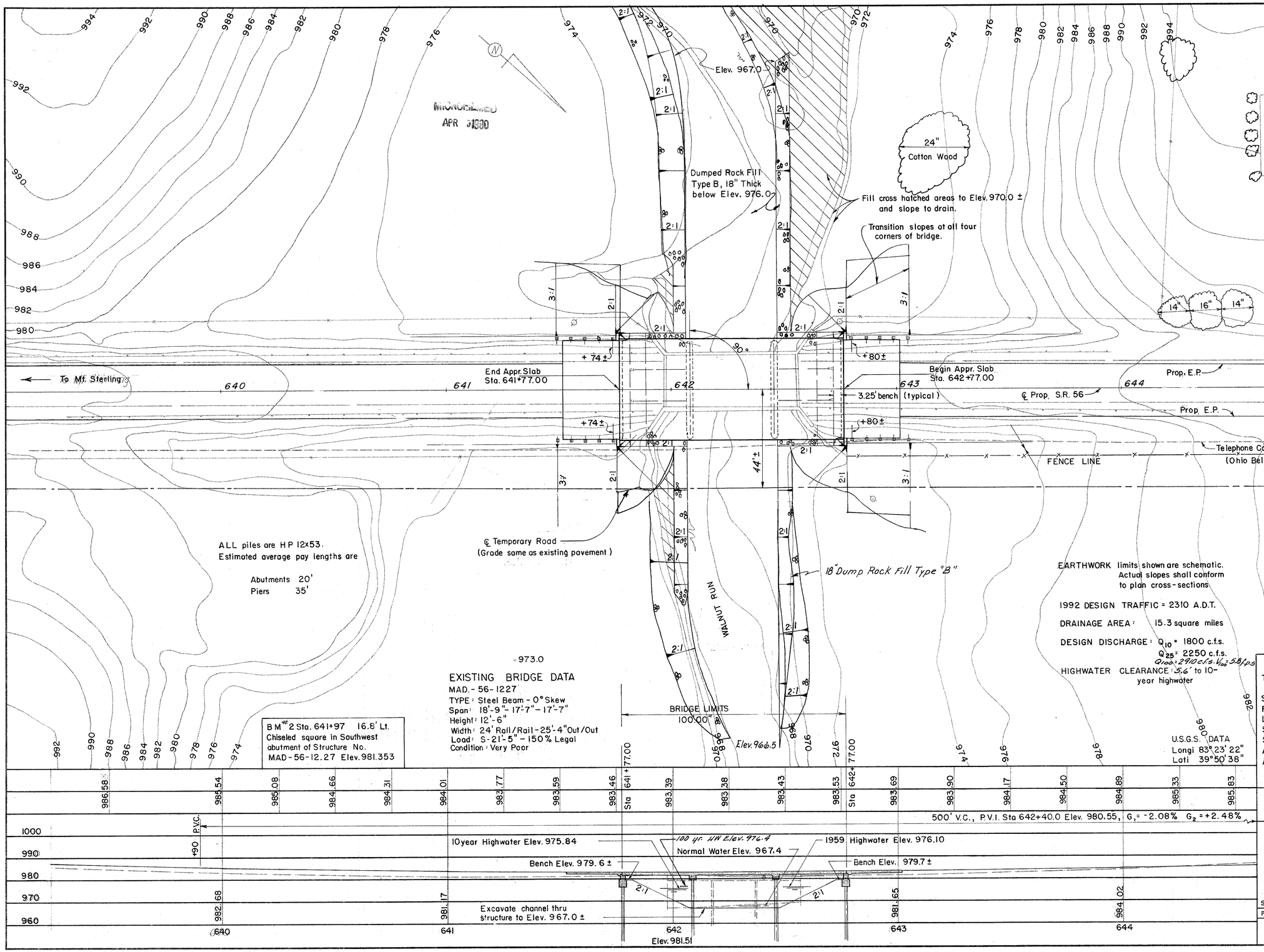
FHWA	STATE	PROJECT	
5	OHIO	BRS-142 (6)	

MAD-56-N.78

44/52



PROPOSED STRUCTURE

TYPE: Continuous reinforced concrete slab with capped pile substructure.
SPANS: 30'-0' - 37.5' - 30.0'
ROADWAY: 44.0' f/f guard rail
LOADING: HS 20 - 44
SKEW: None
SURFACE COURSE: 2½" Asphalt Concrete
APPROACH SLABS: AS-1-72 (25' long) modified.
ALIGNMENT: Tangent

1/4

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SITE PLAN

BRIDGE NO. MAD-56-1227
OVER WALNUT RUN
MADISON COUNTY

STA. 641 + 77.00
642 + 77.00

SCALE 1" = 20'

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
AERIAL SURVEY	AERIAL SURVEY	D.H.S.	D.H.S.	FPK	

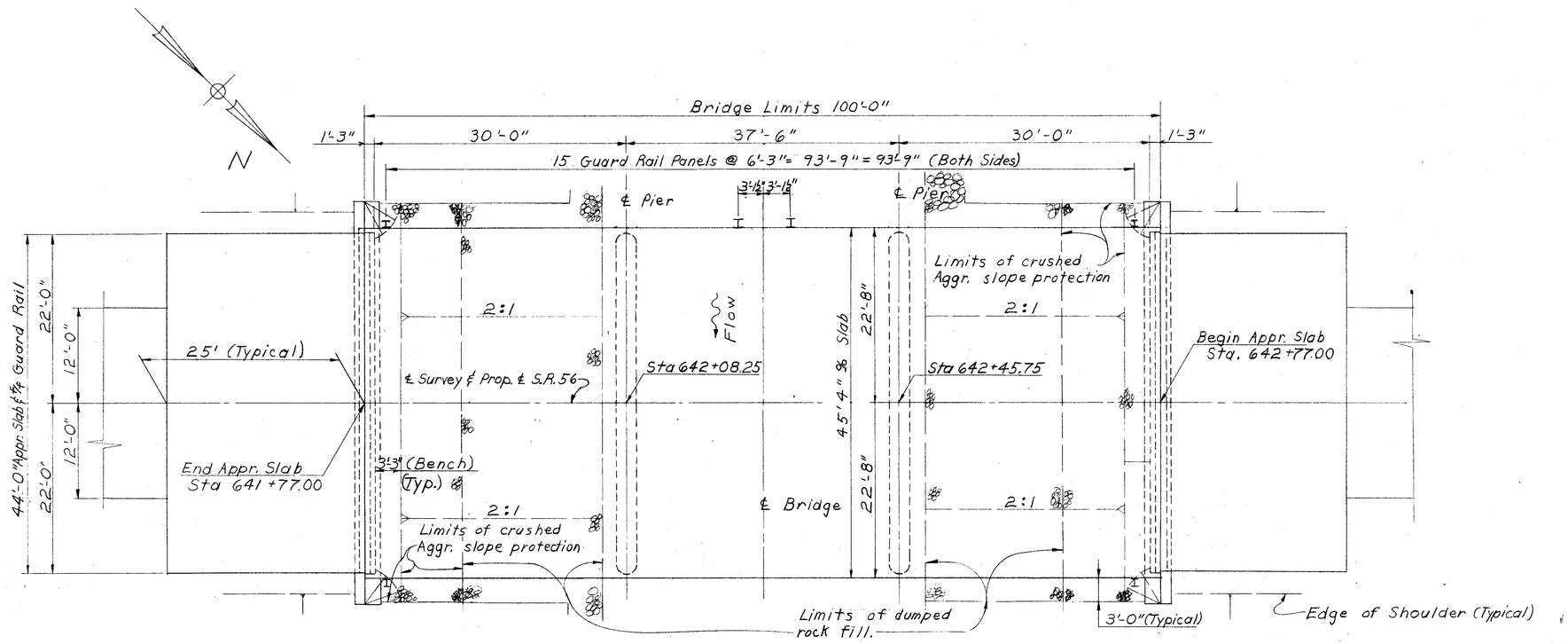
BFG 11-29-72

FHWA	STATE	PROJECT	
5	OHIO	BS-142(6)	

45/52

MAD-56-11.78

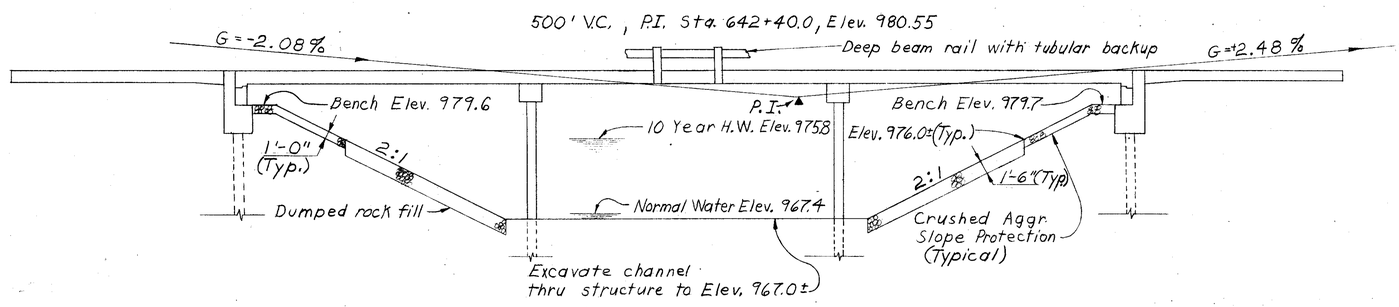
APR



GENERAL PLAN

DUMPED ROCK, suitable waste masonry may be incorporated in the dumped rock fill with the approval of the Engineer.

RAILINGS, see standard drawing DBR-2-73 dated 4-10-73 for deep beam guardrail details.



ELEVATION

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

2/4

GENERAL PLAN AND ELEVATION

BRIDGE NO. MAD-56-1227 OVER WALNUT RUN

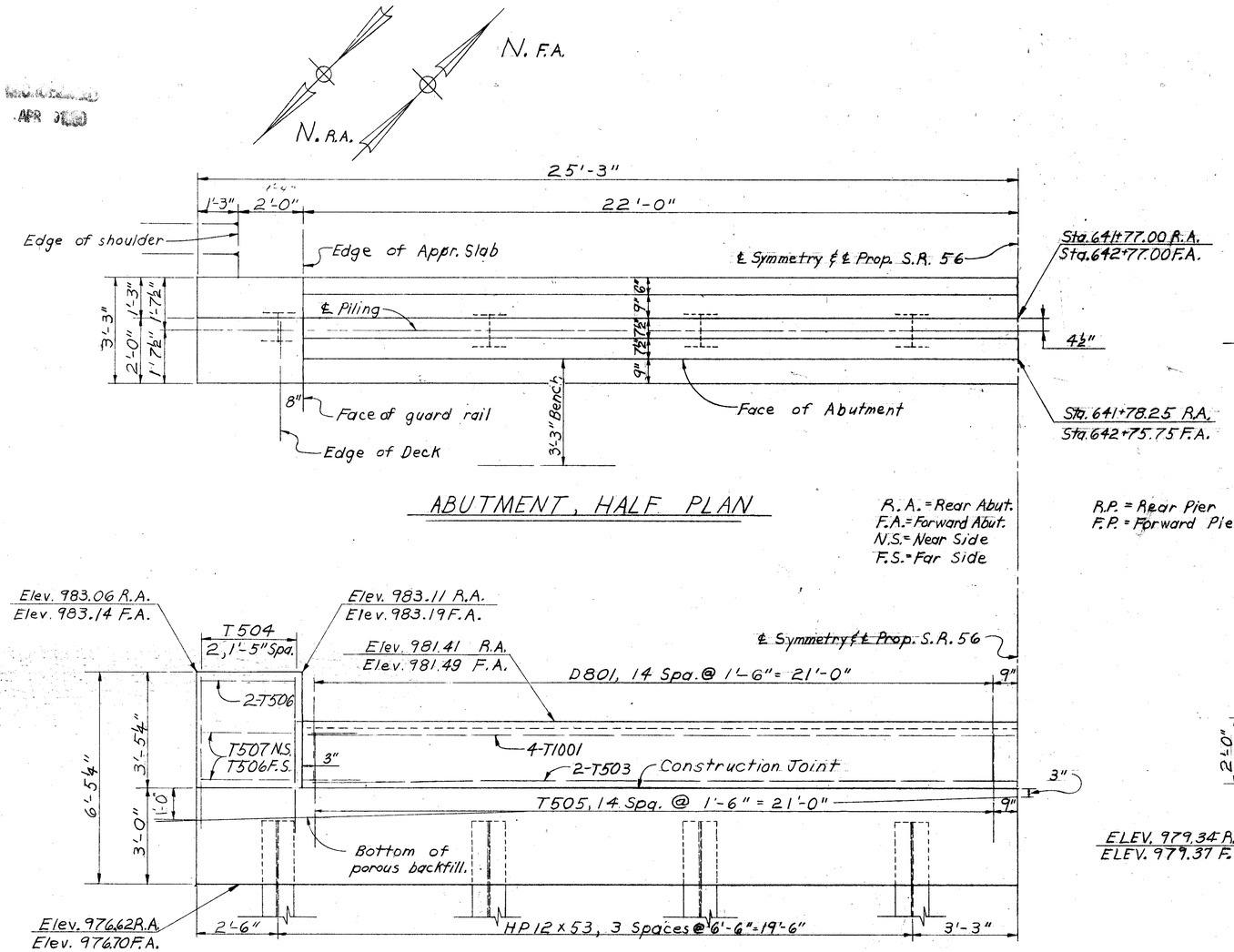
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JGS	JGS		MRG	BFG	11-29-72	

FHWA	STATE	PROJECT	
5	OHIO	BS-142 (6)	

46/52

MAD-56-11.78

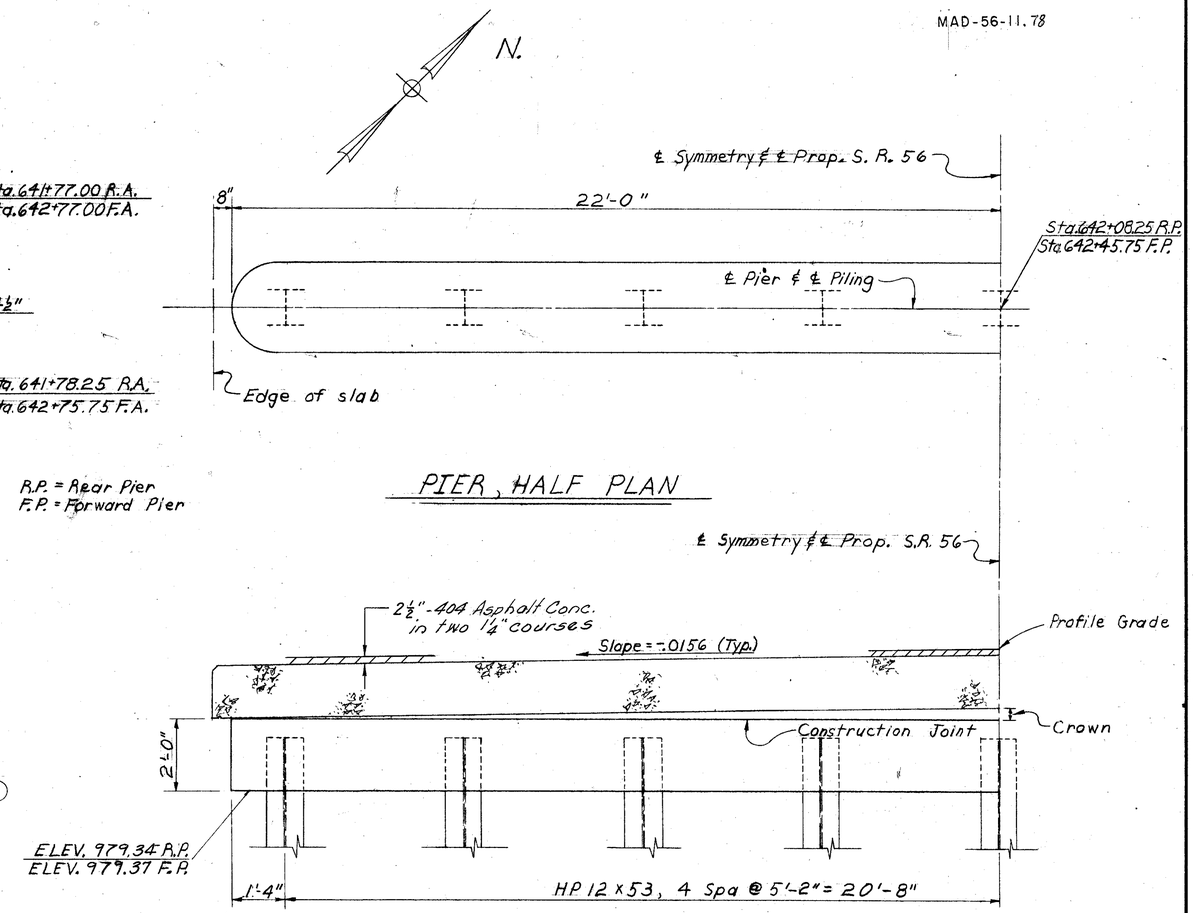
APR 1980



ABUTMENT, HALF PLAN

R.A. = Rear Abut.
F.A. = Forward Abut.
N.S. = Near Side
F.S. = Far Side

ABUTMENT, HALF ELEVATION



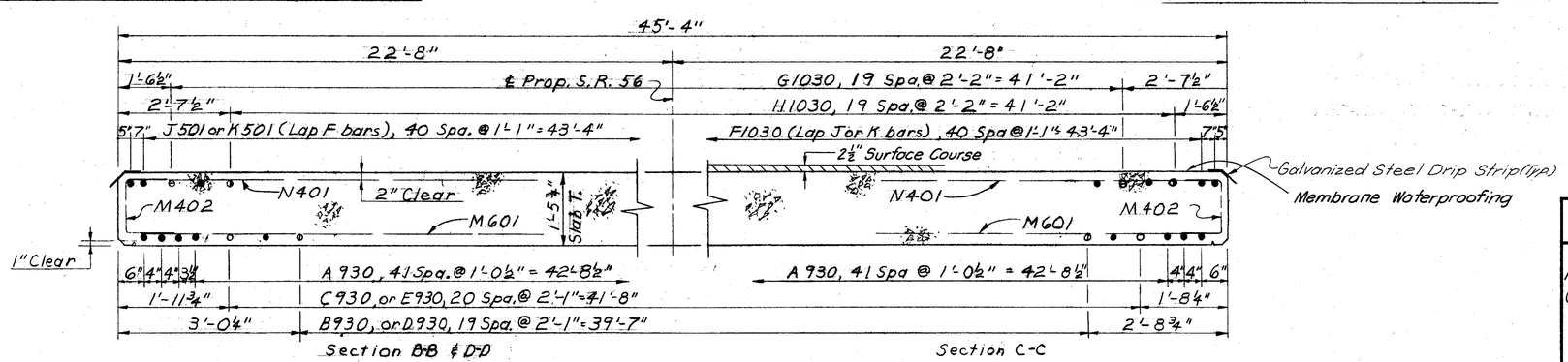
R.P. = Rear Pier
F.P. = Forward Pier

PIER, HALF PLAN

PIER, HALF ELEVATION

ABUTMENT DETAILS, see standard drawing, CPA-2-73, dated 4-10-73, for footing reinforcement, cross sections, general notes, and design notes. Also see standard drawing, AS-1-72, dated 6-30-72, for the location of the D801 bars.

SUPERSTRUCTURE & PIER DETAILS, see standard drawing, CPP-2-73, dated 4-10-73, for pier details not shown, and see standard drawing, CS-2-73, dated 4-10-73, for slab details not shown and also for the location of sections BB, DD & CC.



COMPOSITE TRANSVERSE SECTION

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

3/4

ABUTMENT DETAILS, PIER DETAILS, COMPOSITE TRANSVERSE SECTION

BRIDGE NO. MAD-56-1227
OVER WALNUT RUN

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JGS	JGS		MRG	BFG	11-29-72	

FHWA	STATE	PROJECT	
5	OHIO	RS-142 (6)	

APR 1973

MAD-56-11.78

REINFORCING STEEL LIST

SUPERSTRUCTURE

MARK	TOTAL	LENGTH	WEIGHT	TYPE	A	B	C	D	R
A 930	141	35'-1"	16819	S					
B 930	40	25'-2"	3423	6	23'-11"				
C 930	42	23'-5"	3344	6	22'-2"				
D 930	20	23'-3"	1581	S					
E 930	21	19'-8"	1404	S					
F 1030	86	22'-2"	8203	S					
G 1030	40	11'-8"	2008	S					
H 1030	40	8'-6"	1463	S					
J 501	86	21'-6"	1929	S					
K 501	43	19'-8"	882	S					
M 601	178	23'-6"	6283	S					
M 402	162	2'-10"	307	2	1'-1 1/4"	1'-0"	1'-0"		
N 401	200	23'-1"	3084	S					

PIERS

MARK	Forward	Rear	TOTAL	LENGTH	WEIGHT	TYPE	A	B	C	D	R
P 1001	8	8	16	24'-0"	1652	S					
P 901	8	8	16	22'-4"	1215	S					
P 501	4	4	8	21'-9"	181	S					
P 502	32	32	64	8'-9"	584	3	2'-2"	2'-11"	0'-7 1/2"		
P 503	2	2	4	8'-7"	36	3	2'-0"	2'-11"	0'-7 1/2"		
P 504	2	2	4	3'-11"	16	2	2'-10 3/4"	0'-7 1/2"	0'-7 1/2"		
P 505	4	4	8	6'-4"	53	5	1'-7"	2'-0 1/4"			0'-11 1/8"
P 401	18	18	36	8'-0"	192	1	2'-0 1/4"	1'-9"			

ABUTMENTS

MARK	Forward	Rear	TOTAL	LENGTH	WEIGHT	TYPE	A	B	C	D	R
T 1001	8	8	16	23'-6"	1618	S					
T 801	8	8	16	26'-3"	1121	S					
T 501	8	8	16	25'-10"	431	S					
T 502	78	78	156	6'-10"	1112	2	2'-11"	2'-1"	2'-1"		
T 503	4	4	8	22'-9"	190	S					
T 504	6	6	12	10'-8"	134	2	0'-11"	5'-0"	5'-0"		
T 505	30	30	60	7'-11"	495	2	1'-8"	3'-3"	3'-3		
T 506	8	8	16	2'-10"	47	S					
T 507	4	4	8	4'-10"	40	S					
T 401	16	16	32	9'-2"	196	1	1'-9"	2'-7 3/4"			
D 801	29	29	60	6'-9"	1081	7	1'-1"	4'-2"			

REFER TO CMS SECTIONS 106.03, 700, 709.01 THROUGH 709.05 AND 709.08. SUFFICIENT ADDITIONAL REINFORCING STEEL SHALL BE PROVIDED FOR SAMPLING. RANDOM SAMPLES SHALL BE REPLACED IN THE STRUCTURES BY THE ADDITIONAL STEEL, SPLICED IN ACCORDANCE WITH 509.08.

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. FOR EXAMPLE, A700 IS A NO. 7 SIZE BAR AND A1014 IS A NO. 10 SIZE.

BAR DIMENSIONS SHOWN ARE OUT TO OUT, UNLESS OTHERWISE INDICATED.

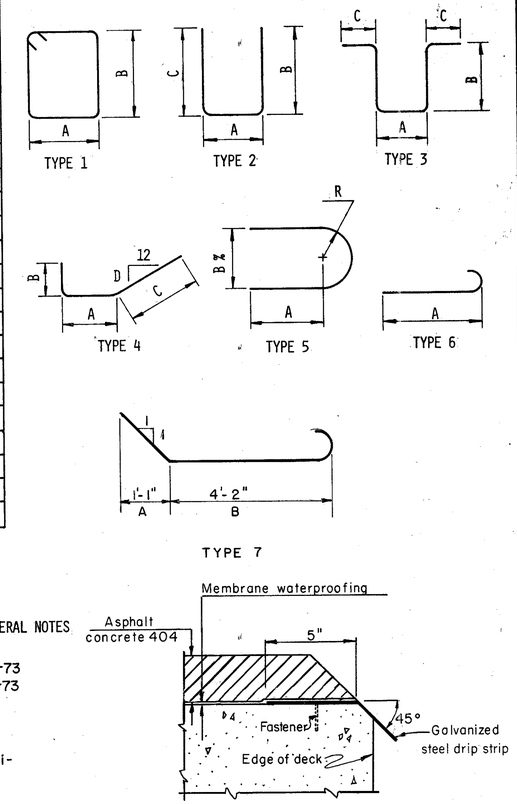
R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED.

"STD" WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	ABUT	PIER	SUPER	GENERAL	AS-BUILT	
202	Lump	Sum	Structure removed				Lump		
502	Lump	Sum	Temporary bridge				Lump		
503	106	Cu. Yd.	Unclassified excavation	106					
505	Lump	Sum	Test pile				Lump		
507	950	Lin. Ft.	Steel piles H P 12 X 53	320	630				
509	61124	Lb.	Reinforcing steel	50730	3929	6465			
511	50	Cu. yd.	Class C concrete, abutment	50					
511	16	Cu. yd.	Class C concrete, pier		16				
511	251	Cu. yd.	Class C concrete, superstructure			251			
517	200.0	Lin. Ft.	Railing (deep beam rail with tubular back up, steel post and bolts)			200.0			
518	16	Cu. Yd.	Porous backfill	16					
601	119	Sq. yd.	Crushed aggegate slope protection				119		
808	251	Units	Chemical admixture for concrete, Type A, B or D			251			
404	35	Cu. yd.	Asphalt Concrete, AC-20			35			
SPECIAL	504	Sq. yd.	Membrane Waterproofing (See Proposal Note)			504			
SPECIAL	134	Sq. ft.	Galvanized Steel Drip Strip			134			

BENDING DIAGRAMS



GENERAL NOTES

REFERENCE shall be made to Standard Drawings, D B R-2-73 dated 4-10-73 and C S-2-73 dated 4-10-73 Sheets 1 and 2, C P A-2-73 dated 4-10-73 C P P-2-73 dated 4-10-73 and to Supplemental Specification 808 dated 1-1-71. & 836 dated 3-12-75.

DESIGN SPECIFCATIONS: 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 — H S 20-44 and the Interstate Alternate Loading

Concrete Class C - unit strees 1200 p.s.i. for superstructure
unit stress 1333 p.s.i for substructure

Reinforcing Steel: ASTM A615, A616 or A617 - unit stress 20,000 p.s.i.

REMOVAL OF EXISTING STRUCTURE: When no longer needed to maintain traffic the existing structure shall be removed. Suitable waste masonry may be incorporated in DUMPED ROCK FILL.

PILES shall be driven to a minimum bearing capacity of 28 tons per pile for the abutments and 38 tons per pile for the piers.

CAMBER of $-\frac{1}{8}$ inches shall be provided under full dead load to coincide with the vertical curve over the bridge.

UTILITY LINES: ALL expense involved in relocating the affected utility lines shall be borne by the Owner. The Contractor and Owner are requested to cooperate by arranging their work in such a manner that inconvenience to either would be held to a minimum.

PAVEMENT JACKING HOLES as shown on Standard Drawing AS-1-72 shall not be provided. Top steel shall have 3" cover instead of 2".

DRIP STRIP
BRIDGES WITHOUT CURBS

Galvanized Steel Drip Strip: Prior to applying deck membrane waterproofing a bent galvanized steel drip strip, 8"x 0.105" shall be installed along the edges of the deck as shown. The strips shall be fastened at 3'-0" c/c maximum with power driven pins or #10 galvanized expansion screws, subject to the approval of the Engineer. The strips shall be placed the full length of the deck. Where splices are required a 3" (min.) lap shall be used with a fastener through the lap. Steel shall meet the requirements of ASTM A568 and galvanizing shall be in accordance with 711.02. Payment shall be at the contract price bid for Item Special, Sq. Ft., Galvanized steel drip strip, which shall include all materials, labor, tools and incidentals necessary to complete the item.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

4 / 4

GENERAL NOTES, ESTIMATED QUANTITIES, REINFORCING STEEL LIST

BRIDGE No. MAD-56-1227
OVER WALNUT RUN

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.G.S.	J.G.S.	S.K.E.	11-27-72 M.R.G.	BFG	11-29-72	