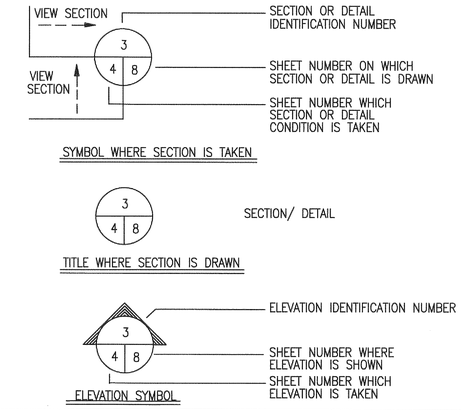
CONSTRUCTION AND DEMOLITION LANDFILL
PHASE II CONSTRUCTION AND PHASE I CLOSURE
PERMIT APPLICATION
PWBC PROJECT NO. F9-00026-8
FORT BRAGG, NORTH CAROLINA

INDEX OF DRAWINGS

STANDARD ABBREVIATIONS

A	
A.C.	AIR CONDITIONED
A.C.M.	ASBESTOS CONTAINING MATERIAL
A.D.	AREA DRAIN
A.F.F.	ABOVE FINISH FLOOR
A.H.U.	AIR HANDLING UNIT
ALT.	ALTERNATE
ALUM.	ALUMINUM
AMP.,A	AMPERES
A.O.	ACCESS OPENING
APPROX.	APPROXIMATELY
ARCH.	ARCHITECTURAL
A.T.C.	ACOUSTICAL TILE CEILING
A.B.	ANCHOR BOLT
B	
BAL.	BALANCE
BD.	BOARD
BLDG.	BUILDING
BLK.	BLOCK
BM.	BEAM
BOT.	BOTTOM
BRG.	BEARING
B.T.U.H.	BRITISH THERMO UNIT/HR.
C	
CAB.	CABINET
CAP.	CAPACITY
C/B	CIRCUIT BREAKER
C.D.	CEILING DIFFUSER
CEM.	CEMENT
CER.	CERAMIC
C.F.M.	CUBIC FEET/MINUTE
CIRC.	CIRCULATING
C.J.	CONTROL JOINT
CK'D	CHECKERED
CKT.	CIRCUIT
C.L.	CENTER LINE
CIEL.,CLG.	CEILING
CLO.	CLOSET
C.M.U.	CONCRETE MASONRY UNIT
C.O.	CLEAN OUT
COL.	COLUMN
CONC.	CONCRETE
COND.	CONDESATE
CONN.	CONNECTION
CONST.	CONSTRUCTION
CONT.	CONTINUOUS
CONT'R.	CONTRACTOR
CONTR. JT.	CONTRACTION JOINT
C.T.	CERAMIC TILE
C.T.B.	CERAMIC TILE BASE
C. TO C.	CENTER TO CENTER
CU. FT., C	CUBIC FEET
D	
DET.	DETAIL
DIA.	DIAMETER
DIFF.	DIFFUSER
DIM.	DIMENSION
DISC.	DISCONNECT
DN.	DOWN
DR.	DOOR
D.S.	DOWNSPOUT
DWG. (S)	DRAWING (S)
DSB	DOUBLE STRENGTH "B" GLASS
E	
EA.	EACH
E.C.	EMPTY CONDUIT
E.F.	EXHAUST FAN
EL., ELEV.	ELEVATION
ELEC.	ELECTRIC
EQUIP.	EQUIPMENT
E.W.	EACH WAY
E.W.C.	ELECTRIC WATER COOLER
EXH.	EXHAUST
EXP. JT.	EXPANSION JOINT
EXT.	EXTERIOR
EXIST.	EXISTING
F	
F.A.	FIRE ALARM
F.C.	FLEXIBLE CONNECTION
F.D.	FLOOR DRAIN
F.E.C.	FIRE EXTINGUISHER CABINET
FIN.	FINISH
FL.	FLOOR
FR.	FRAME
FT.	FOOT – FEET
FTG.	FOOTING
FDN.	FOUNDATION
G	
GA.	GAGE
GAL.	GALLON
GALV.	GALVANIZED
G.F.E.	GOVERNMENT FURNISHED EQUIPMENT
GL.	GLASS
GND.	GROUND
GOV'T	GOVERNMENT
G.P.H.	GALLONS/HOUR
G.P.M.	GALLONS/MINUTE
GR.	GRILLE
G.W.B.	GYPSUM WALL BOARD
GYP.	GYPSUM
H	
H.	HIGH
H.B.	HOSE BIBB
H.C.	HOLLOW CORE
HT.	HEIGHT
H.M.	HOLLOW METAL
H.P.	HORSE POWER
HR.	HOUR
HTG.	HEATING
HTR.	HEATER
HVAC	HEATING, VENTILATION & AIR CONDITIONING
HW., HDWE.	HARDWARE
HYD.	HYDRANT
HORIZ.	HORIZONTAL
I	
I.D.	INSIDE DIAMETER
I.E.	INVERT
IN.	INCHES
INCAND.	INCANDESCENT
INSUL.	INSULATION
INT.	INTERIOR
J	
J.B.	JUNCTION BOX
JCT.	JUNCTION
JT.	JOINT
K	
KVA	KILOVOLT AMPERE
KW.	KILOWATT
L	
LB.	POUND
LG.	LONG
L.P.	LIGHTING PANEL
LTG.	LIGHTING
LAV.	LAVATORY
M	
M.	MOTOR
MAINT.	MAINTENANCE
MAX.	MAXIMUM
M.D.P.	MAIN DISTRIBUTION PANEL
MECH.	MECHANICAL
MTL.	METAL
MIN.	MINIMUM
MISC.	MISCELLANEOUS
M.O.	MASONRY OPENING
M.T.	METAL THRESHOLD
MTD.	MOUNTED
MTG.	MOUNTING
M.V.	MECHANICAL VENTILATION
M.G.T.	MATTE GLAZE TILE
N	
N.A.	NOT APPLICABLE
N.I.C.	NOT IN CONTRACT
NO., #	NUMBER
O	
O.A.	OUTDOOR AIR
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.H.	OVERHEAD
OL.	OVERLOAD
OPNG.	OPENING
OPP.	OPPOSITE
O.S.D.	OPEN SIGHT DRAIN
P	
P.	PAPER
PART'N.	PARTITION
PER.	PERIMETER
PL.	PLATE
PLBG.	PLUMBING
PLYD.	PLYWOOD
PNL.	PANEL
PRESS.	PRESSURE
PSF	POUNDS / SQUARE FOOT
PSI	POUNDS / SQUARE INCH
PSIG	POUNDS / SQUARE INCH GAGE
PT.	POINT
PTD.	PAINTED
P.T.D.	PAPER TOWEL DISPENSER
Q	
QTR.	QUARTER
QUAN.	QUANTITY
R	
R.	RISER
R.A.	RETURN AIR
RAD.	RADIUS
RD.	ROUND
REC'D.	RECESSED
RECIRC.	RECIRCULATING
RECP.	RECEPTACLE
REG.	REGISTER
REINF.	REINFORCING
REQ'D.	REQUIRED
RET.	RETURN
R.G.	RETURN GRILLE
RM.	ROOM
R.O.	ROUGH OPENING
R.P.M.	REVOLUTIONS / MINUTE
S	
S.	SUPPLY
S.A.	SUPPLY AIR
SCH.	SCHEDULE
SECT.	SECTION
SERV.	SERVICE
SHT.	SHEET
S.J.	SLIP JOINT
SPEC.	SPECIFICATIONS
SQ. FT., SF	SQUARE FEET
STL.	STEEL
STOR.	STORAGE
STRUC.	STRUCTURAL
SUSP.	SUSPENDED
SW.	SWITCH
STD.	STANDARD
T	
T., TOIL.	TOILET
TEL.	TELEPHONE
TEMP.	TEMPERATURE
THK.	THICKNESS
THD.	THRESHOLD
TYP.	TYPICAL
T.T.D.	TOILET TISSUE DISPENSER
T.O.S.	TOP OF STEEL
T & G	TONGUE & GROOVE
TR.	TREAD
U	
U.O.N.	UNLESS OTHERWISE NOTED
V	
V.	VOLT
V.C.T.	VINYL COMPOSITION TILE
VENT.	VENTILATION
VERT.	VERTICAL
VTR.	VENT THRU ROOF
W	
W.	WATT
W/	WITH
WD.	WOOD
W.G.	WATER GAGE
WP.	WEATHERPROOF
WTR.	WATER
W.W.F.	WELDED WIRE FABRIC
W.C.	WATER CLOSET
W.H.	WATER HEATER

SECTION SYMBOLS



MATERIAL INDICATIONS

EARTH	STEEL (SECTION)
EARTH (COMPACTED)	STEEL (SMALL SCALE)
GRAVEL	INSULATION (RIGID)
CONCRETE	INSULATION (BATT)
MORTAR–CEMENT–PLASTER–STUCCO	INSULATION (SPRAY–FOAM)
CMU (SMALL SCALE)	WOOD (FINISH)
CMU (LARGE SCALE)	WOOD (ROUGH)
BRICK (ELEVATION)	WOOD (BLOCKING)
BRICK (SECTION)	PLYWOOD
METAL (ELEVATION)	GLASS (ELEVATION)

BASIC DESIGN DATA

NORTH CAROLINA PROFESSIONAL SEAL 19887 ENGINEER THOMAS M. YANOSCHAK

HDR INC. N.C. ENGINEERING BOARD NO. F0116

REVISION	DATE	DESCRIPTION	BY

PUBLIC WORKS BUSINESS CENTER
FORT BRAGG, NORTH CAROLINA

CHIEF, CONSTRUCTION MANAGEMENT
CHIEF, ENVIROMENTAL/NATURAL RESOURCES
CHIEF, FACILITY MAINTENANCE
CHIEF, FIRE PROTECTION AND PREVENTION
DIR, HEALTH SERVICES
USING SERVICE

CONSTRUCTION AND DEMOLITION LANDFILL
FORT BRAGG NORTH CAROLINA

APPROVED: DATE: 5/24/10
COL, C.E. DIRECTOR

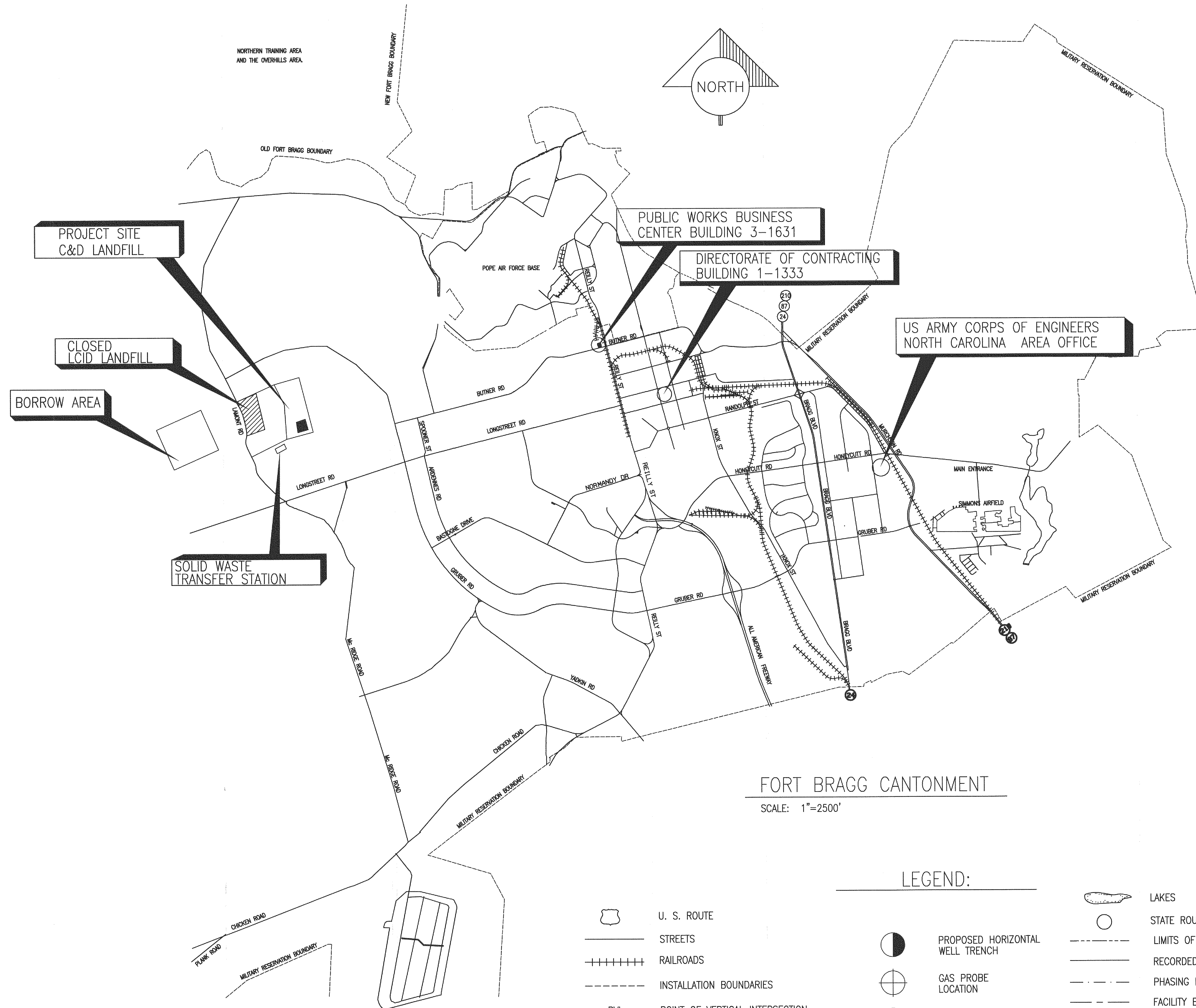
SCALE: N. T. S. DRAWN BY: LEP SPEC. NO. F9-00026-8

DRAWING NUMBER 6909

SHEET 1 OF 14

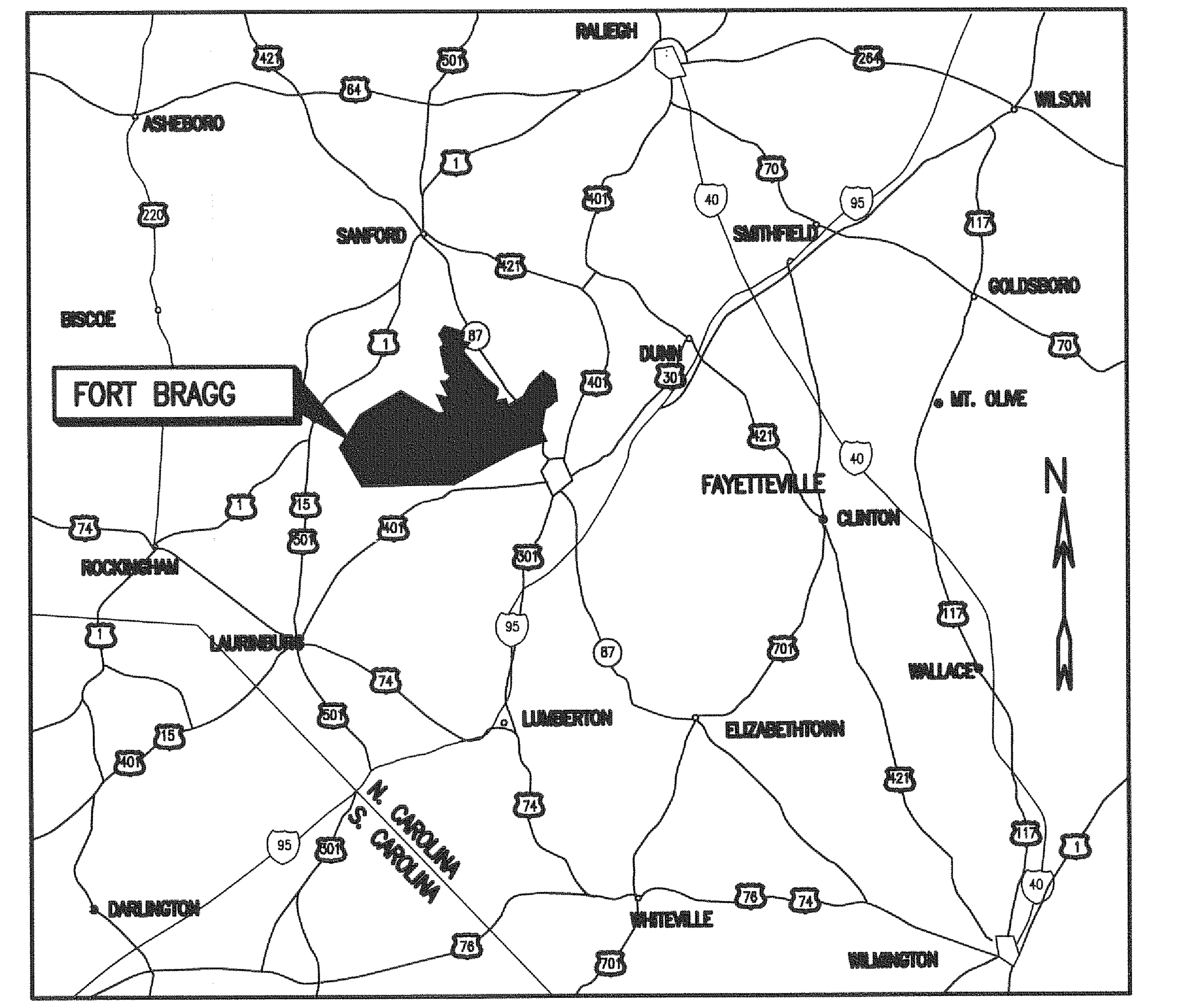
HDR
License Number: F-0116
3733 National Drive
Suite 207
Raleigh, North Carolina 27612
(919) 783-1116
HDR Engineering, Inc.

$$$FILENAME$$$
$$$SAVE DATE$$$
$$$PLOT DATE$$$



FORT BRAGG CANTONMENT

SCALE: 1"=2500'



VICINITY MAP

N.T.S.

GENERAL NOTES

1. FORT BRAGG HAS A WASTE CENTER WITH A CONSTRUCTION AND DEMOLITION LANDFILL FOR NON-HAZARDOUS SOLID WASTE DISPOSAL AND A PERMITTED WASTE TRANSFER STATION (WTS) FOR THE TRANSFER OF MUNICIPAL SOLID WASTE (MSW) TO A REGIONAL LANDFILL. THE WASTE CENTER IS LOCATED ON LAMONT ROAD BETWEEN LONGSTREET AND MCKELLAR ROADS AND IS OPEN WEEKDAYS FOR DISPOSAL FROM 0730-1500 HOURS.

2. THE CONSTRUCTION AND DEMOLITION (C&D) LANDFILL IS PERMITTED TO RECEIVE ASBESTOS AND CONSTRUCTION AND DEMOLITION DEBRIS GENERATED ON FORT BRAGG. THIS INCLUDES PAINTED AND TREATED WOOD, INCIDENTAL SCRAP METALS, AND NON-HAZARDOUS WASTE NORMALLY GENERATED AT A CONSTRUCTION SITE TO INCLUDE PACKAGING, LUNCHES, INSULATION, SHINGLES, METAL CANS, AND WASTE WALLBOARD. ASBESTOS IS DISPOSED OF IN AN ADJACENT CELL WITHIN THE C&D LANDFILL, BUT FRIABLE ASBESTOS MUST BE DOUBLE BAGGED AND MANIFESTED. YARD WASTE IS NOT ALLOWED.

3. THE C&D LANDFILL IS ALSO PERMITTED TO RECEIVE LAND CLEARING AND INERT DEBRIS (LCID) GENERATED ON FORT BRAGG. THIS INCLUDES STUMPS, TREE TRUNKS, BRICK, CONCRETE, ROCK, CLEAN SOIL, AND ASPHALT.

4. THE WASTE TRANSFER STATION (WTS) ACCEPTS MSW FOR SHIPMENT TO THE REGIONAL LANDFILL. THEY ACCEPT TIRES AND APPLIANCES FOUND ON POST, WHICH ARE NOT SERVICED BY DRMO, AAFES OR FAMILY HOUSING REFUSE COLLECTION CONTRACT. THEY DO NOT ACCEPT TIRES, APPLIANCES, AND METAL DISPOSED OF BY OTHER CONTRACTOR ACTIVITIES.

5. CONCRETE AND ASPHALT SHOULD NOT BE MIXED WITH THE DEBRIS AND WILL BE STOCKPILED IN THE CONCRETE RECYCLING AREA FOR CRUSHING AND REUSE. CLEAN, REUSABLE SOIL SHALL BE STOCKPILED AT A SITE DESIGNATED BY ENVIRONMENTAL SUSTAINABILITY OFFICE (ESO). PINE NEEDLES SHOULD NOT BE MIXED WITH DEBRIS AND WILL BE STOCKPILED AT THE CLOSED LCID LANDFILL FOR REUSE. SCRAP METAL SHALL BE TURNED IN TO DRMO FOR SALVAGE; THE LANDFILL WILL ONLY ACCEPT INCIDENTAL METALS ATTACHED TO DEBRIS.

LEGEND:

	U. S. ROUTE				LAKES
	STREETS				STATE ROUTE
	RAILROADS		PROPOSED HORIZONTAL WELL TRENCH		LIMITS OF WASTE
	INSTALLATION BOUNDARIES		GAS PROBE LOCATION		RECORDED PLAT BOUNDARY
PVI	POINT OF VERTICAL INTERSECTION		GW MONITORING WELL LOCATION		PHASING BOUNDARY
PVC	POINT OF VERTICAL CURVE		RIP RAP APRON		FACILITY BOUNDARY
PVT	POINT OF VERTICAL TANGENCY		DIVERSION BERM	—SF—	SILT FENCE
	INTERSTATE ROUTE		SIDESLOPE SWALE		LIMITS OF CLOSURE
	EXISTING GRADE				PERIMETER CHANNEL
				—300—	PROPOSED MAJOR GRADE
					PROPOSED MINOR GRADE

NORTH CAROLINA PROFESSIONAL SEAL 18867 ENGINEER THOMAS M. YANOSCHAK

5/24/10

HDR INC. N.C. ENGINEERING BOARD NO. F0116

PUBLIC WORKS BUSINESS CENTER
FORT BRAGG, NORTH CAROLINA

CONSTRUCTION AND DEMOLITION LANDFILL

FORT BRAGG NORTH CAROLINA

SCOPE NC VICINITY MAP AND FORT BRAGG CANTONMENT MAP WITH PROJECT LOCATION	DATE: 5/24/10
SCALE: 1"-100' DRAWN BY: LEP	SPEC. NO. F9-00026-8
HDR Engineering, Inc. of the Carolinas 3733 National Drive Suite 207 Raleigh, North Carolina 27612	DRAWING NUMBER 6909 SHEET 2 OF 14

CONCRETE MONUMENT
TUDOR–1
N: 508,167.4574
E: 1,978,776.9685

CONCRETE MONUMENT
TUDOR–2
N: 507,706.7660
E: 1,978,793.8247

NAD 83

C&D LIMITS
OF WASTE
(PERMITTED)

CONTROL POINT:
4D PK NAIL #401
N: 509,088.225
E: 1,978,345.394
NC GRID NAD 83
(NSRS 2007)

EXISTING C&D LANDFILL
(ACTIVE)

FACILITY
BOUNDARY

EXISTING
SOIL
STOCKPILE

PHASE II LIMIT
(6.03 AC.)

PHASE I LIMIT
(15.70 AC.)

LCID–3A
N: 509,055.9122
E: 1,977,723.5218

TUDOR–2A
N: 506,787.6887
E: 1,978,456.4400

ACCESS
ROAD

EXISTING
RETENTION POND

DDL–C
N: 507,343.9635
E: 1,978,074.1605

LAT: N 35.14540°
LONG: E –79.07427°

CONCRETE MONUMENT
DDL–A
N: 506,873.5082
E: 1,978,019.3807

PHASE III LIMIT
(6.11 AC.)

ACCESS
ROAD

CONCRETE MONUMENT
LCID–3
N: 508,932.3704
E: 1,977,376.2320

CONCRETE MONUMENT
DDL–B
N: 506,659.9935
E: 1,978,040.7367

TRANSFER STATION

FACILITY
BOUNDARY

PHASE IV LIMIT
(13.71 AC.)

CLOSED LCID LANDFILL
EXISTING RECYCLING AREA

CLOSED LCID LANDFILL
LIMITS OF WASTE

SCALE
HOUSE

CONCRETE MONUMENT
LCID–1
N: 506,956.2005
E: 1,977,092.8447

CONCRETE MONUMENT
LCID–2
N: 508,591.7866
E: 1,976,605.8795

TBM:
4D PK NAIL #400
N: 508,273.705
E: 1,976,629.355
ELEV: 373.62
NC GRID NAD 83
(NSRS 2007)
NAVD 88

LAMONT ROAD

S16°24'39"E 1848.11' TIE

CONTROL POINT:
4D PK NAIL #403
N: 506,500.884
E: 1,977,151.486
NC GRID NAD 83
(NSRS 2007)

NOTES

1. EXISTING TOPOGRAPHY PROVIDED BY 4D SITE SOLUTIONS FROM AN AERIAL PHOTO TAKEN OCTOBER 8, 2009.
2. COORDINATE SYSTEM IS NC STATEPLANE, NAD83.

NORTH CAROLINA PROFESSIONAL SEAL 18867 ENGINEER THOMAS M. YANOSCHAK

HDR INC. N.C. ENGINEERING BOARD NO. F0116

PUBLIC WORKS BUSINESS CENTER
FORT BRAGG, NORTH CAROLINA

CONSTRUCTION AND DEMOLITION LANDFILL

FORT BRAGG NORTH CAROLINA

SCOPE: OVERALL SITE PLAN
DATE: 5/24/10

SCALE: 1"=100' DRAWN BY: LEP
SPEC. NO. F9-00028-8

HDR Engineering, Inc.
of the Carolinas
3733 National Drive
Suite 207
Raleigh, North Carolina 27612

DRAWING NUMBER
6909
SHEET 3 OF 14

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CONCRETE MONUMENT
TUDOR–1
N: 508,167.4574
E: 1,978,776.9685

FINAL COVER (1 / 4 | 11)

CONCRETE MONUMENT
TUDOR–2
N: 507,706.7660
E: 1,978,793.8247

SIDESLOPE SWALE (TYP.) (2 / 4 | 10)

APPROXIMATE LIMITS
OF PHASE I CLOSURE
(10.34 AC)

PERIMETER CHANNEL
DOWNPIPE PROTECTION (5 / 4 | 11)

DOWNPIPE (TYP) (1 / 4 | 10)

FACILITY
BOUNDARY

DIVERSION
BERM (TYP) (3 / 4 | 10)

TUDOR–2A
N: 506,787.6887
E: 1,978,456.4400

ACCESS
ROAD

CONTROL POINT:
4D PK NAIL #401
N: 509,088.225
E: 1,978,345.394
NC GRID NAD 83
(NSRS 2007)

EXISTING SOIL
STOCKPILE

PHASE I LIMIT
(15.70 AC.)

LCID–3A
N: 509,055.9122
E: 1,977,723.5218

EXISTING
RETENTION
POND

DDL–C
N: 507,343.9635
E: 1,978,074.1605

CONCRETE MONUMENT
DDL–A
N: 506,873.5082
E: 1,978,019.3807

PERIMETER
CHANNEL

CONCRETE MONUMENT
DDL–B
N: 506,659.9935
E: 1,978,040.7367

PERIMETER CHANNEL (4 / 4 | 11)

CONCRETE MONUMENT
LCID–3
N: 508,932.3704
E: 1,977,376.2320

ACCESS ROAD

TRANSFER STATION

EXISTING DROP INLET

EXISTING
RECYCLING AREA

MH4

EXISTING 30" RCP

SCALES

SCALE
HOUSE

MH5

C&D LIMITS OF
WASTE (PERMITTED)

(A / 4 | 13)

CONCRETE MONUMENT
LCID–1
N: 506,956.2005
E: 1,977,092.8447

CONTROL POINT:
4D PK NAIL #403
N: 506,500.884
E: 1,977,151.486
NC GRID NAD 83
(NSRS 2007)

RIP RAP APPROX

CONCRETE MONUMENT
LCID–2
N: 508,591.7866
E: 1,976,605.8795

NAD 83

NOTES

1. EXISTING TOPOGRAPHY SUPPLIED BY 4D SITE SOLUTIONS FROM AN AERIAL PHOTOGRAPH DATED OCTOBER 8, 2009.
2. COORDINATE SYSTEM IS NC STATE PLANE, NAD 83.
3. ALL EXTERIOR SLOPES SHALL BE CONSTRUCTED AT 3H:1V.
4. LIMITS OF PHASE I CLOSURE MAY BE ADJUSTED AT TIME OF CONSTRUCTION TO COINCIDE WITH AREAS THAT HAVE REACHED FINAL GRADE.

PHASE I REMAINING CAPACITY AS OF OCTOBER 8, 2009

ASSUMPTIONS:
IN–PLACE DENSITY: 2,339 LB/CY
REFUSE INTAKE: 110,000 TPY

GROSS AREA: 7.0 AC.
GROSS VOLUME: 278,100 CY
FINAL COVER SYSTEM: 33,880 CY
DAILY AND INTERMEDIATE COVER: 21,980 CY
NET OPERATING VOLUME: 222,240 CY
REMAINING LIFESPAN: 2.6 YRS

NORTH CAROLINA PROFESSIONAL SEAL 18887 ENGINEER THOMAS M. VANOSCHAIK
5/28/10

HDR INC. N.C. ENGINEERING BOARD NO. F0116

PUBLIC WORKS BUSINESS CENTER
FORT BRAGG, NORTH CAROLINA

CONSTRUCTION AND DEMOLITION LANDFILL

FORT BRAGG NORTH CAROLINA

SCOPE: PHASE I FINAL GRADE PLAN
DATE: 5/24/10

SCALE: 1" = 100' DRAWN BY: LEP
SPEC. NO. F9-00026-8

HDR Engineering, Inc.
of the Carolinas
3733 National Drive
Suite 207
Raleigh, North Carolina 27612

DRAWING NUMBER
6909
SHEET 4 OF 14

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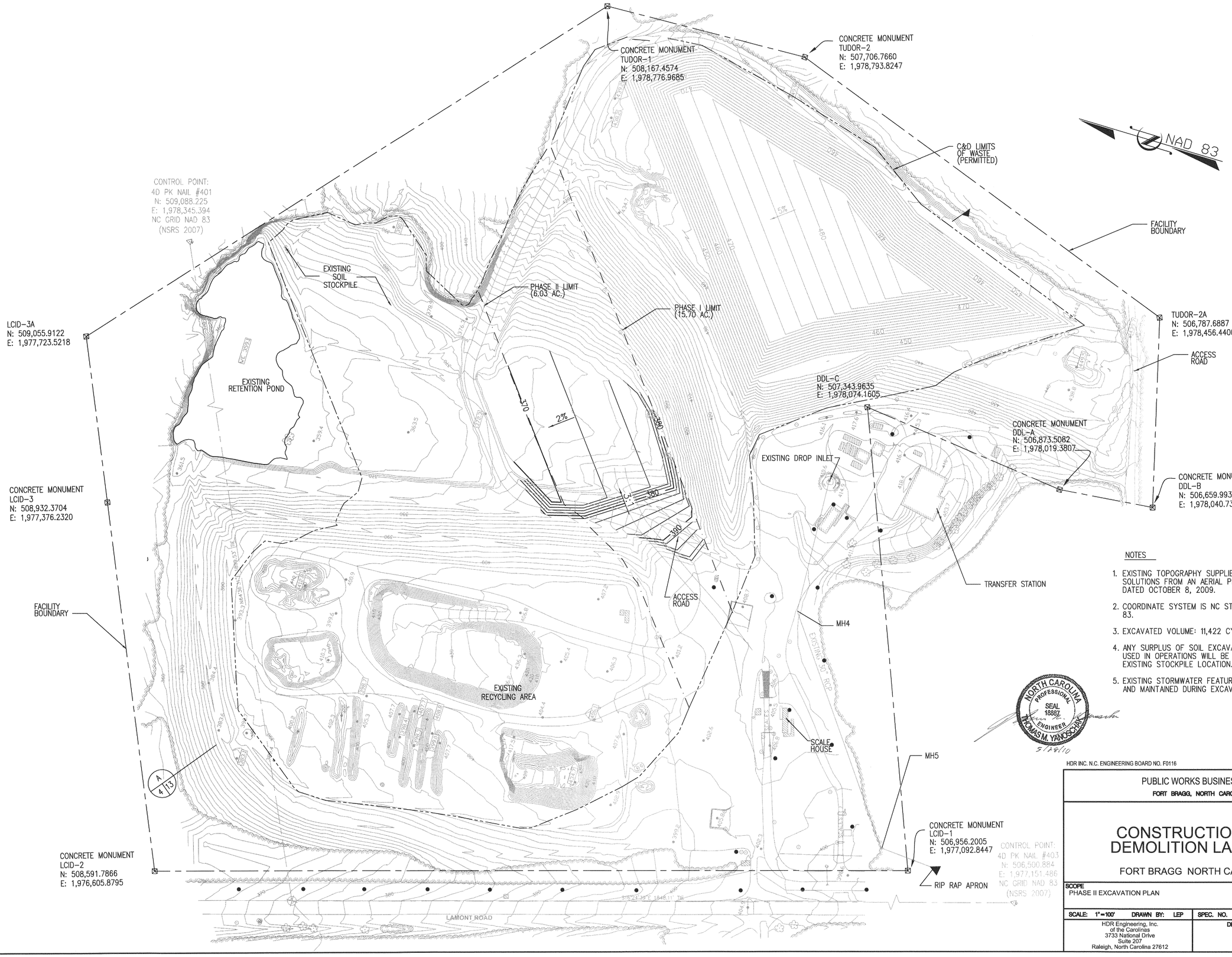
$$$$DATE$$$$



NOTES

1. EXISTING TOPOGRAPHY SUPPLIED BY 4D SITE SOLUTIONS FROM AN AERIAL PHOTOGRAPH DATED OCTOBER 8, 2009.
2. COORDINATE SYSTEM IS NC STATE PLANE, NAD 83.
3. EXCAVATED VOLUME: 11,422 CY.
4. ANY SURPLUS OF SOIL EXCAVATED THAT IS NOT USED IN OPERATIONS WILL BE STOCKPILED IN THE EXISTING STOCKPILE LOCATION.
5. EXISTING STORMWATER FEATURES SHALL BE USED AND MAINTAINED DURING EXCAVATION ACTIVITIES.

NORTH CAROLINA PROFESSIONAL SEAL 18887 ENGINEER THOMAS M. YANOSCHAK
5/24/10

HDR INC. N.C. ENGINEERING BOARD NO. F0116

PUBLIC WORKS BUSINESS CENTER
FORT BRAGG, NORTH CAROLINA

CONSTRUCTION AND DEMOLITION LANDFILL

FORT BRAGG NORTH CAROLINA

SCOPE
PHASE II EXCAVATION PLAN

DATE: 5/24/10

SCALE: 1"=100' DRAWN BY: LEP

SPEC. NO. F9-00026-8

HDR Engineering, Inc.
of the Carolinas
3733 National Drive
Suite 207
Raleigh, North Carolina 27612

DRAWING NUMBER
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SHEET 5 OF 14

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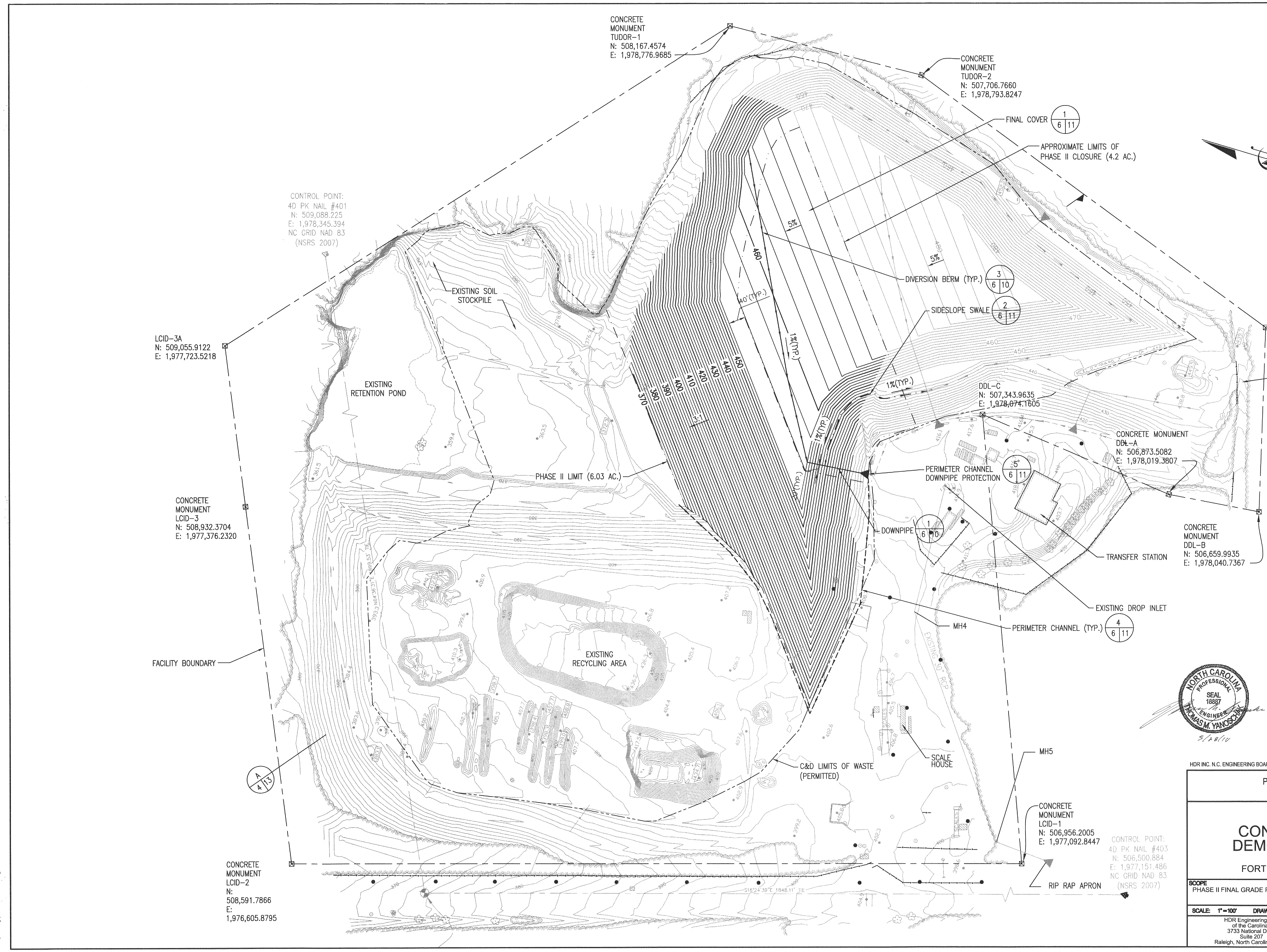


NOTES

1. EXISTING TOPOGRAPHY SUPPLIED BY 4D SITE SOLUTIONS FROM AN AERIAL PHOTOGRAPH DATED OCTOBER 8, 2009.
2. COORDINATE SYSTEM IS NC STATE PLANE, NAD 83.
3. ALL EXTERIOR SLOPES SHALL BE CONSTRUCTED AT 3H:1V.
4. LIMITS OF PHASE II CLOSURE MAY BE ADJUSTED AT TIME OF CONSTRUCTION TO COINCIDE WITH AREAS THAT HAVE REACHED FINAL GRADE.

PHASE II CAPACITY

ASSUMPTIONS:
- IN-PLACE DENSITY: 2,339 LB/CY
- REFUSE INTAKE: 110,000 TPY

GROSS AREA: 6.03 AC.
GROSS VOLUME: 530,100 CY
FINAL COVER SYSTEM: 27,588 CY
DAILY AND INTERMEDIATE COVER: 45,226 CY
NET OPERATING VOLUME: 457,286 CY
REMAINING LIFESPAN: 5.3 YRS

HDR INC. N.C. ENGINEERING BOARD NO. F0116

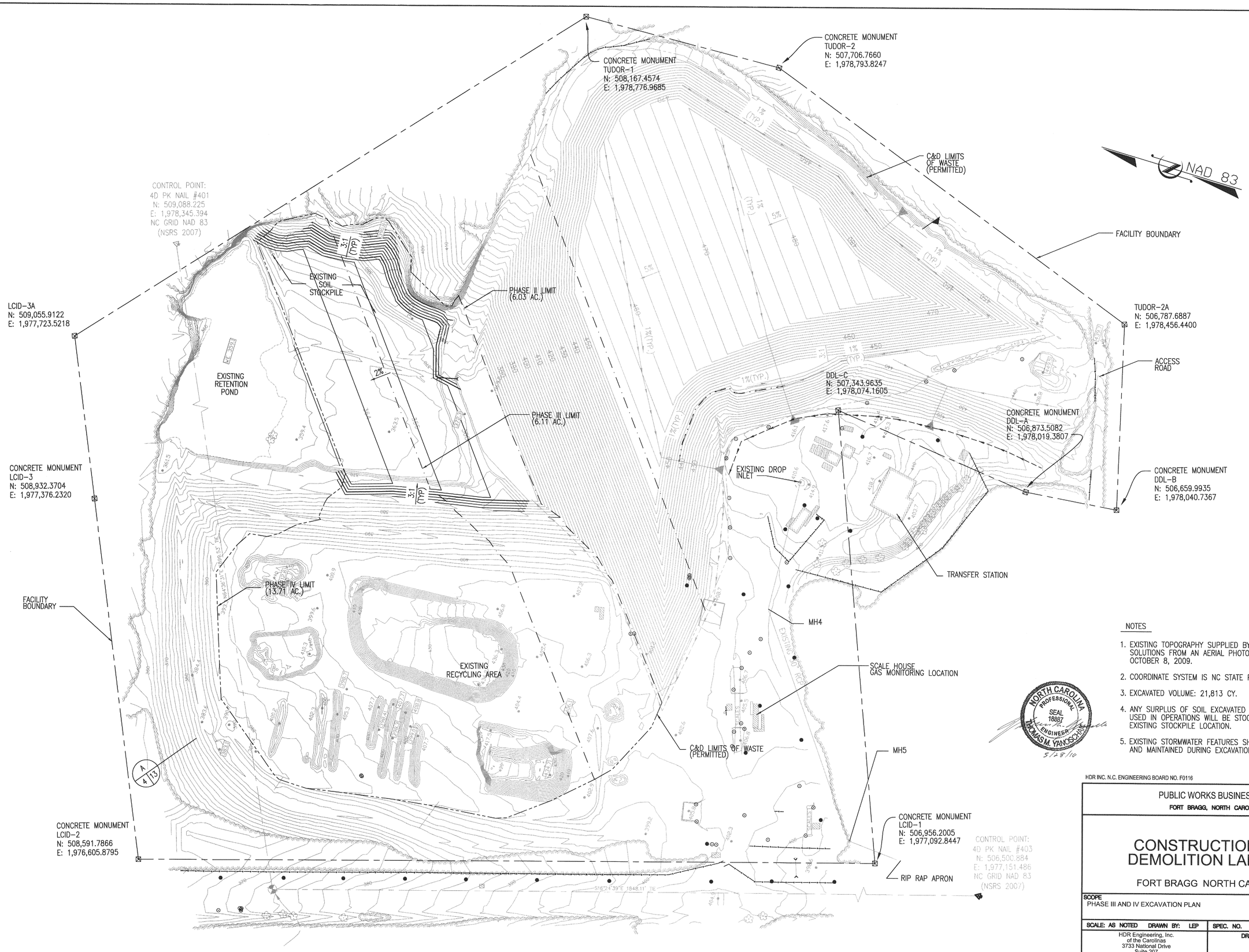
PUBLIC WORKS BUSINESS CENTER
FORT BRAGG, NORTH CAROLINA

CONSTRUCTION AND DEMOLITION LANDFILL

FORT BRAGG NORTH CAROLINA

SCOPE	DATE:
PHASE II FINAL GRADE PLAN	5/24/10

SCALE: 1"=100'	DRAWN BY: LEP	SPEC. NO.	F9-00026-8
HDR Engineering, Inc. of the Carolinas 3733 National Drive Suite 207 Raleigh, North Carolina 27612		DRAWING NUMBER 6909	SHEET 6 OF 14



NOTES

1. EXISTING TOPOGRAPHY SUPPLIED BY 4D SITE SOLUTIONS FROM AN AERIAL PHOTOGRAPH DATED OCTOBER 8, 2009.
2. COORDINATE SYSTEM IS NC STATE PLANE, NAD 83.
3. EXCAVATED VOLUME: 21,813 CY.
4. ANY SURPLUS OF SOIL EXCAVATED THAT IS NOT USED IN OPERATIONS WILL BE STOCKPILED IN THE EXISTING STOCKPILE LOCATION.
5. EXISTING STORMWATER FEATURES SHALL BE USED AND MAINTAINED DURING EXCAVATION ACTIVITIES.

NORTH CAROLINA PROFESSIONAL SEAL 18997 ENGINEER THOMAS M. YANOSCHIK
5/28/10

HDR INC. N.C. ENGINEERING BOARD NO. F0116

PUBLIC WORKS BUSINESS CENTER
FORT BRAGG, NORTH CAROLINA

CONSTRUCTION AND DEMOLITION LANDFILL

FORT BRAGG NORTH CAROLINA

SCOPE: PHASE III AND IV EXCAVATION PLAN
DATE: 5/24/10

SCALE: AS NOTED DRAWN BY: LEP
SPEC. NO. F9-00028-8

HDR Engineering, Inc.
of the Carolinas
3733 National Drive
Suite 207
Raleigh, North Carolina 27612

DRAWING NUMBER
6909
SHEET 7 OF 14

CONCRETE MONUMENT
TUDOR–1
N: 508,167.4574
E: 1,978,776.9685

CONCRETE MONUMENT
TUDOR–2
N: 507,706.7660
E: 1,978,793.8247

CONSTRUCTION LIMITS

PERIMETER CHANNEL
DOWNPIPE PROTECTION (5 | 8 | 11)

C&D LIMITS
OF WASTE
(PERMITTED)

NAD 83

CONTROL POINT:
4D PK NAIL #401
N: 509,088.225
E: 1,978,345.394
NC GRID NAD 83
(NSRS 2007)

FACILITY
BOUNDARY

FINAL COVER (1 | 8 | 11)

APPROXIMATE LIMITS OF
PHASE III CLOSURE 8.46 AC.

LCID–3A
N: 509,055.9122
E: 1,977,723.5218

TUDOR–2A
N: 506,787.6887
E: 1,978,456.4400

DIVERSION BERM (TYP.) (3 | 8 | 10)

ACCESS
ROAD

EXISTING
RETENTION
POND

DDL–C
N: 507,343.9635
E: 1,978,074.1605

18' WIDE x 36' LONG RIPRAP
CHANNEL OUTLET PROTECTION.
CONSISTING OF 2' THICK
NCDOT CLASS B RIPRAP
UNDERLAIN BY NCDOT TYPE 2
FILTER FABRIC

CONCRETE MONUMENT
DDL–A
N: 506,873.5082
E: 1,978,019.3807

EXISTING DROP INLET
STA. 0+00.000

CONCRETE MONUMENT
LCID–3
N: 508,932.3704
E: 1,977,376.2320

CONCRETE MONUMENT
DDL–B
N: 506,659.9935
E: 1,978,040.7367

TRANSFER STATION

PHASE III LIMIT
(6.11 AC)

SIDESLOPE SWALE (TYP.) (2 | 8 | 11)

MH4
STA. 3+03.742

EXISTING
RECYCLING AREA

30" RCP STORM DRAIN (TYP.)

SCALES

SCALE
HOUSE

DOWNPIPE (TYP.) (1 | 8 | 10)

(A | 4 | 13)

MH5
STA. 8+73.499

PERIMETER CHANNEL (TYP.) (1 | 8 | 11)

CONCRETE MONUMENT
LCID–1
N: 506,956.2005
E: 1,977,092.8447

RIP RAP APRON

CONCRETE MONUMENT
LCID–2
N: 508,591.7866
E: 1,976,605.8795

CONTROL POINT:
4D PK NAIL #403
N: 506,500.884
E: 1,977,151.486
NC GRID NAD 83
(NSRS 2007)

NOTES

1. EXISTING TOPOGRAPHY SUPPLIED BY 4D SITE SOLUTIONS FROM AN AERIAL PHOTOGRAPH DATED OCTOBER 8, 2009.
2. COORDINATE SYSTEM IS NC STATE PLANE, NAD 83.
3. ALL EXTERIOR SLOPES SHALL BE CONSTRUCTED AT 3H:1V.
4. LIMITS OF PHASE III CLOSURE MAY BE ADJUSTED AT TIME OF CONSTRUCTION TO COINCIDE WITH AREAS THAT HAVE REACHED FINAL GRADE.

PHASE III CAPACITY

ASSUMPTIONS:
IN–PLACE DENSITY: 2,339 LB/CY
REFUSE INTAKE: 110,000 TPY

GROSS AREA: 6.11 AC.
GROSS VOLUME: 492,100 CY
FINAL COVER SYSTEM: 35,332 CY
DAILY AND INTERMEDIATE COVER: 41,109 CY
NET OPERATING VOLUME: 415,659 CY
LIFESPAN: 4.9 YRS

NORTH CAROLINA PROFESSIONAL SEAL 18887 ENGINEER THOMAS M. YANOSCHIK
5/24/10

HDR INC. N.C. ENGINEERING BOARD NO. F0116

PUBLIC WORKS BUSINESS CENTER
FORT BRAGG, NORTH CAROLINA

CONSTRUCTION AND DEMOLITION LANDFILL

FORT BRAGG NORTH CAROLINA

SCOPE: PHASE III FINAL GRADE PLAN
DATE: 5/24/10

SCALE: 1" = 100' DRAWN BY: LEP
SPEC. NO. F9-00026-8

HDR Engineering, Inc.
of the Carolinas
3733 National Drive
Suite 207
Raleigh, North Carolina 27612

DRAWING NUMBER
6909
SHEET 8 OF 14

$$$FILENAME$$$
$$$$DATE$$$$ $$$$TIME$$$$ $$$$USERNAME$$$$ $$$$XREFS$$$$ $$$$DWG$$$$

CONCRETE MONUMENT
TUDOR–1
N: 508,167.4574
E: 1,978,776.9685

CONCRETE MONUMENT
TUDOR–2
N: 507,706.7660
E: 1,978,793.8247

4 / 9 | 11 PERIMETER CHANNEL

SECTION OF PERIMETER CHANNEL TO BE LINED WITH 18" THICK NCDOT CLASS B RIPRAP UNDERLAIN WITH NCDOT TYPE 2 FILTER FABRIC

N: 509,088.225
E: 1,978,345.394
NC GRID NAD 83
(NSRS 2007)

18' WIDE x 36' LONG RIPRAP CHANNEL OUTLET PROTECTION. CONSISTING OF 2' THICK NCDOT CLASS B RIPRAP UNDERLAIN BY NCDOT TYPE 2 FILTER FABRIC

PERIMETER CHANNEL DOWNPIPE PROTECTION 5 / 9 | 11

1 / 9 | 10 DOWNPIPE (TYP.)

APRON A

EXISTING RETENTION POND

APRON B

2 / 9 | 11 RIPRAP APRON

APPOXIMATE LIMITS OF PHASE IV CLOSURE (19.82 AC)

DIVERSION BERM (TYP.) 3 / 9 | 10

CONCRETE MONUMENT
LCID–3
N: 508,932.3704
E: 1,977,376.2320

PHASE IV LIMIT (13.71 AC.)

APRON C

FACILITY BOUNDARY

A / 4 | 13

CONCRETE MONUMENT
LCID–2
N: 508,591.7866
E: 1,976,605.8795

FINAL COVER 1 / 9 | 11

C&D LIMITS OF WASTE (PERMITTED)

FACILITY BOUNDARY

TUDOR–2A
N: 506,787.6887
E: 1,978,456.4400

ACCESS ROAD

DDL–C
N: 507,343.9635
E: 1,978,074.1605

CONCRETE MONUMENT
DDL–A
N: 506,873.5082
E: 1,978,019.3807

EXISTING DROP INLET
STA. 0+00.000

CONCRETE MONUMENT
DDL–B
N: 506,659.9935
E: 1,978,040.7367

TRANSFER STATION

MH4
STA. 3+03.742

30" RCP STORM DRAIN (TYP)

SCALES

SCALE HOUSE

SIDESLOPE SWALE 2 / 9 | 11

PROPOSED RECYCLING AREA

CONCRETE MONUMENT
LCID–1
N: 506,956.2005
E: 1,977,092.8447

RIP RAP APRON

CONTROL POINT:
4D PK NAIL #403
N: 506,500.884
E: 1,977,151.486
NC GRID NAD 83
(NSRS 2007)

NAD 83

NOTES

1. EXISTING TOPOGRAPHY SUPPLIED BY 4D SITE SOLUTIONS FROM AN AERIAL PHOTOGRAPH DATED OCTOBER 8, 2009.
2. COORDINATE SYSTEM IS NC STATE PLANE, NAD 83.
3. ALL EXTERIOR SLOPES SHALL BE CONSTRUCTED AT 3H:1V.
4. LIMITS OF PHASE IV CLOSURE MAY BE ADJUSTED AT TIME OF CONSTRUCTION TO COINCIDE WITH AREAS THAT HAVE REACHED FINAL GRADE.

PHASE IV CAPACITY

ASSUMPTIONS:
IN–PLACE DENSITY: 2,339 LB/CY
REFUSE INTAKE: 110,000 TPY

GROSS AREA: 13.71 AC.
GROSS VOLUME: 581,500 CY
FINAL COVER SYSTEM: 88,572 CY
DAILY AND INTERMEDIATE COVER: 44,364 CY
NET OPERATING VOLUME: 448,564 CY
REMAINING LIFESPAN: 5.2 YRS

NORTH CAROLINA PROFESSIONAL SEAL 18887 ENGINEER THOMAS M. YANOSCHAK
5/18/10

HDR INC. N.C. ENGINEERING BOARD NO. F0116

PUBLIC WORKS BUSINESS CENTER
FORT BRAGG, NORTH CAROLINA

CONSTRUCTION AND DEMOLITION LANDFILL

FORT BRAGG NORTH CAROLINA

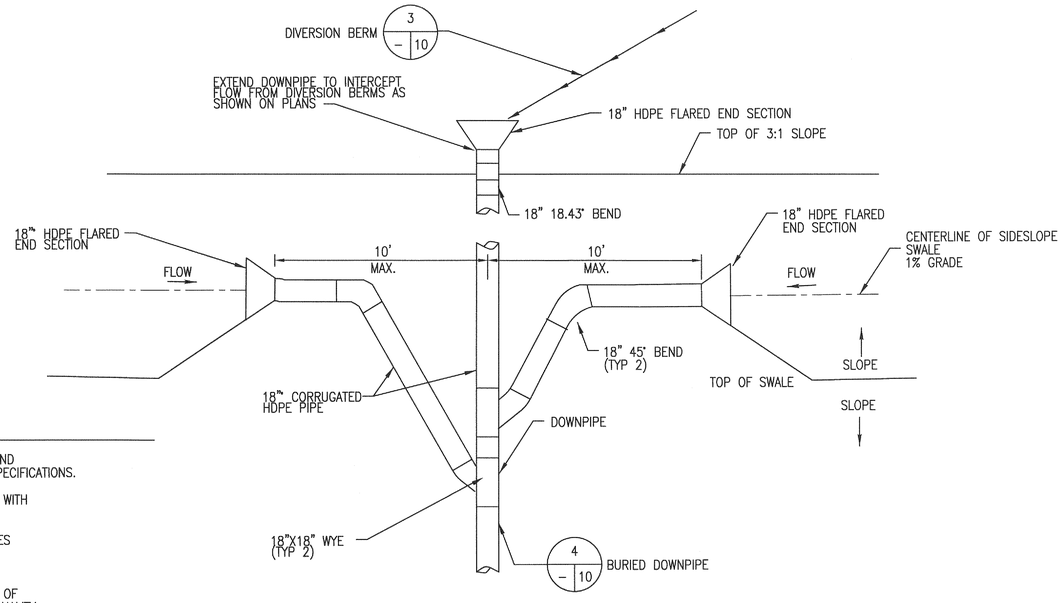
SCOPE: PHASE IV FINAL GRADE PLAN
DATE: 5/24/10

SCALE: 1"=100' DRAWN BY: LEP
SPEC. NO. F9-00026-8

HDR Engineering, Inc.
of the Carolinas
3733 National Drive
Suite 207
Raleigh, North Carolina 27612

DRAWING NUMBER
6909
SHEET 9 OF 14

$$$FILENAME$$$
$$$DATE$$$



DOWNPIPE

NTS

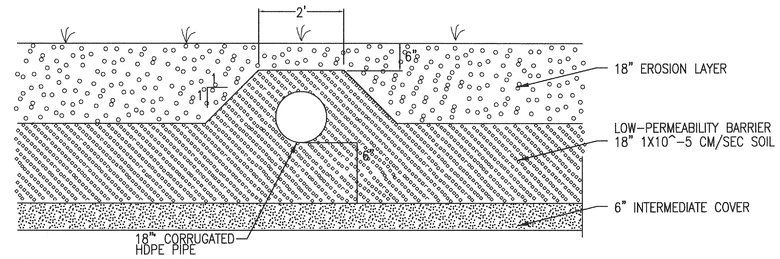
1 – 10

NOTES:

1) ALL PIPE SHALL CONSIST OF DUAL WALL HDPE PIPE WITH SMOOTH INTERIOR.

2) ALL PIPE JOINTS SHALL BE WATER TIGHT.

3) ADJUST GRADING OF SIDESLOPE SWALE AS NECESSARY TO TRANSITION FLOW INTO FLARED END SECTION.



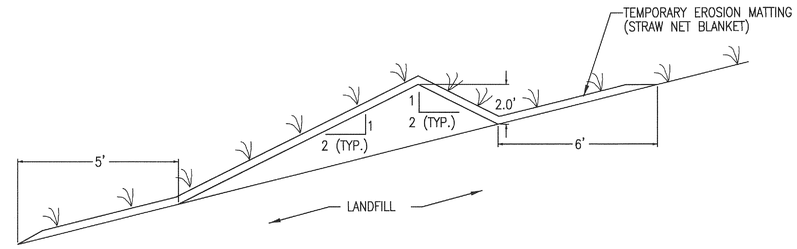
BURIED DOWNPIPE

NTS

4 – 10

SEDIMENTATION AND EROSION CONTROL

1. EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. FAILURE TO DO SO WILL RESULT IN STOPPAGE OF ALL OTHER WORK UNTIL SAID MEASURES COMPLY WITH ACCEPTABLE STANDARDS.
2. SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED IN STRICT ACCORDANCE WITH STANDARDS IN THE CONSTRUCTION DOCUMENTS AND APPLICABLE ENVIRONMENTAL REGULATIONS INCLUDING THOSE SET FORTH BY NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL AND NATURAL RESOURCES – LAND QUALITY SECTION (NCDENR).
3. ALL STORM WATER MANAGEMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED AND MADE OPERATIONAL IN EACH WORK ZONE PRIOR TO COMMENCEMENT OF EARTHWORK ACTIVITIES WITHIN THAT WORK ZONE.
4. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED, UNLESS ACTIVITY IN THAT PORTION OF THE SITE WILL RESUME WITHIN 21 DAYS.
5. ADDITIONAL TEMPORARY DITCHES AND/OR DIVERSIONS MAY BE REQUIRED TO PERFORM CONSTRUCTION. WHERE SUCH MEASURES ARE REQUIRED, THEY SHALL BE CONSTRUCTED SO AS TO DIRECT RUNOFF FROM DISTURBED AREAS TO APPROPRIATE TEMPORARY CONTROL FEATURES.
6. ALL SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN ONE–HALF INCH OF PRECIPITATION DURING ANY 24 HOUR PERIOD. ALL SEDIMENT CONTROL FEATURES SHALL BE MAINTAINED UNTIL FINAL STABILIZATION HAS BEEN OBTAINED.
7. RESTORE AND STABILIZE ALL DISTURBED AREAS INCLUDING STOCKPILES AND STORAGE AREAS. PERFORM PERMANENT SEEDING IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
8. EXISTING EROSION CONTROL MEASURES WITHIN THE CONSTRUCTION LIMITS SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT.

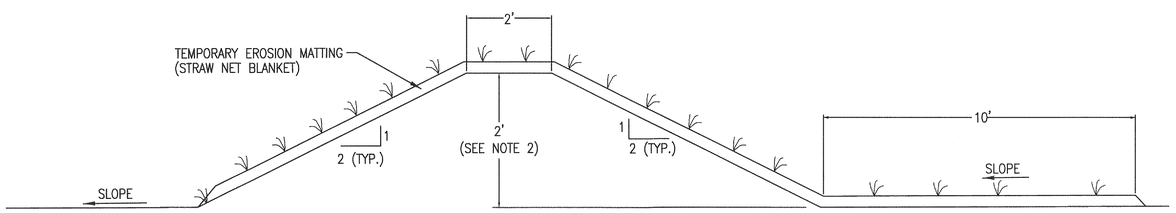


SIDESLOPE SWALE

2 – 10

NOTE:

1) EROSION MATTING SHALL HAVE A MINIMUM PERMISSIBLE UNIT SHEAR STRESS OF 1.45 lb/sqft.



DIVERSION BERM – GRASS LINED

NTS

3 – 10

NOTE:

1) EROSION MATTING SHALL HAVE A MINIMUM PERMISSIBLE UNIT SHEAR STRESS FO 1.45 lb/sqft.

2) CONSTRUCT TOP OF BERM AT CONSTANT ELEVATION BEGINNING 100' FROM DOWNPIPE SUCH THAT BERM HEIGHT IS 3' AT DOWNPIPE.

Erosion Control Mix, March 1 through August 31 – Summer

Botanical Name	Common Name	Rate (lb/acre)
Brachiaria ramosum	Foxtail Millet	50
Cynodon dactylon	Common Bermudagrass (hulled)	50
Setaria italica	German Millet	50

Erosion Control Mix, September 1 through February 28 – Winter

Botanical Name	Common Name	Rate (lb/acre)
Triticum spelta	Roane Soft Red Winter Wheat	50
Cynodon dactylon	Common Bermudagrass (hulled)	25
Cynodon dactylon	Common Bermudagrass (unhulled)	25

SEED SCHEDULE

5 – 10

NOTE:

1) PROVIDE SEEDING AS PER TECHNICAL SPECIFICATION SECTION 02921FB

NORTH CAROLINA PROFESSIONAL SEAL 18887 ENGINEER THOMAS M. YANOSCHAK

5/24/10

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FORT BRAGG, NORTH CAROLINA

CONSTRUCTION AND DEMOLITION LANDFILL

FORT BRAGG NORTH CAROLINA

SCOPE: DETAILS

DATE: 5/24/10

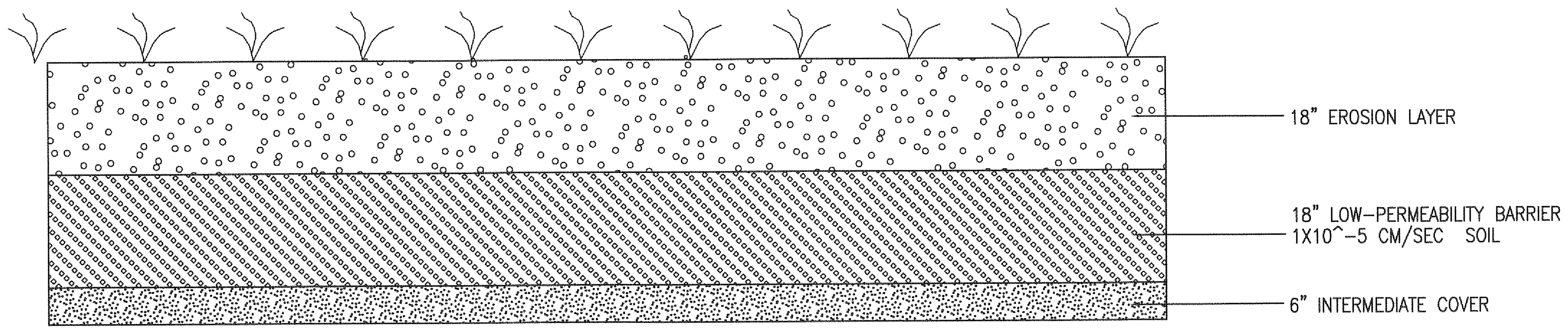
SCALE: AS NOTED DRAWN BY: LEP

SPEC. NO. F9-00026-8

HDR Engineering, Inc.
of the Carolinas
3733 National Drive
Suite 207
Raleigh, North Carolina 27612

DRAWING NUMBER 6909

SHEET 10 OF 14



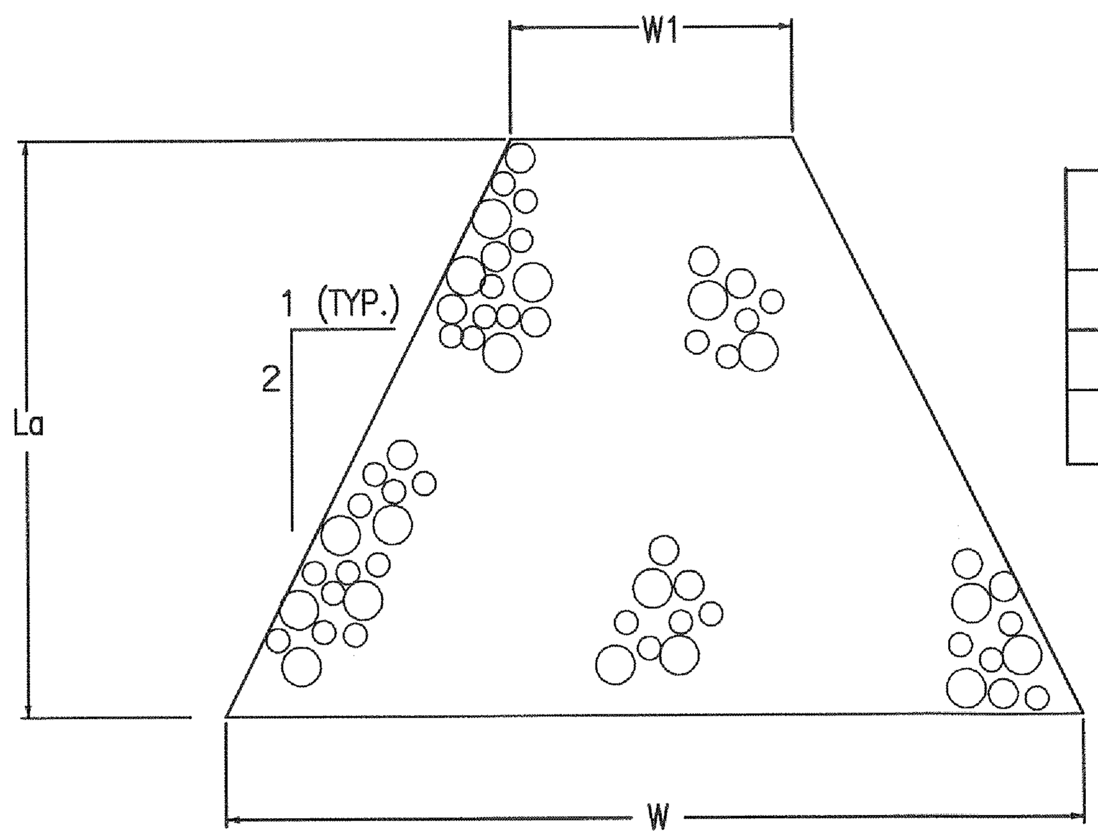
FINAL COVER

1 / - 11

NTS

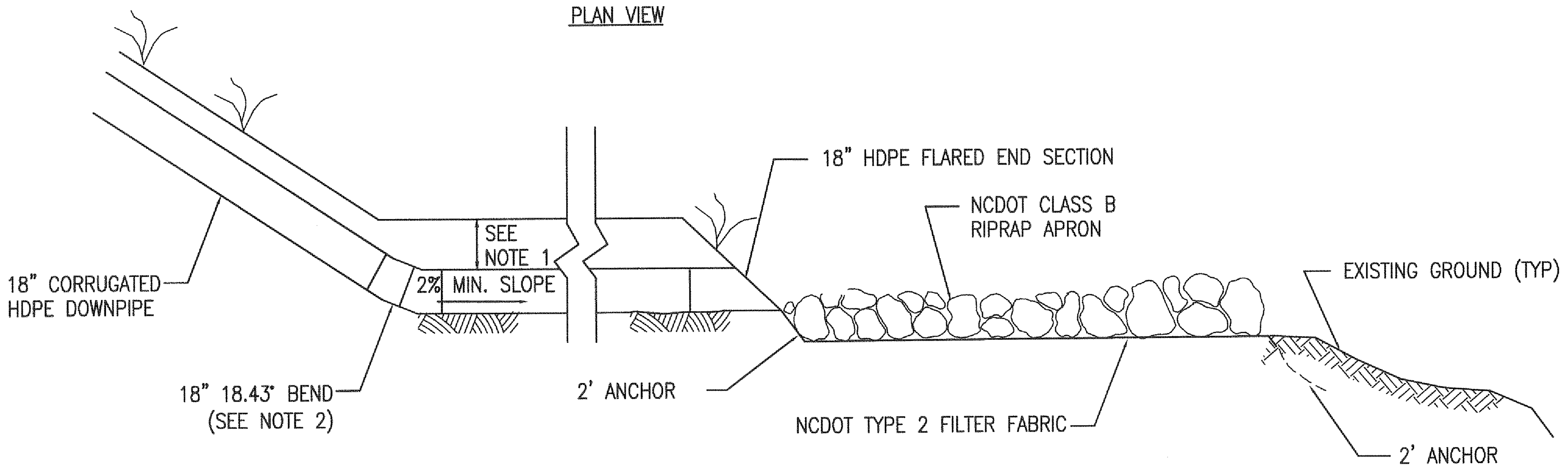
NOTES:
1) THE TOP 6 INCHES OF EROSION LAYER SHALL CONSIST OF TOPSOIL CAPABLE OF SUPPORTING VEGETATION.

2) LAYER THICKNESS SHALL BE MEASURED PERPENDICULAR TO SLOPE ON LANDFILL SIDESLOPES.



PLAN VIEW

LOCATION	W	W1	La	APRON THICKNESS	MAX. RIP RAP DIAMETER
A	13.5'	4.5'	12'	18"	12"
B	17.5'	4.5'	16'	18"	12"
C	11.5'	4.5'	10'	18"	12"



SECTION

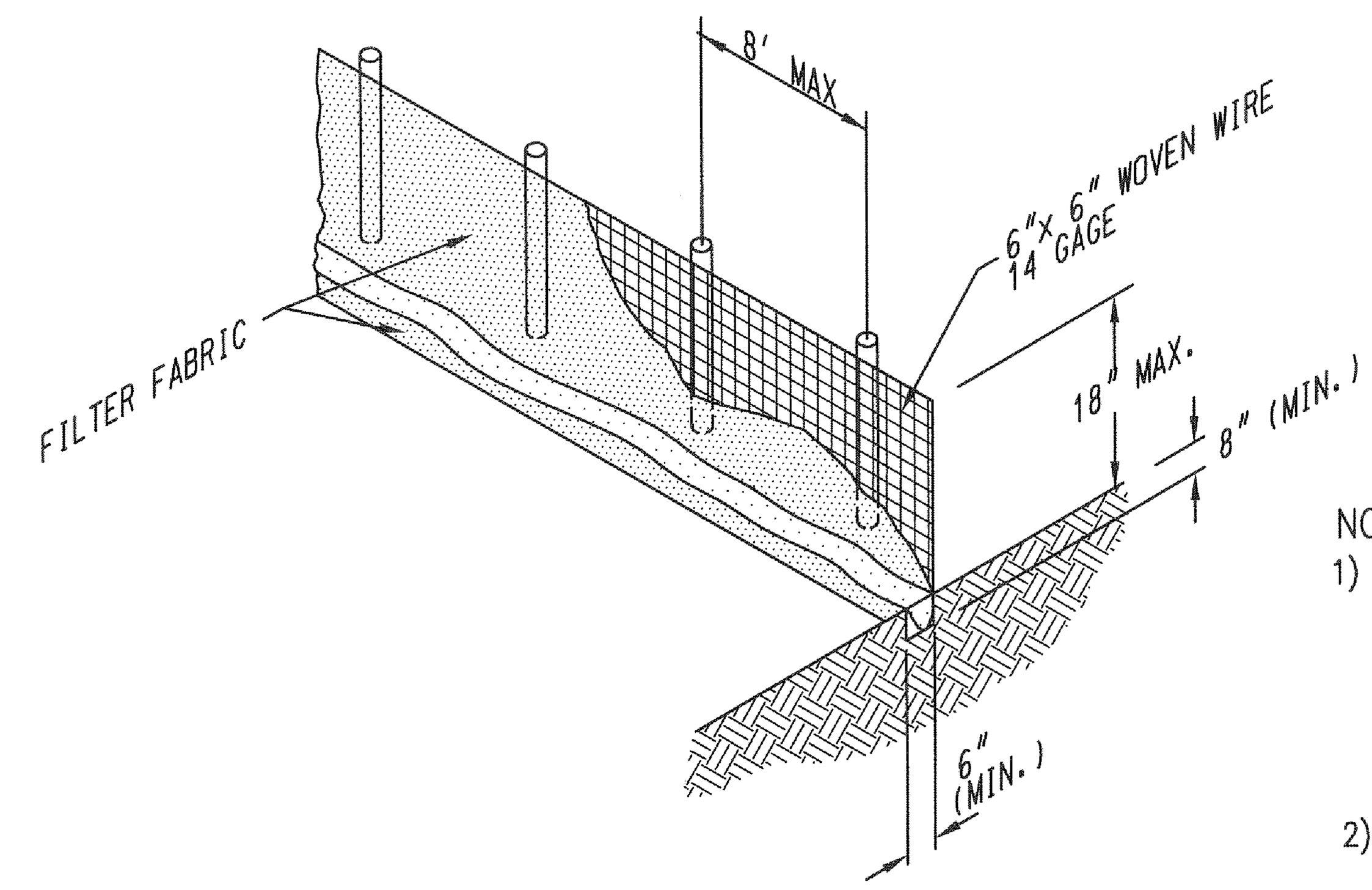
RIP RAP APRON

2 / - 11

NTS

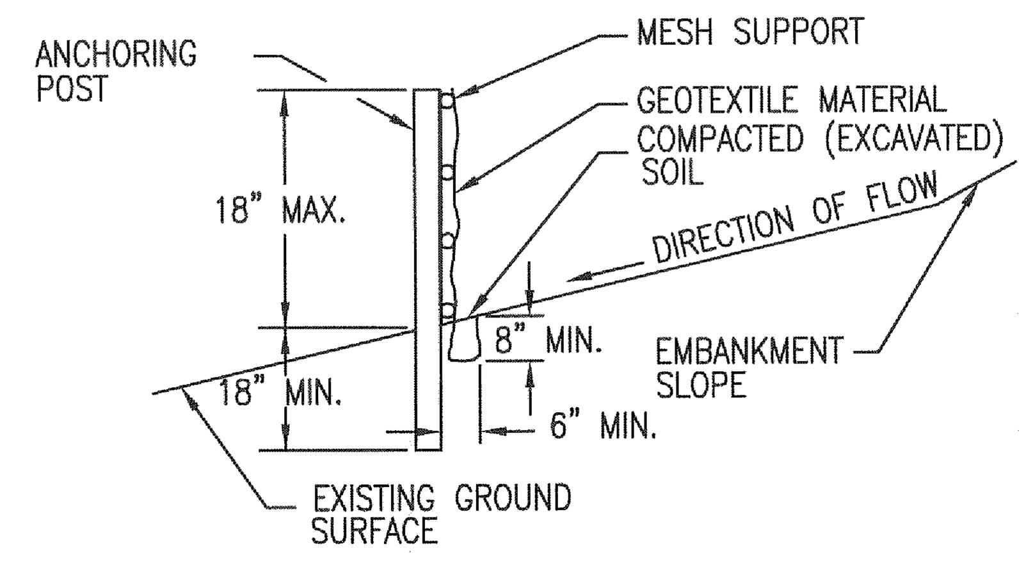
NOTES:
1) MINIMUM DEPTH OF SOIL COVER ABOVE PIPE AT ACCESS ROAD CROSSING SHALL BE 2'. INSTALL PIPE AND SOIL COVER IN ACCORDANCE WITH PIPE MANUFACTURER'S RECOMMENDATIONS. MINIMUM DEPTH OF SOIL COVER ABOVE PIPE MAY BE REDUCED TO 1' IN LOW TRAFFIC AREAS.

2) PIPE DEFLECTION MAY BE USED IN LIEU OF BEND IF WITHIN LIMITS OF PIPE MANUFACTURER'S RECOMMENDATIONS.



NOTES:
1) USE A SYNTHETIC FILTER FABRIC OR A PERVIOUS SHEET OF POLYPROPYLENE, NYLON, POLYESTER, OR POLYETHYLENE YARN, WHICH IS CERTIFIED BY THE MANUFACTURER OR SUPPLIER. SYNTHETIC FILTER FABRIC SHOULD CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0 TO 120A F.

2) POSTS FOR SEDIMENT FENCES ARE EITHER 4-INCH DIAMETER PINE, 2-INCH DIAMETER OAK, OR 1.33 LB/LINEAR FT. STEEL WITH A MINIMUM LENTGH OF 4 FT. STEEL POSTS SHALL HAVE PROJECTIONS TO FACILITATE FASTENING THE FABRIC.

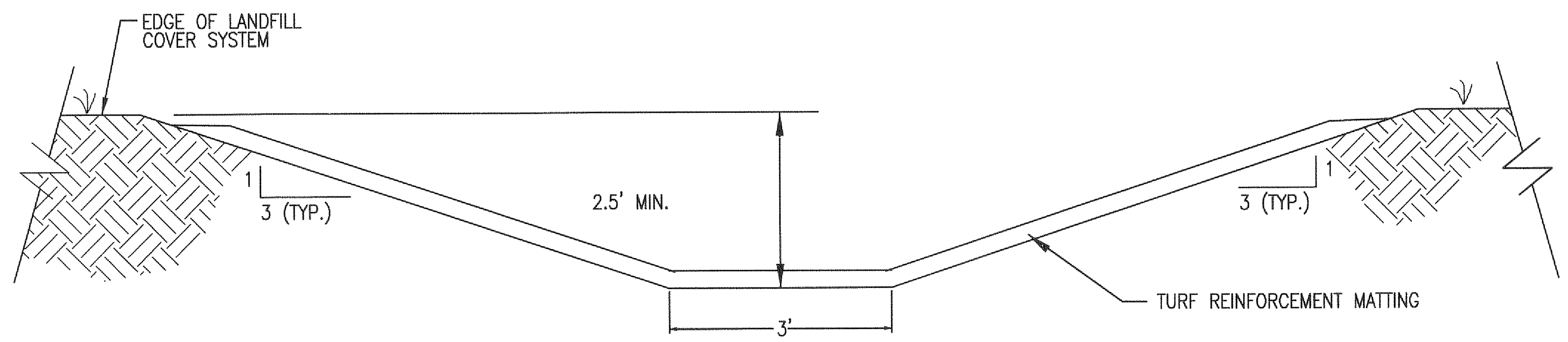


SECTION

SILT FENCE DETAIL

3 / - 11

NTS



PERIMETER CHANNEL

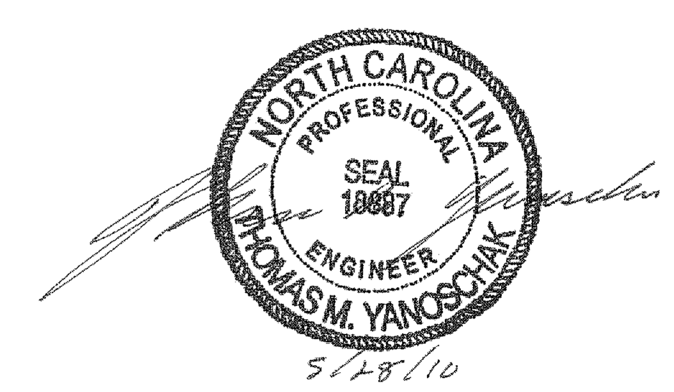
4 / - 11

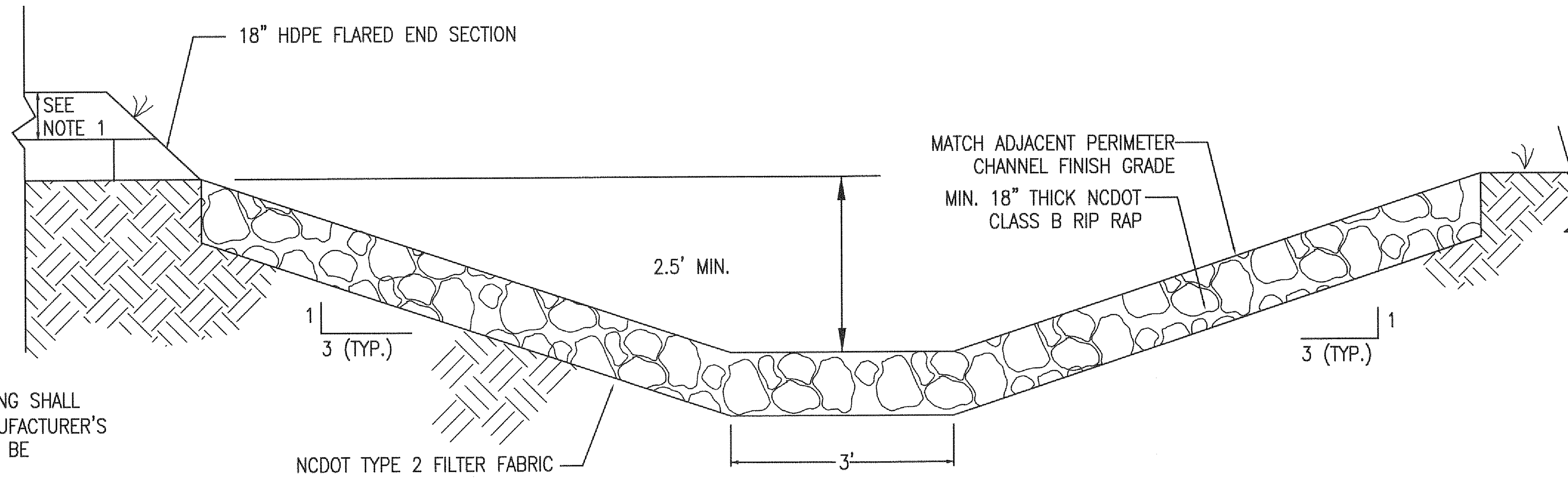
NTS

NOTES:
1) INSTALL TURF REINFORCEMENT MATTING FOR SLOPE STABILIZATION. PERIMETER CHANNELS SHOULD MAINTAIN A MINIMUM OF 6" OF FREEBOARD.

2) IN AREAS WHERE CHANNEL IS LOCATED OVER WASTE, SIDE SLOPE BERMS WILL BE CONSTRUCTED ABOVE THE WASTE

3) USE TURF REINFORCEMENT MATTING DESIGNED FOR MINIMUM VELOCITY OF 16 ft/s AND SHEAR STRESS OF 5.7 lbs/sqft AS SURFACE LINING ON BERM 6' MINIMUM WIDTH.





NOTES:
1) MINIMUM DEPTH OF SOIL COVER ABOVE PIPE AT ACCESS ROAD CROSSING SHALL BE 2'. INSTALL PIPE AND SOIL COVER IN ACCORDANCE WITH PIPE MANUFACTURER'S RECOMMENDATIONS. MINIMUM DEPTH OF SOIL COVER ABOVE PIPE MAY BE REDUCED TO 1' IN LOW TRAFFIC AREAS.

2) PIPE DEFLECTION MAY BE USED IN LIEU OF BEND IF WITHIN LIMITS OF PIPE MANUFACTURER'S RECOMMENDATIONS.

3) RIPRAP SHALL EXTEND A MINIMUM OF 10' UPSTREAM AND DOWNSTREAM OF FLARED END SECTION CENTERLINE.

PERIMETER CHANNEL DOWNPIPE PROTECTION

5 / - 11

NTS

HDR INC. N.C. ENGINEERING BOARD NO. F0116

PUBLIC WORKS BUSINESS CENTER
FORT BRAGG, NORTH CAROLINA

CONSTRUCTION AND DEMOLITION LANDFILL

FORT BRAGG NORTH CAROLINA

SCOPE: DETAILS
DATE: 5/24/10

SCALE: NTS | DRAWN BY: LEP | SPEC. NO. F9-00026-8

HDR Engineering, Inc.
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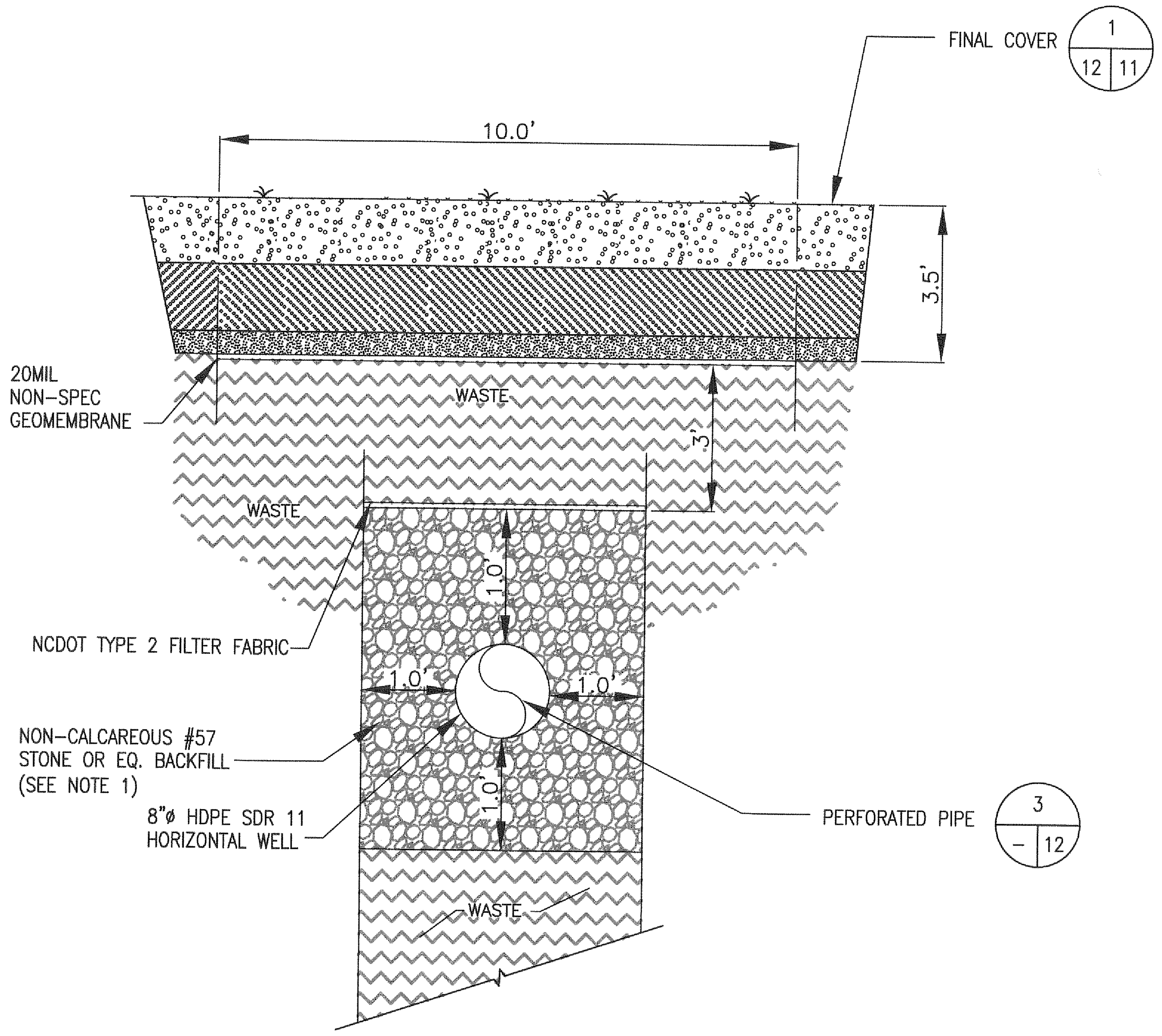
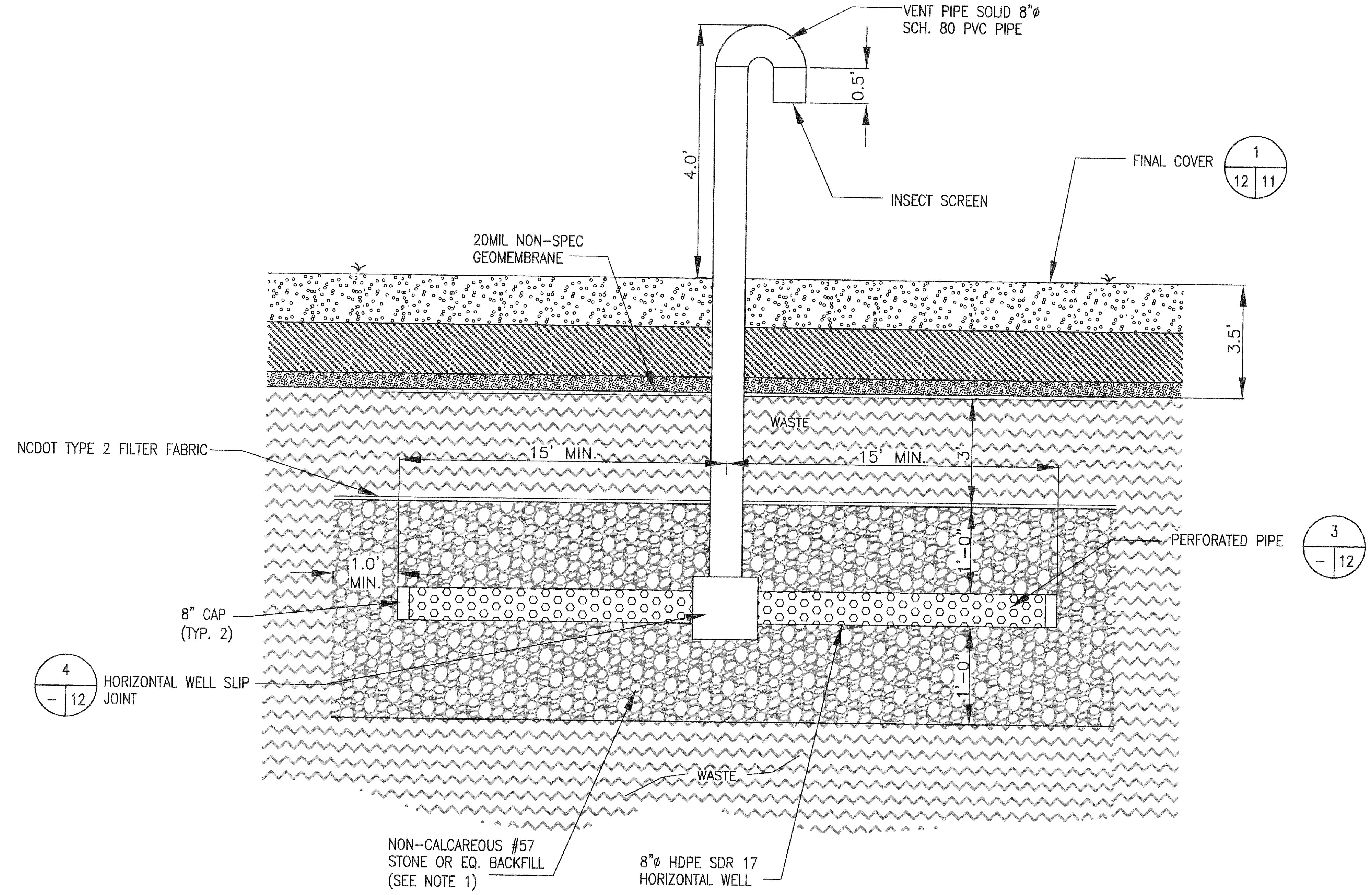


HORIZONTAL WELL TRENCH (FRONT VIEW)

NTS

1
– | 12

NOTES:
1) TIRE CHIPS MAY BE SUBSTITUTED FOR NON-CALCAREOUS #57 STONE IF APPROVED IN WRITING BY ENGINEER.
2) CONTRACTOR IS RESPONSIBLE FOR ALL HEALTH AND SAFETY ASPECTS OF ALL CONSTRUCTION ACTIVITIES.
3) HORIZONTAL WELLS SHALL BE INSTALLED AT A MINIMUM FREQUENCY OF 1 PER CLOSURE ACRE.

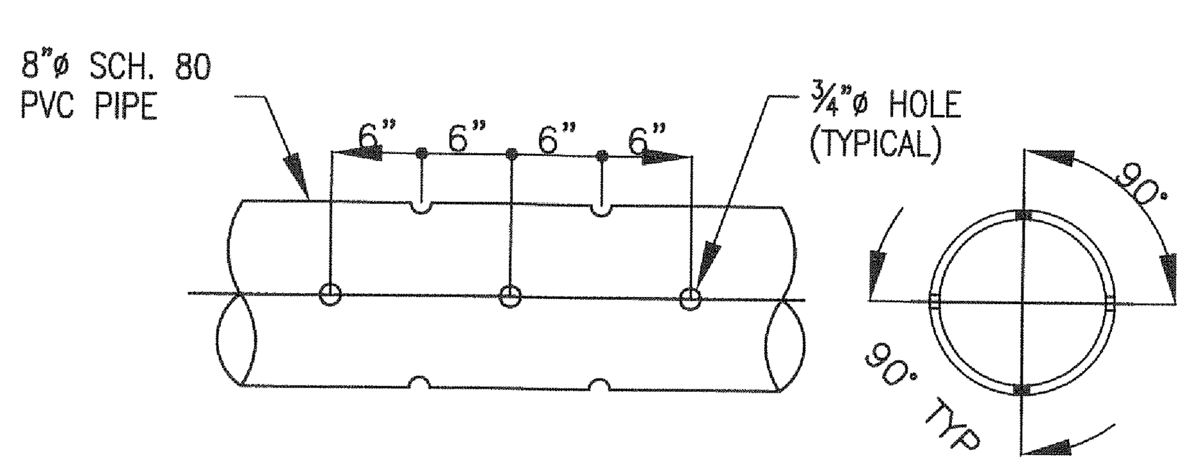


HORIZONTAL WELL TRENCH (SIDE VIEW)

NTS

2
– | 12

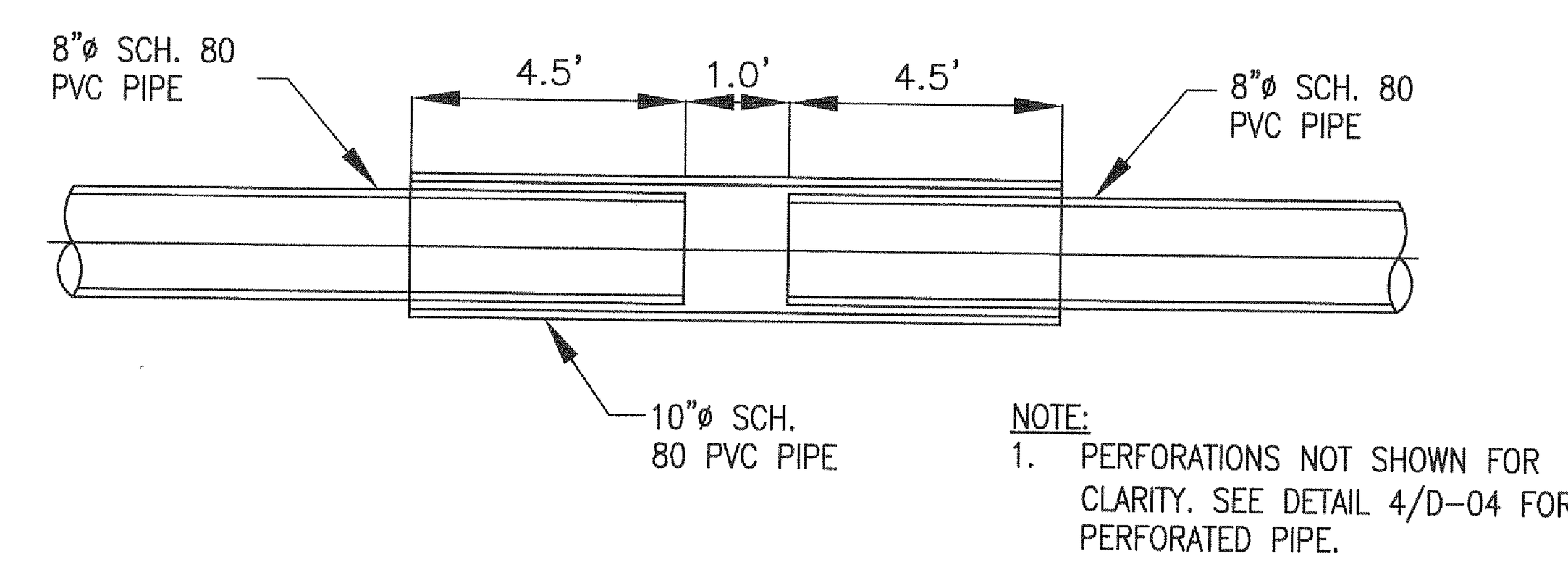
NOTES:
1) TIRE CHIPS MAY BE SUBSTITUTED FOR NON-CALCAREOUS #57 STONE IF APPROVED IN WRITING BY ENGINEER.
2) CONTRACTOR IS RESPONSIBLE FOR ALL HEALTH AND SAFETY ASPECTS OF ALL CONSTRUCTION ACTIVITIES.
3) HORIZONTAL WELLS SHALL BE INSTALLED AT A MINIMUM FREQUENCY OF 1 PER CLOSURE ACRE.



PERFORATED PIPE

NTS

3
– | 12

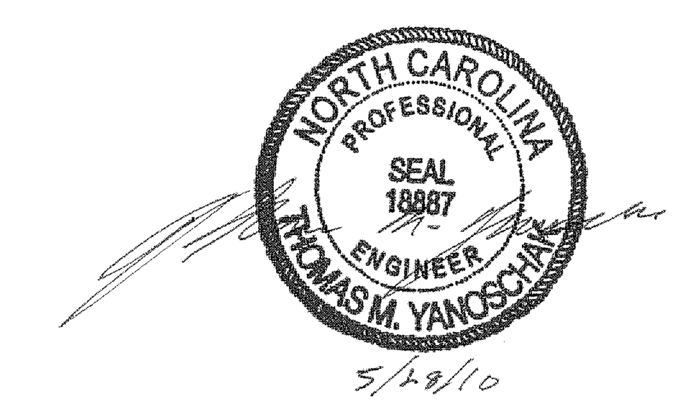


NOTE:
1. PERFORATIONS NOT SHOWN FOR CLARITY. SEE DETAIL 4/D-04 FOR PERFORATED PIPE.

HORIZONTAL WELL SLIP JOINT

NTS

4
– | 12



HDR INC. N.C. ENGINEERING BOARD NO. F0116

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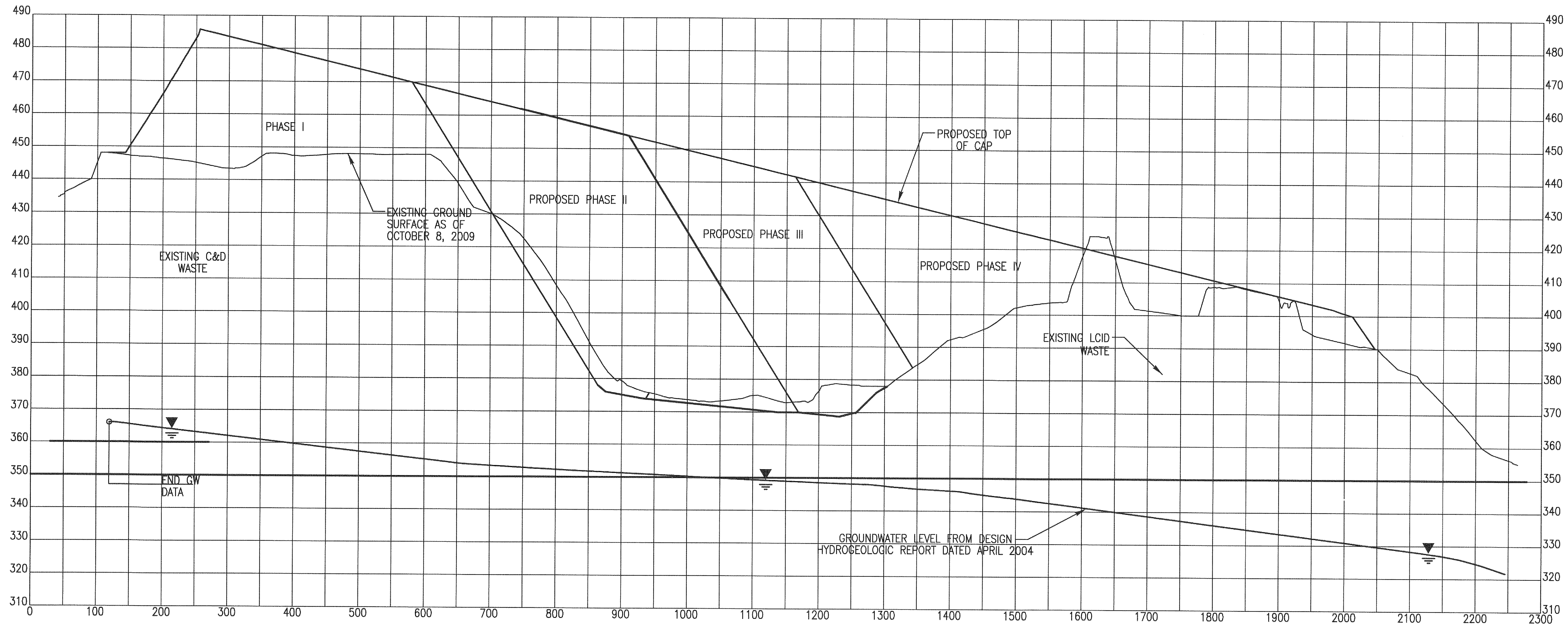
FORT BRAGG, NORTH CAROLINA

CONSTRUCTION AND DEMOLITION LANDFILL

FORT BRAGG NORTH CAROLINA

SCOPE: DETAILS	DATE: 5/24/10
SCALE: AS NOTED DRAWN BY: LEP	SPEC. NO. F9-00026-8
HDR Engineering, Inc. of the Carolinas 3733 National Drive Suite 207 Raleigh, North Carolina 27612	DRAWING NUMBER 6909 SHEET 12 OF 14

$$$FILENAME$$$ $$$DATE$$$



CROSS SECTION A

NORTH CAROLINA PROFESSIONAL SEAL 18887 ENGINEER THOMAS M. YANOSCHIK

5/24/10

100 0 100 200

HORIZONTAL SCALE

40 0 10 20 40

VERTICAL SCALE

HDR INC. N.C. ENGINEERING BOARD NO. F0116

PUBLIC WORKS BUSINESS CENTER

FORT BRAGG, NORTH CAROLINA

CONSTRUCTION AND DEMOLITION LANDFILL

FORT BRAGG NORTH CAROLINA

SCOPE: CROSS SECTIONS

DATE: 5/24/10

SCALE: AS NOTED DRAWN BY: LEP

SPEC. NO. F9-00026-8

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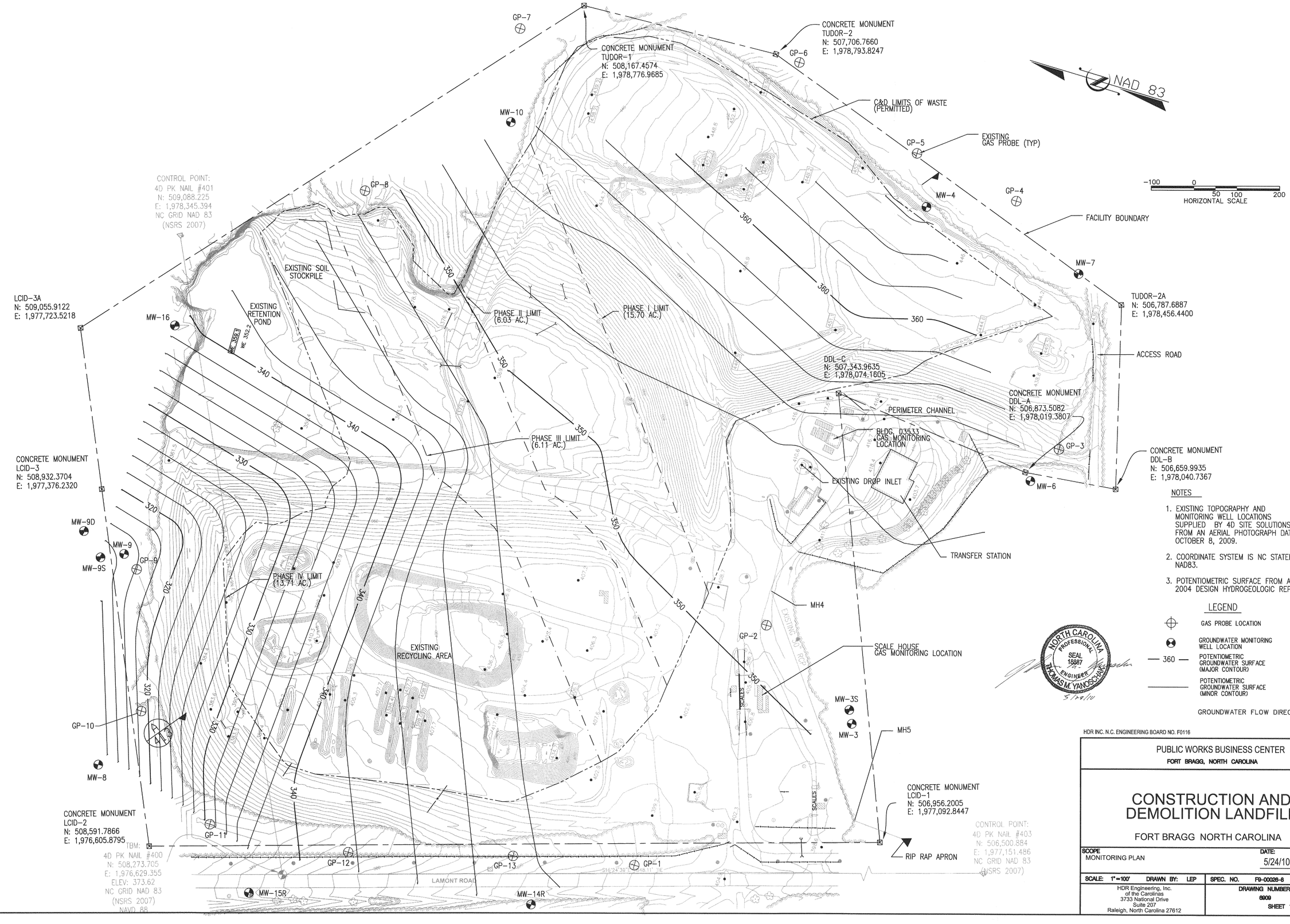
SHEET 13 OF 14



NOTES

1. EXISTING TOPOGRAPHY AND MONITORING WELL LOCATIONS SUPPLIED BY 4D SITE SOLUTIONS FROM AN AERIAL PHOTOGRAPH DATED OCTOBER 8, 2009.
2. COORDINATE SYSTEM IS NC STATEPLANE, NAD83.
3. POTENTIOMETRIC SURFACE FROM APRIL 2004 DESIGN HYDROGEOLOGIC REPORT.

LEGEND

- GAS PROBE LOCATION
- GROUNDWATER MONITORING WELL LOCATION
- 360 — POTENTIOMETRIC GROUNDWATER SURFACE (MAJOR CONTOUR)
- POTENTIOMETRIC GROUNDWATER SURFACE (MINOR CONTOUR)
- GROUNDWATER FLOW DIRECTION

NORTH CAROLINA PROFESSIONAL SEAL 18887 ENGINEER THOMAS M. YANOSCHAK
5/24/10

HDR INC. N.C. ENGINEERING BOARD NO. F0116

PUBLIC WORKS BUSINESS CENTER
FORT BRAGG, NORTH CAROLINA

CONSTRUCTION AND DEMOLITION LANDFILL

FORT BRAGG NORTH CAROLINA

SCOPE: MONITORING PLAN
DATE: 5/24/10

SCALE: 1" = 100' DRAWN BY: LEP
SPEC. NO. F9-00026-8

HDR Engineering, Inc.
of the Carolinas
3733 National Drive
Suite 207
Raleigh, North Carolina 27612

DRAWING NUMBER
6909
SHEET 14 OF 14

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