

MICROFILMED  
NOV 27 1990

**DESIGN DESIGNATION**

Current A.D.T. (1980) = 1830  
Design Year A.D.T.(2000) = 3440

DHV. = 550  
D. = 60%  
T. = 3%  
V. = 30 MPH

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

**BEL-9-19.50**  
**BELMONT COUNTY**  
**WHEELING TOWNSHIP**

FHWA REGION	STATE	PROJECT	
5	OHIO	BRS-1199(3)	

1  
20

BEL-9-19.50

BRS-1199(3)

MICROFILMED  
AUG 27 1991

**1981 SPECIFICATIONS**

The standard specifications of the State of Ohio, Department of Transportation, including changes and supplemental specifications listed in the proposal shall govern this improvement.

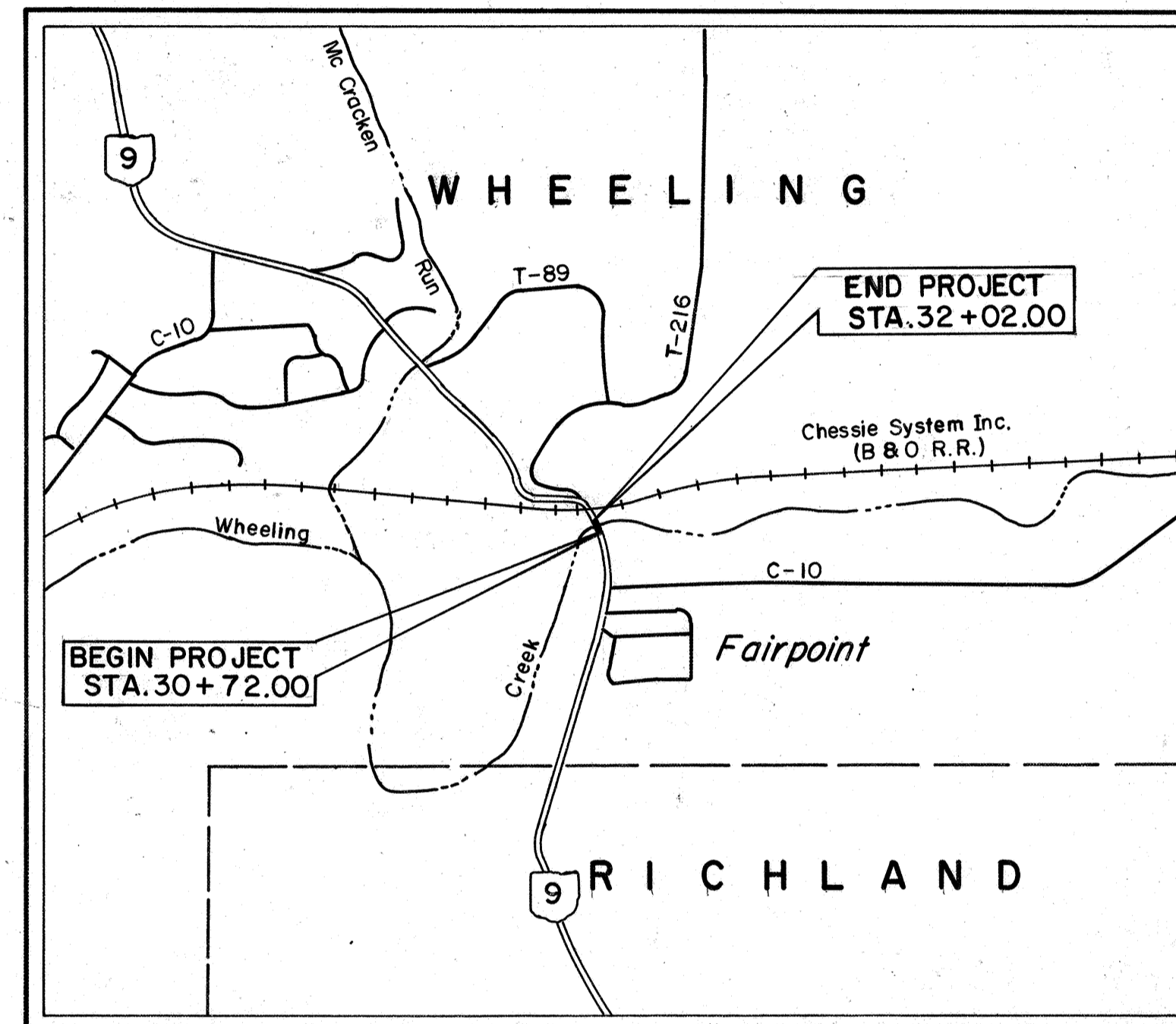
I hereby approve these plans and declare that the making of this improvement will not require the closing to traffic of the highway and that provisions for maintenance and safety of traffic will be as set forth in these plans and estimates.

**CONVENTIONAL SIGNS**

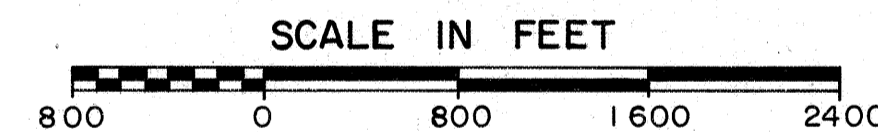
Township Line	-----	Railroad Line	+++++
Section Line	-----	Poles	⊕
Center Line	30 31	Power	⊕
Fence Line	x-x-x-x	Telephone	⊕
Guard Rail (proposed)	.....	Trees & Stumps Existing	○
		Property Line	≡≡≡
		Right of Way Line	— R/W —
		Existing Right of Way Line	— R/W —

**INDEX OF SHEETS**

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Structure over 20' Span	-----	10;18
Right of Way	-----	19;20



**LOCATION MAP**



Portion to be improved

State & Federal Routes	=====
Other Roads	-----

**LINE DATA**

Begin Project STA. 30+72.00  
End Project STA. 32+02.00  
Length of Project 130.00 Lin. Ft. or 0.025 Mi.

Begin Work STA. 29+25.00  
End Work STA. 32+42.45  
Length of Work 317.45 Lin. Ft. or 0.060 Mi.

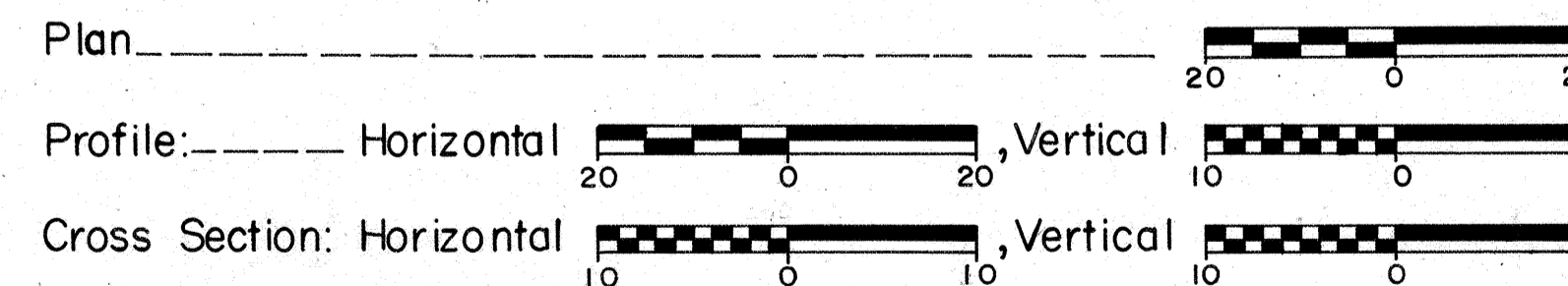
**UNDERGROUND UTILITIES**

48 HOURS  
**BEFORE YOU DIG**

Call 800-362-2764 (Toll free)  
OHIO UTILITIES PROTECTION SERVICE

NON-MEMBERS  
MUST BE CALLED DIRECTLY

**SCALES**



Approved: Robert M. Short  
Date 12-3-82 District Deputy Director of Transportation

Approved: Robert B. Phipps  
Date 2-14-83 Engineer, Bureau of Bridges and Structural Design

Approved: Wayne H. Kaulle  
Date 3-28-83 Chief Engineer, Planning and Design

Approved: Warren J. Smith  
Date 3-28-83 Director, Department of Transportation

**SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS**

BP-4	7-16-81		
BP-5	7-16-81	MC-3	6-1-73
BP-7	12-6-76	MC-4	7-26-76
CB-3A	5-1-79		
GR-1	2-5-82	AS-1-81	11-27-81
GR-2-B	2-5-82	DBR-2-73	4-10-73
GR-3	2-5-82	CPA-2-73	4-10-73
GR-4	2-5-82	CPP-2-73	4-10-73
GR-4A	2-5-82	CS-2-73	4-10-73
HW-4A	4-1-80		
HW-4B	4-1-80		

**SUPPLEMENTAL SPECIFICATIONS**

824	10-8-82
836	3-12-75
1001	1-3-77
939	6-29-82

Project: BEL-9-19.50  
Date of Letting 19\_\_ , Contract No. \_\_\_\_\_

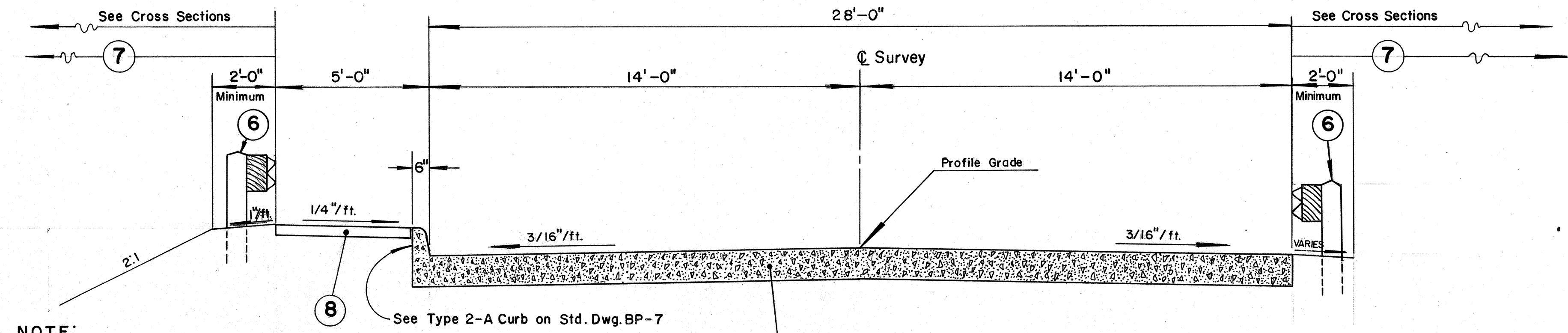
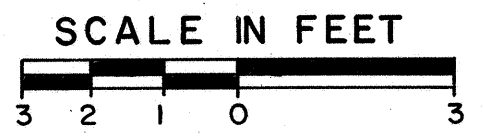
DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

APPROVED: \_\_\_\_\_  
DIVISION ADMINISTRATOR DATE

# TYPICAL SECTIONS

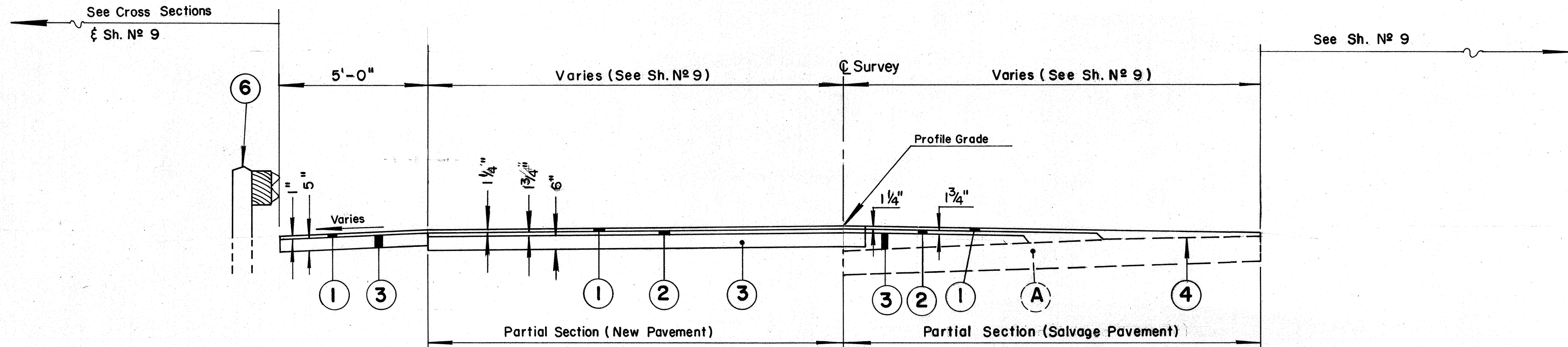
FHWA REGION	STATE	PROJECT	
5	OHIO		

BEL - 9-19.50



**NOTE:**  
 At Rear Abutment, Transition Curb Height From 10" at Sta. 30+87.00 to 6" at Sta. 30+72.00  
 At Fwd. Abutment, Transition Curb Height From 10" at Sta. 31+87.00 to 0" at Sta. 32+02.00

**APPROACH SLAB SECTION**  
 STA. 30 + 72.00 to STA. 30 + 87.00  
 STA. 31 + 87.00 to STA. 32 + 02.00



**NORMAL PAVEMENT SECTION**  
 STA. 29 + 25.00 to STA. 30 + 72.00  
 STA. 32 + 02.00 to STA. 32 + 42.60

**— LEGEND —**

- ① — Item 404 Asphalt Concrete, AC-20
- ② — Item 402 Asphalt Concrete, AC-20
- ③ — Item 301 Bituminous Aggregate Base: AC-20, RT-II or RT-12
- ④ — Item 407 Tack Coat, applied at the rate of 0.10 Gal. per Sq.Yd. and Cover Aggregate, 703.06
- ⑤ — Item 611 Reinforced Concrete Approach Slab (T=12")
- ⑥ — Item 606 Guardrail, Type 5
- ⑦ — Item 659 Seeding and Mulching, See General Notes, Sheet N° 3
- ⑧ — Item 608 4" Concrete Walk
- ⑨ — Item 609 Curb, Type 6
- Ⓐ — Existing Asphalt Concrete Surface and Aggregate Base

# GENERAL NOTES

CALC. BY	CHK. BY
W.F.P.	J.T.P.
11-24-82	11-24-82

FHWA REGION	STATE	PROJECT
5	OHIO	

3  
20

BEL-9-19.50

**MOBILIZATION, AS PER PLAN:** The Contractor shall provide a suitable field office having a minimum of 300 sq. ft. of floor space which shall be in accordance with 619.01 and 619.02. Payment for the above shall be included in the lump sum price bid for Item 624 Mobilization, as per plan.

**ROUNDING OF CORNERS SHOWN ON CROSS SECTIONS:** The rounded corners shown on the typical sections, apply to all cross sections even though otherwise shown on these plans.

**ELEVATION DATUM:** All elevations refer to U.S.G.S. datum.

**CLEARING AND GRUBBING:** Although there are no trees and/or stumps specifically marked for removal within the limits of this project, a lump sum quantity has been included in the General Summary for Item 201, Clearing And Grubbing. All provisions as set forth in the specifications under this item shall be followed and all cost shall be included in the lump sum price bid for Item 201, Clearing And Grubbing.

**LOCATIONS OF GUARDRAIL:** The locations of guardrail runs as shown in these plans are subject to adjustment to assure that the planned installations will afford maximum protection for traffic.

**CONTINGENCY QUANTITIES:** The Contractor shall not order materials or perform work for plan items set up to be used" as directed by the Engineer "unless authorized by the Engineer. The actual work locations and quantities used at the Engineer's discretion shall be made a matter of record by incorporation into the final change order governing completion of this project.

**UNDERGROUND UTILITIES:** The locations of the underground utilities shown on the plans are as obtained from the owners of the utility as required by Section 153.64 O.R.C.

**UTILITIES:** The Contractor shall notify, at least 2 working days before breaking ground, all public service corporations having wires, poles, conduit or other structures, which may be affected by the operation. He shall conduct his operations in such a manner as to avoid damages to any and all utilities. Any and all work required for public or private utilities will be done by and at the expense of their respective owners, unless otherwise noted on these plans.

Following is a list of the owners of utilities known to be within the area of this project:

Belmont Co. Sanitary District 2  
P.O. Box 92  
St. Clairsville, Ohio 43950  
Tel. 614/695-3144

Ohio Power Co.  
301 Cleveland Ave, S.W.  
Canton, Ohio 44701  
Tel. 216/456-8173

Ohio Bell Telephone Co.  
150 East Gay St.  
Columbus, Ohio 43215  
Tel. 614/223-8262

Community T.C.I. of Ohio, Inc.  
P.O. Box 99 South 4th St.  
Martins Ferry, Ohio 43935  
Tel. 614/633-2232

**SEEDING:** Quantities for seeding are calculated for the soil areas between the work limits, as shown on the cross sections.

**U.S.C. & G.S. BENCH MARK:** Bench Mark "V114 1943" set in the East end of the North abutment of Bridge N<sup>o</sup> BEL-9-1950 will be destroyed by construction of the new bridge. Therefore, the contractor will be required to establish temporary bench marks outside construction work limits.

The District Office will furnish a new disk which shall be placed, as directed by the Engineer in the new North abutment. The Contractor shall accurately establish the elevation of the new bench mark and report to the District Location and Design Office on special forms to be furnished. The old disk shall be returned with the report to the District Office. Payment for the above shall be included in the Lump Sum price bid for Item 623, Construction Layout Stakes.

**TEMPORARY STREAM CROSSING FORDS:** Where stream crossing fords are required for equipment crossings, the following shall apply to the Contractor's operations:

The crossing shall consist of clean non-toxic granular or rock material, properly maintained to prevent erosion with provisions for conveyance of anticipated high flows.

Futhermore, it shall follow Part 330.5 Specific Categories of Discharges - Nationally Permitted, paragraph (a) (4) Minor ROAD Crossing Fills - of the Federal Register - Corps of Engineers Final Regulations published July 22, 1982.

**407 TACK COAT:** The Tack Coat and Cover Aggregate Operation shall be determined as per Spec. 407.05. Plan quantities indicate average application rates of 0.10 gallons per square yard of Tack Coat and 7 pounds per square yard of Cover Aggregate for estimating purposes only.

**WATERING SEEDED AREAS:** The following estimated quantities are to be used as directed by the Engineer to promote growth and to care for the seeded areas, as per 659.09.

659 Water 1 M. Gal.

**UTILITIES NOTIFICATION:** At least two working days prior to commencing construction operations in an area which may involve underground utility facilities, the Contractor shall notify the Project Engineer, the registered utility protection service and the owners of each underground utility facility shown in the plans.

The owner of the underground utility facility shall, within forty-eight hours, excluding Saturdays, Sundays and Legal Holidays, after notice is received, stake, mark or otherwise designate the location of the underground utility facilities in the construction area in such a manner as to indicate their course together with the approximate depth at which they were installed. The marking or locating shall be coordinated to stay approximately two days ahead of the planned construction.

**ANCHOR ASSEMBLY STANDARD TYPE T, MODIFIED as per plan:** At the right rear corner of the bridge the details for the Bridge Terminal Assembly Type B and the Anchor Assembly Type T will overlap resulting in the first and second posts back of the beginning of the bridge being common.

The Bridge Terminal Assembly Type B shall be constructed as shown on Std. Dwg. GR-3. The Anchor Assembly Type T as shown on Std. Dwg. GR-4A shall then be constructed using the two concrete encased posts of the Bridge Terminal Assembly.

**MAINTAINING TRAFFIC:** The Contractor shall maintain traffic at all times in accordance with the requirements of Item 614. Two way traffic shall be maintained at all times by use of the existing pavement or Item 615 Temporary Road using class B pavement and Item 502 Temporary Structure.

One way traffic as required by the work shall be held to an absolute minimum and shall be subject to the approval of the Engineer at all times.

Signing on the Temporary Runaround should conform to Plan C-24, page 7-58, latest revision of the MUTCD.

An estimated quantity of 20 cu. yds. of Item 410 Traffic Compacted Surface Type A or Type B has been carried to the General Summary for maintaining local access.

Payment for all the above except Items 410, 502 and 615 shall be included in the price bid for Item 614 Maintaining Traffic.

Also see note about Limits on Construction of the Earth Filled Wall.

**TEMPORARY WALK:** The Temporary Walk will meet the requirements of Item 608 of the specifications. Temporary Walk will be three feet wide and may be either 4" plain concrete or 2" Bituminous material on 4" 304 aggregate base.

**LIMITS ON CONSTRUCTION OF THE EARTH FILLED WALL:**

The construction of a portion of the Earth Filled Wall will require the closing of the drive on the right of Sta. 32+00±. This portion of the earth filled wall construction and the closing of the drive shall be limited to a time period not to exceed 30 consecutive calendar days.

Work will also be performed in the vicinity of the railroad crossing protection devices and their related controls. The Contractor shall use extreme care in the performance of his work to avoid any damage to the railroad facilities and shall restrict construction to a minimum distance of 10 feet from them.

Payment for the restoration of the drive to its original condition shall be included in the price bid for Item 614 Maintaining Traffic.

## EROSION CONTROL

Item 601 is provided in the plans for erosion control. Rock of a stable nature will not be removed in order to place this item. The Engineer shall check and non-perform quantities or adjust locations and quantities for this item where indicated by field conditions during construction.

# TEMPORARY PAVEMENT MARKINGS

## NOTE B

FHWA REGION	STATE	PROJECT	
5	OHIO		4 20

BEL-9-19.50

**GENERAL**

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, AND WHEN NECESSARY, REMOVE TEMPORARY RETROREFLECTIVE PAVEMENT MARKINGS ON EXISTING, RECONSTRUCTED, RESURFACED OR TEMPORARY ROADS WITHIN THE WORK LIMITS, IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS.

THE MARKINGS SHALL BE MAINTAINED IN GOOD CONDITION DURING THE REQUIRED SERVICE PERIOD TO PROVIDE DAY AND NIGHT VISIBILITY. THE MARKINGS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER TO MAINTAIN REQUIRED VISIBILITY AND/OR REFLECTIVITY AT NO ADDITIONAL COST TO THE STATE.

**MATERIALS**

UNLESS OTHERWISE INDICATED ON THE PLANS, TEMPORARY PAVEMENT MARKINGS MAY BE OF PAINT, PAVEMENT MARKING TAPE OR REMOVABLE PAVEMENT MARKING TAPE (TYPE R TAPE).

**A. PAINT**

PAINT SHALL COMPLY WITH 708.14 AND SHALL BE APPLIED IN ACCORDANCE WITH 621 EXCEPT AS MODIFIED HEREIN.

**B. PAVEMENT MARKING TAPE**

FLEXIBLE RETROREFLECTIVE PREFORMED PRESSURE SENSITIVE TAPE SHALL HAVE STRAIGHT EDGES AND BE FREE OF CRACKS. THE TAPE SHALL CONSIST OF PIGMENT AND FILLERS WITH SUFFICIENT BINDER AND PLASTICIZER TO RETAIN GLASS BEADS HAVING A REFRACTIVE INDEX MEETING THE MINIMUM REFLECTIVE INTENSITY STANDARD STATED IN THE MANUFACTURERS INFORMATION. THE TAPE SHALL BE FLEXOLITE "WET REFLECTIVE", 3M "SCOTCHLANE", OR AN APPROVED EQUAL.

THE GLASS BEADS SHALL BE DISTRIBUTED UNIFORMLY THROUGHOUT THE TAPE WITH SUFFICIENT SURFACE BEADS TO PROVIDE OPTIMUM REFLECTORIZATION AT ALL TIMES.

PAVEMENT MARKING TAPE SHALL COMPLY WITH THE COLOR REQUIREMENTS OF 708.14.

THE TAPE SHALL HAVE A PRECOATED ADHESIVE LAYER FOR PAVEMENT APPLICATION WITHOUT THE USE OF HEAT, SOLVENTS OR ADDITIONAL ADHESIVES. THE ADHESIVE SHALL BE SUFFICIENT TO RETAIN COMPLETE MARKINGS ON THE PAVEMENT SURFACE THROUGHOUT THE USEFUL LIFE OF THE MARKINGS.

IN ADDITION TO THE FOREGOING, ALL TEMPORARY APPLICATION REQUIREMENTS AND OTHER APPLICABLE MANUFACTURERS MATERIAL AND APPLICATION INSTRUCTIONS SHALL BE FOLLOWED.

WHEN APPROVED BY THE ENGINEER THE CONTRACTOR MAY USE REMOVABLE PAVEMENT MARKING TAPE (TYPE R TAPE) IN LIEU OF THAT DESCRIBED ABOVE, TO FACILITATE REMOVAL OF MARKINGS.

**C. REMOVABLE PAVEMENT MARKING TAPE (TYPE R TAPE)**

THE MARKING MATERIAL SHALL BE A MIXTURE OF POLYMERIC MATERIALS, PIGMENTS, REINFORCING MEDIUM TO FACILITATE REMOVAL, GLASS BEADS THROUGHOUT THE PIGMENTED PORTION, AND A RETROREFLECTIVE LAYER OF GLASS BEADS BONDED TO THE TOP SURFACE.

THE TAPE SHALL BE PRECOATED WITH A PRESSURE SENSITIVE ADHESIVE CAPABLE OF TEMPORARILY BONDING TO ASPHALT CONCRETE OR PORTLAND CEMENT CONCRETE PAVEMENT AT AN AMBIENT TEMPERATURE OF NOT LESS THAN 50° F AND RISING, AT A PAVEMENT TEMPERATURE OF NOT LESS THAN 50° F NOR MORE THAN 150° F, WITHOUT THE USE OF HEAT, SOLVENTS, AND ADDITIONAL ADHESIVES OR ACTIVATORS.

MATERIALS SHALL CONFORM TO THE COLOR REQUIREMENTS OF 708.14.

THE TAPE SHALL BE REMOVABLE FROM ASPHALT AND PORTLAND CEMENT CONCRETE INTACT OR IN LARGE PIECES AT TEMPERATURES ABOVE 40° F WITHOUT USE OF HEAT, SOLVENTS, GRINDING, OR SANDBLASTING. REMOVAL SHALL NOT RESULT IN DAMAGE TO OR OBJECTIONABLE STAINING OF THE PAVEMENT.

GLASS BEADS SHALL BE PROVIDED IN A PROPER SIZE, QUANTITY AND DISTRIBUTION TO ASSURE OPTIMUM RETROREFLECTIVITY AS THE FILM WEARS. THE FOLLOWING INITIAL AVERAGE REFLECTANCE VALUES AT 86.0 ENTRANCE ANGLE AS MEASURED IN ACCORDANCE WITH THE TESTING PROCEDURES OF FEDERAL TEST METHOD 370 SHALL BE CERTIFIED

	WHITE		YELLOW	
OBSERVATION ANGLE	0.2	0.5	0.2	0.5
SPECIFIC LUMINANCE (MCD/FT <sup>2</sup> )/FC	1770	1270	1320	910

THE TAPE SHALL BE 3-M COMPANY'S "STAMARK, DETOUR GRADE (SERIES 5710, 5711, 6270, 6211)" OR AN APPROVED EQUAL.

THE CONTRACTOR SHALL FURNISH TO THE ENGINEER CERTIFICATION THAT THE MATERIAL SUPPLIED MEETS THE PROPERTIES SPECIFIED HEREIN.

**LAYOUT**

THE TEMPORARY MARKINGS SHALL BE ACCURATELY LAID OUT IN CONFORMANCE WITH 621.051 AND SHALL BE LOCATED IN A TRUE LINE ON THE CENTER LINE, LANE LINE, EDGE LINE, OR CHANNELIZING LINE WHERE PERMANENT MARKINGS WOULD LIE UNLESS OTHERWISE SPECIFIED IN THE PLANS.

**PLACEMENT**

TEMPORARY MARKINGS SHALL BE PLACED IN ACCORDANCE WITH LAYOUTS ON SHEETS AND THE FOLLOWING REQUIREMENTS, UNLESS OTHERWISE SPECIFIED IN THE PLANS.

TEMPORARY MARKINGS SHALL BE COMPLETE AND IN PLACE ON ALL PAVEMENT PRIOR TO EXPOSING IT TO TRAFFIC. WHEN TEMPORARY MARKINGS ARE NO LONGER NEEDED, THEY SHALL BE REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH 621.134 AND NECESSARY PAVEMENT MARKINGS INSTALLED BEFORE THE FLOW OF TRAFFIC IS CHANGED TO THE NEXT PHASE OR RETURNED TO ITS NORMAL CHANNEL.

WHERE PERMANENT PAVEMENT MARKINGS ARE CALLED FOR IN THE PLANS, THE CONTRACTOR SHALL FURNISH AND PLACE THE PERMANENT MARKINGS WITHIN 30 CALENDAR DAYS FOLLOWING COMPLETION OF ALL SURFACE COURSES IN A SINGLE ROADWAY OR PRIOR TO THE END OF THE CONSTRUCTION SEASON, WHICHEVER COMES FIRST. PERMANENT MARKINGS SHALL NOT BE PLACED OVER ANY TAPE MARKINGS.

**A. CLASS I MARKINGS**

CLASS I MARKINGS SHALL BE AS DEFINED IN 621, EXCEPT AS FOLLOWS:

- 1) LANE LINES SHALL BE 4-INCHES IN WIDTH.
- 2) TRANSVERSE LINES SHALL BE 8-INCHES IN WIDTH.
- 3) STOP LINES SHALL BE 12-INCHES IN WIDTH.
- 4) CROSSWALK LINES SHALL BE 8-INCHES IN WIDTH.

GORE MARKINGS SHALL CONSIST OF TWO CHANNELIZING LINES PLACED AT THE THEORETICAL OR TEMPORARY GORE OF RAMPS AND DIVERGING OR CONVERGING ROADWAYS.

THE PAINT APPLICATION RATE SHALL BE NOT LESS THAN 16 GALLONS PER MILE FOR SOLID 4-INCH LINES, 24 GALLONS PER MILE FOR SOLID 6-INCH LINES, 48 GALLONS PER MILE FOR SOLID 12-INCH LINES, AND 4 GALLONS PER MILE FOR 4-INCH DASHED LINES.

**B. CLASS II MARKINGS**

CENTER LINES SHALL CONSIST OF SINGLE, YELLOW 12-INCH BY 4-INCH DASHES SPACED AT A MAXIMUM OF 40-FOOT INTERVALS.

LANE LINES SHALL CONSIST OF WHITE 12-INCH BY 4-INCH DASHES SPACED AT A MAXIMUM OF 40-FOOT INTERVALS.

CHANNELIZING LINES SHALL CONSIST OF WHITE 12-INCH BY 4-INCH DASHES SPACED AT A MAXIMUM OF 20-FOOT INTERVALS.

GORE MARKINGS SHALL BE TWO CONTINUOUS, WHITE 50-FOOT BY 4-INCH LINES PLACED AT THE THEORETICAL GORE OF AN EXIT RAMP OR DIVERGING ROADWAYS.

THE PAINT APPLICATION RATE SHALL BE NOT LESS THAN 16 GALLONS PER MILE FOR GORE MARKINGS, 0.8 GALLONS PER MILE FOR CHANNELIZING LINE, AND 0.4 GALLONS PER MILE FOR LANE LINE AND CENTER LINE.

**CONFLICTING MARKINGS**

THE CONTRACTOR SHALL, PRIOR TO PLACING TEMPORARY MARKINGS, REMOVE ALL EXISTING CONFLICTING MARKINGS VISIBLE TO THE TRAVELING PUBLIC DURING DAYLIGHT OR NIGHTTIME HOURS IN ACCORDANCE WITH 621.134. THE COST FOR REMOVAL OF CONFLICTING MARKINGS SHALL BE INCIDENTAL TO THE VARIOUS PAY ITEMS.

**METHOD OF MEASUREMENT**

TEMPORARY PAVEMENT MARKINGS WILL BE MEASURED COMPLETE IN PLACE, BY CLASS AND MATERIAL, IN THE UNITS DESIGNATED. DASHED LINE QUANTITIES WILL BE THE LENGTH OF THE COMPLETED STRIPE, INCLUDING GAPS, INTERSECTIONS, AND OTHER SECTIONS OF PAVEMENT NOT NORMALLY MARKED, IN ACCORDANCE WITH 621.15.

TEMPORARY PAVEMENT MARKINGS WILL INCLUDE THE LAYOUT, APPLICATION AND REMOVAL OF THE MARKINGS, WHEN REQUIRED.

**BASIS OF PAYMENT**

PAYMENT FOR ACCEPTED QUANTITIES COMPLETE IN PLACE WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL

COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR PLACEMENT, MAINTENANCE AND NECESSARY REMOVAL OF THE MARKINGS.

ITEM	UNIT	DESCRIPTION
614	MILES	TEMPORARY LANE LINES, CLASS _____ (PAINT, TAPE OR TYPE R TAPE)
614	MILES	TEMPORARY CENTER LINES, CLASS _____ (PAINT, TAPE OR TYPE R TAPE)
614	MILES/LIN. FT.	TEMPORARY CHANNELIZING LINES, CLASS _____ (PAINT, TAPE OR TYPE R TAPE)
614	MILES	TEMPORARY EDGE LINES, CLASS I, (PAINT, TAPE OR TYPE R TAPE)
614	LIN. FT.	TEMPORARY GORE MARKING, CLASS II, (PAINT, TAPE OR TYPE R TAPE)
614	LIN. FT.	TEMPORARY STOP LINES, CLASS I, (PAINT, TAPE OR TYPE R TAPE)
614	LIN. FT.	TEMPORARY CROSSWALK LINES, CLASS I, (PAINT, TAPE OR TYPE R TAPE)
614	EACH	TEMPORARY LANE ARROWS, CLASS I, (PAINT, TAPE OR TYPE R TAPE)
614	EACH	TEMPORARY WORD "ONLY" ON PAVEMENT, 72-INCH, CLASS I, (PAINT OR TAPE)
614	LIN. FT.	TEMPORARY TRANSVERSE LINES, CLASS I, (PAINT, TAPE OR TYPE R TAPE)

*Item 614 .06 Mile Temporary center lines, Class I, paint or tape*  
*Item 614 .06 Mile Temporary center lines, Class II, tape*  
*Item 614 .12 Mile Temporary edge lines, Class I, paint or tape*

PERMANENT PAVEMENT MARKING  
 The permanent pavement markings will be installed by ODOT District 11 forces.

# CALCULATIONS

## ITEM 203 SUBGRADE COMPACTION

Under Approach Slabs : 2 x 47.5 S.Y. = 95.0 S.Y.

ITEM 203 SUBGRADE COMPACTION = 95 SQ. YDS.

## ITEM 615 TEMPORARY PAVEMENT, CLASS B

Length Of Temporary Road : 274'

Deduct Temporary Structure : -84'

Length Of Temporary Pavement : 190'

Area : 190' x 20' ÷ 9 = 422.22 S.Y.

ITEM 615 TEMPORARY PAVEMENT, CLASS B = 422 SQ. YDS.

## ITEM 659 COMMERCIAL FERTILIZER

547 S.Y. x (20 Lbs./1000 S.F.) x 9 ÷ 2000 = 0.05 Ton

ITEM 659 COMMERCIAL FERTILIZER = 0.05 TON

## ITEM 659 AGRICULTURAL LIMING

547 S.Y. x (100 Lbs./1000 S.F.) x 9 ÷ 2000 = 0.25 Ton

ITEM 659 AGRICULTURAL LIMING = 0.25 TON

EARTHWORK AND SEEDING				
Station		Excavation	Embankment	Seeding
From	To	Cu. Yds.	Cu. Yds.	Sq. Yds.
29+25	32+42.45	95	384	547

Calculated By W.F.P. 11-24-82	Checked By J.T.P. 11-24-82
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FHWA REGION 5	STATE OHIO	PROJECT	5 20
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BEL-9-19.50

# GENERAL SUMMARY

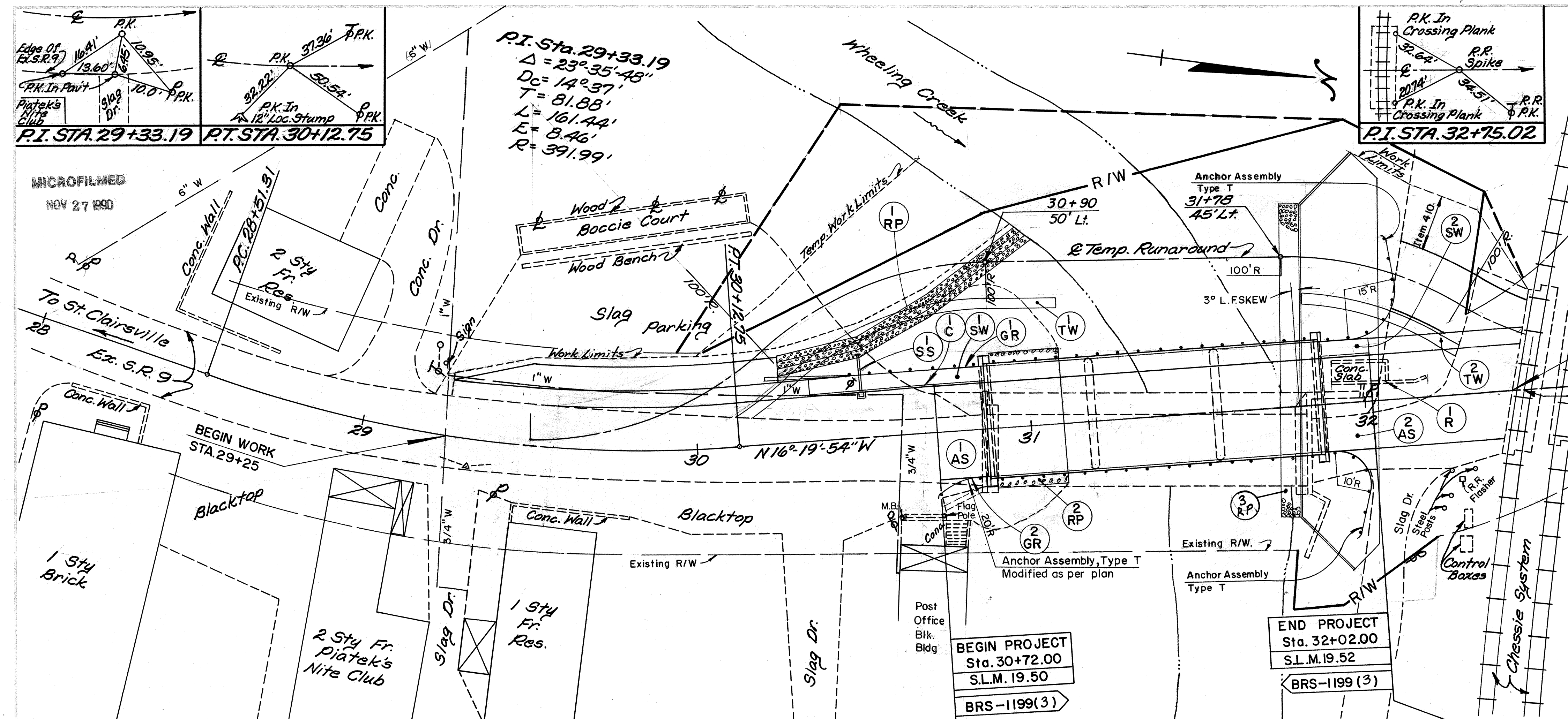
TOTALS FROM SHEET NUMBERS					ITEM	TOTAL	UNIT	DESCRIPTION
3	4	5	6	9				
					201	LUMP	LUMP	CLEARING AND GRUBBING
			LUMP		202	LUMP	LUMP	STRUCTURES REMOVED
		95			203	95	CU.YDS.	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
		384			203	384	CU.YDS.	EMBANKMENT
		95			203	95	SQ.YDS.	SUBGRADE COMPACTION
			132		601	132	CU.YDS.	ROCK CHANNEL PROTECTION, TYPE C, WITHOUT BEDDING
			0.2		602	0.2	CU.YDS.	CONCRETE MASONRY
			14		603	14	LIN.FT.	12" CONDUIT, TYPE B
			1		604	1	EACH	CATCH BASIN, STANDARD NO. 3A
			100		606	100	LIN.FT.	GUARDRAIL, TYPE 5
			1		606	1	EACH	ANCHOR ASSEMBLY, STANDARD TYPE A
			1		606	1	EACH	ANCHOR ASSEMBLY, STANDARD TYPE T, MODIFIED AS PER PLAN
			2		606	2	EACH	ANCHOR ASSEMBLY, STANDARD TYPE T
			4		606	4	EACH	BRIDGE TERMINAL ASSEMBLY, STANDARD TYPE B
			302		608	302	SQ.FT.	4" CONCRETE WALK
			450		608	450	SQ.FT.	TEMPORARY WALK
			37		609	37	LIN.FT.	CURB, STANDARD TYPE 6
		422			615	422	SQ.YDS.	TEMPORARY PAVEMENT, CLASS B
LUMP					615	LUMP	LUMP	TEMPORARY ROADS
		547			659	547	SQ.YDS.	SEEDING AND MULCHING
1					659	1	M.GALS.	WATER
		0.05			659	0.05	TON	COMMERCIAL FERTILIZER
		0.25			659	0.25	TON	AGRICULTURAL LIMING
				42	301	42	CU.YDS.	BITUMINOUS AGGREGATE BASE: AC-20, RT-11 or RT-12
				10	402	10	CU.YDS.	ASPHALT CONCRETE, AC-20
				30	404	30	CU.YDS.	ASPHALT CONCRETE, AC-20
				51	407	51	GAL.	TACK COAT
				2	407	2	TON	COVER AGGREGATE
20					410	20	CU.YDS.	TRAFFIC COMPACTED SURFACE, TYPE A OR B
				95	611	95	SQ.YDS.	REINFORCED CONCRETE APPROACH SLABS (T=12")
	0.06				614	0.06	MILE	TEMPORARY CENTERLINE, CLASS I, PAINT OR TAPE
	0.06				614	0.06	MILE	TEMPORARY CENTERLINE, CLASS II, TAPE
	0.12				614	0.12	MILE	TEMPORARY EDGE LINES, CLASS I, PAINT OR TAPE
LUMP					614	LUMP	LUMP	MAINTAINING TRAFFIC
					623	LUMP	LUMP	CONSTRUCTION LAYOUT STAKES
LUMP					624	LUMP	LUMP	MOBILIZATION, AS PER PLAN
BRIDGE NO. BEL-9-1950 OVER WHEELING CREEK FOR QUANTITIES, SEE SHEET NO. 11								

BEL-9-19.50

Calculated By	Checked By
W.F.P.	J.T.P.
11-24-82	11-24-82

**EXISTING STRUCTURE**  
 TYPE: Pony Truss  
 LENGTH: 92'-6"  
 ROADWAY: 19'-2"  
 ALIGNMENT: Tangent  
 SKEW: 0°

**PROPOSED STRUCTURE**  
 TYPE: Continuous Reinforced Concrete Slab  
 Bridge With Capped Piles Structure  
 SPANS: 30'-0" ~ 37'-6" ~ 30'-0"  
 ROADWAY: 28'-0" Face Curb-Face Guard  
 Rail (5'-0" Sidewalk Left)  
 LOADING: HS-20-44 Interstate Loading  
 WEARING SURFACE: 1" Monolithic Conc.  
 SKEW: 0°  
 SUPERELEVATION: None  
 APPROACH SLAB: 15'-0" (AS-1-81)  
 ALIGNMENT: Tangent



**CALCULATIONS**

1-RP	87' x 6' x 1.5'	÷ 27 = 29	C.Y.
1-AS	28.5' x 15' ÷ 9	= 47.5	S.Y.
2-AS	28.5' x 15' ÷ 9	= 47.5	S.Y.
1-SW	52' x 4.5'	= 234	S.F.
2-SW	15' x 4.5'	= 68	S.F.
1-TW	3' x (100' Est. Length)	= 300	S.F.
2-TW	3' x (50' Est. Length)	= 150	S.F.
2-RP	27' x 40.33' x 1.5' ÷ 27	= 61	C.Y.
3-RP	93.48' x 6' x 2' ÷ 27	= 42	C.Y.

BEGIN PROJECT  
 Sta. 30+72.00  
 S.L.M. 19.50  
 BRS-1199(3)

END PROJECT  
 Sta. 32+02.00  
 S.L.M. 19.52  
 BRS-1199(3)

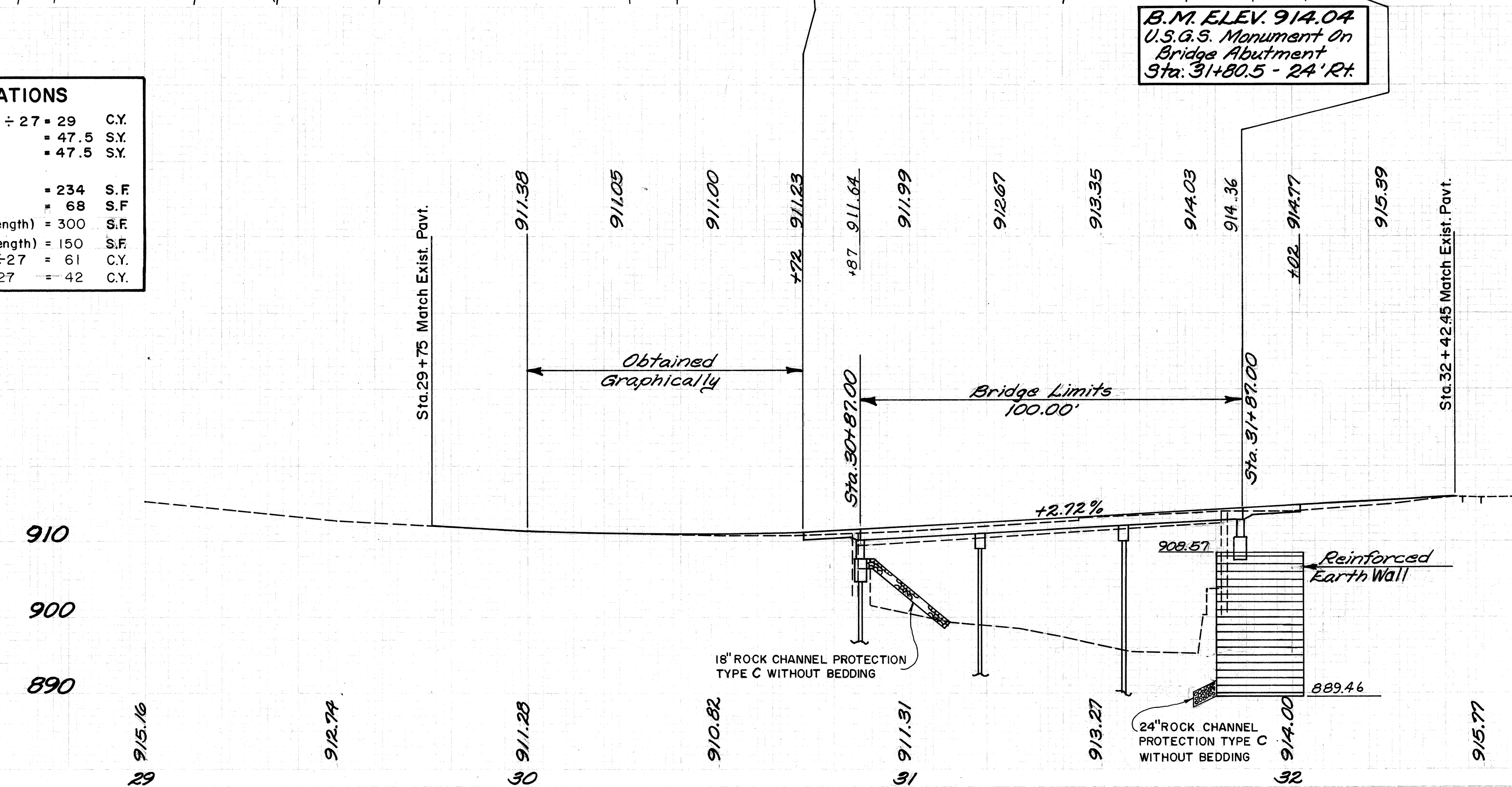
B.M. ELEV. 914.04  
 U.S.G.S. Monument On  
 Bridge Abutment  
 Sta. 31+80.5 - 24' Rt.

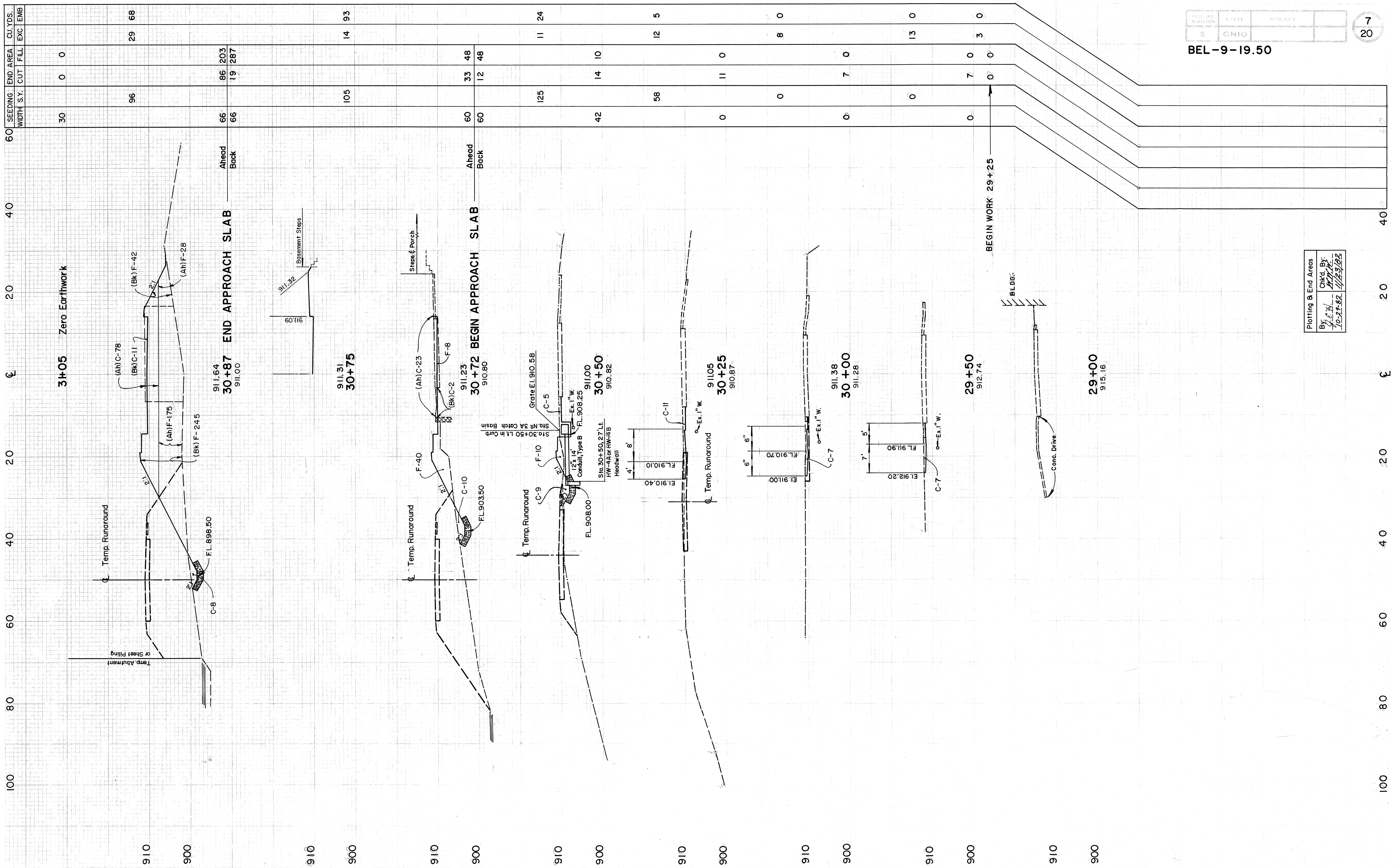
**QUANTITIES**

SEE SHT NO	REF NO	STATION		SIDE	ITEMS														
		FROM	TO		STRUCTURES REMOVED	GUARD RAIL TYPE 5	BRIDGE TERMINAL ASSEMBLY STD. TYPE B	ANCHOR ASSEMBLY			ROCK CHAIN PROT. TYPE C WITHOUT BEDDING	4" CONC. WALK	TEMPORARY WALK	CURB STD. TYPE 6	REINFORCED CONC APPROACH SLAB (T=12')	CONC. MASONRY	12" CONDUIT TYPE B	CATCH BASIN STD. NO. 3A	
1-R		31+90	32+20	Lt.	LUMP														
1-GR		30+21.38	32+11±	Lt.		75*	2	1	1										
2-GR		30+72±	32+00±	Rt.		25*	2		1	1									
1-RP		30+25	31+00	Lt.															
2-RP		30+89	31+10	C															
3-RP		31+74	31+80	Rt.															
1-SW		30+35	30+87	Lt.															
2-SW		31+87	32+02	Lt.															
1-TW		30+15	31+10	Lt.															
2-TW		31+82	32+28	Lt.															
1-C		30+35	30+72	Lt.															
7	1-SS	30+50																	
1-AS		30+72	30+87	C															
2-AS		31+87	32+02	C															
TOTALS					LUMP	100	4	1	2	1	132	302	450	37		95.0	0.21	14	1

\* Bridge Railing = 100.0'

NOTE: For Pavement Details and Quantities See Sh. No 9

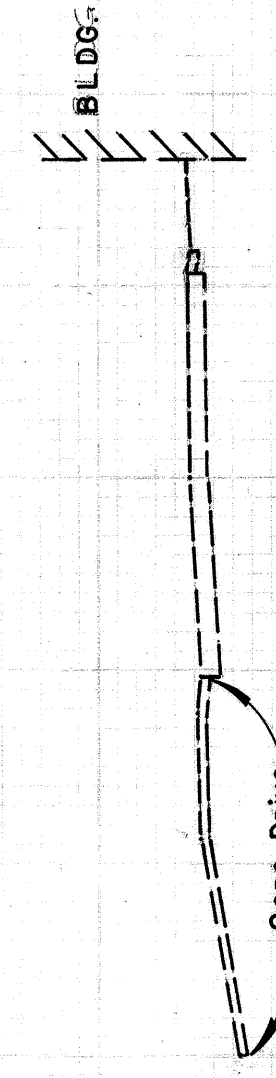




60	SEEDING WIDTH	S.Y.	END AREA		CU. YDS.
			CUT	FILL	
30	0	0	0	0	
96	29	68			
66	86	203			
66	19	287			
105	14	93			
60	33	48			
60	12	48			
125	11	24			
42	14	10			
58	12	5			
0	11	0			
0	8	0			
0	7	0			
0	13	0			
0	7	0			
0	0	0			

Plotting & End Areas  
 Chkd. By: *[Signature]*  
 10-21-82 11/23/82

BEGIN WORK 29+25



3+05 Zero Earthwork

30+87 END APPROACH SLAB

30+72 BEGIN APPROACH SLAB

29+50

29+00

SEEDING  
WIDTH S.Y.

END AREA  
CUT FILL

C.U.YDS.  
EXC EMB

60

40

20

0

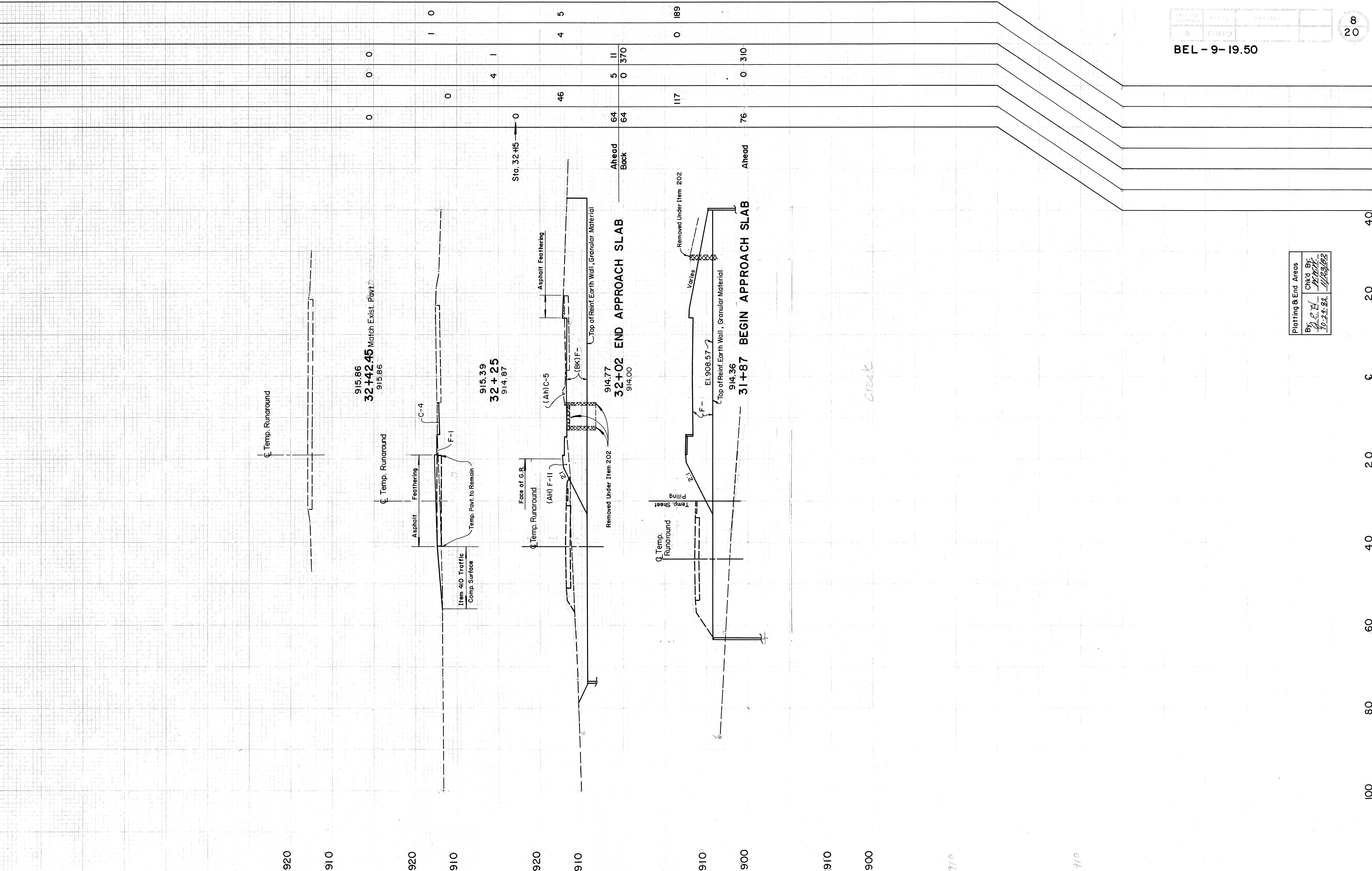
20

40

60

80

100

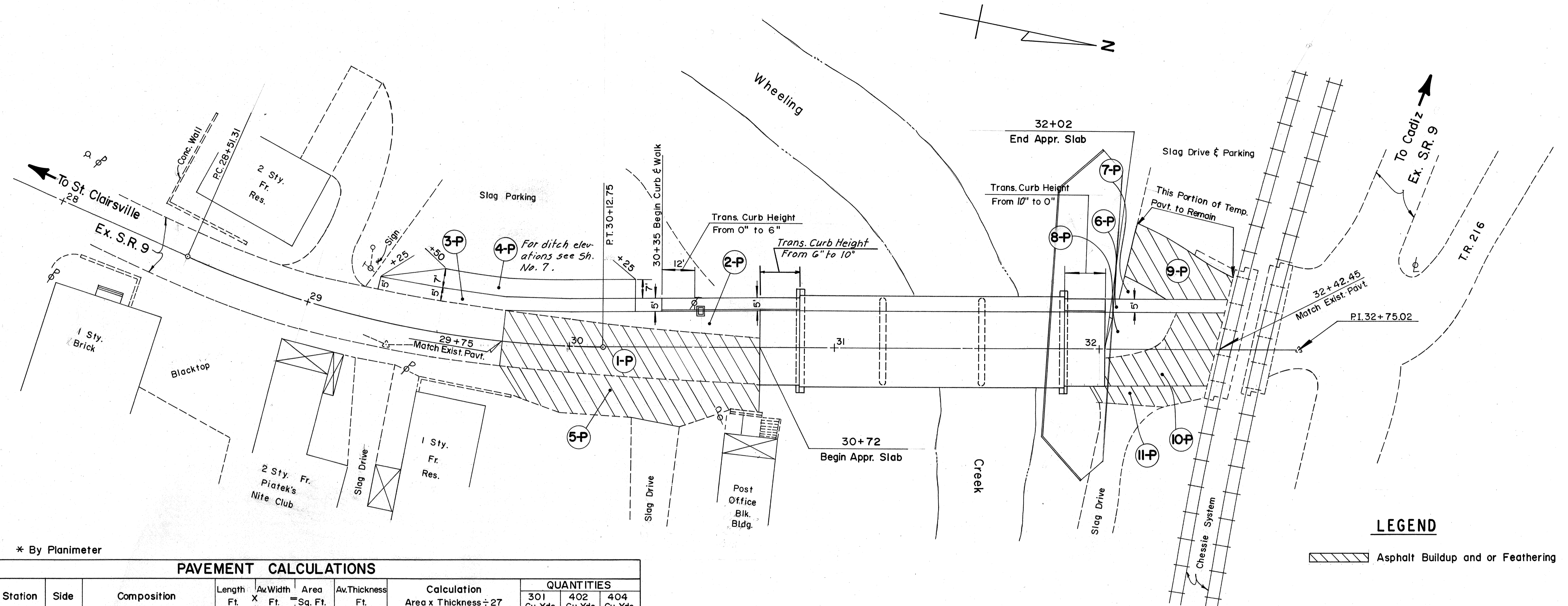


Plotting & End Areas  
By: *J.E. H.*  
Chkd By: *H.H.H.*  
10-23-82

*Creek*



BEL-9-19.50



\* By Planimeter

**PAVEMENT CALCULATIONS**

Ref. No.	Station to Station	Side	Composition	Length Ft.	Av. Width Ft.	Area Sq. Ft.	Av. Thickness Ft.	Calculation Area x Thickness ÷ 27	QUANTITIES		
									301 Cu. Yds.	402 Cu. Yds.	404 Cu. Yds.
1-P	29+75 to 30+72	Lt. & Rt.	404 Feathering & Resurfacing	97	18.5	1794.5	0.12	1794.5 x 0.12 ÷ 27 =			8.0
			1 1/4" 404	97	6	582.0	0.1042	582.0 x 0.1042 ÷ 27 =			2.2
2-P	29+75 to 30+72	Lt.	1 3/4" 402				0.1458	582.0 x 0.1458 ÷ 27 =		3.1	
			6" 301				0.50	582.0 x 0.50 ÷ 27 =	10.8		
3-P	29+25 to 30+35	Lt.	1" 404	107	5	535.0	0.0833	535.0 x 0.0833 ÷ 27 =			1.7
			5" 301			535.0	0.4167	535.0 x 0.4167 ÷ 27 =	8.3		
4-P	29+25 to 30+25	Lt.	1" 404	24+72=84	7	588.0	0.0833	588.0 x 0.0833 ÷ 27 =			1.8
			5" 301			588.0	0.4167	588.0 x 0.4167 ÷ 27 =	9.1		
5-P	29+75 to 30+72	Rt.	404 Feathering	97	10	970.0	0.042	970.0 x 0.042 ÷ 27 =			1.9
			1" 404	46	5	230.0	0.0833	230.0 x 0.0833 ÷ 27 =			0.7
6-P	32+02 to 32+48	Lt.	5" 301			230.0	0.4167	230.0 x 0.4167 ÷ 27 =	3.5		
7-P	32+07 to 32+25	Lt.	1" 404	18	7 ÷ 2 = 3.5	63.0	0.0833	63.0 x 0.0833 ÷ 27 =			0.2
			5" 301			63.0	0.4167	63.0 x 0.4167 ÷ 27 =	1.0		
8-P	32+02 to 32+29	Lt. & Rt.	1 1/4" 404			372.0	0.1042	372.0 x 0.1042 ÷ 27 =			1.4
			1 3/4" 402			372.0	0.1458	372.0 x 0.1458 ÷ 27 =		2.0	
			6" 301			372.0	0.50	372.0 x 0.50 ÷ 27 =	6.9		
9-P	32+07 to 32+50	Lt.	404 Buildup & Feathering			692.0	0.25	692.0 x 0.25 ÷ 27 =			6.4
			404			800.0	0.1042	800.0 x 0.1042 ÷ 27 =			3.1
10-P	32+02 to 32+42.45	Lt. & Rt.	402			800.0	0.1458	800.0 x 0.1458 ÷ 27 =		4.3	
			301	23	12	276.0	0.50 ÷ 2 = 0.25	276.0 x 0.25 ÷ 27 =	2.6		
11-P	31+90 to 32+40	Rt.	404 Buildup & Feathering			288.0	0.25	288.0 x 0.25 ÷ 27 =			2.7
TOTALS									42.2	9.4	30.1

**LEGEND**

Asphalt Buildup and or Feathering

**FINISHED PAVEMENT ELEVATIONS**

LEFT EDGE		CENTERLINE		RIGHT EDGE	
ELEVATION	OFFSET	STATION	ELEVATION	OFFSET	ELEVATION
Match Exist. Pavement		29+75	Match Exist. Pavement		
911.05	12.82'	30+00	911.38	9.50'	911.38
910.87	13.00'	PT. +12.75	911.17	10.25'	911.14
910.80	13.23'	+25	911.05	11.00'	911.00
910.75	13.64'	+50	911.00	12.50'	910.91
Approach Slab		+72	911.23	14.00'	911.01
Approach Slab		30+87	911.64	14.00'	911.42
BRIDGE					
Approach Slab		31+87	914.36	14.00'	914.14
Approach Slab		32+02	914.77	14.00'	914.55
Approach Slab		+25	915.39	14.00'	915.17
Match Exist. Pavt.		32+42.45	Match Exist. Pavt.		

Area for Item 407 = (1-P) + (5-P) + (9-P) + (10-P) + (11-P)  
= (1794.5 + 970 + 692 + 800 + 288) S.F. ÷ 9 = 4544.5 S.F. ÷ 9 = 504.9 S.Y.  
Item 407 Tack Coat = 504.9 S.Y. x 0.10 Gal./S.Y. = 50.5 Gals.  
Item 407 Cover Aggregate = 504.9 S.Y. x 7 Lbs./S.Y. ÷ 2000 = 1.8 Tons



GENERAL NOTES

**DESIGN DATA:**  
 DESIGN LOADING - HS20-44 AND THE ALTERNATE MILITARY LOADING.  
 CONCRETE CLASS S - COMPRESSIVE STRESS  $f_c$  - 4500 P.S.I. USED FOR DESIGN OF SUPERSTRUCTURE AS NOTED ON CS-2-73.  
 CONCRETE CLASS C - COMPRESSIVE STRESS 4000 P.S.I. FOR SUBSTRUCTURE.  
 REINFORCING STEEL - ASTM A615, A616 or A617 UNIT STRESS 20,000 P.S.I.  
 DECK PROTECTION METHOD: EPOXY COATED REINFORCING STEEL TOP MAT.

**DESIGN SPECIFICATIONS:** THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1977 WITH INTERIMS TO 1982, INCLUDING THE OHIO "SUPPLEMENT" TO THESE SPECIFICATIONS.

**REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:**  
 DBR-2-73 DATED 4-10-73  
 CPA-2-73 DATED 4-10-73  
 CPP-2-73 DATED 4-10-73  
 CS-2-73 DATED 4-10-73 SHEETS 1 AND 2  
 AND TO SUPPLEMENTAL SPECIFICATION 836 DATED 3-12-75.  
 824 DATED 10-8-82.

**MONOLITHIC WEARING SURFACE THICKNESS IS ASSUMED, FOR DESIGN PURPOSE, TO BE 1".**

**MAINTAINING TRAFFIC:** TRAFFIC SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.

**PILES SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 32 TONS PER PILE FOR THE ABUTMENTS AND 56 TONS PER PILE FOR THE PIERS.**

**POROUS BACKFILL 1'-6" THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE AND LATERALLY TO THE SURFACE OF THE EMBANKMENT SLOPES.**

**NO EXCAVATION** WILL BE PERMITTED CLOSER THAN 10' FROM THE RAILROAD TRACKS.

STEEL SHEETING MAY BE REQUIRED TO MEET THE ABOVE REQUIREMENT, OR IF THE EXCAVATION DOES NOT REMAIN STABLE WHEN CUT ON A SLOPE OF 1.5:1. PAYMENT WILL BE MADE FOR THIS ITEM UNDER ITEM 503 - LUMP SUM - COFFERDAMS, CRIBS AND SHEETING.

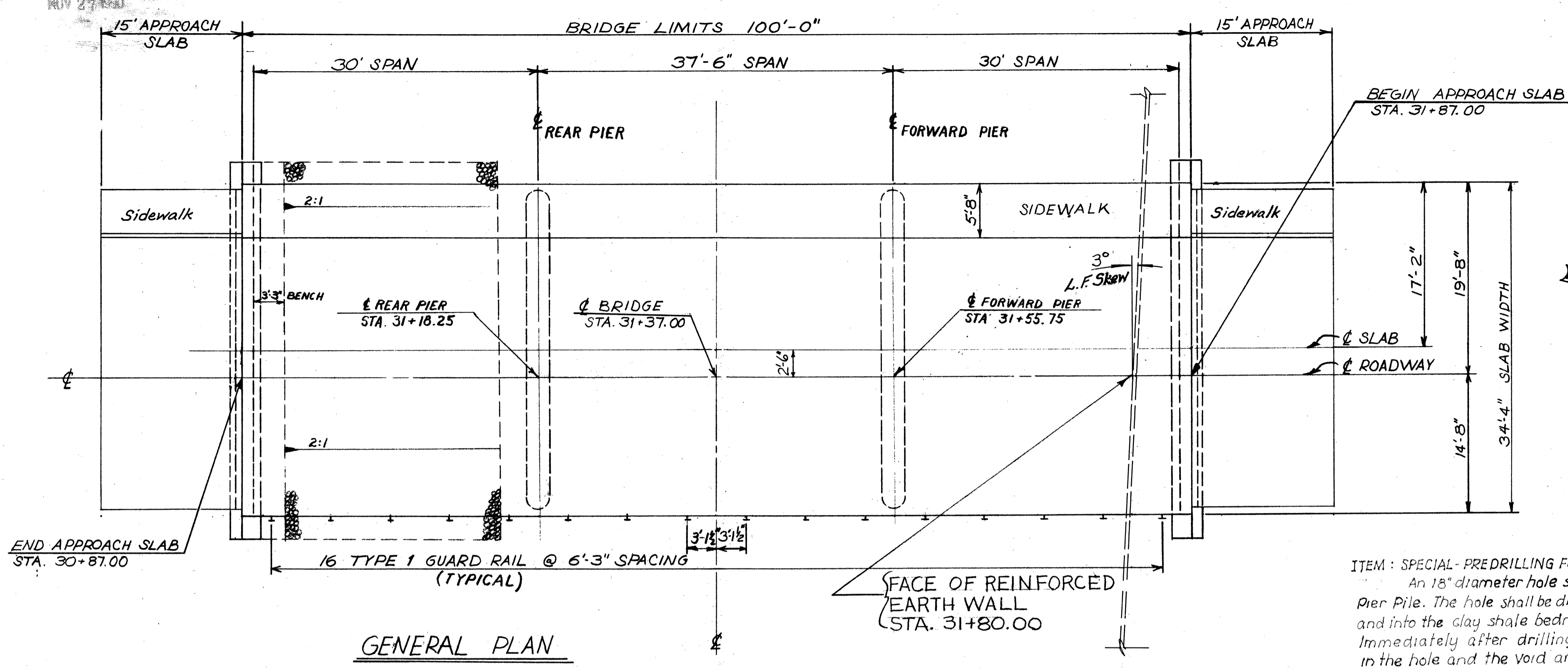
**REINFORCING STEEL SAMPLES -** REFER TO CWS SECTIONS 106.03, 700, 709.01 THROUGH 709.05 AND 709.08 - SUFFICIENT ADDITIONAL REINFORCING STEEL SHALL BE PROVIDED FOR SAMPLING. RANDOM SAMPLES SHALL BE REPLACED IN THE STRUCTURES BY THE ADDITIONAL STEEL, SPLICED IN ACCORDANCE WITH 509.08.

**REMOVAL OF EXISTING STRUCTURE:** WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC, THE EXISTING STRUCTURE SHALL BE REMOVED TO ELEVATION AS DIRECTED BY OHIO DEPARTMENT OF TRANSPORTATION ENGINEER.

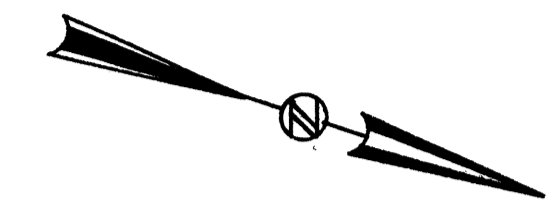
**FOUNDATION BEARING PRESSURE:** FORWARD ABUTMENT FOOTING IS DESIGNED FOR A MAXIMUM BEARING PRESSURE OF 0.50 TONS PER SQUARE FOOT.

**PILES SHALL BE DRIVEN TO BEDROCK.** THE BEARING CAPACITY SHALL BE CONSIDERED OBTAINED BY REPUSAL ON HARD BEDROCK OR BY PENETRATING SOFT BEDROCK FOR SEVERAL INCHES WITH A MINIMUM RESISTANCE OF 20 BLOWS PER INCH.  
 REAR ABUTMENT PILES MAY BE HP 10 X 42 IN LIEU OF THE HP 12 X 53 AS SHOWN.

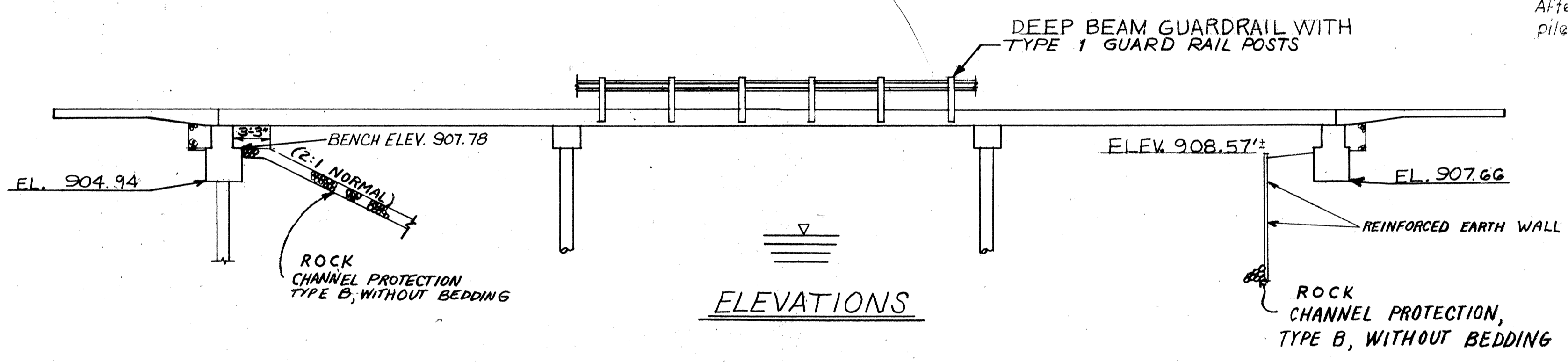
**THE TEMPORARY STRUCTURE SHALL HAVE A MINIMUM ROADWAY WIDTH OF 23' BETWEEN GUARDRAILS WITH A MINIMUM OF 3' WALK OUTSIDE THE EAST GUARDRAIL.**



**ITEM: SPECIAL - PREDRILLING FOR INSTALLATION OF PIER PILES.**  
 An 18" diameter hole shall be drilled at the location of each Pier Pile. The hole shall be drilled through the existing overburden and into the clay shale bedrock to at least elevation 883.0. Immediately after drilling each hole, the H pile shall be placed in the hole and the void area shall be filled with sand that is compacted in the hole by rodding as the sand is placed. After the installation of the piles and the sand backfill, the piles shall be driven to refusal by the pile hammer.



GENERAL PLAN



ELEVATIONS

ESTIMATED QUANTITIES							
ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUT.	PIERS	GENERAL
202	LUMP	SUM	STRUCTURE REMOVED				LUMP
503	LUMP	SUM	COFFERDAMS, CRIBS & SHEETING				LUMP
503	2203	CU.YD.	UNCLASSIFIED EXCAVATION		40		2163
505	LUMP	SUM	TEST PILE				LUMP
507	405	LIN.FT.	STEEL PILES, HP 12x53		120	285	
509	33,953	LBS.	REINFORCING STEEL GRADE 60	27,289	4,975	1,689	
511	200	CU.YD.	CLASS S CONCRETE, SUPERSTRUCTURE	208			
511	14	CU.YD.	CLASS C CONCRETE, PIERS			14	
511	46	CU.YD.	CLASS C CONCRETE, ABUTMENT		46		
517	100	LIN.FT.	RAILING, DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP AND STEEL POSTS AND BOLTS	100			
518	10	CU.YD.	POROUS BACKFILL		10		
203	2108	CU.YD.	SELECT GRANULAR EMBANKMENT USING 304 MATERIAL, EXCLUDING SLAG				2108
SPECIAL	170	LIN.FT.	PREDRILLING FOR INSTALLATION OF PIER PILES,			170	
517	100	LIN.FT.	RAILING, DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP AND HANDRAIL, STEEL POSTS AND BOLTS	100			
514	17,284	LBS.	EPOXY COATED, REINFORCED STEEL, GRADE 60	15,947		1,337	
SPECIAL	2,333	SQ.FT.	REINFORCED EARTH WALL (SEE PROPOSAL NOTE)				2,333
502	LUMP	SUM	TEMPORARY STRUCTURE				LUMP

**THOMAS FOK & ASSOCIATES, LIMITED**  
 CONSULTING ENGINEER, SURVEYOR, & PLANNER  
 3896 MAHONING AVE. YOUNGSTOWN, OHIO

GENERAL PLAN & ELEVATION  
 BR. N° BEL-9-19.50  
 OVER  
 WHEELING CREEK  
 BELMONT COUNTY SR.9

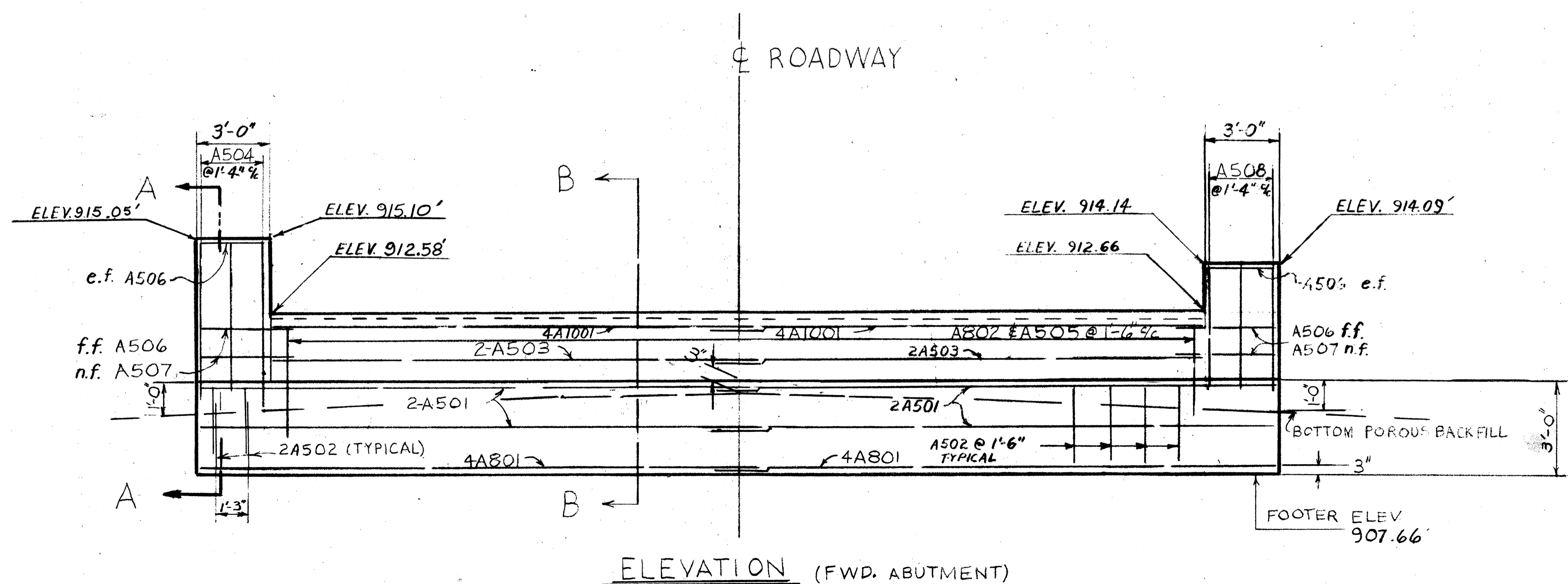
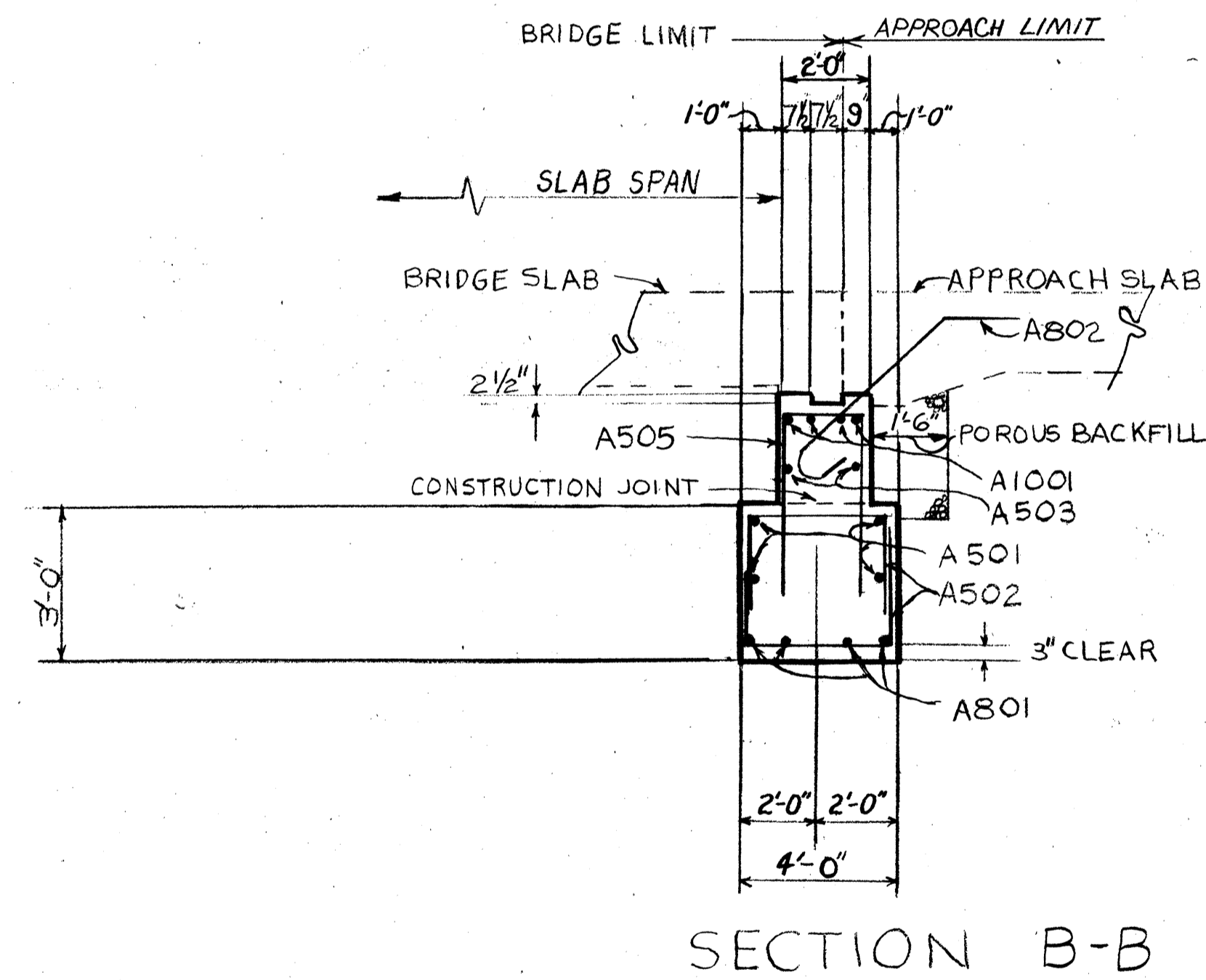
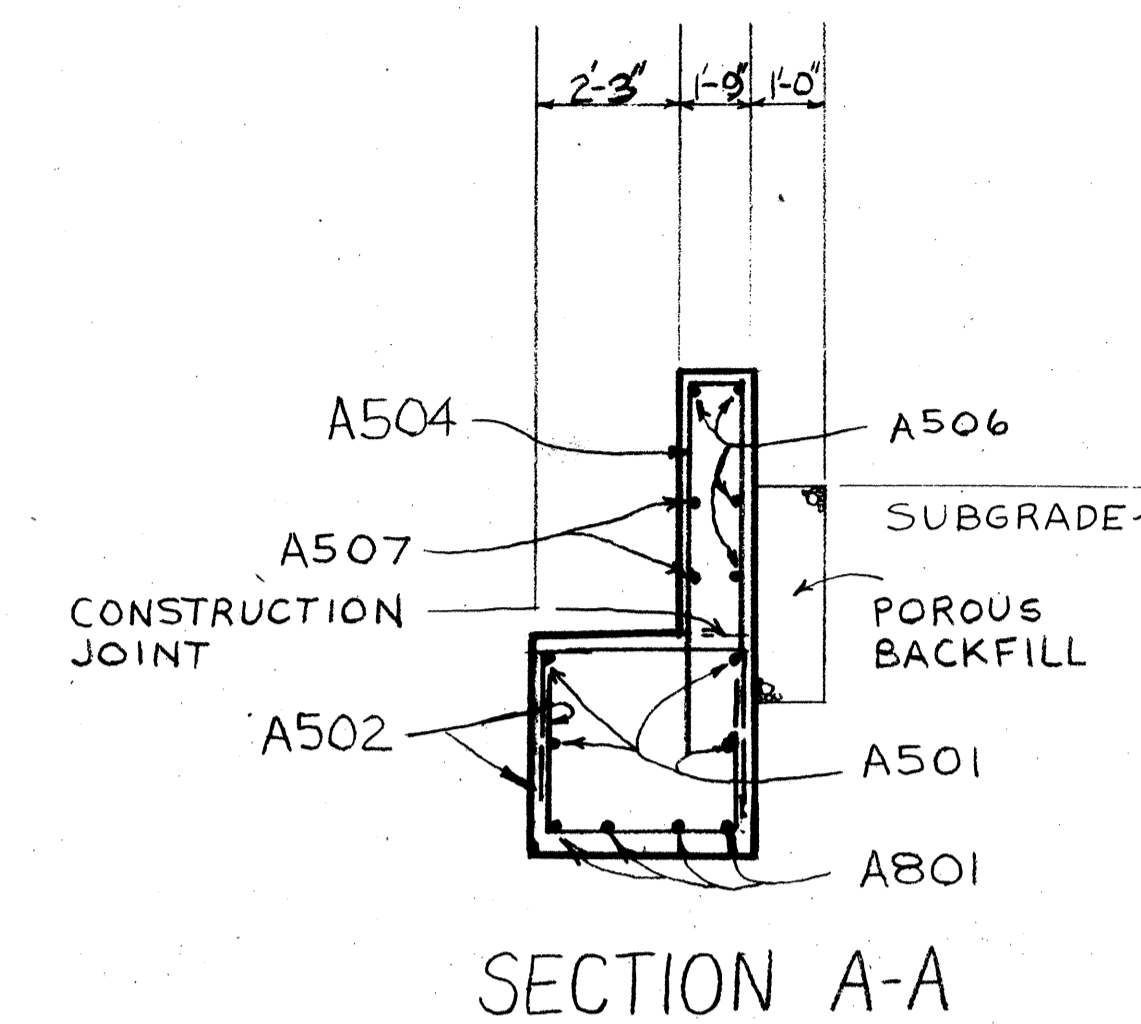
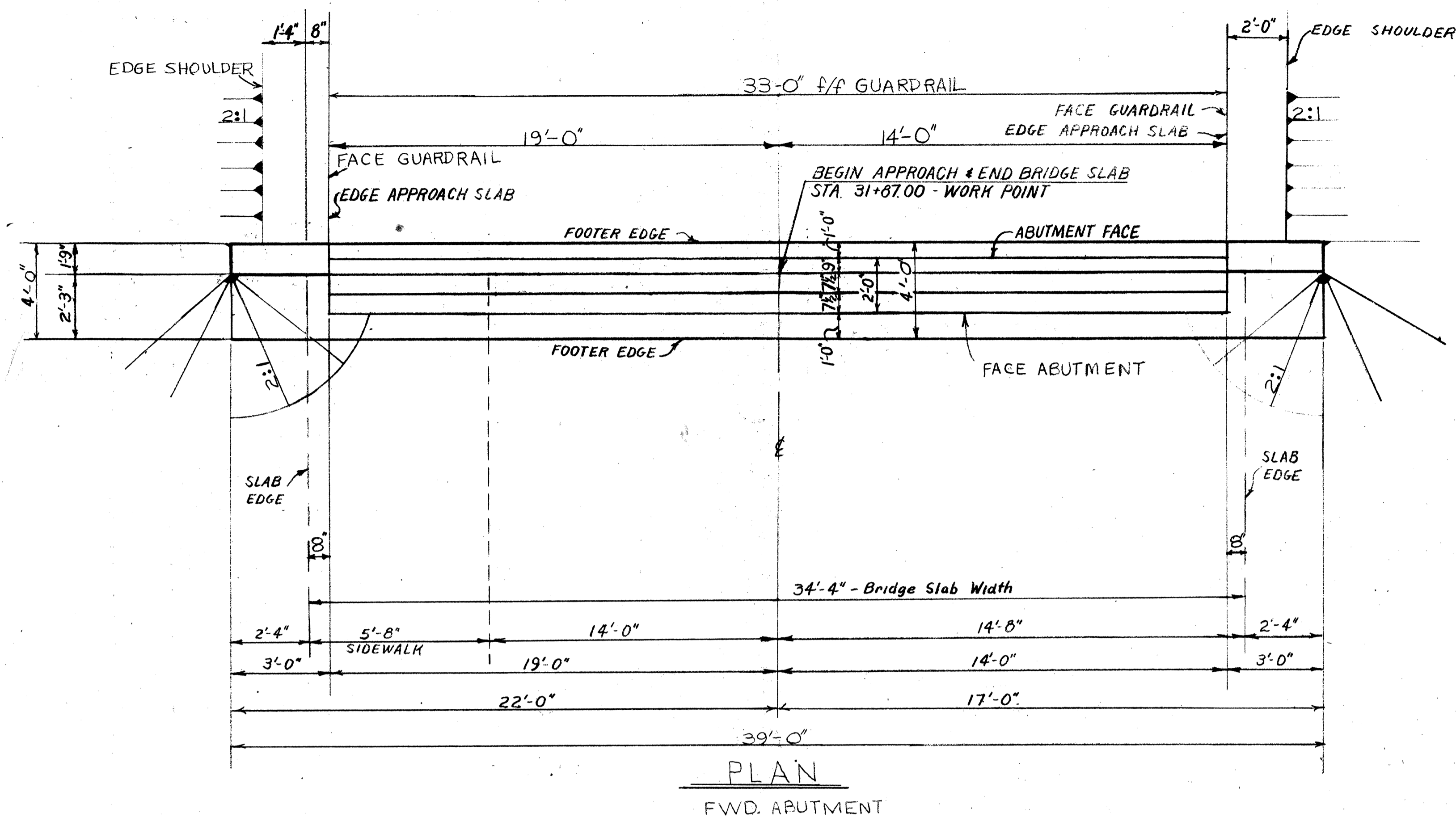
SURVEYED	DESIGNED	DRAWN	CHECKED	REVIEWED	REVISED
	VNS	VNS	LE	T.F.	



ROADWAY

BEL-9-19.50

13  
20



e.f. = EACH FACE  
f.f. = FAR FACE  
n.f. = NEAR FACE

SEE STD. DWG., CPA-2-73 FOR ADDITIONAL DETAILS

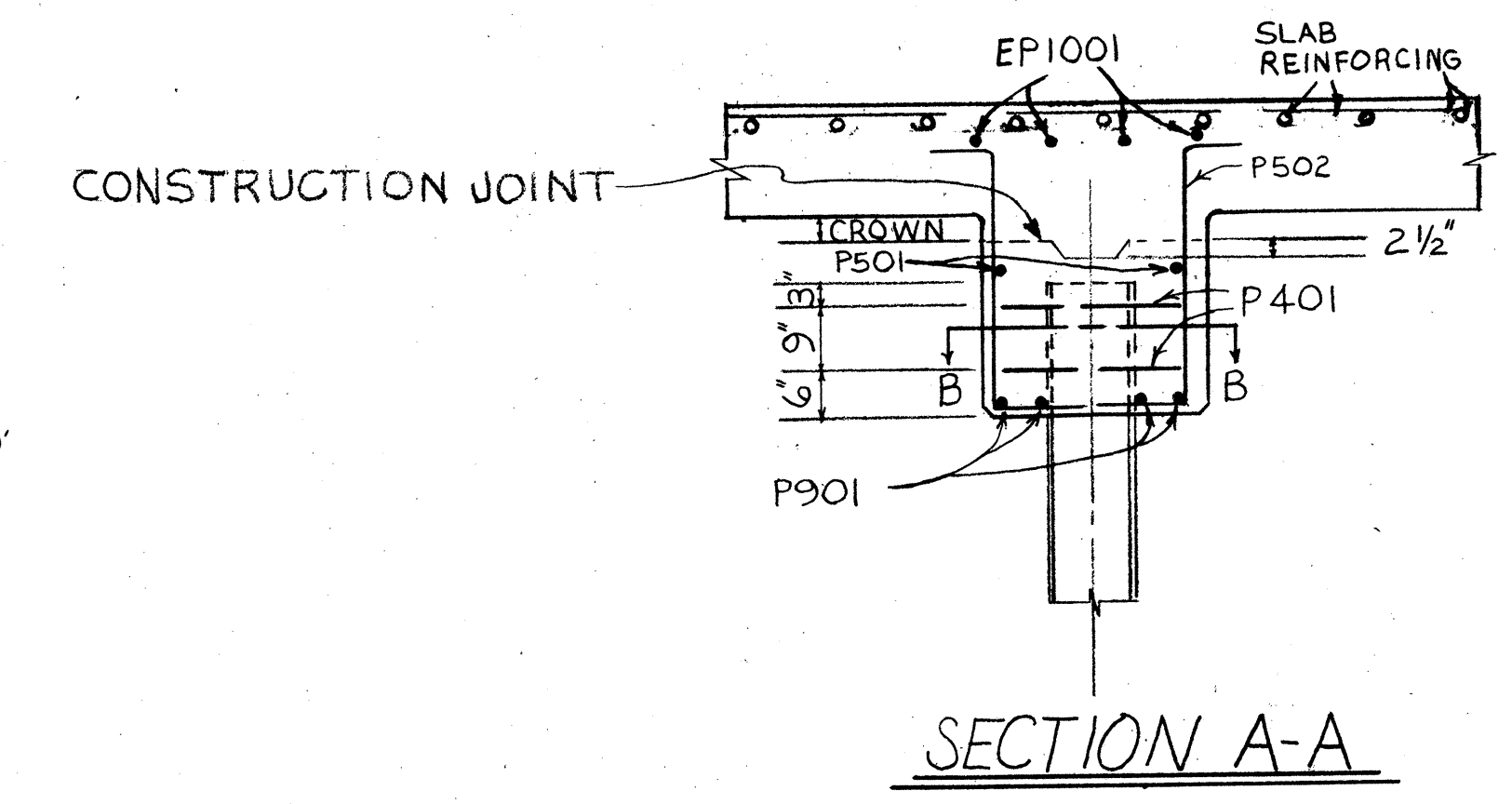
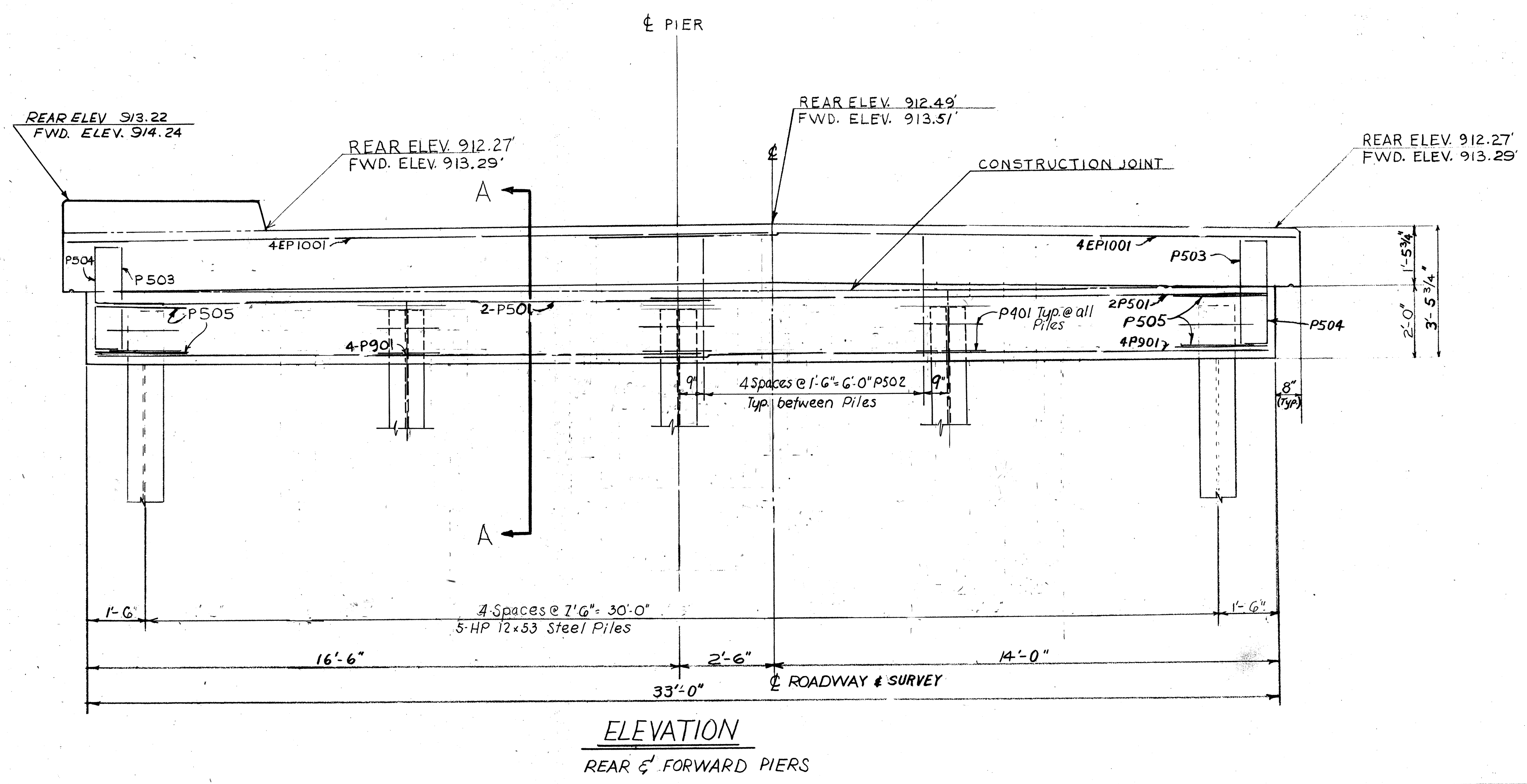
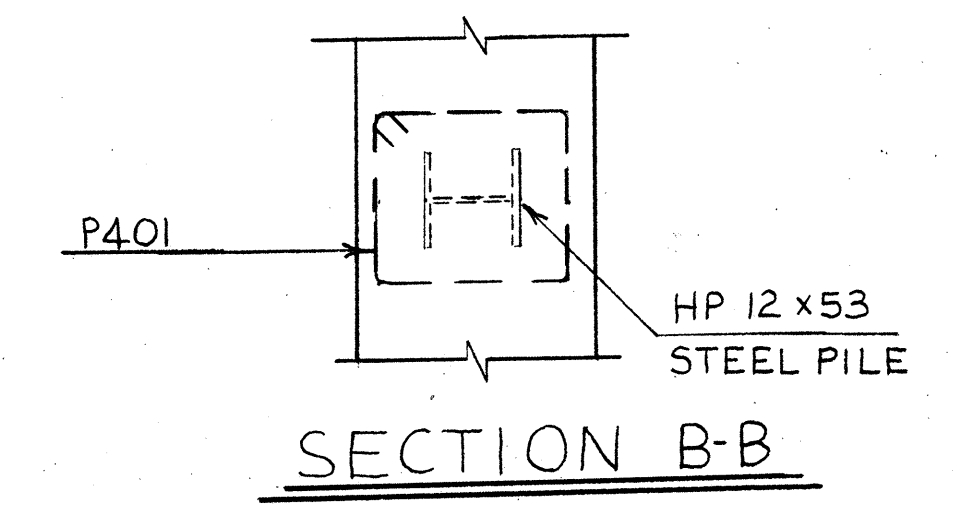
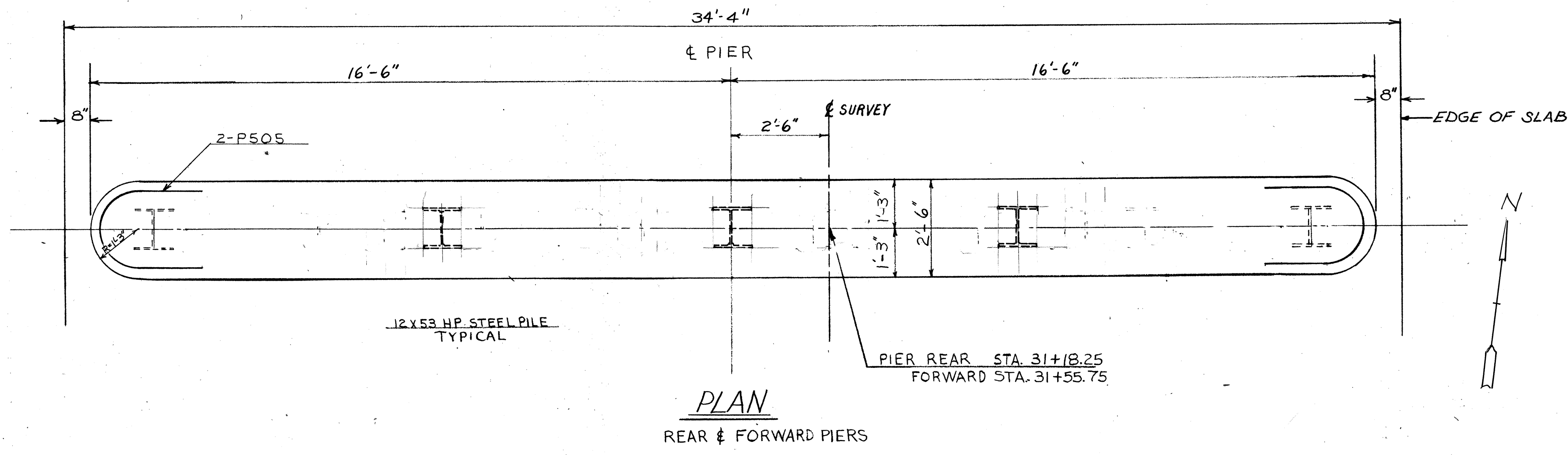
POROUS BACKFILL SHALL EXTEND TO THE PLANE OF THE SUBGRADE AND Laterally TO THE SURFACE OF THE EMBANKMENT SLOPES.  
NOTES: ALL REINFORCING STEEL IN ABUTMENT SHALL HAVE 2" CLEARANCE FROM OUTSIDE EDGES OF CONCRETE UNLESS OTHERWISE NOTED.

4/9

**THOMAS FOK & ASSOCIATES, LIMITED**  
CONSULTING ENGINEER, SURVEYOR & PLANNER  
3896 MAHONING AVE. YOUNGSTOWN, OHIO

**FORWARD ABUTMENT**  
BR. N° BEL-9-19.50  
OVER  
WHEELING CREEK  
BELMONT COUNTY S.R. 9

SURVEYED	DESIGNED	DRAWN	CHECKED	REVIEWED	REVISED
	QEF	QEF	LE	T.F.	



SEE STD. DRAWING  
CPP-2-73 FOR ADDITIONAL DETAILS

EPI001 BARS SHALL BE EPOXY COATED

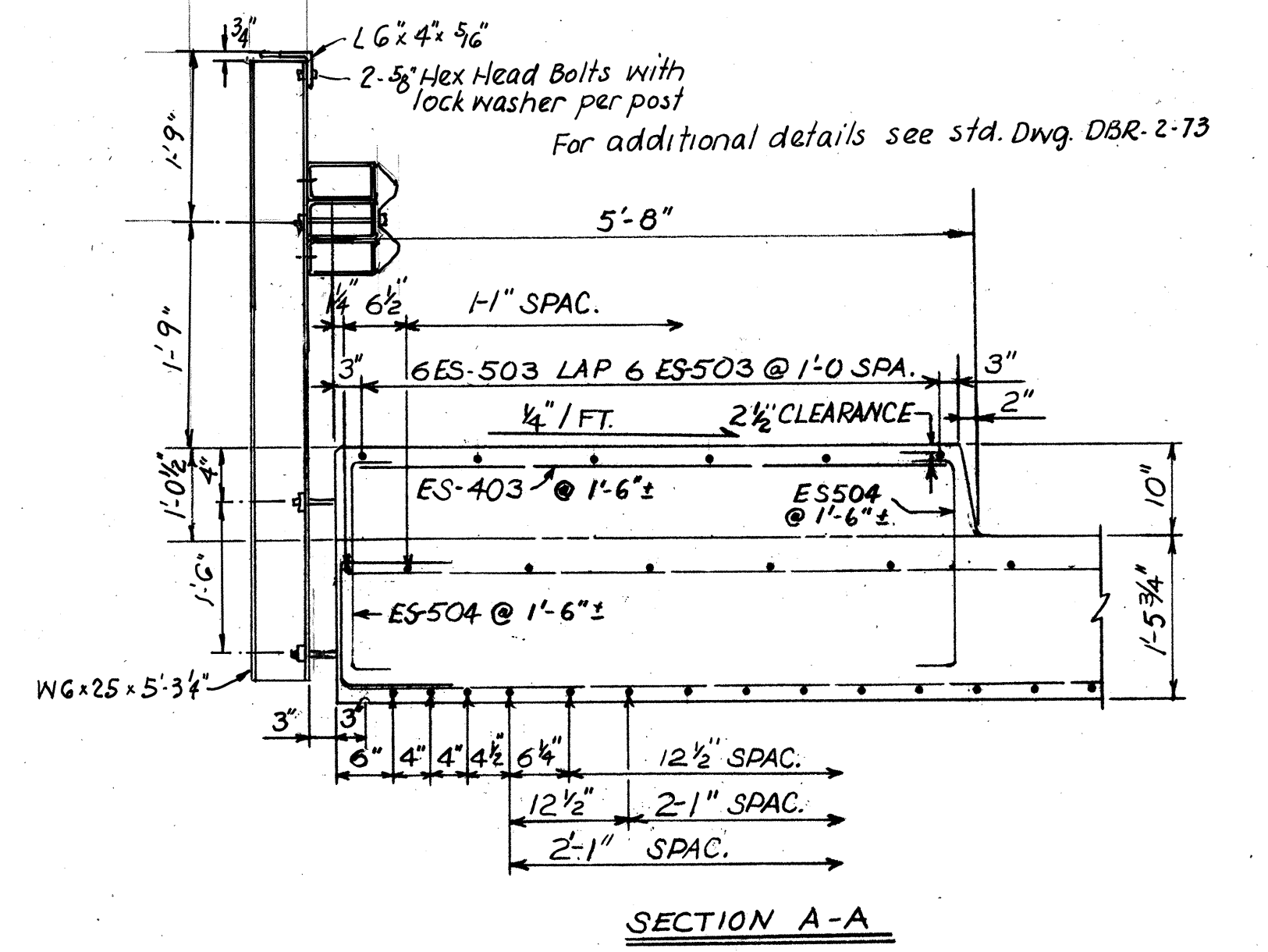
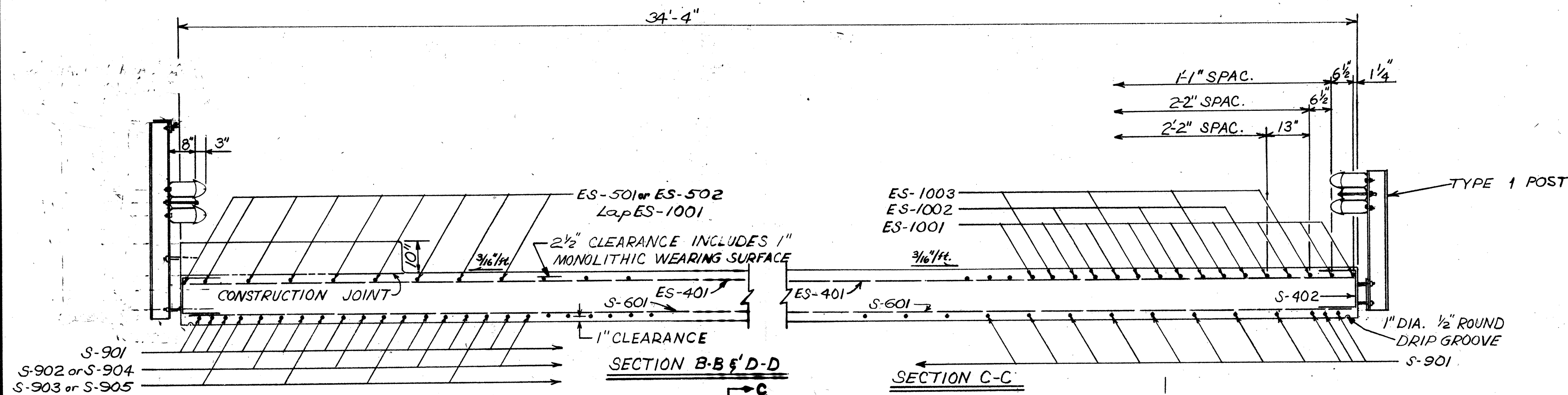
5/9

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3896 MAHONING AVE. YOUNGSTOWN, OHIO

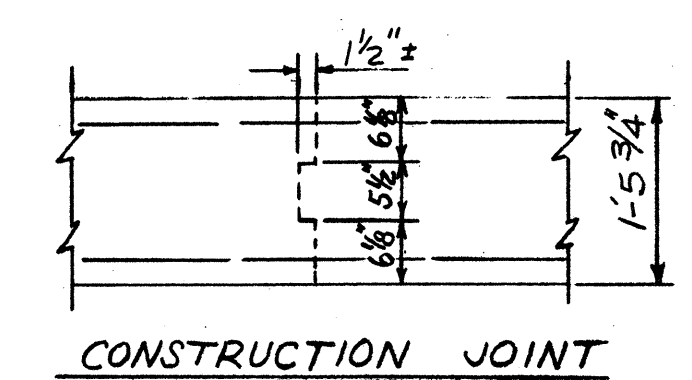
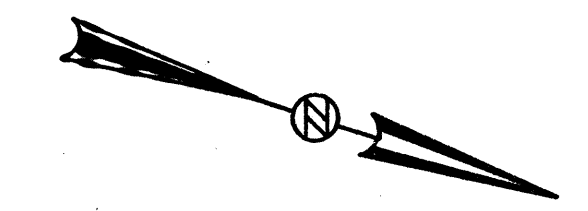
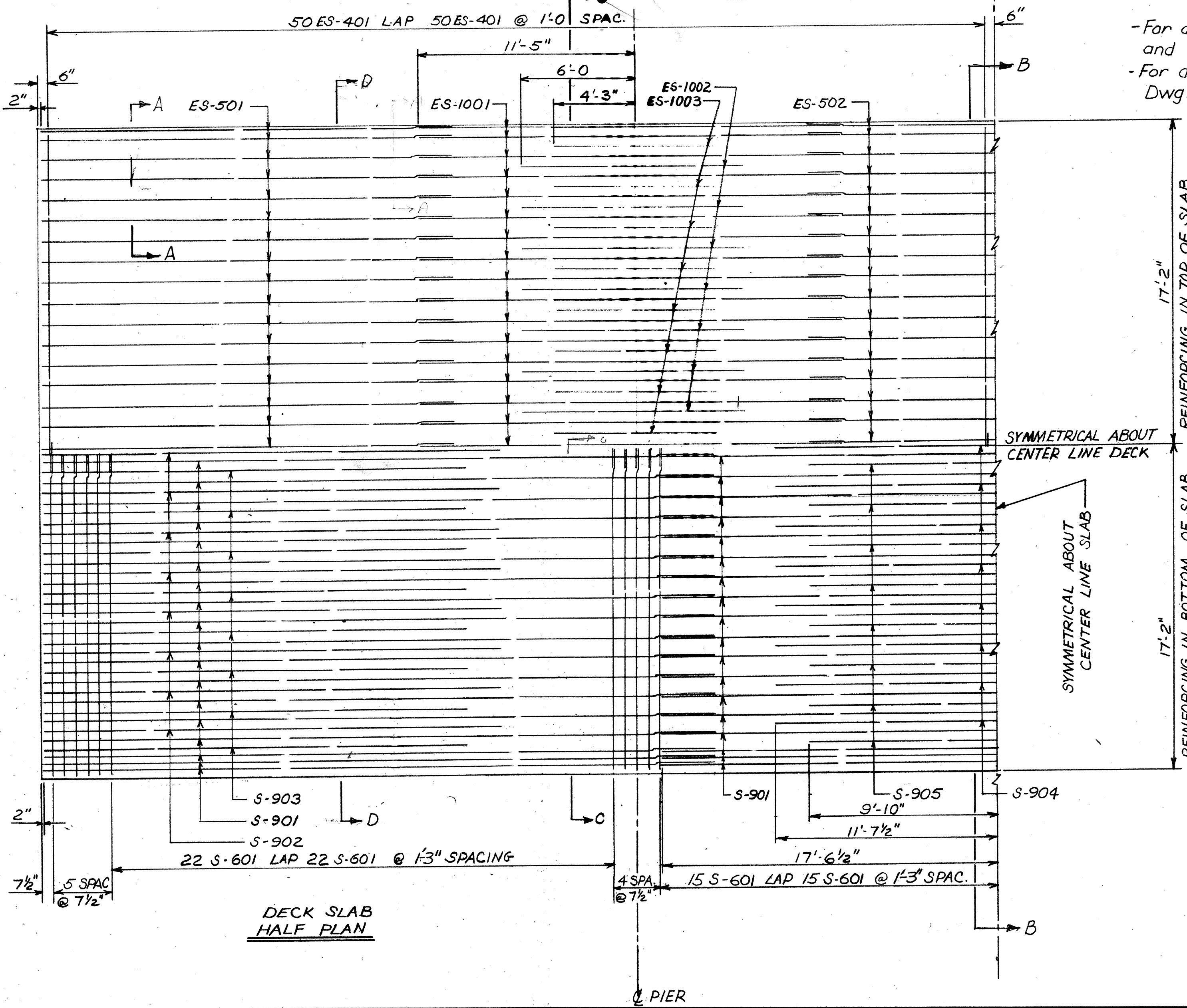
**PIER DETAIL**  
BR. N<sup>o</sup> BEL-9-19.50  
OVER  
WHEELING CREEK  
BELMONT COUNTY S.R. 9

SURVEYED	DESIGNED	DRAWN	CHECKED	REVIEWED	REVISED
	DEF	DEF	LF	J.F.	

SEE SECTION A-A FOR REINFORCING STEEL DETAILS



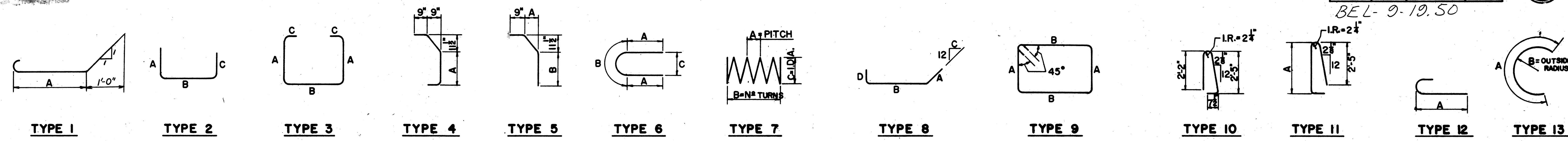
-For additional superstructure notes and details see Std. Dwg. CS-2-73.  
 -For details of Guard Rail see Std. Dwg. DBR-2-73



Note: One construction joint in bridge slab may be placed on transverse centerline of middle span or 1'-0" ± off transverse centerline if necessary to miss railing post and transverse reinforcing bars. One longitudinal joint will be permitted on centerline of roadway.

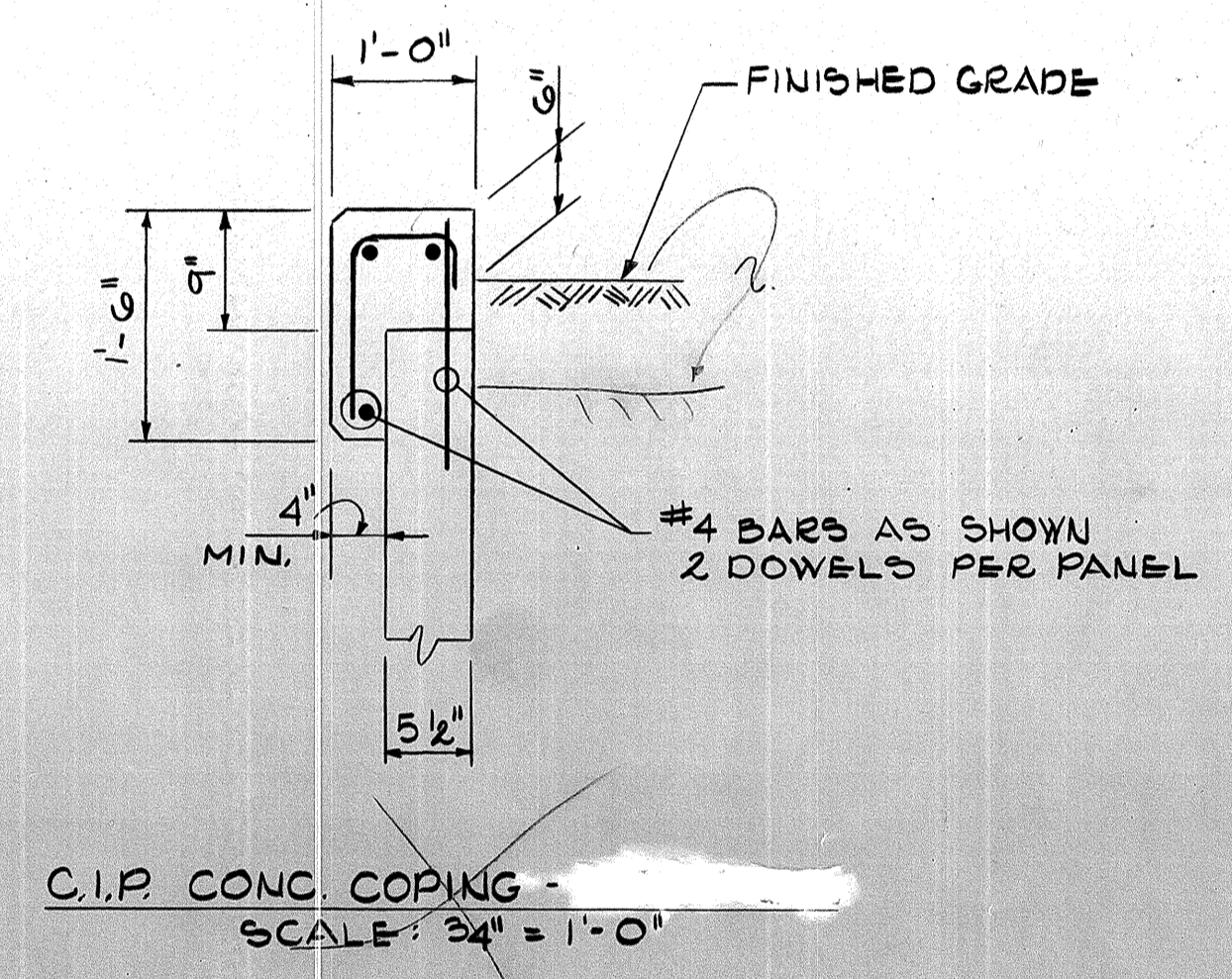
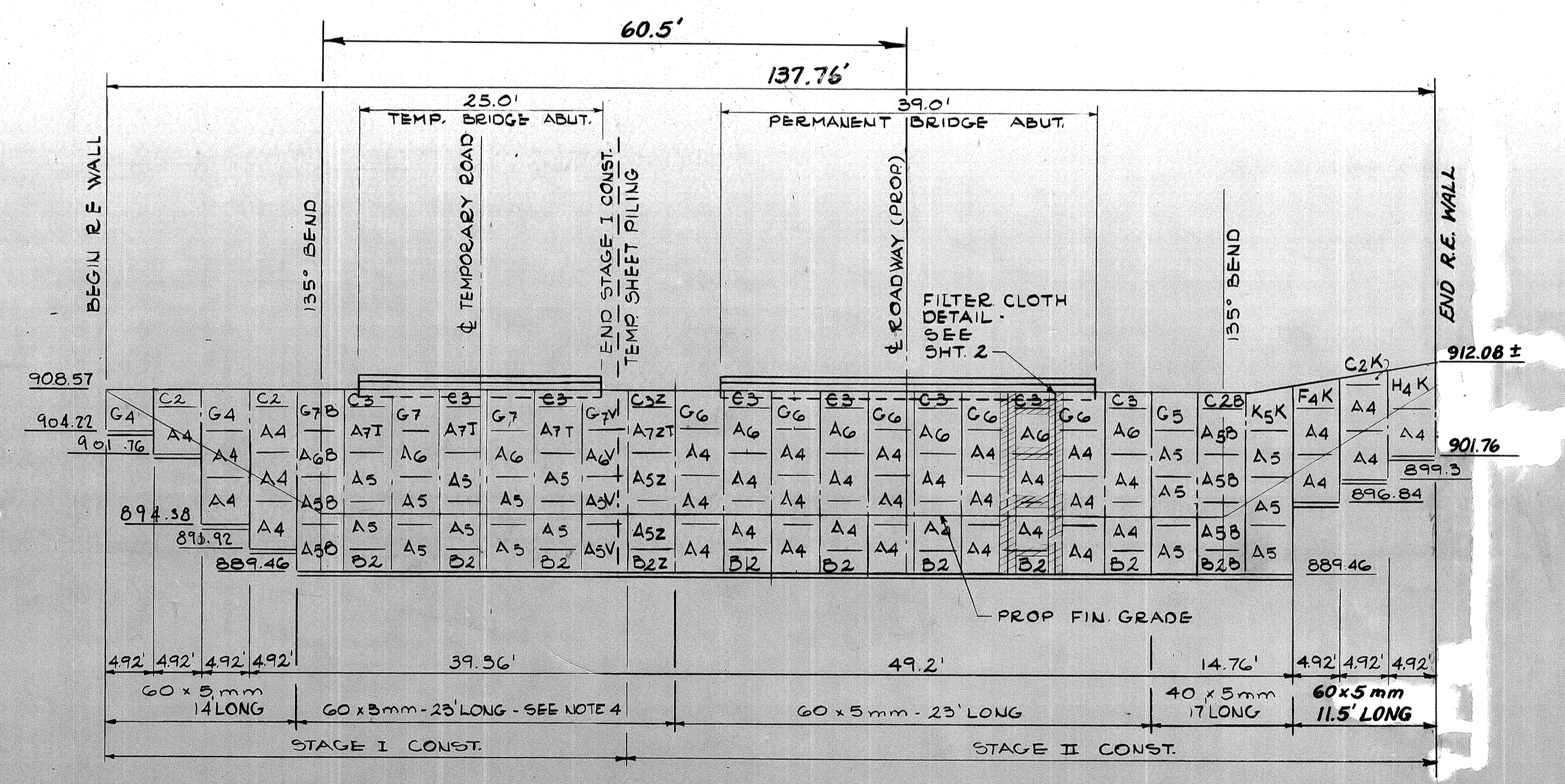
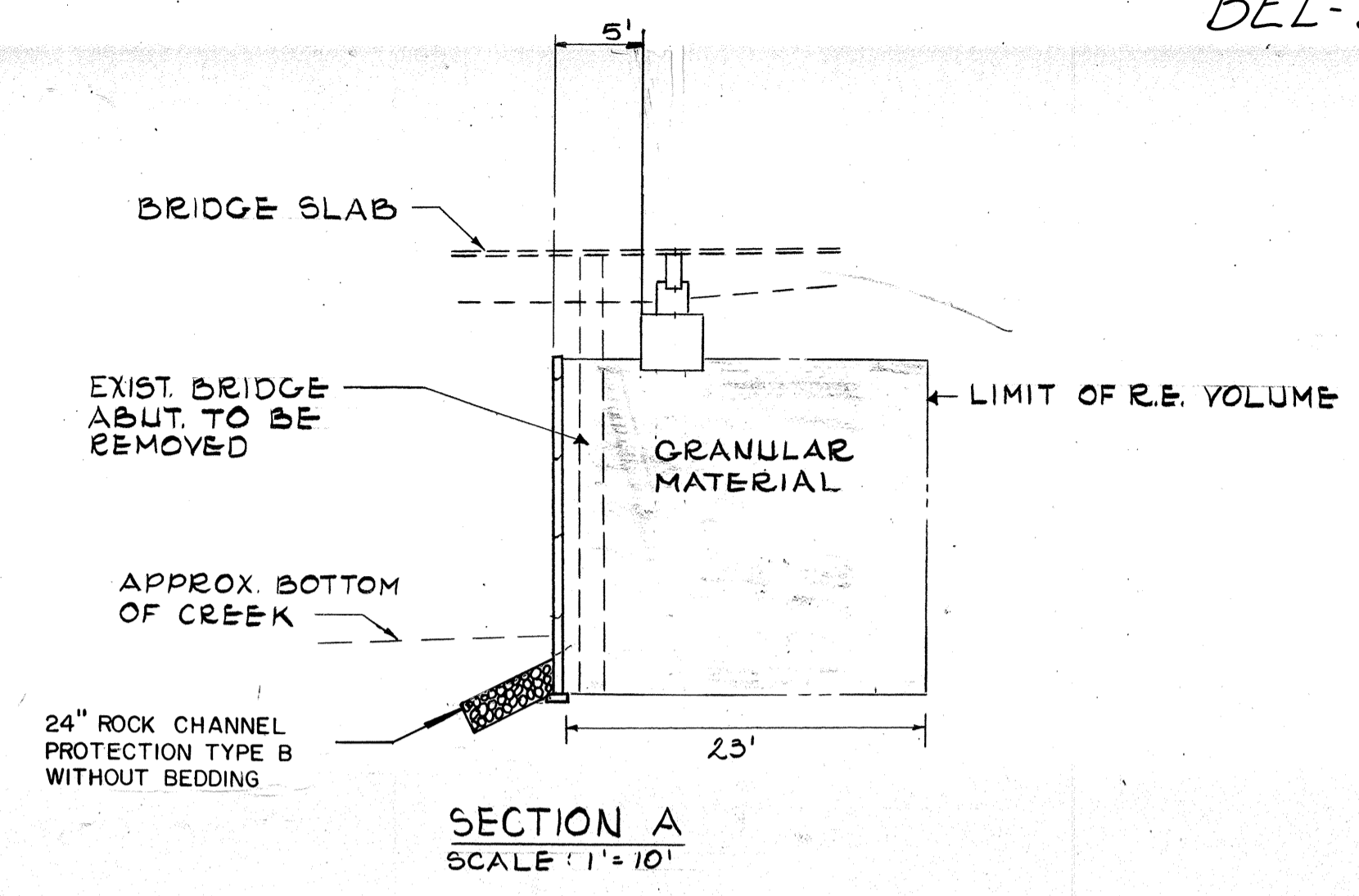
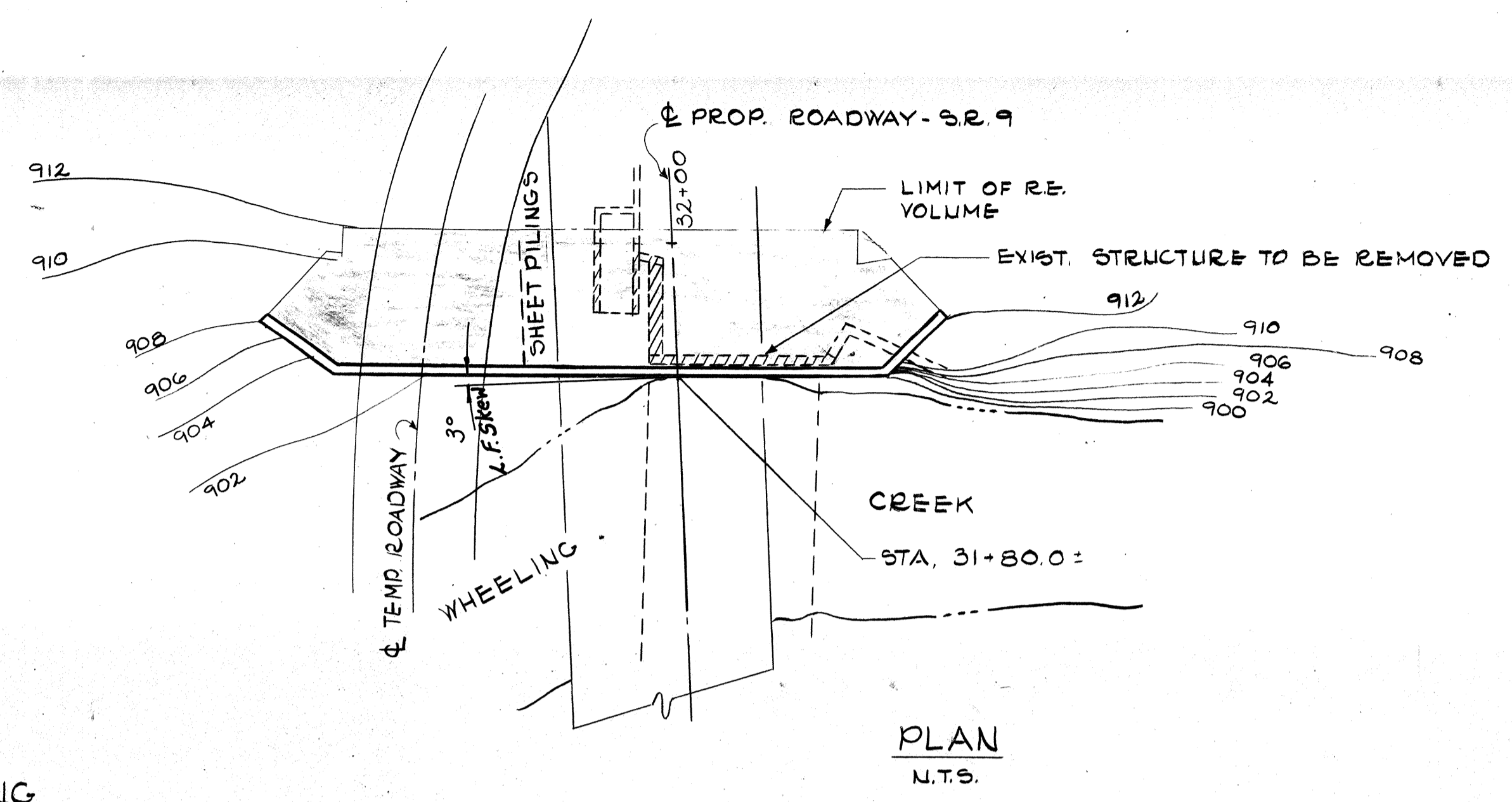
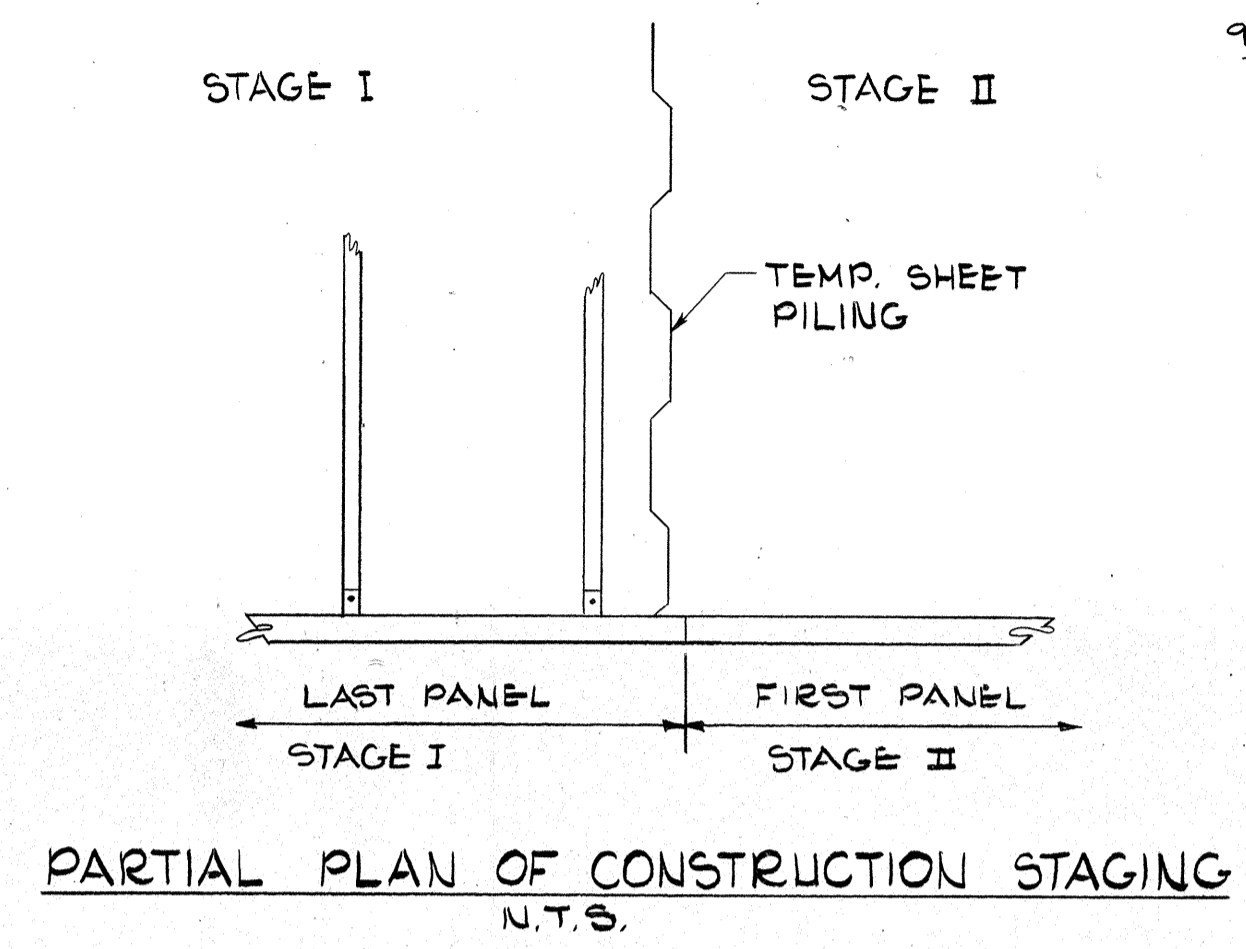
THOMAS FOK & ASSOCIATES, LIMITED					
CONSULTING ENGINEER, SURVEYOR & PLANNER					
3896 MAHONING AVE. YOUNGSTOWN, OHIO					
SUPERSTRUCTURE DETAIL					
BRIDGE No BEL-9-1950					
OVER WHEELING CREEK					
BELMONT COUNTY S.R.9					
SURVEYED	DESIGNED	DRAWN	CHECKED	REVIEWED	REVISED
	V.M.S.	V.M.S.	L.F.	T.F.	

BEL-9-19.50



ABUTMENTS										PIERS										SUPERSTRUCTURE										
MARK	NO.	LENGTH	TYPE	A	B	C	D	WEIGHT		MARK	NO.	LENGTH	TYPE	A	B	C	D	WEIGHT		MARK	NO.	LENGTH	TYPE	A	B	C	D	WEIGHT		
<i>FORWARD</i>																														
A501	8	20'-1"	STR					168		P401	20	8'-0"	9	1'-9"	2'-0 1/2"				107		ES401	200	17'-6 1/2"	STR					2344	
A502	54	7'-7"	2	2'-1"	3'-8"	2'-1"		427		P501	8	16'-2"	STR					135		ES402	162	2'-10 1/4"	2	1'-0 1/2"	1'-1 1/4"	1'-0 1/2"		309		
A503	4	18'-0"	STR					75		P502	40	9'-0"	3	2'-11"	2'-6"			375		ES403	67	5'-2"	STR					231		
A504	3	9'-2"	2	4'-0"	1'-5"	4'-0"		29		P503	4	8'-10"	3	2'-11"	2'-0"			37		ESS01	68	21'-6"	STR					1525		
A505	23	7'-8"	2	3'-3"	1'-5"	3'-3"		184		P504	4	3'-11"	2	2'-11"	2'-11"			16		ESS02	68	19'-8"	STR					1395		
A506	8	2'-8"	STR					22		P505	8	6'-4"	6	1'-7"	3'-0"			53		ESS03	24	26'-1"	STR					653		
A507	4	3'-7"	STR					15		P901	16	17'-9"	STR					966		ESS04	134	3'-0 3/4"	2	0'-7 1/2"	2'-0 3/4"	0'-7 1/2"		428		
A508	3	10'-10"	2	4'-10"	1'-5"	4'-10"		34		EP1001	16	19'-5"	STR					1337		S601	178	17'-10 1/2"	STR					4779		
A801	8	20'-7"	STR					440												S901	108	35'-1"	STR					12,883		
A802	23	5'-9 1/2"	1	3'-2 1/2"				356												S902	30	25'-2"	12	23-11				2567		
A1001	8	19'-6"	STR					671												S903	32	23'-5"	12	22-2				2548		
																				S904	30	23'-3"	STR					2372		
																				S905	32	19'-8"	STR					2140		
																				ES1001	68	22'-2"	STR					6486		
																				ES1002	28	11'-8"	STR					1406		
																				ES1003	32	8'-6"	STR					1170		





NOTES

- ALL PANELS ARE TYPE 'A' UNLESS OTHERWISE NOTED.
- 2" x 0" WIDE STRIPS OF POLY-FILTER 'X' SHALL BE PLACED ON THE INSIDE FACE OF PANELS, OVER ALL JOINTS PREVIOUSLY COATED WITH ADHESIVE (PLIOBOND 5001) COMPOUND. ALL STRIPS SHALL BE FIELD SLIT AT THE TIE STRIP LOCATION TO FIT REINF. STRIPS THROUGH.
- DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE REINFORCED EARTH VOLUME, METHODS OF CONSTRUCTION AND QUALITY OF PREFABRICATED MATERIALS SHALL CONFORM TO THE MANUFACTURER'S SPECIFICATIONS.
- SYMBOLS
  - TYPE OF PANEL
  - H NO OF TIE STRIPS
  - ① INDICATES TYPE OF REINFORCING STRIPS PER PANEL.
  - ② INDICATES NO. OF TIE STRIPS PER 'A' PANEL ONLY.
  - Ⓜ INDICATES NO. OF REINF. BARS PER PANEL.
- RE. WALL DESIGN AT TEMP BRIDGE BASED ON ASSUMED BRIDGE LOADS. ACTUAL DESIGN LOADS TO BE FURNISHED TO REINFORCED EARTH CO. FOR REVIEW PRIOR TO CONSTRUCTION.

REINFORCING STRIP	SCHEDULE
TYPE	LENGTH
40 x 5 mm	11.5' 14' 17' 23'
60 x 5 mm	30 36 36.5

SURFACE AREA - 2,332.6 SQ. FT.

TYPE	PANEL SCHEDULE																				
	STANDARD				135° BEND				SPECIAL CUT				DOUBLE SLEEVE/DEFLIPS								
No. 3.	A	B	C	G	AB	CB	BB	CB	KK	FK	CK	HK	EK	GV	AV	AZ	BZ	CZ	AT	AZT	
2		8	2				1	1			1										
3			8																		
4	36			2					1		1										
5	16			1	5										2	2					
6	7			5	1										1						
7				2		1								1						3	1
SOFT PER PANEL	24.2	12.1	8.8	20.9	24.2	20.9	12.1	8.8	23.0	14.4	5.7	21.3	0	20.9	24.2	24.2	12.1	8.8	24.2	24.2	

This drawing contains information proprietary to The Reinforced Earth Company, and is being furnished for the use of STATE OF OHIO DOT BUREAU OF BRIDGES only in connection with this project, and the information contained herein is not to be transmitted to any other organization unless specifically authorized in writing by The Reinforced Earth Company. The Reinforced Earth Company is exclusive licensee in the United States under patents issued to Henri Vidal, and the furnishing of this drawing does not constitute an express or implied license under the Vidal patents.

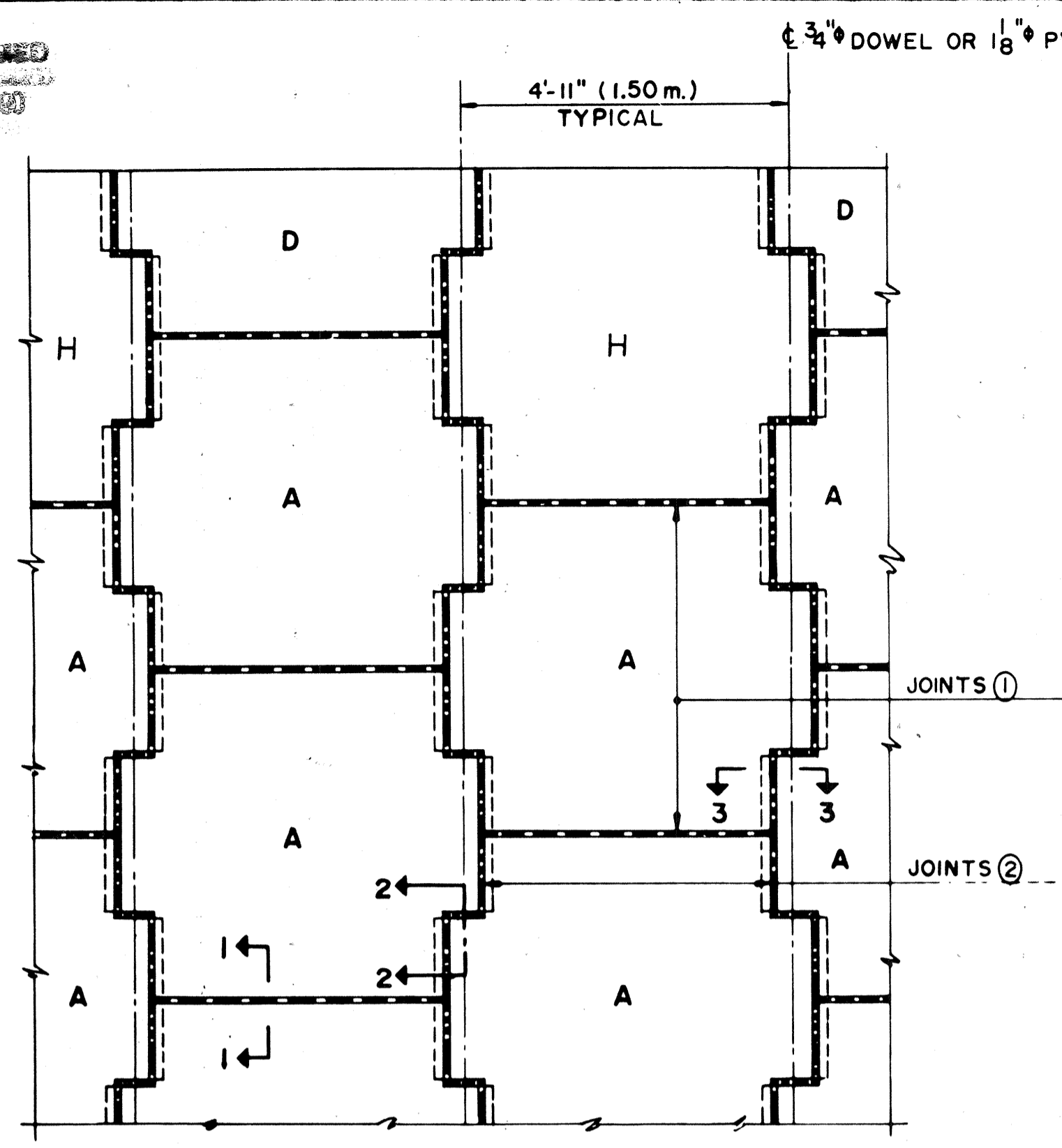
STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF BRIDGES

REINFORCED EARTH WALL  
BRIDGE NO BEL-9  
OVER WHEELING CREEK  
BELMONT COUNTY, OHIO

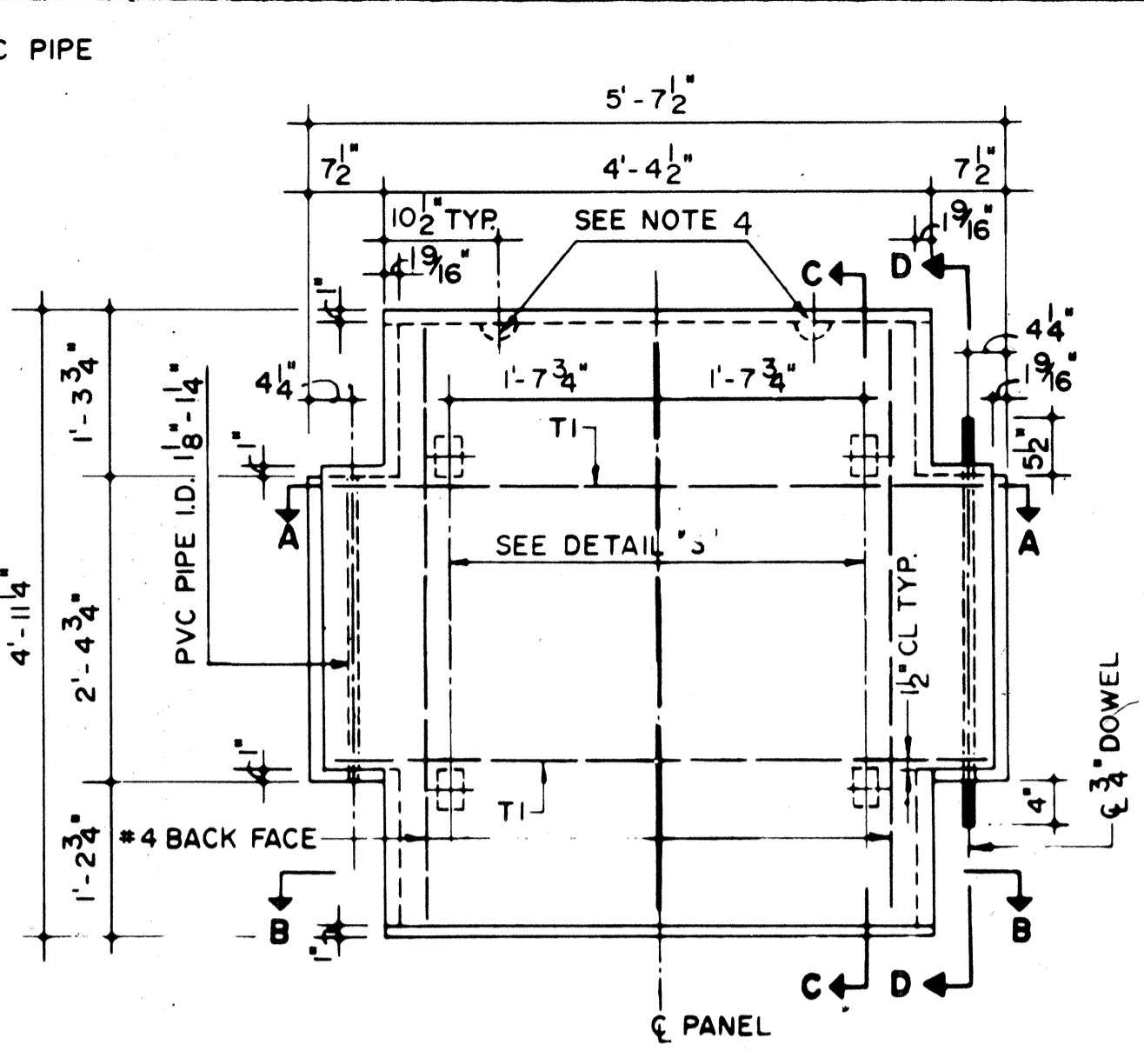
DRAWING COVER:  
SITE PLAN - ELEVATION - SECTION - SCHEDULE

CHECKED BY	DATE
A.P.	10-28-82
SCALE: AS SHOWN	DRAWN BY: JAB

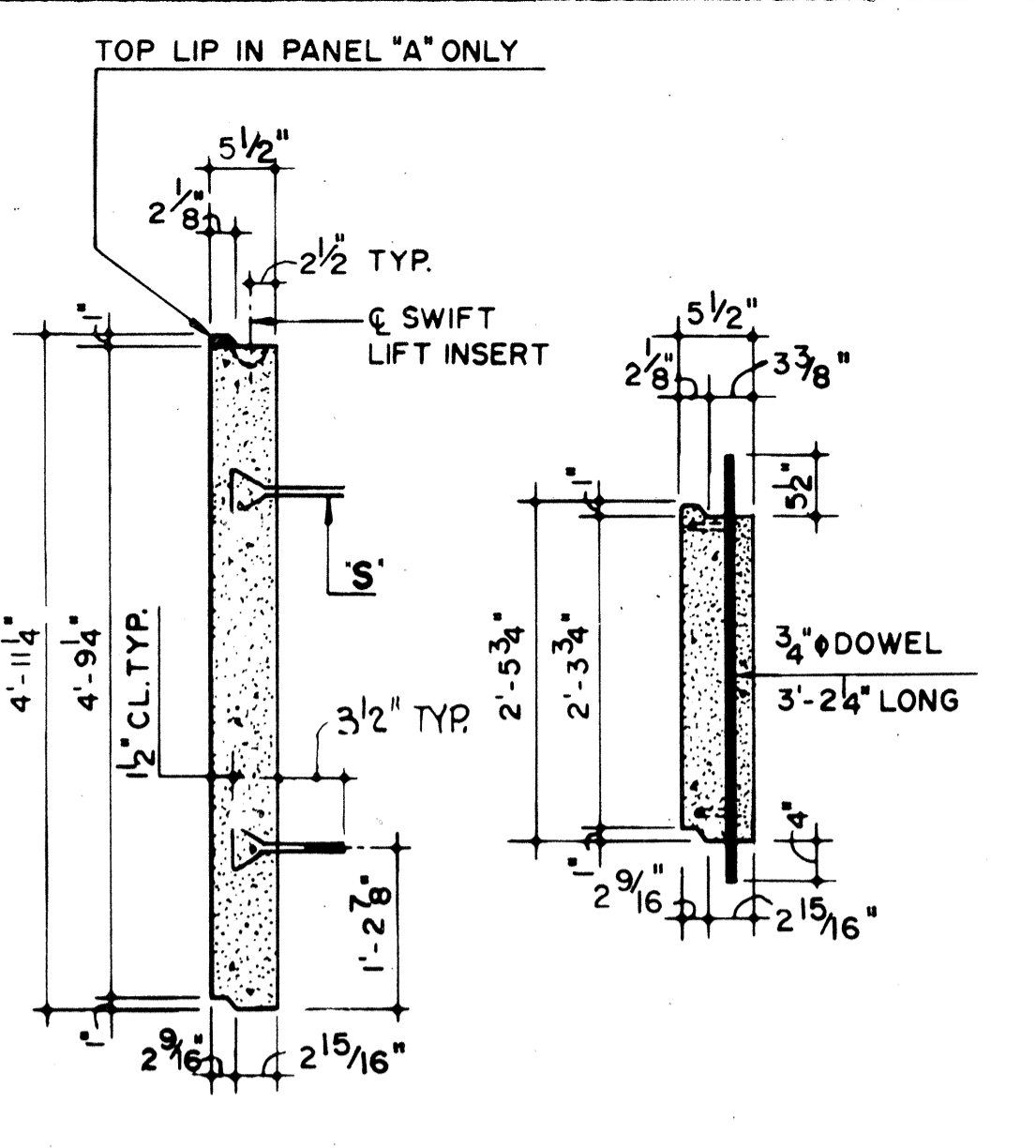
RE 1220 10-28-82



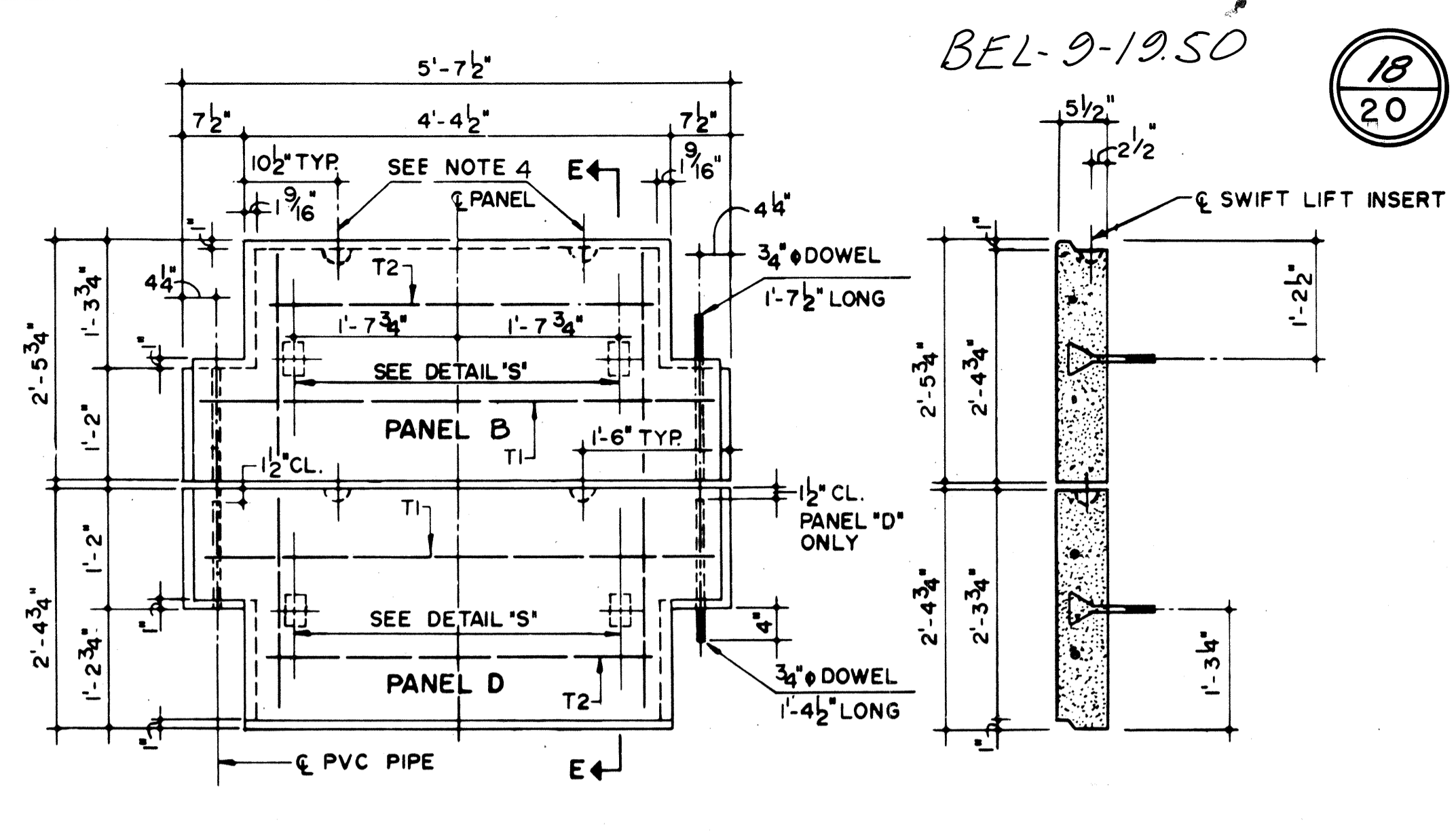
TYPICAL PANEL LAYOUT  
SCALE: 1/2" = 1'-0"



PANEL TYPE A & H  
FRONT VIEW

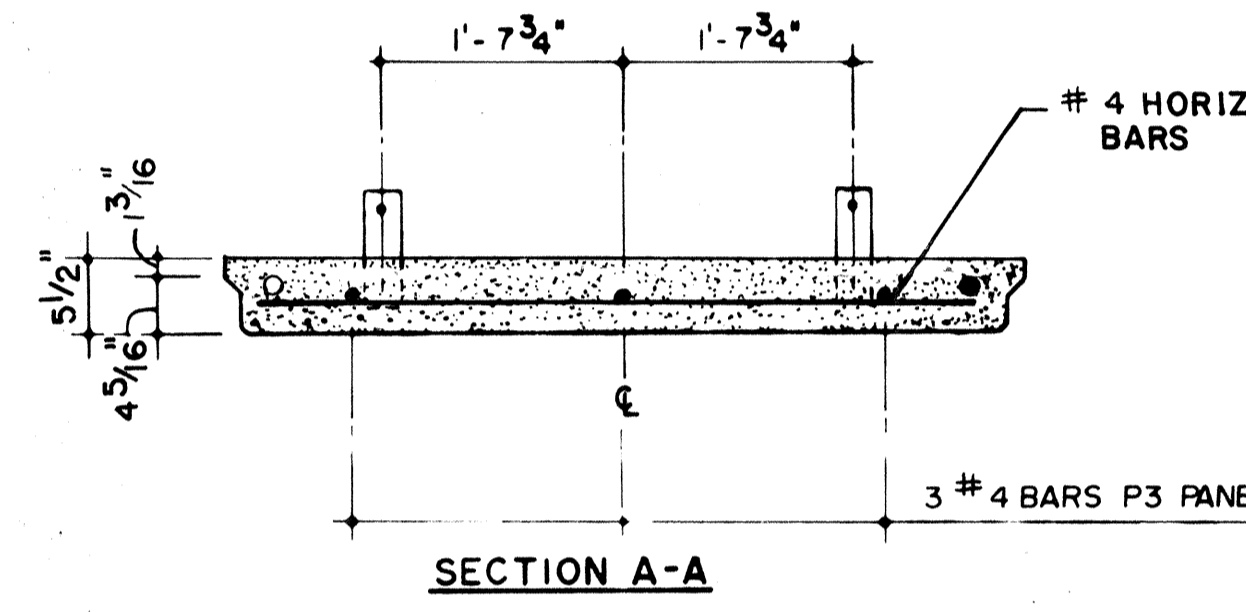


SECTION C-C SECTION D-D

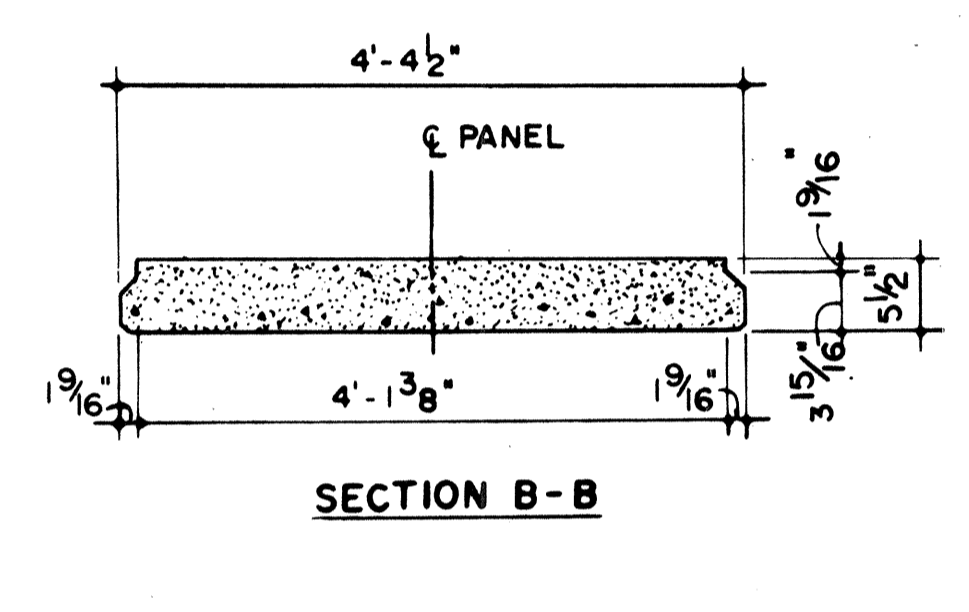


HALF PANELS B & D  
FRONT VIEW

SECTION E-E

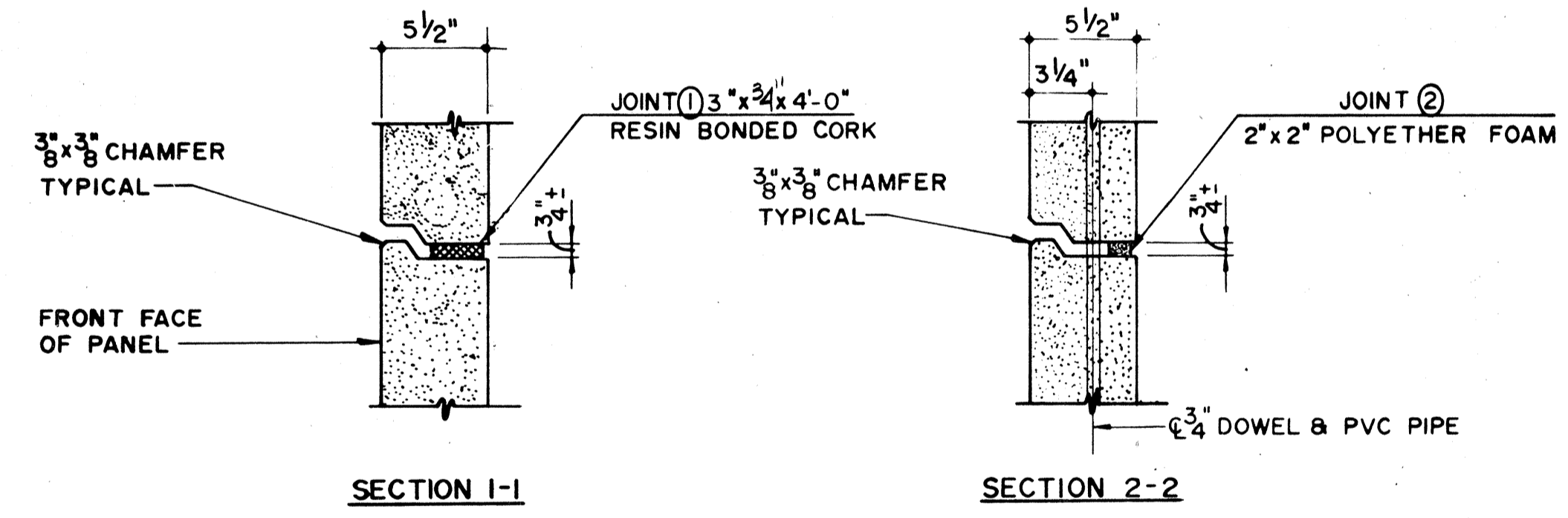


SECTION A-A



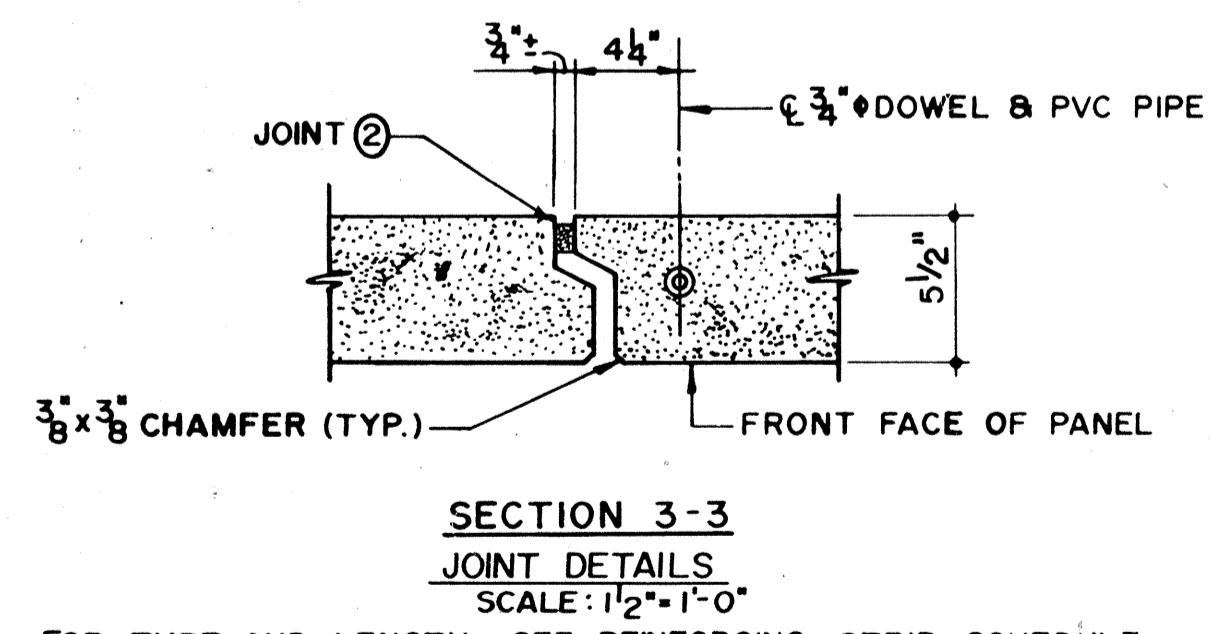
SECTION B-B

TYPICAL PANEL DETAILS  
SCALE: 3/4" = 1'-0"



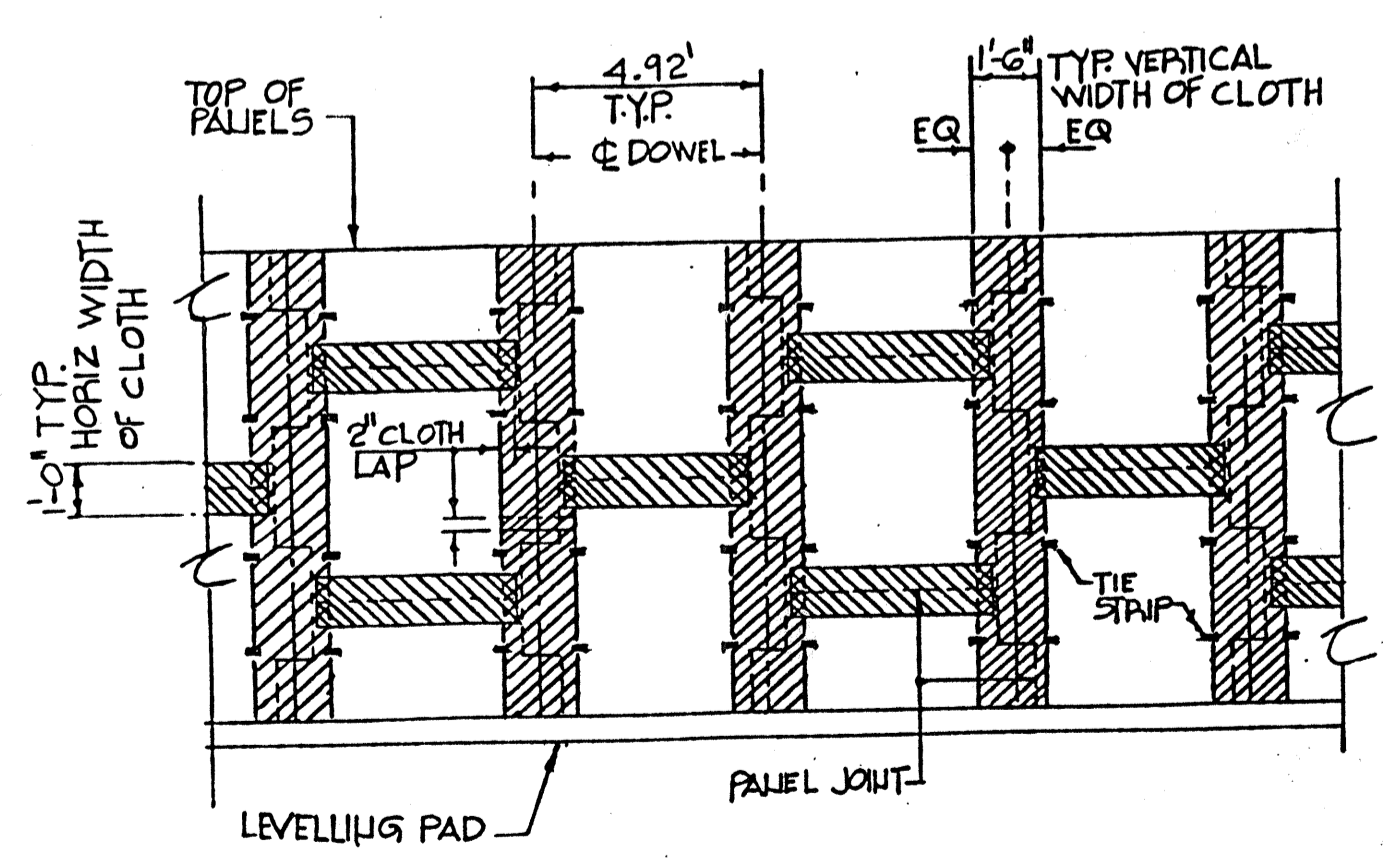
SECTION 1-1

SECTION 2-2

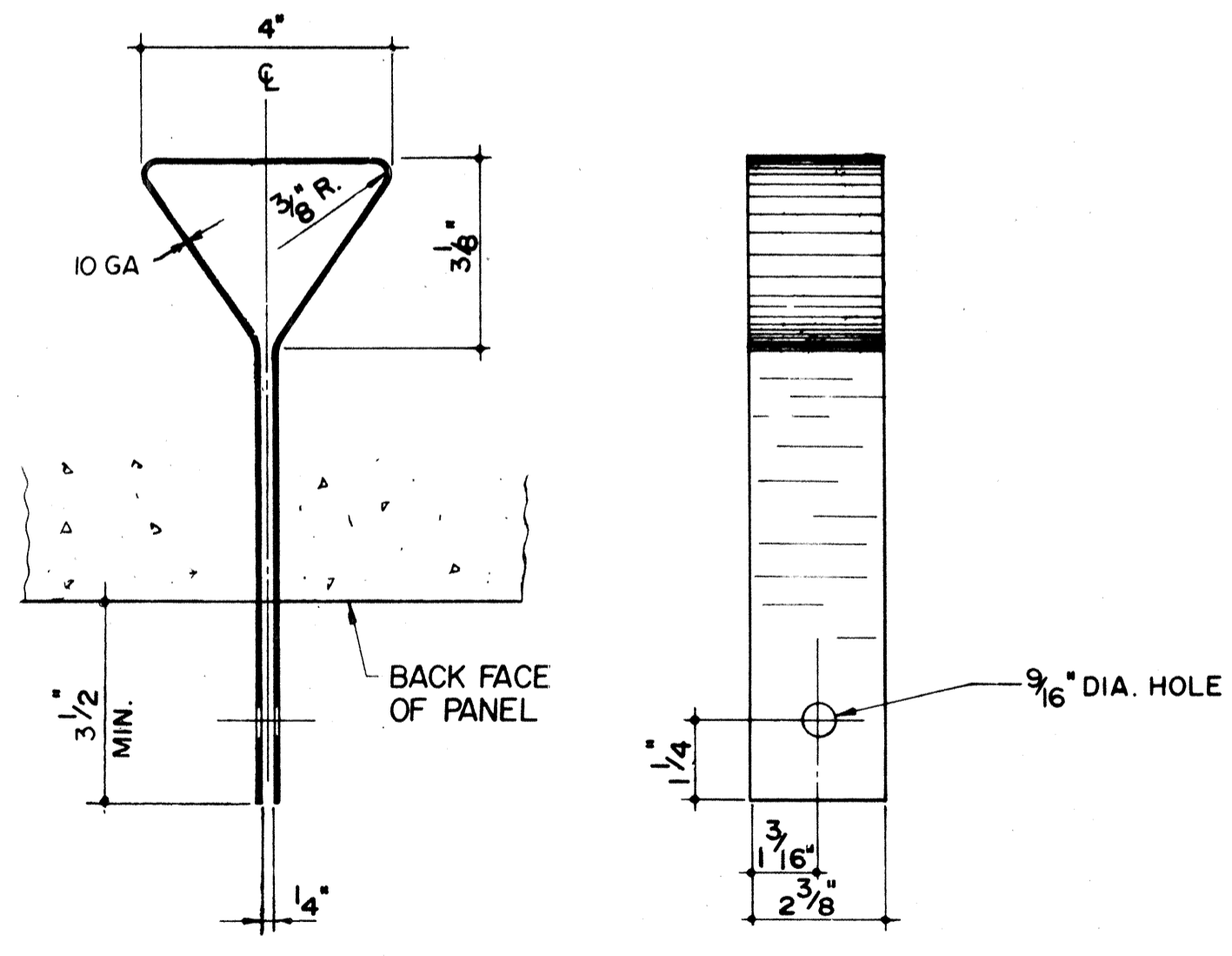


SECTION 3-3  
JOINT DETAILS  
SCALE: 1/2" = 1'-0"

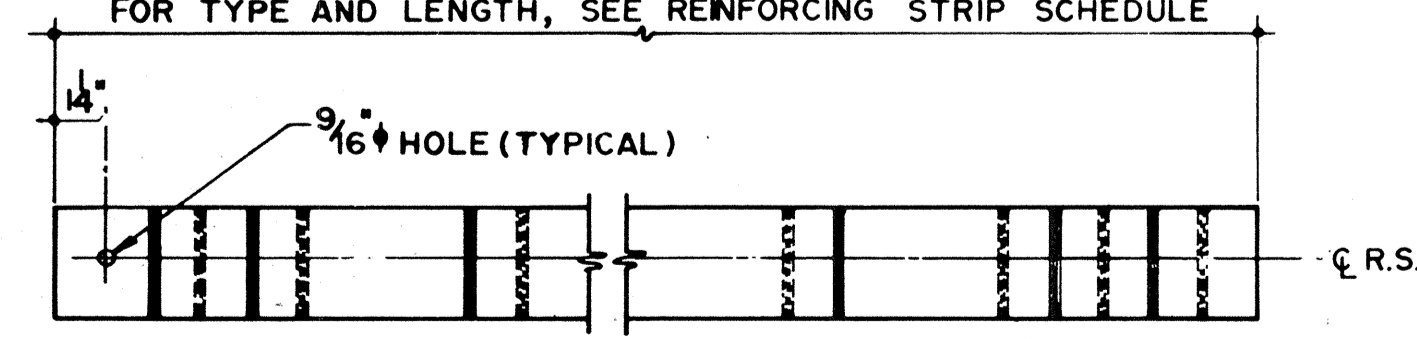
NOTE: STRIPS OF FILTER CLOTH SHALL BE PLACED ON THE INSIDE FACE OF PANELS AS SHOWN BELOW, OVER JOINTS PREVIOUSLY COATED WITH ADHESIVE COMPOUND (PLIOBOND 5001 OR EQUAL) COVER JOINTS OF ENTIRE WALL OR TO UPPER LIMIT AS INDICATED BY LINE ON ELEVATIONS



FILTER-CLOTH DETAIL  
PARTIAL ELEVATION-BACK FACE  
SCALE: 3/8" = 1'-0"



TIE STRIP DETAIL "S"  
NOT TO SCALE



DETAIL OF REINFORCING STRIP  
NOT TO SCALE

- NOTE:
1. REINFORCING STEEL TO BE STEEL A615 GRADE 40.
  2. 3/8" x 3/8" CHAMFER SHALL BE PROVIDED ON ALL EXPOSED EDGES (FRONT FACE ONLY).
  3. ALL PANELS AND OTHER RELATED ELEMENTS WILL BE DETAILED ON SHOP DRAWINGS.
  4. ONE TON SWIFT LIFT INSERTS 3/8" x 3/8" LONG AS MANUFACTURED BY SUPERIOR CONC. ACCESSORIES.
  5. PANEL DESIGN THICKNESS IS 5 1/2" QUANTITY OF CONCRETE WILL INCREASE TO ACCOMMODATE ANY ARCHITECTURAL SURFACE FINISH THAT MAY BE SPECIFIED.

<b>REINFORCED EARTH WALL</b> Roslyn Center, 1700 North Moore Street, Arlington, Virginia 22209 (703) 527-3434	
Structure	REINFORCED EARTH WALL
Location	WHEELING CREEK STATE OF OHIO
5 1/2" PANEL DETAILS	
Drawn by	STANDARD PANEL DETAILS
DATE	SCALE AS SHOWN

This drawing contains information proprietary to The Reinforced Earth Company, and is being furnished for the use of STATE OF OHIO DOT BUREAU OF BRIDGES only in connection with this project, and the information contained herein is not to be transmitted to any other organization unless specifically authorized in writing by The Reinforced Earth Company. The Reinforced Earth Company is exclusive licensee in the United States under patents issued to Henri Vidal, and the furnishing of this drawing does not constitute an express or implied license under the Vidal patents.



**GEOLOGY OF THE SITE**

THE STRUCTURE SITE IS LOCATED IN THE HIGHLY DISSECTED UNGLACIATED PORTION OF THE ALLEGHENY PLATEAU REGION ON THE FLUSHING ESCARPMENT, IN AN AREA WHERE MODERATELY DEEP VALLEY AND ALLUVIAL DEPOSITS AND FILL MATERIAL OVERLIE SHALE BEDROCK, OF PENNSYLVANIAN AGE.

**EXPLORATION**

THE EXPLORATION CONSISTED OF TWO DRIVE SAMPLE BORINGS MADE BY MEANS OF A MECHANICALLY-POWERED HOLLOW STEM AUGER MOUNTED ON A MOBILE PLATFORM, PERFORMED BETWEEN FEBRUARY 18 AND 22, 1982.

**INVESTIGATIONAL FINDINGS AND OBSERVATIONS**

THE BORINGS DISCLOSED THAT INTERVALS OF EXTREMELY LOOSE TO DENSE UNSTRATIFIED SILTS, CLAYS, GRAVEL AND FILL MATERIAL CONSISTING OF RED DOG, FINES, GRAVEL AND CINDERS THAT RAPIDLY INCREASE IN DENSITY WITH INCREASE IN DEPTH OVERLIE RELATIVELY FLAT-LYING BEDROCK SURFACE. BORING B-1 (IN THE GENERAL VICINITY OF THE REAR ABUTMENT) ENCOUNTERED BEDROCK SURFACE AT 24.0-FOOT DEPTH, DATUM ELEVATION 75.8 FEET AND WAS TERMINATED AT 25.3-FOOT DEPTH, DATUM ELEVATION 74.5 FEET AFTER PENETRATING 1.3 FEET BELOW BEDROCK SURFACE. BORING B-2 (IN THE GENERAL VICINITY OF THE FORWARD ABUTMENT) ENCOUNTERED BEDROCK SURFACE AT 23.8-FOOT DEPTH, DATUM ELEVATION 75.7 FEET AND WAS TERMINATED AT 25.2-FOOT DEPTH, DATUM ELEVATION 74.3 FEET AFTER PENETRATING 1.2 FEET BELOW BEDROCK SURFACE.

NO FREE WATER OBSERVATIONS WERE MADE DURING OR AT THE CONCLUSION OF DRILLING OPERATIONS.

- Auger Boring Location - Plan View.
- Press and / or Drive Sample and / or Core Boring Location - Plan View.
- Drive Rod Penetration Resistance Sounding Location - Plan View.
- Capped Pile
- Footing
- Footing on Pile
- Top of Rock

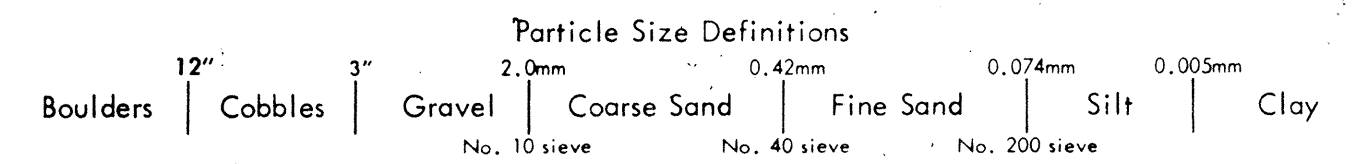
- Coal
- Weathered Mudstone or Claystone
- Mudstone or Claystone
- Weathered Shale
- Shale
- Weathered Siltstone
- Siltstone

**LEGEND**

- Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken.
- Figures Beside the Boring Log in Profile Indicate the Number of Blows for Standard Penetration Test.  
X = Number of Blows for First 6 inches.  
Y = Number of Blows for Second 6 inches.  
Z = Number of Blows for Third 6 inches.
- Drive Rod Penetration Resistance Sounding Log - Profile  
Resistance "R" < 10,000 lbs.  
Resistance "R" > 10,000 lbs.
- Casing
- Indicates Final Measurement of Penetration, in Inches.
- Indicates Free Water Elevation.
- Indicates Static Water Elevation.

**SYMBOLS OF ROCK TYPES**

- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone
- Boulders or Cobbles



**GENERAL INFORMATION**

**Drive Rod Penetration Sounding Tests**

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with post performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

**Drive Sample Borings - Drive-Press Sample Borings**

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and / or 5-foot depth intervals, driven by means of a 140 - pound drop-hammer with a free fall of 30 inches. The number of blows required to drive the sampler 18 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in three 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system - and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing, if performed, appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

**LOG OF BORING**

Date Started 2/18/82 Sampler Type SS Dia 1 3/8" Water Elev. \_\_\_\_\_  
 Date Completed 2/22/82 Casing Length \_\_\_\_\_ Dia \_\_\_\_\_  
 Boring No. B-1 Station & Offset 99+25-30' LT. (REAR ABUTMENT) Surface Elev. 99.8'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics								SHTL Class.		
							% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.			
99.8	0																
	2				BROWN CLAY SILT-RED DOG (FILL MATERIAL) (DRILLER'S DESCRIPTION)												VISUAL
94.8	4																
	6				AUGERED GRAY-BLACK GRAVELLY SANDY SILT (FILL MATERIAL)	1	25	16	15	19	25	NP	NP	37			VISUAL
89.8	8																
	10				2/2/2 GRAY-BLACK GRAVELLY SANDY CLAY WITH CINDERS (FILL MATERIAL)	2	22	17	16	21	24	42	12	31			VISUAL
84.8	12																
	14																
	16				5/9/9 BROWN SILTY SANDY GRAVEL	3	42	13	22	10	13	NP	NP	11			A-1-B
79.8	18																
	20				14/14/33 BROWN-GRAY SILTY GRAVELLY SAND WITH COAL BLOSSOMS	4	17	29	21	15	18	NP	NP	16			A-8A
75.8	22																
	24				TOP OF ROCK												
74.8	24				50(0.3') GRAY WEATHERED SHALE	5	39	10	4	26	21			6			VISUAL
74.5					BOTTOM OF BORING												

**LOG OF BORING**

Date Started 2/18/82 Sampler Type SS Dia 1 3/8" Water Elev. \_\_\_\_\_  
 Date Completed 2/22/82 Casing Length \_\_\_\_\_ Dia \_\_\_\_\_  
 Boring No. B-2 Station & Offset 100+75 - 25' LT. (FORWARD ABUTMENT) Surface Elev. 99.5'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics								SHTL Class.		
							% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.			
99.5	0																
	2				BROWN CLAY SILT-FILL MATERIAL (DRILLER'S DESCRIPTION)												VISUAL
94.5	4																
	6				AUGERED BROWN CLAY	1	8	4	7	22	59	50	27	22			A-7-6
89.5	8																
	10				4/5/5 BROWN GRAVEL SILTY CLAY	2	19	6	6	21	48			22			VISUAL
84.5	12																
	14																
	16				3/2/3 BROWN SANDY SILT	3	0	0	38	32	30	30	10	88			A-4A
79.5	18																
	20				13/14/9 BROWN GRAVEL AND STONE FRAGMENTS	4	79	3	6	4	8			19			VISUAL
75.7	22				TOP OF ROCK												
74.5	24				50(0.2') BROWN CLAY SHALE	5	29	11	8	23	29			5			VISUAL
74.3					BOTTOM OF BORING												

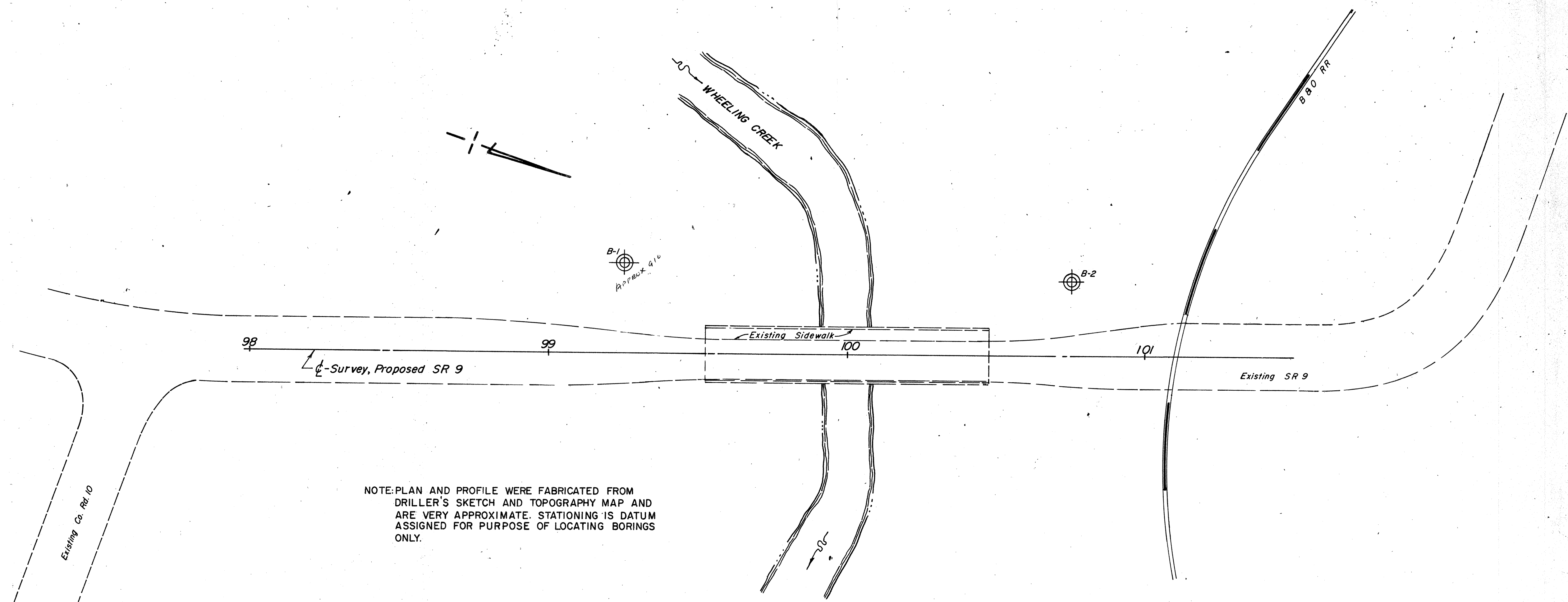
**NOTE - ALL AVAILABLE SOIL AND BEDROCK INFORMATION WHICH CAN BE CONVENIENTLY SHOWN ON THE STRUCTURE FOUNDATION INVESTIGATION SHEETS HAS BEEN SO REPORTED. ADDITIONAL SUBSURFACE INVESTIGATIONS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, IF ANY, MAY BE INSPECTED IN THE DISTRICT DEPUTY DIRECTOR'S OFFICE, THE BUREAU OF TESTS AT 1600 WEST BROAD STREET, THE PAVEMENT AND SOILS SECTION OF THE BUREAU OF LOCATION AND DESIGN OR IN THE BRIDGE BUREAU AT 25 SOUTH FRONT STREET.**

NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

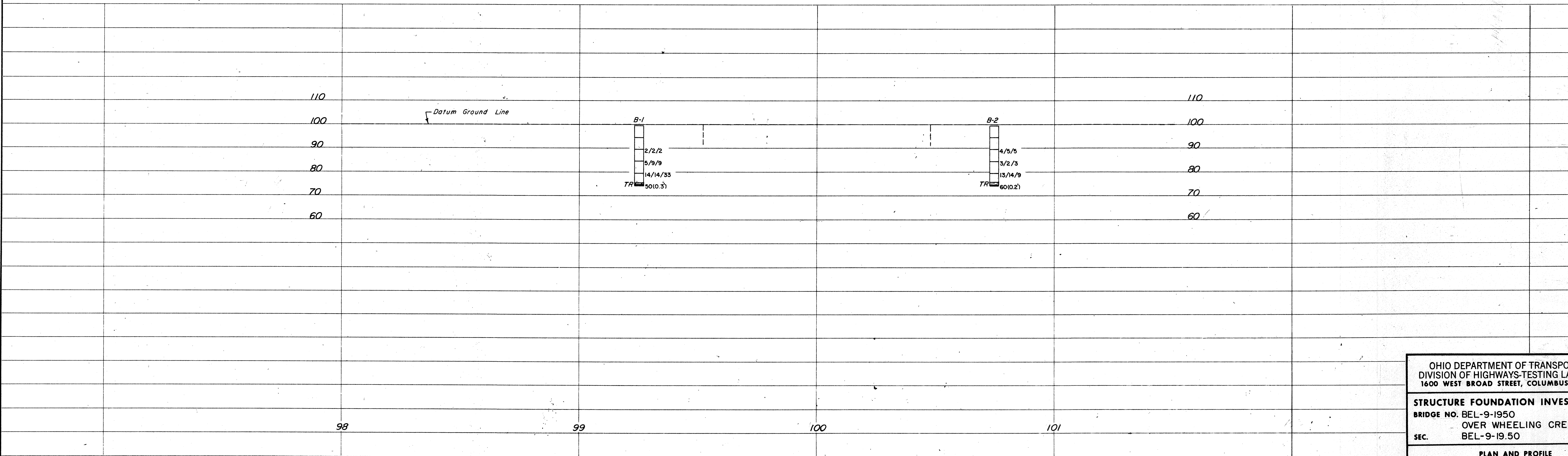
OHIO DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS - TESTING LABORATORY  
1600 WEST BROAD STREET, COLUMBUS, OHIO 43223

STRUCTURE FOUNDATION INVESTIGATION  
BRIDGE NO. BEL-9-1950  
OVER WHEELING CREEK  
SEC. BEL-9-19.50

CHECKED BY L. N. L. REVIEWED BY R. D. R. DATE 3/24/82



NOTE: PLAN AND PROFILE WERE FABRICATED FROM DRILLER'S SKETCH AND TOPOGRAPHY MAP AND ARE VERY APPROXIMATE. STATIONING IS DATUM ASSIGNED FOR PURPOSE OF LOCATING BORINGS ONLY.



SCALE: 1" = 20'

OHIO DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS-TESTING LABORATORY  
 1600 WEST BROAD STREET, COLUMBUS, OHIO 43223

**STRUCTURE FOUNDATION INVESTIGATION**  
 BRIDGE NO. BEL-9-1950  
 OVER WHEELING CREEK  
 SEC. BEL-9-19.50

**PLAN AND PROFILE**

DRAWN BY A. F.	CHECKED BY L. N. L.	REVIEWED BY R. D. R.	DATE 3/24/82
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# BELMONT COUNTY WHEELING TOWNSHIP T8N, R4W, SEC. 13

FHWA REGION	STATE	STATE PROJECT NO.	20
5	OHIO	11498(0)	20

BEL-9-19.50

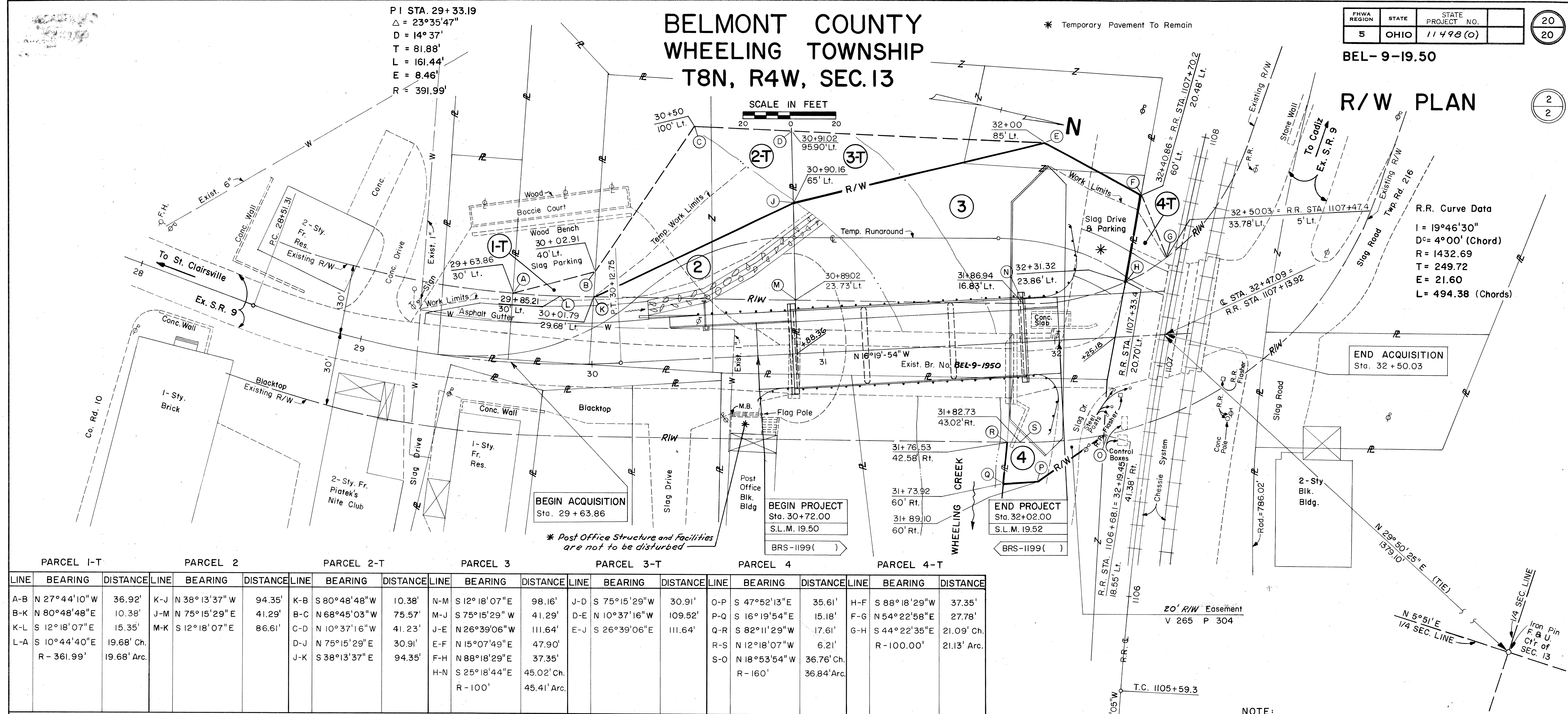
## R/W PLAN

P I STA. 29+33.19  
 $\Delta = 23^{\circ}35'47''$   
 $D = 14^{\circ}37'$   
 $T = 81.88'$   
 $L = 161.44'$   
 $E = 8.46'$   
 $R = 391.99'$

SCALE IN FEET

\* Temporary Pavement To Remain

R.R. Curve Data  
 $I = 19^{\circ}46'30''$   
 $D_c = 4^{\circ}00'$  (Chord)  
 $R = 1432.69$   
 $T = 249.72$   
 $E = 21.60$   
 $L = 494.38$  (Chords)



PARCEL 1-T			PARCEL 2			PARCEL 2-T			PARCEL 3			PARCEL 3-T			PARCEL 4			PARCEL 4-T			
LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE	
A-B	N 27°44'10"W	36.92'	K-J	N 38°13'37"W	94.35'	K-B	S 80°48'48"W	10.38'	N-M	S 12°18'07"E	98.16'	J-D	S 75°15'29"W	30.91'	O-P	S 47°52'13"E	35.61'	H-F	S 88°18'29"W	37.35'	
B-K	N 80°48'48"E	10.38'	J-M	N 75°15'29"E	41.29'	B-C	N 68°45'03"W	75.57'	M-J	S 75°15'29"W	41.29'	D-E	N 10°37'16"W	109.52'	P-Q	S 16°19'54"E	15.18'	F-G	N 54°22'58"E	27.78'	
K-L	S 12°18'07"E	15.35'	M-K	S 12°18'07"E	86.61'	C-D	N 10°37'16"W	41.23'	J-E	N 26°39'06"W	111.64'	E-J	S 26°39'06"E	111.64'	Q-R	S 82°11'29"W	17.61'	G-H	S 44°22'35"E	21.09' Ch.	
L-A	S 10°44'40"E	19.68' Ch.				D-J	N 75°15'29"E	30.91'	E-F	N 15°07'49"E	47.90'	F-H	N 88°18'29"E	37.35'	R-S	N 12°18'07"W	6.21'		R-100.00'	21.13' Arc.	
	R-361.99'	19.68' Arc.				J-K	S 38°13'37"E	94.35'	F-H	N 88°18'29"E	37.35'	H-N	S 25°18'44"E	45.02' Ch.	S-O	N 18°53'54"W	36.76' Ch.				
																R-160'	36.84' Arc.				

\* Lot No. As Shown On The Belmont Co. Tax Map for identification purposes only and are not Lots in a Recorded Subdivision.

NOTE: Record Area After Outsides Minus Total P.R.O. Minus Net Take Equals Net Residue.

### SUMMARY OF ADDITIONAL RIGHT OF WAY REQUIRED

PARCEL NO.	OWNER	DEED RECORD			RECORD AREA	TOTAL PRO	TOTAL TAKE	PRO IN TAKE	NET TAKE	NET RES. RIGHT	NET RES. LEFT	BLDGS TO BE ACQD	REMARKS	TYPE FUND
		BOOK	PAGE	DATE										
1T	Vasiliko S. Stifos	257	70	8-14-24	4375 S.F.	998 S.F.	187 S.F.	0	187 S.F.	—	3377 S.F.	None	Provide Working Area For Temporary Runaround	STATE
2	Tony Bartolo and Wanda Bartolo	583	893	3-19-79	0.21 Ac.	0.037 Ac.	0.014 Ac.	0	0.014 Ac.	—	0.159 Ac.			
	do	599	197	3-30-81	0.125 Ac.	0.026 Ac.	0.027 Ac.	0	0.027 Ac.	—	0.072 Ac.			
2T	do						0.071 Ac.	0	0.071 Ac.	—			Provide Working Area For Temporary Runaround	
3	Fairpoint Mennonite Church	499	248	8-19-67	0.376 Ac.	0.103 Ac.	0.177 Ac.	0	0.177 Ac.	—	0.096 Ac.			
	do	499	657	9-16-67	0.078 Ac.	0	0.008 Ac.	0	0.008 Ac.	—	0.070 Ac.			
	do	512	190		0.167 Ac.	0	0	0	0	—	0.167 Ac.		Not Involved	
	do	515	209	12-23-69	0.157 Ac.	0	0	0	0	—	0.157 Ac.		do	
3T	do						0.039 Ac.	0	0.039 Ac.	—			Provide Working Area For Temporary Runaround	
4	Chessie System Railroads	133	333	11-2-04	1/4 Ac.	0.024 Ac.	0.011 Ac.	0	0.011 Ac.	0.215 Ac.			Parcel 8 Of R.R. Valuation Map 1-OH-122.1(9)	
4T	do						297 S.F.	0	297 S.F.	—			Provide Working Area For Temporary Runaround	

### R/W PLAN AND SUMMARY

REVISION COMPLETED BY DATE 12-7-82