,044.83	10	27.0	27.0	10.0	16.0	4.0
GW-34	774,140.70	1,180,783.33	1,108.72	1,106.72	2.00	1,055.93	15	36.0	36.0	16.0	19.0	4.0
GW-35	774,290.96	1,180,963.17	1,110.40	1,108.40	2.00	1,058.65	15	35.0	35.0	16.0	18.0	4.0
GW-36	774,340.40	1,181,128.21	1,111.35	1,109.35	2.00	1,054.42	15	40.0	40.0	16.0	23.0	4.0
GW-37	774,120.27	1,181,206.19	1,125.98	1,123.98	2.00	1,043.64	15	65.0	65.0	16.0	48.0	4.0
GW-38	774,121.07	1,180,965.98	1,124.51	1,122.51	2.00	1,058.14	15	49.0	49.0	16.0	32.0	4.0

NOTES:

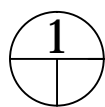
- GAS EXTRACTION WELL COORDINATES AND SURFACE ELEVATIONS, UNLESS NOTED OTHERWISE, BASED ON THE PROPOSED FINAL COVER DESIGNS.
- AREA 1-2 AND AREA 1-3 LINER ELEVATIONS BASED ON AS-BUILT DOCUMENTATION, WHERE AVAILABLE, PROVIDED BY OTHERS. DRILL DEPTHS DEVELOPED BASED ON COMPILED LINER ELEVATIONS.
- WELL BORE SEALS TO BE INSTALLED ON WELLS WITH LESS THAN 10 FEET OF SOLID PIPE BELOW TOP OF FINAL COVER ELEVATION.
- COORDINATES AND SURFACE ELEVATIONS HAVE YET TO BE VERIFIED WITH A FIELD SURVEY. THESE VALUES WILL BE REVISED AND APPROVED BY THE ENGINEER, PRIOR TO THE COMMENCEMENT OF DRILLING.



FINAL COVER NOTES:

- REPAIR FINAL COVER TO MATCH EXISTING CONDITIONS.

- LOW PERMEABILITY COVER LAYER TO BE COMPACTED TO 90 PERCENT STANDARD PROCTOR AND BETWEEN 0% TO +2.5% OPTIMUM MOISTURE CONTENT OR WITHIN PLACEMENT ZONE. PLACEMENT ZONE TO BE PROVIDED UPON REQUEST.



CLASS 1 COMPOSITE FINAL COVER CROSS SECTION  
NOT TO SCALE

CK  
BY

DESCRIPTION

REV

DATE

WELL SCHEDULE

CLOSURE OF INACTIVE NABORS LANDFILL

CLIENT

SCS AQUATERRA

7311 W. 130th St. Ste. 100  
Overland Park, Kansas 66213  
PH. (913) 681-0030 FAX. (913) 681-0012

Q/A R/W BY: DMB

PROJ. MOD: FEC

DWN. BY: ZDB

CHK. BY: FEC

DSK. BY: ZDB

CADD FILE:

C-403 - WELL SCHEDULE.DWG

DATE:

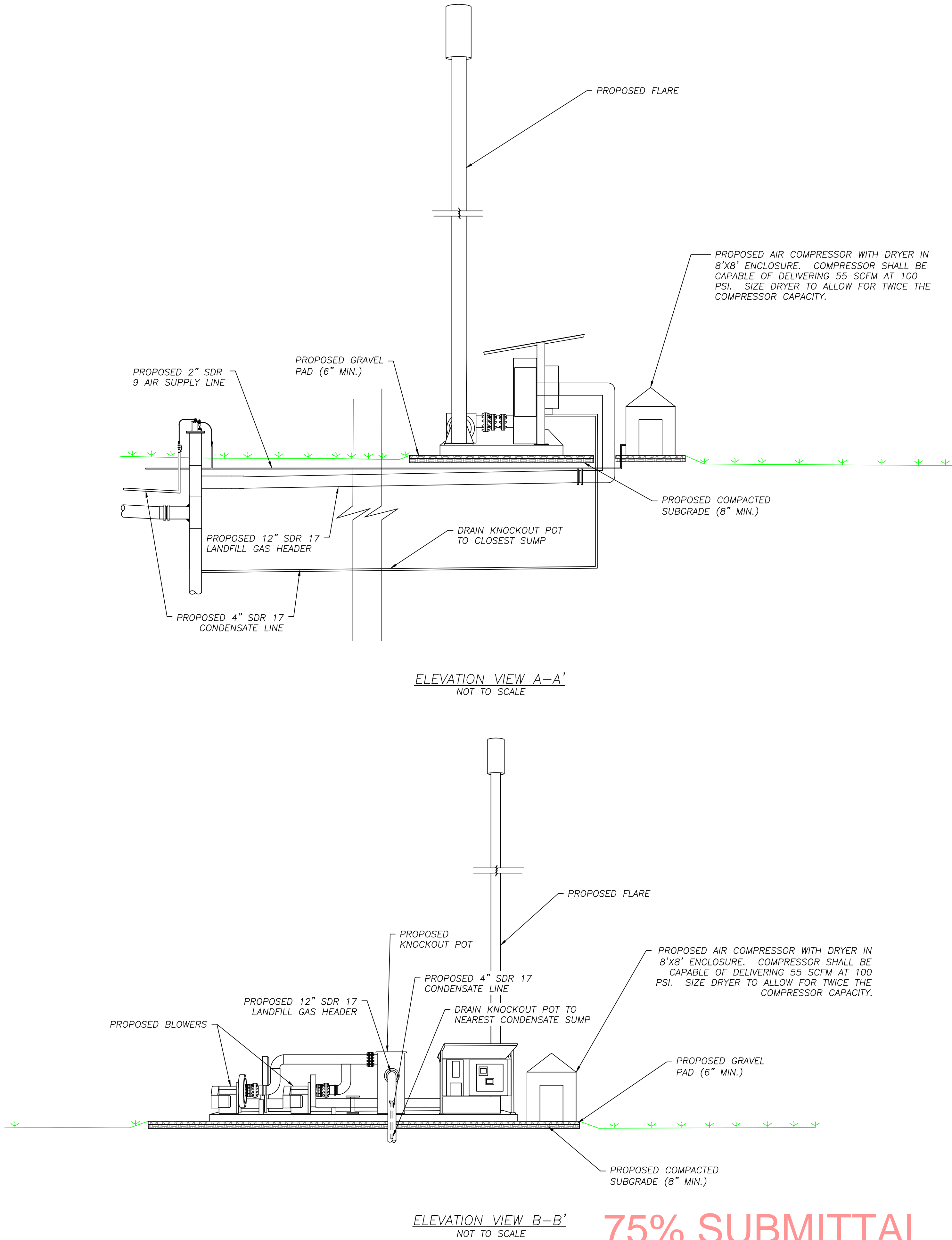
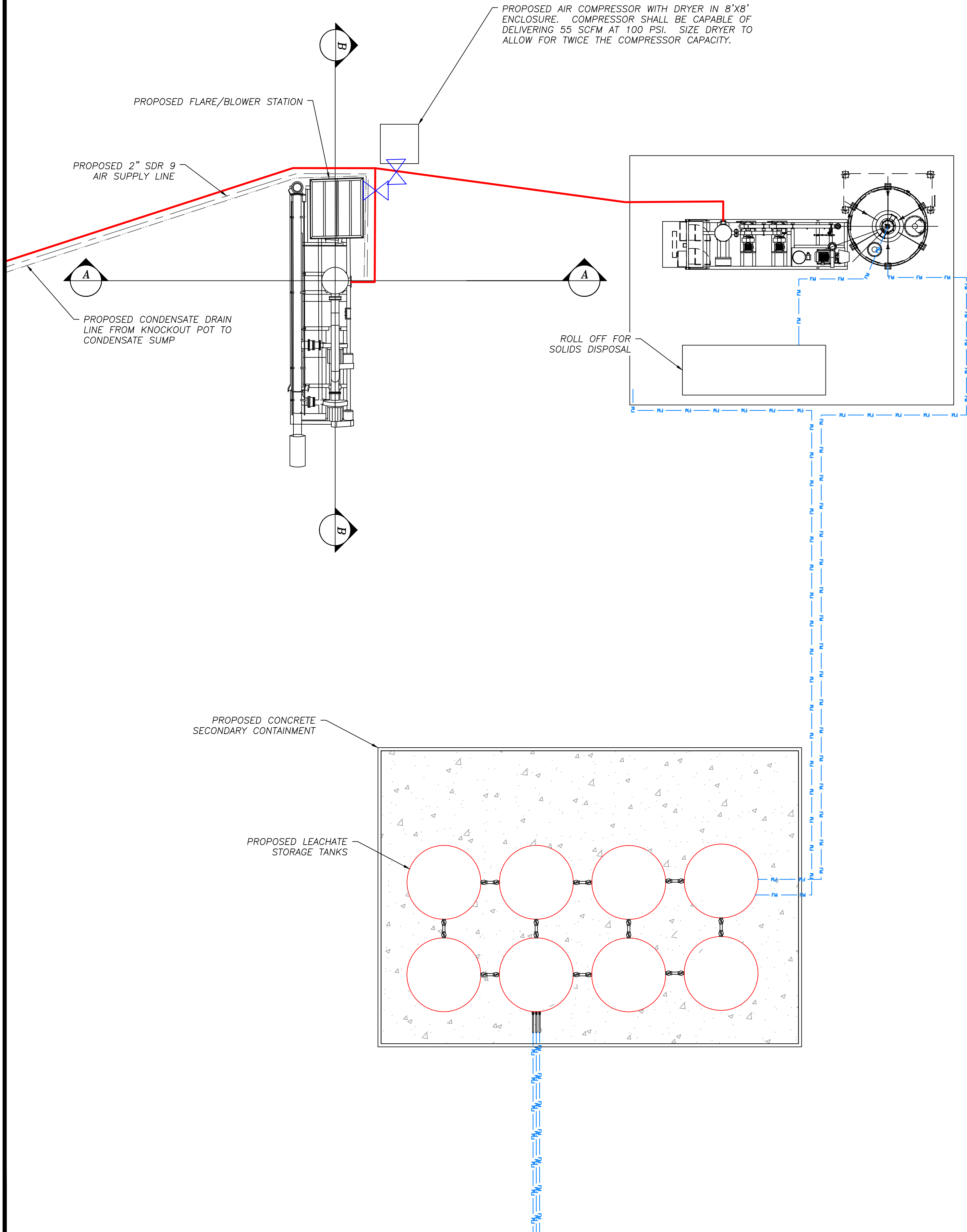
7/9/15

DRAWING NO.

C-403



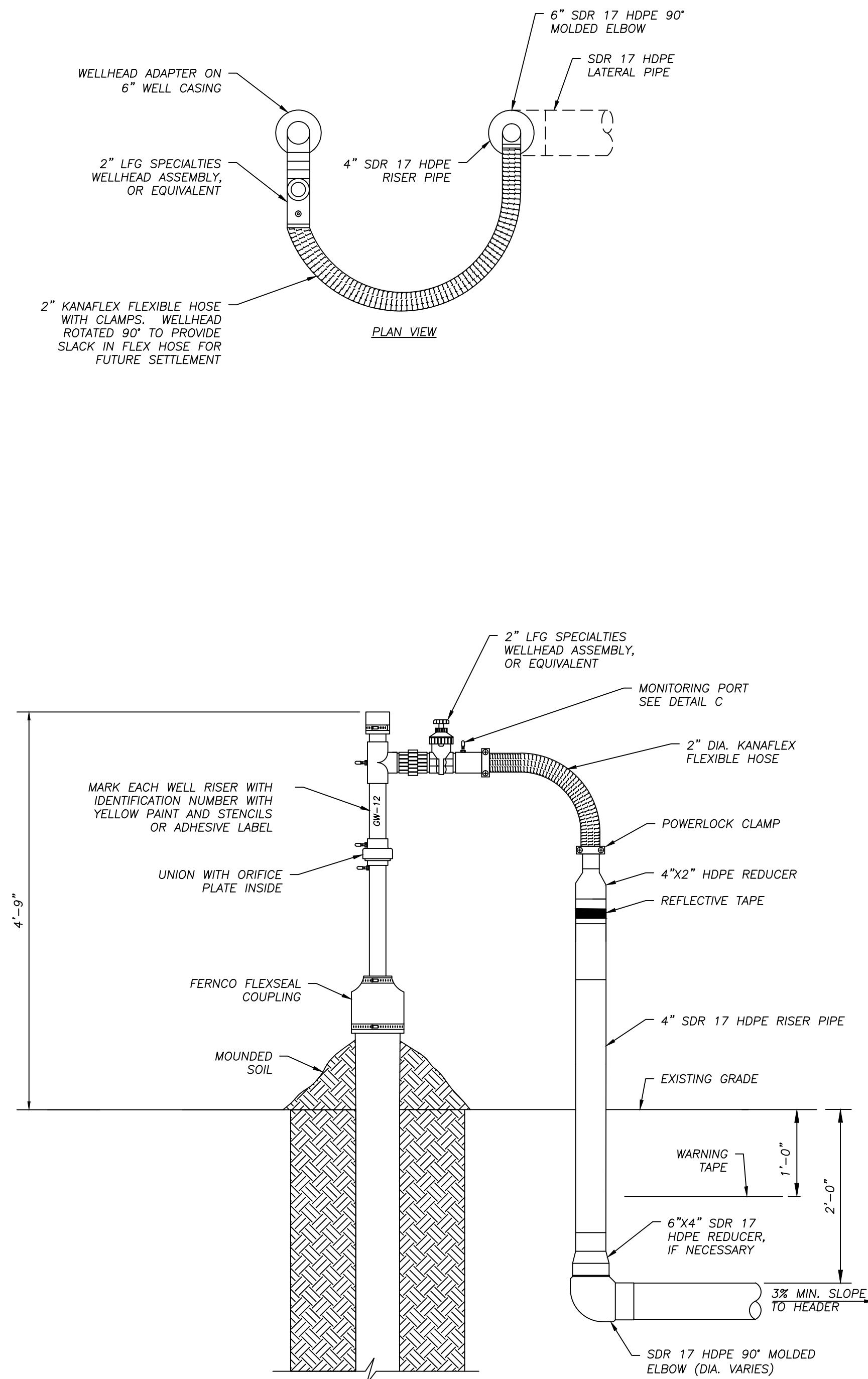
\\KAN-FS01\Clients\ADEQ\Projects\27214218.01 - Closure Contract - 2014\Task 2 - Design and Procurement\GCCS Design\C-404 - Proposed Flare Layout.dwg Jul 09, 2015 - 9:38pm Layout Name: Proposed Flare Layout By: 3726dmb



75% SUBMITTAL

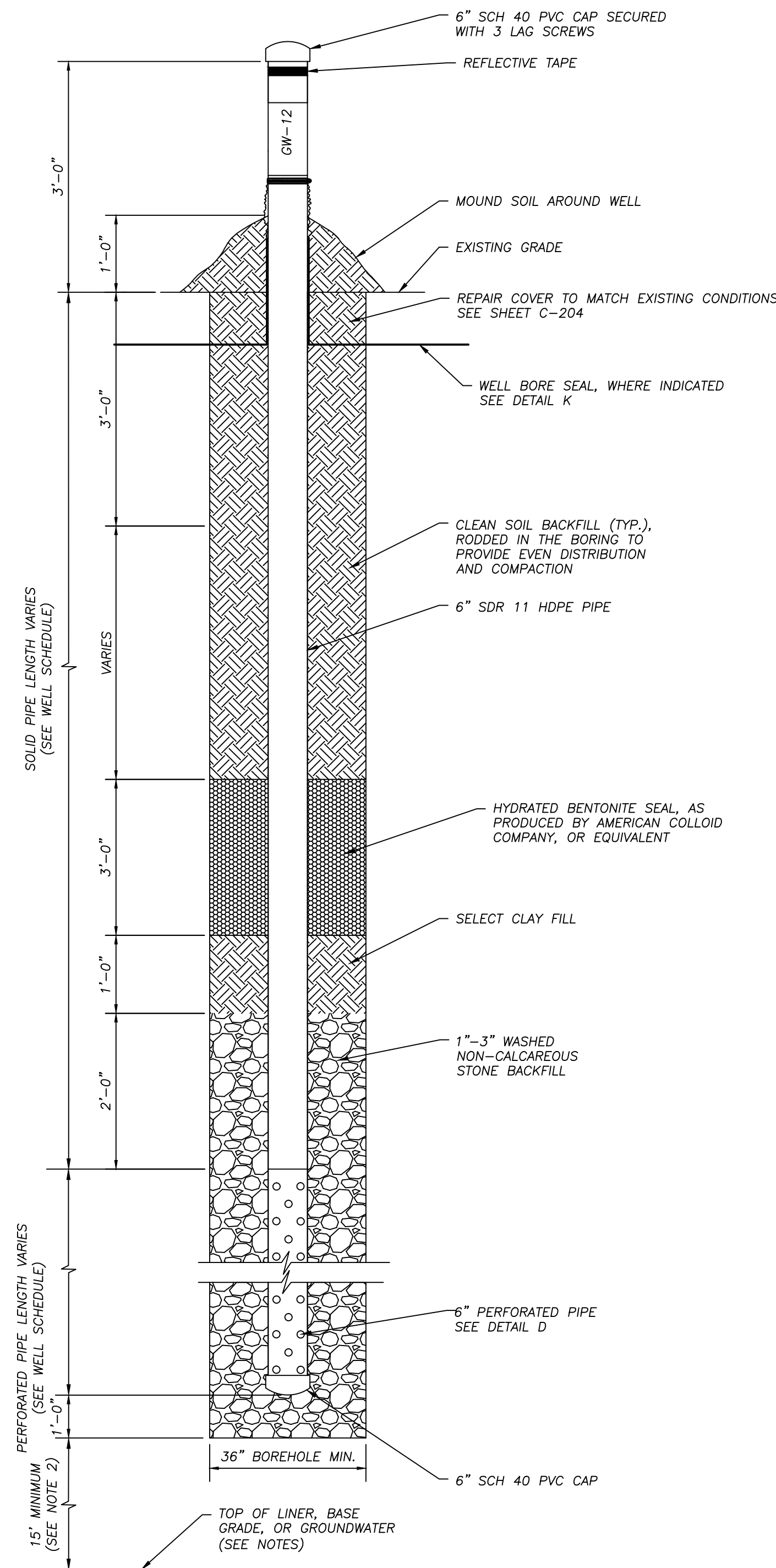
CLIENT		SHEET TITLE		REV. DATE		DESCRIPTION		CK BY	
SCS AQUATERRA		PROPOSED FLARE LAYOUT							
7311 W. 130th St. Ste. 100 Overland Park, Kansas 66213 PH. (913) 681-0030 FAX. (913) 681-0012		PROJECT TITLE							
PROJ. NO. 27214218.01		CLOSURE OF INACTIVE NABORS LANDFILL		1 7/2015				75% SUBMITTAL	
DSR. BY: ZDB				0 5/2015				50% SUBMITTAL	
DWN. BY: ZDB									
CHK. BY: FEC									
Q/A R/W BY: DMB									
PROJ. MGR: FEC									
CADD FILE:									
C-404 - PROPOSED FLARE LAYOUT.DWG									
DATE:									
7/9/15									
DRAWING NO.									
C-404									





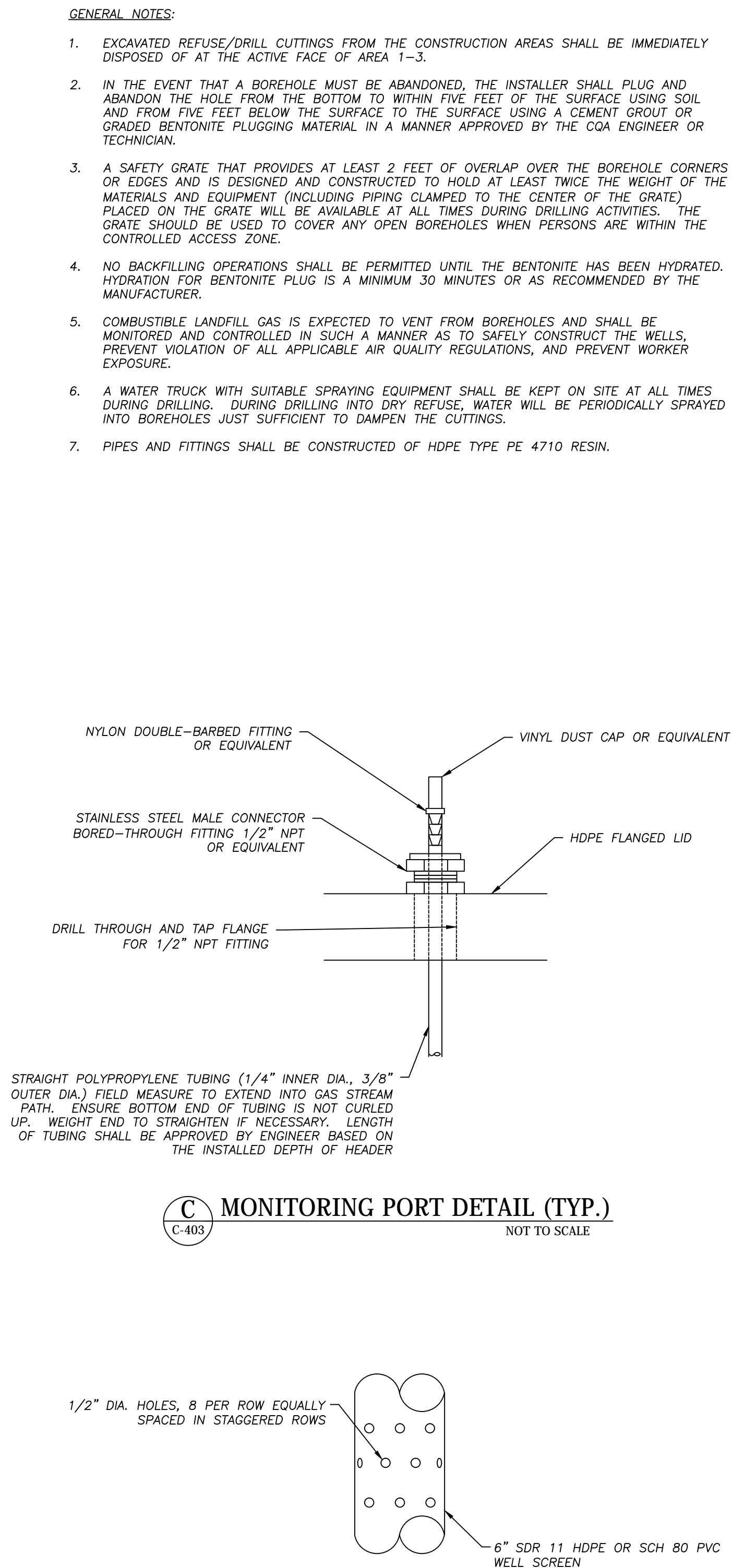
**A WELLHEAD DETAIL**  
C-403 NOT TO SCALE

- NOTES:**
1. WELLHEAD ASSEMBLIES SHALL BE SUPPLIED AS PREFABRICATED AND SHOP TESTED ASSEMBLIES.
  2. WELLHEAD PIPING AND FITTINGS SHALL BE SCHEDULE 80 PVC.
  3. WELLHEAD ASSEMBLY UNITS SHALL BE SUITABLE FOR MEASURING LANDFILL GAS FLOW UP TO 50 CUBIC FEET PER MINUTE AND SHALL INCORPORATE BUILT-IN MEASUREMENT TUBES, IMPACT TUBING, UNIONS, FITTINGS, TEMPERATURE GAUGES OR PORTS, QUICK CONNECT PORTS, AND NUTS, BOLTS, AND GASKETS.
  4. NUTS, BOLTS, AND GASKETS SHALL BE CADMIUM PLATED, GALVANIZED STEEL, STAINLESS STEEL, OR ZINC PLATE FOR ABOVEGROUND INSTALLATION AND STAINLESS STEEL FOR BELOW GROUND INSTALLATION.
  5. KANAFLEX HOSE SHALL BE INSTALLED TO PROVIDE 50 PERCENT CONTRACTION, 20 PERCENT EXTENSION, AND SUFFICIENT SLACK TO ALLOW FOR PIPING EXPANSION AND CONTRACTION WITHOUT CREATION OF LOW POINTS IN THE LINE.



**B** TYPICAL GAS EXTRACTION WELL DETAIL  
C-403 NOT TO SCALE

- NOTES:**
1. ENGINEER SHALL ADJUST WELL SCHEDULE AS NECESSARY BASED ON THE PRE-CONSTRUCTION SURVEY.
  2. TOTAL DRILL DEPTHS WILL BE A MINIMUM 15' ABOVE THE TOP OF LOW PERMEABILITY LINER ELEVATIONS.
  3. THE WASHED NON-CALCAREOUS STONE BACKFILL SHALL BE FREE FROM DIRT, VEGETATION, OR OTHER OBJECTIONABLE MATERIAL, AND FREE FROM AN EXCESS OF SOFT, THIN ELONGATED, LAMINATED OR DISINTEGRATED PIECES.
  4. UNDER NO CIRCUMSTANCE SHALL THE BOREHOLE DRILLING CONTINUE BELOW THE WELL DEPTH ELEVATION IDENTIFIED IN THE WELL SCHEDULE.



**D PERFORATED PIPE DETAIL**  
C-403 NOT TO SCALE

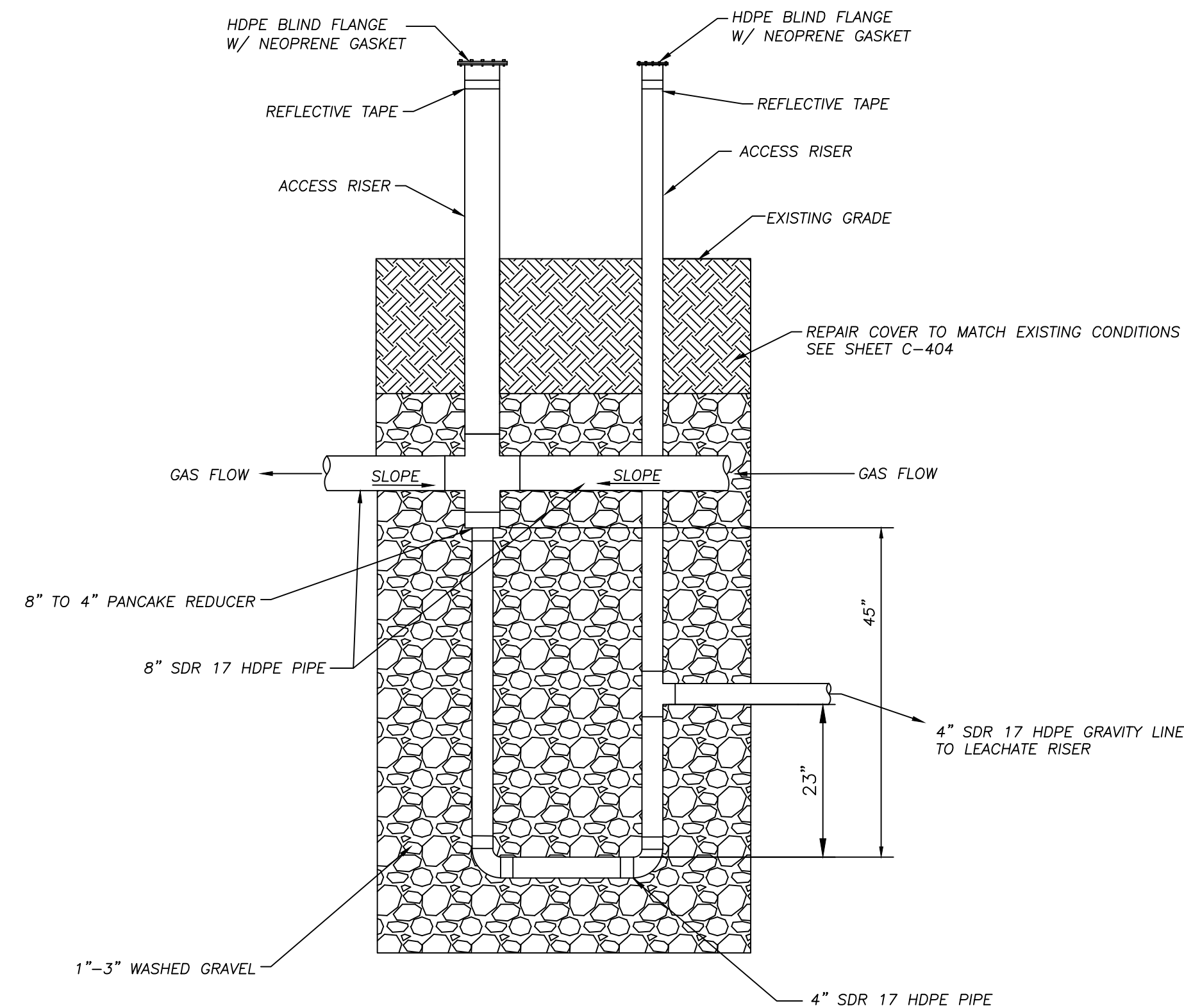
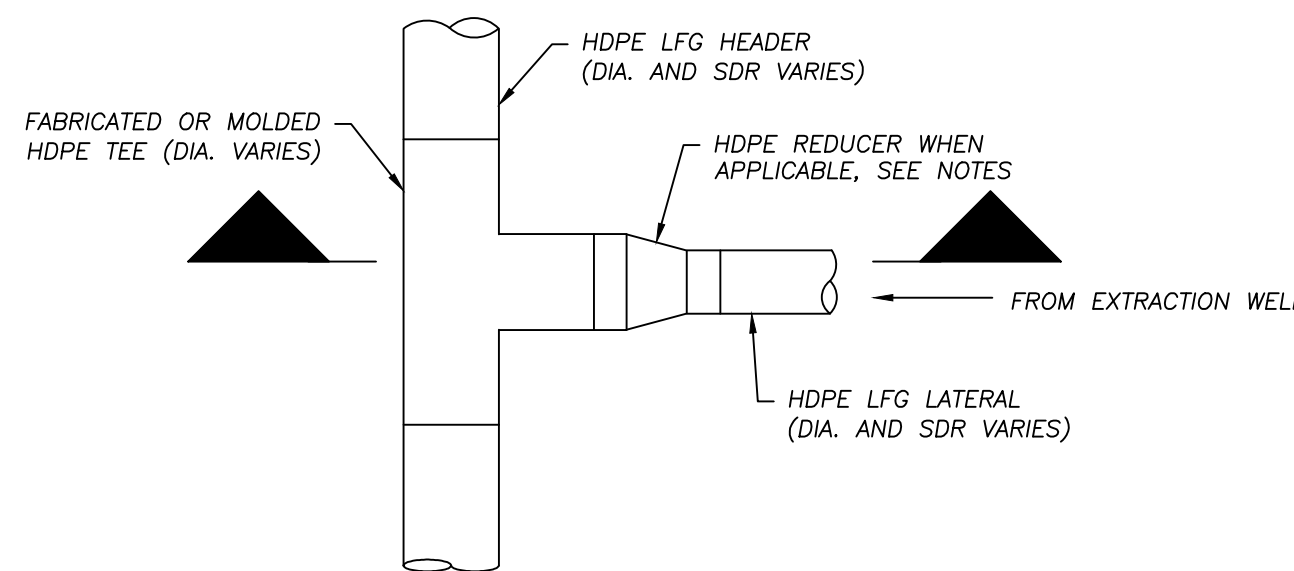
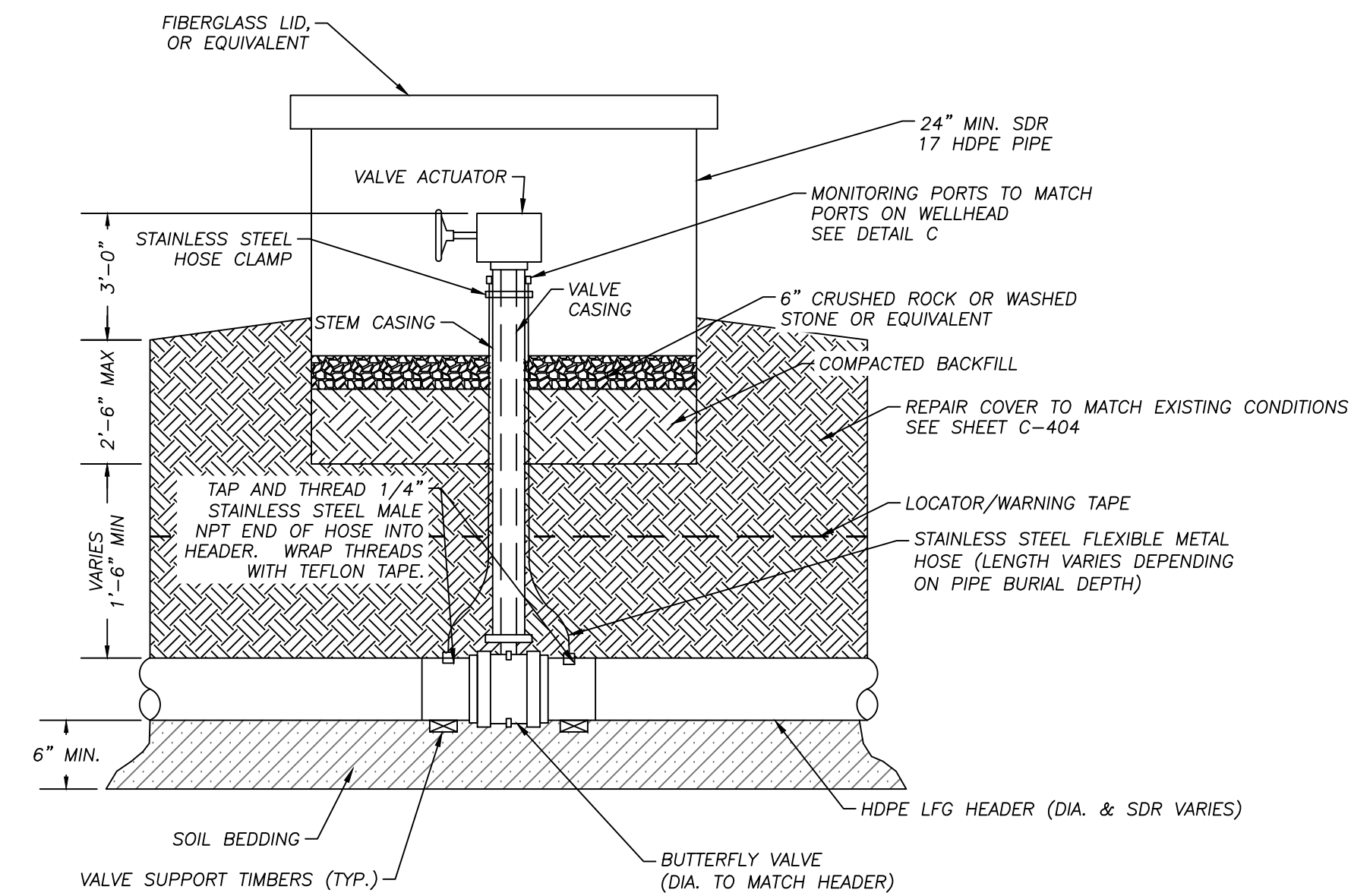
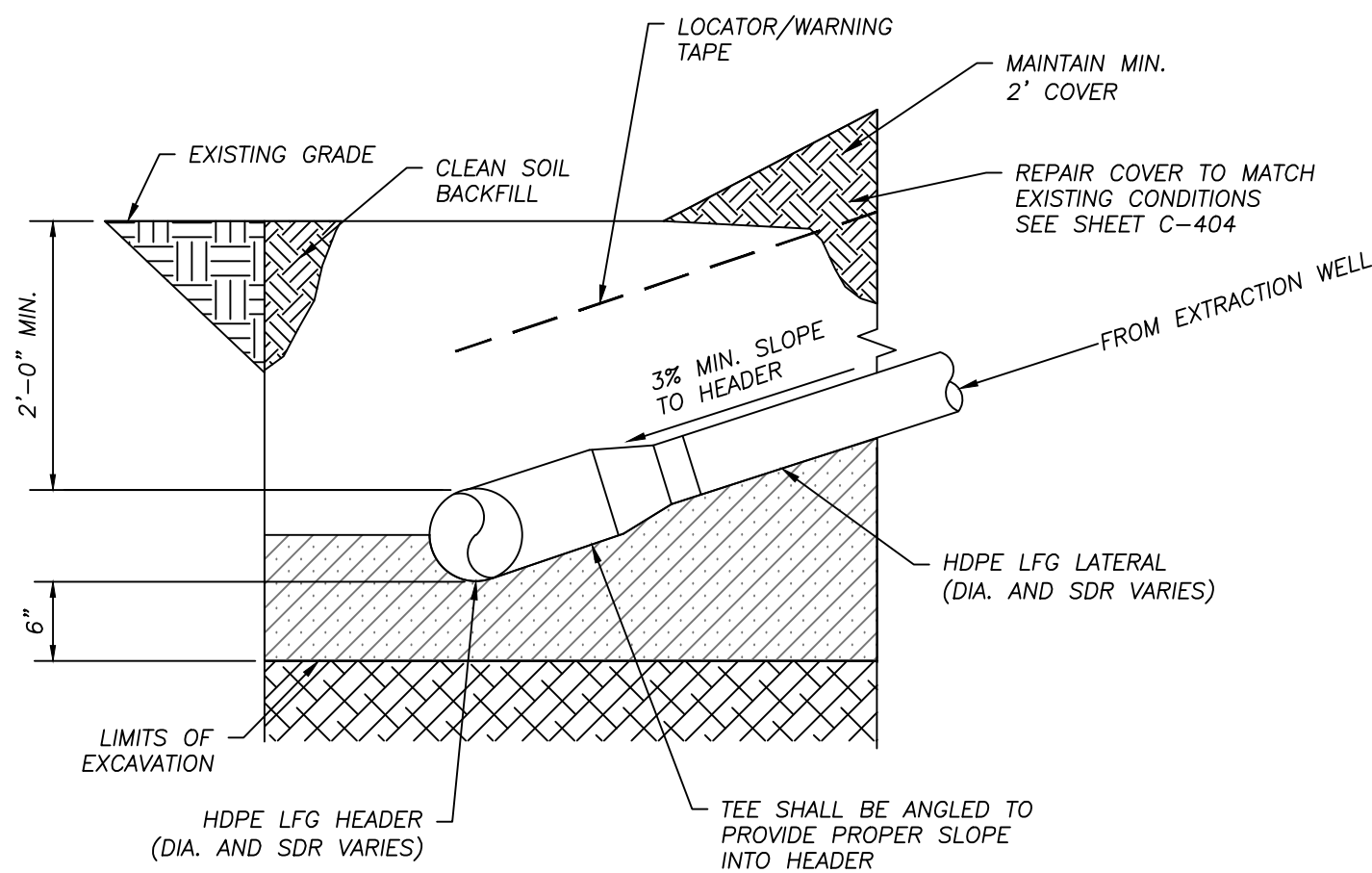
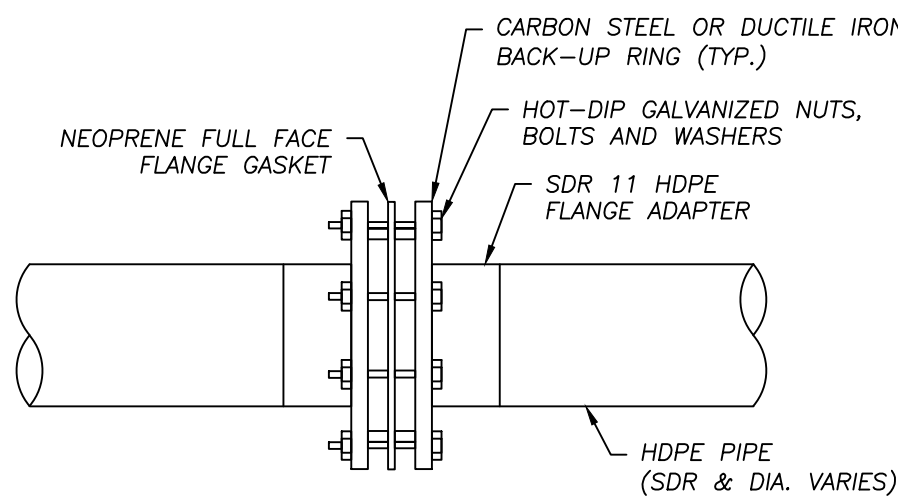
- NOTES:
1. PERFORATIONS SPACED 90" APART HORIZONTALLY.
  2. PERFORATIONS SPACED 4" APART VERTICALLY.
  3. 90° AND 270° ROWS STAGGERED 2" BELOW 0° AND 180° ROWS.

<div>CLIENT</div> <div>SCS AQUATERRA 7311 W. 130th St. Ste. 100 Overland Park, Kansas 66213 PH. (913) 681-0030 FAX. (913) 681-0012</div>		<div>ADEQ</div> <div>ARKANSAS Department of Environmental Quality</div>		<div>SHEET TITLE</div> <div>GCCS DETAILS 1</div>		<div>REV. DATE</div> <div></div>		<div>DESCRIPTION</div> <div></div>		<div>CK BY</div> <div>BY</div>	
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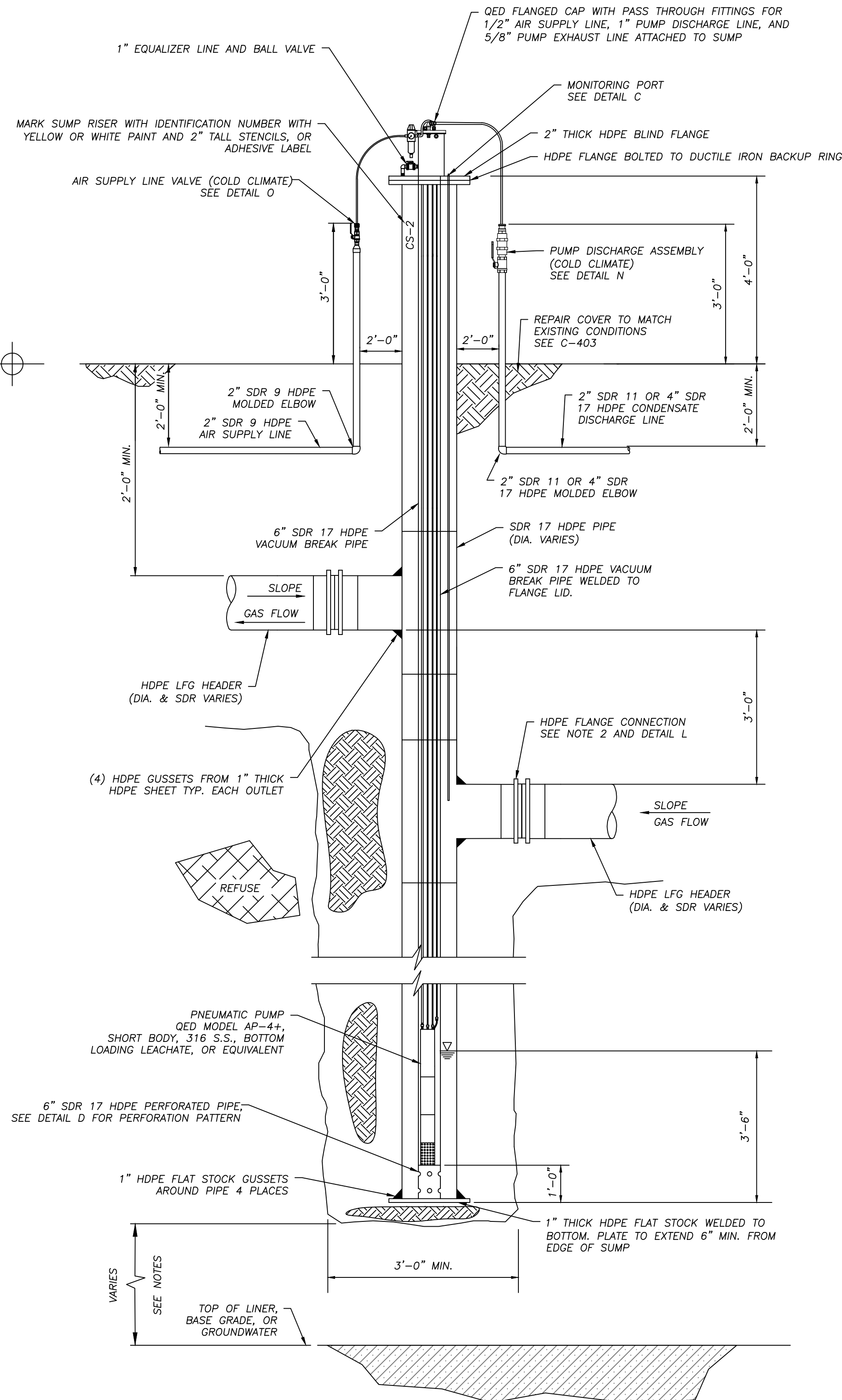
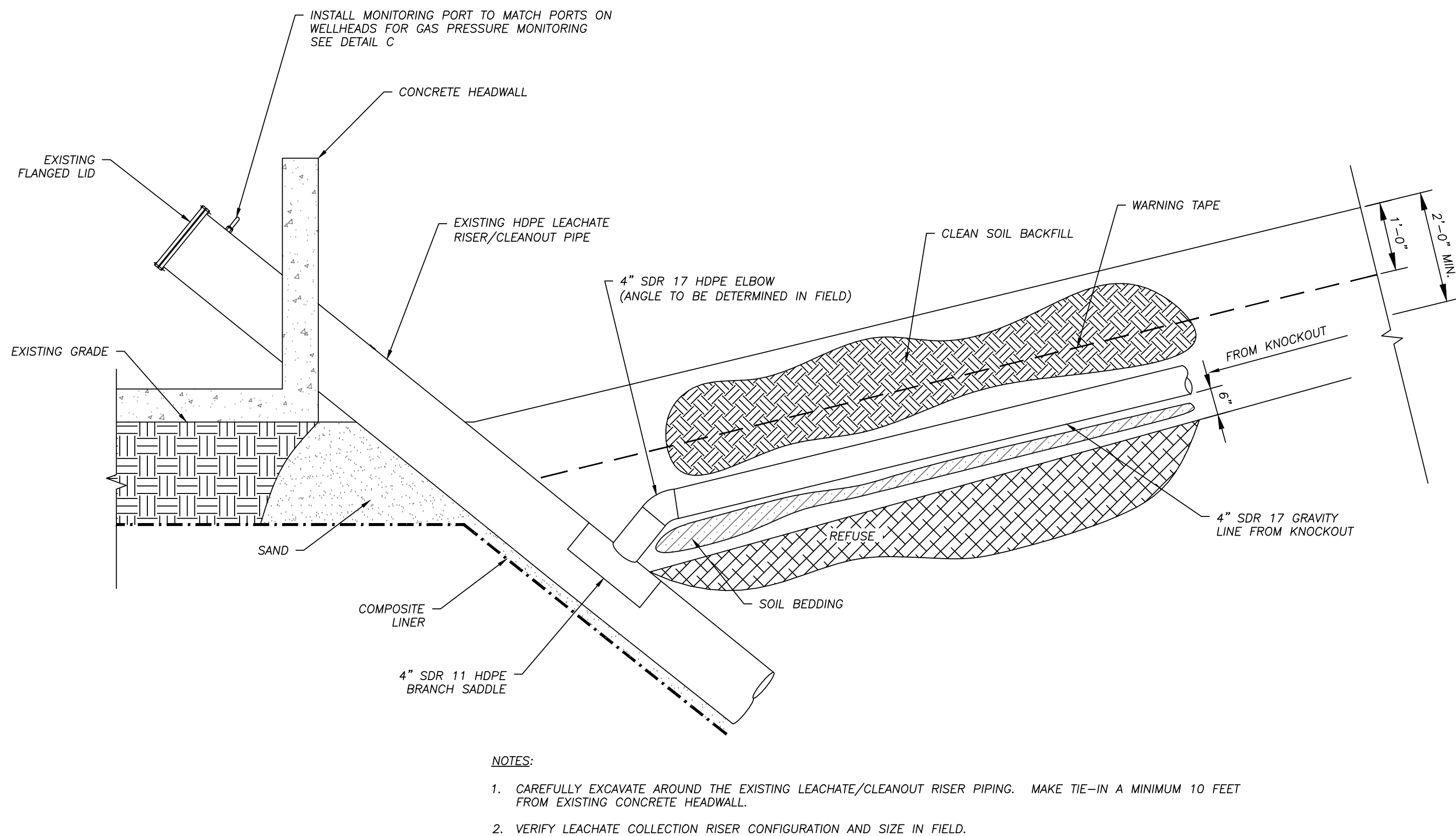
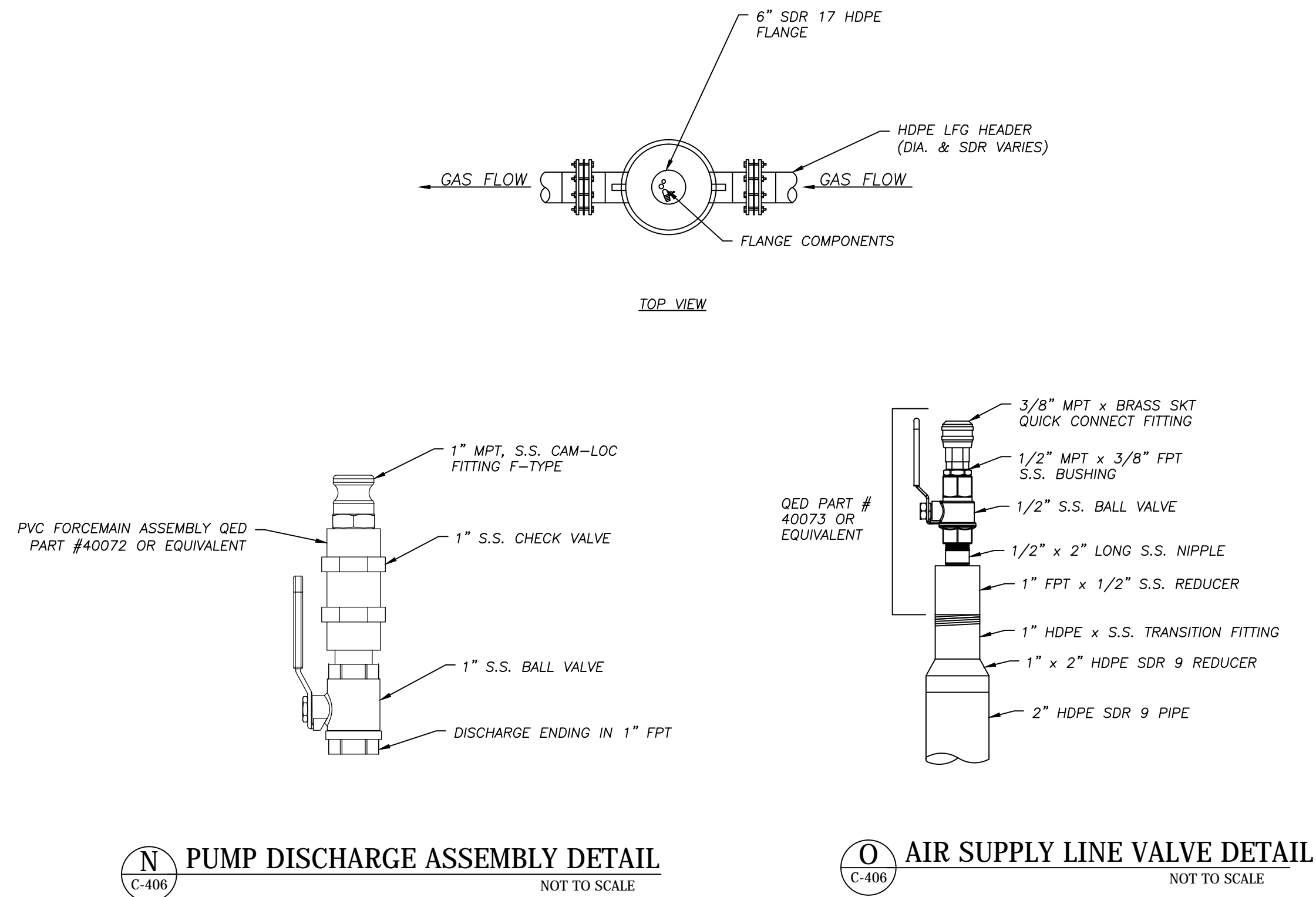




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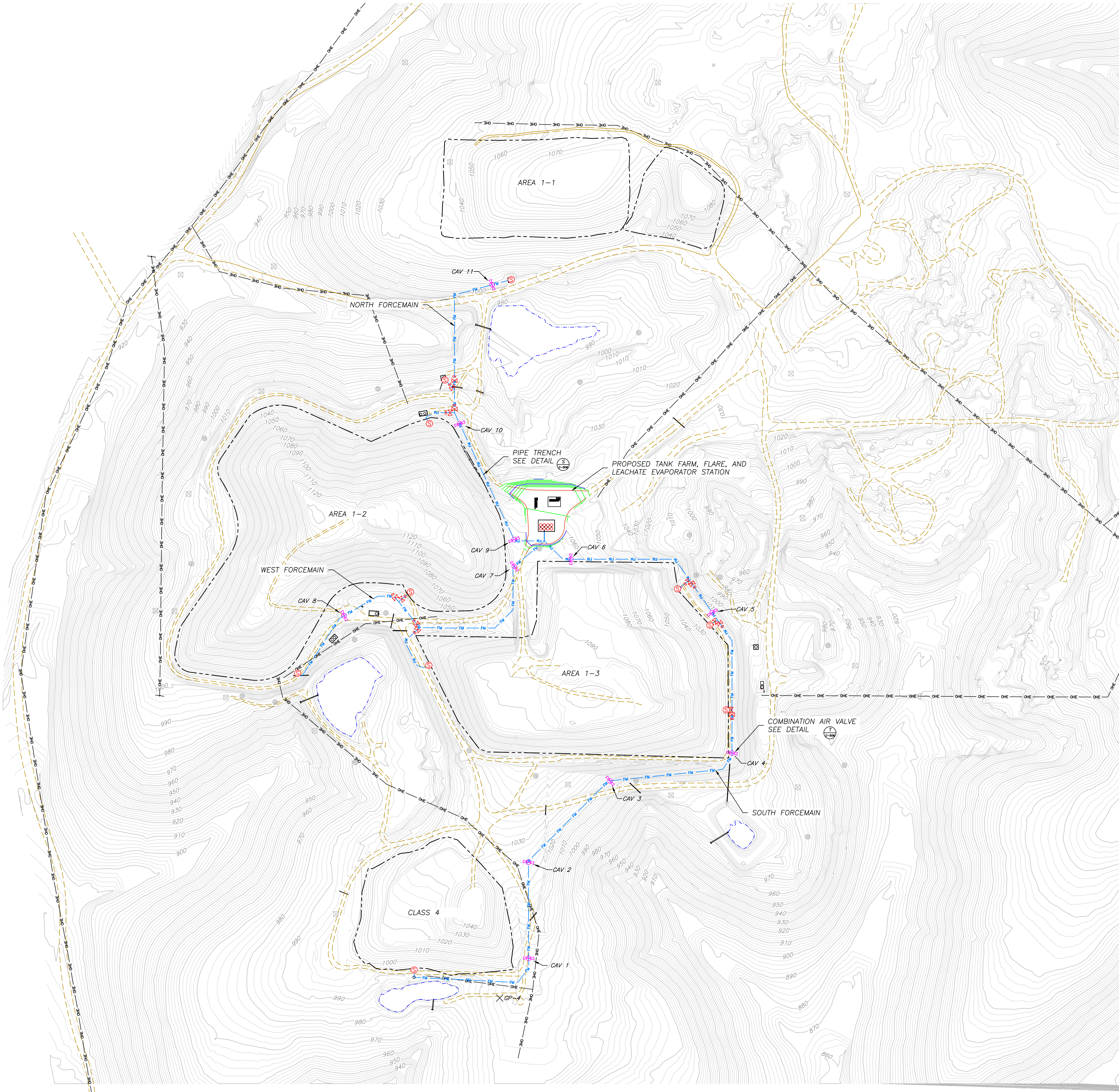


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ADEQ										CLIENT	
ARKANSAS										SCS AQUATERRA	
Department of Environmental Quality										7311 W. 130th St. Ste. 100 Overland Park, Kansas 66213 PH. (913) 681-0030 FAX. (913) 681-0012	
CADD FILE:		DATE:		DRAWING NO.		PROJ. NO.		DWN. BY:		G/A R/W BY:	
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GCCS DETAILS 4										SHEET TITLE	
CLOSURE OF INACTIVE NABORS LANDFILL										PROJECT TITLE	
REV.		DATE		DESCRIPTION		CK		BY			
1		7/2015		75% SUBMITTAL						FEC	
0		5/2015		50% SUBMITTAL						FEC	





- LEGEND:
- EXISTING 5' MINOR CONTOUR
  - EXISTING 25' MAJOR CONTOUR
  - EXISTING OVERHEAD ELECTRIC
  - EXISTING BODY OF WATER
  - PROPOSED FORCEMAIN
  - EXISTING ROADWAY
  - PROPOSED PAD BOUNDARY
  - DISPOSAL BOUNDARY (APPROXIMATE)
  - EXISTING LEACHATE STORAGE TANK AND SECONDARY CONTAINMENT
  - PROPOSED LEACHATE SUMP/COLLECTION POINT
  - PROPOSED CHECK VALVE
  - PROPOSED COMBINATION AIR VALVE

- NOTES:
- EXISTING TOPOGRAPHY BASED ON AERIAL SURVEY PERFORMED BY M.J. HARDEN ASSOCIATES, INC. ON AUGUST 17, 2010. UPDATES TO THE TOPOGRAPHY AND SITE FEATURES FOR AREA 1-2, AREA 1-3, AND SOUTH CLASS 4 DISPOSAL UNITS SURVEYED BY CONSOLIDATED LAND SERVICES, INC. BETWEEN DECEMBER 2014 AND JANUARY 2015.
  - CHECK VALVES ARE ORIENTATED WITH "CV" TO THE INFLOW SIDE OF THE VALVE.
  - SURVEY DATA BASED ON THE NAD83 ARKANSAS STATE PLANE NORTH COORDINATE SYSTEM.
  - PROPOSED LEACHATE COLLECTION SUMPS BASED ON EXISTING LEACHATE COLLECTION POINTS. CONNECTION TO EXISTING LEACHATE COLLECTION SUMPS WILL DIFFER BASED ON THE DISPOSAL UNIT.

Air Valve Locations			
Point #	Description	Northing	Easting
101	CAV 1	772973.82	1180790.33
102	CAV 2	773370.56	1180789.33
103	CAV 3	773706.57	1181126.57
104	CAV 4	773821.52	1181630.18
105	CAV 5	774401.71	1181548.36
106	CAV 6	774622.36	1180964.77
107	CAV 7	774592.93	1180731.36
108	CAV 8	774389.01	1180028.57
109	CAV 9	774703.40	1180730.33
110	CAV 10	775182.20	1180505.48
111	CAV 11	775756.00	1180639.66

75% SUBMITTAL

CK BY

DESCRIPTION

REV.

DATE

LEACHATE FORCEMAIN LAYOUT

CLOSURE OF INACTIVE NABORS LANDFILL

SCS AQUATERRA

7311 W. 130th St. Ste. 100

Overland Park, Kansas 66213

PH. (913) 681-0030 FAX. (913) 681-0012

Q/A R/W BY: DMB

PROJ. MGR: DMB

DRS: DMB

CHK. BY: DMB

7/9/2015

DATE:

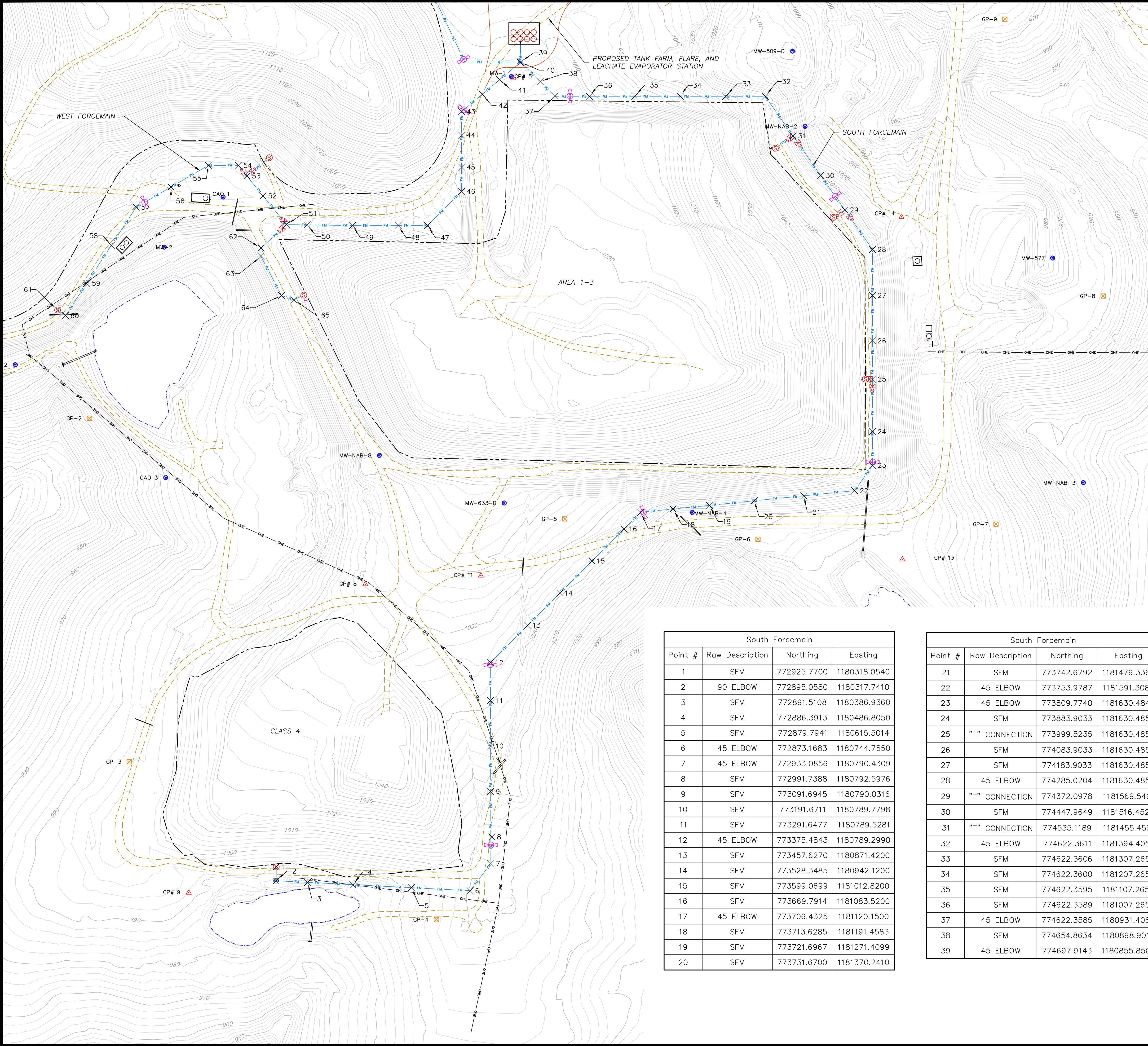
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C-500

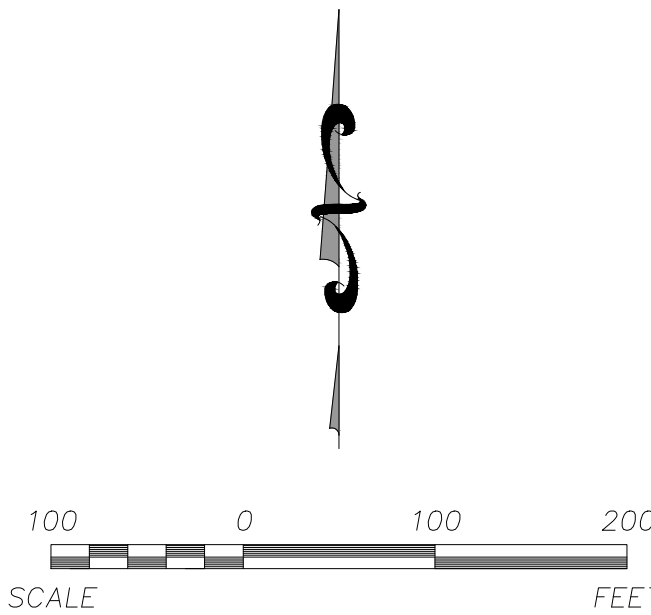


\\KAN-FS01\Clients\ADEQ\Projects\272142\18.01 - Closure Contract - 2014\Task 2 - Design and Procurement\Forcemain Design\C-501 - South and West Forcemain Layout By: 372edmb



- LEGEND:
- EXISTING 5' MINOR CONTOUR
  - EXISTING 25' MAJOR CONTOUR
  - EXISTING OVERHEAD ELECTRIC
  - EXISTING BODY OF WATER
  - PROPOSED FORCEMAIN
  - EXISTING ROADWAY
  - PROPOSED ROADWAY
  - DISPOSAL BOUNDARY (APPROXIMATE)
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  - COMBINATION AIR VALVE

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  - CHECK VALVES ARE ORIENTATED WITH "CV" TO THE INFLOW SIDE OF THE VALVE.
  - SURVEY DATA BASED ON THE NAD83 ARKANSAS STATE PLANE NORTH COORDINATE SYSTEM.



South Forcemain			
Point #	Raw Description	Northing	Easting
1	SFM	772925.7700	1180318.0540
2	90 ELBOW	772895.0580	1180317.7410
3	SFM	772891.5108	1180386.9360
4	SFM	772886.3913	1180486.8050
5	SFM	772879.7941	1180615.5014
6	45 ELBOW	772873.1683	1180744.7550
7	45 ELBOW	772933.0856	1180790.4309
8	SFM	772991.7388	1180792.5976
9	SFM	773091.6945	1180790.0316
10	SFM	773191.6711	1180789.7798
11	SFM	773291.6477	1180789.5281
12	45 ELBOW	773375.4843	1180789.2990
13	SFM	773457.6270	1180871.4200
14	SFM	773528.3485	1180942.1200
15	SFM	773599.0699	1181012.8200
16	SFM	773669.7914	1181083.5200
17	45 ELBOW	773706.4325	1181120.1500
18	SFM	773713.6285	1181191.4583
19	SFM	773721.6967	1181271.4099
20	SFM	773731.6700	1181370.2410

South Forcemain			
Point #	Raw Description	Northing	Easting
21	SFM	773742.6792	1181479.3366
22	45 ELBOW	773753.9787	1181591.3088
23	45 ELBOW	773809.7740	1181630.4846
24	SFM	773883.9033	1181630.4850
25	"T" CONNECTION	773999.5235	1181630.4850
26	SFM	774083.9033	1181630.4850
27	SFM	774183.9033	1181630.4850
28	45 ELBOW	774285.0204	1181630.4850
29	"T" CONNECTION	774372.0978	1181569.5461
30	SFM	774447.9649	1181516.4520
31	"T" CONNECTION	774535.1189	1181455.4591
32	45 ELBOW	774622.3611	1181394.4050
33	SFM	774622.3606	1181307.2650
34	SFM	774622.3600	1181207.2650
35	SFM	774622.3595	1181107.2650
36	SFM	774622.3589	1181007.2650
37	45 ELBOW	774622.3585	1180931.4063
38	SFM	774654.8634	1180898.9013
39	45 ELBOW	774697.9143	1180855.8504

West Forcemain			
Point #	Raw Description	Northing	Easting
40	45 ELBOW	774697.0948	1180855.3164
41	WFM	774658.9040	1180809.8661
42	WFM	774626.6391	1180771.4681
43	45 ELBOW	774588.4054	1180725.9668
44	WFM	774536.8363	1180725.9668
45	WFM	774466.4964	1180725.9668
46	45 ELBOW	774413.0311	1180725.9670
47	45 ELBOW	774338.0311	1180650.9670
48	WFM	774338.0311	1180586.2720
49	WFM	774338.0311	1180486.2720
50	WFM	774339.1276	1180386.2800
51	"Y" CONNECTION	774339.8295	1180340.3000
52	WFM	774403.1243	1180288.8850
53	"T" CONNECTION	774446.9200	1180253.3090
54	45 ELBOW	774470.0959	1180234.4830
55	45 ELBOW	774470.0959	1180168.3420
56	WFM	774422.5784	1180086.4380
57	45 ELBOW	774377.9528	1180009.5180
58	WFM	774294.4229	1179955.1050
59	WFM	774210.5286	1179900.6830
60	90 ELBOW	774139.3852	1179854.1100
61	WFM	774151.7233	1179836.6820
62	WFM	774288.0311	1180284.4830
63	WFM	774269.7958	1180284.4830
64	WFM	774183.4984	1180329.5090
65	WFM	774174.2709	1180356.8620

CK  
BY

DESCRIPTION

REV.

DATE

SHEET TITLE

SOUTH AND WEST LEACHATE  
FORCEMAIN POINTS

PROJECT TITLE

CLOSURE OF INACTIVE NABORS LANDFILL

1

7/2015

75% SUBMITTAL

FEC

0

5/2015

50% SUBMITTAL

FEC

CLIENT

SCS AQUATERRA  
7311 W. 130th St. Ste. 100  
Overland Park, Kansas 66213  
PH. (913) 681-0030 FAX. (913) 681-0012

PROJ. NO.

27214218.01

DRS.

DMB

Q/A R/W BY:

DMB

PROJ. MGR.

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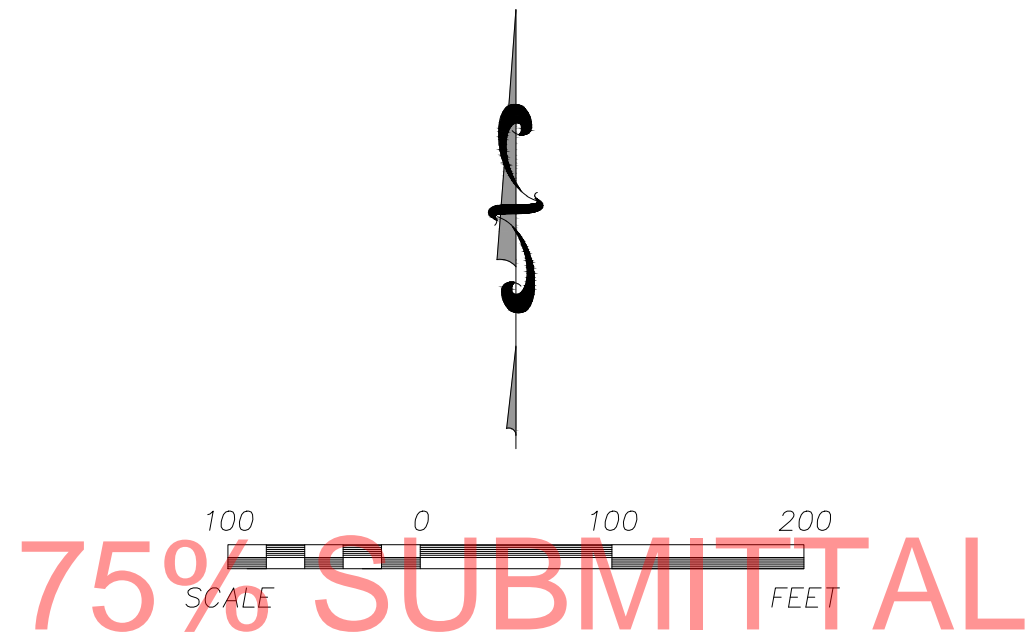
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C-501



1. EXISTING TOPOGRAPHY BASED ON AERIAL SURVEY PERFORMED BY M.J. HARDEN ASSOCIATES, INC ON AUGUST 17, 2010. UPDATES TO THE TOPOGRAPHY AND SITE FEATURES FOR AREAS 1-2, AREA 1-3, LAND SOUTH CLASS 4 DISPOSAL UNITS SURVEYED BY CONSOLIDATED LAND SERVICES, INC BETWEEN DECEMBER 2014 AND JANUARY 2015.
2. CHECK VALVES ARE ORIENTED WITH "CV" TO THE INFLOW SIDE OF THE VALVE.
3. SURVEY DATA BASED ON THE NAD83 ARKANSAS STATE PLANE NORTH COORDINATE SYSTEM.

North Foreman			
Point #	Northing	Easting	Description
66	774697.91	1180854.64	90 ELBOW
67	774697.91	1180785.36	NFM
68	774697.91	1180732.90	45 ELBOW
69	774748.03	1180709.37	NFM
70	774838.54	1180666.86	NFM
71	774929.06	1180624.36	NFM
72	775019.58	1180581.85	NFM
73	775110.09	1180539.34	NFM
74	775200.61	1180496.84	NFM
75	775227.69	1180484.12	"Y" CONNECTION
76	775322.98	1180484.12	"Y" CONNECTION
77	775415.58	1180484.12	NFM
78	775515.66	1180484.12	NFM
79	775613.96	1180484.12	NFM
80	775713.97	1180484.12	90 ELBOW
81	775735.83	1180565.02	NFM
82	775754.58	1180629.77	NFM
83	775777.47	1180719.11	NFM
84	775228.09	1180439.16	NFM
85	775206.45	1180366.81	90 ELBOW
86	775362.60	1180445.19	NFM



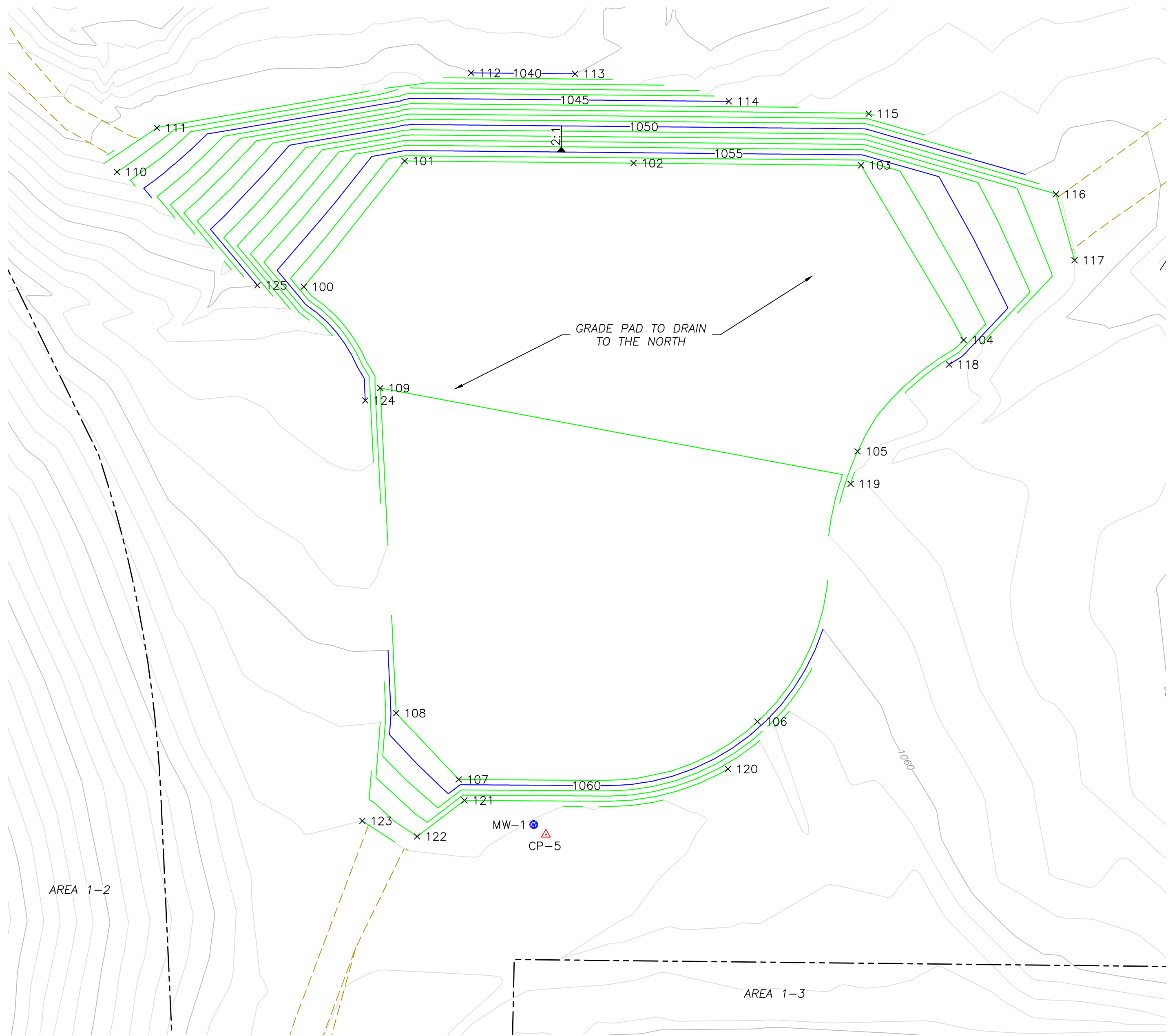
<div style="text-align: center;"> <h1>ADEQ</h1> <hr/> <p><b>A R K A N S A S</b> Department of Environmental Quality</p> </div>						CUSTOMER							
<b>SCS AQUATERRA</b> 7311 W. 130th St. Ste. 100 Overland Park, Kansas 66213 PH. (913) 881-0030 FAX. (913) 681-0012													
CADD FILE:						DWN. BY:		G/A RW BY:		DMB			
DRAWING.DWG						DSN. BY:		CHK. BY:		PROJ. MGR.			
DATE:						DRS		DMB		FEC			
7/9/2015													
DRAWING NO.													
<b>C-502</b>													



\\KAN-FS01\Clients\ADEQ\Projects\27214218.01 - Closure Contract - 2014\Task 2 - Design and Procurement\Forcemain Design\C-503 - Tank Farm, Flare, and Evaporator Station Plan.dwg    Jul 08, 2015 - 9:33pm    Layout Name: Flare Pad Plan View By: 3726dmb

TANK FARM, FLARE, AND EVAPORATOR STATION - GRADING PLAN

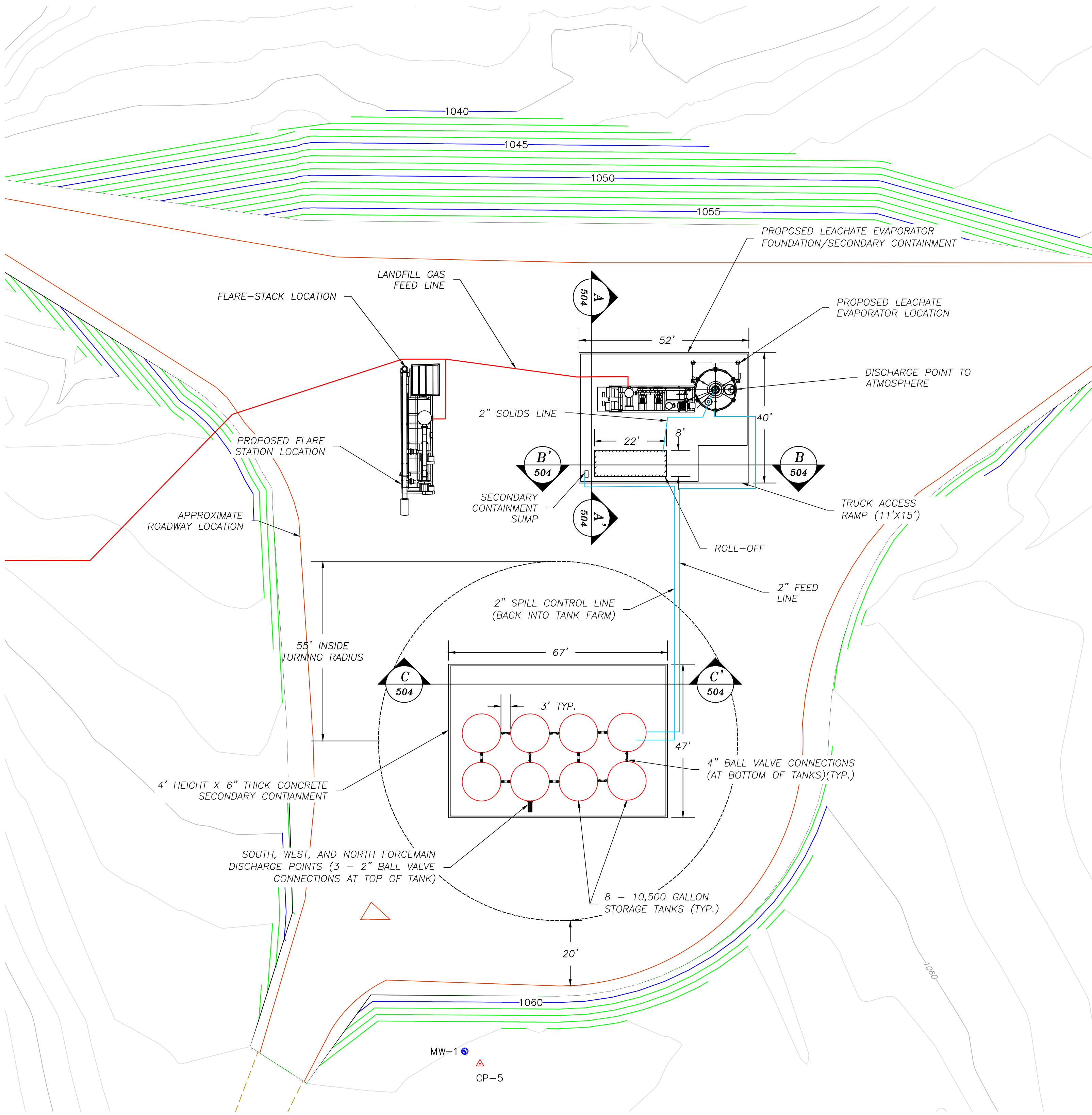
NO SCALE



Point Table				
Point #	Northing	Easting	Elevation	Description
100	774871.76	1180747.09	1057.00	TOP OF PAD
101	774919.94	1180785.70	1057.00	TOP OF PAD
102	774919.11	1180873.39	1057.00	TOP OF PAD
103	774918.28	1180960.57	1057.00	TOP OF PAD
104	774851.35	1180999.84	1057.00	TOP OF PAD
105	774808.69	1180959.24	1057.00	TOP OF PAD
106	774705.17	1180920.86	1059.00	TOP OF PAD
107	774683.00	1180806.45	1059.00	TOP OF PAD
108	774708.39	1180782.49	1059.00	TOP OF PAD
109	774832.94	1180776.40	1058.00	TOP OF PAD
110	774915.75	1180675.55	1043.00	TIE-IN POINT
111	774932.63	1180690.84	1042.00	TIE-IN POINT
112	774953.70	1180811.19	1040.00	TIE-IN POINT
113	774953.32	1180851.04	1040.00	TIE-IN POINT
114	774942.76	1180909.94	1045.00	TIE-IN POINT
115	774938.06	1180963.47	1047.00	TIE-IN POINT
116	774907.20	1181035.24	1042.00	TIE-IN POINT
117	774881.91	1181042.34	1052.00	TIE-IN POINT
118	774841.97	1180994.31	1055.00	TIE-IN POINT
119	774796.24	1180956.56	1042.00	TIE-IN POINT

TANK FARM, FLARE, AND EVAPORATOR STATION - LAYOUT PLAN

NO SCALE



LEGEND:

- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- PROPOSED 1' TOP OF PAD CONTOUR
- PROPOSED 5' TOP OF PAD CONTOUR
- PROPOSED ROADWAY
- EXISTING ROADWAY

75% SUBMITTAL

CLIENT		SCS AQUATERRA 7311 W. 1300th St, Ste. 100 Overland Park, Kansas 66213 PH. (913) 681-0030 FAX. (913) 681-0012		DRAWING NO.		CADD FILE:		DATE:		PROJ. NO.		PROJ. NAME		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. R/W BY:		PROJ. 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# ADEQ

## AR K A N S A S

Department of Environmental Quality

CLIENT

**SCS AQUATERRA**

7311 W. 130th St. Ste. 100  
Overland Park, KS 66204  
PH: (913) 681-0030 FAX: (913) 681-0012

ADD FILE: \_\_\_\_\_

DATE: 7/8/15

DRAWING NO. \_\_\_\_\_

PROJECT NO. 1214218.01	OWN. BY: ZDB	Q/A RW BY: DMB	BY: DMB
DATE: 7/8/15	CHK. BY: ZDB	PROJ. MGR: DMB	FEC: DMB

SHEET / TITLE	REV. DATE	DESCRIPTION	BY
<b>TANK FARM FOUNDATION DETAILS</b>			
<b>PROJECT TITLE</b>			
<b>CLOSURE OF INACTIVE NABORS LANDFILL</b>			
	1 7/2015	75% SUBMITTAL	FEC
	0 5/2015	50% SUBMITTAL	FEC



FOUNDATION:

1. SOIL DESIGN PRESSURE: 1,500 P.S.F.
2. FOOTINGS SHALL EXTEND AT LEAST 36" BELOW FINISHED GRADE TO PROVIDE ADEQUATE FROST PROTECTION.
3. SOIL ENGINEER SHALL VERIFY THAT CONSTRUCTION AT THE SITE IS IN ACCORDANCE WITH THE RECOMMENDATIONS AND CONCLUSIONS OF HIS REPORT.
4. FINISHED EXCAVATIONS FOR FOUNDATION SHALL BE NEAT AND TRUE TO LINE WITH ALL LOOSE MATERIALS AND STANDING WATER REMOVED FROM EXCAVATION.
5. BEFORE ANY CONCRETE IS PLACED, EXCAVATIONS SHALL BE CHECKED AND APPROVED BY A QUALIFIED SOILS ENGINEER TO INSURE COMPLIANCE WITH THE REQUIREMENTS.
6. ALL FILL MATERIAL IS TO BE APPROVED BY THE SOILS ENGINEER AND IS TO BE COMPACTED TO 95% OF MAXIMUM DENSITY INSPECTION IS REQUIRED DURING FILL AND COMPACTION.
7. NOTIFY THE STRUCTURAL ENGINEER OF ANY UNUSUAL SOIL CONDITIONS THAT ARE IN VARIANCE WITH THE DATA HEREIN CITED.
8. TEMPORARY EXCAVATION SLOPES IN DRY, LOOSE DEPOSITS SHOULD BE MAINTAINED NOT STEEPER THAN 1.5 HORIZONTAL TO 1.0 VERTICAL (1.5 : 1). IN WET OF LOOSE SOILS, TEMPORARY EXCAVATION SLOPES SHOULD BE FLATTENED AS REQUIRED IN ACCORDANCE WITH OSHA REGULATIONS 29 CFR PART 1926.
9. FOLLOWING EXCAVATION TO AT LEAST 12 INCHES BELOW BOTTOM OF FOOTING, THE SUBGRADE SHOULD THEN BE COMPACTED IN ORDER TO DENSIFY ANY NATURALLY OCCURRING LOOSE ZONES OR THOSE WHICH DEVELOP DURING THE EXCAVATION PROCESS.
10. FOLLOWING COMPACTION OPERATIONS, BACKFILL AS REQUIRED, TO THE BOTTOM OF THE PROPOSED EQUIPMENT FOOTINGS AND MAT FOUNDATIONS WITH SELECT GRANULAR FILL MATERIAL. THIS MATERIAL SHOULD BE PLACED IN 12-INCH MAXIMUM LOOSE LIFTS AND BE COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MATERIALS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-1557.
11. EQUIPMENT FOUNDATIONS SHOULD BE DESIGNED AND SIZED TO ADEQUATELY DAMPEN DYNAMIC FORCES AND VIBRATIONS CAUSED BY THE OPERATION OF EQUIPMENT SUPPORTED ON THE FOUNDATION. THE NATURAL FREQUENCY OF VIBRATION SHOULD DIFFER FROM THE OPERATING FREQUENCY BY AT LEAST 50 PERCENT TO AVOID RESONANCE.

REINFORCED CONCRETE:

1. CEMENT FOR CONCRETE OR GROUT SHALL CONFORM TO A.S.T.M. C-150, TYPE II.
2. AGGREGATES SHALL CONFORM TO A.S.T.M. C-33 FOR NORMAL WEIGHT CONCRETE AND A.S.T.M. C-330 FOR LIGHTWEIGHT CONCRETE.
3. READY MIX CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH A.S.T.M. C-94.
4. ALL CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST A.C.I. CODE (A.C.I. 318) AND DETAILING MANUAL (A.C.I. 315) UNLESS OTHERWISE DETAILED OR NOTED IN DRAWINGS.
5. CONCRETE SHALL HAVE A MINIMUM ULTIMATE STRENGTH AT 28 DAYS f'c OF 4,000 PSI, WITH A WATER CEMENT RATIO NOT EXCEEDING 0.50. SUBMIT CONCRETE MIX DESIGNS TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL. CONCRETE DESIGN IS BASED ON f'c=2,500 PSI AND, THEREFORE, SPECIAL INSPECTION OF CONCRETE IS NOT REQUIRED.
6. ADMIXTURES MAY BE USED WITH APPROVAL OF THE ENGINEER. ADMIXTURES USED TO INCREASE THE WORKABILITY OF THE CONCRETE SHALL NOT BE CONSIDERED TO REDUCE THE SPECIFIED MINIMUM CEMENT CONTENT.
7. PROJECTING CORNERS OF SLABS, SHALL BE FORMED WITH A 3/4" CHAMFER UNLESS OTHERWISE NOTED.
8. RIGID, REINFORCED CONCRETE SPREAD FOOTINGS AND MAT FOUNDATIONS SUPPORTED UPON SELECT GRANULAR FILL CAN BE PROPORTIONED USING AN ALLOWABLE NET BEARING PRESSURE OF 1,500 POUNDS PER SQUARE FOOT (PSF). THIS BEARING PRESSURE ASSUMES THAT SPREAD FOOTINGS WILL HAVE A MINIMUM WIDTH OF 1.5 FEET. FOOTINGS DESIGNED USING THE RECOMMENDATIONS HEREIN SHOULD NOT EXPERIENCE TOTAL SETTLEMENT GREATER THAN 0.75 INCHES. DIFFERENTIAL SETTLEMENT ACROSS THE MAT FOUNDATIONS SHOULD NOT EXCEED 0.50 INCHES.
9. CONCRETE FORM TOLERANCES SHALL BE WITHIN THE STANDARDS SET BY THE AMERICAN CONCRETE INSTITUTE.
10. ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS AND OTHER INSERTS SHALL BE WELL SECURED IN PLACE IN THE FORMS PRIOR TO PLACING OF CONCRETE. TWO-WAY MATS OF STEEL MUST BE WIRED TOGETHER BOTH WAYS AT ALTERNATE INTERSECTIONS.
11. LOCATION OF CONSTRUCTION JOINTS NOT SPECIFICALLY INDICATED ON DRAWINGS SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACING REINFORCING STEEL.
12. CONCRETE SLABS VARIATION FROM LEVEL TO BE 1/16" IN TEN FEET MAXIMUM, UNLESS OTHERWISE NOTED ON DRAWINGS.
13. PIPES MAY PASS THROUGH STRUCTURAL CONCRETE IN SLEEVES, BUT NOT BE EMBEDDED THEREIN.
14. DRYPACK SHALL CONSIST OF ONE PART PORTLAND CEMENT, 4 PARTS SAND BASED ON DRY LOOSE VOLUMES AND NOT LESS THAN 1/4 PART NOR MORE THAN 1/2 PART LIME PUTTY OR HYDRATED LIME. DRYPACK SHALL OBTAIN A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS. SUBMIT MIX DESIGN TO THE STRUCTURAL ENGINEER FOR REVIEW.
15. MINIMUM EMBEDMENT OF ANCHOR BOLTS (A.B.) UNLESS OTHERWISE NOTED ON THE PLANS, SHALL BE 7" IN FOOTINGS. ALL BOLTS SHALL HAVE A STANDARD BOLT HEAD OR A 1-1/4" 90° BEND AT EMBEDDED END. ANCHOR BOLTS SHALL BE SPACED A MINIMUM OF 12 DIAMETERS. IN LIEU OF BOLTS OR DOWELS IN CONCRETE, APPROVED CAST-IN-PLACE THREADED INSERTS MAY BE USED.
16. EXPANSION ANCHORS SHALL BE HILTI KWIK BOLT TZ INSTALLED WITH SPECIAL INSPECTION IN ACCORDANCE WITH ICC/ES REPORT No. 1917, OR APPROVED EQUAL.
17. EPOXY ANCHORS SHALL BE THREADED RODS INSTALLED WITH SPECIAL INSPECTION WITH HILTI HY-200 EPOXY ADHESIVE IN ACCORDANCE W/ ES REPORT No. ESR-3187, OR APPROVED EQUAL.

GENERAL:

1. THE CONTRACTOR SHALL TAKE NO ADVANTAGE OF ANY ERROR OR OMISSION IN THE PLANS, ESTIMATED QUANTITIES OR SPECIFICATIONS. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON THE JOB SITE PRIOR TO COMMENCING WITH THE WORK. SPECIAL CARE SHALL BE GIVEN TO SITE AND BUILDING LAYOUT THEREON. IN THE EVENT THE CONTRACTOR DISCOVERS AN ERROR, OMISSION, OR POSSIBLE DISCREPANCY BETWEEN FIELD CONDITIONS AND THE DRAWINGS, THEY SHALL IMMEDIATELY NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK.
2. NOTES AND DETAILS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER THESE GENERAL NOTES.
3. ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE 2012 EDITION AND THE LOCAL BUILDING OFFICIAL.
4. THE DESIGN, ADEQUACY AND SAFETY OF ERECTION, BRACING, SHORING, TEMPORARY SUPPORTS, ETC. IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND HAS NOT BEEN CONSIDERED BY THE STRUCTURAL ENGINEER.
5. NO PIPES, DUCTS, SLEEVES, CHASES, ETC. SHALL BE PLACED IN SLABS, BEAMS, OR WALLS UNLESS SPECIFICALLY SHOWN OR NOTED. NOR SHALL ANY STRUCTURAL MEMBER BE CUT FOR PIPES DUCTS, ETC., UNLESS OTHERWISE NOTED. CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FOR INSTALLATION OF ANY ADDITIONAL PIPES, DUCTS ETC., REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOCATIONS.
6. ALL DETAIL CALLOUTS AS SHOWN ON THE DRAWINGS, SECTIONS AND ELEVATIONS SHALL APPLY TO ALL SIMILAR CONDITIONS WHETHER REFERENCED OR NOT. TYPICAL DETAILS AND NOTES SHALL APPLY UNLESS SHOWN OTHERWISE IN DRAWINGS.
7. DESIGN LOADS:

WIND LOADS:

BASIC WIND SPEED105 MPH

WIND IMPORTANCEI = 1.0

WIND EXPOSUREC

EARTHQUAKE:

SEISMIC IMPORTANCE FACTORI = 1.0

Ss = 0.507 g

S1 = 0.164 g

SITE CLASS:

SDs = 0.231 g

SD = 0.077 g

SEISMIC CATEGORY C
8. NO CHANGES SHALL BE MADE TO THESE DRAWINGS WITHOUT THE EXPRESSED WRITTEN CONSENT OF THE STRUCTURAL ENGINEER.
9. WORK THESE DRAWINGS WITH CIVIL, MECHANICAL, PROCESS, GENERAL AND ELECTRICAL DRAWINGS.
10. WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS SUCH STANDARDS SHALL BE THE LATEST EDITION, AND/OR ADDENDUM.
11. AS A CONVENIENCE TO THE CONTRACTOR, THE ENGINEER SHALL REVIEW SHOP DRAWINGS AS TO THEIR GENERAL CONFORMANCE TO THE DESIGN CONCEPT. THE CONTRACTOR SHALL BE RESPONSIBLE NONETHELESS FOR COMPLIANCE AND DIMENSIONS. SHOP DRAWINGS ARE REQUIRED FOR THE FOLLOWING:

REINFORCING STEEL  
HIGH STRENGTH BOLTING  
STRUCTURAL FIELD WELDING  
EPOXY ANCHORS

12. FOR EXCAVATION IN NATIVE SOIL, SHORING SHALL BE PROVIDED TO SATISFY STATE OF ARKANSAS SAFETY REQUIREMENTS.
13. ALL FILLS MUST BE COMPACTED TO AT LEAST 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR PROCEDURES OUTLINED IN ASTM D698.
14. BACKFILL MATERIAL AROUND THE FOUNDATION ELEMENTS SHOULD CONSIST OF SUITABLE ON-SITE MATERIAL OR CLEAN GRANULAR FILL FROM A BORROW SOURCE. THIS MATERIAL SHOULD BE PLACED IN 12-INCH MAXIMUM LOOSE LIFTS AND BE COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MATERIALS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-1557.

REINFORCING STEEL:

1. ALL REINFORCING STEEL UNLESS OTHERWISE NOTED IN DRAWINGS SHALL CONFORM TO ASTM A-615, GRADE 60.
2. REINFORCING DETAILING, BENDING AND PLACING SHALL BE IN ACCORDANCE WITH CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE" LATEST EDITION.
3. REINFORCING SHALL BE SPLICED ONLY AS SHOWN OR NOTED. SPLICES AT OTHER LOCATIONS MAY BE ALLOWED ONLY IF APPROVED BY THE STRUCTURAL ENGINEER.
4. PLACING OF REINFORCEMENT SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE'S BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, LATEST EDITION.
5. DIMENSIONS FROM FACE OF CONCRETE TO STEEL (CLR.) ARE TO FACE OF BARS.
6. THE TRANSVERSE REINFORCING STEEL SHALL TERMINATE ONE AND ONE-HALF INCHES FROM THE CONCRETE SURFACE.
7. BARS NOTED "CONT" AND TYPICAL WALL REINFORCING SHALL HAVE A MINIMUM SPLICE EQUAL TO THE STANDARD LAP SPLICES UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
8. REINFORCING BARS AND ACCESSORIES SHALL NOT BE IN CONTACT WITH ANY PIPE, PIPE FLANGE OR METAL PARTS EMBEDDED IN CONCRETE. A MINIMUM CLEARANCE OF 2" SHALL BE MAINTAINED BETWEEN REINFORCING STEEL AND ALL EMBEDDED METAL PARTS.
9. PROVIDE THE MINIMUM PROTECTIVE COVERING OF CONCRETE UNLESS OTHERWISE NOTED:

BELOW GRADE OR EXPOSED TO WEATHER:  
UNIFORMED, CAST IN PLACE3" CLEAR  
FORMED, CAST IN PLACE2" CLEAR

LAP SCHEDULE-CLASS "B"		
BAR SIZE	TOP BARS	OTHER BARS
#3	30"	23"
#4	41"	31"
#5	51"	39"
#6	61"	47"
#7	89"	68"
#8	101"	78"

BEND SCHEDULE	
BAR SIZES	D
#3 THRU #8	6d

D = DIAMETER OF REINF. BAR

NOTES:

1. CONCRETE CLASS: 3,500 PSI - NORMAL WEIGHT  
CLASS "B" LAP, TYPICAL
2. CLASS "A" SPLICES ARE ALLOWED WHEN ONE HALF OF THE TOTAL BARS ARE SPLICED WITHIN THE REQUIRED LAP LENGTH OF THE BARS.
3. CLASS "A" SPLICE = CLASS "B" SPLICE / 1.3

CK  
BY

DESCRIPTION

REV.

DATE

TANK FARM FOUNDATION NOTES

CLOSURE OF INACTIVE NABORS LANDFILL

1

7/2015

75% SUBMITTAL

0

5/2015

50% SUBMITTAL

FEC

FEC

CLIENT

SCS AQUATERRA

7311 W. 130th St. Ste. 100  
Overland Park, Kansas 66213  
PH. (913) 681-0030 FAX. (913) 681-0012

Q/A R/W BY: DMB

PROJ. MGR: DMB

DWN. BY: ZDB

CHK. BY: DMB

PROJ. NO. 27214218.01

DSK. BY: ZDB

CADD FILE:  
C-504 - LEACHATE EVAPORATOR-TANK FARM  
FOUNDATION SECTIONS AND DETAILS.DWG

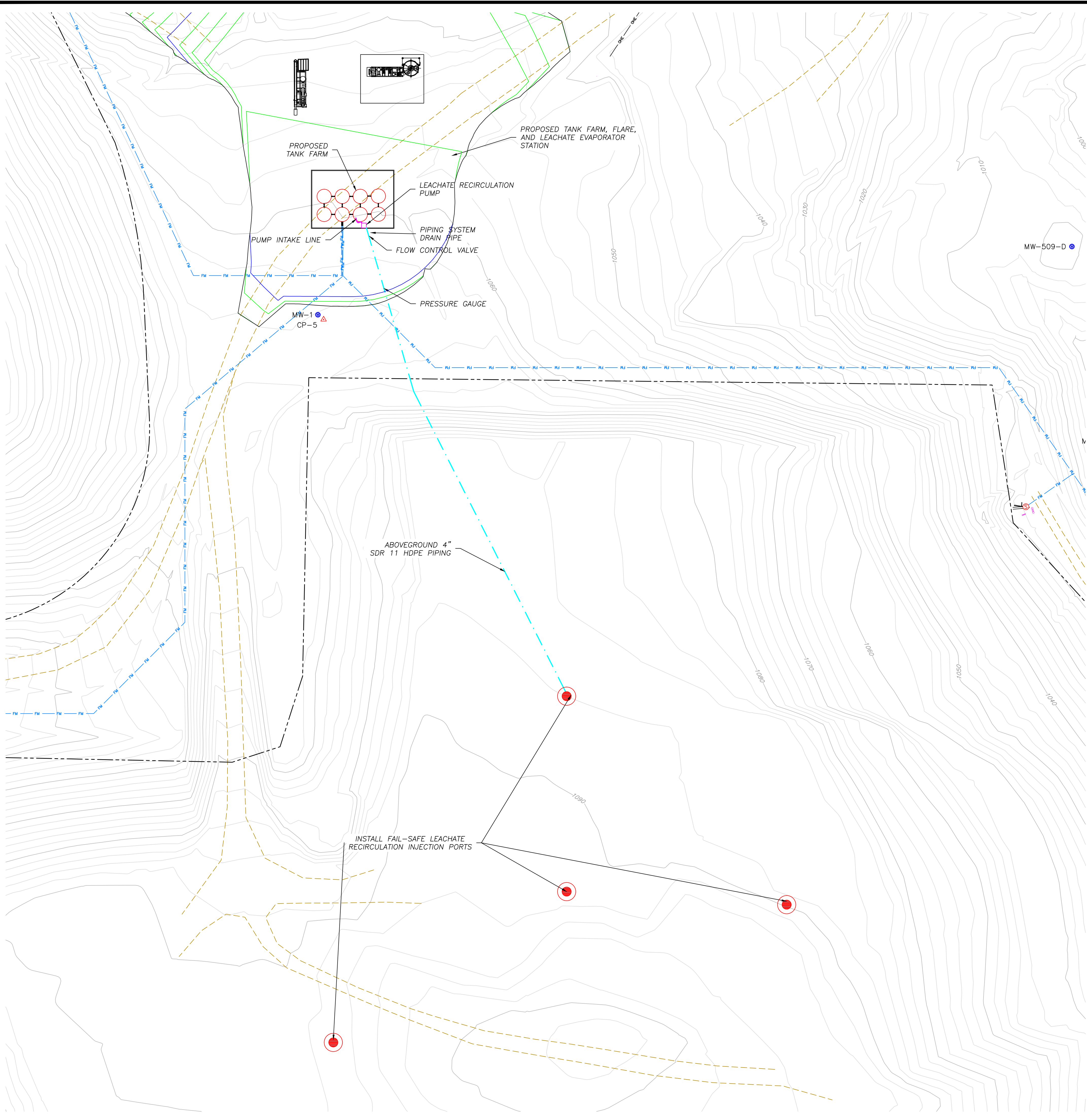
DATE:  
7/8/15

DRAWING NO.  
C-505

75% SUBMITTAL

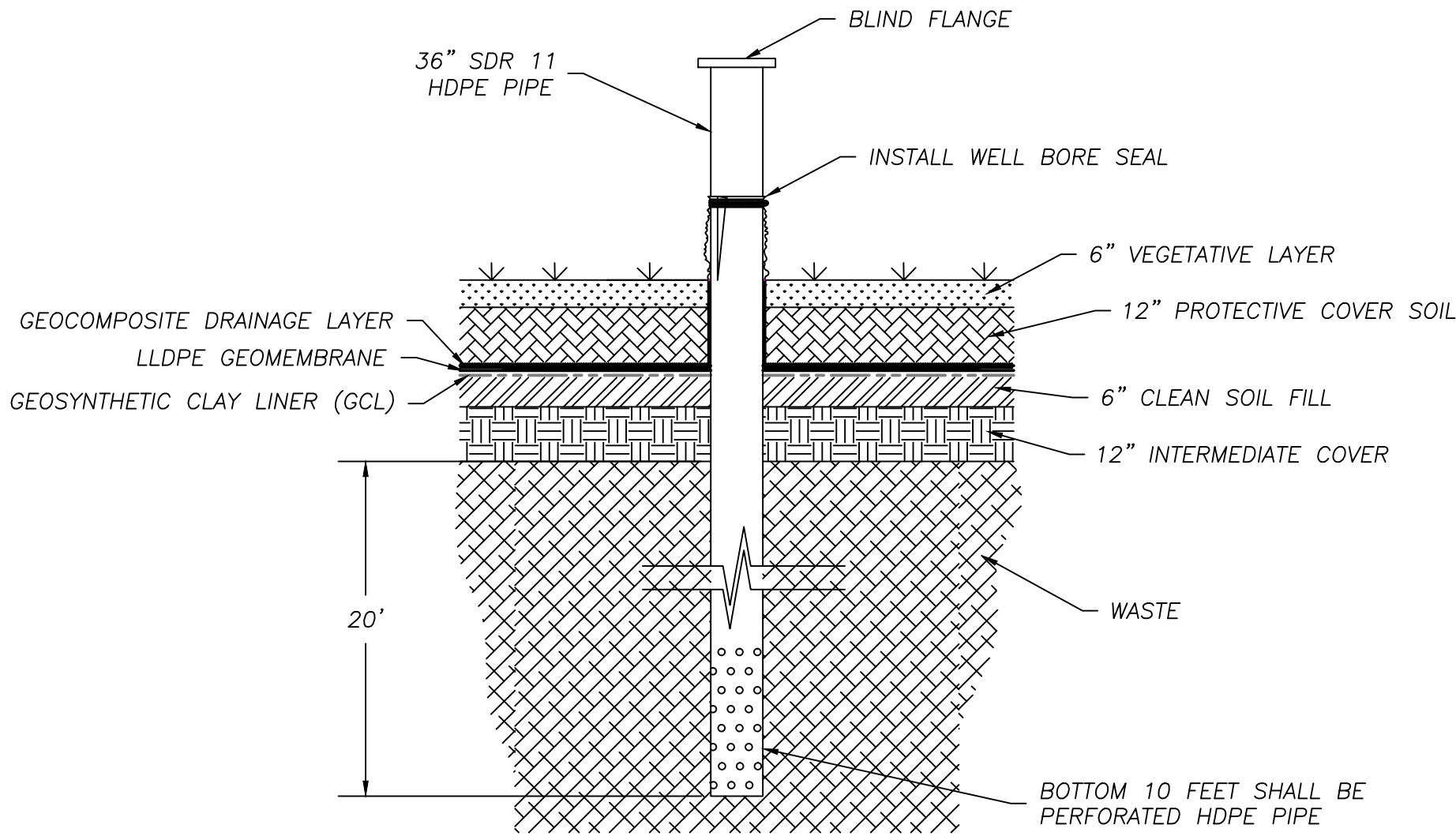


\\KAN-FS01\Clients\ADEQ\Projects\27214218.01 - Closure Contract - 2014\Task 2 - Design and Procurement\Forcemain Design\C-506 - Leachate Recirculation Plan.dwg Jul 09, 2015 - 10:32pm Layout Name: Leachate Recirculation Plan By: 3726dmb



- LEGEND:
- EXISTING 5' MINOR CONTOUR
  - EXISTING 25' MAJOR CONTOUR
  - EXISTING OVERHEAD ELECTRIC
  - PROPOSED LEACHATE RECIRCULATION PIPING
  - PROPOSED FORCEMAIN
  - EXISTING ROADWAY
  - EDGE OF PROPOSED PAD
  - DISPOSAL BOUNDARY (APPROXIMATE)

- NOTES:
- EXISTING TOPOGRAPHY BASED ON AERIAL SURVEY PERFORMED BY M.J. HARDEN ASSOCIATES, INC ON AUGUST 17, 2010. UPDATES TO THE TOPOGRAPHY AND SITE FEATURES FOR AREA 1-2, AREA 1-3, AND SOUTH CLASS 4 DISPOSAL UNITS SURVEYED BY CONSOLIDATED LAND SERVICES, INC BETWEEN DECEMBER 2014 AND JANUARY 2015.
  - SURVEY DATA BASED ON THE NAD83 ARKANSAS STATE PLANE NORTH COORDINATE SYSTEM.
  - INSTALL LEACHATE INJECTION PORTS A MINIMUM 50 FEET FROM ALL GAS EXTRACTION WELLS.
  - CONTRACTOR SHALL WELD A LENGTH OF ABOVEGROUND PIPING LONG ENOUGH TO REACH THE FURTHEST INJECTION PORT PLUS 50 ADDITIONAL FEET. ABOVEGROUND PIPING SHALL BE STORED IN AN ONSITE BUILDING FOR FUTURE USE.



TYPICAL LEACHATE INJECTION PORT DETAIL  
NOT TO SCALE

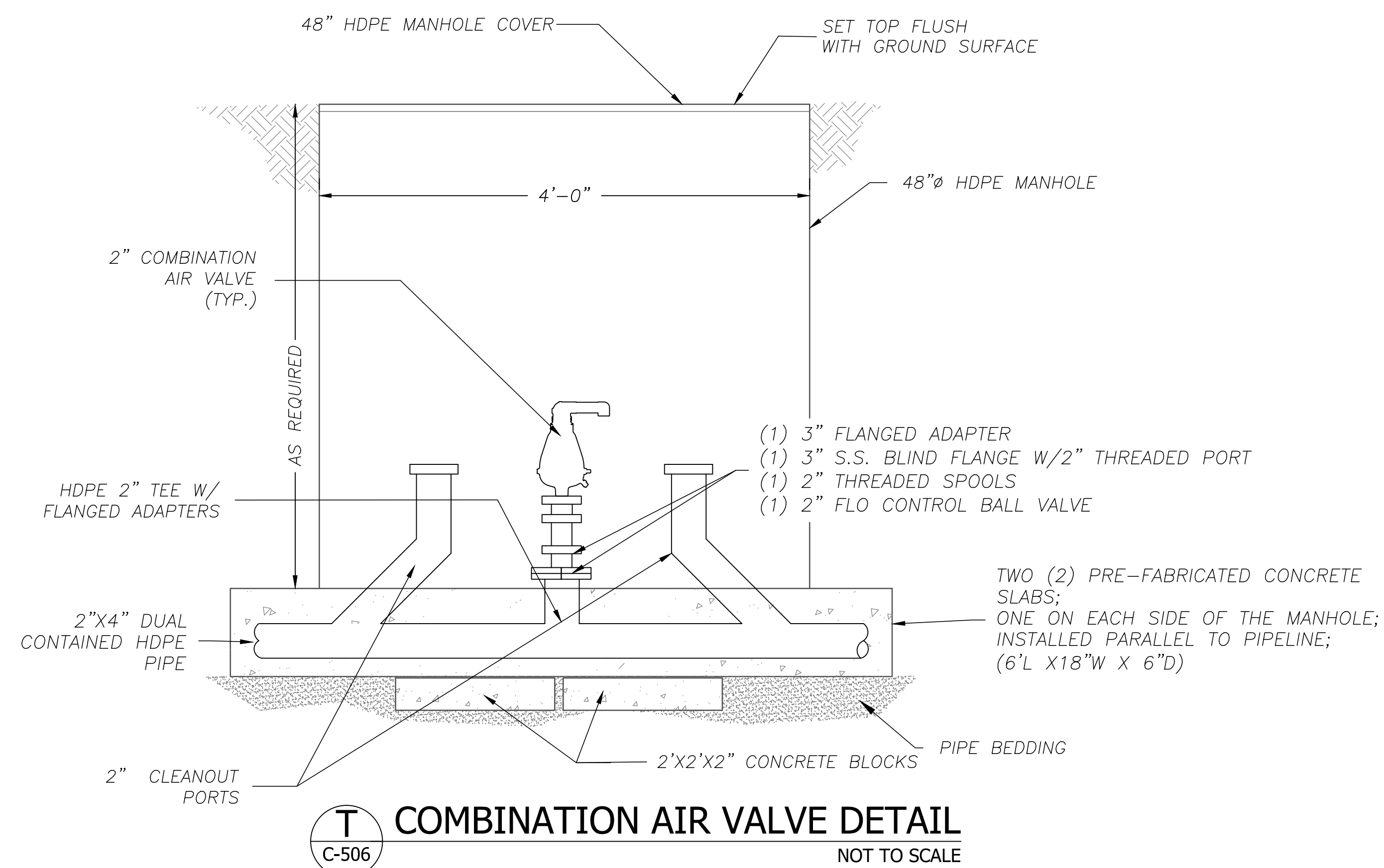
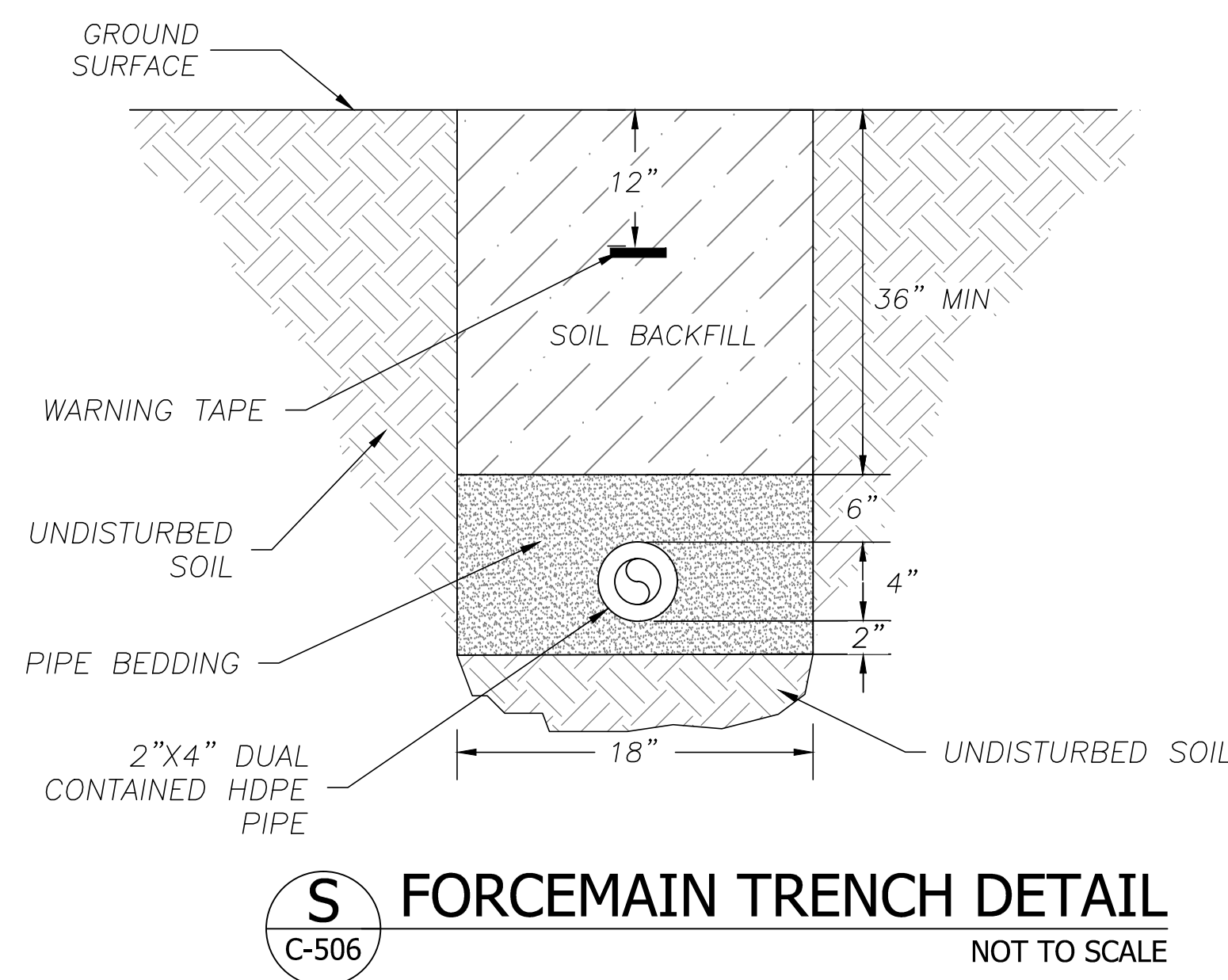


75% SUBMITTAL

SHEET TITLE		PROJECT TITLE		CLIENT		CADD FILE:		DATE:		DRAWING NO.	
LEACHATE RECIRCULATION PLAN		CLOSURE OF INACTIVE NABORS LANDFILL		SCS AQUATERRA 7311 W. 130th St. Ste. 100 Overland Park, Kansas 66213 PH. (913) 681-0030 FAX. (913) 681-0012		DRAWING.DWG		7/9/2015		C-506	
CK BY		DESCRIPTION		REV.	DATE	DSK. BY	DRS	CHK. BY	DMB	PROJ. MGR	FEC
				1	7/2015		DRS		DMB		75% SUBMITTAL
				0	5/2015		DRS		DMB		50% SUBMITTAL



# 75% SUBMITTAL



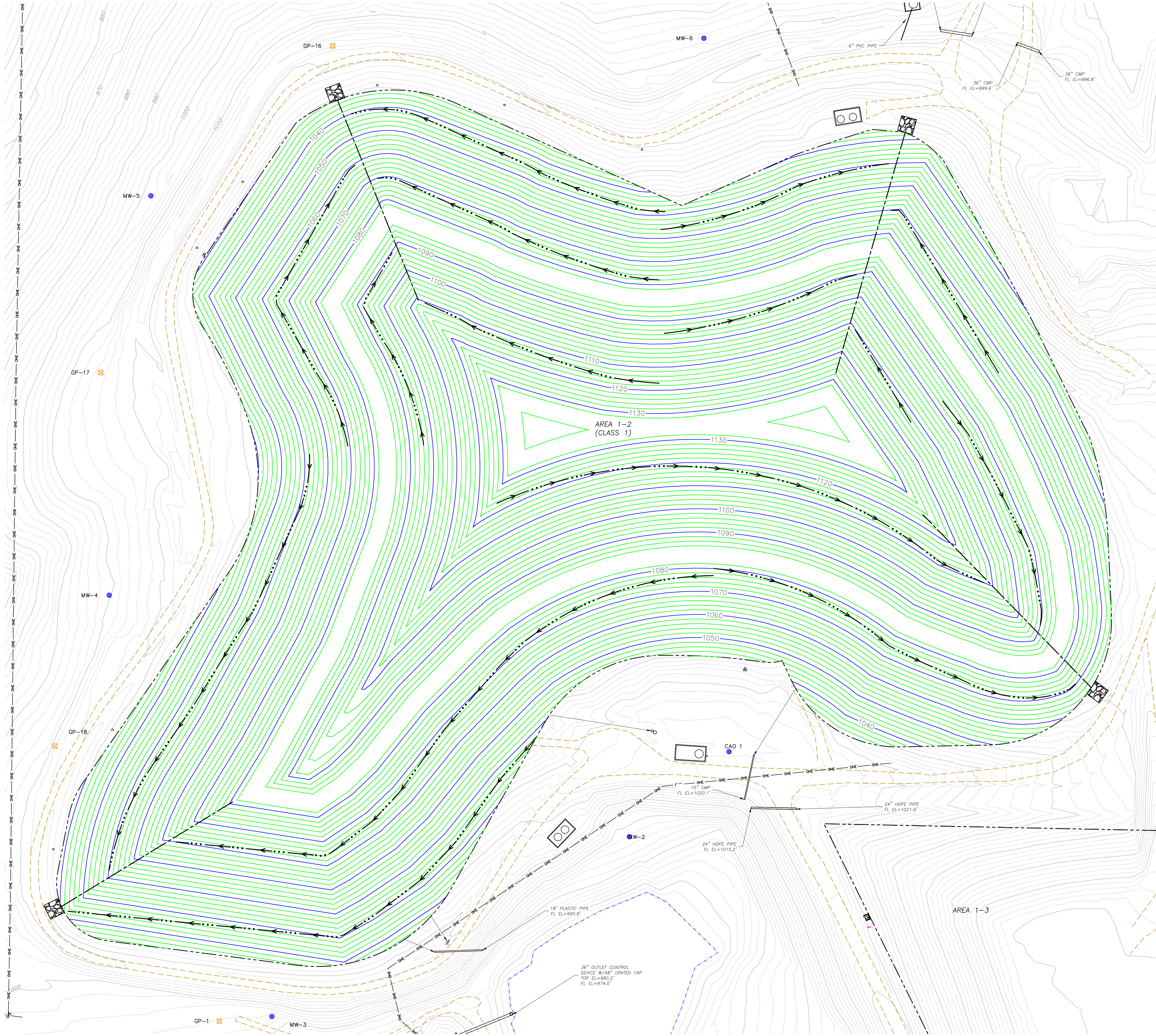
<div>SCS AQUATERRA</div> <div>7311 W. 130th St. Ste. 100</div> <div>Overland Park, Kansas 66213</div> <div>PH. (913) 681-0030 FAX. (913) 681-0012</div>	CLIENT		<div>ADEQ</div> <div>A R K A N S A S</div> <div>Department of Environmental Quality</div>		SHEET TITLE		REV.	DATE	DESCRIPTION	CK. BY	
	CADD FILE: DRAWING.CWG				LEACHATE DISPOSAL SYSTEM DETAILS						
	DATE: 7/9/2015										
	DRAWING NO. C-507										
PROJECT NO. 14218.01		DWN. BY: DRS	G/A RW BY: DMB	PROJECT TITLE							
TSA BY: CHG		CHK BY: DMB	PROJ. MGR: FEC	CLOSURE OF INACTIVE NABORS LANDFILL		1		7/2015	75% SUBMITTAL	FEC	
DRS						0		15/2015	50% SUBMITTAL	FEC	



- NOTES:**
1. EXISTING TOPOGRAPHY BASED ON AERIAL SURVEY PERFORMED BY M.J. HARDEN ASSOCIATES, INC ON AUGUST 17, 2010. UPDATES TO THE TOPOGRAPHY AND SITE FEATURES FOR AREA 1-2, AREA 1-3, AND SOUTH CLASS 4 DISPOSAL UNITS SURVEYED BY CONSOLIDATED LAND SERVICES, INC BETWEEN DECEMBER 2014 AND JANUARY 2015.
  2. SURVEY DATA BASED ON THE NAD83 ARKANSAS STATE PLANE NORTH COORDINATE SYSTEM.
  3. PROPOSED FINAL COVER CONTOURS BASED ON SHEET 5 OF 13 AS SHOWN IN ADEQ DOCUMENT #28209 PREPARED BY NORTHSTAR ENGINEERING CONSULTANT, INC. ON MAY 17, 2005.
  4. WASTE RELOCATION TO BE PERFORMED PRIOR TO FINAL COVER INSTALLATION OF THE AREA 1-2 DISPOSAL UNIT.

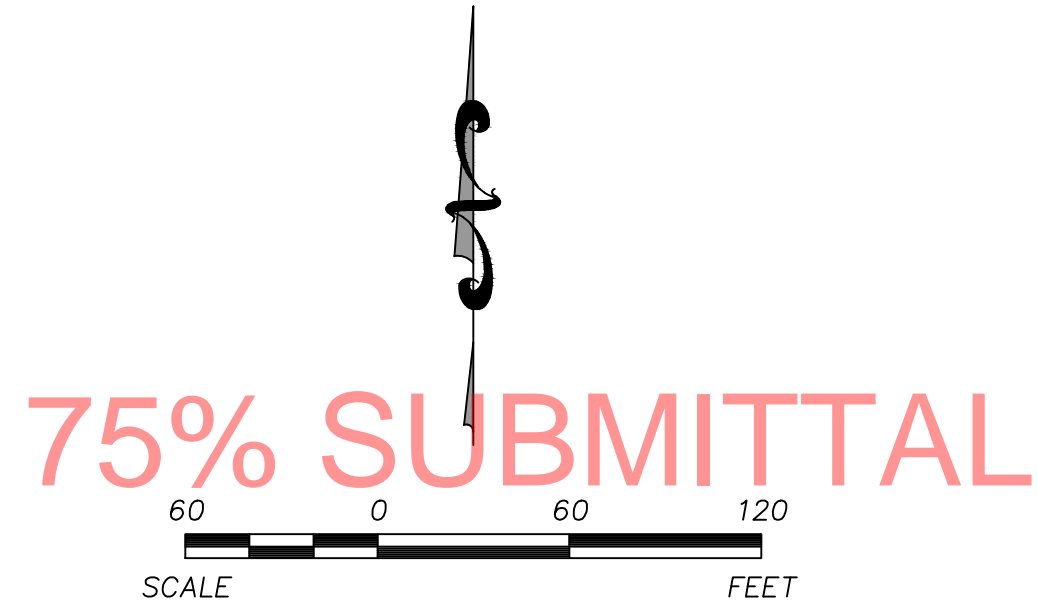
<div>SCS AQUATERRA</div> <div>7311 W. 130th St. Ste. 100 Overland Park, Kansas 66213 PH. (913) 681-0030 FAX. (913) 681-0012</div>	CLIENT		SHEET TITLE		CKY. BY
	A R K A N S A S Department of Environmental Quality		AREA 1-2 FINAL GRADING PLAN		DESCRIPTION
CADD FILE: C-600 - AREA 1-2 FINAL COVER GRADING PLANING	DWG. BY: DMB PROJ. NO: 14218.01 DESK. BY:	S/A RW BY: DMB PROJ. MGR:	PROJECT TITLE		REV. DATE
DATE: 7/9/15	DMB CHK. BY: FEC DESK. BY:	FEC	CLOSURE OF INACTIVE NABORS LANDFILL		1 7/20/15 0 5/20/15
DRAWING NO. C-600	75% SUBMITTAL 50% SUBMITTAL FEC FEC				





- LEGEND:
- EXISTING 2' MINOR CONTOUR
  - EXISTING 10' MAJOR CONTOUR
  - PROPOSED 2' TOP OF FINAL COVER CONTOUR
  - PROPOSED 10' TOP OF FINAL COVER CONTOUR
  - PROPOSED HDPE CORRUGATED PIPE DOWN CHUTE
  - PROPOSED TACK-ON TERRACE
  - EXISTING ROAD
  - EXISTING OVERHEAD ELECTRIC
  - DISPOSAL BOUNDARY (APPROXIMATE)
  - EXISTING BODY OF WATER
  - EXISTING MONITORING WELL
  - EXISTING GAS PROBE
  - EXISTING CONTROL POINT

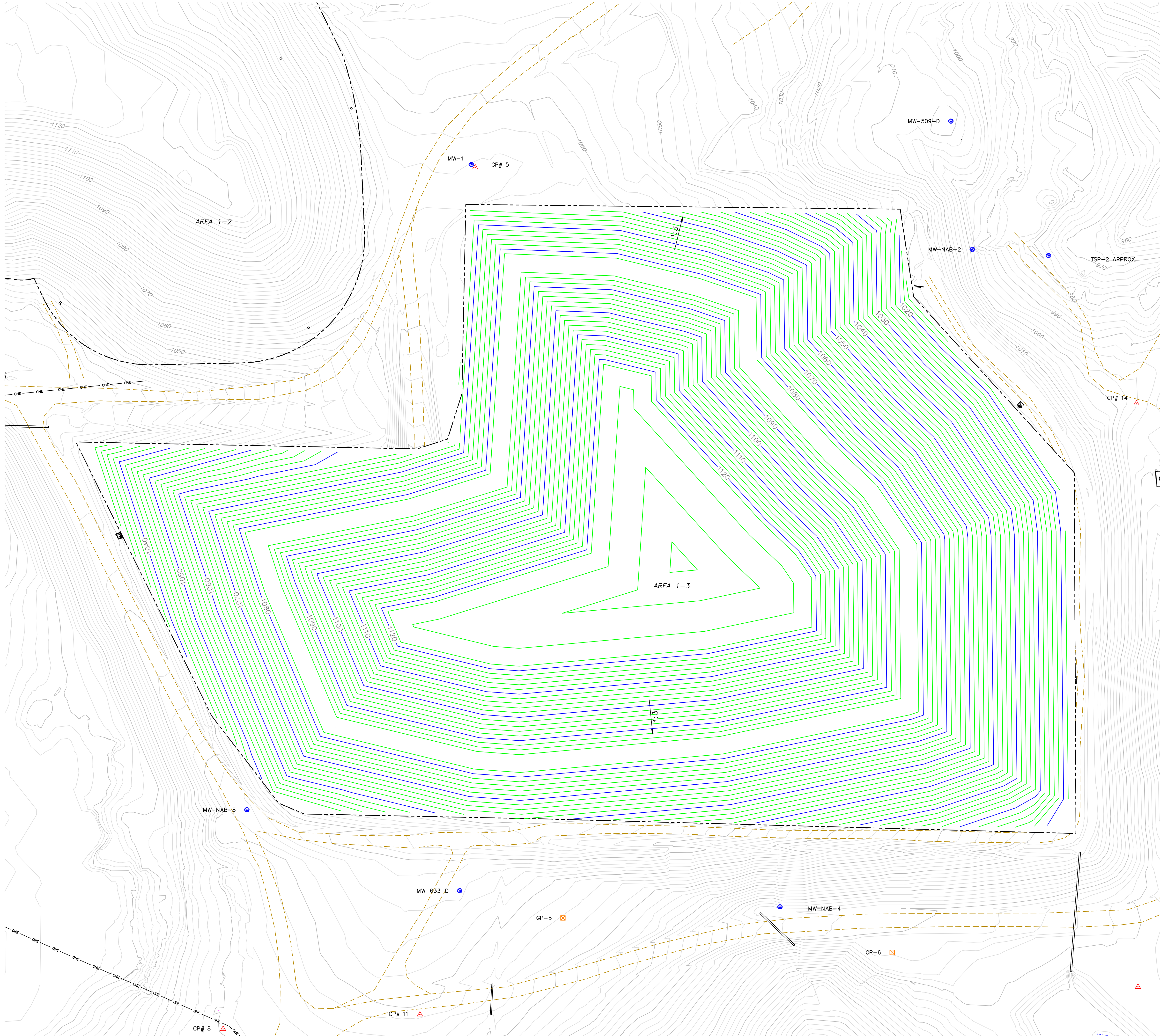
- NOTES:
- EXISTING TOPOGRAPHY BASED ON AERIAL SURVEY PERFORMED BY M.J. HARDEN ASSOCIATES, INC ON AUGUST 17, 2010. UPDATES TO THE TOPOGRAPHY AND SITE FEATURES FOR AREA 1-2, AREA 1-3, AND SOUTH CLASS 4 DISPOSAL UNITS SURVEYED BY CONSOLIDATED LAND SERVICES, INC BETWEEN DECEMBER 2014 AND JANUARY 2015.
  - SURVEY DATA BASED ON THE NAD83 ARKANSAS STATE PLANE NORTH COORDINATE SYSTEM.
  - PROPOSED FINAL COVER CONTOURS BASED ON SHEET 5 OF 13 AS SHOWN IN ADEQ DOCUMENT #28209 PREPARED BY NORTHSTAR ENGINEERING CONSULTANT, INC. ON MAY 17, 2005.
  - WASTE RELOCATION TO BE PERFORMED PRIOR TO FINAL COVER INSTALLATION OF THE AREA 1-2 DISPOSAL UNIT.
  - TACK-ON TERRACES TO BE INSTALLED AT A 1% SLOPE TOWARDS THE DESIGNATED CORRUGATED HDPE DOWN CHUTE.
  - ENERGY DISSIPATERS TO BE INSTALLED AT OUTLET OF DOWN CHUTES BEFORE DISCHARGING INTO PERIMETER STORMWATER CHANNEL.



CLIENT	SCS AQUATERRA 7311 W. 130th St. Ste. 100 Overland Park, Kansas 66213 PH. (913) 681-0030 FAX. (913) 681-0012				CADD FILE: C-601 - AREA 1-2 STORMWATER CONTROL PLAN.DWG		DATE: 7/10/15	DRAWING NO. C-601	SHEET TITLE AREA 1-2 STORMWATER CONTROL PLAN	REV.	DATE	DESCRIPTION	CK BY
	PROJ. NO.: 4218.01	DWN. BY: DMB	G/A R/W BY: WJB	TSN. BY:	CHK. BY: FEC	PROG. MARK: FEC							
A R K A N S A S Department of Environmental Quality									PROJECT TITLE CLOSURE OF INACTIVE NABORS LANDFILL	1	7/2015	75% SUBMITTAL	FEC
										0	5/2015	50% SUBMITTAL	FEC



\\KAN-FS01\Clients\ADEQ\Projects\27214218.01 - Closure Contract - 2014\Task 2 - Design and Procurement\Final Cover Design\Area 1-3 C-602 - Area 1-3 Final Cover Grading Plan.dwg Jul 10, 2015 - 3:29pm Layout Name: Area 1-3 Final Grading Plan By: 3726dmb



- LEGEND:**
- EXISTING 2' MINOR CONTOUR
  - EXISTING 10' MAJOR CONTOUR
  - PROPOSED 2' TOP OF FINAL COVER CONTOUR
  - PROPOSED 10' TOP OF FINAL COVER CONTOUR
  - EXISTING ROAD
  - EXISTING OVERHEAD ELECTRIC
  - DISPOSAL BOUNDARY (APPROXIMATE)
  - EXISTING BODY OF WATER
  - EXISTING MONITORING WELL
  - EXISTING GAS PROBE
  - EXISTING CONTROL POINT

- NOTES:**
- EXISTING TOPOGRAPHY BASED ON AERIAL SURVEY PERFORMED BY M.J. HARDEN ASSOCIATES, INC ON AUGUST 17, 2010. UPDATES TO THE TOPOGRAPHY AND SITE FEATURES FOR AREA 1-2, AREA 1-3, AND SOUTH CLASS 4 DISPOSAL UNITS SURVEYED BY CONSOLIDATED LAND SERVICES, INC BETWEEN DECEMBER 2014 AND JANUARY 2015.
  - SURVEY DATA BASED ON THE NAD83 ARKANSAS STATE PLANE NORTH COORDINATE SYSTEM.
  - PROPOSED FINAL COVER CONTOURS REVISED BY SCS AQUATERRA IN JULY 2015.
  - WASTE RELOCATION TO BE PERFORMED PRIOR TO FINAL COVER INSTALLATION OF THE AREA 1-3 DISPOSAL UNIT.

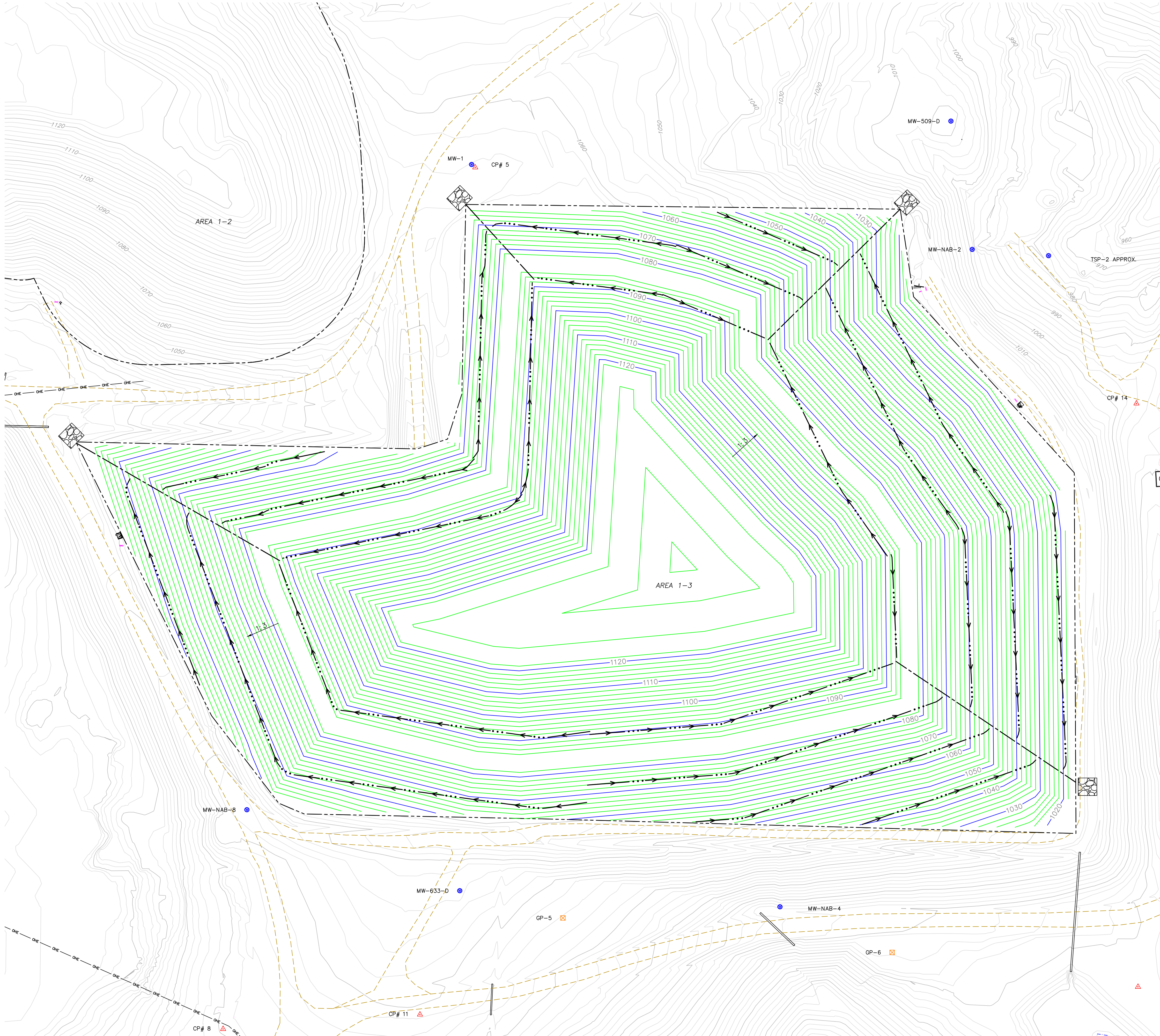
**75% SUBMITTAL**

60 0 60 120  
SCALE FEET

CLIENT		SCS AQUATERRA		CADD FILE:		CK BY	
7311 W. 130th St. Ste. 100 Overland Park, Kansas 66213 PH. (913) 681-0030 FAX. (913) 681-0012		7311 W. 130th St. Ste. 100 Overland Park, Kansas 66213 PH. (913) 681-0030 FAX. (913) 681-0012		7311 W. 130th St. Ste. 100 Overland Park, Kansas 66213 PH. (913) 681-0030 FAX. (913) 681-0012		7311 W. 130th St. Ste. 100 Overland Park, Kansas 66213 PH. (913) 681-0030 FAX. (913) 681-0012	
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DRAWING NO.		C-602		DRAWING NO.		C-602	
PROJECT NO.		4218.01		PROJECT NO.		4218.01	
DWN. BY:		DMB		DWN. BY:		DMB	
CHK. BY:		FEC		CHK. BY:		FEC	
PRG. MGR:		FEC		PRG. MGR:		FEC	
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\\KAN-FS01\Clients\ADEQ\Projects\27214218.01 - Closure Contract - 2014\Task 2 - Design and Procurement\Final Cover Design\Area 1-3 C-603 - Area 1-3 Stormwater Control Plan.dwg Jul 10, 2015 - 4:30pm Layout Name: Area 1-3 Stormwater Control Plan By: 3726dmb



- LEGEND:**
- EXISTING 2' MINOR CONTOUR
  - EXISTING 10' MAJOR CONTOUR
  - PROPOSED 2' TOP OF FINAL COVER CONTOUR
  - PROPOSED 10' TOP OF FINAL COVER CONTOUR
  - PROPOSED HDPE CORRUGATED PIPE DOWN CHUTE
  - PROPOSED TACK-ON TERRACE
  - EXISTING ROAD
  - EXISTING OVERHEAD ELECTRIC
  - DISPOSAL BOUNDARY (APPROXIMATE)
  - EXISTING BODY OF WATER
  - EXISTING MONITORING WELL
  - EXISTING GAS PROBE
  - EXISTING CONTROL POINT

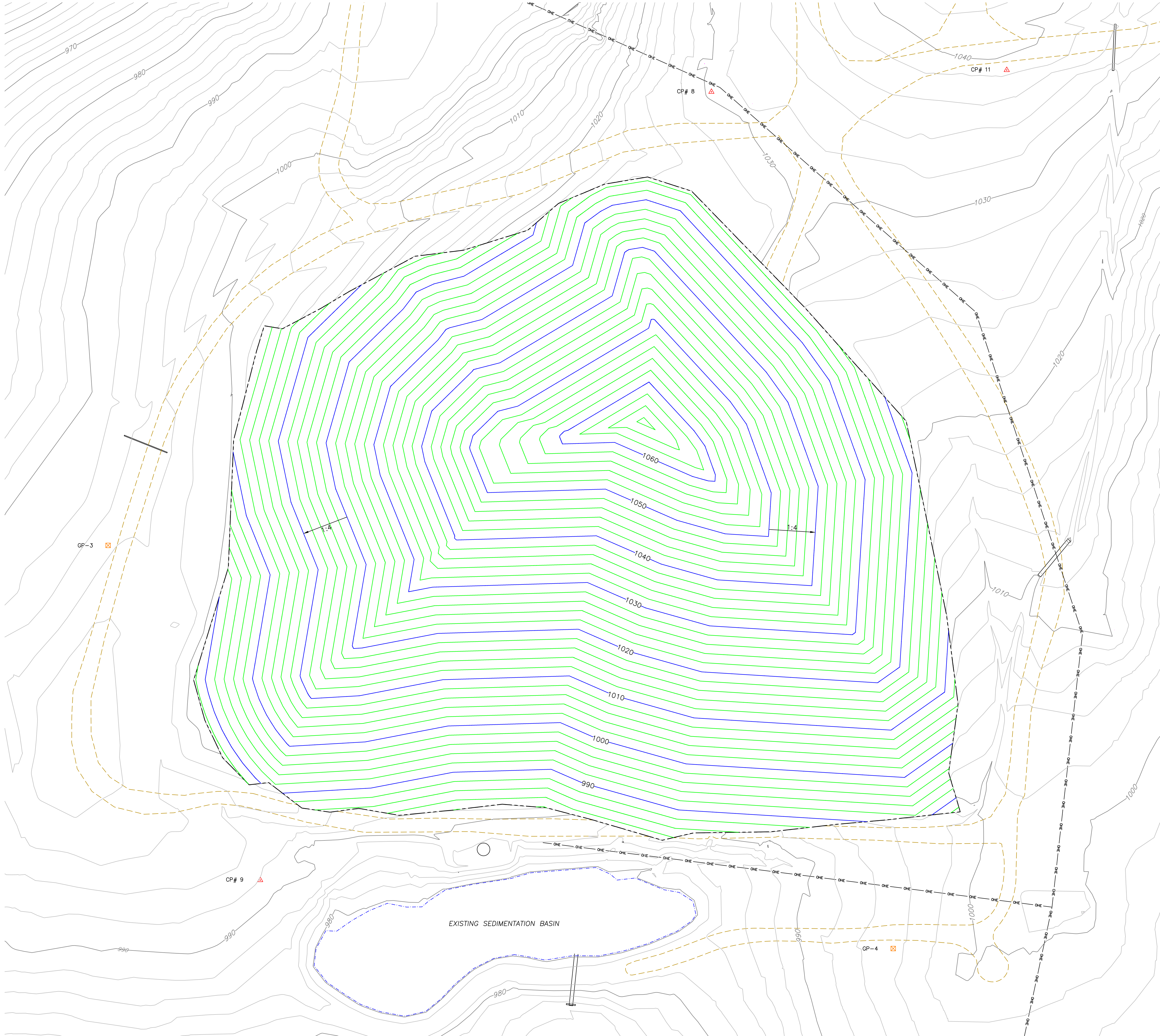
- NOTES:**
- EXISTING TOPOGRAPHY BASED ON AERIAL SURVEY PERFORMED BY M.J. HARDEN ASSOCIATES, INC ON AUGUST 17, 2010. UPDATES TO THE TOPOGRAPHY AND SITE FEATURES FOR AREA 1-2, AREA 1-3, AND SOUTH CLASS 4 DISPOSAL UNITS SURVEYED BY CONSOLIDATED LAND SERVICES, INC BETWEEN DECEMBER 2014 AND JANUARY 2015.
  - SURVEY DATA BASED ON THE NAD83 ARKANSAS STATE PLANE NORTH COORDINATE SYSTEM.
  - PROPOSED FINAL COVER CONTOURS REVISED BY SCS AQUATERRA IN JULY 2015.
  - TACK-ON TERRACES TO BE INSTALLED AT A 1% SLOPE TOWARDS THE DESIGNATED CORRUGATED HDPE DOWN CHUTE.
  - ENERGY DISSIPATERS TO BE INSTALLED AT OUTLET OF DOWN CHUTES BEFORE DISCHARGING INTO PERIMETER STORMWATER CHANNEL.

**75% SUBMITTAL**

60 0 60 120  
SCALE FEET

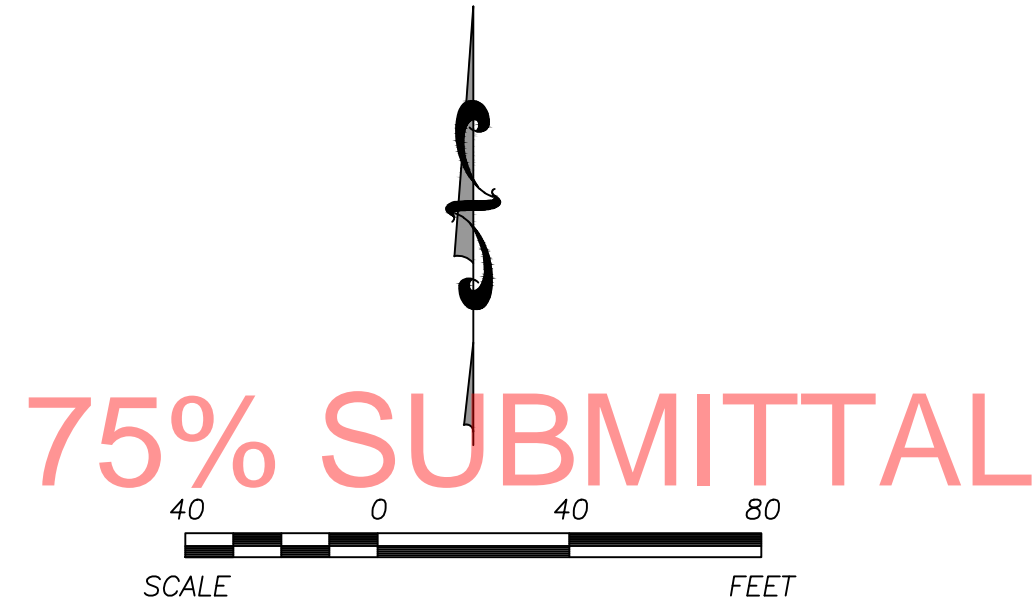
CLIENT										SHEET TITLE										REV.										DATE										DESCRIPTION										CK BY																																							
SCS AQUATERRA 7311 W. 130th St. Ste. 100 Overland Park, Kansas 66213 PH. (913) 681-0030 FAX. (913) 681-0012										AREA 1-3 STORMWATER CONTROL PLAN																																																																															
										PROJECT TITLE										CLOSURE OF INACTIVE NABORS LANDFILL																																																																					
CADD FILE: C-603 - AREA 1-3 STORMWATER CONTROL PLAN.DWG										7/10/15																																																																															
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										Department of Environmental Quality																																																																															
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										TSN. BY: DMB										FEC										FEC										FEC																																																	





- LEGEND:**
- EXISTING 2' MINOR CONTOUR
  - EXISTING 10' MAJOR CONTOUR
  - PROPOSED 2' TOP OF FINAL COVER CONTOUR
  - PROPOSED 10' TOP OF FINAL COVER CONTOUR
  - EXISTING ROAD
  - EXISTING OVERHEAD ELECTRIC
  - DISPOSAL BOUNDARY (APPROXIMATE)
  - EXISTING BODY OF WATER
  - MW-2
  - GP-2
  - CP# 8
  - EXISTING MONITORING WELL
  - EXISTING GAS PROBE
  - EXISTING CONTROL POINT

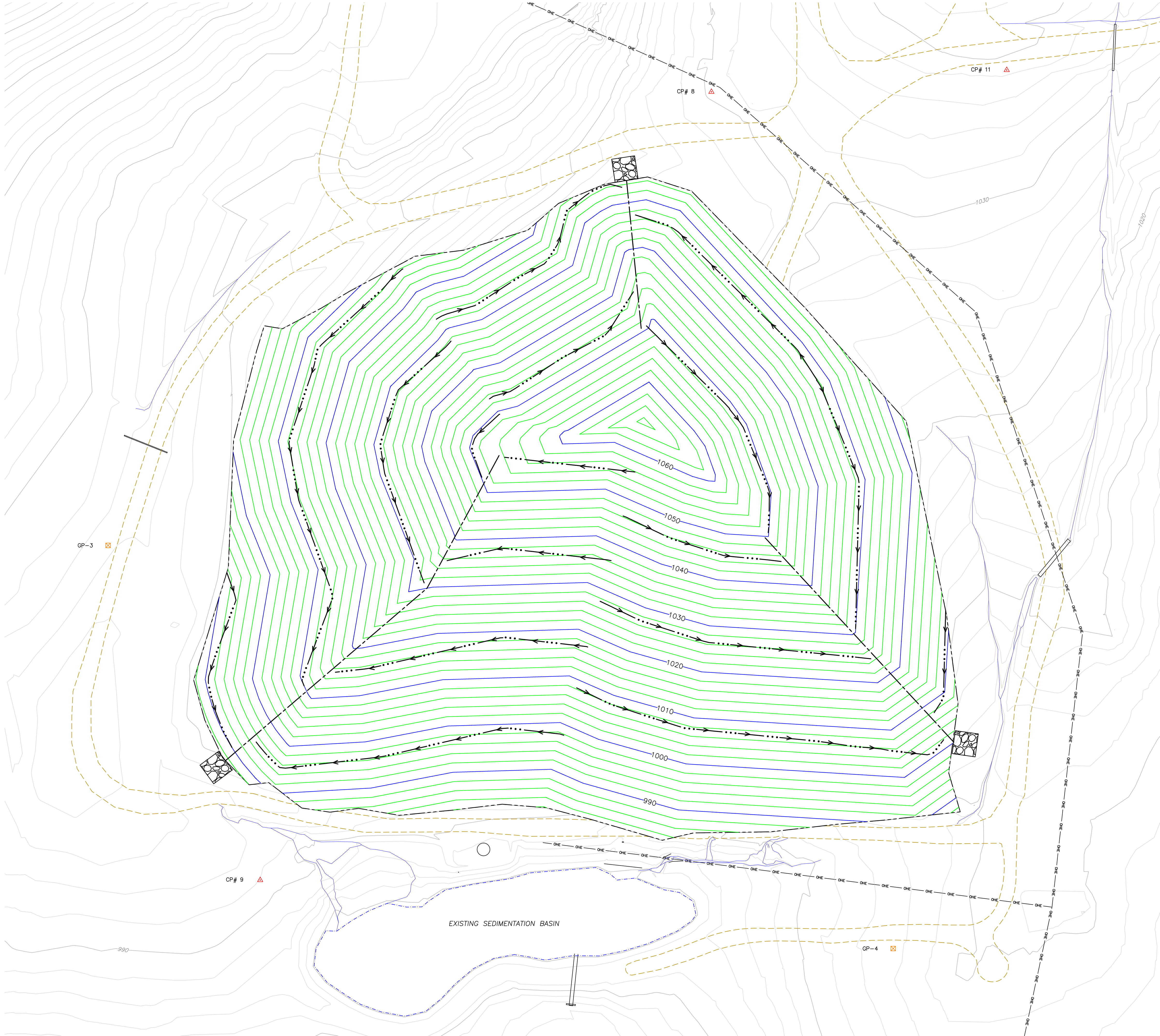
- NOTES:**
- EXISTING TOPOGRAPHY BASED ON AERIAL SURVEY PERFORMED BY M.J. HARDEN ASSOCIATES, INC ON AUGUST 17, 2010. UPDATES TO THE TOPOGRAPHY AND SITE FEATURES FOR AREA 1-2, AREA 1-3, AND SOUTH CLASS 4 DISPOSAL UNITS SURVEYED BY CONSOLIDATED LAND SERVICES, INC BETWEEN DECEMBER 2014 AND JANUARY 2015.
  - SURVEY DATA BASED ON THE NAD83 ARKANSAS STATE PLANE NORTH COORDINATE SYSTEM.
  - PROPOSED FINAL COVER CONTOURS BASED ON SHEET 1 OF 1 AS SHOWN IN ADEQ DOCUMENT #58185 PREPARED BY SCS ENGINEERS ON AUGUST 25, 2010.
  - WASTE RELOCATION TO BE PERFORMED PRIOR TO FINAL COVER INSTALLATION OF THE CLASS 4 DISPOSAL UNIT.



CLIENT		SCS AQUATERRA		CADD FILE:		DATE:		DRAWING NO.	
7311 W. 130th St. Ste. 100 Overland Park, Kansas 66213 PH. (913) 681-0030 FAX. (913) 681-0012		PROJ. NO. 4218.01		C-604 - CLASS 4 FINAL GRADING PLANDWG		7/9/15		C-604	
DWN. BY: DMB		G/A R/W BY: RWB		CHK. BY: FEC		REV.		DESCRIPTION	
DSGN. BY: DMB		PRCT. MGR: FEC		FEC		REV.		DATE	
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- LEGEND:**
- EXISTING 2' MINOR CONTOUR
  - EXISTING 10' MAJOR CONTOUR
  - PROPOSED 2' TOP OF FINAL COVER CONTOUR
  - PROPOSED 10' TOP OF FINAL COVER CONTOUR
  - PROPOSED HDPE CORRUGATED PIPE DOWN CHUTE
  - PROPOSED TACK-ON TERRACE
  - EXISTING ROAD
  - EXISTING OVERHEAD ELECTRIC
  - DISPOSAL BOUNDARY (APPROXIMATE)
  - EXISTING BODY OF WATER
  - EXISTING MONITORING WELL
  - EXISTING GAS PROBE
  - EXISTING CONTROL POINT

- NOTES:**
- EXISTING TOPOGRAPHY BASED ON AERIAL SURVEY PERFORMED BY M.J. HARDEN ASSOCIATES, INC ON AUGUST 17, 2010. UPDATES TO THE TOPOGRAPHY AND SITE FEATURES FOR AREA 1-2, AREA 1-3, AND SOUTH CLASS 4 DISPOSAL UNITS SURVEYED BY CONSOLIDATED LAND SERVICES, INC BETWEEN DECEMBER 2014 AND JANUARY 2015.
  - SURVEY DATA BASED ON THE NAD83 ARKANSAS STATE PLANE NORTH COORDINATE SYSTEM.
  - PROPOSED FINAL COVER CONTOURS BASED ON SHEET 1 OF 1 AS SHOWN IN ADEQ DOCUMENT #58185 PREPARED BY SCS ENGINEERS ON AUGUST 25, 2010.
  - TACK-ON TERRACES TO BE INSTALLED AT A 1% SLOPE TOWARDS THE DESIGNATED CORRUGATED HDPE DOWN CHUTE.
  - ENERGY DISSIPATERS TO BE INSTALLED AT OUTLET OF DOWN CHUTES BEFORE DISCHARGING INTO PERIMETER STORMWATER CHANNEL.

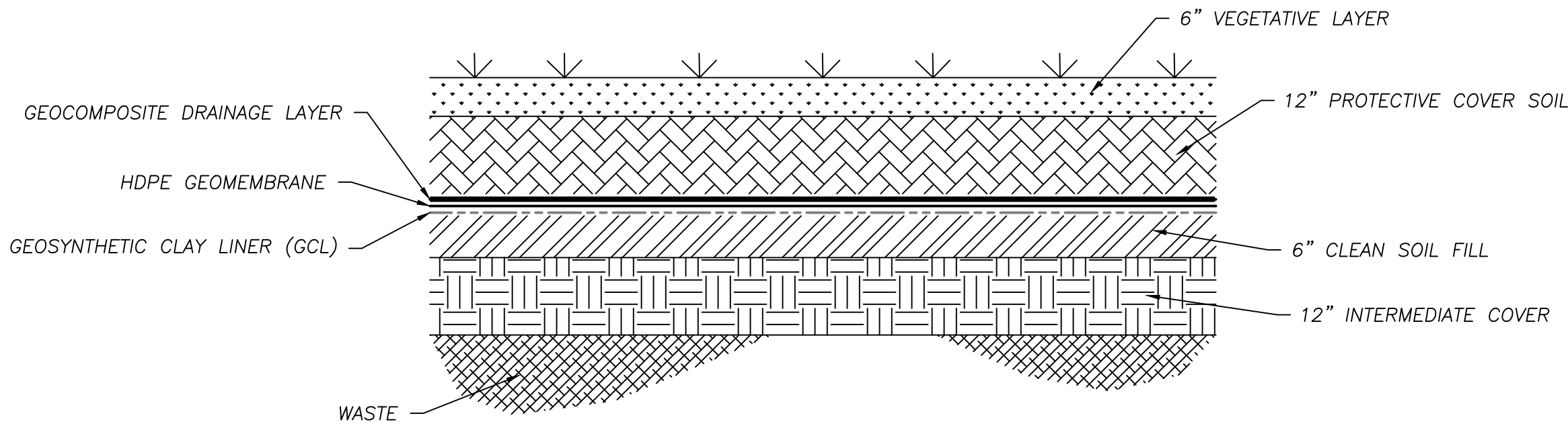
**75% SUBMITTAL**

SCALE 40 0 40 80 FEET

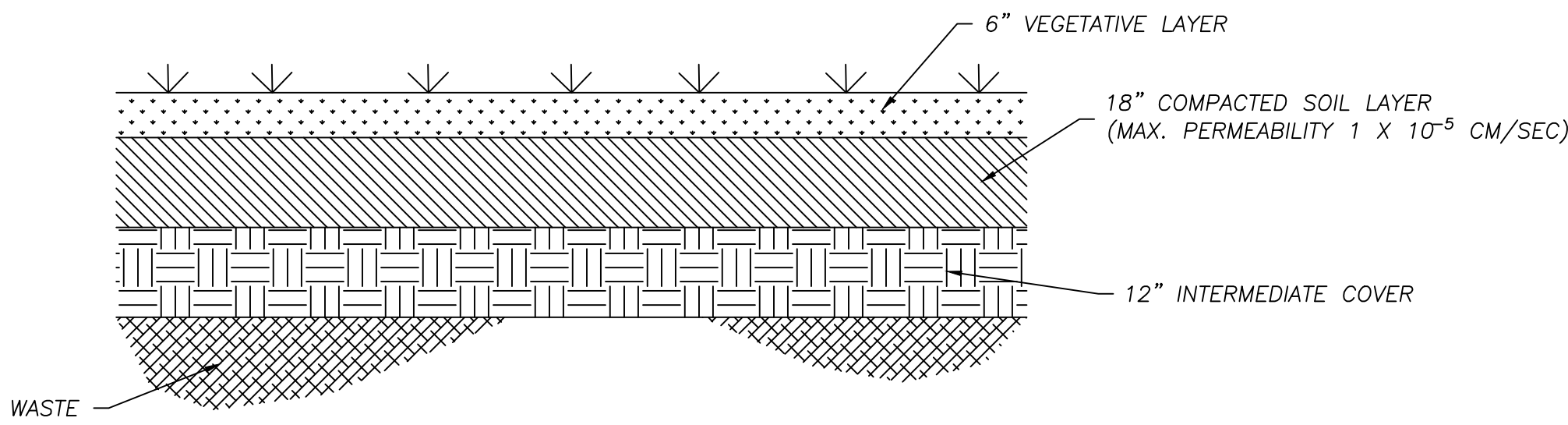
CLIENT				SHEET TITLE				CK BY
<div>SCS AQUATERRA</div> <div>7311 W. 130th St. Ste. 100</div> <div>Overland Park, Kansas 66213</div> <div>PH. (913) 681-0030 FAX. (913) 681-0012</div>				CLASS 4 STORMWATER CONTROL PLAN				DESCRIPTION
				PROJECT TITLE				REV. DATE
<div>A R K A N S A S</div> <div>Department of Environmental Quality</div>				CLOSURE OF INACTIVE NABORS LANDFILL				FEC
								0 5/2015 75% SUBMITTAL
								FEC
								50% SUBMITTAL



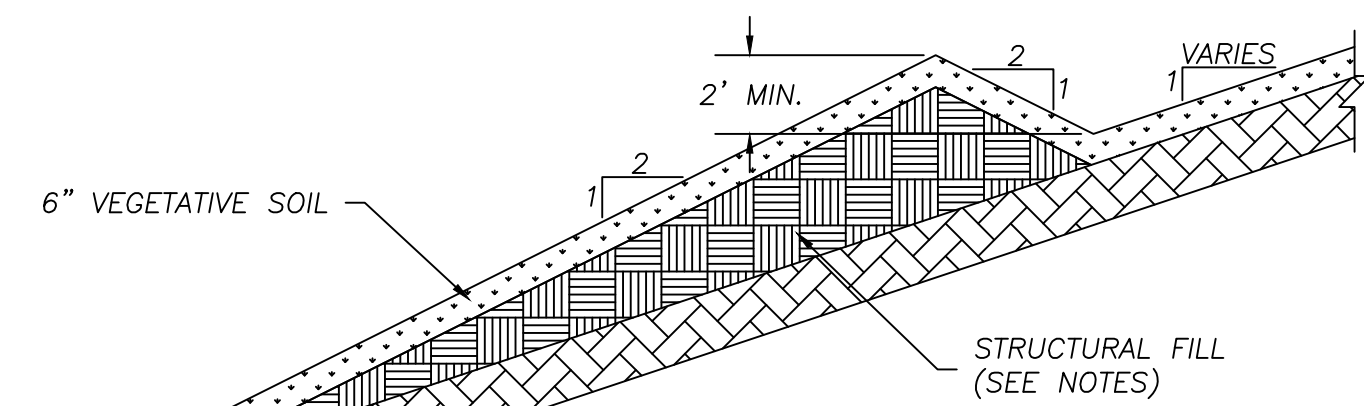
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CLASS 1 COMPOSITE FINAL COVER CROSS SECTION  
NOT TO SCALE

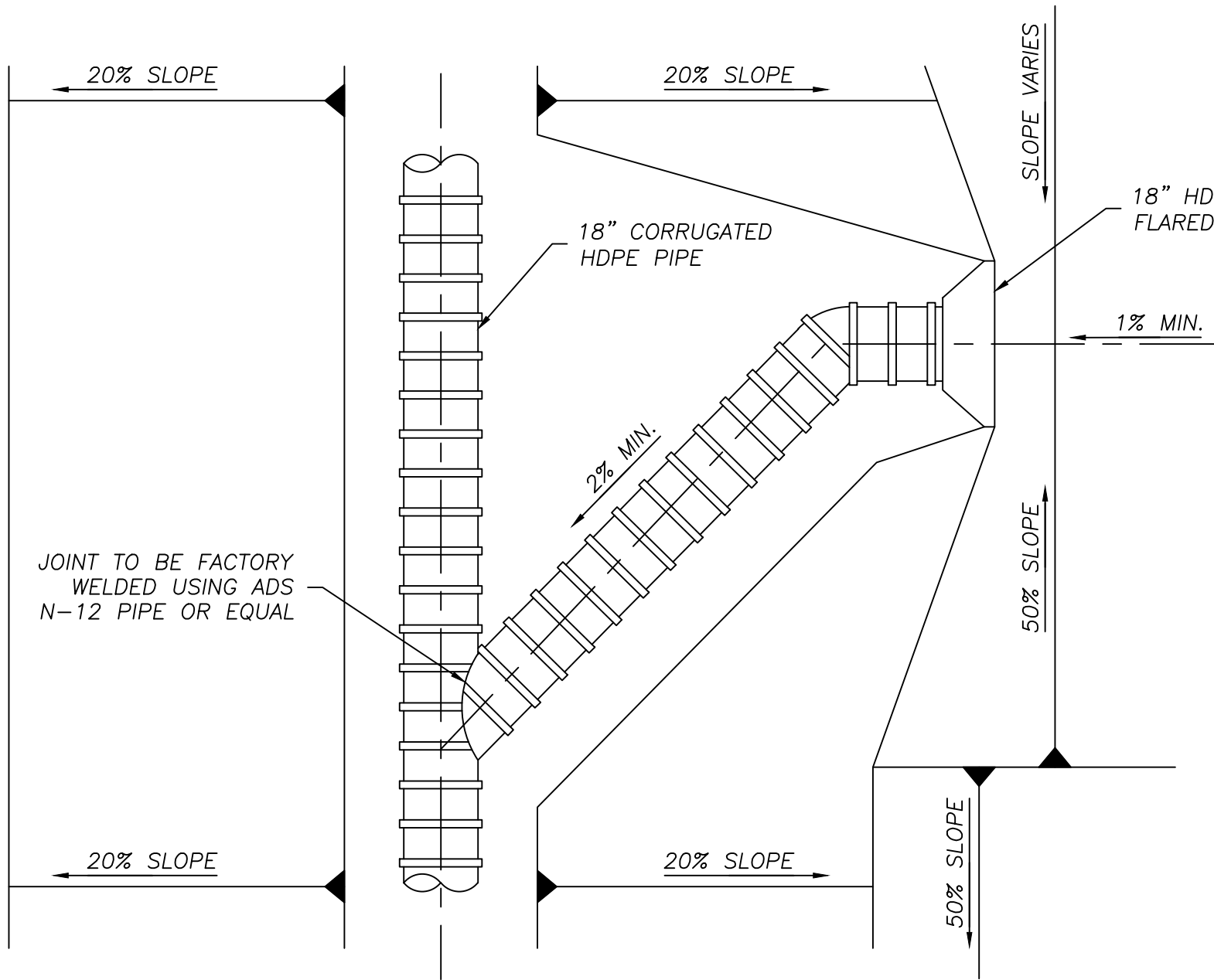


CLASS 4 COMPOSITE FINAL COVER CROSS SECTION  
NOT TO SCALE



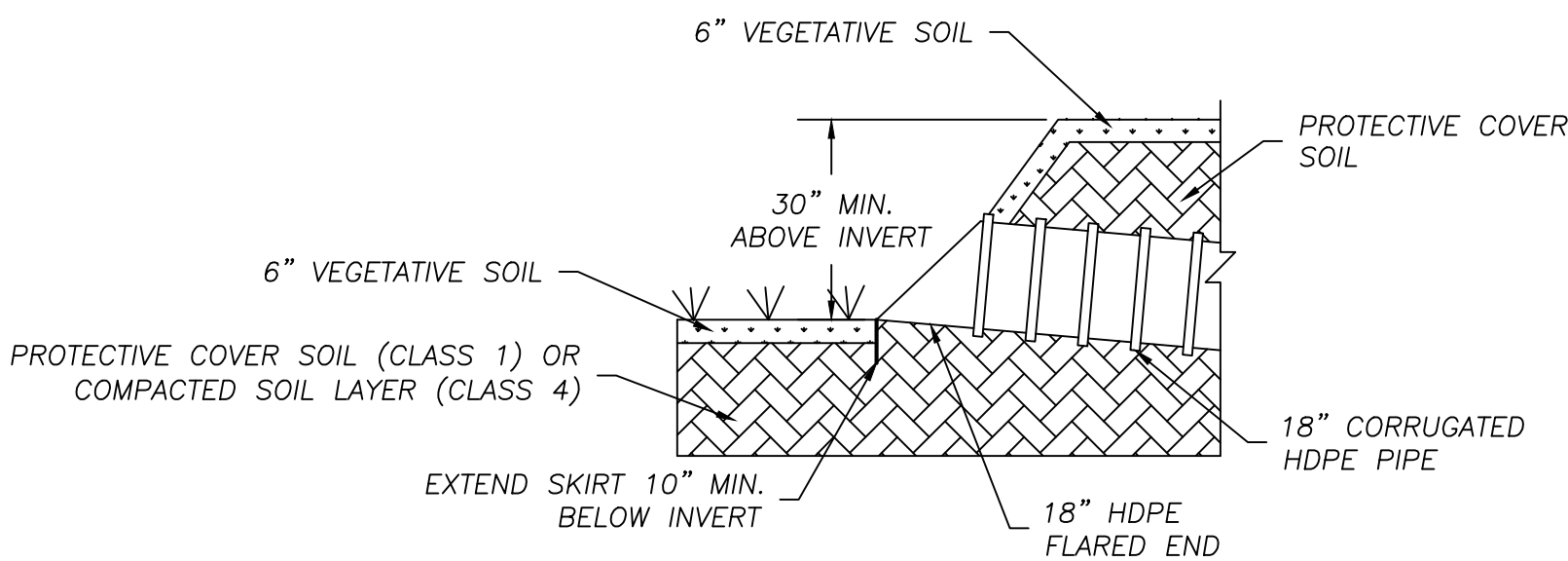
- NOTES:
- STRUCTURAL FILL FOR TACK-ON TERRACES TO BE COMPACTED TO AT LEAST 95% STANDARD PROCTOR.
  - TACK-ON TERRACES TO BE INSTALLED SIMULTANEOUS TO PROTECTIVE COVER SOIL (CLASS 1) OR COMPACTED SOIL LAYER (CLASS 4) INSTALLATION TO PREVENT SLIDING OR SEPARATION OF TERRACES.

TACK-ON TERRACE  
NOT TO SCALE



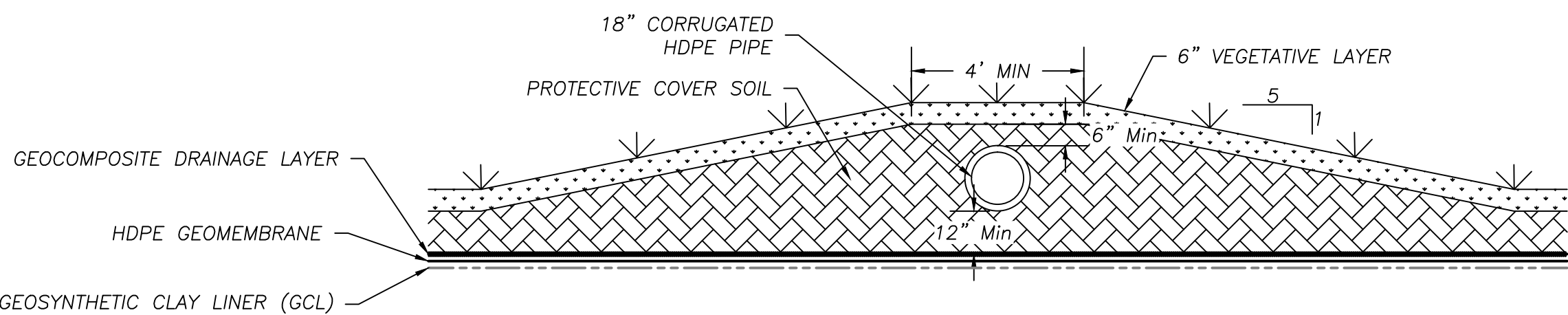
- NOTES:
- ALL PORTIONS OF DRAINAGE PIPE TO BE COVERED WITH A 6" MIN. PROTECTIVE COVER SOIL AND 6" MIN. VEGETATIVE SOIL.

CORRUGATED HDPE DOWN CHUTE DETAIL  
NOT TO SCALE

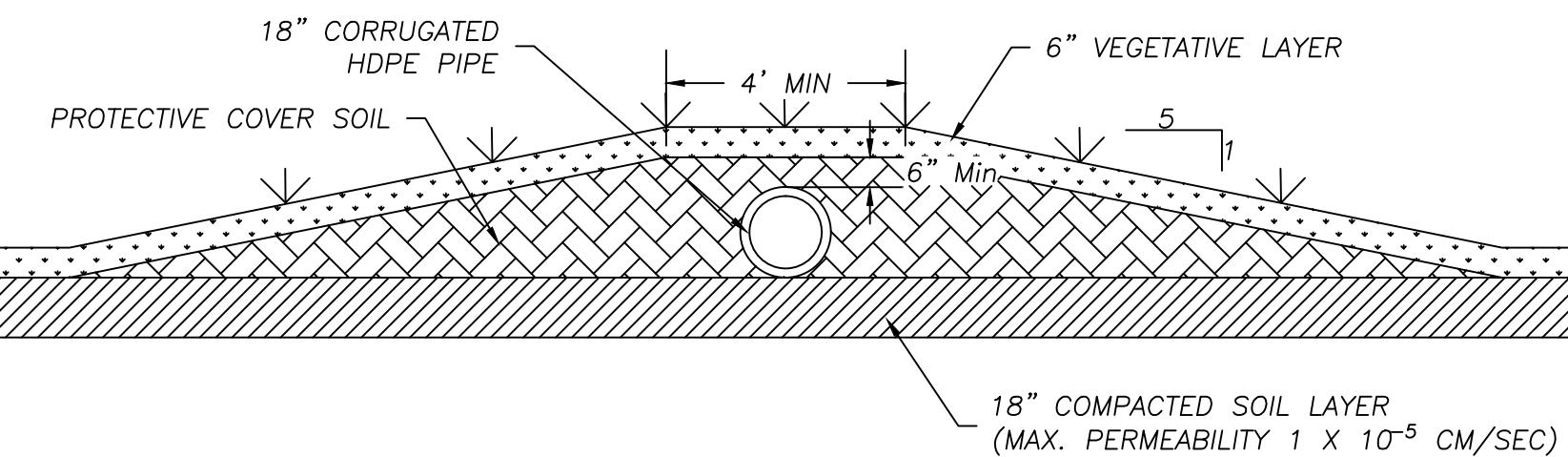


- NOTES:
- PROVIDE AND INSTALL RIP-RAP ABOVE AND AROUND ALL PIPE INLETS.
  - MAINTAIN MINIMUM THICKNESS OF PROTECTIVE COVER SOIL (CLASS 1) AND COMPACTED SOIL LAYER (CLASS 4) BELOW CORRUGATED HDPE PIPE DOWN CHUTES.

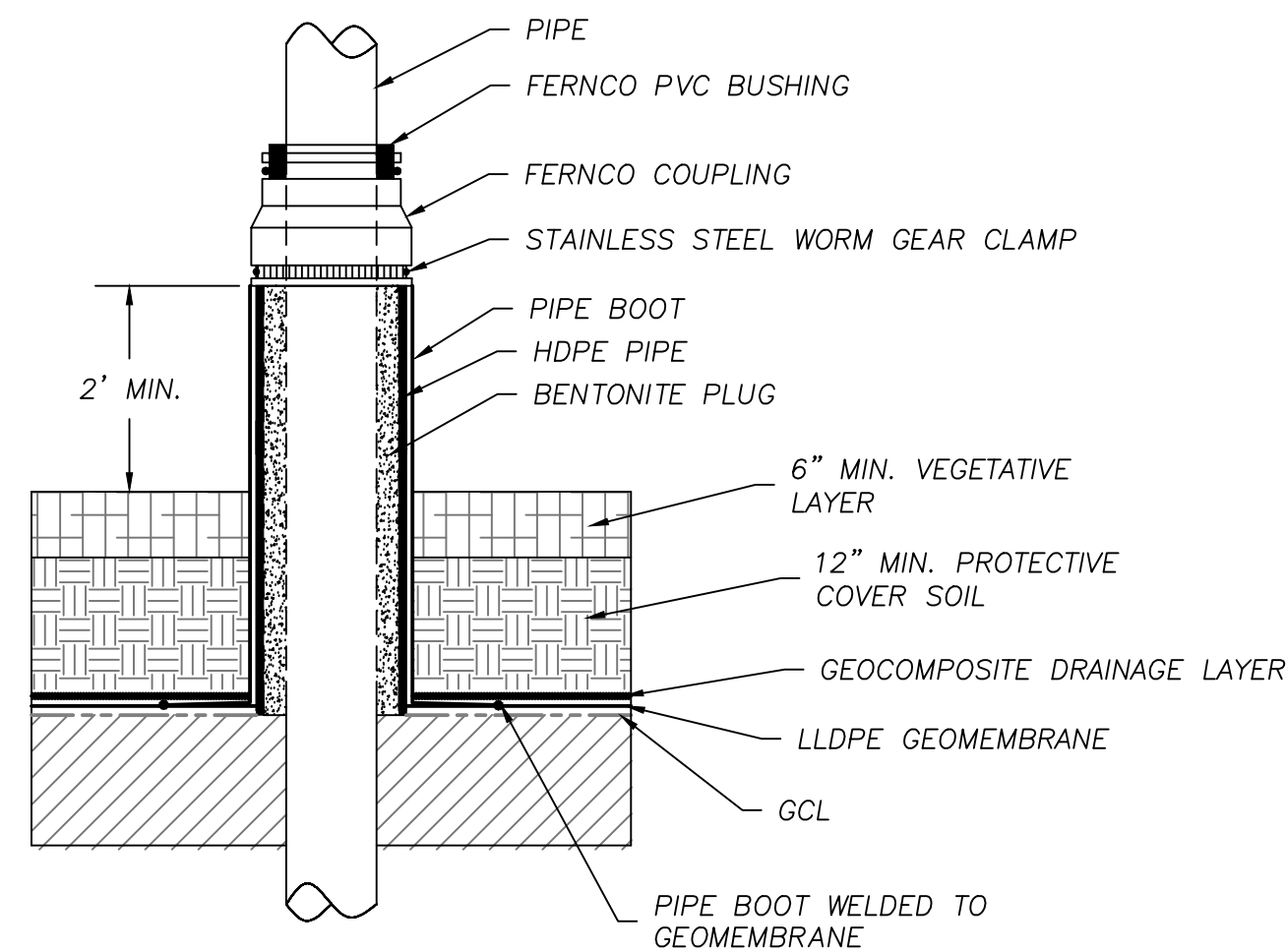
HDPE PIPE INLET  
NOT TO SCALE



CLASS 1 CORRUGATED HDPE DOWN CHUTE CROSS SECTION  
NOT TO SCALE



CLASS 4 CORRUGATED HDPE DOWN CHUTE CROSS SECTION  
NOT TO SCALE



PIPE BOOT  
NOT TO SCALE

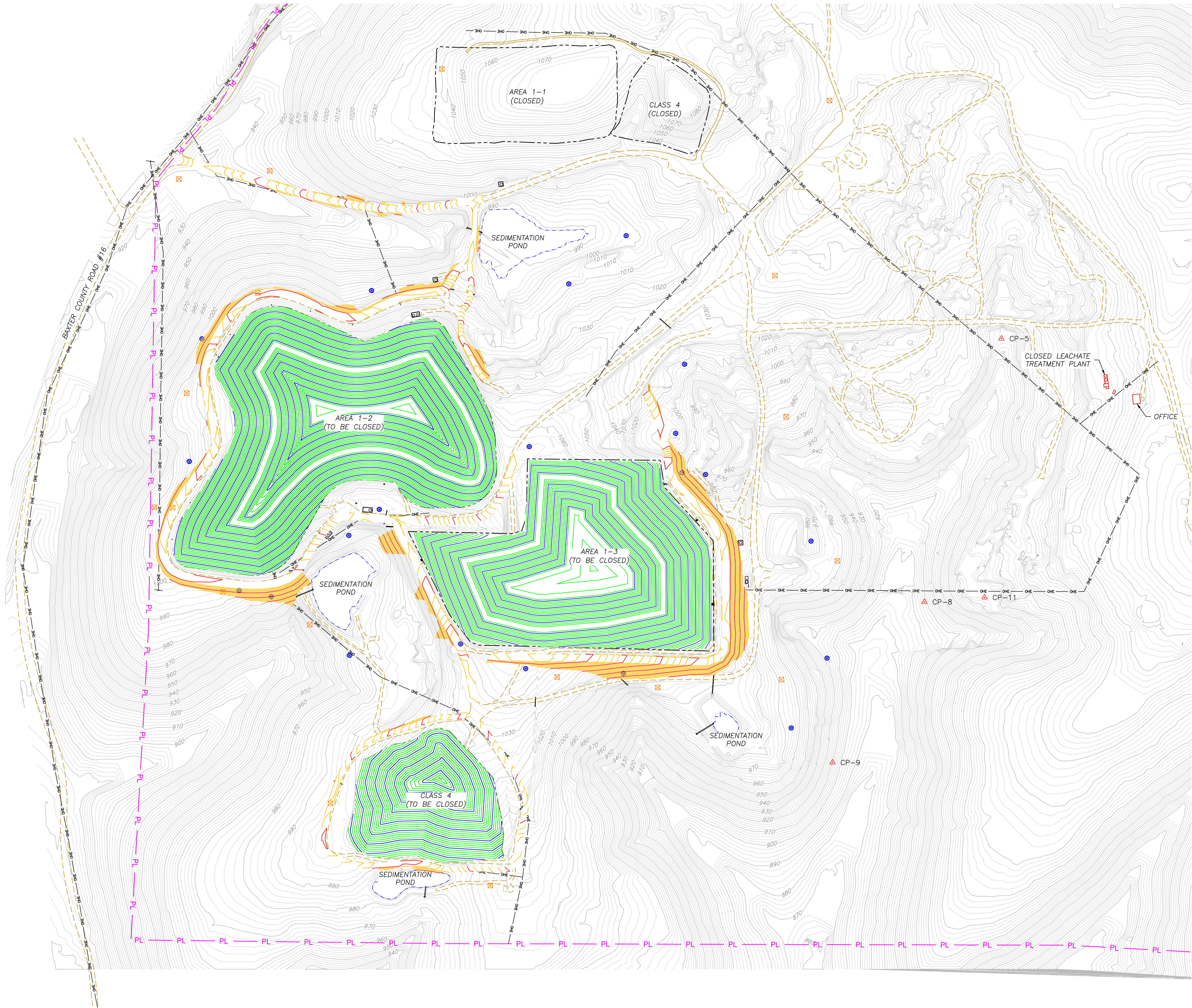
- NOTES:
- TO BE INSTALLED ON ALL EXISTING & PROPOSED PIPE PENETRATIONS WITHIN THE PERMITTED LIMITS OF WASTE/GEOMEMBRANE

- NOTES:
- 50 MIL LLDPE SUPER GRIPNET FLAP TO COVER ANCHOR TRENCH AND DRAIN INTO STORMWATER CHANNEL.
  - LENGTH OF GRANULAR MATERIAL VARIES BASED ON LOCATION OF STORMWATER CHANNEL.

TYPICAL PIPE BOOT DETAIL (CLASS 1)  
NOT TO SCALE

<div>CLIENT</div> <div>SCS AQUATERRA</div> <div>7311 W. 130th St. Ste. 100 Overland Park, Kansas 66213 PH. (913) 681-0030 FAX. (913) 681-0012</div>										<div>CADD FILE:</div> <div>C-606 - FINAL COVER DETAILS/ONG</div>									
<div>DATE:</div> <div>7/10/15</div>										<div>DRAWING NO.</div> <div>C-606</div>									
<div>PROJ. NO.</div> <div>14215.01</div>										<div>DWN. BY:</div> <div>DMB</div>									
<div>TS&amp;E BY:</div> <div>DMB</div>										<div>G/A R/W BY:</div> <div>DMB</div>									
<div>CHK. BY:</div> <div>FEC</div>										<div>PROJ. MGR:</div> <div>FEC</div>									
<div>REV.</div> <div>DATE</div>										<div>PROJ. TITLE</div> <div>CLOSURE OF INACTIVE NABORS LANDFILL</div>									
<div>DESCRIPTION</div>										<div>SHEET TITLE</div> <div>FINAL COVER DETAILS</div>									
<div>CK</div> <div>BY</div>										<div>FEC</div> <div>FEC</div>									





- LEGEND:**
- EXISTING 2' MINOR CONTOUR
  - EXISTING 10' MAJOR CONTOUR
  - PROPOSED 2' EXTERIOR GRADING CONTOUR
  - PROPOSED 10' EXTERIOR GRADING CONTOUR
  - PROPOSED 2' TOP OF FINAL COVER CONTOUR
  - PROPOSED 10' TOP OF FINAL COVER CONTOUR
  - PROPERTY BOUNDARY (APPROX.)
  - EXISTING ROAD
  - EXISTING OVERHEAD ELECTRIC
  - DISPOSAL BOUNDARY (APPROXIMATE)
  - EXISTING BODY OF WATER
  - EXISTING DRAINAGE PIPE/CULVERT
  - EXISTING MONITORING WELL
  - EXISTING GAS PROBE
  - EXISTING CONTROL POINT

- NOTES:**
- EXISTING TOPOGRAPHY BASED ON AERIAL SURVEY PERFORMED BY M.J. HARDEN ASSOCIATES, INC ON AUGUST 17, 2010. UPDATES TO THE TOPOGRAPHY AND SITE FEATURES FOR AREA 1-2, AREA 1-3, AND SOUTH CLASS 4 DISPOSAL UNITS SURVEYED BY CONSOLIDATED LAND SERVICES, INC BETWEEN DECEMBER 2014 AND JANUARY 2015.
  - SURVEY DATA BASED ON THE NAD83 ARKANSAS STATE PLANE NORTH COORDINATE SYSTEM.
  - PERIMETER ROADS FOR THE DISPOSAL UNITS BEING CLOSED TO BE REGRADED AND FINISHED WITH AN ARKANSAS DEPARTMENT OF TRANSPORTATION AGGREGATE FOR COUNTY ROADS.
  - PROTECT EXISTING MONITORING WELLS, GAS PROBES, AND CONTROL POINTS WHILE PERFORMING CONSTRUCTION ACTIVITIES.

**75% SUBMITTAL**

SCALE 0 200 400 FEET

CLIENT		SCS AQUATERRA		FACILITY IMPROVEMENTS		REV.	DATE	DESCRIPTION	CK. BY
7311 W. 130th St. Ste. 100 Overland Park, Kansas 66213 PH. (913) 681-0030 FAX. (913) 681-0012		7/9/15		C-700 - FACILITY IMPROVEMENTS.DWG					
DWN. BY: DMB		CHK. BY: DMB		PROJECT TITLE		1	7/2015	75% SUBMITTAL	FEC
PROJ. NO. 27214218.01		Q/A R/W BY: DMB		CLOSURE OF INACTIVE NABORS LANDFILL		0	5/2015	50% SUBMITTAL	FEC
DSC. BY: DMB		PROJ. MGR: DMB							