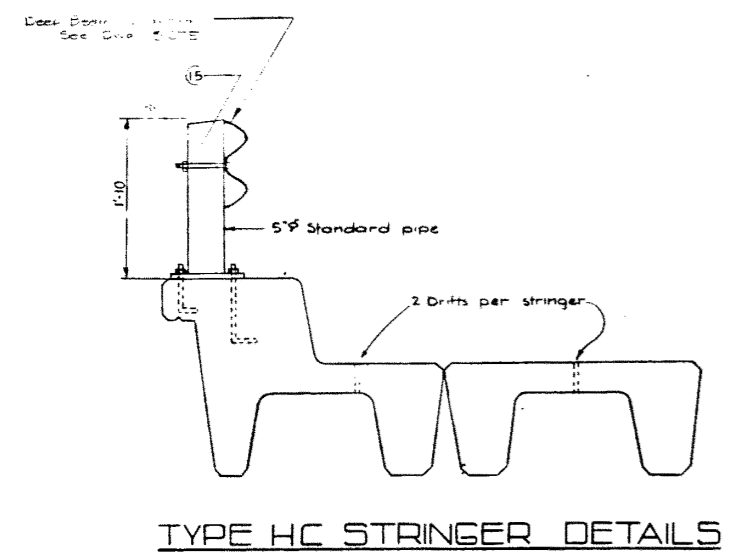


BILL OF HARDWARE

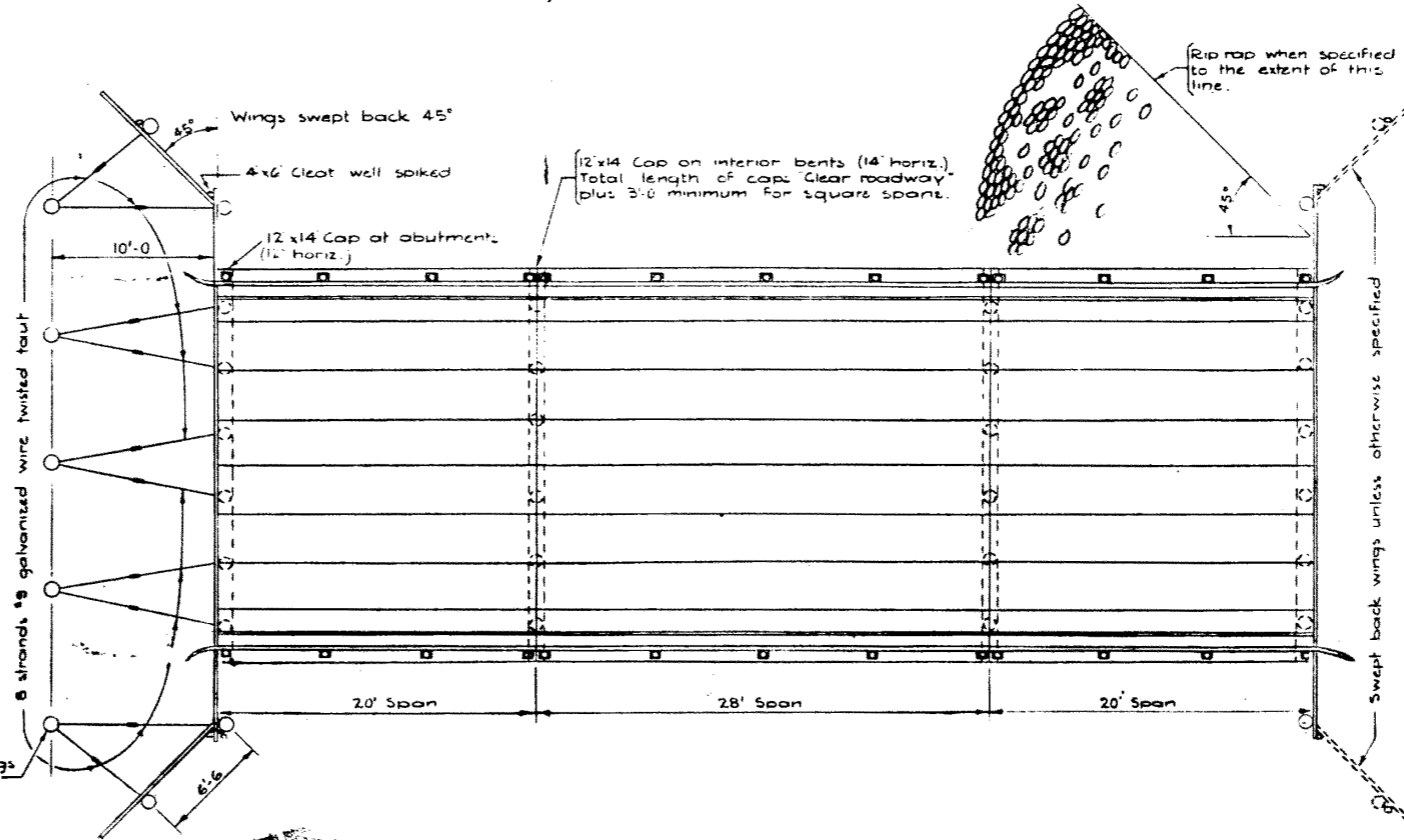
MARK	SIZE	TYPE	WASHERS	PLACING & NO. REQUIRED
1	3/4 x 22	Drifts		Caps & subcaps to piles & bents
2	3/4 x 24	Headless Drifts		Stringers & curbs to caps 2 per stringer, 2 per curb
3	1/2 x 8	Carrriage Bolts	2-3/8 Flat	Handrail to post, 2 per post
4	1/2 x 8	Carrriage Bolts	1-3/8 Flat	Handrail splice, 4 per splice
5	3/8 x 24	Machine Bolts	2-3/8 O.G.	Cap splice, 4 per splice
6	3/8 x 22	Machine Bolts	2-3/8 O.G.	Double sway brace to cap
7	3/8 x 20	Machine Bolts	2-3/8 O.G.	Single sway brace to cap
8	3/8 x 20	Machine Bolts	2-3/8 O.G.	Tower brace
9	1/2 x 8	Machine Bolts	2-1/2 O.G.	Tower brace splice
10	3/8 x 8	Dowel		Pile splice, 2 per splice
11	3/8 x 16	Machine Bolts		Pile splice, 8 per splice
12	3/8 x 20	Machine Bolts	2-3/8 O.G.	Handrail post, 2 per post
13	1/2 x 12	Carrriage Bolts		Handrail splice, 1 per splice
14	1/2 x 12	Carrriage Bolts	2-1/2 Flat	Handrail post, 2 per post
15	3/4 x 22	Drifts		Handrail splice, 1 per splice

-GENERAL NOTES-

- TREATMENT OF TIMBER - IMPORTANT**
- (a) Pile tops under caps shall be coated with 3 applications of creosote oil and thoroughly covered with roofing pitch.
 - (b) Exposed pile tops shall be treated as in (a) and in addition shall be covered with 12 ga. galvanized sheet iron of a size 4" greater in diameter than the pile. Neatly trim iron, bend down, and fasten to pile with galvanized roofing nails.
 - (c) Treated timber shall be carefully handled, so as to avoid breaking of outer fibers and bruising or penetrating the surface. Tools to be used only on ends of timber.
 - (d) All cuts and abrasions in treated timber, shall after careful trimming be coated with 2 applications of creosote and then be thoroughly covered with hot roofing pitch.
 - (e) Treated piles must not be dapped for sway bracing in the field.
 - (f) Bolt holes bored after treatment shall be carefully treated with creosote. Any unfilled holes shall be sealed with creosoted plugs.
 - (g) For details of Standard Precast Units see - dwgs 5780, 5781, 5791, & 5792.

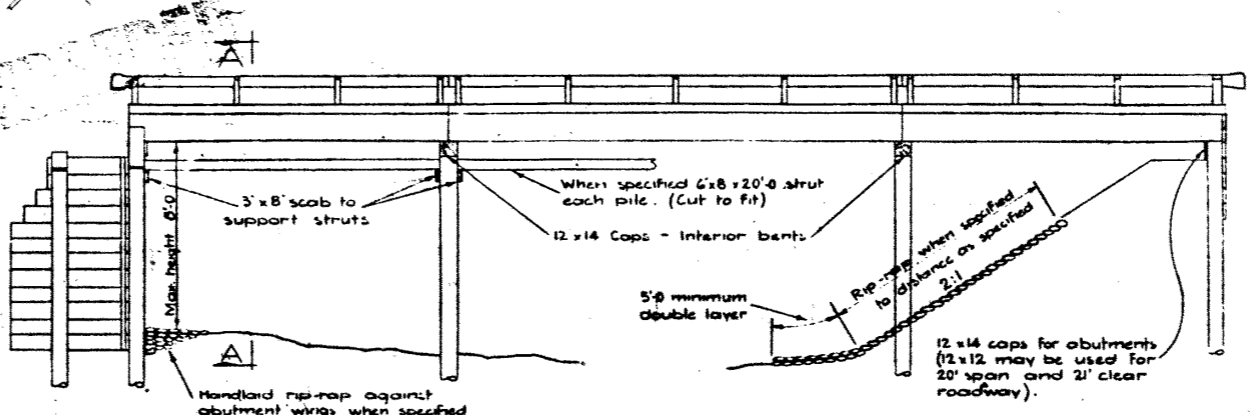
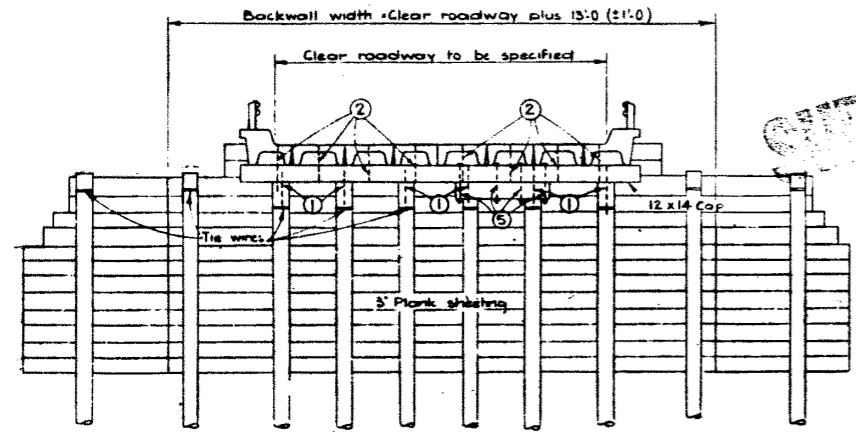


Treated anchor piles for backwall. (To be used in lieu of struts where specified). Minimum length 6'-0", minimum penetration 4'-0".



Anchor piles for wings always required

Swept back wings unless otherwise specified



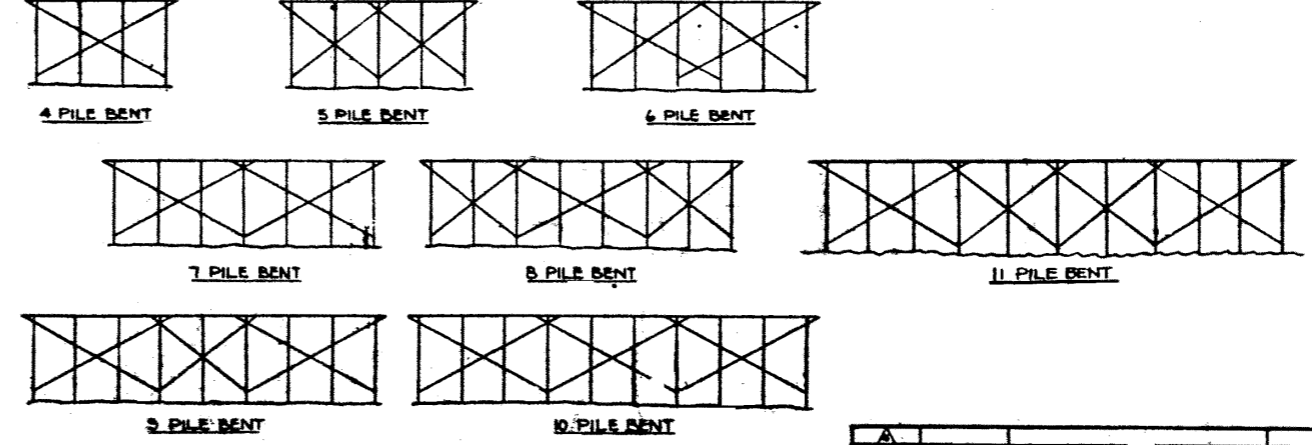
SHOWING BACKWALL TYPE ABUTMENT

SHOWING SPILL THROUGH TYPE ABUTMENT

PILE SPACING FOR STD. PRECAST BRIDGES
(Pile spacing to be centre to centre of piles)

Clear Roadway	Skew	Cap Length	20' Span Abutment		28' Span Abutment		20'-20' Span Pier		20'-28' Span Pier		28'-28' Span Pier	
			No. of Piles	Pile Sp.	No. of Piles	Pile Sp.	No. of Piles	Pile Sp.	No. of Piles	Pile Sp.	No. of Piles	Pile Sp.
21'	0°	24'	5	5'-3"	5	5'-3"	6	4'-2 1/2"	6	4'-2 1/2"	7	3'-6"
	15°	26'	5	5'-3 1/4"	5	5'-3 1/4"	6	4'-4 1/2"	6	4'-4 1/2"	7	3'-7 1/2"
	30°	25'	5	6'-0"	5	6'-0"	6	4'-10 1/2"	6	4'-10 1/2"	7	4'-0 1/2"
	45°	36'	5	7'-5 1/2"	5	7'-5 1/2"	6	5'-11 1/4"	6	5'-11 1/4"	7	4'-11 1/2"
24'	0°	27'	5	6'-0"	6	4'-3 1/2"	6	4'-3 1/2"	7	4'-0"	8	3'-5 1/2"
	15°	25'	5	6'-2 1/2"	6	4'-11 1/2"	6	4'-11 1/2"	7	4'-1 1/2"	8	3'-6 1/2"
	30°	32'	5	6'-1 1/2"	6	5'-6 1/2"	6	5'-6 1/2"	7	4'-7 1/2"	8	3'-11 1/2"
	45°	40'	5	8'-5 1/2"	6	6'-3 1/2"	6	6'-3 1/2"	7	5'-7 1/2"	8	4'-10 1/2"
27'	0°	30'	6	5'-4 1/2"	7	4'-6"	7	4'-6"	8	3'-10 1/2"	9	3'-10 1/2"
	15°	32'	6	5'-7 1/2"	7	4'-7 1/2"	7	4'-7 1/2"	8	3'-11 1/2"	9	3'-11 1/2"
	30°	36'	6	6'-2 1/2"	7	5'-2 1/2"	7	5'-2 1/2"	8	4'-5 1/2"	9	4'-5 1/2"
	45°	44'	6	7'-7 1/2"	7	6'-4 1/2"	7	6'-4 1/2"	8	5'-5 1/2"	9	5'-5 1/2"
30'	0°	33'	6	6'-0"	7	5'-0"	8	4'-3 1/2"	8	4'-3 1/2"	9	3'-5"
	15°	35'	6	6'-2 1/2"	7	5'-2 1/2"	8	4'-5 1/2"	8	4'-5 1/2"	9	3'-10 1/2"
	30°	39'	6	6'-4 1/2"	7	5'-4 1/2"	8	4'-11 1/2"	8	4'-11 1/2"	9	4'-3 1/2"
	45°	48'	6	8'-5 1/2"	7	7'-0"	8	6'-4 1/2"	8	6'-4 1/2"	9	5'-10 1/2"

(All sway bracing 3'x10' or 3'x12')



SWAY BRACING LAYOUT
(Single story bracing)
(Double story bracing 16' or less, used when height is over 14'-0")

NO.	DATE	DESCRIPTION	BY

SUPERSEDED

STANDARD PRECAST BRIDGES WITH TREATED TIMBER SUBSTRUCTURE

GOVERNMENT OF THE PROVINCE OF ALBERTA
DEPARTMENT OF HIGHWAYS
BRIDGE BRANCH, EDMONTON

FILE NO. _____ HWY. NO. _____
LOCATION _____ SCALE _____
STREAM _____ SHEET _____ OF _____

5660-A

DESIGNED BY: R. L. Stauffer
DATE: Mar. 15, 1964
CHECKED BY: _____
DATE: _____