FHWA REGION	STATE	PROJECT		6
5	OHIO			19

LAKE COUNTY
LAK-86-1.95

PLAN NO. BR-73-85

PROPOSED WORK

1. REPLACE EXISTING SUPERSTRUCTURE WITH PRESTRESSED CONCRETE BOX BEAMS.
2. REPAIR AND RAISE THE ABUTMENT BRIDGE SEATS.
3. WATERPROOF AND OVERLAY THE BRIDGE WITH ASPHALT CONCRETE.
4. REPOSITION GUARDRAIL.
5. PATCH AND SEAL CONCRETE.

STANDARD DRAWINGS

BP-5	DATED 1-11-85	MC-3	DATED 6-1-73
BP-11	DATED 1-30-84	MC-7	DATED 10-15-76
DBR-2-73	DATED 4-10-73	MC-9 A	DATED 1-11-85
GR-1	DATED 1-11-85	MC-10	DATED 5-1-76
GR-2 B	DATED 2-5-82	PSBD-1-81	DATED 9-19-81
GR-3	DATED 1-21-85		

SUPPLEMENTAL SPECIFICATIONS

SS 836	DATED 3-12-75	SS 956	DATED 6-26-78
SS 853	DATED 6-26-78	SS 961	DATED 9-9-83
SS 861	DATED 9-9-83		

DESIGN SPECIFICATIONS

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

DESIGN DATA

DESIGN LOADING - HS 20-44 AND THE ALTERNATE MILITARY LOADING.
DESIGN STRESSES - CONCRETE CLASS C-UNIT STRESS 1333 PSI.
- REINFORCING STEEL - ASTM A615, A616, A617; GRADE 40
- UNIT STRESS 20,000 PSI.
CONCRETE FOR PRESTRESSED BEAMS - UNIT STRESS 2200 PSI COMPRESSION; 444 PSI TENSION.
PRESTRESSING STRAND - ASTM A416 F'S = 270,000 PSI. ; INITIAL STRESS = 0.7 F'S
DECK PROTECTION METHOD - TYPE D WATERPROOFING AND ASPHALT CONCRETE OVERLAY.

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/OR 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. PLANS OF THE EXISTING STRUCTURE INCLUDING STANDARD DRAWINGS G35-24-1 ARE AVAILABLE FOR EXAMINATION AT THE ODOT DISTRICT TWELVE OFFICE IN GARFIELD HEIGHTS, OHIO.

RIGHT-OF-WAY

ALL WORK WILL BE PERFORMED WITHIN THE EXISTING RIGHT-OF-WAY.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR PLAN ITEMS SET UP TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER.

COOPERATION BETWEEN CONTRACTORS

THE CONTRACTOR'S ATTENTION IS SPECIFICALLY DIRECTED TO SECTION 105.07 OF THE CMS.

UTILITIES

AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN AN AREA WHICH MAY INVOLVE UNDERGROUND UTILITIES, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, THE REGISTERED UTILITY PROTECTION SERVICE AND THE OWNERS OF THE UNDERGROUND UTILITIES SHOWN IN PLAN. NONMEMBER UTILITY COMPANINES MUST BE CALLED DIRECTLY.

THE OWNER OF THE UNDERGROUND UTILITY FACILITY SHALL, WITHIN FORTY-EIGHT HOURS, EXCLUDING SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS, AFTER NOTICE IS RECEIVED, STAKE, MARK OR OTHERWISE DESIGNATE THE LOCATION OF THE UNDERGROUND UTILITIES IN THE CONSTRUCTION AREA IN SUCH A MANNER AS TO INDICATE THE COURSE TOGETHER WITH THE APPROXIMATE DEPTH AT WHICH IT WAS INSTALLED. THE MARKING OR LOCATION SHALL BE COORDINATED TO STAY APPROXIMATELY TWO DAYS AHEAD OF THE PLANNED CONSTRUCTION.

THE FOLLOWING AERIAL UTILITIES ARE LOCATED WITHIN THE WORK LIMITS OF THE PROJECT. THE CONTRACTOR SHALL ALSO NOTIFY THESE UTILITY COMPANIES AT LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS.

ELECTRIC . . . . . CLEVELAND ELECTRIC ILLUMINATING COMPANY
P.O. BOX 668
ASHTABULA, OHIO 44004
TELEPHONE: 216-998-3131

PAINESVILLE CITY
325 RICHMOND STREET
PAINESVILLE, OHIO 44077
TELEPHONE: 325-9301 EXT. 227

TELEPHONE . . . . . OHIO BELL TELEPHONE COMPANY
34 SOUTH ST. CLAIR STREET
PAINESVILLE, OHIO 44077
TELEPHONE: 216-352-8515

CABLE TELEVISION . . . . . TELE-MEDIA CONSTRUCTOR'S COMPANY
P.O. BOX 2992
ASHTABULA, OHIO 44004
TELEPHONE: 216-964-6363

SEQUENCE OF OPERATIONS

I. IMPLEMENT PHASE I MAINTENANCE OF TRAFFIC SYSTEM INCLUDING THE INSTALLATION OF THE TEMPORARY RAILING WITH STEEL POSTS AND TUBULAR BACKUP.

II. INSTALL THE TEMPORARY SUPPORT GIRDER SYSTEM FOR PHASE I MAINTENANCE OF TRAFFIC.

III. PERFORM CONSTRUCTION PHASE I WORK ON THE EAST SIDE IN THE FOLLOWING ORDER:
- A. DISCONNECT EXISTING BRIDGE TERMINAL ASSEMBLIES FROM THE CONCRETE GIRDER.
- B. REMOVE THE EAST PORTION OF EXISTING SUPERSTRUCTURE INCLUDING THE WEARING SURFACE, DECK, FLOORBEAMS, AND GIRDER.
- C. EXTEND AND RAISE ABUTMENT BRIDGE SEATS WITH ITEM SPECIAL - MAGNESIUM PHOSPHATE CONCRETE WITH AGGREGATE.
- D. INSTALL THE EPOXY- SEALED PRESTRESSED CONCRETE BOX BEAMS INCLUDING TRANSVERSE TIE RODS, BEARING PADS, ANCHOR DOWELS AND NON-SHRINKING EPOXY MORTAR.
- E. INSTALL JOINT SEALS, POROUS BACKFILL, AND BITUMINOUS AGGREGATE BASE IN BERMS AND PAVEMENT.
- F. INSTALL BRIDGE RAIL, BRIDGE TERMINAL ASSEMBLIES AND GUARDRAIL.
- G. INSTALL THE TEMPORARY RAILING FOR PHASE II MAINTENANCE OF TRAFFIC.
- H. PLACE TYPE D WATERPROOFING AND OVERLAY WITH ASPHALT CONCRETE, (403 ONLY).

IV. REMOVE THE PHASE I MAINTENANCE OF TRAFFIC SYSTEM AND IMPLEMENT PHASE II INCLUDING RELOCATING THE TEMPORARY CONCRETE BARRIER.

V. PERFORM CONSTRUCTION PHASE II WORK ON THE WEST SIDE IN THE FOLLOWING ORDER:
- A. DISCONNECT EXISTING BRIDGE TERMINAL ASSEMBLIES FROM THE CONCRETE GIRDER.
- B. REMOVE WEST PORTION OF EXISTING SUPERSTRUCTURE INCLUDING THE WEARING SURFACE, DECK, FLOORBEAMS, AND GIRDER.
- C. EXTEND THE SOUTH ABUTMENT USING CLASS C CONCRETE.
- D. PERFORM ITEMS C THROUGH F ON THE WEST SIDE IN THE SAME ORDER AS CONSTRUCTION PHASE I.
- E. PLACE TYPE D WATERPROOFING AND OVERLAY WITH ASPHALT CONCRETE (403 AND 404).

VI. REMOVE PHASE II MAINTENANCE OF TRAFFIC SYSTEM.

VII. PLACE 404 ASPHALT CONCRETE ON EAST SIDE OF BRIDGE, INSTALL CENTERLINE, AND OPEN THE HIGHWAY TO TRAFFIC.

VIII. PERFORM ITEMS OF WORK NOT SPECIFICALLY ORDERED AS APPROPRIATE THROUGHOUT THE CONSTRUCTION OPERATIONS.

ITEM 202 PORTIONS OF STRUCTURES REMOVED

WORK TO BE PAID FOR UNDER THIS ITEM SHALL INCLUDE THE REMOVAL OF STRUCTURAL COMPONENTS AS DETAILED IN THE PLANS. THESE REMOVALS ARE INCLUDED IN BUT NOT NECESSARILY LIMITED TO THE FOLLOWING LIST.

1. 2" DEEP SAW CUT IN ASPHALT CONCRETE 342 L.F.
2. STONE BLOCK 1 EA.
3. PORTIONS OF ABUTMENTS 1 CU. YD.
4. 1½" DIAMETER HOLES DRILLED THROUGH DECK FOR TEMPORARY RAIL SUPPORT 40 EA.
5. ¾" DIAMETER HOLES 12 " DEEP DRILLED INTO DECK FOR TEMPORARY RAIL SUPPORT 8 EA.
6. EXISTING SUPERSTRUCTURE INCLUDING GIRDERS, FLOORBEAMS, DECK, AND WEARING SURFACE. 63 CY.
7. PORTIONS OF ASPHALT WEARING COURSE 119 SY.

REMOVAL OF THE SUPERSTRUCTURE SHALL BE DONE WITHOUT INCREASING DEAD LOAD STRESSES AT ANY POINT OF THE TEMPORARY SUPPORT SYSTEM OR SUPERSTRUCTURE WHICH IS TO REMAIN IN PLACE FOR PHASE I MAINTENANCE OF TRAFFIC. A SUPERSTRUCTURE REMOVAL PLAN SHALL BE SUBMITTED TO THE ENGINEER FOR HIS APPROVAL PRIOR TO THE START OF ANY SUPERSTRUCTURE REMOVAL OPERATIONS.

ITEM 202 - BRIDGE TERMINAL ASSEMBLY REMOVED

THIS ITEM SHALL CONSIST OF REMOVING THE COMPLETE BRIDGE TERMINAL ASSEMBLY CONSISTING OF THE RAIL, POSTS AND ENCASEMENTS AND THE FILLING OF THE RESULTING HOLES SO AS TO PROVIDE A STABLE, EVEN SHOULDER FOR NEW GUARDRAIL CONSTRUCTION.

ITEM 404 - BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC

THIS ITEM SHALL BE USED TO REPAIR HOLES IN THE BRIDGE DECK, ROADWAY SURFACE, AND BERMS WHICH ARE DAMAGED DURING THE CLOSURE. THE CONTRACTOR SHALL USE THIS ITEM TO MAINTAIN THE HIGHWAY ACCORDING TO SEC 614.02. THE CONTRACTOR SHALL PERFORM THE ABOVE WORK DURING THE HOURS AS PER THE MAINTENANCE OF TRAFFIC PLANS. THE FOLLOWING ESTIMATED QUANTITY IS INCLUDED IN THE ESTIMATED QUANTITIES FOR THE MAINTENANCE OF TRAFFIC TO BE USED AS DIRECTED BY THE ENGINEER.

ITEM 404 - BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC 3 CY.

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 12 BRIDGE DEPARTMENT

2/11

STRUCTURE NOTES
BRIDGE LAK-86-0195
OVER KELLOGG CREEK

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EJA	SDG	SDG	DWL	GWM	8/13/85	