

PROJECTS \ P18391B \ NPLANS \ 18391SNA.DGN 14 AUG 2001

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.

EXTRANEIOUS MEMBERS:  
EXISTING EXTRANEIOUS 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 THESQUAR 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 44071  
 DATE: 2-28-01  
 REVIEWED: DWL  
 DRAWN: MKB  
 DESIGNED: MKB  
 CHECKED: SCT  
 STRUCTURE FILE NUMBER: 4302702  
 STRUCTURE NOTES 1 OF 11  
 BRIDGE NO. LAK-44-0510  
 JACKSON STREET OVER STATE ROUTE 44  
 LAKE COUNTY  
 LAK-2/44-13.05/4J4  
 2/8  
 85B  
 93