

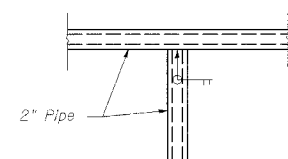
COUNTY HIGHWAY	FISCAL YEAR	TOTAL SHEETS	SHEET NO.
	2005	30	29
SEC 03-00001-06-BT		DUPAGE COUNTY	

CONTRACT NO.: 83805

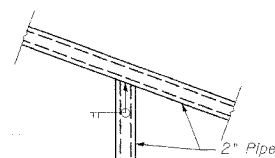


DETAIL A1

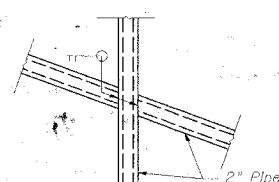
DETAIL A2



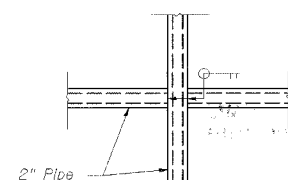
DETAIL B1



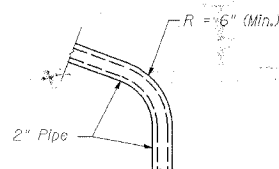
DETAIL B2



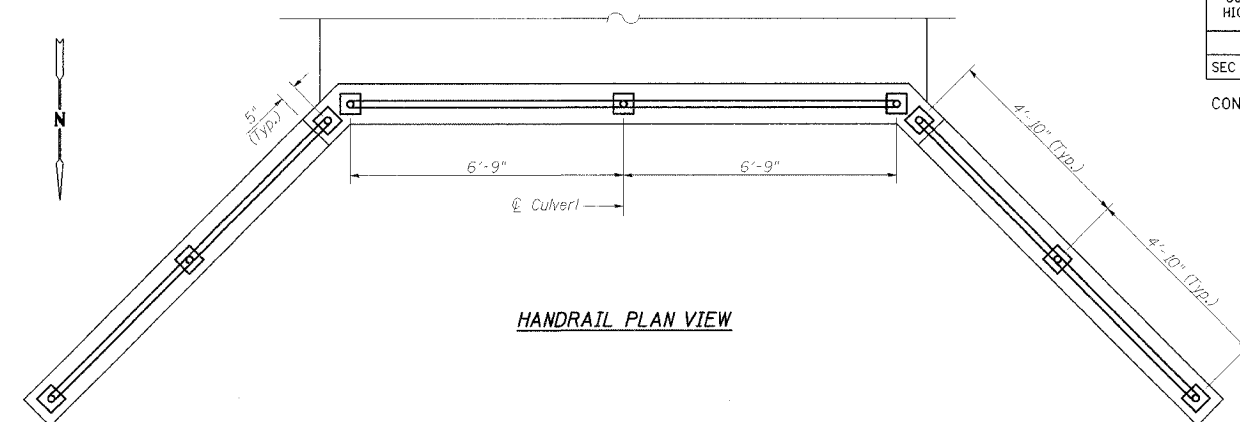
DETAIL C2



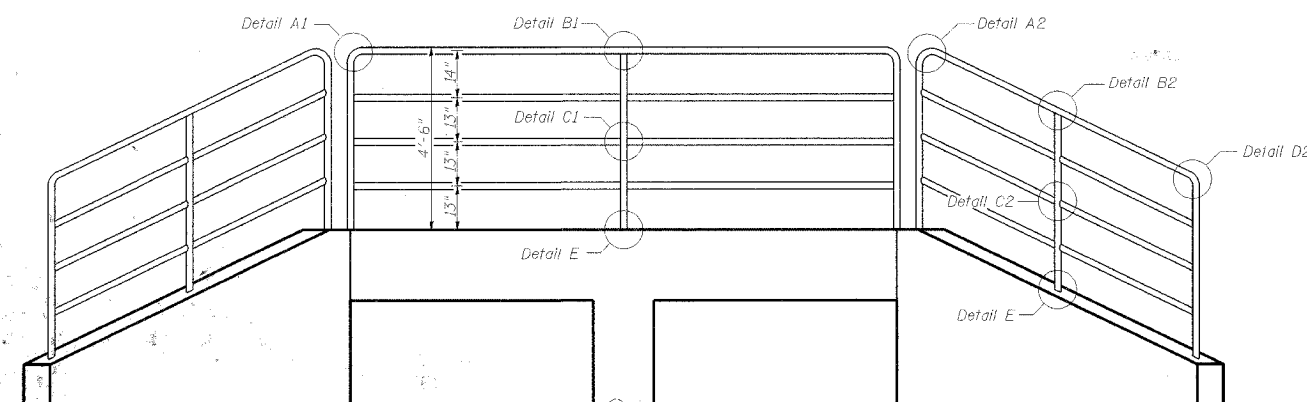
DETAIL C1



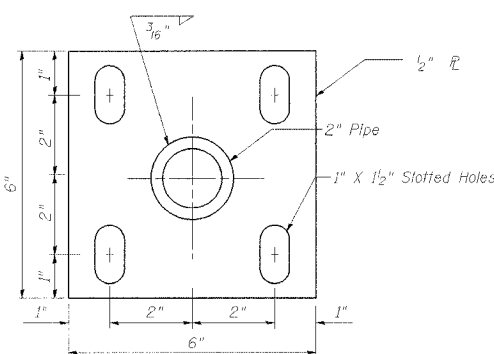
DETAIL D2



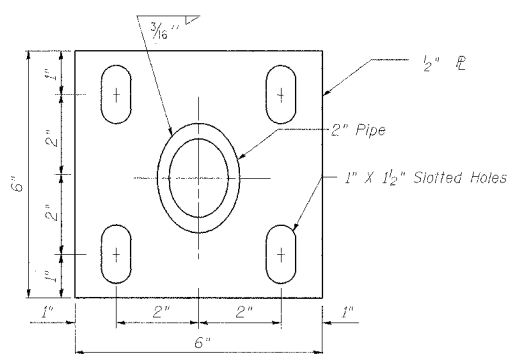
HANDRAIL PLAN VIEW



HANDRAIL ELEVATION VIEW
Looking South



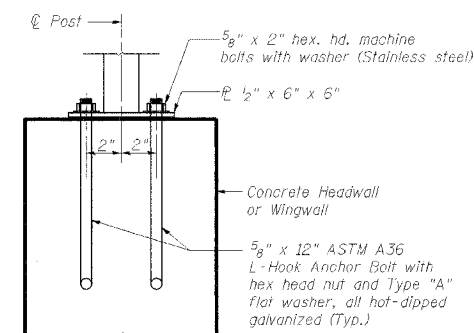
BASE PLATE
At Headwall



BASE PLATE
At Wingwall

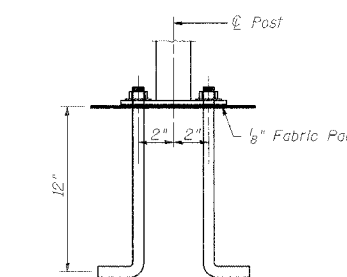
BILL OF MATERIAL

ITEM	UNIT	TOTAL
Pipe Handrail	Foot	33

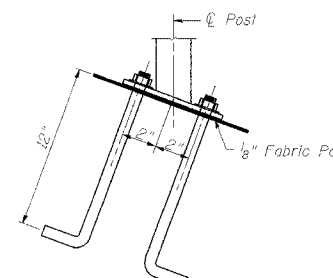


DETAIL E (ANCHOR BOLT DETAILS)

In lieu of the cast-in place anchor device shown, the Contractor has the option of drilling and epoxy grouting 5/8" diameter anchor rods. Embedment shall be according to the manufacturer's specifications.



AT HEADWALL



AT WINGWALL

NOTES

Wingwall handrails shall be fabricated to match the slope of the wingwalls.

Railing shall be according to Section 510 of the Standard Specifications, except as noted, and will be paid for at the Contract Unit Price per foot for Hand Rail.

Hollow structural steel tubing shall conform to the requirements of ASTM designation A 500, Grade B, structural steel tubing.

All other steel shapes and plates shall conform to requirements of AASHTO W 270 Grade 36.

If the option of drilling and epoxy grouting the anchor rods is chosen, the Contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures. The capsule or the adhesive cartridge shall be sealed with premeasured amounts of the adhesive chemical.

Space reinforcement to miss anchor rods.

All posts, railing, splices, anchor devices, and bent plates shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. All bolts, nuts, washers, and anchor rods shall be galvanized according to AASHTO M 232 except stainless steel bolts as noted.

Vent holes for galvanizing shall be placed in the posts and rails at locations that will not allow the accumulation of moisture in the members.

HANDRAIL SHALL BE PAINTED BLACK PER ARTICLE 510.05.

6/10/2005 4:48:13 AM E:\180001\culvert\handrail.dgn

NO.	DATE	BY	REVISION	NO.	DATE	BY	REVISION

SCALE	N/A
DRAWN BY	BLB
CHECKED BY	WJV
APPROVED BY	



RJN GROUP, INC.
CONSULTING ENGINEERS

PROJECT
Southern DuPage County Regional Trail
101st Street Connector - Waterfall Glen Spur

TITLE	HANDRAIL DETAILS
DATE	JUNE 9, 2005
PROJECT No.	II-1900-01
SHEET	3 of 3