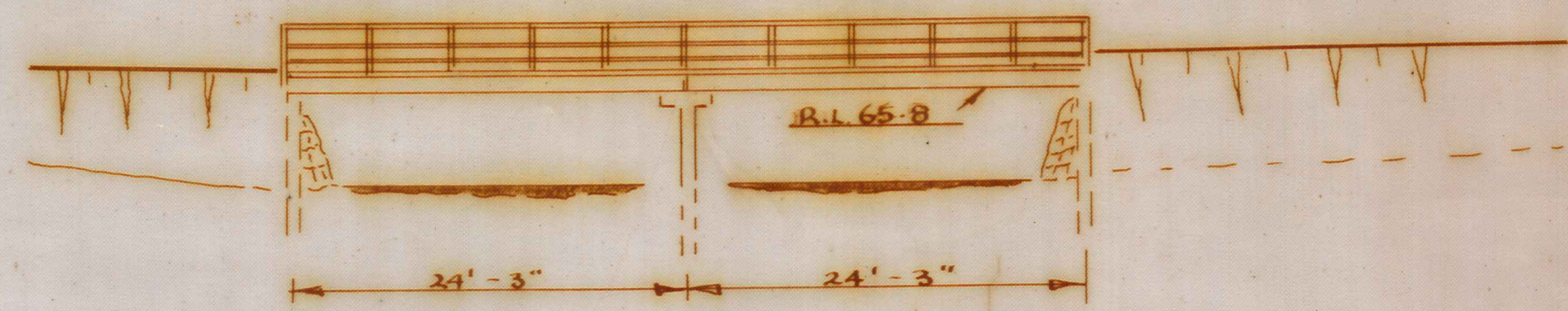
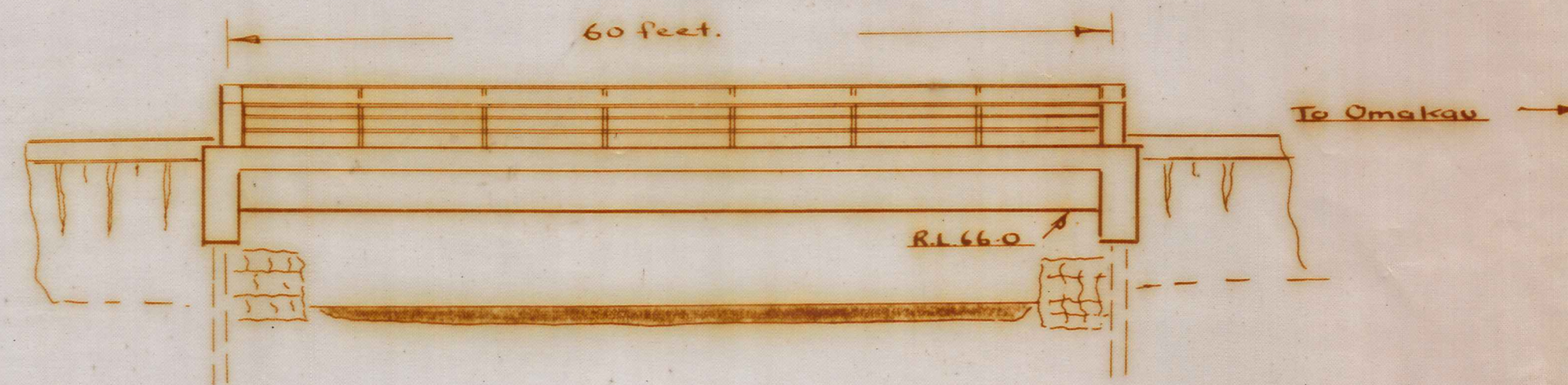


- PLAN - Scale 1 chain = 1 inch



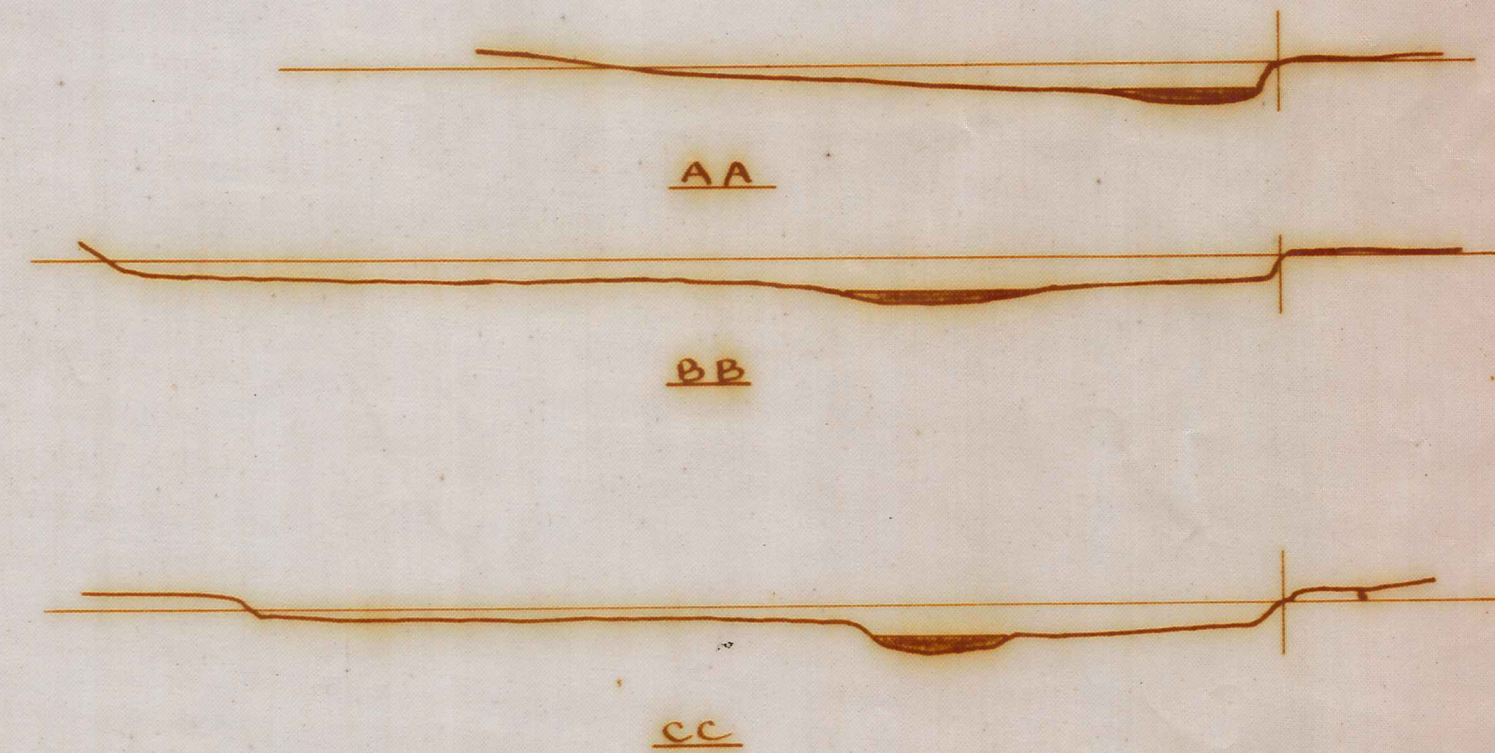
- X-SECTION OF EXISTING BRIDGE - Scale 10'-1"

Exist. Waterway allowing 2'-0" of freeboard = 168 sq ft.



- X-SECTION OF PROPOSED BRIDGE - 10'-1"

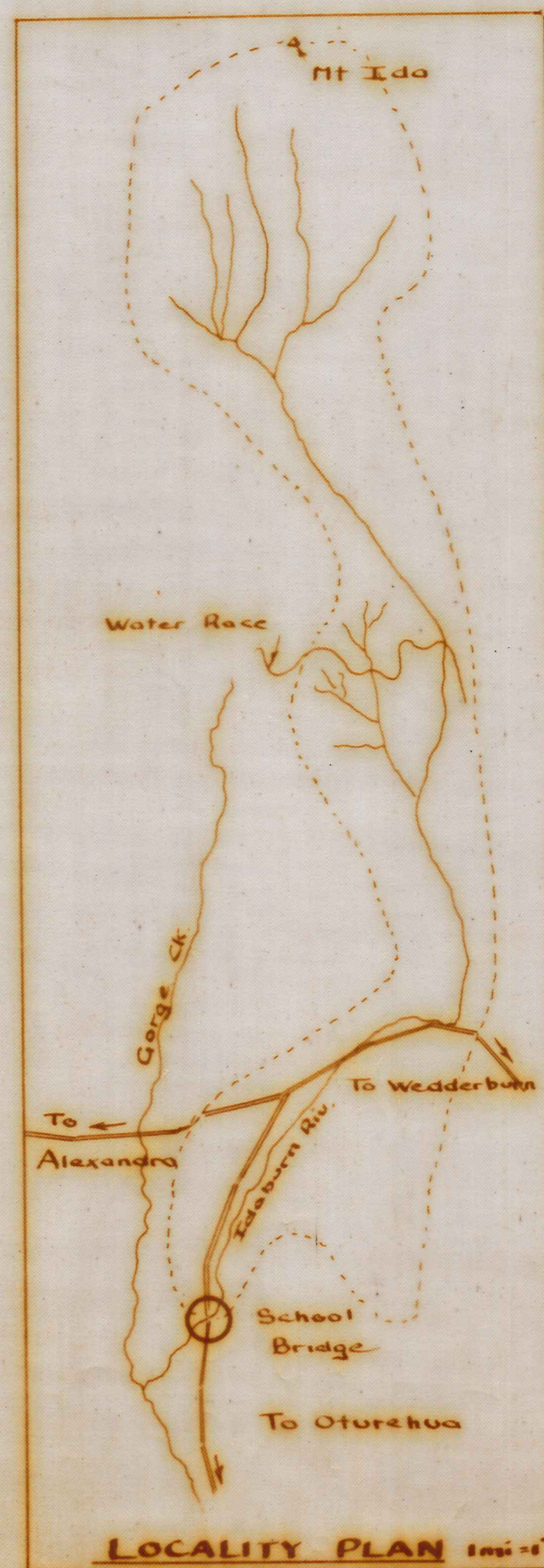
Proposed Waterway allowing 2'-0" of freeboard = 230 sq ft.



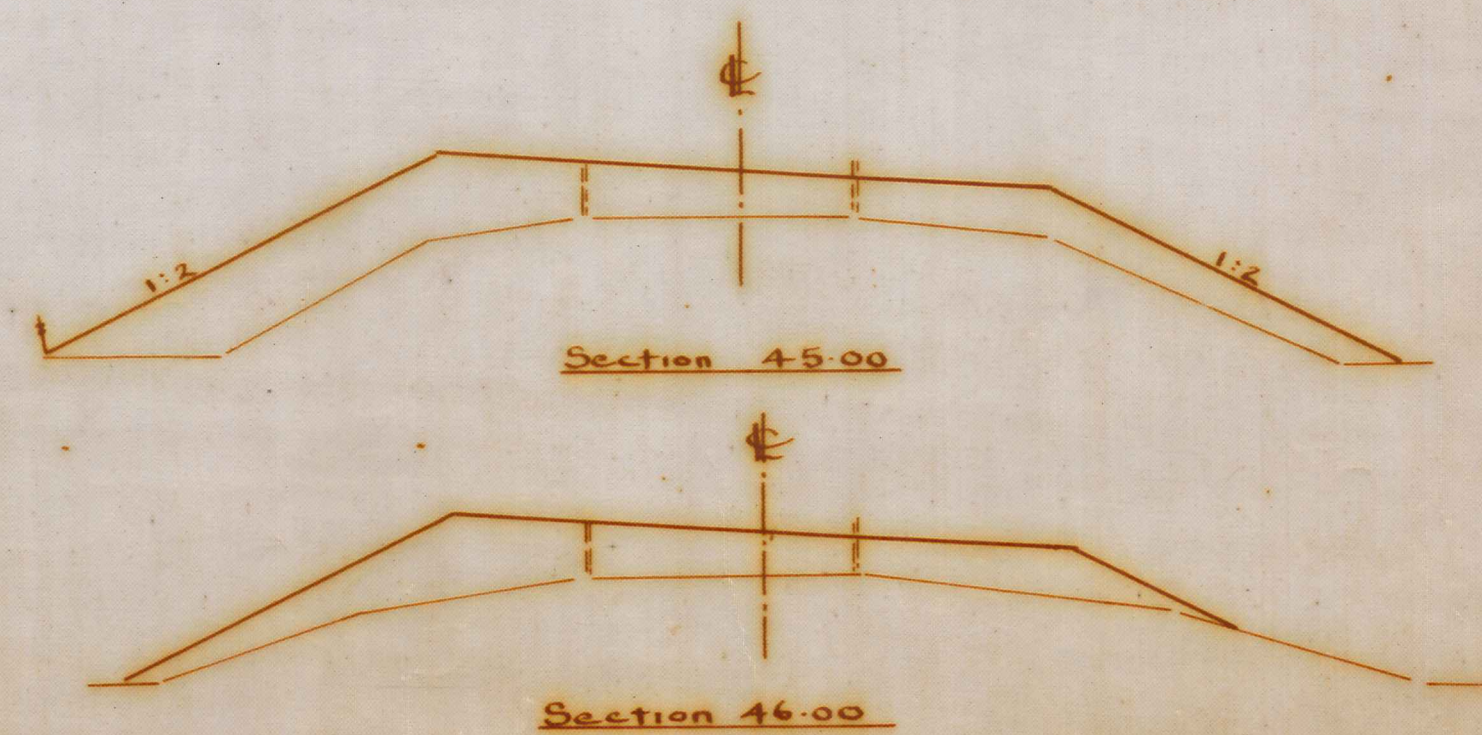
- STREAM X-SECTIONS - Scale 20'-1"

	Exist. & level Exist. Bridge							New Bridge											
	SE = 0.7"/ft																		
DATUM	330 FT																		
CHAINAGE	368.5	368.5	442.0	369.5	443.0	377	379	445.0	379.5	446.0	379.5	447.0	379.5	448.0	379.5	449.0	379.5	450.0	
FORMATION & LEV																			
EXIST. & LEVEL	368.5	368.5	442.0	369.5	443.0	377	379	445.0	379.5	446.0	379.5	447.0	379.5	448.0	379.5	449.0	379.5	450.0	
ALIGNMENT	← 50 M.P.H. TRANSITION CURVE →																		
GRADE	← REGRADE AS SHOWN →																		

- LONGSECTION - Scales Horiz 1ch = 1" Vert 10' = 1"



LOCALITY PLAN 1mi = 1"



EW = 30" SE = 0.7"/ft

MANIOTOTO COUNTY COUNCIL

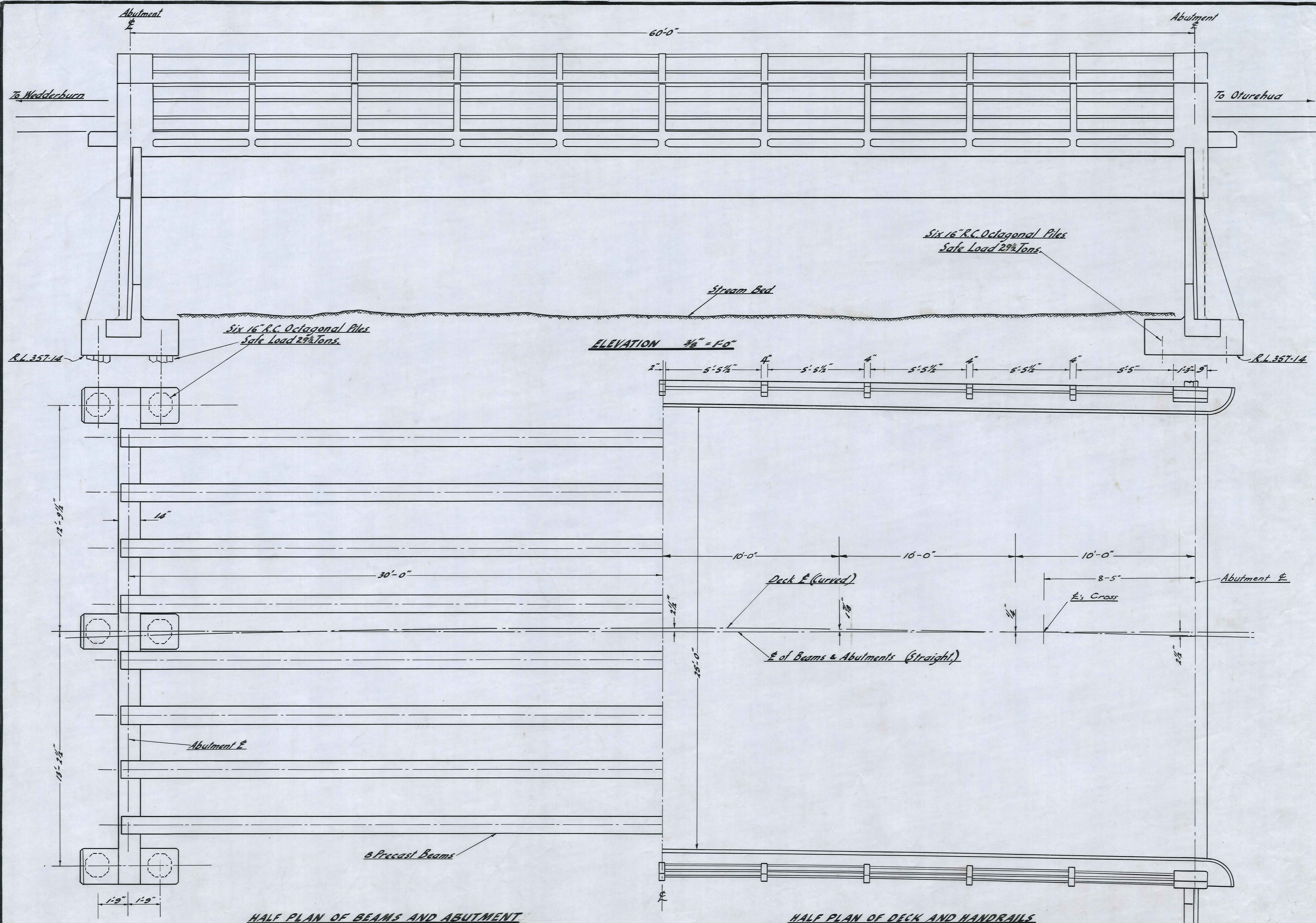
SCHOOL BRIDGE

DUFFILL, WATTS & KING  
CONSULTING CIVIL & STRUCTURAL ENGINEERS  
DUNEDIN AND INVERCARGILL

DESIGNED BY R.J.F. & J.L.F. MAY 63  
CHECKED G.P.F.  
DATE 7/63

JOB NO. 4288/1

EX 165 6/60



MANIOTOTO COUNTY COUNCIL.

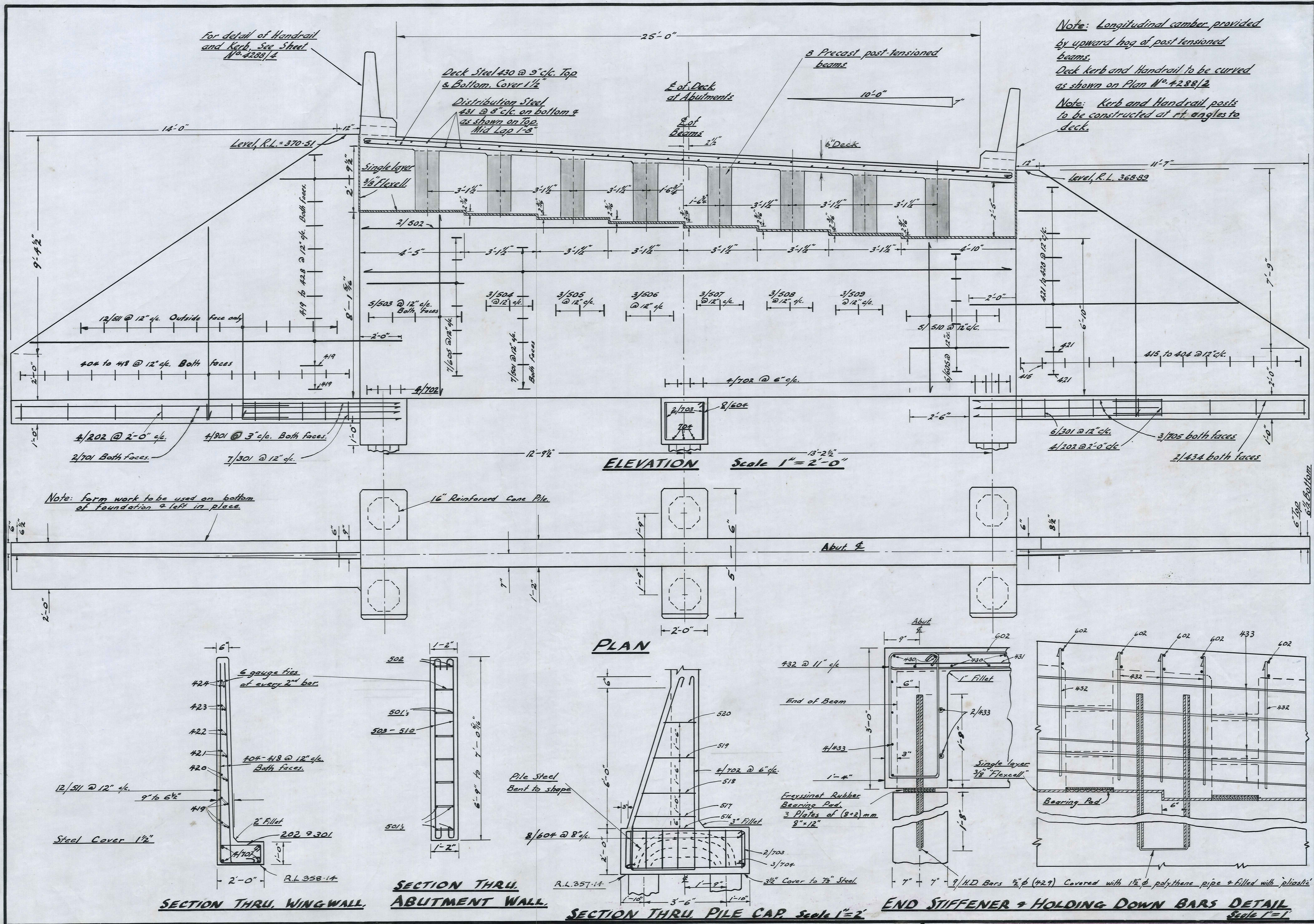
SCHOOL BRIDGE

DUFFILL, WATTS & KING  
CONSULTING CIVIL & STRUCTURAL ENGINEERS  
DUNEDIN and INVERCARGILL

	NAME	DATE
SURVEYED BY	R.J. FULTON	MAY 63
DRAWN	"	"
CALCULATIONS	"	"
CHECKED	"	"
TRACED	R. ALLWORDEN	JULY 63
APPROVED	(Signature)	JULY 63

JOB No.  
**4288/2**

F.BK. 165 FILE No 6/60



Note: Longitudinal camber provided by upward hog of post tensioned beams.  
 Deck kerb and Handrail to be curved as shown on Plan No. 4288/2  
 Note: Kerb and Handrail posts to be constructed at rt. angles to deck.

Note: Form work to be used on bottom of foundation & left in place.

ELEVATION Scale 1" = 2'-0"

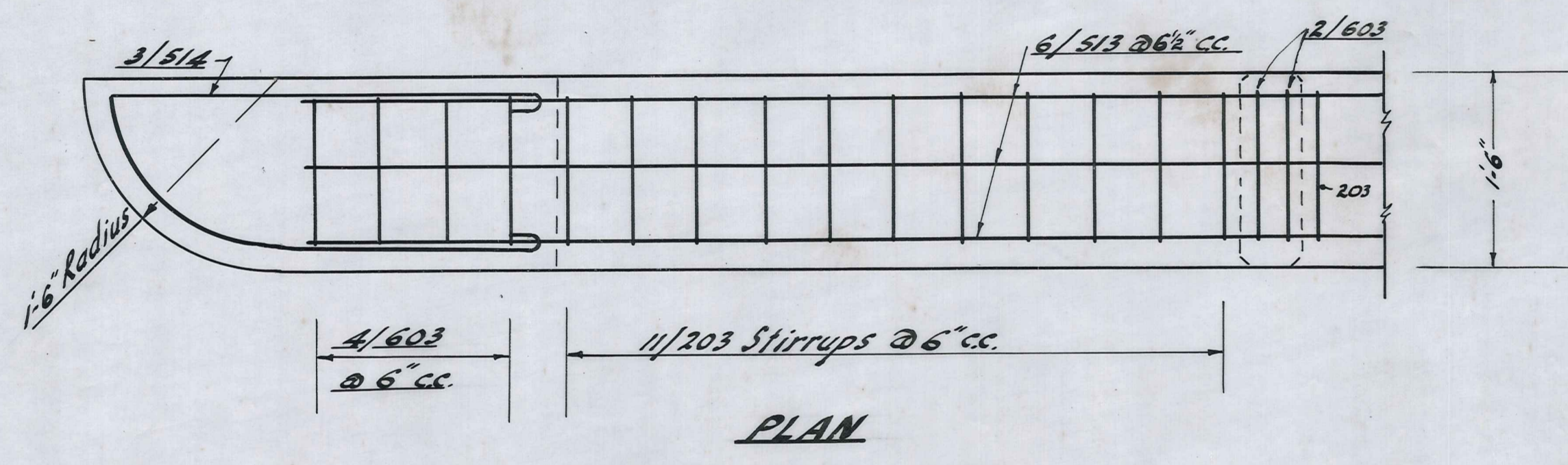
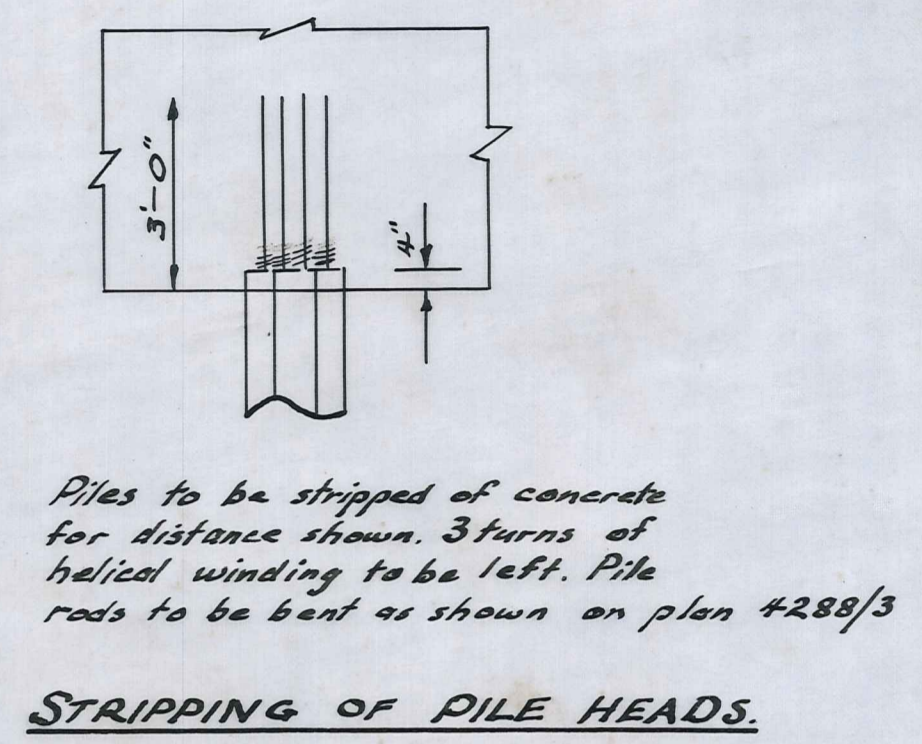
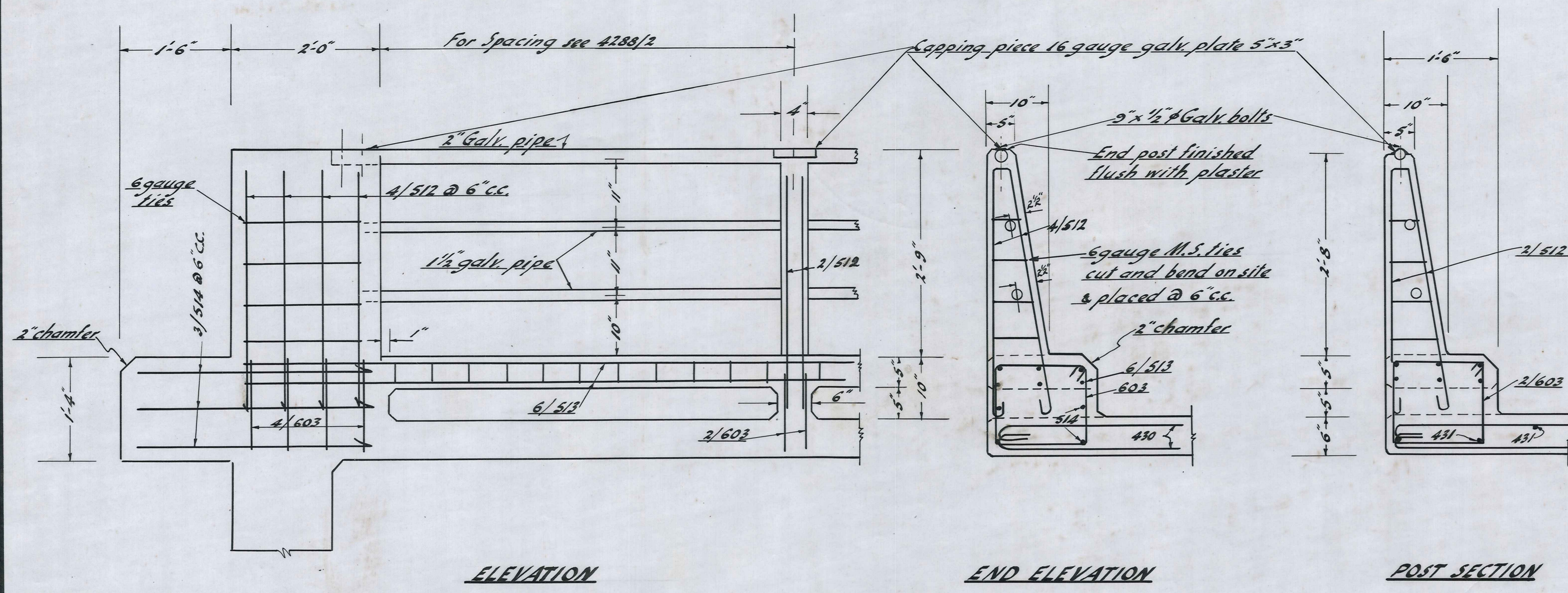
PLAN

END STIFFENER + HOLDING DOWN BARS DETAIL Scale 1" = 1"

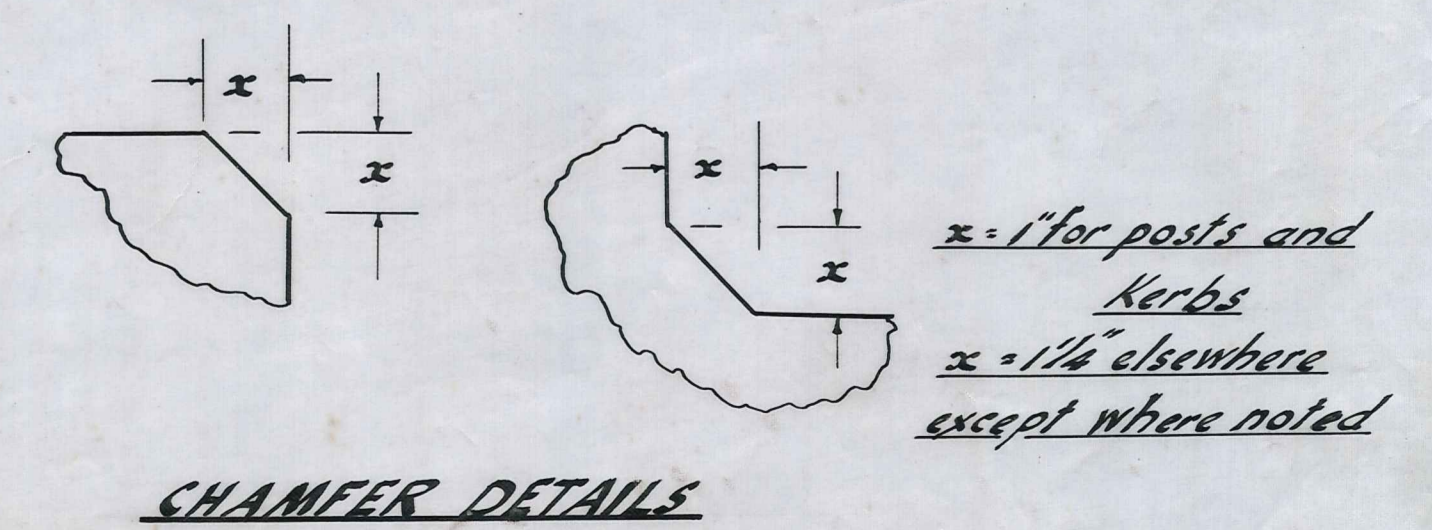
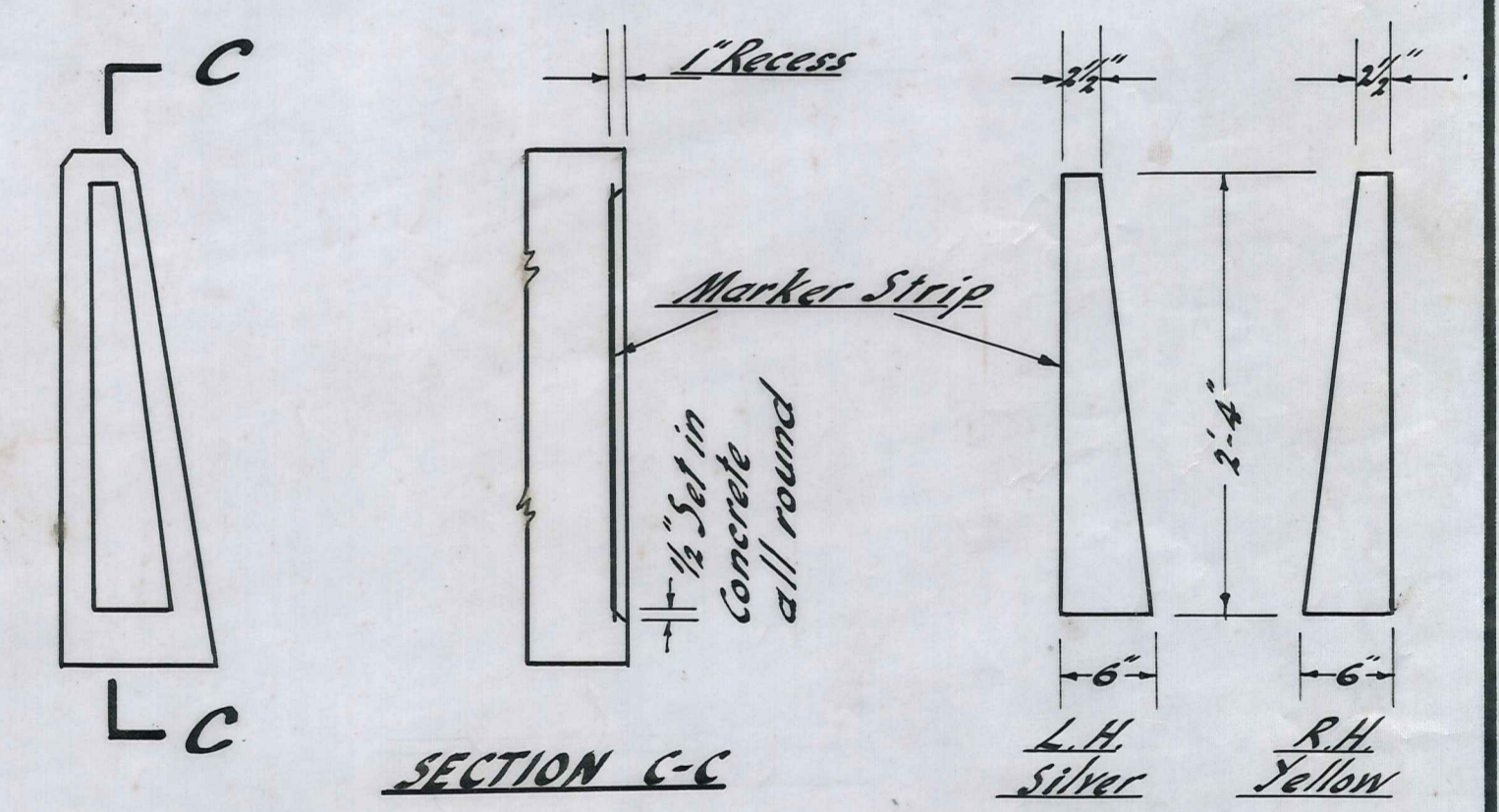
SECTION THRU WINGWALL

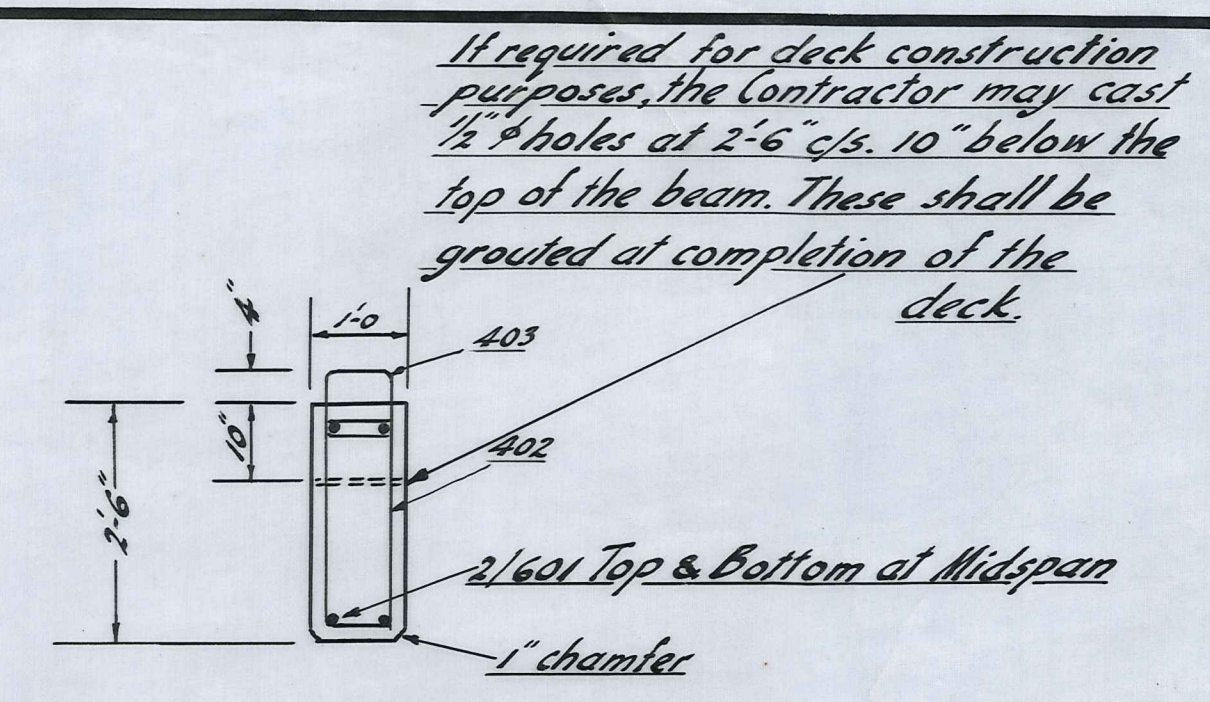
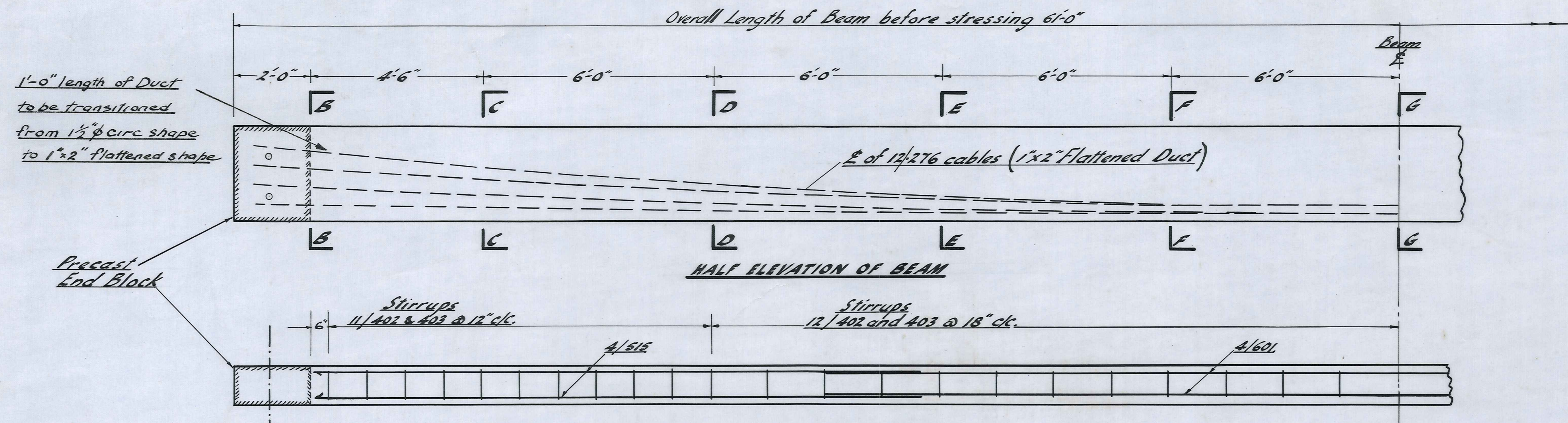
SECTION THRU ABUTMENT WALL

SECTION THRU PILE CAP Scale 1" = 2'



**DETAILS OF KERB, HANDRAILS & POSTS**





TYPICAL X SECTION

NOTE

Completed Beams must be handled right way up and shall be lifted and supported at the ends only.

Weight of Beams = 10.2 Tons

Min Concrete strength for 'on site' conc. 4000 p.s.i.

Cables shall not be stressed until concrete strength of 4000 p.s.i. has been reached.

Order of Stressing Cables to be 1, 2, 3, 4.

Stressing to be single ended at alternate ends.

Prestress force required at transfer = 103,500 lbs. per cable.

After stressing excess lengths of wire should be gas cut. (Do not use bolt cutters)

All cable ducts to be grouted after stressing.

Min Cover to Main M.S. Reinforcing = 1 1/2"

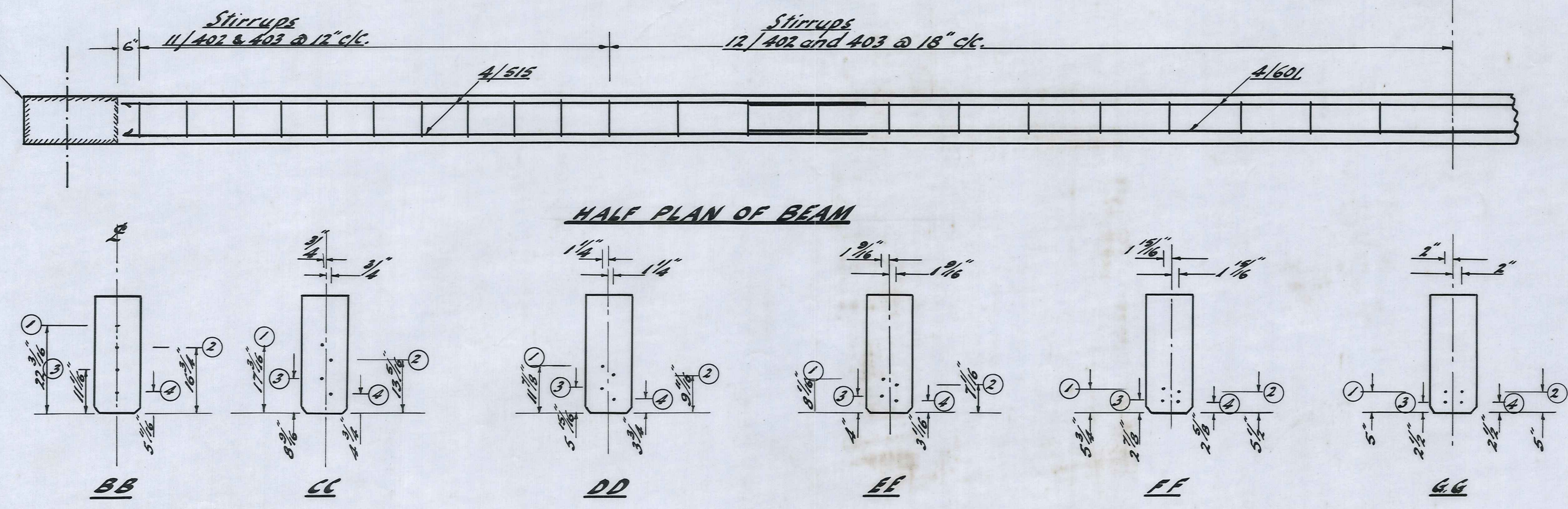
Tolerances

Cross sectional dimensions  $\pm 1/8$ "

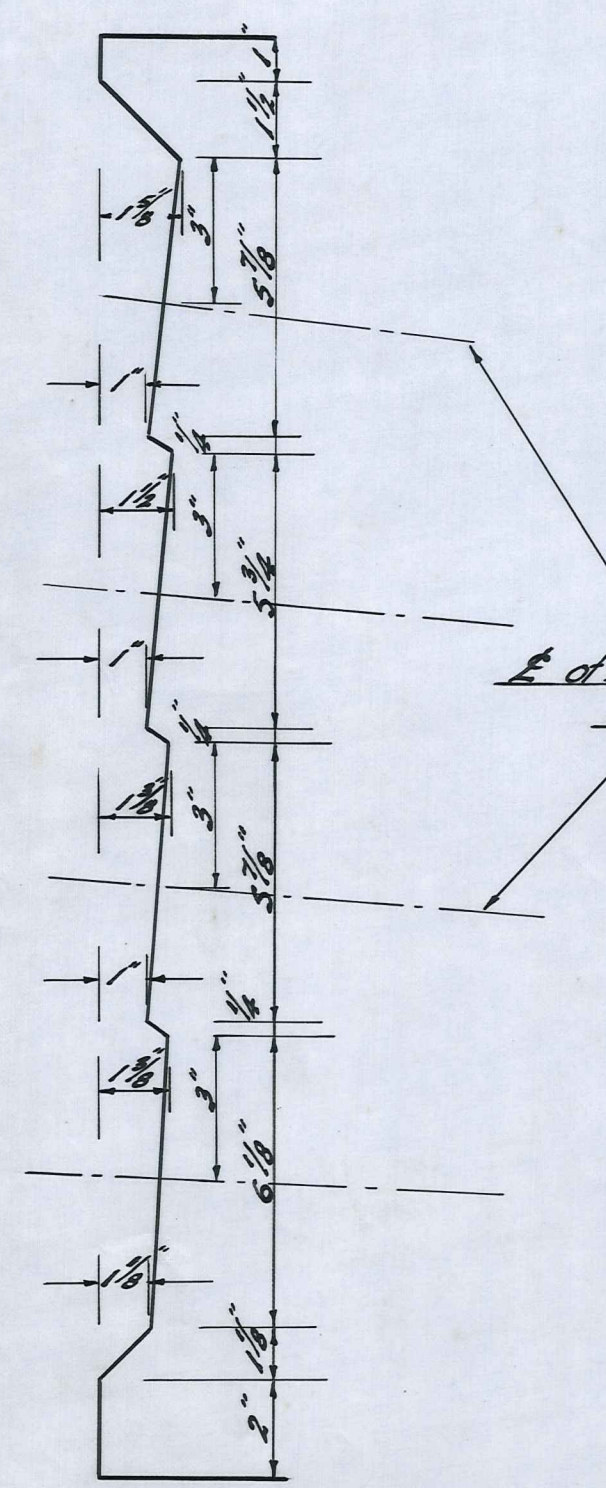
Location of cable ducts  $\pm 1/4$ "

Length dimension for Beam  $\pm 1/2$ "

The top of the beams shall be artificially roughened after compaction with a wooden float.

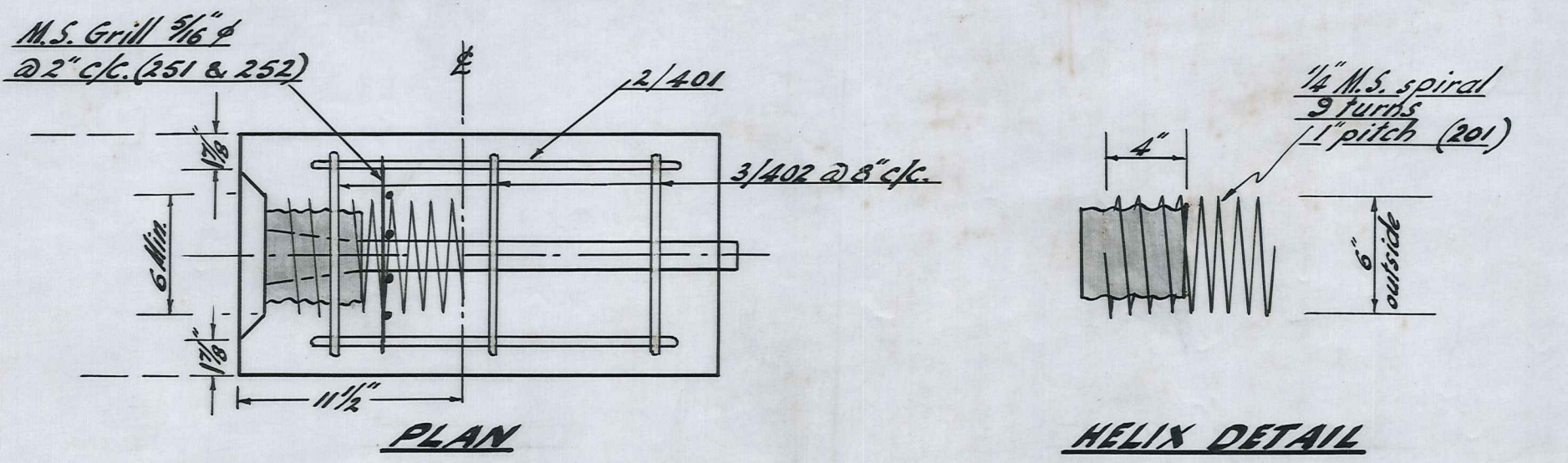


BEAM SECTIONS SHOWING CABLE POSITIONS Scale: 1/2" = 1'-0"



DETAIL OF END RECESS Scale: 3" = 1'-0"

- NOTE
- Standard 12W-276 anchorages to be placed as shown.
  - 1 1/2" Galv. Iron Ducts to be sealed to anchorages with tape.
  - Spiral Reinforcement to be screwed through grill.
  - Min concrete strength 6000 p.s.i. at 28 days.
  - Top of Anchor Block to be finished with a wooden float and artificially roughened.



PRECAST END BLOCK 6,000 p.s.i. CONC. Scale: 1 1/2" = 1'-0"

REINFORCEMENT FOR ANCHOR BLOCK ONLY

Mark	Dia	Cut Length	No. per Anchor Bl.	Shape
201	1/4"	16'-2"	4	6" outside spiral 9 turns pitch 1"
251	5/16"	9'-3 1/2"	1	2'-3" 2" c/c N.T.S.
252	5/16"	10'-11"	1	9" 2'-0" (2" c/c)
401	1/2"	8'-0"	2	1'-6" 2'-3" Note: All dimensions are to the outside of rods
402	1/2"	6'-10"	3	10" 2'-4"
403	1/2"	3'-6"	2	10" 8"

