



PILE SPACING AND CROWN FOR 30' CLEAR ROADWAY 0% GRADE

	Dim. 'X'	No of piles	Spacing of piles			
			0° skew	15° skew	30° skew	45° skew
20' Abut. span	3 3/4"	6	6'-0"	6'-2 9/16"	6'-11 1/8"	8'-5 13/16"
28' Abut. span	3 3/4"	7	5'-0"	5'-2 3/8"	5'-9 1/4"	7'-0 7/8"
20'-20' Pier span	3 3/4"	8	4'-3 7/16"	4'-5 1/4"	4'-11 3/8"	6'-0 3/4"
28'-20' Pier span	3 3/4"	8	4'-3 7/16"	4'-5 1/4"	4'-11 3/8"	6'-0 3/4"
28'-28' Pier span	3 3/4"	9	3'-9"	3'-10 9/16"	4'-3 15/16"	5'-3 3/8"

Half cap length:
 0° skew 17'-0"
 15° skew 17'-6"
 30° skew 20'-0"
 45° skew 24'-0"

PILE SPACING AND CROWN FOR 27' CLEAR ROADWAY 0% GRADE

	Dim. 'X'	No of piles	Spacing of piles			
			0° skew	15° skew	30° skew	45° skew
20' Abut. span	3 3/8"	6	5'-4 13/16"	5'-7 1/16"	6'-2 13/16"	7'-7 5/8"
28' Abut. span	3 3/8"	7	4'-6"	4'-7 7/8"	5'-2 3/8"	6'-4 3/8"
20'-20' Pier span	3 3/8"	7	4'-6"	4'-7 7/8"	5'-2 3/8"	6'-4 3/8"
28'-20' Pier span	3 3/8"	8	3'-10 5/16"	3'-11 15/16"	4'-5 7/16"	5'-5 7/16"
28'-28' Pier span	3 3/8"	8	3'-10 5/16"	3'-11 15/16"	4'-5 7/16"	5'-5 7/16"

Half cap length:
 0° skew 15'-0"
 15° skew 16'-0"
 30° skew 18'-0"
 45° skew 22'-0"

PILE SPACING AND CROWN FOR 36' CLEAR ROADWAY 0% GRADE

	Dim. 'X'	No of piles	Spacing of piles			
			0° skew	15° skew	30° skew	45° skew
20' Abut. span	4 1/2"	7	6'-0"	6'-2 9/16"	6'-11 1/8"	8'-5 13/16"
28' Abut. span	4 1/2"	8	5'-1 11/16"	5'-3 3/8"	5'-11 1/4"	7'-3 1/8"
20'-20' Pier span	4 1/2"	9	4'-6"	4'-7 15/16"	5'-2 3/8"	6'-4 3/8"
28'-20' Pier span	4 1/2"	10	4'-0"	4'-1 11/16"	4'-7 7/16"	5'-7 7/8"
28'-28' Pier span	4 1/2"	11	3'-7 3/16"	3'-8 3/4"	4'-1 7/8"	5'-1 1/16"

Half cap length:
 0° skew 20'-0"
 15° skew 20'-6"
 30° skew 23'-0"
 45° skew 28'-6"
 (one 14' & one 14'-6")

PILE SPACING AND CROWN FOR 45' CLEAR ROADWAY 0% GRADE

	Dim. 'X'	No of piles	Spacing of piles			
			0° skew	15° skew	30° skew	45° skew
20' Abut. span	5 5/8"	9	5'-7 1/2"	5'-9 7/8"	6'-5 13/16"	7'-11 7/16"
28' Abut. span	5 5/8"	10	5'-0"	5'-2 1/8"	5'-9 5/16"	7'-0 7/8"
20'-20' Pier span	5 5/8"	11	4'-6"	4'-7 15/16"	5'-2 3/8"	6'-4 3/8"
28'-20' Pier span	5 5/8"	12	4'-1 1/16"	4'-2 13/16"	4'-8 11/16"	5'-9 1/16"
28'-28' Pier span	5 5/8"	13	3'-9"	3'-10 9/16"	4'-3 15/16"	5'-3 5/8"

Half cap length:
 0° skew 24'-0"
 15° skew 25'-0"
 30° skew 28'-0"
 (two 14')
 45° skew 35'-0"
 (one 20' & one 15')

PILE SPACING AND CROWN FOR 42' CLEAR ROADWAY 0% GRADE

	Dim. 'X'	No of piles	Spacing of piles			
			0° skew	15° skew	30° skew	45° skew
20' Abut. span	5 1/4"	8	6'-0"	6'-2 9/16"	6'-11 1/8"	8'-5 13/16"
28' Abut. span	5 1/4"	9	5'-3"	5'-5 1/4"	6'-0 3/4"	7'-5 1/8"
20'-20' Pier span	5 1/4"	10	4'-8"	4'-10"	5'-4 9/16"	6'-7 3/16"
28'-20' Pier span	5 1/4"	11	4'-2 3/8"	4'-4 3/16"	4'-10 3/16"	5'-11 1/4"
28'-28' Pier span	5 1/4"	12	3'-9 13/16"	3'-11 7/16"	4'-4 15/16"	5'-4 13/16"

Half cap length:
 0° skew 23'-0"
 15° skew 24'-0"
 30° skew 26'-6"
 45° skew 33'-0"
 (one 19' & one 14')

GENERAL NOTES

- Pile spacing design based on type 'HC' precast concrete stringers.
- Pile spacing dimensions given in the tables to be measured along cap.
- A 12"x12" cap may be used for a 20' abutment span with a 21' clear roadway. A 12"x14" cap is used in all other cases.

SUPERSEDED
SUPERSEDED

DESIGNED BY R.P. Parish
 DATE JUNE 15 1964
 DETAILED BY F.M.
 DATE JUNE 15 1964
 CHECKED BY
 DATE

NO.	DATE	DESCRIPTION	BY
REVISIONS			

SUBSTRUCTURE LAYOUT
 STANDARD PRECAST SPANS
 27'; 30'; 36'; 42'; 45' CROWNED ROADWAYS
 MAIN HIGHWAYS

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

FILE NO. _____ HWY. NO. _____
 LOCATION _____ SCALE _____
 STREAM _____ SHEET _____ OF _____
 DWS. NO. S-862