





12/05/11

Note: Not to Scale

\*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. SHEET NO.  
R-4436MG I-B

# CONVENTIONAL PLAN SHEET SYMBOLS

### BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EP
Property Corner	✕
Property Monument	□ ECU
Parcel/Sequence Number	②③
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	----- WLB
Proposed Wetland Boundary	----- WLB
Existing Endangered Animal Boundary	----- EAB
Existing Endangered Plant Boundary	----- EPB
Known Soil Contamination: Area or Site	☠ ☠
Potential Soil Contamination: Area or Site	☠ ☠

### BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○ S
Well	○ W
Small Mine	✕
Foundation	▭
Area Outline	▭
Cemetery	▭ †
Building	▭
School	▭
Church	▭
Dam	▭

### HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	▭
Jurisdictional Stream	----- JS
Buffer Zone 1	----- BZ 1
Buffer Zone 2	----- BZ 2
Flow Arrow	←
Disappearing Stream	-----
Spring	○
Wetland	-----
Proposed Lateral, Tail, Head Ditch	-----
False Sump	▽

### RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○ MILEPOST 35
Switch	□ SWITCH
RR Abandoned	-----
RR Dismantled	-----

### RIGHT OF WAY:

Baseline Control Point	△
Existing Right of Way Marker	△
Existing Right of Way Line	-----
Proposed Right of Way Line	-----
Proposed Right of Way Line with Iron Pin and Cap Marker	-----
Proposed Right of Way Line with Concrete or Granite R/W Marker	-----
Proposed Control of Access Line with Concrete CA Marker	-----
Existing Control of Access	-----
Proposed Control of Access	-----
Existing Easement Line	----- E
Proposed Temporary Construction Easement	----- E
Proposed Temporary Drainage Easement	----- TDE
Proposed Permanent Drainage Easement	----- PDE
Proposed Permanent Drainage / Utility Easement	-----
Proposed Permanent Utility Easement	----- PUE
Proposed Temporary Utility Easement	----- TUE
Proposed Aerial Utility Easement	----- AUE
Proposed Permanent Easement with Iron Pin and Cap Marker	-----

### ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	----- C
Proposed Slope Stakes Fill	----- F
Proposed Curb Ramp	-----
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊕
Pavement Removal	▨

### VEGETATION:

Single Tree	○
Single Shrub	○
Hedge	-----
Woods Line	-----

Orchard	○ ○ ○ ○
Vineyard	▭ Vineyard

### EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	▭ CONC
Bridge Wing Wall, Head Wall and End Wall	) CONC WW (
MINOR:	
Head and End Wall	▭ CONC HW
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	□ CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	⊕
Storm Sewer	-----

### UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊕
Power Line Tower	⊗
Power Transformer	⊗
U/G Power Cable Hand Hole	▭
H-Frame Pole	●
Recorded U/G Power Line	----- P
Designated U/G Power Line (S.U.E.*)	----- P

### TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊕
Telephone Booth	▭
Telephone Pedestal	▭
Telephone Cell Tower	⊗
U/G Telephone Cable Hand Hole	▭
Recorded U/G Telephone Cable	----- T
Designated U/G Telephone Cable (S.U.E.*)	----- T
Recorded U/G Telephone Conduit	----- TC
Designated U/G Telephone Conduit (S.U.E.*)	----- TC
Recorded U/G Fiber Optics Cable	----- T FO
Designated U/G Fiber Optics Cable (S.U.E.*)	----- T FO

### WATER:

Water Manhole	⊕
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
Recorded U/G Water Line	-----
Designated U/G Water Line (S.U.E.*)	-----
Above Ground Water Line	----- A/G Water

### TV:

TV Satellite Dish	⊗
TV Pedestal	▭
TV Tower	⊗
U/G TV Cable Hand Hole	▭
Recorded U/G TV Cable	----- TV
Designated U/G TV Cable (S.U.E.*)	----- TV
Recorded U/G Fiber Optic Cable	----- TV FO
Designated U/G Fiber Optic Cable (S.U.E.*)	----- TV FO

### GAS:

Gas Valve	◇
Gas Meter	⊕
Recorded U/G Gas Line	----- G
Designated U/G Gas Line (S.U.E.*)	----- G
Above Ground Gas Line	----- A/G Gas

### SANITARY SEWER:

Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	----- SS
Above Ground Sanitary Sewer	----- A/G Sanitary Sewer
Recorded SS Forced Main Line	----- FSS
Designated SS Forced Main Line (S.U.E.*)	----- FSS

### MISCELLANEOUS:

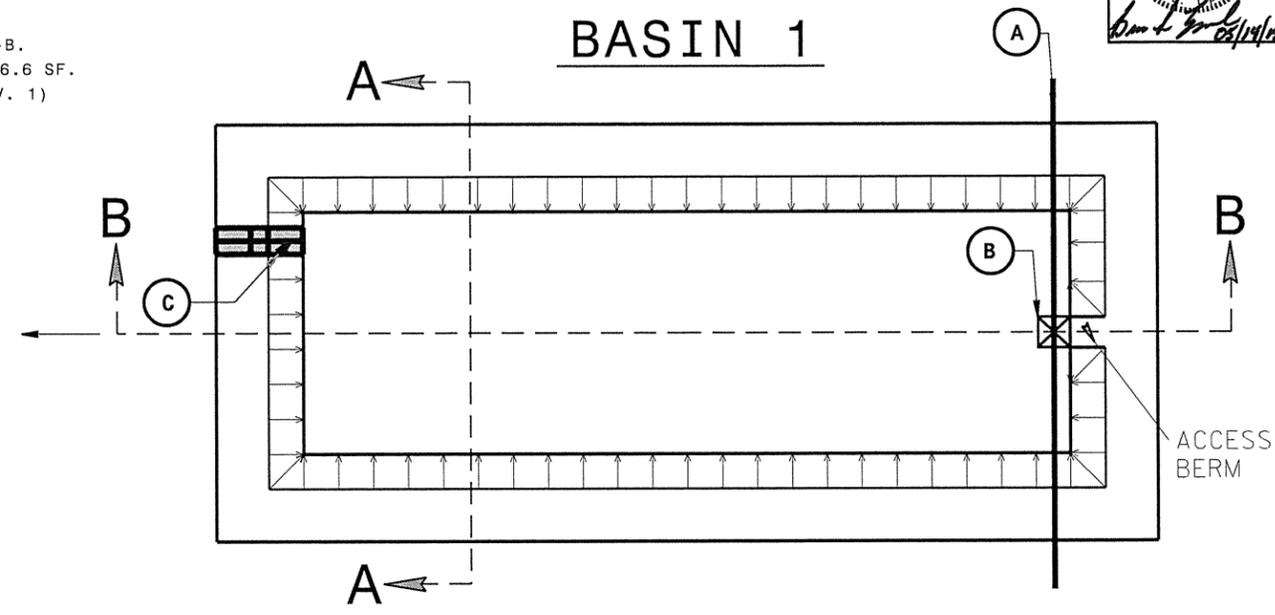
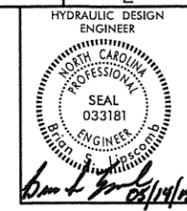
Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊕
Utility Unknown U/G Line	----- U/L
U/G Tank; Water, Gas, Oil	▭
Underground Storage Tank, Approx. Loc.	⊕
A/G Tank; Water, Gas, Oil	▭
Geoenvironmental Boring	⊗
U/G Test Hole (S.U.E.*)	⊕
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

5/28/99

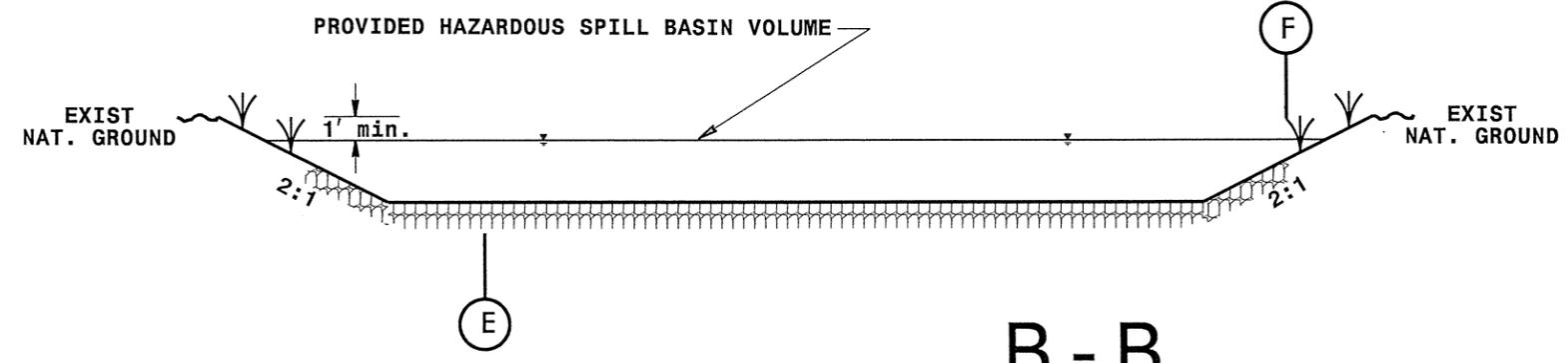
MATERIALS	
A	EXISTING 24" PIPE
B	OUTLET CONTROL STRUCTURE (SEE SPECIAL DETAIL SHEET "2-B")
C	CURB CUT AND CONCRETE CHANNEL INLET
D	EXISTING 24" PIPE
E	6"-10" RIVER STONE
F	DAY LILLY BEDS
G	SLUICE GATE

# HAZARDOUS SPILL BASIN DETAIL

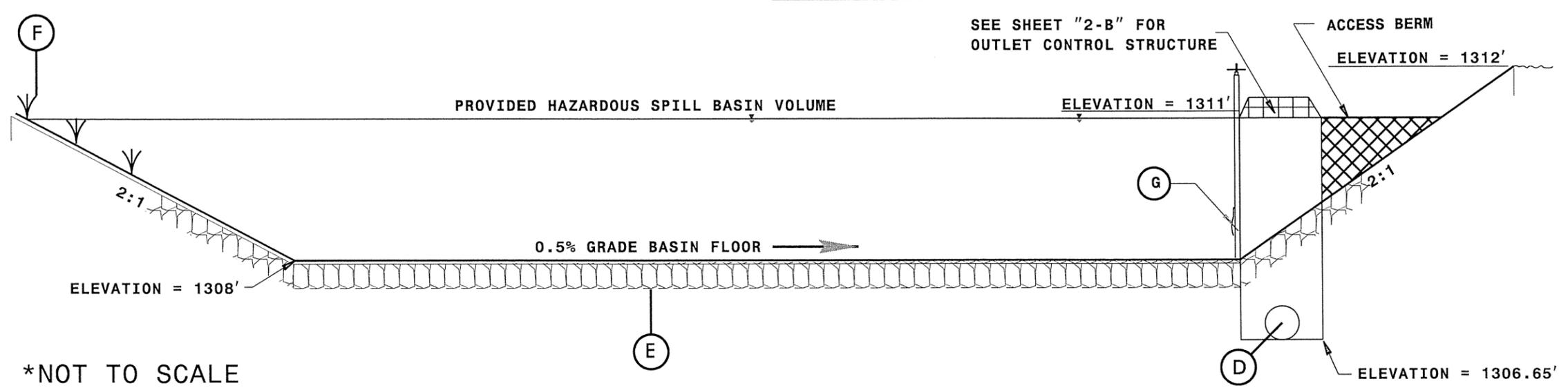
- NOTES
1. SEE PLAN SHEET #4 FOR SHAPE AND SIZE OF BASIN.
  2. PRECAST BOX DIMENSIONS CAN BE FOUND ON SHEET 2-B.
  3. BOTTOM OF BASIN SURFACE AREA AT ELEV. 1308' = 346.6 SF.
  4. VOLUME NEEDED = 2400 CU. FT. (PER BMP TOOLBOX V. 1)
  5. VOLUME PROVIDED = 2170 CU. FT.



## A - A



## B - B

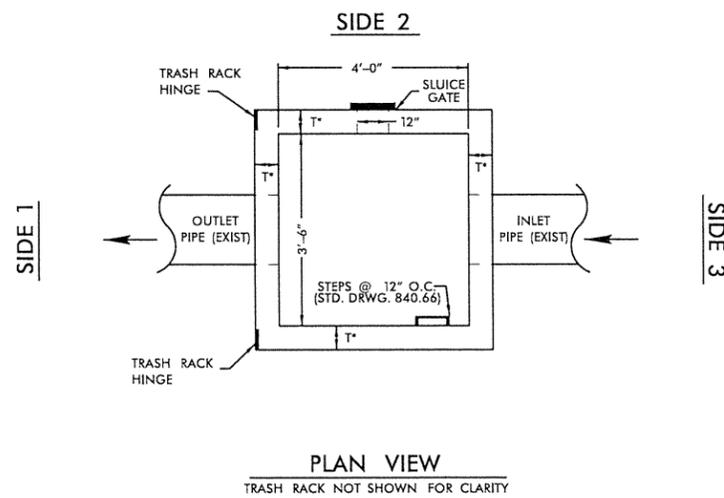
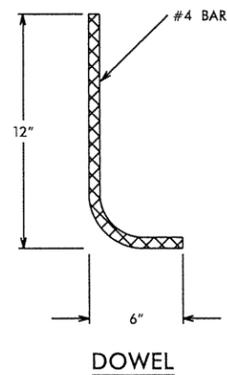
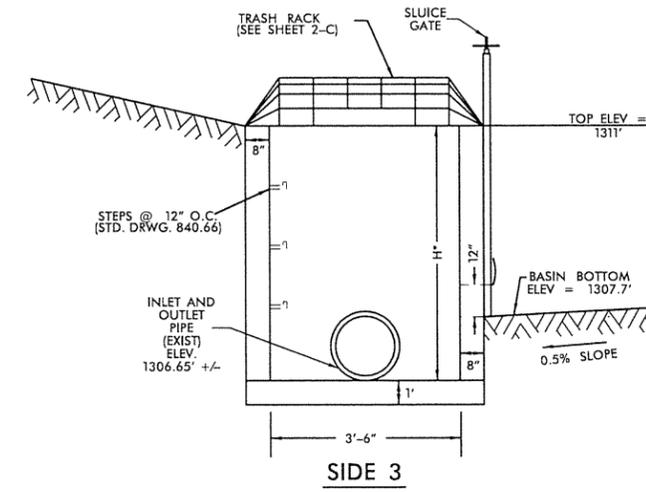
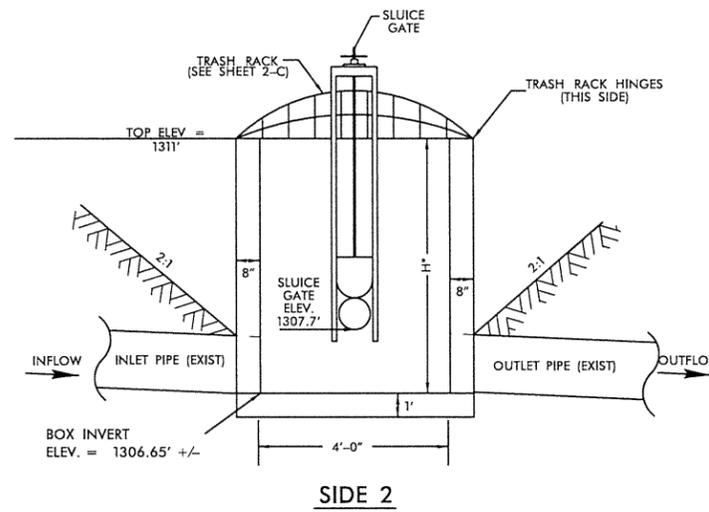
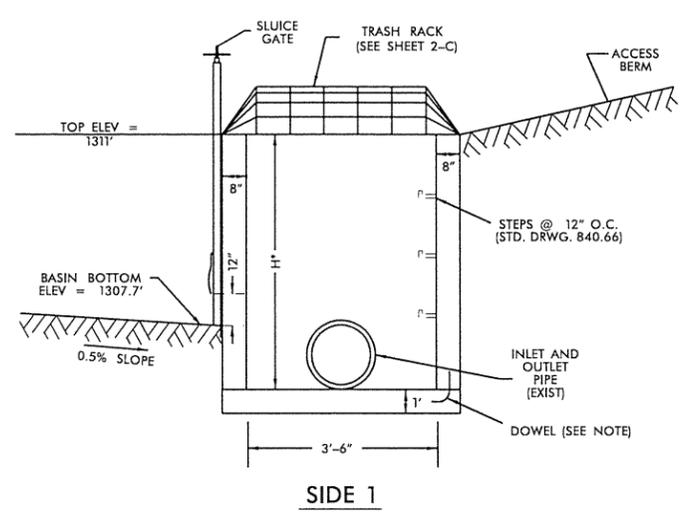


\*NOT TO SCALE

DATE PLOTTED: 05/19/99 10:58 AM

# HAZARDOUS SPILL BASIN OUTLET STRUCTURE

\*NOT TO SCALE\*



NOTES:

1. CONCRETE BOTTOM SLAB, CONCRETE OR BRICK WALLS (INDIVIDUAL BRICKS NOT SHOWN FOR CLARITY)
2. TOP ELEVATION OF CONTROL STRUCTURE (WEIR ELEVATION) SHOULD BE SET AT THE HAZARDOUS SPILL VOLUME ELEVATION.
3. NO BEDDING MATERIAL TO BE USED. THEREFORE, DO NOT FOLLOW STANDARD DRAWINGS FOR METHOD OF PIPE INSTALLATION FOR OUTLET PIPE THROUGH EMBANKMENT.
4. 12" SLUICE GATE IS FOR HAZARDOUS SPILLS AND SHOULD REMAIN OPEN DURING NORMAL OPERATION.
5. SLUICE GATE SHALL PROVIDE WATERTIGHT SEAL AND PROVIDE ADEQUATE CLEARANCE FOR GATE OPERATION.
6. SELECT BOX STANDARD AS REQUIRED TO ACCOMMODATE SLUICE GATE AND TRASH RACK WIDTH.
7. ENSURE TRASH RACK OPENS FREELY AND WITHOUT INTERFERENCE WITH SLUICE GATE.
8. MORTAR JOINTS 1/2" +/- 1/8" THICK.
9. USE CLASS "B" CONCRETE THROUGHOUT
10. USE FORMS FOR CONSTRUCTION OF THE BOTTOM SLAB
11. USE #4 DOWELS AT 12" CENTERS
12. USE BRICK OR CONCRETE BLOCK WHICH COMPLIES WITH THE REQUIREMENTS OF SECTION 840 OF THE STANDARD SPECIFICATIONS.
13. CHAMFER ALL EXPOSED CORNERS 1".
14. STRUCTURE SIDE WALLS NEED TO BE CONNECTED TO THE BOTTOM WALL.

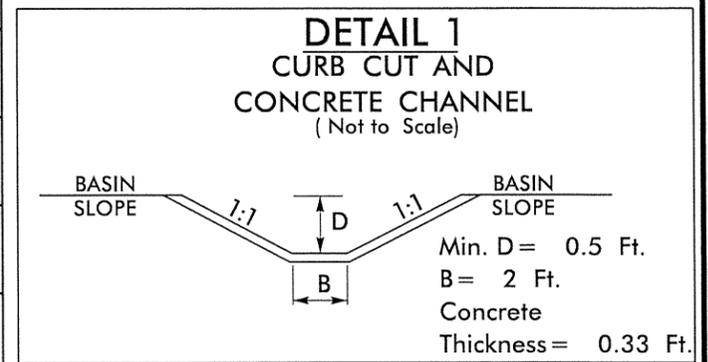
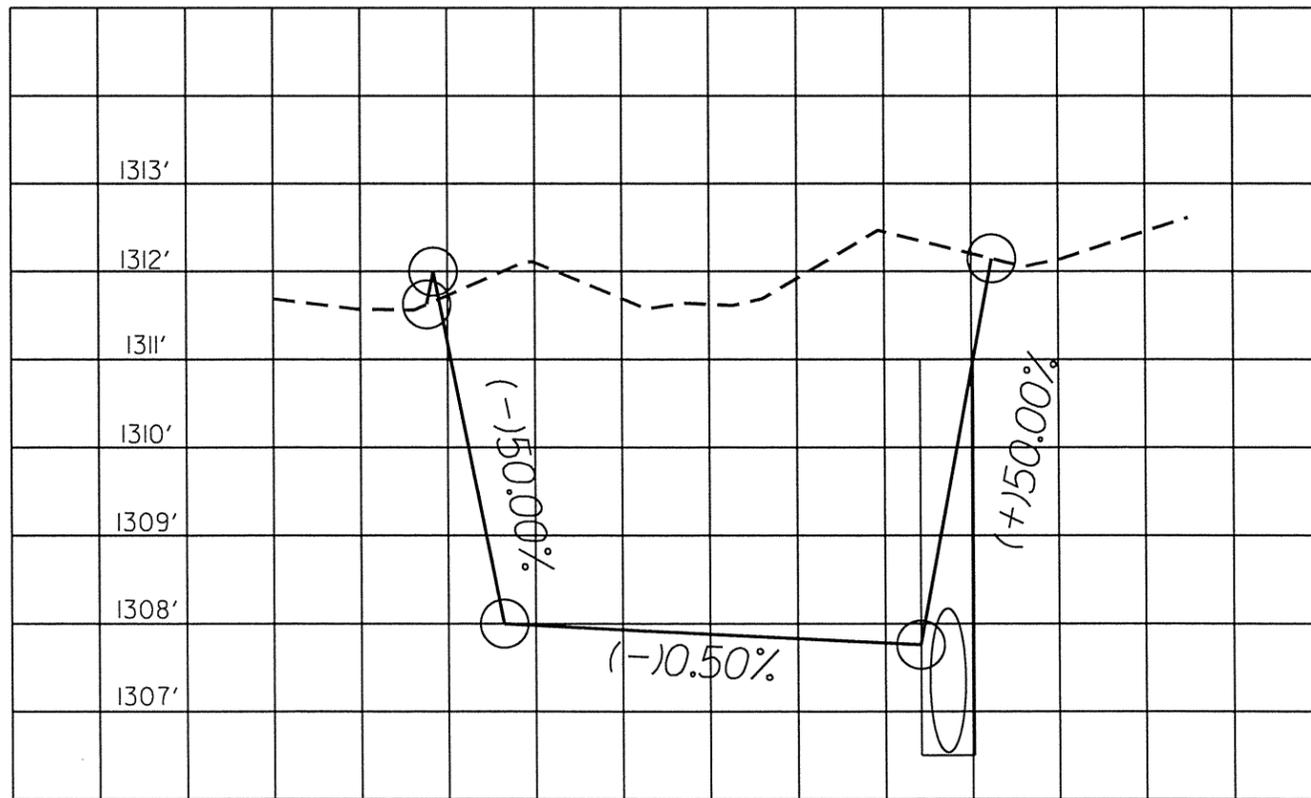
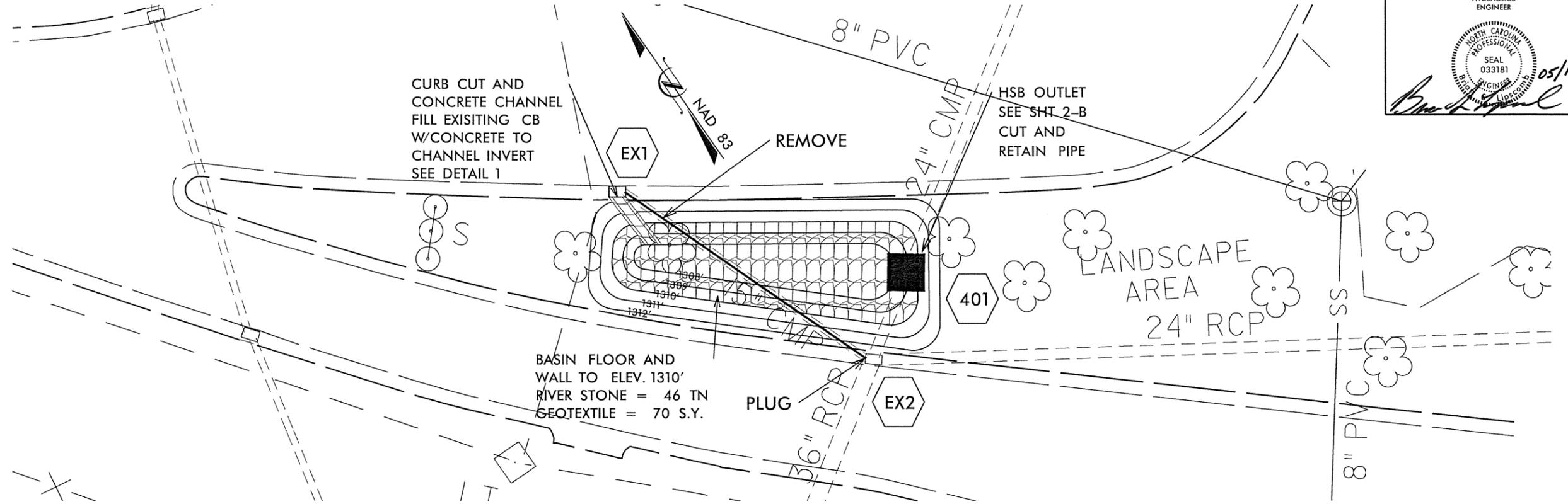
H\* = 4'-4.2" +/- (NOTE ACTUAL DEPTH WILL BE DEPENDENT ON ACTUAL EXISTING PIPE ELEVATION)

T\* = SIDE WALL THICKNESS WILL BE 6" IF BOX IS CAST CONCRETE AND 8" IF MASONRY

5/21/15 11:58 AM C:\PROJECTS\4436MG\DWG\2-A.DWG







REVISIONS

8/17/99

SYSTEMS

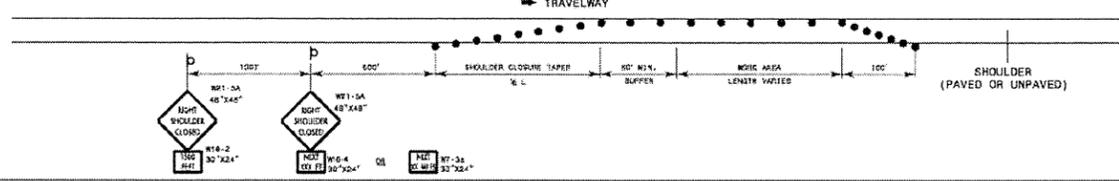
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STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

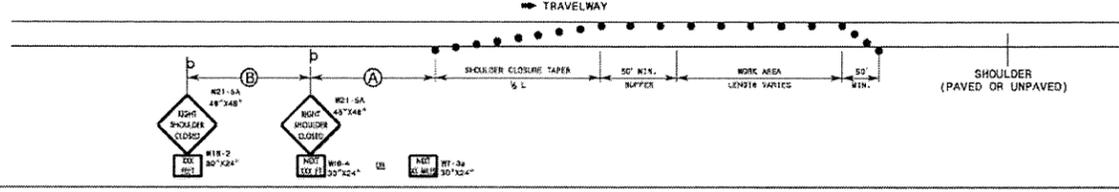
ENGLISH STANDARD DRAWING FOR  
TEMPORARY SHOULDER CLOSURES

SHEET 1 OF 1  
1101.04

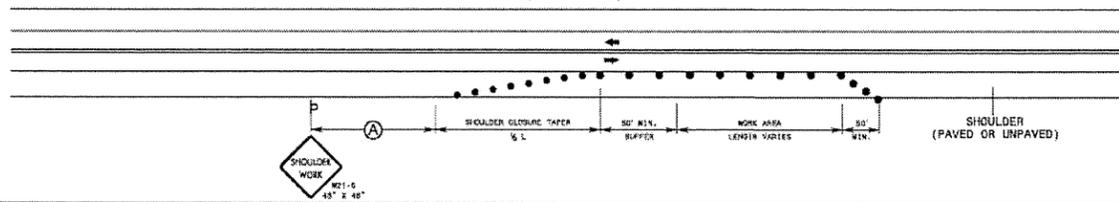
### SHOULDER CLOSURE ON CONTROLLED ACCESS FACILITIES - ≥ 60 MPH



### SHOULDER CLOSURE ON DIVIDED FACILITIES - ≤ 55 MPH



### SHOULDER CLOSURE ON UNDIVIDED ROADWAYS (SEE NOTE 5)



- GENERAL NOTES**
- 1- PLACE SHOULDER CLOSURE SIGNS ON THE SAME SIDE AS THE SHOULDER THAT IS CLOSED.
  - 2- PLACE DRUMS IN THE SHOULDER TAPER AT THE MAXIMUM SPACING EQUAL IN FEET TO THE POSTED SPEED LIMIT. THE MAXIMUM SPACING OF DRUMS ALONG THE WORK AREA IS EQUAL IN FEET TO 2 TIMES THE POSTED SPEED LIMIT.
  - 3- USE STATIONARY SIGNS FOR LONG TERM OPERATIONS (LONGER THAN 3 DAYS).
  - 4- REFER TO STD. 1101.11 FOR "L" DISTANCE AND SIGN SPACING.
  - 5- THE TWO-LANE, TWO-WAY DRAWING MAY BE APPLIED TO UNDIVIDED, MULTI-LANE FACILITIES.

**LEGEND**

- DRUM
- STATIONARY OR PORTABLE SIGN
- DIRECTION OF TRAFFIC FLOW

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RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR  
TEMPORARY SHOULDER CLOSURES

SHEET 1 OF 1  
1101.04

### GENERAL NOTES

THE FOLLOWING GENERAL NOTES SHALL APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

THE TRAFFIC CONTROL PLAN FOR THIS PROJECT CONSISTS OF STANDARD DETAIL DRAWINGS, THESE DRAWINGS ARE TYPICAL SITUATIONS AND SHOULD BE ADAPTED TO THE ACTUAL FIELD CONDITIONS, SUCH AS WHEN PHYSICAL DIMENSIONS ARE NOT ATTAINABLE, OR WHEN MORE THAN ONE DRAWING IS APPLIED SIMULTANEOUSLY RESULTING IN DUPLICATE SIGNING, OR UNDESIRABLE OVERLAPPING OF DEVICES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADAPTING THE TRAFFIC CONTROL PLAN TO FIELD CONDITIONS TO PROVIDE SAFE AND EFFICIENT TRAFFIC MOVEMENT.

PROJECT REFERENCE NO. R-4436MG SHEET NO. TMP-1

HYDRAULICS ENGINEER

STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

SEAL 033181

06/01/15

REVISIONS

### SHOULDER CLOSURE REQUIREMENTS

- A. SHOULDER CLOSURES SHALL BE REMOVED AS SOON AS PRACTICAL AFTER WORK BEHIND THE CLOSURE IS COMPLETED OR WHEN SHOULDER CLOSURE IS NO LONGER NEEDED.
- B. CONTRACTOR SHALL MAINTAIN EXISTING TRAFFIC PATTERNS AND LANE CONFIGURATIONS AT THE END OF EACH DAYS OPERATION AND DURING CONSTRUCTION INACTIVITY, EXCEPT AS OTHERWISE INDICATED IN THE PHASING PLAN.
- C. WHEN SHOULDER CLOSURES ARE NOT IN EFFECT, CHANNELIZING DEVICES IN WORK AREAS SHALL BE SPACED NO GREATER THAN TWICE THE POSTED SPEED LIMIT, EXCEPT 10-FOOT ON CENTER IN RADII, AND SHALL BE SET 3' OFF THE EDGE OF AN EXISTING TRAVEL LANE.
- D. DURING SHOULDER CLOSURES, FLAGGERS SHALL BE USED WHEN DELIVERING MATERIALS TO LOCATIONS CLOSE TO THE PAVEMENT. FLAGGERS AND PROPER VEHICLE ACCESS TECHNIQUES SHALL BE USED FOR AREAS WHERE CONSTRUCTION TRAFFIC IS UTILIZING STANDARD CONSTRUCTION ENTRANCES.

### SIGNING

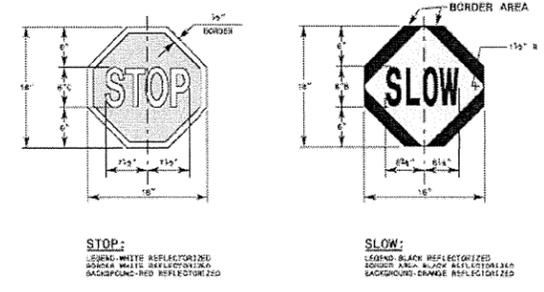
- E. EXISTING TRAFFIC SIGNAGE SHALL BE MOVED AND OTHERWISE MAINTAINED BY THE CONTRACTOR AS APPROPRIATE DURING CONSTRUCTION.
- F. ALL NECESSARY TRAFFIC CONTROL SIGNING SHALL BE IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

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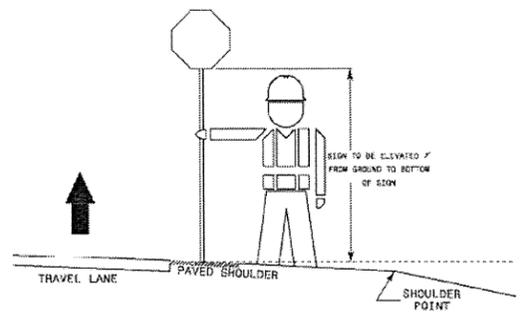
ENGLISH STANDARD DRAWING FOR  
FLAGGERS

SHEET 1 OF 1  
1150.01

### STOP/SLOW PADDLE



### FLAGGER AND PADDLE PLACEMENT



### GENERAL NOTES

- 1- USE HAND SIGNALING DEVICES SUCH AS STOP-SLOW PADDLES, FLASHLIGHTS TO CONTROL TRAFFIC. USE STOP-SLOW PADDLES AS THE PRIMARY DEVICE.
- 2- FABRICATE STOP-SLOW PADDLES FROM SHEET METAL OR OTHER LIGHT SEMI RIGID MATERIAL. PROVIDE A RIGID HANDLE OF SUFFICIENT LENGTH SO THE PADDLE IS HELD AT 7 FEET ABOVE GROUND LEVEL.
- 3- PROVIDE STOPPING SIGHT DISTANCE TO EACH FLAGGER STATION (REFER TO STD. 1101.11 SHEET 2).
- 4- ILLUMINATE FLAGGER STATIONS DURING NIGHT OPERATIONS.
- 5- FOLLOW FLAGGER QUALIFICATIONS AND METHODS OF HAND-SIGNALING PROCEDURES IN ACCORDANCE WITH PART VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- 6- ALL FLAGGERS MUST BE CERTIFIED BY AN NCDOT APPROVED SOURCE.

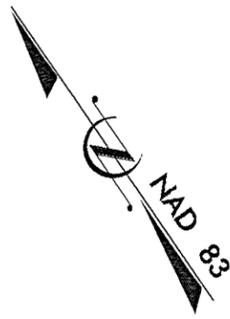
STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR  
FLAGGING DEVICES

SHEET 1 OF 1  
1150.01

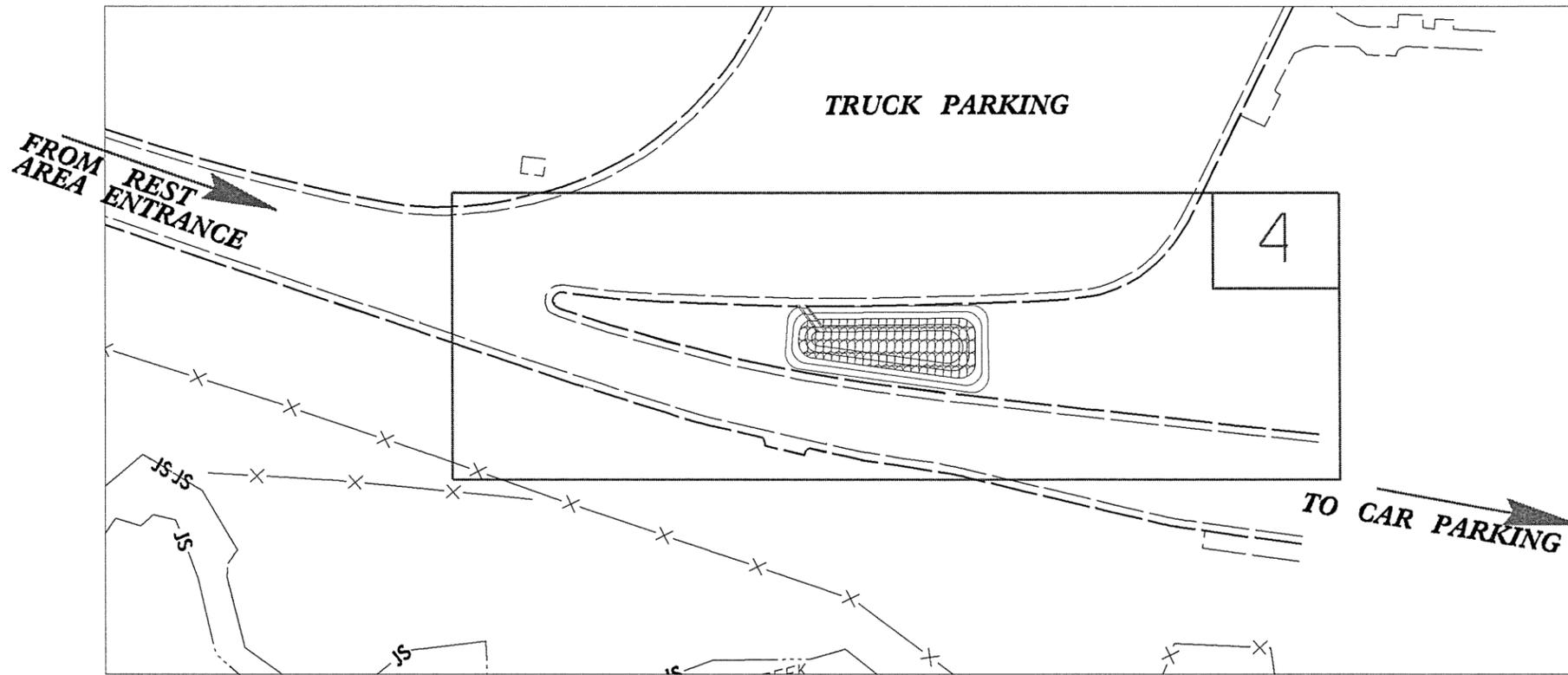
**TIP PROJECT: R-4436MG**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS  
**PLAN FOR PROPOSED  
HIGHWAY EROSION CONTROL**



**LOCATION: MCDOWELL COUNTY REST AREA OFF OF INTERSTATE 40 EAST. BETWEEN INTERCHANGE WITH SR 1168 (ASHWORTH RD) AND SR 1001 (SUGAR HILL RD)**

**TYPE OF WORK: GRADING, STORM DRAINAGE, EROSION CONTROL, VEGETATION REMOVAL, AND VEGETATION RESTORATION**

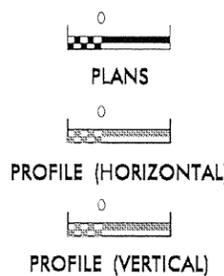


STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-4436MG	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

**EROSION AND SEDIMENT CONTROL MEASURES**

Sed. #	Description	Symbol
1630.05	Temporary Silt Ditch	---
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	III III III
1606.01	Special Sediment Control Fence	---X---X---X
1622.01	Temporary Berms and Slope Drains	---X---
1630.02	Silt Basin Type B	---X---
1633.01	Temporary Rock Silt Check Type-A	---X---
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	---X---
1633.02	Temporary Rock Silt Check Type-B	---X---
	Wattle / Coir Fiber Wattle	---X---
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	---X---
1634.01	Temporary Rock Sediment Dam Type-A	---X---
1634.02	Temporary Rock Sediment Dam Type-B	---X---
1635.01	Rock Pipe Inlet Sediment Trap Type-A	---X---
1635.02	Rock Pipe Inlet Sediment Trap Type-B	---X---
1630.04	Stilling Basin	---X---
1630.06	Special Stilling Basin	---X---
	Rock Inlet Sediment Trap:	
1632.01	Type A	---X---
1632.02	Type B	---X---
1632.03	Type C	---X---
	Skimmer Basin	---X---
	Tiered Skimmer Basin	---X---
	Infiltration Basin	---X---

**GRAPHIC SCALE**



ROADSIDE ENVIRONMENTAL UNIT  
DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT NATURAL RESOURCES DIVISION OF WATER RESOURCES.

Prepared in the Office of:  
**ROADSIDE ENVIRONMENTAL UNIT**  
1 South Wilmington St.  
Raleigh, NC 27611

**2012 STANDARD SPECIFICATIONS**

Designed by:  
**BARNEY BLACKBURN** 3442  
NAME LEVEL III CERTIFICATION NO.

**Roadway Standard Drawings**

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C. dated January 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

1604.01 Railroad Erosion Control Detail	1632.01 Rock Inlet Sediment Trap Type A
1605.01 Temporary Silt Fence	1632.02 Rock Inlet Sediment Trap Type B
1606.01 Special Sediment Control Fence	1632.03 Rock Inlet Sediment Trap Type C
1607.01 Gravel Construction Entrances	1633.01 Temporary Rock Silt Check Type A
1622.01 Temporary Berms and Slope Drains	1633.02 Temporary Rock Silt Check Type B
1630.01 Riser Basin	1634.01 Temporary Rock Sediment Dam Type A
1630.02 Silt Basin Type B	1634.02 Temporary Rock Sediment Dam Type B
1630.03 Temporary Silt Ditch	1635.01 Rock Pipe Inlet Sediment Trap Type A
1630.04 Stilling Basin	1635.02 Rock Pipe Inlet Sediment Trap Type B
1630.05 Temporary Diversion	1640.01 Coir Fiber Baffle
1630.06 Special Stilling Basin	1645.01 Temporary Stream Crossing
1631.01 Matting Installation	

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA***SOIL STABILIZATION TIMEFRAMES***

<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HOW ZONES.

