

DESIGN DESIGNATION
CURRENT A.D.T. 1985
DESIGN YEAR A.D.T. 1985
DHV
C.T.V.

TRANSPORTATION
CITY OF HURON
ERIE COUNTY

6013-83

BRIDGE REPAIR

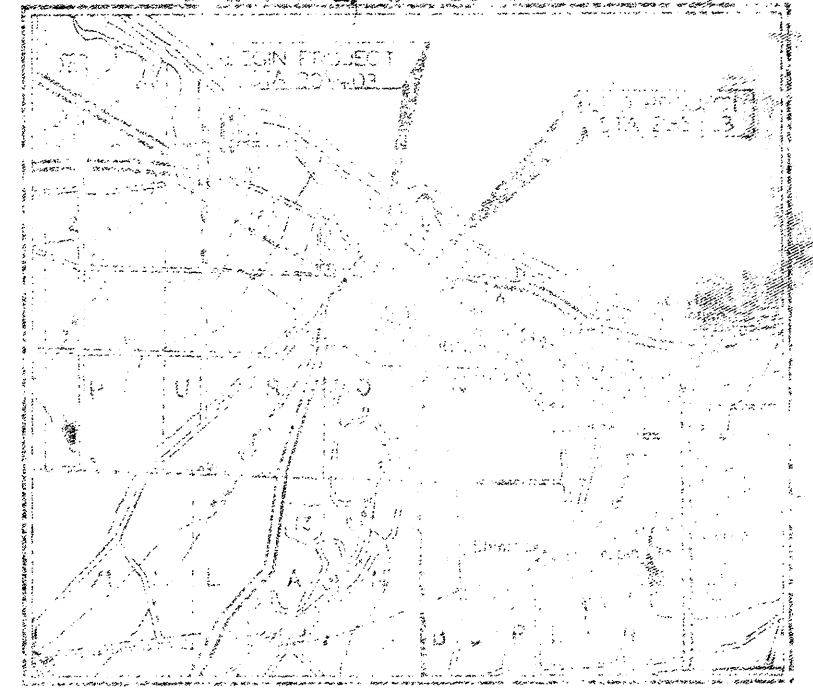
ERI-6-1792-SEN 2201884
ERI-6-18.24-SEN 2202018

CONVENTIONAL SIGNS

Table with 3 columns: Sign Name, Description, and Abbreviation. Includes County Line, Township Line, Section Line, Corporation Line, Minor Line, Center Line, and Utility Pole.

INDEX OF SHEETS

Table with 2 columns: Sheet Title and Sheet Number. Lists Title Sheet, Typical Section, General Notes, etc.



LOCATION MAP

SCALE IN MILES

Table for SCALES with rows for Plan, Profile, and Cross Section, and columns for horizontal and vertical scales.

SUPPLEMENTAL SPECIFICATIONS table with columns for Item, Description, and Quantity.

LINE DATA

Table with 2 columns: Item and Value. Includes BEGIN PROJECT, END PROJECT, NET PROJECT LENGTH, BEGIN WORK, END WORK, NET WORK LENGTH.

UNDERGROUND UTILITIES 24 HOURS BEFORE YOU DIG. Call 1-800-362-2754 (Toll free) for UTILITIES PROTECTION SERVICE.

Portion to be improved: State & Federal routes, Other Roads

1983 SPECIFICATIONS

The standard specifications of the State of Ohio, Department of Transportation, including changes and amendments, shall apply to the project and shall govern the improvement.

Approved: [Signature] District Deputy Director of Transportation

Approved: [Signature] Engineer in Charge of Bridges and Structural Design

Approved: [Signature] District Engineer, Operations

Approved: [Signature] District Director, Department of Transportation

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

Plan Prepared By: DISTRICT THREE BRIDGE DEPARTMENT

SEAL

TYPICAL SECTIONS

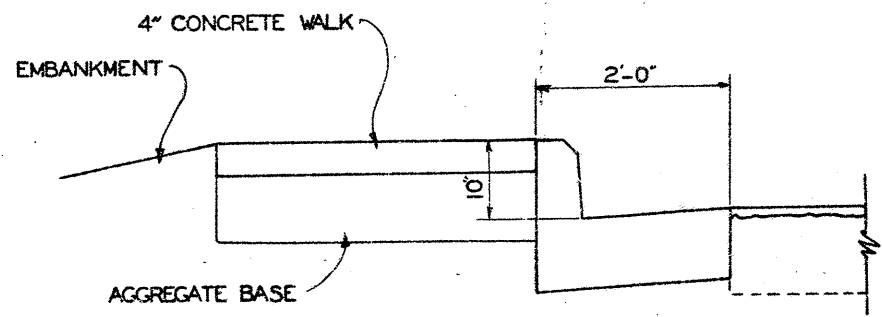
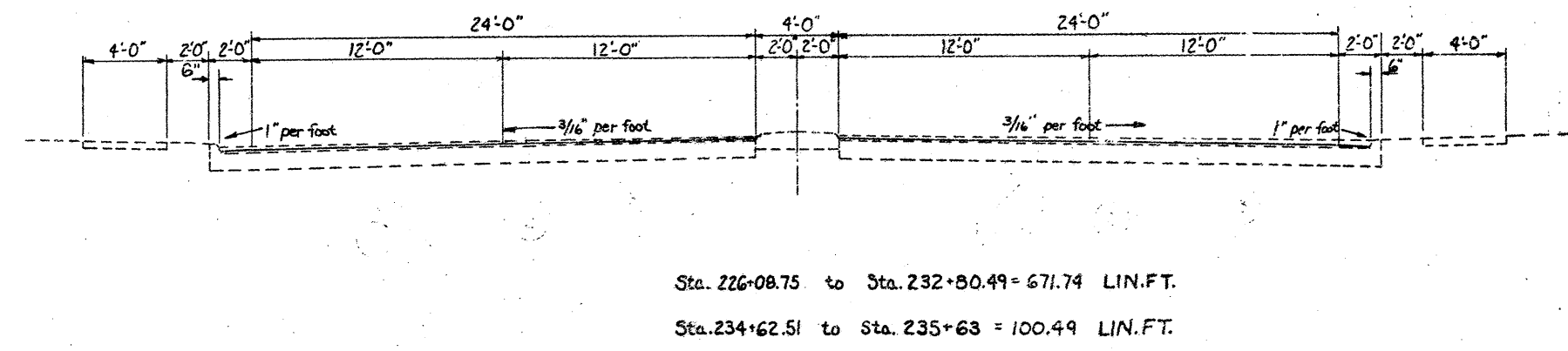
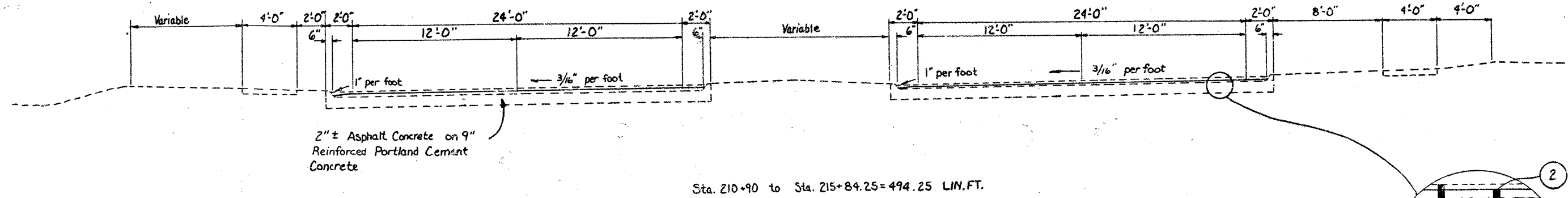
TYPE 404

FHWA REGION	STATE	PROJECT
5	OHIO	

2
47

ERI-6-17.41

PLAN NO. BR-51-83



NOTE: REMOVAL OF EXISTING CURB INCLUDED IN THIS ITEM. FOR DETAILS NOT SHOWN SEE STANDARD DRAWING BP-7.

CURB, TYPE 2, AS PER PLAN
(SEE SHEETS 13 AND 15 FOR LOCATION)

- ① SPECIAL ASPHALT PAVEMENT PLANING (SEE GENERAL NOTE SHEET NO. 3) (DEPTH 1'-1 1/2")
- ② 1" 404 ASPHALT CONCRETE AC-20

GENERAL NOTES

MOBILIZATION AS PER PLAN.

THE CONTRACTOR SHALL PROVIDE A SUITABLE FIELD OFFICE HAVING A MINIMUM OF 300 SQ. FT. OF FLOOR SPACE WHICH SHALL BE IN ACCORDANCE WITH 619.01 AND 619.02. PAYMENT SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 624, MOBILIZATION AS PER PLAN.

UNDERGROUND UTILITIES.

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY SECTION 153.64 ORC.

UTILITIES NOTIFICATION.

AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN AN AREA WHICH MAY INVOLVE UNDERGROUND UTILITY FACILITIES, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, THE REGISTERED UTILITY PROTECTION SERVICE AND THE OWNERS OF EACH UNDERGROUND UTILITY FACILITY SHOWN IN THE PLANS.

THE OWNER OF THE UNDERGROUND UTILITY FACILITY SHALL, WITHIN FORTY-EIGHT (48) HOURS, EXCLUDING SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS, AFTER NOTICE IS RECEIVED, STAKE, MARK OR OTHERWISE DESIGNATE THE LOCATION OF THE UNDERGROUND UTILITY FACILITIES IN THE CONSTRUCTION AREA IN SUCH A MANNER AS TO INDICATE THEIR COURSE TOGETHER WITH THE APPROXIMATE DEPTH AT WHICH THEY WERE INSTALLED. THE MARKING OR LOCATING SHALL BE COORDINATED TO STAY APPROXIMATELY TWO (2) DAYS AHEAD OF THE PLANNED CONSTRUCTION.

UTILITY OWNERS.

THE FOLLOWING UTILITIES AND OWNERS ARE LOCATED WITHIN THE WORK LIMITS ON THIS PROJECT.

COLUMBIA GAS OF OHIO
99 FRONT STREET
COLUMBUS, OHIO 43215

GENERAL TELEPHONE OF OHIO
117 NORTH SANDUSKY STREET
BELLEVUE, OHIO 44811

OHIO EDISON COMPANY
76 SOUTH MAIN STREET
AKRON, OHIO 44308

CITY OF HURON
WATER DEPARTMENT
CITY BUILDING
HURON, OHIO 44859

SANITARY ENGINEERING DEPARTMENT
1200 SYCAMORE LINE
P. O. BOX 549
SANDUSKY, OHIO 44870

WORK SEQUENCE.

IN APRIL, 1984 A SEWER LINE WILL BE INSTALLED ON THE SOUTH SIDE OF THE BRIDGE. THE CONTRACTOR WILL HAVE TO COORDINATE HIS WORK WITH THE SEWER LINE CONTRACTOR. WORK ON THE EASTBOUND LANES SHALL BE DONE FIRST.

BOAT TRAFFIC.

THE CONTRACTOR MUST MAKE PROVISIONS TO PROTECT ALL BOAT TRAFFIC FROM DEBRIS AND PAINT. ANY DAMAGE DONE TO BOATS WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

LOCATION OF GUARDRAIL.

THE LOCATIONS OF GUARDRAIL RUNS, AS SHOWN IN THESE PLANS, ARE SUBJECT TO ADJUSTMENT PRIOR TO FINAL ACCEPTANCE. THE ENGINEER SHALL BE SATISFIED THAT ALL INSTALLATIONS WILL AFFORD MAXIMUM PROTECTION FOR TRAFFIC.

GUARDRAIL REPLACEMENT.

NO HAZARD SHALL BE LEFT UNPROTECTED EXCEPT FOR THE ACTUAL TIME NECESSARY TO REMOVE, GRADE AND REINSTALL GUARDRAIL IN A CONTINUOUS OPERATION. THE REMOVAL OF ALL GUARDRAIL SHALL AT ALL TIMES BE AS DIRECTED BY THE ENGINEER. NO GUARDRAIL SHALL BE REMOVED UNTIL THE REPLACEMENT MATERIAL IS ON THE SITE, READY FOR INSTALLATION. FAILURE TO COMPLY WITH THIS REQUIREMENT SHALL BE DEEMED SUFFICIENT CAUSE TO ORDER WORK STOPPED ON THIS PROJECT UNTIL SUCH TIME THAT THE ENGINEER IS ASSURED OF SAID COMPLIANCE.

PROFILE AND ALIGNMENT.

THE PROPOSED PAVEMENT PLANNING AND RESURFACING COURSE SHALL FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. THE PROPOSED ASPHALT CONCRETE OVERLAY SHALL HAVE A UNIFORM THICKNESS OF APPROXIMATELY ONE (1) INCH.

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. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED AT THE ENGINEER'S DISCRETION SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

ITEM 407 TACK COAT.

THE TACK COAT AND COVER AGGREGATE OPERATION SHALL BE DETERMINED AS PER SPEC. 407.05. PLAN QUANTITIES INDICATE AVERAGE APPLICATION RATES OF 0.1 GALLONS PER SQUARE YARD OF TACK COAT AND 7 POUNDS PER SQUARE YARD OF COVER AGGREGATE FOR ESTIMATING PURPOSES ONLY.

ITEM 606 BRIDGE TERMINAL ASSEMBLY, TYPE "G" MODIFIED, AS PER PLAN.

THE BRIDGE TERMINAL ASSEMBLY, TYPE "G", SHALL BE BUILT ACCORDING TO STANDARD DRAWING GR-3B AND MODIFIED AS PER DETAIL ON SHEET NO. 41. THE ADDITIONAL COST FOR THE EXTRA LENGTH OF WHEELGUARD SHALL BE INCLUDED IN THIS ITEM.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH FOR ITEM 606 BRIDGE TERMINAL ASSEMBLY, TYPE "G", MODIFIED, AS PER PLAN WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 607 TEMPORARY FENCE TYPE 47 AS PER PLAN.

TEMPORARY FENCE TYPE 47 SHALL BE ERECTED AT THE LOCATIONS SHOWN ON SHEET NO. 13-15, BEFORE ANY WORK IS STARTED ON THE PROJECT. A HINGED GATE SHALL BE ERECTED AT THE LOCATIONS SHOWN ON SHEET NO. 13 & 15. THE GATE SHALL BE AN APPROVED 16' BY 4' STEEL FRAME FARM TYPE, OR A TYPE APPROVED BY THE ENGINEER. THE GATE SHALL BE HUNG ON HINGE SCREW HOOKS OR AT THE CENTER IN AN APPROVED MANNER. AT THE COMPLETION OF THE PROJECT THE FENCE WILL BE REMOVED AND BECOME THE PROPERTY OF THE CONTRACTOR. ALL POSTS HOLES SHALL BE CAREFULLY FILLED AND TAMPED AND THE SITE CLEANED AND RESTORED.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY.

607 TEMPORARY FENCE TYPE 47 AS PER PLAN 1325 LINEAR FEET.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER LINEAR FOOT FOR ITEM 607, TEMPORARY FENCE TYPE 47 AS PER PLAN WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 615 TEMPORARY PAVEMENT, CLASS "A", AS PER PLAN.

ALL SECTIONS OF ITEM 615 SHALL APPLY EXCEPT THE TEMPORARY PAVEMENT WILL NOT BE REMOVED AT THE LOCATION SHOWN ON SHEET NO. 42.

ITEM 624 ASPHALT PAVEMENT PLANING.

THIS WORK SHALL CONSIST OF PLANING THE EXISTING PAVEMENT AND DISPOSING OF THE CUTTINGS IN ACCORDANCE WITH THESE SPECIFICATIONS IN AREAS DESIGNATED ON THE PLANS OR ESTABLISHED BY THE ENGINEER. WHEN PROVIDED FOR IN THE CONTRACT THE WORK ALSO SHALL CONSIST OF PATCHING THE PLANED SURFACE.

EXISTING PAVEMENT TYPE.

THE ITEM DESCRIPTION INDICATES THE PREDOMINANT TYPE OF PAVEMENT. ALL PAVEMENT ENCOUNTERED IN THE AREAS DESIGNATED ON THE PLANS SHALL BE PLANED, MEASURED, AND PAID FOR UNDER THE ITEM UNLESS A SEPARATE ITEM IS PROVIDED IN THE CONTRACT.

EQUIPMENT.

PLANING EQUIPMENT SHALL BE SELF-PROPELLED WITH SUFFICIENT POWER AND STABILITY TO CONSISTENTLY AND EFFICIENTLY PRODUCE THE REQUIRED RESULTS. THE CUTTING ELEMENT MAY BE OF THE GRINDING, SAWING, OR MILLING TYPE.

PLANING CUTTERS SHALL BE MOUNTED RIGIDLY TO THE CARRIER AND SHALL BE ADJUSTABLE AND CONTROLLABLE AS TO DEPTH OF CUT AND CROSS-SLOPE. LONGITUDINAL PLANING ACTION MAY BE PRODUCED EITHER BY MEANS OF A SUITABLE CARRIER WHEELBASE OR BY MEANS OF AN AUTOMATIC CONTROL SYSTEM HAVING AN EXTERNAL REFERENCE. CROSS-SLOPE ADJUSTMENTS OR AUTOMATIC CONTROLS SHALL BE CAPABLE OF PRODUCING EITHER A VARIABLE OR A CONSTANT CROSS-SLOPE AS REQUIRED.

PLANING CUTTERS SHALL BE DESIGNED, MAINTAINED AND OPERATED SO AS TO PRODUCE A SURFACE FREE FROM GROOVES, RIDGES, GOUGES OR OTHER IRREGULARITIES DETRIMENTAL TO THE SAFE OPERATION OF VEHICLES IN TRAFFIC ROUTED ONTO THE PLANED SURFACE, TEMPORARILY OR PERMANENTLY.

SUITABLE SUPPLEMENTAL EQUIPMENT OR METHODS, APPROVED BY THE ENGINEER, MAY BE USED IN SMALL OR CONFINED AREAS.

PLANING.

ONE OR MORE PLANING PASSES SHALL BE MADE OVER THE DESIGNATED AREA AS NECESSARY TO REMOVE SUCH IRREGULARITIES AS BUMPS, CORRUGATIONS, AND WHEEL RUTS, AND WHEN REQUIRED, AS NECESSARY TO ESTABLISH A NEW PAVEMENT SURFACE ELEVATION OR CROSS-SLOPE.

CUTTINGS SHALL BE REMOVED FROM THE SURFACE FOLLOWING EACH PASS OF THE EQUIPMENT. BEFORE OPENING THE COMPLETED AREA TO TRAFFIC, THE SURFACE SHALL BE CLEANED THOROUGHLY OF ALL LOOSE MATERIAL THAT WOULD CREATE A HAZARD, A NUISANCE, OR WOULD BE REDEPOSITED INTO THE SURFACE TEXTURE. CUTTINGS SHALL BE DISPOSED OF IN ACCORDANCE WITH 203.05.

EFFECTIVE MEASURES SHALL BE TAKEN TO CONTROL DUST, SMOKE, CONTAMINATION OF THE PAVEMENT, AND THE SCATTERING OF LOOSE PARTICLES DURING PLANING, AND CLEANING OPERATIONS.

WHERE SOUND PAVEMENT HAS BEEN GOUGED, TORN, OR OTHERWISE DAMAGED DURING PLANING OPERATIONS, THE DAMAGED AREA SHALL BE REPAIRED AT NO ADDITIONAL COST IN A MANNER SATISFACTORY TO THE ENGINEER TO CONFORM TO THE ADJACENT PAVEMENT IN SMOOTHNESS AND DURABILITY.

SURFACE TOLERANCES.

WHEN THE CONTRACT PROVIDES FOR PLANING WITHOUT RESURFACING, THE SURFACE SHALL BE PLANED TO A SMOOTHNESS OR PLUS OR MINUS 1/8 INCH IN 10 FEET AND THE SURFACES AT THE EDGES OF ADJACENT PASSES SHALL BE MATCHED WITHIN PLUS OR MINUS 1/8 INCH. WHEN THE CONTRACT INCLUDES RESURFACING, THESE TOLERANCES SHALL CONFORM TO THE SPECIFIED CROSS-SLOPE WITHIN PLUS OR MINUS 3/8 INCH IN TEN FEET.

METHOD OF MEASUREMENT.

THE QUANTITY OF PAVEMENT PLANING INCLUDING THE REMOVAL AND DISPOSAL OF CUTTINGS SHALL BE THE NUMBER OF SQUARE YARDS PLANED.

GENERAL NOTES

DESIGN DATA

STATE	4
COUNTY	47
ERI-6-17.41	
PLANS BR-59-83	

ITEM SPECIAL PRESSURE RELIEF JOINT

A PRESSURE RELIEF JOINT SHALL BE PLACED AT THE FIRST TRANSVERSE JOINT BEYOND THE APPROACH SLAB. THE RELIEF JOINT SHALL BE INSTALLED AS SHOWN ON SHEET NO. 20.

PAYMENT SHALL BE AT THE UNIT PRICE BID PER LINEAL FOOT FOR PRESSURE RELIEF JOINT, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, REMOVING AND DISPOSING OF EXISTING PAVEMENT AND DOWEL ASSEMBLY AND MATERIAL TO COMPLETE THE ABOVE.

ITEM SPECIAL BITUMINOUS CONCRETE GUTTER

BITUMINOUS CONCRETE GUTTER SHALL BE CONSTRUCTED AS PER DETAIL ON SHEET NO. 41. THE 404 SHALL BE COMPACTED WHILE HOT USING HAND AND MECHANICAL TAMPERS. THE GUTTERS SHALL BE CENTERED UNDER THE SCUPPERS AND LOCATED AS SHOWN ON SHEET NO.'S 13, 15 & 17.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER LINEAL FOOT FOR ITEM SPECIAL, BITUMINOUS CONCRETE GUTTER WHICH SHALL INCLUDE ALL NECESSARY TOOLS, LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM SPECIAL PARTIAL DEPTH PAVEMENT JOINT REPAIR

THIS ITEM OF WORK SHALL CONSIST OF PARTIAL DEPTH REMOVAL OF EXISTING ASPHALT AND CONCRETE PAVEMENT IN AREAS EXHIBITING DETERIORATION AT THE SURFACE, APPLYING TACK COAT, AND PLACING AND COMPACTING ASPHALT CONCRETE. SEE DETAILS ON SHEET NO. 20.

THE ENGINEER WILL DESIGNATE THE LOCATION AND THE LIMITS OF THE AREAS TO BE REPAIRED. THE REPAIR AREAS WILL BE ROUGHLY RECTANGULAR IN SHAPE AS REQUIRED TO ENVELOP SURFACE DETERIORATION. TYPICAL REPAIR AREAS WILL EXTEND THE FULL WIDTH OF A TRAFFIC LANE AT TRANSVERSE JOINTS AND ALONG PORTIONS OF LONGITUDINAL JOINTS. THE DEPTH OF REMOVAL SHALL BE AS DIRECTED BY THE ENGINEER.

THE PAVEMENT SHALL BE REMOVED TO THE DIRECTED DEPTH WITHIN THE DESIGNATED LIMITS BY A METHOD THAT WILL NOT LOOSEN OR OTHERWISE DAMAGE ADJACENT PAVEMENT. PAVEMENT REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH 203.05.

AFTER REMOVAL OF THE PAVEMENT, ITEM 407, TACK COAT, SHALL BE APPLIED IN SUFFICIENT QUANTITY TO THOROUGHLY COAT ALL EXPOSED SURFACES AND TO FILL CRACKS AND JOINT OPENINGS.

ASPHALT CONCRETE MEETING THE REQUIREMENTS OF ITEM 404 SHALL THEN BE PLACED AND COMPACTED IN ONE (1) OR MORE LIFTS AS NECESSARY TO FINISH FLUSH WITH THE ADJACENT PAVEMENT SURFACE.

PAYMENT ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER CUBIC YARD, BASED ON FIELD MEASUREMENT, FOR ITEM SPECIAL PARTIAL DEPTH PAVEMENT JOINT REPAIRS, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

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 513.02.

DESIGN SPECIFICATIONS

THIS STRUCTURE MODIFICATION CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS 1977, INCLUDING THE 1978 THRU 1982 INTERIM SPECIFICATIONS AND THE ONTO "SUPPLEMENT" TO THESE SPECIFICATIONS.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRELIM 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.

DESIGN STRESSES: CONCRETE CLASS "S" - COMPRESSIVE STRENGTH 4500 P.S.I.
CONCRETE CLASS "C" - COMPRESSIVE STRENGTH 4000 P.S.I.
REINFORCING STEEL - ASTM A615, A616, A617-GRADE 60
MINIMUM YIELD STRENGTH 60,000 P.S.I.

DECK PROTECTION METHOD: LATEX-MODIFIED CONCRETE OVERLAY

STREAM POLLUTION

THE CONTRACTOR SHALL MAKE PROVISIONS DURING THE BRIDGE REPAIR OPERATION NOT TO ALLOW ANY MATERIALS, EQUIPMENT, ETC., TO FALL INTO OR ENTER THE WATER. MATERIALS MAY BE ALLOWED TO FALL ONTO THE STREAM BANK IF ALL THESE MATERIALS ARE REMOVED THE SAME DAY.

ALL WASTE MATERIAL FROM THE STRUCTURE OR APPROACHES SHALL BE DISPOSED OF BY THE CONTRACTOR BUT IN NO CASE SHALL THE CONTRACTOR OR HIS AGENT USE THE MATERIALS AS FILL AT ANY LOCATION ON THE HURON RIVER FLOOD PLAIN. THE COST TO COMPLY WITH THE ABOVE SHALL BE INCLUDED IN THE RESPECTIVE BID ITEMS.

ITEM 520 PNEUMATICALLY PLACED MORTAR, AS PER PLAN

THIS ITEM SHALL BE USED TO REPAIR PIERS, ABUTMENTS, BOTTOM OF SLABS ALONG CENTER JOINT, EDGE BEAMS AND OTHER PARTS OF THE SUBSTRUCTURE AS DIRECTED BY THE ENGINEER.

WITHIN TWENTY-FOUR (24) HOURS BEFORE PLACING CONCRETE, THE EXISTING SURFACE AGAINST WHICH THE CONCRETE SHALL BE PLACED, AND EXISTING REINFORCING STEEL SHALL BE THOROUGHLY CLEANED BY SANDBLASTING. SANDBLASTING SHALL BE AT LEAST EQUAL TO SA2 "THOROUGH BLAST CLEANING" AS OUTLINED IN ASTM D-2200 OR SSPC-SP6. ALL LOOSE AND DETERIORATED CONCRETE AND CALCIUM CARBONATE DEPOSITS SHALL BE REMOVED WITH HAND TOOLS BEFORE SANDBLASTING. CONCRETE QUANTITIES SHALL BE ADJUSTED TO INCLUDE ADDITIONAL VOLUMES REQUIRED.

THE FOLLOWING ESTIMATED QUANTITY IS TO BE USED AS DIRECTED BY THE ENGINEER TO PATCH BOTH STRUCTURES:

520 PNEUMATICALLY PLACED MORTAR, AS PER PLAN 1978 SQ. FT.

PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 520 PNEUMATICALLY PLACED MORTAR, AS PER PLAN, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

CLASS "S" CONCRETE, AS PER PLAN

THIS NOTE SHALL APPLY TO ALL ITEMS THAT CALL FOR CLASS "S" CONCRETE. ALL LOOSE AND DETERIORATED CONCRETE AND CALCIUM CARBONATE DEPOSITS SHALL BE REMOVED WITH HAND TOOLS. CONCRETE QUANTITIES SHALL BE ADJUSTED TO INCLUDE ADDITIONAL VOLUMES REQUIRED. BEFORE PLACING CONCRETE, THE EXISTING SURFACE AGAINST WHICH THE CONCRETE SHALL BE PLACED, AND EXISTING REINFORCING STEEL SHALL BE THOROUGHLY CLEANED BY SANDBLASTING. SANDBLASTING SHALL BE AT LEAST EQUAL TO SA2 "THOROUGH BLAST CLEANING" AS OUTLINED IN ASTM D-2200 OR SSPC - SP6.

THE COARSE AGGREGATE SHALL BE NO. 8 LIMESTONE.

QUANTITIES PER CUBIC YARD

FINE AGGREGATE (LB)	COARSE AGGREGATE (LB)	CEMENT CONTENT (LB)	MAXIMUM WATER-CEMENT RATIO
1535	1100	2655	0.44
AIR CONTENT 8 ± 2%			

ALL OTHER PROVISIONS OF ITEM 511 SHALL REMAIN IN EFFECT. PAYMENT FOR THE ABOVE COMPLETED AND ACCEPTED QUANTITIES WILL BE MADE AT THE CONTRACT BID PRICE FOR

ITEM	UNIT	DESCRIPTION (SEE APPLICABLE GENERAL NOTES)
511	CU. YD.	CLASS "S" CONCRETE, ABUTMENT, AS PER PLAN
511	CU. YD.	CLASS "S" CONCRETE, EDGE BEAM, AS PER PLAN
511	CU. YD.	CLASS "S" CONCRETE, EXPANSION JOINT, AS PER PLAN
511	CU. YD.	CLASS "S" CONCRETE, PIER CAP, AS PER PLAN
511	CU. YD.	CLASS "S" CONCRETE, SIDEWALK, AS PER PLAN

ITEM 511 CLASS "S" CONCRETE, ABUTMENTS, AS PER PLAN

BOTH ABUTMENTS WILL BE REPAIRED AS PER DETAILS ON SHEET NO. 21. THE EXISTING EXPANSION JOINT SHALL BE REMOVED.

PAYMENT FOR THE ABOVE, INCLUDING EXISTING CONCRETE REMOVAL SHALL BE AT THE UNIT PRICE BID PER CUBIC YARD FOR ITEM 511, CLASS "S" CONCRETE, ABUTMENTS, AS PER PLAN; WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 511 CLASS "S" CONCRETE, EDGE BEAM, AS PER PLAN

THE EDGE BEAM SHALL BE REPLACED AS PER DETAILS ON SHEET NO. 39. BEFORE THE OLD EDGE BEAM IS REMOVED, PROVISIONS MUST BE MADE TO SUPPORT THE SIDEWALK. PAYMENT FOR SUPPORTING THE SIDEWALK WILL BE INCLUDED IN THIS ITEM. ALSO INCLUDED IN THIS ITEM WILL BE ALL WORK NECESSARY TO RESET THE EXISTING RAILING POSTS.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER CUBIC YARD FOR ITEM 511, CLASS "S" CONCRETE, EDGE BEAM, AS PER PLAN; WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 511 CLASS "S" CONCRETE, SIDEWALK, AS PER PLAN

PORTIONS OF THE OPEN GRID SIDEWALK WILL BE REMOVED AND REPLACED WITH CONCRETE AS PER DETAILS ON SHEET NO. 28. THE EXISTING BRACKETS THAT WILL SUPPORT THE SIDEWALK SHALL BE SANDELASTED BEFORE PLACING THE CONCRETE. THE MANHOLE FRAMES INSTALLED IN THE SIDEWALK WILL BE THE TYPE SHOWN ON SHEET NO. 28, OR AN APPROVED EQUAL.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER CUBIC YARD FOR ITEM 511, CLASS "S" CONCRETE, SIDEWALK, AS PER PLAN; WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 511 CLASS "S" CONCRETE, EXPANSION JOINT, AS PER PLAN

THIS ITEM SHALL INCLUDE ALL WORK REQUIRED TO REMOVE THE EXISTING EXPANSION JOINT, AND REPAIR WITH CLASS "S" CONCRETE, AS PER DETAILS ON SHEET NO. 25-29/49. CARE SHOULD BE TAKEN NOT TO DAMAGE THE EXISTING REINFORCING STEEL DURING THE REMOVAL OF THE DETERIORATED CONCRETE. IF THE EXISTING REINFORCING STEEL, WHICH IS TO BE SALVAGED, IS DAMAGED; THEN THE CONTRACTOR AT HIS EXPENSE WILL REMOVE A SUFFICIENT AMOUNT OF SOUND CONCRETE TO PROVIDE THE REQUIRED LAP LENGTH FOR NEW REINFORCING. DOWELS WILL NOT BE PERMITTED.

BONDING GROUT SHALL BE PLACED AS PER 519.04

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER CUBIC YARD FOR ITEM 511, CLASS "S" CONCRETE, EXPANSION JOINT, AS PER PLAN; WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 511 CLASS "S" CONCRETE, PIER CAP, AS PER PLAN

THE PIER CAPS WILL BE REPAIRED AS PER DETAILS ON SHEET NO. 22-24. THE REMOVAL OF THE EXISTING CONCRETE IS INCLUDED IN THIS ITEM. IF THE EXISTING REINFORCING STEEL, WHICH IS TO BE SALVAGED, IS DAMAGED DURING THE REMOVAL; DOWELS MUST BE ADDED AT THE CONTRACTOR'S EXPENSE.

BONDING GROUT SHALL BE PLACED AS PER 519.04.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 511, CLASS "S" CONCRETE, PIER CAP, AS PER PLAN; WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

GENERAL NOTES

STATE
 PROJECT NO. 17
 ERI-6-17-41
 PR-57-63

ITEM SPECIAL LATEX MODIFIED CONCRETE, OPEN GRID

PORTIONS OF THE OPEN GRID ROADWAY SURFACE ARE TO BE FILLED WITH LATEX MODIFIED CONCRETE AS PER DETAILS ON SHEET NO. 37. THE NEW SIDEWALK GRID WILL BE FILLED WITH LMC BEHIND THE STEEL BARRIER AS SHOWN ON SHEET NO. 30.

WITHIN TWENTY-FOUR (24) HOURS BEFORE PLACING THE LMC, THE EXISTING SURFACES AGAINST WHICH THE LMC SHALL BE PLACED ARE TO BE THOROUGHLY CLEANED BY SANDBLASTING. SANDBLASTING SHALL BE AT LEAST EQUAL TO SA2 "THOROUGH BLAST CLEANING" AS OUTLINED IN ASTM D-2200 OR SSPC-SP6.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER SQUARE YARD FOR ITEM SPECIAL LATEX MODIFIED CONCRETE, OPEN GRID WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM SPECIAL CURB

THE CURB ON STRUCTURE ERI-6-1824 SHALL BE REPAIRED AS PER DETAIL ON SHEET NO. 41. THE CONTRACTOR MAY USE LATEX MODIFIED CONCRETE OR ITEM 511.

ALL LOOSE AND DETERIORATED CONCRETE AND CALCIUM CARBONATE DEPOSITS SHALL BE REMOVED WITH HAND TOOLS BEFORE SANDBLASTING. WITHIN 24 HOURS BEFORE PLACING CONCRETE, THE EXISTING SURFACE AGAINST WHICH THE CONCRETE SHALL BE PLACED AND ANY EXPOSED REINFORCING STEEL SHALL BE THOROUGHLY CLEANED BY SANDBLASTING. SANDBLASTING SHALL BE AT LEAST EQUAL TO SA2 "THOROUGH BLAST CLEANING" AS OUTLINED IN ASTM D-2200 OR SSPC-SP6. BONDING GROUT SHALL BE PLACED AS PER 519.04

PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER LINEAL FOOT FOR ITEM SPECIAL, CURB, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 513 STRUCTURAL STEEL SWAY BRACING

THE EXISTING SWAY BRACING WILL BE RECONNECTED AS PER DETAILS ON SHEET NO. 28. THE NEW GUSSET PLATE SHALL BE CUT IN THE FIELD TO FIT.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE LUMP SUM PRICE BID FOR ITEM 513 STRUCTURAL STEEL, SWAY BRACING, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 513 STRUCTURAL STEEL BRACKET ANGLES, AS PER PLAN

TWO (2) EXISTING BRACKET ANGLES WILL BE REPLACED AS PER DETAILS ON SHEET NO. 28.

THIS ITEM SHALL ALSO INCLUDE ALL FALSEWORK REQUIRED TO SUPPORT THE BRACKET WHILE THE ANGLES ARE REPLACED. THE FALSEWORK SHALL BE DESIGNED TO PREVENT ALL HORIZONTAL OR VERTICAL MOVEMENT. THE CONTRACTOR SHALL REMOVE AND REPLACE AT HIS OWN EXPENSE ANY PART OF THE BRACKET MADE UNSATISFACTORY BY MOVEMENT.

THE FALSEWORK PLANS SHALL BE APPROVED BY THE DIRECTOR. FOR SUCH APPROVAL, THREE (3) COPIES OF THE PLANS AND TWO (2) COPIES OF THE DESIGN COMPUTATIONS SHALL BE SUBMITTED AT LEAST FIFTEEN (15) DAYS BEFORE THE CONSTRUCTION OF THE FALSEWORK AND APPROVAL MUST BE OBTAINED PRIOR TO PLACING THE FALSEWORK. THE PLANS SHALL BE PREPARED BY A REGISTERED PROFESSIONAL ENGINEER AND SHALL BEAR HIS SIGNATURE AND P.E. NUMBER OR HIS P.E. SEAL. APPROVAL OF THE ABOVE FALSEWORK PLANS DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR THE BEHAVIOR OF THE FALSEWORK AND PROCEDURES PROPOSED.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE LUMP SUM PRICE BID FOR ITEM 513, STRUCTURAL STEEL, BRACKET ANGLES, AS PER PLAN WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 517 RAILING (SINGLE DEEP BEAM WITH TUBULAR BACKUP), AS PER PLAN

THE SINGLE DEEP BEAM RAIL WITH TUBULAR BACKUP SHALL BE MOUNTED ON THE EXISTING CONCRETE PILES AS PER DETAIL ON SHEET NO. 49. THE RAILING WILL BE CONSTRUCTED AS PER STANDARD DRAWING BR-7-43. THE RAIL LENGTH FOR THIS ITEM SHALL BE THE EXISTING BRIDGE LIMIT LENGTH, BUT SHALL INCLUDE THE ADDITIONAL TUBULAR BACKUP TO END AT THE FIRST POST OFF EACH END OF THE BRIDGE.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER LINEAL FOOT FOR ITEM 517 RAILING (SINGLE DEEP BEAM WITH STEEL TUBULAR BACKUP), AS PER PLAN, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 518 SCUPPERS THROUGH CONCRETE BARRIER, AS PER PLAN

SCUPPERS WILL BE PLACED THROUGH THE CONCRETE BARRIER AS PER DETAILS ON SHEET NO. 33-35. THE SCUPPERS WILL BE STRUCTURAL IUDING (5 X 3 X 5/16).

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER EACH FOR ITEM 518, SCUPPERS THROUGH CONCRETE BARRIER, AS PER PLAN, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 518 SCUPPERS, AS PER PLAN

THE EXISTING SCUPPERS WILL BE MODIFIED AS PER DETAILS ON SHEET NO. 38.

PAYMENT SHALL BE AT THE UNIT PRICE BID PER EACH, FOR ITEM 518 SCUPPERS, AS PER PLAN WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 622 CONCRETE BARRIER, AS PER PLAN

CONCRETE BARRIER SHALL BE CONSTRUCTED AS PER DETAILS ON SHEET NO. 33-35. BEFORE DRILLING DWEL HOLES, THE EXISTING REINFORCING STEEL SHALL BE LOCATED USING AN APPROPRIATE DEVICE.

UPON COMPLETION OF THE PROJECT THE R-METER SHALL BECOME THE PROPERTY OF THE STATE.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER LINEAL FOOT FOR ITEM 622, CONCRETE BARRIER, AS PER PLAN, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 516 1 3/4" X 6" X 9" LAMINATED ELASTOMERIC BEARINGS, AS PER PLAN

THE EXPANDED POLYSTYRENE SHALL BE INCLUDED WITH THE LAMINATED ELASTOMERIC BEARINGS FOR PAYMENT. THE EXPANDED POLYSTYRENE, TO BE LEFT IN PLACE, WILL BE USED AS FORM WORK FOR THE CONCRETE. SEE DETAILS ON SHEET NO. 21-24-29.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH FOR ITEM 516, 1 3/4" X 6" X 9" LAMINATED ELASTOMERIC BEARINGS, AS PER PLAN WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 516 STRUCTURAL STEEL ARMOR FOR SEALED EXPANSION JOINTS, AS PER PLAN

EXPANSION JOINTS SHALL BE CONSTRUCTED AS PER DETAILS ON SHEET'S NO. 25-27-40. ALL STRUCTURAL STEEL ARMOR SHALL BE GALVANIZED AS PER 711.02.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER LINEAL FOOT FOR ITEM 516, STRUCTURAL STEEL ARMOR FOR SEALED EXPANSION JOINTS, AS PER PLAN, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 849 ELASTOMERIC COMPRESSION SEALS, AS PER PLAN

THIS ITEM SHALL INCLUDE ALL WORK REQUIRED TO PROVIDE AND INSTALL THE ELASTOMERIC COMPRESSION SEAL.

THE ELASTOMERIC COMPRESSION SEAL SHALL BE EITHER TYPE I, TYPE II, OR TYPE III AS INDICATED IN THE PLANS AS PER DETAILS ON SHEET NO. 25-27-40. THE

TYPE I SEAL SHALL BE A WD-500 AS MANUFACTURED BY WATSON ROMAN ASSOCIATES, 1700 NORTH STATE STREET, BUFFALO, NY 14207. TYPE II SEAL SHALL BE A WD-350, J-200, OR AN APPROVED EQUAL. THE TYPE III SEAL SHALL BE A WD-200L, J-200 OR AN APPROVED EQUAL.

PAYMENT FOR THE ABOVE COMPLETED AND ACCEPTED QUANTITIES WILL BE MADE AT THE CONTRACT BID PRICE FOR:

ITEM	UNIT	DESCRIPTION
849	LINEAL FOOT	ELASTOMERIC COMPRESSION SEALS, (TYPE I), FOR STRUCTURAL STEEL JOINTS.
849	LINEAL FOOT	ELASTOMERIC COMPRESSION SEALS, (TYPE II), FOR STRUCTURAL STEEL JOINTS.
849	LINEAL FOOT	ELASTOMERIC COMPRESSION SEALS, (TYPE III), FOR CENTER JOINT.

ITEM SPECIAL, STEEL BARRIER

STEEL BARRIER SHALL BE CONSTRUCTED AS PER DETAILS ON SHEET NO. 30-32. THE STEEL BARRIER SHALL BE SUPPLIED BY THE SYPO STEEL COMPANY, 1170 NORTH STATE STREET, GIRARD, OHIO 44420 WITH LOCAL REPRESENTATIVE MR. WALT HUMBLE (216-545-4373).

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER LINEAL FOOT FOR ITEM SPECIAL, STEEL BARRIER WHICH SHALL INCLUDE THE POSTS, PLATES, HIGH STRENGTH A325 BOLTS AND ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM SPECIAL RAILING

THE RAILING SECTIONS DESIGNATED FOR REPAIR ON SHEET NO. 39 SHALL BE RESTORED TO THEIR ORIGINAL SHAPE BY A METHOD APPROVED BY THE ENGINEER.

PAYMENT FOR THE ABOVE SHALL BE AT THE UNIT PRICE BID PER EACH FOR ITEM SPECIAL, RAILING, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM SPECIAL SIDEWALK GRID

THE EXISTING SIDEWALK GRID AND CHANNELS WILL BE REMOVED AND BECOME THE PROPERTY OF THE CONTRACTOR.

NEW SIDEWALK GRID AND CHANNELS WILL BE INSTALLED AS PER DETAILS ON SHEET NO. 36. BEFORE THE CHANNELS ARE INSTALLED, THE EXISTING BRACKETS SHALL BE PAINTED AS PER ITEMS 514.

THE SIDEWALK GRID SHALL BE AS MANUFACTURED BY:

BORDEN METAL PRODUCTS COMPANY
 CARLISLE, OHIO
 TELEPHONE: (513)-745-3681

PRODUCT: WELDED GRATING, TYPE W/B SIZE 4, MADE WITH 1" X 3/16" BEARING BARS AT 1 3/16" CENTERS AND TWISTED SQUARE CROSS BARS AT 4" CENTERS.

OR
 RELIANCE STEEL PRODUCTS COMPANY
 MCKEESPORT, PENNSYLVANIA
 TELEPHONE: (412)-461-3616

PRODUCT: WELDED GRATING, TYPE 1R4, WITH 1" X 3/16" BEARING BARS SPACED AT 1 3/16" AND TWISTED CROSS BARS AT 4" CENTERS.

OR THE CONTRACTOR MAY USE AN APPROVED EQUAL.

THE GRATING AND CHANNELS MUST BE GALVANIZED AS PER 711.02. PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE FOOT FOR ITEM SPECIAL, SIDEWALK GRID WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

GENERAL NOTES

ITEM SPECIAL TEMPORARY SUPPORT

THIS ITEM SHALL INCLUDE ALL WORK REQUIRED TO SUPPORT THE SLABS WHILE THE PIER CAPS AND EXPANSION JOINTS ARE REPAIRED. DOUBLE HARDWOOD WEDGES SHALL BE USED IN CONNECTION WITH FALSEWORK TO FACILITATE VERTICAL ADJUSTMENT. FALSEWORK SHALL BE DESIGNED TO PREVENT ALL HORIZONTAL OR VERTICAL MOVEMENT. THE CONTRACTOR SHALL REMOVE AND REPLACE, AT HIS OWN EXPENSE, ANY PART OF THE STRUCTURE MADE UNSATISFACTORY BY SETTLEMENT, OR MOVEMENT.

PAYMENT FOR THE ABOVE COMPLETED AND ACCEPTED QUANTITY WILL BE MADE AT THE CONTRACT BID PRICE FOR:

ITEM	QUANTITY	UNIT	DESCRIPTION
SPECIAL	7	EACH	TEMPORARY SUPPORT

THE TEMPORARY SUPPORT PLANS SHALL BE APPROVED BY THE DIRECTOR. FOR SUCH APPROVAL, THREE (3) COPIES OF THE PLANS AND TWO (2) COPIES OF THE DESIGN COMPUTATIONS SHALL BE SUBMITTED AT LEAST FIFTEEN (15) DAYS BEFORE THE CONSTRUCTION OF THE FALSEWORK AND APPROVAL MUST BE OBTAINED PRIOR TO PLACING TEMPORARY SUPPORT. THE PLANS SHALL BE PREPARED BY A REGISTERED PROFESSIONAL ENGINEER AND SHALL BEAR HIS SIGNATURE AND P.E. NUMBER OR HIS P.E. SEAL. APPROVAL OF THE ABOVE SUPPORT PLANS DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR THE BEHAVIOR OF THE TEMPORARY SUPPORT AND PROCEDURES PROPOSED.

FALSEWORK FOR STRUCTURES SHALL REMAIN IN PLACE UNTIL THE CONCRETE HAS MET THE REQUIREMENTS OF 511.14.

FALSEWORK CONSTRUCTION SHALL BE REMOVED BEFORE FINAL ACCEPTANCE OF THE PROJECT. IF USED, FALSEWORK PILING SHALL BE CUT OFF OR PULLED. IF PILES ARE CUT OFF, THEY SHALL BE CUT AT LEAST TO THE SLOPE LINE, RIPRAP LINE OR BED OF STREAM.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER EACH, FOR ITEM SPECIAL, TEMPORARY SUPPORT, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 845 BRIDGE DECK REPAIR AND OVERLAY WITH LATEX MODIFIED CONCRETE
PREPARATION:

THE CONCRETE DECK OVERLAYS SHALL BE PLACED BETWEEN APRIL 15 AND OCTOBER 15.

SURFACE PREPARATION SHALL INCLUDE THE REMOVAL OF THE EXISTING ASPHALT WEARING SURFACE. THE CONCRETE DECK SHALL BE SCARIFIED WITH A SEPARATE PASS AFTER THE ASPHALT HAS BEEN COMPLETELY REMOVED.

ALL EXISTING PARTIAL DEPTH CONCRETE SHALL BE REMOVED COMPLETELY.

ANY CONSTRUCTION EQUIPMENT ON THE DECK SURFACE AFTER THE DECK SURFACE HAS BEEN SANDBLASTED SHALL BE DRIVEN ON A FOUR (4) MIL. POLYETHYLENE SHEET TO PREVENT CONTAMINATION OF THE CLEAN SURFACE.

WATER BLAST CLEANING SHALL NOT BE USED.

SCREED RAIL SUPPORTS SHALL NOT BE SET ON THE DECK SURFACE TO BE OVERLAPPED.

DECK ELEVATIONS ARE SHOWN ON SHEET NO. 13-15. THEY SHALL BE ADJUSTED AS NEEDED BY THE ENGINEER TO MEET THE ABOVE REQUIREMENTS.

AFTER THE SCREED RAILS HAVE BEEN SET TO PROPER PROFILE AND PRIOR TO PLACING THE OVERLAY, THE FINISHING MACHINE WITH 1-1/8" THICK FILLER BLOCKS ATTACHED TO THE BOTTOM OF THE SCREED SHALL BE PASSED OVER THE ENTIRE AREA OF THE DECK TO BE OVERLAPPED.

THE FILLER BLOCKS SHOULD GENERALLY CLEAR THE SCARIFIED DECK SURFACE BY NOT MORE THAN 1/8". CONCRETE WHICH DOES NOT CLEAR THE FILLER BLOCKS SHALL BE REMOVED.

LONGITUDINAL JOINTS IN THE LATEX MODIFIED CONCRETE ARE PERMITTED BUT ONLY TO THE EXTENT NECESSARY TO ACCOMMODATE THE WIDTH OF THE FINISHING MACHINE, TO FACILITATE CHANGES IN ROADWAY CROWN, AND TO PERMIT MAINTENANCE OF VEHICULAR TRAFFIC, EXCEPT AS APPROVED BY THE DISTRICT CONSTRUCTION ENGINEER. LONGITUDINAL JOINTS SHALL NOT BE USED IN PROXIMITY TO RAISED CURBS, BARRIERS, OR EDGES OF DECKS.

FINAL SOUNDING OF THE DECK SHALL NOT BE PERFORMED WITHIN TWENTY-FOUR (24) HOURS AFTER A RAIN, WHICH SHALL INCLUDE EIGHT (8) HOURS OF GOOD DRYING WEATHER. IN NO CASE SHALL THE FINAL SOUNDING BE MADE WHEN THE DECK IS DAMP. FINAL SOUNDING MAY INCLUDE ONE (1) OR MORE ATTEMPTS TO ASSURE ALL DETEIORATED CONCRETE HAS BEEN REMOVED.

PLACEMENT:

PLACEMENT OF THE OVERLAY SHALL BE COMPLETED DURING THE NIGHT BETWEEN OFFICIAL SUNSET AND SUNRISE. THE CONTRACTOR SHALL SUBMIT A PLAN FOR PROVIDING ADEQUATE LIGHTING FOR THE WORK AREA AT LEAST FIFTEEN (15) CALENDAR DAYS IN ADVANCE, AND RECEIVE WRITTEN APPROVAL FROM THE DISTRICT CONSTRUCTION ENGINEER, BEFORE PLACING THE CONCRETE. THE LIGHTS SHALL BE SO DIRECTED THAT THEY DO NOT AFFECT OR DISTRACT APPROACHING TRAFFIC. IN EARLY SPRING OR LATE FALL THE OVERLAYS MAY BE PLACED DURING DAYLIGHT HOURS BY PERMISSION OF THE ENGINEER, IF ALL OF THE FOLLOWING CONDITIONS ARE MET AND DOCUMENTED:

- WIND SPEED.....10 MPH OR LESS
- RELATIVE HUMIDITY.....40% OR GREATER
- EXISTING CONCRETE DECK TEMPERATURE.....70 OR LESS
- AIR TEMPERATURE.....70 OR LESS
- ALL REQUIRED CHARACTERISTICS (AIR, SLUMP, ETC.) OF THE MIX SHALL BE ADJUSTED OFF THE DECK BEFORE PLACEMENT ON THE DECK STARTS.

THE CEMENT TEMPERATURE SHALL NOT EXCEED 90 F. AT THE TIME OF MIXING.

A BONDING GROUT CONSISTING OF EQUAL PARTS BY VOLUME OF PORTLAND CEMENT AND SAND MIXED WITH 50% WATER AND LATEX MIXTURE TO PRODUCE A PAINT CONSISTENCY SHALL BE USED FOR SEALING VERTICAL JOINTS AROUND FULL-DEPTH REPAIRS, BETWEEN ADJACENT POURS AND RAISED CURBS AND BARRIERS.

ACCESS OR WORK AREA SHALL BE PROVIDED AROUND BOTH SIDES OF THE FINISHING MACHINE ON STRUCTURES LONGER THAN 20'. IF NECESSARY, THE CONTRACTOR SHALL CONSTRUCT A MINIMUM TWO (2) FOOT WIDE WALKWAY ALONG THE EDGE OF THE STRUCTURE TO FACILITATE FINISHING AND INSPECTION.

CURING:

INSTEAD OF COVERING THE SINGLE LAYER OF BURLAP WITH A LAYER OF FOUR (4) MIL. POLYETHYLENE OR A WET BURLAP-POLYETHYLENE SHEET, THE BURLAP SHALL BE KEPT CONTINUOUSLY WET BY MEANS OF AN AUTOMATIC WETTING SYSTEM FOR THE FIRST TWENTY-FOUR (24) HOUR PERIOD. IN ADDITION, A SECOND LAYER OF BURLAP SHALL BE PLACED ONE (1) HOUR AFTER PLACEMENT OF THE FIRST LAYER.

QUANTITIES:
 A CONTINGENT QUANTITY OF * CUBIC YARDS FULL DEPTH REPAIR IS PROVIDED FOR EACH STRUCTURE. IF THIS ITEM IS NOT REQUIRED IT SHALL BE NONPERFORMED.

SPALLED TOPS OF BACKWALLS SHALL BE REPAIRED WITH ITEM 845, LATEX MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS).

ALL PROVISIONS OF SUPPLEMENTAL SPECIFICATION 845 AND ITEM 511 OF 1983 CONSTRUCTION AND MATERIALS SPECIFICATIONS SHALL APPLY EXCEPT WHEN IN CONFLICT WITH THESE NOTES.

ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE ABOVE WORK SHALL BE INCLUDED IN ITEM 845-LATEX MODIFIED CONCRETE OVERLAY (1-1/4" THICK), AS PER PLAN.

* SEE SHEET NO'S 13 - 15

ITEM 608 CONCRETE WALK, AS PER PLAN

CONCRETE WALK SHALL BE PLACED AT THE LOCATIONS SHOWN ON SHEET NO. 13, 15, 16 AND AS PER DETAILS ON SHEET NO. 2. THE EXISTING SIDEWALK REMOVAL, AGGREGATE BASE AS PER ITEM 304 AND EMBANKMENT AS PER ITEM 203 SHALL BE INCLUDED IN THIS ITEM.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE FOOT FOR ITEM 608, CONCRETE WALK, AS PER PLAN WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

GENERAL NOTES

FEDERAL REGION	STATE	PROJECT	
5	OHIO		7 47

BR-54-83

ITEM SPECIAL, SURFACE PREPARATION

ALL SURFACES TO BE PAINTED SHALL BE WASHED WITH WATER HAVING A NOZLE PRESSURE OF AT LEAST 1,000 PSI AND A DELIVERY RATE OF NOT LESS THAN 4 GALLON PER MINUTE. THE CONTRACTOR, SHALL PROVIDE EQUIPMENT SPECIFICATIONS TO VERIFY THE ABOVE. THE EQUIPMENT SHALL ALSO BE EQUIPPED WITH GAGES TO VERIFY THE PRESSURE. THE WATER SHALL CONTAIN A DETERGENT AT THE RATE SPECIFIED BY THE MANUFACTURER, TO REMOVE OIL GREASE, SALT AND DIRT TO THE ENGINEER'S SATISFACTION. BEFORE THE SURFACES DRY, A RINSE OF CLEAR WATER SHALL REMOVE ALL REMAINING DETERGENT. A SECOND RINSE SHALL FOLLOW IMMEDIATELY. THE NOZLE SHALL BE HELD A MAXIMUM OF TWELVE (12) INCHES FROM THE SURFACE BEING WASHED OR RINSED. THE FINISH COAT SHALL BE APPLIED WITHIN ONE (1) MONTH OF WASHING THE STRUCTURE.

ALL DIRT, SAND, AND DEBRIS SHALL BE COMPLETELY REMOVED FROM THE STRUCTURE SCUPPERS, BULB ANGLES, AND ANY OTHER SECTION OF THE BRIDGE AS DIRECTED BY THE ENGINEER.

ALL STEEL TO BE PAINTED SHALL BE BLASTED CLEANED TO GRADE Sa 2 1/2 ACCORDING TO ASTM D2200 OR SSPC-SP10. BLASTING SHALL NOT PROCEED WHEN THE STEEL TEMPERATURE IS WITHIN 5° OF THE DEW POINT TO PREVENT RUST BACK. ASTM D2200, SSPC-SP10, AND SSPC-SP1 ARE AVAILABLE FROM THE DISTRICT 3 OFFICE IN ASHLAND, OHIO OR THE BRIDGE BUREAU IN COLUMBUS, OHIO.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM SPECIAL, SURFACE PREPARATION WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM SPECIAL BRIDGE PAINTING, COMPLETE SYSTEM

THIS ITEM SHALL CONSIST OF FURNISHING ALL PAINT AND INCIDENTAL MATERIAL, AND APPLYING THE PAINT AS SPECIFIED.

ALL STRUCTURAL STEEL SHALL BE PAINTED ON ERI-6-1792 AND ERI-6-1824.

PAINTING WILL NOT BEGIN UNTIL THE NEW DECKS ARE COMPLETE.

ONE OF THE FOLLOWING MANUFACTURERS AND PAINT SYSTEMS SHALL BE USED ON THIS PROJECT. ALL MIL THICKNESSES ARE DRY.

SYSTEM I

MANUFACTURER: KOPPERS COMPANY, INC.
ORGANIC MATERIALS GROUP
ELMHURST, ILLINOIS 60126
TELEPHONE: (312)-530-6300

MATERIAL: PRIME COAT: KOPPERS ORGANIC ZINC 3.0 MILS
INTERMEDIATE COAT: KOPPERS 25 PRIMER 2.0 MILS
FINISH COAT: KOPPERS 401 VINYL 6.0 MILS
COLOR: LIGHT GREY 306

OR SYSTEM II

MANUFACTURER: AMERON
PROTECTIVE COATINGS DIVISION
P. O. BOX 349
AKRON, OHIO 44309
TELEPHONE: (216)-896-3502

MATERIAL: PRIME COAT: DIMETCOTE E-211A 4.0 MILS
FINISH COAT: AMERCOAT 99HS VINYL 5.0 MILS
COLOR: LIGHT BLUE BL-4

OR SYSTEM III

CONSTRUCTION AND MATERIAL SPECIFICATIONS 708.17, 708.18
PRIME COAT (708.17) 4.0 MILS
TOP COAT (708.18) 3.0 MILS

MANUFACTURER

SUFFICIENT IDENTIFIABLE CHARACTERISTICS OTHER THAN TRADE OR BRAND NAME OR DESIGNATED NUMBER OR SYMBOL SHALL BE PROVIDED TO PERMIT LABORATORY TEST VERIFICATION OF COATING IDENTITY. THESE CHARACTERISTICS SHALL INCLUDE FORMULATION INFORMATION READILY DERIVABLE IN A LABORATORY, INCLUDING THE GENERAL NATURE OF THE VEHICLE, PIGMENT, AND VOLATILE PORTIONS, THE WEIGHT PER GALLON, THE PERCENT SOLIDS BY VOLUME, THE ZINC CONTENT, AND OTHER PROCEDURES USED FOR QUALITY CONTROL DURING MANUFACTURE OF THE COATING.

MATERIALS HANDLING AND USE

ALL PAINT SHALL BE DELIVERED TO THE SHOP OR JOB SITE IN ORIGINAL, UNOPENED CONTAINERS WITH LABELS INTACT. MINOR DAMAGE TO CONTAINERS IS ACCEPTABLE PROVIDED THE CONTAINER HAS NOT BEEN PUNCTURED OR THE LID SEAL BROKEN.

EACH CONTAINER OF PAINT SHALL BE CLEARLY MARKED OR LABELLED TO SHOW PAINT IDENTIFICATION, DATE OF MANUFACTURE, BATCH NUMBER, ANALYSIS OF CONTENTS, IDENTIFICATION OF ALL TOXIC SUBSTANCES, AND SPECIAL INSTRUCTIONS.

ALL CONTAINERS OF PAINT SHALL REMAIN UNOPENED UNTIL REQUIRED FOR USE. THOSE CONTAINERS WHICH HAVE BEEN PREVIOUSLY OPENED SHALL BE USED FIRST. THE LABEL INFORMATION SHALL BE LEGIBLE AND SHALL BE CHECKED AT THE TIME OF USE.

PAINT WHICH HAS LIVERED, GELLED, OR OTHERWISE DETERIORATED DURING STORAGE SHALL NOT BE USED; HOWEVER, THIXOTROPIC MATERIALS WHICH CAN BE STIRRED TO ATTAIN NORMAL CONSISTENCY MAY BE USED.

THE OLDEST PAINT OF EACH KIND SHALL BE USED FIRST. IN EVERY CASE, PAINT IS TO BE USED BEFORE ITS SHELF LIFE HAS EXPIRED. IN ORDER TO USE PAINTS WHICH HAVE EXCEEDED THEIR SHELF LIFE OR HAVE NO STATED SHELF LIFE AND ARE MORE THAN ONE YEAR OLD, THE SPECIFIER OR MANUFACTURER MUST CERTIFY THAT THE PAINT IS STILL SUITABLE FOR USE.

MIXING AND THINNING

ALL INGREDIENTS IN ANY CONTAINER OF PAINT SHALL BE THOROUGHLY MIXED BEFORE USE AND SHALL BE AGITATED OFTEN ENOUGH DURING APPLICATION TO KEEP THE PAINT UNIFORM. THE PAINT SHALL BE MIXED IN A MANNER WHICH WILL INSURE THE BREAK-UP OF ALL LUMPS, COMPLETE DISPERSION OF PIGMENT, AND A UNIFORM COMPOSITION. PAINT SHALL BE CAREFULLY EXAMINED AFTER MIXING FOR UNIFORMITY AND TO VERIFY THAT NO UNMIXED PIGMENT REMAINS ON THE BOTTOM OF THE CONTAINER. THE PAINT SHALL BE MIXED WITH MECHANICAL PAINT SHAKERS OR MIXERS.

ALL PIGMENTED PAINT SHALL BE STRAINED AFTER MIXING EXCEPT WHERE APPLICATION EQUIPMENT IS PROVIDED WITH STRAINERS. STRAINERS SHALL BE OF A TYPE TO REMOVE ONLY SKINS AND UNDESIRABLE MATTER BUT NOT TO REMOVE THE PIGMENT.

WHERE A SKIN HAS FORMED IN THE CONTAINER, THE SKIN SHALL BE CUT LOOSE FROM THE SIDES OF THE CONTAINER, REMOVED AND DISCARDED. IF THE VOLUME OF SUCH SKINS ARE MORE THAN 2% OF THE REMAINING PAINT, THE PAINT SHALL NOT BE USED.

MIXING IN OPEN CONTAINERS SHALL BE DONE IN A WELL VENTILATED AREA AWAY FROM SPARKS OR FLAMES.

PAINT SHALL NOT BE MIXED OR KEPT IN SUSPENSION BY MEANS OF AN AIR STREAM BUBBLING UNDER THE PAINT SURFACE.

DRY PIGMENTS WHICH ARE SEPARATELY PACKAGED SHALL BE MIXED INTO PAINTS IN SUCH A MANNER THAT THEY ARE UNIFORMLY BLENDED AND ALL PARTICLES OF THE DRY POWDER ARE WETTED BY THE VEHICLE.

PASTES SHALL BE MADE INTO PAINTS IN SUCH A MANNER THAT THE PASTE SHALL BE UNIFORMLY BLENDED AND ALL LUMPS AND PARTICLES BROKEN UP TO FORM A HOMOGENEOUS PAINT.

TINTING PASTES OR COLORS SHALL BE WETTED WITH A SMALL AMOUNT OF THINNER, VEHICLE, OR PAINT AND THOROUGHLY MIXED. NEXT, THE THINNED MIXTURE SHALL BE STRAINED. FINALLY, IT SHALL BE ADDED TO THE LARGE CONTAINER OF PAINT AND MIXED UNTIL THE COLOR IS UNIFORM. SMALL AMOUNTS OF PAINT MAY BE TINTED BY THE CONTRACTOR.

WHEN SUCCESSIVE COATS OF PAINT OF THE SAME COLOR HAVE BEEN SPECIFIED, ALTERNATE COATS OF PAINT SHALL BE TINTED, SUFFICIENTLY TO PROVIDE ENOUGH CONTRAST TO INDICATE COMPLETE COVERAGE OF THE SURFACE. THE TINTING SHALL BE DONE BY THE MANUFACTURER BEFORE THE PAINT IS DELIVERED TO THE JOB SITE.

PAINT WHICH DOES NOT HAVE A LIMITED POT LIFE (TIME INTERVAL) OR DOES NOT DETERIORATE ON STANDING MAY BE MIXED AT ANY TIME BEFORE USING, BUT IF SETTLING HAS OCCURRED IT MUST BE REMIXED IMMEDIATELY BEFORE USING.

PAINT SHALL NOT REMAIN IN SPRAY POTS, PAINTERS BUCKETS, ETC. OVERNIGHT, BUT SHALL BE STORED IN A COVERED CONTAINER AND REMIXED BEFORE USE.

NO THINNER SHALL BE ADDED TO THE PAINT WITHOUT THE ENGINEER'S APPROVAL, AND ONLY IF NECESSARY FOR PROPER SPRAY APPLICATION AS RECOMMENDED BY THE MANUFACTURER. PAINTS TO BE APPLIED BY BRUSH WILL USUALLY REQUIRE NO THINNING. WHEN THE USE OF THINNER IS PERMISSIBLE, THINNER SHALL BE ADDED SLOWLY TO PAINT DURING THE MIXING PROCESS. THE TYPE OF THINNER SHALL COMPLY WITH THE MANUFACTURER'S INSTRUCTIONS. ALL THINNING SHALL BE DONE UNDER SUPERVISION OF THE ENGINEER. IN NO CASE SHALL MORE THINNER BE ADDED THAN THAT RECOMMENDED BY THE MANUFACTURER'S INSTRUCTIONS.

APPLICATION

IF THE SURFACE IS DEGRADED OR CONTAMINATED SUBSEQUENT TO SURFACE PREPARATION AND PRIOR TO PAINTING, THE SURFACE SHALL BE RESTORED BEFORE PAINT APPLICATION. ALL SURFACE CLEANING SHALL BE APPROVED BY THE ENGINEER PRIOR TO PAINTING. IN ORDER TO PREVENT THE DEGRADATION OR CONTAMINATION OF CLEANED SURFACES, THE PRIME COAT OF PAINT SHALL BE APPLIED THE SAME DAY THE SURFACE HAS BEEN CLEANED. SUCCEEDING COATS SHALL BE APPLIED BEFORE CONTAMINATION OF THE UNDER SURFACE OCCURS.

CLEANING AND PAINTING SHALL BE SO PROGRAMMED THAT DETRIMENTAL AMOUNTS OF DUST OR OTHER CONTAMINANTS DO NOT FALL ON WET, NEWLY-PAINTED SURFACES. SURFACES NOT INTENDED TO BE PAINTED SHALL BE SUITABLY PROTECTED FROM THE EFFECTS OF CLEANING AND PAINTING OPERATIONS.

OVERSPRAY OF THE ZINC RICH PRIMER WILL RESULT IN IMPROPER ADHESION OF THE TOPCOAT. OVERSPRAY SHALL BE REMOVED WITH A STIFF BRISTLE BRUSH OR WIRE SCREEN.

TEMPERATURE

PAINT SHALL NOT BE APPLIED WHEN THE TEMPERATURE OF THE STEEL, OR PAINT IS BELOW 40° F (4° C) OR WHEN THE AIR TEMPERATURE IS BELOW 40° F (4° C). PAINT SHALL NOT BE APPLIED WHEN THE SURFACE TEMPERATURE IS EXPECTED TO DROP TO 40° F (4° C) BEFORE THE PAINT HAS DRIED. PAINT SHALL NOT BE APPLIED TO STEEL WHICH IS AT A TEMPERATURE THAT WILL CAUSE BLISTERING OR POROSITY OR OTHERWISE WILL BE DETRIMENTAL TO THE LIFE OF THE PAINT. WHEN PAINT IS APPLIED IN HOT WEATHER, OR THINNED IN COLD WEATHER, PRECAUTIONS MUST BE TAKEN TO INSURE THAT THE SPECIFIED THICKNESS OF PAINT IS OBTAINED.

MOISTURE

PAINT SHALL NOT BE APPLIED IN RAIN, WIND, SNOW, FOG, OR MIST, OR WHEN THE STEEL SURFACE TEMPERATURE IS LESS THAN 5° F (3° C) ABOVE THE DEW POINT. PAINT SHALL NOT BE APPLIED TO WET OR DAMP SURFACES UNLESS THE PAINT IS OF THE WATER-THINNED TYPE. PAINT SHALL NOT BE APPLIED ON FROSTED OR ICE-COATED SURFACES.

GENERAL NOTES

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DAMAGE

DAMAGED AREAS OF PAINT WHICH ARE DETRIMENTAL TO THE SERVICE LIFE SHALL BE REMOVED, THE SURFACE AGAIN PREPARED AND REPAINTED WITH THE SAME NUMBER OF COATS OF PAINT OF THE SAME KIND AS THE UNDAMAGED AREAS.

CONTINUITY

TO THE MAXIMUM EXTENT PRACTICAL, EACH COAT OF PAINT SHALL BE APPLIED AS A CONTINUOUS FILM OF UNIFORM THICKNESS FREE OF PORES. ALL THIN SPOTS OR AREAS MISSED IN THE APPLICATION SHALL BE REPAINTED AND PERMITTED TO DRY BEFORE THE NEXT COAT OF PAINT IS APPLIED.

THICKNESS

EACH COAT OF PAINT MUST HAVE THE REQUIRED MIL THICKNESS AS REQUIRED BY THE MANUFACTURER. A THICKNESS GAGE WILL BE USED BY THE ENGINEER TO VERIFY THE REQUIRED MIL THICKNESS.

IN THE EVENT THE REQUIRED MINIMUM THICKNESS IS NOT ACHIEVED, AS SPECIFIED, ADDITIONAL COATS SHALL BE APPLIED UNTIL THE REQUIRED THICKNESS IS OBTAINED. THE INORGANIC ZINC-RICH COATINGS SHALL NOT BE CORRECTED IN THIS MANNER UNLESS THE MANUFACTURER'S INSTRUCTIONS SPECIFICALLY PERMIT THIS PRACTICE.

RECOATING

EACH COAT OF PAINT SHALL BE IN A PROPER STATE OF CURE OR DRYNESS BEFORE THE APPLICATION OF THE SUCCEEDING COAT. PAINT SHALL BE CONSIDERED DRY FOR RECOATING WHEN AN ADDITIONAL COAT CAN BE APPLIED WITHOUT THE DEVELOPMENT OF ANY DETRIMENTAL FILM IRREGULARITIES, SUCH AS LIFTING, WRINKLING, OR LOSS OF ADHESION OF THE UNDERCOAT. THE TIME INTERVAL BETWEEN COATING APPLICATIONS SHALL BE IN COMPLIANCE WITH MANUFACTURER'S INSTRUCTIONS.

THE MAXIMUM PRACTICAL TIME SHALL BE ALLOWED FOR PAINT TO DRY BEFORE RECOATING. SOME PAINTS MAY DRY TOO HARD FOR GOOD ADHESION OF SUBSEQUENT COATS, THESE SHALL BE RECOATED WITHIN THE TIME PERIOD IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. IF NOT RECOATED WITHIN THE SPECIFIED TIME THEN THE PREVIOUSLY APPLIED COATINGS SHALL BE ROUGHENED PRIOR TO RECOATING.

NO DRIER SHALL BE ADDED TO PAINT ON THE JOB UNLESS SPECIFICALLY CALLED FOR IN THE MANUFACTURER'S INSTRUCTIONS.

PAINT SHALL BE PROTECTED FROM RAIN, CONDENSATION, CONTAMINATION, SNOW, AND FREEZING UNTIL DRY TO THE FULLEST EXTENT PRACTICAL.

INTERCOAT ADHESION

UNDERCOATS HAVING A GLOSSY SURFACE WHICH DETRIMENTALLY AFFECTS THE ADHESION OF THE SUBSEQUENT COAT SHALL BE TREATED BY MILD SURFACE ABRASION, SOLVENT TREATMENT, OR OTHER SUITABLE PROCESSES WHICH WILL NOT CUT THROUGH OR DETRACT FROM THE PERFORMANCE OF THE UNDERLYING PAINT.

SPRAY APPLICATION (GENERAL)

ALL SPRAY APPLICATION OF PAINT, WHETHER AIR SPRAY, AIRLESS SPRAY, HOT AIR SPRAY OR HOT AIRLESS SPRAY, SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

THE EQUIPMENT USED SHALL BE SUITABLE FOR THE INTENDED PURPOSES, SHALL BE CAPABLE OF PROPERLY ATOMIZING THE PAINT TO BE APPLIED, AND SHALL BE EQUIPPED WITH SUITABLE PRESSURE REGULATORS AND GAGES. THE EQUIPMENT SHALL BE MAINTAINED IN PROPER WORKING CONDITION.

PAINT INGREDIENTS SHALL BE KEPT UNIFORMLY MIXED IN THE SPRAY POTS OR CONTAINERS DURING PAINT APPLICATION EITHER BY CONTINUOUS MECHANICAL AGITATION OR BY INTERMITTENT AGITATION AS FREQUENTLY AS NECESSARY.

SPRAY EQUIPMENT SHALL BE KEPT SUFFICIENTLY CLEAN SO THAT DIRT, DRIED PAINT AND OTHER FOREIGN MATERIALS ARE NOT DEPOSITED IN THE PAINT FILM. ANY SOLVENTS LEFT IN THE EQUIPMENT SHALL BE COMPLETELY REMOVED BEFORE USING.

PAINT SHALL BE APPLIED IN A UNIFORM LAYER WITH OVERLAPPING AT THE EDGES OF THE SPRAY PATTERN. DURING APPLICATION, THE GUN SHALL BE HELD PERPENDICULAR TO THE SURFACE AND AT A DISTANCE WHICH WILL ENSURE THAT A WET LAYER OF PAINT IS DEPOSITED ON THE SURFACE. THE TRIGGER OF THE GUN SHOULD BE RELEASED AT THE END OF EACH STROKE. ALL BOLTS AND RIVET HEADS SHALL BE SPRAYED FROM AT LEAST TWO (2) DIRECTIONS.

ALL RUNS AND SAGS SHALL BE BRUSHED OUT IMMEDIATELY OR THE COATING SHALL BE REMOVED AND THE SURFACE REPAINTED.

IF MUD CRACKING OCCURS, THE AFFECTED AREA SHALL BE CLEANED TO BARE METAL AND REPAINTED.

CRACKS, CREVICES, BLIND AREAS OF ALL RIVETS AND BOLTS, AND ALL OTHER INACCESSIBLE AREAS SHALL BE PAINTED BY BRUSH, DAUBERS, OR SHEEPSKINS.

PAINT SHALL BE SUITABLE FOR THE PARTICULAR SPRAY APPLICATION METHOD USED.

CAUTION MUST BE EXERCISED SO THAT HOT COATINGS ARE NOT APPLIED TO COLD SURFACES AND, CONVERSELY, THAT COLD COATINGS ARE NOT APPLIED TO HOT SURFACES.

ALL CRACKS AND CREVICES SHALL BE FILLED WITH PAINT IF PRACTICAL. WET PAINT SHALL BE PROTECTED AGAINST DAMAGE FROM DUST OR OTHER DETRIMENTAL FOREIGN MATTER.

AIRLESS SPRAY APPLICATIONS

AIRLESS OR HIGH PRESSURE SPRAY APPLICATION OF PAINT SHALL BE IN ACCORDANCE WITH THE ABOVE PROVISIONS AND IN ADDITION SHALL COMPLY WITH THE FOLLOWING.

FLUID TIPS SHALL BE OF PROPER ORIFICE SIZE AND FAN ANGLE, AND THE FLUID CONTROL GUN OF PROPER CONSTRUCTION, AS RECOMMENDED BY THE MANUFACTURER OF THE MATERIAL BEING SPRAYED AND THE EQUIPMENT BEING USED. FLUID TIPS SHALL BE OF THE SAFETY TYPE WITH SHIELDS TO PREVENT PENETRATION OF THE SKINS BY THE HIGH PRESSURE STREAM OF PAINT.

THE AIR PRESSURE TO THE PAINT PUMP SHALL BE ADJUSTED SO THAT THE PAINT PRESSURE TO THE GUN IS PROPER FOR OPTIMUM SPRAYING EFFECTIVENESS. THIS PRESSURE SHALL BE SUFFICIENTLY HIGH TO PROPERLY ATOMIZE THE PAINT. PRESSURES CONSIDERABLY HIGHER THAN THOSE NECESSARY TO PROPERLY ATOMIZE THE PAINT SHOULD NOT BE USED.

SPRAYING EQUIPMENT SHALL BE KEPT CLEAN AND SHALL UTILIZE PROPER FILTERS IN THE HIGH PRESSURE LINE SO THAT DIRT, DRY PAINT, AND OTHER FOREIGN MATERIALS ARE NOT DEPOSITED IN THE PAINT FILM. ANY SOLVENTS LEFT IN THE EQUIPMENT SHALL BE COMPLETELY REMOVED BEFORE APPLYING PAINT.

THE TRIGGER OF THE GUN SHOULD BE PULLED FULLY OPEN AND HELD FULLY OPEN DURING ALL SPRAYING TO INSURE PROPER APPLICATION OF PAINT.

AIRLESS PAINT SPRAY EQUIPMENT SHALL ALWAYS BE PROVIDED WITH AN ELECTRIC GROUND WIRE IN THE HIGH PRESSURE LINE BETWEEN THE GUN AND THE PUMPING EQUIPMENT. FURTHER THE PUMPING EQUIPMENT SHALL BE SUITABLE GROUNDED TO AVOID THE BUILD-UP OF ANY ELECTROSTATIC CHARGE ON THE GUN. THE MANUFACTURER'S INSTRUCTIONS ARE TO BE FOLLOWED REGARDING THE PROPER USE OF THE EQUIPMENT.

INSPECTION

ALL WORK AND MATERIALS SUPPLIED UNDER THIS SPECIFICATION SHALL BE SUBJECT TO TIMELY INSPECTION BY THE ENGINEER. THE CONTRACTOR SHALL CORRECT SUCH WORK OR REPLACE SUCH MATERIAL AS IS FOUND DEFECTIVE UNDER THE SPECIFICATION.

SAMPLES OF PAINTS USED UNDER THIS SPECIFICATION SHALL BE SUPPLIED UPON REQUEST ALONG WITH THE SUPPLIER'S NAME AND IDENTIFICATION FOR THE MATERIALS.

THE CONTRACTOR SHALL LEAVE HIS LADDERS, PLATFORM OR SCAFFOLD IN PLACE FOR A SUFFICIENT LENGTH OF TIME AND IN SUCH A MANNER TO PERMIT THE ENGINEER TO SAFELY EXAMINE THE WORK PERFORMED.

STATE SAFETY REQUIREMENTS

THE CONTRACTOR IS REQUIRED TO MEET THE APPLICABLE SAFETY REQUIREMENTS OF THE OHIO INDUSTRIAL COMMISSION. THE CONTRACTOR SHALL PROVIDE MATERIAL SAFETY DATA SHEETS FOR ALL PAINTS AND THINERS USED.

PRIOR INSPECTION OF WORK

PROSPECTIVE BIDDERS ARE REQUIRED TO MAKE AN INSPECTION OF THE BRIDGES IN THE FIELD AND TO REVIEW THE PLANS AND SPECIFICATIONS BEFORE SUBMITTING BIDS. SEE SECTION 102.05 OF THE "CONSTRUCTION AND MATERIALS SPECIFICATIONS", DATED JANUARY 1, 1983.

DATE PAINTED

THE COMPLETION DATE OF THE FINISH COAT OF PAINT (MONTH AND YEAR I.e., 9-73) SHALL BE STENCILED ON THE STRUCTURE, AS DIRECTED BY THE ENGINEER IN A CONTRASTING COLOR.

PAYMENT SHALL BE INCLUDED IN PRICE BID FOR ITEM SPECIAL BRIDGE PAINTING

PROTECTION OF PERSONS AND PROPERTY

THE CONTRACTOR SHALL COLLECT, REMOVE AND DISPOSE OF ALL BUCKETS, RAGS, OR OTHER DISCARDED MATERIALS AND HE SHALL LEAVE THE JOB SITE IN A CLEAN CONDITION.

THE CONTRACTOR SHALL PROTECT ALL PORTIONS OF THE STRUCTURE WHICH ARE NOT TO BE PAINTED, AGAINST DAMAGE OR DISFIGUREMENT BY SPLASHES, SPATTERS, AND SMIRCHES OF PAINT.

WHEN OR WHERE ANY DIRECT OR INDIRECT DAMAGE OR INJURY IS DONE TO PUBLIC OR PRIVATE PROPERTY BY OR ON ACCOUNT OF ANY ACT, OMISSION, NEGLIGENCE, OR MISCONDUCT IN THE EXECUTION OF THE WORK, OR IN CONSEQUENCE OF THE NON-EXECUTION THEREOF BY THE CONTRACTOR, HE SHALL RESTORE, AT HIS OWN EXPENSE, SUCH PROPERTY TO A CONDITION SIMILAR OR EQUAL TO THAT EXISTING BEFORE SUCH DAMAGE OR INJURY WAS DONE, BY REPAIRING, REBUILDING OR OTHERWISE RESTORING AS MAY BE DIRECTED, OR HE SHALL MAKE GOOD SUCH DAMAGE OR INJURY IN AN ACCEPTABLE MANNER.

POLLUTION CONTROL

THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO COMPLY WITH POLLUTION CONTROL LAWS, RULES OR REGULATIONS OR FEDERAL, STATE OR LOCAL AGENCIES.

WORK LIMITATIONS

THE CONTRACTOR SHALL NOT PERFORM WORK ON SUNDAYS OR LEGAL HOLIDAYS WITHOUT THE APPROVAL OF THE DIRECTOR. ON SATURDAYS THE CONTRACTOR MAY PAINT THE WESTBOUND LANES ONLY.

ALL WORK SHALL SUSPEND BETWEEN THE HOURS OF 5:00 P.M. SATURDAY AND 5:00 A.M. MONDAY. WORK SHALL ALSO BE SUSPENDED AT 5:00 P.M. OF THE DAY PRECEEDING ALL LEGAL HOLIDAYS AND SHALL NOT RESUME UNTIL 7:00 A.M. OF THE DAY FOLLOWING THE HOLIDAY.

PAYMENT FOR ALL OF THE ABOVE WILL BE MADE AT THE CONTRACT BID PRICE FOR:

ITEM	UNIT	DESCRIPTION
SPECIAL	LUMP SUM	BRIDGE PAINTING

SUB-SUMMARY

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FEDERAL AID	STATE	LOCAL
5	OHIO	

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SHEET NO.	202	202	202	606	606	606	608	615	615	606	615	SPECIAL	SPECIAL	607	609	404	407	407	609	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	510	511	SHEET NO.					
	CURB AND GUTTER REMOVED	GUARDRAIL REMOVED	MEDIAN REMOVED	GUARDRAIL TYPE 5	ANCHOR ASSEMBLY, TYPE A	BRIDGE TERMINAL ASSEMBLY, TYPE G MODIFIED AS PER PLAN	4 INCH CONCRETE WALK, AS PER PLAN	TEMPORARY PAVEMENT, CLASS A	TEMPORARY ROADS	ANCHOR ASSEMBLY TYPE T	TEMPORARY PAVEMENT, CLASS A, AS PER PLAN	BITUMINOUS CONCRETE GUTTER NO. 1	BITUMINOUS CONCRETE GUTTER NO. 2		TEMPORARY FENCE TYPE 47, AS PER PLAN	CURB, TYPE 2, AS PER PLAN		ASPHALT CONCRETE, AC-20	TACK COAT	COVER AGGREGATE	COMBINATION CURB AND GUTTER STANDARD TYPE 2		ASPHALT PAVEMENT PLANING	PRESSURE RELIEF JOINT		PAVEMENT SAWING		FULL DEPTH RIGID PAVEMENT REMOVAL AND FLEXIBLE REPLACEMENT	PARTIAL DEPTH PAVEMENT JOINT REPAIR		DOWELS HOLES	CLASS 5 CONCRETE ABUTMENT, AS PER PLAN
	LIN. FT.	LIN. FT.	SQ. FT.	LIN. FT.	EACH	EACH	SQ. FT.	SQ. YD.	LUMP	EACH	SQ. YD.	LIN. FT.	LIN. FT.		LIN. FT.		CU. YD.	GAL.	TON	LIN. FT.		SQ. YD.	LIN. FT.		LIN. FT.	SQ. YD.	CU. YD.		EACH	CU. YD.		
3																																
12B																	76	264	10				2824									12B
13							600					354			60		22	80	5			804	56						744		13	
14																													892		14	
15							366					212			21		7	24	1			234	52					860		15		
16		115		148			234								39		87	315	11			3147									16	
17		540		540		4											42	150	5			1514	120								17	
18		900		900													2	8	0			74									18	
19		340		390																											19	
20																								1008	215	16						20
21																													89	14	21	
23																													24		23	
12																	28	99	4			890										12
12A																	93	335	12			3344										12A
42	390		120					56	LUMP		394										20										42	
TOTAL	390	1895	120	1978	2	4	1200	56	LUMP	2	394	566	156	1325	120		359	1297	46	20		12931	228		1008	215	16		2408	14		

* - 100% STATE FUNDED

SHEET NO.	511	511	511	511	612	513	513	SPECIAL	SPECIAL	516	516	517	518	518	520	622	845	845	845	849	SHEET NO.										
	CLASS 5 CONCRETE EDGE BEAM AS PER PLAN	CLASS 5 CONCRETE EXPANSION JOINT, AS PER PLAN	CLASS 5 CONCRETE PIER CAP AS PER PLAN	CLASS 5 CONCRETE SIDEWALK, AS PER PLAN	CONCRETE MEDIAN	STRUCTURAL STEEL BRACKET ANGLES AS PER PLAN	STRUCTURAL STEEL SWAY BRACING	SURFACE PREPARATION	BRIDGE PAINTING	STRUCTURAL STEEL ANCHOR FOR SEALED EXPANSION JOINTS	4x6x9 LAMINATED ELASTOMERIC BEARING AS PER PLAN	RAILING SINGLE DEEP BEAM WITH STEEL TUBULAR BACKUPS PER PLAN	SCUPPERS AS PER PLAN	SCUPPERS THROUGH CONCRETE BARRIER AS PER PLAN	PNEUMATICALLY PLACED MORTAR AS PER PLAN	CONCRETE BARRIER AS PER PLAN	LATEX MODIFIED CONCRETE OVERLAY (1/2" THICKNESS)	LATEX MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS)	FULL DEPTH REPAIR	ELASTOMERIC JOINT SEALERS FOR STRUCTURAL STEEL JOINTS											
	CU. YD.	CU. YD.	CU. YD.	CU. YD.	CU. YD.	LUMP	LUMP	LUMP	LUMP	LIN. FT.	EACH	LIN. FT.	EACH	EACH	SQ. FT.	LIN. FT.	SQ. YD.	CU. YD.	CU. YD.	LIN. FT.											
13																															
14	6	20		20				LUMP	LUMP	148			36								148	13									
15		16						LUMP	LUMP	254			36									76	14								
16		18						LUMP	LUMP	148			44									148	15								
17		4						*LUMP	LUMP*	136		364										148	16								
21																							1978	17							
22																															21
23			47																												22
24			20																												23
28			4																												24
33																															28
42					75																										
TOTAL	6	58	71	20	75			LUMP	LUMP	LUMP	LUMP	668	218	364																	

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SUB-SUMMARY

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SHEET NO.	ELASTOMERIC COMPRESSION SEALS TYPE II FOR STEEL JOINTS	ELASTOMERIC COMPRESSION SEALS TYPE III FOR CENTER JOINTS	EPOXY COATED REINFORCING STEEL	RAILING	TEMPORARY SUPPORT	SIDEWALK GRID	STEEL BARRIER	LATEX MODIFIED CONCRETE, OPEN GRID	CURB	TEMPORARY EDGE LINES, CLASS I PAINT	TEMPORARY CHANNELIZING LINES, CLASS I, PAINT	TEMPORARY DOTTED LINES, 4 INCH CLASS I PAINT	LANE LINES, 4 INCH	EDGE LINE	IMPACT ATTENUATOR GREAT SYSTEM MODEL NUMBER 200200 NSG-CZ
	LIN. FT.	LIN. FT.	LB.	EACH	EACH	SQ. FT.	LIN. FT.	SQ. YD.	LIN. FT.	MILES	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	EACH
6															
12B															
13		293		1									5878	11738	
14	156	274		1		1038	240	198							
15		339		5											
16															
17	136	182		2					424						
18															
18A													297	594	
													1298	2596	
21		139													
22			1805												
23			15094												
24			1211												
29			228												
33			12338												
39			28475												
40			1868												
46C			769												
47										2.03	525	560			2
	292	1227	61788	9	7	1038	240	198	424	2.03	525	560	7473	14928	2

SHEET NO.	TEMPORARY PRECAST CONCRETE BARRIER, AS PER PLAN	CONSTRUCTION LAYOUT STAKES	MAINTAINING TRAFFIC	MOBILIZATION AS PER PLAN
	LIN. FT.	LUMP	LUMP	LUMP
3				LUMP
47	1530		LUMP	
1530	LUMP	LUMP	LUMP	

GENERAL SUMMARY

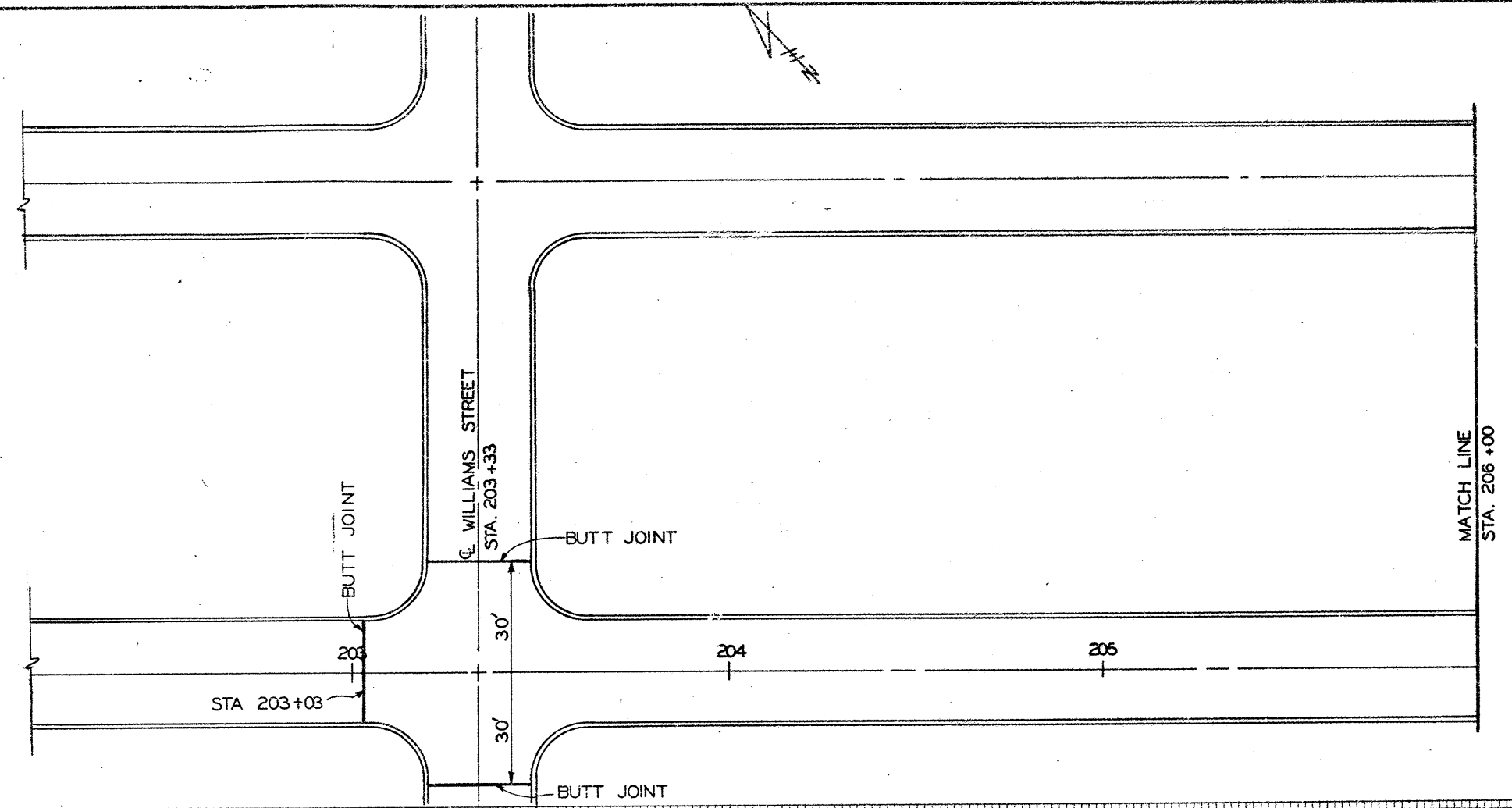
S.W.A. REGION	STATE	PROJECT	11
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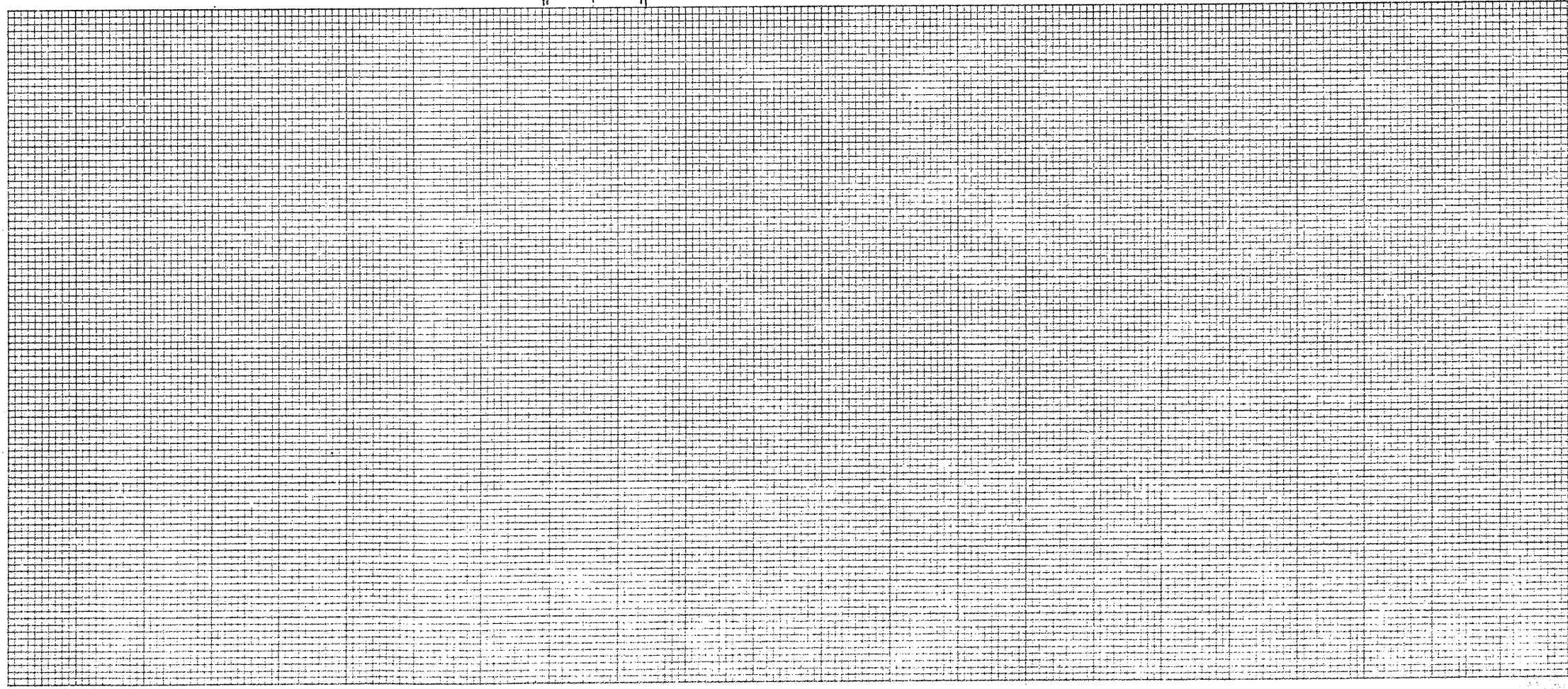
* FED STATE + County

FROM SHEET NO.	SUB TOTALS				ITEM	PLAN TOTAL	UNITS	DESCRIPTION	FROM SHEET NO.	SUB TOTALS				ITEM	PLAN TOTAL	UNITS	DESCRIPTION
	ERI-6-17.41 X-031 *	ERI-6-18.24 X-131 *	NORMAL STATE, CITY & FED	PART. STATE, COUNTY & FED						ERI-6-17.41 X-031 *	ERI-6-18.24 X-131 *	NORMAL STATE, CITY & FED	PART. STATE, COUNTY & FED				
							ROADWAY									STRUCTURES (CONT'D)	
		390		390	202	390	LIN.FT.	CURB AND GUTTER REMOVED		530	136		666	516	666	LIN.FT.	STRUCTURAL STEEL ARMOR FOR SEALED EXPANSION JOINTS, AS PER PLAN
		1895		1895	202	1895	LIN.FT.	GUARDRAIL REMOVED		218			218	516	218	EACH	1/4" x 6" x 9" LAMINATED ELASTOMERIC BEARINGS, AS PER PLAN
		120		120	202	120	SQ.FT.	MEDIAN REMOVED					364	516	364	EACH	
			2		606	2	EACH	ANCHOR ASSEMBLY, TYPE T					364	517	364	LIN.FT.	RAILING (SINGLE DEEP BEAM WITH STEEL TUBULAR BACKUP), AS PER PLAN
			1978		606	1978	LIN.FT.	GUARDRAIL, TYPE 5									
			2		606	2	EACH	ANCHOR ASSEMBLY, TYPE A									
		4		4	606	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE G MODIFIED, AS PER PLAN									
	1200			1200	608	1200	SQ.FT.	4 INCH CONCRETE WALK, AS PER PLAN		116			116	518	116	EACH	SCUPPERS, AS PER PLAN
		56		56	615	56	SQ.YD.	TEMPORARY PAVEMENT, CLASS A		112			112	518	112	EACH	SCUPPERS THROUGH CONCRETE BARRIER, AS PER PLAN
		LUMP		LUMP	615	LUMP	LUMP	TEMPORARY ROADS		1978			1978	520	1978	SQ.FT.	PNEUMATICALLY PLACED MORTAR, AS PER PLAN
		394		394	615	394	SQ.YD.	TEMPORARY PAVEMENT, CLASS A, AS PER PLAN									
	1325			1325	607	1325	LIN.FT.	TEMPORARY FENCE, TYPE 47, AS PER PLAN									
	100	20		120	609	120	LIN.FT.	CURB, TYPE 2, AS PER PLAN		1893			1893	622	1893	LIN.FT.	CONCRETE BARRIER, AS PER PLAN
								EROSION CONTROL									
	566			566	SPECIAL	566	LIN.FT.	BITUMINOUS CONCRETE GUTTER NO.1		5108	1032		6140	845	6140	SQ.YD.	LATEX MODIFIED CONCRETE OVERLAY (1/4" THICKNESS)
		156		156	SPECIAL	156	LIN.FT.	BITUMINOUS CONCRETE GUTTER NO.2		134	2		136	845	136	CU.YD.	LATEX MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS)
										9	2		11	845	11	CU.YD.	FULL DEPTH REPAIR
										374			374	849	374	LIN.FT.	ELASTOMERIC COMPRESSION SEALS, TYPE I, FOR STRUCTURAL STEEL JOINTS
										156	136		292	849	292	LIN.FT.	ELASTOMERIC COMPRESSION SEALS, TYPE II, FOR STRUCTURAL STEEL JOINTS
										1045	182		1227	849	1227	LIN.FT.	ELASTOMERIC COMPRESSION SEALS, TYPE III, FOR CENTER JOINTS
								PAVEMENT									
				359	404	359	CU.YD.	ASPHALT CONCRETE, AC-20		61019	769		61788	824	61788	LB.	EPOXY COATED REINFORCING STEEL
				1297	407	1297	GAL.	TACK COAT		7	2		9	SPECIAL	9	EACH	RAILING
				46	407	46	TON.	COVER AGGREGATE		7			7	SPECIAL	7	EACH	TEMPORARY SUPPORT
										1038			1038	SPECIAL	1038	SQ.FT.	SIDEWALK GRID
										240			240	SPECIAL	240	LIN.FT.	STEEL BARRIER
										198			198	SPECIAL	198	SQ.YD.	LATEX MODIFIED CONCRETE, OPEN GRID
		20		20	609	20	LIN.FT.	COMBINATION CURB AND GUTTER, STANDARD TYPE 2			424		424	SPECIAL	424	LIN.FT.	CURB
				12931						1530			1530	622	1530	LIN.FT.	TEMPORARY PRECAST CONCRETE BARRIER, AS PER PLAN
	108	120		228	SPECIAL	228	LIN.FT.	PRESSURE RELIEF JOINT		2			2	SPECIAL	2	EACH	IMPACT ATTENUATOR, GREAT SYSTEM, MODEL NUMBER 200200 N3G-CZ
				1008	SPECIAL	1008	LIN.FT.	PAVEMENT SAWING (SEE PROPOSAL NOTE)		162	.41		2.03	614	2.03	MILES	TEMPORARY EDGE LINES CLASS I PAINT
				215	SPECIAL	215	SQ.YD.	FULL DEPTH RIGID PAVEMENT REMOVAL AND FLEXIBLE REPLACEMENT (SEE PROPOSAL NOTE)		420	105		525	614	525	LIN.FT.	TEMPORARY CHANNELIZING LINES CLASS I PAINT
				16	SPECIAL	16	CU.YD.	PARTIAL DEPTH PAVEMENT JOINT REPAIR		448	112		560	614	560	LIN.FT.	TEMPORARY DOTTED LINES, 4 INCH
		75		75	612	75	CU.YD.	CONCRETE MEDIAN		5978	1495		7473	621	7473	LIN.FT.	LANE LINES, 4 INCH
								STRUCTURES		11942	2986		14928	621	14928	LIN.FT.	EDGE LINES
	2408			2408	510	2408	EACH	DOWEL HOLES									
	14			14	511	14	CU.YD.	CLASS S CONCRETE, ABUTMENT, AS PER PLAN									
	6			6	511	6	CU.YD.	CLASS S CONCRETE, EDGE BEAM, AS PER PLAN									
	54	4		58	511	58	CU.YD.	CLASS S CONCRETE, EXPANSION JOINT, AS PER PLAN									
	71			71	511	71	CU.YD.	CLASS S CONCRETE, PIER CAP, AS PER PLAN									
	20			20	511	20	CU.YD.	CLASS S CONCRETE, SIDEWALK, AS PER PLAN									
	LUMP			LUMP	513	LUMP	LUMP	STRUCTURAL STEEL BRACKET ANGLES, AS PER PLAN, (AISC CERT. NOT REQ.)					LUMP	623	LUMP	LUMP	CONSTRUCTION LAYOUT STAKES
	LUMP			LUMP	513	LUMP	LUMP	STRUCTURAL STEEL SWAY BRACING, (AISC CERT. NOT REQ.)					LUMP	614	LUMP	LUMP	MAINTAINING TRAFFIC
	LUMP	LUMP		LUMP	SPECIAL	LUMP	LUMP	SURFACE PREPARATION					LUMP	624	LUMP	LUMP	MOBILIZATION, AS PER PLAN
	LUMP	LUMP		LUMP	SPECIAL	LUMP	LUMP	BRIDGE PAINTING									



**ITEM 621
PAVEMENT MARKING QUANTITIES**

STATION FROM	STATION TO	LIN. FT. LANE LINE 4 INCH	LIN. FT. EDGE LINES
203+03	206+00	297	594
TOTALS		297	594



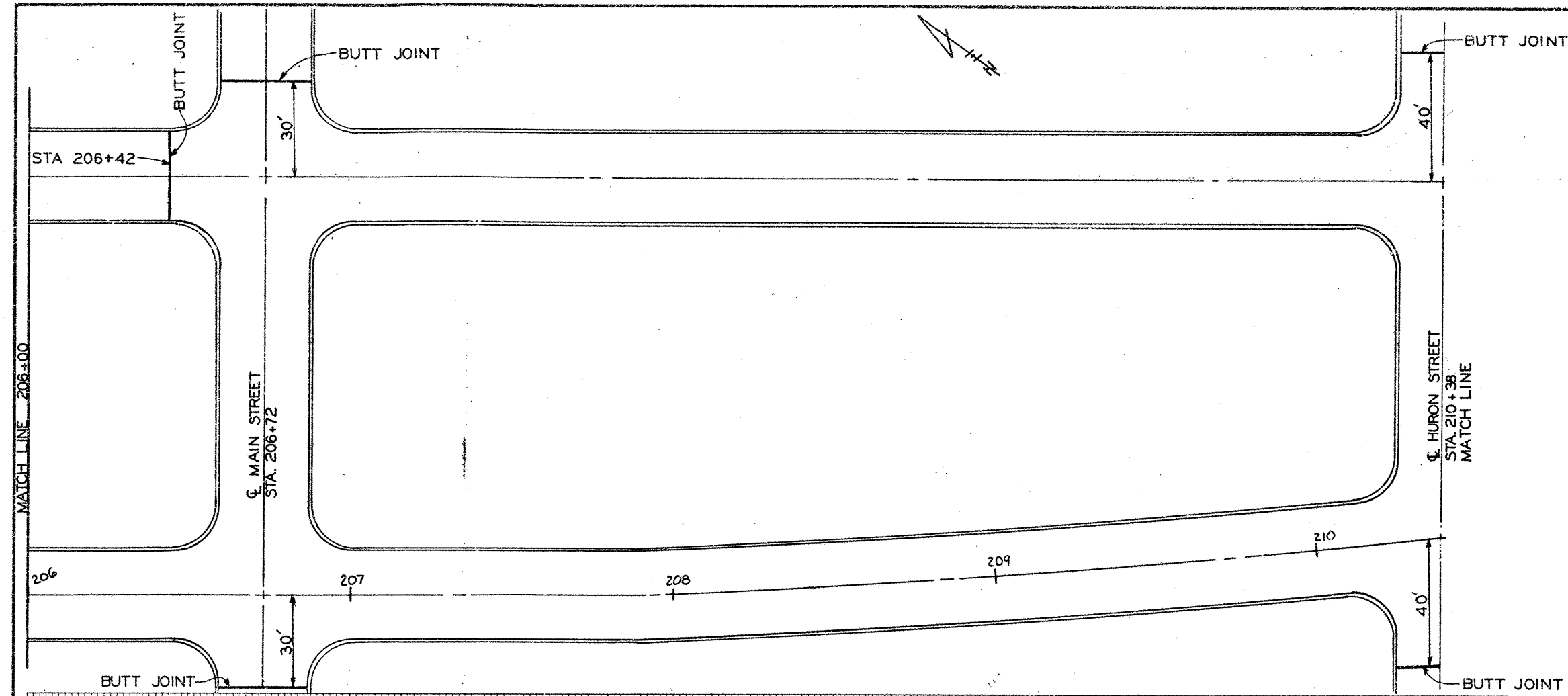
404	ASPHALT CONCRETE 1"	CU.YD.	WEST	EAST	WEST	EAST		
			27.5					
407	TACK COAT @ 0.1GAL./SQ.YD.	GAL.	WEST	EAST	WEST	EAST		
			99					
407	COVER AGGREGATE @ 7LB./SQ.YD.	TON	WEST	EAST	WEST	EAST		
			3.5					
SPECIAL	ASPHALT PAVEMENT PLANING	SQ.YD.	WEST	EAST	WEST	EAST		
			990					
STATION	TO	206+00						
STATION	FROM	203+03						
TOTAL								
TOTAL								
REFERENCE NO.								

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

12A
47

ERI-6-17.41

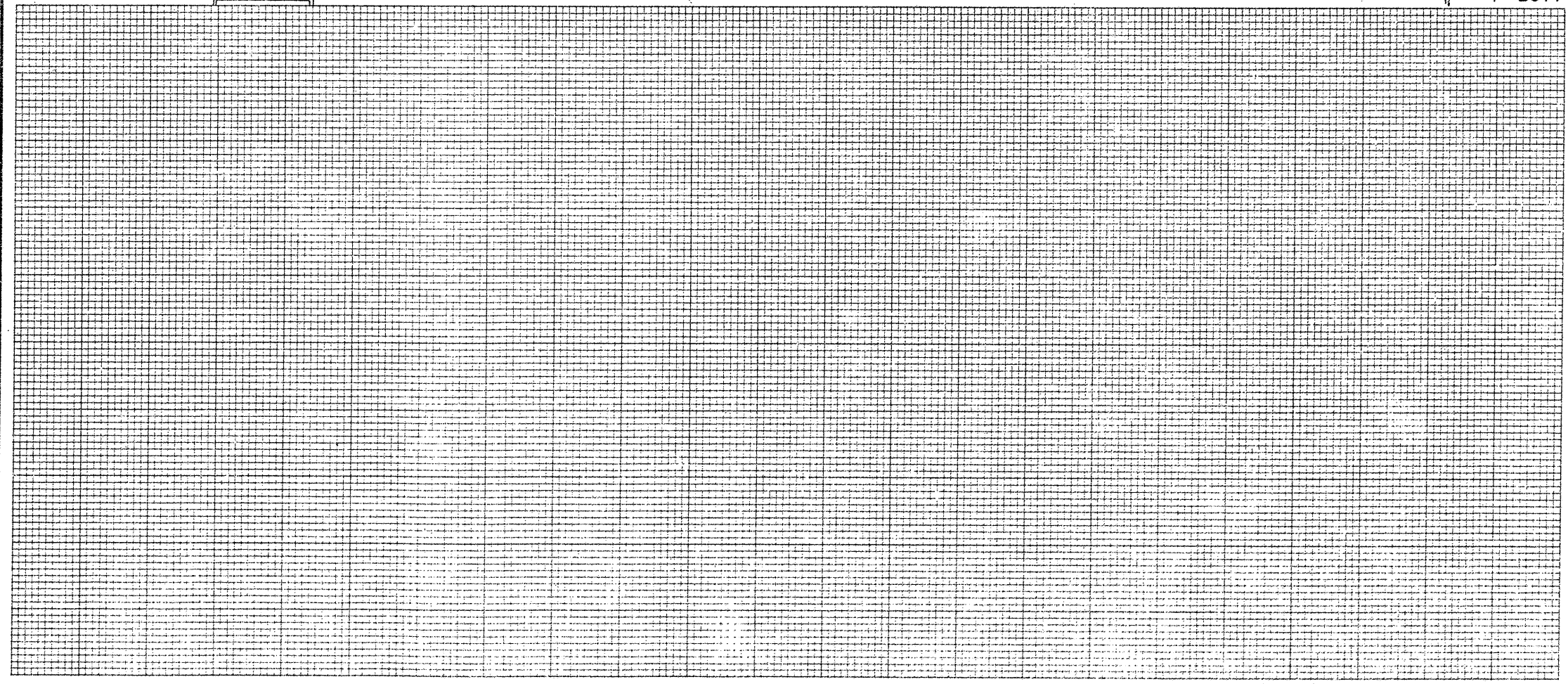
BR-57-13



ITEM 621
PAVEMENT MARKING QUANTITIES*

STATION FROM	STATION TO	LIN. FT. LANE LINE	LIN. FT. EDGE
206+42	210+80	628	1256
206+00	210+80	670	1340
TOTALS		1298	2596

* INCLUDES MAIN AND HURON STREETS

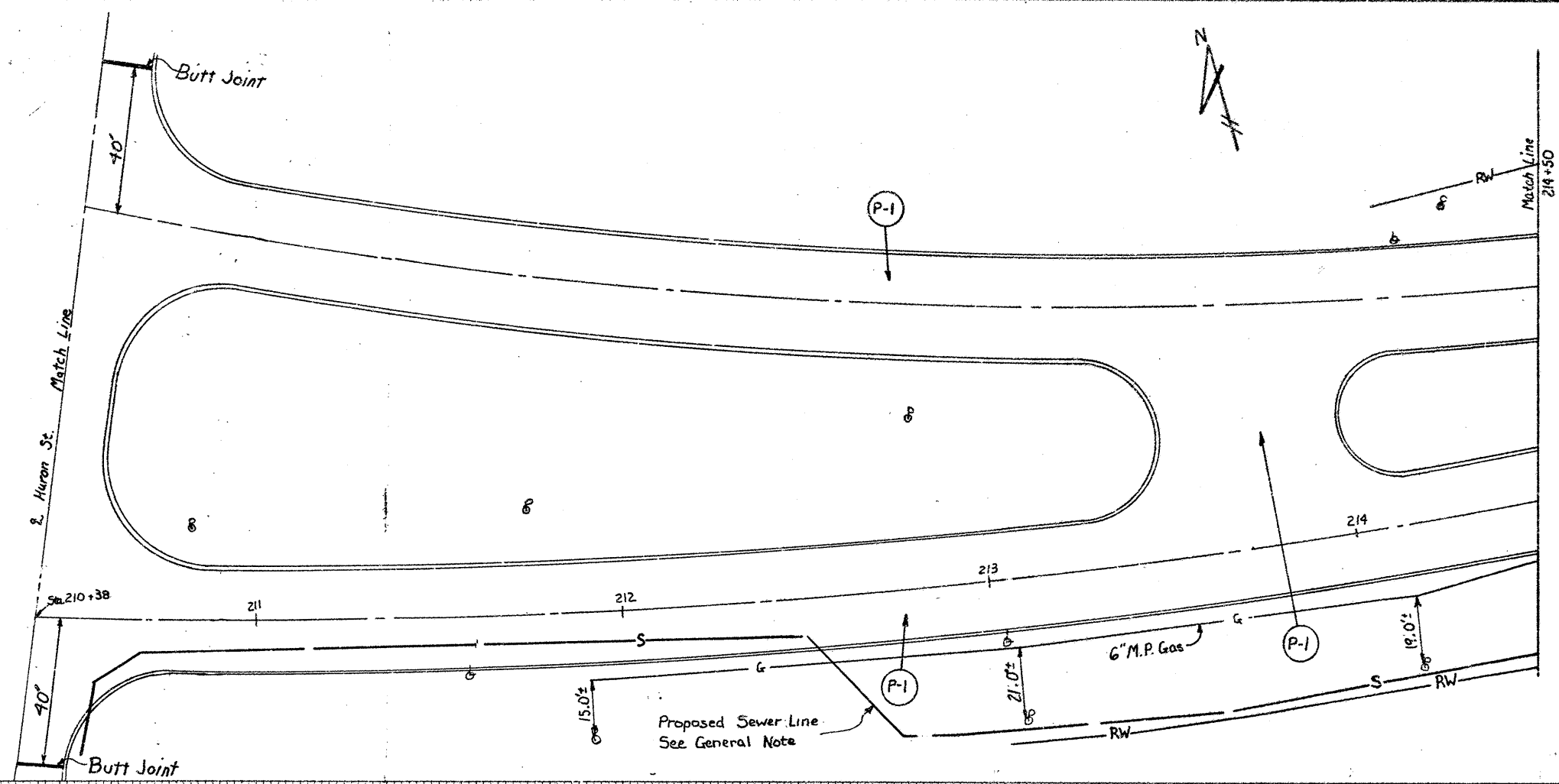


REFERENCE NO.	STATION FROM	STATION TO	SQ. YD.		TON		GAL.		CU. YD.	
			WEST	EAST	WEST	EAST	WEST	EAST	WEST	EAST
P-1	206+42	210+38	1609		5.6		161		44.7	
P-2	206+00	210+38	1735		6.1		174		48.2	
TOTALS			3344		11.7		335		92.9	

Calc. by Y/W
 Chkd. by W.S.

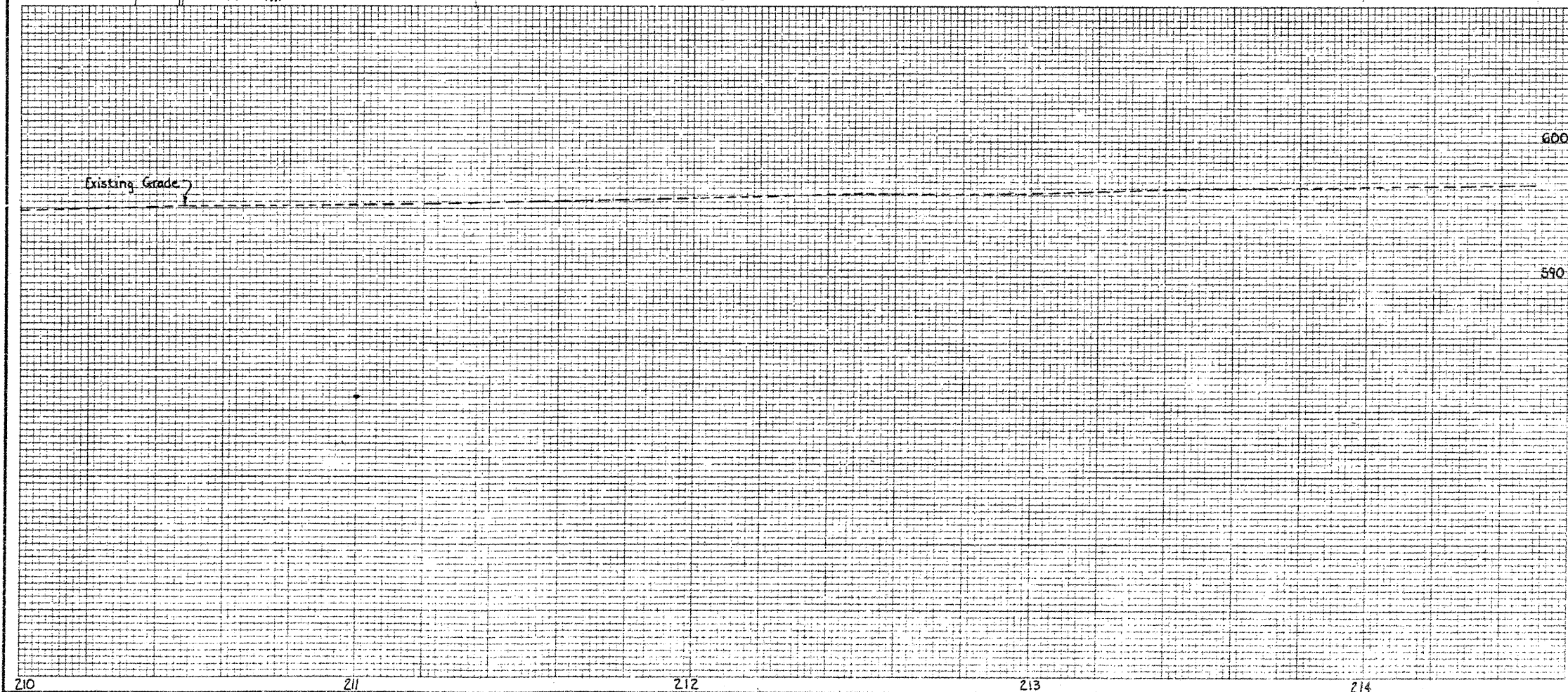
FED. RD. DIV. SIGN.	STATE	PROJECT	128 47
5	OHIO		

ERI-6-17.41 BR-59-83



ITEM 521
PAVEMENT MARKING QUANTITIES

STATION FROM	STATION TO	LIN. FT. LANE LINE 4 INCH	LIN. FT. EDGE LINES
210+80	229+21	3682	
230+57	241+55	2196	
210+80	213+40		520
214+10	229+21		3022
230+57	241+55		2196
210+80	229+50		3740
230+25	241+55		2260
TOTALS		5878	11738



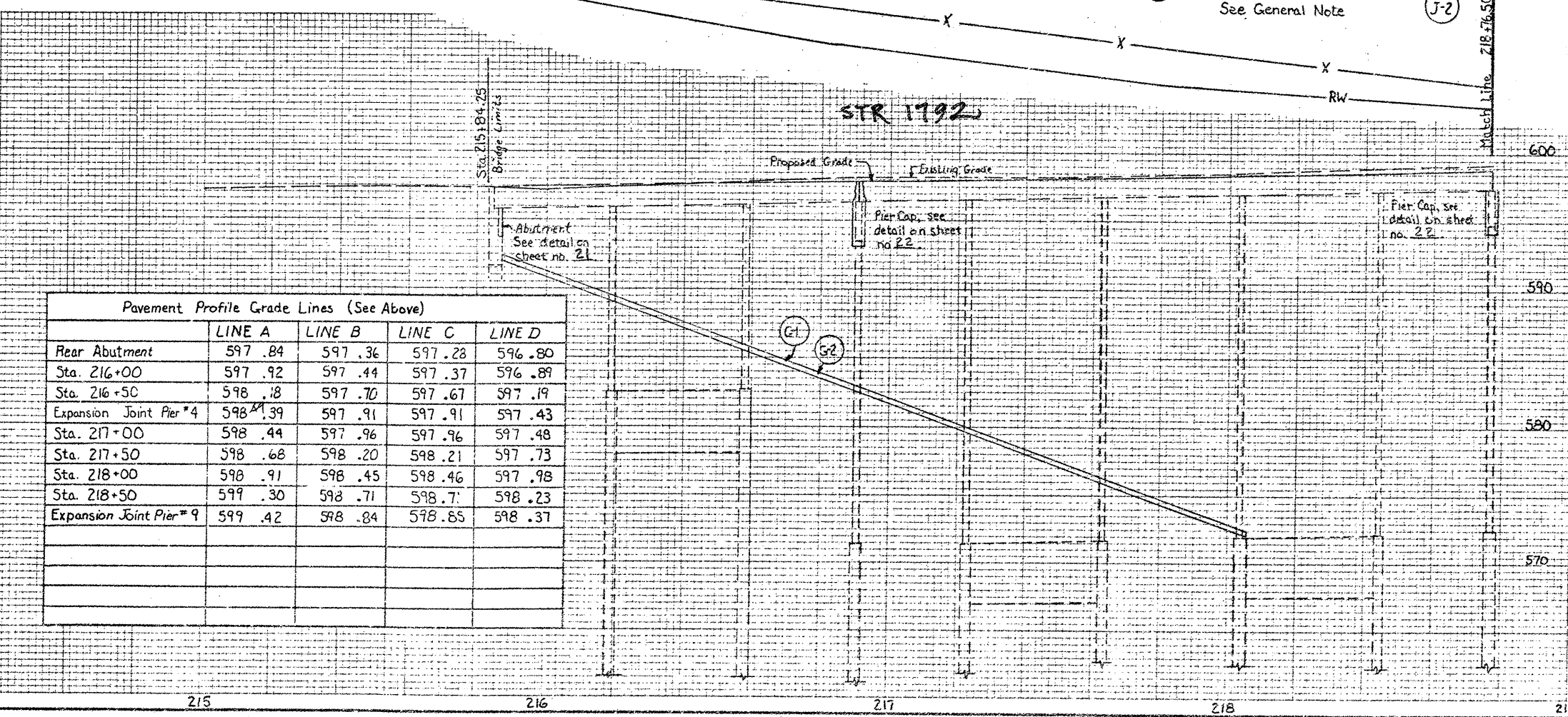
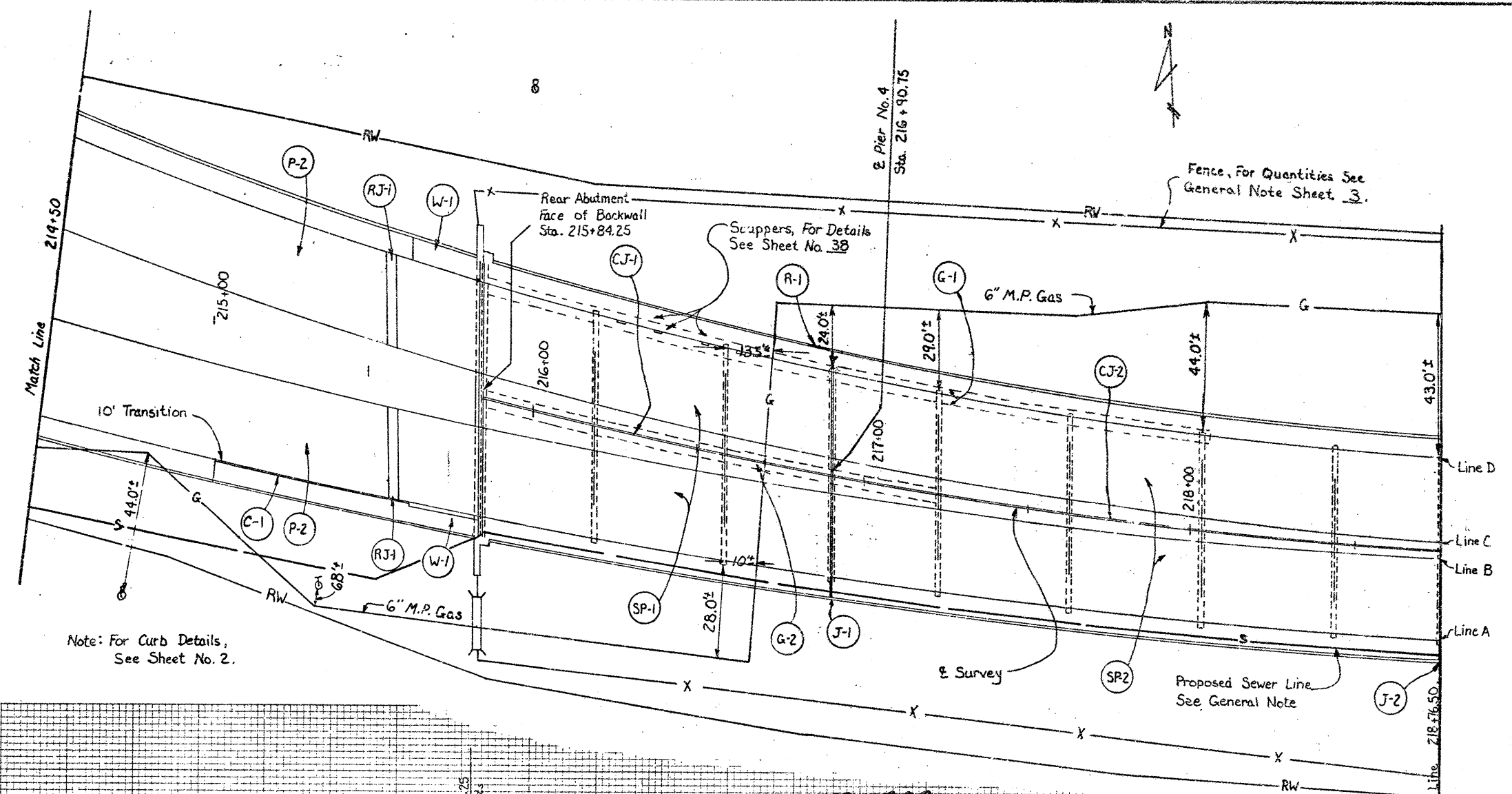
Reference No.	Station	From	To	Sg. Yd.		Ton		Gal.		Cu. Yd.	Totals
				West	East	West	East	West	East		
P-1		210+38	214+50	1412	1412	5	5	142	142	392	784
											284
											10
											2824
											2824

PLAN & PROFILE STA. 210+90 TO STA. 214+50

Calc. by *AV*
Chkd by *W.S.*

FED. RD. DIVISION	STATE	PROJECT	13 97
5	OHIO		

ERI-b-1741 BR-59-83

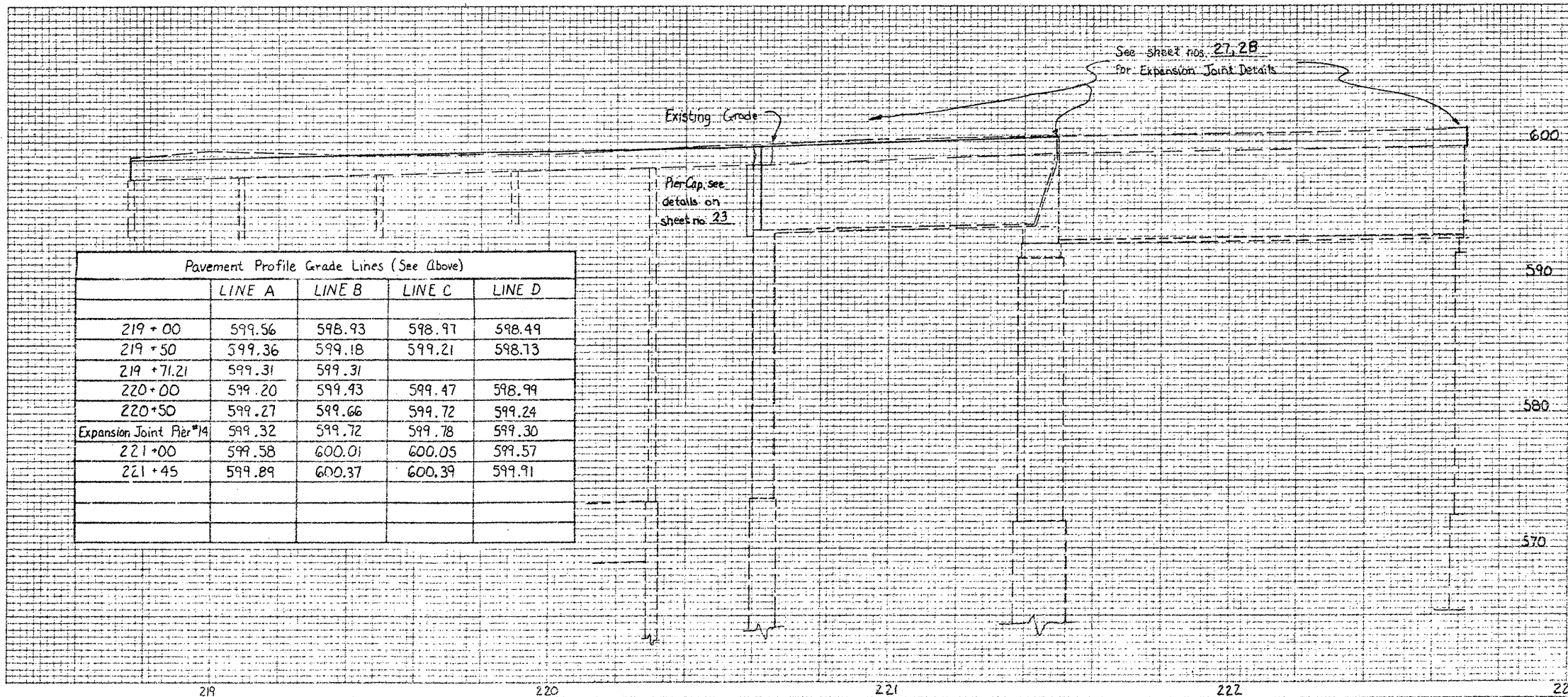
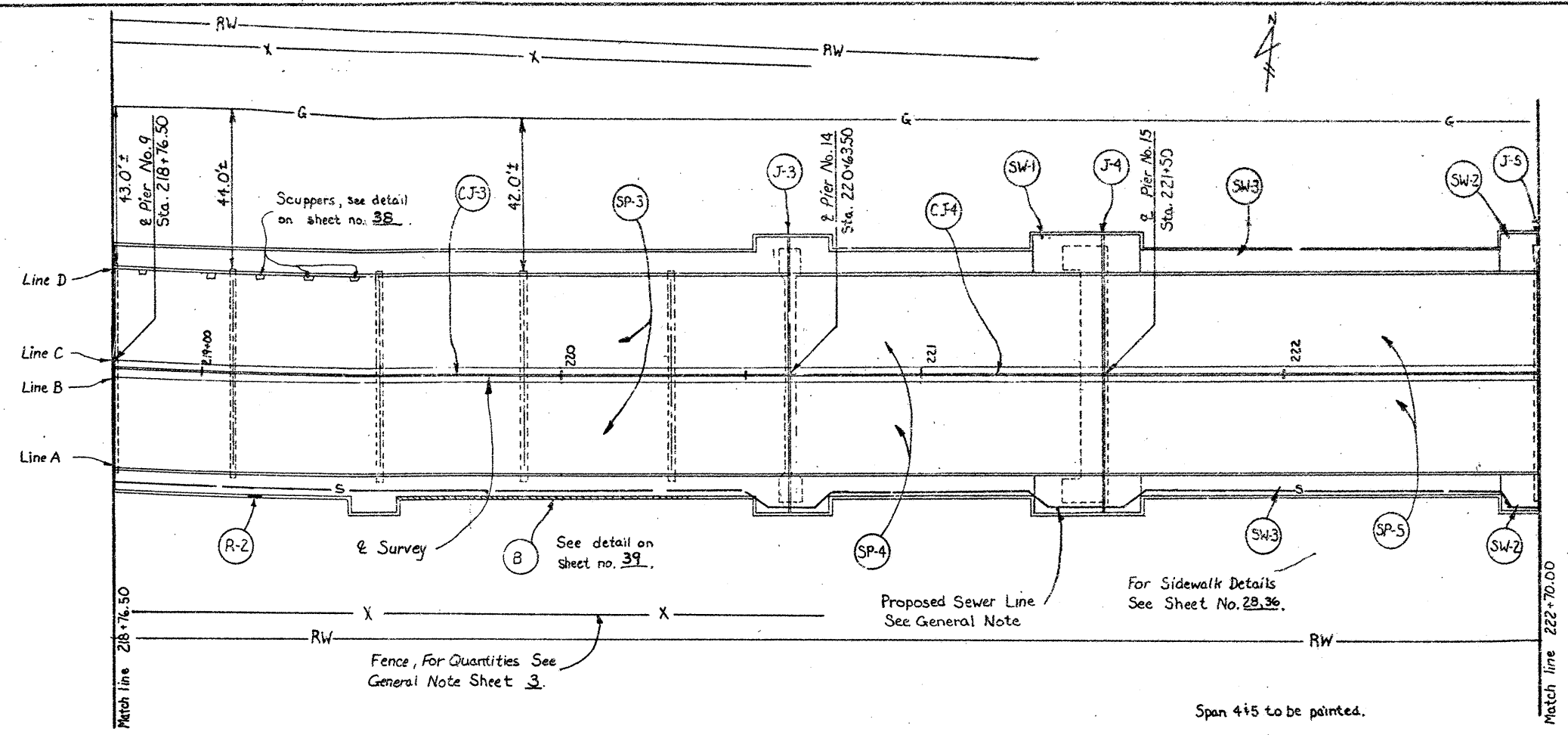


	LINE A	LINE B	LINE C	LINE D
Rear Abutment	597.84	597.36	597.28	596.80
Sta. 216+00	597.92	597.44	597.37	596.89
Sta. 216+50	598.18	597.70	597.67	597.19
Expansion Joint Pier #4	598.39	597.91	597.91	597.43
Sta. 217+00	598.44	597.96	597.96	597.48
Sta. 217+50	598.68	598.20	598.21	597.73
Sta. 218+00	598.91	598.45	598.46	597.98
Sta. 218+50	599.30	598.71	598.71	598.23
Expansion Joint Pier #9	599.42	598.84	598.85	598.37

Reference No.	Description	Unit	West		East		Total	Station	Reference No.
			West	East	West	East			
609	Curb Type 2, As Per Plan	Lin. Ft.					60		
622	Concrete Barrier, as per plan	Lin. Ft.					627		
510	Dowel Holes	Each					744		
608	Concrete Walk, As Per Plan	Sq. Ft.					600		
518	Scuppers, as per plan	Each					36		
845	Full Depth Repair	Cu. Yd.					2		
845	Latex Modified Concrete Overlay (Variable Thickness)	Cu. Yd.					36		
845	Latex Modified Concrete Overlay (1/4" Thickness)	Sq. Yd.					1664		
Special	Pressure Relief Joint	Lin. Ft.					56		
407	Cover Aggregate @ 7 lbs./sq. yd.	Ton					2.8		
407	Tack Coat @ 0.12 gal./sq. yd.	Gal.					80		
404	Asphalt Concrete 1"	Cu. Yd.					22.4		
Special	Asphalt Pavement Planing	Sq. Yd.					804		
849	Elastomeric Compression Seals, Type III for Center Joint.	Lin. Ft.					107		
849	Elastomeric Compression Seals, Type I for Structural Steel Joints.	Lin. Ft.					186		
516	Structural Steel Armor For Sealed Expansion Joints, As Per Plan	Lin. Ft.					39		
511	Class S Concrete Expansion Joints, as per plan	Cu. Yd.					5		
Special	Bituminous Concrete Gutter No. 1	Lin. Ft.					219		
Special	Railing	Each					1		
849	Elastomeric Compression Seals, Type I for Structural Steel Joints.	Lin. Ft.					35		
511	Class S Concrete Expansion Joints, as per plan	Cu. Yd.					5		

PLAN & PROFILE STA. 214+50 TO STA. 218+76.50

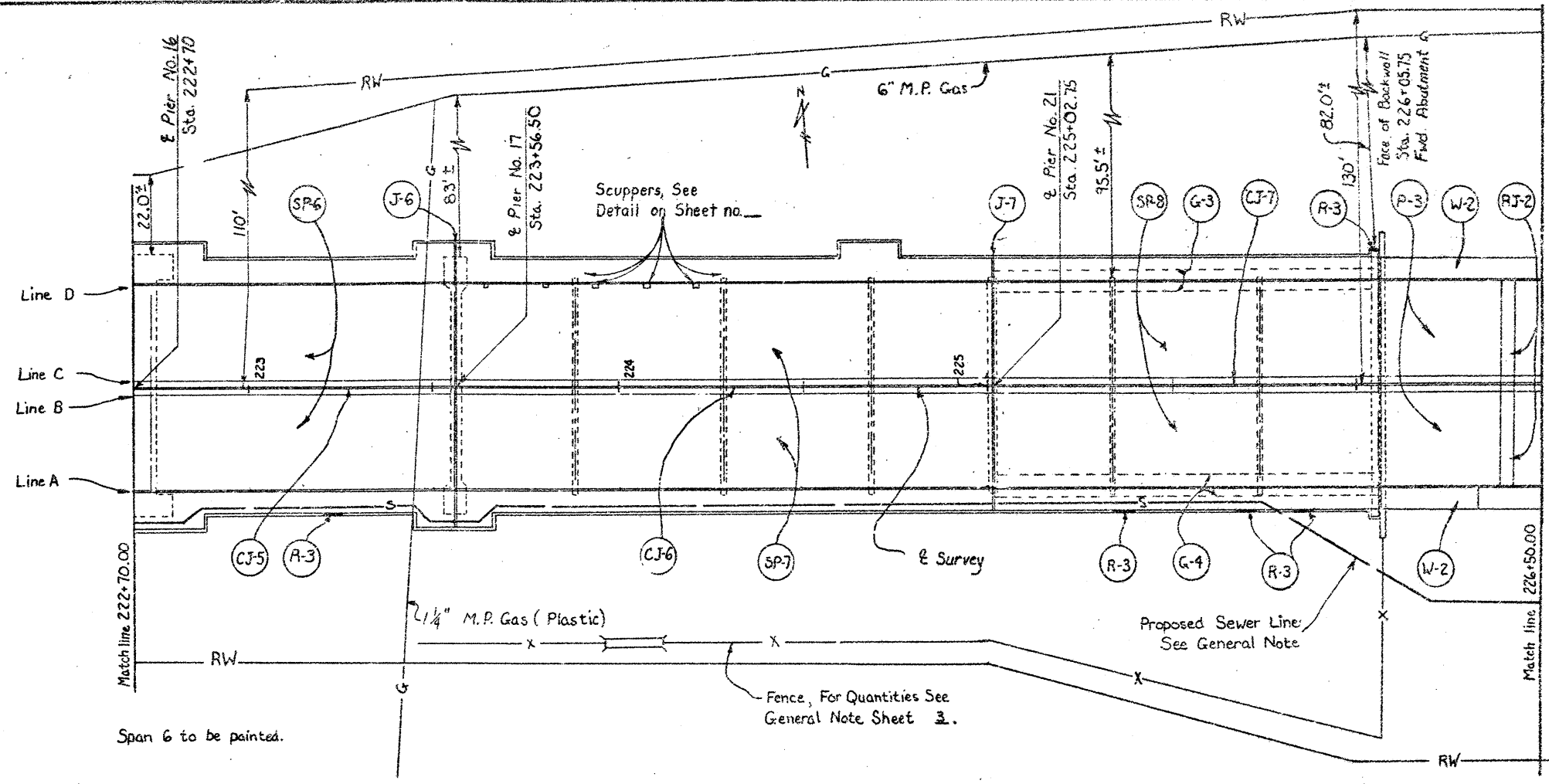
Calc. by *KW*
 Chkd by *W.S.*



Reference No.	Description	Unit	West		East		Total	Special	Notes
			West	East	West	East			
511	Class S Concrete Edge Beam, as per plan	Cu. Yd.			0	6	6		
849	Elastomeric Compression Seals Type II for Structural Steel Joints	Lin. Ft.			39	39	78		
849	Elastomeric Compression Seals Type I for Structural Steel Joints	Lin. Ft.			39	39	78		
516	Structural Steel Armor for Sealed Expansion Joints, As Per Plan	Lin. Ft.			39	39	78		
511	Class S Concrete Expansion Joints, as per plan	Cu. Yd.			4	2	6		
					16	16	32		
	Special Bridge Painting	Lump Sum							
849	Elastomeric Compression Seals, Type III, For Center Joint	Lin. Ft.			187	87	274		
622	Concrete Barriers, as per plan	Lin. Ft.			120	120	240		
510	Dowel Holes	Each			106	6	112		
518	Scuppers, as per plan	Each			6	30	36		
845	Full Depth Repair	Cu. Yd.			1	2	3		
845	Latex Modified Concrete Overlay (Variable Thickness)	Cu. Yd.			3	35	38		
845	Latex Modified Concrete (1 1/2" thick)	Sq. Yd.			243	195	438		
					99	99	198		
	Station		From	To					
			218+76.50	219+24					
			220+63.50	220+70					
			219+55	220+32					
			220+62.50	220+69.50					
			221+49	221+51					
			222+69	222+71					
	Reference No.		R-2						
			SP-3						
			SP-4						
			B						
			J-3						
			J-4						
			SW-1						
			SW-2						
			SW-3						

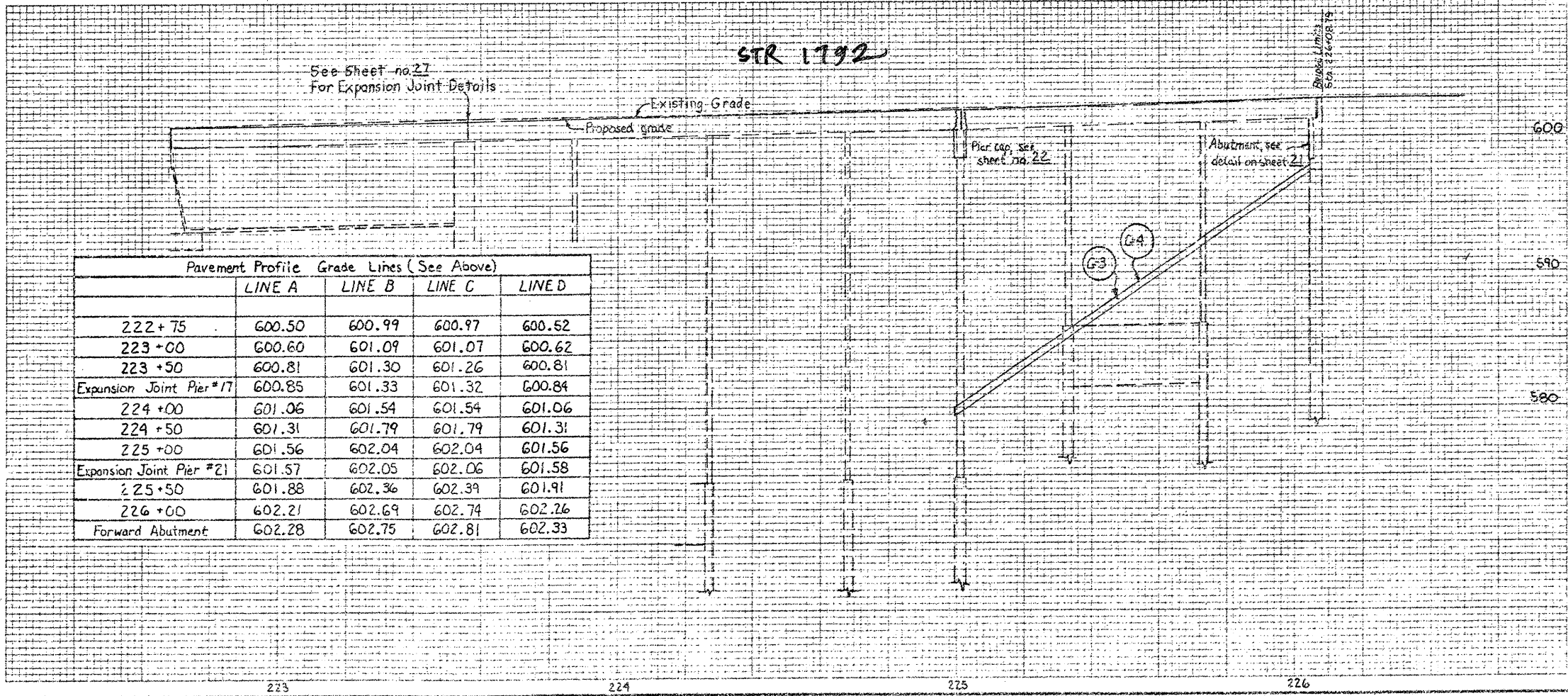
Calc. by KW
 Chk'd by W.S.

ERI-6-17.41 BR-57-83



Note: For Curb Details, See Sheet 2.

Span 6 to be painted.



Reference No.	Description	Unit	West		East		Total	Special	Notes
			West	East	West	East			
609	Curb, Type 2, As Per Plan	Lin. Ft.					21		
510	Dowel Holes	Each			106	106	860		
622	Concrete Barrier, as per plan	Lin. Ft.			87	87	718		
608	Concrete Walk, As Per Plan	Sq. Ft.			146	106	246		
518	Scuppers, as per plan	Each			9	7	44		
845	Full Depth Repair	Cu. Yd.			1	0	9	Special	Bridge Painting
845	Latex Modified Concrete Overlay (Variable Thickness)	Cu. Yd.			3	5	37	Special	Bridge Preparation
845	Latex Modified Concrete Overlay (1 1/2\" Thickness)	Sq. Yd.			243	212	1706		
511	Class S Concrete Expansion Joints as per plan	Cu. Yd.			4	5	18		
Special	Pressure Relief Joint	Lin. Ft.					26	Special	Bituminous Concrete Gutter No. 1
407	Cover Aggregate @ 7lb./sq. yd.	Ton				0.4	0.8		
407	Tack Coat @ 0.1 gal./sq. yd.	Gal.				12	24		
404	Asphalt Concrete 1\"	Cu. Yd.				3.3	6.6		
Special	Asphalt Pavement Planing	Sq. Yd.				117	234		
Station	From To								
Station	From To								
Reference No.	From To								

PLAN & PROFILE STA 222+70.00 TO 226+50

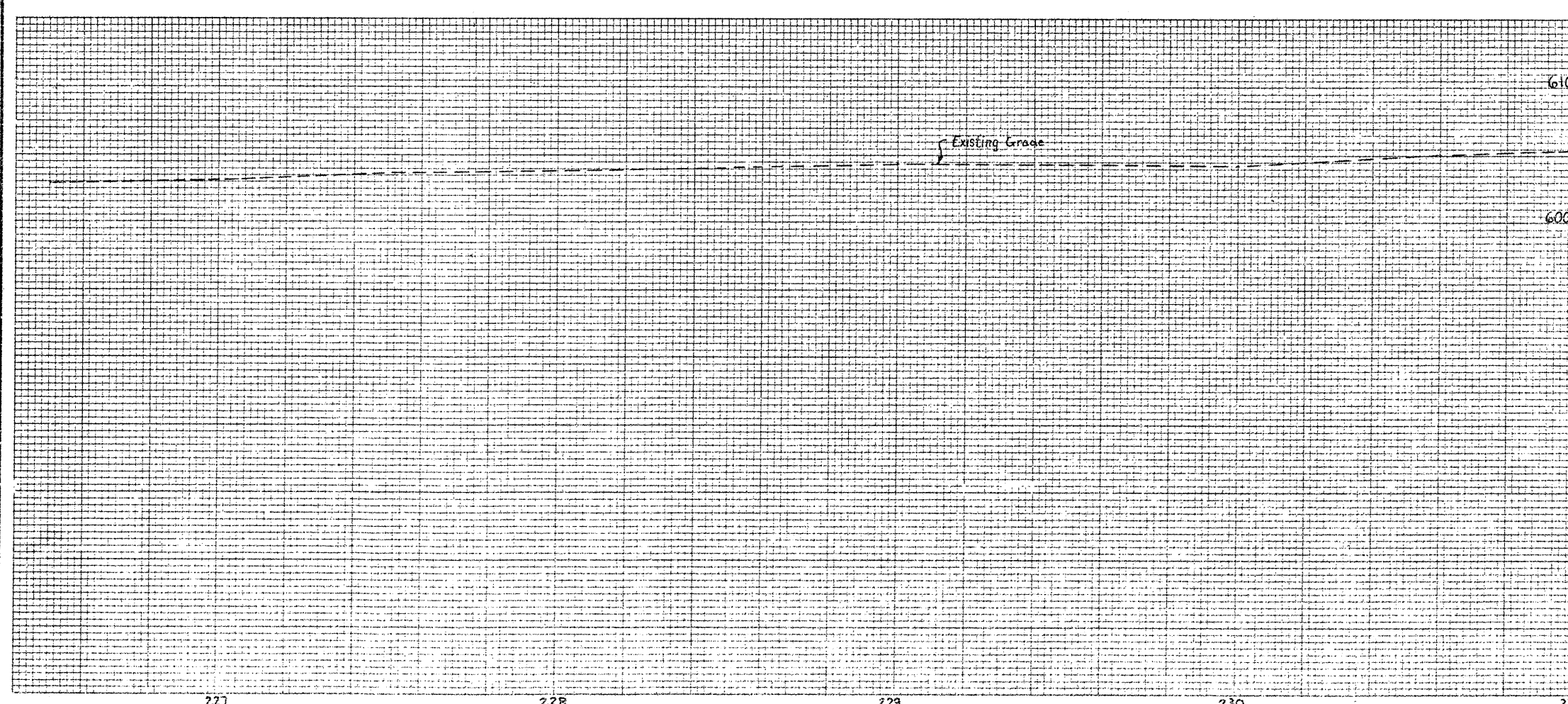
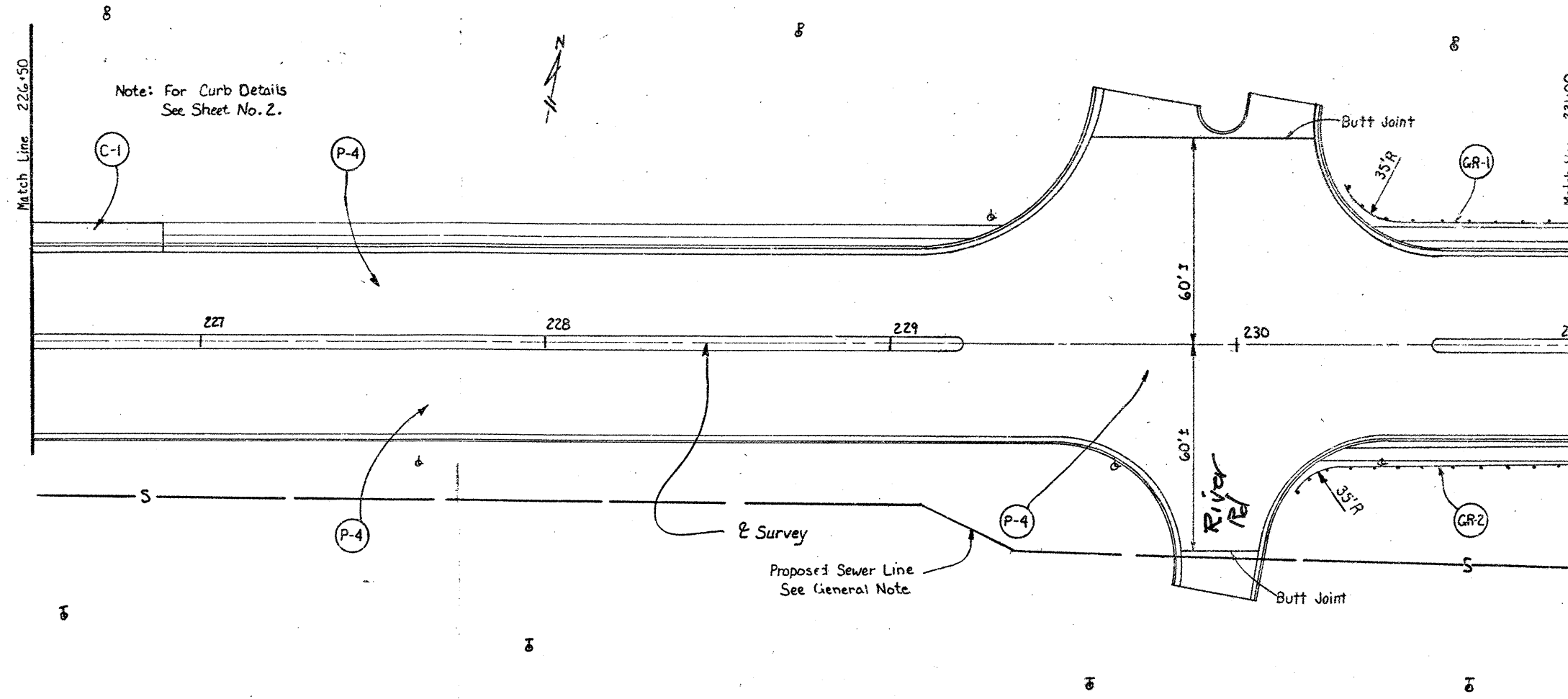
Calc. by *KW*
 Chkd by *U.S.*

FED. RD. DIVISION	STATE	PROJECT
5	MI	

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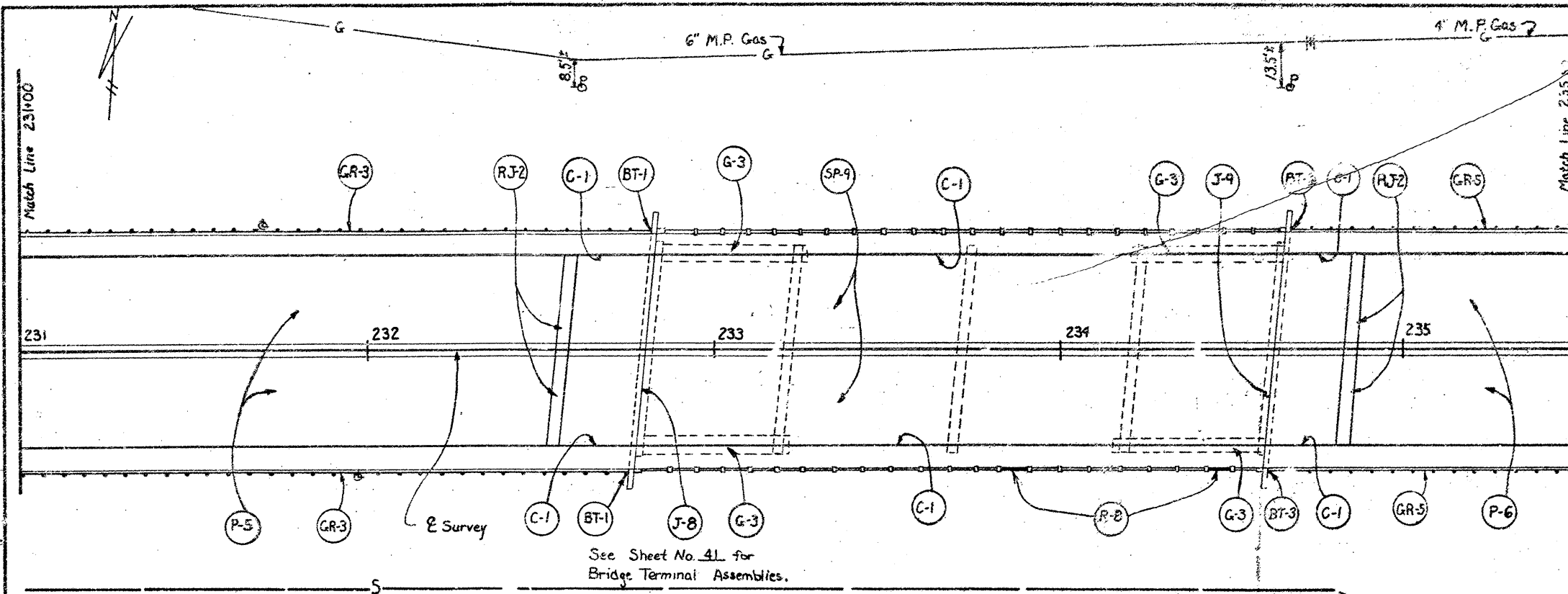
ERI-6-17.41

BR-59-83



Item No.	Description	Unit	West		East		Total
			West	East	West	East	
608	Concrete Walk, As Per Plan	Sq. Ft.					234
609	Curb, Type 2, As Per Plan	Lin. Ft.				39	39
606	Anchor Assembly, Type T	Each		0	1		1
202	Guardrail Removed	Lin. Ft.		45		70	115
606	Anchor Assembly, Type A	Each			1		1
606	Guardrail, Type 5	Lin. Ft.	83	0	0	65	148
407	Cover Aggregate @ 7lbs./sq.yds.	Ton	6.1	4.4			11.0
407	Tack Coat @ 0.1 gal./sq.yd.	Gal.	141	174			315
404	Asphalt Concrete 1"	Cu. Yd.	48.2	39.2			87.4
Special	Asphalt Pavement Planing	Sq. yd.	1736	141			3147
Station		From	226+50	231+00	230+28	231+00	
Station		To	230+28	231+00	230+16	226+50	
Reference No.			P-4	GR-1	GR-2	C-1	
Total							

PLAN & PROFILE STA 226+50 TO 231+00

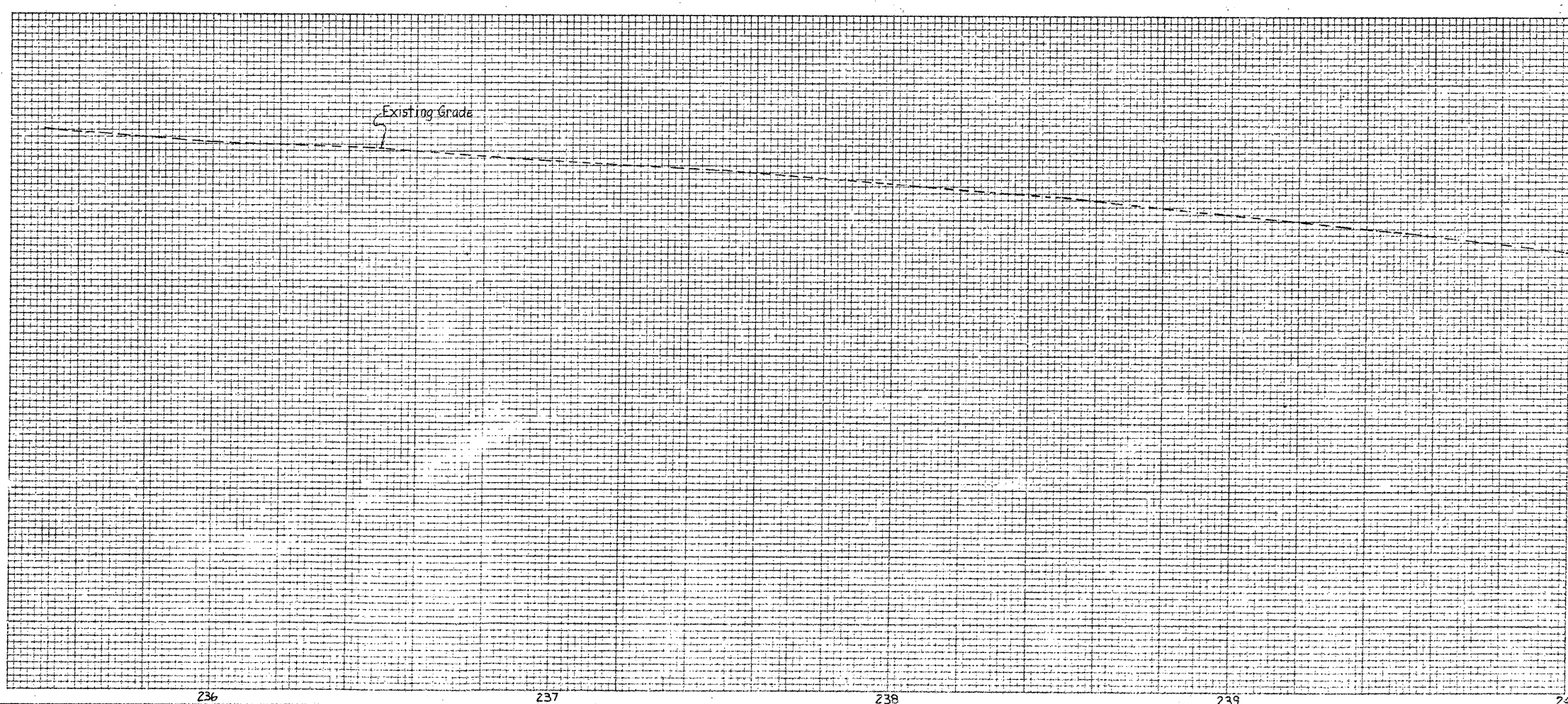
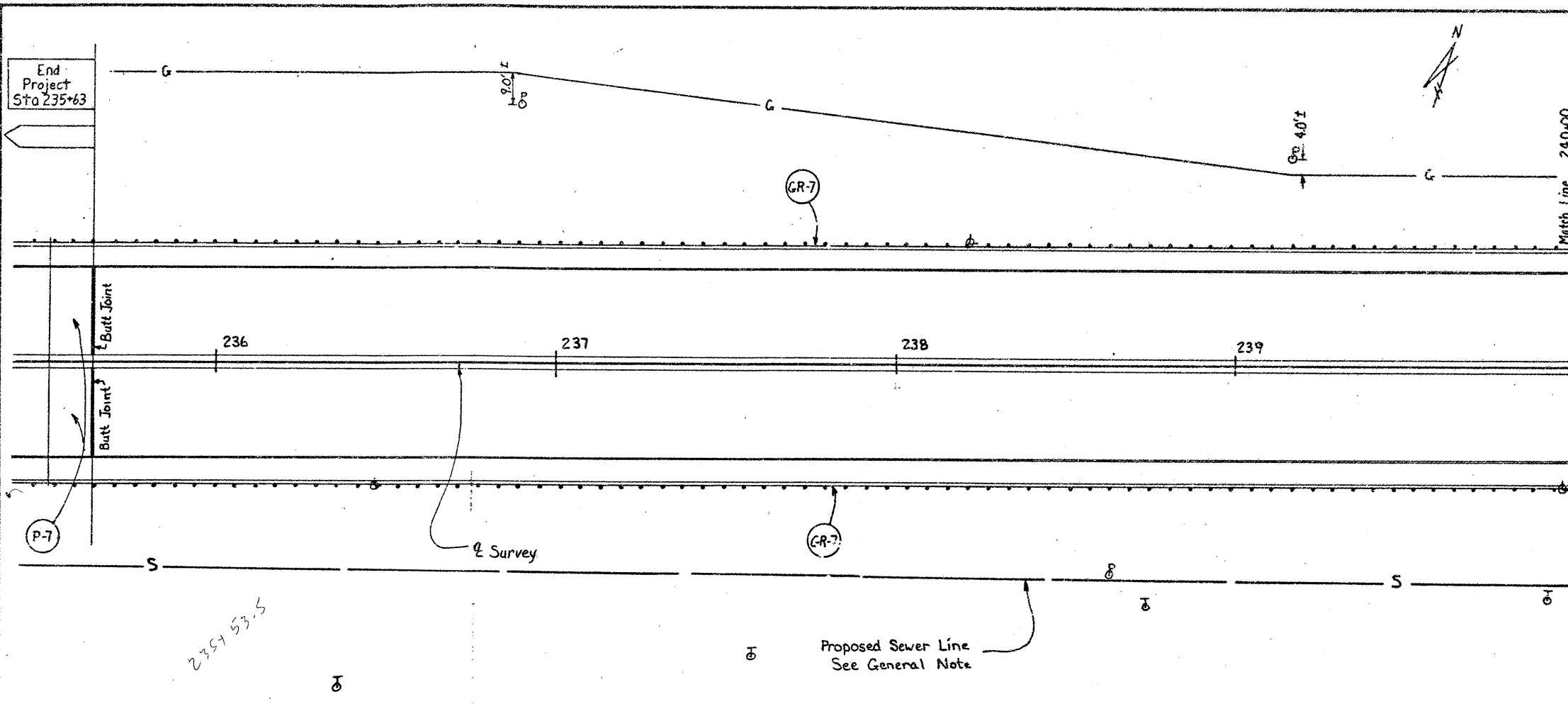


Item No.	Description	Unit	West	East	Total	Remarks
5	Bridge Painting (100% State Funded)	Lump Sum				
Special	Surface Preparation (100% State Funded)	Lump Sum				
Special	Bituminous Concrete Gutter No. 2	Lin. Ft.				
517	Railing (Single Deep Beam with Steel Tubular Backup), as per plan	Lin. Ft.	182	182	364	
849	Elastomeric Compression Seals Type III for Center Joints	Each			182	
845	Full Depth Repair	Cu. Yd.			2	
845	Latex Modified Concrete Overlay Variable Thickness	Cu. Yd.			23	
845	Latex Modified Concrete Overlay (1 1/4" Thickness)	Sq. Yd.			1032	
Special	Curb	Each			2	
407	Cover Aggregate @ 7 lbs./sq. yd.	Ton			5.4	
407	Tack Coat @ 0.1 gal./sq. yd.	Gal.			152	
404	Asphalt Concrete 1"	Cu. Yd.			42.2	
Special	Asphalt Pavement Planing	Sq. Yd.			1514	
Station	To					
Station	From					
Reference						

PROJECT: ERI-6-1741
 DATE: OHIO
 17/47
 Calc. by: K.W. CHK'd by: U.S.

Item No.	Description	Unit	West	East	Total	Remarks
Special	Pressure Relief Joint	Lin. Ft.			60	
606	Bridge Terminal Assembly Type G Modified, as per plan	Each			4	
606	Guardrail, Type 5	Lin. Ft.			540	
202	Guardrail Removed	Lin. Ft.			540	
Special	Railing	Each			2	
849	Elastomeric Compression Seals Type II Structural Steel Joints	Lin. Ft.			136	
513	Structural Steel Armor for Sealed Expansion Joints, As Per Plan	Lin. Ft.			136	
511	Class 5 Concrete Expansion Joint, as per plan	Cu. Yd.			4	
Station	To					
Station	From					
Reference						

End Project Sta 235+63



Calc. by *HW*
 Chkd by *W.S.*

FED. RD. DIVISION	STATE	PROJECT
5	OHIO	

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47

ERI-6-17.41

BR-59-83

Item No.	Description	Unit	West		East		Total
			West	East	West	East	
606	Guardrail Type 5	Lin. Ft.			450	450	900
202	Guardrail Removed	Lin. Ft.			450	450	900
407	Cover Aggregate @ 7lbs./sq. yd.	Ton			0.1	0.1	0.2
407	Tack Coat @ 0.1 gal./sq. yd.	Gal.			4	4	8
404	Asphalt Concrete 1"	Cu. Yd.			1.0	1.0	2.0
Special	Asphalt Pavement Planing	Sq. Yd.			37	37	74
Station		To	235+63	240+00			
Station		From	235+50	235+63			
Reference No.			P-7	GR-7			
							Total

PLAN & PROFILE STA 235+50 TO 240+00

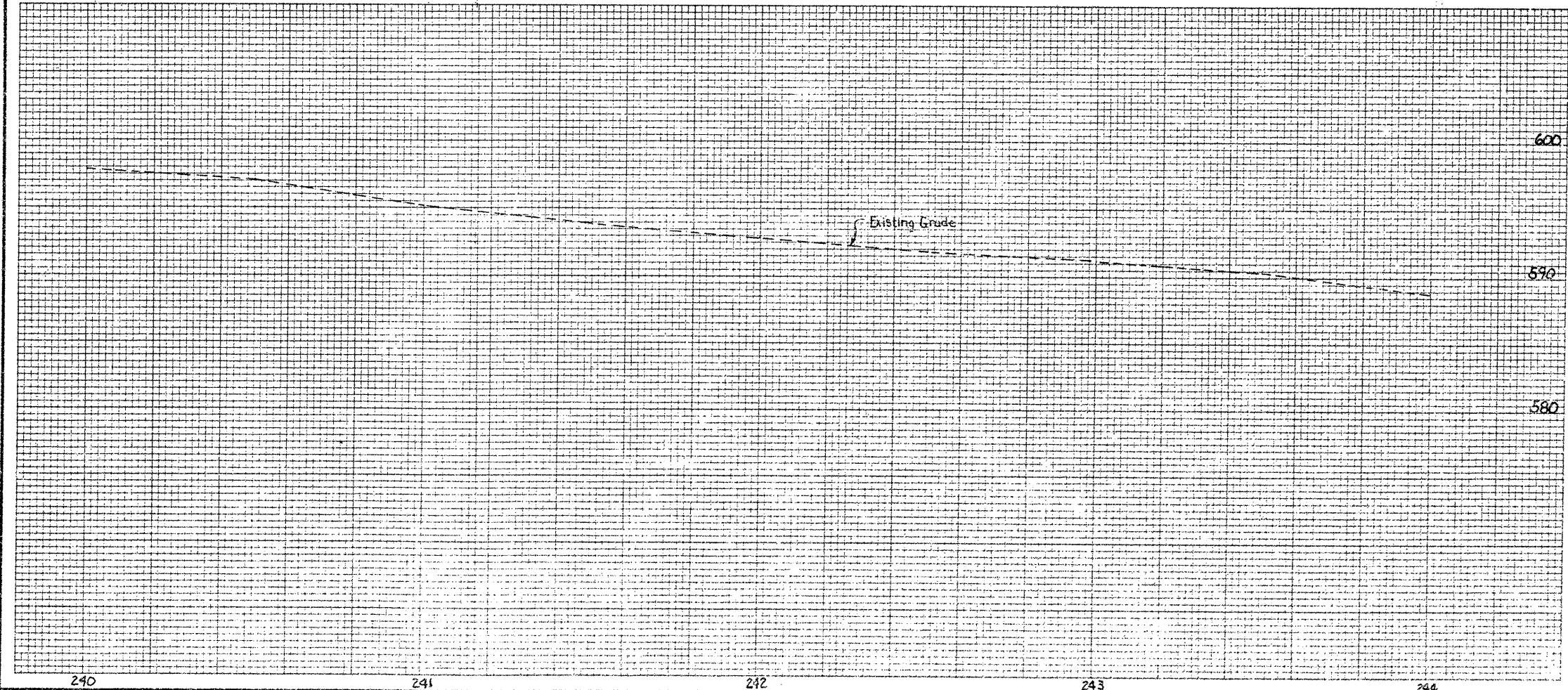
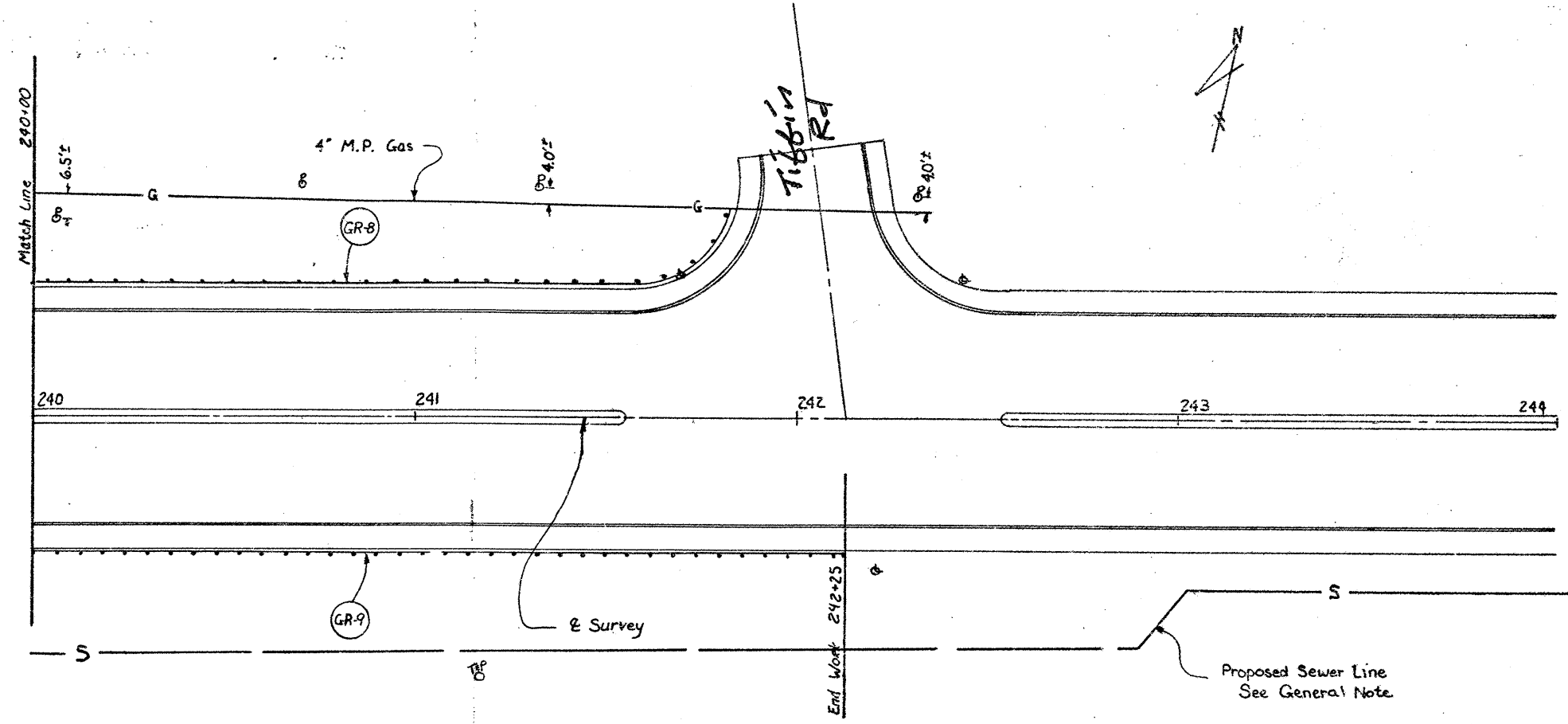
Calc. by Y.W.
 Chk'd by W.S.

FED. RD. DIVISION	STATE	PROJECT
5	OHIO	

19
47

ERI-6-17.41

PLANNING BR-59-83



Reference No.	Station	From	To	Lin. Ft.		Each		Totals
				West	East	West	East	
606	Guardrail Type S	240+00	242+25	165	0	1	0	390
606	Anchor Assembly, Type A	240+00	242+25	1	0	1	0	1
606	Anchor Assembly, Type T	240+00	242+25	0	0	0	1	1
202	Guardrail Removed	240+00	242+25	170	0	170	0	340

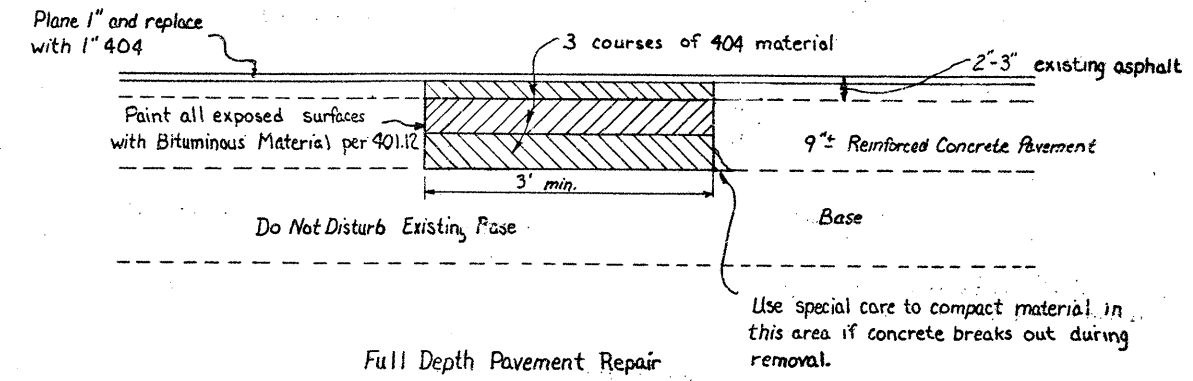
PLAN & PROFILE 240+00 TO 242+13

ERI-6-17.41

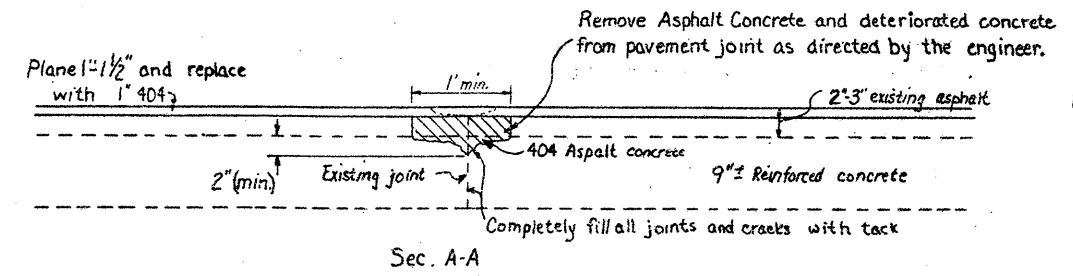
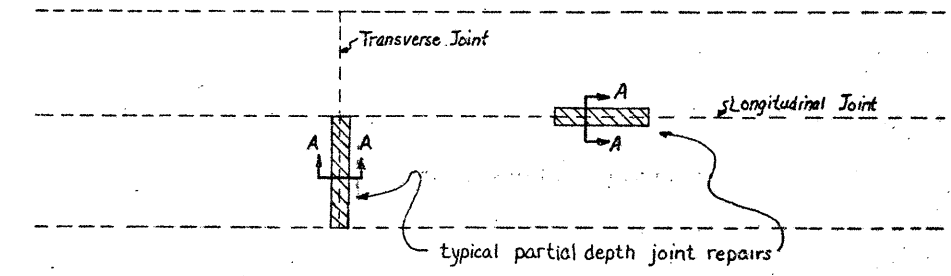
BR-91-83

Pavement Repair

Note: Full Depth Pavement Repair shall be used for distressed transverse contraction joints or other areas in the existing reinforced concrete pavement. The location and sizes of these repairs shall be as directed by the engineers.

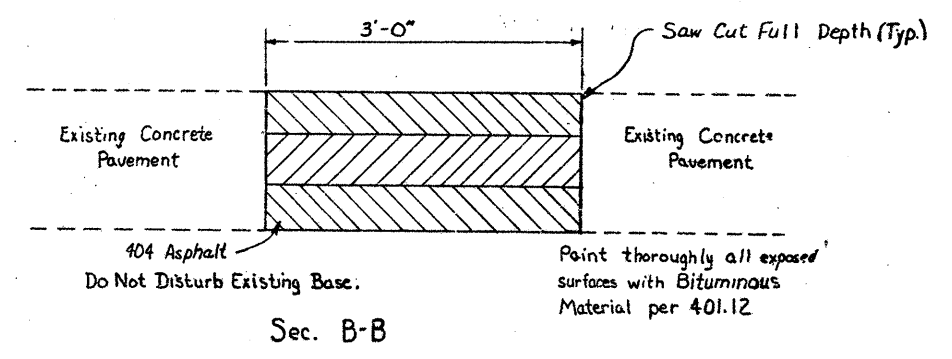
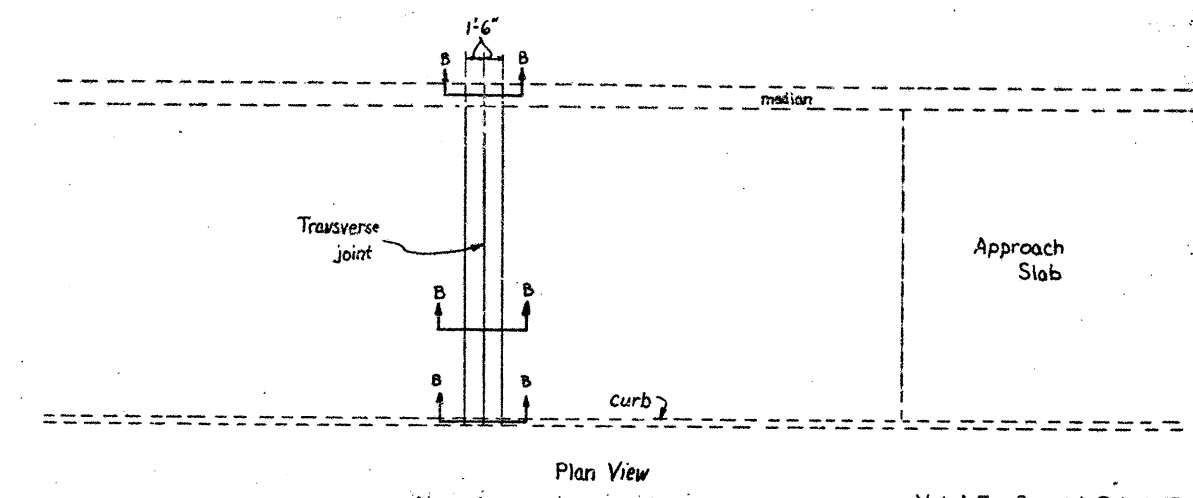


Note: If curb and gutter are removed they shall be replaced with asphalt.



Note: The engineer may direct that the asphalt is to be saw cut. The cost shall be included in this item.

Relief Joint



Note: For Special Relief Joint quantities see sheet no. 13.15.17.

Estimated Quantities

Item	Quantity	Unit	Description
Special	1008	Lin. Ft.	Pavement Sawing
Special	215	Sq. Yd.*	Full depth ridged pavement removal and flexible replacement
Special	16	Cu. Yd.	Partial Depth Pavement Joint Repair

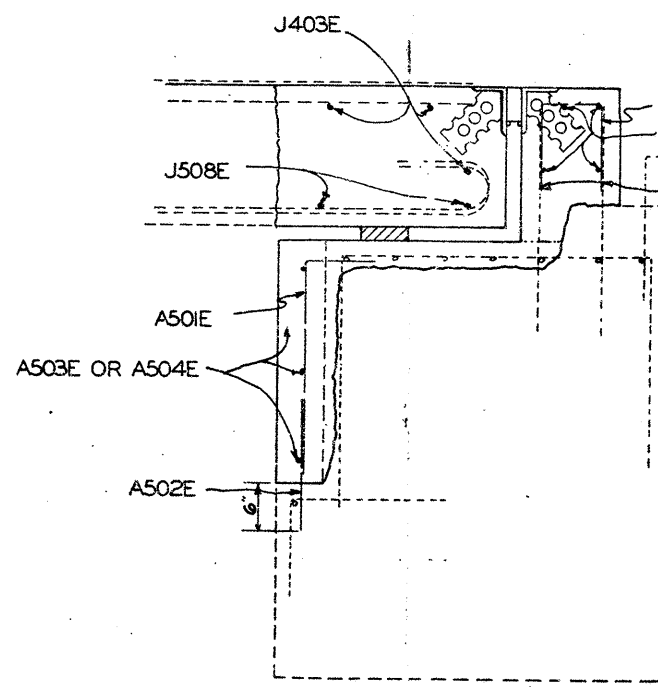
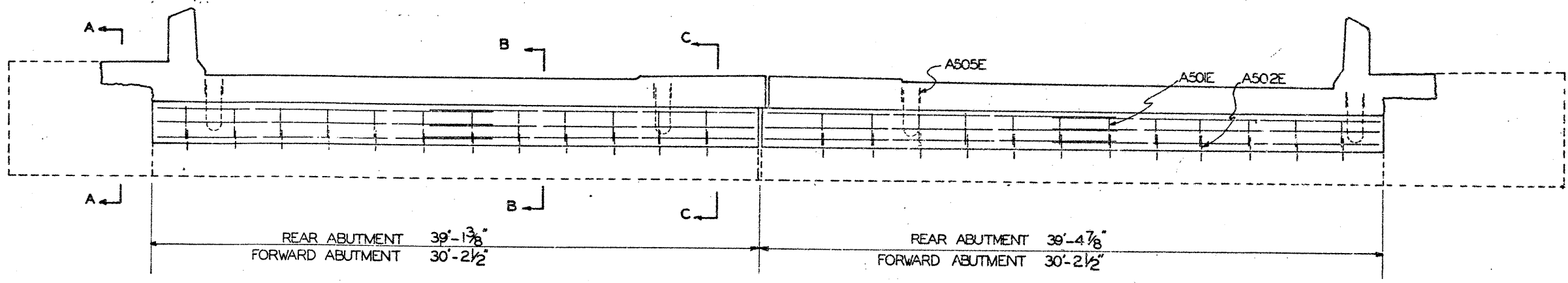
*Area of Concrete Removal

Note: Full and Partial Depth Pavement Repair shall be done before the existing pavement is planed.

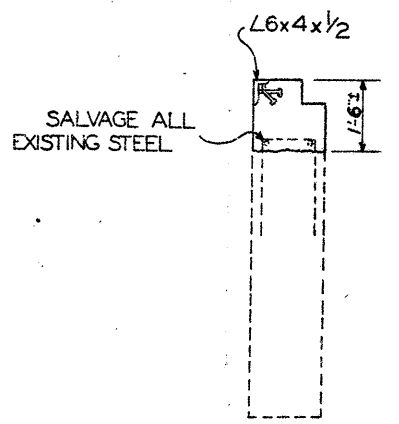
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

PAVEMENT REPAIR AND RELIEF JOINT DETAILS

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Y/W	DES	DES	W.S.	[Signature]	4-25-83	



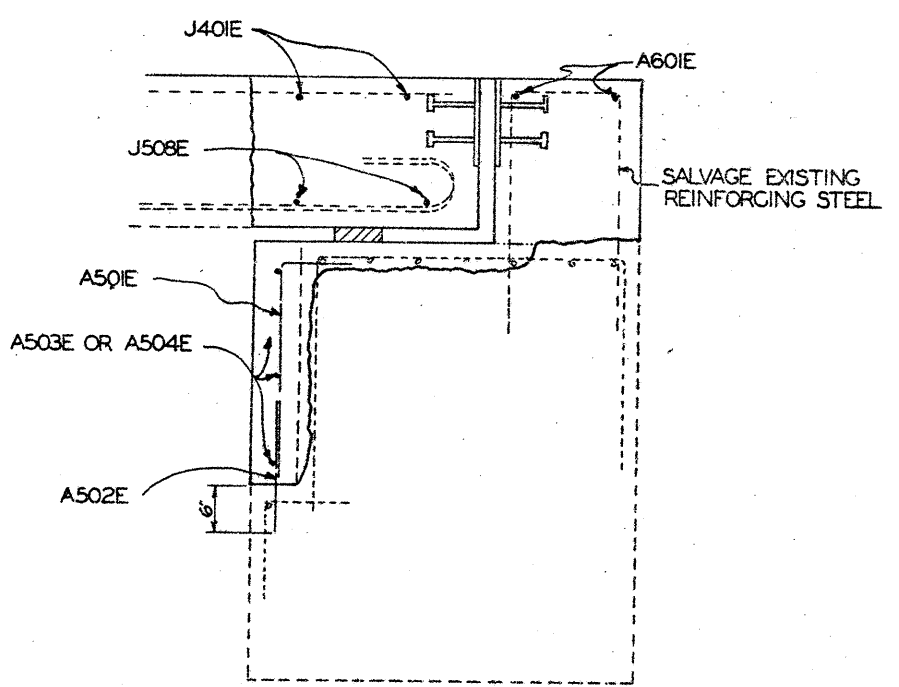
SECTION B-B



SECTION A-A

NOTE: FOR EXPANSION JOINT DETAILS, SEE SHEETS 25 & 26.

NOTE: ALL EXISTING LONGITUDINAL DECK REINFORCING STEEL MUST BE SALVAGED.



SECTION C-C

MARK	REAR ABUT.		FWD. ABUT.		TOTAL	LENGTH	SHAPE	WEIGHT
	WB	EB	WB	EB				
A501E	36	36	30	30	132	2'-8"	B	367
A502E	36	36	30	30	132	1'-6"	S	207
A503E	6	6			12	21'-0"	S	263
A504E			6	6	12	16'-0"	S	200
A505E	28	28	26	26	108	2'-5"	B	272
A506E	8	8			16	14'-0"	S	234
A507E			8	8	16	13'-0"	S	217
A601E	2	2			4	7'-6"	S	45
TOTAL LB.								1805

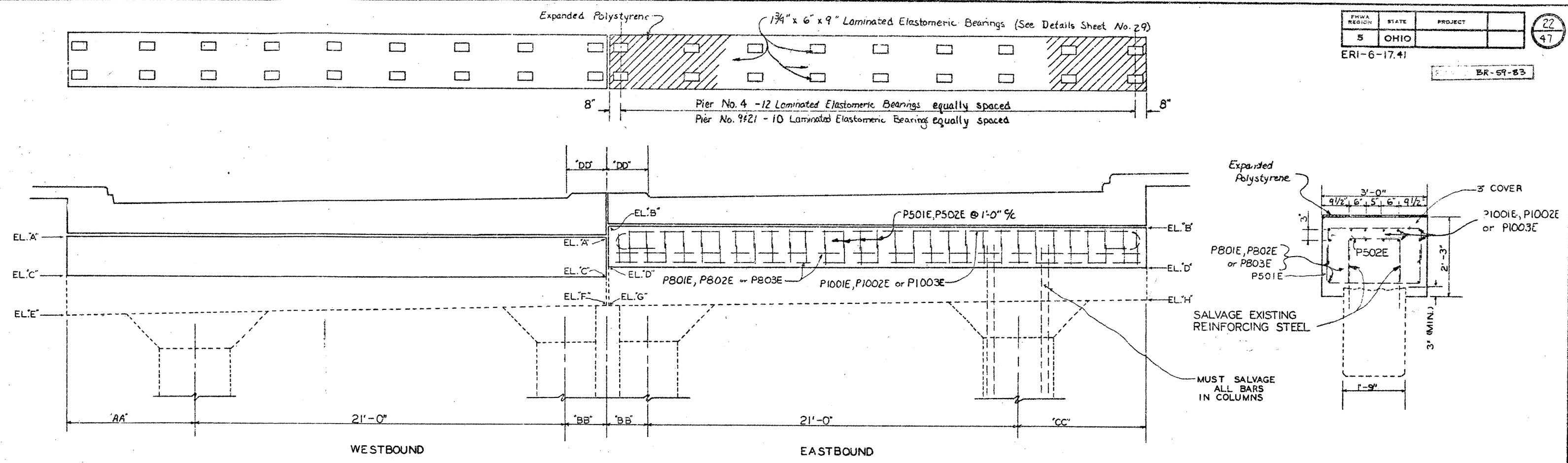
ITEM	QUANTITY				TOTAL QUANTITY	UNIT	DESCRIPTION
	REAR ABUT.	FWD. ABUT.	WB	EB			
510	12	12	10	10	44	EACH	DOWEL HOLES
511						CU.YD.	CLASS S CONCRETE, ABUTMENTS, AS PER PLAN
516	13	13	10	10	46	EACH	6"x9"x1 3/4" LAMINATED ELASTOMERIC BEARING PADS
516	43	43	34	34	154	LIN. FT.	STRUCTURAL STEEL ARMOR FOR SEALED EXPANSION JOINTS, AS PER PLAN
849	43	43	34	34	154	LIN. FT.	ELASTOMERIC COMPRESSION SEAL, (TYPE 1), FOR STRUCTURAL STEEL JOINTS

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

ABUTMENTS DETAILS

ERI-6-1792

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JW	BES	BES	WS	JW	4-25-88	



Item 824 Epoxy Coated Reinforcing Steel

MARK	NO. OF BARS						TOTAL	LENGTH	SHAPE	WEIGHT
	PIER 4		PIER 9		PIER 21					
	WEST	EAST	WEST	EAST	WEST	EAST				
P1001E	12	12					24	36'-10"	B	3804
P1002E			12	12			24	32'-10"	B	3391
P1003E					12	12	24	32'-7"	B	3365
P801E	4	4					8	34'-0"	S	726
P802E			4	4			8	30'-0"	S	641
P803E					4	4	8	29'-9"	S	635
P501E	70	70	62	62	62	62	388	4'-5"	B	1789
P502E	35	35	31	31	31	31	194	3'-8"	B	743
TOTAL										15094 LB

TABLE OF DIMENSIONS

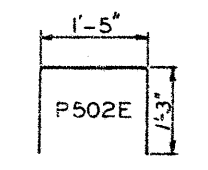
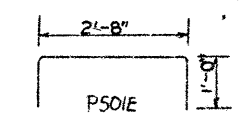
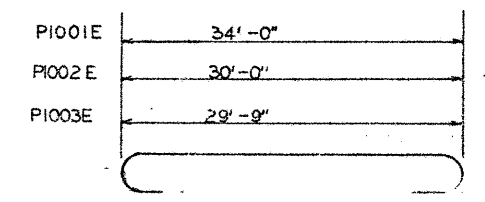
PIER	'AA'	'BB'	'CC'	'DD'
4	7'-10 3/8"	6'-0"	7'-6 1/8"	5'-11 1/8"
9	7'-3 1/8"	2'-3"	7'-3 5/8"	2'-3 1/2"
21	7'-2 1/2"	2'-0"	7'-2 1/2"	2'-0"

TABLE OF ELEVATIONS

PIER	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'
4	594.48	595.05	593.48	594.05	591.07	591.72	591.73	592.34
9	595.55	596.06	594.55	595.06	592.17	592.76	592.77	593.16
21	598.74	598.83	597.74	597.83	595.47	595.94	595.94	595.47

ESTIMATED QUANTITIES

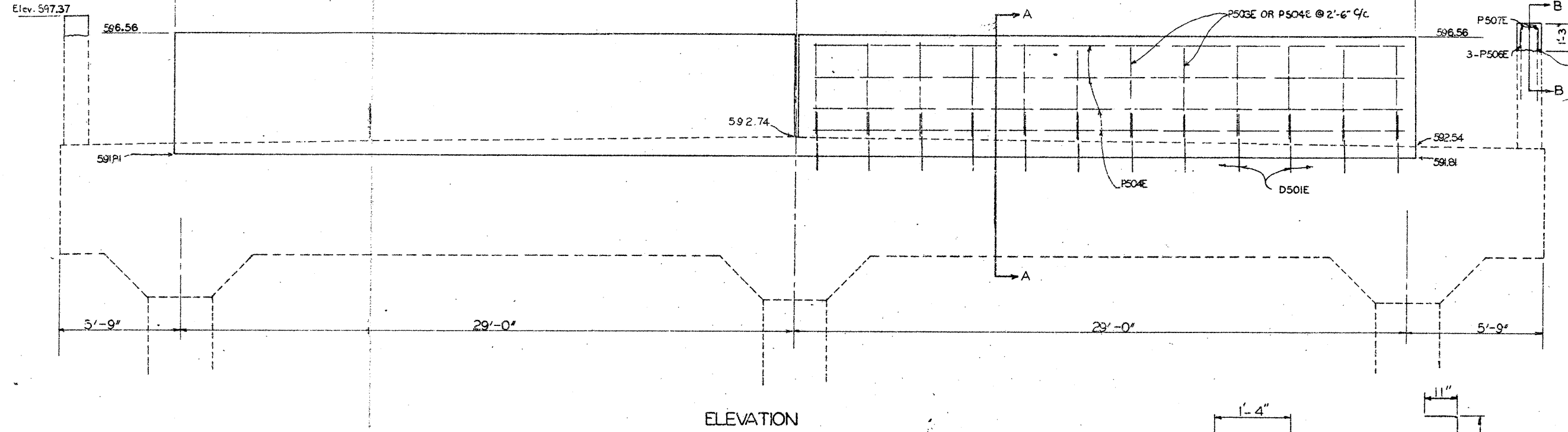
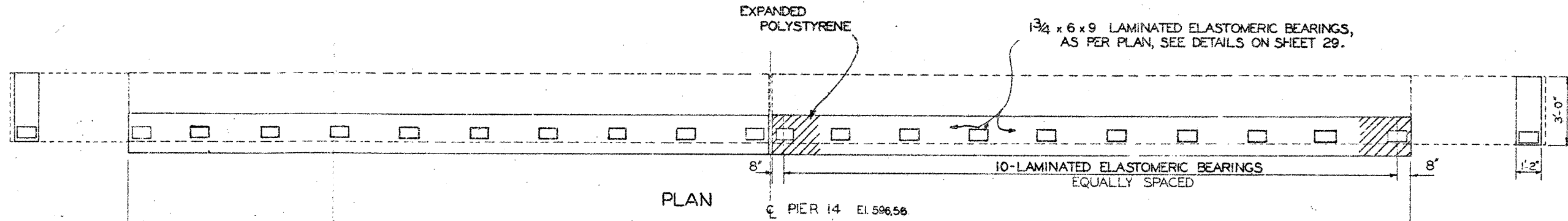
ITEM	QUANTITY						TOTAL	UNIT	DESCRIPTION
	PIER 4		PIER 9		PIER 21				
	WEST	EAST	WEST	EAST	WEST	EAST			
511	8.5	8.5	7.5	7.5	7.5	7.5	47	CU. YD.	CLASS 3 CONCRETE, PIER CAP AS PER PLAN
516	24	24	20	20	20	20	128	EACH	1 3/4" x 6" x 9" Laminated Elastomeric Bearings, As Per Plan



STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

PIER CAP DETAILS
PIER NOS 4, 9 & 21
ERI-6-1792

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KW	DES	DES	W.S.	Floyd G	4-15-83	



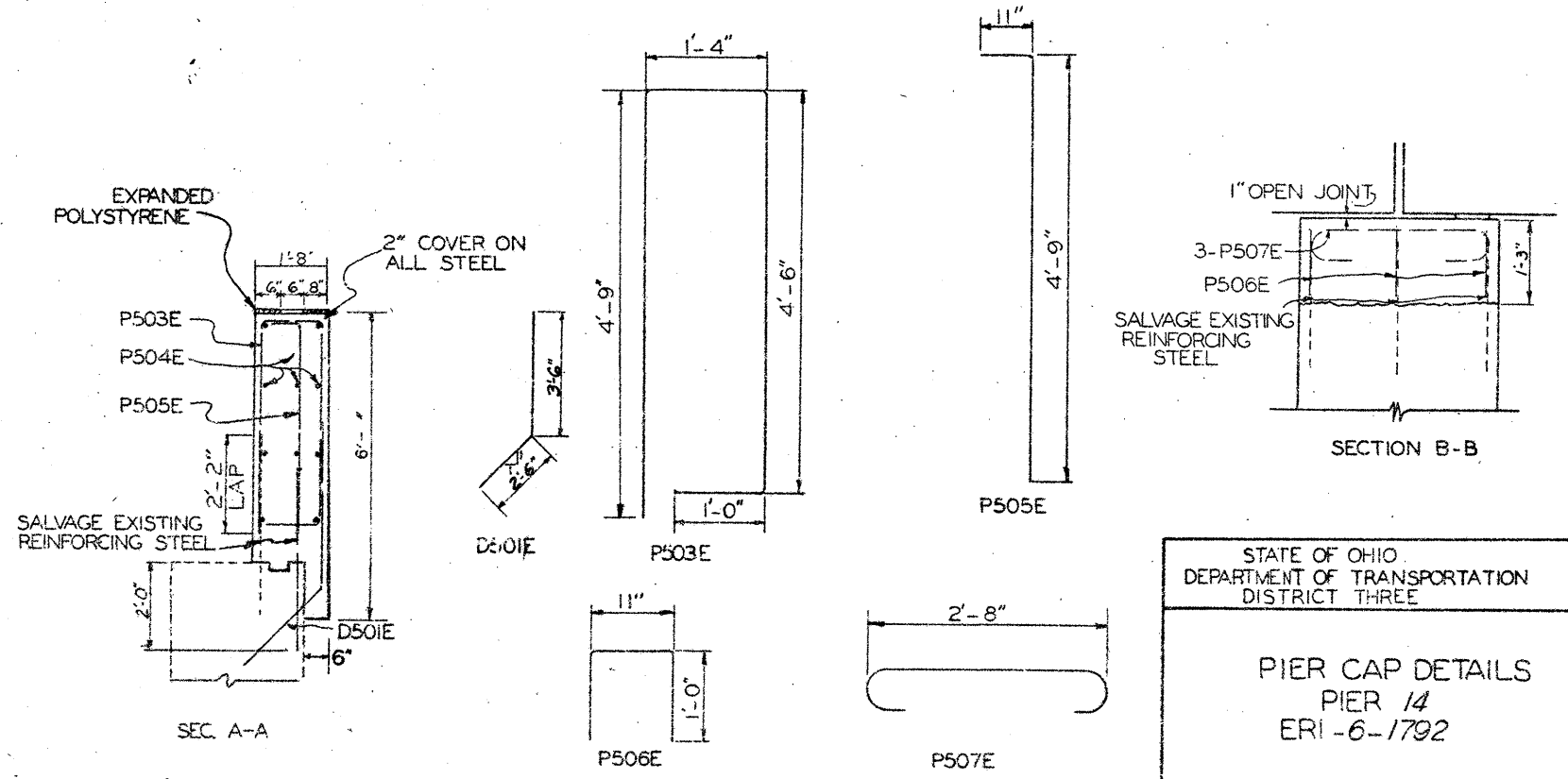
ESTIMATED QUANTITIES

ITEM	QUANTITY	TOTAL	UNIT	DESCRIPTION
511	10	10	20	CU. YD. CLASS 5 CONCRETE PIER CAP AS PER PLAN
516	11	11	22	EACH 1 3/4 x 6 x 9 LAMINATED ELASTOMERIC BEARINGS AS PER PLAN
510	12	12	24	EACH DOWEL HOLES

Item 824 Epoxy Coated Reinforcing Steel

MARK	NO.	LENGTH	SHAPE	WEIGHT
P503E	24	11'-3"	B	282
P504E	20	28'-9"	S	600
P505E	24	5'-7"	B	140
P506E	6	2'-8"	B	17
P507E	6	3'-10"	B	24
D501E	24	5'-11"	B	148
TOTAL				1211 LB

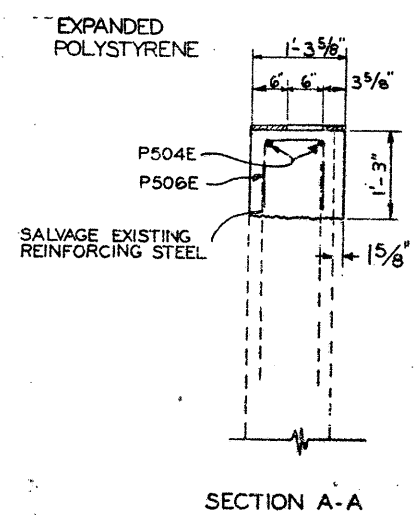
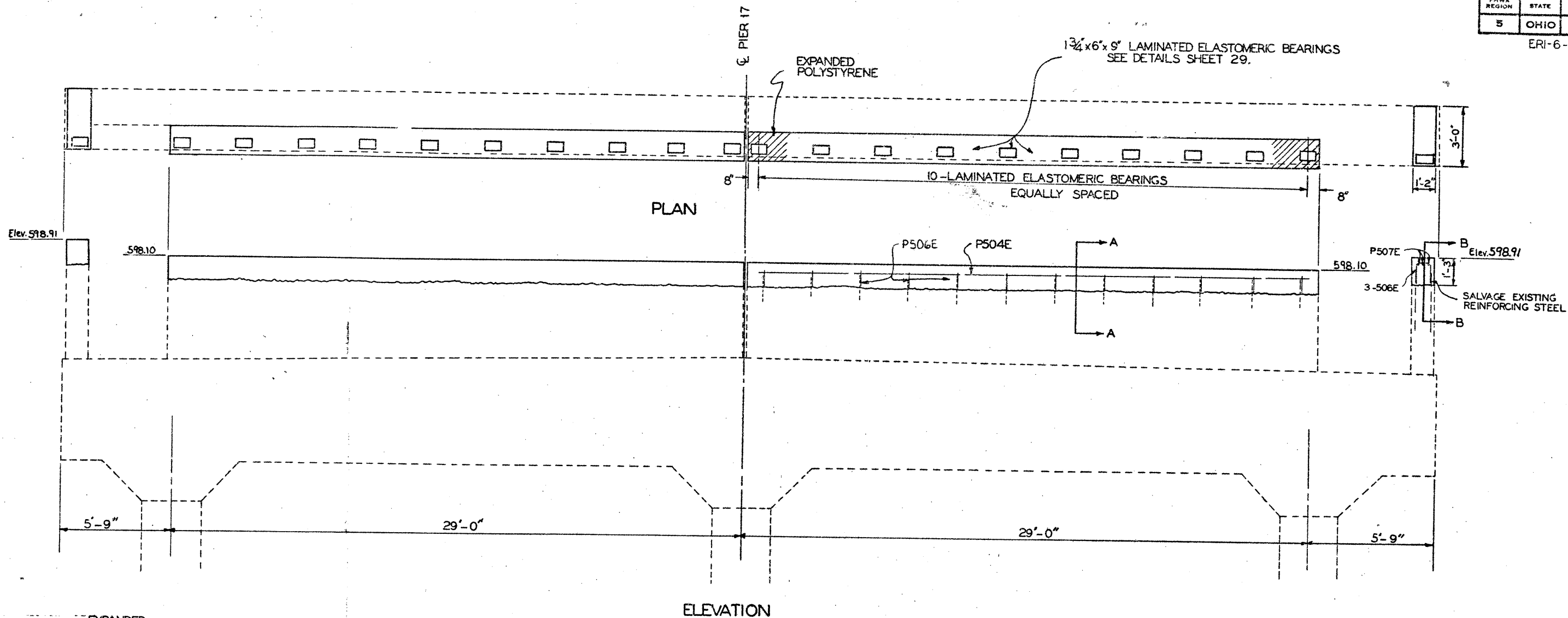
NOTE: P504E, P506E AND P507E ARE ALSO USED ON PIER NO. 17. SEE SHEET NO. 24.



STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

PIER CAP DETAILS
PIER 14
ERI-6-1792

DESIGNED	DRAWN	TRACED	CHECKED	RE-FILED	DATE REVISED
KW	DES	DES	WS	JH	4-25-83



ITEM 824
EPOXY COATED REINFORCING STEEL

MARK	NO	LENGTH	SHAPE	WEIGHT
P504E	4	28'-9"	S	120
P506E	30	2'-8"	B	84
P507E	6	3'-10"	B	24
TOTAL				228LB.

ESTIMATED QUANTITIES

ITEM	QUANTITY		TOTAL	UNIT	DESCRIPTION
	WEST	EAST			
511	2	2	4	CU YD	CLASS 5 CONCRETE, PIER CAP, AS PER PLAN
516	11	11	22	EACH	1 3/4 x 6 x 9" LAMINATED ELASTOMERIC BEARINGS, AS PER PLAN

NOTE: FOR SECTION B-B AND REINFORCING STEEL SHAPES SEE SHEET NO. 23.

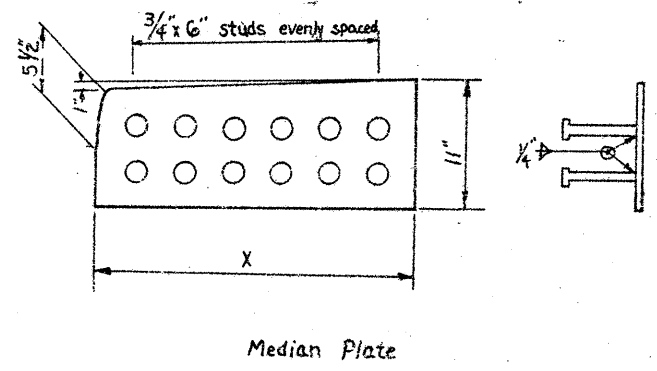
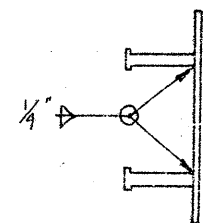
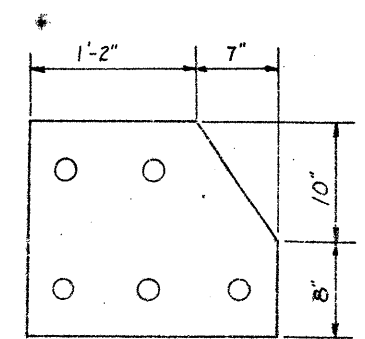
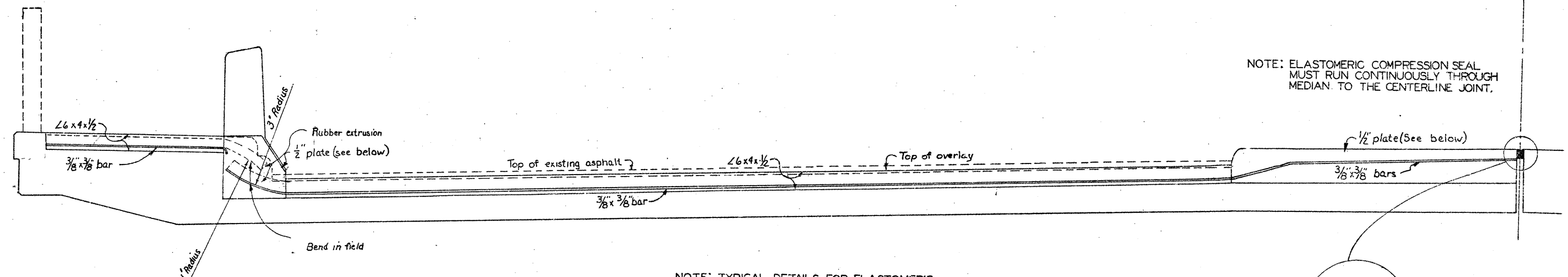
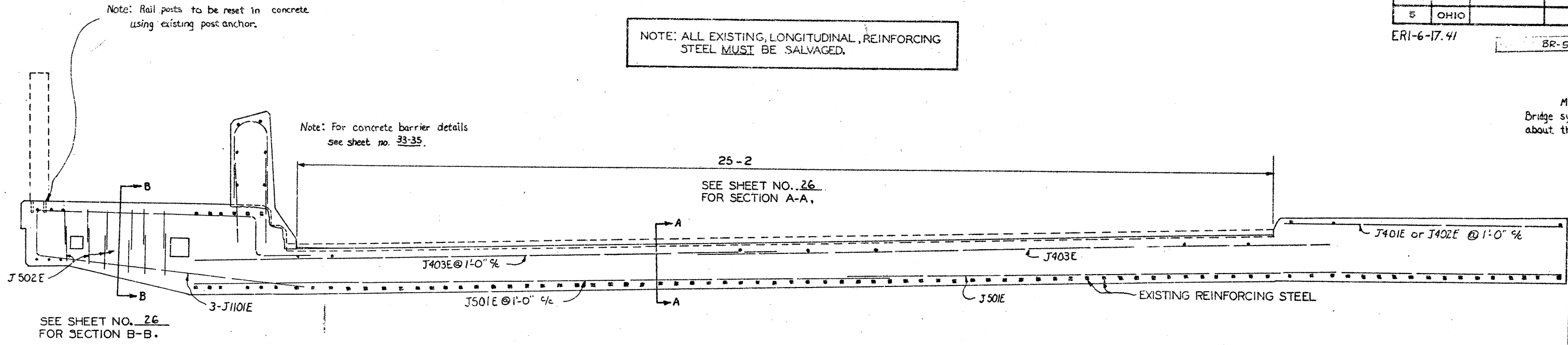
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

PIER CAP DETAILS
PIER 17
ERI-6-1792

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KW	DES	DES	W.S.	Flap Cop	4-25-85	

NOTE: ALL EXISTING, LONGITUDINAL, REINFORCING STEEL MUST BE SALVAGED.

2
Median.
Bridge symmetrical about this line.



JOINT	*1	*4	*9	*21	*24
X	8'-5 3/4"	5'-11 1/4"	2'-3 1/2"	2'-0"	2'-0"
# OF STUDS	14	12	6	6	6

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

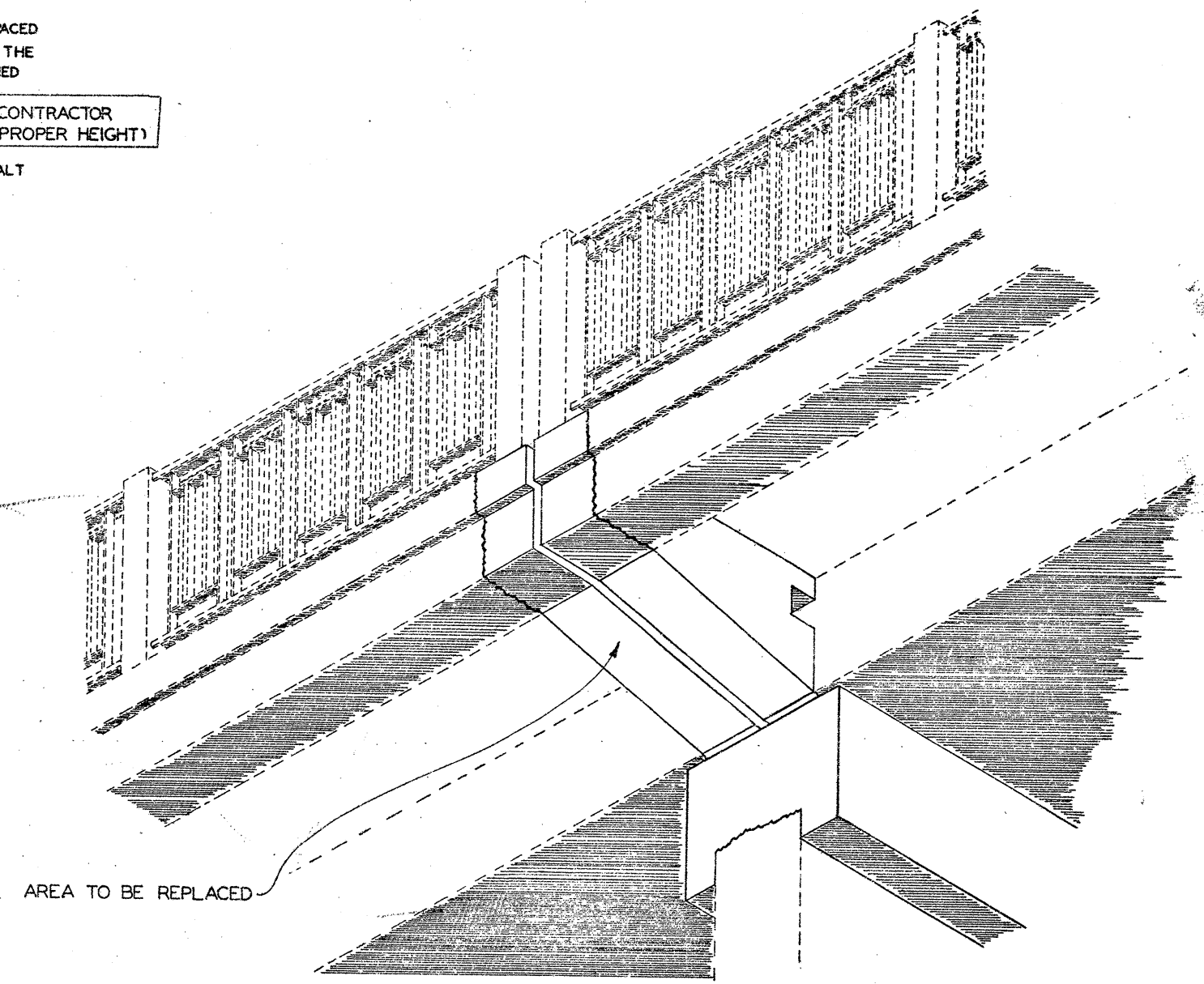
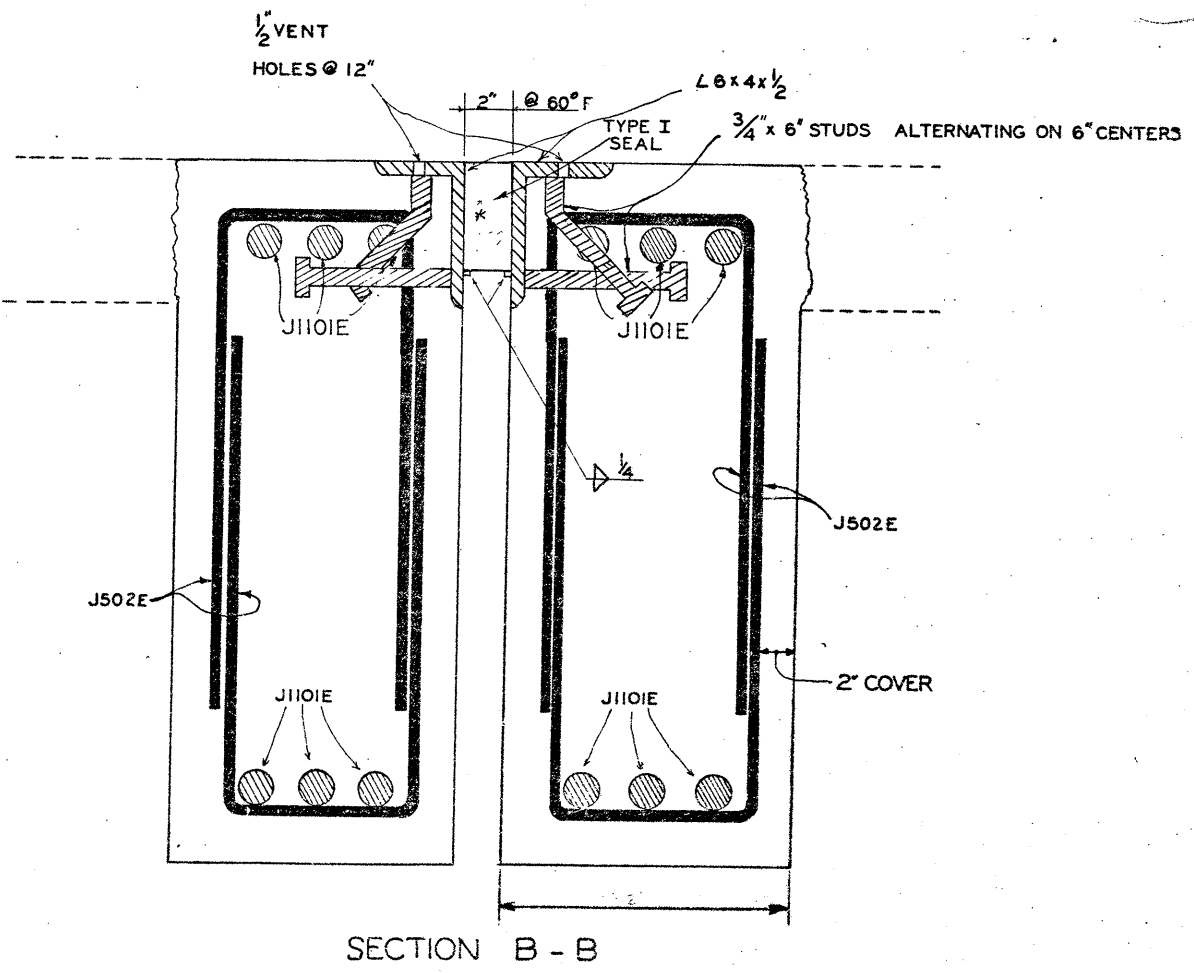
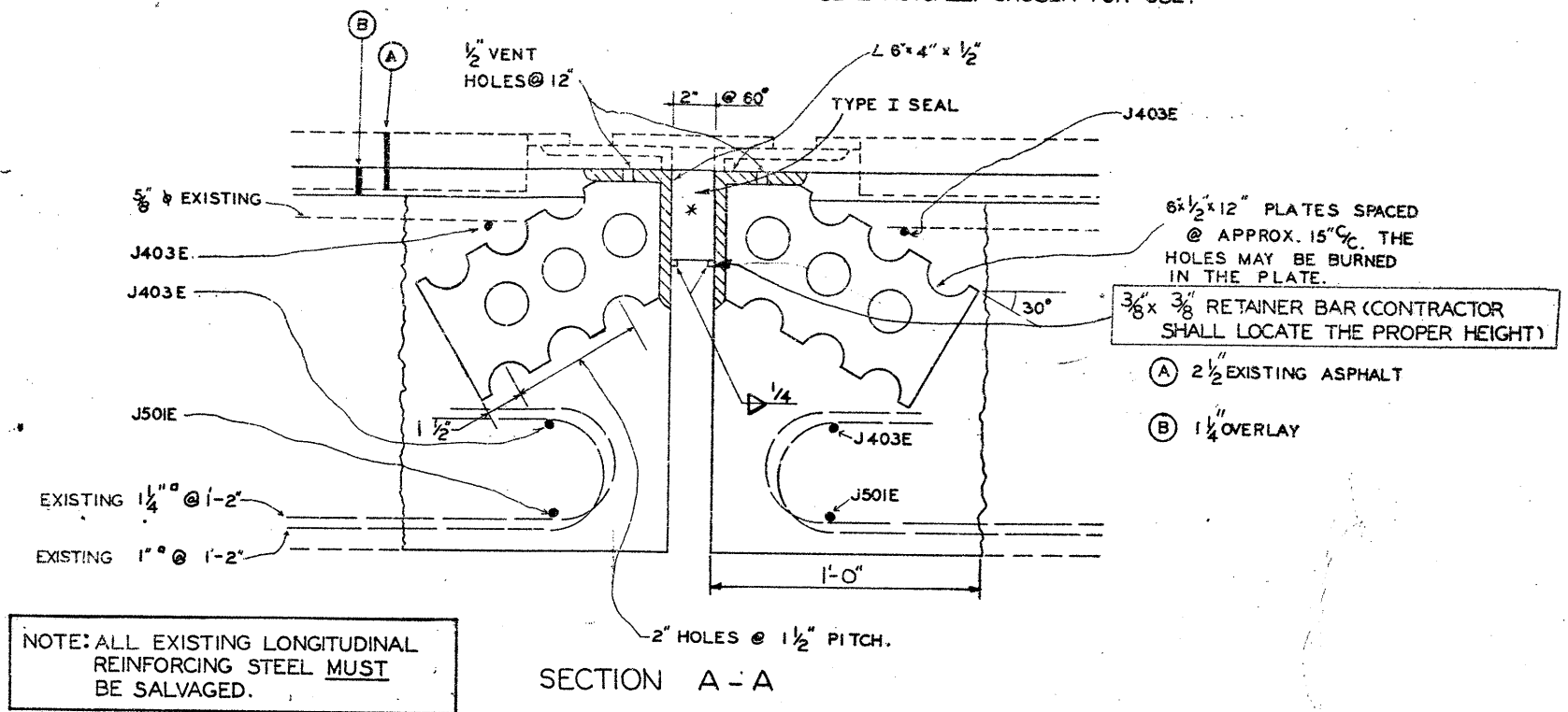
EXPANSION JOINTS

PIERS 4, 9 & 21

ERI - 6 - 1792

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KW	DES	DES	W.S.	W.S.	4-25-85	

* SEE MANUFACTURER'S CATALOGUE FOR SEAL ACTUALLY CHOSEN FOR USE.



STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

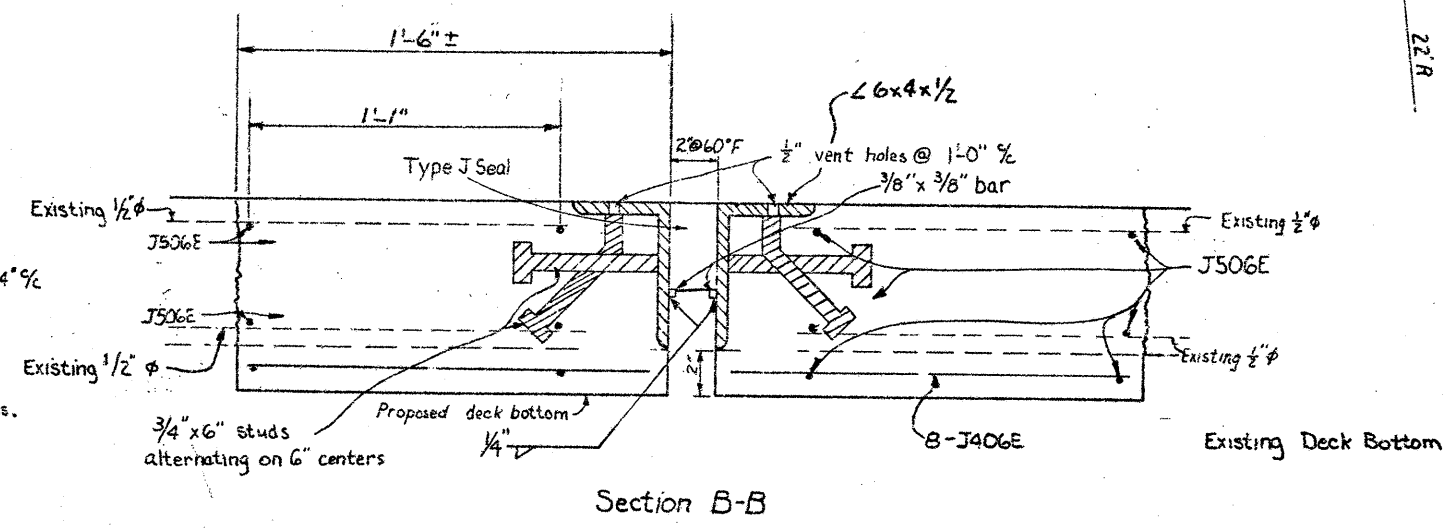
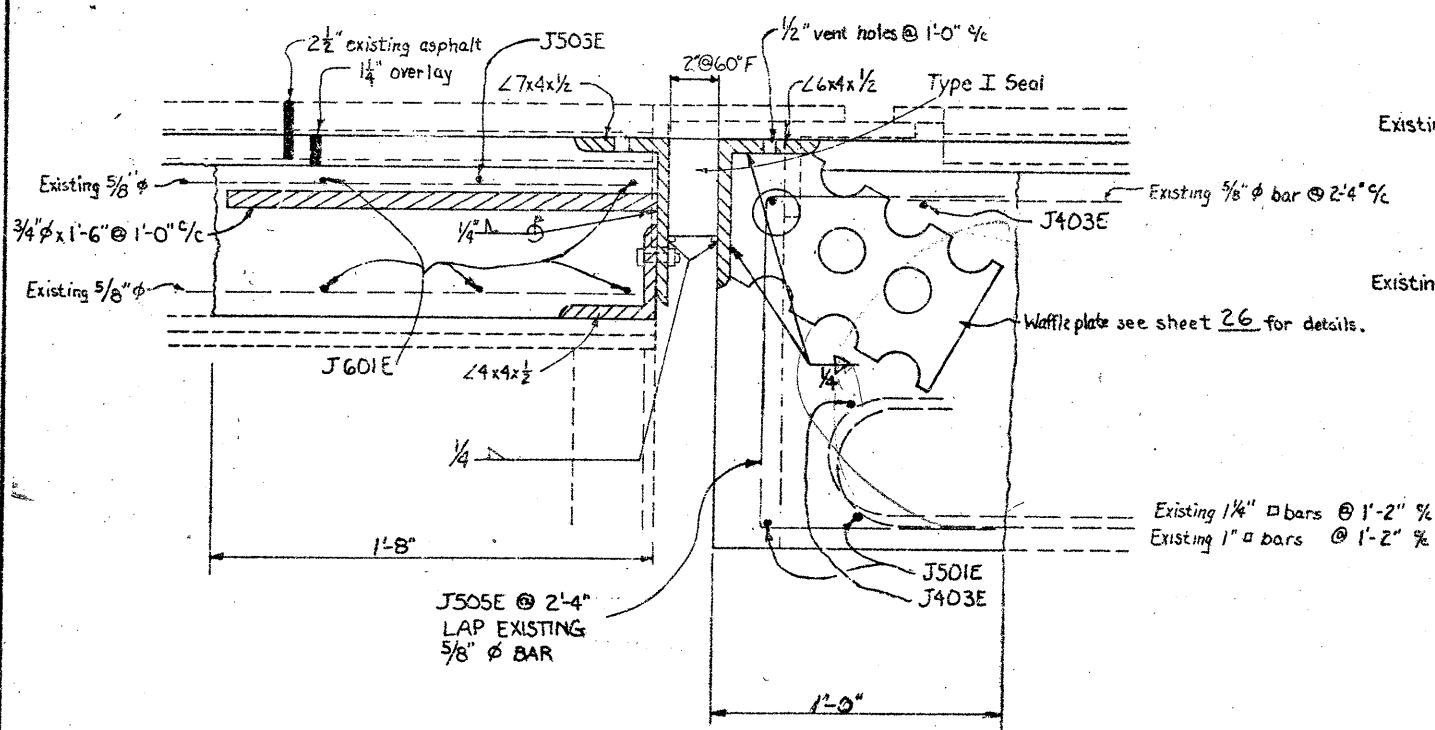
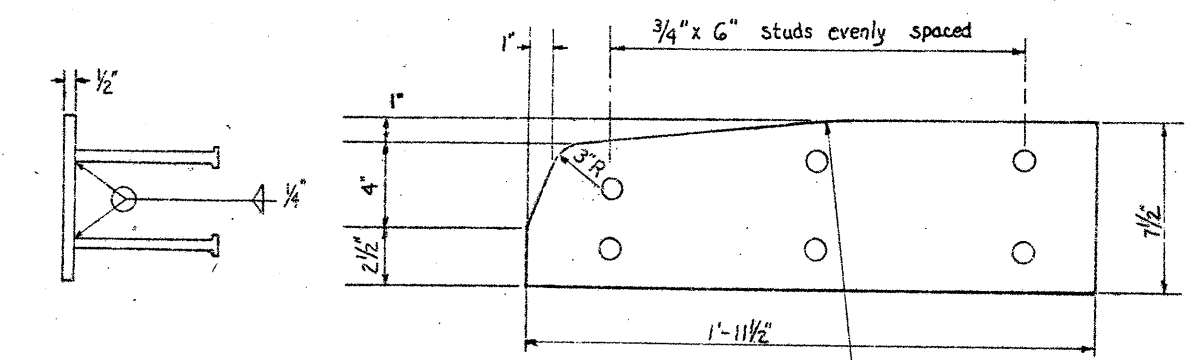
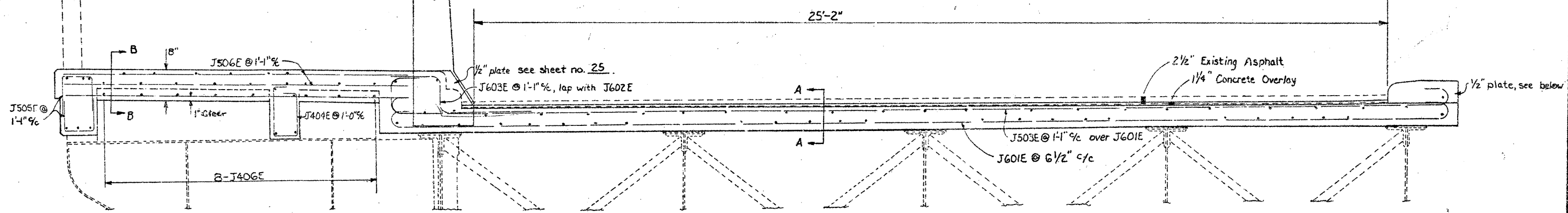
EXPANSION JOINT DETAILS
PIER 4, 9 & 21
ERI-6-1792

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KW	DES	DES	WLS	F. Long	4-25-83	

ERI-6-17.41

BR-59-83

Note: For concrete barrier details, see sheet no. 3335.



NOTE: ALL EXISTING LONGITUDINAL REINFORCING STEEL MUST BE SALVAGED.

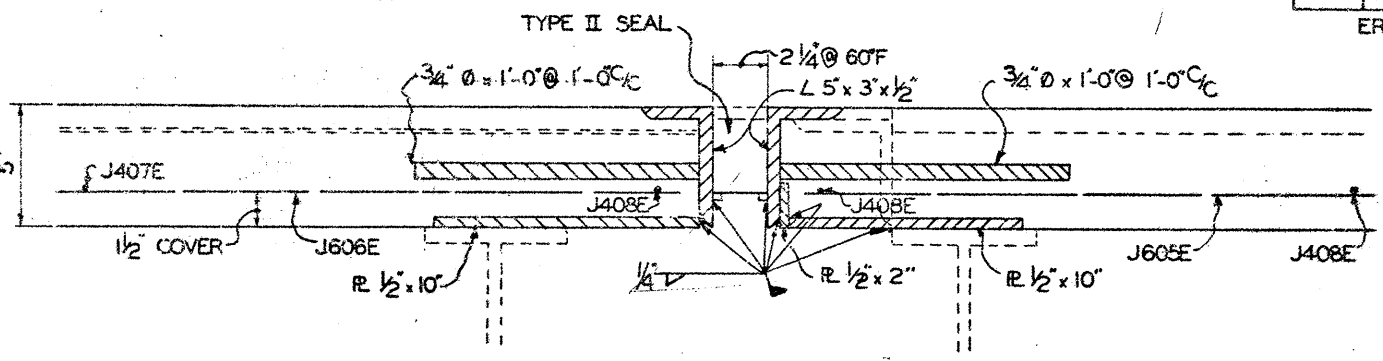
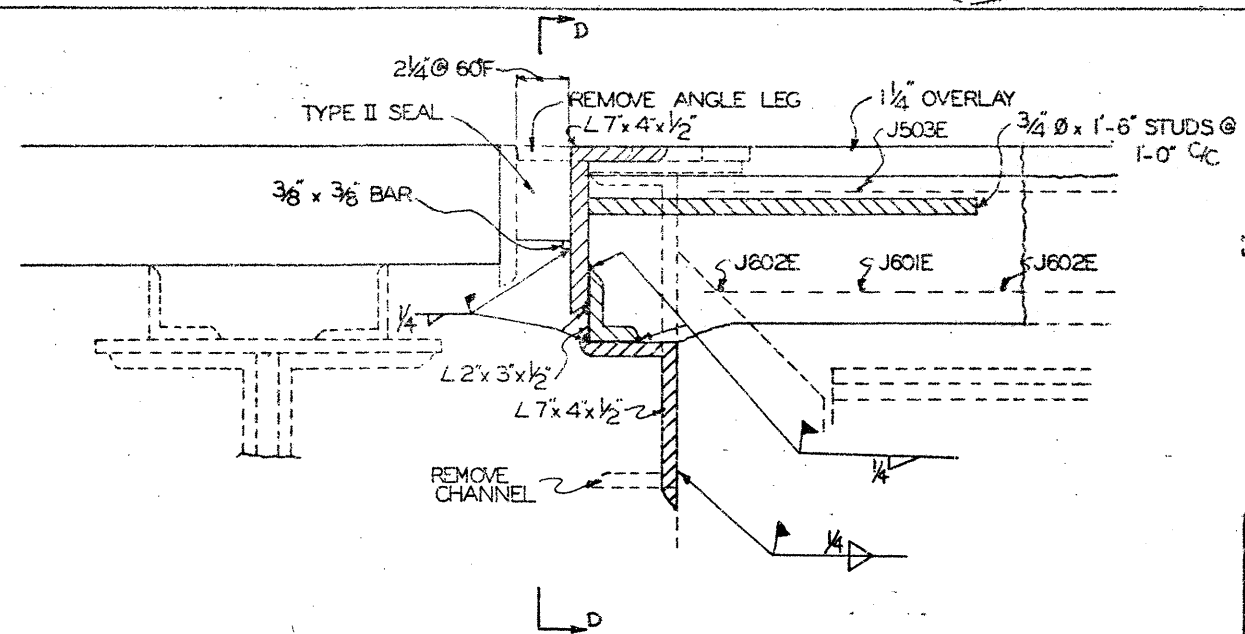
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

EXPANSION JOINT DETAILS

PIERS 14 & 17

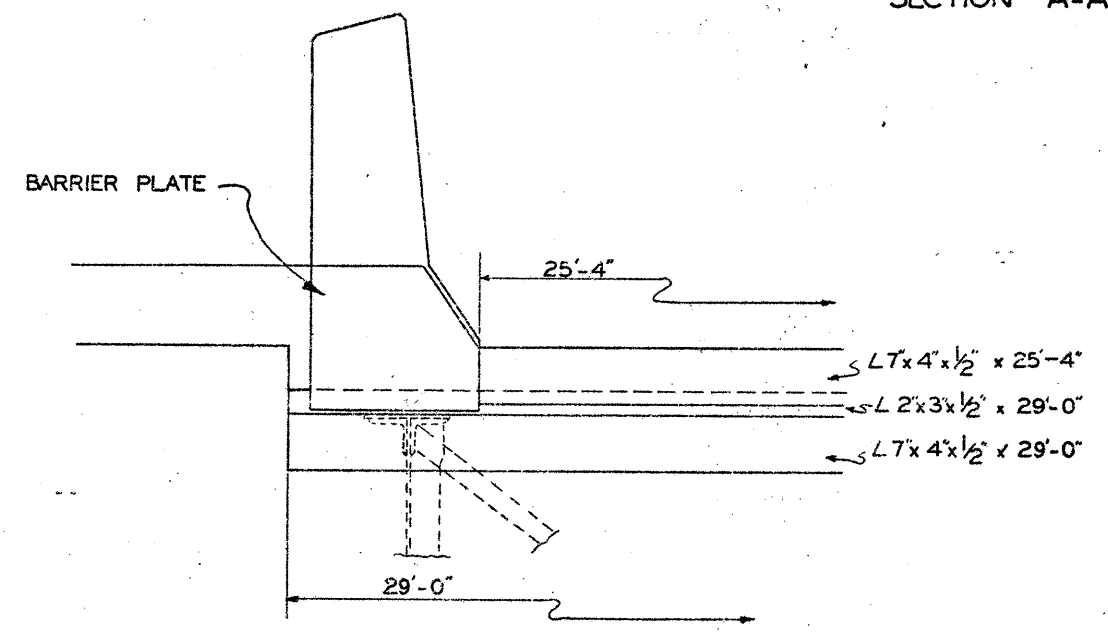
ERI-6-1792

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.S.	DES	DES	W.S.	Hand by	4-25-80	



SECTION A-A

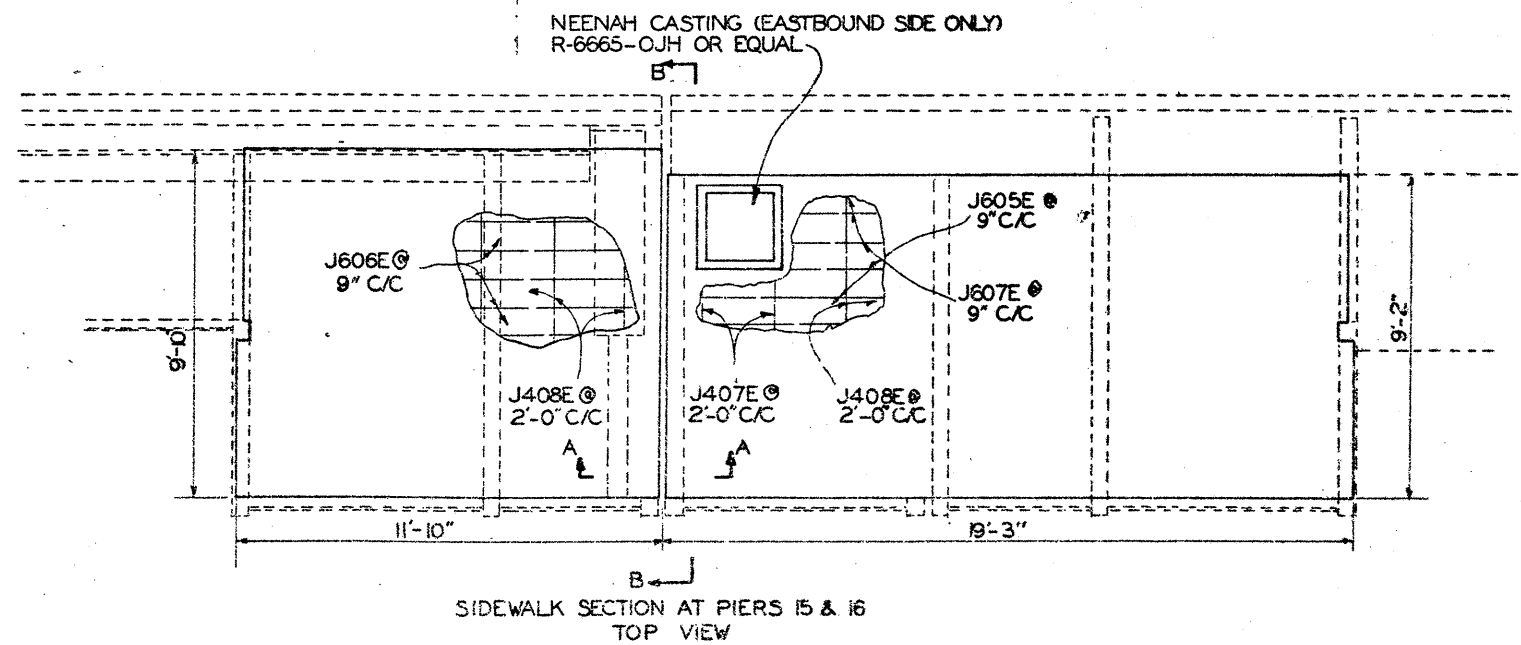
ROADWAY SECTION
EXPANSION JOINT AT PIERS 15 & 16



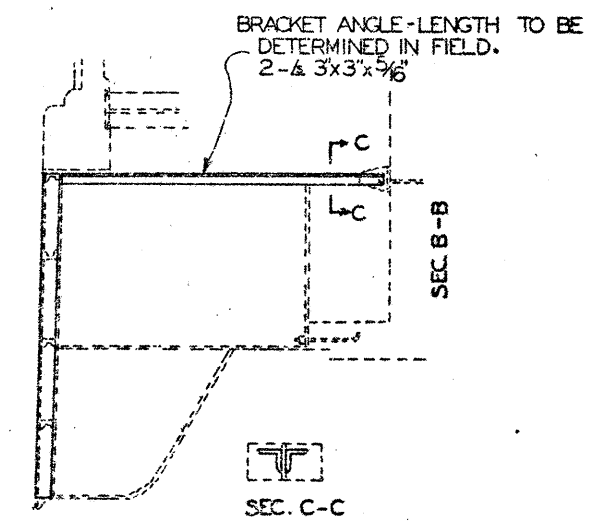
SECTION D-D

ESTIMATED QUANTITIES

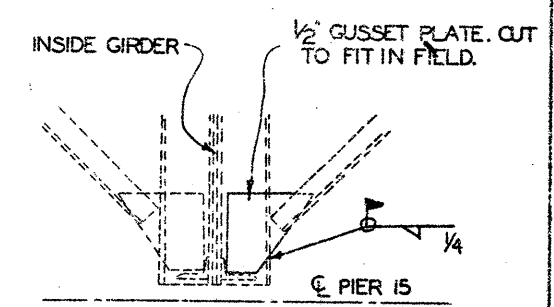
ITEM	QUANTITY	UNIT	DESCRIPTION
513	LUMP SUM	LUMP SUM	STRUCTURAL STEEL BRACKET ANGLES, AS PER PLAN
513	LUMP SUM	LUMP SUM	STRUCTURAL STEEL, SWAY BRACING



SIDEWALK SECTION AT PIERS 15 & 16
TOP VIEW



BRACKET ANGLE REPLACEMENT
SIDE VIEW



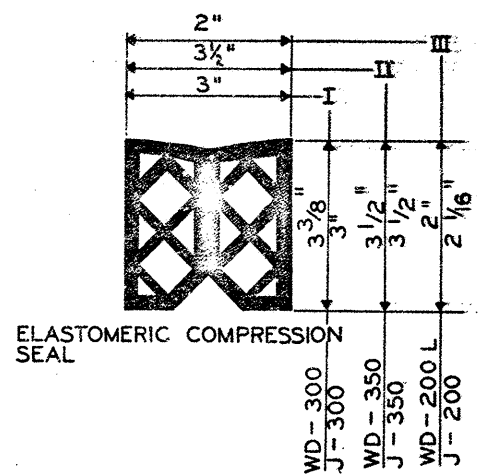
SWAY BRACING CONNECTION

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

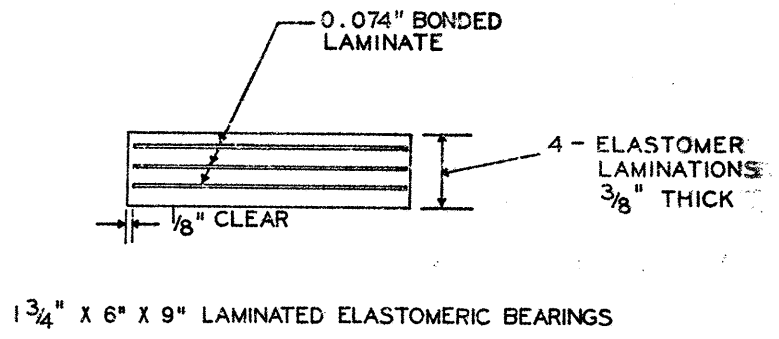
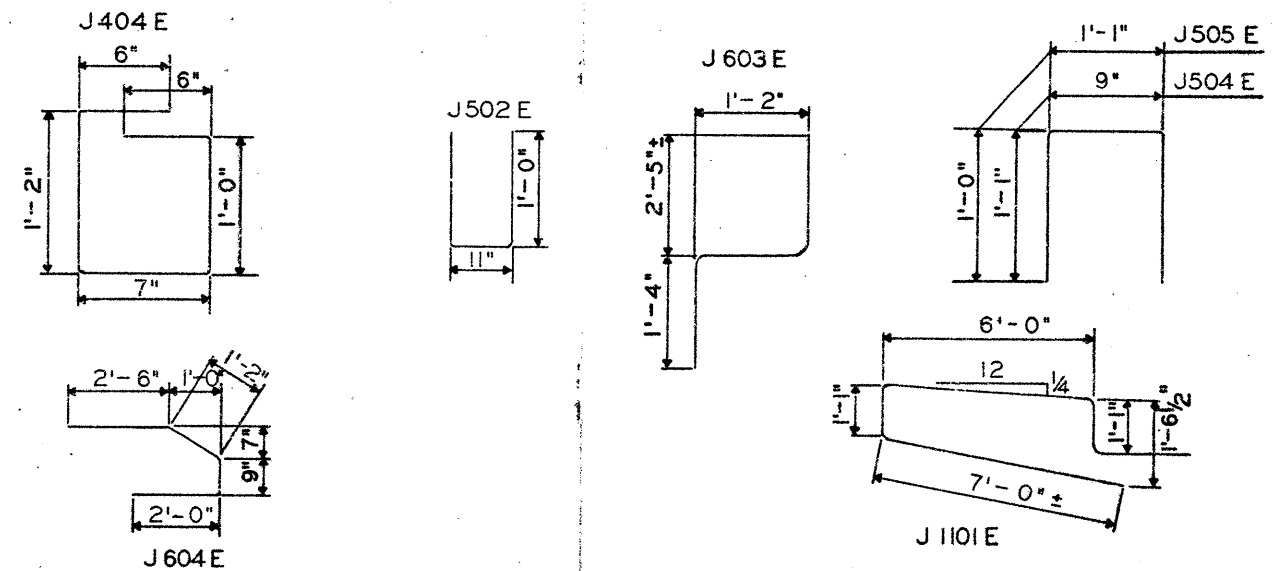
EXPANSION JOINT DETAILS
PIERS 15 & 16
BRACKET ANGLES &
SWAY BRACING

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KW	DES	DES	WS	4-27-85		

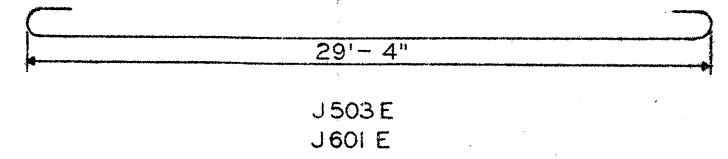
MARK	J O I N T S																GRAND TOTAL	LENGTH	SHAPE	WEIGHT	
	#1		#4		#9		#21		#14,17		#15,16		#26		TOTAL						
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB					
J401E	1	1	2	2											3	3	6	5'-6"	S	22	
J402E					2	2	2	2	2	2				1	1	7	7	14	1'-9"	S	16
J403E	6	6	8	8	8	8	8	8	8	8				4	4	42	42	84	16'-0"	S	898
J404E															4	4	8	3'-6"	B	19	
J405E															4	4	8	2'-3"	S	13	
J406E															16	16	32	1'-2"	S	25	
J407E															4	-	4	5'-6"	S	15	
J408E															44	48	92	8'-0"	S	492	
J501E			4	4	4	4	4	4	4	8	8			2	2	22	22	44	18'-6"	S	849
J502E	12	12	24	24	24	24	24	24	24					12	12	96	96	192	2'-8"	B	534
J503E										2	2	2	2			4	4	8	30'-6"	B	254
J504E										8	8					8	8	16	2'-8"	B	45
J505E										28	28					28	28	56	2'-10"	B	165
J506E										24	24					24	24	48	9'-6"	S	476
J507E												82	82			82	82	164	1'-6"	S	257
J508E	4	4													4	4	8	22'-6"	S	188	
J601E										10	10	10	10			20	20	40	30'-8"	B	1842
J603E										4	4	4	4			8	8	16	4'-7"	B	110
J604E										4	4					4	4	8	7'-0"	B	84
J605E												16	22			16	22	38	18'-0"	S	1027
J606E												17	23			17	23	40	9'-0"	S	541
J607E												6	-			6	-	6	14'-6"	S	131
J1101E	3	3	6	6	6	6	6	6						3	3	24	24	48	17'-0"	B	4335
																				TOTAL	12338



SEE GENERAL NOTE SHEET NO. 5



1 3/4" X 6" X 9" LAMINATED ELASTOMERIC BEARINGS



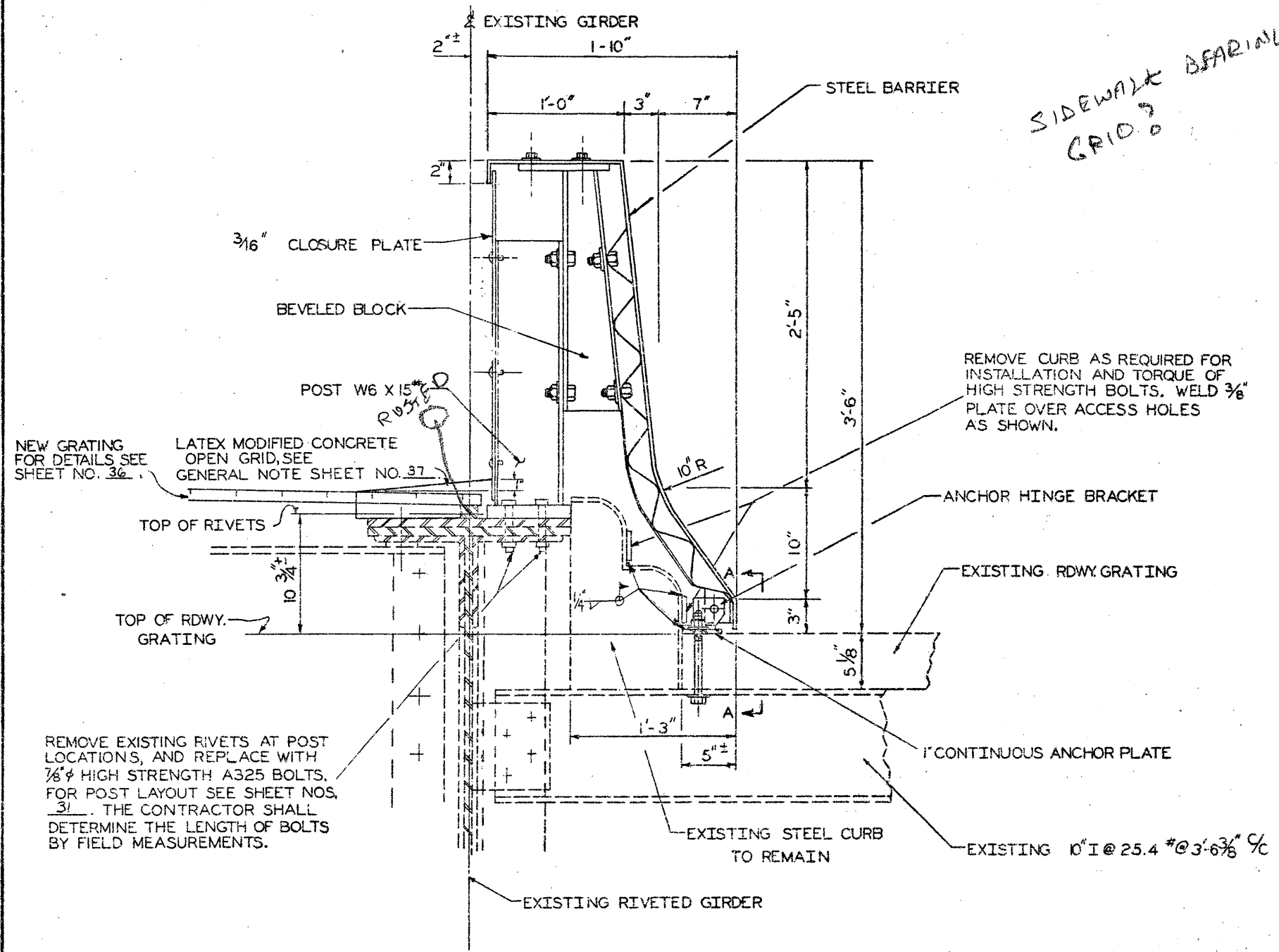
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

EXPANSION JOINT STEEL
ELASOMERIC COMPRESSION SEAL
LAMINATED ELASOMERIC BEARINGS
ERIE - 6 - 1792

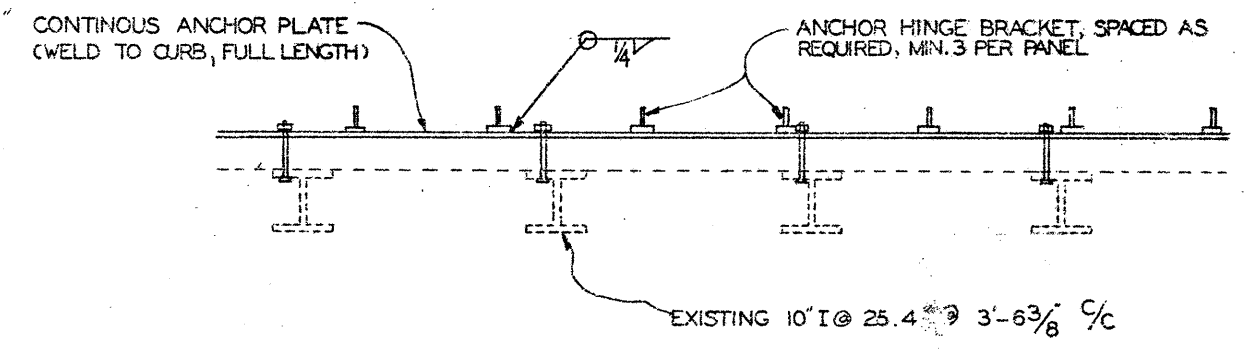
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JKW	LES	LES	WS	JKW/LES	4-27-83	

NOTE: POST HOLES SHALL BE 2" LONG VERTICALLY SLOTTED. LOCATION OF HOLES MUST VARY TO COMPENSATE FOR GIRDER COVER PLATE.

SIDEWALK BEARING GRID?



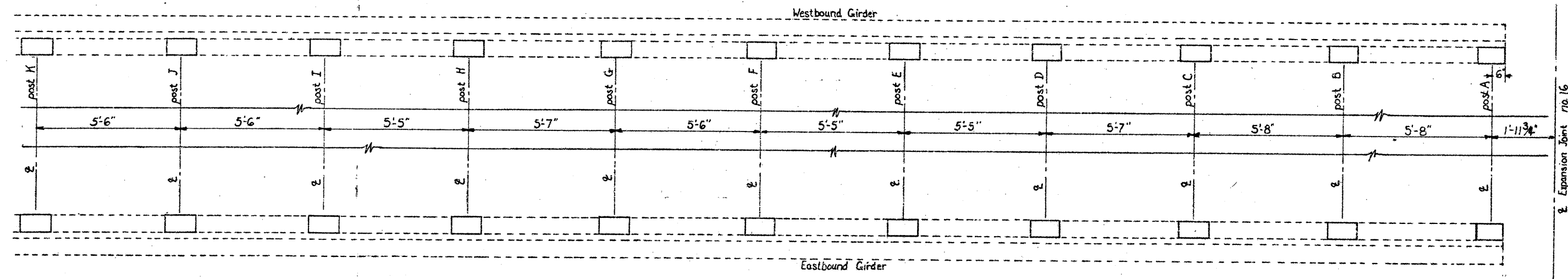
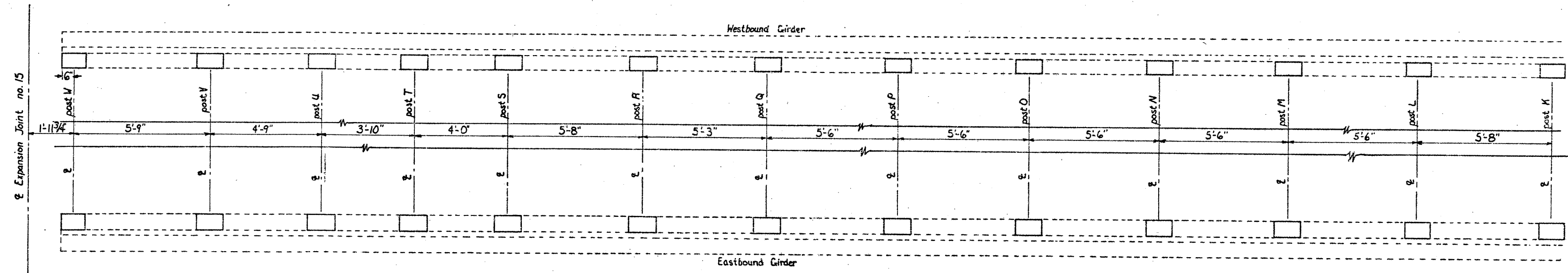
STEEL BARRIER DETAIL



SECTION A-A

REMOVE EXISTING RIVETS AT POST LOCATIONS, AND REPLACE WITH 7/8" HIGH STRENGTH A325 BOLTS. FOR POST LAYOUT SEE SHEET NOS. 31. THE CONTRACTOR SHALL DETERMINE THE LENGTH OF BOLTS BY FIELD MEASUREMENTS.

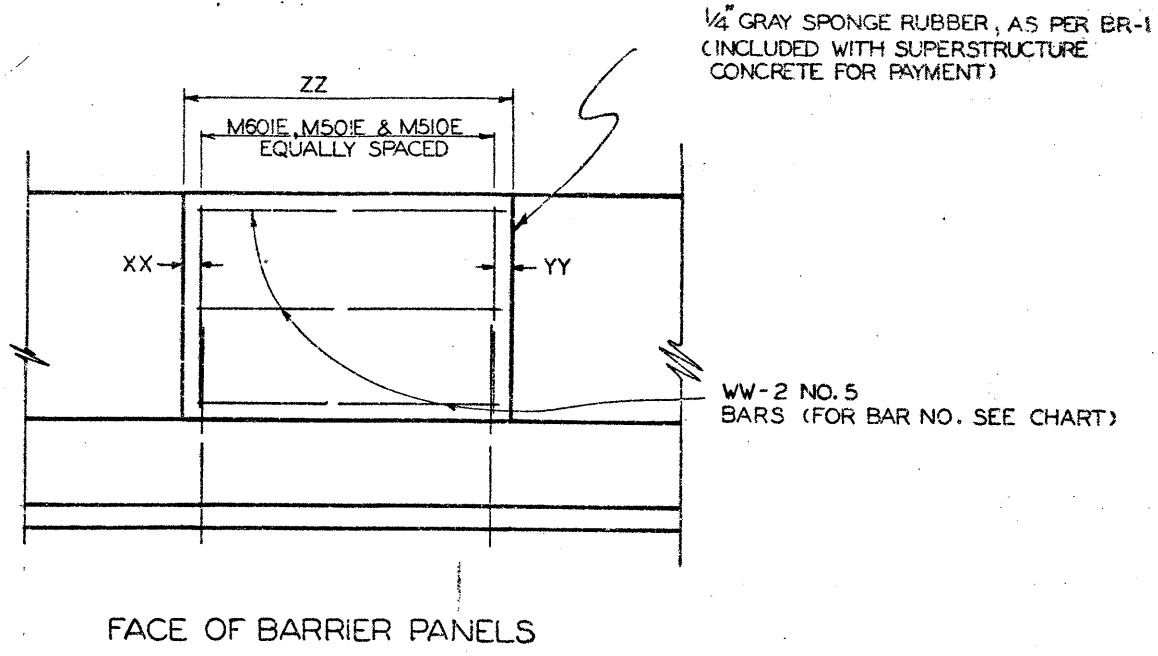
STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT THREE					
STEEL BARRIER DETAIL					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE REVISED
KW	BT	BT	W.S.	W.S.	4-25-88



STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

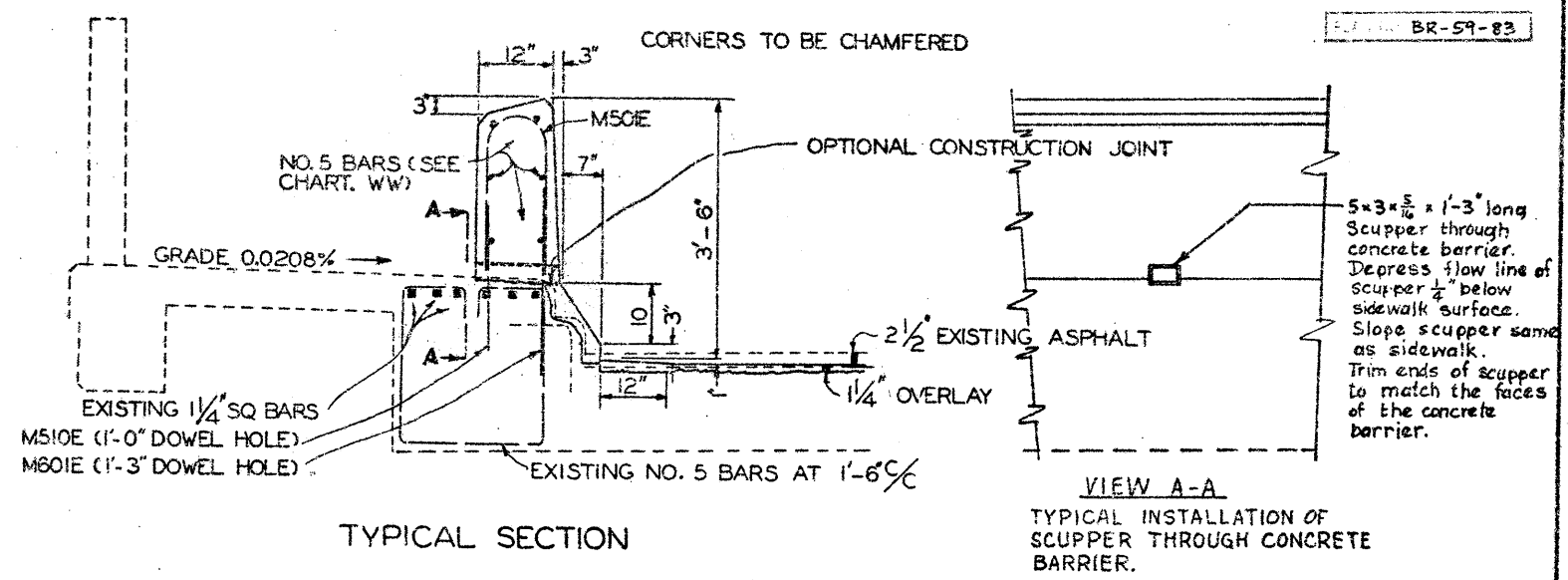
STEEL BARRIER
POST LAYOUT
ERI-6-1792

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KW	DES	DES	W.S		4-25-83 9/1/84	



1/4" GRAY SPONGE RUBBER, AS PER BR-1
(INCLUDED WITH SUPERSTRUCTURE
CONCRETE FOR PAYMENT)

WW-2 NO. 5
BARS (FOR BAR NO. SEE CHART)



TYPICAL SECTION

VIEW A-A
TYPICAL INSTALLATION OF
SCUPPER THROUGH CONCRETE
BARRIER.

STEEL LAYOUT CHART

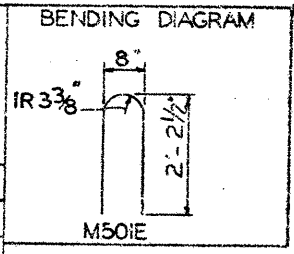
	M601E, M501E	WW	DIMENSIONS			M510E
			XX	YY	ZZ	
A	6	M502E	9"	9"	6'-0"	2
B	14	M503E	6"	6"	14'-6"	4
C	14	M503E	9"	9"	15'-0"	4
D	14	M505E	9"	9"	14'-1"	4
E	15	M508E	9"	9"	15'-0"	4
F	11	M504E	3"	9"	12'-2"	3
G	11	M504E	3 1/2"	7"	12'-0 1/2"	3
H	11	M504E	9"	3"	12'-2"	3
I	11	M504E	7"	3 1/2"	12'-0 1/2"	3
J	13	M506E	3 1/2"	5"	12'-5 1/2"	3
K	13	M506E	5"	9"	12'-11"	3
L	13	M506E	5"	3 1/2"	12'-5 1/2"	3
M	13	M506E	9"	5"	12'-11"	3
N	13	M507E	3"	9"	13'-1"	3
O	13	M507E	9"	3"	13'-1"	3
P	12	M504E	3"	9"	13'-6"	3
Q	12	M504E	9"	3"	13'-6"	3
R	13	M509E	3 1/2"	9"	12'-6 1/2"	3
S	13	M509E	9"	3 1/2"	12'-6 1/2"	3
T	13	M506E	3"	9"	12'-9"	3
U	13	M506E	9"	3"	12'-9"	3

ESTIMATED QUANTITIES

ITEM	QUANTITY		TOTAL	UNIT	DESCRIPTION
	EB	WB			
518	56	56	112	EACH	SCUPPERS THROUGH CONCRETE BARRIER, AS PER PLAN

ITEM 824 EPOXY COATED REINFORCING STEEL

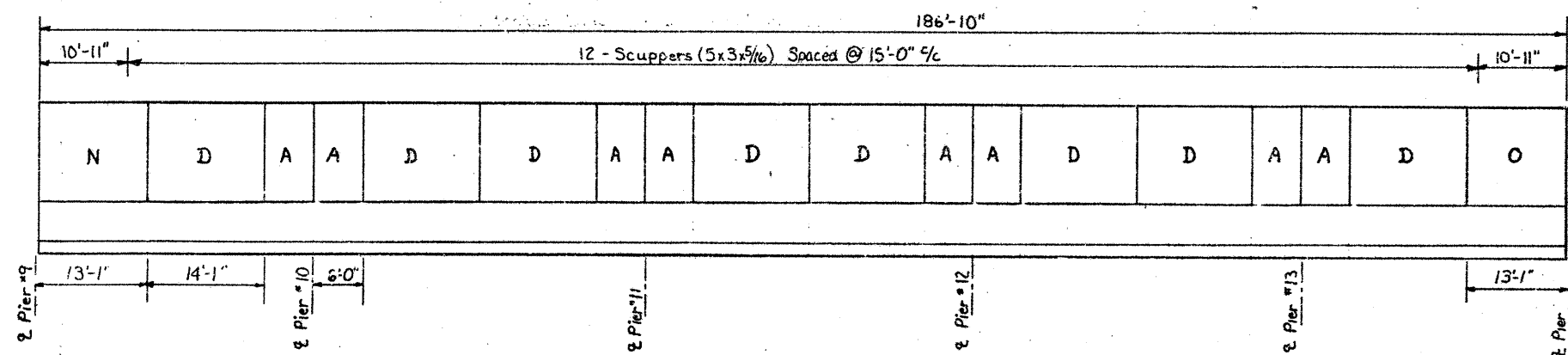
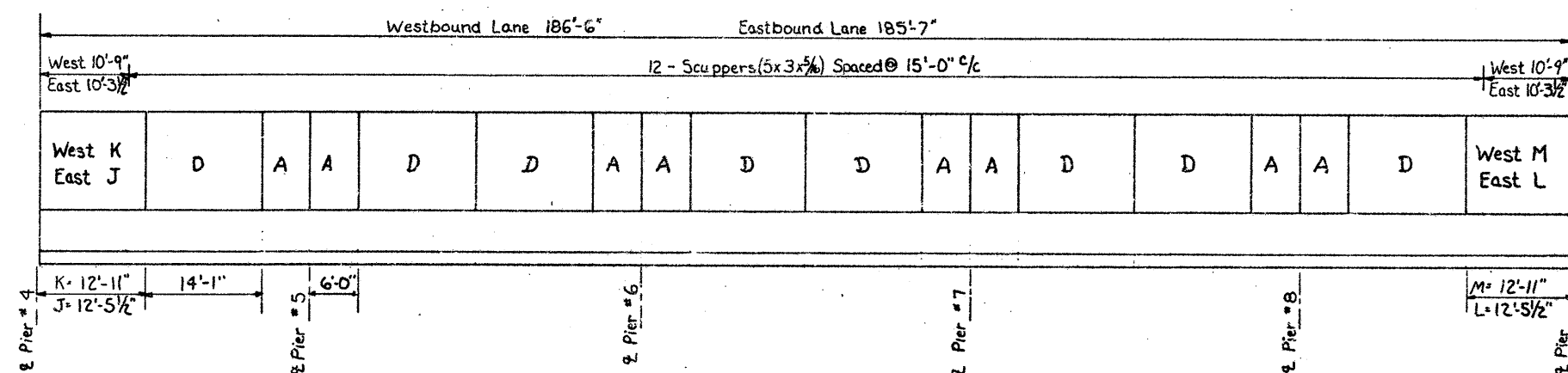
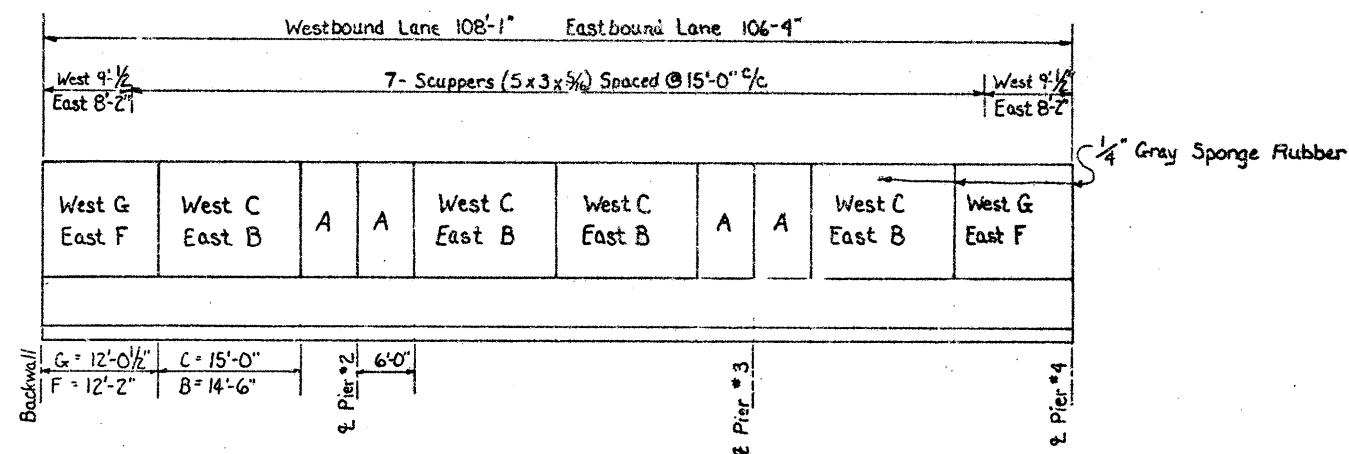
MARK	NUMBER	LENGTH	SHAPE	WEIGHT	USAGE BREAKDOWN										TOTAL WESTBOUND	TOTAL EASTBOUND
					BACKWALL TO PIER 4	PIER 4 TO PIER 9	PIER 9 TO PIER 14	PIER 14 TO PIER 15	PIER 15 TO PIER 16	PIER 16 TO PIER 17	PIER 17 TO PIER 21	PIER 21 TO BACKWALL				
M601E	1788	3'-3"	S	8728	102	186	186	84	84	146	106	894	894			
M501E	1788	4'-9"	B	8858	102	186	186	84	84	146	106	894	894			
M502E	360	4'-6"	S	1690	24	48	48			36	24	180	180			
M503E	48	13'-6"	S	676	24							24	24			
M504E	72	11'-2"	S	839	12			12	12			36	36			
M505E	312	12'-7"	S	4094		48	48			36	24	156	156			
M506E	48	11'-9"	S	588		12					12	24	24			
M507E	24	12'-1"	S	302			12					12	12			
M508E	96	13'-6"	S	1352				24	24			48	48			
M509E	24	11'-6"	S	288						12		12	12			
M510E	508	2'-0"	S	1060	30	54	54	22	22	42	30	254	254			
TOTAL				28475LB												



STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

CONCRETE BARRIER
ERI-6-1792

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KW	DES	DES	W.S.	DES	4-25-83	

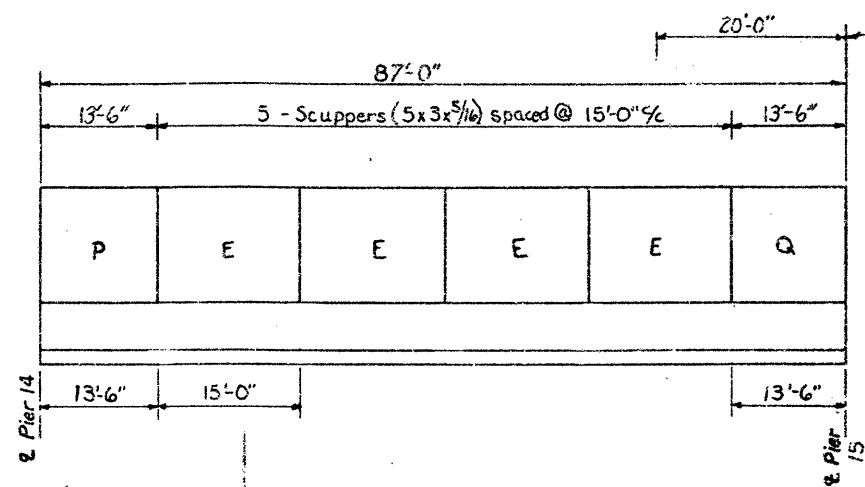


STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

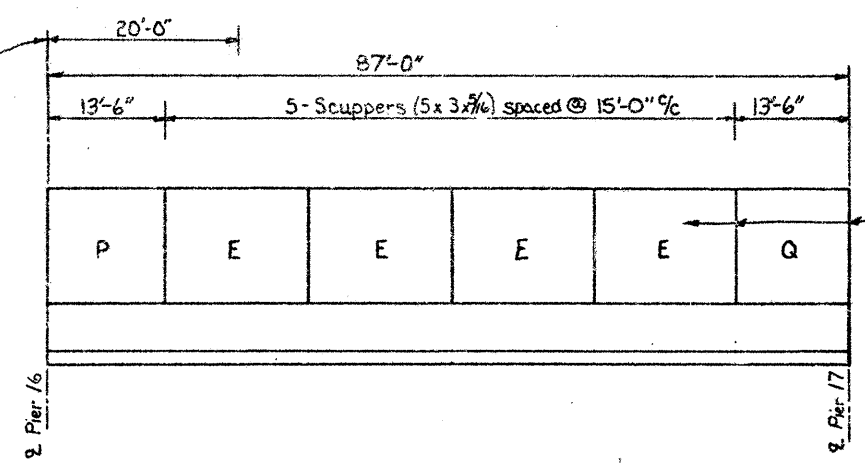
CONCRETE BARRIER

ERI - 6 - 1792

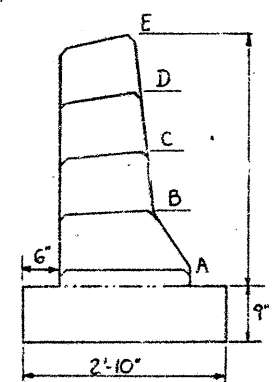
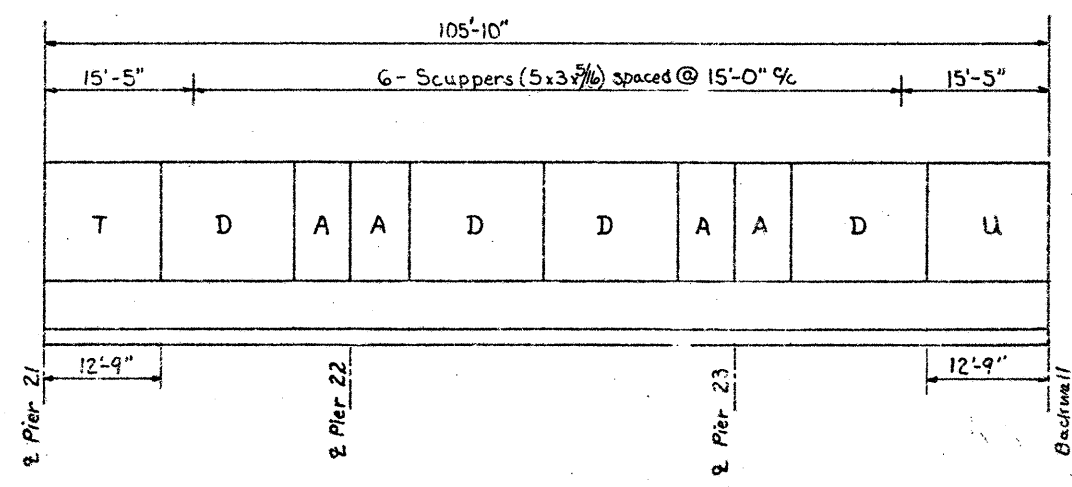
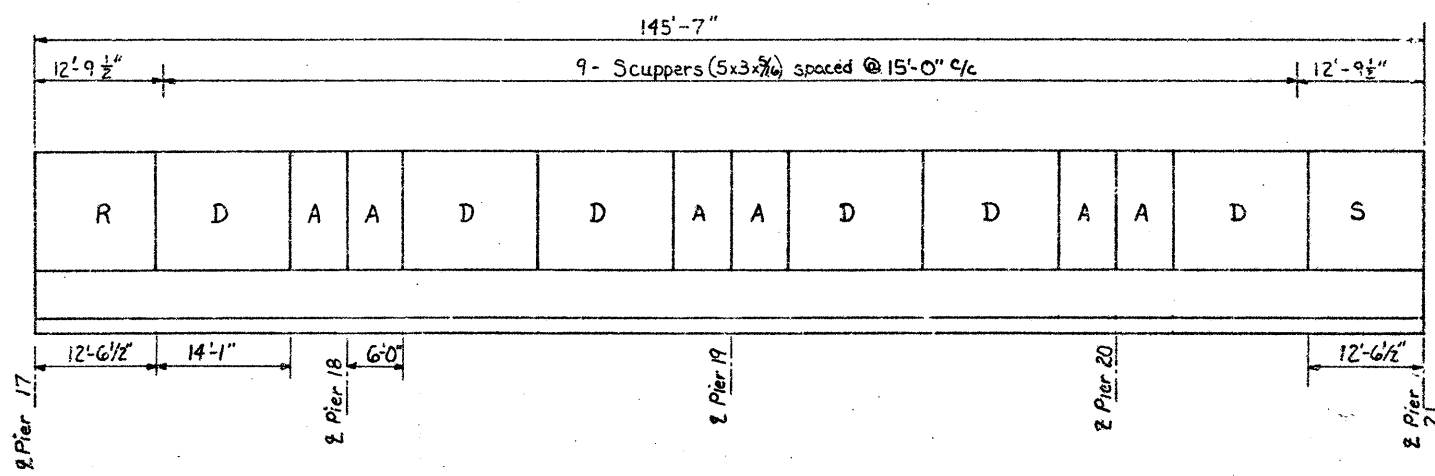
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
X/W	BES	BES	W.S.	Hop/ly	4-25-83	



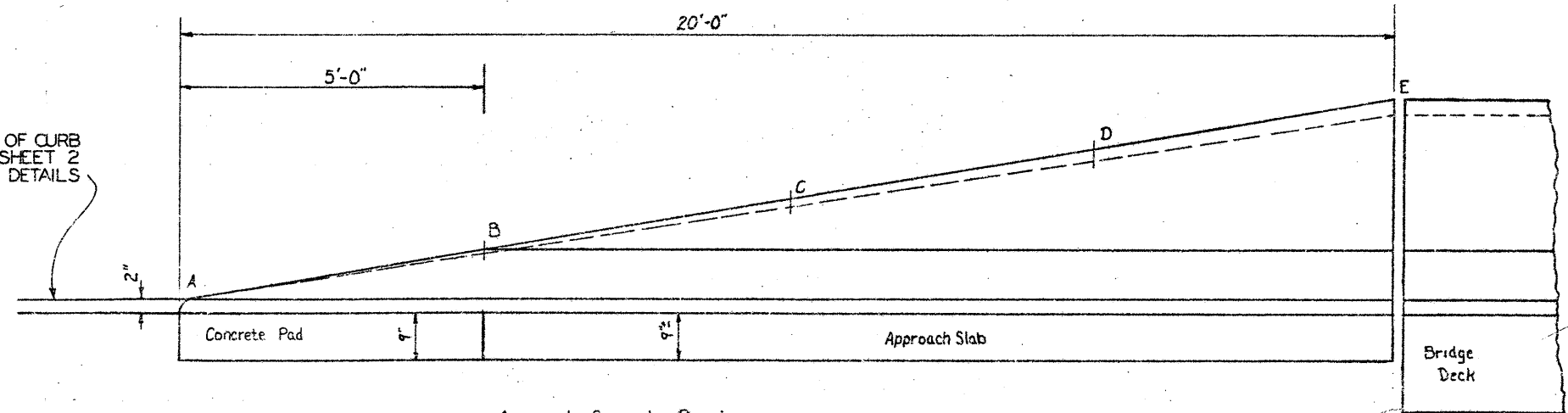
20' Transition section to match concrete barrier to steel barrier. For steel barrier details see sheet 30-32



1/4 Gray Sponge Rubber



TOP OF CURB SEE SHEET 2 FOR DETAILS



Approach Concrete Barrier

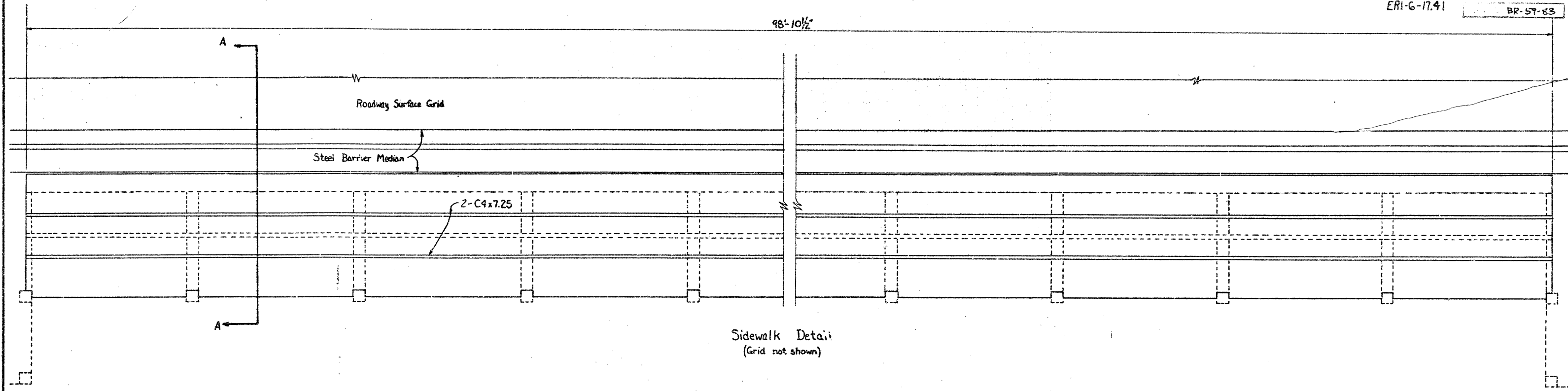
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

CONCRETE BARRIER

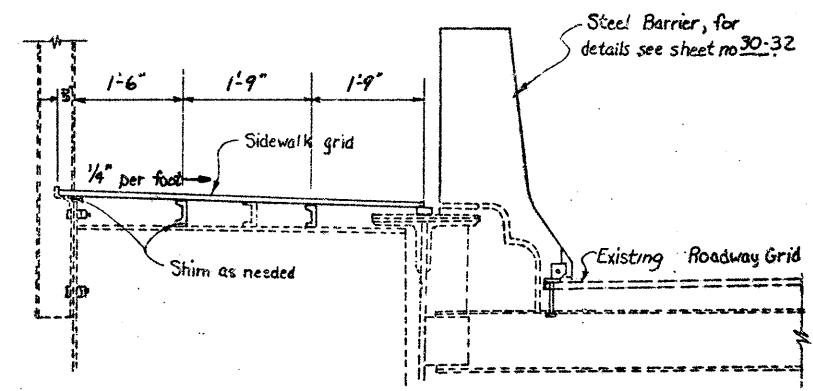
ERI-6-1792

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.W.	DES	DES	W.S.	4-25-83		

98'-10 1/2"



Sidewalk Detail
(Grid not shown)



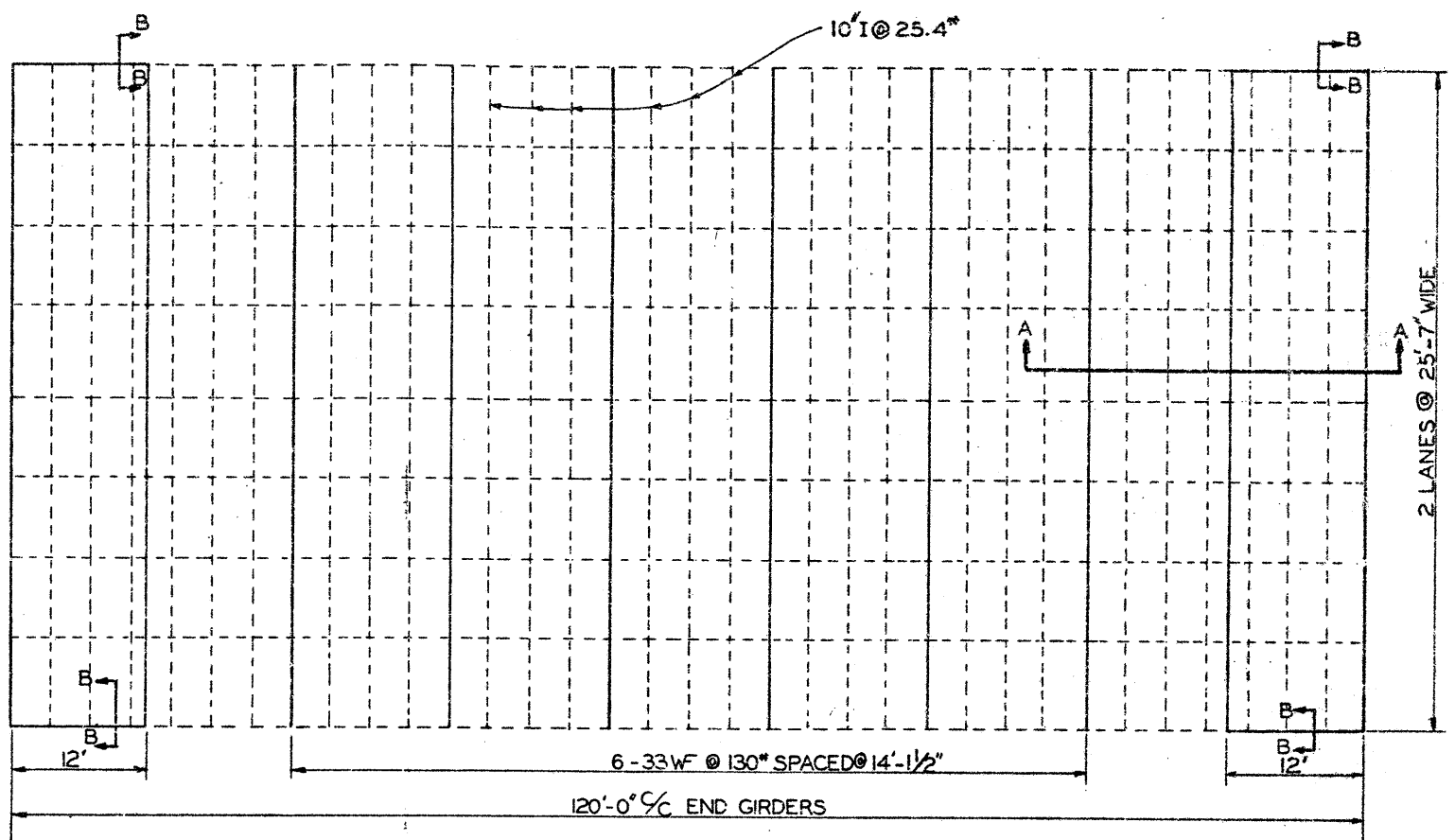
Section A-A

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

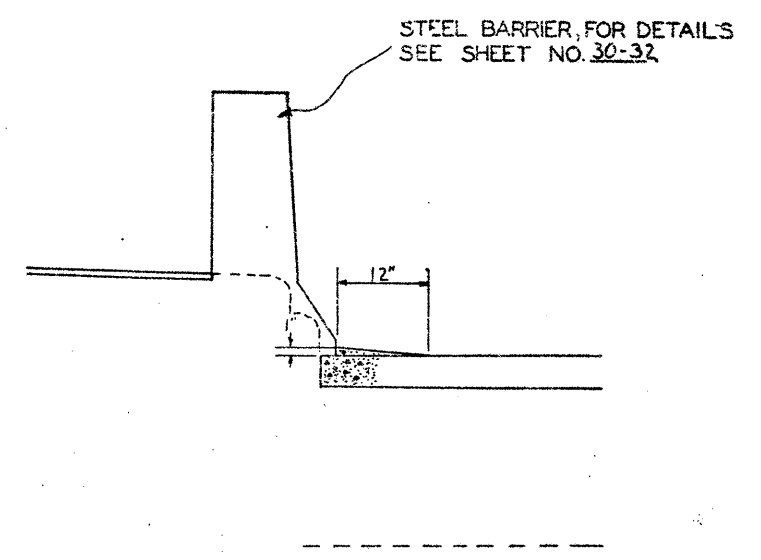
SIDEWALK GRID

ERI-6-1792

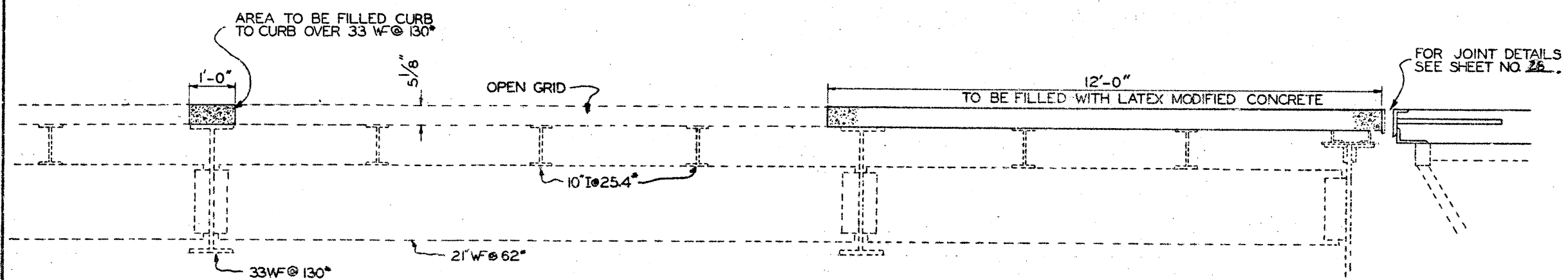
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
HWS	BES	BES	WS	ALG	4-25-83	



PLAN VIEW, LATEX MODIFIED CONCRETE, OPEN GRID



SECTION B - B

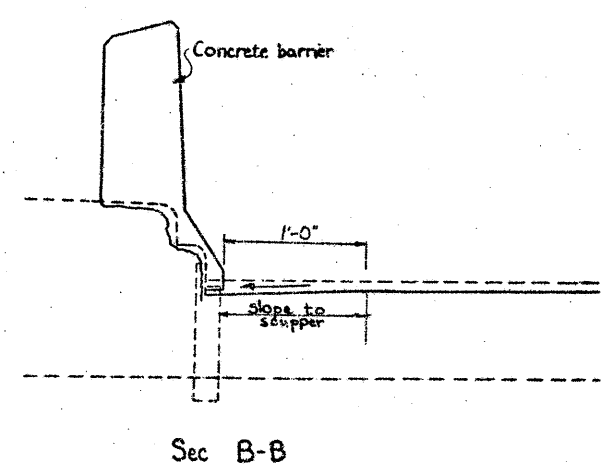
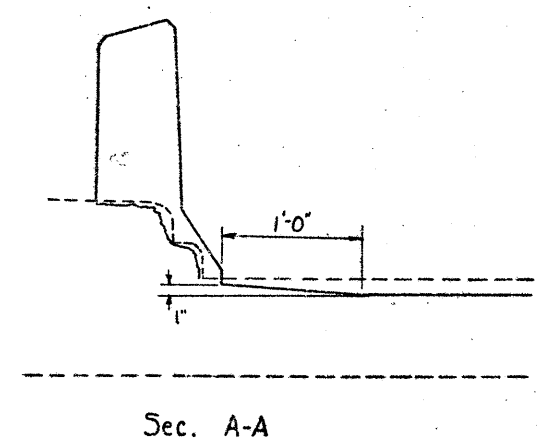
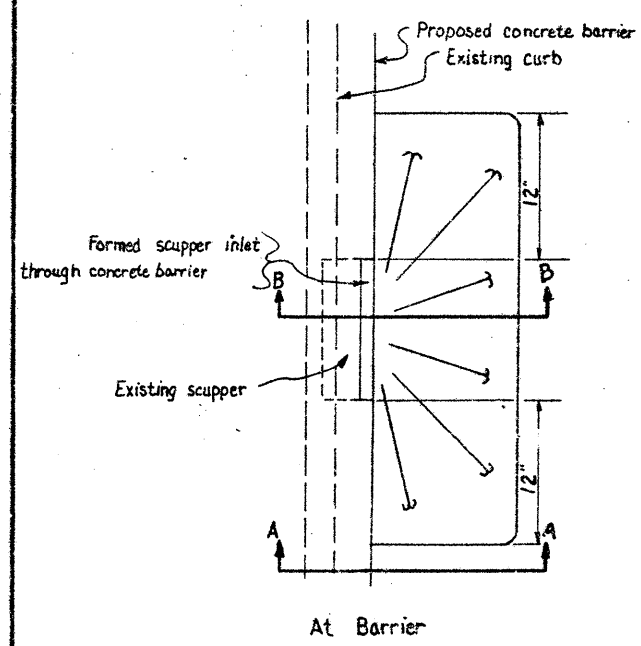
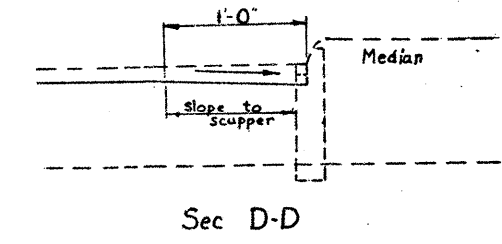
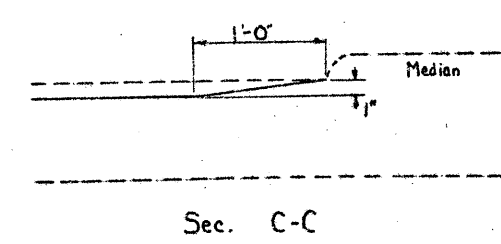
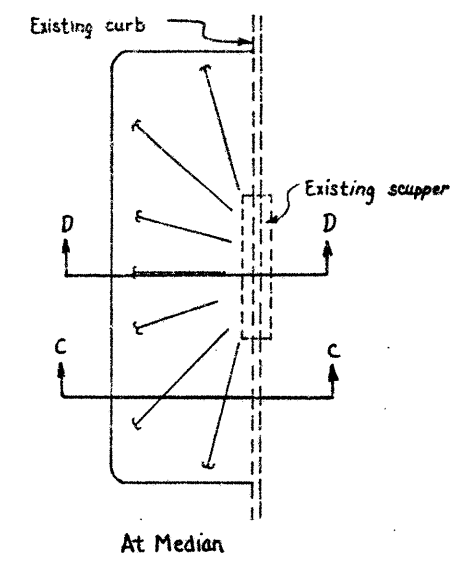
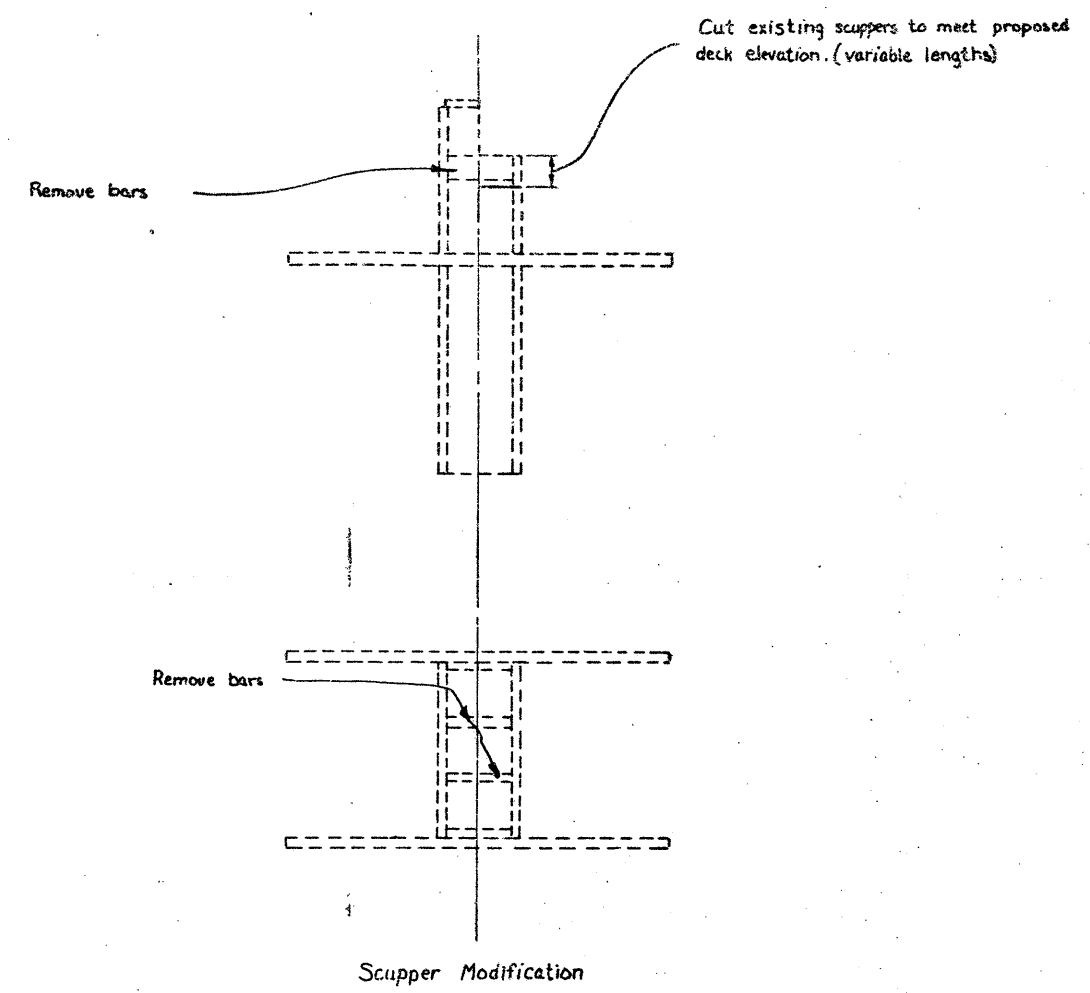


SECTION A - A

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

LATEX CONCRETE OVERLAY
OPEN GRID

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KW	BES	DEJ	WS	ALG	4-25-83	

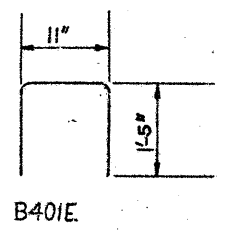
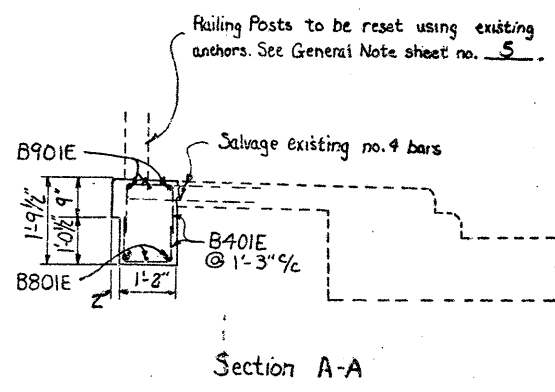
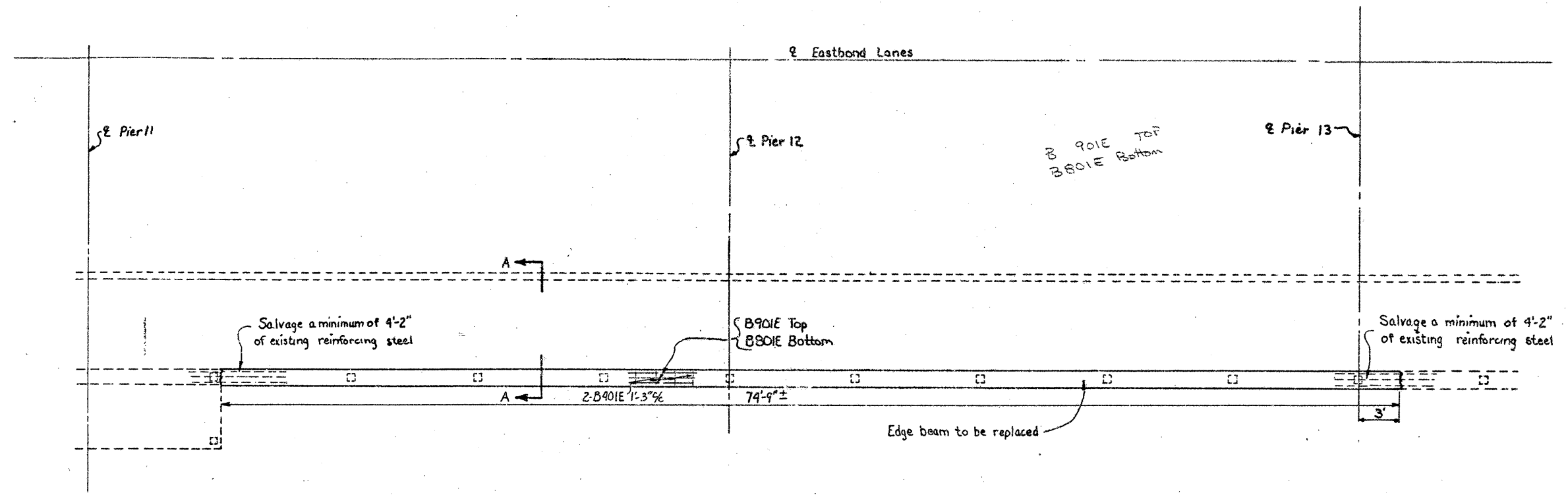


STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

SCUPPER MODIFICATION
DETAILS

ERI-6-1792

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KW	BES	BES	WS	Ally	4-25-83	



Item 824 Epoxy Coated Reinforcing Steel

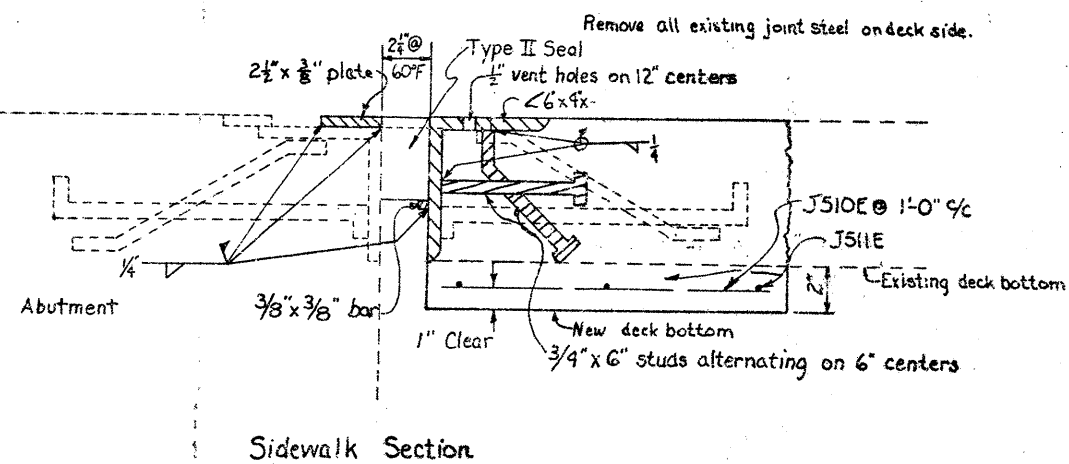
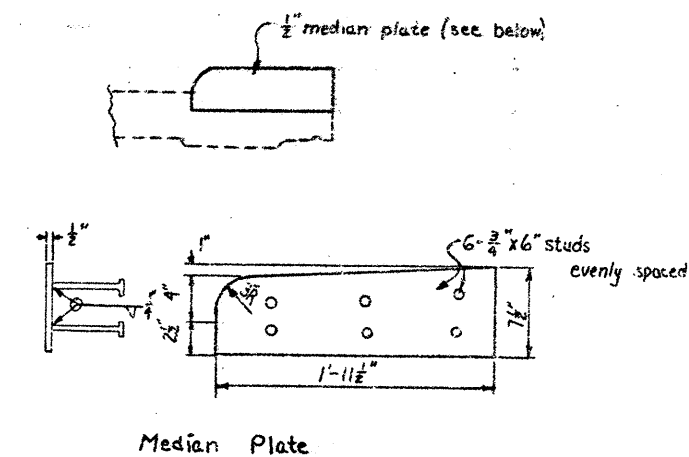
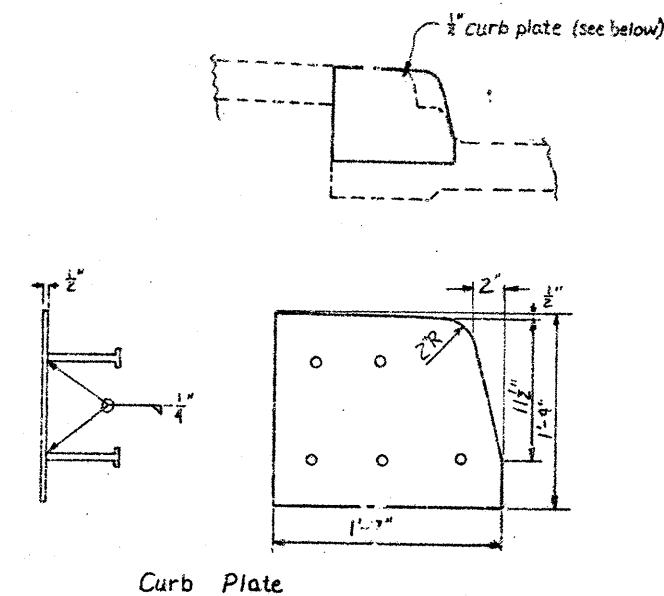
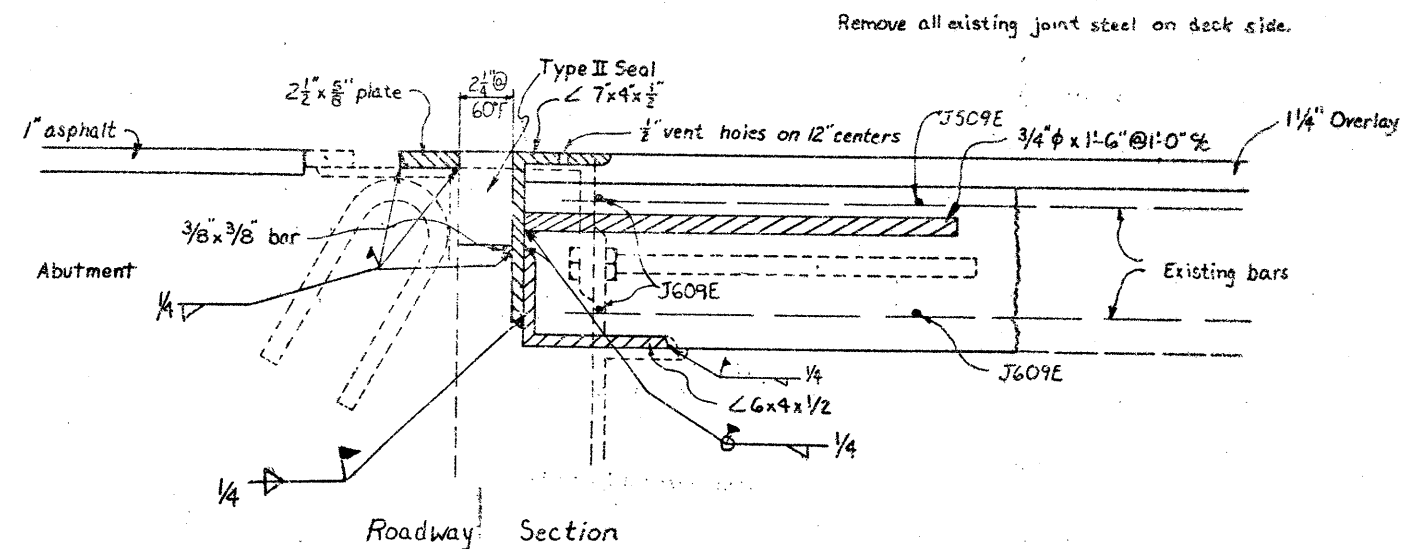
MARK	NO.	LENGTH	SHAPE	WEIGHT
B40IE	120	3'-7"	B	287
B80IE	12	21'-4"	S	683
B90IE	12	22'-0"	S	898
Total Weight				1868LBS.

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

**EDGE BEAM
REPLACEMENT DETAILS**

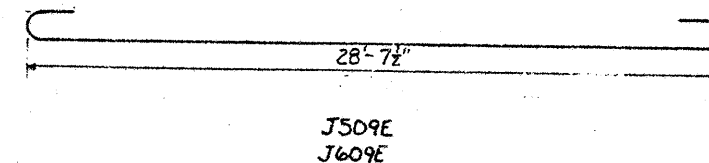
ERI-6-1792

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Y/W	DES	DES	WS	Alph/Co	4-25-83	



Item 824 Epoxy Coated Reinforcing Steel

Mark	EB	WB	Total	Length	Shape	Weight
J509E	2	2	4	29'-10"	B	124
J510E	12	12	24	1'-2"	S	29
J511E	6	6	12	6'-0"	S	75
J609E	6	6	12	30'-0"	B	541
					total	769 lbs.



STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

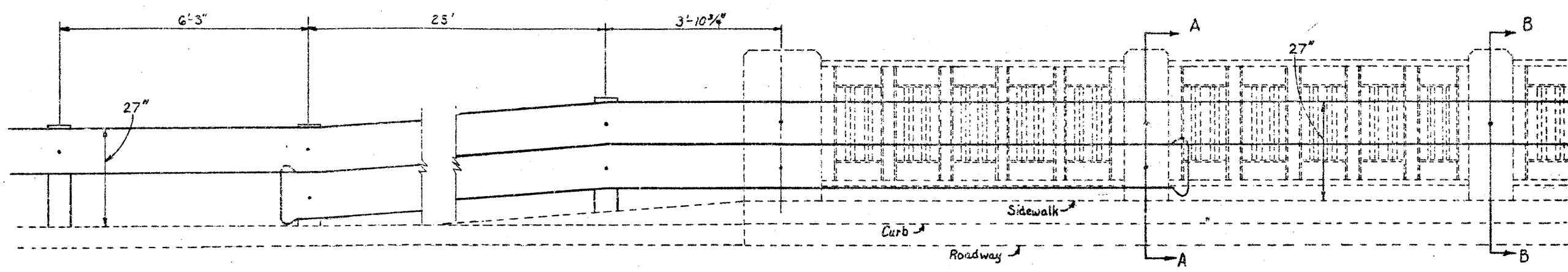
EXPANSION JOINTS

ERI-6-1824

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KW	BLS	BLS	WS	AL	4-15-80	

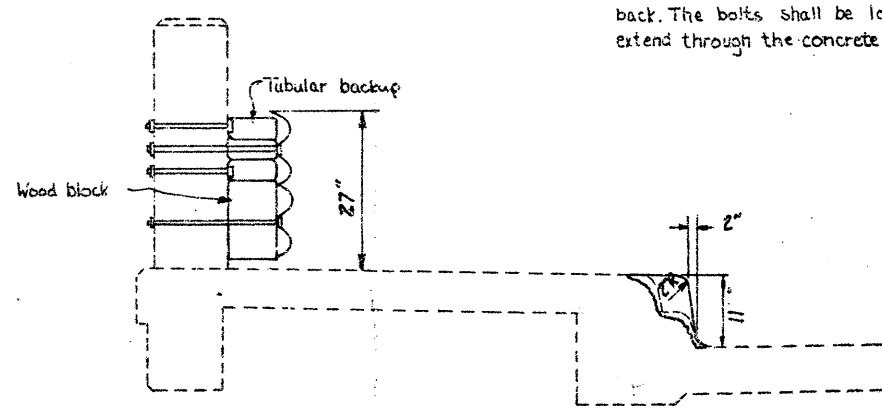
ERI-6-17.41

BR-59-83

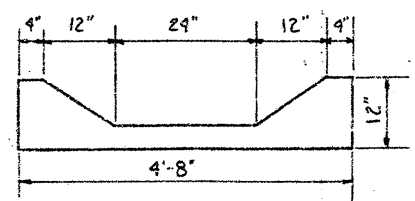
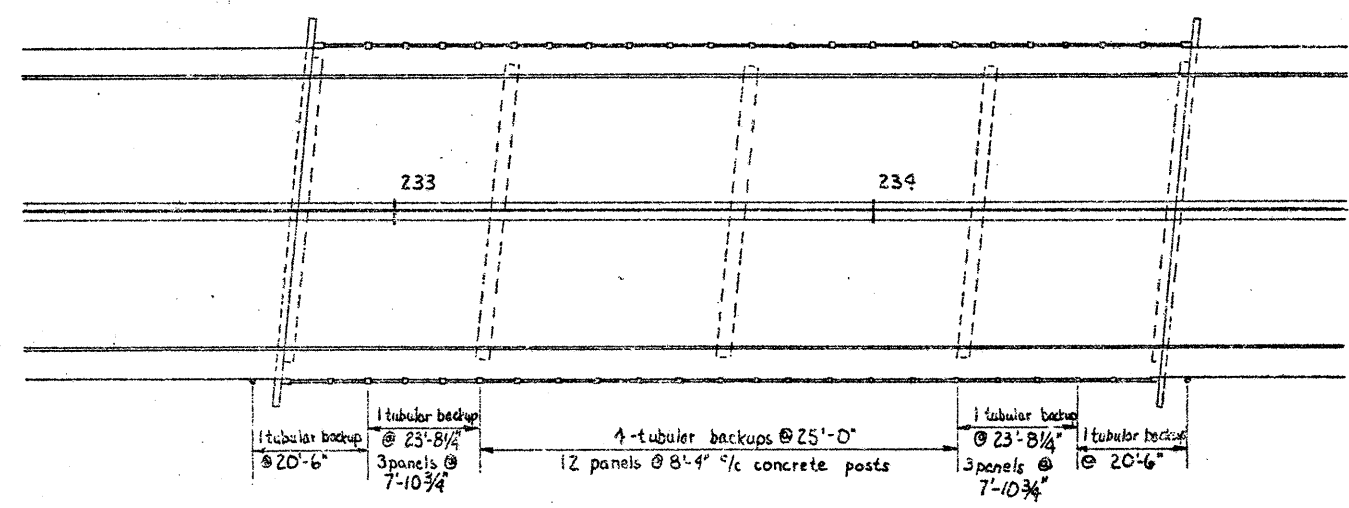


Bridge Terminal Assembly Type G Modified

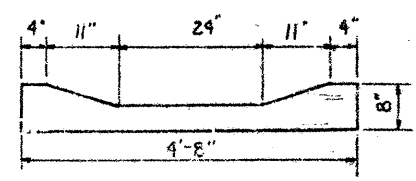
Note: All bolts through concrete shall be 1" diameter hexhead bolts and nuts with 3"x3"x1/2" R washers on back. The bolts shall be long enough to extend through the concrete post.



Sec. A-A
Sec. B-B same as Sec. A-A, only without bottom rail.



For ERI-6-18.24
Type 2
 $4.666 \times 1 = 4.666$
 $\frac{(4+2)}{2} \times .666 = 1.998$
 $2.668 \frac{5}{8}$ END AREA
Bituminous Concrete Gutter



For ERI-6-17.92
Type 1
 $4.666 \times 666 = 3.107$
 $\frac{(3.83+2)}{2} \times .331 = -0.971$
 $2.136 \frac{5}{8}$

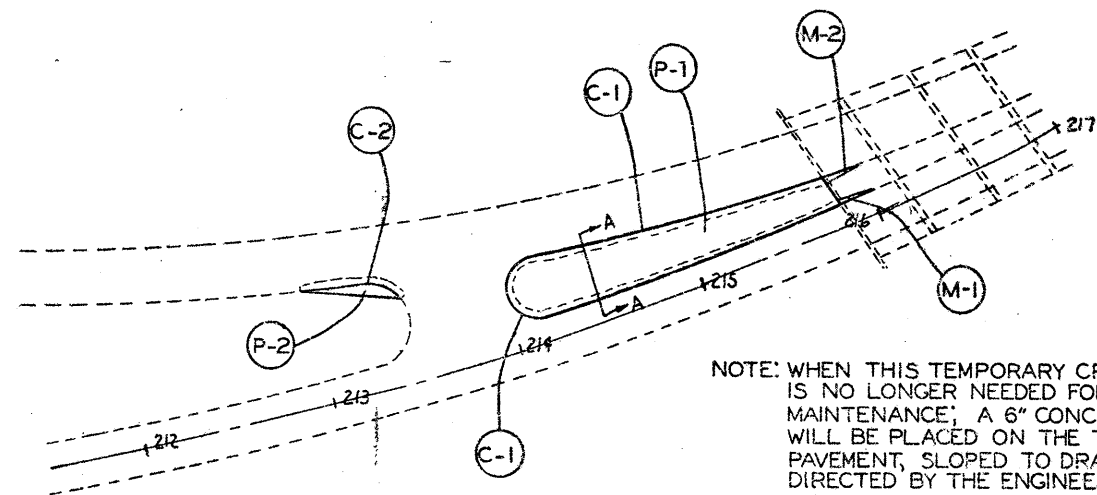
See General Note Sheets No. 4, For Locations See Sheet No. 13, 15, 17.

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

GUARDRAIL ERI-6-1824
BITUMINOUS CONCRETE GUTTER

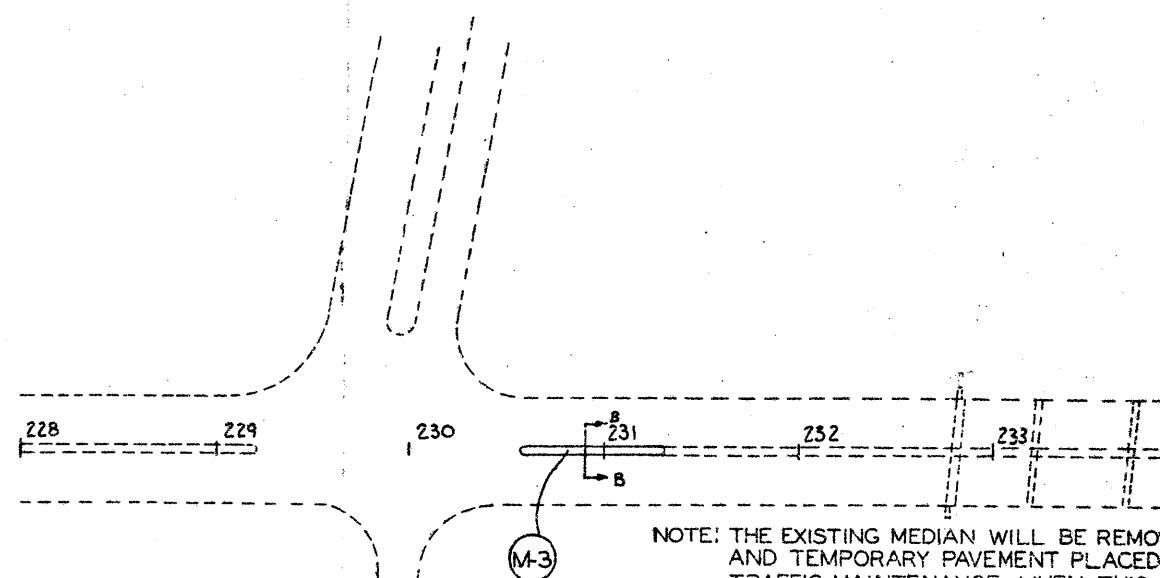
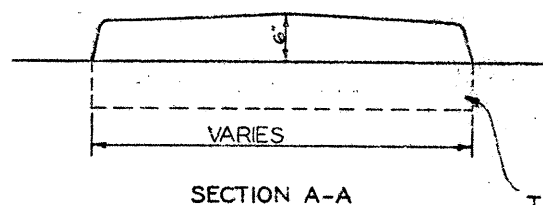
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KW	DES	DES	WS	Alford	4-16-58	

NOTE: THE MEDIAN ON THE BRIDGE SHALL BE PLANED TO A TO A SMOOTH RIDING SURFACE. THE REINFORCING STEEL SHALL BE REMOVED. WHEN THIS TEMPORARY CROSSOVER IS NO LONGER NEEDED THE MEDIAN SHALL BE RESTORED USING LATEX MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), THE REINFORCING STEEL NEED NOT BE REPLACED.

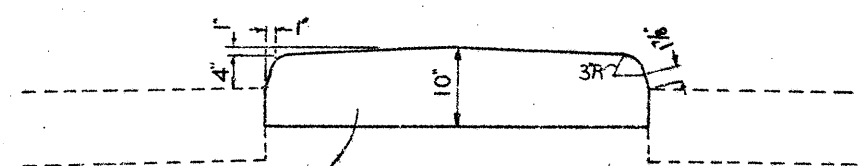


NOTE: WHEN THIS TEMPORARY CROSSOVER IS NO LONGER NEEDED FOR TRAFFIC MAINTENANCE, A 6" CONCRETE ISLAND WILL BE PLACED ON THE TEMPORARY PAVEMENT, SLOPED TO DRAIN AS DIRECTED BY THE ENGINEER. SEE SECTION A-A. FOR DETAILS NOT SHOWN, SEE STANDARD DRAWING MC-6.

Reference No.	Station	Station	1	13	9	10	25		44	11	3
			202	609	615	615	612		845	615	202
			Curb and Gutter Removed	Combination Curb and Gutter Std. Type 2	Temporary Pavement, Class A	Temporary Roads	Concrete Median		Latex Modified Concrete Overlay (Variable Thickness)	Temporary Pavement Class A, as per plan	Median Removed
			Lin. Ft.	Lin. Ft.	Sq. Yd.	Lump	Cu. Yd.		Cu. Yd.	Sq. Yd.	Sq. Ft.
C-1	214+02	215+84	370								
P-1	214+02	215+84				Lump	66			394	
M-1	215+84	216+14							1		60
M-2	215+84	216+14							1		60
M-3	230+50	231+35			33	Lump	9				
P-2	213+00	213+45			23	Lump					
C-2	213+00	213+45	20	20							
TOTALS			390	20	56	Lump	75		2	394	120



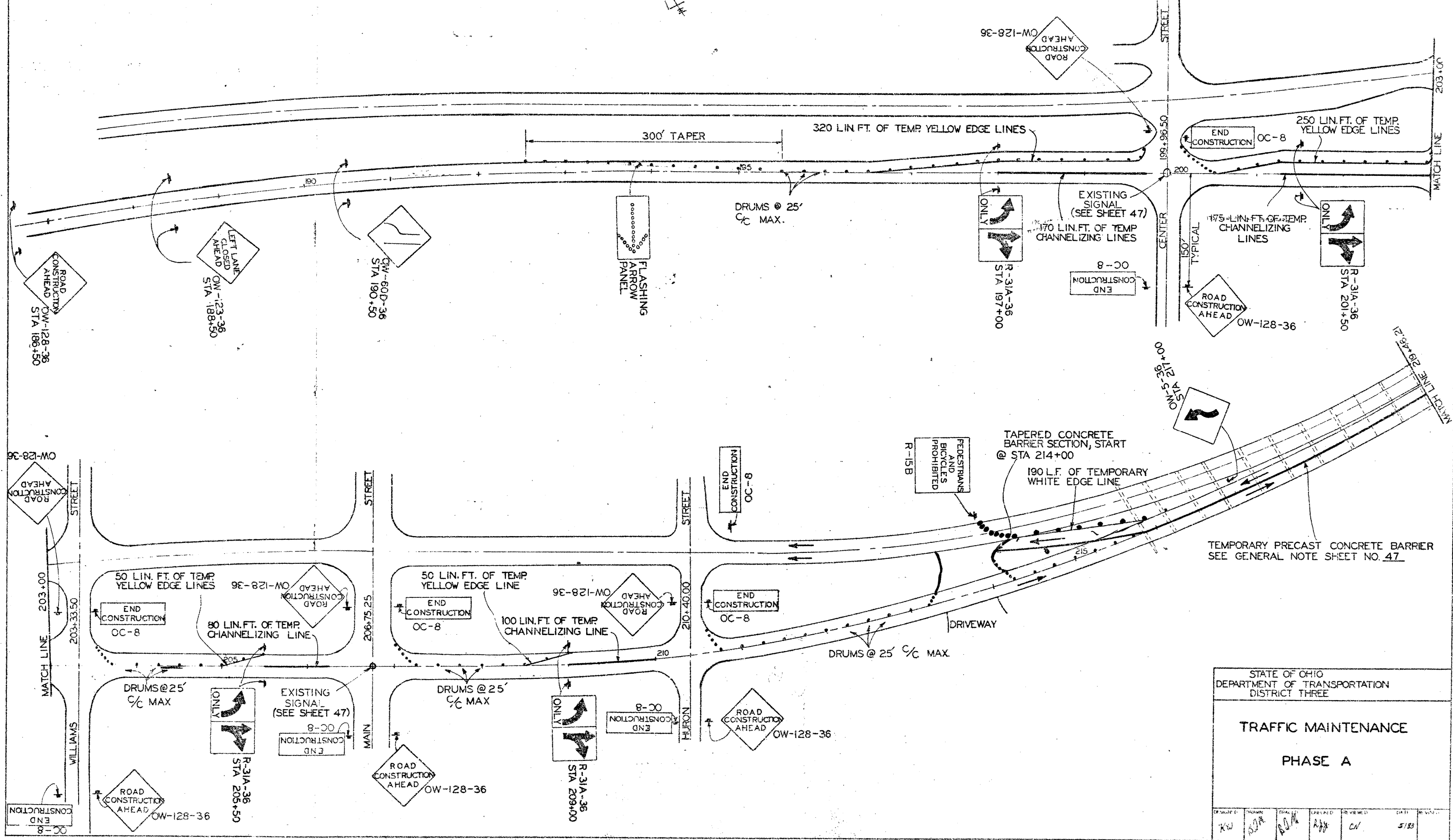
NOTE: THE EXISTING MEDIAN WILL BE REMOVED AND TEMPORARY PAVEMENT PLACED FOR TRAFFIC MAINTENANCE. WHEN THIS TEMPORARY CROSSOVER IS NO LONGER NEEDED THE TEMPORARY PAVEMENT SHALL BE REMOVED AND THE MEDIAN SHALL BE REBUILT AS PER THE MEDIAN DETAIL. SEE SECTION B-B



STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

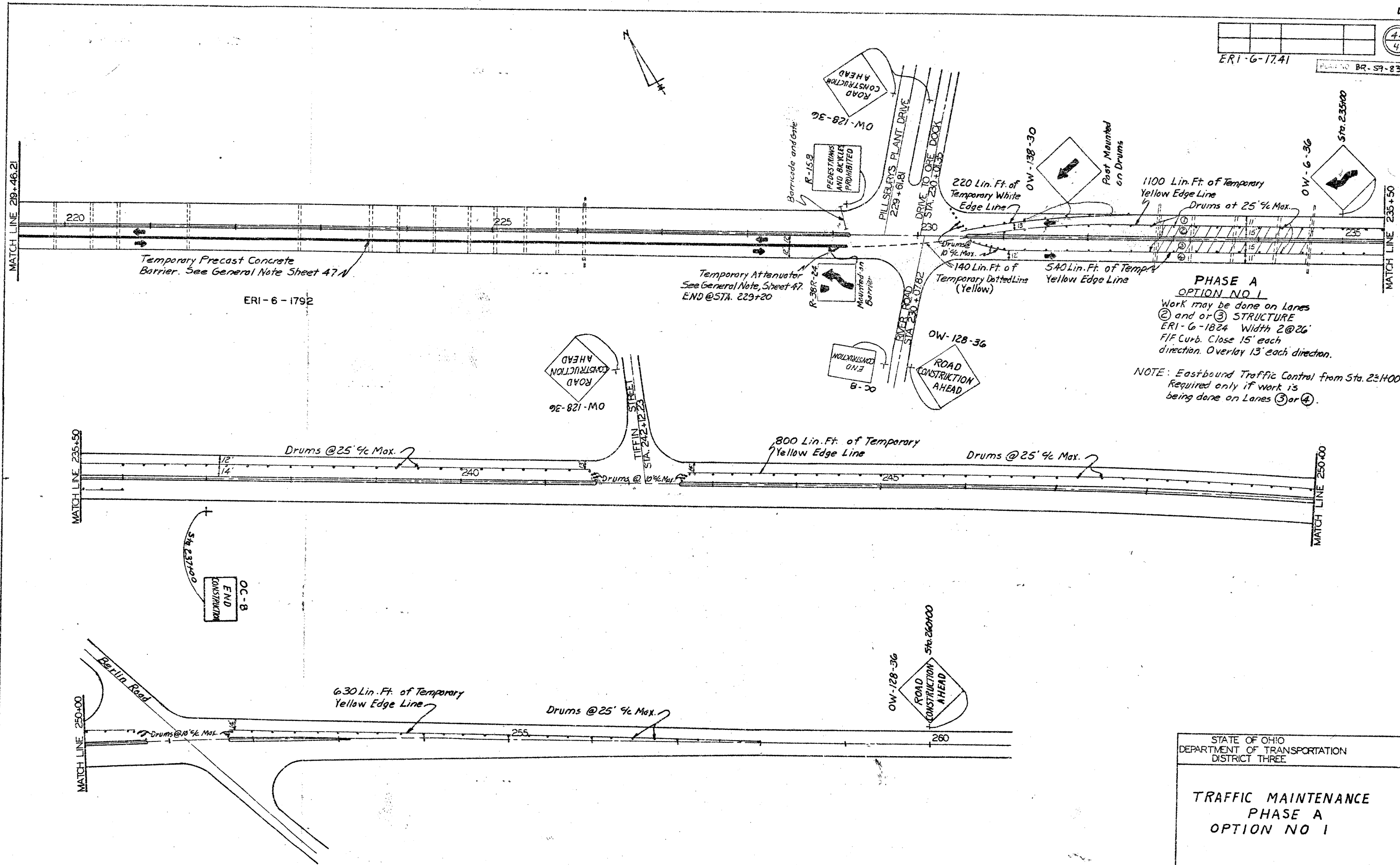
TEMPORARY CROSSOVER
QUANTITIES

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Y-W	BES	BES	WS	Hally	4-25-84	



TEMPORARY PRECAST CONCRETE BARRIER
SEE GENERAL NOTE SHEET NO. 47

STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT THREE					
TRAFFIC MAINTENANCE					
PHASE A					
DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY	DATE	NO. REV.
KW	BD	BD	AK	5/83	



**PHASE A
 OPTION NO 1**
 Work may be done on Lanes
 ② and or ③ STRUCTURE
 ERI-G-1824 Width 2@26'
 F/F Curb. Close 15' each
 direction. Overlay 13' each direction.

NOTE: Eastbound Traffic Control from Sta. 231+00
 Required only if work is
 being done on Lanes ③ or ④.

STATE OF OHIO
 DEPARTMENT OF TRANSPORTATION
 DISTRICT THREE

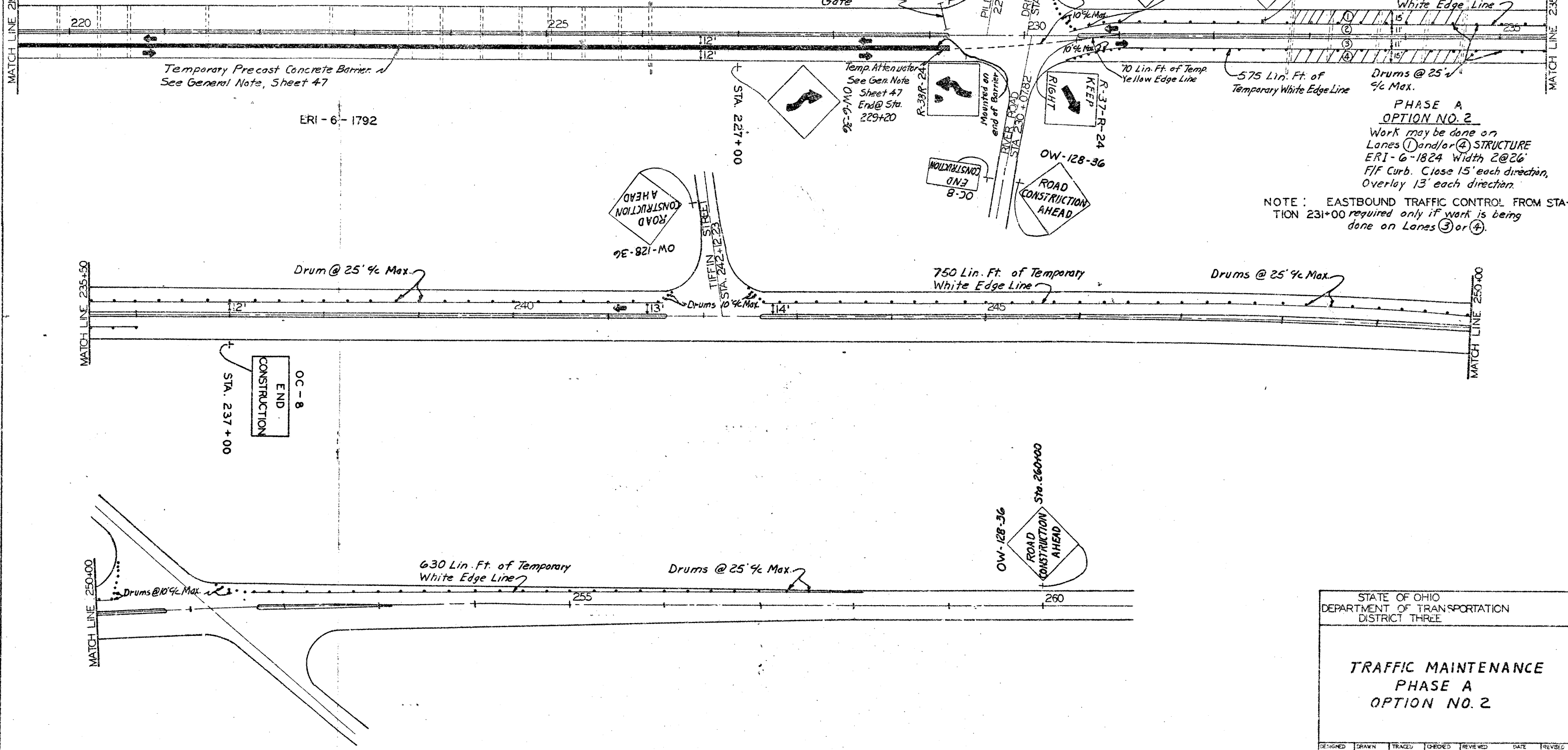
**TRAFFIC MAINTENANCE
 PHASE A
 OPTION NO 1**

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
XW	XW	RL	AB	CN	5/83	



MATCH LINE 219+46.21

MATCH LINE 235+50

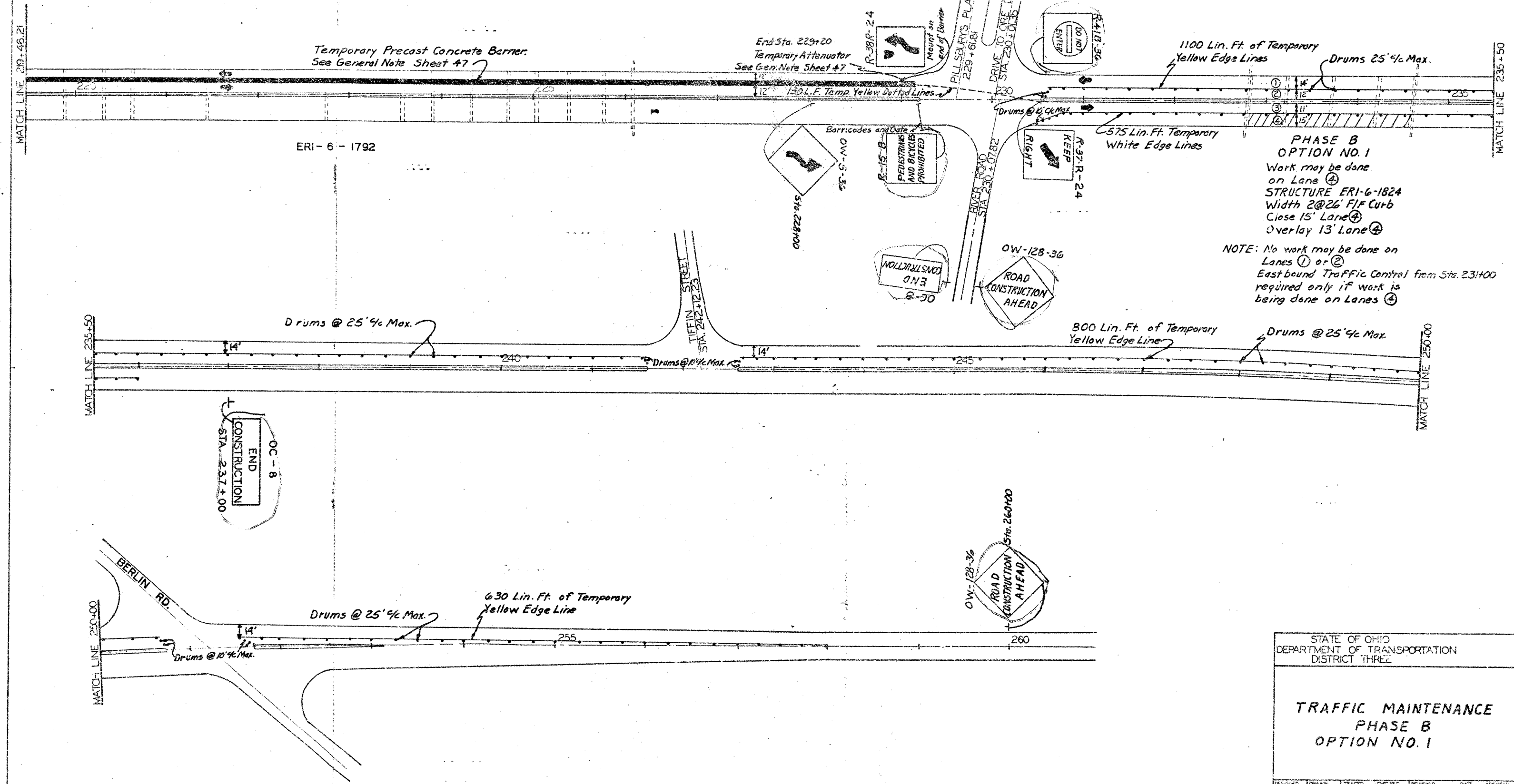


1100 Lin. Ft. of Temporary White Edge Line
575 Lin. Ft. of Temporary White Edge Line
70 Lin. Ft. of Temp. Yellow Edge Line
750 Lin. Ft. of Temporary White Edge Line
630 Lin. Ft. of Temporary White Edge Line

PHASE A
OPTION NO. 2
Work may be done on Lanes ① and/or ④
STRUCTURE ERI-6-1824 Width 2@26' F/F Curb. Close 15' each direction, Overlay 13' each direction.

NOTE: EASTBOUND TRAFFIC CONTROL FROM STATION 231+00 required only if work is being done on Lanes ③ or ④.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT THREE						
TRAFFIC MAINTENANCE PHASE A OPTION NO. 2						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
				LN	5/83	



Temporary Precast Concrete Barrier.
See General Note Sheet 47

End Sta. 229+20
Temporary Attenuator
See Gen. Note Sheet 47

1100 Lin. Ft. of Temporary
Yellow Edge Lines
Drums 25% Max.

ERI-6-1792

**PHASE B
OPTION NO. 1**

Work may be done
on Lane ④
STRUCTURE ERI-6-1824
Width 2@26' FIF Curb
Close 15' Lane ③
Overlay 13' Lane ④

NOTE: No work may be done on
Lanes ① or ②
East bound Traffic Control from Sta. 231+00
required only if work is
being done on Lanes ③

Drums @ 25% Max.

800 Lin. Ft. of Temporary
Yellow Edge Line
Drums @ 25% Max.

OC-8
END
CONSTRUCTION
STA. 237+00

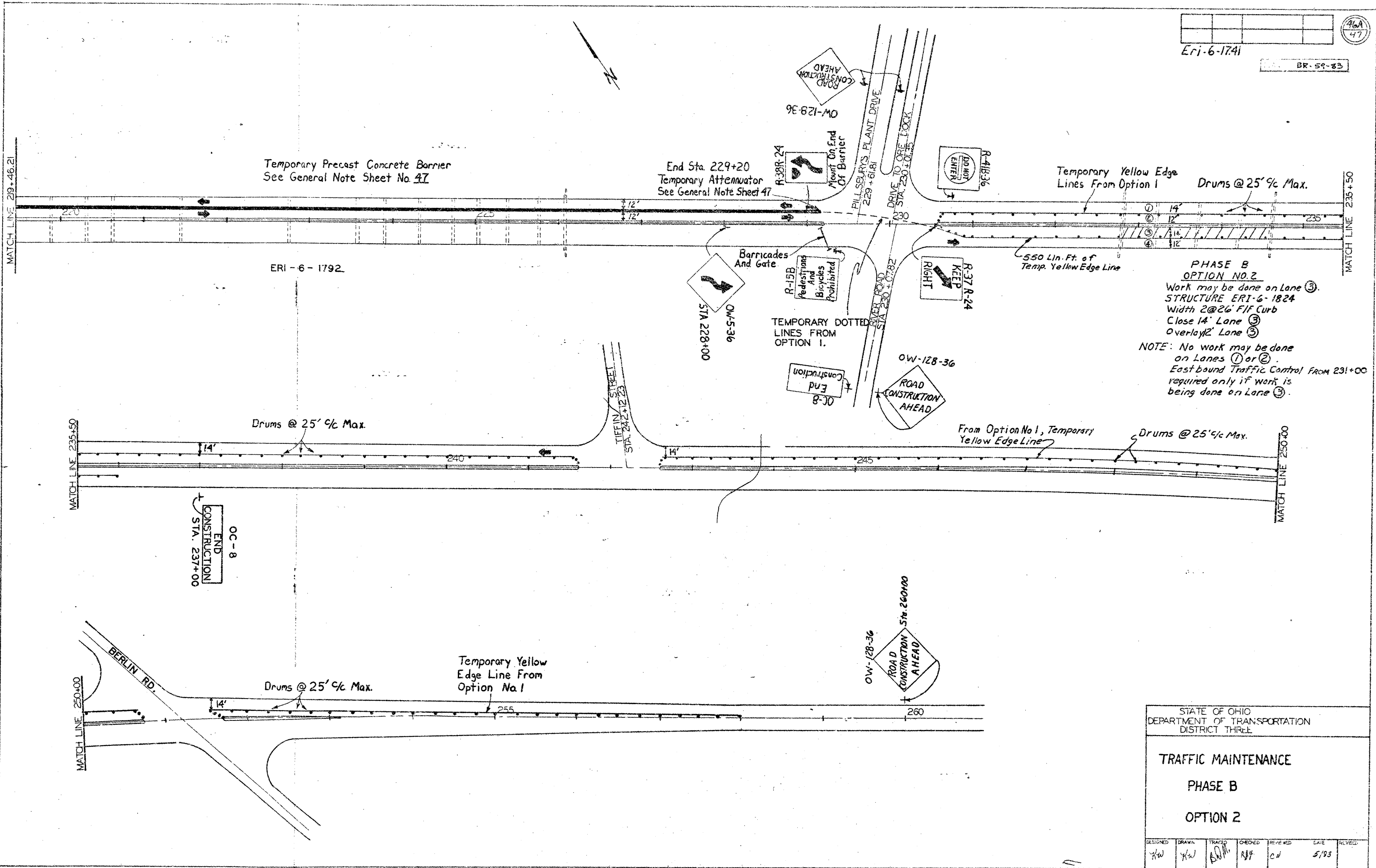
Drums @ 25% Max.

630 Lin. Ft. of Temporary
Yellow Edge Line
Drums @ 25% Max.

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

**TRAFFIC MAINTENANCE
PHASE B
OPTION NO. 1**

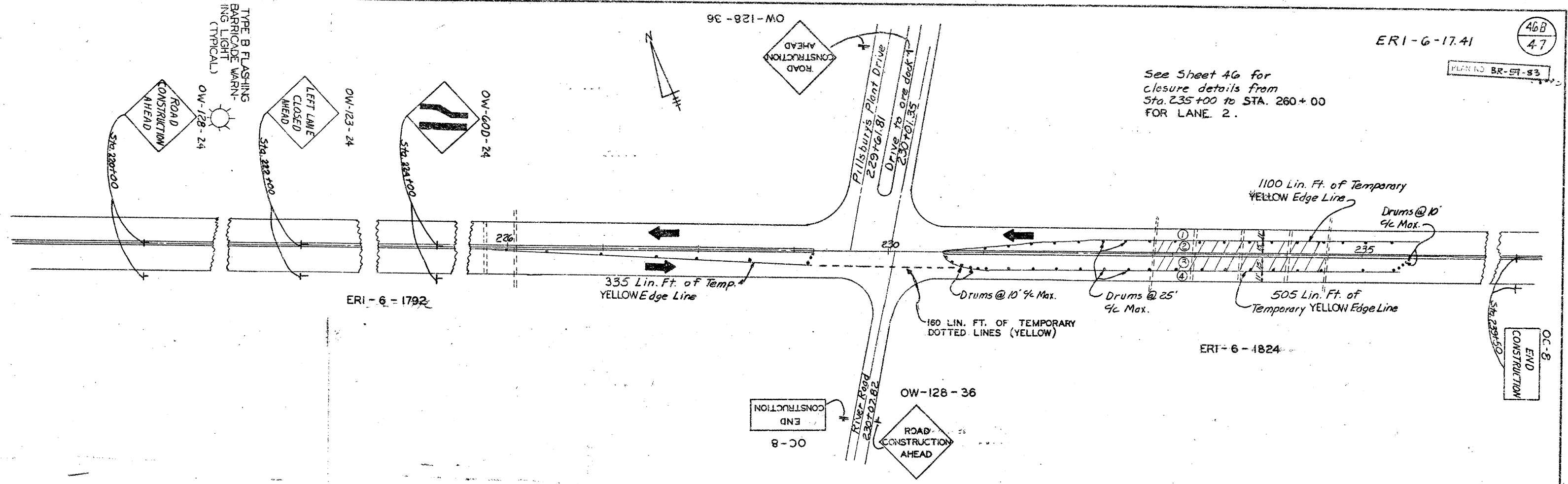
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
RW	RW	RW	RW	CW	5/88	



**PHASE B
OPTION NO. 2**
Work may be done on Lane ③.
STRUCTURE ERI-6-1824
Width 2@26' F/F Curb
Close 14' Lane ③
Overlay 12' Lane ③
NOTE: No work may be done on Lanes ① or ②. East bound Traffic Control From 231+00 required only if work is being done on Lane ③.

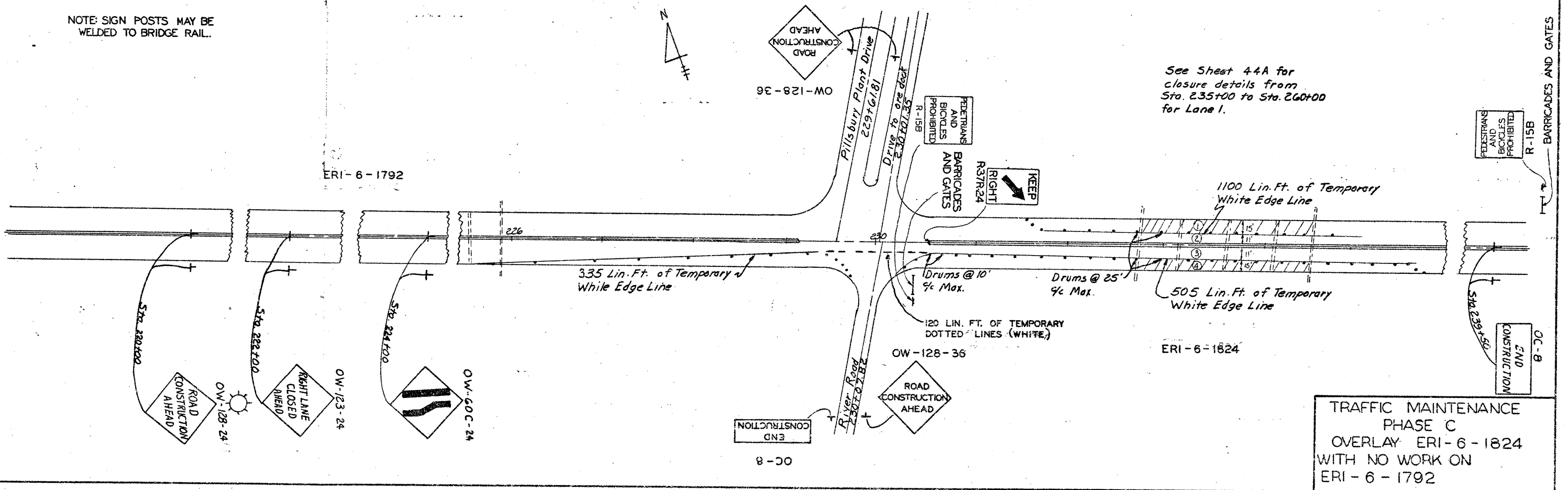
STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT THREE						
TRAFFIC MAINTENANCE						
PHASE B						
OPTION 2						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KW	KW	DM	BY	CD	5/93	

See Sheet 46 for
closure details from
Sta. 235+00 to STA. 260+00
FOR LANE 2.



NOTE: SIGN POSTS MAY BE
WELDED TO BRIDGE RAIL.

See Sheet 44A for
closure details from
Sta. 235+00 to Sta. 260+00
for Lane 1.



TRAFFIC MAINTENANCE
PHASE C
OVERLAY ERI-6-1824
WITH NO WORK ON
ERI-6-1792

BARRICADES AND GATES
R-15B
PEDESTRIANS
AND
BICYCLES
PROHIBITED

TEMPORARY PAVEMENT MARKINGS

NOTE B

CALK. BY. KW
 CHKD. BY. JEC 5-2-83

46C

ERI-6-1741

BR-59-83

GENERAL

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, AND WHEN NECESSARY, REMOVE TEMPORARY RETROREFLECTIVE PAVEMENT MARKINGS ON EXISTING, RECONSTRUCTED, RESURFACED OR TEMPORARY ROADS WITHIN THE WORK LIMITS, IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS.

THE MARKINGS SHALL BE MAINTAINED IN GOOD CONDITION DURING THE REQUIRED SERVICE PERIOD TO PROVIDE DAY AND NIGHT VISIBILITY. THE MARKINGS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER TO MAINTAIN REQUIRED VISIBILITY AND/OR REFLECTIVITY AT NO ADDITIONAL COST TO THE STATE.

MATERIALS

UNLESS OTHERWISE INDICATED ON THE PLANS, TEMPORARY PAVEMENT MARKINGS MAY BE OF PAINT, PAVEMENT MARKING TAPE OR REMOVABLE PAVEMENT MARKING TAPE (TYPE R TAPE).

A. PAINT

PAINT SHALL COMPLY WITH 708.14 AND SHALL BE APPLIED IN ACCORDANCE WITH 621 EXCEPT AS MODIFIED HEREIN.

B. PAVEMENT MARKING TAPE

FLEXIBLE RETROREFLECTIVE PREFORMED PRESSURE SENSITIVE TAPE SHALL HAVE STRAIGHT EDGES AND BE FREE OF CRACKS. THE TAPE SHALL CONSIST OF PIGMENT AND FILERS WITH SUFFICIENT BINDER AND PLASTICIZER TO RETAIN GLASS BEADS HAVING A REFRACTIVE INDEX MEETING THE MINIMUM REFLECTIVE INTENSITY STANDARD STATED IN THE MANUFACTURERS INFORMATION. THE TAPE SHALL BE FLEXOLITE "WET REFLECTIVE", 3M "SCOTCHLANE", OR AN APPROVED EQUAL.

THE GLASS BEADS SHALL BE DISTRIBUTED UNIFORMLY THROUGHOUT THE TAPE WITH SUFFICIENT SURFACE BEADS TO PROVIDE OPTIMUM REFLECTORIZATION AT ALL TIMES.

PAVEMENT MARKING TAPE SHALL COMPLY WITH THE COLOR REQUIREMENTS OF 708.14.

THE TAPE SHALL HAVE A PRECOATED ADHESIVE LAYER FOR PAVEMENT APPLICATION WITHOUT THE USE OF HEAT, SOLVENTS OR ADDITIONAL ADHESIVES. THE ADHESIVE SHALL BE SUFFICIENT TO RETAIN COMPLETE MARKINGS ON THE PAVEMENT SURFACE THROUGHOUT THE USEFUL LIFE OF THE MARKINGS.

IN ADDITION TO THE FOREGOING, ALL TEMPERATURE APPLICATION REQUIREMENTS AND OTHER APPLICABLE MANUFACTURERS MATERIAL AND APPLICATION INSTRUCTIONS SHALL BE FOLLOWED.

WHEN APPROVED BY THE ENGINEER THE CONTRACTOR MAY USE REMOVABLE PAVEMENT MARKING TAPE (TYPE R TAPE), IN LIEU OF THAT DESCRIBED ABOVE, TO FACILITATE REMOVAL OF MARKINGS.

C. REMOVABLE PAVEMENT MARKING TAPE (TYPE R TAPE)

THE MARKING MATERIAL SHALL BE A MIXTURE OF POLYMERIC MATERIALS, PIGMENTS, REINFORCING MEDIUM TO FACILITATE REMOVAL, GLASS BEADS THROUGHOUT THE PIGMENTED PORTION, AND A RETROREFLECTIVE LAYER OF GLASS BEADS BONDED TO THE TOP SURFACE.

THE TAPE SHALL BE PRECOATED WITH A PRESSURE SENSITIVE ADHESIVE CAPABLE OF TEMPORARILY BONDING TO ASPHALT CONCRETE OR PORTLAND CEMENT CONCRETE PAVEMENT AT AN AMBIENT TEMPERATURE OF NOT LESS THAN 50° F AND RISING, AT A PAVEMENT TEMPERATURE OF NOT LESS THAN 50° F NOR MORE THAN 150° F, WITHOUT THE USE OF HEAT, SOLVENTS, AND ADDITIONAL ADHESIVES OR ACTIVATORS.

MATERIALS SHALL CONFORM TO THE COLOR REQUIREMENTS OF 708.14.

THE TAPE SHALL BE REMOVABLE FROM ASPHALT AND PORTLAND CEMENT CONCRETE INTACT OR IN LARGE PIECES AT TEMPERATURES ABOVE 40° F WITHOUT USE OF HEAT, SOLVENTS, GRINDING, OR SANDBLASTING. REMOVAL SHALL NOT RESULT IN DAMAGE TO OR OBJECTIONABLE STAINING OF THE PAVEMENT.

GLASS BEADS SHALL BE PROVIDED IN A PROPER SIZE, QUANTITY, AND DISTRIBUTION TO ASSURE OPTIMUM RETROREFLECTIVITY AS THE FILM WEARS. THE FOLLOWING INITIAL AVERAGE REFLECTANCE VALUES AT 86.0° ENTRANCE ANGLE AS MEASURED IN ACCORDANCE WITH THE TESTING PROCEDURES OF FEDERAL TEST METHOD 370 SHALL BE CERTIFIED:

	WHITE		YELLOW	
OBSERVATION ANGLE	0.2	0.5	0.2	0.5
SPECIFIC LUMINANCE	1770	1270	1310	810
(MCD/FT ²)/FC				

THE TAPE SHALL BE 3-M COMPANY'S "STAMARK, DETOUR GRADE (SERIES 57L0, 57H, 6270, 62H)" OR AN APPROVED EQUAL.

THE CONTRACTOR SHALL FURNISH TO THE ENGINEER CERTIFICATION THAT THE MATERIAL SUPPLIED MEETS THE PROPERTIES SPECIFIED HEREIN.

LAYOUT

THE TEMPORARY MARKINGS SHALL BE ACCURATELY LAID OUT IN CONFORMANCE WITH 621.051 AND SHALL BE LOCATED IN A TRUE LINE ON THE CENTER LINE, LANE LINE, EDGE LINE, OR CHANNELIZING LINE WHERE PERMANENT MARKINGS WOULD BE UNLESS OTHERWISE SPECIFIED IN THE PLANS.

PLACEMENT

TEMPORARY MARKINGS SHALL BE PLACED IN ACCORDANCE WITH LAYOUTS ON SHEETS AS SHOWN AND THE FOLLOWING REQUIREMENTS, UNLESS OTHERWISE SPECIFIED IN THE PLANS.

TEMPORARY MARKINGS SHALL BE COMPLETE AND IN PLACE ON ALL PAVEMENT PRIOR TO EXPOSING IT TO TRAFFIC. WHEN TEMPORARY MARKINGS ARE NO LONGER NEEDED, THEY SHALL BE REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH 621.134 AND NECESSARY PAVEMENT MARKINGS INSTALLED BEFORE THE FLOW OF TRAFFIC IS CHANGED TO THE NEXT PHASE OR RETURNED TO ITS NORMAL CHANNEL.

WHERE PERMANENT PAVEMENT MARKINGS ARE CALLED FOR IN THE PLANS, THE CONTRACTOR SHALL FURNISH AND PLACE THE PERMANENT MARKINGS WITHIN 30 CALENDAR DAYS FOLLOWING COMPLETION OF ALL SURFACE COURSES IN A SINGLE ROADWAY OR PRIOR TO THE END OF THE CONSTRUCTION SEASON, WHICHEVER COMES FIRST. PERMANENT MARKINGS SHALL NOT BE PLACED OVER ANY TAPE MARKINGS.

A. CLASS I MARKINGS

CLASS I MARKINGS SHALL BE AS DEFINED IN 621, EXCEPT AS FOLLOWS:

- 1) LANE LINES SHALL BE 4-INCHES IN WIDTH.
- 2) TRANSVERSE LINES SHALL BE 8-INCHES IN WIDTH.
- 3) STOP LINES SHALL BE 12-INCHES IN WIDTH.
- 4) CROSS WALK LINES SHALL BE 8-INCHES IN WIDTH.

GORE MARKINGS SHALL CONSIST OF TWO CHANNELIZING LINES PLACED AT THE THEORETICAL OR TEMPORARY GORE OF RAMPS AND DIVERGING OR CONVERGING ROADWAYS.

THE PAINT APPLICATION RATE SHALL BE NOT LESS THAN 16 GALLONS PER MILE FOR SOLID 4-INCH LINES, 24 GALLONS PER MILE FOR SOLID 6-INCH LINES, 48 GALLONS PER MILE FOR SOLID 12-INCH LINES, AND 4 GALLONS PER MILE FOR 4-INCH DASHED LINES.

B. CLASS II MARKINGS

CENTER LINES SHALL CONSIST OF SINGLE, YELLOW 12-INCH BY 4-INCH DASHES SPACED AT A MAXIMUM OF 40-FOOT INTERVALS.

LANE LINES SHALL CONSIST OF WHITE 12-INCH BY 4-INCH DASHES SPACED AT A MAXIMUM OF 40-FOOT INTERVALS.

CHANNELIZING LINES SHALL CONSIST OF WHITE 12-INCH BY 4-INCH DASHES SPACED AT A MAXIMUM OF 20-FOOT INTERVALS.

GORE MARKINGS SHALL BE TWO CONTINUOUS, WHITE 50-FOOT BY 4-INCH LINES PLACED AT THE THEORETICAL GORE OF AN EXIT RAMP OR DIVERGING ROADWAYS.

THE PAINT APPLICATION RATE SHALL BE NOT LESS THAN 16 GALLONS PER MILE FOR GORE MARKINGS, 0.8 GALLONS PER MILE FOR CHANNELIZING LINE, AND 0.4 GALLONS PER MILE FOR LANE LINE AND CENTER LINE.

CONFLICTING MARKINGS

THE CONTRACTOR SHALL, PRIOR TO PLACING TEMPORARY MARKINGS, REMOVE ALL EXISTING CONFLICTING MARKINGS VISIBLE TO THE TRAVELING PUBLIC DURING DAYLIGHT OR NIGHTTIME HOURS IN ACCORDANCE WITH 621.134. THE COST FOR REMOVAL OF CONFLICTING MARKINGS SHALL BE INCIDENTAL TO THE VARIOUS PAY ITEMS.

METHOD OF MEASUREMENT

TEMPORARY PAVEMENT MARKINGS WILL BE MEASURED COMPLETE IN PLACE, BY CLASS AND MATERIAL, IN THE UNITS DESIGNATED. DASHED LINE QUANTITIES WILL BE THE LENGTH OF THE COMPLETED STRIPE, INCLUDING GAPS, INTERSECTIONS, AND OTHER SECTIONS OF PAVEMENT NOT NORMALLY MARKED, IN ACCORDANCE WITH 621.15.

TEMPORARY PAVEMENT MARKINGS WILL INCLUDE THE LAYOUT, APPLICATION AND REMOVAL OF THE MARKINGS, WHEN REQUIRED.

BASIS OF PAYMENT

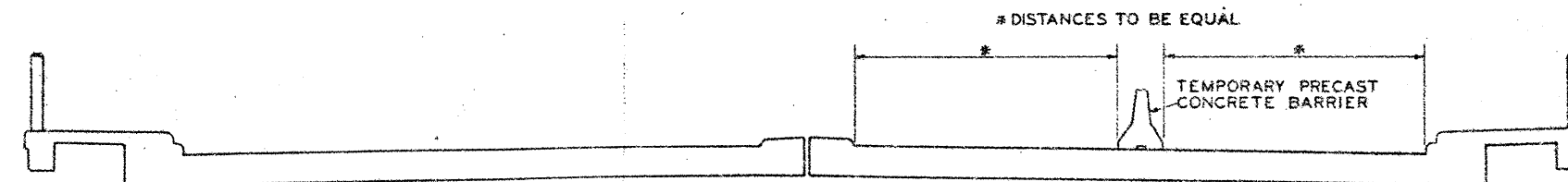
PAYMENT FOR ACCEPTED QUANTITIES COMPLETE IN PLACE WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL

COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR PLACEMENT, MAINTENANCE AND NECESSARY REMOVAL OF THE MARKINGS.

ITEM	UNIT	DESCRIPTION
614	MILES	TEMPORARY LANE LINES, CLASS I, (PAINT, TAPE OR TYPE R TAPE)
614	MILES	TEMPORARY CENTER LINES, CLASS I, (PAINT, TAPE OR TYPE R TAPE)
614	MILES/LIN. FT.	TEMPORARY CHANNELIZING LINES, CLASS I, (PAINT, TAPE OR TYPE R TAPE)
614	MILES	TEMPORARY EDGE LINES, CLASS I, (PAINT, TAPE OR TYPE R TAPE)
614	LIN. FT.	TEMPORARY GORE MARKING, CLASS II, (PAINT, TAPE OR TYPE R TAPE)
614	LIN. FT.	TEMPORARY STOP LINES, CLASS I, (PAINT, TAPE OR TYPE R TAPE)
614	LIN. FT.	TEMPORARY CROSSWALK LINES, CLASS I, (PAINT, TAPE OR TYPE R TAPE)
614	EACH	TEMPORARY LANE ARROWS, CLASS I, (PAINT, TAPE OR TYPE R TAPE)
614	EACH	TEMPORARY WORD "ONLY" ON PAVEMENT, 72-INCH, CLASS I, (PAINT OR TAPE)
614	LIN. FT.	TEMPORARY TRANSVERSE LINES, CLASS I, (PAINT, TAPE OR TYPE R TAPE)
614	LIN. FT.	TEMPORARY DOTTED LINES, CLASS I, (PAINT, TAPE OR TYPE R TAPE)

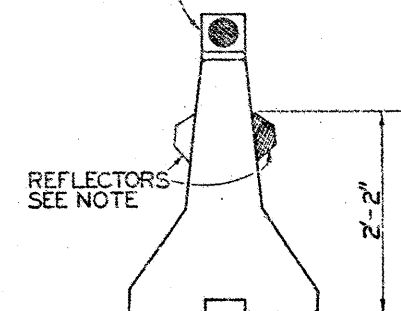
ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
614	2.03	MILES	TEMPORARY EDGE LINES, CLASS I, PAINT
614	560	LIN. FT.	TEMPORARY DOTTED LINES, 4 INCH, CLASS I, PAINT
614	525	LIN. FT.	TEMPORARY CHANNELIZING LINES, CLASS I, PAINT



TYPE "C" STEADY BURNING BARRICADE WARNING LIGHT. SEE NOTE.

THE LIGHTS AND REFLECTORS SHALL ALTERNATE AT 50' INTERVALS. SEE NOTE.



TEMPORARY PRECAST CONCRETE BARRIER WITH REFLECTORS AND LIGHTS.

ITEM 614 MAINTAINING TRAFFIC FOR DECK REPAIR AND OVERLAY

TRAFFIC SHALL BE MAINTAINED AS INDICATED IN THE PLANS AND AS OUTLINED IN THE "OHIO DEPARTMENT OF TRANSPORTATION MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS", CURRENT EDITION WITH LATEST REVISIONS AT THE TIME THE CONTRACT IS AWARDED. THE PLANS SHALL CONSTITUTE THE MINIMUM PROVISIONS FOR TRAFFIC CONTROL. THE PROJECT ENGINEER MAY DIRECT A CHANGE IN THE LOCATION OF THE PLAN TRAFFIC CONTROL DEVICES, AND ADDITIONAL OR ALTERNATIVE DEVICES, TO MEET FIELD CONDITIONS, AT NO ADDITIONAL COST TO THE STATE, UNLESS PAID FOR AS SPECIFIC BID ITEMS. THE CONTRACTOR SHALL ALSO PROVIDE SUFFICIENT ADDITIONAL TRAFFIC CONTROL DEVICES TO PROTECT THE WORK AREA AS DIRECTED BY THE ENGINEER.

- 1.) TYPE "C" STEADY BURNING BARRICADE WARNING LIGHTS SHALL BE BOLTED ON THE TOP OF THE CONCRETE BARRIER. REFLECTORS SHALL ALSO BE MOUNTED TO THE CONCRETE BARRIER AS SHOWN ON THIS SHEET. THE REFLECTORS SHALL BE MODEL 965 BARRIER DELINEATORS AS MANUFACTURED BY THE AMERACE CORPORATION, SIGNAL PRODUCTS DIVISIONS, 7542 NORTH NATCHEZ AVENUE, NILES, ILLINOIS 60648, TELEPHONE: (312)-647-7717 OR AN APPROVED EQUAL. THE LIGHTS AND REFLECTORS SHALL ALTERNATE AT FIFTY (50) FOOT INTERVALS.
- 2.) TYPE "C" STEADY BURNING BARRICADE WARNING LIGHTS SHALL BE MOUNTED ON ALL DRUMS.
- 3.) THE CONTRACTOR MAY NOT CROSS OVER TRAFFIC WHILE ONLY WORKING ON ERI-6-1824. WHILE WORKING ON ERI-6-1792, THE CONTRACTOR MAY WORK ON ERI-6-1824 USING THE TRAFFIC CONTROL OPTIONS AS SHOWN ON SHEET NO. ~~44-46, 46~~ OTHERWISE THE CONTRACTOR SHALL USE ONE LANE CLOSURES TO WORK ON ERI-6-1824 EITHER BEFORE OR AFTER WORKING ON ERI-6-1792. SEE SHEET NO. ~~46B~~.
- 4.) IF THE CONTRACTOR FAILS TO COMPLY WITH THE PROVISIONS FOR TRAFFIC CONTROL AS SET FORTH IN THESE PLANS OR WITH PROVISIONS OF THE MANUAL, AND SUCH FAILURE RESULTS IN A CONDITION AT THE WORK SITE WHICH IS UNSAFE FOR TRAFFIC, THE ENGINEER SHALL SUSPEND WORK UNTIL THE CONTRACTOR COMPLIES WITH THE NECESSARY REQUIREMENTS.
- 5.) THE CONTRACTOR SHALL NOTIFY THE DISTRICT CONSTRUCTION ENGINEER AT LEAST FIFTEEN (15) DAYS PRIOR TO SETTING UP THE TRAFFIC CONTROL, SO THAT HE MAY SEND A TELETYPE TO STOP ALL PERMIT WIDE LOADS FROM PASSING THROUGH THE CONSTRUCTION AREA.
- 6.) THE CITY OF HURON WILL COORDINATE THE STOP LIGHTS WITH THE PROPOSED TRAFFIC CONTROL. THE CONTRACTOR SHALL NOTIFY THE CITY OF HURON IN WRITING AT LEAST FIFTEEN (15) DAYS PRIOR TO SETTING UP THE TRAFFIC CONTROL.

PAYMENT FOR THE ABOVE, UNLESS SPECIFIED SEPARATELY, SHALL BE AT THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 622 TEMPORARY PRECAST CONCRETE BARRIER, AS PER PLAN.

BEFORE ANY BRIDGE WORK IS PERFORMED ON ERI-6-1792, THE BARRIER SHALL BE PLACED AS SHOWN ON SHEET NO. ~~43-47~~. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY.

622 TEMPORARY PRECAST CONCRETE BARRIER, AS PER PLAN 1530 LIN. FT. THE BARRIER SECTIONS MUST BE TIED TOGETHER WITH CONNECTING PINS IN ACCORDANCE WITH STANDARD DRAWING MC-9A. TONGUE AND GROOVE SECTIONS WILL NOT BE PERMITTED ON THIS PROJECT.

UPON COMPLETION OF THE BRIDGE REHABILITATION, THE TEMPORARY PRECAST CONCRETE BARRIER SHALL BECOME THE PROPERTY OF THE STATE. THE CONTRACTOR SHALL STORE THE BARRIER ON THE JOB SITE UNTIL IT CAN BE PICKED-UP BY STATE FORCES. THE CONTRACTOR SHALL ALSO MAKE AVAILABLE TO THE STATE ANY APPROPRIATE HANDLING DEVICES NEEDED TO LOAD THE BARRIER.

PAYMENT SHALL BE AT THE UNIT PRICE BID PER LINEAR FOOT FOR ITEM 622 TEMPORARY PRECAST CONCRETE BARRIER, AS PER PLAN WHICH SHALL INCLUDE ALL COST FOR FURNISHING THE BARRIER, AS WELL AS LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO SETUP, MAINTAIN, REARRANGE, DISMANTLE AND STORE THE PRECAST BARRIERS.

ITEM SPECIAL - IMPACT ATTENUATOR, GREAT SYSTEM, MODEL NUMBER 200200 N36-CZ

THIS WORK SHALL CONSIST OF FURNISHING AN IMPACT ATTENUATOR UNIT AND PORTABLE STEEL PLATFORM WITH INTEGRAL BACK-UP ASSEMBLY AND TWO (2) STANDARD TRANSITION PANELS AND ANY OTHER RELATED INCIDENTAL ITEMS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL GREAT IMPACT ATTENUATOR SYSTEM, AS SUPPLIED BY ENERGY ABSORPTION SYSTEMS, ONE (1) 136 PLAZA, CHICAGO, ILLINOIS 60611, OR EQUAL. THE ATTENUATOR SHALL BE PLACED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND AT THE LOCATION SHOWN ON SHEET'S NO. ~~44-46~~ AND IN REASONABLY CLOSE CONFORMITY WITH THE LINES, GRADES, THICKNESSES AND TYPICAL SECTIONS SHOWN ON THE PLANS OR ESTABLISHED BY THE ENGINEER.

UNTIL ACCEPTANCE OF THE ATTENUATOR AND APPURTENANCES BY THE STATE AT THE END OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTION, REPAIRING, REPOSITIONING AND OTHERWISE RESTORING THE GREAT ATTENUATOR IN ACCORDANCE WITH THE MANUFACTURER'S MAINTENANCE INSTRUCTIONS WHILE IT IS IN USE ON THE PROJECT. SUCH REPAIRS SHALL BE PERFORMED WITH TWENTY-FOUR (24) HOURS OF THE INCIDENT WHICH CAUSED DAMAGE TO THE ATTENUATOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING ALL NECESSARY MATERIALS AND EQUIPMENT REQUIRED TO PERFORM THE ABOVE DESCRIBED RESTORATION OF THE ATTENUATOR EXCEPT FOR ONE (1) EXTRA COMPLETE SET OF HEX-FOAM CARTRIDGES, AS SUPPLIED BY ENERGY ABSORPTION SYSTEMS, WHICH SHALL BE INCLUDED IN THE COST OF THE ATTENUATOR.

UPON COMPLETION OF THE PROJECT, THE IMPACT ATTENUATOR PLATFORM, BACKUP, TRANSITION PANELS IN RESTORED AND FUNCTIONAL CONDITION AND ANY UNUSED HEX-FOAM CARTRIDGES FROM THE ORIGINAL REPLACEMENT SET SHALL BECOME THE PROPERTY OF THE STATE AND SHALL BE STORED ON THE PROJECT FOR PICK-UP BY THE STATE.

THE NOSE COVER OF THE ATTENUATOR SHALL BE MARKED WITH EVENLY SPACED 4" WIDE HORIZONTAL STRIPES OF WHITE REFLECTIVE MATERIAL.

THE ACCEPTED QUANTITY OF IMPACT ATTENUATORS WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH INSTALLATION UNDER ITEM SPECIAL IMPACT ATTENUATOR GREAT SYSTEM, CZ MODEL NO. 200200 N36-CZ.

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

TRAFFIC MAINTENANCE
NOTES

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KW	BS	BS	RJ	CA	5/83	