

# ORANGE COUNTY LANDFILL

INSTALLATION, MAINTENANCE AND MONITORING FOR  
LANDFILL GAS COLLECTION AND CONTROL SYSTEM  
FOR ORANGE COUNTY LANDFILL CELL 9 AND 10

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CHIEF ENGINEER, SOLID WASTE DIVISION

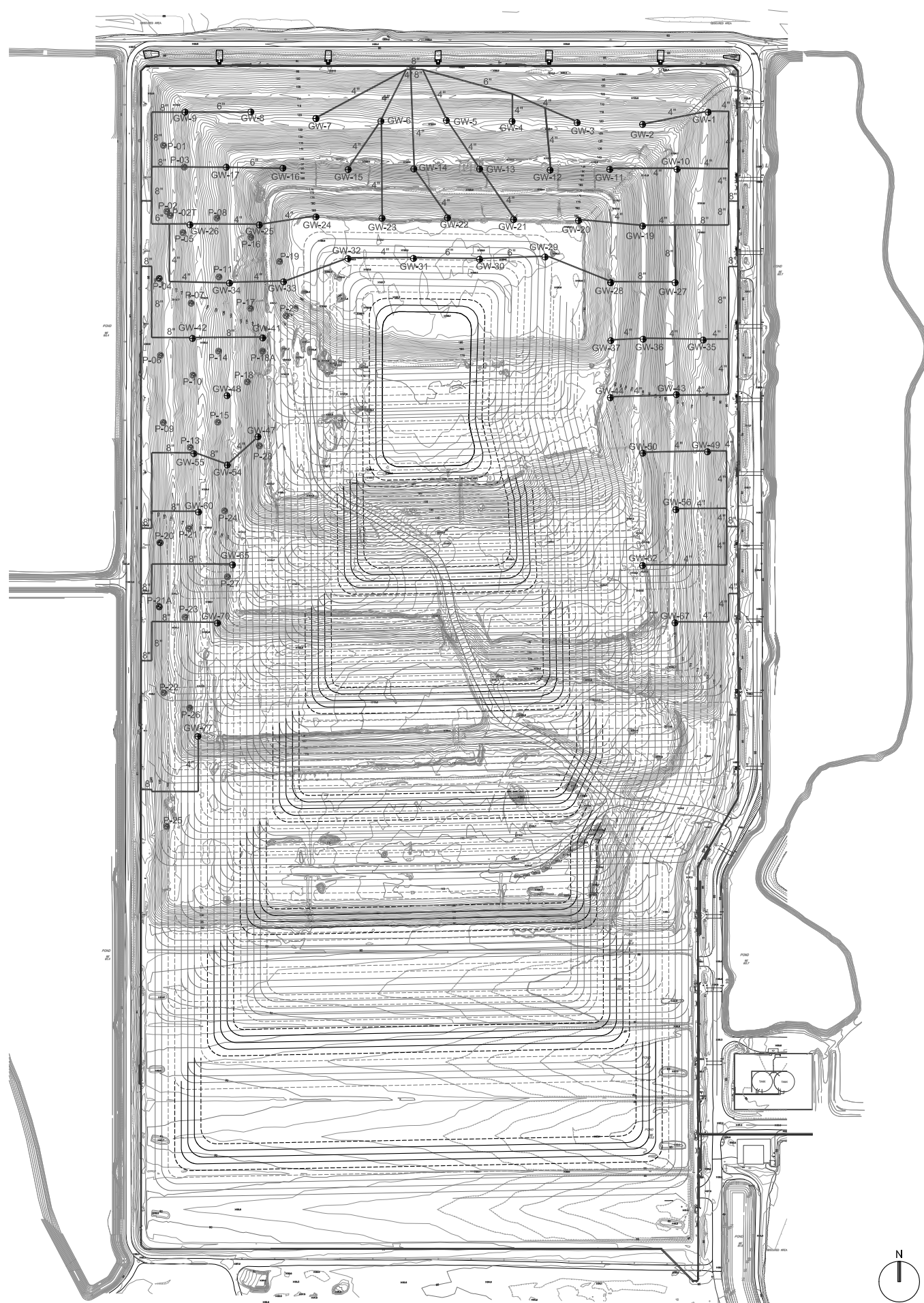
UTILITIES DEPARTMENT  
ORANGE COUNTY, FLORIDA

EXISTING VERTICAL WELLHEADS

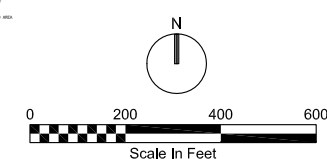
EXISTING HORIZONTAL WELLHEADS

ID NO.	NORTHING	EASTING
GW-1	1507097.18	585414.80
GW-2	1507059.89	585214.35
GW-3	1507064.95	585014.34
GW-4	1507069.04	584815.48
GW-5	1507071.87	584614.40
GW-6	1507069.76	584215.86
GW-7	1507077.89	584215.86
GW-8	1507094.72	584017.01
GW-9	1507094.46	583815.88
GW-10	1506922.63	585319.89
GW-11	1506922.40	585114.15
GW-12	1506919.93	584931.76
GW-13	1506923.59	584716.11
GW-14	1506923.58	584515.07
GW-15	1506921.86	584314.53
GW-16	1506922.97	584114.95
GW-17	1506926.35	583941.12
GW-19	1506749.16	585214.55
GW-20	1506765.80	585018.60
GW-21	1506768.88	584820.11
GW-22	1506774.23	584618.04
GW-23	1506773.10	584417.83
GW-24	1506776.99	584215.81
GW-25	1506752.52	584042.73
GW-26	1506752.89	583830.83
GW-27	1506576.04	585313.79
GW-28	1506576.24	585117.06
GW-33	1506578.74	584116.80
GW-34	1506574.66	583951.63
GW-35	1506400.67	585399.66
GW-36	1506403.32	585216.15
GW-37	1506398.68	585117.35
GW-41	1506407.01	584053.31
GW-42	1506405.66	583838.55
GW-43	1506231.18	585304.25
GW-44	1506224.51	585115.75
GW-47	1506092.27	584026.12
GW-48	1506230.80	583944.19
GW-49	1506059.20	585412.87
GW-50	1506055.02	585215.09
GW-54	1506018.60	583945.00
GW-55	1506053.32	583842.71
GW-56	1505882.28	585316.24
GW-60	1505874.77	583857.01
GW-62	1505711.50	585214.40
GW-65	1505713.35	583960.87
GW-67	1505536.29	585313.44
GW-70	1505535.48	585914.73
GW-77	1505188.84	583854.86

ID NO.	NORTHING	EASTING
P-1	1506995.66	583749.94
P-2	1506793.98	583760.08
P-2T	1506781.56	583770.23
P-3	1506929.58	583813.22
P-4	1506588.76	583736.92
P-5	1506729.14	583809.57
P-6	1506353.83	583740.49
P-7	1506513.26	583834.21
P-8	1506773.63	583912.91
P-9	1506148.26	583749.55
P-10	1506293.10	583839.68
P-11	1506593.63	583919.29
P-13	1506072.41	583831.40
P-14	1506366.72	583918.34
P-15	1506152.36	583913.29
P-16	1506714.91	584017.14
P-17	1506497.13	584015.52
P-18	1506272.86	584005.95
P-18A	1506366.81	584124.57
P-19	1506640.66	584104.75
P-20	1505781.12	583739.19
P-21	1505824.99	583826.74
P-21A	1505585.30	583737.00
P-22	1505322.55	583750.71
P-23	1505553.59	583815.74
P-24	1505878.47	583936.67
P-25	1504913.81	583759.25
P-26	1505275.90	583830.16
P-27	1505676.93	583945.34
P-28	1506077.21	584043.27
P-29	1506474.49	584124.57
P-30	1504717.46	583738.99



**SITE PLAN**  
1" = 200'



	GENERAL <b>EXISTING SITE PLAN AND COORDINATES</b>		SES CELLS 9 -10 CLOSURE OC SOLID WASTE MANAGEMENT FACILITY UTILITIES SOLID WASTE DIVISION ORANGE COUNTY, FLORIDA			
			NO. DATE DSGN MSB	REVISION CHK DS	APVD KRC	BY MSB
VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"		DATE DECEMBER 2013 PROJ DWG G-001 SHEET 1 of 19				



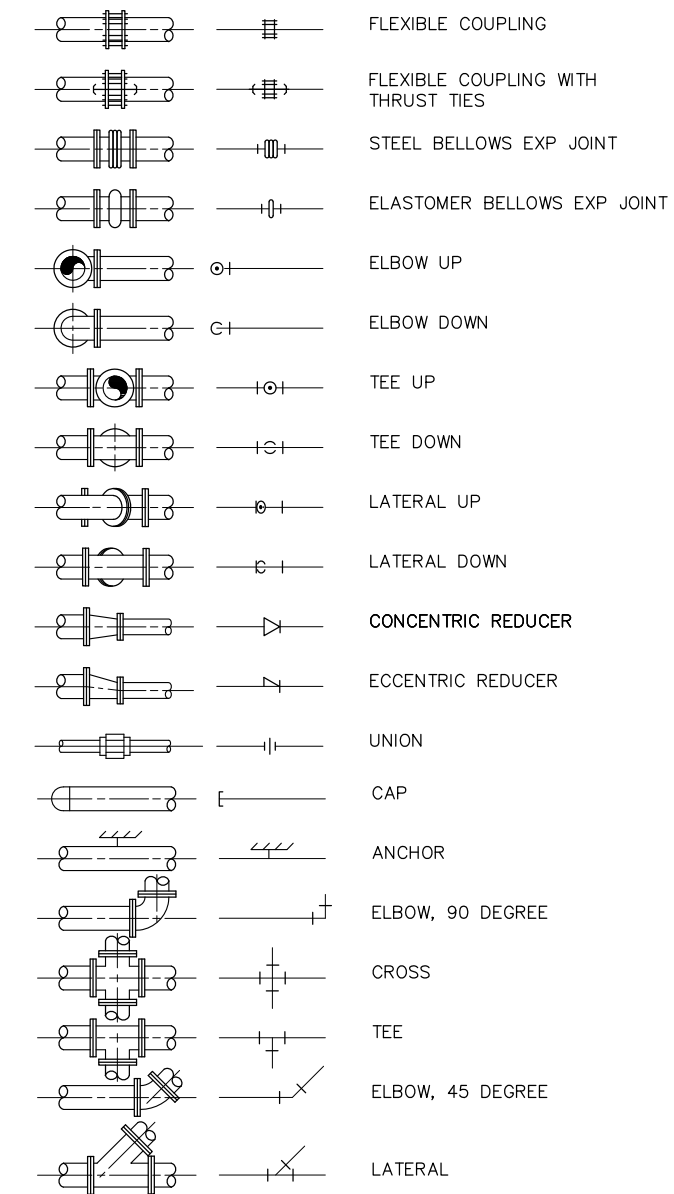
# MECHANICAL LEGEND AND NOTES

## GENERAL PIPING NOTES

- LAY PIPE TO UNIFORM GRADE BETWEEN INDICATED ELEVATION POINTS.
- SIZE OF FITTINGS SHOWN ON PLANS SHALL CORRESPOND TO ADJACENT STRAIGHT RUN OF PIPE, UNLESS OTHERWISE INDICATED. TYPE OF JOINT AND FITTING MATERIAL SHALL BE THE SAME AS SHOWN FOR ADJACENT STRAIGHT RUN OF PIPE.
- LOCATION AND NUMBER OF PIPE HANGERS AND PIPE SUPPORTS SHOWN IS ONLY APPROXIMATE. FINAL SUPPORT REQUIREMENTS SHALL BE DETERMINED IN THE FIELD AND REVIEWED BY THE ENGINEER PRIOR TO INSTALLATION. MAXIMUM SPACING SHALL BE AS SPECIFIED.
- ALL JOINTS SHALL BE WATERTIGHT. WALL PIPES SHALL BE USED WHEREVER PIPING PASSES FROM A STRUCTURE TO BACKFILL.
- ALL FLEXIBLE CONNECTORS OR FLANGED COUPLING ADAPTERS SHALL BE PROVIDED WITH THRUST TIES, BLOCKS, OR ANCHORS, UNLESS OTHERWISE NOTED. THRUST PROTECTION SHALL BE ADEQUATE FOR TEST PRESSURES SPECIFIED.
- SYMBOLS, LEGENDS, AND PIPE USE IDENTIFICATIONS SHOWN SHALL BE FOLLOWED THROUGHOUT THE PLANS, WHEREVER APPLICABLE. NOT ALL OF THE VARIOUS PIPING COMPONENTS ARE NECESSARILY USED IN THE PROJECT.
- ALL BURIED PIPING SPECIFIED TO BE PRESSURE TESTED, EXCEPT FLANGED, WELDED, OR SCREWED PIPING, SHALL BE PROVIDED WITH CONCRETE THRUST BLOCKS AT ALL DIRECTION CHANGES, UNLESS OTHERWISE NOTED.
- NUMBER AND LOCATION OF UNIONS SHOWN ON PLANS IS ONLY APPROXIMATE. PROVIDE ALL UNIONS NECESSARY TO FACILITATE CONVENIENT REMOVAL OF VALVES AND MECHANICAL EQUIPMENT.
- WHERE A GROOVED END COUPLING IS SHOWN, IT SHALL BE THE RIGID JOINT TYPE, UNLESS OTHERWISE SPECIFIED. WHERE A FLANGED COUPLING ADAPTER IS SHOWN, A STANDARD FLANGE SHALL BE JOINED TO THE COUPLING ADAPTER.

## PIPE AND FITTING SYMBOLS

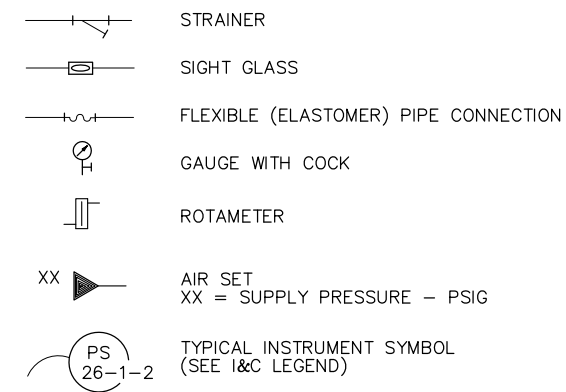
### DOUBLE LINE SINGLE LINE



### NOTES:

- ONLY FLANGED END CONNECTIONS ARE SHOWN HERE FOR DOUBLE LINE FITTINGS. FITTINGS WITH OTHER END PATTERNS ARE SHOWN SIMILARLY ON THE CONSTRUCTION DRAWINGS. ALSO SEE PIPING SPECIFICATIONS.
- SYMBOLS SHOWN HERE FOR SINGLE LINE FITTINGS ARE GENERIC ONLY. REFER TO PIPING SPECIFICATIONS FOR SPECIFIC END CONNECTIONS FOR SINGLE LINE PIPE AND FITTINGS.
- EXISTING PIPE AND EQUIPMENT IS SHOWN LIGHT-LINED AND/OR SCREENED AND IS NOTED AS EXISTING. NEW PIPING AND EQUIPMENT IS SHOWN HEAVY-LINED.
- THIS IS A STANDARD LEGEND SHEET. SOME OF THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY NOT BE USED IN THESE DRAWINGS

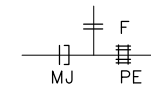
## MISCELLANEOUS PIPING SYMBOLS



## PIPE AND FITTING END PATTERNS

B	BELL	PE	PLAIN END
S	SPIGOT	GE	GROOVED END
F	FLANGE	MJ	MECHANICAL JOINT

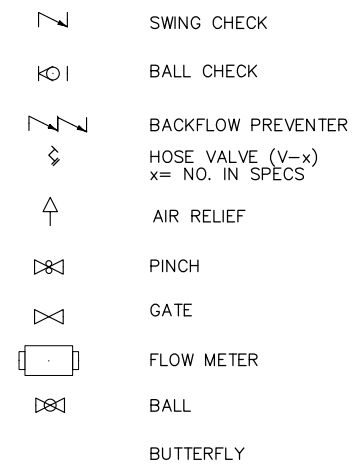
### EXAMPLE:



## PIPE MATERIALS

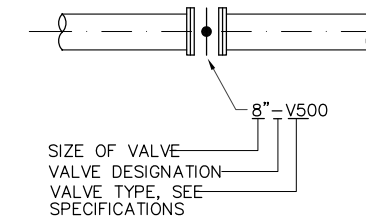
- CELDI - CERAMIC EPOXY-LINED DUCTILE IRON
- CLDI - CEMENT LINED DUCTILE IRON
- CSTL - CARBON STEEL, MILL TYPE
- HDPE - HIGH DENSITY POLYETHYLENE
- PVC - POLYVINYL CHLORIDE
- RCP - REINFORCED CONCRETE PIPE
- SST - STAINLESS STEEL

## VALVE SYMBOLS

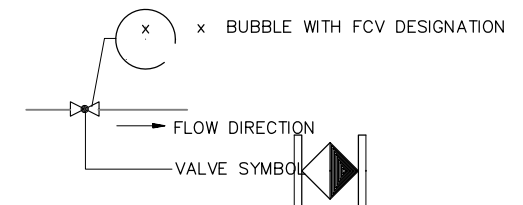


## VALVE DESIGNATION

### MANUAL VALVES AND CHECK VALVES



### CONTROL VALVES



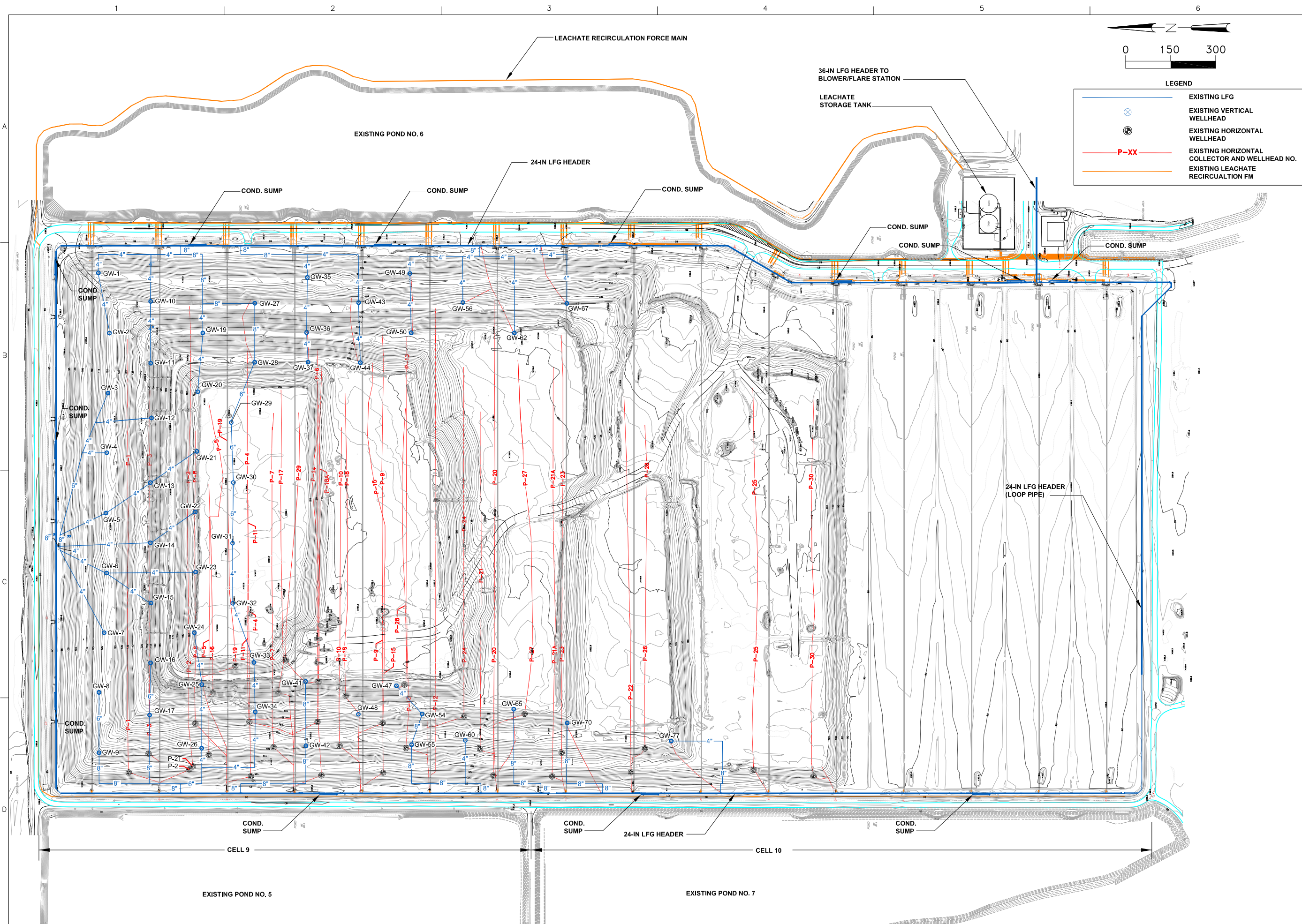
**NEEL-SCHAFFER**  
SOLUTIONS YOU CAN BUILD UPON

**CH2MHILL**

SES CELLS 9-10 CLOSURE  
OC SOLID WASTE MANAGEMENT FACILITY  
UTILITIES SOLID WASTE DIVISION  
ORANGE COUNTY, FLORIDA

GENERAL  
MECHANICAL LEGEND

VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	DECEMBER 2013
PROJ	456975
DWG	G-003
SHEET	3 19



**LEGEND**

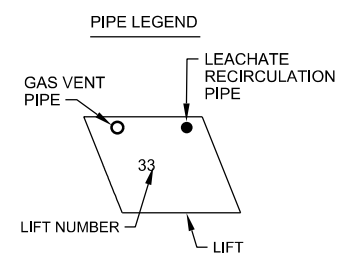
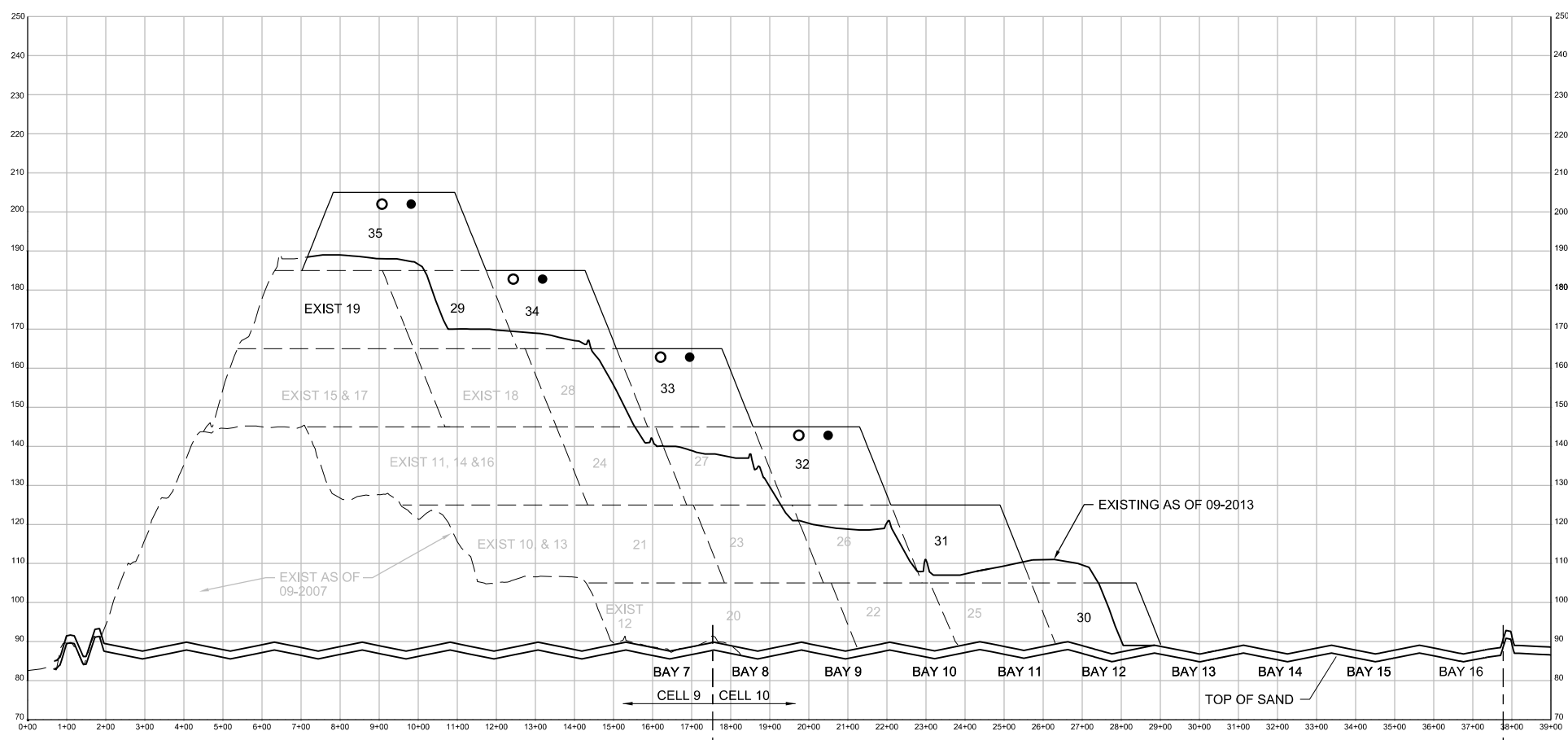
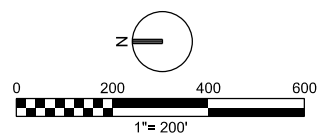
- EXISTING LFG
- ⊗ EXISTING VERTICAL WELLHEAD
- ⊙ EXISTING HORIZONTAL WELLHEAD
- P-XX EXISTING HORIZONTAL COLLECTOR AND WELLHEAD NO.
- EXISTING LEACHATE RECIRCULATION FM

		SES CELLS 9-10 CLOSURE OC SOLID WASTE MANAGEMENT FACILITY UTILITIES SOLID WASTE DIVISION ORANGE COUNTY, FLORIDA
		EXISTING CELLS 9-10 LFG COLLECTIONS SYSTEM AND TRANSMISSION SYSTEM
VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"		
DATE		
PROJ	456975	
DWG	G-004	
SHEET	4 of 19	

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1 2 3 4 5 6

A  
B  
C  
D



CIVIL  
**CELL 9 AND 10  
 LIFT SEQUENCING  
 LIFTS 30 THROUGH 35**

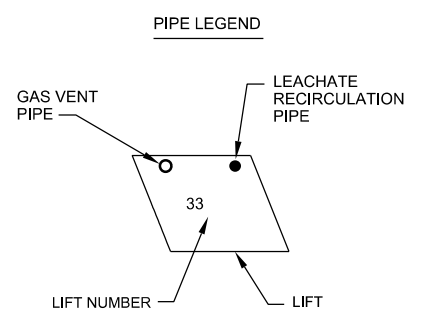
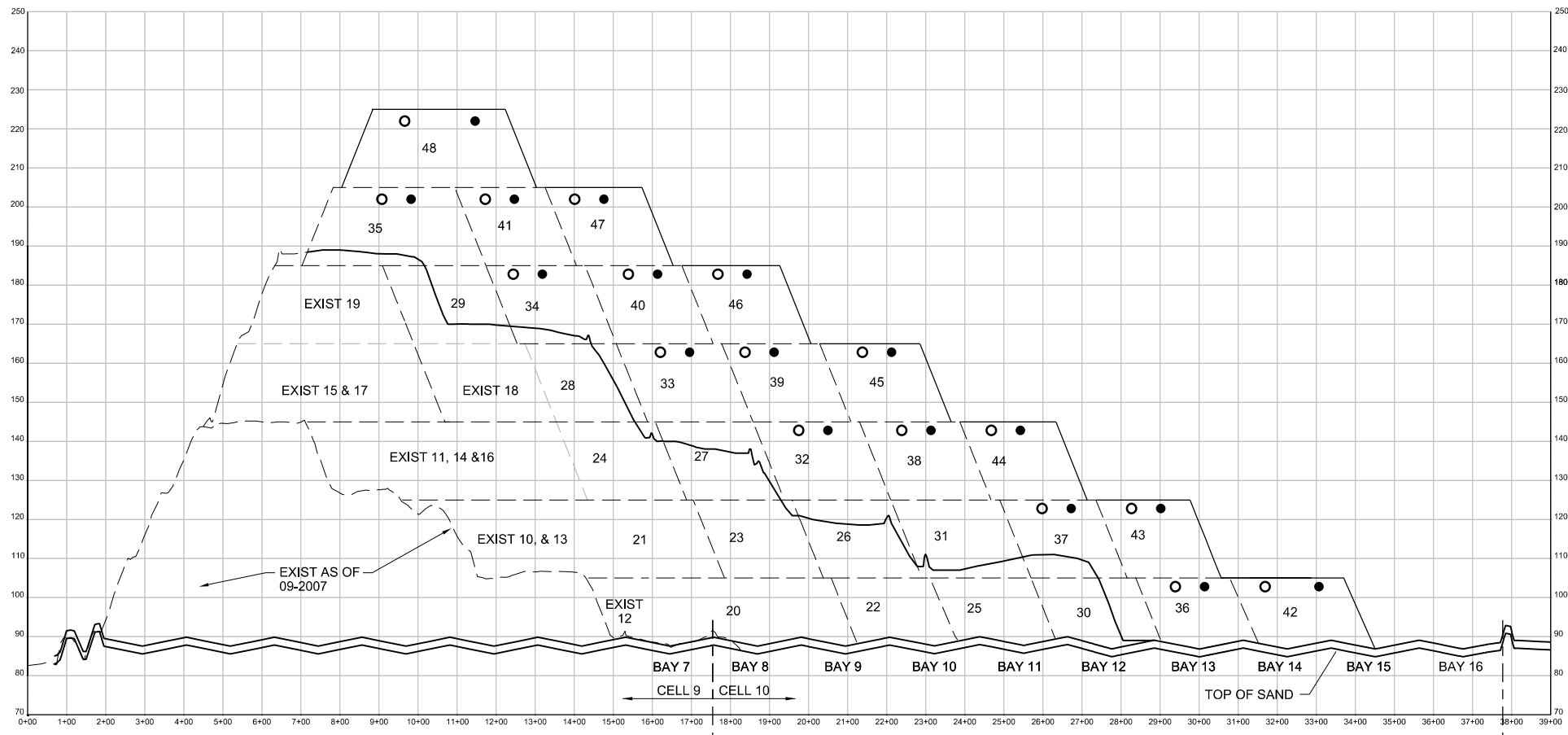
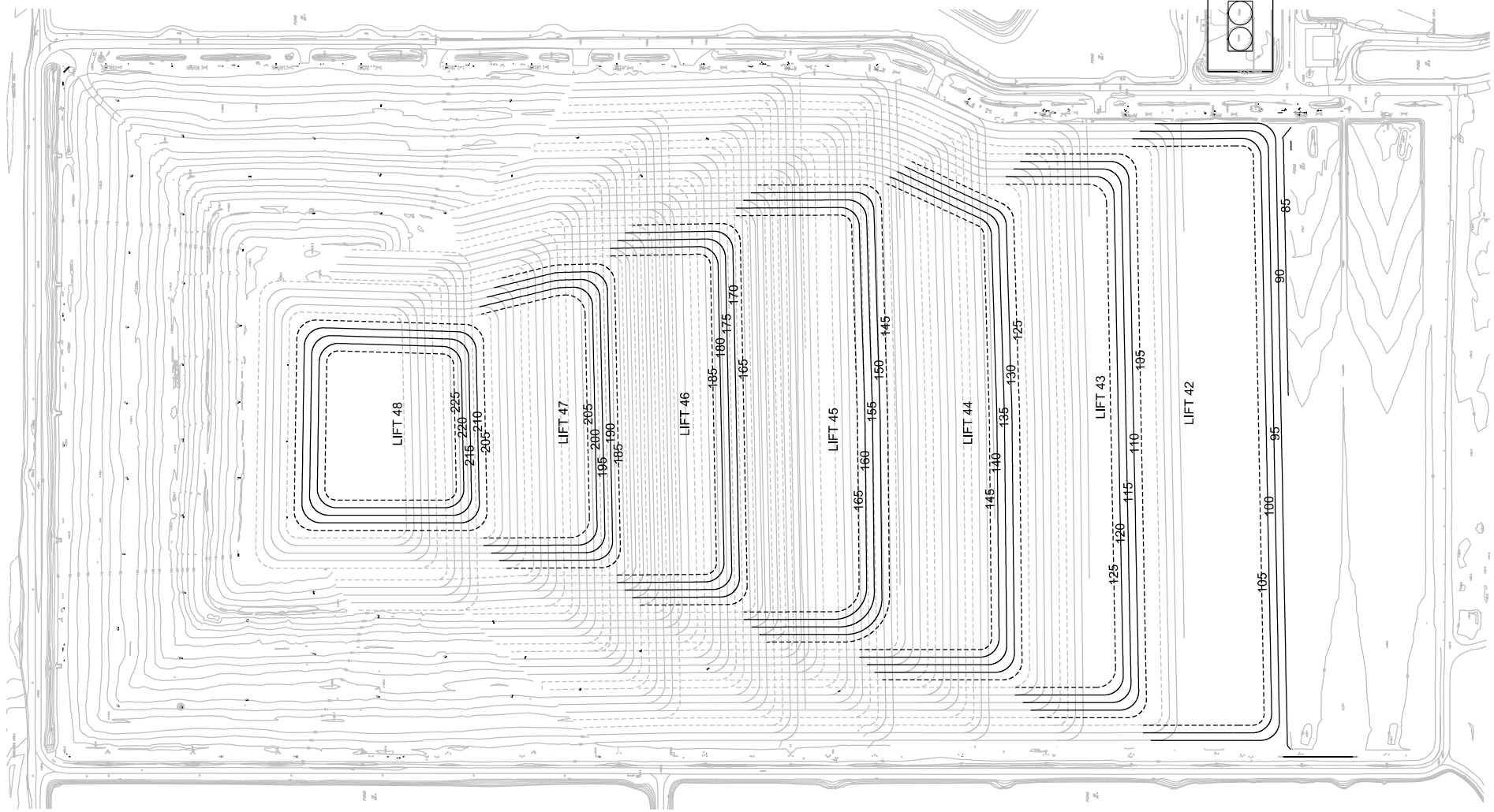
SES CELLS 9-10 CLOSURE  
 OC SOLID WASTE MANAGEMENT FACILITY  
 UTILITIES SOLID WASTE DIVISION  
 ORANGE COUNTY, FLORIDA

VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	DECEMBER 2013
PROJ	456975
DWG	CS-1.1
SHEET	5 of 19

NO.	DATE	DR	REVISION	BY	APVD
		D SCHAUER	S BRETZ	CHK	APVD
					MSB

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CIVIL  
CELL 9 AND 10  
LIFT SEQUENCING  
LIFTS 42 THROUGH 48

SES CELLS 9-10 CLOSURE  
OC SOLID WASTE MANAGEMENT FACILITY  
UTILITIES SOLID WASTE DIVISION  
ORANGE COUNTY, FLORIDA

NO.	DATE	DR	REVISION	BY	APVD
		D SCHAUER	S BRETZ		
			CHK		
					MSB

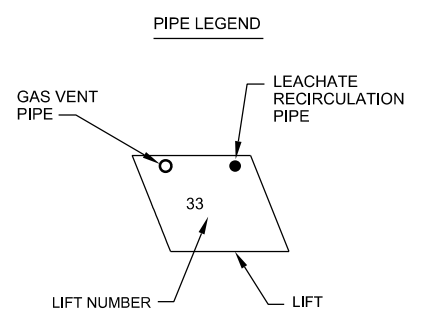
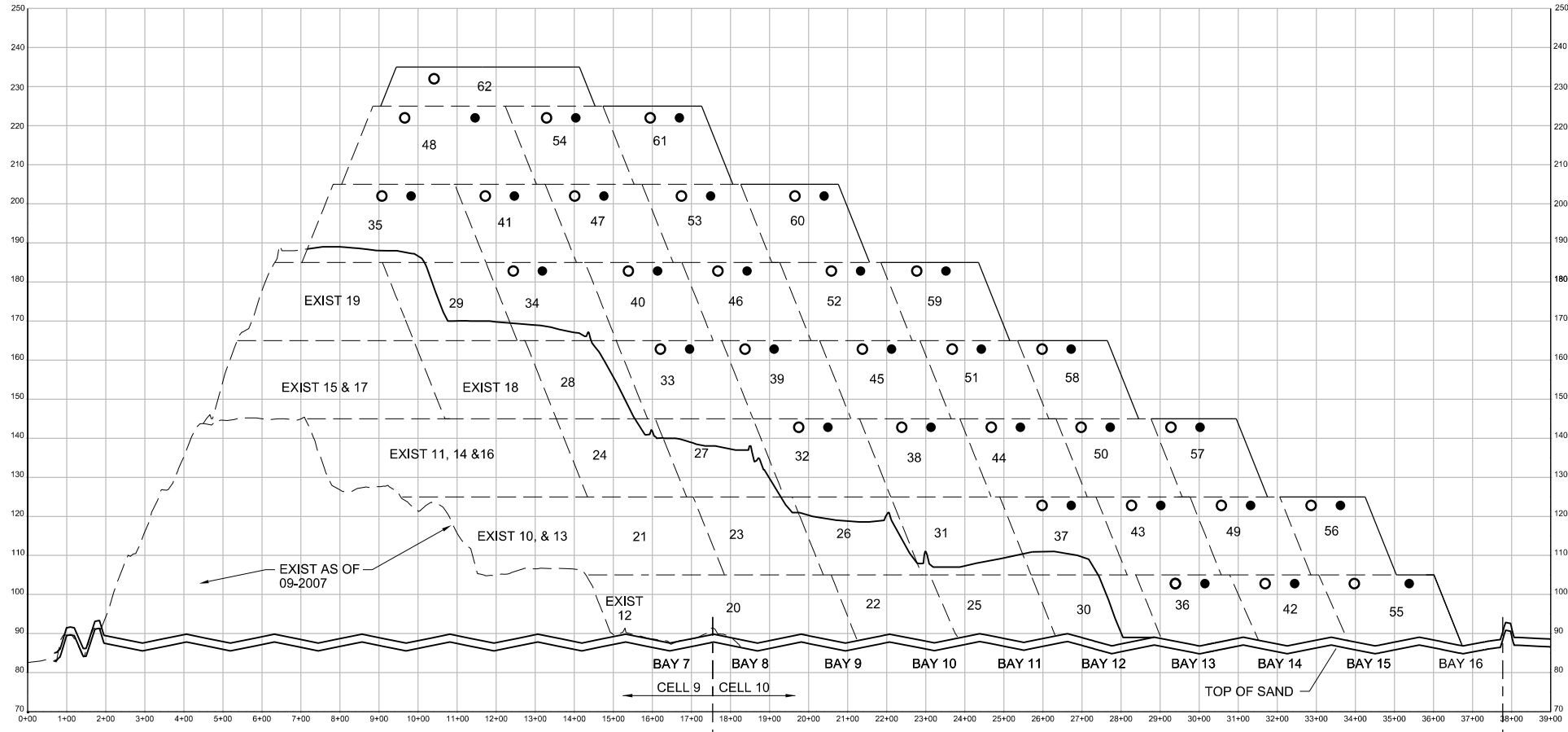
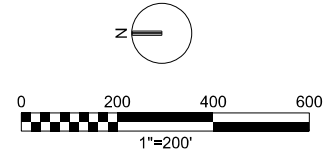
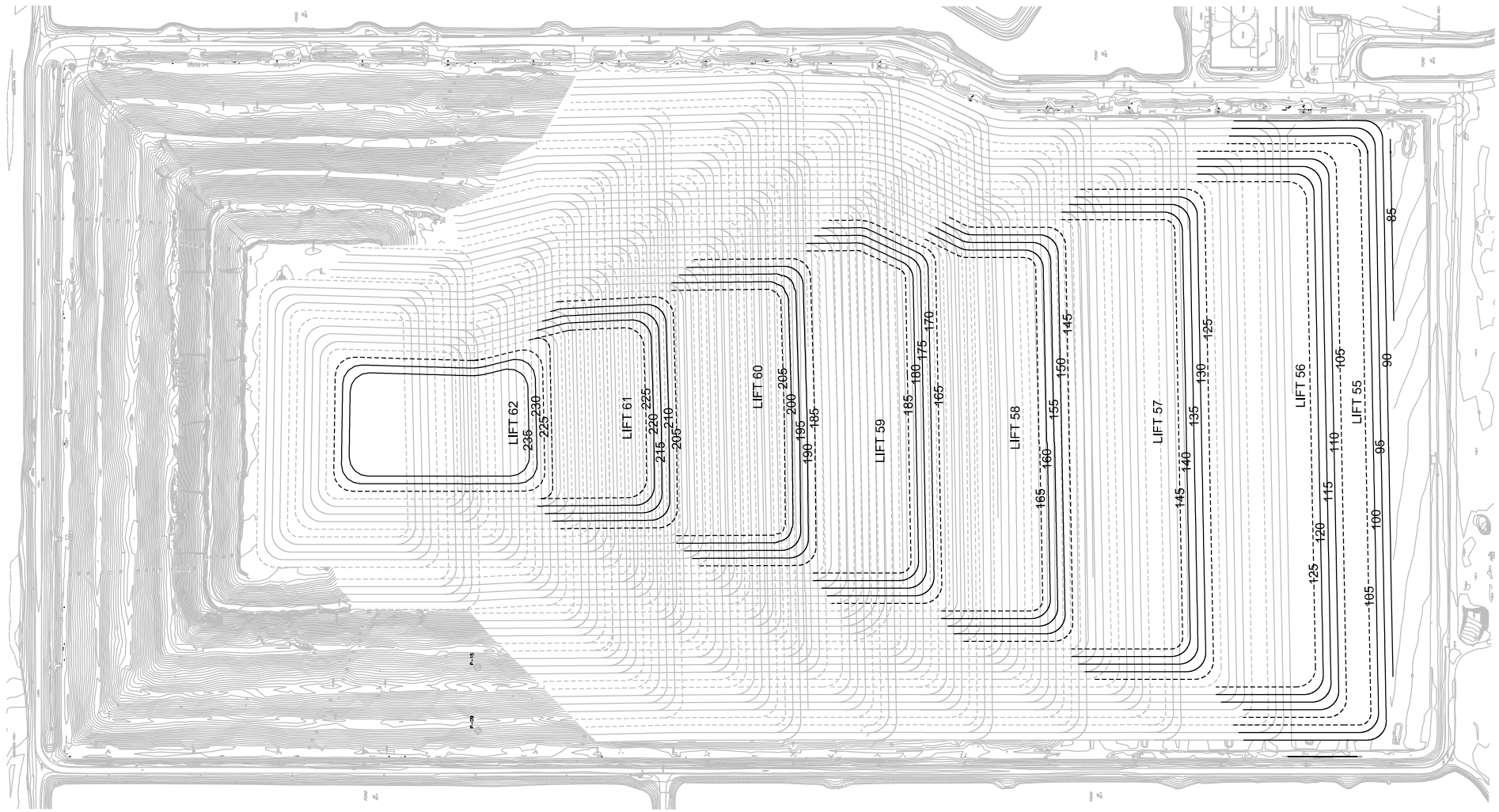
VERIFY SCALE  
BAR IS ONE INCH ON ORIGINAL DRAWING.  
0 1'

DATE: DECEMBER 2013  
PROJ: 456975  
DWG: CS-1.3  
SHEET: 7 of 19

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CIVIL  
**CELL 9 AND 10  
LIFT SEQUENCING  
LIFTS 55 THROUGH 62**

SES CELLS 9-10 CLOSURE  
OC SOLID WASTE MANAGEMENT FACILITY  
UTILITIES SOLID WASTE DIVISION  
ORANGE COUNTY, FLORIDA

NO.	DATE	DR	REVISION	BY	APVD	MSB	
DGDN		D. SCHAUER	CHK	S. BREITZ	APVD		

VERIFY SCALE  
BAR IS ONE INCH ON ORIGINAL DRAWING.  
0 1"

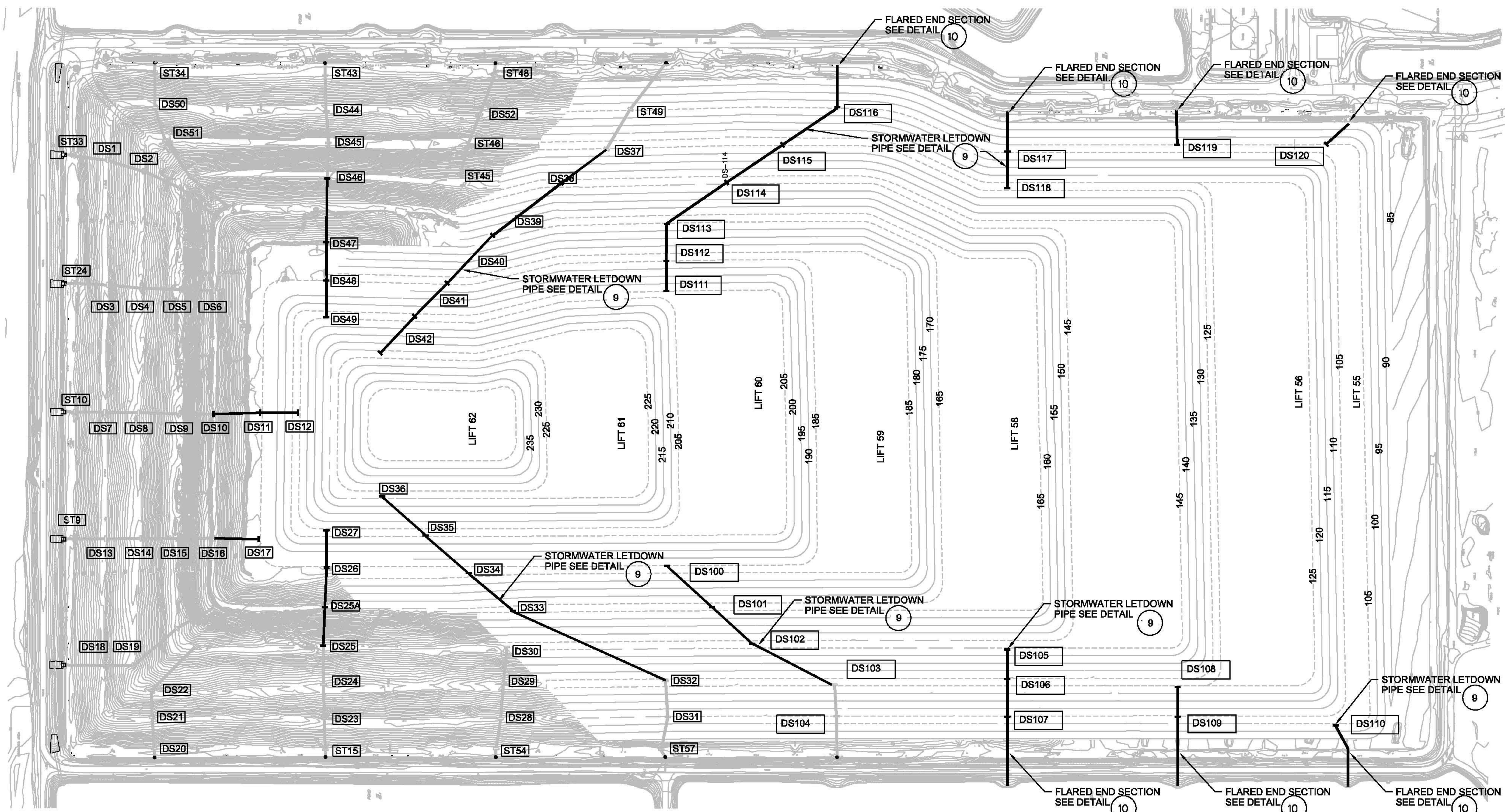
DATE: DECEMBER 2013  
PROJ: 456975  
DWG: CS-1.5  
SHEET: 9 of 19

**ISSUED FOR REVIEW**

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CELL 9 STRUCTURES

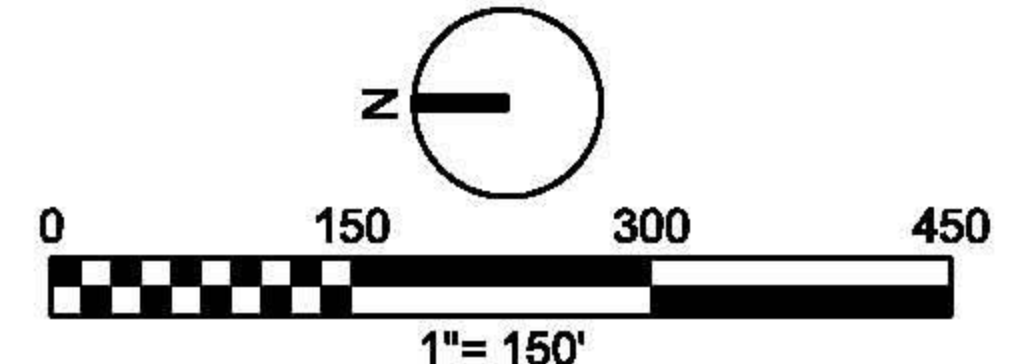
NO.	EASTING	NORTHING	ELEV	NO.	EASTING	NORTHING	ELEV	NO.	EASTING	NORTHING	ELEV	NO.	EASTING	NORTHING	ELEV	NO.	EASTING	NORTHING	ELEV	NO.	EASTING	NORTHING	ELEV	NO.	EASTING	NORTHING	ELEV
DS-1	585254.79	1507135.25	EXISTING	DS-9	584584.02	1506943.44	EXISTING	DS-17	584252.83	1506734.73	184.5	DS-25	583971.5	1506564.3	145.5	DS-32	583946.55	1505946.61	EXISTING	DS-40	584929.98	1506236.53	184.5	DS-48	584936.76	1506556.15	184.5
DS-2	585225.67	1507040.77	EXISTING	DS-10	584583.76	1506854.88	EXISTING	DS-18	583919.21	1507144.34	EXISTING	DS-25A	584072.94	1506559.73	164.5	DS-33	584061.66	1506062.44	164.5	DS-41	584842.72	1506322.94	204.5	DS-49	584839.9	1506556.13	204.5
DS-3	584924.87	1507134.83	EXISTING	DS-11	584587.24	1506731.22	184.5	DS-19	583918.74	1507067.7	EXISTING	DS-26	584178.62	1506555.15	184.5	DS-34	584164.16	1506179.54	184.5	DS-42	584745.44	1506413.67	224.5	DS-50	585394.98	1507008.89	EXISTING
DS-4	584916.53	1507045.19	EXISTING	DS-12	584587.42	1506631.33	204.5	DS-20	583698.92	1507011.51	EXISTING	DS-27	584276.48	1506555.94	204.5	DS-35	584262.28	1506292.09	204.5	DS-43	585478.61	1506558.63	EXISTING	DS-51	585307.39	1506982.28	EXISTING
DS-5	584912.68	1506942.67	EXISTING	DS-13	584253.69	1507140.26	EXISTING	DS-21	583781.21	1507016.58	EXISTING	DS-28	583779.27	1506094.78	EXISTING	DS-36	584366.61	1506410.02	222.5	DS-44	585384.01	1506555.84	EXISTING				
DS-6	584910.24	1506853.38	EXISTING	DS-14	584255.29	1507046.12	EXISTING	DS-22	583851.94	1507018.42	EXISTING	DS-29	583871.74	1506088.31	EXISTING	DS-37	585284.84	1505815.3	EXISTING	DS-45	585300.09	1506550.39	EXISTING				
DS-7	584588.16	1507142.8	EXISTING	DS-15	584255.02	1506947.24	EXISTING	DS-23	583778.59	1506561.66	EXISTING	DS-30	583967.87	1506078.94	EXISTING	DS-38	585193.16	1505934.65	144.5	DS-46	585206.26	1506553.82	EXISTING				
DS-8	584587.27	1507052.62	EXISTING	DS-16	584254.77	1506854.19	EXISTING	DS-24	583867.59	1506563.59	EXISTING	DS-31	583853.75	1505844.23	EXISTING	DS-39	585055.84	1506116.53	164.5	DS-47	585038.62	1506556.19	EXISTING				



CELL 10 STRUCTURES

NO.	EASTING	NORTHING	ELEV	NO.	EASTING	NORTHING	ELEV
DS-100	584179.85	1505653.39	185	DS-110	583761.53	1503888.44	105
DS-101	583977.28	1505430.23	165	DS-111	584909.11	1505656.86	205
DS-102	583886.12	1505317.06	145	DS-112	584988.97	1505656.71	185
DS-103	583867.86	1505212.53	EXISTING	DS-113	585085.58	1505656.44	165
DS-104	583785.34	1505208.06	EXISTING	DS-114	585195.94	1505498.16	145
DS-105	583961.47	1504756.09	125	DS-115	585295.47	1505350.29	125
DS-106	583884.02	1504756.02	105	DS-116	585394.61	1505205.29	105
DS-107	583784.23	1504755.92	125	DS-117	585277.72	1504755.87	105
DS-108	583861.82	1504306.13	105	DS-118	585180.76	1504756.01	125
DS-109	583784.17	1504305.93	105	DS-119	585296.24	1504306.11	105
				DS-120	585297.13	1503913.15	105

NOTE:  
ELEVATION IS APPROXIMATE PIPE INVERT  
ELEVATION. FINAL LOCATION TO BE FIELD LOCATED.



**NEEL-SCHAFFER**  
SOLUTIONS YOU CAN BUILD UPON

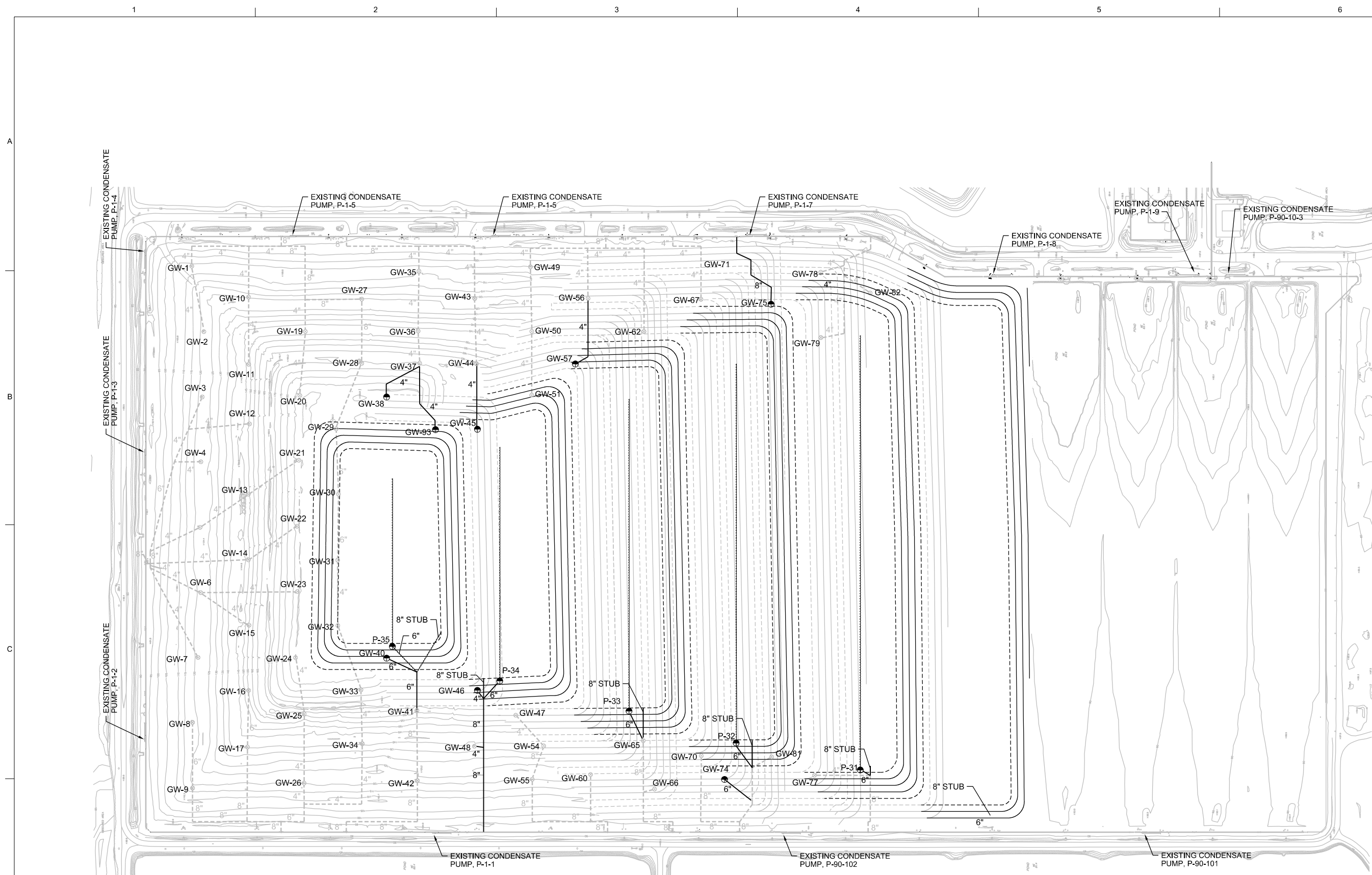
**CH2MHILL**  
CIVIL

SES CELLS 9-10 CLOSURE  
OC SOLID WASTE MANAGEMENT FACILITY  
UTILITIES SOLID WASTE DIVISION  
ORANGE COUNTY, FLORIDA

CELL 9 AND 10  
STORMWATER PLAN

VERIFY SCALE	
DATE	DECEMBER 2013
PROJ	456975
DWG	C-001
SHEET	10 of 19

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LFG EXTRACTION WELL SCHEDULE

GAS WELL ID NO.	NORTH	EAST	TOP ELEV	BOT ELEV	WELL DEPTH	PIPE LENGTH SOLID (P)	PERFORATED
GW-38	1506499.95	585014.05	170	100	70	28	46
GW-40	1506499.95	584214.06	192	100	92	30	61
GW-45	1506221.55	584915.34	180	100	80	26	53
GW-46	1506221.51	584115.24	176	100	76	25	50
GW-57	1505921.42	585115.30	161	100	61	20	40
GW-74	1505471.51	583848.20	120	100	20	10	9
GW-76	1505321.51	585298.53	125	100	25	10	14
GW-78	1505171.51	585331.10	120	100	20	10	9

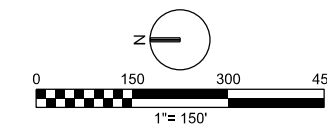
NOTE: SOLID WALL PIPE LENGTH IN THIS TABLE DOES NOT INCLUDE ABOVE GROUND PIPING, TYPICALLY FOUR FOOT IN LENGTH.

HORIZONTAL COLLECTOR SCHEDULE

ID NO.	NORTH	EAST	GRADE ELEV. AT WELL HEAD	COLLECTOR PIPE APPROX LENGTH (FT)
P-31	1506482.10	584249.57	123	1280
P-32	1506153.00	584144.30	143	1130
P-33	1505756.95	584051.81	163	920
P-34	1505428.47	583953.81	183	780
P-35	1505048.12	583854.70	203	490

PIPE LEGEND

- P-31 PROPOSED HORIZONTAL COLLECTOR WELLHEADS
- EXISTING WELLHEAD
- GW-45 PROPOSED VERTICAL WELL
- PROPOSED HORIZONTAL COLLECTOR PIPE
- PROPOSED LATERAL PIPE
- EXISTING LATERAL PIPE



**NEEL-SCHAFFER**  
SOLUTIONS YOU CAN BUILD UPON

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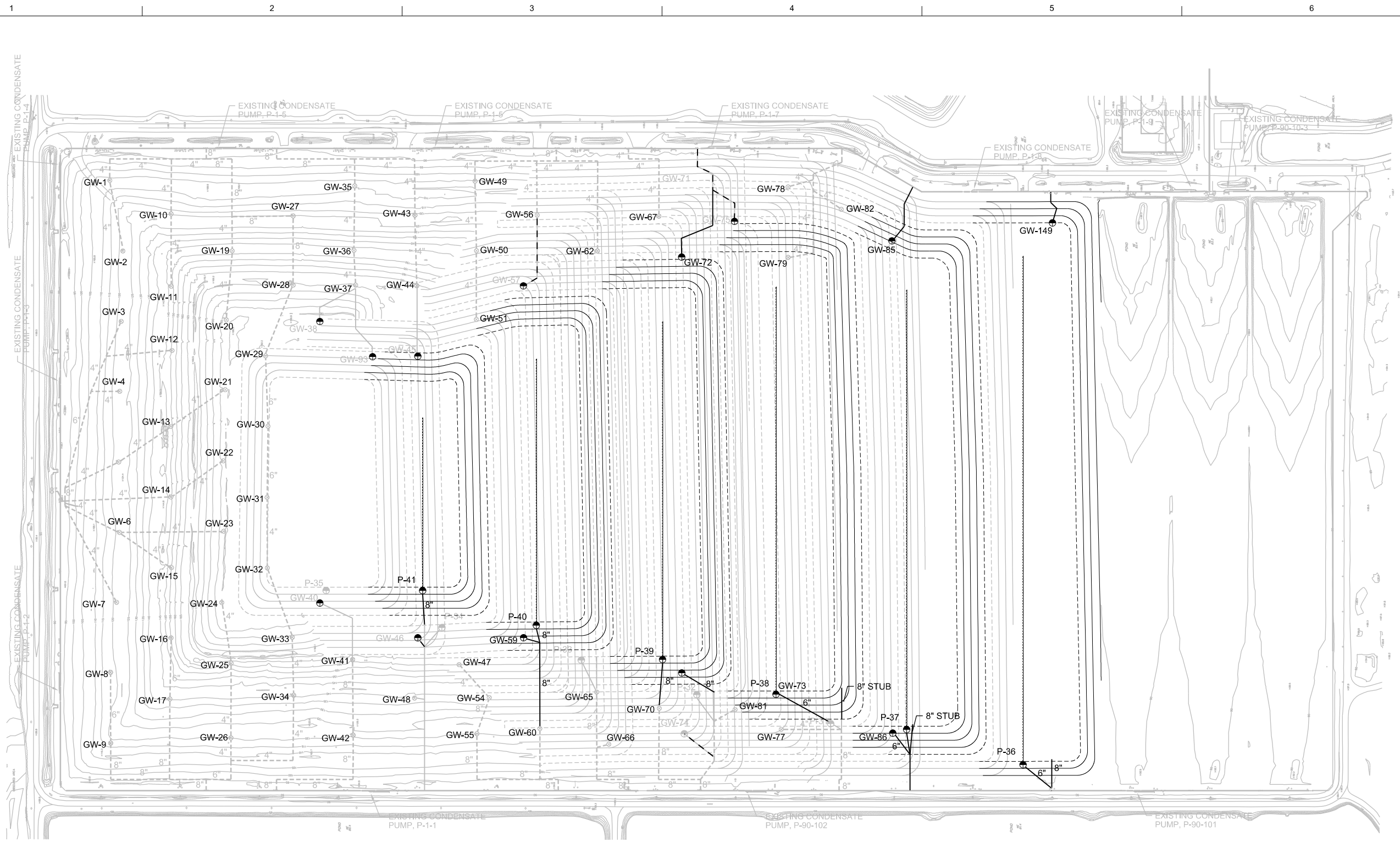
SES CELLS 9-10 CLOSURE  
OC SOLID WASTE MANAGEMENT FACILITY  
UTILITIES SOLID WASTE DIVISION  
ORANGE COUNTY, FLORIDA

CELL 9 AND 10  
LANDFILL GAS COLLECTION SYSTEM  
LIFTS 30 THROUGH 35

VERIFY SCALE  
BAR IS ONE INCH ON ORIGINAL DRAWING.  
DATE: DECEMBER 2013  
PROJ: 456975  
DWG: C-002  
SHEET: 11 of 19

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LFG EXTRACTION WELL SCHEDULE

ID NO.	GAS WELL COORDINATES		TOP ELEV	BOT ELEV	WELL DEPTH	PIPE LENGTH	
	NORTH	EAST				SOLID (P)	PERFORATED
GW-59	1505921.00	584115.53	174	104	70	23	46
GW-72	1505471.51	585197.20	145	100	45	15	29
GW-73	1505471.18	584015.55	153	100	53	17	36
GW-85	1504873.78	585243.16	120	98	22	10	11
GW-86	1504871.55	583844.36	120	100	20	10	9
GW-149	1504422.08	583295.25	120	100	20	10	9

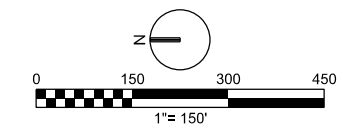
NOTE: SOLID WALL PIPE LENGTH IN THIS TABLE DOES NOT INCLUDE ABOVE GROUND PIPING, TYPICALLY FOUR FOOT IN LENGTH.

HORIZONTAL COLLECTOR SCHEDULE

ID NO.	HORIZONTAL WELL COORDINATES			COLLECTOR PIPE APPROX LENGTH (FT.)
	NORTH	EAST	GRADE ELEV. AT WELL HEAD	
P-36	1504501.18	583754.72	110	1420
P-37	1504832.03	583854.71	123	1220
P-38	1505203.31	583954.70	143	1100
P-39	1505525.92	584053.59	163	930
P-40	1505845.00	584150.68	183	700
P-41	1506207.76	584249.39	203	480

PIPE LEGEND

- P-31 PROPOSED HORIZONTAL COLLECTOR WELL HEADS
- EXISTING WELL HEAD
- GW-45 PROPOSED VERTICAL WELL
- PROPOSED HORIZONTAL COLLECTOR PIPE
- PROPOSED LATERAL PIPE
- EXISTING LATERAL PIPE

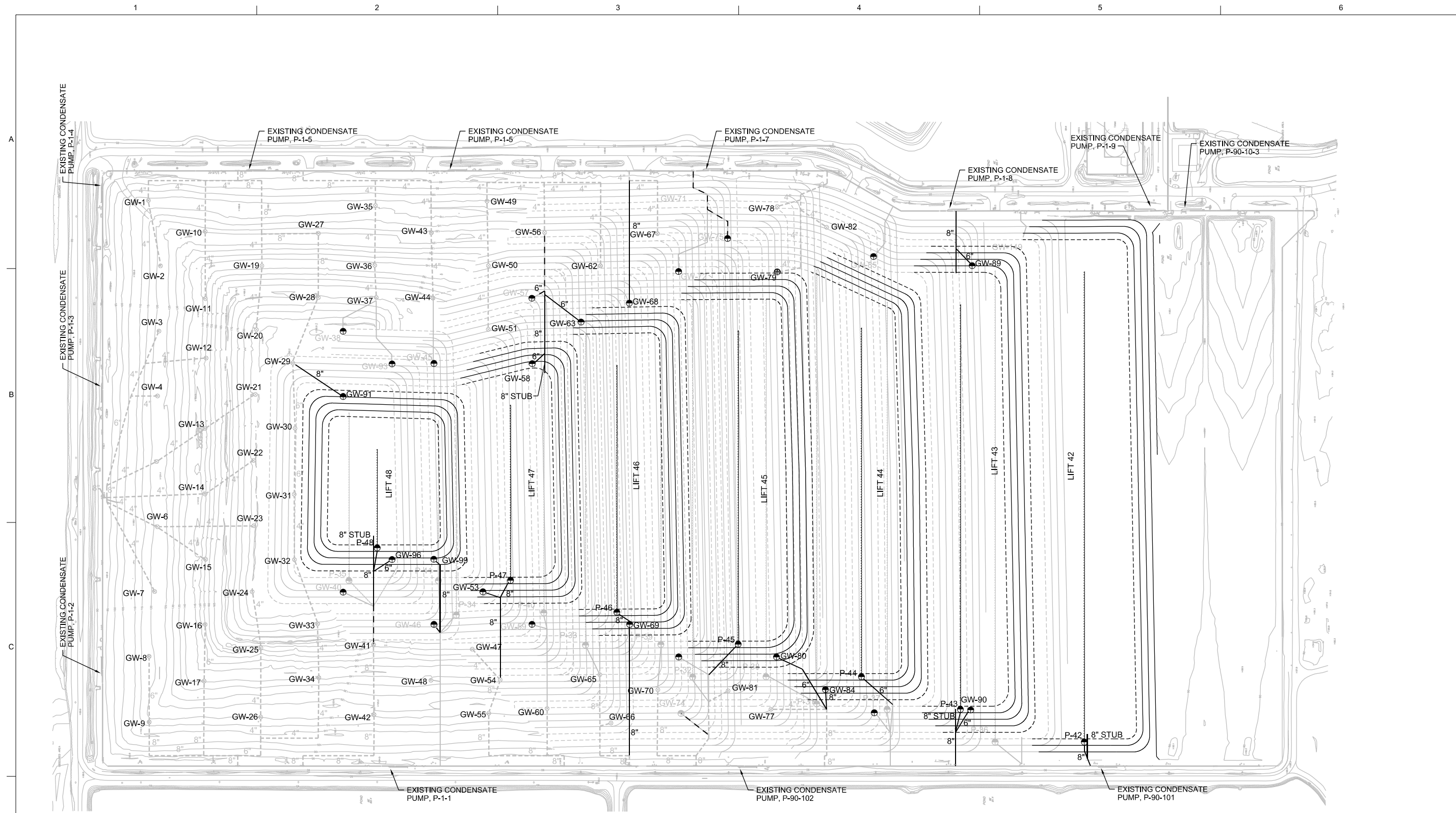


SES CELLS 9-10 CLOSURE  
 OC SOLID WASTE MANAGEMENT FACILITY  
 UTILITIES SOLID WASTE DIVISION  
 ORANGE COUNTY, FLORIDA

CELL 9 AND 10  
 LANDFILL GAS COLLECTION  
 LIFTS 36 THROUGH 41

VERIFY SCALE	
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DATE	DECEMBER 2013
PROJ	456975
DWG	C-003
SHEET	12 of 19

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LFG EXTRACTION WELL SCHEDULE

ID NO.	NORTH	EAST	TOP ELEV.	BOT ELEV.	WELL DEPTH (FT)	PIPE LENGTH (PERFORATED)
GW-1	1506071.51	584215.26	194	102	92	30
GW-2	1505920.25	584914.76	202	102	100	33
GW-3	1505770.69	585042.34	175	100	75	24
GW-4	1505622.47	585100.24	165	100	65	20
GW-5	1505621.51	584115.26	173	100	73	24
GW-6	1505171.51	585198.04	145	100	45	14
GW-7	1505171.51	584035.26	152	100	52	17
GW-8	1505021.51	583915.26	132	100	32	10
GW-9	1504571.51	585215.26	120	100	20	10
GW-10	1504576.00	583852.91	124	100	24	10
GW-11	1506499.95	584814.06	210	100	110	36
GW-12	1506349.95	584314.06	214	100	114	38
GW-13	1506222.01	584315.08	214	100	114	38

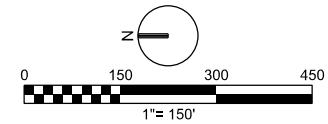
NOTE: SOLID WALL PIPE LENGTH IN THIS TABLE DOES NOT INCLUDE ABOVE GROUND PIPING, TYPICALLY FOUR FOOT IN LENGTH.

HORIZONTAL COLLECTOR SCHEDULE

ID NO.	NORTH	EAST	GRADE ELEV. AT WELL HEAD	COLLECTOR PIPE APPROX LENGTH (FT)
P-42	1504227.72	583754.70	105	1400
P-43	1504607.54	583854.70	123	1200
P-44	1504911.03	583954.70	143	1020
P-45	1505288.74	584054.46	163	930
P-46	1505660.79	584152.52	183	720
P-47	1505986.81	584250.28	203	520
P-48	1506395.60	584349.68	223	280

PIPE LEGEND

- P-31 PROPOSED HORIZONTAL COLLECTOR WELL HEADS
- EXISTING WELL HEAD
- GW-45 PROPOSED VERTICAL WELL
- PROPOSED HORIZONTAL COLLECTOR PIPE
- PROPOSED LATERAL PIPE
- EXISTING LATERAL PIPE



CIVIL  
 CELL 9 AND 10  
 LANDFILL GAS COLLECTION  
 LIFTS 42 THROUGH 48

SES CELLS 9-10 CLOSURE  
 OC SOLID WASTE MANAGEMENT FACILITY  
 UTILITIES SOLID WASTE DIVISION  
 ORANGE COUNTY, FLORIDA

VERIFY SCALE
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DWG C-004
SHEET 13 of 19

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**LFG EXTRACTION WELL SCHEDULE**

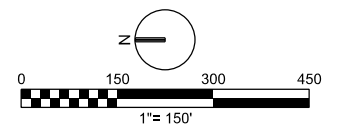
ID NO.	NORTH	EAST	ELEV	DEPTH	WELL	PIPE LENGTH	
						SOLID (P) PERFORATED	
GW-2	1506070.97	584815.25	213	100	113	36	72
GW-4	1505771.93	584216.45	194	102	92	30	61
GW-6	1505320.22	585098.28	165	100	65	21	43
GW-8	1505021.51	585115.25	155	100	55	18	36
GW-10	1504721.31	585115.31	140	100	40	13	26
GW-12	1504720.84	583915.79	133	100	33	10	22
GW-14	1505321.51	584115.26	173	100	73	24	48
GW-16	1504271.13	585213.35	120	100	20	10	9
GW-18	1504271.53	583854.37	124	100	24	10	14

NOTE: SOLID WALL PIPE LENGTH IN THIS TABLE DOES NOT INCLUDE ABOVE GROUND PIPING, TYPICALLY FOUR FOOT IN LENGTH.

**HORIZONTAL COLLECTOR SCHEDULE**

ID NO.	NORTH	EAST	GRADE ELEV. AT WELLHEAD	COLLECTOR PIPE APPROX LENGTH (FT)
P-48	1504338.15	583854.70	123	1260
P-50	1504679.02	583954.70	143	1060
P-51	1505014.36	584054.70	163	940
P-52	1505348.83	584153.90	183	780
P-53	1505729.98	584252.04	203	580
P-54	1506071.45	584349.89	223	340

- PIPE LEGEND**
- P-31 PROPOSED HORIZONTAL COLLECTOR WELLHEADS
  - EXISTING WELLHEAD
  - GW-45 PROPOSED VERTICAL WELL
  - PROPOSED HORIZONTAL COLLECTOR PIPE
  - PROPOSED LATERAL PIPE
  - EXISTING LATERAL PIPE



CIVIL  
**CELL 9 AND 10  
LANDFILL GAS COLLECTION  
LIFTS 49 THROUGH 54**

SES CELLS 9-10 CLOSURE  
OC SOLID WASTE MANAGEMENT FACILITY  
UTILITIES SOLID WASTE DIVISION  
ORANGE COUNTY, FLORIDA

NO.	DATE	REVISION	BY	APVD	MSB

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DWG: C-005

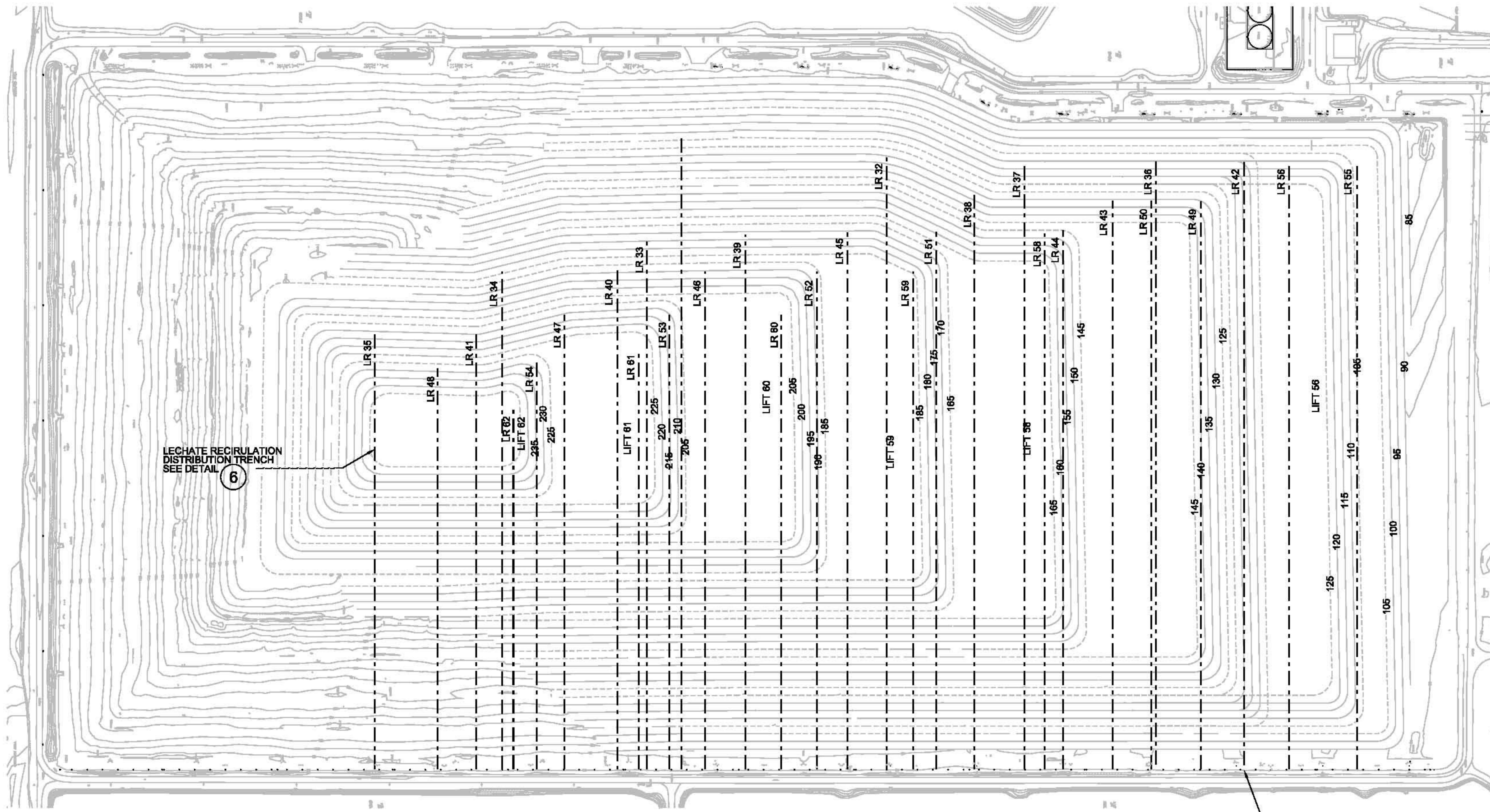
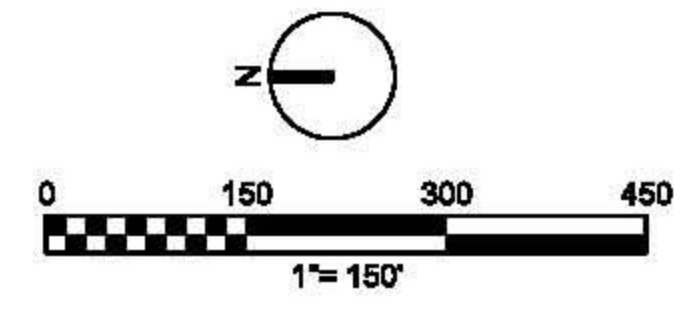
SHEET: 14 of 19

FILENAME: SEQ\_dn05C304A\_456975.dgn PLOT DATE: 2013/12/18 PLOT TIME: 12:00:43 PM





1 2 3 4 5 6



LEACHATE RECIRCULATION PIPE SCHEDULE

LIFT NUMBER	LR PIPING	NORTH	ELEVATION	LIFT NUMBER	LR PIPING	NORTH	ELEVATION
32	32	1505371.98	143.0	45	45	1505203.72	163.0
33	33	1505725.70	163.0	46	46	1505573.74	183.0
34	34	1506102.16	183.0	47	47	1505940.36	203.0
35	35	1506434.11	203.0	48	48	1506270.03	223.0
36	36	1504401.39	108.0	49	49	1504284.45	123.0
37	37	1504743.15	123.0	50	50	1504643.71	143.0
38	38	1505102.40	143.0	51	51	1504973.72	163.0
39	39	1505468.87	163.0	52	52	1505283.12	183.0
40	40	1505802.90	183.0	53	53	1505666.96	203.0
41	41	1506169.53	203.0	54	54	1506012.43	223.0
42	42	1504171.39	108.0	55	55	1503878.14	108.0
43	43	1504514.45	123.0	56	56	1504054.45	123.0
44	44	1504873.71	143.0	57	57	1504413.71	143.0
				58	58	1504690.32	163.0
				59	59	1505032.31	183.0
				60	60	1505373.30	203.0
				61	61	1505746.98	223.0
				62	62	1506072.50	233.0

LECHATE RECIRCULATION TEE CONNECTION, SEE DETAIL 3

LEGEND  
 --- 3" HORIZONTAL LEACHATE RECIRCULATION TRENCH PIPE



**CH2MHILL**  
 CIVIL  
 CELL 9 AND 10  
 LEACHATE RECIRCULATION PLAN

SES CELLS 9-10 CLOSURE  
 OC SOLID WASTE MANAGEMENT FACILITY  
 UTILITIES SOLID WASTE DIVISION  
 ORANGE COUNTY, FLORIDA

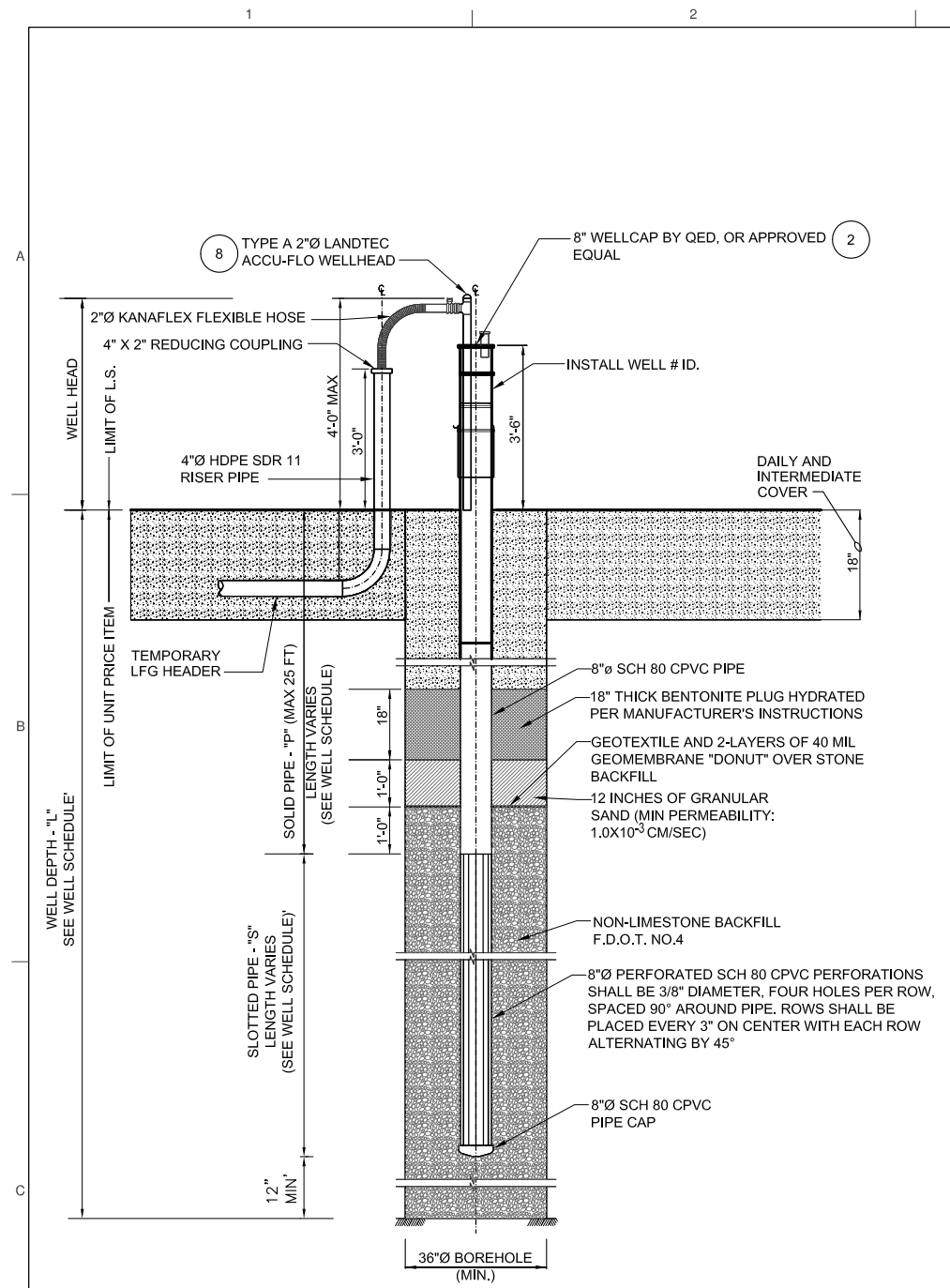
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PROJ	456975
DWG	C-007
SHEET	16 of 19

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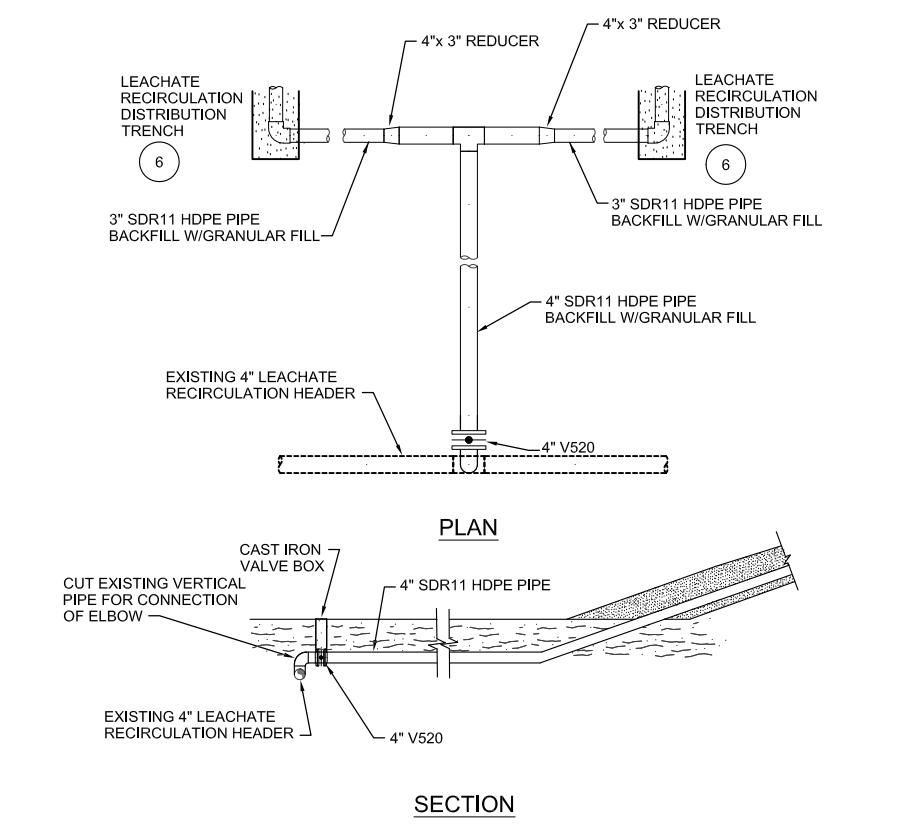
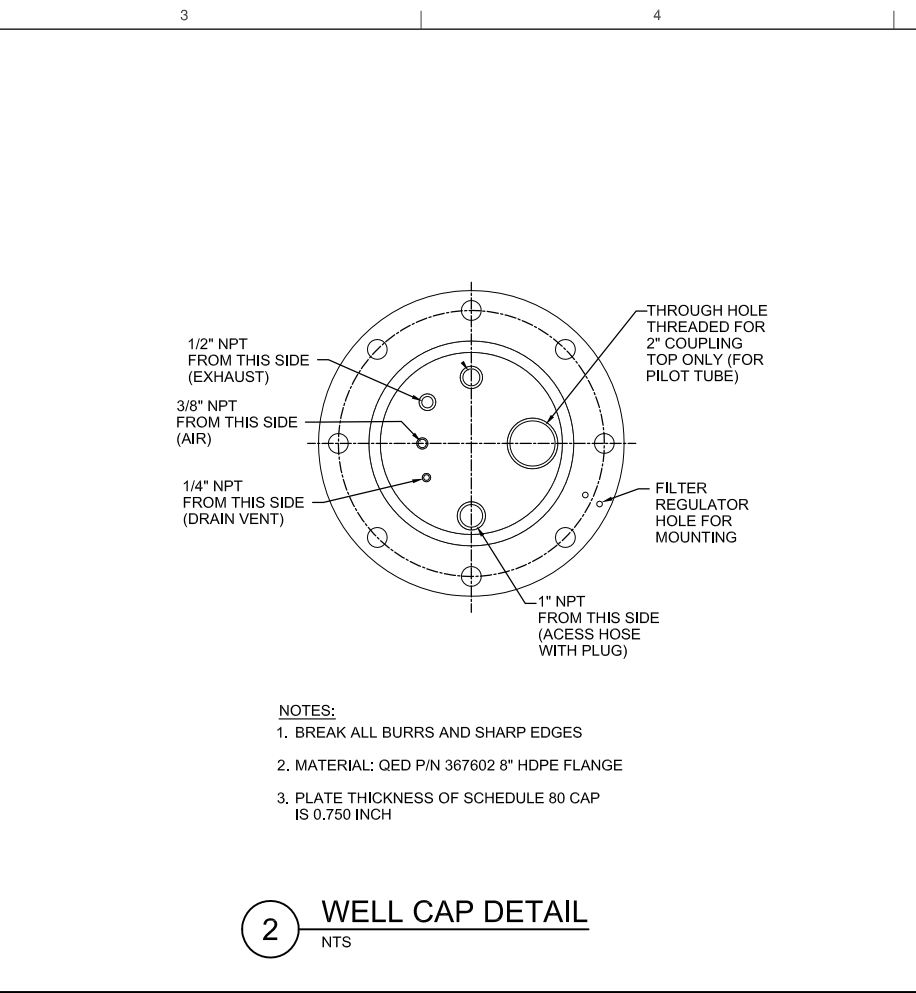
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		D SCHAALIER	CHK		
		S BRETZ	CHK		

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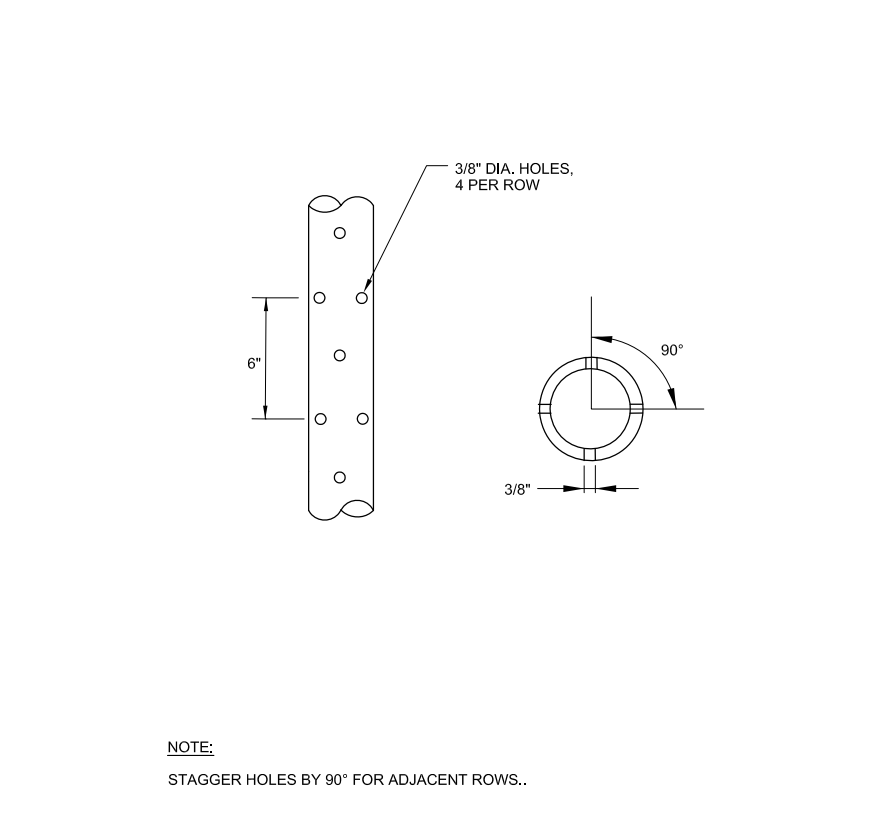
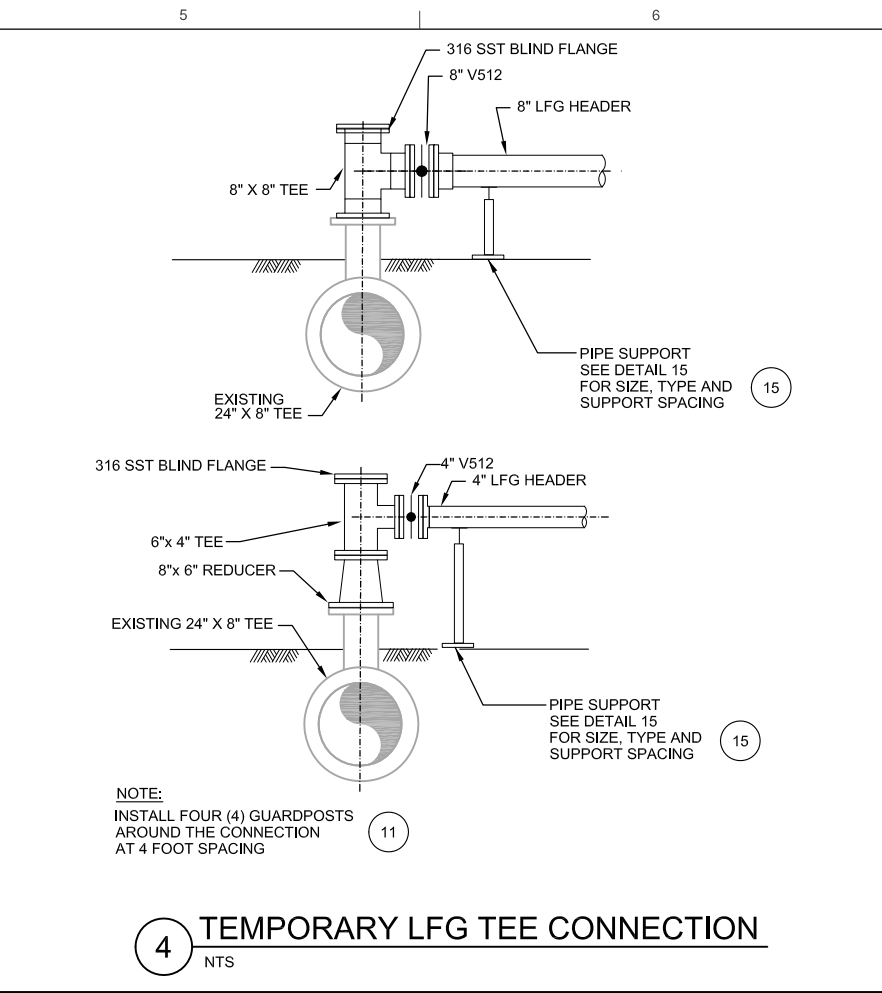


- NOTES**
- THE COUNTY WILL SURVEY THE PROPOSED WELL LOCATION AND PROVIDE THE EXISTING GROUND ELEVATIONS AT EACH LOCATION PRIOR TO COMMENCEMENT OF WELL DRILLING
  - THE COUNTY WILL ADJUST WELL DEPTHS AND SCHEDULE BASED ON THE PRE-CONSTRUCTION SURVEY
  - WELLS ARE TO BE DRILLED TO THE DEPTH AND DIAMETER AS SHOWN ON THE PLANS. THE BORING DEPTHS SHOWN ON THE PLANS ARE ESTIMATED AND MAY BE ADJUSTED UNDER NO CIRCUMSTANCES THE DRILLING DEPTHS WILL BE LESS THAN 10 FEET FROM THE LINER.
  - CPVC PIPES CONNECTED WITH GLUE AND SECURED WITH LAG SCREWS (TYPICAL OF EACH FITTING BELOW GRADE). SCREW LENGTH SHALL BE NO LONGER THAN THE COMBINED THICKNESS OF THE WALLS OF BOTH PIPE AND FITTING.

**1 VERTICAL LFG EXTRACTION WELL DETAIL**  
NTS



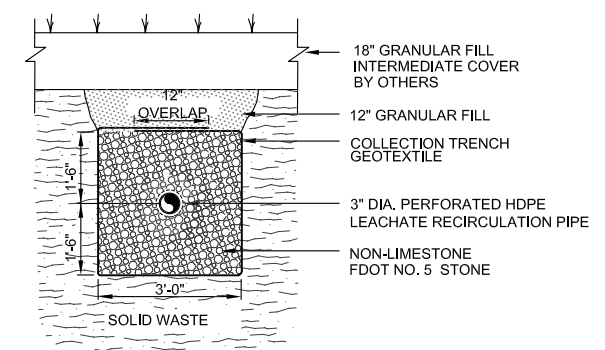
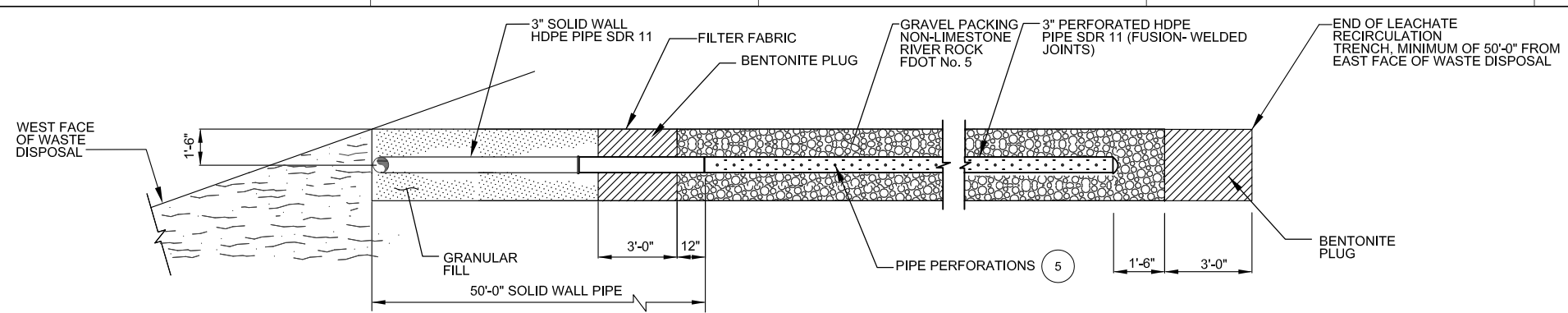
**3 LEACHATE RECIRCULATION TEE CONNECTION DETAIL**  
NTS  
(TYPICAL FOR EACH WASTE LIFT)



**5 PIPE PERFORATION DETAIL**  
NTS

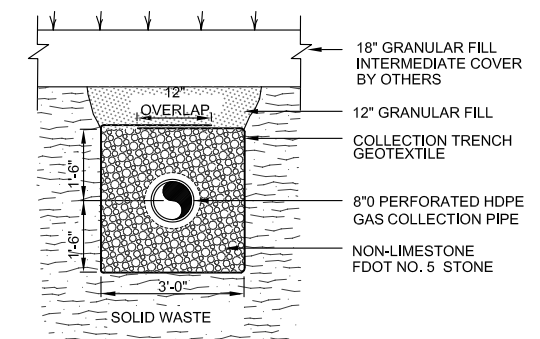
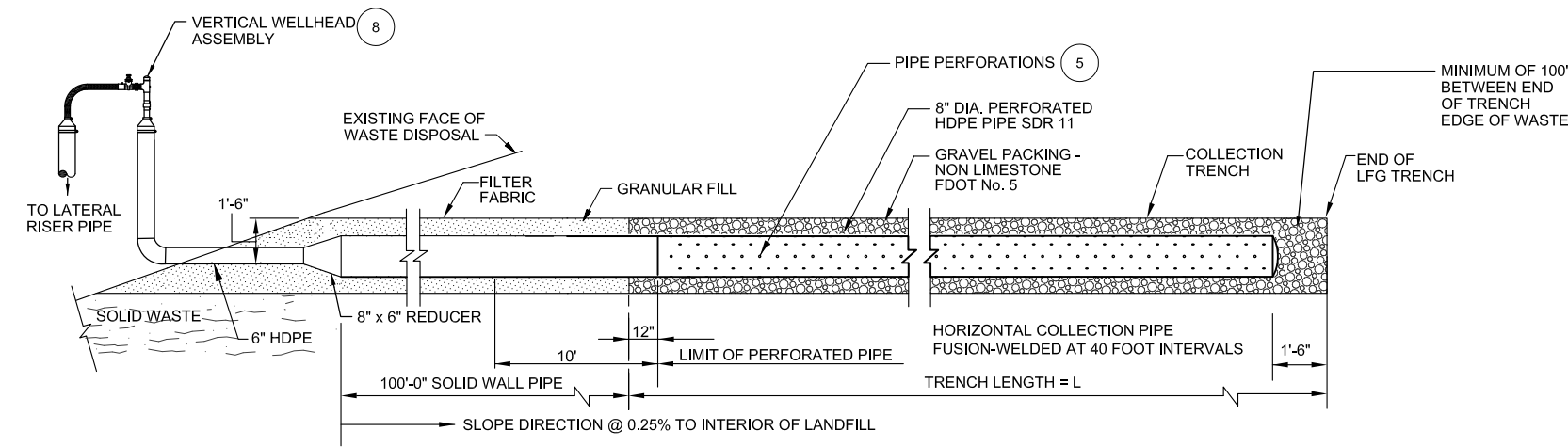
CH2MHILL®		NEEL-SCHAFFER SOLUTIONS YOU CAN BUILD UPON	
CIVIL		OC SOLID WASTE MANAGEMENT FACILITY UTILITIES SOLID WASTE DIVISION ORANGE COUNTY, FLORIDA	
DETAILS		SES CELLS 9-10 CLOSURE	
DATE	DECEMBER 2013	NO. DATE	NO. DATE
PROJ		DSGN	
DWG	C-008	DR	MSB
SHEET	17 of 19	CHK	KRC
		APVD	MSB
		BY	APVD

**6 LEACHATE RECIRCULATION DISTRIBUTION TRENCH DETAIL**  
NTS



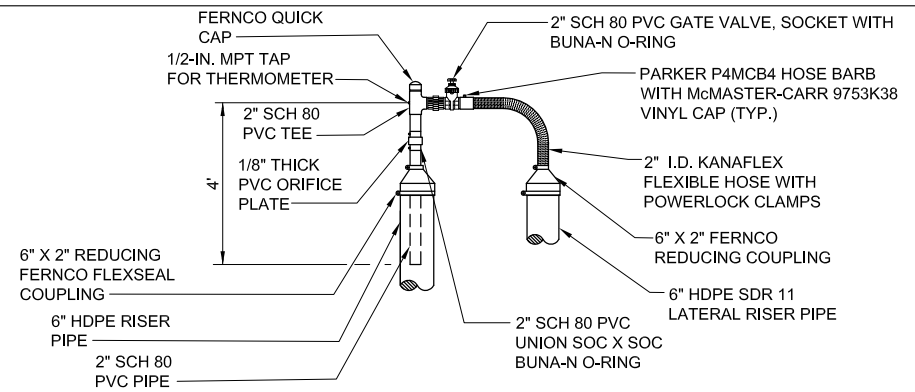
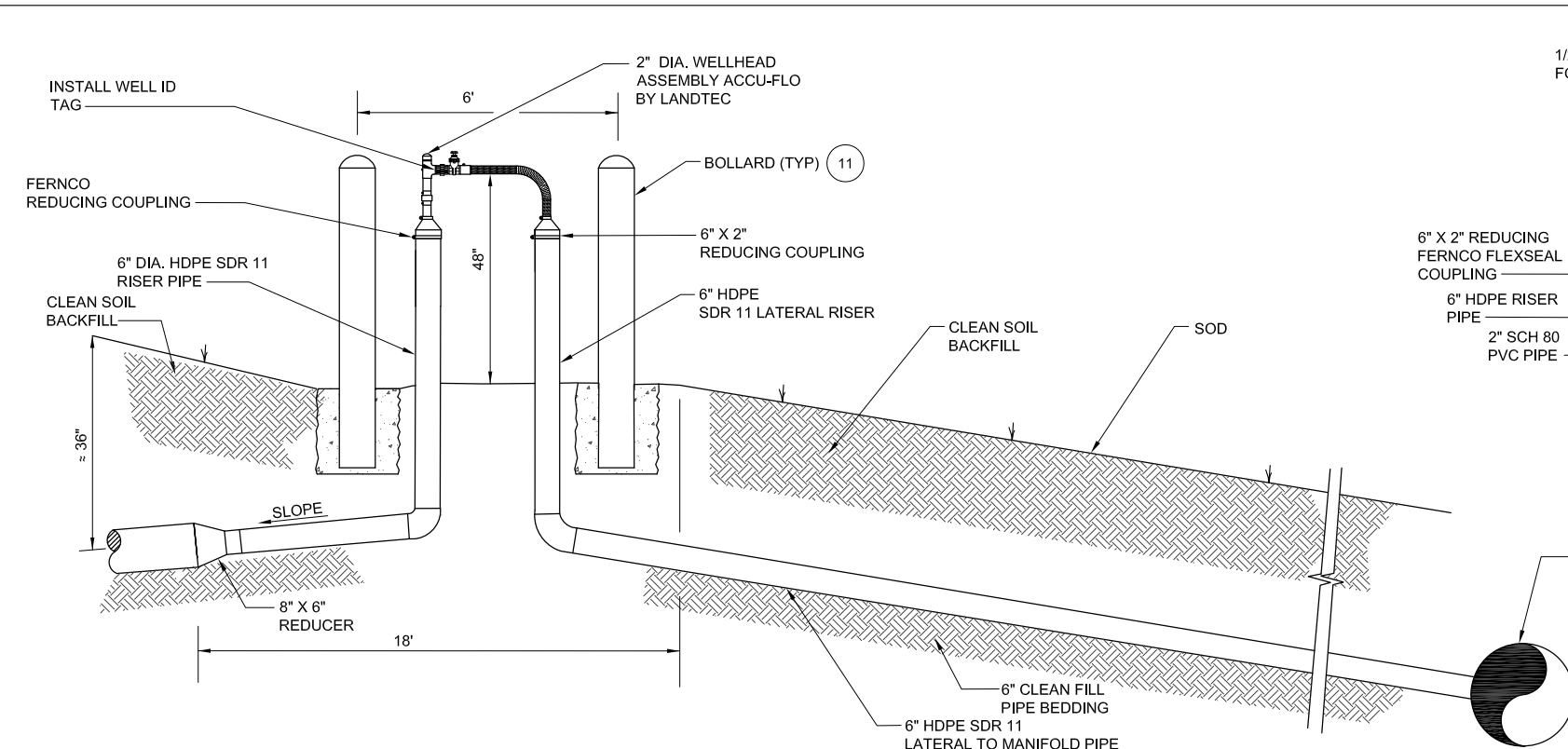
NOTE:  
BACKFILL WITH SELECT SOLID WASTE  
WITHIN ONE FOOT OF GEOTEXTILE

**7 HORIZONTAL LANDFILL GAS COLLECTOR DETAIL**  
NTS

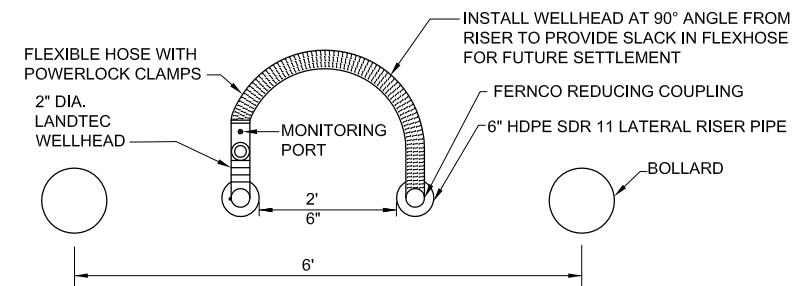


NOTE:  
BACKFILL WITH SELECT SOLID WASTE  
(NO SHARP OBJECTS, REBAR ETC.)  
WITHIN ONE FOOT OF  
GEOTEXTILE

**8 HORIZONTAL LFG COLLECTOR WITH VERTICAL WELLHEAD**  
NTS



**WELLHEAD DETAIL**  
NTS



**PLAN VIEW FOR LFG WELLHEAD**  
NTS

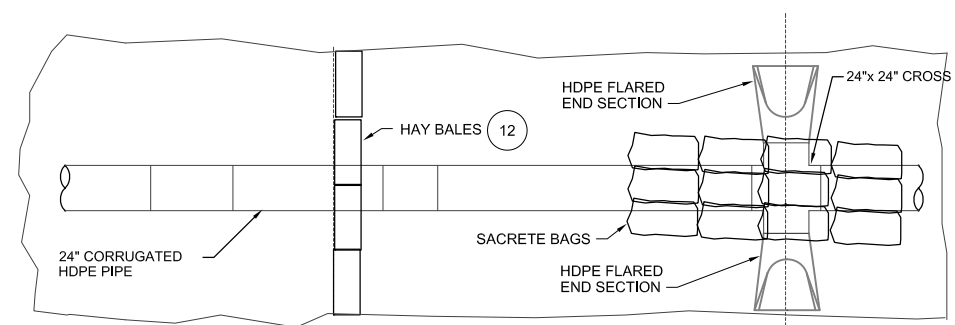
**NEEL-SCHAFFER**  
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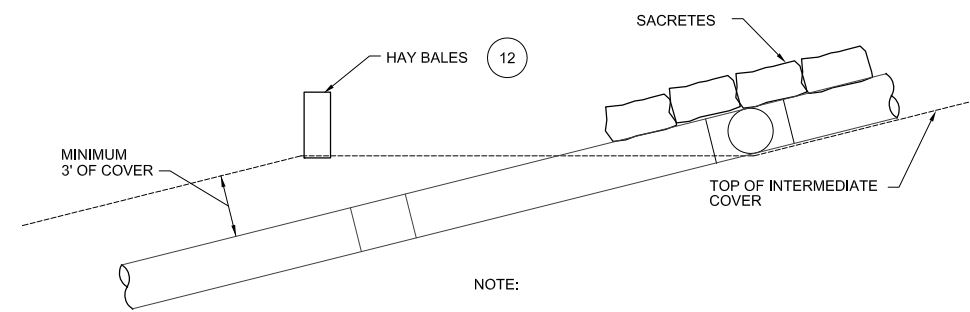
SES CELLS 9-10 CLOSURE  
OC SOLID WASTE MANAGEMENT FACILITY  
UTILITIES SOLID WASTE DIVISION  
ORANGE COUNTY, FLORIDA

DETAILS

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PLAN

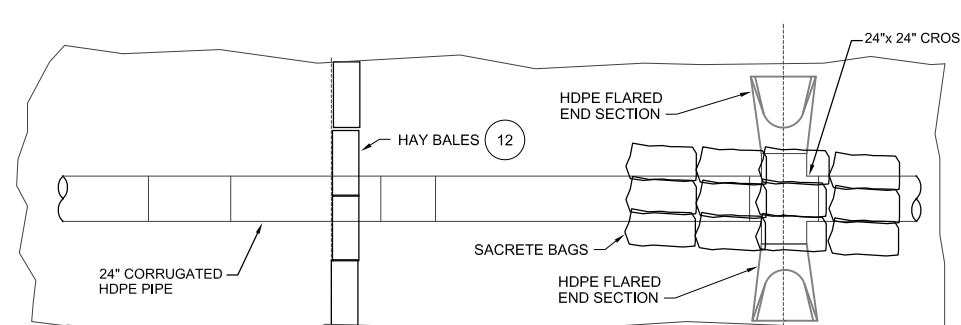


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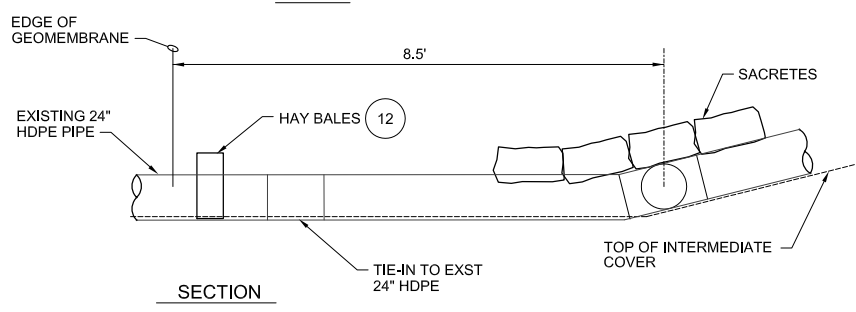
NOTE:

1. LETDOWN PIPES SHALL BE CORRUGATED HDPE PIPES, 24" IN DIAMETER.

9 TEMPORARY STORMWATER LETDOWN STRUCTURE  
NTS

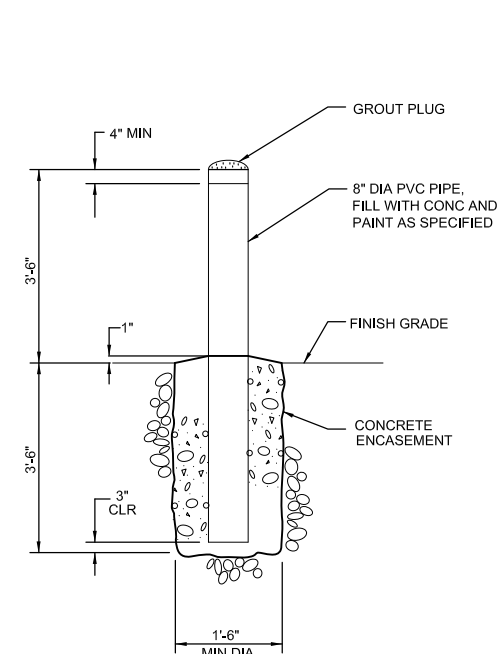


PLAN

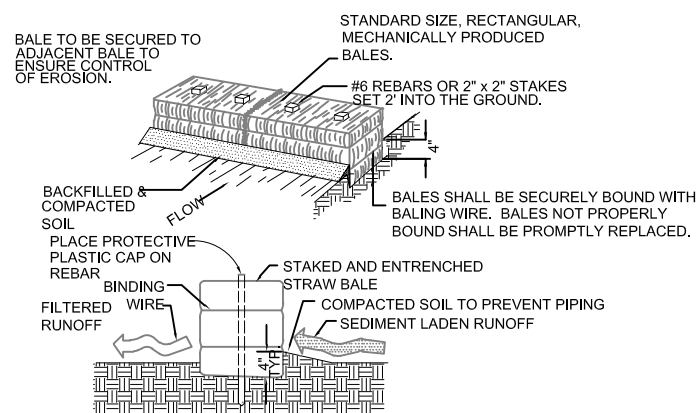


SECTION

10 FLARED END SECTIONS AT FIRST BENCH  
NTS

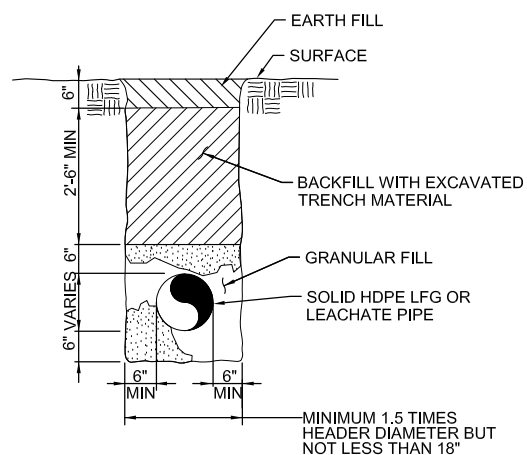


11 GUARDPOST- EXTERIOR  
NTS

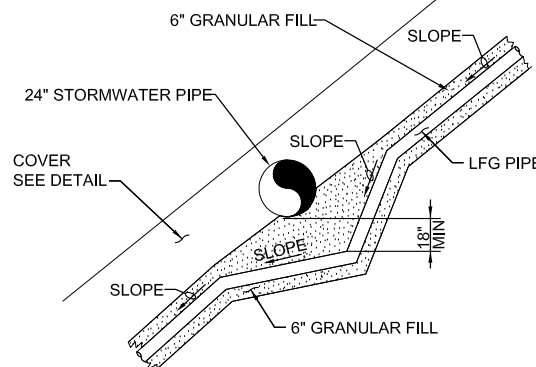


- NOTES:
- EXCAVATE TRENCH WIDTH OF BALE LENGTH OF PROPOSED BARRIER TO A MINIMUM DEPTH OF 4 INCHES.
  - HAY BALES SHOULD BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
  - CONTRACTOR IS REQUIRED TO REMOVE HAY BALE BARRIERS AND RESTORE AREA TO THE ORIGINAL CONDITION UPON COMPLETION OF CONSTRUCTION AND PERMANENT STABILIZATION OF UPSLOPE AREAS.

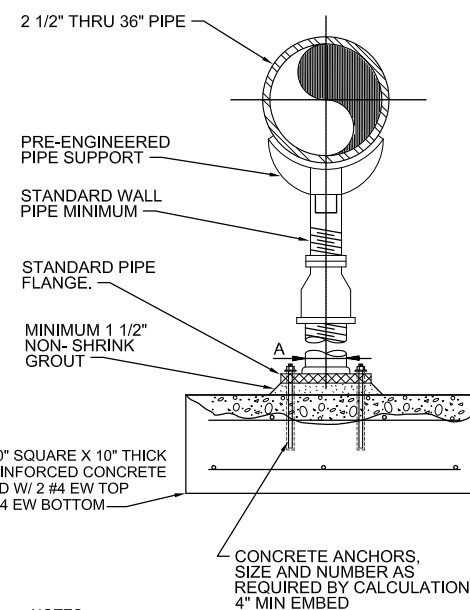
12 STAKED HAYBALE  
NTS



13 LFG & LEACHATE PIPE TRENCH  
NTS



14 LFG PIPE CROSSING STORMWATER PIPE  
NTS



DIMENSION TABLE

PIPE SIZE	A
2-1/2"	2-1/2"
3"	2-1/2"
4"	3"
6"	3"
8"	3"
10"	3"
12"	3"
14"	4"
16"	4"
20"	6"
24"	6"
30"	6"
36"	6"

SUPPORT SPACING	
SDR 11 & 17 HPDE PIPE SIZE	MAXIMUM SUPPORT SPACING
1" - 2"	2'-6"
4" - 6"	4'-0"
8" - 10"	5'-0"
> 12"	6'-0"

- NOTES:
- PIPE SUPPORTS SHALL BE GALVANIZED STEEL. PROVIDE 90 DEGREE TO 120 DEGREE PIPE SADDLE BASEPLATES DRILLED FOR ANCHORS BOLTS. SADDLE SUPPORTS SHALL BE:
    - MINIMUM STANDARD WEIGHT PIPE STANCHION, SADDLE, AND ANCHORING FLANGE.
    - NONADJUSTABLE SADDLE: MSS SP , TYPE 37 WITH UBOLT.
    - ADJUSTABLE SADDLE: MSS SP 58, TYPE 38 WITHOUT CLAMP.
  - CONCRETE SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI, WITH A MAXIMUM W/C RATIO = 0.50, A MAXIMUM SLUMP = 5", CONCRETE SHALL BE MIXED AND PLACED PER ACI 304 AND 318 (LATEST EDITION) AND SHALL BE CURED WITH APPROVED CURING COMPOUND MEETING ASTM C1315.

15 PIPE SUPPORT  
NTS

NEEL-SCHAFFER SOLUTIONS YOU CAN BUILD UPON

CH2MHILL

SES CELLS 9 -10 CLOSURE  
OC SOLID WASTE MANAGEMENT FACILITY  
UTILITIES SOLID WASTE DIVISION  
ORANGE COUNTY, FLORIDA

CIVIL  
DETAILS

VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	DECEMBER 2013
PROJ	
DWG	C-010
SHEET	19 of 19