GENERAL NOTES

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

50
86

LAKE COUNTY
LAK-20-17.14

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1977, INCLUDING THE 1978, 1979, 1980, 1981, 1982, AND 1983 INTERIM SPECIFICATIONS AND THE OHIO " SUPPLEMENT" TO THESE SPECIFICATIONS.

DESIGN LOADING:

HS20-44 Case II AND THE ALTERNATE MILTARY 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.

STRUCTURAL STEEL - ASTM A572 - YIELD STRENGTH 50,000 P.S.I.

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL, TOP AND BOTTOM MATS.

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

REMOVAL OF EXISTING STRUCTURE:

* ABUTMENTS SHALL BE REMOVED TO 1'-0" BELOW EXISTING OR FINAL GRADE PIERS SHALL BE REMOVED TO ELEVATION 577'. IN ADDITION, THERE ARE TWO (2) SETS OF FOUR (4) CONCRETE PYLONS IN THE RIVERBED SOUTH OF THE EXISTING STRUCTURE. THESE PYLONS SHALL BE REMOVED TO ELEVATION 577'. PAYMENT WILL BE MADE AT THE LUMP SUM PRICE BID FOR ODOT ITEM 202, STRUCTURES REMOVED, AS PER PLAN.

PILE POINTS:

STEEL PILE POINTS SHALL BE USED TO PROTECT THE TIPS OF THE PROPOSED PILING. THE STEEL POINTS SHALL BE FURNISHED BY THE ASSOCIATED PILE AND FITTING CORPORATION, 262 RUTHERFORD BOULEVARD, CLIFTON, NEW JERSEY 07014; THE INTERNATIONAL CONSTRUCTION EQUIPMENT, INC., 301 WAREHOUSE DRIVE, MATTHEWS, NORTH CAROLINA 28015; DOUGHERTY FOUNDATION PRODUCTS, INC., P.O. BOX 688, FRANKLIN LAKES, NEW JERSEY 07417 OR BY A MANUFACTURER THAT CAN FURNISH A STEEL POINT THAT IS ACCEPTABLE TO THE DIRECTOR.

PILE DRIVING CONSTRAINTS:

PRIOR TO DRIVING PILES AT THE WEST ABUTMENT, THE SPILL THROUGH SLOPE EMBANKMENT AT THE WEST ABUTMENT SHALL BE CONSTRUCTED TO THE LEVEL OF THE SUBGRADE FOR A MINIMUM DISTANCE OF 200 FEET BACK OF THE WEST ABUTMENT. SEE SHEET 8/86 OF THE GENERAL NOTES CONCERNING THE SPECIAL EMBANKMENT CONSTRUCTION REQUIRED FOR THE WEST APPROACH TO THE BRIDGE. EXCAVATION FOR THE WEST ABUTMENT FOOTING MAY BE MADE AND PILES DRIVEN, AFTER THE REQUIREMENTS ARE MET.

* SEE NOTE IN "WATERWORK" REGARDING REMOVAL OF EXISTING WATER MAIN ON STRUCTURE.

PREBORED HOLES:

IF THE CONTRACTOR HAS DEMONSTRATED A REASONABLE EFFORT TO INSTALL THE REAR ABUTMENT PILES TO BEDROCK AND HAS FOUND THAT AN EXCESSIVE BLOW COUNT IS REACHED PRIOR TO THE PILES PENETRATING TO BEDROCK, THE PROJECT ENGINEER MAY PERMIT THE CONTRACTOR TO USE PREBORED HOLES AS NECESSARY TO INSTALL THE PROPOSED PILES TO REFUSAL ON BEDROCK.

PILES:

PILES SHALL BE DRIVEN TO REFUSAL ON BEDROCK. REFUSAL SHALL BE CONSIDERED AS ATTAINED BY PENETRATING SOFT BEDROCK WITH A MINIMUM RESISTANCE OF 20 BLOWS PER INCH, OR REFUSAL SHALL BE CONSIDERED AS ATTAINED AFTER THE PILE HAS CONTACTED HARD BEDROCK AND THE PILE HAS THEN RECEIVED AT LEAST 20 BLOWS.

THE DESIGN LOAD IS 55 TONS PER PILE FOR THE ABUTMENT PILES AND 55 TONS PER PILE FOR THE PIER PILES.

FOUNDATION BEARING PRESSURE:

PIER 1 FOOTING, AS DESIGNED, PRODUCES A MAXIMUM BEARING PRESSURE OF 5.76 TONS PER SQUARE FOOT.

FOOTING-PIER 1

PIER 1 FOOTING SHALL BE PLACED IN BEDROCK AT THE ELEVATION SHOWN.

UTILITY LINES:

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

INSTALLATION OF SEAL:

DURING INSTALLATION OF THE SUPPORT/ARMOR FOR THE SUPERSTRUCTURE SIDE OF THE EXPANSION JOINT SEAL, THE SEATING OF BEAMS ON BEARINGS SHALL BE CAREFULLY OBSERVED TO ASSURE THAT POSITIVE BEARING IS MAINTAINED. PROPER VERTICAL FIT OF THE SUPPORT/ARMOR ON THE BEAMS SHALL BE ACHIEVED BY POSITIONING OF THE BEVEL FILL PLATES RATHER THAN BY CLAMPING FORCE.

PILE HAMMER:

THE PILE HAMMER USED TO INSTALL THE STEEL "H" BEARING PILES SHALL HAVE A STATE'S ENERGY RATING OF NOT LESS THAN 15,000 FOOT-POUNDS. THIS REQUIREMENT DOES NOT RELIEVE THE CONTRACTOR FROM 108.05 WHICH STATES THAT THE CONTRACTOR IS TO PROVIDE SUFFICIENT EQUIPMENT FOR PROSECUTING THE REQUIRED WORK. REFER TO ODOT'S "MANUAL OF PROCEDURES FOR STRUCTURES" TO OBTAIN THE STATE'S ENERGY RATING.

ITEM SPECIAL- SEALING OF CONCRETE SURFACES

A SEALER SHALL BE APPLIED TO THE EXPOSED CONCRETE SURFACES OF THE BRIDGE AS LISTED BELOW. SEE THE PROPOSAL FOR SEALER MATERIAL AND SURFACE PREPARATION REQUIREMENTS AND APPLICATION RATES AND PROCEDURES.

1) CURBS, SIDEWALKS AND PARAPETS (ALL FACES)
2) DECK EDGES AND THE UNDERSIDE EXTENDING BEYOND THE EXTERIOR BEAMS.
3) PIER CAPS AND STEMS
4) ABUTMENTS INCLUDING BACKWALLS AND WINGWALLS.

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

AS-1-81	DATED	11-27-81
BR-2-82	DATED	11-1-82
RB-1-55	REVISED	2-2-59
SD-1-69	DATED	6-12-69
EXJ-2-81	REVISED	4-2-84

AND TO SUPPLEMENTAL SPECIFICATIONS:

824	DATED	10-8-82
849	DATED	10-19-81

WOODRUFF, INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

GENERAL NOTES

U.S. ROUTE 20 OVER
THE GRAND RIVER

BR. NO.-LAK-20-1723 FROM STA. 18+91.00
TO STA. 22+89.56

LAKE COUNTY OHIO

MADE AJM	TRACED M.A.Q.	CHECKED P.G.	REVIEWED	REVISED 9-3-86
DATE 10/84	DATE 10-84	DATE 10-84	DATE 10/84	SHEET 3 / 22

U.S. 20 OVER GRAND RIVER