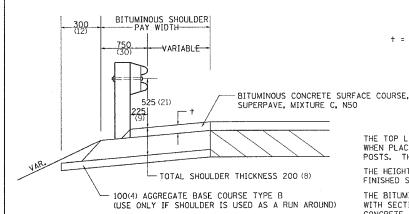
# DETAIL OF BITUMINOUS SHOULDER AT GUARD RAIL



t = SEE TYPICAL SECTIONS FOR THICKNESS

#### GENERAL NOTES

THE TOP LIFT SHALL NOT BE PLACED BEHIND THE GUARDRAIL POSTS. WHEN PLACING THE TOP LIFT THE RAIL MUST BE REMOVED FROM THE POSTS. THE POST SHALL NOT BE REMOVED.

THE HEIGHT OF THE GUARD RAIL SHALL BE SET  ${f 525}$  (21) FROM THE FINISHED SURFACE.

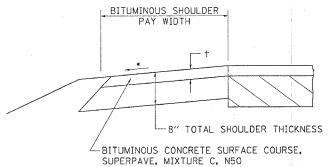
THE BITUMINOUS SHOULDER SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 482 EXCEPT THE TOP LIFT SHALL BE BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE C, N50. THE WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON FOR BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE C, N50, AND SOUARE METER (SQUARE YARD) FOR BITUMINOUS SHOULDERS SUPERPAVE OF THE THICKNESS SPECIFIED. THE REMOVAL & REINSTALLATION OF THE GUARDRAIL WILL BE INCLUDED IN THE COST OF THE BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE C, N50.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

## DETAIL OF BITUMINOUS SHOULDER AT GUARD RAIL 23.4

REVISED 1-17-02

## **BITUMINOUS SHOULDER**



+ = SEE TYPICAL SECTIONS FOR THICKNESS

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

#### GENERAL NOTES

THE BITUMINOUS SHOULDER SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 482 EXCEPT THE TOP LIFT SHALL BE BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE C, N50. THE WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON FOR BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE C, N50, AND SOUARE YARD FOR BITUMINOUS SHOULDERS SUPERPAVE OF THE THICKNESS SPECIFIED.

USE BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE C, N50, WHEN RESURFACING EXISTING BITUMINOUS SHOULDERS. THE THICKNESS IS SHOWN ON THE TYPICAL SECTIONS. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON FOR BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE C, N50.

REMOVAL OF MATERIAL FOR PLACEMENT OF THE BITUMINOUS SHOULDER TO BE PAID FOR IN UNITS FOR EXCAVATING AND GRADING EXISTING SHOULDERS OR IN CUBIC YARDS FOR EARTH EXCAVATION OR EARTH EXCAVATION WIDENING.

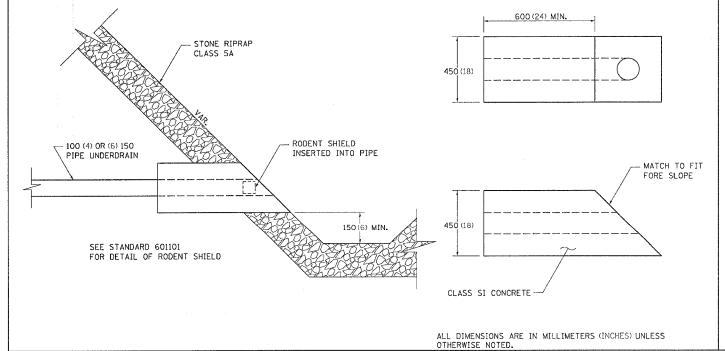
\* 4% WHEN MAINLINE IS ON TANGENT. FOR CROSS SLOPE ON SUPERELEVATION SECTION, SEE HIGHWAY STANDARD 482001 OR 482006.

### **BITUMINOUS SHOULDER**

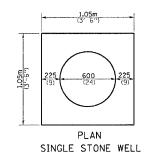
23.4a

REVISED 5-30-03

# CONCRETE HEADWALLS FOR PIPE DRAINS

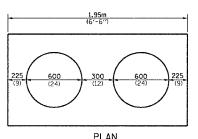


## STONE WELL SPECIAL



DITCH GRADE OR LOW POINT

OCCUPANT



DOUBLE STONE WELL

#### NOTE:

THE INSIDE LINER OF THE STONEWELL SHALL BE A 600 (24) CORRUGATED METAL PIPE OF THE SAME QUALITY AS SPECIFIED FOR PIPE CULVERTS, TYPE I. THE PERFORATIONS SHALL BEGIN 375 (15) FROM THE TOP OF THE STONEWELL AT THE RATE OF 4 HOLES PER 0.093m² (FT²) FOOT. THE SIZE OF THE HOLES SHALL NOT BE LESS THAN B (5/16) OR MORE THAN (6/5/8) DIAMETER. DOUBLE STONEWELL TO BE PAID FOR AS TWO (2) STONEWELLS. STANDARD GRATE TYPE 8 (STD. 604036) WILL BE USED. THE CONTRACT UNIT PRICE FOR STONEWELLS SPECIAL SHALL INCLUDE ALL MATERIALS AND LABOR FOR THE COMPLETE IN PLACE STONEWELLS.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

STONE WELL SPECIAL

30.4

**CONCRETE HEADWALLS FOR PIPE DRAINS** 

27.4

REVISED 10-15-04

REVISED 5-4-94