FOR SHOULDER DRAIN

INSTALLATION DRAWING FOR ROADWAY STANDARD

CLOTH .063 WIRE OR EQUAL PIPE I.D. RODENT SCREEN INSTALL RODENT SCREEN

4" TO 6" INTO DRAIN PIPE **TOP VIEW** 

H

2'-6"

1/4" DRAF1

25/8

2,

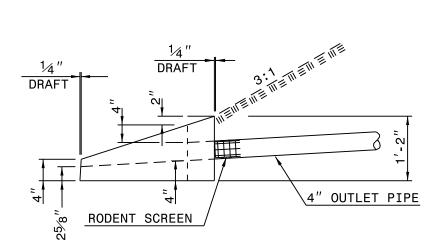
2'-4"

10″

**DETAIL OF PARTIAL** RODENT SCREEN

2x2 TO 4x4 GALV. HARDWARE

OUTLET PIPE



**PLAN VIEW** 

1/4"

DRAFT

RODENT SCREEN

4" OUTLET PIPE

2'-6"

1/4" DRAFT

2

2'-4"

10,

**ELEVATION VIEW** 

## **ELEVATION VIEW**

13⁄8″

1/4" DRAFT 2'-4"

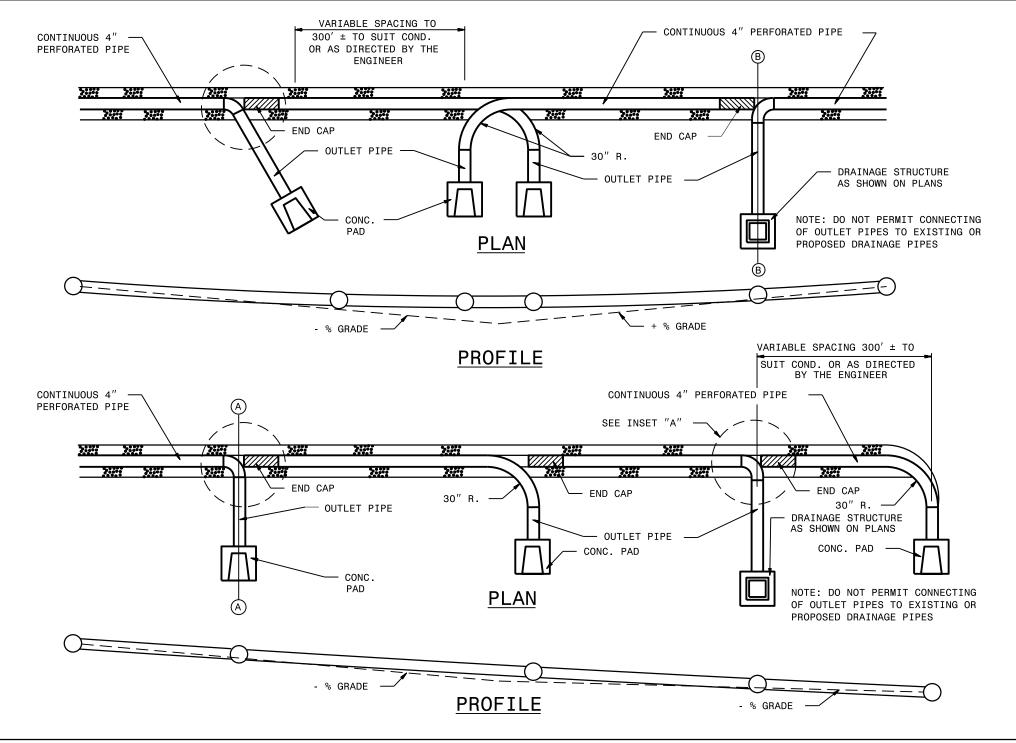
\4<sup>3</sup>⁄4

THE CONCRETE PAD CONSISTS OF 0.137 CUBIC YARDS OF CLASS "B" CONCRETE.

4" OUTLET PIPE

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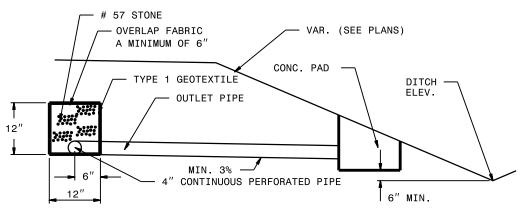
DRAIN STANDARD DRAWING FOR SHOULDER AGGREGATE ROADWAY



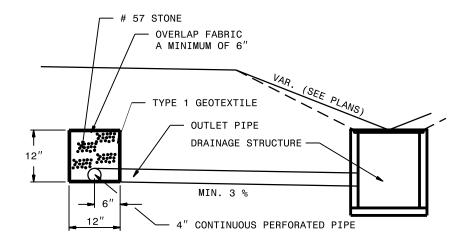
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AGGREGATE

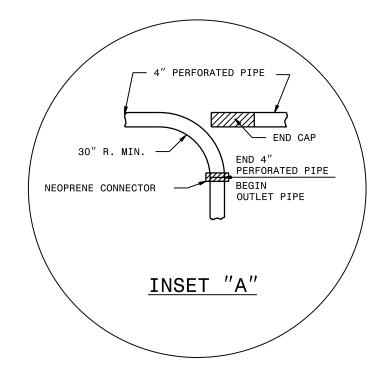
SHEET 2 OF 2 816.02



### TYPICAL SECTION A-A



TYPICAL SECTION B-B



#### GENERAL NOTES:

USE THE FOLLOWING CRITERIA AS A GUIDE FOR THE LOCATION, QUANTITY AND INSTALLATION OF AGGREGATE SHOULDER DRAIN.

- (1) INSTALL ON LOW SIDE OF PAVEMENT IN AREAS WITH GRADES FLATTER THAN 1%, AND SAG VERTICAL CURVES.
- OTHER LOCATIONS AS DIRECTED BY THE ENGINEER.
- PLACE OUTLETS AT THE LOW POINTS AND SPACE AS SHOWN ON THE PLAN VIEW.
- CONNECT OUTLET PIPE INTO DRAINAGE STUCTURE WHERE POSSIBLE. IF NOT CONNECTED TO DRAINAGE STRUCTURE, PROTECT END OF PIPE BY CONCRETE PAD. SEE DETAIL OF CONCRETE PAD.
- OUTLET PIPE GRADE MIN. 3%.

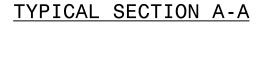
NORTH CARÓLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 5 DEPT DRAIN FOR

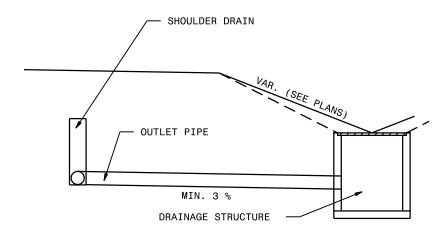
GEOCOMPOSITE SHOULDER DRAII

SHEET 1 OF 2

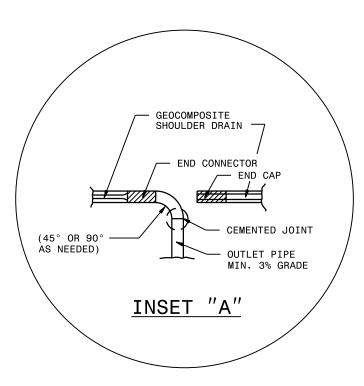
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SHOULDER DRAIN CONC. PAD DITCH ELEV. OUTLET PIPE 6" MIN.





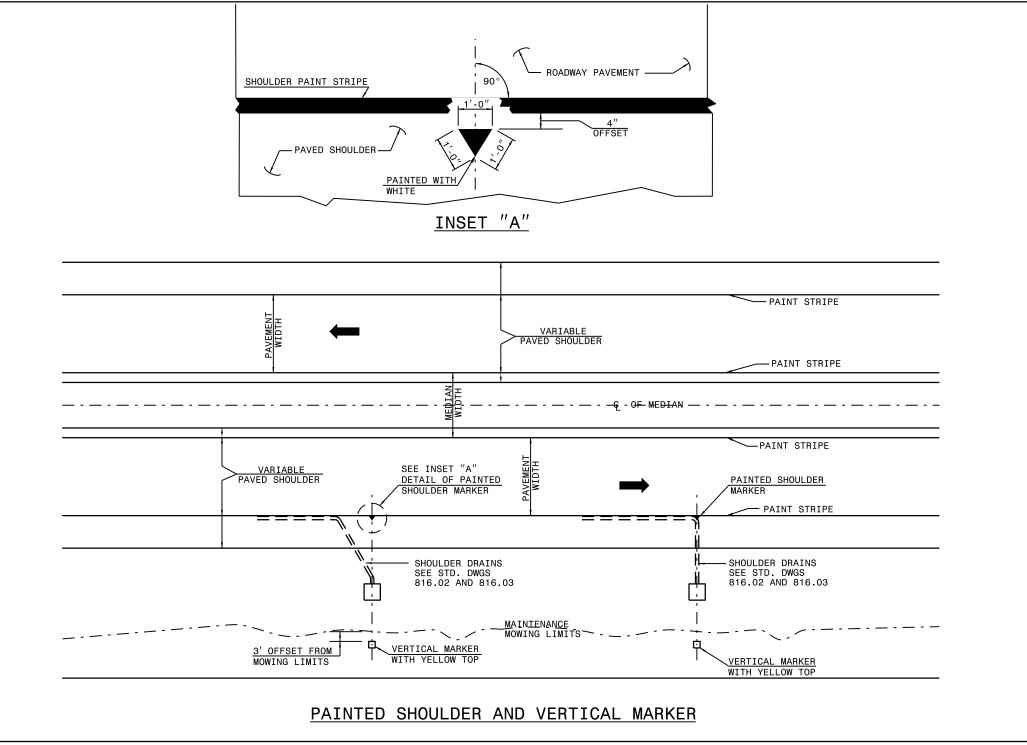
TYPICAL SECTION B-B



**GENERAL NOTES:** 

USE THE FOLLOWING CRITERIA AS A GUIDE FOR THE LOCATION, QUANTITY AND INSTALLATION OF GEOCOMPOSITE SHOULDER DRAIN.

- (1) INSTALL ON LOW SIDE OF PAVEMENT IN AREAS WITH GRADES FLATTER THAN 1% ± AND SAG VERTICAL CURVES.
- (2) OTHER LOCATIONS AS DIRECTED BY THE **ENGINEER.**
- (3) PLACE OUTLETS AT THE LOW POINTS AND SPACE AS SHOWN ON THE PLAN VIEW.
- CONNECT OUTLET PIPE INTO DRAINAGE STUCTURE WHERE POSSIBLE. IF NOT CONNECTED TO DRAINAGE STRUCTURE, PROTECT END OF PIPE BY CONCRETE PAD. SEE DETAIL OF CONCRETE PAD.
- PROVIDE 4" SCH. 40 PVC PIPE FOR OUTLET.
  - OUTLET PIPE GRADE MIN. 3%.



STANDARD DRAWING FOR S DRAINAGE CONCRETE P FOR ROADWAY MARKERS

L-18 STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

DEPT

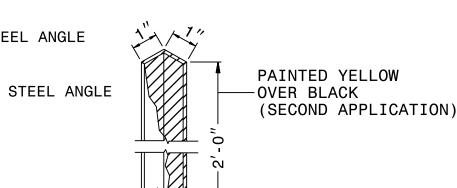
STRUCTURE

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PAINTED BLACK

(FIRST APPLICATION)

**LEGEND** 

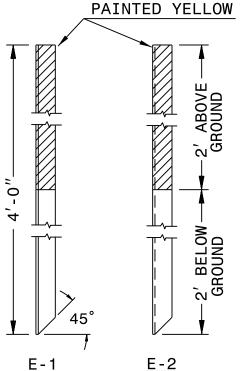
YELLOW PAINT

**BLACK PAINT** 

# **PLAN**

"x1"x1/8" STEEL ANGLE

′x1″x½″



<u>E - 1</u>

**ELEVATION** 

## ISOMETRIC VIEW

### **GENERAL NOTES:**

USE A36 GRADE STEEL. USE FLAT BLACK PAINT AS FIRST APPLICATION.

USE YELLOW AS SECOND APPLICATION FOR THE TOP HALF OF THE MARKER. USE EXTERIOR OIL BASE FOR ALL PAINT.

USE MARKERS FOR SUBSURFACE AND SHOULDER DRAIN CONCRETE PADS. PLACE MARKERS FOR OUTLETS AT DRAINAGE STRUCTURES WHERE APPLICABLE.

SHEET 2 OF 2

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