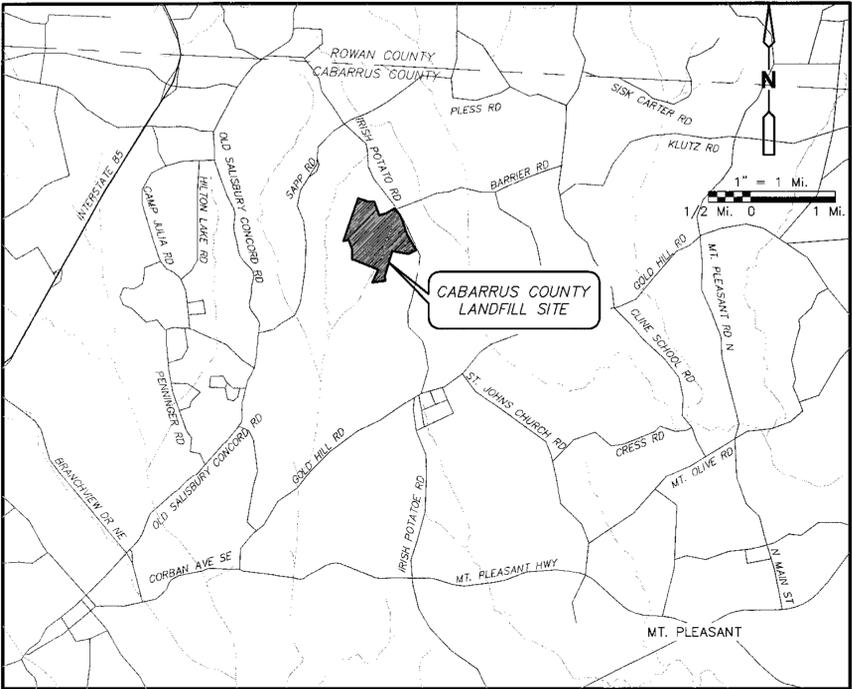


CABARRUS COUNTY
NORTH CAROLINA



CONSTRUCTION PLAN - PHASE 1L EXPANSION CABARRUS COUNTY C&D LANDFILL



LOCATION MAP

DRAWING INDEX

G-1	GENERAL NOTES, LEGEND AND ABBREVIATIONS
C-1	EXISTING CONDITIONS
C-2	BASE GRADING PLAN
C-3	LEACHATE COLLECTION PLAN
C-4	EROSION AND SEDIMENTATION CONTROL PLAN
D-1	LINER AND MISCELLANEOUS DETAILS
D-2	LEACHATE COLLECTION DETAILS
D-3	STORMWATER CONTROL DETAILS
D-4	EROSION AND SEDIMENTATION CONTROL DETAILS
D-5	EROSION AND SEDIMENTATION CONTROL DETAILS II
D-6	EROSION AND SEDIMENTATION CONTROL DETAILS III
D-7	LEACHATE STORAGE TANK
D-8	TRUCK LOAD OUT AREA DETAILS
E-1	ELECTRICAL SYMBOLS AND ABBREVIATIONS
E-2	ELECTRICAL SYMBOLS AND ABBREVIATIONS
E-3	ELECTRICAL SITE PLAN AND RISER DIAGRAMS
E-4	TRANSFER PUMP STATION AND LEACHATE COLLECTION PUMP STATION ELECTRICAL PLANS
E-5	ELECTRICAL DETAILS

SEPTEMBER 2010

CDM Camp Dresser & McKee

consulting
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construction
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5400 Glenwood Avenue, Suite 300
Raleigh, North Carolina 27612
Tel: 919-787-5620 Fax: 919-781-5730
North Carolina Firm Licensure: F-0412

CDM PROJECT No: 1278-77070



GENERAL NOTES:

- 1. THE LIMITS OF CONSTRUCTION SHOWN ON THE PLANS SHALL BE STRICTLY OBSERVED BY THE CONTRACTOR. ALL INGRESS, EGRESS AND TRAFFIC PATTERNS ON THE SITE SHALL BE WITHIN THE LIMITS OF CONSTRUCTION AND ESTABLISHED ACCESS ROADS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND REPAIRING ACCESS ROADS USED BY HIS EQUIPMENT TO ORIGINAL CONDITION OR BETTER.
3. SURVEY INFORMATION WAS PROVIDED BY AN AERIAL SURVEY PERFORMED FEBRUARY 1999 BY HUTCHINSON AND BIGGS AND EARLIER SURVEY DATED 1994.
4. ADDITIONAL FILLING HAS OCCURED WITHIN THE EXISTING C&D LANDFILL DISPOSAL AREA SINCE DATE OF TOPOGRAPHIC SURVEY.
5. ADDITIONAL EXCAVATION HAS OCCURED WITHIN ACTIVE BORROW AREA SINCE DATE OF TOPOGRAPHIC SURVEY.
6. TRAVERSE ADJUSTED BY LEAST SQUARES ADJUSTMENT METHOD; RAW ERROR OF CLOSURE 1:10,000+.
7. AREA COMPUTED BY COORDINATE COMPUTATIONS.
8. ALL DISTANCES SHOWN ARE HORIZONTAL GROUND DISTANCES UNLESS OTHERWISE NOTED.
9. SUBJECT PROPERTY LOCATED IN ZONE X (AREAS DETERMINED TO BE OUTSIDE OUTSIDE 500-YEAR FLOODPLAIN) AS PER F.I.R.M. PANEL 37025C0045 D, EFFECTIVE DATE NOVEMBER 2, 1994.
10. ELEVATIONS TRANSFERRED FROM GPS #4 (AS PER REFERENCE #5); ELEVATION = 753.95' (NGVD 29).
11. CONTRACTOR SHALL PROTECT ALL STREAMS AND WETLANDS AS SHOWN ON SHEET C-4.

REFERENCES:

- 1. ALL DEEDS AND MAPS SHOWN HEREON.
2. CABARRUS COUNTY ON-LINE G.I.S. TAX MAP.
3. UNRECORDED MAP ENTITLED "BOUNDARY SURVEY OF: CABARRUS COUNTY LANDFILL", BY CONCORD ENGINEERING & SURVEYING, INC., DATED JANUARY 1, 1987, LAST REVISED MAY 31, 1988, CESI JOB NO. 88-02-46.
4. UNRECORDED MAP ENTITLED "TOPOGRAPHIC SURVEY OF: CABARRUS COUNTY LANDFILL", BY CESI LAND DEVELOPMENT SERVICES, DATED FEBRUARY 27, 2007, CESI JOB NO. 070107.000.
5. UNRECORDED MAP ENTITLED "GPS VECTOR MAP; CABARRUS COUNTY LANDFILL GPS CONTROL MONUMENTS", BY CONCORD ENGINEERING & SURVEYING, INC., DATED JUNE 3, 1994, CESI JOB NO. 94-05-47.
6. UNRECORDED MAP ENTITLED "TOPOGRAPHIC SURVEY OF: ACTIVE CELL AT CABARRUS COUNTY LANDFILL", BY CESI LAND DEVELOPMENT SERVICES, DATED OCTOBER 26, 2007, CESI JOB NO. 070913.000.
7. UPDATED SURVEY INFORMATION OF EXISTING C&D LANDFILL PROVIDED BY CESI, INC. DATED MAY 19, 2010.

TRAFFIC CONTROL AND ACCESS:

- 1. THE CABARRUS COUNTY SOLID WASTE FACILITY WILL REMAIN IN OPERATION DURING THE PROJECT. COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE OWNER SO THAT OPERATIONS ARE NOT INTERRUPTED OR ADVERSELY IMPACTED.
2. CONTRACTOR SHALL NOT DELIVER MATERIALS TO THE SITE ON WEEKENDS WITHOUT PRIOR APPROVAL OF THE OWNER OR ENGINEER.

WATER USAGE:

- 1. CONTRACTOR SHALL OBTAIN A SEPERATE WATER METER FROM LOCAL AUTHORITY FOR CONTRACTOR WATER USE FOR PROJECT. WATER USAGE WILL NOT BE AVAILABLE AT THE LANDFILL SITE.

ELECTRICAL USAGE:

- 1. CONTRACTOR SHALL OBTAIN A SEPERATE ELECTRICAL METER FROM POWER COMPANY FOR CONTRACTOR ELECTRICAL USE FOR PROJECT.

EROSION CONTROL:

- 1. CONTRACTOR SHALL BE RESPONSIBLF FOR REMOVING SEDIMENTATION FROM EXISTING DRAINAGE CHANNELS, CULVERTS, AND PONDS AS DIRECTED BY THE ENGINEER. UPON COMPLETION, THE DRAINAGE STRUCTURES SHALL BE RETURNED TO PRE-CONSTRUCTION CONDITION OR BETTER AND SEDIMENTATION BASINS SHALL BE CLEANED TO BASE GRADES.
2. EROSION AND SEDIMENTATION CONTROL DEVICES SHALL BE IN PLACE PRIOR TO CLEARING AND GRUBBING. THEY SHALL BE INSTALLED TO THE LIMITS SHOWN ON THE DRAWINGS, AS REQUIRED IN THE SPECIFICATIONS AND IN ACCORDANCE WITH ALL REGULATORY AGENCY REQUIREMENTS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING LANDFILL ACCESS ROADS (INCLUDING DUST CONTROL AND SWEEPING). CONTRACTOR SHALL HAVE SUFFICIENT EQUIPMENT ON SITE (I.E. WATER TRUCK, ETC.) THROUGHOUT THE DURATION OF THE CONTRACT TO ADEQUATELY MAINTAIN THE MAIN LANDFILL ACCESS ROAD.
4. AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE FOR A PERIOD OF MORE THAN 21 CALENDAR DAYS MUST BE STABILIZED WITH TEMPORARY SEEDING.
5. AREAS TO BE STABILIZED WITH PERMANENT VEGETATION MUST BE SEEDED OR PLANTED WITHIN 15 WORKING DAYS AFTER FINAL GRADE IS REACHED, UNLESS TEMPORARY STABILIZATION IS APPLIED.
6. ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED BY THE CONTRACTOR FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL OR AT A MINIMUM ONCE PER WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED.
7. SEDIMENT WILL BE REMOVED FROM BEHIND THE SILT FENCE WHEN IT REACHES A HEIGHT OF 0.5 FEET.
8. SEDIMENT FENCE WILL BE PLACED AROUND MATERIAL STOCKPILES. VEGETATION AND/OR PLASTIC TARPS WILL BE USED TO STABILIZE STOCKPILES, AS NEEDED.

ABBREVIATIONS

Table listing abbreviations and their full names, such as ABAND., A.D., ASPH., APPROX., B/C, BIT., BRG., BVC., CB., C&G., CL., C/L FENCE., CMP., CONC., CONST., CPP., DB., DI., DIA., DW., DIM., E., EA., ELEV., EOP., ESMT., EVC., EX., F/C., FES., FH., FOC., G., GV., HORIZ., HW., IP., INT., INV., L., LB., LP., MAX., MB., MIN., MONO., mph., MIL., OU., N., NTS., OC., PAVT., PC., PERM., PG., PL., PK., PP., PROP., PSE., PT., PVI., PUE., PWR., R., RCP., REINF., RELOC., ROW., S., SD., SDMH., SF., S/R FENCE., SS., SSMH., STA., STD., SW., T., T&B., TAN., TCE., TELE., TEMP., TP., TV., TW., TYP., VC., VERT., W., W/, WM., W/O., W VAULT., WV., 60p., and inches.

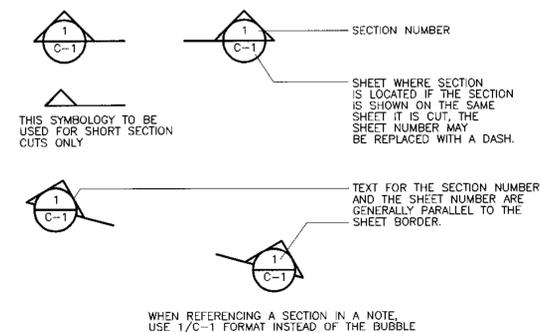
LEGEND

Legend table showing symbols for various features: EXISTING INDEX CONTOUR, EXISTING INTERMEDIATE CONTOUR, PROPOSED INDEX CONTOUR, PROPOSED INTERMEDIATE CONTOUR, LIMITS OF CONSTRUCTION, POROUS BAFFLES, TEMPORARY STORMWATER PUMP, SILT FENCE, TEMPORARY DIVERSION BERM, STONE CHECK DAM, LEVEL SPREADER, ROCK DOUGHNUT INLET PROTECTION, ROCK PIPE INLET PROTECTION, CONTROL POINT, BORING/MONITORING WELL, WETLANDS, PROPERTY LINE, EXISTING ROAD, and PROPOSED ROAD.

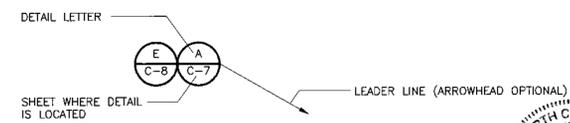
PROTECTION OF EXISTING STRUCTURES AND STORMWATER CONTROL MEASURES:

- 1. THE CONTRACTOR SHALL REPLACE ALL STRUCTURES INCLUDING, BUT NOT LIMITED, TO ASPHALT, CONCRETE AND STONE PAVING, CURBS, DRIVEWAYS, DRAINAGE CULVERTS, FENCES, GAS WELLS, MONITORING WELLS, ETC. THAT WERE REMOVED OR DAMAGED DURING CONSTRUCTION BUT WERE INTENDED TO REMAIN IN SERVICE.
2. LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN ACCORDING TO THE INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS.

SECTION CUT SYMBOLS

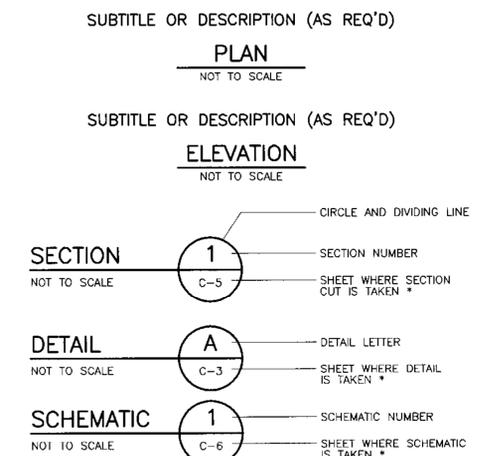


DETAIL CALL OUT SYMBOLS



WHERE A NOTE IS REQUIRED FOR CLARITY, USE A/C-12 FORMAT IN THE NOTE INSTEAD OF BUBBLE. IF MULTIPLE DETAILS REFER TO THE SAME AREA OF THE DRAWING, THE BUBBLES MAY BE STACKED SIDE BY SIDE.

DRAWING, SECTION AND DETAIL TITLES



* IF SECTION, DETAIL, SCHEMATIC OR DIAGRAM IS DRAWN ON THE SAME SHEET THAT IT IS TAKEN FROM, MAY REPLACE THE SHEET NUMBER WITH A HYPHEN. IF THE SECTION IS REFERENCED ON MULTIPLE SHEETS, THE SHEET NUMBER SHOWN SHOULD INDICATE THE FIRST SHEET THE SECTION IS TAKEN FROM.



08/29/10 2:40:01 PM C:\CDM\VAH\ESGWA\0359271\G-1.DWG

Table with columns for DESIGNED BY, DRAWN BY, SHEET CHK'D BY, CROSS CHK'D BY, APPROVED BY, and DATE (SEPTEMBER 2010).

CDM logo and contact information for Camp Dresser & McKee, 5400 Glenwood Avenue, Suite 300, Raleigh, NC 27612.

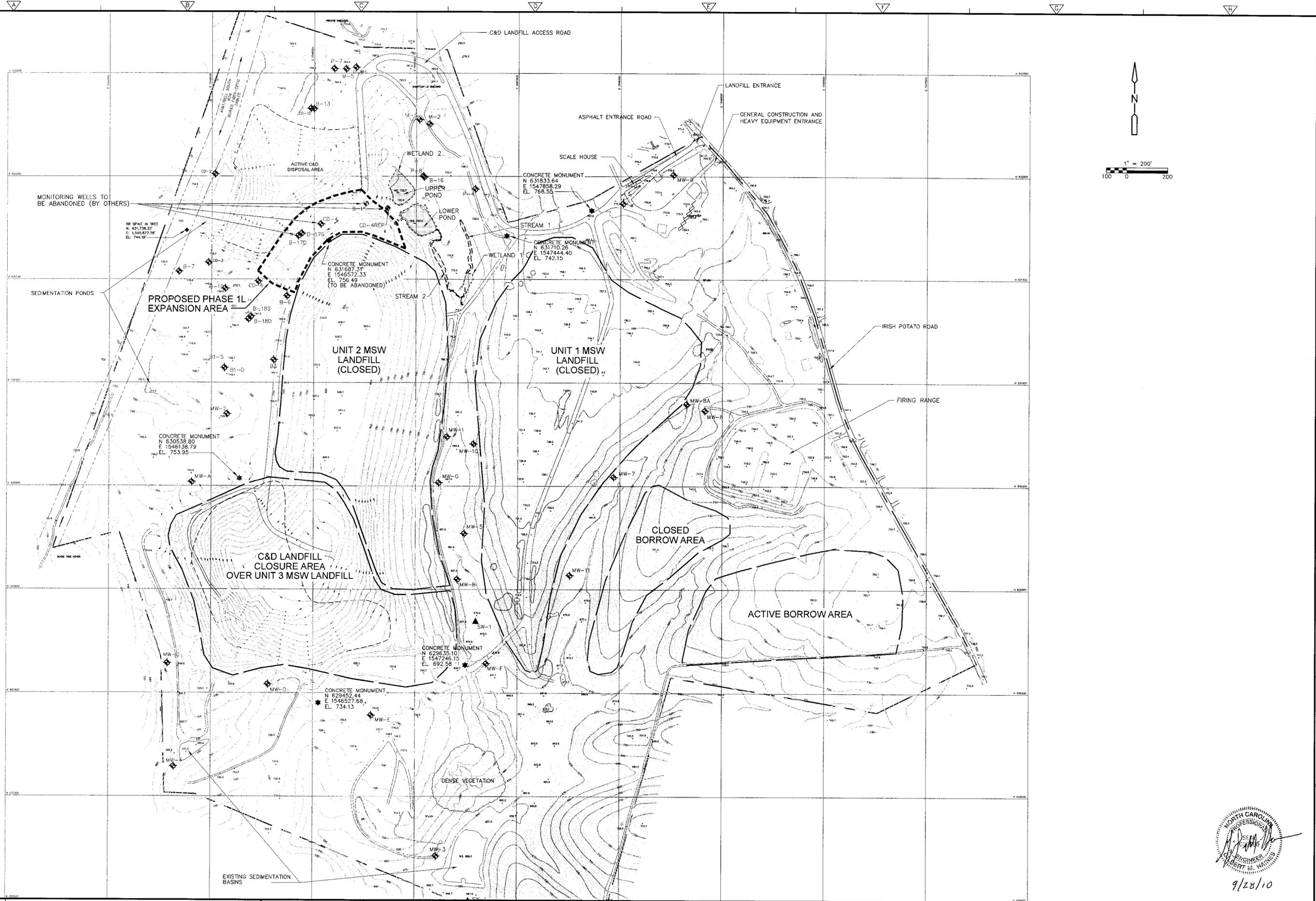
CABARRUS COUNTY NORTH CAROLINA CONSTRUCTION PLAN - PHASE 1L EXPANSION CABARRUS COUNTY C&D LANDFILL

GENERAL NOTES, LEGEND AND ABBREVIATIONS

PROJECT NO. 1278-77070 FILE NAME: G-1

SHEET NO. G-1

Table with columns for REV. NO., DATE, DRWN, CHKD, and REMARKS.



09/29/10 2:31:03 PM C:\CDMM\HAINES\035971\C-1.DWG

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: G. HAINES
 DRAWN BY: J. KILLINGSWORTH
 SHEET CHK'D BY: G. HAINES
 CROSS CHK'D BY: C. GABEL
 APPROVED BY: G. HAINES
 DATE: SEPTEMBER 2010

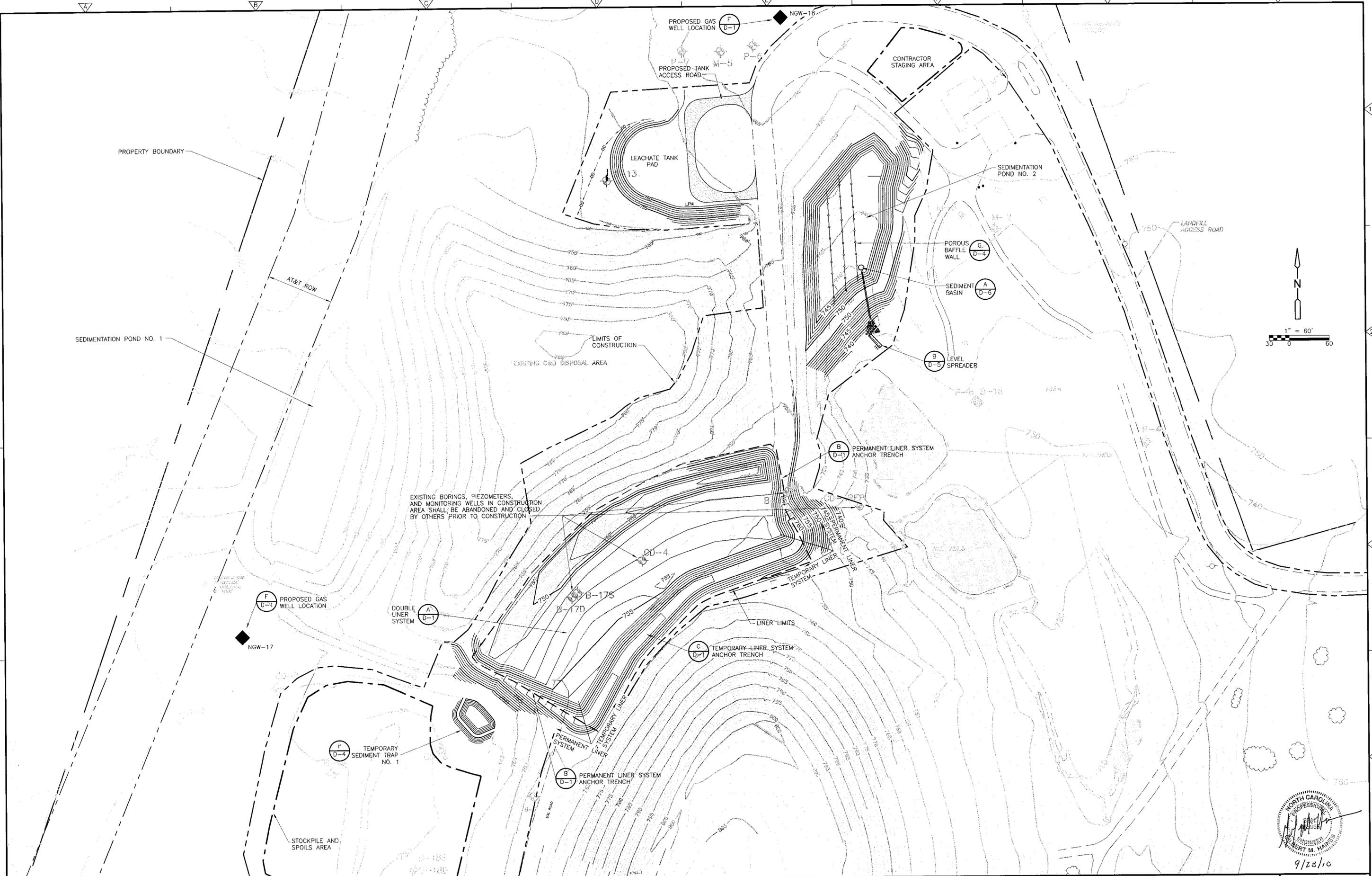
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CABARRUS COUNTY
 NORTH CAROLINA
CONSTRUCTION PLAN - PHASE 1L EXPANSION
CABARRUS COUNTY C&D LANDFILL

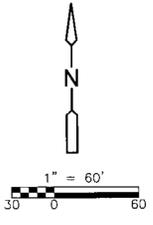
EXISTING CONDITIONS
 SHEET NO. C-1

PROJECT NO. 1278-77070
 FILE NAME: C-1.dwg
 NORTH CAROLINA PROFESSIONAL ENGINEER
 BERT W. HAINES
 9/28/10

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EXISTING BORINGS, PIEZOMETERS, AND MONITORING WELLS IN CONSTRUCTION AREA SHALL BE ABANDONED AND CLOSED BY OTHERS PRIOR TO CONSTRUCTION



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: G. HAINES
 DRAWN BY: J. KILLINGSWORTH
 SHEET CHK'D BY: G. HAINES
 CROSS CHK'D BY: C. GABEL
 APPROVED BY: G. HAINES
 DATE: SEPTEMBER 2010

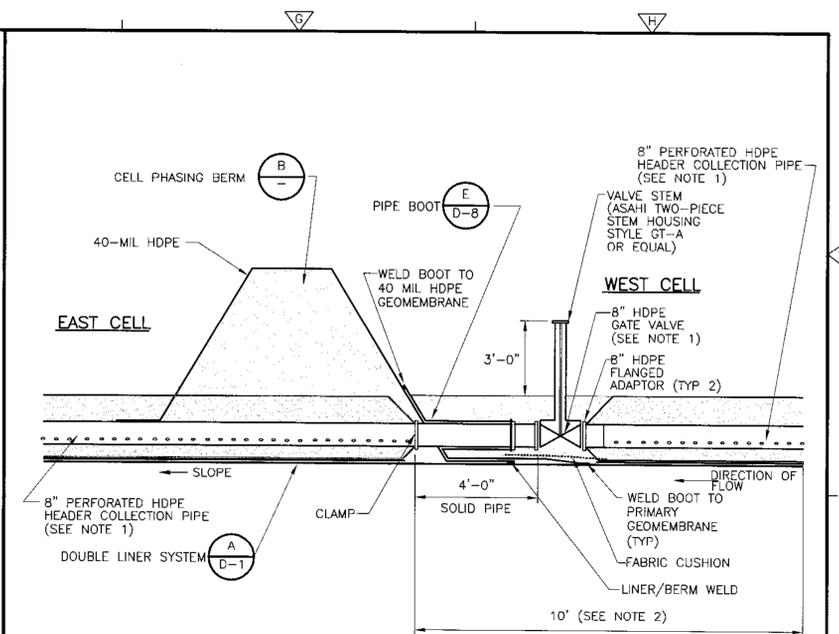
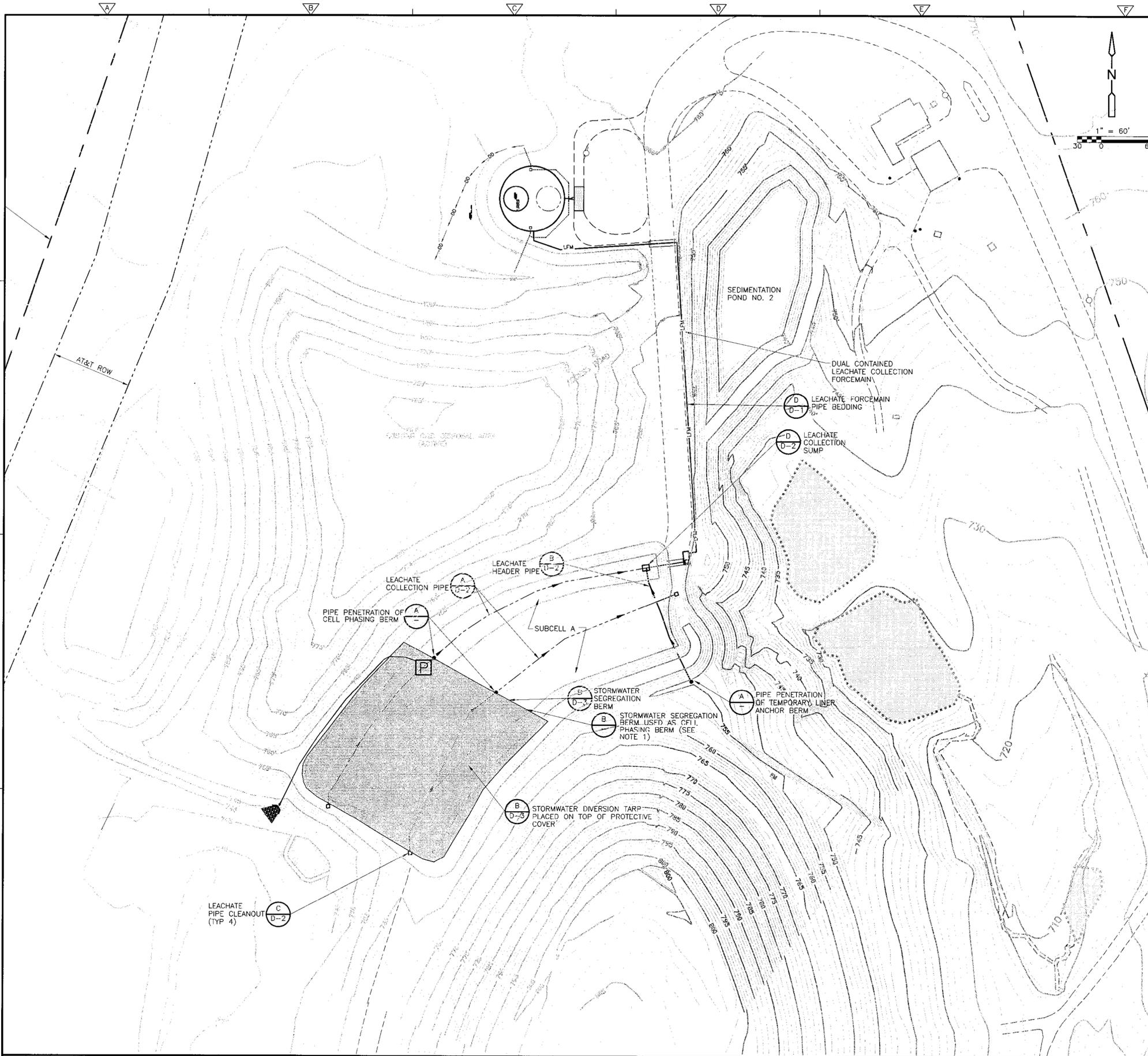
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 NORTH CAROLINA
CONSTRUCTION PLAN - PHASE 1L EXPANSION
CABARRUS COUNTY C&D LANDFILL

BASE GRADING PLAN

PROJECT NO. 1278-77070
 FILE NAME: C-2.dwg
 SHEET NO. **C-2**

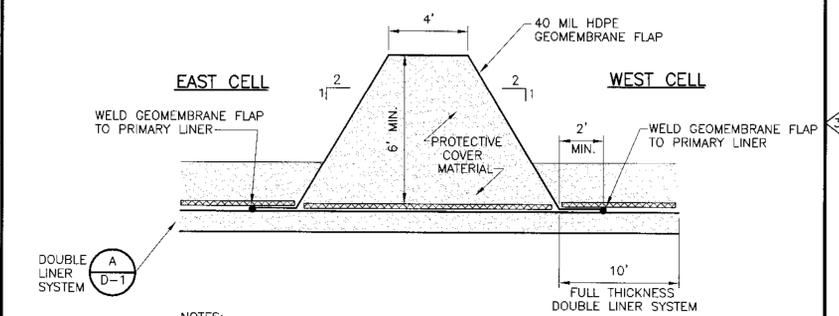
PROFESSIONAL ENGINEER
 NORTH CAROLINA
 BERT M. HAINES
 9/28/10



- NOTES:
- 6" LEACHATE COLLECTION PIPE PENETRATION SHALL REQUIRE A 6" HDPE GATE VALVE AND 6" HDPE FLANGE ADAPTER.
 - CONTRACTOR TO CONSTRUCT LINER AND LCS PIPE 10' BEYOND BERM FOR TEMPORARY LINER SYSTEM ANCHOR BERM PENETRATION.

LCS PIPE PENETRATION OF CELL PHASING BERM AND TEMPORARY LINER SYSTEM ANCHOR BERM

DETAIL A
NTS



- NOTES:
- ONCE CELL IS COMPLETED AND APPROVED BY NCDENR, OWNER, AND ENGINEER, CONTRACTOR TO REMOVE FLAP AND CONNECT DRAINAGE COMPOSITE NET ON NORTH AND SOUTH SIDES IN ACCORDANCE WITH SPECIFICATIONS.

CELL PHASING BERM
DETAIL B
NTS

- NOTES:
- THE OWNER MAY ELECT TO CONSTRUCT THE CELL IN 2 PHASES. IF THIS OPTION IS SELECTED, THE CONTRACTOR SHALL CONSTRUCT THE STORMWATER SEGREGATION BERM AS A CELL PHASING BERM AS SHOWN ON DETAIL B, AND PROVIDE PIPE PENETRATIONS PER DETAIL A. DETAILS A AND B DO NOT APPLY IF THE PHASING OPTION IS NOT PURSUED BY THE OWNER EXCEPT AT THE TEMPORARY LINER SYSTEM ANCHOR BERM.



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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: G. HAINES
 DRAWN BY: J. KILLINGSWORTH
 SHEET CHK'D BY: G. HAINES
 CROSS CHK'D BY: C. GABEL
 APPROVED BY: G. HAINES
 DATE: SEPTEMBER 2010

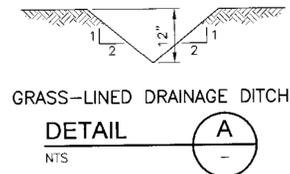
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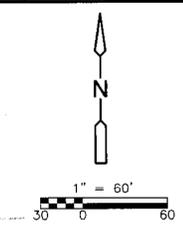
**CONSTRUCTION PLAN - PHASE 1L EXPANSION
 CABARRUS COUNTY C&D LANDFILL**

LEACHATE COLLECTION PLAN

PROJECT NO. 1278-77070
 FILE NAME: C-3.dwg
 SHEET NO.
C-3



GRASS-LINED DRAINAGE DITCH
DETAIL
NTS

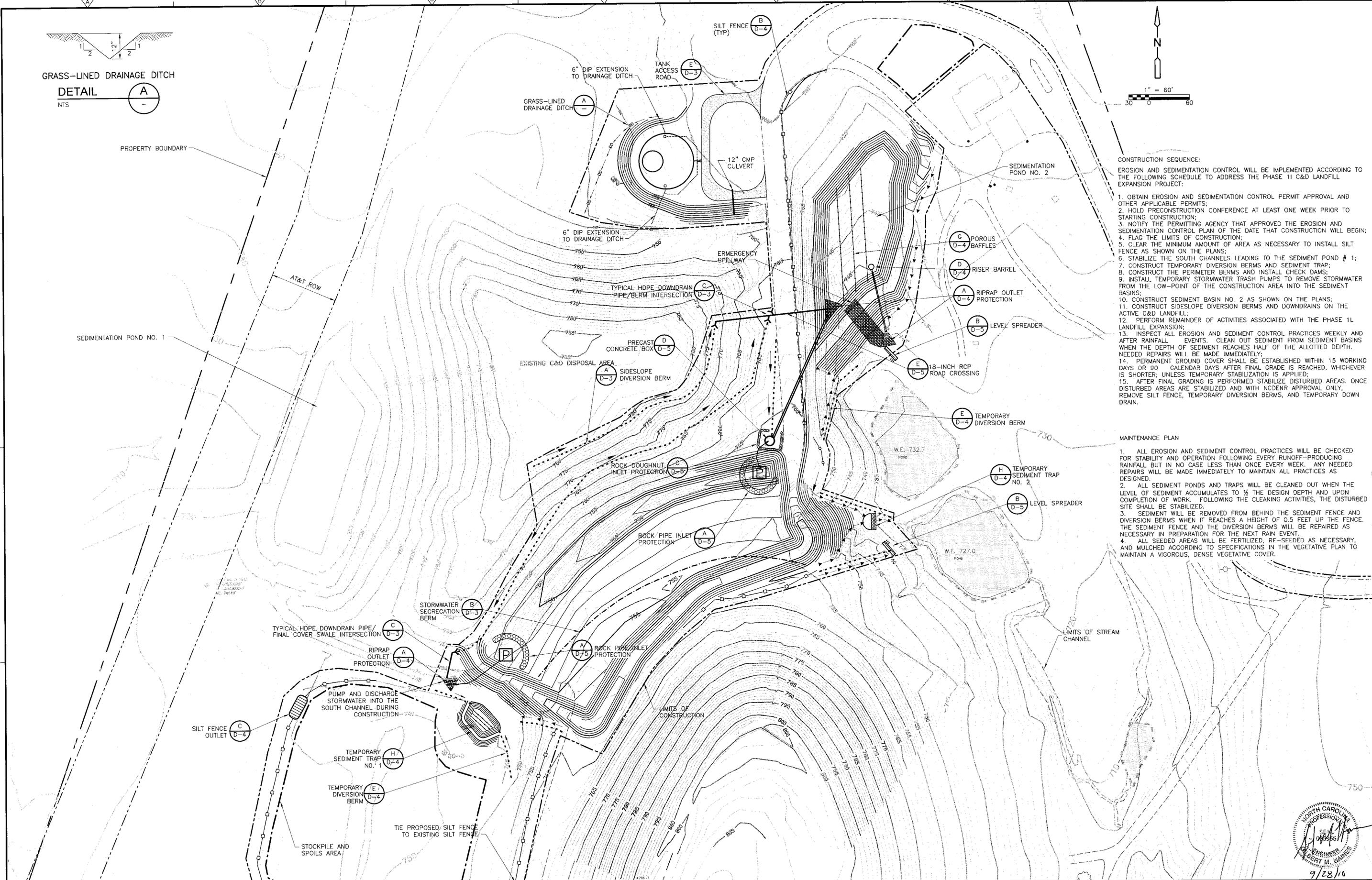


CONSTRUCTION SEQUENCE:
EROSION AND SEDIMENTATION CONTROL WILL BE IMPLEMENTED ACCORDING TO THE FOLLOWING SCHEDULE TO ADDRESS THE PHASE 1L C&D LANDFILL EXPANSION PROJECT:

1. OBTAIN EROSION AND SEDIMENTATION CONTROL PERMIT APPROVAL AND OTHER APPLICABLE PERMITS;
2. HOLD PRECONSTRUCTION CONFERENCE AT LEAST ONE WEEK PRIOR TO STARTING CONSTRUCTION;
3. NOTIFY THE PERMITTING AGENCY THAT APPROVED THE EROSION AND SEDIMENTATION CONTROL PLAN OF THE DATE THAT CONSTRUCTION WILL BEGIN;
4. FLAG THE LIMITS OF CONSTRUCTION;
5. CLEAR THE MINIMUM AMOUNT OF AREA AS NECESSARY TO INSTALL SILT FENCE AS SHOWN ON THE PLANS;
6. STABILIZE THE SOUTH CHANNELS LEADING TO THE SEDIMENT POND # 1;
7. CONSTRUCT TEMPORARY DIVERSION BERMS AND SEDIMENT TRAP;
8. CONSTRUCT THE PERIMETER BERMS AND INSTALL CHECK DAMS;
9. INSTALL TEMPORARY STORMWATER TRASH PUMPS TO REMOVE STORMWATER FROM THE LOW-POINT OF THE CONSTRUCTION AREA INTO THE SEDIMENT BASINS;
10. CONSTRUCT SEDIMENT BASIN NO. 2 AS SHOWN ON THE PLANS;
11. CONSTRUCT SIDESLOPE DIVERSION BERMS AND DOWNDRAINS ON THE ACTIVE C&D LANDFILL;
12. PERFORM REMAINDER OF ACTIVITIES ASSOCIATED WITH THE PHASE 1L LANDFILL EXPANSION;
13. INSPECT ALL EROSION AND SEDIMENT CONTROL PRACTICES WEEKLY AND AFTER RAINFALL EVENTS. CLEAN OUT SEDIMENT FROM SEDIMENT BASINS WHEN THE DEPTH OF SEDIMENT REACHES HALF OF THE ALLOTTED DEPTH. NEEDED REPAIRS WILL BE MADE IMMEDIATELY;
14. PERMANENT GROUND COVER SHALL BE ESTABLISHED WITHIN 15 WORKING DAYS OR 90 CALENDAR DAYS AFTER FINAL GRADE IS REACHED, WHICHEVER IS SHORTER, UNLESS TEMPORARY STABILIZATION IS APPLIED;
15. AFTER FINAL GRADING IS PERFORMED STABILIZE DISTURBED AREAS. ONCE DISTURBED AREAS ARE STABILIZED AND WITH NCDENR APPROVAL ONLY, REMOVE SILT FENCE, TEMPORARY DIVERSION BERMS, AND TEMPORARY DOWN DRAIN.

MAINTENANCE PLAN

1. ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED.
2. ALL SEDIMENT PONDS AND TRAPS WILL BE CLEANED OUT WHEN THE LEVEL OF SEDIMENT ACCUMULATES TO 1/2 THE DESIGN DEPTH AND UPON COMPLETION OF WORK. FOLLOWING THE CLEANING ACTIVITIES, THE DISTURBED SITE SHALL BE STABILIZED.
3. SEDIMENT WILL BE REMOVED FROM BEHIND THE SEDIMENT FENCE AND DIVERSION BERMS WHEN IT REACHES A HEIGHT OF 0.5 FEET UP THE FENCE. THE SEDIMENT FENCE AND THE DIVERSION BERMS WILL BE REPAIRED AS NECESSARY IN PREPARATION FOR THE NEXT RAIN EVENT.
4. ALL SEEDED AREAS WILL BE FERTILIZED, RF-SEEDED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.



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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: G. HAINES
 DRAWN BY: J. KILLINGSWORTH
 SHEET CHK'D BY: G. HAINES
 CROSS CHK'D BY: C. CABEL
 APPROVED BY: G. HAINES
 DATE: SEPTEMBER 2010

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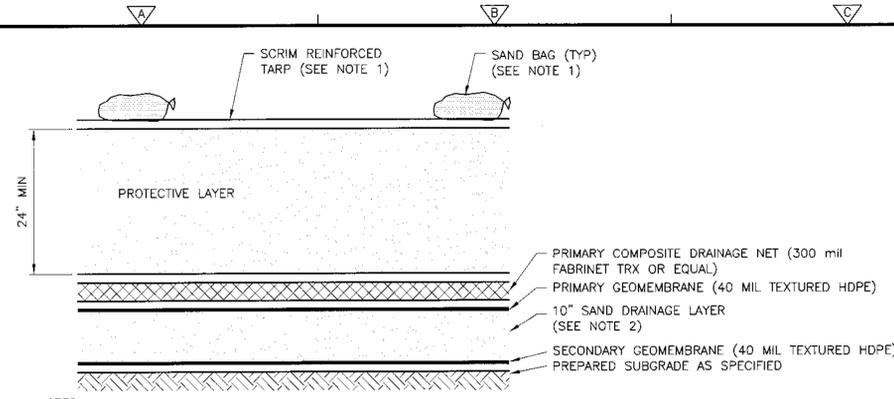
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 NORTH CAROLINA

**CONSTRUCTION PLAN - PHASE 1L EXPANSION
 CABARRUS COUNTY C&D LANDFILL**

EROSION AND SEDIMENTATION CONTROL PLAN

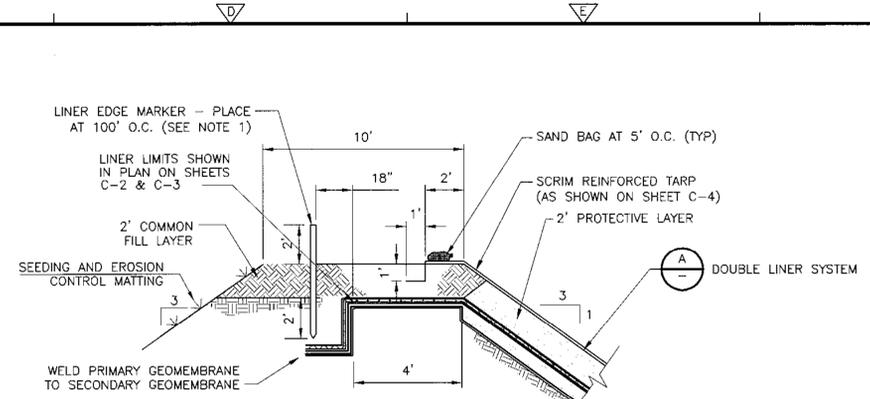
PROJECT NO. 1278-77070
 FILE NAME: C-4.dwg
 SHEET NO. C-4





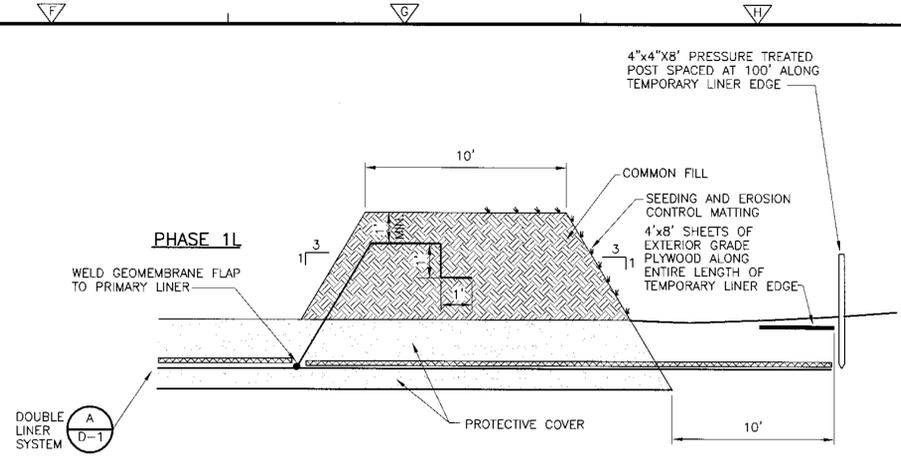
- NOTES:
- TARP AND SANDBAGS INSTALLED PER SPECIFICATION AND ONLY IN THE AREA SHOWN ON SHEET C-4.
 - 10" SAND DRAINAGE LAYER FOR THE SECONDARY LEACHATE COLLECTION SYSTEM SHALL BE THE SAME MATERIAL AS THE PROTECTIVE COVER, WITH HYDRAULIC CONDUCTIVITY OF 5x10⁻⁶ CM/SEC OR GREATER (MORE PERMEABLE).

DOUBLE LINER SYSTEM
DETAIL A
NTS C-3

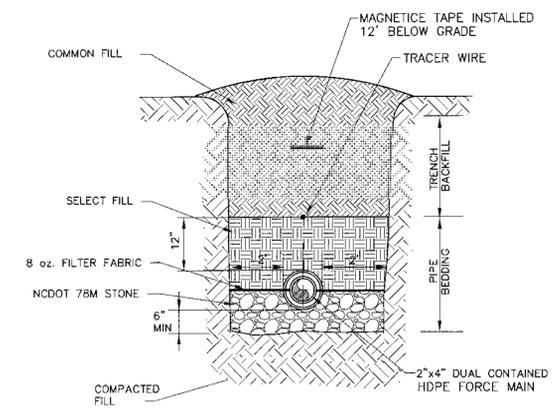


- NOTES:
- MARKER SHALL BE A CARSONITE 72" CFUM-400 CURV-FLEX. MARKER DECAL SHALL READ "EDGE OF LINER" AND SHALL BE CUSTOM DECAL 2 COLOR (YELLOW) NON-REFLECTIVE, 2 7/8"x1/16".

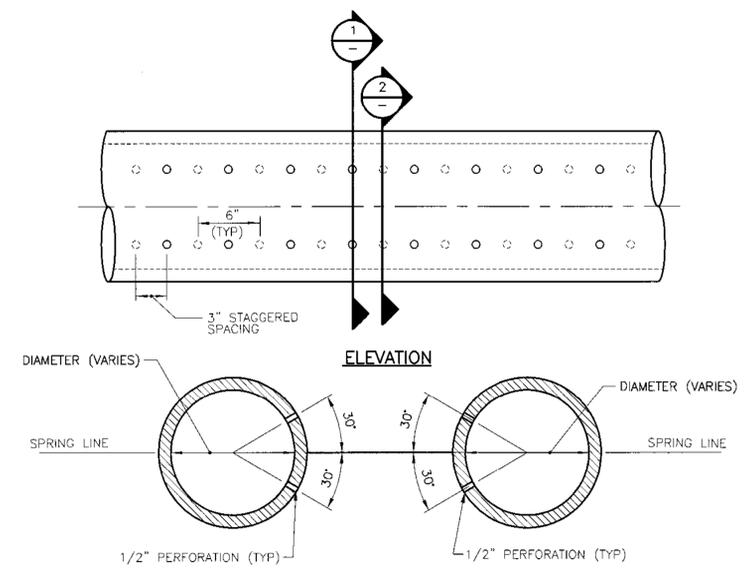
PERMANENT LINER SYSTEM ANCHOR TRENCH
DETAIL B
NTS C-2



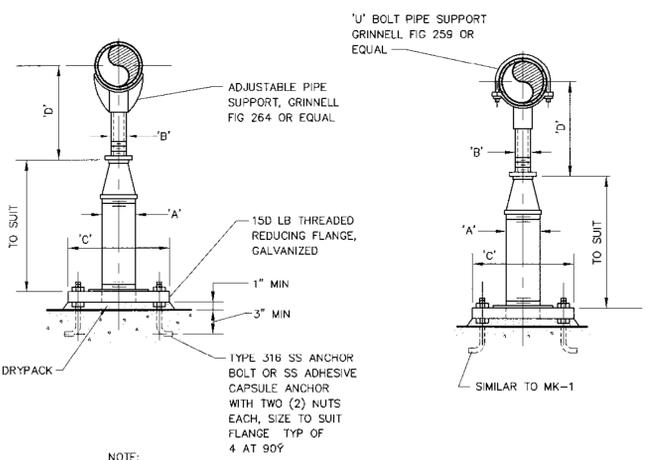
TEMPORARY LINER SYSTEM ANCHOR TRENCH
DETAIL C
NTS C-2



LEACHATE FORCEMAIN PIPE BEDDING
DETAIL D
NTS C-3

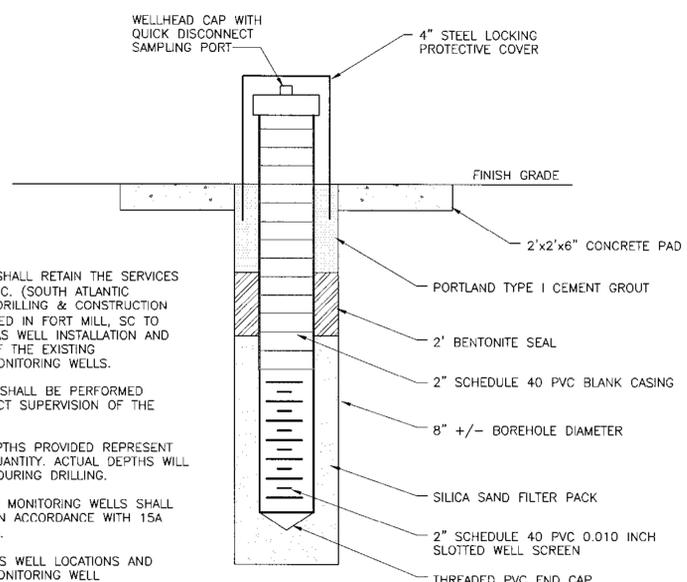


PERFORATED HDPE PIPE
DETAIL E
NTS



ADJUSTABLE PIPE SUPPORT
DETAIL G
NTS D-7

- NOTES:
- CONTRACTOR SHALL RETAIN THE SERVICES OF SAEDACCO, INC. (SOUTH ATLANTIC ENVIRONMENTAL DRILLING & CONSTRUCTION COMPANY) LOCATED IN FORT MILL, SC TO PERFORM THE GAS WELL INSTALLATION AND ABANDONMENT OF THE EXISTING GROUNDWATER MONITORING WELLS.
 - ALL DRILLING SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF THE ENGINEER.
 - THE WELL DEPTHS PROVIDED REPRESENT AN ESTIMATED QUANTITY. ACTUAL DEPTHS WILL BE DETERMINED DURING DRILLING.
 - GROUNDWATER MONITORING WELLS SHALL BE ABANDONED IN ACCORDANCE WITH 15A NCAC 2C.0113(d).
 - PROPOSED GAS WELL LOCATIONS AND GROUNDWATER MONITORING WELL ABANDONMENT LOCATIONS ARE SHOWN ON SHEET C-1.



PROPOSED MONITORING GAS WELL	DEPTH (FT)
NGW-17	30
NGW-18	30

TYPICAL GAS WELL
DETAIL F
NTS C-1

09/29/10 2:40:51 PM C:\CDM\HAINES\00358271\0-1.DWG

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: G. HAINES
 DRAWN BY: M. KOSKI
 SHEET CHK'D BY: G. HAINES
 CROSS CHK'D BY: C. GABEL
 APPROVED BY: G. HAINES
 DATE: SEPTEMBER 2010

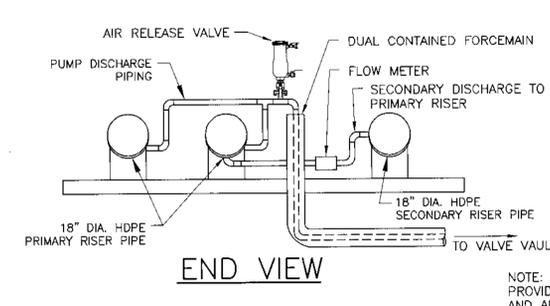
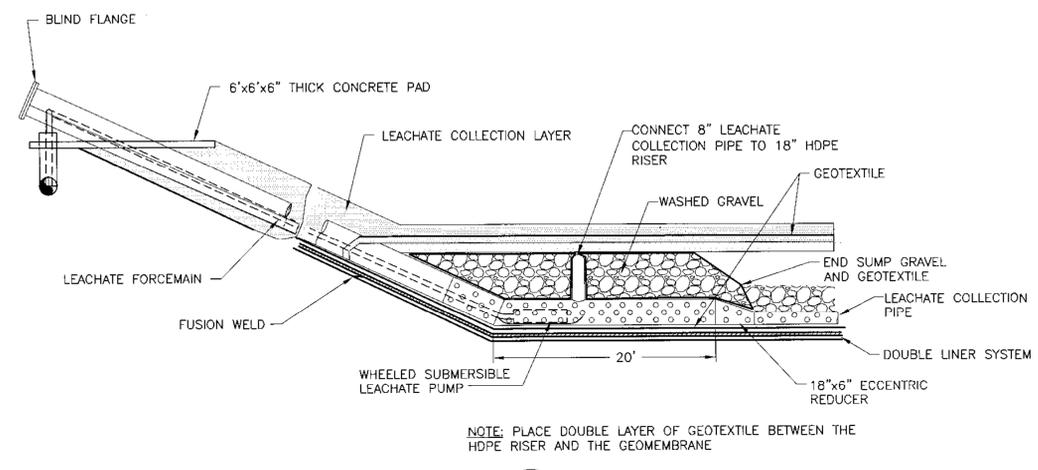
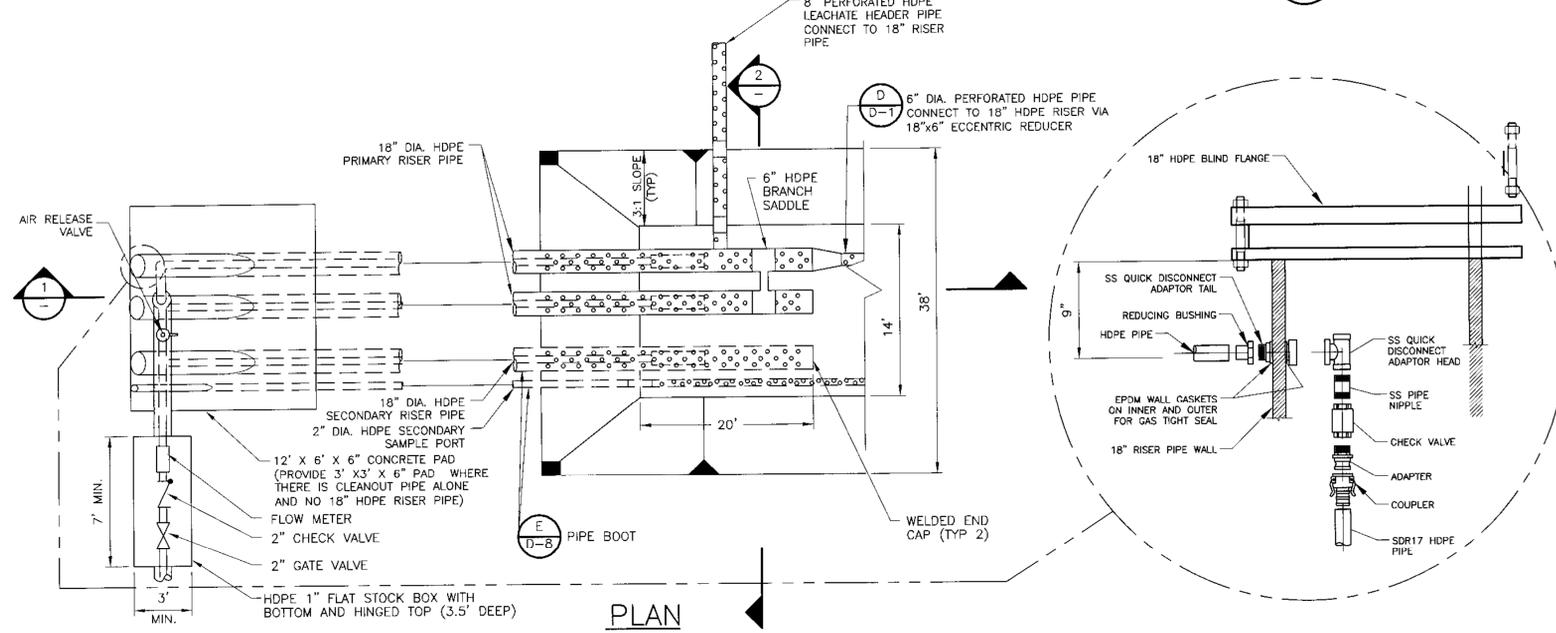
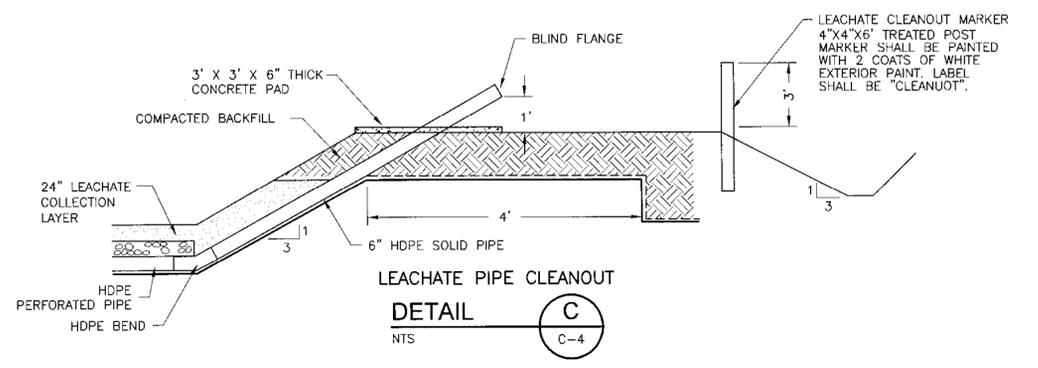
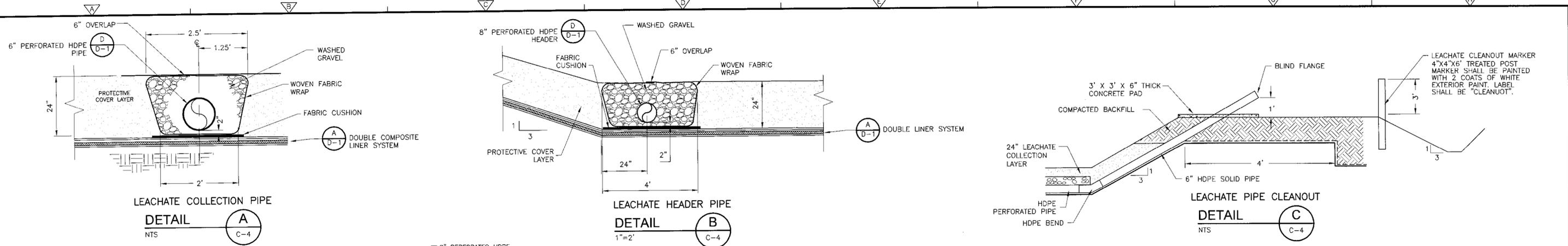
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CABARRUS COUNTY C&D LANDFILL

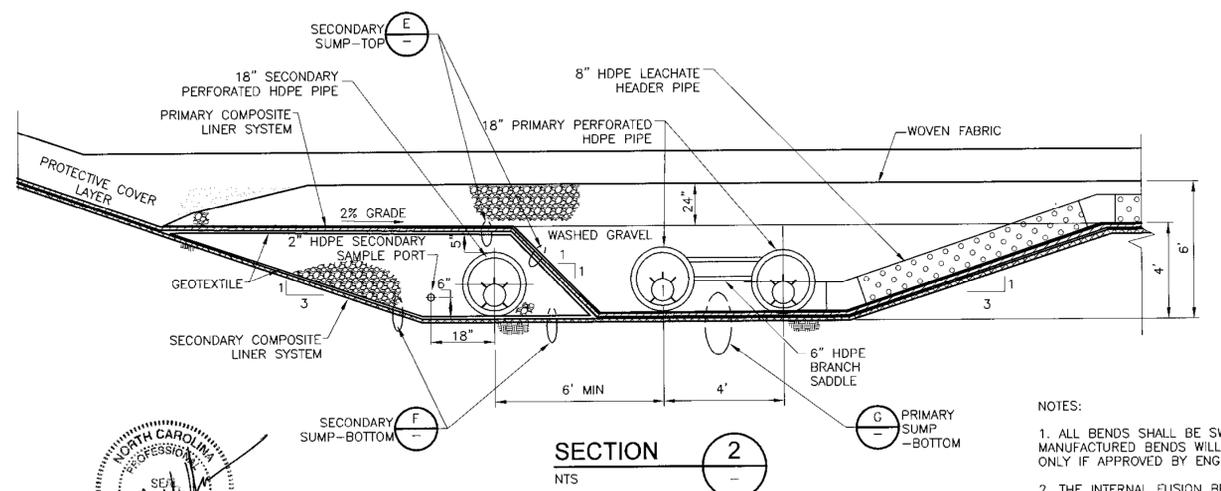
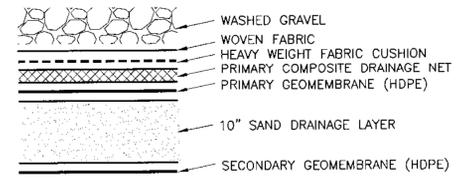
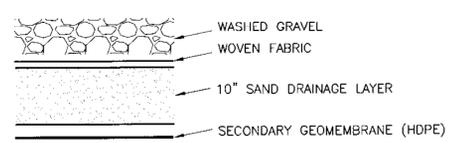
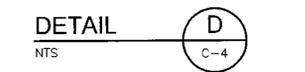
LINER AND MISCELLANEOUS DETAILS

PROJECT NO. 1278-7707
 FILE NAME: D-1
 SHEET NO. D-1

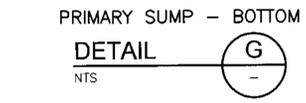
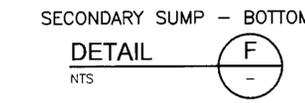
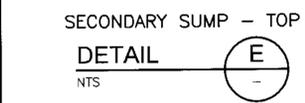
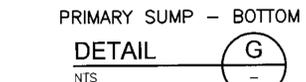
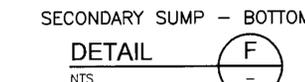
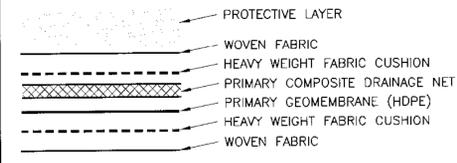




LEACHATE COLLECTION SUMP AND SIDESLOPE RISER



NOTES:
1. ALL BENDS SHALL BE SWEEPING, MANUFACTURED BENDS WILL BE USED ONLY IF APPROVED BY ENGINEER.
2. THE INTERNAL FUSION BEAD SHALL BE REMOVED IN THE LEACHATE PUMP SLOPE RISERS PER SPECIFICATION SECTION 02623.



DESIGNED BY: G. HAINES
DRAWN BY: M. KOSKI
SHEET CHK'D BY: G. HAINES
CROSS CHK'D BY: C. GABEL
APPROVED BY: G. HAINES
DATE: SEPTEMBER 2010

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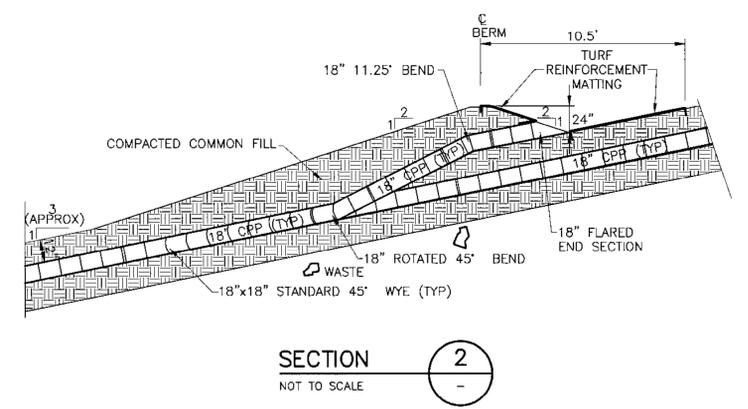
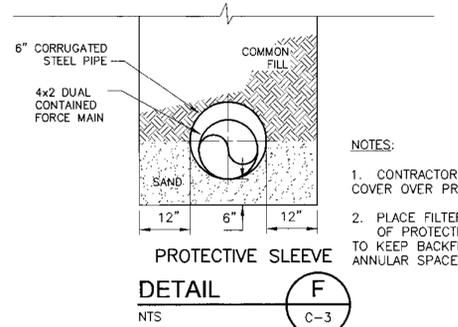
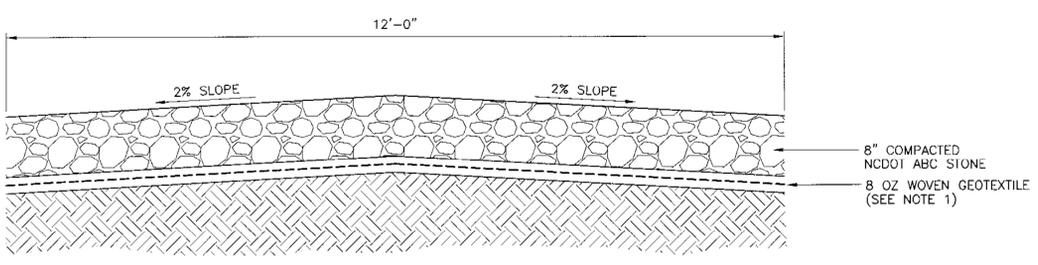
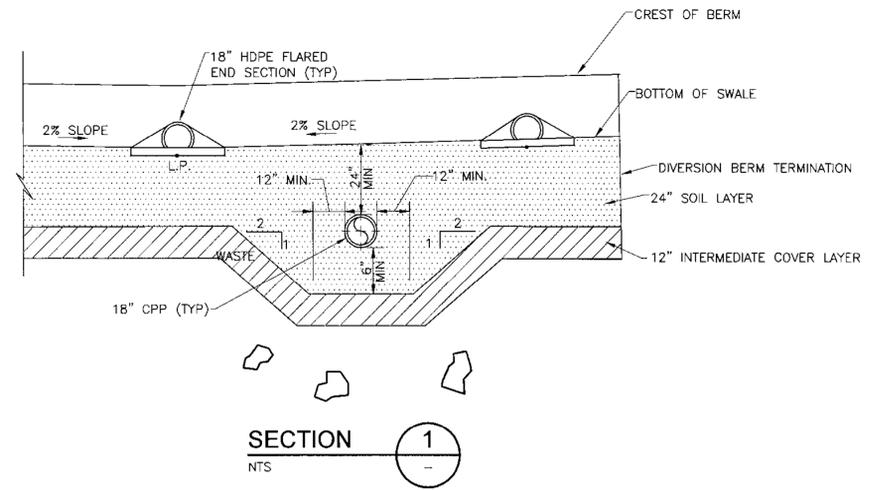
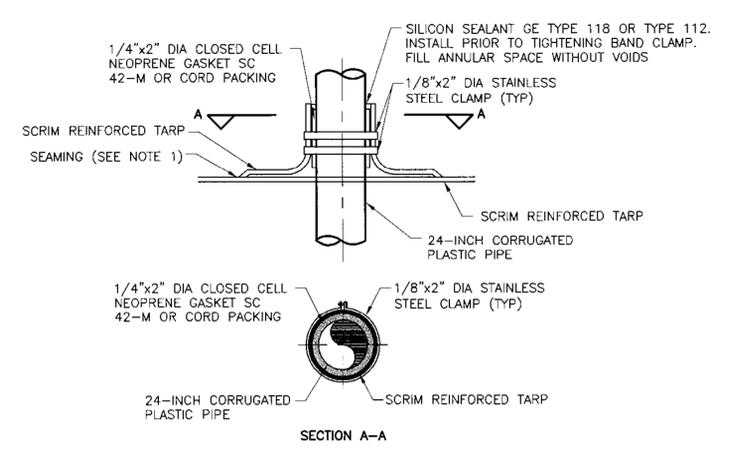
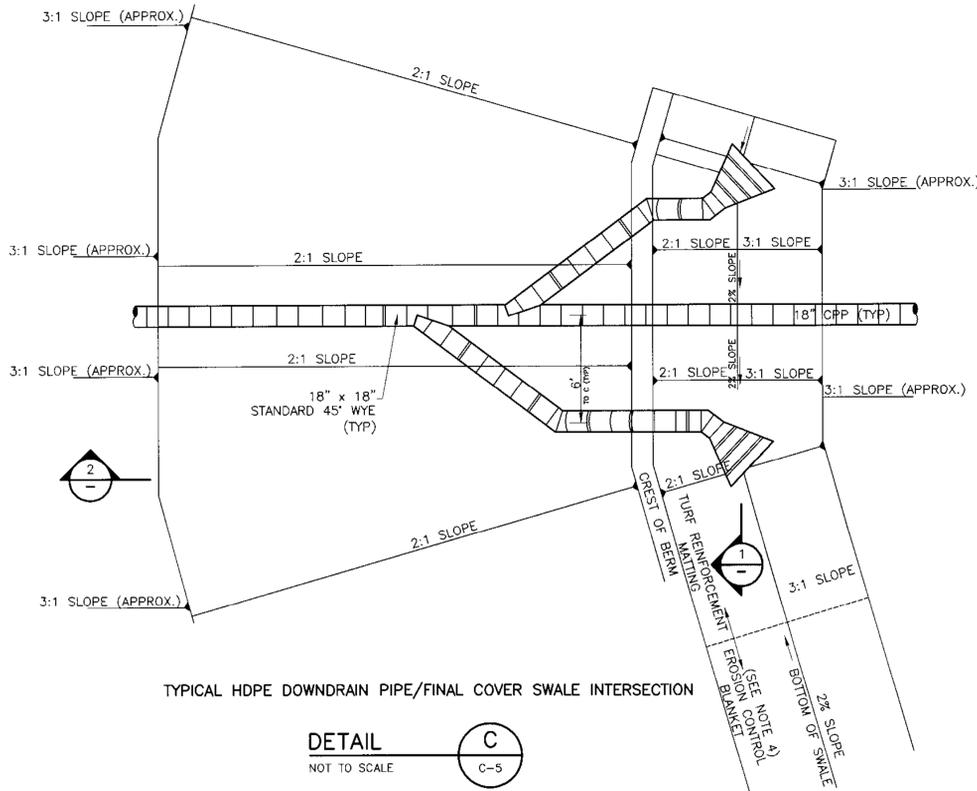
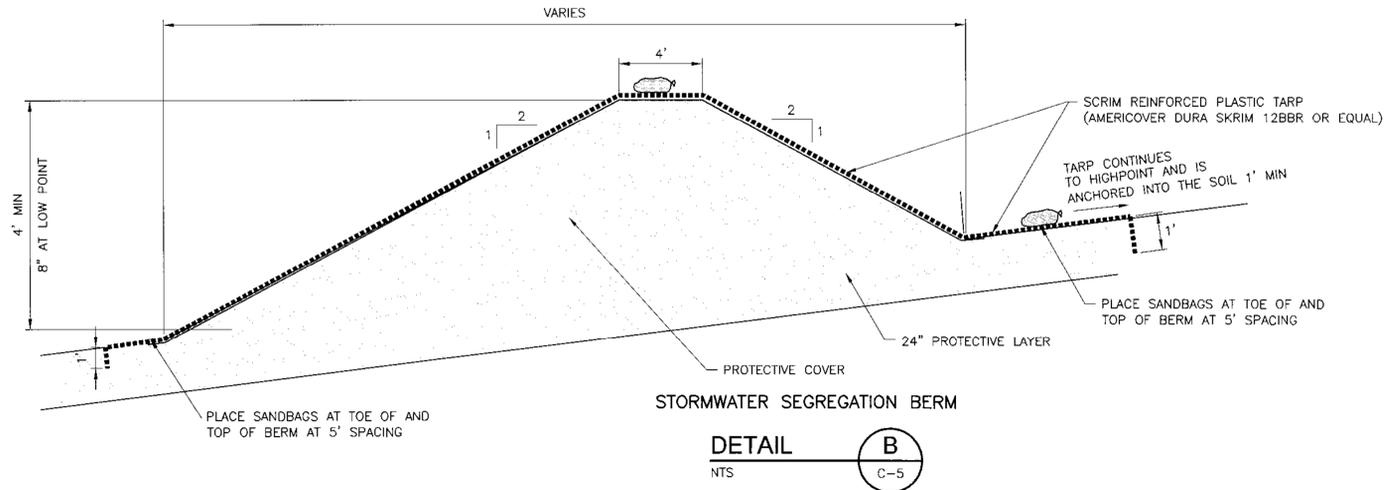
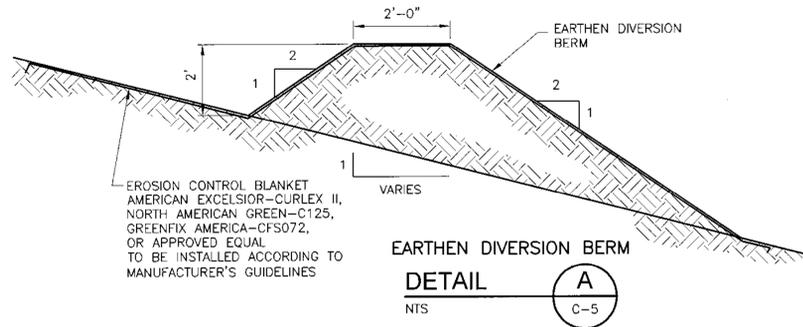
CABARRUS COUNTY
NORTH CAROLINA
**CONSTRUCTION PLAN - PHASE 1L EXPANSION
CABARRUS COUNTY C&D LANDFILL**

**LEACHATE COLLECTION
DETAILS**

PROJECT NO. 1278-77070
FILE NAME: D-2
SHEET NO. D-2

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REV. NO.	DATE	DRWN	CHKD	REMARKS



NOTES:
 1. PLACE GEOTEXTILE ON PREPARED SUBGRADE CONSISTING OF NATIVE SOILS PROOFROLLED/COMPACTED IN HTE PRESENCE OF THE ENGINEER OR SELECT FILL MATERIALS COMPACTED TO 98% OF STANDARD PROCTOR (D698).

NOTES:
 1. CONTRACTOR TO MAINTAIN 12" MIN. COVER OVER PROTECTIVE SLEEVE.
 2. PLACE FILTER FABRIC AT END OF PROTECTIVE SLEEVE IN ORDER TO KEEP BACKFILL FROM ENTERING ANNULAR SPACE.

09/29/10 2:42:25 PM C:\CDMVA\HAINES\003592710-3.DWG

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: G. HAINES
 DRAWN BY: M. KOSKI
 SHEET CHK'D BY: G. HAINES
 CROSS CHK'D BY: C. GABEL
 APPROVED BY: G. HAINES
 DATE: SEPTEMBER 2010

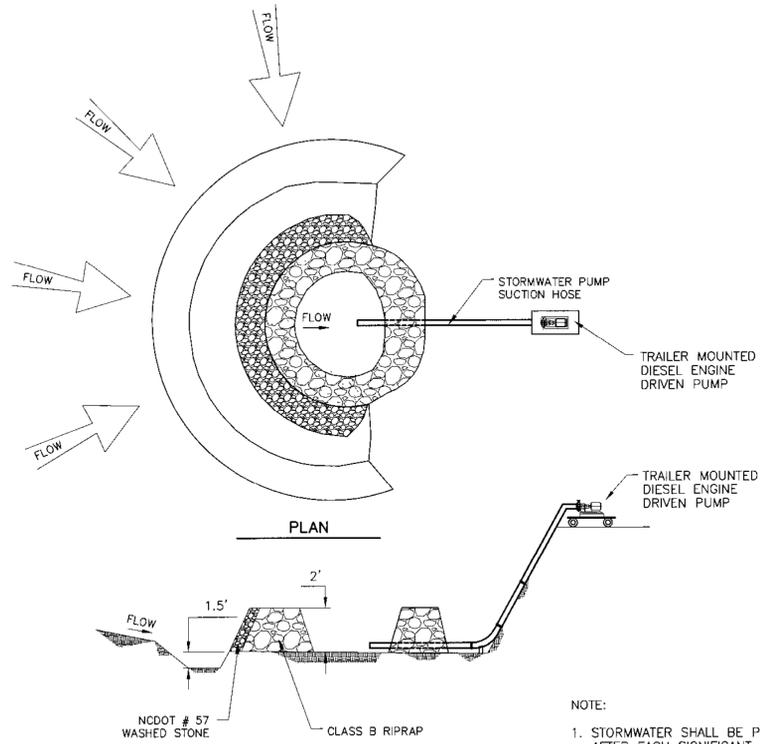
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 NORTH CAROLINA
 CONSTRUCTION PLAN - PHASE 1L EXPANSION
 CABARRUS COUNTY C&D LANDFILL

STORMWATER CONTROL DETAILS

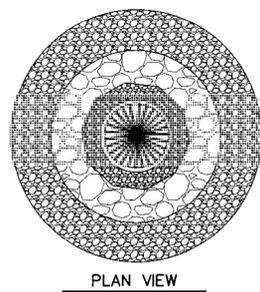
PROJECT NO. 12/8-17070
 FILE NAME: D-3
 SHEET NO. D-3





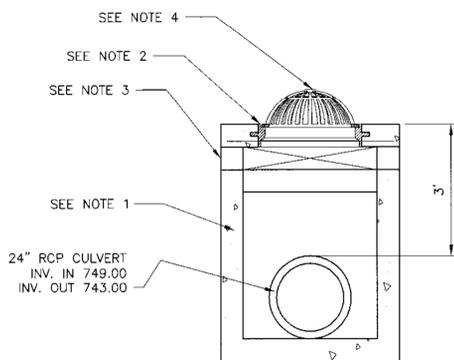
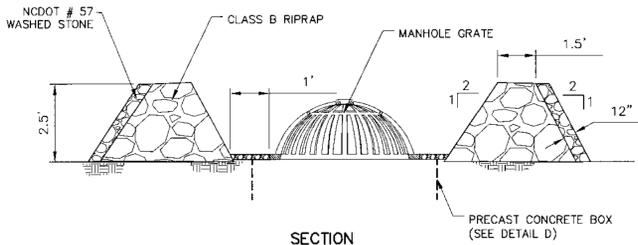
ROCK PIPE INLET PROTECTION

DETAIL A
NTS C-4



ROCK DOUGHNUT PROTECTION

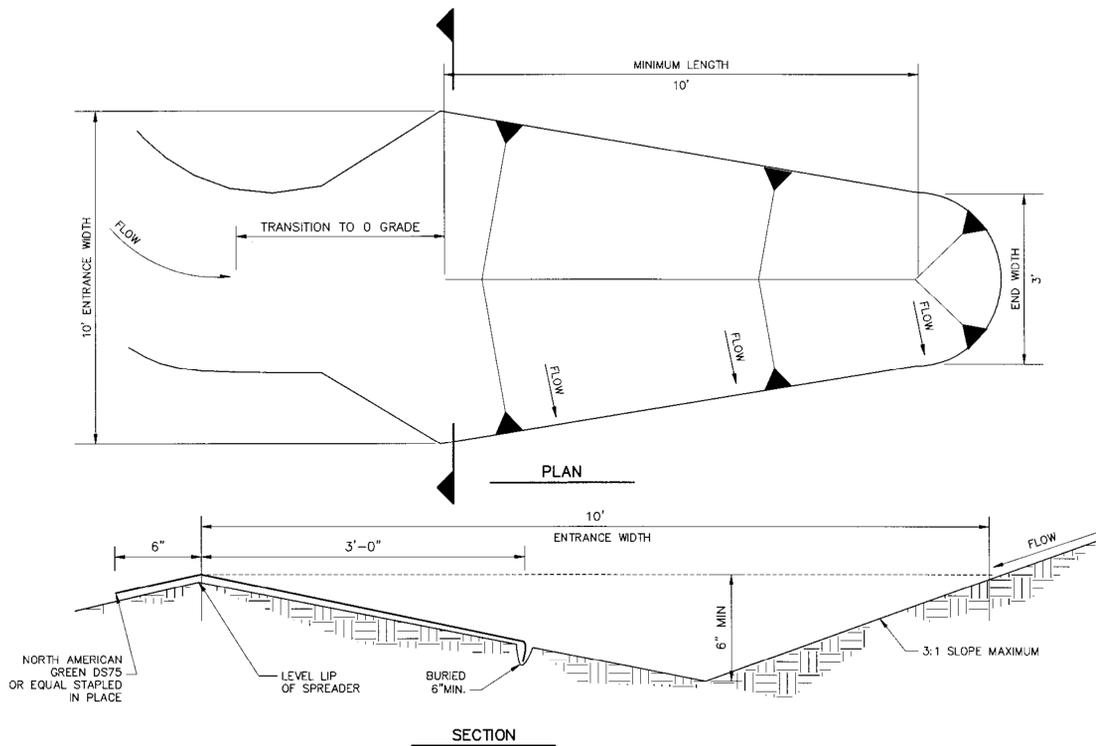
DETAIL C
NTS C-4



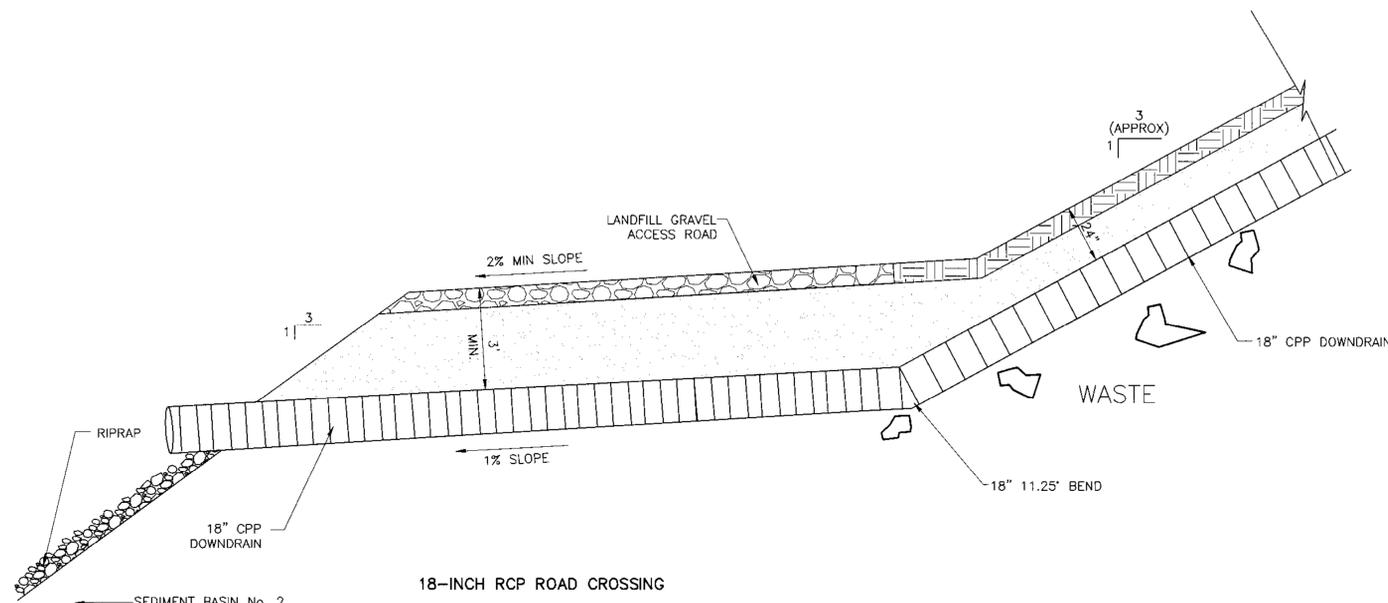
PRECAST CONCRETE BOX
DETAIL D
NOT TO SCALE C-4

NOTES:

1. 4'W X 4'L PRECAST CONCRETE BOX CONSTRUCTED PER NCDOT 840.45.
2. 6" MIN SLAB DESIGNED TO SUPPORT 100 PSF MIN LIVE LOAD.
3. SUPPORT AT EACH CORNER, MINIMUM 6" HIGH.
4. GRATE WITH FRAME (NEENAH MODEL NO. R-4353 OR APPROVED EQUIVALENT).



LEVEL SPREADER
DETAIL B
NTS C-4



18-INCH RCP ROAD CROSSING
DETAIL E
NOT TO SCALE C-4



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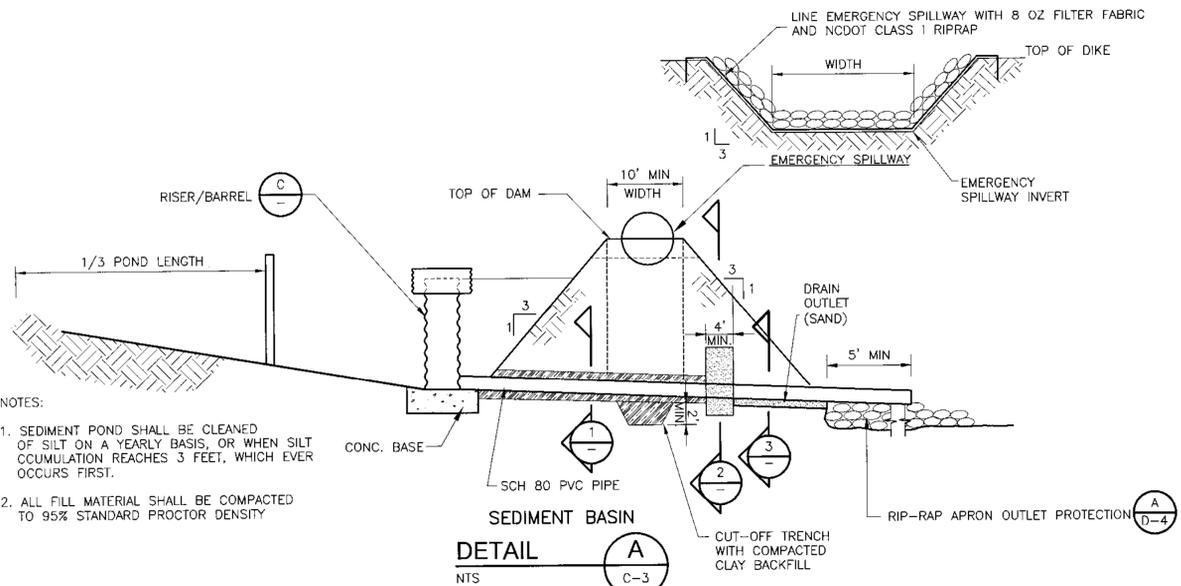
REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: G. HAINES	CDM Camp Dresser & McKee 5400 Glenwood Avenue, Suite 300 Raleigh, NC 27612 Tel: (919) 797-5620 North Carolina Firm License: F-0412 consulting • engineering • construction • operations
DRAWN BY: M. KOSKI	
SHEET CHK'D BY: G. HAINES	
CROSS CHK'D BY: C. GABEL	
APPROVED BY: G. HAINES	
DATE: SEPTEMBER 2010	

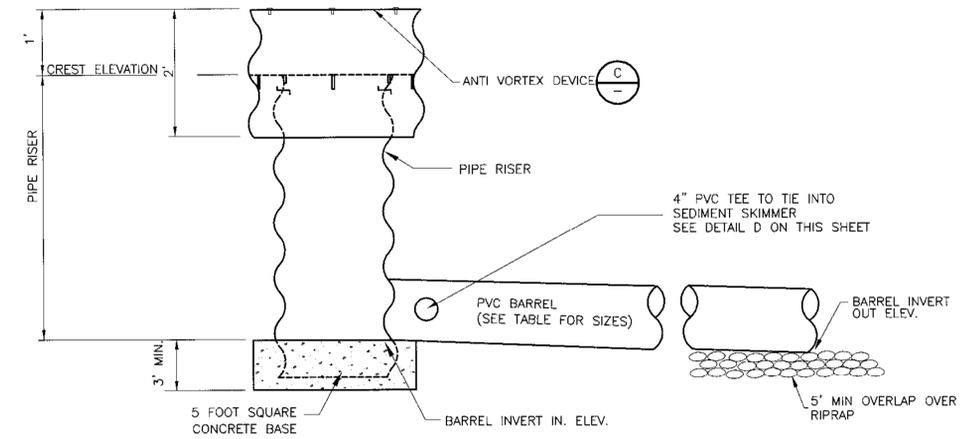
CABARRUS COUNTY
NORTH CAROLINA
CONSTRUCTION PLAN - PHASE 1L EXPANSION
CABARRUS COUNTY C&D LANDFILL

EROSION AND SEDIMENT CONTROL
DETAILS II

PROJECT NO. 1278-77070
FILE NAME: D-5
SHEET NO. D-5

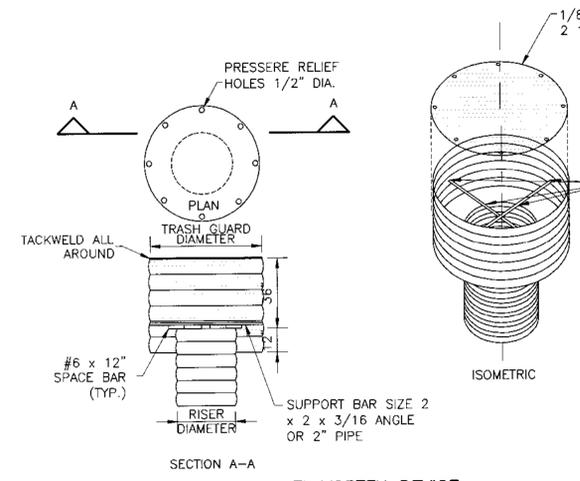


- NOTES:
1. SEDIMENT POND SHALL BE CLEANED OF SILT ON A YEARLY BASIS, OR WHEN SILT ACCUMULATION REACHES 3 FEET, WHICH EVER OCCURS FIRST.
 2. ALL FILL MATERIAL SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY

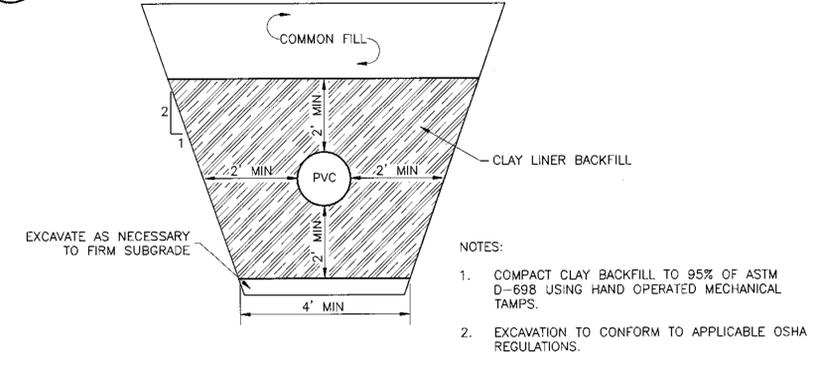
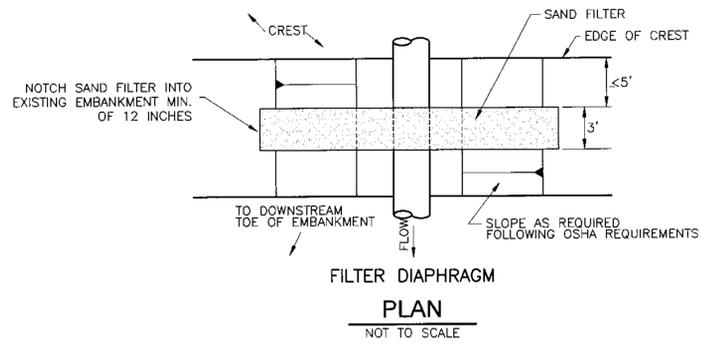


SEDIMENT POND DATA

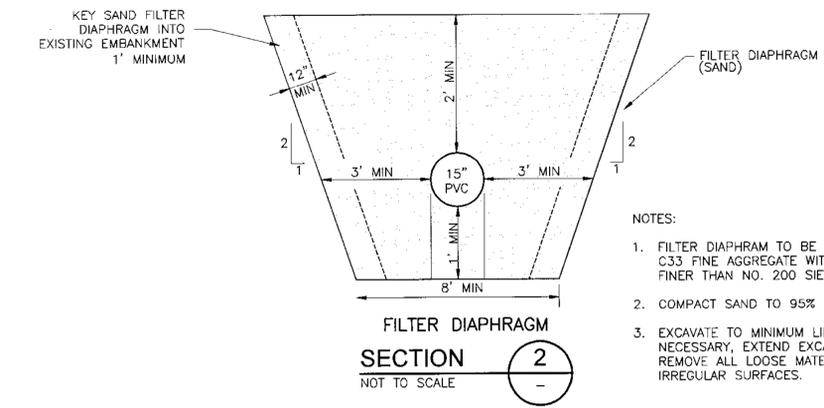
SEDIMENT BASIN NO.	BOTTOM ELEV.	PIPE RISER			PIPE BARREL				CONCRETE BASE (CY)	TOP OF DIKE ELEV.	EMERGENCY SPILLWAY		NO. POROUS BAFFLES		
		DIAMETER (IN.)	HEIGHT (FT)	CREST ELEV.	TRASH GUARD DIA. (IN.)	DIAMETER (IN.)	LENGTH (FT)	SLOPE (%)			INVERT IN. ELEV.	INVERT OUT. ELEV.		ELEV.	WIDTH
SB-2	742	36	5.0	747	42	18	93	2.15	742	740	2.8	750	748	10	3



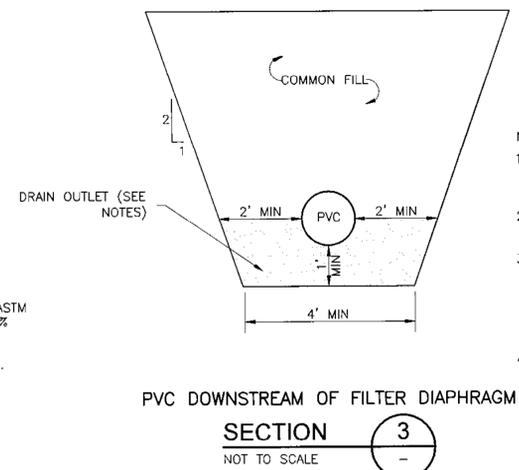
- NOTES:
1. THE CYLINDER MUST BE FIRMLY FASTENED TO THE TOP OF THE RISER.
 2. SUPPORT BARS ARE WELDED TO THE TOP OF THE RISER OR ATTACHED BY STRAPS BOLTED TO THE TOP OF THE RISER.
 3. HOT DIP GALVANIZE THE ENTIRE DEVICE AFTER ASSEMBLY.
 4. CYLINDER IS 10 GAGE CORRUGATED METAL PIPE



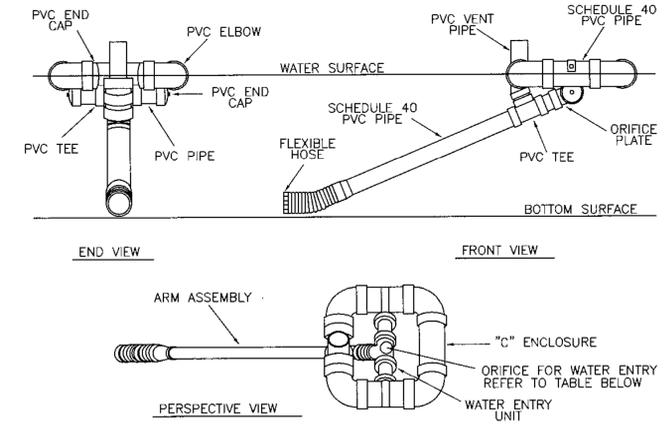
- NOTES:
1. COMPACT CLAY BACKFILL TO 95% OF ASTM D-698 USING HAND OPERATED MECHANICAL TAMPS.
 2. EXCAVATION TO CONFORM TO APPLICABLE OSHA REGULATIONS.



- NOTES:
1. FILTER DIAPHRAGM TO BE SAND MEETING ASTM C33 FINE AGGREGATE WITH LESS THAN 3% FINER THAN NO. 200 SIEVE.
 2. COMPACT SAND TO 95% OF ASTM D-698.
 3. EXCAVATE TO MINIMUM LIMITS SHOWN. IF NECESSARY, EXTEND EXCAVATION TO REMOVE ALL LOOSE MATERIAL AND IRREGULAR SURFACES.



- NOTES:
1. DRAIN OUTLET TO BE SAND MEETING ASTM C33 FINE AGGREGATE WITH LESS THAN 3% FINER THAN NO. 200 SIEVE.
 2. DRAIN OUTLET SAND TO BE COMPACTED TO 95% OF ASTM D-698.
 3. EXCAVATE TRENCH TO MINIMUM LIMITS SHOWN. EXCAVATE TRENCH LARGER OR DEEPER IF NECESSARY TO REMOVE ALL LOOSE SOIL AND IRREGULAR SURFACES AND OVER STEEP SLOPES.
 4. EXCAVATE TO CONFORM TO APPLICABLE OSHA REGULATIONS.



SEDIMENT BASIN NO.	SKIMMER SIZE (IN.)	ORIFICE DIAMETER (IN.)
SB-2	3.0	2.8



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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: R. HOPPER
 DRAWN BY: J. KILLINGSWORTH
 SHEET CHK'D BY: F. BANNA
 CROSS CHK'D BY: C. GABEL
 APPROVED BY: G. HAINES
 DATE: SEPTEMBER 2010

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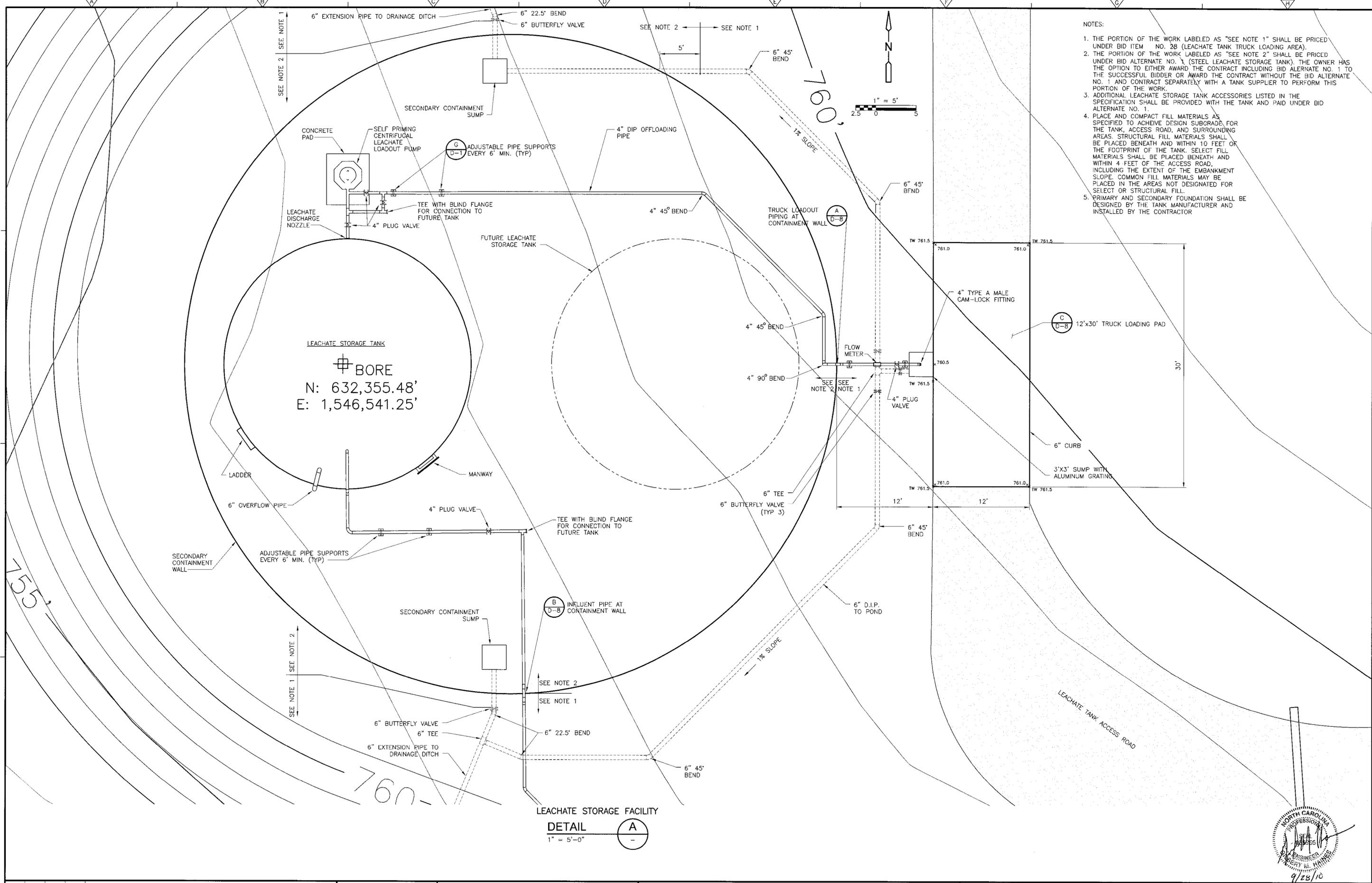
CABARRUS COUNTY
 NORTH CAROLINA

**CONSTRUCTION PLAN - PHASE 1L EXPANSION
 CABARRUS COUNTY C&D LANDFILL**

**EROSION AND SEDIMENT CONTROL
 DETAILS III**

PROJECT NO. 1278-77070
 FILE NAME: D-6
 SHEET NO. D-6

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- NOTES:
1. THE PORTION OF THE WORK LABELED AS "SEE NOTE 1" SHALL BE PRICED UNDER BID ITEM NO. 28 (LEACHATE TANK TRUCK LOADING AREA).
 2. THE PORTION OF THE WORK LABELED AS "SEE NOTE 2" SHALL BE PRICED UNDER BID ALTERNATE NO. 1 (STEEL LEACHATE STORAGE TANK). THE OWNER HAS THE OPTION TO EITHER AWARD THE CONTRACT INCLUDING BID ALTERNATE NO. 1 TO THE SUCCESSFUL BIDDER OR AWARD THE CONTRACT WITHOUT THE BID ALTERNATE NO. 1 AND CONTRACT SEPARATELY WITH A TANK SUPPLIER TO PERFORM THIS PORTION OF THE WORK.
 3. ADDITIONAL LEACHATE STORAGE TANK ACCESSORIES LISTED IN THE SPECIFICATION SHALL BE PROVIDED WITH THE TANK AND PAID UNDER BID ALTERNATE NO. 1.
 4. PLACE AND COMPACT FILL MATERIALS AS SPECIFIED TO ACHIEVE DESIGN SUBGRADE FOR THE TANK, ACCESS ROAD, AND SURROUNDING AREAS. STRUCTURAL FILL MATERIALS SHALL BE PLACED BENEATH AND WITHIN 10 FEET OF THE FOOTPRINT OF THE TANK. SELECT FILL MATERIALS SHALL BE PLACED BENEATH AND WITHIN 4 FEET OF THE ACCESS ROAD, INCLUDING THE EXTENT OF THE EMBANKMENT SLOPE. COMMON FILL MATERIALS MAY BE PLACED IN THE AREAS NOT DESIGNATED FOR SELECT OR STRUCTURAL FILL.
 5. PRIMARY AND SECONDARY FOUNDATION SHALL BE DESIGNED BY THE TANK MANUFACTURER AND INSTALLED BY THE CONTRACTOR.

DESIGNED BY:	G. HAINES
DRAWN BY:	M. KOSKI
SHEET CHK'D BY:	G. HAINES
CROSS CHK'D BY:	C. CABEL
APPROVED BY:	G. HAINES
DATE:	SEPTEMBER 2010

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 NORTH CAROLINA
CONSTRUCTION PLAN - PHASE 1L EXPANSION
 CABARRUS COUNTY C&D LANDFILL

LEACHATE STORAGE TANK

PROJECT NO.	1278-77070
FILE NAME:	D-7
SHEET NO.	D-7



9/28/10

4" PIPE FROM LOAD OUT PUMP
 PIPING TO BE SCH 10, 304 SS PER ASTM A-312.
 FITTINGS TO BE SCH 10, 304 SS PER ASTM A-403.
 FLANGES ARE TYPE C STUB ENDS AND 150 LB. HOT
 DIP GALVANIZED BACK UP FLANGES.

4" BUTTERFLY VALVE WITH
 ELECTRIC ON-OFF ACTUATOR
 BY TANK SUPPLIER

CONTRACTOR TO CONNECT 4"
 HDPE TO 4" SS PIPE FLANGE.
 CONTRACTOR TO COORDINATE
 WITH TANK SUPPLIER

TOP OF TANK CONTAINMENT WALL

ADJUSTABLE PIPE SUPPORT
 BY GENERAL CONTRACTOR

4" D.I. PIPE TO TRUCK LOADOUT
 PAD FROM TANK

4" BUTTERFLY VALVE

4" TYPE A CAM-LOCK FITTING

TRUCK LOAD OUT PIPING AT CONTAINMENT WALL

DETAIL

1/2" = 1'-0"



SEE NOTE 1 SEE NOTE 2

1'-0"±

CONTRACTOR TO CONNECT 4" HDPE TO
 4" SS PIPE FLANGE, CONTRACTOR TO
 COORDINATE WITH TANK SUPPLIER

1/2" HDPE LEAK DETECTION
 PIPE WITH VALVE

TOP OF TANK CONTAINMENT WALL

ADJUSTABLE PIPE SUPPORT
 BY GENERAL CONTRACTOR

4" HDPE DUAL CONTAINED
 FORCEMAIN FROM LEACHATE SUMP

INFLUENT PIPING AT CONTAINMENT WALL

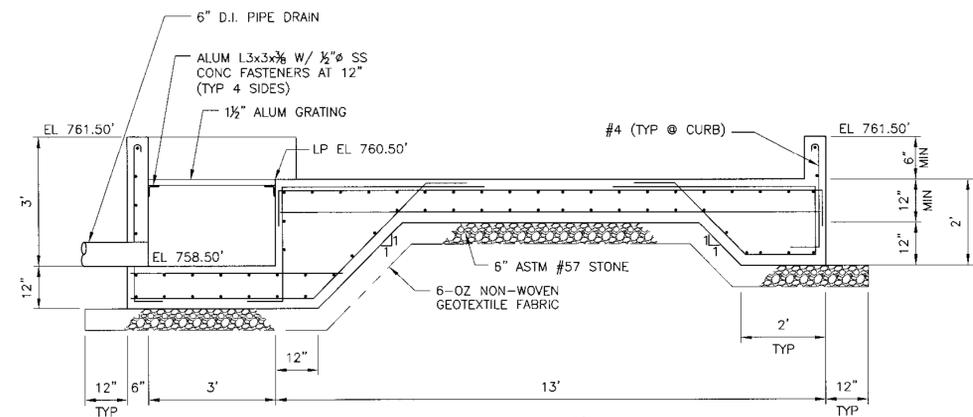
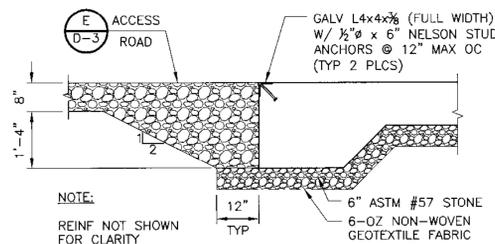
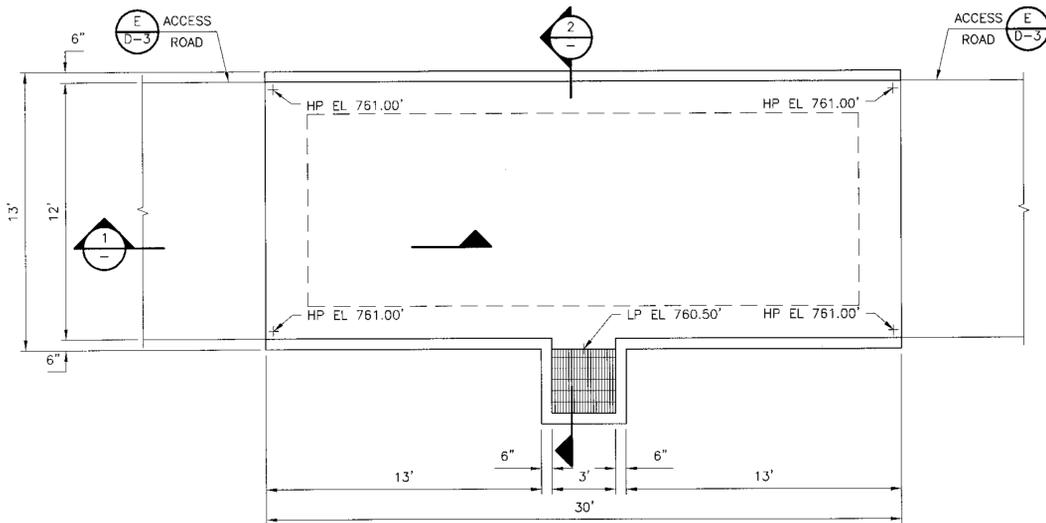
DETAIL

1/2" = 1'-0"



NOTES:

1. THE PORTION OF THE WORK LABELED AS "SEE NOTE 1" SHALL BE PRICED UNDER BID ITEM NO. 28 (LEACHATE TANK TRUCK LOADING AREA).
2. THE PORTION OF THE WORK LABELED AS "SEE NOTE 2" SHALL BE PRICED UNDER BID ALTERNATE NO. 1 (STEEL LEACHATE STORAGE TANK). THE OWNER HAS THE OPTION TO EITHER AWARD THE CONTRACT INCLUDING BID ALTERNATE NO. 1 TO THE SUCCESSFUL BIDDER OR NOT AWARD BID ALTERNATE NO. 1 AND CONTRACT SEPARATELY WITH A TANK SUPPLIER TO PERFORM THIS PORTION OF THE WORK.



NOTE:
 ALL REINF #5@8" OC UNO

1/4" = 1'-0"

1/2" = 1'-0"

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DESIGNED BY: G. HAINES
 DRAWN BY: M. KOSKI
 SHEET CHK'D BY: G. HAINES
 CROSS CHK'D BY: C. CABEL
 APPROVED BY: G. HAINES
 DATE: SEPTEMBER 2010

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 CONSTRUCTION PLAN - PHASE 1L EXPANSION
 CABARRUS COUNTY C&D LANDFILL

TRUCK LOAD OUT AREA
 DETAILS



PROJECT NO. 1278-77070
 FILE NAME: D-8
 SHEET NO.
 D-8

REV. NO.	DATE	DRWN	CHKD	REMARKS

ONE LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
	—	MEDIUM VOLTAGE DRAWOUT TYPE POWER CIRCUIT BREAKER CS=CONTROL SWITCH
	CB	LOW VOLTAGE AIR OR MOLDED CASE CIRCUIT BREAKER, 3 POLE UNLESS OTHERWISE NOTED.
		COMBINATION MOTOR CIRCUIT PROTECTOR AND MAGNETIC MOTOR STARTER, FULL VOLTAGE NON-REVERSING UNLESS OTHERWISE NOTED: * FVR- FULL VOLTAGE REVERSING RVNR- REDUCED VOLTAGE NON-REVERSING 2S1W- TWO SPEED, ONE WINDING 2S2W- TWO SPEED, TWO WINDING RVAT- REDUCED VOLTAGE AUTOTRANSFORMER RVSS- REDUCED VOLTAGE, SOLID STATE
	OR	NON-FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE * AMPERE RATING NOTED IF OTHER THAN 30A
	F	FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE, AMPERE RATING AND FUSE SIZE AS NOTED * AMPERE RATING NOTED IF OTHER THAN 30A * FUSE RATING
	P 2	MANUAL MOTOR STARTER WITH THERMAL OVERLOAD HEATER, 1 POLE UNLESS OTHERWISE NOTED "P" INDICATES WITH PILOT LIGHT "2" INDICATES TWO POLE
	—	DRAWOUT TYPE EQUIPMENT OR DEVICE
		TRANSFORMER, RATINGS AND CONNECTIONS AS NOTED, UNLESS OTHERWISE NOTED ON THE SINGLE LINE DIAGRAMS. ALL DRY TYPE TRANSFORMERS SERVING ADMINISTRATIVE AND LABORATORY SPACES SHALL HAVE A K FACTOR OF 4. ISOLATION TRANSFORMERS SHALL HAVE A K=20 RATING
	A TO 5	CURRENT TRANSFORMER * QUANTITY A = PRIMARY AMPERES
	V TO 120	POTENTIAL TRANSFORMER * QUANTITY V = PRIMARY VOLTAGE
	M	MOTOR, NUMERAL INDICATES HORSEPOWER
	—	VOLTMETER WITH SWITCH, 3 PHASE
	—	AMMETER WITH SWITCH, 3 PHASE
	—	PUSHBUTTON, MOMENTARY CONTACT, SPRING RETURN, NORMALLY CLOSED
	—	PUSHBUTTON, MOMENTARY CONTACT, SPRING RETURN, NORMALLY OPEN
	ES	EMERGENCY STOP PUSHBUTTON WITH RED MUSHROOM HEAD OPERATOR (MAINTAINED CONTACT)
	PBL	START-STOP PUSHBUTTON CONTROL STATION (MOMENTARY CONTACT) WITH LOCKOUT DEVICE ON STOP
	PBM	START-STOP PUSHBUTTON CONTROL STATION, MAINTAINED CONTACT WITH LOCKOUT DEVICE ON STOP
	S/S	OFF/ON SELECTOR SWITCH

ONE LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
	—	MOTOR STARTER COIL, NUMBER AS INDICATED TO DENOTE INTERLOCKING ONLY
	—	CONTROL RELAY COIL, NUMBER AS INDICATED
	—	PILOT LIGHT, COLOR AS NOTED * R - RED G - GREEN B - BLUE W - WHITE A - AMBER
	—	TIME DELAY RELAY RANGE AS NOTED SETPOINT AS NOTED # NUMBER AS INDICATED *TDE-TIME DELAY AFTER ENERGIZATION-ON DELAY TDD-TIME DELAY AFTER DE-ENERGIZATION-OFF DELAY
	NOTC	NOTC-NORMALLY OPEN, TIMED CLOSING WHEN ENERGIZED
	NCTO	NCTO-NORMALLY CLOSED, TIMED OPENING WHEN ENERGIZED
	NOTO	NOTO-NORMALLY OPEN, TIMED OPENING WHEN DE-ENERGIZED
	NCTC	NCTC-NORMALLY CLOSED, TIMED CLOSING WHEN DE-ENERGIZED
	*-##	FIELD INSTRUMENT, TAG NO. AS INDICATED * - INDICATES INSTRUMENT TYPE DEFINED ON LOOP SHEETS OR P & ID ## - INDICATES LOOP NO.
	LS OR ■	LIQUID LEVEL (FLOAT) SWITCH NORMALLY OPEN, CLOSING ON RISING LEVEL NORMALLY CLOSED, OPENS ON RISING LEVEL
	PS OR ■	PRESSURE OR VACUUM SWITCH NORMALLY OPEN, CLOSING ON RISING PRESSURE NORMALLY OPEN, CLOSING ON DROPPING PRESSURE NORMALLY CLOSED, OPENS ON RISING PRESSURE NORMALLY CLOSED, OPENS ON DROPPING PRESSURE
	TS OR T OR ■	TEMPERATURE SWITCH OR THERMOSTAT NORMALLY OPEN, CLOSING ON RISING TEMPERATURE START-STOP PUSHBUTTON CONTROL STATION, NORMALLY OPEN, CLOSING ON DROPPING TEMP. NORMALLY CLOSED, OPENS ON RISING TEMPERATURE NORMALLY CLOSED, OPENS ON DROPPING TEMP.
	FS OR ■	FLOW SWITCH (AIR, WATER, ETC.) NORMALLY OPEN, CLOSING ON INCREASED FLOW NORMALLY CLOSED, OPENS ON INCREASED FLOW
	ZS OR ■	POSITION (LIMIT) SWITCH NORMALLY OPEN NORMALLY OPEN - HELD CLOSED NORMALLY CLOSED NORMALLY CLOSED - HELD OPEN
	WS OR ■	TORQUE SWITCH NORMALLY OPEN, CLOSING ON HIGH TORQUE NORMALLY CLOSED, OPENS ON HIGH TORQUE

ONE LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
	—	CONDUCTORS OR CONDUITS CROSSING PATHS BUT NOT CONNECTED
	—	CONDUCTORS ELECTRICALLY CONNECTED
	—	INDICATES LIMITS OF ELECTRICAL EQUIPMENT OR WIRING ENCLOSURE
	—	LIGHTNING ARRESTER
	⊙	GROUND OR GROUND ROD
	30A	FUSE, AMPERE RATING AS NOTED
	HTR	STRIP HEATER OR HEATING ELEMENT
	—	CONTACT, NORMALLY OPEN (NO)
	—	CONTACT, NORMALLY CLOSED (NC)
	—	OVERLOAD RELAY HEATER
	K	KEY INTERLOCK
	TB	TERMINAL OR TEST BLOCK
	ETM	ELAPSED TIME METER
	M	MOTOR OPERATED VALVE (MOV)

GENERAL NOTE
THIS IS A STANDARD LEGEND.
SOME SYMBOLS MAY NOT APPEAR
ON THE DRAWINGS.

ABBREVIATIONS	
A	AMPS
AC	ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AL	ALUMINUM
AIC	AMPERE INTERRUPTING CAPACITY
AMP	AMPERE
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
BKR	BREAKER
BLDG	BUILDING
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CLB	CURRENT LIMITING BREAKER
CLF	CURRENT LIMITING FUSE
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
CS	CONTROL SWITCH
CT	CURRENT TRANSFORMER
CU	COPPER
CWS	CONDUIT WALL SEAL
DC	DIRECT CURRENT
DIA	DIAMETER
DMU	DIGITAL METERING UNIT
DN	DOWN
EC	EMPTY CONDUIT
ELEC	ELECTRICAL
ELEV	ELEVATION
EM	EMERGENCY
ENCL	ENCLOSURE OR ENCLOSED
EQUIP	EQUIPMENT
EW	ELECTRIC WATER COOLER
EW	ELECTRIC WATER HEATER
EX	EXISTING
FBO	FURNISHED BY OTHERS
FO	FIBER OPTIC
FRP	FIBERGLASS REINFORCED POLYESTER
FU	FUSE
GCP	GENERATOR CONTROL PANEL
GEN	GENERATOR
GB	GROUND BAR
G, GRD	GROUND
GFI	GROUND FAULT INTERRUPTER
GRS	GALVANIZED RIGID STEEL
HH	HANDHOLE
HT	HEIGHT
HID	HIGH INTENSITY DISCHARGE
HP	HORSEPOWER
HZ	HERTZ
INST	INSTANTANEOUS
INSTR	INSTRUMENT OR INSTRUMENTATION
K	KILO (PREFIX)
KCMIL	1000 CIRCULAR MILS

ABBREVIATIONS (CONTINUED)	
KVA	KILOVOLT AMPERES
KW	KILOWATTS
LA	LIGHTNING ARRESTER
LGTS	LIGHTS
LIG	LIGHTING
LP	LIGHTING PANEL
LV	LOW VOLTAGE
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MCM	1000 CIRCULAR MILS
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MMU	MICROPROCESSOR METERING UNIT
MPZ	MINI POWER ZONE
MTG	MOUNTING
MTD	MOUNTED
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE
N	NEUTRAL
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN OR NUMBER
NTS	NOT TO SCALE
OH	OVERHEAD
PB	PULL BOX
OL	OVERLOAD
PCP	PUMP CONTROL PANEL
PH	PHASE
PMH	POWER MANHOLE
PNL	PANEL OR PANELBOARD
PR	PAIR
PRI	PRIMARY
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
RECPT	RECEPTACLE
REQD	REQUIRED
QTY	QUANTITY
SA	SURGE ARRESTER
SC	SURGE CAPACITOR
SEC	SECONDS OR SECONDARY
SH	SHIELDED OR SPACE HEATER
SHH	SIGNAL HANDHOLE
SHT	SHEET
SN	SOLID NEUTRAL
SS	STAINLESS STEEL
SV	SOLENOID VALVE
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TC	TIME TO CLOSE OR TRAY CABLE
TEL	TELEPHONE
THH	TELEPHONE HANDHOLE
TM	TELEPHONE BACKBOARD
TO	TIME TO OPEN
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TS	TWISTED SHIELDED
TYP	TYPICAL
UG	UNDERGROUND
UN	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS
VA	VOLT AMPS
VAR	VOLT AMPS REACTIVE
VFD	VARIABLE FREQUENCY DRIVE
W	WIRE, WATTS, WITH, WIDTH
WP	WEATHERPROOF
XP	EXPLOSION PROOF
XFMR	TRANSFORMER

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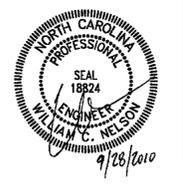
DESIGNED BY: R. JONES
DRAWN BY: R. JONES
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CABARRUS COUNTY
NORTH CAROLINA
CONSTRUCTION PLAN - PHASE 1L EXPANSION
CABARRUS COUNTY C&D LANDFILL

ELECTRICAL SYMBOLS AND ABBREVIATIONS

PROJECT NO. 1278-77070
FILE NAME: E001SYMB
SHEET NO.
E-1



SYMBOL	DESCRIPTION
	POLE MOUNTED H.D. TYPE LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE
	POLE MOUNTED OR STANCHION MOUNTED LIGHT FIXTURE
	HOME RUN TO DESIGNATED EQUIPMENT, BRANCH CIRCUIT CONDUIT WITH 2 NO. 12 AWG BRANCH CIRCUIT CONDUCTORS AND 1 NO. 12 AWG GROUND CONDUCTOR UNLESS OTHERWISE NOTED. NUMBER OF ARROWS INDICATE NUMBER OF CIRCUITS. FOR MINIMUM SIZE CONDUIT PERMITTED REFER TO THE SPECIFICATIONS.
	CONDUIT CONCEALED IN WALL, IN SLAB ABOVE, OR ABOVE CEILING.
	CONDUIT CONCEALED IN OR BELOW FLOOR OR UNDERGROUND.
	CONDUIT RUN EXPOSED, RUN PARALLEL OR PERPENDICULAR TO STRUCTURE OR WALL.
	'X' INDICATES EXPLOSION PROOF CONDUIT SEAL FITTING.
	CONCRETE ENCASED DUCTBANK.
	CONDUIT STUBBED OUT AND CAPPED
	DENOTES A QUANTITY OF TWO (2) 3-INCH CONDUITS EACH CONTAINING THREE NO. 3/0 AWG CONDUCTORS AND 1 NO. 2 AWG GROUND CONDUCTOR.
	DENOTES A QUANTITY OF TWO INSTRUMENT CABLES, EACH CABLE TO CONSIST OF TWO NO. 16 AWG CONDUCTORS TWISTED TOGETHER AND COVERED WITH A METALLIC SHIELD AND AN OVERALL PROTECTIVE JACKET. REFER TO THE SPECIFICATIONS FOR THE EXACT CABLE TO BE PROVIDED.
	SAME AS ABOVE EXCEPT CABLE TO CONSIST OF THREE NO. 16 AWG CONDUCTORS TWISTED, SHIELDED AND COVERED WITH AN OVERALL PROTECTIVE JACKET. REFER TO THE SPECIFICATIONS FOR THE EXACT CABLE TO BE PROVIDED.
	THREE 4-INCH CONDUITS
	FLEXIBLE METAL CONDUIT "WHIP" (3/4" C., 2#12, 1#12G UNLESS OTHERWISE NOTED) FOR RECESSED LIGHTING FIXTURES AND LIQUID TIGHT MOTOR CONNECTIONS
	CONDUIT SEAL FITTING SHOWN IN OTHER THAN CODE REQUIRED LOCATIONS.
	INDICATES MOTOR STARTER AND/OR MOTOR CONTROL EQUIPMENT WITHIN THE ENCLOSURE.

SYMBOL	DESCRIPTION
	SINGLE POLE SWITCH 'a' INDICATES FIXTURES CONTROLLED
	DOUBLE POLE SWITCH 'b' INDICATES FIXTURES CONTROLLED
	THREE WAY SWITCH 'c' INDICATES FIXTURES CONTROLLED
	FOUR WAY SWITCH 'a' INDICATES FIXTURES CONTROLLED
	LIGHTING CONTACTOR WITH NUMBER OF POLES AS INDICATED
	TIME SWITCH
	LIGHTING PANELBOARD (LP)
	POWER PANELBOARD (PP) OR DISTRIBUTION PANELBOARD (DP)
	MINI POWER ZONE (MPZ) OR MINI POWER CENTER (MPC)
	PUSH BUTTON STATION
	* DUPLEX RECEPTACLE, 20A, 120V, 2P, 3W GFCI - GROUND FAULT CIRCUIT INTERRUPTER TYPE WP - WEATHERPROOF T - TRANSIENT VOLTAGE SURGE SUPPRESSOR IC - ISOLATED GROUND 4 - CIRCUIT NUMBER
	DUPLEX RECEPTACLE, 20A, 120V, 2P, 3W MOUNTED ABOVE COUNTER-TOP OR 42" AFF * NOTATIONS SAME AS ABOVE
	JUNCTION BOX
	PULL BOX
	TERMINAL CABINET
	PHOTOCELL

SYMBOL	DESCRIPTION
	INDICATED EQUIPMENT AND MATERIALS TO BE DEMOLISHED
	INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE OF NEMA 12 CONSTRUCTION (OR GASKETED AND SUITABLE FOR USE IN A WET LOCATION WHERE NEMA STANDARDS DO NOT APPLY) UNLESS OTHERWISE NOTED.
	INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE OF NEMA 4 CONSTRUCTION (OR GASKETED AND SUITABLE FOR USE IN A WET LOCATION WHERE NEMA STANDARDS DO NOT APPLY) UNLESS OTHERWISE NOTED.
	INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE OF NEMA 4X CONSTRUCTION (OR CORROSION RESISTANT CONSTRUCTION SUITABLE FOR USE IN A WET LOCATION WHERE NEMA STANDARDS DO NOT APPLY) UNLESS OTHERWISE NOTED.
	INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL CONFORM TO N.E.C. REQUIREMENTS FOR THE HAZARDOUS AREA CLASSIFICATION SHOWN.
	INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL CONFORM TO N.E.C. REQUIREMENTS FOR THE HAZARDOUS AREA CLASSIFICATION SHOWN.
	GROUND SYSTEM GRID OR LOOP, 36" BELOW FINISHED GRADE UNLESS OTHERWISE NOTED.
	EXOTHERMIC WELD CONNECTION
	3/4" x 10'-0" GROUND ROD
	GROUND ROD TEST WELL STATION (SEE DETAIL SHEET FOR REQUIREMENTS)

NOTES:

- THE PLANS DO NOT SHOW RACEWAYS AND CONDUCTORS BETWEEN RECEPTACLES, LIGHTING FIXTURES AND SWITCHES. HOWEVER, THE CONTRACTOR SHALL FURNISH AND INSTALL THESE CONNECTIONS IN ACCORDANCE WITH THE ASSIGNED FIXTURE OR RECEPTACLE CIRCUIT NUMBER AND SWITCH DESIGNATIONS. HOME RUNS SHOWN CONCEALED SHALL BE INDICATIVE OF ENTIRE CIRCUIT INSTALLATION. THE SAME SHALL APPLY FOR HOME RUNS SHOWN EXPOSED. REFER TO SPECIFICATIONS FOR MATERIALS AND INSTALLATION REQUIREMENTS.
- CONDUIT AND WIRE (NOT SHOWN) FOR FIXTURES, SWITCHES AND/OR RECEPTACLES SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR AND SHALL BE:
 - 3/4" (MIN.) CONDUIT RUN
 - EXPOSED IN UNFINISHED AREAS
 - CONCEALED ABOVE HUNG CEILINGS AND IN WALLS AND SLABS IN FINISHED AREAS
- THE WIRING DIAGRAMS, QUANTITY AND SIZE OF WIRES AND CONDUIT REPRESENT A SUGGESTED ARRANGEMENT BASED UPON SELECTED STANDARD COMPONENTS OF ELECTRICAL EQUIPMENT. MODIFICATIONS ACCEPTABLE TO THE ENGINEER MAY BE MADE BY THE CONTRACTOR TO ACCOMMODATE EQUIPMENT ACTUALLY PURCHASED. THE BASIC SEQUENCE AND METHOD OF CONTROL MUST BE MAINTAINED AS INDICATED ON THE DRAWINGS AND/OR SPECIFICATIONS.
- SWITCHGEAR AND MCC COMPARTMENT DESIGNATIONS AS INDICATED BELOW:

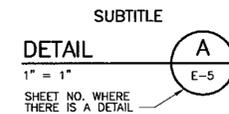
BLANK: NOT INTENDED FOR USE. PLATE ONLY

SPACE: CONTAINS NECESSARY BUS AND HARDWARE FOR FUTURE ADDITION OF BREAKERS OR STARTERS WITHIN SIZE RANGE SHOWN

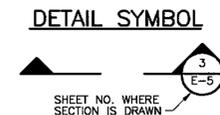
SPARE: CONTAINS A COMPLETE BREAKER OR STARTER INSTALLED, SIZE AS INDICATED FOR FUTURE USE



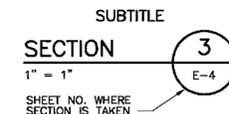
SYMBOL WHERE THERE IS A DETAIL



SYMBOL WHERE DETAIL IS DRAWN



SYMBOL WHERE THERE IS A SECTION



SYMBOL WHERE SECTION IS DRAWN

SECTION SYMBOL

GENERAL NOTE
THIS IS A STANDARD LEGEND.
SOME SYMBOLS MAY NOT APPEAR
ON THE DRAWINGS.

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DESIGNED BY: R. JONES
DRAWN BY: R. JONES
SHEET CHK'D BY: P. LEFAVE
CROSS CHK'D BY: P. LEFAVE
APPROVED BY: W. NELSON
DATE: SEPTEMBER 2010

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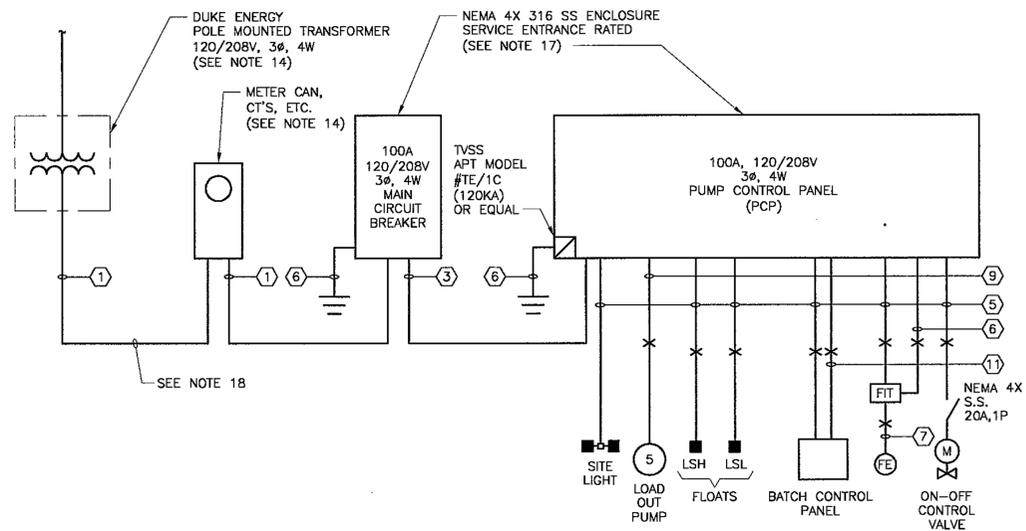
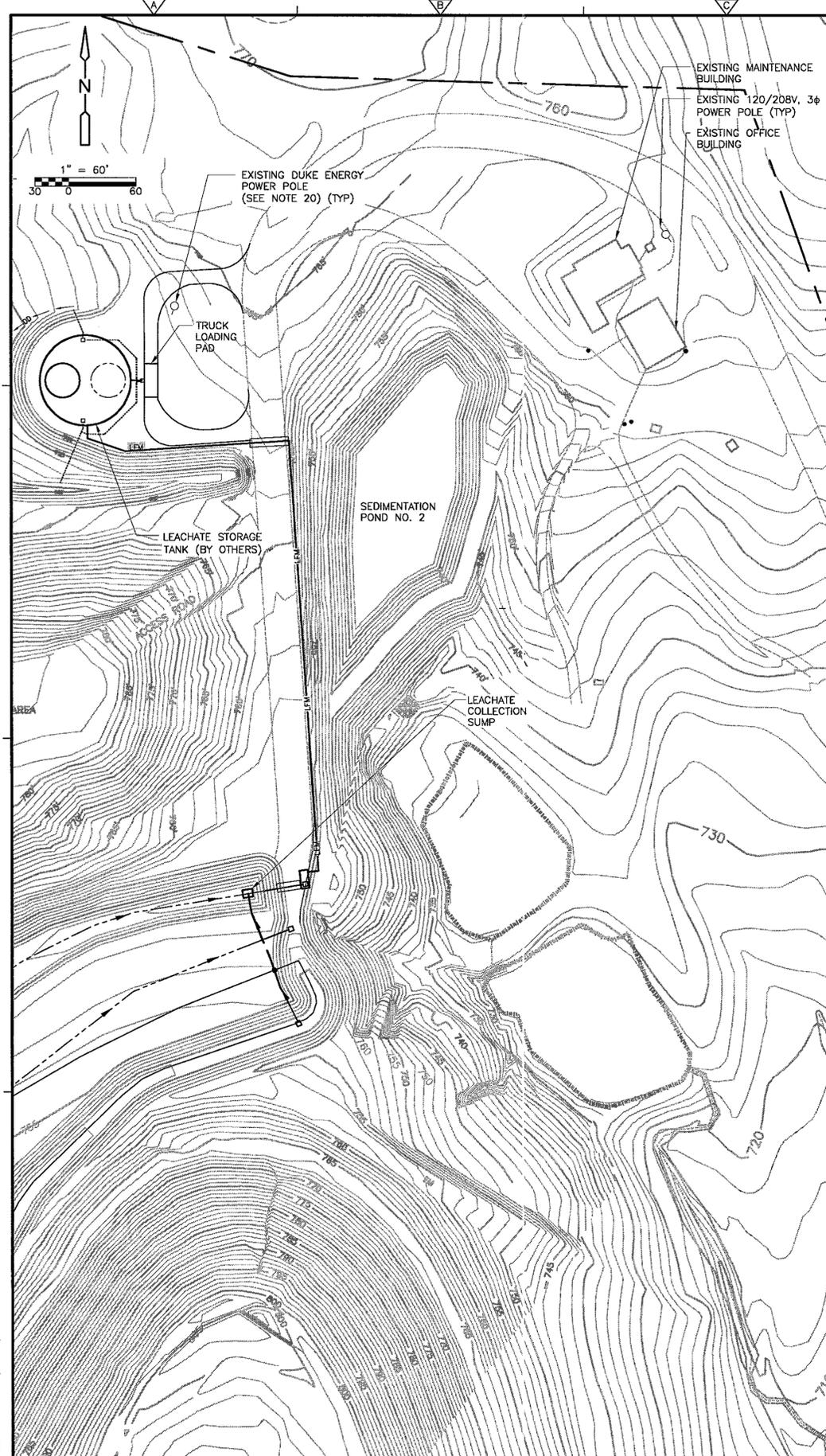
CABARRUS COUNTY
NORTH CAROLINA
CONSTRUCTION PLAN - PHASE 1L EXPANSION
CABARRUS COUNTY C&D LANDFILL

ELECTRICAL SYMBOLS AND ABBREVIATIONS

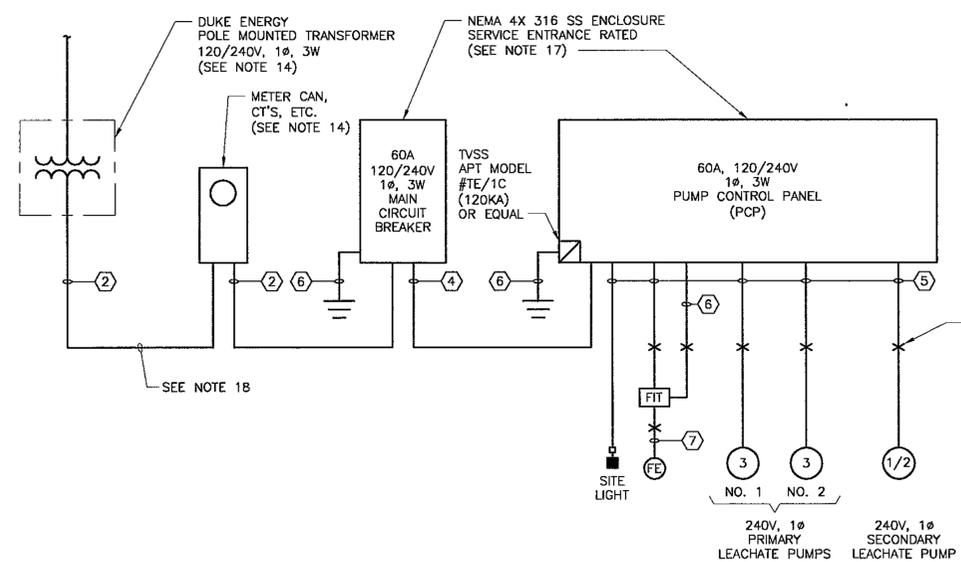
PROJECT NO. 1278-77070
FILE NAME: E002SYMB
SHEET NO.
E-2



REV. NO.	DATE	DRWN	CHKD	REMARKS



LEACHATE STORAGE FACILITY
POWER RISER DIAGRAM
NTS



LEACHATE COLLECTION SUMP PUMP
POWER RISER DIAGRAM
NTS

NOTES:

- FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS REQUIRED FOR A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM AS SHOWN ON THE DRAWINGS.
- COORDINATE WORK WITH OTHER TRADES AND OWNER. MAINTAIN EXISTING PROCESS OPERATIONS.
- CONTRACTOR SHALL FIELD VERIFY EXISTING UNDERGROUND UTILITIES, PIPING, ETC. REROUTE NEW CONDUITS, DUCTBANK, MANHOLES, PULL BOXES, ETC., AS REQUIRED AT NO ADDITIONAL COST TO THE OWNER.
- ALL ELECTRICAL EQUIPMENT AND MATERIALS SHALL BE LISTED BY UNDERWRITER'S LABORATORIES, INC., AND SHALL BEAR THE APPROPRIATE UL LISTING MARK OR CLASSIFICATION MARKING. EQUIPMENT, MATERIALS, ETC. UTILIZED NOT BEARING A UL CERTIFICATION SHALL BE FIELD OR FACTORY UL CERTIFIED PRIOR TO EQUIPMENT ACCEPTANCE AND USE.
- DO NOT SCALE THE ELECTRICAL DRAWINGS REFER TO THE CIVIL DRAWINGS, AND APPROVED MANUFACTURER'S SHOP DRAWINGS FOR THE EXACT LOCATION OF ALL EQUIPMENT.
- CONTRACTOR'S WORK SHALL INCLUDE COMPLETE TESTING OF ALL EQUIPMENT AND WIRING AND MAKING ANY MINOR CORRECTION CHANGES OR ADJUSTMENTS NECESSARY FOR THE PROPER FUNCTIONING OF THE SYSTEMS AND EQUIPMENT. ALL WORKMANSHIP SHALL BE OF THE HIGHEST QUALITY; SUBSTANDARD WORK WILL BE REJECTED.
- ALL WORK SHALL COMPLY WITH NEC AND LOCAL CODES.
- INSTALL HAND HOLES AND PULL BOXES AS REQUIRED.
- CONDUCTORS SHALL NOT BE SPLICED EXCEPT AS NOTED IN DIVISION 16 REQUIREMENTS.
- ALL CONDUITS SHALL HAVE A BOND WIRE SIZED PER TABLE 250-122 OF THE NEC (UNLESS OTHERWISE NOTED).
- SUBMIT TO THE ENGINEER THE FOLLOWING FOR APPROVAL IN ACCORDANCE WITH CONTRACT DOCUMENTS: RACEWAYS, BOXES, FITTINGS AND HANGERS; WIRES AND CABLES; HANDHOLES; PUMP CONTROL PANEL.
- CONTRACTOR SHALL COORDINATE WITH DUKE ENERGY TO ARRANGE FOR ALL ASPECTS OF THE ELECTRICAL SERVICE INCLUDING LOCATION OF THE SERVICE POLES AND TRANSFORMERS. CONTRACTOR SHALL INSTALL ALL BOXES, CONDUIT, PADS AND EQUIPMENT REQUIRED AND PAY ALL FEES REQUIRED FOR THE NEW SERVICE. ASSUME SERVICE POINT MAY BE 100 FT. AWAY FROM PANEL. BIDDERS SHALL INCLUDE AN ALLOWANCE OF \$15,000 FOR CHARGES BY DUKE ENERGY ASSOCIATED WITH THE ADDITION AND INSTALLATION OF OVERHEAD SINGLE PHASE OR THREE PHASE DISTRIBUTION TO EACH PUMP STATION SITE. ALLOWANCE SHALL BE USED FOR THE COST OF POLES, OVERHEAD LINE INSTALLATION AND INSTALLATION OF 120/240, 120/208, 480 VOLT SINGLE PHASE & THREE PHASE TRANSFORMERS. IF DUKE ENERGY CHARGES ARE LESS THAN THE ALLOWANCE BASED ON ACTUAL DUKE ENERGY INVOICES THEN THE DIFFERENCE WILL BE RETURNED TO THE OWNER. IF CHARGES ARE GREATER THAN THE ALLOWANCE, THEN THE DIFFERENCE BASED ON ACTUAL DUKE ENERGY INVOICES WILL BE PAID DIRECTLY TO DUKE ENERGY BY THE OWNER.
- PROVIDE METER AND MOUNTING APPURTENANCES PER DUKE ENERGY STANDARD REQUIREMENTS. SEE METER MOUNTING DETAIL.
- ALL CONDUIT BETWEEN THE PUMPS AND CONTROL PANEL SHALL BE RIGID ALUMINUM.
- THE CONTROL PANEL SHALL BE SERVICE ENTRANCE RATED AND THE CONTRACTOR SHALL PROVIDE A SERVICE ENTRANCE RATED OVER-CURRENT (MOLDED CASE CIRCUIT BREAKER) DEVICE MOUNTED IN A NEMA 4X STAINLESS STEEL ENCLOSURE INSTALLED AHEAD OF THE CONTROL PANEL.
- CONTRACTOR SHALL PROVIDE CONDUIT TO THE POWER COMPANY TRANSFORMER / POLE LOCATION. CONFIRM AND COORDINATE LOCATION IN FIELD WITH THE OWNER AND DUKE ENERGY.
- CONTRACTOR TO VERIFY ALL EXISTING ELECTRICAL REQUIREMENTS AT EACH EXISTING POWER POLE LOCATED AT THE EXISTING LANDFILL SITE. ALL ELECTRICAL REQUIREMENTS NEEDED FOR EACH PUMP STATION SHALL BE COORDINATED WITH DUKE ENERGY IN ORDER TO OBTAIN A OPERABLE AND RUNNING SYSTEM.
- ALL CONDUITS CROSSING ROADWAYS SHALL BE CONCRETE ENCASED. EXTEND DUCTBANK 10- FEET BEYOND EDGE OF ROADWAY ON BOTH SIDES. REFER TO TYPICAL DUCTBANK DETAIL SHOWN ON SHEET E-5.

CONDUIT AND WIRE LEGEND
(NUMBERS REFERENCE THIS SHEET ONLY)

NO.	DESCRIPTION
①	1" C., 3#2, 1#8
②	1" C., 3#4
③	1" C., 3#2, 1#8
④	1" C., 3#6, 1#8G
⑤	3/4" C., 2#12, 1#12G
⑥	1" C., 1-2/C#16 SH
⑦	3/4" C. W/WIRING PER MFR.
⑧	3/4" C., 3#12, 1#12G
⑨	3/4" C., 3#10, 1#10G
⑩	3/4" C., 2#12, 1#12G
⑪	3/4" C., 4#14

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DESIGNED BY: R. JONES
 DRAWN BY: R. JONES
 SHEET CHK'D BY: P. LEFAVE
 CROSS CHK'D BY: P. LEFAVE
 APPROVED BY: W. NELSON
 DATE: SEPTEMBER 2010

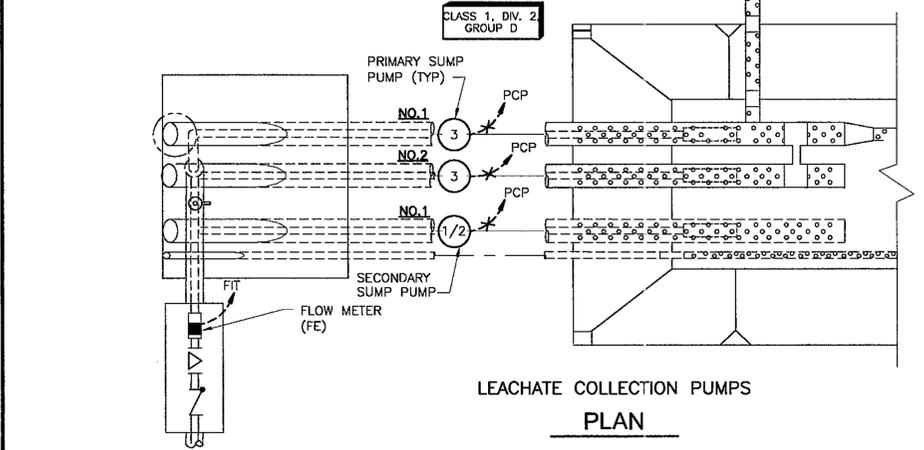
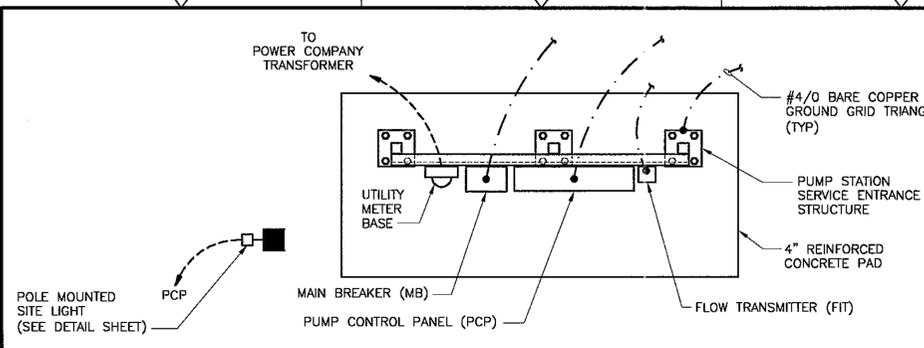
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CABARRUS COUNTY
 NORTH CAROLINA
 CONSTRUCTION PLAN - PHASE 1L EXPANSION
 CABARRUS COUNTY C&D LANDFILL

ELECTRICAL SITE PLAN AND RISER DIAGRAMS

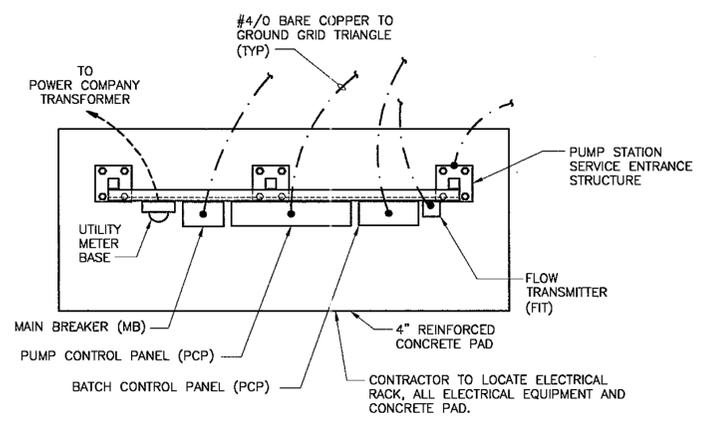


PROJECT NO. 1278-77070
 FILE NAME: EO03STPL
 SHEET NO. E-3



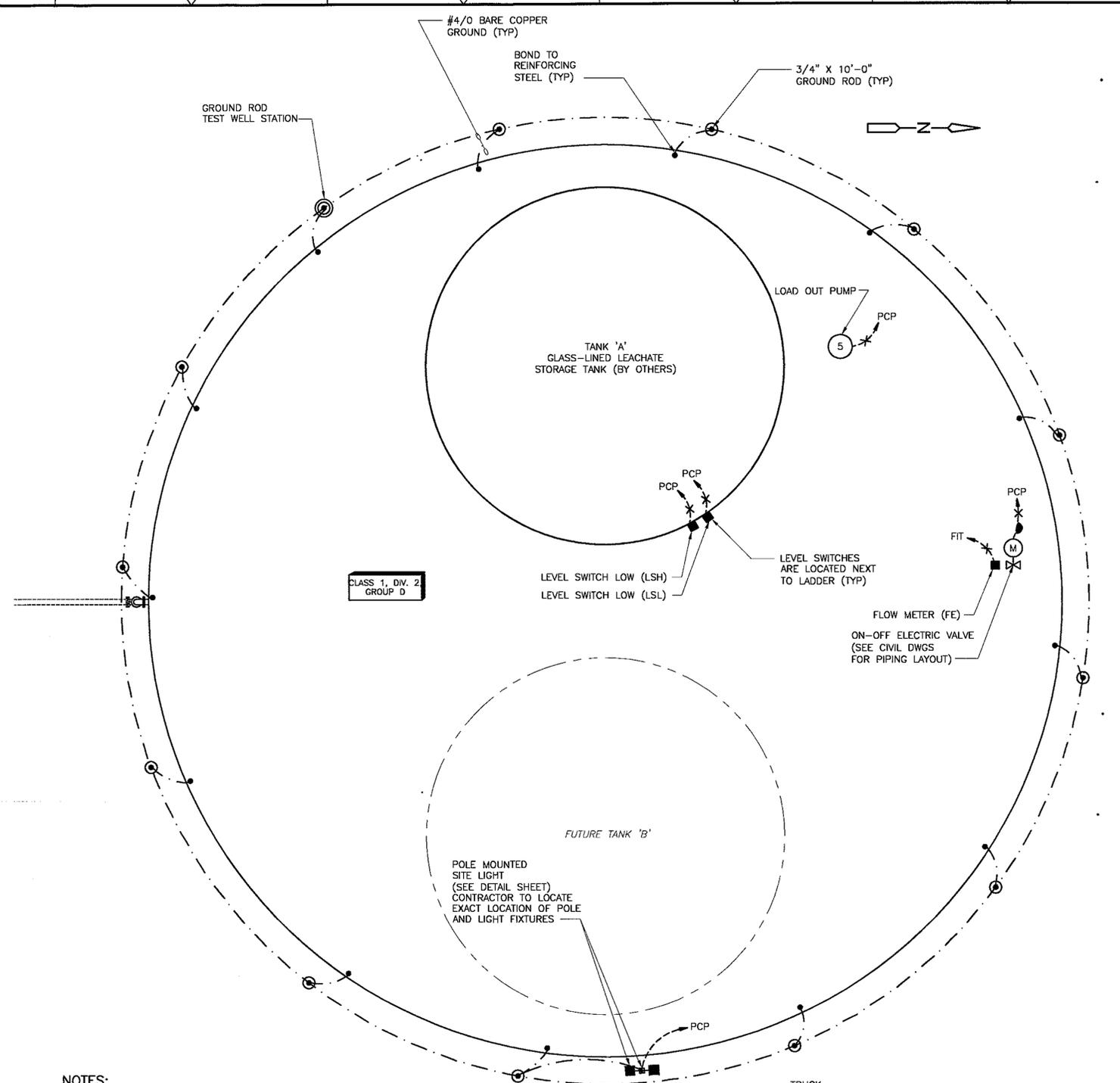
NOTES:

1. SEE SITE PLAN FOR EXACT LOCATION OF LEACHATE COLLECTION PUMP STATION.
2. CONTRACTOR TO FIELD VERIFY LOCATION OF LEACHATE COLLECTION PUMP STATION BEFORE INSTALLING ANY ELECTRICAL EQUIPMENT.
3. CONTRACTOR TO LOCATE POWER CAN METER, PUMP CONTROL PANEL, MAIN CIRCUIT BREAKER, ELECTRICAL RACK AND MAKE A DETERMINATION OF A BEST POSSIBLE ROUTE FOR CONDUIT AND WIRE.
4. SEE ELECTRICAL RISER DIAGRAM FOR CONDUIT AND WIRE CALLOUTS.



NOTES:

1. SEE SITE PLAN FOR EXACT LOCATION OF LEACHATE STORAGE FACILITY.
2. CONTRACTOR TO FIELD VERIFY LOCATION OF LEACHATE STORAGE FACILITY SERVICE ENTRANCE BEFORE INSTALLING ANY ELECTRICAL EQUIPMENT.
3. CONTRACTOR TO LOCATE POWER CAN METER, PUMP CONTROL PANEL, MAIN CIRCUIT BREAKER, ELECTRICAL RACK, ETC. AND MAKE A DETERMINATION OF A BEST POSSIBLE ROUTE FOR CONDUIT AND WIRE.
4. SEE ELECTRICAL RISER DIAGRAM FOR CONDUIT AND WIRE CALLOUTS.



NOTES:

1. CONTRACTOR TO FIELD VERIFY LOCATION OF ALL ELECTRICAL EQUIPMENT ASSOCIATED WITH THE LEACHATE SYSTEM BEFORE INSTALLING ANY ELECTRICAL EQUIPMENT. CONTRACTOR SHALL MOUNT ELECTRICAL EQUIPMENT ON ELECTRICAL RACK. SEE ELECTRICAL DETAILS FOR MOUNTING REQUIREMENTS.
2. CONTRACTOR TO LOCATE POWER CAN METER, PUMP CONTROL PANEL, MAIN CIRCUIT BREAKER, BATCH CONTROLLER, ACTUATOR, ELECTRICAL RACK AND MAKE A DETERMINATION OF A BEST POSSIBLE ROUTE FOR CONDUIT AND WIRE.
3. SEE ELECTRICAL RISER DIAGRAM FOR CONDUIT AND WIRE CALLOUTS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING CORRECT ELECTRICAL REQUIREMENTS TO OBTAIN A PROPER SYSTEM OPERATION. CONTRACTOR SHALL COORDINATE WITH POWER COMPANY ALL POWER REQUIREMENTS, DISCREPANCIES AND CHANGES NEEDED TO COMPLETE AN INSTALLATION OF ALL ELECTRICAL EQUIPMENT.

LEACHATE STORAGE FACILITY
PLAN
3/8" = 1'-0"



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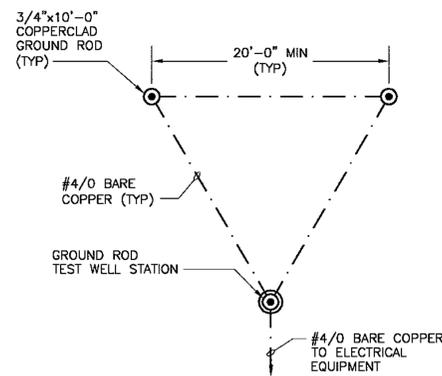
REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: R. JONES	CDM Camp Dresser & McKee 5400 Glenwood Avenue, Suite 300 Raleigh, NC 27612 Tel: (919) 787-5620 North Carolina Firm License: F-0412 consulting • engineering • construction • operations
DRAWN BY: R. JONES	
SHEET CHK'D BY: P. LEFAVE	
CROSS CHK'D BY: P. LEFAVE	
APPROVED BY: W. NELSON	
DATE: SEPTEMBER 2010	

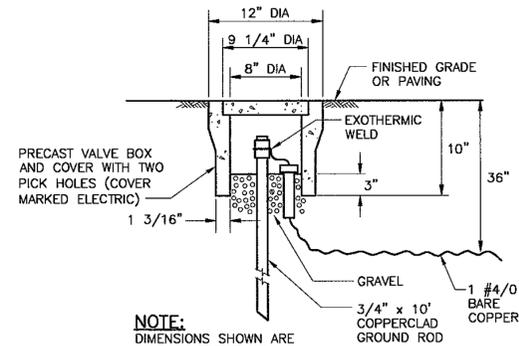
CABARRUS COUNTY
NORTH CAROLINA
CONSTRUCTION PLAN - PHASE 1L EXPANSION
CABARRUS COUNTY C&D LANDFILL

TRANSFER PUMP STATION AND
LEACHATE COLLECTION PUMP STATION
ELECTRICAL PLANS

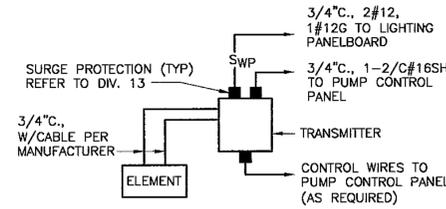
PROJECT NO. 1278-77070
FILE NAME: E004EGPL
SHEET NO. E-4



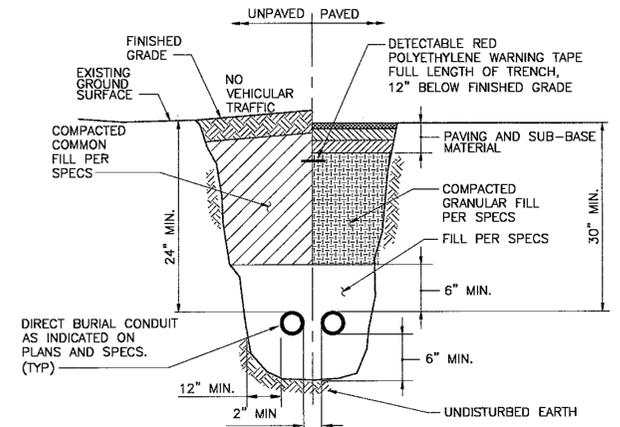
**GROUND GRID TRIANGLE
DETAIL**
NTS



**GROUND ROD TEST WELL
DETAIL**
NTS

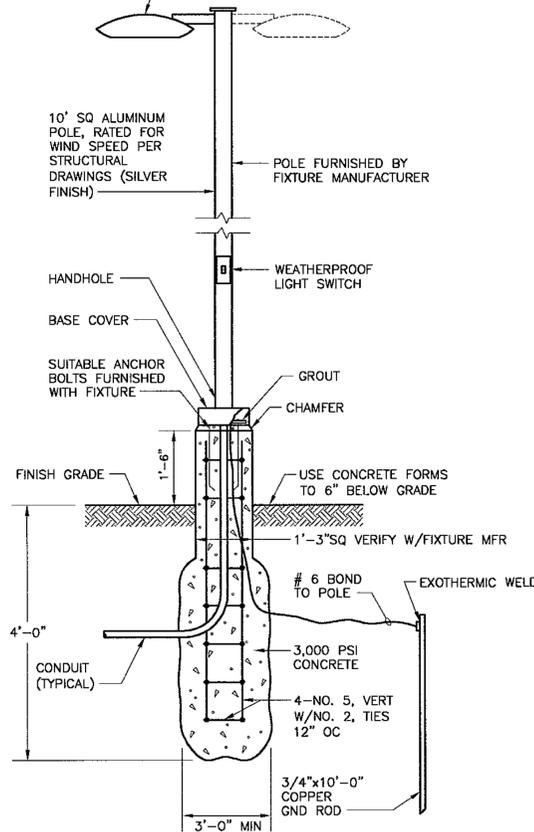


**TYPICAL TRANSMITTER
DETAIL**
NTS

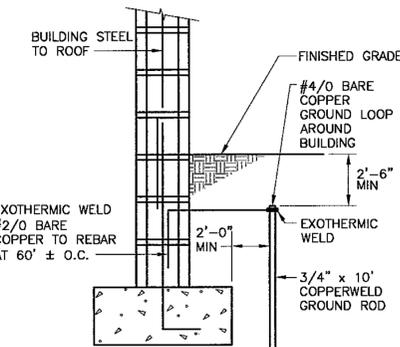


**TYPICAL DIRECT BURIED CONDUIT INSTALLATION
DETAIL**
NTS

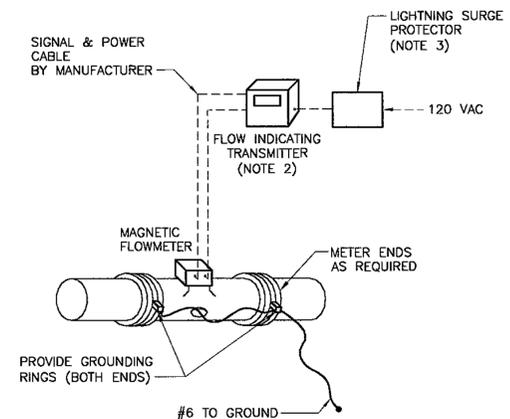
POLE MOUNTED LUMINAIRE W/ 4 LED LIGHT BARS (104 WATTS), FULL CUT OFF OPTICS, SLIM, LOW PROFILE, CAST ALUMINUM SIDES W/ INTEGRAL WEATHER-TIGHT LED DRIVER AND HIGH PERFORMANCE ALUMINUM HEATSINKS, DIE CAST ALUMINUM HOUSING, COLORFAST DELTAGUARD SILVER FINISH, 6000K COLOR TEMPERATURE, MINIMUM 75 CRI, LONG LIFE LED SOURCE, 120V, 60HZ, CLASS 1 LED DRIVER W/ POWER FACTOR >90% AND THD <20% OF FULL LOAD, PHOTOCELL CONTROL, UL LISTED FOR WET LOCATIONS, IP66 CLASSIFIED ENCLOSURE, MFR BY BETA LED BLD-ARE-T3-DA TYPE III DISTRIBUTION, EDGE SERIES LED AREA LIGHT.



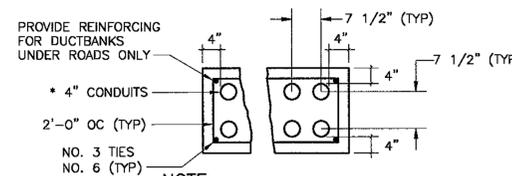
**POLE MOUNTED SITE LIGHT
DETAIL**
NTS



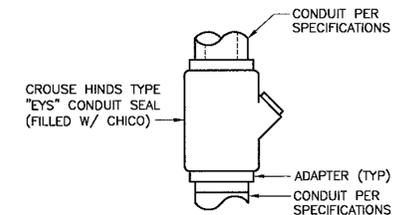
**BUILDING STRUCTURE BONDING
DETAIL**
NTS



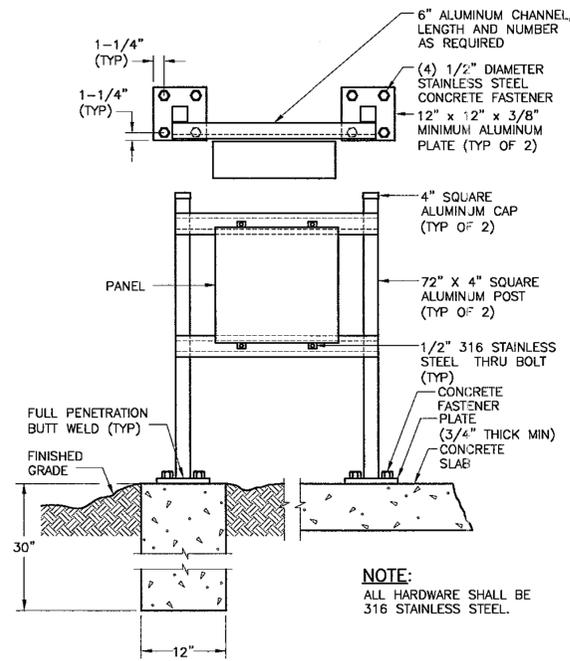
**MAGNETIC FLOWMETER INSTALLATION
DETAIL**
NTS



**TYPICAL DUCTBANK
DETAIL**
NTS



**CONDUIT SEAL CONNECTION
DETAIL**
NTS



**ELECTRICAL EQUIPMENT MOUNTING
DETAIL**
NTS

- NOTES:**
- REFER TO SECTION 15100 FOR MAGNETIC FLOWMETER SPECIFICATION.
 - FLOW METER TRANSMITTER SHALL BE REMOTELY WALL MOUNTED OR ON THE ELECTRICAL EQUIPMENT RACK AS SHOWN ON THE DRAWINGS. PROVIDE AN INSTRUMENT RAINHOOD WHICH COVERS THE SIDES, BACK, AND TOP WITH AN OVERHANG TO SHIELD THE FRONT DISPLAY OF THE TRANSMITTER.
 - PROVIDE LIGHTNING SURGE PROTECTION FOR THE INSTRUMENT POWER SUPPLY. LIGHTNING SURGE PROTECTOR SHALL BE MOUNTED IN A SEPARATE NEMA 4X JUNCTION BOX. LIGHTNING SURGE PROTECTION SHALL BE MANUFACTURED BY PHOENIX CONTACT, EDCC, OR APPROVED EQUAL.

NOTE:
ALL HARDWARE SHALL BE 316 STAINLESS STEEL.

NOTE:
* ALL SHIELDED INSTRUMENTATION CABLES SHALL BE INSTALLED IN RIGID ALUMINUM CONDUIT. PROVIDE ONE GALVANIZED CONDUIT IN EACH INSTRUMENTATION DUCTBANK WITH SPARES FOR FUTURE.

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CABARRUS COUNTY
NORTH CAROLINA
**CONSTRUCTION PLAN - PHASE 1L EXPANSION
CABARRUS COUNTY C&D LANDFILL**

ELECTRICAL DETAILS

PROJECT NO. 1278-77070
FILE NAME: E005DET.DWG

SHEET NO.

E-5



REV. NO.	DATE	DRWN	CHKD	REMARKS