WILLIAM R. SHAW, P.E., P.S.
Hocking County Engineer
engineer@hocking.oh.gov

1286 California Avenue
Logan, Ohio 43138-8999
Office Phone (740) 385-8543
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Addendum #2 to PID 112312 HOC-CR174-00.30

12/8/2025

1. See attached revised BID FOR UNIT PRICE CONTRACT document. This has been updated to add pay item #55A and #55B for approach slabs, and list Addenda on the signature page.
    a. Associated revisions for approach slab are included on attached plan sheets 17, 18 and 19
2. Plans for the existing structure are attached as “Appendix F”
3. A question was received asking if existing overhead utilities will be relocated or remain in place. The overhead utilities are being relocated.
4. Addendum #1 indicated that the Contractor shall be permitted a maximum road closure of 90 days. Contractor is responsible for signage per Item 614 in the plans. Engineer will handle detour routing and signage.

BID FOR UNIT PRICE CONTRACT

HOC-CR 174-00.30

PID 112312

LETTING: December 11, 2025

EDGE Goal: 5%

Submitted by: _____

Address: _____

Street City State Zip

Submit to Hocking County Commissioners, 1 E. Main St, Logan OH 43138

LINE	ITEM	EXT	DESCRIPTION	UNIT	QTY	UNIT COST	TOTAL
	ROADWAY						
1	201	11000	CLEARING AND GRUBBING		LS		
2	202	23000	PAVEMENT REMOVED	SY	543		
3	202	38000	GUARDRAIL REMOVED	FT	325		
4	203	10000	EXCAVATION	CY	216		
5	203	20000	EMBANKMENT	CY	26		
6	204	10000	SUBGRADE COMPACTION	SY	782		
7	204	45000	PROOF ROLLING	HOUR	1		
8	606	15050	GUARDRAIL, TYPE MGS	FT	137.5		
9	606	15100	GUARDRAIL, TYPE MGS WITH LONG POSTS	FT	37.5		
10	606	25550	ANCHOR ASSEMBLY, MGS TYPE A	EACH	1		
11	606	26150	ANCHOR ASSEMBLY, MGS TYPE E	EACH	2		
12	606	26550	ANCHOR ASSEMBLY, MGS TYPE T	EACH	1		
13	606	35002	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	EACH	4		
	EROSION CONTROL						
14	601	32200	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	CY	10		
15	659	00100	SOIL ANALYSIS TEST	EACH	2		
16	659	00300	TOPSOIL	CY	25		
17	659	10000	SEEDING AND MULCHING	SY	229		
18	659	14000	REPAIR SEEDING AND MULCHING	SY	11		
19	659	20000	COMMERCIAL FERTILIZER	TON	0.03		

20	659	31000	LIME	ACRE	0.05		
21	659	35000	WATER	MGAL	1		
22	832	30000	EROSION CONTROL	EACH	2500		
	DRAINAGE						
23	605	31100	AGGREGATE DRAINS	FT	70		
24	611	01400	6" CONDUIT, TYPE E	FT	50		
25	611	01500	6" CONDUIT, TYPE F	FT	50		
26	611	01800	8" CONDUIT, TYPE B	FT	50		
	PAVEMENT						
27	301	56000	ASPHALT CONCRETE BASE, PG64-22, (449)	CY	65		
28	304	20000	AGGREGATE BASE	CY	125		
29	407	10000	TACK COAT	GAL	64		
30	441	70000	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22	CY	49		
	TRAFFIC CONTROL						
31	626	00110	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL	EACH	11		
32	630	84900	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	EACH	4		
33	630	86002	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	EACH	4		
34	642	00300	CENTER LINE, TYPE 1	MILE	0.08		
	STRUCTURE OVER 20 FOOT SPAN (3731731)						
35	202	11201	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN		LS		
36	202	22900	APPROACH SLAB REMOVED	SY	111		
37	202	23500	WEARING COURSE REMOVED	SY	551		
38	503	11100	COFFERDAMS AND EXCAVATION BRACING		LS		

39	503	21300	UNCLASSIFIED EXCAVATION		LS		
40	509	10000	EPOXY COATED STEEL REINFORCEMENT	LB	17123		
41	510	10000	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	EACH	18		
42	511	31610	CLASS QC2 CONCRETE, SUPERSTRUCTURE	CY	96		
43	511	50210	CLASS QC1 CONCRETE, SUBSTRUCTURE	CY	10		
44	512	10000	SEALING OF CONCRETE SURFACES	SY	184		
45	515	12050	PRESTRESSED CONCRETE COMPOSITE BOX BEAM BRIDGE MEMBERS, LEVEL 1, CB21-48, 55.45'	EACH	6		
46	515	12050	PRESTRESSED CONCRETE COMPOSITE BOX BEAM BRIDGE MEMBERS, LEVEL 1, CB21-48, 56.45'	EACH	12		
47	516	13600	1" PREFORMED EXPANSION JOINT FILLER	SF	24		
48	516	14020	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	FT	56		
49	516	41100	1/8" PREFORMED BEARING PAD, TYPE CDP	EACH	36		
50	516	43200	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE), 2" x 11" x 11"	EACH	72		
51	517	70000	RAILING (TWIN STEEL TUBE)	FT	347		
52	518	21200	POROUS BACKFILL WITH GEOTEXTILE FABRIC	CY	35		
53	518	40000	6" PERFORATED CORRUGATED PLASTIC PIPE	FT	70		
54	518	40010	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	FT	60		
55	519	11101	PATCHING CONCRETE STRUCTURE, AS PER PLAN	SF	25		
55A	526	25000	REINFORCED CONCRETE SLABS (T=15")	SY	67		
55B	526	25001	REINFORCED CONCRETE SLABS (T=15"), AS PER PLAN	SY	67		
56	601	32010	ROCK CHANNEL PROTECTION, TYPE A WITH AGGREGATE FILTER	CY	439		
57	611	99710	PRECAST REINFORCED CONCRETE OUTLET	EACH	4		
58	SPECIAL	51822300	STEEL DRIP STRIP	FT	413.54		

	INCIDENTALS						
59	614	11000	MAINTAINING TRAFFIC		LS		
60	623	10000	CONSTRUCTION LAYOUT STAKES AND SURVEYING		LS		
61	624	10000	MOBILIZATION		LS		
			TOTAL AMOUNT OF BID:		**$**		

TO: HOCKING COUNTY BOARD OF COMMISSIONERS

The undersigned having full knowledge of the sites, plans, or specifications for the following improvements and the conditions of this proposal, hereby agrees to furnish all services, labor, materials, and equipment necessary to complete the entire project, according to the plans, specifications and completion dates and to accept the unit prices listed for each item as full compensation for the work on this proposal.

DATE OF COMPLETION: **October 31, 2026**

The total amount of the bid is the sum of:

_____ and_____/ 100 Dollars

($_____)

This bid includes $ _____ or _____ % EDGE Participation

Company name of EDGE Partner: _____

Addenda acknowledged:

Addendum # _____ Dated: _____

Addendum # _____ Dated: _____

COMPANY: _____

SIGNED: _____

TITLE: _____

DATE: _____

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD DRAWINGS

AS-1-15	REVISED 1/20/23
BD-1-11	REVISED 7/20/18
DS-1-92	REVISED 7/15/22
PSBD-2-07	REVISED 7/20/18
TST-1-99	REVISED 1/15/21

THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS

SS800	DATED 7/18/25
SS832	DATED 7/18/25

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

DESIGN LOADING

DESIGN LOADING INCLUDES:

VEHICULAR LIVE LOAD: HL-93
FUTURE WEARING SURFACE OF 0.060 KSF

DESIGN DATA

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

EPOXY COATED STEEL REINFORCEMENT - MINIMUM YIELD STRENGTH 60 KSI

ADDITIONAL DATA FOR PRESTRESSED CONCRETE MEMBERS:

CONCRETE FOR PRESTRESSED BEAMS:
COMPRESSIVE STRENGTH (FINAL) 5.5 KSI
COMPRESSIVE STRENGTH (RELEASE) 4.0 KSI

PRESTRESSING STRAND:
AREA = 0.167 SQ IN
ULTIMATE STRENGTH = 270 KSI
INITIAL STRESS = 202.5 KSI (LOW RELAXATION)

MONOLITHIC WEARING SURFACE

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

BEARING PAD SHIMS, PRESTRESSED

PLACE ⅛" THICK PREFORMED BEARING PAD SHIMS, PLAN AREA 11 INCHES BY 11 INCHES, UNDER THE ELASTOMERIC BEARING PADS WHERE REQUIRED FOR PROPER BEARING. FURNISH TWO SHIMS PER BEAM. THE COUNTY WILL MEASURE THIS ITEM BY THE TOTAL NUMBER SUPPLIED. THE COUNTY WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516 - ⅛" PREFORMED BEARING PADS, TYPE CDP. ANY UNUSED SHIMS WILL BECOME THE PROPERTY OF THE COUNTY.

PATCHING CONCRETE SURFACES, AS PER PLAN

PILE ENCASEMENT AT PIERS SHALL BE PATCHED PER C&MS 519. THE FOLLOWING ESTIMATED QUANTITY SHALL BE PERFORMED AS DIRECTED BY THE ENGINEER:

ITEM 519, PATCHING CONCRETE STRUCTURE, AS PER PLAN
25 SF

ITEM 512, SEALING OF CONCRETE SURFACES

SEAL ALL EXPOSED CONCRETE OF THE NEW AND EXISTING ABUTMENTS AND PIERS. THE FOLLOWING ESTIMATED QUANTITY HAVE BEEN CARRIED TO THE GENERAL SUMMARY

ITEM 512, SEALING OF CONCRETE SURFACES 184 SY

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR THE WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE COUNTY WILL NOT PERMIT THE USE OF EXPLOSIVES, HEADACHE BALLS, AND/OR HOE-RAMS. DO NOT BEGIN WORK UNTIL THE ENGINEER ACCEPTS THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE, OR DAMAGE THE EXISTING CONCRETE REINFORCEMENT TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH CONCRETE REINFORCEMENT THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO C&MS 501.05.

BEAM SEAT ELEVATIONS

EXISITING BEAM SEATS SHALL REMAIN AT ABUTMENTS AND PIERS. DECK THICKNESS MAY VARY DUE TO INCONSISTENCIES IN BEAM SEAT ELEVATIONS. A MINIMUM DECK THICKNESS OF 6" SHALL BE MAINTAINED.

ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN

CONSTRUCT REAR APPROACH SLABS PER DETAIL ON SHEET 12/13.

REAR ABUTMENT

MARK	NUMBER	LENGTH	WEIGHT (LBS.)	DIMENSION			
				TYPE	A	B	C
AR501	4	12'-6"	52	2	4'-11"	2'-2"	5'-8"
AR502	7	4'-3"	31	STR			
AR503	5	12'-8"	66	2	5'-0"	2'-2"	5'-9"
AR504	7	5'-0"	37	STR			
		TOTAL	186				

FORWARD ABUTMENT

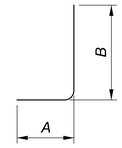
MARK	NUMBER	LENGTH	WEIGHT (LBS.)	DIMENSION			
				TYPE	A	B	C
AF501	4	12'-10"	54	2	5'-1"	2'-2"	5'-10"
AF502	7	4'-5"	32	STR			
AF503	5	12'-8"	66	2	5'-0"	2'-2"	5'-9"
AF504	7	4'-4"	32	STR			
		TOTAL	184				

SUPERSTRUCTURE

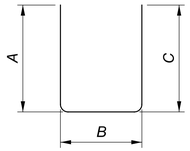
MARK	NUMBER	LENGTH	WEIGHT (LBS.)	DIMENSION			
				TYPE	A	B	C
S401	8	24'-4"	130	STR			
S501	36	6'-2"	232	3	0'-8"	2'-1"	
S502	36	4'-4"	163	3	1'-2"	0'-8"	
S503	48	3'-10"	192	17	2'-8"		
S601	244	24'-4"	8,918	STR			
S602	85	37'-5"	4,777	STR			
S603	32	22'-2"	1,065	STR			
S604	144	3'-9"	811	1	2'-11"	1'-0"	
D801	36	4'-10"	465	18	2'-8"	1'-0"	1'-0"
		TOTAL	16,753				

APPROACH SLABS (FOR REFERENCE ONLY)

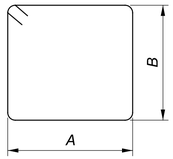
MARK	NUMBER			LENGTH	WEIGHT (LBS.)	DIMENSION				
	REAR	FWD	TOTAL			TYPE	A	B	C	D
AS501	48	48	96	24'-6"	2,453	STR				
AS502	89	89	178	24'-2"	4,487	STR				
AS503	38	-	38	4'-9"	188	19	3'-1"	1'-6"	0'-9"	
AS504	38	-	38	3'-8"	145	10	1'-6"	0'-9"	0'-8"	1'-6"
AS1001	45	42	87	25'-11"	9,702	16	24'-6"			
				TOTAL	16,975					



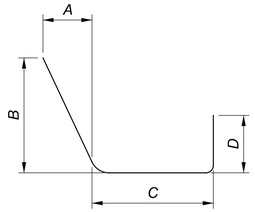
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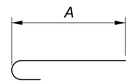
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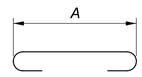
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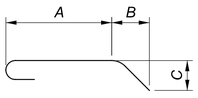
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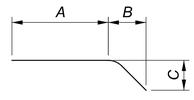
TYPE-16



TYPE-17



TYPE-18



TYPE-19

GENERAL NOTES & REINFORCING STEEL LISTS
BRIDGE NO.: HOC-CR174-0030
OVER SALT CREEK

SFN 3731731

DESIGN AGENCY

ADR
DESIGN • ENGINEERING • INNOVATION
An Employee Owned Company
88 West Church Street
Newark, OH 43055
(740) 345-1921 (ph)
www.adrinnovation.com

DESIGNER	CHECKER
CAC	JTH

REVIEWER: BCK 07-29-25

PROJECT ID: 112312

SUBSET	TOTAL
2	13

SHEET	TOTAL
P.17	28

HOC-CR174-00.30

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SN001.dgn

STRUCTURE ESTIMATED QUANTITIES

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTMENTS		PIER 1	PIER 2	SUPER.
					REAR	FWD.			
202	11201	LS		PORTIONS OF STRUCTURE REMOVED AS PER PLAN					
202	22900	111	SY	APPROACH SLAB REMOVED					111
202	23500	551	SY	WEARING COURSE REMOVED					551
503	11100	LS		COFFERDAMS AND EXCAVATION BRACING					
503	21300	LS		UNCLASSIFIED EXCAVATION					
509	10000	17,123	LB	EPOXY COATED STEEL REINFORCEMENT	186	184			16,753
510	10000	18	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	9	9			
511	31610	96	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE					96
511	50210	10	CY	CLASS QC1 CONCRETE, SUBSTRUCTURE	5	5			
512	10000	184	SY	SEALING OF CONCRETE SURFACES	17	16	20	26	105
515	12050	6	EACH	PRESTRESSED CONCRETE COMPOSITE BOX BEAM BRIDGE MEMBERS, LEVEL 1, CB21-48, 55.45'					6
515	12050	12	EACH	PRESTRESSED CONCRETE COMPOSITE BOX BEAM BRIDGE MEMBERS, LEVEL 1, CB21-48, 56.45'					12
516	13600	24	SF	1" PREFORMED EXPANSION JOINT FILLER	12	12			
516	14020	56	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	28	28			
516	41100	36	EACH	⅛" PREFORMED BEARING PAD, TYPE CDP					36
516	43200	72	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE), 2" x 11" x 11"					72
517	70000	347	FT	RAILING (TWIN STEEL TUBE)					347
518	21200	35	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	18	17			
518	40000	70	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	35	35			
518	40010	60	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	32	28			
519	11101	25	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN					
526	25000	67	SY	REINFORCED CONCRETE APPROACH SLABS (T=15")		67			
526	25001	67	SY	REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN	67				
601	32010	439	CY	ROCK CHANNEL PROTECTION, TYPE A WITH AGGREGATE FILTER				439	
611	99710	4	EACH	PRECAST REINFORCED CONCRETE OUTLET	2	2			
SPECIAL	518E22300	413.54	FT	STEEL DRIP STRIP					413.54

ESTIMATED QUANTITIES
BRIDGE NO.: HOC-CR174-0030
OVER SALT CREEK

SFN
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REVIEWER
BCK 07-29-25

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SUBSET	TOTAL
3	13

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P.18	28

HOC-CR174-00.30

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 12/8/2025 TIME: 9:20:27 AM USER: bklingenberg
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ITEM 202 - APPROACH SLAB REMOVED
REAR AND FORWARD = 2
APPROXIMATE WIDTH = 20.00'
ASSUMED LENGTH = 25.00'
TOTAL = 2 x 20.00' x 25.00' / 9 = ***111.11 SY***

ITEM 202 - WEARING COURSE REMOVED
PLAN MEASURED AREA = 3,960.49 SF

ADDITIONAL AREA FOR APPROACH SLAB
REAR AND FORWARD = 2
APPROXIMATE WIDTH = 20.00'
ASSUMED LENGTH = 25.00'

TOTAL = (3,960.49 SF + 2 x 20.00' x 25.00') / 9 = ***551.17 SY***

ITEM 511 - CLASS QC2 CONCRETE, SUPERSTRUCTURE
DECK
WIDTH = 24.00'
LENGTH = 171.37'
AVERAGE DECK THICKNESS = (6" + 7.875") / 2 = 6.94" = 0.58'
SUBTOTAL = 24.00' x 171.37' x 0.58' / 27 = 88.35 CY

DIAPHRAGMS
REAR AND FORWARD (2)
HEIGHT = 1.75'
WIDTH = 1.50'
LENGTH = 24.73'
HEIGHT OF NOTCH = 0.58'
WIDTH OF NOTCH = 0.50'
SUBTOTAL = 2 x ((1.75' x 1.50' - 0.58' x 0.50') x 24.73') / 27 = 4.28 CY

BEAM CONNECTION OVER PIER
NUMBER OF PIERS = 2
STEM HEIGHT = 1.17'
STEM WIDTH = 0.50'
LENGTH = 24.73'
FLANGE HEIGHT = 0.58'
FLANGE WIDTH = 2.50'
SUBTOTAL = 2 x ((1.17' x 0.50' + 0.58' x 2.50') x 24.73') / 27 = 3.73 CY

TOTAL = 88.35 CY + 4.28 CY + 3.73 CY = ***96.36 CY***

ITEM 511 - CLASS QC1 CONCRETE, SUBSTRUCTURE
RIGHT REAR WINGWALL
WIDTH = 2.50'
LENGTH = 4.61'
HEIGHT = 5.30'
SUBTOTAL = 2.50' x 4.61' x 5.30' / 27 = 2.26 CY

LEFT REAR WINGWALL
WIDTH = 2.50'
LENGTH = 5.36'
HEIGHT = 5.38'
SUBTOTAL = 2.50' x 5.36' x 5.38' / 27 = 2.67 CY

TOTAL = 2.26 CY + 2.67 CY = ***4.93 CY***

RIGHT FORWARD WINGWALL
WIDTH = 2.50'
LENGTH = 4.70'
HEIGHT = 5.40'
SUBTOTAL = 2.50' x 4.70' x 5.40' / 27 = 2.35 CY

LEFT FORWARD WINGWALL
WIDTH = 2.50'
LENGTH = 4.80'
HEIGHT = 5.42'
SUBTOTAL = 2.50' x 4.80' x 5.42' / 27 = 2.41 CY

TOTAL = 2.35 CY + 2.41 CY = ***4.76 CY***

ITEM 512 - SEALING OF CONCRETE SURFACES
APPROXIMATE AREA BEHIND WINGWALLS = 2.00 SF

APPROXIMATE AREA AT END OF WINGWALLS = 6.50 SF

APPROXIMATE HEIGHT OF FRONT FACE = 3.91'

RIGHT REAR WINGWALL
WIDTH = 2.50'
LENGTH = 4.61'
SUBTOTAL = (2.00 SF + 6.50 SF + (3.91' + 2.50') x 4.61') / 9 = 4.23 SY

LEFT REAR WINGWALL
WIDTH = 2.50'
LENGTH = 5.36'
SUBTOTAL = (2.00 SF + 6.50 SF + (3.91' + 2.50') x 5.36') / 9 = 4.76 SY

REAR BREASTWALL
LENGTH = 24.84'
APPROXIMATE HEIGHT = 1.73'
SUBTOTAL = (24.84' x 1.73') / 9 = 4.77 SY

REAR BEAM SEAT
LENGTH = 24.86'
WIDTH = 1.28'
SUBTOTAL = (24.86' x 1.28') / 9 = 3.54 SY

TOTAL = 4.23 SY + 4.76 SY + 4.77 SY + 3.54 SY = ***17.30 SY***

RIGHT FORWARD WINGWALL
WIDTH = 2.50'
LENGTH = 4.70'
SUBTOTAL = (2.00 SF + 6.50 SF + (3.91' + 2.50') x 4.70') / 9 = 4.29 SY

LEFT FORWARD WINGWALL
WIDTH = 2.50'
LENGTH = 4.80'
SUBTOTAL = (2.00 SF + 6.50 SF + (3.91' + 2.50') x 4.80') / 9 = 4.37 SY

FORWARD BREASTWALL
LENGTH = 24.86'
APPROXIMATE HEIGHT = 1.29'
SUBTOTAL = (24.86' x 1.29') / 9 = 3.56 SY

FORWARD BEAM SEAT
LENGTH = 24.89'
WIDTH = 1.27'
SUBTOTAL = (24.89' x 1.27') / 9 = 3.51 SY

TOTAL = 4.29 SY + 4.37 SY + 3.56 SY + 3.51 = ***15.73 SY***

PIER 1
EACH SIDE = 2
APPROXIMATE WIDTH ALONG PIER CAP = 3.04'
APPROXIMATE HEIGHT OF PIER CAP = 3.75'
APPROXIMATE LENGTH OF PIER CAP = 3.24'
APPROXIMATE HEIGHT OF CONCRETE PILE = 3.24'
APPROXIMATE DIAMETER OF CONCRETE PILE = 1.75'
APPROXIMATE LENGTH OF PILE ENCASEMENT = 6.69'
APPROXIMATE EXPOSED HEIGHT OF PILE ENCASEMENT = 3.27'
APPROXIMATE RADIUS OF PILE ENCASEMENT = 1.50'
APPROXIMATE PLAN MEASURED TOP AREA OF PILE ENCASEMENT = 10.52 SF

TOTAL = 2 x ((3.04' + 3.24') x 3.75' + (π x 3.24' x 1.75') + (6.69' + π x 1.50) x 3.27' + 10.52 SF) / 9 = ***19.82 SY***

ITEM 512 - SEALING OF CONCRETE SURFACES (CONT.)
PIER 2
EACH SIDE = 2
APPROXIMATE WIDTH ALONG PIER CAP = 2.88'
APPROXIMATE HEIGHT OF PIER CAP = 3.75'
APPROXIMATE LENGTH OF PIER CAP = 3.06'
APPROXIMATE HEIGHT OF CONCRETE PILE = 3.14'
APPROXIMATE DIAMETER OF CONCRETE PILE = 1.167'
APPROXIMATE LENGTH OF PILE ENCASEMENT = 6.77'
APPROXIMATE EXPOSED HEIGHT OF PILE ENCASEMENT = 6.20'
APPROXIMATE RADIUS OF PILE ENCASEMENT = 1.50'
APPROXIMATE PLAN MEASURED TOP AREA OF PILE ENCASEMENT = 10.64 SF

TOTAL = 2 x ((2.88' + 3.06') x 3.75' + (π x 3.14' x 1.167') + (6.77' + π x 1.50) x 6.20' + 10.64 SF) / 9 = ***25.69 SY***

DECK
EACH SIDE = 2
LENGTH BETWEEN ABUTMENTS = 166.27'
AVERAGE DECK THICKNESS = (6" + 7.875") / 2 = 6.94" = 0.58'
HEIGHT OF BEAM = 21" = 1.75'
WIDTH UNDER BEAM = 6" = 0.50'

TOTAL = 2 x 166.27' x (0.58' + 1.75' + 0.50') / 9 = ***104.57 SY***

ITEM 516 - 1" PREFORMED EXPANSION JOINT FILLER
REAR ABUTMENT = FORWARD ABUTMENT

HEIGHT = 2.42'
WIDTH = 2.58'
NUMBER = 2

TOTAL = 2 x 2.42' x 2.58' = ***12.49 SF***

ITEM 516 - SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL
REAR ABUTMENT = FORWARD ABUTMENT
JOINT LENGTH = 24.90'
ADDITIONAL LENGTH PER JOINT = 3.00'

TOTAL = 24.90' + 3.00' = ***27.90 FT***

ITEM 516 - ⅛" PREFORMED BEARING PAD, TYPE CDP
NUMBER OF BEAMS = 18
NUMBER OF PADS PER BEAM = 2

TOTAL = 18 x 2 = ***36 EACH***

ITEM 516 - ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE), 2" x 11" x 11"
NUMBER OF BEAMS = 18
NUMBER OF PADS PER BEAM = 4

TOTAL = 18 x 4 = ***72 EACH***

ITEM 517 - RAILING (TWIN STEEL TUBE)
NUMBER OF SIDES = 2
LENGTH BETWEEN POST ANCHORED IN WINGWALLS = 168.75'
ADDITIONAL LENGTH OF RAIL BEYOND ANCHORED POSTS = 2'-5½" = 2.46'
NUMBER OF CORNERS = 4

TOTAL = 2 x 168.75' + 4 x 2.46' = ***347.34 FT***

ITEM 518 - POROUS BACKFILL WITH GEOTEXTILE FABRIC
WIDTH = 2.00'

RIGHT REAR WINGWALL
LENGTH = 4.61'
HEIGHT = 6.72'
SUBTOTAL = 2.00' x 4.61' x 6.72' / 27 = 2.29 CY

LEFT REAR WINGWALL
LENGTH = 5.36'
HEIGHT = 6.84'
SUBTOTAL = 2.00' x 5.36' x 6.84' / 27 = 2.72 CY

REAR BREASTWALL
LENGTH = 24.90'
HEIGHT = 6.77'
SUBTOTAL = 2.00' x 24.90' x 6.77' / 27 = 12.49 CY

TOTAL = 2.29 CY + 2.72 CY + 12.49 CY = ***17.50 CY***

RIGHT FORWARD WINGWALL
LENGTH = 4.70'
HEIGHT = 6.81'
SUBTOTAL = 2.00' x 4.70' x 6.81' / 27 = 2.37 CY

LEFT FORWARD WINGWALL
LENGTH = 4.80'
HEIGHT = 6.86'
SUBTOTAL = 2.00' x 4.80' x 6.86' / 27 = 2.44 CY

FORWARD BREASTWALL
LENGTH = 24.90'
HEIGHT = 6.79'
SUBTOTAL = 2.00' x 24.90' x 6.79' / 27 = 12.52 CY

TOTAL = 2.37 CY + 2.44 CY + 12.52 CY = ***17.33 CY***

ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15")
FORWARD:
WIDTH = 24.00 FT
LENGTH = 25.00 FT
AREA = 24.00 FT x 25.00 FT / 9 = ***66.67 SY***

ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN
REAR:
WIDTH = 24.00 FT
LENGTH = 25.00 FT
AREA = 24.00 FT x 25.00 FT / 9 = ***66.67 SY***

ITEM 601 - ROCK CHANNEL PROTECTION, TYPE A WITH AGGREGATE FILTER
PLAN MEASURED AREA AT TOP = 148.82 SF
PLAN MEASURED AREA AT BOTTOM = 1,756.63 SF
APPROXIMATE HEIGHT OF SLOPED AREA = 2.75'
APPROXIMATE HEIGHT OF TOTAL AREA = 5.25'

TOTAL = ((148.82 SF + 1,756.63 SF) / 2 x 2.75' + 1,756.63 SF x 5.25') / 27 = ***438.60 CY***

ITEM SPECIAL - STEEL DRIP STRIP
NUMBER OF SIDES = 2
LENGTH = 166.27'
NUMBER OF POST = 27
ADDITIONAL LENGTH PER POST = 1.50'

TOTAL = 2 x (166.27' + 27 x 1.50') = ***413.54 FT***

CALCULATIONS
BRIDGE NO.: HOC-CR174-0030
OVER SALT CREEK

SFN 3731731
DESIGN AGENCY
ADR ARCH & ENGINEERING, INC.
An Employee Owned Company
DESIGN • ENGINEERING • INNOVATION
88 West Church Street
Newark, OH 43055
(740) 345-1921 (ph)
www.adrinnovation.com

DESIGNER	CHECKER
CAC	JTH

REVIEWER: BCK 07-29-25
PROJECT ID: 112312
SUBSET 4 / TOTAL 13
SHEET P.19 / TOTAL 28

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 12/8/2025 TIME: 9:20:28 AM USER: bklingenberg
P:\ADR\2025\25-020 HOC-CR174-0030 - Bridge\HOC-CR174-0030\400-Engineering\Structures\SFN_3731731\Sheets\HOC-CR174-0030_SFN_3731731_SQ002.dgn

APPENDIX F: PLANS FOR EXISTING STRUCTURE

GEOLOGY AND OBSERVATIONS OF THE SITE

THE STRUCTURE SITE IS LOCATED ON THE RELATIVELY FLAT FLOODPLAIN AND OVER SALT CREEK, IN AN AREA WHERE MODERATELY DEEP ALLUVIUM AND OUTWASH DEPOSITS OVERLIE BEDROCK, OF MISSISSIPPIAN AGE.

EXPLORATION

THE EXPLORATION CONSISTED OF TWO DRIVE SAMPLE BORINGS AND THREE DRIVE ROD PENETRATION TESTS, MADE BETWEEN APRIL 4 AND 10, 1972.

INVESTIGATIONAL FINDINGS

THE BORINGS ENCOUNTERED UNSTRATIFIED INTERVALS OF SILTS, SANDS AND GRAVELS, AND CLAY, THAT INCREASE IN DENSITY WITH INCREASE IN DEPTH. THE BORINGS WERE TERMINATED AT 46 AND 56-FOOT DEPTHS, ELEVATIONS 686 AND 679 FEET, AFTER PENETRATING IN EXCESS OF 20 FEET OF MATERIAL REQUIRING IN EXCESS OF 30 BLOWS PER FOOT IN THE STANDARD PENETRATION TEST.

ROD SOUNDINGS GENERALLY PENETRATED TO GREATER DEPTHS THAN THE BORINGS, MET GRADUAL INCREASE IN PENETRATION RESISTANCE WITH INCREASE IN DEPTH, AND WERE TERMINATED UPON ENCOUNTER WITH HIGH RESISTANCE TO PENETRATION AT 30 TO 68-FOOT DEPTHS, ELEVATIONS 701 TO 666 FEET, CONSIDERED TO BE IN VERY DENSE MATERIAL, AS REVEALED BY THE BORINGS AT HIGHER ELEVATIONS.

NO FREE WATER OBSERVATIONS WERE MADE IN ANY OF THE ROD SOUNDING HOLES.

NO TEST PENETRATED TO BEDROCK SURFACE.

LEGEND

- Auger Boring Location - Plan View.
- Press and / or Drive Sample and / or Core Boring Location - Plan View.
- Drive Rod Penetration Resistance Sounding Location - Plan View.
- Capped Pile
- Footing
- Footing on Pile
- TR — Top of Rock
- Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken.
- X/Y — Figures Beside the Boring Log in Profile Indicate the Number of Blows for Standard Penetration Test. X = Number of Blows for First 6 inches. Y = Number of Blows for Second 6 inches.
- Drive Rod Penetration Resistance Sounding Log - Profile
- Casing
- Resistance "R" < 10,000 lbs.
- Resistance "R" > 10,000 lbs.
- Z — Indicates Final Measurement of Penetration, in Inches.
- W — Indicates Free Water Elevation.
- Indicates Static Water Elevation.

SYMBOLS OF ROCK TYPES

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

LOG OF BORING

Date Started 4-7-72 — Sampler Type SS — Dia 1 3/8" — Water Elev —
Date Completed 4-10-72 — Casing Length 45' — Dia 3 1/2"
Boring No B-1 — Station & Offset 10+12, 12' LT. (REAR ABUTMENT) — Surface Elev 731.7'

Elev	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
731.7	0														
	2														
	4														
726.7	6	2/2			BROWN SILTY SAND	1	1	5	57	29	8	NP	NP	12	A-4a
724.2	8	2/2			BROWN SANDY SILT	2	0	1	37	45	17	NP	NP	31	A-4a
721.7	10	15/15			BROWN SILTY SANDY GRAVEL	3	56	12	16	13	3	NP	NP	17	A-1-b
	12														
	14														
716.7	16	17/35			GRAY SANDY SILT	4	12	15	31	20	22	NP	NP	20	A-4a
	18														
711.7	20	11/12			GRAY SILTY SAND	5	6	26	53	-15-		NP	NP	10	A-3a
	22														
	24														
706.7	26	20/24			BROWN SILTY GRAVELLY SAND	6	21	30	31	-18-		NP	NP	13	A-1-b
	28														
701.7	30	17/18			BROWN SILTY SAND	7	6	15	54	-25-		NP	NP	18	A-3a
	32														
	34														
696.7	36	20/25			BROWN SILTY GRAVELLY SAND	8	20	20	34	23	3	NP	NP	15	A-3a
	38														
691.7	40	25/28			GRAY SANDY SILT	9	5	2	26	23	44	21	7	19	A-4a
	42														
	44														
686.7															
685.7	46	16/20			GRAY SILTY CLAY	10	1	2	10	19	68	39	19	27	A-6b

BOTTOM OF BORING

LOG OF BORING

Date Started 4-4-72 — Sampler Type SS — Dia 1 3/8" — Water Elev —
Date Completed 4-5-72 — Casing Length 55' — Dia 3 1/2"
Boring No B-8 — Station & Offset 11+64, 17' RT. (FORWARD ABUTMENT) — Surface Elev 734.6'

Elev	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
734.6	0														
	2														
	4														
729.6	6	3/5			BROWN SANDY SILT	1	0	3	27	50	20	26	6	29	A-4b
727.1	8	4/5			BROWN SANDY SILT	2	2	5	49	24	20	NP	NP	24	A-4a
724.6	10	9/14			BROWN SILTY SANDY GRAVEL	3	42	13	24	16	5	NP	NP	16	A-2-b
	12														
	14														
719.6	16	8/14			GRAY CLAYEY SILT	4	3	2	22	34	39	23	9	25	A-4a
717.1	18	8/11			GRAY SILTY SANDY GRAVEL	5	45	25	20	-10-		NP	NP	14	A-1-b
714.6	20	14/24			GRAY SANDY SILT	6	7	10	36	33	14	NP	NP	11	A-4a
	22														
	24														
709.6	26	15/17			GRAY SILTY GRAVELLY SAND	7	23	14	30	20	13	NP	NP	15	A-2-4
	28														
704.6	30	16/27			GRAY SILTY SANDY GRAVEL	8	66	13	7	11	3	NP	NP	11	A-1-a
	32														
	34														
699.6	36	17/21			GRAY GRAVEL	9	80	10	3	-7-		NP	NP	10	A-1-a
	38														
694.6	40	75 (0.6')			GRAY GRAVEL	10	82	8	4	-6-		NP	NP	16	A-1-a
	42														
	44														
689.6	46	18/24			GRAY SILTY SANDY GRAVEL	11	66	17	7	-10-		NP	NP	11	A-1-a
	48														
684.6	50	19/28			GRAY SILTY SANDY GRAVEL	12	61	17	7	-15-		NP	NP	12	A-1-a
	52														
	54														
679.6															
678.6	56	17/27			GRAY SANDY GRAVEL	13	74	13	6	-7-		NP	NP	7	A-1-a

BOTTOM OF BORING

GENERAL INFORMATION

Drive Rod Penetration Sounding Tests

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

Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and / or 5-foot depth intervals, driven by means of a 140 - pound drop-hammer with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

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

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

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

Particle Size Definitions

Boulders	Cobbles	Gravel	Coarse Sand	Fine Sand	Silt	Clay
12"	3"	2.0mm (No. 10 sieve)	0.42mm (No. 40 sieve)	0.074mm (No. 200 sieve)	0.005mm	

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

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

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. HOC-CO. RD. 174
OVER SALT CREEK
SEC. HOC-CO. RD. 174

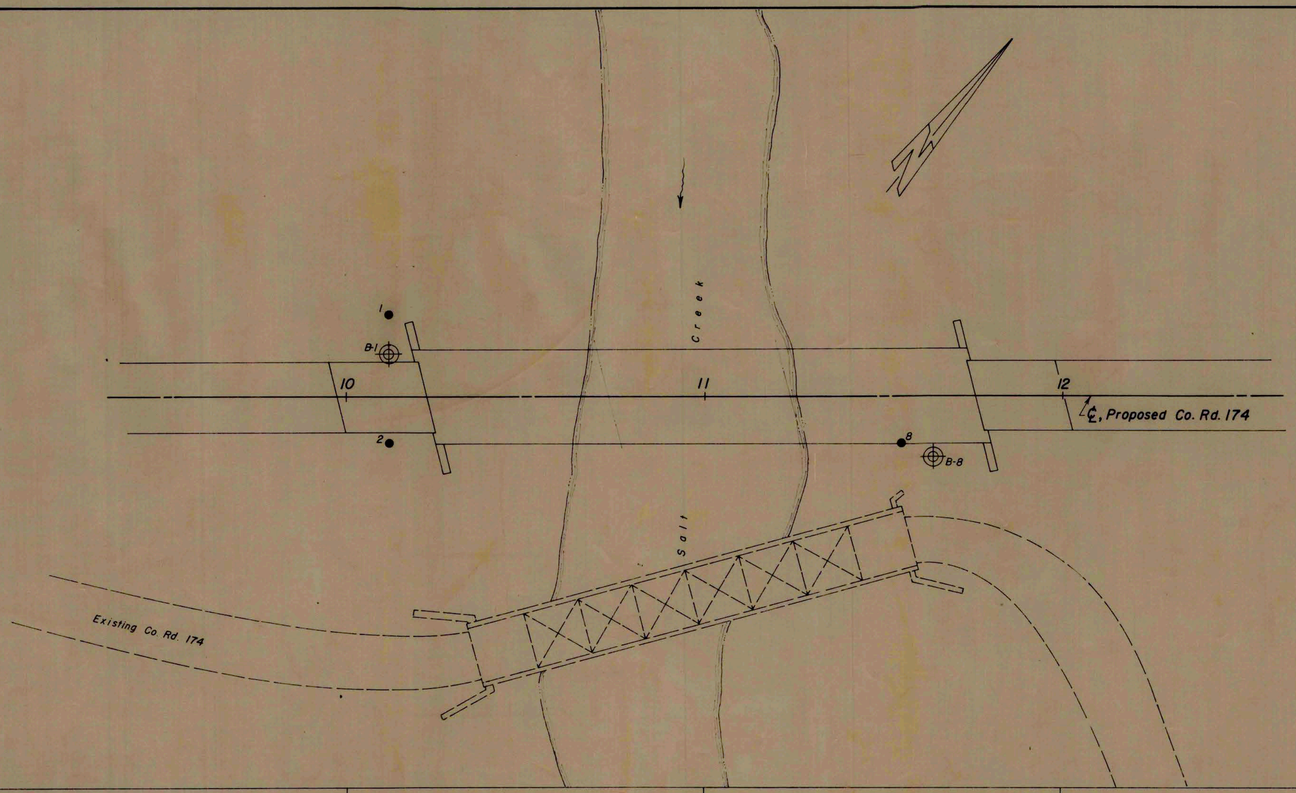
CHECKED BY	REVIEWED BY	DATE
R. D. R.	G. P. H.	5/4/72

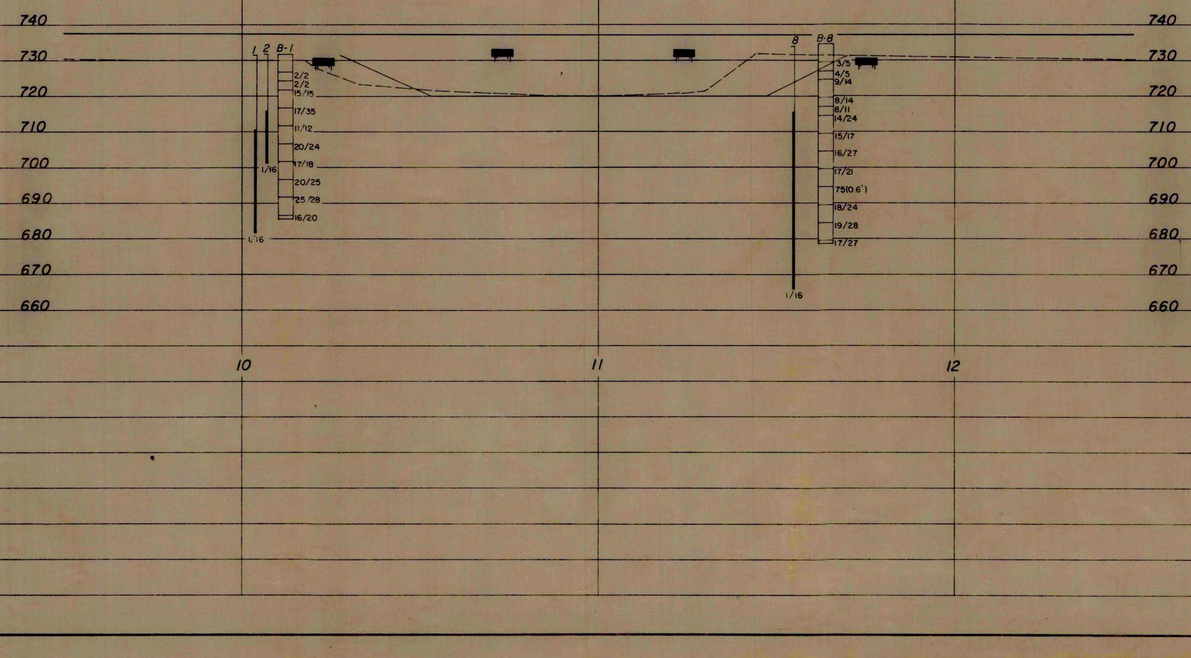
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HOC - CO. RD. 174

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SCALE: 1" = 20'

OHIO DEPARTMENT OF HIGHWAYS TESTING LABORATORY 1600 WEST BROAD STREET, COLUMBUS, OHIO 43223			
STRUCTURE FOUNDATION INVESTIGATION BRIDGE NO. HOC-CO. RD. 174 OVER SALT CREEK SEC. HOC-CO. RD. 174			
PLAN AND PROFILE			
DRAWN BY D. E. N.	CHECKED BY R. D. R.	REVIEWED BY G. P. H.	DATE 5/4/72

Test Location No. _____
Station & Offset _____
Surface Elev. _____ Water Elev. _____
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition _____

738 734 730 726 722 718 714 710 706 702 698 694 690 686 682 678 674 670 666 662

Capacity "R" in Thousands of Pounds

Test Location No. _____
Station & Offset _____
Surface Elev. _____ Water Elev. _____
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition _____

Capacity "R" in Thousands of Pounds

Test Location No. _____
Station & Offset _____
Surface Elev. _____ Water Elev. _____
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition _____

Capacity "R" in Thousands of Pounds

Test Location No. _____
Station & Offset _____
Surface Elev. _____ Water Elev. _____
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition _____

Capacity "R" in Thousands of Pounds

Test Location No. _____
Station & Offset _____
Surface Elev. _____ Water Elev. _____
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition _____

730 726 722 718 714 710 706 702 698 694 690 686 682 678 674 670 666 662

Capacity "R" in Thousands of Pounds

Test Location No. 1
Station & Offset 10+12 23' LT.
REAR ABUTMENT
Surface Elev. 731.5 Water Elev. _____
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition _____

TEST ROD

Capacity "R" in Thousands of Pounds

Test Location No. 2
Station & Offset 10+12 13' RT.
REAR ABUTMENT
Surface Elev. 731.8 Water Elev. _____
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition _____

TEST ROD

Capacity "R" in Thousands of Pounds

Test Location No. 8
Station & Offset 11+55 13' RT.
FORWARD ABUTMENT
Surface Elev. 733.9 Water Elev. _____
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition BOD BENT-16

HOC - CO. RD. 174

730 726 722 718 714 710 706 702 698 694 690 686 682 678 674 670 666 662

TEST ROD

Capacity "R" in Thousands of Pounds

OHIO STATE HIGHWAY TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. HOC - CO. RD. 174 OVER SALT CREEK
SEC. HOC - CO. RD. 174

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
R. C.	R. D. R.	G. P. H.	5/4/72

TE-69
500-7-68

GENERAL INFORMATION

INTRODUCTION

THIS REPORT CONSISTS OF THE SOILS INVESTIGATION OF 0.28 MILE OF RELOCATED COUNTY ROAD 174, BEGINNING APPROXIMATELY 0.1 MILE SOUTHWEST OF SALT CREEK, EXTENDING NORTHEASTWARD AND TERMINATING AT SR 56.

PROPOSED GRADE INDICATES MAXIMUM PROPOSED 8-FOOT FILL EMBANKMENTS.

GEOLOGY OF THE PROJECT

THE PROJECT IS LOCATED ON THE FLOODPLAIN OF SALT CREEK, IN AN AREA WHERE THICK ALLUVIAL AND OUTWASH DEPOSITS OVERLIE SHALE AND SANDSTONE BEDROCK, OF MISSISSIPPIAN AGE.

EXPLORATION

EXPLORATORY BORINGS WERE MADE BY MEANS OF TRUCK-MOUNTED MECHANICAL SOIL AUGER, ON MARCH 27, 1972. INCLUDED IN THIS REPORT IS A LOG OF A BORING MADE FOR THE STRUCTURE FOUNDATION INVESTIGATION ON THE PROJECT.

INVESTIGATIONAL FINDINGS

MATERIALS ENCOUNTERED ON THE PROJECT WERE COMPRISED OF GRAVELS (A-1-a), SANDY GRAVELS (A-1-b AND A-2-4), SANDS (A-3a) AND SANDY SILTS (A-4a). GENERALLY, THE NON-PLASTIC MATERIALS HAD LOW MOISTURE CONTENTS, WHILE THE PLASTIC MATERIALS HAD MOISTURE CONTENTS IN THE UPPER PORTIONS OF THE PLASTIC RANGE.

WET MATERIALS WERE ENCOUNTERED AT STATIONS 8+00, 11+64, 16+00 AND 19+00.

FROST SUSCEPTIBLE SILT WAS ENCOUNTERED WITHIN THREE FEET OF PROPOSED GRADE AT STATION 11+64.

LEGEND FOR PROJECT AVERAGE RESULTS OF TESTS— 14 SAMPLES TESTED

DESCRIPTION	H.R.B. CLASS	OHIO CLASS	% AGG.	% C. SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
GRAVEL	A-1-a(0)	A-1-a	54	21	14	6	5	NP	NP	17	2
GRAVEL WITH SAND	A-1-b(0)	A-1-b	40	25	20	9	6	NP	NP	11	3
COARSE AND FINE SAND	-----	A-3a	7	10	54	19	10	NP	NP	18	3
GRAVEL WITH SAND AND SILT	A-2-4(0)	A-2-4	30	18	17	23	12	25	10	18	1
SANDY SILT	A-4(3)	A-4a	18	8	26	32	16	24	4	18	3
SILT	A-4(7)	A-4b	0	3	27	50	20	26	6	29	-
SILT AND CLAY	A-6(9)	A-6a	0	1	24	49	26	30	12	24	2

TOPSOIL=X'=APPROXIMATE DEPTH.

AUGER BORING-PLAN VIEW.

DRIVE SAMPLE BORING-PLAN VIEW.

AUGER BORING PLOTTED TO VERTICAL SCALE ONLY.

DRIVE SAMPLE BORING PLOTTED TO VERTICAL SCALE ONLY.

WATER CONTENT NEARLY EQUAL TO OR GREATER THAN LIQUID LIMIT.

INDICATES A NON-PLASTIC MATERIAL WITH A HIGH WATER CONTENT.

W FREE WATER.

NUMBER OF BLOWS FOR "STANDARD PENETRATION" TEST.
X=NUMBER OF BLOWS FOR FIRST 6 INCHES.
Y=NUMBER OF BLOWS FOR SECOND 6 INCHES.

NOTE: FIGURES BESIDE BORINGS INDICATE WATER CONTENT IN PERCENT.E.G. 15

SOIL PROFILE

HOCKING COUNTY

HOC-CO. RD. 174

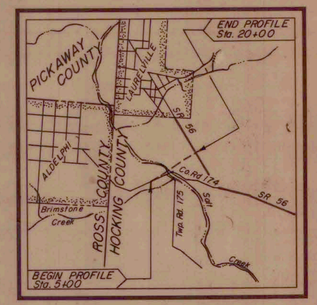
OHIO STATE HIGHWAY TESTING LABORATORY

1620 W. BROAD ST. COLUMBUS, OHIO 43223

4/5

1/2

NOTE: INFORMATION SHOWN BY THIS SUBGRADE PROFILE WAS OBTAINED SOLELY FOR USE IN ESTABLISHING DESIGN CONTROLS FOR THE PROJECT. THE STATE OF OHIO DOES NOT GUARANTEE THE ACCURACY OF THIS DATA AND IT IS NOT TO BE CONSTRUED AS A PART OF THE PLANS GOVERNING CONSTRUCTION OF THE PROJECT.



LOCATION MAP

Recon- J.S.M. 3/20/72
Drilling- J.W.P. 3/27/72
Drafting- A.F. 4/21/72

SUMMARY OF SOIL TEST DATA

NOTE: NP SHOWN IN LIQUID LIMIT AND PLASTICITY INDEX COLUMNS INDICATES THAT THE MATERIAL IS NON-PLASTIC.
*DENOTES SAMPLE TAKEN AT OR NEAR GRADE.

STATION & OFFSET	DEPTH FROM	DEPTH TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
6+00 10'Rt	0.0	2.0	12	5	22	41	20	24	7	20	A-4a*
	2.0	4.0	18	17	37	16	12	NP	NP	16	A-3a*
	4.0	10.0	30	18	17	23	12	25	10	18	A-2-4
8+00 CL	0.9	5.0	25	14	22	26	13	NP	NP	15	A-4a
	5.0	9.0	16	7	32	30	15	23	6	20	A-4a
	9.0	10.0	57	21	10	6	6	NP	NP	16	A-1-a
12+50 CL	0.9	5.0	47	27	14	6	6	NP	NP	9	A-1-b
	5.0	9.5	33	29	22	8	8	NP	NP	9	A-1-b
16+00 CL	0.0	4.0	0	1	26	49	24	28	11	26	A-6a*
	4.0	7.0	0	5	67	23	5	NP	NP	16	A-3a
	7.0	10.0	50	22	17	6	5	NP	NP	17	A-1-a
19+00 CL	0.0	2.0	0	1	22	48	29	32	12	27	A-6a*
	2.0	7.0	2	10	56	19	13	NP	NP	21	A-3a
	7.0	10.0	39	20	23	13	5	NP	NP	15	A-1-b

DRIVE SAMPLE SOIL TEST DATA

STATION & OFFSET	DEPTH FROM	DEPTH TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
11+64 17'Rt	5.0	6.0	0	3	27	50	20	26	6	29	A-4b
	7.5	8.5	2	5	49	24	20	NP	NP	24	A-4a
	10.0	11.0	42	13	24	16	5	NP	NP	16	A-1-b
	15.0	16.0	3	2	22	34	39	23	9	25	A-4a
	17.5	18.5	45	25	20	-	10 -	NP	NP	14	A-1-b
	20.0	21.0	7	10	36	33	14	NP	NP	11	A-4a
	25.0	26.0	23	14	30	20	13	NP	NP	15	A-2-4
	30.0	31.0	66	13	7	11	3	NP	NP	11	A-1-a
	35.0	36.0	80	10	3	-	7 -	NP	NP	10	A-1-a
	40.0	40.6	82	8	4	-	6 -	NP	NP	16	A-1-a
	45.0	46.0	66	17	7	-	10 -	NP	NP	11	A-1-a
	50.0	51.0	61	17	7	-	15 -	NP	NP	12	A-1-a
	55.0	56.0	74	13	6	-	7 -	NP	NP	7	A-1-a

TE-127
1000 3-71

SOIL PROFILE

HOCKING COUNTY

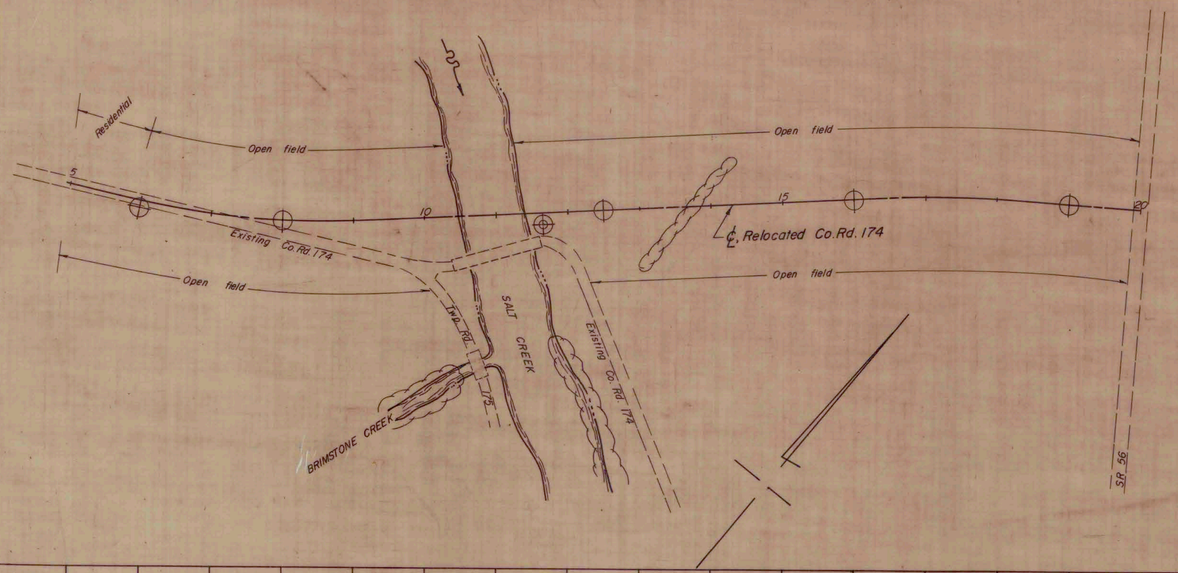
HOC-CO. RD. 174

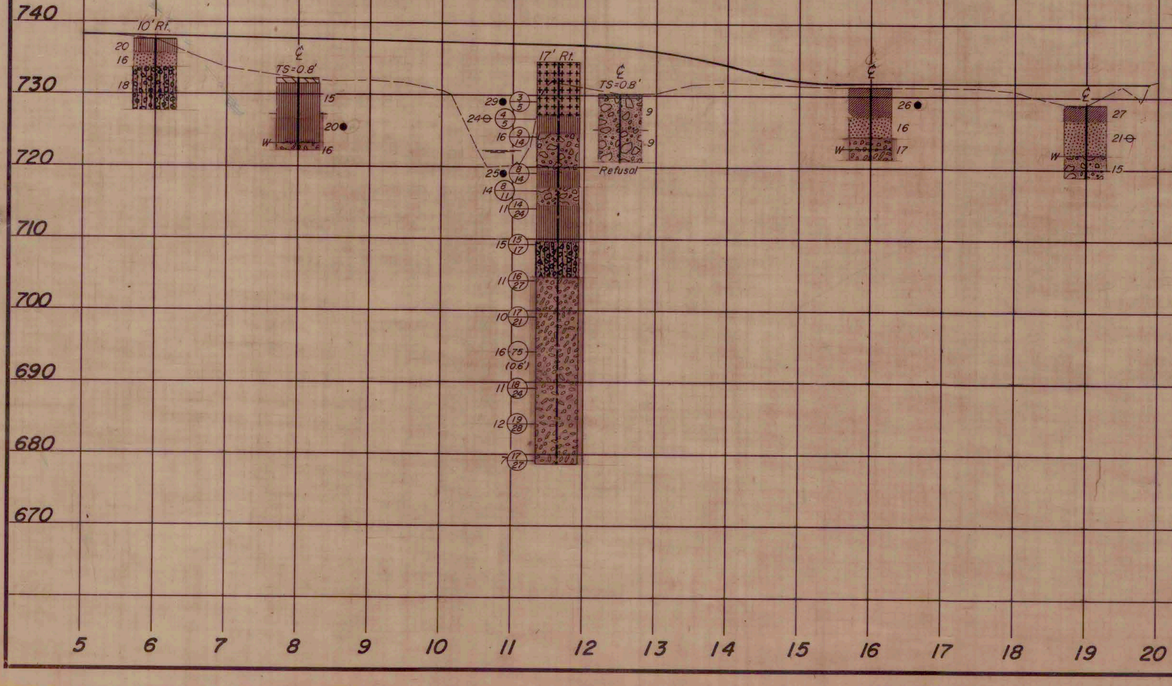
OHIO STATE HIGHWAY TESTING LABORATORY

1600 W. BROAD ST. COLUMBUS, OHIO 43223

5/5

2/2





STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
COUNTY ROAD 174
SALT CREEK TOWNSHIP
HOCKING COUNTY

STATE ISSUE I
FUNDS PROJECT

FHWA Region	STATE	PROJECT	
5	OHIO	STATE	

HOCKING CO. RD 174

1/21

CONVENTIONAL SIGNS

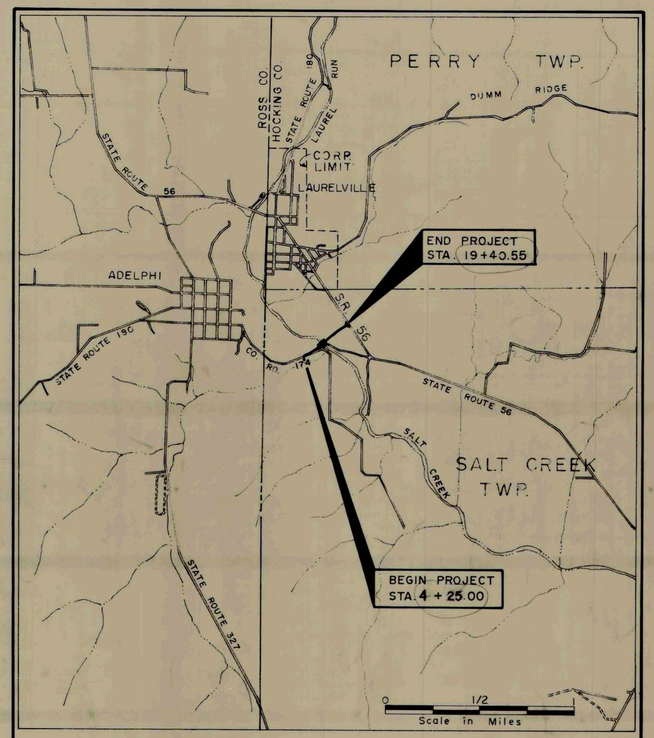
TOWNSHIP LINE
COUNTY LINE
CENTER LINE
PROPERTY LINE
FENCE
GUARD RAIL ___ EXISTING ___ PROPOSED ___
TREES
RIGHT OF WAY ___ EXISTING ___ PROPOSED ___
RAILROAD
DRAIN PIPE ___ EXISTING ___ PROPOSED ___

INDEX OF SHEETS

TITLE SHEET ____ 1
TYPICAL SECTIONS ____ 2
GENERAL NOTES & GENERAL SUMMARY & ESTIMATED QUANTITIES ____ 3
PLAN & PROFILE ____ 4
CROSS SECTIONS ____ 5-8
CHANNEL PLAN & PROFILE ____ 9
CHANNEL CROSS SECTIONS ____ 10-13
STRUCTURE OVER 20' SPAN ____ 14-20
RIGHT OF WAY ____ 21

LINE DATA

BEGIN PROJECT ____ STA. 4+25
END PROJECT ____ STA. 19+40.55
NET LENGTH OF PROJECT ____ 1515.55 Lin. Ft .287 Miles
BEGIN WORK ____ STA. 4+00
END WORK ____ STA. 19+90.55
TOTAL LENGTH ____ 1590.55 Ft or 0.301 Miles



LOCATION MAP

Plan ____ 0 50 100 ____ Profile Horizontal
Profile Vertical ____ 0 10 20 ____ Cross Sections

Portion to be improved ____
State Roads ____
Other Roads ____

1973 SPECIFICATIONS

We the Commissioners of Hocking County, Ohio, in formal session hereby approve these plans and certify that the necessary right of way is available. We agree to maintain the project in a manner satisfactory to the Director of Transportation, State of Ohio, or his duly authorized representatives, and will make ample provisions each year for such maintenance and repair.

Done under authority of Sections 5555.02 et. seq. and 5535.01 et. seq. of the Revised Code of Ohio, Board of Commissioners, Hocking County.

Date March 8, 1973

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

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

APPROVED George A. Mara
DATE Feb 26, 1973 COUNTY ENGINEER

APPROVED Max R. Saxby
DATE 3-20-73 DISTRICT DEPUTY DIRECTOR OF TRANSPORTATION

APPROVED Robert B Pfeifer
DATE 7-2-73 ENGINEER, BUREAU OF BRIDGES

APPROVED E. J. Schaefer
DATE 6-27-73 ENGINEER, BUREAU OF ROADWAY DESIGN

APPROVED William C. Stoll
DATE 9-4-73 ASSISTANT DEPUTY DIRECTOR FOR HIGHWAY DESIGN

APPROVED ____
DATE ____ ASSISTANT DEPUTY DIRECTOR FOR REAL ESTATE

APPROVED William Buckley
DATE 8-24-73 3-9-73 ASSISTANT DEPUTY DIRECTOR FOR PROGRAM DEVELOPMENT

APPROVED ____
DATE ____ CHIEF ENGINEER, DIVISION OF HIGHWAYS

APPROVED William W. Boles
DATE 9-5-73 DEPUTY DIRECTOR DIVISION OF HIGHWAYS

APPROVED William P McKenna
DATE 9-5-73 ASSISTANT DIRECTOR, DEPARTMENT OF TRANSPORTATION

APPROVED Phillip Bradley
DATE 9/10/73 DIRECTOR, DEPARTMENT OF TRANSPORTATION

STANDARD DRAWINGS	
BP-6	6-1-65
GR-2B	11-9-71
GR-3	11-9-71
GR-4	11-9-71
PSBD-1-71	9-1-71
DBR-1-71	1-1-71
AS-1-67	6-12-69
BP-3	1-1-71
BP-5	6-1-72
L-1	6-1-73
MC-3	6-1-73

SUPPLEMENTAL SPECIFICATION	
1001	9-20-72
923	1-10-69

DESIGN DESIGNATIONS	
ADT 1969	710
Design Year ADT 1989	923
DHV	100
D	50 %
T (Percent B & C)	10 %
V	40 MPH

FILE NO.

HOCKING CO. COUNTY ROAD 174
DATE OF LETTING ____ 197__
CONTRACT NO. ____

PREPARED BY
AUBLE - MITCHELL - BURGESS & ASSOCIATES
ENGINEERS ARCHITECT
CINCINNATI - ATHENS, OHIO

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	STATE	

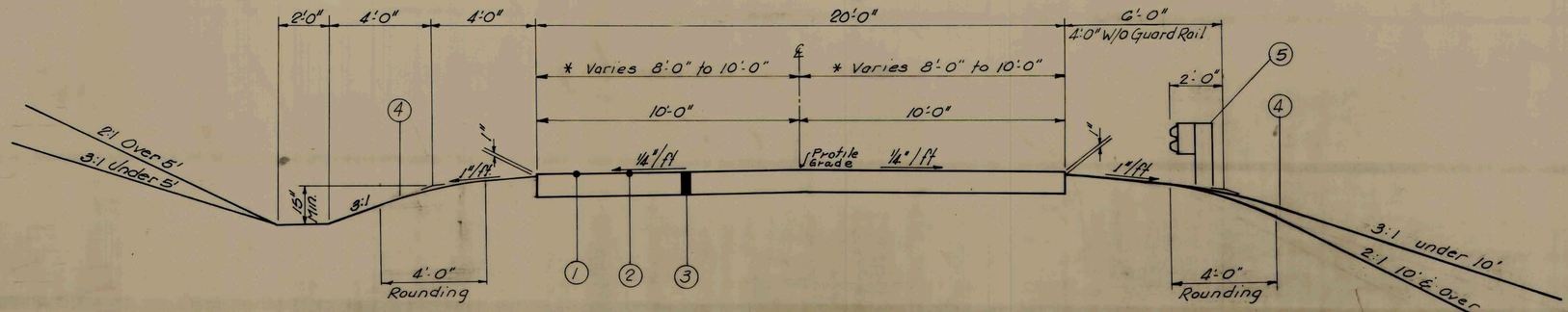
2/21

HOC - C.R. 174

TYPICAL SECTIONS

½ 0 1 2 3 4

409 on 304



NORMAL SECTION

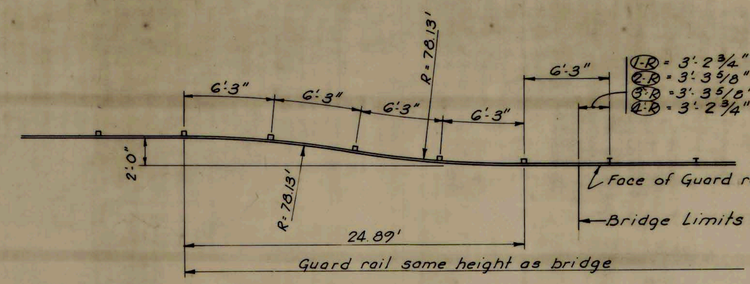
UTILITY OWNERS

Electric - South Central Power Co.
Cannal Winchester, Ohio 43110

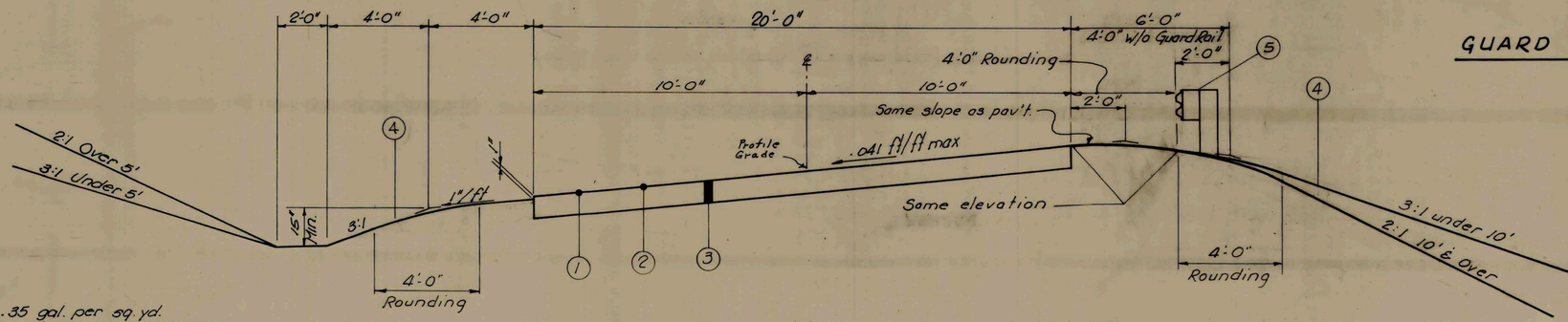
Telephone - General Telephone
Circleville, Ohio 43113

* Sta. 4+00 to Sta. 4+25 (Taper)
Sta. 4+25 to Sta. 5+00
Sta. 9+50 to Sta. 9+72
Sta. 12+11.03 to Sta. 15+50
Sta. 17+25 to Sta. 17+40

Approach Slabs
Sta. 9+72 to Sta. 10+17
Sta. 11+86.03 to Sta. 12+11.03



GUARD RAIL TRANSITION



SUPERELEVATED SECTION

Sta. 5+00 to Sta. 6+50 (Trans.)
Sta. 6+50 to Sta. 8+00
Sta. 8+00 to Sta. 9+50 (Trans.)

Sta. 15+50 to Sta. 17+00 (Trans.)
Sta. 17+00 to Sta. 17+75
Sta. 17+75 to Sta. 17+25 (Trans.)

(1) — Item 409 — Seal Coat using .35 gal. per sq. yd. of bituminous emulsion SS.923 MWB 150 with No. 8 Cover aggregate applied at the rate of .008 cu. yds per sq. yd.

(2) — Item 408 — Prime Coat applied at the rate of 0.4 gal. per sq. yd. using 702.02 MC-30

(3) — Item 304 — 10" Aggregate Base

(4) — Item 659 — Seeding and Mulching

(5) — Item 606 — Guardrail Type 5

TYPICAL SECTIONS

Calculated By REW Date 3.23.72
Checked By J.M.S. Date 6.13.72

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	STATE	

HOC - CO. RD. 174

3
21

ESTIMATED QUANTITIES from sheet 4

REF. NO.	STATION TO STATION	SIDE	407 Cover Aggreg.	407 Tack Coat at 0.1 Gal/Sq.Y.	304 Aggr. Base	408 Bit. Prime Coat	409 Seal Coat Bit. Mat.	409 Cover Aggr.	404 Asph. Conc.	603 TYPE "D" 12"	660 Sodding	606 Guard Rail Type 5	606 Anchor Assem.	606 Bridge Terminal Assem. Type B	611 Reinf. Conc. Appr. Slab T=13
			Ton	Gal.	C.Y.	GAL.	GAL.	C.Y.	C.Y.	L.F.	S.Y.	L.F.	Ea.	Ea.	S.Y.
	Co. Rd. 174														
1-P	Sta. 4+00 to Sta. 9+92				363.74	524	458.5	3.76							
2-P	Sta. 12+11.03 to Sta. 19+90				513.76	740.10	647.60	4.93							
3-P	Sta. 9+92 to Sta. 10+17		0.2	5.5	9.26				5.40						55.55
4-P	Sta. 11+86.03 to Sta. 12+11.03		0.2	5.5	9.26				5.40						55.55
5-P	Sta. 0+15.24 to Sta. 0+93.61 (Twp. Rd.)				79.23	114	100	2							
6-P	Sta. 0+93.61 to Sta. 97.43 (Twp. Rd.)				57.68	83	73	2							
	Drive @ Sta. 5+56	Lt.			14.67										
1-R	Sta. 8+60.99 to Sta. 10+14.01	Lt.										128.02	1	1	
2-R	Sta. 1+24.80 to Sta. 10+19.99	Rt.										84.14	1	1	
3-R	Sta. 11+83.04 to Sta. 15+23.49	Lt.										315.45	1	1	
4-R	Sta. 11+89.02 to Sta. 15+23.35	Rt.										302.33	1	1	
1-D	Sta. 11+60 to Sta. 18+73	Rt.									713				
2-D	Sta. 18+73 to Sta. 19+70	Rt.									65				
3-D	Sta. 11+65 to Sta. 18+73	Lt.									708				
4-D	Sta. 18+73 to Sta. 19+80	Lt.									87				
5-D	Sta. 5+43 to Sta. 5+88	Lt.								44					
	Totals to General Summary		0.4	11	1048	1461	1279	13	11	44	1573	836.94	4	4	111

GENERAL NOTES

MAINTENANCE OF TRAFFIC

TWO-WAY TRAFFIC SHALL BE MAINTAINED ON COUNTY ROAD 174 AND TOWNSHIP ROAD 175 BY USING EXISTING ROAD AND BRIDGE.

BETWEEN STATION 4 + 75 AND 8 + 00, TRAFFIC SHALL BE MAINTAINED BY THE USE OF THE PROPOSED PAVEMENT, EXISTING PAVEMENT AND THE EXISTING SHOULDER USING ITEM 410 TRAFFIC COMPACTED SURFACE TYPE A OR B AND STABILIZED WITH ITEM 616 CALCIUM CHLORIDE.

COUNTY ROAD 175 MAY BE CLOSED TO TRAFFICE FOR A PERIOD NOT TO EXCEED SEVEN (7) DAYS DURING THE FINAL PAVING OPERATIONS.

THE FOLLOWING ESTIMATED QUANTITIES ARE INCLUDED IN THE GENERAL SUMMARY FOR THIS WORK:

- 410 50 CU. YD. TRAFFIC COMPACTED SURFACE TYPE A OR B
- 616 1 M-GAL WATER
- 616 0.4 TON CALCIUM CHLORIDE
- 614 LUMP SUM - MAINTAINING TRAFFIC

FIELD OFFICE

THE CONTRACTOR SHALL PROVIDE A SUITABLE FIELD OFFICE HAVING A MINIMUM OF 150 SQ. FT. OF FLOOR SPACE AND IN ADDITION TO THE REQUIREMENTS OF ITEM 619, HE SHALL PROVIDE AND MAINTAIN SANITARY PROVISIONS AS PER 107.06. ALL THE ABOVE IS INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 619, FIELD OFFICE.

ROUNDING OF CORNERS SHOWN ON CROSS SECTIONS

THE ROUNDED CORNERS SHOWN ON THE TYPICAL SECTIONS, APPLY TO ALL CROSS SECTIONS EVEN THOUGH OTHERWISE SHOWN ON THESE PLANS.

ITEM 606 BRIDGE TERMINAL ASSEMBLY TYPE B

The bridge terminal assembly type B shall be constructed as shown on standard drawing GR-3 except that the wheel guard shall be omitted.

SEEDING

QUANTITIES FOR SEEDING ARE CALCULATED FOR THE SOIL AREAS BETWEEN THE WORK LIMITS, AS SHOWN ON THE CROSS SECTIONS.

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM.

REMOVAL OF EXISTING BRIDGE, AS PER PLAN

AFTER COMPLETION OF THE PROPOSED BRIDGE AND APPROACHES, THE EXISTING BRIDGE SHALL BE DISMANTLED AND REMOVED FROM THE SITE BY THE CONTRACTOR. THE SANDSTONE BLOCKS IN THE EXISTING ABUTMENTS SHALL BE REMOVED TO WATER LEVEL AND STOCKPILED FOR SUBSEQUENT SALVAGE BY THE HOCKING COUNTY ENGINEER.

THE APPROACHES TO THE EXISTING BRIDGE SHALL THEN BE EXCAVATED IN ACCORDANCE WITH THE CHANNEL IMPROVEMENT AS SHOWN ON THE PLANS.

CARE SHALL BE TAKEN TO PREVENT ANY DEBRIS FROM OBSTRUCTING THE RIVER FLOW OR OTHERWISE POLLUTING THE RIVER BED OR BANKS. THE LUMP SUM PAY ITEM FOR ITEM 202 STRUCTURES REMOVED, SHALL INCLUDE THE STOCKPILING OF THE ABUTMENT STONE, AND THE DISPOSAL OF THE BRIDGE FLOORING AND FRAMEWORK.

REMOVAL OF TREES AND STUMPS

ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT SHALL BE REMOVED UNDER THE LUMP SUM PRICE BID FOR ITEM 201 CLEARING AND GRUBBING, EXCEPT THAT THOSE TREES FOR WHICH PROTECTION AND PRESERVATION WORK IS INDICATED ELSEWHERE IN THESE PLANS SHALL NOT BE REMOVED.

THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED.

SIZES	NO. TREES	NO. STUMPS
18"	2	-
30"	1	-

GENERAL SUMMARY

ITEM NO.	Sheet 3	Sheet 7	Sheet 8	Sheet 13	ITEM NO.	TOTAL	UNIT	DESCRIPTION
								ROADWAY
201					201	Lump	Lump	Clearing & Grubbing
203					203	4314	S.Y.	Subgrade Compaction
203		5352	374	11077	203	16,803	C.Y.	Excavation not including embankment construction
203		3438	211	250	203	3899	C.Y.	Embankment
410	50				410	50	C.Y.	Traffic Compacted Surface Type A or B
606	836.94				606	836.94	L.F.	Guard rail Type 5
606	4				606	4	Ea.	Anchor Assembly
606	4				606	4	Ea.	Bridge terminal assembly Type B
616	1				616	1	M Gal	Water
616	0.4				616	0.4	Ton	Calcium Chloride
								PAVEMENT
407	0.4				407	0.4	Ton	Cover Aggregate
304	1048				304	1048	C.Y.	Aggregate base
404	11				404	11	C.Y.	Asphalt Concrete (85-100 or AC-20)
408	1461				408	1461	Gal.	Bituminous Prime Coat 702.02, MC-30
407	11				407	11	Gal.	Tack Coat: 702.04, MS-2 or RS-1j or 702.02, RC-70 or RC-250
409	1279				409	1279	Gal.	Sealcoat bituminous material 55 923 MWS 150
409	13				409	13	C.Y.	Seal coat cover aggregate No. 8
611	111				611	111	S.Y.	Reinforced concrete approach slabs T=13"
								DRAINAGE
603	44				603	44	L.F.	12" Conduit Type "D"
								EROSION CONTROL
660	1573				660	1573	S.Y.	Sodding
659					659	6947	S.Y.	Seeding & Mulching
659					659	3.83	Ton	Agricultural Liming
659					659	0.77	Ton	Commerical Fertilizer (12-12-12)
								STRUCTURES OVER 20' SPAN
								For estimated quantities see sh. 15
614					614	Lump	Lump	Maintaining Traffic
619					619	Lump	Lump	Field Office
623					623	Lump	Lump	Construction layout stakes

make new sheet saw this one for Co use

Calculated By REW Date 3-23-72
Checked By J.M.S. Date 6-13-72

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	STATE	

HOC - CO. RD. 174

3
21

ESTIMATED QUANTITIES from sheet 4

REF. NO.	STATION TO STATION	SIDE	407 Cover Aggreg.	407 Tack Coat at 0.16gl/Sy.	304 Aggr. Base	408 Bit. Prime Coat	409 Seal Coat Bit. Mat.	409 Cover Aggr.	404 Asph. Conc.	603 TYPE "D" 12"	660 Sodding	606 Guard Rail Type 5	606 Anchor Assem.	606 Bridge Terminal Assem. Type "B"	611 Reinf. Conc. Appr. Slab T=13
			Ton	Gal.	C.Y.	GAL.	GAL.	C.Y.	C.Y.	L.F.	S.Y.	L.F.	Ea.	Ea.	S.Y.
	Co. Rd. 174														
1-P	Sta. 4+00 to Sta. 9+92				363.74	524	458.5	3.76							
2-P	Sta. 12+11.03 to Sta. 19+90				513.76	740.10	647.60	4.93							
3-P	Sta. 9+92 to Sta. 10+17		0.2	5.5	9.26				5.40						55.55
4-P	Sta. 11+86.03 to Sta. 12+11.03		0.2	5.5	9.26				5.40						55.55
5-P	Sta. 0+15.24 to Sta. 0+93.61 (Twp. Rd.)				79.23	114	100	2							
6-P	Sta. 0+93.61 to Sta. 1+97.43 (Twp. Rd.)				57.68	83	73	2							
	Drive @ Sta. 5+56	Lt.			14.67										
1-R	Sta. 8+60.99 to Sta. 10+14.01	Lt.										128.02	1	1	
2-R	Sta. 1+24.80 to Sta. 10+12.99	Rt.										84.14	1	1	
3-R	Sta. 11+83.04 to Sta. 15+23.49	Lt.										315.45	1	1	
4-R	Sta. 11+87.02 to Sta. 15+23.35	Rt.										307.33	1	1	
1-D	Sta. 11+60 to Sta. 18+73	Rt.									713				
2-D	Sta. 18+73 to Sta. 19+70	Rt.									65				
3-D	Sta. 11+65 to Sta. 18+73	Lt.									708				
4-D	Sta. 18+73 to Sta. 19+80	Lt.									87				
5-D	Sta. 5+43 to Sta. 5+88	Lt.								44					
	Totals to General Summary		0.4	11	1048	1461	1279	13	11	44	1573	836.94	4	4	111

GENERAL NOTES

MAINTENANCE OF TRAFFIC

TWO-WAY TRAFFIC SHALL BE MAINTAINED ON COUNTY ROAD 174 AND TOWNSHIP ROAD 175 BY USING EXISTING ROAD AND BRIDGE.

BETWEEN STATION 4 + 75 AND 8 + 00, TRAFFIC SHALL BE MAINTAINED BY THE USE OF THE PROPOSED PAVEMENT, EXISTING PAVEMENT AND THE EXISTING SHOULDER USING ITEM 410 TRAFFIC COMPACTED SURFACE TYPE A OR B AND STABILIZED WITH ITEM 616 CALCIUM CHLORIDE.

COUNTY ROAD 175 MAY BE CLOSED TO TRAFFICE FOR A PERIOD NOT TO EXCEED SEVEN (7) DAYS DURING THE FINAL PAVING OPERATIONS.

THE FOLLOWING ESTIMATED QUANTITIES ARE INCLUDED IN THE GENERAL SUMMARY FOR THIS WORK:

410	50 CU. YD. TRAFFIC COMPACTED SURFACE TYPE A OR B
616	1 M-GAL WATER
616	0.4 TON CALCIUM CHLORIDE
614	LUMP SUM - MAINTAINING TRAFFIC

FIELD OFFICE

THE CONTRACTOR SHALL PROVIDE A SUITABLE FIELD OFFICE HAVING A MINIMUM OF 150 SQ. FT. OF FLOOR SPACE AND IN ADDITION TO THE REQUIREMENTS OF ITEM 619, HE SHALL PROVIDE AND MAINTAIN SANITARY PROVISIONS AS PER 107.06. ALL THE ABOVE IS INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 619, FIELD OFFICE.

ROUNDING OF CORNERS SHOWN ON CROSS SECTIONS

THE ROUNDED CORNERS SHOWN ON THE TYPICAL SECTIONS, APPLY TO ALL CROSS SECTIONS EVEN THOUGH OTHERWISE SHOWN ON THESE PLANS.

ITEM 606 BRIDGE TERMINAL ASSEMBLY TYPE B
The bridge terminal assembly type B shall be constructed as shown on standard drawing GR-3 except that the wheel guard shall be omitted.

SEEDING

QUANTITIES FOR SEEDING ARE CALCULATED FOR THE SOIL AREAS BETWEEN THE WORK LIMITS, AS SHOWN ON THE CROSS SECTIONS.

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM.

REMOVAL OF EXISTING BRIDGE, AS PER PLAN

AFTER COMPLETION OF THE PROPOSED BRIDGE AND APPROACHES, THE EXISTING BRIDGE SHALL BE DISMANTLED AND REMOVED FROM THE SITE BY THE CONTRACTOR. THE SANDSTONE BLOCKS IN THE EXISTING ABUTMENTS SHALL BE REMOVED TO WATER LEVEL AND STOCKPILED FOR SUBSEQUENT SALVAGE BY THE HOCKING COUNTY ENGINEER.

THE APPROACHES TO THE EXISTING BRIDGE SHALL THEN BE EXCAVATED IN ACCORDANCE WITH THE CHANNEL IMPROVEMENT AS SHOWN ON THE PLANS.

CARE SHALL BE TAKEN TO PREVENT ANY DEBRIS FROM OBSTRUCTING THE RIVER FLOW OR OTHERWISE POLLUTING THE RIVER BED OR BANKS. THE LUMP SUM PAY ITEM FOR ITEM 202 STRUCTURES REMOVED, SHALL INCLUDE THE STOCKPILING OF THE ABUTMENT STONE, AND THE DISPOSAL OF THE BRIDGE FLOORING AND FRAMEWORK.

REMOVAL OF TREES AND STUMPS

ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT SHALL BE REMOVED UNDER THE LUMP SUM PRICE BID FOR ITEM 201 CLEARING AND GRUBBING, EXCEPT THAT THOSE TREES FOR WHICH PROTECTION AND PRESERVATION WORK IS INDICATED ELSEWHERE IN THESE PLANS SHALL NOT BE REMOVED.

THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED.

SIZES	NO. TREES	NO. STUMPS
18"	2	-
30"	1	-

GENERAL SUMMARY

ITEM NO.	Sheet 3	Sheet 7	Sheet 8	Sheet 13	ITEM NO.	TOTAL	UNIT	DESCRIPTION
								ROADWAY
201					201	Lump	Lump	Clearing & Grubbing
203					203	4314	S.Y.	Subgrade Compaction
203		5352	374	11077	203	16,803	C.Y.	Excavation not including embankment construction
203		3438	211	250	203	3899	C.Y.	Embankment
410	50				410	50	C.Y.	Traffic Compacted Surface Type A or B
606	836.94				606	836.94	L.F.	Guard rail Type 5
606	4				606	4	Ea.	Anchor Assembly
606	4				606	4	Ea.	Bridge terminal assembly Type B
616	1				616	1	MGal	Water
616	0.4				616	0.4	Ton	Calcium Chloride
								PAVEMENT
407	0.4				407	0.4	Ton	Cover Aggregate
304	1048				304	1048	C.Y.	Aggregate base
404	11				404	11	C.Y.	Asphalt Concrete (85-100 or AC-20)
408	1461				408	1461	Gal.	Bituminous Prime Coat 702.02, MC-30
407	11				407	11	Gal.	Tack Coat: 702.04, MS-2 or RS-1j or 702.02, RC-70 or RC-250
409	1279				409	1279	Gal.	Sealcoat bituminous material SS 923 MWS 150
409	13				409	13	C.Y.	Seal coat cover aggregate No. 8
611	111				611	111	S.Y.	Reinforced concrete approach slabs T=13"
								DRAINAGE
603	44				603	44	L.F.	12" Conduit Type "D"
								EROSION CONTROL
660	1573				660	1573	S.Y.	Sodding
659					659	6947	S.Y.	Seeding & Mulching
659					659	3.83	Ton	Agricultural Liming
659					659	0.77	Ton	Commerical Fertilizer (12-12-12)
								STRUCTURES OVER 20' SPAN
								For estimated quantities see sh. 15
614					614	Lump	Lump	Maintaining Traffic
619					619	Lump	Lump	Field Office
623					623	Lump	Lump	Construction layout stakes

make new sheet save this one for Co use

Fed Rd DIVISION	STATE	PROJECT	
2	OHIO	STATE	

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HOC. CO. RD. 174

Item 304 10" Aggregate Base
Item 408 Prime Coat applied at the rate of 0.4 gal./s.y. using 702.09 Rt.2 or Rt.3
Item 409 Seal Coat using 0.35 gal./s.y. of Bituminous Material 702.09 Rt 8 or 9 or 702.02 MC-800 or 3000 with No 8 Cover Aggregate applied at the rate of .008 cu yds./sq yd.
Item 304 6" Aggregate Base

Item 404 2-1 1/4" Courses Asphalt Concrete (85-100 or AC-20)
Item 611 13" Reintorced Conc. Approach Slab
Item 304 6" Aggregate Base
Item 203 Subgrade Compaction

CURVE No. 1
Δ = 17°15'55"
Dc = 5°00'00"
R = 1145.92'
T = 173.97'
Lc = 345.31'
E = 13.13'
P.I. Sta. 7+26.46

CURVE No. 2
Δ = 7°14'30"
Dc = 4°00'00"
R = 1,432.39'
T = 90.64'
Lc = 181.04'
E = 2.86'
P.I. Sta. 17+44.43

Begin Project Sta 4+25
Begin Work Sta. 4+00
N62°04'35"E
Ex. R/W
R/W
Construction Limits
16' Gravel
18" to Tan.
12" C.M.P.
Gravel
1½ Sty. Fr.
12' Drive
Ex. R/W
5-D
1-P
2-P
3-P
4-P
5-P
6-P
1-R
2-R
3-R
4-R
1-D
2-D
3-D
P.I. #1
P.I. Sta. 8+77.80
Sta. 8+96.00 = Sta. 0+00.00 Twp. Rd.
℄ Reloc. Co. Rd. 174
Sta. 8+96.00
Sta. 0+00
℄ Prop. Co. Rd. 174
9+00
N48°48'40"E
41°00'00"
Tangent
N89°48'40"E
℄ Prop. Twp. Rd.
P.K. in Pole
P.K. in Tree Stump
℄ Co. Rd. 174
Iron Bar
P.I. Sta. 7+26.46
SIDE ROAD CURVE DATA
P.I. Sta. = 1+46
Δ = 19°00'
Dc = 18°18'00"
R = 313.07'
T = 52.39'
Lc = 103.82'
E = 4.55'
Meet Ex PT 1+74.31
Taper to Meet Exist.
To be Removed
Ex. R/W
Ex. Co. Rd. 174
BRIMSTONE CREEK
End Work 2+40
SALT CREEK
℄ Relocated Channel
Sta. 11+01.52 Co. Rd. 174 ℄
Sta. 10+00.00 Reloc. Channel
George Swackhammer
Gwendolyn Egan
Construction Limits
R/W
Sodding 9' Wide
Sodding 6' Wide
℄ Relocated Co. Rd. 174
N48°48'40"E
N56°30'10"E
P.I. #2
End Project Sta. 19+40.55
End Work Sta. 19+90.55
Sta. 20+00.55 Co. Rd. 174
Exist. ℄ S.R. 56
N33°30'50"E
Gravel
(Asphalt)
℄ S.R. 56
Prop. ℄ Channel
Ex. Co. Rd. 174
B.M. 1 & 2
steel reinf. rod in conc. bridge abut. Elev. 735.30
Most eastwardly steel reinf. rod in conc. bridge abut. Elev. 734.99
iron bar
Co. Rd. 174
90° to Tan
P.I. Sta. 17+44.43

For Quantities See Sheet 3
For Channel See Sheet 9
For Channel X-Sections See Sheet 10
For Twp. Rd. 175 X-Sections & Profile See Sh. 8

EXISTING STRUCTURE

Exist structure shall be removed & becomes property of contractor except the stone of abutments shall be piled for removal from site by the County's forces
TYPE: Steel trusses
SPANS: 120' ±
ROADWAY: 14' between trusses
WEARING SURFACE: Wood floor
LOADING: 3 ton limit

PROPOSED STRUCTURE

TYPE: Prestressed concrete box beams and capped pile substructure
SPANS: 56'-0", 56'-0", 56'-0"
ROADWAY: 24' f to f of guard rail
WEARING SURFACE: 2½" Asph. concrete min.
LOADING: AASHO H5-20-44
ALIGNMENT: Tangent
APPROACH SLABS: AS-1-67 25' long
SKEW: 14° R.F.

PLAN — SURVEYED, PLOTTED, ALIGNMENT CHECKED, P.I. OF MAG CHECKED — NOTE BOOK — NO. — BY — DATE

PROFILE — SURVEYED, PLOTTED, NOTE BOOK, B.M.'S NOTED, STRUCTURE NO. — ALIGNMENT CHK'D. — P.I. OF MAG CHK'D. — BY — DATE

Begin Work Sta. 4+00
P.V.I. Sta 4+50 Elev 738.57
P.V.C.
P.V.T.
-2.0%
100' V.C.
200' V.C.
P.V.I. Sta 7+00 Elev 733.57
+2.0%
Exist. Ground
℄ Prop. Twp. Rd. 175
P.V.I. Sta 9+00 Elev 737.57
P.R.V.C.
172.03' Bridge Limits
Sta. 10+17.00
Sta. 11+89.03
Design High Water Elev 733.7
CREEK
0.20%
P.V.I. Sta 13+00 Elev 736.77
-2.30%
P.V.C.
200' V.C.
P.V.T.
P.V.I. Sta 16+50 Elev 728.02
200' V.C.
+1.14%
Exist. Ground
P.V.I. 17+29.16
Sta. 20+00.55 Co. Rd. 174
Exist. ℄ S.R. 56
740
730
720

SEEDING	
END WIDTH	SQ YDS

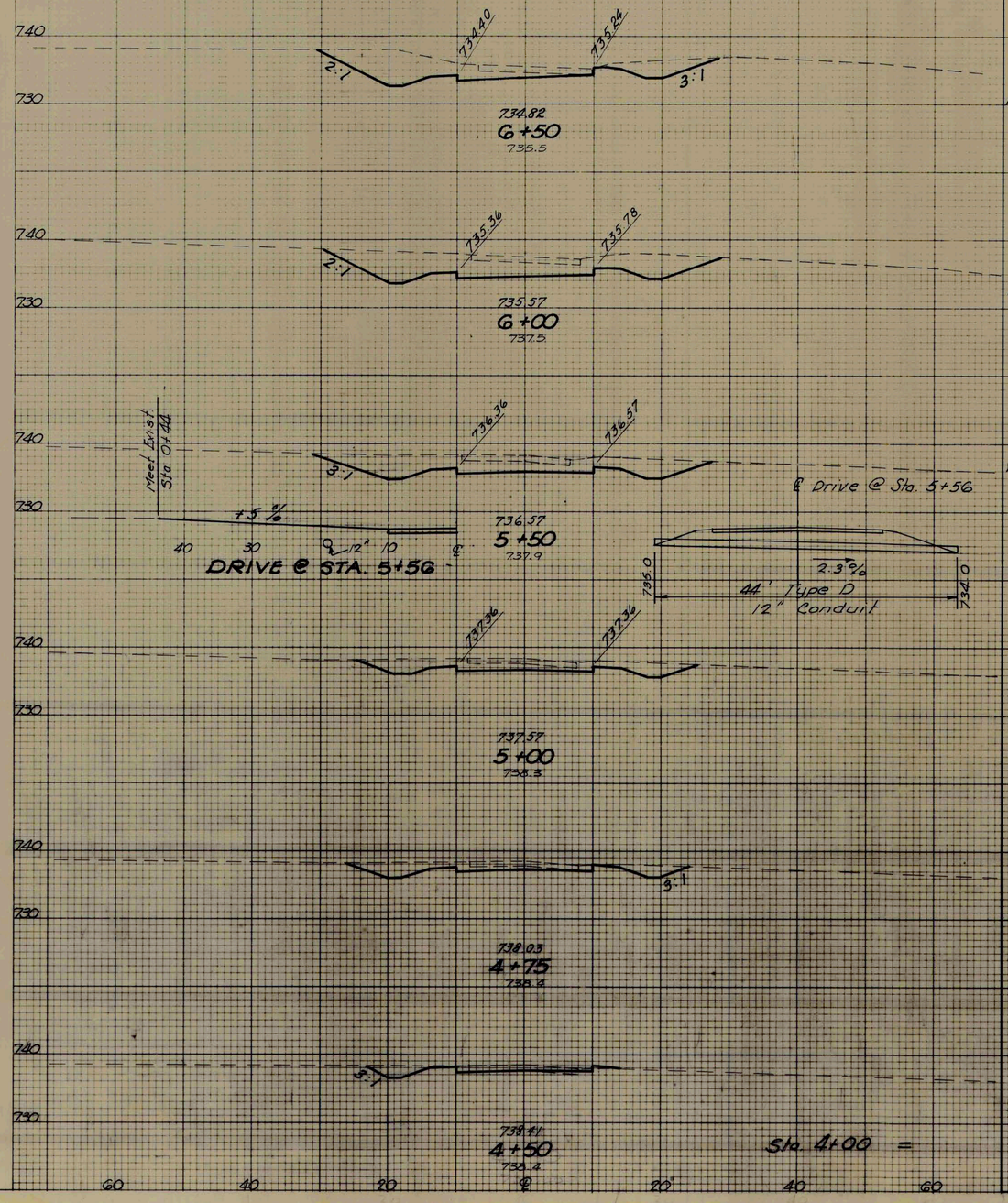
FED RD DIVISION	STATE	PROJECT	
2	OHIO	STATE	

HOC CO. RD. 174

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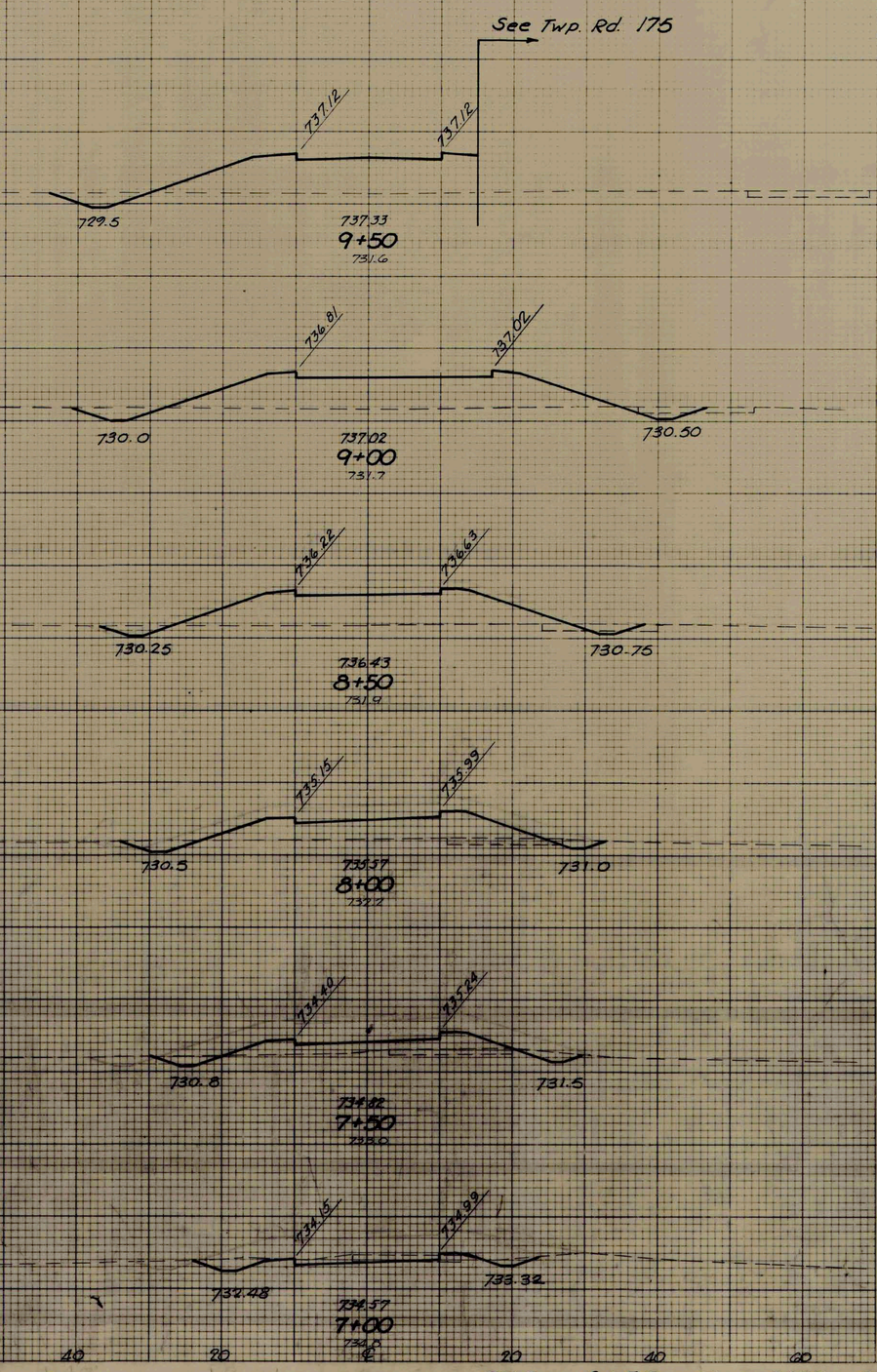
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Checked By J.M.S. Date 6.7.72

End Area		Volume	
Cut	Fill	Cut	Fill
128	0		
		273	0
167	0		
		273	0
128	0		
		191	0
78	0		
		62	0
56	0		
		40	0
30	0		
		28	0
0	0		



& Drive @ Sta. 5+56

Sta. 4+00 =



END AREA		VOLUME	
CUT	FILL	CUT	FILL
18	191		
		42	388
27	228		
		44	381
20	183		
		32	270
15	109		
		28	155
16	58		
		48	54
36	0		
		152	0

STA. 4+50 TO STA. 9+50

SEEDING

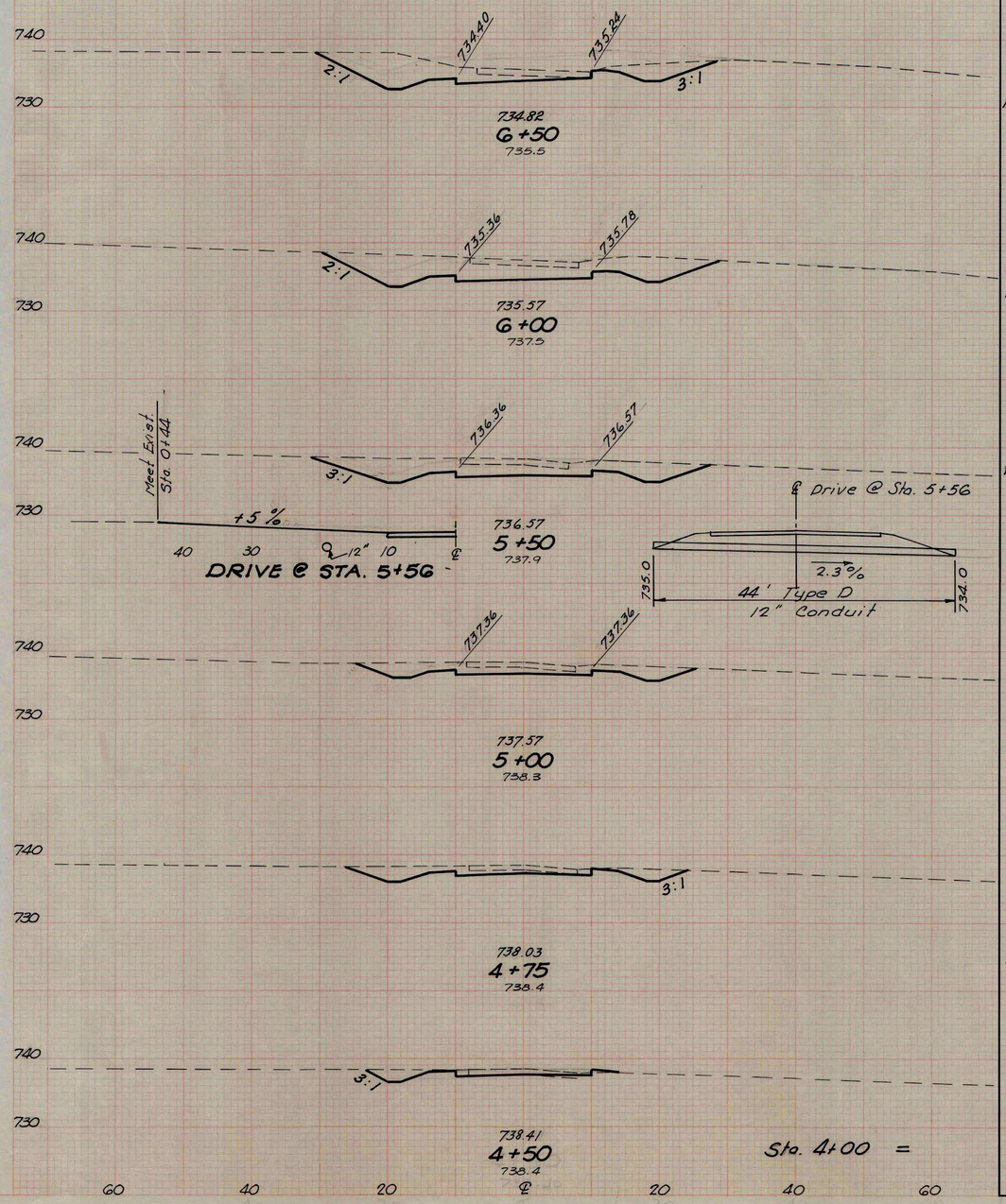
END WIDTH	SQ YDS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	STATE	

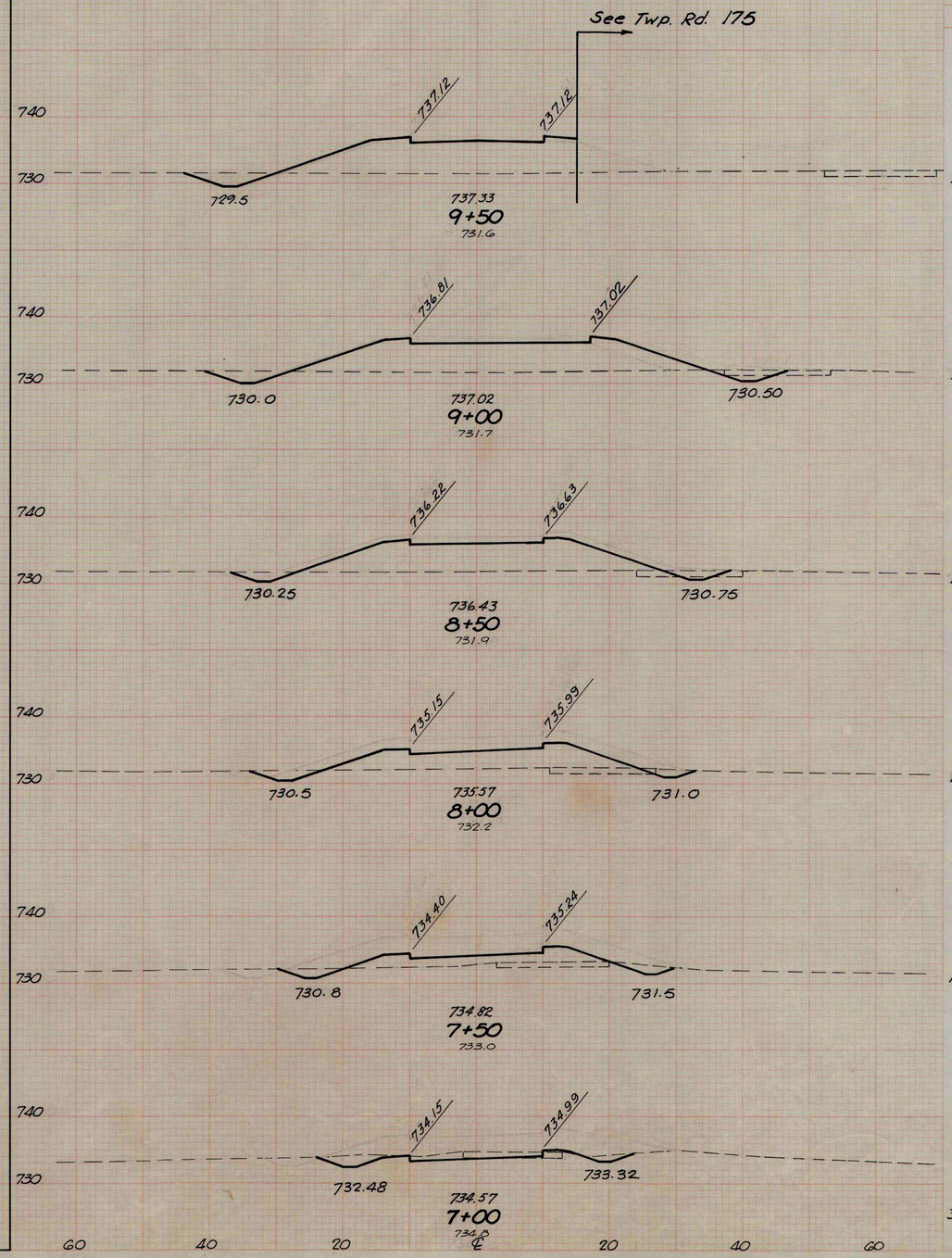
5
21

HOC. CO. RD. 174

Calculated By J.H. Date 3-14-72
Checked By J.M.G. Date 6-7-72



End Area Cut	End Area Fill	Volume Cut	Volume Fill
128	0		
		273	0
167	0		
		273	0
128	0		
		191	0
78	0		
		62	0
56	0		
		40	0
30	0		
		28	0
0	0		



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
18	191		
		42	388
27	228		
		44	381
20	183		
		32	270
15	109		
		28	155
16	58		
		48	54
36	0		
		152	0

STA. 4+50 To STA. 9+50

SEEDING	
END WIDTH	SQ YDS

End Area		Volume	
Cut	Fill	Cut	Fill
136	207		
		229	428
111	859		
		327	415
242	193		
		142	90
304	170		
0	253		
5	165		
0	271		
24	428		

FED RD DIVISION	STATE	PROJECT	
2	OHIO	STATE	

Hoc Co Rd 174

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Calculated By J.H. Date 6-2-72
Checked By J.M.S. Date 6-7-72

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
Sta. 16+00	230	0		
			362	0
	161	0		
			267	0
	127	0		
			248	11
	141	12		
			291	67
	173	60		
			317	159
	169	112		
			282	295
	136	207		

STA. 10+00 To STA. 15+50

SEEDING

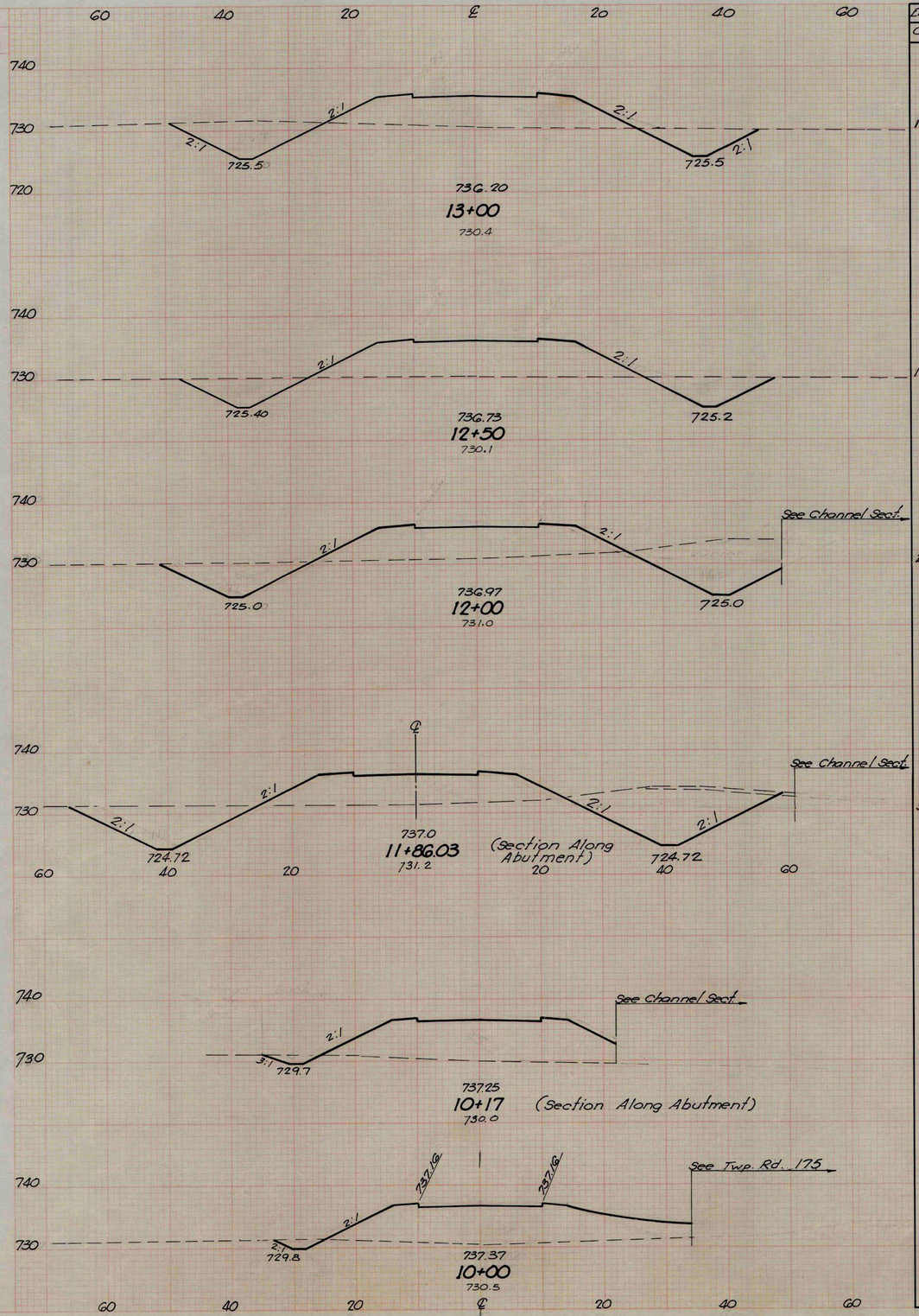
END WIDTH	SQ. YDS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	STATE	

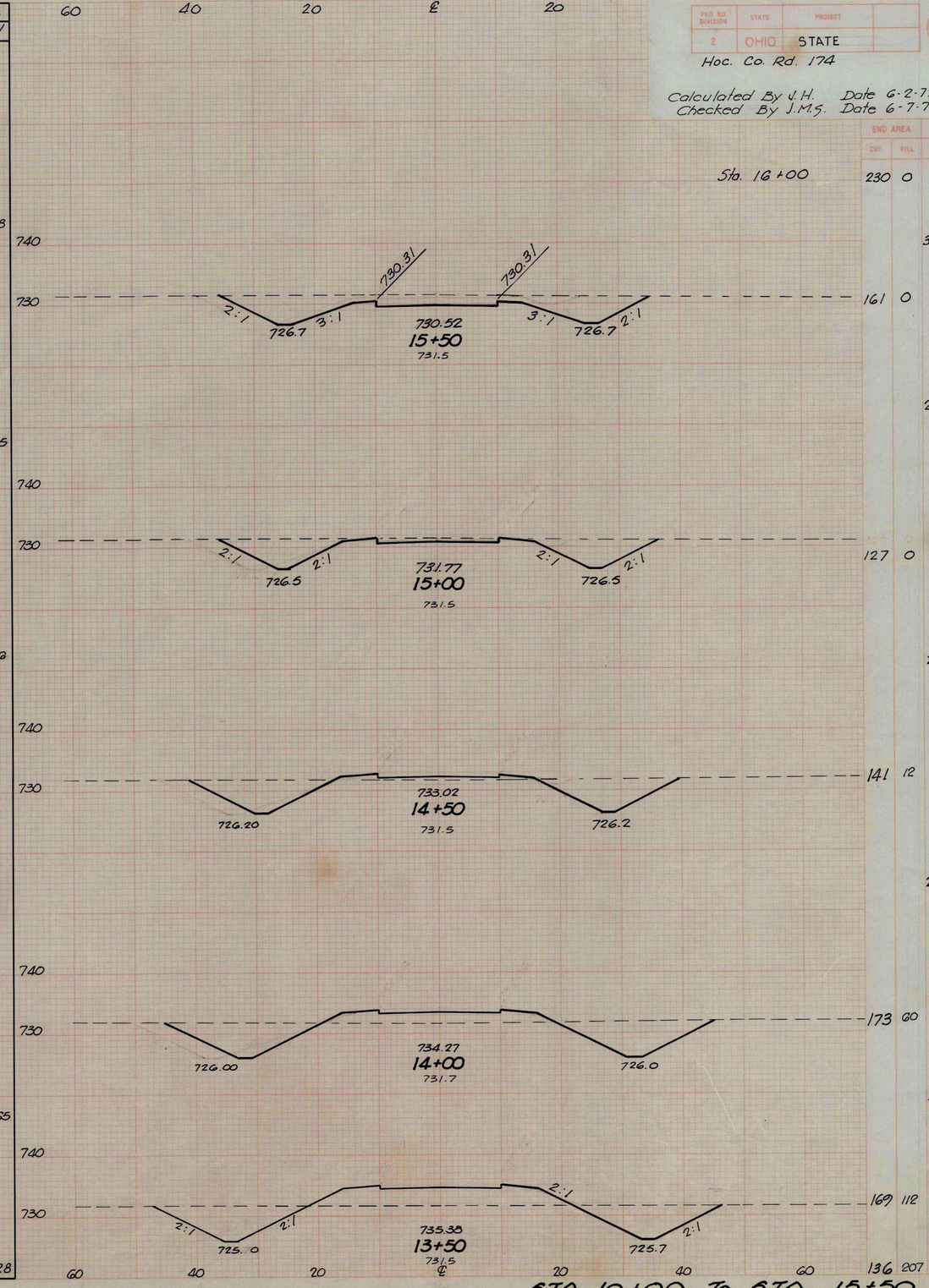
Hoc. Co. Rd. 174

6
21

Calculated By J.H. Date 6-2-72
Checked By J.M.S. Date 6-7-72



	End Area		Volume	
	Cut	Fill	Cut	Fill
	136	207		
			229	428
	111	255		
			327	415
	242	193		
			142	98
	304	178		
	8	253		
			5	165
	8	271		
			24	428



	End Area		Volume	
	Cut	Fill	Cut	Fill
Sta. 16+00	230	0		
			362	0
	161	0		
			267	0
	127	0		
			248	11
	141	12		
			291	67
	173	60		
			317	159
	169	112		
			282	295
	136	207		

STA. 10+00 To STA. 15+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	STATE	

7
21

Hoc. Co. Rd. 174

Calculated By J.H. Date 6-4-72
Checked By J.M.S. Date 6-8-72

SEEDING	
END WIDTH	SQ. YDS.

End Area		Volume	
Cut	Fill	Cut	Fill
35	0		
		152	0
108	0		
		221	0
152	0		
		349	0
225	0		
		415	0
223	0		
		419	0
230	0		
		39	0
		46	63
		11	68
		43	63
		35	0

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL

Total Mainline Earthwork
Excavation 5352 C.Y.
Embankment 3438 C.Y.

730.41 730.09
730.30
16+50
729.7

730.09 729.41
729.73
18+00
730.6

729.68 728.74
729.76
17+50
727.4 727.46

729.24 728.40
728.82
17+00
729.3 726.3
731.2

729.14 728.72
728.93
16+50
725.9 729.4
731.2

729.50 729.20
729.50
16+00
725.5 725.5
731.2

731.24 731.24
731.45
19+50
729.7 730.2
731.5

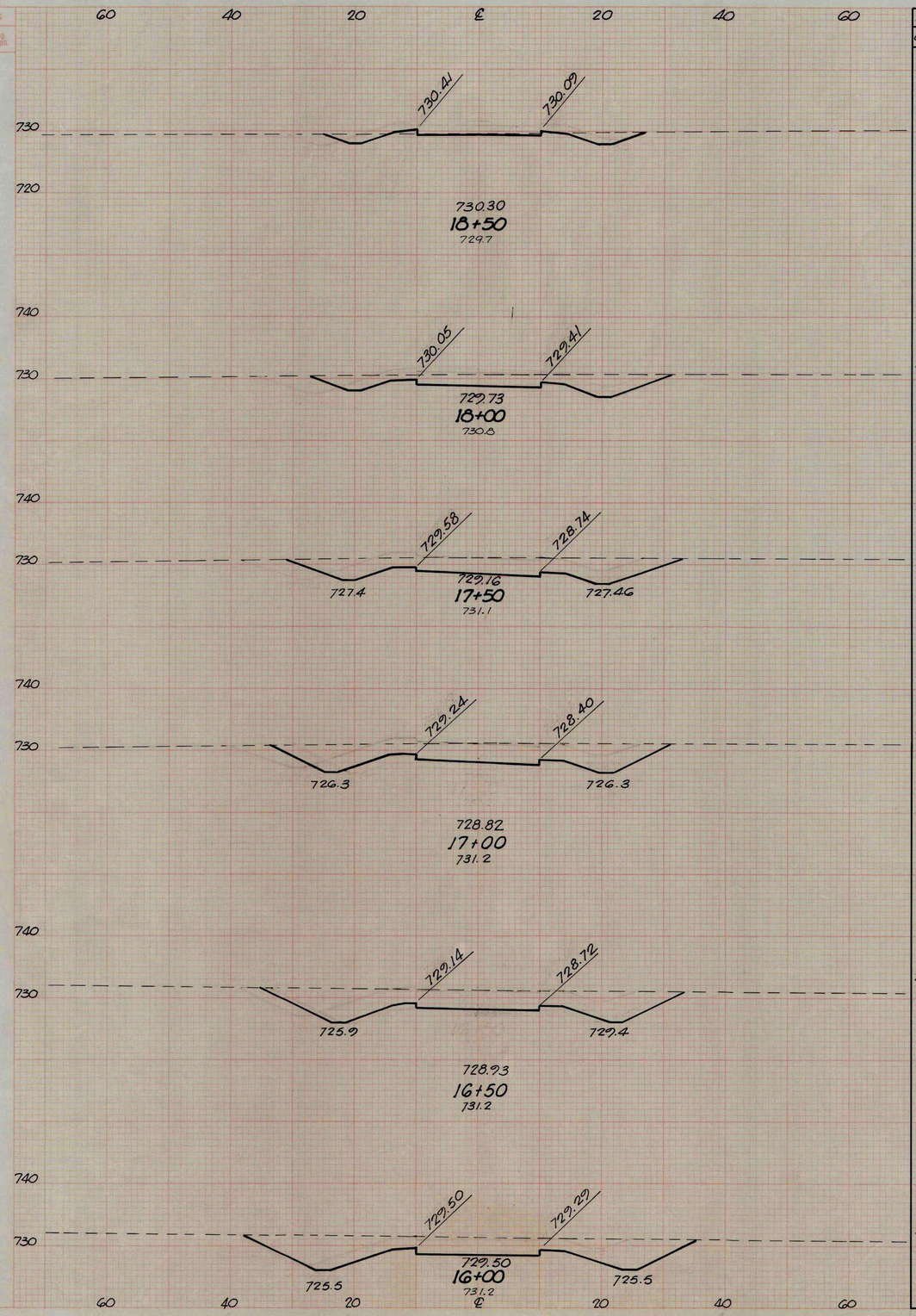
END WORK

730.78 730.67
730.68
19+00
729.0
731.5

STA. 16+00 To STA. 19+50

SEEDING

END WIDTH	SQ. YDS.



End Area		Volume	
Cut	Fill	Cut	Fill
35	0		
		132	0
108	0		
		241	0
152	0		
		349	0
225	0		
		415	0
223	0		
		419	0
230	0		

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	STATE	

7
21

Hoc. Co. Rd. 174

Calculated By J.H. Date 6-4-72
Checked By J.M.S. Date 6-8-72

END AREA		VOLUME	
CUT	FILL	CUT	FILL

Total Mainline Earthwork
Excavation 5352 C.Y.
Embankment 3438 C.Y.

39	0	
		46 63
11	68	
		43 63
35	0	

END WORK

STA. 16+00 To STA. 19+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	STATE	

8/21

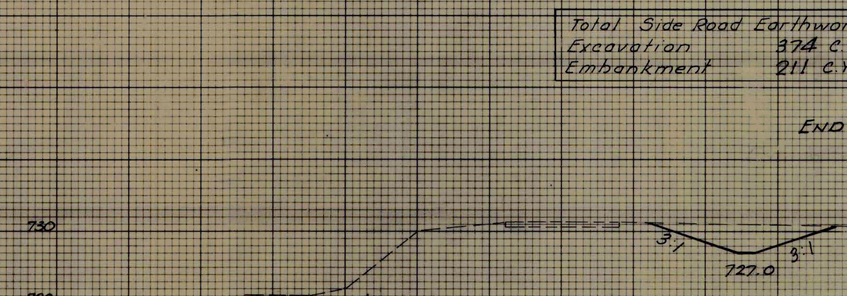
HOC - CO. RD. 174

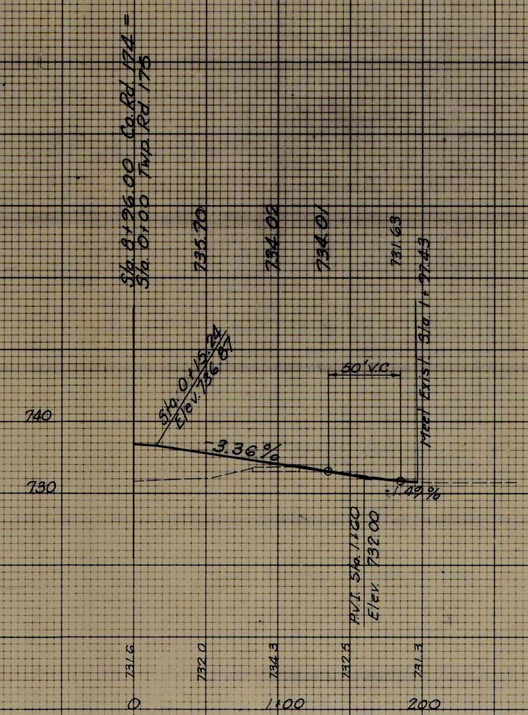
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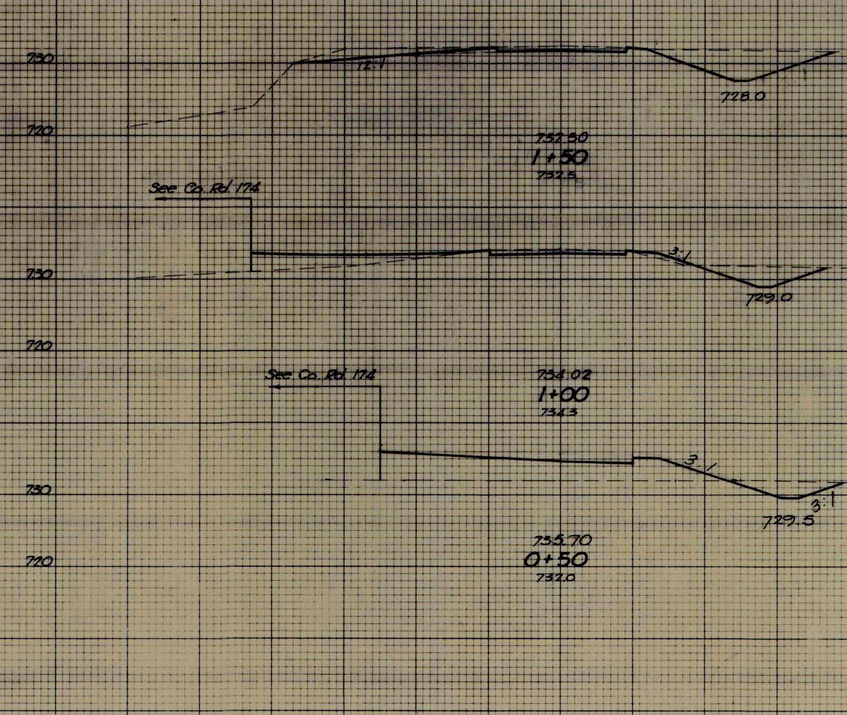
SEEDING	
END WIDTH	SQ. YDS

Total Side Road Earthwork	
Excavation	374 C.Y.
Embankment	211 C.Y.

	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
END WORK STA. 2+40	0	0		
			46	0
	62	0		
			148	0
	98	0		
			124	41
	36	44		
			56	170
	25	140		







TWP. RD. 175 PROFILE & CROSS SECTIONS

SEEDING	
END WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	STATE	

8
21

HOC - CO. RD. 174

Calculated by JH Date 6-4-72
Checked by JMS Date 6-8-72

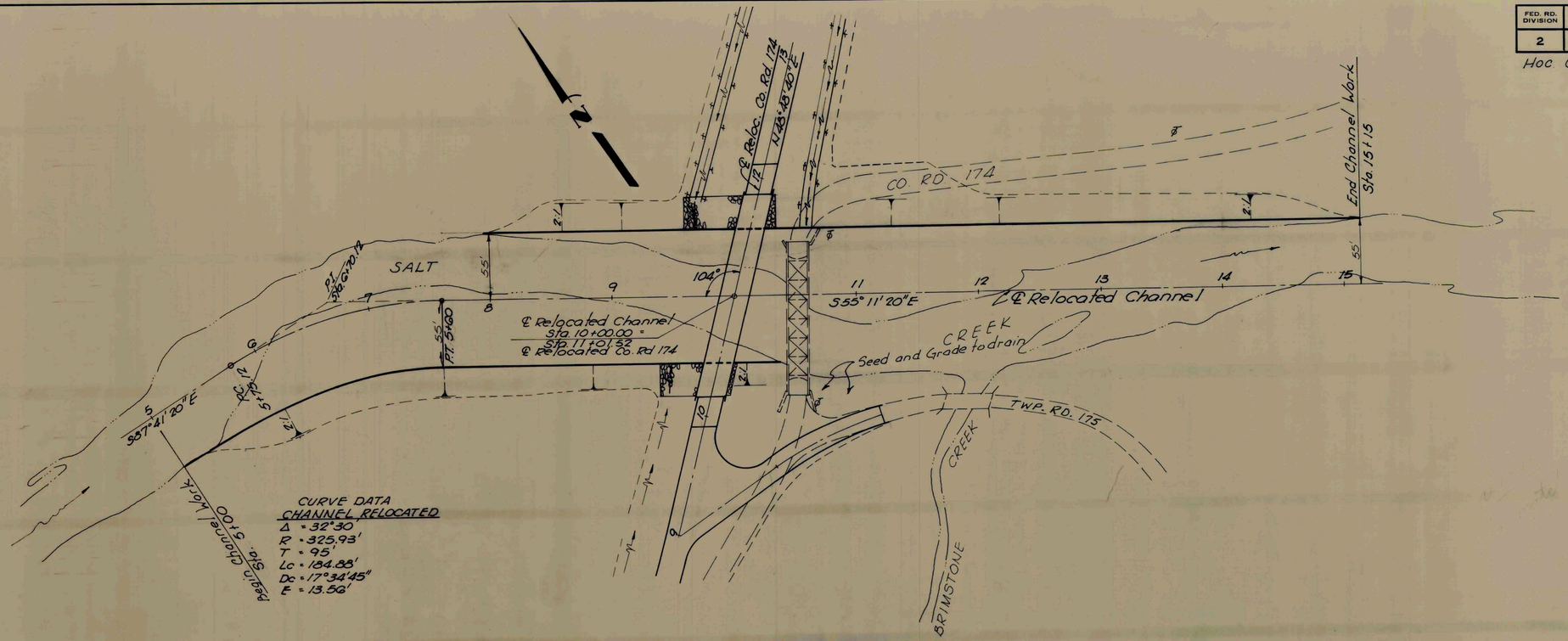
Total Side Road Earthwork	
Excavation	374 C.Y.
Embankment	211 C.Y.

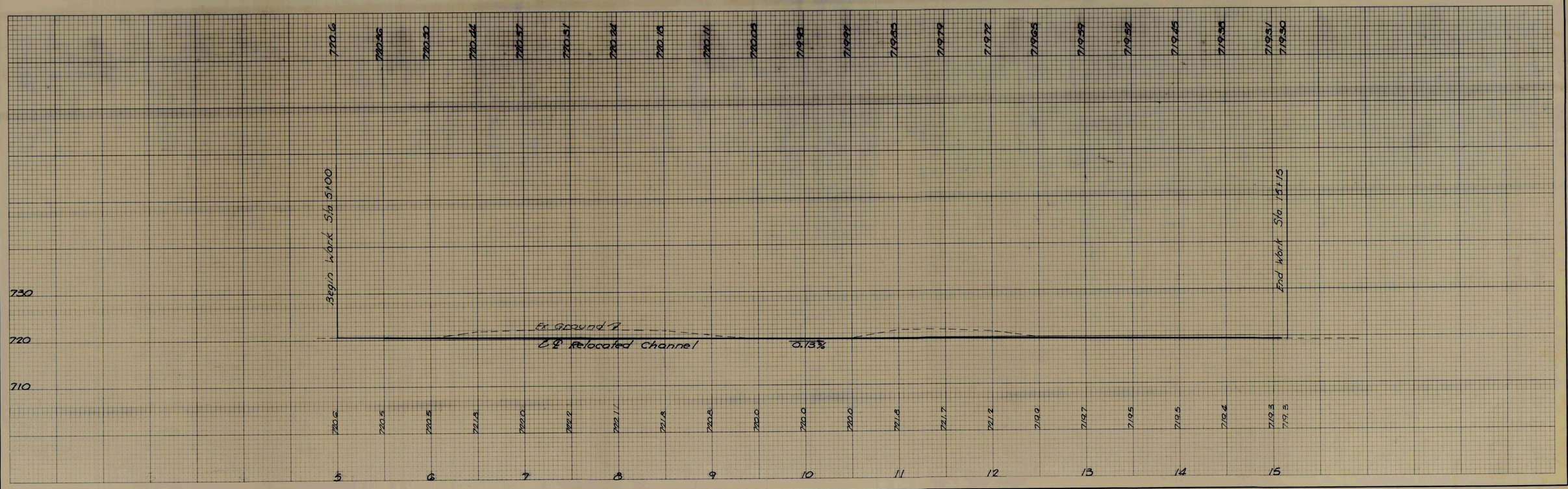
END AREA		VOLUME	
CUT	FILL	CUT	FILL

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	STATE	

9/21

HOC. COUNTY RD. 174





CHANNEL PLAN & PROFILE STA. 5+00 TO STA. 15+15

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	STATE	

HOC. Co. Rd. 174

10
21

Calculated By J.H. Date 6-4-72
Checked By J.M.S. Date 6-9-72

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
		384	0		
				606	0
		270	0		
				423	0
		187	0		
				258	0
		92	0		
				152	0
		72	0		
				67	0
		0	0		

730
720
720.31
7+50
722.2
2:1
730
720
720.37
7+00
722.0
730
720
720.44
6+50
721.6
730
720
720.5
6+00
720.5
730
720
720.56
5+50
720.5
2:1
730
720
5+00
720.6
100 80 60 40 20 0 20 40 60 80 100

CHANNEL SECTIONS - STA. 5+00 TO STA. 7+50

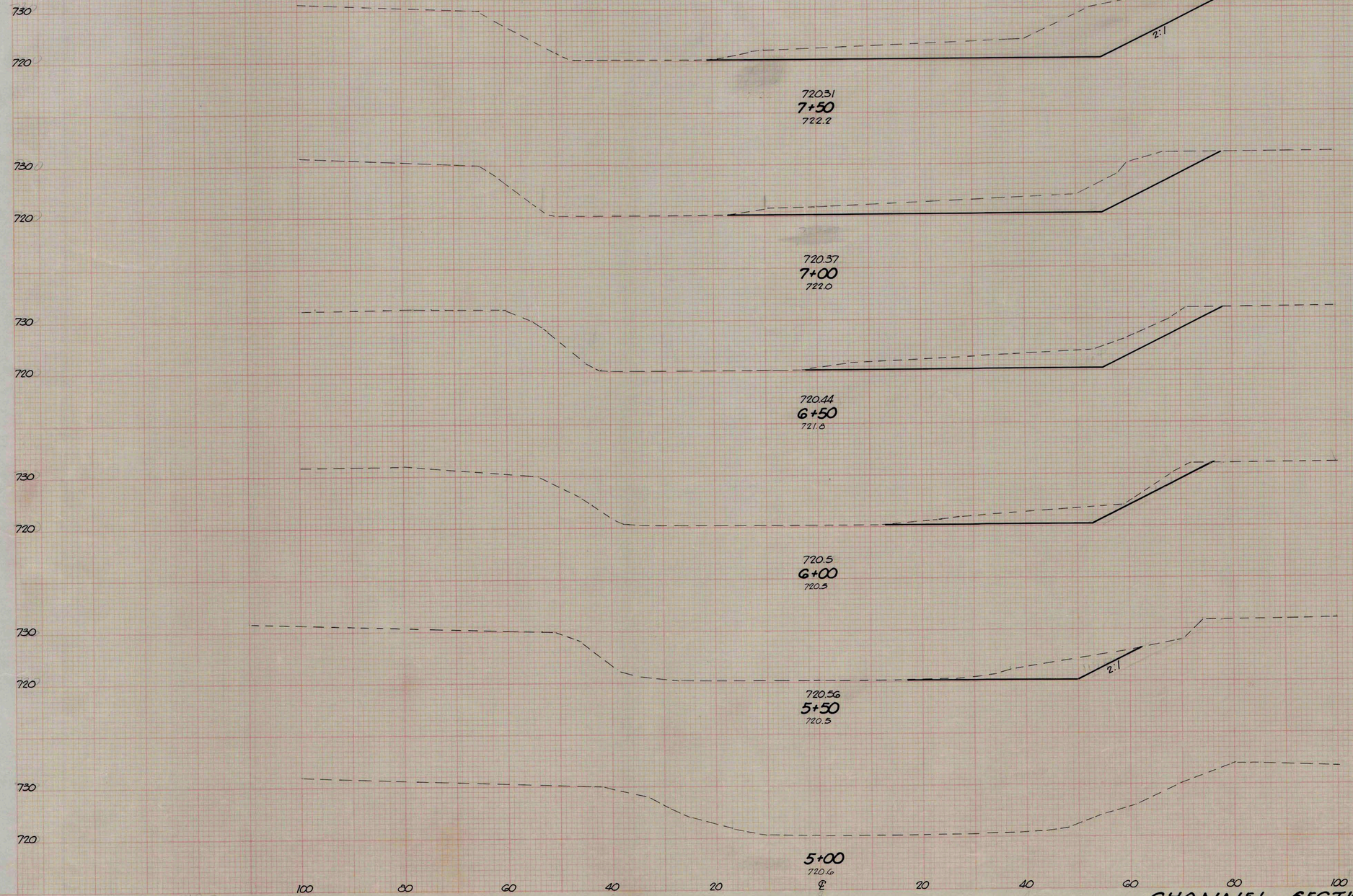
SEEDING	
THD. WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	STATE	

HOC. Co. Rd. 174

10
21

Calculated By J.H. Date 6-4-72
Checked By J.M.S. Date 6-9-72



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
384	0			
			606	0
270	0			
			423	0
187	0			
			258	0
92	0			
			152	0
72	0			
			67	0
0	0			

CHANNEL SECTIONS - STA. 5+00 To STA. 7+50

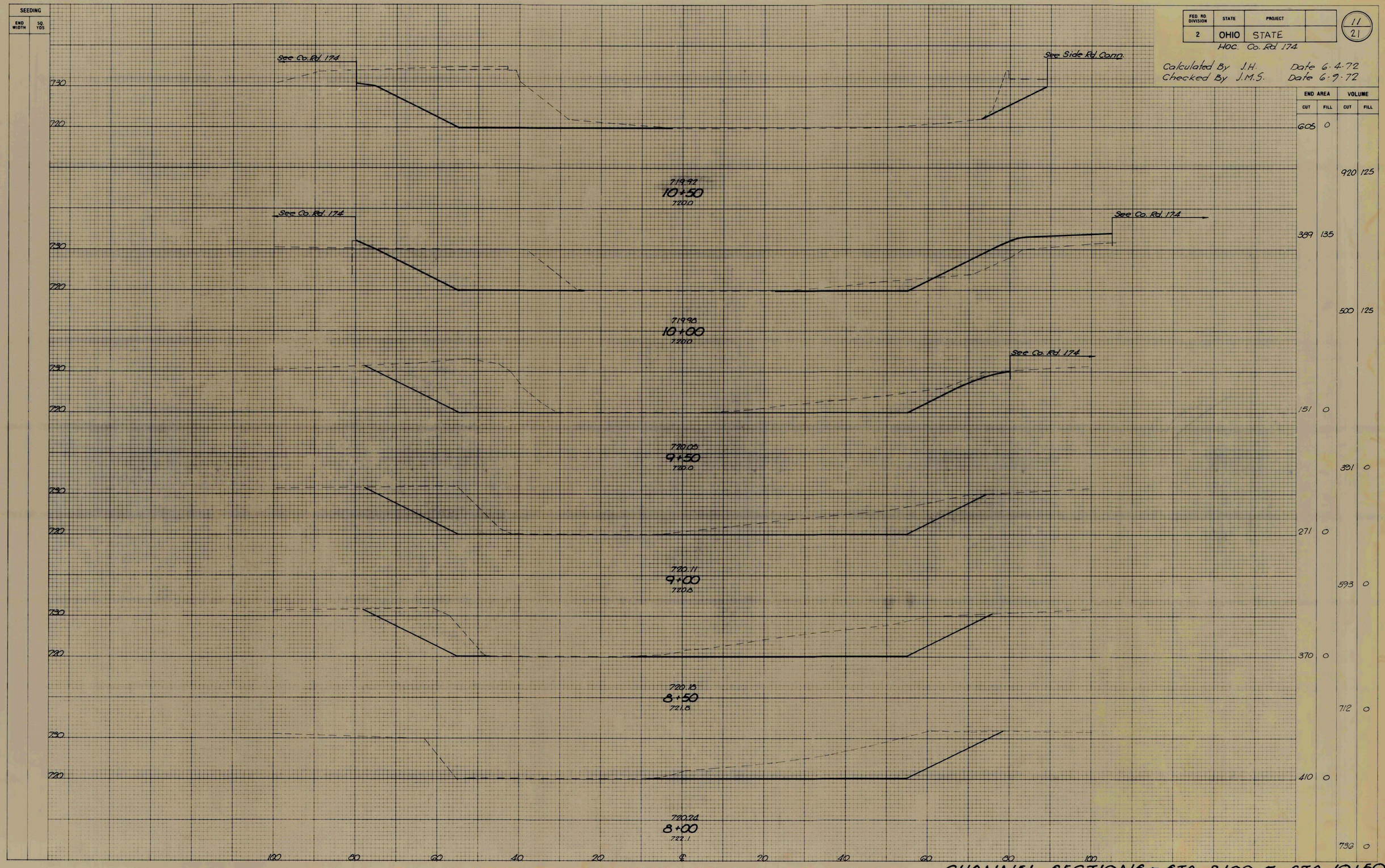
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	STATE	

HOC. Co. Rd 174

11/21

Calculated By J.H. Date 6-4-72
Checked By J.M.S. Date 6-9-72

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS	CUT	FILL	CUT	FILL
		605	0		
				920	125
		389	135		
				500	125
		151	0		
				391	0
		271	0		
				593	0
		370	0		
				712	0
		410	0		
				736	0



CHANNEL SECTIONS - STA. 8+00 to STA. 10+50

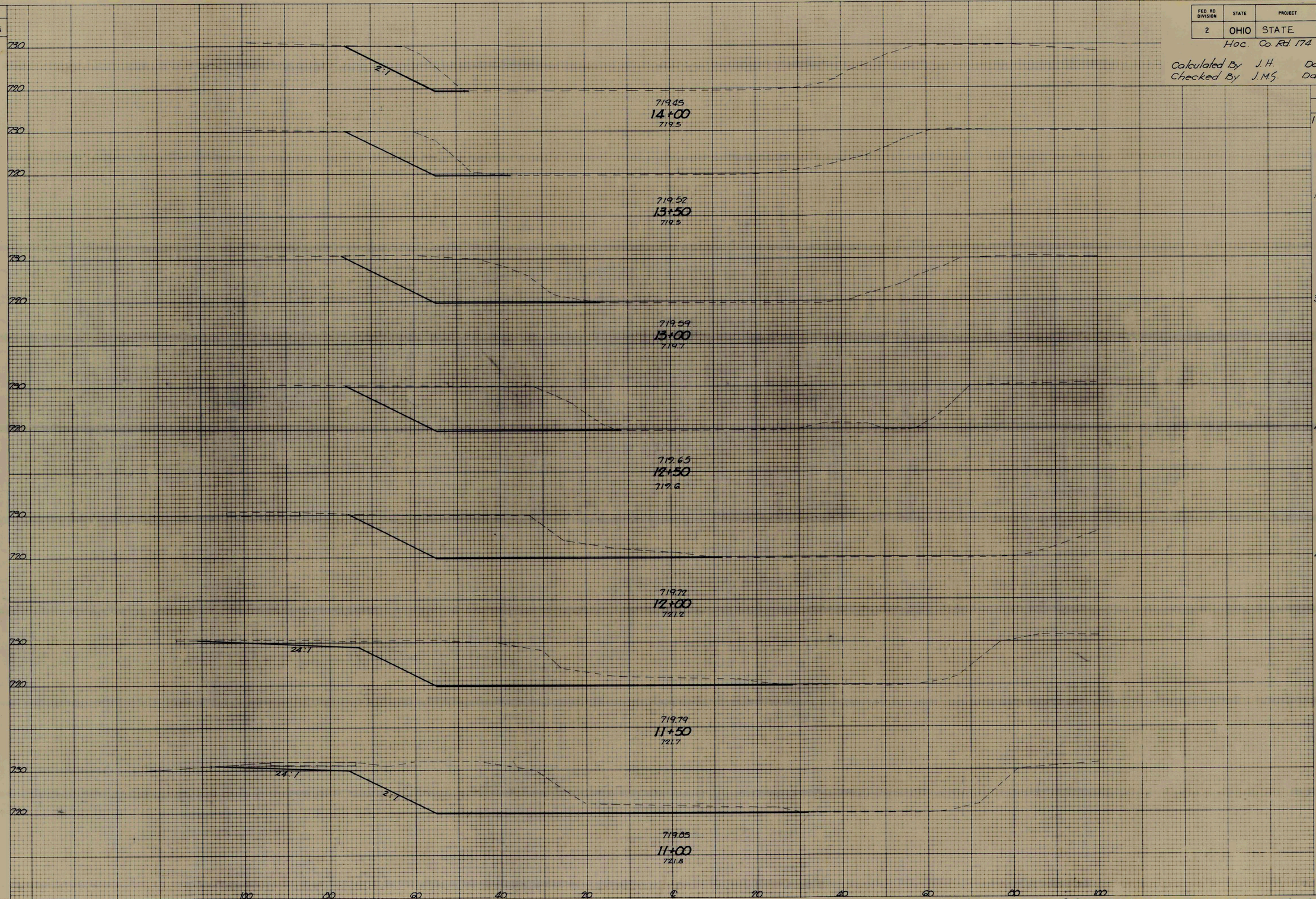
FED RD DIVISION	STATE	PROJECT	
2	OHIO	STATE	

Hoc. Co. Rd. 174

12/21

Calculated By J.H. Date 6-4-72
Checked By J.M.S. Date 6-10-72

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS	CUT	FILL	CUT	FILL
		119	0		
				251	0
		152	0		
				463	0
		347	0		
				751	0
		464	0		
				841	0
		444	0		
				903	0
		530	0		
				1080	0
		637	0		
				1150	0



CHANNEL SECTIONS - STA. 11+00 To STA. 14+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	STATE	

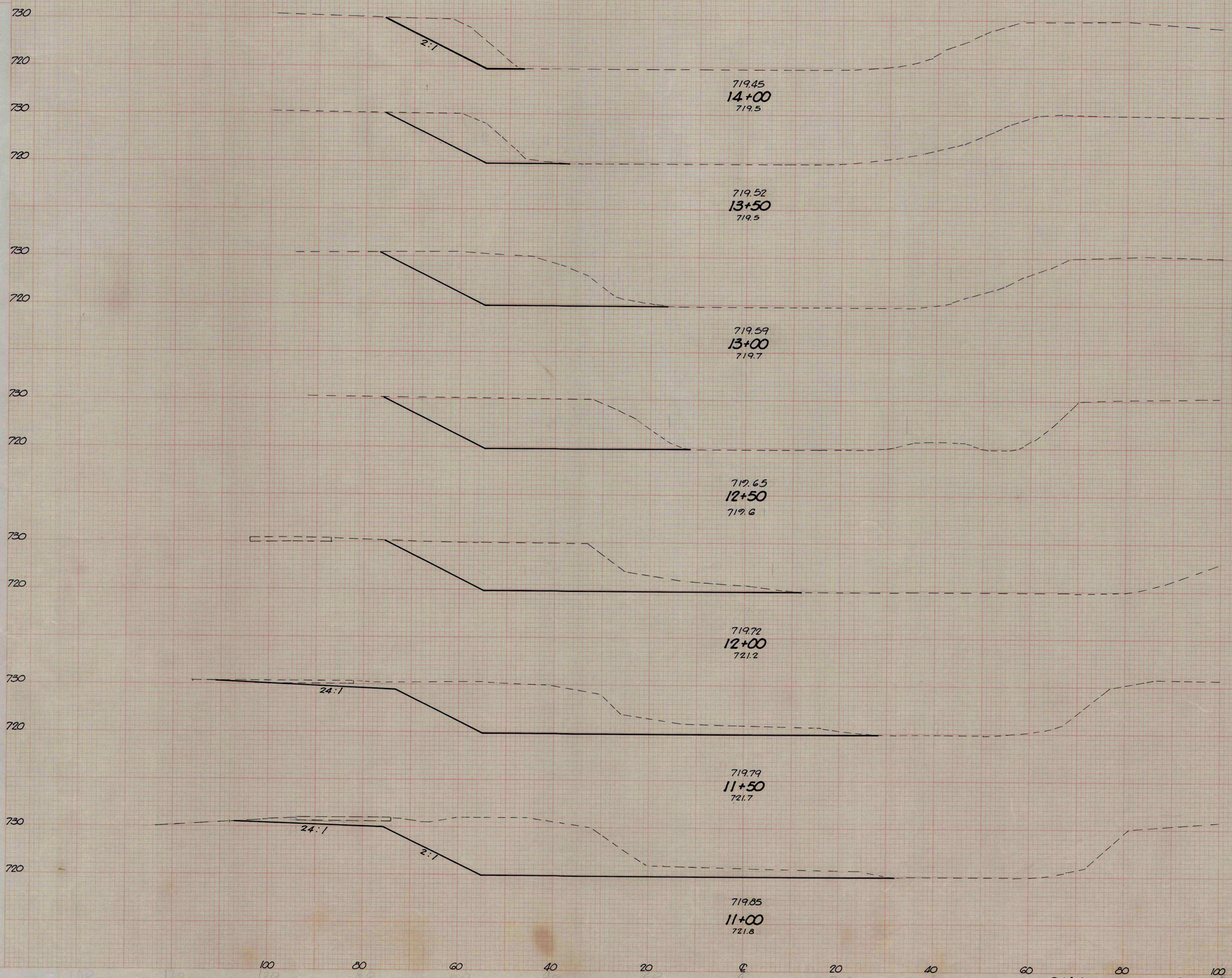
12
21

Hoc. Co. Rd 174

Calculated By J.H. Date 6-4-72
Checked By J.M.S. Date 6-10-72

SEEDING

END WIDTH	SQ. YDS.



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
119	0		
			251 0
152	0		
			463 0
347	0		
			751 0
464	0		
			841 0
444	0		
			903 0
530	0		
			1080 0
637	0		
			1150 0

CHANNEL SECTIONS - STA. 11+00 TO STA. 14+00

SEEDING	
END WIDTH	SQ YDS

FED RD DIVISION	STATE	PROJECT	
2	OHIO	STATE	

Hoc. Co. Rd. 174

13
21

Calculated By J.H. Date 6-4-72
Checked By J.M.S. Date 6-10-72

END AREA		VOLUME	
CUT	FILL	CUT	FILL

Total Channel Earthwork
Embankment 250 C.Y.
Excavation 11,077 C.Y.

730
720
730
720
2:1
719.30
15+15
719.3
719.38
14+50
719.4
100 80 60 40 20 ℄ 20 40 60 80 100
0 0
96 0
80 0
184 0

CHANNEL SECTIONS - STA. 14+50 To STA. 15+15

SEEDING	
END WIDTH	SQ. YDS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	STATE	

Hoc. Co. Rd. 174

13
21

Calculated By J.H. Date 6-4-72
Checked By J.M.S. Date 6-10-72

END AREA		VOLUME	
CUT	FILL	CUT	FILL

Total Channel Earthwork	
Embankment	250 C.Y.
Excavation	11,077 C.Y.

730
720

719.30
15+15
719.3

730
720

2:1

719.38
14+50
719.4

100 80 60 40 20 ℄ 20 40 60 80 100

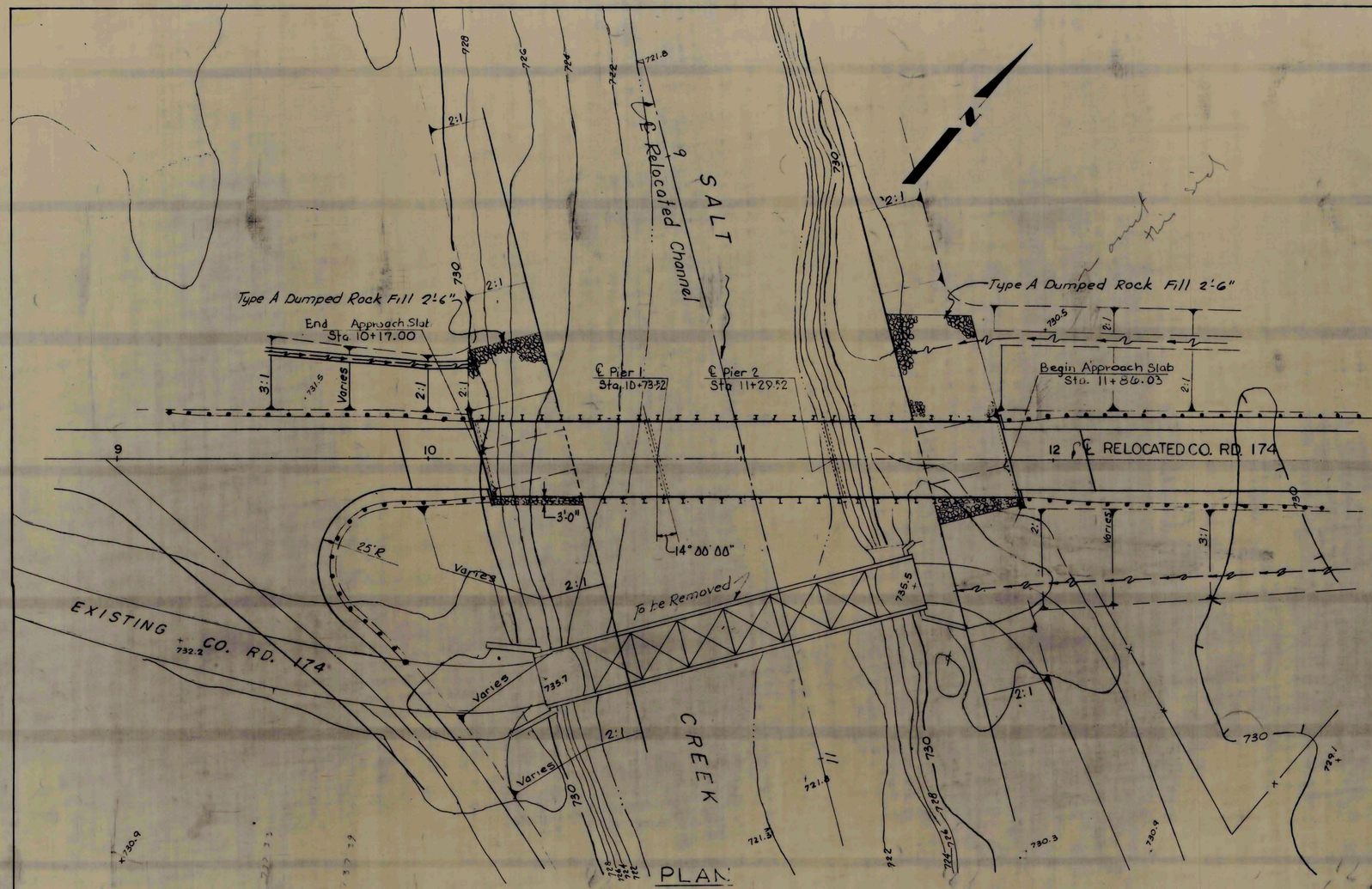
0 0
96 0
80 0
184 0

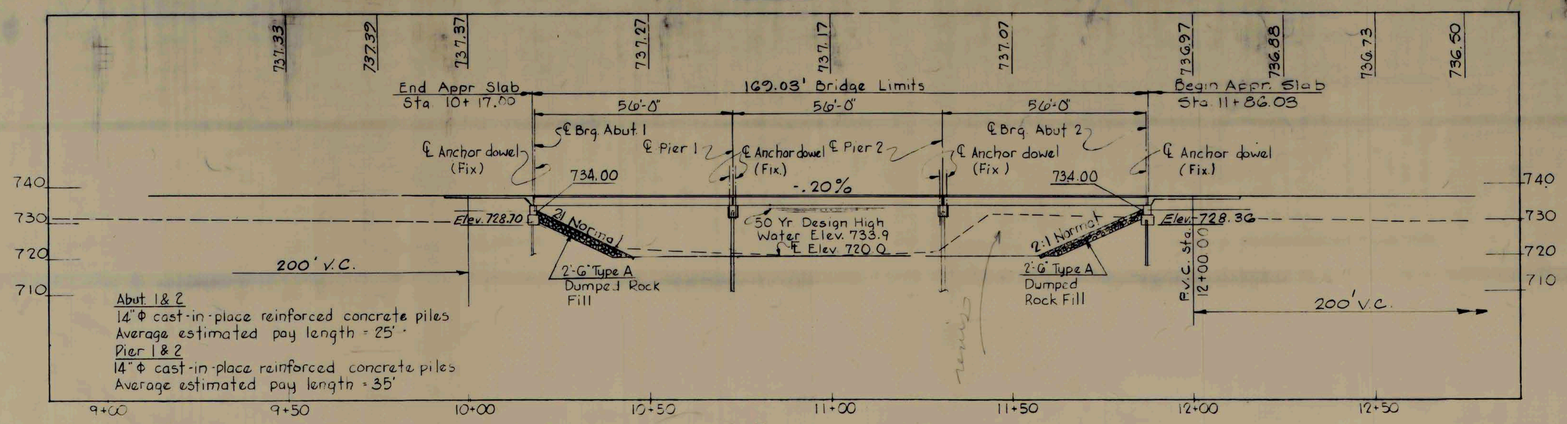
CHANNEL SECTIONS - STA. 14+50 TO STA. 15+15

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	STATE	

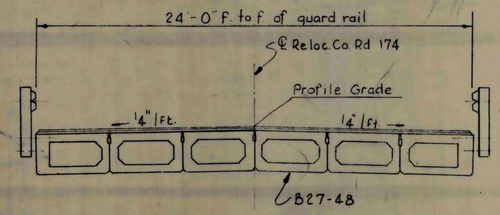
14
21

HOCKING CO. RD. 174 (RELOCATED)
1/2 Mile East of Adelphi





PROFILE ON ℄ OF ROADWAY



ADT 1989 = 923

EXISTING STRUCTURE

Existing structure shall be removed and becomes property of contractor except that stone of abutments shall be piled for removal from the site by the County's forces.
TYPE: Steel Trusses
SPANS: 120' ±
ROADWAY: 14' between trusses
WEARING SURFACE: Wood Floor
LOADING: 3 Ton Limit

PROPOSED STRUCTURE

TYPE: Prestressed concrete box beams and capped pile substructure

SPANS: 56'-0", 56'-0", 56'-0"
ROADWAY: 24'-0" F to F. of guard rail.
WEARING SURFACE: 2½" Asphalt Concrete

LOADING: AASHO HS-20-44
ALIGNMENT: Tangent
APPROACH SLABS: AS-1-67 (25'-0" Long)
SKEW: 14° R.F.

Design 50 Year
High Water Clearance = 7¾"

HYDRAULIC DATA

D.A. 106 Sq. Miles
Q25 14,700 c.f.s.
Q50 16,800 c.f.s.

VERTICAL CURVE DATA

Length: 200'
Approach Gradient -0.20%
Departing Gradient - 2.50%
P.V.I. Sta. 13+00
Elevation: 736.77

Abut 1 & 2
14" ϕ cast-in-place reinforced concrete piles
Average estimated pay length = 25'
Pier 1 & 2
14" ϕ cast-in-place reinforced concrete piles
Average estimated pay length = 35'

AUBLE-MITCHELL-BURGESS & ASSOC. 1/7
ENGINEERS AND ARCHITECTS
CINCINNATI, OHIO

SITE PLAN

CO. RD. 174 (RELOCATED) OVER SALT CREEK
STA. 10+17.00
HOCKING CO TO STA. 11+86.03

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
GKS	DR		JMS	FAM	7-12-72	

FED. RD. DIVISION	STATE	PROJECT	--
2	OHIO	STATE	

15
21

CO.RD 174
HOCKING CO

ESTIMATED QUANTITIES

By: GKS 6-1-72
Ch.By: JMS 6-9-72

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUT.	PIERS	GEN.
202	Lump	Sum	Structure Removed				LUMP
403	22	C.Y.	Asphalt Concrete (70-85, or AC-20)	22			
404	16	C.Y.	Asphalt Concrete (70-85, or AC-20)	16			
505	Lump	Sum	Test Pile				Lump
503	81	C.Y.	Unclassified Excavation		81		
507	840	L.F.	14" ϕ Reinforced Concrete Piles (Cast in place)		350	490	
509	66676	lbs.	Reinforcing Steel		4067	2609	
510	72	Ea.	Dowel Holes		24	48	
511	5	C.Y.	Class C Concrete - Superstructure	5			
511	22	C.Y.	Class C Concrete - Pier Caps			22	
511	41	C.Y.	Class C Concrete - Abutments		41		
512	544	S.Y.	Type B Waterproofing, Modified	535			9
515	18	Ea.	Prestressed Concrete Bridge Members	18			
516	45	S.F.	1" Thick Elastomeric Bearing Pads Grade 50		15	30	
516	38	S.F.	1" Preformed Expansion Joint Filler		1	37	
517	338	L.F.	Railing (Single deep beam rail with steel posts & bolts)	338			
518	17	C.Y.	Porous Backfill		17		
601	299	C.Y.	Dumped Rockfill, Type A				299

REFERENCE SHALL BE MADE TO THE FOLLOWING:

STANDARD DRAWINGS:

PSBD-1-71, DATED 9-1-71
DBR-1-71, DATED 1-1-71
AS-1-67, REVISED 6-12-69

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS, 1969, INCLUDING THE OHIO "SUPPLEMENT" TO THESE SPECIFICATIONS.

DESIGN DATA:

DESIGN LOADING:- HS 20-44
PRESTRESS BOX BEAM CONCRETE:- SEE SHEET 6 OF 7
CONCRETE CLASS C:- UNIT STRESS 1200 P.S.I. FOR SUPERSTRUCTURE
UNIT STRESS 1333 P.S.I. FOR SUBSTRUCTURE

PRESTRESSING STRANDS: - SEE SHEET 6 OF 7

REINFORCING STEEL: ASTM A615, A616, OR A617 UNIT STRESS 20,000 P.S.I. (IF BARS IN ACCORDANCE WITH ASTM A616 ARE PROVIDED THEY SHALL BE SUBJECT TO BEND TESTS AS PER AASHO DESIGNATION M42-70).

REMOVAL OF EXISTING STRUCTURE: WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC, THE EXISTING STRUCTURE SHALL BE REMOVED. SEE 'GENERAL NOTES' SHEET 3 OF 21

EMBANKMENT CONSTRUCTION: EMBANKMENT SHALL BE CONSTRUCTED TO THE LEVEL OF SUBGRADE ~~FOR A MINIMUM DISTANCE OF 200 FEET~~ BACK OF THE ABUTMENTS. EXCAVATION SHALL THEN BE MADE FOR ABUTMENTS.

NON-SHRINKING MORTAR SHALL BE MADE WITH PORTLAND CEMENT AND AN APPROVED ADDITIVE OR WITH AN APPROVED PROPRIETARY PRODUCT.

GALVANIZING: ALL ANCHOR BOLTS, STUDS, INSERTS, TIE RODS, NUTS AND WASHERS SHALL BE GALVANIZED PER 711.02.

ASPHALT CONCRETE SURFACE COURSE: SHALL CONSIST OF A VARIABLE THICKNESS OF 403 AND A 1-1/4" THICKNESS OF 404. THE 403 SHALL BE PLACED IN TWO OPERATIONS. THE FIRST COURSE SHALL BE OF 1 1/4" UNIFORM THICKNESS. THE SECOND COURSE SHALL BE FEATHERED TO PLACE THE SURFACE PARALLEL TO AND 1 1/4" BELOW FINAL PAVEMENT SURFACE ELEVATION.

PILES: SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 35 TONS PER PILE FOR THE ABUTMENTS AND 40 TONS PER PILE FOR THE PIERS.

PILE CASINGS: THE CASINGS OF CAST-IN-PLACE CONCRETE PILES SHALL BE OF THE TYPE THAT IS LEFT IN PLACE AND IS DESIGNED TO RESIST BOTH DIRECT COMPRESSION AND BENDING. THE PORTION ABOVE THE PROPOSED SURFACE OF THE GROUND SHALL BE OF UNIFORM DIAMETER (NOT TAPERED) AND SHALL HAVE A THICKNESS OF METAL NOT LESS THAN 0.179 INCHES.

TYPE "B" WATERPROOFING MODIFIED SHALL BE IN ACCORDANCE WITH SECTION 512 OF THE "CONSTRUCTION AND MATERIAL SPECIFICATIONS", EXCEPT AS MODIFIED. AFTER THE DECK IS PRIMED ALL JOINTS AND IRREGULARITIES IN THE BEAMS SHALL BE FILLED WITH ASPHALT CEMENT SEC 702.01 (70-85). BEFORE THE FIRST MOPPING, AN EXTRA PLY OF FABRIC SHALL BE LAID OVER THE JOINTS BETWEEN THE BEAMS AND BETWEEN THE APPROACH SLAB AND THE BEAMS EXTENDING AT LEAST 9" ON EACH SIDE OF THE JOINTS. THE MEMBRANE SHALL THEN BE MOPPED ON TOP OF THIS EXTRA PLY ALLOWING THE UNDERSIDE TO REMAIN LOOSE WHICH ALLOWS FOR MOVEMENT IN THE JOINT. PLACING OF WATERPROOFING SHALL BEGIN AT THE EDGE OF THE DECK AND SHALL PROGRESS TOWARD THE CENTER. ASPHALT CONCRETE PAVING OPERATIONS SHALL BE CARRIED OUT IN A MANNER THAT WILL NOT DISPLACE OR OTHERWISE DAMAGE THE COMPLETED WATERPROOFING.

AUBLE-MITCHELL-BURGESS & ASSOC. 2/7
ENGINEERS AND ARCHITECTS
CINCINNATI, OHIO

ESTIMATED QUANTITIES & GENERAL NOTES

CO. RD. 174 (RELOCATED) OVER SALT CREEK

HOCKING CO.

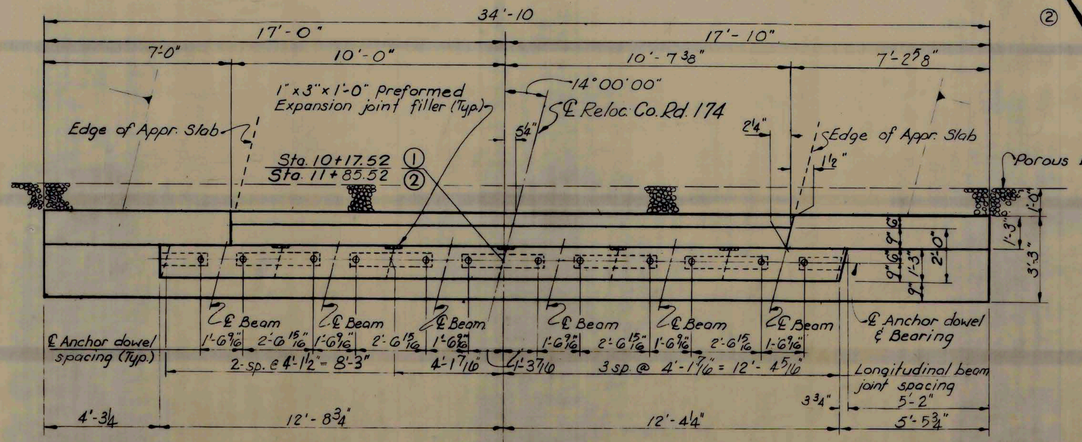
STA. 10 + 17.00
TO STA. 11 + 86.03

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
D.R.	J.H.		GKS	F.A.M.	7-12-72	

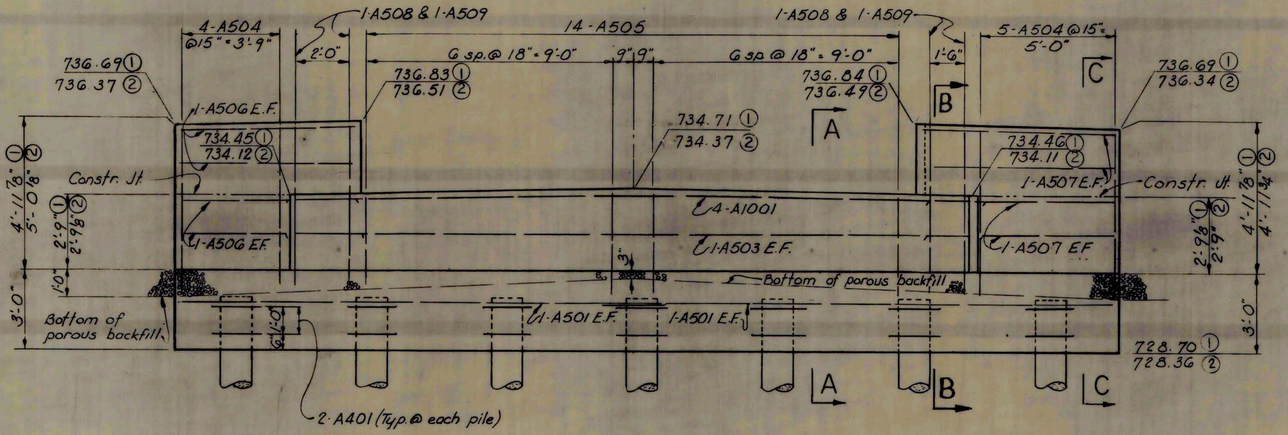
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	STATE	

16
21

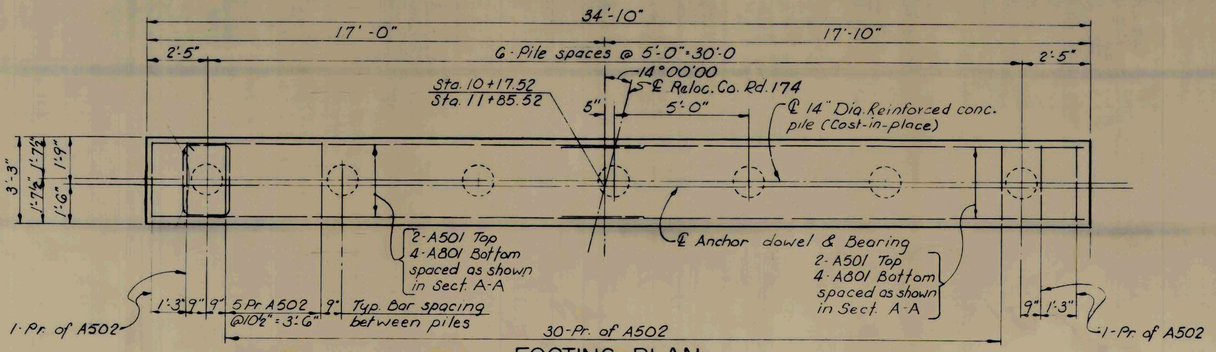
CO. RD. 174
HOCKING CO.



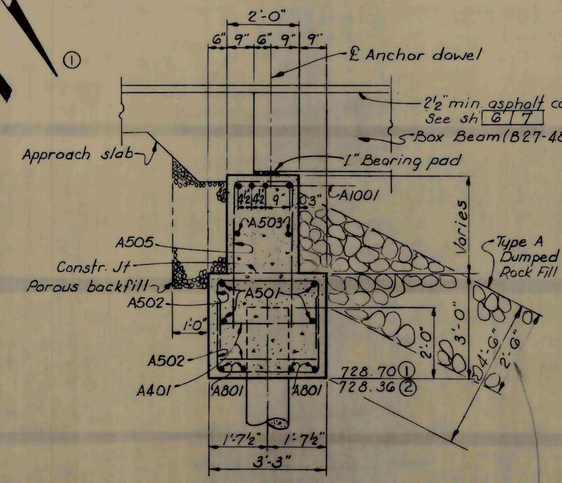
PLAN



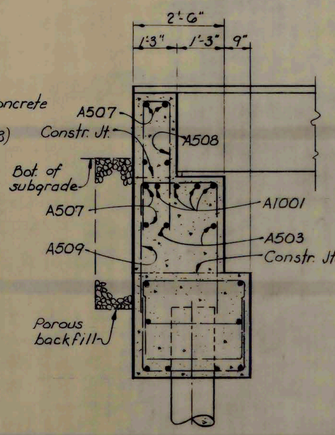
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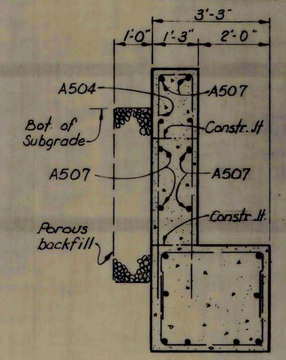
FOOTING PLAN



SECTION A-A



SECTION B-B



SECTION C-C

NOTES

1. Porous Backfill shall extend upward to the plane of the subgrade and laterally to the surface of the embankment slopes.
2. For Reinforcing Steel List see sh 7 7.
3. Special care shall be taken in placing reinforcing steel in the vicinity of the beam seat to avoid interference with drilling of anchor dowel holes.
4. For bearing pad layout, see sh 4 7.
5. The portion of the abutment backwall above the upper construction joint shall be constructed after the beams are in place.

LEGEND

E.F. Each Face
N.F. Near Face
F.F. For Face
① Abutment 1
② Abutment 2

AUBLE-MITCHELL-BURGESS & ASSOC. 3 7
ENGINEERS AND ARCHITECTS
CINCINNATI, OHIO

ABUTMENTS 1 & 2

CO. RD. 174 (RELOCATED) OVER SALT CREEK

HOCKING CO.

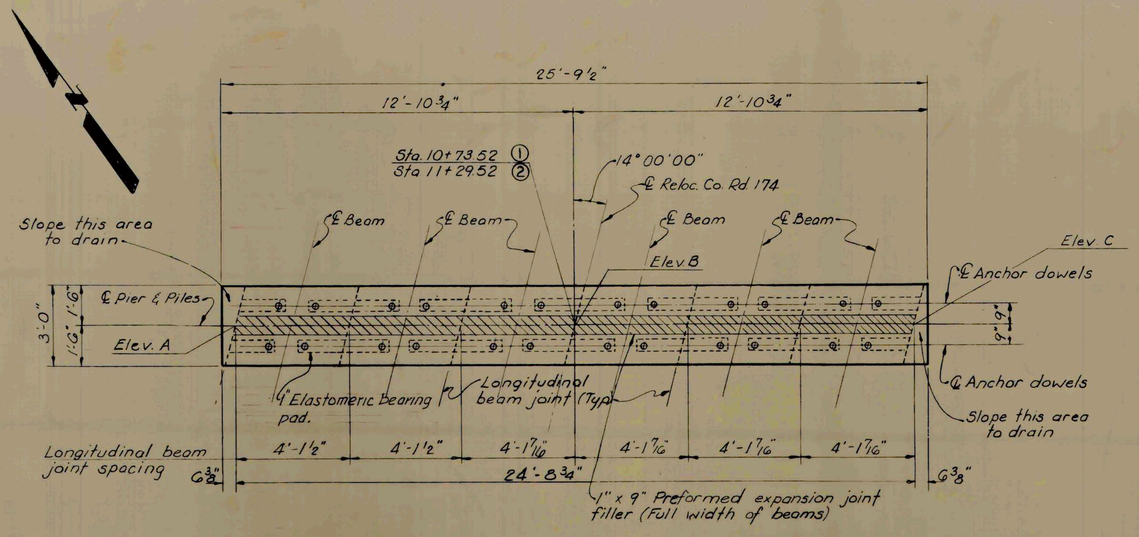
STA. 10+17.00
TO STA. 11+86.03

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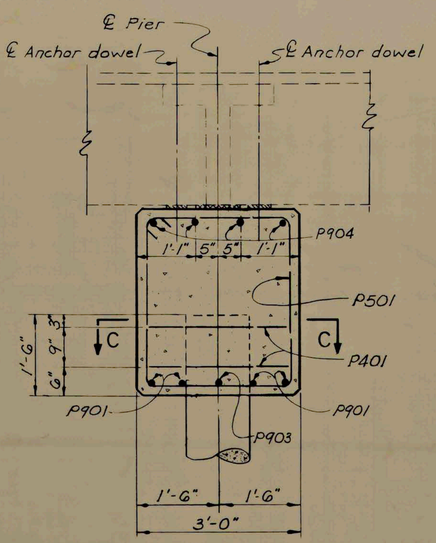
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2	OHIO	STATE	

17
21

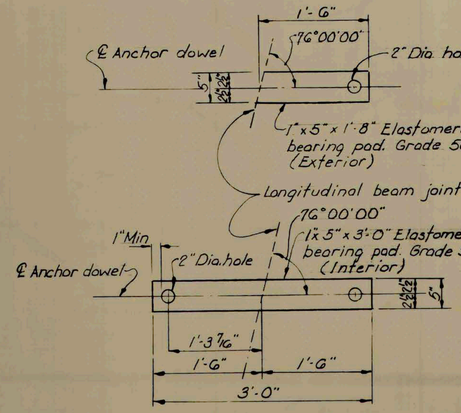
CO. RD. 174
HOCKING CO.



CAP PLAN

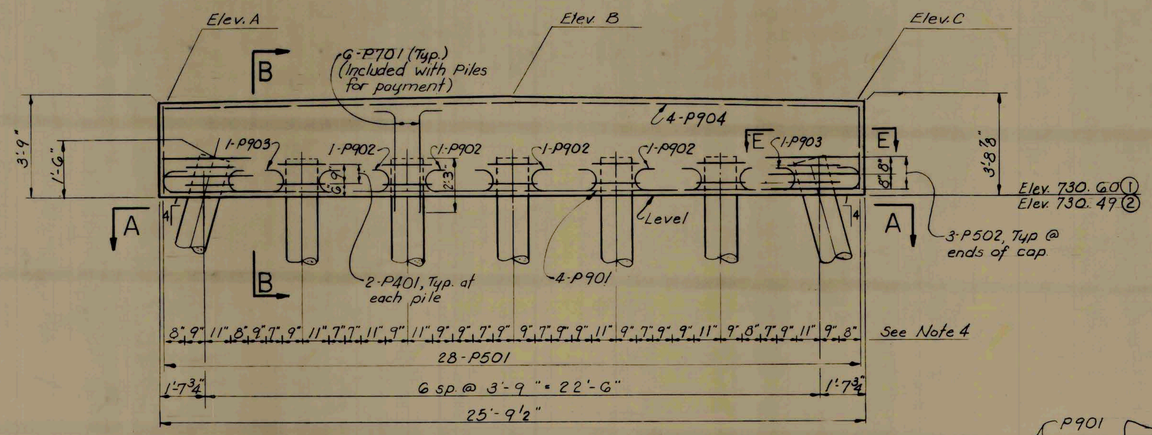


SECTION B-B



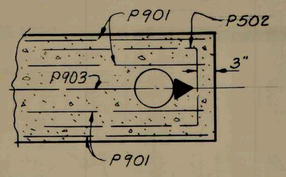
BEARING PAD DETAIL

(Bearing pads may be furnished in segments or may be cut to facilitate erection of beams.)

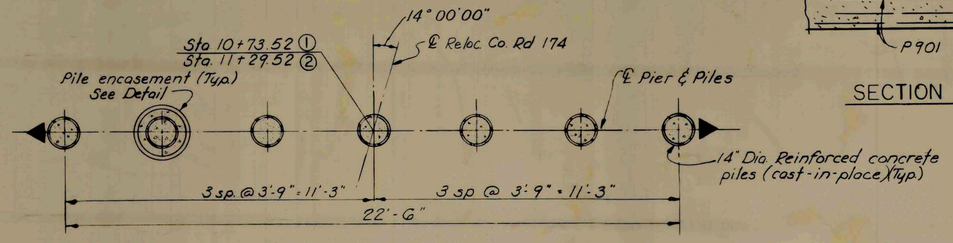


ELEVATION

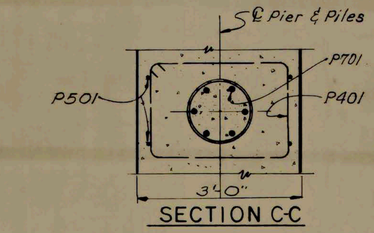
Top of the cap elevations		
	Pier 1	Pier 2
Elev. A	734.35	734.24
Elev. B	734.60	734.49
Elev. C	734.34	734.23



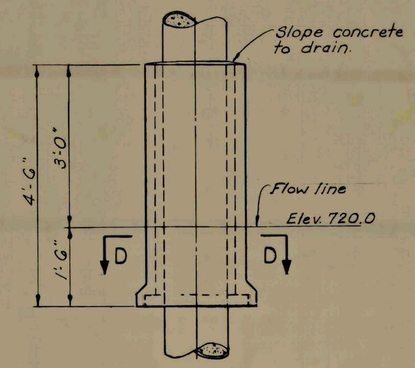
SECTION E-E



VIEW A-A

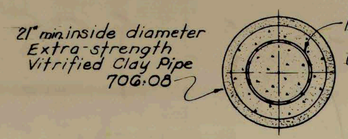


SECTION C-C



PILE ENCASEMENT

1. Attachment of falsework support members to pier piles will be permitted, if the attachment is made to that portion of pile encased in the pier cap.
2. After driving the pile, place the pipe into position, and fill with concrete. The concrete encasement may be placed in water as per 511, care being taken to remove all dirt between the pile and the pipe. The concrete and clay pipe shall be included with piles for payment.
3. Two P501 stirrups, one on each side of piles, shall have hooks in the bottom portion of cap.
4. Special care shall be taken in placing P904 bars and P501 stirrups so as not to interfere with drilling of anchor dowel holes.
5. For Reinforcing Steel List, see sh. 7/7
6. Drop due to longitudinal grade from edge to edge of pier cap is 1½". Top of the pier cap shall be sloped to allow for grade.



SECTION D-D

LEGEND
① Pier 1
② Pier 2
Indicates pile battered 1 horizontal to 4 vertical in the direction of arrow.

AUBLE-MITCHELL-BURGESS & ASSOC. 4/7
ENGINEERS AND ARCHITECTS
CINCINNATI, OHIO

PIERS 1 & 2

CO. RD. 174 (RELOCATED) OVER SALT CREEK

STA. 10 + 17.00

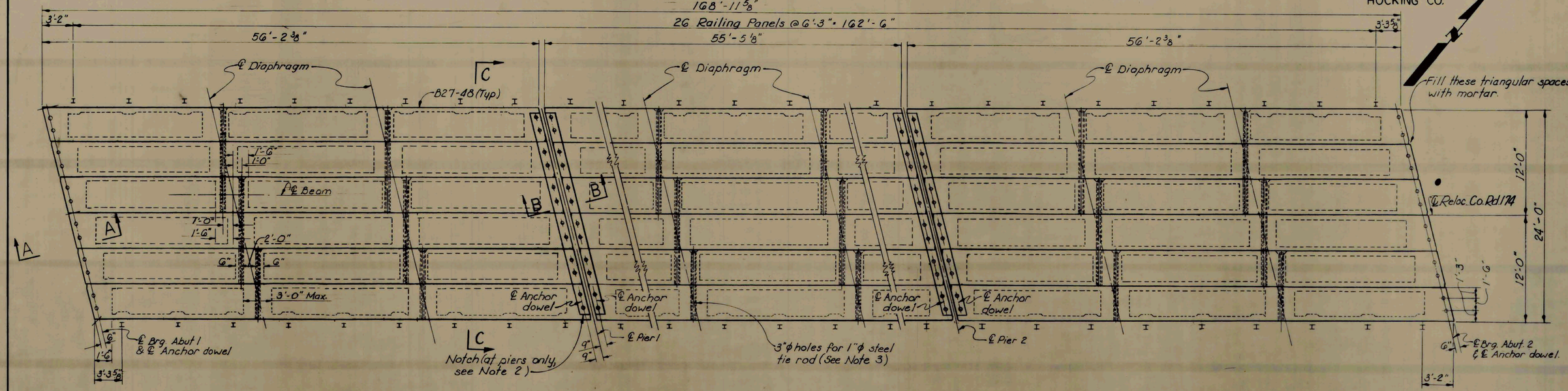
HOCKING CO. TO STA. 11 + 86.03

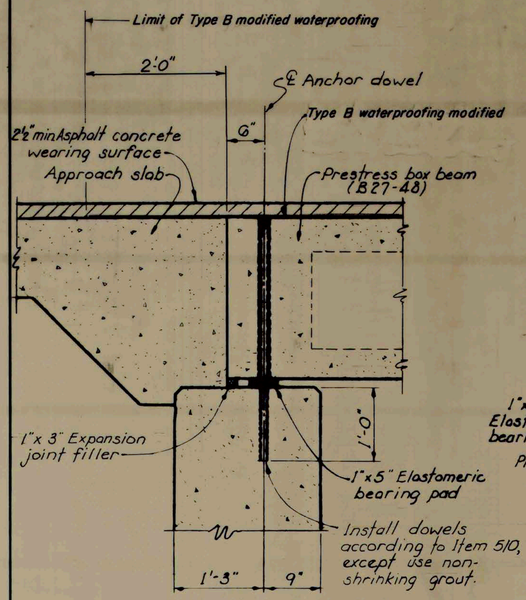
Designed	Drawn	Traced	Checked	Reviewed - Date	Revised
GKS	D.R.		G.K.S.	F.P.M. 7-12-72	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	STATE	

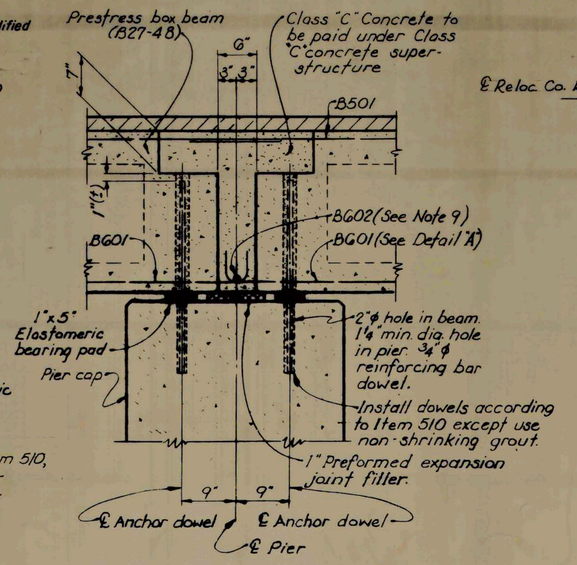
18
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CO. RD. 174
HOCKING CO.



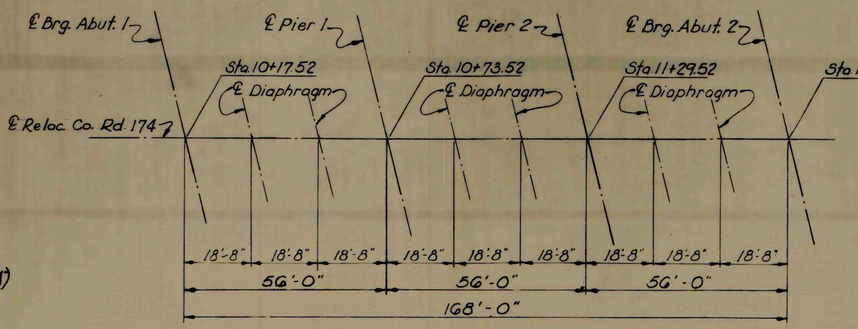


SECTION A-A

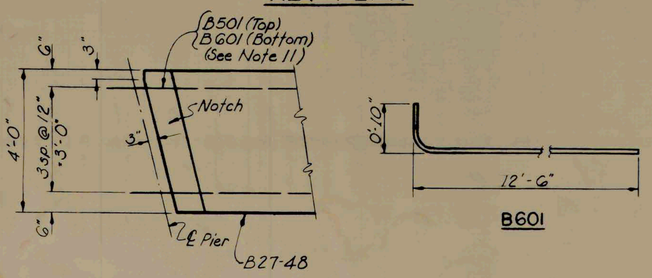


SECTION B-B

BEAM LAYOUT



KEY PLAN



DETAIL "A"
(See Note 2)

NOTES

1. For type, size and location of elastomeric bearing pads, see sh. 4/7
2. Except as shown on this sheet, see "Detail and Reinforcement of Beam Ends," Std. Dwg. PBSD-1-71, sh. 1 of 3.
3. Beams shall be anchored with tie rods. Transverse Tie Rods shall be 1" diameter steel rods of A36 steel, threaded both ends, and with nut and washer at both ends. Threads may be cut or rolled. If rolled threads are used, minimum diameter of rod at root of threads shall be 0.838". Tension shall be applied by a torque of approximately 250 foot-pounds. After the tie rods are tightened the recesses in the fascia beam shall be filled with non-shrinking mortar of the same color as the beams. For additional details not shown, see "End Details of Transverse Tie Rod Anchorage", Std. Dwg. PSBD-1-71, sh. 2 of 3.
4. Voids shall be vented to prevent heaving of the top flange during curing.
5. For details of deep beam guard rail, see Std. Dwg. DBR-1-71.
6. After tensioning of the transverse tie rods the dowel holes shall be drilled into the abutment or pier seat and dowels installed.
7. For details of beam lifting inserts, see Std. Dwg. PSBD-1-71, sh. 1 of 3.
8. Dimensional variations in excess of tolerances shown in "Beam Dimensional Tolerances", Std. Dwg. PSBD-1-71, sh. 2 of 3 may be cause for rejection of the member.
9. Include for payment with Item 515, Prestress Concrete Bridge Members.
10. For Section C-C, see sh. 6/7
11. B501 shall be embedded a min. of 12'-0" on each side of center line of pier.

AUBLE-MITCHELL-BURGESS & ASSOC. 5/7
ENGINEERS AND ARCHITECTS
CINCINNATI, OHIO

SUPERSTRUCTURE DETAILS

CO. RD 174 (RELOCATED) OVER SALT CREEK

HOCKING CO.

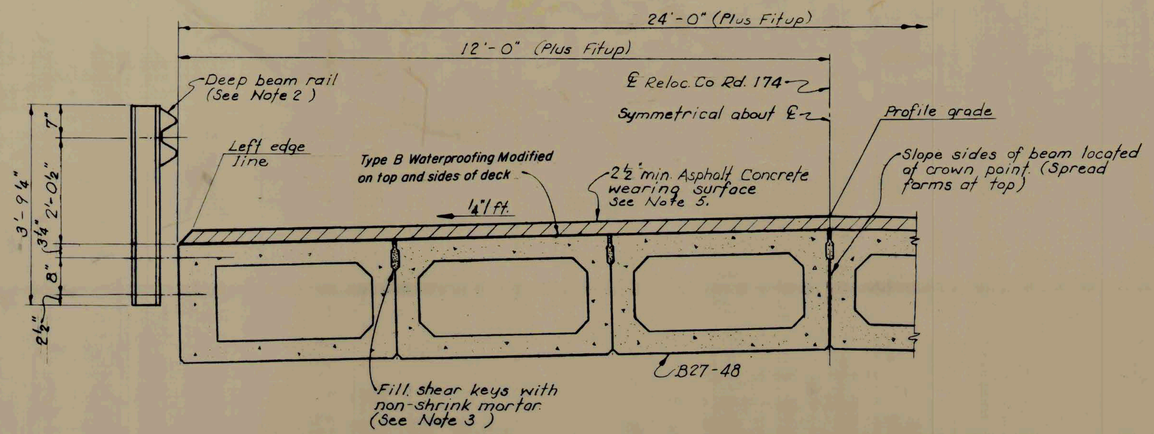
STA. 10+17.00
TO STA. 11+86.03

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
GKS	DR		GKS	E.A.M.	7-12-72	

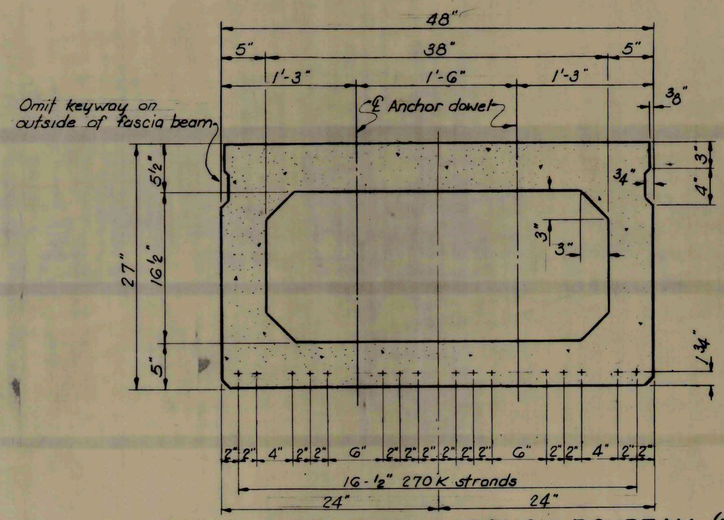
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	STATE	

12/21

CO. RD. 174
HOCKING CO



SECTION C-C



TYPICAL SECTION THROUGH BOXBEAM (B27-48)
(See Note 4)

BOX BEAM NOTES

1. Min. concrete strength at 28 days = 5500 p.s.i.
2. Min. concrete strength at release of prestress = 4000 p.s.i.
3. Prestressing strands are ½" dia., 270 K seven-wire, uncoated and stress-relieved. As = 0.154 in². Initial tension = 28,900 lbs per strand.
4. Unit stress - 2200 p.s.i. compression
   444 p.s.i tension
5. Prestressing Strand ASTM A416, f's = 270,000 psi. Working stress = 0.60 f's.
6. Calculated camber at release of prestress is 0.45 inches. (This does not include creep.)

   Estimated camber increase due to creep of concrete is 0.68 inches.

   Calculated deflection due to weight of surface course and railing is 0.08 inches.

   Net final camber of beams is 1.05 inches. This is 1.05 inches in excess of the required value (0"). This excess amount shall be compensated for by thickening the 403 levelling course from 1¼" at center to 2¼" at ends of span.
7. BEAM FINISHING: Texturing of the tops of the beams as provided in 451.09 shall not be done.

FINISHED PAVEMENT ELEVATIONS				
	℄ Brg. Abut 1	℄ Pier 1	℄ Pier 2	℄ Brg. Abut 2
Left edge line	737.091	736.979	736.867	736.755
Profile grade	737.335	737.223	737.111	736.999
Right edge line	737.079	736.967	736.855	736.743

NOTES

1. Exterior wall of fascia beam shall be thickened to accomodate Type C anchors, for details see Std Dwg PSBD-1-71, sh 1 of 3.
2. For additional details of deep beam guard rail see Std Dwg. DBR-1-71. Inserts of a type different from those shown on Std Dwg. DBR-1-71 may be used if approved by the Director.
3. After the transverse tie rods have been tightened shear keys shall be filled with non-shrinking mortar. Before mortaring, the keyway surfaces shall be wetted, but no free water shall be allowed to remain in the keyways. Mortar shall be placed into the keyways in a manner that insures complete and solid filling. This work is included for payment with Item 515.
4. For additional reinforcement not shown see Std. Dwg. PSBD-1-71, sh. 3 of 3. Payment for this reinforcing steel shall be included with Item 513.
5. Asphalt concrete wearing surface shall be 3½" thick at ℄ of all bearings and vary uniformly to be 2½" thick at middle of all spans

AUBLE-MITCHELL-BURGESS & ASSOC. 6/7
ENGINEERS AND ARCHITECTS
CINCINNATI, OHIO

SUPERSTRUCTURE DETAILS

CO. RD. 174 (RELOCATED) OVER SALT CREEK

STA. 10+17.00 TO STA. 11+86.03

HOCKING CO.

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
GKS	DR		GKS	F.A.M	7-12-72	

DESIGN	STATE	PROJECT	
2	OHIO	STATE	

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CO. RD. 174
HOCKING CO.

ABUTMENTS

MARK	NO.	LENGTH	TYPE	WEIGHT	ABUT. 1	ABUT. 2
A401	28	9'-2"	3	171	14	14
A501	16	18'-0"	Str.	300	8	8
A502	136	6'-10"	2	969	68	68
A503	4	24'-9	Str	103	2	2
A504	18	13'-10"	2	260	9	9
A505	28	8'-7"	2	251	14	14
A506	16	6'-7"	Str.	110	8	8
A507	16	6'-10"	Str.	114	8	8
A508	8	8'-4"	2	70	4	4
A509	8	9'-3"	2	77	4	4
A801	16	18'-6"	Str.	790	8	8
A1001	8	24-9"	Str.	852	4	4
				TOTAL 4067 lbs.		

PIERS

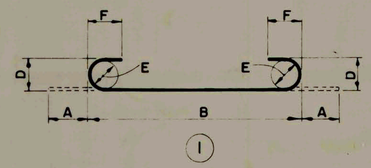
MARK	NO.	LENGTH	TYPE	WEIGHT	PIER 1	PIER 2
P401	28	9'-0"	3	168	14	14
P501	56	12'-7"	3	735	28	28
P502	12	4'-10"	2	60	6	6
P701	84	4'-7	4		42	42
		(Include for payment with piles.)				
P901	8	27'-11"	1	759	4	4
P902	8	4'-11"	1	133	4	4
P903	4	4'-8"	1	63	2	2
P904	8	25'-5"	Str.	691	4	4
				TOTAL 2609 lbs.		

REPLACEMENT BARS

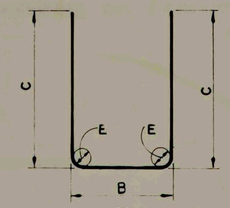
MARK	NO.	LENGTH	TYPE
RE401	1	6'-3"	Str.
RE501	1	6'-7"	Str.
RE701	1	7'-2"	Str.
RE801	1	7'-6"	Str.
RE901	1	7'-10"	Str.
RE1001	1	8'-3"	Str.

DIMENSIONS FOR BENDING

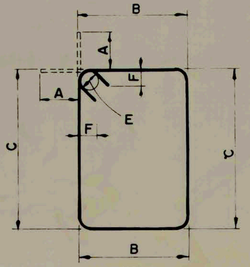
MARK	TYPE	A	B	C	D	E	F
A401	3	4½"	1'-9"	2'-7¾"		2½"	2½"
A502	2		2'-11"	2'-1"		4"	
A504	2		0'-11"	6'-7"		4"	
A505	2		1'-8"	3'-7"		4"	
A508	2		0'-11"	3'-10"		4"	
A509	2		2'-2"	3'-8"		4"	
P401	3	4½"	1'-9"	2'-6¼"		2½"	2½"
P501	3	5"	2'-8"	3'-5"		3"	2¾"
P502	2		1'-10"	3'-3"		4"	
P701	4	10"	3'-9"		1'-0"	5"	
P901	1	15"	25'-5"		11¼"	9"	10¼"
P902	1	15"	2'-5"		11¼"	9"	10¼"
P903	1	15"	2'-2"		11¼"	9"	10¼"



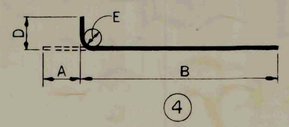
(1)



(2)



(3)



(4)

NOTES:

1. Figures in circles show bar types.
2. All dimensions are out to out.
3. All bends shown are bent around a standard mandrel.
4. The length of bent bars is measured along the centerline.
5. For standard hook dimensions, see Sect. 509.05 of the specifications.
6. Bar size is indicated in the bar mark. The first digit where three digits are used and the first two digits where four are used, indicate the bar size number.

REINFORCING STEEL LIST FOR THE BEAMS IS NOT SHOWN. REFERENCE SHALL BE MADE TO STD. DWG. PSBD-1-71 AND FABRICATOR'S SHOP DRAWINGS SHALL SHOW COMPLETE DETAILS OF REINFORCING. ALL REINFORCEMENT USED IN BEAMS SHALL BE INCLUDED FOR PAYMENT WITH ITEM 515, PRESTRESSED CONCRETE BRIDGE MEMBERS.

AUBLE-MITCHELL-BURGESS & ASSOC. 7/7
Engineers & Architects

REINFORCING STEEL LIST

CO. RD. 174 (RELOCATED) OVER SALT CREEK

STA. 10 + 17.00
HOCKING CO. TO STA. 11 + 86.03

Des.	Dr.	Tra.	Ck.	Reviewed Date	Revised
GKS	DR		GKS	FAM. 7-12-72	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	STATE	

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HOC - CR. 174
ISSUE 1 PROJECT
R/W PLAN

Begin Work Sta. 4+00.00
Begin R/W Acquisition Sta. 4+25.00
Begin Project Sta. 4+25.00
Cont. = 0.01 AC.
CURVE No. 1
Δ = 17°15'55"
Dc = 5°00'00"
R = 1145.92'
T = 173.97'
Lc = 345.31'
E = 13.13'
P.I. Sta. 7+26.46
CURVE No. 2
Δ = 7°14'30"
Dc = 4°00'00"
R = 1,432.39'
T = 90.64'
Lc = 181.04'
E = 2.86'
P.I. Sta. 17+44.43
MATCH LINE
LOT 5 OF SECTION 6
LOT 4 OF SECTION 6
GEORGE SWACKHAMMER
GWENDOLYN EGAN
Construction Limits
℄ Reloc. Co. Rd. 174
Sta. 8+96.00 = Sta. 0+00.00 Twp Rd. 175
℄ Relocated Co. Rd. 174
Sta. 11+01.52 Co. Rd. 174 = Sta. 10+00.00 Reloc. Channel
SALT CREEK
BRIMSTONE CREEK
Existing Road to be vacated
Contains 2.527 ACRES
Contains 1.048 ACRES
Cont. 2.527 Ac.
A.L. & T. HINTON Et. Al.
GWENDOLYN EGAN
HOCKING COUNTY
SALTCREEK TOWNSHIP
SEC. 6 T 11 R 19
END WORK Sta. 19+90.55
END R/W ACQUISITION Sta. 19+80.55
END PROJECT Sta. 19+40.55
Sta. 20+00.55 Co. Rd. 174: Exist. ℄ S.R. 56
Ex. R/W
℄ S.R. 56
(Asphalt)
60'
CONT. = 1.74 AC.
P.R.O. = 0.79 AC.
TOTAL = 2.53 AC.
CONT. = 1.48 AC.
P.R.O. = 0.00 AC.
TOTAL = 1.48 AC.
SIDE ROAD CURVE DATA
P.I. Sta. 1+46
Δ = 19°00'
Dc = 18°18'00"
R = 313.07'
T = 52.39'
Lc = 103.82'
E = 4.35'
CURVE DATA CHANNEL RELOCATED
Δ = 32°30'
R = 325.93'
T = 95'
Lc = 184.88'
Dc = 17°34'45"
E = 13.56'
Pc. = 5+75.12
Pr. = 7+60.00

SUMMARY OF ADDITIONAL RIGHT OF WAY

TOTAL NO OWNERS
TOTAL TAKERS
OWNERS WITH STRUCTURES INVOLVED

PARCEL NO.	OWNER	RECORDED BOOK	RECORDED PAGE	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. INTAKE	NET TAKE LAND	NET TAKE BLDG	NET RESIDUE LEFT	NET RESIDUE RIGHT	SHEET NO.	TYPE FUND	REMARKS
10	George Swackhammer	114	315	27.25 Ac.	0.8G AC.	2.53 AC.	0.79 AC.	1.74 AC.	No	8.36 AC±	16.29 AC±	21	LOCAL	
10 T-1	" "	"	"	"	—	2.53 AC.	—	2.53 AC.	No	—	—	"	"	Construct Channel
10 T-2	" "	"	"	"	—	0.01 AC.	—	0.01 AC.	No	—	—	"	"	Construct Driveway
11-T	A.L & T. Hinton Et. Al.	66	364	77 Ac.	0.47 AC.	1.05 AC.	0.02 AC.	1.03 AC.	No	—	76.53 AC±	"	"	Construct Channel
12	Gwendolyn Egan	106	217	15 Ac.	0.47 AC.	1.48 AC.	0.00 AC.	1.48 AC.	No	7.00 AC±	6.05 AC.±	"	"	

State Job No. 10938 (0)

UTILITY OWNERS
Electric - South Central Power Co
Canal Winchester, Ohio
43110
Telephone - General Telephone
Circleville, Ohio
43113

R/W PLAN STA. 4+25 to STA. 19+70