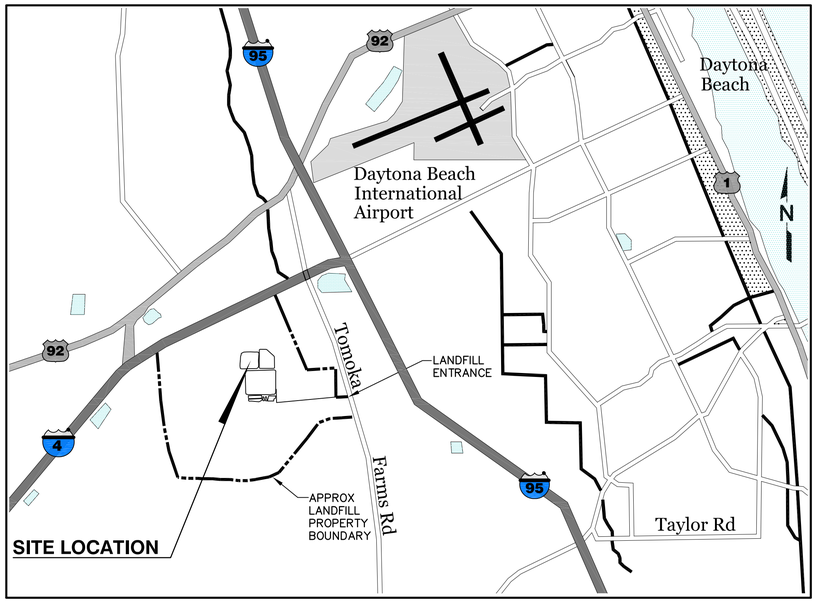
HDR Engineering, Inc.
200 W Forsyth St
Jacksonville, FL 32202

Volusia County Council Members

Frank Bruno Jr., County Chair
Joie Alexander, At-Large, Vice Chair
Andy Kelly, District 1
Josh Wagner, District 2
Jack Hayman, District 3
Carl G. Persis, District 4
Pat Northey, District 5

Volusia County
FLORIDA



0 1 MILE 2 MILES
APPROX SCALE

LOCATION MAP

Permit Drawings For

Volusia County Tomoka Farms Road Landfill

North Cell Closure Drawings

Project No.
000000000139929

ISSUED FOR APPROVAL
August, 2010

NOTICE

THIS PLAN SET ACCOMPANIES THE DOCUMENT, "NORTH CELL CLOSURE INTERMEDIATE MODIFICATION PERMIT APPLICATION" SUBMITTED TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, AUGUST, 2010.

THESE DRAWINGS ARE NOT IN FINAL FORM, BUT ARE BEING TRANSMITTED TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) TO RECEIVE REVIEWS, COMMENTS, AND INTERPRETATIONS.

INDEX OF DRAWINGS

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00G-01 GENERAL NOTES

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00C-01 AERIAL SITE MAP
00C-02 EXISTING CONDITIONS
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00C-12 DRAINAGE DETAILS (4 OF 5)
00C-13 DRAINAGE DETAILS (5 OF 5)

HDR

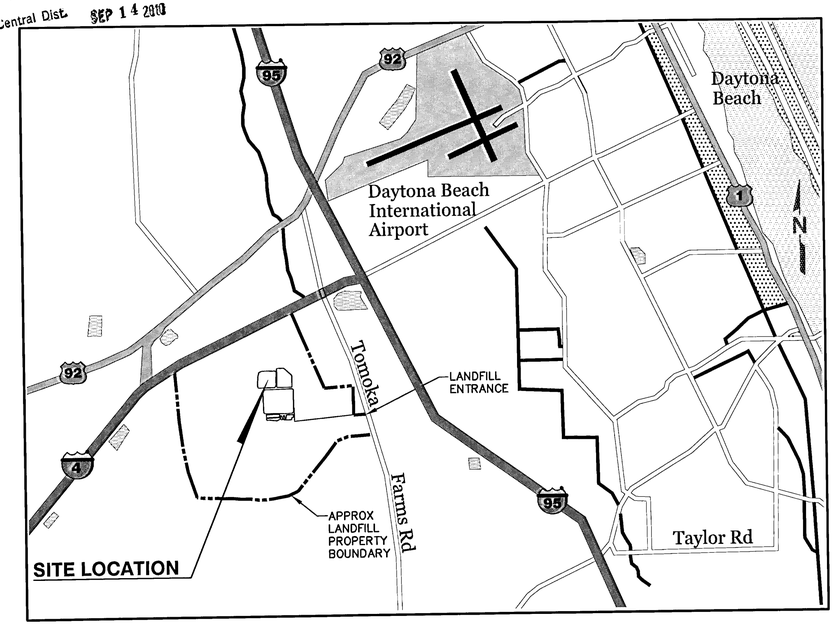
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Volusia County
FLORIDA

RECEIVED
2010
DEP Central Dist. SEP 14 2010



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SEP 14 2010

SEP 14 2010

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00C-10 DRAINAGE DETAILS (2 OF 5)
00C-11 DRAINAGE DETAILS (3 OF 5)
00C-12 DRAINAGE DETAILS (4 OF 5)
00C-13 DRAINAGE DETAILS (5 OF 5)

SURVEY AND MAP REPORT:

1. EXISTING TOPOGRAPHY SUPPLIED BY AERIAL CARTOGRAPHICS OF AMERICA FROM AERIAL PHOTOGRAPHY DATED APRIL 7, 2010.
2. HORIZONTAL DATUM IS BASED ON THE FLORIDA STATE PLANE COORDINATE SYSTEM (EAST ZONE) NAD 1983/90. VERTICAL DATUM IS BASED ON THE NATIONAL GEODETIC VERTICAL DATUM (NGVD) 1929.

EROSION AND SEDIMENT CONTROL:

1. EROSION AND SEDIMENT CONTROL SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND SHALL BE MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
2. CONTRACTOR SHALL INSPECT AND REPAIR, AS NECESSARY, ANY EROSION AND SEDIMENT CONTROL DAILY AND FOLLOWING EACH RAIN.
3. CONTRACTOR SHALL ADD EROSION AND SEDIMENT CONTROL AS NECESSARY TO PREVENT SEDIMENTATION AND DAMAGE TO ADJACENT AREAS.
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 FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STANDARD SPECIFICATIONS. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES.
6. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTION BY ENGINEER.

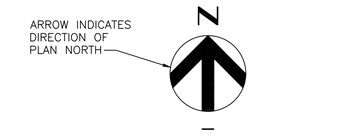
EARTHWORK:

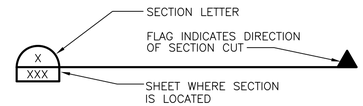
1. EXCAVATION IS UNCLASSIFIED AND INCLUDES REMOVAL OF EXISTING COVER SOILS AND WASTE TO DEPTHS AND EXTENTS SHOWN ON DRAWINGS OR SPECIFIED. THE ENGINEER SHALL BE THE FINAL AUTHORITY AND SHALL MAKE THE FINAL DECISION DURING CONSTRUCTION AS TO THE DEPTH AND EXTENT TO WHICH MATERIALS MUST BE REMOVED AND REPLACED.
2. SURVEY BENCHMARKS, MONUMENTS AND OTHER REFERENCE POINTS SHALL BE PROTECTED FROM DAMAGE AND DISPLACEMENT.
3. CONTRACTOR SHALL KEEP DIRT, DUST, NOISE AND OTHER OBJECTIONABLE NUISANCES TO A MINIMUM.
4. ALL STRIPPED AREAS ARE TO BE PROOF ROLLED BEFORE FILL MATERIAL IS PLACED.

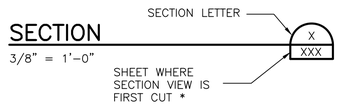
GENERAL NOTES:

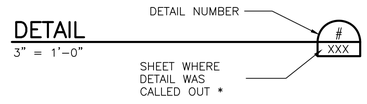
1. THIS IS A STANDARD SHEET SHOWING COMMON SYMBOLOGY. ALL SYMBOLS ARE NOT NECESSARILY USED ON THIS PROJECT.
2. CONTRACTOR SHALL TAKE WHATEVER MEANS NECESSARY TO PROTECT EXISTING PIPING, AND WELLS FROM DAMAGE DURING CONSTRUCTION. CONTRACTOR SHALL REPAIR OR REPLACE PIPING, AND GAS WELLS DAMAGED DURING CONSTRUCTION WITH EQUIVALENT MATERIALS AT NO EXPENSE TO THE COUNTY.
3. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH EXISTING VOLUSIA COUNTY DESIGN AND CONSTRUCTION STANDARDS.
4. CONTRACTOR SHALL COMPLY WITH ALL TERMS, CONDITIONS, AND REQUIREMENTS OF ALL APPLICABLE PERMITS FOR THE SITE.
5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH PREVAILING FEDERAL, STATE, LOCAL AND OTHER APPLICABLE REGULATIONS.
6. THE CONTRACTOR SHALL PROVIDE ALL WARNING SIGNALS, SIGNS, LIGHTS, AND FLAG PERSON AS REQUIRED BY FDOT.
7. ALL PIPING SHALL HAVE A MINIMUM COVER OF 24" UNLESS OTHERWISE NOTED.
8. WHERE IT IS NECESSARY TO DEFLECT PIPE EITHER HORIZONTALLY OR VERTICALLY, PIPE DEFLECTION SHALL NOT EXCEED 75% OF THE MANUFACTURER'S RECOMMENDED DEFLECTION ANGLE. MINIMUM PIPE RADIUS SHALL BE A MINIMUM OF 25% GREATER THAN THE MANUFACTURER'S RECOMMENDED MINIMUM RADIUS.
9. CONTRACTOR SHALL VERIFY ALL CLEARANCES PRIOR TO CONSTRUCTION.
10. CONTRACTOR SHALL MAINTAIN A CLEAR PATH FOR ALL SURFACE WATER DRAINAGE STRUCTURES AND DITCHES DURING ALL PHASES OF CONSTRUCTION AND SHALL UTILIZE WHATEVER MEANS NECESSARY TO MANAGE STORMWATER SUCH THAT THE IMPACT TO CONSTRUCTION AND TO ESTABLISHED LANDFILL COVER IS MINIMIZED.
11. THE CONTRACTOR SHALL REPLACE ALL EXISTING PAVING, LANDFILL COVER MATERIAL, ACCESS ROADS, PIPES, STABILIZED EARTH, FENCES, SIGNS AND OTHER IMPROVEMENTS WITH THE SAME TYPE OF MATERIAL THAT WAS REMOVED OR DAMAGED DURING CONSTRUCTION.
12. INSPECTION: EXAMINE AREAS FOR CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED. REPORT TO ENGINEER 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.
13. 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.
14. ALL WORK SHALL BE PERFORMED IN A QUALITY WORKMANLIKE MANNER.
15. ALL EXCAVATED MATERIALS SHALL REMAIN THE PROPERTY OF THE OWNER.
16. AS-BUILT SURVEY REQUIREMENTS SHALL BE AS SPECIFIED IN THE CQA PLAN AND SPECIFICATIONS.
17. 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 811.
18. CONTRACTOR IS RESPONSIBLE FOR DEWATERING (IF REQUIRED) ALL EXCAVATIONS, FILL AREAS, ETC. IN ORDER TO WORK IN DRY CONDITIONS AND OBTAINING ANY NECESSARY PERMITS.
19. ATTENTION IS DIRECTED TO THE FACT THAT AN ACTIVE LANDFILL AND OTHER FACILITIES WILL BE IN OPERATION DURING THE CONSTRUCTION PERIOD. WASTE HAULING TRUCKS WILL BE ACTIVE DURING NORMAL BUSINESS HOURS. IF NECESSARY, CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL TO MAINTAIN LANDFILL ACTIVITIES.
20. CONTRACTOR SHALL PROVIDE PROPER WARNING SIGNS, BARRICADES, TEMPORARY FENCING AND OTHER APPROPRIATE SAFETY DEVICES DURING THE EXECUTION OF THE WORK TO PROVIDE PUBLIC PROTECTION AND SAFETY.

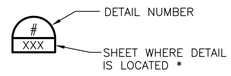
SHEET REFERENCES











DETAIL MARKER

FOR REFERENCING DETAILS INCLUDED IN DRAWING SET.

ABBREVIATIONS

ADS	–	SMOOTH INTERIOR WALL CORRUGATED POLYETHYLENE DRAINAGE PIPE (N–12 PIPE)
APPROX	–	APPROXIMATE, APPROXIMATELY
BLDG	–	BUILDING
BTM	–	BOTTOM
CB	–	CATCH BASIN
CM	–	CONCRETE MONUMENT
CONC	–	CONCRETE
CONT	–	CONTINUOUS
CORR	–	CORRUGATED
DET	–	DETAIL
DIA	–	DIAMETER
DIM	–	DIMENSION
DWG	–	DRAWING
EA	–	EACH
EOL	–	EDGE OF LINER
EOR	–	EDGE OF ROAD
ETC	–	ET CETERA
ENCL	–	ENCLOSE, ENCLOSURE
EL	–	ELEVATION
EQUIP	–	EQUIPMENT
ERCP	–	ELLIPTICAL REINFORCED CONCRETE PIPE
EXIST	–	EXISTING
FDEP	–	FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
FDOT	–	FLORIDA DEPARTMENT OF TRANSPORTATION
FES	–	FLARED END SECTION
FIN	–	FINISHED
FM	–	FORCE MAIN
GALV	–	GALVANIZED
GCL	–	GEOSYNTHETIC CLAY LINER
GFFR	–	GROUT FILLED FIBER REVETMENT
GR	–	GRADE
GDL	–	GEOSYNTHETIC DRAINAGE LINER
GM	–	GAS MONITORING LOCATION
GP	–	GAS PROBE
HDPE	–	HIGH DENSITY POLYETHYLENE
HP	–	HIGH POINT
ID	–	INSIDE DIAMETER
IE	–	INVERT ELEVATION
LF	–	LINEAL FEET
LFG	–	LANDFILL GAS
LLDPE	–	LINEAR LOW DENSITY POLYETHYLENE
LP	–	LOW POINT
MAX	–	MAXIMUM
MFR	–	MANUFACTURER
MH	–	MANHOLE
MIN	–	MINIMUM
MISC	–	MISCELLANEOUS
MSL	–	(ABOVE) MEAN SEA LEVEL
MT	–	MOUNT
MW	–	GROUNDWATER MONITORING WELL
N/A	–	NOT APPLICABLE
N/AVAIL	–	NOT AVAILABLE
NGVD	–	NATIONAL GEODETIC VERTICAL DATUM
NIC	–	NOT IN CONTRACT
No	–	NUMBER
NP	–	NONPERFORATED PIEZOMETER
NTS	–	NOT TO SCALE
OC	–	ON CENTER
OD	–	OUTSIDE DIAMETER
OSHA	–	OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION
P	–	PIEZOMETER
PLS	–	PROFESSIONAL LAND SURVEYOR
PS	–	PUMP STATION
R	–	RADIUS
RCP	–	REINFORCED CONCRETE PIPE
REF	–	REFERENCE
REQD	–	REQUIRED
SL	–	SLOPE
SCH	–	SCHEDULE
SDR	–	STANDARD DIMENSION RATIO
SHT	–	SHEET
SIM	–	SIMILAR
SS	–	STAINLESS STEEL
STD	–	STANDARD
STL	–	STEEL
STW	–	STORMWATER MONITORING STATION
TRM	–	TURF REINFORCEMENT MATTING
TYP	–	TYPICAL
USC&GS	–	UNITED STATES COASTAL AND GEODETIC SURVEY
USGS	–	UNITED STATES GEOLOGICAL SURVEY
WGT	–	WEIGHT
W.E.	–	WATER ELEVATION

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

ISSUE	DATE	DESCRIPTION
A	08/10	ISSUED FOR APPROVAL

PROJECT MANAGER	A. EVANS, P.E.
DESIGNED BY	M. AUSTIN
DESIGNED BY	
DESIGNED BY	
DRAWN BY	M. AUSTIN
CHECKED BY	T. YANOSCHAK, P.E.
PROJECT NUMBER	0000000000139929

Volusia County FLORIDA

CLASS I ACTIVE AREA
TOMOKA FARMS ROAD LANDFILL
VOLUSIA COUNTY, FLORIDA

GENERAL NOTES

0 1" 2"

FILENAME	00G–01.dwg
SCALE	NOT TO SCALE

SHEET **G-01**



N

SCALE IN FEET

400 200 0 400 800

LEGEND

- PROPERTY BOUNDARY
- LIMITS OF LINER
- LS-1 LEACHATE SAMPLING LOCATION
- B-65 GROUNDWATER WELL
- SW-3 SURFACE WATER MONITORING LOCATION

NOTES:

1. AERIAL IMAGERY WAS TAKEN FROM AERIAL SURVEY PERFORMED BY AERIAL CARTOGRAPHICS OF AMERICA ON APRIL 7, 2010.
2. PROPERTY BOUNDARY WAS OBTAINED FROM VOLUSIA COUNTY PROPERTY APPRAISERS FOR YEAR 2008.
3. MONITORING LOCATIONS SHOWN ARE APPROXIMATE AND WERE DIGITIZED FROM "FIGURE 1" OF 2009 BIENNIAL WATER QUALITY MONITORING REPORT PREPARED BY SCS ENGINEERS.

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Volusia County FLORIDA

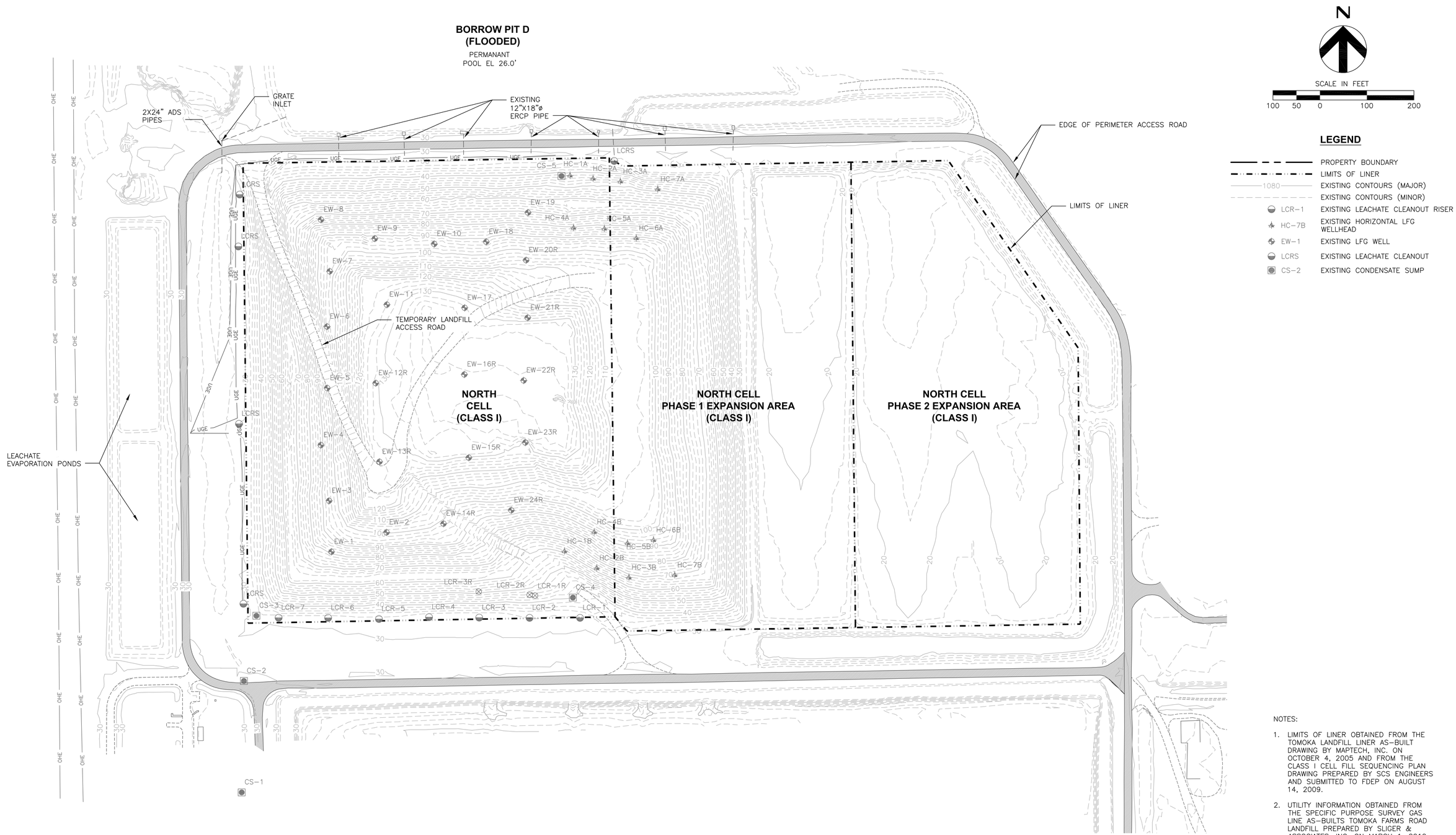
CLASS I ACTIVE AREA
TOMOKA FARMS ROAD LANDFILL
VOLUSIA COUNTY, FLORIDA

AERIAL SITE MAP

0 1" 2"

FILENAME	00C-01.dwg
SCALE	AS SHOWN

SHEET **00C-01**



NOTES:

1. LIMITS OF LINER OBTAINED FROM THE TOMOKA LANDFILL LINER AS-BUILT DRAWING BY MAPTECH, INC. ON OCTOBER 4, 2005 AND FROM THE CLASS I CELL FILL SEQUENCING PLAN DRAWING PREPARED BY SCS ENGINEERS AND SUBMITTED TO FDEP ON AUGUST 14, 2009.
2. UTILITY INFORMATION OBTAINED FROM THE SPECIFIC PURPOSE SURVEY GAS LINE AS-BUILTS TOMOKA FARMS ROAD LANDFILL PREPARED BY SLIGER & ASSOCIATES, INC. ON MARCH 1, 2010.

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Volusia County FLORIDA

CLASS I ACTIVE AREA
TOMOKA FARMS ROAD LANDFILL
VOLUSIA COUNTY, FLORIDA

EXISTING CONDITIONS

0 1" 2"

FILENAME	00C-02.dwg
SCALE	AS SHOWN

SHEET **00C-02**

BORROW PIT D (FLOODED)

PERMANANT POOL EL 26.0'

PROPOSED 19" x 30"ø ERCP PIPE (TYP)

EXISTING 12" x 18"ø ERCP PIPE (TYP)

PROPOSED NORTH DITCH (SEE NOTE 3)

BERM TO BE EXCAVATED AND REMOVED

3 00C-13 DOWNDRAIN DISCHARGE PIPES (NORTH SIDE)

DOWNDRAIN TOE OF SLOPE 1 00C-13

TOE OF SLOPE (TYPICAL) 3 00C-06

PROPOSED 12" x 18"ø ERCP PIPE

DOWNDRAIN DISCHARGE PIPES (NORTH SIDE) 3 00C-13

EL 26.0

ENDWALL FDOT INDEX 272

PROPOSED (2) 24"ø HDPE PIPES

ENDWALL FDOT INDEX 272

PROPOSED 12" x 18"ø ERCP PIPE

2 00C-12 DITCH BOTTOM INLET (NORTHWEST)

EL 26.0

EL 26.5

TRANSITION MANHOLES 2 00C-13

EXISTING PERIMETER ACCESS ROAD

LIMITS OF LINER

2 00C-09 DOWNDRAIN SINGLE INLET

1 00C-12 DITCH BOTTOM INLET

A 00C-05

LEACHATE EVAPORATION PONDS

1 00C-11 DOWNDRAIN DISCHARGE STRUCTURE

EOR

47.0'

86.0'

TOP OF DITCH

15.0'

86.0'

B 00C-05

C 00C-05

EL 28.8

EL 28.8

TOP OF DITCH

DITCH BOTTOM (EL VARIES FROM 28.8 – 26.0)

PERMANENT ACCESS ROAD 4 00C-06

PERMANENT ACCESS ROAD CROSSING 5 00C-06

PERIMETER DITCH 3 00C-08

DOWNDRAIN DOUBLE INLET 1 00C-09

TERRACE SWALE (TYPICAL) 1 00C-08

TERRACE SWALE (HIGHPOINT) 2 00C-08

400.0' MAX

EL 27.75

EL 27.85

3:1 (TYP)

24"ø

× EL 191.0

× EL 191.0

EL 192.6

EL 192.7

N

SCALE IN FEET

150 75 0 150 300

LEGEND

- PROPERTY BOUNDARY
- LIMITS OF LINER
- 1080 EXISTING CONTOURS (MAJOR)
- EXISTING CONTOURS (MINOR)
- 1080 PROPOSED CONTOURS (MAJOR)
- PROPOSED CONTOURS (MINOR)
- PROPOSED 18"ø DOWNDRAIN PIPE
- PROPOSED 24"ø DOWNDRAIN PIPE
- PROPOSED ACCESS ROAD PAVEMENT
- DRAINAGE FLOW ARROW

NOTES:

1. FINAL GRADES SHOWN SUBMITTED IN AUGUST 2009 TO FDEP IN THE DRAWING SET TITLED "CLASS I CELL FILL SEQUENCE PLAN" AND REPRESENT MAXIMUM ALLOWABLE ELEVATIONS.
2. DOWNDRAINS PIPES ARE 18"ø UNLESS NOTED OTHERWISE.
3. NORTH PERIMETER DITCH TO BE GRADED WITH 0.2% MINIMUM SLOPE, 10 FT BOTTOM, AND 3:1 SIDESLOPES TO DIRECT STORMWATER TO 12" X 18"ø ERCP PIPES.
4. DITCH BOTTOM INLETS TO BE PROVIDED AT ALL INTERSECTIONS OF DOWNDRAIN PIPES AND PERMANENT ACCESS ROAD.

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CLASS I ACTIVE AREA
TOMOKA FARMS ROAD LANDFILL
VOLUSIA COUNTY, FLORIDA

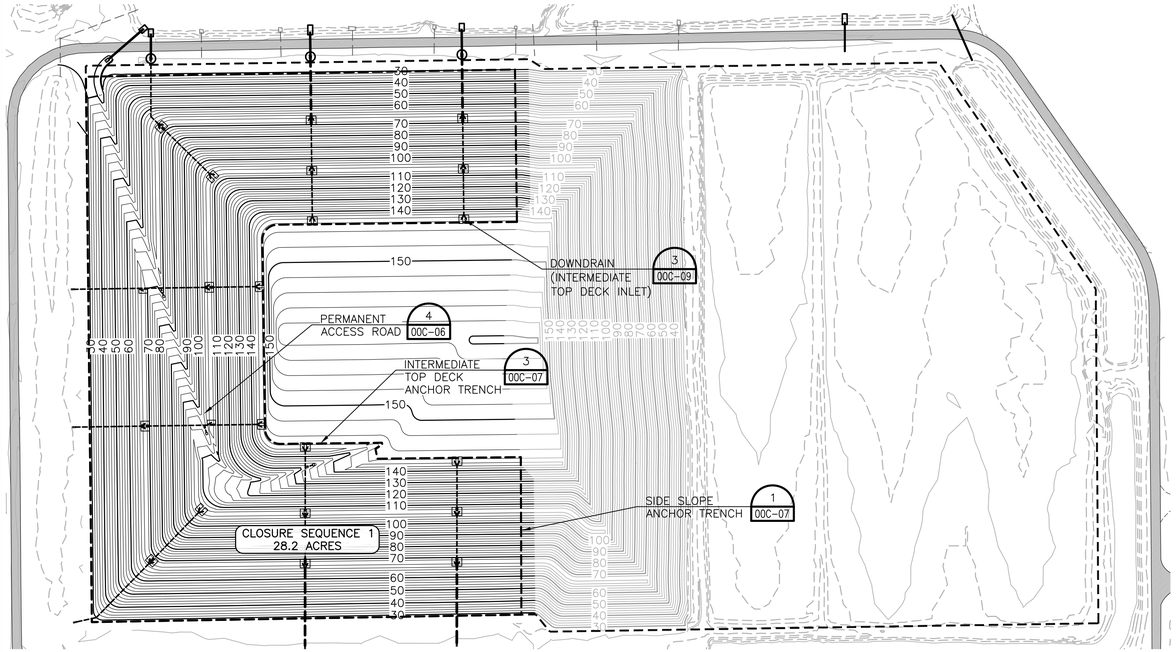
FINAL GRADING PLAN

0 1" 2"

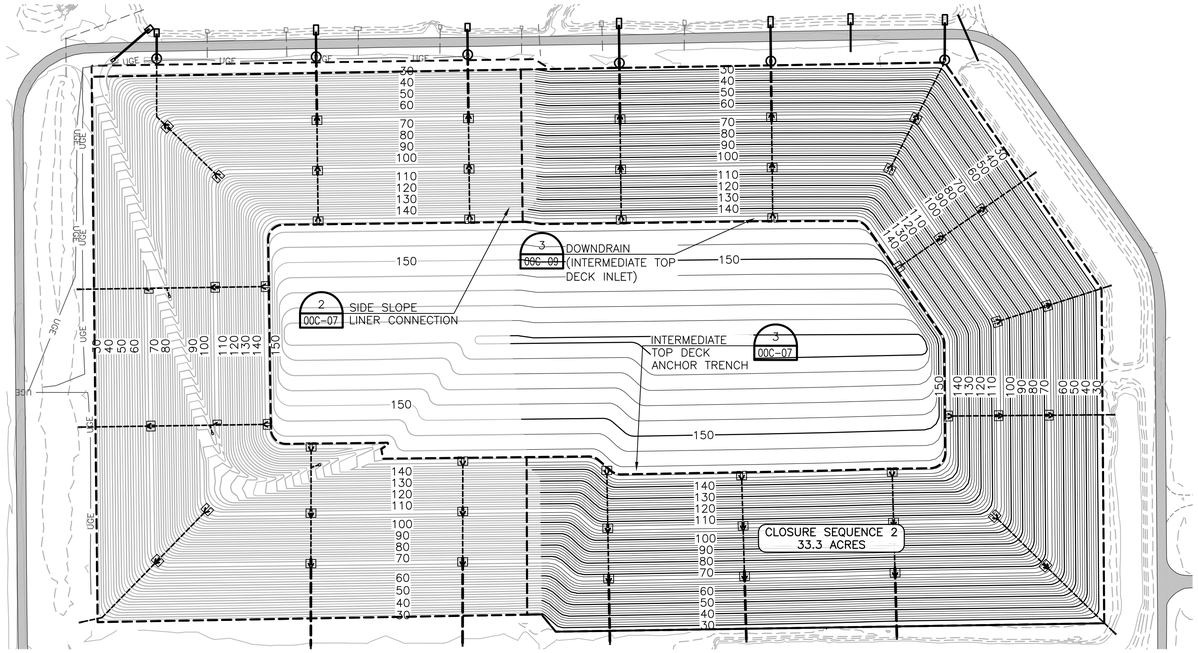
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SHEET 00C-03

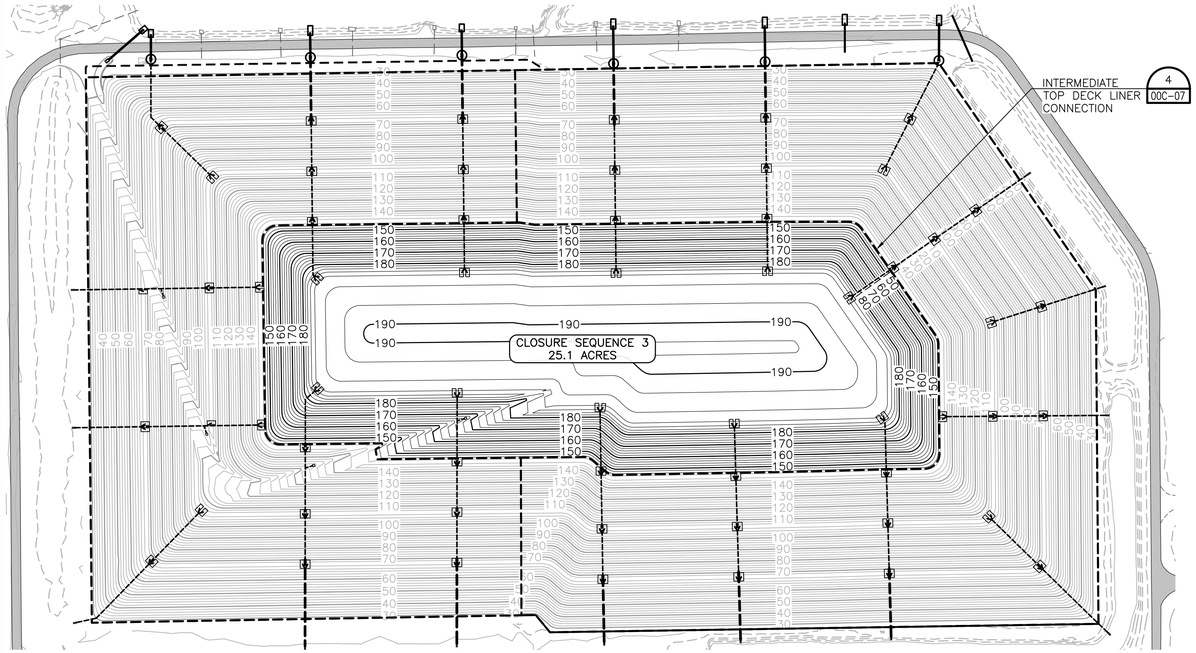
C:\powerking\task\0230699\00C-03.dwg, Plot, 8/25/2010 12:25:00 PM, maustin



CLOSURE SEQUENCE 1



CLOSURE SEQUENCE 2



CLOSURE SEQUENCE 3

N

SCALE IN FEET

200 100 0 200 400

NOTES:

1. CLOSURE SEQUENCE PLAN BASED ON "CLASS I CELL FILL SEQUENCE PLAN" DRAWING SET SUBMITTED AUGUST 2009 TO FDEP.

HDR Engineering, Inc.
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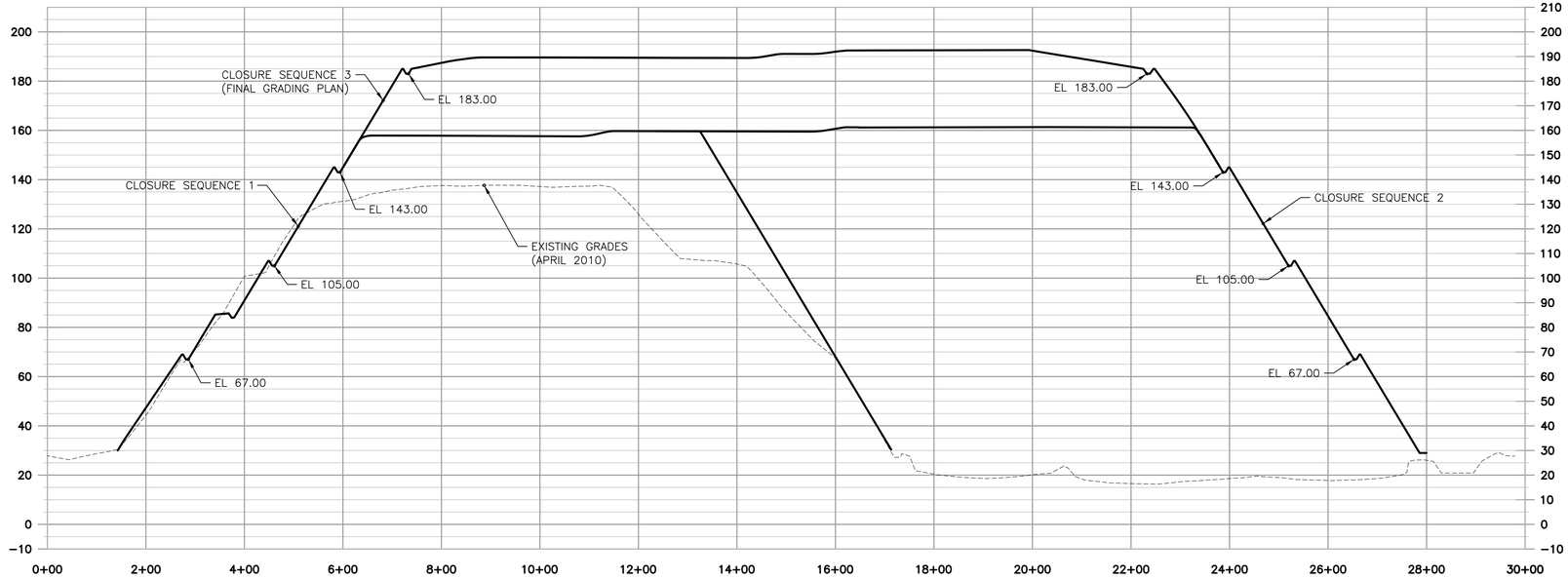
CLASS I ACTIVE AREA
TOMOKA FARMS ROAD LANDFILL
VOLUSIA COUNTY, FLORIDA

CLOSURE SEQUENCING PLAN

0 1" 2"

FILENAME	00C-04.dwg
SCALE	AS SHOWN

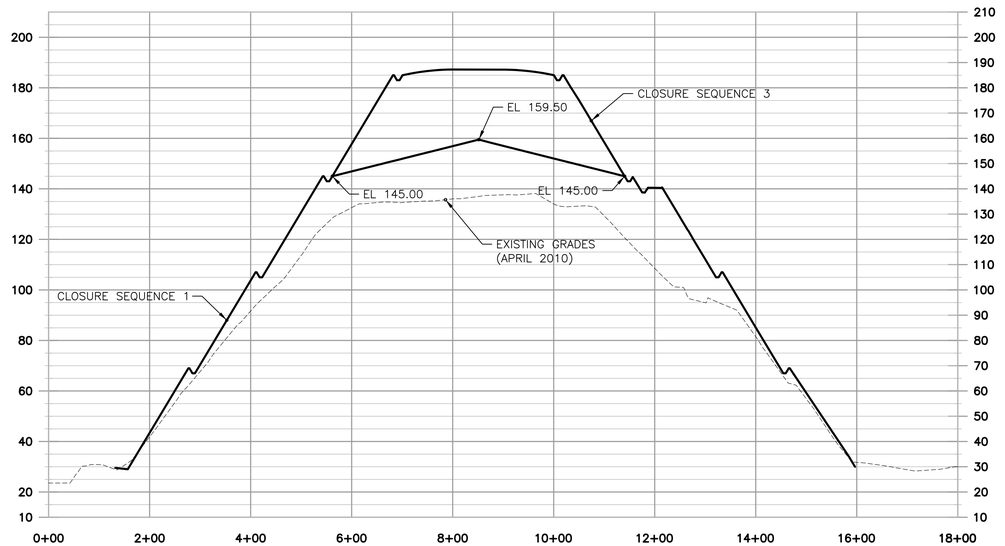
SHEET **00C-04**



SECTION A

VERTICAL EXAGGERATION: 5

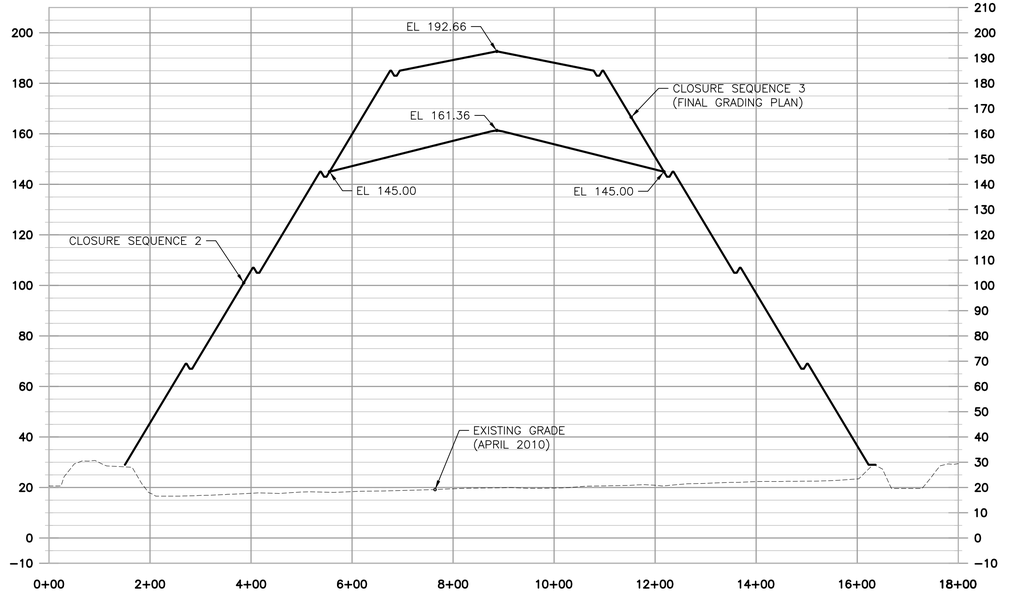
A
00C-03



SECTION B

VERTICAL EXAGGERATION: 5

B
00C-03



SECTION C

VERTICAL EXAGGERATION: 5

C
00C-03

ISSUE	DATE	DESCRIPTION
A	08/10	ISSUED FOR APPROVAL

PROJECT MANAGER	A. EVANS, P.E.
DESIGNED BY	M. AUSTIN
DESIGNED BY	
DESIGNED BY	
DRAWN BY	M. AUSTIN
CHECKED BY	T. YANOSCHAK, P.E.
PROJECT NUMBER	0000000000139929

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

Volusia County
FLORIDA

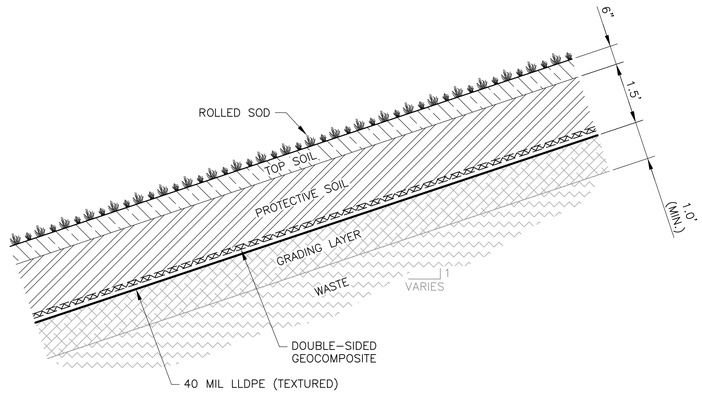
CLASS I ACTIVE AREA
TOMOKA FARMS ROAD LANDFILL
VOLUSIA COUNTY, FLORIDA

SECTIONS

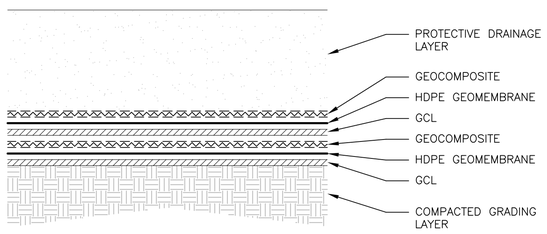
0 1" 2"

FILENAME	00C-05.dwg
SCALE	AS SHOWN

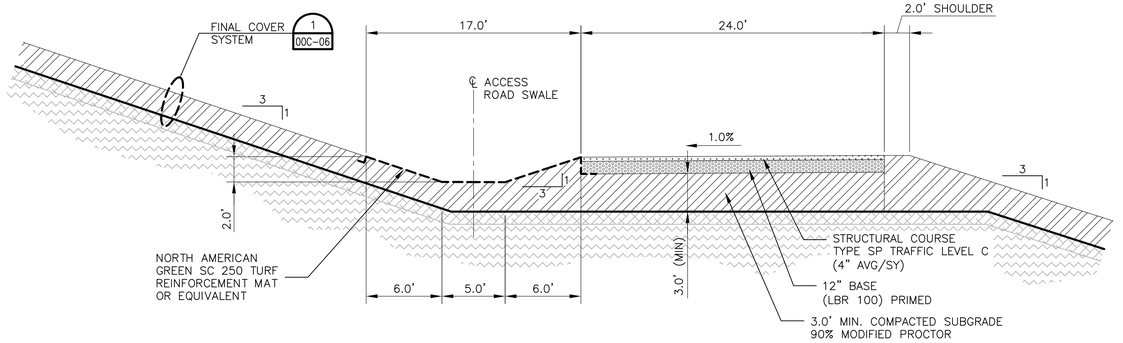
SHEET
00C-05



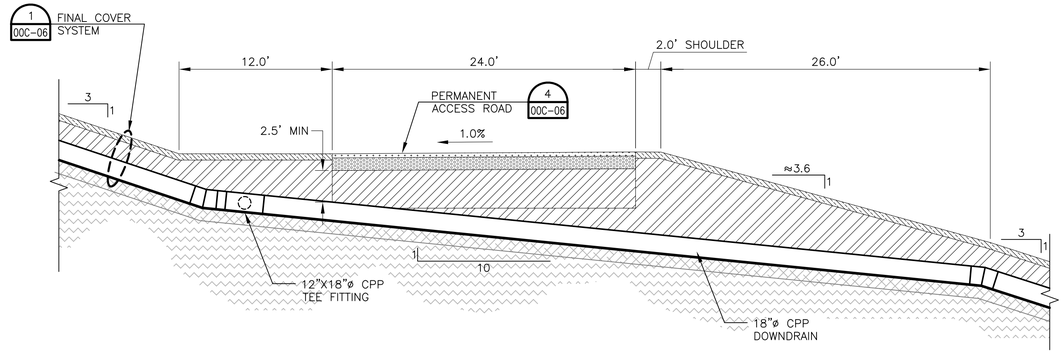
FINAL COVER SYSTEM
NOT TO SCALE — 1 / –



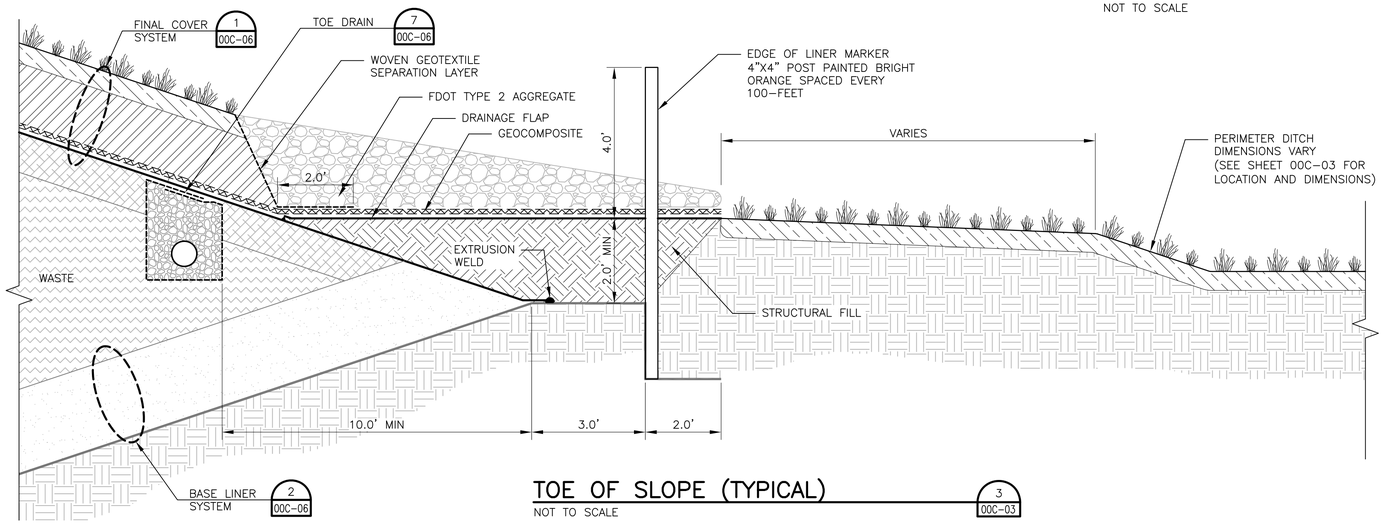
BOTTOM LINER SYSTEM
NOT TO SCALE — 2 / –



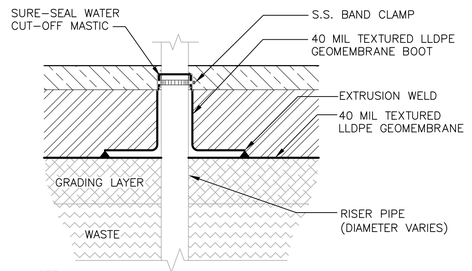
PERMANENT ACCESS ROAD
NOT TO SCALE — 4 / 00C-03



PERMANENT ACCESS ROAD CROSSING
NOT TO SCALE — 5 / 00C-03



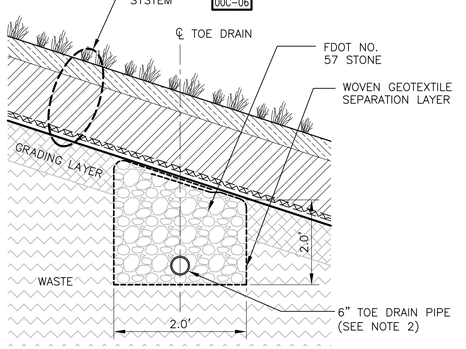
TOE OF SLOPE (TYPICAL)
NOT TO SCALE — 3 / 00C-03



NOTE:

1. BOOTS TO BE INSTALLED AT HDPE OR PVC WELL CASINGS, LFG LATERAL RISERS, CONDENSATE TRAPS, HEADER ACCESS RISERS, AND LEACHATE RISER PIPES.
2. BASED ON FIELD CONDITIONS EXISTING RISER PIPES MAY NEED TO BE EXTENDED. WELL HEADS WILL BE A MIN OF 3' ABOVE FINAL GRADE.

PIPE BOOT
NOT TO SCALE — 6 / –



NOTES:
1. 6" CAPPED ACCESS POINTS WITH PIPE BOOTS TO BE PROVIDED EVERY 500'.
2. TOE DRAIN PIPE TO BE GRADED AT 0.5% MIN AND TIED INTO EXISTING LEACHATE CLEANOUTS AS NECESSARY.

TOE DRAIN
NOT TO SCALE — 7 / 00C-06

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

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A	08/10	ISSUED FOR APPROVAL

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DESIGNED BY	M. AUSTIN
DESIGNED BY	
DESIGNED BY	
DRAWN BY	M. AUSTIN
CHECKED BY	T. YANOSCHAK, P.E.
PROJECT NUMBER	0000000000139929

Volusia County FLORIDA

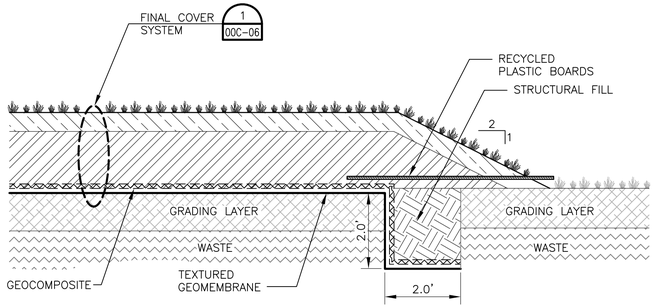
CLASS I ACTIVE AREA
TOMOKA FARMS ROAD LANDFILL
VOLUSIA COUNTY, FLORIDA

GENERAL DETAILS (1 OF 3)

0 1" 2"

FILENAME	00C-06.dwg
SCALE	AS SHOWN

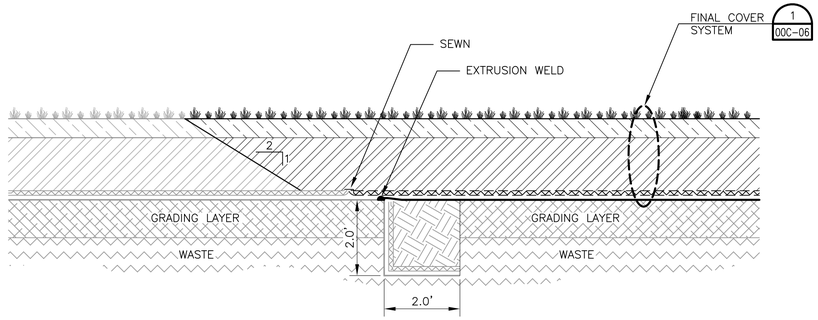
SHEET **00C-06**



SIDE SLOPE ANCHOR TRENCH

NOT TO SCALE

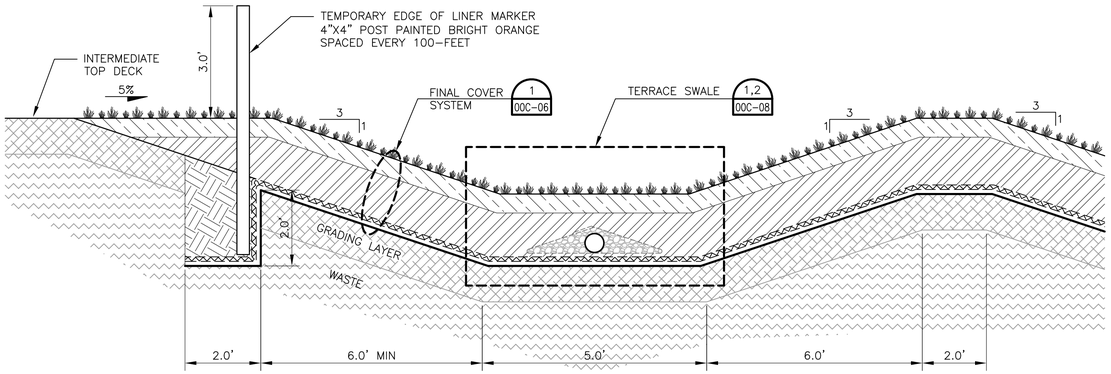
1 00C-04



SIDE SLOPE LINER CONNECTION

NOT TO SCALE

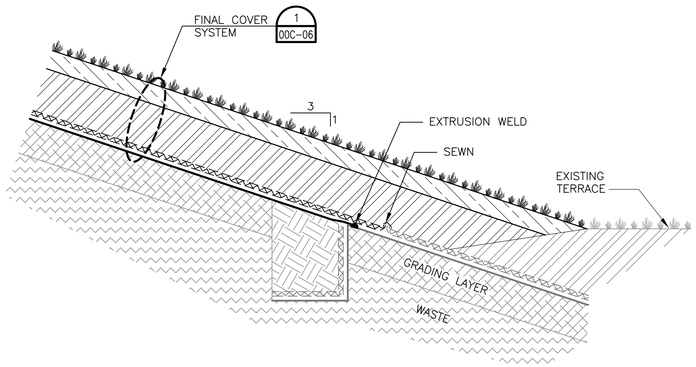
2 00C-04



INTERMEDIATE TOP DECK ANCHOR TRENCH

NOT TO SCALE

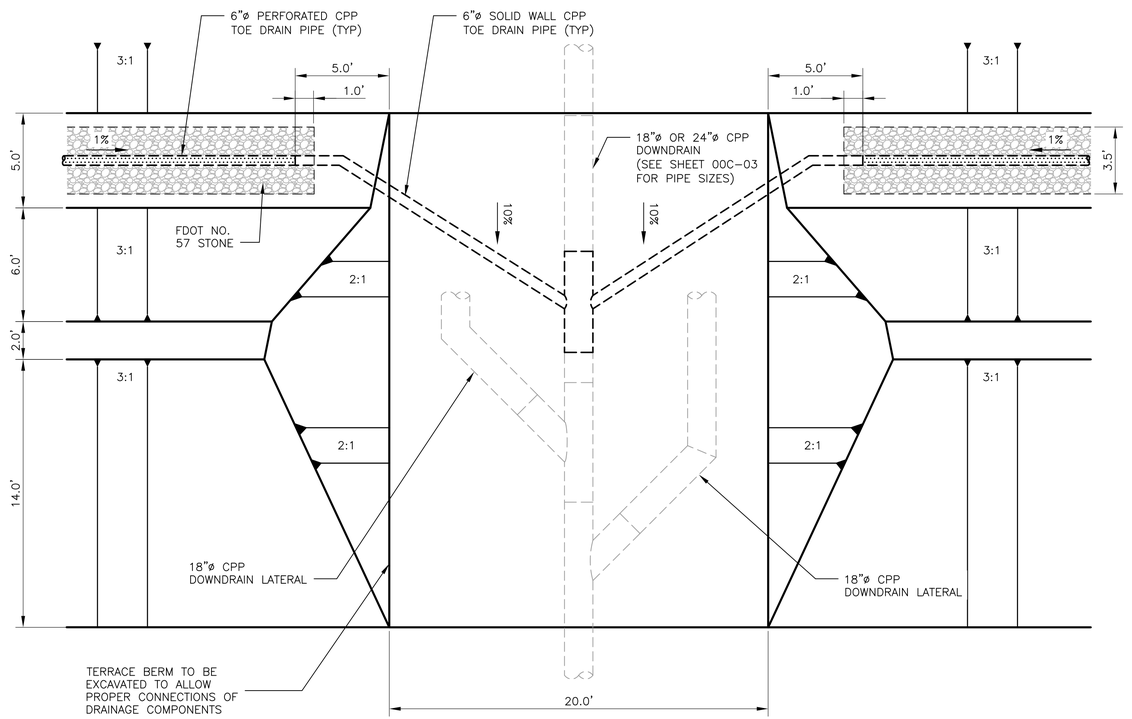
3 00C-04



INTERMEDIATE TOP DECK LINER CONNECTION

NOT TO SCALE

4 00C-04



FINAL COVER LINER INTERSECTION AT DOWNDRAIN

NOT TO SCALE

5 00C-09

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

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PROJECT NUMBER	0000000000139929

Volusia County FLORIDA

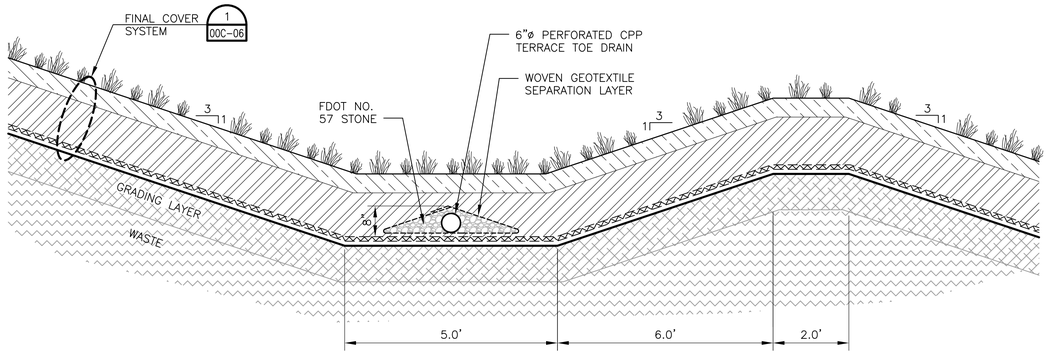
CLASS I ACTIVE AREA
TOMOKA FARMS ROAD LANDFILL
VOLUSIA COUNTY, FLORIDA

GENERAL DETAILS (2 OF 3)

0 1" 2"

FILENAME	00C-07.dwg
SCALE	AS SHOWN

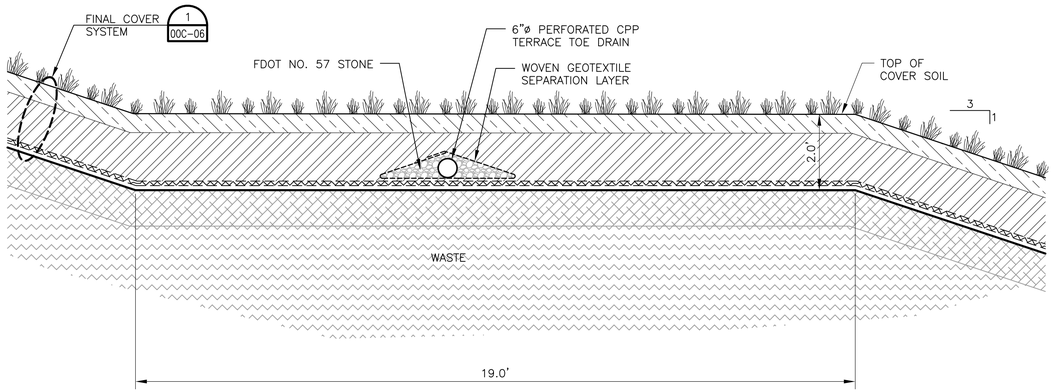
SHEET **00C-07**



TERRACE SWALE (LOWPOINT)

NOT TO SCALE

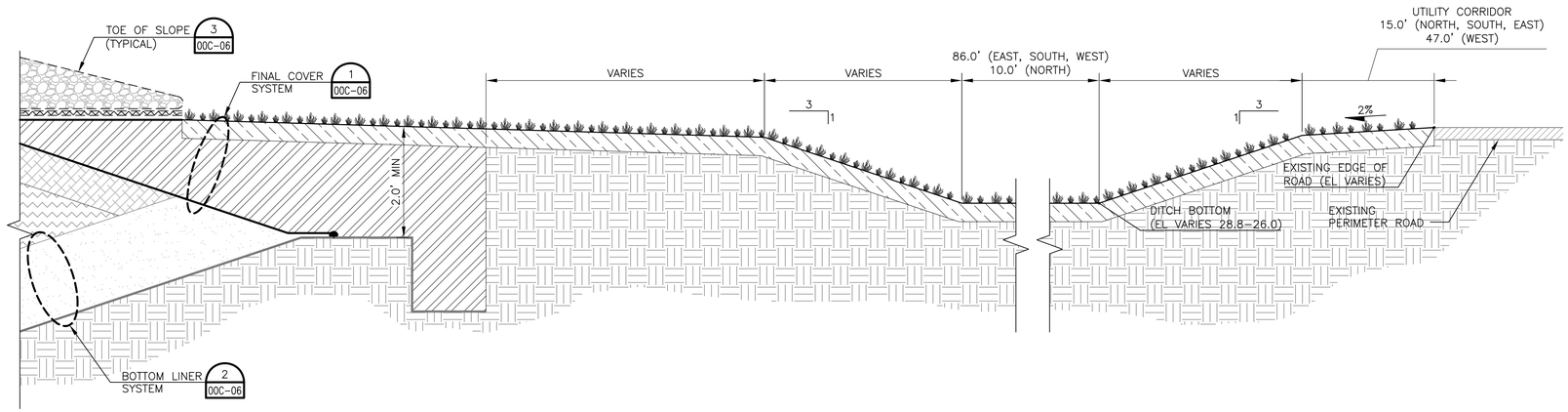
1
00C-03



TERRACE SWALE (HIGH POINT)

NOT TO SCALE

2
00C-03



PERIMETER DITCH

NOT TO SCALE

3
00C-03

HDR Engineering, Inc.
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Jacksonville, FL 32202

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DESIGNED BY	
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CHECKED BY	T. YANOSCHAK, P.E.
PROJECT NUMBER	0000000000139929

Volusia County FLORIDA

CLASS I ACTIVE AREA
TOMOKA FARMS ROAD LANDFILL
VOLUSIA COUNTY, FLORIDA

GENERAL DETAILS
(3 OF 3)

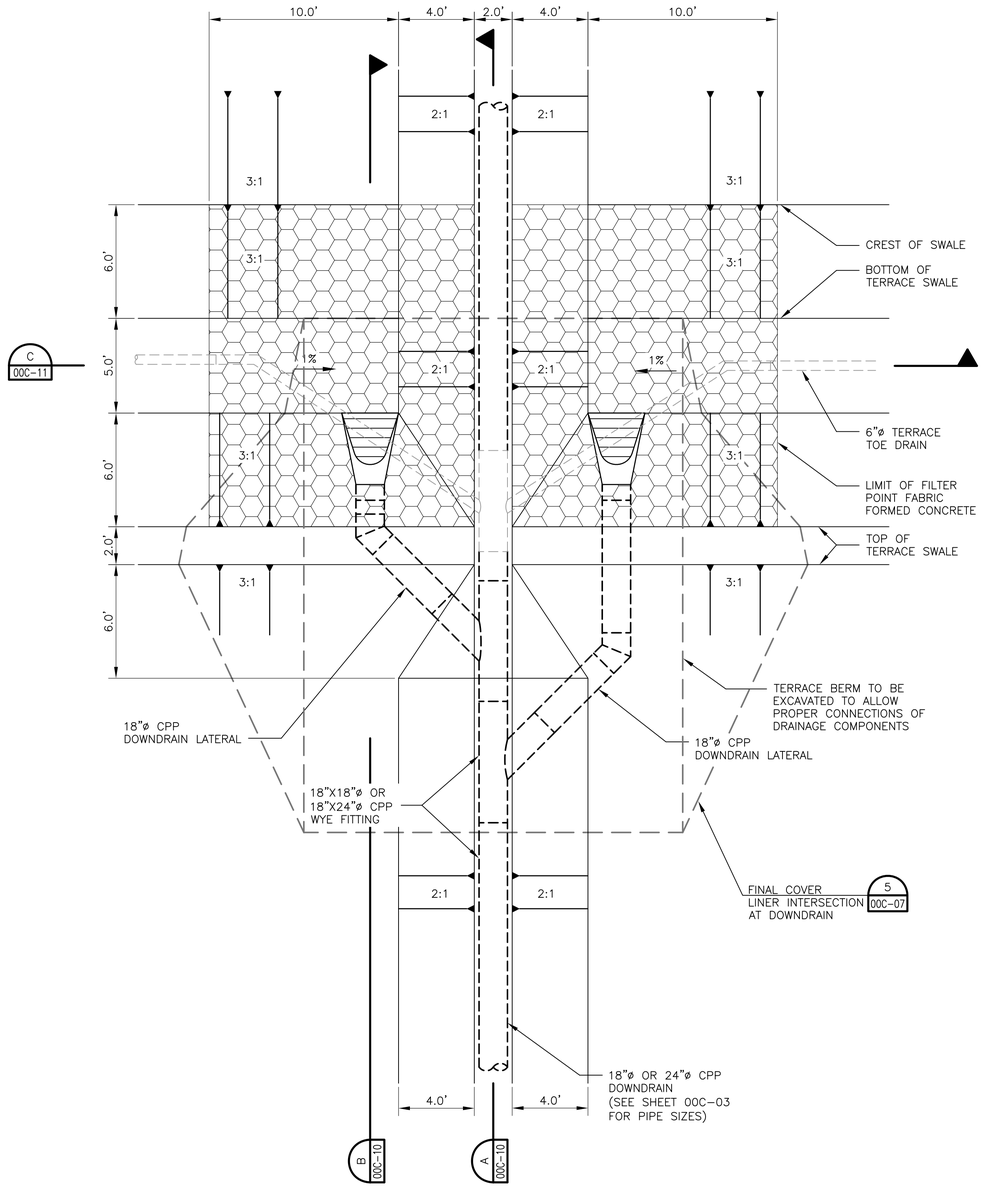
0 1" 2"

FILENAME	00C-08.dwg
SCALE	AS SHOWN

SHEET
00C-08

NOTES:

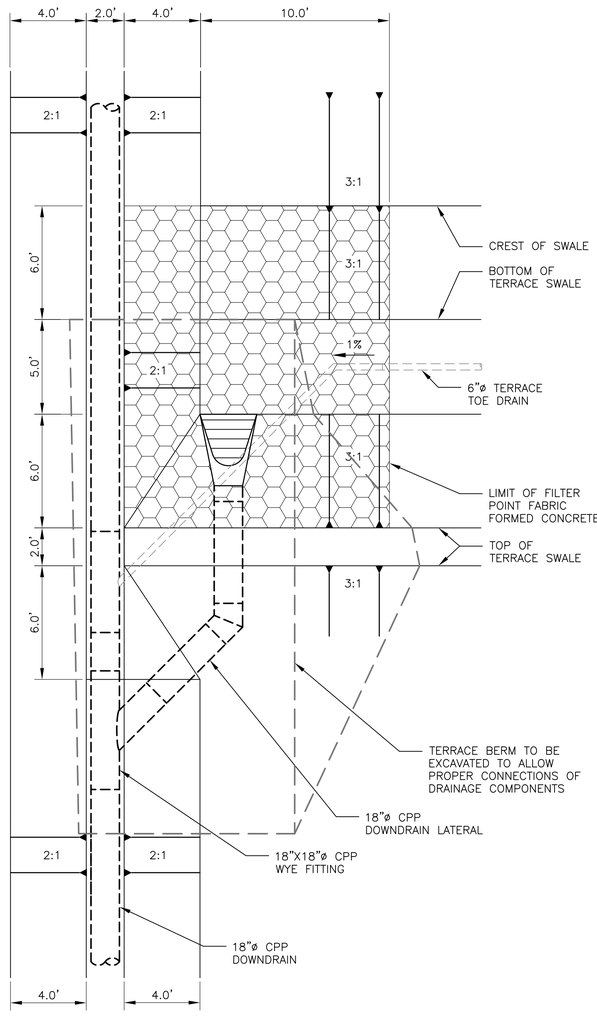
1. ALL PIPE SHALL BE DUAL WALLED CPP WITH WATER TIGHT JOINTS.
2. DASHED LINES REPRESENT BURIED PIPE.
3. ALL FITTING SHALL BE PRE-FABRICATED.
4. PIPE AND FITTINGS SHALL BE INSTALLED TO MANUFACTURER'S RECOMMENDATIONS.
5. TRASH SCREEN SHALL BE CONSTRUCTED FROM 1/2" DIA REBAR INSERTED THROUGH HOLES DRILLED IN FES. BARS SHALL BE 6" OC AND HELD IN PLACE WITH LOCKNUTS.



DOWNDRAIN (DOUBLE INLET)

NOT TO SCALE

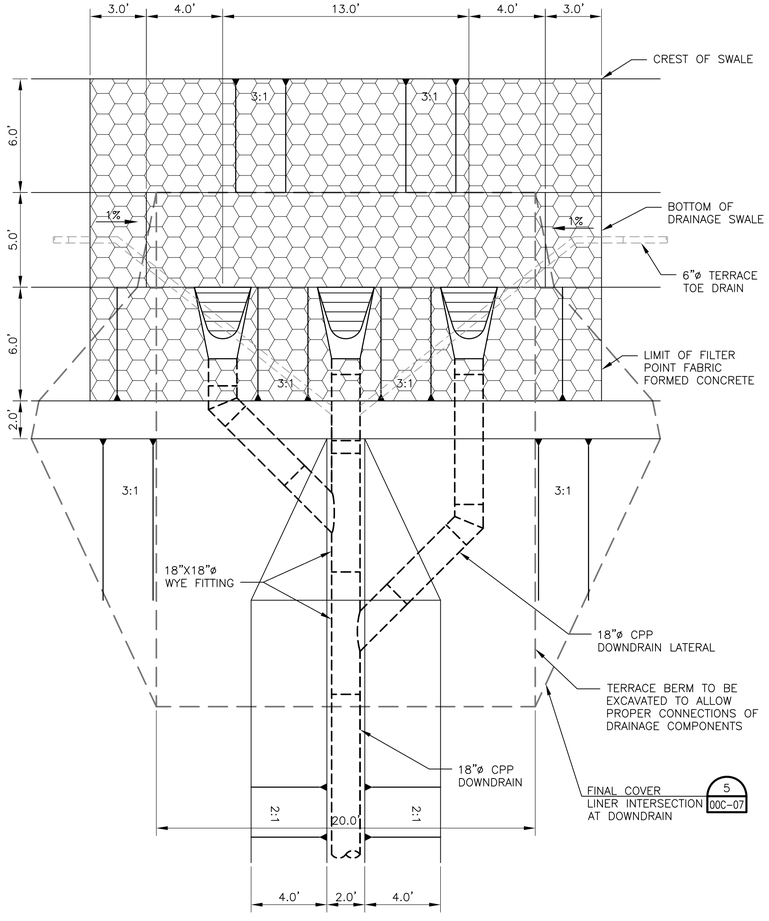
1 00C-03



DOWNDRAIN (SINGLE INLET)

NOT TO SCALE

2 00C-03



DOWNDRAIN (INTERMEDIATE TOP DECK INLET)

NOT TO SCALE

3 00C-04

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

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PROJECT NUMBER	0000000000139929

Volusia County FLORIDA

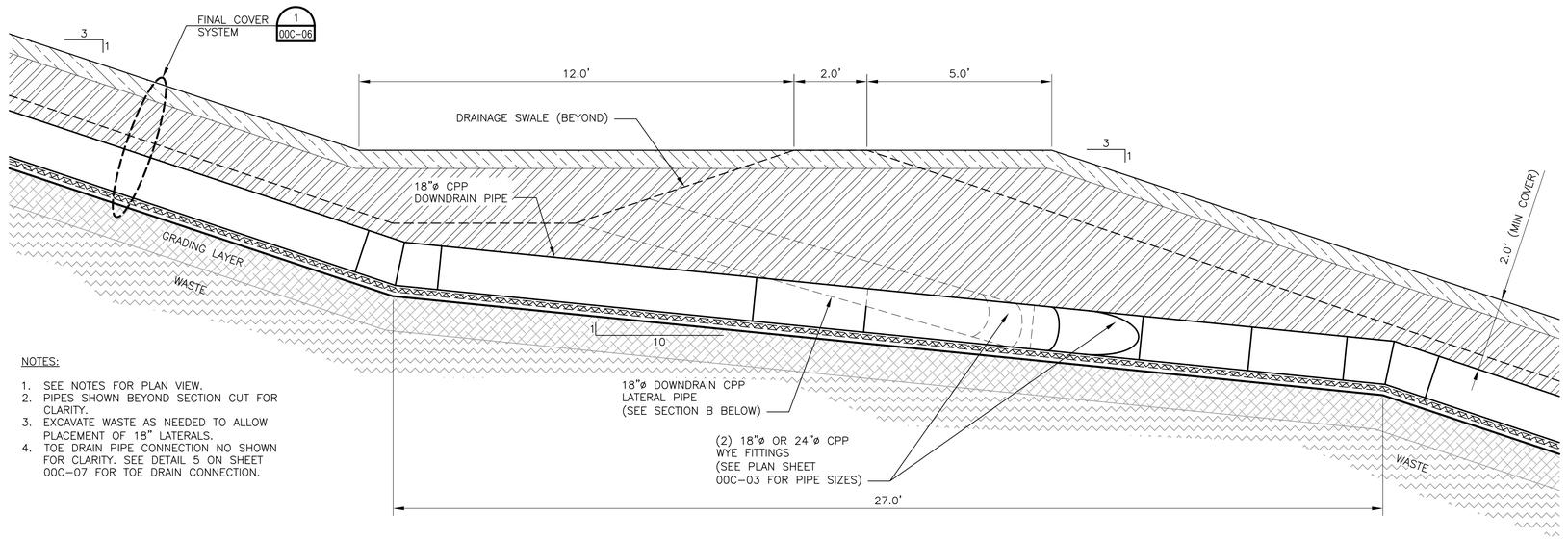
CLASS I ACTIVE AREA
TOMOKA FARMS ROAD LANDFILL
VOLUSIA COUNTY, FLORIDA

DRAINAGE DETAILS (1 OF 5)

0 1" 2"

FILENAME	00C-09.dwg
SCALE	AS SHOWN

SHEET **00C-09**



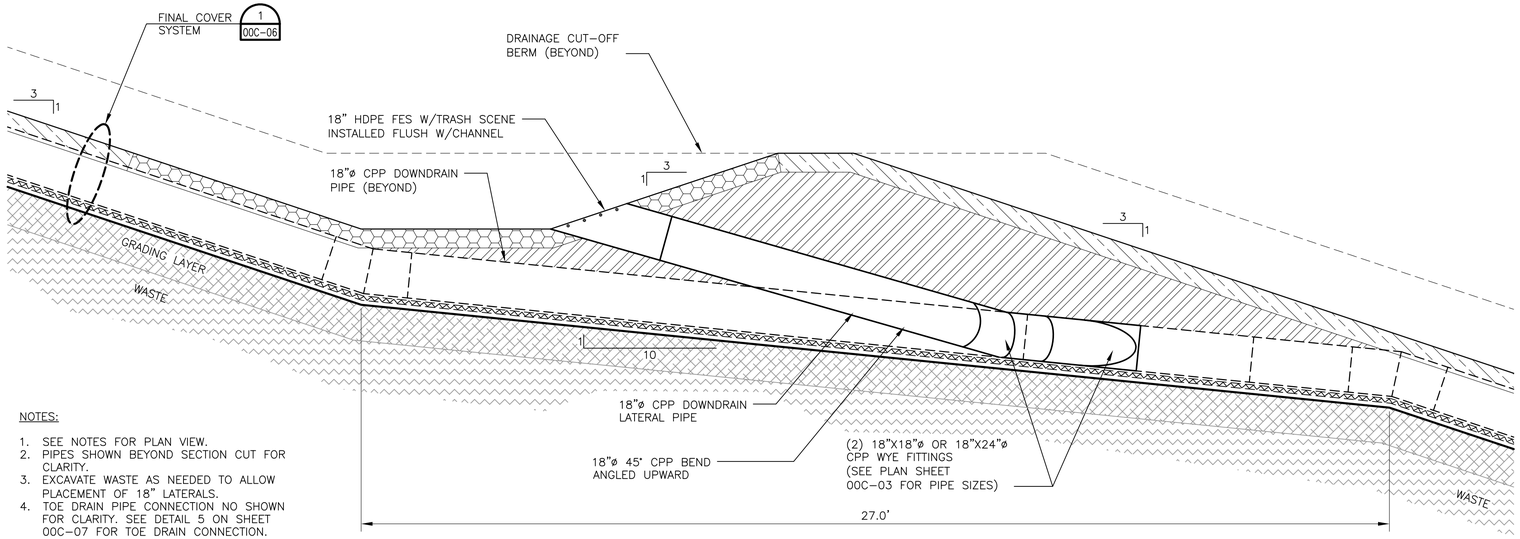
NOTES:

1. SEE NOTES FOR PLAN VIEW.
2. PIPES SHOWN BEYOND SECTION CUT FOR CLARITY.
3. EXCAVATE WASTE AS NEEDED TO ALLOW PLACEMENT OF 18" LATERALS.
4. TOE DRAIN PIPE CONNECTION NO SHOWN FOR CLARITY. SEE DETAIL 5 ON SHEET 00C-07 FOR TOE DRAIN CONNECTION.

DOWNDRAIN – SECTION A

NOT TO SCALE

A
00C-09



NOTES:

1. SEE NOTES FOR PLAN VIEW.
2. PIPES SHOWN BEYOND SECTION CUT FOR CLARITY.
3. EXCAVATE WASTE AS NEEDED TO ALLOW PLACEMENT OF 18" LATERALS.
4. TOE DRAIN PIPE CONNECTION NO SHOWN FOR CLARITY. SEE DETAIL 5 ON SHEET 00C-07 FOR TOE DRAIN CONNECTION.

DOWNDRAIN – SECTION B

NOT TO SCALE

B
00C-09

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

ISSUE	DATE	DESCRIPTION
A	08/10	ISSUED FOR APPROVAL

PROJECT MANAGER	A. EVANS, P.E.
DESIGNED BY	M. AUSTIN
DESIGNED BY	
DESIGNED BY	
DRAWN BY	M. AUSTIN
CHECKED BY	T. YANOSCHAK, P.E.
PROJECT NUMBER	0000000000139929

Volusia County
FLORIDA

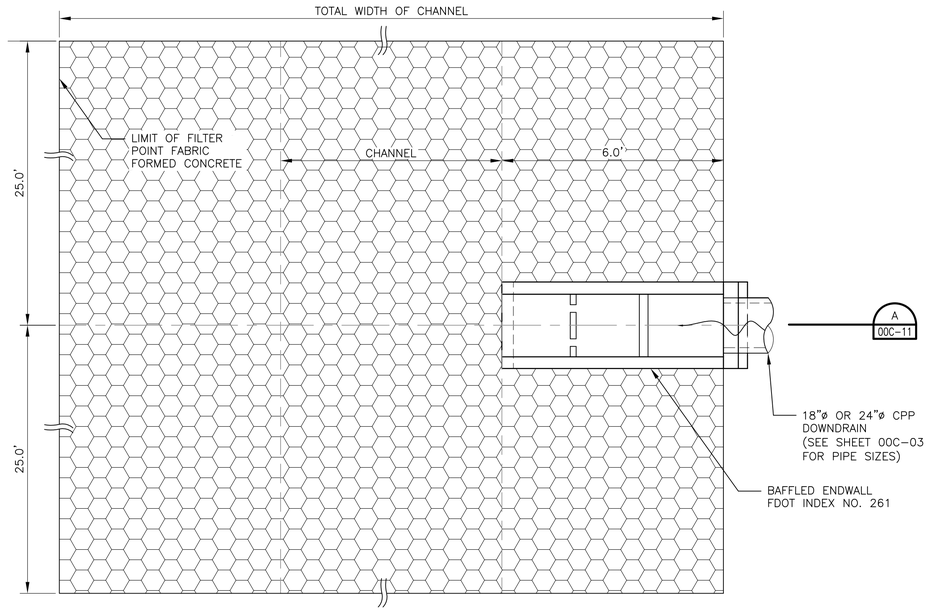
CLASS I ACTIVE AREA
TOMOKA FARMS ROAD LANDFILL
VOLUSIA COUNTY, FLORIDA

DRAINAGE DETAILS (2 OF 5)

0 1" 2"

FILENAME	00C-10.dwg
SCALE	AS SHOWN

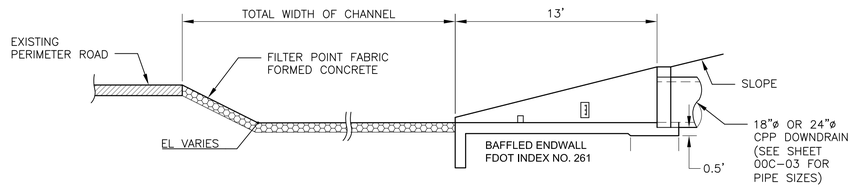
SHEET
00C-10



DOWNDRAIN DISCHARGE STRUCTURE (PLAN)

NOT TO SCALE

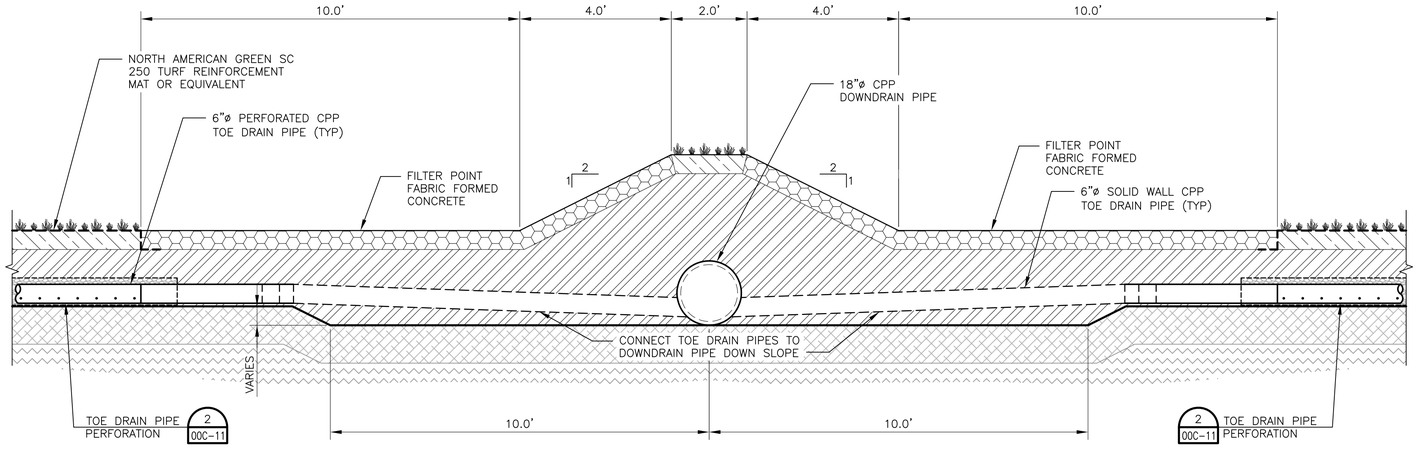
1 00C-03



DOWNDRAIN DISCHARGE STRUCTURE (SECTION)

NOT TO SCALE

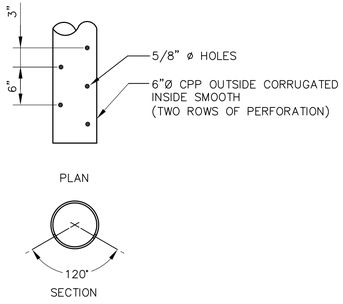
A 00C-11



DOWNDRAIN – SECTION C

NOT TO SCALE

C 00C-09



TOE DRAIN PIPE PERFORATION

NOT TO SCALE

2 –

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

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DESIGNED BY	
DESIGNED BY	
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PROJECT NUMBER	0000000000139929

Volusia County FLORIDA

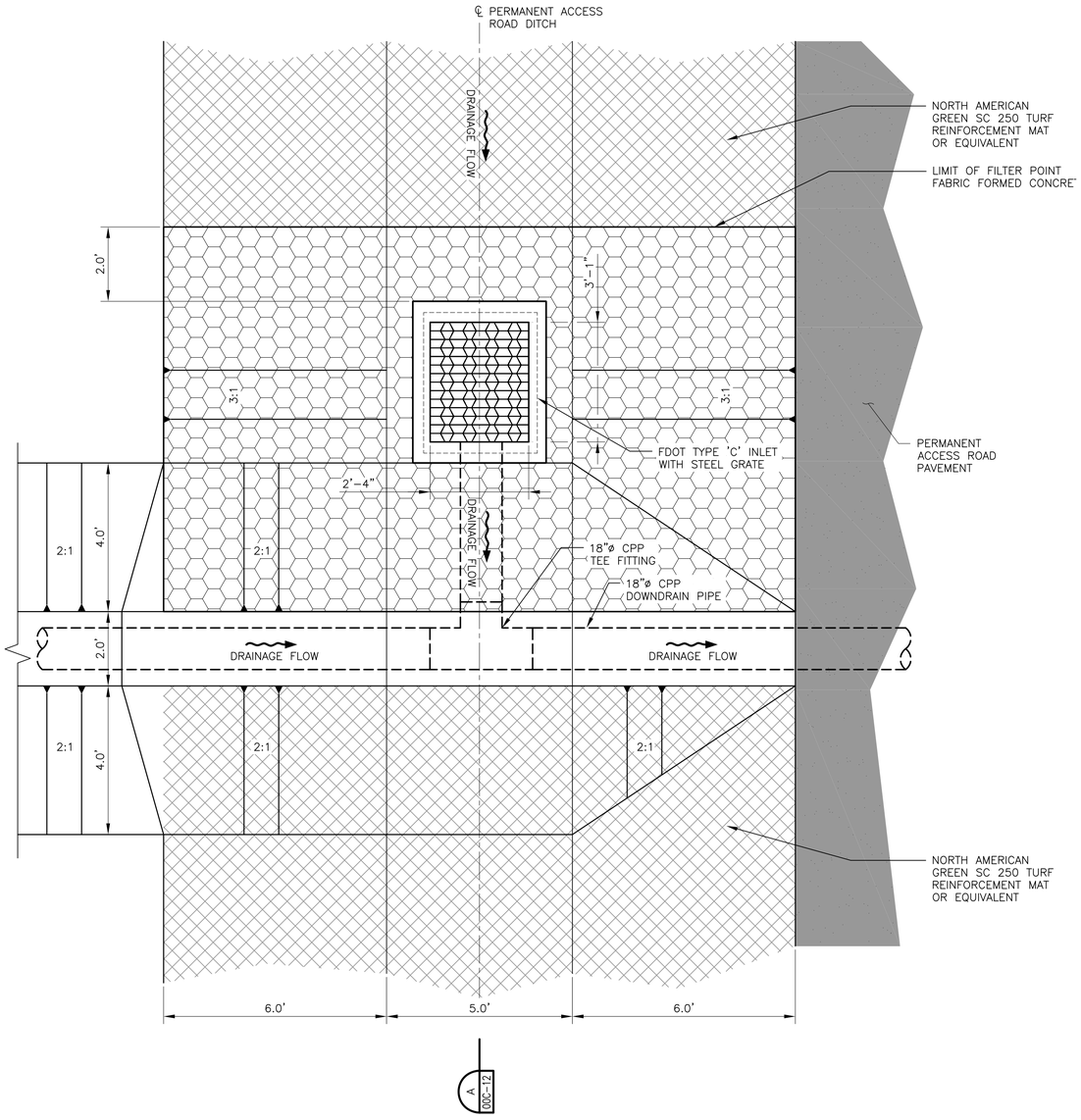
CLASS I ACTIVE AREA
TOMOKA FARMS ROAD LANDFILL
VOLUSIA COUNTY, FLORIDA

DRAINAGE DETAILS (3 OF 5)

0 1" 2"

FILENAME	00C-11.dwg
SCALE	AS SHOWN

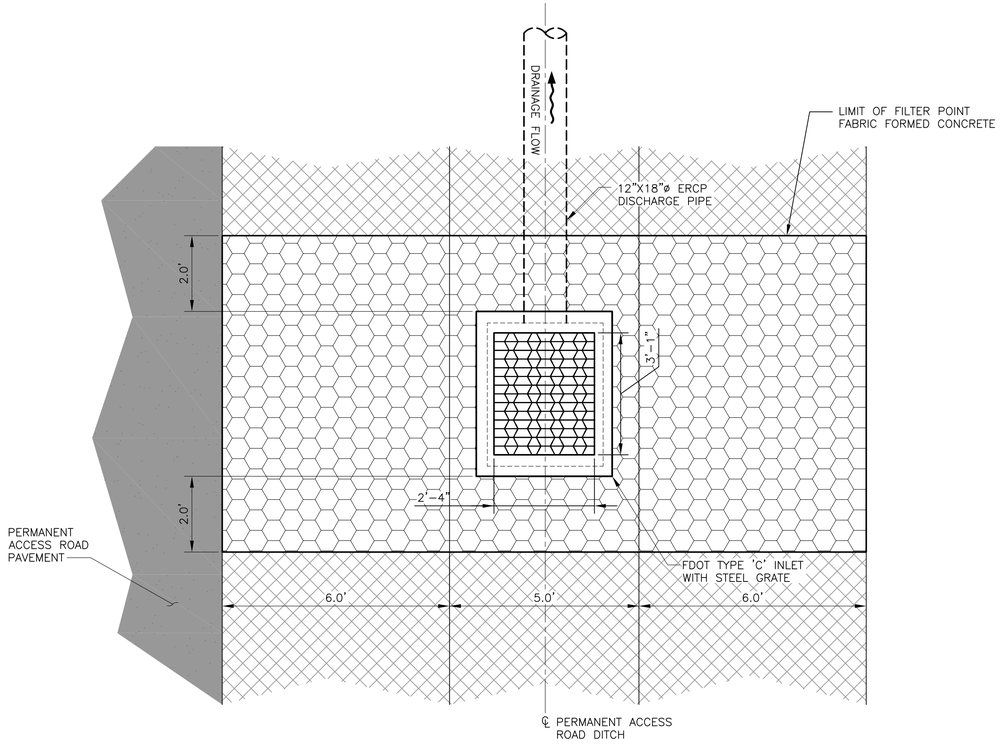
SHEET **00C-11**



DITCH BOTTOM INLET

NOT TO SCALE

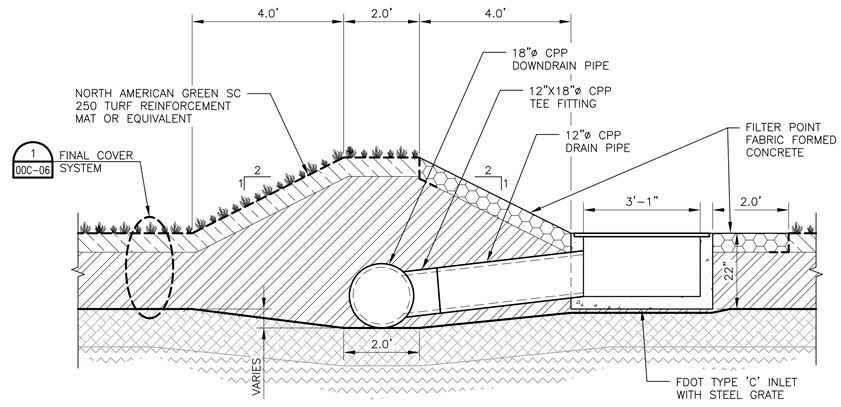
1 00C-03



DITCH BOTTOM INLET (NORTHWEST)

NOT TO SCALE

2 00C-03



DITCH BOTTOM INLET (SECTION)

NOT TO SCALE

A 00C-12

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

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Volusia County FLORIDA

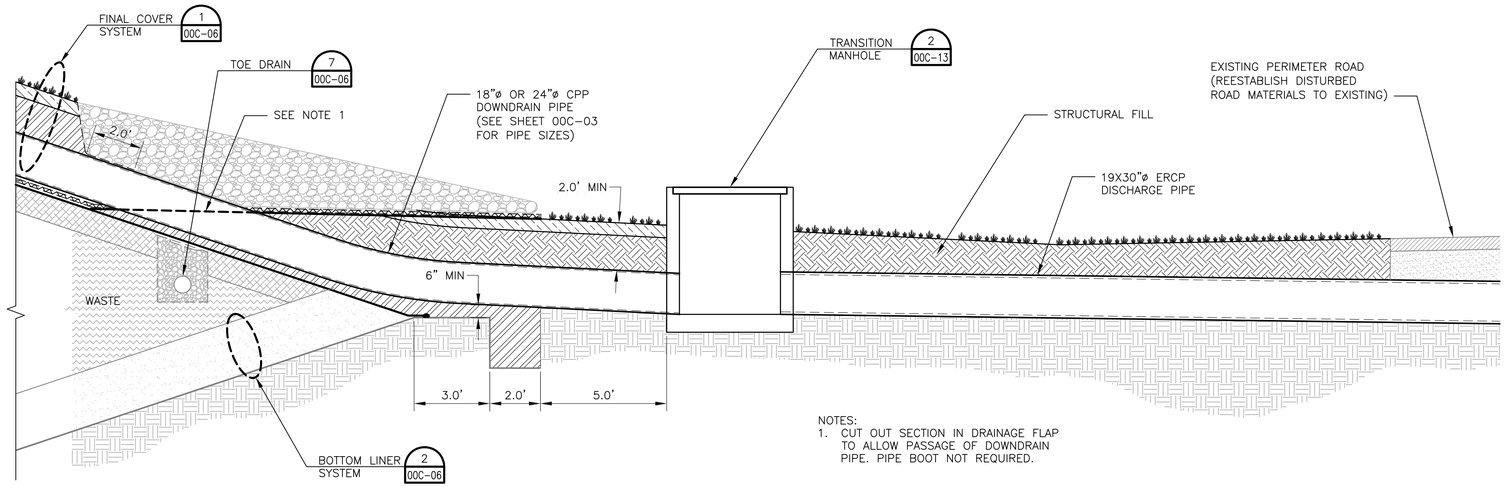
CLASS I ACTIVE AREA
TOMOKA FARMS ROAD LANDFILL
VOLUSIA COUNTY, FLORIDA

DRAINAGE DETAILS (4 OF 5)

0 1" 2"

FILENAME	00C-12.dwg
SCALE	AS SHOWN

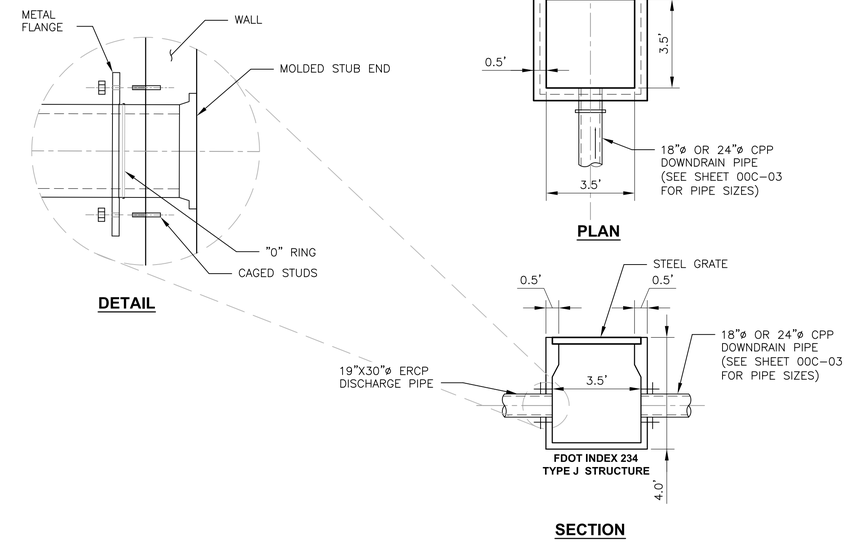
SHEET **00C-12**



NOTES:
1. CUT OUT SECTION IN DRAINAGE FLAP TO ALLOW PASSAGE OF DOWNDRAIN PIPE. PIPE BOOT NOT REQUIRED.

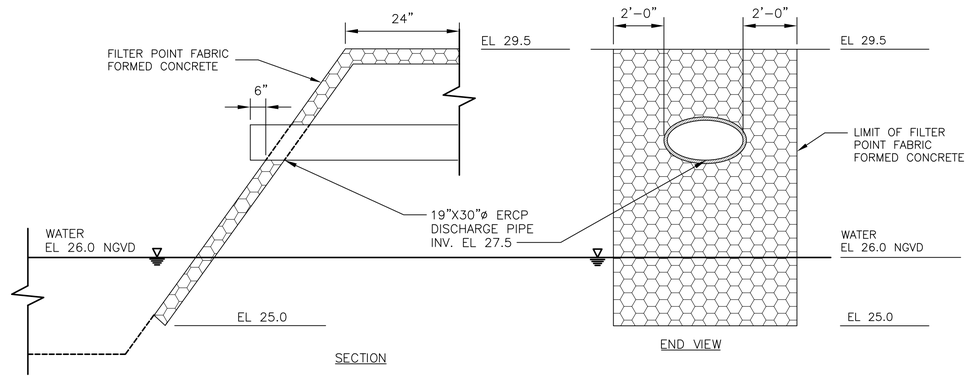
DOWNDRAIN – TOE OF SLOPE
1 00C-03

NOT TO SCALE



TRANSITION MANHOLES
2 00C-03

NOT TO SCALE



DOWNDRAIN DISCHARGE PIPES (NORTH SIDE)
3 00C-03

NOT TO SCALE

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PROJECT NUMBER	0000000000139929

Volusia County FLORIDA

CLASS I ACTIVE AREA
TOMOKA FARMS ROAD LANDFILL
VOLUSIA COUNTY, FLORIDA

DRAINAGE DETAILS (5 OF 5)

0 1" 2"

FILENAME	00C-13.dwg
SCALE	AS SHOWN

SHEET **00C-13**