



HDR Engineering, Inc.
200 W. Forsyth St
Suite 800
Jacksonville, FL 32202

Dept. of Environmental
Protection
APR 22 2009
Southwest District



Permit Drawings For

Central County Solid Waste Disposal Complex

Sarasota County

Phase 1 Landfill Gas Collection and Control System

Project No. 000000000087559
Certificate of Authorization No. 4213

Nokomis, Florida

December, 2008
March, 2009

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Carlo H.
4/20/09

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
APR 22 2009
SOUTHWEST DISTRICT
TAMPA

ENGINEERING SYMBOLOGY

HP

HIGH POINT

LP

LOW POINT

S-1

PROPOSED CONDENSATE SUMP

GW-49

PROPOSED LFG EXTRACTION WELL

SSW-1

PROPOSED SIDESLOPE WELLHEAD

AP

PROPOSED ACCESS POINT

KO

PROPOSED KNOCKOUT POT

U1

PROPOSED U-TRAP

PROPOSED REMOTE WELLHEAD

EXISTING LEACHATE SUMP

EXISTING LEACHATE CLEANOUT

PROPOSED AIRLINE/FORCE MAIN VALVE PIT

PROPOSED HEADER ISOLATION VALVE PIT

PROPOSED ECCENTRIC REDUCER

PROPOSED STRAW BALE BARRIER

PROPOSED TEMPORARY DITCH BLOCK

SOLAR FLARE

GP-7

EXISTING GAS PROBE

MW-14

EXISTING GROUNDWATER MONITORING WELL

EXISTING WATER SUPPLY WELL

PROPOSED SILT FENCE

PROPOSED 2" HDPE SDR 9 AIR SUPPLY LINE

PROPOSED 4" HDPE SDR 9 CONDENSATE RETURN LINE

PROPOSED 4" HDPE SDR 11 LATERAL

PROPOSED 6" HDPE SDR 11 LATERAL

PROPOSED 8" HDPE SDR 11 LATERAL

PROPOSED HDPE SDR 17 HEADER

EXISTING MAJOR/MINOR CONTOURS

40

PROPOSED MAJOR/MINOR CONTOURS

PHASE LIMITS

CELL LIMITS

PROPERTY LINE

EXISTING 6" LEACHATE FORCEMAIN

PROPOSED 8" HDPE SDR 11 SIDE SLOPE GAS PIPE

DESIGN REVISION CALLOUT

DETAILS LEGEND OF PATTERNS

CLEAN BACKFILL

PIPE BEDDING (DEFINED AS FIELD COMPACTED AND LEVELED BACKFILL OR EQ.)

INTERMEDIATE COVER

WASTE

BENTONITE SEAL

EXISTING GROUND

GRAVEL

ONSITE SOIL

NOTE

SYMBOLOLOGY IS REPRESENTATIVE OF MAJOR LANDFILL GAS COMPONENTS.

GENERAL SYMBOLOGY

ARROW INDICATES DIRECTION OF PLAN NORTH

N

PLAN

1/4" = 1'-0"

PLAN TITLE

SECTION LETTER

FLAG INDICATES DIRECTION OF SECTION CUT

X

XXX

SECTION CUT MARKER

SECTION

3/8" = 1'-0"

SECTION LETTER

SHEET WHERE SECTION VIEW IS FIRST CUT *

X

XXX

SECTION TITLE

DETAIL NUMBER

SHEET WHERE DETAIL IS LOCATED *

#

XXX

DETAIL MARKER

DETAIL

3" = 1'-0"

DETAIL NUMBER

SHEET WHERE DETAIL WAS CALLED OUT

#

XXX

DETAIL TITLE

FOR REFERENCING DETAILS INCLUDED IN DRAWING SET.

SURVEY AND MAP REPORT:

1. TOPOGRAPHY WITHIN PHASES I THROUGH IV AREAS COMPILED BY KUCERA INTERNATIONAL INC., OF WILLOUGHBY, OHIO USING PHOTOGRAMMETRIC METHODS FROM AERIAL PHOTOGRAPHS DATED APRIL 12, 2008.

SPECIFIC NOTES:

1. 2 WEEKS PRIOR TO INITIATING WORK, THE CONTRACTOR WILL SUBMIT FOR APPROVAL A SCHEDULE TO THE ENGINEER, FOR COMPLETION OF THE PROJECT.

2. ALL EXCAVATION AND DRILLING WITHIN THE LANDFILL LIMITS SHALL CEASE PRIOR TO 3:00 PM M-F AND BY 1:00 PM SAT. ALL WASTE EXCAVATED SHALL BE DELIVERED TO THE ACTIVE FACE OF THE LANDFILL DAILY BY 3:30 PM M-F AND BY 2:00 PM SAT. CHANGES IN WORK HOURS ARE BASED UPON OWNER'S APPROVAL.

3. HOURS FOR CONSTRUCTION: 6:30 AM TO 5 PM MONDAY THRU FRIDAY, 9 AM TO 2 PM SATURDAY, NO WORK ALLOWED ON SUNDAY UNLESS OTHERWISE APPROVED BY OWNER AND PERMIT.

4. CONTRACTOR MAY CONTAINERIZE WASTE AND TARP OVERNIGHT BASED ON OWNER APPROVAL.

EROSION AND SEDIMENT CONTROL:

1. CONTRACTOR WILL ADD EROSION AND SEDIMENT CONTROL AS NECESSARY TO PREVENT SEDIMENTATION AND DAMAGE TO ADJACENT AREAS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE.

2. CONTRACTOR WILL INSPECT AND REPAIR, AS NECESSARY, ANY EROSION AND SEDIMENT CONTROL DAILY AND FOLLOWING EACH RAIN.

3. EROSION AND SEDIMENT CONTROL WILL BE INSTALLED PRIOR TO CONSTRUCTION AND SHALL BE MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

4. CONTRACTOR IS RESPONSIBLE FOR MONITORING DOWNSTREAM CONDITIONS THROUGHOUT THE CONSTRUCTION PERIOD AND CLEARING ANY DEBRIS AND SEDIMENT RESULTING FROM CONSTRUCTION.

5. EROSION CONTROL FENCING MUST MEET THE REQUIREMENT OF THE DEPARTMENT OF TRANSPORTATION, STATE OF FLORIDA STANDARD SPECIFICATIONS. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES.

6. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTION.

EARTHWORK:

1. EXCAVATION IS UNCLASSIFIED AND INCLUDES REMOVAL OF EARTH FILLS, RUBBLE, TRASH, AND OTHER MATERIALS ENCOUNTERED IN EXCAVATION AND GRADING OPERATIONS TO DEPTH AND EXTENT SHOWN ON DRAWINGS OR SPECIFIED. THE OWNER'S REPRESENTATIVE SHALL BE THE FINAL AUTHORITY AND SHALL MAKE THE FINAL DECISION DURING CONSTRUCTION AS TO THE DEPTH AND EXTENT TO WHICH MATERIALS MUST BE REMOVED AND REPLACED.

2. SURVEY BENCHMARKS, MONUMENTS AND OTHER REFERENCE POINTS WILL BE PROTECTED FROM DAMAGE AND DISPLACEMENT. IF DISTURBED OR DESTROYED, THEY WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

3. CONTRACTOR SHALL KEEP DIRT, DUST, NOISE AND OTHER OBJECTIONABLE NUISANCES TO A MINIMUM.

4. ALL FILL AREAS ARE TO BE COMPACTED AS DEFINED IN THE SPECIFICATIONS AND DRAWINGS.

5. CUT AND FILL SLOPES FOR STRUCTURAL EMBANKMENTS SHALL NOT EXCEED 3 HORIZONTAL TO 1 VERTICAL.

UTILITIES:

1. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THESE PLANS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR LOCATIONS SHOWN AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATIONS OF ALL UTILITIES WITHIN THE LIMITS OF THE WORK PRIOR TO CONSTRUCTION. ALL DAMAGE MADE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

AS-BUILT SURVEY DATA:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR MINIMIZING LANDFILL GAS EMISSIONS FROM SURVEY TUBES (E.G. SEAL TOP OF SURVEY TUBES).

2. THE CONTRACTOR SHALL PROVIDE SURVEY DATA TO THE ENGINEER SHOWING THE LANDFILL GAS SYSTEM HAS BEEN PROPERLY CONSTRUCTED AND MEETS THE MINIMUM SLOPES REQUIRED AS SHOWN ON THE DRAWINGS.

3. THE SURVEY DATA SUBMITTED TO THE ENGINEER SHALL BE GROUND SURFACE ELEVATIONS AND TOP OF PIPE ELEVATIONS AT 50 FOOT INTERVALS ON CENTER AND AT EACH FITTING, LATERAL CONNECTION, VALVE, BENDS AND OTHER SIGNIFICANT FEATURES

4. ALL REQUESTED SURVEY DATA MUST BE PROVIDED TO OWNER'S REPRESENTATIVE IN FLORIDA STATE PLANE COORDINATES AND BE PERFORMED BY A STATE OF FLORIDA CERTIFIED SURVEYOR.

GENERAL NOTES:

1. THE CONTRACTOR IS ADVISED THAT NO ACTIVITIES MAY INTERFERE, DISRUPT, BLOCK, OR OTHERWISE CONFLICT WITH LANDFILL OPERATIONS. IF CONFLICTS ARE ANTICIPATED THEY SHALL BE COORDINATED AND APPROVED BY THE OWNER AND ENGINEER PRIOR TO DISRUPTION.

2. PROJECT SITE IS A SOLID WASTE LANDFILL, AS SUCH, CONDITIONS ARE SUBJECT TO CHANGE WITH TIME. CONTROLS, IN PARTICULAR VERTICAL CONTROL, SHOULD BE EXPECTED (AND ANTICIPATED) TO VARY FROM THOSE SHOWN ON THESE DRAWINGS DUE TO ONGOING SUBSIDENCE RESULTING FROM REFUSE DECOMPOSITION. RELATIVE ELEVATION DIFFERENCES IN EXISTING AND PROPOSED ELEVATIONS SHOWN ON THE DRAWINGS SHALL BE ADJUSTED ACCORDINGLY. LOCATION OF STRUCTURES SHALL BE PLACED IN ACCORDANCE WITH HORIZONTAL CONTROLS. VERTICAL PLACEMENT OF STRUCTURES SHALL BE IN ACCORDANCE WITH CONSTRUCTION DOCUMENTS, OR AS APPROVED BY THE ENGINEER.

3. CONSTRUCTION OF LANDFILL GAS COLLECTION SYSTEM WILL INVOLVE REFUSE EXCAVATION. THE CONTRACTOR SHALL MAKE ALL SAFETY AND ENVIRONMENTAL PRECAUTIONS TO PROTECT ITS WORKERS AND SUBCONTRACTORS, AT NO ADDITIONAL COST TO THE OWNER. ALL EXCAVATED WASTES SHALL BE PLACED AT THE WORKING FACE. CONTRACTOR IS ADVISED THAT THE POTENTIAL FOR ENCOUNTERING ASBESTOS CONTAINING MATERIAL EXISTS. SHOULD SUSPECT ASBESTOS-CONTAINING MATERIAL BE ENCOUNTERED, IT SHALL BE MAINTAINED IN A MOIST CONDITION DURING THE REMOVAL AND TRANSFER PROCESS TO MINIMIZE/PREVENT EMISSIONS FROM SUCH. DISTURBED REFUSE (INCLUDING ANY SUSPECT ASBESTOS-CONTAINING MATERIAL) WILL BE TRANSPORTED TO THE WORKING FACE OF THE CENTRAL COUNTY SOLID WASTE DISPOSAL COMPLEX BY THE END OF EACH WORKING DAY FOR PROPER DISPOSAL AND BURIED WITH A MINIMUM OF SIX (6) INCHES OF SOIL COVER.

4. ANY AND ALL FINES IMPOSED ON THE OWNER BY ANY REGULATORY AGENCY DUE TO ACTIONS OF THE CONTRACTOR SHALL BE PAID BY THE CONTRACTOR.

5. INSPECTION: EXAMINE AREAS FOR CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED. REPORT IN WRITING TO OWNER'S REPRESENTATIVE ALL CONDITIONS CONTRARY TO THOSE SHOWN ON THE DRAWINGS OR SPECIFIED HEREIN AND ALL OTHER CONDITIONS THAT WILL AFFECT SATISFACTORY EXECUTION OF WORK. DO NOT PROCEED WITH WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED. STARTING WORK CONSTITUTES ACCEPTANCE OF THE CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED. AFTER SUCH ACCEPTANCE, THE CONTRACTOR SHALL, AT CONTRACTORS EXPENSE, BE RESPONSIBLE FOR CORRECTING ALL UNSATISFACTORY AND DEFECTIVE WORK RESULTING FROM SUCH UNSATISFACTORY CONDITIONS.

6. PROTECTIONS: INSTALL TEMPORARY BARRIERS, FENCES, BARRICADES, LIGHTS, WARNING SIGNS AND OTHER DEVICES NECESSARY TO PROTECT STRUCTURES, UTILITIES, LANDSCAPING, EXCAVATIONS, AND OTHER ITEMS AS NECESSARY. PROTECT SURVEY BENCHMARKS AND MONUMENTS FROM DISPLACEMENT.

7. ALL WORK SHALL BE PERFORMED IN A QUALITY WORKMANLIKE MANNER.

8. DEVIATIONS FROM THESE PLANS AND SPECIFICATIONS WITHOUT PRIOR WRITTEN CONSENT OF THE ENGINEER OR OWNER MAY CAUSE THE WORK TO BE UNACCEPTABLE AND WILL BE ADJUSTED OR REPAIRED AT THE CONTRACTOR'S EXPENSE.

9. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY LICENSES AND PERMITS ASSOCIATED WITH THE CONSTRUCTION OF THIS PROJECT UNLESS NOTIFIED OTHERWISE IN WRITING BY THE OWNER.

10. LATERAL PIPING ALIGNMENTS ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY TO ASSURE REQUIRED SLOPE AND DIRECTION OF GAS AND CONDENSATE FLOW.

11. SUGGESTED INSTALLATION SEQUENCE: THE FOLLOWING INSTALLATION SEQUENCE HAS BEEN ASSUMED IN THE ENGINEER CALCULATIONS.

(A.) DRILL ALL VERTICAL WELLS, INSTALLING AND COMPLETING WELL COMPONENTS AS PROCEEDING.

(B.) TRENCH LATERAL PIPING FROM THE WELLS TO CONNECTION POINT IN THE ACTIVE GAS COLLECTION SYSTEM.

(C.) CONNECT ALL LATERALS TO ACTIVE GAS COLLECTION SYSTEM.

(D.) INSTALL FORCEMAIN AND AIR LINE PIPING

(E.) INSTALL PNEUMATIC PUMPS AT WELLS DESIGNATED IN PLAN SHEET 00C-04.

(F.) COMPLETE WELLHEAD INSTALLATION AND PNEUMATIC PUMP CONNECTIONS.

12. PRIOR TO INSTALLATION OF GAS COLLECTION SYSTEM, ENGINEER TO BE PROVIDED WITH THE FINAL GRADING PLAN TO CONFIRM LAYOUT AND MINIMUM SLOPES.

13. ALL WORK SHALL HAVE A ONE YEAR WARRANTY. ONE YEAR WARRANTY WILL BECOME EFFECTIVE WHEN THE PROJECT IS SUBSTANTIALLY COMPLETE, AS DETERMINED BY ENGINEER.

14. ALL BORE HOLES THAT ARE NOT COMPLETED AT THE END OF THE DAY ARE TO BE COVERED WITH A METAL WELL COVER CAPABLE OF PREVENTING ANY PERSONS FROM FALLING INTO THE HOLE. THE HOLE MUST THEN BE COVERED WITH A PIECE OF PLYWOOD TO SUBSTANTIALLY COVER THE ENTIRE HOLE. SOIL MUST BE PLACED ON TOP OF THE PLYWOOD TO COMPLETELY COVER THE PLYWOOD TO FURTHER PREVENT GAS EMISSIONS. SUBSTITUTE SAFETY MEASURES MAY BE USED IF APPROVED BY ENGINEER.

15. ALL HDPE PIPES SHALL BE PRESSURE TESTED AFTER FUSION FOR LEAKS. THE STANDARD PRESSURE TEST SHALL BE 10 PSI FOR 1 HOUR WITH A MAXIMUM OF 5% LOSS.

16. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL SURVEY TUBES AT THE END OF THE PROJECT, UNLESS INSTRUCTED OTHERWISE BY OWNER OR ENGINEER.

17. ACTUAL DIMENSIONS AND LOCATIONS MAY VARY BASED ON FIELD LOCATIONS.

18. TERMS "OWNER'S REPRESENTATIVE" AND "ENGINEER" ARE INTERCHANGEABLE.

19. ALL ROAD CROSSINGS TO BE ENCASED IN A MINIMUM 6" DIAMETER LARGER PIPE THAN ACTUAL LATERAL FOR PROTECTION. CASING TO EXTEND 5' PAST THE ACCESS ROAD ON BOTH SIDES OF ACCESS ROAD.

20. CONTRACTOR TO PROVIDE SHOP DRAWINGS TO ENGINEER FOR APPROVAL.

21. EXISTING SOLAR FLARES WHICH PASSIVELY CONTROL LANDFILL GAS ACCUMULATED IN LEACHATE COLLECTION SYSTEM TO BE DECOMMISSIONED AND MOVED TO OWNER SPECIFIED LOCATION. ALL CONNECTIONS FROM LEACHATE COLLECTION SYSTEM TO SOLAR FLARES SHALL BE CAPPED IMMEDIATELY.

SARASOTA COUNTY

HDR

HDR Engineering, Inc.

1	03/09	ISSUED FOR RAI #1
0	12/08	ISSUED FOR FDEP APPROVAL
B	11/08	100% QC REVIEW
A	10/08	DEP PRE-APP MEETING
ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	C. KOENIG, P.E.
DESIGNED BY	A. BARKER, E.I.
DRAWN BY	D. SOSA
CHECKED BY	C. LEBRON, P.E.
PROJECT NUMBER	87559

Central County Solid Waste Disposal Complex

PERMIT DRAWINGS

SARASOTA COUNTY FLORIDA

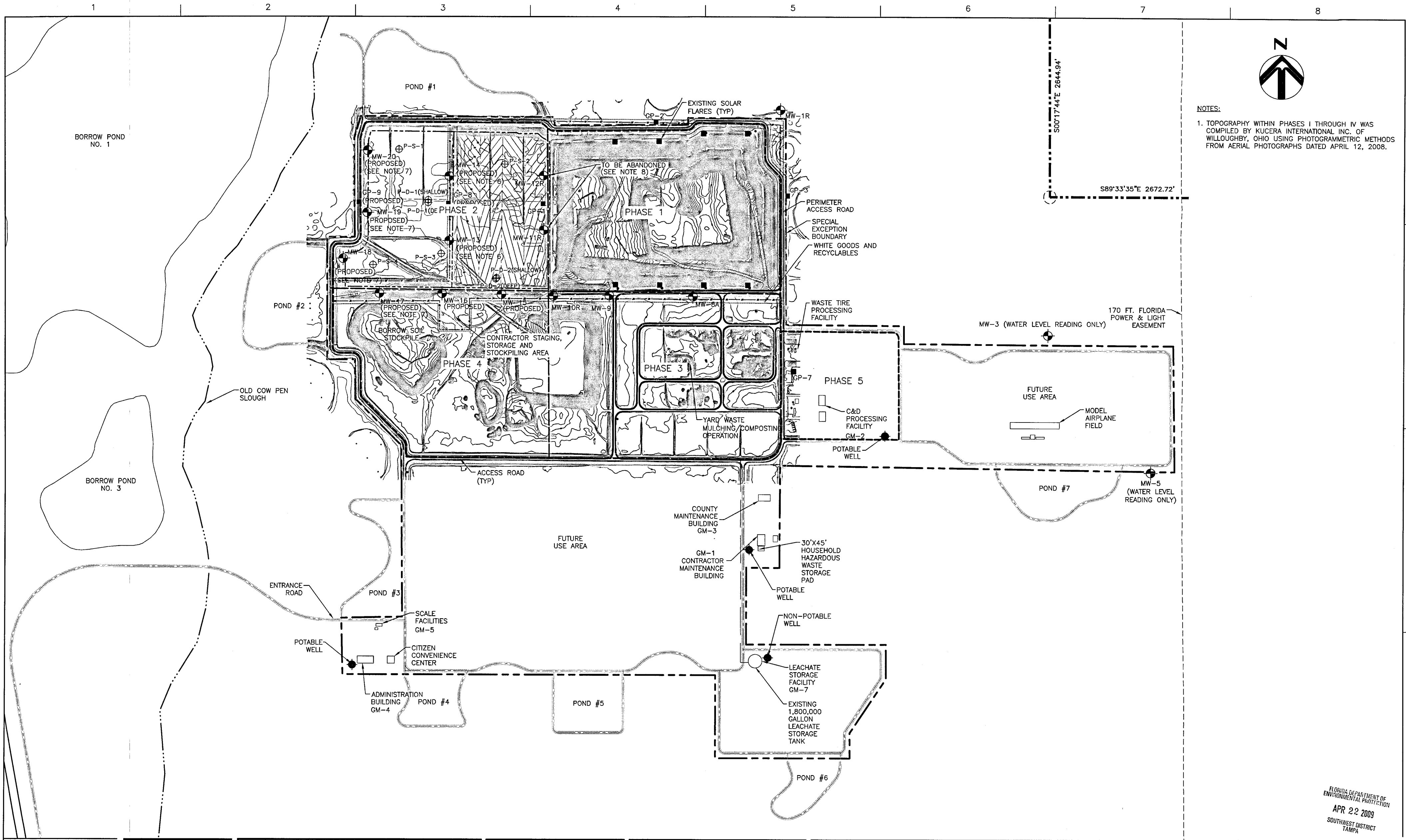
GENERAL NOTES

0 1" 2"

FILENAME 00G-01.dwg

SCALE NTS

SHEET 00G-01



NOTES:
1. TOPOGRAPHY WITHIN PHASES I THROUGH IV WAS COMPILED BY KUCERA INTERNATIONAL INC. OF WILLOUGHBY, OHIO USING PHOTOGRAMMETRIC METHODS FROM AERIAL PHOTOGRAPHS DATED APRIL 12, 2008.



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Carla L.
4/22/09

Central County Solid Waste Disposal Complex
PERMIT DRAWINGS
SARASOTA COUNTY FLORIDA

EXISTING CONDITIONS

0 1" 2"

FILENAME	00C-01.dwg	SHEET
SCALE	1" = 200'	00C-01

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
APR 22 2009
SOUTHWEST DISTRICT
TAMPA

1

2

3

4

5

6

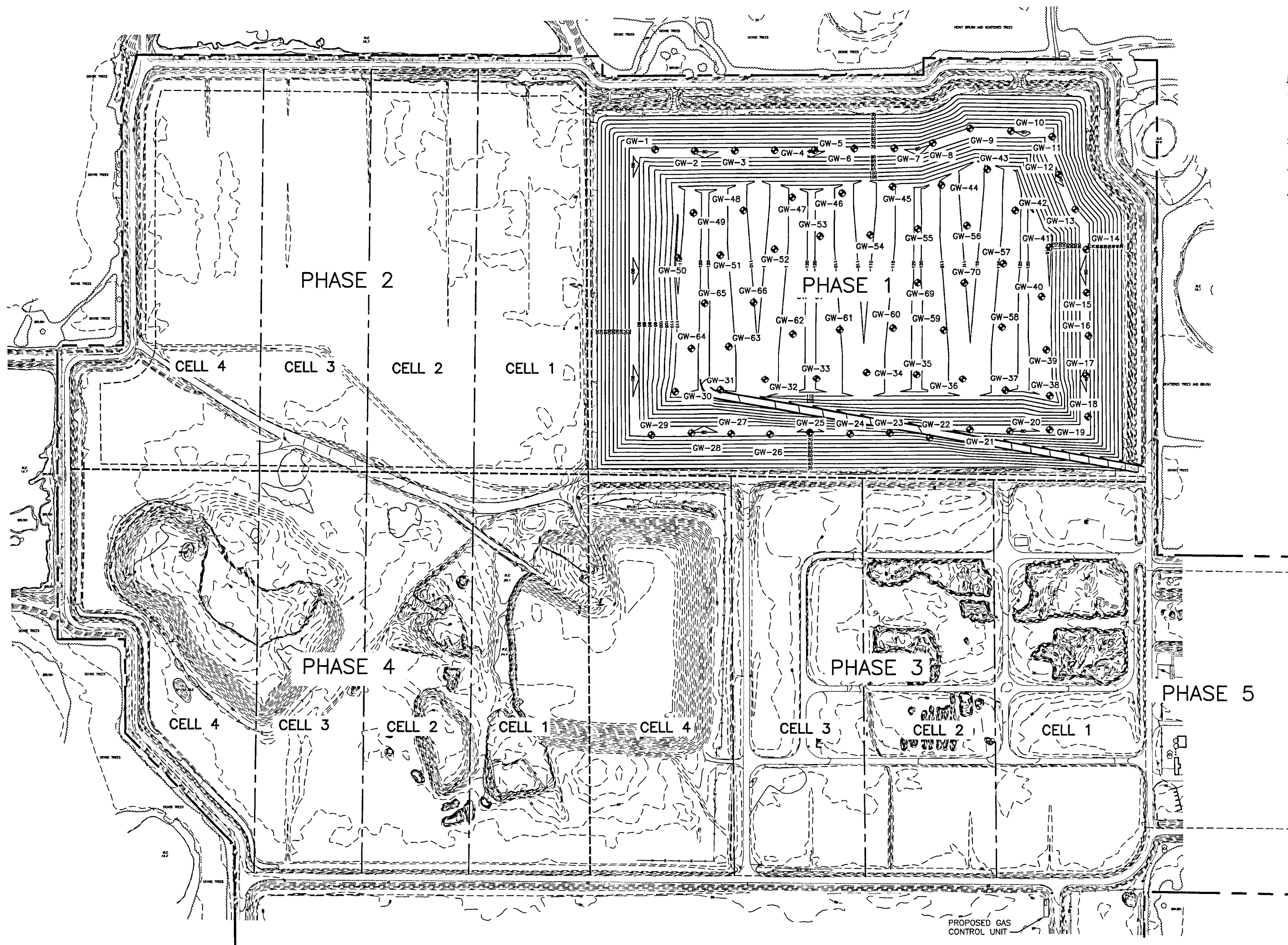
7

8



NOTES:

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2. PHASE I FINAL GRADES DESIGNED BY HDR ENGINEERING, INC. TAMPA, FLORIDA.
3. SEE SHEET 00C-03 FOR DETAILED LANDFILL GAS COLLECTION SYSTEM LAYOUT OF PHASE I.
4. WELLS TO BE LOCATED ON SIDE SLOPE SIDE OF TERRACE.

**HDR**

HDR Engineering, Inc.

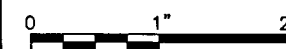
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Chula L
4/20/09**Central County Solid Waste
Disposal Complex****PERMIT DRAWINGS**

SARASOTA COUNTY

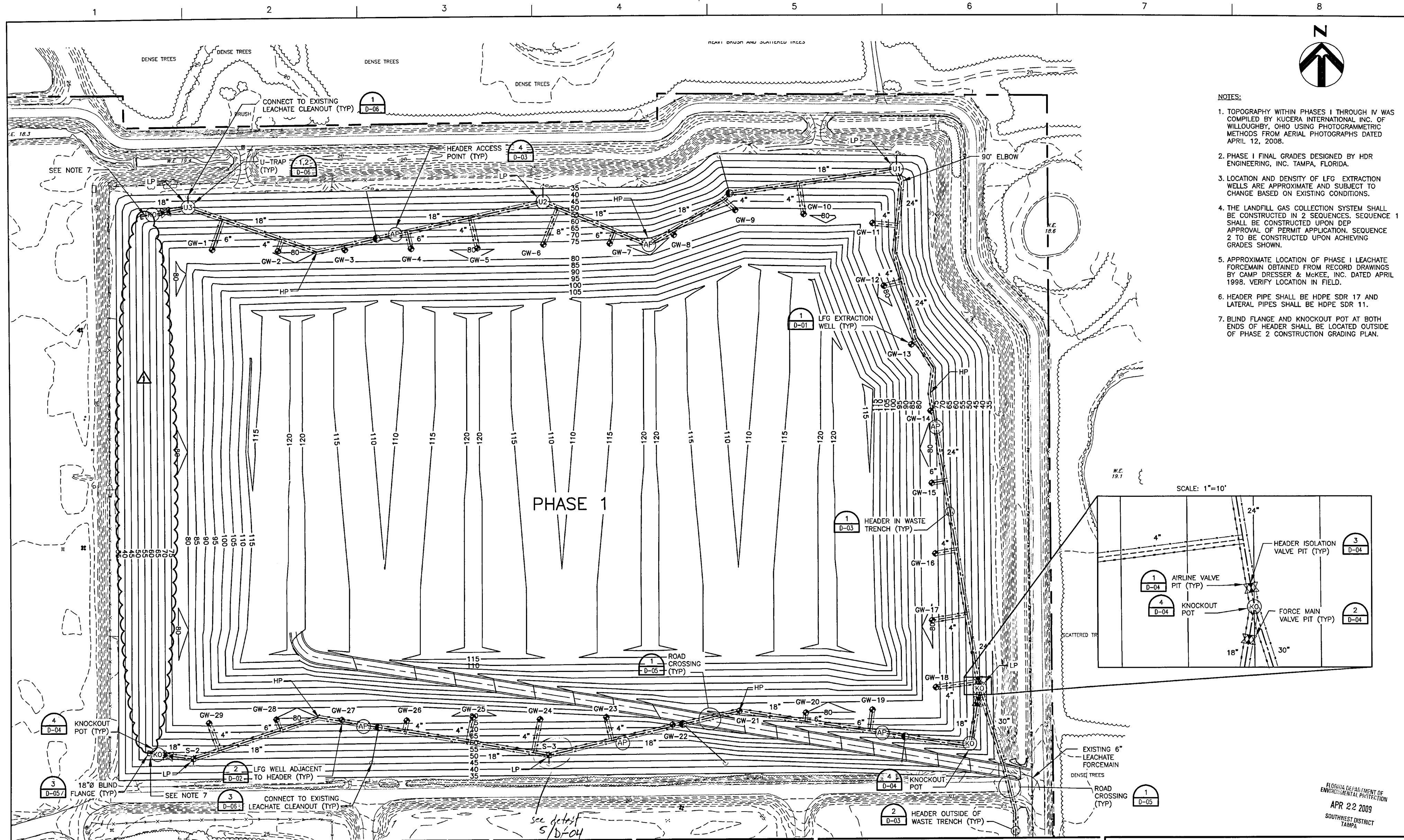
FLORIDA

OVERALL SITE PLAN

FILENAME	00C-02.dwg
SCALE	1" = 200'

SHEET	00C-02
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FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
APR 22 2009
SOUTHWEST DISTRICT
TAMPA



- NOTES:
1. TOPOGRAPHY WITHIN PHASES I THROUGH IV WAS COMPILED BY KUCERA INTERNATIONAL INC. OF WILLOUGHBY, OHIO USING PHOTOGRAMMETRIC METHODS FROM AERIAL PHOTOGRAPHS DATED APRIL 12, 2008.
 2. PHASE I FINAL GRADES DESIGNED BY HDR ENGINEERING, INC. TAMPA, FLORIDA.
 3. LOCATION AND DENSITY OF LFG EXTRACTION WELLS ARE APPROXIMATE AND SUBJECT TO CHANGE BASED ON EXISTING CONDITIONS.
 4. THE LANDFILL GAS COLLECTION SYSTEM SHALL BE CONSTRUCTED IN 2 SEQUENCES. SEQUENCE 1 SHALL BE CONSTRUCTED UPON DEP APPROVAL OF PERMIT APPLICATION. SEQUENCE 2 TO BE CONSTRUCTED UPON ACHIEVING GRADES SHOWN.
 5. APPROXIMATE LOCATION OF PHASE I LEACHATE FORCEMAIN OBTAINED FROM RECORD DRAWINGS BY CAMP DRESSER & MCKEE, INC. DATED APRIL 1998. VERIFY LOCATION IN FIELD.
 6. HEADER PIPE SHALL BE HDPE SDR 17 AND LATERAL PIPES SHALL BE HDPE SDR 11.
 7. BLIND FLANGE AND KNOCKOUT POT AT BOTH ENDS OF HEADER SHALL BE LOCATED OUTSIDE OF PHASE 2 CONSTRUCTION GRADING PLAN.



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Charles L. Lebron
4/20/09

Central County Solid Waste Disposal Complex

PERMIT DRAWINGS

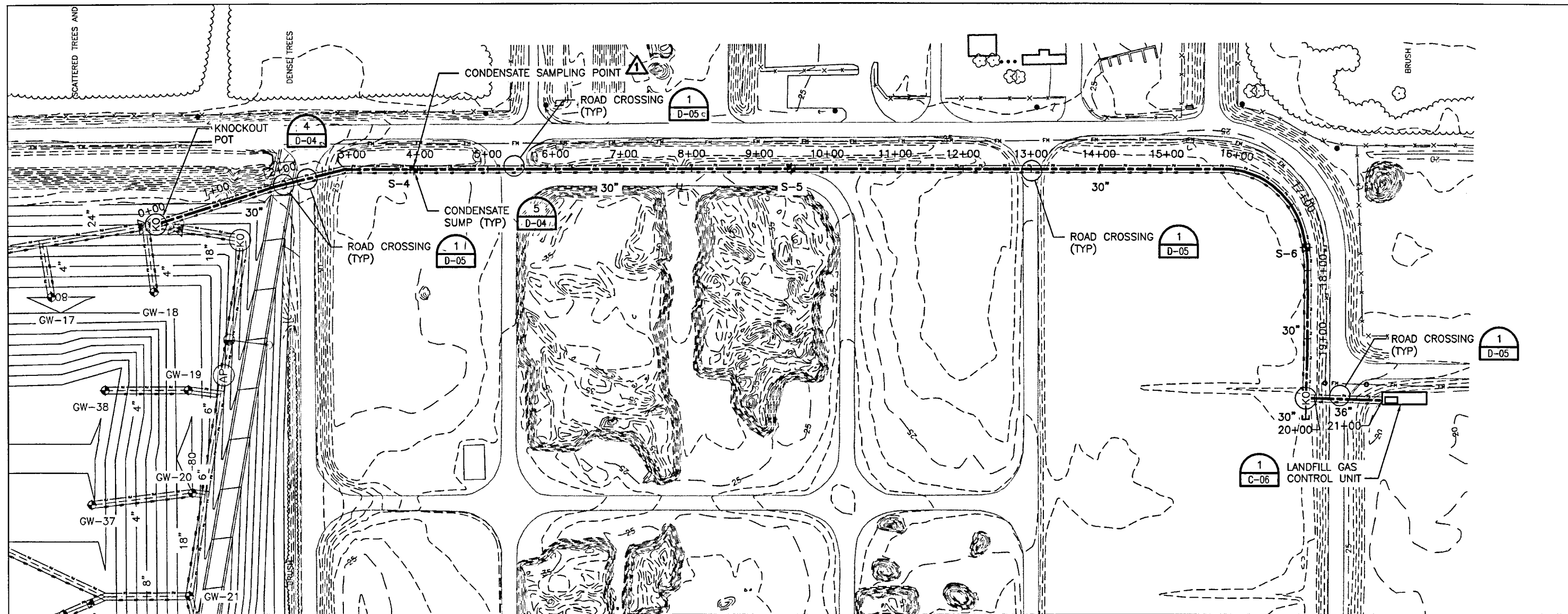
SARASOTA COUNTY FLORIDA

PHASE 1 SEQUENCE 1 GAS SYSTEM LAYOUT

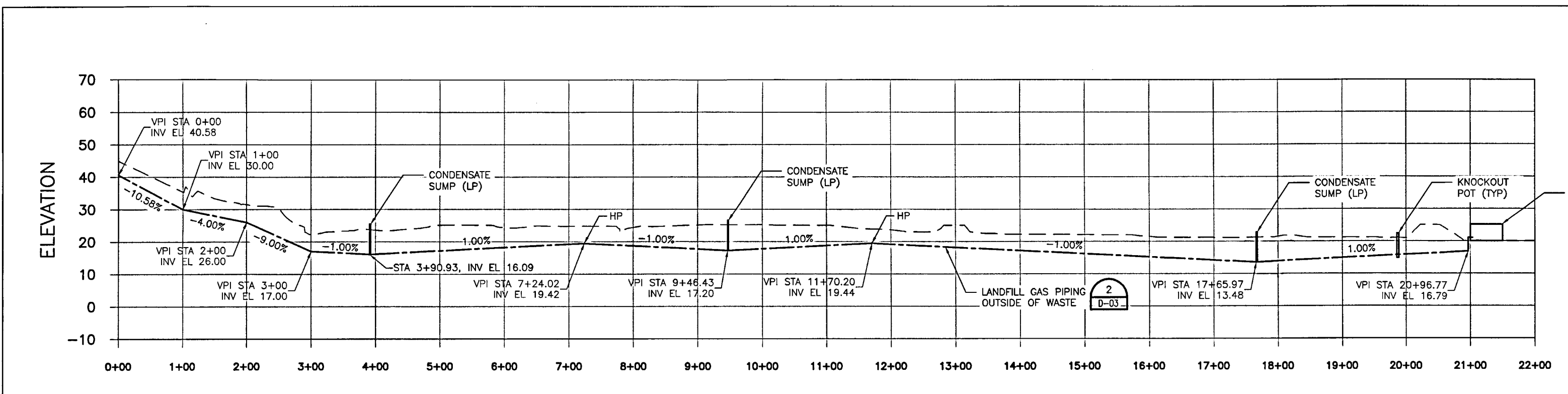
0 1" 2"

FILENAME	00C-03.dwg	SHEET
SCALE	1" = 100'	00C-03

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
APR 22 2009
SOUTHWEST DISTRICT TAMPA



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 2. TRENCH DEPTHS ARE CURRENTLY DESIGNED TO BE NO SHALLOWER THAN 4 FEET AND NO DEEPER THAN 8 FEET.
 3. ONLY PROFILE OF HEADERLINE IS SHOWN FOR CLARITY. HOWEVER, AN AIRLINE AND A CONDENSATE FORCEMAIN SHALL BE INSTALLED IN THE SAME TRENCH.
 4. GAS LINE MARKERS SHALL BE INSTALLED EVERY 300 FEET NOTING LOCATION OF HEADERLINE.
 5. APPROXIMATE LOCATION OF PHASE I LEACHATE FORCEMAIN OBTAINED FROM RECORD DRAWINGS BY CAMP DRESSER & MCKEE, INC. DATED APRIL 1998. VERIFY LOCATION IN FIELD.



NOTE: AIRLINE/FORCEMAIN LINES NOT SHOWN FOR CLARITY.

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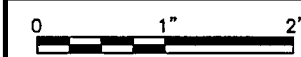
Paula LL
4/20/09

Central County Solid Waste Disposal Complex PERMIT DRAWINGS

SARASOTA COUNTY

FLORIDA

HEADER TO FLARE STATION PLAN & PROFILE



FILENAME	00C-05.dwg
SCALE	HZ 1"=100' VT 1"=10'

SHEET
00C-05

1

2

3

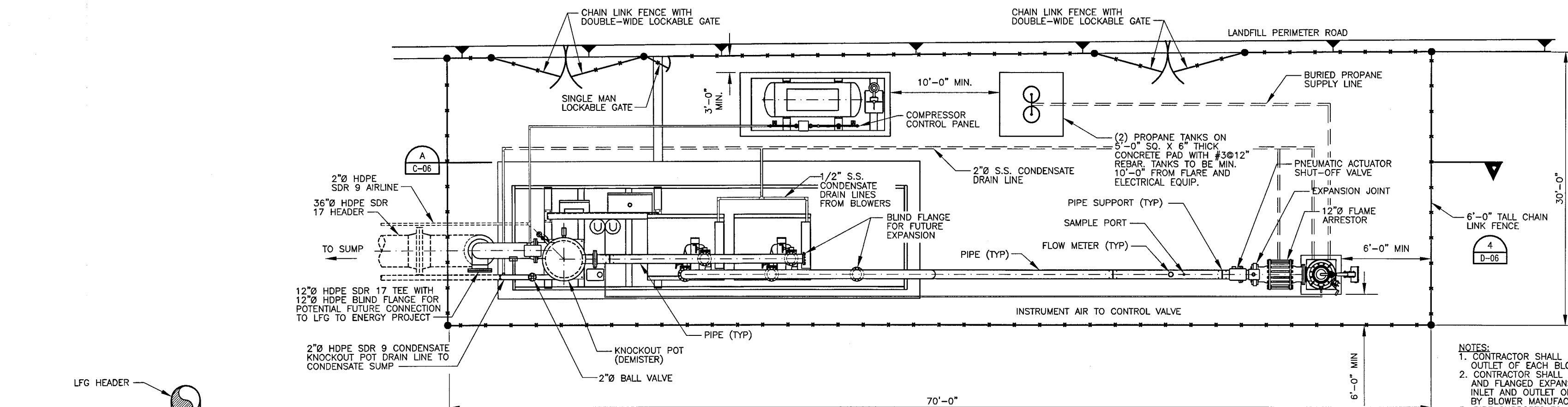
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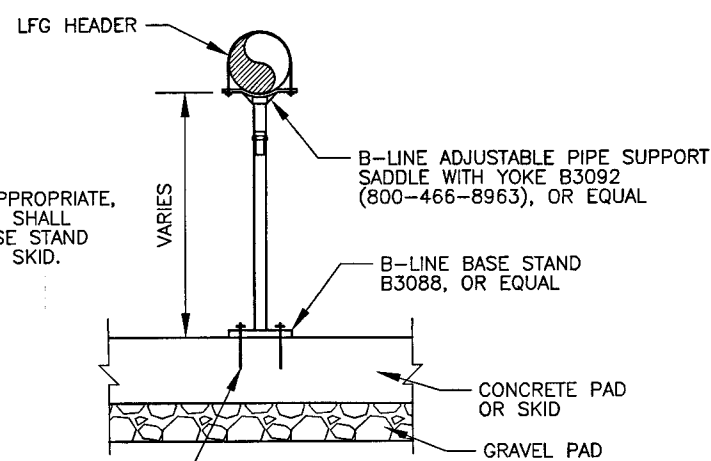


LANDFILL FLARE STATION (TYP) PLAN VIEW

NOT TO SCALE

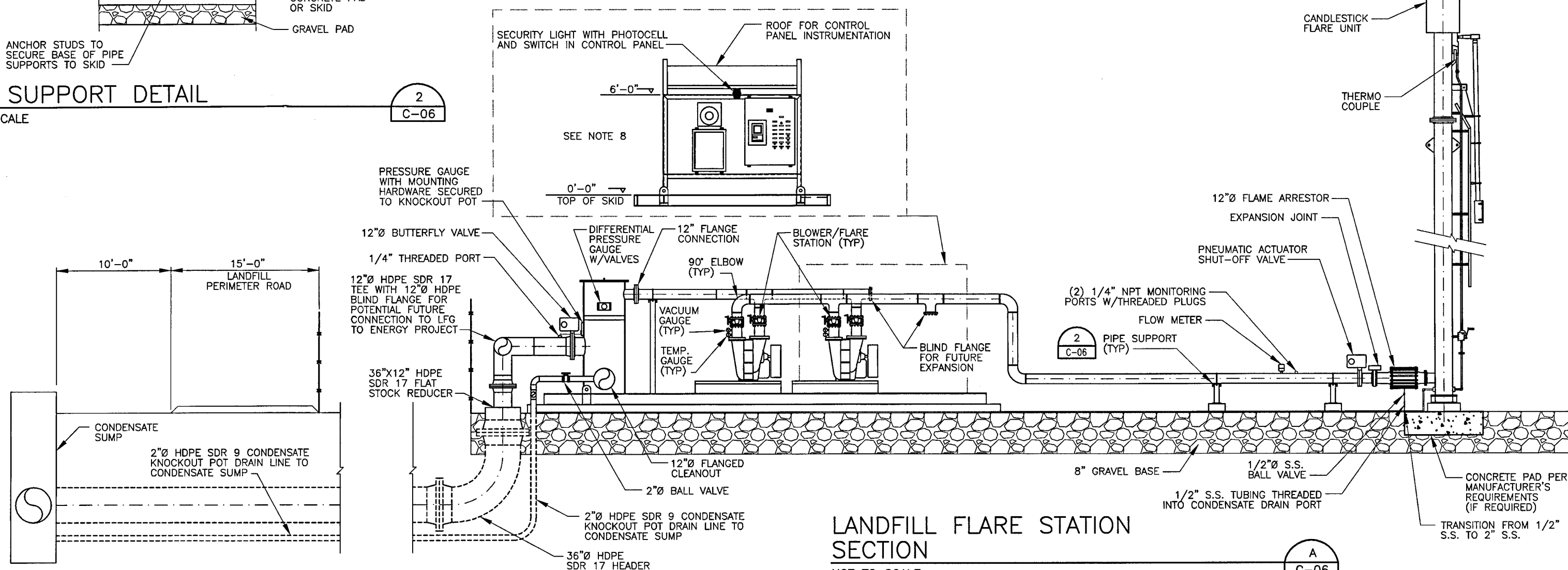
1
C-05

NOTE:
1. WHERE APPROPRIATE,
CONTRACTOR SHALL
ANCHOR BASE STAND
DIRECTLY TO SKID.



PIPE SUPPORT DETAIL

NOT TO SCALE

2
C-06

LANDFILL FLARE STATION SECTION

NOT TO SCALE

A
C-06

- NOTES:
- CONTRACTOR SHALL INSTALL CHECK VALVE ON OUTLET OF EACH BLOWER.
 - CONTRACTOR SHALL INSTALL BUTTERFLY VALVES AND FLANGED EXPANSION COUPLING ON BOTH THE INLET AND OUTLET OF EACH BLOWER AS REQUIRED BY BLOWER MANUFACTURER.
 - PIPE SUPPORTS TO BE INSTALLED MIN. OF EVERY 8' FOR STRAIGHT PIPE SECTIONS AND OTHERWISE AS NECESSARY TO ADEQUATELY SUPPORT PIPING, VALVES, ETC. AS REQUIRED BY MANUFACTURER.
 - BLOWER/FLARE PLAN AND SECTIONS ARE SHOWN FOR INFORMATION PURPOSES ONLY. IT IS A SCHEMATIC LAYOUT. ACTUAL LAYOUT AND DESIGN TO BE PROVIDED BY THE MANUFACTURER AND APPROVED BY THE ENGINEER.
 - DIMENSIONS SHOWN MAY BE MODIFIED TO SUIT BLOWER/FLARE MANUFACTURER'S REQUIREMENTS. CONTRACTOR SHALL COORDINATE PIPING TO SUIT ASSEMBLY.
 - SHOP DRAWINGS OF BLOWER/FLARE STATION LAYOUT TO BE REVIEWED AND APPROVED BY ENGINEER PRIOR TO AUTHORIZATION TO FABRICATE AND DELIVER.
 - BLOWERS AND EQUIPMENT MAY BE SUPPLIED AND INSTALLED AS INDIVIDUAL UNITS OR AS A COMPLETE SKID PACKAGE, PER APPROVAL OF ENGINEER.
 - THE CONTRACTOR SHALL INSTALL ALL CONDUITS AND CONDUCTORS NECESSARY FOR THE FLARE, BLOWER MOTORS, AND CONTROLS.
 - DIMENSIONS MAY BE MODIFIED TO SUIT INDIVIDUAL SKID ASSEMBLY MANUFACTURER'S REQUIREMENTS.
 - SAMPLING PORTS SHALL BE QUICK CONNECTS DRILLED AND TAPPED INTO PIPE AT TWO LOCATIONS 90' APART.
 - CONTROLS AND ELECTRICAL DESIGN SHALL BE BY THE FLARE VENDOR AND APPROVED BY THE ENGINEER.
 - GAS IMPERMEABLE SEAL-OFFS SHALL BE USED OR ALL UNDERGROUND ELECTRICAL CONDUIT.
 - FLARE TO BE MOUNTED ON A LEVEL SURFACE, SHIM OR GROUT AS REQUIRED.
 - PAINT SPECS DO NOT APPLY TO STAINLESS STEEL MATERIAL.
 - FLARE TO SHIP WITH CONTROL PANELS MOUNTED IN PLACE.
 - PROVIDE 8" NOST GRAVEL ON 8 OZ/SY NON-WOVEN GEOTEXTILE WITHIN FENCE AREA EXCEPT IN LOCATION OF FOUNDATION.
 - FLARE DEPICTION IS SHOWN FOR ILLUSTRATION PURPOSES. ACTUAL FLARE MAY VARY FROM THE FLARE SHOWN.
 - CONTRACTOR TO INSTALL PHONE SERVICE TO CONTROL PANEL FROM LANDFILL OFFICE (WIRELESS).
 - CONTROL PANEL ACTUAL LOCATION IN FRONT OF KNOCKOUT POT (DEMISTER). SHOWN IN-SET FOR CLARITY.
 - ONE FLARE STACK SHOWN FOR CLARITY. ADDITIONAL FLARE STACKS MAY BE NECESSARY TO MEET FUTURE FLOW RATE.
 - INLET AND OUTLET CONFIGURATIONS MAY VARY DEPENDING UPON EQUIPMENT PROVIDED.
 - FORMWORK, CONCRETE PLACEMENT, PROTECTION, AND CURING SHALL BE IN ACCORDANCE WITH ACI 318.
 - CONCRETE PAD SHALL BE 2' LARGER (SQ.) THAN DIAMETER OF FLARE BASE OR AS SPECIFIED BY MANUFACTURER.
 - MONITORING PORTS ON PIPE LEADING TO FLARE SHALL BE 10 DIAMETER LENGTHS DOWNSTREAM AND 5 DIAMETER LENGTHS UPSTREAM FROM ANY PIPE BENDS OR OBSTRUCTIONS.
 - ALL STAINLESS STEEL PIPE, TUBING, VALVES, ETC. SHALL BE 316 STAINLESS STEEL.
 - FLARE SUBGRADE TO BE COMPACTED TO 95% OF MODIFIED PROCTOR.



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0	12/08	ISSUED FOR FDEP APPROVAL
B	11/08	100% QC REVIEW
A	10/08	DEP PRE-APP MEETING

PROJECT MANAGER	C. KOENIG, P.E.
DESIGNED BY	A. BARKER, E.I.
DRAWN BY	D. SOSA
CHECKED BY	C. LEBRON, P.E.
PROJECT NUMBER	87559

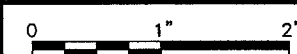
Calvin
4/22/09

Central County Solid Waste Disposal Complex PERMIT DRAWINGS

SARASOTA COUNTY

FLORIDA

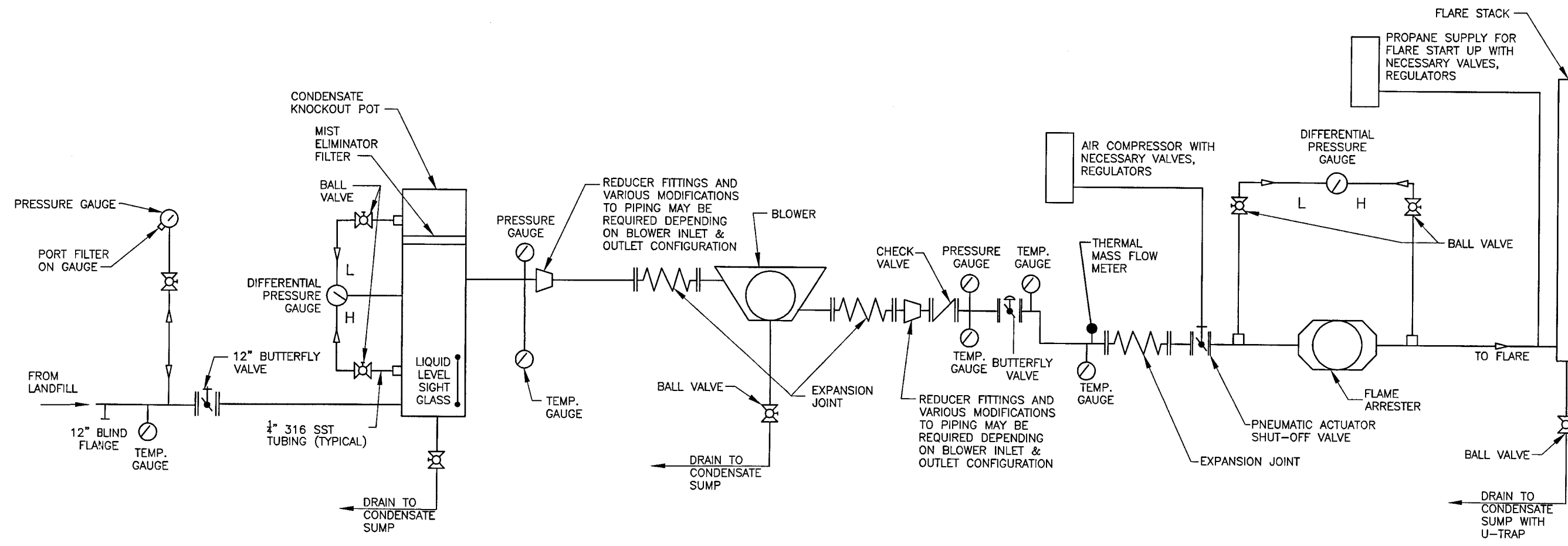
TYPICAL FLARE STATION LAYOUT



FILENAME: OOC-06.dwg
SCALE: NTS

SHEET
00C-06

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
APR 22 2009
SOUTHWEST DISTRICT
TAMPA



NOTE:
1. P&ID IS SHOWN FOR INFORMATION PURPOSES ONLY. IT IS A SCHEMATIC LAYOUT. ACTUAL LAYOUT AND DESIGN TO BE PROVIDED BY THE MANUFACTURER AND APPROVED BY THE ENGINEER.

FLARE STATION P&ID
NOT TO SCALE

1
C-07

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
APR 22 2009
SOUTHWEST DISTRICT
TAMPA



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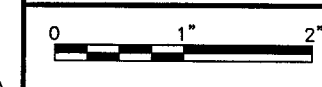
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4/22/09

Central County Solid Waste
Disposal Complex
PERMIT DRAWINGS

SARASOTA COUNTY

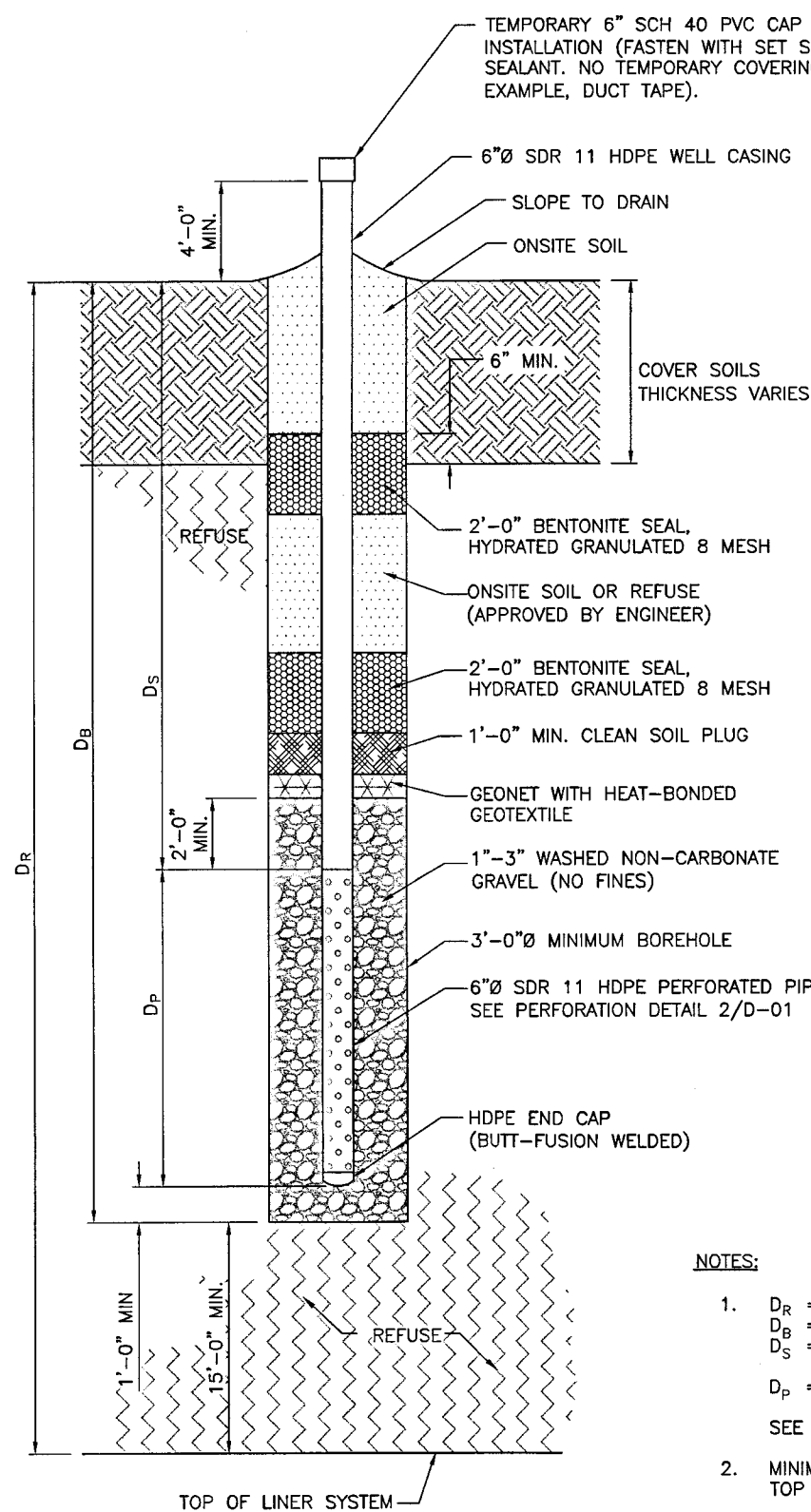
FLORIDA

FLARE STATION P&ID

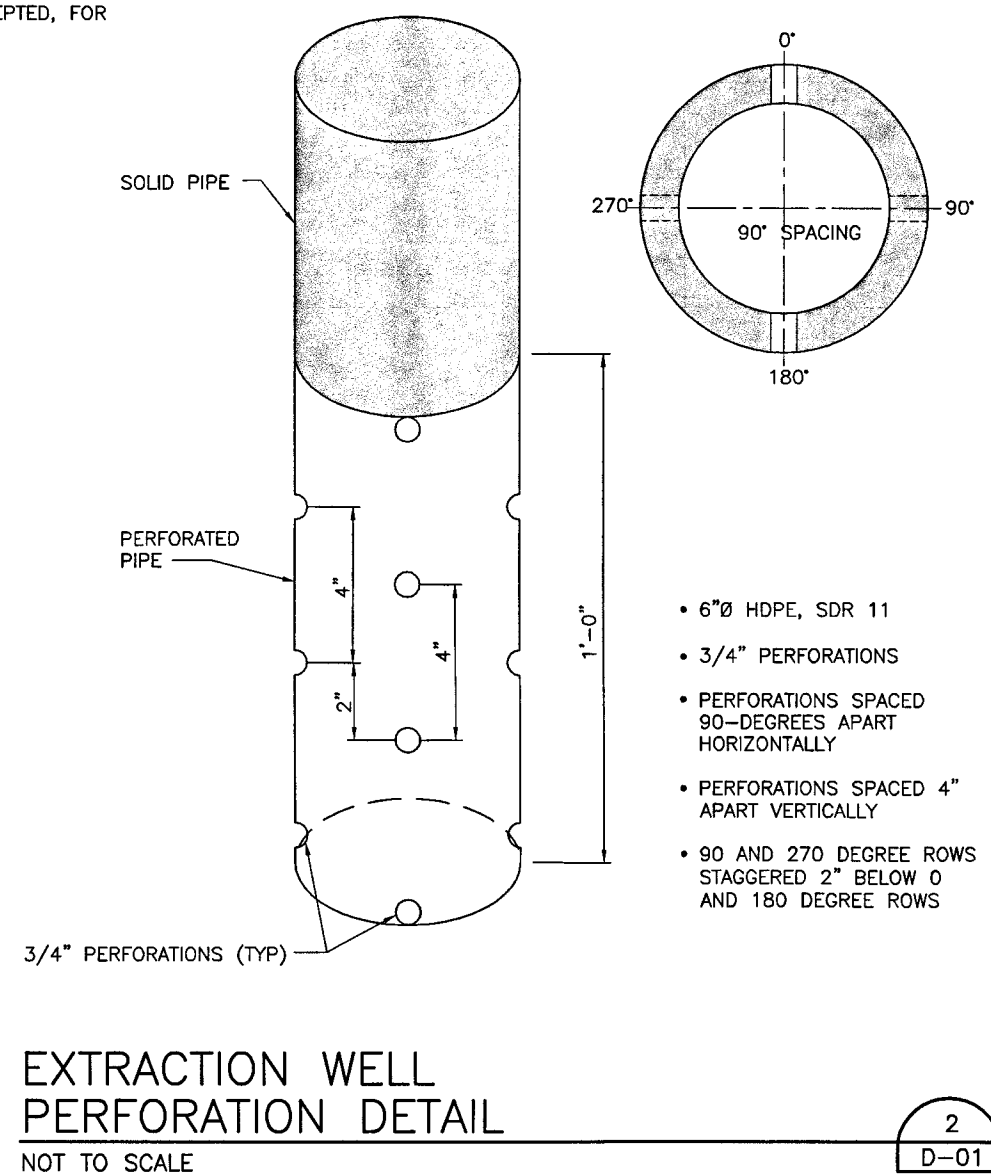


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SHEET	00C-07
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LANDFILL GAS
EXTRACTION WELL
NOT TO SCALE



EXTRACTION WELL
PERFORATION DETAIL
NOT TO SCALE

- NOTES:
- D_R = DEPTH OF REFUSE
 D_B = DEPTH OF BORING
 D_S = DEPTH OF SOLID PIPE (BELOW GRADE)
-10 FEET MINIMUM
 D_P = LENGTH OF PERFORATED PIPE
SEE WELL SCHEDULE THIS SHEET.
 - MINIMUM 15 FEET SEPARATION BETWEEN BASE OF BORING AND TOP OF LINER SYSTEM.
 - 1"-3" WASHED NON-CARBONATE GRAVEL (NO FINES).
 - WELL DRILLING WILL NOT COMMENCE UNTIL BOTTOM LINER ELEVATIONS ARE IDENTIFIED AND VERIFIED BY PROJECT SURVEYOR, DESIGN ENGINEER, AND CQA REPRESENTATIVE.
 - WELL DRILLING TABLE WILL BE MANAGED BY OWNER OR DESIGNATED REPRESENTATIVE TO ENSURE ONLY THE VERIFIED WELL DEPTHS ARE PRESENT, AND THAT DRILLER AND CQA REPRESENTATIVE HAVE THE IDENTICAL INFORMATION PRIOR TO DRILLING.

	WELL ID	NORTHING	EASTING	FG ELEVATION	BG ELEVATION	DEPTH OF WASTE (D _R)	BOREHOLE (D _B)	SOLID PIPE (D _S)	PERFORATED PIPE (D _P)
SEQUENCE 1	GW-1	1043648.25	529407.18	77.0	26.0	51.0	34.0	10.0	24.0
	GW-2	1043643.78	529555.93	79.0	28.0	51.0	34.0	10.0	24.0
	GW-3	1043644.93	529707.20	78.0	26.0	52.0	34.0	10.0	24.0
	GW-4	1043646.49	529856.78	78.0	27.0	51.0	34.0	10.0	24.0
	GW-5	1043646.70	530006.58	79.0	28.0	51.0	34.0	10.0	24.0
	GW-6	1043653.81	530156.12	77.0	25.0	52.0	34.0	10.0	24.0
	GW-7	1043655.04	530306.24	78.0	28.0	50.0	33.0	10.0	23.0
	GW-8	1043674.00	530451.01	79.0	27.0	52.0	34.0	10.0	24.0
	GW-9	1043729.42	530590.25	76.0	26.0	50.0	33.0	10.0	23.0
	GW-10	1043720.28	530744.59	79.0	28.0	51.0	34.0	10.0	24.0
	GW-11	1043699.47	530900.23	77.0	27.0	50.0	33.0	10.0	23.0
	GW-12	1043559.00	530925.66	80.0	27.0	53.0	35.0	10.0	25.0
	GW-13	1043427.84	530987.70	77.0	27.0	50.0	33.0	10.0	23.0
	GW-14	1043278.66	531030.61	79.0	29.0	50.0	33.0	10.0	23.0
	GW-15	1043116.60	531032.49	79.0	29.0	50.0	33.0	10.0	23.0
	GW-16	1042957.98	531039.64	77.0	29.0	48.0	32.0	10.0	22.0
	GW-17	1042808.10	531031.73	80.0	29.0	51.0	34.0	10.0	24.0
	GW-18	1042657.09	531038.82	78.0	29.0	49.0	32.0	10.0	22.0
	GW-19	1042607.47	530894.94	79.0	30.0	49.0	32.0	10.0	22.0
	GW-20	1042601.45	530744.79	80.0	31.0	49.0	32.0	10.0	22.0
	GW-21	1042591.49	530594.32	77.0	29.0	48.0	32.0	10.0	22.0
	GW-22	1042596.53	530443.14	79.0	30.0	49.0	32.0	10.0	22.0
	GW-23	1042592.58	530293.30	78.0	30.0	48.0	32.0	10.0	22.0
	GW-24	1042588.66	530143.85	77.0	28.0	49.0	32.0	10.0	22.0
	GW-25	1042593.76	529992.42	79.0	31.0	48.0	32.0	10.0	22.0
	GW-26	1042586.82	529842.63	77.0	29.0	48.0	32.0	10.0	22.0
	GW-27	1042588.88	529696.26	78.0	29.0	49.0	32.0	10.0	22.0
	GW-28	1042590.90	529546.65	79.0	31.0	48.0	32.0	10.0	22.0
	GW-29	1042583.90	529394.20	77.0	28.0	49.0	32.0	10.0	22.0
SEQUENCE 2	GW-30	1042740.47	529484.07	117.0	30.0	87.0	58.0	10.0	48.0
	GW-31	1042747.90	529655.28	118.0	30.0	88.0	58.0	10.0	48.0
	GW-32	1042798.78	529835.56	113.0	29.0	84.0	56.0	10.0	46.0
	GW-33	1042791.98	530017.16	120.0	31.0	89.0	59.0	10.0	49.0
	GW-34	1042816.73	530205.71	111.0	29.0	82.0	54.0	10.0	44.0
	GW-35	1042809.04	530393.83	121.0	32.0	89.0	59.0	10.0	49.0
	GW-36	1042791.49	530567.31	112.0	28.0	84.0	56.0	10.0	46.0
	GW-37	1042749.48	530727.80	118.0	31.0	87.0	58.0	10.0	48.0
	GW-38	1042729.74	530894.99	117.0	30.0	87.0	58.0	10.0	48.0
	GW-39	1042904.29	530881.78	117.0	31.0	86.0	57.0	10.0	47.0
	GW-40	1043101.51	530862.82	117.0	31.0	86.0	57.0	10.0	47.0
	GW-41	1043287.03	530892.47	115.0	31.0	84.0	56.0	10.0	46.0
	GW-42	1043423.64	530761.90	119.0	29.0	90.0	60.0	10.0	50.0
	GW-43	1043577.01	530655.82	111.0	27.0	84.0	56.0	10.0	46.0
	GW-44	1043516.97	530484.19	115.0	26.0	89.0	59.0	10.0	49.0
	GW-45	1043510.85	530300.25	114.0	27.0	87.0	58.0	10.0	48.0
	GW-46	1043486.01	530110.70	113.0	26.0	87.0	58.0	10.0	48.0
	GW-47	1043470.08	529922.80	116.0	28.0	88.0	58.0	10.0	48.0
	GW-48	1043420.67	529739.69	111.0	26.0	85.0	56.0	10.0	46.0
	GW-49	1043411.11	529551.95	118.0	29.0	89.0	59.0	10.0	49.0
	GW-50	1043243.55	529493.43	115.0	28.0	87.0	58.0	10.0	48.0
	GW-51	1043253.76	529653.64	117.0	28.0	89.0	59.0	10.0	49.0
	GW-52	1043276.06	529857.54	112.0	27.0	85.0	56.0	10.0	46.0
	GW-53	1043325.43	530028.10	119.0	27.0	92.0	61.0	10.0	51.0
	GW-54	1043330.53	530217.36	109.0	26.0	83.0	55.0	10.0	45.0
	GW-55	1043353.23	530395.40	121.0	29.0	92.0	61.0	10.0	51.0
	GW-56	1043366.35	530580.19	109.0	26.0	83.0	55.0	10.0	45.0
	GW-57	1043224.57	530716.99	116.0	28.0	88.0	58.0	10.0	48.0
	GW-58	1042988.69	530713.97	117.0	28.0	89.0	59.0	10.0	49.0
	GW-59	1042976.22	530495.90	116.0	27.0	89.0	59.0	10.0	49.0
	GW-60	1042983.27	530304.05	116.0	30.0	86.0	57.0	10.0	47.0
	GW-61	1042977.11	530103.91	115.0	29.0	86.0	57.0	10.0	47.0
	GW-62	1042960.10	529928.06	118.0	31.0	87.0	58.0	10.0	48.0
	GW-63	1042912.18	529687.23	116.0	29.0	87.0	58.0	10.0	48.0
	GW-64	1042904.69	529545.79	119.0	31.0	88.0	58.0	10.0	48.0
	GW-65	1043072.86	529595.53	121.0	31.0	90.0	60.0	10.0	50.0
	GW-66	1043075.88	529779.37	110.0	28.0	82.0	54.0	10.0	44.0
	GW-67	1043145.00	529996.89	121.0	29.0	92.0	61.0	10.0	51.0
	GW-68	1043145.70	530212.83	110.0	26.0	84.0	56.0	10.0	46.0
	GW-69	1043151.72	530396.57	121.0	29.0	92.0	61.0	10.0	51.0
	GW-70	1043151.52	530571.69	110.0	26.0	84.0	56.0	10.0	46.0



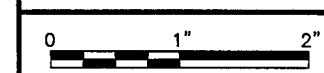
ISSUE	DATE	DESCRIPTION
1	03/09	ISSUED FOR RAI #1
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B	11/08	100% QC REVIEW
A	10/08	DEP PRE-APP MEETING

PROJECT MANAGER	C. KOENIG, P.E.
DESIGNED BY	A. BARKER, E.I.
DRAWN BY	D. SOSA
CHECKED BY	C. LEBRON, P.E.
PROJECT NUMBER	87559

Chela LL
4/20/09

Central County Solid Waste
Disposal Complex
PERMIT DRAWINGS

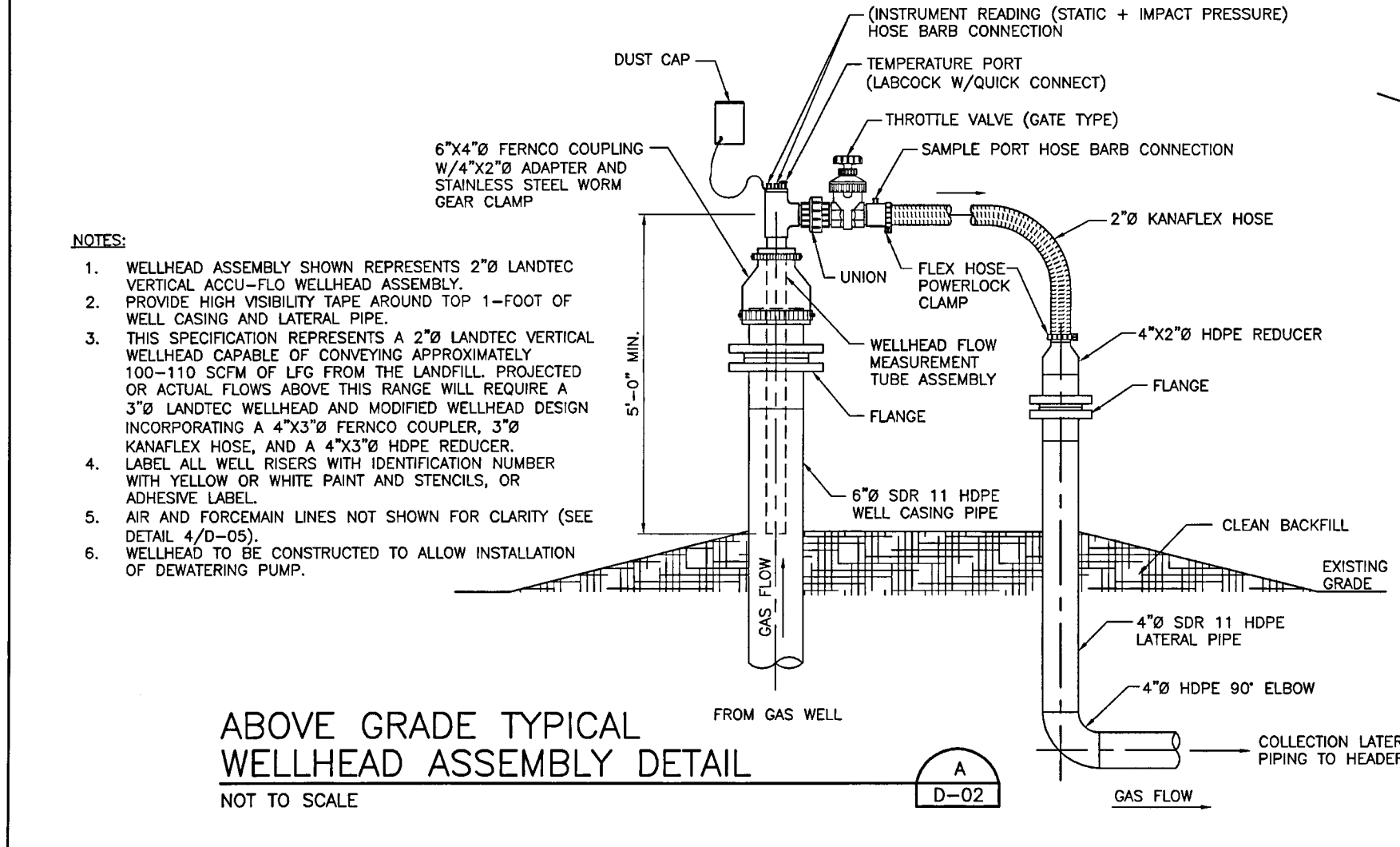
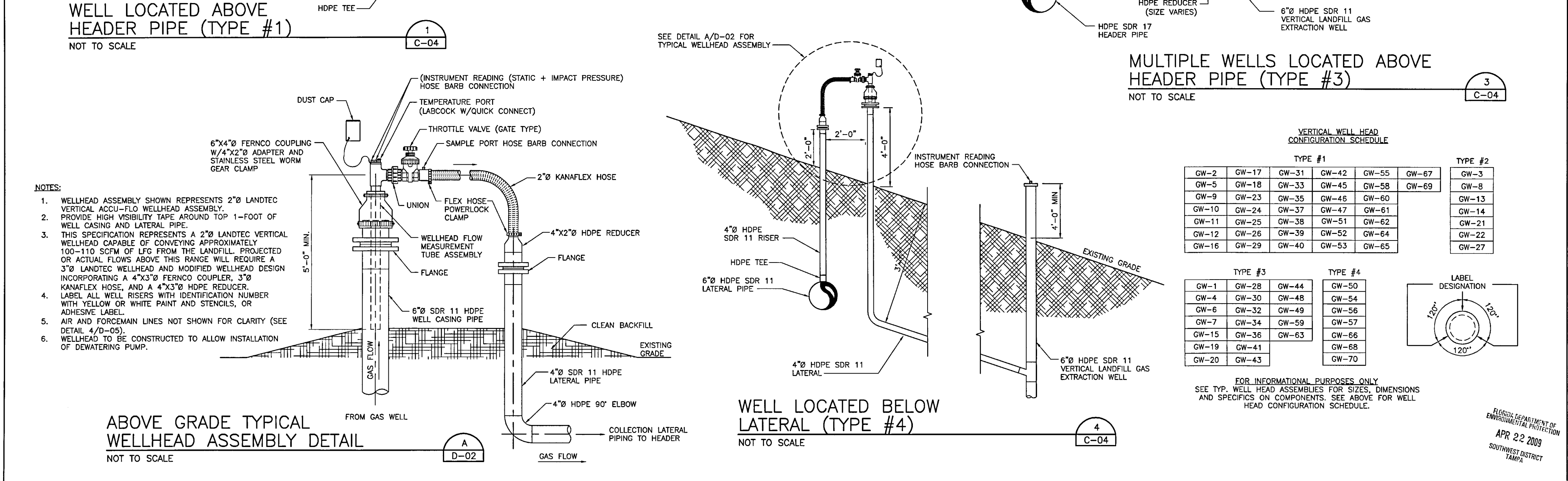
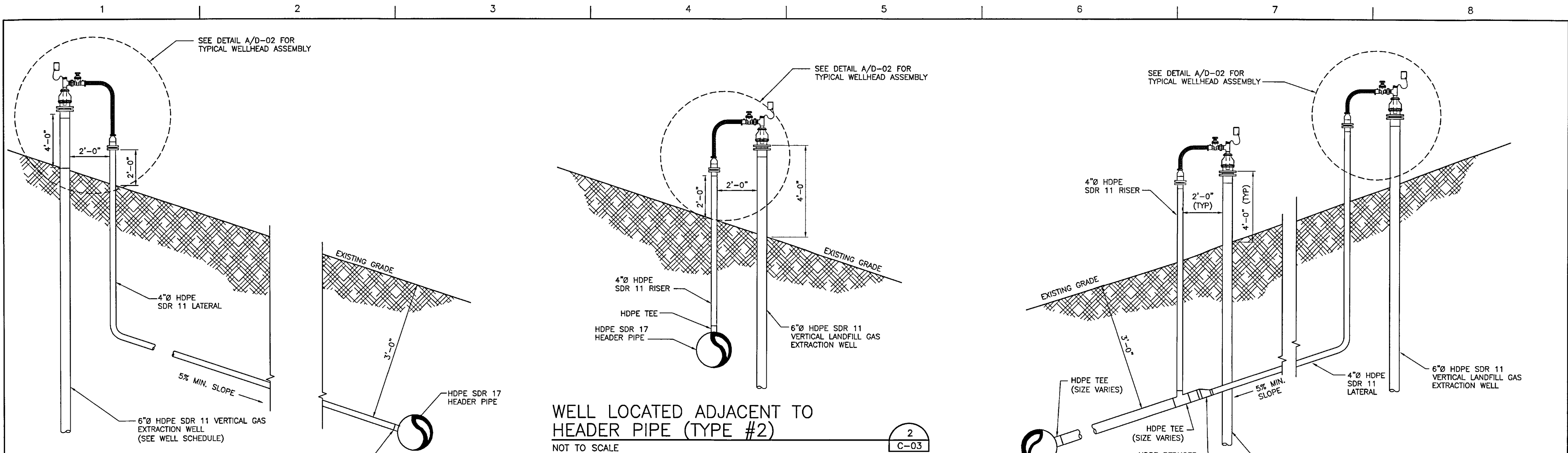
EXTRACTION WELL DETAILS
AND WELL SCHEDULE



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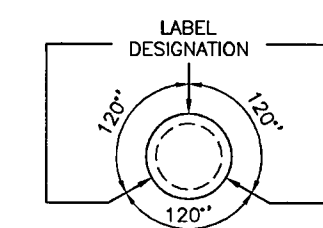
FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
APR 22 2009
SOUTHWEST DISTRICT
TAMPA



VERTICAL WELL HEAD CONFIGURATION SCHEDULE

TYPE #1						TYPE #2	
GW-2	GW-17	GW-31	GW-42	GW-55	GW-67	GW-3	GW-8
GW-5	GW-18	GW-33	GW-45	GW-58	GW-69	GW-13	GW-14
GW-9	GW-23	GW-35	GW-46	GW-60		GW-21	GW-22
GW-10	GW-24	GW-37	GW-47	GW-61		GW-27	
GW-11	GW-25	GW-38	GW-51	GW-62			
GW-12	GW-26	GW-39	GW-52	GW-64			
GW-16	GW-29	GW-40	GW-53	GW-65			

TYPE #3			TYPE #4	
GW-1	GW-28	GW-44	GW-50	
GW-4	GW-30	GW-48	GW-54	
GW-6	GW-32	GW-49	GW-56	
GW-7	GW-34	GW-59	GW-57	
GW-15	GW-36	GW-63	GW-66	
GW-19	GW-41		GW-68	
GW-20	GW-43		GW-70	



FOR INFORMATIONAL PURPOSES ONLY
SEE TYP. WELL HEAD ASSEMBLIES FOR SIZES, DIMENSIONS
AND SPECIFICS ON COMPONENTS. SEE ABOVE FOR WELL
HEAD CONFIGURATION SCHEDULE.

HDR

HDR Engineering, Inc.

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Central County Solid Waste Disposal Complex

PERMIT DRAWINGS

SARASOTA COUNTY

FLORIDA

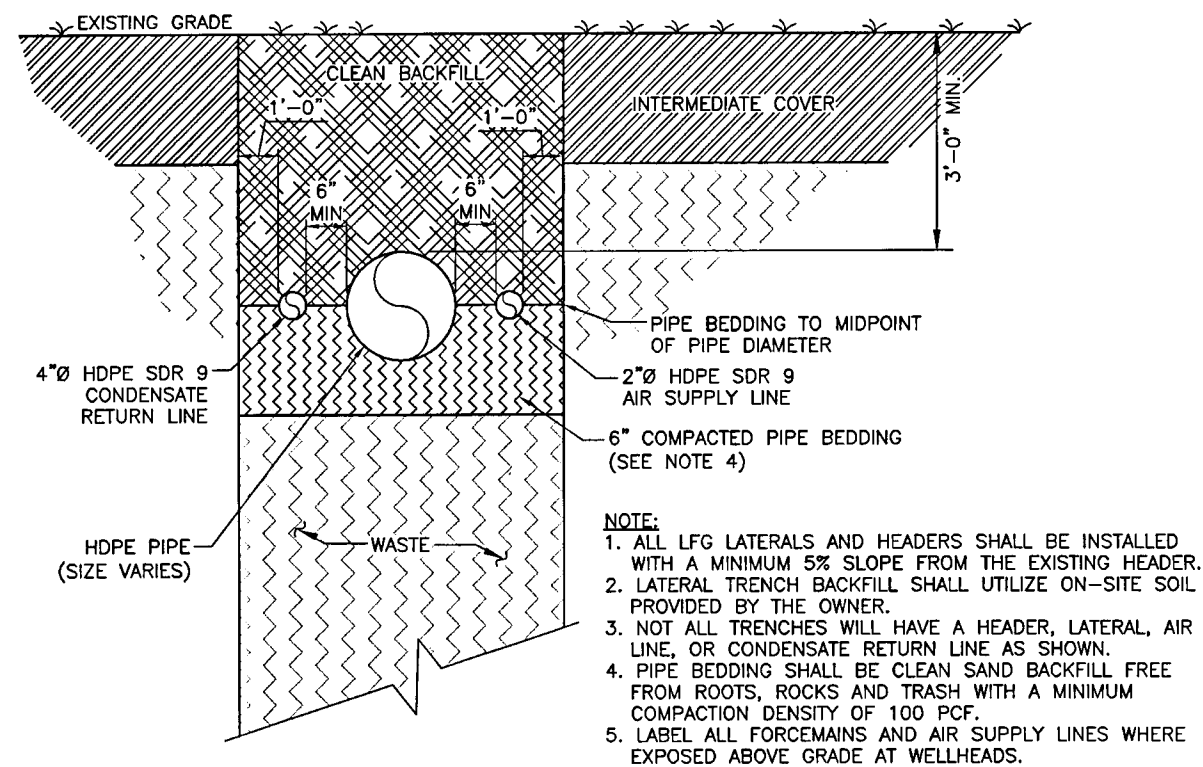
WELLHEAD AND CONFIGURATION DETAILS

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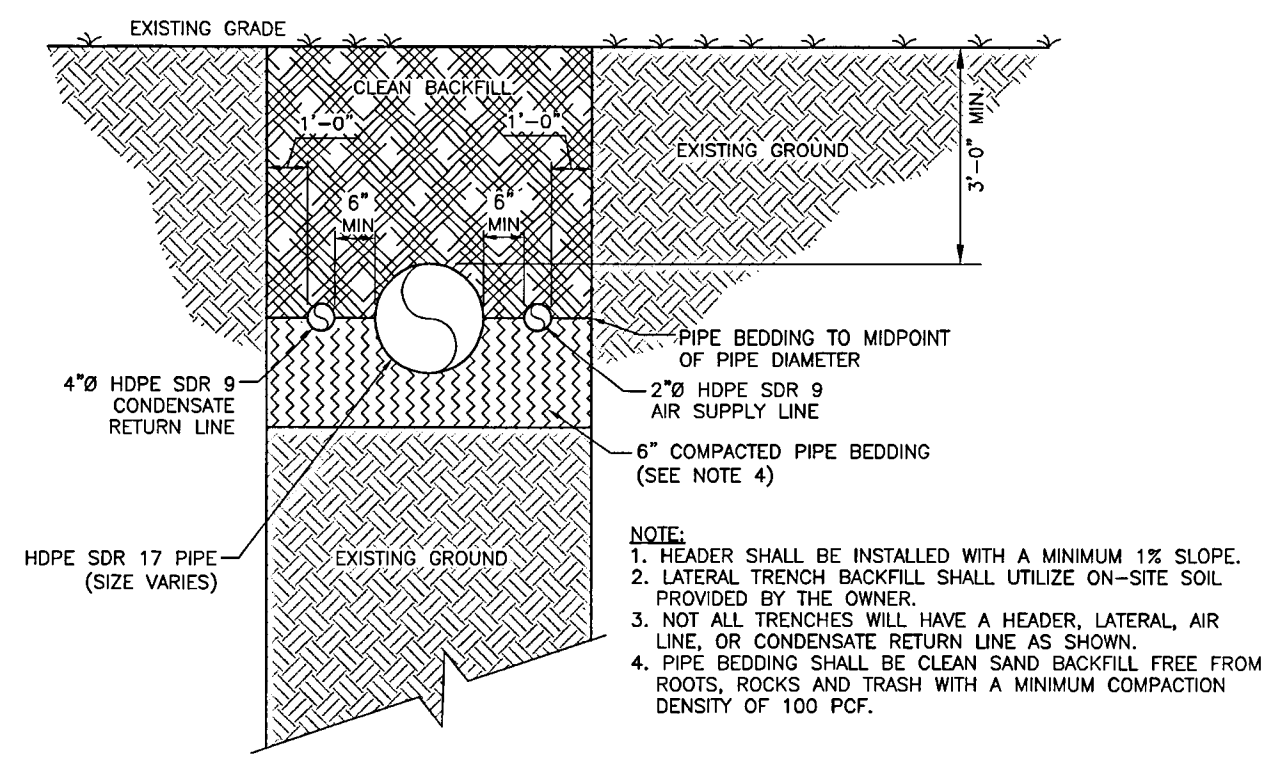
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LANDFILL GAS PIPING IN
WASTE TRENCH DETAIL

NOT TO SCALE

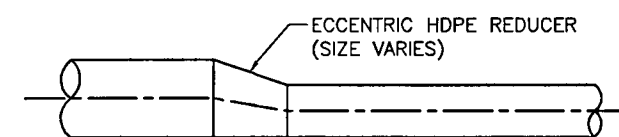
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C-03



LANDFILL GAS PIPING OUTSIDE
OF WASTE TRENCH DETAIL

NOT TO SCALE

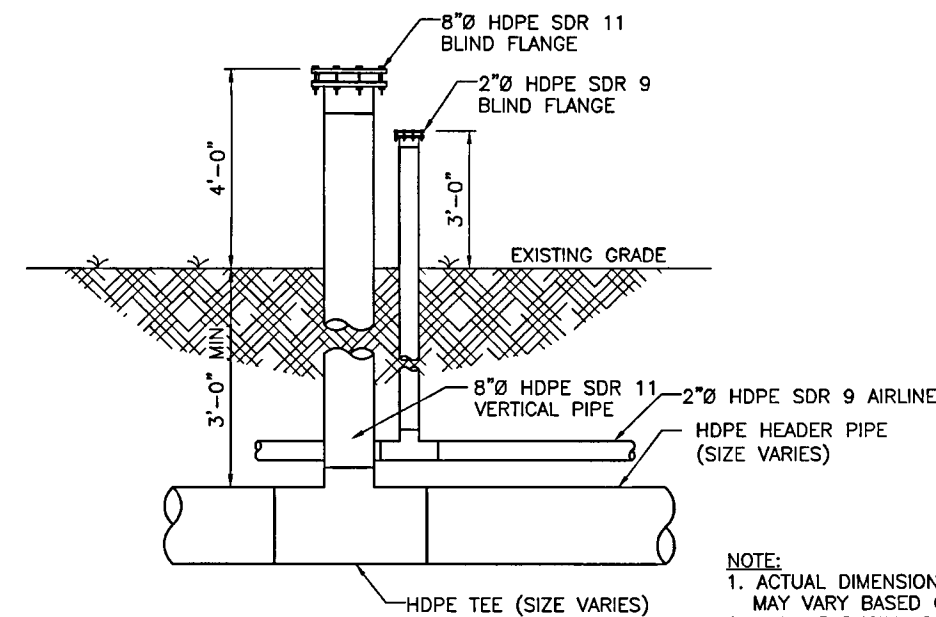
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C-03



ECCENTRIC REDUCER DETAIL

NOT TO SCALE

3
D-04



HEADER ACCESS POINT

NOT TO SCALE

4
C-03



ISSUE	DATE	DESCRIPTION
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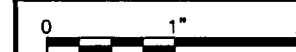
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Central County Solid Waste
Disposal Complex
PERMIT DRAWINGS

SARASOTA COUNTY

FLORIDA

GENERAL DETAILS

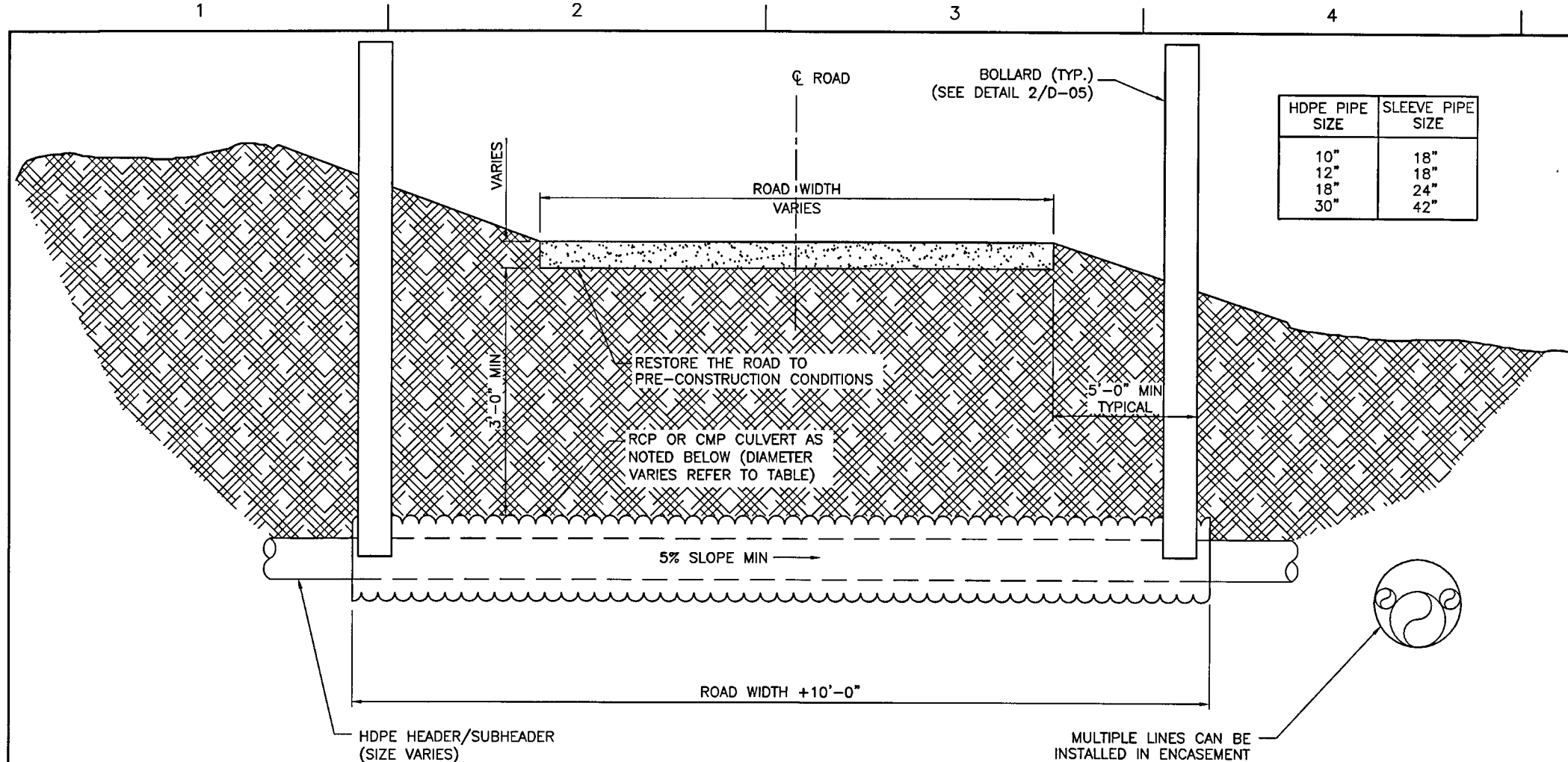


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SHEET
00D-03

FLORIDA DEPARTMENT OF
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APR 22 2009
SOUTHWEST DISTRICT
TAMPA

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
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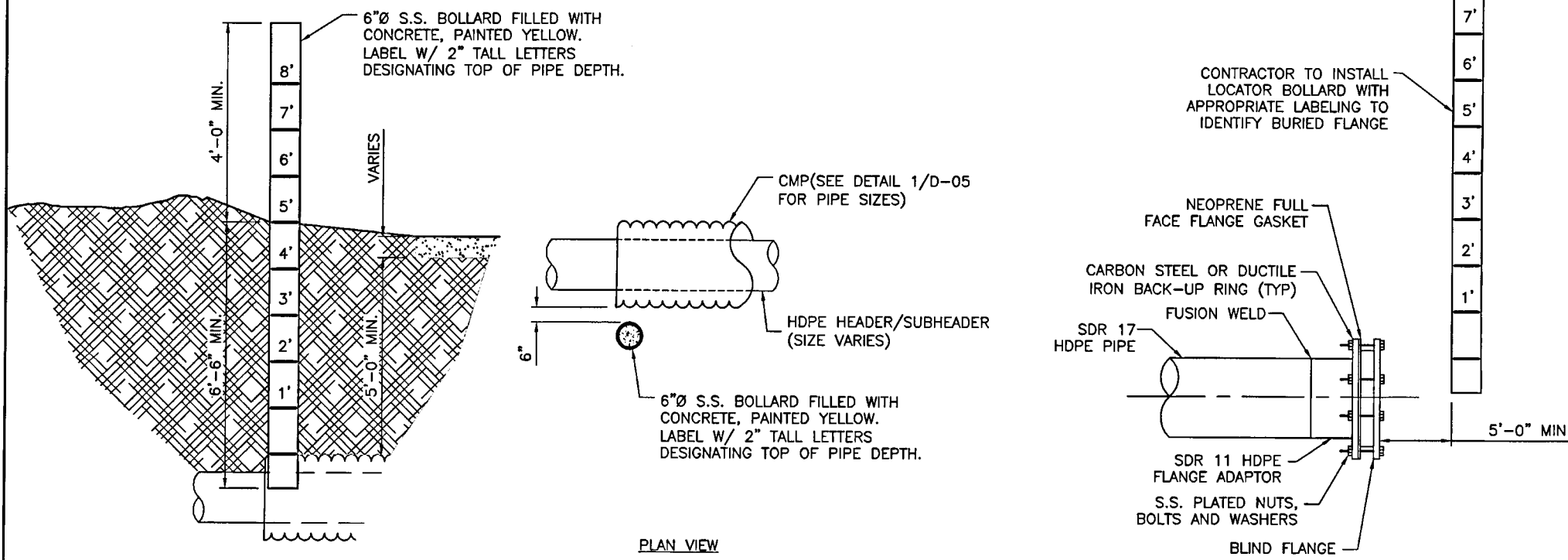


- NOTES:**
1. ACTUAL DIMENSIONS MAY VARY BASED ON FIELD CONDITIONS.
 2. REINFORCED CONCRETE PIPE CULVERT SHALL BE USED FOR ALL ROAD CROSSING LOCATIONS LOCATED OUTSIDE OF PHASE 1 LIMITS OF WASTE.
 3. CORRUGATED METAL PIPE CULVERT SHALL BE USED FOR ROAD CROSSING LOCATIONS LOCATED WITHIN PHASE 1 LIMITS OF WASTE.
 4. CUT ASPHALT WITH SAW TO MATCH TRENCH WIDTH PRIOR TO EXCAVATION.
 5. CONTRACTOR SHALL RESTORE ROAD TO MATCH ORIGINAL CONDITIONS.
 6. CONTRACTOR SHALL INSTALL 2 BOLLARDS, ONE AT EACH END OF THE CONCRETE CASING. THE BOLLARDS SHALL BE CONCRETE-FILLED STEEL PIPE BOLLARDS 6"ØX6" TALL. BOLLARDS SHALL BE PAINTED SAFETY YELLOW AND LABELED "LANDFILL GAS PIPE BURIED BELOW".
 7. LIMEROCK BASE COMPACTED TO 99% MAXIMUM DENSITY AASHTO T-180 FOR ROAD CROSSINGS WITHIN THE LANDFILL FOOTPRINT.
 8. LIMEROCK BASE COMPACTED TO 98% MAXIMUM DENSITY AASHTO T-180, LBR 40 FOR THE PERIMETER ACCESS ROAD.
 9. SUBGRADE GRANULAR FILL COMPACTED TO 95% MAXIMUM DENSITY AASHTO T-180.

ACCESS ROAD CROSSING DETAIL (TYP)

NOT TO SCALE

1
C-03,05



NOTE:
1. ACTUAL DIMENSIONS MAY VARY BASED ON FIELD CONDITIONS.

BOLLARD DETAIL (TYP)

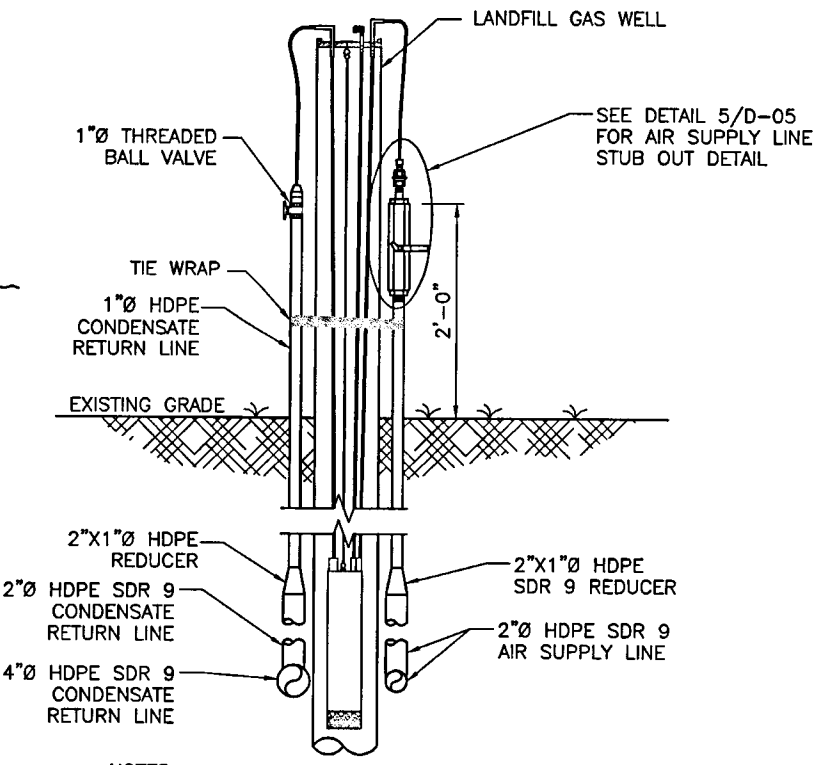
NOT TO SCALE

2
D-05

BLIND FLANGE WITH LOCATOR BOLLARD DETAIL

NOT TO SCALE

3
C-03



- NOTES:**
1. CONTRACTOR TO DIFFERENTIATE BETWEEN AIR SUPPLY LINE AND CONDENSATE RETURN LINE AT ALL STUB OUTS.
 2. WELLHEAD FOR TYPES 1, 2 & 3 NOT SHOWN FOR CLARITY.

WELL WITH PUMP DETAIL (TYP)

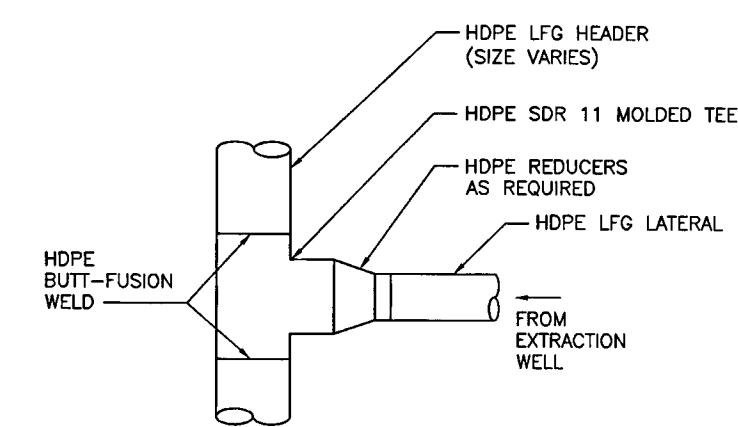
NOT TO SCALE

4
D-02

AIR SUPPLY LINE STUB OUT DETAIL (TYP)

NOT TO SCALE

5
D-05

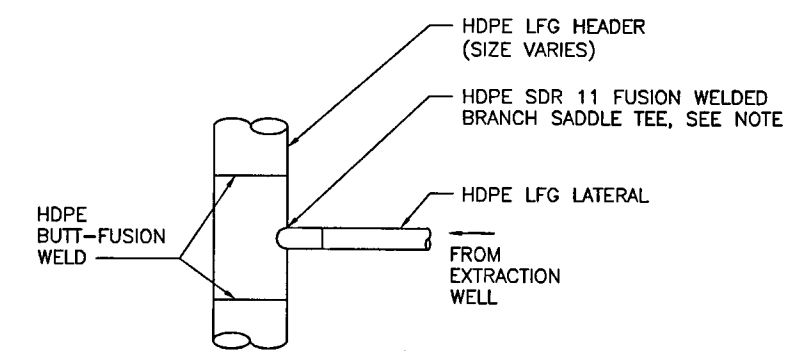


- NOTES:**
1. HDPE MOLDED TEES SHALL BE USED TO TIE-IN 2"Ø AND LARGER LFG LATERALS TO 8"Ø HEADER AND SMALLER.
 2. 1" MIN. OF SAND WILL BE PLACED BELOW EACH TEE. THE SAND WILL BE INSTALLED SO IT EXTENDS 3'-0" MIN. ON EACH SIDE OF THE TEE. SAND WILL BE SLIGHTLY MOISTENED AND HAND-TAMPED PROVIDING SUPPORT TO ALL POINTS OF THE TEE. CLEAN, GRADED SOIL WILL BE HAND-TAMPED ABOVE TEE (1'-0" MIN.) BEING CAREFUL TO ELIMINATE ALL VOIDS.

LATERAL TIE-IN W/TEE

NOT TO SCALE

6
C-04



- NOTES:**
1. BRANCH SADDLE SHALL BE SHOP-FABRICATED (FIELD-FABRICATION WILL NOT BE ACCEPTED) AND INSTALLED TO MAINTAIN SLOPE INTO THE HEADER.
 2. 1" MIN. OF SAND WILL BE PLACED BELOW EACH TEE. THE SAND WILL BE INSTALLED SO IT EXTENDS 3' MIN. IN EACH DIRECTION OF THE TEE. SAND WILL BE SLIGHTLY MOISTENED AND HAND-TAMPED PROVIDING SUPPORT TO ALL POINTS OF THE TEE. CLEAN, GRADED SOIL WILL BE HAND-TAMPED ABOVE TEE (1" MIN.) BEING CAREFUL TO ELIMINATE ALL VOIDS.
 3. HDPE SUPPORT GUSSETS (LOCATED AT 0,90,180, & 270 DEGREES) ARE REQUIRED FOR BRANCH SADDLE FITTINGS.

LATERAL TIE-IN W/BRANCH SADDLE

NOT TO SCALE

7
C-04



ISSUE	DATE	DESCRIPTION
1	03/09	ISSUED FOR RAI #1
0	12/08	ISSUED FOR FDEP APPROVAL
B	11/08	100% QC REVIEW
A	10/08	DEP PRE-APP MEETING

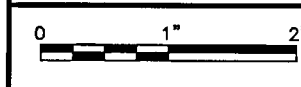
PROJECT MANAGER	C. KOENIG, P.E.
DESIGNED BY	A. BARKER, E.I.
DRAWN BY	D. SOSA
CHECKED BY	C. LEBRON, P.E.
PROJECT NUMBER	87559

4/20/09

Central County Solid Waste Disposal Complex PERMIT DRAWINGS

SARASOTA COUNTY

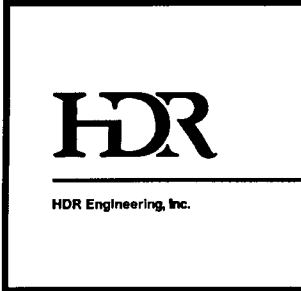
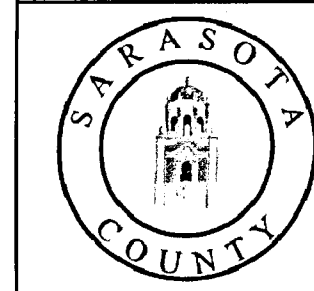
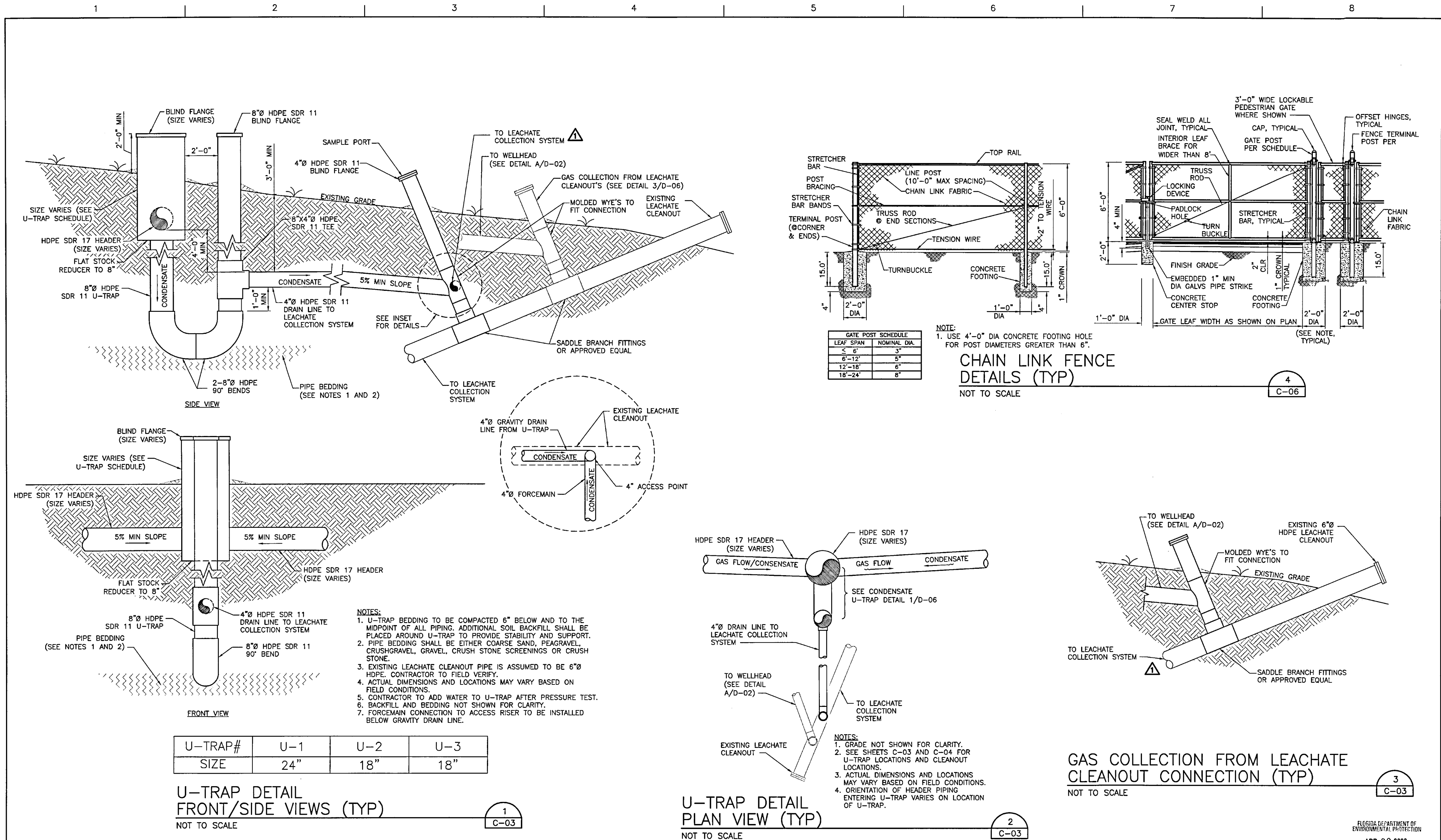
FLORIDA



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SCALE	NOT TO SCALE

SHEET	00D-05
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FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
APR 22 2009
SOUTHWEST DISTRICT
TAMPA



1	03/09	ISSUED FOR RAI #1
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PROJECT MANAGER	C. KOENIG, P.E.
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4/20/08

Central County Solid Waste Disposal Complex
PERMIT DRAWINGS
SARASOTA COUNTY FLORIDA

U-TRAP LAYOUT & DETAILS	FILENAME	00D-06.dwg	SHEET	00D-06
	SCALE	NOT TO SCALE		

1

2

3

4

5

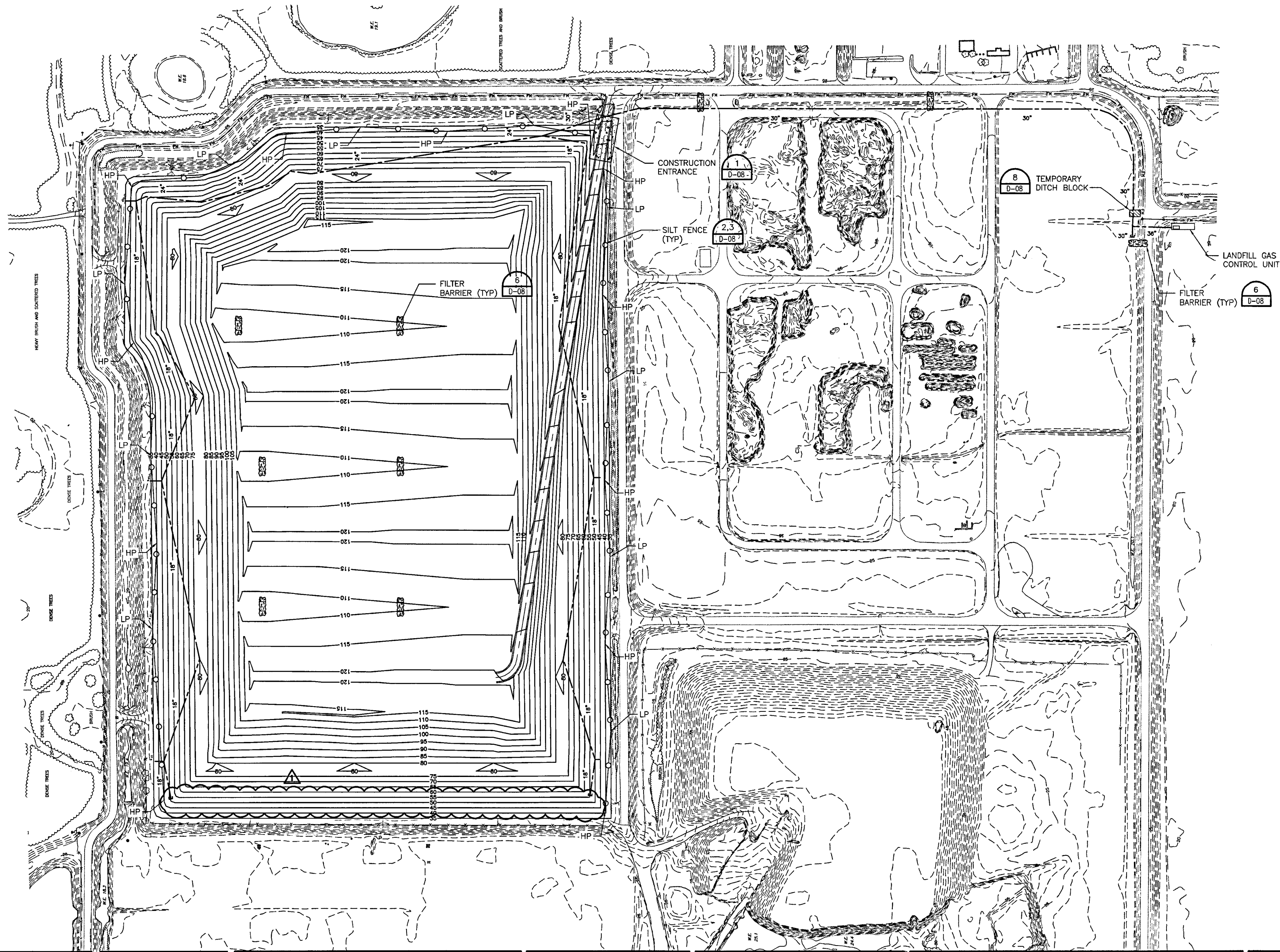
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7

8



NOTES:
1. TOPOGRAPHY WITHIN PHASES I THROUGH IV WAS
COMPILED BY KUCERA INTERNATIONAL INC. OF
WILLOUGHBY, OHIO USING PHOTOGRAMMETRIC METHODS
FROM AERIAL PHOTOGRAPHS DATED APRIL 12, 2008.



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Cal H
4/20/09

**Central County Solid Waste
Disposal Complex**
PERMIT DRAWINGS
SARASOTA COUNTY FLORIDA

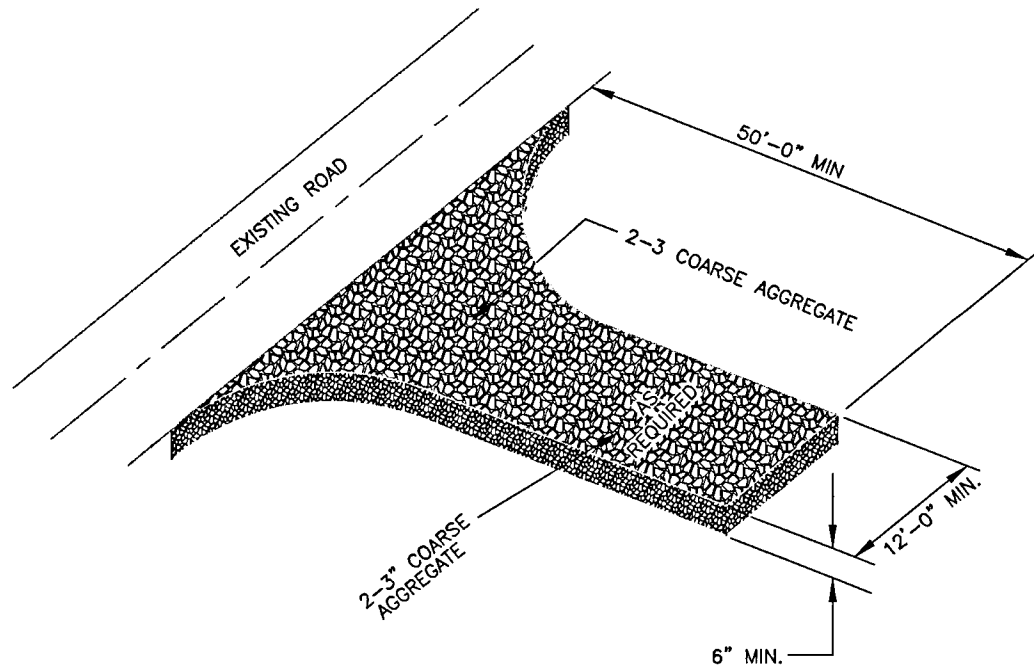
EROSION CONTROL LAYOUT
0 1" 2"
SCALE 1"=150'

FILENAME 00D-07.dwg
SHEET 00D-07

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
APR 22 2009
SOUTHWEST DISTRICT
TAMPA

SEDIMENT AND EROSION CONTROL

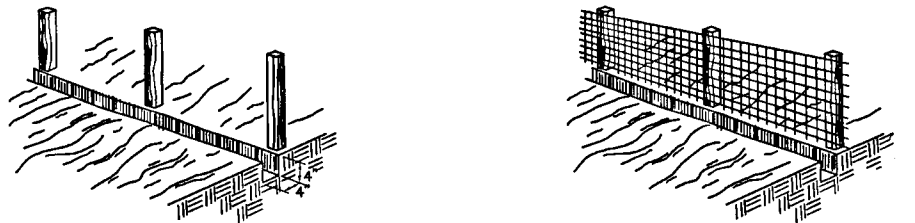
1. SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED IN STRICT ACCORDANCE WITH STANDARDS IN THE CONSTRUCTION DOCUMENTS AND APPLICABLE ENVIRONMENTAL REGULATIONS.
2. ALL STORM WATER MANAGEMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED AND MADE OPERATIONAL PRIOR TO COMMENCEMENT OF EARTHWORK ACTIVITIES.
3. CONTRACTOR, OWNER AND ENGINEER WILL EVALUATE THE EXISTING CONDITION OF THE PERIMETER DRAINAGE CHANNELS AT START OF WORK. CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING THE CHANNEL AND PONDS AND RESTORING THEM TO THE ORIGINAL CONDITION AT START OF WORK PRIOR TO DEMOBILIZING.
4. EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED TO THE SATISFACTION OF THE ENGINEER. FAILURE TO DO SO WILL RESULT IN STOPPAGE OF ALL OTHER WORK UNTIL SAID MEASURES COMPLY WITH ACCEPTABLE STANDARDS.
5. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 6 WEEKS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED, UNLESS ACTIVITY IN THAT PORTION OF THE SITE WILL RESUME WITHIN 8 WEEKS.
6. ADDITIONAL TEMPORARY DITCHES AND/OR DIVERSIONS MAY BE REQUIRED TO PERFORM CONSTRUCTION. WHERE SUCH MEASURES ARE REQUIRED, THEY SHALL BE CONSTRUCTED SO AS TO DIRECT RUNOFF FROM DISTURBED AREAS TO APPROPRIATE TEMPORARY CONTROL FEATURES. NO ADDITIONAL PAYMENT SHALL BE MADE FOR ADDITIONAL MEASURES REQUIRED TO CONTROL EROSION.
7. ALL SEDIMENT CONTROL MEASURES SHALL BE INSPECTED DAILY AND AFTER ANY STORM EVENT OF GREATER THAN ONE-HALF INCH OF PRECIPITATION DURING ANY 24 HOUR PERIOD. ALL SEDIMENT CONTROL FEATURES SHALL BE MAINTAINED UNTIL FINAL STABILIZATION HAS BEEN OBTAINED.
8. RESTORE AND STABILIZE ALL DISTURBED AREAS INCLUDING STOCKPILES AND STORAGE AREAS. PERFORM PERMANENT SEEDING IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
9. BETWEEN SUBSTANTIAL COMPLETION AND FINAL COMPLETION OF THE WORK, THE CONTRACTOR SHALL REMOVE ALL SEDIMENT FROM THE EROSION CONTROL MEASURES THAT RECEIVED DRAINAGE DURING CONSTRUCTION.
10. ANY ERODED MATERIALS SHALL BE PROMPTLY REMOVED FROM ROADWAYS, DRIVES, WALKS, DITCHES, WATER COURSES, DRAINAGE CULVERTS, AND/OR STRUCTURES.
11. SILT FENCE, STRAW BALE BARRIERS, ETC. SHALL BE CHECKED REGULARLY FOR UNDERMINING OR DETERIORATION. CONTRACTOR SHALL REPLACE AS REQUIRED.
12. ALL TEMPORARY EROSION CONTROL AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED UPON SATISFACTORY COMPLETION OF WORK AND SITE STABILIZATION.
13. CONTRACTOR IS RESPONSIBLE FOR NPDES PERMIT & DEWATERING PERMITS.



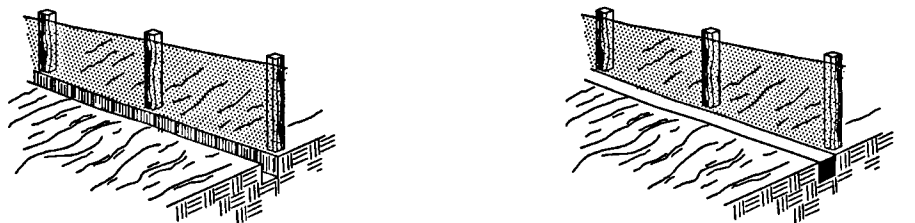
TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT

NOT TO SCALE

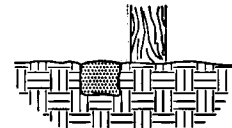
1. SET POSTS AND EXCAVATE A 4" X 4" TRENCH UPSLOPE ALONG THE LINE OF POSTS.
2. STAPLE WIRE FENCING TO THE POSTS.



3. ATTACH THE FILTER FABRIC TO THE WIRE FENCE AND EXTEND IT INTO THE TRENCH.
4. BACKFILL AND COMPACT THE EXCAVATED SOIL.



EXTENSION OF FABRIC AND WIRE INTO THE TRENCH.



CONSTRUCTION OF SILT FENCE

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

MATERIALS

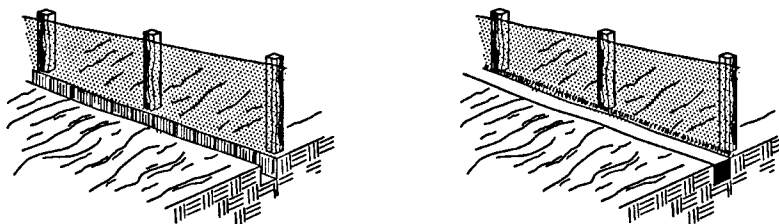
SYNTHETIC FILTER FABRIC SHALL BE A PERVIOUS SHEET OF POLYPROPYLENE, NYLON PLOYESTER, OR ETHYLENE YARN AND SHALL BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE FOLLOWING REQUIREMENTS:

PHYSICAL PROPERTY	TEST	REQUIREMENTS
FILTERING EFFICIENCY	ASTM D-5141	75% (MIN)
TENSILE STRENGTH AT 20% (MAX.) ELONGATION*	VTM-52	EXTRA STRENGTH- 50 LBS./LIN. IN. (MIN.) STANDARD STRENGTH- 30 LBS./LIN. IN. (MIN.)
FLOW RATE	ASTM D-5141	0.3 GAL./SQ. FT./MIN.
ULTRAVIOLET RADIATION	ASTM D-4355 AND G-28	90% (MIN.)

* REQUIREMENTS REDUCED BY 50% AFTER 6 MONTHS OF INSTALLATION.

SYNTHETIC FILTER FABRIC SHALL CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0 F TO 120 F.

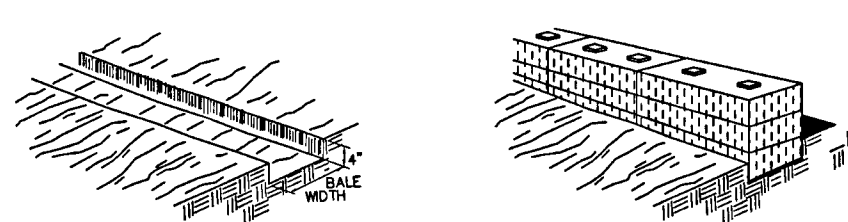
1. SET THE STAKES.
2. EXCAVATE A 4" X 4" TRENCH UPSLOPE ALONG THE LINE OF STAKES
3. STAPLE FILTER MATERIAL TO STAKES AND EXTEND IT INTO THE TRENCH. 4. BACKFILL AND COMPACT THE EXCAVATED SOIL



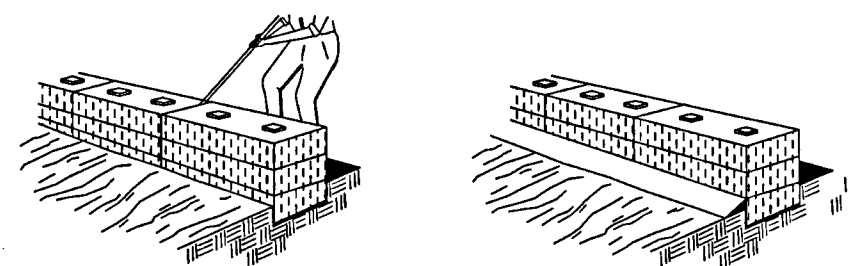
CONSTRUCTION OF A FILTER BARRIER

NOT TO SCALE

1. EXCAVATE THE TRENCH
2. PLACE AND STAKE STRAW BALES.

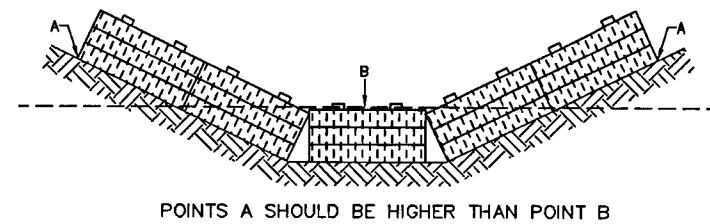


3. WEDGE LOOSE STRAW BETWEEN BALES.
4. BACKFILL AND COMPACT THE EXCAVATED SOIL.



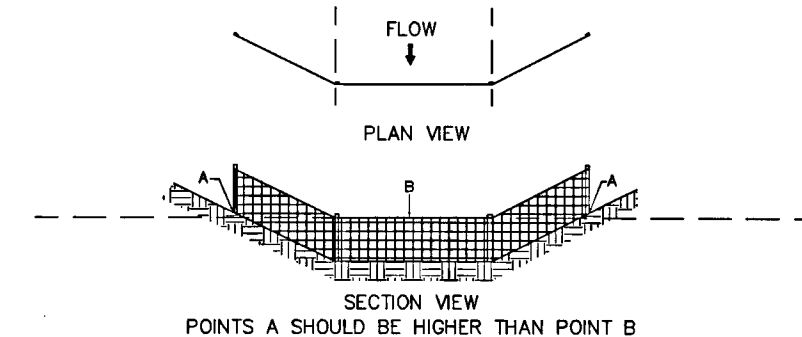
CONSTRUCTION OF A STRAW BALE FILTER BARRIER

NOT TO SCALE



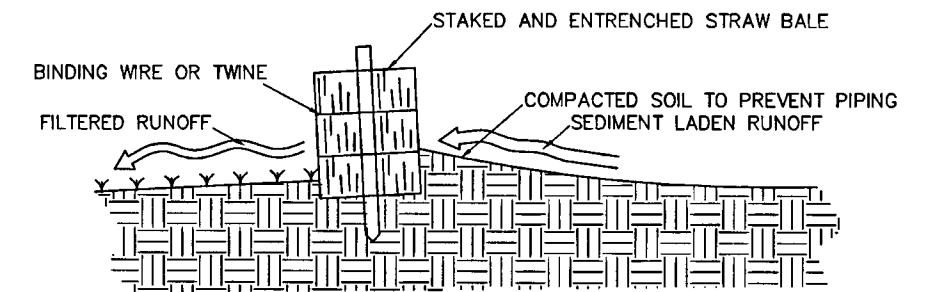
PROPER PLACEMENT OF STRAW BALE IN A DRAINAGE WAY

NOT TO SCALE



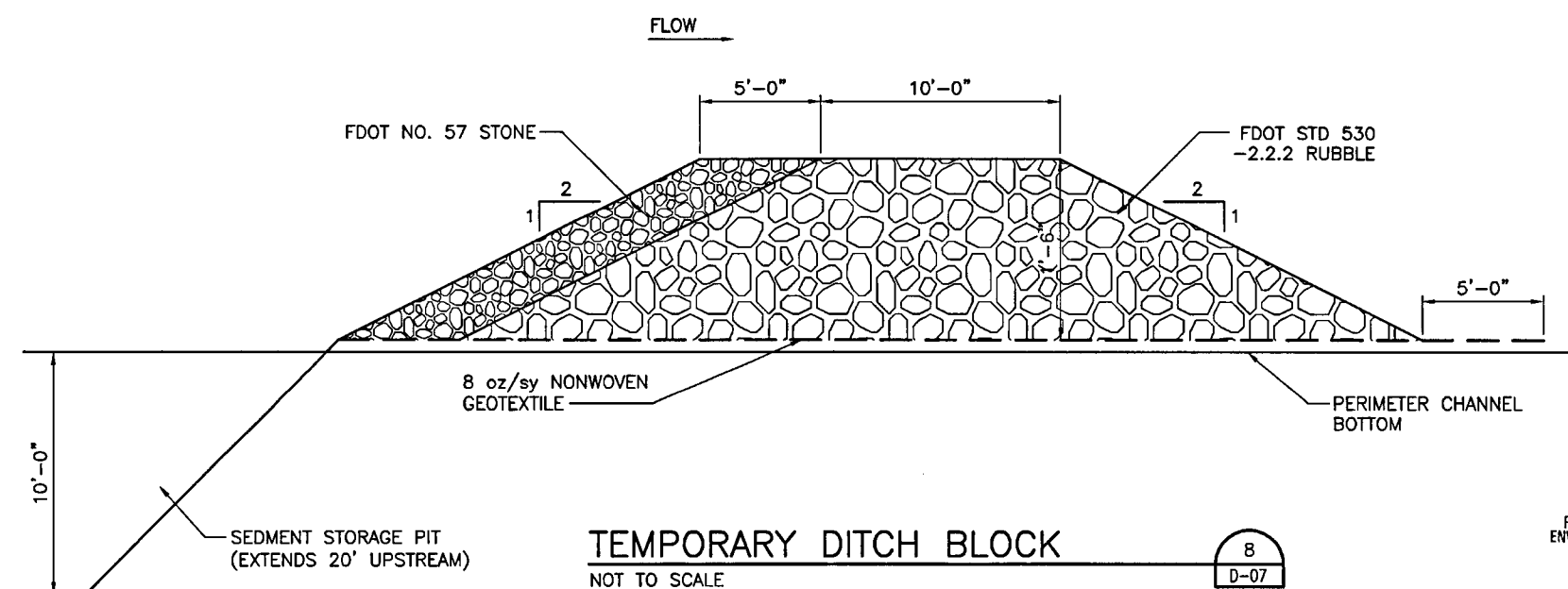
PROPER PLACEMENT OF A FILTER BARRIER IN DRAINAGE WAY

NOT TO SCALE



CROSS-SECTION OF A PROPERLY INSTALLED STRAW BALE

NOT TO SCALE



TEMPORARY DITCH BLOCK

NOT TO SCALE

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
APR 22 2009
SOUTHWEST DISTRICT TAMPA



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DRAWN BY	D. SOSA
CHECKED BY	C. LEBRON, P.E.
PROJECT NUMBER	87559

Handwritten signature and date: 4/22/09

Central County Solid Waste Disposal Complex
PERMIT DRAWINGS

SARASOTA COUNTY

FLORIDA

EROSION CONTROL DETAILS



FILENAME	00D-08.dwg
SCALE	NOT TO SCALE

SHEET	00D-08
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