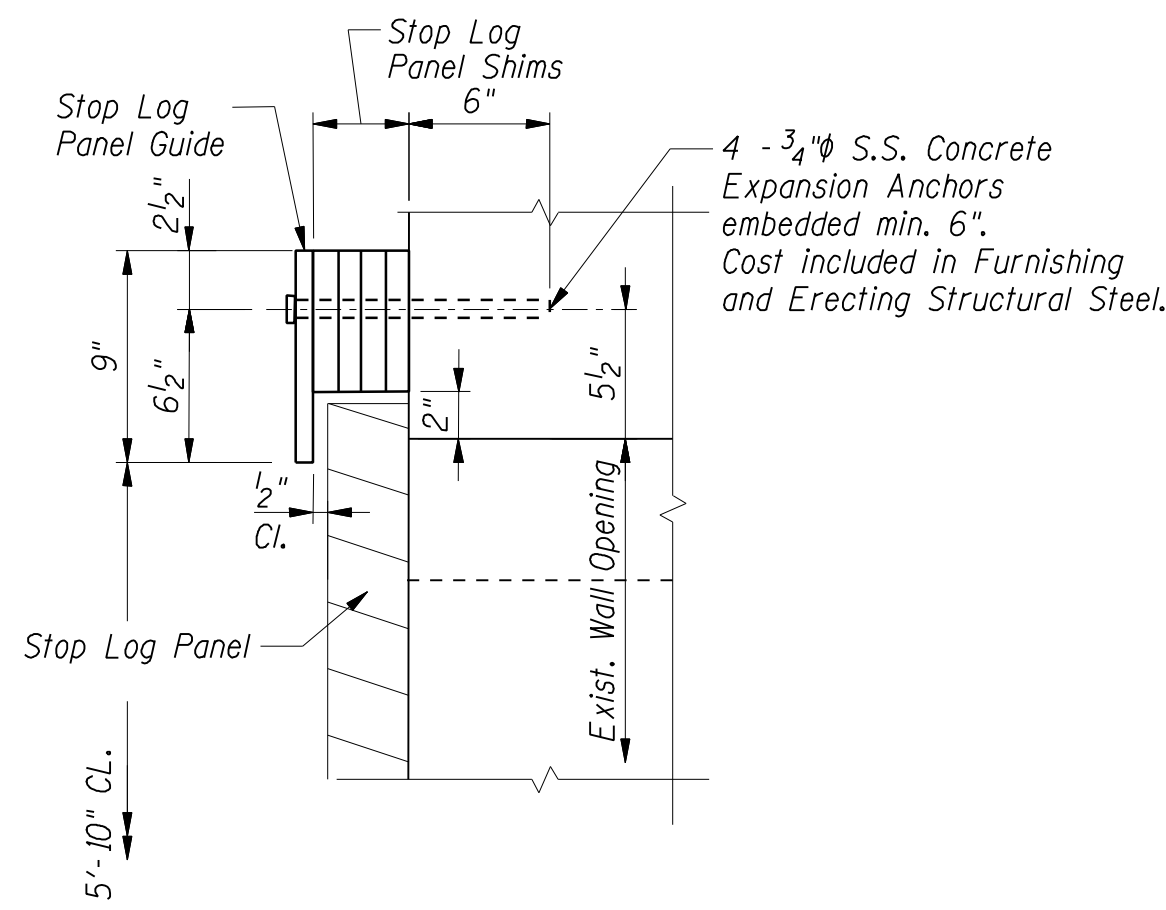
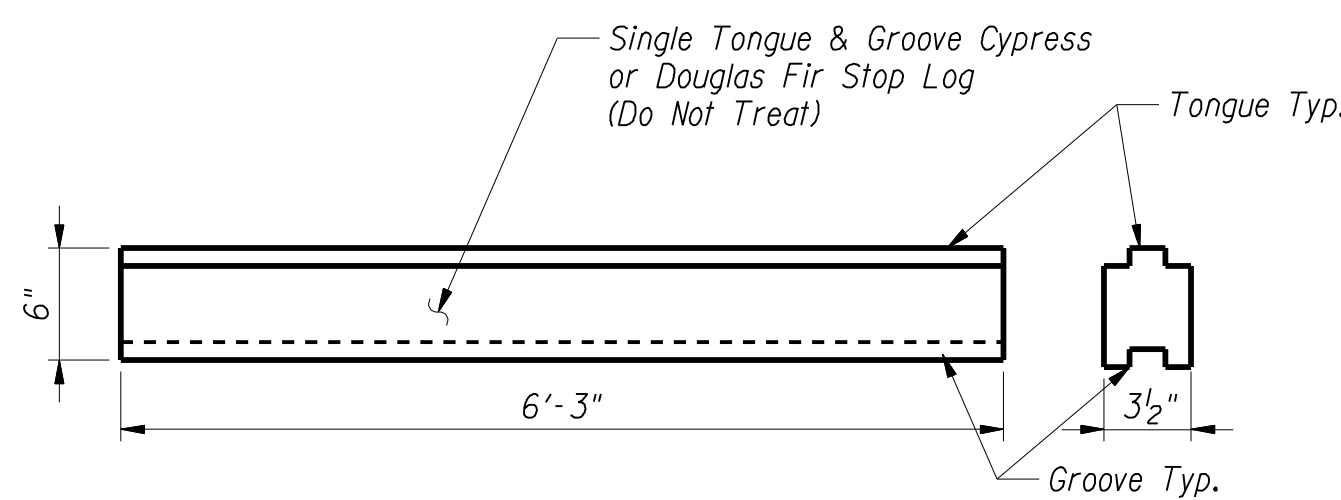


**ELEVATION C-C**



**SECTION D-D**  
(Typ. Each Side of Culvert Opening)

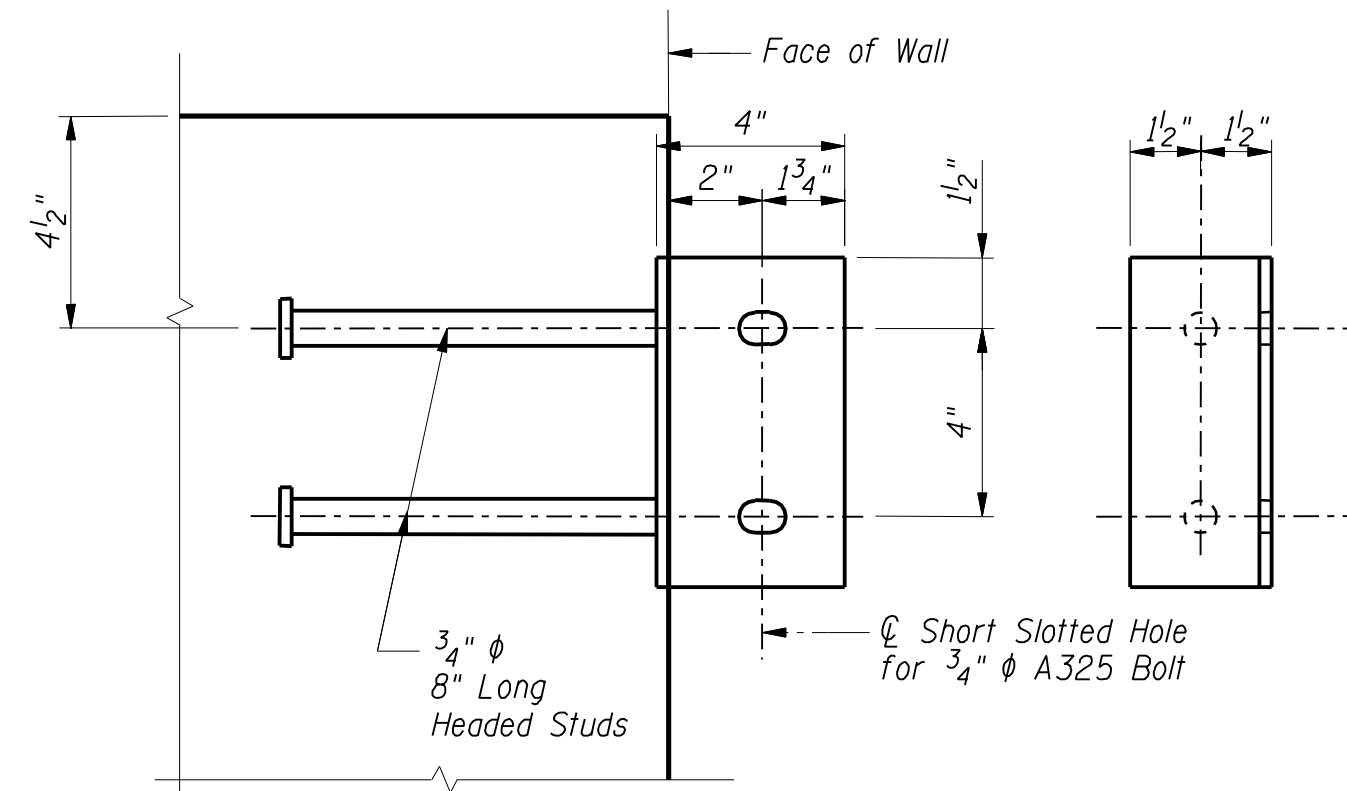


**STOP LOG PANEL DETAIL**

11 Required

Cost of furnishing stop logs shall be included in Furnishing and Erecting Structural Steel.

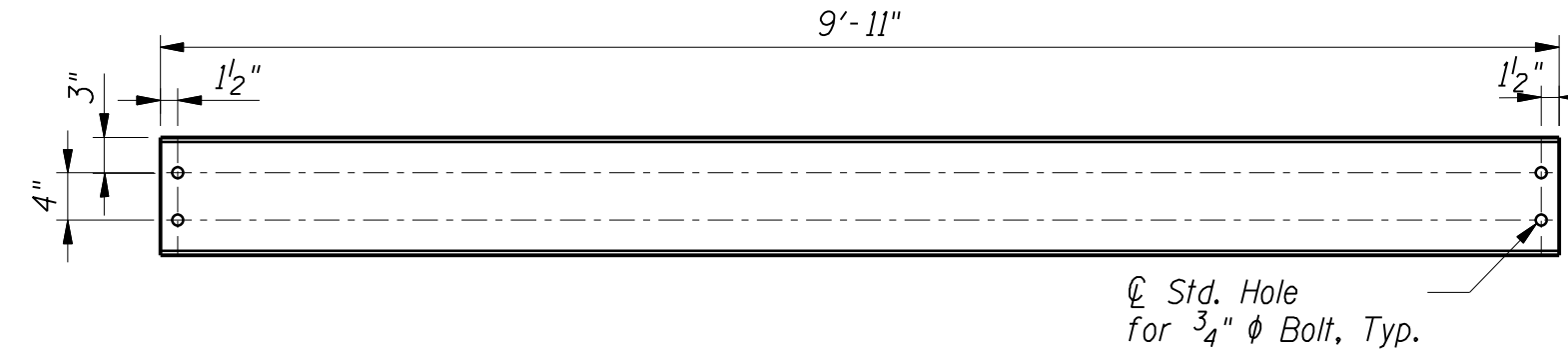
Store stop logs on site according to direction of the Engineer.



Note: Galvanized Surfaces which will have concrete cast against them shall be chemically passivated per page 351, article 506.04 of the Standard Specifications.

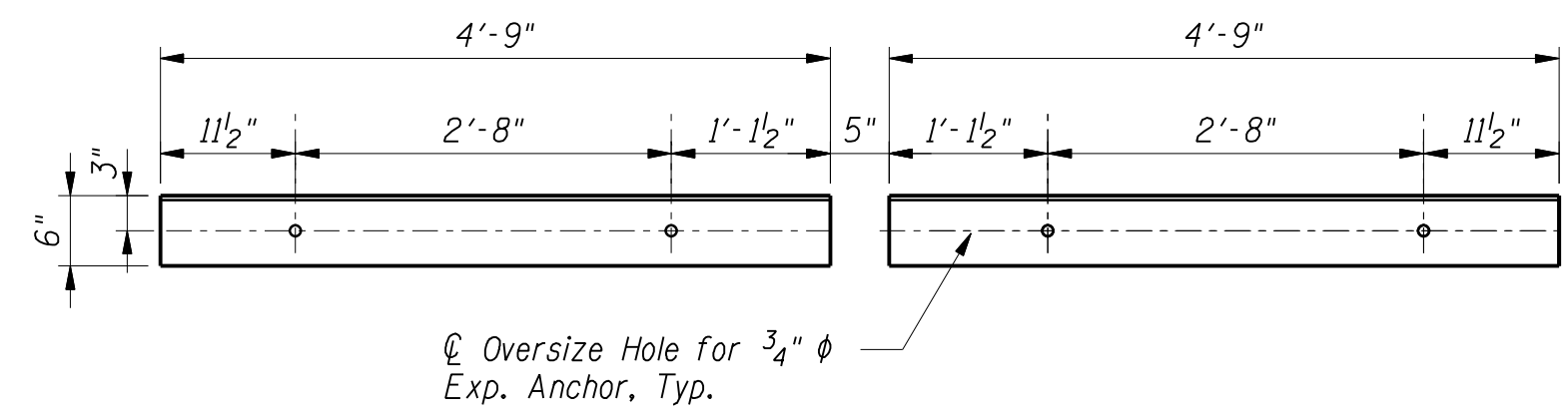
**RETAINER ANGLE**

(2 Required. Paid for as Furnishing & Erecting Structural Steel)



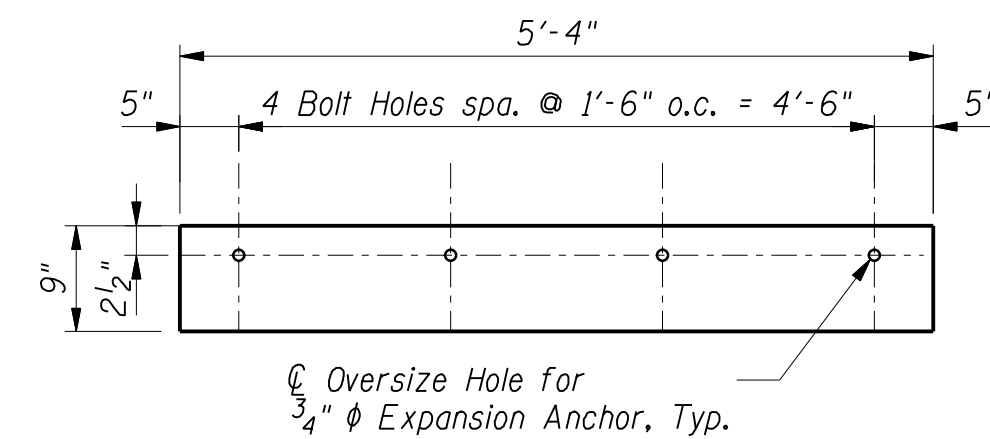
**MC10x22 GRATE SUPPORT BEAM**

(1 Req'd. Paid for as Furnishing & Erecting Structural Steel)



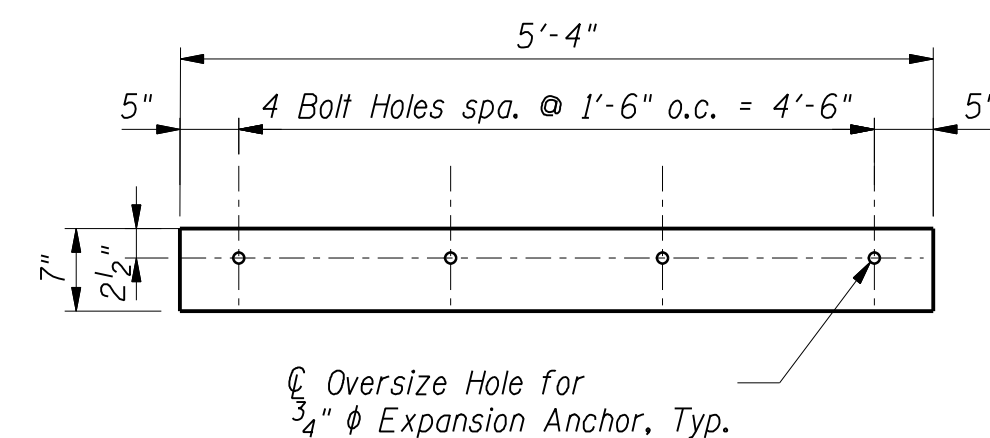
**L6x4 GRATE SUPPORT**

(1 Req'd. Paid for as Furnishing & Erecting Structural Steel)



**3/4" x 9" x 5'-4" STOP LOG PANEL GUIDE**

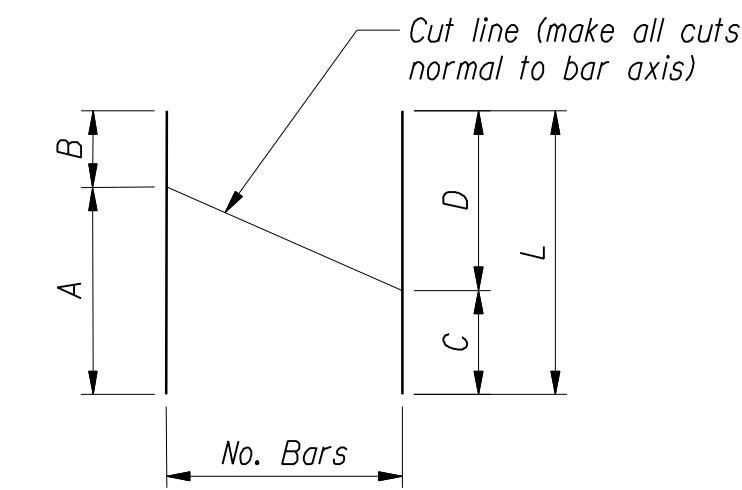
(2 Req'd. Paid for as Furnishing & Erecting Structural Steel)



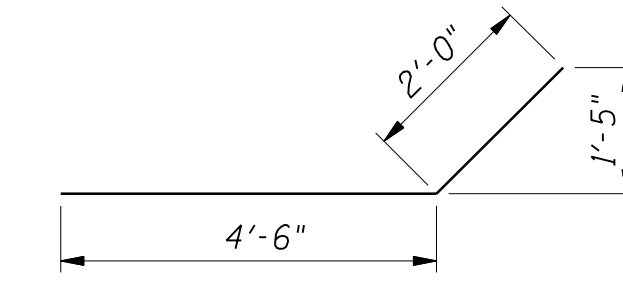
**1" x 7" x 5'-4" STOP LOG PANEL SHIMS**

(8 Req'd. Paid for as Furnishing & Erecting Structural Steel)

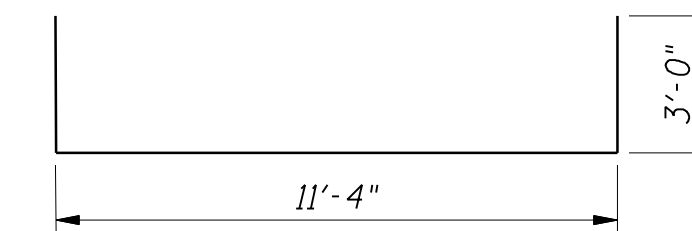
**BAR CUTTING DIAGRAM**



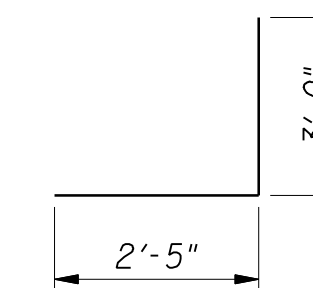
Bar	A	B	C	D	L	No. bars
h4(E)	11'-8"	5'-8"	5'-8"	11'-8"	14'-4"	18
v3(E)	9'-0"	3'-1"	3'-1"	9'-0"	12'-1"	18



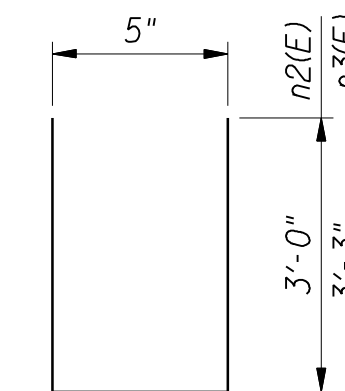
**Bar h1(E)**



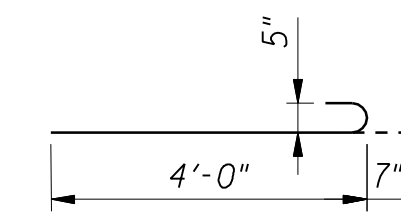
**Bar h6(E)**



**Bar h8(E)**



**Bars n2(E) & n3(E)**

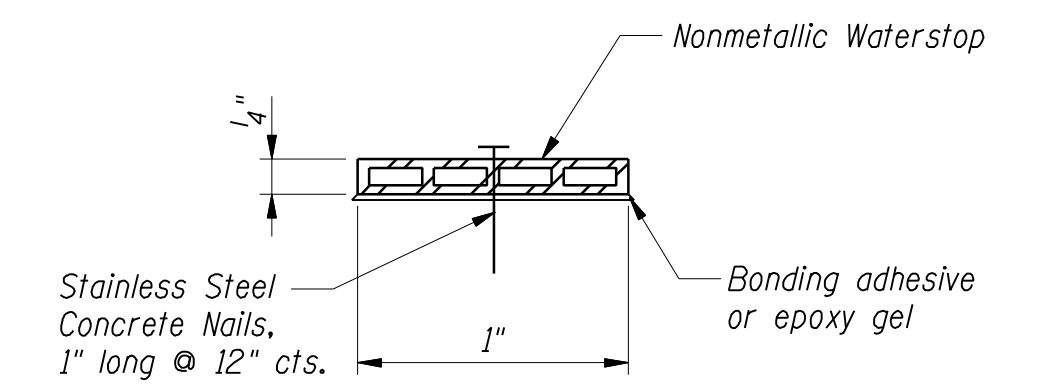


**Bar n1(E)**

<b>BAR LIST</b>				
Bar	No.	Size	Length	Shape
h1(E)	4	#5	6'-6"	┌───┐
h2(E)	4	#5	12'-4"	┌───┐
h3(E)	8	#5	13'-4"	┌───┐
h4(E)	18	#5	17'-4"	┌───┐
h5(E)	15	#5	11'-4"	┌───┐
h6(E)	7	#5	17'-4"	┌───┐
h7(E)	10	#5	2'-5"	┌───┐
h8(E)	10	#5	5'-5"	┌───┐
h9(E)	16	#5	4'-0"	┌───┐
n1(E)	82	#5	4'-7"	┌───┐
n2(E)	7	#5	6'-5"	┌───┐
n3(E)	15	#5	6'-11"	┌───┐
i1(E)	34	#5	12'-4"	┌───┐
v1(E)	42	#5	9'-8"	┌───┐
v2(E)	16	#5	3'-8"	┌───┐
v3(E)	18	#5	12'-1"	┌───┐
w1(E)	26	#5	15'-4"	┌───┐

**BILL OF MATERIAL**

Item	Unit	Total
Concrete Structures	Cu yd	27.6
Reinforcement Bars, Epoxy Coated	lb	3,080
Furnishing and Erecting Structural Steel	lb	1686



**TYPE D WATERSTOP**

Existing concrete surfaces in contact with waterstop shall be cleaned by sand blasting or grinding to assure a good bond. An epoxy gel bonding agent or bonding adhesive shall be applied per the manufacturer's instructions. (Cost included with Concrete Structures)

**Notes:**

1. Work this sheet with Drwg. S3 OF S12 & S5 OF S12.
2. All structural steel this sheet shall be galvanized after shop fabrication according to AASHTO M III 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.
3. Reinforcement designated (E) shall be epoxy coated.

Drawn By JEG Checked By TCU  
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