

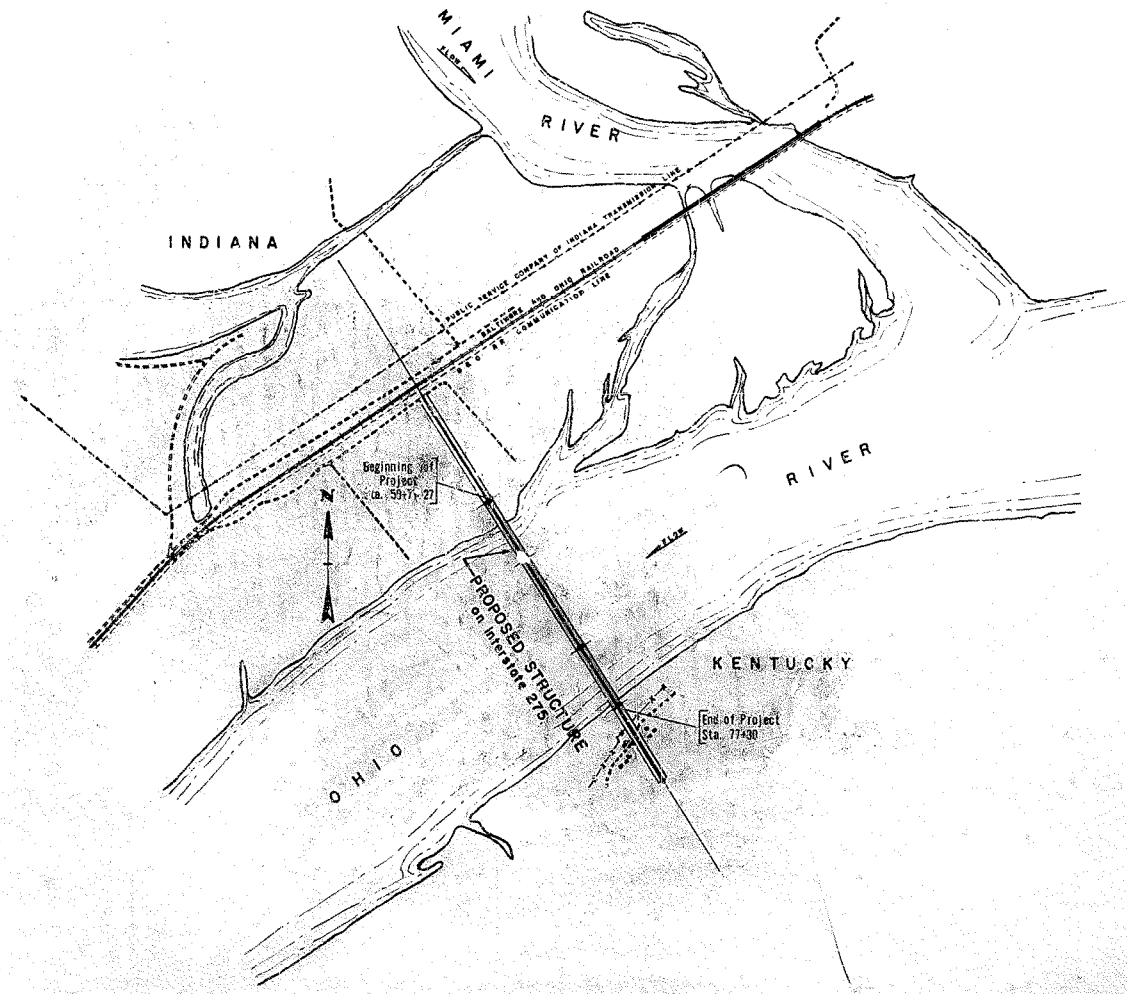
NO.	DATE	BY	REVISION
1	1-7-67	M. W.	

COMMONWEALTH OF KENTUCKY
STATE OF INDIANA
STATE HIGHWAY DEPARTMENTS

PLAN AND PROFILE OF PROPOSED
STATE HIGHWAY
BOONE COUNTY
PROJECT I-275-9(19)0

INDEX OF PLANS

SHEET NO.	TITLE
1	INDEX AND TITLE SHEET
2	ESTIMATED QUANTITIES AND GENERAL NOTES
3	PLAN AND PROFILE
4	LOG OF BORINGS
5	HYDROGRAPH
6	LAYOUT
7	PIER A
8	PIER A
9	PIER B
10	PIER B
11	PIER C
12	PIER C
13	PIER D
14	PIER D
15	BILL OF REINFORCEMENT
16	MISCELLANEOUS DETAILS
17	PILE RECORD
18	TRIANGULATION NETWORK
19	CONSTRUCTION PERMIT INFORMATION
20	CONSTRUCTION PERMIT INFORMATION
21	RIGHT-OF-WAY, INDIANA



LAYOUT MAP

SCALE IN FEET
0 100 200 400 800
GROSS LENGTH 1,036.33 IN. FT. 85.53 MILES
NET LENGTH 1,036.33 IN. FT. 85.53 MILES

RECOMMENDED FOR APPROVAL
HAZELET AND ERDAL
CONSULTING ENGINEERS
FILE NO. 872-A

BY *R. Howard*

DATE Dec. 15, 1967



APPROVED BY KENTUCKY DEPARTMENT OF HIGHWAYS

BY *A. C. New* STATE HIGHWAY ENGINEER DATE 12-19-67

BY *W. B. Stapp* COMMISSIONER OF HIGHWAYS DATE 12-19-67

APPROVED BY INDIANA STATE HIGHWAY COMMISSION

BY *J. J. ...* CHIEF ENGINEER DATE 12-20-67

BY *M. L. Hayes* EXECUTIVE DIRECTOR DATE 12-22-67

SHEET 1 OF 27

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

RECOMMENDED FOR APPROVAL:

DISTRICT ENGINEER _____ DATE _____

APPROVED _____

DIVISION ENGINEER _____ DATE _____

GENERAL NOTES

SPECIFICATIONS: Kentucky Department of Highways Standard Specifications current edition, with Revisions and Special Note for Substructure, Main River Spans, shall apply to this Project.

DESIGN LOAD: Bridge designed for HS20-44 loading as specified in 1961 AASHTO Specifications, including Interim Specifications for 1961, 1962, 1963 and 1964 or alternate loading of two 24 kip axles spaced 4 feet apart, whichever produces the greater stress, and modifications as per the Design Specifications for this Project. Dead load includes 20 pounds per square foot of roadway surface allowance for future wearing surface.

DESIGN STRESSES: For reinforced concrete:
 $f'_s = 20,000$ psi. $u = 200$ psi. for embedment
 $f'_c = 3,000$ psi. $u = 300$ psi. for Σ_0
 $f_c = 1,200$ psi. $n = 10$

FOUNDATION PRESSURE: Footings are designed for a maximum pressure of 18,000 pounds per square foot and piles are designed for a maximum load of 117 tons per pile. These maximums are for Group I loads with increases allowed for other loading groups in accordance with AASHTO Specifications, Article 1.4.1.

TYPE OF PILE: The Contractor shall use 14" Structural Steel Bearing Pile at 89 pounds.

PILING: Piling shall be driven to refusal or to solid rock. Test piles shall be driven where designated on the plans to determine the length required. All test piles shall be accurately located so that they may be used in the finished structure.

COORDINATION WITH CONTRACTORS ON ADJACENT PROJECTS: In addition to the requirements of Article 1.5.8 of the Standard Specifications, this Contractor shall coordinate his work with that of Contractors on adjacent sections of this Project. See Special Note for Substructure, Main River Spans.

CONCRETE: Class 'A' Concrete is to be used throughout.

CIRCULAR SECTION REINFORCED CONCRETE COLUMNS: This note modifies the requirements of Article 404.3.1 and 403.3.8 for pier columns. The concrete shall be placed, finished and cured as specified in Article 404.3.1 except as required by the following:

- (a) All forms for the circular section columns shall be made of metal or shall be plastic or plastic-lined so as to give the surface a true, smooth, cylindrical shape free from fins, joints and irregularities.
- (b) The concrete shall be placed in, and carefully vibrated against the forms to assure smooth surfaces without voids, honeycomb, air pockets or irregularities in the surface.
- (c) The surface shall be finished as specified in Article 403.3.8-B.

No extra payment will be made to the Contractor for the use of metal, plastic or plastic-lined forms, nor for placing or finishing the concrete. The cost of furnishing the forms, placing the concrete and finishing as specified shall be included in the unit price bid for Concrete, Class 'A'.

BEVELED EDGES: All exposed edges shall be beveled 7/8" unless otherwise shown.

CONSTRUCTION JOINTS: All construction joints shall be carefully formed. The Contractor shall furnish sufficient mixer capacity to place the concrete between construction joints, as noted on the plans, in a period not to exceed ten (10) hours continuous run. After one section of the concrete has been placed, the construction joint shall be thoroughly cleaned of all laitance and loose or foreign material just before the concrete takes its final set (which is about six hours). The joint shall then be covered with burlap and kept completely saturated with water. Flush the joint with 1:2 Portland Cement Mortar before placing the adjoining section.

SLOPE PROTECTION: Slope Protection shall be Dry Cyclopean Stone Riprap in accordance with Article 501.3.5 of the Standard Specifications.

REINFORCEMENT: Dimensions shown from face of concrete to bars are to center of bars unless noted as clear distance. Spacing of bars is from center to center of bars. See Special Note for Substructure, Main River Spans, for splicing of reinforcement.

PROTECTING EXPOSED STEEL REINFORCEMENT: Exposed steel reinforcement at the tops of all columns shall be protected by painting with Type 1 Red Lead or other protective measure as may be approved by the Engineer. The cost of protecting the exposed steel reinforcement shall not be paid for separately but shall be included in the unit price bid for 'Steel Reinforcement'.

SPIRAL REINFORCEMENT: Spirals for spirals where desired by the Contractor shall be made with a minimum of one and one-half turns of spiral, or the spirals may be butt welded in accordance with the requirements for welding in the Special Notes. No additional payment will be made for these spirals, but the cost will be considered incidental to the cost of the developed length of spiral shown on the Plans. Spiral reinforcement shall meet the requirements of Section 541.5.0 of the Standard Specifications.

PIER LIGHTS: During construction, from completion of Piers B and C to any elevation above the tops of their respective cofferdams, each end of each pier shall be marked by a fixed 360 degree red light. Lights shall be navigation type with 155 mm marine beacons, aluminum lanterns complete with 360 degree red acrylic Fresnel wide vertical divergence lens, lampchanger, four prefocused 0.46 amp lamps, Sun Switch and 6 volt, 2500 ampere-hour carbon-zinc battery, or equal. A weather-tight wood battery box to protect the battery is to be furnished and securely placed convenient to each light at each location. Lights shall be raised with each successive lift of concrete until they are in place at final elevation at top of each pier.

The above lights shall be displayed from both downstream and upstream ends of the cofferdams at Piers B and C while the cofferdams are in existence. Temporary lights shall be visible against the background lighting for a distance of at least 2,000 yards, 90 percent of the nights of the year.

Upon completion of the contract, the lights shall remain in place. The cost of furnishing, erecting, moving and maintaining these lights until acceptance of the Project by the Kentucky Department of Highway, will be included in the lump sum bid for the pay item, 'Pier Lights'.

CLEARANCE GAGES: A clearance gage consisting of painted marks and numerals as shown on the Plans shall be painted on the upstream and downstream ends of Pier C only. The marks and numerals are to be accurately located as shown on the Plans. The area to be painted shall be thoroughly cleaned before painting. The marks and numerals shall be painted directly on the concrete with two coats of black paint as specified herein. The paint shall be similar and/or equal to any of the following:

- a. No. 801 Coroc Synthetic Enamel, black, as manufactured by the Cook Paint and Varnish Company, 1412 Knox Avenue, Kansas City, Missouri.
- b. Hydroflex Swimming Pool Paint, black, as manufactured by the Phelan-Faust Paint Manufacturing Company, 932 Loughborough Avenue, St. Louis, Missouri.
- c. DuPont 353-801 White and 353-802 Black, alkali resisting paints, as manufactured by the E. I. DuPont DeNemours and Company, 2100 Eiston Avenue, Chicago, Illinois.

The work covered by this section shall be paid for at the contract lump sum price for 'Painting Clearance Gages', which payment and price shall be full compensation for all materials, transportation, all equipment and tools, all work and labor, and all incidentals necessary to complete the work.

GROUT: Grout for use in grouting the reinforcing bars into the seal pours of Pier B shall be of the non-shrinking type. The grout shall be made from cement, sand and water with admixtures as necessary or desirable to obtain non-shrink properties. The cement, sand and water shall meet the requirements of the Standard Specifications and, in addition, the sand shall all pass a No. 30 sieve and 50 percent shall pass a No. 50 sieve and 20 percent shall pass a No. 100 sieve. The proportions of cement to sand may vary from a neat grout to a 1:1 mix. A minimum amount of water shall be used to obtain a flowable grout. The grout shall have the consistency of thick cream or heavy paint. Sample mixes shall be made to determine satisfactory consistency for use and these mixes shall be made into test specimens to demonstrate the strength and shrinkage characteristics which must be approved by the Engineer prior to the use of the grout in the construction. The cost of grouting at Pier B will be incidental to the construction of the pier.

FOUNDATION SEAL, CLASS 'A' CONCRETE: The concrete foundation seals to be placed under water shall be constructed in accordance with Articles 403.3.3-B and 404.3.1-B of the Standard Specifications except that a Type 0 Water-Reducing and Set-Retarding admixture conforming to the requirements of ASTM C494-67T shall be used in the mix as recommended by the admixture manufacturer for tremie concrete. The slump of the tremie concrete shall be not less than four (4) inches nor more than eight (8) inches. The admixture will not be paid for separately, but the cost shall be included in the price bid for 'Foundation Seal, Class 'A' Concrete'. The volume of 'Foundation Seal, Class 'A' Concrete' to be paid for shall be that volume as outlined by plan dimensions or as ordered in writing by the Engineer. The volume of concrete displaced by the pile heads shall be deducted from the pay quantities. The accepted quantities, thus measured, shall be paid for at the contract unit price per cubic yard for 'Foundation Seal, Class 'A' Concrete'. Such payment shall be full compensation for all materials, including admixtures as specified, forms, falsework, placing and finishing, all equipment, tools, labor, and incidentals necessary to complete the work.

ITEM	UNIT	ESTIMATED QUANTITIES				TOTALS
		PIER A	PIER B	PIER C	PIER D	
Foundation Seal, Class 'A' Concrete	Cu. Yds.	243	1,788	6,608(2) 5,344(2)	683	9,320(2) 8,056(2)
Concrete, Class 'A'	Cu. Yds.	1,831.3	4,258.6	8,828.3	2,303.8	14,422.0
Steel Reinforcement	Lbs. /39,838	130,678	168,167	233,794	190,435	722,674
Structure Excavation - Common	Cu. Yds.	2,200	3,030			5,230
Structure Excavation - Solid Rock	Cu. Yds.			1,155	555	1,710
Cofferdams						Lump Sum
Steel Piles(14BP89) - Furnishing	Lin. Ft.	4,300	7,600			11,900
Steel Piles(14BP89) - Driving	Lin. Ft.	4,300	7,600			11,900
Slope Protection (1)	Sq. Yds.	690				690
Pier Lights						Lump Sum
Painting Clearance Gages						Lump Sum

- (1) Dry Cyclopean Stone Riprap
- (2) If internally braced cofferdam is employed at Pier C.
- (3) If self-supporting cofferdam is employed at Pier C.

**** PIER LIGHTS (Cont.):** Immediately prior to final acceptance of the project by the Kentucky Department of Highways, the Contractor shall fully recharge the batteries and replace all the lamps (bulbs) and perform any other maintenance necessary as directed by the Engineer so as to leave the temporary pier lights in satisfactory automatic operating condition.

FALSEWORK: The Contractor shall submit to the Division of Construction for submission to U.S. Coast Guard for approval and temporary navigation lighting requirements six (6) sets of falsework plans showing the plan, elevation, and location of any and all temporary structures to be used in connection with the construction of this bridge.

SPECIAL PROVISIONS

- No. 5-A For Staking (F. A. Projects).
- No. 15 Relating to Bid Proposal Guaranty and Contract Bonds.
- No. 40-B For Grading Requirements for Coarse Aggregates.
- No. 46 Relative to Water Pollution.

PR 1278 (Rev. 12-65) Required Contract Provisions Federal-Aid Contracts Interstate Highways (Act of 1956)

Chronological Listing of Revisions to the 1965 Edition of The Standard Specifications

SPECIAL NOTE

For Substructure, Main River Spans

REVISIONS: 1. DATE 5-28-68 BY: [Signature] CHECKED BY: [Signature]
 2. DATE 5-28-68 BY: [Signature] CHECKED BY: [Signature]
 3. DATE 5-28-68 BY: [Signature] CHECKED BY: [Signature]

ESTIMATED QUANTITIES & GENERAL NOTES

**KENTUCKY DEPARTMENT OF HIGHWAYS
INDIANA STATE HIGHWAY COMMISSION**

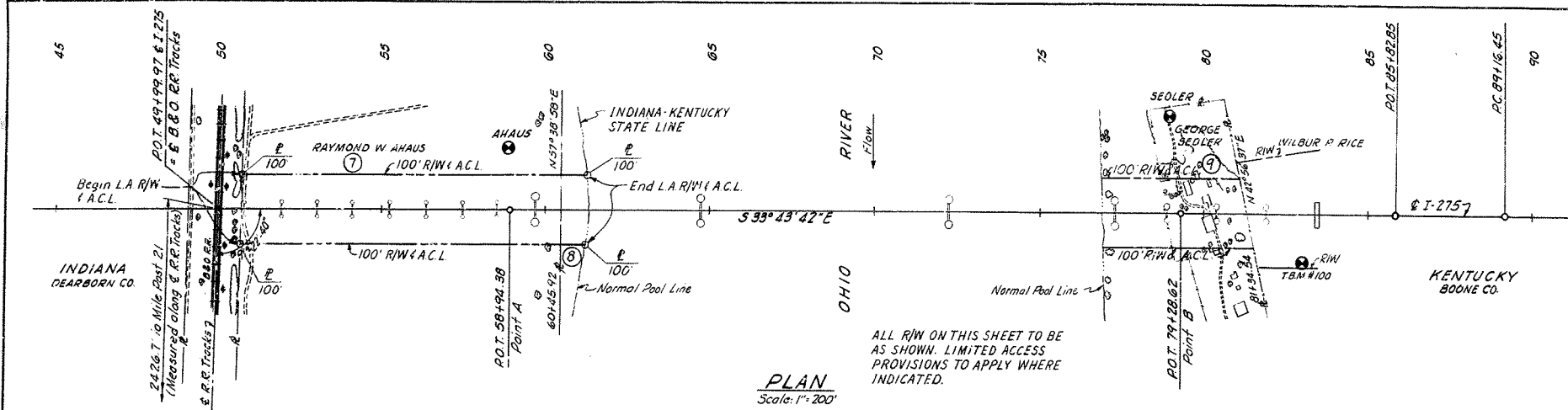
PROJECT 1275-7 () 0
BRIDGE OVER OHIO RIVER ON I 275
BETWEEN BOONE COUNTY, KENTUCKY AND
DEARBORN COUNTY, INDIANA

STATION 68+50.56

HAZLET & ERDAL Consulting Engineers File No. 872-1	BRIDGE NUMBER	DRAWING NO. 17208	INDEX
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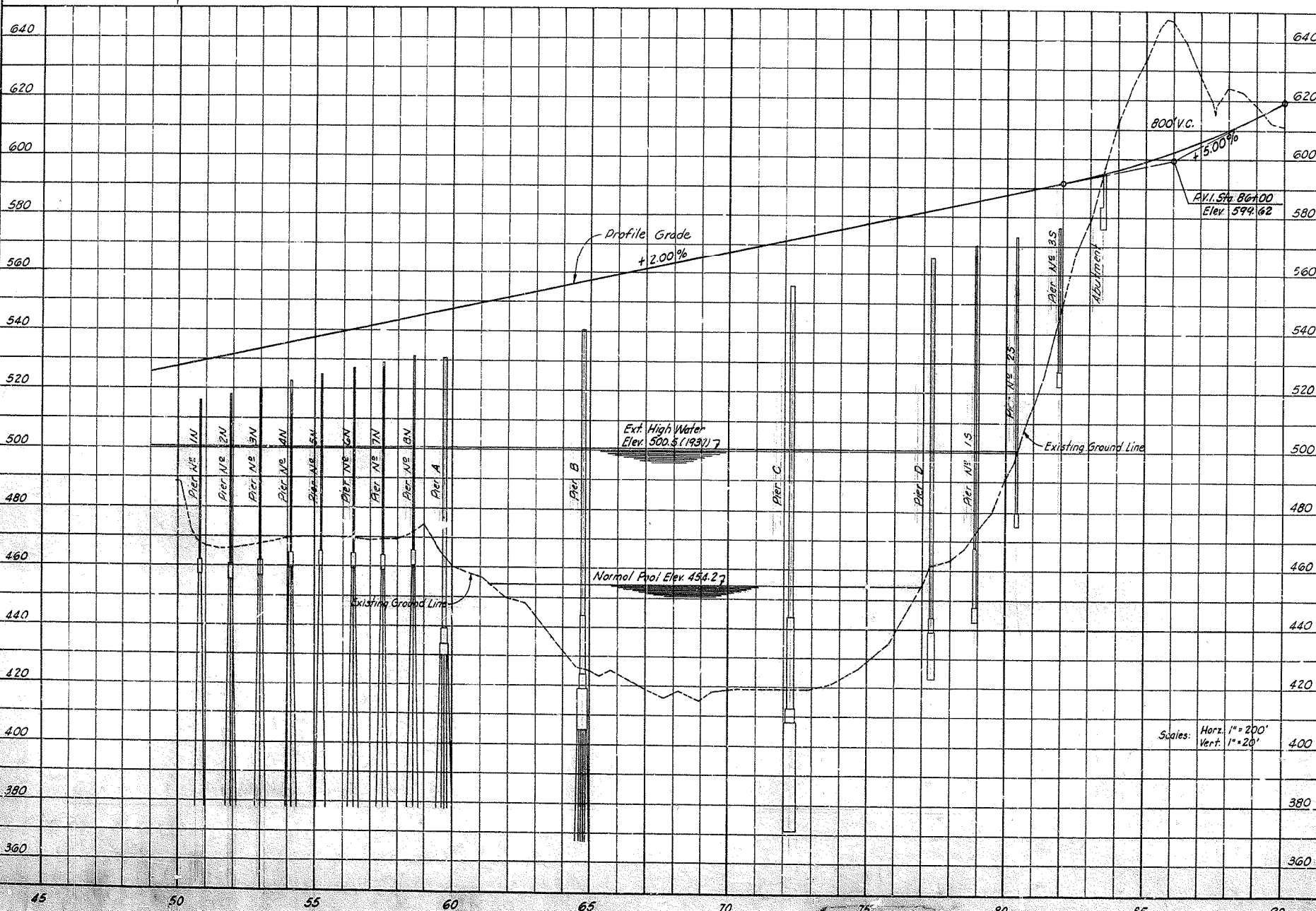
HYDRAULIC DATA

Max. Flood (1937) Elev. 500.5
 Max. Flood Discharge 940,000 c.f.s.
 Max. Flood Frequency 150 years - plus
 Design Flood (1937) Elev. 500.5
 Design Discharge 940,000 c.f.s.
 Backwater caused by Bridge Negligible

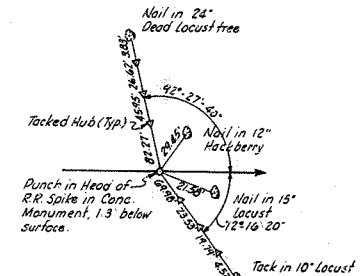
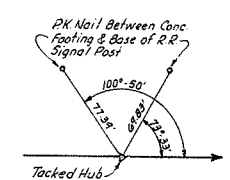


PLAN
Scale: 1" = 200'

ALL R/W ON THIS SHEET TO BE AS SHOWN. LIMITED ACCESS PROVISIONS TO APPLY WHERE INDICATED.

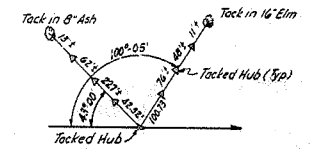
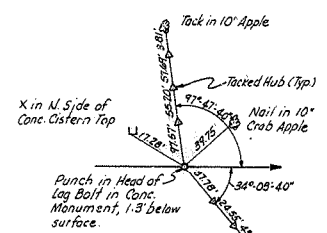


Scales: Horz. 1" = 200'
Vert. 1" = 20'



P.O.T. 49+99.97 & I-275 = B & O.R.R. Tracks

P.O.T. 58+94.38 Point A



Tack in 30" Locust
P.O.T. 79+28.62 Point B

P.O.T. 85+82.85

BENCH MARKS

INDIANA
 AHAUS Elev. 474.340
 Survey Disk set in top of concrete cylinder projecting 2" and stamped AHAUS 1964, 178' Lt. Sta. 58+85

KENTUCKY
 SEDLER Elev. 482.620
 Survey Disk set in top of concrete cylinder projecting 3" and stamped SEDLER 1964, 279' Lt. Sta. 78+92

T.B.M. #100 Elev. 573.098
 R.R. Spike in N. Roof of 42" White Oak, 136' Rt. Sta. 83+03

NOTE:
Elevations Refer to Mean Sea Level
U.S.C. & G.S. - 1929 General Adjustment.

UTILITIES
None

SHEET 3 OF 21

PLAN & PROFILE

KENTUCKY DEPARTMENT OF HIGHWAYS
INDIANA STATE HIGHWAY COMMISSION

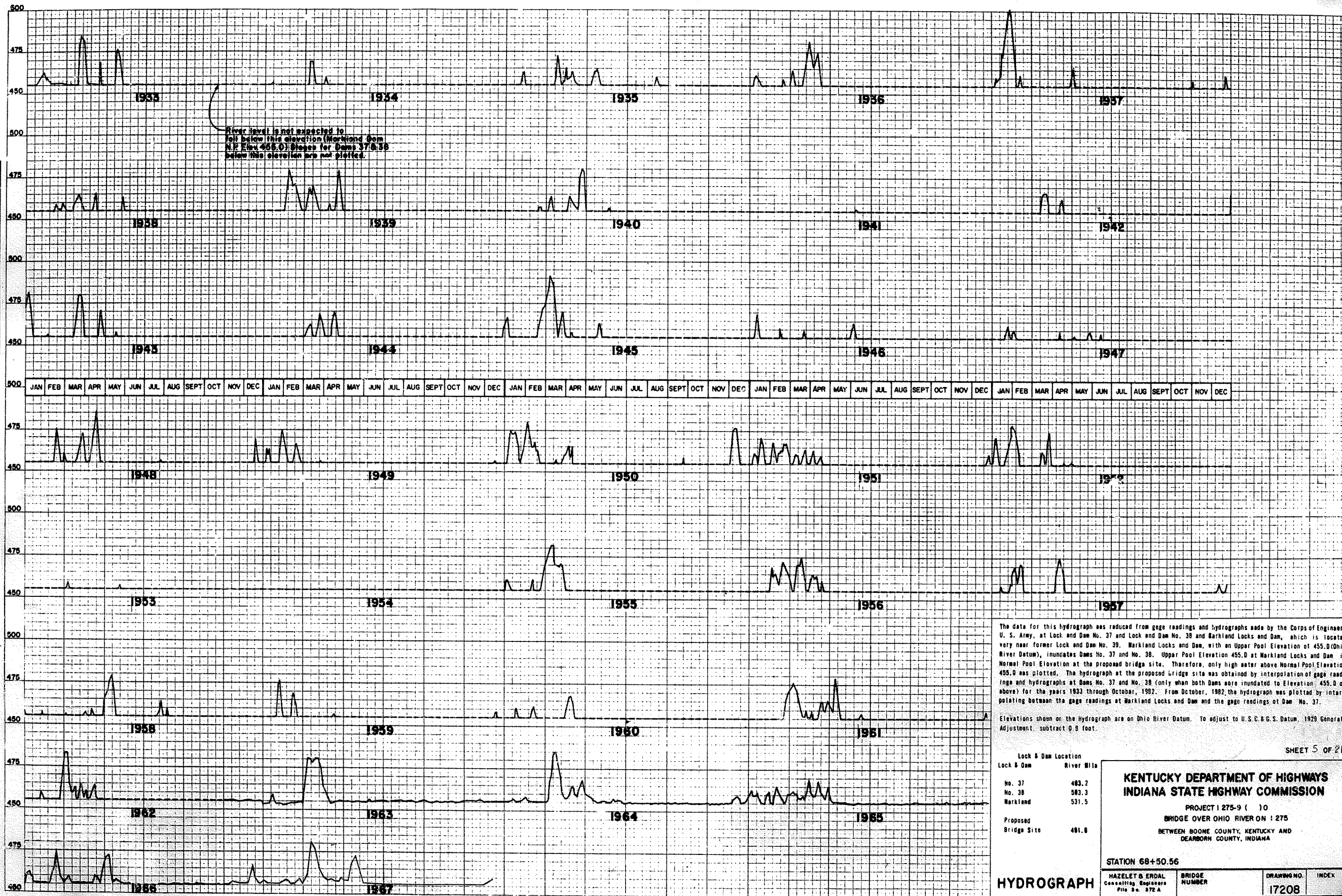
PROJECT 1 275-9 () 0
 BRIDGE OVER OHIO RIVER ON I 275
 BETWEEN BOONE COUNTY, KENTUCKY AND DEARBORN COUNTY, INDIANA

STATION
 HAZELT & ERDAL Consulting Engineers File No. 872

BRIDGE NUMBER
 17208

DRAWING NO.
 17208

INDEX



DATE
BY
FINAL SURVEY
DRAWN BY
CHECKED BY
DATE CALCULATED

DATE
BY
ORIGINAL SURVEY
DRAWN BY
CHECKED BY
DATE CALCULATED

The data for this hydrograph was reduced from gage readings and hydrographs made by the Corps of Engineers U. S. Army, at Lock and Dam No. 37 and Lock and Dam No. 38 and Barkland Locks and Dam, which is located very near former Lock and Dam No. 39. Markland Locks and Dam, with an Upper Pool Elevation of 455.0 (Ohio River Datum), inundates Dams No. 37 and No. 38. Upper Pool Elevation 455.0 at Markland Locks and Dam is Normal Pool Elevation at the proposed bridge site. Therefore, only high water above Normal Pool Elevation 455.0 was plotted. The hydrograph at the proposed bridge site was obtained by interpolation of gage readings and hydrographs at Dams No. 37 and No. 38 (only when both Dams were inundated to Elevation 455.0 or above) for the years 1933 through October, 1982. From October, 1982, the hydrograph was plotted by interpolating between the gage readings at Markland Locks and Dam and the gage readings of Dam No. 37.

Elevations shown on the Hydrograph are on Ohio River Datum. To adjust to U.S.C. & G.S. Datum, 1929 General Adjustment, subtract 0.9 foot.

SHEET 5 OF 21

Lock & Dam	River Mile
No. 37	483.2
No. 38	503.3
Markland	531.5
Proposed Bridge Site	481.8

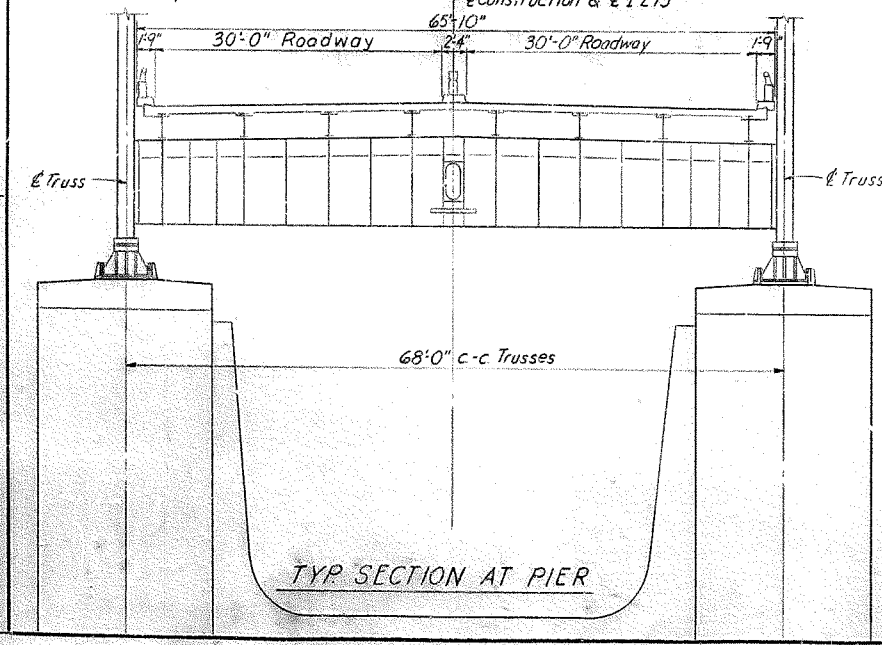
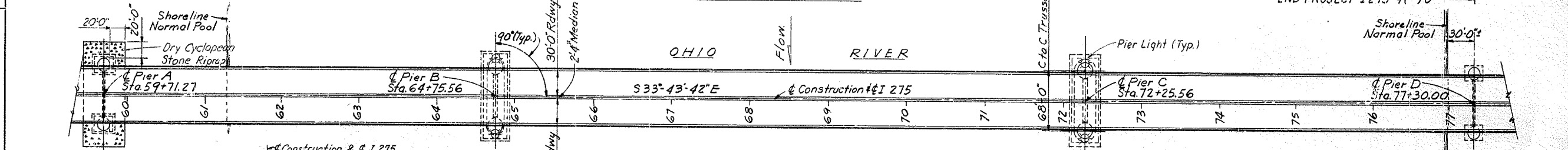
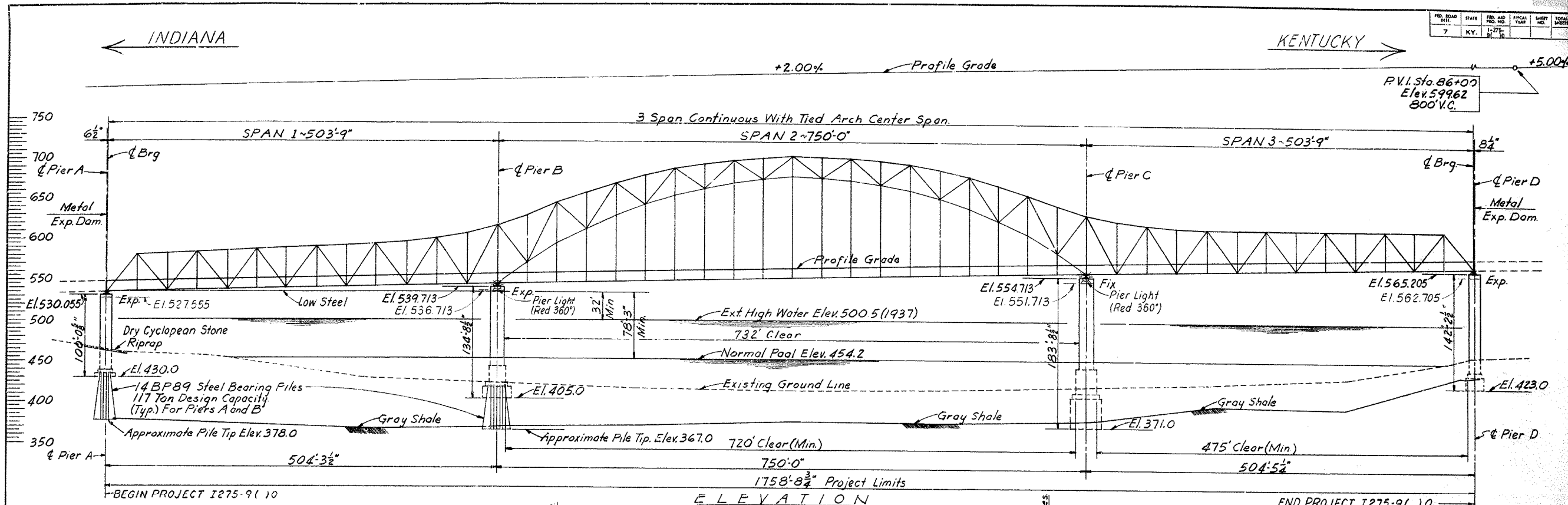
**KENTUCKY DEPARTMENT OF HIGHWAYS
INDIANA STATE HIGHWAY COMMISSION**

PROJECT 1275-9 (10)
BRIDGE OVER OHIO RIVER ON I 275
BETWEEN BOONE COUNTY, KENTUCKY AND
DEARBORN COUNTY, INDIANA

STATION 68+50.56

HYDROGRAPH	HAZELET & ERDAL Consulting Engineers P.O. Box 272-A	BRIDGE NUMBER	DRAWING NO. 17208	INDEX
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FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.	1-275-9			



3 Span Continuous Truss 503'-9", 750'-0", 503'-9" Spans
HS 20-44 Loading as specified in 1961 AASHO specifications
with Interim specifications for 1961, thru 1964 & 1965*
or alternate loading of two 24 Kip axles spaced 4 feet apart
whichever produces the greatest stress.
2-30'-0" Roadways with 2'-4" Median and 2'-0"-9" Brush Curbs.
No Skew.

*1965 revisions includes only new proposed
Section B dated September 1, 1965.

Superstructure shown for information only, not a part of this Contract

DESIGNED BY: L.M.H. CHECKED BY: C.B.K. DATE: 1-275-9
 DRAWN BY: L.M.H. CHECKED BY: C.B.K. DATE: 1-275-9

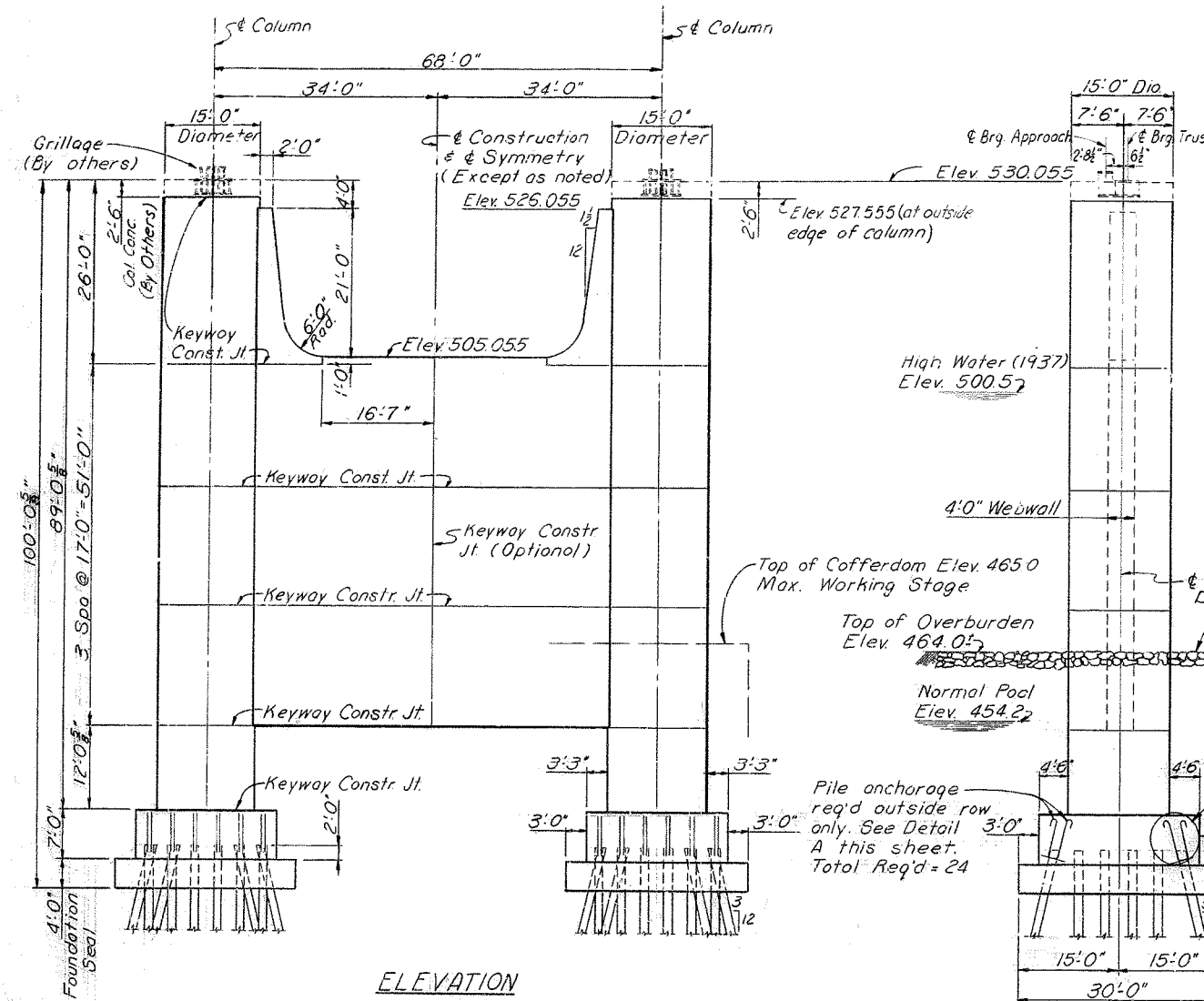
LAYOUT

SHEET 6 OF 21

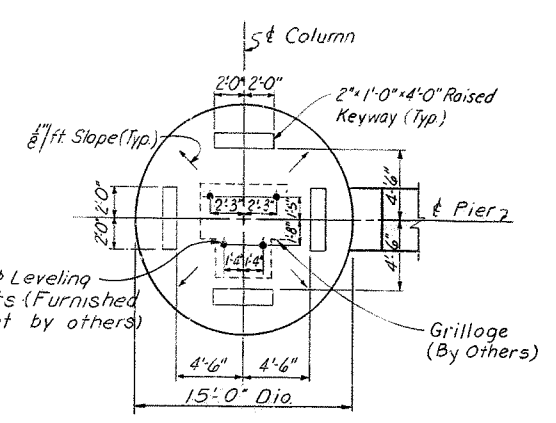
**KENTUCKY DEPARTMENT OF HIGHWAYS
INDIANA STATE HIGHWAY COMMISSION**

PROJECT I 275-9 (10)
BRIDGE OVER OHIO RIVER ON I 275
BETWEEN BOONE COUNTY, KENTUCKY AND
DEARBORN COUNTY, INDIANA

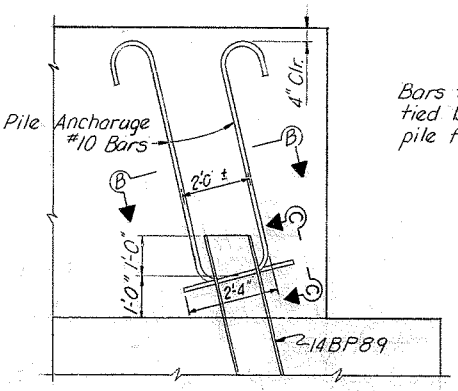
STATION 68+0.56		BRIDGE NUMBER	DRAWING NO. 17208	INDEX
HAZELET & ERDAL Consulting Engineers File No. 872 A				



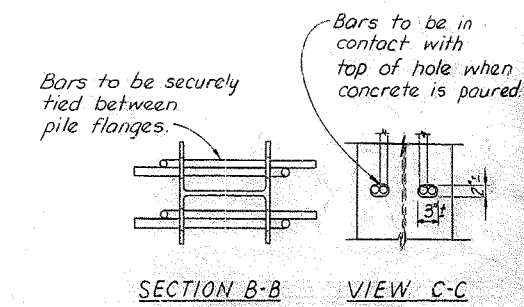
ELEVATION



PLAN OF COLUMN



DETAIL A

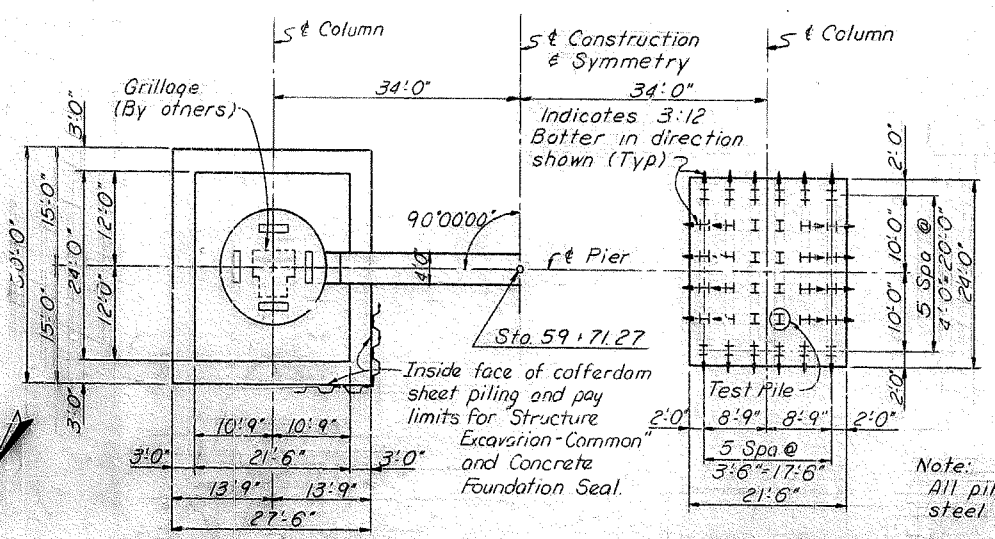


END VIEW

ESTIMATE OF QUANTITIES

Foundation Seal - Class "A" Concrete (Cu. Yds.)	243
Concrete Class "A" (Cu. Yds.)	1,831.3
Steel Reinforcement (Lbs.)	139,628
Structure Excavation - Common (Cu. Yds.)	2,200
Steel Piles (14BP89) - Furnishing (Lin. Ft.)	4,300
Steel Piles (14BP89) - Driving (Lin. Ft.)	4,300
Slope Protection (Sq. Yds.)	690

Notes:
 Work this sheet with Sheet 8
 For reinforcing bar details, see Sheet 15
 For General Notes, see Sheet 2
 For Grounding Details, see Sheet 16
 The cost of furnishing #10 anchor bars, is incidental to Steel Piles (14BP89) furnishing



FOOTING & SEAL DIMENSIONS PLAN PILE LAYOUT (Dimensions @ Elev. 434.0)

Note:
 All piles are 14BP 89 steel piles

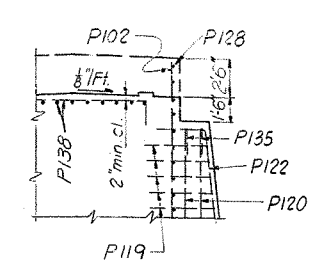
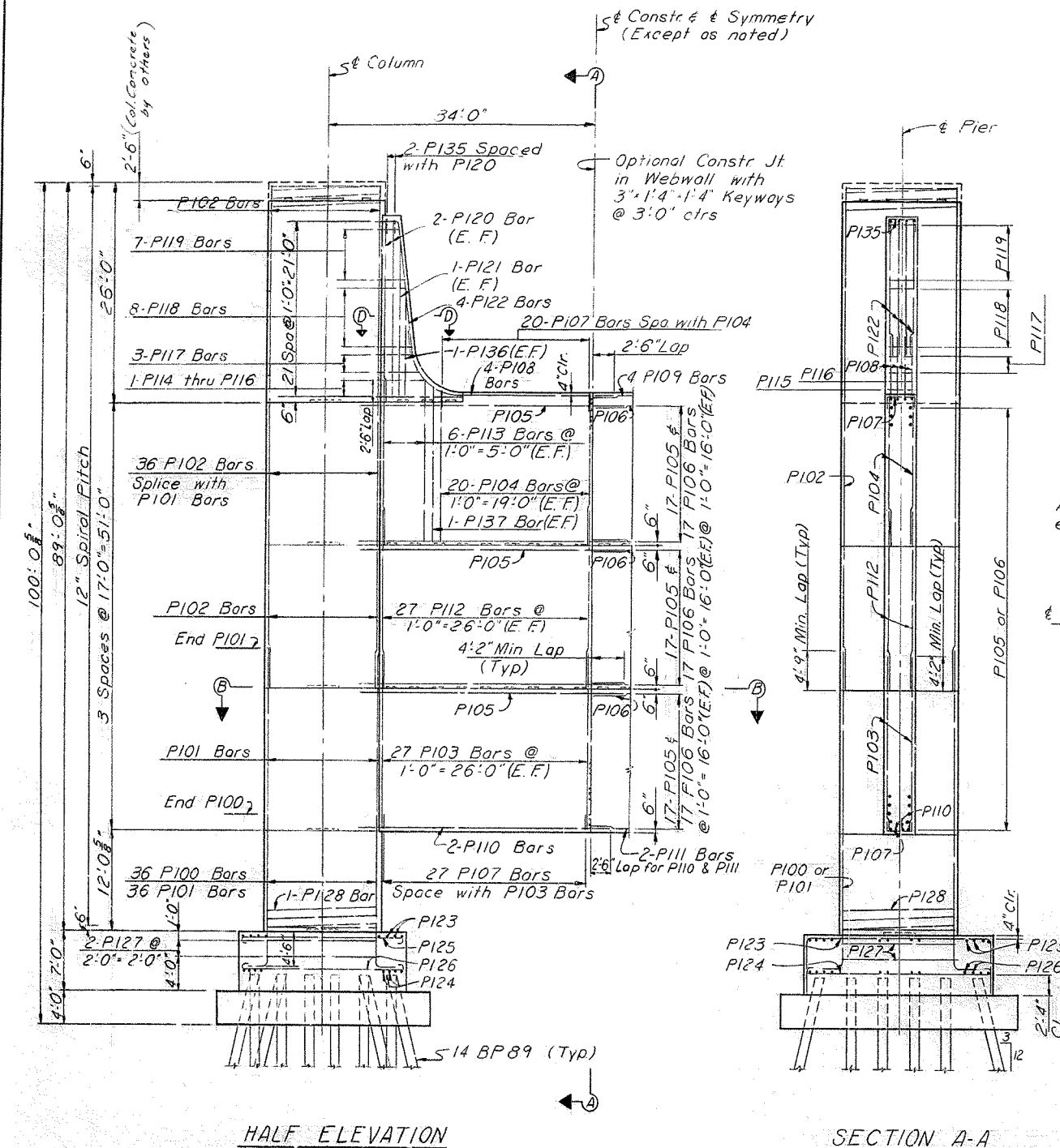
DRAWN BY: P. L. W. CHECKED BY: L. J. C. DATE: 1/10/50
 DESIGNED BY: L. J. C. DATE: 1/10/50
 CHECKED BY: P. L. W. DATE: 1/10/50
 APPROVED BY: H. L. W. DATE: 1/10/50

KENTUCKY DEPARTMENT OF HIGHWAYS
INDIANA STATE HIGHWAY COMMISSION

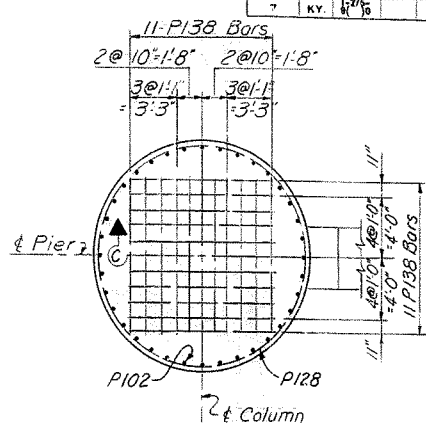
PROJECT 1 275-9 () 0
 BRIDGE OVER OHIO RIVER ON I 275
 BETWEEN BOONE COUNTY, KENTUCKY AND
 DEARBORN COUNTY, INDIANA

STATION 60+50.56

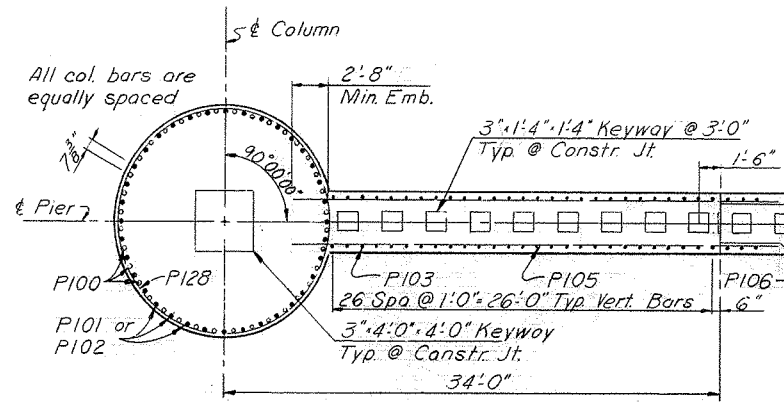
HAZLET & ERDAL Consulting Engineers File No. 872A	BRIDGE NUMBER	DRAWING NO. 17208	INDEX
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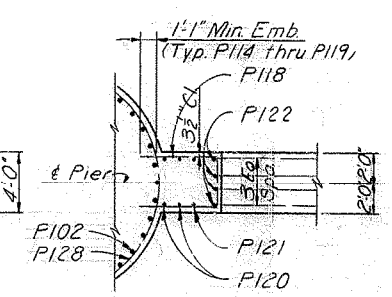
SECTION C-C



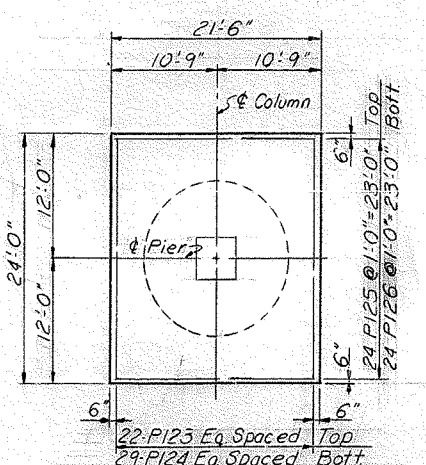
PLAN OF COLUMN



SECTION B-B



SECTION D-D

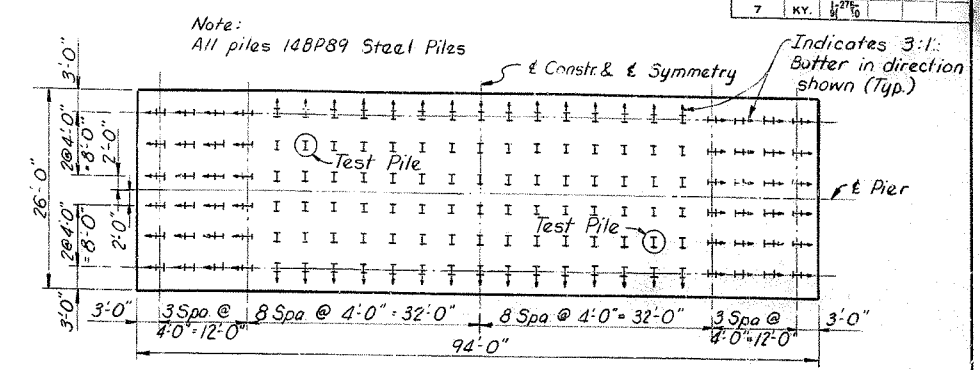
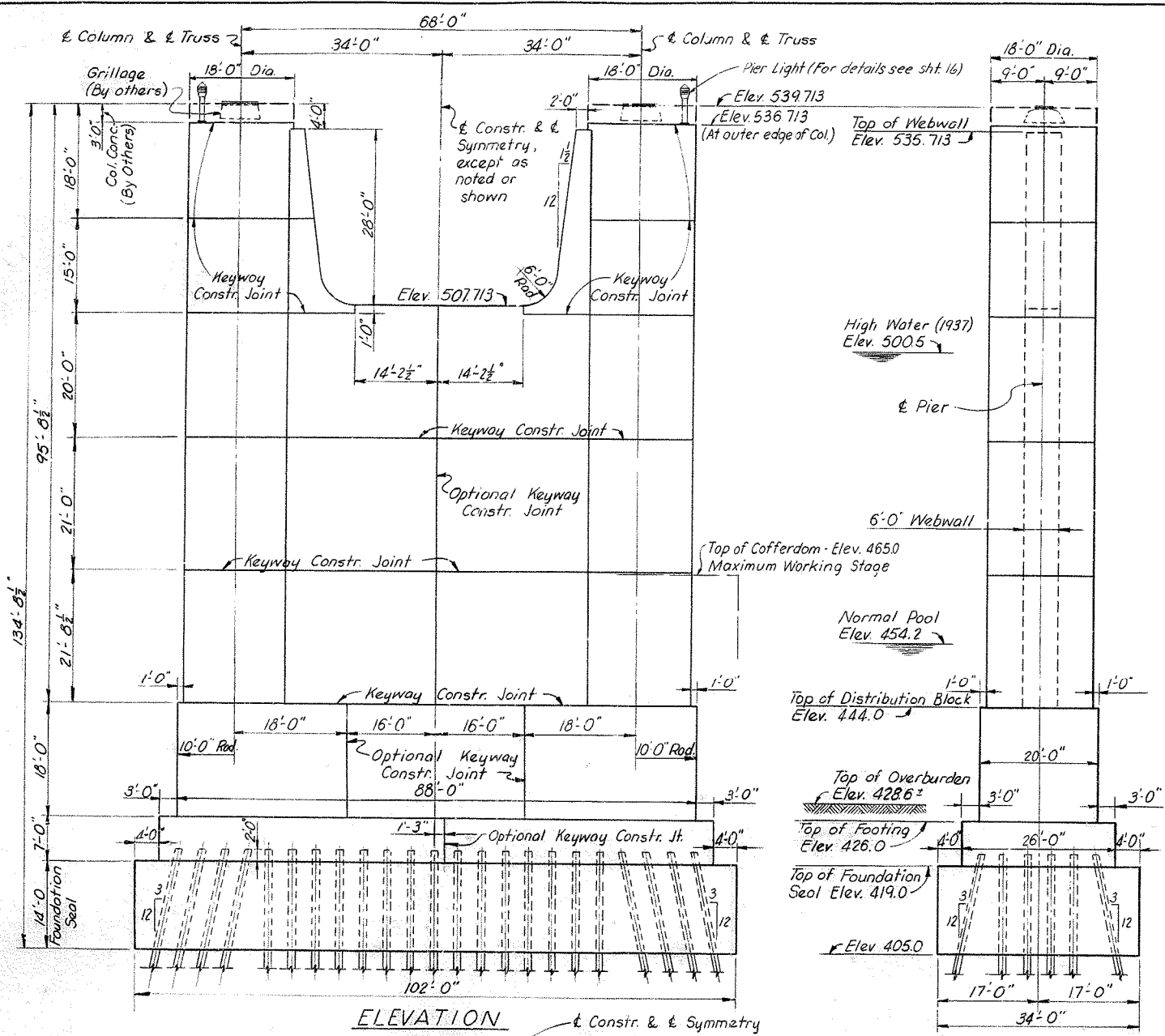


FOOTING PLAN
(Column bars not shown)

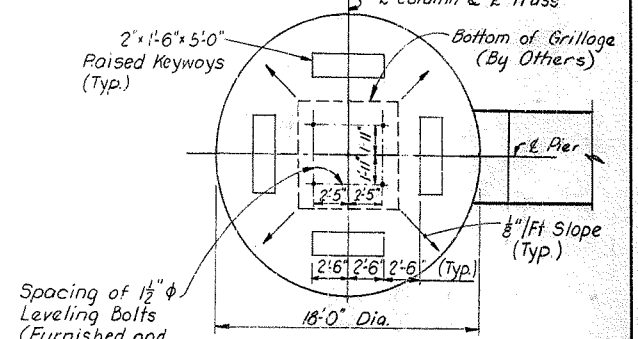
Notes:
Splices in vertical column bars P102 may be added if desired. The lap of such splices shall be 40 bar diameters.
Mark this sheet with Sheet 7 For reinforcing bar details, see Sheet 15
Bars P138, shown in Sect C-C, are to be accurately located as shown so that they do not interfere with the drilling of holes for placing of leveling bolts.
E.F denotes Each Face
4" clear cover to reinforcing bars maintained throughout except as noted.

DESIGNED BY: R. LIN
 CHECKED BY: A. C.
 DATE: 11/10/50
 DRAWING NO.: 17208
 PROJECT NO.: 1275-9 (10)
 STATION: 68+50.56
 BRIDGE NUMBER: 17208
 INDEX: 17208

KENTUCKY DEPARTMENT OF HIGHWAYS
INDIANA STATE HIGHWAY COMMISSION
 PROJECT 1275-9 (10)
 BRIDGE OVER OHIO RIVER ON I 275
 BETWEEN BOONE COUNTY, KENTUCKY AND
 DEARBORN COUNTY, INDIANA
 STATION 68+50.56
 HAZLET & ERDAL
 Consulting Engineers
 File No. 873 A
 BRIDGE NUMBER
 DRAWING NO.
 17208
 INDEX

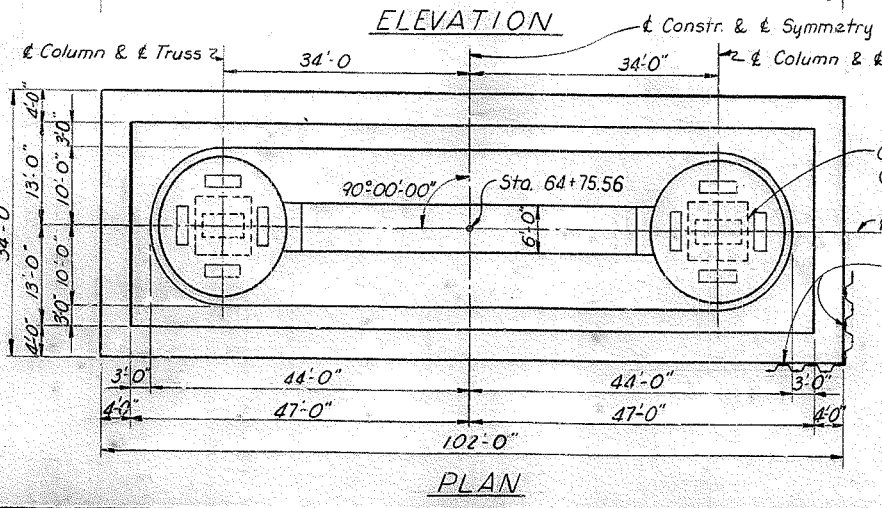


PILE LAYOUT
(DIMENSIONS AT ELEV. 419.0)



PLAN OF COLUMN

Notes:
Work this sheet with Sheet 10
For Reinforcing Bar Details, see Sheet 15
For Pier Light, Ladder and Grounding Details, see Sheet 16
For General Notes, see Sheet 2



PLAN

END VIEW

ESTIMATE OF QUANTITIES

Foundation Seal - Class "A" Concrete	(Cu. Yds.)	1,786
Concrete - Class "A"	(Cu. Yds.)	4,258.6
Steel Reinforcement	(lbs.)	168,167
Structure Excavation - Common	(Cu. Yds.)	3,030
Steel Piles (148BP84) - Furnishing	(Lin. Ft.)	7,600
Steel Piles (148BP84) - Driving	(Lin. Ft.)	7,600

DESIGNED BY: R. L. LIN
 CHECKED BY: DMH
 DATE: 10/10/56
 REVISIONS: (None)
 DATE: (None)
 REVISIONS: (None)
 DATE: (None)

SHEET 9 OF 21

**KENTUCKY DEPARTMENT OF HIGHWAYS
INDIANA STATE HIGHWAY COMMISSION**

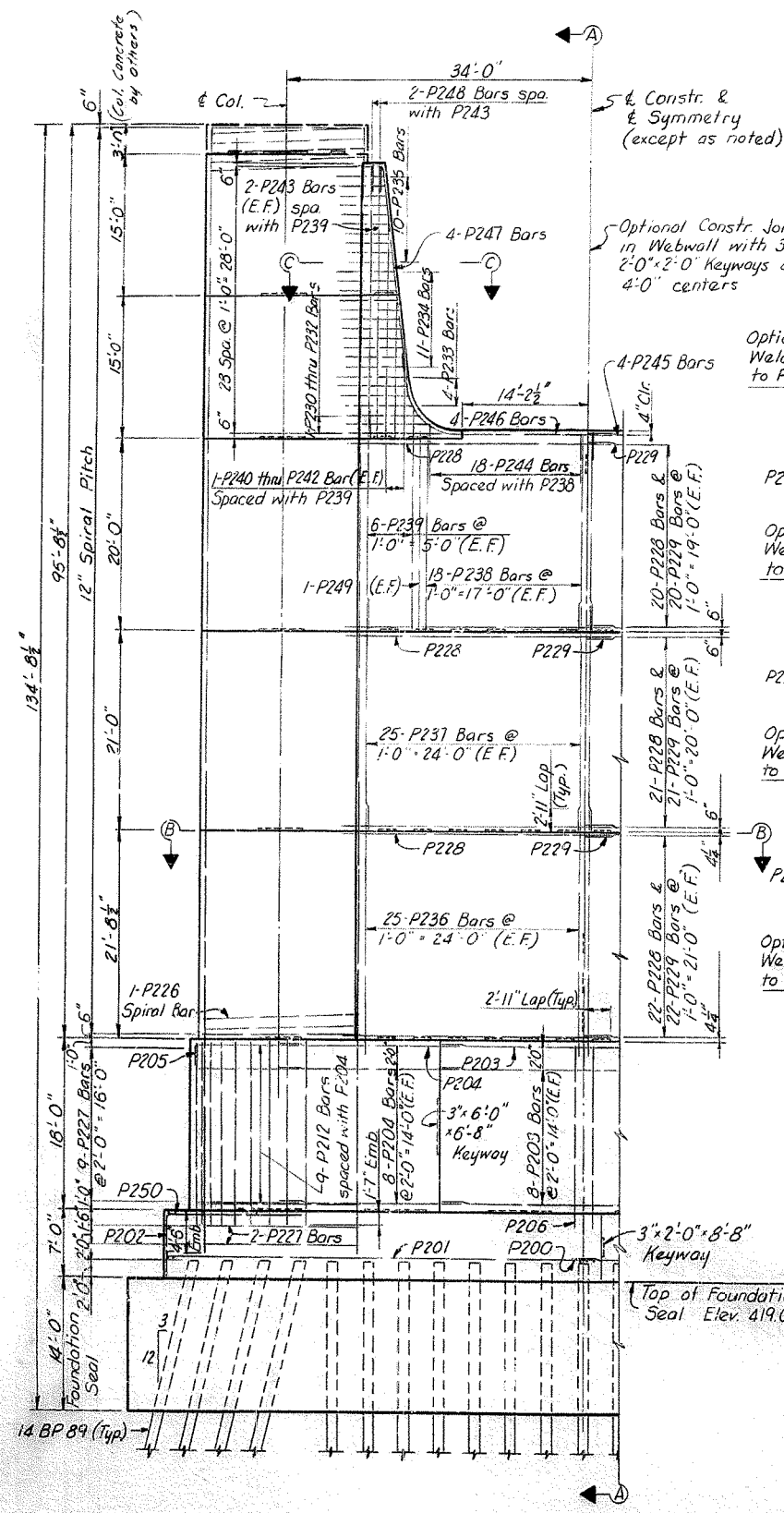
PROJECT: 275-9 (10)
BRIDGE OVER OHIO RIVER ON I 275
BETWEEN BOONE COUNTY, KENTUCKY AND
DEARBORN COUNTY, INDIANA

STATION 68+50.56

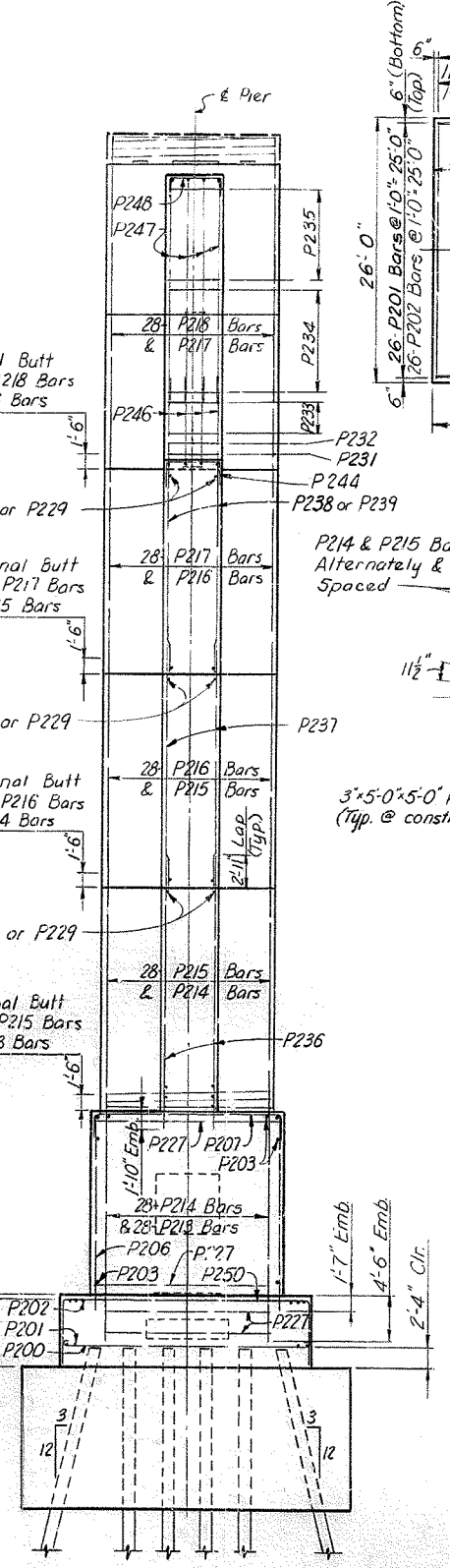
HAZELET & ERDAL Consulting Engineers File No. 8728	BRIDGE NUMBER	DRAWING NO. 17208	INDEX
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PIER B

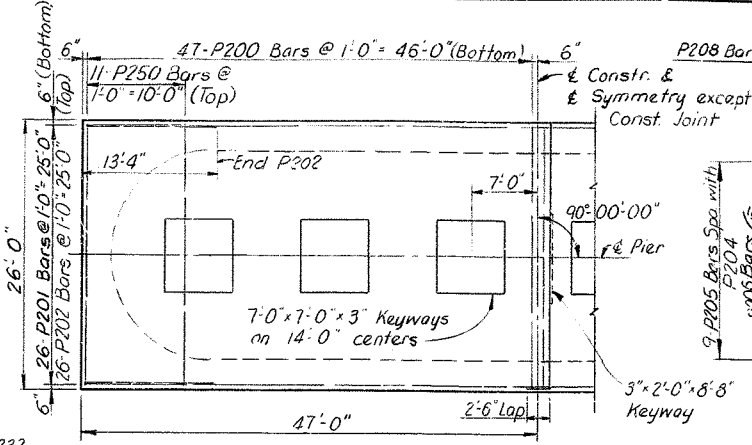
FED. ROAD DIST.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
7	KY.	1275-9	10	21



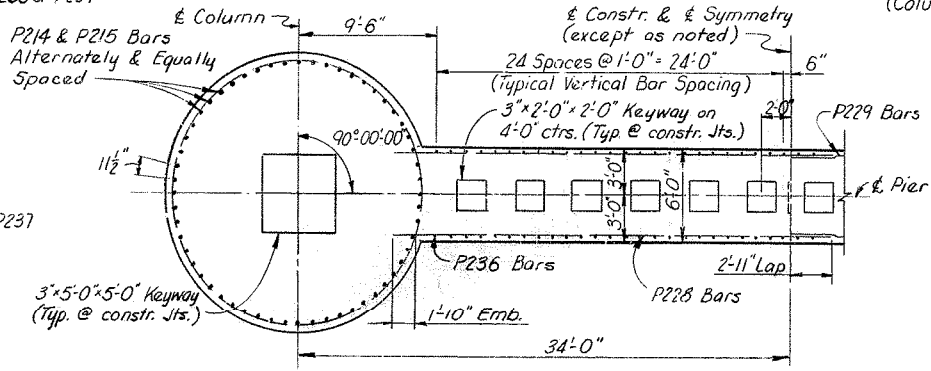
HALF ELEVATION



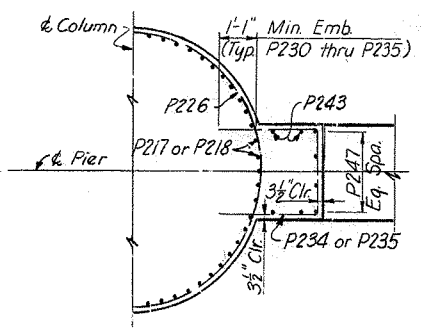
SECTION A-A



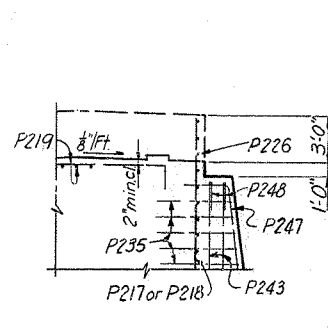
HALF PLAN OF FOOTING
(Column Bars not shown)



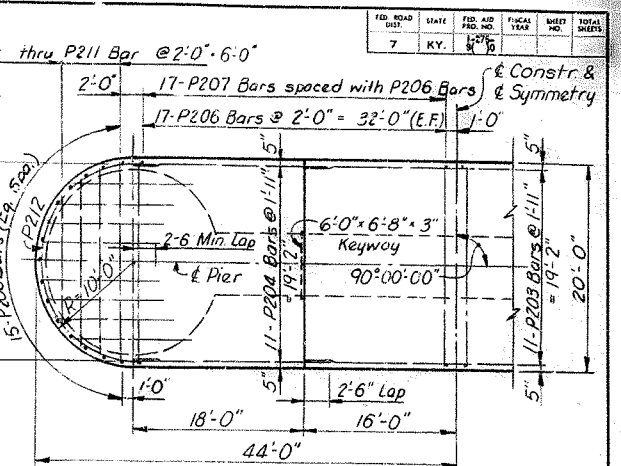
SECTION B-B



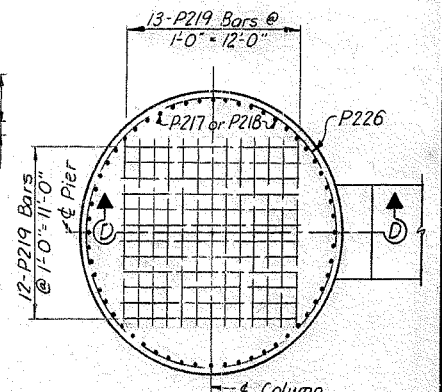
SECTION C-C



SECTION D-D



HALF PLAN OF DISTRIBUTION BLOCK
(Column and Webwall Bars not shown)



PLAN OF COLUMN

Notes:
 E.F. denotes Each Face
 Work this sheet with Sheet 9
 For Reinforcement Bar Details, see Sheet 15
 P219 Bars of section D-D are to be accurately located as shown so that they do not interfere with the drilling of leveling bolt holes.
 4" clear cover to reinforcing bars maintained throughout except as noted.
 "Optional Butt Weld" indicates that the welded splices in vertical column bars may be omitted or varied if the use of longer bars than detailed is desired. Such splices in adjacent bars shall be staggered vertically at least 30 bar diameters.

DRAWN BY: R. LIN
 CHECKED BY: DMH
 DATE: 11-26-60
 PROJECT NO.: 1275-9
 SHEET NO.: 10
 TOTAL SHEETS: 21

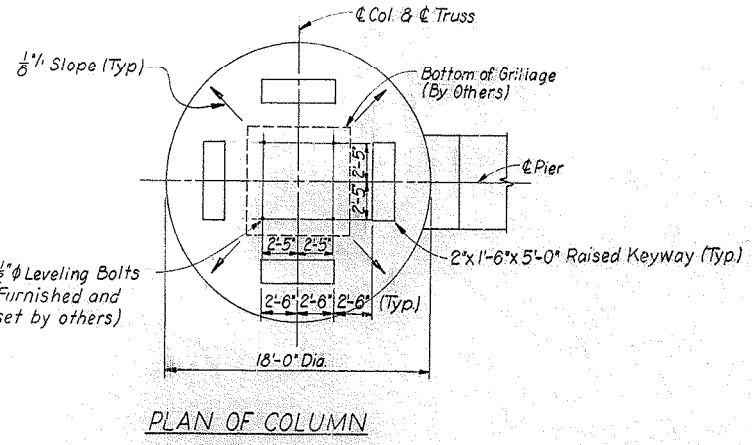
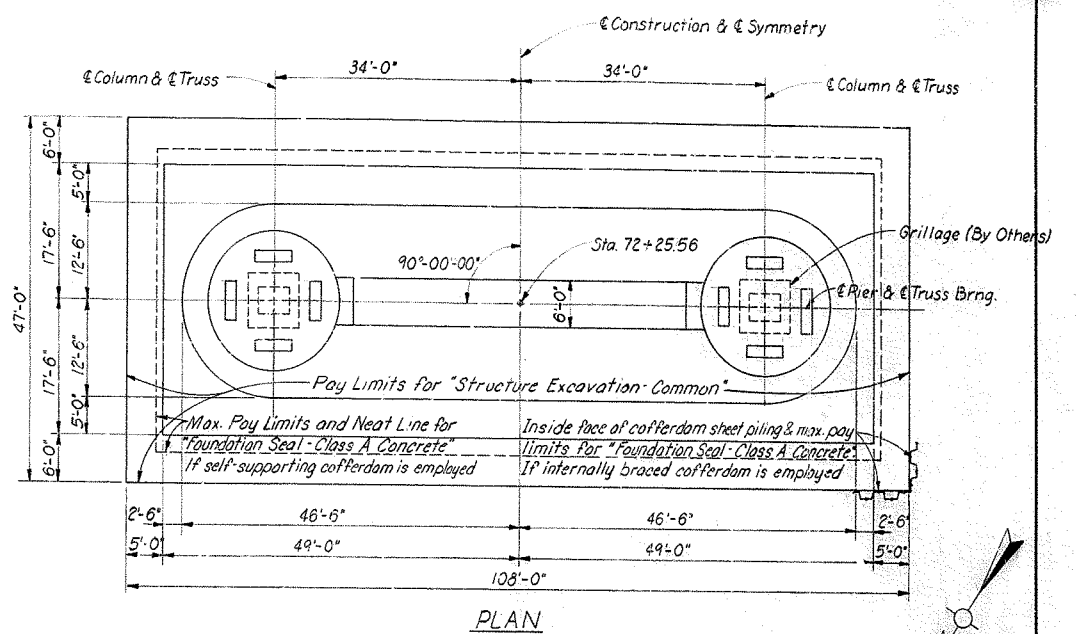
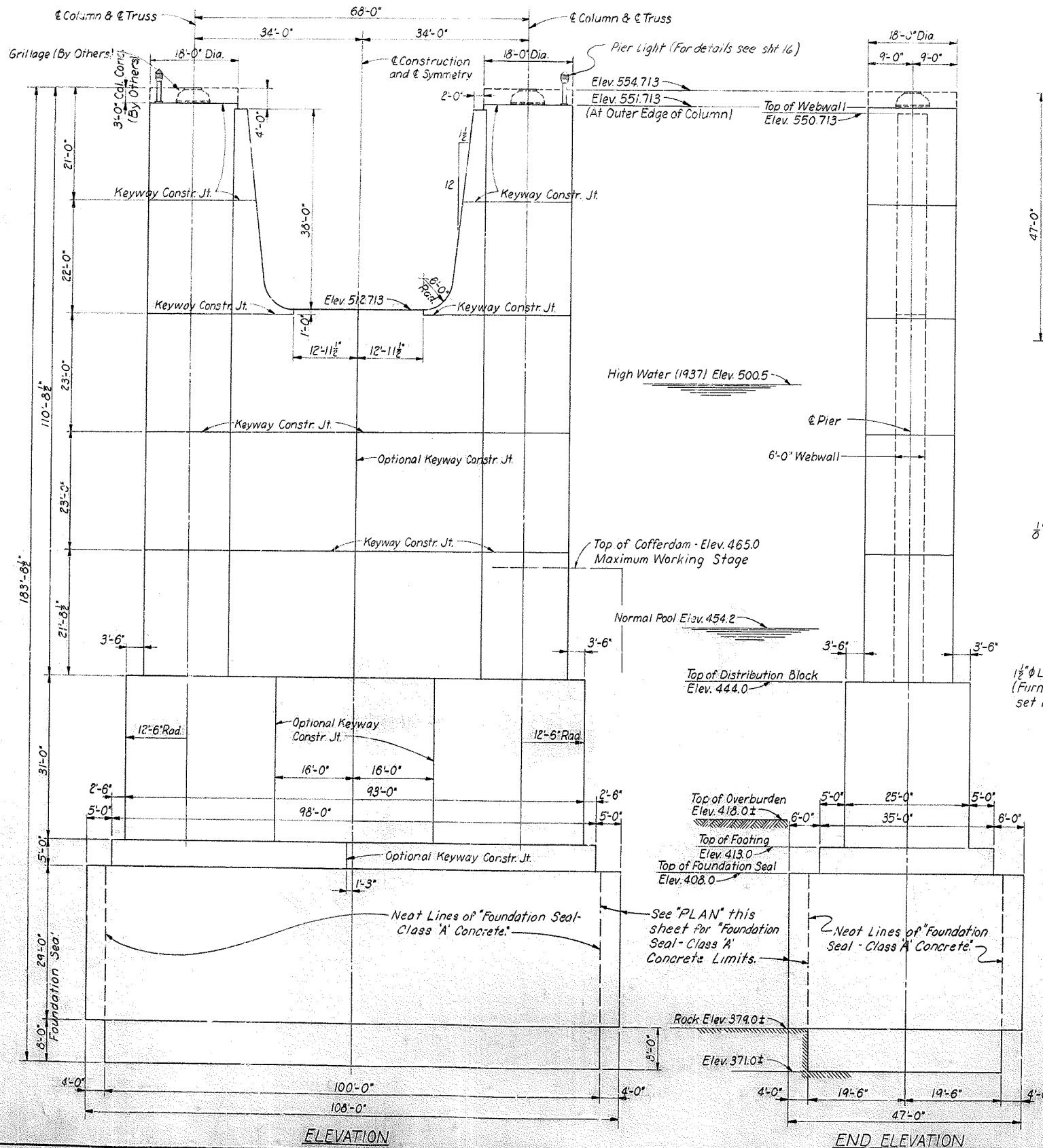
KENTUCKY DEPARTMENT OF HIGHWAYS
INDIANA STATE HIGHWAY COMMISSION
 PROJECT 1275-9 () 0
 BRIDGE OVER OHIO RIVER ON I 275
 BETWEEN BOONE COUNTY, KENTUCKY AND
 DEARBORN COUNTY, INDIANA

STATION 68+50.56

HAZLET & ERDAL Consulting Engineers File No. 872 A	BRIDGE NUMBER	DRAWING NO. 17208	INDEX
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PIER B

SHEET 10 OF 21



ESTIMATE OF QUANTITIES

Foundation Seal - Class "A" Concrete (Cu. Yds.)	6,608 *	5344 †
Concrete - Class "A" (Cu. Yds.)	6,028.3	
Steel Reinforcement (Lbs.)	233,794	
Structure Excavation - Common (Cu. Yds.)	7,330	
Structure Excavation - Solid Rock (Cu. Yds.)	1,155	

* If internally braced cofferdam is employed.
† If self-supporting cofferdam is employed.

NOTES:
 For General Notes, see Sheet 2
 Work this Sheet with Sheet 12
 For Reinforcement Bar Details, see Sheet 15
 For Pier Light, Ladder, Vertical Clearance
 Gage and Grounding Details, see Sheet 16

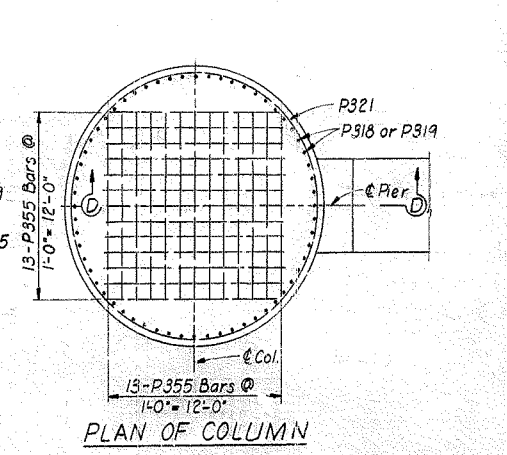
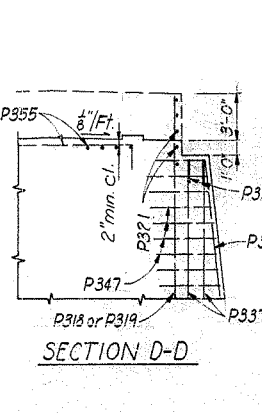
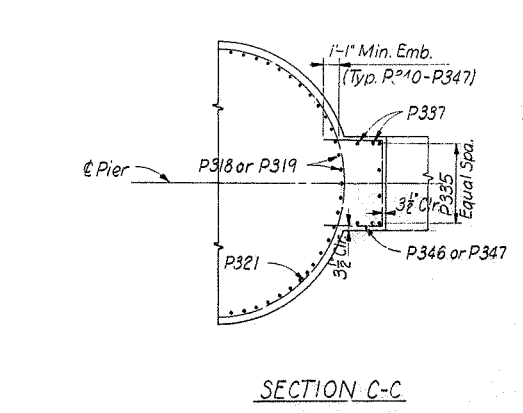
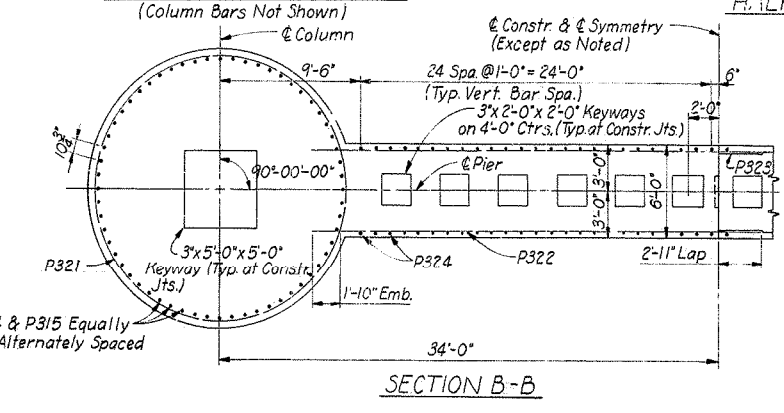
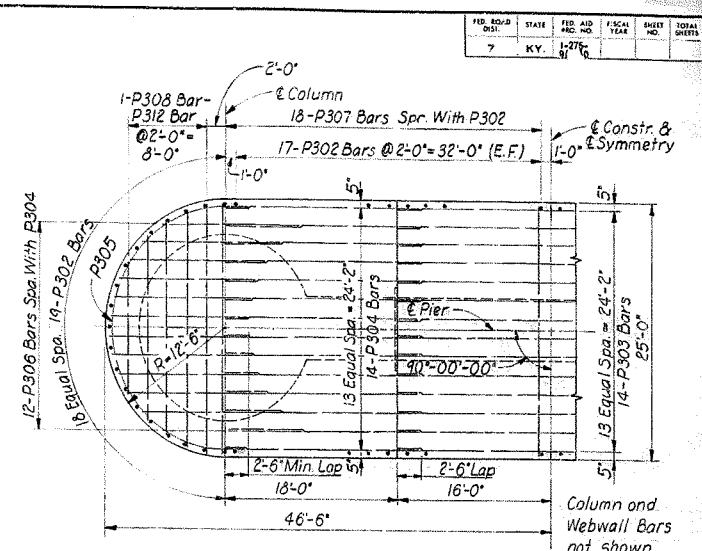
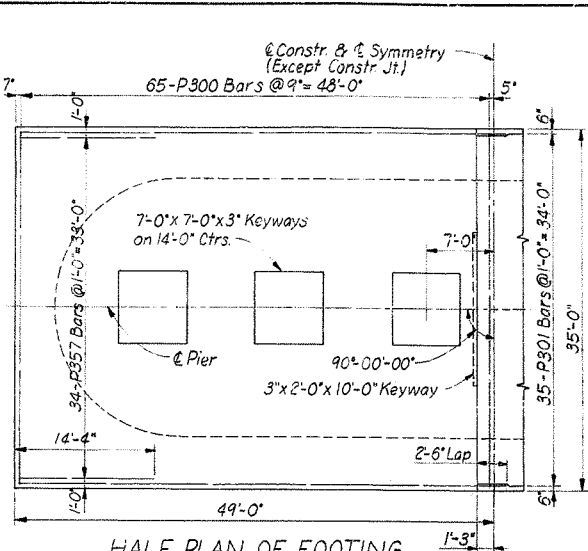
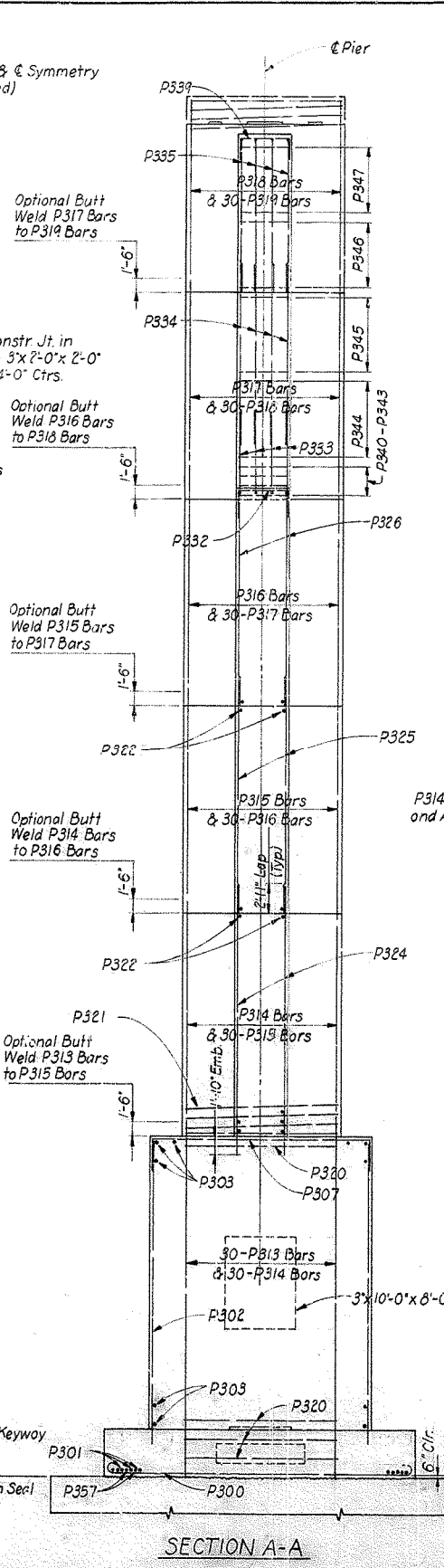
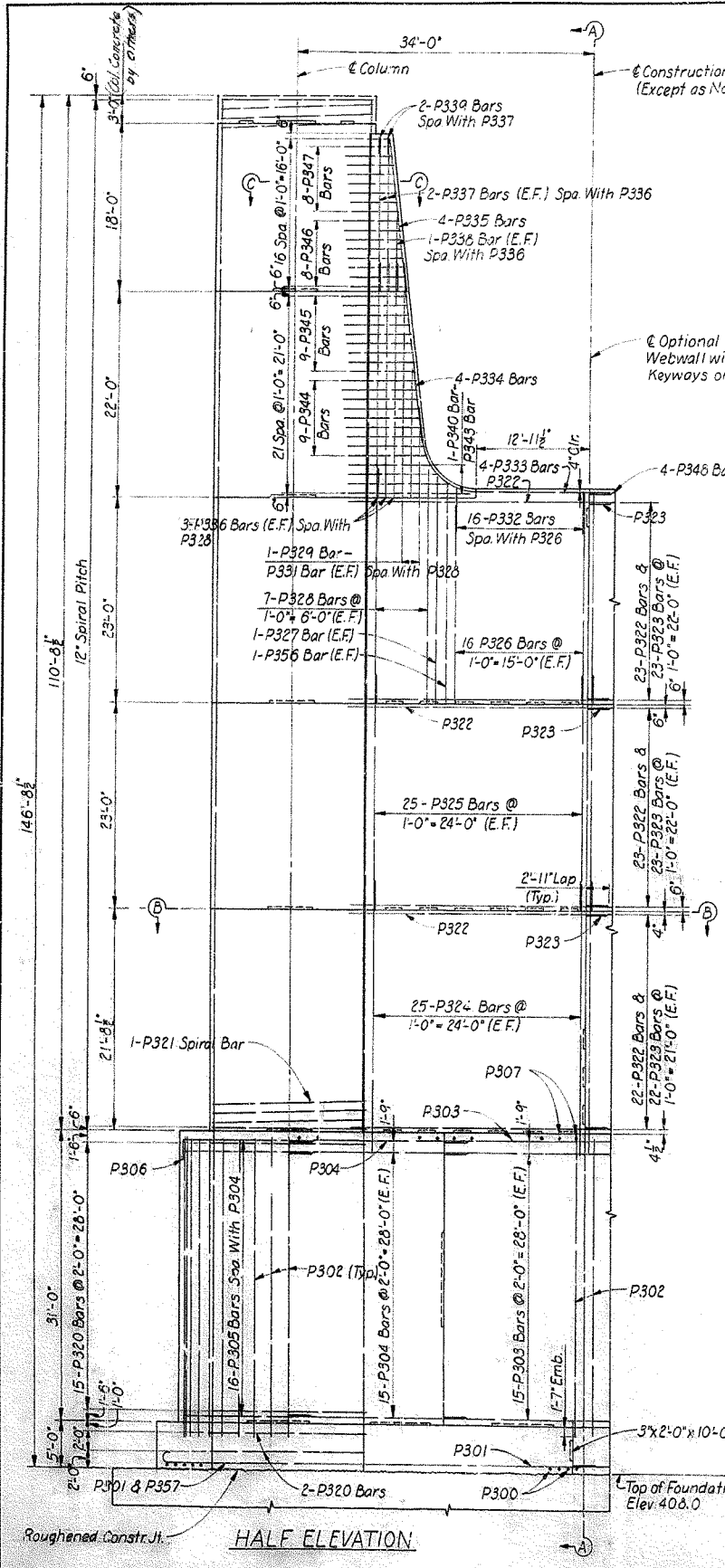
**KENTUCKY DEPARTMENT OF HIGHWAYS
 INDIANA STATE HIGHWAY COMMISSION**

PROJECT 1275-9 () 0
 BRIDGE OVER OHIO RIVER ON I 275
 BETWEEN 6-JONE COUNTY, KENTUCKY AND
 DEARBORN COUNTY, INDIANA

STATION 68+50.56

HAZELT & EDAL Consulting Engineers File No. 872A	BRIDGE NUMBER	DRAWING NO. 17208	INDEX
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DESIGNED BY: R.O.G. CHECKED BY: P.M.E. DATE: 5-6-48
 DRAWN BY: P.M.E. DATE: 11-11-48
 REVISIONS: 1. DATE: 5-6-48
 2. DATE: 11-11-48



NOTES:
 Work this Sheet with Sheet 11.
 For Reinforcement Bar Details, see Sheet 15.
 P355 Bars of Section D-D are to be accurately located as shown so that they do not interfere with the drilling of leveling bolt holes.
 See note "Optional Butt Weld" on Sheet 10.
 E.F. denotes Each Face.
 4" Clear Cover to Reinforcing Bars to be maintained, except as noted.

DESIGNED BY	DATE	BY	DATE
BY	DATE	BY	DATE
CHECKED BY	DATE	BY	DATE
DATE	DATE	DATE	DATE

SHEET 12 OF 12

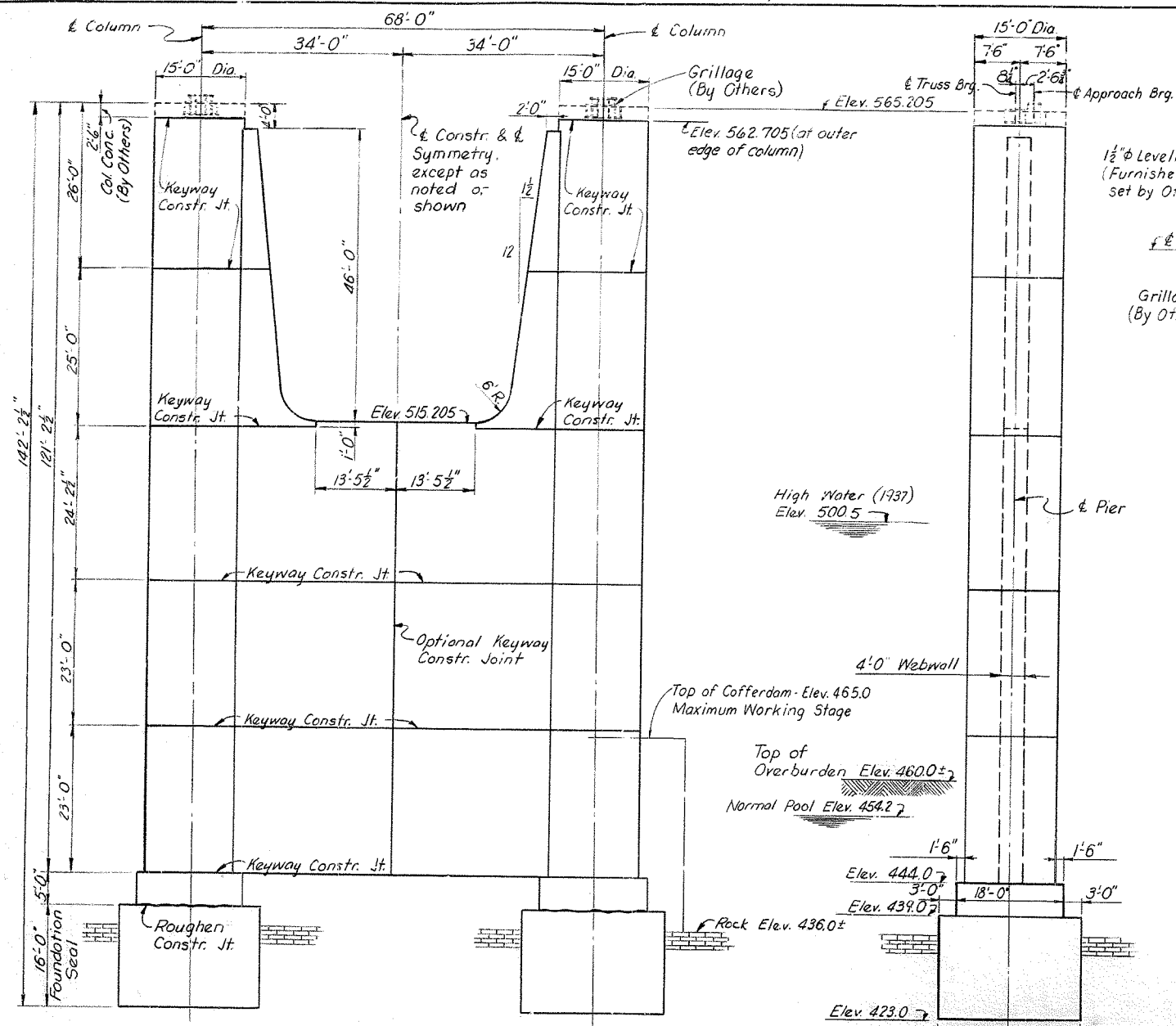
**KENTUCKY DEPARTMENT OF HIGHWAYS
 INDIANA STATE HIGHWAY COMMISSION**

PROJECT 1 275-9 () 0
 BRIDGE OVER OHIO RIVER ON 1 275
 BETWEEN BOONE COUNTY, KENTUCKY AND
 DEARBORN COUNTY, INDIANA

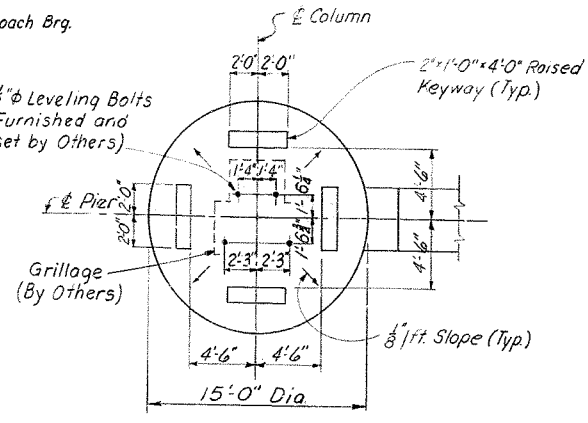
STATION 68+50.56

HAZLET & ERDAL Consulting Engineers File No. 872 A	BRIDGE NUMBER	DRAWING NO. 17208	INDEX
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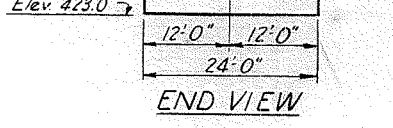
PIER C



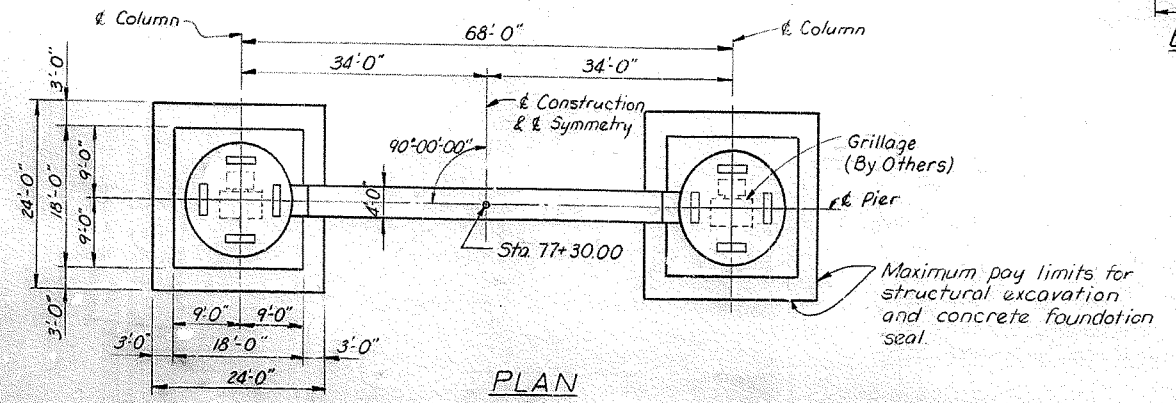
ELEVATION



PLAN OF COLUMN



END VIEW



PLAN

Notes:
 Work this sheet with Sheet 14
 For reinforcing bar details, see Sheet 15
 For General Notes, see Sheet 2
 For Grounding Details, see Sheet 16

ESTIMATE OF QUANTITIES

Foundation Seal - Class "A" Concrete	(Cu. Yds.)	683
Concrete - Class "A"	(Cu. Yds.)	2,303.8
Steel Reinforcement	(Lbs.)	190,436
Structure Excavation - Common	(Cu. Yds.)	1,210
Structure Excavation - Solid Rock	(Cu. Yds.)	555

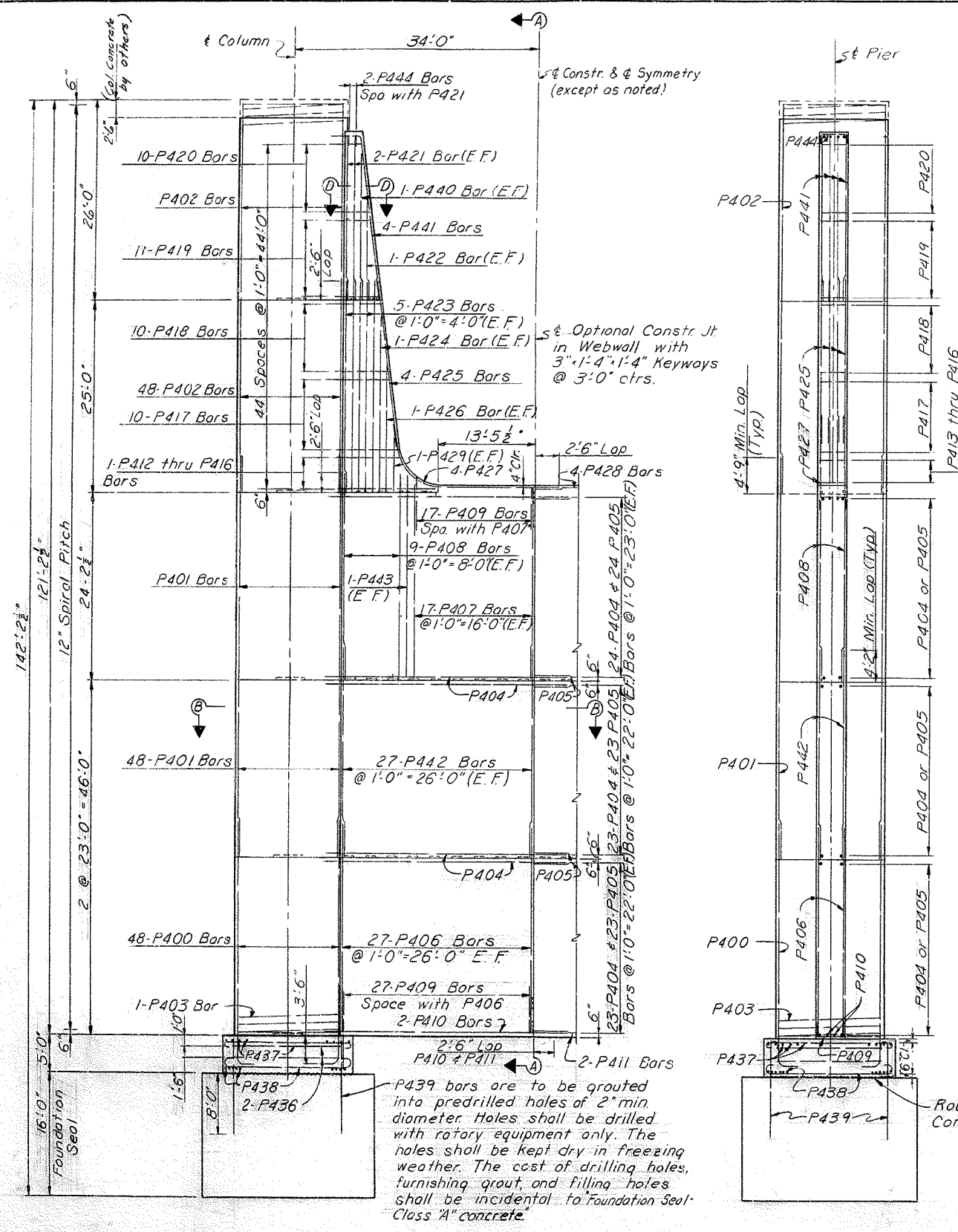
KENTUCKY DEPARTMENT OF HIGHWAYS
INDIANA STATE HIGHWAY COMMISSION
 PROJECT 1-275-9 () 0
 BRIDGE OVER OHIO RIVER ON 1-275
 BETWEEN BOONE COUNTY, KENTUCKY AND
 DEARBORN COUNTY, INDIANA

STATION 68+50.56

HAZLET & ERDAL Consulting Engineers File No. 872 A	BRIDGE NUMBER	DRAWING NO. 17208	INDEX
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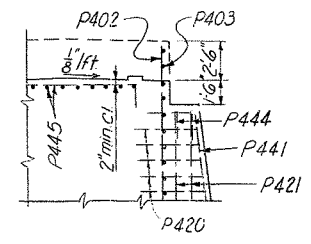
PIER D

DESIGNED BY: R. LIN
 CHECKED BY: R. LIN
 DATE: 11-56
 DATE: 11-56
 TRACED BY: UNK
 DATE:

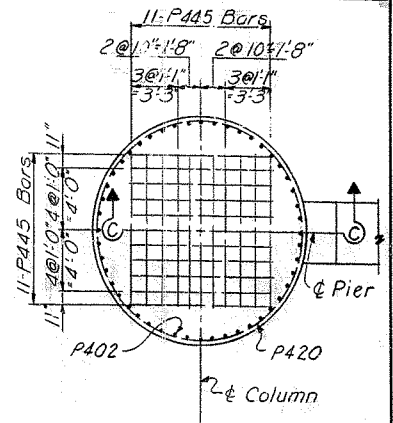


HALF ELEVATION

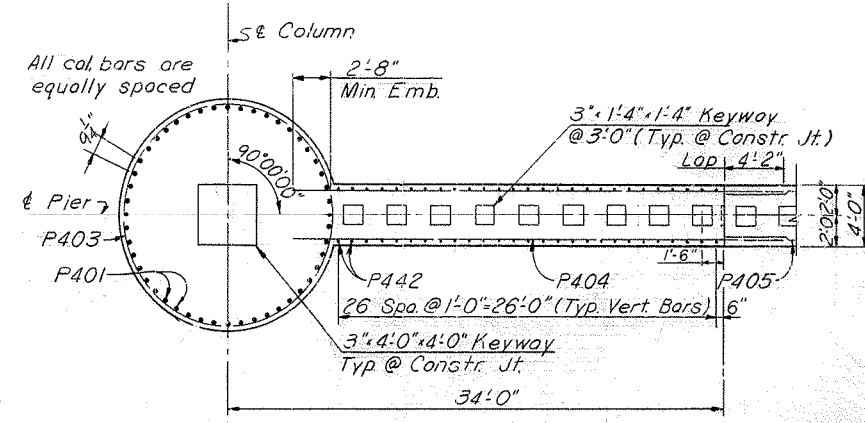
SECTION A-A



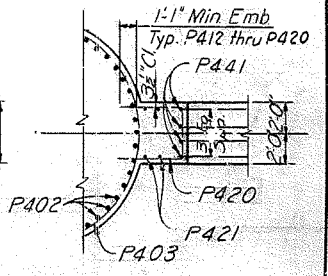
SECTION C-C



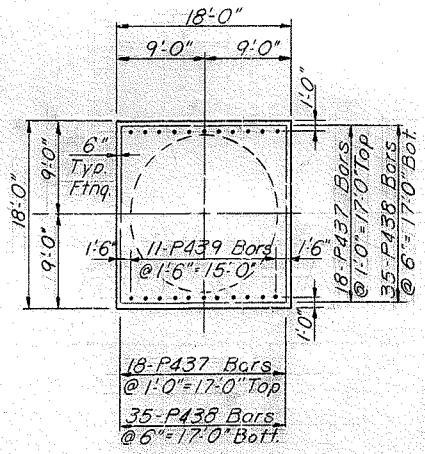
PLAN OF COLUMN



SECTION B-B



SECTION D-D



FOOTING PLAN
(Column bars not shown)

PIER D

Notes:
 Splices in vertical column bars P401 and P402 may be varied if desired. The lap of splices shall be 40 diameters.
 Work this sheet with Sheet 13 For reinforcing bar details, see Sheet 15.
 Bars P445 shown in Section C-C, are to be accurately located as shown so they do not interfere with the drilling of holes for placing of leveling bolts.
 E.F. denotes Each Face.
 4" clear cover to reinforcing bars maintained throughout except as noted.

**KENTUCKY DEPARTMENT OF HIGHWAYS
INDIANA STATE HIGHWAY COMMISSION**

PROJECT 1 275-9 (10)
BRIDGE OVER OHIO RIVER ON I 275
BETWEEN ROONE COUNTY, KENTUCKY AND
DEARBORN COUNTY, INDIANA

STATION 68+50.56

HAZELET & ERDAL Consulting Engineers File No. 872 A	BRIDGE NUMBER	DRAWING NO. 17208	INDEX
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DESIGNED BY: R. LIN DATE: 11/66
 CHECKED BY: R. LIN DATE: 11/66
 DRAWN BY: J. J. C. DATE: 11/66
 REVISIONS: 1. 11/66
 DATE: 11/66
 BY: J. J. C.
 REVISIONS: 2. 11/66
 DATE: 11/66
 BY: J. J. C.

BILL OF REINFORCEMENT - PIER A

Mark	Type	Size	No of Bars	Length Ft	Dim "a" In	Dim "b" In	Dim "c" In	Location				
P100	Str.	#6	72	20	7	2	6 1/2	18 6	Column			
P101	Str.	#6	72	40	4	2	6 1/2	38 3	"			
P102	Str.	#11	72	59	8				"			
P103	Str.	#10	108	20	10				Webwall			
P104	Str.	#10	80	17	8				"			
P105	Str.	#10	102	33	11				"			
P106	Str.	#10	102	25	9				"			
P107	Str.	#4	94	6	8	1	8	1	8	3	4	"
P108	Str.	#6	4	30	9	2	6	9	2	19	1	"
P109	Str.	#6	4	28	3	2	6	9	2	16	7	"
P110	Str.	#6	2	31	2							"
P111	Str.	#6	2	28	8							"
P112	Str.	#10	108	21	2							"
P113	Str.	#10	24	19	7							"
P114	Str.	#4	2	22	11	9	9	9	9	3	5	"
P115	Str.	#4	2	20	5	8	6	8	6	3	5	"
P116	Str.	#4	2	17	11	7	3	7	3	3	5	"
P117	Str.	#4	6	16	1	6	4	6	4	3	5	"
P118	Str.	#4	16	14	1	5	4	5	4	3	5	"
P119	Str.	#4	14	12	1	4	4	4	4	3	5	"
P120	Str.	#6	8	21	8							"
P121	Str.	#6	4	17	9							"
P122	Str.	#6	8	18	9	3	4	15	5			"
P123	Str.	#9	44	36	4	6	6	6	23	4		Footing
P124	Str.	#10	58	26	2	23	4	1	1/2	0	11 1/2	"
P125	Str.	#6	48	22	2	20	10	0	6	0	6	"
P126	Str.	#7	48	22	6	20	10	0	7	0	7	"
P127	Str.	#5	4	46	11	14	4					"
P128	Str.	#6	2	47	0	14	4					Column
P129												
P130												
P131												
P132												
P133												
P134												
P135	Str.	#4	4	5	10	1	8	1	8	3	6	Webwall
P136	Str.	#6	4	9	9							"
P137	Str.	#6	4	18	9							"
P138	Str.	#6	44	13	2	1	7	1	7	10	0	Column

BILL OF REINFORCEMENT - PIER B

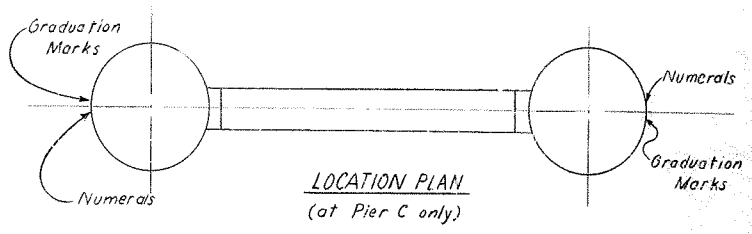
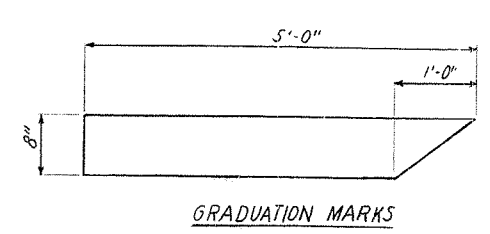
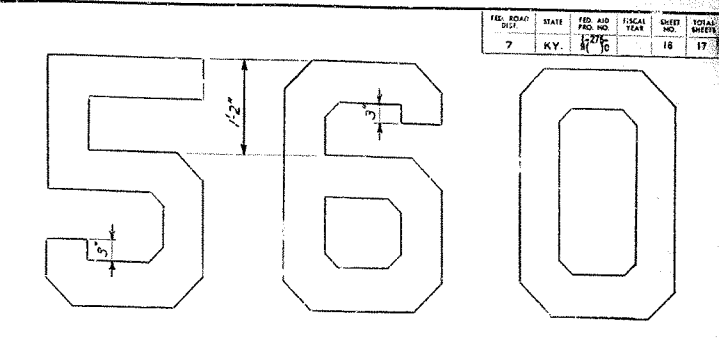
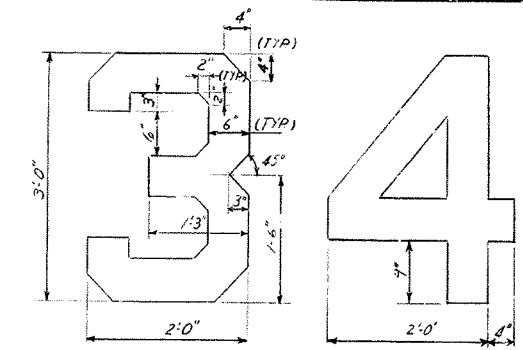
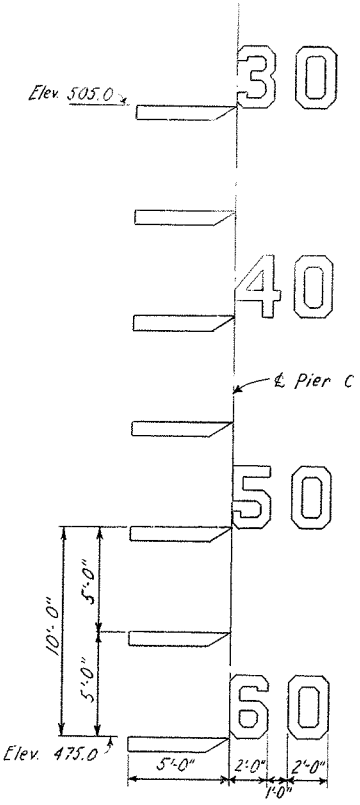
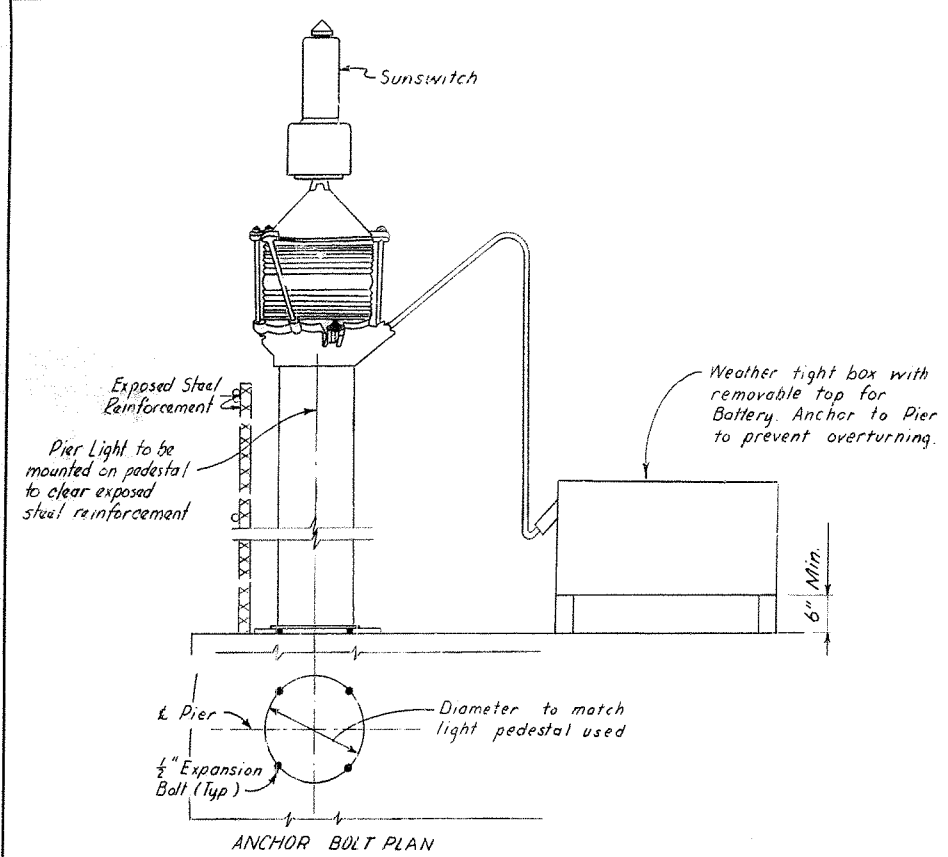
Mark	Type	Size	No of Bars	Length Ft	Dim "a" In	Dim "b" In	Dim "c" In	Location				
P200	Str.	#6	94	26	8	25	4	0	6	0	6	Footing
P201	Str.	#6	52	48	7	47	11	0	6	0	6	"
P202	Str.	#8	52	19	6	6	13	0				"
P203	Str.	#6	27	31	10							Dist Block
P204	Str.	#6	54	20	7							"
P205	Str.	#6	18	14	8	2	6	12	2			"
P206	Str.	#6	98	19	3							"
P207	Str.	#6	34	24	4	2	6	2	6	19	4	"
P208	Str.	#6	2	24	2	2	6	2	6	19	2	"
P209	Str.	#6	2	23	4	2	6	2	6	18	4	"
P210	Str.	#6	2	21	6	2	6	2	6	16	6	"
P211	Str.	#6	2	18	4	2	6	2	6	13	4	"
P212	Str.	#6	18	35	2	2	6	30	2	9	7 1/2	"
P213	Str.	#4s	56	24	0							Column
P214	Str.	#4s	56	45	9							"
P215	Str.	#4s	56	42	9							"
P216	Str.	#4s	56	41	0							"
P217	Str.	#4s	56	51	2							"
P218	Str.	#4s	56	31	2							"
P219	Str.	#6	50	15	4	1	7	1	7	12	2	"
P220												
P221												
P222												
P223												
P224												
P225												
P226	Str.	#5	2	54	0	17	4					Column
P227	Str.	#5	22	56	4	17	4					Dist Block; footing
P228	Str.	#7	126	30	7							Webwall
P229	Str.	#7	126	27	8							"
P230	Str.	#4	2	26	3	10	5	10	5	5	5	"
P231	Str.	#4	2	24	7	9	7	9	7	5	5	"
P232	Str.	#4	2	21	11	8	3	8	3	5	5	"
P233	Str.	#4	8	20	5	7	6	7	6	5	5	"
P234	Str.	#4	22	17	11	6	3	6	3	5	5	"
P235	Str.	#4	20	15	1	4	10	4	10	5	5	"
P236	Str.	#7	100	26	6							"
P237	Str.	#7	100	23	11							"
P238	Str.	#7	72	20	8							"
P239	Str.	#7	24	22	11							"
P240	Str.	#7	4	5	9							"
P241	Str.	#7	4	12	9							"
P242	Str.	#7	4	20	9							"
P243	Str.	#7	8	28	8							"
P244	Str.	#4	36	8	8	1	8	1	8	5	4	"
P245	Str.	#7	4	26	4	3	0	9	2	14	2	"
P246	Str.	#7	4	29	4	3	0	9	2	17	2	"
P247	Str.	#7	5	26	0	3	6	22	6			"
P248	Str.	#4	4	8	10	1	8	1	8	5	6	"
P249	Str.	#7	4	22	0							"
P250	Str.	#8	22	38	4	6	6	6	6	25	4	Footing

BILL OF REINFORCEMENT - PIER C

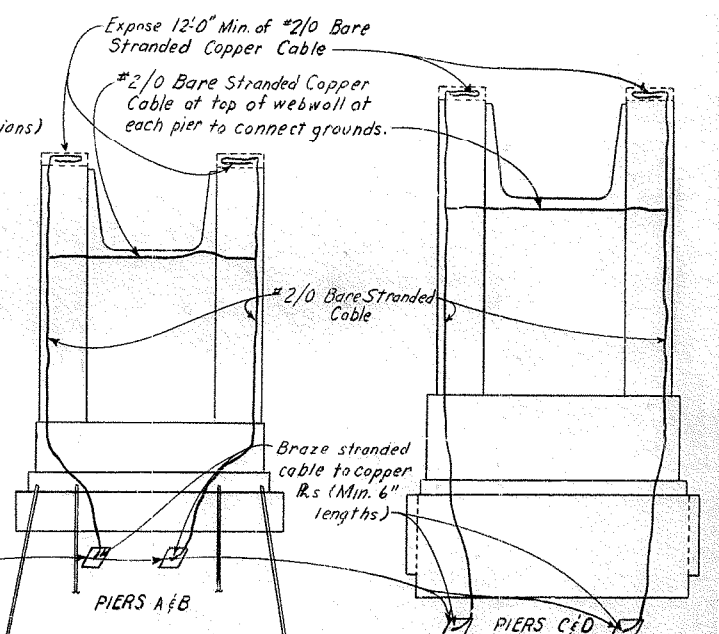
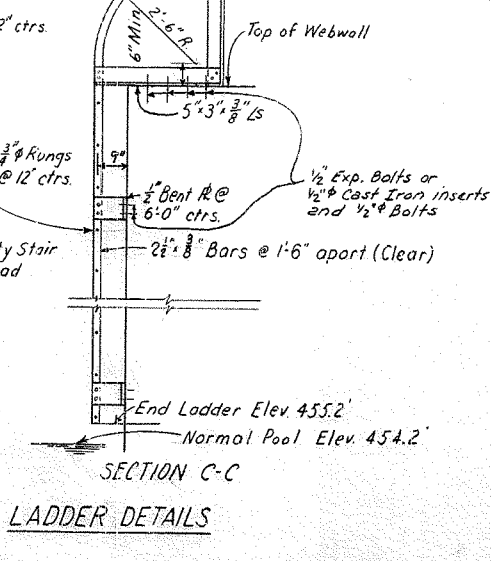
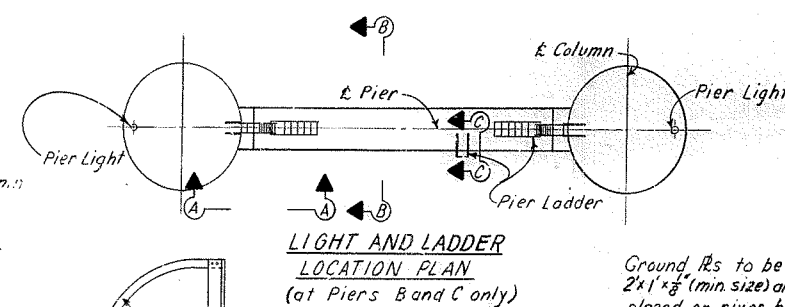
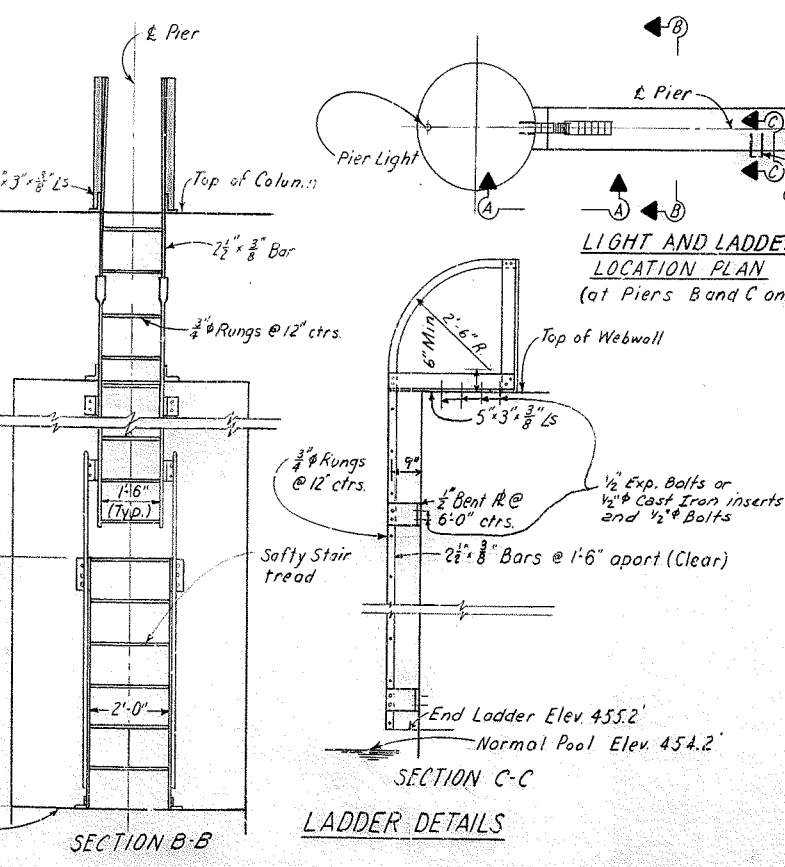
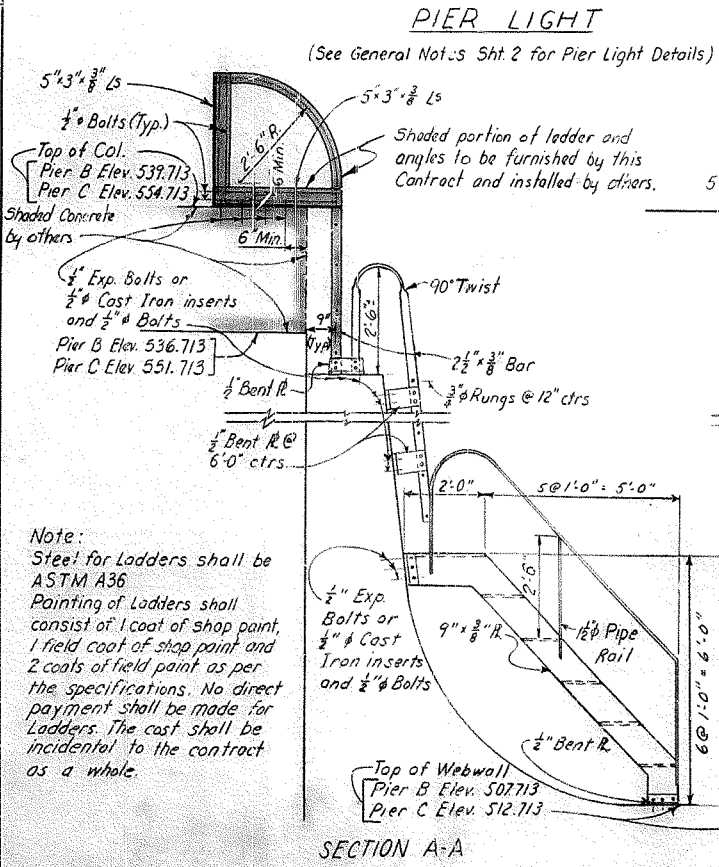
Mark	Type	Size	No of Bars	Length Ft	Dim "a" In	Dim "b" In	Dim "c" In	Location				
P300	Str.	#11	130	37	6	34	4	1	2	1	1/2	Footing
P301	Str.	#6	70	50	7	49	11	0	6	0	6	"
P302	Str.	#6	106	32	3							Dist Block
P303	Str.	#6	44	31	10							"
P304	Str.	#6	88	20	7							"
P305	Str.	#6	32	42	11	2	6	37	11	12	1 1/2	"
P306	Str.	#6	24	17	2	2	6	14	8			"
P307	Str.	#6	36	29	4	2	6	2	6	24	4	"
P308	Str.	#6	2	19	0	2	6	2	6	14	0	"
P309	Str.	#6	2	23	5	2	6	2	6	18	5	"
P310	Str.	#6	2	26	3	2	6	2	6	21	3	"
P311	Str.	#6	2	28	0	2	6	2	6	23	0	"
P312	Str.	#6	2	29	0	2	6	2	6	24	0	"
P313	Str.	#4s	60	37	6							Column
P314	Str.	#4s	60	59	3							"
P315	Str.	#4s	60	44	9							"
P316	Str.	#4s	60	46	0							"
P317	Str.	#4s	60	45	0							"
P318	Str.	#4s	60	41	2							"
P319	Str.	#4s	60	19	2							"
P320	Str.	#5	34	56	4	17	4					"
P321	Str.	#5	2	6	0	17	4					"
P322	Str.	#7	136	30	7							Webwall
P323	Str.	#7	136	27	8							"
P324	Str.	#7	100	26	6							"
P325	Str.	#7	100	25	11							"
P326	Str.	#7	64	23	8							"
P327	Str.	#7	4	25	7							"
P328	Str.	#7	28	25	11							"
P329	Str.	#7	4	7	9							"
P330	Str.	#7	4	15	9							"
P331	Str.	#7	4	23	9							"
P332	Str.	#4	32	8	8	1	8	1	8	5	4	"
P333	Str.	#7	4	28	0	2	11	9	2	15	11	"
P334	Str.	#7	8	19	0							"
P335	Str.	#7	8	20	0	3	6	16	6			"
P336	Str.	#7	12	24	11							"
P337	Str.	#7	8	14	8							"
P338	Str.	#7	4	9	9							"
P339	Str.	#4	4	8	10	1	8	1	8	5	6	"
P340	Str.	#4	2	32	9	13	8	13	8	5	5	"
P341	Str.	#4	2	27	5	11	0	11	0	5	5	"
P342	Str.	#4	2	24	7	9	7	9	7	5	5	"
P343	Str.	#4	2	22	11	8	9	8	9	5	5	"
P344	Str.	#4	18	21	9	8	2	8	2	5	5	"
P345	Str.	#4	18	19	1	6	10	6	10	5	5	"
P346	Str.	#4	16	16	11	5	9	5	9	5	5	"
P347	Str.	#4	16	14	11	4	9	4	9	5	5	"
P348	Str.	#7	4	25	0	2	11	9	2	12	11	"
P349												
P350												
P351												
P352												
P353												
P354												
P355	Str.	#6	52	15	4	1	7	1	7	12	2	Column
P356	Str.	#7	4	24	7							Webwall
P357	Str.	#7	68	14	10	14	0	0	7	0	7	Footing

BILL OF REINFORCEMENT - PIER D

Mark	Type	Size	No of Bars	Length Ft	Dim "a" In	Dim "b" In	Dim "c" In	Location				
P400	Str.	#4s	96	33	4	2	6 1/2	31	3			Column
P401	Str.	#11	96	52	0							"
P												



VERTICAL CLEARANCE GAGE DETAILS
 Numerals and Graduation Marks shall be painted directly on concrete with 2 coats of paint. (See General Notes Sheet 2 for paint specifications)



Ground R's to be copper 2x1 x 3/8 (min. size) and are to be placed on river bottom prior to pouring foundation seal concrete. Resistance to Ground not to exceed 25 ohms.

Copper cable may be supported by steel reinforcement

Note: Run a continuous circuit from Ground and expose copper cable on all piers. No direct payment shall be made for Grounding. It shall be incidental to the construction of the Contract as a whole.

PIER ELEVATION SHOWING METHOD OF GROUNDING STEEL
 (for Piers A, B, C, and D)

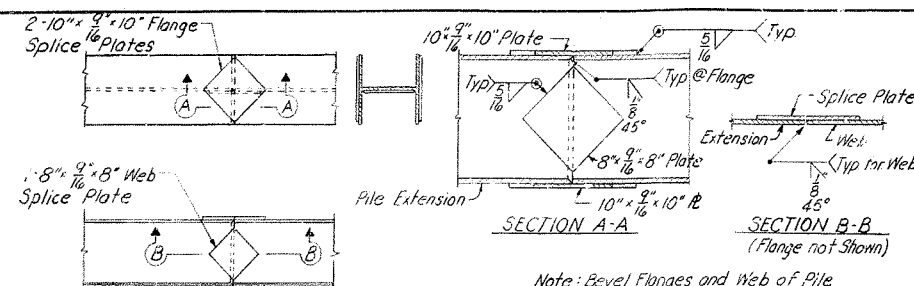
SHEET 16 OF 21

KENTUCKY DEPARTMENT OF HIGHWAYS
INDIANA STATE HIGHWAY COMMISSION
 PROJECT 1 275-P () 0
 BRIDGE OVER OHIO RIVER ON I 275
 BETWEEN BOOHE COUNTY, KENTUCKY AND
 YEARBORN COUNTY, INDIANA

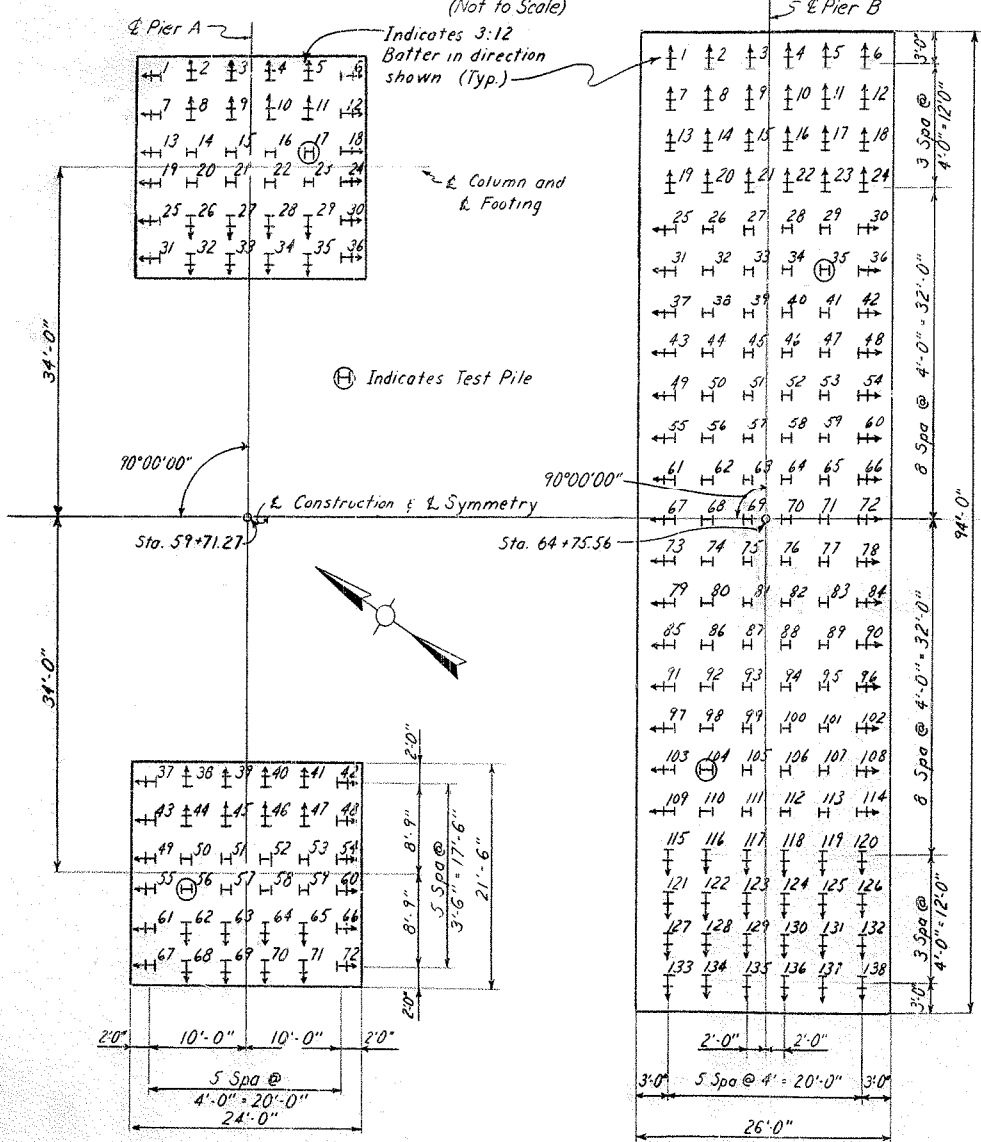
STATION 68+50.56
 HAZLETT & ERDAL Consulting Engineers File No. 872A
 BRIDGE NUMBER
 DRAWING NO. 17208
 INDEX

MISCELLANEOUS DETAILS

DESIGNED BY: R. L. H. DATE: 1/15/56
 CHECKED BY: U.S. DATE: 1/15/56
 REVISIONS:



Note: Bevel Flanges and Web of Pile Extension on 1:1 bevel as shown and employ conventional butt weld.



Note: All Piles 148P89 Steel Piles

PIER A
(Dimensions at Elev. 434.0)

PIER B
(Dimensions at Elev. 419.0)

PILING PLAN

PIER A			
Pile No.	Cutoff Elevation	Tip of Piles Elevation as Driven	Calculated Bearing Capacity Tons
1	436.00		
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
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58			
59			
60			
61			
62			
63			
64			
65			
66			
67			
68			
69			
70			
71			
72	436.00		

PIER B			
Pile No.	Cutoff Elevation	Tip of Piles Elevation as Driven	Calculated Bearing Capacity Tons
1	421.00		
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
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58			
59			
60			
61			
62			
63			
64			
65			
66			
67			
68			
69			
70			
71			
72	421.00		

PIER B (CONT.)			
Pile No.	Cutoff Elevation	Tip of Piles Elevation as Driven	Calculated Bearing Capacity Tons
73	421.00		
74			
75			
76			
77			
78			
79			
80			
81			
82			
83			
84			
85			
86			
87			
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123			
124			
125			
126			
127			
128			
129			
130			
131			
132			
133			
134			
135			
136			
137			
138	421.00		

NOTES:

This pile record does not replace other records of piles required to be kept and submitted by the Resident Engineer. After all piles have been driven, the Resident Engineer shall record the tip-of-pile elevation as driven, the length of pile in place, the calculated bearing capacity of each pile, and shall return one blueprint copy of this sheet with this data to the Director of Bridges so that the data may be recorded on the original plans. Lengths of piles in place shown hereon are the actual lengths of piles in the finished structure below cutoff elevation, and are not necessarily pay items.

GENERAL NOTES FOR STEEL PILES (148P89):

Specifications: Piling shall be in accordance with Standard Specifications and Revisions. Structural steel piles shall conform to ASTM A36-66 with a minimum copper content of (2/108) two tenths of one percent.

Splice Plates: Splice plates shall conform to ASTM Specifications A36-66 and may be furnished in non-copper bearing steel.

Field Welding: Field Welding Material and Workmanship for all piling shall conform to Standard Specifications and Revisions. Piles shall be spliced as indicated on plans only when driven below cut-off elevation.

Payment: Payment for furnishing and driving the piles in accordance with plans and specifications shall be made at the contract price per linear foot. Payment for splicing piles for extensions shall be made in accordance with the Specifications.

Paint: No paint shall be required on steel piles.

Reports: Three copies of mill orders, mill shipping statements, and notarized mill test reports for all steel to be used shall be furnished the Department of Highways showing that all material furnished conforms to the Specifications.

Pile Lengths: Steel piles shall be ordered full length as shown on plans or ordered full length as shown on the order list furnished by the Engineer.

TEST PILE LENGTHS	
PIER A	68'
PIER B	64'

KENTUCKY DEPARTMENT OF HIGHWAYS
INDIANA STATE HIGHWAY COMMISSION

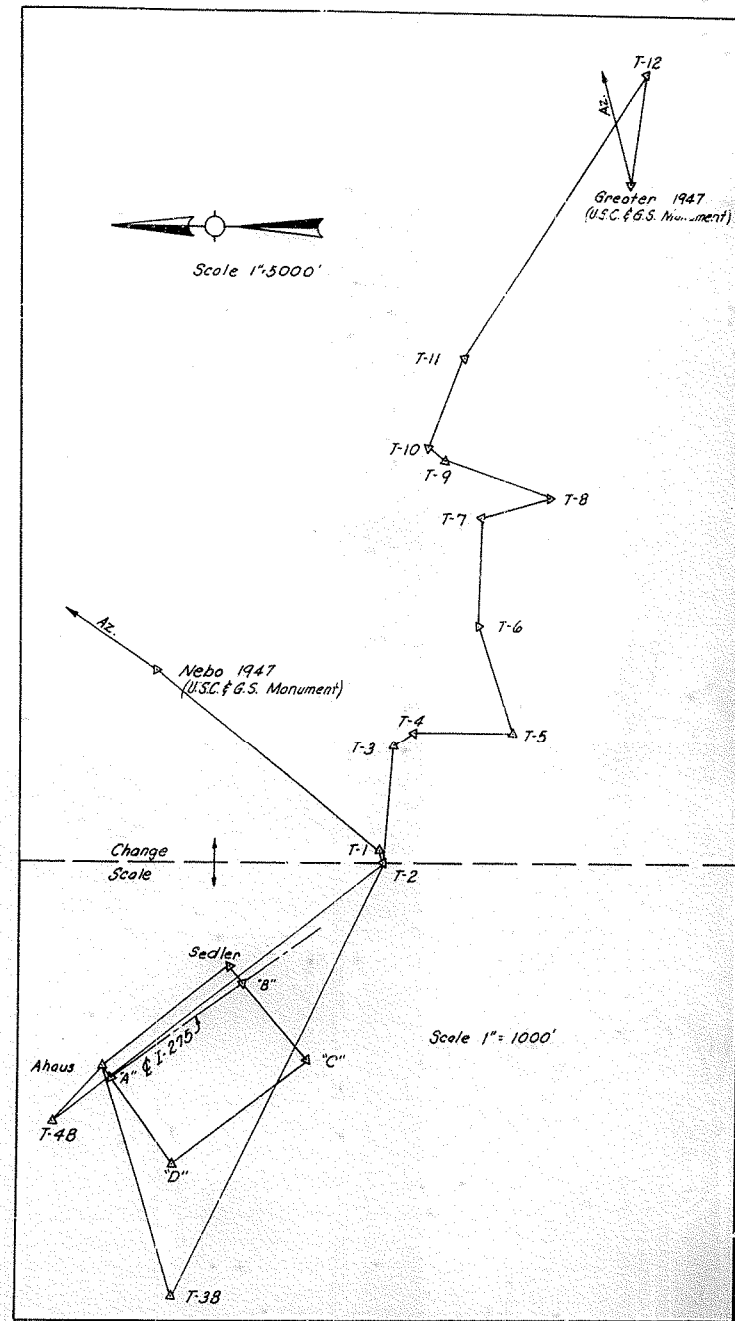
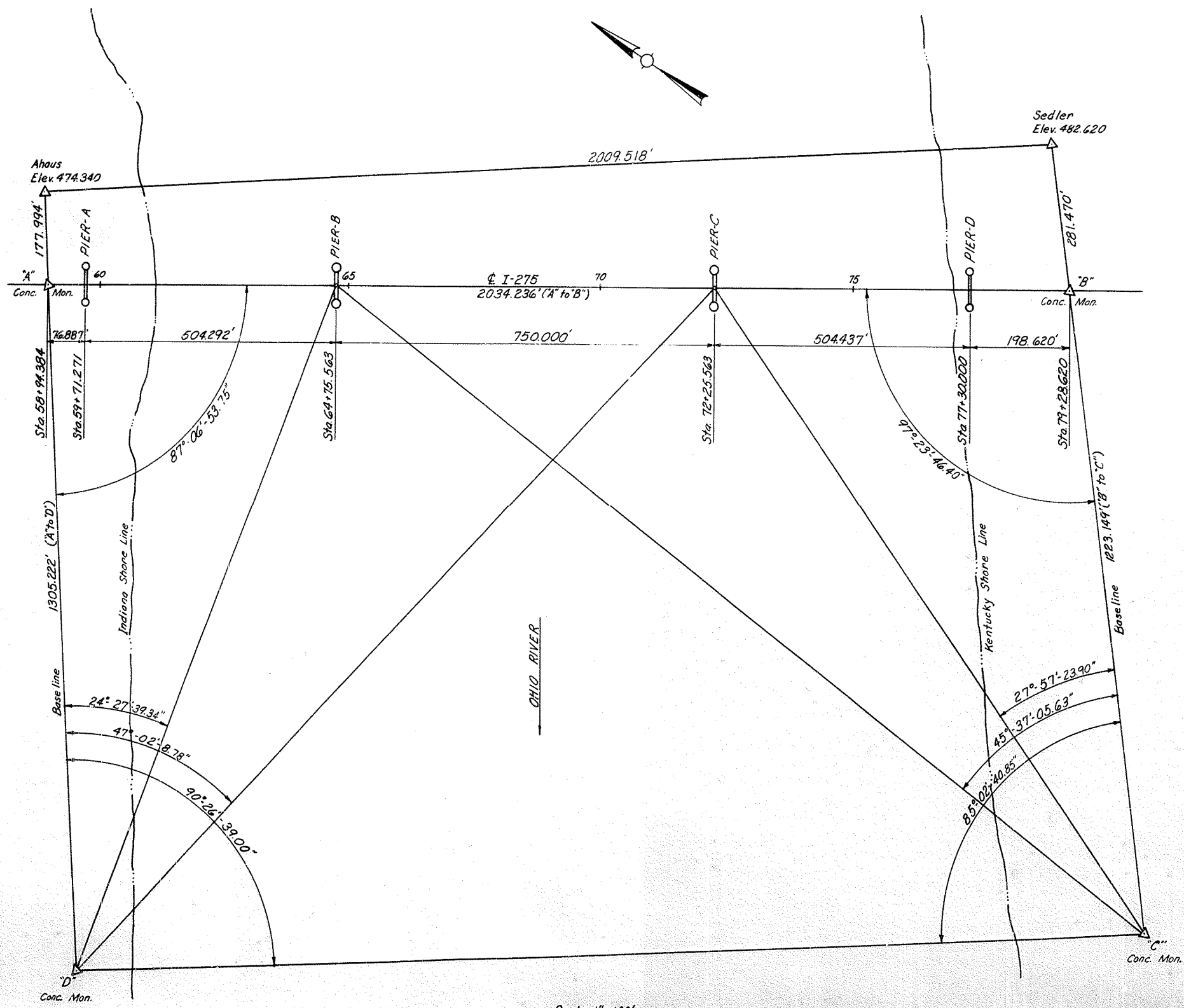
PROJECT 1275-9 () 0
 BRIDGE OVER OHIO RIVER ON I 275
 BETWEEN BOONE COUNTY, KENTUCKY AND
 DEARBORN COUNTY, INDIANA

STATION 68+50.56

HAZLET & ERDAL Consulting Engineers File No. 872 A	BRIDGE NUMBER	DRAWING NO. 17208	INDEX
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PILE RECORD

FED. ROAD DIST.	STATE	PRO. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



BASE TRAVERSE

SHEET 18 OF 21

KENTUCKY DEPARTMENT OF HIGHWAYS
 INDIANA STATE HIGHWAY COMMISSION
 PROJECT 1 275-9 () 0
 BRIDGE OVER OHIO RIVER ON I 275
 BETWEEN BOONE COUNTY, KENTUCKY AND
 DEARBORN COUNTY, INDIANA
 STATION 66+50.56
 HAZLET & IRDAL
 Consulting Engineers
 File No. 672A
 BRIDGE NUMBER
 DRAWING NO.
 17208
 INDEX

TRIANGULATION NETWORK

DESIGNED BY	DATE	REVISION	DATE
CHECKED BY	DATE	REVISION	DATE
TRAILED BY	DATE	REVISION	DATE

ADDRESS REPLY TO: DISTRICT ENGINEER, U. S. ARMY ENGINEER DISTRICT, LOUISVILLE, KENTUCKY

23 November 1964

Commonwealth of Kentucky Department of Highways Frankfort, Kentucky

ATTN: D.H. Bray, State Highway Engineer

Gentlemen:

Your application to construct a highway bridge across the Ohio River near Lawrenceburg, Indiana, dated 20 August 1964, is approved.

In compliance with your request there is inclosed an instrument of approval issued by direction of the Secretary of the Army, dated 12 November 1964, authorizing the construction of a highway bridge across the Ohio River at Mile 491.6 near Lawrenceburg, Indiana. Should changes in the location or plans of the structure or work become necessary, revised plans shall be submitted to this office for approval before construction is commenced.

Please inform this office, as early as possible, the actual date upon which construction will begin and also the date when all physical work is completed. The latter information should also state whether or not the structure has been completed in accordance with the terms of the instrument and approved plans. It is requested that this office be furnished, when available, a set of the detailed construction plans of the project.

Very truly yours,

Morris L. Gardner Major, Corps of Engineers Deputy District Engineer

Incl Orig. Instrument of Approval w/plans attached.

Proposed Bridge Across Ohio River near Lawrenceburg, Indiana Mile 491.6 Kentucky Department of Highways Commonwealth of Kentucky Frankfort, Kentucky

FINDINGS OF FACT

1. The proposed bridge is a fixed structure across the Ohio River between Boone County, Kentucky and Dearborn County, Indiana at Mile 491.6 below Pittsburgh, Pennsylvania about 1.4 miles upstream from Lawrenceburg, Indiana. The structure will consist of three steel truss spans; 506 feet, 750 feet, 506 feet, center to center of piers respectively, with fill and trestle work approaches. The main channel span in about mid-river will provide a horizontal clearance of 720 feet (clear opening). The minimum vertical clearance provided at the low point of steel at the north or Indiana end of the bridge will be 78.3 feet above normal pool level, which is 32 feet above the 1937 High Water.

2. The proposed highway bridge does not replace any other structure but is an additional link in the interstate highway system in the area.

3. A preliminary conference was held in the office of Hazelet & Erdal, Consulting Engineers for the applicant in Louisville, Kentucky, on 5 August 1964, to discuss navigation clearances to be provided in the proposed structure. Those attending represented the following:

- Indiana State Highway Commission
Kentucky Department of Highways
Bureau of Public Roads, Indiana & Kentucky Division
Corps of Engineers
American Commercial Lines, Inc.
The Ohio River Company
Mississippi Valley Barge Line Co.
Hazelet & Erdal

The clearances and pier locations as shown on the plans accompany this application are those agreed upon by all concerned at this conference.

4. The present governing bridge clearances on the Waterway are horizontal clearance of 241.5 feet in the span of the Pennsylvania Railroad Bridge across the Louisville Portland Canal Mile 606.4, and vertical clearance of 69.8 feet at low point of steel with this bridge in raised position.

5. No preliminary investigation has been made in this case, by the District Engineer since it is believed that the bridge proposed has adequate clearances for any foreseeable navigation and flood control purposes. There are no established standard bridge clearances on the Ohio River.

6. A notice of public hearing to consider the application and plans was issued on 27 August 1964. A public hearing was held at Burlington, Kentucky on 29 September 1964. The hearing was attended by 26 interested parties. Two prepared statements favoring the proposed construction were received and accompany the report on this application.

7. The principal method of handling traffic on the Ohio River is in tows of tank and cargo barges propelled by towboats. These barges vary in size. Those used in long haul tows by the large common carriers are principally 26 feet wide by 175 feet long and 35 feet wide by 195 feet long, and are capable of being loaded to a draft of 9 feet or more. They may be rafted into tows of from 1 to 20 or more barges. The present largest long haul tows for pool navigation are about 105 feet in width and not over 1200 feet in length, loaded to an 8-1/2 feet draft with a cargo of from 15,000 to 25,000 tons. It is not likely that the above size of tows will be greatly exceeded during normal pool stages of the river. During open river stages tows of somewhat greater length and width than mentioned above may be used.

DEPARTMENT OF THE ARMY APPROVAL OF LOCATION AND PLANS OF BRIDGE

Whereas by Title V of an act of Congress approved August 9, 1916, entitled General Bridge Act of 1916 (33 U. S. C. 585-588, as amended) the consent of Congress was granted for the construction, maintenance, and operation of bridges and approaches thereto over the navigable waters of the United States;

And whereas section 502(b) of said act provides that: "The location and plans for such bridges shall be approved by the Chief of Engineers and the Secretary of the Army before construction is commenced, and, in approving the location and plans of any bridge, they may impose any specific conditions relating to the maintenance and operation of the structure which they may deem necessary in the interest of public navigation, and the conditions so imposed shall have the force of law."

And whereas the Kentucky Department of Highways has submitted plans and a map of the location of a bridge to be constructed across the Ohio River near Lawrenceburg, in the State of Indiana

John Hartzert, This is to certify that the location and attached plans are hereby approved by the Chief of Engineers and by the Secretary of the Army, pursuant to the above-mentioned act of Congress, subject to the following conditions:

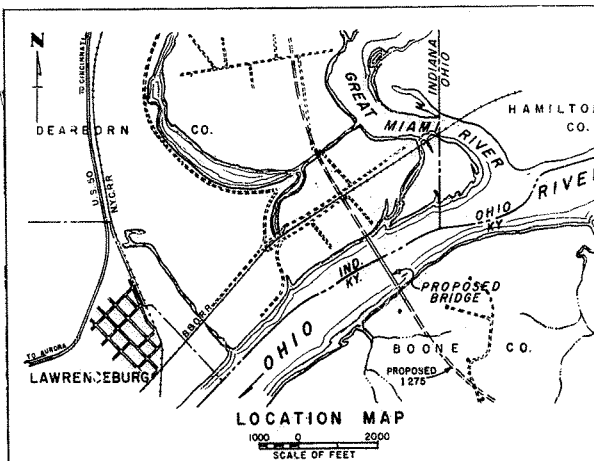
- 1. The district engineer in charge of the locality within which the bridge is to be built may supervise its construction in order that said plans shall be complied with.
2. All work shall be so conducted so that the free navigation of the waterway shall not be unreasonably interfered with and the present navigable depths shall not be impaired. The channel or channels through the structure shall be promptly cleared of all fetters, piling, or other obstructions placed therein or caused by the construction of the bridge, to the satisfaction of the said district engineer, when in his judgment the construction work has reached a point where such action should be taken, and in any case not later than ninety days after the bridge has been opened to traffic.
3. The approval hereby granted shall cease and be null and void unless the actual construction of the bridge be commenced within 2 years and completed within 4 years from the date of this instrument.
4. No deviation from the approved plans shall be made either before or after completion of the structure unless the modification of said plans has previously been submitted to and received the approval of the Chief of Engineers and of the Secretary of the Army.
5. Clearance gauges, of a type to be approved by the said district engineer, shall be installed on the upstream and downstream ends of the Kentucky or south pier of the mid-river span by and at the expense of the owners of or operators of the bridge and shall be kept in good legible condition.

An witness whereof I have hereunto set my hand by direction of the Chief of Engineers this 5th day of November 1964

JACKSON GRABNEY Major General Director of Civil Works

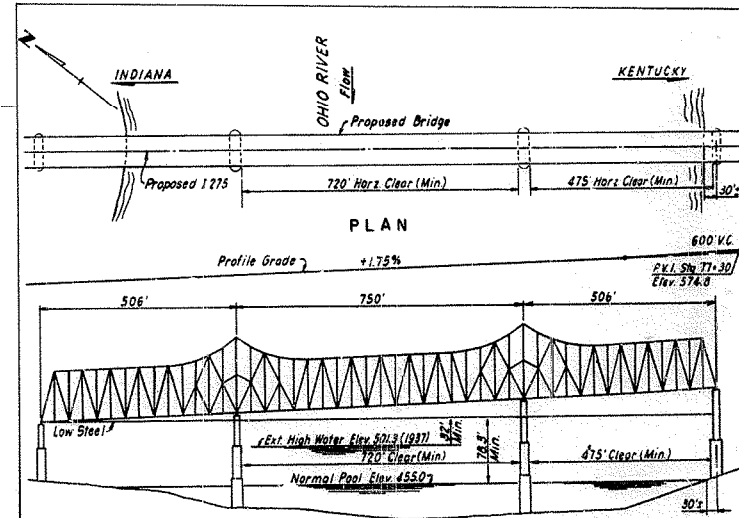
An witness whereof I have hereunto set my hand by direction of the Assistant Secretary of the Army this 1st day of November 1964

R.A. Hazelet Chief, District of Civil Functions



The Proposed Bridge is to be located at Ohio River Mile 491.6, approx. 488 miles from the convergence of the Mississippi and Ohio Rivers.

PROPOSED BRIDGE OVER OHIO RIVER BOONE CO., KY-DEARBORN CO., IND. APPLICATION BY KENTUCKY DEPT. OF HIGHWAYS SHEET 1 of 2 DATE 8-20-64



Elevations are in feet and refer to Mean Sea Level. Bridge to be located at Ohio River Mile 491.6 Normal Pool Elevation corresponds to an elevation of 455.0 feet above Mean Sea Level (Ohio River Datum).

SCALES OF FEET HORIZONTAL 1" = 100' VERTICAL 1" = 10'

PROPOSED BRIDGE OVER OHIO RIVER BOONE CO., KY-DEARBORN CO., IND. APPLICATION BY KENTUCKY DEPT. OF HIGHWAYS SHEET 2 of 2 DATE 8-20-64

SHEET 19 OF 21

COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS FRANKFORT PROJECT 1 275-D (10 BRIDGE OVER OHIO RIVER ON 1 275 BETWEEN BOONE COUNTY, KENTUCKY AND DEARBORN COUNTY, INDIANA STATION 68+50.96 BRIDGE NUMBER 17208

CONSTRUCTION PERMIT INFORMATION

FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD
INSTRUMENT

ADDRESS REPLY TO
COMMANDANT
U.S. COAST GUARD
WASHINGTON, D.C.
20591

29 NOV 1967

WHEREAS by an instrument signed on 5 November 1964 and 12 November 1964, the Chief of Engineers and the Secretary of the Army approved the map of location and plans of a bridge to be constructed by the Kentucky Department of Highways across the Ohio River near Lawrenceburg, Indiana, under authority of the General Bridge Act of 1946;

AND WHEREAS condition 3 of said instrument of approval fixed the times for commencing and completing construction of said bridge at 12 November 1966 and 12 November 1968;

AND WHEREAS the times for commencing and completing construction have been previously extended to 12 November 1967 and 12 November 1969;

AND WHEREAS construction of said bridge has not been commenced;

AND WHEREAS the functions, powers and duties of the Chief of Engineers and the Secretary of the Army under the General Bridge Act of 1946 have been transferred to and vested in the Secretary of Transportation by section 6(g)(6)(C) of the Department of Transportation Act (80 Stat. 331) and delegated by the Secretary of Transportation to the Commandant of the Coast Guard in title 49 Code of Federal Regulations, part 1;

AND WHEREAS the - KENTUCKY DEPARTMENT OF HIGHWAYS - now requests that the times for commencing and completing construction of said bridge be extended;

NOW THEREFORE, This is to certify that the times for commencing and completing construction of said bridge are hereby extended to 12 November 1968 and 12 November 1970, all other conditions of the previous instrument of approval remaining unchanged, except condition 4 which is modified as follows:

4. No deviation from the approved plans shall be made either before or after completion of the structure unless the modification of said plans has previously been submitted to and received the approval of the Commandant of the Coast Guard.

W. J. Smith
W. J. SMITH
Admiral, U. S. Coast Guard
Commandant



DEPARTMENT OF THE ARMY
LOUISVILLE DISTRICT CORPS OF ENGINEERS
P. O. BOX 59, 830 WEST BROADWAY
LOUISVILLE, KENTUCKY 40201

IN REPLY REFER TO: ORLOP-AH (Bridge Over Ohio River Near Lawrenceburg, Ind. MI 491.6)

12 December 1967

Commonwealth of Kentucky
Department of Highways
Frankfort, Kentucky 40601

ATTN: Mr. Charles G. Cook, Director
Division of Bridges

Gentlemen:

Reference your letter dated 19 October 1967 requesting an extension of time to the original instrument of the Approval of Location and Plans of Bridge across the Ohio River near Lawrenceburg, Indiana.

Inclosed is an Instrument dated 29 November 1967, issued by the Department of Transportation, United States Coast Guard, extending the time of commencing and completing construction of said bridge to 12 November 1968 and 12 November 1970 respectively. This Instrument shall become a part of the original instrument approved 12 November 1964.

Acknowledgement of receipt of this Instrument is requested.

Very truly yours,
John R. Bledt
JOHN R. BLEDT
Chief, Operations Division

Incl
As stated
Copy furnished:
Commander, 2nd Coast Guard District (c)
1520 Market Street - Federal Bldg.
St. Louis, Mo. 63103



DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, LOUISVILLE
P. O. BOX 59, 830 WEST BROADWAY
LOUISVILLE, KENTUCKY 40201

IN REPLY REFER TO: ORLOP-A (Bridge Over Ohio River Near Lawrenceburg, Ind. - Mile 491.6)

11 March 1966

Commonwealth of Kentucky
Department of Highways
Frankfort, Kentucky

ATTN: Mr. Guy E. Vanzant, Jr.,
Director, Division of Bridges

Gentlemen:

Reference is made to your letter of 4 March 1966, requesting an extension of time for commencing and completing construction of a highway bridge across the Ohio River, 491.6 miles below Pittsburgh, Pennsylvania near Lawrenceburg, Indiana.

Condition 3 of the Instrument of Approval of the location and plans of the bridge, signed by the Chief of Engineers and the Secretary of the Army on 5 November 1964 and 12 November 1964, fixed the times for commencing and completing construction of the bridge at 12 November 1966 and 12 November 1968.

This is to certify that by authority of the Secretary of the Army and the Chief of Engineers, the times for commencing and completing construction of the bridge are extended to 12 November 1967 and 12 November 1969, all other conditions of the original Instrument of Approval remaining unchanged.

Sincerely yours,
W. Roper
W. ROOPER
Colonel, Corps of Engineers
District Engineer

APPROVED BY	DATE	REVISION
DESIGNED BY	DATE	REVISION
CHECKED BY	DATE	REVISION
DRAWN BY	DATE	REVISION

SHEET 20 OF 21

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT

PROJECT 1 275-9 1 10
BRIDGE OVER OHIO RIVER ON 1 275
BETWEEN BOONE COUNTY, KENTUCKY AND
DEARBORN COUNTY, INDIANA

STATION 68+50.5E

BRIDGE NUMBER	DRAWING NO.	INDEX
	17208	

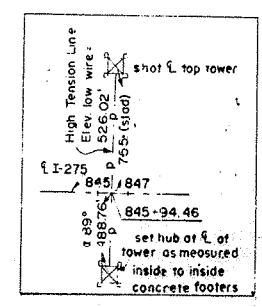
CONSTRUCTION PERMIT INFORMATION

LEGEND
 LA R/W - Limited Access Right of Way
 ACL - Access Control Line
 F.F.T.F. - Farm Field Type Fence
 R/W - Right of Way
 B7 - Property Line, Unfenced
 LA R/W - Limited Access Right of Way
 State Line - State Line
 Landscape Area

PUBLIC UTILITY OWNERS
 ALL POWER LINES & POLES THROUGHOUT THIS PROJECT ARE OWNED BY THE PUBLIC SERVICE COMPANY OF SOUTHERN INDIANA
 1000 E. MAIN STREET
 PLAINFIELD, INDIANA
 46168

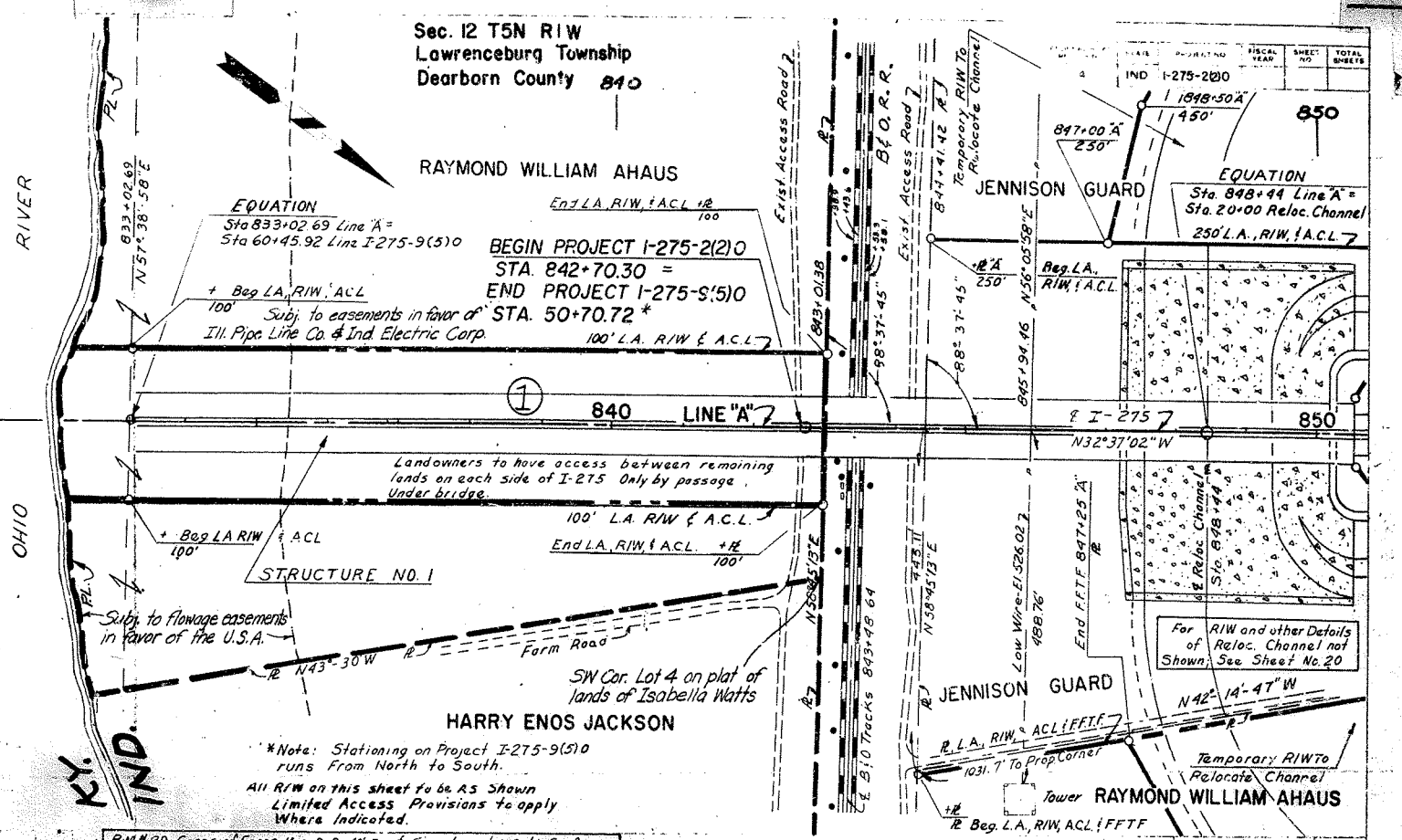
RAILROADS
 THE B. & O. SW RR CO.
 (ST. LOUIS DIVISION)
 WASHINGTON, INDIANA.

PARCEL 1 ON PROJECT I-275-2(2) AND PARCEL 7 ON PROJECT I-275-9(5) COVER THE SAME LAND, WITH ACQUISITION WHEREOF ENTIRELY UNDER SAID PROJECT I-275-2(2)



GENERAL NOTES

- Standard Division Lane Sections for Federal Aid Interstate Projects Adopted May 1967 as shown on sheet No 4 to be used on this project.
- Standard Pavement section E-11-JR Revised 11-17-66 to be used on this project.
- Standard Ramp Section, Adopted May 1967 to be used on this project.
- Typical Cross Sections as shown on Sheets 2 and 3 to be used on this project.
- Indiana State Highway Commission Standard Specifications Dated 1963 to be used with these plans.
- Standards under dates as listed in index on Title Sheet to be used on this project.
- Grade Line as shown on profile represents top of finished surface.
- The Contractor must accept plan quantities of Subbase as given on the "Estimate of Quantities" Sheet (See Special Provisions)
- A Keyway Joint is to be constructed on Median Side of each pavement.
- All Ditches of 100% grade and over shall be sodded except where Ditch is in Rock Cut or where Paved Side Ditch is to be constructed.
- All Earth Shoulders Cut and Fill Slopes shall be plain or Mulched Seeded except where sodding is specified.
- Shoulders are to be sodded as shown on Standard and Typical Cross-Sections and on Miscellaneous Standard Sheet "B"
- Sodding shall be placed along Paved Side Ditch as shown on Miscellaneous Standard Sheet "E"
- Excavation Quantities as shown on Plan and Profile Sheets include estimated excavation Public and Private Approaches.
- Curves on Mainline shall be Super-elevated as shown on the Super-elevation Detail Sheets.
- Quantities for Pipe Culvert Headwalls are based on using Standard Headwalls for retaining 2:1 or 3:1 slopes and Private Drive Headwalls for retaining 4:1 or flatter slope.
- For "kinds of Pipe" permitted for each size and classification as shown in "Structure Notes", See Miscellaneous Standard Sheet "P" and "Q"
- All Limited Access R/W (LA, R/W) to be fenced with Chain Link Type Fence (C.L.T. Fence) or Form Field Type Fence (F.F.T. Fence) as specified in the Plans.
- The Minimum Grade for Subsurface Drains shall be 0.20%. Where the profile grade is less than 0.20%, special grades for Subsurf. Drains shall be established by the Engineer.
- The pipe sizes given in structure notes applies to the C.M. Option. However, any type pipe specified under the group may be used.
- Paper Relocation is to be cross-sectioned by the Project Engineer before construction.



*Note: Stationing on Project I-275-9(5) runs From North to South.
 All R/W on this sheet to be AS Shown Limited Access Provisions to apply Where Indicated.

B.M. #29 Corps of Engrs. Mon. D-9, 40' E. of Signal post 80' E. of E. B. & O. Tracks & E. I-275 on S. Side of tracks El. 489.340

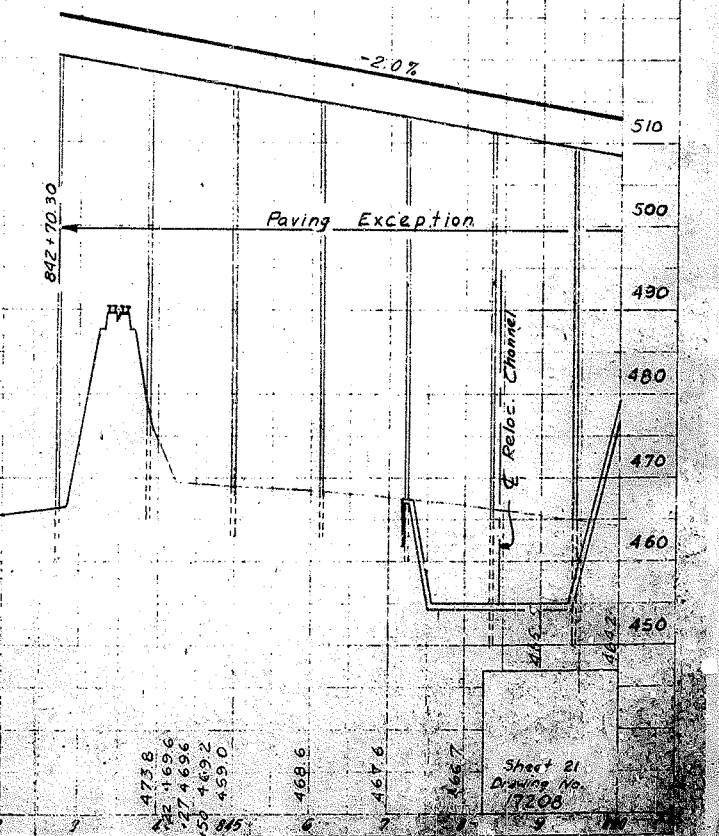
B.M. #28 RR Spike in power pole 875' E. of Sta. 843+48.64 E. of B. & O. Tracks & E. I-275 on South side of tracks El. 487.534

B.M. #28A Corps of Engrs. Mon. D-10 425' E. of Sta. 843+48.64 (E. of B. & O. Tracks & E. I-275) on S. side of tracks El. 488.815

B.M. #28B-Mark is set in the top of the SE. end of the NE Concrete abutment of the B. & O. S.W. R.R. Bridge over the Great Miami River at the Ohio-Indiana State Line, 55' SE. of the SE. Rail and about 1' below the track. El. 494.436

B.M. "AHAUS" Survey Disc set in conc. cylinder 2" above ground stamped "AHAUS 1964" 178' Lt. of Sta. 58+85 (Proj. I-275-9(1)) set by others El. 474.476

Bench Mark "Equation I-275-2(1) B.M. AHAUS" from N. El. 474.476
 I-275-9(1) B.M. AHAUS from S. El. 474.340



Sheet 21
 Drawing No.
 17208