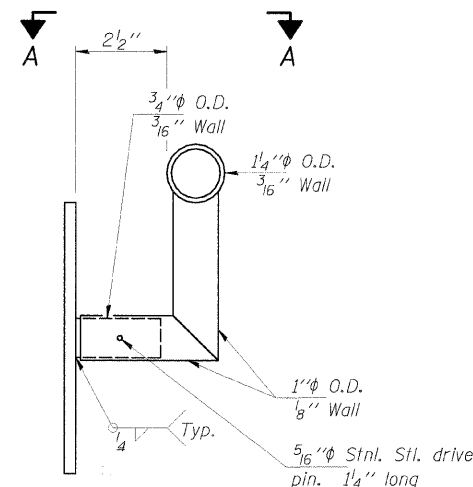
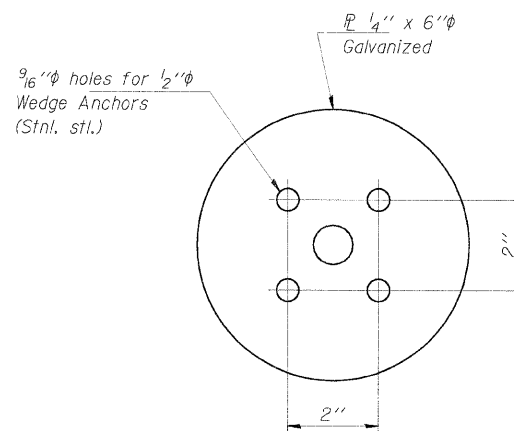
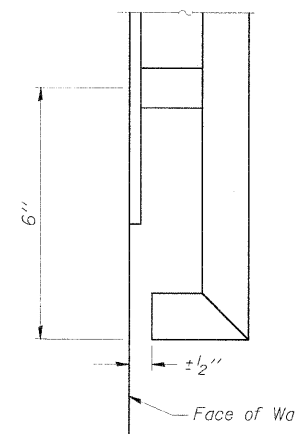


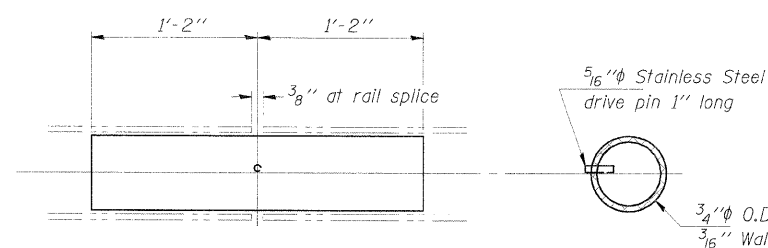
PARTIAL LONG. SECTION



PIPE HANDRAIL DETAILS



SECTION A-A



RAIL SPLICE

NOTES

Railing shall be in accordance with Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for PIPE HANDRAIL.

Aluminum alloy rail shall conform to ASTM B221 alloy 6061-T6 or 6351-T5 with min. yield 35 ksi, min. tensile 38 ksi, and elongation of 10% in 2 inches.

All joints in rail shall be spliced per detail.

All plates shall conform to the requirements of AASHTO M-270 Grade 36.

All plates shall be galvanized after shop fabrication in accordance with AASHTO M-111 and ASTM A-385.

1/2" diameter wedge anchors shall be stainless steel and shall have a minimum working shear level of 4,000 pounds and a working pullout load of 2,000 pounds.

BILL OF MATERIAL

Item	Unit	Quantity
Pipe Handrail	Foot	170

HLR
 Rice, Berry and Associates
 A Division of Hampton,
 Lenzini and Renwick, Inc.
 Civil & Structural Engineers
 801 S. Durkin Drive
 Springfield, Illinois 62704
 217-546-3400
 Account Number 03-05-0181-1
 Date: 6-09-04
 P.O. Box 1036
 DuQuoin, Illinois 62832
 618-790-4637
 DESIGNED: P.S.L. CHECKED: J.L.B. DRAWN: D.S.S.

TUNNEL DETAILS III
SECTION 99-00243-00-PV
BIKE PATH UNDER RANDALL ROAD
KANE COUNTY
STATION 11+25