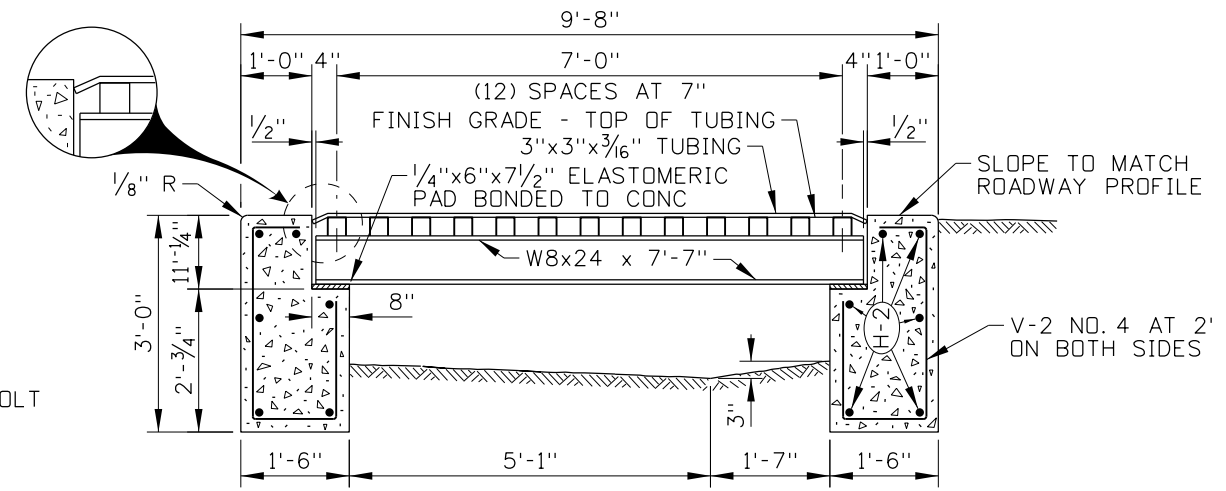


PLAN



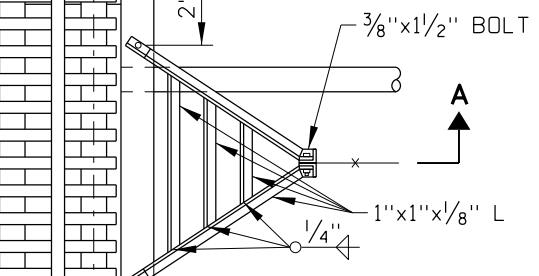
SECTION B-B

REINFORCEMENT STEEL				
MARK	LOCATION	SIZE NO.	BAR LENGTH	NO. REQ'D
V-1	END WALLS	4	2'-8"	18
V-2	SIDE WALLS	4	6'-0"	11
H-1	END WALLS	4	9'-4"	6
H-2	SIDE WALLS (TIE BARS)	4	23'-8"	12
454 LIN. FT. NO. 4 BARS @ 0.668 LB./FT. = 304 LBS.				

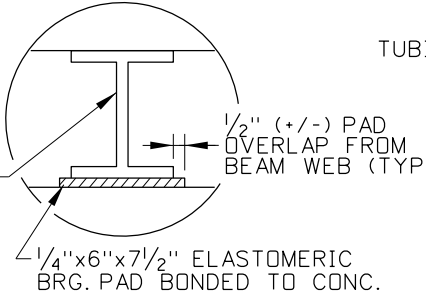
BILL OF MATERIALS	
CONCRETE, CLASS 30	8.2 C.Y.
METAL REINFORCEMENT	304 LBS
STRUCTURAL STEEL	4600 LBS

NOTES

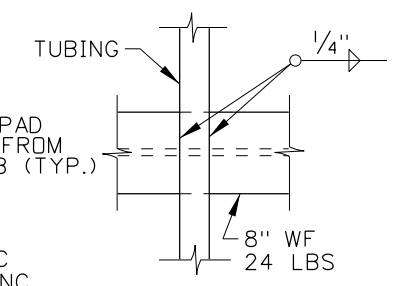
1. ENSURE THAT CATTLE GUARD MEETS THE REQUIREMENTS OF SECTION 611 - CATTLE GUARDS OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
2. ENSURE THAT THE EXPOSED STEEL SURFACES ARE BLASTED CLEAN TO AN SSPC SP-10 AND PAINTED WITH PAINT SYSTEM D IN ACCORDANCE WITH SECTION 627 - PAINTING OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
3. ENSURE THAT THE CATTLE GUARD AND SUPPORTS ARE DESIGNED FOR HS-25 LOADING. ENSURE THAT THE ELASTOMERIC BEARING PADS ARE 50 DUROMETER IN HARDNESS.
4. PLACE THE CATTLE GUARD ON BASE AGGREGATE, 3" MINIMUM THICKNESS OVER HAND LEVELED SOIL COMPACTED TO 95% DENSITY.
5. GALVANIZE CATTLE GUARD HARDWARE FASTENERS.
6. GRADE TO DRAIN.
7. PLACE THE CATTLE GUARD TO MATCH THE ROADWAY SLOPE, CROWN, OR BOTH.
8. ALTERNATE CATTLE GUARD DESIGNS MAY BE USED. PRIOR APPROVAL, BY THE ENGINEER, OF SHOP DRAWINGS IS REQUIRED FOR THE USE OF ALTERNATE CATTLE GUARDS.
9. NOT TO SCALE.



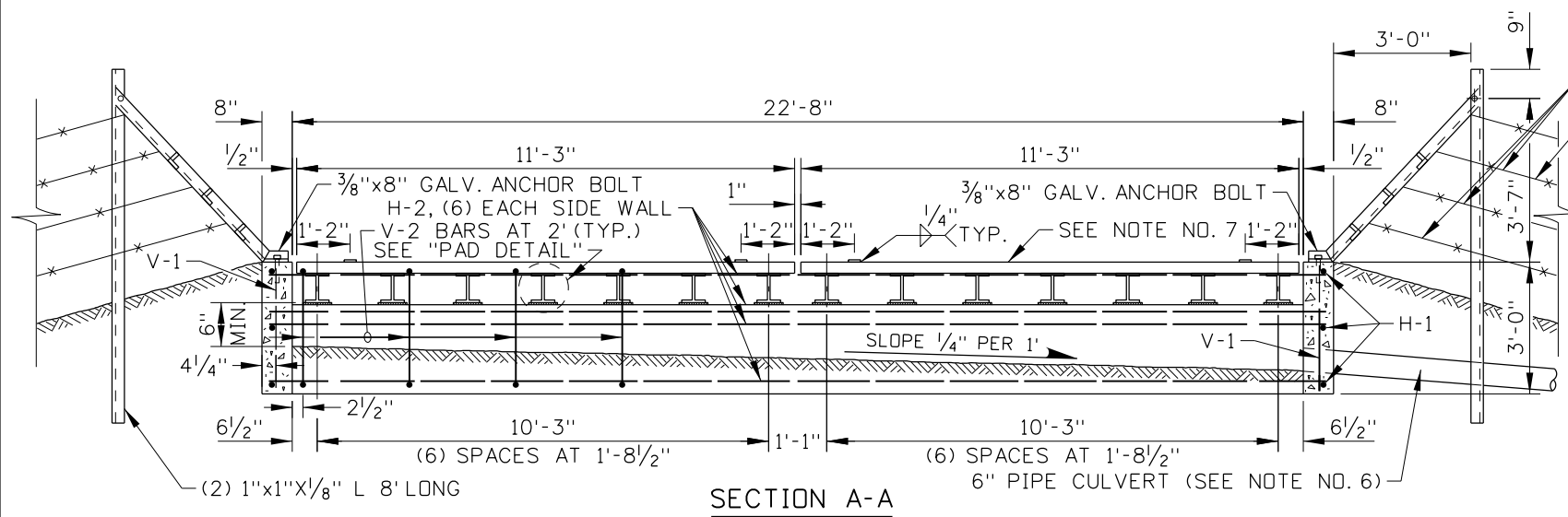
TYPICAL W8x24 BEAM



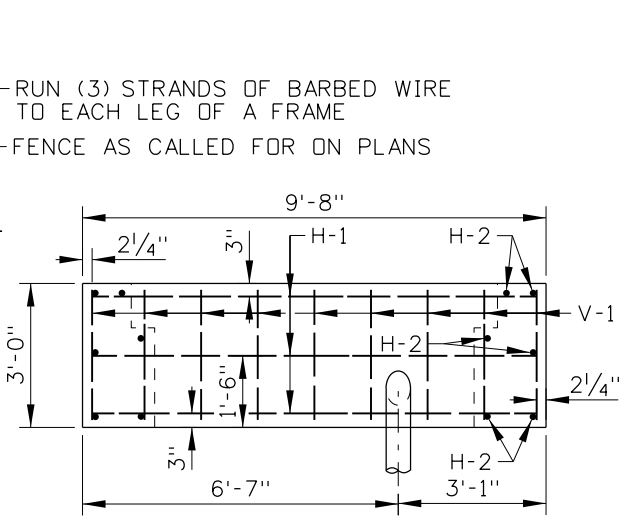
PAD DETAIL (SEE NOTE NO. 3)



TYPICAL WELD DETAIL



SECTION A-A



END VIEW

REVISIONS							
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE
1	12-72		6	5-95	IJR	11	12-12
2	12-73		7	1-00	MSM		
3	2-74		8	9-02	MSM		
4	3-81		9	10-05	MSM		
5	6-81		10	08-11	RSC		

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY  
 CADD FILE NAME: 611-1\_1212.dgn  
 DRAWING DATE: JANUARY, 1971

**IDAHO TRANSPORTATION DEPARTMENT**

BOISE IDAHO

ORIGINAL SIGNED BY: LOREN THOMAS  
 HIGHWAYS PROGRAM OVERSIGHT ENGINEER

ORIGINAL SIGNED BY: TOM COLE  
 CHIEF ENGINEER

STANDARD DRAWING

**CATTLE GUARD TYPE A**

**English**

STANDARD DRAWING NO. **611-1**

SHEET 1 OF 1

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

ORIGINAL SIGNED BY: RYAN D. LANCASTER  
 DATE ORIGINAL SIGNED: DECEMBER 17, 2012