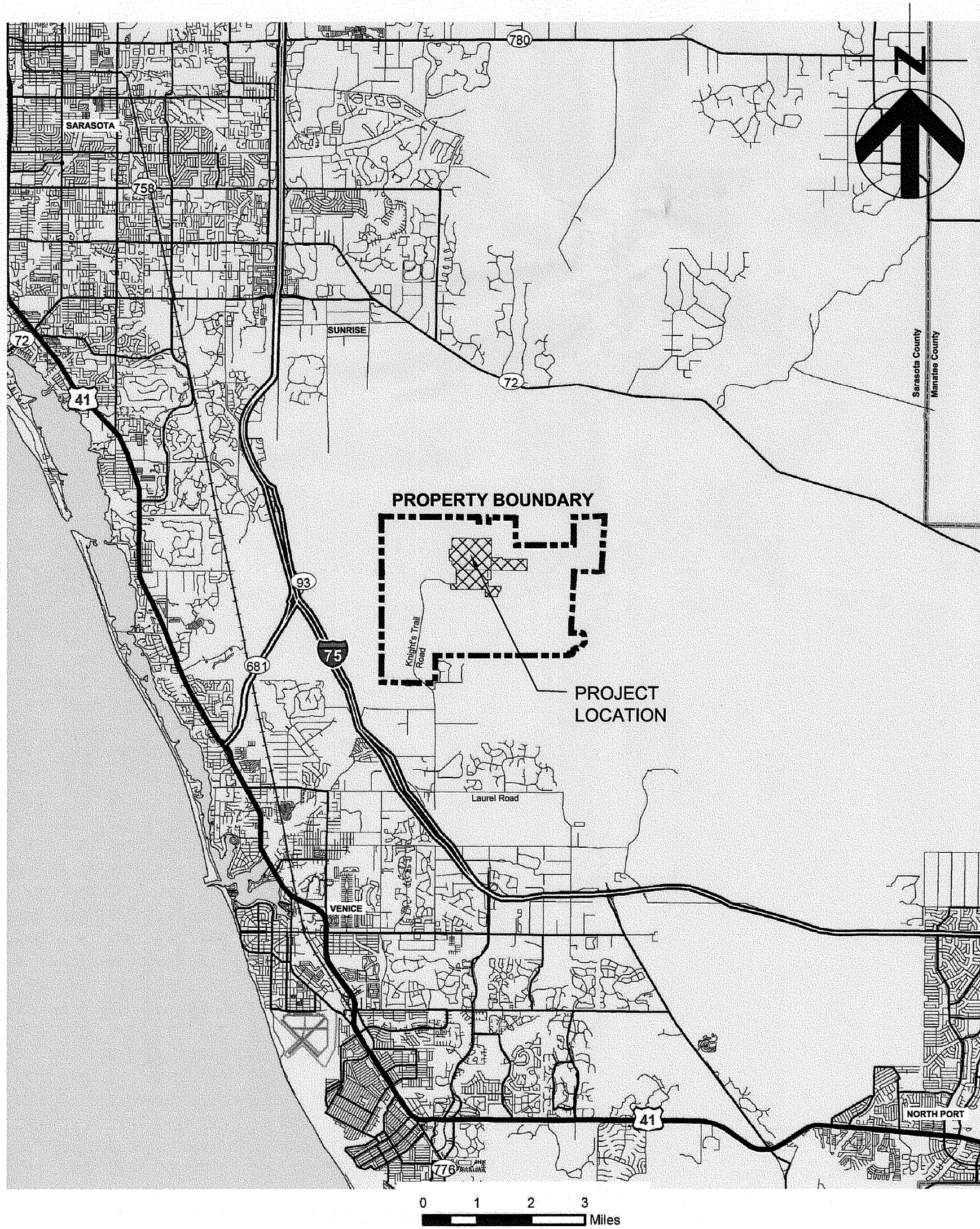




HDR

HDR Engineering, Inc.
200 W. Forsyth St
Suite 800
Jacksonville, FL 32202
Certificate of Authorization No. 4213



Construction Drawings For

Central County Solid Waste Disposal Complex

Sarasota County

Phase 1 - Sequence 1 Landfill Gas Collection and Control System

Project No. 95215
BID No. 09803CS

Nokomis, Florida

Record Drawings
June, 2010

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00C-02	PHASE 1 - LANDFILL GAS EXTRACTION WELL LAYOUT
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00D-09	EROSION CONTROL DETAILS

RECORD DRAWING

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CLIFFORD B. KOENIG, P.E.
FLORIDA P.E. NO. 64078
HDR ENGINEERING, INC.

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
AUG 13 2010
SOUTHWEST DISTRICT
TAMPA

sunshine state
ONE CALL
of florida

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sunshine state
ONE CALL
of florida

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ENGINEERING SYMBOLOGY	
HP	HIGH POINT
LP	LOW POINT
⊕ S-1	PROPOSED CONDENSATE SUMP
⊕ GW-49	PROPOSED LFG EXTRACTION WELL
⊙ AP	PROPOSED ACCESS POINT
⊙ KO	PROPOSED KNOCKOUT POT
⊙ UT	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
■	EXISTING SOLAR FLARE
■ GP-7	EXISTING GAS PROBE
⊕ MW-14	EXISTING GROUNDWATER MONITORING WELL
⊕	EXISTING WATER SUPPLY WELL
○	PROPOSED ELECTRICAL HOUSING
—○—○—	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
—FM—FM—	EXISTING 6" LEACHATE FORCEMAIN
—X—X—X—	PROPOSED CHAIN LINK FENCE
—X—X—X—	EXISTING CHAIN LINK FENCE
—•••••—	LIMITS OF CONSTRUCTION
—UGE—	PROPOSED UNDERGROUND ELECTRIC CONDUIT
—UGT—	PROPOSED UNDERGROUND TELEPHONE CONDUIT
DETAILS LEGEND OF PATTERNS	
CLEAN BACKFILL	▨
PIPE BEDDING (DEFINED AS FIELD COMPACTED AND LEVELED BACKFILL OR EQ.)	▧
INTERMEDIATE COVER	▩
WASTE	▪
BENTONITE SEAL	▫
EXISTING GROUND	▬
STONE	▭
ONSITE SOIL	▮
CONCRETE	▯
ASPHALT	▰
NOTE SYMBOLGY IS REPRESENTATIVE OF MAJOR LANDFILL GAS COMPONENTS.	

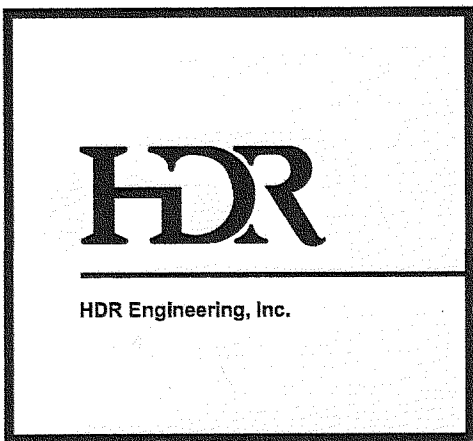
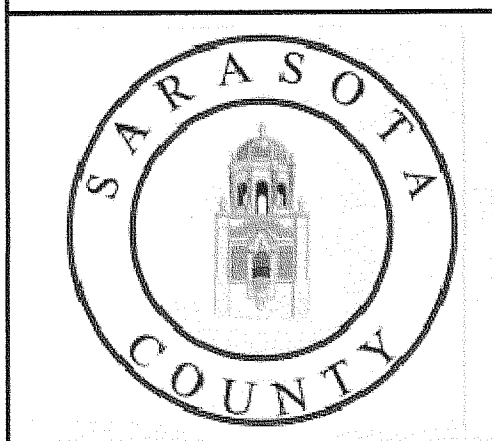
GENERAL SYMBOLOGY	
ARROW INDICATES DIRECTION OF PLAN NORTH	
DETAIL NUMBER	#
SHEET WHERE DETAIL IS LOCATED	XXX
DETAIL MARKER	
FOR REFERENCING DETAILS INCLUDED IN DRAWING SET.	
DETAIL	3" = 1'-0"
DETAIL NUMBER	#
SHEET WHERE DETAIL WAS CALLED OUT	XXX
DETAIL TITLE	

GENERAL NOTES	
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 4:00 PM M-F AND BY 2:00 PM SAT. CHANGES IN WORK HOURS ARE BASED UPON OWNER'S APPROVAL. 3. HOURS FOR CONSTRUCTION: 7:00 AM TO 5:30 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 OWNERS 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. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES IN THE AREA AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION. CALL FLORIDA SUNSHINE STATE ONE CALL CENTER AT 1-800-432-4770. ALL COORDINATION AND REQUIRED UTILITY COMPANY TEMPORARY PROTECTION SHALL BE AT THE CONTRACTOR'S EXPENSE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE UNINTERRUPTION OF SERVICE AND REPLACEMENT OF DAMAGED UTILITIES.	

GENERAL NOTES	
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.	

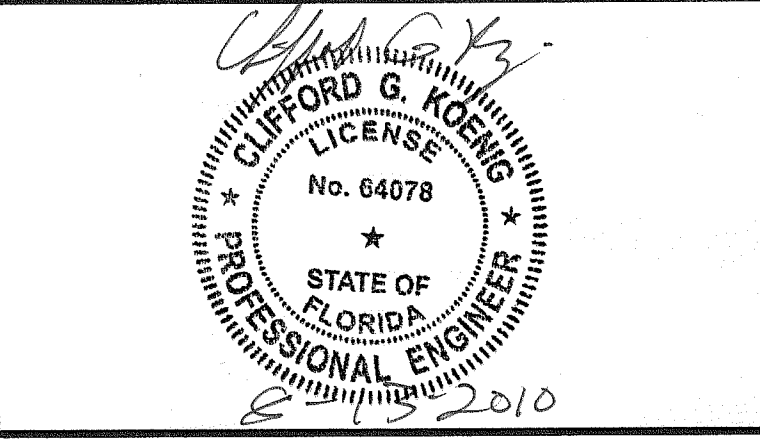
GENERAL NOTES	
11. SUGGESTED INSTALLATION SEQUENCE: THE FOLLOWING INSTALLATION SEQUENCE HAS BEEN ASSUMED IN THE ENGINEER CALCULATIONS. (A.) DRILL ALL VERTICAL WELLS, INSTALLING AND COMPLETING WELL COMPONENTS AS PROCEEDING. (B.) TRENCH LATERAL PIPING FROM THE WELLS TO CONNECTION POINT IN THE ACTIVE GAS 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 BY ENGINEER. (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 LARGER DIAMETER PIPE AS SHOWN IN DETAIL 1, SHEET D-05 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. 22. CONTRACTOR MUST COORDINATE ROAD CROSSING CONSTRUCTION WITH OWNER. ALL ROAD CROSSINGS SHALL BE COMPLETED WHILE THE LANDFILL IS CLOSED TO DISPOSAL OPERATIONS. ROADWAY CUTS SHALL NOT HINDER TRAFFIC. 23. THE CONTRACTOR IS ADVISED THAT THE LANDFILL CONTAINS A SYNTHETIC LINER AS PART OF THE SUBGRADE CONSTRUCTION. ALL COSTS ASSOCIATED WITH REPAIR RESULTING FROM DAMAGE TO THIS LINER SYSTEM SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THESE COSTS SHALL INCLUDE, BUT ARE NOT LIMITED TO ENGINEER'S REVIEW, REPAIR OR REPLACEMENT BY A QUALIFIED LLDPE LINER INSTALLER, THIRD PARTY OBSERVATION, AND COUNTY REVIEW. 24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ENGINEERING HOURS OVER THE 60 HOURS PER WEEK WORK SCHEDULE AT A RATE OF \$100/Hr.	

GENERAL NOTES	
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ISSUE	DATE	DESCRIPTION
3	08/10	RECORD DRAWINGS
2	12/09	ISSUED FOR CONSTRUCTION
1	08/09	ISSUED FOR BID
0	05/09	ISSUED FOR CLIENT REVIEW

PROJECT MANAGER	C. KOENIG, P.E.
DESIGNED BY	A. BARKER, E.I.
DRAWN BY	D. SOSA
	B. JOHNSON
CHECKED BY	C. LEBRON, P.E.
PROJECT NUMBER	101628



Central County Solid Waste Disposal Complex
Phase 1 - Sequence 1
Landfill Gas Collection and Control System
ISSUED FOR CONSTRUCTION

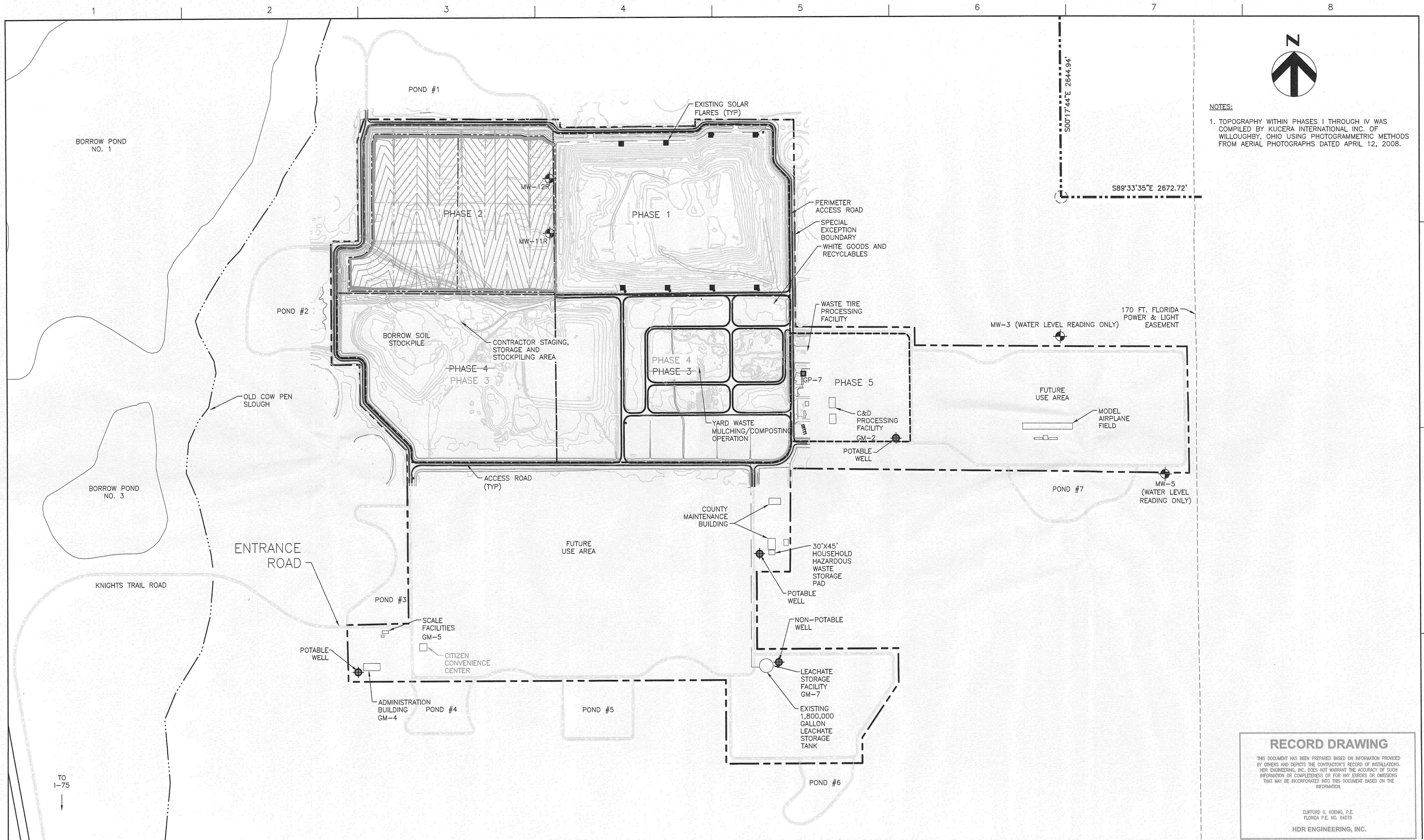
SARASOTA COUNTYFLORIDA

GENERAL NOTES
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
AUG 13 2010
SOUTHWEST DISTRICT
TAMPA

01"2"
AT FULL SIZE BAR LENGTH EQUALS TWO INCHES. ADJUST SCALE ACCORDINGLY.

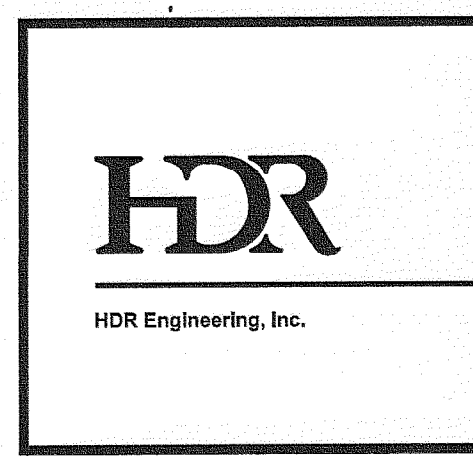
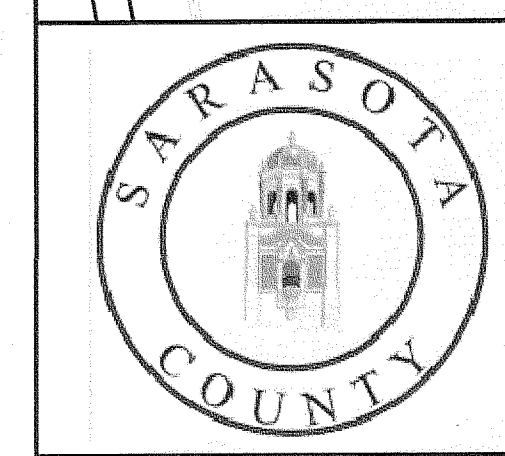
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SCALENOT TO SCALE

SHEET
00G-01



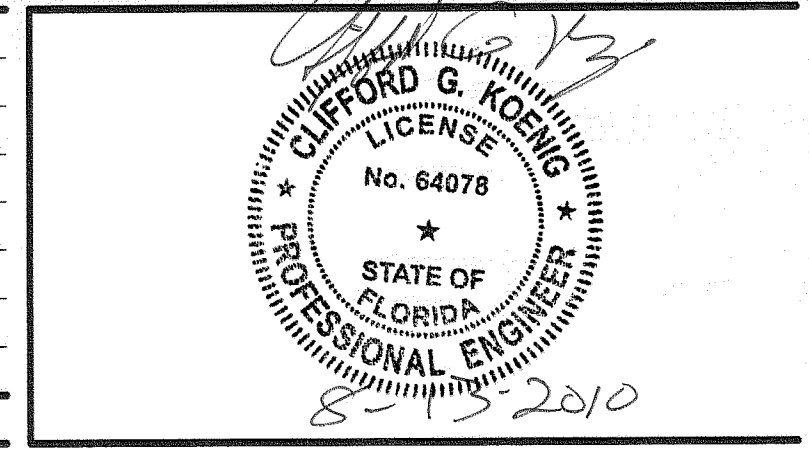
NOTES:
1. TOPOGRAPHY WITHIN PHASES I THROUGH IV WAS COMPILED BY KUCERA INTERNATIONAL INC. OF WILLOUGHBY, OHIO USING PHOTOGRAMMETRIC METHODS FROM AERIAL PHOTOGRAPHS DATED APRIL 12, 2008.

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Central County Solid Waste Disposal Complex
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ISSUED FOR CONSTRUCTION
SARASOTA COUNTY FLORIDA

EXISTING CONDITIONS

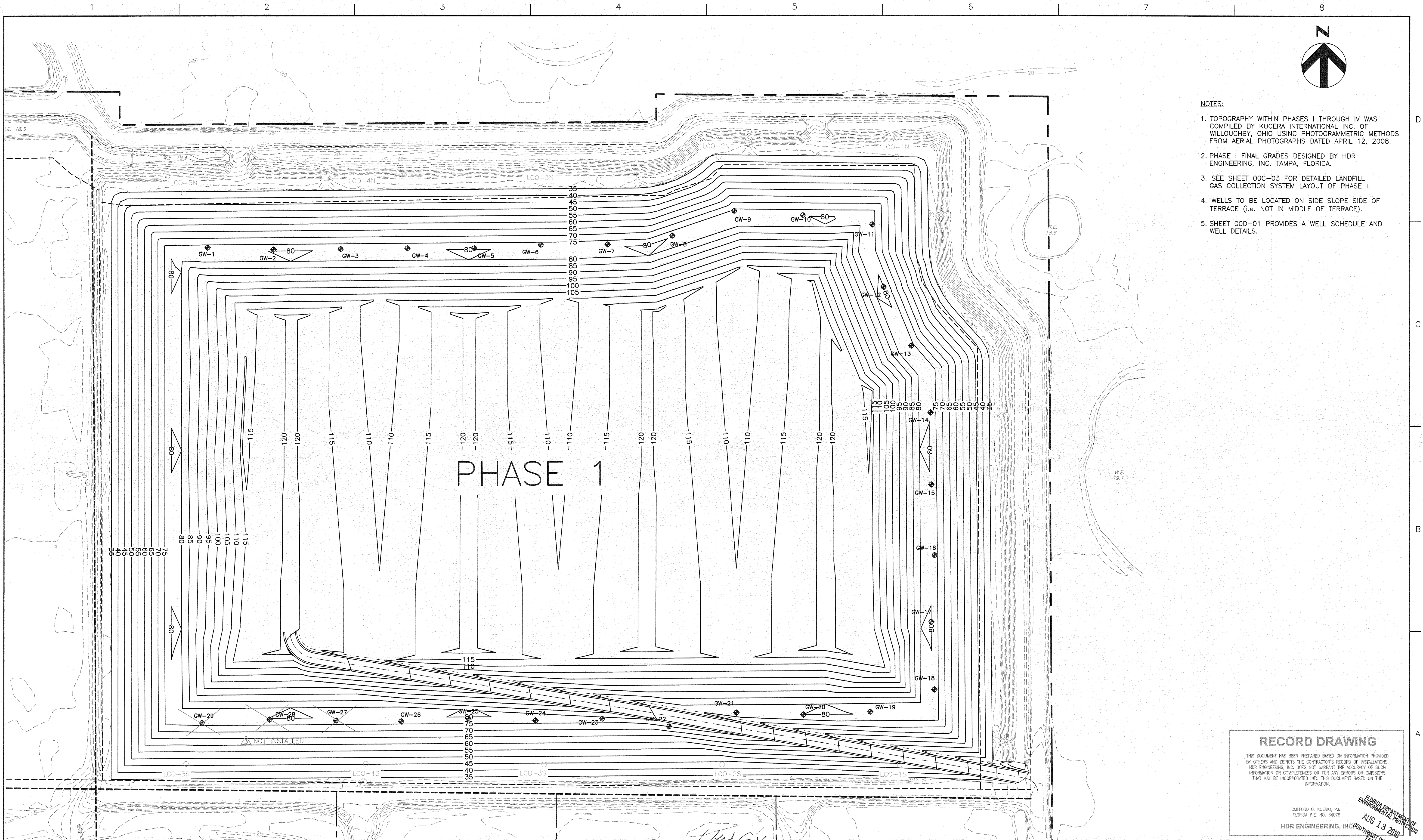
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
AUG 13 2010
SOUTHWEST DISTRICT
TAMPA

0 1" 2"
AT FULL SIZE BAR LENGTH EQUALS TWO INCHES. ADJUST SCALE ACCORDINGLY.

FILENAME 00C-01.dwg
SCALE 1" = 400'

SHEET
00C-01

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- 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 (i.e. NOT IN MIDDLE OF TERRACE).
 5. SHEET 00D-01 PROVIDES A WELL SCHEDULE AND WELL DETAILS.

RECORD DRAWING

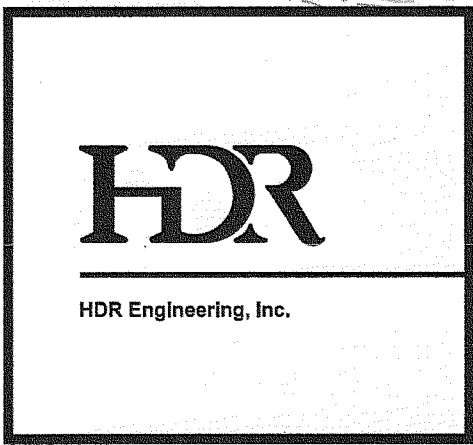
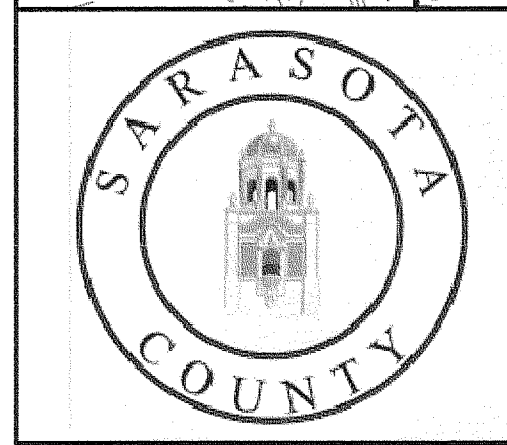
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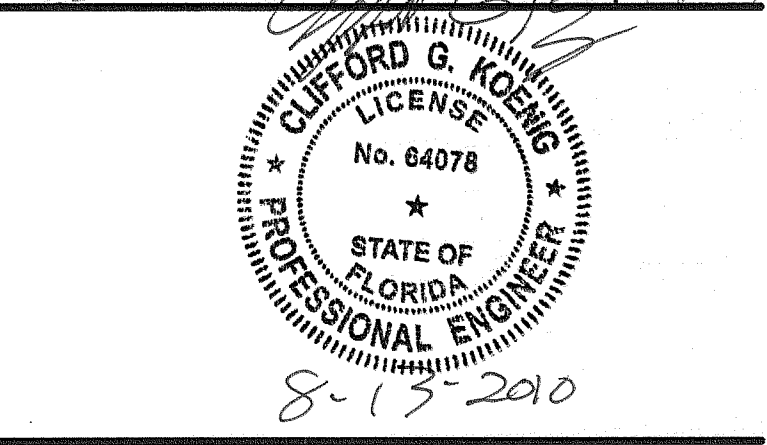
FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

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Disposal Complex
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Landfill Gas Collection and Control System

ISSUED FOR CONSTRUCTION

SARASOTA COUNTYFLORIDA

PHASE 1
LANDFILL GAS EXTRACTION WELL LAYOUT

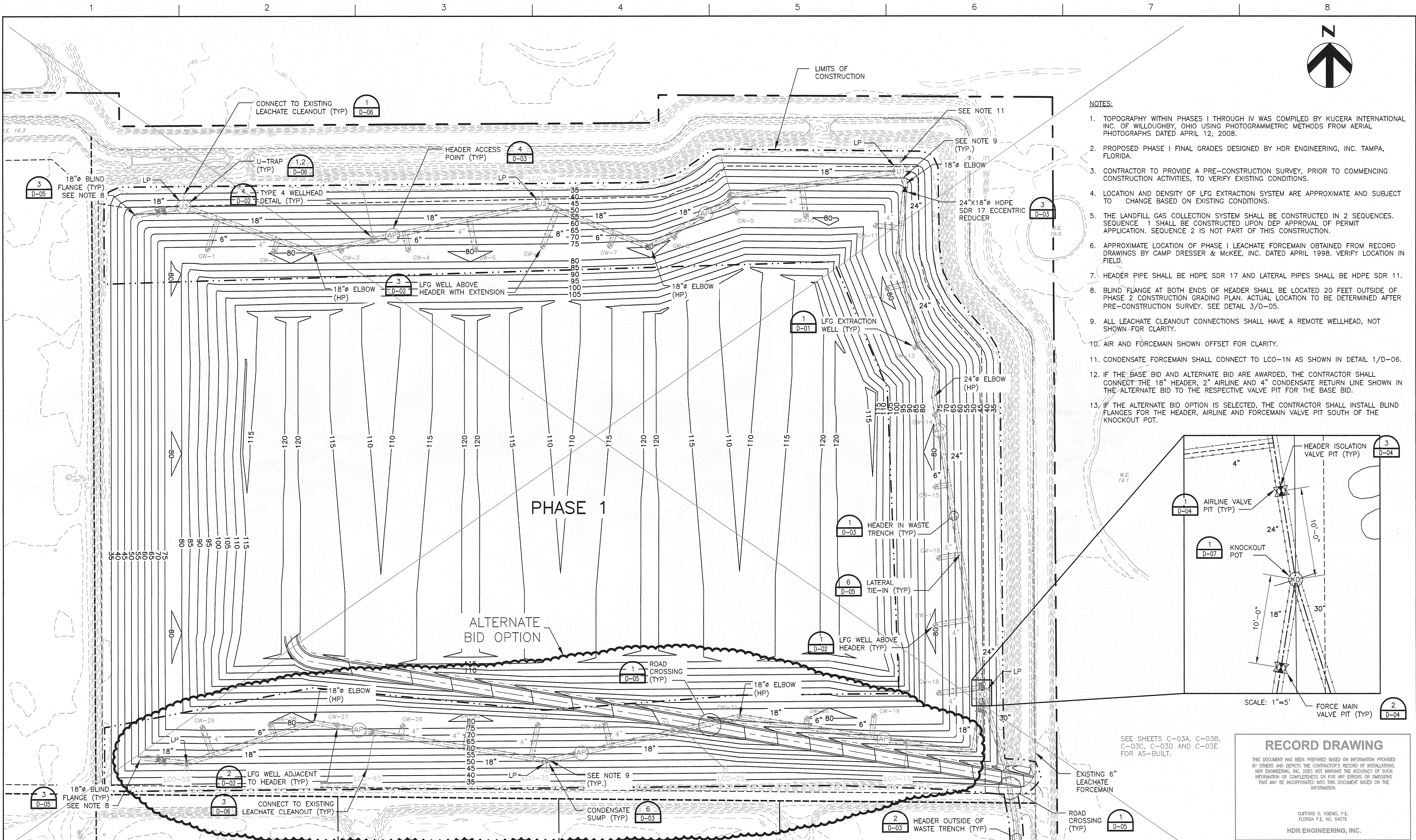
01"2"

AT FULL SIZE BAR LENGTH EQUALS TWO INCHES. ADJUST SCALE ACCORDINGLY.

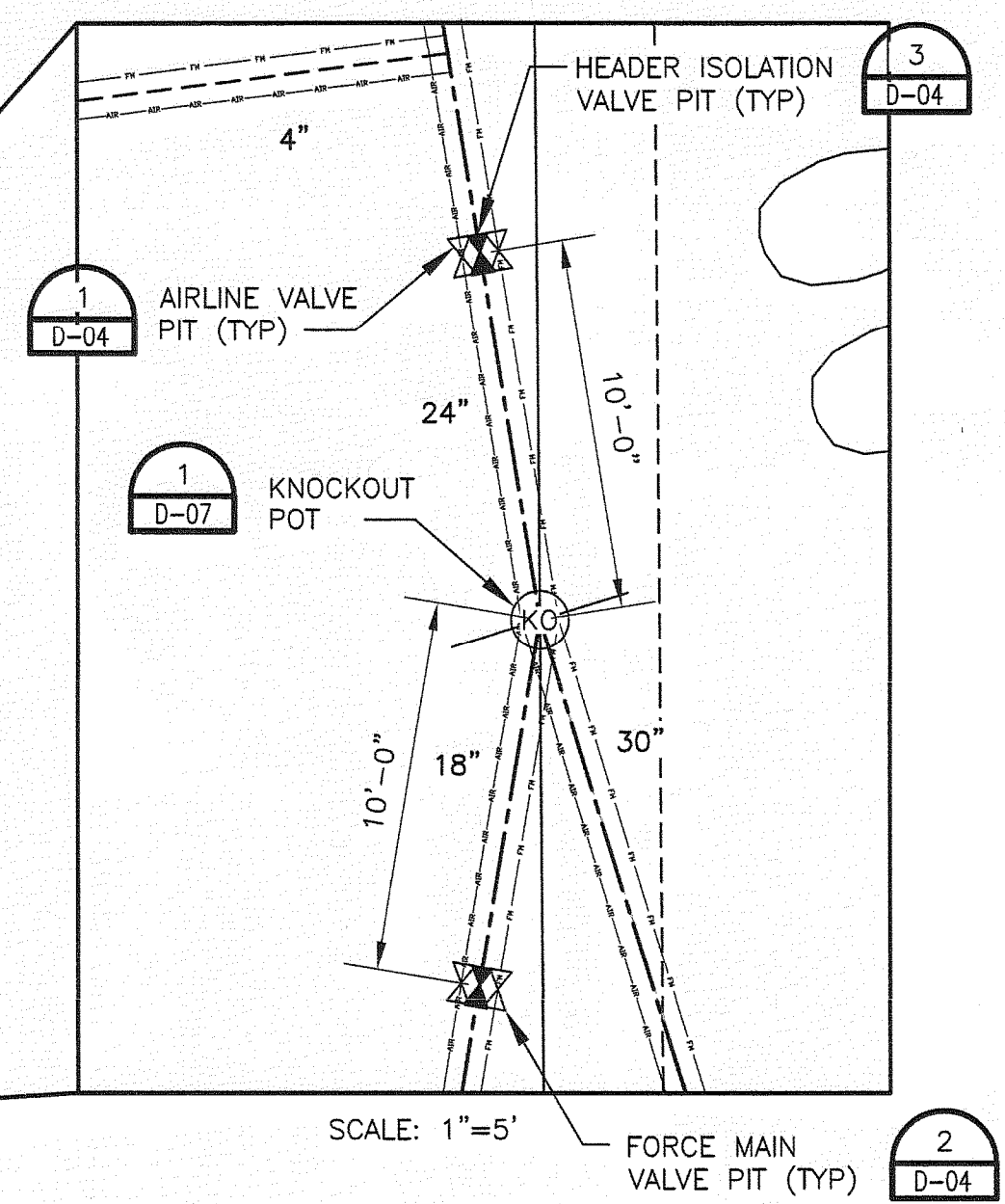
FILENAME00C-02.dwg

SHEET00C-02

SCALE1" = 100'



- NOTES:**
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 3. CONTRACTOR TO PROVIDE A PRE-CONSTRUCTION SURVEY, PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES, TO VERIFY EXISTING CONDITIONS.
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 13. IF THE ALTERNATE BID OPTION IS SELECTED, THE CONTRACTOR SHALL INSTALL BLIND FLANGES FOR THE HEADER, AIRLINE AND FORCEMAIN VALVE PIT SOUTH OF THE KNOCKOUT POT.



SEE SHEETS C-03A, C-03B, C-03C, C-03D AND C-03E FOR AS-BUILT.

RECORD DRAWING

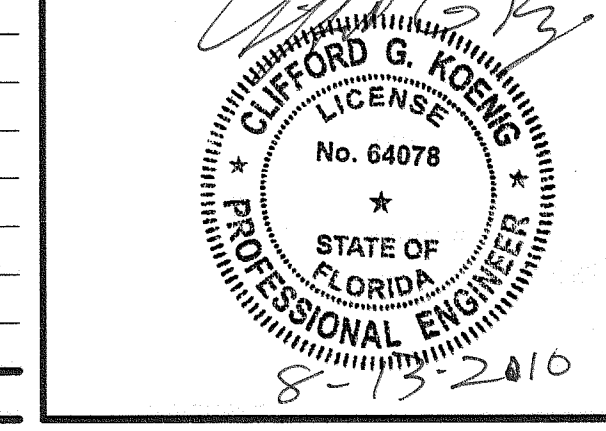
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CLIFFORD G. KOENIG, P.E.
FLORIDA P.E. NO. 64078
HDR ENGINEERING, INC.



ISSUE	DATE	DESCRIPTION
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1	08/09	ISSUED FOR BID
0	05/09	ISSUED FOR CLIENT REVIEW

PROJECT MANAGER	C. KOENIG, P.E.
DESIGNED BY	A. BARKER, E.I.
DRAWN BY	D. SOSA
	B. JOHNSON
CHECKED BY	C. LEBRON, P.E.
PROJECT NUMBER	101628



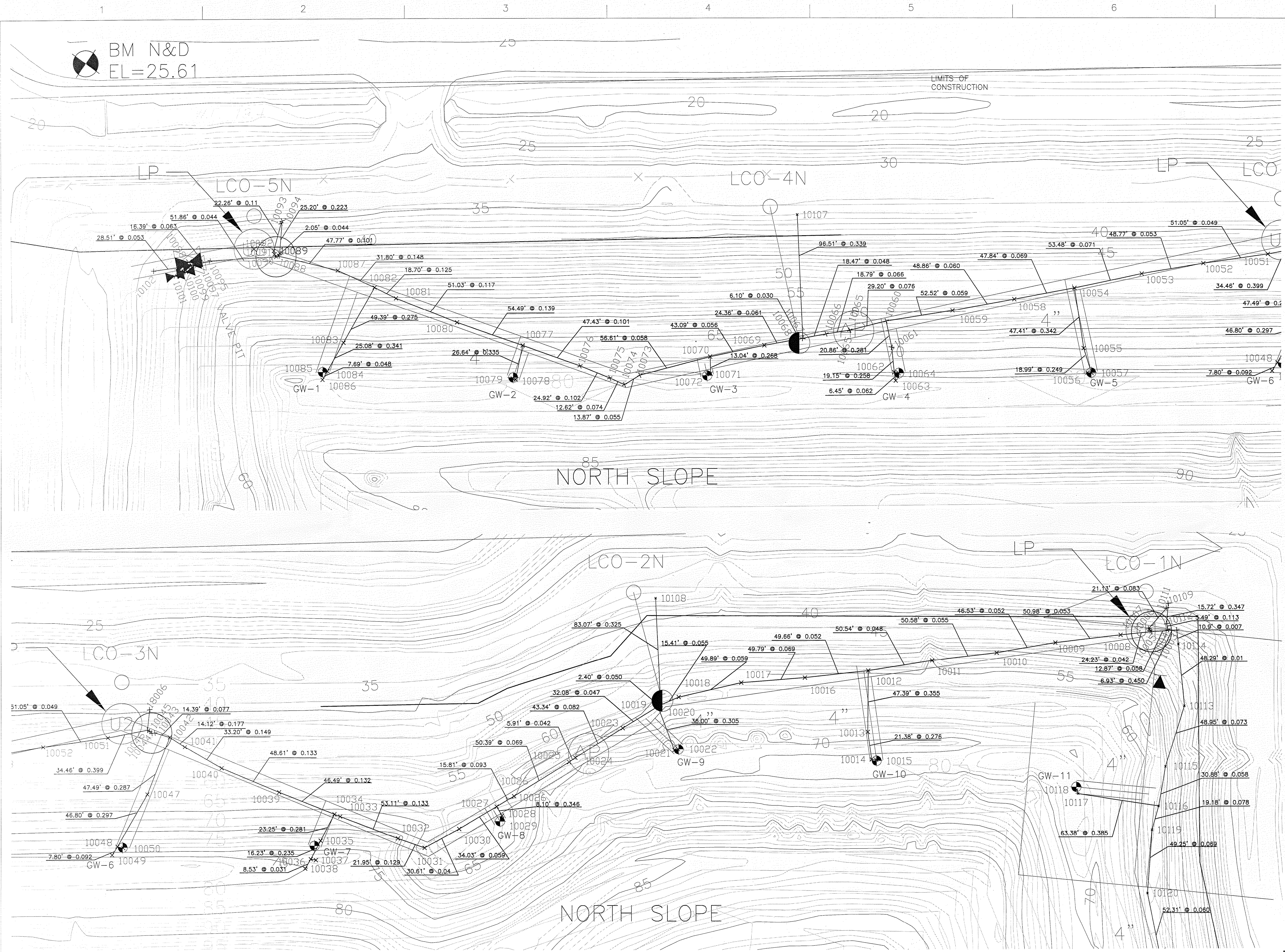
Central County Solid Waste Disposal Complex
Phase 1 - Sequence 1
Landfill Gas Collection and Control System
ISSUED FOR CONSTRUCTION

SARASOTA COUNTY FLORIDA

PHASE 1 GAS SYSTEM PIPING LAYOUT

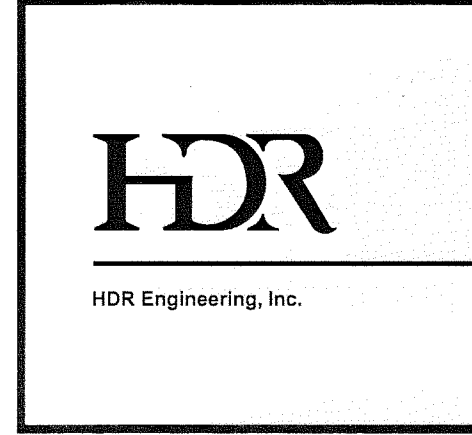
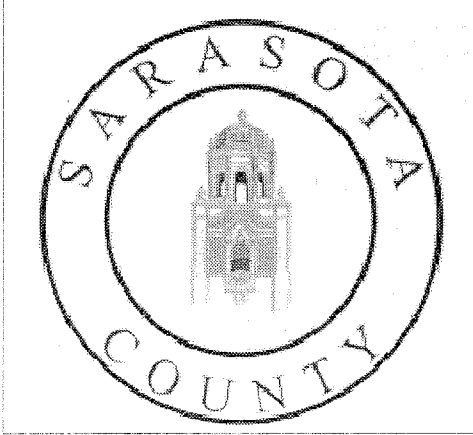
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SCALE: 1" = 100'
SHEET: 00C-03

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
AUG 13 2010
SOUTHWEST DISTRICT
TAMPA



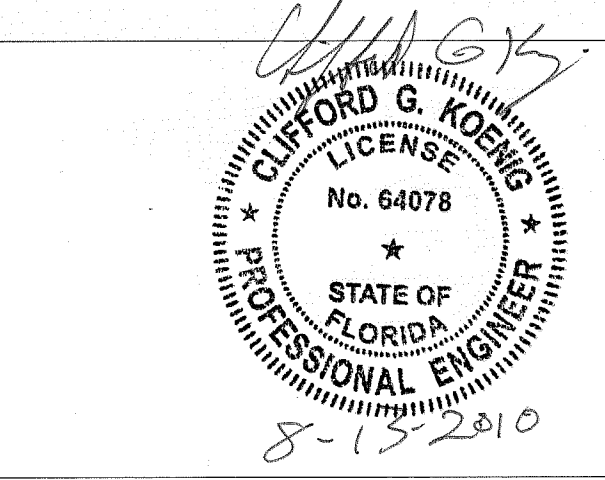
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DESIGNED BY	A. BARKER, E.I.
DRAWN BY	D. SOSA
CHECKED BY	C. LEBRON, P.E.
PROJECT NUMBER	101628



Central County Solid Waste Disposal Complex
Phase 1 - Sequence 1
Landfill Gas Collection and Control System
ISSUED FOR CONSTRUCTION

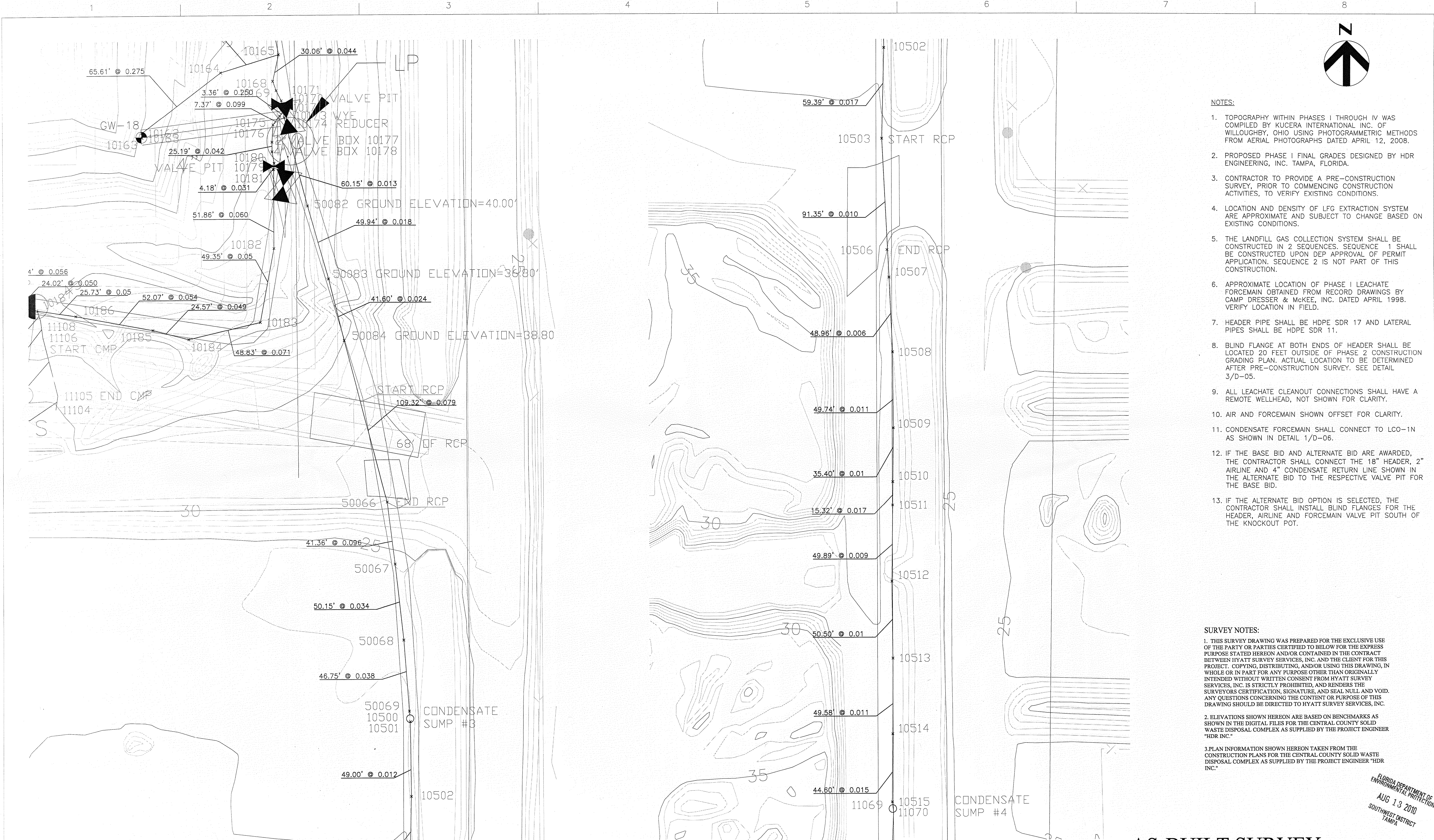
SARASOTA COUNTY FLORIDA

AS-BUILT SURVEY
PHASE 1
GAS SYSTEM PIPING LAYOUT

Hyatt Survey Services, Inc.
Geographic Data Specialists
11007 8TH AVENUE EAST, BRANSON, FLORIDA 32109
TEL: (407) 748-4693 FAX: (407) 744-1643
E-MAIL: info@hyattsurvey.com
PROJ. MAN. DVE. DRAWN BY: DVE. CHECKED BY: BSH
FIELD DATE: 09/02/2009 SCALE: SEE SHEET

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
AUG 13 2010
SOUTHWEST DISTRICT
TAMPA

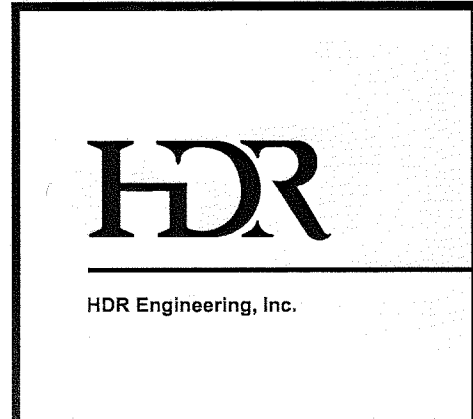
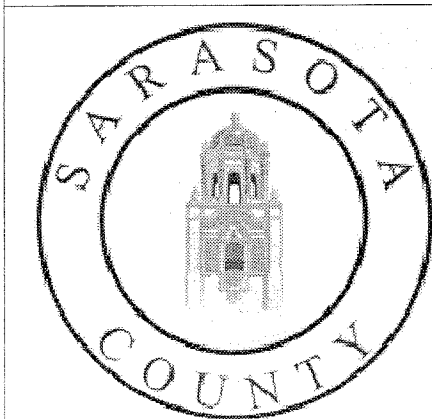
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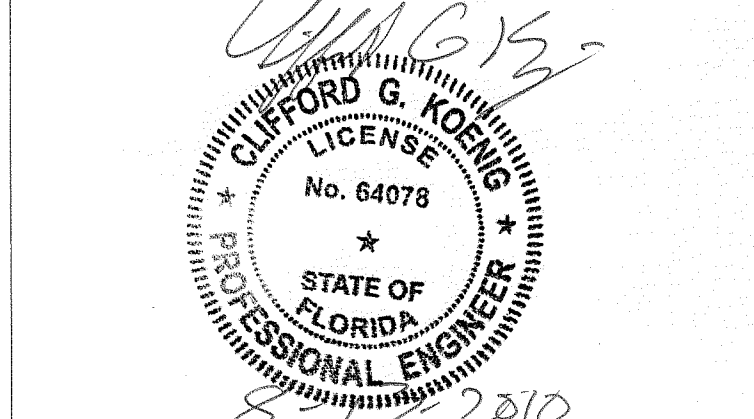
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FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
AUG 13 2010
SOUTHWEST DISTRICT
TAMPA



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DESIGNED BY	A. BARKER, E.I.
DRAWN BY	D. SOSA
CHECKED BY	C. LEBRON, P.E.
PROJECT NUMBER	101628



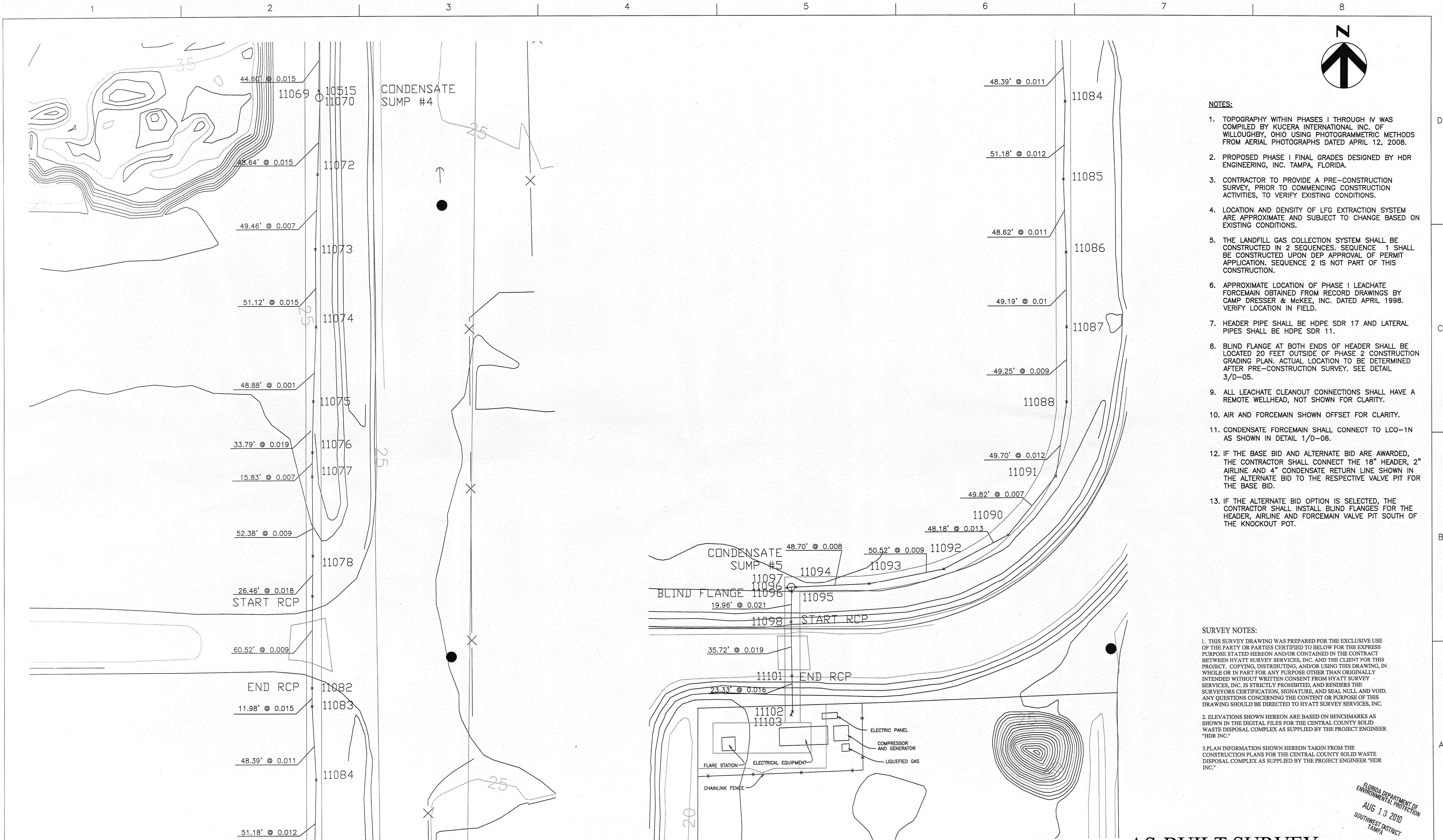
Central County Solid Waste Disposal Complex
Phase 1 - Sequence 1
Landfill Gas Collection and Control System
ISSUED FOR CONSTRUCTION
SARASOTA COUNTY FLORIDA

AS-BUILT SURVEY
PHASE 1
GAS SYSTEM PIPING LAYOUT

Hyatt Survey Services, Inc.
TOPOGRAPHIC SURVEY
11007 8TH AVENUE EAST BRADENTON, FLORIDA 34212
TEL (941) 748-4693 FAX (941) 744-1463
THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND SEAL OF A FLORIDA LICENSED SURVEYOR AND REGISTERED PROFESSIONAL ENGINEER.
DRAWN BY: [Signature] CHECKED BY: [Signature]
FIELD DATE: 08/02/2010 SCALE: SEE SHEET

0 1" 2"
AT FULL SIZE BAR LENGTH EQUALS TWO INCHES. ADJUST SCALE ACCORDINGLY.

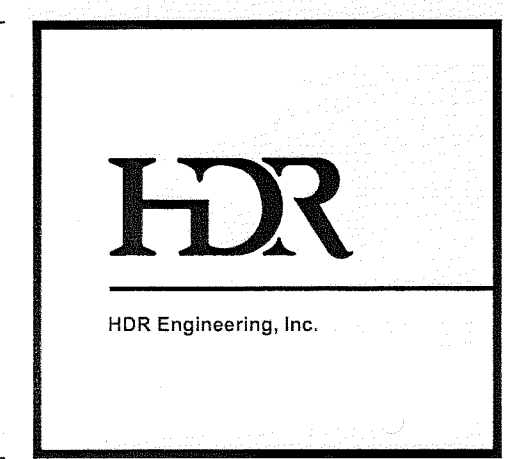
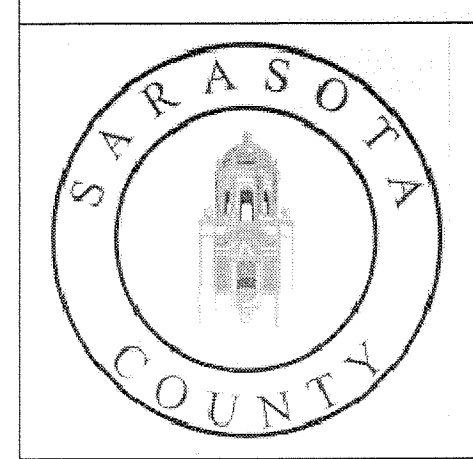
FILENAME: 00C-03.dwg
SCALE: 1" = 100'
SHEET: 00C-03D



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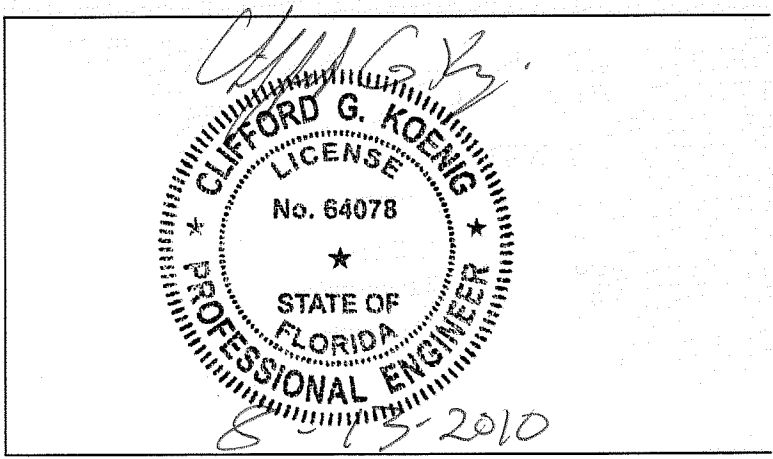
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PROJECT MANAGER	C. KOENIG, P.E.
DESIGNED BY	A. BARKER, E.I.
DRAWN BY	D. SOSA
CHECKED BY	C. LEBRON, P.E.
PROJECT NUMBER	101628



Central County Solid Waste Disposal Complex
Phase 1 - Sequence 1
Landfill Gas Collection and Control System
ISSUED FOR CONSTRUCTION

SARASOTA COUNTY FLORIDA

AS-BUILT SURVEY
PHASE 1
GAS SYSTEM PIPING LAYOUT

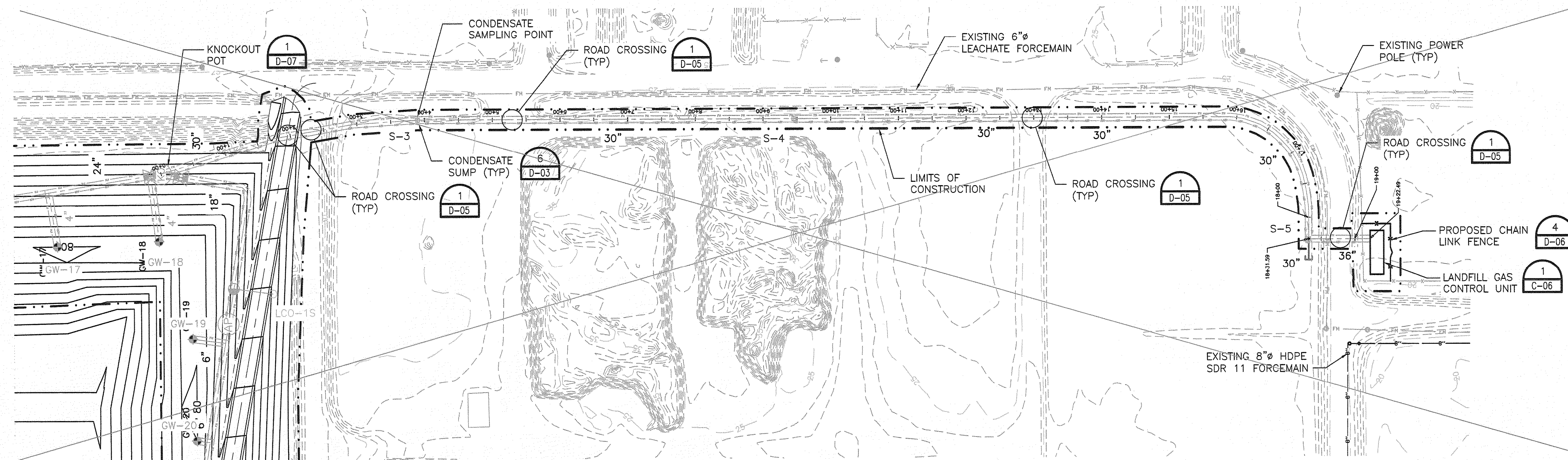
Hyatt Survey Services, Inc.

11007 8TH AVENUE EAST BRADENTON, FLORIDA 34212
 TEL (941) 748-4693 FAX (941) 744-1443 LB No. 7293
 AND REG. UNDER PHOT. MAP. ACT. DRAWING BY: HYATT CHECKED BY: HYATT
 PROJECT: 1001 FIELD DATE: 08/02/10 SCALE: SEE SHEET

TOPOGRAPHIC SURVEY
 THIS SURVEY IS NOT TO BE USED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF HYATT SURVEY SERVICES, INC.
 REGISTERED PROFESSIONAL SURVEYOR
 FLORIDA SURVEYORS REGISTRATION NO. 5003

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

AUG 13 2010
 SOUTH WEST DISTRICT
 TAMPA
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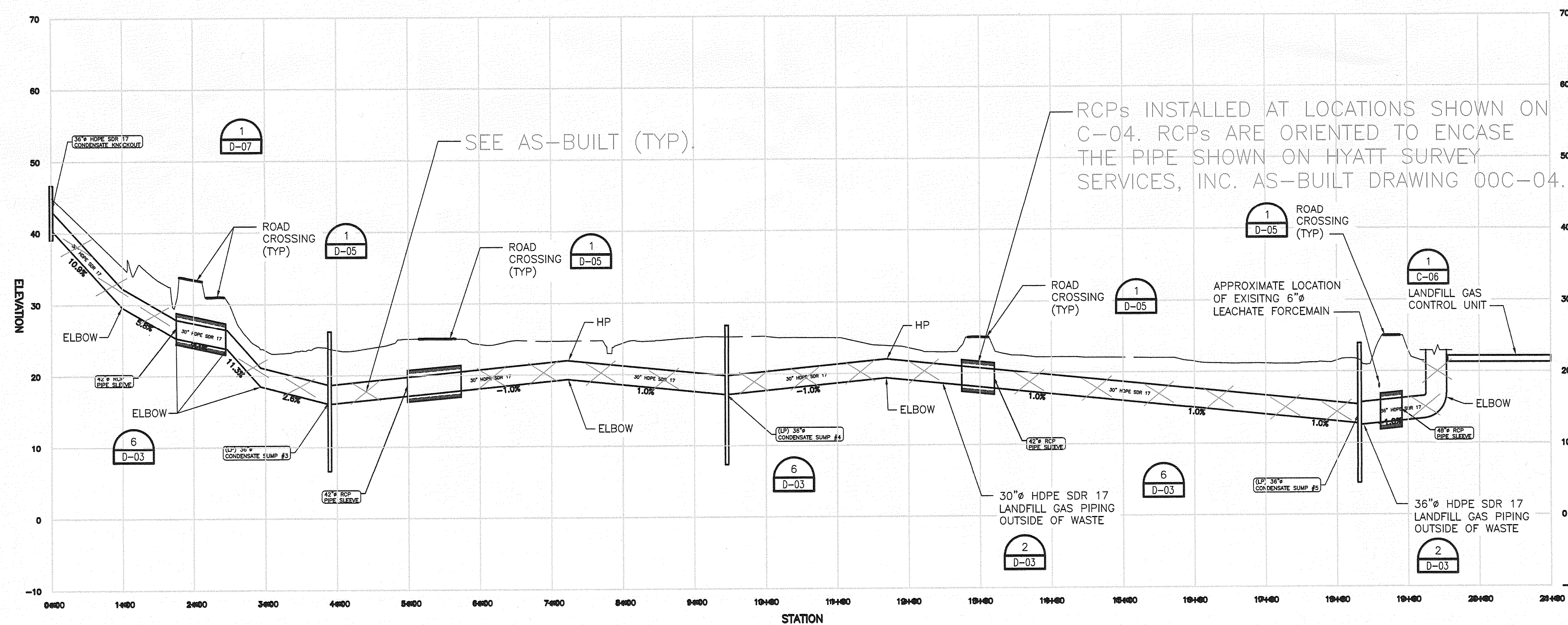


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PLAN VIEW

SCALE: 1"=100'



PROFILE VIEW

SCALE: 1"=10'V 1"=100'H

NOTE: AIRLINE/FORCEMAIN LINES NOT SHOWN FOR CLARITY.

RECORD DRAWING

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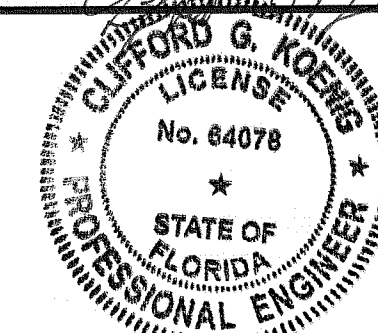
CLIFFORD G. KOENIG, P.E.
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HDR ENGINEERING, INC.



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	B. JOHNSON
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**Central County Solid Waste
Disposal Complex
Phase 1 - Sequence 1
Landfill Gas Collection and Control System**

SARASOTA COUNTY

FLORIDA

HEADER TO FLARE STATION PLAN & PROFILE

0 1" 2"

AT FULL SIZE BAR LENGTH EQUALS TWO INCHES. ADJUST SCALE ACCORDINGLY.

FILENAME	00C-04.dwg
SCALE	AS NOTED

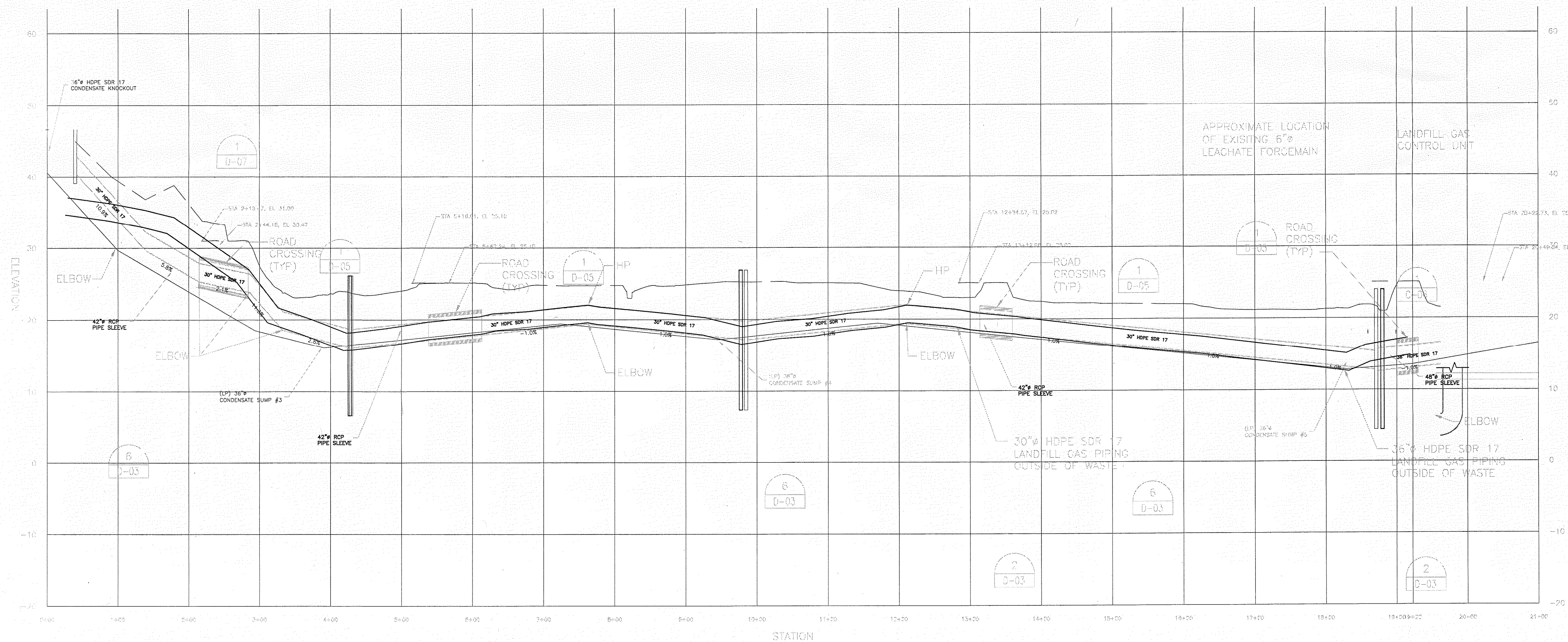
SHEET

00C-04



PLAN VIEW

SCALE: 1"=100'



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SCALE: 1"=10' V 1"=100' H

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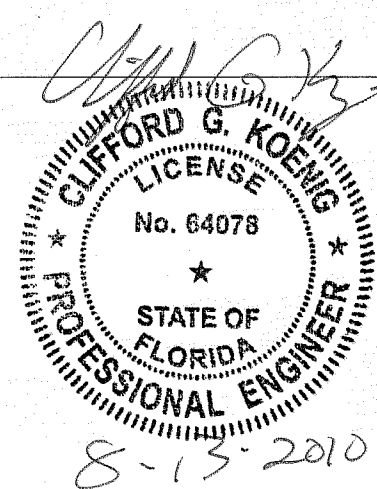
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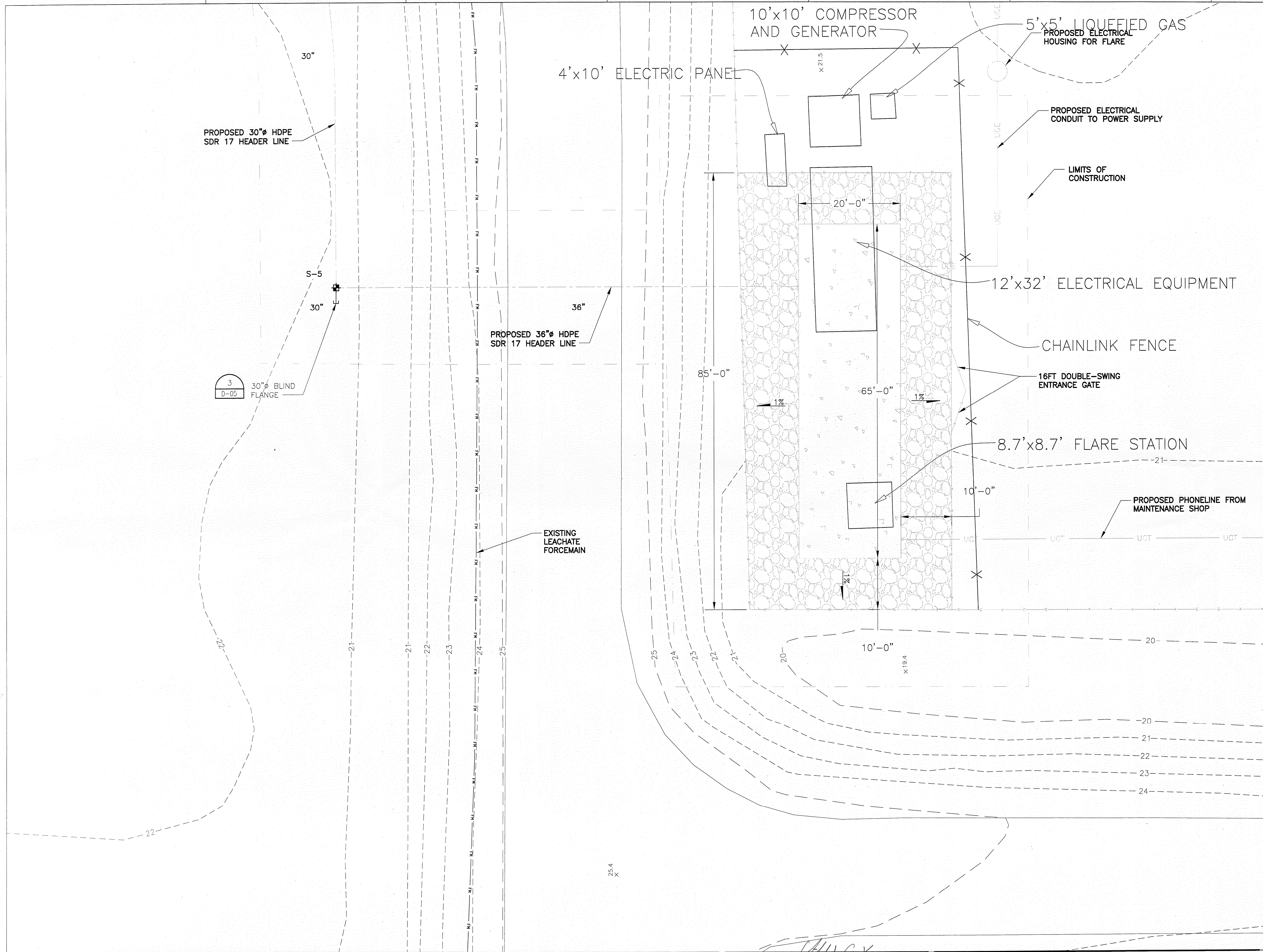
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 SARASOTA COUNTY FLORIDA

HEADER TO FLARE STATION PLAN & PROFILE Hyatt Survey Services, Inc. <small>11007 47th AVENUE EAST, BRADENTON, FLORIDA 34212 TEL (941) 748-4693 FAX (941) 744-1643 PLOT FILE: hyatt004-03 PROJ: MAN: DVE DRAWN BY: DVE CHECKED BY: BWH PROJ: 004-1001 FB: TFC FIELD DATE: 08/22/09 SCALE: SEE SHEET</small>		RECORD DRAWING <small>THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL PLOTTED SEAL OF A FLORIDA LICENSED SURVEYOR.</small>
0 1 2 AT FULL SIZE BAR LENGTH EQUALS TWO INCHES. ADJUST SCALE ACCORDINGLY.	FILENAME: 00C-04.dwg SCALE: AS NOTED	SHEET: 00C-04



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. LOCATION AND DENSITY OF LFG EXTRACTION SYSTEM ARE APPROXIMATE AND SUBJECT TO CHANGE BASED ON EXISTING CONDITIONS.
3. APPROXIMATE LOCATION OF PHASE I LEACHATE FORCEMAIN OBTAINED FROM RECORD DRAWINGS BY CAMP DRESSER & MCKEE, INC. DATED APRIL 1998. VERIFY LOCATION IN FIELD.
4. HEADER PIPE SHALL BE HDPE SDR 17.
5. 8" OF NO. 57 STONE IS REQUIRED TO BE INSTALLED WITHIN THE FENCED AREA AS SHOWN.
6. ELECTRICAL CONNECTION AND ROAD CROSSING OF ELECTRICAL MUST MEET FLORIDA CODE.
7. FLARE STATION ELEVATIONS ARE AS FOLLOWS:
 - CRUSHED GRAVEL - EL. 21.70
 - FLARE PAD - EL. 21.90CONTRACTOR TO FILL AND COMPACT FLARE STATION PAD AND GRAVEL AREA TO ELEVATION SPECIFIED. CONTRACTOR TO FILL AREA SURROUNDING GRAVEL AREA AT 3:1 SLOPE TO MEET EXISTING GRADES.
8. CONTRACTOR TO GRADE SOIL FOR STORMWATER DRAINAGE AROUND FLARE STATION.
9. AIR AND FORCEMAIN LINES NOT SHOWN FOR CLARITY.

AS-BUILT SURVEY

Hyatt Survey Services, Inc.

Geographic Data Specialists
11007 8TH AVENUE EAST BRADENTON, FLORIDA 34212
PH: (941) 748-4093 FAX: (941) 744-1445 LBN No.: 7203

DATE FILE: 08-05 PROJ. MAN: DVE DRAWN BY: DVE CHECKED BY: RWH
PROJ. NO: 1001 FB 223 PG 20 FIELD DATE: 08/03/10 SCALE: SEE SHEET

FLARE STATION
GRADING PLAN

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
AUG 13 2010
SOUTHWEST DISTRICT
TAMPA

0 1" 2"
AT FULL SIZE BAR LENGTH EQUALS TWO
INCHES. ADJUST SCALE ACCORDINGLY.

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

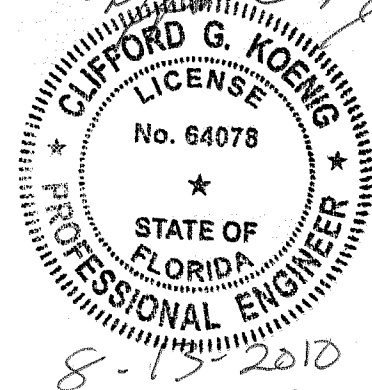
SHEET
00C-05



HDR
HDR Engineering, Inc.

ISSUE	DATE	DESCRIPTION
2	12/09	ISSUED FOR CONSTRUCTION
1	08/09	ISSUED FOR BID
0	05/09	ISSUED FOR CLIENT REVIEW

PROJECT MANAGER	C. KOENIG, P.E.
DESIGNED BY	A. BARKER, E.I.
DRAWN BY	D. SOSA
CHECKED BY	C. LEBRON, P.E.
PROJECT NUMBER	101628

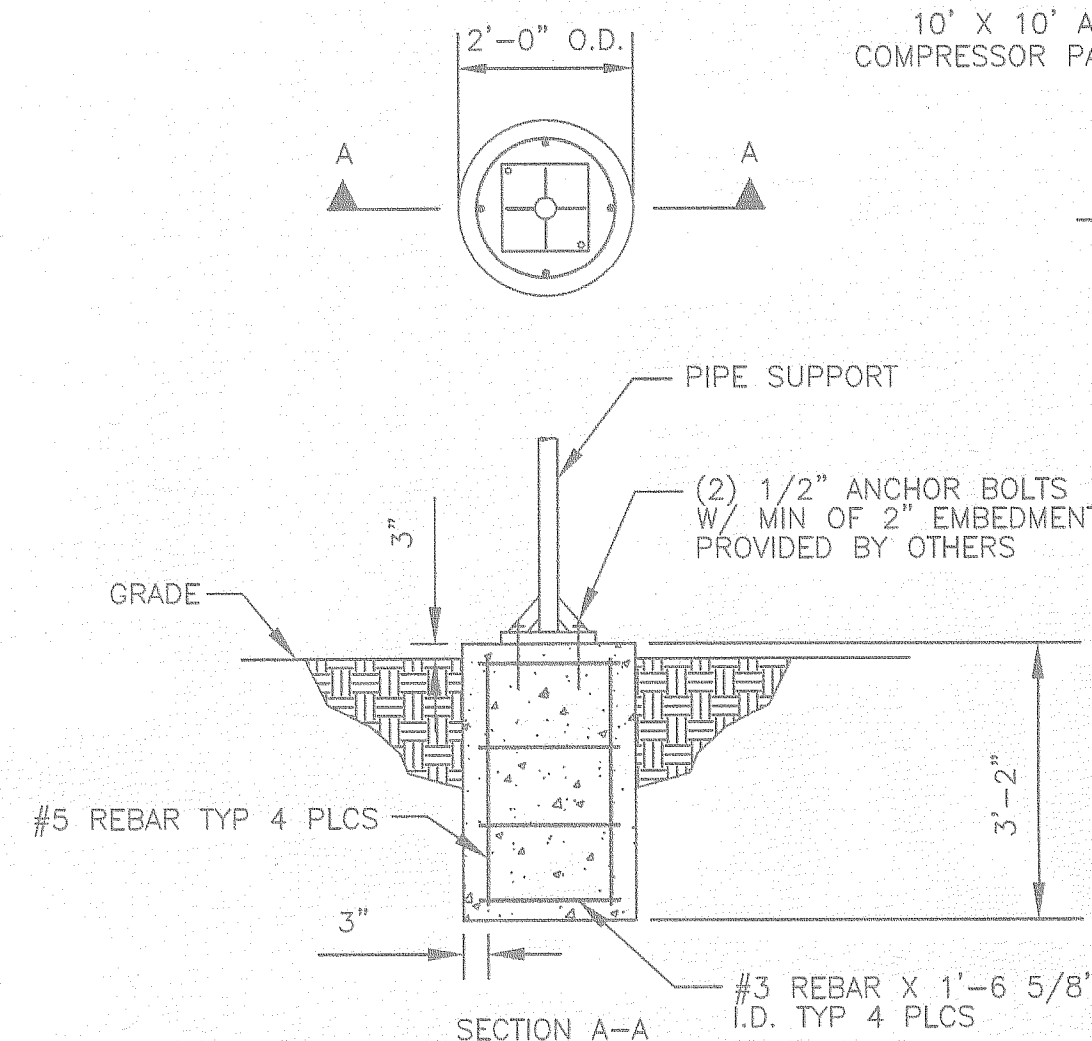


Central County Solid Waste
Disposal Complex
Phase 1 - Sequence 1
Landfill Gas Collection and Control System
ISSUED FOR CONSTRUCTION

SARASOTA COUNTY

FLORIDA

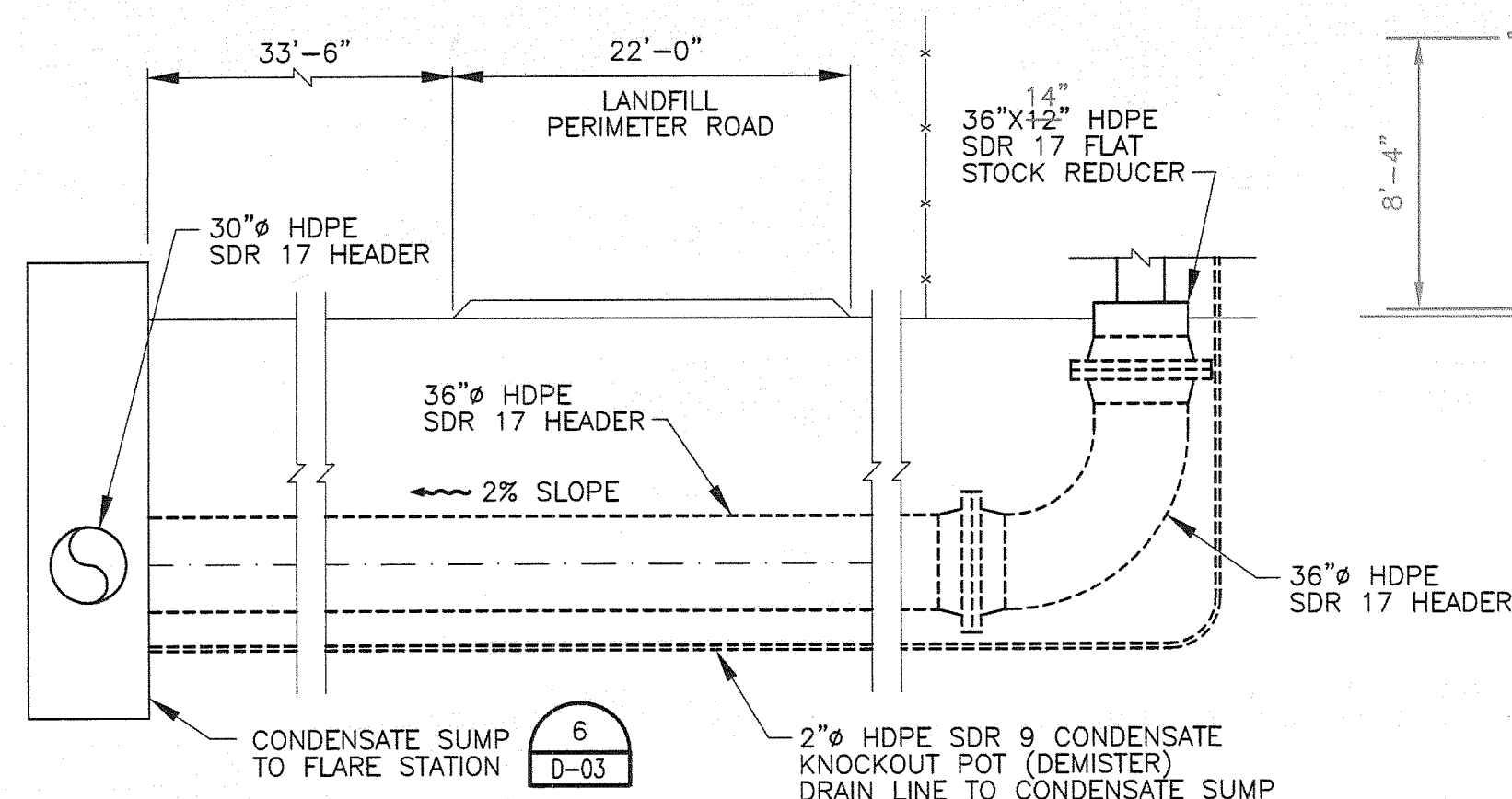
(2) PROPANE TANKS ON 5'-0" X 8'-0" SQ. X 6" THICK CONCRETE PAD WITH #3@12" REBAR. TANKS TO BE MIN. 10'-0" FROM FLARE AND ELECTRICAL EQUIP.



PIPE SUPPORT DETAIL

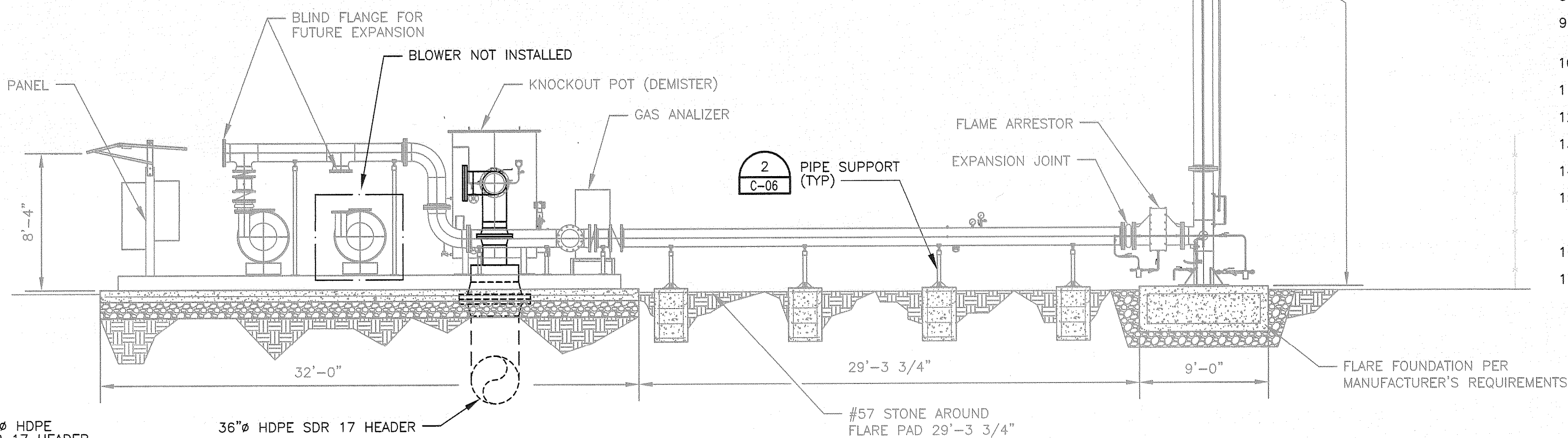
NOT TO SCALE

FLARE MANUFACTURER TO PROVIDE REINFORCED CONCRETE PAD FOUNDATION DESIGN, GROUNDING AND EARTHWORK COMPACTION REQUIREMENTS. THE CONSTRUCTION OF THE FLARE STATION PAD WILL BE COMPLETED BY THE GAS COLLECTION SYSTEM PIPING CONTRACTOR AND SHALL MEET THE FLARE VENDOR SPECIFICATIONS.



LANDFILL FLARE STATION (TYP) PLAN VIEW

NOT TO SCALE



LANDFILL FLARE STATION SECTION

NOT TO SCALE

- NOTES:
1. 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.
 2. DIMENSIONS SHOWN MAY BE MODIFIED TO SUIT BLOWER/FLARE MANUFACTURER'S REQUIREMENTS. CONTRACTOR SHALL COORDINATE PIPING TO SUIT ASSEMBLY.
 3. BLOWERS AND EQUIPMENT MAY BE SUPPLIED AND INSTALLED AS INDIVIDUAL UNITS OR AS A COMPLETE SKID PACKAGE, PER APPROVAL OF ENGINEER.
 4. 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.
 5. GAS IMPERMEABLE SEAL-OFFS SHALL BE USED ON ALL UNDERGROUND ELECTRICAL CONDUITS.
 6. FLARE TO BE MOUNTED ON A LEVEL SURFACE, SHIM OR GROUT AS REQUIRED.
 7. PROVIDE 8" NO. 57 GRAVEL ON 8 OZ/SY NON-WOVEN GEOTEXTILE WITHIN FENCE AREA EXCEPT IN LOCATION OF FOUNDATION.
 8. CONTRACTOR TO INSTALL PHONE SERVICE TO CONTROL PANEL FROM LANDFILL OFFICE.
 9. ONE FLARE STACK SHOWN FOR CLARITY. ADDITIONAL FLARE STACKS MAY BE NECESSARY TO MEET FUTURE FLOW RATE.
 10. INLET AND OUTLET CONFIGURATIONS MAY VARY DEPENDING UPON EQUIPMENT PROVIDED.
 11. FORMWORK, CONCRETE PLACEMENT, PROTECTION, AND CURING SHALL BE IN ACCORDANCE WITH ACI 318.
 12. THE REINFORCED CONCRETE FLARE STATION PAD WILL BE SPECIFIED IN ADDENDUM NO. 1.
 13. FLARE SUBGRADE TO BE COMPACTED TO 95% OF MODIFIED PROCTOR.
 14. CONTRACTOR TO INSTALL SPECIFIED GROUNDING AS REQUIRED BY FLARE MANUFACTURER.
 15. CONTRACTOR TO PURCHASE AND INSTALL INGERSOL RAND COMPRESSOR WITH 125 HP AND 150 MAX. PSI CAPABILITY. CONTRACTOR TO SUBMIT MANUFACTURER SPECIFICATIONS FOR APPROVAL.
 16. AIR COMPRESSOR MAY BE LOCATED ON SEPARATE CONCRETE PAD AS REQUIRED BY FLARE MANUFACTURER.
 17. FLARE STATION WILL BE PROVIDED AND COMMISSIONED BY OTHERS. ALL NOTED CONNECTIONS TO THE FLARE STATION SHALL BE MADE BY THE GAS COLLECTION SYSTEM CONTRACTOR.

RECORD DRAWING

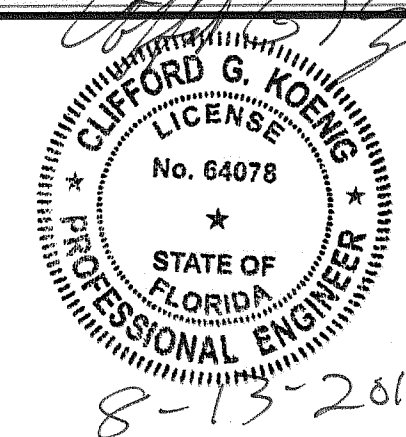
THIS DOCUMENT HAS BEEN PREPARED BASED ON INFORMATION PROVIDED BY OTHERS AND DEPICTS THE CONTRACTOR'S RECORD OF INSTALLATIONS. HDR ENGINEERING, INC. DOES NOT WARRANT THE ACCURACY OF SUCH INFORMATION OR COMPLETENESS OR FOR ANY ERRORS OR OMISSIONS THAT MAY BE INCORPORATED INTO THIS DOCUMENT BASED ON THE INFORMATION.

CLIFFORD G. KOENIG, P.E.
FLORIDA P.E. NO. 64078
HDR ENGINEERING, INC.



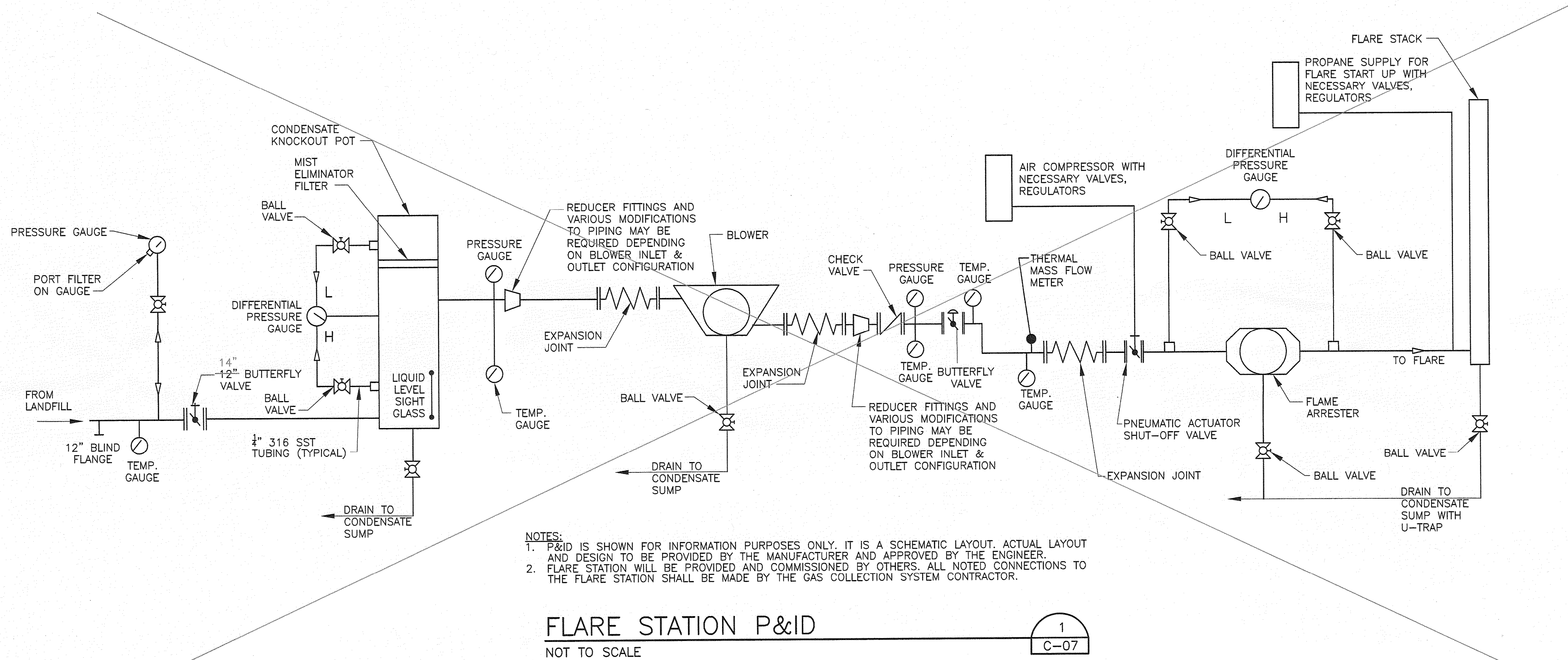
ISSUE	DATE	DESCRIPTION
3	08/10	RECORD DRAWINGS
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1	08/09	ISSUED FOR BID
0	05/09	ISSUED FOR CLIENT REVIEW

PROJECT MANAGER	C. KOENIG, P.E.
DESIGNED BY	A. BARKER, E.I.
DRAWN BY	D. SOSA
	B. JOHNSON
CHECKED BY	C. LEBRON, P.E.
PROJECT NUMBER	101628



**Central County Solid Waste
Disposal Complex**
Phase 1 - Sequence 1
Landfill Gas Collection and Control System
ISSUED FOR CONSTRUCTION
SARASOTA COUNTY FLORIDA

TYPICAL FLARE STATION LAYOUT	FILENAME: 00C-06.dwg	SHEET: 00C-06
SCALE: NOT TO SCALE		



NOTES:
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.
2. FLARE STATION WILL BE PROVIDED AND COMMISSIONED BY OTHERS. ALL NOTED CONNECTIONS TO THE FLARE STATION SHALL BE MADE BY THE GAS COLLECTION SYSTEM CONTRACTOR.

FLARE STATION P&ID
NOT TO SCALE

1
C-07

SEE SHEETS C-07A AND C-07B
FOR AS-BUILT FLARE STATION
P&ID AND LEGEND

RECORD DRAWING

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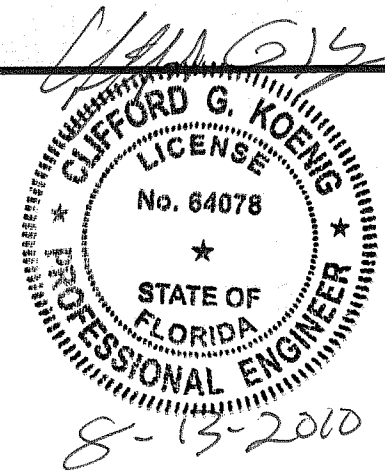
CLIFFORD G. KOENIG, P.E.
FLORIDA P.E. NO. 64078

HDR ENGINEERING, INC.



ISSUE	DATE	DESCRIPTION
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	B. JOHNSON
CHECKED BY	C. LEBRON, P.E.
PROJECT NUMBER	101628

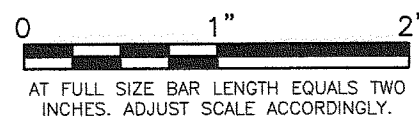


Central County Solid Waste
Disposal Complex
Phase 1 - Sequence 1
Landfill Gas Collection and Control System
ISSUED FOR CONSTRUCTION

SARASOTA COUNTY

FLORIDA

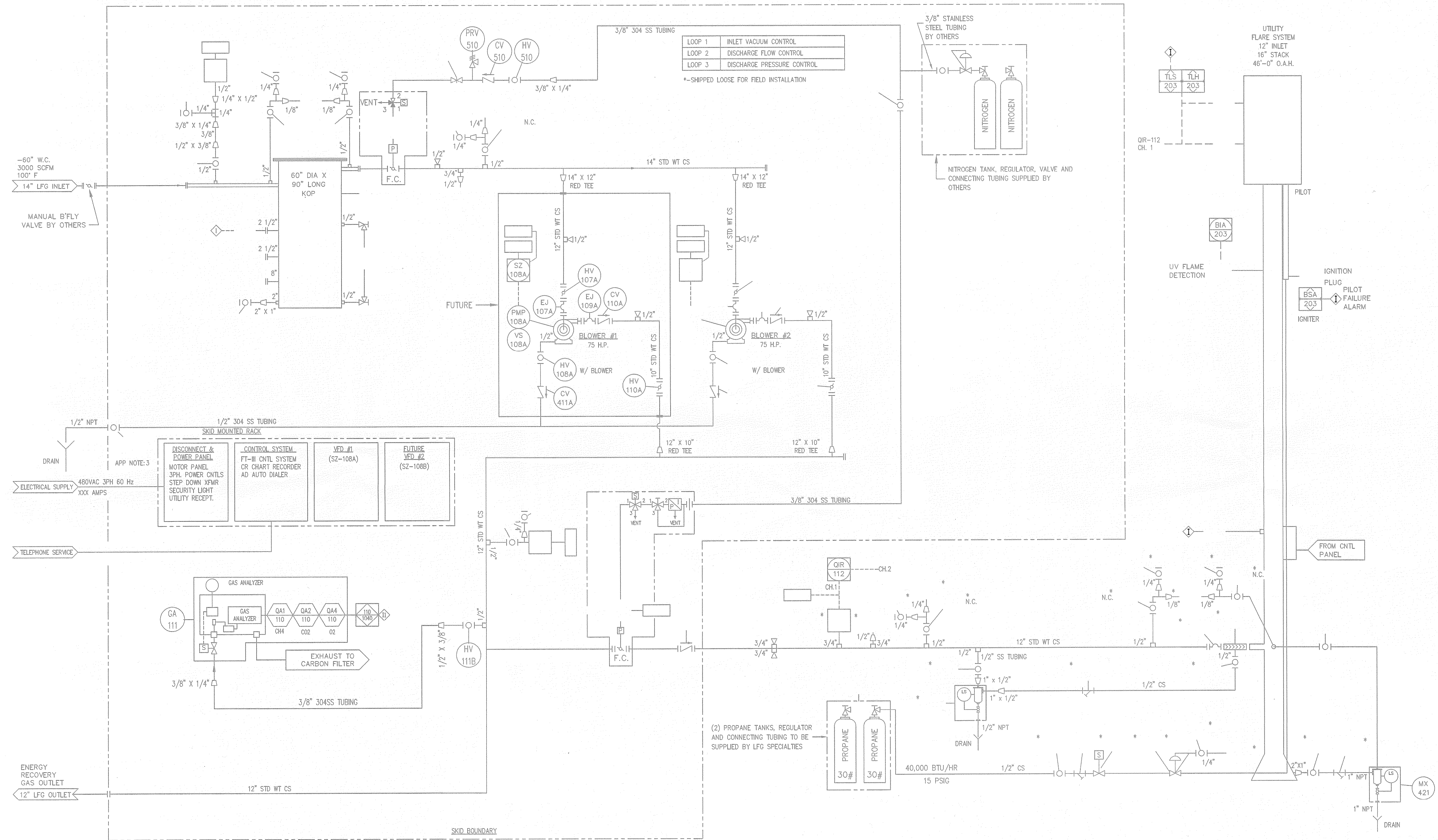
FLARE STATION P&ID



FILENAME	00C-07.dwg
SCALE	NOT TO SCALE

SHEET	00C-07
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FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
AUG 13 2010
SOUTHWEST DISTRICT
TAMPA

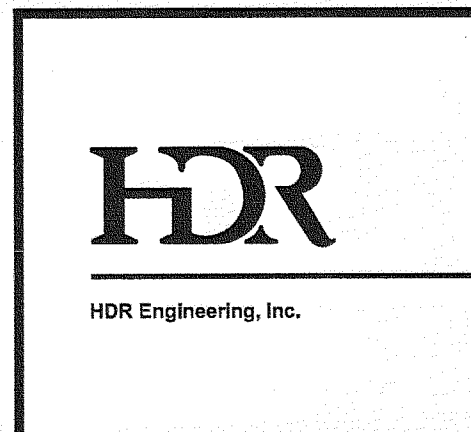
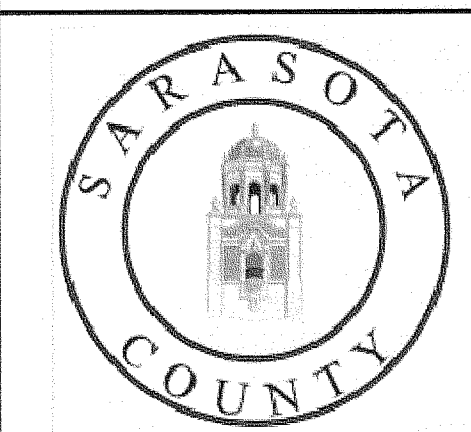


ALL INFORMATION ON THIS DRAWING IS REPRODUCED FROM DOCUMENTS PROVIDED BY SHAW LFG SPECIALTIES, LLC.

RECORD DRAWING

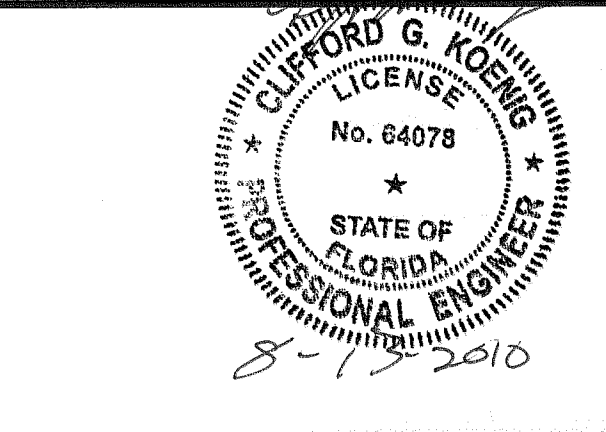
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CLIFFORD G. KOENIG, P.E.
FLORIDA P.E. NO. 64078
HDR ENGINEERING, INC.



ISSUE	DATE	DESCRIPTION
3	07/2010	RECORD DRAWINGS

PROJECT MANAGER	
DESIGNED BY	SHAW LFG
DRAWN BY	SHAW LFG
CHECKED BY	
PROJECT NUMBER	101628



Central County Solid Waste Disposal Complex
Phase 1 - Sequence 1
Landfill Gas Collection and Control System

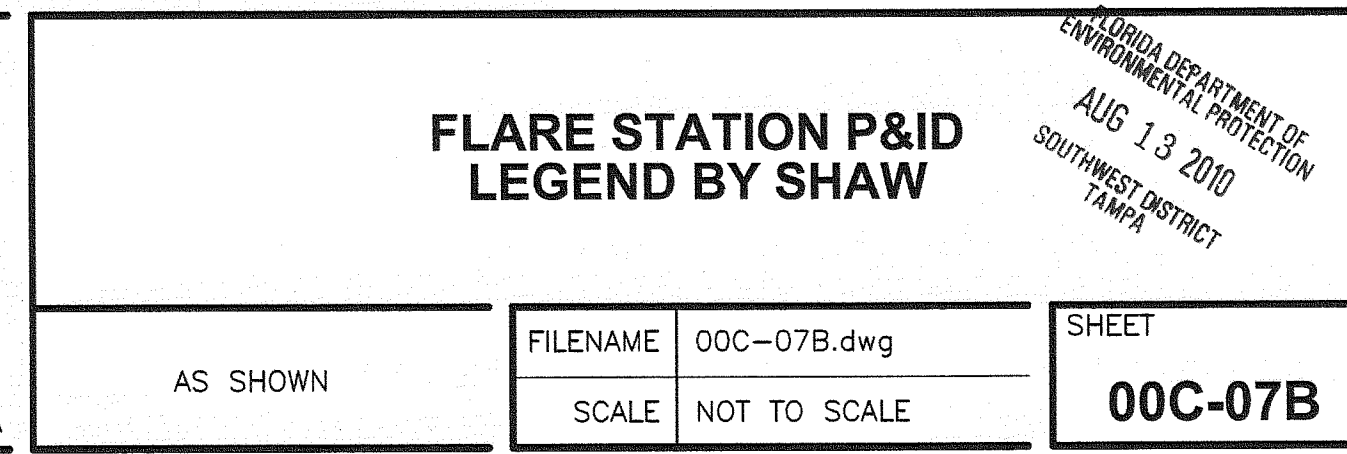
SARASOTA COUNTY FLORIDA

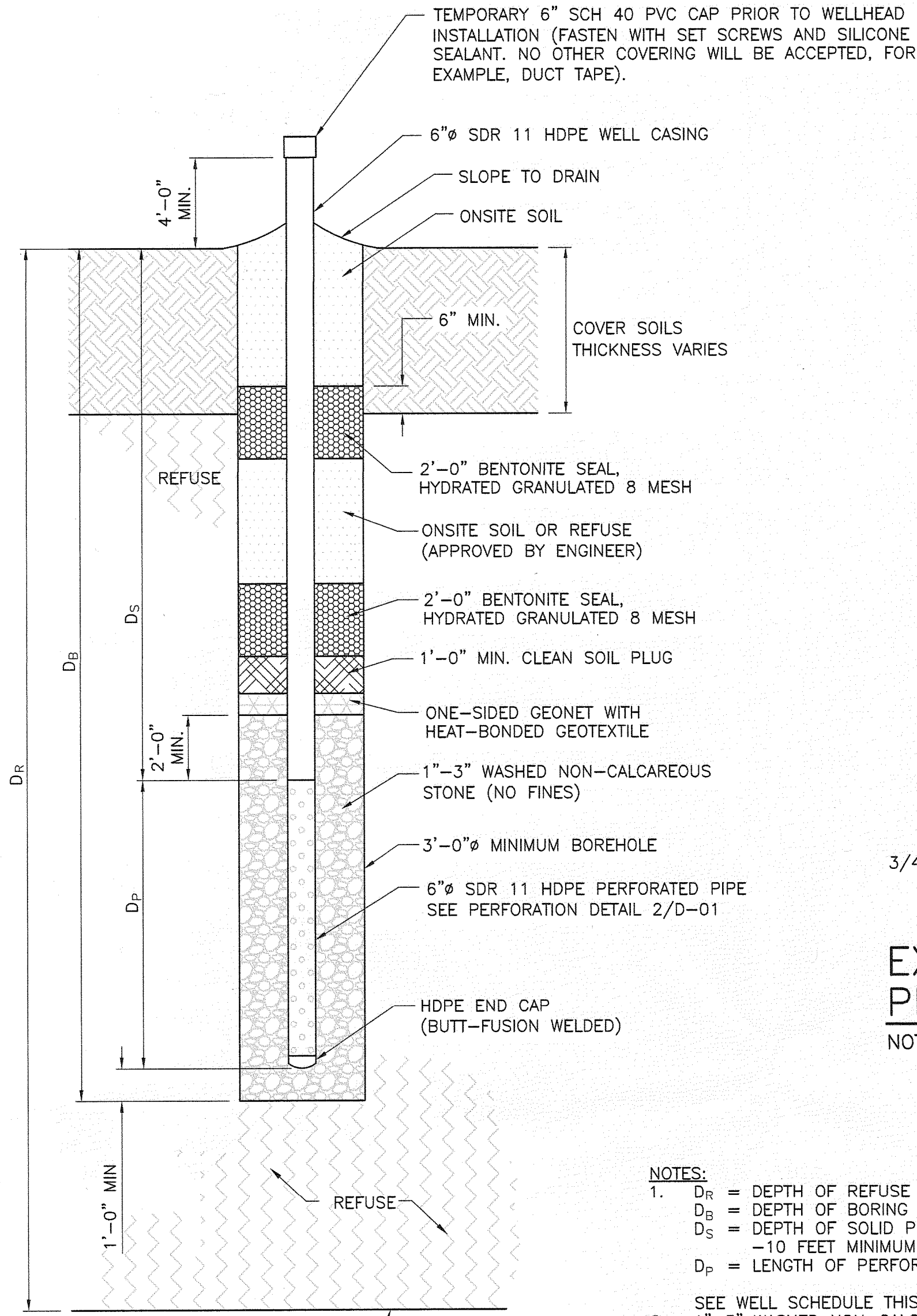
FLARE STATION P&ID BY SHAW	
AS SHOWN	FILENAME 00C-07A.dwg
SCALE NOT TO SCALE	SHEET 00C-07A

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
AUG 13 2010
SOUTHWEST DISTRICT
TAMPA

EQUIPMENT / INSTRUMENT LEGEND

00C-07B





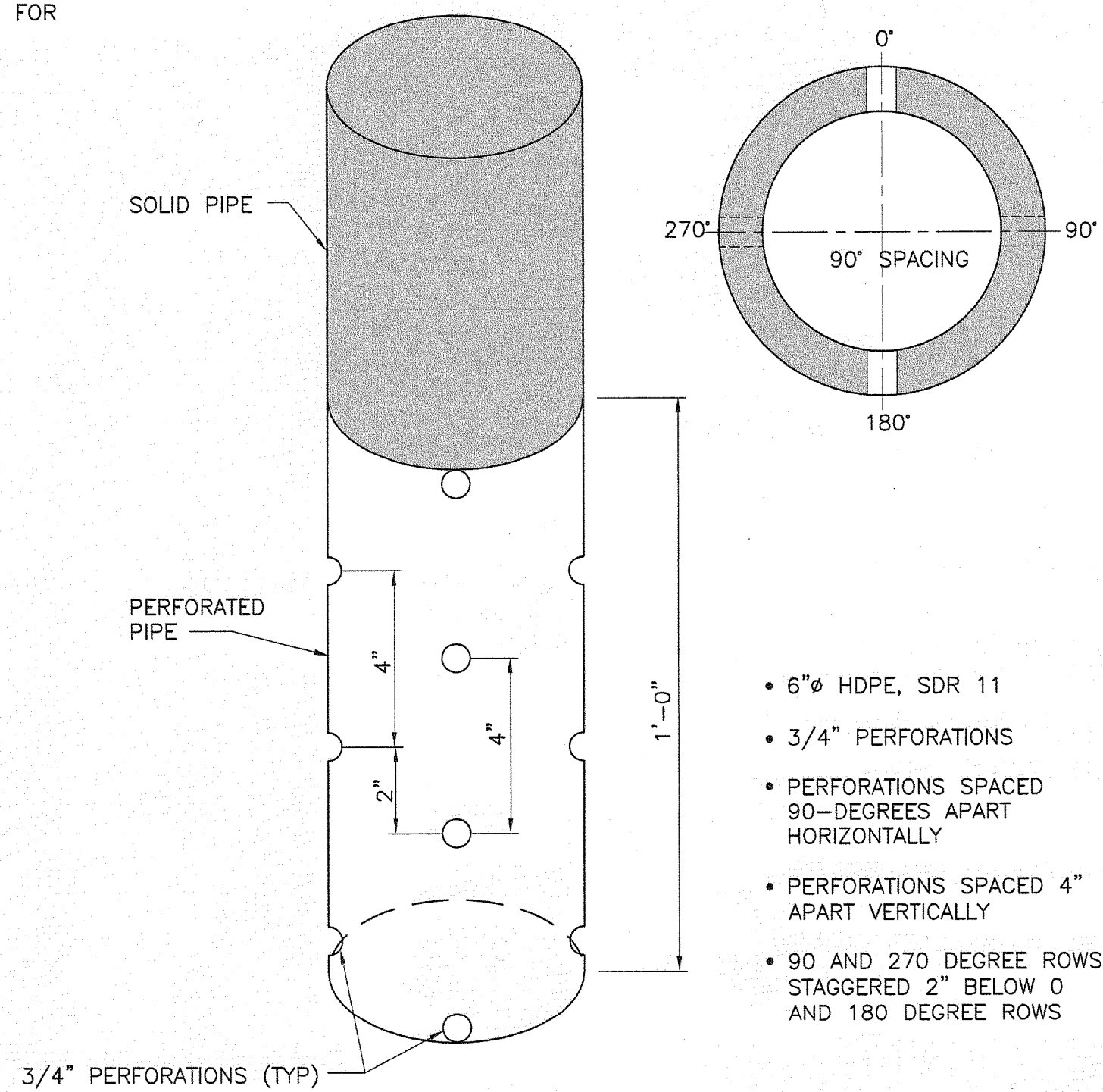
- NOTES:
- D_R = DEPTH OF REFUSE
 D_B = DEPTH OF BORING
 D_S = DEPTH OF SOLID PIPE (BELOW GRADE) - 10 FEET MINIMUM
 D_P = LENGTH OF PERFORATED PIPE
 - SEE WELL SCHEDULE THIS SHEET.
 - 1"-3" WASHED NON-CALCAREOUS STONE (NO FINES). WELL DRILLING WILL NOT COMMENCE UNTIL EXISTING GRADE ELEVATIONS ARE IDENTIFIED 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.

LANDFILL GAS EXTRACTION WELL

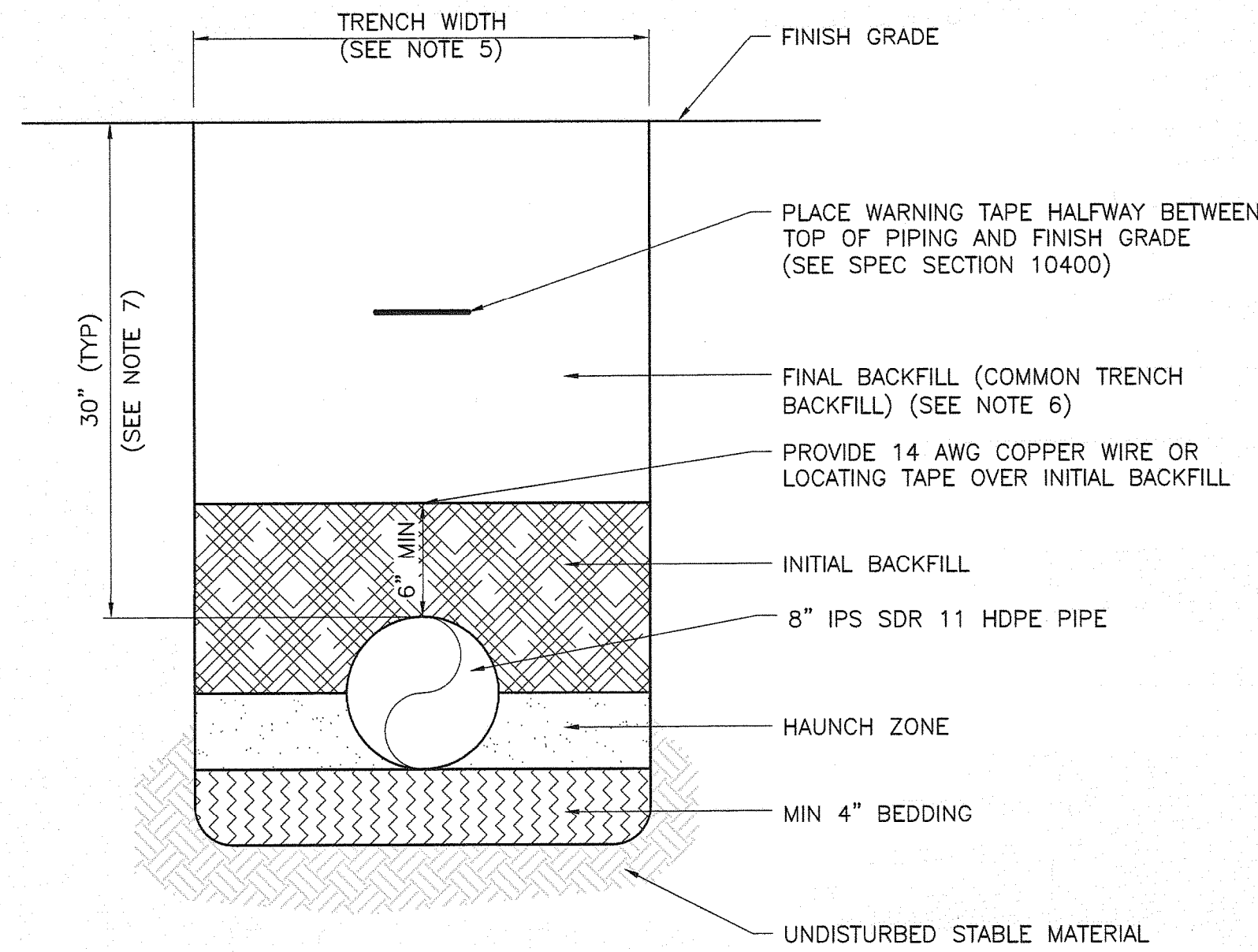
NOT TO SCALE

EXTRACTION WELL PERFORATION DETAIL

NOT TO SCALE



- 6"Ø HDPE, SDR 11
- 3/4" PERFORATIONS
- PERFORATIONS SPACED 90-DEGREES APART HORIZONTALLY
- PERFORATIONS SPACED 4" APART VERTICALLY
- 90 AND 270 DEGREE ROWS STAGGERED 2" BELOW 0 AND 180 DEGREE ROWS



EXISTING LEACHATE FORCEMAIN BEDDING

NOT TO SCALE

- NOTES:
- TRENCHING AND PIPE INSTALLATION SHALL BE PERFORMED IN ACCORDANCE WITH ASTM D2321. MAXIMUM PARTICLE SIZE = 1/2".
 - BEDDING, HAUNCHING AND INITIAL BACKFILL MATERIAL USED SHOULD BE CLASS I OR CLASS II AS PER ASTM D2487, "STANDARD METHOD FOR CLASSIFICATION OF SOILS FOR ENGINEERING PURPOSES." THIS MATERIAL SHALL BE COMPACTED TO 95% DENSITY PER AASHTO T-99. SEE SPECIFICATIONS.
 - WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION. DEWATER TO ONE FOOT BELOW TRENCH BOTTOM, SEE SPECIFICATIONS.
 - INITIAL BACKFILL SHOULD BE PLACED IN 6" LAYERS AND EXTENDED TO AT LEAST 6" ABOVE THE TOP OF THE PIPE.
 - MINIMUM TRENCH WIDTH = PIPE OD + 16". MAXIMUM TRENCH WIDTH = MINIMUM TRENCH + 18".
 - FINAL BACKFILL SHALL BE CLASS I, CLASS II OR CLASS III MATERIAL AS PER ASTM D2487. THIS MATERIAL SHALL BE COMPACTED TO 95% DENSITY PER AASHTO T-99. SEE SPECIFICATIONS.
 - FORCEMAIN MAY BE INSTALLED DEEPER IN ACCORDANCE WITH SPECIFICATIONS TO MAINTAIN ADEQUATE CLEARANCE DURING HORIZONTAL DIRECTIONAL DRILLING OR DURING CROSSING OF EXISTING PIPELINES.
 - THIS DETAIL IS FOR INFORMATIONAL PURPOSES ONLY.

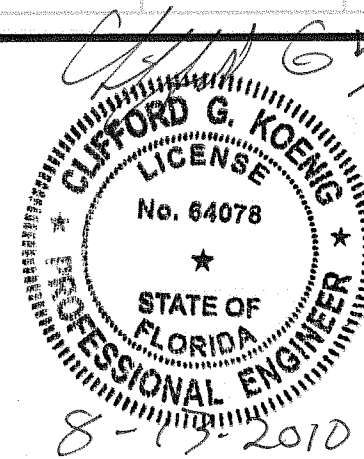
LFG Extraction Well Number	Grid Coordinates		Final Grade Elevation	Basegrade Elevation	Calculated Depth of Waste (D_R)	Calculated Borehole (D_B)	Solid Pipe (Does Not Include 4' Above Grade Stickup) (D_S)	Perforated Pipe (D_P)	Grid Coordinates (Surveyed)		Surveyed Cover Elevation	Calculated Well Depth	Calculated Perforated Length
	NORTHING	EASTING							NORTHING	EASTING			
GW-1	1043648.25	529407.18	77.0	26.0	51.0	34.0	10.0	24.0	1043648.23	529407.18	74.92	33	22
GW-2	1043643.78	529555.93	79.0	28.0	51.0	34.0	10.0	24.0	1043643.77	529555.91	77.33	34	23
GW-3	1043644.93	529707.20	78.0	26.0	52.0	34.0	10.0	24.0	1043645.00	529707.21	76.33	35	24
GW-4	1043646.49	529856.78	78.0	27.0	51.0	34.0	10.0	24.0	1043646.48	529856.80	75.70	33	22
GW-5	1043646.70	530006.58	79.0	28.0	51.0	34.0	10.0	24.0	1043646.80	530006.58	76.51	33	22
GW-6	1043653.81	530156.12	77.0	25.0	52.0	34.0	10.0	24.0	1043653.74	530156.13	74.58	35	24
GW-7	1043655.04	530306.24	78.0	28.0	50.0	33.0	10.0	23.0	1043655.00	530306.17	73.17	30	19
GW-8	1043674.00	530451.01	79.0	27.0	52.0	34.0	10.0	24.0	1043673.95	530451.05	76.08	34	23
GW-9	1043729.42	530590.25	76.0	26.0	50.0	33.0	10.0	23.0	1043729.39	530590.26	74.33	33	22
GW-10	1043720.28	530744.59	79.0	28.0	51.0	34.0	10.0	24.0	1043720.35	530744.52	76.87	34	23
GW-11	1043699.47	530900.23	77.0	27.0	50.0	33.0	10.0	23.0	1043699.49	530900.25	74.62	33	22
GW-12	1043559.00	530925.66	80.0	27.0	53.0	35.0	10.0	25.0	1043558.97	530925.69	76.58	35	24
GW-13	1043427.84	530987.70	77.0	27.0	50.0	33.0	10.0	23.0	1043427.69	530987.70	75.27	33	22
GW-14	1043278.66	531030.61	79.0	29.0	50.0	33.0	10.0	23.0	1043278.58	531030.60	75.81	32	21
GW-15	1043116.60	531032.49	79.0	29.0	50.0	33.0	10.0	23.0	1043116.56	531032.48	75.91	32	21
GW-16	1042957.98	531039.64	77.0	29.0	48.0	32.0	10.0	22.0	1042957.98	531039.57	73.91	30	19
GW-17	1042808.10	531031.73	80.0	29.0	51.0	34.0	10.0	24.0	1042808.15	531031.79	78.09	34	23
GW-18	1042657.09	531038.82	78.0	29.0	49.0	32.0	10.0	22.0	1042657.06	531038.79	76.10	32	21
GW-19	1042607.47	530894.94	79.0	30.0	49.0	32.0	10.0	22.0	1042607.41	530895.05	75.19	30	19
GW-20	1042601.45	530744.79	80.0	31.0	49.0	32.0	10.0	22.0	1042601.42	530744.75	76.89	31	20
GW-21	1042591.49	530594.32	77.0	29.0	48.0	32.0	10.0	22.0	1042606.07	530594.44	74.42	30	19
GW-22	1042596.53	530443.14	79.0	30.0	49.0	32.0	10.0	22.0	1042575.17	530443.18	69.91	25	14
GW-23	1042592.58	530293.30	78.0	30.0	48.0	32.0	10.0	22.0	1042592.64	530293.38	75.63	31	20
GW-24	1042588.66	530143.85	77.0	28.0	49.0	32.0	10.0	22.0	1042588.64	530143.86	74.83	32	21
GW-25	1042593.76	529992.42	79.0	31.0	48.0	32.0	10.0	22.0	1042593.72	529992.38	76.58	31	20
GW-26	1042586.82	529842.63	77.0	29.0	48.0	32.0	10.0	22.0	1042586.75	529842.71	72.77	29	18
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	1042593.90	529394.20	77.0	28.0	49.0	32.0	10.0	22.0					
TOTALS:						955.00	290.00	665.00	TOTALS:			834.00	548.00
						859.00	260.00	599.00					

RECORD DRAWING

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CLIFFORD G. KOENIG, P.E.
FLORIDA P.E. NO. 64078
HDR ENGINEERING, INC.

PROJECT MANAGER	C. KOENIG, P.E.
DESIGNED BY	A. BARKER, E.I.
DRAWN BY	D. SOSA
	B. JOHNSON
CHECKED BY	C. LEBRON, P.E.
PROJECT NUMBER	101628



Central County Solid Waste Disposal Complex Phase 1 - Sequence 1 Landfill Gas Collection and Control System

ISSUED FOR CONSTRUCTION

SARASOTA COUNTY

FLORIDA

EXTRACTION WELL DETAILS AND WELL SCHEDULE

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
AUG 13 2010
SOUTHWEST DISTRICT TAMPA

0 1" 2"
AT FULL SIZE BAR LENGTH EQUALS TWO INCHES. ADJUST SCALE ACCORDINGLY.

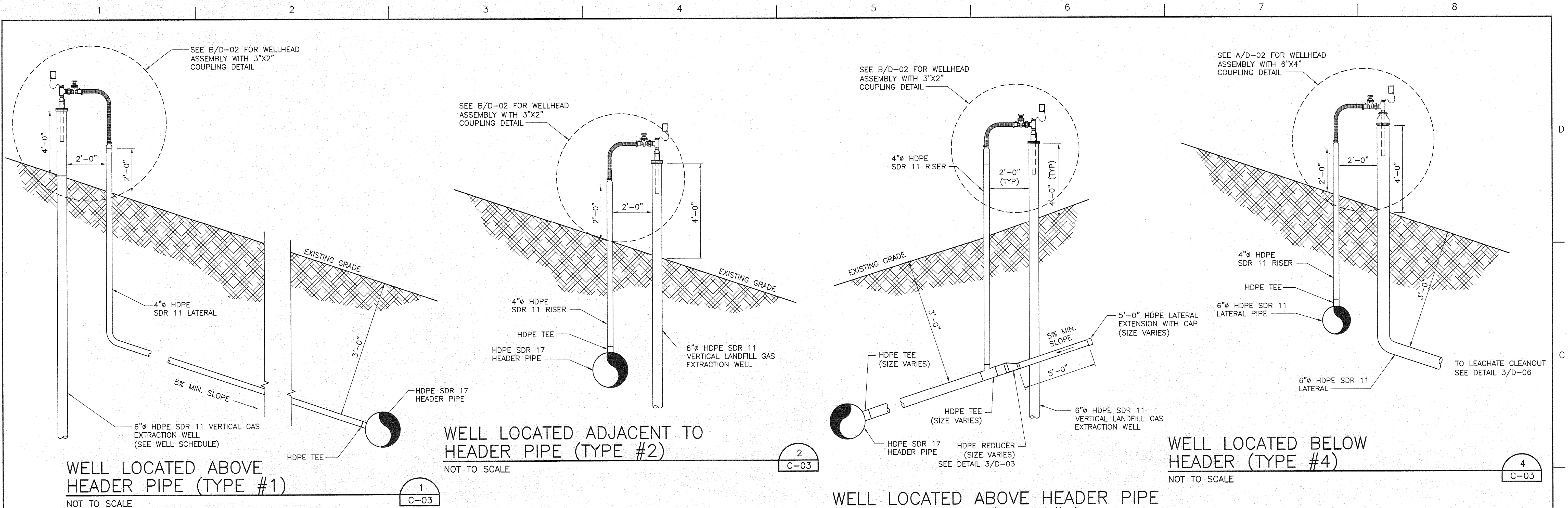
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SCALE NOT TO SCALE

SHEET
00D-01



HDR
HDR Engineering, Inc.

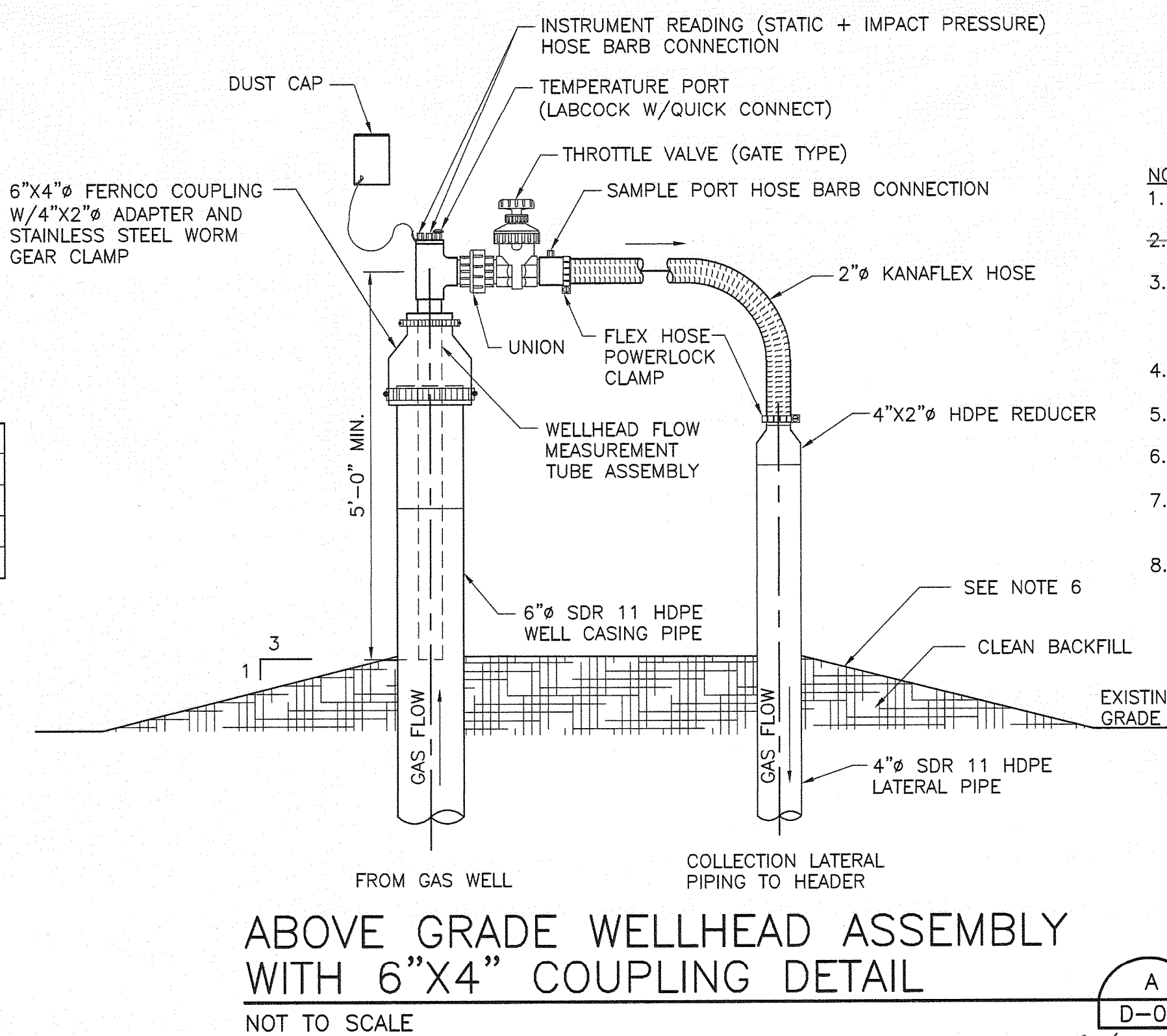
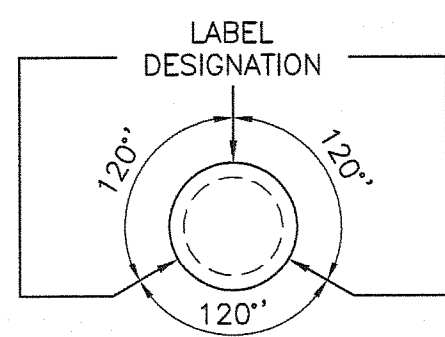
3	08/10	RECORD DRAWINGS
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0	05/09	ISSUED FOR CLIENT REVIEW
ISSUE	DATE	DESCRIPTION



VERTICAL WELL HEAD CONFIGURATION SCHEDULE

TYPE #1		TYPE #2		TYPE #3		TYPE #4	
GW-2	GW-13	GW-3	GW-17	GW-1	GW-15	LCO-1N	LCO-1S
GW-3	GW-17	GW-4	GW-16	GW-2	GW-14	LCO-2N	LCO-2S
GW-5	GW-18	GW-13	GW-21	GW-6	GW-19	LCO-3N	LCO-3S
GW-8	GW-23	GW-21	GW-22	GW-7	GW-20	LCO-4N	LCO-4S
GW-9	GW-24	GW-22	GW-27	GW-14	GW-28	LCO-5N	LCO-5S
GW-10	GW-25	GW-27					
GW-11	GW-26						
GW-12	GW-29						

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

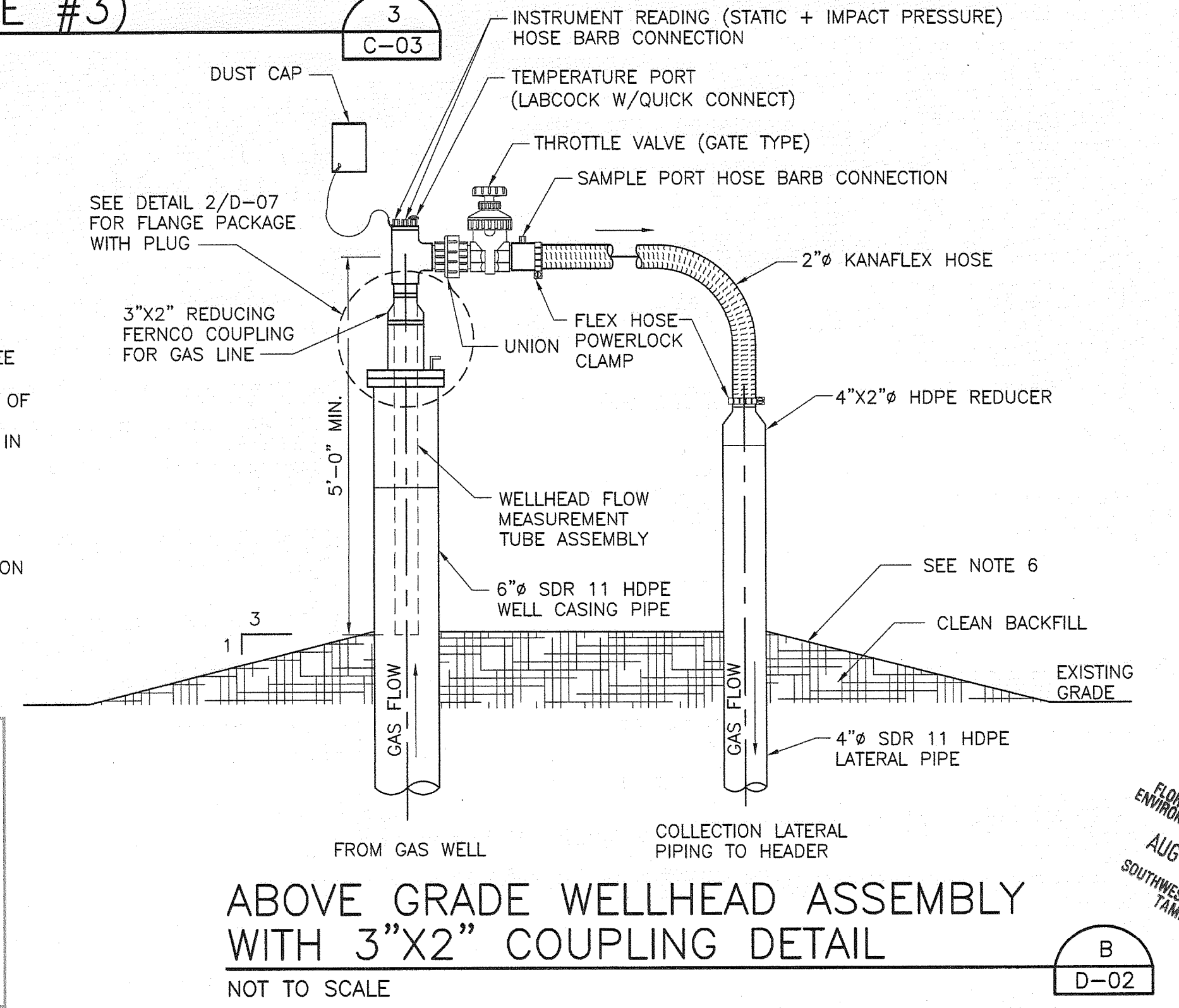


- NOTES:**
1. WELLHEAD ASSEMBLY SHOWN REPRESENTS 2" LANDTEC VERTICAL ACCU-FLO WELLHEAD ASSEMBLY.
 2. PROVIDE HIGH-VISIBILITY TAPE AROUND TOP 1-FOOT-OF-WELL-CASING-AND-LATERAL-PIPE.
 3. LABEL ALL WELL RISERS WITH IDENTIFICATION NUMBER WITH YELLOW OR WHITE PAINT AND STENCILS OR ADHESIVE LABEL AT 2" MINIMUM HEIGHT AND LOCATED IMMEDIATELY BELOW HIGH VISIBILITY TAPE.
 4. AIR AND FORCEMAIN LINES NOT SHOWN FOR CLARITY (SEE DETAIL 4/D-05).
 5. WELLHEAD TO BE CONSTRUCTED TO ALLOW INSTALLATION OF DEWATERING PUMP.
 6. EXISTING GRADE TO BE SLOPED FOR POSITIVE DRAINAGE IN A 1'-0" SURROUNDING SURFACE EXPRESSION.
 7. A TOTAL OF 8-10 SOLAR FLARES SHALL BE DECOMMISSIONED AS PART OF THE TYPE 4 WELLHEAD CONNECTION.
 8. 1" DIAMETER RISERS FOR FORCEMAIN AND AIRLINE WITH BALL VALVES ARE REQUIRED FOR ALL VERTICAL EXTRACTION WELLS.

RECORD DRAWING

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CLIFFORD G. KOENIG, P.E.
FLORIDA P.E. NO. 64078
HDR ENGINEERING, INC.



Central County Solid Waste Disposal Complex
Phase 1 - Sequence 1
Landfill Gas Collection and Control System
ISSUED FOR CONSTRUCTION

WELLHEAD AND CONFIGURATION DETAILS

0 1" 2"
AT FULL SIZE BAR LENGTH EQUALS TWO INCHES. ADJUST SCALE ACCORDINGLY.

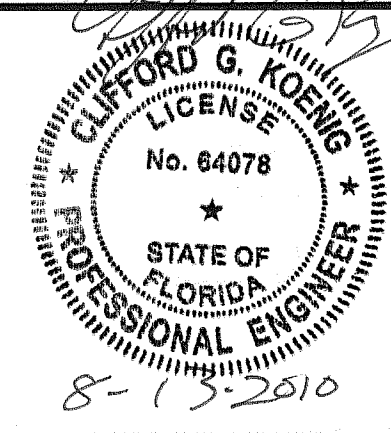
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SHEET
OOD-02



ISSUE	DATE	DESCRIPTION
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2	12/09	ISSUED FOR CONSTRUCTION
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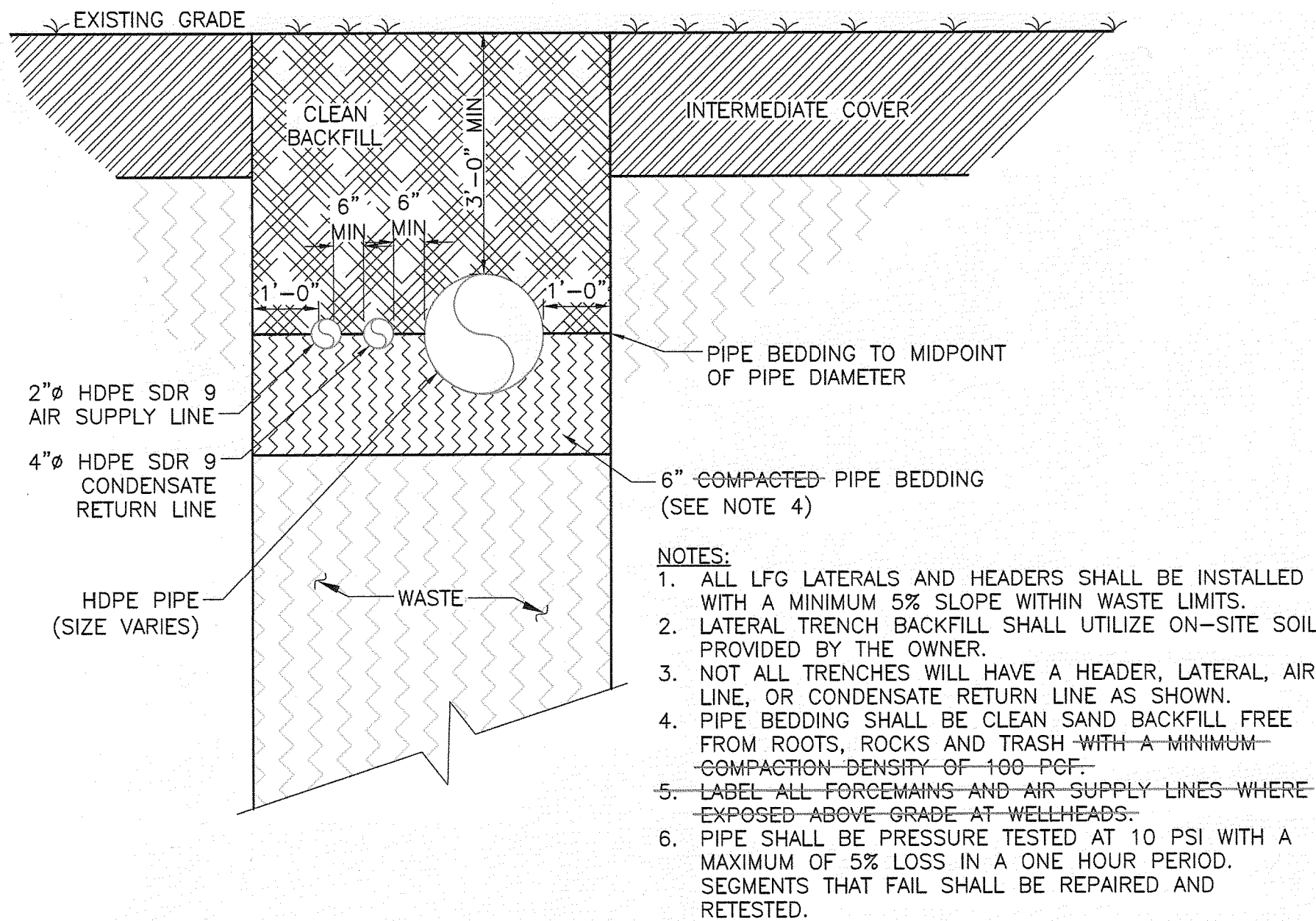
PROJECT MANAGER	C. KOENIG, P.E.
DESIGNED BY	A. BARKER, E.I.
DRAWN BY	D. SOSA
	B. JOHNSON
CHECKED BY	C. LEBRON, P.E.
PROJECT NUMBER	101628



SARASOTA COUNTY

FLORIDA

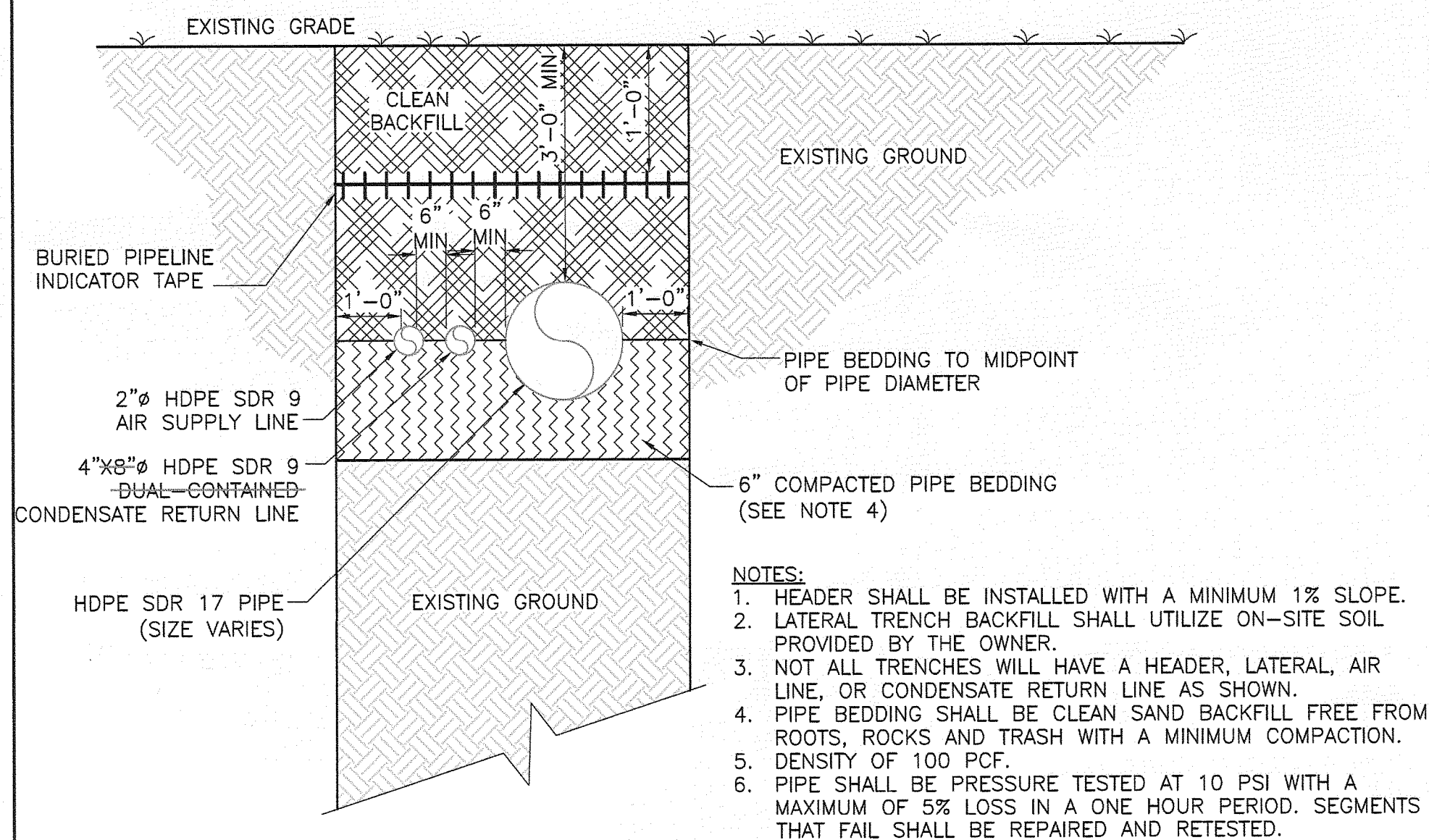
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
AUG 13 2010
SOUTHWEST DISTRICT TAMPA



LANDFILL GAS PIPING IN
WASTE TRENCH DETAIL

NOT TO SCALE

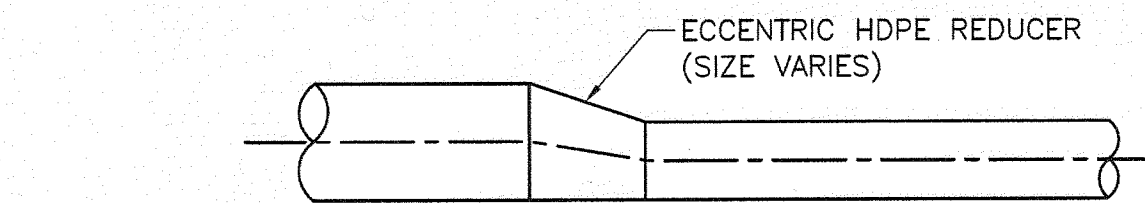
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C-03



LANDFILL GAS PIPING OUTSIDE
OF WASTE TRENCH DETAIL

NOT TO SCALE

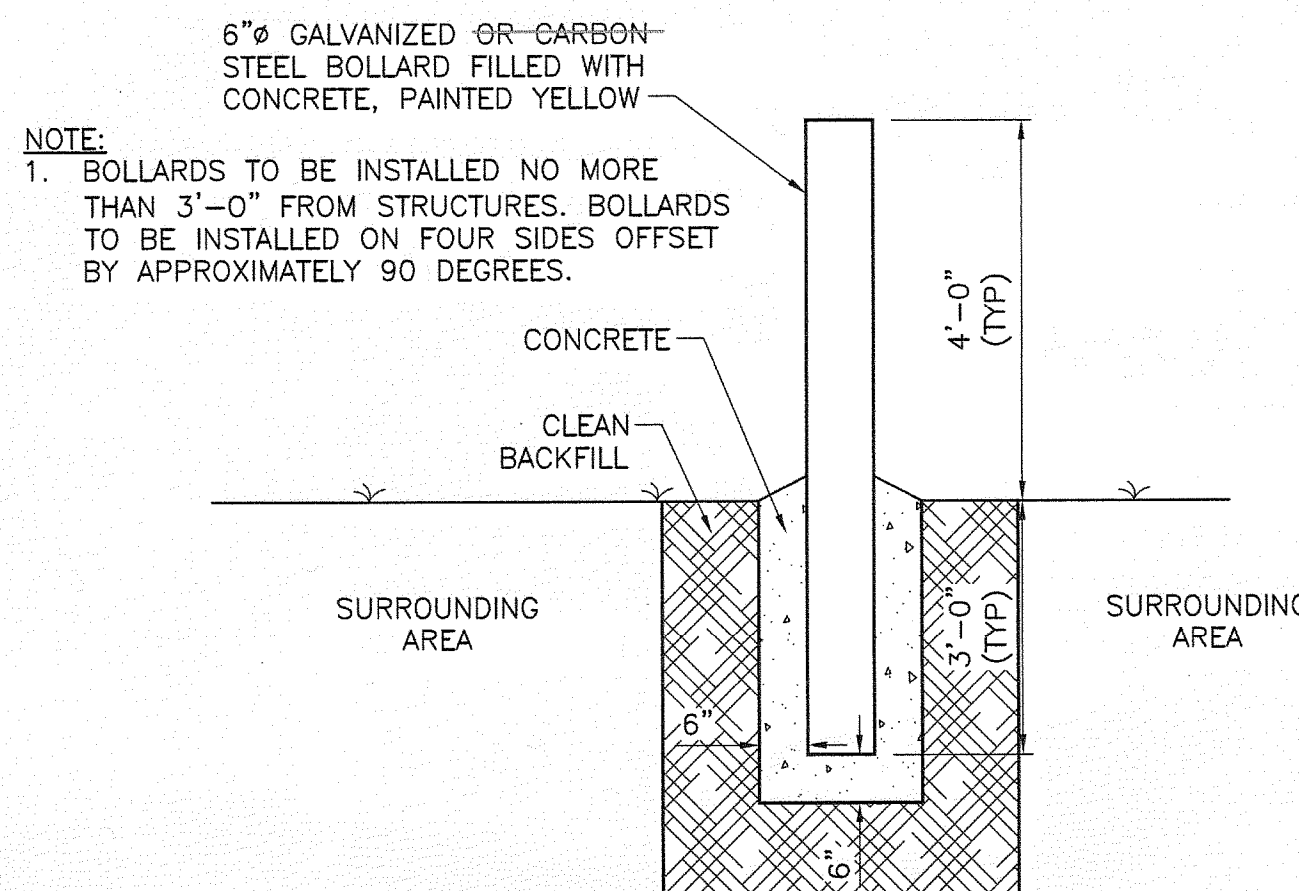
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C-03
C-04



ECCENTRIC REDUCER DETAIL

NOT TO SCALE

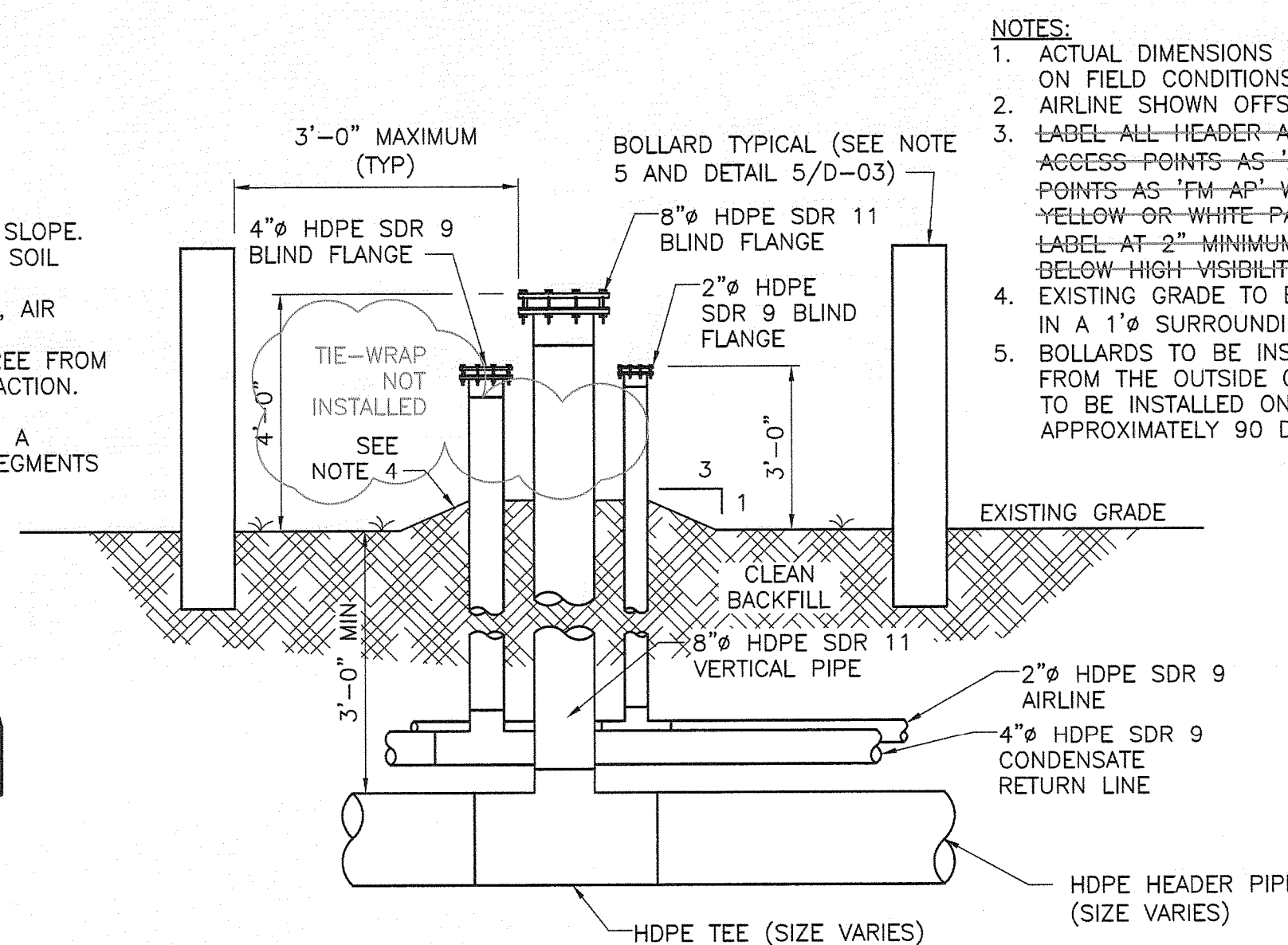
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D-02
C-03



BOLLARD (TYP)

NOT TO SCALE

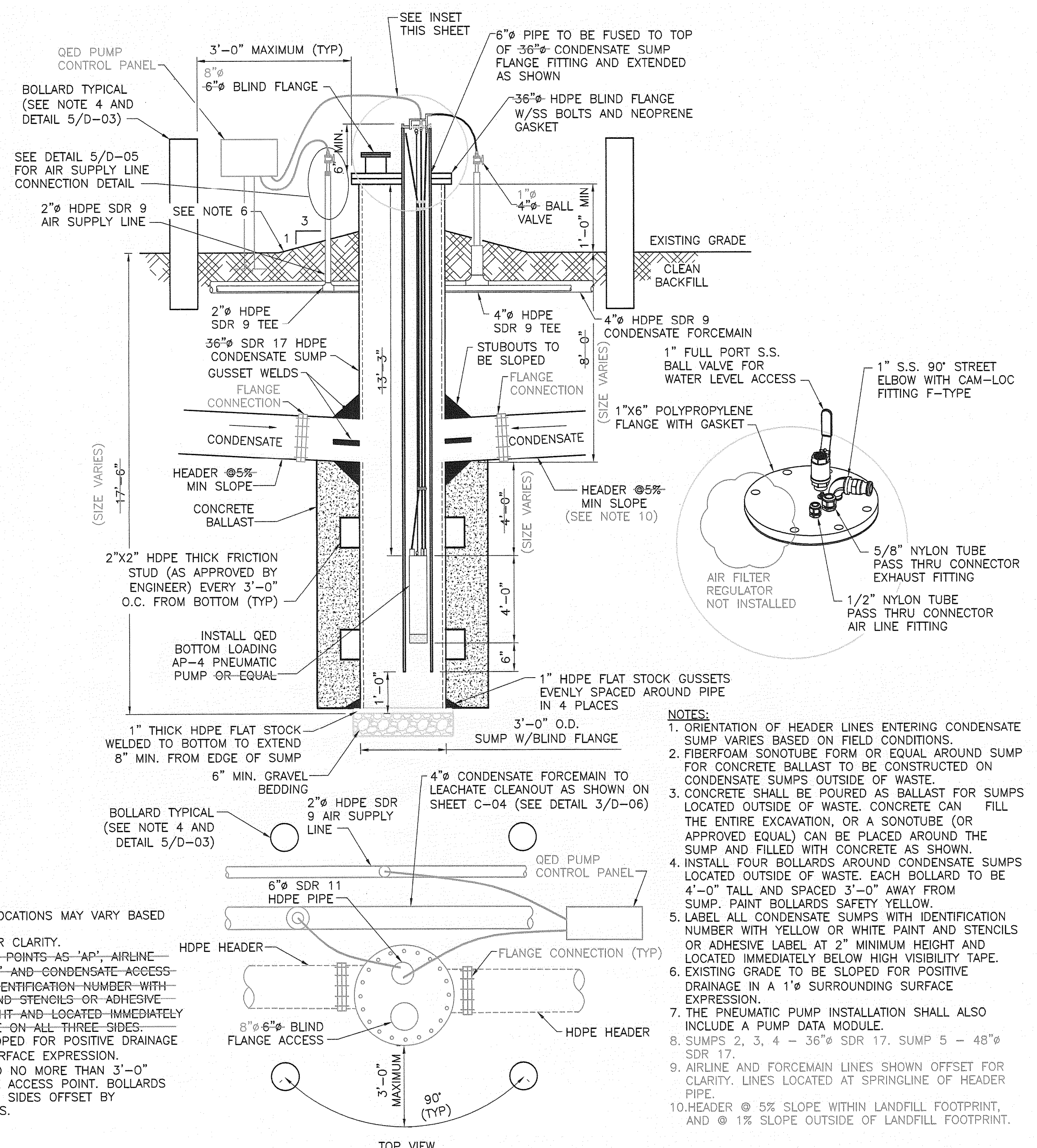
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D-03
D-04
D-07



HEADER ACCESS POINT

NOT TO SCALE

4
C-03



CONDENSATE SUMP DETAIL (TYP)

NOT TO SCALE

6
C-03
C-04

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CLIFFORD G. KOENIG, P.E.
FLORIDA P.E. NO. 64078
HDR ENGINEERING, INC.

GENERAL DETAILS

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
AUG 13 2010
SOUTHWEST DISTRICT
TAMPA

0 1" 2"
AT FULL SIZE BAR LENGTH EQUALS TWO
INCHES. ADJUST SCALE ACCORDINGLY.

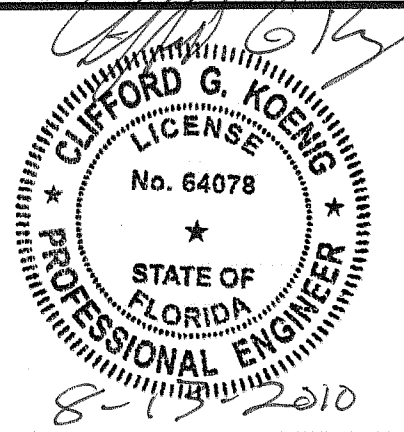
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DESIGNED BY	A. BARKER, E.I.
DRAWN BY	D. SOSA B. JOHNSON
CHECKED BY	C. LEBRON, P.E.
PROJECT NUMBER	101628



**Central County Solid Waste
Disposal Complex**
Phase 1 - Sequence 1
Landfill Gas Collection and Control System
ISSUED FOR CONSTRUCTION
SARASOTA COUNTY FLORIDA

1

2

3

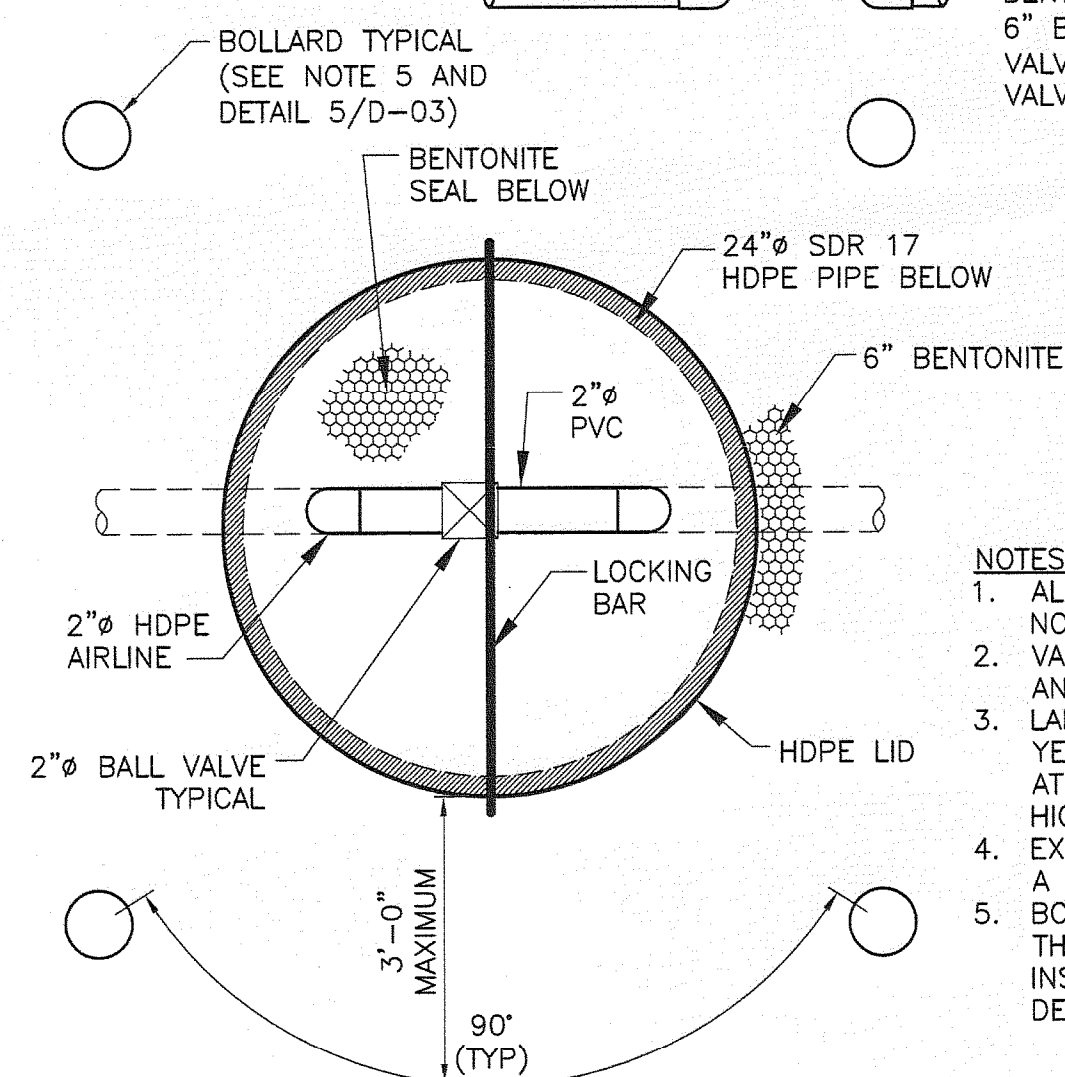
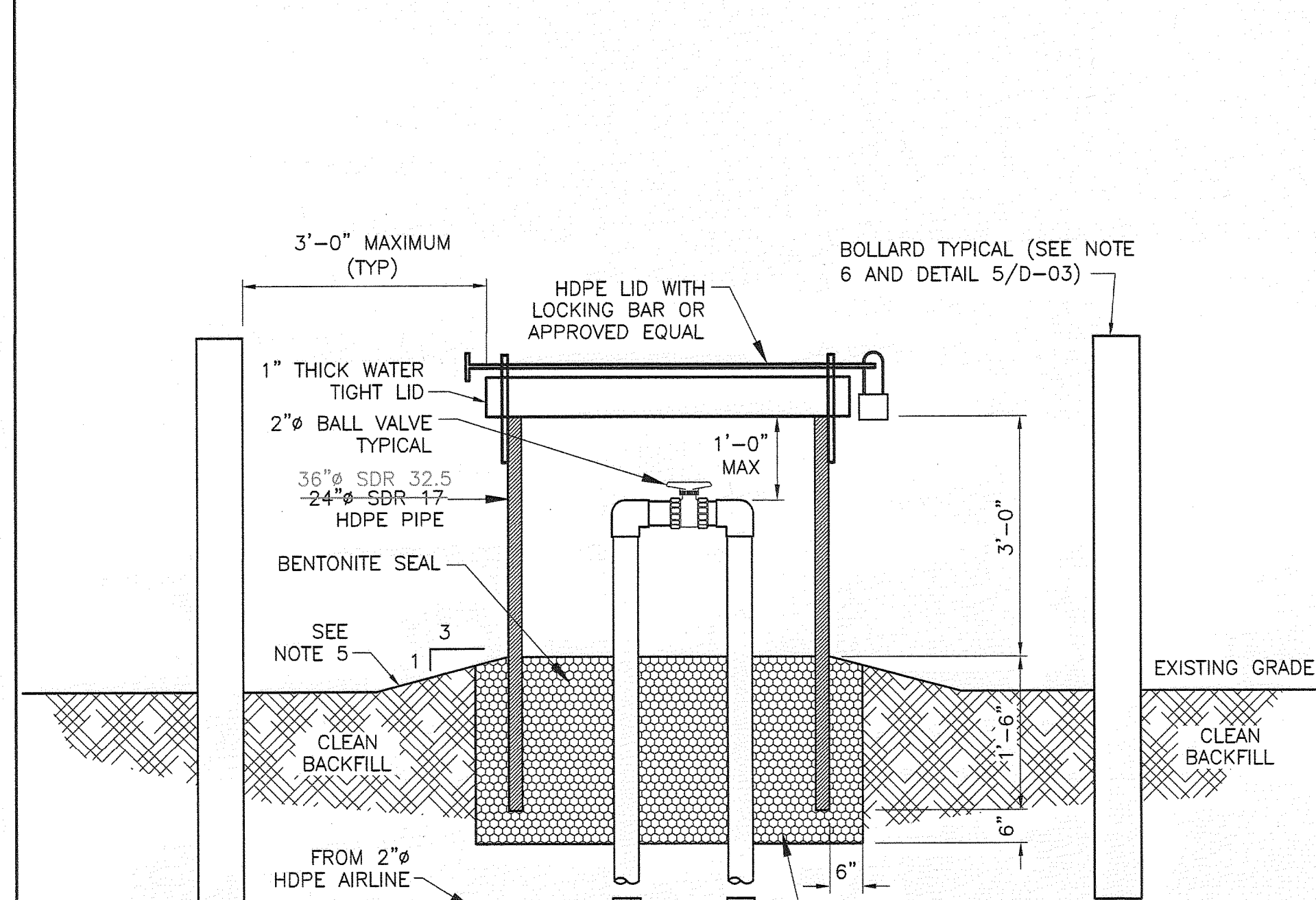
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5

6

7

8

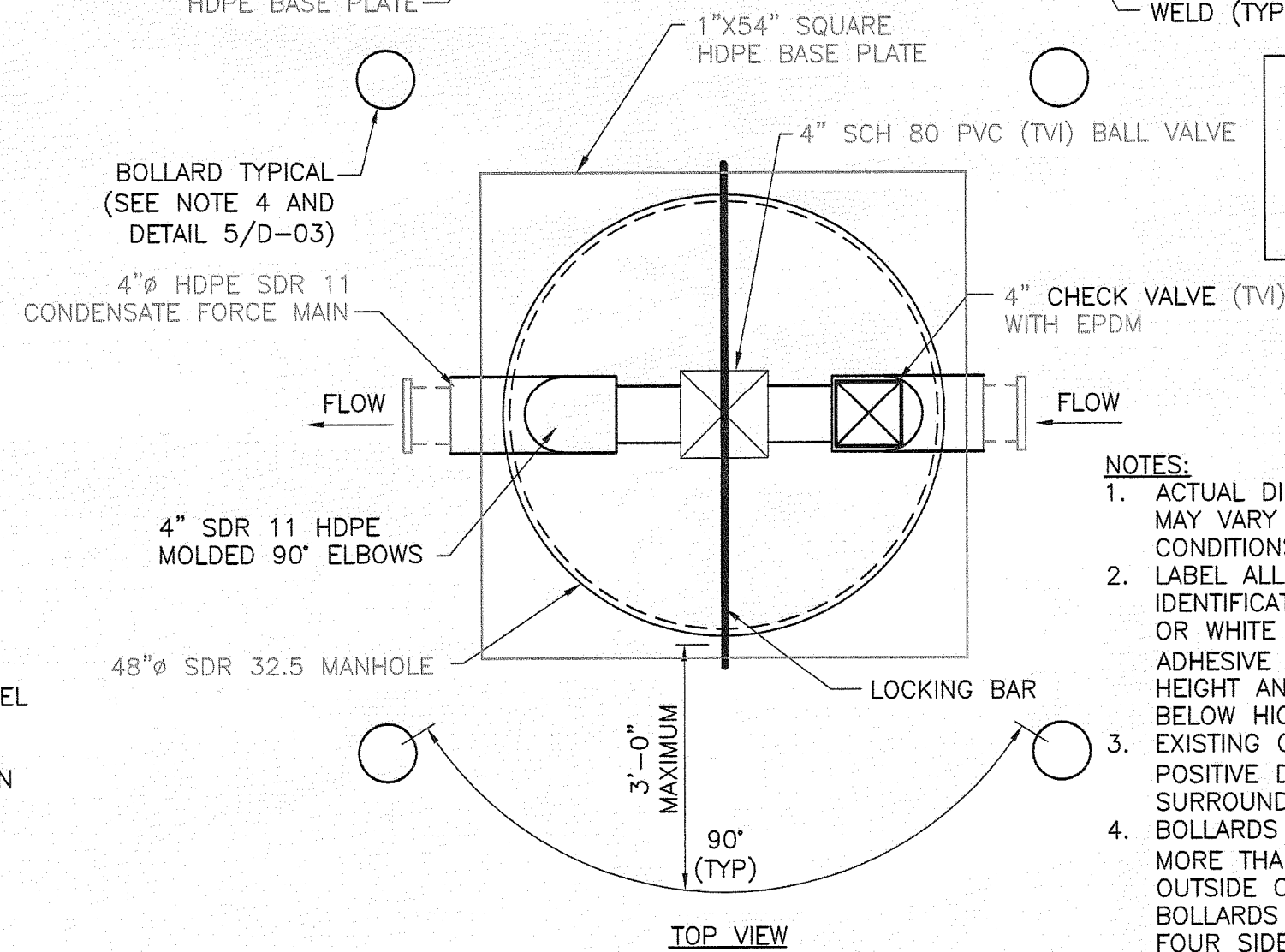
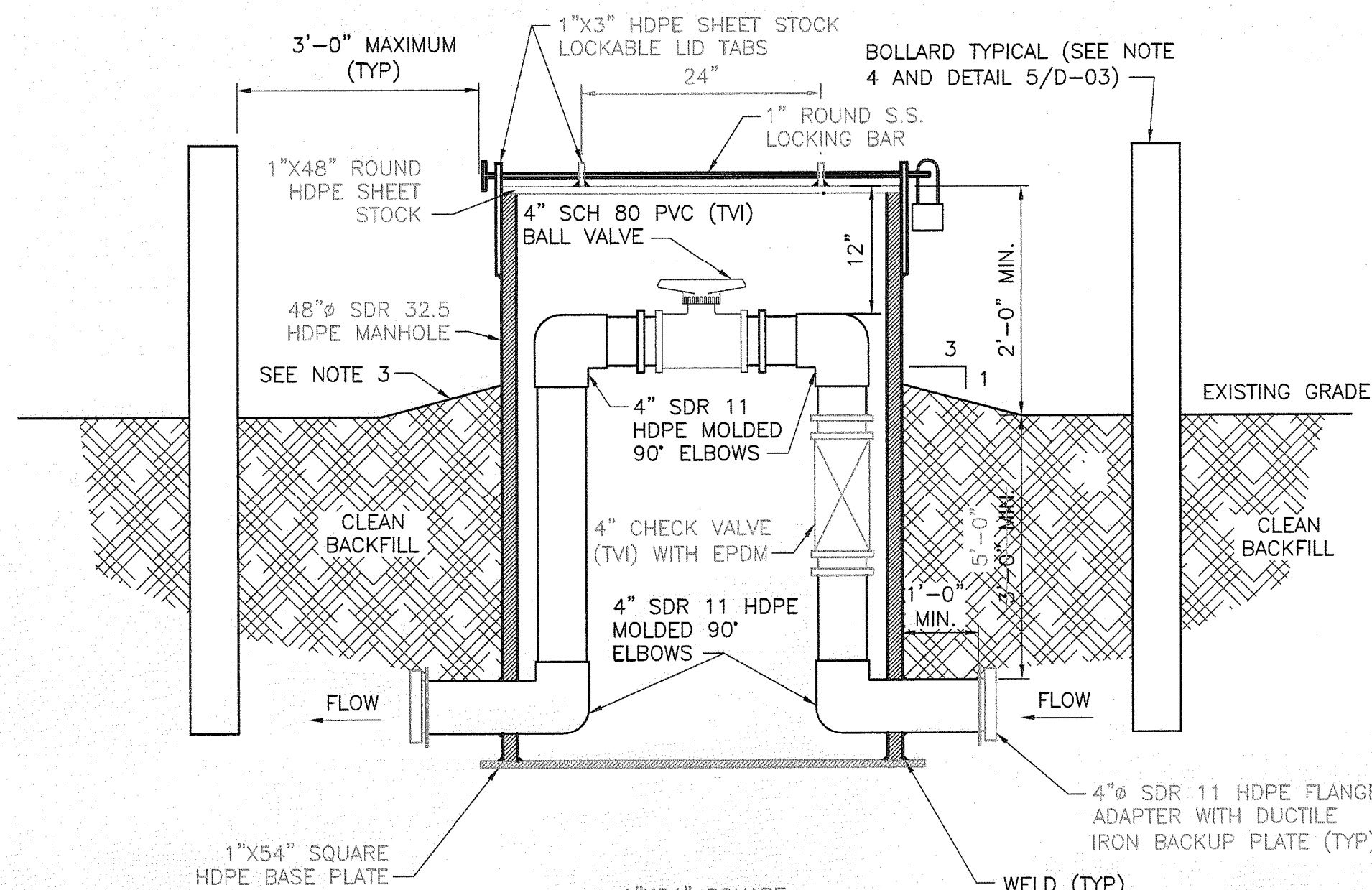


AIRLINE VALVE PIT

NOT TO SCALE

NOTES:

1. ALL FITTINGS SHALL BE HDPE SDR 9 UNLESS OTHERWISE NOTED.
2. VALVE BOX AND COVER SHALL BE 2'-0" MIN, WITH LID AND LOCKING DEVICE.
3. LABEL ALL VALVE PITS WITH IDENTIFICATION NUMBER WITH YELLOW OR WHITE PAINT AND STENCILS OR ADHESIVE LABEL AT 2" MINIMUM HEIGHT AND LOCATED IMMEDIATELY BELOW HIGH VISIBILITY TAPE.
4. EXISTING GRADE TO BE SLOPED FOR POSITIVE DRAINAGE IN A 1% SURROUNDING SURFACE EXPRESSION.
5. BOLLARDS TO BE INSTALLED NO MORE THAN 3'-0" FROM THE OUTSIDE OF THE VALVE PIT. BOLLARDS TO BE INSTALLED ON FOUR SIDES OFFSET BY APPROXIMATELY 90 DEGREES.

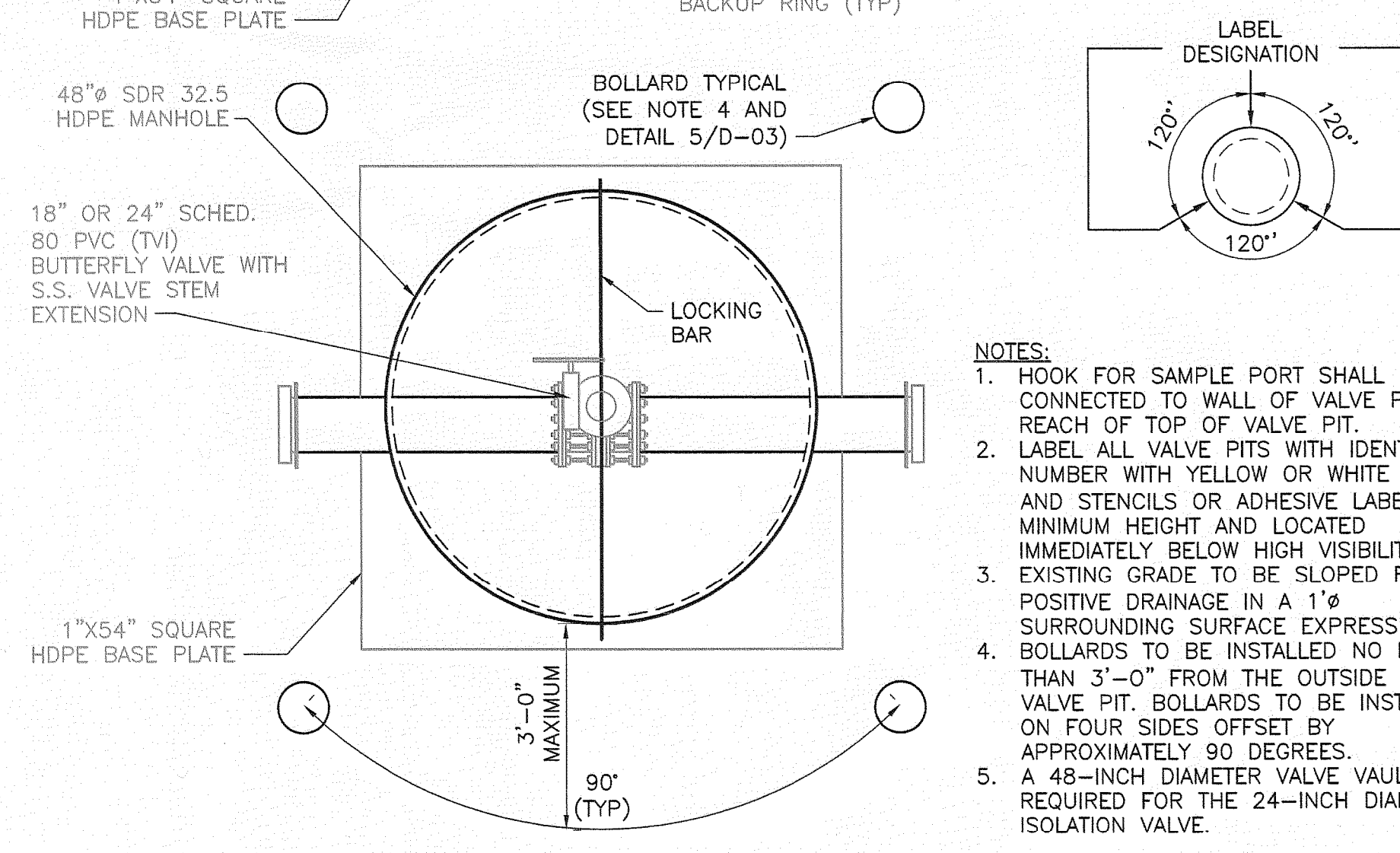
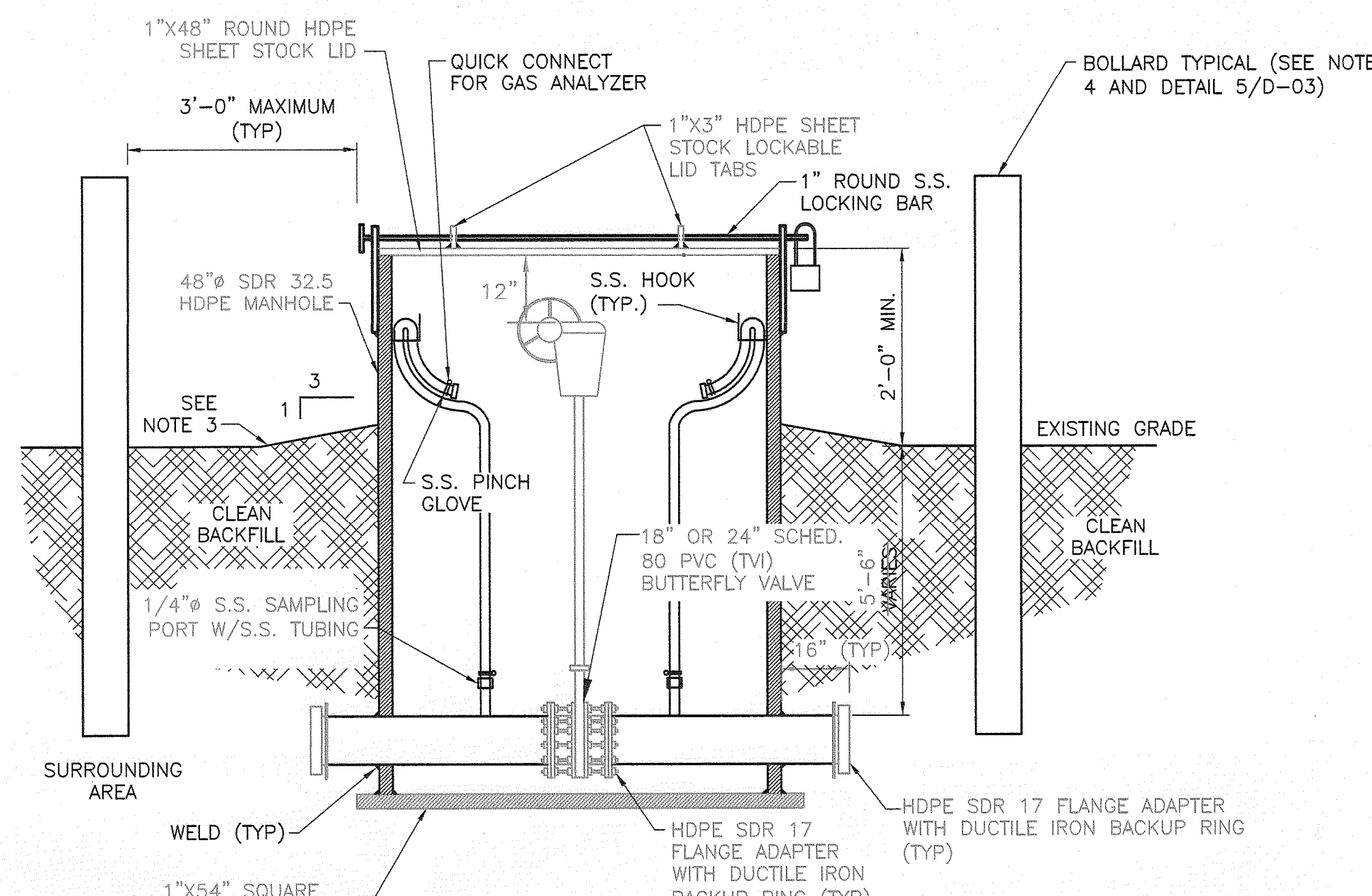


FORCE MAIN VALVE PIT

NOT TO SCALE

NOTES:

1. ACTUAL DIMENSIONS AND LOCATIONS MAY VARY BASED ON FIELD CONDITIONS.
2. LABEL ALL VALVE PITS WITH IDENTIFICATION NUMBER WITH YELLOW OR WHITE PAINT AND STENCILS OR ADHESIVE LABEL AT 2" MINIMUM HEIGHT AND LOCATED IMMEDIATELY BELOW HIGH VISIBILITY TAPE.
3. EXISTING GRADE TO BE SLOPED FOR POSITIVE DRAINAGE IN A 1% SURROUNDING SURFACE EXPRESSION.
4. BOLLARDS TO BE INSTALLED NO MORE THAN 3'-0" FROM THE OUTSIDE OF THE VALVE PIT. BOLLARDS TO BE INSTALLED ON FOUR SIDES OFFSET BY APPROXIMATELY 90 DEGREES.



HEADER LINE ISOLATION VALVE PIT

NOT TO SCALE

NOTES:

1. HOOK FOR SAMPLE PORT SHALL BE CONNECTED TO WALL OF VALVE PIT WITHIN REACH OF TOP OF VALVE PIT.
2. LABEL ALL VALVE PITS WITH IDENTIFICATION NUMBER WITH YELLOW OR WHITE PAINT AND STENCILS OR ADHESIVE LABEL AT 2" MINIMUM HEIGHT AND LOCATED IMMEDIATELY BELOW HIGH VISIBILITY TAPE.
3. EXISTING GRADE TO BE SLOPED FOR POSITIVE DRAINAGE IN A 1% SURROUNDING SURFACE EXPRESSION.
4. BOLLARDS TO BE INSTALLED NO MORE THAN 3'-0" FROM THE OUTSIDE OF THE VALVE PIT. BOLLARDS TO BE INSTALLED ON FOUR SIDES OFFSET BY APPROXIMATELY 90 DEGREES.
5. A 48-INCH DIAMETER VALVE VAULT IS REQUIRED FOR THE 24-INCH DIAMETER ISOLATION VALVE.

RECORD DRAWING

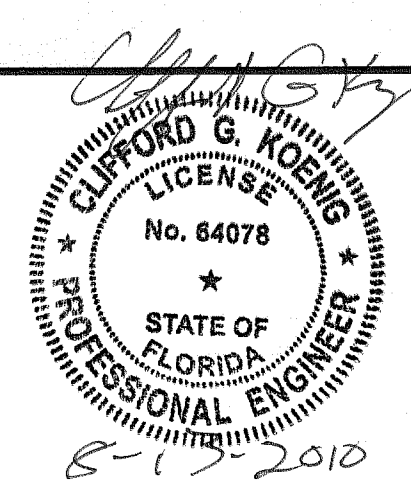
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CLIFFORD G. KOENIG, P.E.
FLORIDA P.E. NO. 64078
HDR ENGINEERING, INC.



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PROJECT MANAGER	C. KOENIG, P.E.
DESIGNED BY	A. BARKER, E.I.
DRAWN BY	D. SOSA
	B. JOHNSON
CHECKED BY	C. LEBRON, P.E.
PROJECT NUMBER	101628



Central County Solid Waste Disposal Complex
Phase 1 - Sequence 1
Landfill Gas Collection and Control System
ISSUED FOR CONSTRUCTION

SARASOTA COUNTY

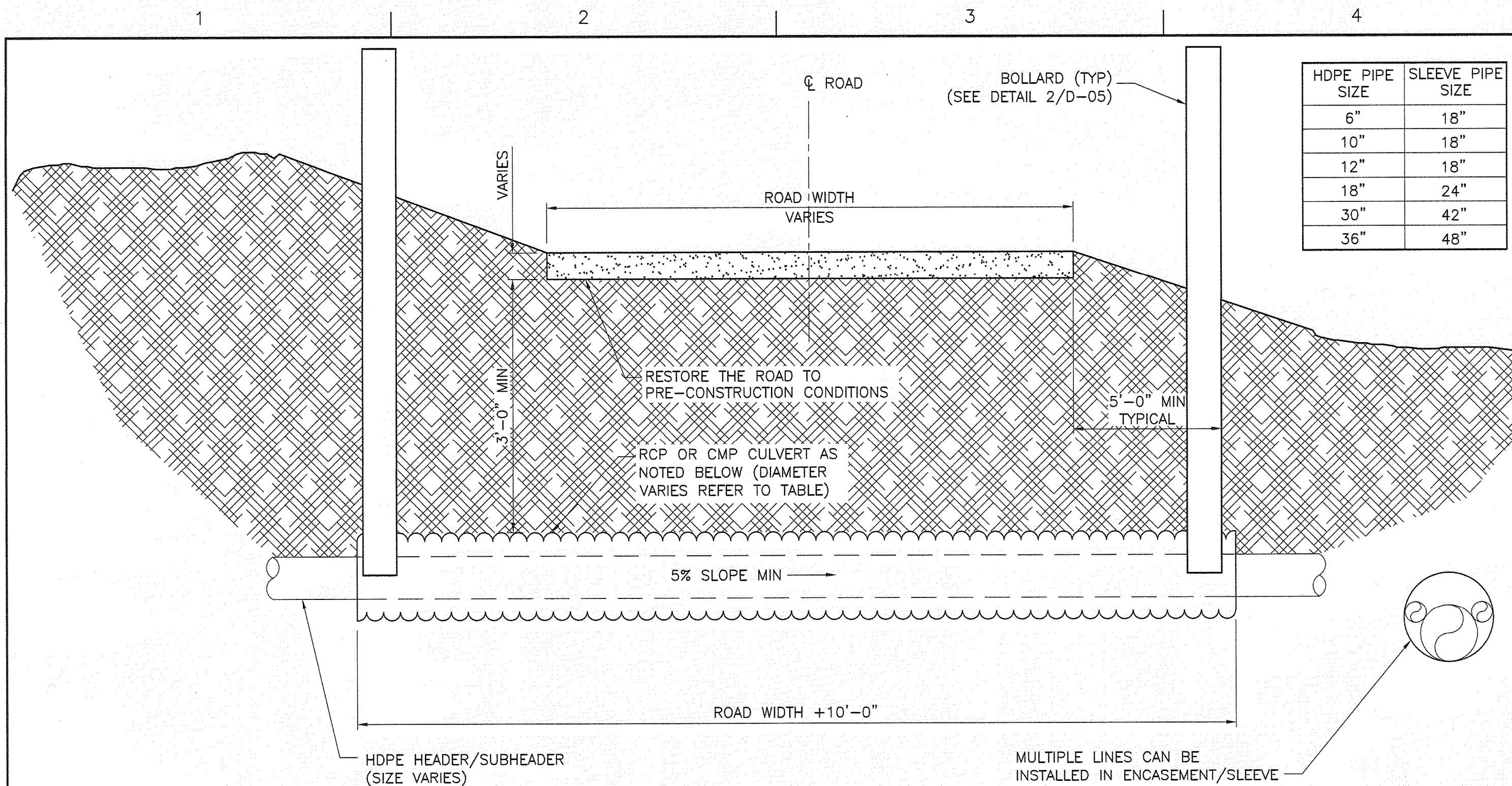
FLORIDA

VALVE PIT DETAILS

FILENAME OOD-04.dwg
SCALE NOT TO SCALE

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
AUG 13 2010
SOUTHWEST DISTRICT
TAMPA

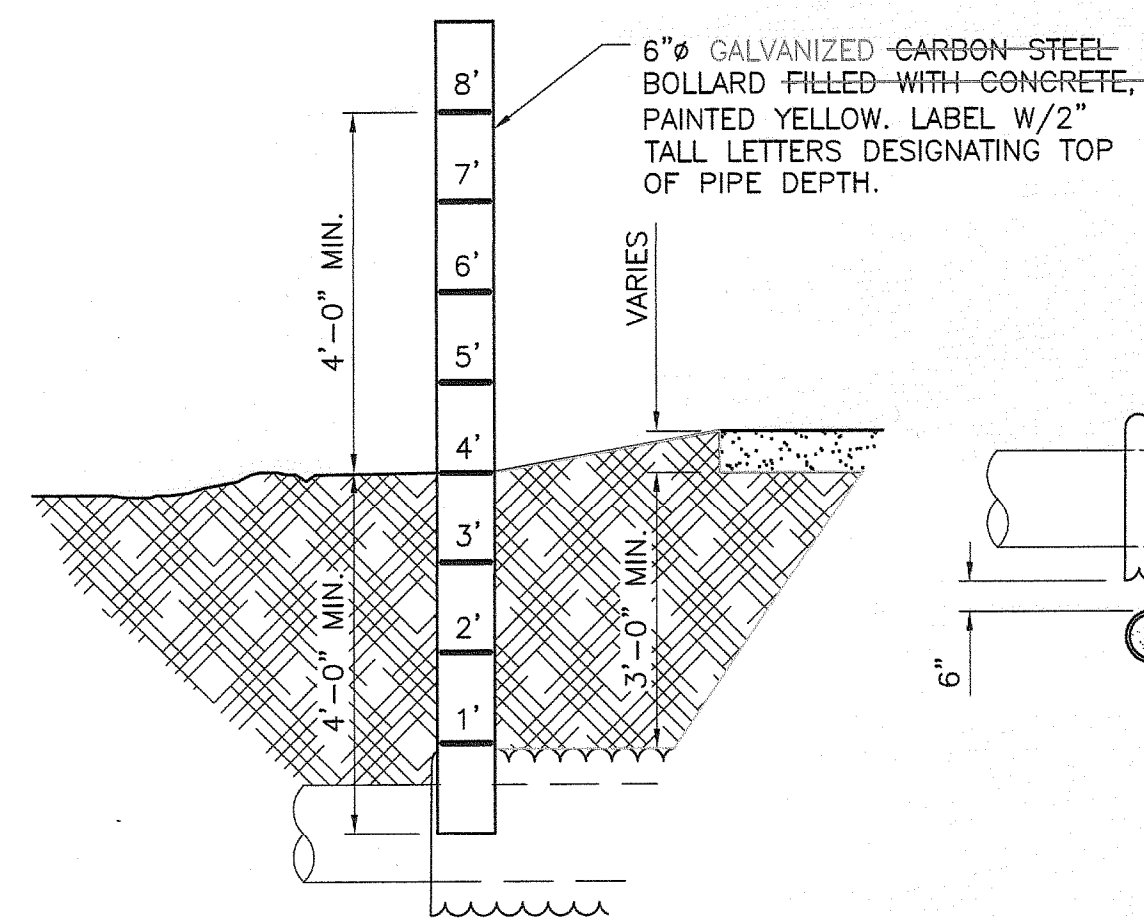
SHEET
OOD-04



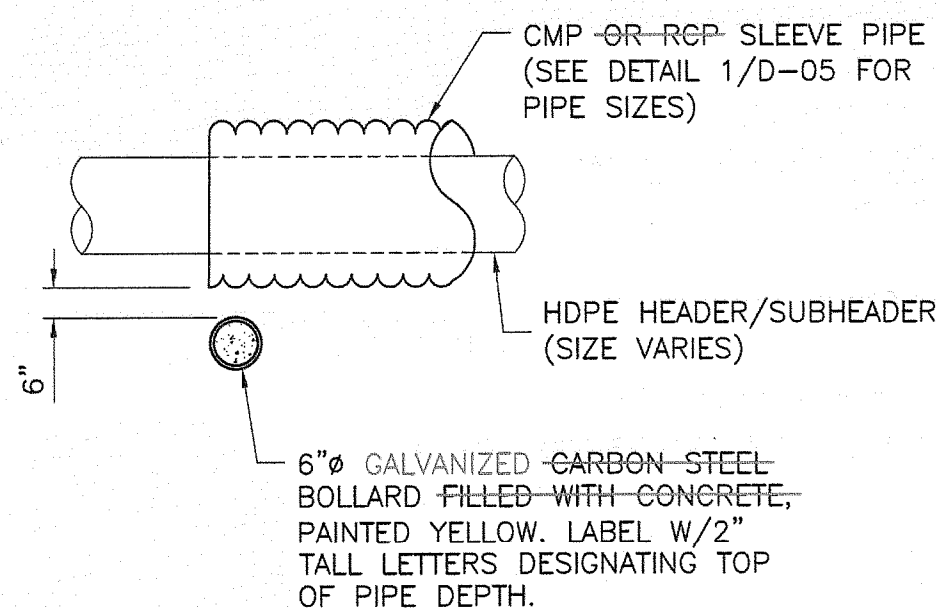
- NOTES:**
1. ACTUAL DIMENSIONS MAY VARY BASED ON FIELD CONDITIONS.
 2. CLASS V REINFORCED CONCRETE PIPE CULVERT SHALL BE USED FOR ALL ROAD CROSSING LOCATIONS LOCATED OUTSIDE OF PHASE I LIMITS OF WASTE.
 3. CORRUGATED METAL PIPE CULVERT SHALL BE USED FOR ROAD CROSSING LOCATIONS LOCATED WITHIN PHASE I LIMITS OF WASTE. STEEL PIPE SHALL HAVE A MINIMUM WALL THICKNESS OF 0.168 INCHES AND MINIMUM YIELD STRENGTH OF 35,000 PSI.
 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 CMP CONCRETE CASING WITHIN THE LANDFILL FOOTPRINT. THE BOLLARDS SHALL BE CONCRETE FILLED STEEL PIPE BOLLARDS 6"X8" TALL BOLLARDS SHALL BE PAINTED SAFETY YELLOW AND LABELED "LANDFILL GAS PIPE BURIED BELOW".
 7. LIMEROCK BASE COMPACTED TO 95% MODIFIED PROCTOR FOR ROAD CROSSINGS WITHIN THE LANDFILL FOOTPRINT.
 8. LIMEROCK BASE COMPACTED TO 95% MODIFIED PROCTOR FOR THE PERIMETER ACCESS ROAD.
 9. SUBGRADE GRANULAR FILL COMPACTED TO 95% MODIFIED PROCTOR.

ACCESS ROAD CROSSING DETAIL (TYP)

NOT TO SCALE



PROFILE VIEW



PLAN VIEW

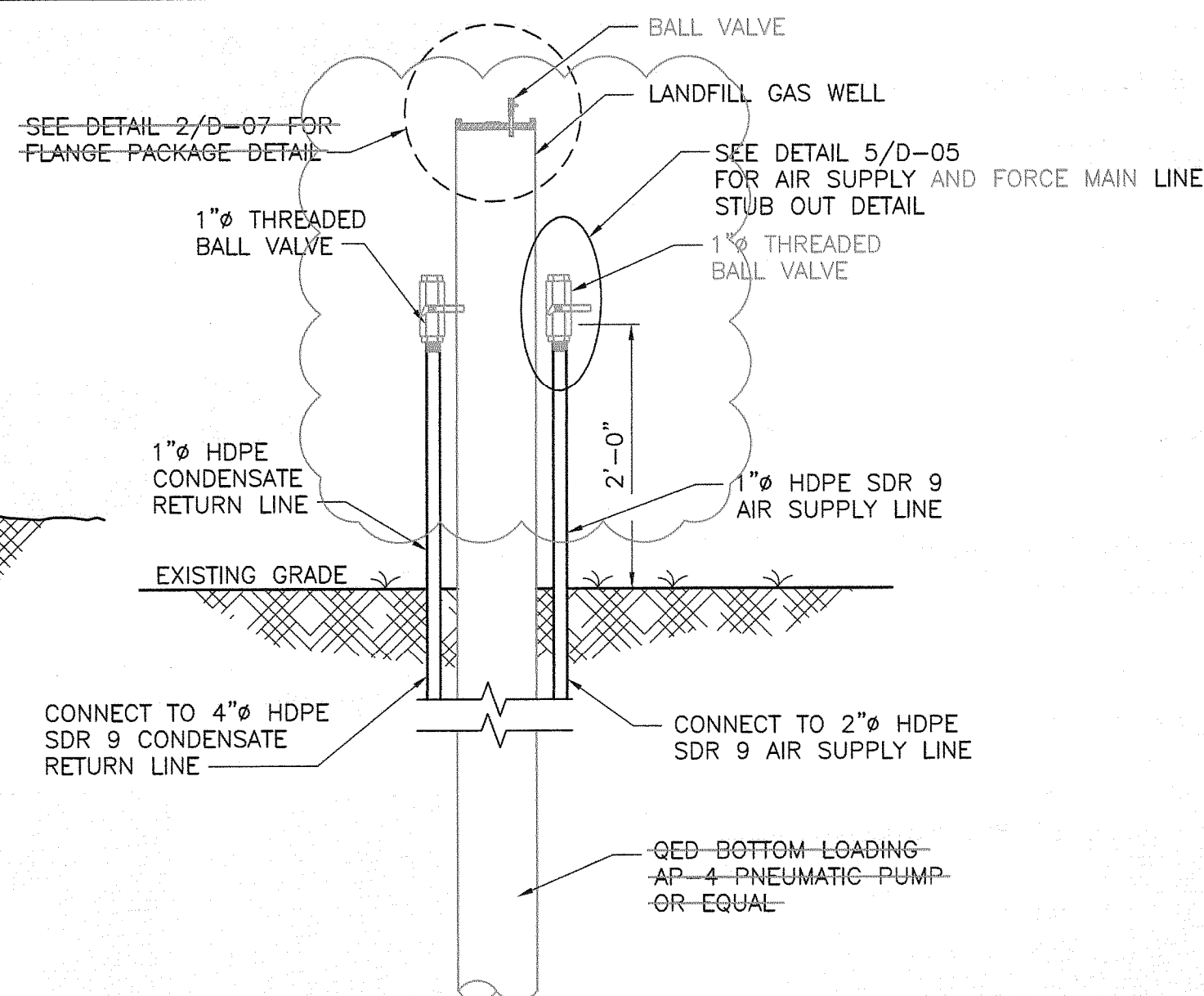
- NOTE:**
1. ACTUAL DIMENSIONS MAY VARY BASED ON FIELD CONDITIONS.

BOLLARD DETAIL (TYP)

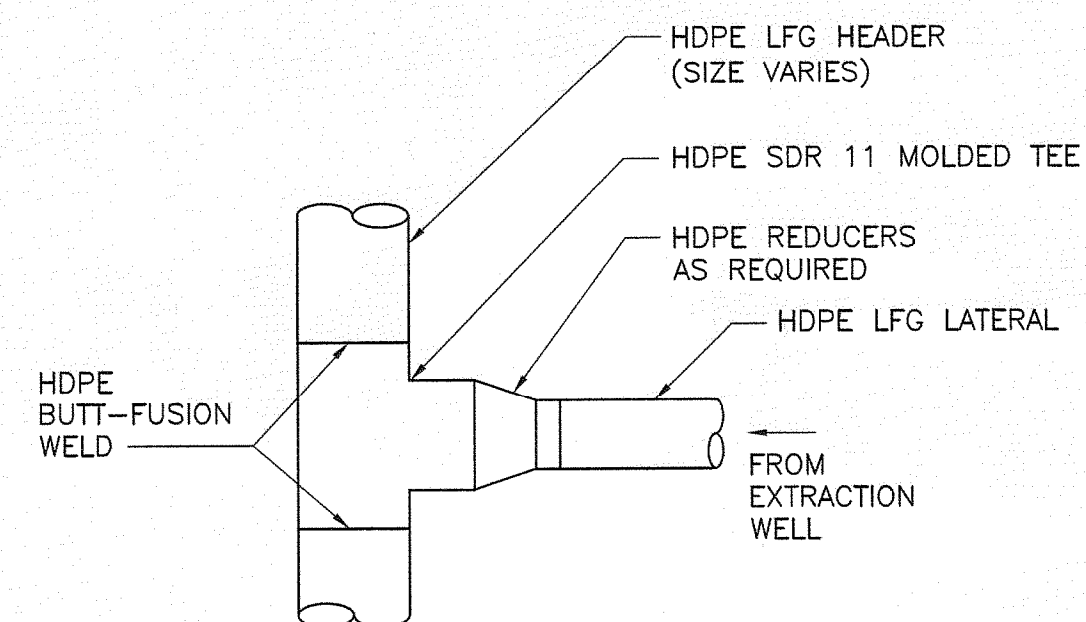
NOT TO SCALE

WELL RISER WITH PUMP DETAIL (TYP)

NOT TO SCALE



- NOTES:**
1. CONTRACTOR TO DIFFERENTIATE BETWEEN AIR SUPPLY LINE AND CONDENSATE RETURN LINE AT ALL STUD-OUTS.
 2. WELLHEAD FOR TYPES 1, 2 & 3 NOT SHOWN FOR CLARITY.
 3. ALTERNATIVE ITEM TO BE INSTALLED IN SELECT VERTICAL WELLS TO BE DETERMINED BY OWNER AND ENGINEER.



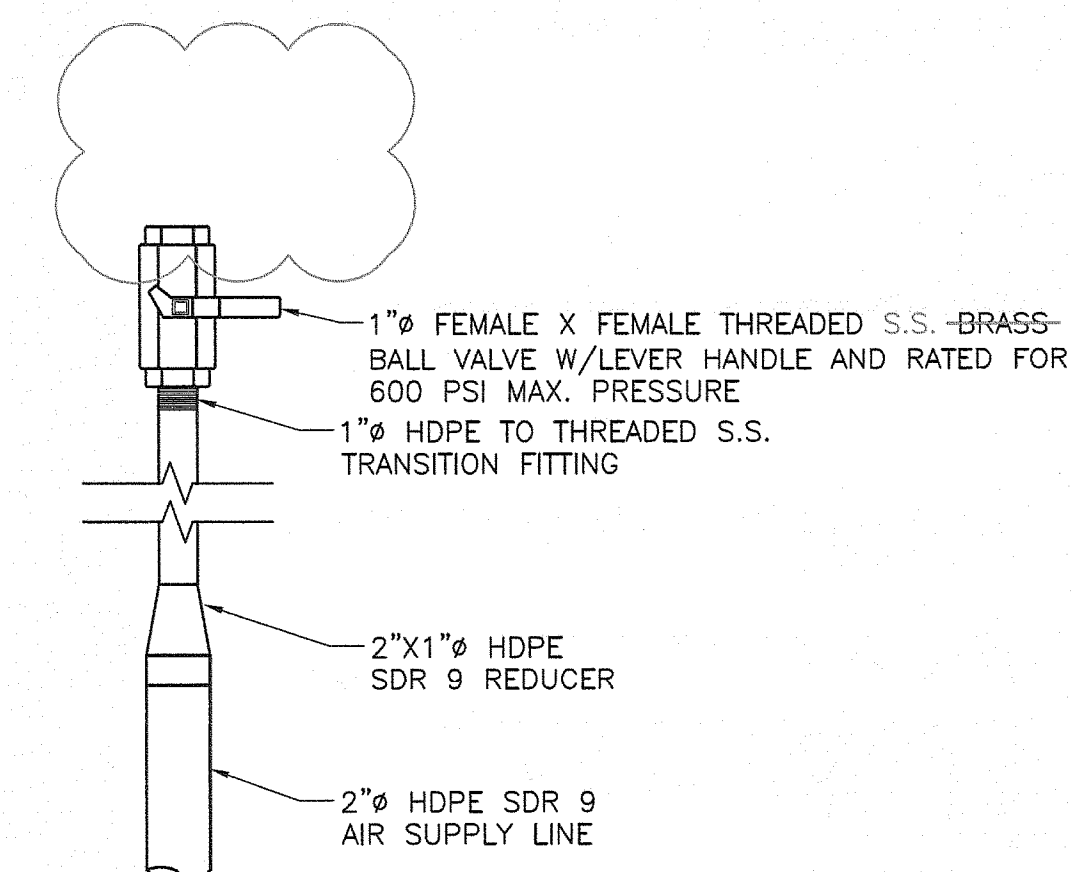
- NOTES:**
1. HDPE MOLDED TEES SHALL BE USED TO TIE-IN 2" AND LARGER LFG LATERALS TO 8" HEADER AND SMALLER.
 2. 1' MIN. OF SAND WILL BE PLACED BELOW EACH TEE. THE SAND WILL BE INSTALLED SO IT EXTENDS 3'-0" MIN. ON EACH SIDE OF THE TEE. SAND WILL BE SLIGHTLY MOISTENED AND HAND-TAMPED PROVIDING SUPPORT 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

AIR SUPPLY AND FORCE MAIN LINE CONNECTION DETAIL (TYP)

NOT TO SCALE



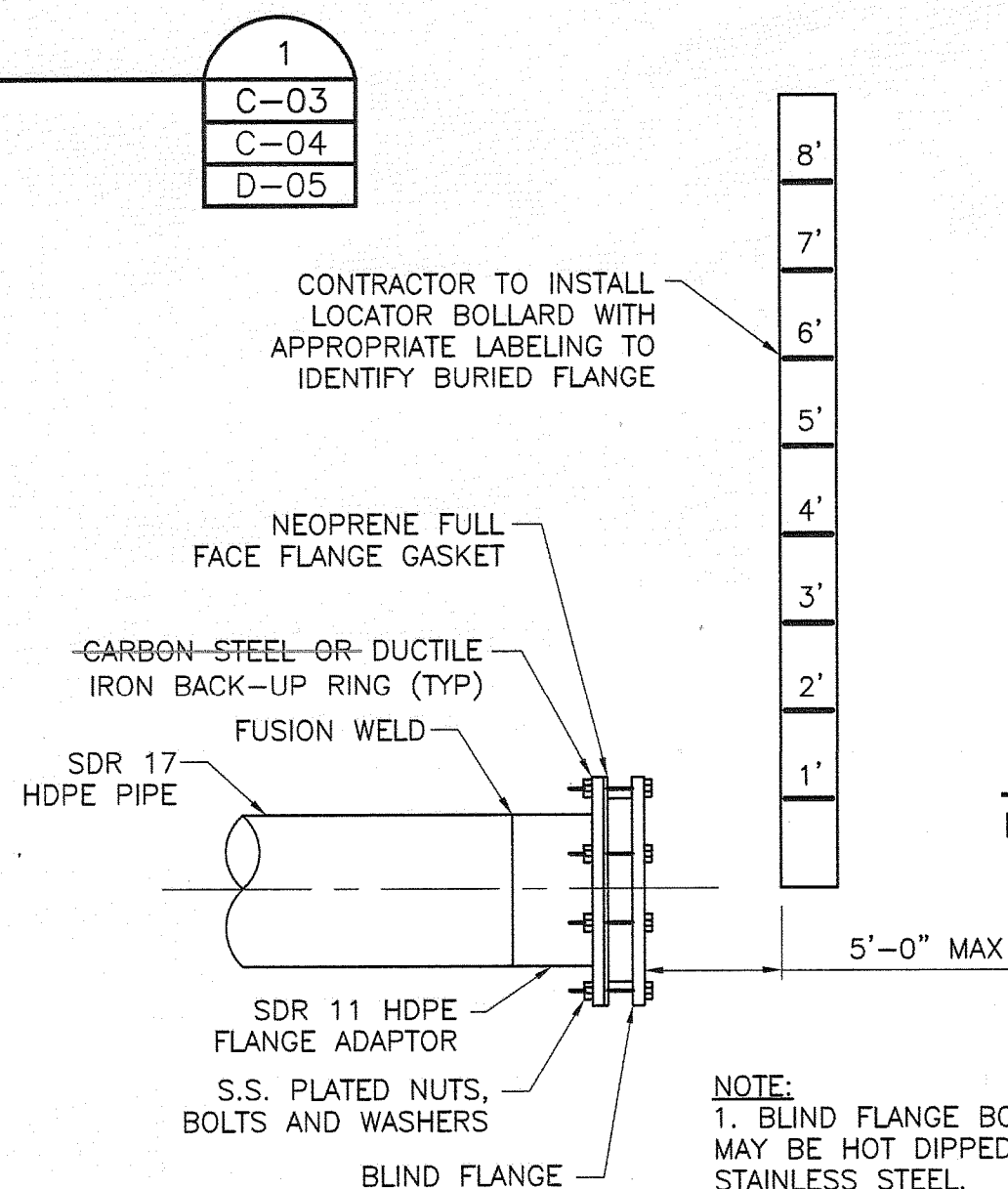
- NOTES:**
1. BRANCH SADDLE SHALL BE SHOP-FABRICATED (FIELD-FABRICATION WILL NOT BE ACCEPTED) AND INSTALLED TO MAINTAIN SLOPE INTO THE HEADER.
 2. 1' MIN. OF SAND WILL BE PLACED BELOW EACH TEE. THE SAND WILL BE INSTALLED SO IT EXTENDS 3' MIN. IN EACH DIRECTION OF THE TEE. SAND WILL BE SLIGHTLY MOISTENED 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.
 4. HDPE BRANCH SADDLE FITTINGS SHALL BE USED TO TIE-IN 2" AND LARGER LANDFILL GAS LATERALS TO 10" HEADER AND LARGER.

LATERAL TIE-IN W/BRANCH SADDLE

NOT TO SCALE

BLIND FLANGE WITH LOCATOR BOLLARD DETAIL

NOT TO SCALE



- NOTE:**
1. BLIND FLANGE BOLTS AND WASHERS MAY BE HOT DIPPED GALVANIZED OR STAINLESS STEEL.

RECORD DRAWING

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CLIFFORD G. KOENIG, P.E.
FLORIDA P.E. NO. 64078
HDR ENGINEERING, INC.

Central County Solid Waste Disposal Complex Phase 1 - Sequence 1 Landfill Gas Collection and Control System

ISSUED FOR CONSTRUCTION

SARASOTA COUNTY

FLORIDA

ACCESS ROAD CROSSING AND BOLLARD DETAILS

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
AUG 13 2010
SOUTHWEST DISTRICT
TAMPA

0 1" 2"
AT FULL SIZE BAR LENGTH EQUALS TWO INCHES. ADJUST SCALE ACCORDINGLY.

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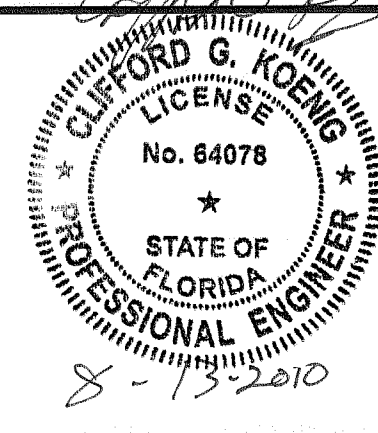
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00D-05



ISSUE	DATE	DESCRIPTION
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PROJECT MANAGER	C. KOENIG, P.E.
DESIGNED BY	A. BARKER, E.I.
DRAWN BY	D. SOSA B. JOHNSON
CHECKED BY	C. LEBRON, P.E.
PROJECT NUMBER	101628

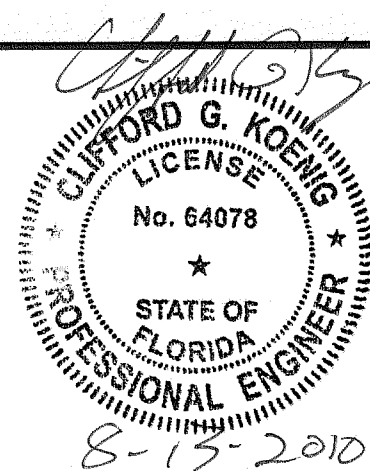


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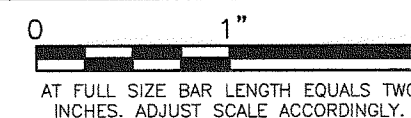
**Central County Solid Waste
Disposal Complex
Phase 1 - Sequence 1
Landfill Gas Collection and Control System**

ISSUED FOR CONSTRUCTION

SARASOTA COUNTY

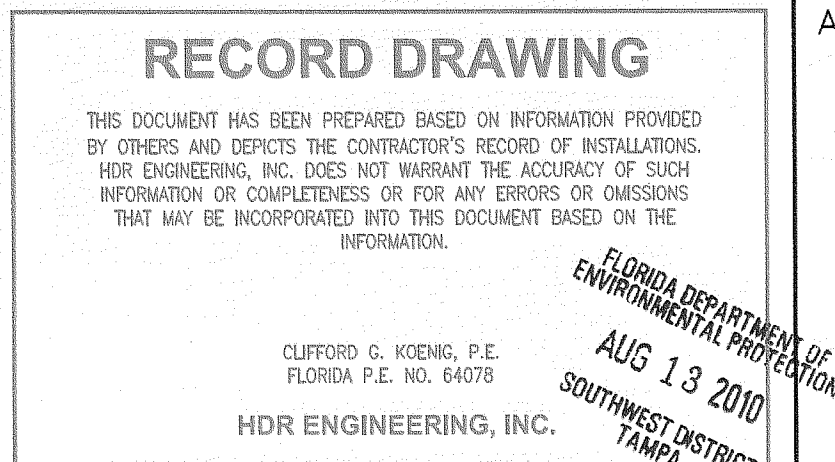
FLORIDA

U-TRAP LAYOUT & DETAILS



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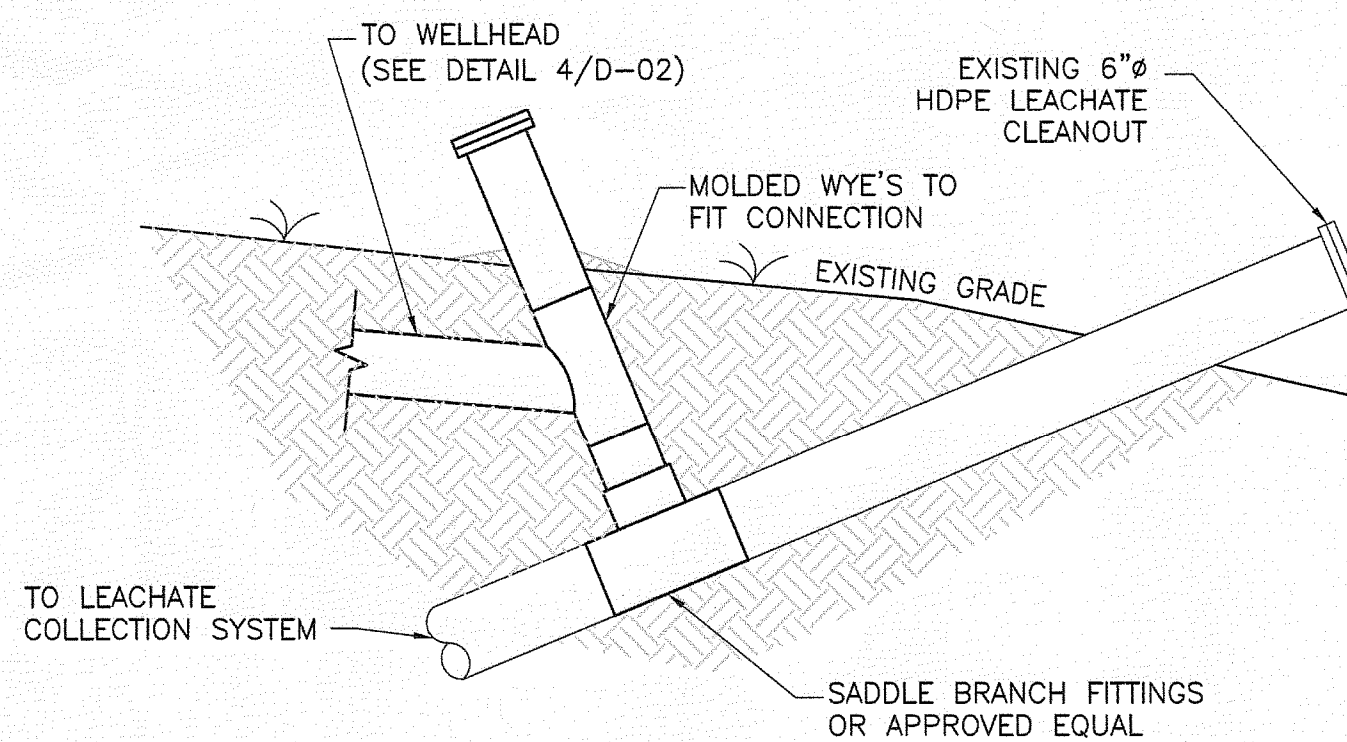
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**GAS COLLECTION FROM LEACHATE
CLEANOUT CONNECTION (TYP)**

NOT TO SCALE

3
C-03
D-02
D-03

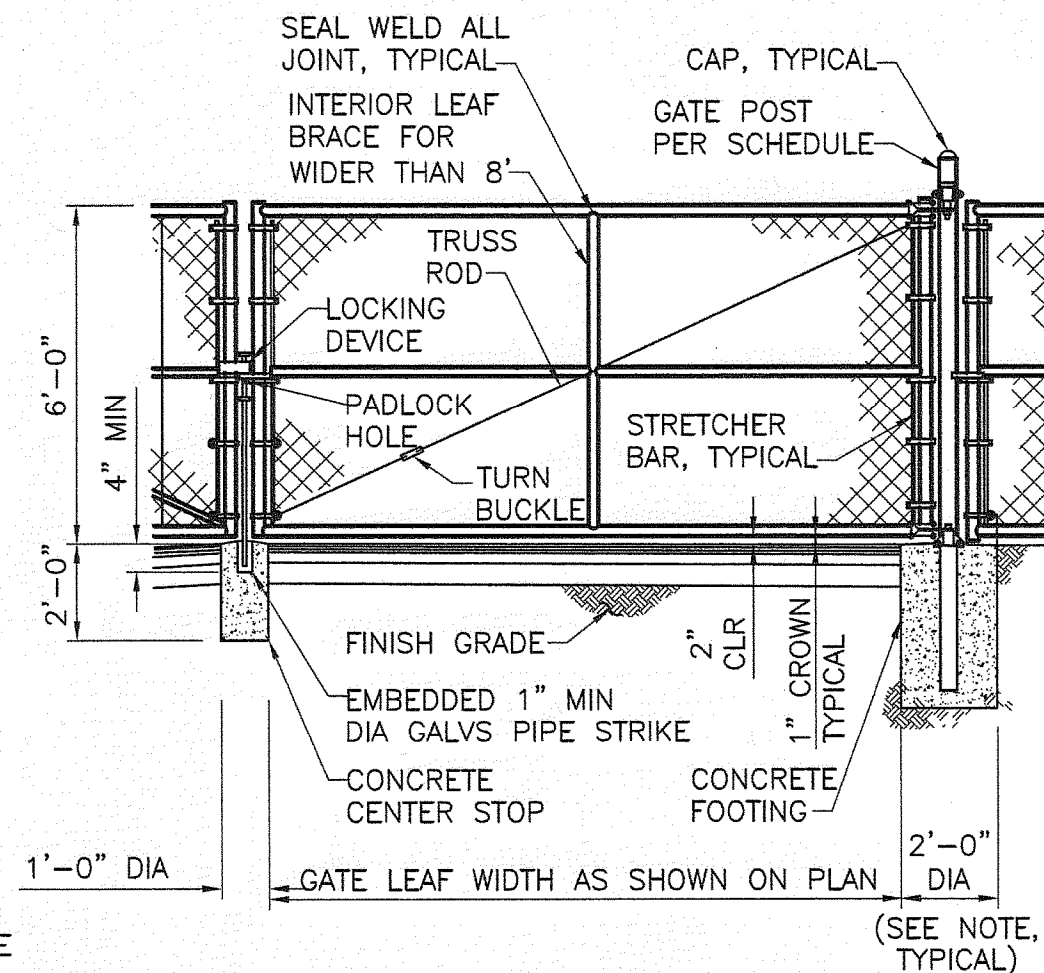
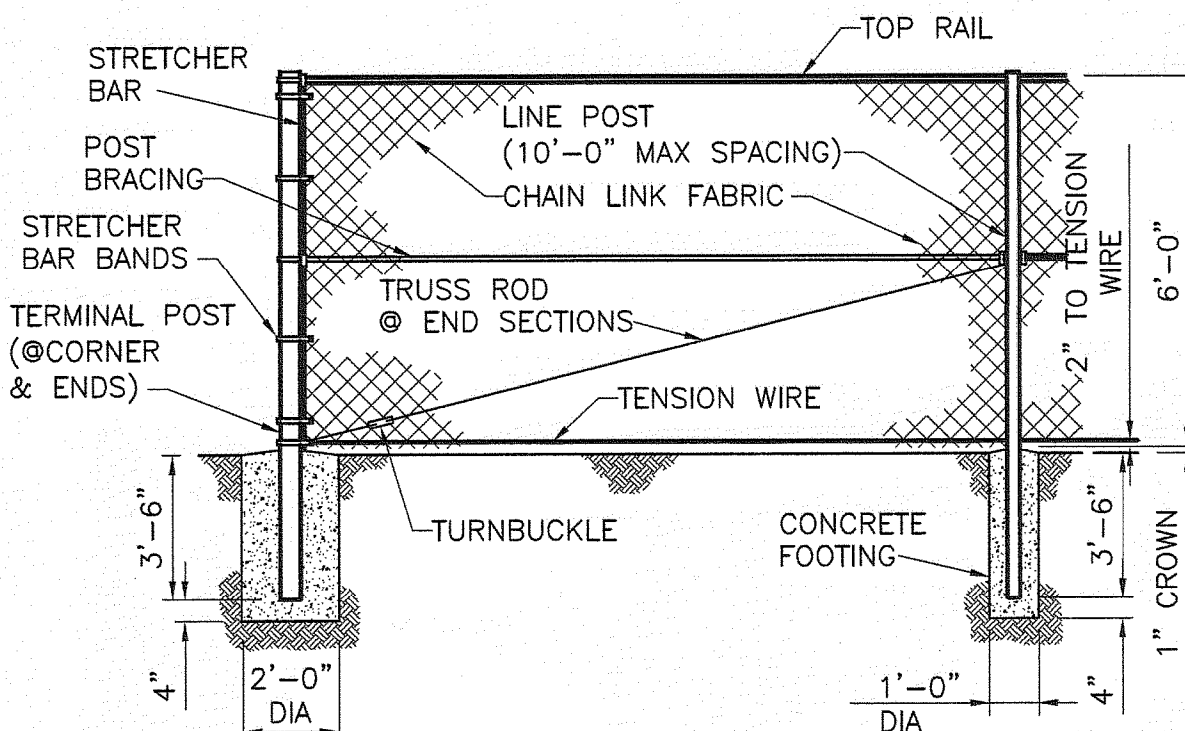


**CHAIN LINK FENCE
DETAILS (TYP)**

NOT TO SCALE

LEAF SPAN	NOMINAL DIA.
< 6'	3"
6'-12'	5"
12'-18'	6"
18'-24'	8"

NOTE:
1. USE 4'-0" DIA CONCRETE FOOTING HOLE FOR POST DIAMETERS GREATER THAN 6".



**U-TRAP DETAIL
PLAN VIEW (TYP)**

NOT TO SCALE

2
C-03

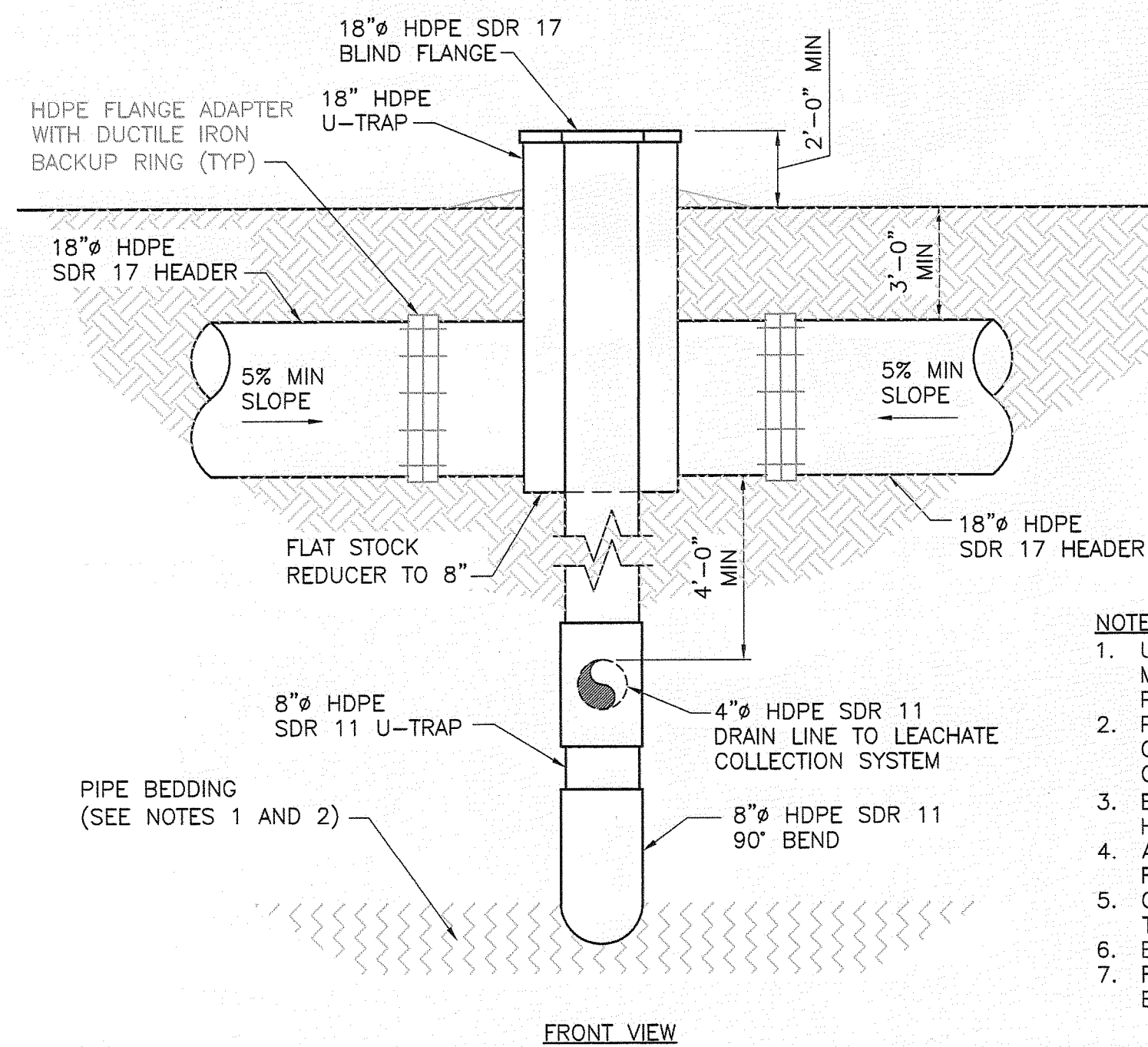
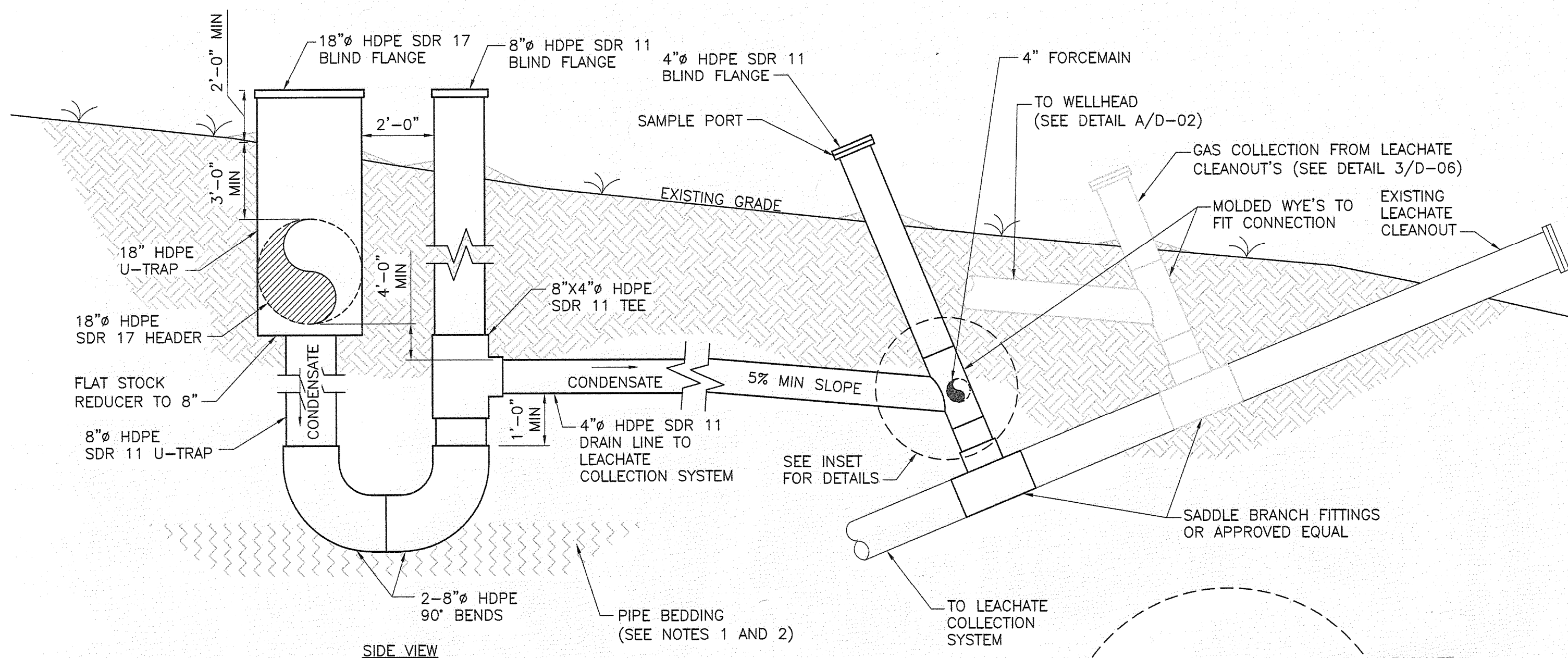
- NOTES:
1. U-TRAP BEDDING TO BE COMPACTED 6" BELOW AND TO THE MIDPOINT OF ALL PIPING. ADDITIONAL SOIL BACKFILL SHALL BE PLACED AROUND U-TRAP TO PROVIDE STABILITY AND SUPPORT.
 2. PIPE BEDDING SHALL BE EITHER COARSE SAND, PEAGRAVEL, CRUSHED GRAVEL, GRAVEL, CRUSH STONE SCREENINGS OR CRUSHED STONE.
 3. EXISTING LEACHATE CLEANOUT PIPE IS ASSUMED TO BE 6" HDPE. CONTRACTOR TO FIELD VERIFY.
 4. ACTUAL DIMENSIONS AND LOCATIONS MAY VARY BASED ON FIELD CONDITIONS.
 5. CONTRACTOR TO ADD WATER TO U-TRAP AFTER PRESSURE TEST.
 6. BACKFILL AND BEDDING NOT SHOWN FOR CLARITY.
 7. FORCEMAIN CONNECTION TO ACCESS RISER TO BE INSTALLED BELOW GRAVITY DRAIN LINE.

U-TRAP#	U-1	U-2	U-3
SIZE	18"	18"	18"

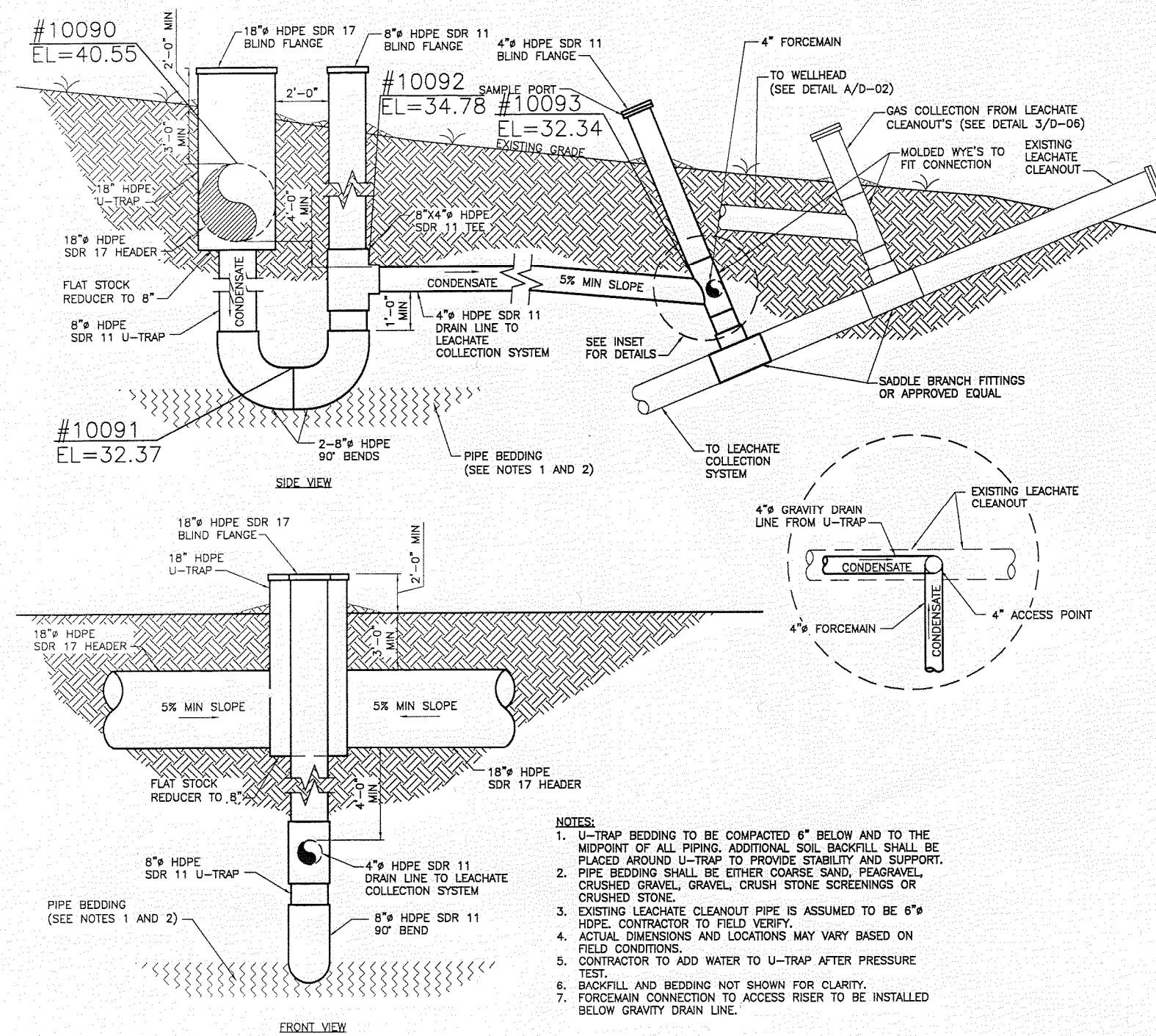
**U-TRAP DETAIL
FRONT/SIDE VIEWS (TYP)**

NOT TO SCALE

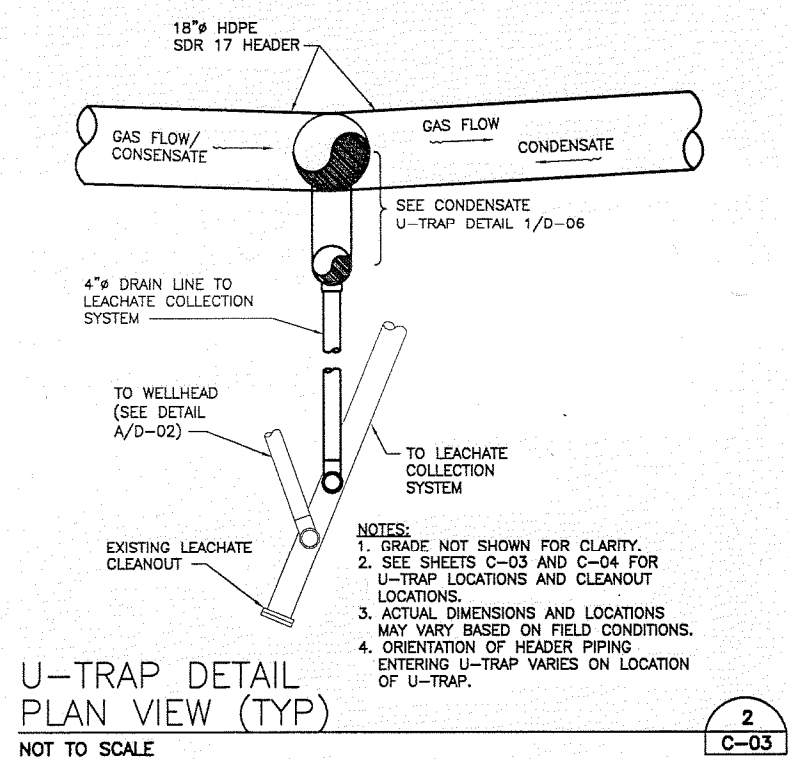
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C-03



U-TRAP 3

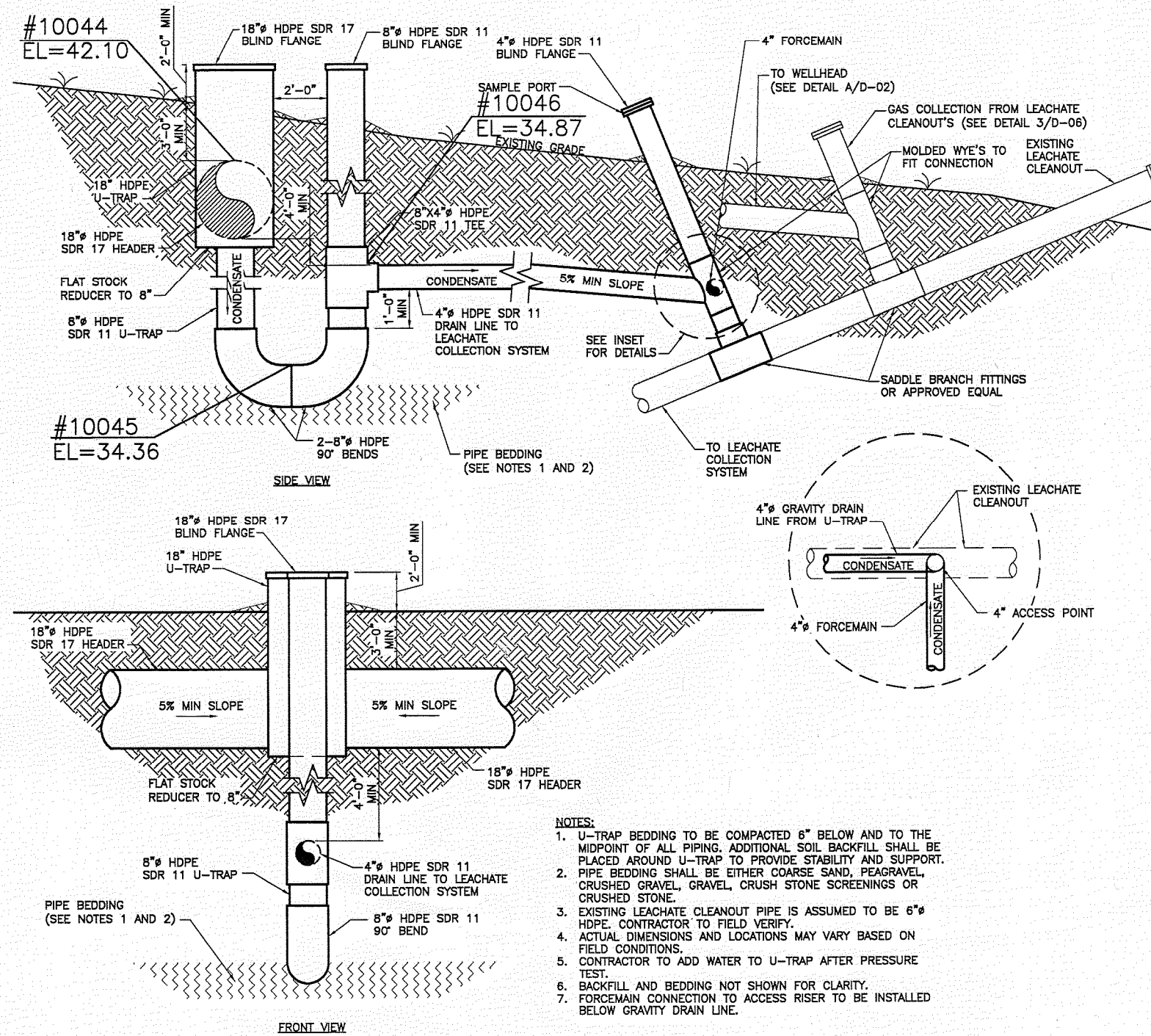


U-TRAP DETAIL
FRONT/SIDE VIEWS (TYP)
NOT TO SCALE

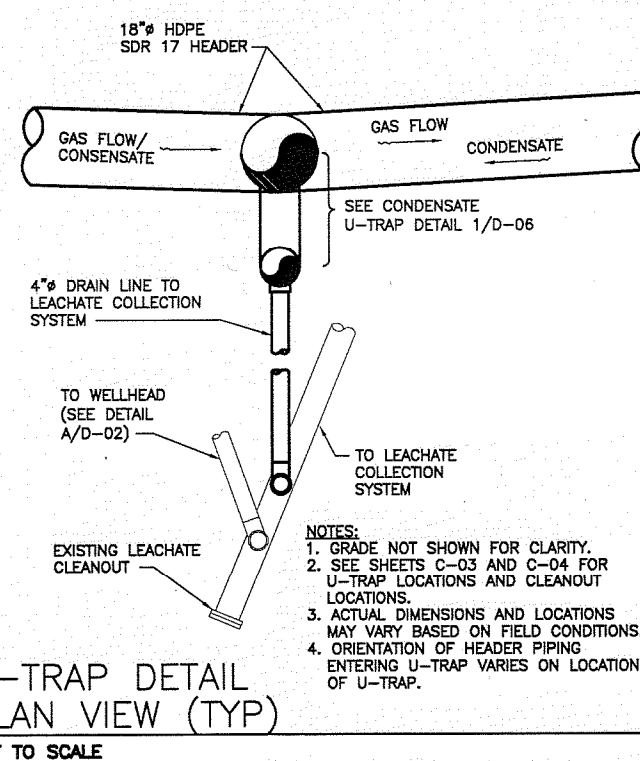


U-TRAP DETAIL
PLAN VIEW (TYP)
NOT TO SCALE

U-TRAP 2

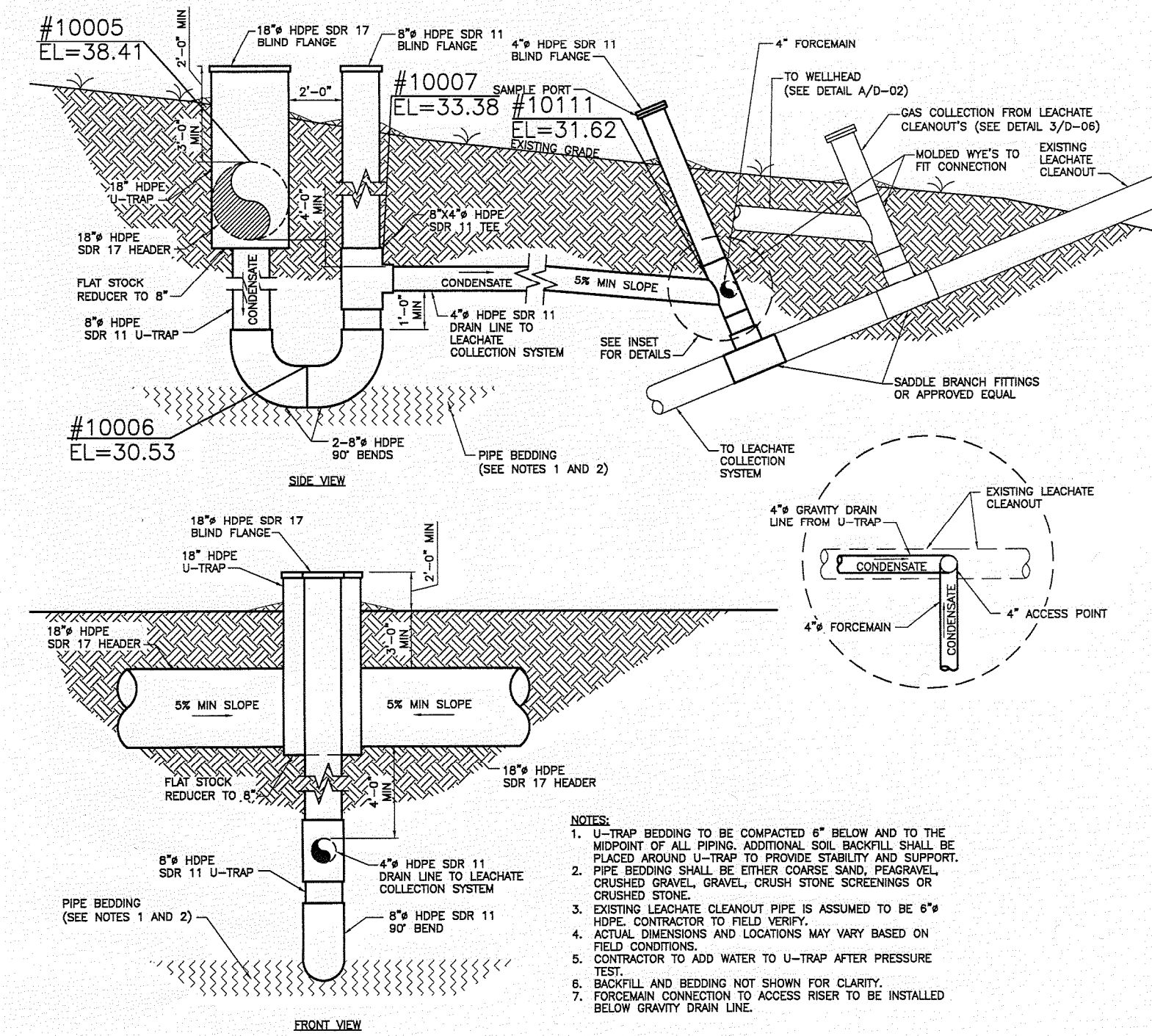


U-TRAP DETAIL
FRONT/SIDE VIEWS (TYP)
NOT TO SCALE

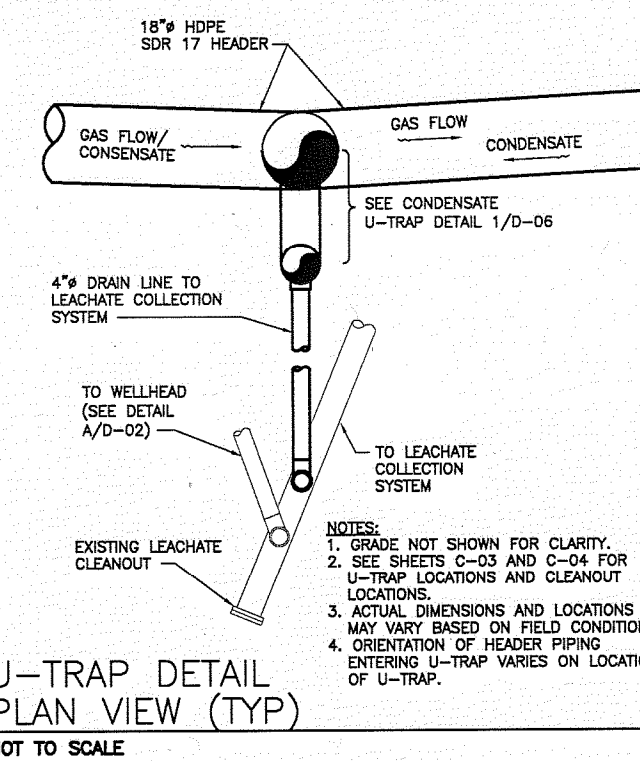


U-TRAP DETAIL
PLAN VIEW (TYP)
NOT TO SCALE

U-TRAP 1

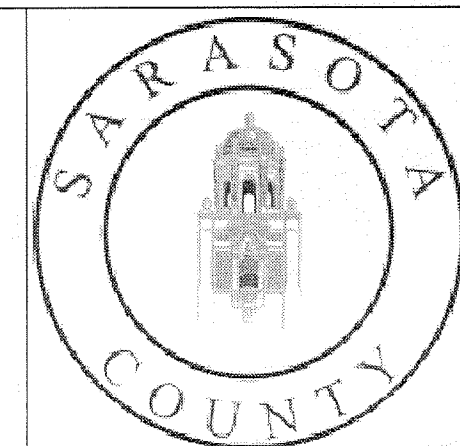


U-TRAP DETAIL
FRONT/SIDE VIEWS (TYP)
NOT TO SCALE



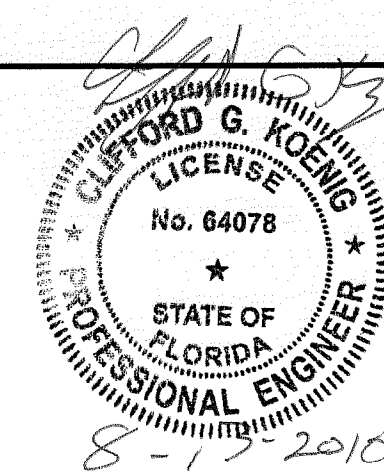
U-TRAP DETAIL
PLAN VIEW (TYP)
NOT TO SCALE

U-TRAP#	U-1	U-2	U-3
SIZE	18"	18"	18"



ISSUE	DATE	DESCRIPTION
2	12/09	ISSUED FOR CONSTRUCTION
1	08/09	ISSUED FOR BID
0	05/09	ISSUED FOR CLIENT REVIEW

PROJECT MANAGER	C. KOENIG, P.E.
DESIGNED BY	A. BARKER, E.I.
DRAWN BY	D. SOSA
CHECKED BY	C. LEBRON, P.E.
PROJECT NUMBER	101628



Central County Solid Waste Disposal Complex
Phase 1 - Sequence 1
Landfill Gas Collection and Control System
ISSUED FOR CONSTRUCTION

SARASOTA COUNTY

FLORIDA

AS-BUILT SURVEY

Hyatt Survey Services, Inc.
Geographic Data Specialists
11007 8TH AVENUE EAST BRADENTON, FLORIDA 34112
PH: (941) 748-4093 FAX: (941) 748-1463 1876-17203
CADD FILE: 000-06.dwg PROJ. MAN. DVE DRAWN BY: DVE CHECKED BY: RPH
PROJ. 02-1501 FB 223 PG 20 FIELD DATE: 06/02/10 SCALE: SHEET

AS-BUILT SURVEY
THIS SURVEY IS NOT VALID UNLESS THE SIGNATURE AND ORIGINAL PRESSED SEAL OF A LICENSED SURVEYOR AND MAPPER IS PLACED HEREON.
RPH
RUSSELL
FLORIDA SURVEYING AND MAPPING
1876-17203

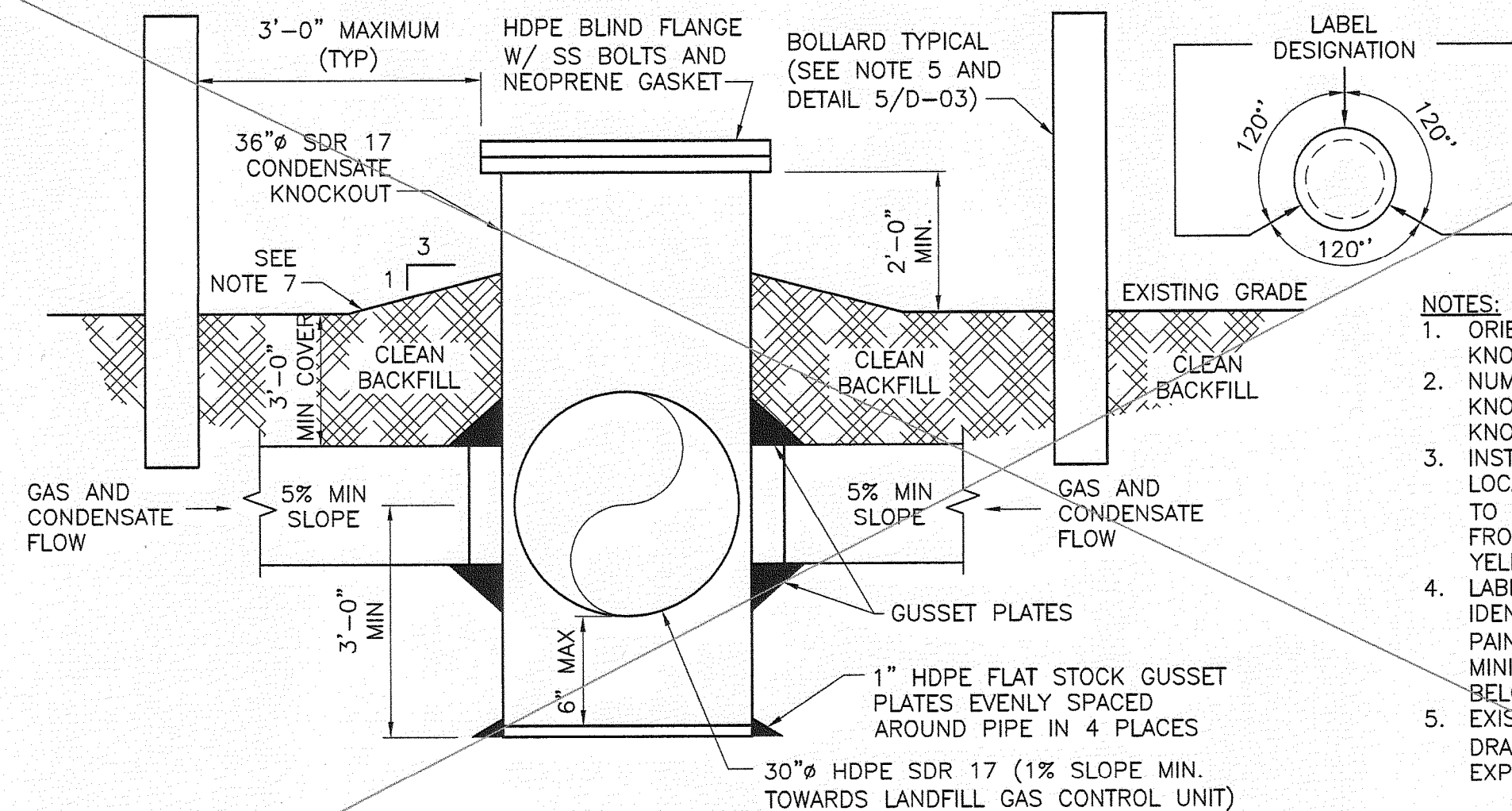
U-TRAP LAYOUT & DETAILS

0 1" 2"
AT FULL SIZE BAR LENGTH EQUALS TWO INCHES. ADJUST SCALE ACCORDINGLY.

FILENAME: 00D-06.dwg
SCALE: NOT TO SCALE

SHEET
00D-06A

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
AUG 13 2010
SOUTHWEST DISTRICT
TAMPA

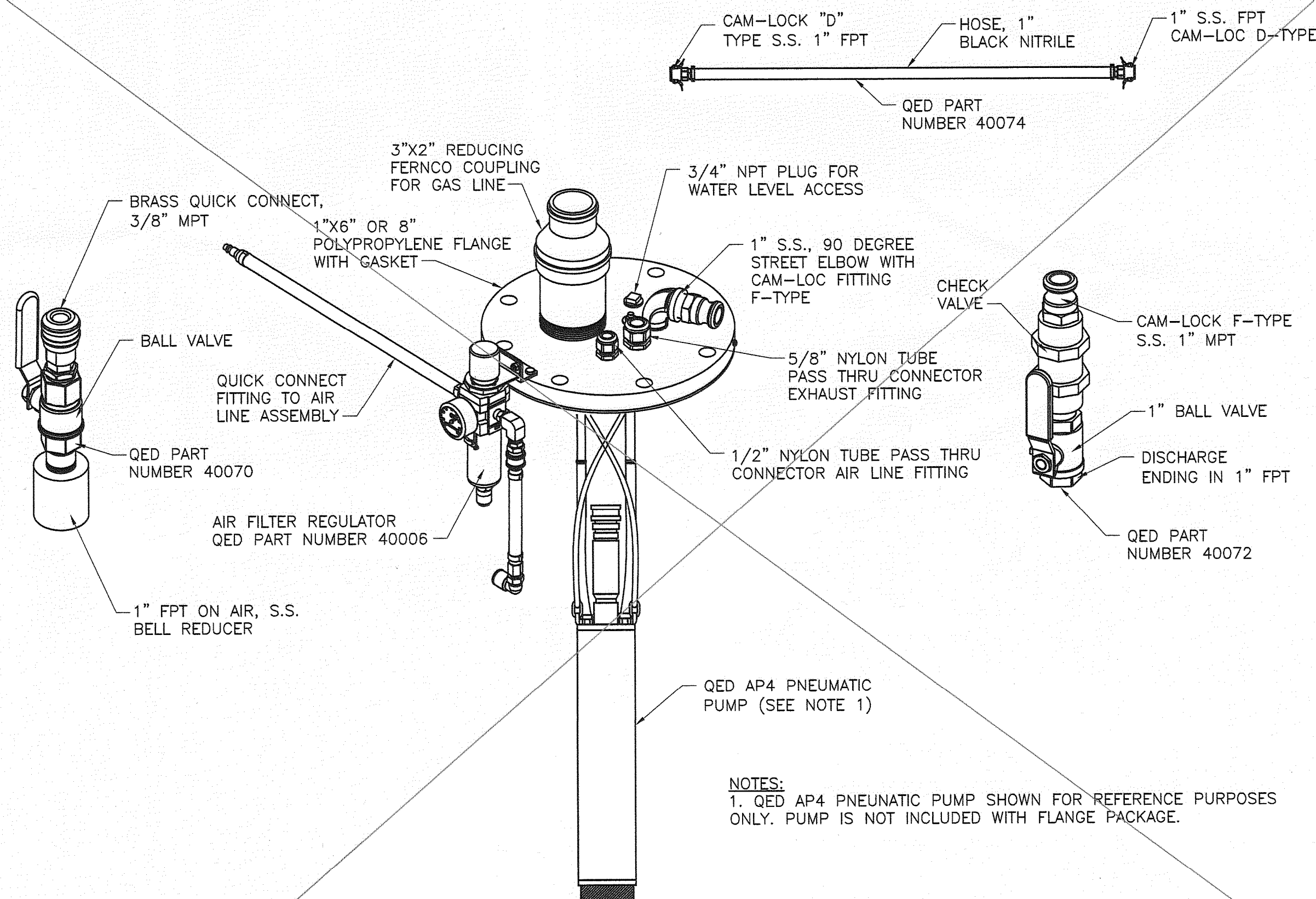


CONDENSATE KNOCKOUT POT

NOT TO SCALE

NOT INSTALLED

1
C-03
C-04

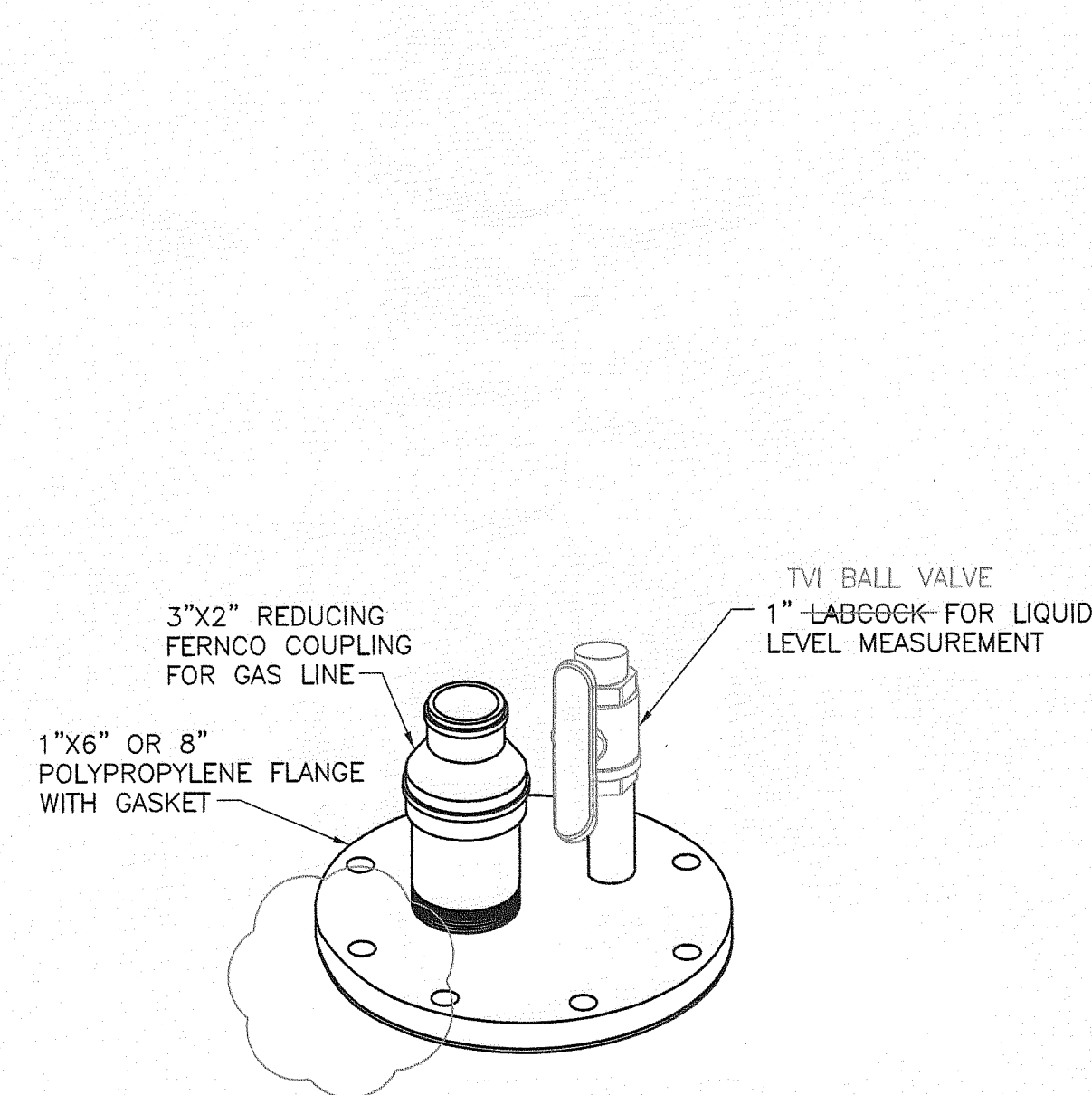


FLANGE PACKAGE WITH PLUG

NOT TO SCALE

NOT INSTALLED

2
D-02
D-05



VERTICAL WELL WITHOUT PUMP FLANGE PACKAGE

NOT TO SCALE

3
C-03

RECORD DRAWING

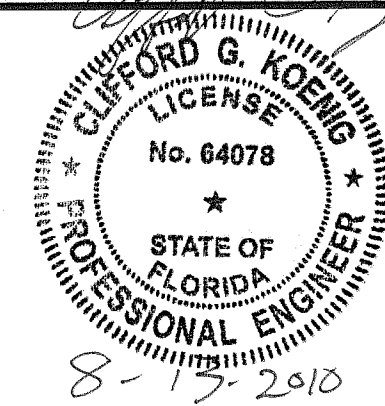
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CLIFFORD G. KOENIG, P.E.
FLORIDA P.E. NO. 64078
HDR ENGINEERING, INC.



ISSUE	DATE	DESCRIPTION
3	08/10	RECORD DRAWINGS
2	12/09	ISSUED FOR CONSTRUCTION
1	08/09	ISSUED FOR BID
0	05/09	ISSUED FOR CLIENT REVIEW

PROJECT MANAGER	C. KOENIG, P.E.
DESIGNED BY	A. BARKER, E.I.
DRAWN BY	D. SOSA
	B. JOHNSON
CHECKED BY	C. LEBRON, P.E.
PROJECT NUMBER	101628

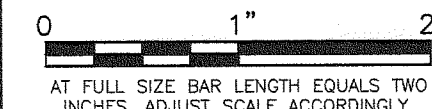


Central County Solid Waste Disposal Complex
Phase 1 - Sequence 1
Landfill Gas Collection and Control System
ISSUED FOR CONSTRUCTION

SARASOTA COUNTY

FLORIDA

CONDENSATE KNOCKOUT POT DETAIL



FILENAME	OOD-07.dwg
SCALE	NOT TO SCALE

SHEET	00D-07
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FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
AUG 13 2010
SOUTHWEST DISTRICT
TAMPA

