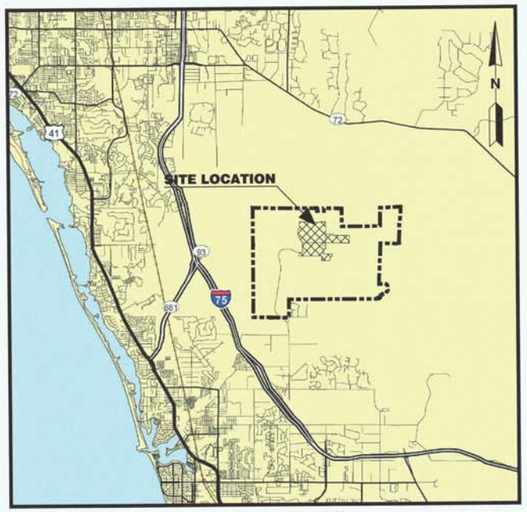
SARASOTA COUNTY

CENTRAL COUNTY SOLID WASTE DISPOSAL COMPLEX

PHASE II LFGCCS EXPANSION

NOKOMIS, FLORIDA

MARCH 2017



LOCATION MAP

Sarasota County

SARASOTA BOARD OF COUNTY COMMISSIONERS
4000 KNIGHTS TRAIL ROAD
NOKOMIS, FL, 34275

INDEX OF DRAWINGS

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4	-	STAGE 1B - SUBCELL 3, LIFT 2 - TARGETS
5	-	STAGE 2 - SUBCELL 4, LIFT 2 - TARGETS
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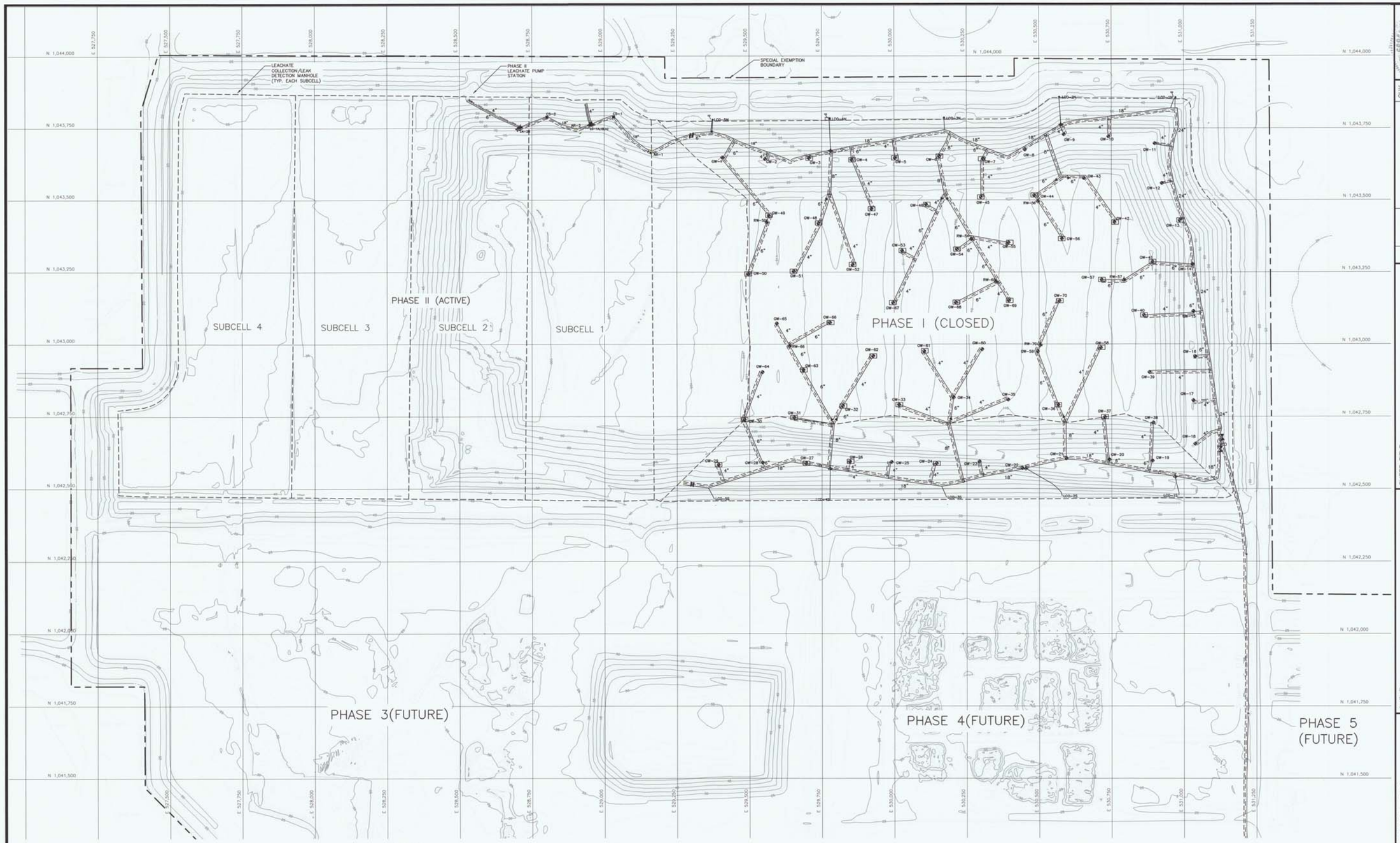
SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS, INC.
4041 PARK OAKS BLVD., SUITE 100
TAMPA, FLORIDA 33610
PH. (813) 621-0080 FAX. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892
WWW.SCSENGINEERS.COM

SCS PROJECT NO. 09216163.00

DESIGN DRAWINGS
MARCH 2017

3-22-17
DANIEL R. COOPER, P.E. DATE
LICENSE NO. 66440

G:\PROJECT\Sarasota\09216163.00-Phase II Design_DRAWINGS\Engineering Drawings\Permit Drawings\216163_00 COVR.dwg Mar 16, 2017 - 5:21pm Layout Name: Cover By: 3661dfd



NOTES:

1. TOPOGRAPHY WITHIN PHASE I AND II PROVIDED BY KUCERA INTERNATIONAL INC. 38133 WESTERN PARKWAY WILLOUGHBY, OH (440) 975-4230 DATED: 12/3/2016.
2. EXISTING PHASE I LANDFILL GAS COLLECTION AND CONTROL SYSTEM LAYOUT OBTAINED FROM RECORD DRAWINGS TITLED "PHASE I-SEQUENCE I LFGCCS" DATED JUNE 2010 BY HDR ENGINEERING INC. AND "PHASE I-SEQUENCE 2 LFGCCS" DATED AUGUST 2012, BY HDR ENGINEERING, INC.
3. EXISTING PHASE II LFGCCS LAYOUT OBTAINED FROM RECORD DRAWINGS TITLED "PHASE I LATERAL REPLACEMENTS AND GCCS PHASE II SUBCELLS 1 AND 2 LEACHATE COLLECTION SYSTEM CONNECTIONS" DATED MARCH 2016, BY SCS ENGINEERS.

LEGEND:

102 / 22.67	EXIST. SURVEY CONTROL POINT
⊢	EXIST. HEADER/LATERAL TEE FOR FUTURE EXPANSION
AR-1	EXIST. HEADER ACCESS RISER
LC-14	EXIST. LEACHATE COLLECTION SYSTEM
LCO-1N	EXIST. LEACHATE COLLECTION SYSTEM
GW-3	EXIST. LFG EXTRACTION WELL
GW-3	EXIST. LFG EXTRACTION WELL WITH DEWATERING PUMP
RW-70	EXIST. REMOTE WELLHEAD
CT-1	EXIST. CONDENSATE U-TRAP
CS-1	EXIST. CONDENSATE SUMP
⋈	EXIST. ISOLATION VALVE
4"	EXIST. HEADER/LATERAL PIPE SIZE
———	EXIST. LFG HEADER/LATERAL
- - - -	EXIST. AIR SUPPLY LINE
— · —	EXIST. DEWATERING DISCHARGE LINE
- - - -	EXIST. PHASE/SUBCELL BOUNDARY

N

0 75 150 300
1" = 150'

DESIGN DRAWINGS
MARCH 2017

DANIEL R. COOPER, P.E.
LICENSE NO. 66440

REV	DATE	DESCRIPTION	CHK. BY

SHEET TITLE: **EXISTING LFG SYSTEM**

PROJECT TITLE: **PHASE II LFGCCS EXPANSION**

CLIENT: **SARASOTA COUNTY CENTRAL COUNTY SOLID WASTE DISPOSAL COMPLEX NOKOMIS, FLORIDA**

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PHONE: (813) 621-0080 FAX: (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJECT NO.	DWN. BY	CHK. BY	QA/QC BY	APP. BY
09216163.00	AFD	DRC	CFL	DRC

DSN. BY: AFD

CADD FILE: 216163_00 EXISTING

DATE: MARCH 2017

SCALE: AS SHOWN

DRAWING NO. **2**

SHEET 2 of 16

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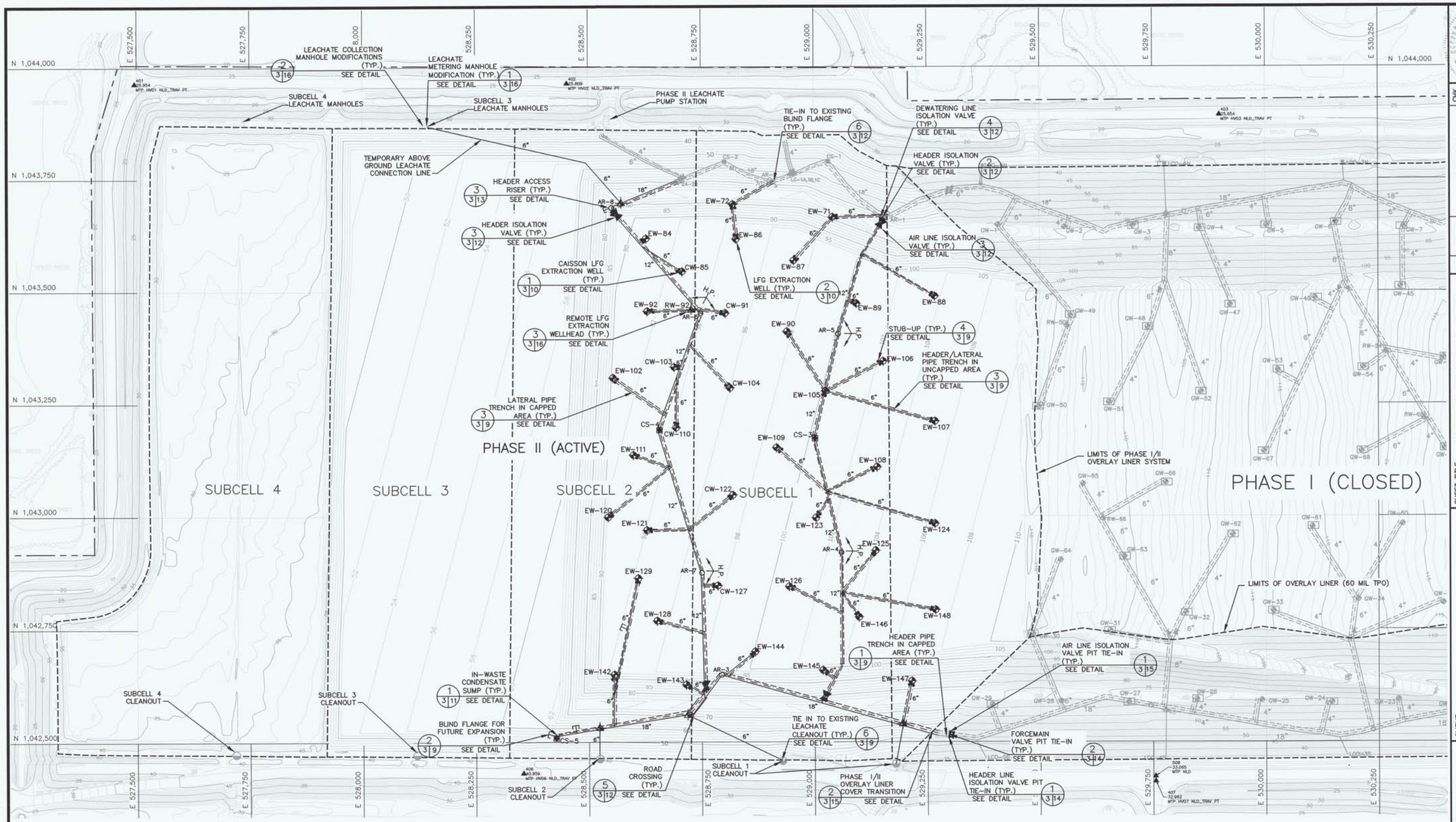


NOTES:

1. LIFT SEQUENCE IN ACCORDANCE WITH THE PHASE II STAGING PLANS BY HDR ENGINEERING, DATED DECEMBER 1, 2014.
2. TOPOGRAPHY OUTSIDE OF LIFT SEQUENCE PROVIDED BY KUCERA INTERNATIONAL INC. 38133 WESTERN PARKWAY WILLOUGHBY, OH 44094 (440) 975-4230 DATED: DECEMBER 3, 2016
3. CONTROL POINTS PROVIDED BY STANTEC, IN A DRAWING ENTITLED, "CONTROL POINTS," DATED JULY 8, 2016.
4. EXISTING TOPOGRAPHIC CONTOURS SHOWN IN SUBCELL 4 OF PHASE II. FUTURE CONTOURS SHOW IN SUBCELLS 1-3 IN PHASE II: SUBCELL 3 IN LIFT 2, SUBCELL 1 AND 2 IN LIFT 5.

LEGEND:

- RW-89 — EXIST. REMOTE WELL
- △ — EXIST. COUNTY SURVEY CONTROL POINT
- EXIST. LFG HEADER/LATERAL
- EXIST. AIR SUPPLY LINE
- EXIST. DEWATERING DISCHARGE
- HC-1 — HORIZONTAL COLLECTOR/REMOTE WELLHEAD
- CW-71 — CAISSON WELL
- EW-89 — EXTRACTION WELL
- AR-7 — ACCESS RISER
- H.P. — PIPING HIGH POINT
- HEADER ISOLATION VALVE
- ROAD CROSSING
- CS-1 — CONDENSATE SUMP
- SUBCELL BOUNDARY/ LANDFILL LIMITS
- LFG HEADER/LATERAL
- AIR SUPPLY LINE
- DEWATERING DISCHARGE
- E- — BLIND FLANGE FOR FUTURE EXPANSION
- 18" — PIPE DIAMETER
- AR-7 — ACCESS RISER
- LEACHATE CLEANOUT RISER

0 50 100 200
1" = 100'

DESIGN DRAWINGS
MARCH 2017

DANIEL R. COOPER, P.E. LICENSE NO. 66440

REV	DATE	DESCRIPTION	CHK. BY

SHEET TITLE: STAGE 1A: SUBCELLS 3 - LIFT 2 CAISSON AND VERTICAL WELLS

PROJECT TITLE: PHASE II LFGCCS EXPANSION

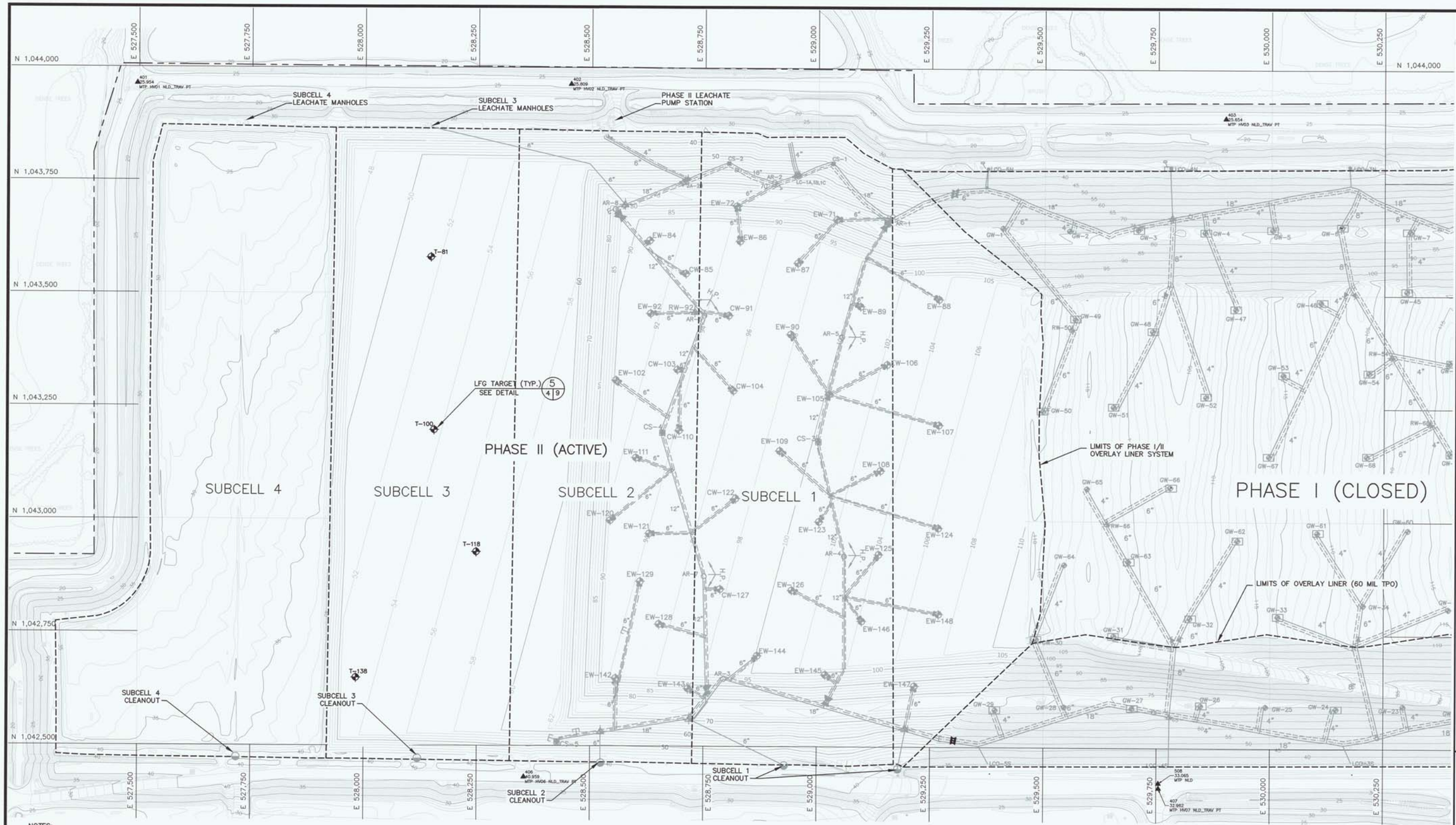
CLIENT: SARASOTA COUNTY CENTRAL COUNTY SOLID WASTE DISPOSAL COMPLEX NOKOMIS, FLORIDA

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO.	DWG. BY	Q/A REVIEW
09216163.00	AFD	CFL
DSK. BY: AFD	CHK. BY: DRC	APP. BY: DRC

CADD FILE: 216163_00 PROPOSED
DATE: MARCH 2017
SCALE: AS SHOWN
DRAWING NO. 3
SHEET 3 of 16

G:\PROJECT\Sarasota\09216163.00-Phase II Design_DRAWINGS\Engineering Drawings\Permit Drawings\216163_00 Proposed.dwg Mar 16, 2017 - 5:16pm Layout Name: ST. 1A SUB-CELLS 1 & 2 LIFT 5 By: 3661afd



NOTES:

1. LIFT SEQUENCE IN ACCORDANCE WITH THE PHASE II STAGING PLANS BY HDR ENGINEERING, DATED DECEMBER 1, 2014.
2. TOPOGRAPHY OUTSIDE OF LIFT SEQUENCE PROVIDED BY KUCERA INTERNATIONAL INC. 38133 WESTERN PARKWAY WILLOUGHBY, OH 44094 (440) 975-4230 DATED: DECEMBER 3, 2016
3. CONTROL POINTS PROVIDED BY STANTEC, IN A DRAWING ENTITLED, "CONTROL POINTS," DATED JULY 8, 2016.
4. TARGETS TO BE INSTALLED FOLLOWING COMPLETION OF LIFT 2 IN THE TARGET AREA. DEPTH VARIES, MAINTAIN A MINIMUM OF 4 FEET OFFSET FROM BOTTOM LINER SYSTEM.
5. EXISTING TOPOGRAPHIC CONTOURS SHOWN IN SUBCELL 4 OF PHASE II. FUTURE CONTOURS SHOWN IN SUBCELLS 1-3 IN PHASE II: SUBCELL 3 IN LIFT 2, SUBCELL 1 AND 2 IN LIFT 5.

LEGEND:

- RW-89 — EXIST. REMOTE WELL
- △ — EXIST. COUNTY SURVEY CONTROL POINT
- EXIST. LFG HEADER/LATERAL
- EXIST. AIR SUPPLY LINE
- EXIST. DEWATERING DISCHARGE
- HC-1 — HORIZONTAL COLLECTOR/REMOTE WELLHEAD
- CW-71 — CAISSON WELL
- EW-89 — EXTRACTION WELL
- AR-7 — ACCESS RISER
- H.P. — PIPING HIGH POINT
- HEADER ISOLATION VALVE
- ROAD CROSSING
- CS-1 — CONDENSATE SUMP
- SUBCELL BOUNDARY/ LANDFILL LIMITS
- LFG HEADER/LATERAL
- AIR SUPPLY LINE
- DEWATERING DISCHARGE
- E- — BLIND FLANGE FOR FUTURE EXPANSION
- 18" — PIPE DIAMETER

N

0 50 100 200
1" = 100'

DESIGN DRAWINGS
MARCH 2017

DANIEL R. COOPER, P.E.
LICENSE NO. 66440

REV	DATE	DESCRIPTION	CHK. BY
1			
2			
3			
4			
5			
6			

SHEET TITLE: STAGE 1B: SUBCELLS 3 - LIFT 2 TARGETS

PROJECT TITLE: PHASE II LFGCCS EXPANSION

CLIENT: SARASOTA COUNTY CENTRAL COUNTY SOLID WASTE DISPOSAL COMPLEX NOKOMIS, FLORIDA

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJECT NO.	DWN. BY	Q/A BY	APP. BY
09216163.00	AFD	DFL	DRC
DSN. BY	CHK. BY		
AFD	DRC		

CADD FILE: 216163_00 PROPOSED

DATE: MARCH 2017

SCALE: AS SHOWN

DRAWING NO. 4

SHEET 4 of 16

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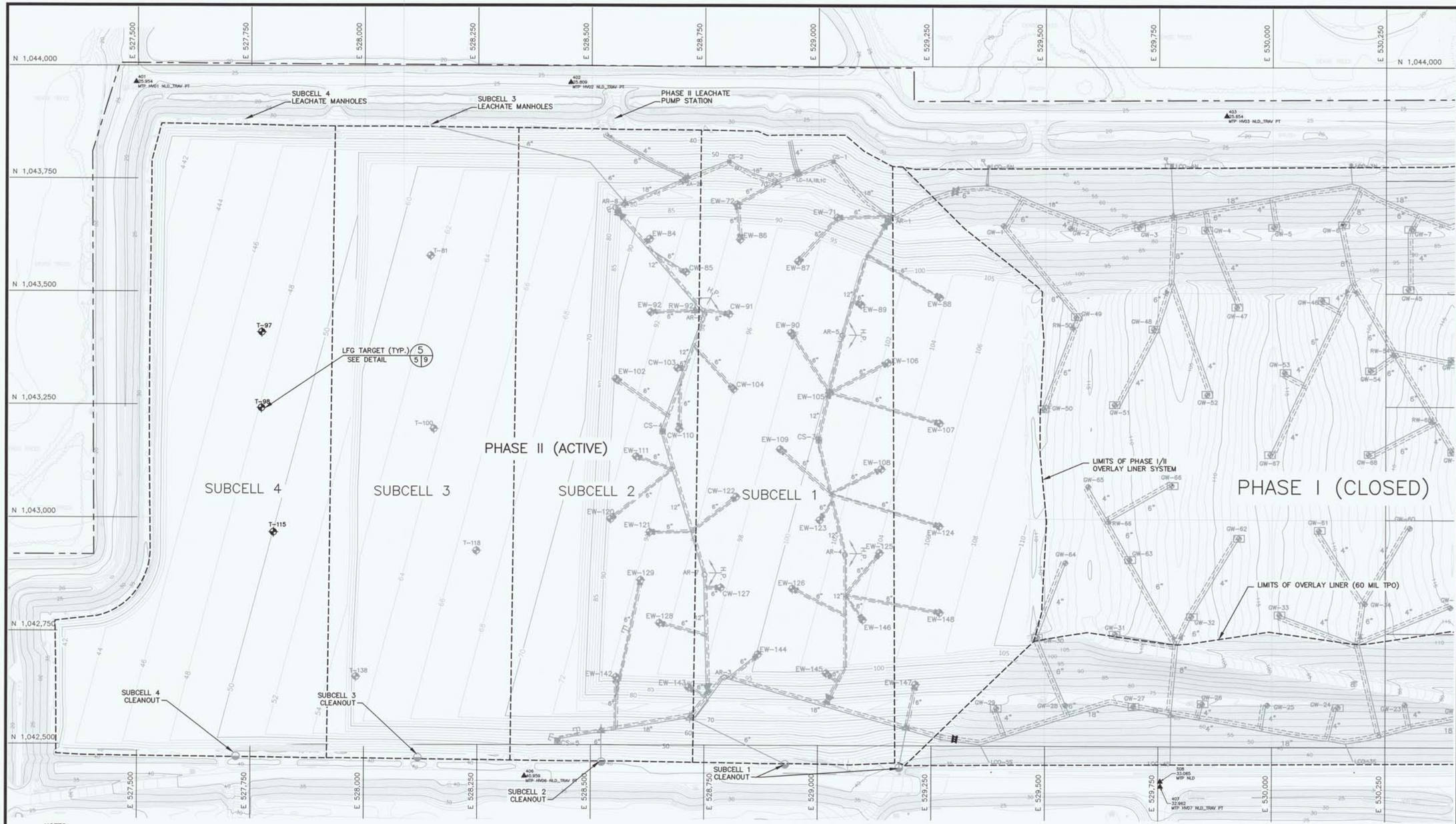

NOTES:

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3. CONTROL POINTS PROVIDED BY STANTEC, IN A DRAWING ENTITLED, "CONTROL POINTS," DATED JULY 8, 2016.
4. TARGET WELLS TO BE INSTALLED BY COUNTY FORCES. TRAGET TO BE INSTALLED FOLLOWING COMPLETION OF LIFT 2 IN THE TARGET AREA. DEPTH VARIES, MAINTAIN A MINIMUM OF 4 FEET FROM BOTTOM LINER SYSTEM.
5. FUTURE CONTOURS SHOWN IN SUBCELLS 1-4 IN PHASE II: SUBCELLS 1 AND 2 IN LIFT 5, SUBCELL 3 IN LIFT 3, SUBCELL 4 IN LIFT 2.

LEGEND:

- RW-89 — EXIST. REMOTE WELL
- △ — EXIST. COUNTY SURVEY CONTROL POINT
- EXIST. LFG HEADER/LATERAL
- EXIST. AIR SUPPLY LINE
- EXIST. DEWATERING DISCHARGE
- HC-1 — HORIZONTAL COLLECTOR/REMOTE WELLHEAD
- CW-71 — CARBON WELL
- EW-89 — EXTRACTION WELL
- AR-7 — ACCESS RISER
- H.P. — PIPING HIGH POINT
- HEADER ISOLATION VALVE
- ROAD CROSSING
- CS-1 — CONDENSATE SUMP
- SUBCELL BOUNDARY/ LANDFILL LIMITS
- LFG HEADER/LATERAL
- AIR SUPPLY LINE
- DEWATERING DISCHARGE
- E- — BLIND FLANGE FOR FUTURE EXPANSION
- 18" — PIPE DIAMETER
- AR-7 — ACCESS RISER

N

0 50 100 200
1" = 100'

DESIGN DRAWINGS
MARCH 2017

DANIEL R. COOPER, P.E. LICENSE NO. 66440

REV	DATE	DESCRIPTION	CHK. BY

SHEET TITLE: STAGE 2: SUBCELLS 4 - LIFT 2 TARGETS

PROJECT TITLE: PHASE II LFGCCS EXPANSION

CLIENT: SARASOTA COUNTY CENTRAL COUNTY SOLID WASTE DISPOSAL COMPLEX NOKOMIS, FLORIDA

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO.	DWN. BY:	D/A RVW BY:
09216163.00	AFD	CFL
DSN. BY:	CHK. BY:	APP. BY:
AFD	DRC	DRC

CADD FILE: 216163_00 PROPOSED

DATE: MARCH 2017

SCALE: AS SHOWN

DRAWING NO. 5

SHEET 5 of 16

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SUBCELL 4 LEACHATE MANHOLES

SUBCELL 3 LEACHATE MANHOLES

PHASE II LEACHATE PUMP STATION

TEMPORARY ABOVE GROUND LEACHATE CONNECTION LINE

HORIZONTAL COLLECTOR WELLHEAD (TYP.) SEE DETAIL 2/6 13

HORIZONTAL COLLECTOR TRENCH (TYP.) SEE DETAIL 1/6 13

PHASE II (ACTIVE)

SUBCELL 4

SUBCELL 3

SUBCELL 2

SUBCELL 1

PHASE I (CLOSED)

LIMITS OF PHASE I/II OVERLAY LINER SYSTEM

LIMITS OVERLAY LINER (60 MIL TPO)

SUBCELL 4 CLEANOUT

SUBCELL 3 CLEANOUT

SUBCELL 2 CLEANOUT

SUBCELL 1 CLEANOUT

NOTES:

1. LIFT SEQUENCE IN ACCORDANCE WITH THE PHASE II STAGING PLANS BY HDR ENGINEERING, DATED DECEMBER 1, 2014.
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4. FUTURE CONTOURS SHOW IN SUBCELLS 1-4 IN PHASE II: SUBCELL 3 AND 4 IN LIFT 4, SUBCELL 1 AND 2 IN LIFT 5.

LEGEND:

- RW-89 — EXIST. REMOTE WELL
- △ — EXIST. COUNTY SURVEY POINT
- EXIST. LFG HEADER/LATERAL
- EXIST. AIR SUPPLY LINE
- EXIST. DEWATERING DISCHARGE
- HC-1 — HORIZONTAL COLLECTOR/REMOTE WELLHEAD
- CW-71 — CAISSON WELL
- EW-89 — EXTRACTION WELL
- AR-7 — ACCESS RISER
- H.P. — PIPING HIGH POINT
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- ROAD CROSSING
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- SUBCELL BOUNDARY/ LANDFILL LIMITS
- LFG HEADER/LATERAL
- AIR SUPPLY LINE
- DEWATERING DISCHARGE
- BLIND FLANGE FOR FUTURE EXPANSION
- 18" — PIPE DIAMETER
- ACCESS RISER

0 50 100 200
1" = 100'

DESIGN DRAWINGS
MARCH 2017

DANIEL R. COOPER, P.E.
LICENSE NO. 68440

REV	DATE	DESCRIPTION	CHK. BY

SHEET TITLE: STAGE 3A: SUBCELLS 3 AND 4 - LIFT 4 HORIZONTAL COLLECTORS

PROJECT TITLE: PHASE II LFGCCS EXPANSION

CLIENT: SARASOTA COUNTY CENTRAL COUNTY SOLID WASTE DISPOSAL COMPLEX NOKOMIS, FLORIDA

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
3920 SW 53RD STREET, SUITE 200, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 621-0475
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 09216163.00 | DWG. BY: AFD | C/A R/W BY: CFL
DSK. BY: AFD | CHK. BY: DRC | APP. BY: DRC

CADD FILE: 216163_00 PROPOSED

DATE: MARCH 2017

SCALE: AS SHOWN

DRAWING NO. 6

SHEET 6 of 16

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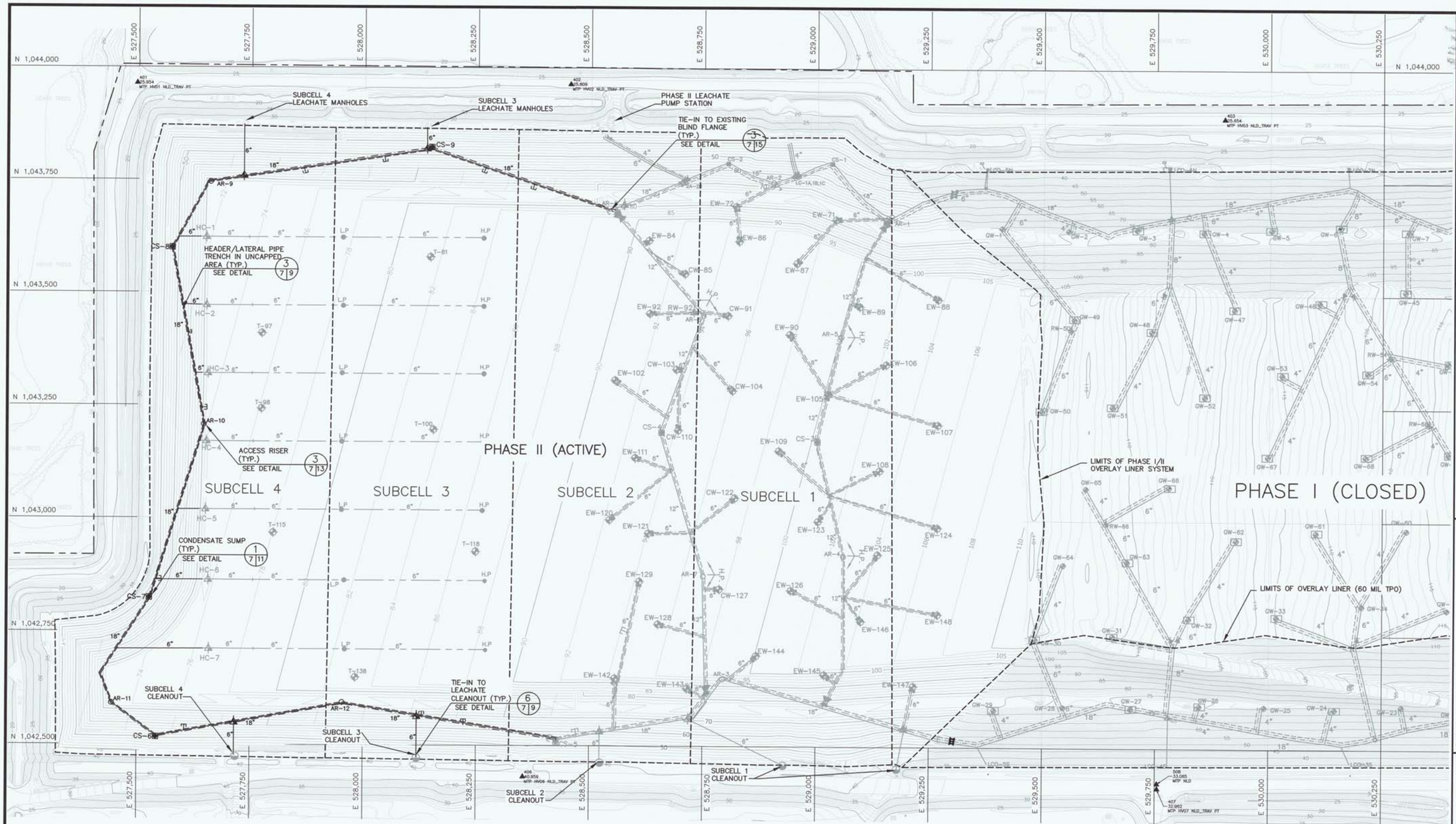

NOTES:

1. LIFT SEQUENCE IN ACCORDANCE WITH THE PHASE II STAGING PLANS BY HDR ENGINEERING, DATED DECEMBER 1, 2014.
2. TOPOGRAPHY OUTSIDE OF LIFT SEQUENCE PROVIDED BY KUCERA INTERNATIONAL INC. 38133 WESTERN PARKWAY WILLOUGHBY, OH 44094 (440) 975-4230 DATED: DECEMBER 3, 2016
3. CONTROL POINTS PROVIDED BY STANTEC, IN A DRAWING ENTITLED, "CONTROL POINTS," DATED JULY 8, 2016.
4. FUTURE CONTOURS SHOWN IN SUBCELLS 1-4 IN PHASE II: SUBCELL 3 AND 4 IN LIFT 5, SUBCELL 1 AND 2 IN LIFT 5.

LEGEND:

RW-89	EXIST. REMOTE WELL
△	EXIST. COUNTY SURVEY POINT
	EXIST. LFG HEADER/LATERAL
	EXIST. AIR SUPPLY LINE
	EXIST. DEWATERING DISCHARGE
HC-1	HORIZONTAL COLLECTOR/REMOTE WELLHEAD
CW-71	CAISSON WELL
EW-89	EXTRACTION WELL
AR-7 ○	ACCESS RISER
H.P.	PIPING HIGH POINT
	HEADER ISOLATION VALVE
	ROAD CROSSING
CS-1	CONDENSATE SUMP
	SUBCELL BOUNDARY/ LANDFILL LIMITS
	LFG HEADER/LATERAL
	AIR SUPPLY LINE
	DEWATERING DISCHARGE
E	BLIND FLANGE FOR FUTURE EXPANSION
18"	PIPE DIAMETER
AR-7 ○	ACCESS RISER

N

0 50 100 200
1" = 100'

DESIGN DRAWINGS
MARCH 2017

DANIEL R. COOPER, P.E.
LICENSE NO. 66440

REV	DATE	DESCRIPTION	CHK. BY

SHEET TITLE: STAGE 3B: SUBCELLS 3 AND 4 - LIFT 5 HEADER

PROJECT TITLE: PHASE II LFGCCS EXPANSION

CLIENT: SARASOTA COUNTY CENTRAL COUNTY SOLID WASTE DISPOSAL COMPLEX NOKOMIS, FLORIDA

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 09216163.00 | DSN. BY: AFD | DWN. BY: AFD | CHK. BY: DRC | Q/A RVW BY: CFL | APP. BY: DRC

CADD FILE: 216163_00 PROPOSED

DATE: MARCH 2017

SCALE: AS SHOWN

DRAWING NO. 7

SHEET 7 of 16

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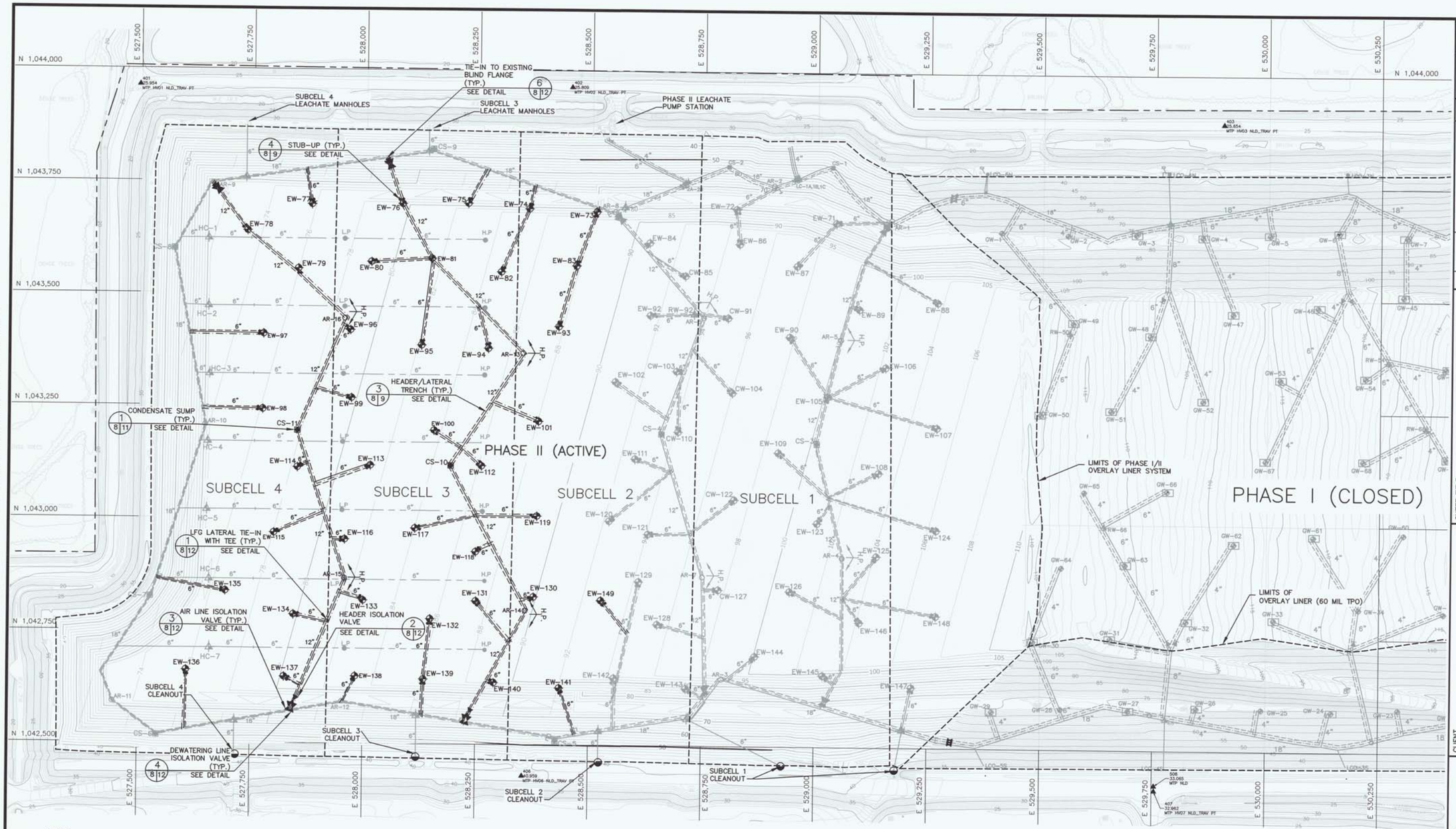


NOTES:

1. LIFT SEQUENCE IN ACCORDANCE WITH THE PHASE II STAGING PLANS BY HDR ENGINEERING, DATED DECEMBER 1, 2014.
2. TOPOGRAPHY OUTSIDE OF LIFT SEQUENCE PROVIDED BY KUCERA INTERNATIONAL INC. 38133 WESTERN PARKWAY WILLOUGHBY, OH 44094 (440) 975-4230 DATED: DECEMBER 3, 2016
3. CONTROL POINTS PROVIDED BY STANTEC, IN A DRAWING ENTITLED, "CONTROL POINTS," DATED JULY 8, 2016.
4. FUTURE CONTOURS SHOWN IN SUBCELLS 1-4 IN PHASE II: LIFT 5.

LEGEND:

- RW-89 — EXIST. REMOTE WELL
- EXIST. COUNTY SURVEY CONTROL POINT
- EXIST. LFG HEADER/LATERAL
- EXIST. AIR SUPPLY LINE
- EXIST. DEWATERING DISCHARGE
- HC-1 — HORIZONTAL COLLECTOR/REMOTE WELLHEAD
- CW-71 — CAISSON WELL
- EW-89 — EXTRACTION WELL
- AR-7 — ACCESS RISER
- H.P. — PIPING HIGH POINT
- HEADER ISOLATION VALVE
- ROAD CROSSING
- CS-1 — CONDENSATE SUMP
- SUBCELL BOUNDARY/ LANDFILL LIMITS
- LFG HEADER/LATERAL
- AIR SUPPLY LINE
- DEWATERING DISCHARGE
- BLIND FLANGE FOR FUTURE EXPANSION
- 18" — PIPE DIAMETER
- AR-7 — ACCESS RISER

0 50 100 200
1" = 100'

DESIGN DRAWINGS
MARCH 2017

DANIEL R. COOPER, P.E.
LICENSE NO. 66440

REV	DATE	DESCRIPTION	CHK. BY

SHEET TITLE: STAGE 4: FINAL LIFT LFG WELLS

PROJECT TITLE: PHASE II LFGCCS EXPANSION

CLIENT: SARASOTA COUNTY CENTRAL COUNTY SOLID WASTE DISPOSAL COMPLEX NOKOMIS, FLORIDA

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH: (813) 621-0080 FAX NO. (813) 623-0757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO.	DWG. BY:	S/A R/W BY:
09216163.00	AFD	CPL
DSK. BY:	CHK. BY:	APP. BY:
AFD	DRC	DRC

CADD FILE: 216163_00 PROPOSED

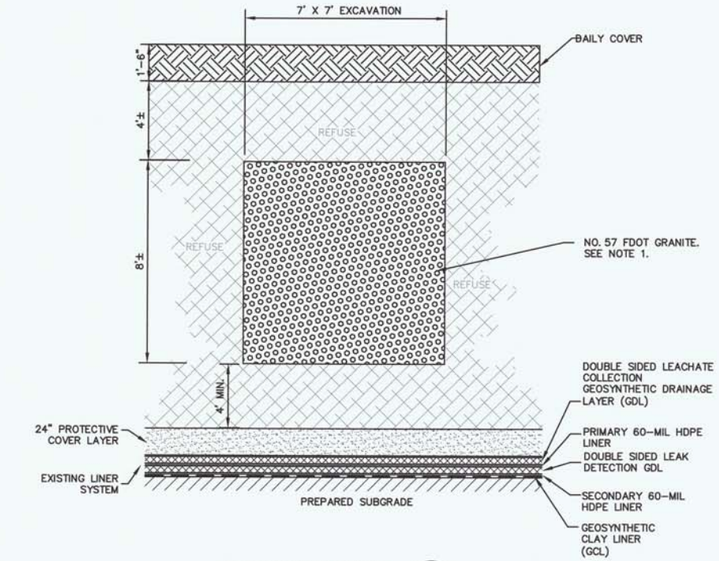
DATE: MARCH 2017

SCALE: AS SHOWN

DRAWING NO. 8

SHEET 8 of 16

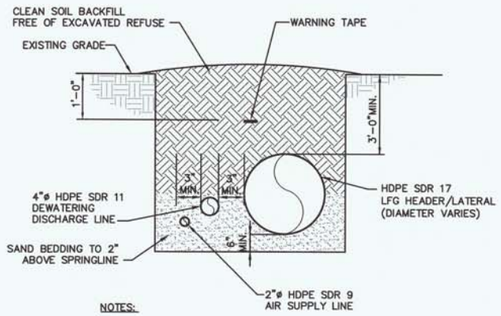
G:\PROJECT\Sarasota\09216163.00-Phase II Design_DRAWINGS\Engineering Drawings\Permit Drawings\216163_00 Proposed.dwg Mar 16, 2017 - 5:40pm Layout Name: ST. 4 SUB-FINAL LIFT By: 3661afd



LFG TARGET DETAIL (5 / 4,5 | 9)
NOT TO SCALE

NOTES:

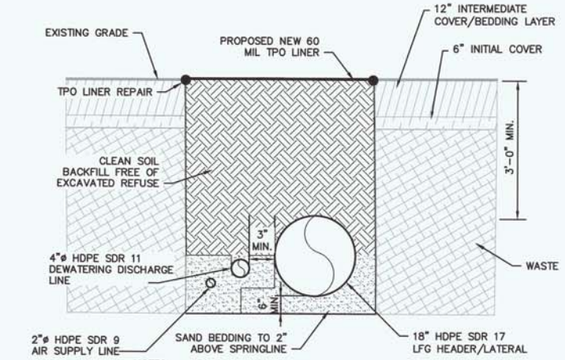
1. LFG TARGET WILL BE EXCAVATED MAINTAINING A MINIMUM 4' OFFSET FROM TOP OF PROTECTIVE COVER SAND.



NOTES:

1. WARNING TAPE TO BE MIN. 3" WIDE AND IMPRINTED WITH "GAS LINE BURIED BELOW."
2. ALL HEADER AND LATERAL PIPE TO BE INSTALLED AT 5% MIN.
3. THE NUMBER AND TYPES OF PIPES INSTALLED IN THE TRENCH MAY VARY, REFER TO SITE PLAN.
4. ALL MAIN HEADER PIPING TO BE INSTALLED AS 18" DIAMETER SDR 17 HDPE. ALL CROSSOVER HEADER PIPING TO BE 12" DIAMETER SDR 17 HDPE. REFER TO SITE PLAN FOR OTHER PIPE DIMENSIONS.
5. 2" AIR AND 4" DEWATERING LINES TO BE INSTALLED ON THE UPHILL SIDE OF THE LFG HEADER.

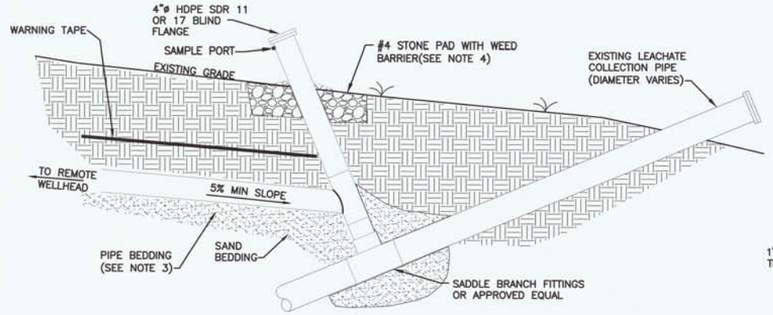
HEADER/LATERAL PIPE TRENCH IN UNCAPPED AREA DETAIL (3 / 3,8 | 9)
NOT TO SCALE



NOTES:

1. ALL LATERALS SHALL BE INSTALLED AT 5% SLOPE.
2. THE NUMBER AND TYPES OF PIPES INSTALLED IN THE TRENCH MAY VARY, REFER TO SITE PLAN.
3. 2" AIR AND 4" DEWATERING LINES TO BE INSTALLED ON THE UPHILL SIDE OF THE LFG HEADER.
4. THE EXISTING TPO IS TO BE PRESERVED TO THE EXTENT POSSIBLE AND "FLAPPED BACK" WHILE WORK IS BEING CONDUCTED.
5. PIPE BURIAL DEPTH MAY VARY TO ENSURE PIPE IS INSTALLED AT 5% MINIMUM SLOPE. PIPE TO MAINTAIN A 3 FOOT BURIAL DEPTH AT A MINIMUM.

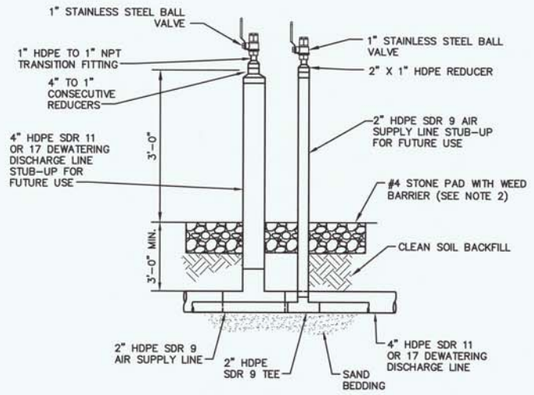
HEADER/LATERAL PIPE TRENCH IN CAPPED AREA DETAIL (1 / 3 | 9)
NOT TO SCALE



TIE-IN TO EXISTING LEACHATE CLEANOUT PIPE (6 / 3,7,8 | 9)
NOT TO SCALE

NOTES:

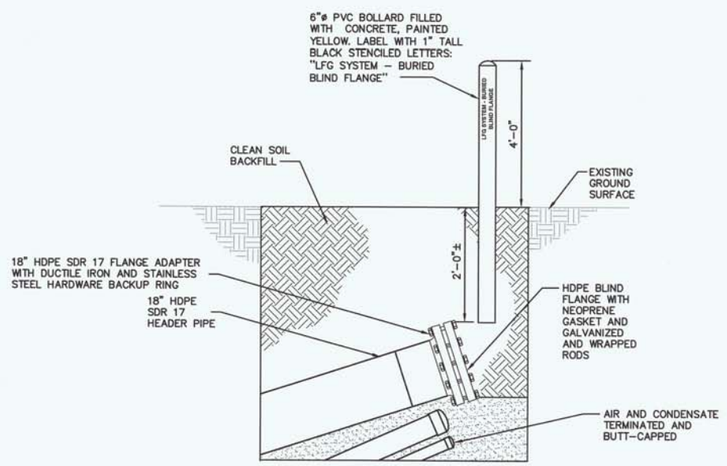
1. WARNING TAPE TO BE INSTALLED WITH A MIN. 3" WIDE AND IMPRINTED WITH "GAS LINE BURIED BELOW."
2. ALL HEADER AND LATERAL TO BE INSTALLED AT 5% MIN. SLOPE UNLESS APPROVED IN ADVANCE BY THE ENGINEER.
3. 1' MIN. OF SAND TO BE PLACED BELOW EACH BRANCH SADDLE. SAND INSTALLED SO IT EXTENDS 3' MIN. IN EACH DIRECTION OF THE BRANCH SADDLE AND HAND-TAMPED PROVIDING SUPPORT TO ALL POINTS OF THE BRANCH SADDLE.
4. #4 STONE PAD TO BE INSTALLED 36" BEYOND THE RISER PIPE IN ALL DIRECTIONS AND 4" THICK. WEED BARRIER USED TO SEPARATE GRAVEL AND CLEAN BACKFILL.



NOTES:

1. ALL 2" AND 4" PIPE AND FITTINGS TO BE BUTT WELDED.
2. #4 STONE PAD TO BE INSTALLED 36" BEYOND THE RISER PIPE IN ALL DIRECTIONS AND 4" THICK. WEED BARRIER TO BE INSTALLED TO SEPARATE GRAVEL AND CLEAN BACKFILL.

STUB-UP DETAIL (4 / 3,8 | 9)
NOT TO SCALE



NOTES:

1. GALVANIZED THREADED RODS, WASHERS, NUTS AND BACKUP RINGS TO BE THOROUGHLY COATED WITH POLYCOAT RUBBERIZED PRIMER, OR EQUAL, AFTER TIGHTENING BOLTS. FLANGE TO BE WRAPPED IN PLASTIC WRAP PRIOR TO BACKFILLING.
2. FLANGE TO BE INSTALLED WITH THE PROPER SLOPE TO PROVIDE FOR FUTURE CONDENSATE DRAINAGE.
3. 2" AIR AND 4" CONDENSATE LINE TO BE BUTT-CAPPED.

BURIED BLIND FLANGE FOR FUTURE EXPANSION DETAIL (2 / 3,8 | 9)
NOT TO SCALE

DESIGN DRAWINGS
MARCH 2017

DANIEL R. COOPER, P.E.
LICENSE NO. 66440

REV	DATE	DESCRIPTION	CHK. BY

SHEET TITLE: DETAILS - 1

PROJECT TITLE: PHASE II LFGCCS EXPANSION

CLIENT: SARASOTA COUNTY CENTRAL COUNTY SOLID WASTE DISPOSAL COMPLEX NOKOMIS, FLORIDA

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 09216163.00 | DSN. BY: AFD | DWN. BY: AFD | CHK. BY: DRC | QA/QC BY: CFL | APP. BY: DRC

CADD FILE: 216163_00 DETL

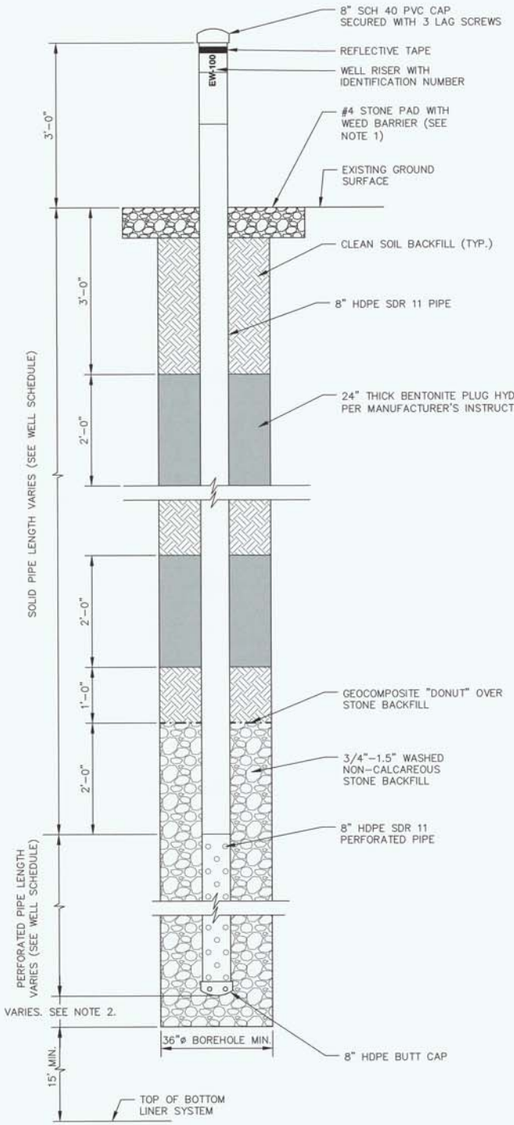
DATE: APRIL 2017

SCALE: AS SHOWN

DRAWING NO. 9

SHEET 9 of 16

G:\PROJECT\Sarasota\09216163.00-Phase II Design_DRAWINGS\Engineering Drawings\Permit Drawings\216163_00 DETL.dwg Mar 20, 2017 - 3:00pm Layout Name: Sheet 9 By: 3661afd



LFG EXTRACTION WELL DETAIL

NOT TO SCALE

2 / 3,8|10

NOTES:

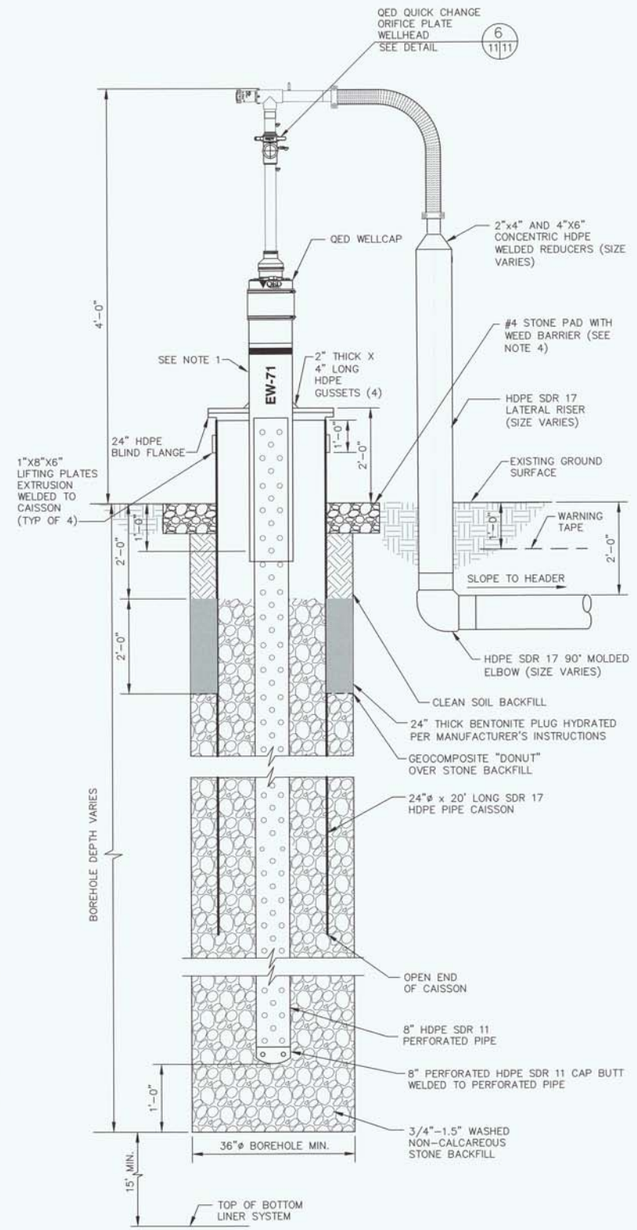
1. #4 STONE PAD TO BE 36" BEYOND THE RISER PIPE IN ALL DIRECTIONS AND 4" THICK. WEED BARRIER SEPARATES GRAVEL AND CLEAN BACKFILL.
2. REMOTE WELLS TO TERMINATE 5 FEET FROM BOTTOM OF BOREHOLE. TRADITIONAL WELLS TO TERMINATE 1 FOOT FROM BOTTOM OF BOREHOLE.

WELL SCHEDULE

Well ID	Stage	Northing	Easting	Approx. Ground Surface	Approx. Base Grade Elevation	Well Depth	Slotted Pipe Length	Solid Pipe Length Below Grade	Solid Pipe Length Above Grade	Thickness of Gravel Pack
				(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
EW-71	1A	1043665.04	529041.47	78	28	35	14	20	3	17
EW-72	1A	1043693.76	528820.47	80	28	37	16	20	3	19
EW-73	2	1043686.54	528510.48	82	27	41	20	20	3	23
EW-74	2	1043691.96	528361.05	81	29	38	17	20	3	20
EW-75	2	1043703.15	528225.42	78	27	36	15	20	3	18
EW-76	2	1043701.51	528080.10	79	27	38	17	20	3	20
EW-77	2	1043699.40	527879.19	81	28	38	17	20	3	20
EW-78	2	1043640.09	527736.57	94	27	53	32	20	3	35
EW-79	2	1043555.80	527850.04	112	30	67	46	20	3	49
EW-80	2	1043571.77	528012.03	115	29	71	50	20	3	53
EW-81	2	1043579.74	528145.68	105	27	63	42	20	3	45
EW-82	2	1043550.71	528299.60	115	30	70	49	20	3	52
EW-83	2	1043565.37	528466.27	112	29	68	47	20	3	50
EW-84	1A	1043617.68	528628.15	90	28	47	26	20	3	29
CW-85	1A	1043544.27	528707.77	92	31	47	26	20	3	29
EW-86	1A	1043616.28	528827.39	94	29	51	30	20	3	33
EW-87	1A	1043568.16	528955.25	97	28	55	34	20	3	37
EW-88	1A	1043489.15	529267.10	103	61	27	6	20	3	9
EW-89	1A	1043472.83	529093.78	100	31	55	34	20	3	37
EW-90	1A	1043410.28	528939.79	98	29	54	33	20	3	36
CW-91	1A	1043451.56	528803.04	95	31	49	28	20	3	31
RW-92	1A	1043455.79	528630.53	92	30	47	26	20	3	29
EW-93	2	1043429.76	528428.07	115	31	69	48	20	3	51
EW-94	2	1043380.47	528272.34	113	32	66	45	20	3	48
EW-95	2	1043386.55	528124.24	108	30	63	42	20	3	45
EW-96	2	1043419.49	527966.63	118	32	71	50	20	3	53
EW-97	2	1043410.12	527774.05	107	30	62	41	20	3	44
EW-98	2	1043242.79	527773.42	107	32	60	39	20	3	42
EW-99	2	1043268.61	527969.75	118	34	70	49	20	3	52
EW-100	2	1043197.31	528153.32	107	32	60	39	20	3	42
EW-101	2	1043218.88	528384.89	118	34	70	49	20	3	52
EW-102	1A	1043307.80	528554.30	90	31	44	23	20	3	26
CW-103	1A	1043331.93	528689.80	93	33	46	25	20	3	28
CW-104	1A	1043285.19	528813.68	96	33	49	28	20	3	31
EW-105	1A	1043277.92	529025.05	100	32	53	32	20	3	35
EW-106	1A	1043344.49	529152.83	102	33	54	33	20	3	36
EW-107	1A	1043211.06	529267.43	105	61	29	8	20	3	11
EW-108	1A	1043109.62	529138.79	103	36	53	32	20	3	35
EW-109	1A	1043152.69	528916.30	99	32	52	31	20	3	34
CW-110	1A	1043197.41	528693.97	94	34	45	24	20	3	27
EW-111	1A	1043136.45	528599.13	93	33	45	24	20	3	27
EW-112	2	1043118.81	528259.02	113	35	63	42	20	3	45
EW-113	2	1043118.57	528012.71	116	35	66	45	20	3	48
EW-114	2	1043113.58	527851.22	113	34	64	43	20	3	46
EW-115	2	1042968.22	527800.24	110	34	61	40	20	3	43
EW-116	2	1042954.19	527957.18	118	36	67	46	20	3	49
EW-117	2	1042979.50	528112.80	110	33	62	41	20	3	44
EW-118	2	1042928.49	528247.23	113	35	63	42	20	3	45
EW-119	2	1043008.20	528382.84	118	35	68	47	20	3	50
EW-120	1A	1042998.39	528542.97	92	33	45	24	20	3	27
EW-121	1A	1042969.36	528629.01	94	35	45	24	20	3	27
CW-122	1A	1043047.46	528819.40	97	35	48	27	20	3	30
EW-123	1A	1042996.59	529003.41	101	34	53	32	20	3	35
EW-124	1A	1042983.64	529266.94	107	60	32	11	20	3	14
EW-125	1A	1042924.77	529135.32	104	37	53	32	20	3	35
EW-126	1A	1042845.06	528943.74	101	34	53	32	20	3	35
CW-127	1A	1042847.27	528785.74	98	36	47	26	20	3	29
EW-128	1A	1042769.39	528650.98	95	36	44	23	20	3	26
EW-129	1A	1042863.80	528609.43	94	35	44	23	20	3	26
EW-130	2	1042828.47	528376.60	118	36	67	46	20	3	49
EW-131	2	1042818.53	528248.74	113	36	62	41	20	3	44
EW-132	2	1042778.34	528147.96	109	34	60	39	20	3	42
EW-133	2	1042818.63	527998.89	117	36	66	45	20	3	48
EW-134	2	1042786.54	527844.74	113	36	62	41	20	3	44
EW-135	2	1042837.97	527693.26	86	34	38	17	20	3	20
EW-136	2	1042661.68	527607.68	93	35	44	23	20	3	26
EW-137	2	1042648.25	527825.28	89	37	38	17	20	3	20
EW-138	2	1042649.91	527982.59	91	37	39	18	20	3	21
EW-139	2	1042644.15	528133.83	89	35	40	19	20	3	22
EW-140	2	1042637.87	528289.77	89	38	37	16	20	3	19
EW-141	2	1042626.60	528434.86	86	36	35	14	20	3	17
EW-142	1A	1042649.58	528556.18	93	35	43	22	20	3	25
EW-143	1A	1042627.46	528715.39	87	40	32	11	20	3	14
EW-144	1A	1042700.31	528868.09	100	35	50	29	20	3	32
EW-145	1A	1042659.15	529018.39	98	36	47	26	20	3	29
EW-146	1A	1042777.43	529098.48	104	37	53	32	20	3	35
EW-147	1A	1042634.71	529214.99	86	45	26	5	20	3	8
EW-148	1A	1042793.32	529267.88	107	60	32	11	20	3	14
EW-149	2	1042821.67	528525.92	111	34	62	41	20	3	44
TOTALS						4040	2381	1580	237	2618

NOTES:

1. CW=CAISSON LFG EXTRACTION WELL. EW=LFG EXTRACTION WELL.



CAISSON LFG EXTRACTION WELL DETAIL

NOT TO SCALE

1 / 3|10

NOTES:

1. 8"ø HDPE SDR 17 PIPE STUB THROUGH 10" HOLE IN CENTER OF BLIND FLANGE. PIPE STUB EXTRUSION WELDED TO HDPE BLIND FLANGE AT TOP OF CAISSON.
2. CONTRACTOR SHALL TEMPORARILY CAP THE SLOTTED PIPE WHILE BACKFILLING.
3. CONTRACTOR SHALL INSTALL PVC CAP ON WELL CASING TO PREVENT FREE VENTING OF LFG PRIOR TO INSTALLING WELLHEAD.
4. #4 STONE PAD TO BE 36" BEYOND THE RISER PIPE IN ALL DIRECTIONS AND 4" THICK. WEED BARRIER SEPARATES GRAVEL AND CLEAN BACKFILL.

DESIGN DRAWINGS
MARCH 2017

DANIEL R. COOPER, P.E.
LICENSE NO. 66440

REV	DATE	DESCRIPTION	CHK. BY

SHEET TITLE: **DETAILS - 2**

PROJECT TITLE: **PHASE II LFGCCS EXPANSION**

CLIENT: **SARASOTA COUNTY CENTRAL COUNTY SOLID WASTE DISPOSAL COMPLEX NOKOMIS, FLORIDA**

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJECT NO.	DSN. BY:	Q/A REVIEW BY:	APP. BY:
09216163.00	AFD	CFL	DRC
	DSN. BY:	CHK. BY:	
	AFD	DRC	

CADD FILE: 216163_00 DETL

DATE: **MARCH 2017**

SCALE: **AS SHOWN**

DRAWING NO. **10**

SHEET **10** of 16

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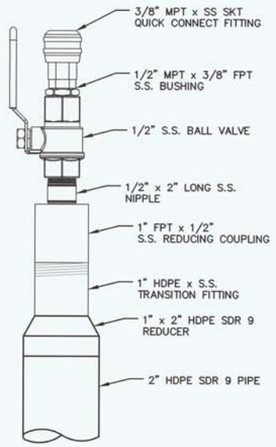
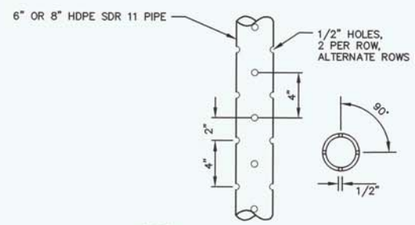


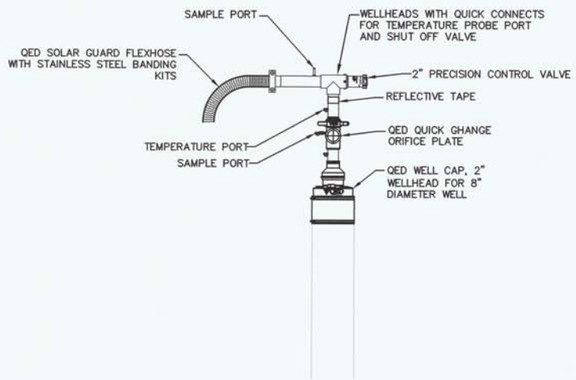
AIR SUPPLY LINE VALVE DETAIL (4 | 11|11)
NOT TO SCALE



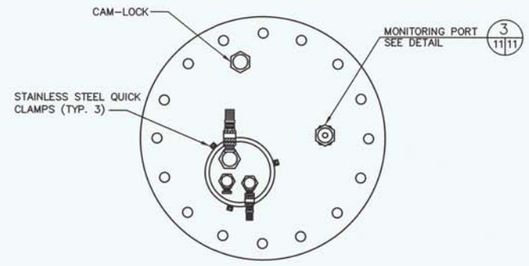
NOTES:

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

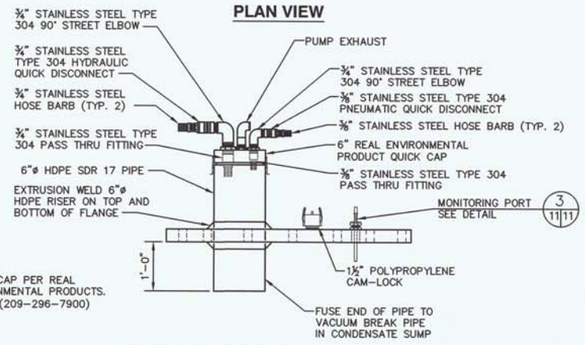
PERFORATED PIPE DETAIL (5 | 11|11)
NOT TO SCALE



QED PRECISION QUICK CHANGE ORIFICE PLATE WELLHEAD (6 | 11|11)
NOT TO SCALE



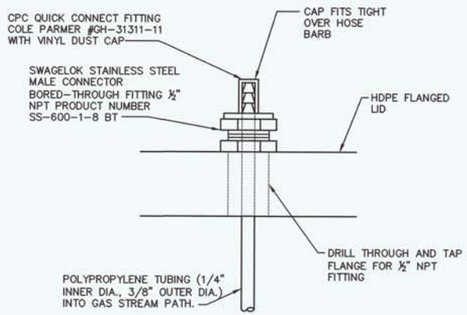
PLAN VIEW



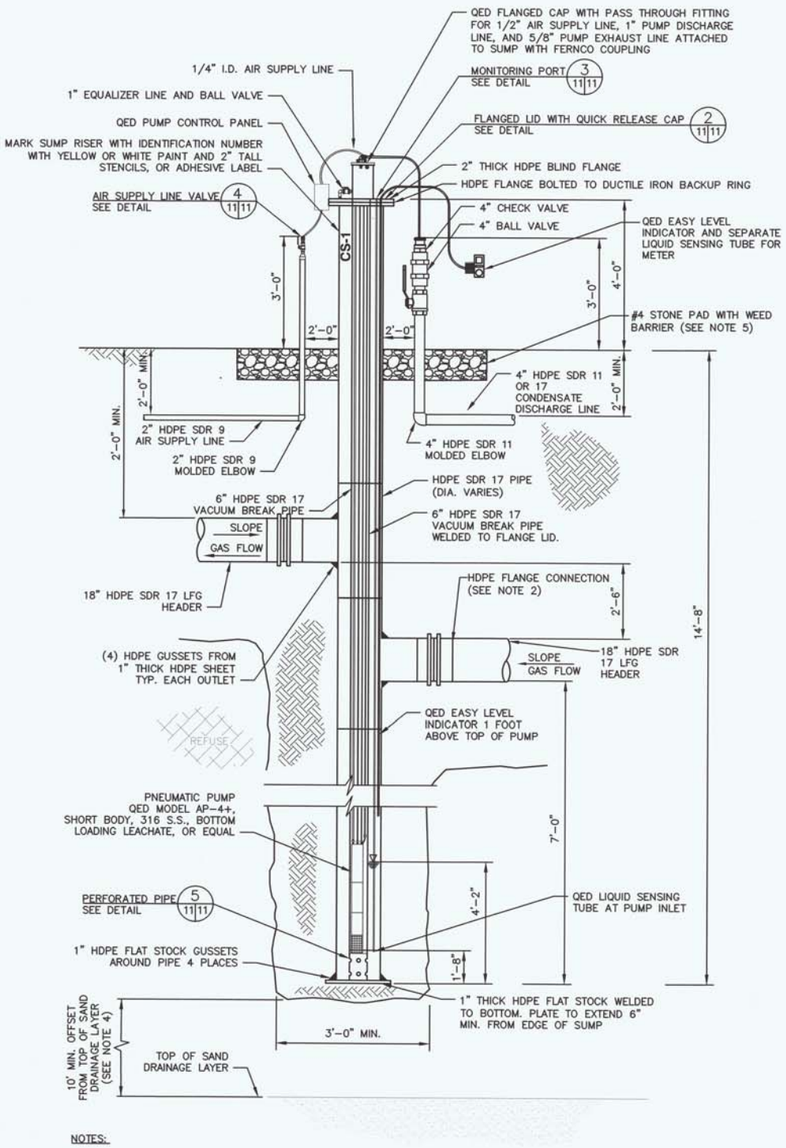
NOTES:

1. QUICK CAP PER REAL ENVIRONMENTAL PRODUCTS. PHONE: (209-296-7900)

FLANGED LID WITH QUICK RELEASE CAP DETAIL (N.I.C.) (2 | 11|11)
NOT TO SCALE



MONITORING PORT DETAIL (TYP.) (3 | 11|11)
NOT TO SCALE



NOTES:

1. 6"ø HDPE SDR 17 VACUUM BREAK PIPE EXTRUSION WELDED TO FLANGE LID. 1'-0" OF PIPE PROTRUDING THROUGH TOP OF FLANGE. PIPE EXTRUSION WELDED TO BOTH SIDES OF BLIND FLANGE. CENTER OF PIPE LOCATED 2" OFF CENTER OF BLIND FLANGE.
2. ENTIRE SURFACE OF BOLTS, WASHERS, NUTS AND BACKUP RINGS THOROUGHLY COATED WITH POLYCOAT RUBBERIZED PRIMER, OR EQUAL, AFTER TIGHTENING BOLTS. FLANGE WRAPPED IN PLASTIC WRAP PRIOR TO BACKFILLING.
3. CONTRACTOR SHALL VERIFY CONDENSATE SUMP CONFIGURATION IN FIELD. ADJUSTMENTS SHALL BE APPROVED BY ENGINEER PRIOR TO INSTALLATION.
4. ENGINEER SHALL APPROVE DEPTH BASED ON GROUND SURFACE ELEVATION PRIOR TO INSTALLATION.
5. #4 STONE PAD TO BE 36" BEYOND THE RISER PIPE IN ALL DIRECTIONS AND 4" THICK. WEED BARRIER SEPARATES GRAVEL AND CLEAN BACKFILL.

IN-WASTE CONDENSATE SUMP DETAIL (1 | 11) 3,7,8
NOT TO SCALE

DESIGN DRAWINGS
MARCH 2017

DANIEL R. COOPER, P.E.
LICENSE NO. 66440

REV	DATE	DESCRIPTION	CHK. BY

SHEET TITLE: **DETAILS - 3**
PROJECT TITLE: **PHASE II LFGCCS EXPANSION**

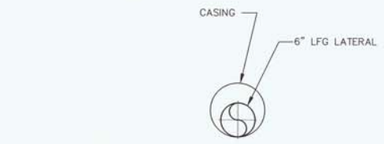
CLIENT
SARASOTA COUNTY
CENTRAL COUNTY SOLID WASTE DISPOSAL COMPLEX
NOKOMIS, FLORIDA

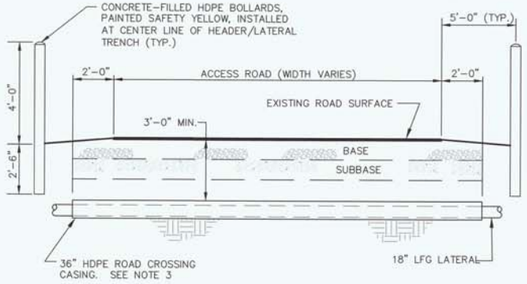
SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-0757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJECT NO.	DRW. BY:	Q/A REV. BY:	APP. BY:
09216163.00	AFD	JEL	DRC
DSN. BY:	CHK. BY:		
AFD	DRC		

CADD FILE: 216163_00 DETL
DATE: MARCH 2017
SCALE: AS SHOWN
DRAWING NO. **11**
SHEET 11 of 16

G:\PROJECT\Sarasota\09216163.00-Phase II Design_DRAWINGS\Engineering Drawings\Permit Drawings\216163_00 DETL.dwg Mar 16, 2017 - 5:50pm Layout Name: Sheet 11 By: 3661afd



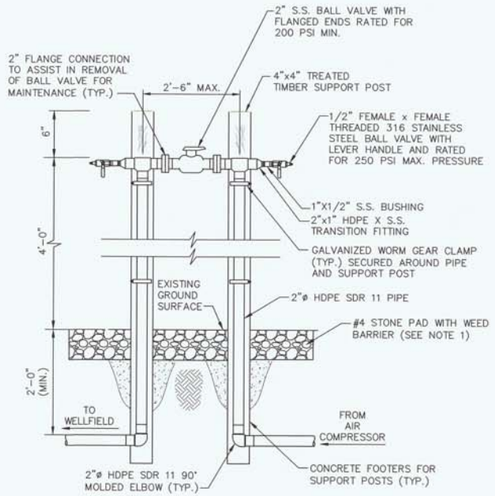


NOTES:

1. ROAD RESTORED TO MATCH ORIGINAL CONDITIONS.
2. BOLLARDS ARE CONCRETE-FILLED HDPE PIPE BOLLARDS 6"ø x 4'-0" TALL.
3. CASING IS 12" GREATER THAN THE CUMULATIVE DIAMETER OF THE PIPES BEING ENCASED.

ROAD CROSSING DETAIL (5 / 3 | 12)
NOT TO SCALE

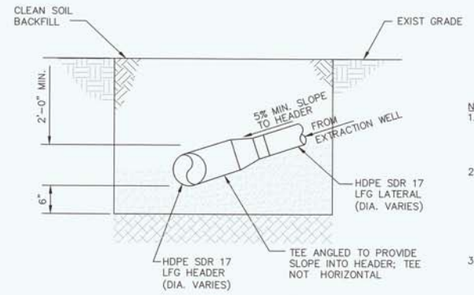
TIE-IN TO EXISTING BLIND FLANGE (6 / 3,7,8 | 12)
NOT TO SCALE



NOTES:

1. #4 STONE PADS TO BE INSTALLED 36" BEYOND THE RISER PIPE IN ALL DIRECTIONS AND 4" THICK. WEED BARRIER TO BE INSTALLED TO SEPARATE GRAVEL AND CLEAN BACKFILL.

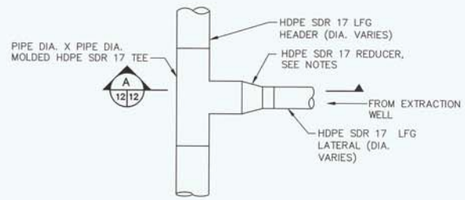
AIR LINE ISOLATION AND BLOWOFF VALVES DETAIL (3 / 3,8 | 12)
NOT TO SCALE



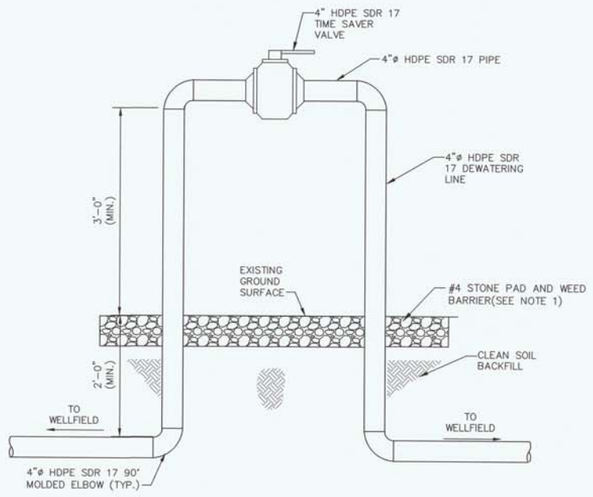
SECTION VIEW (A / 12 | 12)
NOT TO SCALE

NOTES:

1. CONSECUTIVE SIZE REDUCERS TO BE USED TO TRANSITION FROM THE MOLDED TEE TO THE LFG LATERAL.
2. MOLDED HDPE TEES INSTALLED FOR ALL TIE-INS OF LATERALS TO HEADER SMALLER THAN 12"ø. TEES ANGLED TO MAINTAIN SLOPE INTO THE HEADER AS SHOWN IN SECTION VIEW.
3. ALL HEADER NOT IN LINED AREA TO BE INSTALLED WITH A MINIMUM BURIAL DEPTH OF 2 FEET.
4. 1' MIN. OF SAND PLACED BELOW EACH TEE. THE SAND TO BE INSTALLED TO EXTEND 3' MIN. IN EACH DIRECTION OF THE TEE. SAND TO BE SLIGHTLY MOISTENED AND HAND-TAMPED PROVIDING SUPPORT TO ALL POINTS OF THE TEE. CLEAN, GRADED SOIL HAND-TAMPED ABOVE TEE (1' MIN.) BEING CAREFUL TO ELIMINATE VOIDS.



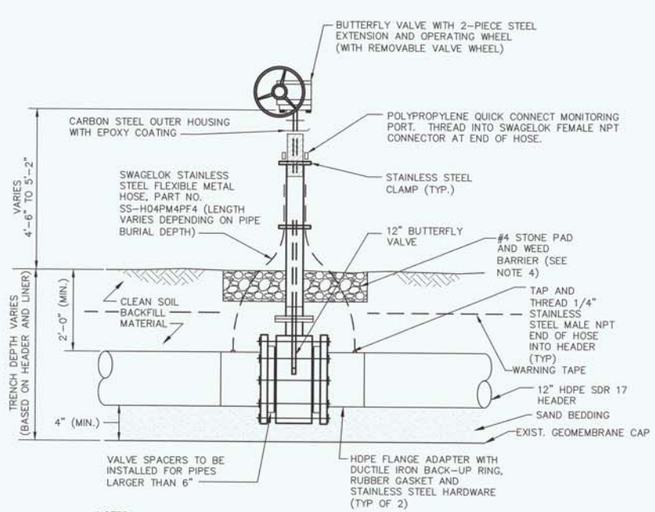
LFG LATERAL TIE-IN WITH TEE DETAIL (1 / 3,7,8 | 12)
NOT TO SCALE



NOTES:

1. #4 STONE PAD TO BE INSTALLED 36" BEYOND THE RISER PIPE IN ALL DIRECTIONS AND 4" THICK. WEED BARRIER TO BE INSTALLED TO SEPARATE GRAVEL AND CLEAN BACKFILL.

DEWATERING LINE ISOLATION VALVE DETAIL (4 / 3,8 | 12)
NOT TO SCALE



NOTES:

1. ENTIRE SURFACE OF BOLTS, WASHERS, NUTS AND BACKUP RINGS TO BE THOROUGHLY COATED WITH POLYCOAT RUBBERIZED PRIMER, OR EQUAL, AFTER TIGHTENING BOLTS. COATING INSTALLED WITH NO "HOLIDAYS", OR GAPS IN ITS APPLICATION.
2. FLANGE TO BE WRAPPED IN PLASTIC PRIOR TO BACK FILLING.
3. ALL HEADER NOT IN LINED AREA TO BE INSTALLED WITH A MINIMUM BURIAL DEPTH OF 2 FEET.
4. #4 STONE PAD TO BE INSTALLED 36" BEYOND THE RISER PIPE IN ALL DIRECTIONS AND 4" THICK. WEED BARRIER TO BE INSTALLED TO SEPARATE GRAVEL AND CLEAN BACKFILL.

HEADER ISOLATION VALVE DETAIL (2 / 3,8 | 12)
NOT TO SCALE

DESIGN DRAWINGS
MARCH 2017

DANIEL R. COOPER, P.E.
LICENSE NO. 66440

REV	DATE	DESCRIPTION	CHK. BY

SHEET TITLE: **DETAILS - 4**

PROJECT TITLE: **PHASE II LFGCCS EXPANSION**

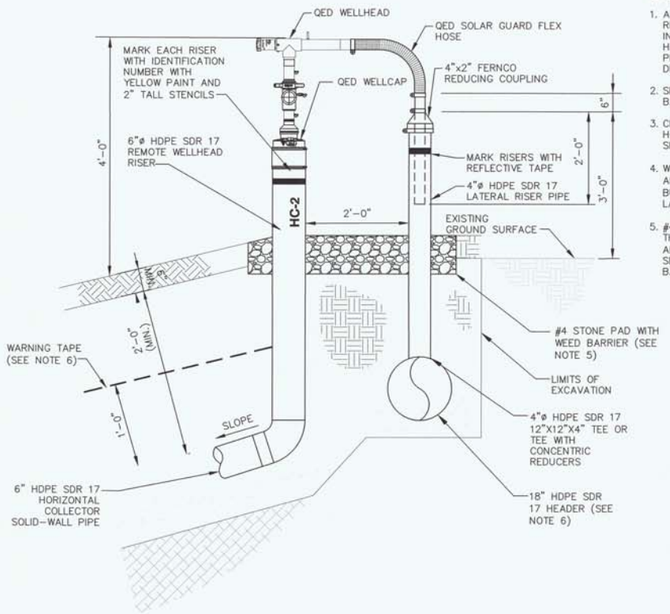
CLIENT: **SARASOTA COUNTY CENTRAL COUNTY SOLID WASTE DISPOSAL COMPLEX NOKOMIS, FLORIDA**

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH: (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJECT NO. 0216163.00
DSN. BY: AFD | DWN. BY: AFD | CK'A RVW BY: DTL | APP. BY: DRC

CADD FILE: 216163_00 DETL
DATE: MARCH 2017
SCALE: AS SHOWN
DRAWING NO. **12**
SHEET **12** of 16

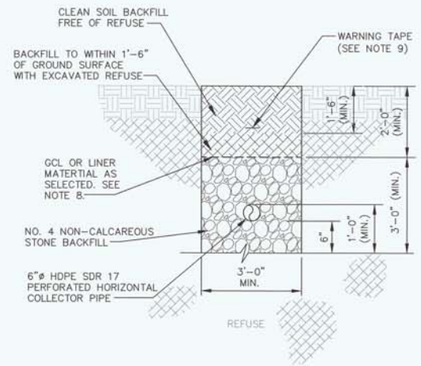
G:\PROJECT\Sarasota\0216163.00-Phase II Design_DRAWINGS\Engineering Drawings\Permit Drawings\216163_00 DETL.dwg Mar 16, 2017 - 5:51pm Layout Name: Sheet 12 By: 3661afd



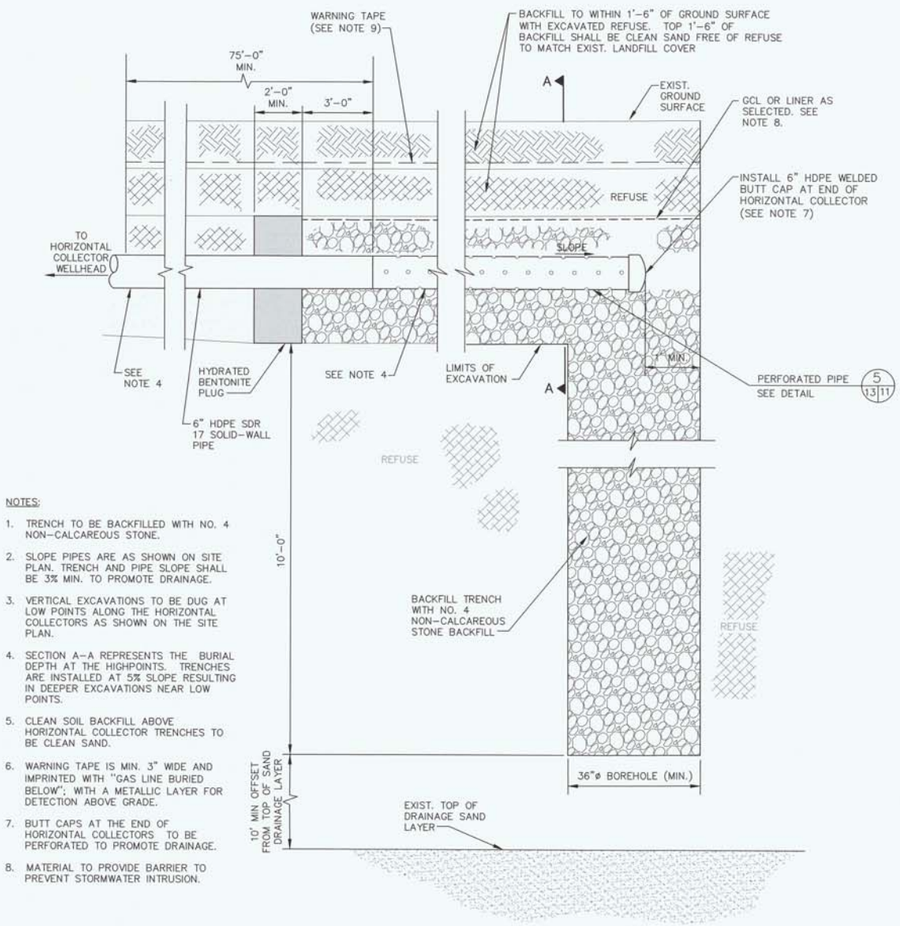
NOTES:

1. ALL HORIZONTAL COLLECTOR LATERAL RISERS AND WELLHEADS TO BE INSTALLED AT THE SIDESLOPE HIGHPOINT AS SHOWN ON THE SITE PLAN, IN ORDER TO PROMOTE DRAINAGE.
2. SIDESLOPE TRENCHES TO BE BACKFILLED WITH CLAY.
3. CLEAN SOIL BACKFILL ABOVE HORIZONTAL COLLECTOR TRENCHES SHALL BE CLEAN SAND.
4. WARNING TAPE TO BE MIN. 3" WIDE AND IMPRINTED WITH "GAS LINE BURIED BELOW"; WITH A METALLIC LAYER FOR DETECTION ABOVE GRADE.
5. #4 STONE PAD TO BE 36" BEYOND THE RISER PIPE IN ALL DIRECTIONS AND 4" THICK. WEED BARRIER SEPARATES GRAVEL AND CLEAN BACKFILL.

HORIZONTAL COLLECTOR WELLHEAD DETAIL (2 / 6 | 13)
NOT TO SCALE



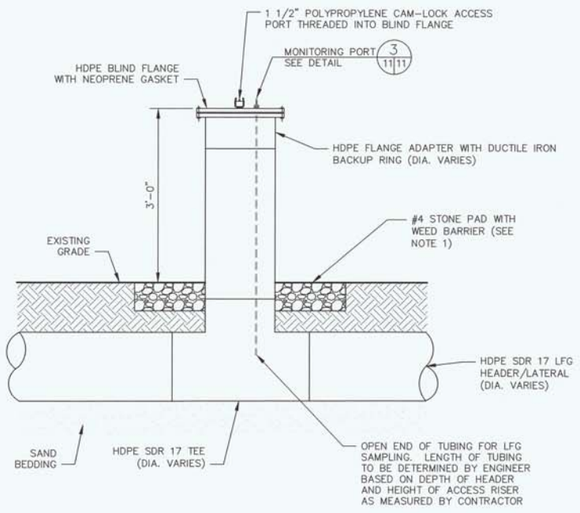
SECTION A-A



NOTES:

1. TRENCH TO BE BACKFILLED WITH NO. 4 NON-CALCAREOUS STONE.
2. SLOPE PIPES ARE AS SHOWN ON SITE PLAN. TRENCH AND PIPE SLOPE SHALL BE 3% MIN. TO PROMOTE DRAINAGE.
3. VERTICAL EXCAVATIONS TO BE DUG AT LOW POINTS ALONG THE HORIZONTAL COLLECTORS AS SHOWN ON THE SITE PLAN.
4. SECTION A-A REPRESENTS THE BURIAL DEPTH AT THE HIGHPOINTS. TRENCHES ARE INSTALLED AT 5% SLOPE RESULTING IN DEEPER EXCAVATIONS NEAR LOW POINTS.
5. CLEAN SOIL BACKFILL ABOVE HORIZONTAL COLLECTOR TRENCHES TO BE CLEAN SAND.
6. WARNING TAPE IS MIN. 3" WIDE AND IMPRINTED WITH "GAS LINE BURIED BELOW"; WITH A METALLIC LAYER FOR DETECTION ABOVE GRADE.
7. BUTT CAPS AT THE END OF HORIZONTAL COLLECTORS TO BE PERFORATED TO PROMOTE DRAINAGE.
8. MATERIAL TO PROVIDE BARRIER TO PREVENT STORMWATER INTRUSION.

HORIZONTAL COLLECTOR TRENCH DETAIL (1 / 6 | 13)
NOT TO SCALE



NOTES:

1. #4 STONE PAD TO BE 36" BEYOND THE RISER PIPE IN ALL DIRECTIONS AND 4" THICK. WEED BARRIER SEPARATES GRAVEL AND CLEAN BACKFILL.

ACCESS RISER DETAIL (3 / 13)
NOT TO SCALE
3,7,8✓

DESIGN DRAWINGS
MARCH 2017

REV	DATE	DESCRIPTION	CHK BY

DANIEL R. COOPER, P.E.
LICENSE NO. 66440

SHEET TITLE: **DETAILS - 5**

PROJECT TITLE: **PHASE II LFGCCS EXPANSION**

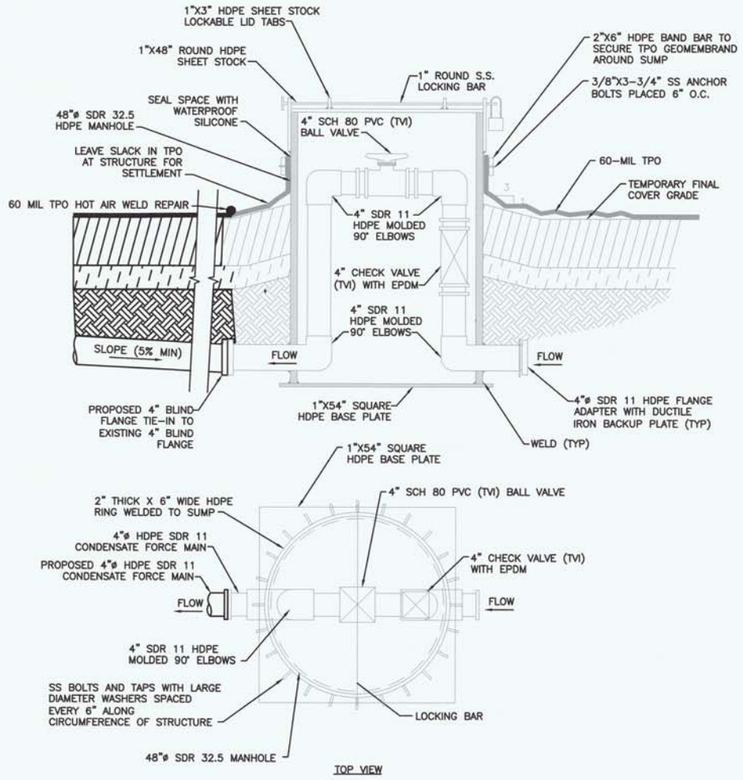
CLIENT: **SARASOTA COUNTY CENTRAL COUNTY SOLID WASTE DISPOSAL COMPLEX NOKOMIS, FLORIDA**

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT
CONSULTING ENGINEERS
3920 SW 53RD TERRACE, SUITE 100, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO: 09216163.00 | DSN. BY: AFD | D/A R/W BY: CFL
SDE. BY: AFD | CHK. BY: DRC | APP. BY: DRC

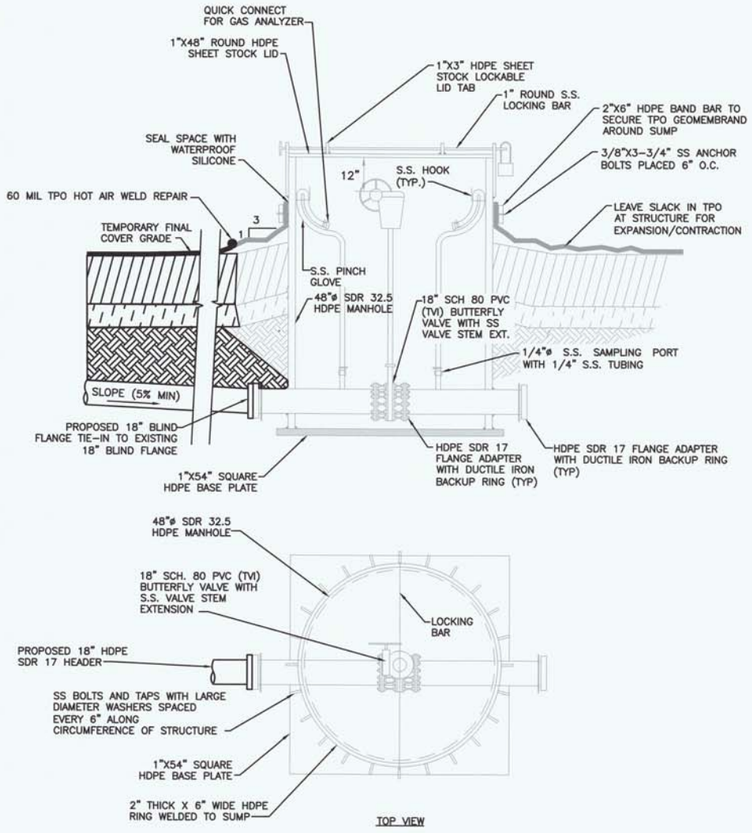
CADD FILE: 216163_00 DETL
DATE: MARCH 2017
SCALE: AS SHOWN
DRAWING NO. **13**
SHEET **13** of 16

G:\PROJECT\Sarasota\09216163.00-Phase II Design_DRAWINGS\Engineering Drawings\Permit Drawings\216163_00 DETL.dwg Mar 16, 2017 - 5:52pm Layout Name: Sheet 13 By: 3661afd



NOTES:
1. FORCEMAIN TO BE INSTALLED AT 5% SLOPE TO ACCESS RISER TO THE WEST.
2. SLACK TO BE LEFT IN REPAIR TO ALLOW FOR SLIGHT MOVEMENT OF TPO WHEN NECESSARY DUE TO SETTLEMENT.
3. CONTRACTOR TO LIMIT DISTURBANCE OF THE VALVE PIT BOOT TO THE GREATEST EXTENT POSSIBLE. SHOULD BOOT BECOME DISTURBED, BOOT TO BE RESTORED TO ORIGINAL CONDITIONS.

FORCEMAIN VALVE PIT TIE-IN (2 / 3 | 14)
NOT TO SCALE



NOTES:
1. HEADER TO BE INSTALLED AT 5% SLOPE TO ACCESS RISER TO THE WEST.
2. SLACK TO BE LEFT IN REPAIR TO ALLOW FOR SLIGHT MOVEMENT OF TPO WHEN NECESSARY DUE TO SETTLEMENT.
3. CONTRACTOR TO LIMIT DISTURBANCE OF THE VALVE PIT BOOT TO THE GREATEST EXTENT POSSIBLE. SHOULD BOOT BECOME DISTURBED, BOOT TO BE RESTORED TO ORIGINAL CONDITIONS.

HEADER LINE ISOLATION VALVE PIT TIE-IN (1 / 3 | 14)
NOT TO SCALE

DESIGN DRAWINGS
MARCH 2017

DANIEL R. COOPER, P.E. LICENSE NO. 66440

REV	DATE	DESCRIPTION	CHK. BY

SHEET TITLE: **DETAILS - 6**

PROJECT TITLE: **PHASE II LFGCCS EXPANSION**

CLIENT: **SARASOTA COUNTY CENTRAL COUNTY SOLID WASTE DISPOSAL COMPLEX NOKOMIS, FLORIDA**

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-8757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO.	DSN. BY:	DWN. BY:	C/A R/W BY:
0216163.00	AFD	AFD	CFL
		CHK. BY:	APP. BY:
		DRC	DRC

CADD FILE: 216163_00 DETL

DATE: APRIL 2017

SCALE: AS SHOWN

DRAWING NO. **14**

SHEET 14 of 16

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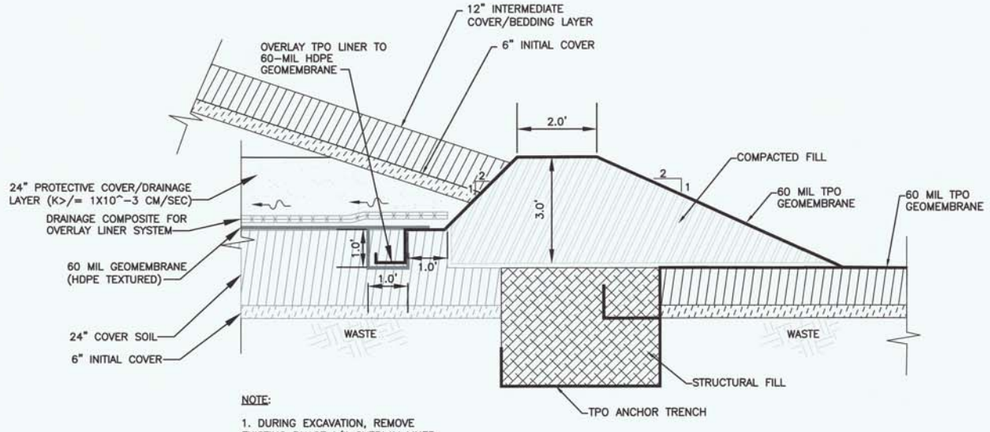
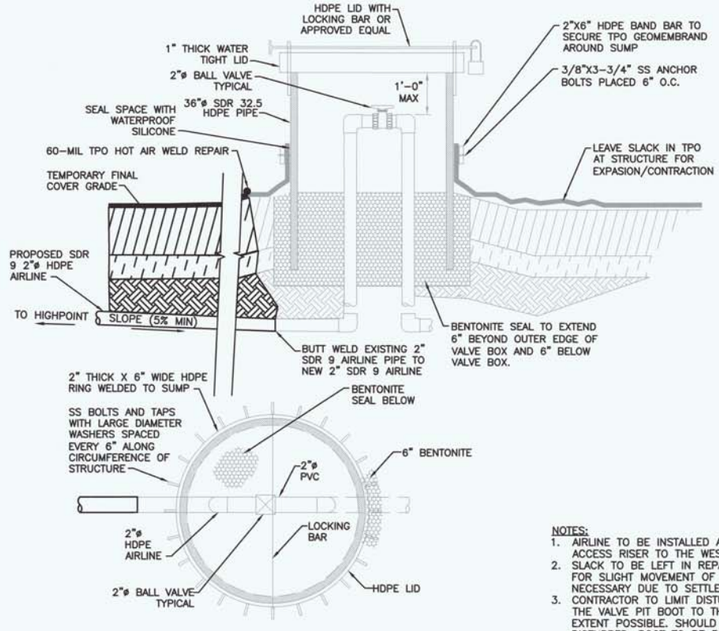


NOTE:

1. DURING EXCAVATION, REMOVE EXISTING PHASE I/II OVERLAY LINER SYSTEM ANCHOR TRENCH AND RECONSTRUCT AS SHOWN ABOVE.

TRANSITION PHASE I/II OVERLAY LINER TO TEMPORARY FINAL COVER (3 | 16 | 16)

NOT TO SCALE

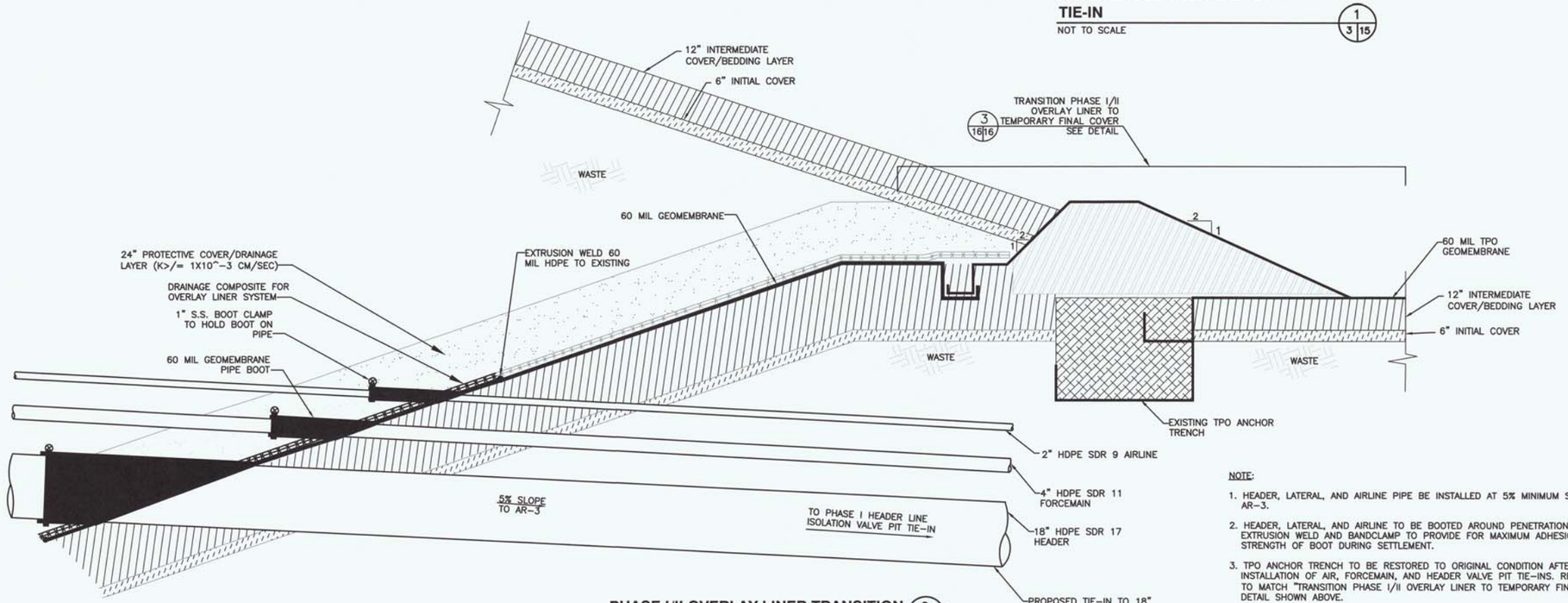


TOP VIEW

NOTES:
1. AIRLINE TO BE INSTALLED AT 5% SLOPE TO ACCESS RISER TO THE WEST.
2. SLACK TO BE LEFT IN REPAIR TO ALLOW FOR SLIGHT MOVEMENT OF TPO WHEN NECESSARY DUE TO SETTLEMENT.
3. CONTRACTOR TO LIMIT DISTURBANCE OF THE VALVE PIT BOOT TO THE GREATEST EXTENT POSSIBLE. SHOULD BOOT BECOME DISTURBED, BOOT TO BE RESTORED TO ORIGINAL CONDITIONS.

AIR LINE ISOLATION VALVE PIT TIE-IN (1 | 3 | 15)

NOT TO SCALE



NOTE:

1. HEADER, LATERAL, AND AIRLINE PIPE BE INSTALLED AT 5% MINIMUM SLOPE TO AR-3.
2. HEADER, LATERAL, AND AIRLINE TO BE BOOTED AROUND PENETRATION WITH EXTRUSION WELD AND BANDCLAMP TO PROVIDE FOR MAXIMUM ADHESION STRENGTH OF BOOT DURING SETTLEMENT.
3. TPO ANCHOR TRENCH TO BE RESTORED TO ORIGINAL CONDITION AFTER INSTALLATION OF AIR, FORCEMAIN, AND HEADER VALVE PIT TIE-INS. RESTORATION TO MATCH "TRANSITION PHASE I/II OVERLAY LINER TO TEMPORARY FINAL COVER" DETAIL SHOWN ABOVE.

PHASE I/II OVERLAY LINER TRANSITION (2 | 3 | 15)

NOT TO SCALE

DESIGN DRAWINGS
MARCH 2017

DANIEL R. COOPER, P.E. LICENSE NO. 66440

REV	DATE	DESCRIPTION	CHK. BY

SHEET TITLE: **DETAILS - 7**

PROJECT TITLE: **PHASE II LFGCCS EXPANSION**

CLIENT: **SARASOTA COUNTY CENTRAL COUNTY SOLID WASTE DISPOSAL COMPLEX NOKOMIS, FLORIDA**

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH: (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO.	DWN. BY:	Q/A BY:
09216163.00	AFD	CFL
DSN. BY:	**CHK. BY:**	**APP. BY:**
AFD	DRC	DRC

CADD FILE: 216163_00 DETL

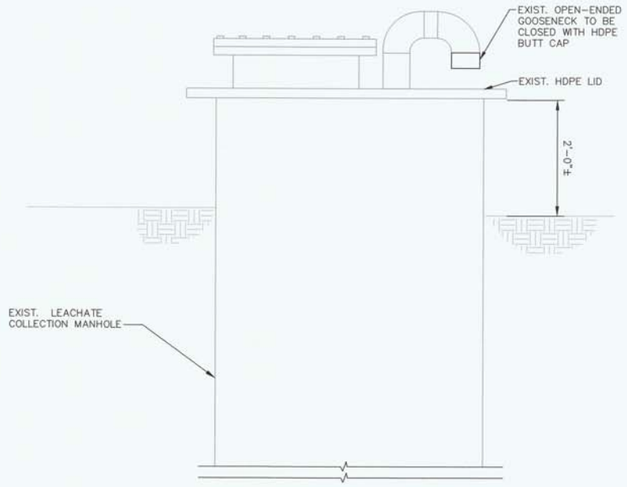
DATE: APRIL 2017

SCALE: AS SHOWN

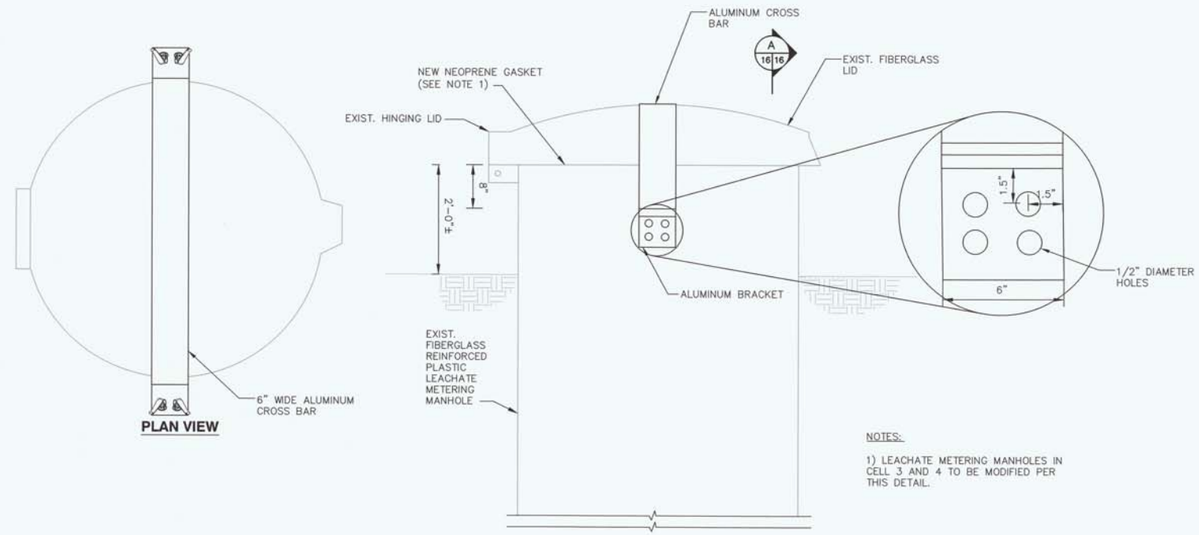
DRAWING NO. **15**

SHEET **15** of 16

G:\PROJECT\Sarasota\09216163.00-Phase II Design_DRAWINGS\Engineering Drawings\Permit Drawings\216163_00 DETL.dwg Mar 20, 2017 - 3:03pm Layout Name: Sheet 15 By: 3661afd



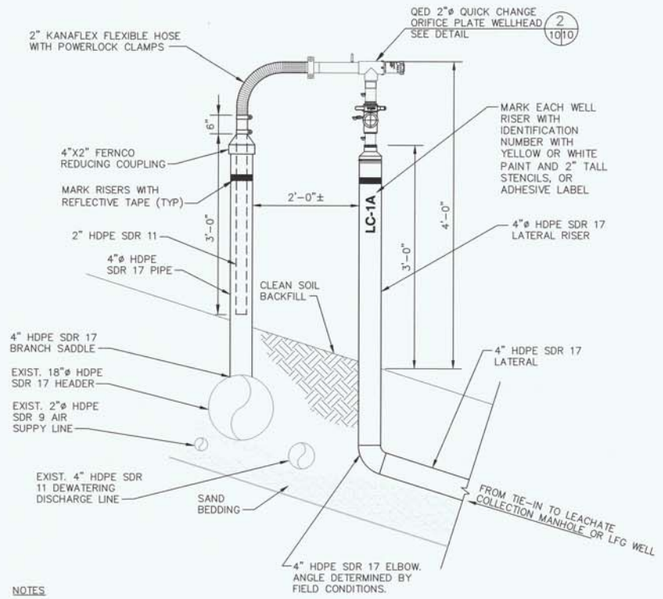
LEACHATE COLLECTION MANHOLE MODIFICATIONS (2 / 3 16)
NOT TO SCALE



NOTES:

1) LEACHATE METERING MANHOLES IN CELL 3 AND 4 TO BE MODIFIED PER THIS DETAIL.

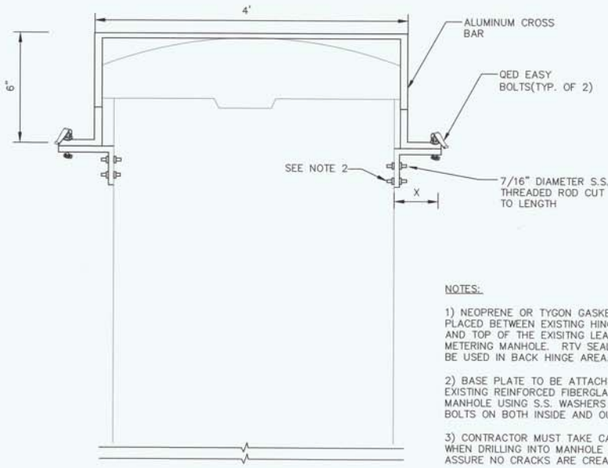
LEACHATE METERING MANHOLE MODIFICATION DETAIL (1 / 3 16)
NOT TO SCALE



NOTES

1. EACH CLEANOUT TIE-IN OR LFG WELL WILL HAVE A REMOTE WELLHEAD DESIGNATED FOR IT.

REMOTE LFG EXTRACTION WELLHEAD DETAIL (3 / 3 16)
NOT TO SCALE



NOTES:

1) NEOPRENE OR TYGON GASKET TO BE PLACED BETWEEN EXISTING HINGING LID AND TOP OF THE EXISITNG LEACHATE METERING MANHOLE. RTV SEALANT TO BE USED IN BACK HINGE AREA.

2) BASE PLATE TO BE ATTACHED TO EXISTING REINFORCED FIBERGLASS MANHOLE USING S.S. WASHERS AND BOLTS ON BOTH INSIDE AND OUTSIDE.

3) CONTRACTOR MUST TAKE CARE WHEN DRILLING INTO MANHOLE TO ASSURE NO CRACKS ARE CREATED.

SECTION VIEW (A / 16 16)
NOT TO SCALE

DESIGN DRAWINGS
MARCH 2017

DANIEL R. COOPER, P.E.
LICENSE NO. 66440

REV	DATE	DESCRIPTION	CHK. BY

SHEET TITLE: **DETAILS - 8**

PROJECT TITLE: **PHASE II LFGCCS EXPANSION**

CLIENT: **SARASOTA COUNTY CENTRAL COUNTY SOLID WASTE DISPOSAL COMPLEX NOKOMIS, FLORIDA**

SCS ENGINEERS
STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS
3012 U.S. HWY. 301 NORTH, SUITE 700, TAMPA, FL 33619
PH (813) 621-0080 FAX NO. (813) 623-6757
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892

PROJ. NO. 09216163.00 | DSN. BY: AFD | DWN. BY: AFD | CHK. BY: DRC | Q/A RVW BY: CFL | APP. BY: DRC

CADD FILE: 216163_00 DETL

DATE: MARCH 2017

SCALE: AS SHOWN

DRAWING NO. **16**

SHEET 16 of 16

G:\PROJECT\Sarasota\09216163.00-Phase II Design_DRAWINGS\Engineering Drawings\Permit Drawings\216163_00 DETL.dwg Mar 17, 2017 - 8:55am Layout Name: Sheet 16 By: 3661afd