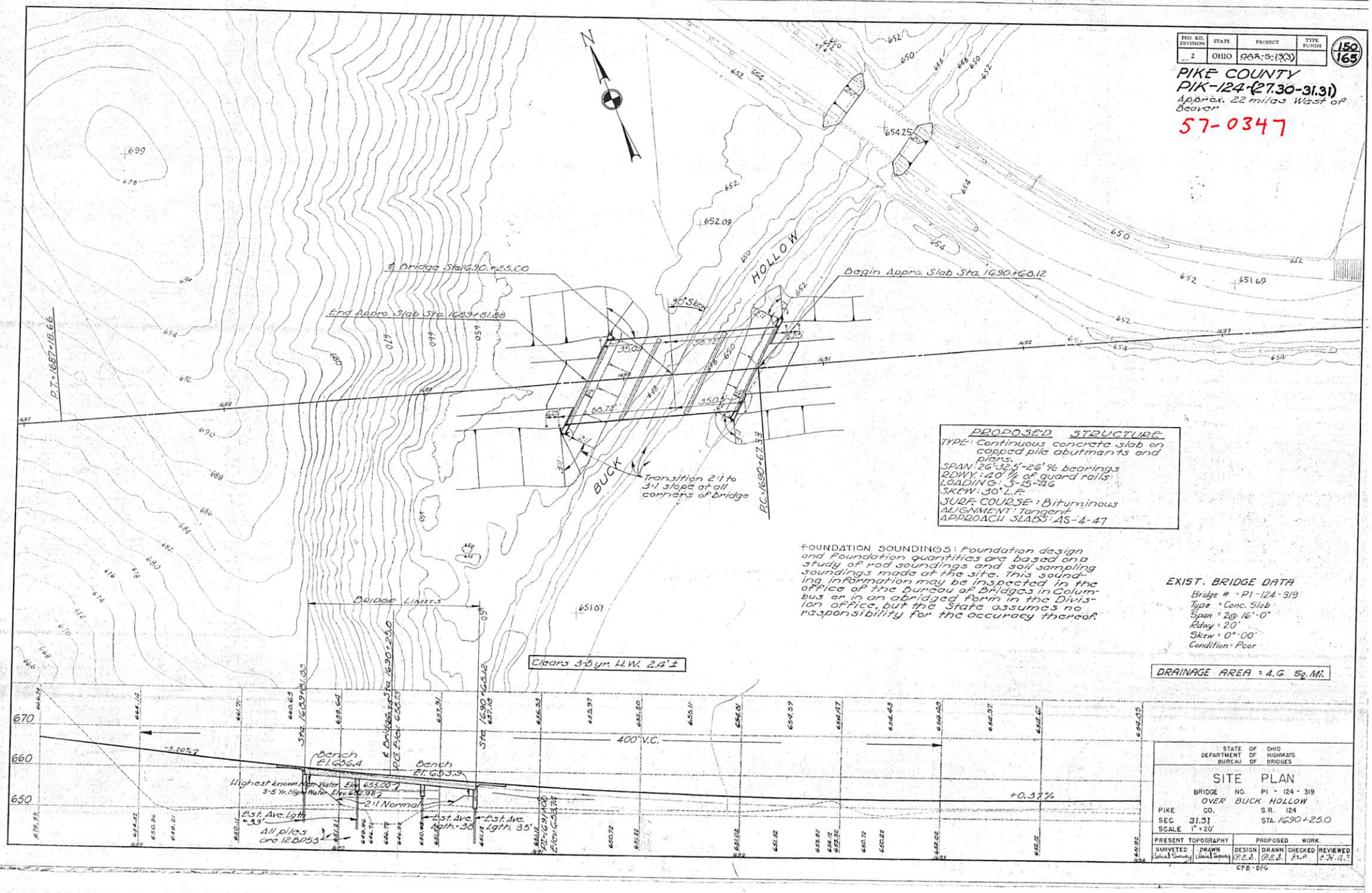


FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	BAA-5-1(3)	

150
165

PIKE COUNTY
PIK-124-(27.30-31.31)
Approx. 22 miles West of Beaver

57-0347

PROPOSED STRUCTURE
TYPE: Continuous concrete slab on capped pile abutments and piers.
SPAN: 26'-32.5'-26' % bearings
RDWY: 40' ℄ of guard rails
LOADING: S-15-46
SKEW: 30° L.F.
SURF. COURSE: Bituminous
ALIGNMENT: Tangent
APPROACH SLABS: AS-4-47

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in an abridged form in the Division office, but the State assumes no responsibility for the accuracy thereof.

EXIST. BRIDGE DATA
Bridge # = PI-124-319
Type = Conc. Slab
Span = 2@ 16'-0"
Rdwy = 20'
Skew = 0°-00'
Condition = Poor

DRAINAGE AREA = 4.6 Sq. Mi.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SITE PLAN

BRIDGE NO. PI - 124 - 319
OVER BUCK HOLLOW
PIKE CO. S.R. 124
SEC. 31.31 STA. 1690+25.0
SCALE 1" = 20'

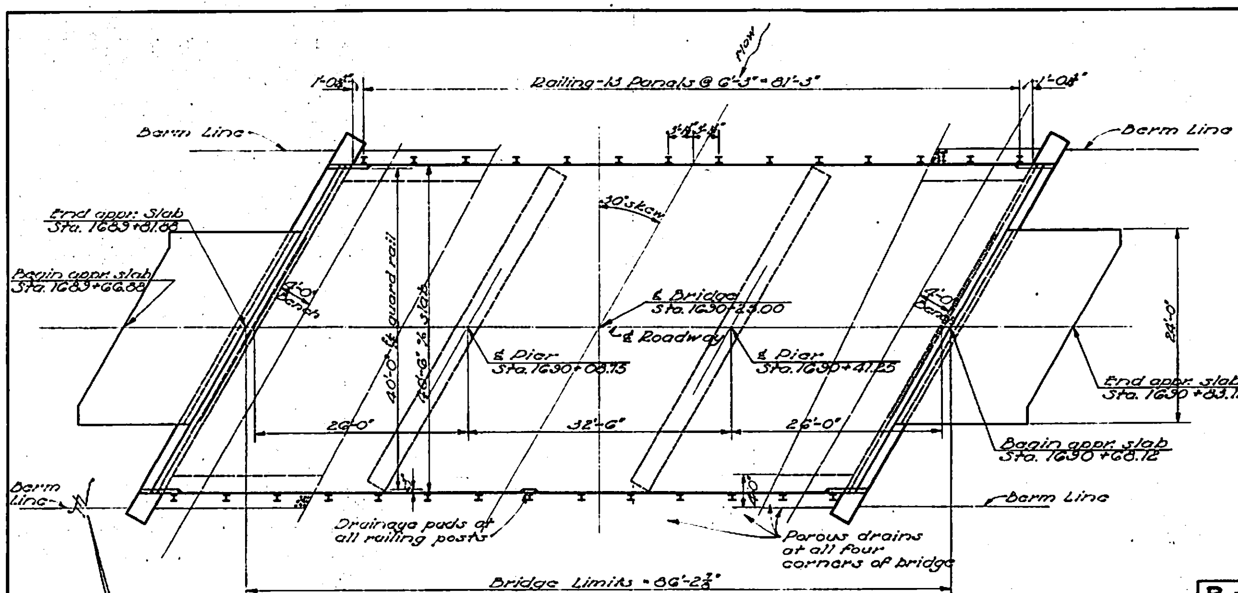
PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGN	DRAWN	CHECKED	REVIEWED
Federal Survey	Federal Survey	P.E.S.	P.E.S.	J.A.P.	4-7-61

CFB-DFG

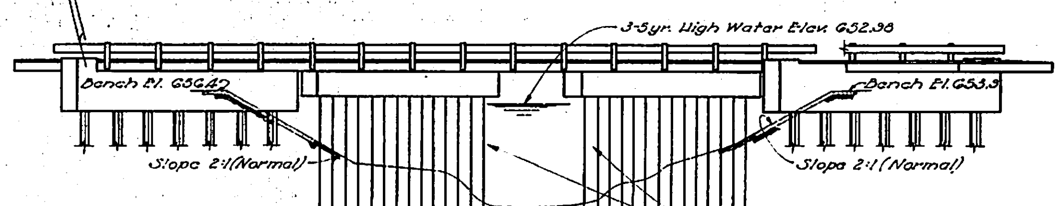
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	OAA-S-13(3)	

151/165

PIKE COUNTY
PIK-124-(27.30-31.31)



General Plan



General Elevation

Estimated Quantities

Item	Total	Unit	Description	Abut.	Piers	Super	Gen'l	As	Built
E-2.	57	Cu.yd.	Unclassified excavation	57					
S-1	177	Cu.yd.	Class "C" concrete, superstructure and pier caps		25	152			
S-1	60	Cu.yd.	Class "C" concrete, abutments	60					
S-3	383	Sq.yd.	Type "C" waterproofing			383			
S-4	47380	Lbs.	Reinforcing steel	5410	3731	38057	122		
S-9	14	Sq.Ft.	½" Premolded expansion joint filler			14			
S-14	172.48	Lin.Ft.	Railing (Type I-13.13 with steel posts)			172.48			
S-16	Lump	Sum	First test pile				Lump		
S-18	1060	Lin.Ft.	Steel piling, 12BP53	520	540			[illegible]	989.16
S-24	Lump	Sum	Removal of existing structure				Lump	[illegible]	0
S-29	11	Cu.yd.	Porous drains on embankment slopes				11		
T-35	27	Cu.yd.	Asphaltic concrete surface course, Type "A" or "C" (70-80)			27			

Revised As-Built

General Notes

REFERENCE shall be made to Standard Drawings CS-1-47, revised 1-20-48, A-1-43, Dated 7-27-43 and P-1-43, Dated 7-27-43.

REMOVAL OF EXISTING STRUCTURE: When no longer needed to maintain traffic, the existing structure shall be removed and become the property of the Contractor. Existing substructure shall be removed to ground line and banks dressed to 2:1 slope. Waste masonry may be disposed of as bank protection as directed by the Engineer. Dressing of slopes included with Item S-24, 'Removal of existing structure' for payment.

EXCAVATION quantity includes the removal of fill material between top of earth bench and bottom of abutment crossbeam.

PILING shall be driven with a steam hammer of not less than 7000'# energy per blow, to firm contact with shale for the pier piles and preferably also for the abutment piles. The necessary penetration shall be considered as attained when the capacity according to the formula in Sec. S-18.05 is at least 33 tons per pile for the pier piles and 35 tons for the abutment piles if a 7,000'# hammer is used, or 35 tons for the pier piles and 28 tons for the abutment piles if a 15,000'# hammer is used and if the length of penetration of the pier piles and preferably also the abutment piles is approximately equal to the depth to shale according to the bridge foundation investigation report. If the energy rating of the hammer is between these values, the required formula capacity shall be determined by interpolation. (The design load is 30 tons per pile for the pier piles and 25 tons for the abutment piles.)

SURFACE FINISH OF CONCRETE: Fascia of deck slab shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of Item S-1.

BITUMINOUS SURFACE COURSE: 2½" Asphaltic concrete, Item T-35, laid in two 1¼" courses.

POROUS DRAINS extending from face of abutment to Elev. 651.0±, shall be placed on and flush with embankment slopes at all four corners of the bridge. The drains shall be 4' wide and 1' thick. They shall be centered under the edge of the deck. They shall be composed of No. 1 or No. 12 gravel, stone or slag. Construction procedure shall conform essentially to Item I-9. Trench excavation shall be included for payment with price per cu yd. bid for "Porous drains on embankment slopes".

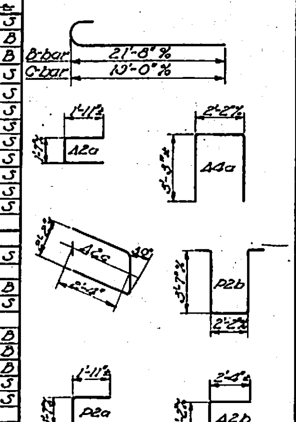
METAL WASHERS of approximately 3" diameter shall be provided on the anchor bolts, between the railing posts and the fascia of the deck, to hold the railing in accurate alignment. Washers shall be used only to the extent necessary for this purpose. The space between each railing post and the face of the concrete shall be thoroughly and neatly filled with "Leadite" or approved equivalent to exclude moisture. Payment for washers and filling shall be considered as included in the contract price bid per lin. ft. of railing. Bush-hammering of fascia of deck as required by Std. Dwg. CS-1-47 shall not be done.

GRAVEL, if used as the course aggregate, shall be according to Sec. M-3.93 instead of M-3.91 for Class "C" concrete, superstructure & pier caps.

Reinforcing Steel List

Mark	Size	No.	Length	Weight	Sh.
Superstructure					
A	1"□	33	30'-9"	9723	S
B	1"□	30	22'-9"	2321	B
C	1"□	30	20'-1"	2046	B
D	1"□	15	20'-3"	1035	S
E	1"□	15	17'-0"	867	S
F	1"□	82	24'-7"	6854	S
G	1"□	40	14'-7"	1983	S
H	1"□	40	11'-10"	1603	S
J	¾"φ	40	19'-0"	1142	S
K	¾"φ	40	18'-9"	1127	S
L	¾"φ	164	24'-0"	5912	S
M	¾"φ	112	24'-0"	4038	S
Abutments					
A7a	1"φ	48	28'-7"	3663	S
A4a	⅝"φ	128	8'-5"	1123	B
A4b	⅝"φ	30	3'-0"	94	S
A2a	½"φ	56	5'-3"	196	B
A2b	½"φ	8	6'-8"	36	B
A2c	½"φ	8	6'-10"	37	B
A2d	½"φ	88	3'-6"	206	S
A2e	½"φ	8	10'-4"	55	S
Piers					
P0a	1¼"□	8	25'-5"	1073	S
P7a	1"φ	32	24'-10"	2122	S
P2a	½"φ	56	5'-3"	196	B
P2b	½"φ	58	10'-4"	400	B
Replacement Bars					
RE0	1¼"□	1	7'-6"	40	S
RE8	1"□	2	6'-10"	46	S
RE7	1"φ	1	6'-6"	17	S
RE5	⅝"φ	1	5'-11"	9	S
RE4	⅝"φ	1	5'-7"	6	S
RE2	½"φ	1	5'-3"	4	S

Bending Diagrams



NOTE: The bar size designations shown do not correspond with the size designations given in the January 1, 1953 edition of the Construction and Materials Specifications.

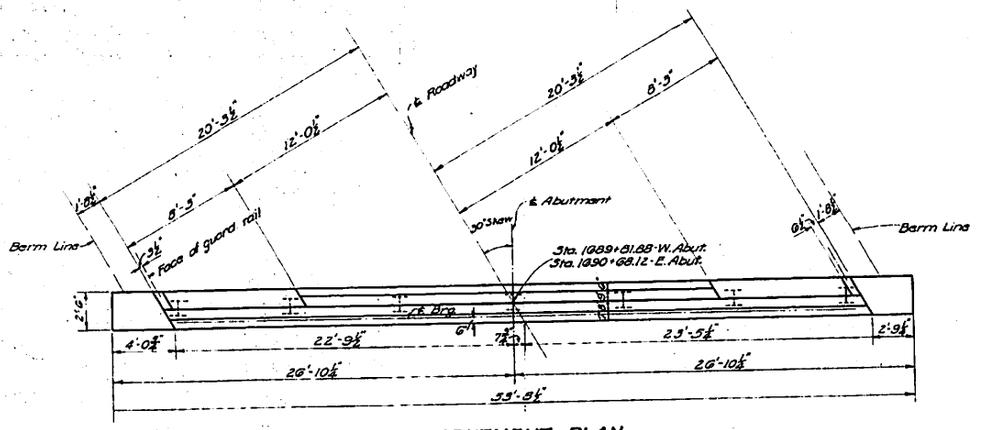
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES AND RAILROAD CROSSINGS

GENERAL PLAN, ELEVATION, NOTES & ESTIMATED QUANTITIES & REINFORCING STEEL LIST
BRIDGE NO. PI-124-319 OVER BUCK HOLLOW
Pike County
Sec. PIK-124-31.31 Sta. 1690+23.00

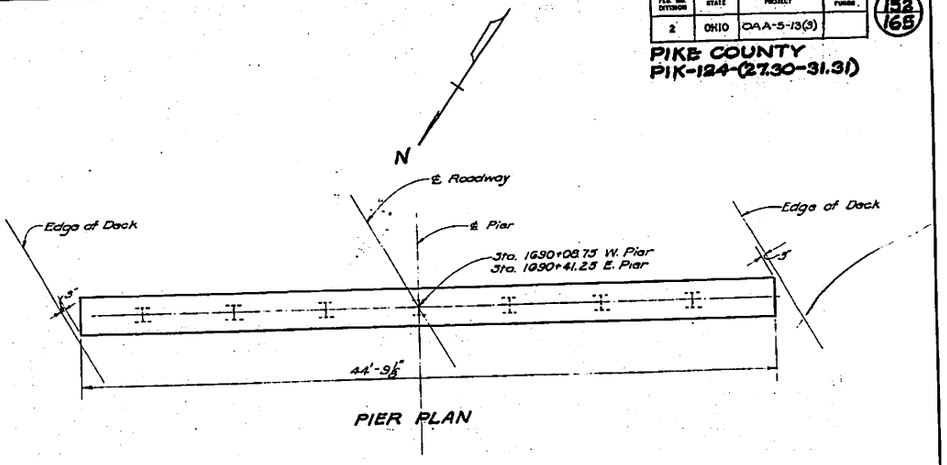
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED / DATE	REVISED
E.L.L.	E.L.S.	J.O.V.	R.V.H.	CFD BFG 8-22-53	17 Nov 53

FED. ROAD DIVISION	STATE	PROJECT	SHEET NUMBER
2	OHIO	OAA-5-13(9)	152 / 165

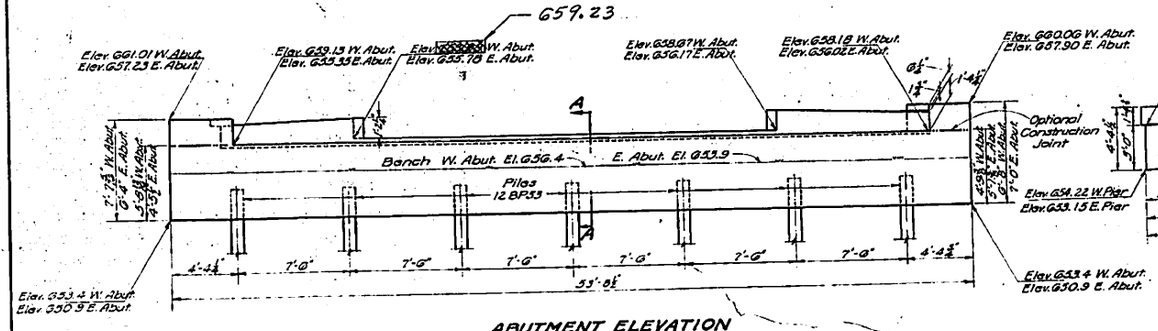
PIKE COUNTY
PIK-124-(27.30-31.31)



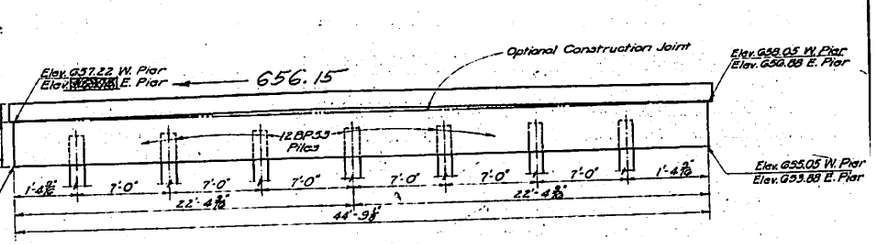
ABUTMENT PLAN



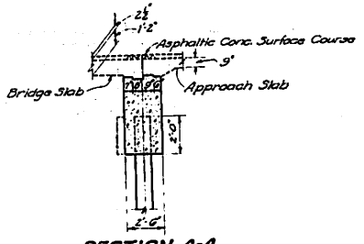
PIER PLAN



ABUTMENT ELEVATION



PIER ELEVATION



SECTION A-A

NOTE:
For details of pier and abutments not shown, see Std. Drwg. Nos. P-1-49 and A-1-49, dated 7-27-49.

PENCIL REVISIONS
June 9, 1954
KED

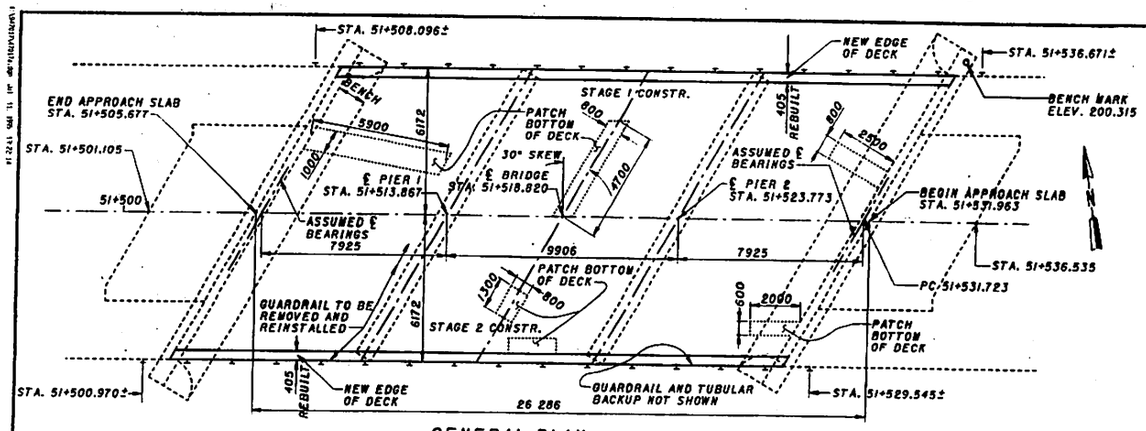
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES AND RAILROAD CROSSINGS

PIER & ABUTMENT DETAILS

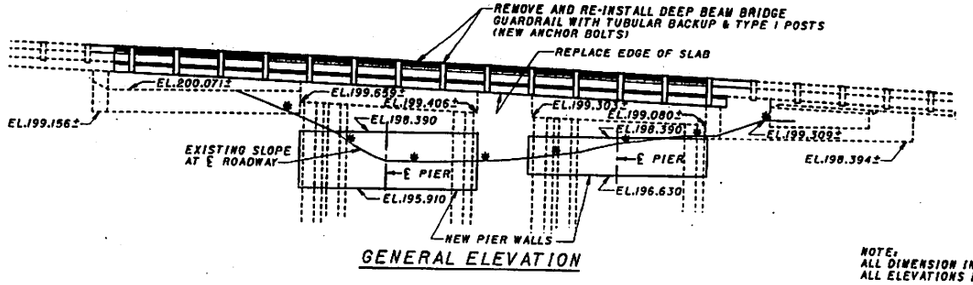
BRIDGE No. PI-124-319
OVER BUCK HOLLOW

PIKE COUNTY
SEC. PIK-124-31.31 STA. 1090+25.00

DESIGNED	DRAWN	TRACED	CHECKED	REVISED	DATE	SECTION
E.F.S.	E.R.S.	J.D.J	R.W.K.	CFB	BFG 8-22-53	



GENERAL PLAN



GENERAL ELEVATION

NOTE:
ALL DIMENSION IN MILLIMETERS
ALL ELEVATIONS IN METERS

PROPOSED WORK CONSISTS OF THE FOLLOWING ITEMS:

1. CONSTRUCTION OF CONCRETE PROTECTION WALLS FOR PILES OF EACH PIER.
2. REMOVAL OF EXISTING ASPHALT WEARING SURFACE, DECK WATERPROOFING, AND STEEL DRIP STRIPS.
3. REMOVAL OF THE OUTSIDE 405MM OF THE CONCRETE FROM EACH EDGE OF THE EXISTING DECK, LEAVING THE EXISTING REINFORCING STEEL.
4. REMOVAL AND STORAGE OF THE EXISTING GUARDRAIL AND ANCHOR BOLTS.
5. RECONSTRUCTION OF CONCRETE FOR THE OUTSIDE 405MM OF EACH EDGE OF DECK, INCLUDING REINSTALLATION OF RAILING ANCHOR BOLTS.
6. PROVIDE NEW STEEL DRIP STRIPS TO EACH EDGE OF DECK.
7. PATCH CONCRETE IN TOP OF CONCRETE DECK AND/OR REPAIR DELAMINATED DECK CONCRETE IN STAGES, WHILE MAINTAINING TRAFFIC.
8. INSTALL NEW WATERPROOFING (SHEET TYPE 3) AND ASPHALT CONCRETE SURFACING IN STAGES, WHILE MAINTAINING TRAFFIC.
9. PATCH CONCRETE IN BOTTOM OF CONCRETE DECK.
10. REINSTALL GUARDRAIL.
11. SEALING OF THE CONCRETE SURFACES OF THE NEW EDGES OF CONCRETE DECK.

BRIDGE RAILING: EXISTING DEEP BEAM BRIDGE GUARDRAIL WITH TUBULAR BACKUP SHALL BE REMOVED AND RE-INSTALLED IN THE SAME POSITION AS EXISTING EXCEPT THAT THE TYPE I POSTS SHALL BE POSITIONED 75MM FROM THE EDGE OF DECK INSTEAD OF 25MM. POST ANCHOR BOLTS, NUTS AND WASHERS WHICH ARE UNUSABLE AFTER REMOVAL SHALL BE REPLACED BY NEW TYPE A ANCHORS AS SHOWN ON STANDARD DRAWING DBR-2-75. THE COST OF THE ADDITIONAL ANCHORS SHALL BE INCLUDED IN THE UNIT PRICE PER METER FOR ITEM 517, RAILING REBUILT, AS PER PLAN.

REFERENCE SHALL BE MADE TO STANDARD DRAWING:

DBR-2-73 DATED 8-18-95
DS-1-94M DATED 12-15-94
AND TO SUPPLEMENTAL SPECIFICATIONS:
933 DATED 7-17-95

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1992, INCLUDING THE 1993 AND 1994 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING: MS-18 AND THE ALTERNATE MILITARY LOADING.

DESIGN DATA:

CONCRETE CLASS S - UNIT STRESS 10.3 M pa. (SUPERSTRUCTURE)
CONCRETE CLASS C - UNIT STRESS 9.8 Mpa. (SUBSTRUCTURE)
REINFORCING STEEL - ASTM A615M, A616M OR A617M.
GRADE 400 - UNIT STRESS 160 M pa.

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL.
65MM CONCRETE COVER.
WATERPROOFING AND ASPHALT CONCRETE OVERLAY.
STEEL DRIP STRIP

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 25mm THICK.

ITEM SPECIAL, SEALING OF CONCRETE SURFACES: A CONCRETE SEALER SHALL BE APPLIED TO THE CONCRETE SURFACES DESIGNATED ON THE PLANS. SEE PROPOSAL FOR SURFACE PREPARATION REQUIREMENTS, APPLICATION RATES, MATERIAL REQUIREMENTS AND APPLICATION PROCEDURES.

PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

DESCRIPTION: THIS WORK SHALL CONSIST OF THE REMOVAL OF A PORTION OF THE CONCRETE DECK INCLUDING RAILINGS. CARE SHALL BE TAKEN DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. IN THIS RESPECT, THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED.

PROTECTION OF TRAFFIC: PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING SUPERSTRUCTURE, THE CONTRACTOR SHALL SUBMIT HIS PLANS FOR THE PROTECTION OF TRAFFIC ADJACENT TO THE STRUCTURE TO THE DIRECTOR FOR APPROVAL. THESE PLANS SHALL INCLUDE PROVISIONS FOR ANY DEVICES AND STRUCTURES THAT MAY BE NECESSARY TO ENSURE SUCH PROTECTION.

REMOVAL METHOD: CONCRETE MAY BE REMOVED BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVALS, A HAMMER HEAVIER THAN 16KG BUT NOT TO EXCEED 41KG MAY BE USED AT THE APPROVAL OF THE ENGINEER, TO ENSURE ADEQUATE DEPTH CONTROL AND TO PREVENT MICRING.

LOADING LIMITATIONS: NO PART OF THE STRUCTURE SHALL BE SUBJECTED TO UNIT STRESSES THAT EXCEED 136.5% OF THE ALLOWABLE UNIT STRESSES GIVEN IN THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES DUE EITHER TO DEMOLITION, ERECTION OR CONSTRUCTION METHODS, OR TO THE USE OR MOVEMENT OF DEMOLITION OR ERECTION EQUIPMENT ON OR ACROSS THE STRUCTURE. STRUCTURAL ANALYSIS COMPUTATIONS, BY A REGISTERED PROFESSIONAL ENGINEER, SHOWING THE ALLOWABLE STRESSES AND THE MAXIMUM STRESSES PRODUCED BY THE CONTRACTOR'S METHODS OR EQUIPMENT SHALL BE SUBMITTED TO THE DIRECTOR FOR REVIEW AND APPROVAL AT LEAST TWO WEEKS PRIOR TO THE START OF THE WORK.

PAYMENT: THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE BID, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS, WITH PERTINENT PROVISIONS OF 202, AND TO THE SATISFACTION OF THE ENGINEER.

EXISTING STRUCTURE VERIFICATION: DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

REPLACEMENT OF EXISTING REINFORCING STEEL: ANY EXISTING REINFORCING BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND WHICH ARE MADE UNUSABLE BY THE CONTRACTOR'S CONCRETE REMOVAL OPERATIONS SHALL BE REPLACED WITH NEW STEEL AT THEIR COST. ANY EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION SHALL BE REPLACED WITH NEW STEEL. AN ALLOWANCE OF 200 KILOGRAMS IS INCLUDED IN ITEM 509 FOR THIS PURPOSE, LISTED IN THE ESTIMATED QUANTITIES TABLE.

STAINLESS STEEL DRIP STRIP: PRIOR TO THE CONCRETE DECK PLACEMENT A BENT DRIP STRIP SHALL BE INSTALLED ALONG THE EDGES OF THE DECK BY ANCHORING TO THE TOP LAYER OF REINFORCING STEEL AND BEING BUTTED, WITH A 90 DEGREE BEND, AGAINST THE FORMWORK. AN ADDITIONAL 305MM LONG STRIP SHALL ALSO BE INSTALLED CENTERED ON EACH POST.

THE STRIPS SHALL BE PLACED THE FULL LENGTH OF THE DECK, ENDING AT THE ABUTMENTS. WHERE SPLICES ARE REQUIRED THE INDIVIDUAL PIECES SHALL BE BUTTED TOGETHER. STAINLESS STEEL SHALL BE 0.76mm THICK ASTM A167M, TYPE 304, MILL FINISH.

THE FINAL PAY QUANTITY SHALL BE THE ACTUAL OVERALL LENGTH OF THE DRIP STRIP. ADDITIONAL STRIPS AT POSTS SHALL NOT BE MEASURED FOR PAYMENT.

PAYMENT SHALL BE AT THE CONTRACT PRICE BID FOR ITEM SPECIAL, METER, STEEL DRIP STRIP, WHICH SHALL INCLUDE ALL MATERIALS, LABOR, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE ITEM.

benatec associates
119 DILLIGOT DR.
COLUMBUS, OHIO 43213

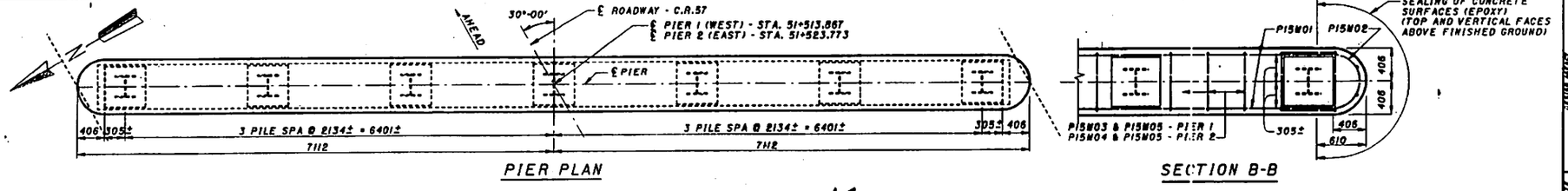
DESIGNED RAK
DRAWN CFZ
CHECKED RWM
CHECKED ELC
DATE - 8-94
STRUCTURAL FILE NUMBER

GENERAL PLAN, ELEVATION, AND GENERAL NOTES, STRUCTURE NO. PIK-CR57-0556 BRIDGE OVER BUCK HOLLOW CREEK

PIK-C.R.57-45.930

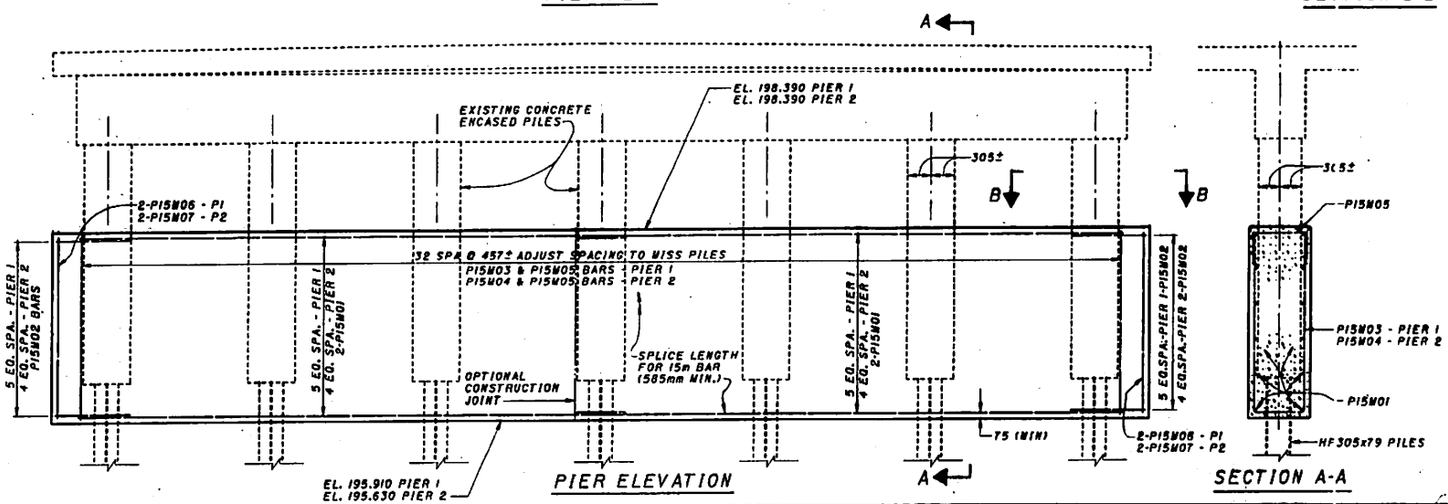
1 | 2

36 / 37



PIER PLAN

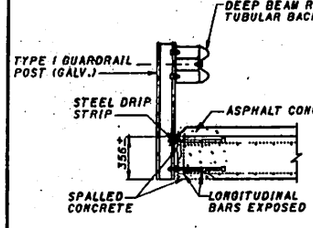
SECTION B-B



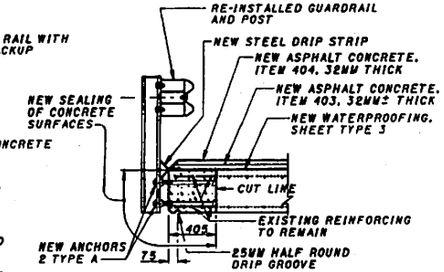
PIER ELEVATION

SECTION A-A

NOTE: ALL ELEVATIONS IN METERS.
ALL DIMENSIONS IN MILLIMETERS.



EXISTING BRIDGE



PROPOSED BRIDGE

ESTIMATED QUANTITIES

CALC'D RAK 7-94 CHDK RWH 8-95

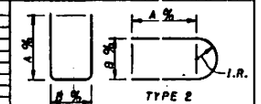
ITEM	ITEM EXT.	TOTAL	UNIT		SUPER	PIERS	GEN'L
202	11203	LUMP	LUMP	PORTION OF STRUCTURE REMOVED, OVER 6 METER SPAN, AS PER PLAN			LUMP
202	23500	325	SQ. METER	WEARING COURSE REMOVED	325		
403	20000	11	CU. METER	ASPHALT CONCRETE, AC-20	11		
404	20000	11	CU. METER	ASPHALT CONCRETE, AC-20	11		
501	11100	LUMP	LUMP	COFFERDAMS - PIERS AND SHEETING -*		LUMP	
503	21100	52	CU. METER	UNCLASSIFIED EXCAVATION		52	
509	13000	1448	KG	EPOXY COATED REINFORCING STEEL, GRADE 400		1248	200
511	32500	8	CU. METER	CLASS S CONCRETE, SUPERSTRUCTURE	8		
511	40500	16	CU. METER	CLASS S CONCRETE, PIER ABOVE FOOTING		16	
SPECIAL	51207516	325	SQ. METER	WATERPROOFING, SHEET TYPE 3 -* SEE ABOVE	325		
SPECIAL	51207508	45	SQ. METER	SEALING OF CONCRETE SURFACES (EPOXY) (SEE PROPOSAL NOTE) Approx.	39	6	
517	75401	57.15	METER	RAILING REBUILT, AS PER PLAN	57.15		
SPECIAL	51225100	81	METER	STEEL DRIP STRIP	81		
SPECIAL	51912510	14	SQ. METER	PATCHING CONCRETE BRIDGE DECK -*	14		

-* SEE PROPOSAL NOTE

REINFORCING STEEL - PIERS

MARK	NO.	LENGTH (mm)	WEIGHT (KG)	TYPE	NUMBER PIER 1	NUMBER PIER 2	A	B	I.R.
P15M01	44	6985	417	STR	24	20			
P15M02	22	2438	77	2	12	10	385	480	325
P15M03	33	3345	277	/	33		2385	710	
P15M04	33	3915	203	/		33	1640	710	
P15M05	66	1805	187	/	33	33	585	710	
P15M06	4	2358	18	STR	4				
P15M07	4	1640	10	STR		4			
		TOTAL	1248						

BENDING DIAGRAM



NOTES FOR REINFORCING:

ALL DIMENSIONS ARE IN MILLIMETERS.
ALL WEIGHTS ARE IN KILOGRAMS.
BAR SIZE IS INDICATED IN THE BAR MARK THE FIRST 3 DIGITS INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE, P15M01 IS A NO. 15M SIZE.
BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. I.R. INDICATES INSIDE RADIUS. UNLESS OTHERWISE NOTED, "STD" WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.
ALL NEW REINFORCING STEEL TO BE EPOXY COATED.

BRIDGE DETAILS AND QUANTITIES
STRUCTURE NO. PIK-CR57-0556
BRIDGE OVER BUCK HOLLOW CREEK

DESIGNED	RAK	DRAWN	CFZ	REVIEWED	ELC	DATE	2-95
CHECKED	RWH	REVISED		STRUCTURE FILE NUMBER			

benatec associates
119 ELLIOTT DR.
COLUMBUS, OHIO 43213

PIK-C.R.57-45.930

2 | 2

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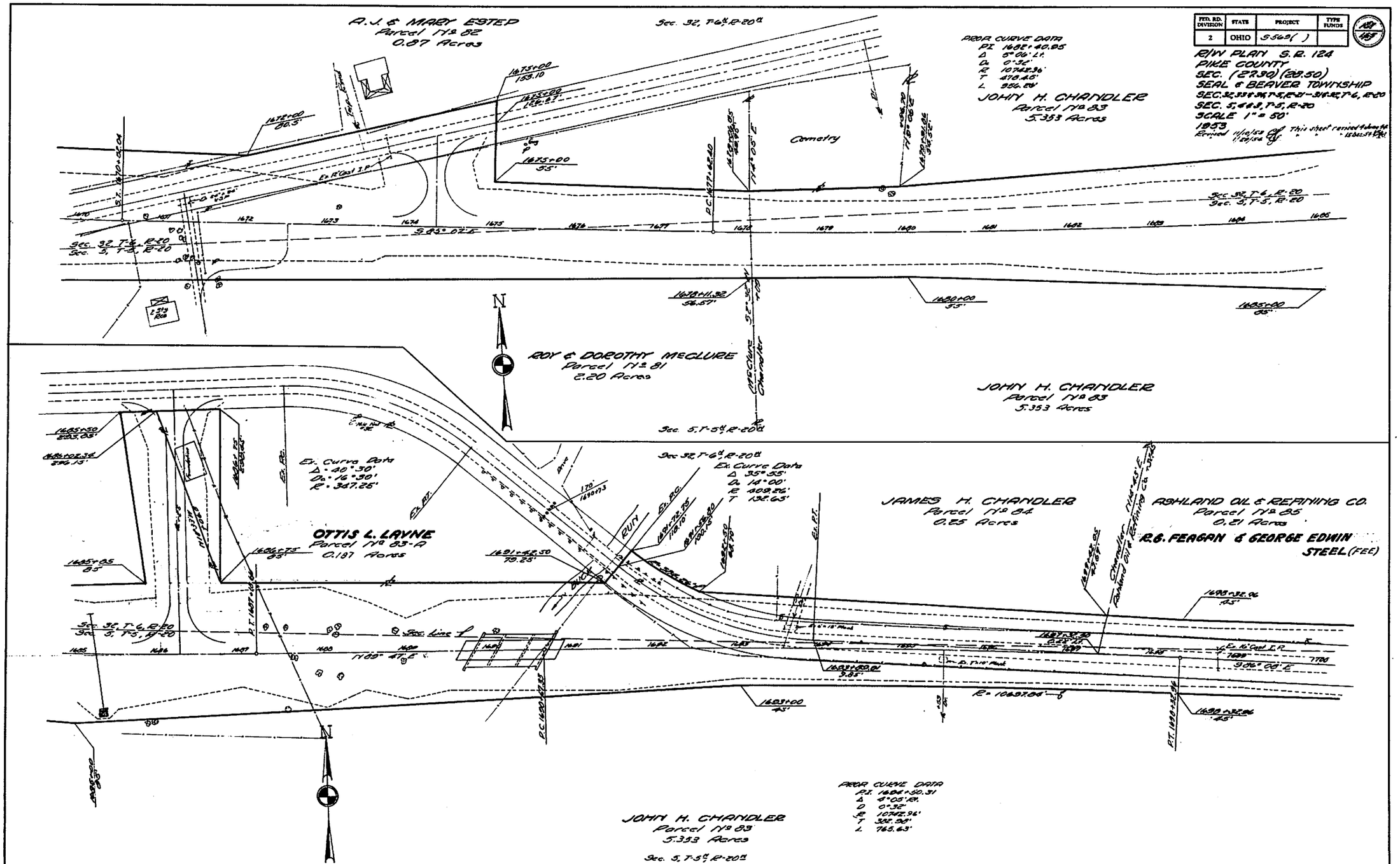
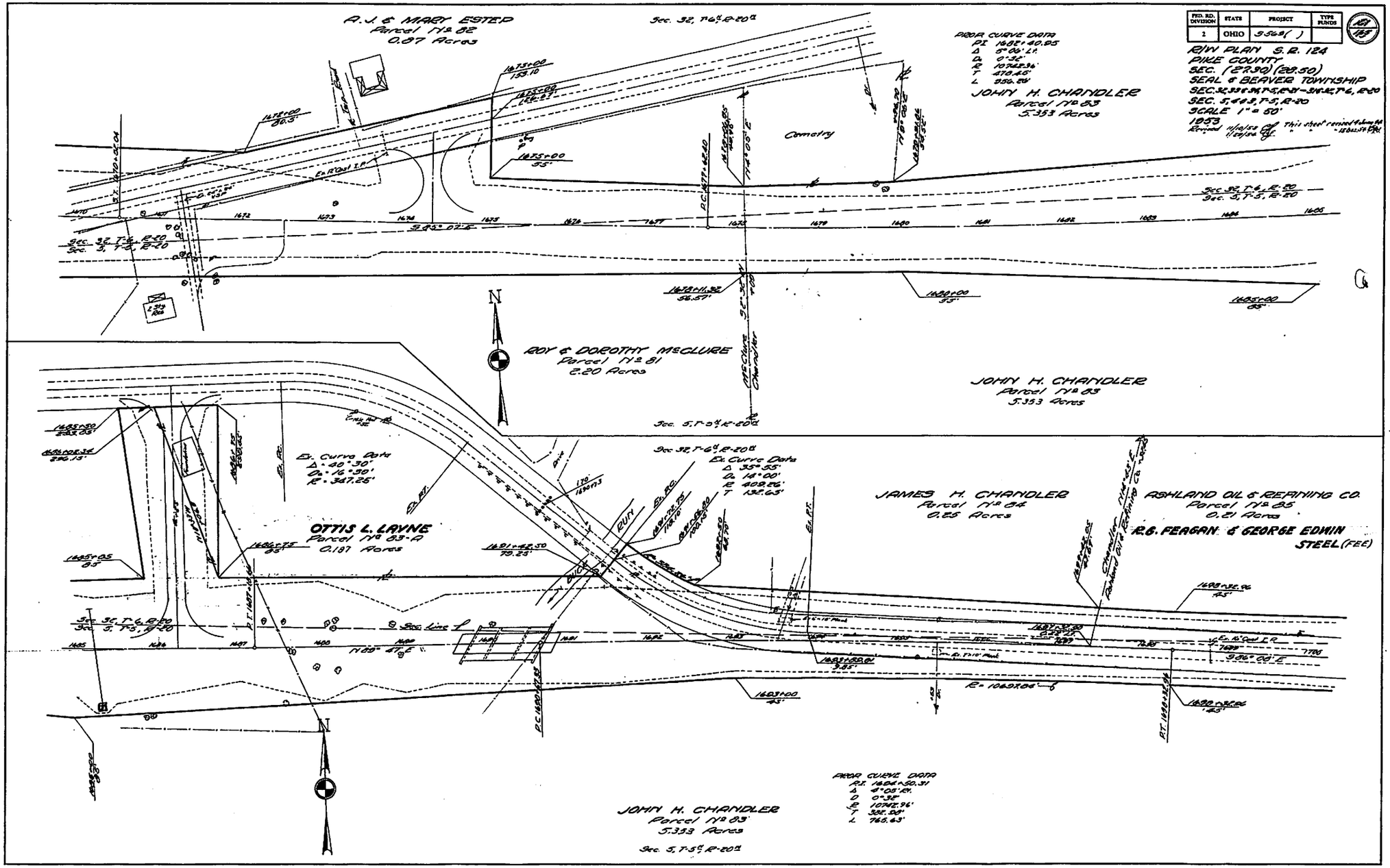


PROPERTY INDEX, SHEET 165 Sta. 1670 to Sta. 1700



PROPERTY INDEX, SHEET 165 Sta. 1670 to Sta. 1700