

DESIGN DESIGNATION

CURRENT A.D.T.(1995) 1438
 DESIGN YR. ADT(2015) 1754
 D.H.V. 175
 D 55%
 T 5%
 DESIGN SPEED 55 MPH
 LEGAL SPEED 55 MPH
 FUNCTIONAL CLASSIFICATION RURAL COLLECTOR
 DESIGN EXCEPTION APPROVAL DATE

COSHOCTON COUNTY, OHIO OFFICE OF COUNTY ENGINEER C.R. 24 OVER MILL CREEK TUSCARAWAS TOWNSHIP, COSHOCTON COUNTY

1
17

RECEIVED

NOV 24 1993

Coshocton County Engineer

1993 SPECIFICATIONS

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

I hereby approve these plans and declare that the making of this improvement will require the closing to traffic of the highway and that detours will be provided as indicated on sheet 3/17.

The current edition of the State of Ohio, Dept. of Transportation "Construction and Materials Specifications", shall govern the construction and materials for this project, unless otherwise noted, for the "State of Ohio", read "Coshocton County, Ohio", and for the "Director of Transportation", read "Coshocton County Engineer".

CONVENTIONAL SIGNS

County Line --- Limited Access (only) --- LA
 Township Line --- Right of Way (only) --- PROP. R/W
 Section Line --- Limited Access & Right of Way --- LA&R/W
 Corporation Line --- Existing Right of Way --- EX. R/W
 Fence Line (existing) --- (proposed) ---
 Center Line --- Railroad --- or ---
 Trees Stumps (to be removed) --- Guardrail (existing) --- (proposed) ---
 Utility Poles: Telephone ϕ , Power ϕ , Light ϕ Work Limits ---

INDEX OF SHEETS

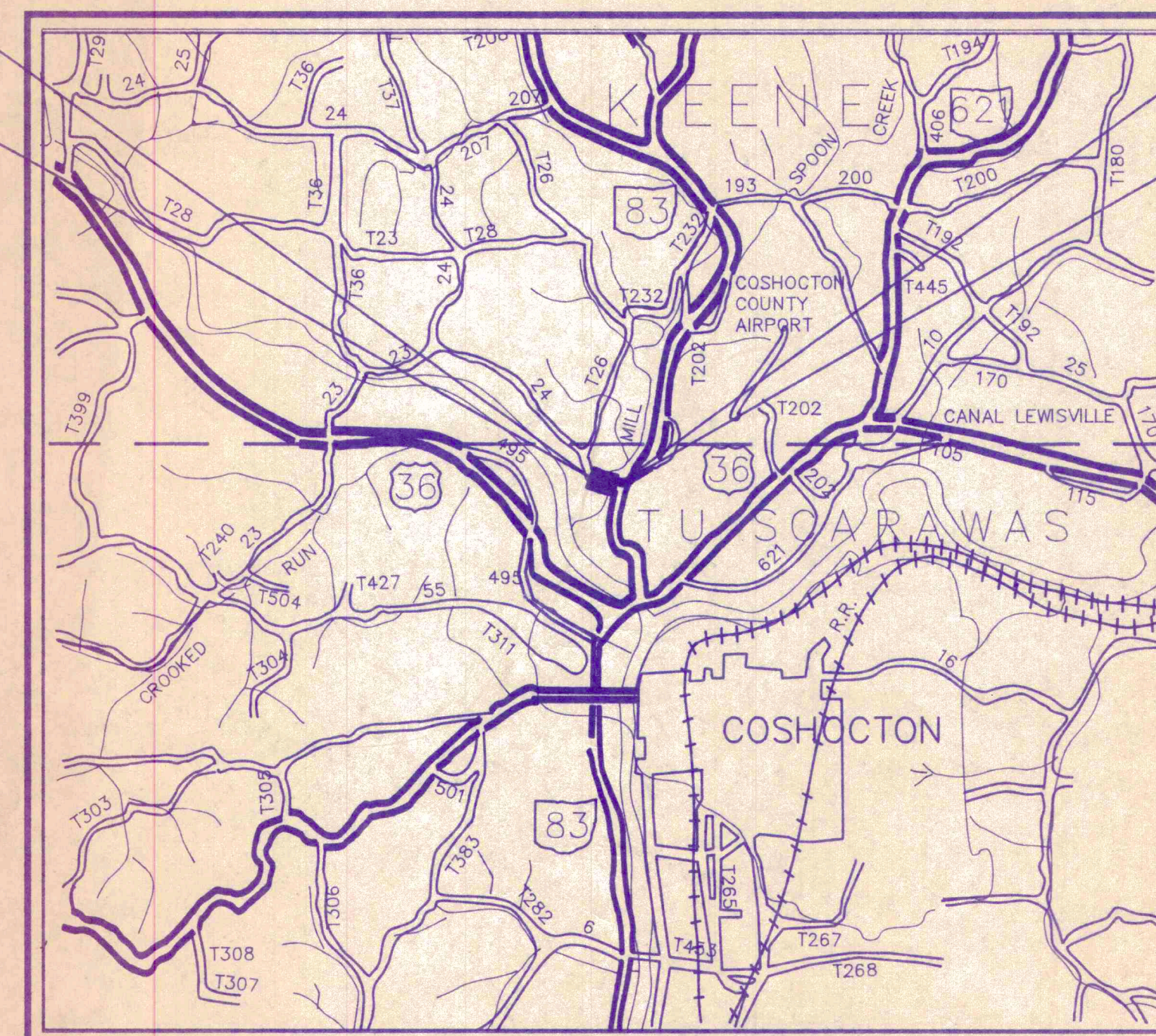
TITLE SHEET 1
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LINE DATA

BEGIN PROJECT 10+90.00
 END PROJECT 12+48.81
 TOTAL LENGTH 158.81 LIN. FT. OR 0.030 MILE
 BEGIN WORK 10+85.00
 END WORK 12+50.68
 TOTAL LENGTH 165.68 LIN.FT. OR 0.031 MILE

BEGIN PROJECT
STA. 10+90.00

END PROJECT
STA. 12+48.68



LOCATION MAP
SCALE IN MILES

Portion to be Improved
 State & Federal Routes
 Other Roads

UNDERGROUND UTILITIES

TWO WORKING DAYS
 BEFORE YOU DIG
 Call . 800-362-2764 (Toll Free)
 OHIO UTILITIES PROTECTION SERVICE
 NON-MEMBERS
 MUST BE CALLED DIRECTLY

SUPPLEMENTAL SPECIFICATIONS

802	4-13-90
836	11-12-85
852	7-30-93
952	12-14-88

SCALES

Plan: 0 10 20 40
 Profile: Horizontal 0 10 20 Vertical 0 5
 Cross Section: Horizontal 0 5 Vertical 0 5

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS

BP-3.1	2-21-92	MT-99.10	11-14-86
GR-1.1	5-6-91	MT-101.60	7-1-92
GR-1.2	10-30-92	MT-105.10	7-1-92
GR-2.1	5-6-91	MT-105.11	7-1-92
GR-3.4	5-6-91		
GR-4.1	5-6-91		
MC-11	8-1-78		
		AS-1-81	11-27-81
		DBR-2-73	4-10-73
		DBP-1-92	3-23-92
		PSBD-1-81	6-20-89R

Plan Prepared By

Jones-Stuckey Ltd., Inc.
 1641 West Fifth Avenue
 Columbus, Ohio 43212

PE

Approved _____
 Date _____ Coshocton County Deputy Engineer

Approved _____
 Date _____ Coshocton County Engineer

Approved _____
 Date _____ Coshocton County Auditor

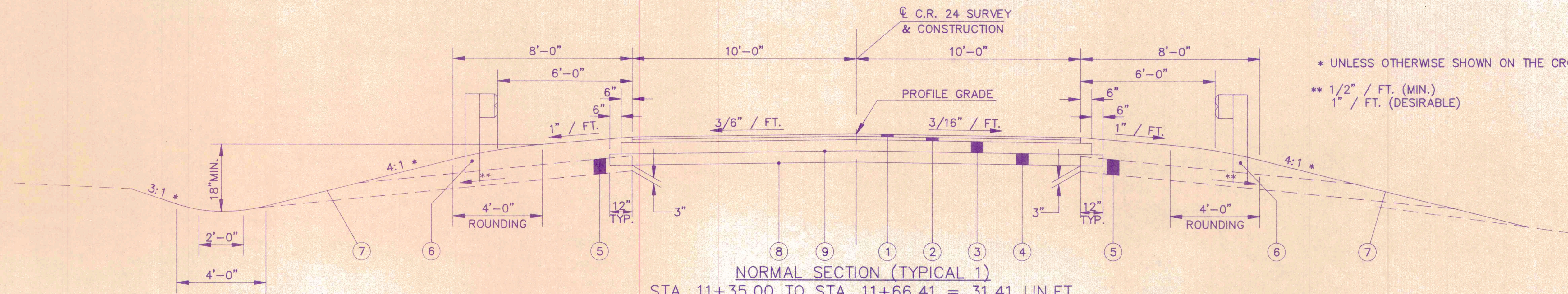
Approved _____
 Date _____ Coshocton County Commissioners

11/30/93
 discussed w/ Dave Jones -
 no major concerns at
 this time.
 Fred

NOV 19 1993

TYPICAL SECTIONS

TYPE 404 ON 301

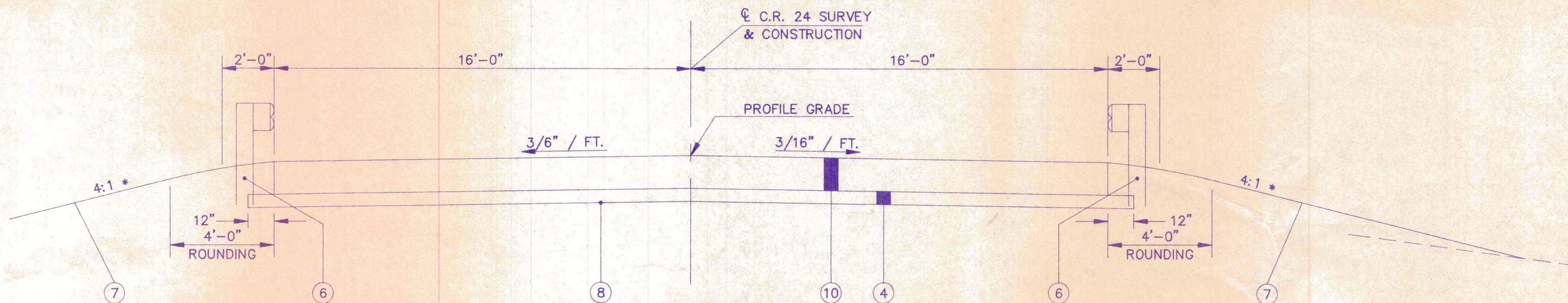


* UNLESS OTHERWISE SHOWN ON THE CROSS SECTIONS

** 1/2" / FT. (MIN.)
1" / FT. (DESIRABLE)

NORMAL SECTION (TYPICAL 1)

STA. 11+35.00 TO STA. 11+66.41 = 31.41 LIN.FT.



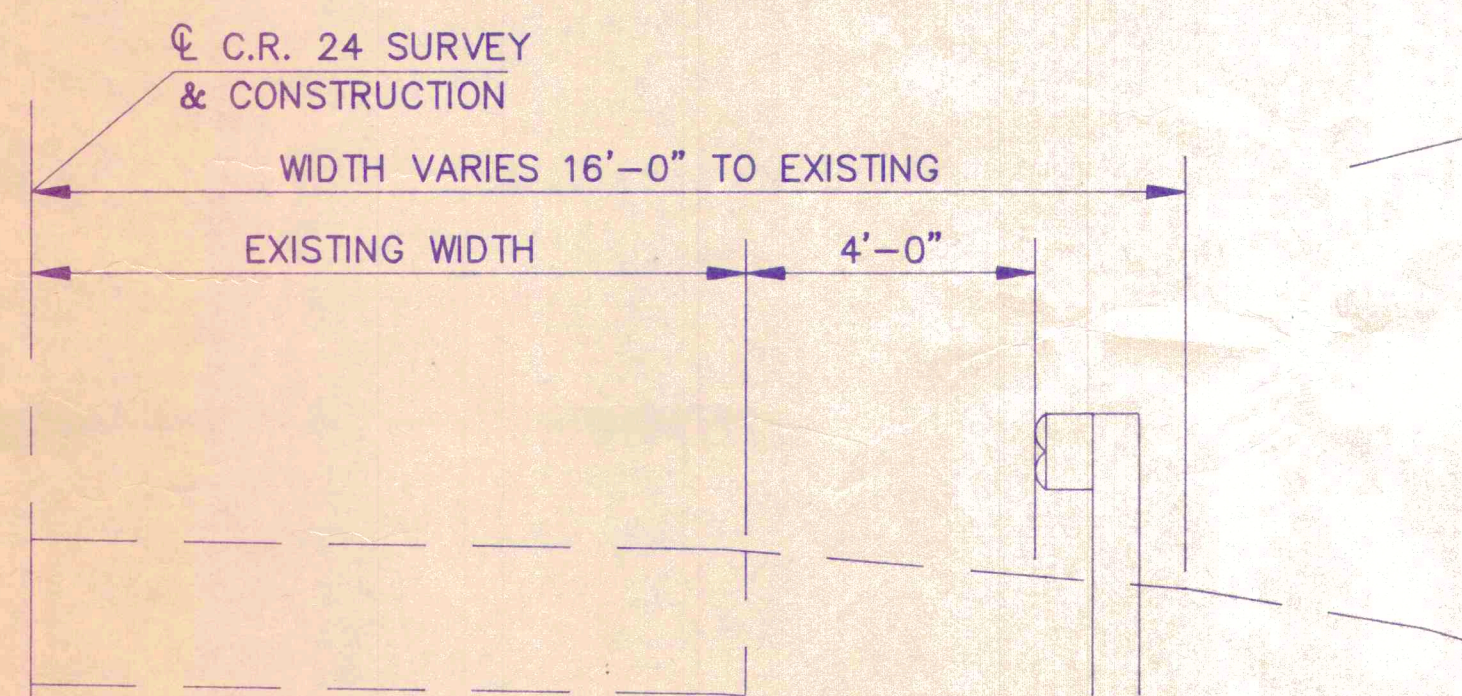
NORMAL SECTION (TYPICAL 2)

STA. 11+66.41 TO STA. 11+81.41 = 15.00 LIN. FT.

APPROACH SLAB SECTION, AS PER PLAN (SEE DETAILS ON SHT. 7/17)

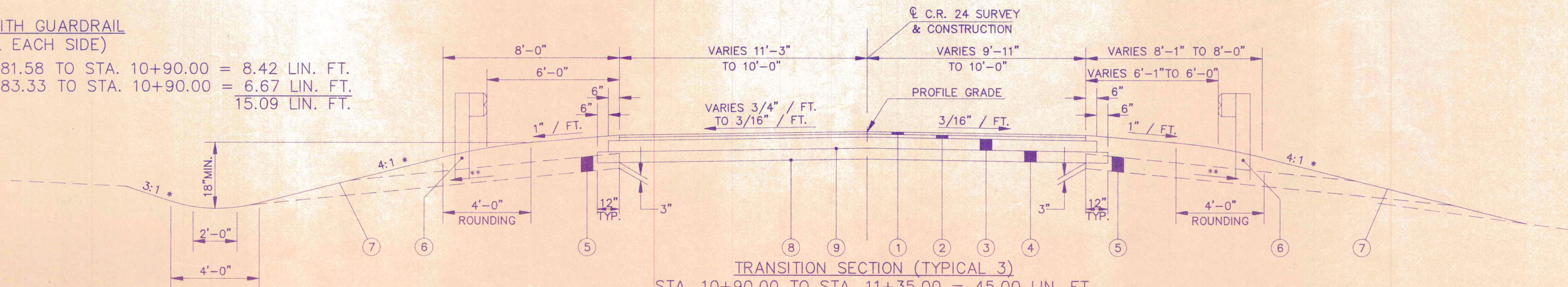
STA. 12+30.25 TO STA. 12+45.25 = 15.00 LIN. FT.

30.00 LIN. FT.



SECTION WITH GUARDRAIL
(TYPICAL EACH SIDE)

(LT.) STA. 10+81.58 TO STA. 10+90.00 = 8.42 LIN. FT.
(RT.) STA. 10+83.33 TO STA. 10+90.00 = 6.67 LIN. FT.
15.09 LIN. FT.



TRANSITION SECTION (TYPICAL 3)

STA. 10+90.00 TO STA. 11+35.00 = 45.00 LIN. FT.

LEGEND

①	404	1 1/4" ASPHALT CONCRETE AC-20	⑥	606	GUARDRAIL TYPE 5
②	402	1 3/4" ASPHALT CONCRETE AC-20	⑦	659	SEEDING AND MULCHING
③	301	6" BITUMINOUS AGGREGATE BASE AC-20	⑧	203	SUBGRADE COMPACTION
④	304	6" AGGREGATE BASE, AS PER PLAN (SEE GENERAL NOTES)	⑨	408	BITUMINOUS PRIME COAT AT 0.40 GALS. PER SQ. YD.
⑤	605	AGGREGATE DRAIN	⑩	611	REINFORCED CONCRETE APPROACH SLAB(t=12")

TYPICAL SECTION OF ADJOINING PAVEMENT
AT BEGIN PROJECT STA. 10+90.00

CALCULATED

CHECKED

TYPICAL SECTIONS

COSHOCTON COUNTY
COS-CR24

$$\frac{2}{17}$$

GENERAL NOTES

ELEVATION DATA

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM. U.S.G.S. REFERENCE BENCH MARK (NO. 57.777 OHIO 1905 PRIM TRAVERSE STATION DISE) FOUND ON THE SOUTHEAST CORNER OF COSHOCTON COUNTY COURT-HOUSE, ELEVATION 776.773.

ROUNDING OF CORNERS SHOWN ON CROSS SECTIONS

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

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK LIST IN THE GENERAL SUMMARY FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED " AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED AT THE ENGINEER'S DISCRETION SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

LOCATION OF GUARDRAIL

THE LOCATION OF GUARDRAIL RUNS, AS SHOW IN THESE PLANS, ARE SUBJECT TO ADJUSTMENT PRIOR TO FINAL ACCEPTANCE. THE ENGINEER SHALL BE SATISFIED THAT ALL INSTALLATIONS WILL AFFORD MAXIMUM PROTECTION FOR TRAFFIC.

SEEDING

QUANTITIES FOR SEEDING ARE CALCULATED FOR SOIL AREAS BETWEEN TEN (10) FEET OUTSIDE THE WORK LIMITS, AS SHOWN ON THE CROSS SECTIONS OR TO THE RIGHT-OF-WAY LINE, IF SUCH LINE IS LESS THAN TEN (10) FEET FROM WORK LIMITS.

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER, FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES:

ITEM 207 STRAW OR HAY BALES 50 EACH

EROSION CONTROL

ITEM 601 IS PROVIDED IN THE PLANS FOR EROSION CONTROL. ROCK OF A STABLE NATURE WILL NOT BE REMOVED IN ORDER TO PLACE THIS ITEM. THE ENGINEER SHALL CHECK AND NON-PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES FOR THIS ITEM WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION.

UTILITY OWNERSHIP

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

TELEPHONE: OHIO BELL TELEPHONE
150 EAST GAY STREET, RM 6C
COLUMBUS, OHIO 43215
(614) 223-8535

UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY SECTION 153.64 ORC.

PAVEMENT MARKING

PERMANENT PAVEMENT MARKINGS MUST BE IN PLACE PRIOR TO OPENING ROADWAY TO TRAFFIC.

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES AND/OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THIS PROJECT, A LUMP SUM QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

DETOUR LIMITATION & MAINTAINING TRAFFIC

THE DETOUR AS SHOWN ON THIS SHEET SHALL BE MAINTAINED AND SUBSEQUENTLY REMOVED BY THE COSHOCTON COUNTY ENGINEERS OFFICE FOR ALL SIGNING, LIGHTS AND/OR BARRICADES BEYOND THE CONSTRUCTION WORK LIMITS OF THIS PROJECT EXCEPT AS FOLLOWS.

ALL SIGNS, BARRICADES AND LIGHTS WITHIN THE PROJECT LIMITS SHALL BE PROVIDED, ERECTED AND MAINTAINED BY THE CONTRACTOR AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL NOTIFY COSHOCTON COUNTY ENGINEER OFFICE (614-622-2135) AND ODOT DISTRICT FIVE TRAFFIC DEPARTMENT (614-323-4400) IN WRITING A MINIMUM OF SEVEN (7) DAYS IN ADVANCE OF THE DATE THE DETOUR IS NEEDED TO CLOSE ROAD.

AFTER THE DATE THE OFFICIAL NOTICE TO PROCEED IS GIVEN TO THE CONTRACTOR, TRAFFIC SHALL CONTINUE TO BE DETOURED FOR A PERIOD NOT TO EXCEED 60 CONSECUTIVE CALENDAR DAYS. THE CONTRACTOR SHALL NOTIFY THE COUNTY AND ODOT DISTRICT FIVE TRAFFIC ENGINEER IN WRITING A MINIMUM OF SEVEN (7) DAYS IN ADVANCE OF THE DATE THE DETOUR IS NO LONGER NEEDED AND THE DATE THE ROADWAY MAY BE OPENED TO THE SAFE AND CONVENIENT USE OF THE TRAVELING PUBLIC. IF THE 60 CONSECUTIVE CALENDAR DAYS, CONSIDERED TO BE AN INTERIM COMPLETION DATE FOR THIS PROJECT IS EXCEEDED, LIQUIDATED DAMAGES SHALL BE ASSESSED AS PER SPECIFICATION 108.07 OF THE CONSTRUCTION AND MATERIAL SPECIFICATION.

TRAFFIC ON STATE ROUTE 83 MAY BE RESTRICTED TO ONE LANE TRAFFIC CONTROLLED BY FLAGGERS DURING THE INTERSECTION WORK FOR A PERIOD NOT TO EXCEED THREE CALENDAR DAYS. THIS 3 DAY PERIOD WILL BE CONSIDERED AN INTERIM COMPLETION DATE FOR WHICH LIQUIDATED DAMAGED MAY ALSO BE ASSESSED AS PER SPEC. 108.07 OF THE C & MS.

ITEM 605 -- AGGREGATE DRAINS

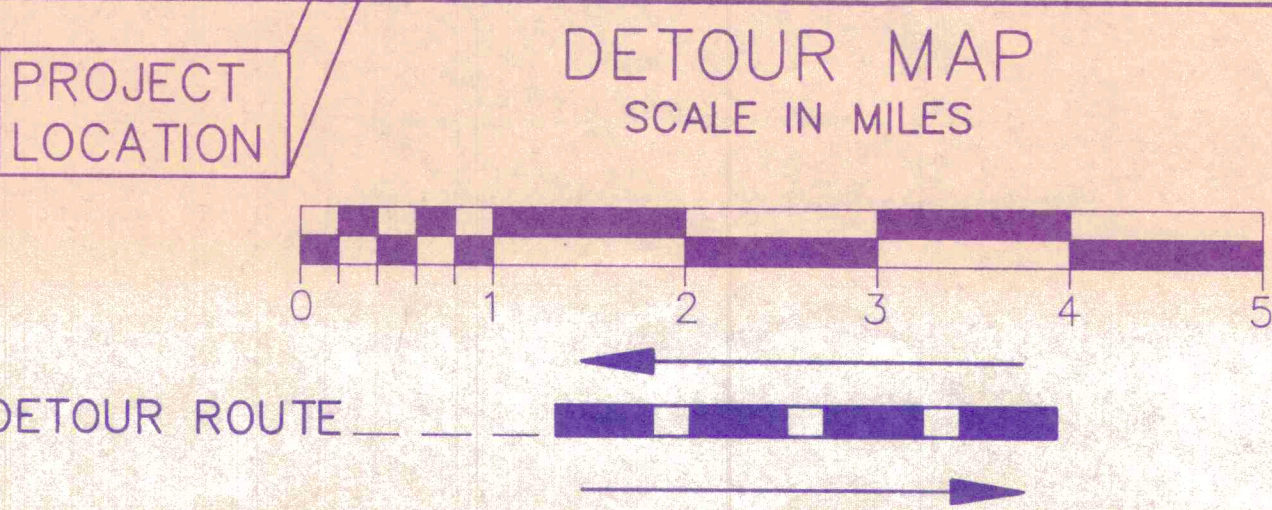
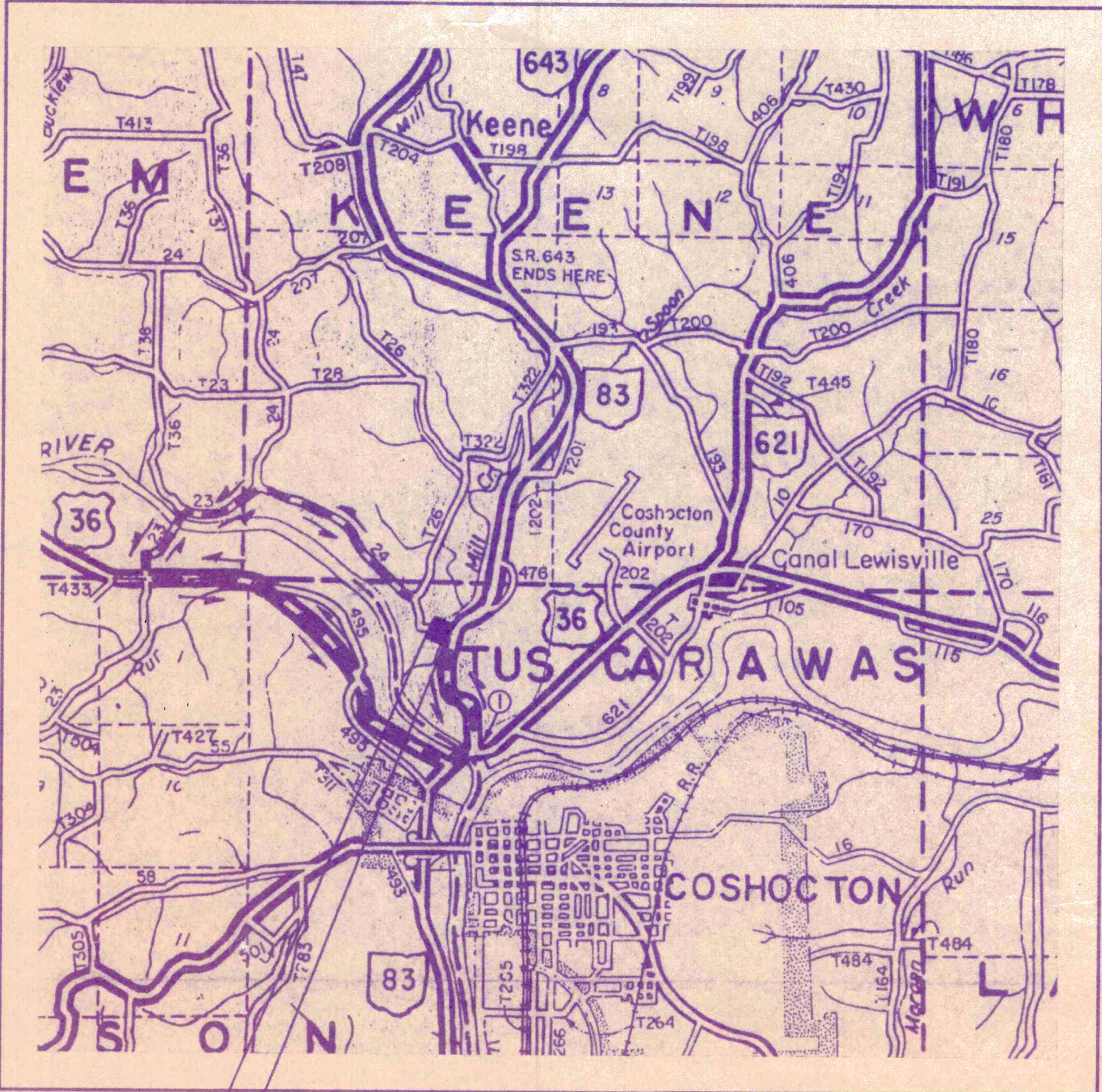
AGGREGATE DRAINS SHALL BE PLACED AT (50) FOOT INTERVALS ON EACH SIDE OF NORMAL CROWNED SECTIONS, AND STAGGERED SO THAT EACH DRAIN IS (25) FEET FROM THE ADJACENT DRAIN ON THE OPPOSITE SIDE, AND AT TWENTY-FIVE (25) FOOT INTERVALS ON THE LOW SIDE ONLY OF SUPERELEVATED SECTIONS. AN AGGREGATE DRAIN SHALL BE PLACED AT THE LOW POINT OF EACH SAG VERTICAL CURVE. SEE QUANTITIES AND LOCATION ON SHT. 4 OF 17.

GUARDRAIL REPLACEMENT

NO HAZARD SHALL BE LEFT UNPROTECTED EXCEPT FOR THE ACTUAL TIME NECESSARY TO REMOVE THE EXISTING GUARDRAIL, PREPARE THE SITE, AND INSTALL NEW GUARDRAIL IN A CONTINUOUS OPERATION. THE REMOVAL OF ALL GUARDRAIL SHALL AT ALL TIMES BE AS DIRECTED BY THE ENGINEER. NO GUARDRAIL SHALL BE REMOVED UNTIL THE REPLACEMENT MATERIAL IS ON SITE, READY FOR INSTALLATION. FAILURE TO COMPLY WITH THIS REQUIREMENT SHALL BE DEEMED SUFFICIENT CAUSE TO ORDER WORK SUSPENDED UNTIL SUCH TIME AS THE ENGINEER IS ASSURED OF COMPLIANCE.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A "W-BEAM RAIL SPLICE" AS SHOWN ON STANDARD CONSTRUCTION DRAWING GR-1.1. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.



GENERAL NOTES

COSHOCTON COUNTY
COS-CR24

CALCULATIONS

LOCATION	STATION		SIDE	LENGTH	AVE. PVMT. WIDTH	TYPICAL	DESCRIPTION	PAV'T	BERM	203	301	304	402	404	408	605	611	611	659	659	802				
	FROM	TO						AREA		SUBGRADE	BITUMINOUS	AGGREGATE	ASPHALT	ASPHALT	BITUMINOUS	AGGREGATE	REINFORCED	REINFORCED	COMMERCIAL	WATER	BARRIER				
								AREA		COMPACTION	AGGREGATE	BASE	CONCRETE	CONCRETE	PRIME	UNDERDRAIN	CONCRETE	CONCRETE	FERTILIZER		REFLECTORS				
								SQ. FT.	SQ. FT.	SQ. YD.	CU. YD.	CU. YD.	CU. YD.	CU. YD.	GAL.	LIN. FT.	SQ. YD.	SQ. YD.	TONS	M GAL.	EACH				
C.R. 24	10+90.00	11+35.00	LT. & RT.	45.00	20.59	3	PAVEMENT TRANSITION	926.33		103			4	5											
C.R. 24	11+35.00	11+66.41	LT. & RT.	31.41	20.00	1	PAVEMENT	628.20		70			3	3											
C.R. 24	12+45.25	12+48.68	LT. & RT.	PLANIMETERED		N/A	PAVEMENT (INTERSECTION)	292.71		33			1	2											
											18														
C.R. 24	10+90.00	11+35.00	LT. & RT.	45.00	21.59	3	PAVEMENT TRANSITION	971.33																	
C.R. 24	11+35.00	11+66.41	LT. & RT.	31.41	21.00	1	PAVEMENT	659.61			12														
C.R. 24	12+45.25	12+48.68	LT. & RT.	PLANIMETERED		N/A	PAVEMENT (INTERSECTION)	312.79			6														
												19			45										
C.R. 24	10+90.00	11+35.00	LT. & RT.	45.00	22.59	3	PAVEMENT TRANSITION	1,016.33				13			31										
C.R. 24	11+35.00	11+66.41	LT. & RT.	31.41	22.00	1	PAVEMENT	691.02				10													
C.R. 24	11+66.41	11+81.41	LT. & RT.	15.00	34.00	2	APPROACH SLAB	510.00				11													
C.R. 24	12+30.25	12+45.25	LT. & RT.	PLANIMETERED		2	APPROACH SLAB	610.19							15										
C.R. 24	12+45.25	12+48.68	LT. & RT.	PLANIMETERED		N/A	PAVEMENT (INTERSECTION)	332.87				6													
																	54								
C.R. 24	11+66.41	11+81.41	LT. & RT.	15.00	32.00	2	APPROACH SLAB	480.00		54								65							
C.R. 24	12+30.25	12+45.25	LT. & RT.	PLANIMETERED		2	APPROACH SLAB	585.86		65															
																12.1									
C.R. 24	11+00.00		RT.	N / A		N/A	AGGREGATE UNDERDRAIN	N/A								12.7									
C.R. 24	11+25.00		LT.	N / A		N/A	AGGREGATE UNDERDRAIN	N/A								12.1									
C.R. 24	11+50.00		RT.	N / A		N/A	AGGREGATE UNDERDRAIN	N/A																	
C.R. 24	11+16.95	12+37.42	LT.	125.00		1,2 & 3	BARRIER REFLECTORS	N/A																	
C.R. 24	11+16.60	12+50.12	RT.	112.50		1,2 & 3	BARRIER REFLECTORS	N/A																	
C.R. 24	10+90.00	12+63.10	LT. & RT.	N / A		N/A	SEEDING AREA	4,815.00																	
							TOTAL			325	36	59	8	10	91	37	54	65	0.05	1	6				

GENERAL SUMMARY

SHEET NUMBERS						ITEM	ITEM		DESCRIPTION	
3	4	5				ITEM	EXT.	QUANT.		UNIT
										ROADWAY
LUMP						201	11000	LUMP		CLEARING AND GRUBBING
						202	38000	56.25	LIN. FT.	GUARDRAIL REMOVED
			56.25			203	12000	214	CU. YD.	EXCAVATION NOT INCLUDING EMBANK. CONST.
			214			203	20000	7	CU. YD.	EMBANKMENT
			7			203	50000	325	SQ. YD.	SUBGRADE COMPACTION
	325									
						606	13000	131.25	LIN. FT.	GUARDRAIL, TYPE 5
		131.25				606	25000	2	EACH	ANCHOR ASSEMBLY, TYPE A
		2				606	35140	2	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4
		2				606	35141	2	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4,
		2								AS PER PLAN(SEE MISC. DETAILS SHT. 8/17)
										EROSION CONTROL
50						207	70000	50	EACH	STRAW OR HAY BALES
		535				659	10000	535	SQ. YD.	SEEDING AND MULCHING
	0.05					659	20000	0.05	TON	COMMERCIAL FERTILIZER
	1					659	35000	1	M.GAL.	WATER
										DRAINAGE
	37					605	31100	37	LIN. FT.	AGGREGATE DRAIN

SHEET NUMBERS						ITEM	ITEM		DESCRIPTION	
3	4	5				ITEM	EXT.	QUANT.		UNIT
										PAVEMENT
		36				301	10002	36	CU. YD.	BITUMINOUS AGGREGATE BASE, AC-20
		59				304	20000	59	CU. YD.	AGGREGATE BASE (SEE PROPOSAL NOTE)
		8				402	20000	8	CU. YD.	ASPHALT CONCRETE, AC-20
		10				404	20000	10	CU. YD.	ASPHALT CONCRETE, AC-20
		91				408	10000	91	GAL.	BITUMINOUS PRIME COAT
			54			611	10000	54	SQ. YD.	REINFORCED CONC. APPROACH SLAB(t=12")
			65			611	10001	65	SQ. YD.	REINFORCED CONC. APPROACH SLAB(t=12")
										AS PER PLAN (SEE MISC. DETAILS SHT. 8/17)
										TRAFFIC CONTROL
			0.06			642	00090	0.06	MILE	EDGE LINE
			0.03			642	00290	0.03	MILE	CENTER LINE
			19			642	00490	19	LIN. FT.	STOP LINE
	6					802	00100	6	EACH	BARRIER REFLECTOR, TYPE A
										MAINTENANCE OF TRAFFIC
LUMP						614	11000	LUMP		MAINTAINING TRAFFIC
						623	10000	LUMP		CONSTRUCTION LAYOUT STAKES
						624	10000	LUMP		MOBILIZATION



9

 INDICATES BORING LOCATION INDICATES BORING LOCATION

* PLUS FIT-UP

NOTE: EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS-SECTIONS.

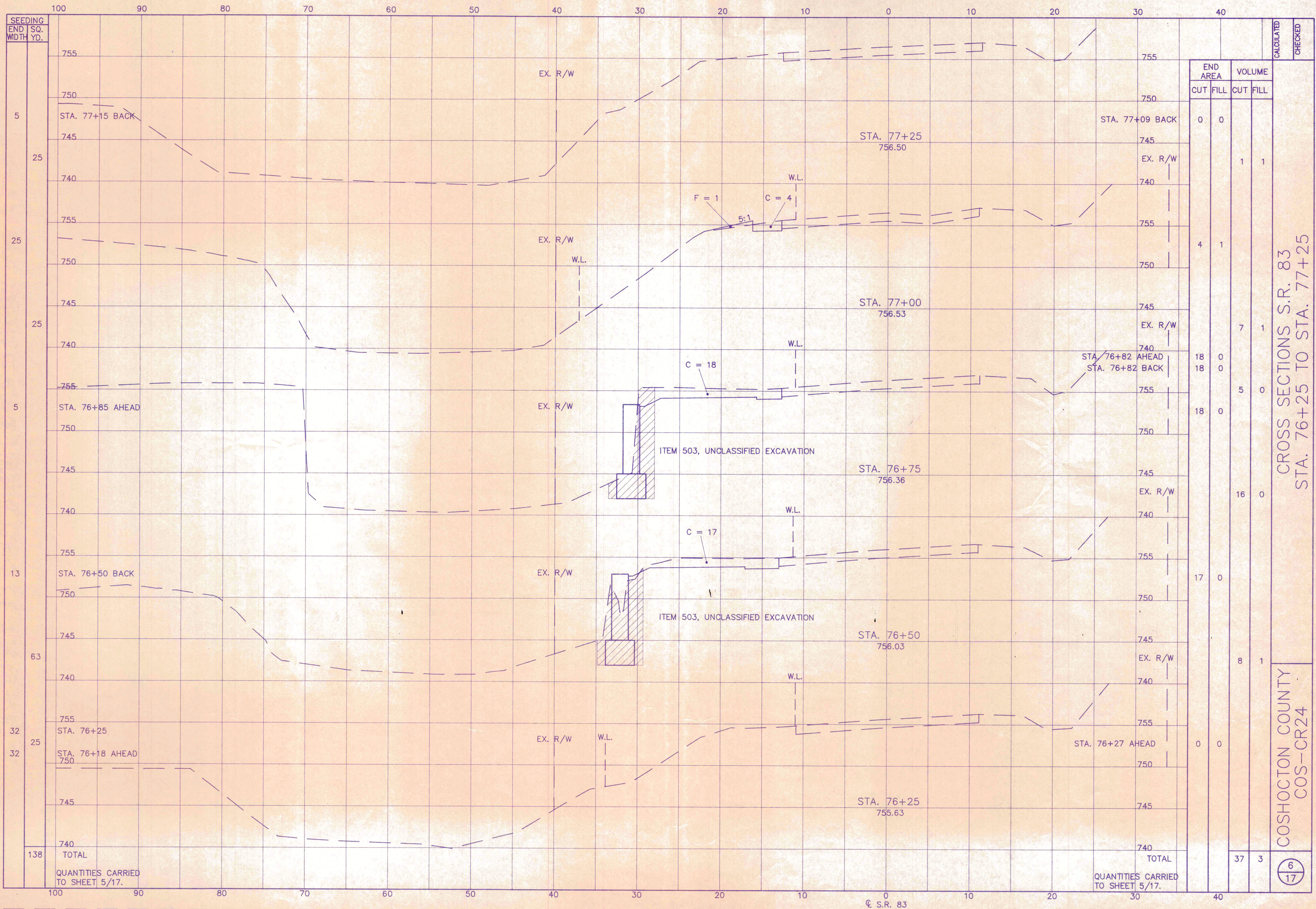
ESTIMATED QUANTITIES

EXISTING STRUCTURE	
<u>TYPE:</u> SINGLE SPAN STEEL BEAM WITH PAN FLOOR ASPHALT	
<u>SPAN:</u> 39'-8" \pm F/F ABUTMENT	
<u>ROADWAY:</u> 23'-4" F/F RAIL	
<u>SKEW:</u> NONE	
<u>STRUCTURE FILE NO.:</u> 1631330	

[illegible]

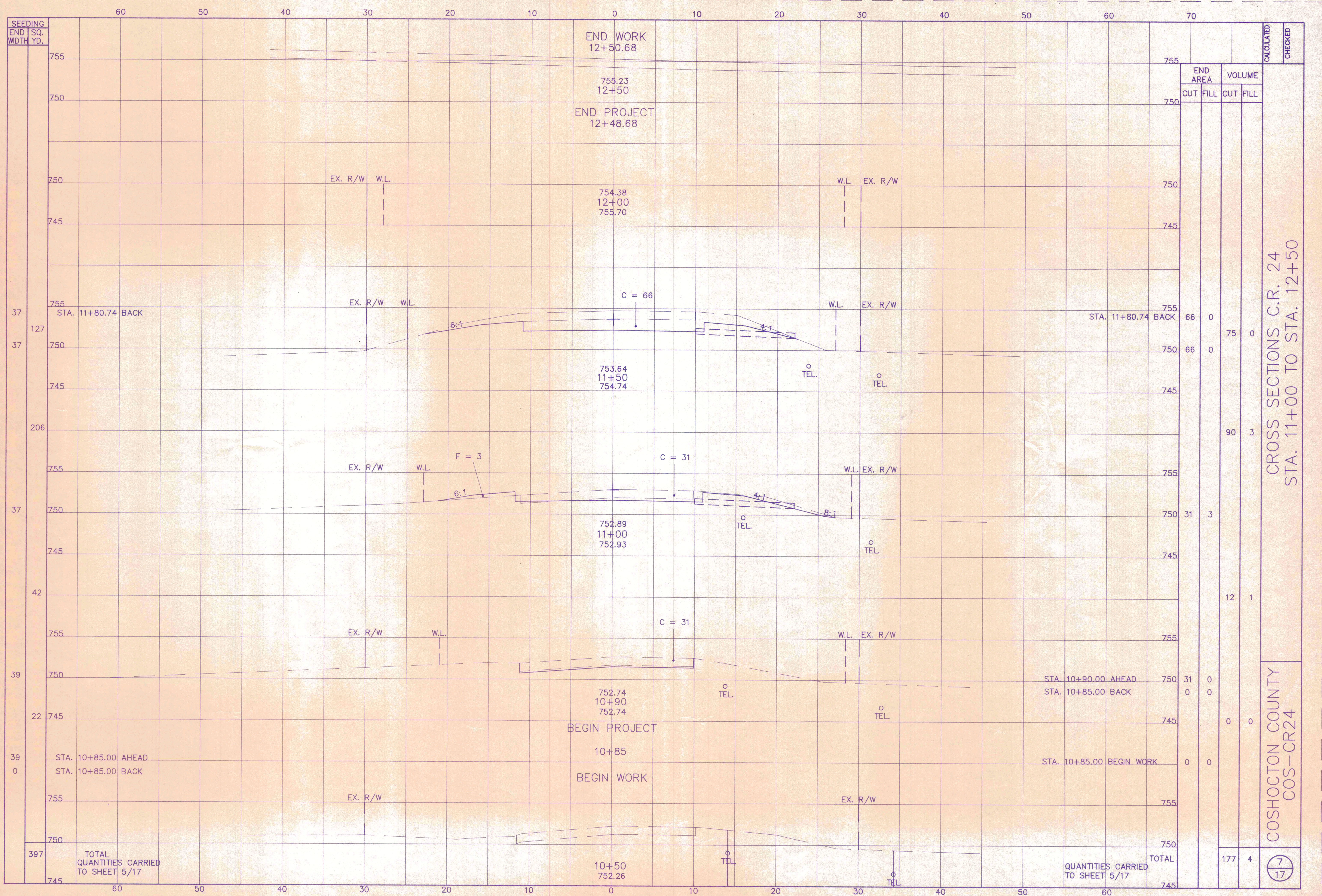
PLAN AND PROFILE
BRIDGE NO. COS-24-0.00
OVER MILL CREEK

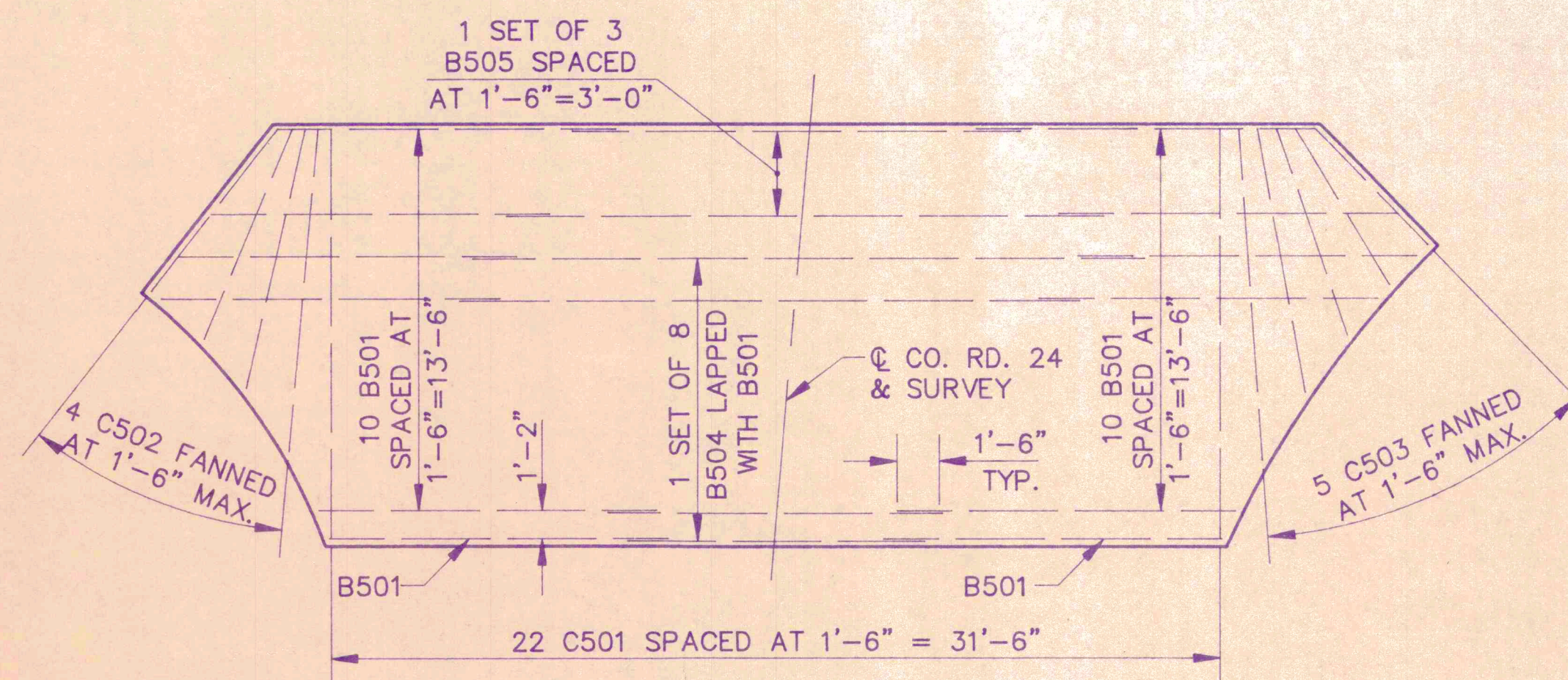
COSHOCTON COUNTY
COS-CR24



CROSS SECTIONS S.R. 83
STA. 76+25 TO STA. 77+25

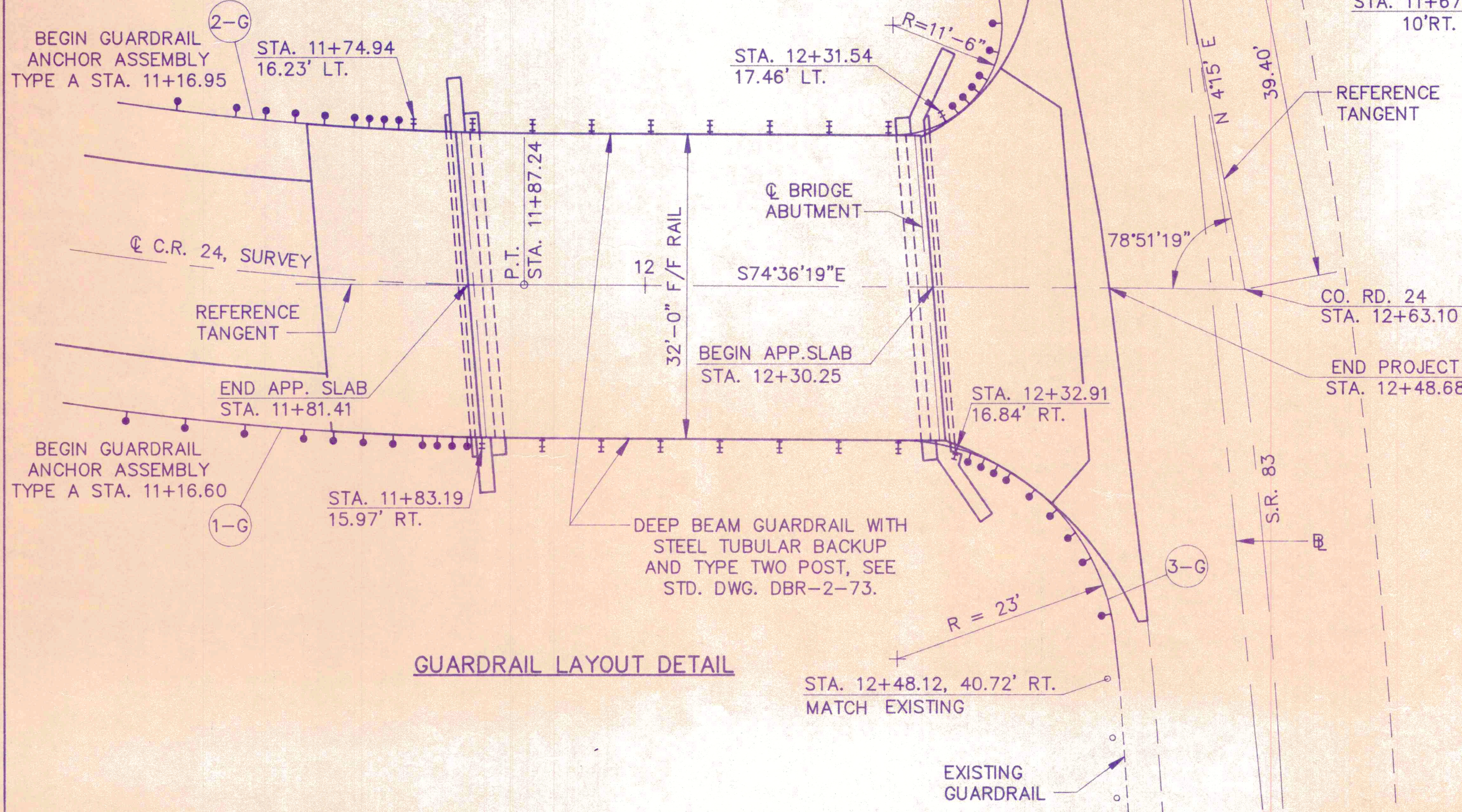
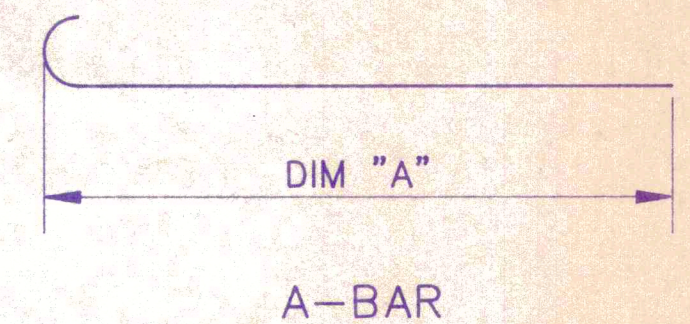
COSHOCTON COUNTY
COS-CR24



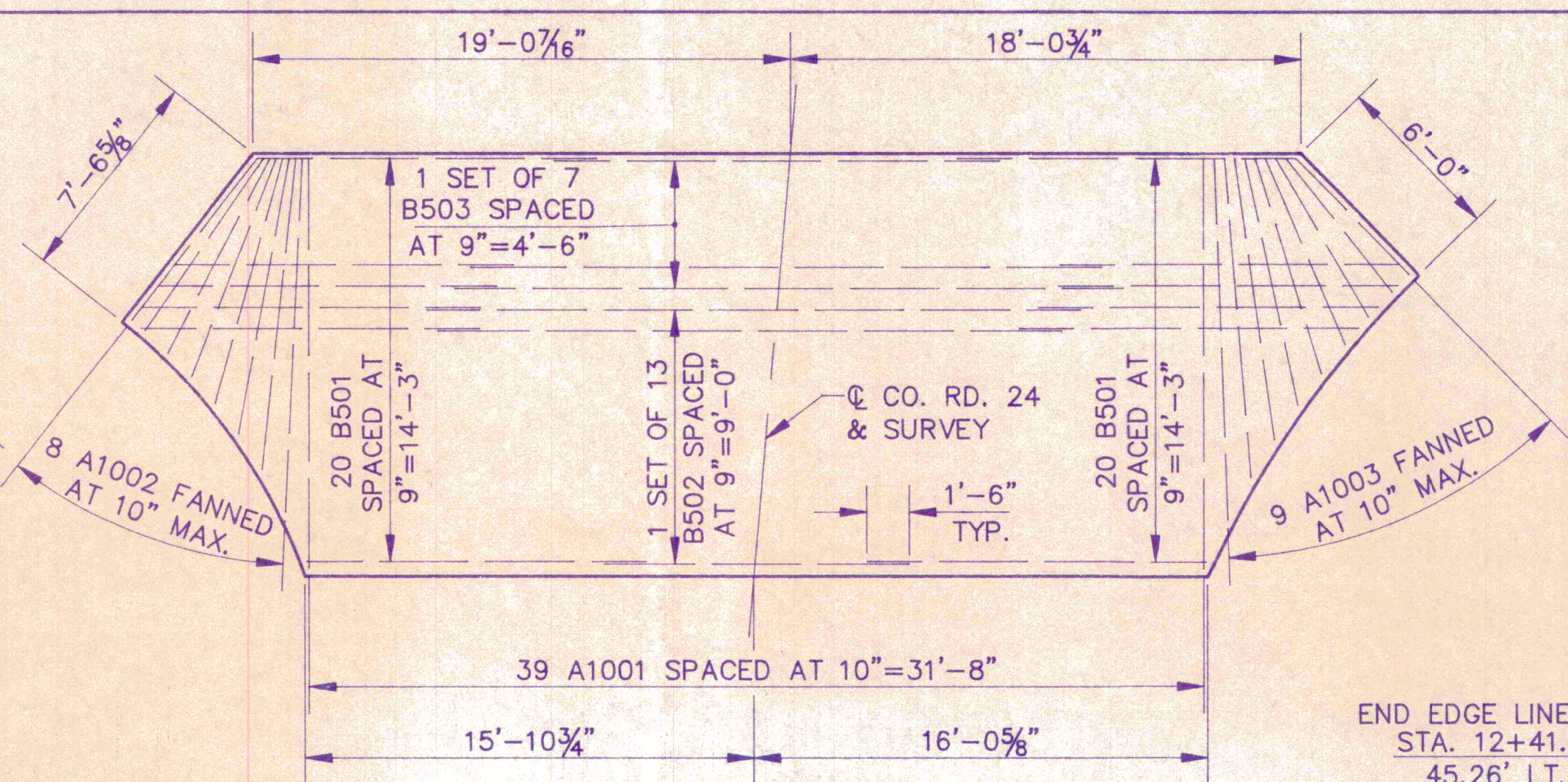


AS-1-81 MODIFIED
PLAN SHOWING TOP REINFORCING

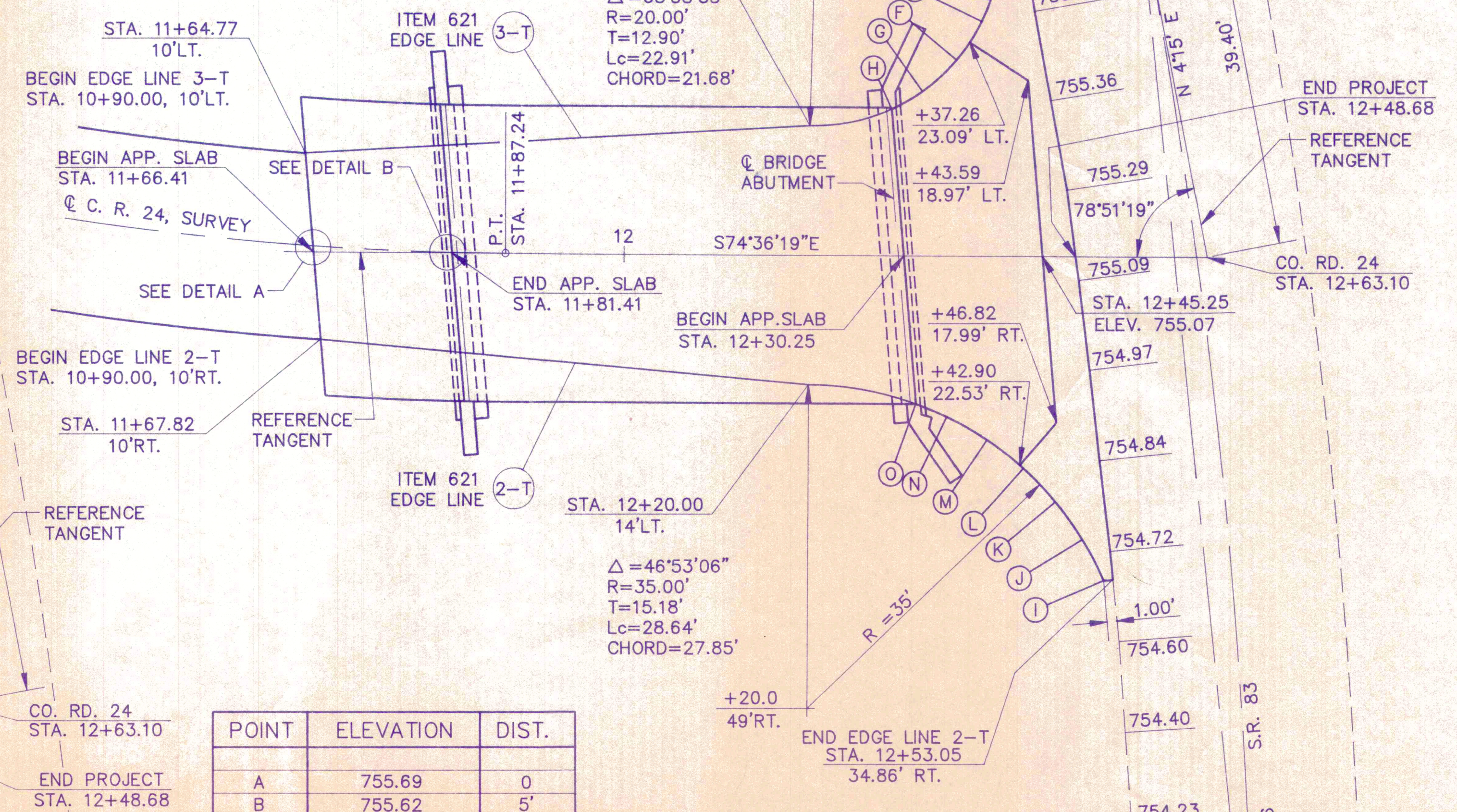
AS-1-81 MODIFIED APPROACH SLAB REINFORCING STEEL LIST			
MARK	No.	LENGTH	DIM. "A"
B501	62	12'-0"	
B502	1 SET OF 13	10'-10" TO 23'-4" INCR. 12 1/2"	
B503	1 SET OF 7	15'-11" TO 23'-8" INCR. 15 1/2"	
B504	1 SET OF 8	10'-8" TO 23'-6" INCR. 22"	
B505	1 SET OF 3	15'-11" TO 21'-3" INCR. 32"	
C501	22	14'-6"	
C502	1 SET OF 4	7'-3" TO 11'-6" INCR. 1'-5"	
C503	1 SET OF 5	5'-9" TO 11'-9" INCR. 1'-6"	
A1001	39	15'-11"	14'-6"
A1002	1 SET OF 8	8'-8" TO 13'-11" INCR. 9"	7'-3" TO 12'-6" INCR. 9"
A1003	1 SET OF 9	7'-2" TO 14'-2" INCR. 10 1/2"	5'-9" TO 12'-9" INCR. 10 1/2"



GUARDRAIL LAYOUT DETAIL

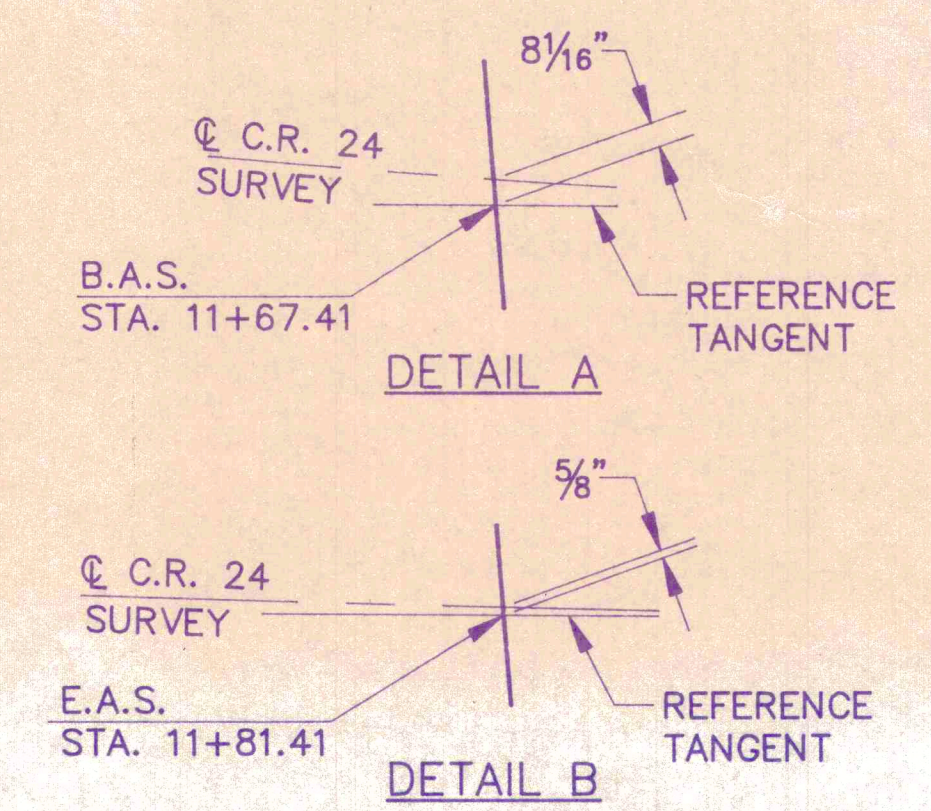


AS-1-81 MODIFIED
PLAN SHOWING BOTTOM REINFORCING
FOR DETAILS NOT SHOWN
SEE STD. DWG. AS-1-81



INTERSECTION DETAIL

POINT	ELEVATION	DIST.
A	755.69	0
B	755.62	5'
C	755.55	5'
D	755.43	5'
E	755.21	5'
F	754.96	5'
G	754.81	5'
H	754.59	3.86'
I	754.69	0
J	754.69	5'
K	754.70	5'
L	754.69	5'
M	754.67	5'
N	754.62	5'
O	754.58	3.64'



ESTIMATED QUANTITIES					CALC. BY	R.S.B.	CHK'D BY	K.S.E.
ITEM	ITEM EXT.	QUANTITY	UNIT	DESCRIPTION	ABUT.	SUPER.	GEN.	
202	11002	LUMP	SUM	STRUCTURE REMOVED, OVER 20' SPAN			LUMP	
403	20000	11	CU.YD.	ASPHALT CONCRETE (AC-20)		11		
404	20000	6	CU.YD.	ASPHALT CONCRETE (AC-20)		6		
503	11100	LUMP	SUM	COFFERDAMS, CRIBS AND SHEETING	LUMP			
503	21300	LUMP	SUM	UNCLASSIFIED EXCAVATION			LUMP	
SPECIAL	50794802	14	LIN.FT.	DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK	14			
SPECIAL	50794804	30	LIN.FT.	DRILLED SHAFTS, 42" DIAMETER, INTO BEDROCK	30			
509	15800	7260	LB.	EPOXY COATED REINFORCING STEEL, GRADE 60	7260			
511	44100	40	CU.YD.	CLASS C CONCRETE, ABUTMENT	40			
511	46500	28	CU.YD.	CLASS C CONCRETE, FOOTINGS	28			
SPECIAL	51267000	188	SQ.YD.	MEMBRANE WATERPROOFING, TYPE 3		188		
SPECIAL	51267500	25	SQ.YD.	SEALING OF CONCRETE SURFACES (SEE PROPOSAL NOTE)		25		
SPECIAL	51267502	55	SQ.YD.	SEALING OF CONCRETE SURFACES (EPOXY)(SEE PROPOSAL NOTE)	55			
515	53900	8	EACH	PRESTRESSED CONCRETE BOX BEAM (40'-52') B21-48, (48'-8" LENGTH)(SEE PROPOSAL NOTE)		8		
516	13600	139	SQ.FT.	1" PREFORMED EXPANSION JOINT FILLER	139			
516	31011	69	LIN.FT.	2" DEEP JOINT SEALER, AS PER PLAN	69			
SPECIAL	51631200	66	LIN.FT.	SAWING AND SEALING BITUMINOUS CONCRETE JOINTS		66		
516	41200	6	SQ.FT.	1/8" PREFORMED BEARING PAD, 711.21		6		
516	43100	32	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE) (1"x6"x9")		32		
517	72300	106.25	LIN.FT.	RAILING (DEEP BEAM RAILING WITH STEEL TUBULAR BACKUP AND TYPE TWO STEEL POSTS & ANCHOR BOLTS (SEE PROPOSAL NOTE)		106.25		
518	21200	37	CU.YD.	POROUS BACKFILL WITH FILTER FABRIC	37			
SPECIAL	51822200	73	SQ.FT.	STEEL DRIP STRIP	73			
518	41100	38	LIN.FT.	6" PERFORATED HELICAL CORRUGATED STEEL PIPE, 707.01	38			
518	41200	12	LIN.FT.	6" NON-PERFORATED HELICAL CORRUGATED STEEL PIPE, INCLUDING SPECIALS, 707.01	12			
601	32300	141	CU.YD.	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER	141			

GENERAL NOTES

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS

AS-1-81 DATED 11-27-81
DBR-2-73 DATED 4-10-73
DBP-1-92 DATED 3-23-92
PSBD-1-81 DATED 6-20-89R

SUPPLEMENTAL SPECIFICATIONS

836 DATED 11-2-85 952 DATED 12-14-88
852 DATED 7-30-93

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1992 AND THE OHIO "SUPPLEMENT" TO THESE SPECIFICATIONS.

DESIGN DATA

DESIGN LOADING: HS20-44 AND THE ALTERNATE MILITARY LOADING.

DESIGN STRESSES:

CONCRETE CLASS S - COMPRESSIVE STRENGTH 4500 P.S.I.
CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 P.S.I.
REINFORCING STEEL - ASTM A615, A616, A617 - GRADE 60
MINIMUM YIELD STRENGTH 60,000 P.S.I.
PRESTRESSING STRAND ASTM A416
f's = 270,000 P.S.I.
INITIAL STRESS = 0.70 f's
PRESTRESSED BEAM REINFORCING STEEL - ASTM A615, A616, A617 -
MINIMUM YIELD STRENGTH 40,000 P.S.I.
CONCRETE FOR PRESTRESSED BEAMS - UNITS STRESS 2,200 P.S.I.
COMPRESSION, 444 P.S.I. TENSION.

DRILLED SHAFT DESIGN LOADS: THE DESIGN LOAD FOR THE ABUTMENT DRILLED SHAFT IS 27.6 TONS PER SHAFT. SEE SHEET [5/10] FOR DRILLED SHAFT NOTES.

REMOVAL OF EXISTING STRUCTURE: WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC, THE EXISTING STRUCTURE SHALL BE REMOVED. SUITABLE WASTE MASONRY MAY BE PLACED AS BANK PROTECTION AS DIRECTED BY THE ENGINEER.

REINFORCING BAR SPLICES: REINFORCING BAR SPLICE LENGTHS SHALL CONFORM TO THE MINIMUM LENGTHS SPECIFIED BY SECTION 8.25 OF THE AASHTO UNLESS OTHERWISE NOTED ON THE PLANS.

ITEM SPECIAL SEALING OF CONCRETE SURFACES: A CONCRETE SEALER SHALL BE APPLIED TO THOSE SURFACES SHOWN ON SHEET [3,4 & 7/10]. SEE PROPOSAL NOTE FOR SURFACE PREPARATION REQUIREMENTS, APPLICATION RATES, MATERIAL REQUIREMENTS AND APPLICATION PROCEDURES:

UTILITY LINES: ALL EXPENSE INVOLVED IN RELOCATING (INSTALLING) THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE OWNER(S). THE CONTRACTOR AND OWNER(S) ARE REQUESTED TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

STRUCTURE EXCAVATION: EXCAVATION LIMITS FOR THE PROPOSED STRUCTURE SHALL BE AS DEFINED IN 503.11. EXCAVATION OUTSIDE THESE LIMITS TO REMOVE THE EXISTING STRUCTURE SHALL BE INCLUDED IN 202 FOR PAYMENT.

DECK PROTECTION METHOD: MEMBRANE WATERPROOFING, ASPHALT CONCRETE OVERLAY, AND A CALCIUM NITRATE CORROSION INHIBITING ADMIXTURE IN THE CONCRETE FOR THE BEAMS. SEALING OF CONCRETE SURFACES AND STEEL DRIP STRIP.

ELASTOMERIC BEARING PADS SHALL CONFORM TO ASTM REQUIREMENTS REFERED TO IN ITEM 711.23. ELASTOMERIC COMPOUND SHALL BE OF GRADE 50 HARDNESS.

ADDITIONAL SOIL INFORMATION
THE COMPLETE SOIL BORING REPORT IS AVAILABLE AT THE COSHOCTON COUNTY ENGINEER'S OFFICE, 318 MAIN STREET, COSHOCTON, OHIO 43812.

DESIGN PROJECT
JONES-STUCKEY, LTD., INC.
1641 WEST FIFTH AVENUE
COLUMBUS, OHIO 43212

DATE
11-12-93
REVIEWED
D.W.J.
STRUCTURE FILE NUMBER

DRAWN
K.S.E.
REVISED

DESIGNED
G.G.N.
CHECKED
E.D.W.

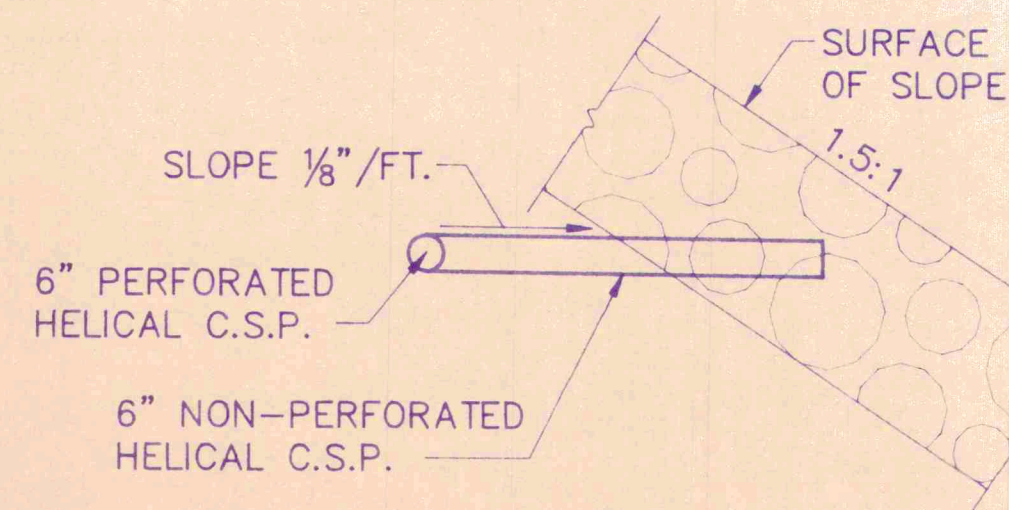
GENERAL NOTES & ESTIMATED QUANTITIES

BRIDGE NO. COS-24-0000
OVER MILL CREEK

COSHOCTON COUNTY
COS-CR24

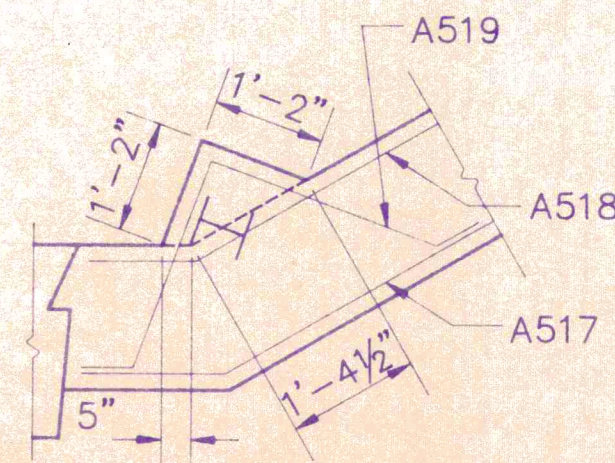
2 / 10

9
17



6" C.S.P. TERMINATION

ROCK CHANNEL PROTECTION
TYPE D, 2'-6" THICK WITH
FILTER (TYPICAL)



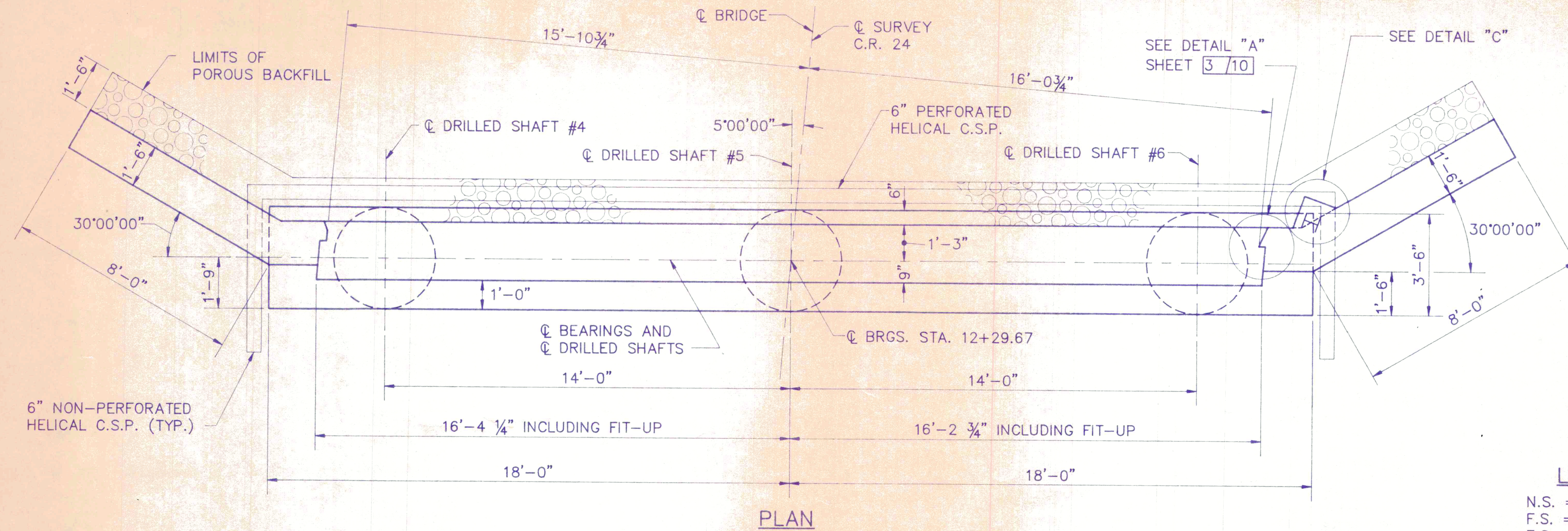
DETAIL "C"

ABOVE CONSTRUCTION JOINT (ONLY)

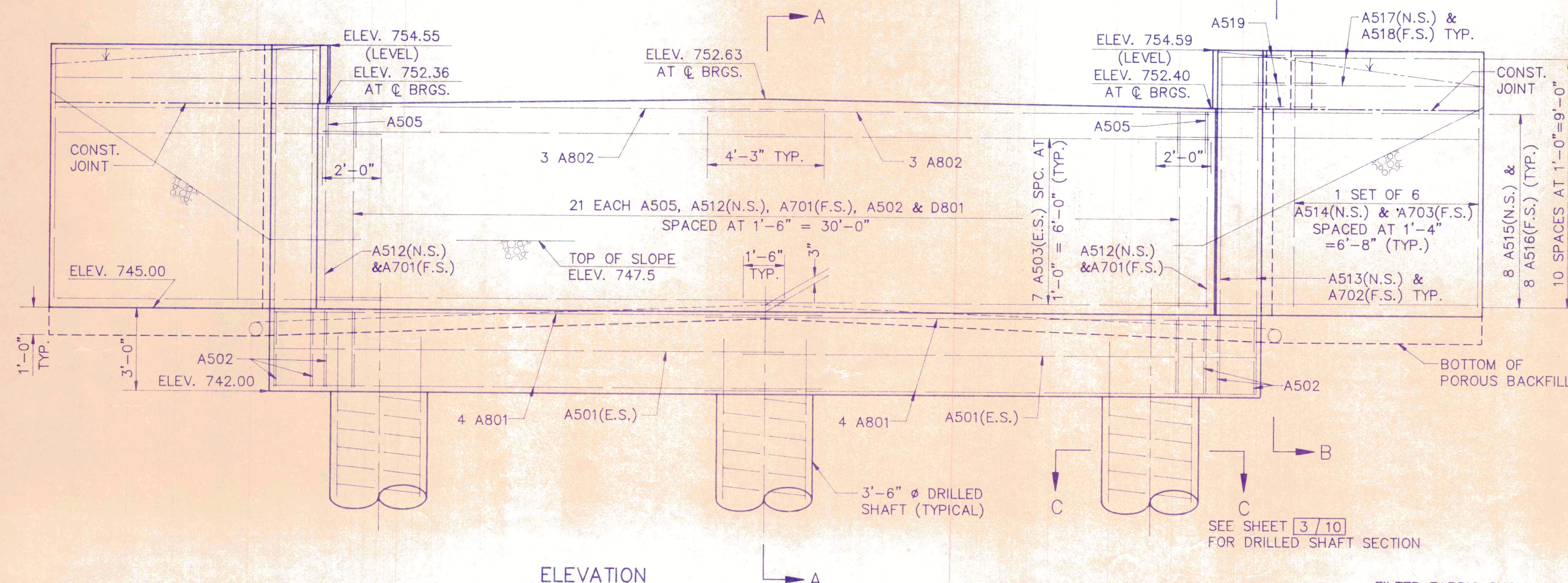
POROUS BACKFILL: SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE.

BRIDGE SEAT REINFORCING: REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT SHALL BE ACCURATELY PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF ANCHOR BAR HOLES.

CONCRETE ABOVE THE BRIDGE SEAT CONSTRUCTION JOINT SHALL NOT BE PLACED UNTIL THE PRESTRESSED BOX BEAMS HAVE BEEN SET.



PLAN

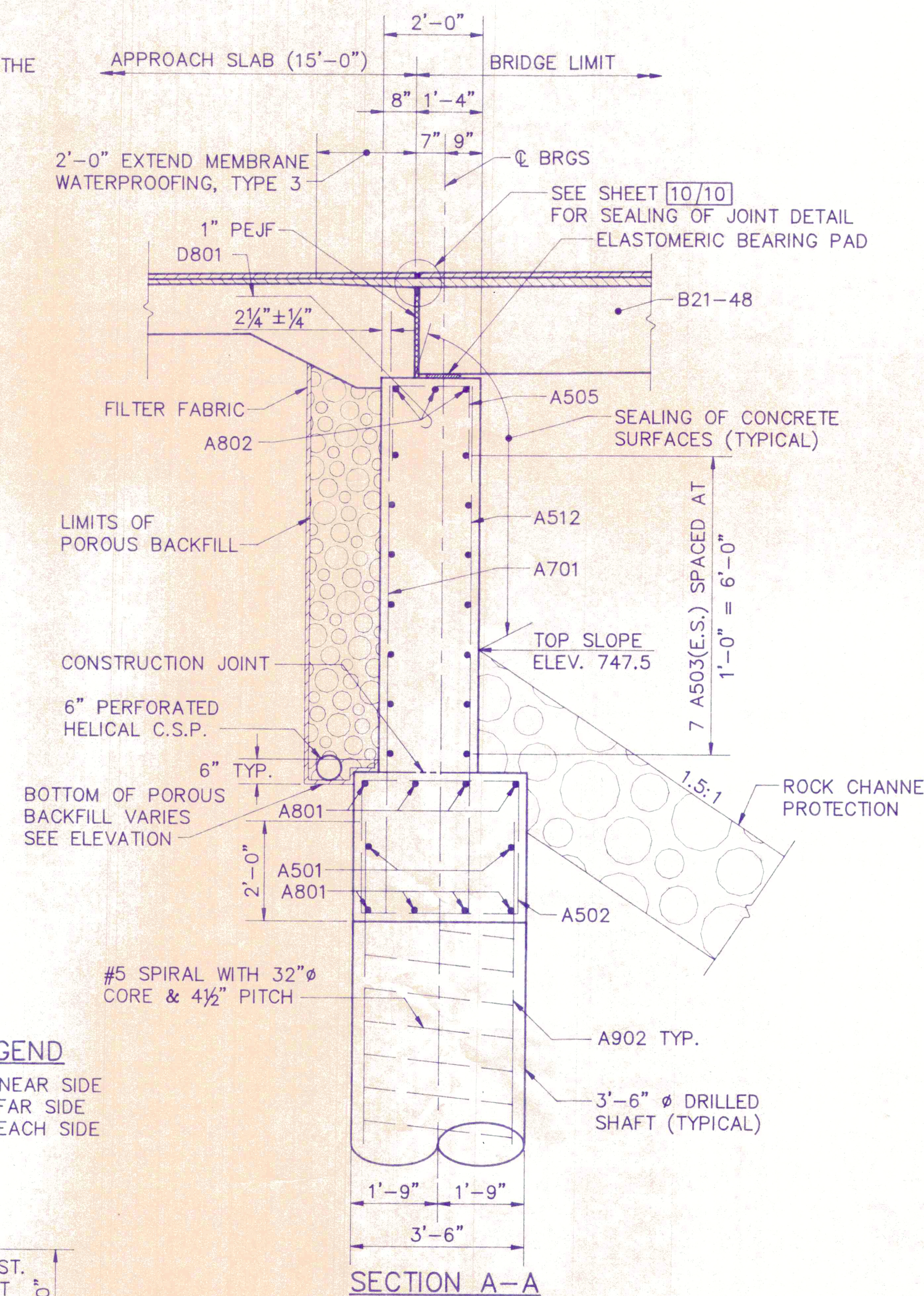


ELEVATION

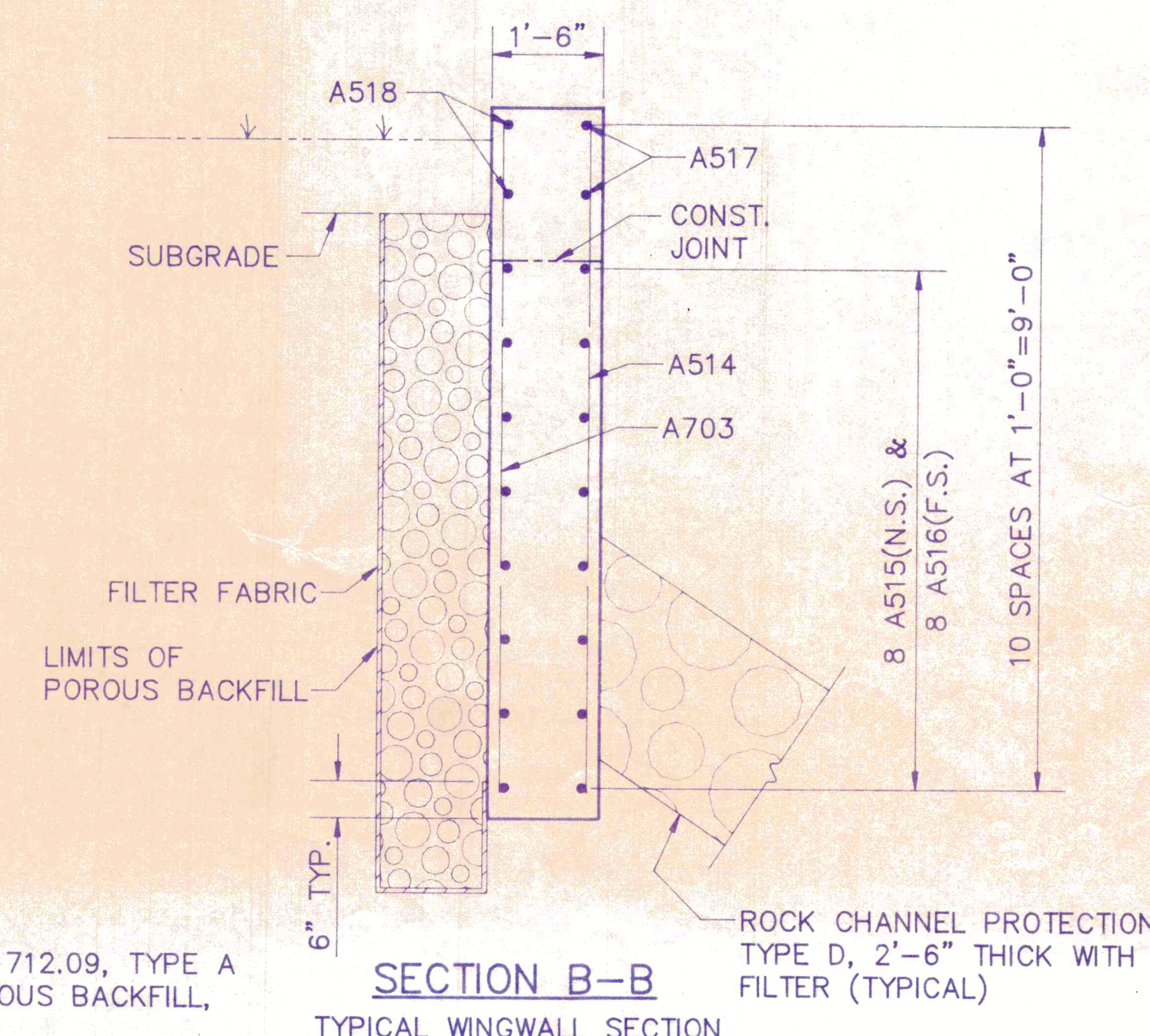
NOTE: WINGWALL VIEWS ADJUSTED TO
SHOW TRUE WINGWALL ELEVATIONS.

LEGEND

N.S. = NEAR SIDE
F.S. = FAR SIDE
E.S. = EACH SIDE



SECTION A-A



SECTION B-B

TYPICAL WINGWALL SECTION

FILTER FABRIC SHALL CONFORM TO 712.09, TYPE A
AND SHALL BE INCLUDED WITH POROUS BACKFILL,
AS PER PLAN FOR PAYMENT.

DESIGN PROJECT		JONES-STUCKEY, LTD., INC.	
DATE		1641 WEST FIFTH AVENUE	
REVIEWED		COLUMBUS, OHIO 43212	
DRAWN		STRUCTURE FILE NUMBER	
DESIGNED		FORWARD ABUTMENT DETAILS	
CHECKED		BRIDGE NO. COS-24-0.00	
OVER MILL CREEK		COSHOCTON COUNTY	
COS-CR24		4 / 10	
11		17	

ITEM SPECIAL -- DRILLED SHAFTS

DESCRIPTION

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING DRILLED SHAFTS OF THE TYPE AND SIZE SPECIFIED IN THE PLANS. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL, AND APPURTENANCES REQUIRED TO COMPLETE THE WORK AS SPECIFIED. THE LENGTH(S) OF THE DRILLED SHAFTS SHOWN IN THESE PLANS HAS BEEN ESTIMATED FROM AVAILABLE SUBSURFACE INFORMATION. THE CONTRACTOR IS EXPECTED TO FURNISH THE PROPOSED DRILLED SHAFTS AS PER THESE PLAN REQUIREMENTS, WITH THE UNDERSTANDING THAT THE ACTUAL LENGTH REQUIRED BASED ON CONDITIONS ENCOUNTERED DURING CONSTRUCTION, MAY DIFFER FROM THE ESTIMATED LENGTH SHOWN IN THE PLANS.

THE LIMITS OF EACH DRILLED SHAFT SHALL BE DEFINED AT THE TOP BY THE PLAN ELEVATION AND AT THE BOTTOM BY THE ELEVATION OF THE BOTTOM OF THE BEDROCK SOCKET AS APPROVED BY THE ENGINEER.

A CASING SHALL BE NECESSARY FOR THE CONSTRUCTION OF EACH DRILLED SHAFT. CASINGS MAY BE REMOVED PROVIDED ALL PLAN REQUIREMENTS ARE SATISFIED.

CONTRACTOR QUALIFICATION

THE CONTRACTOR SHALL SUBMIT INFORMATION TO THE ENGINEER TO DOCUMENT THAT HIS PERSONNEL ARE EXPERIENCED IN THE CONSTRUCTION OF DRILLED SHAFTS OF THE TYPE AND SIZE SPECIFIED ON THE PLANS. THIS INFORMATION SHALL BE SUBMITTED AT THE PRECONSTRUCTION CONFERENCE. THE PROJECT ENGINEER IS REQUESTED TO INFORM BUREAU OF BRIDGES, ATTENTION: COSHOCTON COUNTY ENGINEER'S OFFICE OF THE DATES WHEN THE CONTRACTOR WILL BE CONSTRUCTING THE DRILLED SHAFTS.

APPROVAL BEFORE DRILLED SHAFT CONSTRUCTION

THE CONTRACTOR SHALL SUBMIT TO THE DIRECTOR FOR APPROVAL A WRITTEN PLAN OF STEPS AND PROCEDURES HE PROPOSES TO FOLLOW WHEN DRIVING THE STEEL CASING, EXCAVATING INSIDE THE CASING, PLACING AND MONITORING THE CONCRETE PLACEMENT. CONSTRUCTION OF THE DRILLED SHAFT SHALL NOT BEGIN WITHOUT PRIOR APPROVAL BY THE DIRECTOR. A COPY OF THE PROCEDURE SHALL BE FAXED DIRECTLY TO THE BUREAU OF BRIDGES AND STRUCTURAL DESIGN (ATTN: COSHOCTON COUNTY ENGINEER'S OFFICE).

CASING

THE CASING SHALL BE MADE OF STEEL. SHALL BE WATER TIGHT AND SHALL BE OF AMPLE STRENGTH TO WITHSTAND HANDLING STRESSES AND EXTERNAL SUBSURFACE PRESSURES. A CASING SHALL BE PROVIDED FOR THE COMPLETE LENGTH OF THE DRILLED SHAFT AND SHALL BE INSTALLED PRIOR TO EXCAVATING. DO NOT EXCAVATE BELOW THE BOTTOM OF THE CASING. AFTER THE CONCRETE IS PLACED IN THE SHAFT EXCAVATION UP TO THE TOP OF THE DRILLED SHAFT, THE CASING MAY BE PULLED UP (REMOVED).

THE DIAMETER OF THE FURNISHED CASING(S) SHALL BE LARGE ENOUGH TO ALLOW THE CONSTRUCTION OF A BEDROCK SOCKET WITH A DIAMETER EQUAL TO OR GREATER THAN THE PLAN DIAMETER.

EXCAVATION

WHEN OBJECTS SUCH AS LARGE BOULDERS ARE ENCOUNTERED, THEY SHALL BE REMOVED. BLASTING METHODS MAY BE USED AND WHEN USED, SHALL BE CONDUCTED SO AS TO AVOID DISTURBANCE TO THE BEDROCK FOUNDATION BELOW AND OUTSIDE THE LIMITS OF THE PROPOSED DRILLED SHAFT EXCAVATIONS.

DEWATERING

THE CONTRACTOR SHALL ENSURE THAT THE WATER ELEVATION INSIDE THE CASING IS AT ALL TIMES EQUAL TO OR HIGHER THAN THE STATIC WATER TABLE IMMEDIATELY OUTSIDE OF THE CASING. THE CONTRACTOR MUST USE WORK METHODS THAT PREVENT WATER FROM FLOWING INTO THE CASING THROUGH THE BOTTOM OPENING OF THE CASING.

BOTTOM CLEANOUT

THE BOTTOM OF THE COMPLETED DRILLED SHAFT EXCAVATION SHALL BE AS CLEAN AS IS PRACTICAL.

APPROVAL BEFORE CONCRETE PLACEMENT

THE CONTRACTOR SHALL SUBMIT TO THE PROJECT ENGINEER FOR APPROVAL A WRITTEN PLAN OF STEPS AND PROCEDURES HE PROPOSES TO FOLLOW WHEN PLACING AND MONITORING THE CONCRETE PLACEMENT. CONCRETE SHALL NOT BE PLACED IN THE DRILLED SHAFT EXCAVATION WITHOUT PRIOR APPROVAL FROM THE ENGINEER. THE DRILLED SHAFT EXCAVATION SHALL BE INSPECTED IMMEDIATELY BEFORE THE CONCRETE IS PLACED. NOTE THAT THROUGH THE WATER THE INSPECTION SHALL BE LIMITED TO PROBING AND MEASURING.

CONCRETE PLACEMENT

THE CONCRETE FOR THE DRILLED SHAFT SHALL BE PLACED AS PER 511 EXCEPT AS MODIFIED BY THE PLANS. THE CONCRETE PLACEMENT OPERATION SHALL BE CONTINUOUS FROM START TO FINISH. IF THE DRILLED SHAFT HAS A BEDROCK SOCKET, THE CONCRETE FOR THE BEDROCK SOCKET SHALL BE PLACED AGAINST THE IN-SITU BEDROCK. THE CONCRETE FOR THE DRILLED SHAFT SHALL BE PLACED PROMPTLY AFTER THE FINAL INSPECTION OF THE SHAFT. IF PRACTICABLE, THE CONCRETE SHALL BE PLACED IN A CLEAN DRY EXCAVATION. CARE SHALL BE TAKEN TO ENSURE THAT CONCRETE IS NOT BEING PLACED IN MOVING WATER. THE CONCRETE CAN BE PLACED IN A DRY DRILLED SHAFT EXCAVATION BY THE FREE FALL METHOD PROVIDED THE CONCRETE FALLS TO ITS FINAL POSITION THROUGH AIR WITHOUT STRIKING THE SIDES OF THE HOLES, THE REINFORCING STEEL CAGE OR ANY OTHER OBSTRUCTION. THE FREE FALL METHOD ALLOWS THE CONCRETE TO BE DROPPED FROM THE TOP THROUGH A CENTERING CHUTE TO THE CONCRETE'S FINAL POSITION.

IF THE ENGINEER DETERMINES THAT DEWATERING IS NOT PRACTICABLE THE ENGINEER CAN REQUIRE THAT THE CONCRETE BE PLACED UNDER WATER BY MEANS OF A CONCRETE PUMP.

THE TREMIE USED FOR CONCRETE PLACEMENT SHALL BE WATERTIGHT. UNDERWATER PLACEMENT SHALL NOT BEGIN UNTIL THE TREMIE IS PLACED TO THE SHAFT BOTTOM ELEVATION. VALVES, BOTTOM PLATES OR PLUGS MAY BE USED SO THAT CONCRETE DISCHARGE CAN BEGIN WITHIN ONE TREMIE DIAMETER OF THE BASE. PLUGS SHALL EITHER BE REMOVED FROM THE EXCAVATION OR BE OF A MATERIAL, APPROVED BY THE ENGINEER, WHICH WILL NOT CAUSE A DEFECT IN THE SHAFT IF NOT REMOVED. THE DISCHARGE END OF THE TREMIE SHALL BE CONSTRUCTED TO PERMIT THE FREE RADIAL FLOW OF CONCRETE DURING PLACEMENT OPERATIONS. THE TREMIE DISCHARGE END SHALL BE IMMERSSED AT LEAST 10 FEET IN CONCRETE AT ALL TIMES AFTER STARTING THE FLOW OF CONCRETE. THE FLOW OF THE CONCRETE SHALL BE CONTINUOUS. THE CONCRETE IN THE TREMIE SHALL BE MAINTAINED AT A POSITIVE PRESSURE DIFFERENTIAL AT ALL TIMES TO PREVENT WATER INTRUSION INTO THE SHAFT CONCRETE.

IF AT ANY TIME DURING THE CONCRETE POUR, THE TREMIE LINE ORIFICE IS REMOVED FROM THE FLUID CONCRETE COLUMN AND DISCHARGES CONCRETE ABOVE THE RISING CONCRETE LEVEL, THE SHAFT SHALL BE CONSIDERED DEFECTIVE. IN SUCH CASE, THE CONTRACTOR SHALL REMOVE THE REINFORCING CAGE AND CONCRETE, COMPLETE ANY NECESSARY SIDEWALL REMOVAL DIRECTED BY THE ENGINEER AND REPOUR THE SHAFT. ALL COSTS OF REPLACEMENT OF DEFECTIVE SHAFTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

THE TOP CENTER OF THE ABUTMENT DRILLED SHAFTS SHALL BE LOCATED WITHIN A 3 INCH RADIUS OF THE POSITION INDICATED BY THE PLANS. THE ABUTMENT VERTICAL DRILLED SHAFTS ARE TO BE INSTALLED WITHIN 2.0 PERCENT OF PLUMB FOR THE TOTAL LENGTH OF THE DRILLED SHAFT.

CONCRETE

CONCRETE FOR ALL DRILLED SHAFTS SHALL BE CLASS S CONCRETE AND SHALL BE IN ACCORDANCE WITH ITEM 511 EXCEPT AS MODIFIED AND SUPPLEMENTED HEREIN. THE REQUIRED SLUMP IS SIX (6) INCHES, PLUS OR MINUS ONE-HALF (1/2) INCH. THE MAXIMUM WATER TO CEMENT RATIO SHALL BE 0.50. FOR CONCRETE PLACED UNDER WATER, THE REQUIREMENTS OF ADDING 10 PERCENT MORE CEMENT TO THE CONCRETE MIX SHALL BE WAIVED. THE MAXIMUM COARSE AGGREGATE SIZE SHALL BE LIMITED TO 3/8 INCH. THE TOP 2 TO 3 FEET OF CONCRETE IN THE DRILLED SHAFTS ARE REQUIRED TO BE VIBRATED. ONLY A MINIMAL VIBRATORY EFFORT IS NECESSARY. SPECIAL CARE SHALL BE TAKEN NOT TO OVER-VIBRATE THE DRILLED SHAFT CONCRETE. NOTE: IF THE CASING IS REMOVED USING A VIBRATORY HAMMER NO OTHER VIBRATORY EFFORT IS NEEDED.

REINFORCING STEEL

REINFORCING STEEL SHALL MEET THE REQUIREMENTS OF 509. THE REINFORCING STEEL SHALL BE GRADE 60. THE SPIRAL REINFORCING STEEL MAY BE PLAIN BARS ASTM A82 OR A615. THE REINFORCING STEEL CAGE SHALL BE COMPLETELY ASSEMBLED PRIOR TO PLACEMENT AND THE LENGTH SHALL BE AS NECESSARY TO CONSTRUCT EACH DRILLED SHAFT. SEE PLAN SHEETS FOR DETAILS OF REINFORCING STEEL. NOTE THAT THE LENGTHS PROVIDED IN THE REINFORCING STEEL LIST ARE ESTIMATED LENGTHS. THE REINFORCING REINFORCING STEEL SHOULD BE PLACED AT PLAN LOCATION. ALL REINFORCING STEEL SHALL BE EPOXY COATED.

SPACERS

CONCRETE SPACERS OR OTHER APPROVED NONCORROSIVE SPACING DEVICES SHALL BE USED AT SUFFICIENT INTERVALS (NEAR THE BOTTOM AND AT INTERVALS NOT EXCEEDING 10 FEET) TO INSURE CONCENTRIC SPACING FOR THE ENTIRE CAGE LENGTH. SPACERS SHALL BE CONSTRUCTED OF APPROVED MATERIAL EQUAL IN QUALITY AND DURABILITY TO THE CONCRETE SPECIFIED FOR THE SHAFT. THE SPACERS SHALL HAVE ADEQUATE DIMENSIONS TO INSURE A MINIMUM 3 INCH CLEAR SPACE BETWEEN THE OUTSIDE OF THE REINFORCING CAGE AND THE SIDE OF THE EXCAVATED HOLE. CYLINDRICAL CONCRETE FEET (BOTTOM SUPPORTS) SHALL BE PROVIDED TO INSURE THAT THE BOTTOM OF THE CAGE IS MAINTAINED THE PROPER DISTANCE ABOVE THE BASE.

AN INSPECTION RECORD CHART HAS BEEN INCLUDED WITH THE PLANS ON SHEET 6 OF 10 AND SHOULD BE COMPLETED BY THE ENGINEER. MEASUREMENTS SHOULD BE OBTAINED PRIOR TO PLACING CONCRETE. THE CONTRACTOR SHOULD PROVIDE ALL NECESSARY EQUIPMENT NEEDED TO OBTAIN MEASUREMENTS FOR COMPLETING THE CHART. THE CONTRACTOR SHALL ASSIST THE ENGINEER IN OBTAINING THESE MEASUREMENTS. WHEN THE INSPECTION RECORD CHART IS COMPLETED, THE PROJECT ENGINEER SHOULD SUBMIT A COPY.

SAFETY PROVISIONS

THE CONTRACTOR SHALL HAVE AT THE JOB SITE ALL EQUIPMENT AND MATERIALS NEEDED TO PROVIDE SAFE CONSTRUCTION AND INSPECTION OF THE DRILLED SHAFTS AS REQUIRED BY CITY, STATE AND FEDERAL SAFETY REQUIREMENTS.

SAFETY PROVISIONS SHALL INCLUDE, BUT NOT BE LIMITED TO THE REQUIREMENTS SPECIFIED BY THE PLANS, SPECIAL PROVISIONS, AND PROPOSAL.

METHOD OF MEASUREMENT

THE TOTAL PAY LENGTH OF EACH DRILLED SHAFT SHALL BE THE COMPLETED AND ACCEPTED LENGTH MEASURED ALONG THE AXIS OF THE DRILLED SHAFT FROM THE BOTTOM OF THE BEDROCK SOCKET TO THE PROPOSED TOP ELEVATION, AS PER PLAN. THE REINFORCING STEEL THAT PROJECTS FROM THE DRILLED SHAFT INTO THE ABUTMENT FOOTING AS SPECIFIED BY THE PLANS IS INCLUDED WITH THE DRILLED SHAFT FOR PAYMENT BUT SHALL NOT BE INCLUDED IN THE MEASURED LENGTH OF THE DRILLED SHAFT.

THE TOTAL LENGTH OF EACH DRILLED SHAFT SHALL BE DIVIDED INTO TWO SEGMENTS. THE LENGTH OF THE LOWER SEGMENT IS THE LENGTH OF THE BEDROCK SOCKET AND THE LENGTH OF THE UPPER SEGMENT IS THE LENGTH OF THE DRILLED SHAFT ABOVE THE BEDROCK SOCKET.

BASIS OF PAYMENT

PAYMENT FOR FURNISHING AND INSTALLING DRILLED SHAFTS WILL BE MADE AT THE CONTRACT UNIT PRICE PER LINEAR FOOT OF ACCEPTED SHAFT LENGTH AS PER ITEM SPECIAL -- "42" DIAMETER DRILLED SHAFTS ABOVE THE BEDROCK SOCKET" AND ITEM SPECIAL--"42" DIAMETER DRILLED SHAFTS IN BEDROCK". WHICH SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE ITEMS AS SPECIFIED.

DESIGN PARAMETERS

THE CALCULATED DESIGN LOADING FOR AN ABUTMENT DRILLED SHAFT IS 317 TONS. THE ALLOWABLE DESIGN END BEARING PRESSURE IS 1.5 TONS PER SQUARE FOOT.

DRILLED SHAFT NOTES

BRIDGE NO. COS-24-0000
OVER MILL CREEK

COSHOCTON COUNTY
COS-CR24

5 / 10

12
17

DESIGN PROJECT

JONES-STUCKEY, LTD., INC.
1641 WEST FIFTH AVENUE
COLUMBUS, OHIO 43212

DATE

11-12-93

REVIEWED

D.W.J.

STRUCTURE FILE NUMBER

DRAWN

K.S.E.

REVISED

DESIGNED

G.G.N.

CHECKED

E.D.W.

INSPECTION RECORD FOR DRILLED SHAFTS

FHWA REGION	STATE	PROJECT	
5	OHIO		

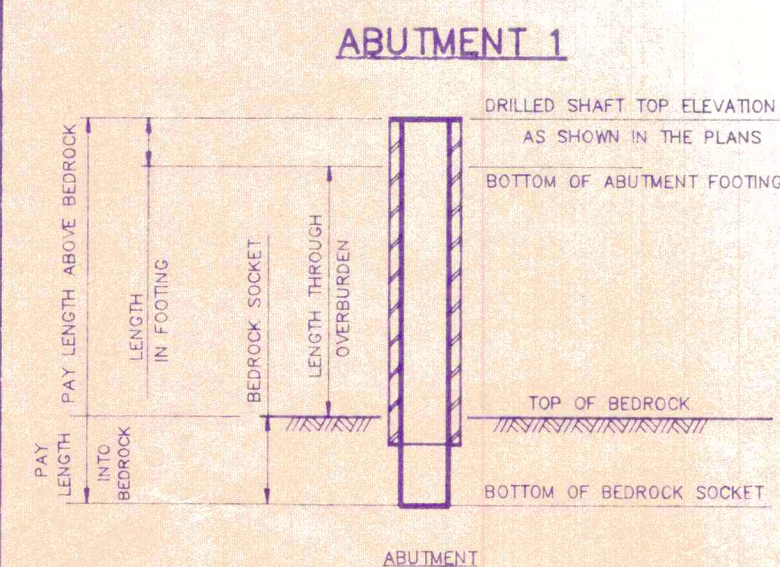
COSHOCTON COUNTY
COS-CR24

PROJECT NO. _____	GENERAL CONTRACTOR _____	TYPE & MODEL OF DRILLING MACHINERY _____	TYPE OF CONCRETE PUMP _____	COST PER LINEAL FOOT _____
	DRILLING CONTRACTOR _____	MAX. CONTINUOUS TORQUE _____ FT.-LB.	HOSE DIAMETER _____ INCHES	ABOVE THE BEDROCK SOCKET _____
	PROJECT ENGINEER _____	CROWD (MAX. CONTINUOUS DOWNWARD FORCE) _____ LBS.	CAPACITY _____ CU. FT./MIN.	IN BEDROCK SOCKET _____
				TYPE OF ROCK _____

[illegible]

PROJECT ENGINEER COMMENTS

1. LOCATION AND EXTENT OF CAVITIES
2. PROCEDURES FOR CONTROLLING WATER
3. WERE UNEXPECTED SUBSURFACE CONDITIONS ENCOUNTERED
4. ANY SUGGESTIONS FOR IMPROVING THE PLANS



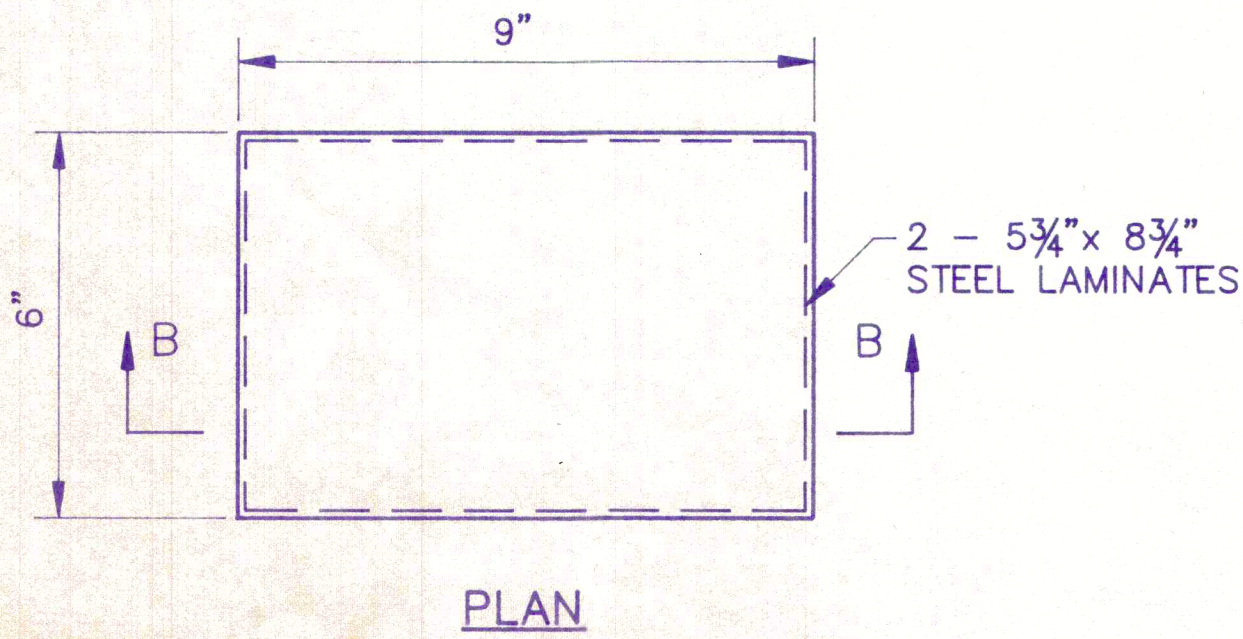
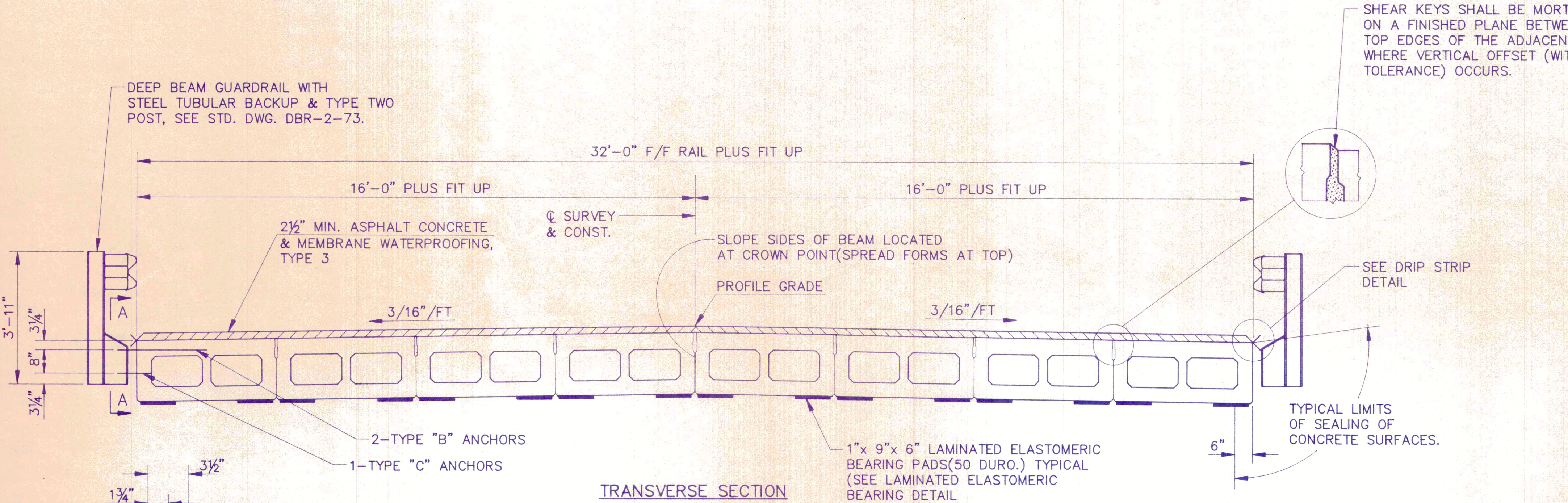
SUBMIT A COPY TO COSHOCTON COUNTY
ENGINEERS OFFICE.

THIS SHEET IS TO BE USED ONLY FOR
RECORDING "AS-BUILT" INFORMATION

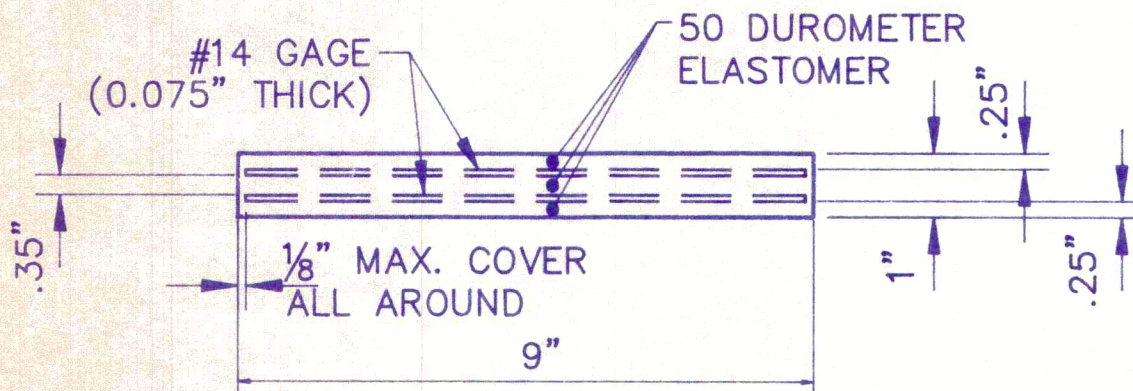
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

DRILLED SHAFTS
INSPECTION RECORD
BRIDGE NO. COS-CR24
OVER MILL CREEK

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	R.J.S	R.J.S	CKT			

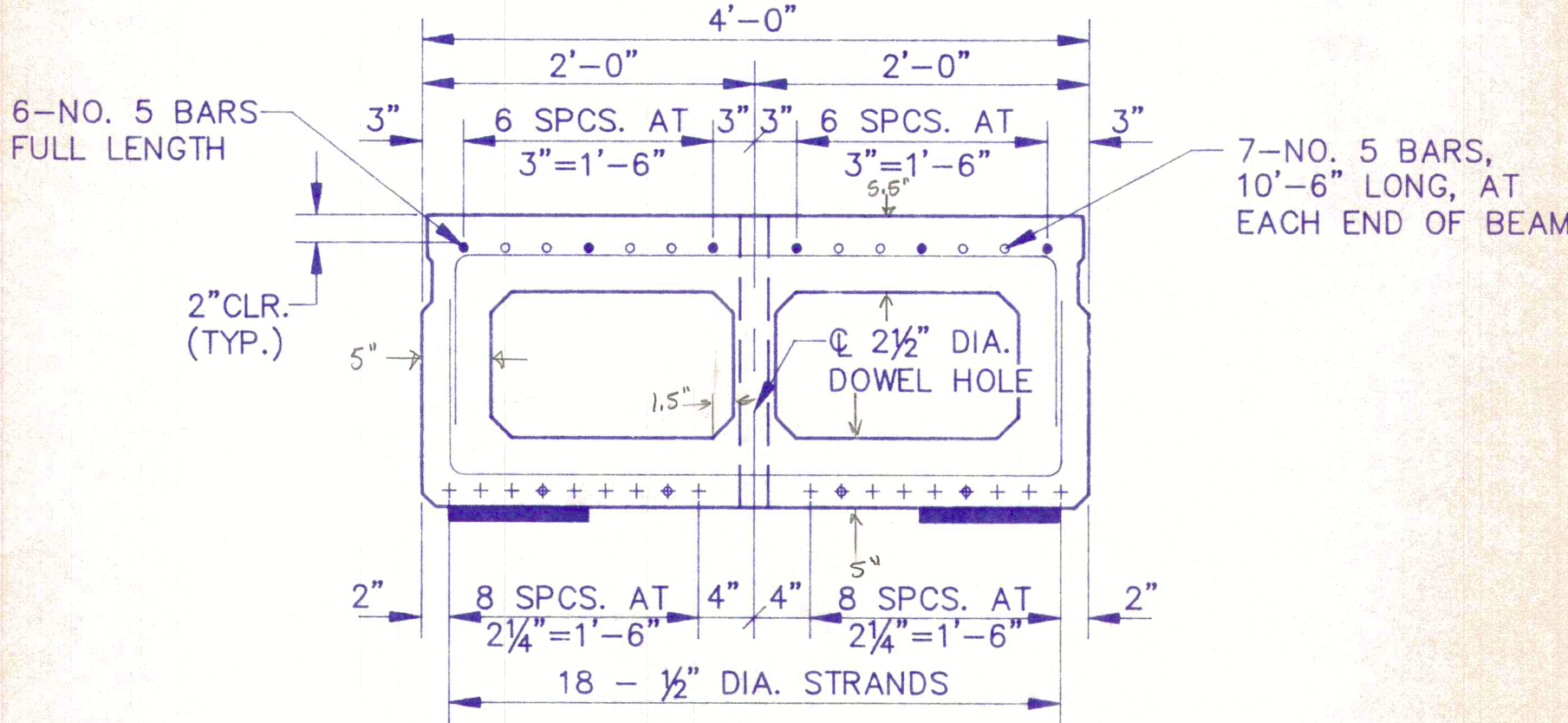
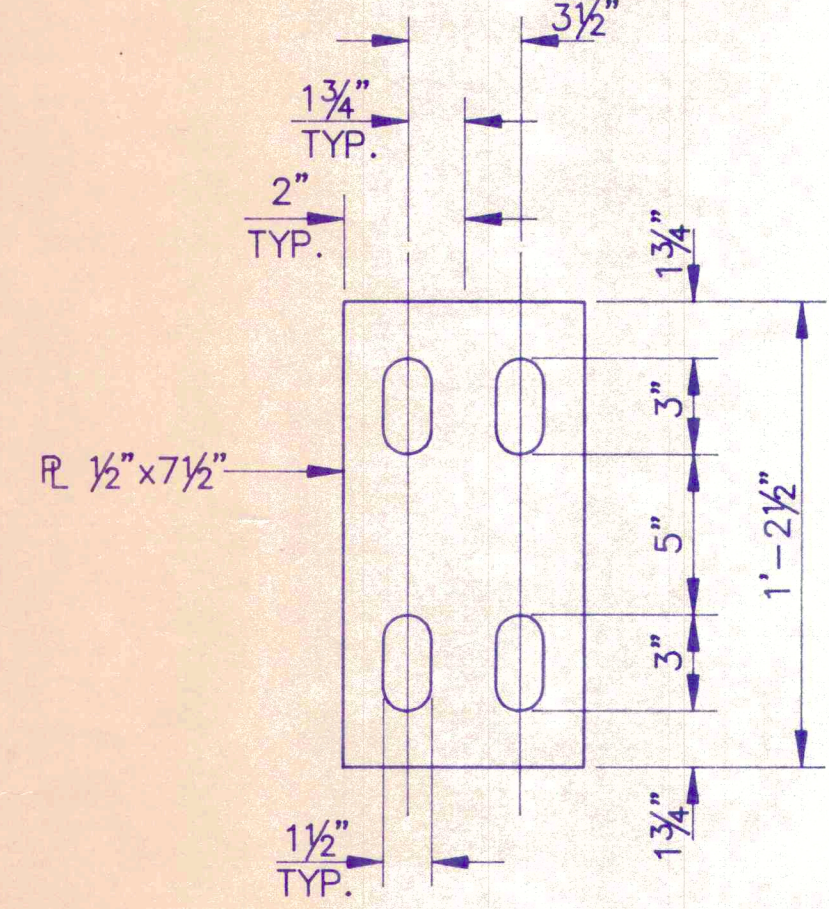


DEAD LOAD REACTION	12.4K
LIVE LOAD REACTION	8K
MAXIMUM DESIGN LOAD	20.4K



LAMINATED ELASTOMERIC BEARING DETAIL

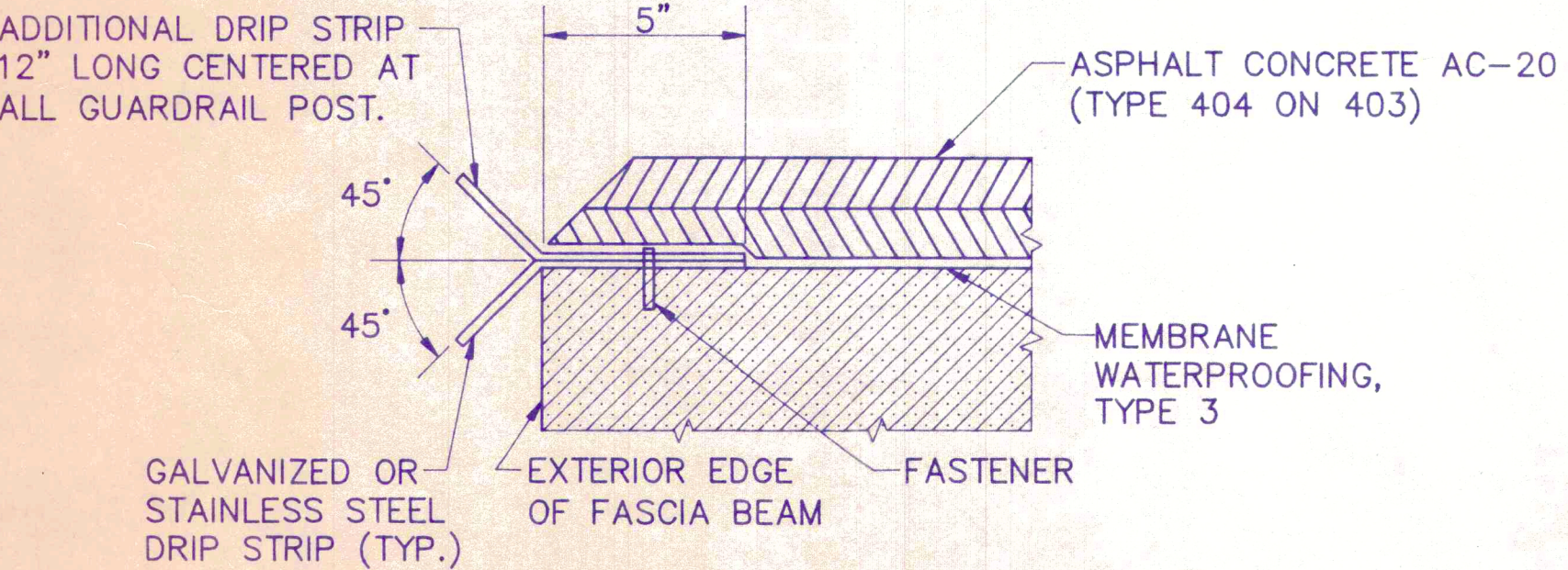
ELASTOMERIC BEARING PADS SHALL CONFORM TO ASTM REQUIREMENTS REFERRED TO IN ITEM 711.23. ELASTOMERIC COMPOUND SHALL BE OF GRADE 50 HARDNESS.



+ INDICATES STRANDS TO BE DEBONDED 2'-6" AT BOTH ENDS. SEE STRANDS DEBOND DETAIL FOR ADDITIONAL LENGTH OF DEBOND

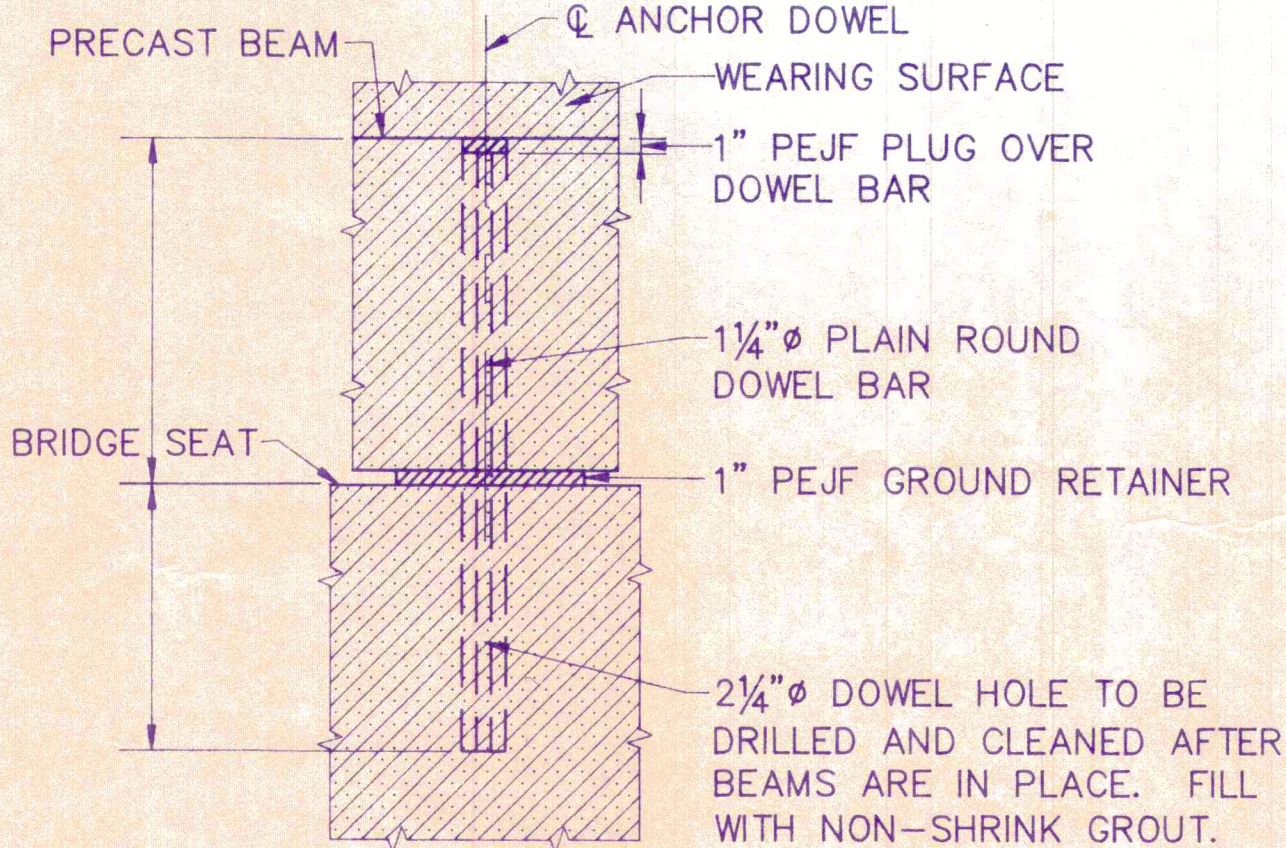
TYPICAL BEAM DETAIL (B21-48)

NOTE: OMIT KEY ON OUTSIDE OF FASCIA BEAM.



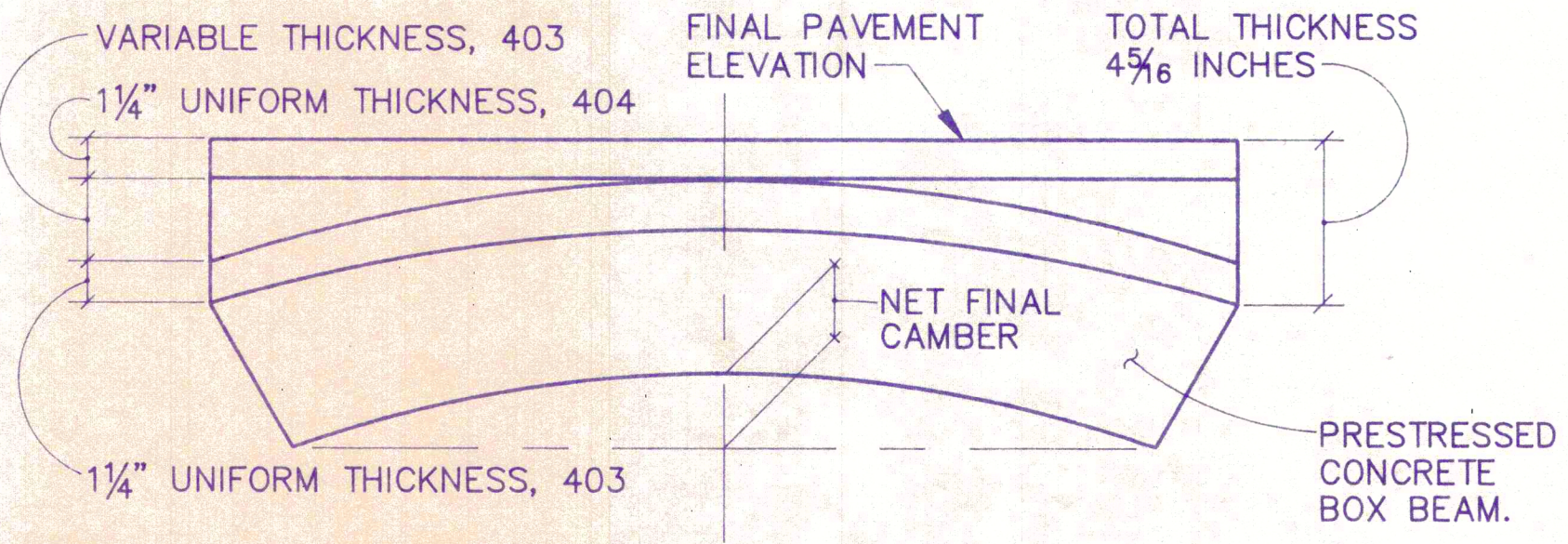
TYPICAL DRIP STRIP DETAIL

DRIP STRIP: PRIOR TO APPLYING MEMBRANE WATERPROOFING, TYPE 3, A BENT DRIP STRIP SHALL BE INSTALLED ALONG THE EDGES OF THE DECK AS SHOWN. THE STRIPS SHALL BE FASTENED AT 1'-6" MAXIMUM WITH 1 1/4" x 5/32" x 1/4" FLAT HEAD PINS AND WASHERS (LENGTH x SHANK DIA. x HEAD DIA.) OR #10 GALVANIZED SCREWS AND EXPANSION ANCHORS, SUBJECT TO THE APPROVAL OF THE ENGINEER. THE STRIPS SHALL BE PLACED THE FULL LENGTH OF THE DECK, ENDING AT THE FACE OF WINGWALL. WHERE SPLICES ARE REQUIRED A 3" (MIN.) LAP SHALL BE USED WITH A FASTENER THROUGH THE LAP. STEEL FOR GALVANIZED STRIPS SHALL BE 8" x 0.105" AND SHALL MEET THE REQUIREMENTS OF ASTM A568. GALVANIZING SHALL BE IN ACCORDANCE WITH ITEM 711.02. STAINLESS STEEL SHALL BE 20 GAGE ASTM A167, TYPE 304, MILL FINISH. PAYMENT SHALL BE AT THE CONTRACT PRICE BID FOR ITEM SPECIAL, SQ. FT. STEEL DRIP STRIP, WHICH SHALL INCLUDE ALL MATERIALS, LABOR, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE ITEM.



FIXED ANCHOR DOWEL DETAIL

NOTE: THE BOND BREAKER SHALL BE APPLIED TO PLAIN ROUND DOWELS ABOVE BRIDGE SEAT.



ASPHALT THICKNESS DIAGRAM

ASPHALT CONCRETE SURFACE COURSE SHALL CONSIST OF A VARIABLE THICKNESS OF 403 AND 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.

CAMBER: CALCULATED CAMBER AT TIME OF PAVING, INCLUDING ALLOWANCE FOR CAMBER GROWTH DUE TO CREEP, IS 2 1/8". CALCULATED DEFLECTION DUE TO WEIGHT OF SURFACE COURSE AND RAILING IS -5/16". NET FINAL CAMBER OF BEAMS IS 1 13/16". THIS IS 1 13/16" IN EXCESS OF THE AMOUNT REQUIRED TO PLACE THE TOP OF THE BEAM PARALLEL TO PROFILE GRADE. THIS EXCESS AMOUNT SHALL BE COMPENSATED FOR BY THICKENING THE 403 LEVELING COURSE FROM 1 1/4" (OR OTHER NOMINAL THICKNESS) AT CENTER OF SPANS TO 3 1/4" AT ENDS OF SPANS.

DESIGN PROJECT
JONES-STUCKEY, LTD., INC.
1641 WEST FIFTH AVENUE
COLUMBUS, OHIO 43212

DATE
11-12-93

REVIEWED
D.W.J.

STRUCTURE FILE NUMBER

DRAWN
K.S.E.

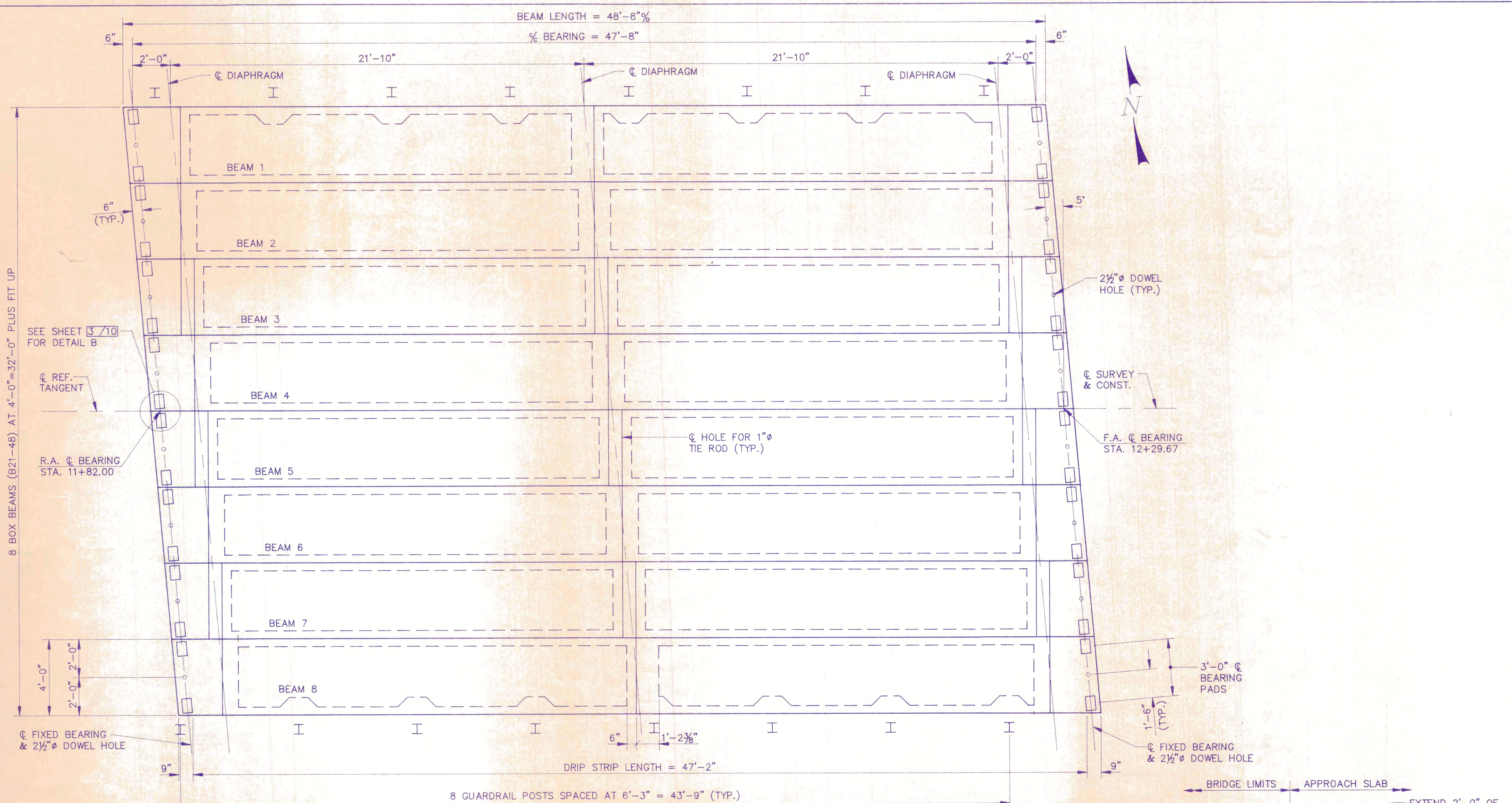
CHECKED
E.D.W.

SUPERSTRUCTURE DETAILS
BRIDGE NO. COS-24-0000
OVER MILL CREEK

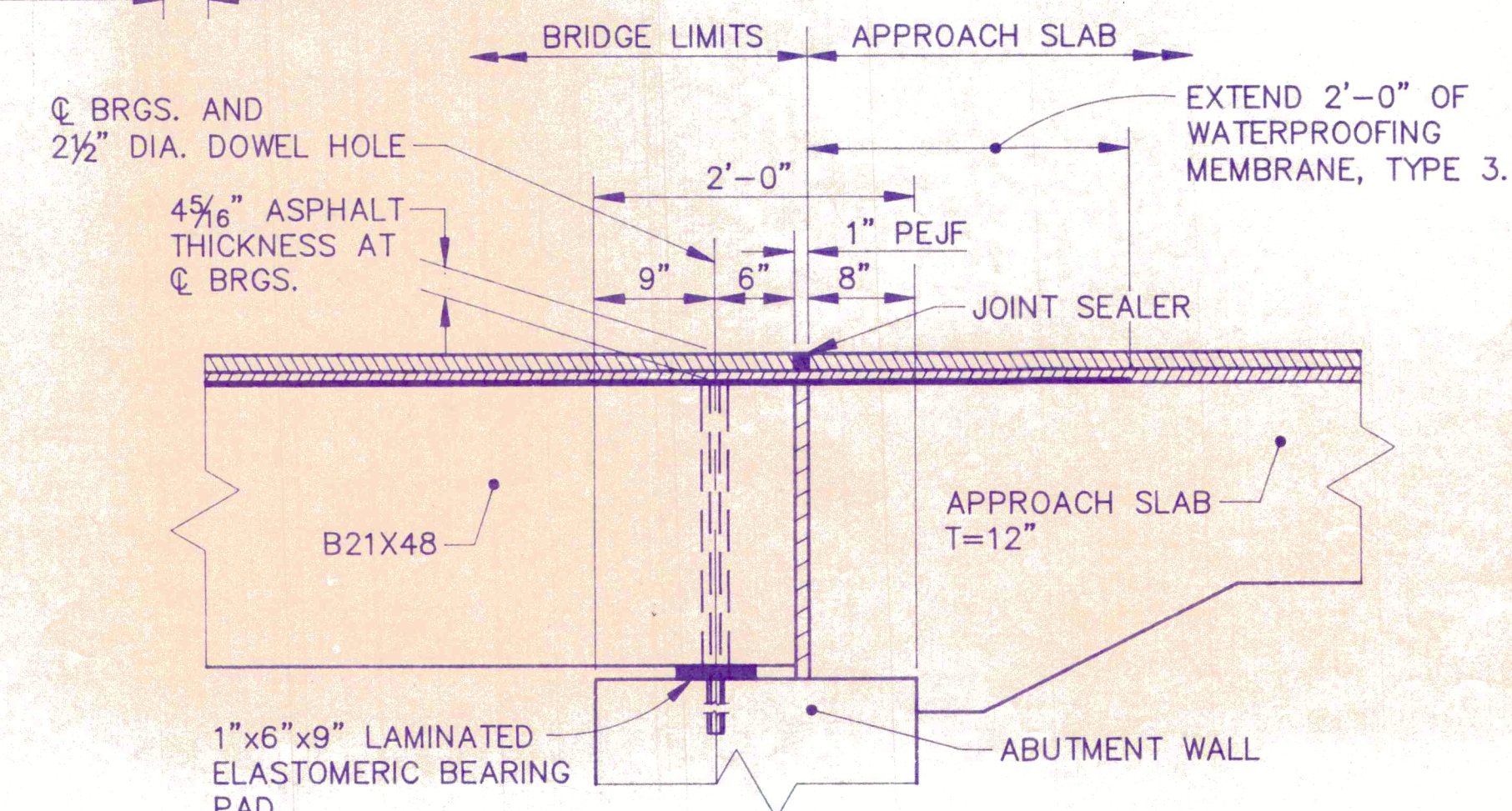
COSHOCTON COUNTY
COS-CR24

7 / 10

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17



PLAN



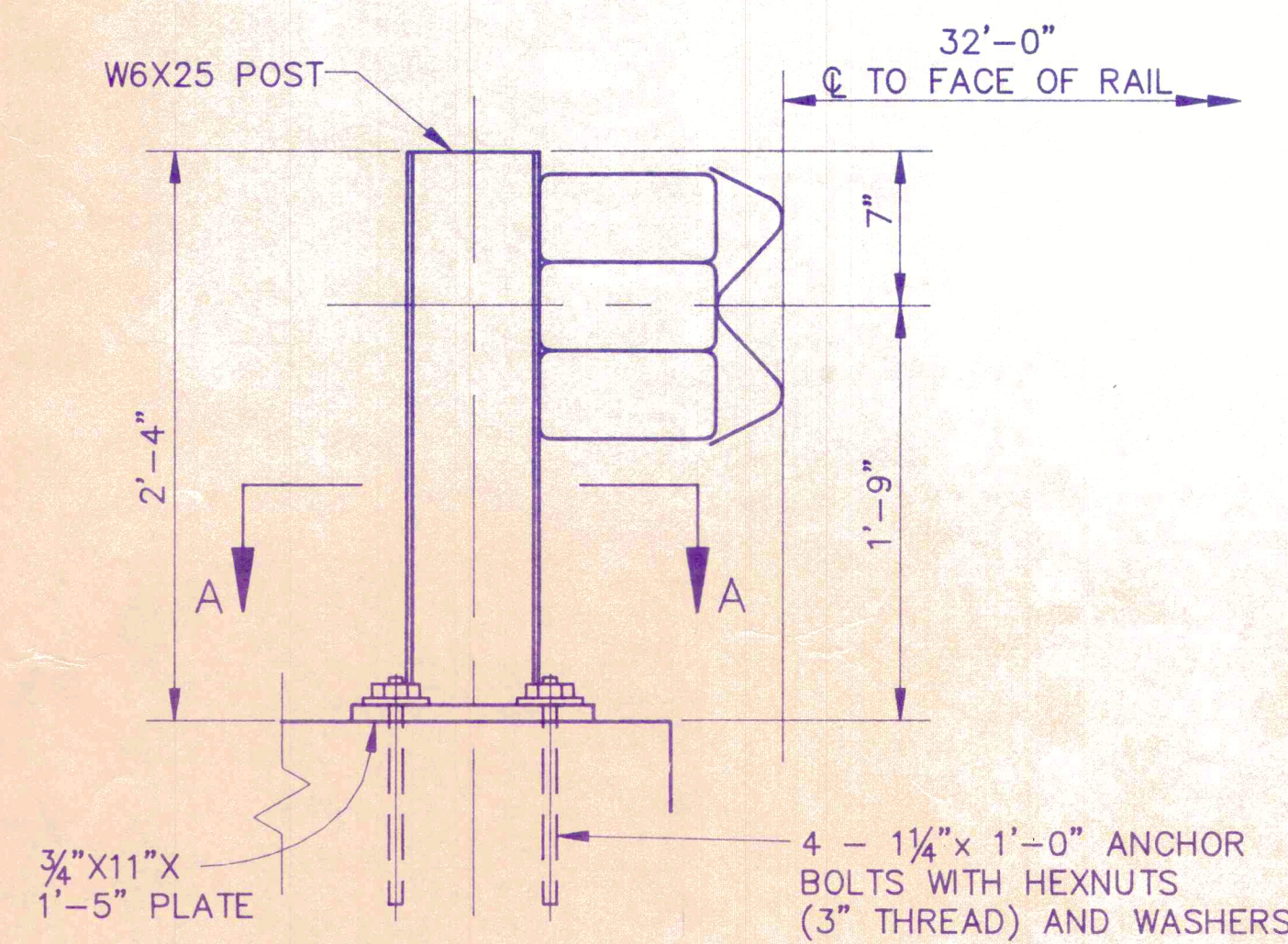
TYPICAL BEAM END DETAIL

DESIGN PROJECT		JONES-STUCKEY, L.T.D., INC. 1641 WEST FIFTH AVENUE COLUMBUS, OHIO 43212	
DATE	11-12-93	REVIEWED	D.W.J.
STRUCTURE FILE NUMBER		DRAWN	K.S.E.
		CHECKED	E.D.W.
SUPERSTRUCTURE DETAILS			
BRIDGE NO. COS-24-0000 OVER MILL CREEK			
COSHOCTON COUNTY COS-CR24			
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15 / 17			

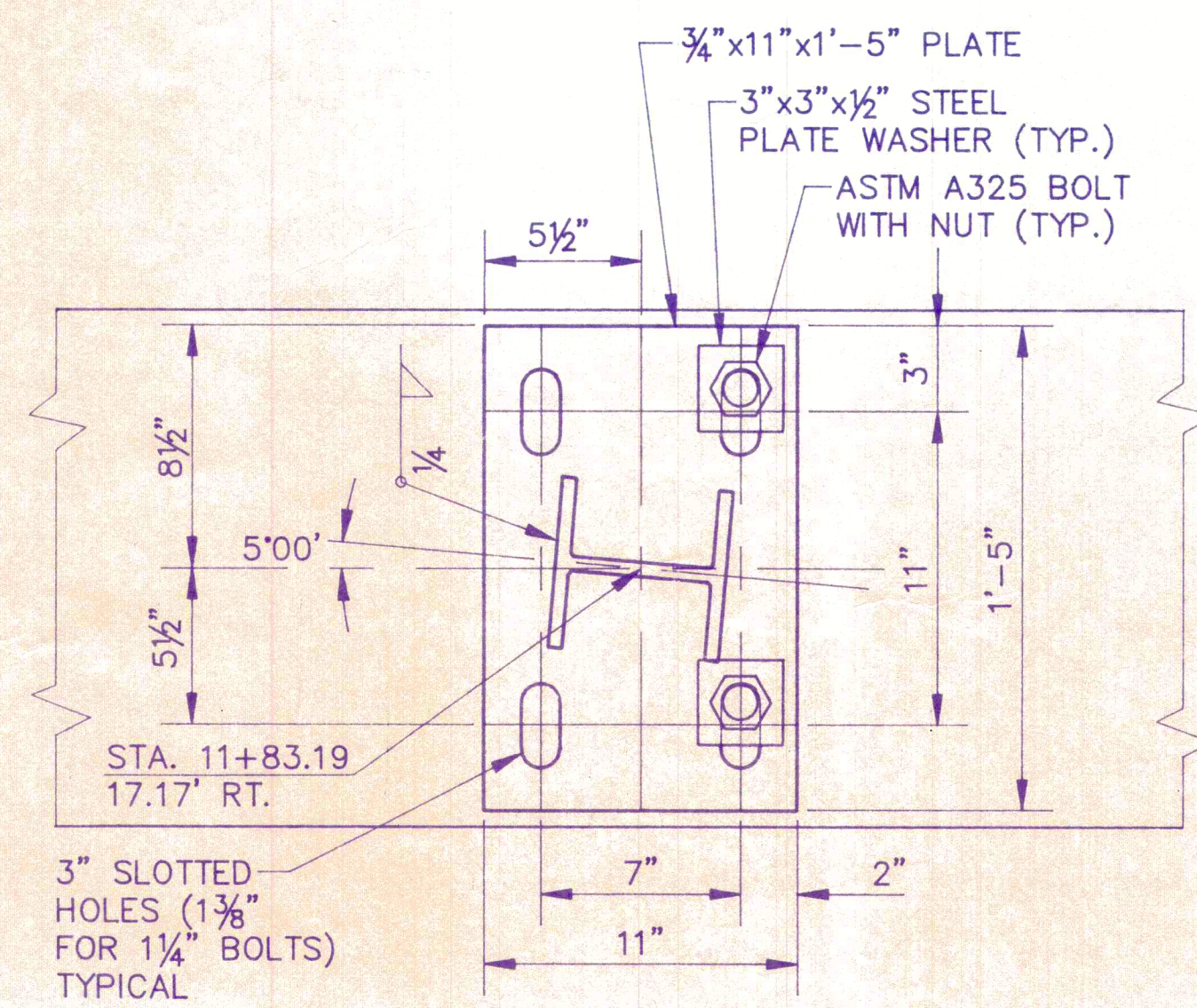
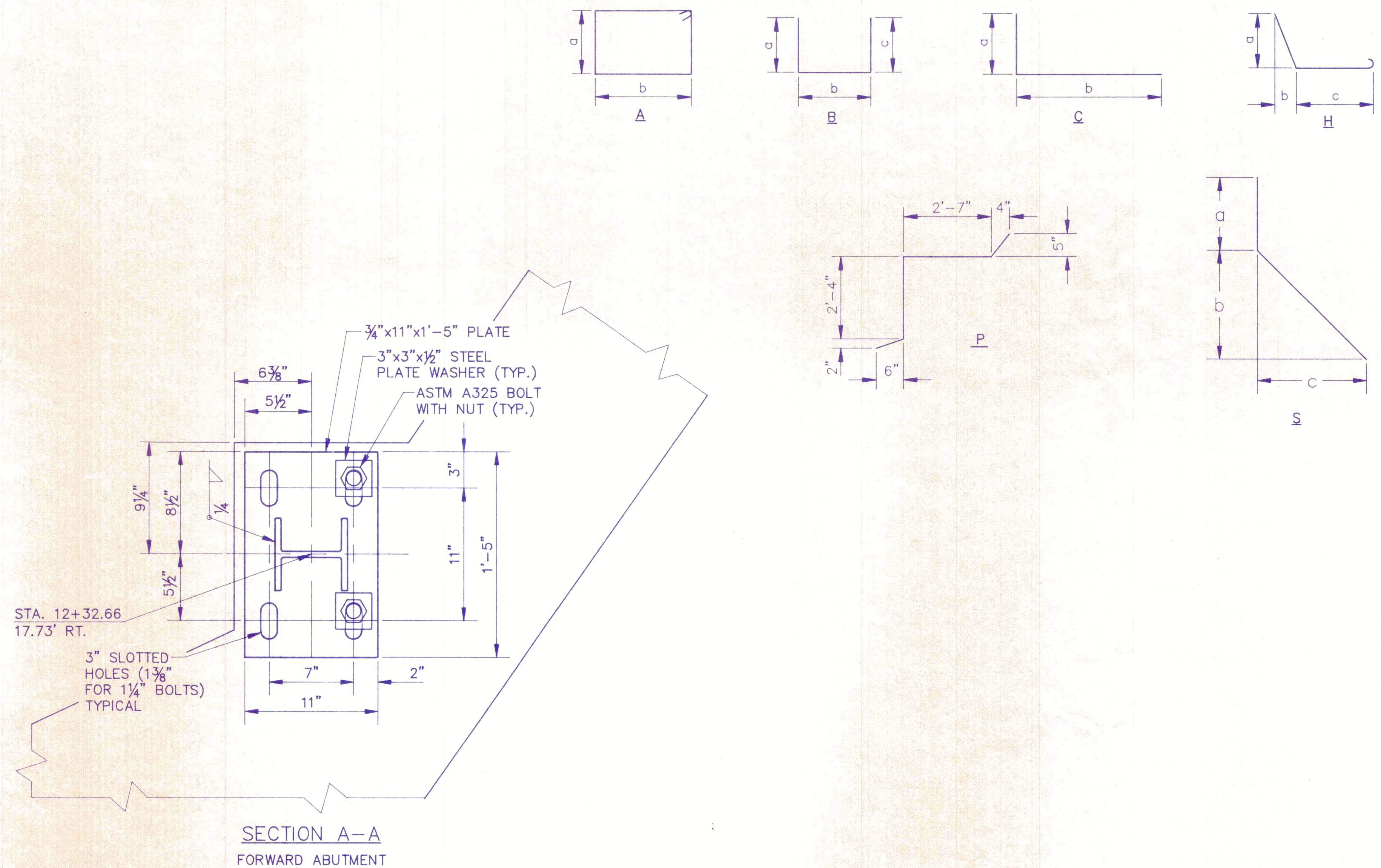
EPOXY REINFORCING STEEL LIST

[illegible]

* INCLUDED WITH DRILLED SHAFT FOR PAYMENT



WALL MOUNTED POST DETAIL

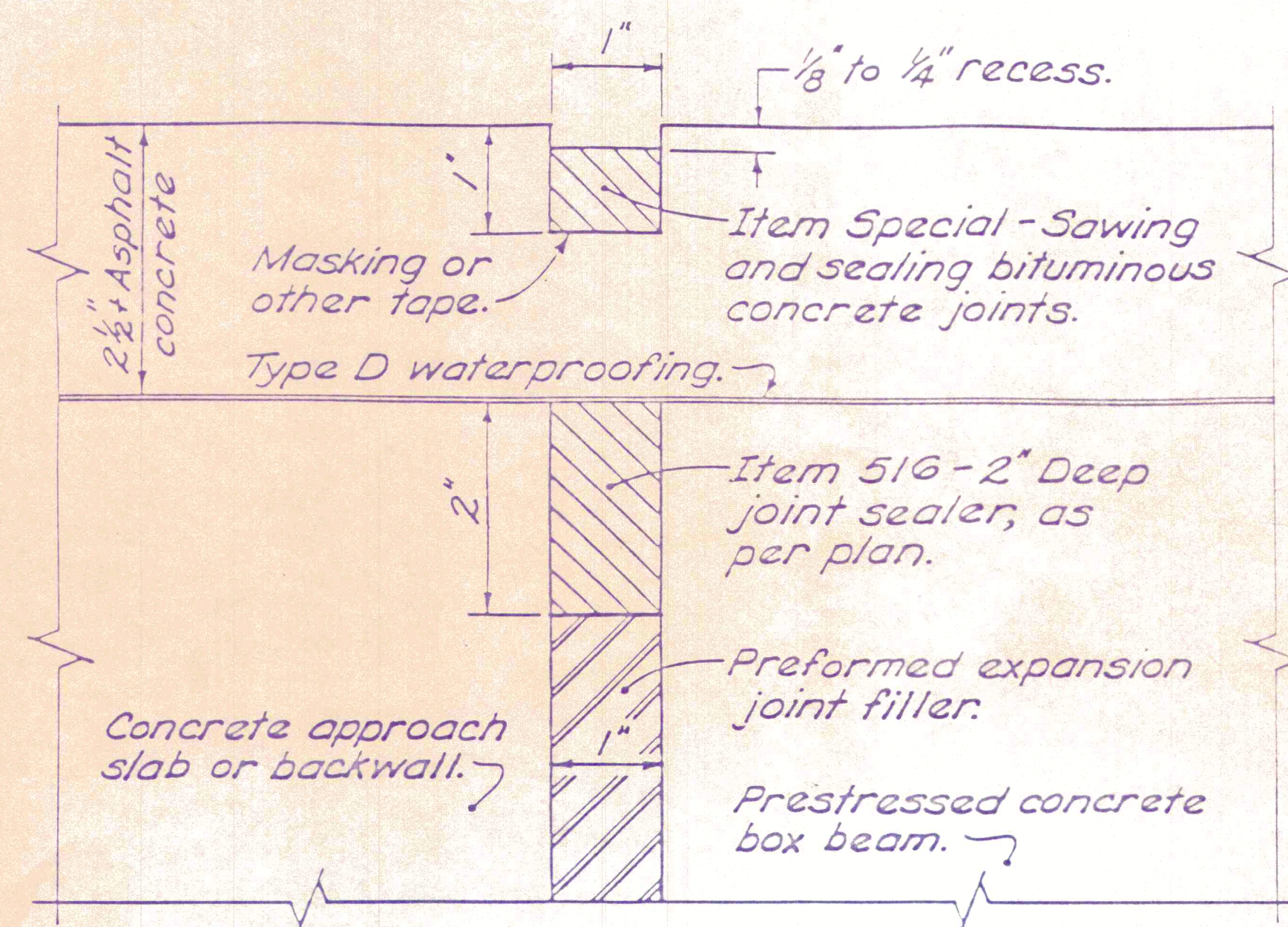


SECTION A-A
REAR ABUTMENT

FHWA REGION	STATE	PROJECT	
5	OHIO		

COSHOCTON COUNTY
COS - CR24

17
17



SEALING OF JOINTS AT ABUTMENTS

ITEM SPECIAL - SAWING AND SEALING BITUMINOUS CONCRETE JOINTS

1) Description:

This work shall consist of cutting and sealing transverse joints on the new bituminous concrete overlay of box beam bridges. Bituminous concrete joints shall be constructed directly over, and in line with, the existing underlying transverse abutment joint of the box beams.

2) Materials:

The joint sealant shall meet the requirements of ASTM Specification D3405, Joint sealants, Hot-poured, for Concrete and Asphalt Pavements. Acceptable alternate materials are:

Roof-Flex 176, polyurethane, as produced by the Carboline Company, 350 Hanley Industrial Court, St. Louis, Missouri 63144 (Roger Zubal, 614-877-3406); a silicone sealant meeting Federal Specifications TT-S-001543A Class A (one-part silicone sealants) and TT-S-00230C Class A (one-component sealants), such as those manufactured by General Electric, Silicone Products Division, 6155 Rockside Rd., Rockside Square I, Independence, Ohio 44131 (John Fromholtz, 216-447-1750) or Dow Corning, 3737 Park East, Beachwood, Ohio 44122 (Robert Ruppel, 216-464-2330); or Sof-Seal, a cold-applied, low-modulus, two-component polymeric compound horizontal sealant as manufactured by W. R. Meadows, Inc., P.O. Box 543, Elgin, Illinois 60121 (Robert Cameron, 312-683-4500). Sealant will be accepted on the basis of the manufacturer's certification that it conforms to the requirements of these specifications.

3) Construction Details:

A) General: The contractor shall conduct his operation so that the cutting, cleaning and sealing of transverse joints is a continuous operation that will be performed as soon as practical after the paving, but no later than four (4) days after placement of the asphalt concrete surface course. Traffic shall not be allowed to knead together or damage the joint cut prior to sealing.

B) Cutting of Transverse Joints: The contractor shall saw or rout transverse joints to the dimensions shown in the details on this sheet. The cut joints shall lie directly above each box beam abutment joint. The joint location shall be marked on the new asphalt surface with a chalk line, or by some other acceptable method, before cutting. Details of the method for locating and accurately marking the proposed cuts shall be subject to the approval of the Engineer prior to starting any surfacing or paving operations.

The blade or blades shall be of such size that the full width and depth of the cut can be made with one pass. Dry or wet cutting will be allowed. Joints shall extend the full width of the bridge.

C) Cleaning Joints: Dry sawed joints shall be thoroughly cleaned with a sufficient amount of compressed air to remove any dirt, dust, or deleterious matter. Wet sawed joints shall be washed clean of all cuttings by flushing with a jet of water and with other tools as necessary. After flushing, the joint shall be blown out with compressed air. When the surfaces are thoroughly clean and dry, and just prior to placing the joint sealer, compressed air having a pressure of at least 90 p.s.i. shall be used to blow out the joint and remove all traces of dust.

In the event freshly cut joints become contaminated before they are sealed, they shall be recleaned of all foreign material by high pressure water jet.

D) Sealing Joints: The joint shall be thoroughly dried before the sealant is placed. After cleaning and drying, a bond-breaker (tape) shall be applied to the bottom of the groove.

Hot-poured joint sealant material shall be heated in a kettle or melter constructed as a double boiler, with the space between the inner and outer shells filled with oil or other heat transfer medium. Positive temperature control and mechanical agitation shall be provided. Heating must be in strict accordance with the manufacturer's recommendation. Joint sealer material shall never be kept heated at the pouring temperature for more than four (4) hours and shall never be reheated. Sealer left in the applicator at the end of a day's work shall be removed and discarded.

Hot-poured sealant shall be applied immediately through a nozzle, which must project into the sawed joint, filling from the bottom up. The seal shall completely fill the joint in such a manner that, after cooling, the level of the sealer will not be higher than 1/8" below the pavement surface. Any depression in the cooled seal greater than 3/16" shall be brought up to the specified limit by further addition of hot-poured sealant. Care shall be taken in the sealing of the joints so that the final appearance will present a neat fine line.

The cold applied sealant materials (polyurethane, silicone, and polymeric compounds) shall be installed as per manufacturers' recommendations, or as directed by the Engineer. The sealant shall be installed when the ambient temperature is 40 degrees F or higher. Traffic shall not be allowed on the joint for one hour after application of the sealant.

4) Method of Measurement:

The quantity to be paid for under this item will be the number of linear feet of joints sawed and sealed as per the above requirements.

5) Basis of Payment:

The unit price per linear foot for Item Special - "Sawing and sealing bituminous concrete joints" shall include the cost of all labor, materials, and equipment necessary to complete the work, including the furnishing and placing of the joint sealer material.

ITEM 516 - 2" DEEP JOINT SEALER, AS PER PLAN

This item shall meet the material (para. 2) and sealing (para. 3D) specifications of Item Special - Sawing and sealing bituminous concrete joints.

REVISIONS	STATE OF OHIO DEPARTMENT OF TRANSPORTATION BUREAU OF BRIDGES AND STRUCTURAL DESIGN	10 / 10
2-8-84 3-10-87 4-14-87 6-16-87	ABUTMENT JOINTS IN BITUMINOUS CONCRETE, BOX BEAM BRIDGES BRIDGE NO. COS - CR24	
DESIGNED JEB	DRAWN MJB	TRACED WTF
CHECKED WTF	REVIEWED WJJ	DATE 2-2-84