



STRUCTURAL GENERAL NOTES

REFERENCE DRAWINGS

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

AS-1-81M	DATED	10-25-94
BR-1M	DATED	12-15-94
SB-06-94M	DATED	12-19-94
PCB-91M	DATED	3-20-95

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996, AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING

MS18 AND THE ALTERNATE MILITARY LOADING.

DESIGN DATA

CONCRETE CLASS S - COMPRESSIVE STRENGTH 31 MPa (SUPERSTRUCTURE)
 CONCRETE CLASS C - COMPRESSIVE STRENGTH 27.5 MPa (SUBSTRUCTURE)
 REINFORCING STEEL - ASTM A615M, A616M OR A617M - GRADE 400 MINIMUM YIELD STRENGTH 400 MPa.

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL, 65 mm CONCRETE COVER AND HIGH PERFORMANCE CONCRETE.

MONOLITHIC WEARING SURFACE

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 25 mm THICK.

MAINTENANCE OF TRAFFIC

REFER TO SHEETS NUMBERED 7 THRU 13 OF THE MAINTENANCE OF TRAFFIC PLANS.

REMOVAL OF EXISTING STRUCTURE

WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC THE EXISTING STRUCTURE SHALL BE REMOVED UPON RECEIVING PERMISSION FROM THE ENGINEER.

PILE DESIGN LOADS (ULTIMATE BEARING VALUE)

THE ULTIMATE BEARING VALUE IS 733 kN PER PILE FOR THE ABUTMENTS.
 ABUTMENT PILES:
 54 PILES 12 METERS LONG, ESTIMATED LENGTH
 54 PILES OF ORDER LENGTH 13.5 METERS LONG
 27 SPLICES
 PREBORE ALL PILES TO ELEV. 197.700.

UTILITY LINES

ALL EXPENSES INVOLVED IN RELOCATING AND/OR INSTALLING THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE 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.

PREBORING

ALL PILES SHALL BE PREBORED TO ELEV. 197.700. PRIOR TO BORING, THE CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF WATER MAIN AND NOTIFY THE LAKE COUNTY DEPARTMENT OF UTILITIES, SO THAT A COUNTY REPRESENTATIVE CAN BE PRESENT.

CONCRETE PARAPETS

AS SOON AS A CONCRETE SAW CAN BE OPERATED WITHOUT DAMAGING THE FRESHLY PLACED CONCRETE, 25 mm DEEP CONTROL JOINTS SHALL BE SAWED INTO THE PERIMETER OF THE CONCRETE PARAPET. THE SAW CUT SHALL BE MADE IN THE COMPLETE CIRCUMFERENCE OF THE PARAPET, STARTING AND ENDING AT THE ELEVATION OF THE CONCRETE DECK. THE SAWCUTS SHALL BE PLACED AT A MINIMUM OF 2000 mm AND A MAXIMUM OF 3000 mm CENTERS. THE USE OF AN EDGE GUIDE, FENCE, OR JIG IS REQUIRED TO INSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF 6 mm. THE PERIMETER OF THE DEFLECTION CONTROL JOINT SHALL BE SEALED TO A MINIMUM DEPTH OF 25 mm WITH A CAULKING MATERIAL CONFORMING TO FEDERAL SPECIFICATION, TT-S-00227E TO A MINIMUM DEPTH OF 25 mm. INCLUDE WITH ITEM SPECIAL, HIGH PERFORMANCE CONCRETE SUPERSTRUCTURE (PARAPETS) FOR PAYMENT.

MECHANICAL CONNECTORS

AN APPROVED TYPE OF MECHANICAL CONNECTOR FOR REINFORCING BARS SHALL BE PROVIDED. INSTALLATION OF CONNECTORS SHALL CONFORM WITH MANUFACTURER'S RECOMMENDED PROCEDURES. IF A DOWEL BAR SPLICE TYPE OF CONNECTOR IS FURNISHED, THE MINIMUM DOWEL BAR LENGTH TO BE INCLUDED WITH THE CONNECTOR SHALL BE GIVEN BY THE DIMENSION "L" SHOWN ON THE PLANS.

CONNECTORS AND DOWEL BARS USED WITH EPOXY COATED BARS SHALL BE EPOXY COATED. COATING FOR BOTH CONNECTORS AND BARS SHALL CONFORM TO THE SAME SPECIFICATION. COATINGS WHICH HAVE BEEN DAMAGED OR WHICH OTHERWISE DO NOT MEET SPECIFICATION WITH RESPECT TO COLOR, CONTINUITY AND UNIFORMITY MAY BE REPAIRED AS DIRECTED BY THE ENGINEER OR THEY SHALL BE REPLACED WITH MATERIAL WHICH MEETS THE SPECIFICATIONS. CONNECTORS AND DOWEL BAR EXTENSIONS SHALL CONFORM WITH 509 AND BE INCLUDED IN THE BID PRICE PER KILOGRAM FOR ITEM 509.

DIMENSIONS

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS AND ALL ELEVATIONS SHOWN ARE IN METERS UNLESS OTHERWISE SPECIFIED.

ABBREVIATIONS

TYP.	=	TYPICAL
@	=	CENTERLINE
@	=	AT
SPA.	=	SPACES
MIN.	=	MINIMUM
EL. = ELEV.	=	ELEVATIONS
CLEAR = CLR.	=	CLEARANCE
E.S.	=	EACH SIDE
F.S.	=	FAR SIDE
N.S.	=	NEAR SIDE
CONST.	=	CONSTRUCTION
STA.	=	STATION
EX.	=	EXISTING
S.R.	=	STATE ROUTE
U.S.	=	UNITED STATES
ST	=	STRAIGHT
ABUT.	=	ABUTMENT
APPR.	=	APPROACH
TEMP.	=	TEMPORARY

CONSTRUCTION CONSTRAINTS

ALL EMBANKMENT MATERIAL FOR FILLING THE VOID CREATED BY EXCAVATING FOR THE ABUTMENT FOOTINGS SHALL BE 203 GRANULAR EMBANKMENT MATERIAL. AFTER THE FOOTING HAS BEEN CONSTRUCTED, THE APPROACH EMBANKMENT BEHIND THE ABUTMENT SHALL BE CONSTRUCTED UP AT A 1:1 SLOPE FROM THE TOP OF THE HEEL OF THE FOOTING TO THE SUBGRADE ELEVATION.

EXCAVATION IN THE AREA OF EXISTING 400 mm WATER MAIN

THE EXISTING 400 mm WATER MAIN SHALL BE KEPT IN OPERATION AT ALL TIMES. ANY EXCAVATION REQUIRED FOR RIGHT SIDE OF THE FORWARD ABUTMENT SHALL BE HAND DUG WITHIN 1000 mm OF THE EXISTING 400 mm WATER MAIN. FOR LOCATION AND DETAILS, SEE SHEET [8/9]. EXPOSED WATER MAIN LENGTH IN TRENCH OF OVER 1500 mm SHALL BE SUPPORTED AS DIRECTED BY THE ENGINEER. PAYMENT FOR ALL MATERIAL, EQUIPMENT AND LABOR NECESSARY TO PERFORM THE ABOVE WORK SHALL BE INCLUDED IN ITEM SPECIAL, HIGH PERFORMANCE CONCRETE, SUBSTRUCTURE.

FALSEWORK AND FORMS

THE FALSEWORK AND/OR FORMS CONSTRUCTED BY THE CONTRACTOR DURING PHASE I CONSTRUCTION SHALL BE LEFT IN PLACE DURING PHASE II CONSTRUCTION, SO AS TO PREVENT EXCESSIVE DIFFERENTIAL DEFLECTION BETWEEN PHASE I AND PHASE II CONSTRUCTION.

SUPPLEMENTAL SPECIFICATIONS

REFERENCE SHALL BE MADE TO SUPPLEMENTAL SPECIFICATIONS:

- 844 - HIGH PERFORMANCE CONCRETE FOR STRUCTURES DATED 9-9-97
- 846 - TREATING CONCRETE BRIDGE DECKS WITH HMW/M RESIN DATED 9-9-97
- 954 - HIGH MOLECULAR WEIGHT METHACRYLATE (HMW/M) RESIN DATED 9-9-97

DESIGN AGENCY: MCCOY ASSOCIATES INC. 367 GHENT ROAD, SUITE 1A AKRON, OHIO 44333
 DATE: 12-31-96
 DRAWN: WEB
 DESIGNED: HK
 CHECKED: SAM
 STRUCTURAL GENERAL NOTES
 BRIDGE NO. LAK-528-11024
 LAK-528-0685 (ENGLISH)
 OVER McMACKIN CREEK
 LAK-528-11.024
 3/9
 35
 49