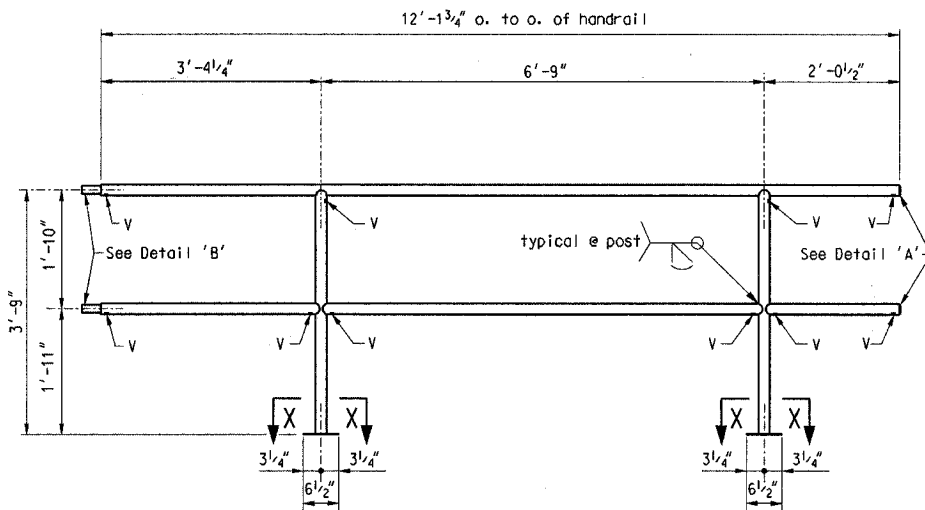


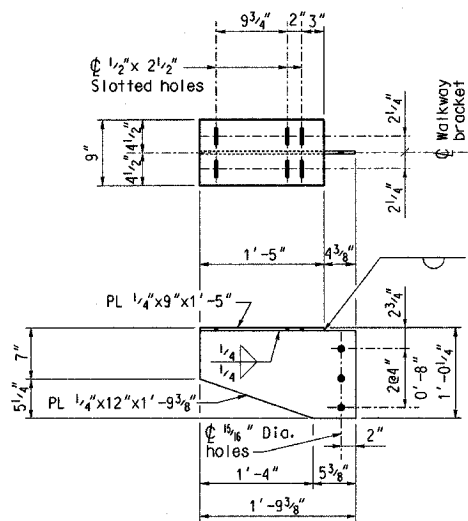
FILL PLATE SFP145.01

8 Req'd., Est. Wt. = 5 Lbs. Each
Material per A.S.T.M. A709, Gr. 36
Coating: None



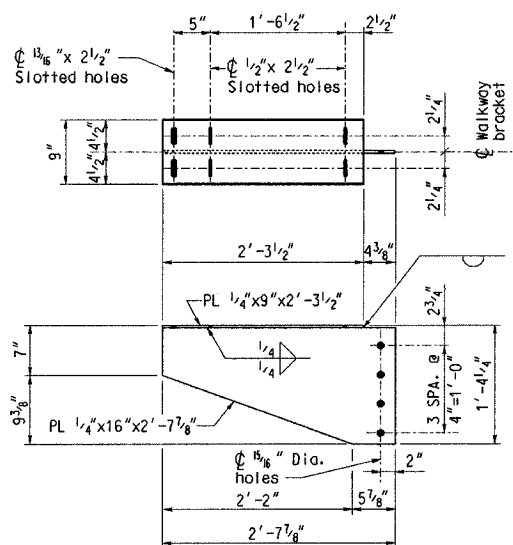
HANDRAIL PANEL SHP145.01-1

Weight = 85 Lbs.
Handrail panels are to be fabricated using 1 1/2 inch standard black pipe.
Galvanize after fabrication



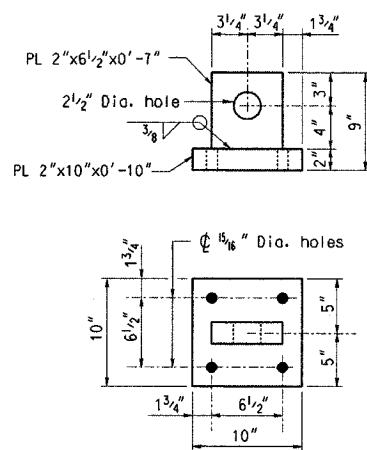
WALKWAY BRACKET SWB145.01-2

16 Req'd., Est'd. Wt. = 45 Lbs. Each
Material per A.S.T.M. A709, Gr. 36
Galvanize after fabrication



WALKWAY BRACKET SWB145.01-1

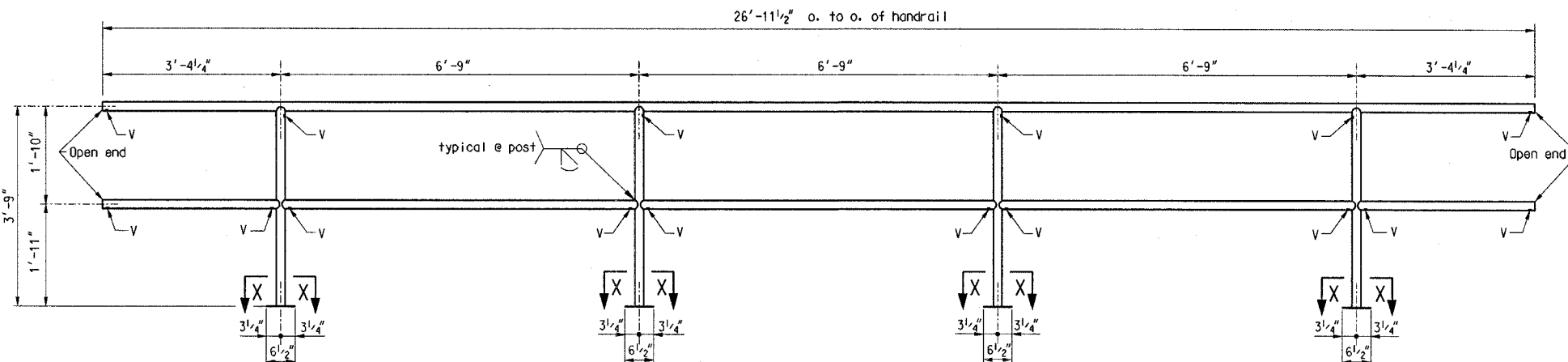
16 Req'd., Est'd. Wt. = 65 Lbs. Each
Material per A.S.T.M. A709, Gr. 36
Galvanize after fabrication



LIFTING LUG DETAIL

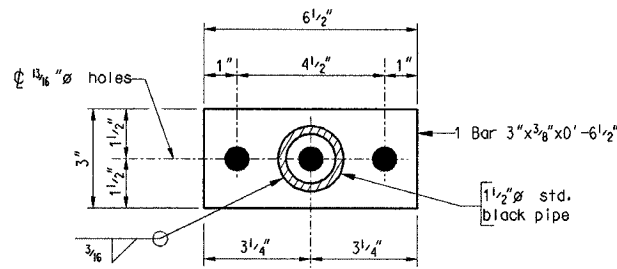
16 Req'd., Est. Wt. = 85 Lbs. Each
Material per A.S.T.M. A709, Gr. 36
Coating: None

NOTE:
Shop bolt lifting lugs to beams for shipment. Use Fill PL SFP145.01 as required. Fabricator shall furnish 100 # 5/8 Dia. x 3 1/2 button head machine bolts for filling holes in field.

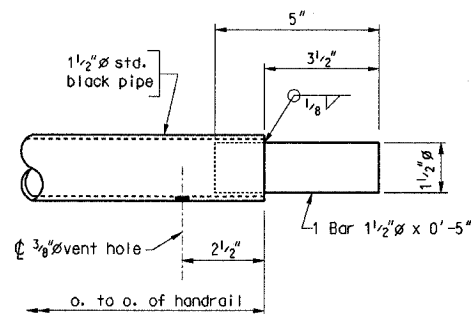


HANDRAIL PANEL SHP145.01-2

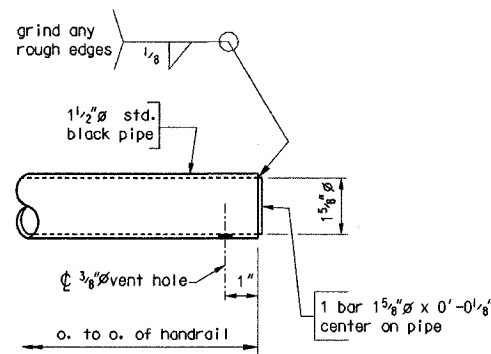
Weight = 188 Lbs.
Handrail panels are to be fabricated using 1 1/2 inch standard black pipe.
Galvanize after fabrication



SECTION X-X



DETAIL 'B'



DETAIL 'A'

LIST OF STRUCTURAL STEEL

LINE NO.	QUAN.	DESCRIPTION	MARK	SIZE	LENGTH	REMARKS
1	2	BEAM SPAN SHOP ASSEMBLED AS SHOWN, COMPLETE WITH DIAPHRAGMS, BALLAST PAN, CURB PLATES, SUPPORT ANGLES, DRAIN PIPES AND SOLE PLATES		W36x300	51'-0"	DETAILED ON PLANS 7000-145.01-05 & 06 MATERIAL PER ASTM A709, GRADE 50W2 (EST'D. WT. = 223,000 LBS.)
2	4	MASONRY PLATE, ASTM A709, GR.50		1 1/2"x10 1/2"	13'-9"	DETAILED ON PLAN 7000-145.01-05
3	4	REINFORCED NEOPRENE PAD, 60 DUROMETER	SRP145.01	1 5/8"x9 1/2"	13'-8"	DETAILED ON PLAN 7000-145.01-05
4	8	ANCHOR BOLT W/WASHERS & NUTS, ASTM F1554, GR.55, GALV.	SAB145.01	2" DIA.	2'-1"	DETAILED ON PLAN 7000-145.01-05
5	16	WALKWAY BRACKET, ASTM A709, GR.36, GALV.	SWB145.01-1			DETAILED ON THIS PLAN
6	16	WALKWAY BRACKET, ASTM A709, GR.36, GALV.	SWB145.01-2			DETAILED ON THIS PLAN
7	8	BALLAST PAN CLOSURE PLATE, ASTM A709, GR.50		5/8"x31 1/2"	12'-8 1/2"	SHOWN ON PLAN 7000-145.01-06
8	6	SEAM COVER PLATE, ASTM A709, GR.50		5/8"x6"	2'-8"	SHOWN ON PLAN 7000-145.01-06
9	16	LIFTING LUG W/ 3/4"x3"x3" PL WASHERS, ASTM A709, GR.36				DETAILED ON THIS PLAN
10	8	FILL PLATE, ASTM A709, GR.36	SFP145.01	5/8"x3"	0'-9 1/2"	DETAILED ON THIS PLAN
11	8	DECK DRAIN COVER, ASTM A709, GR.36, GALV.	SDC145.01	L3"x3"x3/8"	1'-0"	DETAILED ON PLAN 7000-145.01-05
12		EST. WT. OF ABOVE 11 ITEMS OF STRUCTURAL STEEL = 236,400 LBS.				
13	55	ASTM A325 HIGH STRENGTH BOLT, GALV.		1/8" DIA.	2"	FIELD BOLT
14	25	ASTM A325 HIGH STRENGTH BOLT, GALV.		1/8" DIA.	2 1/4"	FIELD BOLT
15	50	ASTM A325 HIGH STRENGTH BOLT, GALV.		1/8" DIA.	2 1/2"	FIELD BOLT
16	75	ASTM A325 HIGH STRENGTH BOLT, GALV.		1/8" DIA.	3"	FIELD BOLT
17	100	BUTTON HEAD MACHINE BOLT		1/8" DIA.	3 1/2"	FIELD BOLT AFTER LIFTING LUGS ARE REMOVED
18	240	ASTM A563 HEAVY HEX NUT, GALV.		1/8"		FIELD BOLT
19	240	ASTM F436 FLAT, ROUND WASHER, GALV.		1/8" ID		FIELD BOLT
		EST. WT. OF ABOVE 7 ITEMS OF H.S BOLTS, NUTS AND WASHERS = 240 LBS.				

NOTES:

MATERIAL: STRUCTURAL STEEL BARS SHALL MEET THE REQUIREMENTS OF THE CURRENT A.S.T.M. DESIGNATION: A36.

STANDARD BLACK PIPE SHALL MEET THE REQUIREMENTS OF THE CURRENT A.S.T.M. DESIGNATION: A53. UNCOATED PIPE SHALL BE USED.

SHOP NOTES: FABRICATION AND ARC WELDING OF STRUCTURAL STEEL AND HANDRAIL PANELS SHALL BE IN ACCORDANCE WITH CHAPTER 15, PART 3 OF THE CURRENT A.R.E.M.A. MANUAL FOR RAILWAY ENGINEERING. MIG WELDING SHALL BE USED ON HANDRAIL PANELS. OPEN HOLES: AS NOTED. SHOP PAINT: NONE.

GALVANIZING: HANDRAIL PANELS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH THE CURRENT A.S.T.M. DESIGNATION: A123.

AFTER GALVANIZING ALL ELEMENTS SHALL BE FREE OF FINES, ABRASIONS, ROUGH OR SHARP EDGES AND OTHER SURFACE DEFECTS.

DES: KHJ	DRW: KHJ	CHK: MGG
DATE: Nov., 2004	AUTH: 7-7000-05	LINE SEG: 7000
BRIDGE ENGINEERING		KANSAS CITY, KS
APPROVED:		
<i>K.H. Jernison</i>		
ASSISTANT DIRECTOR STRUCTURES DESIGN		

CHICAGO, IL TO FT. MADISON, IA
BRIDGE NO. 145.01
OVER CO. HWY R40 NEAR PRINCEVILLE, IL
MISCELLANEOUS STEEL DETAILS
PLAN NO.: 7000-145.01-07

