

GENERAL NOTES

CALC. BY _____	LAKE COUNTY	OHIO	158
DATE _____		LAK-90/271-1.88/0.00	
CHKD. BY _____			185
DATE _____			

STANDARD DRAWING REFERENCES

DESCRIPTION	DWG. NO.	SHT. NO.	DATE
STRIP SEAL EXPANSION JOINTS AT ABUTMENTS FOR STEEL STRINGER STRUCTURES SUPERSTRUCTURE DETAILS	EXJ-4-87	1-5	1/5/89
VANDAL PROTECTION FENCE	SD-1-69	1-9	6/12/69
	VPF-1-90	1-5	9/26/90

PROPOSED WORK

FOURTEEN (14) STRUCTURES CONSISTING OF FOUR (4) MAIN LINE PAIRS, THREE (3) DIRECTIONAL ROADWAYS, AND THREE (3) CROSSINGS OVER THE MAIN LINE, ARE INCLUDED IN THIS PROJECT. THE MAJOR ITEMS OF WORK REQUIRED ARE AS FOLLOWS:

1. DECK REPAIR: EITHER REPLACEMENT OF THE EXISTING OVERLAY WITH A MICROSILICA MODIFIED CONCRETE OVERLAY OR TREATMENT OF THE EXISTING OVERLAY WITH HMWM RESIN OR A COMBINATION OF PATCHING, INJECTING, SEALING AND GROOVING THE EXISTING OVERLAY. THE BOTTOM OF ALL DECKS, OVER TRAFFIC, WILL BE REPAIRED BY REMOVAL OF LOOSE SURFACE CONCRETE AND EPOXY INJECTION OF DELAMINATED AREAS.
2. INSTALLATION OF SAFETY SHAPED PARAPETS: ON THE EIGHT MAIN LINE STRUCTURES, AND BRIDGE NO. LAK-271-0127E, THE EXISTING CURB STYLE PARAPETS WILL BE MODIFIED TO PROVIDE A DEFLECTOR PARAPET SHAPE BY USING CAST IN PLACE CONCRETE.
3. INSTALLATION OF VANDAL PROTECTION FENCE: ON THE THREE (3) CROSS ROAD STRUCTURES VANDAL PROTECTION FENCE WILL BE MOUNTED ON THE EXISTING PARAPET IN ACCORDANCE WITH STANDARD DRAWING VPF-1-90.
4. PATCHING AND SEALING CONCRETE SURFACES: EXISTING EXPOSED CONCRETE SURFACES OF ALL STRUCTURES, WITH THE EXCEPTION OF LAK-271-0145 SW and LAK-90-0243 R, WILL BE PATCHED AS NECESSARY AND SEALED.
5. RETRO-FIT PIN AND HANGER ASSEMBLIES: THE EXISTING PIN AND HANGER ASSEMBLIES ON BRIDGES No. LAK-271-0145 SW, No. LAK-90-0243 R, AND No. LAK-90-0380 WILL BE SUPPORTED AND THE EXISTING HANGER ASSEMBLY REMOVED AND REPLACED WITH A NEW ASSEMBLY AS DETAILED IN THE PLANS. AT BRIDGE No. LAK-90-0380, THE EXISTING FIXED HINGE JOINT WILL BE SUPPORTED AND THE EXISTING PIN REMOVED AND REPLACED WITH A NEW PIN.
6. REPLACE TRANSVERSE EXPANSION JOINT: ON BRIDGES LAK-271-0145SW and LAK-90-0243R THE EXISTING INTERMEDIATE TRANSVERSE EXPANSION JOINT (AT THE PIN AND HANGER ASSEMBLY) WILL BE REMOVED AND REPLACED WITH A SEALED JOINT.

IN ADDITION TO THE ABOVE WORK ITEMS THE FOLLOWING ITEMS WILL BE PERFORMED AT SOME OR ALL OF THE PROJECT BRIDGES.

- A. MODIFY EXISTING SCUPPERS.
- B. PLUG EXISTING SCUPPERS.
- C. REPAIR ERODED SLOPES.
- D. REPLACE DEFECTIVE CROSSFRAME MEMBERS.
- E. SEAL EXISTING EXPANSION JOINTS WITH POURED POLYURETHANE JOINT SEAL.
- F. RESET MISALIGNED BEARINGS.

FOR EXACT ITEMS APPLICABLE TO EACH STRUCTURE, SEE THE GENERAL PLAN SHEETS.

TRAFFIC CONTROL FOR STRUCTURE REPAIR WORK

TRAFFIC CONTROL FOR STRUCTURE REPAIR WORK SHALL BE CO-ORDINATED WITH THE OVERALL PROJECT. REFER TO MAINTENANCE OF TRAFFIC DETAILS ELSEWHERE IN THE PLANS.

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 OBSERVATION AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.02.

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 EXISTING STRUCTURES ARE AVAILABLE FOR EXAMINATION AT THE OHIO DEPARTMENT OF TRANSPORTATION: DISTRICT 12 OFFICE; 5500 TRANSPORTATION BLVD., GARFIELD HTS., OHIO, AND AT THE ODOT BUREAU OF BRIDGES, 25 SOUTH FRONT STREET, COLUMBUS, OHIO.

PLAN OF OPERATIONS AND PROTECTION

THE CONTRACTOR SHALL SUBMIT TO THE DIRECTOR A COMPLETE SCHEDULE OF CONSTRUCTION OPERATIONS ALONG WITH PLANS CONTAINING HIS PROPOSED METHODS OF PREVENTING DEBRIS FROM FALLING ON THE ROADWAY BELOW. THESE PLANS MUST BE SUBMITTED AND APPROVED PRIOR TO COMMENCING THE WORK. NO WORK SHALL BE STARTED WITHOUT PRIOR APPROVAL OF THE ENGINEER.

IN ADDITION TO THE ABOVE REQUIRED SCHEDULE THE CONTRACTOR SHALL ALSO SUBMIT A PROPOSED SEQUENCE OF OPERATIONS TO BE USED AT EACH STRUCTURE LOCATION. SPECIAL ATTENTION IS DIRECTED TO THE WORK ITEM DENOTED AS PATCH, INJECT, SEAL AND GROOVE EXISTING OVERLAY. THESE OPERATIONS MUST BE PERFORMED AS LISTED.

STRUCTURE REPAIR

THE QUANTITIES LISTED IN THE SUMMARY OF QUANTITIES IS THE ESTIMATED AMOUNT OF REPAIR REQUIRED TO PATCH THE STRUCTURE. THESE QUANTITIES ARE BASED ON VISUAL INSPECTION OF THE EXISTING STRUCTURE AND ARE NOT TO BE CONSTRUED TO REPRESENT THE EXACT AMOUNT OF PATCHING REQUIRED TO REHABILITATE THE BRIDGE. PAYMENT WILL BE BASED ON THE ACTUAL WORK PERFORMED AT THE UNIT PRICE BID FOR ITEM SPECIAL - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR OR ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN.

DESCRIPTION OF DETERIORATION

DETERIORATION TO BE REPAIRED UNDER THIS CONTRACT SHALL BE DEFINED AS THOSE AREAS OF ORIGINAL CONCRETE SURFACE MARKED BY THE ENGINEER.

ITEM 509 - REINFORCING STEEL, AS PER PLAN

THIS ITEM SHALL BE USED TO REPLACE REINFORCING STEEL WHICH IS BENT, ELONGATED, MISSING OR EXTREMELY CORRODED. BAR SHALL BE THE SAME SIZE AS ORIGINAL BARS AND SHALL BE PLACED AS NEAR AS POSSIBLE TO THEIR ORIGINAL LOCATION. BARS SHALL BE LAPPED ACCORDING TO SECTION 509.08. PAYMENT FOR THIS ITEM SHALL INCLUDE THE COST OF ALL MATERIALS AND LABOR NECESSARY TO COMPLETE THE ABOVE WORK, INCLUDING REMOVAL OF EXISTING STEEL. 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 STEEL AT HIS COST.

THE FOLLOWING ESTIMATED QUANTITY OF REINFORCING STEEL IS TO BE USED WHERE AND AS DIRECTED BY THE ENGINEER.

ITEM 509 - REINFORCING STEEL, AS PER PLAN 1000 POUNDS

TYING REBARS

THE PURPOSE OF THIS WORK IS TO TIE EXPOSED STEEL REINFORCING BARS WHICH ARE IN CROSS CONTACT OR LAPPED. TACK WELDING SHALL NOT BE PERMITTED. THIS WORK SHALL BE PERFORMED WHERE AND AS DETERMINED BY THE ENGINEER TO RESTRICT THE RELATIVE MOVEMENT OF THE REINFORCING BARS.

PAYMENT FOR THIS WORK INCLUDING EXTRA REMOVAL OF CONCRETE TO PERMIT TYING SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE PERTINENT ITEM REQUIRING EXISTING CONCRETE REMOVAL.

REINFORCING STEEL SAMPLES

REFER TO CMS SECTIONS 106.03, 700, 709, 709.01 THROUGH 709.5 AND 709.08. SUFFICIENT ADDITIONAL REINFORCING STEEL SHALL BE PROVIDED FOR SAMPLING. RANDOM SAMPLES SHALL BE REPLACED IN THE STRUCTURES BY THE ADDITIONAL STEEL, SPLICED IN ACCORDANCE WITH 509.08.

REINFORCING BAR SPLICE LENGTHS

SHALL CONFORM TO THE MINIMUM LENGTH SPECIFIED BY 509.08 OF THE C.M.S. UNLESS OTHERWISE NOTED ON THE PLANS.

ITEM SPECIAL - MICROSILICA MODIFIED CONCRETE OVERLAY - 1 1/2 INCHES OR 2 INCHES THICK (SEE PROPOSAL NOTE)

THIS ITEM SHALL PROVIDE FOR A MICROSILICA MODIFIED CONCRETE OVERLAY EITHER 1 1/2 OR 2 INCHES THICK AS CALLED FOR IN THE PLANS. THE SCARIFICATION SHALL BE THE SAME THICKNESS AS THE OVERLAY. THE TOP OF THE PROPOSED OVERLAY SURFACE SHALL BE AS CLOSE AS POSSIBLE TO THE EXISTING OVERLAID DECK SURFACE.

ITEM SPECIAL - TREATING CONCRETE BRIDGE DECKS WITH HMWM RESIN (SEE PROPOSAL)

THIS ITEM OF WORK TO BE USED TO SEAL EXISTING BRIDGE DECKS, SHALL NOT BE PERFORMED UNTIL ALL REPAIRS TO THE DECK, (WITH THE EXCEPTION OF DECK BOTTOM INJECTION), FOR THE CONSTRUCTION STAGE, ARE COMPLETE, TREATED AREA SHALL BE LIMITED TO THE DECKS.

ITEM SPECIAL - BRIDGE DECK GROOVING (SEE PROPOSAL)

THIS ITEM SHALL CONSIST OF FURNISHING ALL NECESSARY MATERIALS, LABOR AND EQUIPMENT TO CUT TRANSVERSE GROOVES IN THE SURFACE OF THE DECK OF BRIDGES No. LAK-271-0145-SW, LAK-90-0528 L & R, and LAK-90-0599-R.

ITEM SPECIAL - VANDAL PROTECTION FENCE

VANDAL PROTECTING FENCE, 8'-0" HIGH SHALL BE INSTALLED ON BRIDGES LAK-271-0001, LAK-271-0105, AND LAK-90-0380

ITEM SPECIAL - POURED POLYURETHANE JOINT SEAL

I. DESCRIPTION: THIS WORK SHALL CONSIST OF SEALING JOINTS WITH POURED POLYURETHANE JOINT SEAL IN ACCORDANCE WITH THESE SPECIFICATIONS, IN REASONABLY CLOSE CONFORMITY WITH THE PLANS AND MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS AND AS DIRECTED BY THE ENGINEER.

II. MATERIAL: THE MATERIAL FOR THIS ITEM IS A TWO-PART, COLD APPLIED, CHEMICALLY CURING, SELF LEVELING, ELASTOMERIC, POLYURETHANE JOINT SEALANT MEETING THE REQUIREMENTS OF FEDERAL SPECIFICATION TT-S-00227E AND ASTM C-920. ALL MATERIALS SHALL BE STORED AND INCORPORATED IN THE WORK AS SPECIFIED BY THE MANUFACTURER.

III. APPLICATION: THE CONCRETE SURFACES TO WHICH THE SEALER IS TO ADHERE SHALL FIRST BE THOROUGHLY CLEANED BY ABRASIVE BLASTING. POLYURETHANE JOINT SEAL SHALL BE POURED THE FULL LENGTH OF THE BITUMEN IMPREGNATED FOAM SEAL PREVIOUSLY INSTALLED IN THE OPEN JOINT AND SHALL BE APPLIED ONLY WHEN THE CONCRETE IS DRY AND ITS TEMPERATURE IS ABOVE 50 DEGREES F. THE POURED JOINT SEALER SHALL ACT AS A SECOND SEAL UNDERNEATH AND ON TOP OF THE BITUMEN IMPREGNATED FOAM JOINT SEAL. THE INSTALLED AND CURED MATERIAL SHALL BE THE DEPTH AS SHOWN IN THE PLANS AND SHALL BE BONDED TO THE CONCRETE SIDES OF THE JOINT. ANY UNBONDED SECTION SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE. DAMS AS REQUIRED TO CONTAIN THE POURED SEALER SHALL BE INCIDENTAL TO THIS ITEM OF WORK.

IV. METHOD OF MEASUREMENT: FOOTAGE UNDER THIS ITEM SHALL BE THE LINEAR FEET OF POLYURETHANE JOINT SEAL POURED OVER THE FOAM JOINT SEALS THAT ARE COMPLETE, IN PLACE AND ACCEPTED.

V. BASIS OF PAYMENT: THE ACCEPTED QUANTITIES OF POURED POLYURETHANE JOINT SEAL SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LINEAR FOOT, WHICH PRICE AND PAYMENT SHALL BE IN FULL COMPENSATION FOR PREPARING THE SURFACES, FURNISHING AND PLACING ALL MATERIALS AND ALL OTHER MATERIAL, LABOR AND EQUIPMENT NECESSARY TO COMPLETE THE JOINT SEAL ACCORDING TO SPECIFICATIONS. PAYMENT WILL BE MADE UNDER:

ITEM	UNIT	DESCRIPTION
SPECIAL	LINEAR FOOT	POURED POLYURETHANE JOINT SEAL

ITEM 601 CRUSHED AGGREGATE SLOPE PROTECTION AS PER PLAN

THIS ITEM SHALL BE USED TO PROVIDE REPAIR AND PROTECTION FOR EXISTING ERODED SLOPES AS CALLED FOR IN THE PLANS. REPAIR SHALL CONSIST OF REMOVING UNDESIRABLE MATERIAL FROM THE ERODED AREA, SHAPING AS REQUIRED AND FILLING THE DEPRESSION WITH CRUSHED AGGREGATE OF SIZE AND MATERIAL AS SPECIFIED IN CMS ITEM 601.05

COST BID FOR THIS ITEM SHALL BE FOR THE NUMBER OF CUBIC YARDS OF CRUSHED AGGREGATE ACCEPTED IN PLACE AND SHALL INCLUDE THE COST OF ALL LABOR, MATERIAL AND EQUIPMENT REQUIRED TO REPAIR THE SLOPES. PAYMENT WILL BE MADE UNDER

ITEM	UNIT	DESCRIPTION
601	S.Y.	CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN

STILSON & ASSOCIATES, INC. CONSULTING ENGINEERING AND ARCHITECTURE COLUMBUS AND CLEVELAND						
STRUCTURE GENERAL NOTES LAK-90/271-1.88/0.00						
LAKE COUNTY						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.M.	R.T.P.		V.S.	G.W.M.	2/21/92	