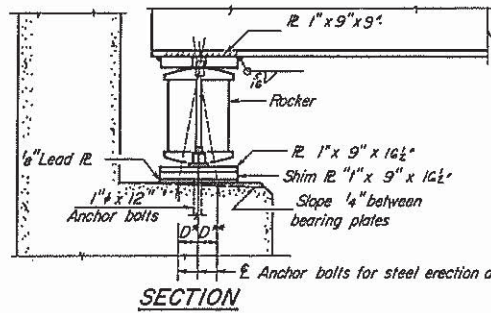
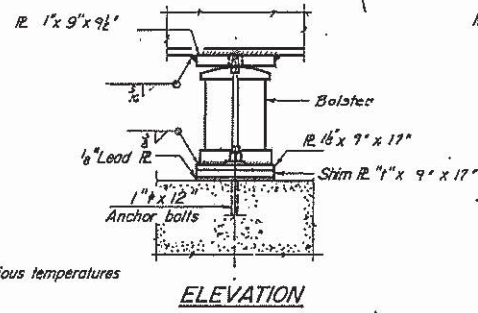


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

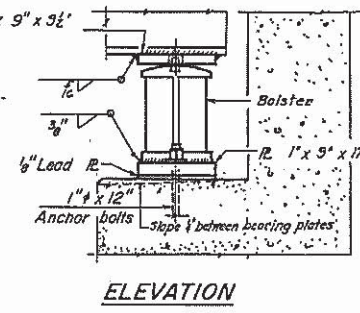
DATE	1/20	QUANTITY	25	19	SHEET NO. 8
NO.	510	BR-4	HANCOCK		// SHEETS



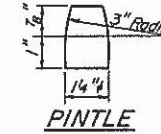
SECTION



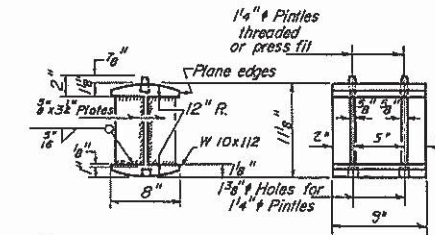
ELEVATION



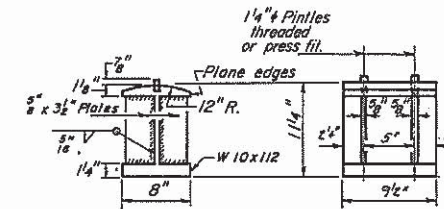
ELEVATION



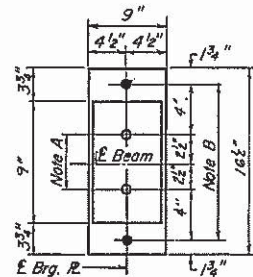
PINTLE



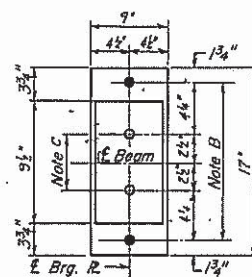
ROCKER



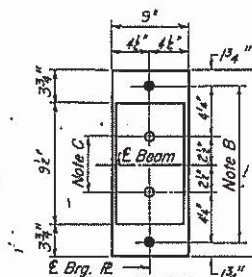
BOLSTER



PLAN
AT ABUTMENT-SOUTH



PLAN
AT PIERS 1&2



PLAN
AT ABUT-NORTH

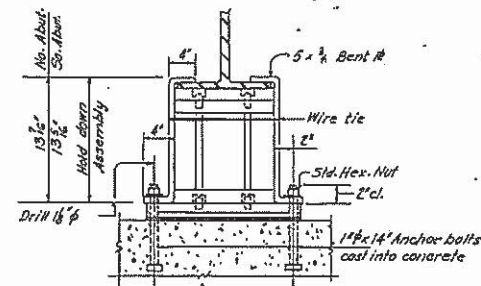
NOTE A
1 3/8" Holes - 1" deep in top R.
for pintles. Thread or press fit
pintles into bottom R.

NOTE B
1 1/2" Holes for 1" anchor bolts.
1 1/2" x 2 1/2" x 2 1/2" R. Washers
under nut.

NOTE C
1 3/8" Holes 1" deep in top R.
only for 1 1/4" pintles.

NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.

- a) D* (Side of brg. away from fixed brg.)
D* = 1/8" per each 100' of expansion for every 15° fall below the normal temp. of 50°F.
- D** (Side of brg. toward fixed brg.)
D** = 1/8" per each 100' of expansion for every 15° rise above the normal temp. of 50°F.
- b) After beams have been erected and dimensions D* or D** determined, holes shall be drilled and anchor bolts shall be grouted in place. All fixed anchor bolts may be built into the masonry.



BEAM HOLD DOWN DETAIL

Note:
Beams shall be held down at the Abutment on the opposite end of Bridge from which the deck pour is commenced. After pouring is completed the Hold Down Assembly shall be removed and nuts placed on Anchor Bolts.
Cast of Hold Down Assembly, incidental to Class X Concrete.

TOP OF BEAM ELEVATIONS

Loc.	1	2	3	4	5	G
1. Br. No. Abut.	527.425	527.337	527.247	527.117	526.977	526.776
2. Br. No. Pier 1	527.460	527.431	527.388	527.292	527.145	526.970
3. Splice	527.473	527.451	527.420	527.334	527.193	527.043
4. Br. No. Pier 2	527.483	527.511	527.519	527.427	527.355	527.223
5. Br. No. Abut.	527.470	527.549	527.616	527.577	527.477	527.384

INTERIOR BEAM MOMENT TABLE

	1.5 Span to B	Pier 1 or 2	.5 Span to E
I in ⁴	843	843	843
S in ³	81.6	81.6	81.6
E (ft)	.816	.816	.816
M _U (k)	31.1	57.2	29.4
M _P (k)	85.1	77.9	86.0
IMP (k)	24.9	23.4	25.8
E _U (k)	274.4	293.8	280.5
E _P (k)	40.4	43.2	41.3

* Ultimate Moment
M_U = 1/8 [W_D + 5/8 (L + Imp)]
* Ultimate Stress in Br.
f_s = 1/3 [f_y (k) + 1.0 mp]

INTERIOR BEAM REACTION TABLE

	Abut.	Pier
R _D (k)	7.1	23.9
R _P (k)	22.2	31.3
IMP (k)	6.7	9.4
R _{Total} (k)	36.0	64.6

DIMENSION "L"

Loc.	1	2	3	4	5	G
So. Abutment						
Pier 1		76"				
Pier 2		76"	76"			

DESIGNED: *Michael R. Tackett*
EXAMINED: *Michael R. Tackett*
CHECKED: *Michael R. Tackett*
DRAWN: *M. K. T.*
CHECKED: *M. K. T.*

I-2-B 9-1-65, 8-1-70

STRUCTURAL STEEL-BRGS.
F.A.R.T. 510 SEC. 120 BR-4
HANCOCK COUNTY
STA. 974+87.00