

F.A.S. ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
1329	149-52	Iroquois	13	1
FED. ROAD DIST. NO. 7 ILLINOIS PROJECT 5-1329 (101)				

INDEX OF SHEETS

SHEET NO.	TITLE	SHEET
2	STD. 1744-1, STD. 1971-3, STD. 2159-2	
2A	STD. 2208-1	
3	STD. 2113-1 STD. 2070 RA-2	
4	PLAN AND PROFILE	STA. 628+00 TO STA. 644+00
5-11	BRIDGE DESIGN SHEETS	
12-13	ROADWAY CROSS SECTIONS	

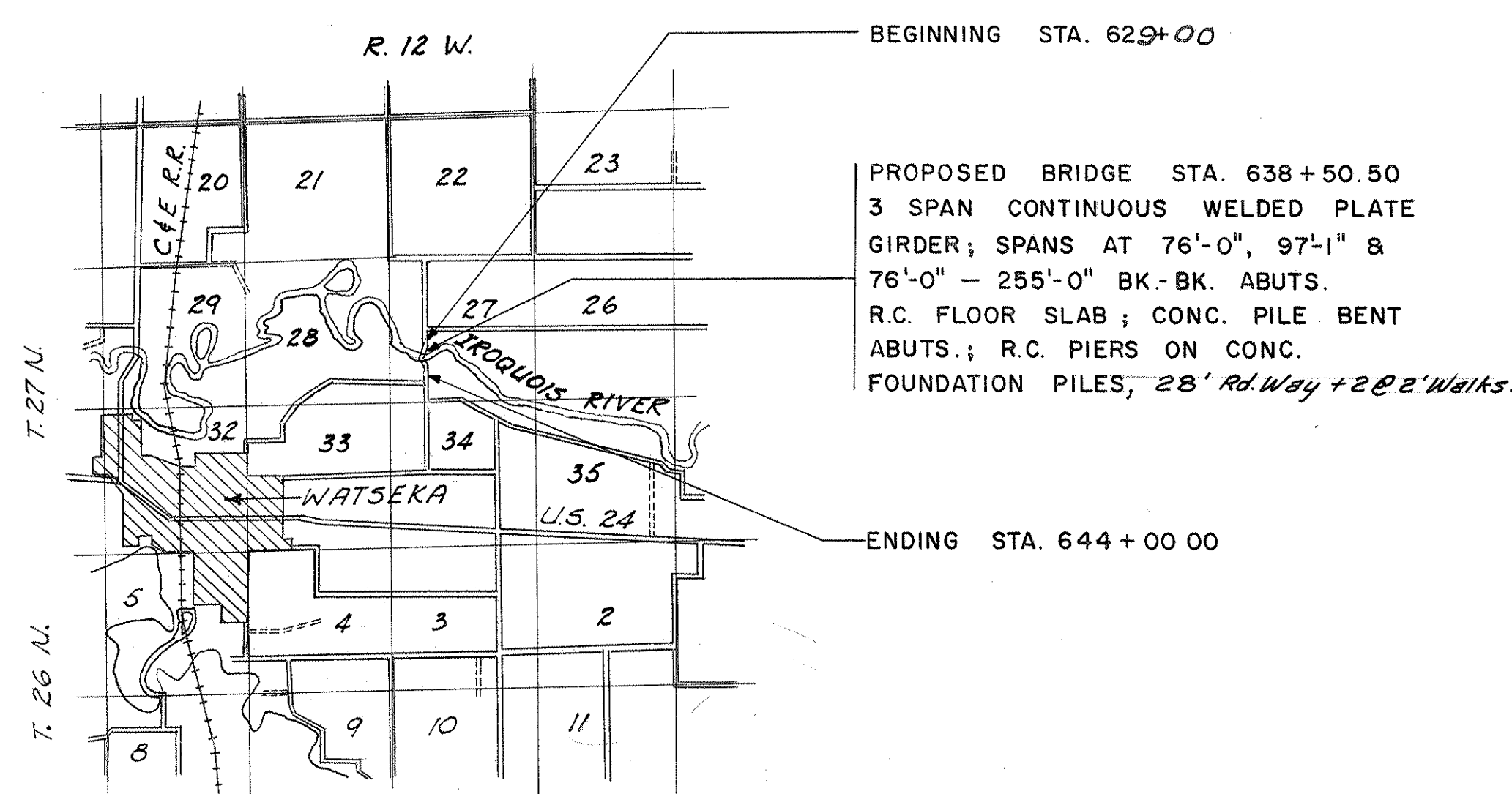
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS
**PLANS FOR PROPOSED
FEDERAL-AID SECONDARY PROJECT**

PLAN 1 INCH = 50 FEET
PROFILE HOR. 1 INCH = 50 FEET
PROFILE VERT. 1 INCH = 10 FEET
CROSS SECTIONS 1 INCH = 5 FEET

**F. A. S. ROUTE 1329 SECTION 149B-2 IROQUOIS COUNTY
PROJECT S-1329 (101)**

SUMMARY OF QUANTITIES

3795	CU. YD.	EARTH EXCAVATION	011001
5706	CU. YD.	BORROW EXCAVATION	013001
1561	TON	GRAVEL OR CRUSHED STONE SURFACE COURSE, TYPE A	036001
1	EACH	REMOVAL OF EXISTING STRUCTURES	049001
294	CU. YD.	COFFERDAM EXCAVATION	050005
1	EACH	COFFERDAM (PIER 1)	050006
1	EACH	COFFERDAM (PIER 2)	050007
13.3	CU. YD.	HANDRAIL CONCRETE	052001
153.1	CU. YD.	CLASS A CONCRETE	052002
333.5	CU. YD.	CLASS X CONCRETE	052003
1019	SQ. YD.	PROTECTIVE COAT	052021
240,230	LB.	FURNISHING AND ERECTING STRUCTURAL STEEL	054001
110,050	LB.	REINFORCEMENT BARS	059001
2755	LIN. FT.	FURNISHING METAL PILE SHELLS 12"	060014
1	EACH	TEST PILE METAL SHELLS	060017
2755	LIN. FT.	DRIVING AND FILLING SHELLS	060018
1	EACH	NAME PLATES	061001
1	LUMP SUM	BRIDGE SEAT SEALANT	201023
17	EACH	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	104001



SCALE: 1 INCH = 1 MILE

LAYOUT

NET LENGTH OF IMPROVEMENT = 1500 = 0.284 MILES

APPROVED

FOR STRUCTURAL ADEQUACY ONLY

(Signature)
Engineer of Bridge & Traffic Structures

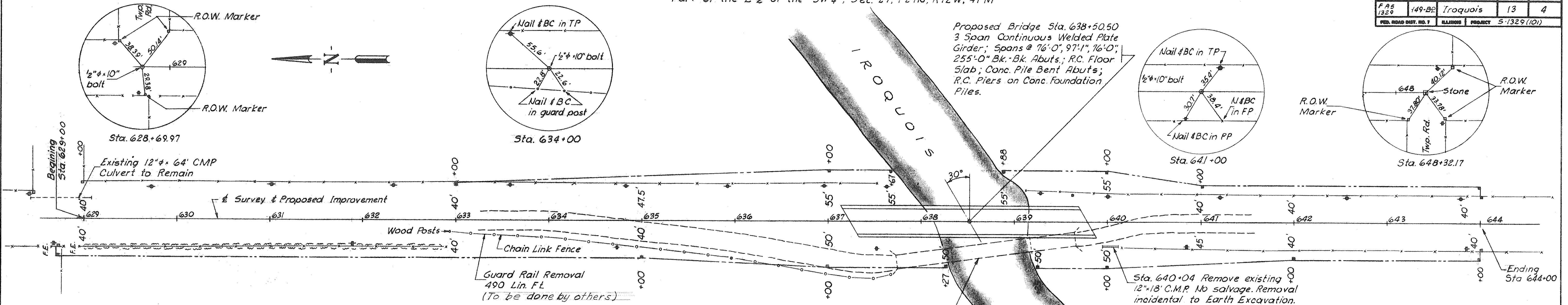
STATE OF ILLINOIS DEPARTMENT OF PUBLIC WORKS AND BUILDINGS DIVISION OF HIGHWAYS	
SUBMITTED 1-26-1965	
<i>(Signature)</i>	DISTRICT ENGINEER
PASSED March 23, 1965	
<i>(Signature)</i>	ENGINEER OF LOCAL ROADS AND STREETS
APPROVED March 23, 1965	
<i>(Signature)</i>	CHIEF HIGHWAY ENGINEER
APPROVED March 23, 1965	
<i>(Signature)</i>	DIRECTOR

Contract # 21769

Part of the E 1/2 of the SW 1/4, Sec. 27, T27N, R12W, 4PM

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F 85 1320	149-BE	Troquois	13	4
FED. ROAD DIST. NO. 1	HAZARD	PROJECT	5-1329(101)	

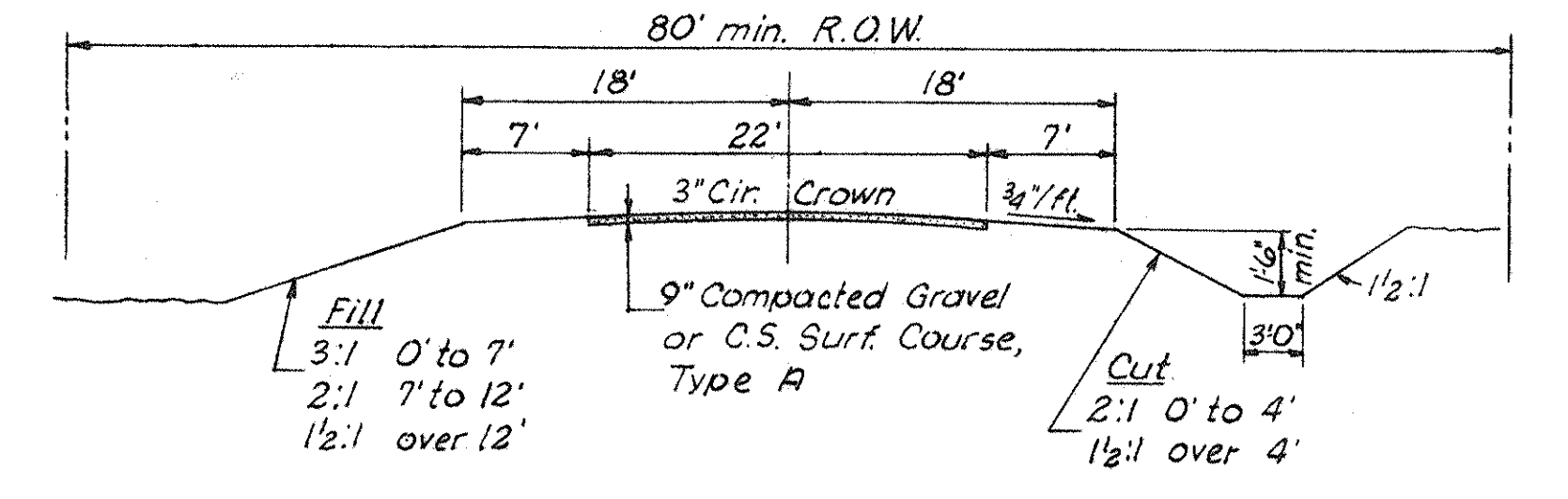
DATE	BY	BY
17-18-54	REO	REO
DATE	BY	BY
17-18-54	REO	REO
DATE	BY	BY
17-18-54	REO	REO



BILL OF MATERIAL

ITEM	UNIT	QTY
Earth Excavation	Cu. Yds.	3795
Borrow Excavation	Cu. Yds.	5706
Gravel or C.S. Surface Course, Type A	Tons	1561
R.O.W. Markers (BLR Std. 1744-1)	Each	17

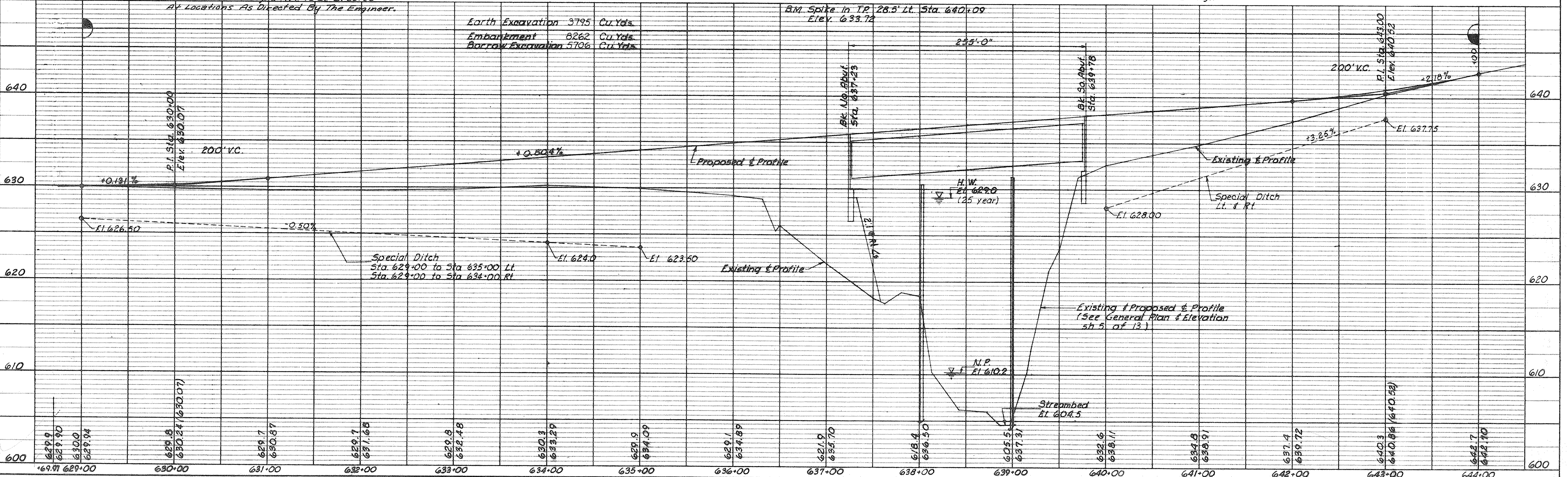
THE NOMINAL THICKNESSES FOR SUB-BASE GRANULAR MATERIAL AND GRAVEL OR CRUSHED STONE SHOULDERS TYPE A; BASE AND SURFACE COURSES ARE SHOWN ON THE TYPICAL SECTIONS, STANDARDS, SCHEDULES OR SPECIAL DETAILS. THE CONSTRUCTED THICKNESSES OF THE ABOVE ITEMS SHALL NOT BE LESS THAN 90 PER CENT OF THE NOMINAL THICKNESS AT ANY LOCATION.



TYPICAL CROSS SECTION
(Construct as shown on Station Cross Sections)

Part of the W 1/2 of the SW 1/4, Sec. 27, T27N, R12W, 4PM

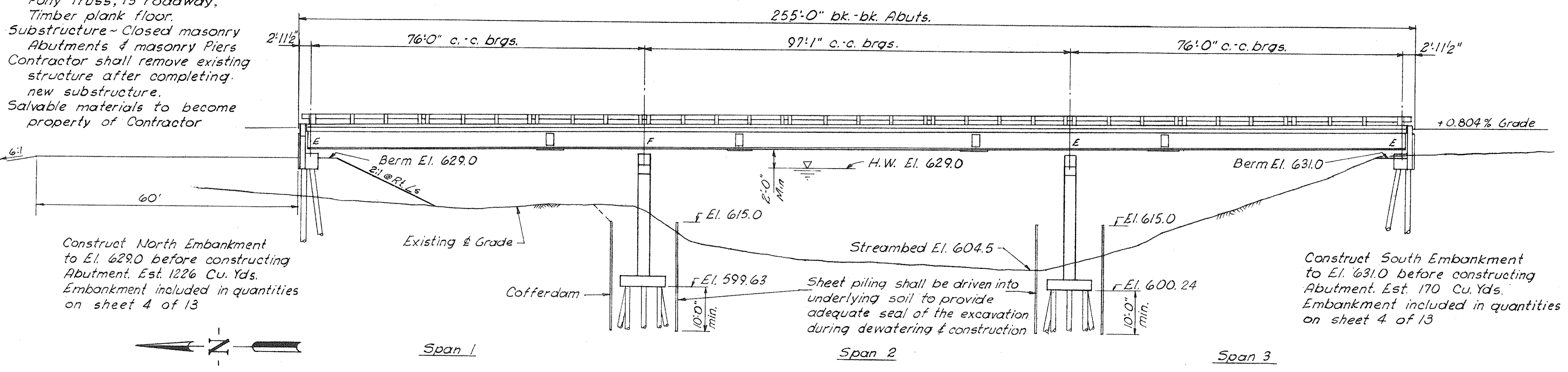
NOTE: Two STD 2159-2 Signs Are To Be Erected At Locations As Directed By The Engineer.



DATE	BY	BY
17-18-54	REO	REO
DATE	BY	BY
17-18-54	REO	REO
DATE	BY	BY
17-18-54	REO	REO

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1329	149B2	Iroquois	13	5
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT S-1329 (101)	SHEET 1 OF 7	

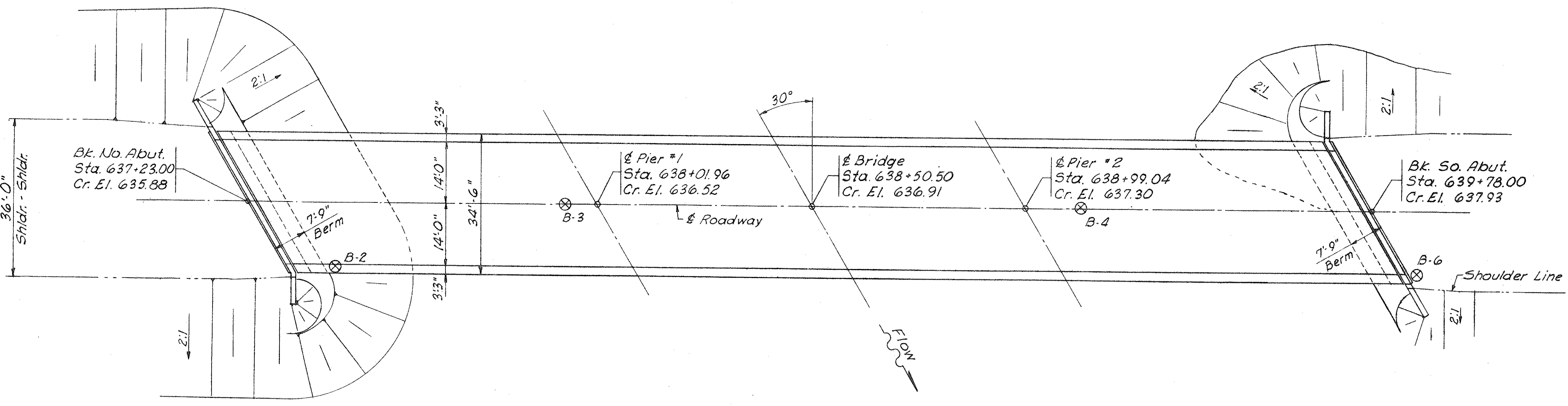
BM - Spike in T.P. 28.5' Lt.
Sta. 640+09 Elev. = 633.72
Existing Structure - 3 span
Pony Truss, 13' roadway,
Timber plank floor.
Substructure - Closed masonry
Abutments & masonry Piers
Contractor shall remove existing
structure after completing
new substructure.
Salvage materials to become
property of Contractor



ELEVATION

GENERAL NOTES

Class X Concrete shall be used throughout except in piers & handrail.
Class A Concrete shall be used in the Piers.
Handrail Concrete shall be used in the handrails.
The concrete floor slab shall be finished in accordance with Article 51.19 of the Standard Specifications and shall be poured in one continuous operation between construction joints.
Rivets shall be 3/4" ϕ and open holes shall be 1 3/16" ϕ unless noted.
High strength steel bolts may be substituted for field rivets.
Structural Steel shall be A.S.T.M. Designation A-36.
All holes for splices shall be punched 1/16" ϕ and reamed to proper size (1 5/16" ϕ in web and 1 5/16" ϕ in flange) with all girders assembled in the shop in proper position. Leave assembled in shop for inspection.
Except as otherwise provided, all structural steel shall receive one (1) shop coat of red lead paint and two (2) field coats of aluminum paint. See Article 56.1 thru 56.5 inclusive of the Standard Specifications.
The Contractor shall drive one cast-in-place concrete test pile at the South Abutment in a permanent location as directed by the Engineer.
For detailed specifications pertaining to the Welding of Structural Steel and Cofferdams See Special Provisions For Protective Coat see Art. 52.14A of the Supplemental Specifications

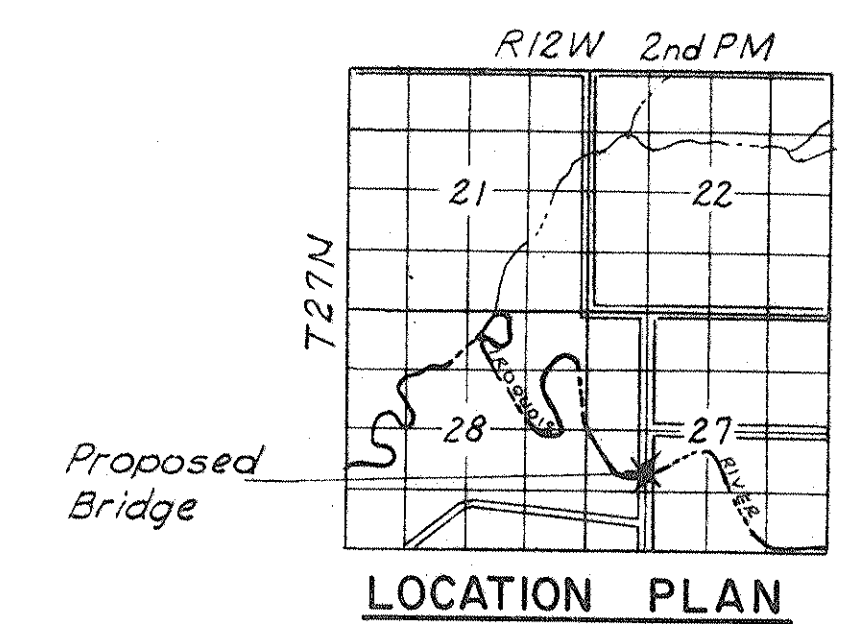


PLAN

TOTAL BILL OF MATERIAL

ITEM	SUPER	SUB	TOTAL
Removal of Existing Structures	Each	-	1
Cofferdam Excavation	Cu. Yds.	294	294
Cofferdam (Pier 1)	Each	1	1
Cofferdam (Pier 2)	Each	1	1
Handrail Concrete	Cu. Yds.	13.3	13.3
Class A Concrete	Cu. Yds.	153.1	153.1
Class X Concrete	Cu. Yds.	247.8	333.5
Protective Coat	Sq. Yds.	1019	1019
Furnishing & Erecting Structural Steel	Lbs.	240,230	240,230
Reinforcement Bars	Lbs.	86,850	110,050
Concrete Piles	Lin. Ft.	2755	2755
Test Piles (Concrete)	Each	1	1
Name Plates	Each	1	1
Bridge Seat Sealant	L. Sum	-	1

* Applied at Abutments



LOCATION PLAN

STATION 638+50.50
IROQUOIS RIVER
BUILT 196
F.A.S. RT. 1329 SEC 149B-2
F.A. PROJ. S-1329 (101)
LOADING HS20

LETTERING FOR NAME PLATE

Locate at the Northwest corner of bridge. See Std. 2113-1

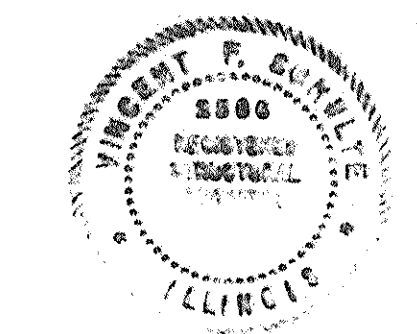
WATERWAY DATA

Drainage Area	458,240 acres
Present Opening	2,962 sq. ft.
Required Opening (25yr.)	2,950 sq. ft.
Proposed Opening	2,950 sq. ft.

DESIGN STRESSES

f_o	= 1,400 p.s.i.
f_s	= 20,000 p.s.i.
v	= 75 p.s.i. (Footings)
n	= 10

Illinois Structural #2586

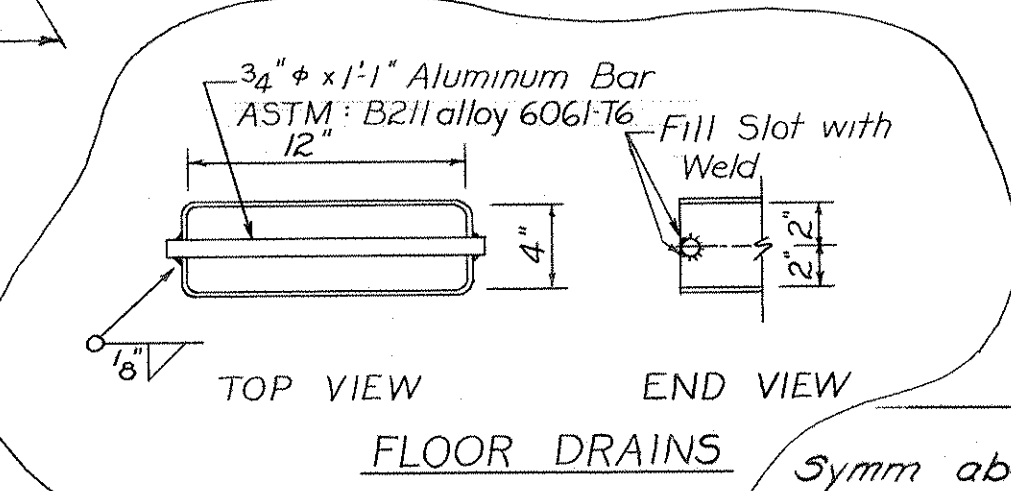
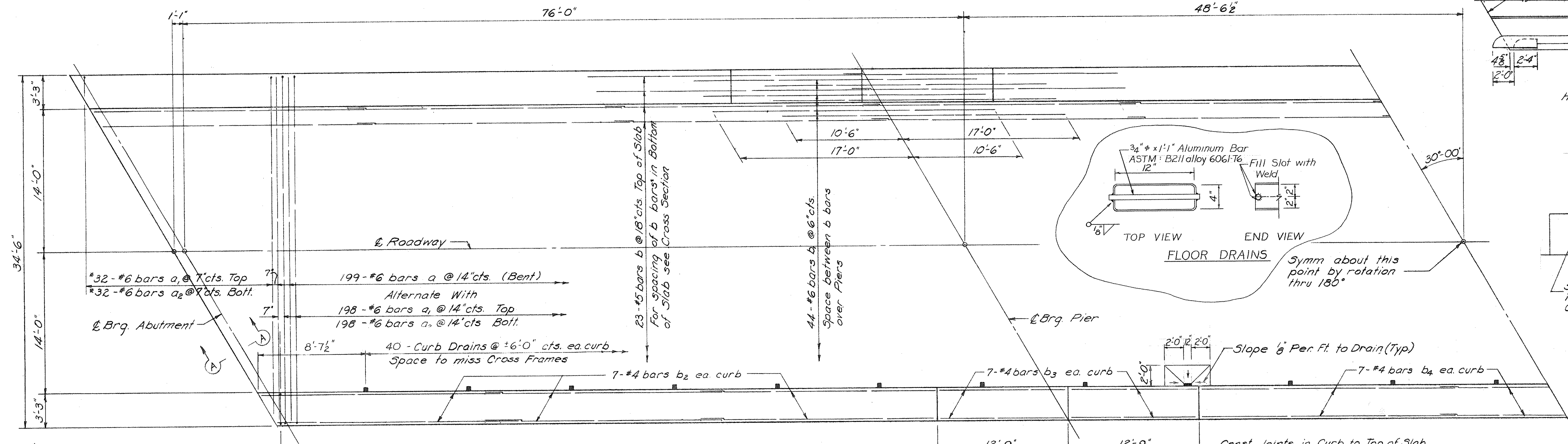
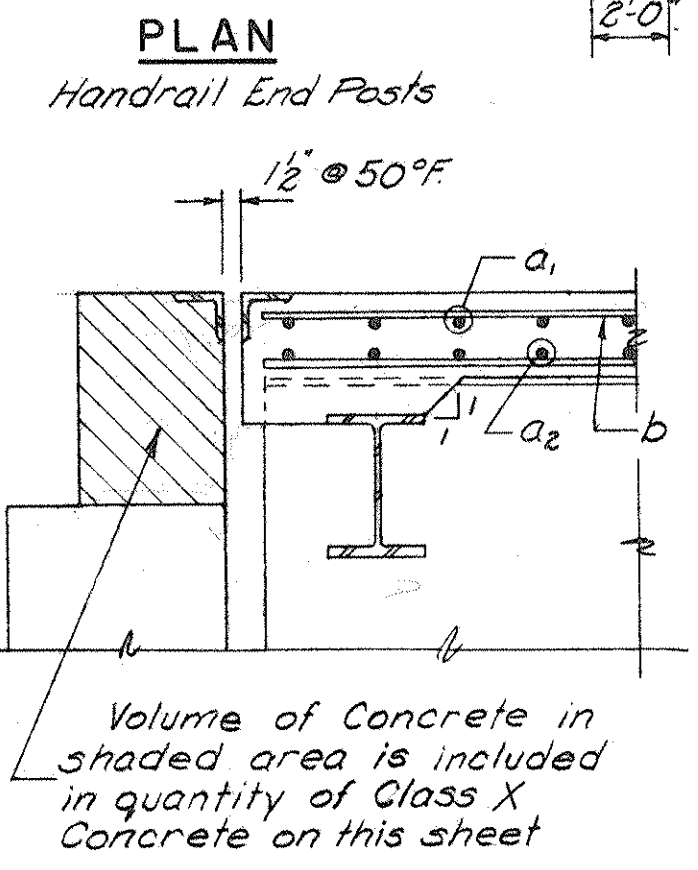
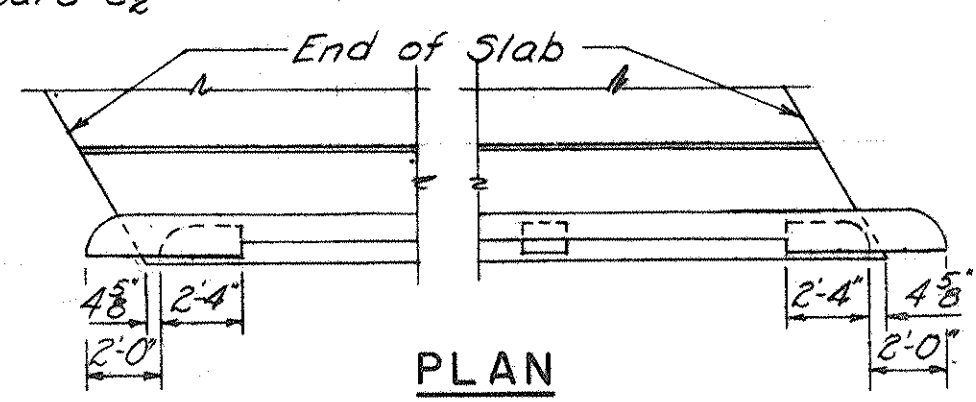
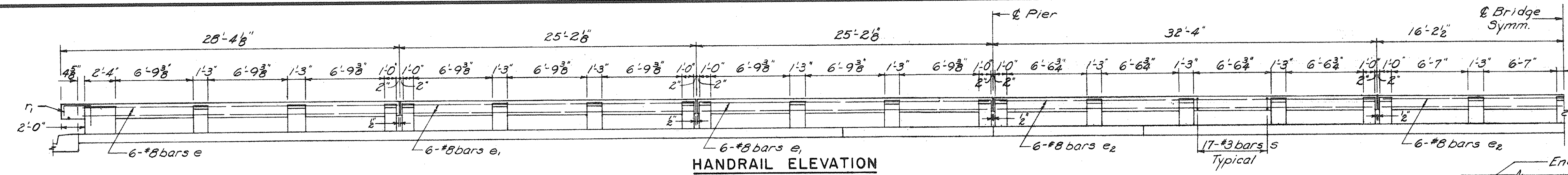


GENERAL PLAN & ELEVATION
PROJECT S-1329 (101)
FAS RT. 1329 SECTION 149-B2
REEDER BRIDGE
IROQUOIS COUNTY
STATION 638 + 50.50

WALTER E. HANSON & COMPANY
ENGINEERS-CONSULTANTS
DESIGNED G.L. DRAWN T.E.B. DATE 11-23-64
CHECKED CR & REO CHECKED V.F.S. NO. 64-55

Loading HS20-16

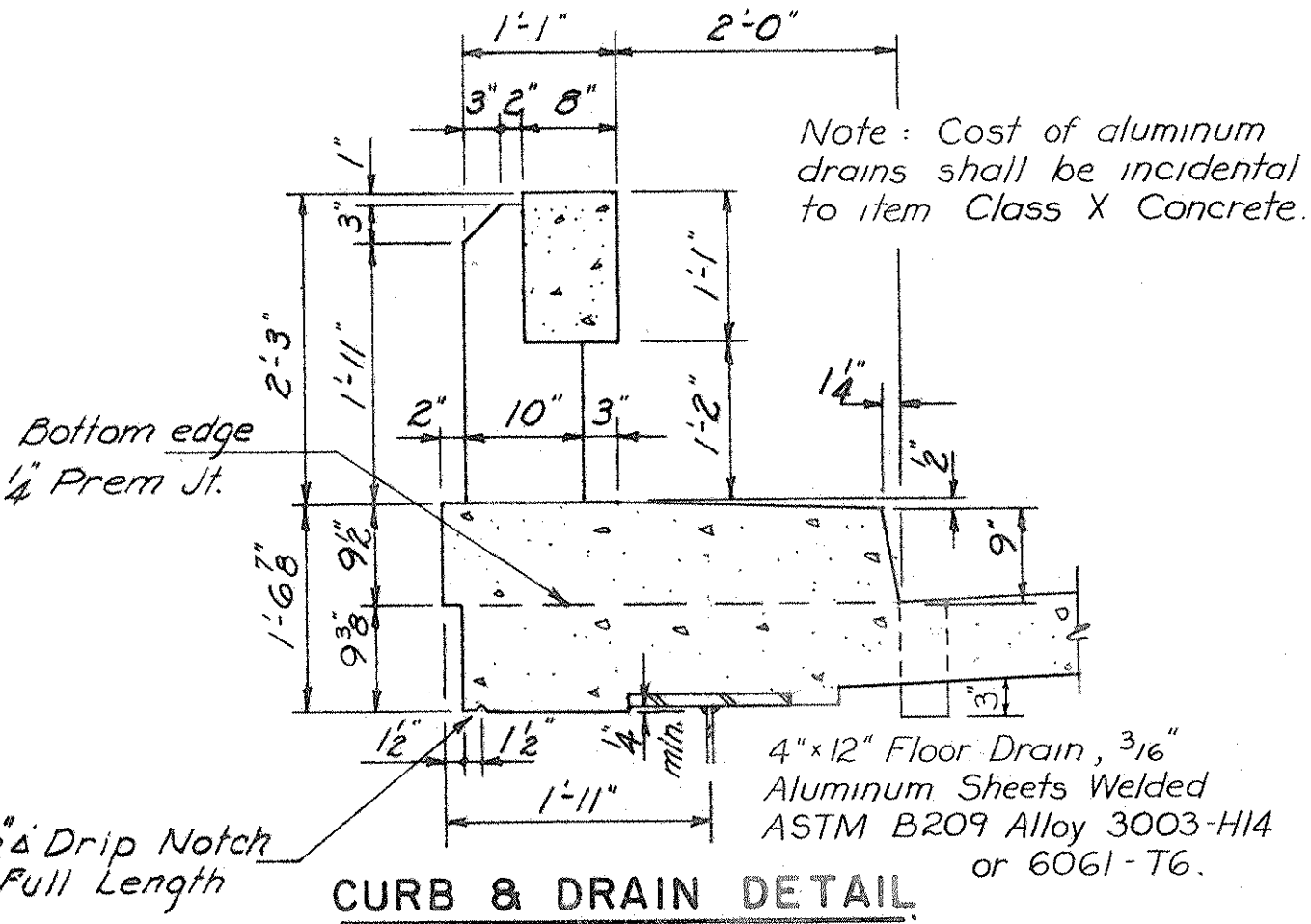
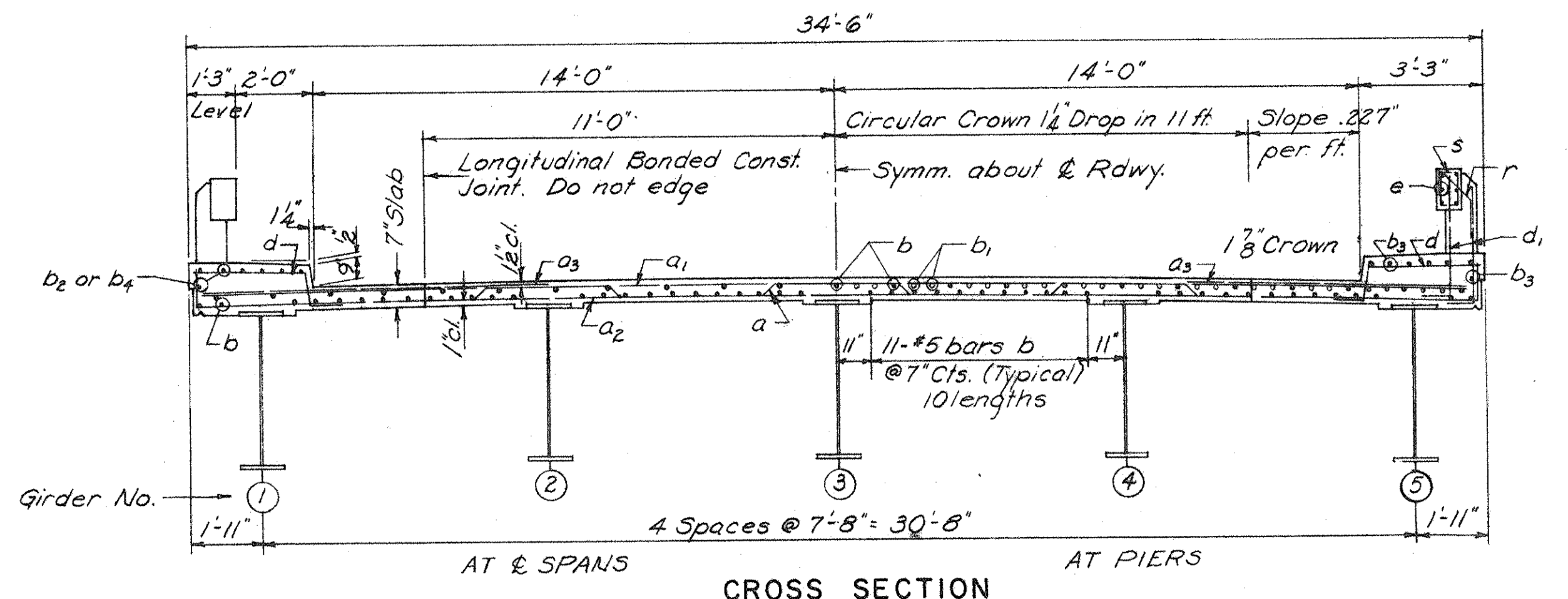
Note:
For other details of the Handrail See Std. 2070RA-2



*Note:
Order a₁, a₂ & a₃ bars full length. Cut in field to fit skew & use the remainder of the bars at the opposite end.

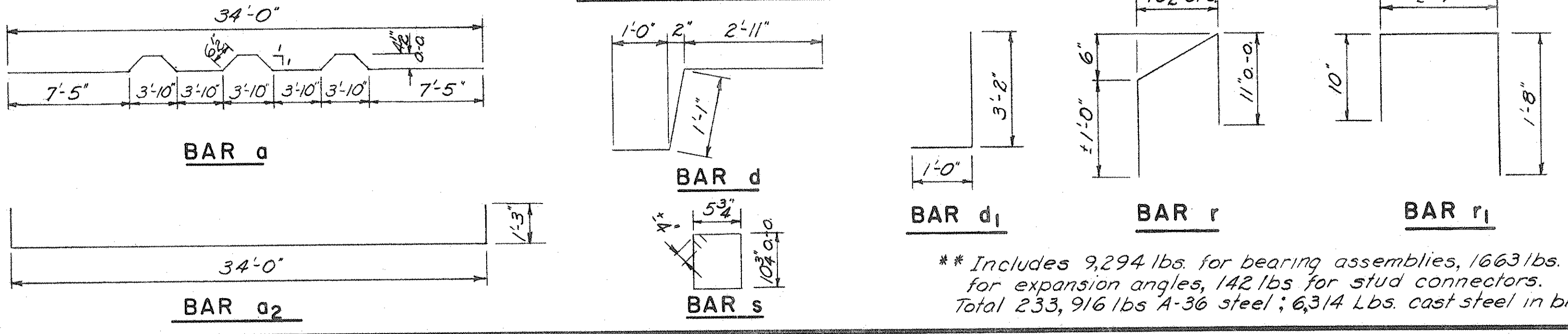
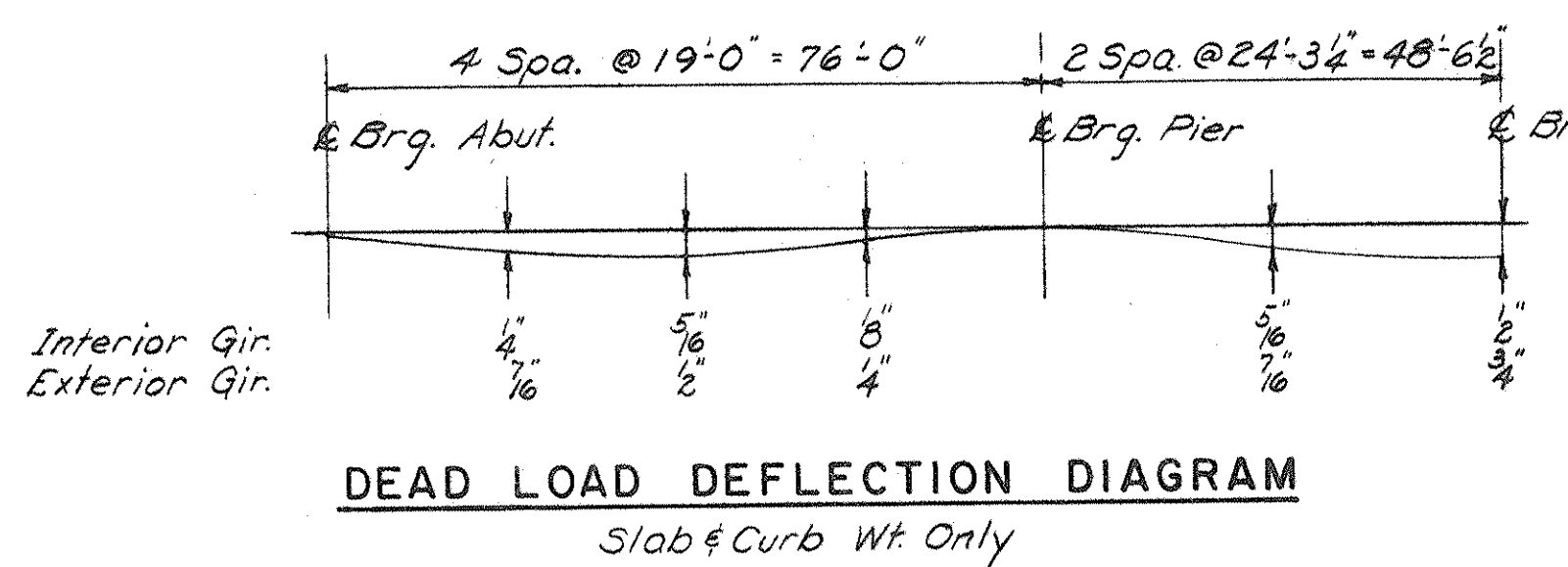
SUPERSTRUCTURE BILL OF MATERIAL

BAR	NO	SIZE	LENGTH	SHAPE
a	199	#6	35'-0"	~
a ₁	230	#6	34'-0"	~
a ₂	230	#6	36'-6"	~
a ₃	430	#6	9'-0"	~
b	710	#5	26'-6"	~
b ₁	88	#6	27'-6"	~
b ₂	84	#4	23'-0"	~
b ₃	56	#4	12'-6"	~
b ₄	42	#4	24'-10"	~
d	858	#6	5'-0"	~
d ₁	394	#8	4'-2"	~
e	24	#8	27'-11"	~
e ₁	48	#8	24'-11"	~
e ₂	36	#8	32'-1"	~
r	156	#4	3'-0"	~
r ₁	12	#4	4'-10"	~
s	1020	#3	3'-5"	~
Class X Concrete Cu. Yds. 247.8				
Handrail Concrete Cu. Yds. 13.3				
Reinforcement Bars Lbs. 86,850				
Structural Steel ** Lbs. 240,230				



METHOD OF DETERMINING FILLET HEIGHTS "t"

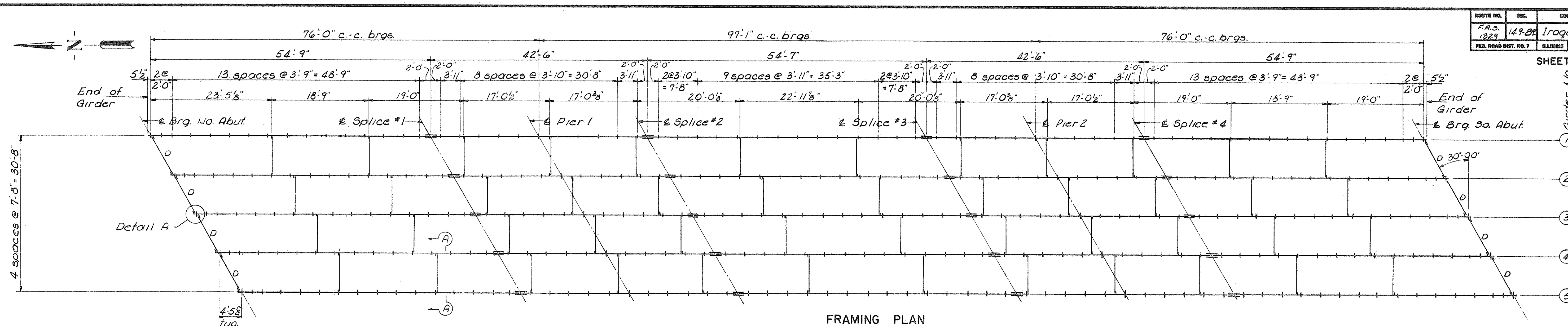
After all Structural Steel has been erected, elevations of the top flanges of the girders shall be taken at intervals not to exceed 10 feet. From these elevations subtract the increment of deflection for these points, determined from the Dead Load Deflection Diagram. The elevations so attained subtracted from the theoretical grade elevations, minus floor thickness, equals the fillet heights "t" above top of beam.



SLAB DETAILS
PROJECT S-1329 (101)
FAS RT. 1329 SECTION 149-B2
REEDER BRIDGE
IROQUOIS COUNTY
STATION 638+50.50
WALTER E. HANSON & COMPANY
ENGINEERS-CONSULTANTS

DESIGNED: G.L. DRAWN: V.F.S. DATE: 11-23-64
CHECKED: ERW. CHECKED: G.L. NO. 64-55

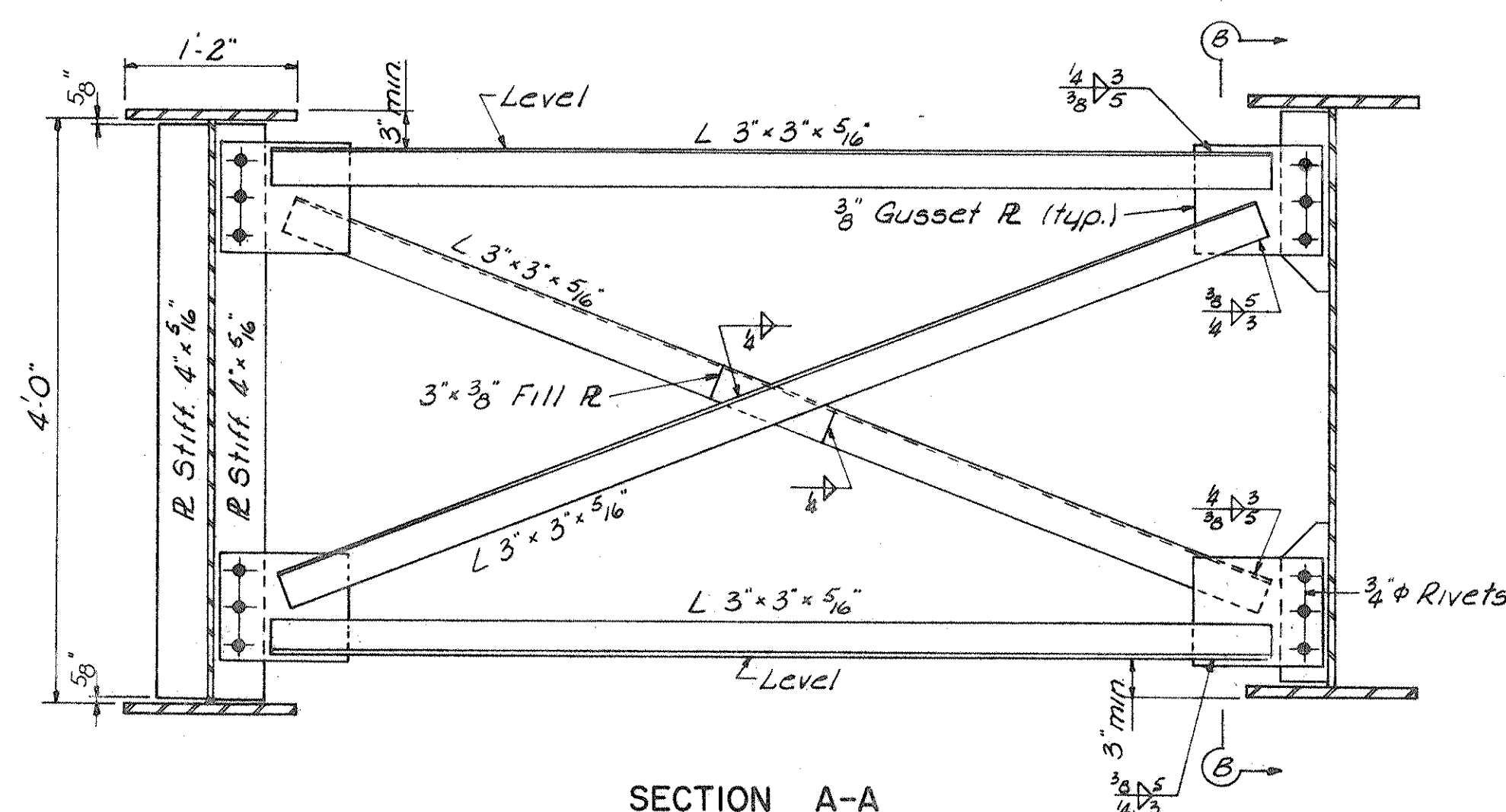
** Includes 9,294 lbs. for bearing assemblies, 1663 lbs. for expansion angles, 142 lbs for stud connectors. Total 233,916 lbs A-36 steel; 6,314 Lbs. cast steel in brgs.



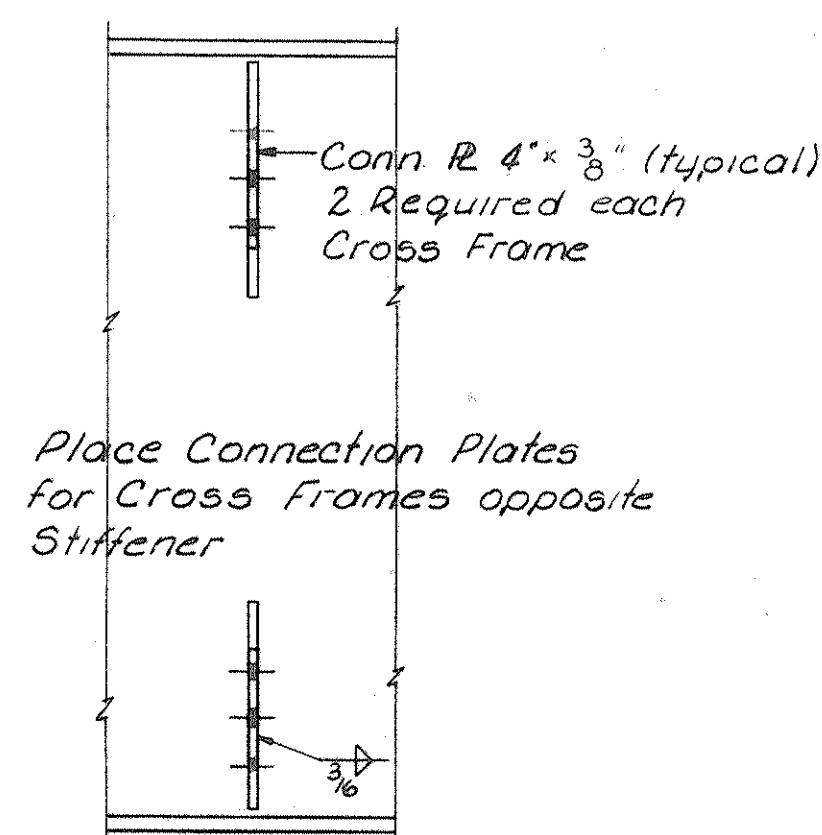
FRAMING PLAN

TOP OF WEB ELEVATIONS

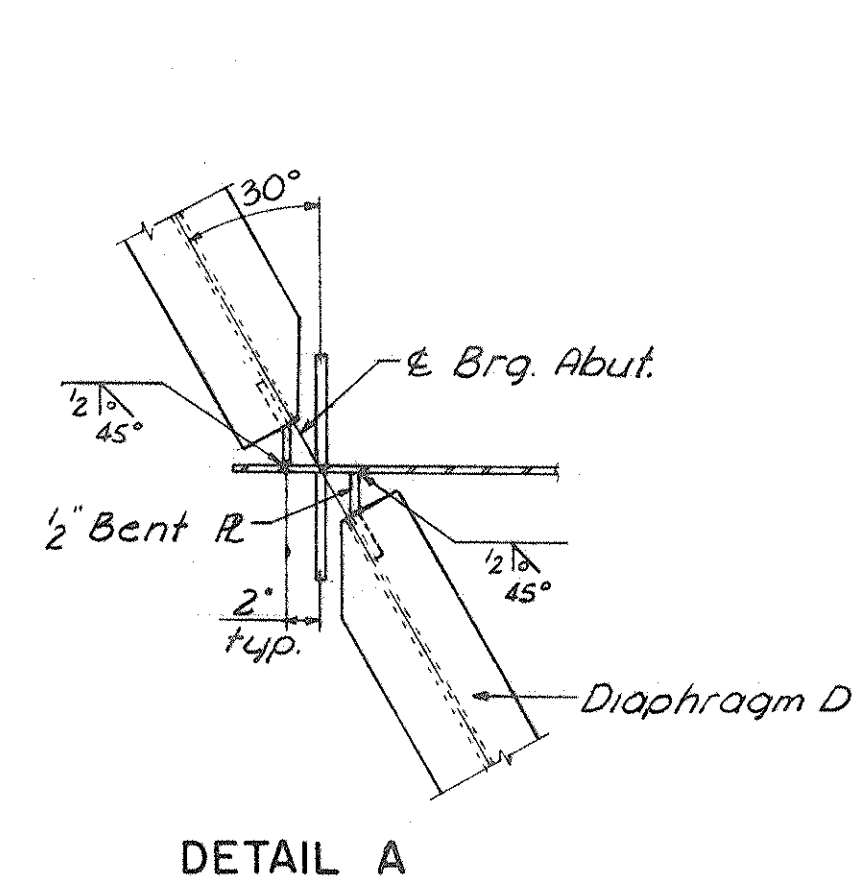
No.	Abut. No.	Splice #1	Pier 1	Splice #2	Splice #3	Pier 2	Splice #4	Abut. No.
1	634.95	635.39	635.57	635.74	636.17	636.35	636.52	636.96
2	635.12	635.56	635.74	635.91	636.34	636.52	636.69	637.13
3	635.20	635.64	635.82	635.99	636.42	636.60	636.77	637.21
4	635.19	635.63	635.81	635.98	636.41	636.59	636.76	637.20
5	635.09	635.53	635.71	635.88	636.31	636.49	636.66	637.10



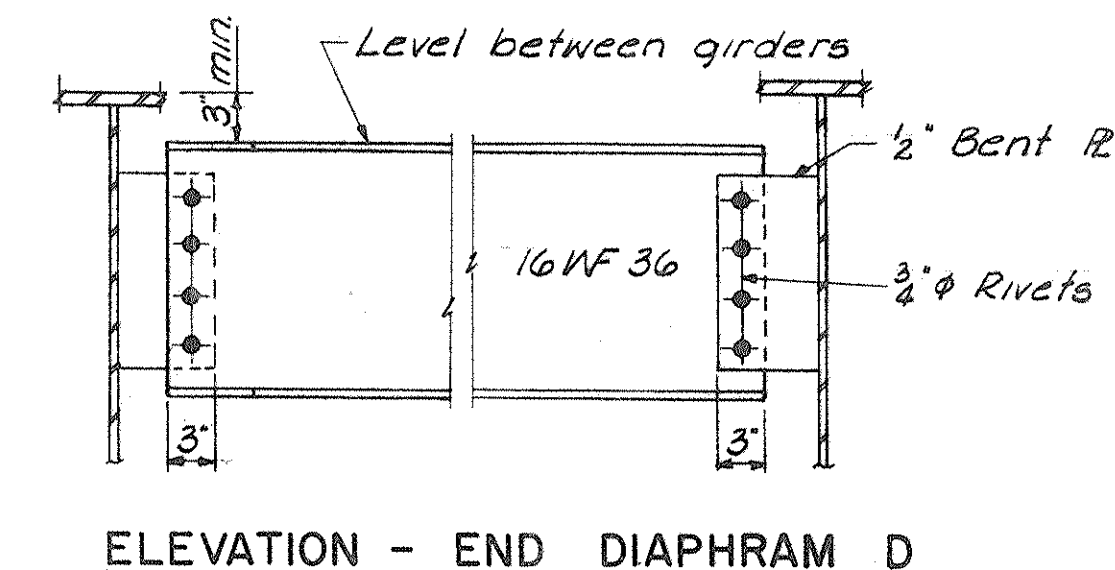
SECTION A-A
Showing Typical
Cross Frame



VIEW B-B
Showing Connection
Plate Details only



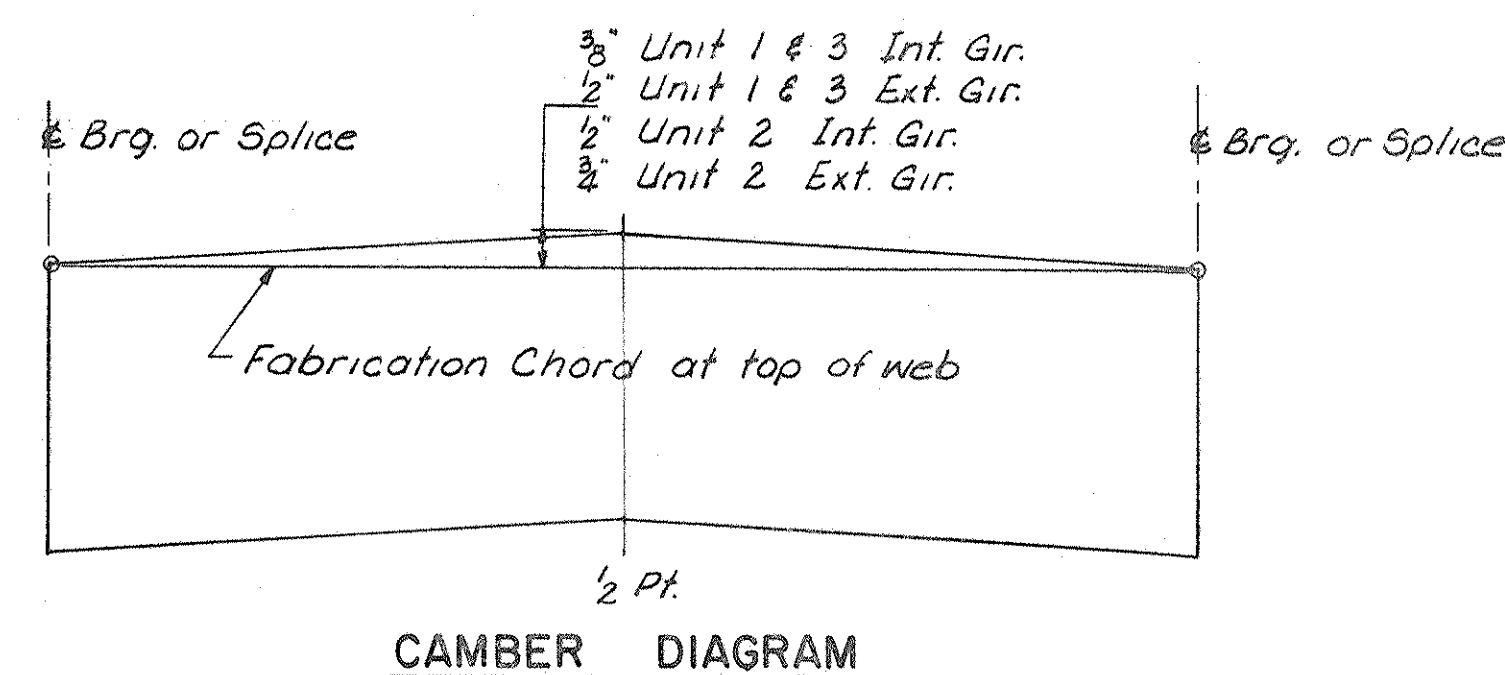
DETAIL A



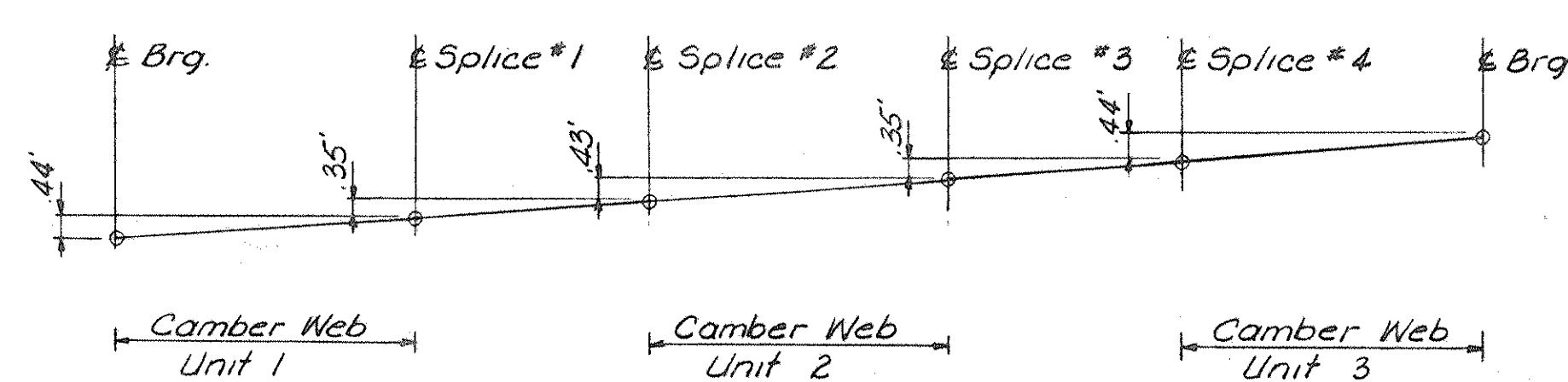
ELEVATION - END DIAPHRAM D

STRESS TABLE

Location	Moments - Ft. Kips				Reactions - Kips			
	.4 Sp 1		Piers		.5 Sp 2		Piers	
Girders	Int.	Ext.	Int.	Ext.	Int.	Ext.	Int.	Ext.
DL	318	449	687	974	324	453	23.5	33.0
LL	610	567	678	397	625	581	42.7	39.6
Imp.	152	141	170	99	156	145	10.7	10.0
Total	1080	1157	1535	1470	1105	1184	76.9	82.6



CAMBER DIAGRAM

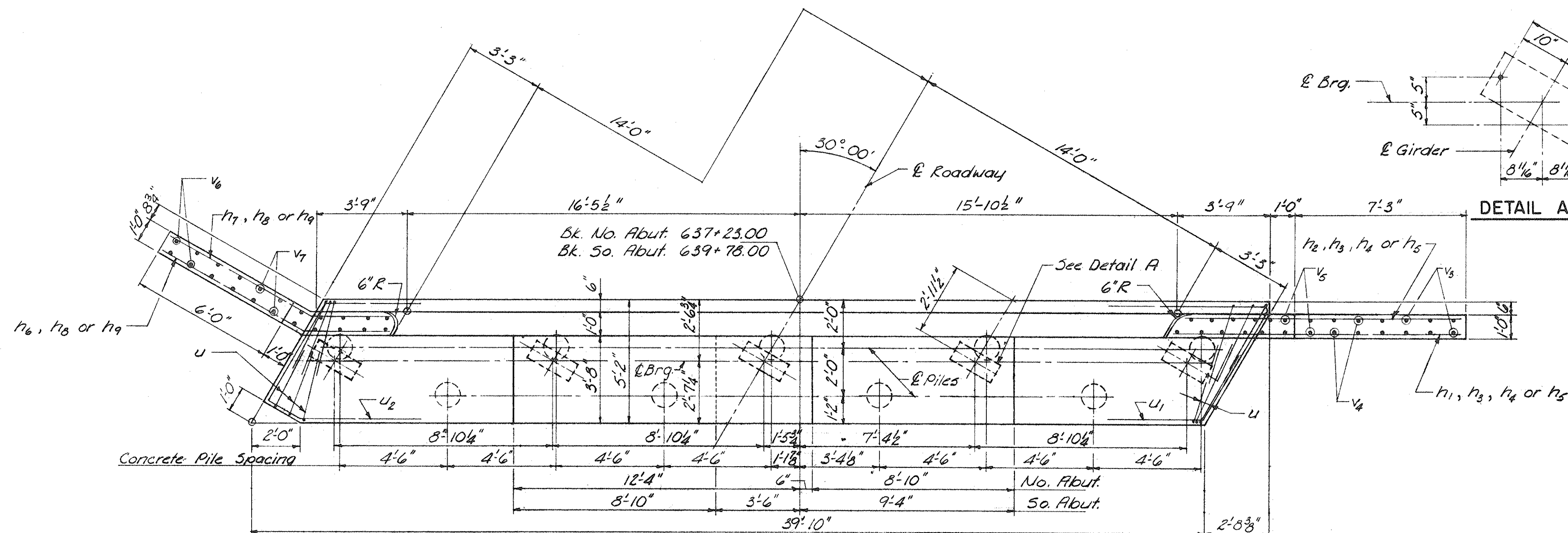


FABRICATION DIAGRAM

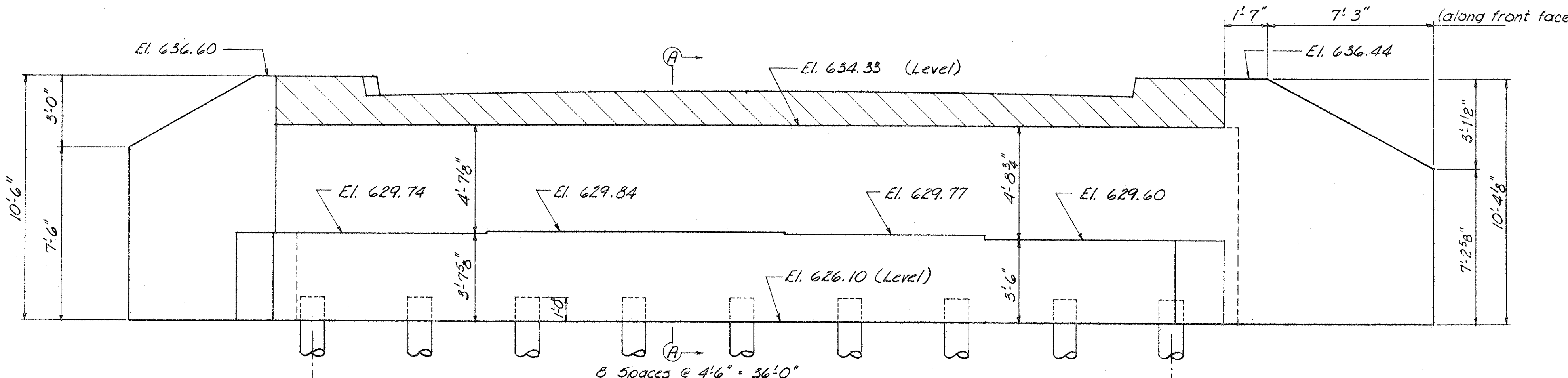
FRAMING PLAN
PROJECT S-1329(101)
FAS RT. 1329 SECTION 149-B2
REEDER BRIDGE
IROQUOIS COUNTY
STATION 638+50.50

WALTER E. HANSON & COMPANY
ENGINEERS-CONSULTANTS

DESIGNED G.L. DRAWN DJM DATE 11-23-64
CHECKED CR & BEO CHECKED VFS

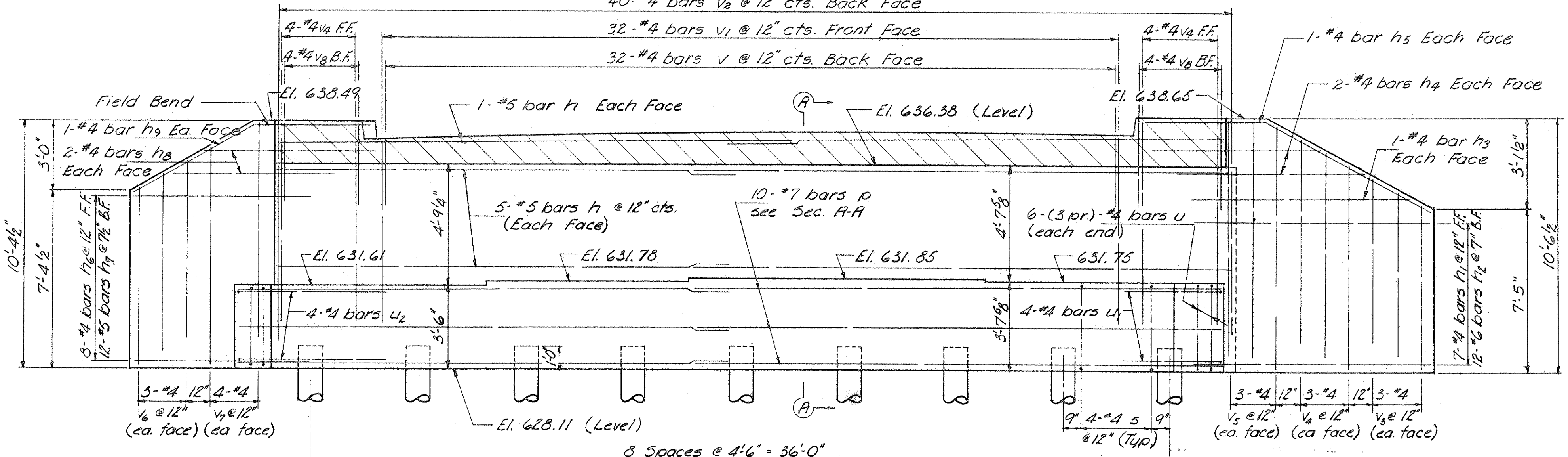


PLAN

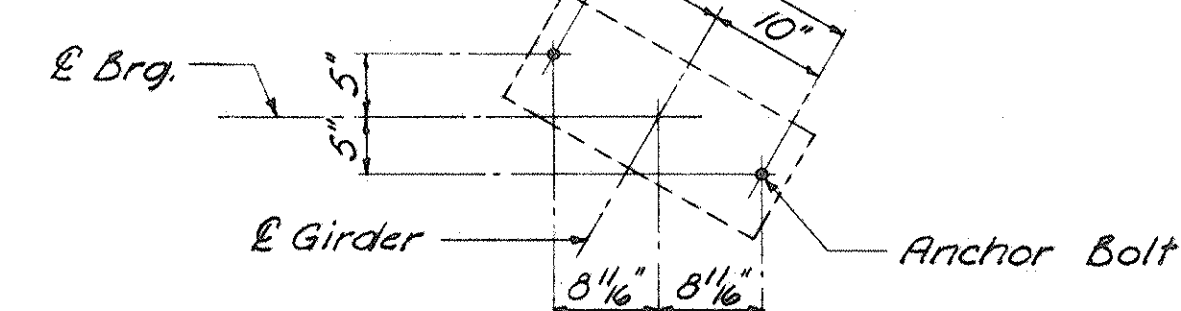


ELEVATION - NORTH ABUT.

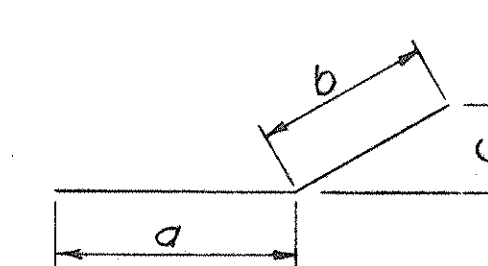
(Reinforcing same as South Abutment)



ELEVATION - SOUTH ABUT.

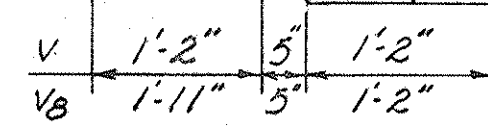


DETAIL A

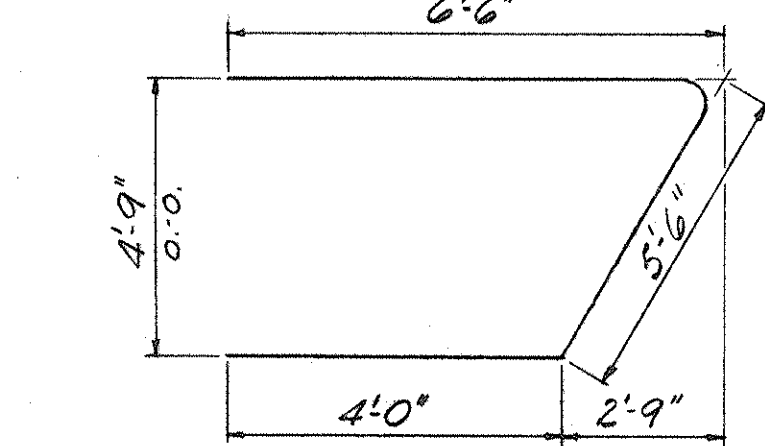


Bar	a	b	c
h5	4'-6"	7'-3"	3'-0"
h6	6'-10"	1'-6"	0'-9"
h7	6'-10"	1'-6"	0'-9"
h8	4'-0"	2'-6"	1'-3"
h9	4'-0"	6'-4"	2'-10"

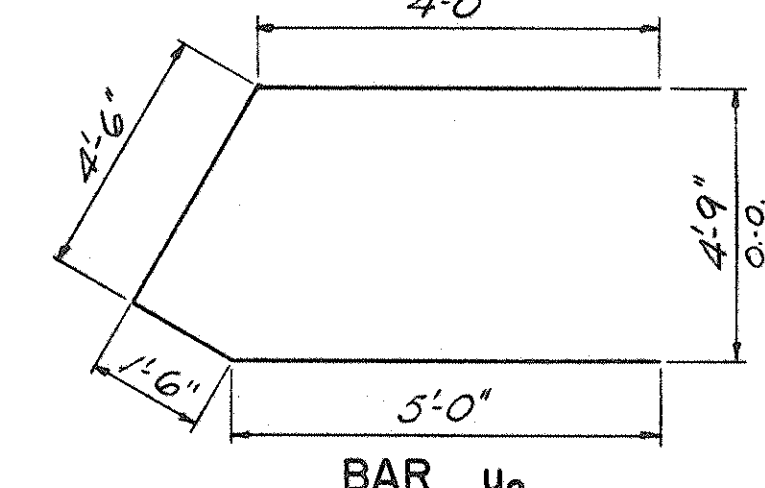
BARS h5 THRU h9



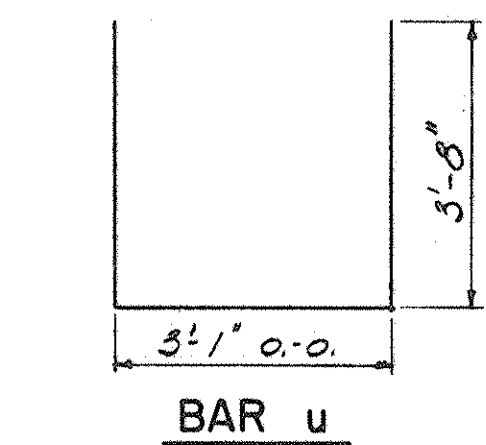
BARS v & v8



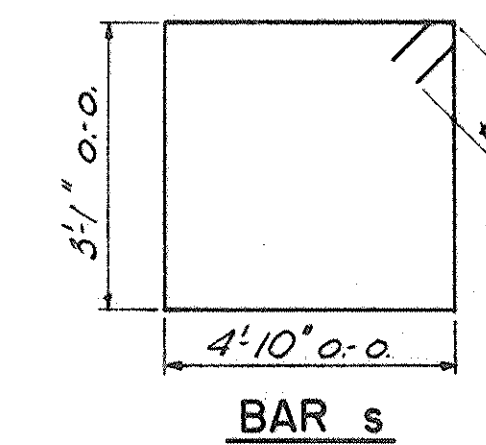
BAR u1



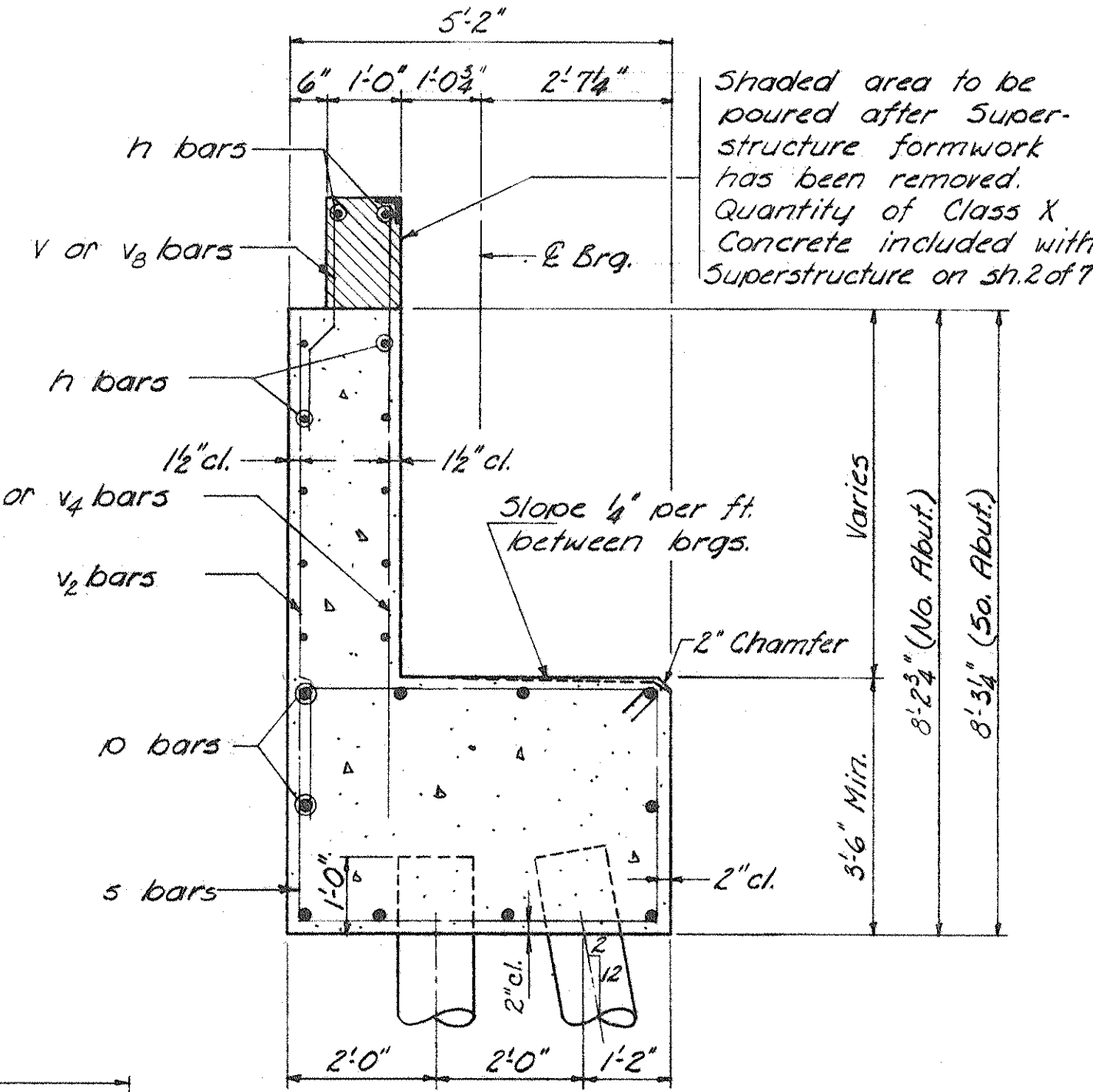
BAR u2



BAR u



BAR s



SECTION A-A

BILL OF MATERIAL - 2 ABUTS.

BAR	NO.	SIZE	LENGTH	SHAPE
h	48	#5	20'-6"	
h1	14	#4	10'-6"	
h2	24	#6	10'-6"	
h3	4	#4	9'-0"	
h4	8	#4	7'-4"	
h5	4	#4	12'-2"	
h6	16	#4	8'-4"	
h7	24	#5	8'-4"	
h8	8	#4	6'-6"	
h9	4	#4	10'-4"	
p	40	#7	21'-2"	
s	64	#4	16'-7"	
u	24	#4	10'-5"	
u1	8	#4	16'-0"	
u2	8	#4	15'-0"	
v	64	#4	2'-11"	
v1	64	#4	8'-0"	
v2	80	#4	6'-6"	
v3	12	#4	7'-2"	
v4	28	#4	8'-6"	
v5	12	#4	9'-9"	
v6	12	#4	7'-3"	
v7	16	#4	8'-9"	
v8	16	#4	3'-8"	
Class X Concrete Cu. Yds.			85.7	
Reinforcement Bars Lbs.			6030	
Concrete Piles Lin. Ft.			1105	
Test Piles			Each	1

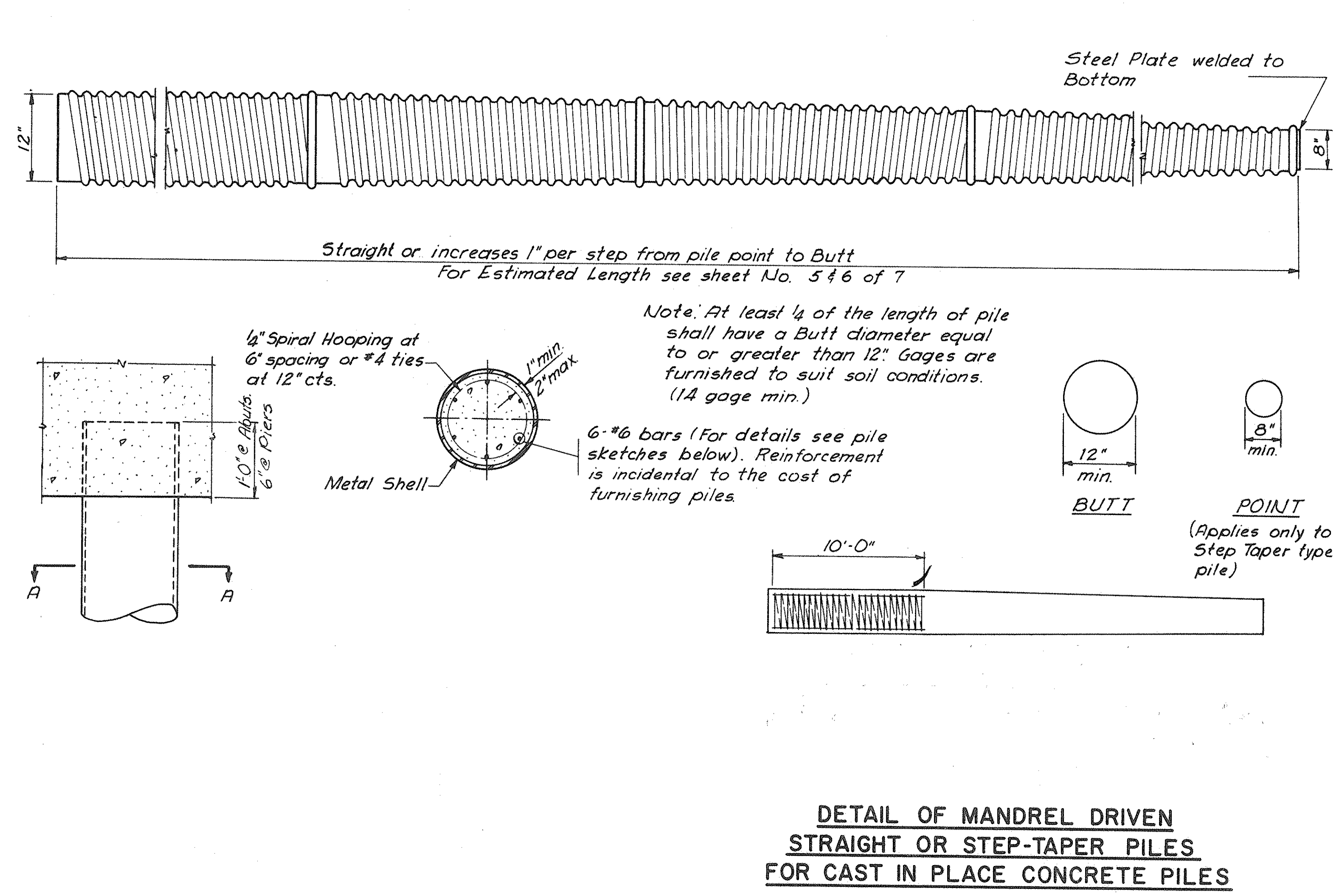
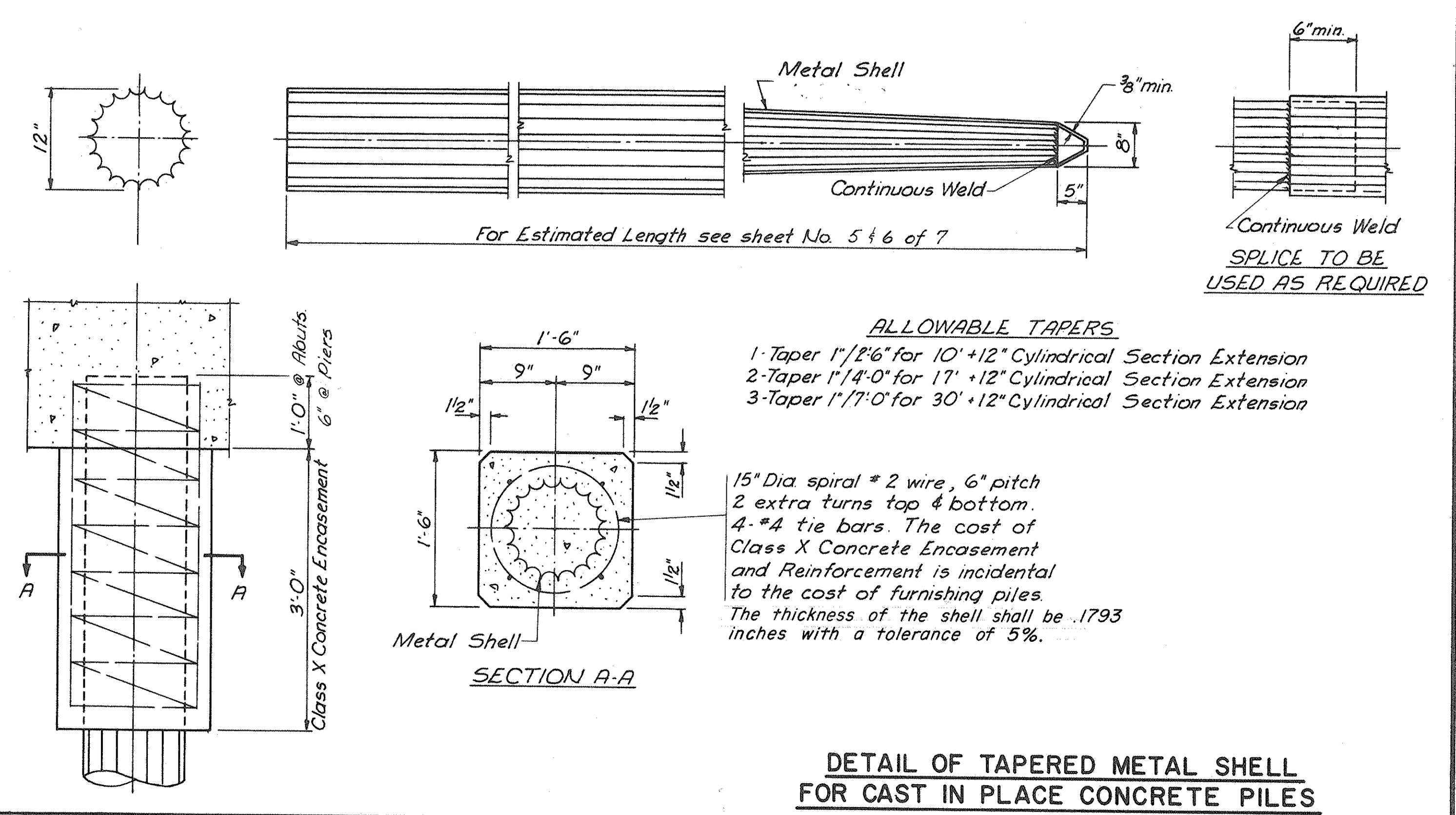
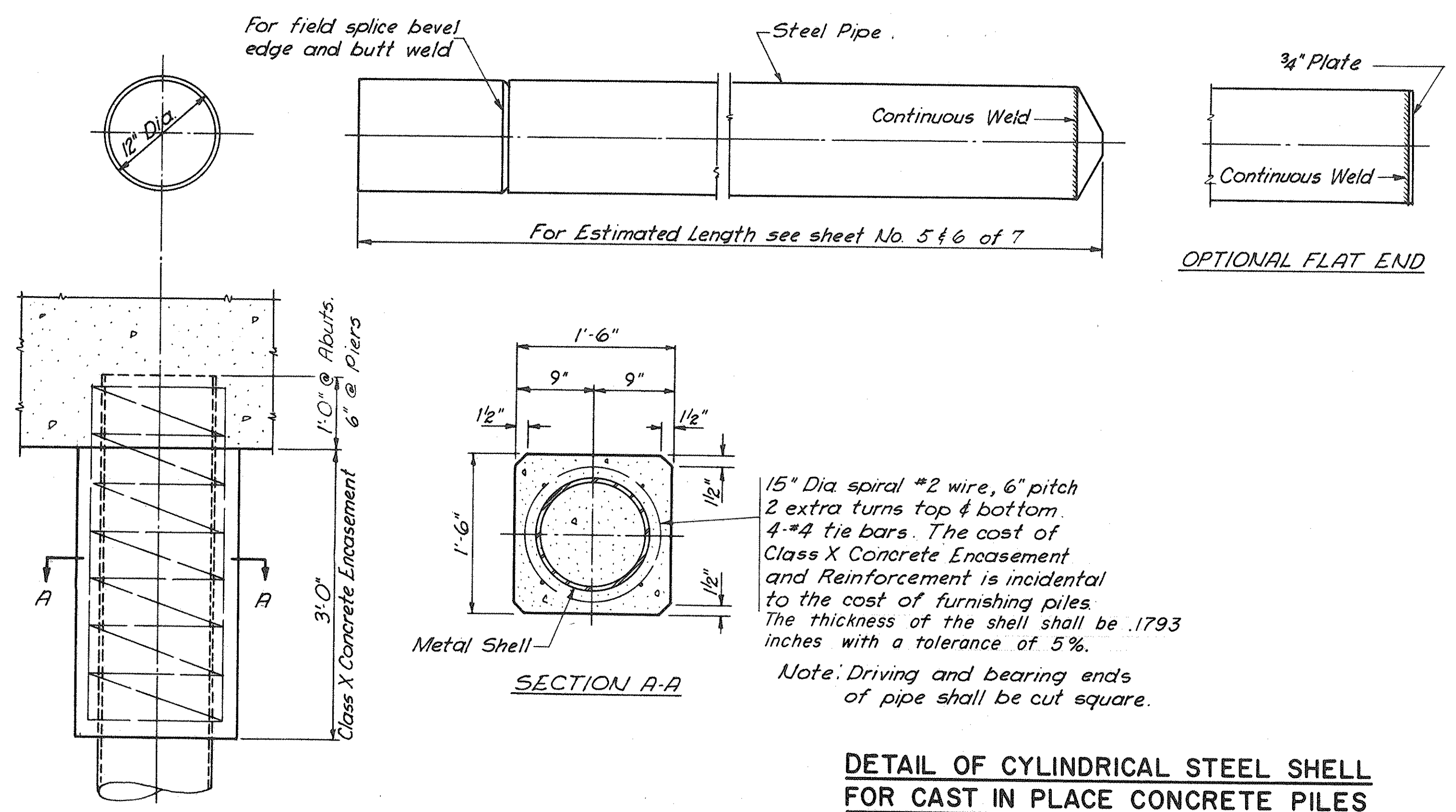
PILE DATA

Type	Concrete
Min. Capacity	45 Tons
Est. Length	65 Ft.
No. Req'd (2 Abuts)	*18

ABUTMENTS
 PROJECT S-1329 (101)
 FAS RT. 1329 SECTION 149-B2
 REEDER BRIDGE
 IROQUOIS COUNTY
 STATION 638+50.50
 WALTER E. HANSON & COMPANY
 ENGINEERS - CONSULTANTS

DESIGNED GL DRAWN G.W.F. DATE 11-23-64
 CHECKED CR CHECKED T.E.B. NO. 64-55

*Includes 1 Test Pile



630	N Qu W	3 40 16.9	Dk. brn. f. sa silt (tr. cl.)	N Qu W	3 22	Dk. brn. cl. silt (tr. f. sand) - calc.	N Qu W	3 6.6	Brn. f. gr. f-m clayey silty sand / sm. pebbles, brick & metal pieces - calc.
		3 6.7	Brn. f. sa. silt (tr. cl.)		3 0.6 13	Brn. f. sa. silt / so. cl.		5 7.6	Brn. f. gr. v.f. sandy silt (tr. clay) - calc.
610	N Qu W	3 18.2	Brn. f. gr. f-m sa silt (tr. sm. r.)	N Qu W	4 1.3 25.1	Gr. v.f. sa. silt (tr. cl.) - calc.	N Qu W	7 23.4	Gr. v.f. sandy silt & gr. clay (tr. silt) - calc.
		4 12.9	Brn. f. gr. f-m sand / so. clay		4 7.1 17.1	Gr. v.f. sa. silt (tr. cl.)		8 14.7 28.7	Gr. si. f-m sand (tr. clay)
600	N Qu W	4 31.2	Lt. gra. & bla. f-m sand	N Qu W	4 1.5 25.1	Gr. v.f. sa. silt (tr. cl.)	N Qu W	8 14.7 28.7	Gr. si. f-m sand (tr. clay)
		9 26.7	Lt. gra. & bla. si. f-c. sand & pebb.		6 9.5 25.6	Gr. si. f-c. sand & pebs.		10 21.9 43.8	Gr. clay (tr. silt) - calc.
590	N Qu W	4 9.5 27.7	Lt. gra. clay (tr. silt) - calc.	N Qu W	4 7.0 27.7	Gr. clay (tr. silt) - calc.	N Qu W	5 10.2 24.5	Gr. clay (tr. silt) - calc.
		4 10.3 36.4	Lt. gra. clay (tr. silt) - calc.		4 1.2 26.7	Gr. clay (tr. silt) - calc.		16 19.0 27.7	Gr. clay (tr. silt) - calc.
580	N Qu W	9 27.2 27.6	Gr. clay / thin silt seams	N Qu W	6 14.0 35.6	Gr. clay (tr. silt & f-c sand) / occ. sm. pebs - calc.	N Qu W	16 19.0 27.7	Gr. clay (tr. silt) - calc.
		4 6.2 28.6	Gr. silty clay - calc.		9 2.7 26.5	Gr. clay (tr. silt) - calc.		BOR. NO. 6 15' Rt. Sta. 639+85	
570	N Qu W	3 16.5 32.6	Gr. si. clay / so. f-c sand	N Qu W	17 2.3 22.9	Gr. clay (tr. silt & f-c sand) / occ. sm. pebs - calc.	N Qu W	15 21.9 43.8	Gr. v.f. sandy silt & gr. clay (tr. silt) - calc.
		3 2.8 17.6	Gr. si. clay / so. f-c sand		9 1.5 21.6	Gr. v.f. sa. silt (tr. cl.) - calc.		BOR. NO. 2 15' Rt. Sta. 637+44	
560	N Qu W	7 7.1 17.2	Gr. clay / thin si. seams	N Qu W	5 1.3 36.6	Gr. clay (tr. silt) - calc.	N Qu W	15 21.9 43.8	Gr. v.f. sandy silt & gr. clay (tr. silt) - calc.
		7 1.5 30.1	Gr. clay / thin si. seams		5 1.9 34.6	Gr. clay (tr. silt) - calc.		BOR. NO. 4 E. Sta. 637+95	
550	N Qu W	7 1.5 30.1	Gr. silt / so. f. sand (tr. cl.)	N Qu W	15 4.5 13.9	Gr. f. sa. cl. silt / sm. pebs - calc.	N Qu W	9 2.0 20.7	Gr. f. sa. silt (tr. clay) - calc.
		17 20.1	Gr. silt / so. f. sand (tr. cl.)		9 2.0 20.7	Gr. f. sa. silt (tr. clay) - calc.		BOR. NO. 3 E. Sta. 637+95	
540	N Qu W	29 17.9	Gr. f. sandy silt - calc.	N Qu W	8 2.1	Gr. f. sa. silt (tr. clay) - calc.	N Qu W	8 2.1	Gr. f. sa. silt (tr. clay) - calc.
		65 48 10.6	Lt. gra. silt / so. f-c. sand, clay & rock frags. - calc.		11 9.8 10.1	Gr. f. sa. cl. silt / occ. sm. pebs - calc.		BOR. NO. 4 E. Sta. 639+20	
530	N Qu W	10 4.5 12.5	Gr. f. sa. cl. silt / occ. sm. pebs - calc.	N Qu W	10 4.5 12.5	Gr. f. sa. cl. silt / occ. sm. pebs - calc.	N Qu W	10 4.5 12.5	Gr. f. sa. cl. silt / occ. sm. pebs - calc.

PILE DETAILS & BORING DATA
PROJECT S-1329 (101)
FAS RT. 1329 SECTION 149-B2
REEDER BRIDGE
IROQUOIS COUNTY
STATION 638+50.50
WALTER E. HANSON & COMPANY
ENGINEERS - CONSULTANTS

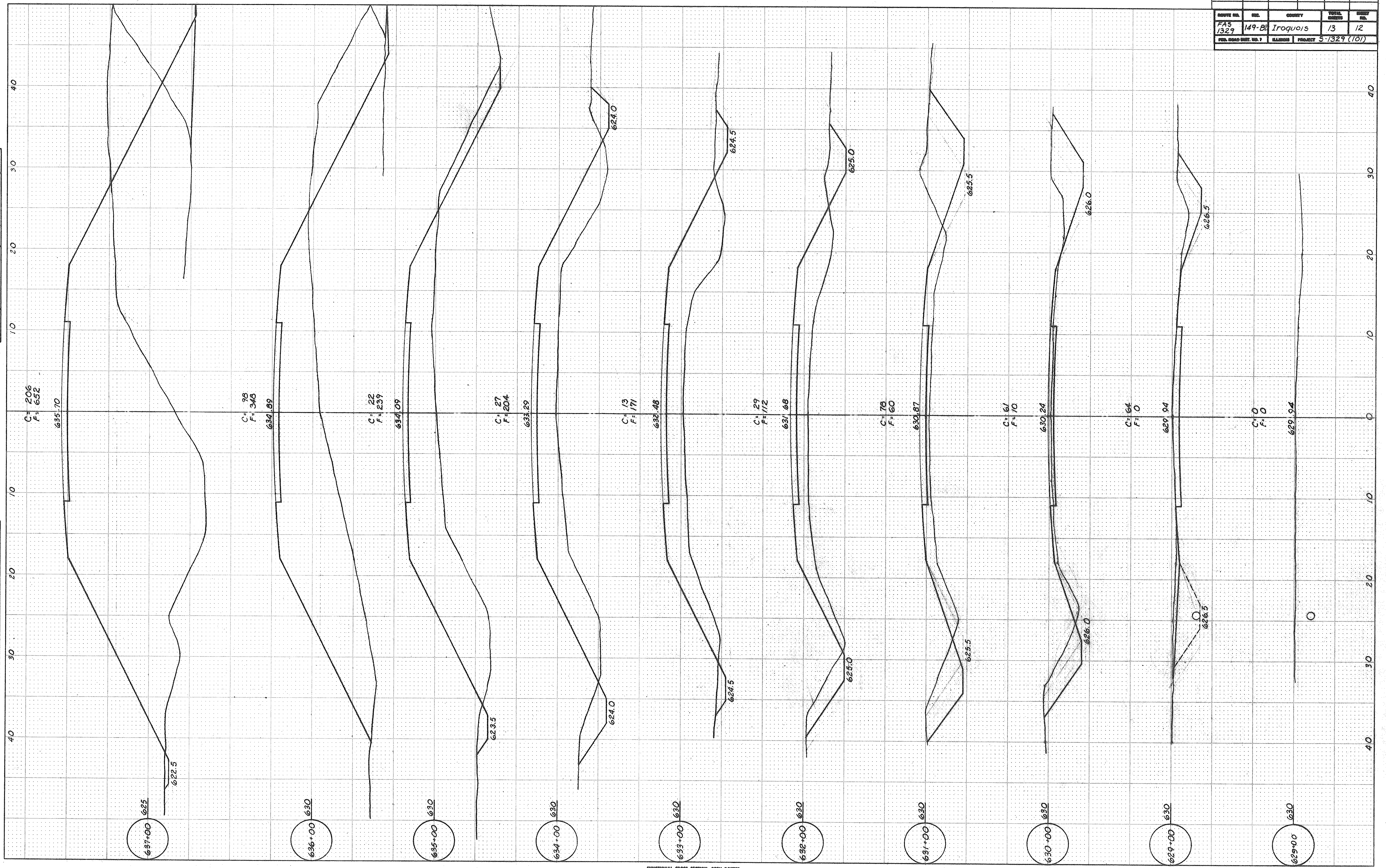
DESIGNED DRAWN T.E.B. & G.W.F. DATE 11-23-64
CHECKED CHECKED REO NO. 64-55

N = Number of blows required to drive sampler 12" with 140 pound weight falling 30".
Qu = Unconfined compressive strength in tons per sq. ft.
W = Natural Water Content (% Dry Weight)
▽ = Water level @ 24 hours

ROUTE NO.	DIS.	COUNTY	TOTAL SHEETS	SHEET NO.
FA5 1329	149-B	Iroquois	13	12
PUB. ROAD DIST. NO. 1		ALIAS	PROJECT 5-1329 (10)	

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
AREAS CHECKED	TEMPLATE		
	NO. _____		

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED	TEB	02-21-64
AREAS CHECKED	TEMPLATE	REG	11-7-62
	NO. _____		

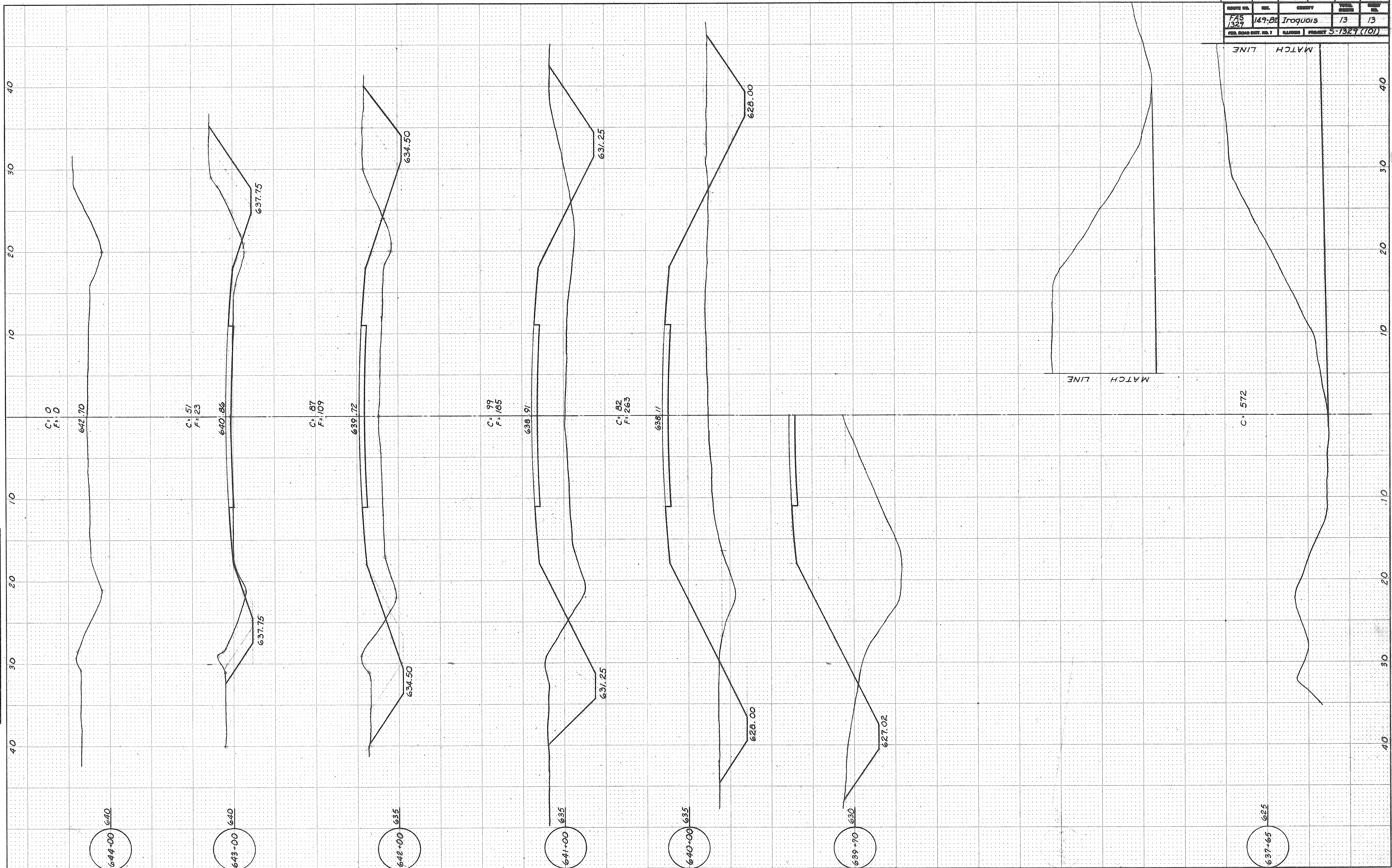


FUNCTIONAL CROSS SECTION - OPEN DOTTED
H. A. ROGERS CO. - MINNEAPOLIS - ST. PAUL - DULUTH

FINAL SURVEY BY DATE
 SURVEYED BY _____
 CHECKED BY _____
 NOTE BOOK NO. _____
 AREAS CHECKED _____

ORIGINAL SURVEY BY DATE
 SURVEYED BY _____
 CHECKED BY _____
 NOTE BOOK NO. _____
 AREAS CHECKED _____

ROUTE NO.	SEC.	COUNTY	TOWNSHIP	RANGE
FAS 1327	149-B2	Iroquois	13	13
FED. ROAD DIST. NO. 7	MILEAGE	PROJECT	S-1327 (101)	



FUNCTIONAL CROSS SECTION - OPEN DOTTED
 H. A. ROGERS CO. - MINNEAPOLIS - ST. PAUL - DULUTH

Sheet No. of Sheets

1800012 ~ 1488-5