U.2

FHWA REGION	STATE	FEDERAL AID PROJECT	FISCAL YEAR
5	OHIO		

1 / 46

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
CUY - 480 - (17.87 WN)(17.90 ES)(17.88 L & R)(18.25)
CITY OF INDEPENDENCE
CUYAHOGA COUNTY

IM-480-4(84)

CUYAHOGA COUNTY
CUY-480- 17.87

DESIGN DESIGNATION

		I-480 MAINLINE
CURRENT ADT (1995)	=	108,400
DESIGN YEAR ADT (2015)	=	113,820
D.H.V.	=	11,382
T	=	10%

FUNCTIONAL CLASSIFICATION - INTERSTATE
DESIGN EXCEPTIONS - NONE

DESIGN SPEED	=	60 M.P.H.
LEGAL SPEED	=	55 M.P.H.

MICROFILMED
APR 03 1997

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE REVISED CODE OF OHIO.

CONVENTIONAL SIGNS

COUNTY LINE
TOWNSHIP LINE
SECTION LINE
CORPORATION LINE
FENCE LINE (EXISTING) —X—X— (PROPOSED) —X—X—
CENTER LINE
TREES, STUMPS, (TO BE REMOVED)
UTILITY POLES: TELEPHONE, POWER, LIGHT
WATER LINE —W— W.V. GAS LINE —G— G.V.
LIMITED ACCESS — LA
RIGHT OF WAY — RW
TEMPORARY RIGHT OF WAY — T
EXISTING RIGHT OF WAY
PROPERTY LINE (IN EXISTING FENCE) —X—X—
RAILROAD — OR
GUARD RAIL (EXISTING) (PROPOSED)
WORK LIMITS
SEWERS: SANITARY —S— STORM —ST—

INDEX OF SHEETS

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STRUCTURE PLANS AND DETAILS	23-40, 30A-C, 35A
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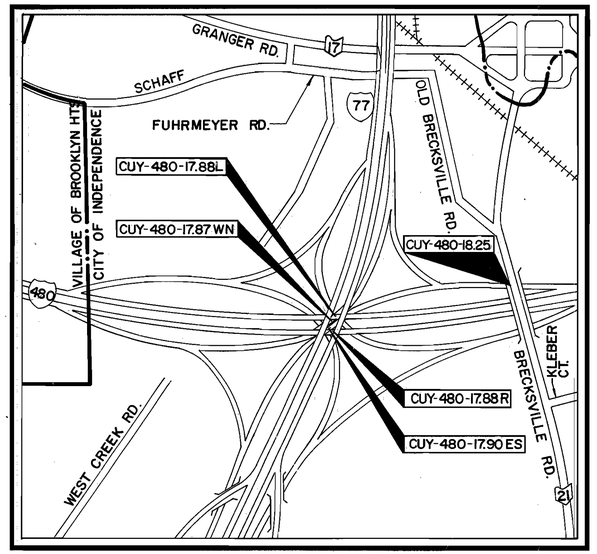
SHEET 45 OMITTED



LOCATION MAP
No Scale

N

1995 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY. PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES

APPROVED Bryan L. Stockton
DATE 8-1-95 DISTRICT DEPUTY DIRECTOR OF TRANSPORTATION

APPROVED Richard L. Engel
DATE 7/31/95 ENGINEER BUREAU OF BRIDGES AND STRUCTURAL DESIGN

APPROVED
DATE DEPUTY DIRECTOR, DESIGN

APPROVED Jerry Wray
DATE 8-15-95 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEATURE	STRUCTURE No.	BEGIN WORK	END WORK	
I-480 RAMP (NORTH)	CUY.-480-17.87 WN	STA.61+40	STA.75+75 =	1435.00 L.F.
I-480 WEST	CUY.-480-17.88 L	STA 958+40	STA.985+45 =	2705.00 L.F.
I-480 EAST	CUY.-480-17.88 R	STA.958+40	STA.985+45 =	2705.00 L.F.
I-480 RAMP (SOUTH)	CUY.-480-17.90 ES	STA. 64+22	STA. 79+52 =	1530.00 L.F.
BRECKSVILLE RD.	CUY.-480-18.25	STA.102+61	STA.114+79 =	1218.00 L.F.

PROJECT LENGTH = 0.000 L.F. = 0.000 MILES
TOTAL WORK LENGTH = 9,593.00 L.F. = 1.817 MILES

PORTION TO BE IMPROVED
STATE & FEDERAL ROUTES
OTHER ROADS

SCALES

PLAN 0 100'

SUPPLEMENTAL SPECIFICATIONS	
802 3-23-95	
902 6-14-95	
921 6-14-95	
923 6-14-95	

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS									
								MC-9.2	5-6-91
BR-1	12-15-94	TC-41.10	8-29-84					MT-99.10	11-14-86
BP-2.4	2-21-92	TC-42.10	8-19-77			SD-1-69	6-12-69		
BP-3.1	2-21-92	TC-52.10	4-3-79					TC-35.10	8-29-84
		TC-52.20	4-3-79	MT-95.30	10-10-88	VPF-1-90 Rev. 3-24-93			
AS-1-81	Rev. 9-15-94	TC-41.20	6-21-94	MT-95.31	10-10-88			MC-1	6-13-69
				MT-95.32	8-25-89	SD-1-65	11-8-65	MC-11	8-1-78
EXJ-4-87	Rev. 11-12-93			MT-101.60	7-1-92				
GR-1.1	5-6-91	GR-2.1	5-6-91	PCB-91	4-24-92			MC-9.3	10-30-92
GR-1.2	10-30-92			PCB-DD	4-24-92			MC-9.4	10-30-92
GR-3.1	5-6-91			MT-102.10	8-25-89				
GR-3.4	5-6-91			MT-105.10	7-1-92				
GR-1.3	2-21-92			MT-105.11	7-1-92				

2 WORKING DAYS BEFORE YOU DIG
CALL TOLL FREE 800-362-2764
OHIO UTILITIES PROTECTION SERVICE

Western Reserve Engineering & Surveying Co.
DIVISION OF W.R.E.S. CORPORATION
5533 CANAL ROAD / CLEVELAND, OHIO 44125 / (216) 524-0008

PROJECT: CUY-480-17.87 PID # 5654
DATE OF LETTING 12-20 1995, CONTRACT NO. 684

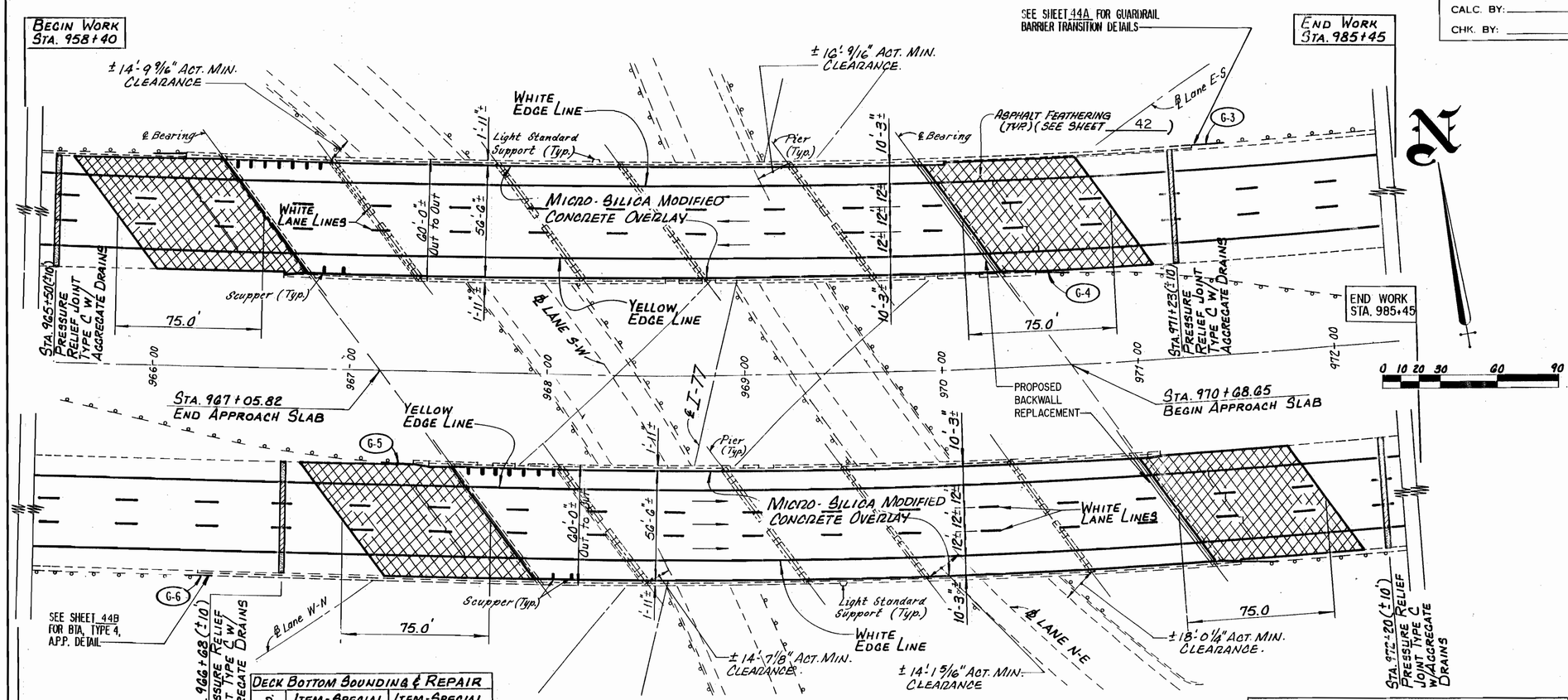
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED:
DIVISION ADMINISTRATOR DATE

TITLE SHEET

CALC. BY:	DATE:
CHK. BY:	DATE:

FHWA REGION	STATE	PROJECT	
5	OHIO		

CUYAHOGA COUNTY
CUY-480-17.87



PLAN

CUY-480-1788 L&R

I-480 OVER LANE N-E & S-W

NOTES.

1. FOR SEALING OF EXISTING TRANSVERSE EXPANSION JOINTS SEE SHEET NO. 41.
2. INSTALLATION OF PRESSURE RELIEF JOINTS AND AGGREGATE DRAINS AT APPROXIMATE STATIONS 965+50, 966+68, 971+23 AND 972+20 ARE AS PER STANDARD CONSTRUCTION DRAWING BP-2.4
3. FOR ASPHALT FEATHER DETAILS SEE SHEET NO. 42.
4. FOR RESETTING BEARINGS SEE DETAIL ON SHEET NO. 42.
5. FOR BEAM ENDS CUTTING DETAIL SEE SHEET NO. 43.
6. FOR TRANSVERSE SECTION SEE SHEET NO. 26.
7. EXCEPT WHERE NOTED, SEE SHEET NO. 44 FOR GUARDRAIL/BARRIER DETAILS.
8. FOR BACKWALL REPLACEMENT SEE SHEET NO. 28-32.

EXISTING STRUCTURE

TYPE:	CONTINUOUS ROLLED BEAMS WITH REINFORCED CONCRETE DECK AND SUB-STRUCTURE.
SPANS:	59'-9", 85'-3", 61'-3 7/8", 84'-9 7/8" AND 66'-1" (MEASURED ALONG ℄ I-480.)
ROADWAY:	56'-6" FACE TO FACE OF PARAPETS (BOTH BRIDGES)
LOADING:	HS20-44 AND INTERSTATE ALTERNATE LOADING.
SKEW:	38°31'02" RIGHT FORWARD TO THE EXTENDED LOCAL TANGENT AT P.C. STA. 967+67.58 ℄ I-480
WEARING SURFACE:	1-1/4" ASPHALT
APPROACH SLABS:	REINFORCED CONCRETE (20' LONG)
ALIGNMENT:	TANGENT AND 1°23'00" LEFT.
SUPERELEVATION:	VARIES ; - 0.003 FT. PER FT. TO 0.036 FT. PER FT.

PROPOSED STRUCTURE

PROPOSED WORK:

1) MICRO-SILICA MODIFIED CONCRETE OVERLAY.
2) PRESSURE RELIEF JOINT INSTALLATION.
3) SLOPE REPAIR AND PROTECTION.
4) CONCRETE BRIDGE COMPONENT REPAIR AND SEALING.
5) DECK BOTTOM SOUNDING AND REPAIR.
6) SEALING TRANSVERSE EXPANSION JOINTS.
7) RESETTING BEARINGS
8) CUTTING BEAM ENDS
9) REPLACE EXISTING BACKWALLS

TYPE: SAME
SPAN: SAME
ROADWAY: SAME
LOADING: SAME
SKEW: SAME
WEARING SURFACE: 2 1/2" MICRO-SILICA MODIFIED CONCRETE OVERLAY.
APPROACH SLABS: AS I-81 (T=15")
ALIGNMENT: SAME
SUPERELEVATION: SAME

DECK BOTTOM SOUNDING & REPAIR

BRIDGE No.	ITEM-SPECIAL SOUNDING CONCRETE BOTTOM	ITEM-SPECIAL LOW PRESSURE EPOXY INJECTING OF DELAMINATED CONCRETE
	S.F.	S.F.
CUY-480 1788-L	21,770	918
CUY-480 1788-R	21,770	513
TOTALS		1,431

PAVEMENT

STATIONS From	STATIONS To	BRIDGE No.	254 PAVEMENT PLANING BITUMINOUS	404 ASPHALT CONCRETE AC-20	407 TACK COAT 0.1 GAL./S.Y.	SPEC. MSC OVERLAY W/WEARING SHOULDER (2 1/2" THICK)	SPEC. MSC OVERLAY (VARIABLE THICKNESS)	202 ▫WEARING COURSE REMOVED
			S.Y.	C.Y.	GAL.	S.Y.	C.Y.	S.Y.
966+31	967+06	CUY-480 1788-L	471	19.6	47	—	—	
967+06	970+69		—	—	—	2,279	105	2279
970+69	971+44		471	19.6	47	—	—	
966+31	967+06	CUY-480 1788-R	471	19.6	47	—	—	
967+06	970+69		—	—	—	2,279	67	2279
970+69	971+44		471	19.6	47	—	—	
TOTALS			1,884	78.4	188	4,558	172	4558

▫: As Per Plan (Asphalt)

PRESSURE RELIEF JOINTS & AGGREGATE DRAINS

STATIONS	BRIDGE No.	SPECIAL PRESSURE RELIEF JOINT TYPE C	605 AGGREGATE DRAIN
		L.F.	L.F.
965+50	CUY-480 1788-L	36	20.5
971+23		36	20.5
966+68	CUY-480 1788-R	36	20.5
972+20		36	20.5
TOTALS		144	82

PERMANENT PAVEMENT MARKINGS

STATIONS From	STATIONS To	BRIDGE No.	SIDE	644 WHITE EDGE LINE MILE	644 YELLOW EDGE LINE MILE	644 WHITE LANE LINE MILE
959+45	988+15	CUY-480 1788-L	LT.	0.54	—	0.54
959+45	988+15	CUY-480 1788-R	RT.	—	0.54	0.54
949+75	978+20		LT.	—	0.54	0.54
949+75	978+20		RT.	0.54	—	0.54
TOTALS				1.08	1.08	2.16

GUARDRAIL

REF. NO.	SIDE	202 GUARDRAIL REMOVED	606 GUARDRAIL TYPE 5	606 BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN	606 BRIDGE TERMINAL ASSEMBLY, TYPE 1	622 CONCRETE BARRIER, AS PER PLAN
		L.F.	L.F.	EA.	EA.	L.F.
G-3	LT	37.5	25		1	14
G-4	LT	37.5	25		1	14
G-5	RT	37.5	25		1	14
G-6	RT	25	25	1		
TOTAL		137.5	100	1	3	42

CONCRETE BRIDGE COMPONENTS REPAIR

LOCATION	BRIDGE No.	ITEM-519 PATCHING CONC. STRUCTURE	ITEM-SPECIAL PATCHING CONC. W/TROWELLABLE MORTAR	
		S.F.	S.F.	
PARAPET	CUY-480 1788-L	38	27	
BACKWALL AND ABUTMENTS		13	13	
PIERS		54	55	
PARAPET	CUY-480 1788-R	10	8	
BACKWALL AND ABUTMENTS		19	12	
PIERS		53	57	
TOTALS		187	172	

SLOPE REPAIR & PROTECTION

BRIDGE No.	LOCATION	601 DUMPED ROCK, TYPE D
		S.Y.
CUY-480 1788-L	EAST ABUTMENT	45
	WEST ABUTMENT	40
CUY-480 1788-R	EAST ABUTMENT	17
	WEST ABUTMENT	54
TOTALS		156

Western Reserve Engineering & Surveying Co.

7/33

GENERAL PLAN

BR № CUY-480-1788 L&R
OVER LANE SW AND LANE NE

CUYAHOGA COUNTY OHIO

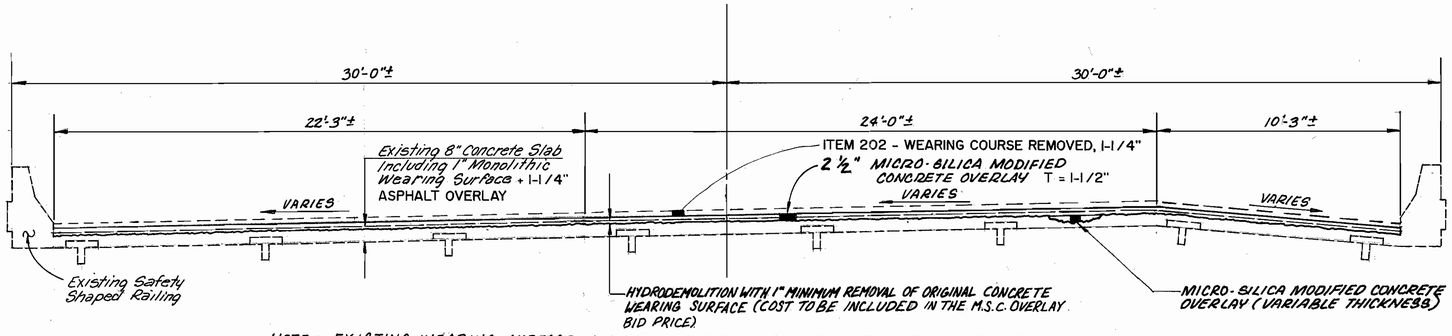
Designed	Traced	Checked	Reviewed	
JJF	MR	DPB	E.J.H.	REVISED ODOT BGW 3/95

CALC. BY:	DATE:
CHK. BY:	DATE:

FHWA REGION	STATE	PROJECT	
5	OHIO		

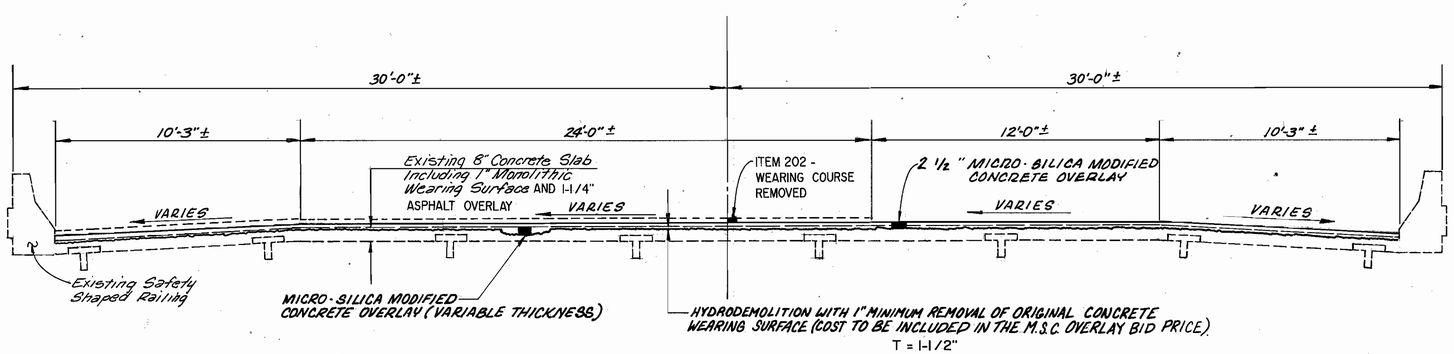
26/46

CUYAHOGA COUNTY
CUY-480-17.87



NOTE: EXISTING WEARING SURFACE HAS BEEN PATCHED WITH QUICK SET MORTAR & ASPHALT & OVERLAYED WITH 1-1/4" ASPHALT.

CUY-480-1788 L.
TRANSVERSE SECTION



CUY-480-1788 R.
TRANSVERSE SECTION

NOTE: EXISTING WEARING SURFACE HAS BEEN PATCHED WITH QUICK SET MORTAR & ASPHALT & OVERLAYED WITH 1-1/4" ASPHALT.

Western Reserve Engineering & Surveying Co.

8/33

CUY-480-1788 LEFT & RIGHT
TRANSVERSE SECTIONS
OVER LANE S.W. AND LANE N.E.

CUYAHOGA COUNTY OHIO

Designed	Traced	Checked	Reviewed	REVISED ODOT
F.M.E.	E.R.S.	E.J.H	J.J.F.	BGW 3/95

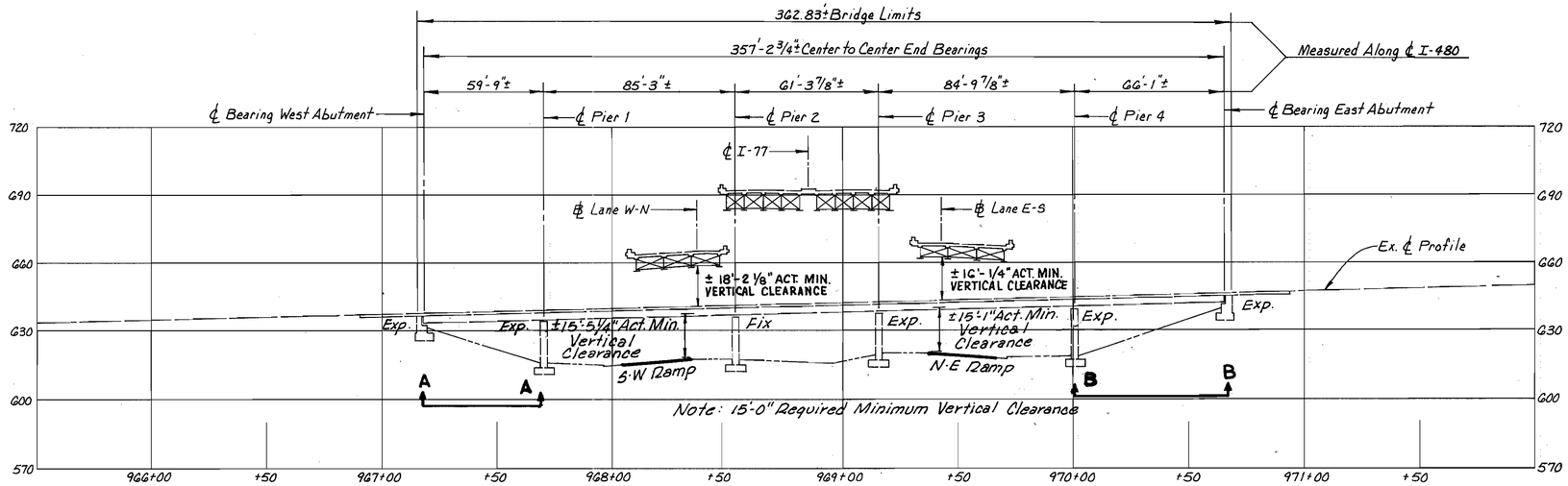
CLEVELAND BLUE PRINT, INC. 531543

CALC. BY:	DATE:
CHK. BY:	DATE:

FHWA REGION	STATE	PROJECT	
5	OHIO		

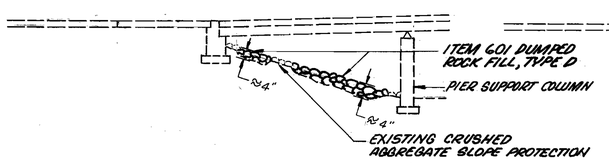
27/46

CUYAHOGA COUNTY
CUY-480-1787



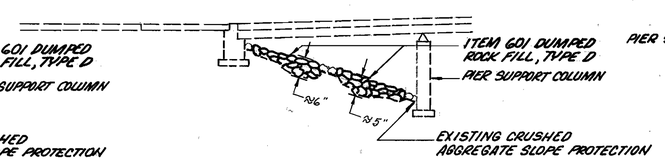
EXISTING ELEVATION

CUY-480 1788 L



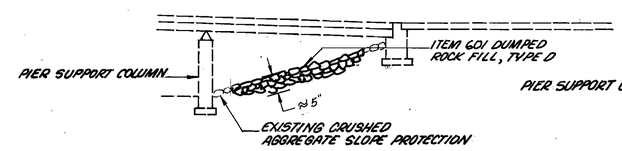
PROFILE VIEW

CUY-480 1788 R



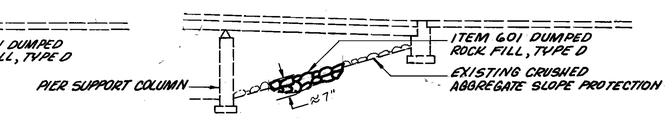
PROFILE VIEW

CUY-480-1788 L

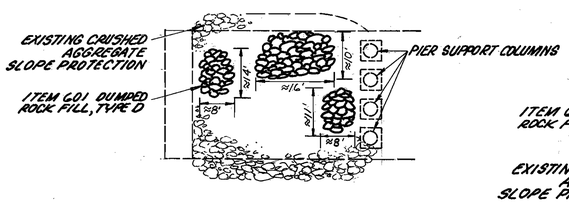


PROFILE VIEW

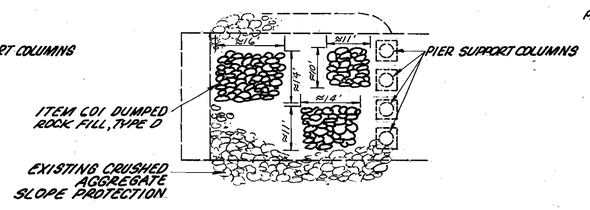
CUY-480-1788 R



PROFILE VIEW



SECTION A-A



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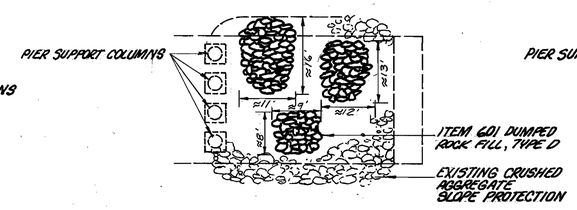
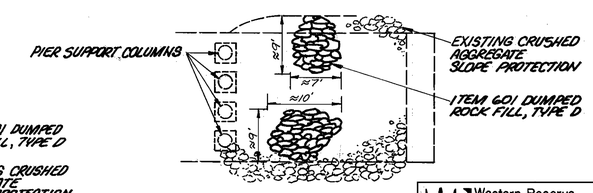


SECTION B-B



SECTION B-B

Western Reserve Engineering & Surveying Co.

9 / 33.

ELEVATION

BRIDGE NO.
CUY-480-1788 L & R
OVER RAMP SW AND RAMP NE

CUYAHOGA COUNTY OHIO

Designed	Traced	Checked	Reviewed
F.M.E.	C.W.	E.J.H.	J.J.F.

ELEVATION CUY-480-1788 L & R

CLEVELAND BLUE PRINT, INC. 533543