

PROJECTS \ P10391A.D&N\PLANS\10391SNA.DGN 14 AUG 2000

PROPOSAL NOTES:

SEALING OF CONCRETE SURFACES.

STANDARD DRAWINGS:

REFERENCE SHALL BE MADE TO THE FOLLOWING STANDARD DRAWINGS:

AS-1-81	REVISED	09-15-94
EXJ-4-87	DATED	02-14-97
PCB-91	REVISED	07-06-99
SBR-1-99	DATED	01-12-99
VPF-1-90M	DATED	03-20-95

AND SUPPLEMENTAL SPECIFICATIONS:

842	DATED	01-06-99
844	DATED	01-06-99
847	DATED	06-30-98
899	DATED	10-21-98

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996, INCLUDING THE 1997 TO 1999 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN DATA:

CONCRETE  
HIGH PERFORMANCE CONCRETE (HPC) SS 844 -  
COMPRESSIVE STRENGTH 4,500 PSI (SUPERSTRUCTURE).

HIGH PERFORMANCE CONCRETE (HPC) SS 844 -  
COMPRESSIVE STRENGTH 4,000 PSI (SUBSTRUCTURE).

REINFORCING STEEL - ASTM A615, A616 OR A617 GRADE  
60, MINIMUM YIELD STRENGTH 60,000 PSI.

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL.  
2 1/2" CONCRETE COVER.  
SEALING OF CONCRETE SURFACES.

MAINTENANCE OF TRAFFIC:

TWO WAY OF TRAFFIC SHALL BE MAINTAINED ON  
JACKSON STREET AND SR 44 AT ALL TIMES.

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,  
105.02 AND 863.07.

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.

EXISTING STRUCTURE PLANS:

THE ORIGINAL DESIGN AND UPGRADING PLANS MAY BE  
EXAMINED BY PROSPECTIVE BIDDERS AT THE OHIO  
DEPARTMENT OF TRANSPORTATION, DISTRICT 12 OFFICE,  
5500 TRANSPORTATION BOULEVARD, GARFIELD HEIGHTS,  
OHIO. THE CONTRACTOR SHALL BECOME FAMILIAR WITH  
THE DRAWINGS.

CONVERSION OF METRIC STANDARD BRIDGE DRAWINGS:

SOME OF THE STANDARD BRIDGE DRAWINGS REFERENCED  
IN THIS PLAN ARE METRIC. ANY CONVERSION OF  
DIMENSIONS REQUIRED TO CONSTRUCT THE ITEMS SHOWN  
ON THE STANDARDS SHALL BE THE RESPONSIBILITY OF  
THE CONTRACTOR. CONVERSIONS SHALL BE MADE USING  
THE SI (METRIC) TO ENGLISH CONVERSION FACTORS  
PROVIDED IN SECTION 109.011 OF THE 1997  
CONSTRUCTION AND MATERIALS SPECIFICATIONS. THE  
APPENDIX OF ASTM E 380 SHALL BE UTILIZED FOR ANY  
ADDITIONAL CONVERSION FACTORS REQUIRED.  
CONVERSIONS SHALL BE APPROPRIATELY PRECISE AND  
SHALL REFLECT STANDARD INDUSTRY ENGLISH VALUES  
WHERE SUITABLE.

COLORS:

THE TOP COAT COLOR FOR ITEM SPECIAL - SEALING OF  
CONCRETE SURFACES (EPOXY-URETHANE) SHALL BE  
FEDERAL COLOR NUMBER 595B-36492, GRAY.

PROPOSED WORK:

1. PROTECT AND MAINTAIN ALL TRAFFIC DURING ALL PHASES OF CONSTRUCTION.
2. REMOVE THE EXISTING PARAPET, SIDEWALK, FENCE, SPLASH BARRIER, AND BULB ANGLE AT NORTH SIDE ONLY.
3. MODIFY THE EXISTING ABUTMENTS AS SHOWN IN THE PLANS TO ACCOMMODATE THE PROPOSED APPROACH SLAB EXTENSION.
4. SCARIFY DECK AS SHOWN IN THE PLANS TO ACCOMMODATE THE PROPOSED OVERLAY.
5. CONSTRUCT NEW SINGLE SLOPE BARRIER AT NORTH ONLY.
6. CONSTRUCT PROPOSED OVERLAY.
7. REINSTALL 8-FOOT TALL VANDAL PROTECTION FENCE.
8. SEAL NEW CONCRETE SURFACES.

CONSTRUCTION SEQUENCE:

1. REMOVE EXISTING PARAPET AND SIDEWALK TO THE STAGE 1 REMOVAL LIMITS SHOWN IN THE PLANS. REMOVE DECK ENDS AND BACKWALL AND INSTALL STRUCTURAL STEEL EXPANSION JOINT EXTENSIONS.
2. CONSTRUCT DECK ENDS AND NEW 42" SINGLE SLOPE BARRIER.
3. INSTALL PORTABLE CONCRETE BARRIER PER MAINTENANCE OF TRAFFIC PLANS.
4. REMOVE REMAINING SIDEWALK, SPLASH BARRIER AND PARTIAL WINGWALL AS SHOWN IN THE PLANS.
5. SCARIFY AND REMOVE DECK CONCRETE AS SHOWN IN THE PLANS AND REMOVE EXISTING BULB ANGLE GUTTER.
6. CONSTRUCT PROPOSED OVERLAY.
7. CONSTRUCT PROPOSED APPROACH SLAB EXTENSION AND TRANSITION BARRIER.

OTHER WORK:

WORK NOT LISTED IN THE SEQUENCE MAY BE PERFORMED ACCORDING TO THE CONTRACTOR'S TIMING IN ACCORDANCE WITH CONTRACT PROVISIONS.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN:

DESCRIPTION:  
THIS WORK SHALL CONSIST OF THE REMOVAL OF CONCRETE DECKS INCLUDING SIDEWALKS, PARAPETS, RAILINGS, DECK JOINTS AND OTHER APPURTENANCES FROM SUPPORTING SYSTEMS (BEAMS, GIRDERS, CROSS FRAMES, ETC.). THIS WORK SHALL ALSO INCLUDE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES FOR REMOVAL THAT 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. CARE SHALL BE TAKEN DURING REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. IN THIS RESPECT, THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED.

PROTECTION OF TRAFFIC:

PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING SUPERSTRUCTURE, THE CONTRACTOR SHALL SUBMIT 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.

PROTECTION OF STEEL SUPPORT SYSTEMS:

BEFORE DECK SLAB CUTTING IS PERMITTED, THE OUTLINE OF PRIMARY STEEL MEMBERS IN CONTACT WITH THE BOTTOM OF THE DECK SHALL BE DRAWN ON THE SURFACE OF DECK. SMALL DIAMETER PILOT HOLES SHALL BE DRILLED 2 INCHES OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF FLANGE EDGES. DECK CUTS OVER OR WITHIN 2 INCHES OF FLANGE EDGES SHALL NOT EXTEND LOWER THAN THE BOTTOM LAYER OF DECK SLAB REINFORCING STEEL. CUTS MADE OUTSIDE 2 INCHES OF FLANGE EDGES MAY EXTEND THE FULL DEPTH OF THE DECK. DURING CUTTING OF THE DECK SLAB, CARE SHALL BE TAKEN NOT TO DAMAGE STEEL MEMBERS THAT ARE TO BE INCORPORATED INTO THE PROPOSED STRUCTURE.

REMOVAL METHODS:

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. CONCRETE MAY BE REMOVED BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

DECK REMOVALS:

CARE SHALL BE TAKEN DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. FOR REMOVALS OVER BRIDGE MEMBERS (PRESTRESSED BOX BEAM, PRESTRESSED I-BEAM, STEEL BEAM, STEEL GIRDER, ETC.), A HAMMER HEAVIER THAN 35 POUNDS BUT NOT TO EXCEED 90 POUNDS MAY BE USED AT THE APPROVAL OF THE ENGINEER. REMOVAL METHODS OVER BRIDGE MEMBERS SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING THE PRIMARY STEEL MEMBERS.

DUE TO THE POSSIBLE PRESENCE OF WELDED ATTACHMENTS TO EXISTING STRUCTURAL STEEL (FINISHING MACHINE, SCUPPER AND FORM SUPPORTS, ETC.), CARE SHALL BE TAKEN DURING DECK REMOVAL TO AVOID DAMAGING STRINGERS WHICH ARE TO REMAIN. STRINGERS DAMAGED BY THE CONTRACTOR'S REMOVAL OPERATIONS SHALL, AT NO COST TO THE PROJECT, BE REPLACED OR REPAIRED. PROPOSED REPAIRS, DEVELOPED BY A OHIO REGISTERED PROFESSIONAL ENGINEER, SHALL BE SUBMITTED IN WRITING FOR REVIEW AND APPROVAL BY THE DIRECTOR.

EXTRANEOUS MEMBERS:

EXISTING EXTRANEOUS MEMBERS (I.E., FINISHING MACHINE AND FORM SUPPORTS, ETC., AND THE SUPPORT FOR SCUPPERS AND BULB ANGLES WHICH ARE TO BE REMOVED) ATTACHED BY WELDED CONNECTION TO THE DESIGNATED TENSION PORTIONS OF THE TOP FLANGES OF EXISTING STEEL MEMBERS SHALL BE REMOVED AND THE FLANGE SURFACES GROUND SMOOTH. GRINDING SHALL BE CAREFULLY DONE AND PARALLEL TO THE FLANGES.

CUT LINE CONSTRUCTION JOINT PREPARATION:

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, SHALL BE LEFT IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THE JOINT SURFACE AND EXPOSED REINFORCEMENT SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH BUT ALL PACK AND LOOSE RUST SHALL BE REMOVED. EXISTING CONCRETE SURFACES WHICH NEW CONCRETE WILL BE PLACED AGAINST SHALL BE WET, BUT WITHOUT FREE WATER, AT THE TIME OF CONCRETE PLACEMENT.

SUBSTRUCTURE CONCRETE REMOVAL:

SUBSTRUCTURE CONCRETE REMOVAL SHALL BE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, HAMMERS NOT EXCEEDING 90 POUNDS, MAY BE USED UPON THE APPROVAL OF THE ENGINEER. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

LOADING LIMITATIONS:

NO PART OF THE STRUCTURE SHALL BE SUBJECTED TO UNIT STRESSES THAT EXCEED 136.5% OF ALLOWABLE UNIT STRESSES AS DEFINED IN THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES DUE EITHER TO DEMOLITION, ERECTION OR CONSTRUCTION METHODS, OR TO THE USE OR MOVEMENT OF DEMOLITION OR ERECTION EQUIPMENT ON OR ACROSS THE STRUCTURE. STRUCTURAL ANALYSIS COMPUTATIONS, BY A OHIO REGISTERED PROFESSIONAL ENGINEER, SHOWING THE ALLOWABLE STRESSES AND THE MAXIMUM STRESSES PRODUCED BY THE CONTRACTOR'S METHODS OR EQUIPMENT SHALL BE SUBMITTED TO THE DIRECTOR FOR REVIEW AND APPROVAL AT LEAST TWO WEEKS PRIOR TO THE START OF THE WORK.

PAYMENT:

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.

ITEM 514, FIELD PAINTING MISC.: JOINT ARMOR

THIS ITEM SHALL CONSIST OF PREPARING AND COATING THE FOLLOWING AREAS OF EXISTING STEEL:

1. AREAS OF STRUCTURAL EXPANSION JOINT EXTENSIONS ACCESSIBLE TO PAINTING OPERATIONS.
2. AREAS OF EXISTING STRUCTURAL EXPANSION JOINT WHERE PAINT IS REMOVED IN ORDER TO WELD THE PROPOSED ANGLES OF THE EXPANSION JOINT EXTENSION.

SURFACE PREPARATION SHALL CONSIST OF ABRASIVE BLASTING THE AREA TO BE COATED TO AN SA 2 1/2 NEAR-WHITE CONDITION. BLASTING ABRASIVES CONTAINING MORE THAN 1 % FREE SILICA SHALL NOT BE ALLOWED. THESE AREAS SHALL BE COATED THE SAME DAY THAT THEY ARE BLASTED.

THE PREPARED AREAS SHALL BE COATED WITH ONE OF A HIGH SOLIDS EPOXY AT LEAST 5 MILS THICK. THE HIGH SOLIDS EPOXY SHALL BE APPLIED BY BRUSH. THE COLOR OF THE HIGH SOLIDS EPOXY SHALL CLOSELY MATCH THE COLOR OF THE EXISTING COATING.

THE HIGH SOLIDS EPOXY SHALL BE ONE OF THE FOLLOWING PRODUCTS:

1. AMERON AMERLOCK 400
2. VALSPAR HIGH SOLIDS EPOXY 76 SERIES
3. TNEMEC CHEMBUILD SERIES 135
4. SHERWIN WILLIAMS - EPOXY-MASTIC COATING

COST FOR FURNISHING ALL MATERIALS, LABOR, AND EQUIPMENT NECESSARY TO COMPLETE THIS ITEM SHALL BE INCLUDED IN THE SQUARE FOOT BID PRICE FOR THIS ITEM:

ITEM	UNIT	DESCRIPTION
514	SQ. FT.	FIELD PAINTING MISC.: JOINT ARMOR

DESIGN AGENCY: BURGESS & NIPLE  
100 WEST ERIE STREET PAINESVILLE, OHIO 44077

DATE: 2-28-01  
REVIEWED: DWL  
STRUCTURE FILE NUMBER: 4302702

DRAWN: MKB  
REVISOR: MKB

DESIGNED: MKB  
CHECKED: SCT

STRUCTURE NOTES I OF II  
BRIDGE NO. LAK-44-0510  
JACKSON STREET OVER STATE ROUTE 44

LAKE COUNTY  
LAK-2/44-13.05/4.14

2/8

85B  
93