FED. ROAD DIST. NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-80	99-4-IVB	WILL	54	1
FED. ROAD DIST. NO. 4	ILLINOIS	PROJECT I-IG-80-4(41)135		

P-91-107-00

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
FEDERAL AID INTERSTATE HIGHWAY

SCALES

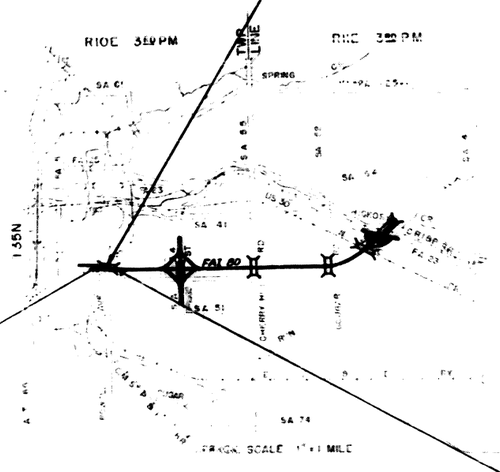
PLAN	1 INCH	50 FT.
PROFILE. HOR.	1 INCH	50 FT.
PROFILE. VERT.	1 INCH	5 FT.
CROSS-SECTIONS	1 INCH	10 FT.

F.A.I ROUTE 80 SECTION 99-4-IVB
PROJECT I-IG-80-4(41)135
WILL COUNTY
C-91-319-64

INDEX TO SHEETS

1 TITLE SHEET
2-3 TYPICAL SECTIONS & MISC. DETAILS
4 SCHEDULES, SYMBOLS & SUMMARY OF QUANTITIES.
5-10 PLANS & PROFILES
11-38 BRIDGE PLANS [SHEET 20-A ALUMINUM HANDRAIL]
39-49 CROSS SECTIONS
50 STANDARD 2138-2
51 STANDARD 2153-4 & 2113-1
52 STANDARDS 2114, 1971-3, 1972-1
53-54 CRITICAL PATH SCHEDULE

SECTION 99-4-IVB
FURNISHING OF STEEL & ERECTION OF MULTIPLE SPAN BRIDGES AT STA. 471+26.39
9 SPANS W.B. – 53'-11⅝", 67'-0⅛", 67'-1⅞", 54'-9⅝", 62'-8⅝", 80'-1⅛", 101'-8⅝", 80'-0" & 61'-9⅞".
8 SPANS E.B. – 54'-0⅝", 67'-0⅛", 54'-10", 53'-11⅝", 80'-0⅞", 101'-11⅝", 80'-0" & 61'-9⅞".
THE CONSTRUCTION OF APPROACH BERMS AND THE CONSTRUCTION OF RELOCATED LINDEN AVENUE.



PROJECT I-IG-80-4(41)135
BEGINS STA 470+38.20

PROJECT I-IG-80-4(41)135
ENDS STA. 476+34.06.

PROJECT LENGTH
F.A.I-80 - 598.86 FT. - 0.113 MI.

LOCATION OF SECTION INDICATED THUS:—

APPROVED
N.E. Bauman 8/63

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS

SUBMITTED Oct. 29 1963 — DISTRICT ENGINEER
EXAMINED July 17 1964 — ENGINEER OF TRAFFIC PLANS AND CONTRACTS
PASSED July 17 1964 — ENGINEER OF DESIGN
APPROVED July 17 1964 — CHIEF HIGHWAY ENGINEER
APPROVED July 17 1964

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
APPROVED:
DIVISION ENGINEER — DATE

CONTRACT No 23011

Rev. 11/4/63 - N.I.A.D. Initiated Beg. & end of Project.

FED. ROAD DIST. NO.	STATE	COUNTY	SECTION	ROUTE
4	ILLINOIS	WILL	99-4-IVB	80

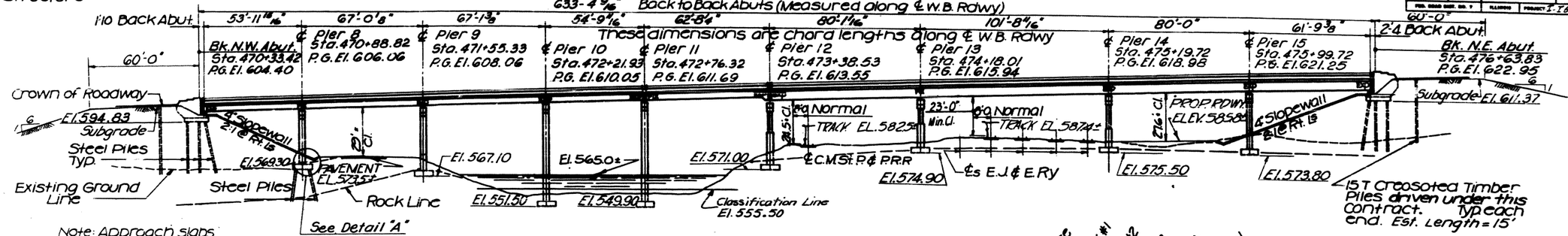
Bench Mark No.63: Square cut on top of concrete wall on East side of Rowell Ave. Approx. 85' Left Sta. 471+40 El. 575.86.

No Existing Structure.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

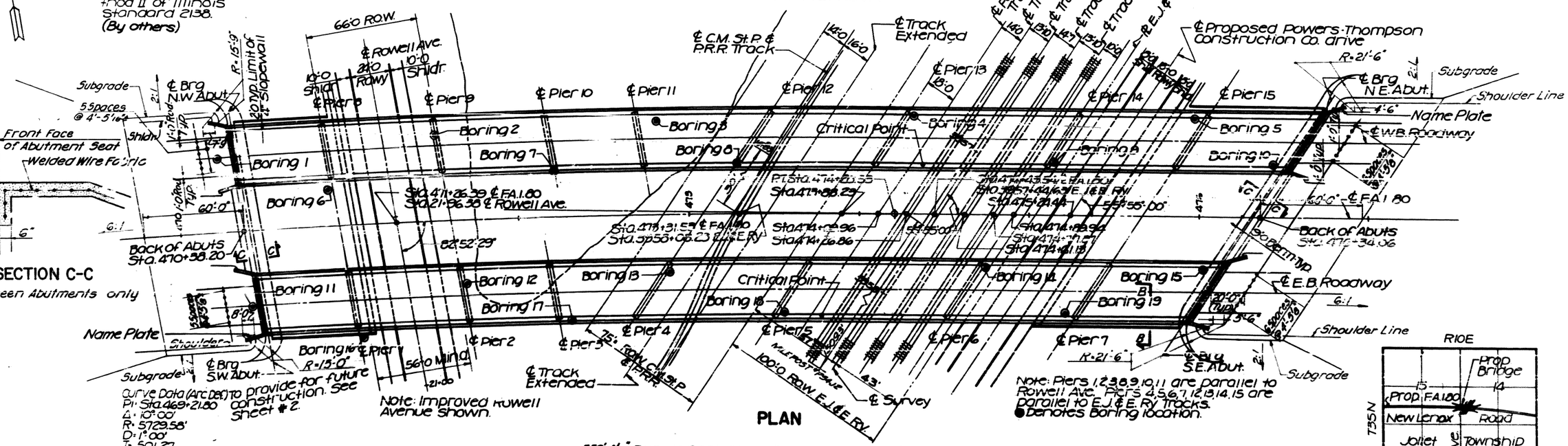
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-80	99-4-IVB	WILL	54	11
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT I-IG-80-4(41)135		

SHEET NO. 1
28 SHEETS



Note: Approach slabs to be constructed in accordance with Method II of Illinois Standard 2138. (By others)

℄ ELEVATION W.B. RDWY



Note: Improved Rowell Avenue Shown.

Note: Piers 1,2,3,8,9,10,11 are parallel to Rowell Ave. Piers 4,5,6,7,12,13,14,15 are parallel to E.J.℄ E.Ry. Tracks.
● Denotes Boring location.

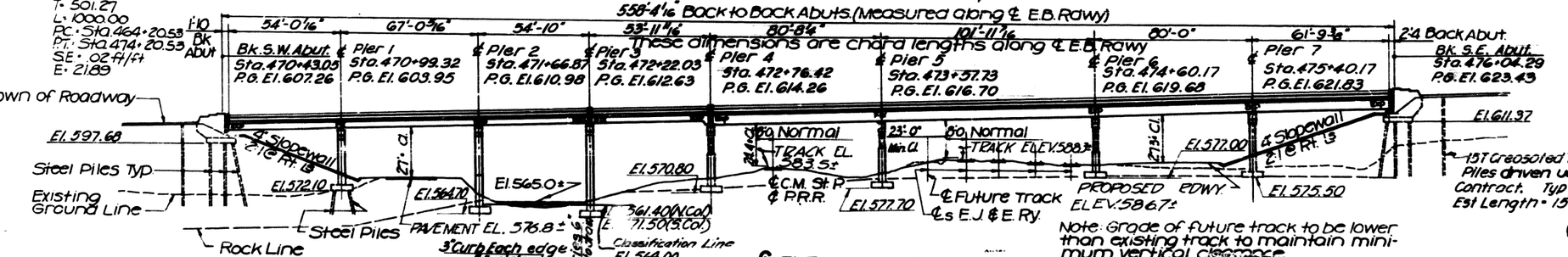
PLAN

SECTION C-C

Between Abutments only

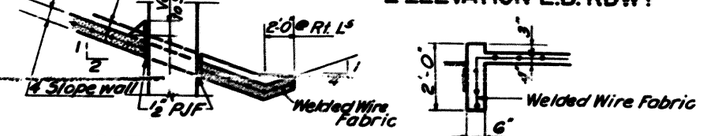
Curve Data (Arc Def.)
PI: Sta. 469+21.80
Δ: 10°00'
R: 5729.58'
D: 1°00'
T: 501.27
L: 1000.00
PC: Sta. 464+20.53
PT: Sta. 474+20.53
SE: .02 ft/ft
E: 21.89

to provide for future construction. See Sheet #2.



℄ ELEVATION E.B. RDWY

Note: Grade of future track to be lower than existing track to maintain minimum vertical clearance.



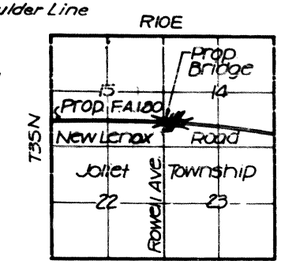
DETAIL A

SECTION B-B

Note: Welded wire fabric in Slopewall shall be 6"×6" Mesh #4 wires, 58 lbs/100 S.F. Cost of Wire Fabric shall be included in cost of 4" Slopewall.

Cost of cutoff wall and paved ditch between bridges shall be included in cost of 4" Slopewall.

Cost of Premoulded Joint Filler shall be incidental to the Contract.



LOCATION PLAN

DESIGNED	B.M. & M.C.
CHECKED	L.D. R.D.L.
DRAWN	S.E.F.
CHECKED	R.D.L. & J.T.L.

GENERAL PLAN & ELEVATION
F.A.I. 80 OVER
ROWELL AVE., C.M.ST.P.&P.R.R. & E.J.&E. RY.

F.A.I. 80 STA. ON ℄ ROWELL AVE. 471+36.39

F.A.I. ROUTE 80 — PROJECT I-IG-80-4(41)135
SECTION 99-4-IVB — WILL COUNTY.
Scale: NO SCALE — Date: OCTOBER 19, 1962

BLAUVELT ENGINEERING CO.
CONSULTING ENGINEERS
WOODBURY, N.J. NEW YORK, N.Y. CRYSTAL LAKE, ILL.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-80	99-4-IVB	WILL	54	12
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT-		

SHEET NO. 2
23 SHEETS

GENERAL NOTES

STRUCTURAL STEEL SHALL CONFORM TO THE SPECIFICATIONS FOR STRUCTURAL STEEL, A.S.T.M. DESIGNATION A-36 NOTED ON THE PLANS.

RIVETS SHALL BE 3/4" ø WITH 13/16" ø OPEN HOLES UNLESS NOTED.

CLASS X CONCRETE SHALL BE USED THROUGHOUT. COARSE AGGREGATE USED IN PARAPETS AND END POSTS SHALL BE FREE OF CHERT, FLINT, LIMONITE, LIGNITE AND SOFT SANDSTONE.

THE CONCRETE FLOOR SLAB SHALL BE FINISHED IN ACCORDANCE WITH ARTICLE 51.19 OF THE STANDARD SPECIFICATIONS.

ALL WELDING SHALL COMPLY WITH THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR WELDED HIGHWAY AND RAILWAY BRIDGES, OF THE AMERICAN WELDING SOCIETY.

ALL ROCKERS, BOLSTERS, BEARING PLATES, LEAD PLATES, PINTLES, AND ANCHOR BOLTS SHALL BE FABRICATED AND SET IN ACCORDANCE WITH ARTICLE 51.15 OF THE STANDARD SPECIFICATIONS AND ARE INCLUDED IN QUANTITY OF STRUCTURAL STEEL.

ANCHOR BOLTS SHALL BE SET BEFORE CONNECTING DIAPHRAGMS OVER SUPPORT. SPACE REINFORCING TO MISS ANCHOR BOLTS.

EXPANSION GUARDS AND PLATES SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH ARTICLE 51.13 (d) OF THE STANDARD SPECIFICATIONS AND ARE INCLUDED IN QUANTITY OF STRUCTURAL STEEL.

EXCEPT AS OTHERWISE PROVIDED, ALL STRUCTURAL STEEL SHALL RECEIVE ONE SHOP COAT OF RED LEAD PAINT AND TWO FIELD COATS OF ALUMINUM PAINT. SEE ARTICLES 56.1 TO 56.5 INCLUSIVE OF THE STANDARD SPECIFICATIONS.

ALL SURFACES OF EXPANSION GUARDS INACCESSIBLE AFTER ERECTION SHALL BE GIVEN TWO SHOP COATS OF RED LEAD PAINT. THE 3/4" ø WELDED STUDS SHALL NOT BE PAINTED.

THE CONTRACTOR SHALL DRIVE 2 TEST PILES IN PERMANENT LOCATIONS AS SHOWN ON THE PLANS, BEFORE ORDERING REMAINDER OF PILES.

NO ROCK LARGER THAN 3" SHALL BE PLACED IN FILLS IN THE AREA WHERE PILES ARE TO BE DRIVEN.

ALL STEEL BEARING PILES ARE TO BE DRIVEN TO REFUSAL.

Permanent Forms will not be permitted in forming the Concrete Floors.

DESIGN STRESSES

Reinforced Concrete:
- f'_c = 3500 psi
- f_s = 20,000 psi
- n = 10
- f_c = 1400 psi (Except Footings)
- f_c = 1000 psi (Footings)
- V_c = 90 psi (Except Footings
- V_c = 75 psi (Footings)

Structural Steel
- f_s = 20.000 psi

Maximum Foundation Pressure
- 5 Tons per Sq. Ft

Loading: H20-S16 & Alternate

TOTAL BILL OF MATERIAL

SEC. 99-4-IVB

Item	Unit	Super	Sub	Total
* Class A Excavation for Structures	Cu. Yd.	—	906	906
Class B Excavation for Structures	Cu. Yd.	—	105	105
Rock Excavation for Structures	Cu. Yd.	—	208	208
Class X Concrete	Cu. Yd.	1313.3	1432.4	2745.7
Furnishing & Erecting Structural Steel	Pound	1,107,950	—	1,107,950
Reinforcement Bars	Pound	345,835	243,400	589,235
Fur. Creo. Piles up to 20 Feet	Lin. Ft.	—	390	390
Driving Timber Piles	Lin. Ft.	—	390	390
Furnishing Steel Piles 10BP42	Lin. Ft.	—	3081	3081
Test Piles Steel 10BP42	Each	—	2	2
Driving Steel Piles	Lin. Ft.	—	3081	3081
Name Plates	Each	2	—	2
Slopewall 4"	Sq. Yd.	—	2145	2145
Aluminum Handrail	Lin. Ft.	2375	—	2375
Protective Coat	Sq. Yd.	5271	40	5311
Bridge Seat Sealant	LumpSum	—	—	—

* Includes excavation for slopewall

STATION 471 + 26.39
BUILT 196 BY
STATE OF ILLINOIS
F.A.I. RT. 80 Sec 99-4-IVB
F.A. PROJ. I-IG-80-4(41)
LOADING H20-S16 & ALT.

See Standard 2113-1
LETTERING FOR NAME PLATE

Note: Bridge Seat Sealant at Abutments & Piers 3, 11, 4 & 12. See sheets 20, 22, 23 & 24 for dimensions of areas to be coated. (Tops of Piers and Abutments, excluding bearing plate areas).

DESIGNED	—
CHECKED	—
DRAWN	R.B. & A.G.
CHECKED	T. G.

GENERAL NOTES & BILL OF MATERIAL
F.A.I. 80 OVER
ROWELL AVE., C.M.S.T.P.& P.R.R. & E.J.& E. R.Y.
F.A.I. 80 STA. ON ℄ ROWELL AVE. 471 + 26.39
F.A.I. ROUTE 80 — PROJECT
SECTION 99-4-IVB — WILL COUNTY
Scale: NO SCALE — Date: OCTOBER 19, 1962
BLAUVELT ENGINEERING CO.
CONSULTING ENGINEERS
NEW YORK, N.Y.

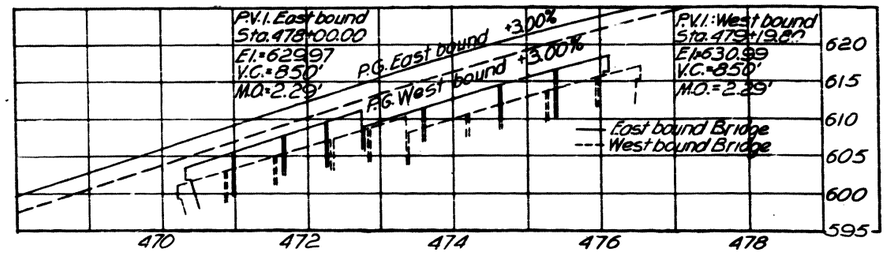
11-65 J.M.J. Rev. Class X con. from 2613.3 to [illegible] bars 557.075 to [illegible]

Rev. Quantities for Class A Excav. from 857 to 788 cu. yds. Substn. Reinf. from 203,340 to 209,250#

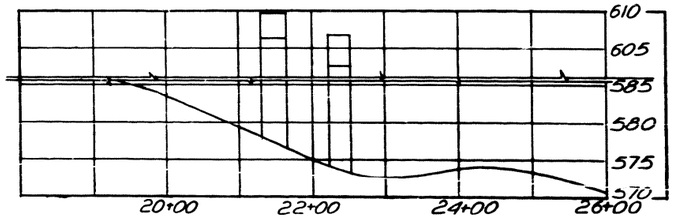
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80	99-4-IVB	WILL	54	13
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

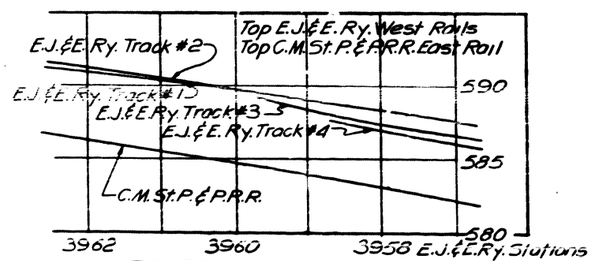
SHEET NO. 3
26 SHEETS



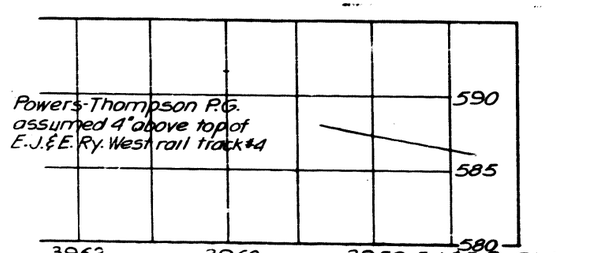
℄ PROFILE F.A.I. 80



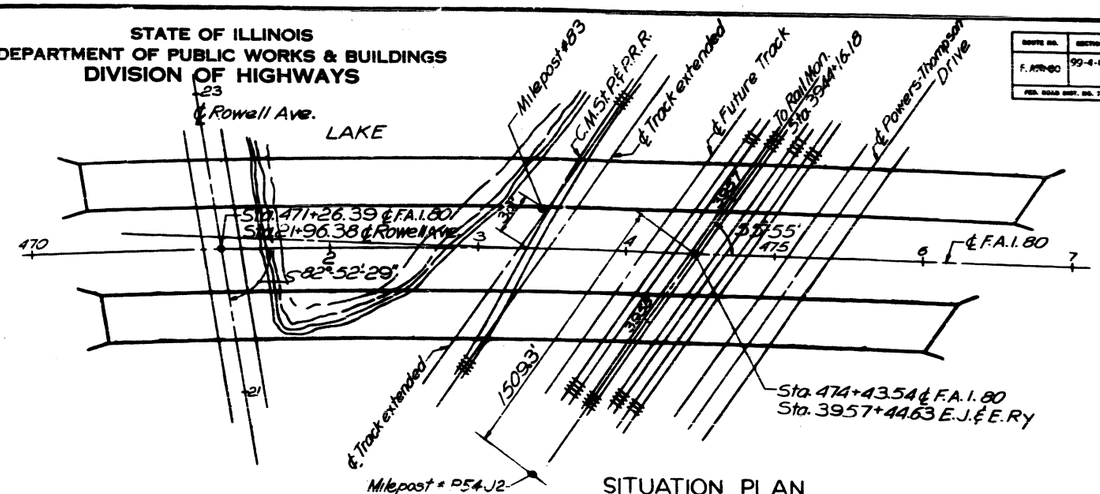
℄ PROFILE ROWELL AVE.



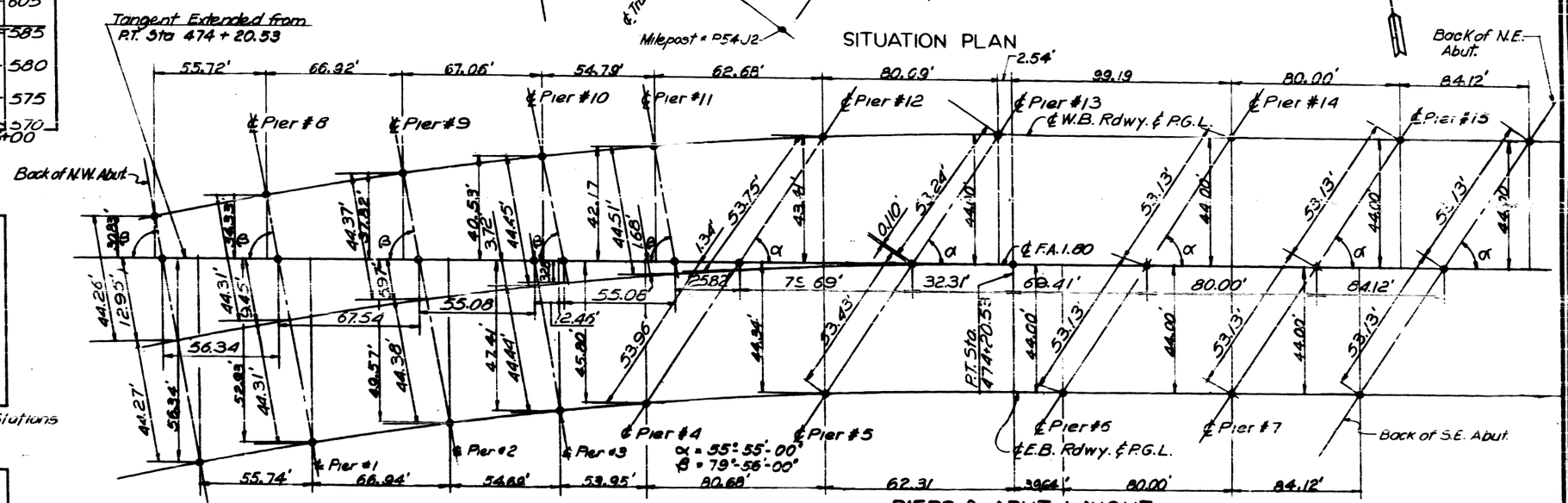
T/R PROFILE R.R. TRACKS



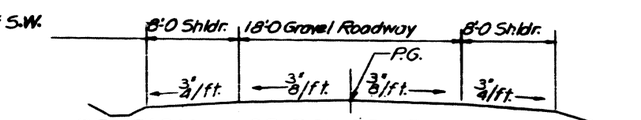
℄ PROFILE POWERS THOMPSON DRIVE



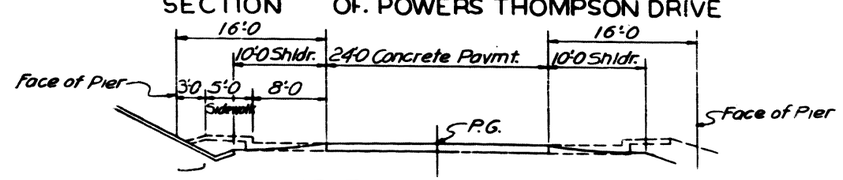
SITUATION PLAN



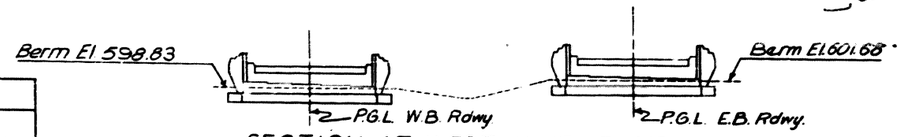
PIERS & ABUT. LAYOUT



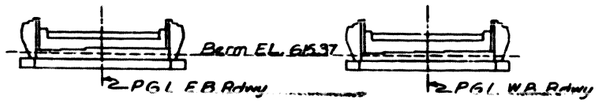
SECTION OF POWERS THOMPSON DRIVE



SECTION ROWELL AVE.
ILLINOIS STANDARD 2068 R



SECTION AT WEST ABUTMENTS



SECTION AT EAST ABUTMENTS

DESIGNED	L.D.
CHECKED	R.H.W.
DRAWN	R.B.
CHECKED	B.M.

PROFILES AND LAYOUT
F.A.I. 80 OVER
ROWELL AVE. C.M.ST.P.&P.R.R. & E.J.&E.R.Y.
F.A.I. 80 STA. ON ℄ ROWELL AVE. 471+26.39

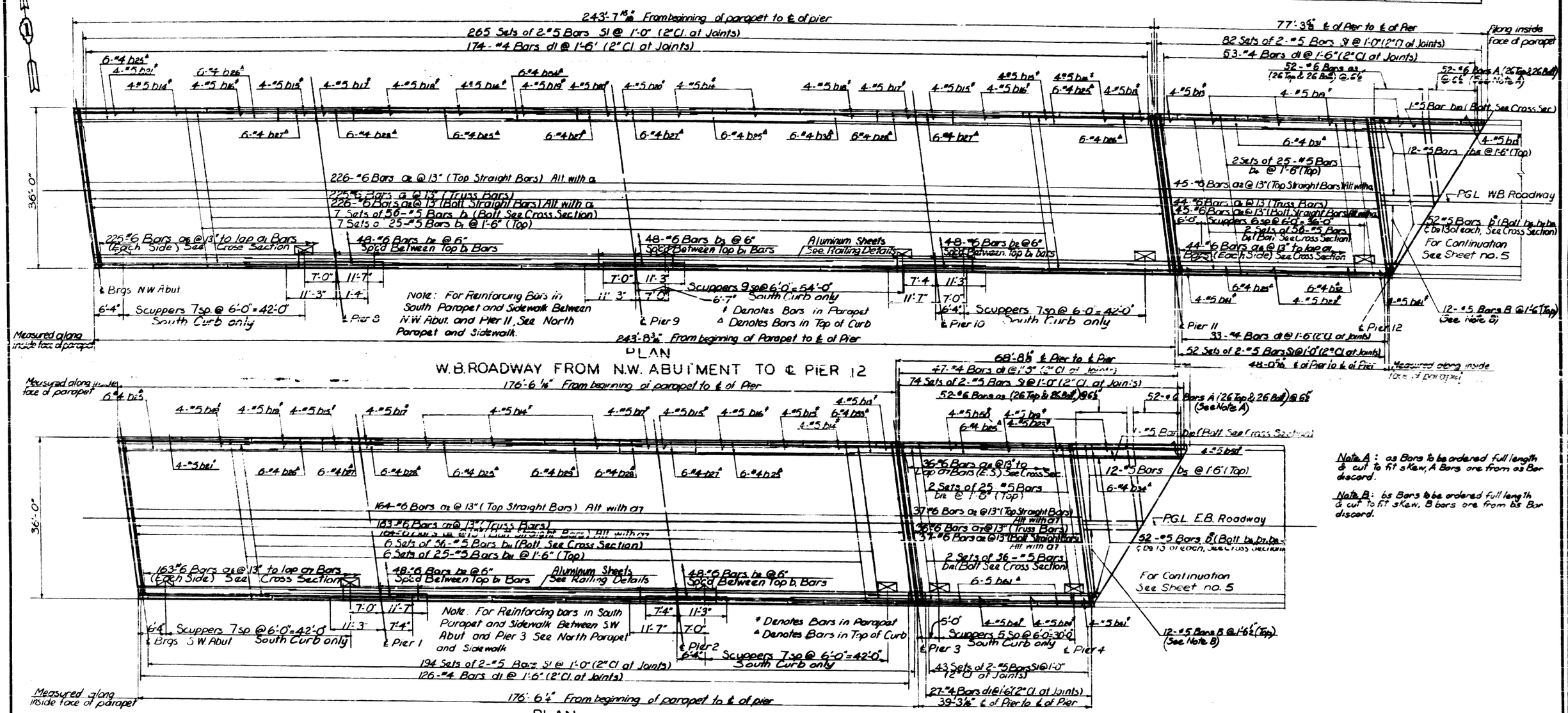
F.A.I. ROUTE 80 — PROJECT
SECTION 99-4-IVB — WILL COUNTY
Scale: NO SCALE — Date: OCTOBER 19, 1962

BLAUVELT ENGINEERING CO.
CONSULTING ENGINEERS
WOODBURY, N.J. NEW YORK, N.Y. CRYSTAL LAKE, ILL.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

STATE ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.A.-80	99-4-IVB	WILL	54	14
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT-		

SHEET NO. 4
28 SHEETS



PLAN
W.B. ROADWAY FROM N.W. ABUTMENT TO ℄ PIER 12

PLAN
E.B. ROADWAY FROM S.W. ABUTMENT TO ℄ PIER 4

Note A: a2 Bars to be ordered full length & cut to fit skew, A Bars are from a2 Bar discard.

Note B: b5 Bars to be ordered full length & cut to fit skew, B bars are from b5 Bar discard.

NOTES:

For General Notes See Sh. No. 2
For Cross Section See Sh. No. 6
For Bar List and Bill of Materials See Sh. No. 6

DESIGNED	T.G.
CHECKED	B.W.
DRAWN	T.G.
CHECKED	P.P.H.R.

SLAB PLAN I
F.A.I. 80 OVER
ROWELL AVE. C.M.S.T.P. & P.R.R. & E.J. & E.R.Y.
F.A.I. 80 STA. ON ℄ ROWELL AVE. 471+26.39

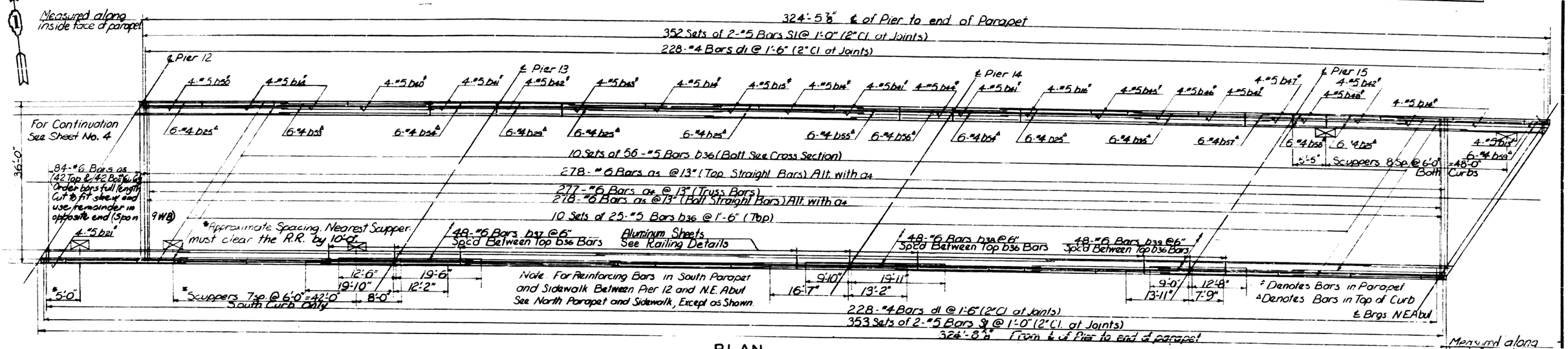
F.A.I. ROUTE 80 — PROJECT
SECTION 99-4-IVB — WILL COUNTY
Scale: NO SCALE — Date: OCTOBER 19, 1962

BLAUVELT ENGINEERING CO.
CONSULTING ENGINEERS
WOODBURY, N.J. NEW YORK, N.Y. CRYSTAL LAKE, ILL.

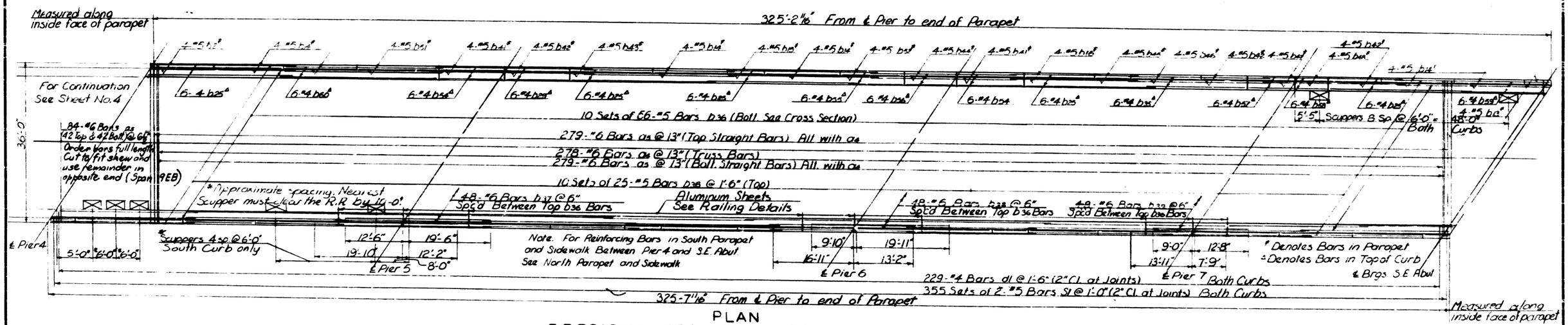
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-80	99-4-IVB	WILL	34	15
FED. ROAD DIST. NO. 1	ILLINOIS	PROJECT		

SHEET NO. 5
28 SHEETS



PLAN
W.B. ROADWAY FROM PIER 12 TO N.E. ABUTMENT



PLAN
E.B. ROADWAY FROM PIER 4 TO S.E. ABUTMENT

NOTES:

For General notes see Sh. No. 2
For Cross Section see Sh. No. 6
For Bar List and Bill of Materials See Sh. No. 6

DESIGNED	T.G.
CHECKED	B.A.
DRAWN	T.G.
CHECKED	P.P.H.R.

SLAB PLAN II
F.A.I. 80 OVER
ROWELL AVE. C.M.S.T.P. & P.P.R. & E.J. & E.R.Y.
F.A.I. 80 STA. ON ℄ ROWELL AVE. 471+26.39

F.A.I. ROUTE 80 — PROJECT
SECTION 99-4-IVB — WILL COUNTY
Scale: NO SCALE — Date: OCTOBER 19, 1962

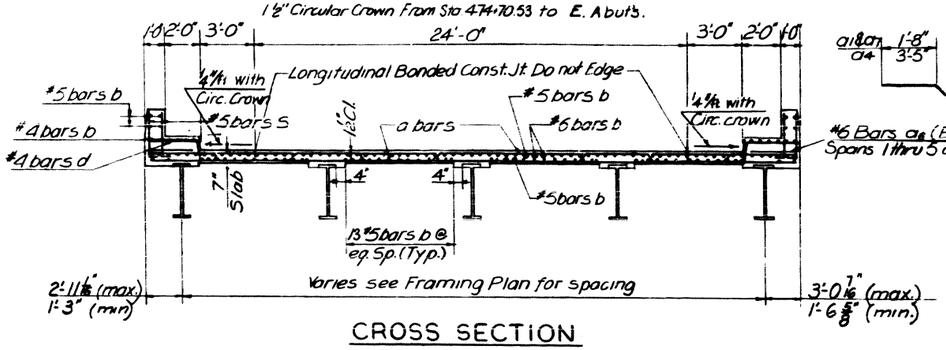
BLAUVELT ENGINEERING CO.
CONSULTING ENGINEERS
WOODBURY, N.J. NEW YORK, N.Y. CRYSTAL LAKE, ILL.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

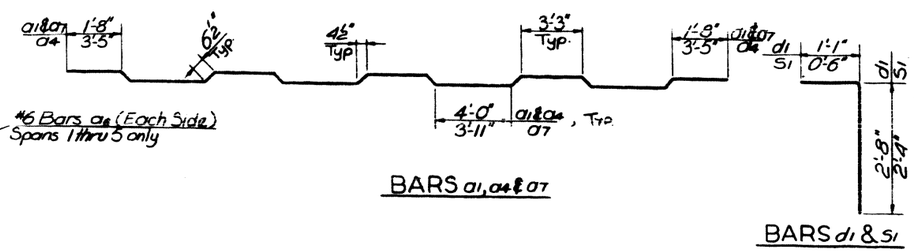
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-80	99-4-IVB	WILL	54	16
FED. ROAD DIST. NO. 1	ILLINOIS	PROJECT-		

SHEET NO. 6
28 SHEETS

Superelevated 02 1/4 From W. Abut's. to Sta. 473+70.53
Transition From Sta. 473+70.53 to Sta. 474+70.53
1 1/2" Circular Crown From Sta 474+70.53 to E. Abut's.

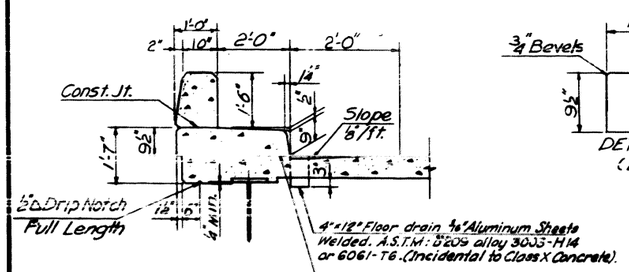


CROSS SECTION

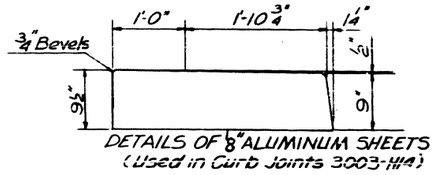


BARS a1, a4 & a7

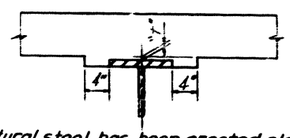
BARS d1 & s1



CURB DETAIL

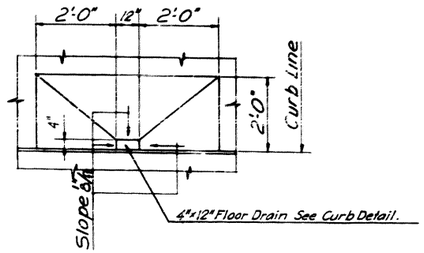


DETAILS OF 1/8" ALUMINUM SHEETS
(Used in Curb Joints 3003-H14)



After all structural steel has been erected elevations of the Top Flanges of the beams shall be taken at intervals shown on D.L. Deflection Diagram. From these elevations subtract the Increment of Deflections for these points determined from the D.L. Deflection Diagram. The elevations so attained subtracted from the Theoretical Grade Elevations minus floor thickness equals fillet heights above top of the beams.

METHOD OF DETERMINING FILLET HEIGHT "t"



DRAIN DETAIL

BILL OF REINFORCEMENT

Bar	No.	Size	Length	Shape
a1	269	#6	33'-5"	
a2	944	#6	35'-11"	
a3	104	#6	37'-0"	
a4	555	#6	36'-11"	
a5	1282	#6	35'-8"	
a6	936	#6	41'-6"	
a7	199	#6	33'-1"	
b1	567	#5	35'-9"	
b2	192	#6	18'-7"	
b3	48	#6	18'-3"	
b4	162	#5	24'-5"	
b5	24		31'-1"	
* b6	26		20'-10	
* b7	26		8'-3" 1'-10	
* b8	26		8'-3" 20'-9	
* b9	26		20'-4" 1'-5	
b10	2		28'-10"	
b11	486		30'-3"	
b12	162		20'-0"	
b13*	40		5'-4"	
b14*	168		15'-2"	
b15*	64		7'-11"	
b16*	40		15'-5"	
b17*	32		8'-4"	
b18*	16		16'-7"	
b19*	40		16'-0"	
b20*	16		8'-1"	
b21*	28		13'-8"	
b22*	4		17'-6"	
b23*	4		7'-10"	
b24*	4	#5	8'-8"	
b25*	216	#4	36'-0"	
b26*	36		11'-1"	
b27*	72		8'-0"	
b28*	48		8'-4"	
b29*	36		14'-3"	
b30*	12		14'-8"	
b31*	18		26'-3"	
b32*	6	#4	12'-6"	

Bar	No.	Size	Length	Shape
b33*	12	#4	10'-10"	
b34*	6	#4	33'-2"	
b35*	24	#4	19'-4"	
b36	1620	#5	33'-7"	
b37	96	#6	32'-0"	
b38	96	#6	29'-9"	
b39	96	#6	21'-8"	
b40*	8	#5	17'-9"	
b41*	56		14'-6"	
b42*	48		14'-2"	
b43*	16		18'-3"	
b44*	16		11'-6"	
b45*	16		7'-9"	
b46*	16		15'-10"	
b47*	16		10'-1"	
b48*	16		8'-11"	
b49*	8		15'-8"	
b50*	12		13'-6"	
b51*	8		18'-1"	
b52*	8	#5	14'-10"	
b53*	12	#4	29'-10"	
b54*	60		14'-6"	
b55*	24		5'-0"	
b56*	24		11'-0"	
b57*	24		10'-0"	
b58*	24		8'-11"	
b59*	24		18'-2"	
b60*	12		30'-5	
b61*	12	#4	60'-5	
d1	1614	#4	3'-8"	
s1	5168	#5	2'-9"	

Notes:
* 2 Sets of 13 Bars Each Set varies from min to max as shown
* Denotes bars in parapet.
△ Denotes bars in top of curb

BILL OF MATERIALS

Class "X" Concrete	Cu. Yds.	1,313.3
Reinforcement Bars	Lbs.	345,835
Structural Steel*	Lbs.	1,107,950

* Structural Steel includes weight of rockers, bolsters bearing plates, pintles and anchor bolts.
Estimated Weight = 33,650

Cost of furnishing and installing drains and aluminum sheets shall be incidental to Class X Concrete

DESIGNED	T.G.
CHECKED	B.A.
DRAWN	R.B.
CHECKED	P.P.H.R.

CROSS SECTION
F.A.I. 80 OVER
ROWELL AVE. C.M.ST.P.&P.R.R. & E.J.&E.R.Y.
F.A.I. 80 STA. ON ℄ ROWELL AVE. 471+26.39

F.A.I. ROUTE 80 — PROJECT
SECTION 99-4-IVB — WILL COUNTY

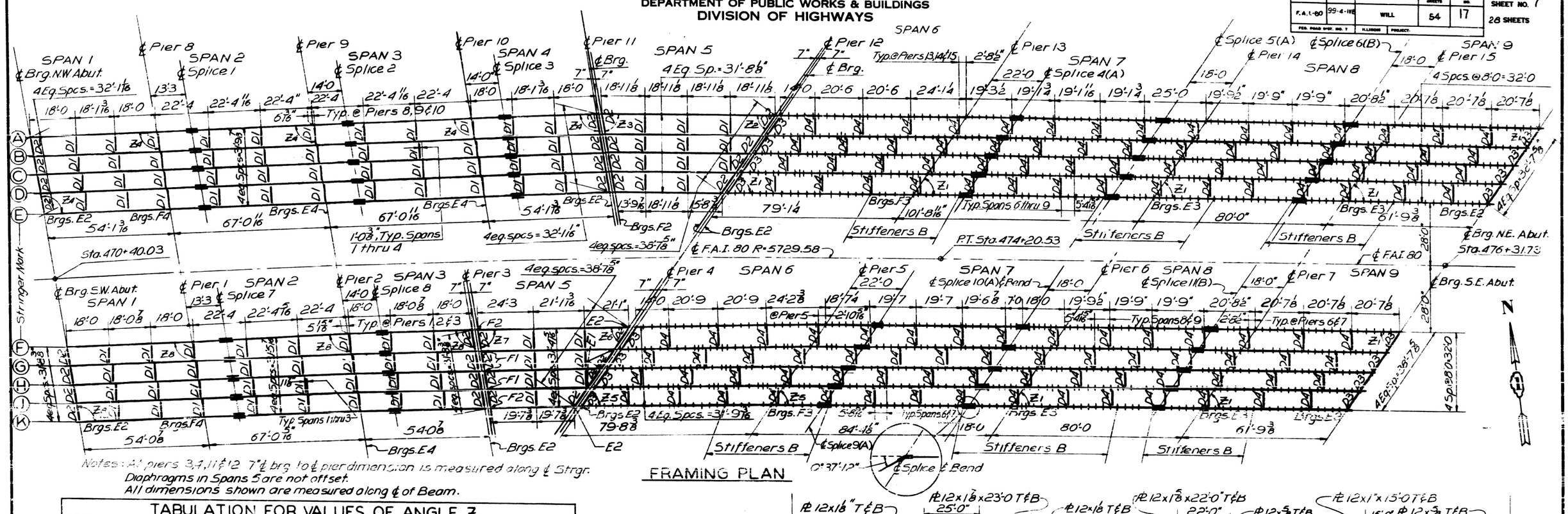
Scale: NO SCALE — Date: OCTOBER 1956

BLAUVELT ENGINEERING CO.
CONSULTING ENGINEERS
WOODBURY, N.J. NEW YORK, N.Y. CRYSTAL LAKE, ILL.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-80	99-4-IVR	WILL	54	17
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

SHEET NO. 7
28 SHEETS

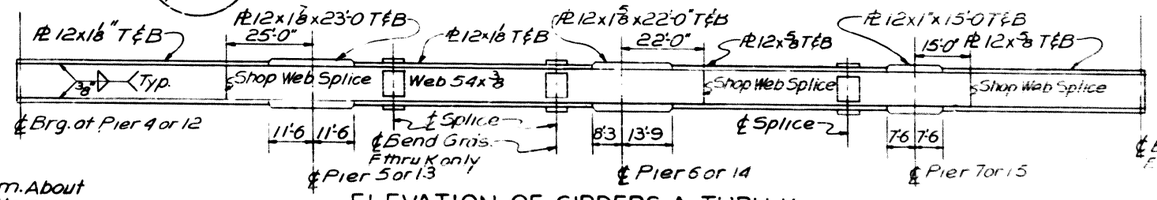


FRAMING PLAN

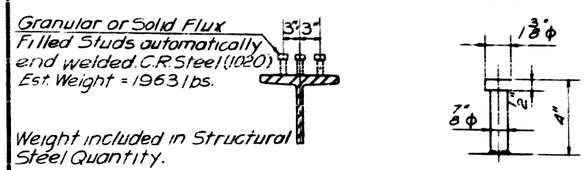
Notes: At piers 3, 4, 11 & 12 7" ℄ brg. to ℄ pier dimension is measured along ℄ Strgr.
Diaphragms in Spans 5 are not offset.
All dimensions shown are measured along ℄ of Beam.

TABULATION FOR VALUES OF ANGLE Z								
Angle	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8
Value	55°-55'-00"	65°-04'-11"	80°-46'-49"	97°-23'-41"	65°-17'-48"	54°-15'-24"	81°-35'-36"	97°-10'-23"

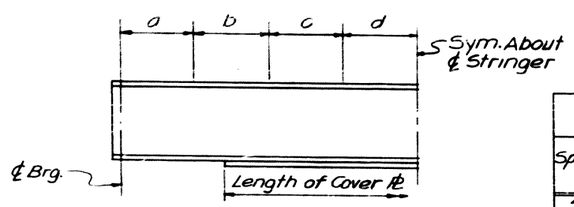
Note: Shop Web splices optional



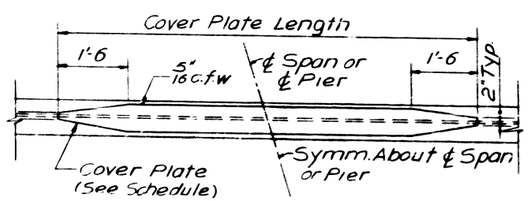
ELEVATION OF GIRDERS A THRU K



SHEAR CONNECTOR DETAILS



STRINGER DETAIL



DETAIL OF COVER PLATES

COV. PLs LENGTHS E.B. & W.B. RDWYS				
Stgr.	Section	Pier 1 & 2	Pier 8 & 10	Pier 9
A Thru E	36WF150	———	9 1/2 x 1 1/16 x 10'-0	9 1/2 x 1 1/16 x 12'-0
F Thru K	36 WF150	9 1/2 x 1 1/16 x 9'-0	———	———

STRINGER DATA												
Span	Stgr.	Lengths Brg. to Brg.	Section	Bottom Cover Plate	Shear Connector Spacing a Pitch	a Lgth.	b Pitch	b Lgth	c Pitch	c Lgth	d Pitch
5	A	75'-8 1/2	36WF194	11 x 1 3/8 x 54'-0	6 1/2"	10'-10	9 1/2"	7'-11	11"	7'-4	14"
	B	68'-10 1/16	36WF160	11 x 1 1/4 x 52'-0	6 1/2"	8'-8	9"	8'-3	11"	8'-3	14"
	C	62'-0 1/8	36WF135	11 x 1" x 46'-3	6 1/2"	9'-9	9"	7'-6	11"	7'-4	14"
	D	55'-3 3/8	36 WF135	11 x 3/4" x 41'-9	6 1/2"	7'-7	9"	6'-9"	11"	6'-5	14"
	E	48'-5 5/16	36 WF150	———	7"	5'-3	8 1/2"	8'-6	11"	4'-7	14"
	F	66'-5 3/16	36 WF135	11 x 3/4 x 46'-6	6"	10'-0	8"	8'-0	10"	8'-4	14"
	G	59'-7 9/16	33 WF130	10 1/2 x 1" x 44'-6	6"	10'-0	8"	8'-0	10"	8'-4	14"
	H	52'-9 7/16	33 WF118	10 1/2 x 7/8" x 40'-0	6 1/2"	9'-9	8 1/2"	5'-8"	10"	7'-6"	14"
	J	46'-0 3/8	33 WF118	9 x 7/16 x 35'-6	6 2"	9'-9	9"	4'-6	11"	3'-8	14"
5	K	39'-2 3/4	36 WF135	———	7 1/2"	8'-9	10"	5'-10	———	———	14"

Note: For Bearing, Diaphragm & Misc. Details See Sheet No. 8
For Girders, Stiffeners B as noted, all others are to be Stiffeners A

DESIGNED	L.D.
CHECKED	B.M.
DRAWN	R.B.
CHECKED	T.G.

Welding Notes:
The Contractor shall submit to the Engineer for approval a welding procedure for the fabrication of all parts.
All welding shall be done in accordance with the "Standard Specifications for Welded Highway and Railway Bridges."
Shop Web splices to be welded by submerged arc square butt weld (similar to 221-A, AWS)
Electrodes conforming to either the E 60XX or the E 70XX series of Tentative Specifications for Mild Steel Arc-Welding Electrodes (AWS Designation A5.1; ASTM Designation A233) shall be used for A36 steel in thickness of 1/4" or less. Only E 70XX Low-Hydrogen electrodes shall be used on thickness of A36 steel over 3/4".
Preference shall be given to flat position welding where feasible.
In general, all welded splices in webs and flanges shall be made before welding flanges to webs.
Stringer sections shall be assembled for position welding with adequate supports to maintain proper dimensions and alignments and to hold distortion to a minimum.

FRAMING PLAN AND STEEL DETAILS
F.A.I. 80 OVER
ROWELL AVE. C.M.ST.P.&P.R.R. & E.J. & E. R.Y.
F.A.I. 80 STA. ON ℄ ROWELL AVE. 471+26.39

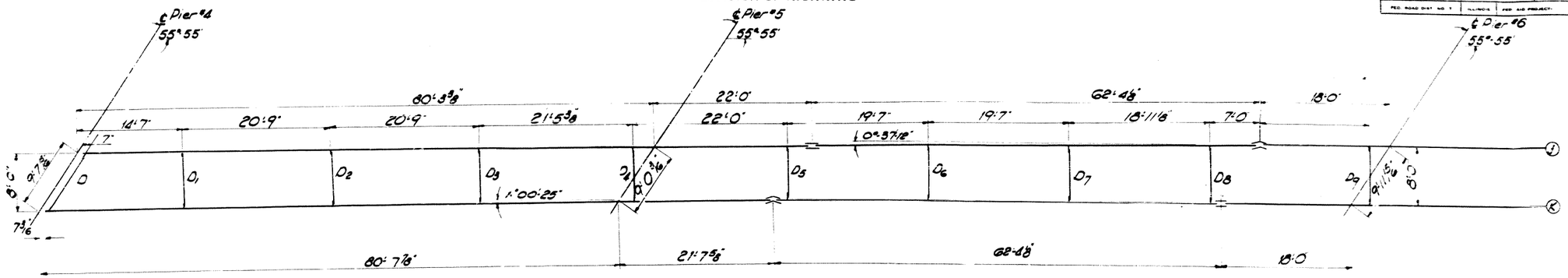
F.A.I. ROUTE 80 — PROJECT
SECTION 99-4-IVR — WILL COUNTY
Scale: NO SCALE — Date: OCTOBER 19, 1962

BLAUVELT ENGINEERING CO.
CONSULTING ENGINEERS
WOODBURY, N.J. — NEW YORK, N.Y. — CRYSTAL LAKE, ILL.

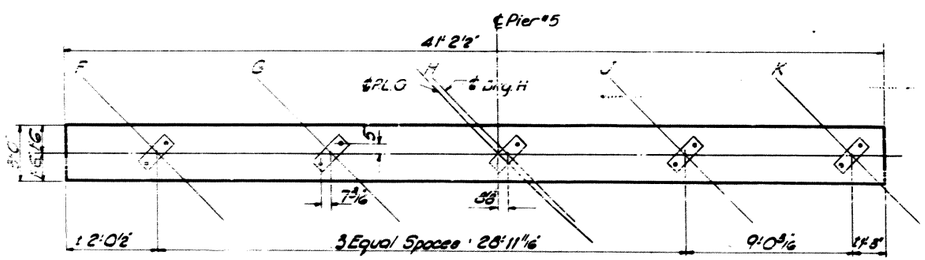
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	99-4 IVB	WILL	54	17A
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

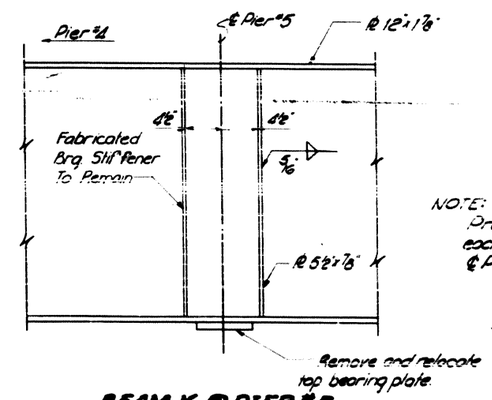
SHEET NO. 17A
2nd SHEETS



REVISED FRAMING PLAN

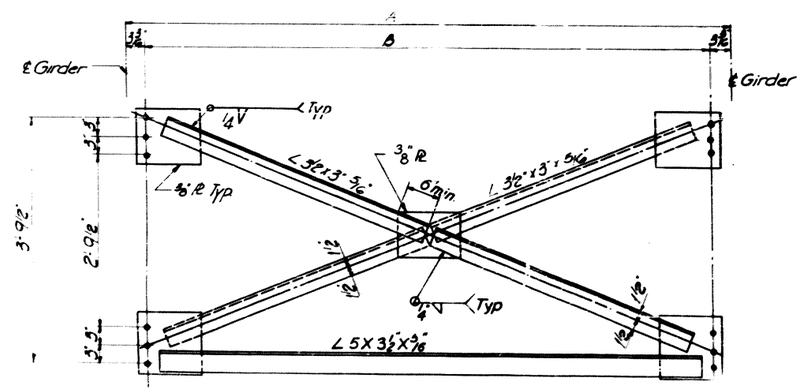


PLAN
REVISED CAP PIER #5



NOTE:
Provide bearing stiffeners each side of web 4 1/2" from ℄ Pier #5

BEAM K @ PIER #5



DIAPHRAMS D-D9

DIAPHRAGM D to D9

Dimension	A	B
D1	7'-9 7/8"	7'-3 1/2"
D2	7'-8 1/8"	7'-1 3/8"
D3	7'-6 1/2"	7'-0 3/8"
D4	7'-4 5/8"	6'-10 7/8"
D5	7'-3 1/2"	6'-9 3/8"
D6	7'-2 3/8"	6'-11 3/4"
D7	7'-0 5/8"	7'-2 1/4"
D8	7'-11 1/8"	7'-4 1/2"
* D9	8'-0"	7'-3 5/8"

* As on the contract plans

*Top Of Stringer Elevations

Bm. Loc.	Pier #4	Pier #5	Splice 9A	Splice 10A	Pier 6
Bm. K	619.00	615.46	616.06	617.98	618.55

* Top of top flange of Stringer K.

Note:
The Contractor shall use the existing web splice plates and shall fabricate new flange splice plates for girder line K between Pier #5 and Pier #6.

DESIGNED	
CHECKED	
DRAWN Robt D Elmore	
CHECKED	

19
EXAMINED
CHIEF ENGR OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF BRIDGES
APPROVED
CHIEF HIGHWAY ENGINEER

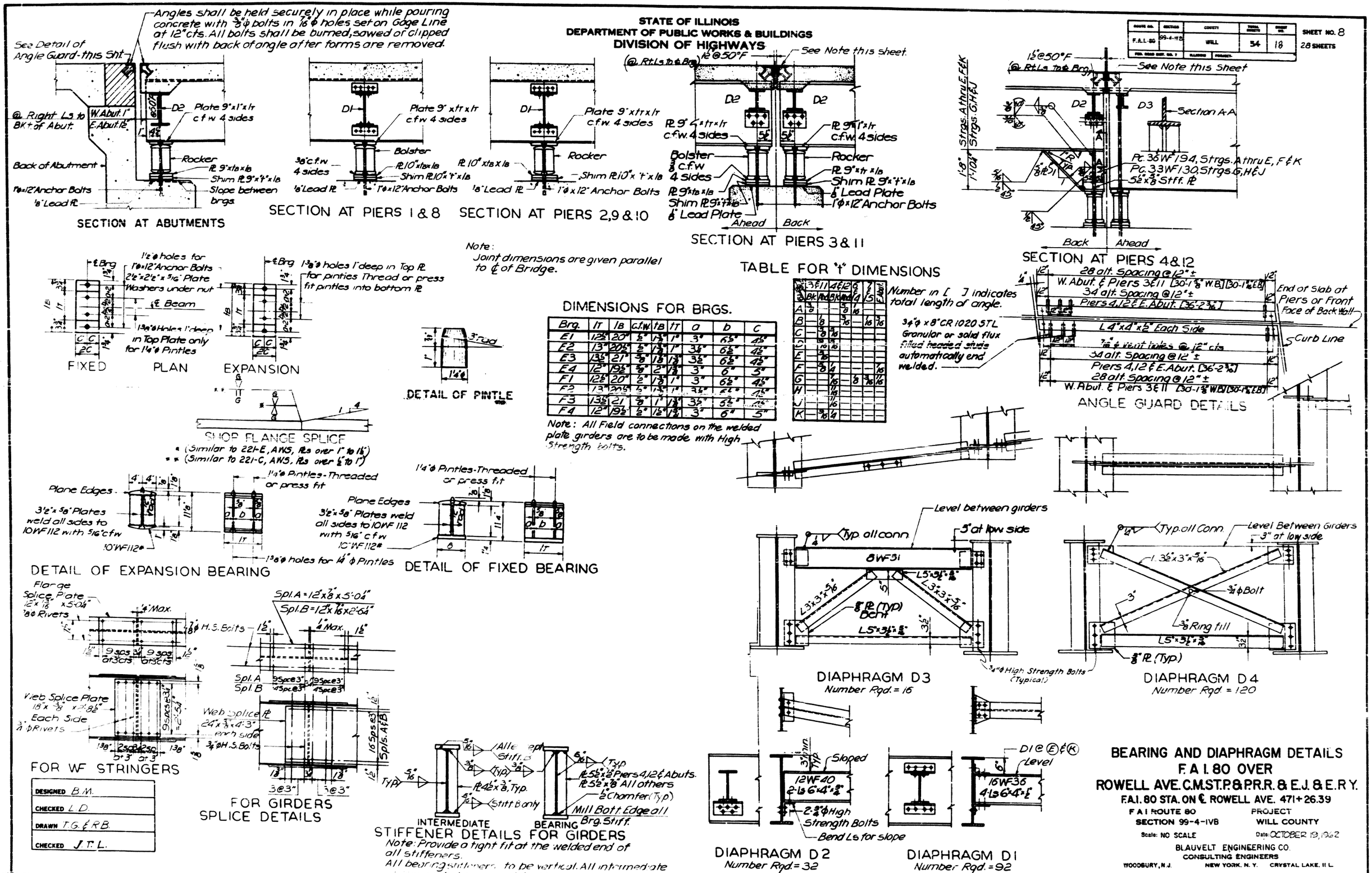
AS BUILT

STRUCTURAL STEEL BM. LINE K
F.A.I. RTE. 80 SEC. 99-4-IVB
WILL COUNTY
STA. 471+26.39

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-80	99-4-1VB	WILL	54	18
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

SHEET NO. 8
28 SHEETS


Angles shall be held securely in place while pouring concrete with 3/8"φ bolts in 7/16"φ holes set on Gage Line at 12" cts. All bolts shall be burned, sawed or clipped flush with back of angle after forms are removed.
See Detail of Angle Guard-this Sht
@ Right Ls to Bk't of Abut.
W. Abut. 1"
E. Abut. 1/2"
D2
Plate 9"x1"x1r c.f.w. 4 sides
Back of Abutment
Rocker
Pl. 9"x1/8"x1/8
Shim Pl. 9"x1"x1/8
1"φ x 12" Anchor Bolts
Slope between brgs
1/8" Lead Pl.
SECTION AT ABUTMENTS
D1
Plate 9"x1"x1r c.f.w. 4 sides
3/8" c.f.w. 4 sides
Bolster
Pl. 10"x1/8"x1/8
Shim Pl. 10"x1"x1/8
1/8" Lead Pl.
1"φ x 12" Anchor Bolts
SECTION AT PIERS 1 & 8
Pl. 10"x1/8"x1/8
Shim Pl. 10"x1"x1/8
SECTION AT PIERS 2,9 & 10
1/2"@50°F
(@ Rt. Ls to ℄ Brg.)
See Note this sheet.
Pl. 9"x1"x1r c.f.w. 4 sides
Bolster 3/8" c.f.w. 4 sides
Rocker
Pl. 9"x1/8"x1/8
Shim Pl. 9"x1"x1/8
1/8" Lead Plate
1"φ x 12" Anchor Bolts
Ahead
Back
SECTION AT PIERS 3 & 11
Strgs. A thru E, F & K
Strgs. G, H & J
1'-8"
1'-10 1/4"
D3
Section A-A
Pl. 36"x1/2" Stiff. Pl.
Back
Ahead
SECTION AT PIERS 4 & 12
Note: Joint dimensions are given parallel to ℄ of Bridge.
℄ Brg.
1 1/2"φ holes for 1"φ x 12" Anchor Bolts
2 1/2"x2 1/2"x5/16" Plate Washers under nut
℄ Beam
1 3/8"φ Holes x 1" deep in Top Plate only for 1 1/4"φ Pintles
FIXED
PLAN
1 3/8"φ holes 1" deep in Top Pl. for pintles Thread or press fit pintles into bottom Pl.
EXPANSION
3" rad.
1 1/4"φ
DETAIL OF PINTLE
SHOP FLANGE SPLICE
* (Similar to 221-E, AWS, Pls over 1" to 1 1/2")
** (Similar to 221-C, AWS, Pls over 1/2" to 1")
Plane Edges
3 1/2"x5/8" Plates weld all sides to 10WF112 with 5/16" c.f.w.
10WF112#
1 1/4"φ Pintles-Threaded or press fit
1 3/8"φ holes for 1 1/4"φ Pintles
DETAIL OF EXPANSION BEARING
Plane Edges
3 1/2"x5/8" Plates weld all sides to 10WF112 with 5/16" c.f.w.
10WF112#
DETAIL OF FIXED BEARING
Flange Splice Plate 12"x1/16"x5'-0 1/4"
8φ Rivets
1/4" Max.
7/8"φ H.S. Bolts
Web Splice Plate 18"x3/8"x2'-8 1/2" Each Side
3/4"φ Rivets
FOR WF STRINGERS
Spl. A = 12"x7/8"x5'-0 1/4"
Spl. B = 12"x7/16"x2'-6 1/4"
Spl. A
Spl. B
Web Splice Pl. 24"x3/8"x4'-3" each side
3/4"φ H.S. Bolts
Spls. A & B
FOR GIRDERS SPLICE DETAILS
Alternate Stiff. B
Typ.
Pl. 4 1/2"x3/8" Typ.
Stiff. B only
Typ.
Pl. 5 1/2"x1/8" Piers 4,12 & Abuts.
Pl. 5 1/2"x3/8" All others
1/2" Chamfer (Typ.)
Mill Bott. Edge all Brg. Stiff.
INTERMEDIATE
BEARING
STIFFENER DETAILS FOR GIRDERS
Note: Provide a tight fit at the welded end of all stiffeners.
All bearing stiffeners to be vertical. All intermediate stiffeners to be normal to flanges.
Number in [ ] indicates total length of angle.
3/4"φ x 8" CR 1020 STL Granular or solid flux filled headed studs automatically end welded.
28 alt. Spacing @ 12" ±
W. Abut. & Piers 3 & 11 [30-1 7/8" W.B.] [30-1 7/8" E.B.]
34 alt. Spacing @ 12" ±
Piers 4,12 & E. Abut. [36'-2 3/16"]
L 4"x4"x1/2" Each Side
7/8" φ rivet holes @ 12" cts
End of Slab at Piers or Front Face of Back Wall
Curb Line
ANGLE GUARD DETAILS
Level between girders
3" at low side
Typ. all conn.
8WF31
L 3"x3"x5/16"
Pl. (Typ.) Bch't
L 5"x3 1/2"x3/8"
3/4"φ High Strength Bolts (Typical)
DIAPHRAGM D3
Number Rqd. = 16
Typ. all Conn.
Level Between Girders 3" at low side
L. 3 1/2"x3"x5/16"
3/4"φ Bolt
3/8" Ring fill
3/8" Pl. (Typ.)
DIAPHRAGM D4
Number Rqd. = 120
Sloped
12WF40
2-Ls 6"x4"x3/8"
2-3/4"φ High Strength Bolts
Bend Ls for slope
DIAPHRAGM D2
Number Rqd. = 32
16WF36
4-Ls 6"x4"x1/2"
D1 @ Ⓔ & Ⓚ Level
DIAPHRAGM D1
Number Rqd. = 92
Note: All Field connections on the welded plate girders are to be made with High Strength bolts.
TABLE FOR "t" DIMENSIONS
DIMENSIONS FOR BRGS.

Brg.	lT	lB	c.f.w.	tB	tT	a	b	c
E1	12 1/2"	20"	1/2"	1 1/2"	1"	3"	6 1/2"	4 1/2"
E2	13"	20 1/2"	1/2"	1 1/2"	1"	3 1/2"	6 1/2"	4 1/2"
E3	13 1/2"	21"	5/8"	1 5/8"	1 1/2"	3 1/2"	6 1/2"	4 1/2"
E4	12"	19 1/2"	5/8"	2"	1 1/2"	3"	6"	5"
F1	12 1/2"	20"	1/2"	1 1/2"	1"	3"	6 1/2"	4 1/2"
F2	13"	20 1/2"	1/2"	1 1/2"	1"	3 1/2"	6 1/2"	4 1/2"
F3	13 1/2"	21"	5/8"	1"	1 1/2"	3 1/2"	6 1/2"	4 1/2"
F4	12"	19 1/2"	1/2"	1 1/2"	1 1/2"	3"	6"	5"

Note: All Field connections on the welded plate girders are to be made with High Strength bolts.

	3 & 11	4 & 12	G & J	F & E Abut.
Bk	Ahd	Ahd	4	5
A	3/8		5/8	1/16
B	5/8		3/16	1/16
C	5/8	3/16		
D	13/16	3/16		
E	5/8	3/16		
F	5/8	1/4		7/16
G		7/16	5/8	5/16	7/16
H		7/16		
J		7/16		
K	5/16	1/4		

DESIGNED	B.M.
CHECKED	L.D.
DRAWN	T.G. & R.B.
CHECKED	J.T.L.

BEARING AND DIAPHRAGM DETAILS
F.A.I. 80 OVER
ROWELL AVE. C.M.ST.P.& P.R.R. & E.J. & E.R.Y.

F.A.I. 80 STA. ON ℄ ROWELL AVE. 471+26.39

F.A.I. ROUTE 80 — PROJECT
SECTION 99-4-1VB — WILL COUNTY

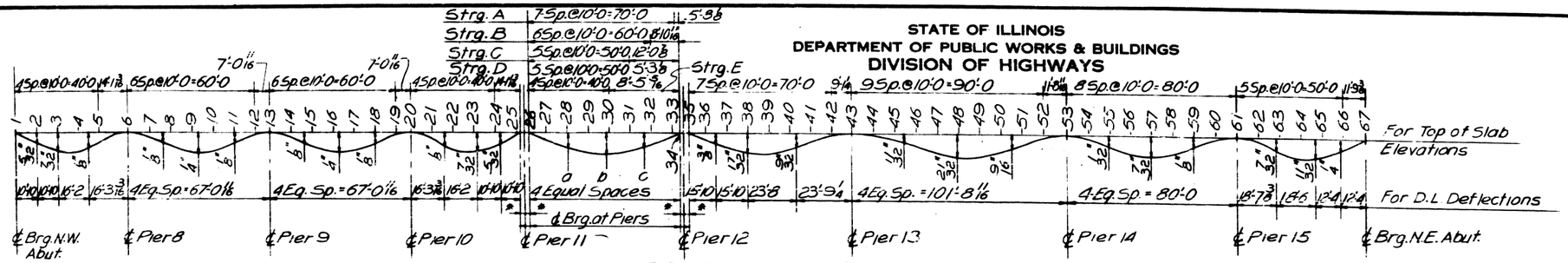
Scale: NO SCALE — Date: OCTOBER 19, 1962

BLAUVELT ENGINEERING CO.
CONSULTING ENGINEERS
WOODBURY, N.J. — NEW YORK, N.Y. — CRYSTAL LAKE, ILL.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

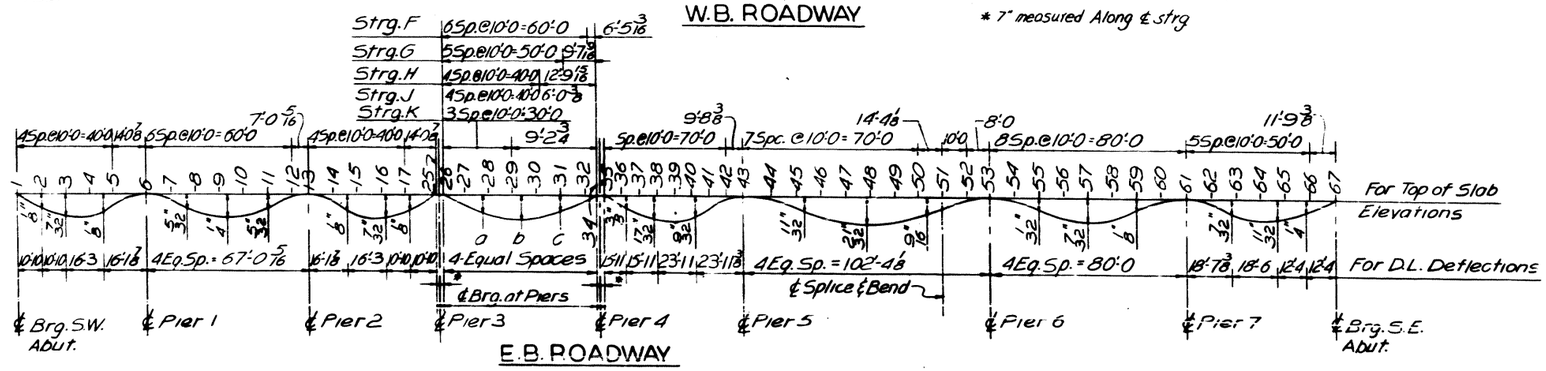
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-80	99-4-IVB	WILL	54	19
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT-		

SHEET NO. 9
28 SHEETS



W.B. ROADWAY

* 7" measured Along ℄ strg.



E.B. ROADWAY

DEAD LOAD DEFLECTIONS

Strg. Point	A	B	C	D	E	F	G	H	J	K
a	1"	5/8"	13/32"	11/32"	5/16"	3/32"	1/32"	3/8"	1/4"	5/32"
b	1 1/16"	23/32"	3/4"	1/2"	7/16"	1/8"	3/32"	1/32"	1/32"	1/32"
c	1"	5/8"	13/32"	11/32"	5/16"	3/32"	1/32"	3/8"	1/4"	5/32"

Dead Load Deflections due to weight of Slab only

TOP OF SLAB ELEVATIONS (Elevations not adjusted for D.L. deflections)

Strg. Pt.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
A	60473	60503	60532	60561	60591	60632	60662	60691	60721	60750	60780	60810	60831	60860	60890	60920	60950	60979	61009	61030	61060	61090	61120	61150	61193	61196	61226	61255	61285	61314	61344	61374	61403	61420	61424
B	60400	60489	60519	60548	60578	60619	60649	60678	60708	60737	60767	60797	60818	60847	60877	60907	60937	60967	60997	61018	61048	61078	61108	61138	61181	61184	61214	61243	61273	61302	61332	61362	—	61388	61392
C	60447	60476	60505	60535	60564	60606	60636	60665	60695	60724	60754	60784	60805	60835	60865	60894	60924	60954	60984	61005	61035	61065	61096	61126	61168	61172	61201	61231	61261	61290	61320	—	—	61356	61359
D	60433	60463	60492	60522	60551	60593	60622	60652	60682	60711	60741	60771	60792	60822	60852	60882	60912	60942	60972	60993	61023	61053	61083	61113	61156	61159	61189	61219	61248	61278	61308	—	—	61324	61327
E	60420	60449	60479	60508	60538	60580	60609	60639	60669	60699	60728	60758	60779	60809	60839	60869	60899	60929	60959	60980	61010	61041	61071	61101	61144	61147	61177	61207	61236	61266	—	—	—	61291	61295
F	60758	60788	60818	60848	60878	60920	60950	60980	61010	61040	61070	61101	61122	61152	61183	61213	61243	—	—	—	—	—	—	—	61286	61290	61320	61350	61380	61410	61440	61470	—	61490	61494
G	60745	60775	60805	60835	60865	60907	60937	60967	60997	61028	61058	61088	61109	61140	61170	61200	61231	—	—	—	—	—	—	—	61274	61277	61307	61337	61368	61398	61428	—	—	61457	61461
H	60732	60762	60792	60822	60852	60894	60924	60954	60985	61015	61045	61075	61097	61127	61158	61188	61218	—	—	—	—	—	—	—	61261	61265	61295	61325	61355	61386	—	—	—	61425	61429
J	60719	60749	60779	60809	60839	60881	60911	60942	60972	61002	61032	61063	61084	61115	61145	61176	61206	—	—	—	—	—	—	—	61249	61253	61283	61313	61343	61374	—	—	—	61392	61396
K	60705	60736	60766	60796	60826	60868	60899	60929	60959	60989	61020	61050	61072	61102	61133	61163	61194	—	—	—	—	—	—	—	61237	61240	61271	61301	61331	—	—	—	—	61359	61363

Strg. Pt.	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67
A	61453	61483	61507	61531	61556	61580	61605	61627	61652	61677	617.01	61726	61755	61785	61815	61843	61874	61909	61938	61966	61995	62023	62051	62079	62106	62133	62160	62187	62213	62240	62266	62296
B	61421	61451	61479	61507	61534	61562	61589	61614	61642	61670	61698	61726	61754	61784	61814	61844	61874	61908	61937	61966	61995	62023	62051	62079	62107	62134	62161	62188	62214	62241	62267	62297
C	61389	61418	61448	61477	61507	61537	61567	61594	616.24	616.54	61684	61714	61744	61774	61804	61834	61863	61898	61927	61956	61985	62013	62042	62070	62097	62125	62152	62179	62206	62232	62258	62289
D	61356	61386	61416	61446	61476	61507	61538	61566	61597	616.28	61659	61690	61721	61752	61782	618.12	61842	618.76	619.06	61935	61964	61992	62021	62049	62077	62104	62132	62159	62186	62212	62239	62269
E	61324	61354	61383	61413	61444	61474	61505	61533	615.64	61595	616.27	61658	61689	61720	61750	61780	61810	61845	61875	61904	61933	61962	61990	62018	62046	62074	62102	62129	62156	62183	62209	62240
F	61524	61554	61584	616.14	616.44	616.74	617.04	61733	61759	617.84	618.09	618.33	618.57	618.81	619.04	619.37	619.59	619.77	620.05	620.32	620.59	620.86	621.12	621.38	621.64	621.90	622.15	622.40	622.65	622.90	623.14	623.43
G	61491	61521	61551	61581	616.11	616.41	616.72	61701	61731	617.58	617.86	618.14	618.41	618.68	618.95	619.32	619.58	619.78	620.05	620.33	620.60	620.87	621.13	621.39	621.65	621.91	622.17	622.42	622.67	622.92	623.16	623.45
H	61459	61488	61519	61549	61579	61609	616.39	616.68	616.99	617.28	617.59	617.89	618.18	618.48	618.77	619.18	619.46	619.68	619.96	620.23	620.51	620.78	621.04	621.31	621.57	621.83	622.09	622.34	622.59	622.84	623.09	623.39
J	614.26	614.56	614.86	615.16	615.46	615.76	616.06	616.36	616.66	616.97	617.27	617.59	617.89	618.20	618.51	618.93	619.23	619.46	619.75	620.03	620.30	620.58	620.84	621.11	621.37	621.63	621.89	622.15	622.40	622.65	622.90	623.19
K	613.93	614.23	614.53	614.83	615.13	615.44	615.74	616.03	616.34	616.64	616.94	617.26	617.57	617.88	618.19	618.62	618.91	619.15	619.44	619.73	620.00	620.28	620.55	620.81	621.08	621.34	621.60	621.86	622.11	622.36	622.61	622.90

Where curb is over Stringer, elevation shown is that of the projection of top of Slab along its cross slope.

*TOP OF STRINGER

Strg. Pt.	1	6	Splice	13	Splice	20	Splice	25	26	34	35	43	Splice	Splice	53	Splice	61	67
A	60410	60569	60608	60767	60809	60967	61009	61129	61133	61357	61360	61570	61618	61792	61849	62017	62069	62228
B	60396	60556	60595	60754	60796	60954	6099	61117	61120	61325	61328	61557	61612	61792	61849	62017	62069	62229
C	60383	60542	60578	60741	60783	60942	60984	61105	61108	61292	61296	61536	61596	61781	61839	62007	62060	62221
D	60370	60529	60569	60729	60770	60929	60971	610.92	61095	61260	61263	61509	61570	61759	61817	61987	62040	62202
E	60356	60516	60555	60716	60758	60917	60959	61080	61084	61228	61231	61476	61538	61728	61786	61956	62010	62172
F	60634	60856	60896	61058	61101	—	—	61213	61220	61426	61430	[illegible]	61723	[illegible]	61918	[illegible]	62125	62275
G	60681	60843	60883	61046	61088	—	—	61210	61214	61394	61398	61644	61700	[illegible]	61919	62077	62127	62277
H	60668	60831	60870	61033	61076	—	—	61198	61201	61361	61365	616.11	616.71	61834	61909	62068	62118	62272
J	60655	60818	60854	61021	61063	—	—	61186	61189	61328	61332	615.78	616.39	618.30	61887	62048	62099	62251
K	60642	60805	60845	61008	61051	—	—	61173	61177	61296	61300	615.46	616.06	617.98	61855	62019	62069	62223

* Top of Stringer Elevations are at top of top flange of stringer, exclusive of deflections.

616.68 618.65 618.64

DESIGNED	L.D. & B.M.
CHECKED	T.G. & L.D.
DRAWN	R.B.
CHECKED	L.D.

SLAB ELEVATIONS
F.A.I. 80 OVER
ROWELL AVE. C.M.ST.P.& P.R.R. & E.J. & E.R.Y.

F.A.I. 80 STA. ON ℄ ROWELL AVE. 471+26.39

F.A.I. ROUTE 80 — PROJECT
SECTION 99-4-IVB — WILL COUNTY

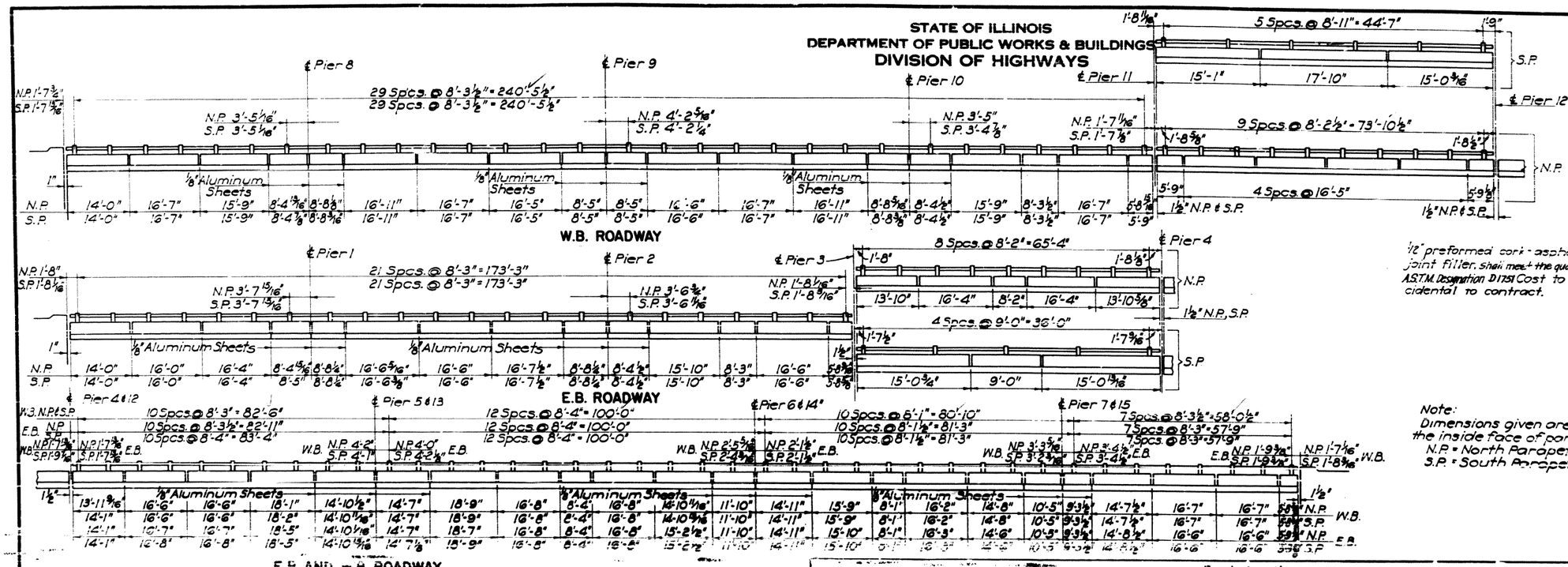
Scale: NO SCALE — Date: OCTOBER 19, 1962

BLAUVELT ENGINEERING CO.
CONSULTING ENGINEERS
WOODBURY, N.J. — NEW YORK, N.Y. — CRYSTAL LAKE, ILL

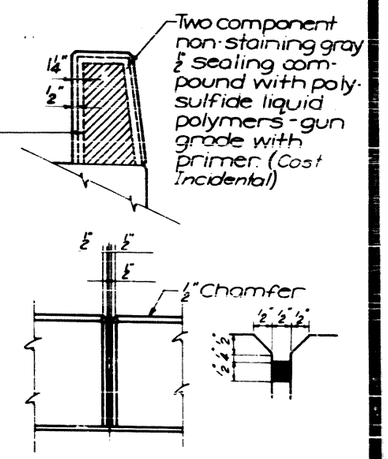
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-80	99-4-IVB	WILL	54	20
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT-		

SHEET NO.10
28 SHEETS

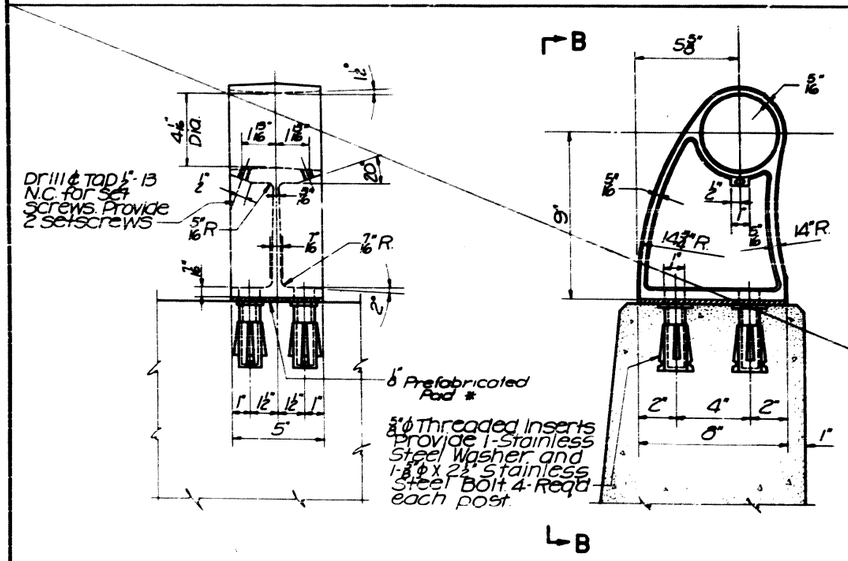


RAILING ELEVATION



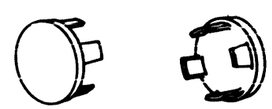
Note:
Dimensions given are along the inside face of parapet.
N.P. = North Parapet
S.P. = South Parapet

PARAPET JOINT DETAILS

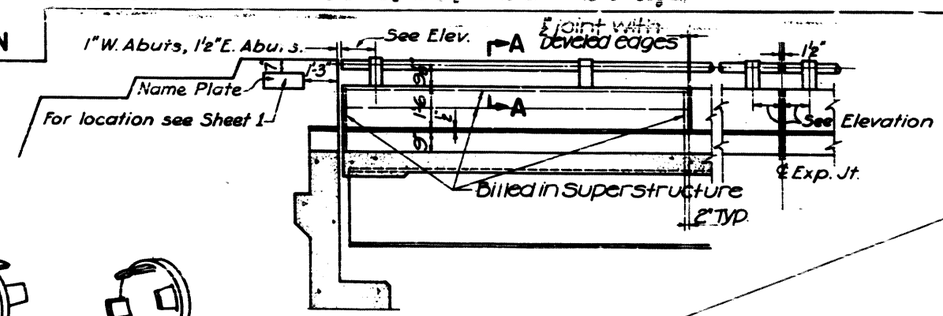


RAIL POST DETAILS

* For each post provide ⅝" prefabricated pad. See Article 54.9(f) of the Standard Specifications. For Material, cost to be incidental to the contract.

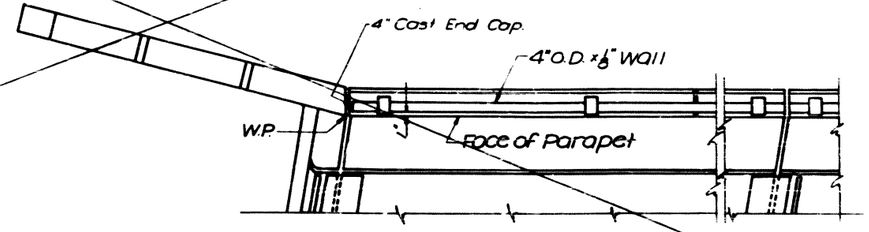


CAST END CAP
Drive fit type 24 Required
Incidental to item "Aluminum Handrail"

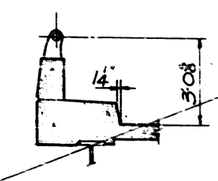


ELEVATION-END POST

NOTE: FOR RAILING DETAILS SEE SHEET NO. 10 A



PLAN-END POST



SEC THRU CURB

BILL OF MATERIAL

Item	Unit	Quantity
Alum. Handrail	Lin. Ft.	2375

NOTES

All posts shall be placed normal to parapet.
All posts shall conform to ASTM Specification B-108 Alloy 56-70B-T6.
All rail tubing shall conform to ASTM Specification B-235 Alloy 6061-T6.
The contract unit price per lineal foot for Aluminum Handrail shall include the furnishing, fabricating, transportation and erection of all material.
Rail tubing may extend to a maximum of 3 panel lengths.
Set screws shall be of Aluminum conforming to A.S.T.M. specification B-211 Alloy 2024-T4.

Aluminum Handrail shall be measured in lineal feet. The length paid for shall be the overall length along the top longitudinal railing member through all posts and gaps.

DESIGNED	T.G.
CHECKED	B.M.
DRAWN	S.E.F.
CHECKED	B.M.

RAILING DETAILS
F.A.I. 80 OVER
ROWELL AVE., C.M.ST.P.&P.R.R. & E.J.&E. RY.
F.A.I. 80 STA. ON ℄ ROWELL AVE. 471+26.39

F.A.I. ROUTE 80 — PROJECT
SECTION 99-4-IVB — WILL COUNTY
Scale: NO SCALE — Date: OCTOBER 19, 1962

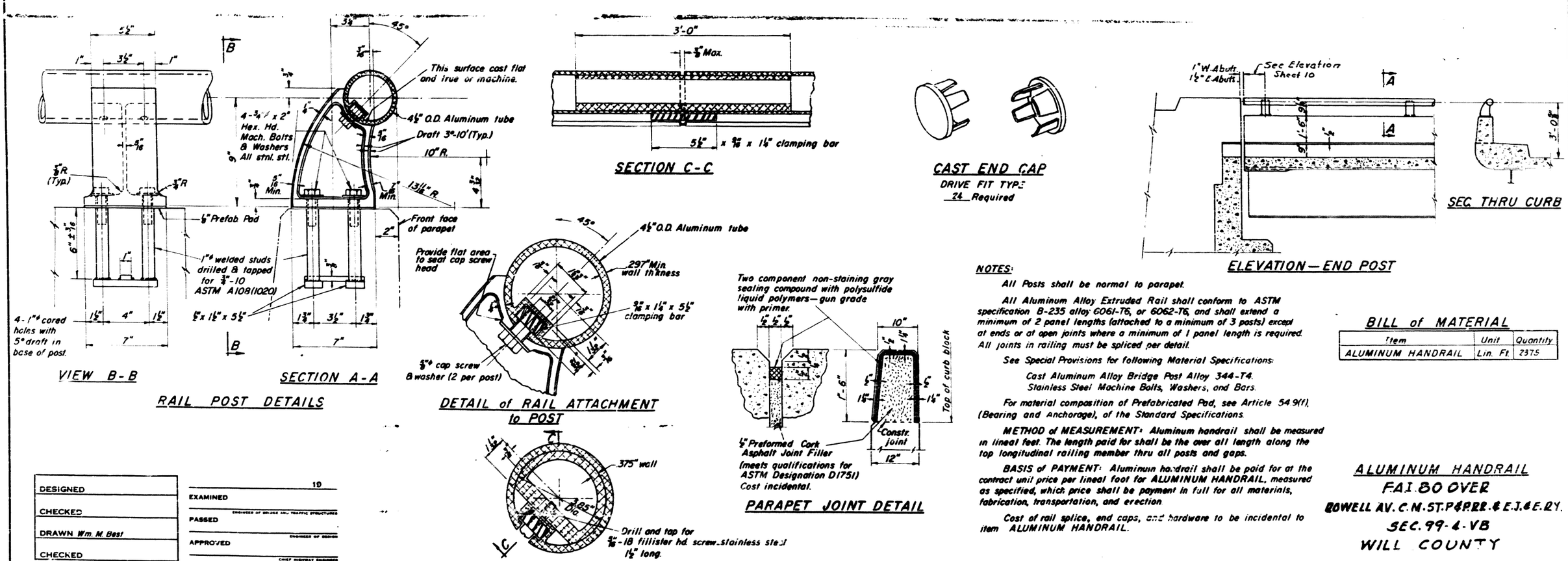
BLAUVELT ENGINEERING CO
CONSULTING ENGINEERS
WOODBURY, N.J. — NEW YORK, N.Y. — CRYSTAL LAKE, ILL.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.I. 80	99 & VB	WILL	54	20A
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 10 A
28 SHEETS

NOTE: FOR RAILING ELEVATION SEE SHEET NO. 10



NOTES:

All Posts shall be normal to parapet.

All Aluminum Alloy Extruded Rail shall conform to ASTM specification B-235 alloy 6061-T6, or 6062-T6, and shall extend a minimum of 2 panel lengths (attached to a minimum of 3 posts) except at ends or at open joints where a minimum of 1 panel length is required. All joints in railing must be spliced per detail.

See Special Provisions for following Material Specifications:

Cast Aluminum Alloy Bridge Post Alloy 344-T4.
Stainless Steel Machine Bolts, Washers, and Bars.

For material composition of Prefabricated Pad, see Article 54.9(f), (Bearing and Anchorage), of the Standard Specifications.

METHOD of MEASUREMENT: Aluminum handrail shall be measured in lineal feet. The length paid for shall be the over all length along the top longitudinal railing member thru all posts and gaps.

BASIS of PAYMENT: Aluminum handrail shall be paid for at the contract unit price per lineal foot for ALUMINUM HANDRAIL, measured as specified, which price shall be payment in full for all materials, fabrication, transportation, and erection.

Cost of rail splice, end caps, and hardware to be incidental to item ALUMINUM HANDRAIL.

BILL of MATERIAL

Item	Unit	Quantity
ALUMINUM HANDRAIL	Lin. Ft.	237.5

ALUMINUM HANDRAIL
F.A.I. 80 OVER
ROWELL AV. C.N.ST.P.&P.R.R. & E.J.&E.RY.
SEC. 99-4-VB
WILL COUNTY

DESIGNED	
CHECKED	
DRAWN Wm. M. Best	
CHECKED	

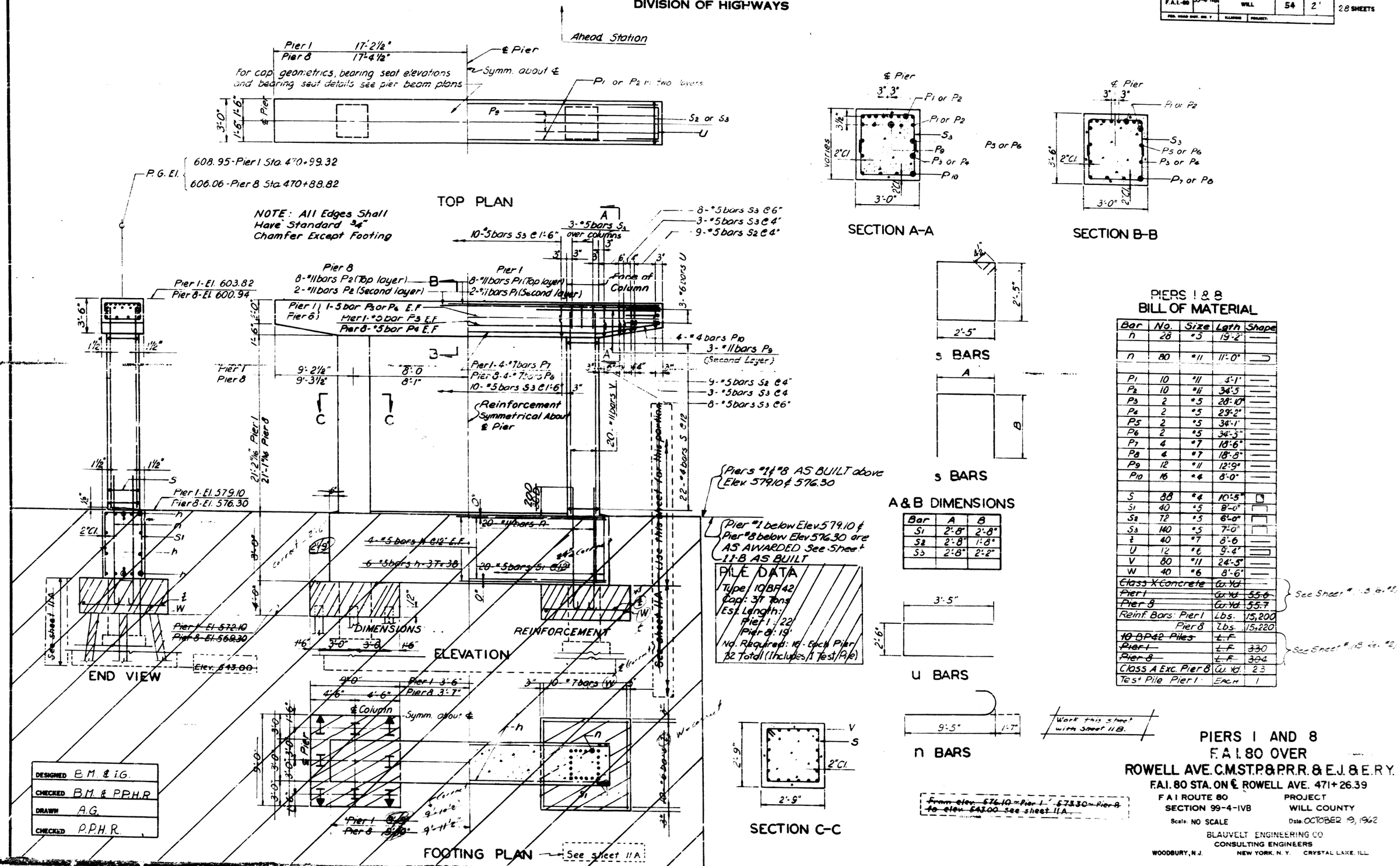
19
EXAMINED
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

R-19 Dwg. C-26-E4

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-80	99-4-1VB	WILL	54	2'
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT-		

SHEET NO. 11
28 SHEETS



PIERS 1 & 8
BILL OF MATERIAL

Bar	No.	Size	Lgth	Shape
n	28	#5	19'-2"	
n	80	#11	11'-0"	
P1	10	#11	4'-1"	
P2	10	#11	34'-5	
P3	2	#5	28'-10"	
P4	2	#5	29'-2"	
P5	2	#5	34'-1"	
P6	2	#5	34'-5"	
P7	4	#7	18'-6"	
P8	4	#7	18'-8"	
P9	12	#11	12'-9"	
P10	16	#4	8'-0"	
S	88	#4	10'-5"	
S1	40	#5	8'-0"	
S2	72	#5	6'-0"	
S3	140	#5	7'-0"	
Z	40	#7	8'-6	
U	12	#6	9'-4"	
V	80	#11	24'-5"	
W	40	#6	8'-6"	
~~Class X Concrete~~		~~Cu. Yd.~~		
~~Pier 1~~		~~Cu. Yd.~~	~~55.6~~	See Sheet #11B for #8
~~Pier 8~~		~~Cu. Yd.~~	~~55.7~~	
Reinf. Bars: Pier 1		Lbs.	15,200	
Pier 8		Lbs.	15,220	
~~10 BP42 Piles~~		~~L.F.~~		
~~Pier 1~~		~~L.F.~~	~~330~~	See Sheet #11B for #8
~~Pier 8~~		~~L.F.~~	~~304~~	
Class A Exc. Pier 8		Cu. Yd.	23	
Test Pile Pier 1		Each	1	

PIERS 1 AND 8
F.A.I. 80 OVER
ROWELL AVE. C.M.S.T.P.&P.R.R. & E.J.&E.R.Y.

F.A.I. 80 STA. ON ℄ ROWELL AVE. 471+26.39

F.A.I. ROUTE 80 — PROJECT
SECTION 99-4-1VB — WILL COUNTY

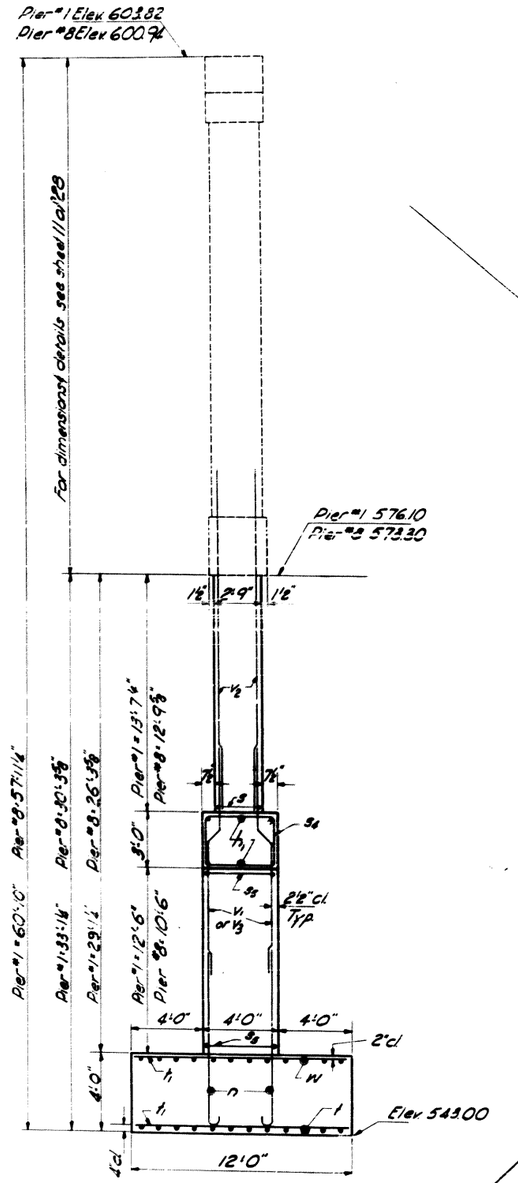
Scale: NO SCALE — Date: OCTOBER 19, 1962

BLAUVELT ENGINEERING CO
CONSULTING ENGINEERS
WOODBURY, N.J. — NEW YORK, N.Y. — CRYSTAL LAKE, ILL.

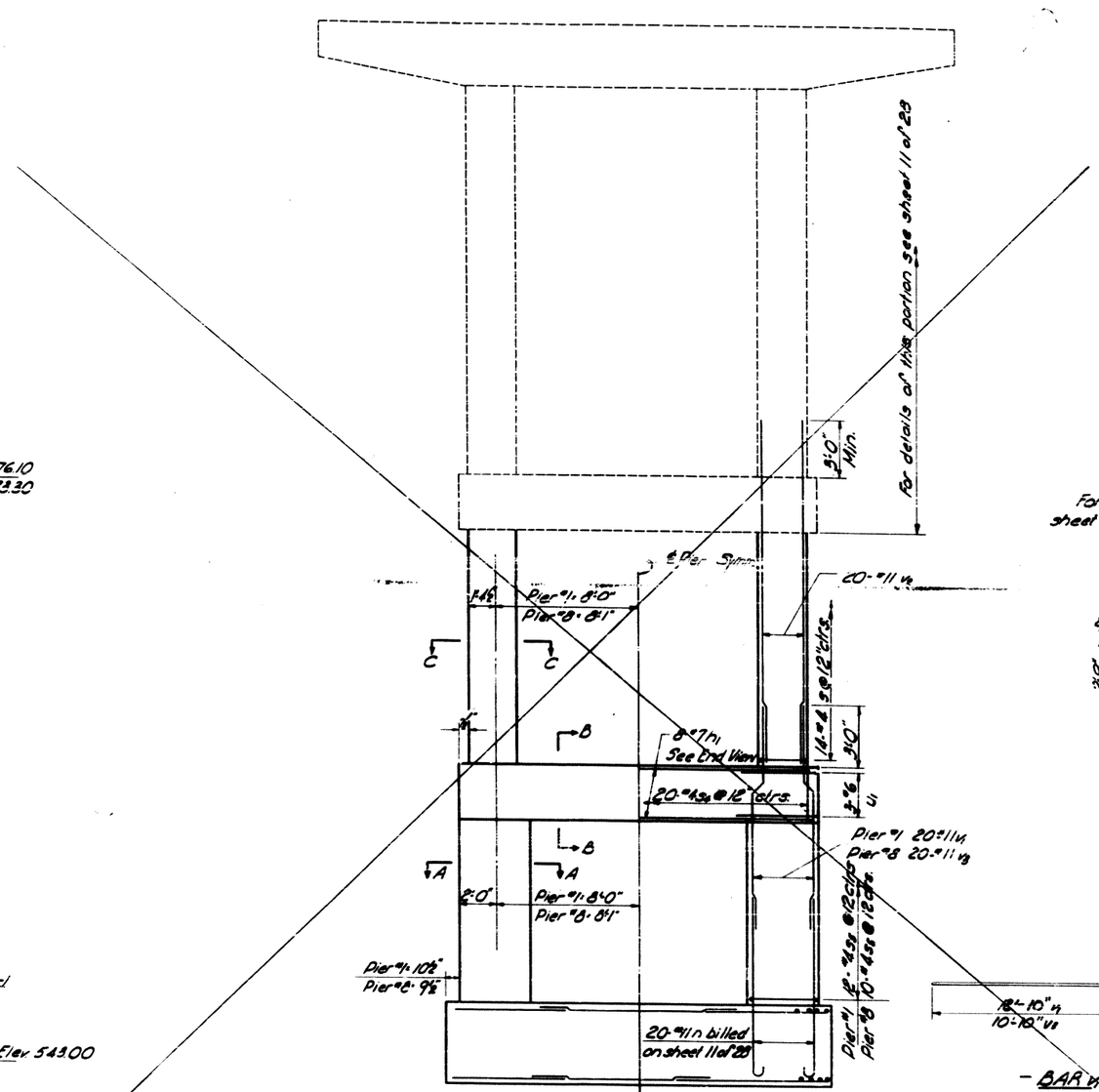
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 180	99-4 IVB	WILL	54	21-A
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

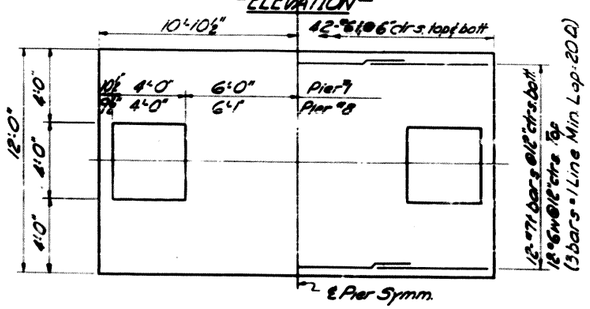
SHEET NO. 1-4 SHEETS



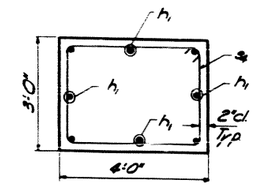
-END VIEW-



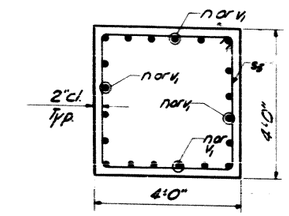
-ELEVATION-



-FOOTING PLAN-

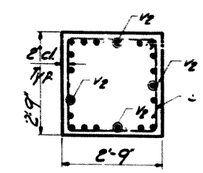


-SEC. B-B-



-SEC. A-A-

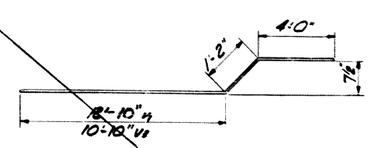
For n bar, s bar & t bar details see sheet #11 of 28.



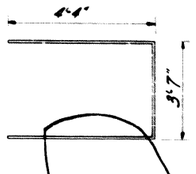
-SEC. C-C-

2 PIERS
ADDITIONAL BILL OF MATERIALS

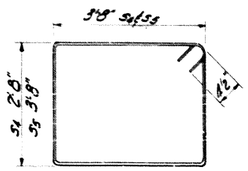
Bar	No	Size	Length	Shape
h1	16	#7	19'-6"	—
s	56	#4	10'-5"	□
s4	40	#	13'-5"	□
s5	44	#	15'-5"	□
t	80	#7	8'-6"	—
t	168	#6	11'-5"	—
u1	12	#6	12'-3"	⊐
V1	40	#11	18'-0"	⌒
V2	80	#11	19'-6"	—
V3	40	#11	16'-0"	⌒
W	32	#6	8'-6"	—
		Pier 1	Pier 8	
Class X Concrete: Cu. Yds.		66.0	43.2	
Reinforcement Bars: Lbs.		10990	10530	
Rock Excavation Cu. Yds.		—	100	



-BAR V4 & V3-



-BAR U1-



-BAR S4 & S5-

VOID

AS BUILT
PIERS 1 & 8
F.A.I. ROUTE 80
SECTION 99-IVB
WILL COUNTY

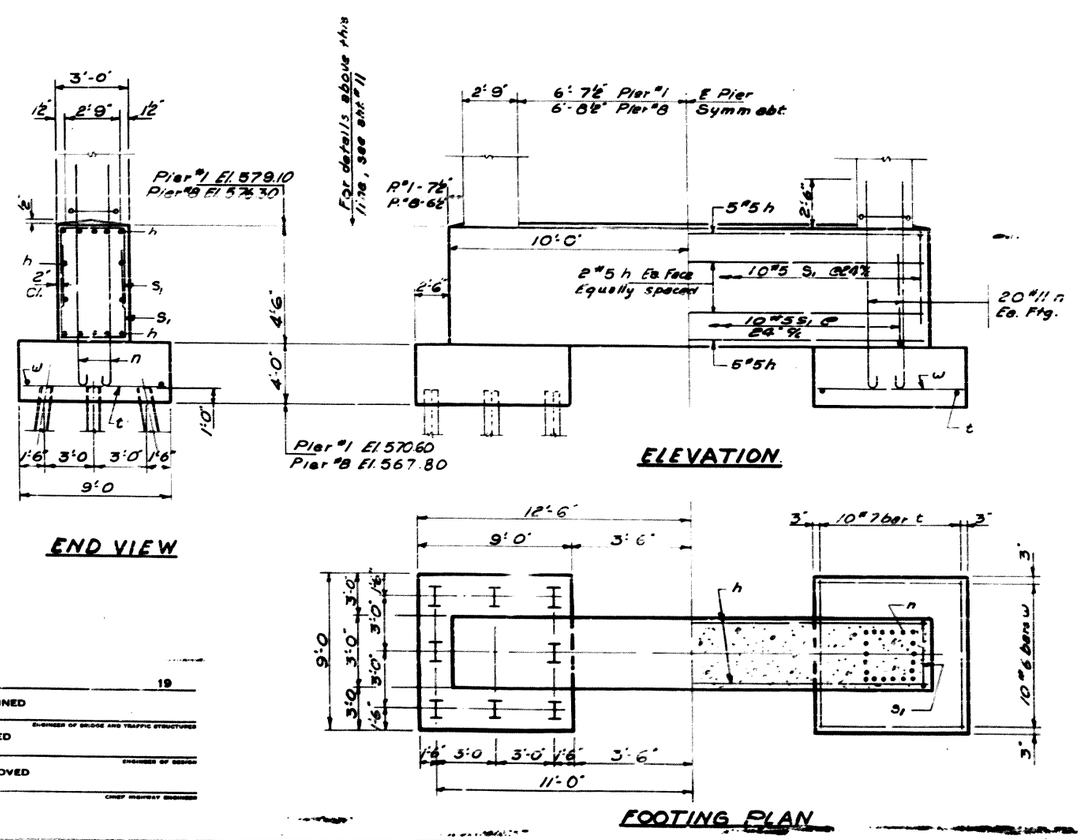
DESIGNED	J. M. Tyrrook
CHECKED	
DRAWN	Robt. P. Elmore
CHECKED	A.S.A.

19
EXAMINED
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. R.I.B.	99-4 118	Will		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET NO. 118
SHEETS



Note:
Batter outside piles 2"/Ft.

Piers 1 & 8
Bill of Materials

** Class X Concrete		
Pier #1	Cu Yds.	59.0
Pier #8	Cu Yds.	59.1
Steel Piles (10BP42)		
Pier #1	Lin Ft	330
Pier #8	Lin Ft	304
* Test Pile (10BP42)	Ea.	1

** Quantity included in the total quantity for Piers 1 & 8
* @ Pier #1

PILE DATA

Type Steel 10BP42
Drive to Refusal
Est'd Length 22 Ft Pier #1
19 Ft Pier #8
No. Req'd. 32 Includes
1 Test Pile

Work this sheet with sheet #11.

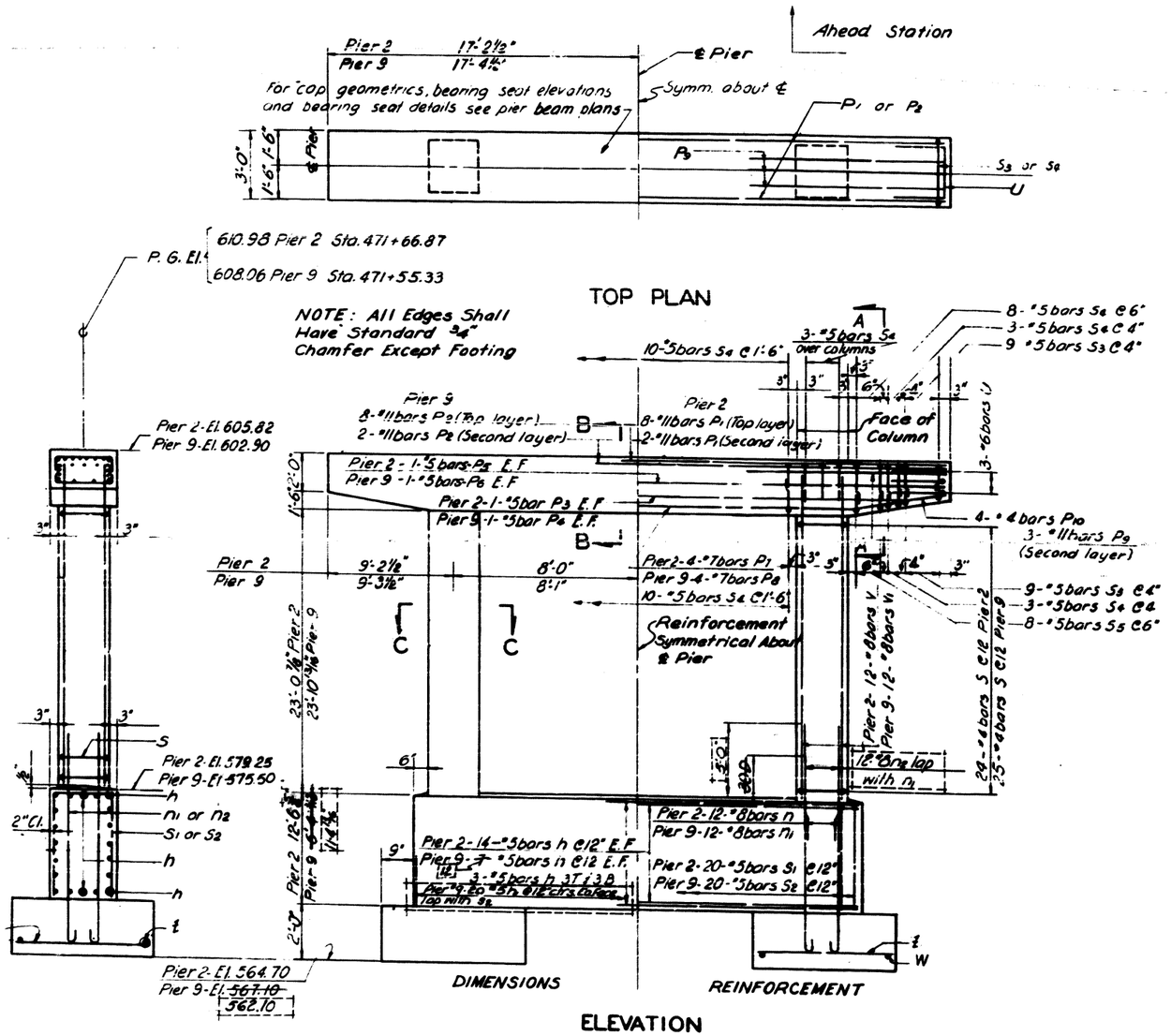
DESIGNED	Walter Burg	19
CHECKED		EXAMINED — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
DRAWN	WP	PASSED — ENGINEER OF DESIGN
CHECKED		APPROVED — CHIEF HIGHWAY ENGINEER

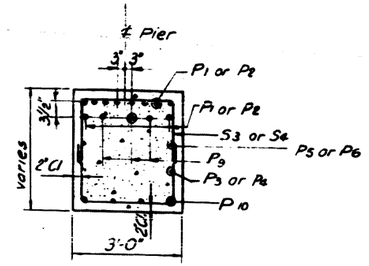
AS BUILT
PIERS 1 & 8
F.A.I. Rte. 80 SEC. 99-4 IVB
WILL COUNTY
STA 471+26.39

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

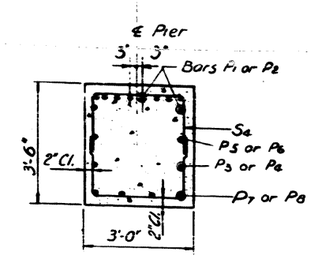
DRAWN BY	DATE	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-80	99-4-1VB	WILL	54	22
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

SHEET NO. 12
28 SHEETS

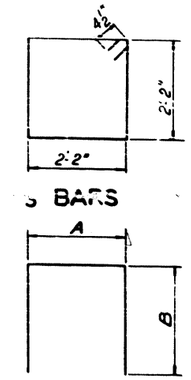




SECTION A-A



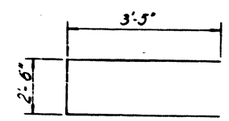
SECTION B-B



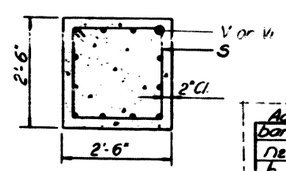
s BARS

A & B DIMENSIONS

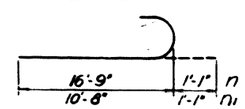
Bar	A	B
S1	2'-8"	19'-2"
S2	2'-8"	6'-0"
S3	2'-8"	1'-8"
S4	2'-8"	2'-2"



U BARS



SECTION C-C



n BARS

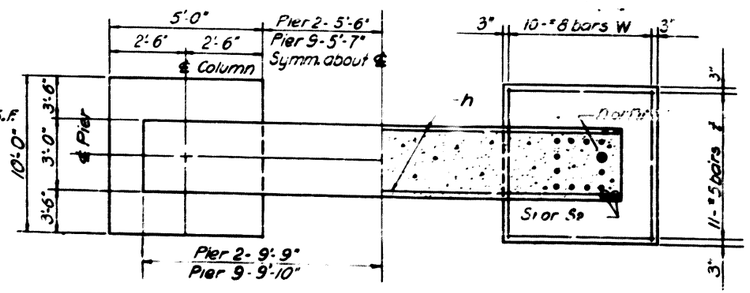
PIER #9

Additional Bill of Materials				
bar	no	size	length	shape
n2	24	#8	8'-0"	
h	10	#5	19'-2"	
h1	40	#5	7'-0"	
Class X Concrete			Cu Yds	10.9
Reinforcement Bars			Lbs	1010

PIERS 2 & 9
BILL OF MATERIAL

Bar	No.	Size	Lgth	Shape
h	54	#5	19'-2"	
n	24	#8	17'-10"	
n1	24	#8	11'-0"	
P1	10	#11	34'-1	
P2	10	#11	34'-5	
P3	2	#5	28'-10"	
P4	2	#5	29'-2"	
P5	2	#5	34'-1"	
P6	2	#5	34'-5"	
P7	4	#7	18'-6"	
P8	4	#7	18'-8"	
P9	12	#11	12'-9	
P10	16	#4	8'-0"	
S	98	#4	9'-5"	
S1	20	#5	27'-0"	
S2	20	#5	14'-8"	
S3	72	#5	6'-0"	
S4	140	#5	7'-0"	
t	44	#5	4'-6"	
U	12	#6	9'-4"	
V	24	#8	25'-7"	
V1	24	#8	26'-5"	
W	40	#8	9'-6	
Class X Conc: Pier 2			Cu Yd.	58.2
Pier 9			Cu Yd	45.5
Reinf. Bars: Pier 2			Lbs	8,260
Pier 9			Lbs.	7,450
Class A Exc: Pier 2			Cu Yds	25
Pier 9			Cu Yds	43
Rock Exc: Pier 2			Cu Yds	6
Pier 9			Cu Yds	4

NOTE:
Footing shall extend 1'-0" minimum into sound rock. Maximum allowable soil bearing pressure = 5 Tons/S.F.



FOOTING PLAN

DESIGNED	B.M. & I.G.
CHECKED	B.M. & P.P.H.R
DRAWN	A.G.
CHECKED	P.P.H.R.

PIERS 2 AND 9
F.A.I. 80 OVER
ROWELL AVE. C.M.ST.P.& P.R.R. & E.J. & E.R.Y.
F.A.I. 80 STA. ON ℄ ROWELL AVE. 471+26.39

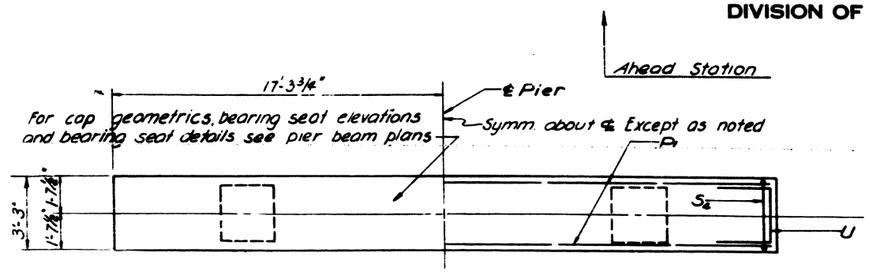
F.A.I. ROUTE 80 — PROJECT
SECTION 99-4-1VB — WILL COUNTY
Scale: NO SCALE — Date: OCTOBER 19, 1962

BLAUVELT ENGINEERING CO.
CONSULTING ENGINEERS
WOODBURY, N.J. NEW YORK, N.Y. CRYSTAL LAKE, ILL.

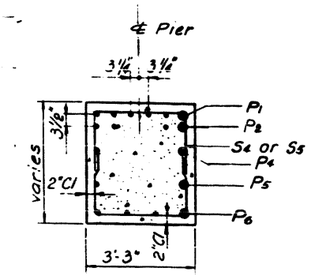
Indicates "AS BUILT" 1-11-65 J.M.J.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

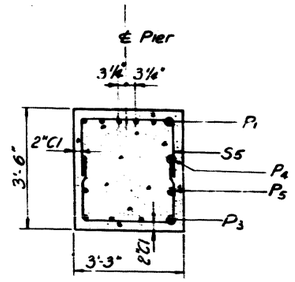
F.A.I.-80	99-4-IVB	WILL	54	23	SHEET NO. 13
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT			28 SHEETS



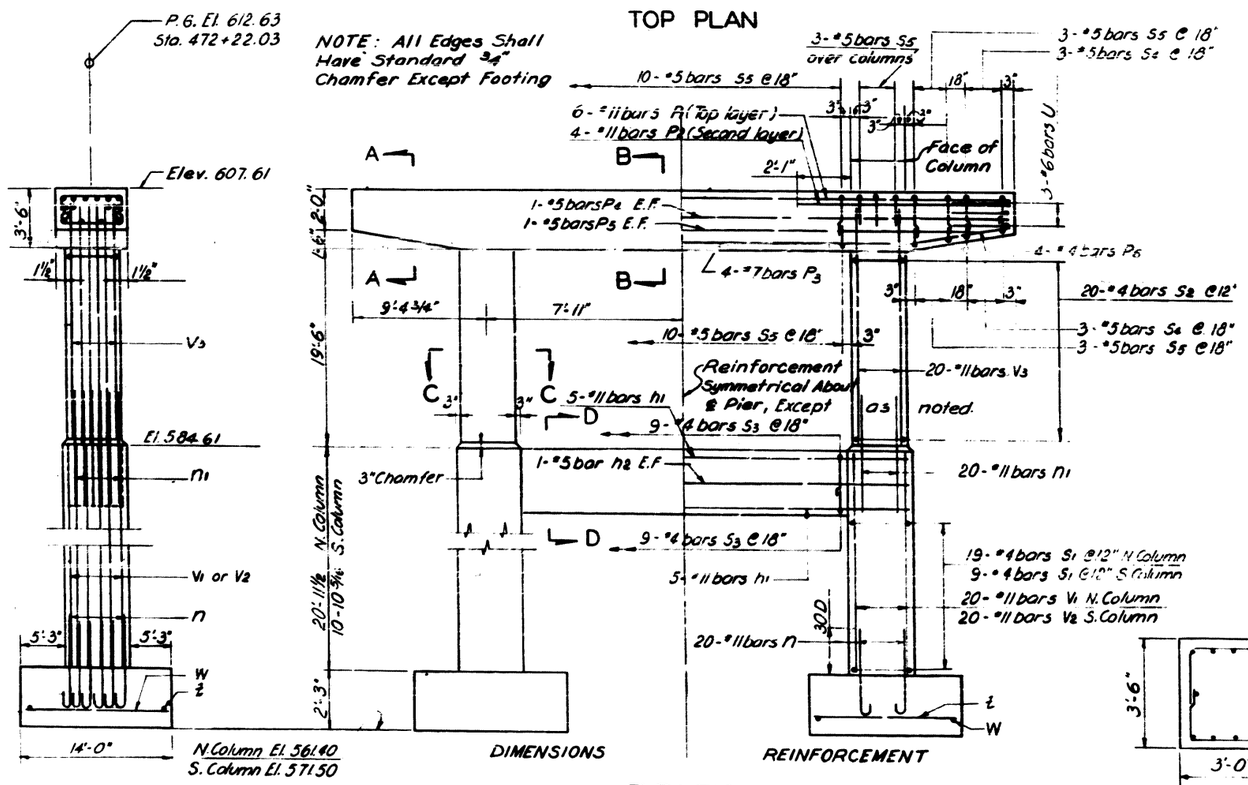
TOP PLAN



SECTION A-A

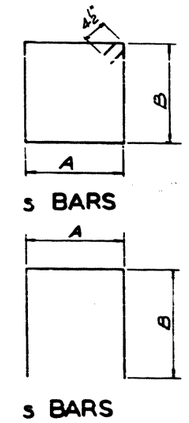


SECTION B-B

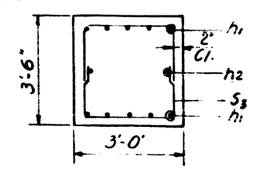


ELEVATION

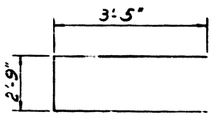
END VIEW



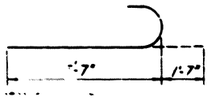
S BARS



SECTION D-D



U BARS



n BARS

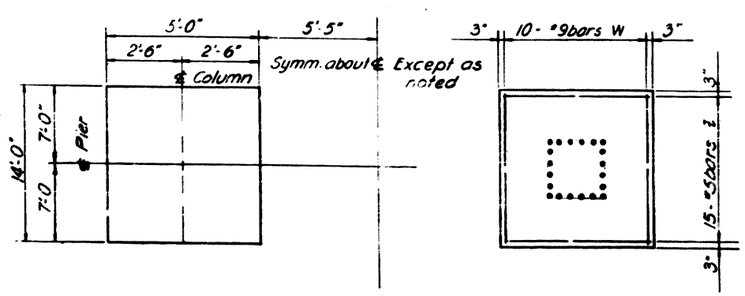
A & B DIMENSIONS

Bar	A	B
S1	3'-0"	3'-0"
S2	2'-8"	2'-8"
S3	2'-8"	2'-2"
S4	2'-11"	1'-8"
S5	2'-11"	2'-2"

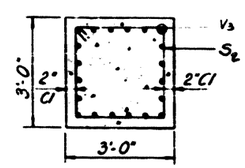
PIER 3
BILL OF MATERIAL

Bar	No.	Size	Lgth	Shape
h1	10	#11	19'-0"	
h2	2	#5	19'-0"	
n	40	#11	7'-2"	
n1	40	#11	7'-2"	
P1	6	#11	34'-3	
P2	8	#11	12'-7"	
P3	4	#7	18'-10"	
P4	2	#5	34'-3"	
P5	2	#5	28'-8"	
P6	8	#4	7'-10"	
S1	28	#4	13'-5"	
S2	40	#4	11'-5"	
S3	18	#4	7'-0"	
S4	12	#5	6'-3"	
S5	38	#5	7'-3"	
z	30	#5	4'-6"	
U	6	#6	9'-7"	
V1	20	#11	20'-11"	
V2	20	#11	10'-10"	
V3	40	#11	22'-10"	
W	20	#9	13'-6"	
Class X Concrete			Cu. Yd.	58.4
Reinforcing Bars			Lbs	10,380
Rock Excavation			Cu. Yds.	13
Class B Excavation			Cu. Yds.	69

NOTE:
Footings shall extend 1'-0" minimum into sound rock. Maximum allowable soil bearing pressure = 5 Tons/S.F.



FOOTING PLAN



SECTION C-C

DESIGNED	B.M.
CHECKED	L.D.
DRAWN	A.G.
CHECKED	P.P.H.R.

AS AWARDED

PIER 3
F.A.I. 80 OVER
ROWELL AVE. C.M.ST.P.&P.R.R. & E.J. & E.R.Y.
F.A.I. 80 STA. ON ℄ ROWELL AVE. 471+26.39

F.A.I. ROUTE 80 — PROJECT
SECTION 99-4-IVB — WILL COUNTY

Scale: NO SCALE — Date: OCTOBER 19, 1962

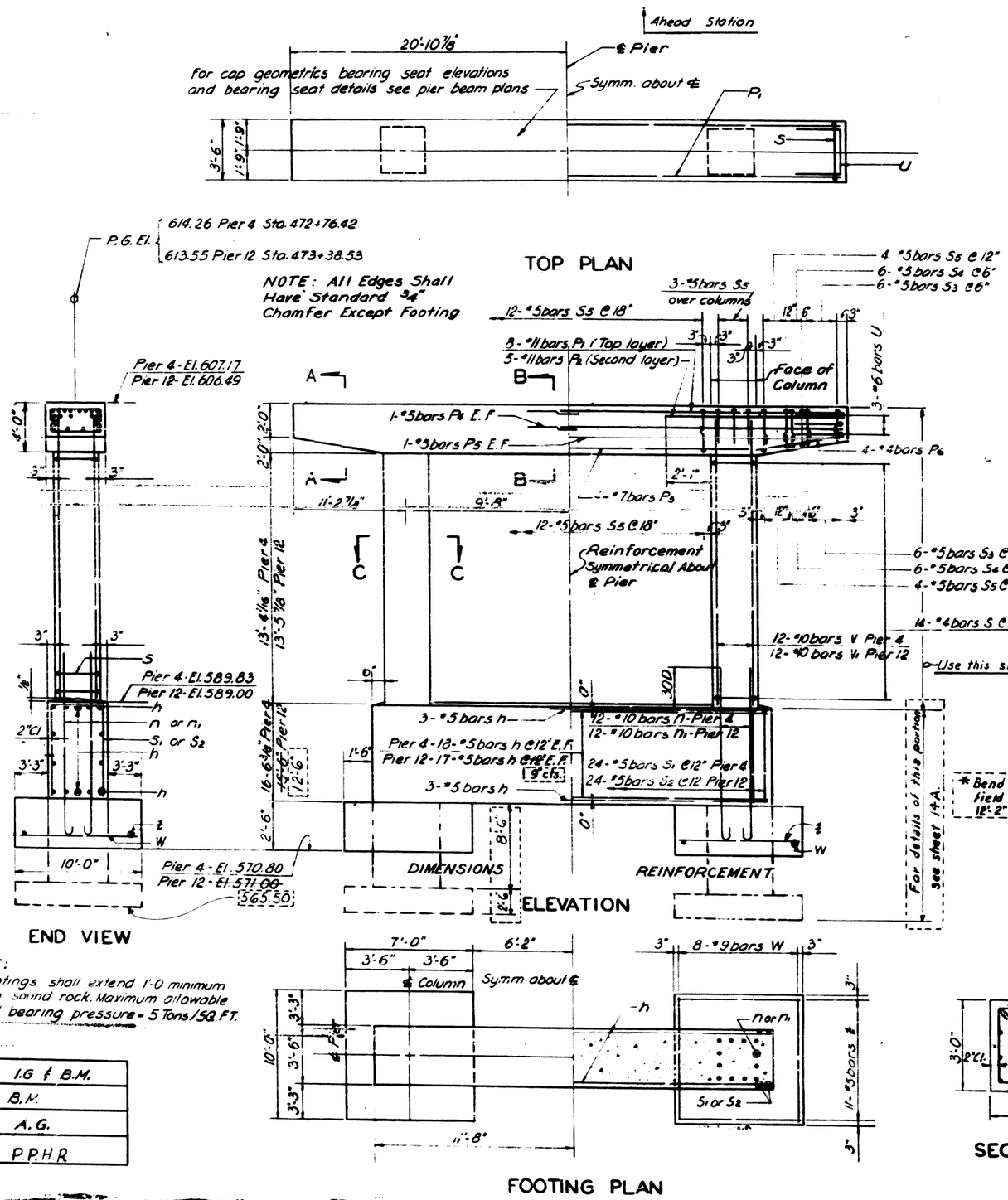
BLAUVELT ENGINEERING CO.
CONSULTING ENGINEERS
WOODBURY, N.J. — NEW YORK, N.Y. — CRYSTAL LAKE, ILL.

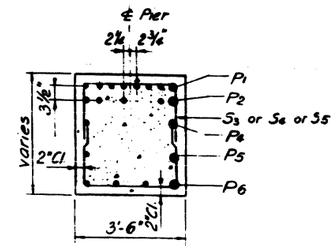
Rev. 5-24-64

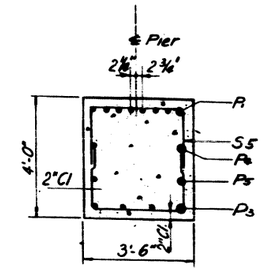
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

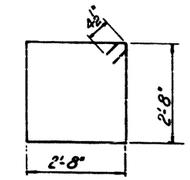
DRAWING NO.	SCALE	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-80	99-4-IVB	WILL	54	24
FED. ROAD DIST. NO. 7	PLANNED	PROJECT		

SHEET NO. 14
28 SHEETS

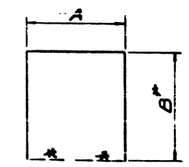








s BARS

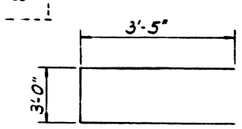


s BARS

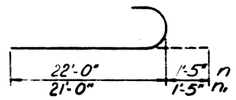
A & B DIMENSIONS

Bar	A	B
S_1	3'-2"	16'-2"
S_2	3'-2"	15'-2"
S_3	3'-2"	1'-8"
S_4	3'-2"	2'-0"
S_5	3'-2"	2'-5"

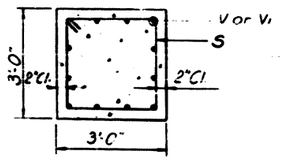
* Bend or cut S_2 bars in the field as shown. "B" for S_2 = 18'-2"



U BARS



n BARS



Work this sheet with sheet 14 A for pier no 12.

PIERS 4 & 12
BILL OF MATERIAL

Bar	No.	Size	Lgth	Shape
h	82	#5	23'-0"	
n	24	#10	23'-5"	
n_1	24	#10	22'-5"	
P_1	32	#11	22'-6"	
P_2	20	#11	16'-8"	
P_3	8	#7	22'-4"	
P_4	8	#5	21'-3"	
P_5	4	#5	32'-9"	
P_6	16	#4	9'-8"	
* P	2	#6	25'-9"	
S	56	#4	11'-5"	
S_1	24	#5	35'-6"	
S_2	24	#5	33'-6"	
S_3	48	#5	6'-6"	
S_4	48	#5	7'-2"	
S_5	92	#5	8'-0"	
℄	44	#5	6'-6"	
U	12	#6	9'-10"	
V	24	#10	16'-7"	
V_1	24	#10	16'-9"	
W	32	#9	9'-6"	
Class X Concrete			Cu. Yd	
Pier 4			Cu. Yd	94.5
Pier 12			Cu. Yd	91.0
Reinf. Bars: Pier 4			Lbs.	10860
Reinf. Bars: Pier 12			Lbs.	10,600
Class A Excavation			Cu. Yds	
Pier 4			Cu. Yds	96
Pier 12			Cu. Yds	81
Rock Excavation			Cu. Yds	6*

* See Pier Beam Plans Sheet # 20
* Each Pier

NOTE:
Footings shall extend 1'-0 minimum into sound rock. Maximum allowable soil bearing pressure - 5 Tons/SQ. FT.

DESIGNED	I.G. & B.M.
CHECKED	B.M.
DRAWN	A.G.
CHECKED	P.P.H.R.

PIERS 4 AND 12
F.A.I. 80 OVER
ROWELL AVE. C.M.S.T.P.&P.R.R. & E.J. & E.R.Y.
F.A.I. 80 STA. ON ℄ ROWELL AVE. 471+26.39

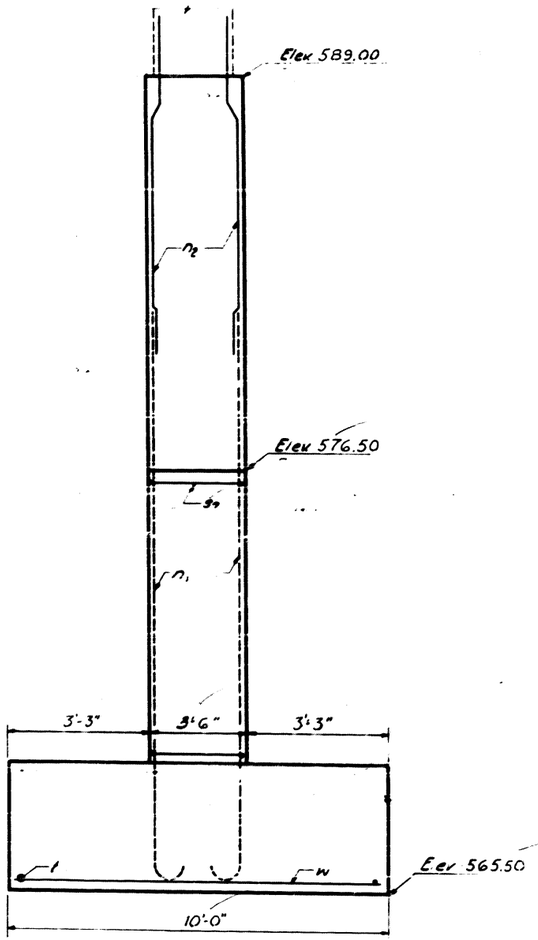
F.A.I. ROUTE 80 — PROJECT
SECTION 99-4-IVB — WILL COUNTY
Scale: NO SCALE — Date: OCTOBER 19, 1962

BLAUVELT ENGINEERING CO.
CONSULTING ENGINEERS
WOODBURY, N.J. — NEW YORK, N.Y. — CRYSTAL LAKE, ILL.

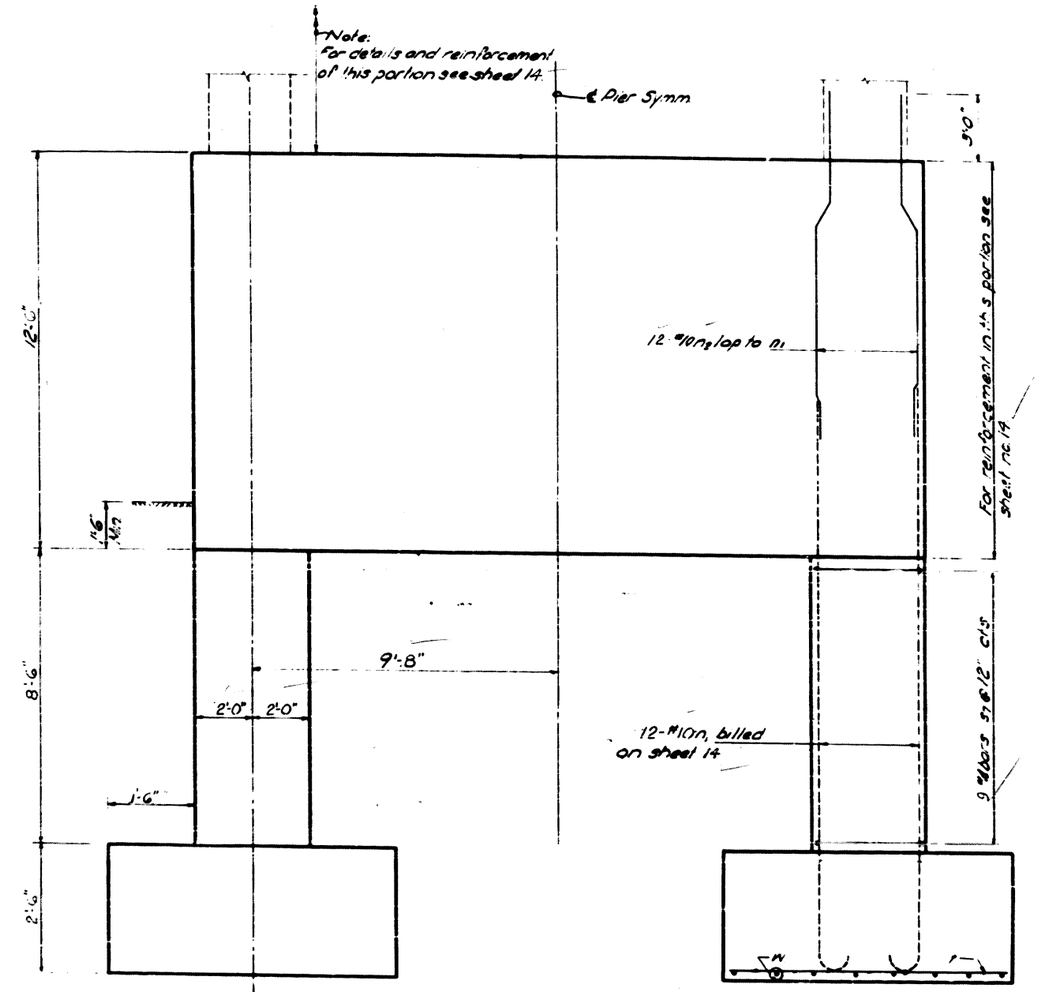
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80	99-4-1VB	WILL	54	24A

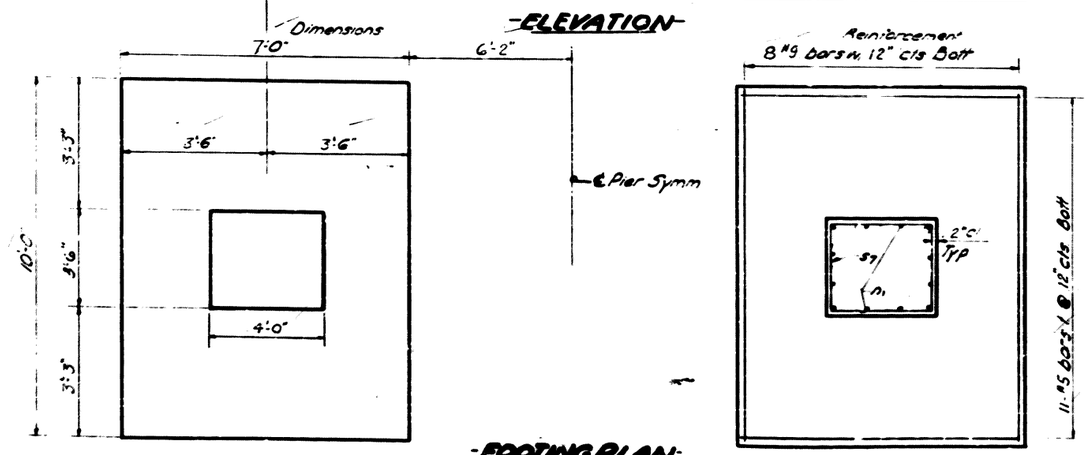
SHEET NO. 14-A SHEETS



-END VIEW-



-ELEVATION-

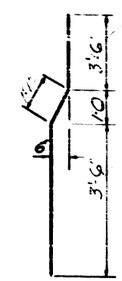


-FOOTING PLAN-

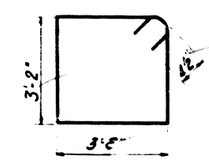
NOTE
Work this sheet with sheet 14.
Bars n1, & n2 are billed on sheet #14.

Additional Bill of Materials ~ Pier #12

bar	no	size	length	shape
n2	28	#10	8'-1"	
s7	18	#2	14'-5"	
~~Class X Concrete~~			Cu. Yd.	
Reinforcement Bars			Lbs.	1010



-BAR n2-



-BAR s7-

DESIGNED J. M. Tyrrell	
CHECKED	
DRAWN Robt. P. Elmore	
CHECKED	

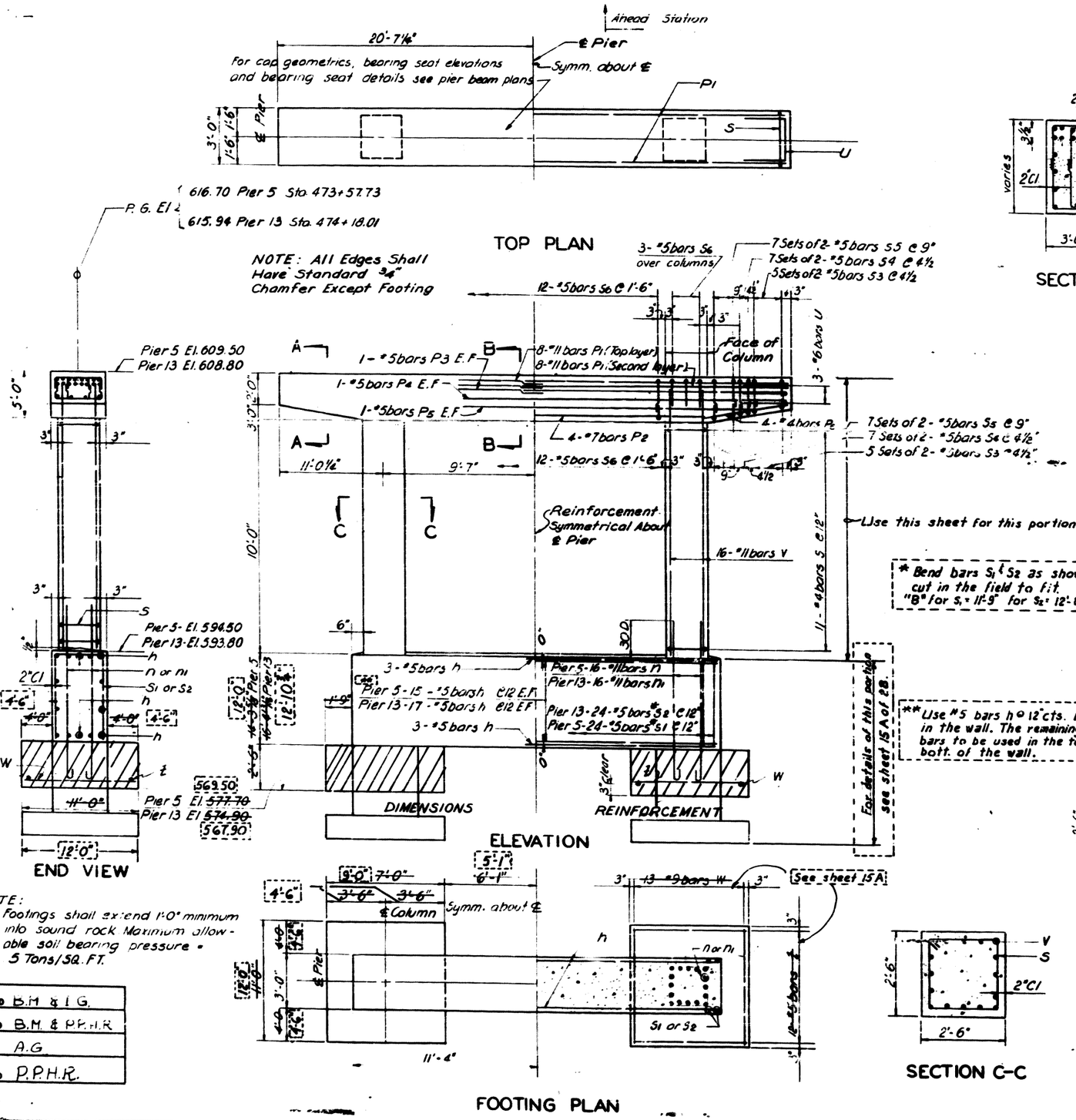
EXAMINED _____ 19
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED _____
ENGINEER OF DESIGN
APPROVED _____
CHIEF HIGHWAY ENGINEER

AS BUILT
PIER #12
F.A.I. ROUTE 80
SECTION 99-4-1VB
WILL COUNTY

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-80	99-4-IVB	WILL	28	25
FED. AID PROJ. NO.	STATE	PROJECT		

SHEET NO. 15
28 SHEETS



Bar	A	B
S1	2'-8"	14'-0"
S2	2'-8	16'-1
S3	2'-0"	1'-8"
S4	2'-0"	2'-1"
S5	2'-0"	2'-11"
S6	2'-8"	2-11"

PIERS 5 & 13
BILL OF MATERIAL

Bar	No.	Size	Lgth	Shape
h	76	#5	22'-4"	
n	32	#11	21'-9"	
n1	32	#11	23'-10"	
* P	2	#6	25'-0"	
P1	64	#11	22'-3"	
P2	8	#7	21'-8"	
P3	8	#5	21'-0"	
P4	4	#5	35'-8"	
P5	4	#5	28'-8"	
P6	16	#4	10'-0"	
S	44	#4	9'-5"	
S1	24	#5	30'-8"	
S2	24	#5	34'-10"	
S3	80	#5	5'-4"	
S4	112	#5	6'-2"	
S5	112	#5	7'-10"	
S6	60	#5	8'-6"	
t	48	#5	6'-6"	
U	12	#6	9'-2"	
V	64	#11	13'-7"	
W	52	#9	10'-6"	
Class X Concrete		Cu. Yd.		
Pier 5		Cu. Yd.	77.2	
Pier 13		Cu. Yd.	82.3	
Reinf. Bars Pier 5		Lbs.	14,520	
Pier 13		Lbs.	15,010	
Class A Exc. Pier 5		Cu. Yd.	82	
Pier 13		Cu. Yd.	91	
Rock Excavation		Cu. Yd.	6*	

* See Pier Beam Plan Sh. Nos. 20 & 21
* Each Pier

DESIGNED	B.M. & I.G.
CHECKED	B.M. & P.P.H.R.
DRAWN	A.G.
CHECKED	P.P.H.R.

PIERS 5 AND 13
F.A.I. 80 OVER
ROWELL AVE. C.M.ST.P.& P.R.R. & E.J. & E.R.Y.

F.A.I. 80 STA. ON ℄ ROWELL AVE. 471+26.39

F.A.I. ROUTE 80 — SECTION 99-4-IVB — PROJECT — WILL COUNTY

Scale: NO SCALE — Date: OCTOBER 19, 1962

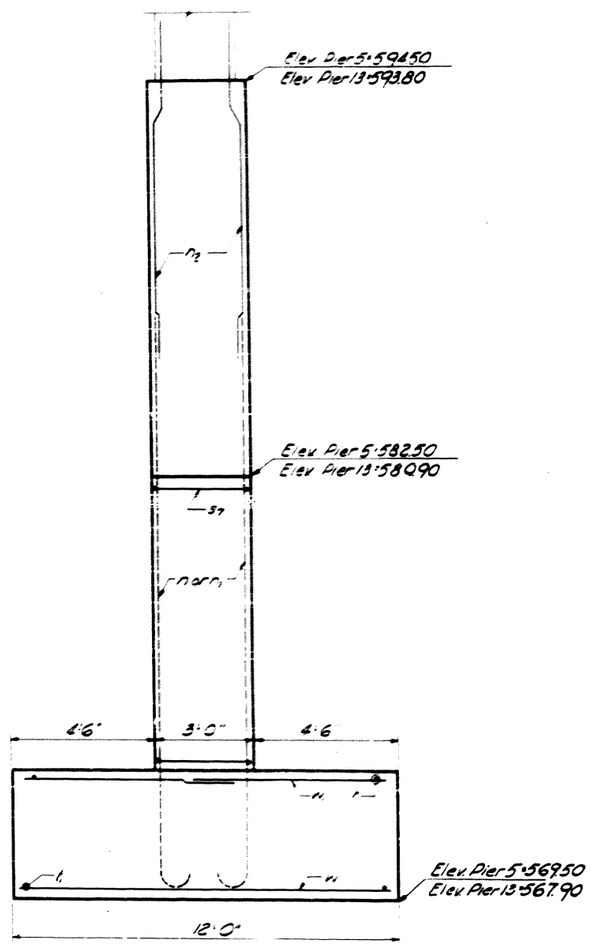
BLAUVELT ENGINEERING CO.
CONSULTING ENGINEERS
WOODBURY, N.J. — NEW YORK, N.Y. — CRYSTAL LAKE, ILL.

[ ] Indicates as built. Hatched area indicates deleted ftg.

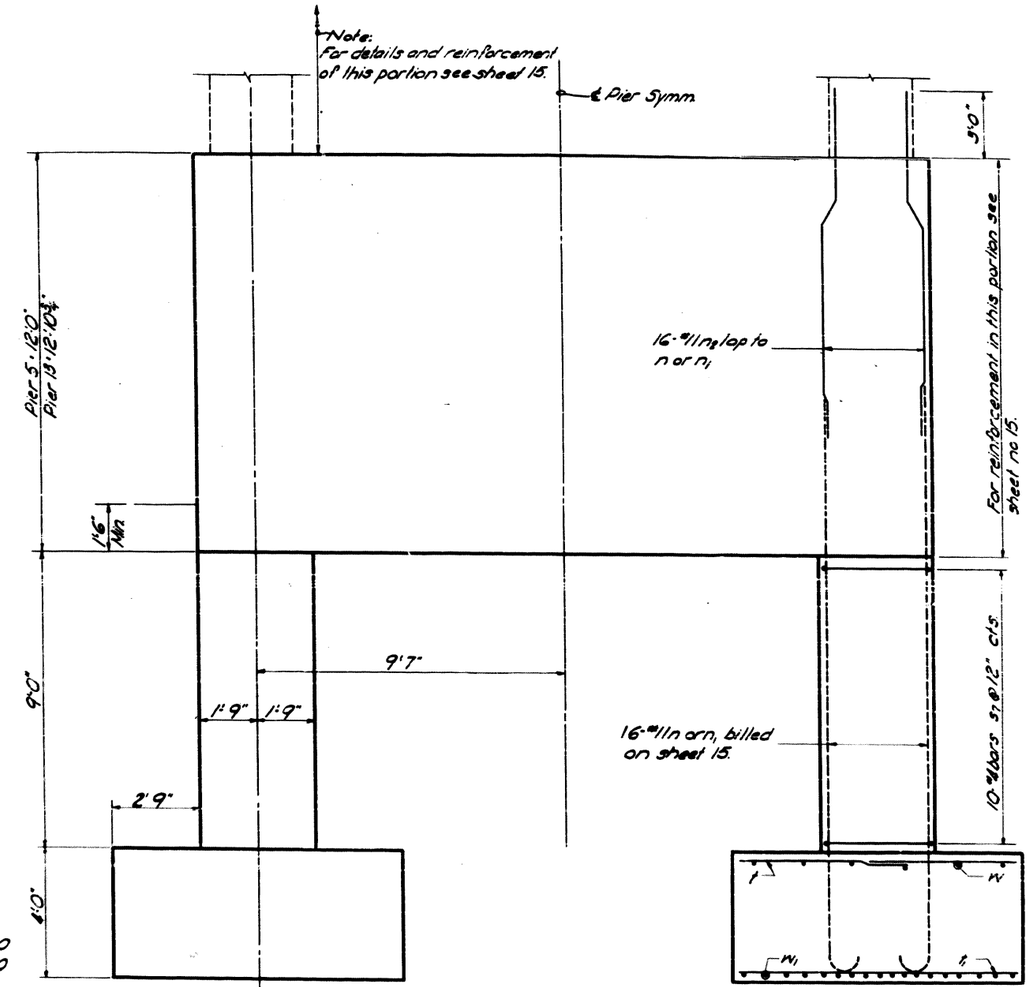
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 80	99-4 IVB	WILL	54	25A
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

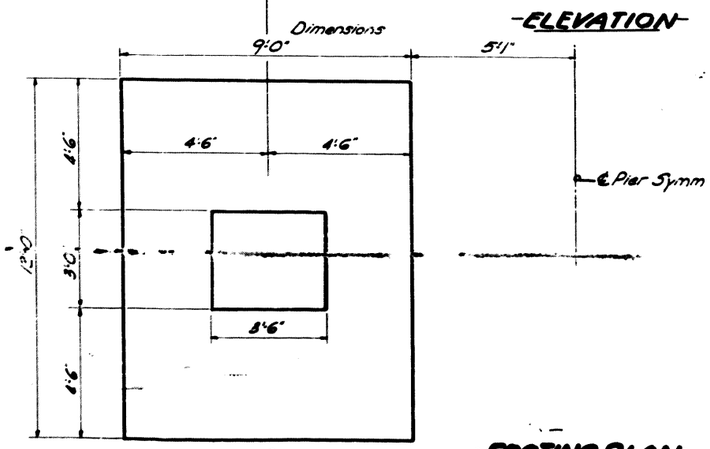
SHEET NO. 15-A
SHEETS



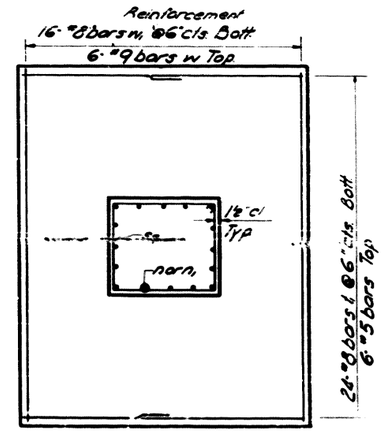
-END VIEW-



-ELEVATION-



-FOOTING PLAN-

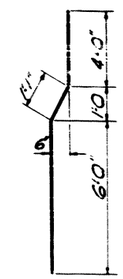


NOTE
Work this sheet with sheet 15.
Bars n n1 t1 w are billed on sheet no 15.

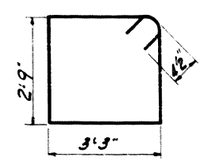
Additional Bill of Materials (2-Piers)

bar	no	size	length	shape
n2	64	#11	11'-1"	
s7	40	#4	12'-9"	
t1	96	#8	9'-9"	
w1	72	#8	11'-9"	

ITEM	Pier 5	Pier 13
Class X Concrete: Cu Yds	12.7	14.6
Reinforcement Bars Lbs	4310	4310



-BAR n2-



-BAR s7-

DESIGNED	J. M. Tyrrell
CHECKED	
DRAWN	Robt. P. Elmore
CHECKED	

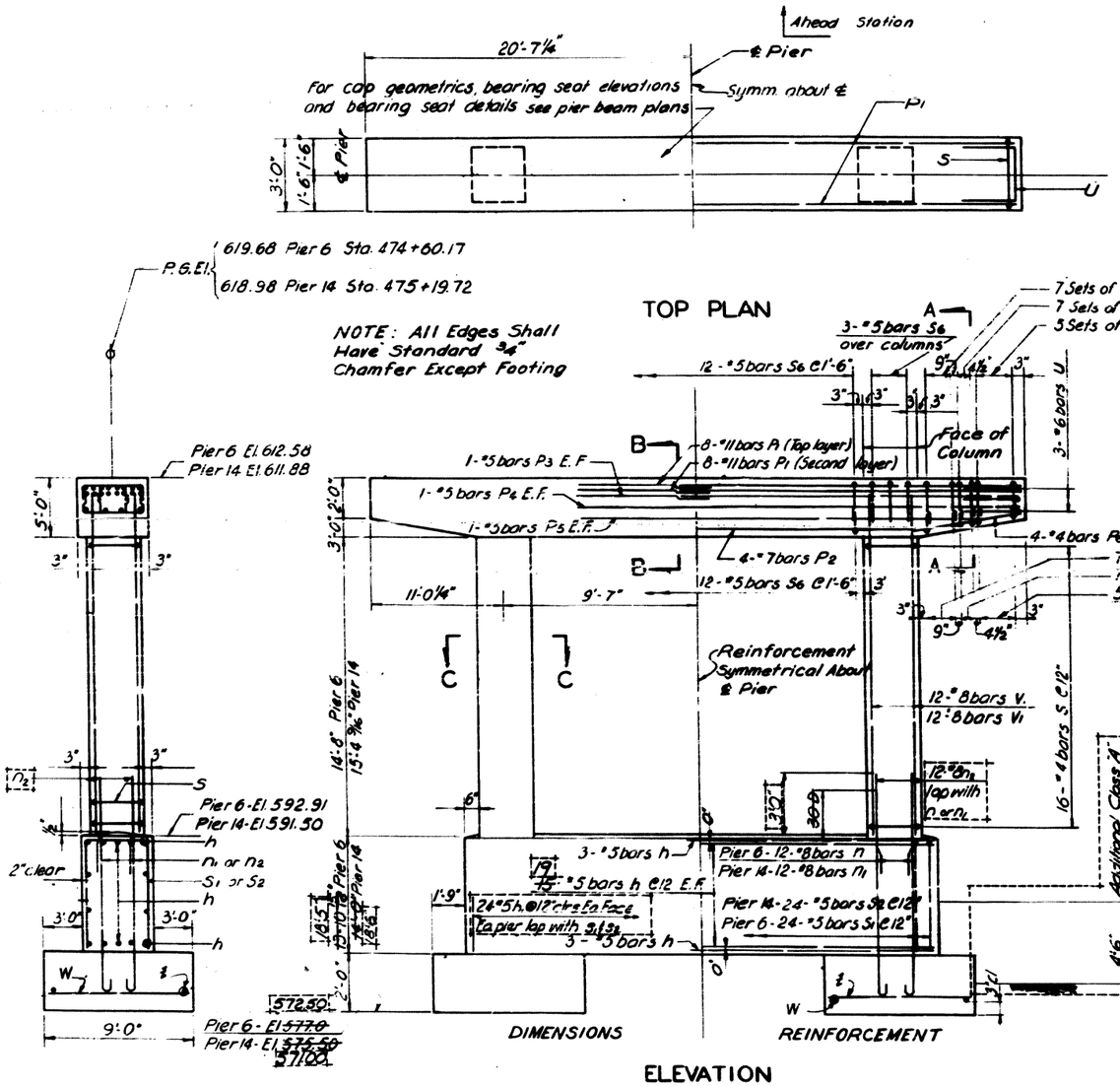
19
EXAMINED
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

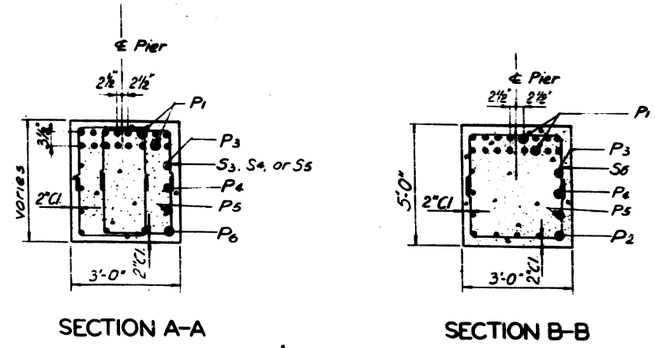
AS BUILT
PIERS 5 & 13
F.A.I. ROUTE 80
SECTION 99-4-IVB
WILL COUNTY

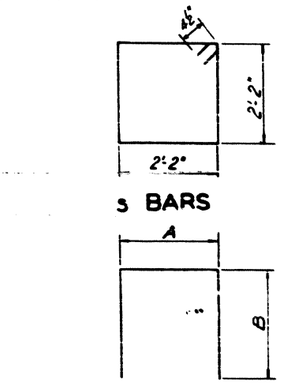
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

F.A.I.-80	99-4-IVB	WILL	54	26

SHEET NO. 16
28 SHEETS

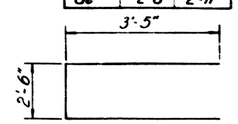




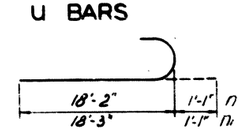


A & B DIMENSIONS

Bar	A	B
S1	2'-8"	13'-7"
S2	2'-8"	13'-8"
S3	2'-0"	1'-8"
S4	2'-0"	2'-1"
S5	2'-0"	2'-11"
S6	2'-8	2'-11"



U BARS



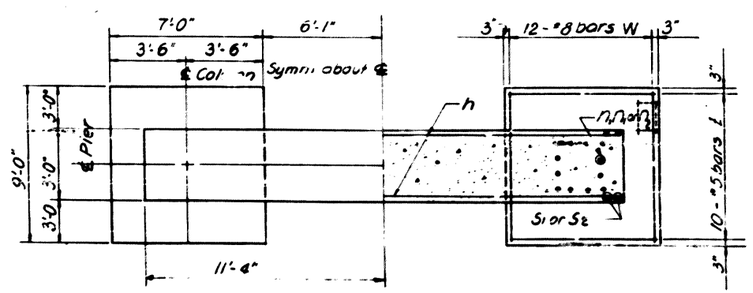
n BARS

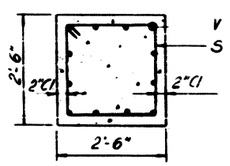
PIERS 6 & 14
BILL OF MATERIAL

Bar	No.	Size	Lgth	Shape
h	72	#5	22'-4"	—
n	24	#8	19'-3"	⊃
n1	24	#8	19'-4"	⊃
P1	64	#11	22'-3"	—
P2	8	#7	21'-8"	—
P3	8	#5	21'-0"	—
P4	4	#5	35'-8"	—
P5	4	#5	28'-8"	—
P6	16	#4	10'-0"	—
S	64	#4	9'-5"	□
S1	24	#5	29'-10"	⊐⊏
S2	24	#5	30'-0"	⊐⊏
S3	80	#5	5'-4"	⊐⊏
S4	112	#5	6'-2"	⊐⊏
S5	112	#5	7'-10"	⊐⊏
S6	60	#5	8'-6"	⊐⊏
½	40	#5	6'-6"	—
U	12	#6	9'-4"	⊐
V	24	#8	17'-2"	—
V1	24	#8	17'-11"	—
W	48	#8	8'-6"	—
Class X Concrete			Cu. Yd.	
Pier 6			Cu. Yd.	72.5
Pier 14			Cu. Yd.	73.0
Reinf. Bars: Pier 6			Lbs.	10,370
Pier 14			Lbs.	10,440
Class A Excavation			Cu. Yds.	
Pier 6			Cu. Yds.	81
Pier 14			Cu. Yds.	90
Rock Excavation			Cu. Yds.	5*

*Each Pier

NOTE:
Footings shall extend 1'-0" minimum into sound rock. Maximum allowable soil bearing pressure = 5 Tons/SQ. FT.





Additional Bill of Materials

bar	no	size	length	shape
n2	48	#8	7'-0"	—
h	16	#5	22'-4"	—
h1	96	#5	7'-0"	—
Class A Excavation			Cu. Yds.	11.8
Class X Concrete			Cu. Yds.	22.6
Reinforcement Bars			Lbs.	1960

DESIGNED	B.M. & I.G.
CHECKED	B.M. & P.P.H.R.
DRAWN	A.G.
CHECKED	P.P.H.R.

PIERS 6 AND 14
F.A.I. 80 OVER
ROWELL AVE. C.M.S.T.P.&P.R.R. & E.J. & E.R.Y.
F.A.I. 80 STA. ON ℄ ROWELL AVE. 471+26.39

F.A.I. ROUTE 80
SECTION 99-4-IVB
PROJECT
WILL COUNTY

Scale: NO SCALE
Date: OCTOBER 19, 1962

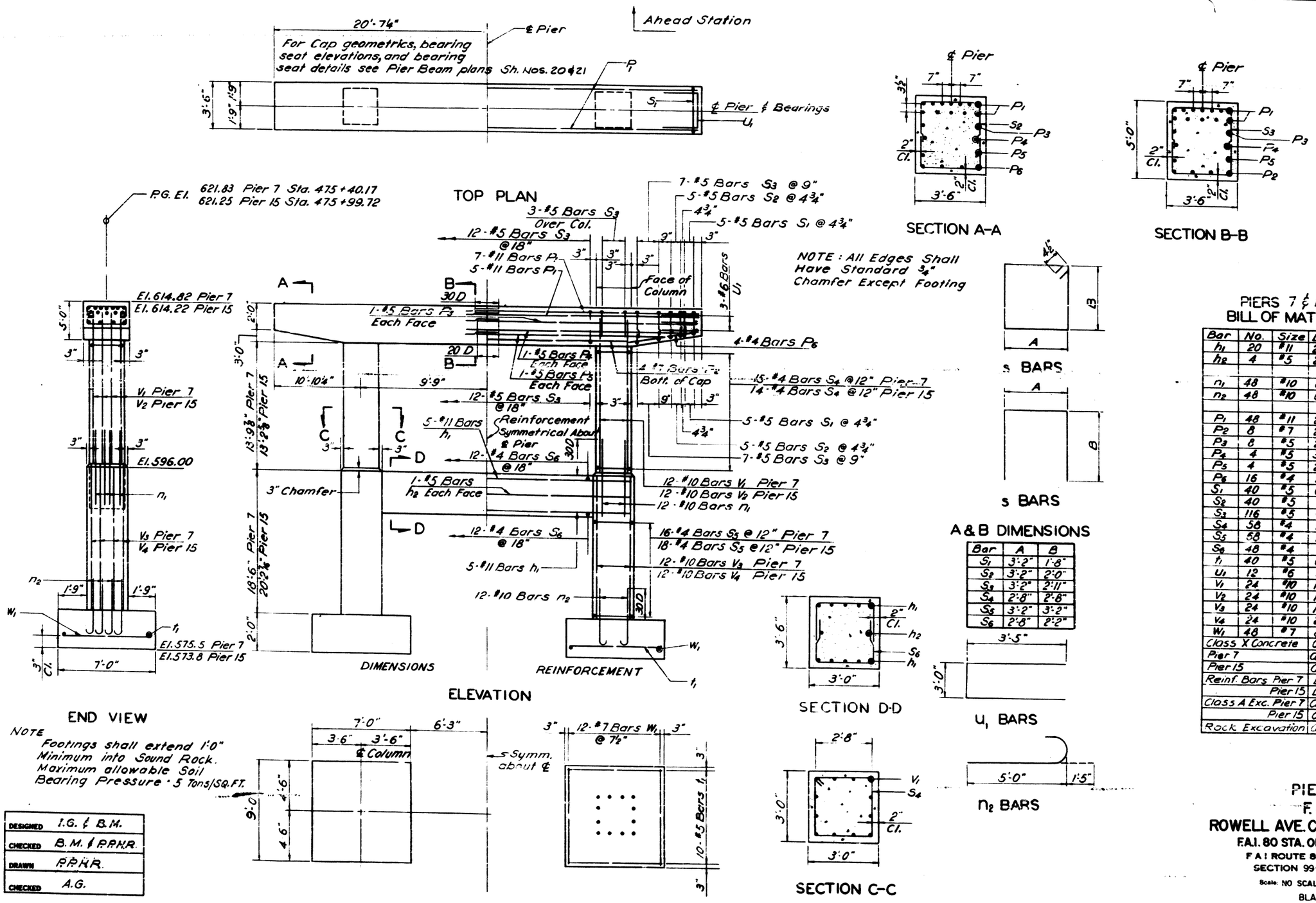
BLAUVELT ENGINEERING CO.
CONSULTING ENGINEERS
WOODBURY, N.J. NEW YORK, N.Y. CRYSTAL LAKE, ILL.

Indicates AS-BUILT

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-80	99-1-IVB	WILL	28	27
FED. ROAD DIST. NO. 7	PLANNING	PROJECT		

SHEET NO. 17
28 SHEETS



NOTE
Footings shall extend 1'-0" Minimum into Sound Rock. Maximum allowable Soil Bearing Pressure - 5 Tons/SQ.FT.

DESIGNED	I.G. & B.M.
CHECKED	B.M. & P.P.H.R.
DRAWN	P.P.H.R.
CHECKED	A.G.

PIERS 7 & 15
BILL OF MATERIAL

Bar	No.	Size	Lgth	Shape
h1	20	#11	22'-8"	—
h2	4	#5	22'-8"	—
n1	48	#10	6'-6"	—
n2	48	#10	6'-5"	—
P1	48	#11	22'-3"	—
P2	8	#7	22'-6"	—
P3	8	#5	21'-0"	—
P4	4	#5	35'-6"	—
P5	4	#5	29'-0"	—
P6	16	#4	9'-8"	—
S1	40	#5	6'-6"	⊓
S2	40	#5	7'-2"	⊓
S3	116	#5	9'-0"	⊓
S4	58	#4	11'-5"	⊓
S5	58	#4	13'-5"	⊓
S6	48	#4	7'-0"	⊓
t1	40	#5	6'-6"	—
U1	12	#6	9'-10"	⊐
V1	24	#10	17'-1"	—
V2	24	#10	16'-6"	—
V3	24	#10	18'-6"	—
V4	24	#10	20'-2"	—
W1	48	#7	8'-6"	—
Class X Concrete			Cu. Yd.	
Pier 7			Cu. Yd.	66.6
Pier 15			Cu. Yd.	67.8
Reinf. Bars Pier 7			Lbs.	11,640
Pier 15			Lbs.	11,790
Class A Exc. Pier 7			Cu. Yd.	83
Pier 15			Cu. Yd.	93
Rock Excavation			Cu. Yd.	5*

* Each Pier

PIERS 7 AND 15
F.A.I. 80 OVER
ROWELL AVE. C.M.ST.P.&P.R.R. & E.J. & E.R.Y.
F.A.I. 80 STA. ON ℄ ROWELL AVE. 471+26.39

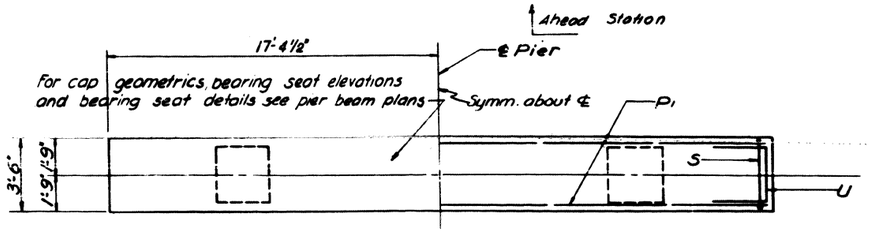
F.A.I. ROUTE 80 — PROJECT
SECTION 99-4-IVB — WILL COUNTY
Scale: NO SCALE — Date: OCTOBER 19, 1962

BLAUVELT ENGINEERING CO.
CONSULTING ENGINEERS
WOODBURY, N.J. NEW YORK, N.Y. CRYSTAL LAKE, ILL.

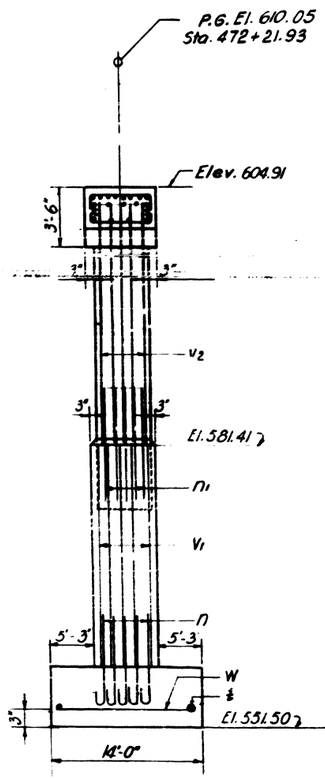
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-80	99-4-IVB	WILL	54	28
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT-		

SHEET NO. 18
28 SHEETS

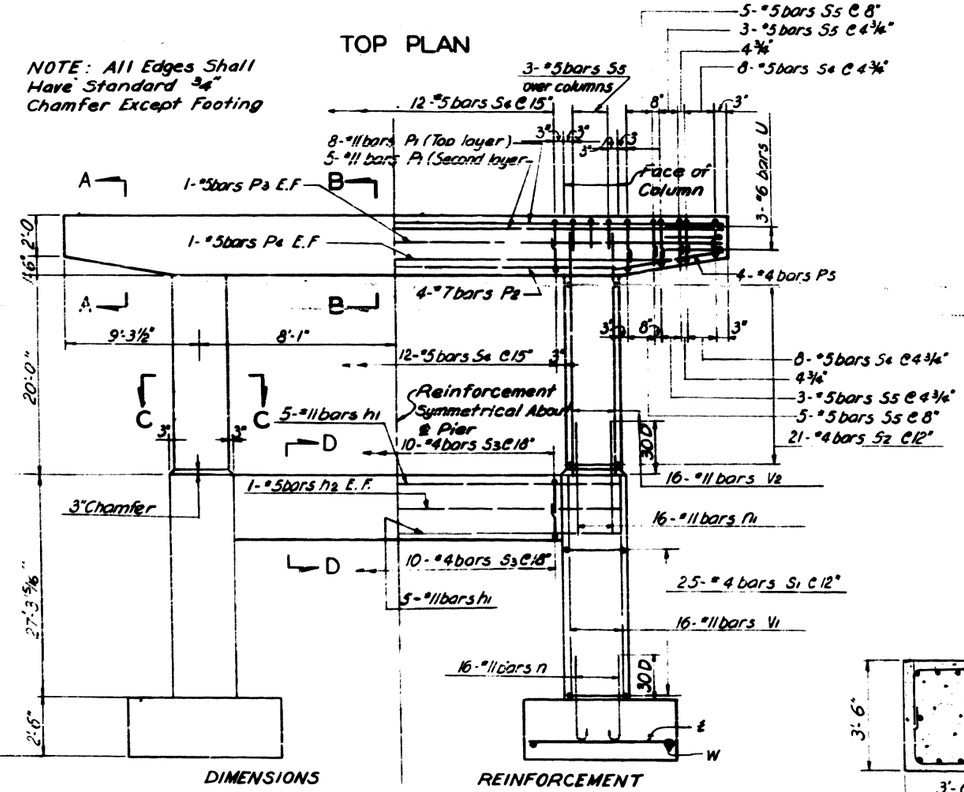


TOP PLAN



END VIEW

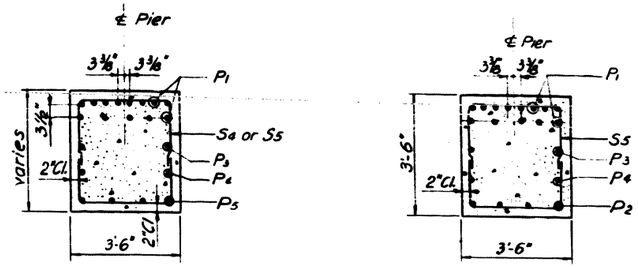
NOTE: All Edges Shall Have Standard ¾" Chamfer Except Footing



DIMENSIONS

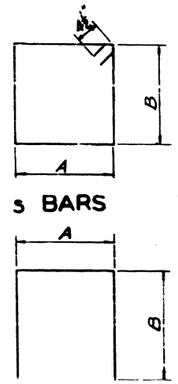
REINFORCEMENT

ELEVATION



SECTION A-A

SECTION B-B



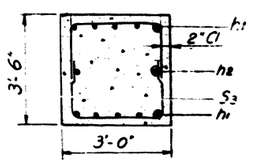
s BARS

A & B DIMENSIONS

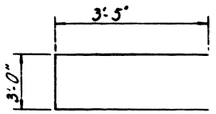
Bar	A	B
S1	3'-2"	3'-2"
S2	2'-8"	2'-8"
S3	2'-8"	2'-2"
S4	3'-2"	1'-8"
S5	3'-2"	2'-2"

PIER 10
BILL OF MATERIAL

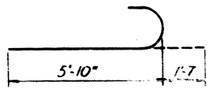
Bar	No.	Size	Lgth	Shape
h1	10	#11	19'-4"	
h2	2	#5	19'-4"	
n	32	#11	7'-5"	
n1	32	#11	7'-[illegible]	
P1	13	#11	34'-5"	
P2	4	#7	19'-2"	
P3	2	#5	34'-5"	
P4	2	#5	28'-8"	
P5	8	#4	7'-9"	
S1	50	#4	13'-5"	
S2	42	#4	11'-5"	
S3	20	#4	7'-0"	
S4	32	#5	6'-6"	
S5	62	#5	7'-6"	
t	30	#5	6'-6"	
U	6	#6	9'-10"	
V1	32	#11	27'-4"	
V2	32	#11	23'-4"	
W	28	#8	13'-6"	
Class X Concrete		Cu. Yd.	76.5	
Reinf. Bars		Lbs.	17,710	
Class E Excavation		Cu. Yds.	25	
Rock Excavation		Cu. Yds.	17	



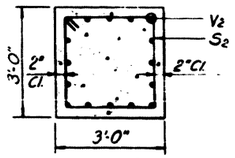
SECTION D-D



U BARS

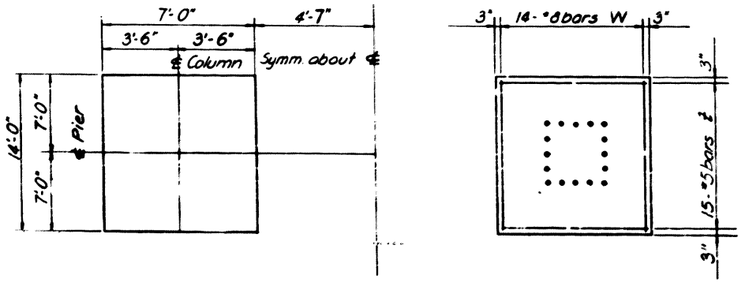


n BARS



SECTION C-C

NOTE:
Footings shall extend 1'-0" minimum into sound rock. Maximum allowable soil bearing pressure = 5 Tons/SQ.FT



FOOTING PLAN

DESIGNED	B.M. & I.G.
CHECKED	B.M. & P.P.H.R.
DRAWN	A.G.
CHECKED	P.P.H.R.

~~PIER 10~~
F.A.I. 80 OVER
ROWELL AVE. C.M.ST.P.& P.R.R. & E.J. & E.R.Y.
F.A.I. 80 STA. ON ℄ ROWELL AVE. 471+26.39

F.A.I. ROUTE 80 — PROJECT
SECTION 99-4-IVB — WILL COUNTY

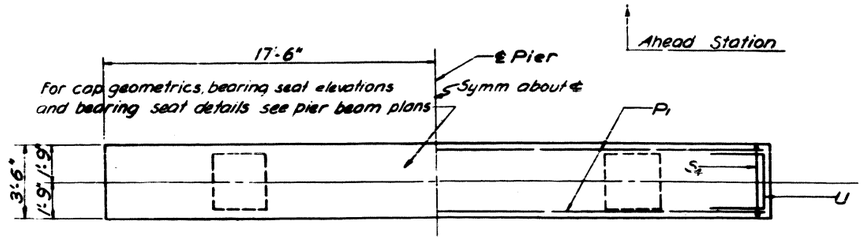
Scale: NO SCALE — Date: OCTOBER 19, 1962

BLAUVELT ENGINEERING CO.
CONSULTING ENGINEERS
WOODBURY, N.J. — NEW YORK, N.Y. — CRYSTAL LAKE, ILL.

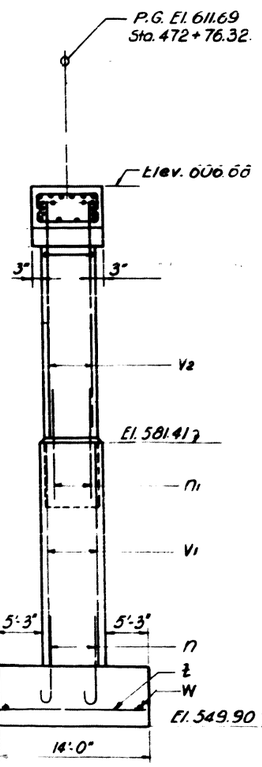
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-80	99-4-IVB	WILL	54	29
FED. ROAD DIV. NO. 7	PLANNING	PROJECT		

SHEET NO. 19
28 SHEETS

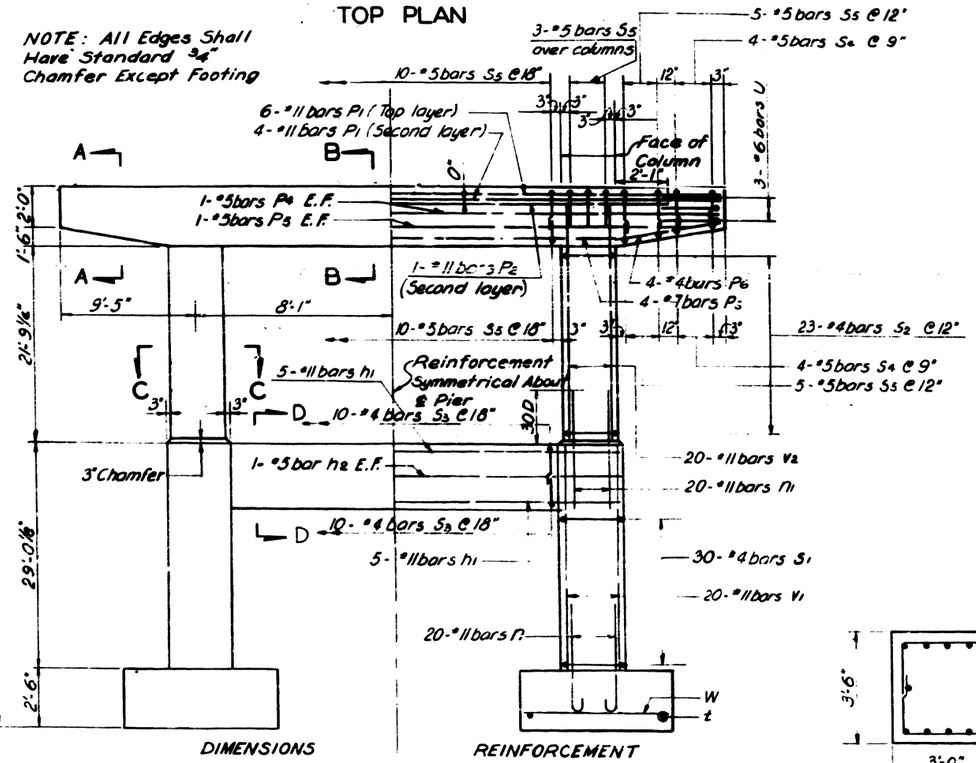


TOP PLAN

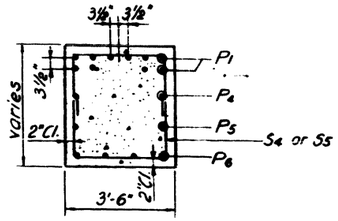


END VIEW

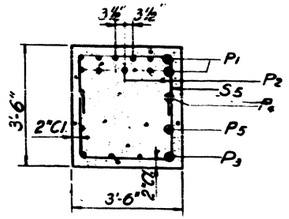
NOTE: All Edges Shall Have Standard ¾" Chamfer Except Footing



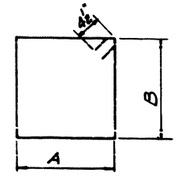
ELEVATION



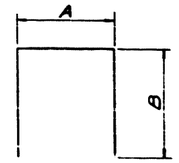
SECTION A-A



SECTION B-B



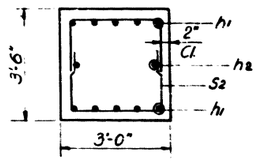
S BARS



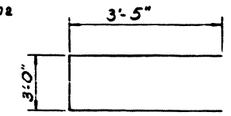
s BARS

A & B DIMENSIONS

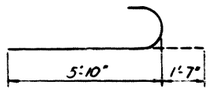
Bar	A	B
S1	3'-2"	3'-2"
S2	2'-8"	2'-8"
S3	2'-8"	2'-2"
S4	3'-2"	1'-8"
S5	3'-2	2'-2"



SECTION D-D



U BARS

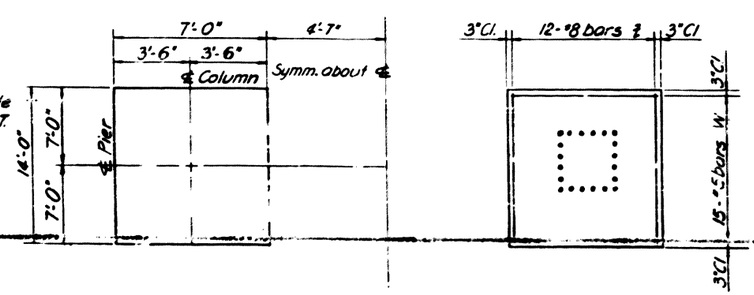


n BARS

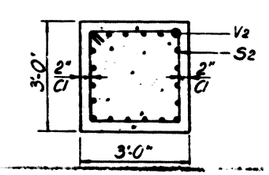
PIER II
BILL OF MATERIAL

Bar	No.	Size	Lgth	Shape
h1	10	#11	19'-6"	—
h2	2	#5	19'-6"	—
n	40	#11	7'-[illegible]	⊃
n1	40	#11	7'-2"	—
P1	10	#11	34'-8"	—
P2	1	#11	23'-4"	—
P3	4	#7	19'-2"	—
P4	2	#5	34'-8"	—
P5	2	#5	29'-0"	—
P6	8	#4	7'-10"	—
S1	60	#4	13'-5"	□
S2	46	#4	11'-5"	□
S3	20	#4	7'-0"	⊓
S4	16	#5	6'-6"	⊓
S5	46	#5	7'-6"	⊓
t	24	#8	13'-6"	—
U	6	#6	9'-10"	—
V1	40	#11	29'-0"	—
V2	40	#11	25'-0"	—
W	30	#5	6'-6"	—
Class X Concrete			Cu. Yd.	79.2
Reinforcing Bars			Lbs	20,550
Class B Excavation			Cu. Yds.	11
Rock Excavation			Cu. Yds.	24

NOTE:
Footings shall extend 1'-0" minimum into sound rock. Maximum allowable soil bearing pressure = 5 Tons/Sq. Ft.



FOOTING PLAN



SECTION C-C

DESIGNED	I.G. & P.P.H.R.
CHECKED	P.P.H.R. & B.M.
DRAWN	A.G.
CHECKED	P.P.H.R.

PIER II
F.A.I. 80 OVER
ROWELL AVE. C.M.ST.P.&P.R.R. & E.J. & E.R.Y.
F.A.I. 80 STA. ON ℄ ROWELL AVE. 471+26.39

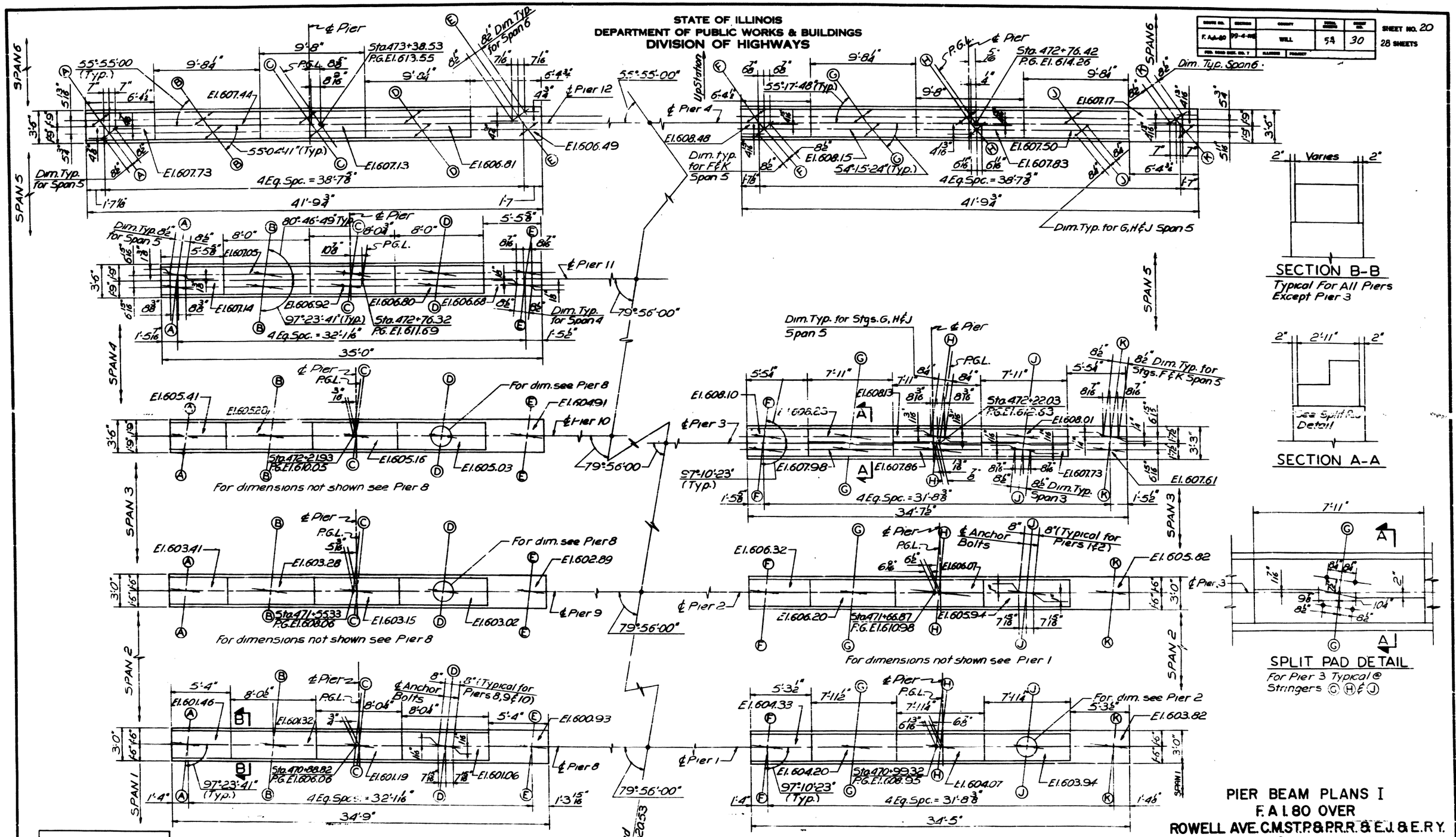
F.A.I. ROUTE 80 — PROJECT
SECTION 99-4-IVB — WILL COUNTY
Scale: NO SCALE — Date: OCTOBER 19, 1962

BLAUVELT ENGINEERING CO.
CONSULTING ENGINEERS
WOODBURY, N.J. — NEW YORK, N.Y. — CRYSTAL LAKE, ILL.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

DRAWING NO.	REVISIONS	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-80	99-4-IVB	WILL	54	30
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

SHEET NO. 20
28 SHEETS



DESIGNED	T.G.
CHECKED	P.P.H.R.
DRAWN	R.B.
CHECKED	P.P.H.R.

Notes: For Piers see Sheet Nos. 11 Thru 19

Ⓐ Denotes ℄ Stringer A

All Stations given along ℄ F.A.I.-80

For Pier Location Plan see sheet No. 3

PIER BEAM PLANS I

F.A.I. 80 OVER

ROWELL AVE. C.M.S.T.P. & P.R.R. & E.J. & E.R.Y.

F.A.I. 80 STA. ON ℄ ROWELL AVE. 471+26.39

F.A.I. ROUTE 80 — PROJECT

SECTION 99-4-IVB — WILL COUNTY

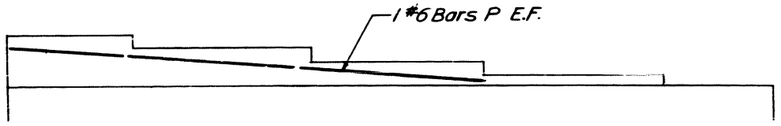
Date: OCTOBER 19, 1962

BLAUVELT ENGINEERING CO.
CONSULTING ENGINEERS
WOODBURY, N.J. — NEW YORK, N.Y. — CRYSTAL LAKE, ILL.

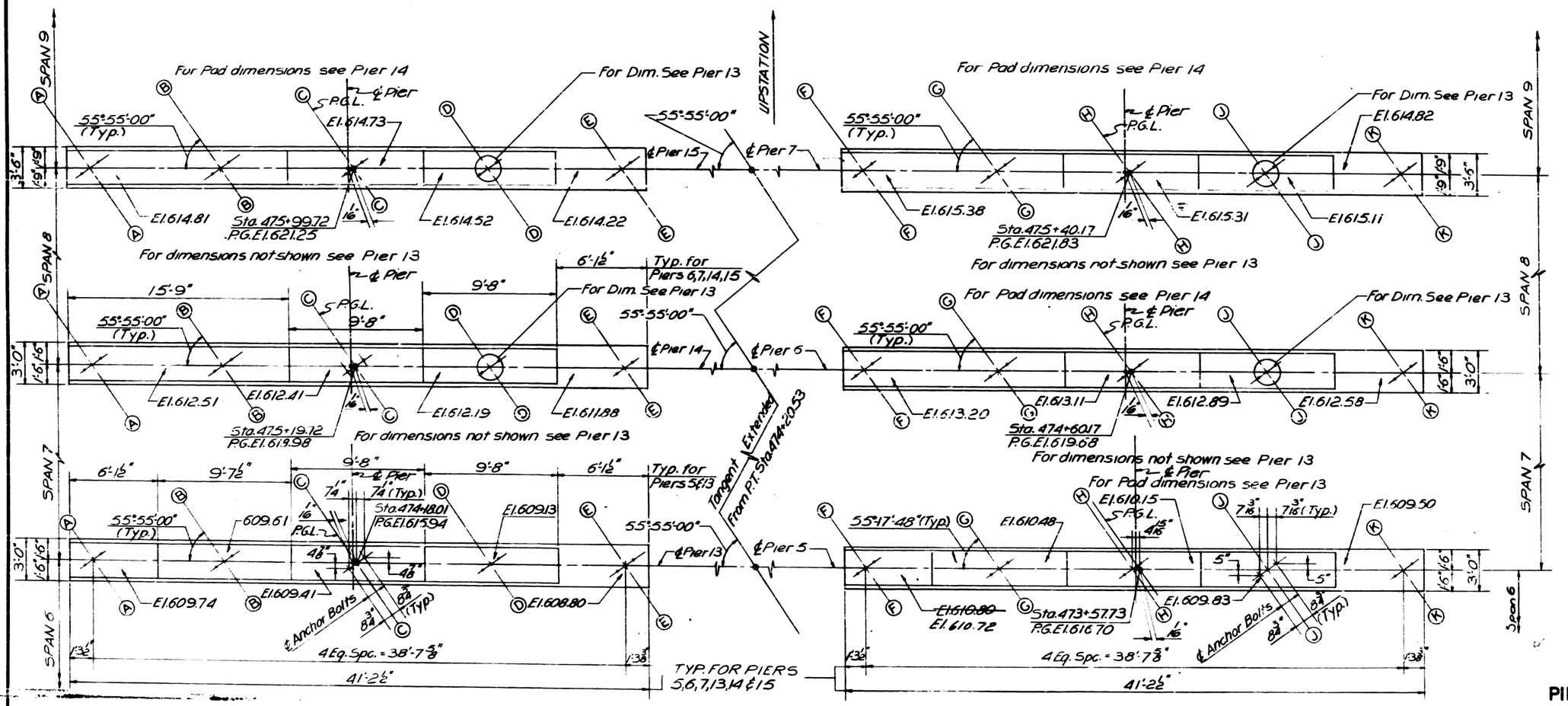
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-80	99-4-1V8	WILL	94	31
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT-		

SHEET NO. 21
28 SHEETS



PAD REINFORCING
PIERS 4 & 5



PIER BEAM PLAN

Notes:
For Piers see sheet Nos. 11 Thru 19
For Typical Pad Cross Section See sheet No. 20
Ⓐ Denotes ℄ Stringer A

DESIGNED	T.G.
CHECKED	D.D.H.R.
DRAWN	R.B.
CHECKED	P.P.H.R.

PIER BEAM PLANS II
F.A.I. 80 OVER
ROWELL AVE. C.M.ST.P.& P.R.R. & E.J. & E.R.Y.
F.A.I. 80 STA. ON ℄ ROWELL AVE. 471+26.39

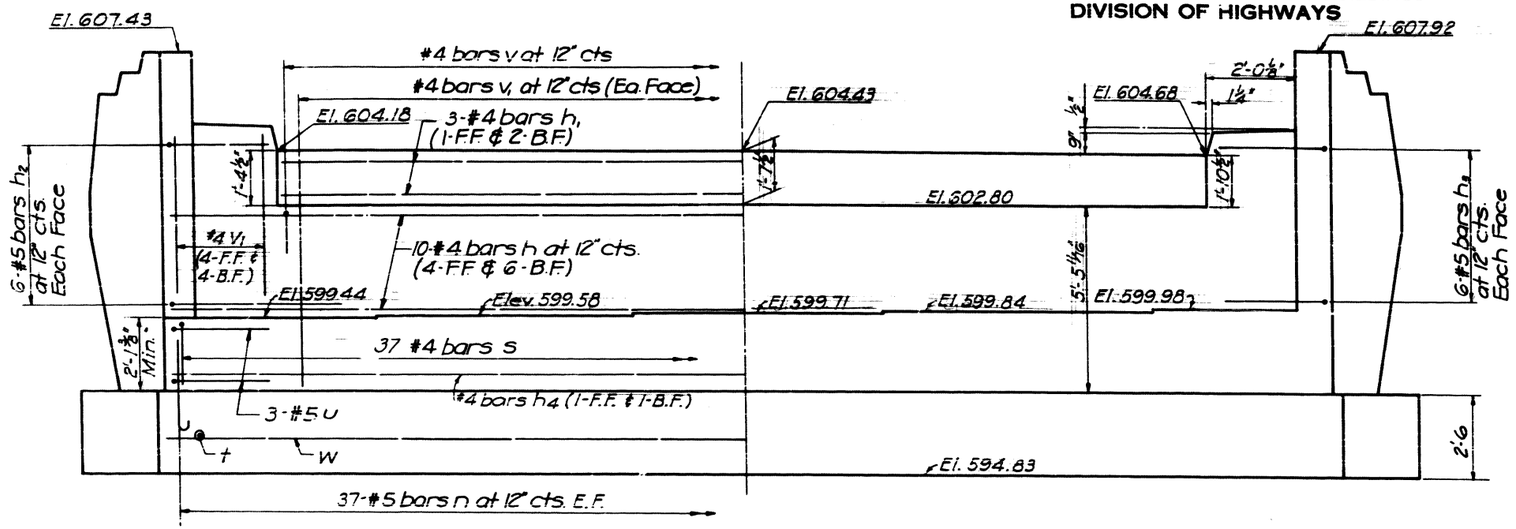
F.A.I. ROUTE 80 — PROJECT
SECTION 99-4-1V8 — WILL COUNTY
Scale: NO SCALE — Date: OCTOBER 19, 1962

BLAUVELT ENGINEERING CO.
CONSULTING ENGINEERS
WOODBURY, N.J. NEW YORK, N.Y. CRYSTAL LAKE, ILL.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

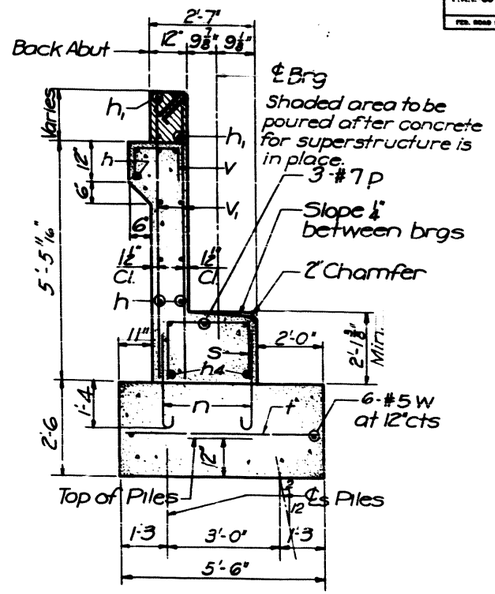
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-80	99-4-IVB	WILL	54	32
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

SHEET NO. 22
#25 SHEETS



Reinforcement Dimensions

ELEVATION



SECTION A-A

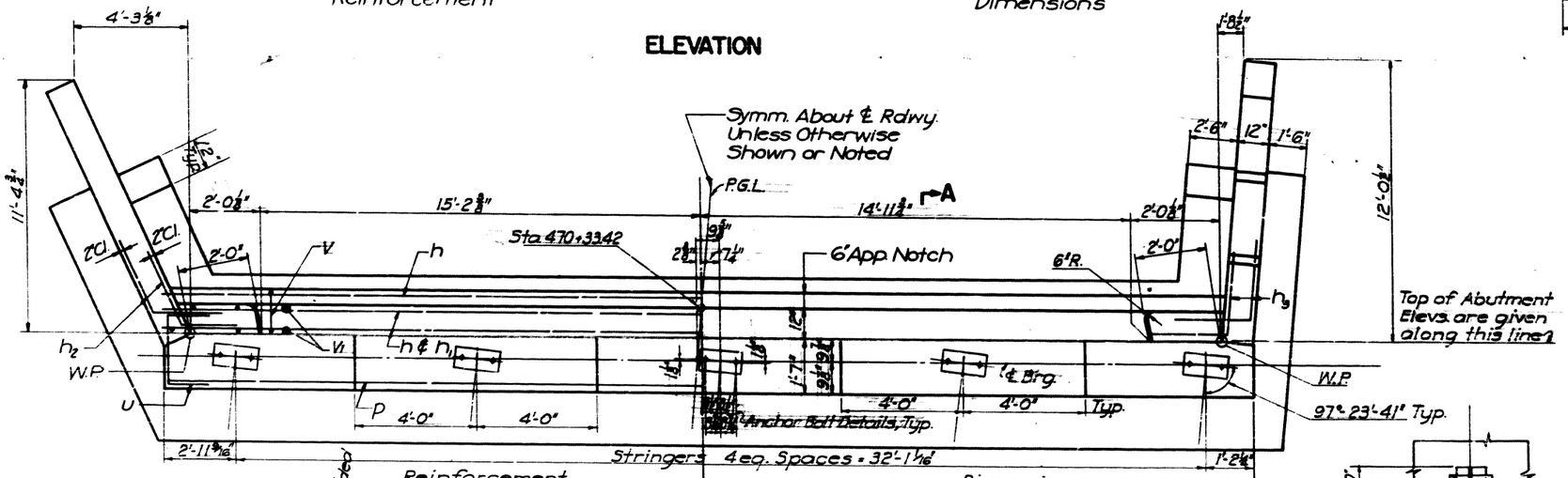
N.W. ABUTMENT BILL OF REINFORCEMENT

Bar	No.	Size	Lgth	Shape
h	10	#4	35'-11"	—
h1	3	#4	29'-11"	—
h2	12	#5	7'-9"	⌊
h3	12	#5	7'-9"	⌋
h4	2	#4	35'-11"	—
n	74	#5	3'-8"	⊃
n1	28	#5	3'-11"	⊃
p	3	#7	35'-11"	—
s	37	#4	6'-0"	⊓
t	32	#5	5'-0"	—
t1	24	#5	4'-6"	—
u	6	#5	5'-3"	⊓
v	31	#4	2'-9"	⊓
v1	78	#4	6'-6"	—
w	6	#5	35'-0"	—
w1	12	#5	10'-8"	—

N.W. ABUTMENT BILL OF MATERIAL

Item	Unit	Quan.
Class X Concrete	Cu. Yds.	48.2
Reinforcement Bars	lbs	2930
10 BP42 Piles	Lin. Ft.	624

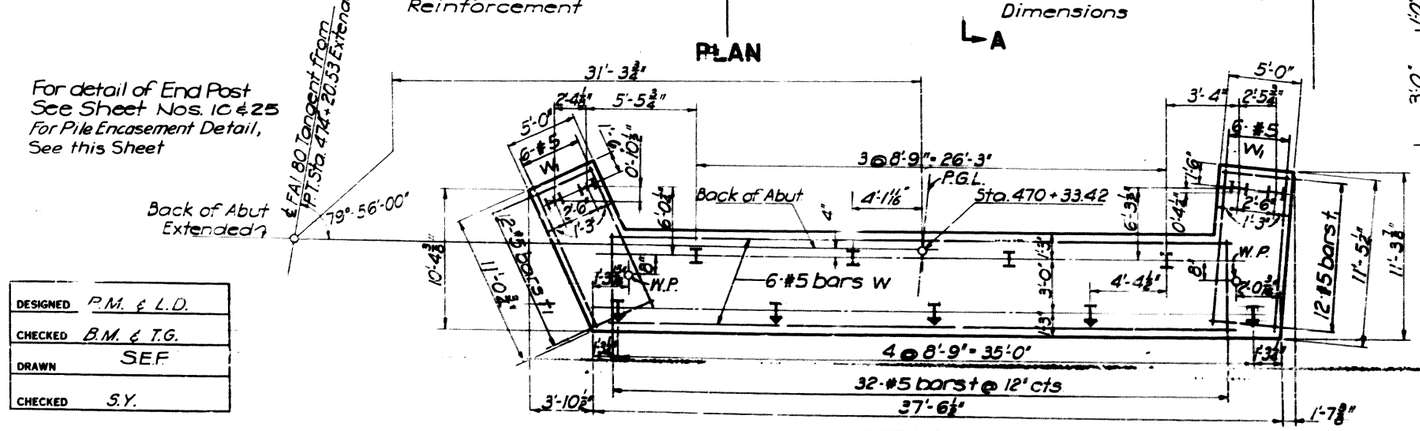
Note: Bill of Material includes Reinforcement and Class X Concrete for End Posts.



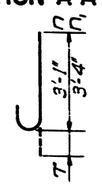
Reinforcement Dimensions

PLAN

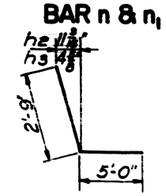
For detail of End Post See Sheet Nos. 10 & 25
For Pile Encasement Detail, See this Sheet



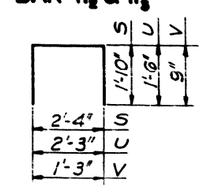
FOOTING PLAN



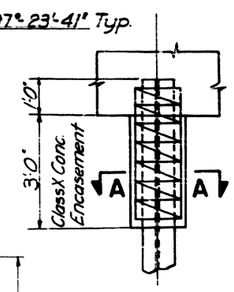
BAR n & n1



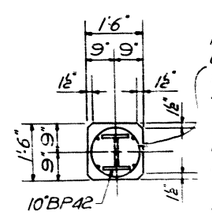
BAR h2 & h3



BARS s, u, & v



PILE ENCASEMENT DETAIL



15" Dia Spiral #2 wire, 6" Pitch, 2 extra turns top & bottom. 4-#4 tie bars

The cost of the Class X Concrete Encasement and Reinforcement is incidental to the cost of furnishing piles.

SECTION A-A

PILE DATA

Type - 10 BP42
Capacity - 35 Ton Min
Est. Length - 48 Feet
No. Req'd 13
▼Indicates battered pile

DESIGNED	P.M. & L.D.
CHECKED	B.M. & T.G.
DRAWN	S.E.F.
CHECKED	S.Y.

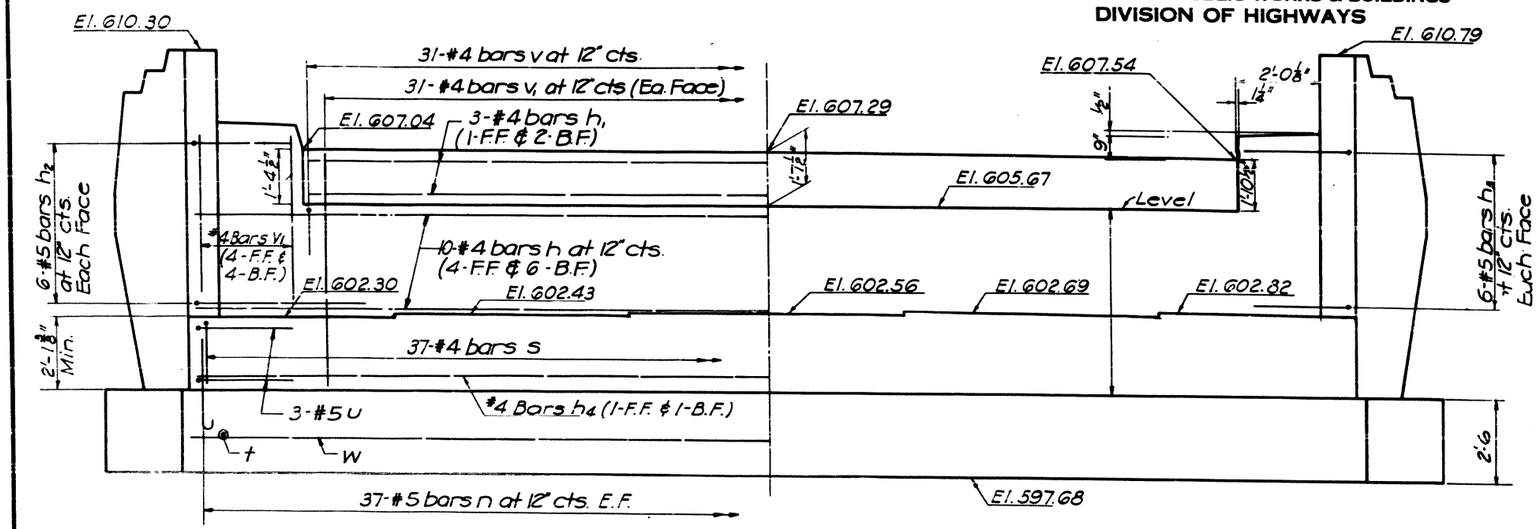
NORTH WEST ABUTMENT
F.A.I. 80 OVER
ROWELL AVE. C.M.ST.P.& P.R.R. & E.J. & E.R.Y.
F.A.I. 80 STA. ON ℄ ROWELL AVE. 471+26.39
F.A.I. ROUTE 80 — PROJECT
SECTION 99-4-IVB — WILL COUNTY
SCALE: NO SCALE — DATE: OCTOBER 1, 1958

BLAUVELT ENGINEERING CO.
CONSULTING ENGINEERS
WOODBURY, N.J. — NEW YORK, N.Y. — CRYSTAL LAKE, ILL.

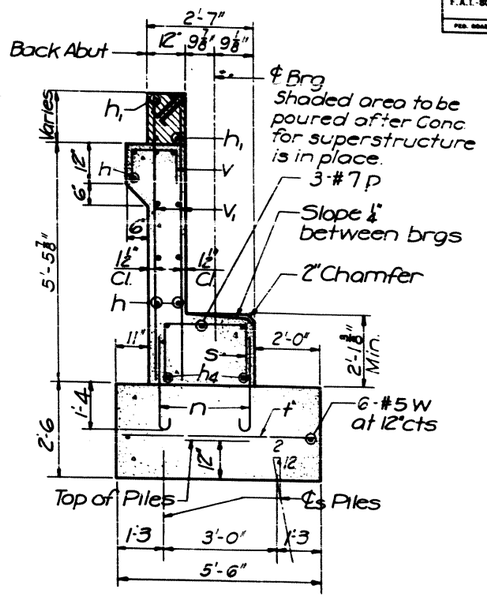
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-80	99-4-IVB	WILL	54	33
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

SHEET NO. 23
26 SHEETS



ELEVATION



SECTION A-A

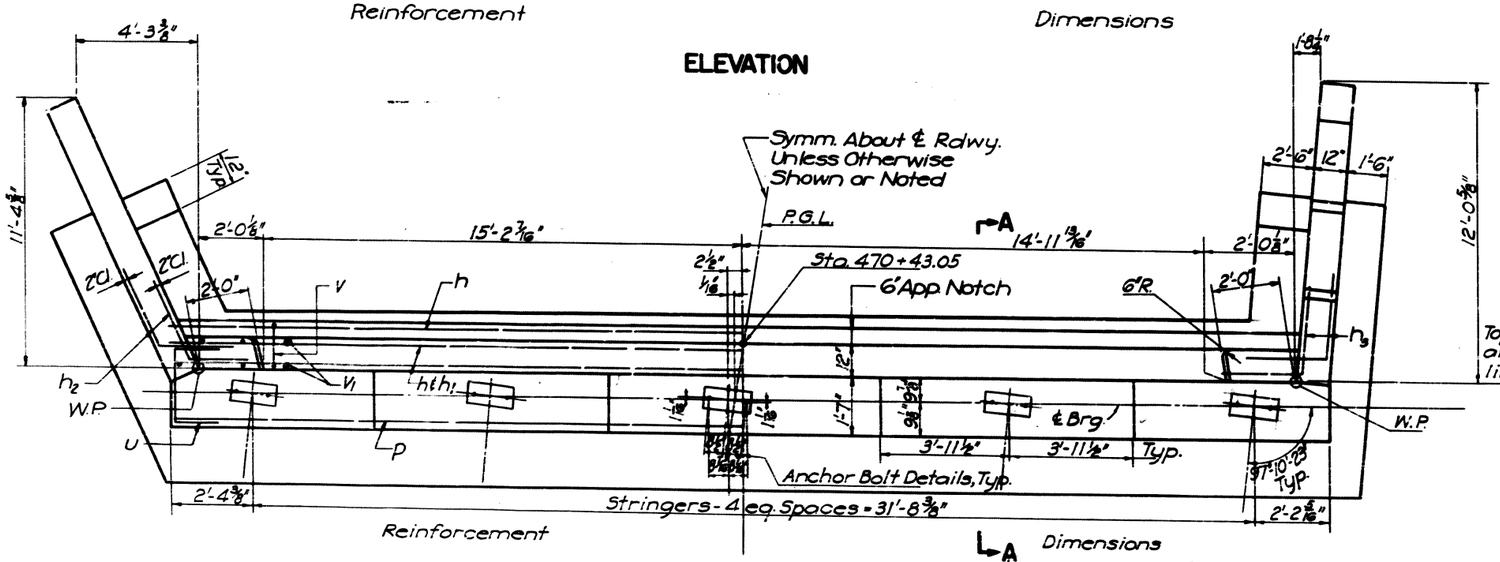
S.W. ABUTMENT BILL OF REINFORCEMENT

Bar	No.	Size	Lgth	Shape
h	10	#4	35'-11"	
h1	3	#4	29'-11"	
h2	12	#5	7'-9"	
h3	12	#5	7'-9"	
h4	2	#4	35'-11"	
n	74	#5	3'-8"	
n1	28	#5	3'-11"	
p	3	#7	35'-11"	
s	37	#4	6'-0"	
t	32	#5	5'-0"	
t1	24	#5	4'-6"	
u	6	#5	5'-3"	
v	31	#4	2'-9"	
v1	78	#4	6'-6"	
w	6	#5	35'-0"	
w1	12	#5	10'-8"	

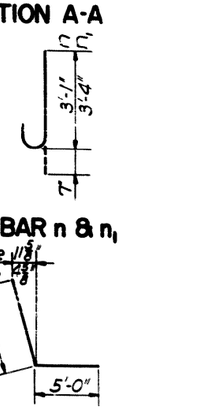
S. W. ABUTMENT BILL OF MATERIAL

Item	Unit	Quan.
Class X Concrete	Cu Yds	48.3
Reinforcement Bars	lbs	2,930
10 BP42 Piles	Lin. Ft.	663

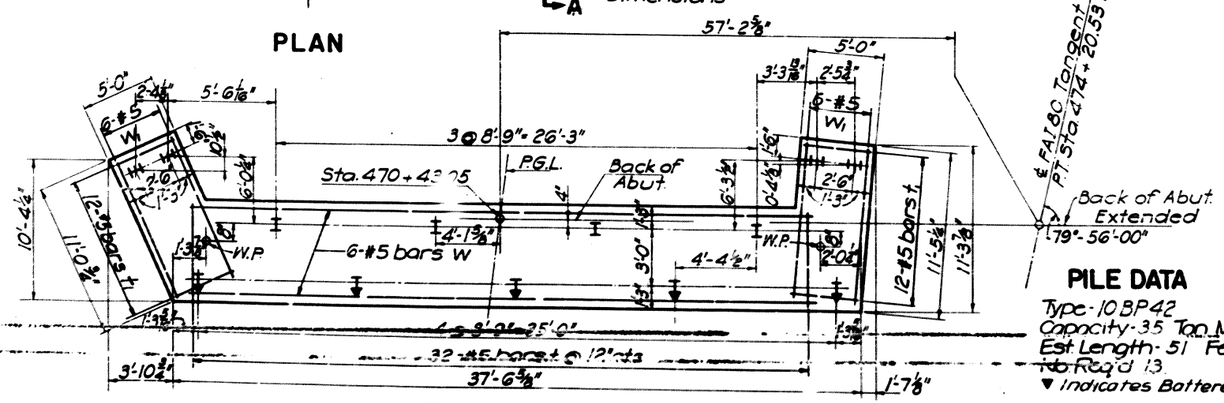
Note: Bill of Material includes Reinforcement and Class X Concrete for End Posts.



PLAN



For detail of End Post See Sheet Nos. 10 & 25
For Pile Encasement Detail, See Sheet No. 22.



FOOTING PLAN

PILE DATA

Type - 10 BP42
Capacity - 35 Ton Min
Est Length - 51 Feet
No. Req'd 13
▼ Indicates Battered Pile

DESIGNED	L. D. & B.M.
CHECKED	B.M. & T.G.
DRAWN	S.E.F.
CHECKED	S.Y.

SOUTH WEST ABUTMENT
F.A.I. 80 OVER
ROWELL AVE C.M.ST.P.&P.R.R. & E.J. & E.R.Y.

F.A.I. 80 STA. ON ℄ ROWELL AVE. 471+26.39

F.A.I. ROUTE 80 — PROJECT
SECTION 99-4-IVB — WILL COUNTY

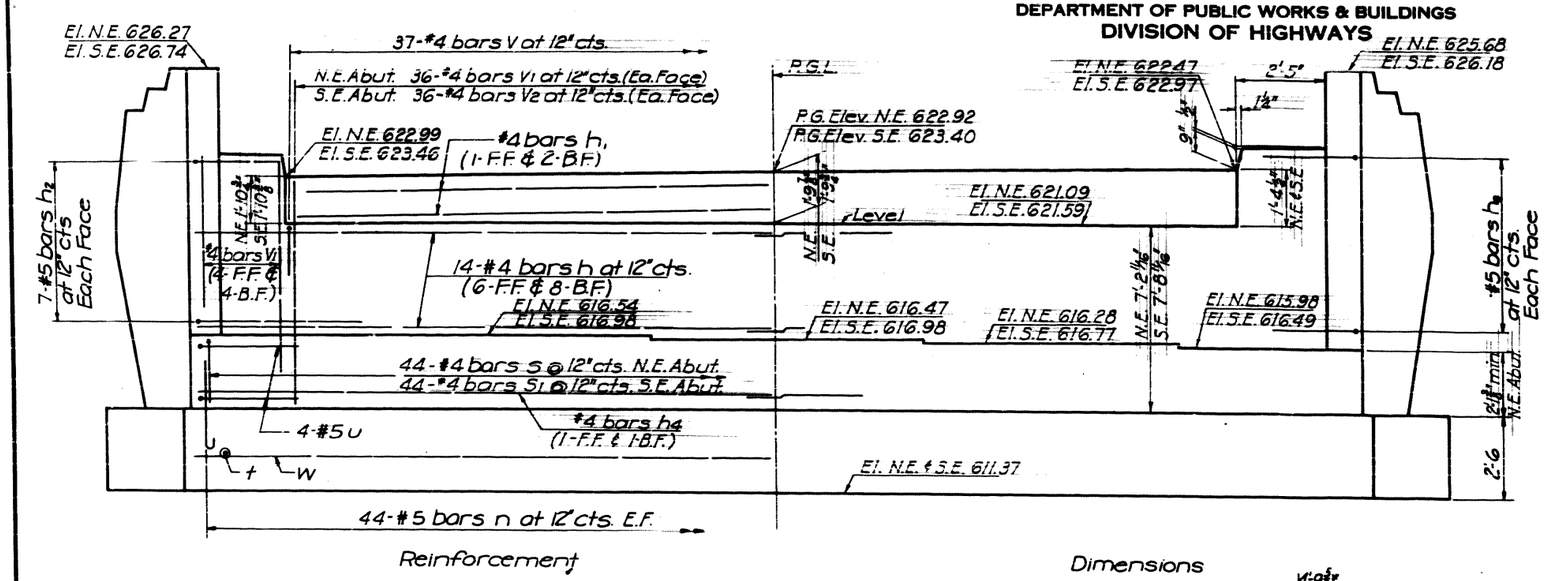
Scale: NO SCALE — Date: OCTOBER 19, 1962

BLAUVELT ENGINEERING CO.
CONSULTING ENGINEERS
WOODBURY N.J. — NEW YORK, N.Y. — CRYSTAL LAKE, ILL.

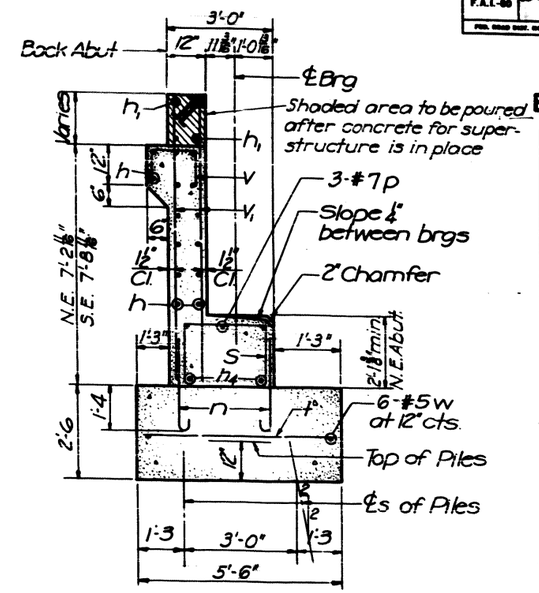
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-80	99-4-18	WILL	54	34
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT-A		

SHEET NO. 24
28 SHEETS



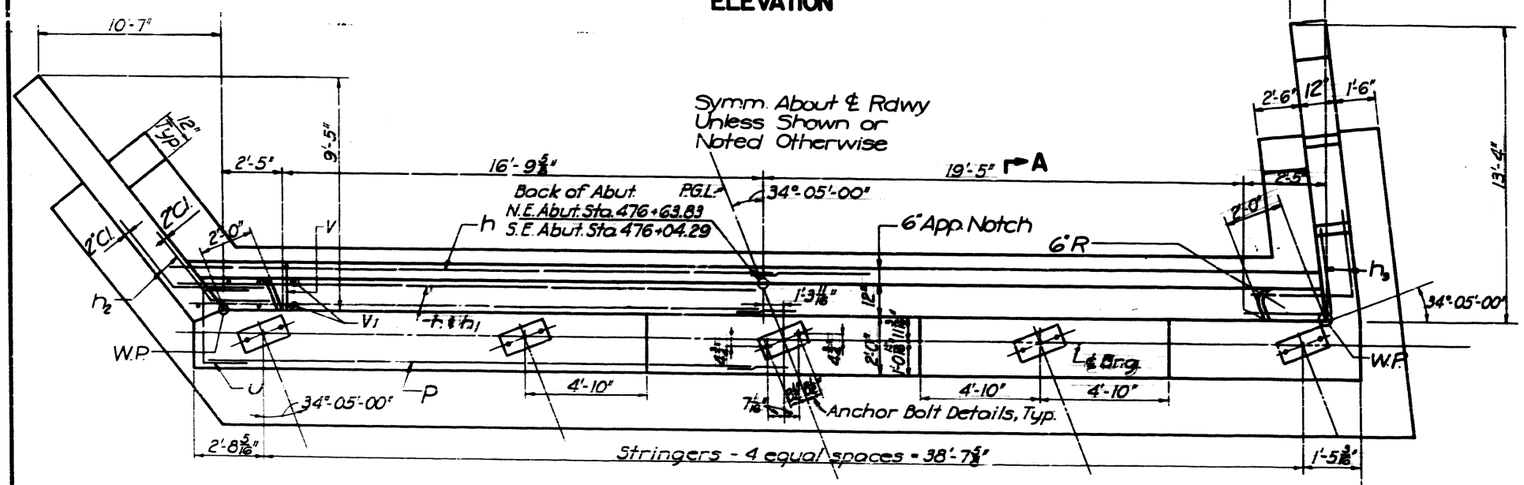
ELEVATION



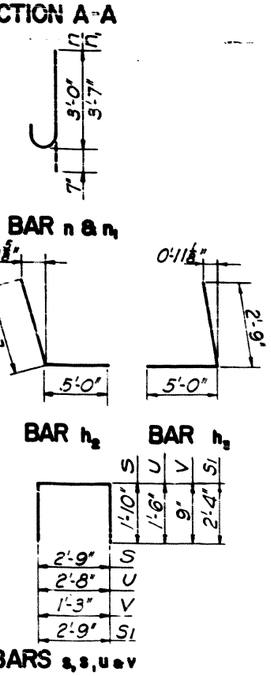
SECTION A-A

N.E. & S.E. ABUTMENTS BILL OF REINFORCEMENT

Bar	No.	Size	Lgth	Shape
h	56	#4	21'-8"	
h1	12	#4	18'-6"	
h2	28	#5	7'-9"	
h3	28	#5	7'-9"	
h4	8	#4	21'-8"	
n	176	#5	3'-7"	
n1	56	#5	4'-2"	
P	12	#7	21'-8"	
S	44	#4	6'-5"	
S1	44	#4	7'-5"	
t	92	#5	5'-0"	
t1	32	#5	4'-6"	
U	16	#5	5'-2"	
V	74	#4	2'-9"	
V1	104	#4	6'-11"	
V2	72	#4	7'-5"	
W	24	#5	23'-6"	
W1	12	#5	10'-5"	
W2	12	#5	10'-0"	



PLAN

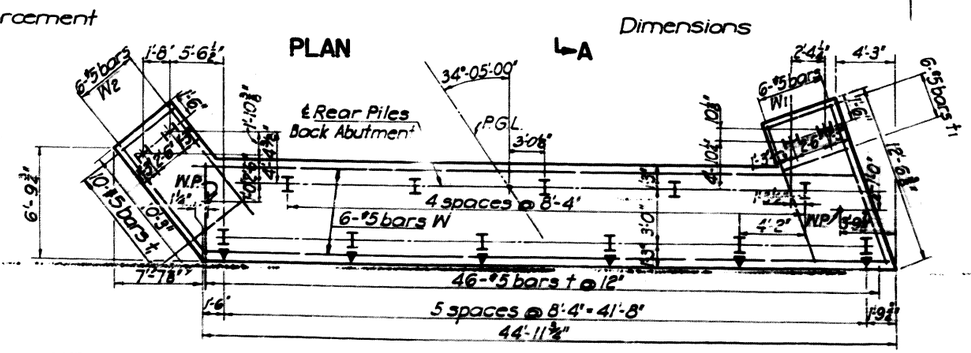


N.E. & S.E. ABUTMENTS BILL OF MATERIAL

	Item	Unit	Quan.
N.E. Abut.	Class X Concrete	Cu.Yds.	622
	Reinforcement Bars	lbs.	3,690
	10 BP 42 Piles	Lin. Ft.	560
	Test Piles	Each	1
S.E. Abut.	Class X Concrete	Cu.Yds.	64.7
	Reinforcement Bars	lbs.	3,730
	10 BP 42 Piles	Lin. Ft.	600

Note: Bill of Material includes Reinforcement and Class X Concrete for End Posts.

For detail of End Post see Sheet Nos. 10 & 25
For Pile Encasement Detail, See Sheet No. 22



FOOTING PLAN

DESIGNED	B.M. & L.D.
CHECKED	L.D. & T.G.
DRAWN	S.E.F.
CHECKED	S.Y.

PILE DATA

Type: 10 BP 42
Capacity: 37 Ton Min.
Est. Length: 40 Feet
No. Req'd: 15 Ea. NE & SE Abut.
30 Total (includes 1 Test Pile)
▼ Indicates battered pile.

EAST ABUTMENTS
F.A.I. 80 OVER
ROWELL AVE., C.M.S.T.P. & P.R.R. & E.J. & E. RY

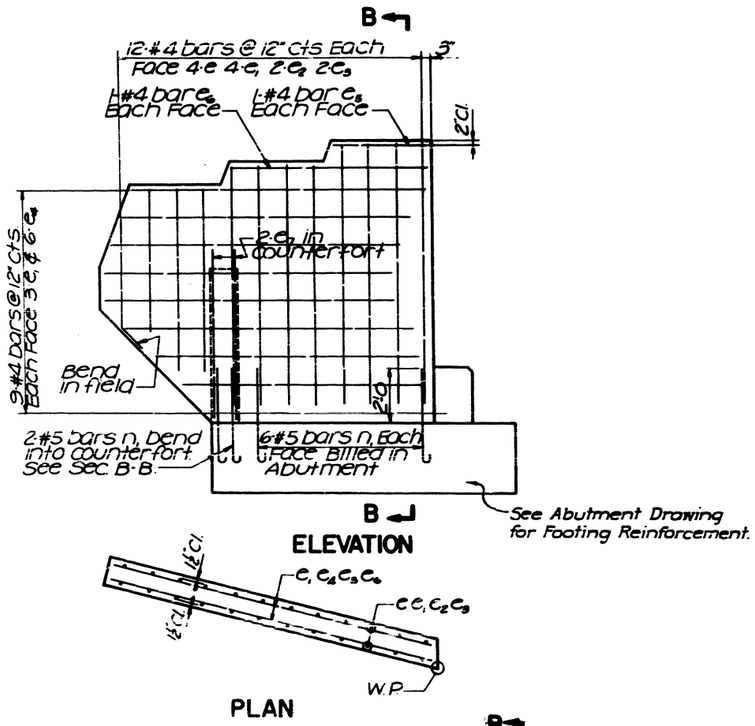
F.A.I. 80 STA. ON ℄ ROWELL AVE. 471+26.39
F.A.I. ROUTE 80 — PROJECT
SECTION 99-4-18B — WILL COUNTY
Scale: NO SCALE — Date: OCTOBER 19, 1962

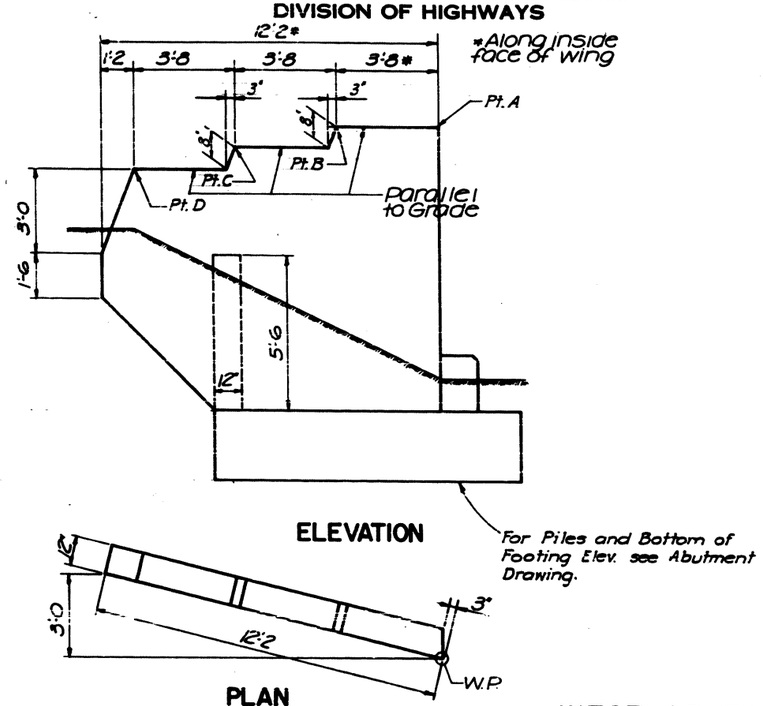
BLAUVELT ENGINEERING CO.
CONSULTING ENGINEERS
WOODBURY, N.J. — NEW YORK, N.Y. — CRYSTAL LAKE, ILL.

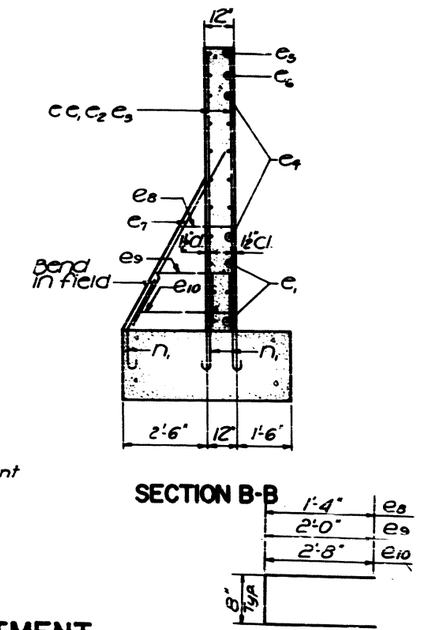
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-80	99-4-IVB	WILL	54	35
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT-		

SHEET NO. 25
28 SHEETS







ONE END POST BILL OF MATERIAL

Bar	No.	Size	Lgth	Shape
e	8	#4	9-3	—
e1	14	#4	8-6	—
e2	4	#4	6-6	—
e3	4	#4	5-0	—
e4	12	#4	10-6	—
e5	2	#4	3-6	—
e6	2	#4	7-0	—
e7	2	#5	7-0	—
e8	1	#4	3-2	
e9	1	#4	4-6	
e10	1	#4	5-10	
* Reinforcement bars			lbs	280

*Quantities are included on Sheet Nos. 22 Thru 24

ELEVATIONS

Pt \ W.W.	N.W. Abutment North Wall	N.W. Abutment South Wall	S.W. Abutment North Wall	S.W. Abutment South Wall
A	607.92	607.43	610.79	610.30
B	607.81	607.33	610.68	610.20
C	607.04	606.56	609.90	609.43
D	606.26	606.79	609.13	608.66

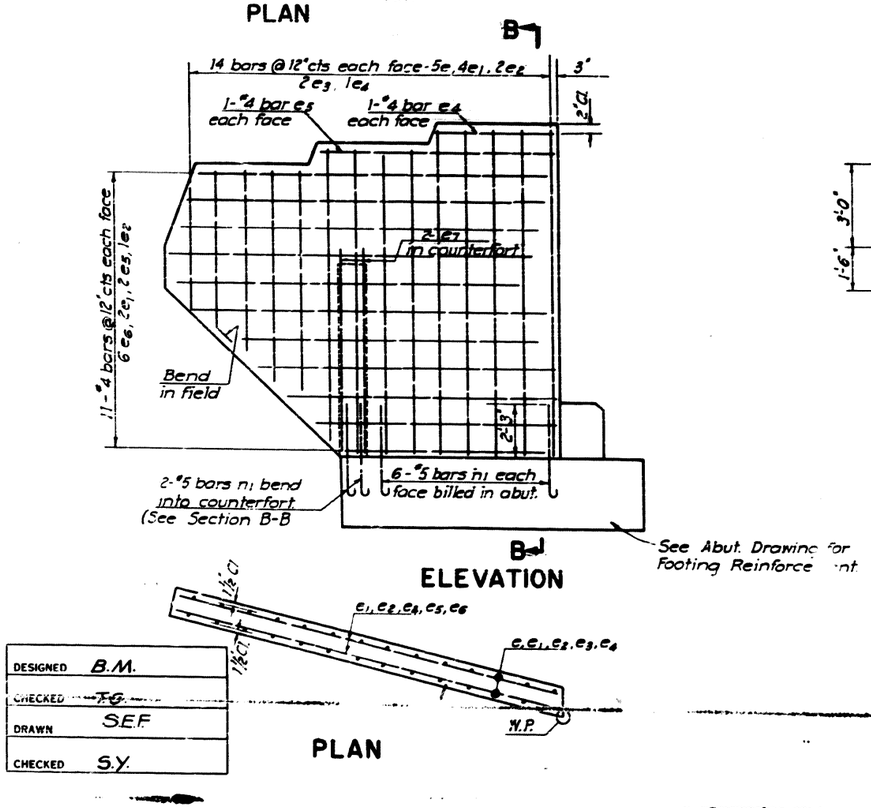
ONE END POST BILL OF MATERIAL

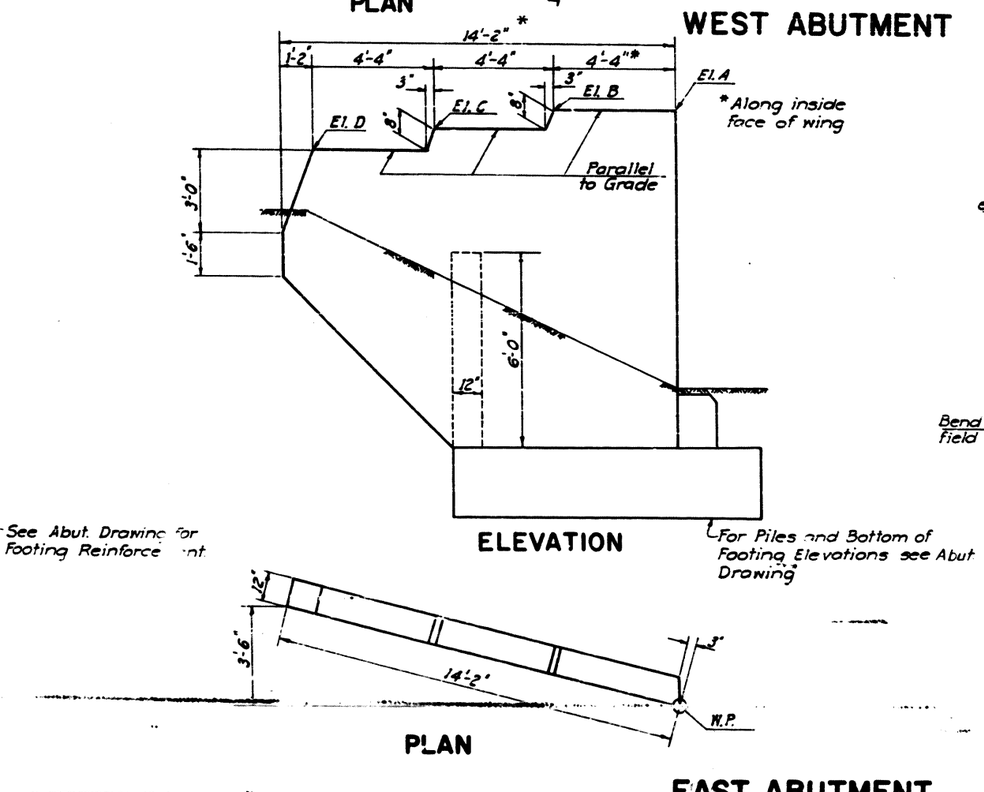
Bar	No	Size	Lgth	Shape
e	10	#4	11'-4"	—
e1	12	#4	10'-6"	—
e2	6	#4	7'-8"	—
e3	4	#4	6'-6"	—
e4	4	#4	4'-2"	—
e5	6	#4	8'-4"	—
e6	12	#4	12'-6"	—
e7	2	#5	7'-6"	—
e8	1	#4	3'-2"	
e9	1	#4	4'-6"	
e10	1	#4	5'-10"	
* Reinforcement Bars			lbs	378

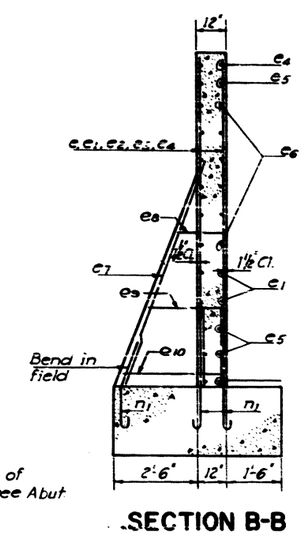
*Quantities are included on Sheet Nos. 22 Thru 24

ELEVATIONS

Pt \ E.W.	N.E. Abutment North Wall	N.E. Abutment South Wall	S.E. Abutment North Wall	S.E. Abutment South Wall
A	626.27	625.68	626.74	626.18
B	626.19	625.56	626.66	626.06
C	625.43	624.77	625.90	625.27
D	624.66	623.98	625.15	624.48







DESIGNED	B.M.
CHECKED	T.G.
DRAWN	S.E.F.
CHECKED	S.Y.

WEST ABUTMENT

EAST ABUTMENT

ABUTMENT DETAILS
F.A.I. 80 OVER
ROWELL AVE., C.M.S.T.P.& P.R.R. & E.J.& E. R.Y.

F.A.I. 80 STA. ON ℄ ROWELL AVE. 471+26.39

F A I ROUTE 80 — PROJECT
SECTION 99-4-IVB — WILL COUNTY

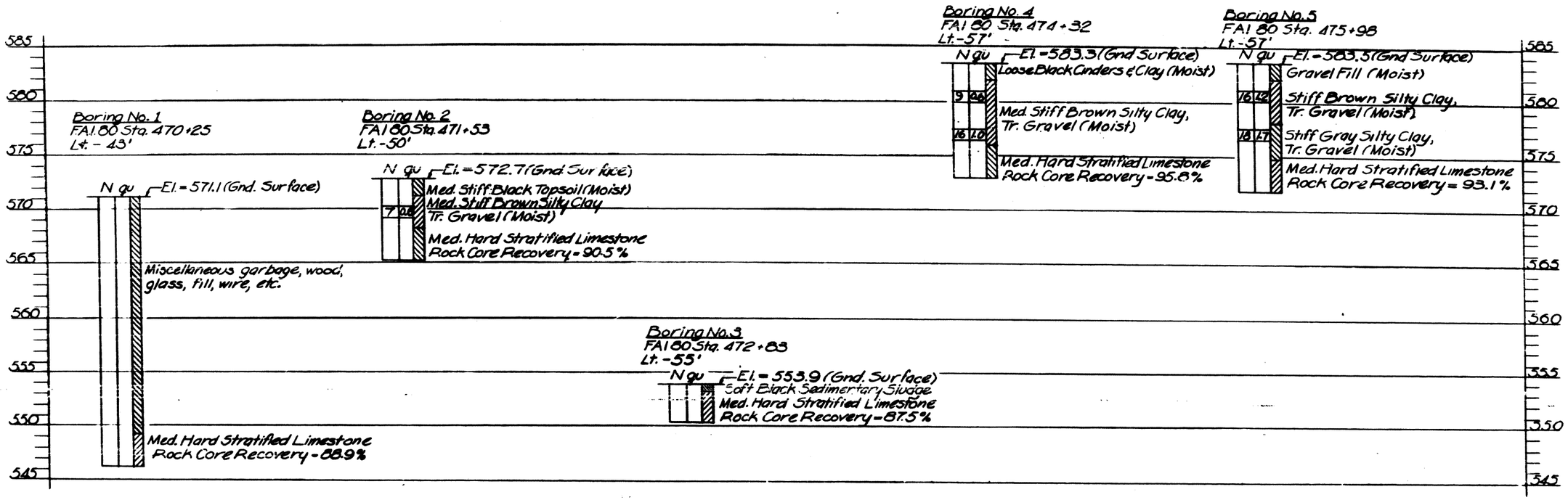
Scale: NO SCALE — Date: OCTOBER 19, 1962

BLAUVELT ENGINEERING CO.
CONSULTING ENGINEERS
WOODBURY, N. J. NEW YORK N. Y. CRYSTAL LAKE ILL.

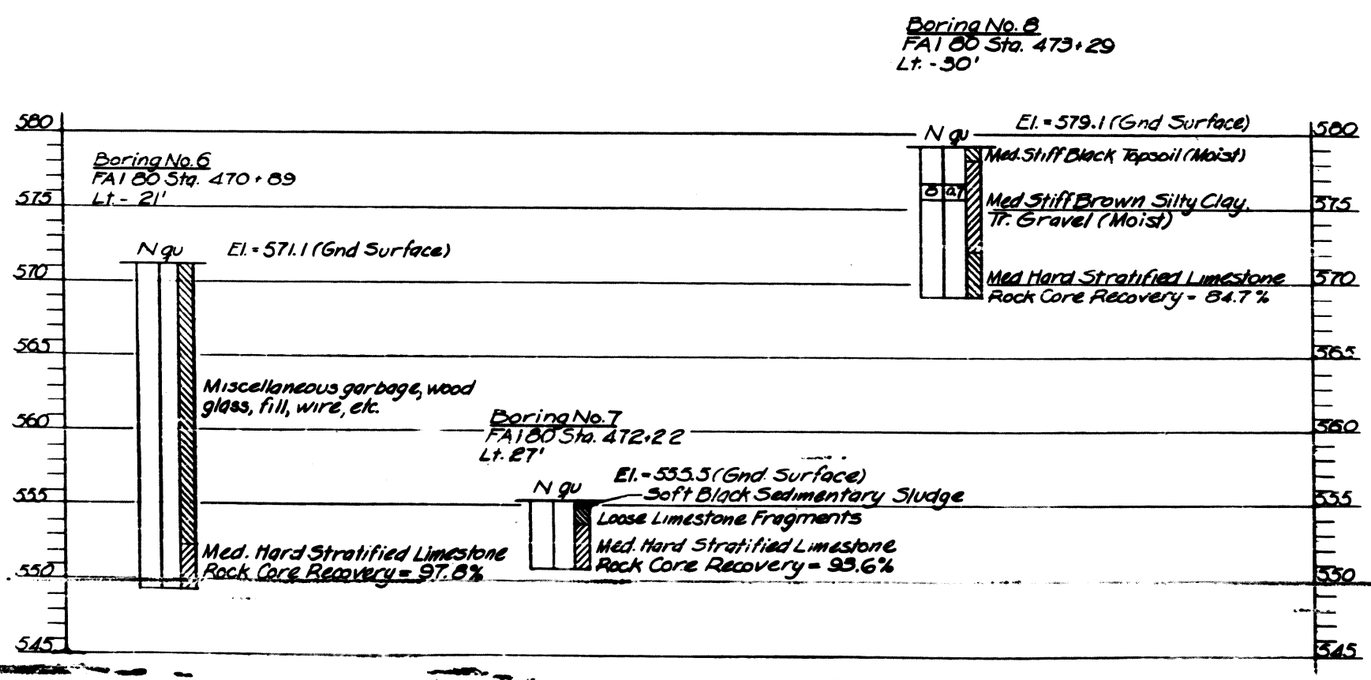
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-80	99-4-IVB	WILL	54	36
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT-		

SHEET NO. 25
28 SHEETS



Note: N = Blows per foot of penetration of sampling spoon. Hammer Wt. = 140 Lbs. Drop 30 inches.
qu = Unconfined compressive strength in tons per square foot.
No Water encountered
Borings taken Feb. 22 to 29, 1960



DESIGNED	
CHECKED	
DRAWN	AME
CHECKED	JPS

BORING LOGS I

F.A.I.80 OVER

ROWELL AVE., C.M.S.T.P. & P.R.R., E.J. & E. RY.

F.A.I.80 STA ON ℄ ROWELL AVE. 471+26.39

F A I ROUTE 80 — PROJECT

SECTION 99-4-IVB — WILL COUNTY

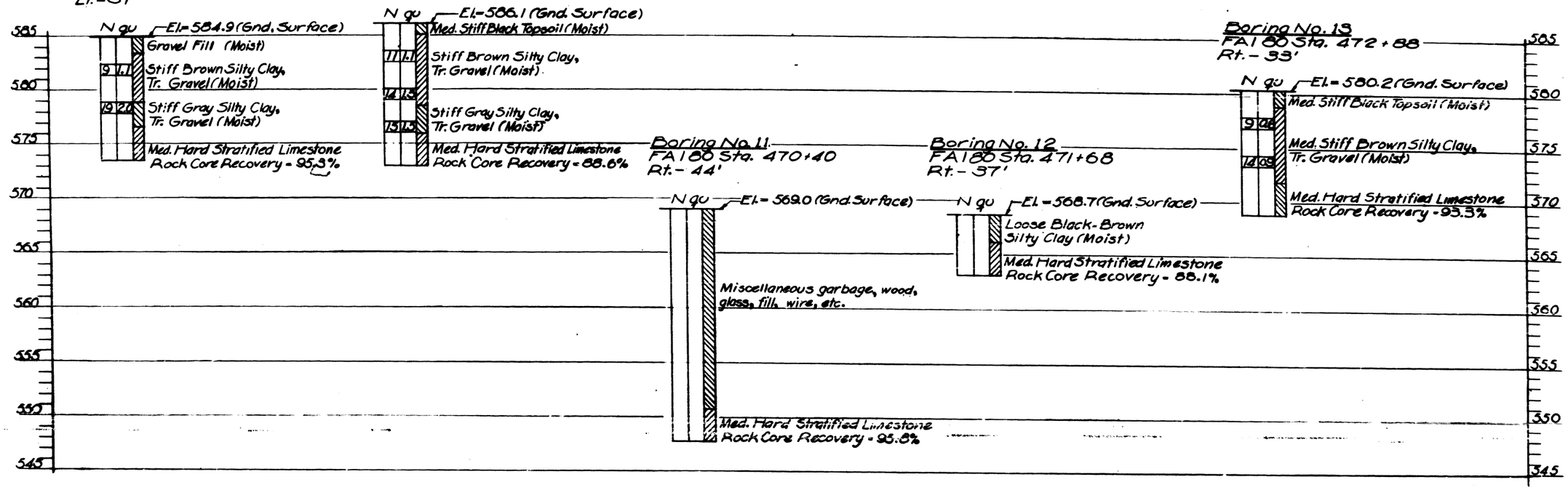
Scale: NO SCALE — Date: OCTOBER 19, 1962

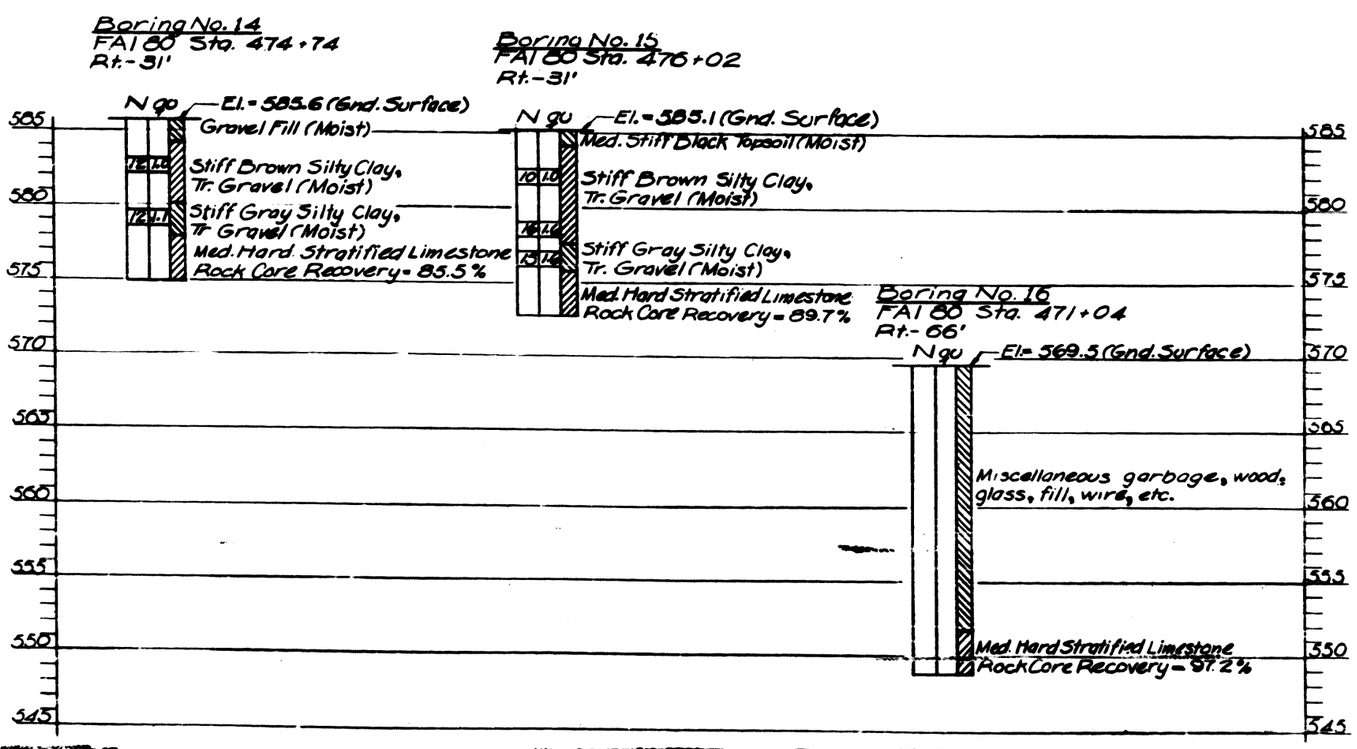
BLAUVELT ENGINEERING CO.
CONSULTING ENGINEERS
WOODBURY, N. J. NEW YORK, N. Y. CRYSTAL LAKE, ILL.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

F.A.I.-80	99-4-1VR	WILL	54	37

SHEET NO. 27
28 SHEETS





Note: N=Blows per foot of penetration of sampling spoon. Hammer Wt.=140 Lbs. Drop 30 inches.
qu-Unconfined compressive strength in tons per square foot.
No water encountered

DESIGNED	
CHECKED	
DRAWN	AME
CHECKED	JPS

BORING LOGS II
FAI 80 OVER
ROWELL AVE., C.M.ST.P.&P.R.R., & E.J.&E.RY.

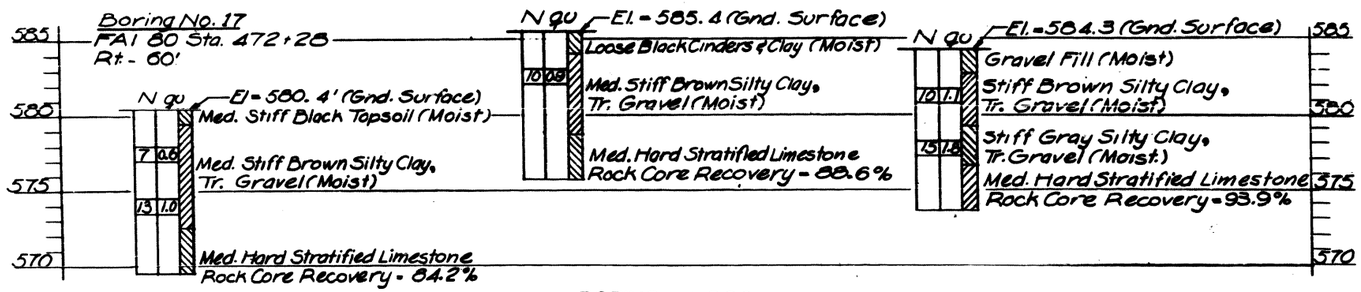
F.A.I. 80 STA. ON ℄ ROWELL AVE. 471+26.39
F.A.I. ROUTE 80 — PROJECT
SECTION 99-4-1VR — WILL COUNTY
Scale: NO SCALE — Date: OCTOBER 19, 1962

BLAUVELT ENGINEERING CO.
CONSULTING ENGINEERS
WOODBURY, N. J. NEW YORK, N. Y. CRYSTAL LAKE, ILL.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-80	99-4-IVB	WILL	54	38
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT-		

SHEET NO. 28
28 SHEETS



BORING LOGS

Note: N - Blows per foot of penetration of sampling spoon. Hammer Wt. - 140 Lbs. Drop 30 inches.
qu - Unconfined compressive strength in tons per square foot.
No Water encountered

DESIGNED	
CHECKED	
DRAWN	AME
CHECKED	JPS

BORING LOGS III
FAI 80 OVER
ROWELL AVE., C.M.ST.P.&P.R.R. & E.J.&E.RY.

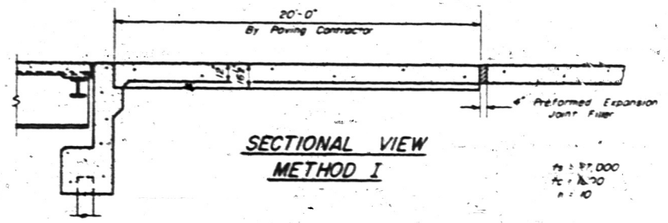
FAI 80 STA. ON ℄ ROWELL AVE. 471+26.39
FAI ROUTE 80 — PROJECT
SECTION 99-4-IVB — WILL COUNTY.

Scale: NO SCALE — Date: OCTOBER 19, 1962

BLAUVELT ENGINEERING CO.
CONSULTING ENGINEERS
WOODBURY, N. J. NEW YORK, N. Y. CRYSTAL LAKE, ILL.

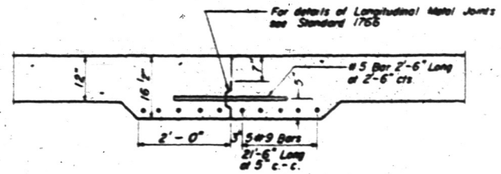
DETAILS OF BRIDGE APPROACHES

FOR FEDERAL AID INTERSTATE ROUTES



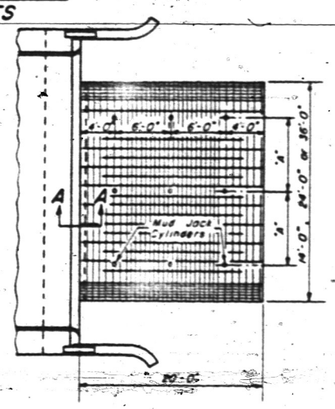
SECTIONAL VIEW
METHOD I

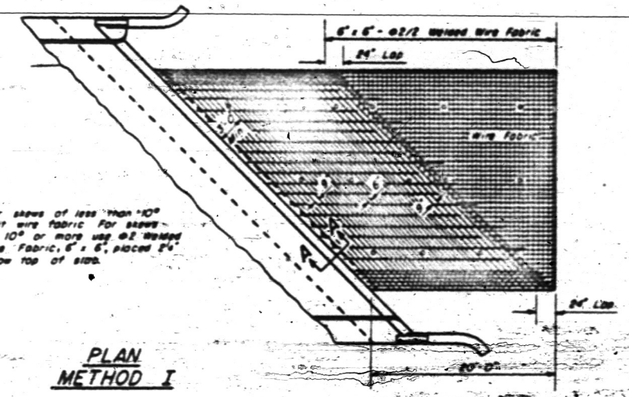
fs = 27,000
fc = 1200
n = 10



OPTIONAL LONGITUDINAL CONSTRUCTION JOINT

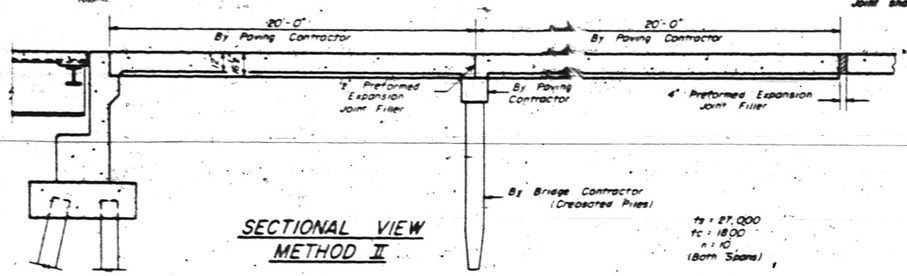
As approved by the Engineer, the Contractor may elect to reduce the widths of pour by use of the Optional Longitudinal Construction Joint shown. Joint shall be located at the edge of Traffic Lane.





For skews of less than 10° omit wire fabric. For skews of 10° or more use #2 Welded Wire Fabric, 6" x 6", placed 2½" below top of slab.

PLAN
METHOD I



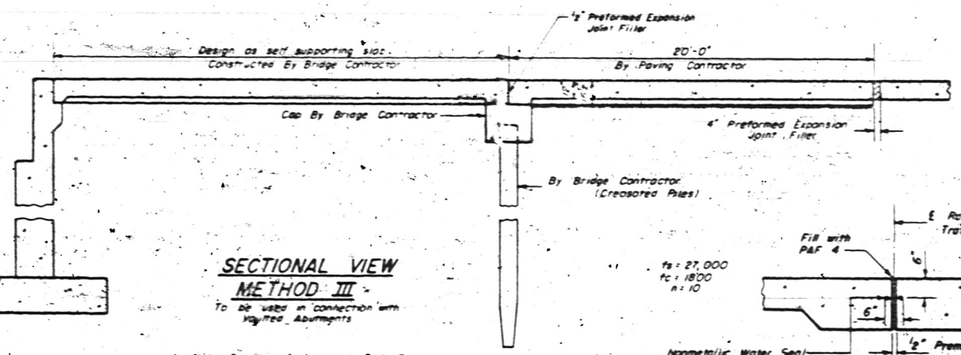
SECTIONAL VIEW
METHOD II

fs = 27,000
fc = 1800
n = 10
(Both Spans)

TABLE OF "A" DIMENSIONS

Width of Approach Slab	Dimension "A" (Spacing of Mud Jack Cylinders)
14	6'-0"
24	8'-0"
36	2 Spaces @ 6'-0"

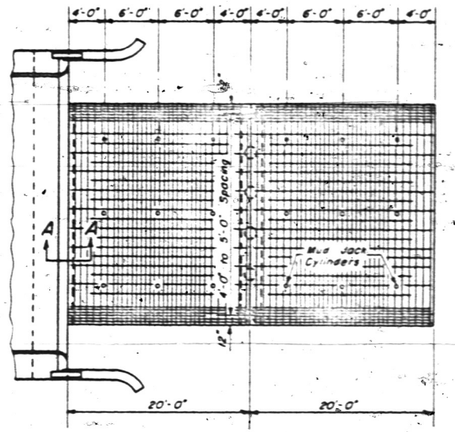
Expanded Metal weighing not less than 78 Lbs. per 100 sq. ft. or a welded bar mat weighing not less than 78 Lbs. per 100 sq. ft. having members of equal size in both directions and spaced not over 6" apart may be used instead of the #2 Welded Wire Fabric, 6" x 6", provided the expanded metal or bar mat is furnished at no additional cost to the State.

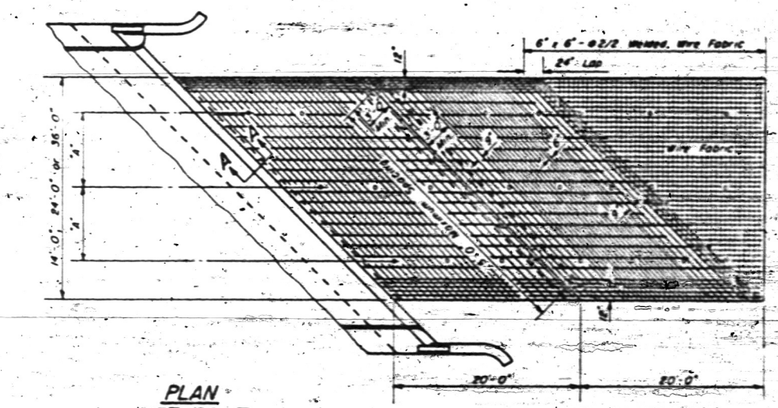


SECTIONAL VIEW
METHOD III

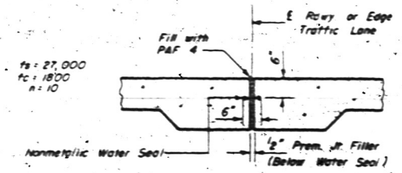
To be used in connection with Vaulted Abutments

Note: Details of Approach Slab By Paving Contractor same as shown for Method I





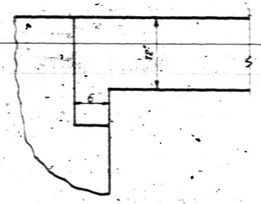
PLAN
METHOD II



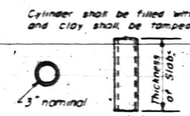
fs = 27,000
fc = 1800
n = 10

LONGITUDINAL EXPANSION JOINT

To be used when Approach Slabs are greater than 36'-0" wide. Joint shall be placed at edge of Traffic Lane nearest to the ℄ of the total width of Approach Slab.

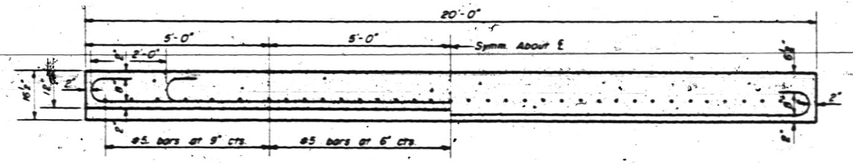


SECTION A-A



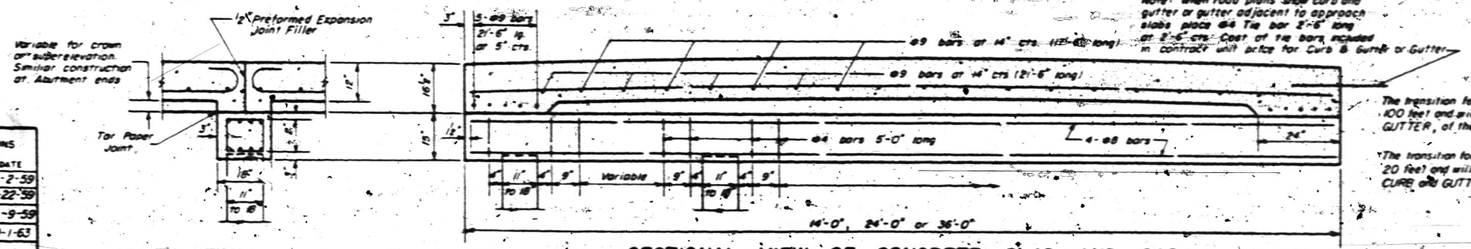
DETAIL OF
MUD JACK CYLINDER

Cylinders shall be Standard Weight Black Steel Pipe



LONGITUDINAL SECTION THRU
CENTER OF SLAB

LONGITUDINAL SECTION THRU
THICKENED EDGE OF SLAB



Note: When road plans show curb and gutter or gutter adjacent to approach slabs place #4 Tie bar 2'-6" long at 2'-6" cts. Cost of tie bars included in contract unit price for Curb & Gutter or Gutter.

The transition for gutter shall be made in 100 feet and will be paid for as CONCRETE GUTTER, of the type specified.

The transition for curb and gutter shall be made in 20 feet and will be paid for as COMBINATION CURB AND GUTTER, of the type specified.

SECTIONAL VIEW OF CONCRETE SLAB AND CAP

GENERAL NOTES

The slab or slabs will be paid for at the contract unit price for PORTLAND CEMENT CONCRETE PAVEMENT (16½"-12"-16½")

The concrete caps will be paid for at the contract unit price for CLASS "A" CONCRETE.

All Reinforcement Bars will be paid for at the contract unit price for REINFORCEMENT BARS, except as noted.

The Welded Wire Fabric, Mud Jack Cylinders and Preformed Expansion Joint Filler shall be included in the unit price bid for PORTLAND CEMENT CONCRETE PAVEMENT (16½"-12"-16½")

Preformed Expansion Joint Filler shall conform to Section 409 of the Standard Specifications.

Width of Bridge Approach Slab pours shall be determined before the reinforcement bars are fabricated.

STATE OF ILLINOIS DEPARTMENT OF PUBLIC WORKS AND BUILDINGS DIVISION OF HIGHWAYS	REVISIONS BY	DATE
PASSED DEC 18 1958	WAS	2-2-59
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES	CET	10-22-59
APPROVED Dec 18 1958	WAS	12-9-59
ENGINEER OF DESIGN	W F	10-1-63

STANDARD 2138-2