

GENERAL NOTES



DESIGN AGENCY
CENTRAL ENGINEERING, INC.
CONSULTING ENGINEERS
STRONGSVILLE, OHIO

DATE
6/96
REVIEWED
RC
STRUCTURE FILE NUMBER
4306090

DRAWN
DR
DESIGNED
DR
CHECKED
DG

GENERAL NOTES
BRIDGE NO. LAK-528-80971
OVER A TRIBUTARY OF ARCOLA CREEK

LAK-528-8.097

4 / 12

21
33

1. DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, DATED 1992, INCLUDING THE 1993 & 1994 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

2. REFERENCE DRAWINGS:

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS
AS-1-81M, DATED 10/25/94
BR-2-82M DATED 12/19/94
PSBD-1-93M, DATED 12/19/94
PCB-91M, DATED 3/20/95

3. DESIGN LOADING:

MS18 AND THE ALTERNATE MILITARY LOADING

4. DESIGN STRESSES:

HIGH PERFORMANCE CONCRETE - UNIT STRESS 10.3 MPa (SUPERSTRUCTURE)
CONCRETE CLASS C - UNIT STRESS 9.2 MPa (SUBSTRUCTURE)
REINFORCING STEEL - ASTM A615M, A616M OR A617M GRADE 400 - UNIT STRESS 160 MPa

5. PRESTRESSED CONCRETE BEAMS:

HIGH PERFORMANCE CONCRETE - COMPRESSIVE STRENGTH 31.0 MPa
REINFORCING STEEL - ASTM A615M, A616M OR A617M GRADE 400 - MINIMUM YIELD STRENGTH 400 MPa
MILD REINFORCING STEEL FOR THE CONCRETE PRESTRESSED BEAMS GRADE 400, MINIMUM YIELD STRENGTH 400 MPa
CONCRETE FOR PRESTRESSED BEAMS
COMPRESSIVE STRENGTH - 38 MPa
UNIT STRESS - 15.2 MPa COMPRESSION
3.1 MPa TENSION
PRESTRESSING STRAND ASTM A416M
f's = 1860 MPa
INITIAL STRESS = 0.75 f's (LOW RELAXATION STRANDS)

6. DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL
65 mm CONCRETE COVER
SEALING OF CONCRETE SURFACES

7. PROTECTION OF TRAFFIC:

PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING SUPERSTRUCTURE, THE CONTRACTOR SHALL SUBMIT HIS PLANS FOR THE PROTECTION OF TRAFFIC (VEHICULAR, PEDESTRIAN, BOAT, ETC.) ADJACENT TO AND/OR UNDER THE STRUCTURE TO THE DIRECTOR FOR APPROVAL. THESE PLANS SHALL INCLUDE PROVISIONS FOR ANY DEVICES AND STRUCTURES THAT MAY BE NECESSARY TO ENSURE SUCH PROTECTION. TEMPORARY VERTICAL CLEARANCES SPECIFIED ON THE PLANS OR IN THE PROPOSAL SHALL BE MAINTAINED AT ALL TIMES EXCEPT AS OTHERWISE APPROVED BY THE DIRECTOR.

THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE BID, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS, WITH PERTINENT PROVISIONS OF 202, AND TO THE SATISFACTION OF THE ENGINEER.

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

9. PORTIONS OF STRUCTURE REMOVED, AS PER PLAN SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL.

ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. ALL WORK SHALL BE DONE IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 41 KILOGRAM CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

10. UTILITIES:

INFORMATION SHOWN IN THE PLANS CONCERNING TYPE AND LOCATION OF UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UTILITIES.

THE FOLLOWING UTILITY FACILITIES ARE IN THE VICINITY OF THE EXISTING BRIDGE AS SHOWN ON THE ROADWAY PLAN. SEE SHEET 4 OF 33 FOR ADDRESSES AND TELEPHONE NUMBERS:

- A. CLEVELAND ELECTRIC ILLUMINATING CO.
- B. EAST OHIO GAS CO.
- C. WESTERN RESERVE TELEPHONE CO.
- D. TCI CABLEVISION OF OHIO, INC.

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

11. ITEMS NOT INCLUDED IN BRIDGE PLANS:

- THE FOLLOWING ITEMS ARE NOT INCLUDED IN THE BRIDGE PLANS. SEE ROADWAY PLANS FOR DETAILS.
 - A. EMBANKMENT AND EXCAVATION AT APPROACHES, GRADING, APPROACH WORK AND APPROACH SLABS.
 - B. ROCK CHANNEL PROTECTION.

12. THE FOLLOWING MINIMUM BAR SPLICE LAP LENGTHS SHALL BE PROVIDED, UNLESS SHOWN OTHERWISE ON THE PLANS:

15M BARS	720 mm
20M BARS	1150 mm

13. REMOVALS OVER WATER

REASONABLE CARE SHALL BE USED BY THE CONTRACTOR TO PREVENT REMOVED MATERIALS FROM FALLING INTO THE WATER. ANY DROPPED MATERIALS SHALL BE IMMEDIATELY RECOVERED AND DISPOSED OF AWAY FROM THE SITE EXCEPT FOR APPROVED MASONRY MATERIAL WHICH MAY BE USED AS BANK PROTECTION AS DIRECTED BY THE ENGINEER. REFER TO 104.06 OF THE ODOT CMS FOR ADDITIONAL REQUIREMENTS.

14. ALL REINFORCING BARS SHALL HAVE A CLEAR COVER OF 50 mm, UNLESS SHOWN OTHERWISE ON THE PLANS.

15. MECHANICAL CONNECTORS FOR REINFORCING STEEL

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 AS GIVEN BY THE DIMENSION OF THE MINIMUM BAR SPLICE LAP LENGTH.

CONNECTORS AND DOWEL BARS USED WITH EPOXY COATED BARS SHALL BE EPOXY COATED. COATING FOR BOTH CONNECTORS AND BARS SHALL CONFORM TO THE SAME SPECIFICATIONS. COATINGS WHICH HAVE BEEN DAMAGED OR WHICH OTHERWISE DO NOT MEET SPECIFICATIONS 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 ITEM 509 AND BE INCLUDED IN THE BID PRICE PER POUND FOR ITEM 509.

16. PROPOSED WORK NOTE:

IN GENERAL, THE PROPOSED WORK CONSISTS OF REMOVAL OF EXISTING BRIDGE DECK SLAB, RAILINGS, PORTIONS OF THE ABUTMENTS AND APPROACH SLABS, CONSTRUCTION OF PORTIONS OF THE ABUTMENTS, INSTALLATION OF PRESTRESSED CONCRETE BOX BEAM, CONSTRUCTION ON TOP OF 155 mm CONCRETE OVERLAY, APPROACH SLABS, AND INCIDENTAL ITEMS OF WORKS.

TRAFFIC ON THE BRIDGE MUST BE MAINTAINED THROUGHOUT THE CONSTRUCTION, AND THEREFORE IT WILL BE NECESSARY TO COMPLETE VARIOUS ITEMS OF WORK IN STAGES. THE MAJOR ITEMS OF WORK REQUIRING STAGE CONSTRUCTION ARE DESCRIBED ON SHEET [11/12].

17. COFFERDAMS, CRIBS, AND SHEETING, AS PER PLAN

TEMPORARY SHORING SHALL BE USED TO ACCOMPLISH THE PROPOSED CONSTRUCTION IN STAGES. THE DESIGN OF THE TEMPORARY SHORING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER, AND CONFORM WITH 501.05. FOR APPROVAL, FIVE COPIES OF THE DRAWINGS SHALL BE SUBMITTED TO THE DIRECTOR AND CONCURRENTLY, ONE COPY TO THE BUREAU OF BRIDGES AND STRUCTURAL DESIGN.

CONSTRUCTION OF THE SHORING SHALL NOT BEGIN UNTIL AFTER WRITTEN APPROVAL HAS BEEN RECEIVED FROM THE DIRECTOR. PORTIONS OF THE TEMPORARY SHORING COMPOSED OF STEEL OR CONCRETE MAY BE LEFT IN PLACE AT THE DISCRETION OF THE ENGINEER. PORTIONS COMPOSED OF OTHER MATERIALS SHALL BE REMOVED PRIOR TO COMPLETION OF THE WORK.

18. EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

19. EXISTING REINFORCING STEEL TO REMAIN:

ANY EXISTING REINFORCING BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND WHICH ARE MADE UNUSABLE BY THE CONTRACTOR'S REMOVAL OPERATIONS SHALL BE REPLACED WITH NEW REINFORCING STEEL, INCLUDING DRILLING AND STEEL ANCHORING BY DOWEL HOLES, AT THE CONTRACTOR'S COST.

ANY EXISTING REINFORCING STEEL DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION SHALL BE REPLACED WITH NEW STEEL.

THE DOWEL HOLES AND ANCHORING REQUIRED TO REPLACE CORRODED STEEL SHALL BE AS PER CMS 705.2