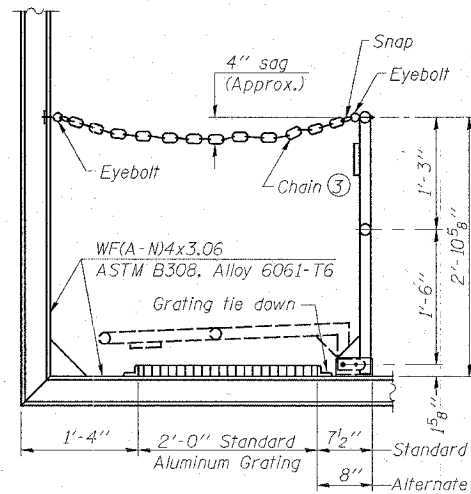


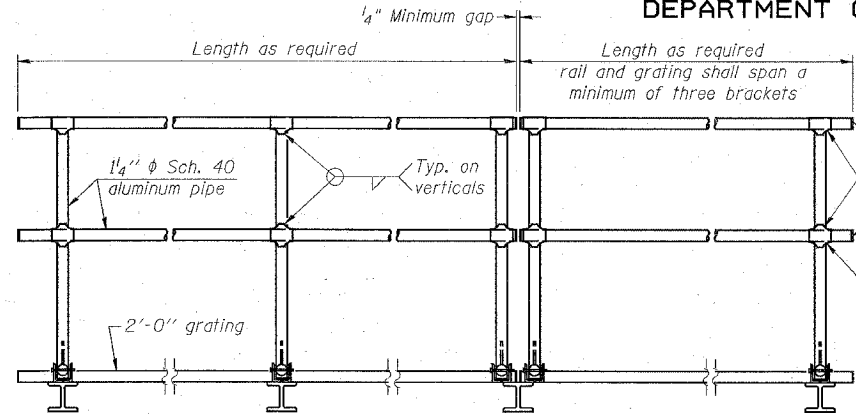
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SHEET 9  
OF 10

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-(10,11)RS	MADISON	156	136
FEB. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 76857				



**SIDE ELEVATION**  
(Showing safety chain w/o sign)



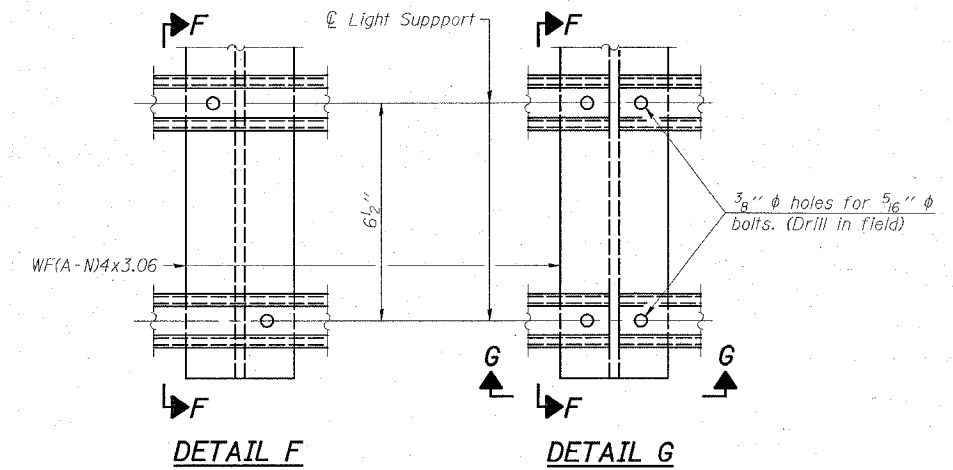
**FRONT ELEVATION**

**HANDRAIL DETAILS**

Handrail pipe shall be ASTM B241 or B429, Alloy 6063-T6 or Alloy 6061-T6.

① Install standard force-fit end caps or weld 1/8" end plates with 1/8" c.f.w. and grind smooth. (All rail ends)  
Fittings-ASTM B26, Alloy 356-T7 or 1/2" diameter aluminum pipe

② Horizontal handrail member shall be continuous thru fitting. Provide 7/16" diameter hole in fitting for 3/8" diameter bolt. Field drill 1/16" diameter hole in horizontal rail member. Provide locknut and two stainless steel washers for bolt. (Use 5/16" eyebolts in 1/16" diameter holes on top rail at ends only.)



**DETAIL F**

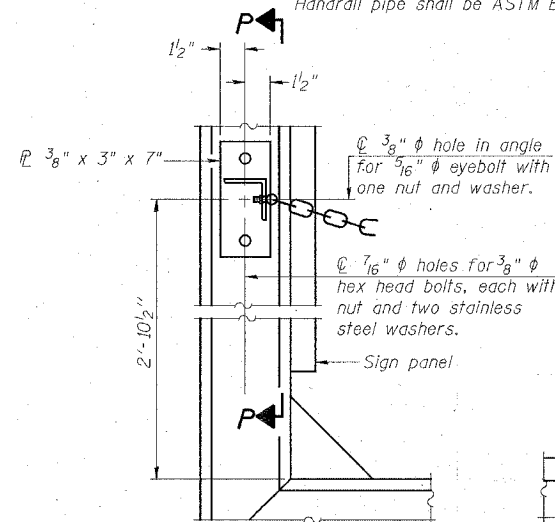
**DETAIL G**

**SECTION F-F**

**SECTION G-G**

**LIGHTING FIXTURE MOUNTS (IF REQUIRED)**

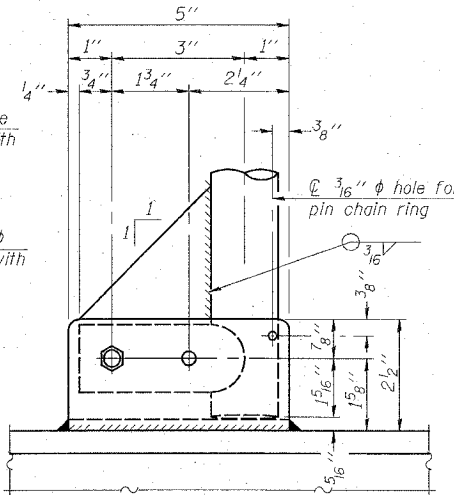
⑤ Field cut ends of light support channels shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.



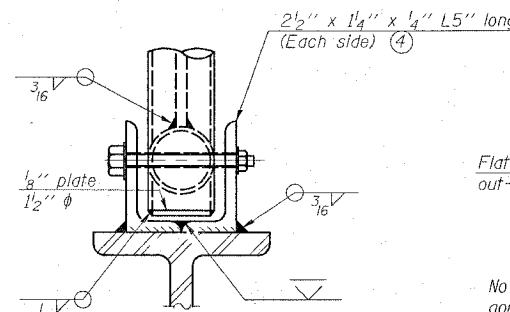
**ALTERNATE SAFETY CHAIN ATTACHMENT**

(With Sign Present)

Items not shown same as "Side Elevation" of "Handrail Details"

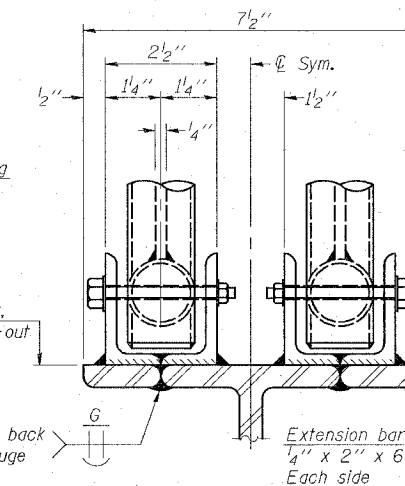


**SIDE ELEVATION**

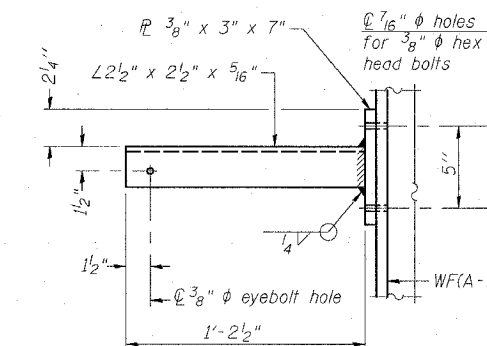


**FRONT ELEVATION**

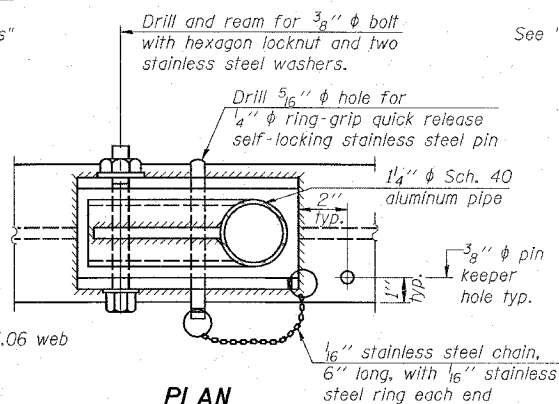
See "Elevation" at right for dimensions.



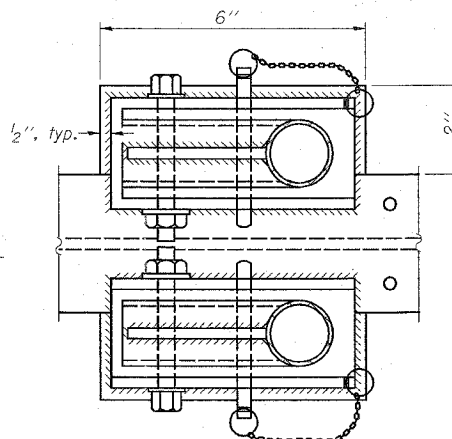
**ELEVATION AT HANDRAIL JOINT**



**SECTION P-P**

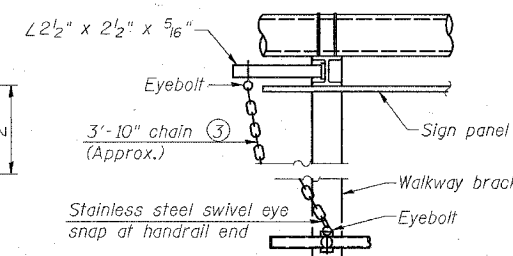


**PLAN  
DETAIL E HANDRAIL HINGE**



**PLAN AT HANDRAIL JOINT**

Details not shown same as "PLAN"

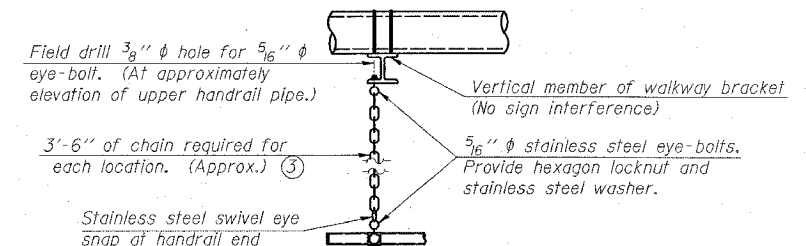


**ALTERNATE SAFETY CHAIN ATTACHMENT**

Details not shown similar to "Safety Chain" Details (Walkway omitted for clarity)

③ 3/16" Type 304L stainless steel chain, approximately 12 links per foot.

④ Extrusions may be used in lieu of the details shown, with approval of the Engineer.



**SAFETY CHAIN**

One required for each end of each walkway.

Field drill 3/8" diameter hole for 5/16" diameter eye-bolt. (At approximately elevation of upper handrail pipe.)

3'-6" of chain required for each location. (Approx.)

5/16" diameter stainless steel eye-bolts. Provide hexagon locknut and stainless steel washer.

**OVERHEAD SIGN STRUCTURES  
ALUMINUM HANDRAIL DETAILS**

FAI ROUTE 70  
SECTION 60-(10,11)RS  
MADISON COUNTY

**JD** Johnson, Depp & Quisenberry  
CONSULTING ENGINEERS  
Springfield, Illinois

DESIGNED: CDB	DRAWN: SJS
CHECKED: DCD	CHECKED: CDB/DCD

OS-A-11

7/01/2006

NUMBER	REVISION	DATE

FILE: #FILES  
USER: #USERS  
DATE: #DATE\$ - #TIME\$