



**LOG C21-1.00 – L9 PIN SOUTH TRUSS (EAST END)**



**LOG C21-1.00 – L9 FLOOR BEAM HANGER PLATE**

MEM	NODE	NUMBER OF MEM.	AREA IN2	d IN	b IN	TF IN	TW IN	IX IN4	IY IN4	WT lb
1	U1-U2	1	15.44	10.38	15.125	0.375	0.339	222.5	383.5	52.50
2	U2-U3	1	15.44	10.38	15.125	0.375	0.339	222.5	383.5	52.50
3	U3-U4	1	15.44	10.38	15.125	0.375	0.339	222.5	383.5	52.50
4	U4-U5	1	15.44	10.38	15.125	0.375	0.339	222.5	383.5	52.50
5	U5-U6	1	15.44	10.38	15.125	0.375	0.339	222.5	383.5	52.50
6	U6-U7	1	15.44	10.38	15.125	0.375	0.339	222.5	383.5	52.50
7	U7-U8	1	15.44	10.38	15.125	0.375	0.339	222.5	383.5	52.50
8	U8-U9	1	15.44	10.38	15.125	0.375	0.339	222.5	383.5	52.50
9	L0-L1	2	4.50	3.00	0.750			3.375	21.219	15.30
10	L1-L2	2	4.50	3.00	0.750			3.375	21.219	15.30
11	L2-L3	2	5.25	3.50	0.750			5.359	36.422	17.90
12	L3-L4	2	7.44	4.25	0.875			11.195	51.724	25.30
13	L4-L5	2	10.00	5.00	1.000			20.833	63.333	34.00
14	L5-L6	2	10.00	5.00	1.000			20.833	63.333	34.00
15	L6-L7	2	7.44	4.25	0.875			11.195	51.724	25.30
16	L7-L8	2	5.25	3.50	0.750			5.359	36.422	17.90
17	L8-L9	2	4.50	3.00	0.750			3.375	21.219	15.30
18	L9-L10	2	4.50	3.00	0.750			3.375	21.219	15.30
19	L0-U1	1	15.44	10.38	15.125	0.375	0.339	222.5	383.5	52.50
20	L1-U1	2	1.75	1.75	0.500					5.95
21	L2-U1	2	3.13	2.50	0.625			204.100	16.600	27.00
22	L3-U1	2	3.13	2.50	0.625			204.100	16.600	27.00
23	L2-U2	1	4.05	6.00	1.750		0.219	19.667	19.558	18.20
24	L4-U2	2	2.50	2.50	0.500					8.50
25	L3-U3	1	3.60	5.00	1.625		0.235	12.585	30.478	17.00
26	L5-U3	2	1.75	1.75	0.500					5.95
27	L4-U4	1	3.60	5.00	1.625		0.235	12.585	30.478	17.00
28	L3-U5	1	1.00	1.00	1.000					3.40
29	L6-U4	1	0.60							2.05
30	L5-U5	1	3.60	5.00	1.625		0.235	12.585	30.478	17.00
31	L4-U6	1	1.27	1.13	1.125					4.30
32	L7-U5	1	1.00	1.00	1.000					3.40
33	L6-U6	1	3.60	5.00	1.625		0.235	12.585	30.478	17.00
34	L5-U7	2	1.75	1.75	0.500					5.95
35	L7-U7	1	3.60	5.00	1.625		0.235	12.585	30.478	17.00
36	L6-U8	2	2.50	2.50	0.500					8.50
37	L8-U8	1	4.05	6.00	1.750		0.219	19.667	19.558	18.20
38	L7-U9	2	3.13	2.50	0.625			204.100	16.600	27.00
39	L8-U9	2	3.13	2.50	0.625			204.100	16.600	27.00
40	L9-U9	2	1.75	1.75	0.500					5.95
41	L10-U9	1	15.44	10.38	15.125	0.375	0.339	222.5	383.5	52.50





KOHLI & KALIHHER ASSOCIATES, INC.  
ENGINEERS AND SURVEYORS  
2244 Baton Rouge Avenue, Lima, Ohio 45805  
419-227-1135

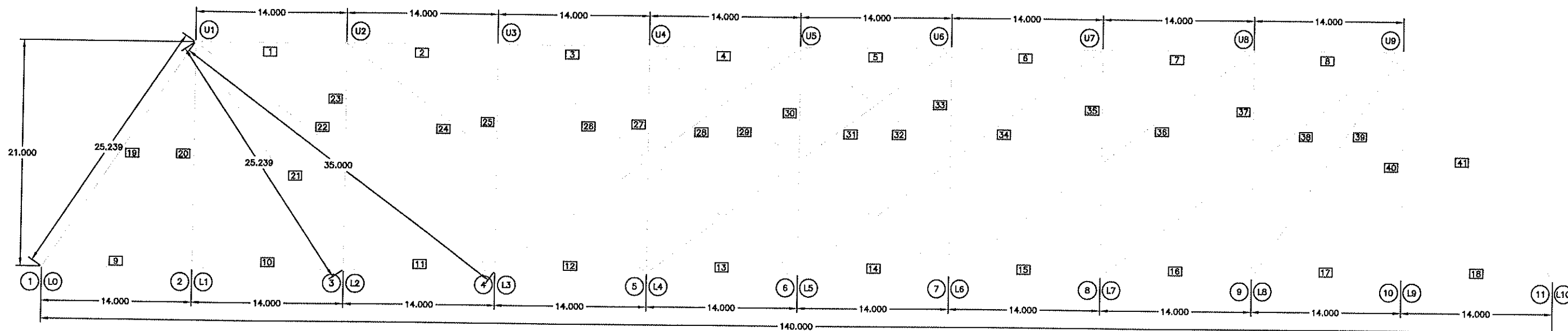
STRUCTURE FILE NUMBER: 4631838

INVENTORY FILE NUMBER: LOG T-21

JOINT NUMBER: TRUSS ELEV

DATE: 08-09-11

DRAWN BY: JRH



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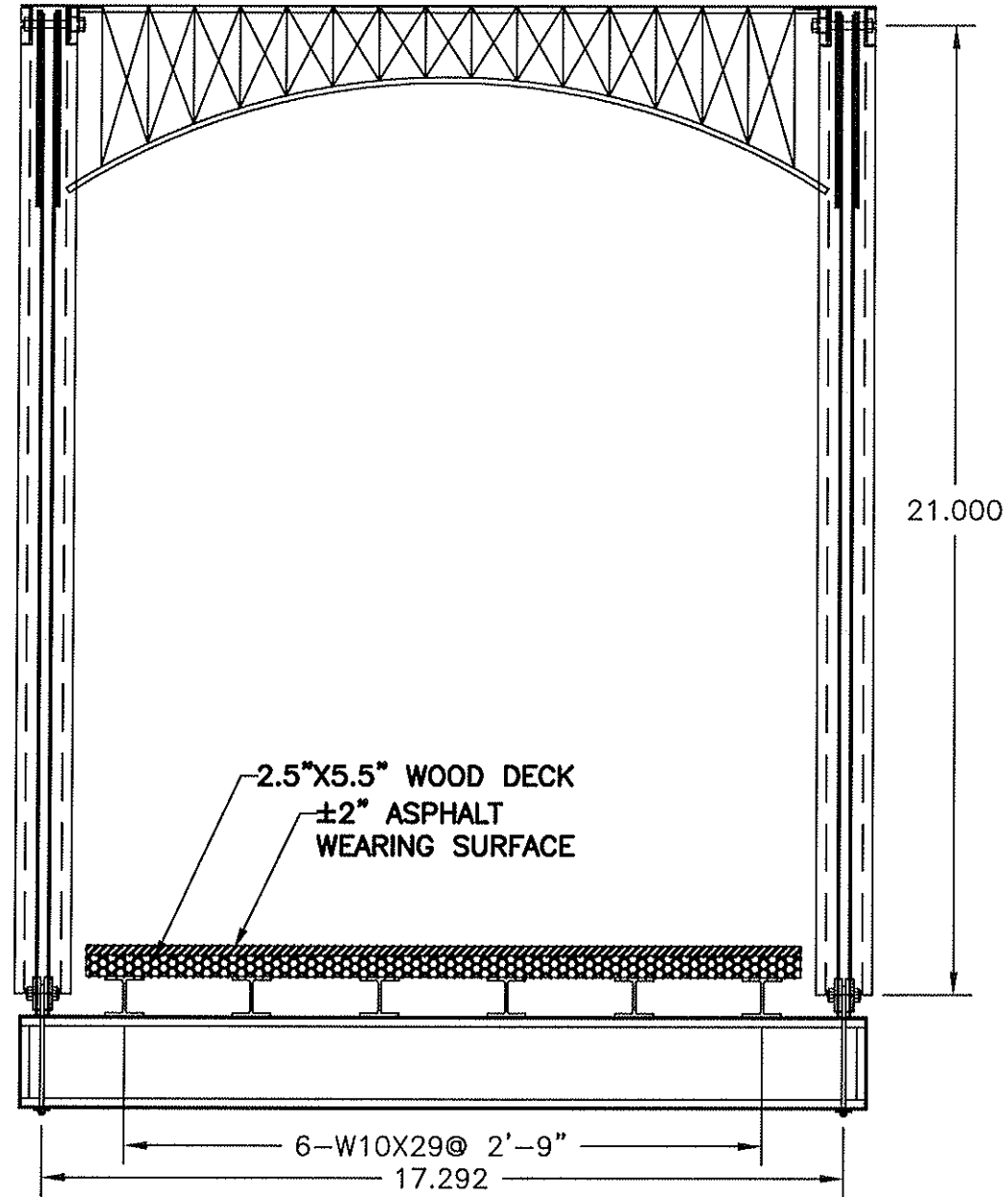
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INVENTORY FILE NUMBER: LOG T-21

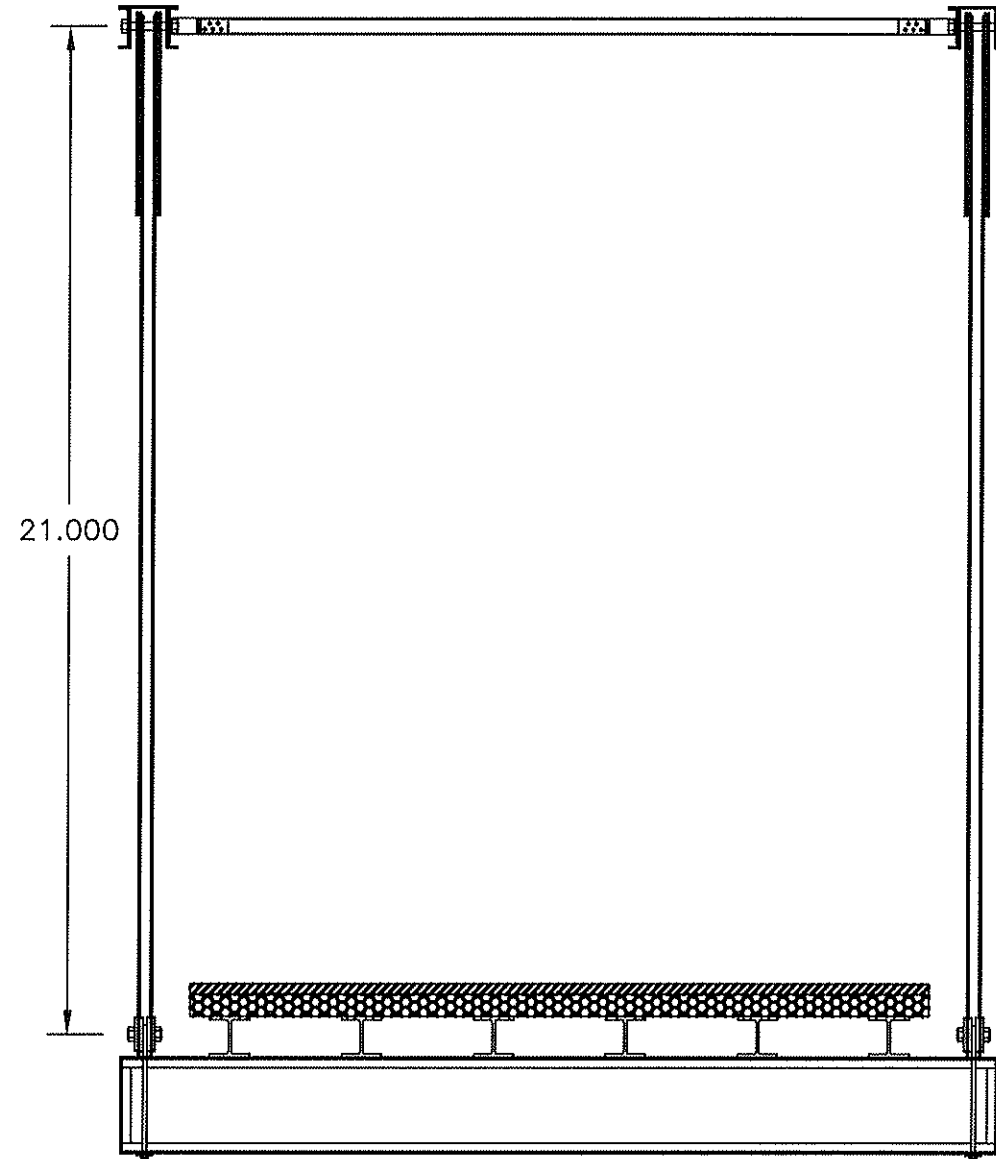
JOINT NUMBER: PORTAL ELEVATIONS

DATE: 08-09-11

DRAWN BY: JRH



PORTAL ELEVATION



TYPICAL ELEVATION

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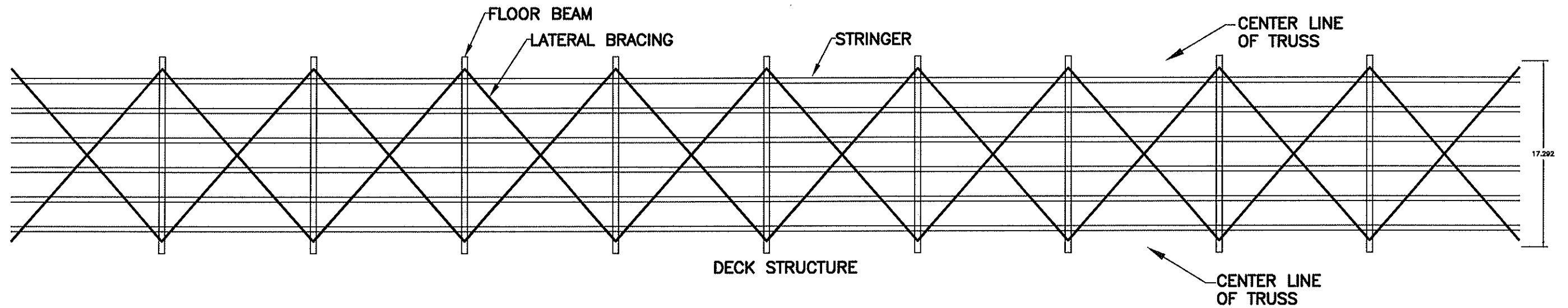
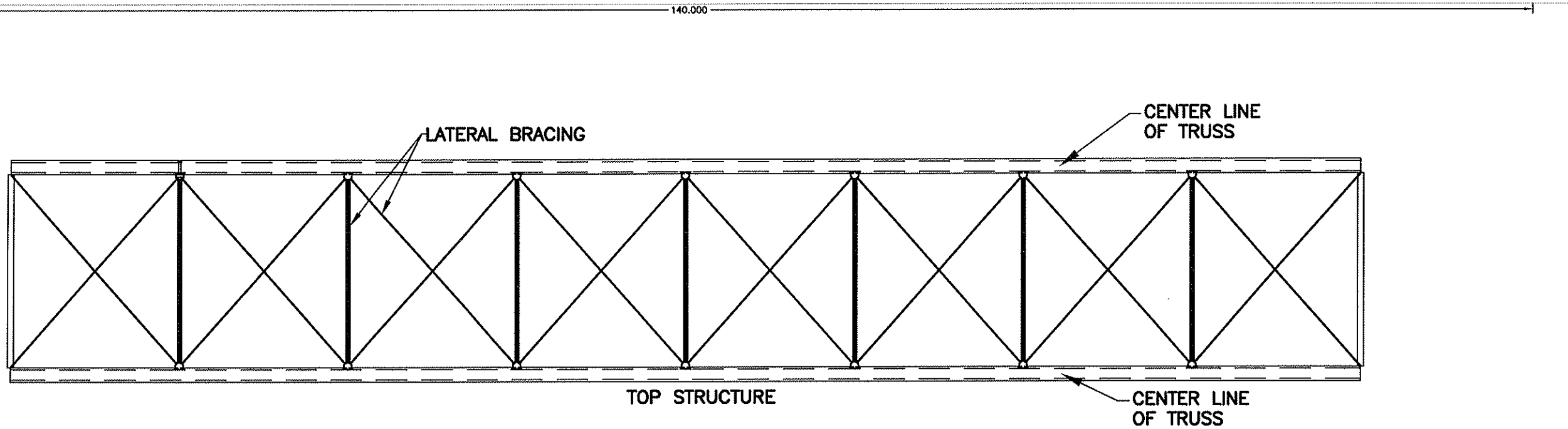
STRUCTURE FILE NUMBER: 4631838

INVENTORY FILE NUMBER: LOG T-21

JOINT NUMBER: TOP & DECK PLAN VIEWS

DATE: 08-11-11

DRAWN BY: JRH



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ENGINEERS AND SURVEYORS  
2244 Baton Rouge Avenue, Lima, Ohio 45805  
419-227-1135

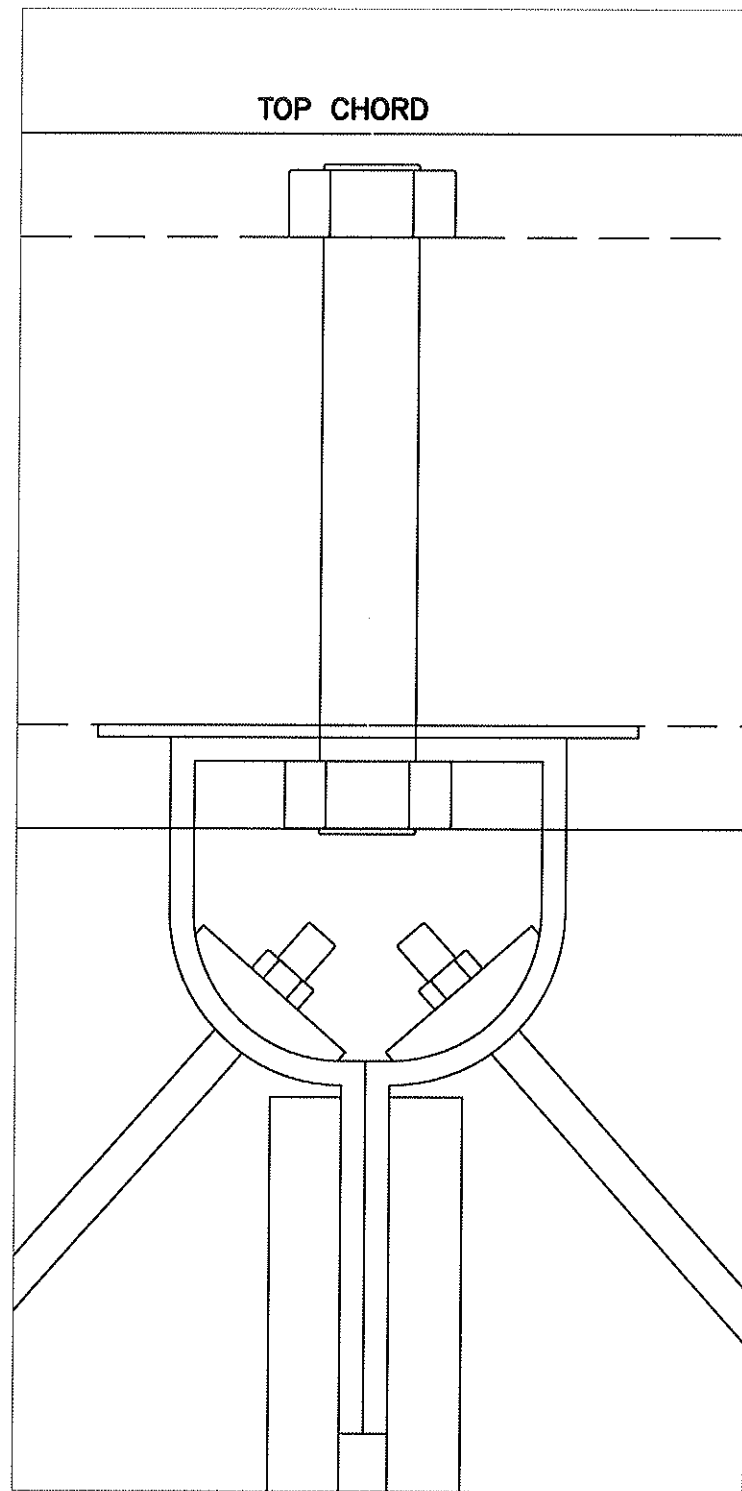
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INVENTORY FILE NUMBER: LOG T-21

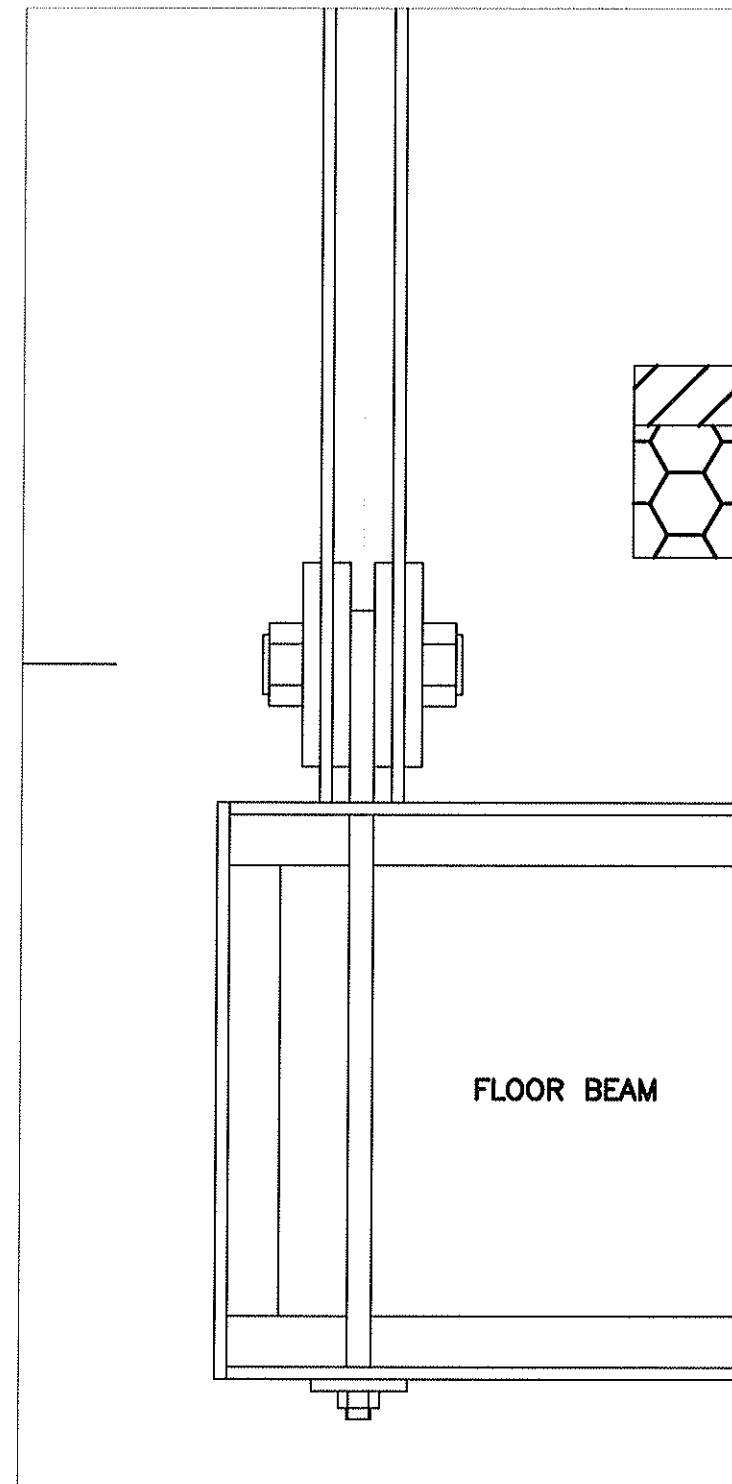
JOINT NUMBER: CONNECTION DETAILS

DATE: 08-09-11

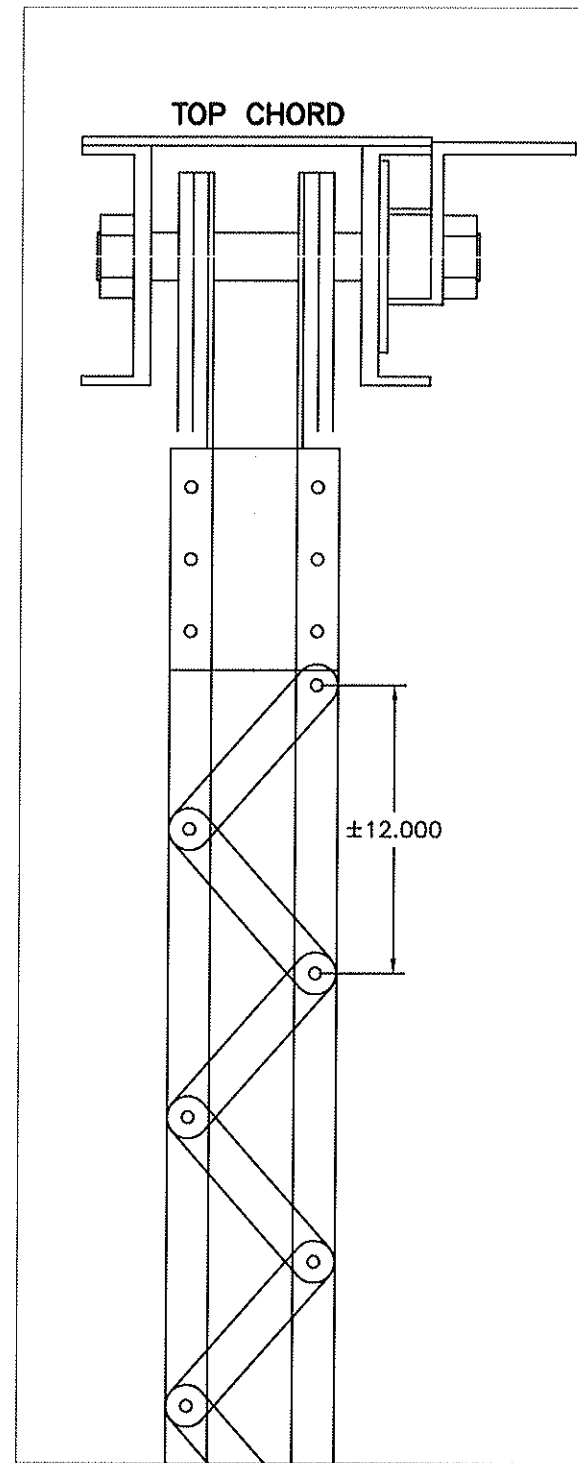
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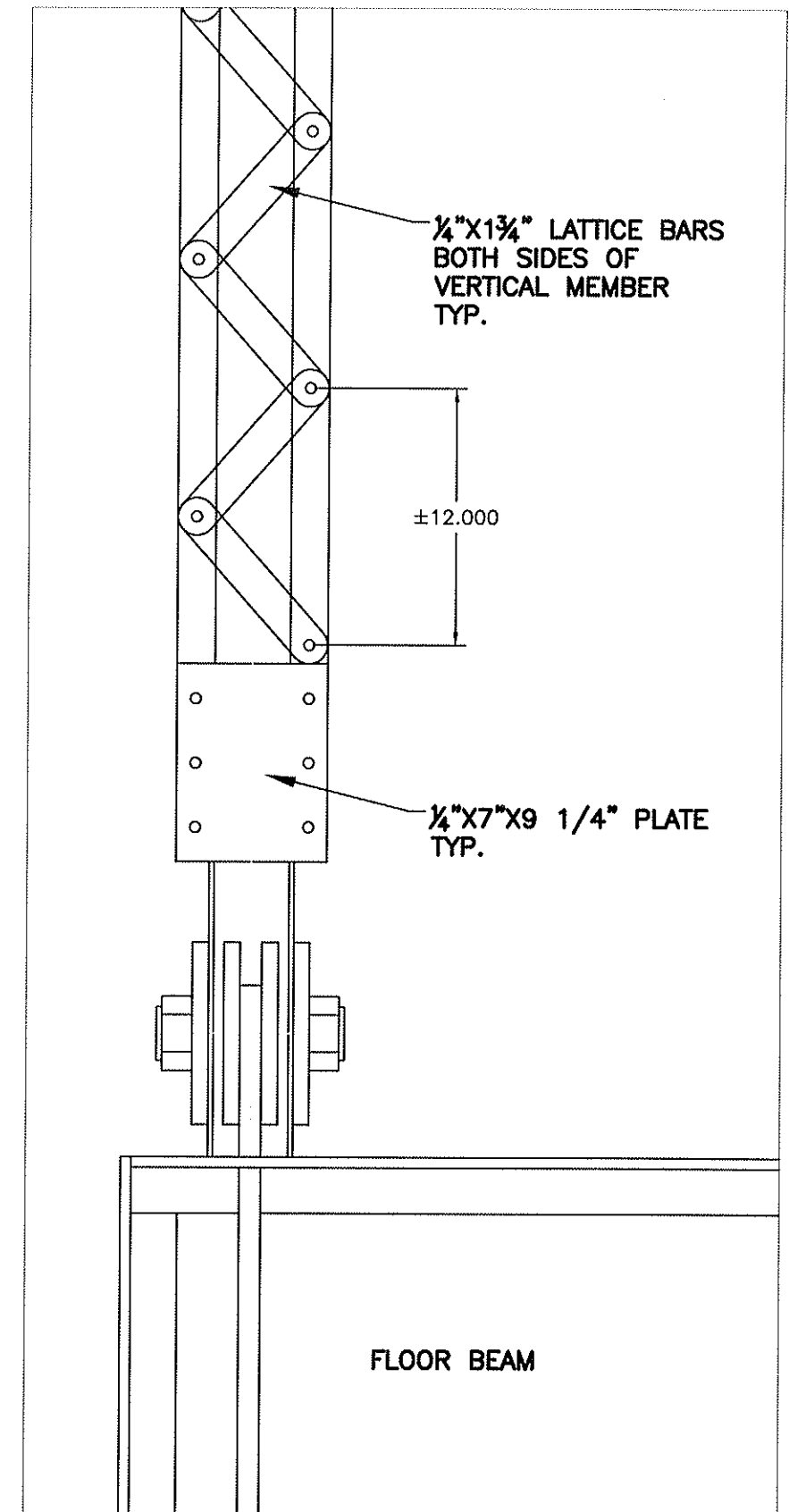
TOP CHORD LATERAL BRACING CONNECTION



BOTTOM CHORD FLOOR BEAM CONNECTION



TYPICAL VERTICAL TOP



TYPICAL VERTICAL BOTTOM

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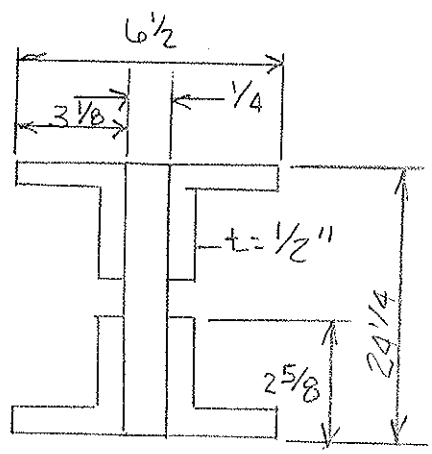
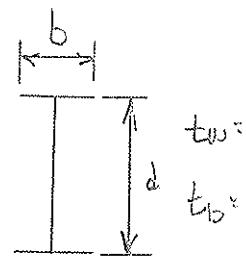


Calculations For LOG 463 1838

C-21

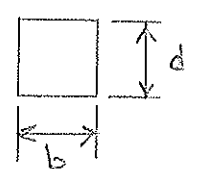
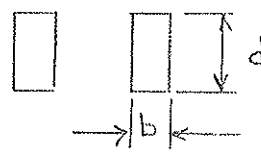
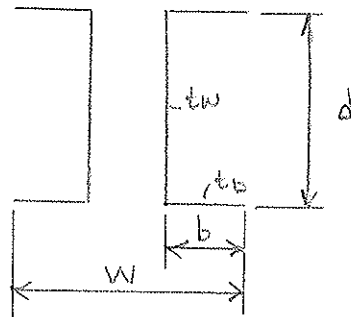
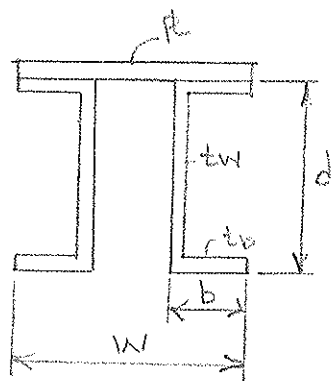
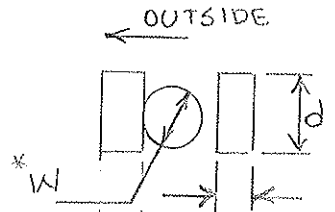
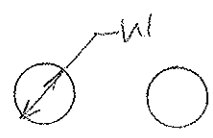
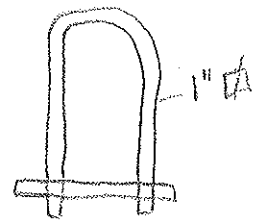
Computed By JRH Date 10-20-10 Sheet 2 of       
 Checked By      Date     

MEM	d	b	tw	tb	W	FL	TYPE	1/2	1/2
L001	10	2 1/2	0.339	0.375	14 1/2	3/8 x 15/8	A		
U1L1	2	1 3/4	1/2		1"		E	1.75	0.06
U1L2	3	2 1/2	5/8				C	3.1	0.1
U2L2	4	6	1 3/4	0.219	7		B		
U1L3	5	2 1/2	3/8				C	3.1	0.1
U3L3	6	5	1 5/8	0.235	8 3/8		B		
U2L4	7	2 1/2	1/2				C	2.5	0.05
L905	8	1	1				D	1	0.04
U4L4	9	5	1 3/4	0.217	1/4	8 3/8	B		
U4L6	10					1/8	F	1.20	0.05
L507	11	1 3/4	1/2				C	1.75	0.04
U5L5	12	5	1 3/4	0.200	1/4	8 3/8	B		
U102	TC1						A		
U203	TC2						A		
U304	TC3						A		
U405	TC4						A		
L601	BC1	3	3/4				C		
L1L2	BC2	3	3/4				C		
L2L3	BC3	3 1/2	3/4				C		
L3L4	BC4	4 1/4	7/8				C		
L4L5	BC5	5	1				C		
	FB								
U3L5	JOIST	10 3/8	5 3/4	0.254	0.418		G		
L406	13	1 3/4	1/2				C	1.75	0.04
	14	1 1/8	1/8				D		



**FLOOR BEAM**  
 RIVETS BEGIN 1/4" FROM END  
 19R @ 2 1/2" O.C. TOP + BOT  
 5R @ 4" O.C. NOTE: 1/2 BEAM  
 11R @ 6" O.C. SYMMETRICAL

FLOOR BEAM HANGER



\* THE 1" DIA HANGER HAS NO LOOP AROUND THE PIN.

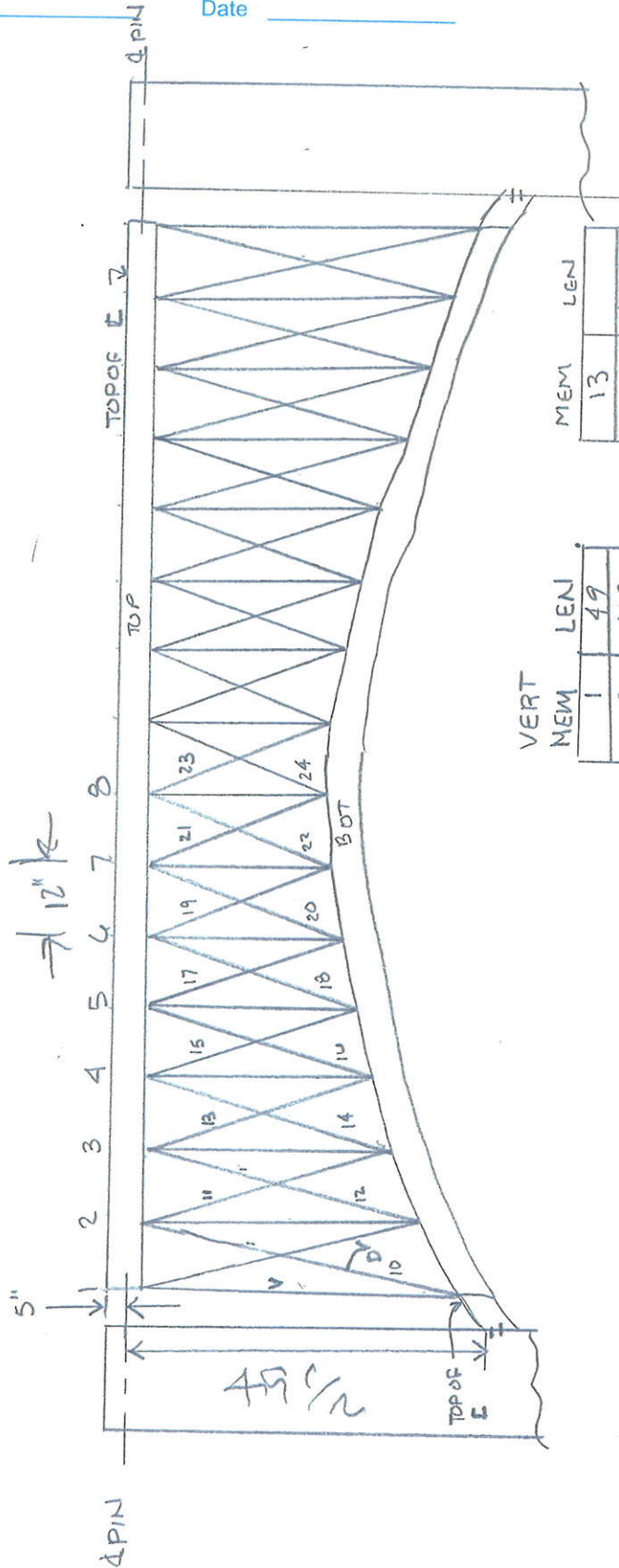




Calculations For Log 4631838

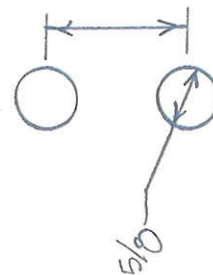
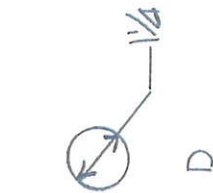
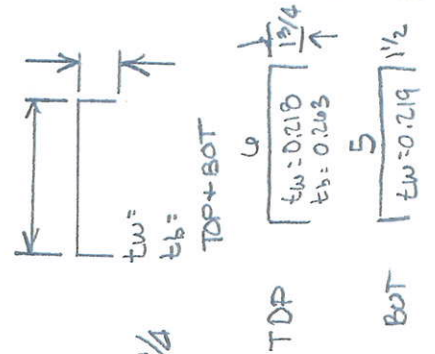
T-21

Computed By JRH Date 10-21-10 Sheet \_\_\_\_\_ of \_\_\_\_\_  
 Checked By \_\_\_\_\_ Date \_\_\_\_\_



MEM	LEN
13	
14	35 3/4
15	20
16	27 1/2
17	
18	22 3/4
19	23 3/4
20	23 3/4
21	
22	23 3/4
23	23
24	

VERT MEM	LEN
1	49
2	40 3/4
3	34 3/4
4	29 3/4
5	25 1/2
6	20 3/4
7	18 1/2
8	
9	42 1/2
10	48
11	36 3/4
12	



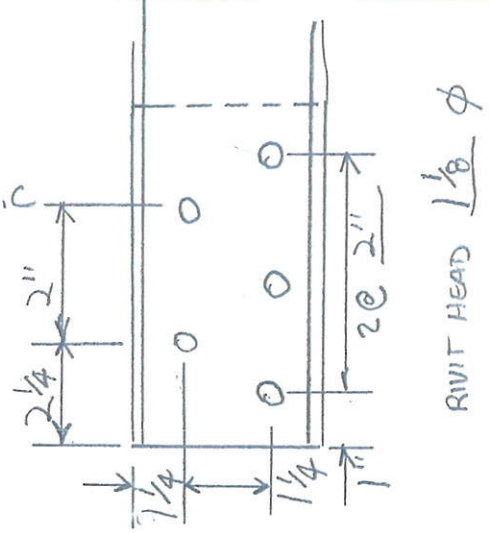
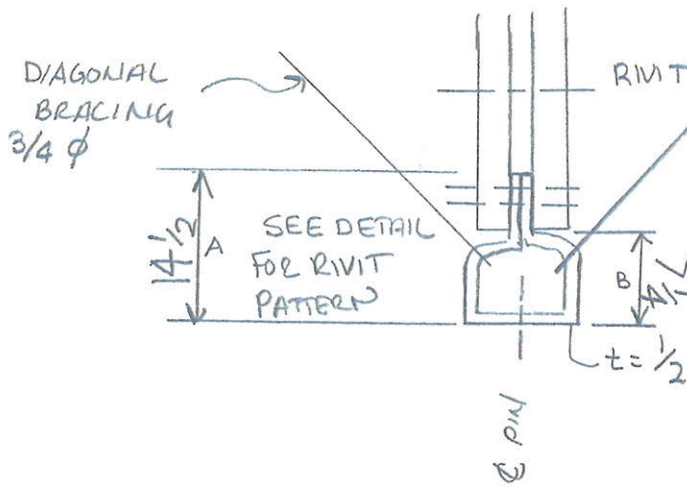
TDP  
 BOT

$t_w = 0.210$   
 $t_b = 0.203$   
 $t_w = 0.219$

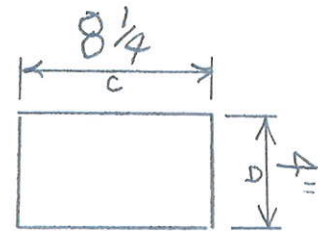
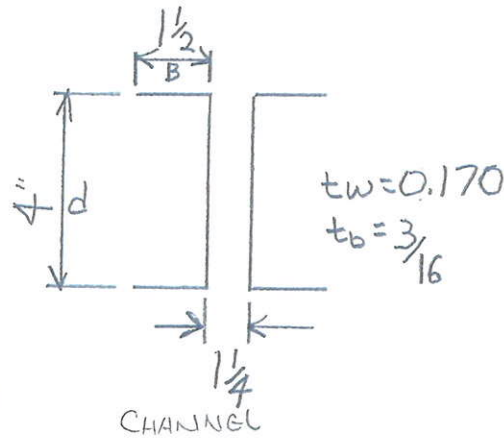
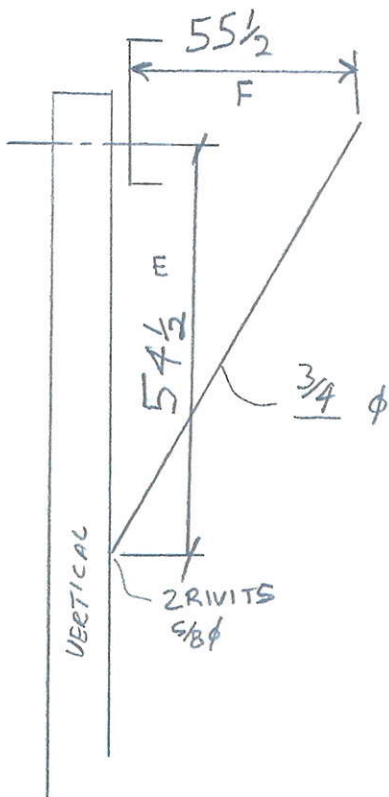
Calculations For LOG 4631838 T-21

Computed By JRH Date 10-21-10  
 Checked By \_\_\_\_\_ Date \_\_\_\_\_

Sheet \_\_\_\_\_ of \_\_\_\_\_



CROSS BRACING



OAL HT = 21 PIN TO PIN

Company :  
 Designer :  
 Job Number:

Jul 29, 2011  
 09:46 AM  
 Checked By: \_\_\_\_\_

LOGAN CO. CR 21-1.00

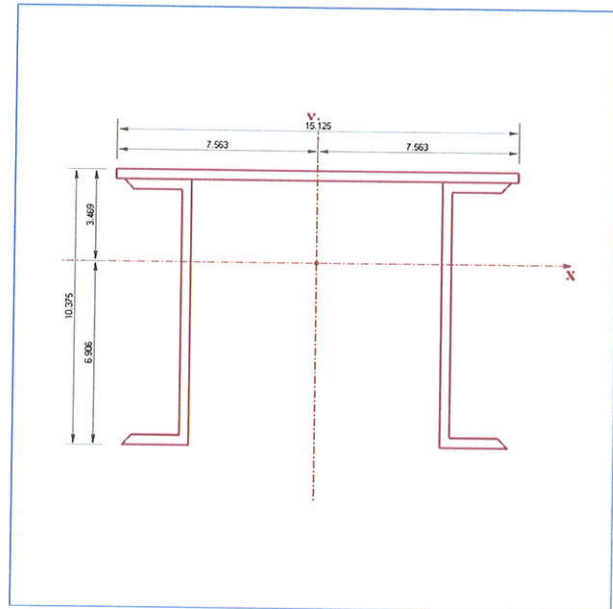
**Section Properties: TOP CHORD**

L001; U102; U203; U304; U405

Number of Shapes	=	2	
Total Width	=	15.125	in
Total Height	=	10.375	in
Center, Xo	=	0.000	in
Center, Yo	=	1.906	in
X-bar(Right)	=	7.563	in
X-bar(Left)	=	7.563	in
Y-bar(Top)	=	3.469	in
Y-bar(Bot)	=	6.906	in

**Equivalent Properties:**

Area, Ax	=	15.439	in <sup>2</sup>
Inertia, Ixx	=	222.50	in <sup>4</sup>
Inertia, Iyy	=	383.97	in <sup>4</sup>
Inertia, Ixy	=	0.000	in <sup>4</sup>
Modulus, Sx(Top)	=	64.134	in <sup>3</sup>
Modulus, Sx(Bot)	=	32.219	in <sup>3</sup>
Modulus, Sy(Left)	=	50.773	in <sup>3</sup>
Modulus, Sy(Right)	=	50.773	in <sup>3</sup>
Radius, rx	=	3.796	in
Radius, ry	=	4.987	in
Plastic Modulus, Zx	=	48.911	in <sup>3</sup>
Plastic Modulus, Zy	=	72.979	in <sup>3</sup>
Torsional, J	=	0.671	in <sup>4</sup>



Section Diagram

$$wt = \frac{(15.439 \text{ in}^2)(12)}{1728} (490 \frac{\text{LBS}}{\text{FT}}) = 52.5 \text{ LBS/LF}$$

Company :  
 Designer :  
 Job Number:

Jul 29, 2011  
 10:25 AM  
 Checked By: \_\_\_\_\_

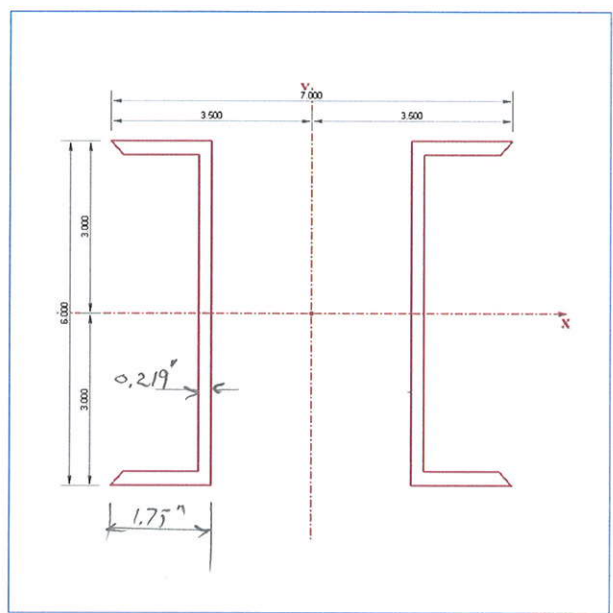
LOGAN CO. CR 217.00

**Section Properties: L3-U3** ; U2L2  
 FIELD  
 ANALYSIS  
 4

Number of Shapes	=	1	
Total Width	=	7.000	in
Total Height	=	6.000	in
Center, Xo	=	-0.000	in
Center, Yo	=	0.000	in
X-bar(Right)	=	3.500	in
X-bar(Left)	=	3.500	in
Y-bar(Top)	=	3.000	in
Y-bar(Bot)	=	3.000	in

Equivalent Properties:

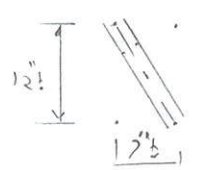
Area, Ax	=	4.049	in^2
Inertia, Ixx	=	19.667	in^4
Inertia, Iyy	=	19.558	in^4
Inertia, Ixy	=	-0.000	in^4
Modulus, Sx(Top)	=	6.556	in^3
Modulus, Sx(Bot)	=	6.556	in^3
Modulus, Sy(Left)	=	5.588	in^3
Modulus, Sy(Right)	=	5.588	in^3
Radius, rx	=	2.204	in
Radius, ry	=	2.198	in
Plastic Modulus, Zx	=	8.036	in^3
Plastic Modulus, Zy	=	8.697	in^3
Torsional, J	=	0.074	in^4



Section Diagram

WT: =  $\frac{(4.049 \text{ in}^2)}{144} (490) = 13.78 \text{ LBS/LF} + 4.5 \text{ LBS/LF} = \underline{\underline{18.2 \text{ LBS/LF}}}$

LATTICE BARS



$\frac{(42 \text{ BARS}) (1.5'') (3.375'') (14'')}{1728} (490) \left(\frac{1}{21}\right) = 4.5 \text{ LBS/LF}$



Company :  
 Designer :  
 Job Number: LOGAN G. CR 21-1.00

Jul 29, 2011  
 10:22 AM  
 Checked By: \_\_\_\_\_

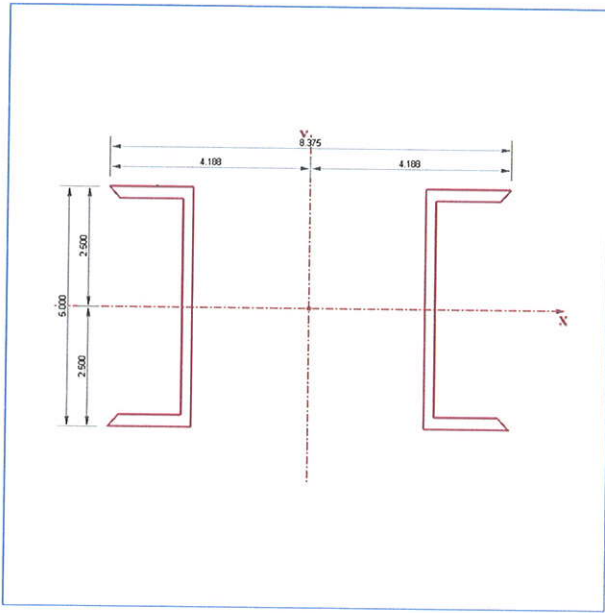
FIELD ANALYSIS  
 ~ 0787  
 6:5

**Section Properties: L4-U4 TYPICAL ; U3L3 ; U4L4 ; U5L5**

Number of Shapes	=	1	
Total Width	=	8.375	in
Total Height	=	5.000	in
Center, Xo	=	0.000	in
Center, Yo	=	-0.000	in
X-bar(Right)	=	4.188	in
X-bar(Left)	=	4.188	in
Y-bar(Top)	=	2.500	in
Y-bar(Bot)	=	2.500	in

Equivalent Properties:

Area, Ax	=	3.595	in^2
Inertia, Ixx	=	12.585	in^4
Inertia, Iyy	=	30.478	in^4
Inertia, Ixy	=	0.000	in^4
Modulus, Sx(Top)	=	5.034	in^3
Modulus, Sx(Bot)	=	5.034	in^3
Modulus, Sy(Left)	=	7.278	in^3
Modulus, Sy(Right)	=	7.278	in^3
Radius, rx	=	1.871	in
Radius, ry	=	2.912	in
Plastic Modulus, Zx	=	6.102	in^3
Plastic Modulus, Zy	=	10.322	in^3
Torsional, J	=	0.068	in^4



Section Diagram

$$wt = \left( \frac{3.595}{144} \right) \left( 490 \frac{LBS}{FT^3} \right) = 12.23 \frac{LBS}{LF}$$

$$LATTICE BARS$$

$$+ 4.5 \frac{LBS}{LF} = 16.7 \frac{LBS}{LF} \Rightarrow \underline{\underline{USE 17 \frac{LBS}{LF}}}$$

Company :  
 Designer :  
 Job Number:

Jul 29, 2011  
 10:12 AM  
 Checked By: \_\_\_\_\_

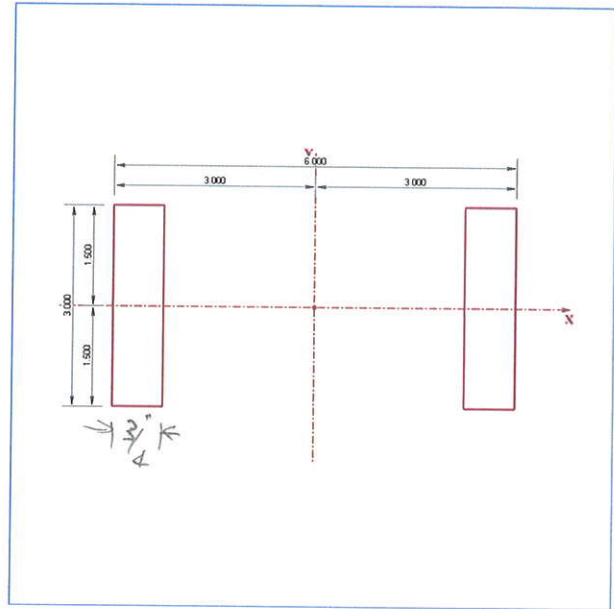
LOGAN Co. CR 21-1.00

FIELD NOTES, ANALYSIS  
**Section Properties: L1-L2**, L021

Number of Shapes	=	2	
Total Width	=	6.000	in
Total Height	=	3.000	in
Center, Xo	=	0.000	in
Center, Yo	=	0.000	in
X-bar(Right)	=	3.000	in
X-bar(Left)	=	3.000	in
Y-bar(Top)	=	1.500	in
Y-bar(Bot)	=	1.500	in

Equivalent Properties:

Area, Ax	=	4.500	in <sup>2</sup>
Inertia, Ixx	=	3.375	in <sup>4</sup>
Inertia, Iyy	=	31.219	in <sup>4</sup>
Inertia, Ixy	=	0.000	in <sup>4</sup>
Modulus, Sx(Top)	=	2.250	in <sup>3</sup>
Modulus, Sx(Bot)	=	2.250	in <sup>3</sup>
Modulus, Sy(Left)	=	10.406	in <sup>3</sup>
Modulus, Sy(Right)	=	10.406	in <sup>3</sup>
Radius, rx	=	0.866	in
Radius, ry	=	2.634	in
Plastic Modulus, Zx	=	3.375	in <sup>3</sup>
Plastic Modulus, Zy	=	11.813	in <sup>3</sup>
Torsional, J	=	0.713	in <sup>4</sup>



Section Diagram

$$I_{min} = \frac{(3)(1.5)^3}{12} (2) = 0.21 \text{ in}^4$$

Company :  
 Designer :  
 Job Number: *LOGAN G. CR 21-1.00*

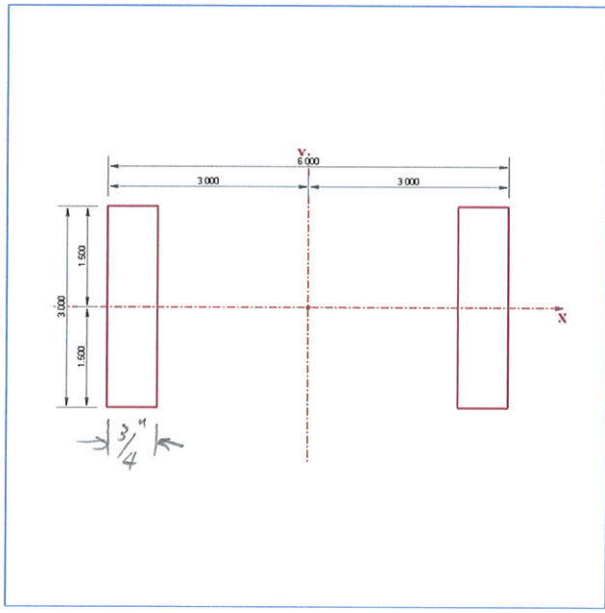
Jul 29, 2011  
 10:13 AM  
 Checked By: \_\_\_\_\_

*FIELD ANALYSIS*  
**Section Properties: L2-L3 ; L1L2**

Number of Shapes	=	2	
Total Width	=	6.000	in
Total Height	=	3.000	in
Center, Xo	=	0.000	in
Center, Yo	=	0.000	in
X-bar(Right)	=	3.000	in
X-bar(Left)	=	3.000	in
Y-bar(Top)	=	1.500	in
Y-bar(Bot)	=	1.500	in

Equivalent Properties:

Area, Ax	=	4.500	in^2
Inertia, Ixx	=	3.375	in^4
Inertia, Iyy	=	31.219	in^4
Inertia, Ixy	=	0.000	in^4
Modulus, Sx(Top)	=	2.250	in^3
Modulus, Sx(Bot)	=	2.250	in^3
Modulus, Sy(Left)	=	10.406	in^3
Modulus, Sy(Right)	=	10.406	in^3
Radius, rx	=	0.866	in
Radius, ry	=	2.634	in
Plastic Modulus, Zx	=	3.375	in^3
Plastic Modulus, Zy	=	11.813	in^3
Torsional, J	=	0.713	in^4



Section Diagram

$$I_{tw} = \frac{(3)(1.5)^3}{12} (2) = 0.21 \text{ in}^4$$

Company :  
 Designer :  
 Job Number:

Jul 29, 2011  
 10:14 AM  
 Checked By: \_\_\_\_\_

LOGAN G. CR21-1.00

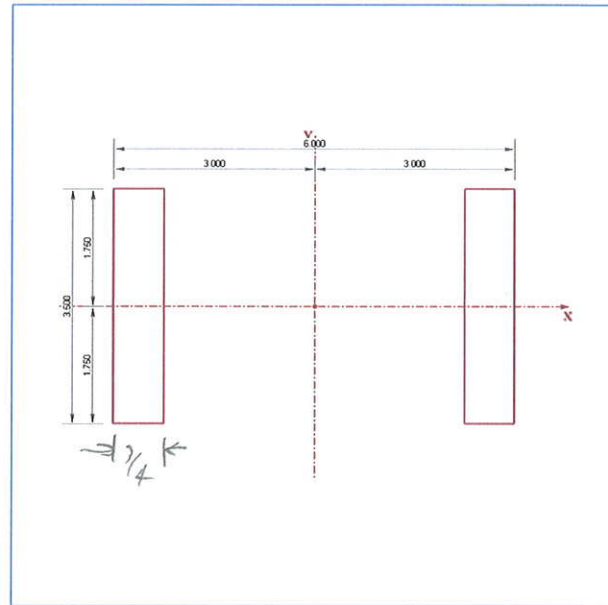
FIELD NOTE ANALYSIS

**Section Properties: L3-L4 ; L2-L3**

Number of Shapes	=	2	
Total Width	=	6.000	in
Total Height	=	3.500	in
Center, Xo	=	0.000	in
Center, Yo	=	0.000	in
X-bar(Right)	=	3.000	in
X-bar(Left)	=	3.000	in
Y-bar(Top)	=	1.750	in
Y-bar(Bot)	=	1.750	in

**Equivalent Properties:**

Area, Ax	=	5.250	in <sup>2</sup>
Inertia, Ixx	=	5.359	in <sup>4</sup>
Inertia, Iyy	=	36.422	in <sup>4</sup>
Inertia, Ixy	=	0.000	in <sup>4</sup>
Modulus, Sx(Top)	=	3.063	in <sup>3</sup>
Modulus, Sx(Bot)	=	3.063	in <sup>3</sup>
Modulus, Sy(Left)	=	12.141	in <sup>3</sup>
Modulus, Sy(Right)	=	12.141	in <sup>3</sup>
Radius, rx	=	1.010	in
Radius, ry	=	2.634	in
Plastic Modulus, Zx	=	4.594	in <sup>3</sup>
Plastic Modulus, Zy	=	13.781	in <sup>3</sup>
Torsional, J	=	0.853	in <sup>4</sup>



Section Diagram

$$I_{min} = \frac{(2.75)(1.75)^3}{12} (2) = 0.25 \text{ in}^4$$



Company :  
 Designer :  
 Job Number:

Jul 29, 2011  
 10:15 AM  
 Checked By: \_\_\_\_\_

LOGAN CO. CR 21-1.20

FIELD NO. 2011 ANALYSIS

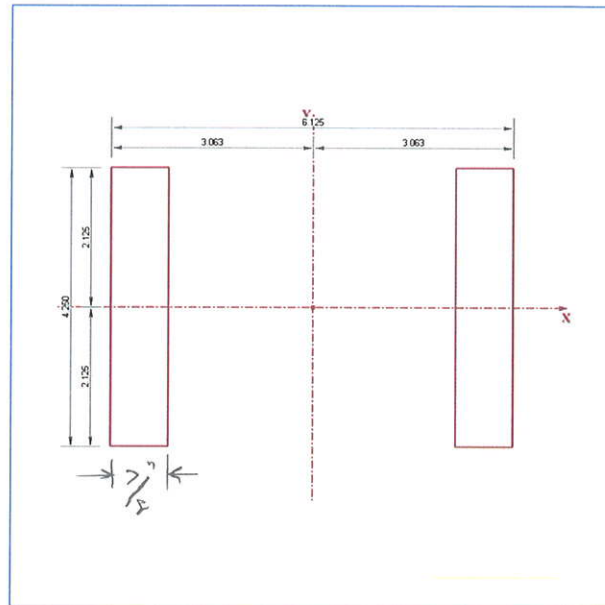
**Section Properties: L4-L5 ; L3 L4**

B<4

Number of Shapes	=	2	
Total Width	=	6.125	in
Total Height	=	4.250	in
Center, Xo	=	0.000	in
Center, Yo	=	0.000	in
X-bar(Right)	=	3.063	in
X-bar(Left)	=	3.063	in
Y-bar(Top)	=	2.125	in
Y-bar(Bot)	=	2.125	in

**Equivalent Properties:**

Area, Ax	=	7.438	in^2
Inertia, Ixx	=	11.195	in^4
Inertia, Iyy	=	51.724	in^4
Inertia, Ixy	=	0.000	in^4
Modulus, Sx(Top)	=	5.268	in^3
Modulus, Sx(Bot)	=	5.268	in^3
Modulus, Sy(Left)	=	16.889	in^3
Modulus, Sy(Right)	=	16.889	in^3
Radius, rx	=	1.227	in
Radius, ry	=	2.637	in
Plastic Modulus, Zx	=	7.902	in^3
Plastic Modulus, Zy	=	19.523	in^3
Torsional, J	=	1.656	in^4



Section Diagram

$$I_{min} = \frac{(4.25)(1.227)^3}{12} (2) = 0.471 \text{ in}^4$$

Company :  
 Designer :  
 Job Number:

Jul 29, 2011  
 10:16 AM  
 Checked By: \_\_\_\_\_

LOGAN CO. CR 21-1.00

FIELD ANALYSIS  
 WATER ; L4-L5

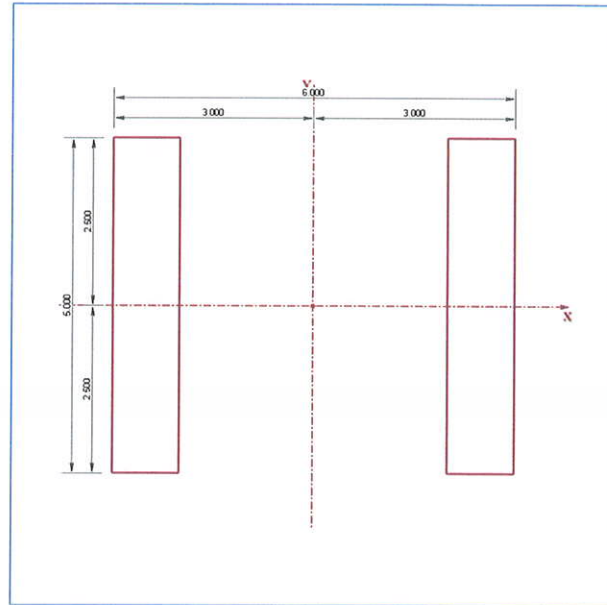
**Section Properties: L5-L6**

B&S

Number of Shapes	=	2	
Total Width	=	6.000	in
Total Height	=	5.000	in
Center, Xo	=	0.000	in
Center, Yo	=	0.000	in
X-bar(Right)	=	3.000	in
X-bar(Left)	=	3.000	in
Y-bar(Top)	=	2.500	in
Y-bar(Bot)	=	2.500	in

Equivalent Properties:

Area, Ax	=	10.000	in <sup>2</sup>
Inertia, Ixx	=	20.833	in <sup>4</sup>
Inertia, Iyy	=	63.333	in <sup>4</sup>
Inertia, Ixy	=	0.000	in <sup>4</sup>
Modulus, Sx(Top)	=	8.333	in <sup>3</sup>
Modulus, Sx(Bot)	=	8.333	in <sup>3</sup>
Modulus, Sy(Left)	=	21.111	in <sup>3</sup>
Modulus, Sy(Right)	=	21.111	in <sup>3</sup>
Radius, rx	=	1.443	in
Radius, ry	=	2.517	in
Plastic Modulus, Zx	=	12.500	in <sup>3</sup>
Plastic Modulus, Zy	=	25.000	in <sup>3</sup>
Torsional, J	=	2.921	in <sup>4</sup>



Section Diagram

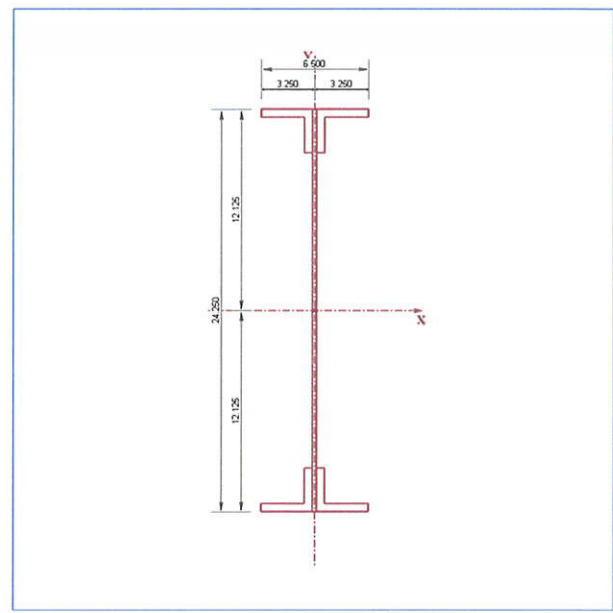
$$I_{min} = \frac{(5)(1)^3}{12} (2) = 0.833 \text{ in}^4$$

**Section Properties: FLOOR BEAM**

Number of Shapes	=	3	
Total Width	=	6.500	in
Total Height	=	24.250	in
Center, Xo	=	0.000	in
Center, Yo	=	0.000	in
X-bar(Right)	=	3.250	in
X-bar(Left)	=	3.250	in
Y-bar(Top)	=	12.125	in
Y-bar(Bot)	=	12.125	in

Equivalent Properties:

Area, Ax	=	16.563	in^2
Inertia, Ixx	=	1653.44	in^4
Inertia, Iyy	=	23.602	in^4
Inertia, Ixy	=	0.000	in^4
Modulus, Sx(Top)	=	136.37	in^3
Modulus, Sx(Bot)	=	136.37	in^3
Modulus, Sy(Left)	=	7.262	in^3
Modulus, Sy(Right)	=	7.262	in^3
Radius, rx	=	9.991	in
Radius, ry	=	1.194	in
Plastic Modulus, Zx	=	155.82	in^3
Plastic Modulus, Zy	=	12.520	in^3
Torsional, J	=	0.976	in^4



Section Diagram

$$w_t = \frac{(16.563)}{144} \left( 490 \frac{L^3}{ft^3} \right) = 56.26 \frac{L^3}{L^3}$$

Company :  
 Designer :  
 Job Number: *LOGAN Co. CR 21-1.00*

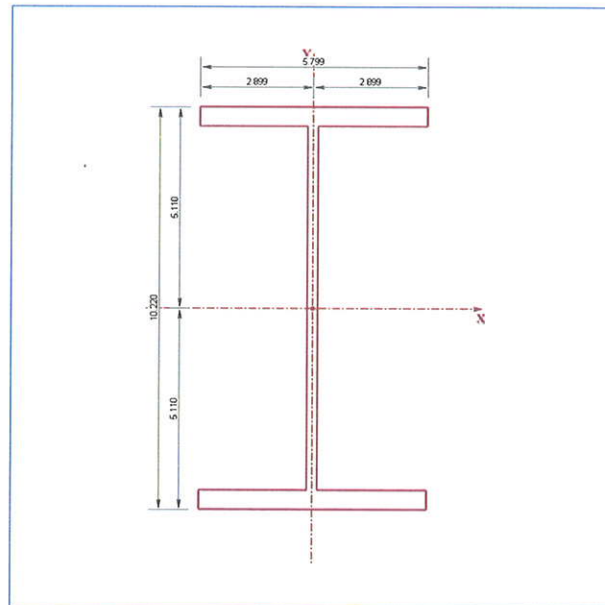
Jul 29, 2011  
 09:57 AM  
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**Section Properties: STRINGER**

Number of Shapes	=	1	
Total Width	=	5.799	in
Total Height	=	10.220	in
Center, Xo	=	0.000	in
Center, Yo	=	0.000	in
X-bar(Right)	=	2.899	in
X-bar(Left)	=	2.899	in
Y-bar(Top)	=	5.110	in
Y-bar(Bot)	=	5.110	in

Equivalent Properties:

Area, Ax	=	8.464	in <sup>2</sup>
Inertia, Ixx	=	155.97	in <sup>4</sup>
Inertia, Iyy	=	16.269	in <sup>4</sup>
Inertia, Ixy	=	0.000	in <sup>4</sup>
Modulus, Sx(Top)	=	30.522	in <sup>3</sup>
Modulus, Sx(Bot)	=	30.522	in <sup>3</sup>
Modulus, Sy(Left)	=	5.611	in <sup>3</sup>
Modulus, Sy(Right)	=	5.611	in <sup>3</sup>
Radius, rx	=	4.293	in
Radius, ry	=	1.386	in
Plastic Modulus, Zx	=	34.325	in <sup>3</sup>
Plastic Modulus, Zy	=	8.600	in <sup>3</sup>
Torsional, J	=	0.575	in <sup>4</sup>



Section Diagram  
*W10x29*



**DEAD LOAD CALCULATIONS  
FOR  
BARS 7 INPUT**





Calculations For Logan County CR 21-1.00  
Load Rating Analysis  
 Computed By THH Date 2-10-11 Sheet 2 of 8  
 Checked By JGB Date 7-29-11

Guardrail

Deep Beam Guardrail

- ✓ 7.9 #/ft - one truss
- ✓ 15.8 #/ft - two truss

3" x 6" Wood Strip Floor

$(5\frac{1}{2}/12) 16.0' (45 \#/\text{ft}^3) = 330 \#/\text{ft}$

Asphalt Wearing Surface

$(3.35/12) (16.0') 145 \#/\text{ft}^3 = 647.67 \#/\text{ft}$

2.6" - Edge of Deck  
 $8(3/16) + 2.6 = 4.125$   
 $(\frac{2.6 + 4.1}{2}) = 3.35$

Total DL =  $15.8 + 330 + 647.67 = 993.47 \#/\text{ft}$

Stringer DL =  $\frac{993.47}{6} = 165.58 \#/\text{ft}$

Truss Loads pg 5-48, 7-44 Bar 7

panel number pp  $\Rightarrow$  0 ; Location L<sub>0</sub>

Floor beam:  $(\frac{0.25}{12})(\frac{24.25}{12}) + (\frac{2.625}{12})(\frac{0.5}{12}) 4 + (\frac{3.125 - 0.5}{12})(\frac{0.5}{12}) 4$   
 $0.115 \text{ ft}^2 (490 \#/\text{ft}^3) = 56.35 \#/\text{ft}$   
 $(18.08') (56.35 \#/\text{ft}) = 1018.81 \#$

4.25  
5.25

stringers:  $(\frac{5.75}{12})(\frac{0.418}{12}) 2 + (\frac{10.375 - 2(\frac{0.418}{12})}{12}) \frac{0.256}{12}$   
 $= 0.05 \text{ ft}^2 (1 \text{ ft}) 490 \#/\text{ft}^3 = 24.48 \#/\text{ft}$   
 $24.48 \#/\text{ft} (6 \text{ Ea}) = 146.88 \#/\text{ft}$