



CALL NO. 100

CONTRACT ID. 121002

CAMPBELL COUNTY

FED/STATE PROJECT NUMBER IM NH 4714(034)

DESCRIPTION ALEXANDRIA-CINCINNATI ROAD (I-471)

WORK TYPE JPC PAVEMENT REPAIRS

PRIMARY COMPLETION DATE 12/1/2012

LETTING DATE: February 24, 2012

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN STANDARD TIME February 24, 2012. Bids will be publicly announced at 10:00 AM EASTERN STANDARD TIME.

ROAD AND BRIDGE PLANS

DBE CERTIFICATION REQUIRED - 5%

REQUIRED BID PROPOSAL GUARANTY: Not less than 5% of the total bid.

TABLE OF CONTENTS

PART I	SCOPE OF WORK
	<ul style="list-style-type: none">• PROJECT(S), COMPLETION DATE(S), & LIQUIDATED DAMAGES• CONTRACT NOTES• FEDERAL CONTRACT NOTES• SIGNIFICANT PROJECT -PROJECT TRAFFIC COORDINATOR (PTC)• ASPHALT MIXTURE• DGA BASE• DGA BASE FOR SHOULDERS• INCIDENTAL SURFACING• JPC RIDE QUALITY• ASPHALT PAVEMENT RIDE QUALITY CAT A• COMPACTION OPTION A• SPECIAL NOTE(S) APPLICABLE TO PROJECT• WASTE AND BORROW SITES• INSTALLATION OF TRAFFIC COUNTING INDUCTANCE LOOPS• RIGHT OF WAY NOTES• UTILITY CLEARANCE• PRE-BID CONFERENCE
PART II	SPECIFICATIONS AND STANDARD DRAWINGS
	<ul style="list-style-type: none">• SPECIFICATIONS REFERENCE• SUPPLEMENTAL SPECIFICATIONS• [SN-1I] PORTABLE CHANGEABLE SIGNS• [SN-2E] ROADBED STABILIZATION AT BRIDGE ENDS• [SN-9Y] MATERIAL TRANSFER VEHICLE• [SN-10W] WATERBLASTING STRIPING REMOVAL
PART III	EMPLOYMENT, WAGE AND RECORD REQUIREMENTS
	<ul style="list-style-type: none">• FEDERAL-AID CONSTRUCTION CONTRACTS - FHWA 1273• NONDISCRIMINATION OF EMPLOYEES• EXECUTIVE BRANCH CODE OF ETHICS• PROJECT WAGE RATES• NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EEO
PART IV	INSURANCE
PART V	BID ITEMS

PART I
SCOPE OF WORK

CONTRACT ID - 121002

ADMINISTRATIVE DISTRICT - 06

PROJECT(S) IDENTIFICATION AND DESCRIPTION:

COUNTY - CAMPBELL
IM NH 4714(034)

PCN - DE01904711202

ALEXANDRIA-CINCINNATI ROAD (I-471) STRUCTURAL OVERLAY ON I-471 FROM US 27 NORTH TO THE
OHIO STATE LINE. JPC PAVEMENT REPAIRS. SYP NO. 06-02021.00.
GEOGRAPHIC COORDINATES LATITUDE 39^04'08" LONGITUDE 84^27'48"

COMPLETION DATE(S):

COMPLETION DATE - December 01, 2012
NORTHBOUND SECTION

COMPLETION DATE - December 01, 2013
SOUTHBOUND SECTION

CONTRACT NOTES

PROPOSAL ADDENDA

All addenda to this proposal must be applied when calculating bid and certified in the bid packet submitted to the Kentucky Department of Highways. Failure to use the correct and most recent addenda may result in the bid being rejected.

BID SUBMITTAL

Bidder must use the Department's Expedite Bidding Program available on the Internet web site of the Department of Highways, Division of Construction Procurement. (www.transportation.ky.gov/contract)

The Bidder must download the bid file located on the Bid Express website (www.bidx.com) to prepare a bid packet for submission to the Department. The bidder must submit electronically using Bid Express.

JOINT VENTURE BIDDING

Joint venture bidding is permissible. All companies in the joint venture must be prequalified in one of the work types in the Qualifications for Bidders for the project. The bidders must get a vendor ID for the joint venture from the Division of Construction Procurement and register the joint venture as a bidder on the project. Also, the joint venture must obtain a digital ID from Bid Express to submit a bid. A joint bid bond of 5% may be submitted for both companies or each company may submit a separate bond of 5%.

UNDERGROUND FACILITY DAMAGE PROTECTION

The contractor is advised that the Underground Facility Damage Protection Act of 1994, became law January 1, 1995. It is the contractor's responsibility to determine the impact of the act regarding this project, and take all steps necessary to be in compliance with the provision of the act.

REGISTRATION WITH THE SECRETARY OF STATE BY A FOREIGN ENTITY

Pursuant to KRS 176.085(1)(b), an agency, department, office, or political subdivision of the Commonwealth of Kentucky shall not award a state contract to a person that is a foreign entity required by [KRS 14A.9-010](#) to obtain a certificate of authority to transact business in the Commonwealth ("certificate") from the Secretary of State under [KRS 14A.9-030](#) unless the person produces the certificate within fourteen (14) days of the bid or proposal opening. If the foreign entity is not required to obtain a certificate as provided in [KRS 14A.9-010](#), the foreign entity should identify the applicable exception. Foreign entity is defined within [KRS 14A.1-070](#).

For all foreign entities required to obtain a certificate of authority to transact business in the Commonwealth, if a copy of the certificate is not received by the contracting agency within the time frame identified above, the foreign entity's solicitation response shall be deemed non-responsive or the awarded contract shall be cancelled.

Businesses can register with the Secretary of State at <https://secure.kentucky.gov/sos/ftbr/welcome.aspx>.

SPECIAL NOTE FOR PROJECT QUESTIONS DURING ADVERTISEMENT

Questions about projects during the advertisement should be submitted in writing to the Division of Construction Procurement. This may be done by fax (502) 564-7299 or email to kytc.projectquestions@ky.gov. The Department will attempt to answer all submitted questions. The Department reserves the right not to answer if the question is not pertinent or does not aid in clarifying the project intent.

The deadline for posting answers will be 3:00 pm Eastern Daylight Time, the day preceding the Letting. Questions may be submitted until this deadline with the understanding that the later a question is submitted, the less likely an answer will be able to be provided.

The questions and answers will be posted for each Letting under the heading "Questions & Answers" on the Construction Procurement website (www.transportation.ky.gov/contract). The answers provided shall be considered part of this Special Note and, in case of a discrepancy, will govern over all other bidding documents.

ACCESS TO RECORDS

The contractor, as defined in KRS 45A.030 (9) agrees that the contracting agency, the Finance and Administration Cabinet, the Auditor of Public Accounts, and the Legislative Research Commission, or their duly authorized representatives, shall have access to any books, documents, papers, records, or other evidence, which are directly pertinent to this contract for the purpose of financial audit or program review. Records and other prequalification information confidentially disclosed as part of the bid process shall not be deemed as directly pertinent to the contract and shall be exempt from disclosure as provided in KRS 61.878(1)(c). The contractor also recognizes that any books, documents, papers, records, or other evidence, received during a financial audit or program review shall be subject to the Kentucky Open Records Act, KRS 61.870 to 61.884.

In the event of a dispute between the contractor and the contracting agency, Attorney General, or the Auditor of Public Accounts over documents that are eligible for

production and review, the Finance and Administration Cabinet shall review the dispute and issue a determination, in accordance with Secretary's Order 11-004. (See attachment)

10/18/2011



Steven L. Beshear
Governor

Commonwealth of Kentucky
Finance and Administration Cabinet
OFFICE OF THE SECRETARY
Room 383, Capitol Annex
702 Capital Avenue
Frankfort, KY 40601-3462
(502) 564-4240
Fax (502) 564-6785

Lori H. Flanery
Secretary

SECRETARY'S ORDER 11-004

FINANCE AND ADMINISTRATION CABINET

Vendor Document Disclosure

WHEREAS, in order to promote accountability and transparency in governmental operations, the Finance and Administration Cabinet believes that a mechanism should be created which would provide for review and assistance to an Executive Branch agency if said agency cannot obtain access to documents that it deems necessary to conduct a review of the records of a private vendor that holds a contract to provide goods and/or services to the Commonwealth; and

WHEREAS, in order to promote accountability and transparency in governmental operations, the Finance and Administration Cabinet believes that a mechanism should be created which would provide for review and assistance to an Executive Branch agency if said agency cannot obtain access to documents that it deems necessary during the course of an audit, investigation or any other inquiry by an Executive Branch agency that involves the review of documents; and

WHEREAS, KRS 42.014 and KRS 12.270 authorizes the Secretary of the Finance and Administration Cabinet to establish the internal organization and assignment of functions which are not established by statute relating to the Finance and Administration Cabinet; further, KRS Chapter 45A.050 and 45A.230 authorizes the Secretary of the Finance and Administration Cabinet to procure, manage and control all supplies and services that are procured by the Commonwealth and to intervene in controversies among vendors and state agencies; and

NOW, THEREFORE, pursuant to the authority vested in me by KRS 42.014, KRS 12.270, KRS 45A.050, and 45A.230, I, Lori H. Flanery, Secretary of the Finance and Administration Cabinet, do hereby order and direct the following:

- I. Upon the request of an Executive Branch agency, the Finance and Administration Cabinet ("FAC") shall formally review any dispute arising where the agency has requested documents from a private vendor that holds a state contract and the vendor has refused access to said documents under a claim that said documents are not directly pertinent or relevant to the agency's inquiry upon which the document request was predicated.
- II. Upon the request of an Executive Branch agency, the FAC shall formally review any situation where the agency has requested documents that the agency deems necessary to

conduct audits, investigations or any other formal inquiry where a dispute has arisen as to what documents are necessary to conclude the inquiry.

- III. Upon receipt of a request by a state agency pursuant to Sections I & II, the FAC shall consider the request from the Executive Branch agency and the position of the vendor or party opposing the disclosure of the documents, applying any and all relevant law to the facts and circumstances of the matter in controversy. After FAC's review is complete, FAC shall issue a Determination which sets out FAC's position as to what documents and/or records, if any, should be disclosed to the requesting agency. The Determination shall be issued within 30 days of receipt of the request from the agency. This time period may be extended for good cause.
- IV. If the Determination concludes that documents are being wrongfully withheld by the private vendor or other party opposing the disclosure from the state agency, the private vendor shall immediately comply with the FAC's Determination. Should the private vendor or other party refuse to comply with FAC's Determination, then the FAC, in concert with the requesting agency, shall effectuate any and all options that it possesses to obtain the documents in question, including, but not limited to, jointly initiating an action in the appropriate court for relief.
- V. Any provisions of any prior Order that conflicts with the provisions of this Order shall be deemed null and void.

FEDERAL CONTRACT NOTES

The Kentucky Department of Highways, in accordance with the Regulations of the United States Department of Transportation 23 CFR 635.112 (h), hereby notifies all bidders that failure by a bidder to comply with all applicable sections of the current Kentucky Standard Specifications, including, but not limited to the following, may result in a bid not being considered responsive and thus not eligible to be considered for award:

102.02 Current Capacity Rating 102.10 Delivery of Proposals
102.08 Irregular Proposals 102.14 Disqualification of Bidders
102.09 Proposal Guaranty

CIVIL RIGHTS ACT OF 1964

The Kentucky Department of Highways, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252) and the Regulations of the Federal Department of Transportation (49 C.F.R., Part 21), issued pursuant to such Act, hereby notifies all bidders that it will affirmatively insure that the contract entered into pursuant to this advertisement will be awarded to the lowest responsible bidder without discrimination on the ground of race, color, or national origin.

NOTICE TO ALL BIDDERS

To report bid rigging activities call: 1-800-424-9071.

The U.S. Department of Transportation (DOT) operates the above toll-free “hotline” Monday through Friday, 8:00 a.m. to 5:00 p.m. eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the “hotline” to report such activities.

The “hotline” is part of the DOT’s continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

FHWA 1273

Contrary to Paragraph VI of FHWA 1273, contractors on National Highway System (NHS) projects of \$1 million or more are no longer required to submit Form FHWA-47.

SECOND TIER SUBCONTRACTS

Second Tier subcontracts on federally assisted projects shall be permitted. However, in the case of DBE's, second tier subcontracts will only be permitted where the other subcontractor is also a DBE. All second tier subcontracts shall have the consent of both the Contractor and the Engineer.

DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

It is the policy of the Kentucky Transportation Cabinet ("the Cabinet") that Disadvantaged Business Enterprises ("DBE") shall have the opportunity to participate in the performance of highway construction projects financed in whole or in part by Federal Funds in order to create a level playing field for all businesses who wish to contract with the Cabinet. To that end, the Cabinet will comply with the regulations found in 49 CFR Part 26, and the definitions and requirements contained therein shall be adopted as if set out verbatim herein.

The Cabinet, contractors, subcontractors, and sub-recipients shall not discriminate on the basis of race, color, national origin, or sex in the performance of work performed pursuant to Cabinet contracts. The contractor shall carry out applicable requirements of 49 CFR 26 in the award and administration of federally assisted highway construction projects. The contractor will include this provision in all its subcontracts and supply agreements pertaining to contracts with the Cabinet.

Failure by the contractor to carry out these requirements is a material breach of its contract with the Cabinet, which may result in the termination of the contract or such other remedy as the Cabinet deems necessary.

DBE GOAL

The Disadvantaged Business Enterprise (DBE) goal established for this contract, as listed on the front page of the proposal, is the percentage of the total value of the contract.

The contractor shall exercise all necessary and reasonable steps to ensure that Disadvantaged Business Enterprises participate in a least the percent of the contract as set forth above as goals for this contract.

OBLIGATION OF CONTRACTORS

Each contractor prequalified to perform work on Cabinet projects shall designate and make

known to the Cabinet a liaison officer who is assigned the responsibility of effectively administering and promoting an active program for utilization of DBEs.

If a formal goal has not been designated for the contract, all contractors are encouraged to consider DBEs for subcontract work as well as for the supply of material and services needed to perform this work.

Contractors are encouraged to use the services of banks owned and controlled by minorities and women.

CERTIFICATION OF CONTRACT GOAL

Contractors shall include the following certification in bids for projects for which a DBE goal has been established. **BIDS SUBMITTED WHICH DO NOT INCLUDE CERTIFICATION OF DBE PARTICIPATION WILL NOT BE ACCEPTED.** These bids will not be considered for award by the Cabinet and they will be returned to the bidder.

“The bidder certifies that it has secured participation by Disadvantaged Business Enterprises (“DBE”) in the amount of ____ percent of the total value of this contract and that the DBE participation is in compliance with the requirements of 49 CFR 26 and the policies of the Kentucky Transportation Cabinet pertaining to the DBE Program.”

The certification statement is located in the electronic bid file. All contractors must certify their DBE participation on that page. DBEs utilized in achieving the DBE goal must be certified and prequalified for the work items at the time the bid is submitted.

DBE PARTICIPATION PLAN

Lowest responsive bidders must submit the *DBE Plan/ Subcontractor Request*, form TC 63-35 DBE, within 10 days of the letting. This is necessary before the Awards Committee will review and make a recommendation. **The project will not be considered for award prior to submission and approval of the apparent low bidder’s DBE Plan/Subcontractor Request.**

The DBE Participation Plan shall include the following:

- 1 Name and address of DBE Subcontractor(s) and/or supplier(s) intended to be used in the proposed project;
- 2 Description of the work each is to perform including the work item , unit, quantity, unit price and total amount of the work to be performed by the individual DBE. The Project Code Number (PCN), Category Number, and the Project Line Number can be found in the “material listing” on the Construction Procurement website under the specific letting;
- 3 The dollar value of each proposed DBE subcontract and the percentage of total project

contract value this represents. DBE participation may be counted as follows; a) If DBE suppliers and manufactures assume actual and contractual responsibility, the dollar value of materials to be furnished will be counted toward the goal as follows:

- The entire expenditure paid to a DBE manufacturer;
 - 60 percent of expenditures to DBE suppliers that are not manufacturers provided the supplier is a regular dealer in the product involved. A regular dealer must be engaged in, as its principal business and in its own name, the sale of products to the public, maintain an inventory and own and operate distribution equipment; and
 - The amount of fees or commissions charged by the DBE firms for a bona fide service, such as professional, technical, consultant, or managerial services and assistance in the procurement of essential personnel, facilities, equipment, materials, supplies, delivery of materials and supplies or for furnishing bonds, or insurance, providing such fees or commissions are determined to be reasonable and customary.
- b) The dollar value of services provided by DBEs such as quality control testing, equipment repair and maintenance, engineering, staking, etc.;
- c) The dollar value of joint ventures. DBE credit for joint ventures will be limited to the dollar amount of the work actually performed by the DBE in the joint venture;
- 4 Written and signed documentation of the bidder's commitment to use a DBE contractor whose participation is being utilized to meet the DBE goal; and
- 5 Written and signed confirmation from the DBE that it is participating in the contract as provided in the prime contractor's commitment.

UPON AWARD AND BEFORE A WORK ORDER WIL BE ISSUED

Contractors must submit the signed subcontract between the contractor and the DBE contractor, the DBE's certificate of insurance, and an affidavit for bidders, offerors, and contractors from the DBE to the Division of Construction Procurement. The affidavit can be found on the Construction Procurement website. If the DBE is a supplier of materials for the project, a signed purchase order and an affidavit for bidders, offerors, and contractors must be submitted to the Division of Construction Procurement.

Changes to DBE Participation Plans must be approved by the Cabinet. The Cabinet may consider extenuating circumstances including, but not limited to, changes in the nature or scope of the project, the inability or unwillingness of a DBE to perform the work in accordance with the bid, and/or other circumstances beyond the control of the prime contractor.

CONSIDERATION OF GOOD FAITH EFFORTS REQUESTS

If the DBE participation submitted in the bid by the apparent lowest responsive bidder does not

meet or exceed the DBE contract goal, the apparent lowest responsive bidder must submit a Good Faith Effort Package to satisfy the Cabinet that sufficient good faith efforts were made to meet the contract goals prior to submission of the bid. Efforts to increase the goal after bid submission will not be considered in justifying the good faith effort, unless the contractor can show that the proposed DBE was solicited prior to the letting date. DBEs utilized in achieving the DBE goal must be certified and prequalified for the work items at the time the bid is submitted. One complete set and nine (9) copies of this information must be received in the office of the Division of Contract Procurement no later than 12:00 noon of the tenth calendar day after receipt of notification that they are the apparent low bidder.

Where the information submitted includes repetitious solicitation letters it will be acceptable to submit a sample representative letter along with a distribution list of the firms solicited. Documentation of DBE quotations shall be a part of the good faith effort submittal as necessary to demonstrate compliance with the factors listed below which the Cabinet considers in judging good faith efforts. This documentation may include written subcontractors' quotations, telephone log notations of verbal quotations, or other types of quotation documentation.

The Good Faith Effort Package shall include, but may not be limited to information showing evidence of the following:

- 1 Whether the bidder attended any pre-bid meetings that were scheduled by the Cabinet to inform DBEs of subcontracting opportunities;
- 2 Whether the bidder provided solicitations through all reasonable and available means;
- 3 Whether the bidder provided written notice to all DBEs listed in the DBE directory at the time of the letting who are prequalified in the areas of work that the bidder will be subcontracting;
- 4 Whether the bidder followed up initial solicitations of interest by contacting DBEs to determine with certainty whether they were interested. If a reasonable amount of DBEs within the targeted districts do not provide an intent to quote or no DBEs are prequalified in the subcontracted areas, the bidder must notify the DBE Liaison in the Office of Minority Affairs to give notification of the bidder's inability to get DBE quotes;
- 5 Whether the bidder selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the contract goals. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise perform these work items with its own forces;
- 6 Whether the bidder provided interested DBEs with adequate and timely information about the plans, specifications, and requirements of the contract;
- 7 Whether the bidder negotiated in good faith with interested DBEs not rejecting them as unqualified without sound reasons based on a thorough investigation of their capabilities. Any rejection should be so noted in writing with a description as to why an agreement could not be reached;
- 8 Whether quotations were received from interested DBE firms but were rejected as unacceptable without sound reasons why the quotations were considered unacceptable. The fact that the DBE firm's quotation for the work is not the lowest quotation received will not in itself be considered as a sound reason for rejecting the quotation as unacceptable. The fact that the bidder has the ability and/or desire to perform the contract work with its own forces will not be

considered a sound reason for rejecting a DBE quote. Nothing in this provision shall be construed to require the bidder to accept unreasonable quotes in order to satisfy DBE goals;

9 Whether the bidder specifically negotiated with subcontractors to assume part of the responsibility to meet the contract DBE goal when the work to be subcontracted includes potential DBE participation;

10 Whether the bidder made any efforts and/or offered assistance to interested DBEs in obtaining the necessary equipment, supplies, materials, insurance and/or bonding to satisfy the work requirements of the bid proposal; and

11 Any other evidence that the bidder submits which may show that the bidder has made reasonable good faith efforts to include DBE participation.

FAILURE TO MEET GOOD FAITH REQUIREMENT

Where the apparent lowest responsive bidder fails to submit sufficient participation by DBE firms to meet the contract goal and upon a determination by the Good Faith Committee based upon the information submitted that the apparent lowest responsive bidder failed to make sufficient reasonable efforts to meet the contract goal, the bidder will be offered the opportunity to meet in person for administrative reconsideration. The bidder will be notified of the Committee's decision within 24 hours of its decision. The bidder will have 24 hours to request reconsideration of the Committee's decision. The reconsideration meeting will be held within two days of the receipt of a request by the bidder for reconsideration.

The request for reconsideration will be heard by the Office of the Secretary. The bidder will have the opportunity to present written documentation or argument concerning the issue of whether it met the goal or made an adequate good faith effort. The bidder will receive a written decision on the reconsideration explaining the basis for the finding that the bidder did or did not meet the goal or made adequate Good Faith efforts to do so.

The result of the reconsideration process is not administratively appealable to the Cabinet or to the United States Department of Transportation.

The Cabinet reserves the right to award the contract to the next lowest responsive bidder or to rebid the contract in the event that the contract is not awarded to the low bidder as the result of a failure to meet the good faith requirement.

SANCTIONS FOR FAILURE TO MEET DBE REQUIREMENTS OF THE PROJECT

Failure by the prime contractor to fulfill the DBE requirements of a project under contract or to demonstrate good faith efforts to meet the goal constitutes a breach of contract. When this occurs, the Cabinet will hold the prime contractor accountable, as would be the case with all other contract provisions. Therefore, the contractor's failure to carry out the DBE contract requirements shall constitute a breach of contract and as such the Cabinet reserves the right to

exercise all administrative remedies at its disposal including, but not limited to the following:

- Disallow credit toward the DBE goal;
- Withholding progress payments;
- Withholding payment to the prime in an amount equal to the unmet portion of the contract goal; and/or
- Termination of the contract.

PROMPT PAYMENT

The prime contractor will be required to pay the DBE within seven (7) working days after he or she has received payment from the Kentucky Transportation Cabinet for work performed or materials furnished.

CONTRACTOR REPORTING

All contractors must keep detailed records and provide reports to the Cabinet on their progress in meeting the DBE requirement on any highway contract. These records may include, but shall not be limited to payroll, lease agreements, cancelled payroll checks, executed subcontracting agreements, etc. Prime contractors will be required to submit certified reports on monies paid to each DBE subcontractor or supplier utilized to meet a DBE goal.

Payment information that needs to be reported includes date the payment is sent to the DBE, check number, Contract ID, amount of payment and the check date. Before Final Payment is made on this contract, the Prime Contractor will certify that all payments were made to the DBE subcontractor and/or DBE suppliers.

The Prime Contractor should supply the payment information at the time the DBE is compensated for their work. Form to use is located at:

<http://transportation.ky.gov/Construction/Pages/Subcontracts.aspx>

Photocopied payments and completed form to be submitted to: Office of Civil Rights and Small Business Development 6th Floor West 200 Mero Street Frankfort, KY 40622

DEFAULT OR DECERTIFICATION OF THE DBE

If the DBE subcontractor or supplier is decertified or defaults in the performance of its work, and the overall goal cannot be credited for the uncompleted work, the prime contractor may utilize a substitute DBE or elect to fulfill the DBE goal with another DBE on a different work item. If after exerting good faith effort in accordance with the Cabinet's Good Faith Effort policies and procedures, the prime contractor is unable to replace the DBE, then the unmet portion of the goal may be waived at the discretion of the Cabinet.

09/14/11

PROJECT TRAFFIC COORDINATOR (PTC)

Be advised this project is a significant project pursuant to section 112.03.12.

ASPHALT MIXTURE

Unless otherwise noted, the Department estimates the rate of application for all asphalt mixtures to be 110 lbs/sy per inch of depth.

DGA BASE

Unless otherwise noted, the Department estimates the rate of application for DGA Base to be 115 lbs/sy per inch of depth.

DGA BASE FOR SHOULDERS

Unless otherwise noted, the Department estimates the rate of application for DGA Base for Shoulders to be 115 lbs/sy per inch of depth. The Department will not measure necessary grading and/or shaping of existing shoulders prior to placing of DGA Base, but shall be incidental to the Contract unit price per ton for DGA Base.

Accept payment at the Contract unit price per ton as full compensation for all labor, materials, equipment, and incidentals for grading and/or shaping of existing shoulders and furnishing, placing, and compacting the DGA Base.

INCIDENTAL SURFACING

The Department has included in the quantities of asphalt mixtures established in the proposal estimated quantities required for resurfacing or surfacing mailbox turnouts, farm field entrances, residential and commercial entrances, curve widening, ramp gores and tapers, and road and street approaches, as applicable. Pave these areas to the limits as shown on Standard Drawing RPM-110-05 or as directed by the Engineer. In the event signal detectors are present in the intersecting streets or roads, pave the crossroads to the right of way limit or back of the signal detector, whichever is the farthest back of the mainline. Surface or resurface these areas as directed by the Engineer. The Department will not measure placing and compacting for separate payment but shall be incidental to the Contract unit price for the asphalt mixtures.

JPC RIDE QUALITY

The Department will apply JPC Ride Quality requirements on this project in accordance with Section 501.03.19(B).

ASPHALT PAVEMENT RIDE QUALITY CATEGORY A

The Department will apply Pavement Rideability Requirements on this project in accordance with Section 410, Category A.

OPTION A

Be advised that the Department will accept compaction of asphalt mixtures furnished for driving lanes and ramps, at 1 inch (25mm) or greater, on this project according to OPTION A in accordance with Section 402 and Section 403 of the current Standard Specifications. The Department will require joint cores as described in Section 402.03.02 for surface mixtures only. The Department will accept compaction of all other asphalt mixtures according to OPTION B.

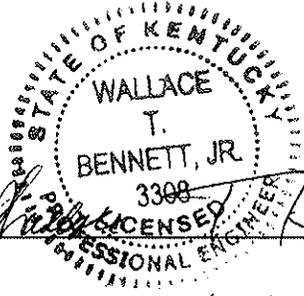
CAMPBELL COUNTY I-471

PROJECT NUMBERS
FD52 019 0471 000-005
IMNH 4714(034)

ITEM NUMBER
6-2021.00

BRIDGE REHABILITATION
(16 LOCATIONS)

STATION 15+09.42
TO
STATION 314+45.00


Wallace T. Bennett, Jr.
DATE 12/27/11

PREPARED BY

WMB, INC. CONSULTING ENGINEERS
1950 HAGGARD COURT
LEXINGTON, KY. 40505
PHONE 859/299-5226

CAMPBELL COUNTY I-471

**PROJECT NUMBERS
FD52 019 0471 000-005
IMNH 4714(034)**

**ITEM NUMBER
6-2021.00**

**BRIDGE REHABILITATION
(16 LOCATIONS)**

**STATION 15+09.42
TO
STATION 314+45.00**

INDEX

ITEM	PAGE NO.
INDEX	2-3
SUMMARY OF BRIDGE QUANTITIES	4
REFERENCES	5
SPECIAL NOTE FOR REPLACING EXPANSION DAMS AND/OR INSTALLING ARMORED EDGES FOR CONCRETE ON BRIDGES	6-8
SPECIAL NOTE FOR ELIMINATING TRANSVERSE JOINTS ON BRIDGES	9-10
SPECIAL NOTE FOR HYDRODEMOLITION METHOD	11-16
SPECIAL NOTE FOR BRIDGE RESTORATION AND WATER- PROOFING WITH CONCRETE OVERLAYS	17-18
SPECIAL NOTE FOR REPLACING COMPRESSION SEAL IN EXISTING EXPANSION JOINT	19-20
SPECIAL NOTE FOR BRIDGE DECK SEALANTS	21-22
SPECIAL NOTE FOR DEBRIS CLEANING THE LOWER CHORD	23-24
SPECIAL NOTE FOR REPLACING GALVANIZED CHAIN LINK FENCE INDEX(CONTINUED)	25

SPECIAL NOTE FOR PROTECTING NESTING BIRDS AND BATS 26

ITEM	PAGE NO
BRIDGE NO.019B00049L I-471 SB OVER US 27	27-35
BRIDGE NO.019B00049R I-471 NB OVER US 27	36-44
BRIDGE NO. 019B00050N HIGHLAND AVENUE OVER I-471	45-49
BRIDGE NO. 019B00051N RAMP E OVER GRAND AVENUE	50-58
BRIDGE NO.019B00052L I-471 SB OVER GRAND AVE	59-65
BRIDGE NO.019B00052R I-471 NB OVER GRAND AVE	66-72
BRIDGE NO.019B00053L I-471 SB OVER CHESAPEAKE AVE	73-80
BRIDGE NO.019B00053R I-471 NB OVER CHESAPEAKE AVE	81-88
BRIDGE NO.019B00056L I-471 SB OVER 6TH STREET	89-95
BRIDGE NO.019B00056R I-471 NB OVER 6TH STREET	96-102
BRIDGE NO.019B00065N I-471 NB RAMP TO KY 8	103-113
BRIDGE NO.019B00082L I-471 SB OVER KY 8	114-122
BRIDGE NO.019B00082R I-471 NB OVER KY 8	123-131
BRIDGE NO.019B00039L I-471 SB OVER OHIO RIVER	132-141
BRIDGE NO.019B00039R I-471 NB OVER OHIO RIVER	142-151
BRIDGE NO.019B00044R I-275 EB OVER I-471 SB	152-154

**SUMMARY OF BRIDGE QUANTITIES FOR I-471 PROJECT
PROJECT NO. IMNH 4714(034)
ITEM NO. 6-2021.00
CAMPBELL COUNTY**

ESTIMATED QUANTITIES REQUIRED

<u>ITEM CODE</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT</u>
3294	EXPANSION JT. REPLACEMENT 1 1/2"	432.0	LIN FT
3295	EXPANSION JT. REPLACEMENT 2"	124.0	LIN FT
3298	EXPANSION JOINT REPLACEMENT 4"	475.0	LIN FT
3300	ELIMINATE TRANSVERSE JOINT	415.0	LIN FT
8016	REINF CONC SLOPEWALL-6 IN	283	SQ YD
8504	EPOXY SAND SLURRY	5445	SQ YD
8526	CONC. CLASS M FULL DEPTH PATCH	156.0	CU YD
8534	CONCRETE OVERLAY-LATEX	1683.0	CU YD
8549	BLAST CLEANING	37052	SQ YD
8550	HYDRODEMOLITION	32515	SQ YD
23622EC	CLEANING DEBRIS FROM LOWER CHORD	1	LS
23386EC	JOINT SEAL REPLACEMENT	1031.0	LIN FT
24094EC	PARTIAL DEPTH PATCHING	336.2	CU YD
24424EC	REM AND REP BRIDGE CHAIN LINK FENCE	604.0	LIN FT
24438EC	SEAL CRACKS BRIDGE DECK	1	LS
24439EC	SEAL BRIDGE DECK	1	LS
24456EC	EXPANSION JOINT REPLACEMENT 5 1/2"	102.0	LIN FT

REFERENCES

THE SUPPLEMENTAL SPECIFICATIONS TO THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2008 EDITION AND THE FOLLOWING SPECIAL NOTES THAT APPLY TO ALL BRIDGES ARE FOUND IN THE ROADWAY PLANS FOR THIS PROJECT:

- **SPECIAL NOTE FOR CONTRACT COMPLETION DATE AND LIQUIDATED DAMAGES**
- **SPECIAL NOTE FOR COORDINATION WITH I-275 CONSTRUCTION**
- **PROJECT PHASING AND MAINTENANCE OF TRAFFIC PLAN**

SPECIAL NOTE FOR REPLACING EXPANSION DAMS AND/OR INSTALLING ARMORED EDGES FOR CONCRETE ON BRIDGES

1. **DESCRIPTION.** Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2008 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and the attached detail drawings. Section references are to the Standard Specifications.

This work consists of the following: (1) Furnish all labor, materials, tools, and equipment; (2) Remove existing concrete and expansion device(s) and/or bridge ends; (3) Install armored edges and new concrete as specified and in accordance with the attached detail drawings; (4) Install new joint seals (where required); (5) Maintain and control traffic; and (6) Any other work specified as part of this contract.

2. **MATERIALS.**

- A. **Class "M" Concrete.** Use either "M1" or "M2". See Section 601.
- B. **Structural Steel.** Use new, commercial grade steel suitable for welding. The Engineer will base acceptance on visual inspection. See Standard Drawing BJE-001, current edition.
- C. **Stud Anchors.** The armored edge stud anchors are ¼" x 6" embedded stud shear connectors conforming to ASTM A108, Grade 1015 (Nelson Studs or equal).
- D. **Steel Reinforcement.** Use Grade 60. See Section 602.
- E. **Epoxy Bond Coat.** See Section 511.
- F. **Neoprene Joint Sealers (Compression Seals).** See Section 807.
- G. **Silicone Rubber Sealant.** See Section 807.
- H. **Neoprene Strip Seals.** See attached detail drawings and Section 807.

3. **EQUIPMENT.**

- A. **Hammer.** Provide Power driven Hammers lighter than nominal 45 lb. class.
- B. **Sawing Equipment.** Sawing equipment shall be a concrete saw capable of sawing concrete to the specified depth.
- C. **Hydraulic Impact Equipment.** Hydraulic Impact/Skid Steer Type Equipment with a maximum rated striking Energy of 360 ft-lbs are permitted only in areas of concrete removal more than 1 foot away from existing beams, girders or other supporting structures that are to remain in service, or more than 6 inches away from boundaries of surface areas to remain in service. The Contractor is to provide data information to the engineer on the equipment they wish to utilize to ensure compliance with this note.

4. **CONSTRUCTION.**

- A. **Remove Existing Materials.** Remove existing Expansion Dam, Bridge End, Armored Edges and specified areas of concrete as shown on the attached sketches. Remove debris and/or expansion joint filler as directed by the Engineer. . . Clean and leave all existing steel reinforcement encountered in place. Damaged steel reinforcement will be repaired/replaced as directed by the Engineer at no additional cost to the Department. Dispose of all removed material entirely away from the job site. This work is incidental to the contract unit price for "Expansion Joint Replacement" or "Armored Edge for Concrete".

B. Place New Concrete and Armored Edges. After all specified existing materials have been removed; place new armored edges to match the grade of the proposed overlay or to match the original grade (See attached detail drawings). Place the new Class "M" concrete to the scarified grade and finish to receive the new overlay or place the new Class "M" concrete to the original grade and finish with broom strokes drawn transversely from curb to curb.

All new structural steel shall be cleaned and painted in accordance with requirements of Section 607.03.23, except that surfaces to come in contact with concrete are not to be painted.

Blast clean all areas of existing concrete and structural steel to come in contact with new concrete until free of all laitance and deleterious substances immediately prior to the placement of the Class "M" Concrete. The surface areas of existing concrete to come in contact with the new Class "M" Concrete are to be coated with an epoxy bond coat immediately prior to placing new concrete in accordance with Section 511. The interfaces of the new and old concrete shall be as nearly vertical and horizontal as possible.

C. Additional Steel Reinforcement. Furnish for replacement, as directed by the Engineer, _____ linear feet of #4 steel reinforcing bars in 20' lengths. Place these bars in areas deemed by the Engineer to require additional reinforcement. Field cutting and bending is permitted. Do not place any additional steel reinforcement above the height of the top row of Nelson Studs on the armored edges. Ensure that all exposed steel reinforcement is tied in accordance with Section 602.03.04 prior to pouring the new Class "M" concrete. Deliver unused bars to the Local County Maintenance Barn. Payment will be made in accordance with Section 602.

D. Stage Construction. Installation of concrete and armored edges in two (or more if specified) stages is necessary. Join the armored edges at or near the centerline of the roadway or lane line, field weld and grind smooth.

E. Preformed Neoprene Joint Seal. Place the preformed joint seal in one continuous, unbroken length. Place neoprene compression seals as recommended by the manufacturer and in accordance with Section 609.03.04 (D). Place neoprene strip seals as recommended by the manufacturer and in accordance with Section 609.03.04 (E), except that shop drawings will not be required.

F. Silicone Rubber Sealant. Place the silicone sealant as recommended by the manufacturer and in accordance with Section 609.03.04 (C).

G. Shop Plans. Shop plans will not be required. The Contractor is responsible for obtaining field measurements and supplying properly sized materials to complete the work.

IV MEASUREMENT.

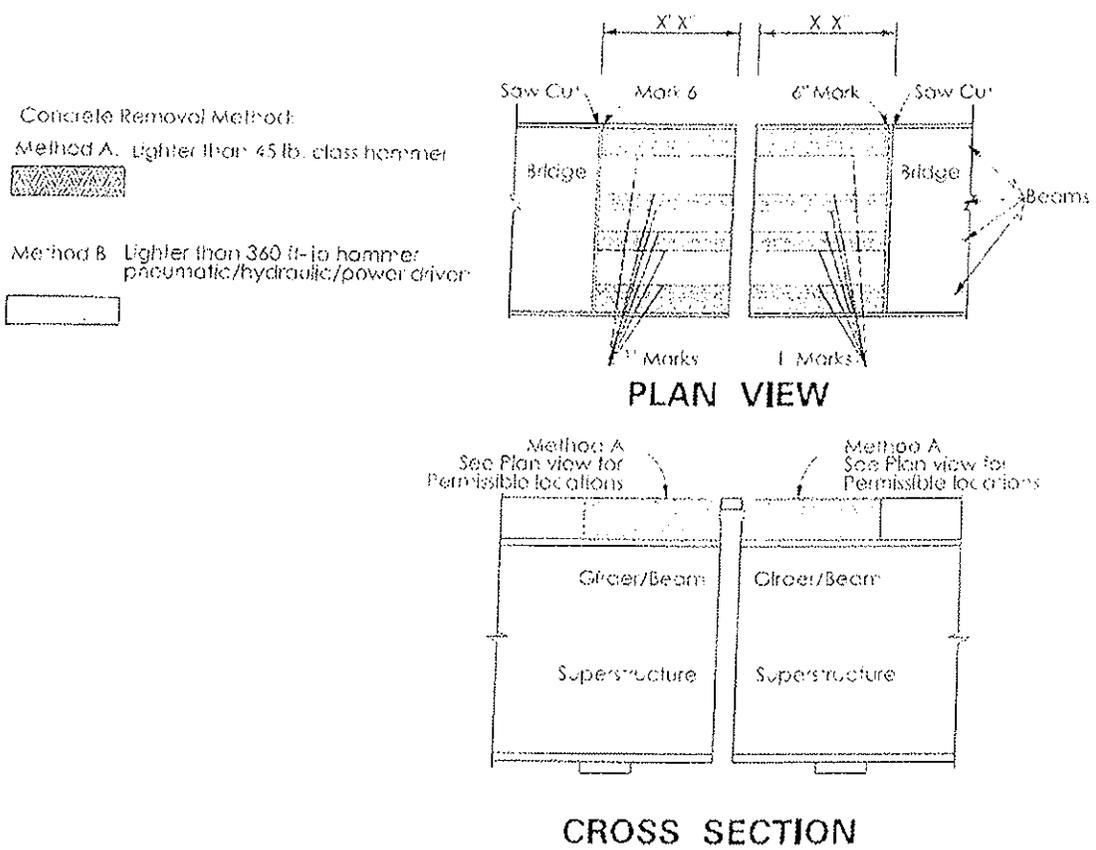
A. Expansion Joint Replacement - 1 ½", 2", 2 ½", 4". The Department will measure the quantity in linear feet from gutterline to gutterline along the centerline of the joint.

B. Armored Edge for Concrete. The Department will measure the quantity in linear feet from gutterline to gutterline along the face of the bridge end.

C. Steel Reinforcement. See Section 602.

V. PAYMENT.

- A. **Expansion Joint Replacement - 1 1/2", 2", 2 1/2", 4"**. Payment at the contract unit price per linear foot is full compensation for removing specified existing materials, furnishing and installing the new armored edges, concrete, neoprene joint seal, and all incidental items necessary to complete the work (except the overlay material) within the specified pay limits as specified by this note and as shown on the attached detail drawings.
- B. **Armored Edge for Concrete**. Payment at the contract unit price per linear foot is full compensation for removing specified existing materials, furnishing and installing the new armored edges, concrete and all incidental items necessary to complete the work (except the overlay material) within the specified pay limits as specified by this note and as shown on the attached detail drawings.
- C. **Steel Reinforcement**. See Section 602.



SPECIAL NOTE FOR ELIMINATING TRANSVERSE JOINTS ON BRIDGES

I. DESCRIPTION. Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2008 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and the attached detail drawings. Section references are to the Standard Specifications.

This work consists of the following: (1) Furnish all labor, materials, tools, and equipment; (2) Remove existing concrete to eliminate the transverse joint; (3) Install additional steel reinforcement, new armored edge and new concrete as specified and in accordance with the attached detail drawings; (4) Maintain and control traffic; and (5) Any other work specified as part of this contract.

II. MATERIALS.

A. Class "M" Concrete. Use either "M1" or "M2". See Section 601.

B. Steel Reinforcement. Use Grade 60. See Section 602.

C. Epoxy Bond Coat. See Section 511.

III. CONSTRUCTION.

A. Remove Existing Materials. Remove the existing transverse joints, joint filler, and specified areas of concrete as shown on the attached detail drawings or as directed by the Engineer. Dispose of all removed material entirely away from the job site. This work is incidental to the contract unit price for "Eliminate Transverse Joint".

Clean and leave all existing steel reinforcement encountered in place. Damaged steel reinforcement will be repaired/replaced as directed by the Engineer at no additional cost to the Department.

B. Place New Concrete and Armored Edges. After all specified existing materials have been removed; place new armored edges to match the original grade (See attached detail drawings). Place the new Class "M" concrete to the original grade and finish with broom strokes drawn transversely from gutterline to gutterline. No accelerants are to be added to Class "M" Concrete as specified in Section 601 of the Standard Specifications.

All new structural steel shall be cleaned and painted with two coats of commercial primer paint red orange in color, except that surfaces to come in contact with concrete are not to be painted.

Blast clean all areas of existing concrete and structural steel to come in contact with new concrete until free of all laitance and deleterious substances immediately prior to the placement of the Class "M" Concrete. The surface areas of existing concrete to

come in contact with the new Class "M" Concrete are to be coated with an epoxy bond coat immediately prior to placing new concrete in accordance with Section 511. The interfaces of the new and old concrete shall be as nearly vertical and horizontal as possible.

- C. Steel Reinforcement.** Furnish for this work steel reinforcement as shown in the individual bridge packages. Splice these bars to the existing reinforcement in the deck and backwall in the areas of removed concrete as shown on the attached detail drawings or directed by the Engineer. Ensure that all exposed steel reinforcement is tied in accordance with Section 602.03.04 prior to pouring the new Class "M" concrete. Reinforcement is incidental to the contract unit price for "Eliminate Transverse Joint".

IV MEASUREMENT.

- A. Eliminate Transverse Joint.** The Department will measure the quantity in linear feet from gutterline to gutterline along the centerline of the joint.

V. PAYMENT.

- A. Eliminate Transverse Joint.** Payment at the contract unit price per linear foot is full compensation for removing and disposing of the specified existing materials, furnishing and installing the concrete, steel reinforcement, armored edge and all incidental items necessary to complete the work within the specified pay limits as specified by this note and as shown on the attached detail drawings.

The Department will consider payment as full compensation for all work required by this note and the attached detail drawings.

SPECIAL NOTE FOR USE OF HYDRODEMOLITION METHOD

Description

This work consists of bridge surface deck preparation using Hydrodemolition to provide a uniform depth, highly bondable surface and to remove all variable depth, unsound material. This item also includes the removal and disposal of all concrete and debris, vacuuming, shielding, water control, additional jack hammering and all other aspects of work necessary to prepare the deck for the placement of the new latex modified concrete overlay.

Equipment

Sawing Equipment. Sawing equipment shall be a concrete saw capable of sawing concrete to the specified depth.

Mechanical Scarifying Equipment. The scarifying equipment shall be a power operated mechanical scarifier capable of uniformly scarifying or removing the old concrete wearing surface from the bridge deck to the depths required in the plans or as directed by the Engineer. The equipment shall be self-propelled with sufficient power, traction and stability to maintain accurate depth of cut and slope. The equipment shall be capable of accurately and automatically establishing profile grades along each edge of the machine by referencing the existing bridge deck by means of a ski or matching shoe, or from an independent grade control; in addition, it shall be equipped with an integral loading means to remove the material being cut from the bridge deck and to discharge the cuttings into a truck all in a single operation.

Hydro-Demolition Equipment. The Hydrodemolition equipment shall consist of a filtering and pumping unit operating with a self-propelled computerized robot that utilizes a high pressure water jet capable of removing concrete to the depth specified on the plans or as directed by the Engineer and be capable of removing rust and concrete particles from reinforcing steel. The equipment shall provide a rough and bondable surface and remove all unsound concrete during the initial pass. The minimum water usage shall be 43 gal/min operating at 13,000 psi minimum.

Vacuum Cleanup Equipment. The vacuum cleanup equipment shall be equipped with fugitive dust control devices and be capable of removing wet debris and water all in the same pass. Provide equipment capable of washing the deck with pressurized water prior to the vacuum operation to dislodge all debris and slurry from the deck surface.

Hand Held Blast Cleaning Equipment. Hand held blast shall be either sand or water as necessary to expose fine and coarse aggregates; thoroughly clean all exposed reinforcing steel; and remove any unsound concrete or laitance layers from the proposed concrete overlay surface. If sand blasting equipment is utilized, the equipment shall have oil traps. If water blasting equipment is utilized, the equipment must be capable of delivering a minimum of 5,000 psi.

Power Driven Hand Tools. Power driven hand tools and jackhammers will be permitted, but shall not be heavier than the nominal 35 lb class. Chipping hammers shall not be heavier than the nominal 15 lb class. Only hand chipping tools shall be used when removing concrete within 1 in. of reinforcing steel. Mechanically driven tools shall be operated at a maximum angle of 45 degrees from the bridge floor surface.

Construction Methods

General: Perform Hydrodemolition surface preparation over the entire top surface of the reinforced concrete bridge deck to provide a rough and bondable surface and to remove all unsound concrete during the initial Hydrodemolition surface preparation pass. The use of hand chipping tools, either hand or mechanically driven, shall be limited to trim work and areas inaccessible or inconvenient for the hydro-demolition equipment.

Description: This work shall consist of furnishing the necessary labor, materials and equipment to completely remove the top surface of the Portland cement concrete bridge deck surface in accordance with these Specifications and in reasonably close conformity with the grades, thickness, or sections shown on the Plans or as directed by the Engineer. This work shall include the removal of patches other than sound Portland cement concrete and all loose and unsound concrete by Hydrodemolition; preparation of the sound existing concrete surface; removal, forming and concrete for full depth repairs; blast cleaning or high pressure water cleaning the existing deck prior to placement of the modified concrete overlay; and all other operations necessary to complete this work according to these specifications and to the satisfaction of the Engineer.

Preparation of Existing Deck

No operations without reasonably available engineering controls that limit fugitive dust will be acceptable.

The Contractor shall be aware that there are federal, state, regional, and local government agencies that have requirements regarding the control of fugitive dust generated by concrete removal and blasting operations.

The Contractor is responsible for protecting traffic traveling adjacent to and under the work zone while removing bridge deck concrete.

Where the deck is sound for less than one third of its original depth, the concrete shall be removed full depth for limited areas as designated by the Engineer. Full depth repairs shall be completed as specified for Full Depth Repair.

Removal of Existing Modified Concrete Overlays

Use conventional methods to remove any and all existing concrete overlay prior to commencement of the Hydrodemolition operation. Clean the bridge deck. Use "Total Surface Hydrodemolition" method to provide a rough & highly bondable surface and to remove partial depth deteriorated concrete with a minimum depth of $\frac{1}{4}$ " below the original deck elevation. If Hydrodemolition does not leave a bondable surface, the Engineer can require mechanical scarification to his satisfaction at no additional cost to the Cabinet. The cost of removal of the existing overlay shall be included as a portion of the pay item for Hydrodemolition.

Existing overlay material which is sound and bonded may be left in patch areas with approval of the Engineer. If determined the existing patches are to be removed, jackhammers, not to be heavier than the nominal 35 lb class shall be used to remove debonded areas.

If the use of mechanical scarifying equipment results in the snagging of the top mat of steel reinforcement, the scarifying equipment shall be immediately stopped and the depth of removal adjusted. Damaged or dislodged reinforcing steel shall be repaired or replaced at the Contractor's expense. Replacement shall include the removal of any additional concrete.

Bridge Decks with No Existing Concrete Overlay

If Hydrodemolition is to be performed on an original bridge deck surface without an overlay, the Contractor may use mechanical scarification equipment conforming to these specifications to remove an initial portion of the hydro-demolition depth. The scarification depth shall be $\frac{1}{4}$ ". Total surface Hydrodemolition is used to provide a highly bondable surface and to remove partial depth deteriorated concrete. The cost of the scarification shall be included as a portion of the pay item for Hydrodemolition.

If the use of mechanical scarifying equipment results in the snagging of the top mat of steel reinforcement, the scarifying equipment shall be immediately stopped and the depth of removal adjusted. Damaged or dislodged reinforcing steel shall be repaired or replaced at the Contractor's expense. Replacement shall include the removal of any additional concrete required to position the new reinforcing steel at the correct height and required lap splice lengths.

Concrete Removal by Hydro-Demolition

General: The total surface area of the reinforced concrete bridge deck shall be completely prepared by Hydrodemolition as necessary to provide a highly roughened and bondable surface prior to placement of the proposed bridge deck overlay while removing any deteriorated and unsound concrete in the initial pass. Unsound concrete is defined as existing bridge deck concrete that is deteriorated, spalled, or determined by the engineer to be unsound.

With the use of Hydrodemolition surface preparation, the requirement to provide a minimum $\frac{3}{4}$ " clearance around all reinforcing bars that are more than 50% diameter exposed is waived, providing that the existing concrete is sound. The amount of steel exposed shall be kept to a minimum.

Damaged or dislodged reinforcing steel shall be repaired or replaced at the Contractor's expense. Replacement shall include the removal of any additional concrete required to position the new reinforcing steel at the correct height and to provide the required lap splice lengths as required.

Calibration: Prior to commencement of the Hydrodemolition removal operation, the Hydrodemolition equipment shall be calibrated on an existing **sound** concrete surface as designated by the Engineer. The calibration area shall be a minimum of 7 feet wide by 7 feet long to demonstrate the desired result of this specification.

Move the Hydrodemolition equipment to a second area (7'x7') that is unsound as designated by the Engineer to demonstrate the desired result of this specification which is providing a highly rough and bondable surface and removing all unsound concrete during the initial pass is being achieved.

The Engineer shall verify the following settings:

1. Water pressure gauge (13,000 psi minimum)
2. Machine staging control (step)
3. Nozzle size
4. Nozzle speed (travel)
5. Depth of removal
6. Minimum water usage (43 gallons per minute)

During the Hydrodemolition operations, any or all of the above settings may be modified in order to achieve removal of all unsound concrete and to provide a highly bondable surface. The settings may be changed by the Contractor to achieve total removal of unsound concrete, but the Engineer must be notified of all changes. The Engineer may change any or all of the settings in order to achieve the desired results with Hydrodemolition. The removals and depth shall be verified, as necessary, and at least every 30 feet along the cutting path. The readings shall be documented and, if necessary, the equipment re-calibrated to insure the Hydrodemolition process achieves the desired results and removal of unsound concrete.

Calibration shall be required on each structure; each time Hydrodemolition is performed and as required to achieve the results specified by the plan.

Debris and Fluid Containment: Prior to commencement of the Hydrodemolition operation, the Contractor shall submit a plan for approval to the engineer for control and filtering of all water discharged during operation. The Contractor, at a minimum, shall block all drains on the deck and install aggregate dams every 150 feet; 6 inches high by 1 foot wide minimum, to strain runoff. The deck shall be used as a settlement basin within itself unless an alternate method of water control, satisfactory to the Engineer and meeting the environmental requirements of any associated Regulatory Agency, is provided.

The Contractor shall provide shielding, as necessary, to insure containment of all dislodged concrete within the removal area in order to protect the public from flying debris both on and under the work site.

Cleaning

Cleaning shall be performed with a vacuum system capable of removing wet debris and water all in the same pass. The vacuum equipment shall be capable of washing the deck with pressurized water prior to the vacuum operation to dislodge all debris and slurry from the deck surface. Cleaning shall be done in a timely manner, before debris and water is allowed to dry on the deck surface.

Resounding

After the Hydrodemolition operation has completed the removal, and the deck is cleaned and allowed to dry, the deck shall be resounded to assure that the all unsound concrete deck material has been removed. The final sounding of the deck shall be done by the Engineer and shall only be performed when the deck is completely dry and frost-free. Final sounding shall consist of as many successive resounding as required to ensure that all deteriorated and fractured concrete has been removed. Additional removal shall be performed with 35 lb maximum weight jackhammers operated at an angle of no more than 45 degrees from horizontal. Aerosol spray paint for outlining and sounding chains shall be provided by the Contractor.

Full Depth Repair

Where the deck is sound for less than one third of its original depth, the concrete shall be removed full depth except for limited areas as may be designated by the Engineer. Forms shall be provided to support concrete placed in full depth repair areas. The forms for areas of up to 4 square feet may be suspended from wires from the reinforcing steel. For areas greater than 4 square feet, the forms shall be suspended from the primary members of the superstructure or by shoring below. Areas of full depth repair shall have the concrete faces and reinforcing steel cleaned. Only those areas marked in the field by the Engineer as full depth repair will be paid for as full depth repair.

Preparation Prior to Overlay Placement

Vehicles other than approved construction equipment will not be permitted on those sections of the deck where Hydrodemolition has begun. Contamination of the deck by construction equipment or from any other source shall be prevented.

Method of Measurement

Surface Preparation Using Hydrodemolition shall be measured as the actual deck area in square yards overlaid and shall include the costs of removal of an existing overlay if one exists, surface preparation including ¼" (min.) milling into the original concrete bridge deck surface, Hydrodemolition to a depth of ¼" (min.) below the surface after surface preparation milling is completed, removal of the surface preparation debris, cleaning, any incidental materials, and all labor and equipment necessary to

complete the work as described in this specification, but not specifically included in other items for payment.

Basis of Payment

Payment for completed and accepted quantities as measured above will be made at the contract price for:

Item	Unit	Description
08550	Square yard	Hydrodemolition

SPECIAL NOTE FOR BRIDGE RESTORATION AND WATERPROOFING WITH CONCRETE OVERLAYS

- I. DESCRIPTION.** Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2008 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, and this Note. Section references are to the Standard Specifications.

This work consists of the following: (1) Furnish all labor, materials, tools, and equipment; (2) Surface Preparation; (3) Complete full-depth and partial depth repairs as directed by the Engineer; (4) Place new concrete overlay and epoxy-sand slurry in accordance with Section 606; (5) Maintain and control traffic; and (6) Any other work specified as part of this contract.

All construction will be in accordance with Section 606 unless otherwise specified.

II. MATERIALS.

- A. Latex Concrete.** See Section 606.03.17.
- B. Class "M" Concrete.** Use either "M1" or "M2". See Section 601.
- C. Epoxy-Sand Slurry.** See Section 606.03.10.
- D. Bituminous asphalt.** See special note for placing bridge overlay approach pavement.

III. EQUIPMENT.

- A. Hammer.** Provide power driven hammers lighter than nominal 45 lb. class.
- B. Sawing Equipment.** Sawing equipment shall be a concrete saw capable of sawing concrete to the specified depth.
- C. Hydraulic Impact Equipment.** Hydraulic Impact/Skid Steer Type Equipment with a maximum rated striking Energy of 360 ft-lbs are permitted only in areas of concrete removal more than 6 inches away from boundaries of surface areas to remain in service. The Contractor is to provide data information to the engineer on the equipment they wish to utilize to ensure compliance with this note.

IV. CONSTRUCTION.

- A. Surface Preparation.** Prepare surface as specified by the Standard Specifications and Special Note for Hydrodemolition. Hydrodemolition is mandatory for all decks.
- B. Full Depth Slab Repair.** After the existing slab has been machine prepared in accordance to Section 606.03.03, perform full depth patching in accordance with section 606.03.05. The Department will not measure material removal, forming, blast cleaning, or retying steel reinforcement in the patches and will consider this work incidental to the pay item "Concrete Class M Full Depth Patch."
- D. Partial Depth Slab Repair.** Perform partial depth patching in accordance with section 606.03.06. The pay item "PARTIAL DEPTH PATCHING" measured in cubic yards of material placed and accepted will include removal of existing material by any means including Hydrodemolition, forming, blast cleaning, retying steel reinforcement in the patches, and disposal of waste off of construction site.
- E. Surface Texturing.** Texture the concrete surface of the overlay in accordance with Section 609.03.10.

- V. MEASUREMENT.** See Section 606 and the following:
- A. Concrete Overlay- Latex.** The Department will measure the quantity in cubic yards using the theoretical volume required for the overlay shown in the Plans.
 - B. Partial Depth Patching.** The Department will measure the quantity in cubic yards by deducting the theoretical volume of bridge deck overlay (LMC) from the total volume (as indicated by the batch quantity tickets) of Concrete required to obtain the finished grade shown on the Plans or established by the Engineer.
 - C. Concrete Class M for Full Depth Patching.** See Section 606.
- VI. PAYMENT.** See Section 606 and the following:
- 1. Concrete Overlay- Latex.** See Section 606.
 - 2. Partial Depth Patching.** The Department will pay for accepted quantities of partial depth patching at the contract unit price in cubic yard for bid item "PARTIAL DEPTH PATCHING".
 - 3. Concrete Class M for Full Depth Patching.** See Section 606.

SPECIAL NOTE FOR REPLACING COMPRESSION SEAL IN EXISTING EXPANSION JOINT

I. DESCRIPTION.

Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2008 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and the attached detail drawings. Section references are to the Standard Specifications.

This work consists of the following: (1) Furnish all labor, materials, tools, and equipment; (2) Remove existing compression seal; (3) Install new compression seal; (4) Maintain and control traffic; and (5) Any other work specified as part of this contract.

II. MATERIALS.

A. Neoprene Joint Sealers (Compression Seals). See Section 807.

B. Silicone Rubber Sealant. See Section 807.

III. CONSTRUCTION.

A. Remove Existing Materials. Remove the existing compression seal as shown on the attached sketches. Remove debris and/or expansion joint filler as directed by the Engineer. Dispose of all removed material entirely away from the job site. This work is incidental to the contract unit price for "Expansion Joint Seal Replacement".

B. Blast Clean Armored Edges. Blast clean all areas of existing armored edges until free of all laitance and deleterious substances immediately prior to the placement of the Compression Seal.

C. Preformed Neoprene Joint Seal. Place the preformed joint seal in one continuous, unbroken length. Place neoprene compression seals as recommended by the manufacturer and in accordance with Section 609.03.04 (D).

D. Silicone Rubber Sealant. Place the silicone sealant as recommended by the manufacturer and in accordance with Section 609.03.04 (C).

E. Shop Plans. Shop plans will not be required. The Contractor is responsible for obtaining field measurements and supplying properly sized materials to complete the work.

IV. MEASUREMENT.

A. Expansion Joint Seal Replacement - The Department will measure the quantity in linear feet from gutterline to gutterline along the centerline of the joint.

V. PAYMENT.

A. Expansion Joint Seal Replacement - Payment at the contract unit price per linear foot is full compensation for removing specified existing materials, furnishing and installing the neoprene compression joint seal, and all incidental items necessary to complete the work within the specified pay limits as specified by this note and as shown on the attached detail drawings.

The Department will consider payment as full compensation for all work required by this note and the attached detail drawings.

Special Note for Experimental Bridge Deck Sealants on I-471 bridge over 6th Street in Newport, Ky.

For the purpose of this experimental crack and deck sealant project, the bridge will be divided into five Test Areas as described in the following;

Test Area 1 I-471 Northbound from End Bent 1 to Pier 13. Include the off ramp (Ramp L) up to Pier 13.

Test Area 2 I-471 Southbound from End Bent 1 to Pier 13.

Test Area 3 I-471 Northbound from Pier 13 to Pier 26.

Test Area 4 I-471 Southbound from Pier 13 to Pier 26. Include the Southbound on ramp (Ramp K) from Pier 24 into the Southbound lanes.

Test Area 5 Both Northbound and Southbound I-471 from Pier 26 to End Bent 2. Test Area 5 is a control area and will not receive crack or deck sealing.

Cleaning Cracks Clean all visible cracks, extending across the width of the deck, to remove debris by pressure washing (2,000 to 3,000 psi rated capacity) with fan tips to remove all debris.

Crack Sealing The crack must be dry (no water is visible) when applying sealer. Seal all visible cracks with one product on the project List of Approved Materials-Crack Sealer. A manufacturers' representative must be present and approve surface preparation and application for a minimum of 10% the total crack length for the project.

Cleaning Deck Clean all visible hydrocarbons from the deck surface (Test Areas 1 through 4) with a detergent approved by the manufacturer of chosen deck sealer for each Test Area. Clean all deck surface to be sealed by pressure washing (2,000 to 3,000 psi rated capacity) with fan tips to remove all debris.

Sealing Deck The deck must be dry (no water is visible) when applying sealer. Apply a sealer from the project List of Approved Materials – Deck Sealer to Test Area 1. Apply a second sealer (different from the Test Area 1 sealer) to Test Area 2. Apply a third sealer (different from Test Areas 1 or 2) to Test Area 3. Apply a fourth sealer (different from Test Areas 1, 2, or 3) to Test Area 4. A manufacturers' representative for each product applied must be present and approve surface preparation and application for the project.

All crack sealing, cleaning, and deck sealing will be conducted in compliance with the traffic control requirements, including lane closure times, for this project.

The Contractor will submit a list of the products chosen for crack and deck sealing at the Pre-construction Conference.

All costs for work and materials for cleaning and sealing cracks are incidental to the lump sum bid for "cleaning and sealing cracks". The approximate total length of cracks is 17,000 ft. but the contractor is responsible for determining quantities for bidding. All costs for work and materials for cleaning and sealing decks are incidental to the lump sum bid for "cleaning and sealing deck". The approximate deck area to be cleaned and sealed is 225,000 ft² but the contractor is responsible for determining quantities for bidding.

Project List of Approved Materials - Crack Sealer

Sikasil 728 SI SIKA Corp.

Sonalastic 150 BASF Construction Chemicals

Project List of Approved Materials - Deck Sealer

Product name	Supplier
Enviroseal 40	BASF
Hydrozo Silane 40	BASF
PowerSeal 40	Vexcon Chemicals Inc.
Pavix CCC100	Chem-Crete
<i>BMS 5122 Clear Cladding</i>	Belzona
Aquinil Plus 40	ChemMasters
TK-590-1-MS-Tri-Silane	TK Products

SPECIAL NOTE FOR DEBRIS CLEANING

- I. DESCRIPTION.** Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2008 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, and this Note. Section references are to the Standard Specifications.

This work consists of the following: (1) Furnish all labor, materials, tools, and equipment; (2) Bag and remove large debris; (3) Power wash the lower chord, truss members, drainage system on each side of the structure, joints, floor beams adjacent to joints, pile/pier caps, and bearing devices; (4) Remove stratified rust and apply lubricant to the bearings.

- II. PREPARATION.** Prior to any other cleaning work, confirm that the bridge drainage system is not blocked by un-removable debris by rodding with a sewer rod or similar tool. A blocked drainage system is considered to be one from which debris cannot be removed using the means specified below in Section III below. If the Engineer has been notified, and concurs that the drainage system is blocked prior to performing other cleaning work, then proceed at the direction of the engineer. If the Contractor does not inspect the bridge drainage system and notify the Engineer prior to beginning work, any blocked drains will be considered to be the result of the Contractor's operations, and all clearing and cleaning of the drainage system shall be done as part of the work of this specification

III. CLEANING.

A. REMOVAL OF TRASH AND DEBRIS FROM LOWER CHORD, DRAINAGE SYSTEM, JOINTS, FLOOR BEAMS, BEARINGS, AND PILE/PIER CAPS.

All loose trash and debris shall be collected by sweeping, shoveling, vacuuming and other suitable methods. Equipment for collecting trash and other debris from bridge decks shall be determined by the Contractor, subject to the approval of the Engineer, and will normally consist of, but not be limited to, industrial vacuums, brushes, brooms, and shovels. Plastic shovels shall be used when other shovels are damaging coated surfaces. The contractor shall not cause or allow trash and/or debris from the bridge to be deposited into a wetland, stream, other water body, bridge drainage system, or active traffic lanes during the cleaning of the bridge. Debris and trash collected shall be disposed of in a suitable off-site disposal facility.

- B. POWER WASHING.** Wash the lower chord, truss members, drainage system, joints, floor beams adjacent to the joint, bearings, and pile/pier caps on each side of the structure. Wash the truss members to a height of eight (8) feet above the top of deck elevation. The equipment for pressure washing shall be operated at a maximum pressure of 1,000 psi and with a minimum flow rate of 3.5 gal/minute provided that these pressures do not damage the paint or other coatings on the bridge or undercut the grout or harm the masonry plates beneath the bearings. If these pressures and flow rates cause such damage, then the Contractor shall reduce either or both to a level satisfactory to the Engineer. The pressure washer shall be operated at a distance of 6 inches to one foot from the surface.

Lower Chord Washing – Wash the top and sides of the lower chord until all foreign material has been removed.

Truss Member Washing – Wash each side of the vertical, diagonal, and horizontal truss members until all foreign material has been removed. The extent of the washing shall be from the lower chord to a height of 8 feet above the deck.

Drainage System – All debris and foreign material shall be removed including material in the gutter line, grate, drain casting / coupling / funneling system, and drains / scuppers / downspouts. If the drain is blocked prior to cleaning operation and the debris cannot be removed by methods described above, proceed at the direction of the engineer.

Joints – Remove all debris from and wash the top and bottom of each joint. If the entire top of the joint is not accessible due to traffic control restrictions, then clean the available portions and proceed at the direction of the engineer. If the joint has a trough, then wash the through until all foreign material has been removed.

Floor Beams – Wash each floor beam adjacent to a joint. Wash the side nearest to the joint until all foreign material has been removed.

Bearings – Prior to washing the bearings, remove the stratified rust from the bearing surface using a wire brush or equivalent method. Wash each bearing until all foreign material and debris has been removed. See Section C for further instruction on bearing cleaning.

Pile / Pier Caps – wash the entire top and the top 3 feet of the sides of the pile/pier caps until all foreign material has been removed.

- C. BEARING CLEANING / LUBRICATING.** Remove the stratified rust from the bearing surface using a wire brush or equivalent method. After washing the bearings, allow the bearings to dry. Apply lubricant to all exposed surfaces of the bearing in accordance with the manufacturer's recommendations (minimum 1mm thickness). Disassembly of the bearing will not be required. The lubricant used shall be 'NEVER-SEEZ – MARINER'S CHOICE' produced by Bostik, Inc. or approved equivalent.
- D. DAMAGES.** Any damage to the system or structure that occurs during cleaning operations shall be repaired by the Contractor to the satisfaction of the Engineer at no additional expense to the State.
- E. SITE VISIT.** We encourage all contractors to visit each site prior to bidding in order to become familiar with the requirements of this work.

IV. MEASUREMENT. 'CLEAN DEBRIS FROM LOWER CHORD'. The Cabinet shall measure this item as a lump sum.

V. PAYMENT. 'CLEAN DEBRIS FROM LOWER CHORD'. The contract price for this item will be paid as a lump sum. The payment for this bid item at the contract unit price of Lump Sum shall be considered full compensation for complete and accepted work which includes all labor, materials, equipment needed for debris removal, power washing, cleaning and lubricating bearing devices for "CLEAN DEBRIS FROM LOWER CHORD".

SPECIAL NOTE FOR REMOVING AND REPLACING BRIDGE CHAIN LINK FENCE

I. DESCRIPTION

Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2008 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this note and the attached detail drawings. Section references are to the Standard Specifications.

This work consists of the following: (1) Furnish all labor, materials, tools, and equipment; (2) Remove existing chain link fence; (3) Install new galvanized chain link fence; (4) Maintain and control traffic; and (5) Any other work specified as part of this contract.

II. MATERIALS

A. Chain Link Fencing Materials. See Section 817 of the Specifications.

III. CONSTRUCTION

A. Remove Existing Materials. Remove the existing chain link as shown on the attached drawings. Dispose of all removed materials entirely away from the job site. This work is incidental to the contract unit price for "Remove and Replace Bridge Chain Link Fence".

B. Galvanized Chain Link Fence. Erect the new galvanized chain link fence in accordance with the attached drawings and Section 722 of the Specifications.

C. Shop Plans. Shop plans will not be required. The Contractor is responsible for obtaining field measurements and supplying properly sized materials to complete the work.

IV. MEASUREMENT

A. Remove and Replace Bridge Chain Link Fence. The Department will measure the quantity in linear feet from end to end of the existing fence on each side of the bridge.

V. PAYMENT

A. Remove and Replace Bridge Chain Link Fence. Payment at the contract unit price per linear foot is full compensation for removing specified existing materials, furnishing and installing the galvanized chain link fence, and all incidental items necessary to complete the work within the specified pay limits by this note and as shown in the attached detail drawings.

The Department will consider payment as full compensation for all work required by this note and the attached detail drawings.

SPECIAL NOTE FOR PROTECTING NESTING BIRDS AND BATS

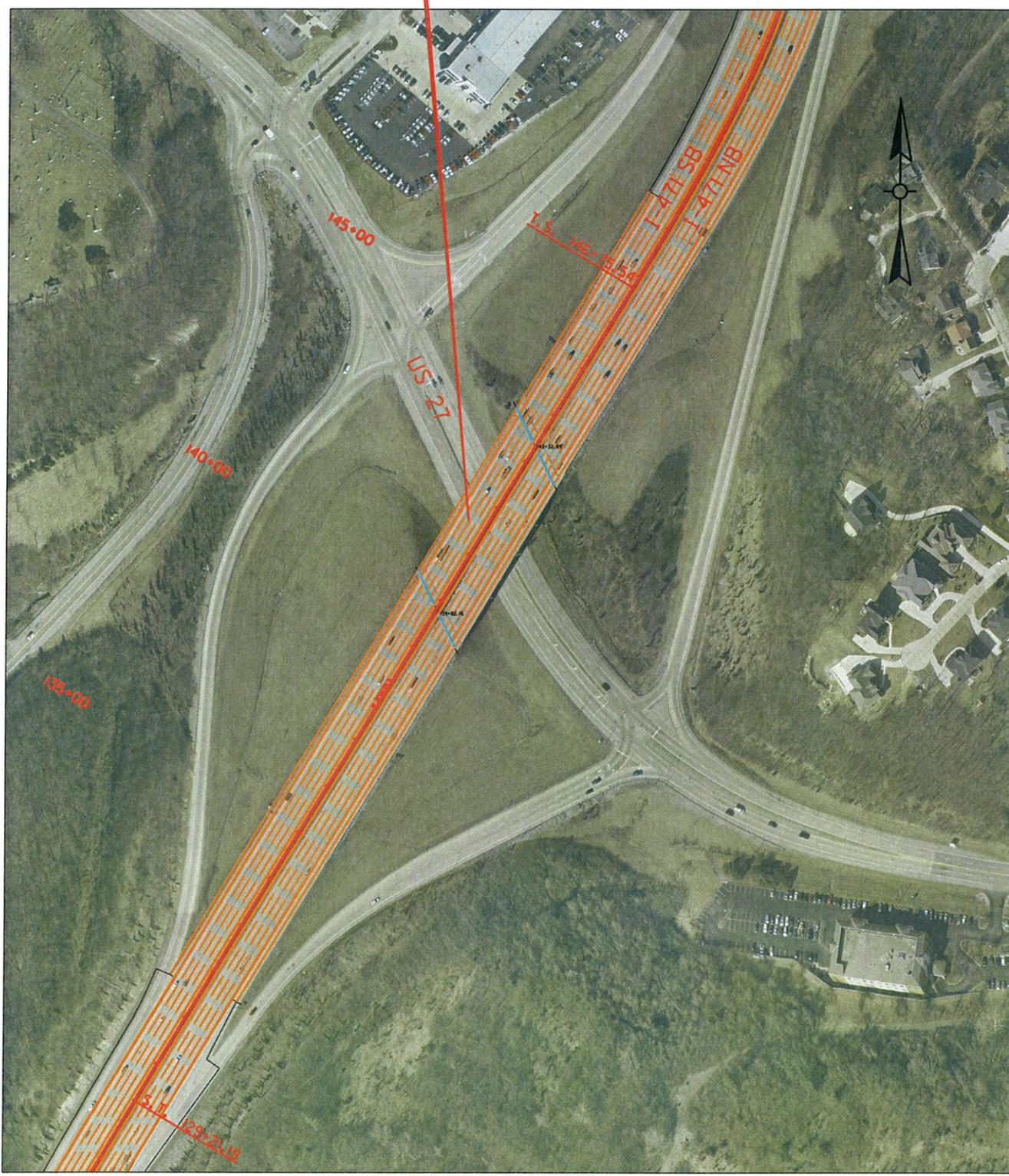
Should an active nest of an osprey or peregrine falcon be located or suspected during bridge work, the KYTC-DEA biologist should be notified. The biologist will notify Kentucky Department of Fish and Wildlife Resources (KDFWR). If an osprey or peregrine falcon is observed diving at bridge personnel or circling the immediate area of bridge work, it can be assumed that a raptor nest is on the bridge. Once contacted, KDFWR can conduct a site visit to confirm the species and nest location. Osprey nests are conspicuous- a few feet wide and made of sticks and vegetation. However, peregrine falcon nests are inconspicuous. Peregrine falcons nest directly on the bridge structure itself, either inside a beam or in a protected area. Bridge workers should be alerted to the possibility of nesting raptors from Mid-February to August 15. Once the nest location is known, bridge workers shall not work within 300 hundred feet of the nest until August 15 or until after the chicks have fledged. KDFWR can monitor the nest and notify the Kentucky Transportation Cabinet once young have fledged.

All nests of other protected migratory birds on bridges should be presumed to be active and occupied between April 15 and August 15. In order to avoid disturbance/destruction of songbird nests (cliff swallow, eastern phoebe, etc.) on bridges the areas within 10 feet laterally of the nest should not be cleaned or washed; pressure washing should start at the 10 feet line and progress away from the nest. Nestlings will fledge within a matter of weeks.

If a roosting bat is encountered, cease cleaning operations in that area, contact the KYTC-DEA biologist and do not disturb the site until they can evaluate the area and make recommendations.

CAMPBELL COUNTY

019B00049L
I-471 SOUTHBOUND OVER US 27



Approximate Location Information
Latitude: 36° 03' 59"
Longitude: 84° 27' 56"

BRIDGE #1 (019B00049L) SUMMARY OF QUANTITIES

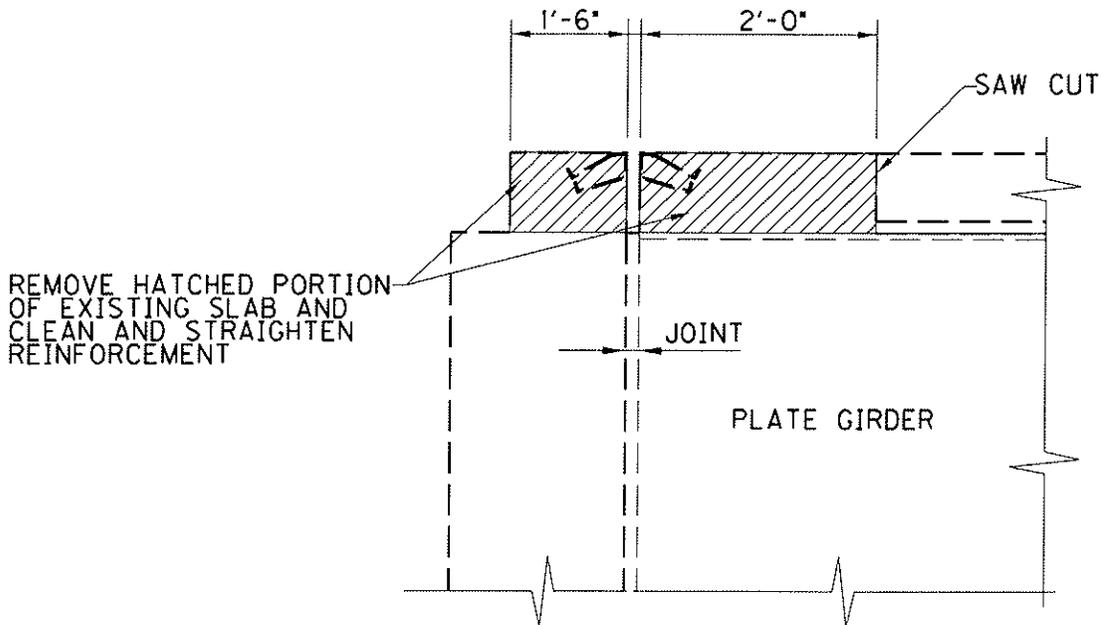
1. DISTRICT: 6
 2. COUNTY: CAMPBELL
 3. ROUTE: I-471
 4. PROJECT NO.: IMNH 4714(034)
 5. ROAD NAME: I-471
 6. DESCRIPTION: I-471 SOUTHBOUND OVER ALEXANDRIA DRIVE (US 27)
 BRIDGE DECK RESTORATION AND WATERPROOFING, ELIMINATE EXPANSION JOINT
 AND REPLACE EXPANSION JOINT

8. LENGTH (FT.): 354.25 BRIDGE WIDTH (FT.): 56.0 SURFACE AREA (SQ. YD.): 2204
 SKEW (DEGREES): 33 DECK THICKNESS (INCHES): 9

ESTIMATED QUANTITIES REQUIRED

ITEM CODE	DESCRIPTION	QUANTITY	UNIT
3298	EXPANSION JT REPLACEMENT 4 IN	67.0	LIN FT
3300	ELIMINATE TRANSVERSE JOINT	67.0	LIN FT
8504	EPOXY SAND SLURRY	354.0	SQ YD
8526	CONC CLASS M FULL DEPTH PATCH	8.0	CU YD
8534	CONCRETE OVERLAY-LATEX	77.0	CU YD
8549	BLAST CLEANING	2504	SQ YD
8550	HYDRODEMOLITION	2204	SQ YD
24094EC	PARTIAL DEPTH PATCHING	15.4	CUYD

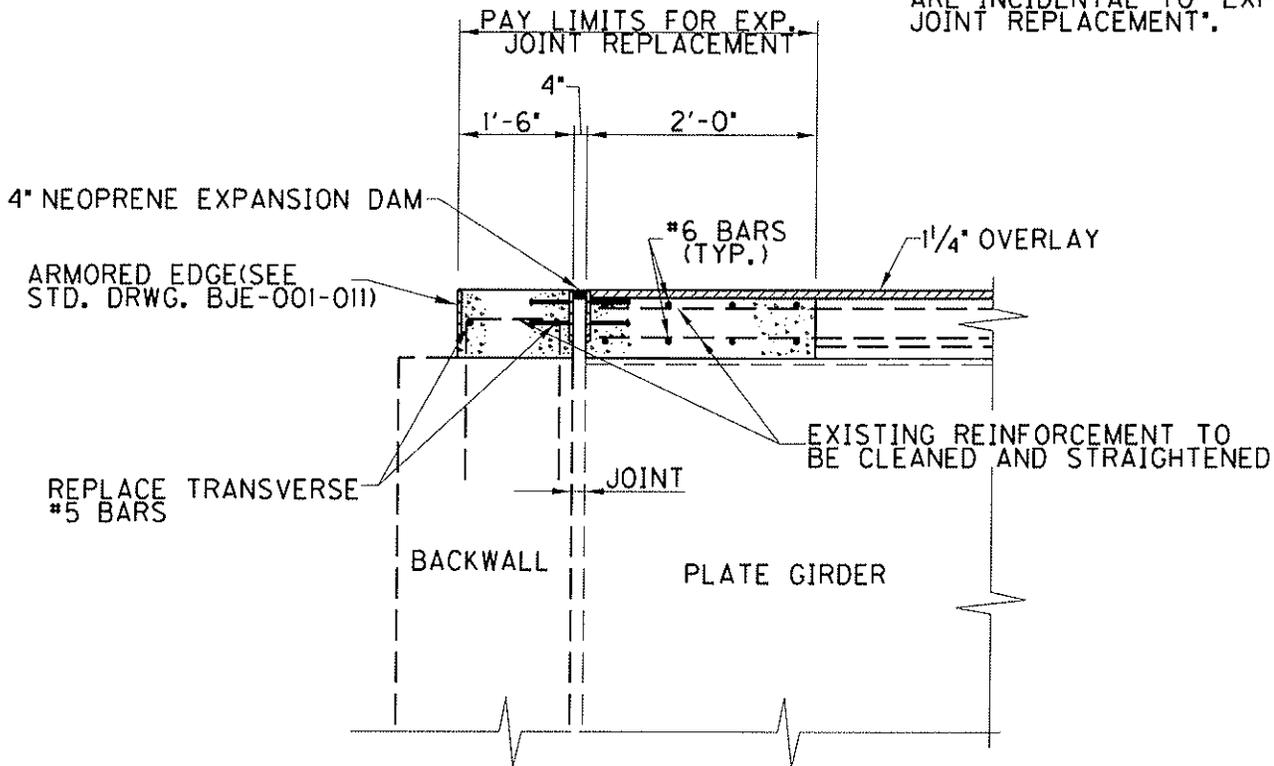
REPLACE JOINT @ END BENT 1



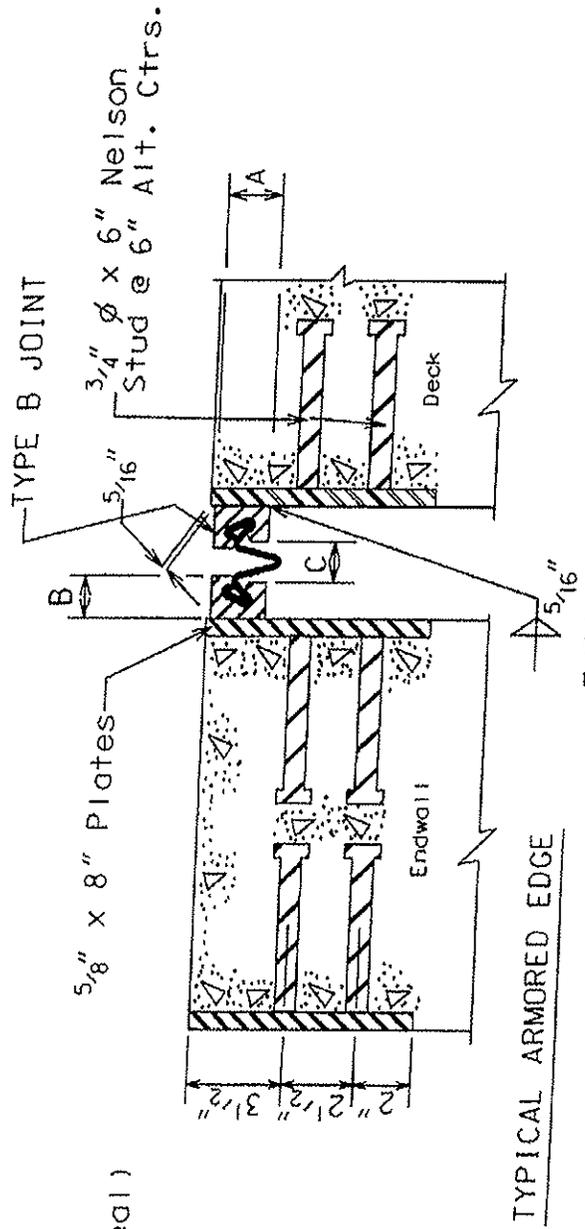
EXISTING SECTION @ END BENT

NOTE:
REMOVE 6' OF ROADWAY PAVEMENT,
PLACE 1/2" PREMOLDED EXPANSION
JOINT MATERIAL AGAINST ARMORED
EDGE. (SEE ROADWAY PLANS)

NOTE:
WHERE A NORMAL LAP CANNOT
BE ATTAINED ON REBARS USE
MECHANICAL SPLICES. SPLICES
ARE INCIDENTAL TO "EXPANSION
JOINT REPLACEMENT".



PROPOSED SECTION @ END BENT



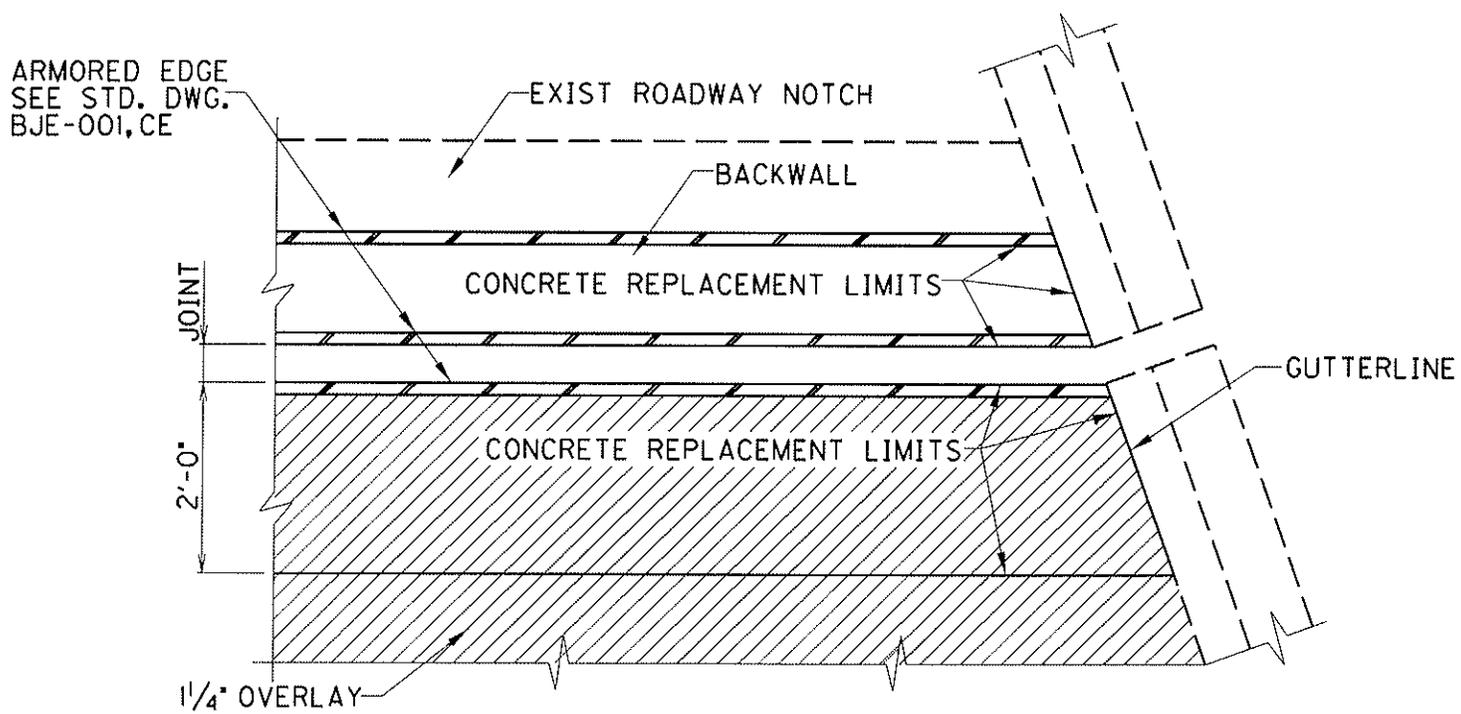
NOTE: Joint openings shall be adjusted for each 10 above or below 60° f. Decrease or increase respectively by increment shown.

ALTERNATE NEOPRENE EXPANSION DAMS - 4"

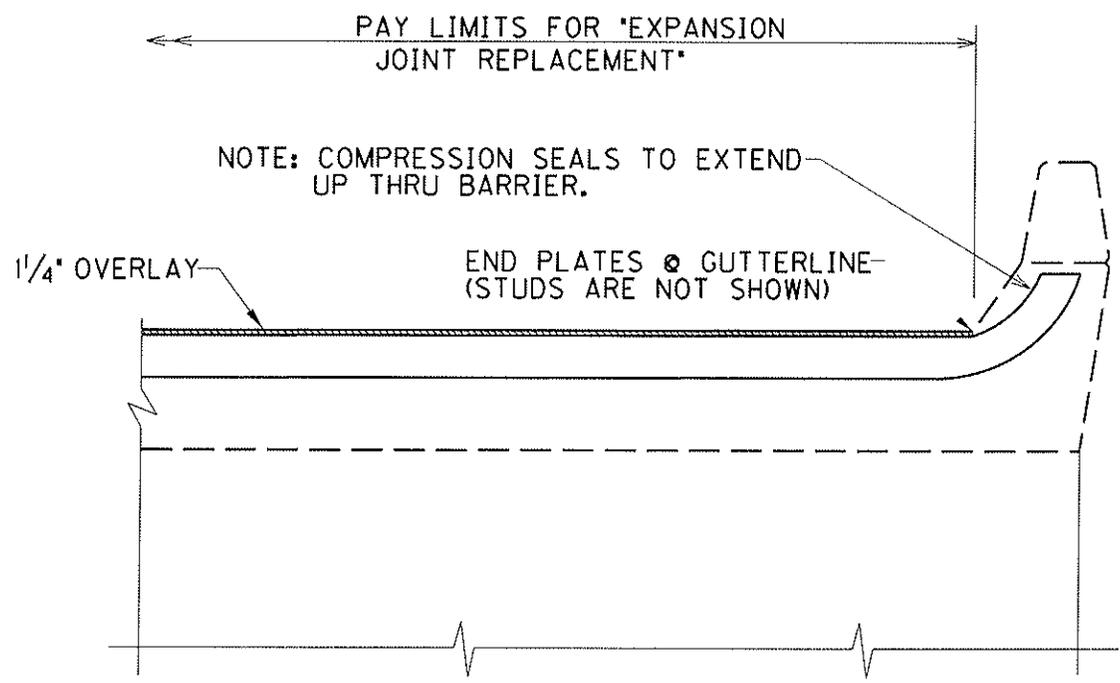
	A	B	C
B WABD STRIP SEAL	2"	1 1/2"	2"
Type A Extrusion with S-400 Seal	Watson Bowman Associates Inc.		
B STEEL FLEX	2"	1 1/2"	2 1/2"
Type SSA with 400 Seal	D. S. Brown Co.		
B GENERAL STRIP CD	2"	1 3/8"	2 1/4"
Profile A Steel Extrusion with Gen Strip CD Seal	General Tire Co.		
B ONFLEX	2"	1 1/4"	2"
Type AM2 Extrusion with 40SE0 Sgl	Structural Accessories Inc.		

Not to Scale

REPLACE EXPANSION JOINT END BENT 1 CURB SECTION

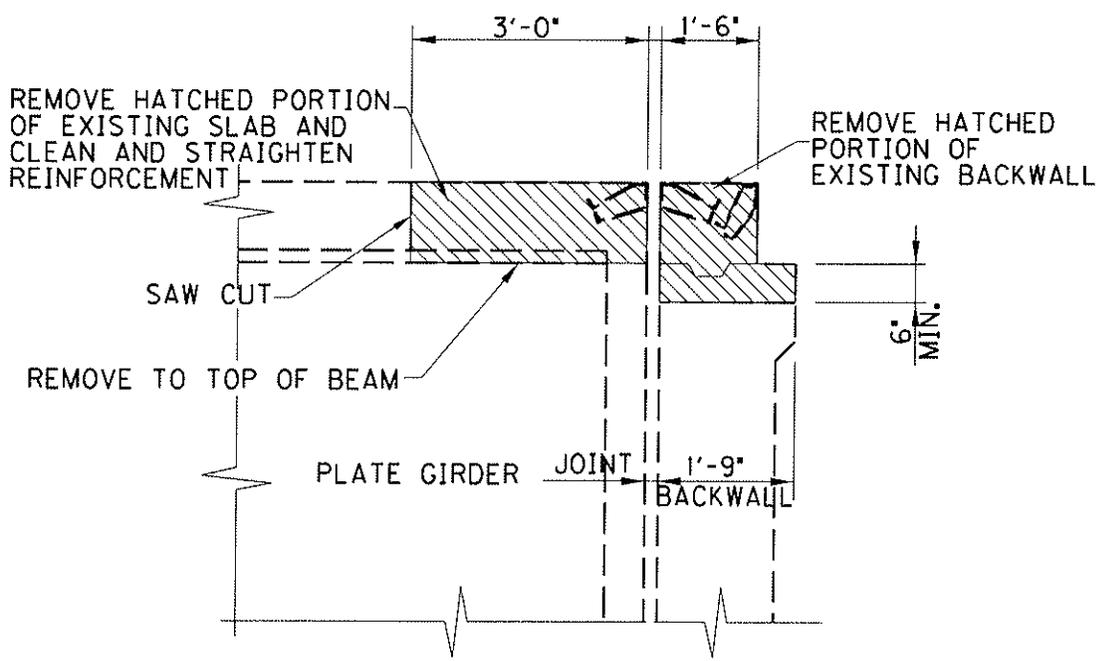


PLAN VIEW @ CURB
REPLACE EXPANSION JOINT



PROPOSED SECTION @ END BENT

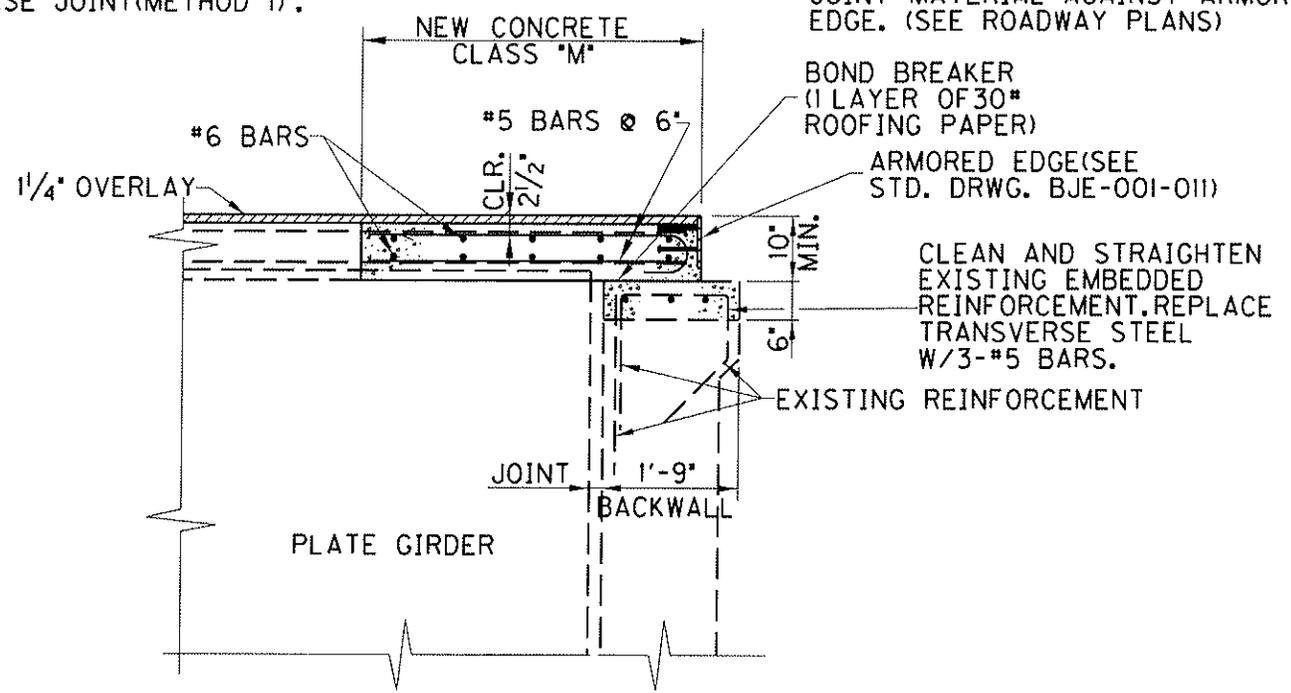
ELIMINATE JOINT @ END BENT 2



EXISTING SECTION @ END BENT

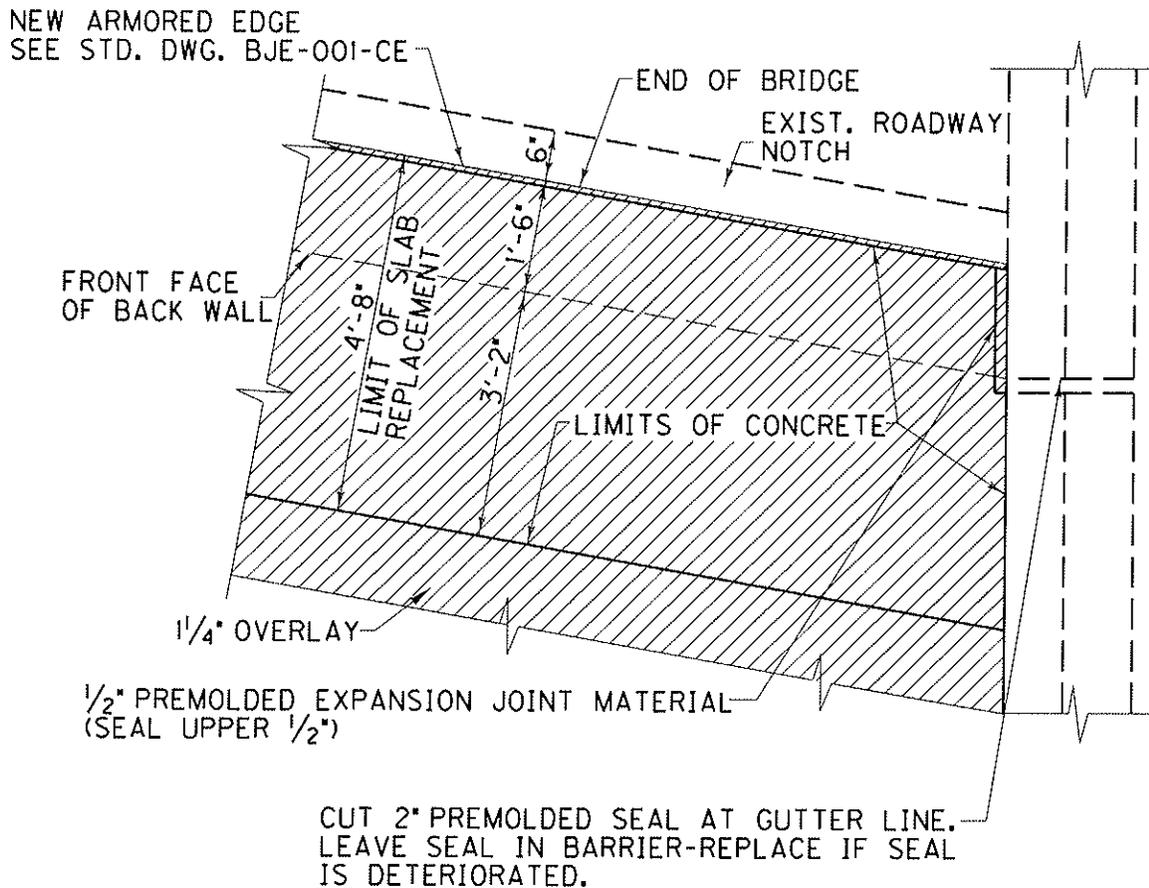
NOTE:
 WHERE A NORMAL LAP CANNOT BE ATTAINED ON REBARS USE MECHANICAL SPLICES. SPLICES ARE INCIDENTAL TO "ELIMINATE TRANSVERSE JOINT (METHOD 1)".

NOTE:
 REMOVE 6' OF ROADWAY PAVEMENT, PLACE 1/2" PREMOLDED EXPANSION JOINT MATERIAL AGAINST ARMORED EDGE. (SEE ROADWAY PLANS)

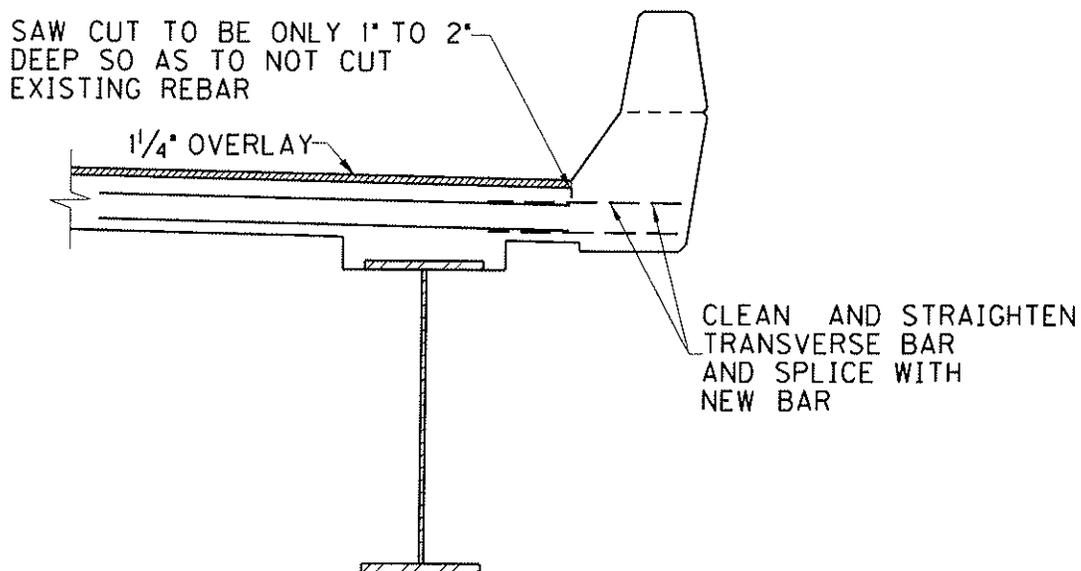


PROPOSED SECTION @ END BENT

CURB SECTION @ END BENT 2

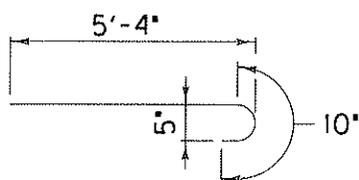


PROPOSED PLAN @ END BENT

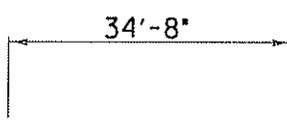


PROPOSED SECTION @ END BENT

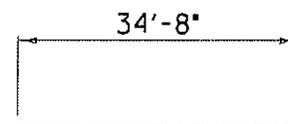
REINFORCEMENT



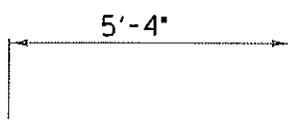
#5 BENT BAR
112 REQ'D END BENT 2



#5 STRAIGHT BAR
4 REQ'D END BENT 1
6 REQ'D END BENT 2



#6 STRAIGHT BAR
16 REQ'D END BENT 1
20 REQ'D END BENT 2



#5 STRAIGHT BAR
112 REQ'D END BENT 2

978 LBS END BENT 1
2,577 LBS END BENT 2

END BENT REINFORCEMENT

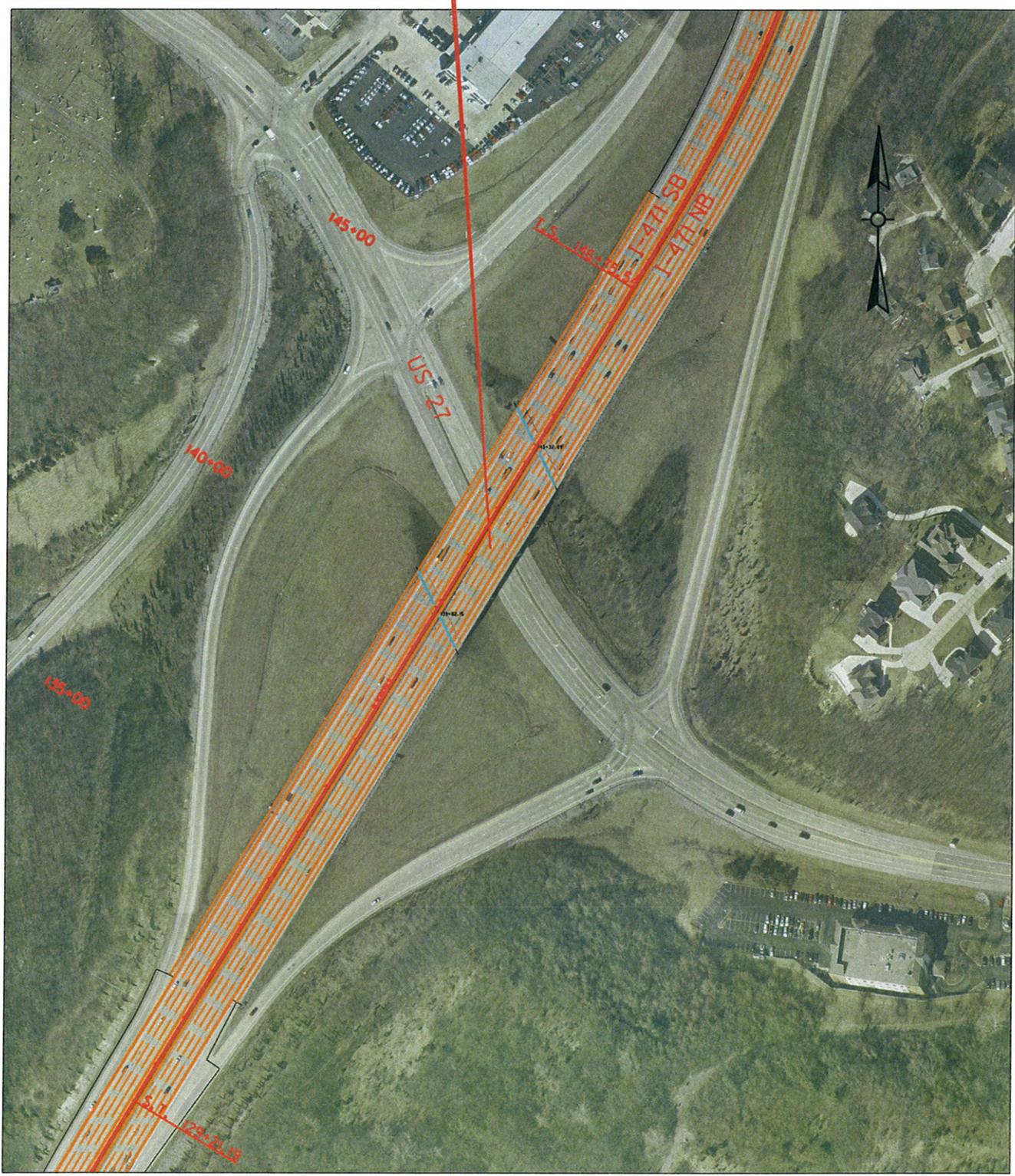
300 LIN. FT. #4 BARS IN 20'-0" LENGTHS
200 LBS. EACH END BENT

MISCELLANEOUS REINFORCEMENT

TOTAL REINFORCEMENT 3,955 LBS.

CAMPBELL COUNTY

019B00049R
I-471 NORTHBOUND OVER US 27



Approximate Location Information
Latitude: 39° 03' 59"
Longitude: 84° 27' 55"

BRIDGE #2 (019B00049R) SUMMARY OF QUANTITIES

1. DISTRICT: 6
 2. COUNTY: CAMPBELL
 3. ROUTE: I-471
 4. PROJECT NO.: IMNH 4714(034)
 5. ROAD NAME: I-471
 6. DESCRIPTION: I-471 NORTHBOUND OVER ALEXANDRIA DRIVE (US 27)
 BRIDGE DECK RESTORATION AND WATERPROOFING, ELIMINATE EXPANSION JOINT
 AND REPLACE EXPANSION JOINT

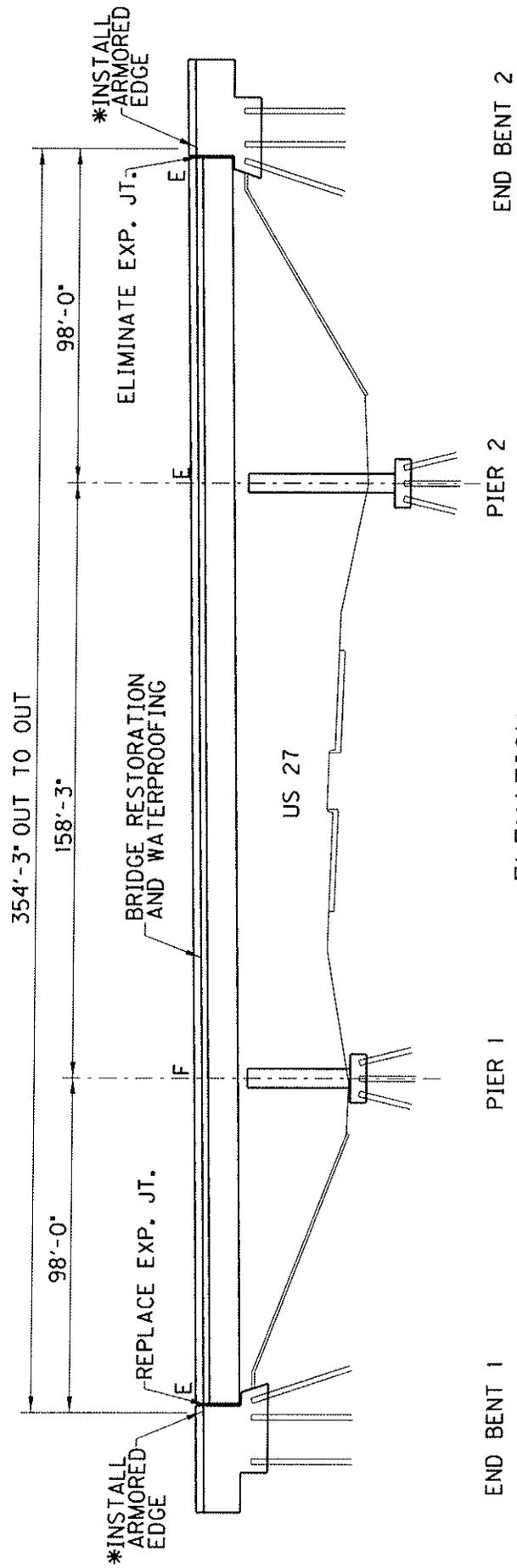
8. LENGTH (FT.): 354.25 BRIDGE WIDTH (FT.): 56.0 SURFACE AREA (SQ. YD.): 2204
 SKEW (DEGREES): 33 DECK THICKNESS (INCHES): 9

ESTIMATED QUANTITIES REQUIRED

ITEM CODE	DESCRIPTION	QUANTITY	UNIT
3298	EXPANSION JT REPLACEMENT 4 IN	67.0	LIN FT
3300	ELIMINATE TRANSVERSE JOINT	67.0	LIN FT
8504	EPOXY SAND SLURRY	354.0	SQ YD
8526	CONC CLASS M FULL DEPTH PATCH	8.0	CU YD
8534	CONCRETE OVERLAY-LATEX	77.0	SQ YD
8549	BLAST CLEANING	2504	SQ YD
8550	HYDRODEMOLITION	2204	CU YD
24094EC	PARTIAL DEPTH PATCHING	15.4	CU YD

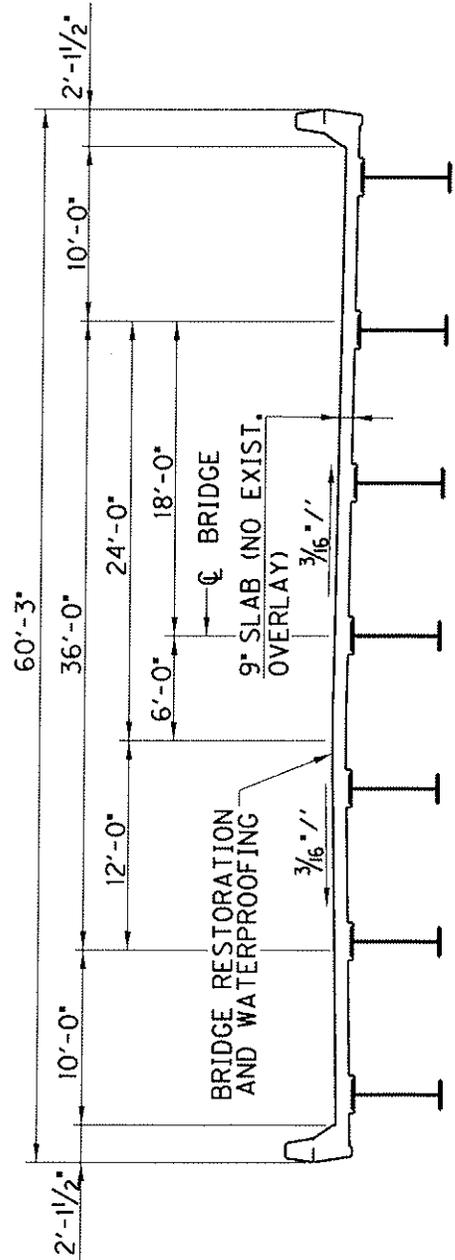
B2

I-471 NORTHBOUND OVER ALEXANDRIA PIKE (US 27)
BRIDGE MAINTENANCE NUMBER 019B00049R



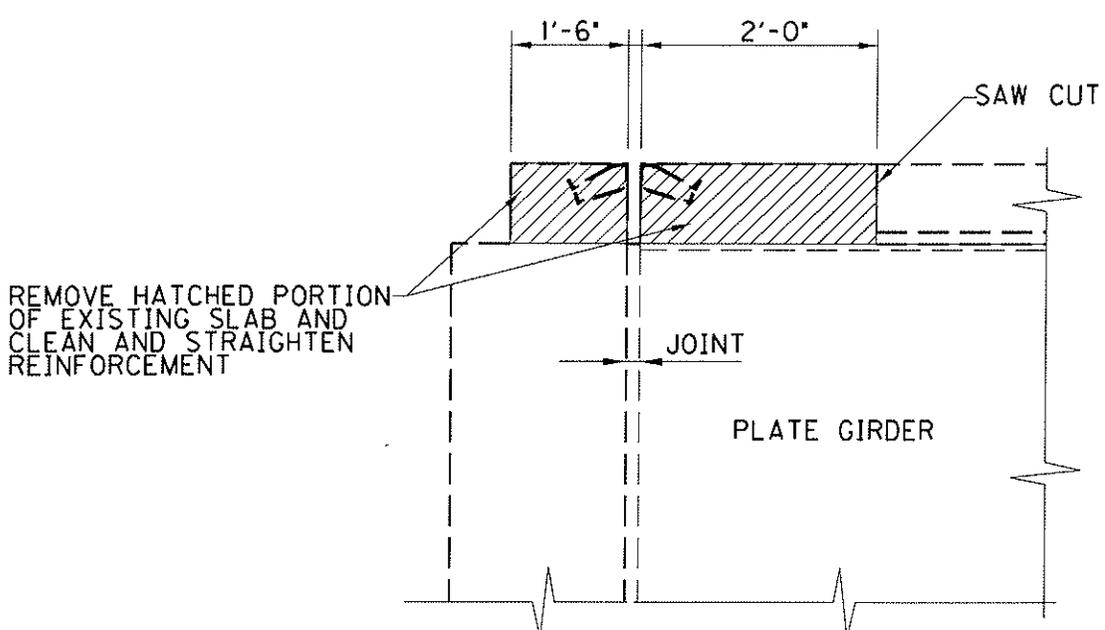
ELEVATION
33°00'00" SKEW RT.
NOT TO SCALE

NOTE:
THE CONTRACTOR SHALL REPAIR ANY DAMAGES TO EXISTING PAINT.
*SEE STD. DRWG. BJE-001-11



TYPICAL SECTION

REPLACE JOINT @ END BENT 1

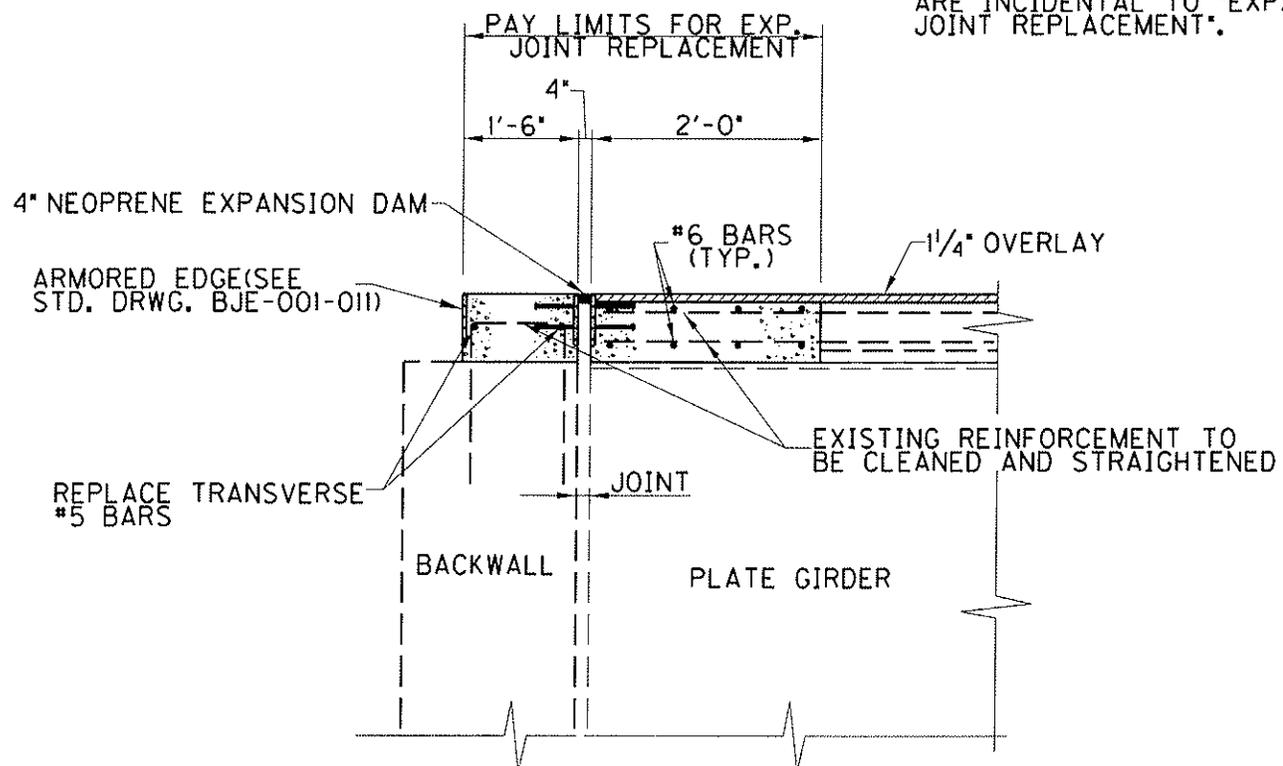


REMOVE HATCHED PORTION OF EXISTING SLAB AND CLEAN AND STRAIGHTEN REINFORCEMENT

EXISTING SECTION @ END BENT

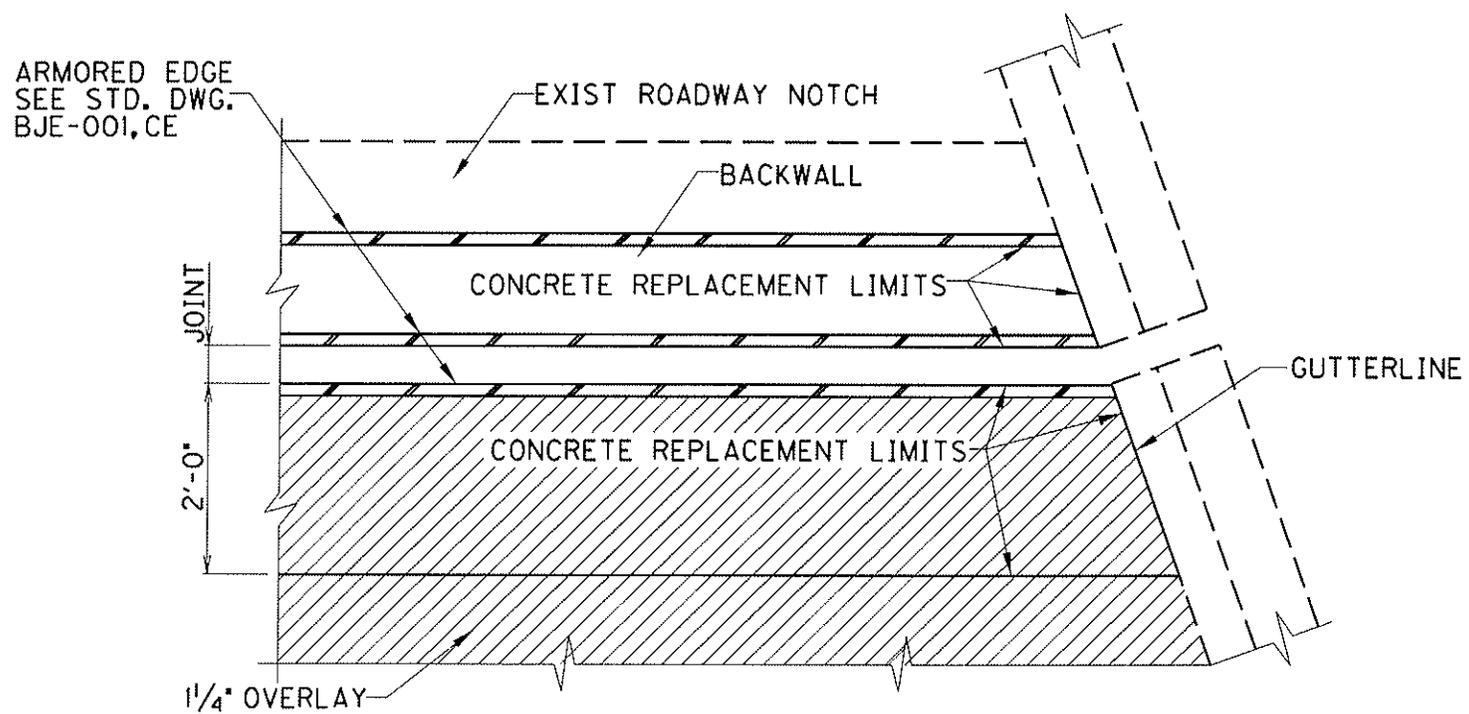
NOTE:
REMOVE 6' OF ROADWAY PAVEMENT,
PLACE 1/2" PREMOLDED EXPANSION
JOINT MATERIAL AGAINST ARMORED
EDGE. (SEE ROADWAY PLANS)

NOTE:
WHERE A NORMAL LAP CANNOT
BE ATTAINED ON REBARS USE
MECHANICAL SPLICES. SPLICES
ARE INCIDENTAL TO "EXPANSION
JOINT REPLACEMENT".

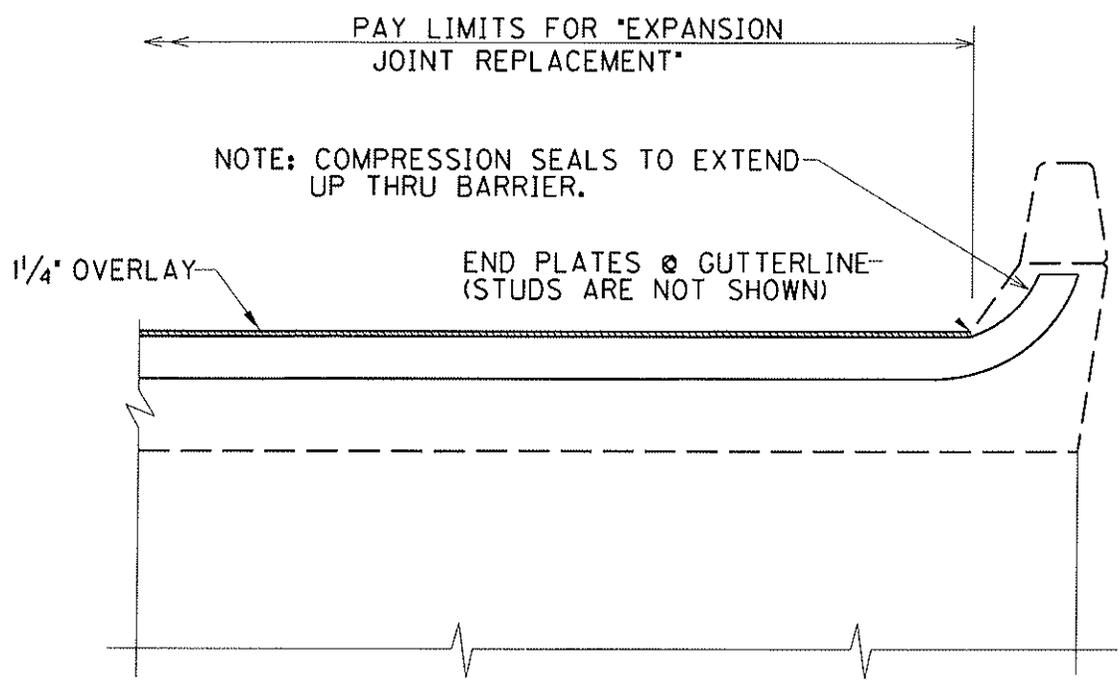


PROPOSED SECTION @ END BENT

REPLACE EXPANSION JOINT END BENT 1 CURB SECTION

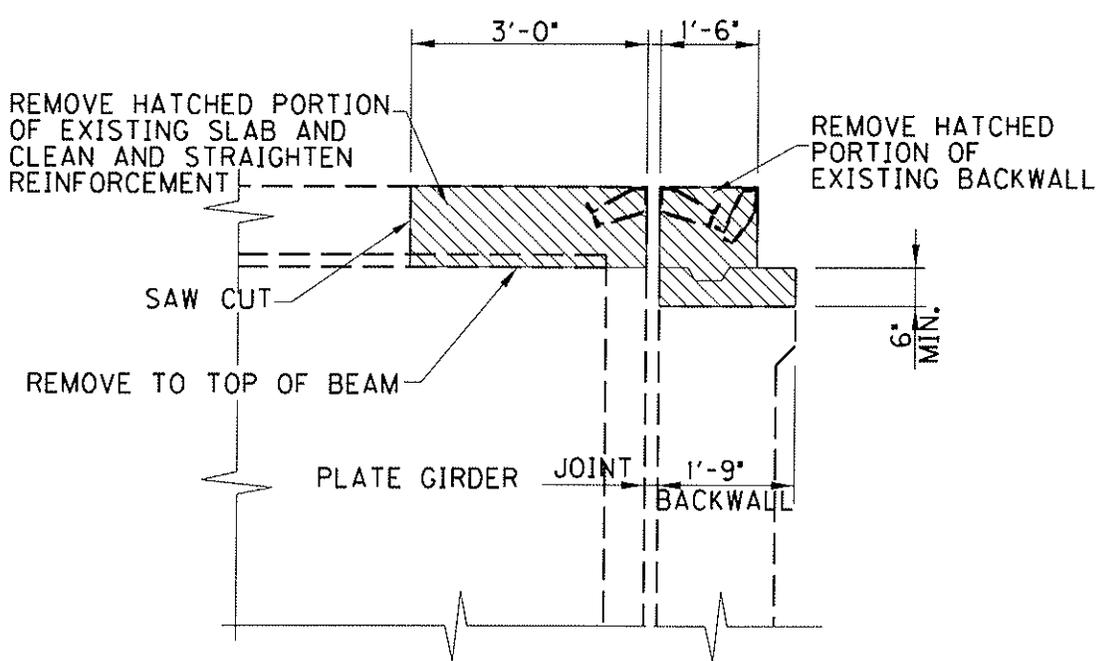


PLAN VIEW @ CURB
REPLACE EXPANSION JOINT



PROPOSED SECTION @ END BENT

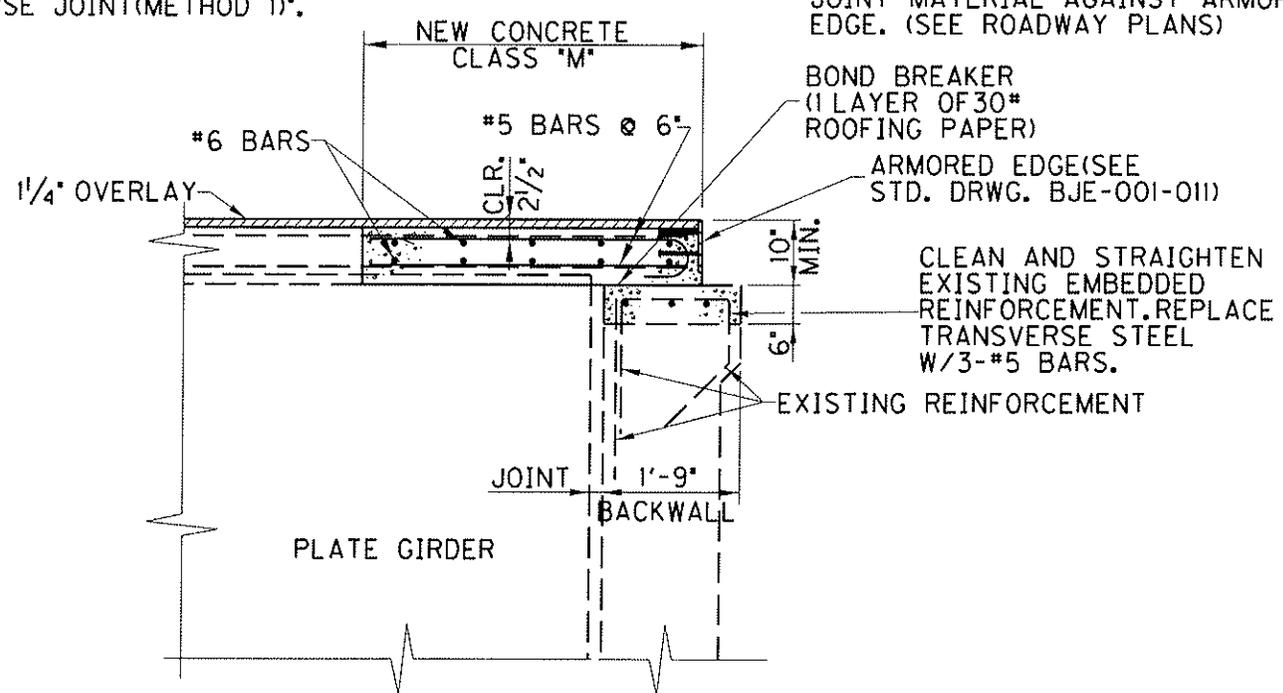
ELIMINATE JOINT @ END BENT 2



**EXISTING SECTION
 @ END BENT**

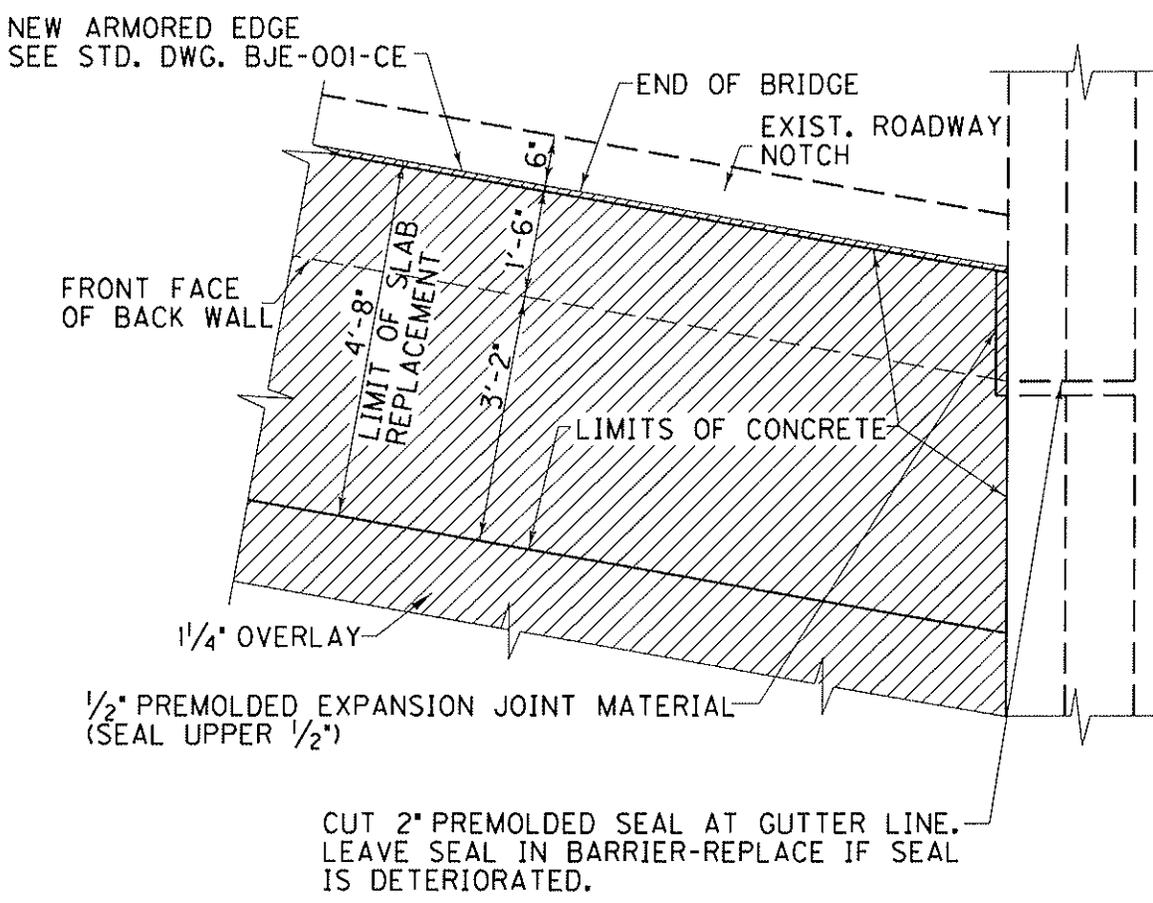
NOTE:
 WHERE A NORMAL LAP CANNOT BE ATTAINED ON REBARS USE MECHANICAL SPLICES. SPLICES ARE INCIDENTAL TO ELIMINATE TRANSVERSE JOINT (METHOD 1).

NOTE:
 REMOVE 6' OF ROADWAY PAVEMENT, PLACE 1/2" PREMOLDED EXPANSION JOINT MATERIAL AGAINST ARMORED EDGE. (SEE ROADWAY PLANS)

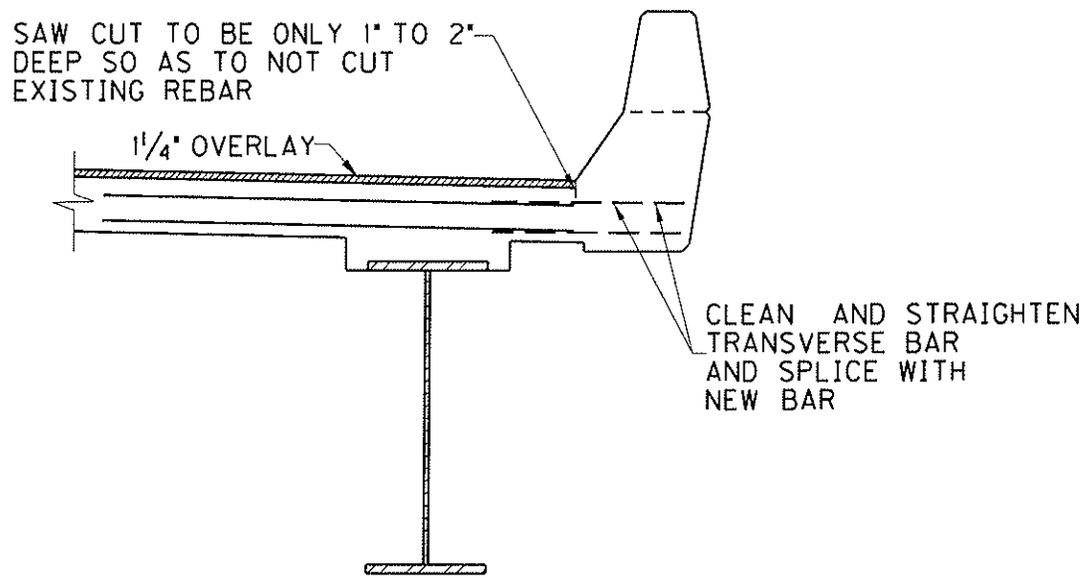


**PROPOSED SECTION
 @ END BENT**

CURB SECTION @ END BENT 2

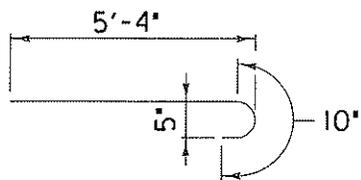


PROPOSED PLAN @ END BENT

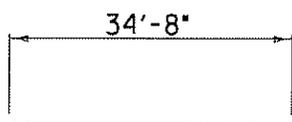


PROPOSED SECTION @ END BENT

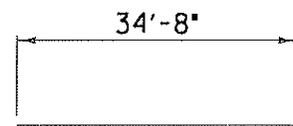
REINFORCEMENT



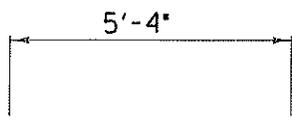
#5 BENT BAR
112 REQ'D END BENT 2



#5 STRAIGHT BAR
4 REQ'D END BENT 1
6 REQ'D END BENT 2



#6 STRAIGHT BAR
16 REQ'D END BENT 1
20 REQ'D END BENT 2



#5 STRAIGHT BAR
112 REQ'D END BENT 2

978 LBS END BENT 1
2,577 LBS END BENT 2

END BENT REINFORCEMENT

300 LIN. FT. #4 BARS IN 20'-0" LENGTHS
200 LBS. EACH END BENT

MISCELLANEOUS REINFORCEMENT

TOTAL REINFORCEMENT 3,955 LBS.

CAMPBELL COUNTY

HIGHLAND AVENUE
OVER I-471



Approximate Location Information
Latitude:
Longitude:

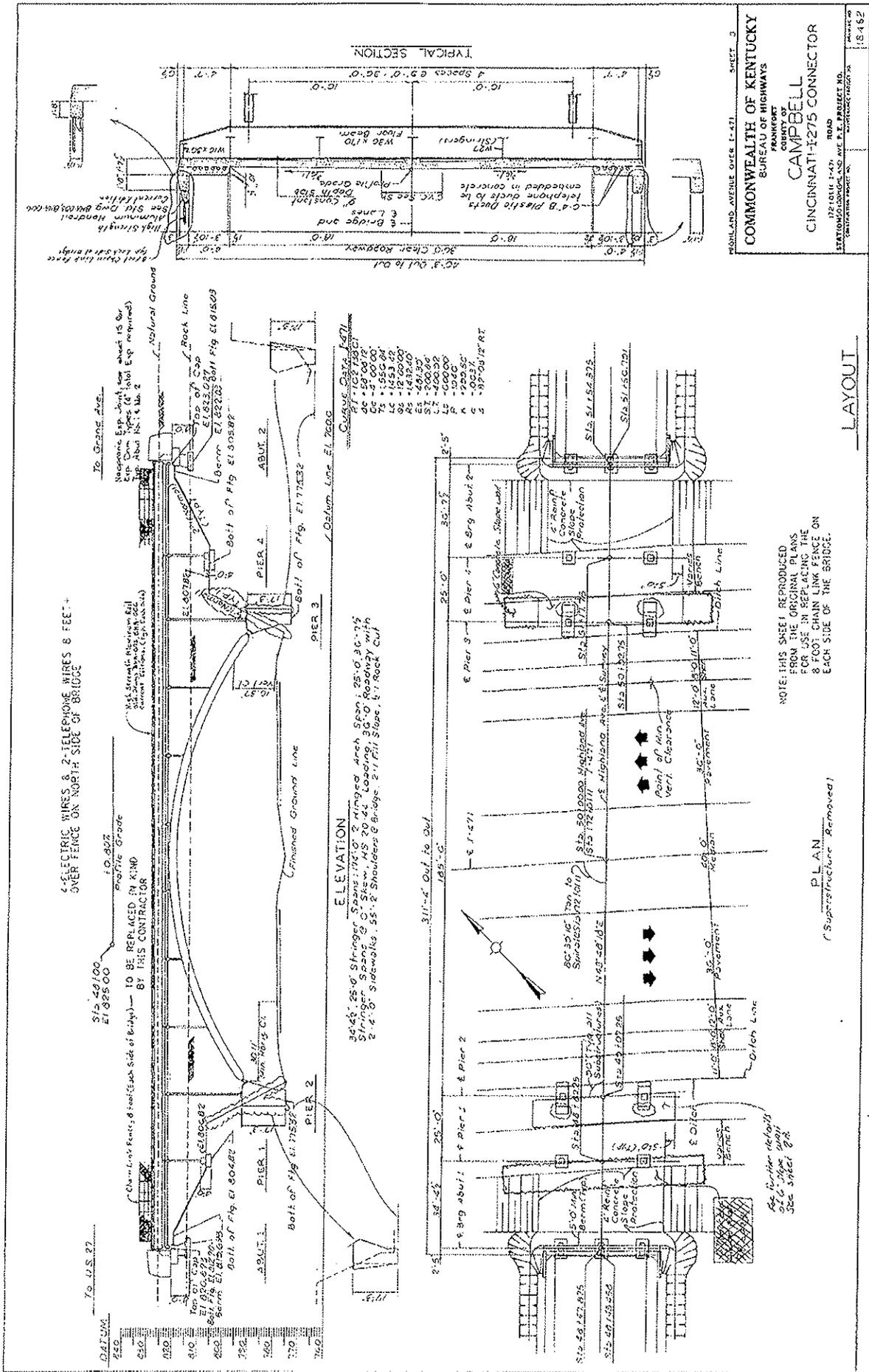
BRIDGE #2A (019B00050N) SUMMARY OF QUANTITIES

1. DISTRICT: 6
2. COUNTY: CAMPBELL
3. ROUTE: HIGHLAND AVENUE
4. PROJECT NO.: IMNH 4714(034)
5. ROAD NAME: HIGHLAND AVENUE
6. DESCRIPTION: HIGHLAND AVENUE OVER I-471
REMOVE AND REPLACE BRIDGE CHAIN LINK FENCE

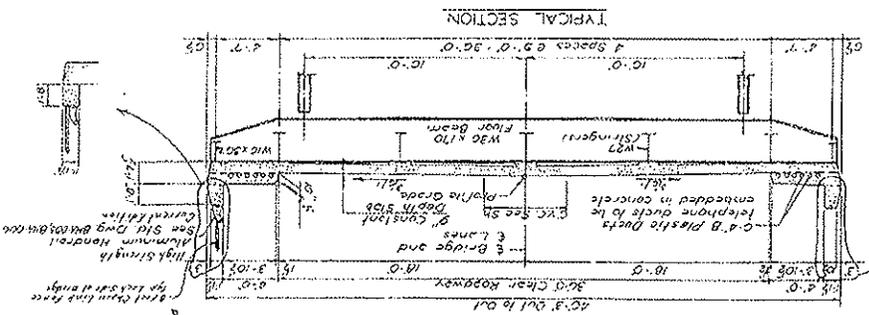
8. LENGTH (FT.): 311.33 BRIDGE WIDTH (FT.): 36.0 SURFACE AREA (SQ. YD.): 1245
SKEW (DEGREES): 0 DECK THICKNESS (INCHES): 9

ESTIMATED QUANTITIES REQUIRED

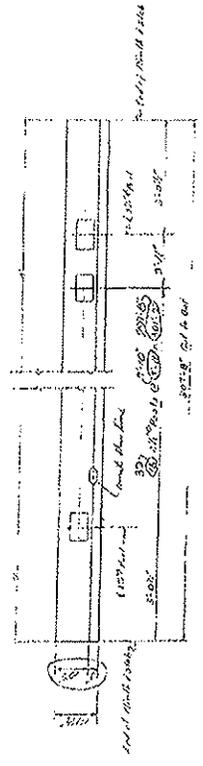
ITEM CODE	DESCRIPTION	QUANTITY	UNIT
24424EC	REM AND REP BRIDGE CHAIN LINK FENCE	604.0	LIN FT



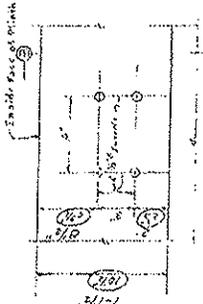
COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
COUNTY OF FRANKFORT
CAMPBELL
CINCINNATI-1275 CONNECTOR
172 1014 1-471
ROAD
DRAWN BY: J. W. F. FRANKFORT, KY.
CHECKED BY: J. W. F. FRANKFORT, KY.
DATE: 1-1-47
SHEET 3



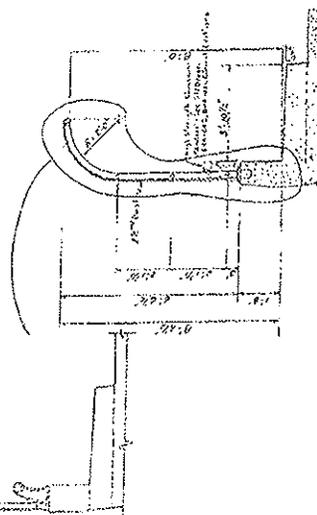
NOTE: THIS SHEET REPRODUCED FROM THE ORIGINAL PLANS FOR USE IN REPLACING THE 8 FOOT CHAIN LINK FENCE ON EACH SIDE OF THE BRIDGE.



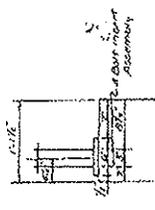
PLINTH PLAN
 Foot Spacing for Chain Link Fence
 Typical Rock Slope or Flank



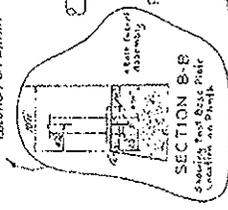
PLAN
 Showing Typical Location
 on Bridge



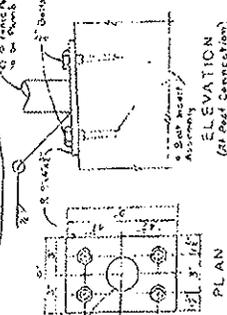
SECTION A-A



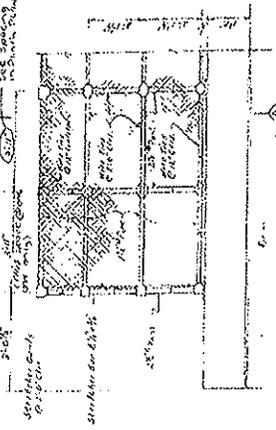
SECTION B-B
 Showing Post Base Plate
 Location on Bridge



PIPE CONNECTION
 Showing Longitudinal
 Pipe Connection



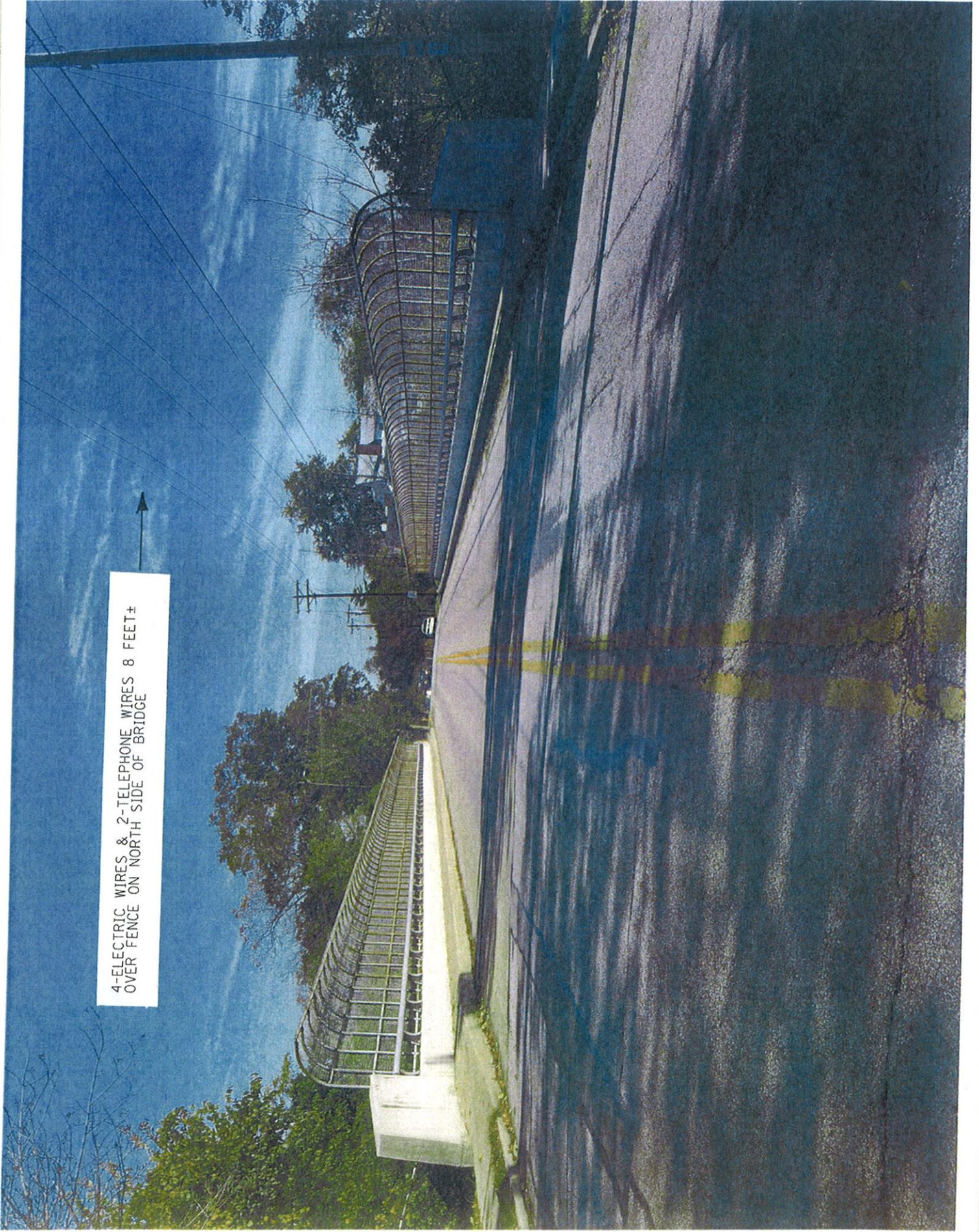
PLAN CONNECTION



ELEVATION

REGISTERED PROFESSIONAL ENGINEER
 SHEET 10A
 COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 COUNTY OF
CAMPBELL
 CINCINNATI-1275 CONNECTOR
 ROAD
 KENTON COUNTY, KENTUCKY
 PROJECT NO. 18642

CHAIN LINK FENCE DETAILS



4-ELECTRIC WIRES & 2-TELEPHONE WIRES 8 FEET±
OVER FENCE ON NORTH SIDE OF BRIDGE

BRIDGE #3 (019B00051N) SUMMARY OF QUANTITIES

1. DISTRICT: 6
 2. COUNTY: CAMPBELL
 3. ROUTE: I-471
 4. PROJECT NO.: IMNH 4714(034)
 5. ROAD NAME: I-471
 6. DESCRIPTION: RAMP E OVER GRAND AVENUE
 7. TYPE OF WORK: BRIDGE DECK WATERPROOFING AND RESTORATION, ELIMINATE EXPANSION JOINT AND EXPANSION JOINT REPLACEMENT

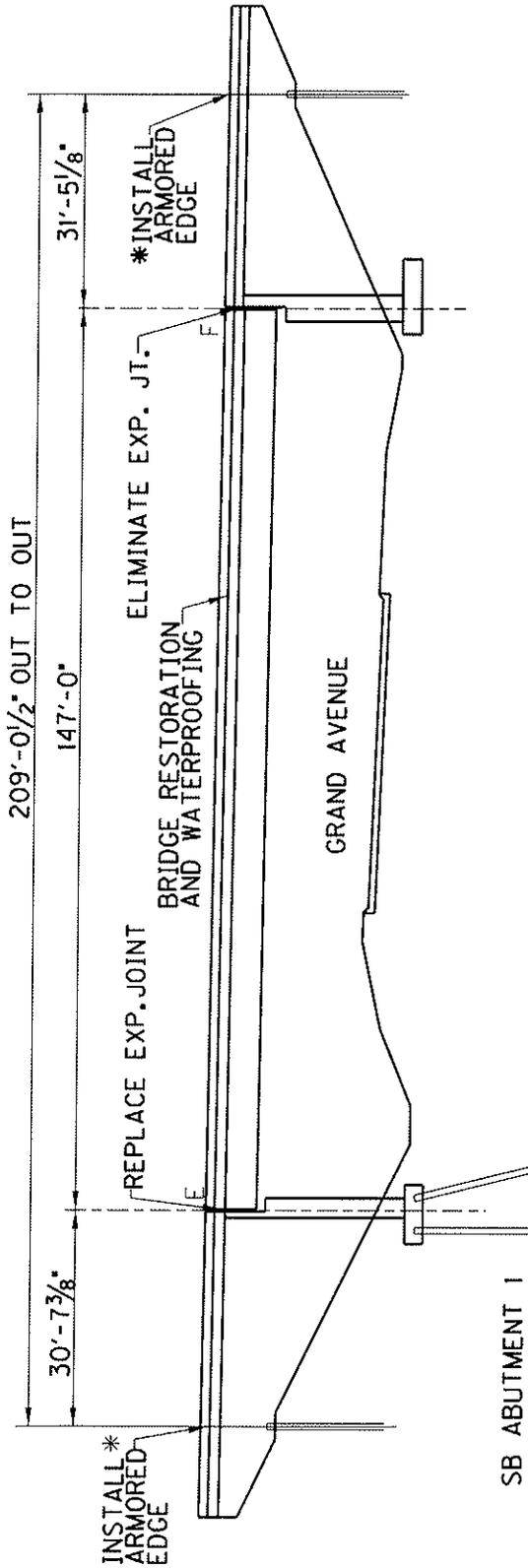
8. LENGTH (FT.): 209.04 BRIDGE WIDTH (FT.): 23.5 SURFACE AREA (SQ. YD.): 546
 SKEW (DEGREES): 22 DECK THICKNESS (INCHES): 9

ESTIMATED QUANTITIES REQUIRED

ITEM CODE	DESCRIPTION	QUANTITY	UNIT
3298	REPLACE EXPANSION JT 4 IN	26.0	LIN FT
3300	ELIMINATE TRANSVERSE JOINT	26.0	LIN FT
8504	EPOXY SAND SLURRY	209.0	SQ YD
8526	CONC CLASS M FULL DEPTH PATCH	2.0	CU YD
8534	CONCRETE OVERLAY-LATEX	19.0	CU YD
8549	BLAST CLEANING	721	SQ YD
8550	HYDRODEMOLITION	546	SQ YD
24094EC	PARTIAL DEPTH PATCHING	3.8	CU YD

B3

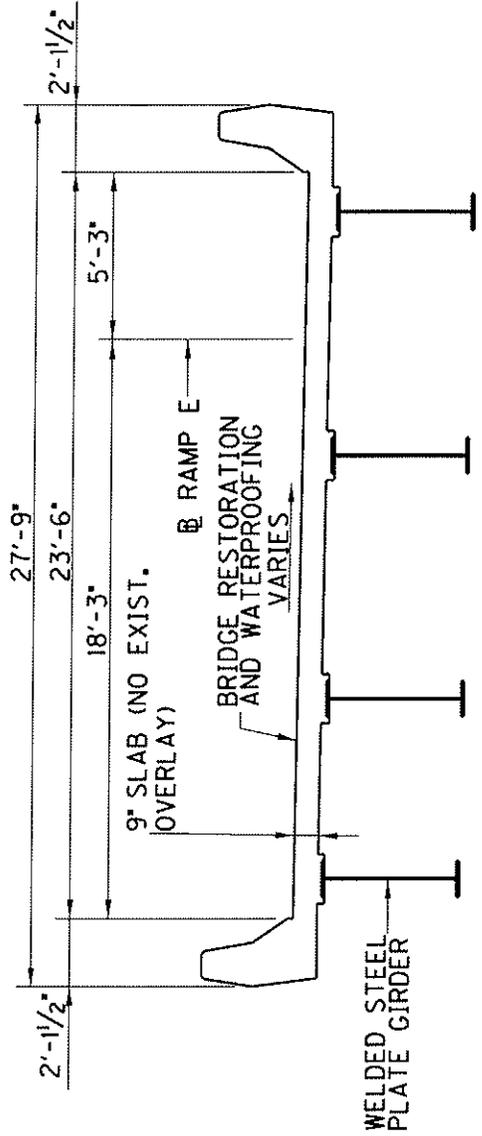
RAMP E OVER GRAND AVENUE
BRIDGE MAINTENANCE NUMBER 019B00005IN



ELEVATION
22°00'00" SKEW RT.
NOT TO SCALE

*SEE STD. DRWG. BJE-001-11

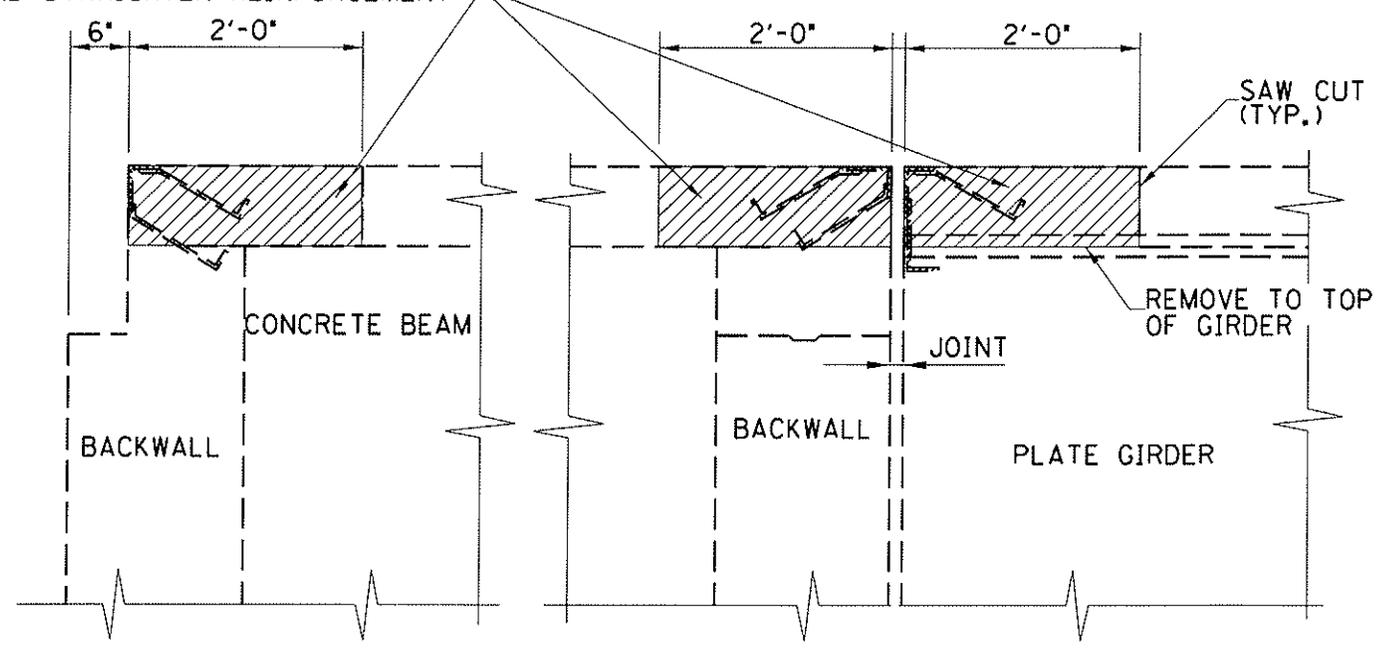
NOTE:
THE CONTRACTOR SHALL REPAIR ANY DAMAGES TO EXISTING PAINT.



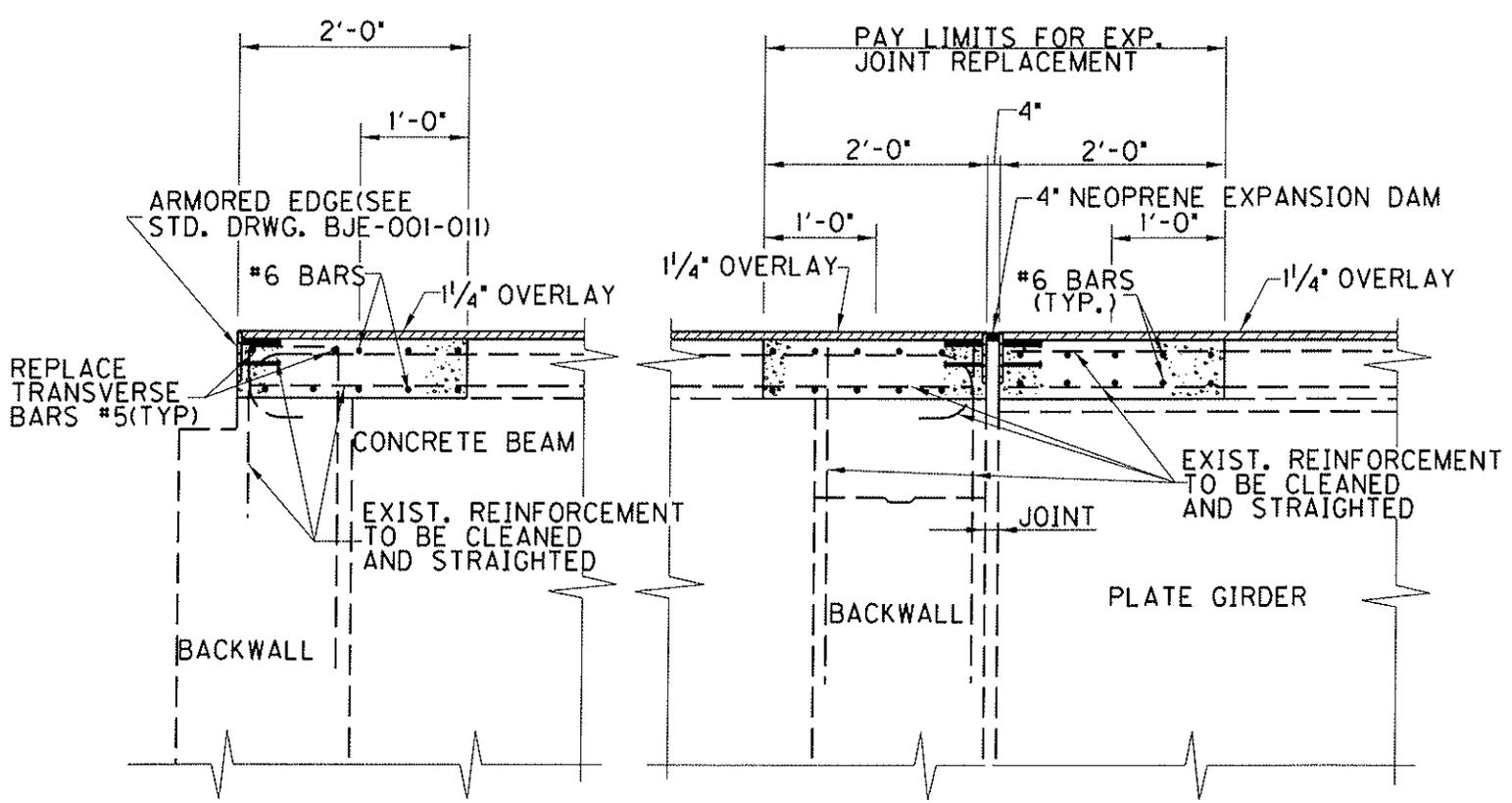
TYPICAL SECTION

REPLACE JOINT @ ABUTMENT 1

REMOVE HATCHED PORTION OF
EXISTING SLAB AND CLEAN
AND STRAIGHTEN REINFORCEMENT

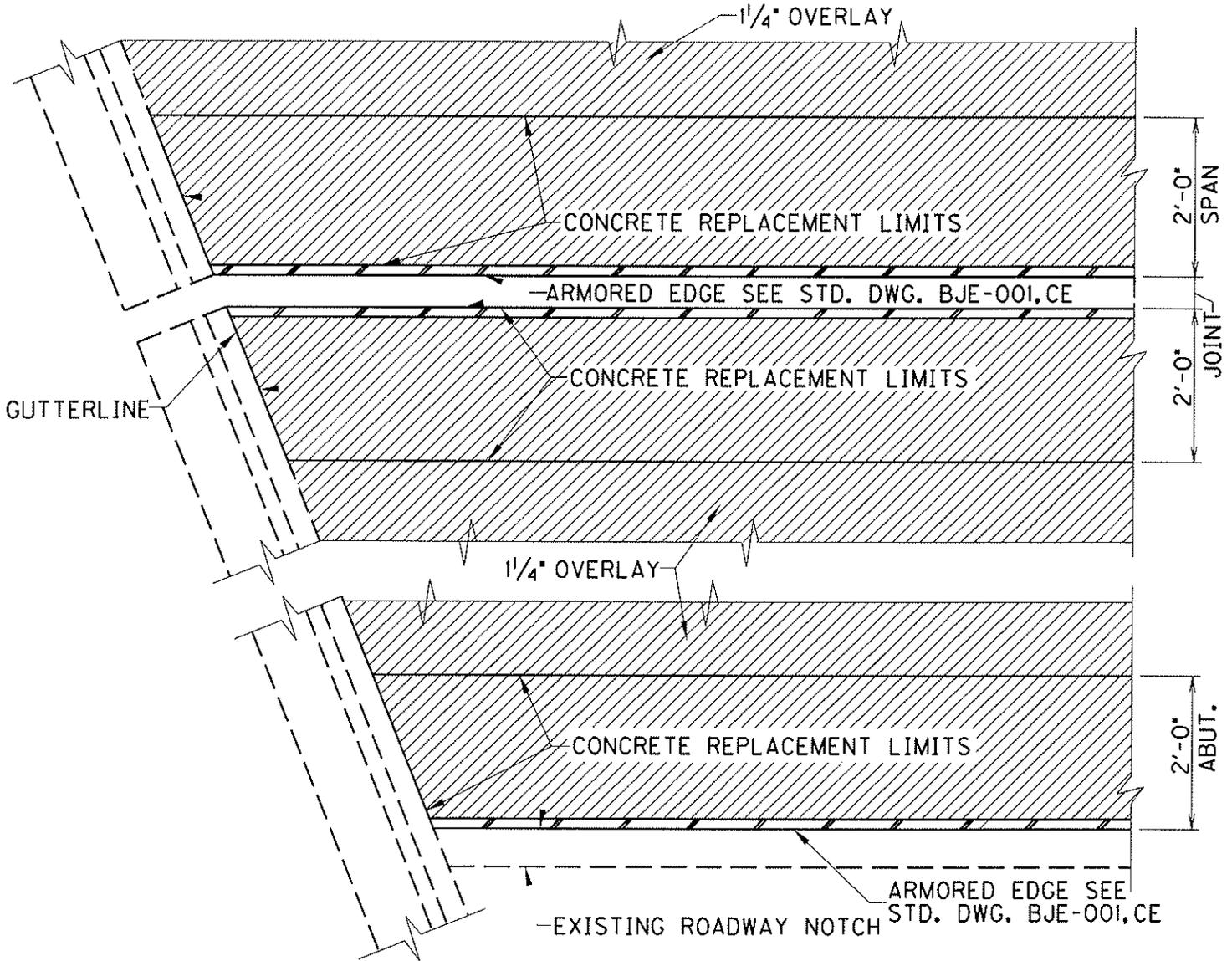


EXISTING SECTION @ ABUTMENT



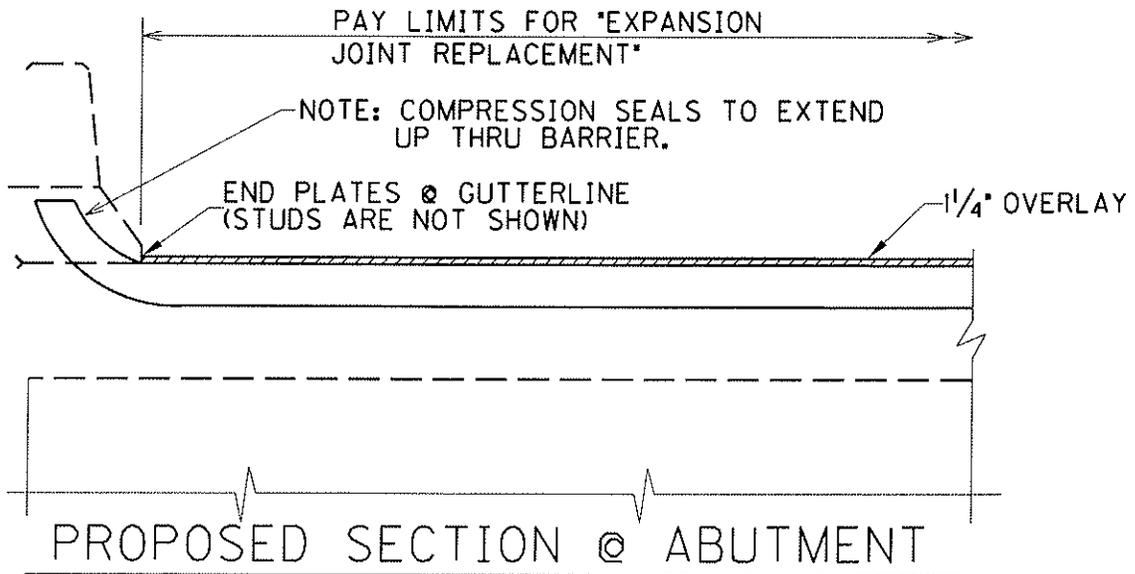
PROPOSED SECTION @ ABUTMENT

REPLACE EXPANSION JOINT ABUTMENT 1 CURB SECTION



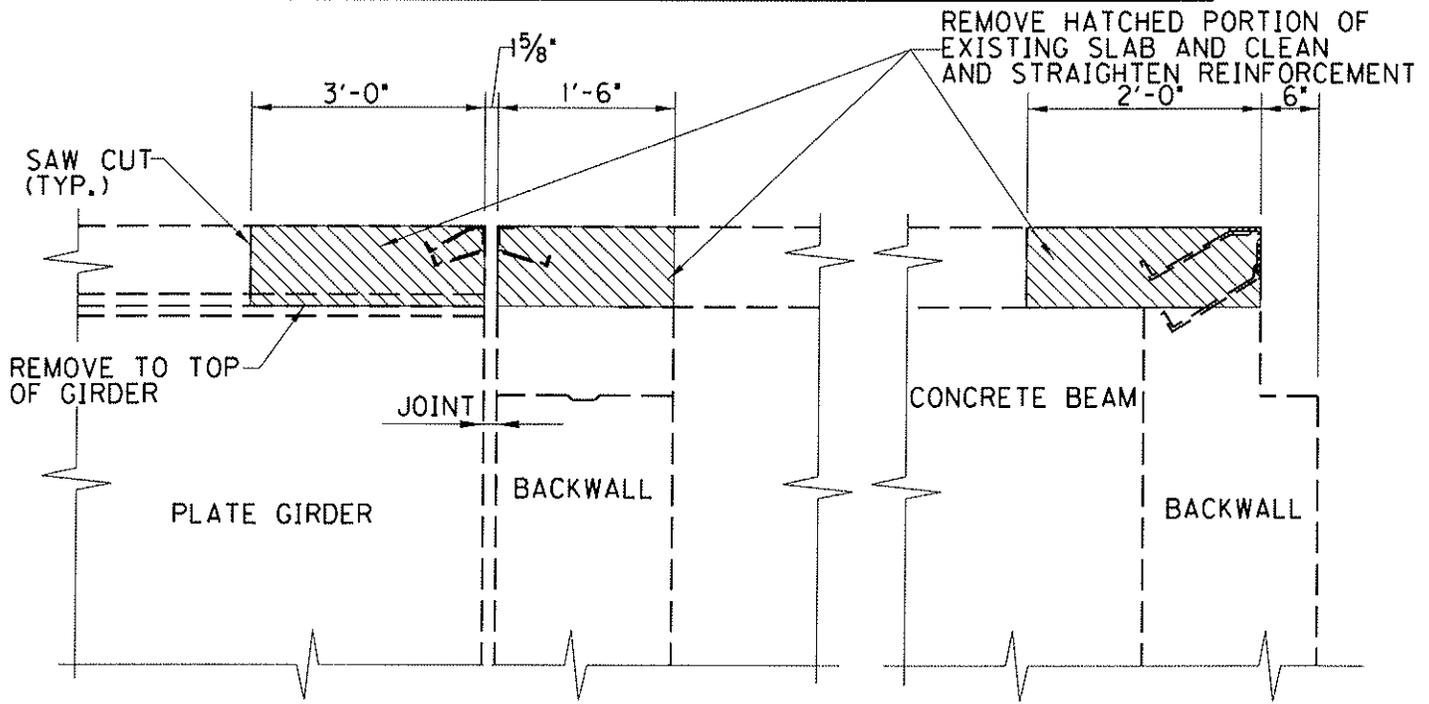
PLAN VIEW @ CURB

REPLACE EXPANSION JOINT & ARMORED EDGE



PROPOSED SECTION @ ABUTMENT

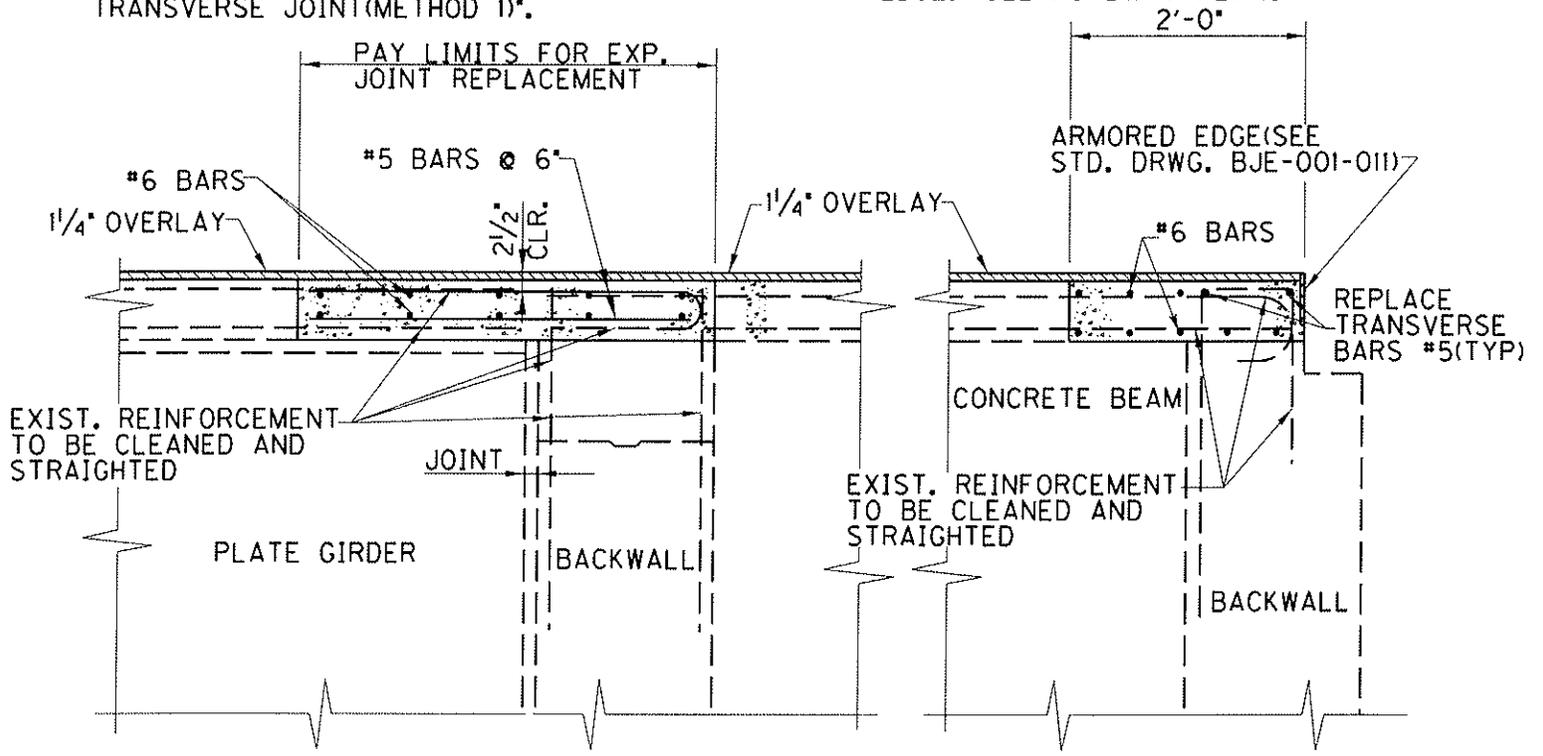
ELIMINATE JOINT @ ABUTMENT 2



EXISTING SECTION @ ABUTMENT 2

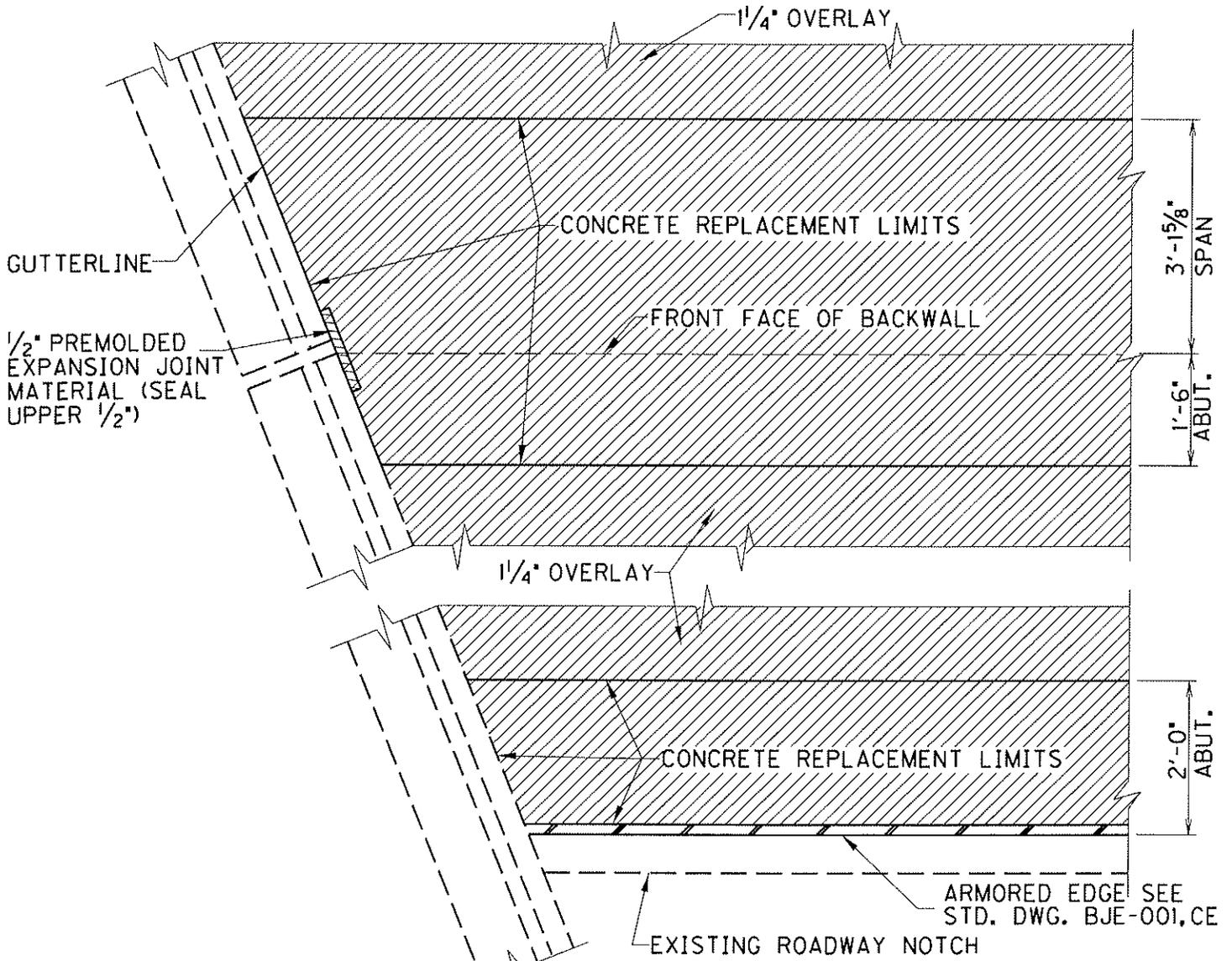
NOTE:
WHERE A NORMAL LAP CANNOT BE ATTAINED ON REBARS USE MECHANICAL SPLICES. SPLICES ARE INCIDENTAL TO 'ELIMINATE TRANSVERSE JOINT(METHOD 1)'.
REMOVE TO TOP OF GIRDER

NOTE:
REMOVE 6' OF ROADWAY PAVEMENT, PLACE 1/2" PREMOLDED EXPANSION JOINT MATERIAL AGAINST ARMORED EDGE. (SEE ROADWAY PLANS)

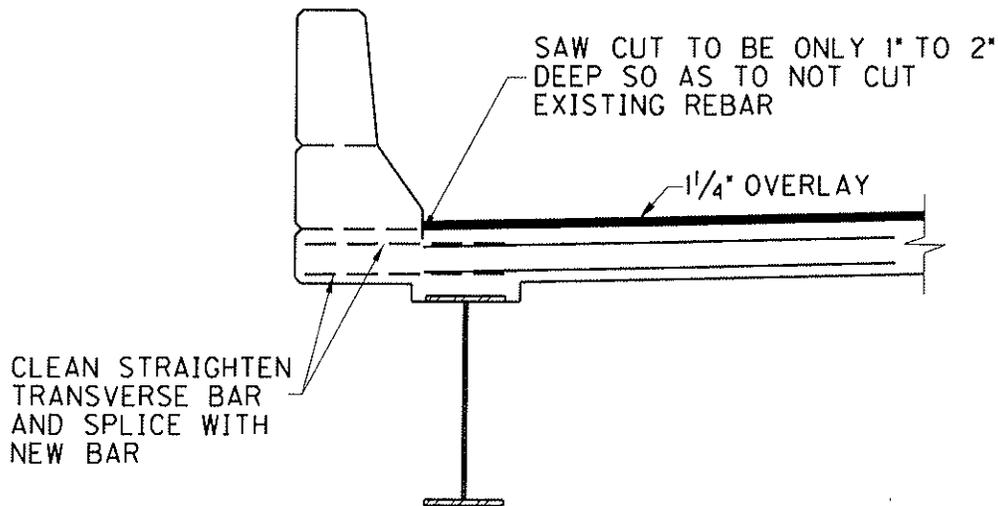


PROPOSED SECTION @ ABUTMENT 2

ABUTMENT 2 CURB SECTION

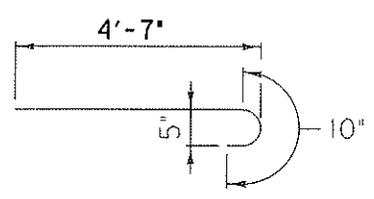


PROPOSED PLAN @ ABUTMENT 2 ELIMINATE EXPANSION JOINT & REPLACE ARMORED EDGE

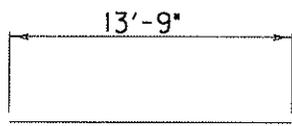


PROPOSED SECTION @ ABUTMENT 2

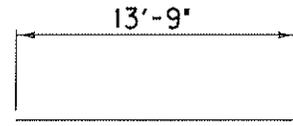
REINFORCEMENT



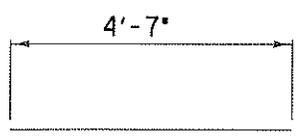
#5 BENT BAR
47 REQ'D END BENT 2



#5 STRAIGHT BAR
20 REQ'D END BENT 1
4 REQ'D END BENT 2



#6 STRAIGHT BAR
40 REQ'D END BENT 1
40 REQ'D END BENT 2



#5 STRAIGHT BAR
47 REQ'D END BENT 2

1,113 LBS END BENT 1
1,363 LBS END BENT 2

END BENT REINFORCEMENT

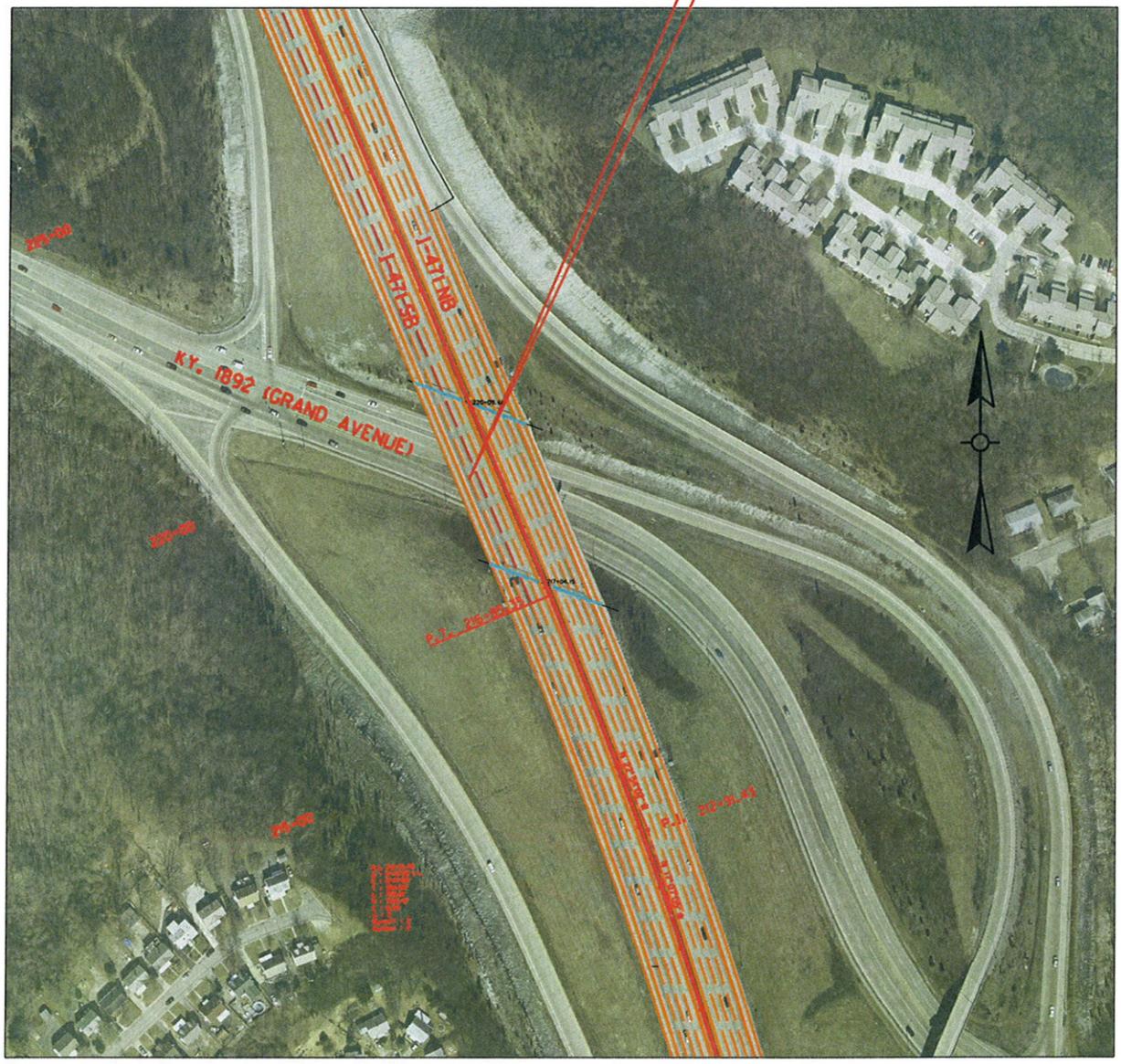
300 LIN. FT. #4 BARS IN 20'-0" LENGTHS
200 LBS. EACH END BENT

MISCELLANEOUS REINFORCEMENT

TOTAL REINFORCEMENT 2,876 LBS.

CAMPBELL COUNTY

019B00052L
I-471 SOUTHBOUND
OVER GRAND AVENUE



Approximate Location Information
Latitude: 39° 5' 5"
Longitude: 84° 28' 23"

BRIDGE #4 (019B00052L) SUMMARY OF QUANTITIES

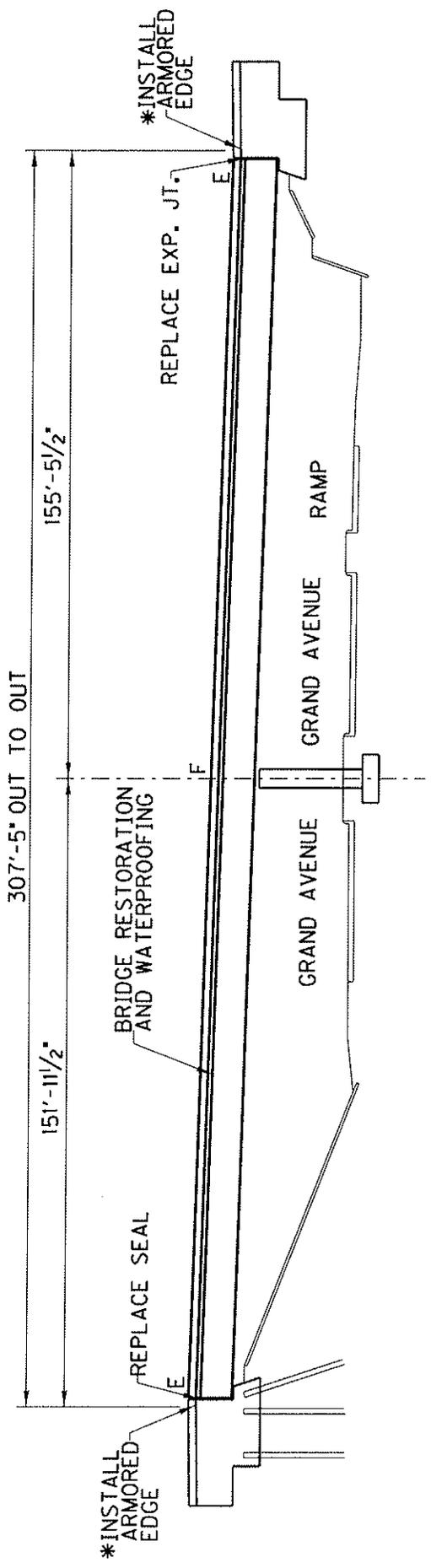
1. DISTRICT: 6
 2. COUNTY: CAMPBELL
 3. ROUTE: I-471
 4. PROJECT NO.: IMNH 4714(034)
 5. ROAD NAME: I-471
 6. DESCRIPTION: I-471 SOUTHBOUND OVER GRAND AVENUE
 BRIDGE DECK RESTORATION AND WATERPROOFING, JOINT SEAL REPLACEMENT
 AND REPLACE EXPANSION JOINT
 8. LENGTH (FT.): 307.42 BRIDGE WIDTH (FT.): 56.0 SURFACE AREA (SQ. YD.): 1913
 SKEW (DEGREES): 43.72 DECK THICKNESS (INCHES): 9

ESTIMATED QUANTITIES REQUIRED

ITEM CODE	DESCRIPTION	QUANTITY	UNIT
3298	EXPANSION JT REPLACEMENT 4 IN	79.0	LIN FT.
8504	EPOXY SAND SLURRY	307.0	SQ YD
8526	CONC CLASS M FULL DEPTH PATCH	7.0	CU YD
8534	CONCRETE OVERLAY-LATEX	67.0	CU YD
8549	BLAST CLEANING	2168	SQ YD
8550	HYDRODEMOLITION	1913	SQ YD
23386EC	JOINT SEAL REPLACEMENT	79.0	LIN FT.
24094EC	PARTIAL DEPTH PATCHING	13.4	CU YD

B4

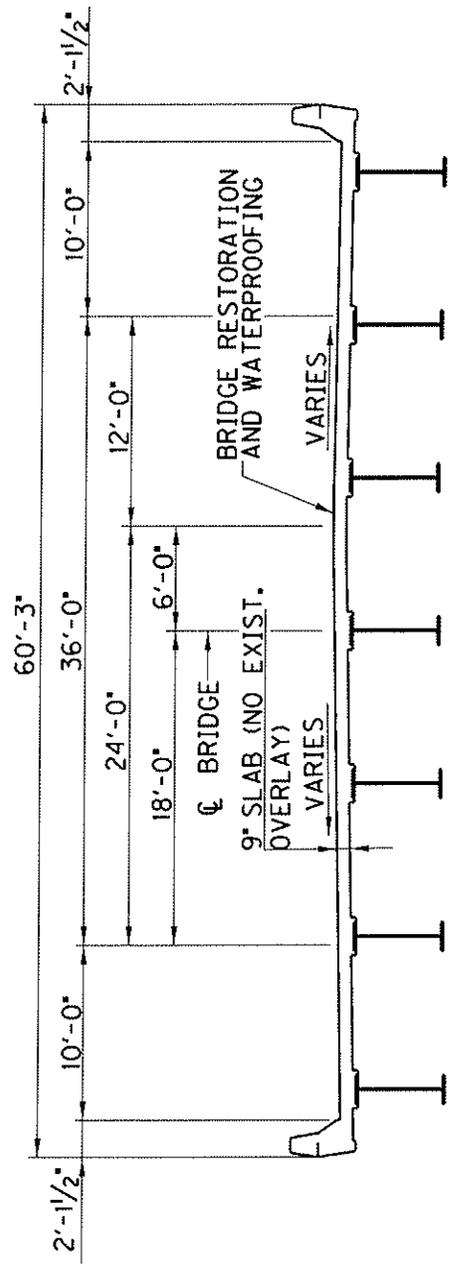
I-471 SOUTHBOUND OVER GRAND AVENUE
BRIDGE MAINTENANCE NUMBER 019B00052L



END BENT 1 ABUTMENT 1

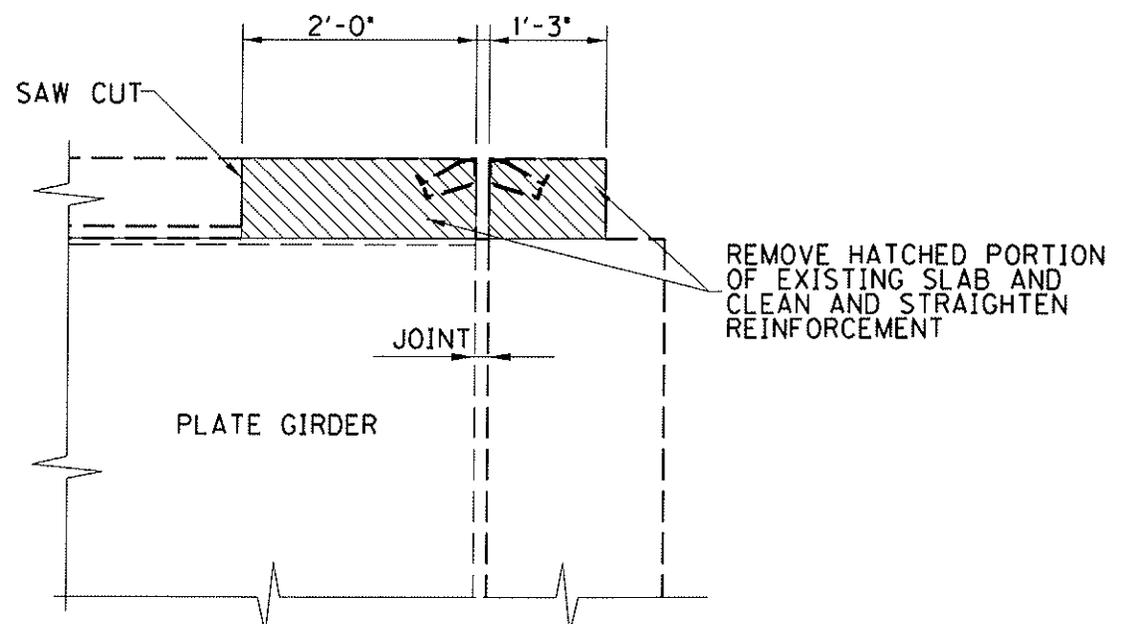
ELEVATION
43°43'00" SKEW RT.
NOT TO SCALE

NOTES:
CONTRACTOR RESPONSIBLE FOR VERIFYING SIZE OF SEAL.
THE CONTRACTOR SHALL REPAIR ANY DAMAGES TO EXISTING PAINT.
*SEE STD. DRWG. BJE-001-II



TYPICAL SECTION

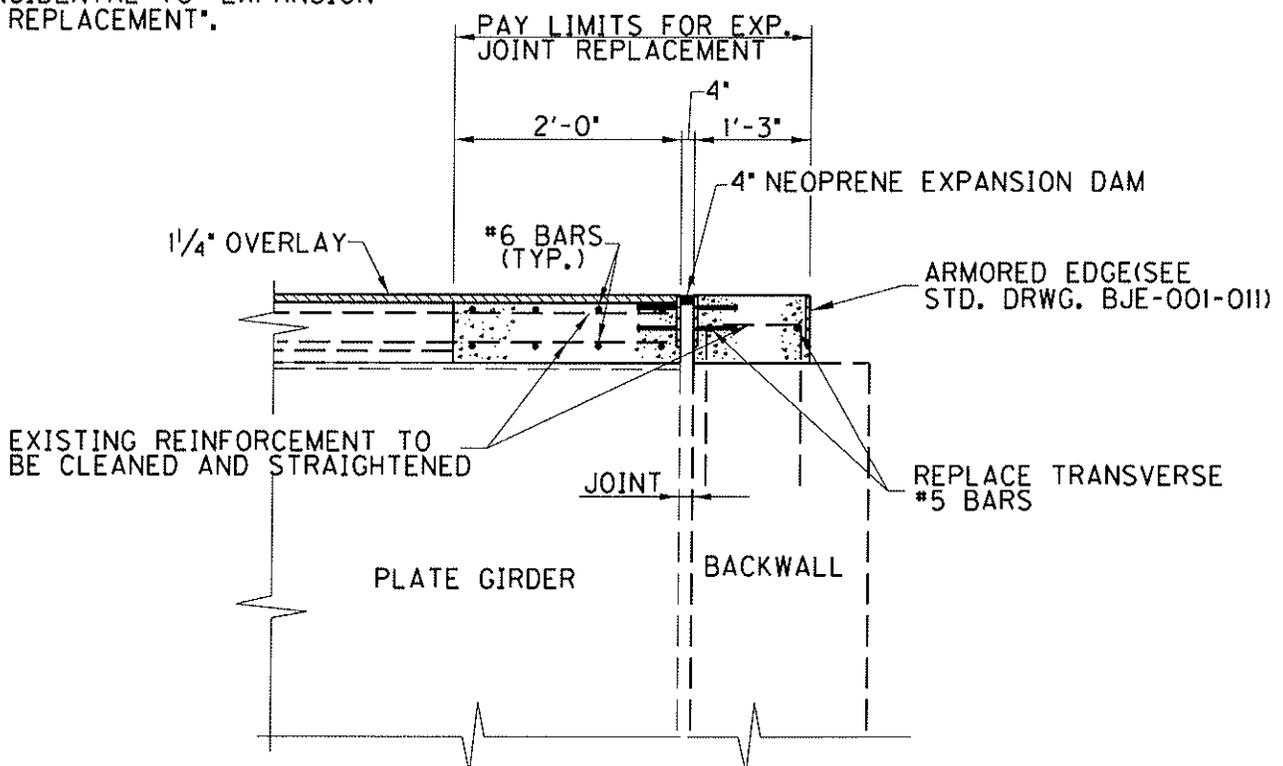
REPLACE JOINT @ ABUTMENT 1



EXISTING SECTION @ ABUTMENT

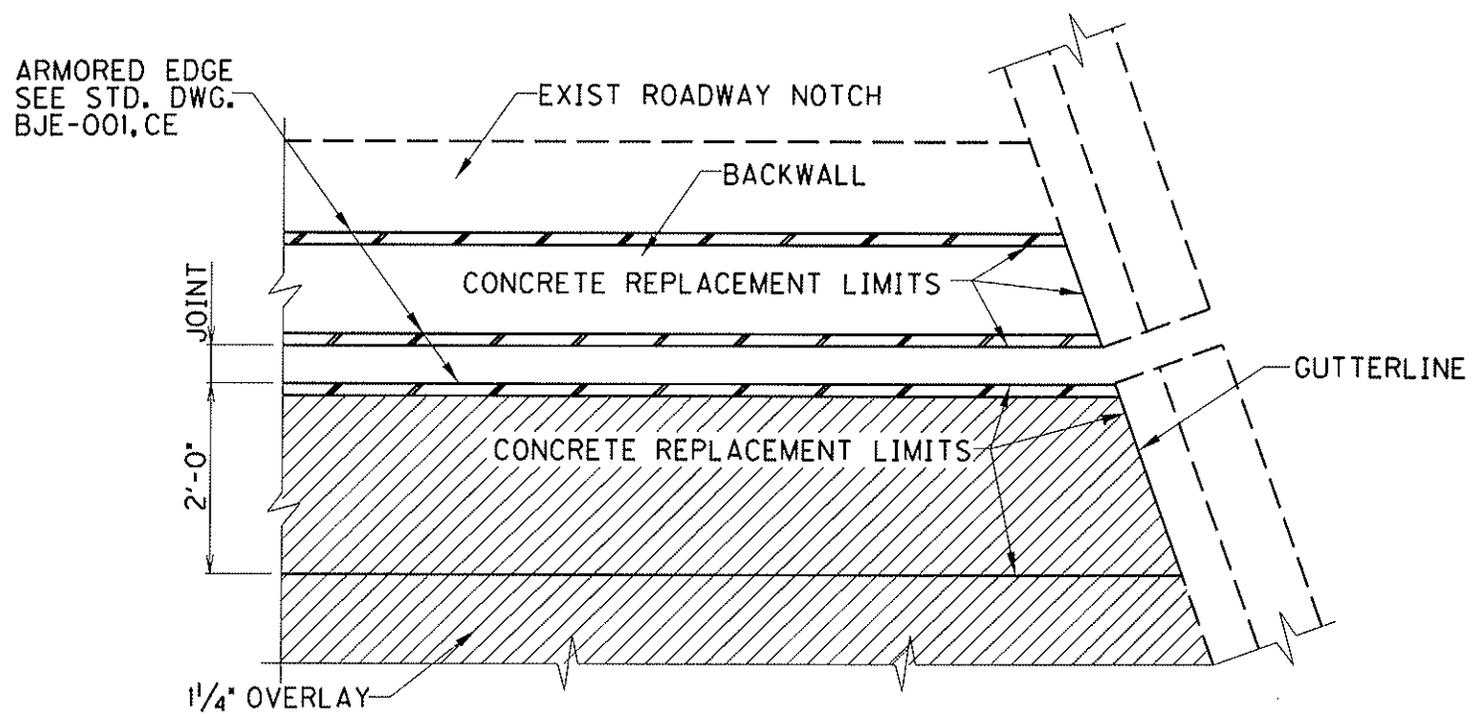
NOTE:
WHERE A NORMAL LAP CANNOT BE ATTAINED ON REBARS USE MECHANICAL SPLICES. SPLICES ARE INCIDENTAL TO "EXPANSION JOINT REPLACEMENT".

NOTE:
REMOVE 6' OF ROADWAY PAVEMENT, PLACE 1/2" PREMOLDED EXPANSION JOINT MATERIAL AGAINST ARMORED EDGE. (SEE ROADWAY PLANS)

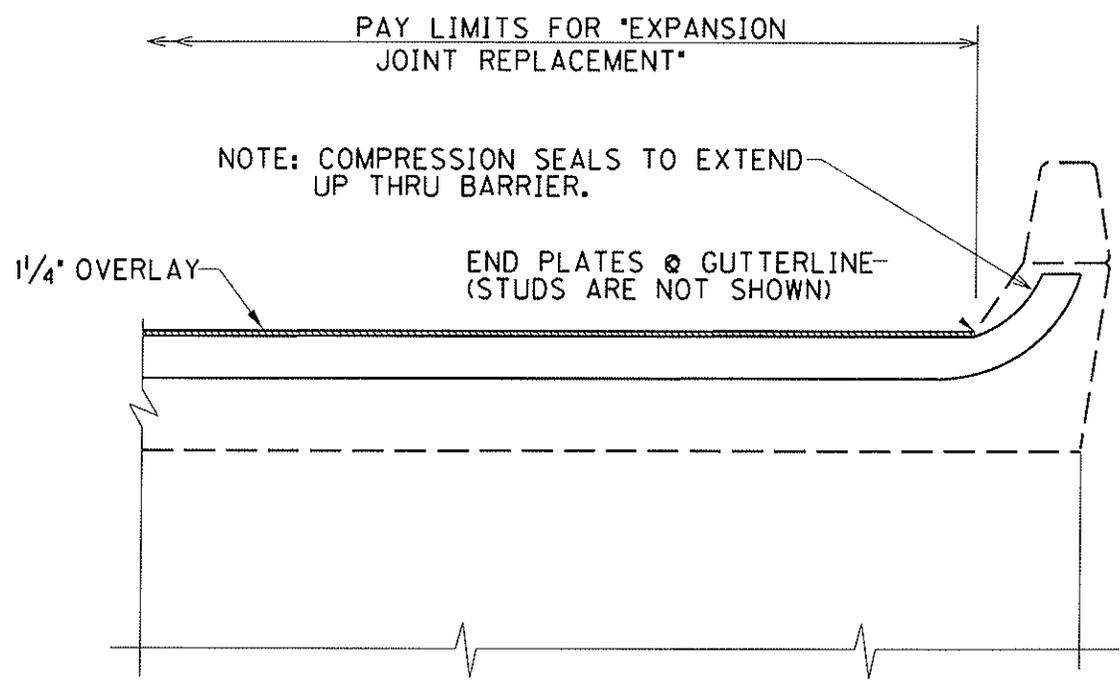


PROPOSED SECTION @ ABUTMENT

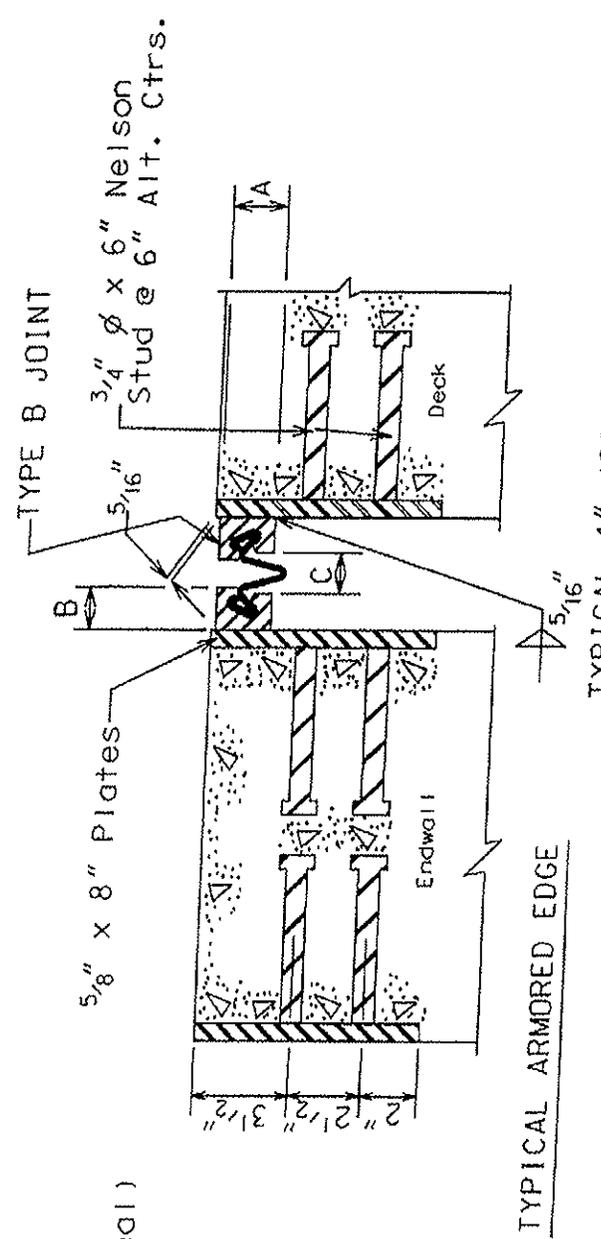
REPLACE EXPANSION JOINT ABUTMENT 1 CURB SECTION



PLAN VIEW @ CURB
REPLACE EXPANSION JOINT



PROPOSED SECTION @ ABUTMENT



(Strip Seal)

NOTE: Joint openings shall be adjusted for each 10 above or below 60° f. Decrease or increase respectively by increment shown.

4" - Joint Opening @ 60 F.

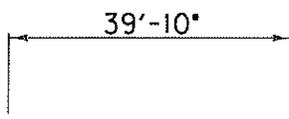
INCREMENT FOR 10° TEMPERATURE CHANGE					
- STEEL SPAN -					
THRU 60'	61' - 100'	101' - 140'	141' - 180'	181' - 240'	241' - 320'
1/32"	1/16"	3/32"	1/8"	3/16"	1/4"
					5/16"

Not to Scale

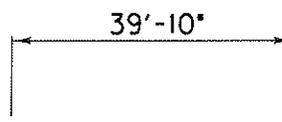
ALTERNATE NEOPRENE EXPANSION DAMS - 4"					
		A	B	C	
B	WABO STRIP SEAL Type A Extrusion with S-400 Seal	2"	1 1/2"	2"	Watson Bowman Associates Inc.
B	STEEL FLEX Type SSA with 400 Seal	2"	1 1/2"	2 1/2"	D. S. Brown Co.
B	GENERAL STRIP CD Profile A Steel Extrusion with Gen Strip CD Seal	2"	1 3/8"	2 1/4"	General Tire Co.
B	DNFLEX Type AM2 Extrusion with 40SE0 Sat	2"	1 1/4"	2"	Structural Accessories Inc.

Not to Scale

REINFORCEMENT



#5 STRAIGHT BAR
4 REQ'D ABUTMENT 1



#6 STRAIGHT BAR
16 REQ'D ABUTMENT 1

1,123 LBS ABUTMENT 1

ABUTMENT 1 REINFORCEMENT

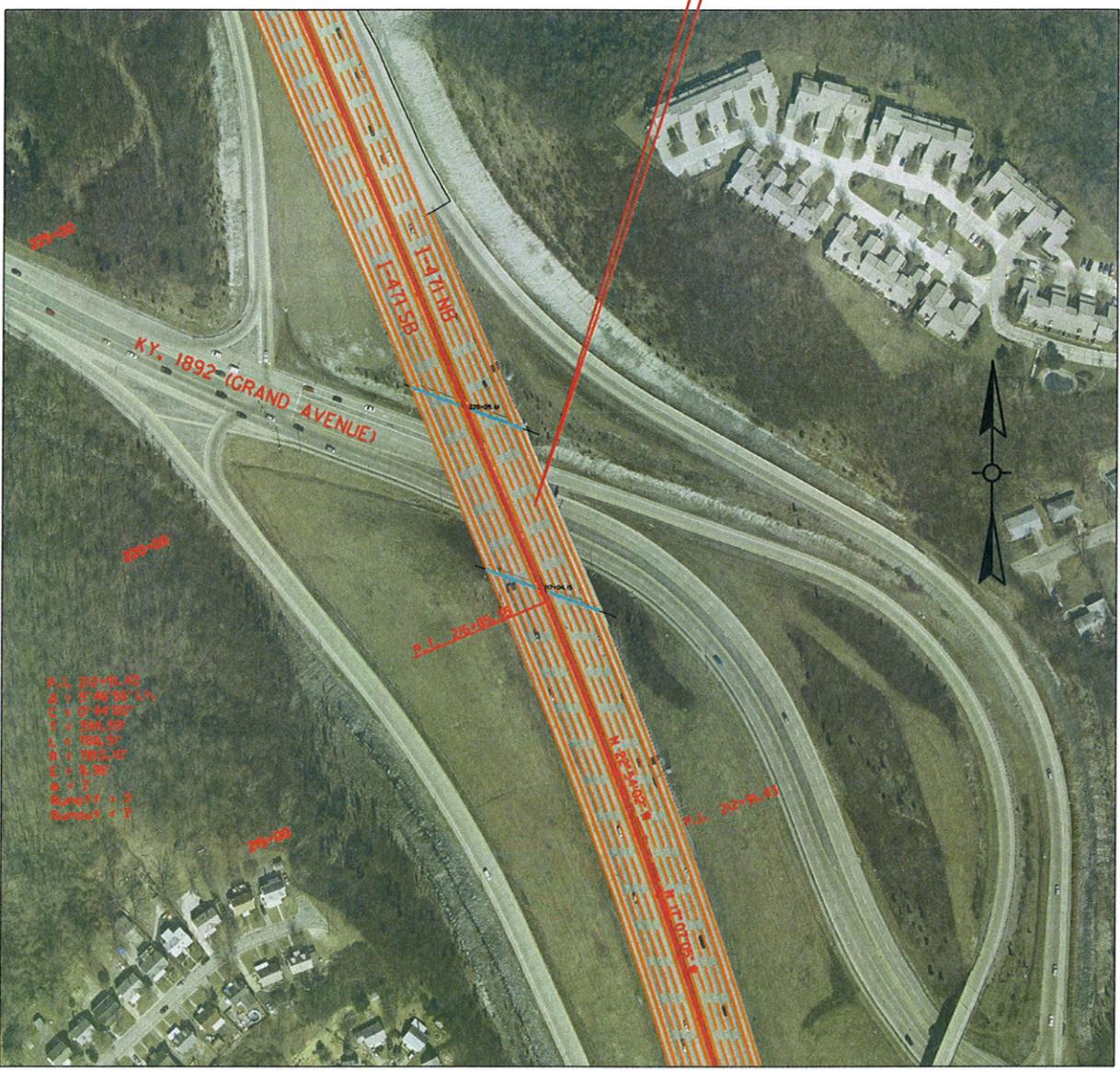
300 LIN. FT. #4 BARS IN 20'-0" LENGTHS
200 LBS. ABUTMENT 1

MISCELLANEOUS REINFORCEMENT

TOTAL REINFORCEMENT 1,323 LBS.

CAMPBELL COUNTY

019B00052R
I-471 NORTHBOUND
OVER GRAND AVENUE



BRIDGE #5 (019B00052R) SUMMARY OF QUANTITIES

1. DISTRICT: 6
 2. COUNTY: CAMPBELL
 3. ROUTE: I-471
 4. PROJECT NO.: IMNH 4714(034)
 5. ROAD NAME: I-471
 6. DESCRIPTION: I-471 NORTHBOUND OVER GRAND AVENUE
 BRIDGE DECK RESTORATION AND WATERPROOFING, JOINT SEAL REPLACEMENT
 AND REPLACE EXPANSION JOINT

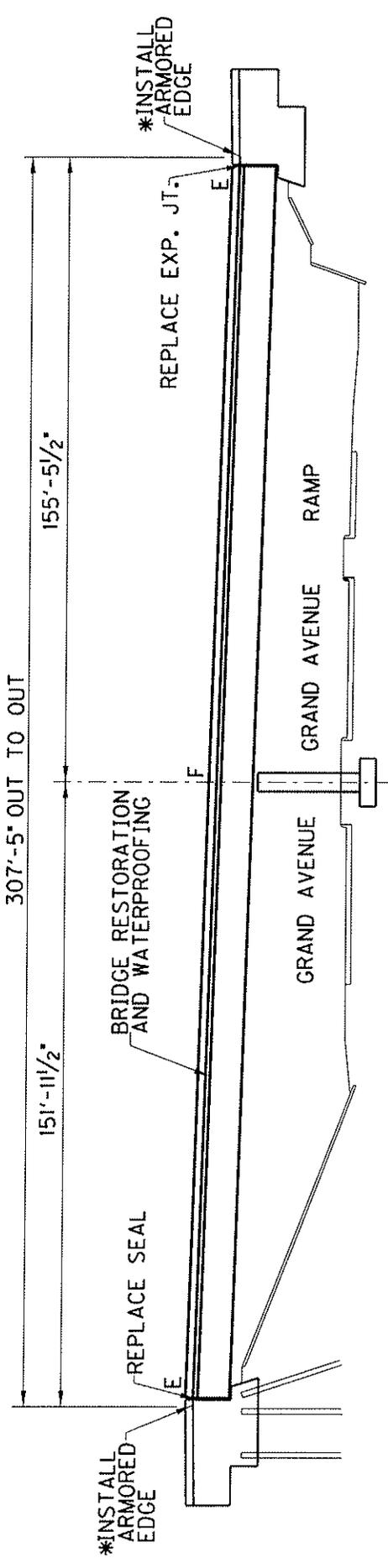
8. LENGTH (FT.): 307.42 BRIDGE WIDTH (FT.): 56.0 SURFACE AREA (SQ. YD.): 1913
 SKEW (DEGREES): 43.72 DECK THICKNESS (INCHES): 9

ESTIMATED QUANTITIES REQUIRED

ITEM CODE	DESCRIPTION	QUANTITY	UNIT
3298	EXPANSION JT REPLACEMENT 4 IN	79.0	LIN FT.
8504	EPOXY SAND SLURRY	307.0	SQ YD
8526	CONC CLASS M FULL DEPTH PATCH	7.0	CU YD
8534	CONCRETE OVERLAY-LATEX	67.0	CU YD
8549	BLAST CLEANING	2168	SQ YD
8550	HYDRODEMOLITION	1913	SQ YD
23386EC	JOINT SEAL REPLACEMENT	79.0	LIN FT.
24094EC	PARTIAL DEPTH PATCHING	13.4	CU YD

B5

I-471 NORTHBOUND OVER GRAND AVENUE
BRIDGE MAINTENANCE NUMBER 019B00052R



END BENT 1

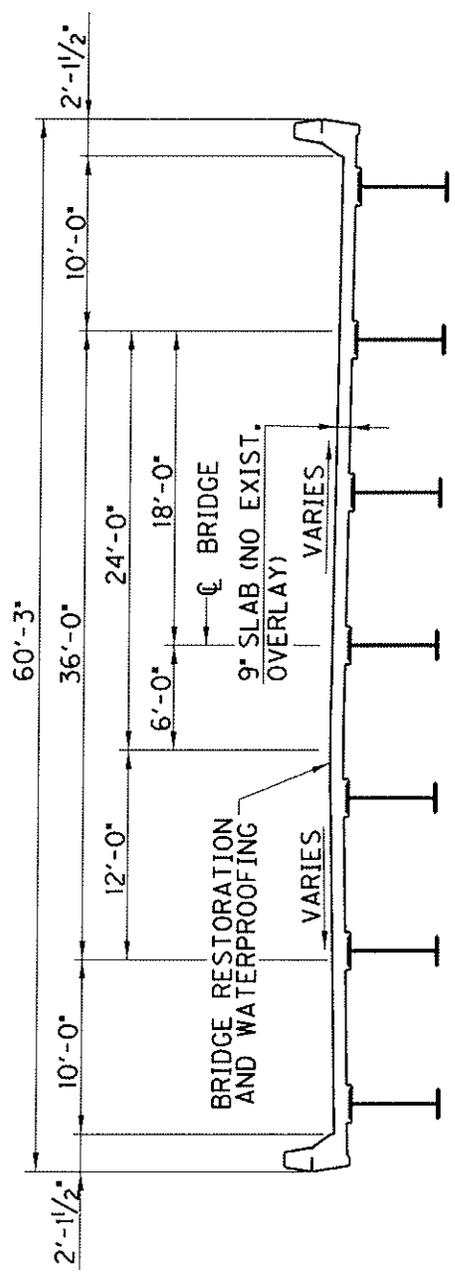
PIER 1

ABUTMENT 1

ELEVATION
43°43'00" SKEW RT.
NOT TO SCALE

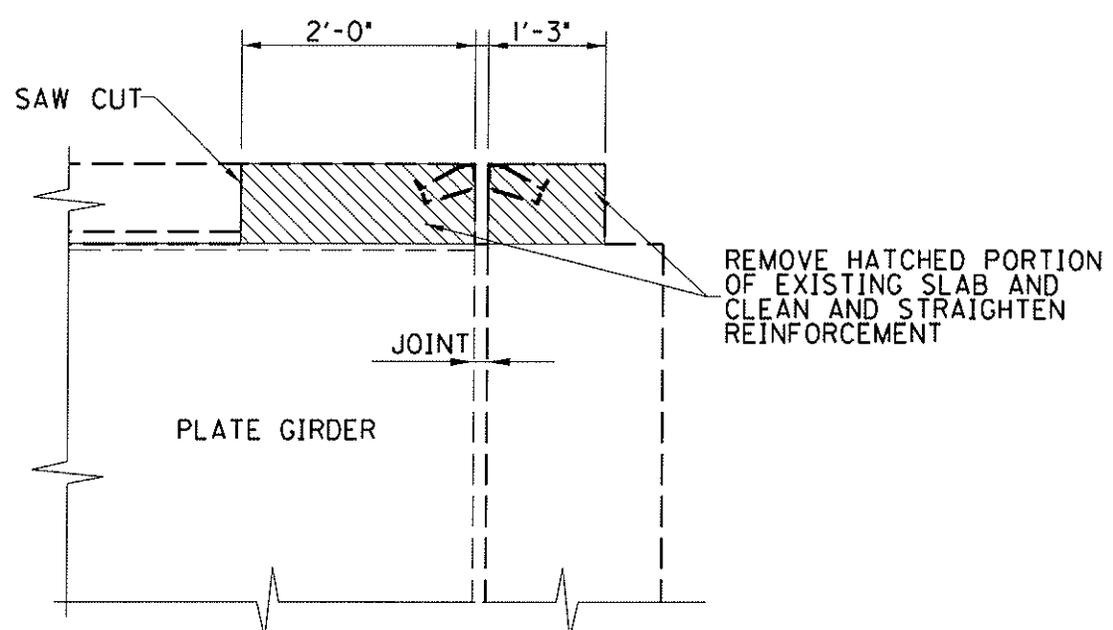
NOTES:
CONTRACTOR RESPONSIBLE FOR VERIFYING SIZE OF SEAL.
THE CONTRACTOR SHALL REPAIR ANY DAMAGES TO EXISTING PAINT.

*SEE STD. DRWG. BJE-001-II



TYPICAL SECTION

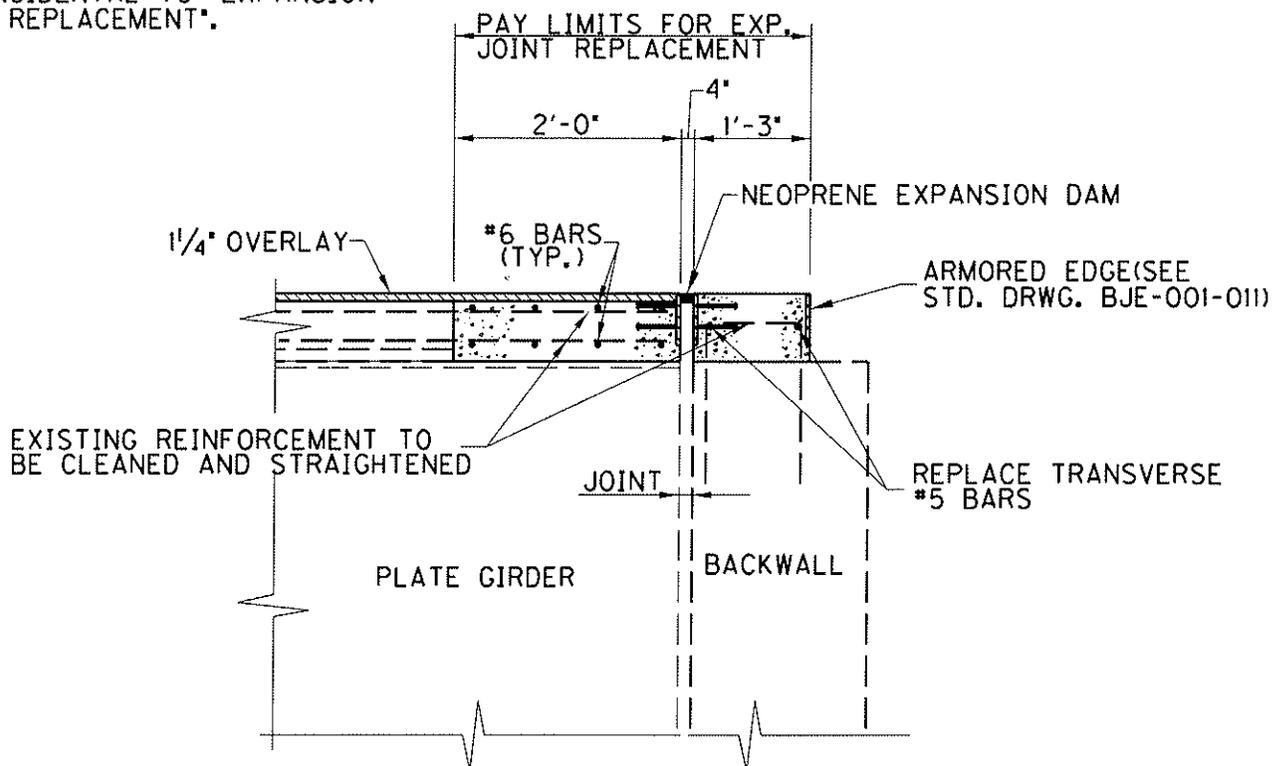
REPLACE JOINT @ ABUTMENT 1



EXISTING SECTION @ ABUTMENT

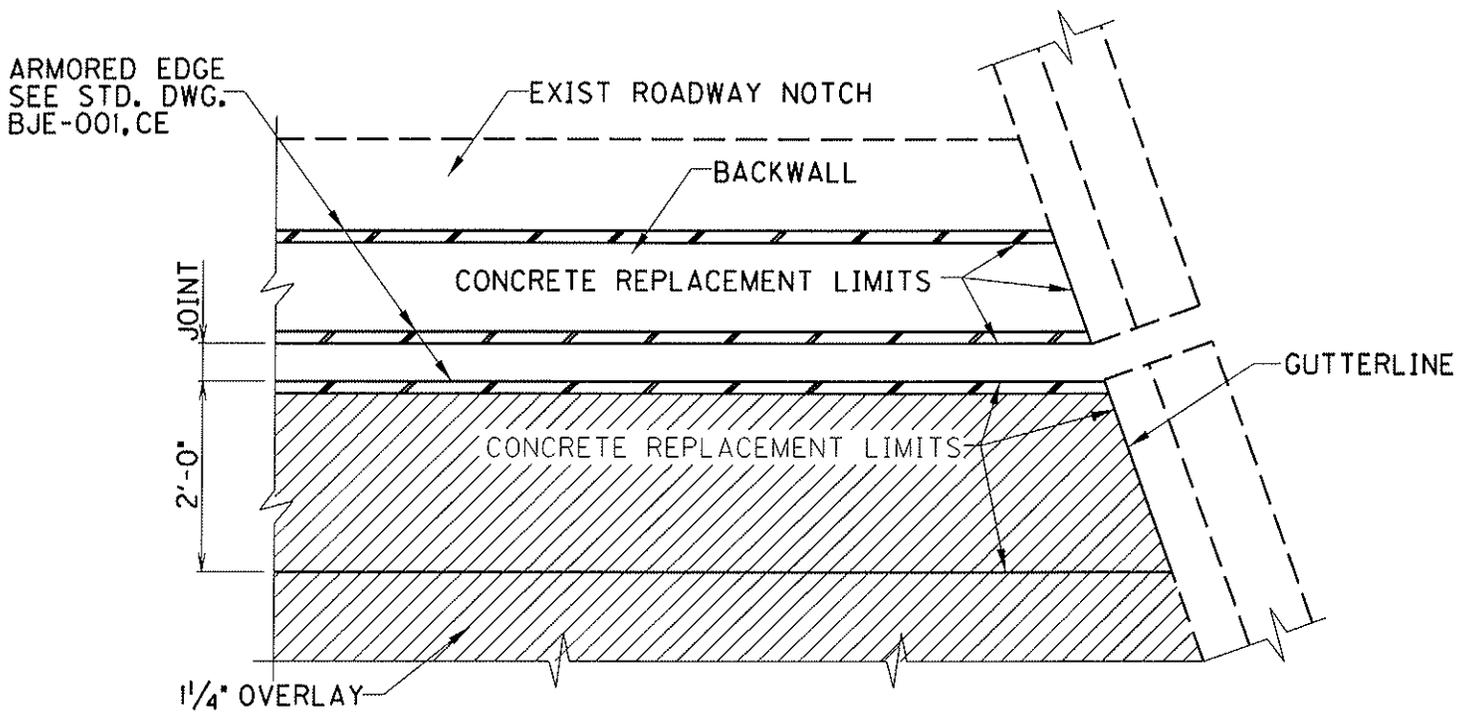
NOTE:
WHERE A NORMAL LAP CANNOT BE ATTAINED ON REBARS USE MECHANICAL SPLICES. SPLICES ARE INCIDENTAL TO "EXPANSION JOINT REPLACEMENT".

NOTE:
REMOVE 6' OF ROADWAY PAVEMENT. PLACE 1/2" PREMOLDED EXPANSION JOINT MATERIAL AGAINST ARMORED EDGE. (SEE ROADWAY PLANS)

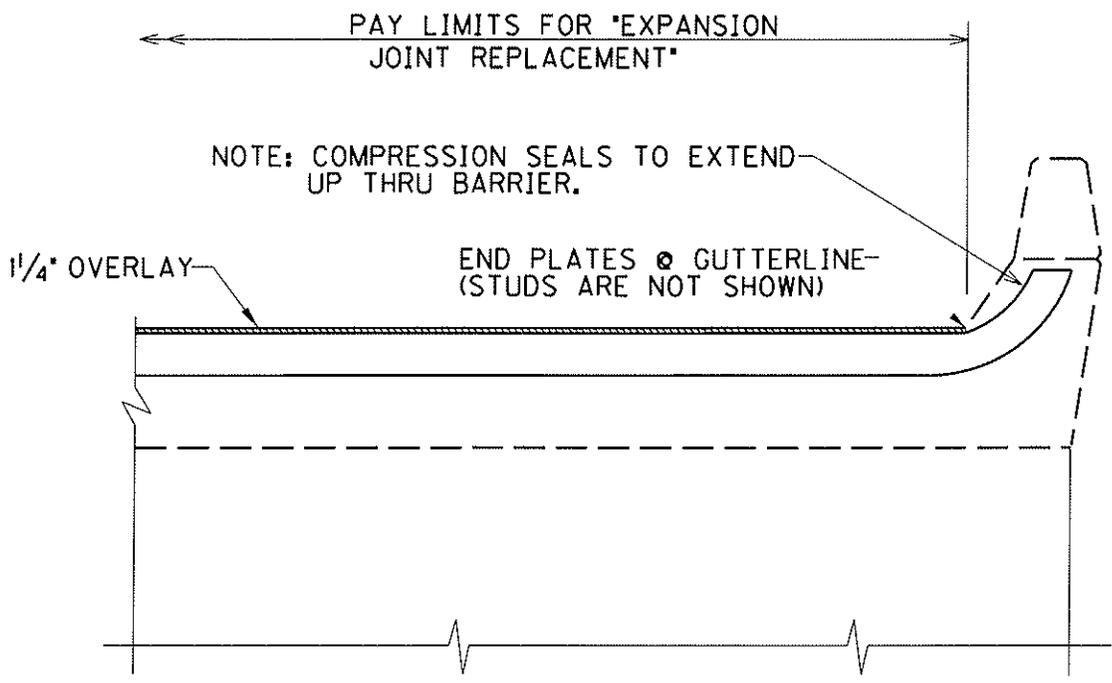


PROPOSED SECTION @ ABUTMENT

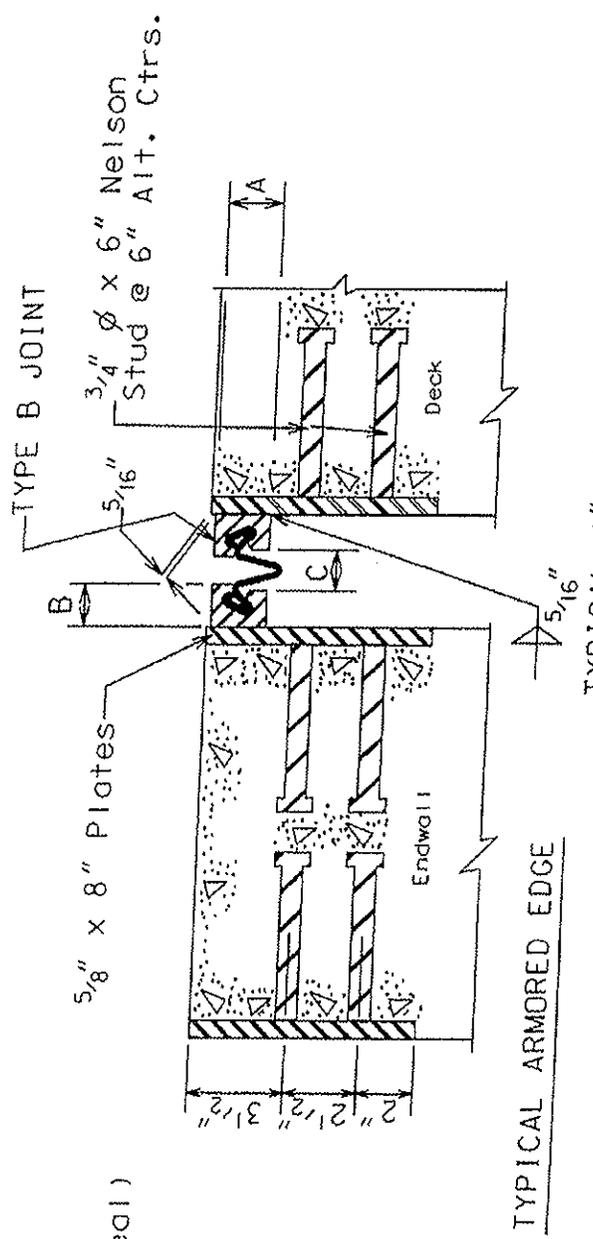
REPLACE EXPANSION JOINT ABUTMENT 1 CURB SECTION



PLAN VIEW @ CURB
REPLACE EXPANSION JOINT



PROPOSED SECTION @ ABUTMENT



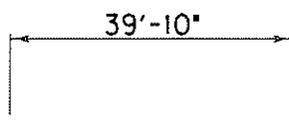
NOTE: Joint openings shall be adjusted for each 10 above or below 60° f. Decrease or increase respectively by increment shown.

ALTERNATE NEOPRENE EXPANSION DAMS - 4"

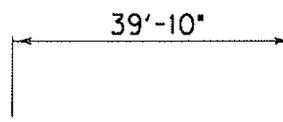
	A B C		
	A	B	C
B WABO STRIP SEAL			
Type A Extrusion with S-400 Seal	Watson Bowman Associates Inc.	2" 1 1/2"	2"
B STEEL FLEX			
Type SSA with 400 Seal	D. S. Brown Co.	2" 1 1/2"	2 1/2"
B GENERAL STRIP CD			
Profile A Steel Extrusion with Gen Strip CD Seal	General Tire Co.	2" 1 3/8"	2 1/4"
B ONFLEX			
Type AM2 Extrusion with 40SE0 Seal	Structural Accessories Inc.	2" 1 1/4"	2"

Not to Scale

REINFORCEMENT



#5 STRAIGHT BAR
4 REQ'D ABUTMENT 1



#6 STRAIGHT BAR
16 REQ'D ABUTMENT 1

1,123 LBS ABUTMENT 1

ABUTMENT 1 REINFORCEMENT

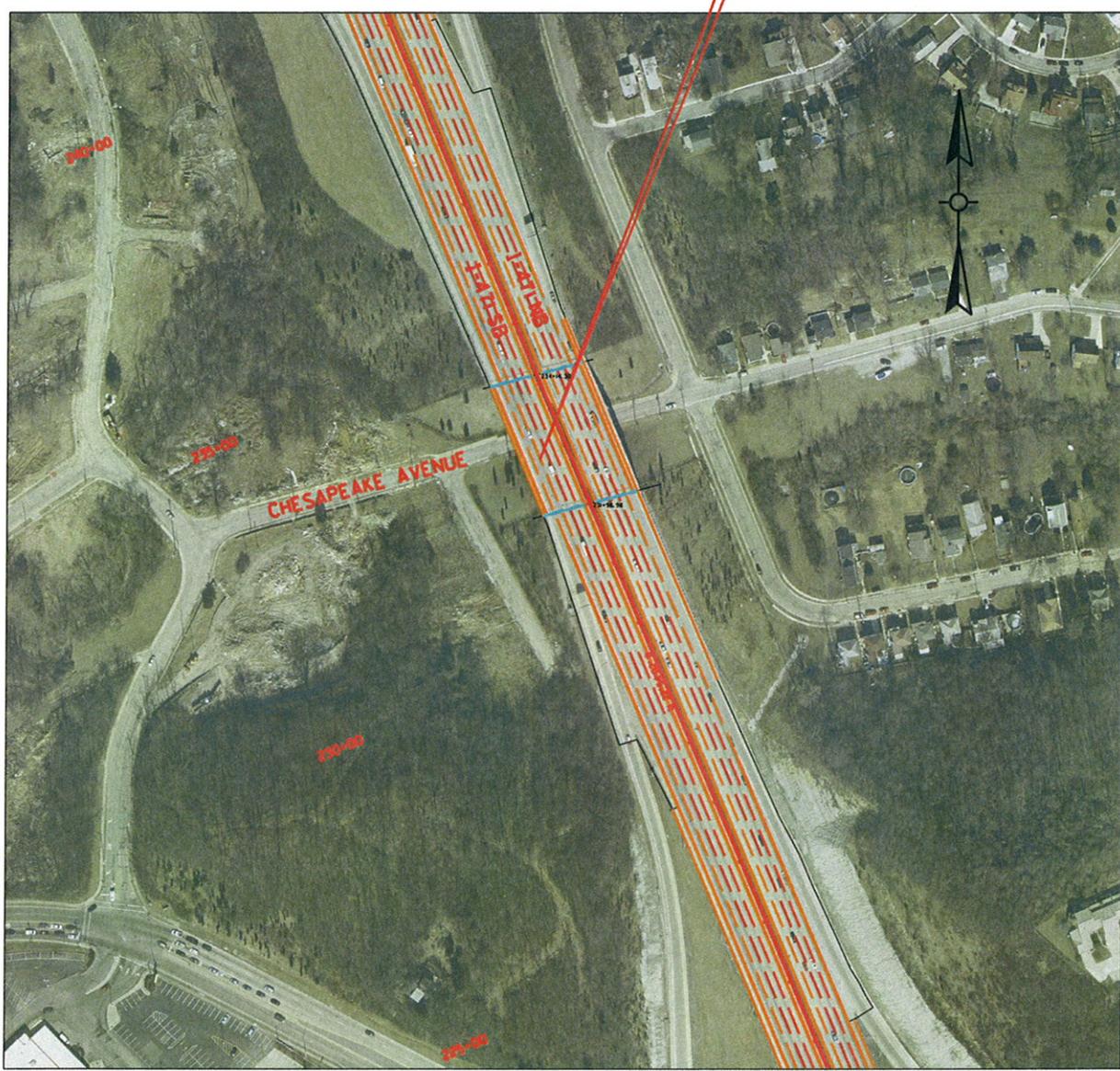
300 LIN. FT. #4 BARS IN 20'-0" LENGTHS
200 LBS. ABUTMENT 1

MISCELLANEOUS REINFORCEMENT

TOTAL REINFORCEMENT 1,323 LBS.

CAMPBELL COUNTY

019B00053L
I-471 SOUTHBOUND OVER
CHESAPEAKE AVENUE



Approximate Location Information
Latitude: 39° 5' 18"
Longitude: 84° 28' 30"

BRIDGE #6 (019B00053L) SUMMARY OF QUANTITIES

1. DISTRICT: 6
 2. COUNTY: CAMPBELL
 3. ROUTE: I-471
 4. PROJECT NO.: IMNH 4714(034)
 5. ROAD NAME: I-471
 6. DESCRIPTION: I-471 SOUTHBOUND OVER CHESAPEAKE AVENUE
 BRIDGE DECK RESTORATION AND WATERPROOFING, ELIMINATE EXPANSION JOINT
 AND EXPANSION JOINT REPLACEMENT

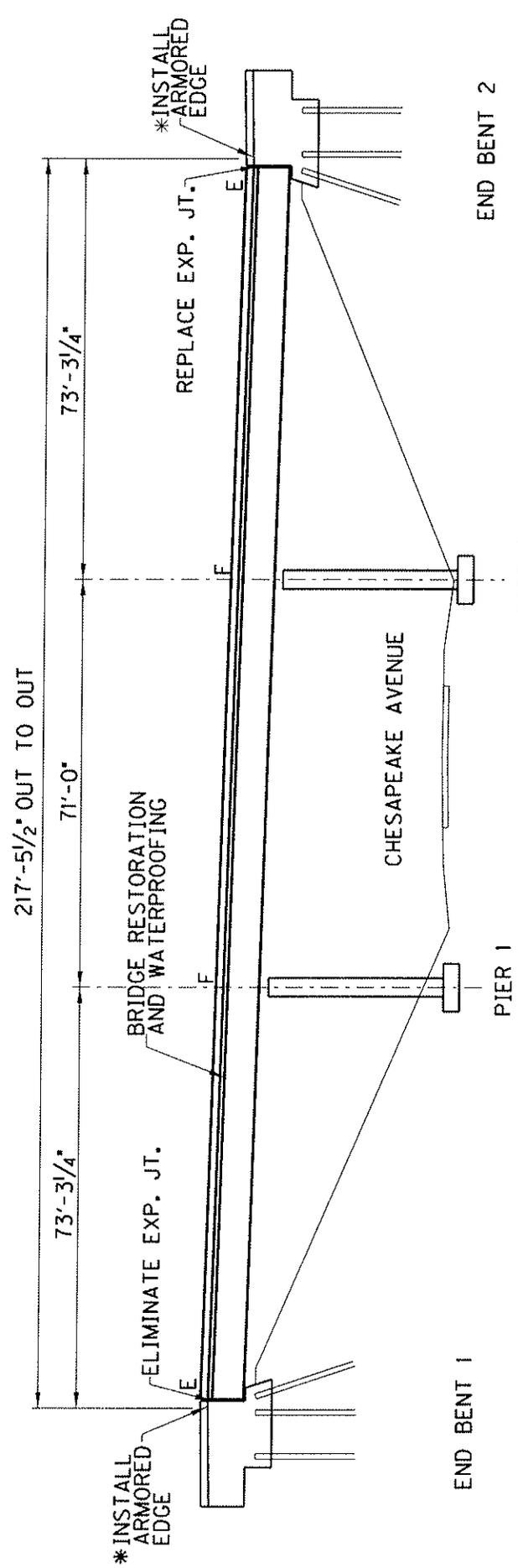
8. LENGTH (FT.): 217.45 BRIDGE WIDTH (FT.): 63.7 SURFACE AREA (SQ. YD.): 1539
 SKEW (DEGREES): 7.61 DECK THICKNESS (INCHES): 9.0

ESTIMATED QUANTITIES REQUIRED

ITEM CODE	DESCRIPTION	QUANTITY	UNIT
3295	EXPANSION JOINT REPLACEMENT 2 IN	62.0	LIN FT
3300	ELIMINATE TRANSVERSE JOINT	62.0	LIN FT
8504	EPOXY SAND SLURRY	217.0	SQ YD
8526	CONC CLASS M FULL DEPTH PATCH	5.0	CU YD
8534	CONCRETE OVERLAY-LATEX	53.5	CU YD
8549	BLAST CLEANING	1720	SQ YD
8550	HYDRODEMOLITION	1539	SQ YD
24094EC	PARTIAL DEPTH PATCHING	10.7	CU YD

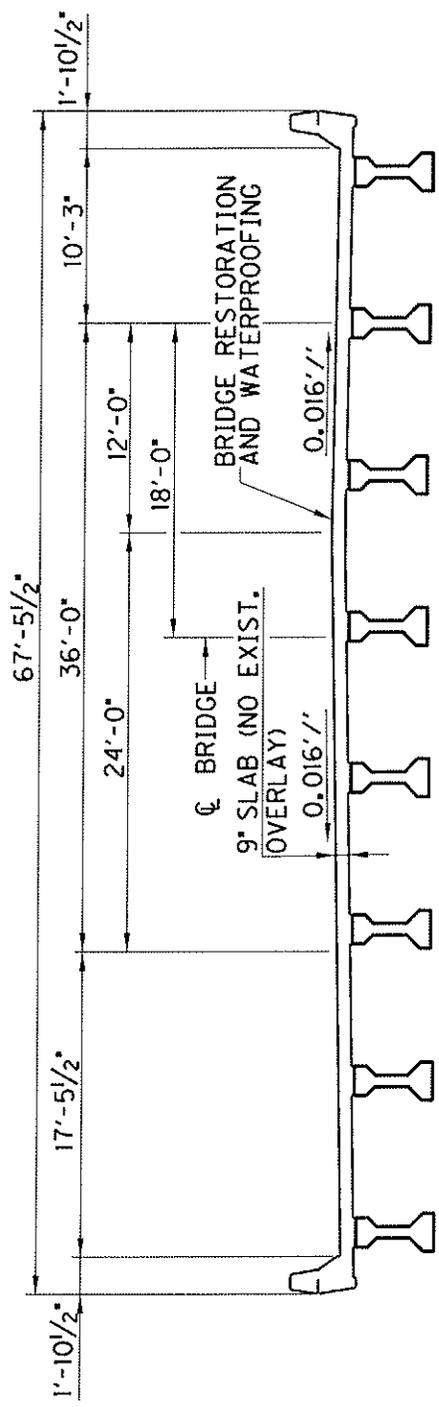
B6

I-471 SOUTHBOUND OVER CHESAPEAKE AVENUE
BRIDGE MAINTENANCE NUMBER 019B00053L



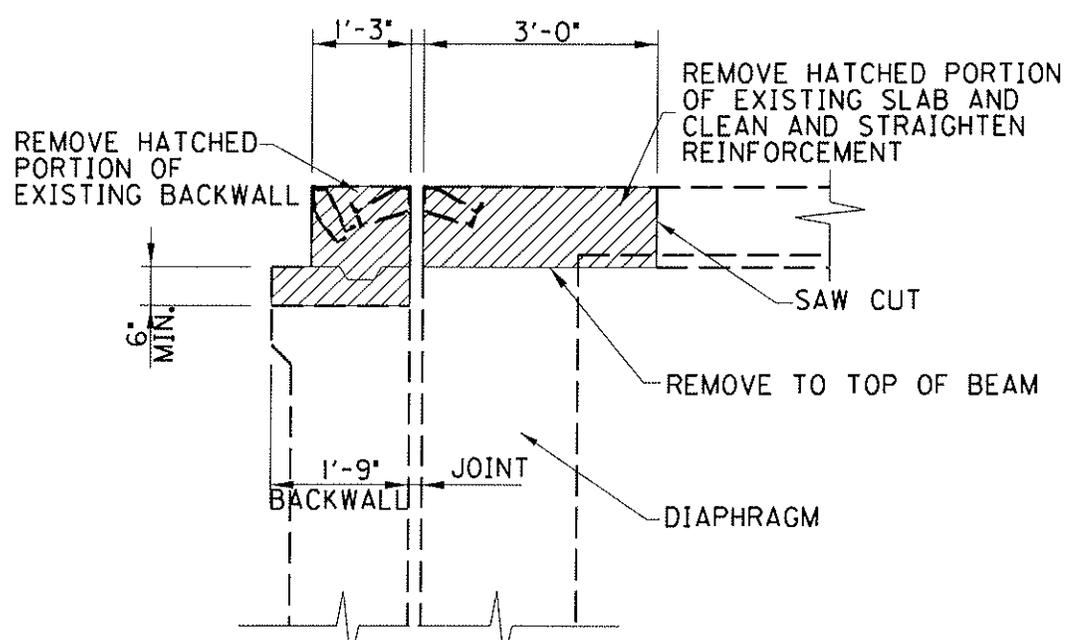
ELEVATION
7° 36' 37" SKEW RT.
NOT TO SCALE

*SEE STD. DRWG. BJE-001-II



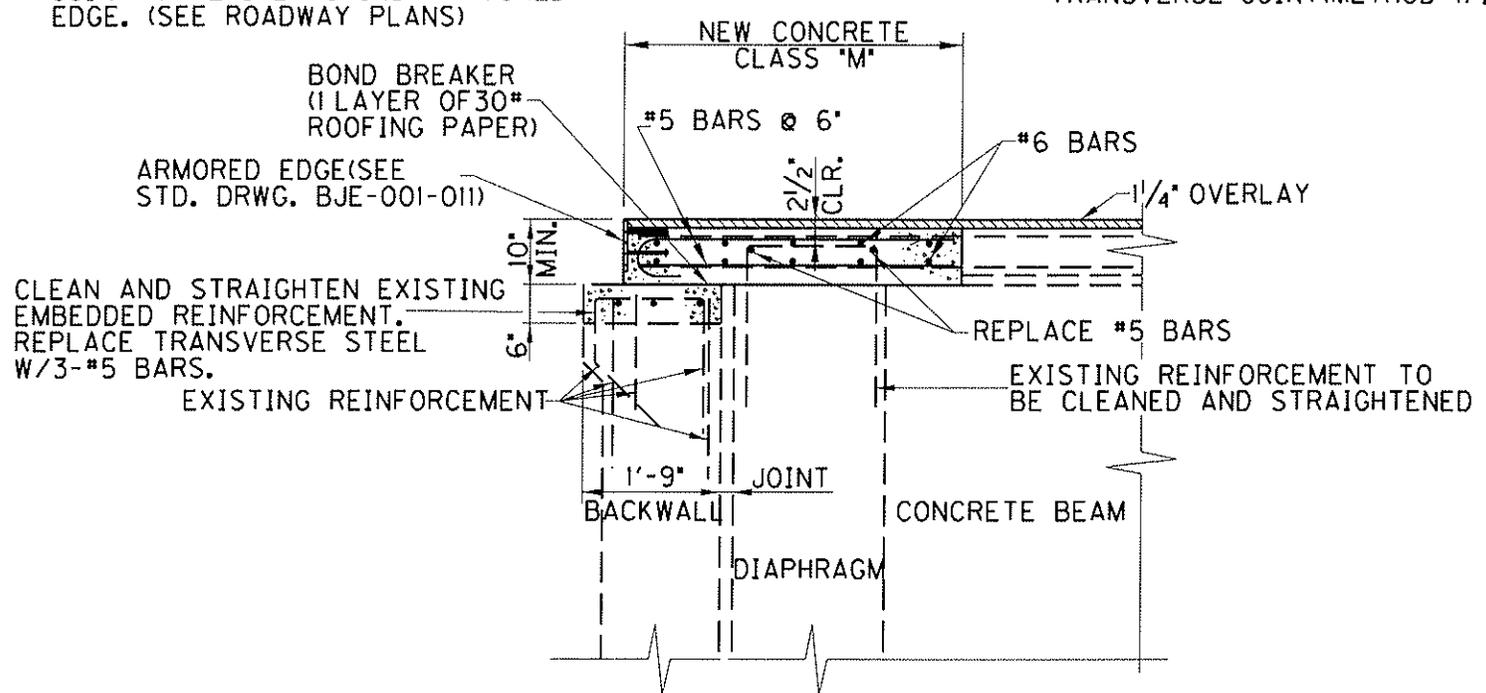
TYPICAL SECTION

ELIMINATE JOINT @ END BENT 1



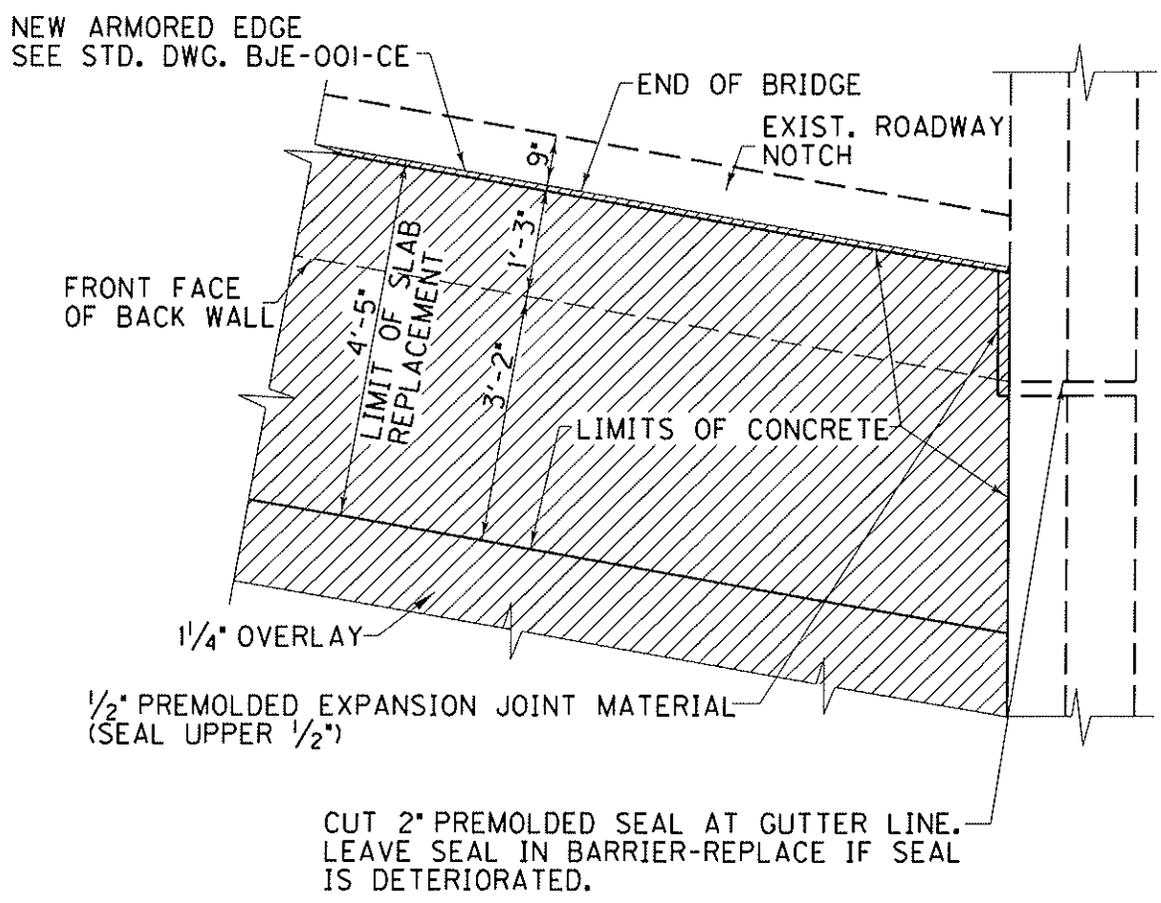
NOTE:
REMOVE 6' OF ROADWAY PAVEMENT, PLACE 1/2" PREMOLDED EXPANSION JOINT MATERIAL AGAINST ARMORED EDGE. (SEE ROADWAY PLANS)

NOTE:
WHERE A NORMAL LAP CANNOT BE ATTAINED ON REBARS USE MECHANICAL SPLICES. SPLICES ARE INCIDENTAL TO "ELIMINATE TRANSVERSE JOINT(METHOD 1)".

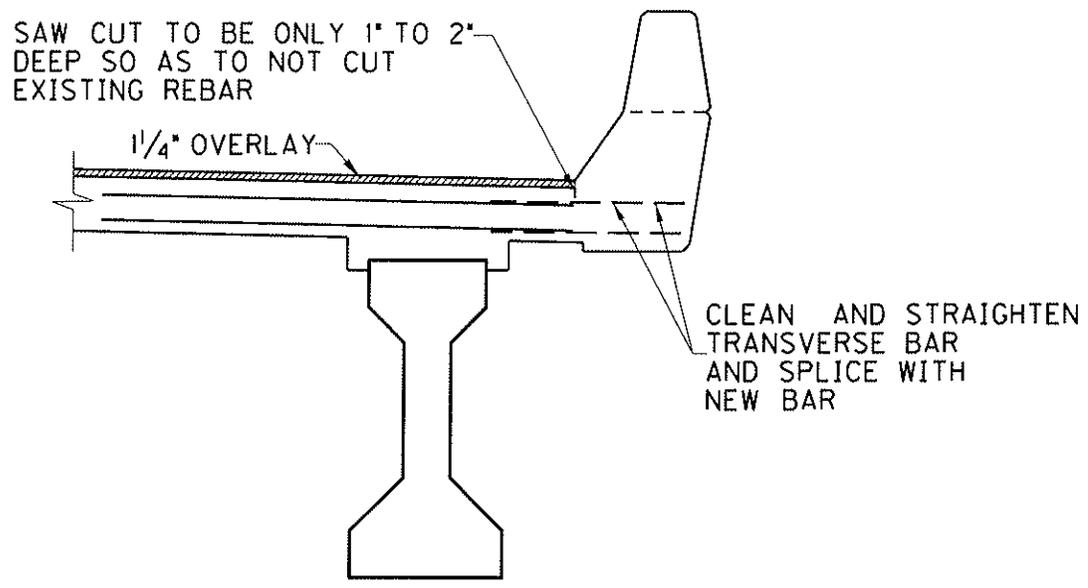


PROPOSED SECTION @ END BENT

CURB SECTION @ END BENT 1

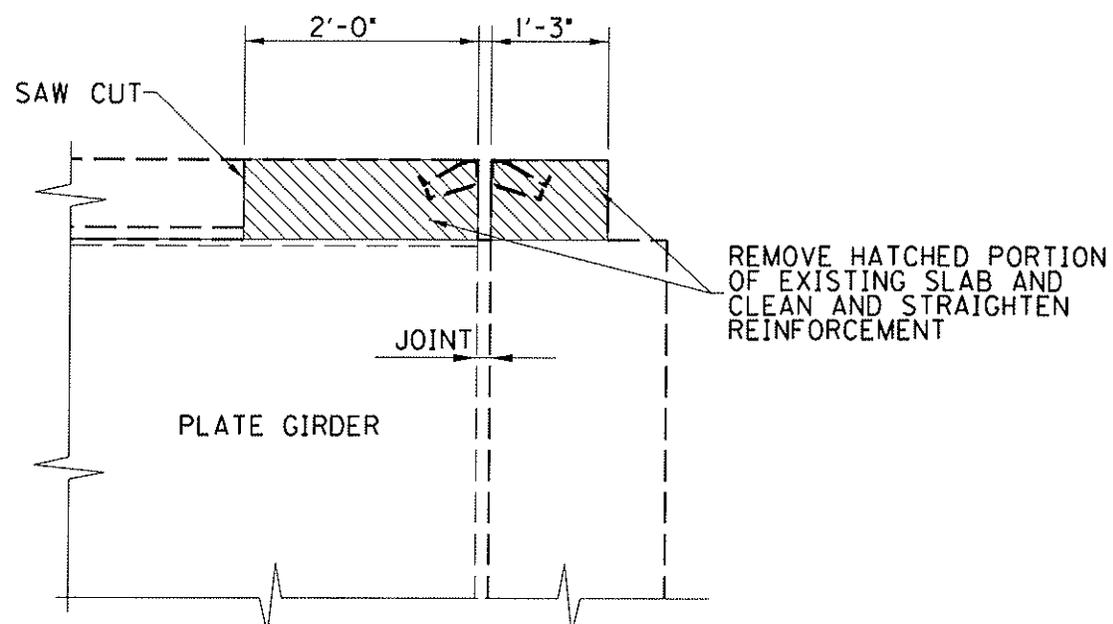


PROPOSED PLAN @ END BENT



PROPOSED SECTION @ END BENT

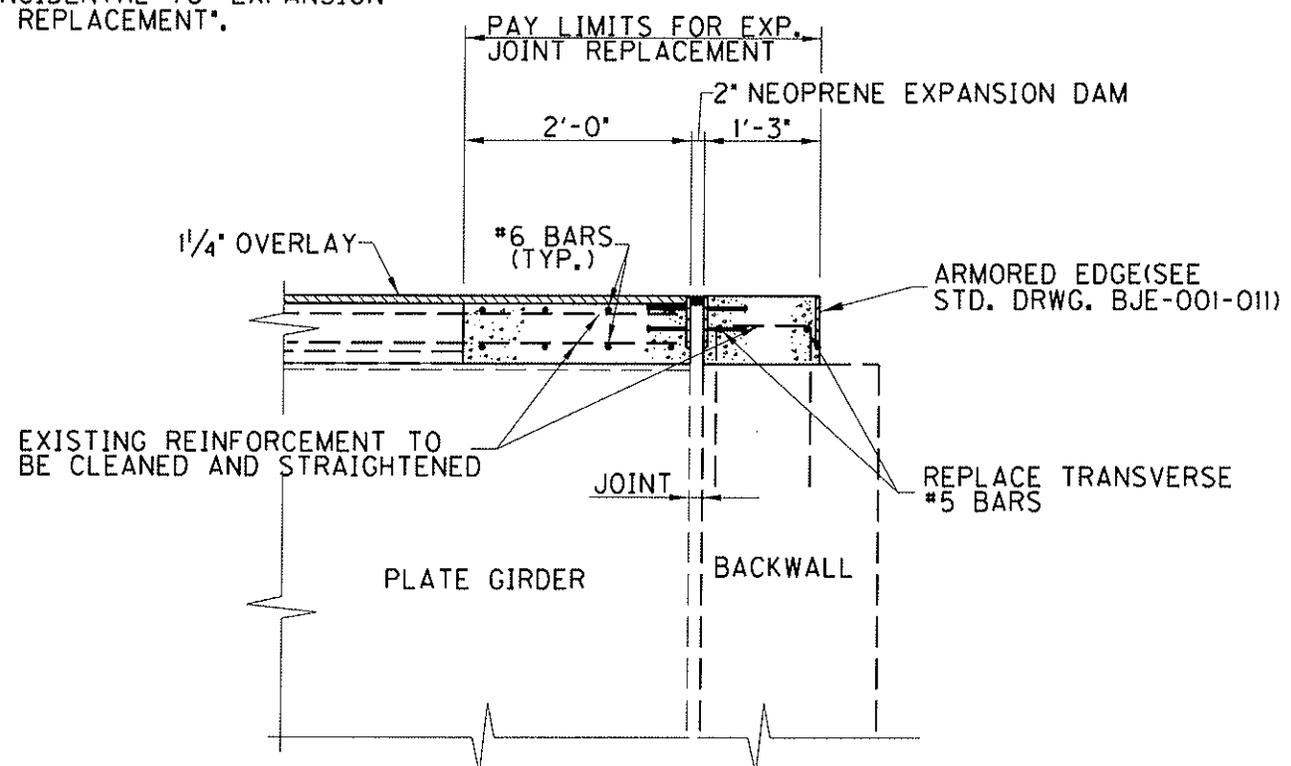
REPLACE JOINT @ END BENT 2



EXISTING SECTION @ END BENT

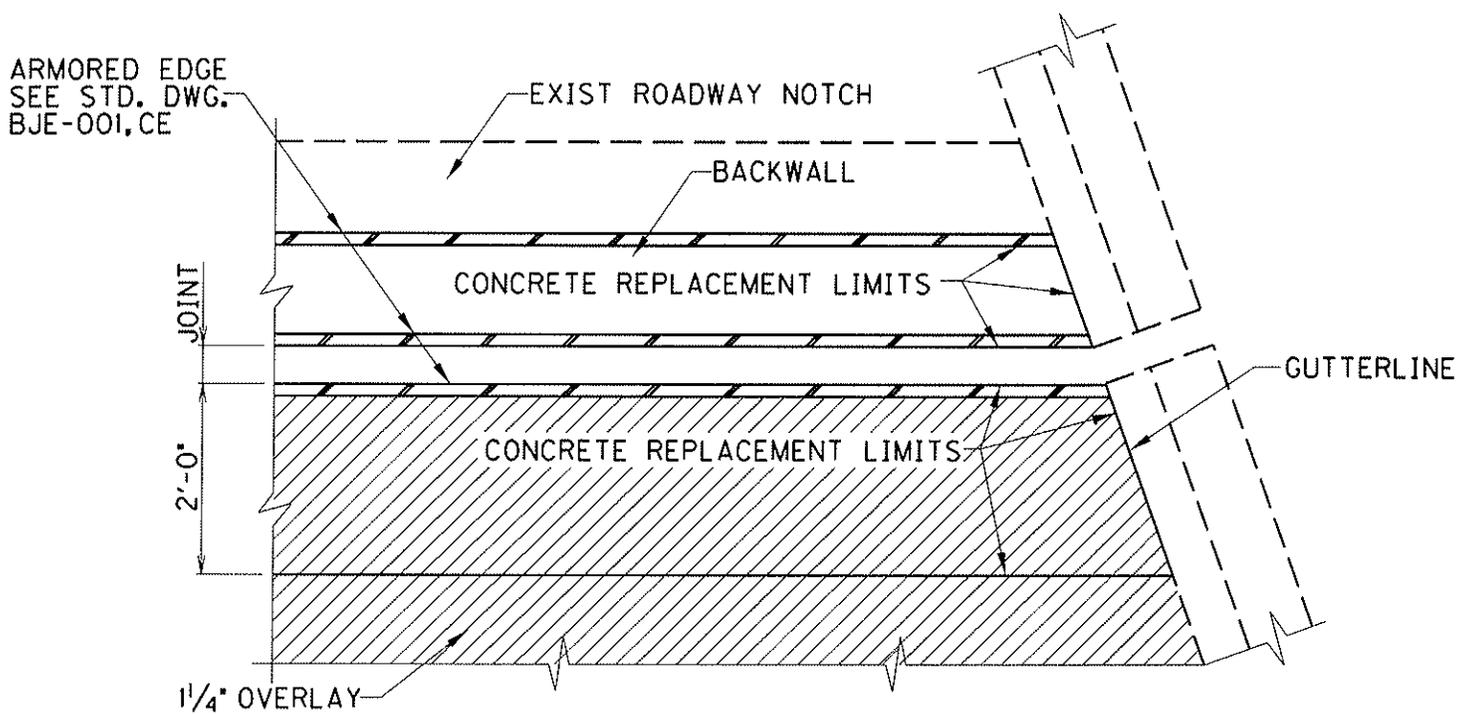
NOTE:
WHERE A NORMAL LAP CANNOT BE ATTAINED ON REBARS USE MECHANICAL SPLICES. SPLICES ARE INCIDENTAL TO "EXPANSION JOINT REPLACEMENT".

NOTE:
REMOVE 6' OF ROADWAY PAVEMENT, PLACE 1/2" PREMOLDED EXPANSION JOINT MATERIAL AGAINST ARMORED EDGE. (SEE ROADWAY PLANS)

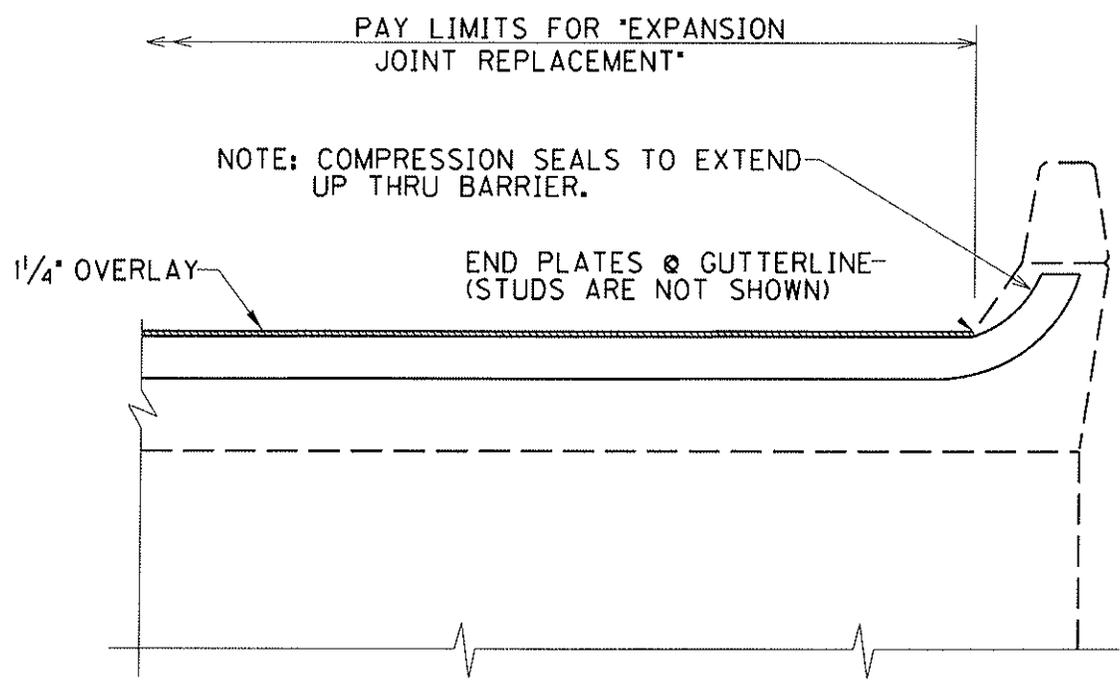


PROPOSED SECTION @ END BENT

REPLACE EXPANSION JOINT END BENT 2 CURB SECTION

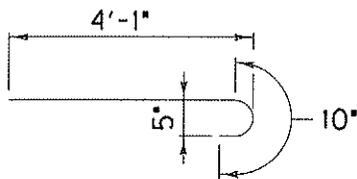


PLAN VIEW @ CURB
REPLACE EXPANSION JOINT

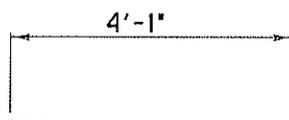


PROPOSED SECTION @ END BENT

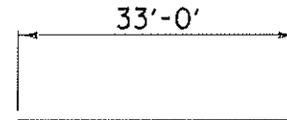
REINFORCEMENT



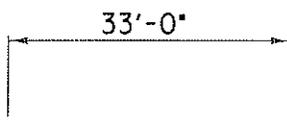
#5 BENT BAR
127 REQ'D END BENT 1



#5 STRAIGHT BAR
127 REQ'D END BENT 1



#6 STRAIGHT BAR
20 REQ'D END BENT 1
16 REQ'D END BENT 2



#5 STRAIGHT BAR
6 REQ'D END BENT 1
4 REQ'D END BENT 2

2,362 LBS END BENT 1
931 LBS END BENT 2

END BENT REINFORCEMENT

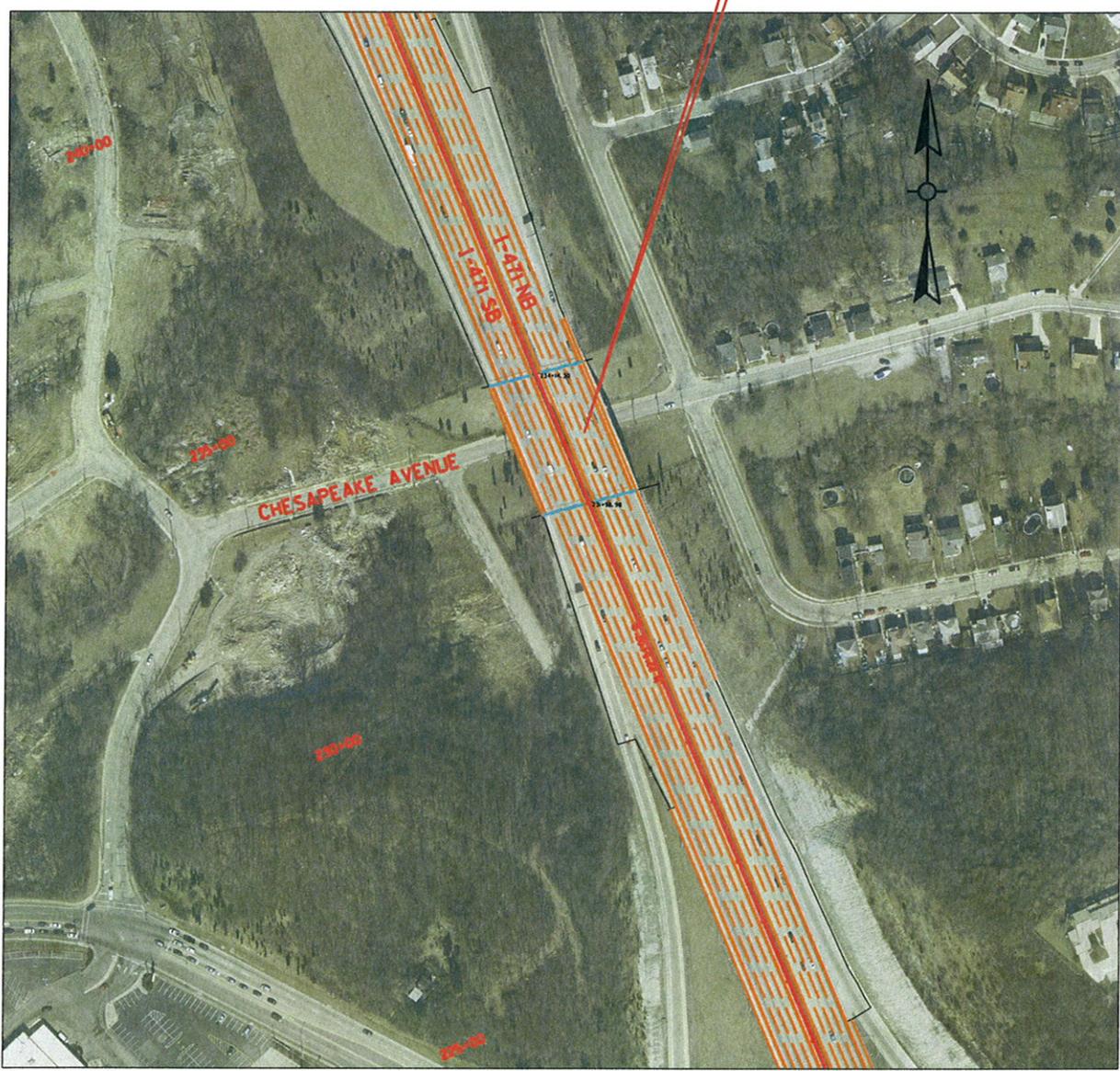
300 LIN. FT. #4 BARS IN 20'-0" LENGTHS
200 LBS. EACH END BENT

MISCELLANEOUS REINFORCEMENT

TOTAL REINFORCEMENT 3,693 LBS.

CAMPBELL COUNTY

019B00053R
I-471 NORTHBOUND OVER
CHESAPEAKE AVENUE



Approximate Location Information
Latitude: 39° 5' 18"
Longitude: 84° 28' 29"

BRIDGE #7 (019B00053R) SUMMARY OF QUANTITIES

1. DISTRICT: 6
 2. COUNTY: CAMPBELL
 3. ROUTE: I-471
 4. PROJECT NO.: IMNH 4714(034)
 5. ROAD NAME: I-471
 6. DESCRIPTION: I-471 NORTHBOUND OVER CHESAPEAKE AVENUE
 BRIDGE DECK RESTORATION AND WATERPROOFING, ELIMINATE EXPANSION JOINT
 AND EXPANSION JOINT REPLACEMENT

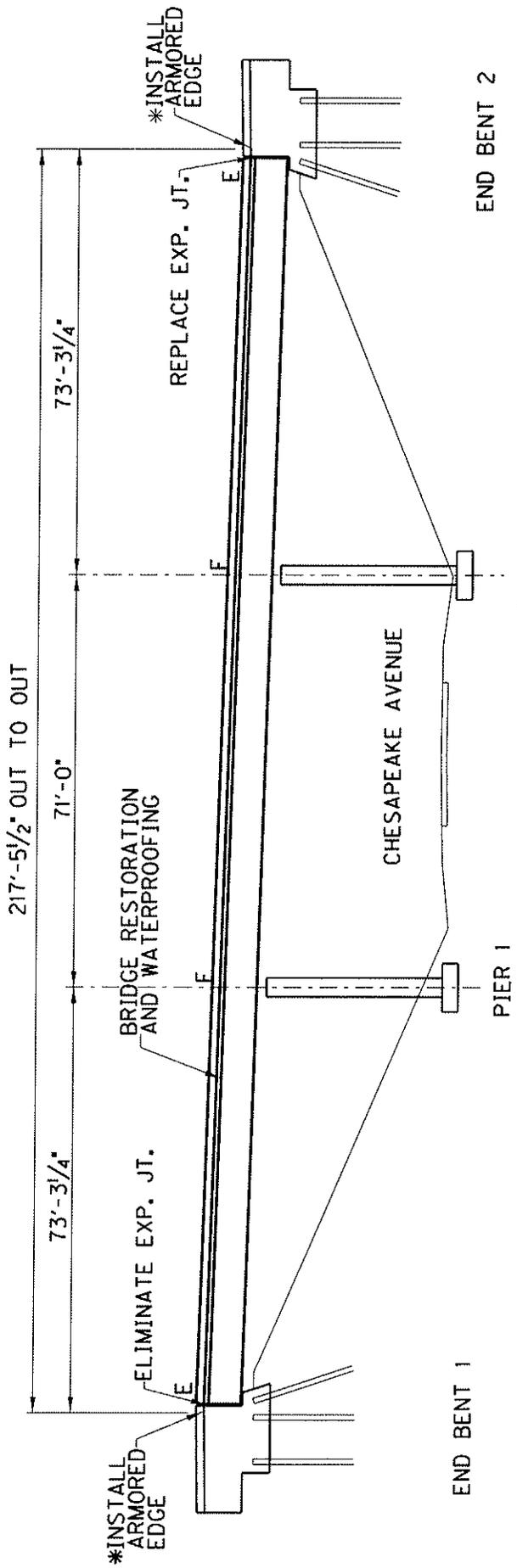
8. LENGTH (FT.): 217.45 BRIDGE WIDTH (FT.): 63.7 SURFACE AREA (SQ. YD.): 1539
 SKEW (DEGREES): 7.61 DECK THICKNESS (INCHES): 9.0

ESTIMATED QUANTITIES REQUIRED

ITEM CODE	DESCRIPTION	QUANTITY	UNIT
3295	EXPANSION JOINT REPLACEMENT 2 IN	62.0	LIN FT
3300	ELIMINATE TRANSVERSE JOINT	62.0	LIN FT
8504	EPOXY SAND SLURRY	217.0	SQ YD
8526	CONC CLASS M FULL DEPTH PATCH	5.0	CU YD
8534	CONCRETE OVERLAY-LATEX	53.5	CU YD
8549	BLAST CLEANING	1720	SQ YD
8550	HYDRODEMOLITION	1539	CU YD
24094EC	PARTIAL DEPTH PATCHING	10.7	CU YD

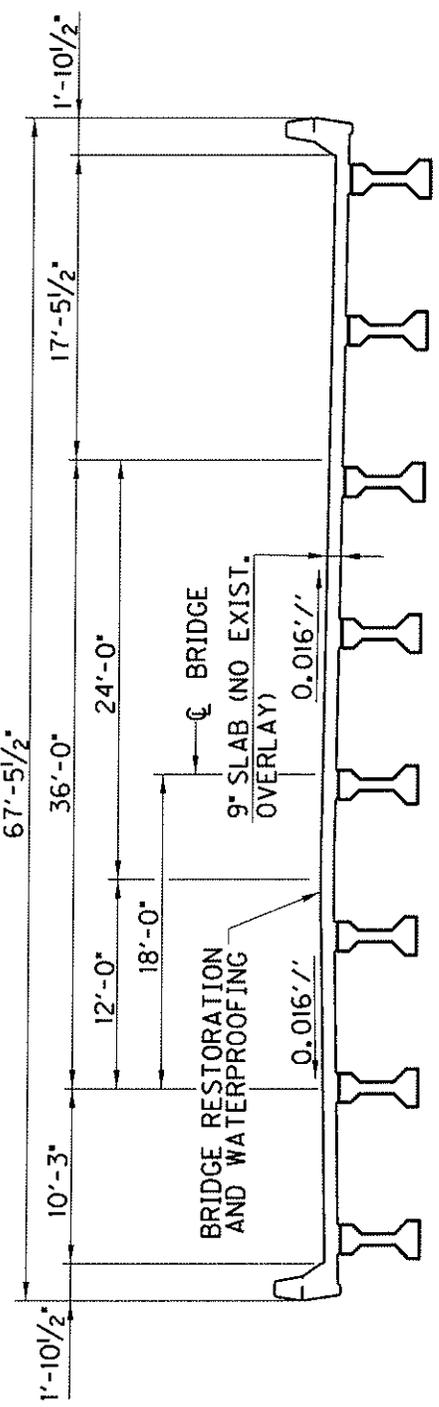
B7

I-471 NORTHBOUND OVER CHESAPEAKE AVENUE
BRIDGE MAINTENANCE NUMBER 019B00053R



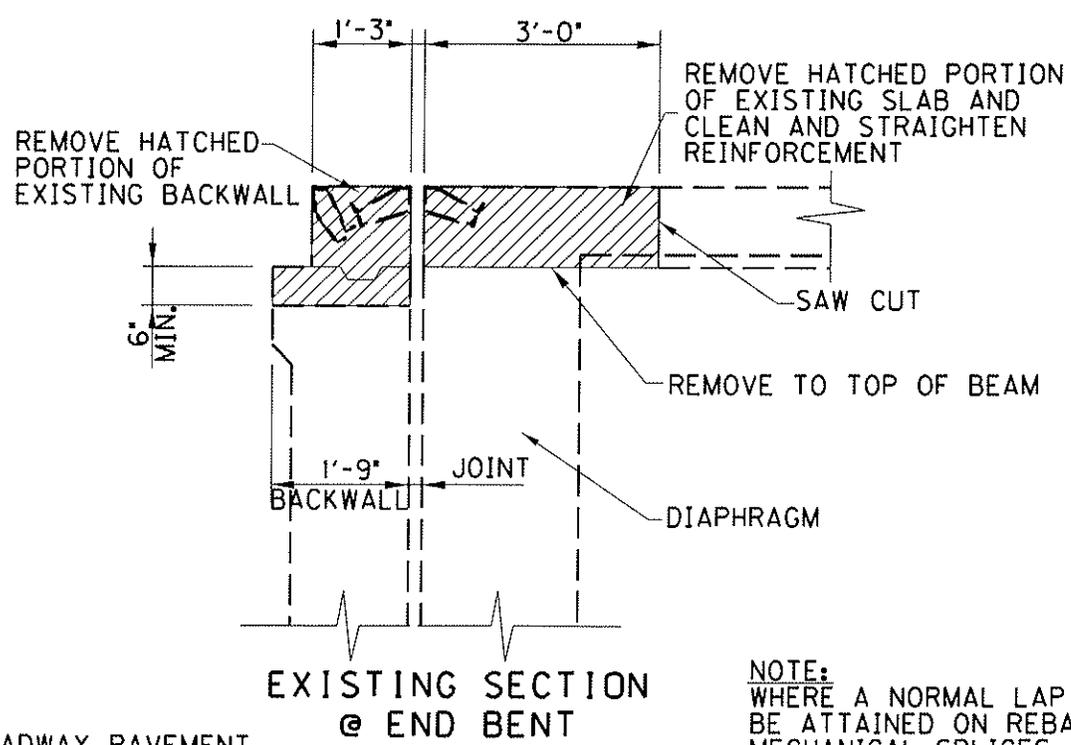
ELEVATION
7° 36' 37" SKEW RT.
NOT TO SCALE

*SEE STD. DRWG. BJE-001-11



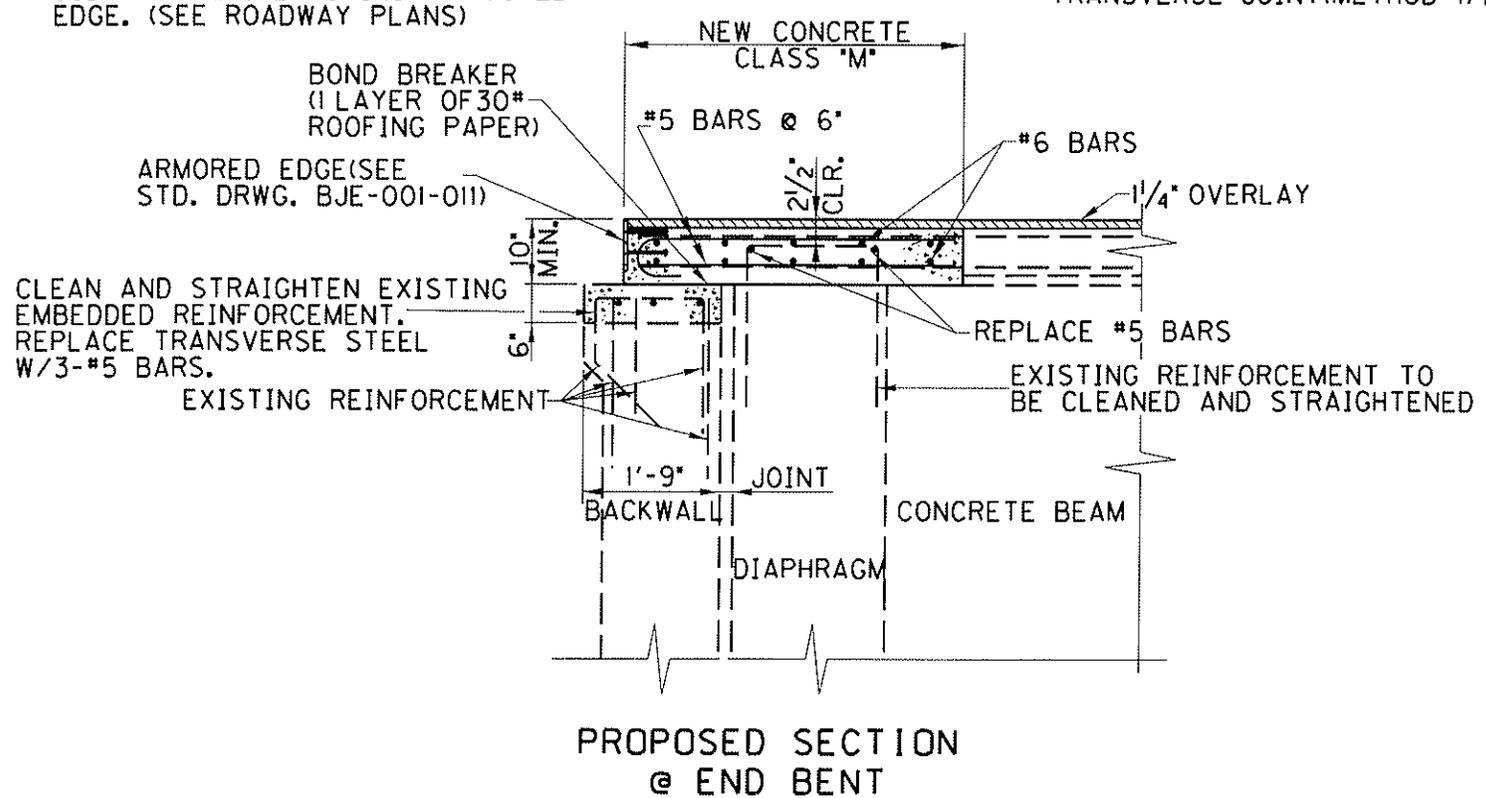
TYPICAL SECTION

ELIMINATE JOINT @ END BENT 1

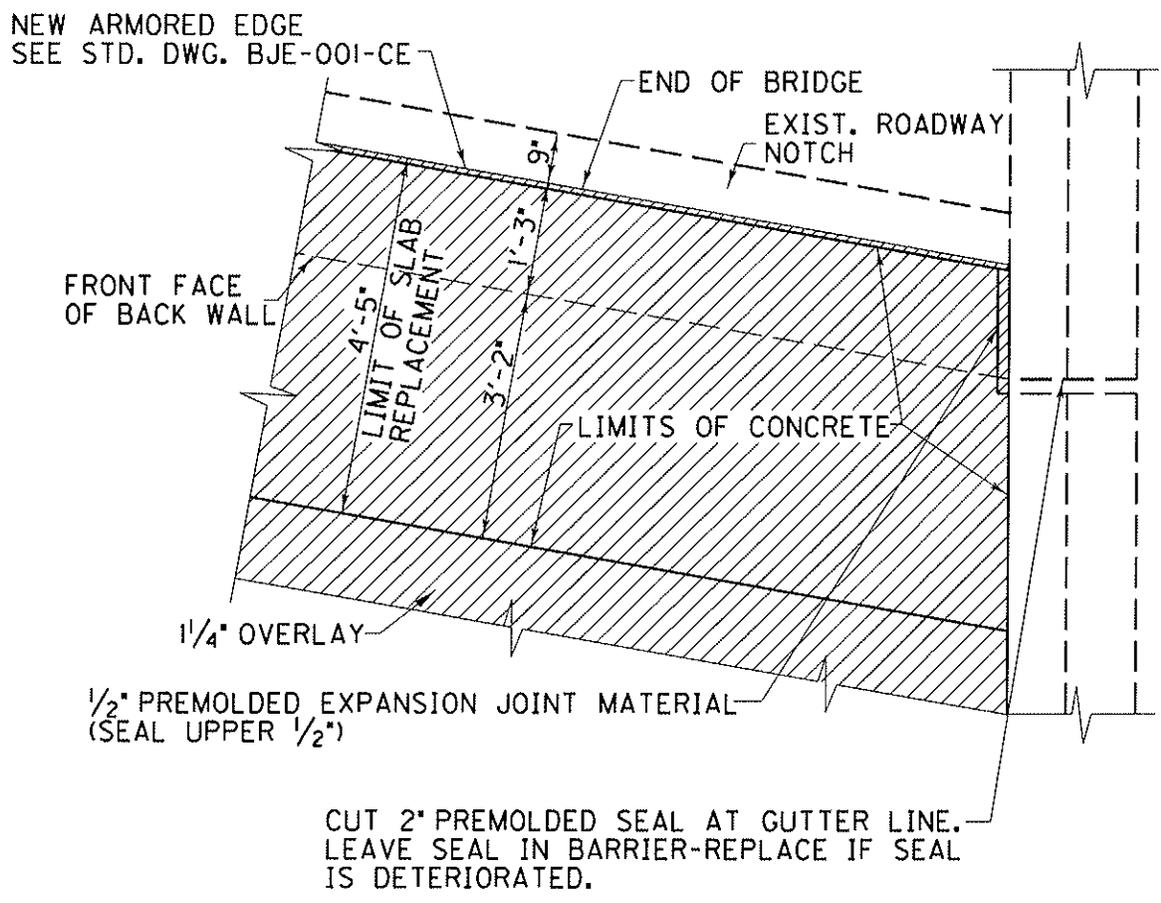


NOTE:
REMOVE 6' OF ROADWAY PAVEMENT,
PLACE 1/2" PREMOLDED EXPANSION
JOINT MATERIAL AGAINST ARMORED
EDGE. (SEE ROADWAY PLANS)

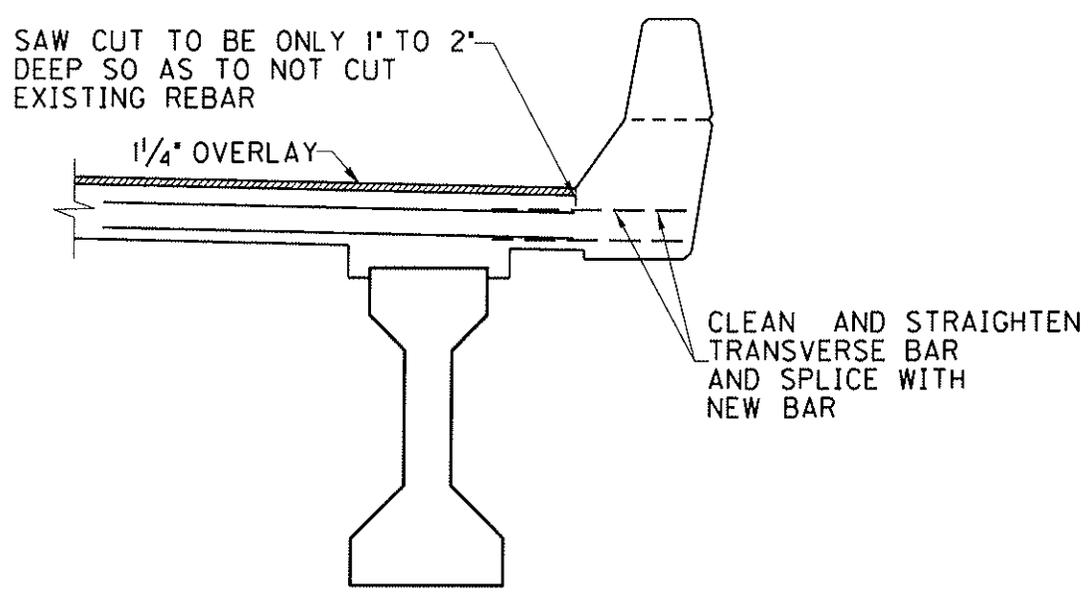
NOTE:
WHERE A NORMAL LAP CANNOT
BE ATTAINED ON REBARS USE
MECHANICAL SPLICES. SPLICES
ARE INCIDENTAL TO "ELIMINATE
TRANSVERSE JOINT(METHOD 1)".



CURB SECTION @ END BENT 1

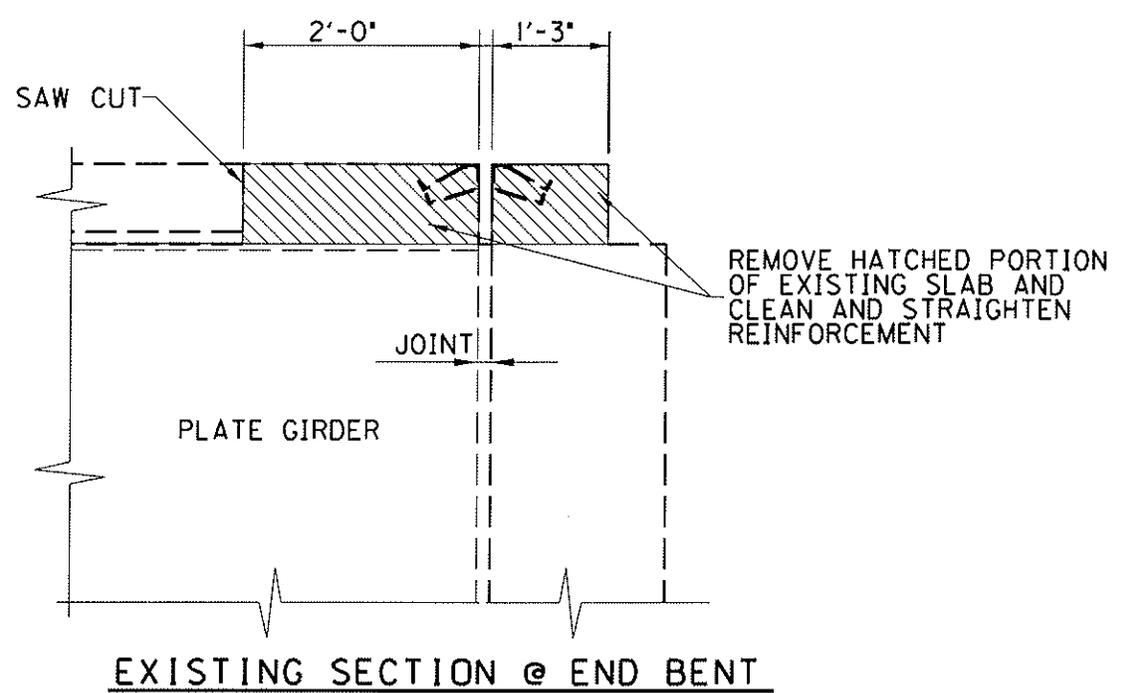


PROPOSED PLAN @ END BENT



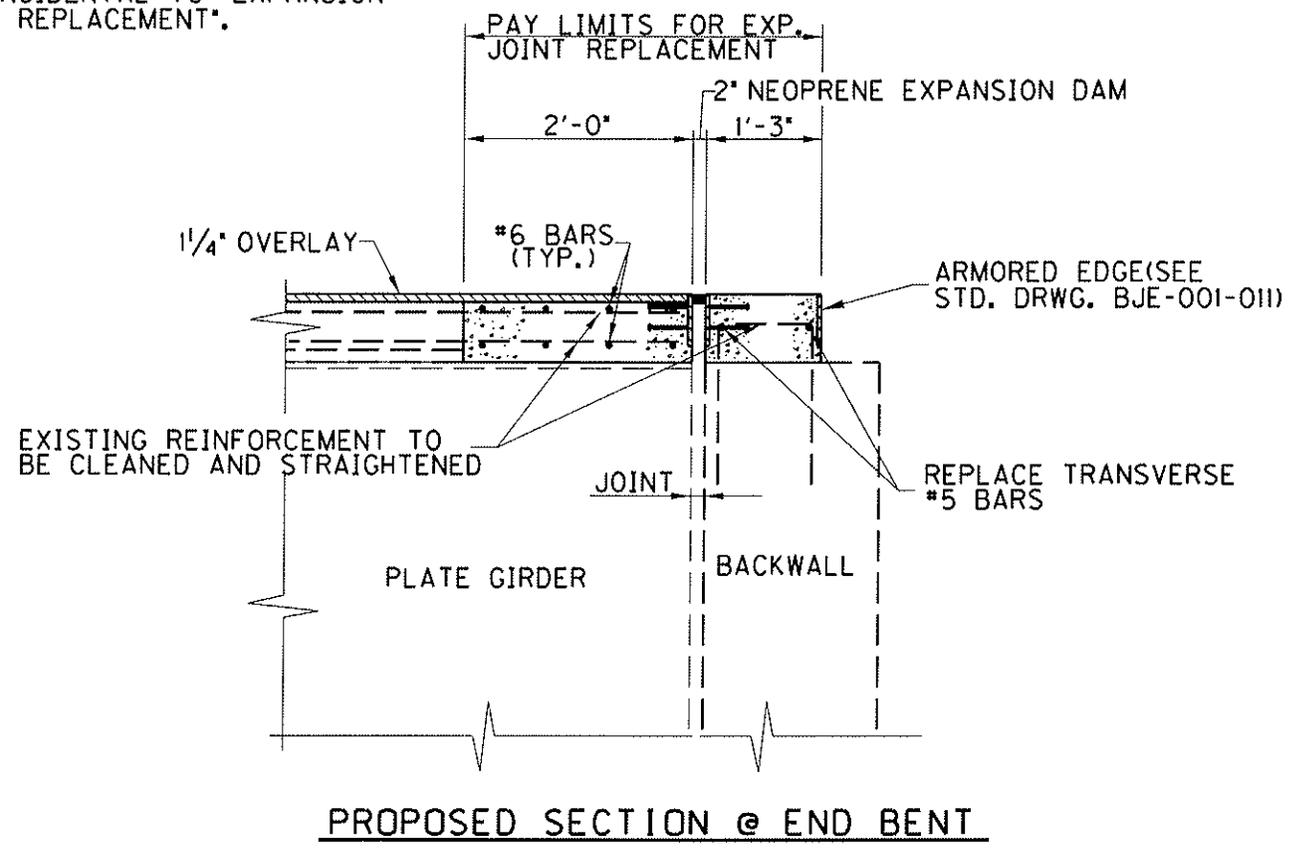
PROPOSED SECTION @ END BENT

REPLACE JOINT @ END BENT 2

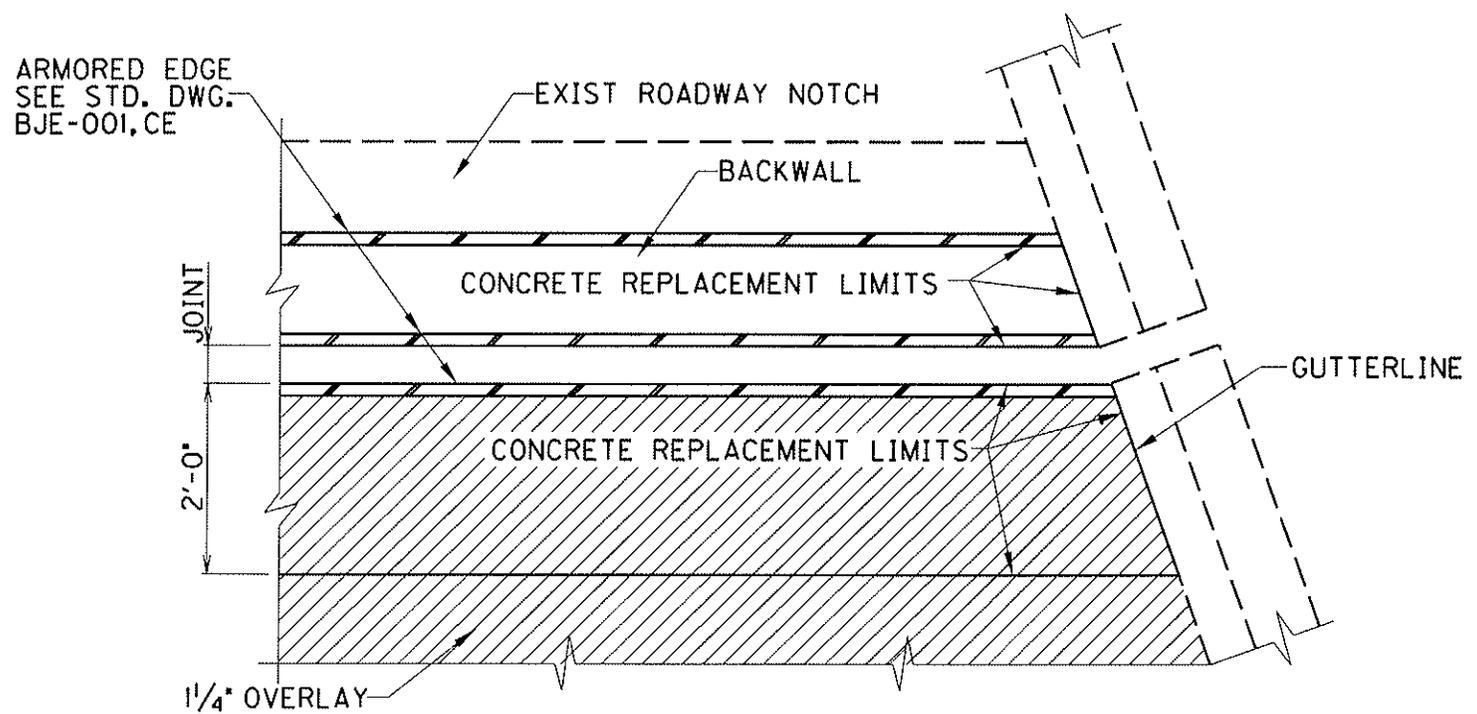


NOTE:
WHERE A NORMAL LAP CANNOT BE ATTAINED ON REBARS USE MECHANICAL SPLICES. SPLICES ARE INCIDENTAL TO "EXPANSION JOINT REPLACEMENT".

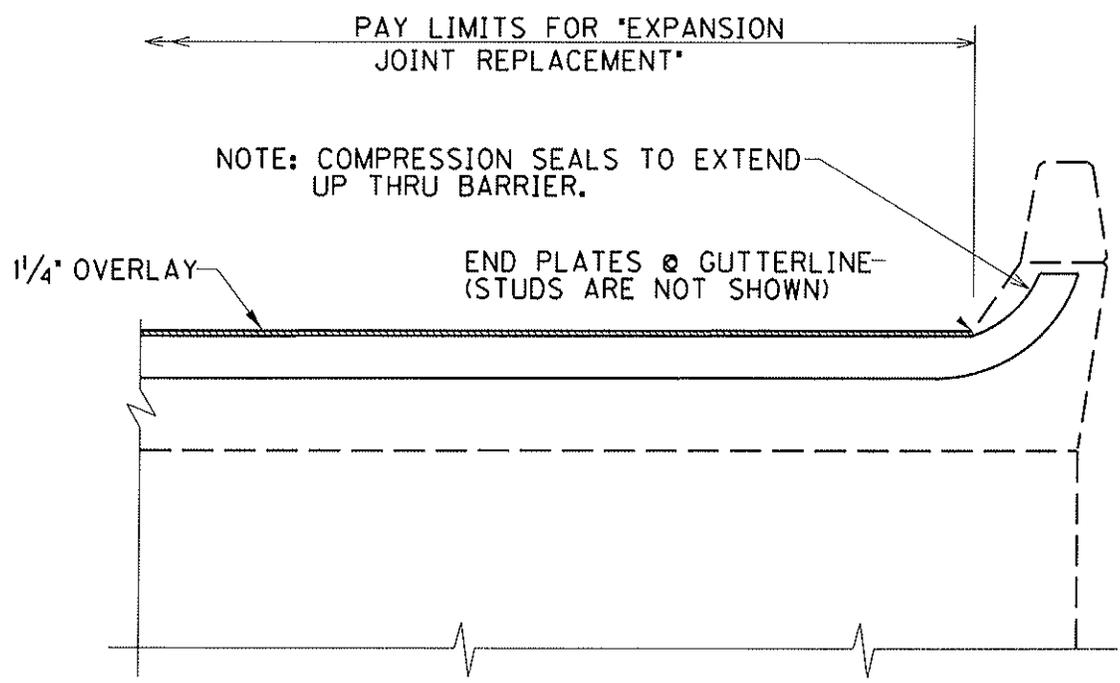
NOTE:
REMOVE 6' OF ROADWAY PAVEMENT, PLACE 1/2" PREMOLDED EXPANSION JOINT MATERIAL AGAINST ARMORED EDGE. (SEE ROADWAY PLANS)



REPLACE EXPANSION JOINT END BENT 2 CURB SECTION

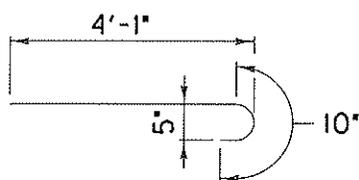


PLAN VIEW @ CURB
REPLACE EXPANSION JOINT

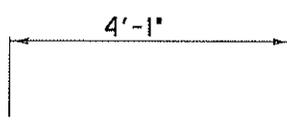


PROPOSED SECTION @ END BENT

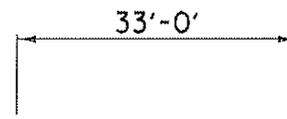
REINFORCEMENT



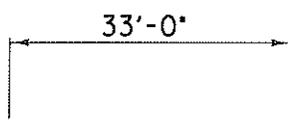
#5 BENT BAR
127 REQ'D END BENT 1



#5 STRAIGHT BAR
127 REQ'D END BENT 1



#6 STRAIGHT BAR
20 REQ'D END BENT 1
16 REQ'D END BENT 2



#5 STRAIGHT BAR
6 REQ'D END BENT 1
4 REQ'D END BENT 2

2,362 LBS END BENT 1
931 LBS END BENT 2

END BENT REINFORCEMENT

300 LIN. FT. #4 BARS IN 20'-0" LENGTHS
200 LBS. EACH END BENT

MISCELLANEOUS REINFORCEMENT

TOTAL REINFORCEMENT 3,693 LBS.

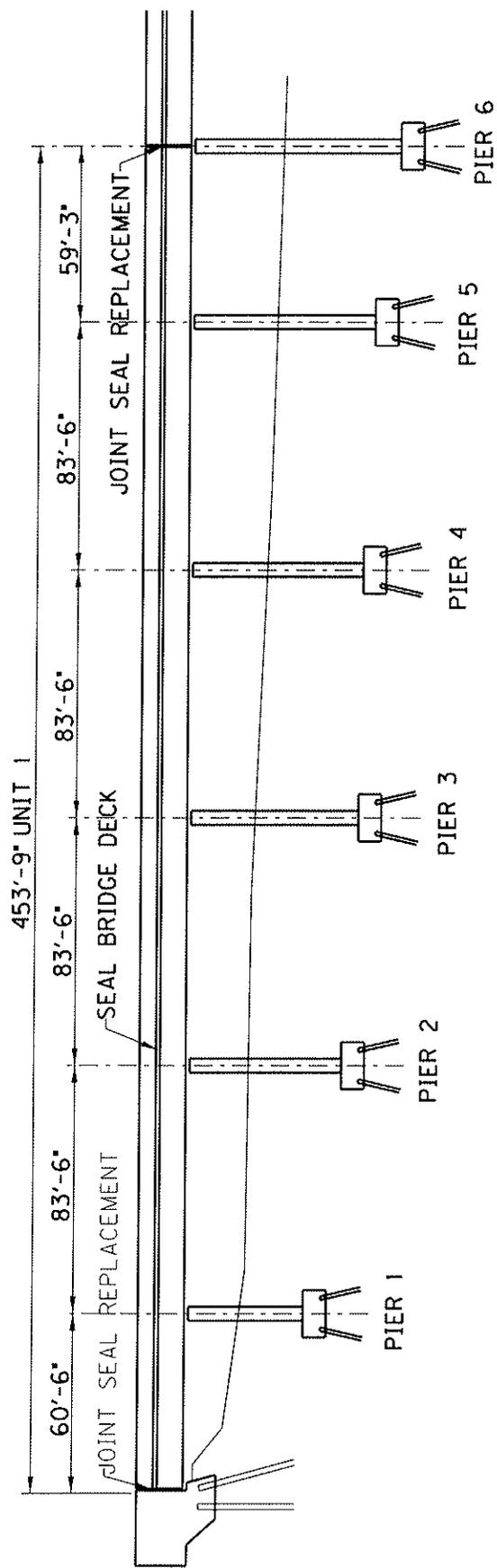
BRIDGE #8 (019B00056L) SUMMARY OF QUANTITIES

1. DISTRICT: 6
2. COUNTY: CAMPBELL
3. ROUTE: I-471
4. PROJECT NO.: IMNH 4714(034)
5. ROAD NAME: I-471
6. DESCRIPTION: I-471 SOUTHBOUND OVER SIXTH STREET
JOINT SEAL REPLACEMENT AND SEAL BRIDGE DECK
8. LENGTH (FT.): 2164 BRIDGE WIDTH (FT.): 56.5 SURFACE AREA (SQ. YD.): 13585
SKEW (DEGREES): VARIES DECK THICKNESS (INCHES): 9.0

ESTIMATED QUANTITIES REQUIRED

ITEM CODE	DESCRIPTION	QUANTITY	UNIT
23386EC	JOINT SEAL REPLACEMENT	339.0	LIN FT
24438EC	SEAL CRACKS BRIDGE DECK	1	LS
24439EC	SEAL BRIDGE DECK	1	LS

B8
I-471 SOUTHBOUND OVER SIXTH STREET
BRIDGE MAINTENANCE NUMBER 019B00056L

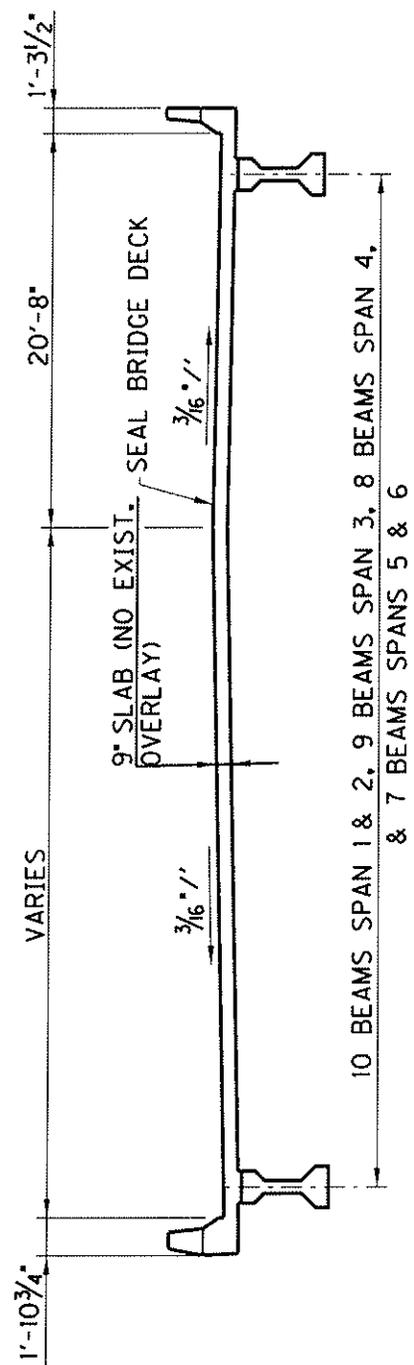


ELEVATION-UNIT 1

0° SKEW
NOT TO SCALE

*SEE STD. DRWG. BJE-001-IT

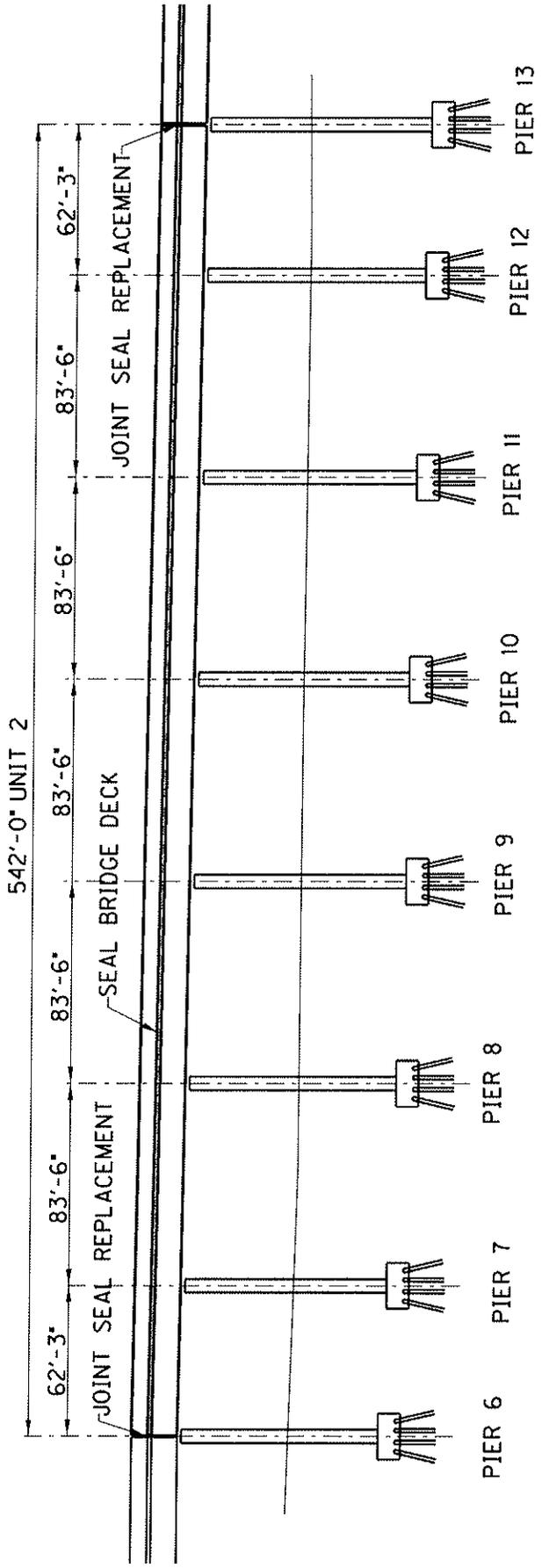
NOTE:
CONTRACTOR RESPONSIBLE FOR VERIFYING SIZE OF SEAL.



TYPICAL SECTION

I-471 SOUTHBOUND OVER SIXTH STREET
BRIDGE MAINTENANCE NUMBER 019B00056L

B8

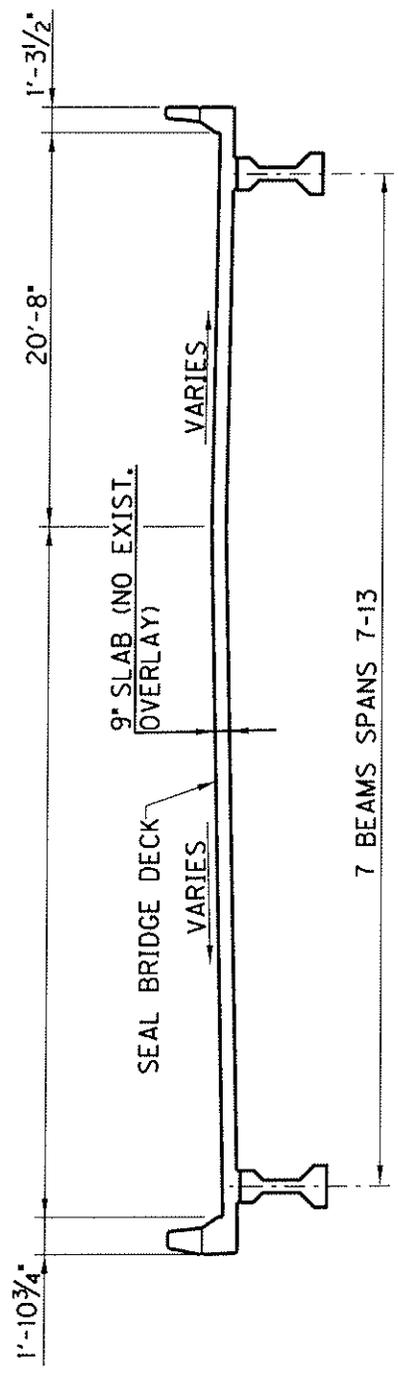


ELEVATION-UNIT 2

0° SKEW
NOT TO SCALE

*SEE STD. DRWG. BJE-001-11

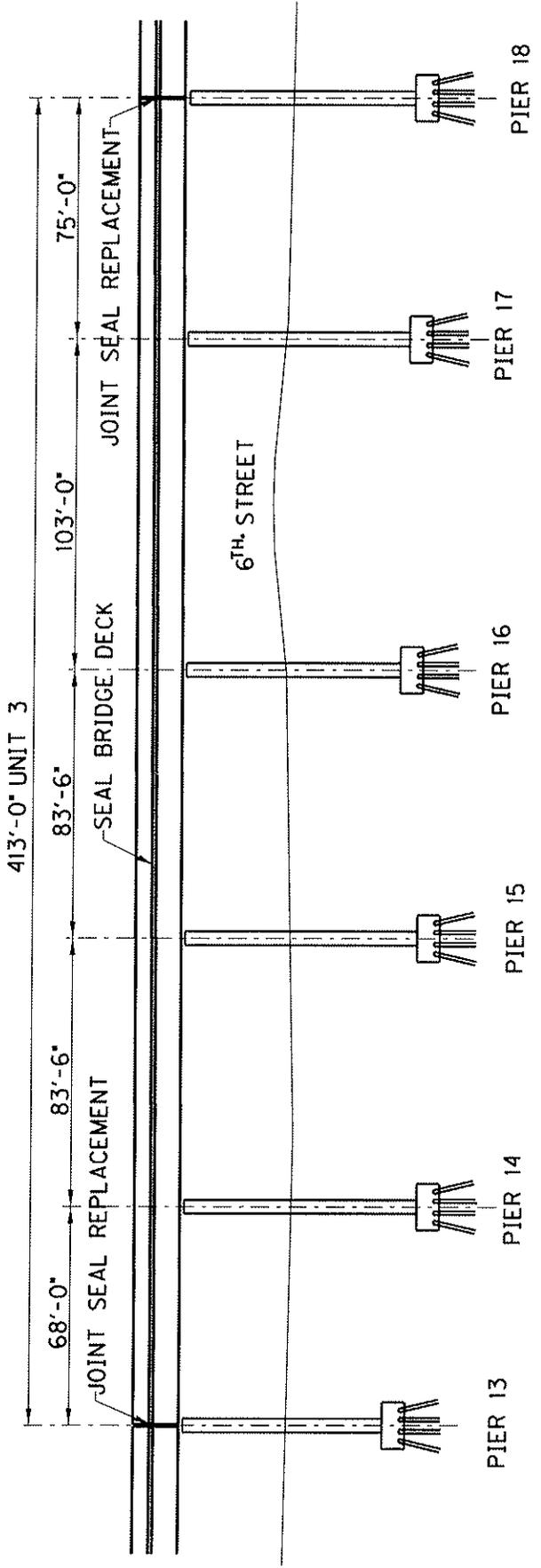
NOTE:
CONTRACTOR RESPONSIBLE FOR VERIFYING SIZE OF SEAL.



TYPICAL SECTION

B8

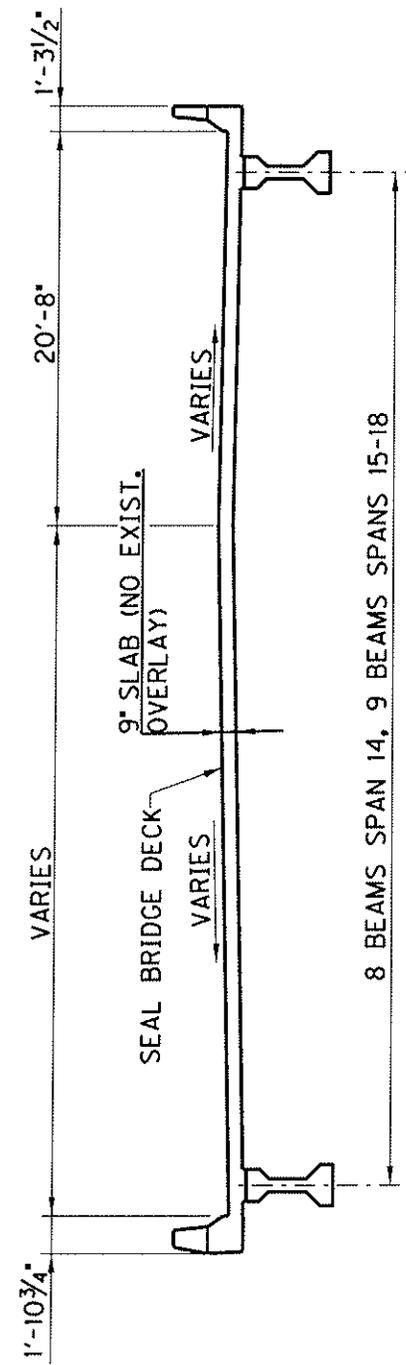
I-471 SOUTHBOUND OVER SIXTH STREET
BRIDGE MAINTENANCE NUMBER 019B00056L



ELEVATION-UNIT 3
0° & 15° SKEW RT.
NOT TO SCALE

*SEE STD. DRWG. BJE-001-11

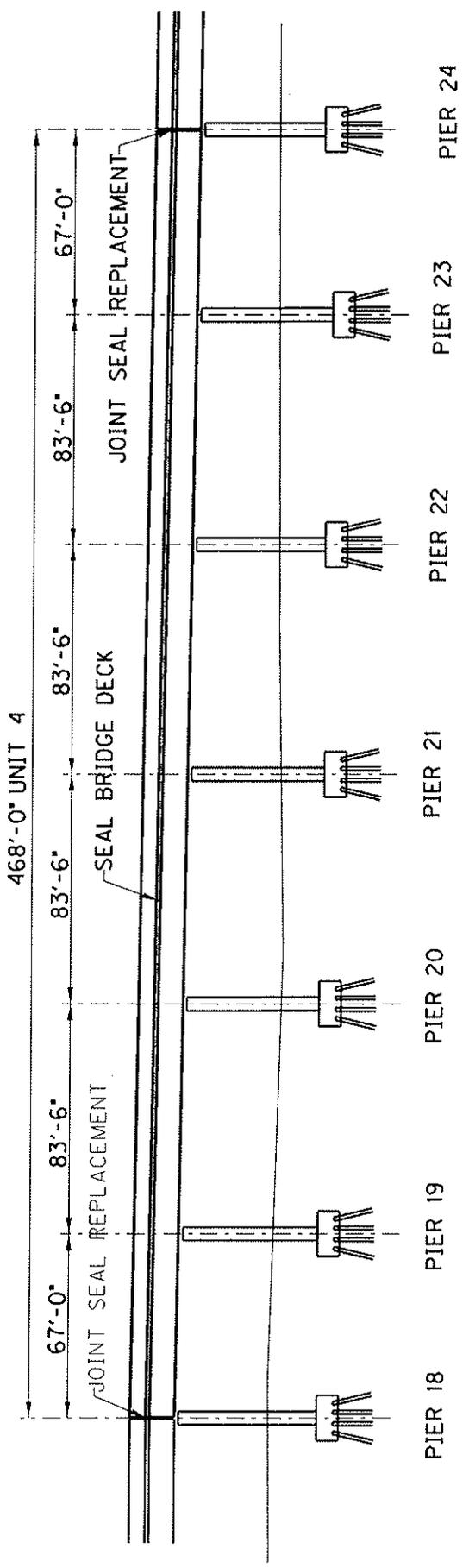
NOTE:
CONTRACTOR RESPONSIBLE FOR VERIFYING SIZE OF SEAL.



TYPICAL SECTION

I-471 SOUTHBOUND OVER SIXTH STREET
BRIDGE MAINTENANCE NUMBER 019B00056L

B8

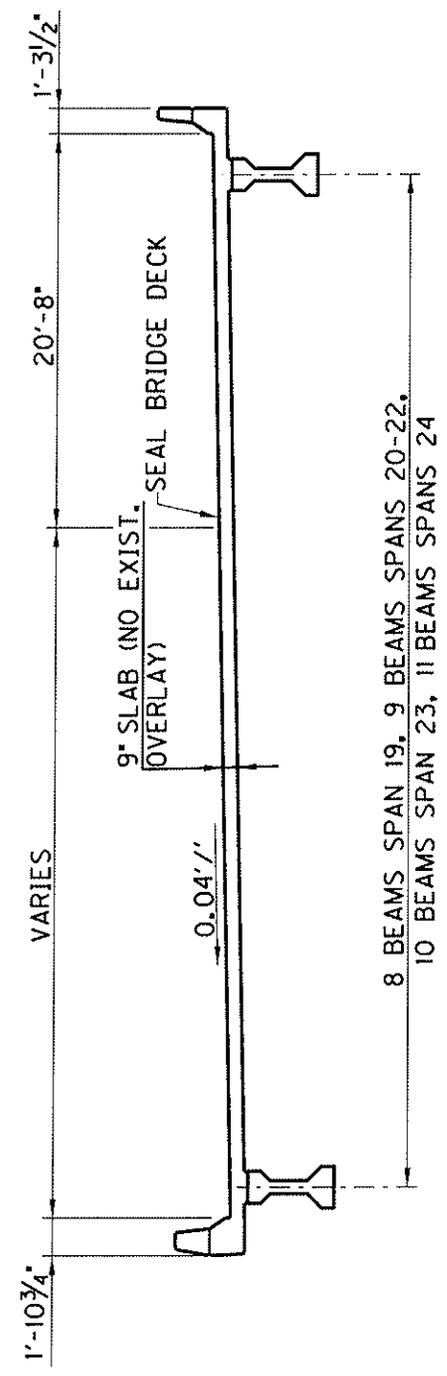


ELEVATION-UNIT 4

0° SKEW
NOT TO SCALE

*SEE STD. DRWG. BJE-001-11

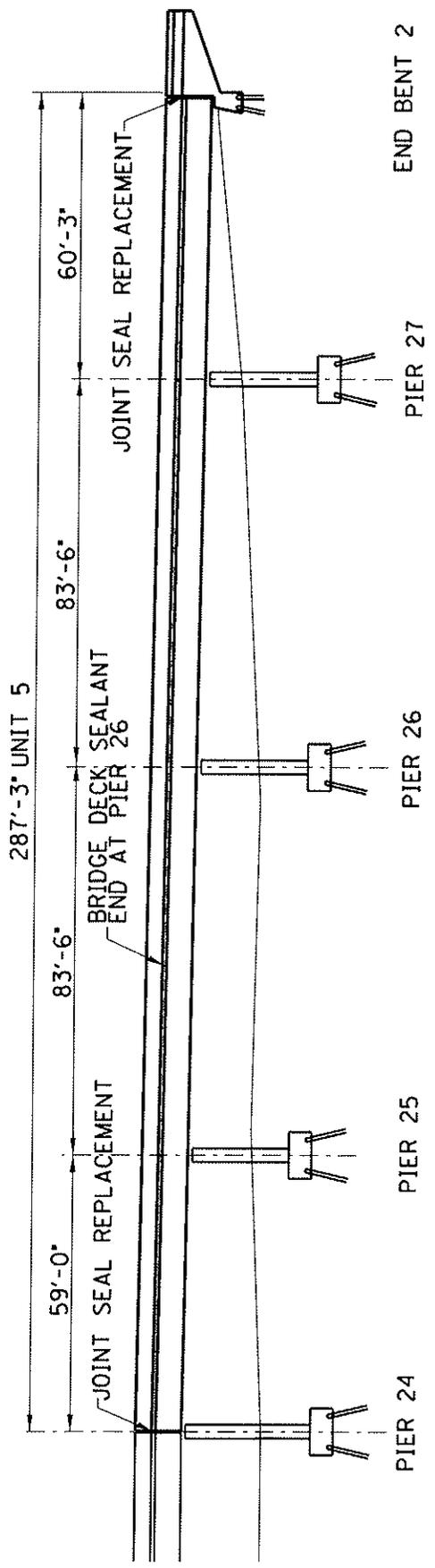
NOTE:
CONTRACTOR RESPONSIBLE FOR VERIFYING SIZE OF SEAL.



TYPICAL SECTION

I-471 SOUTHBOUND OVER SIXTH STREET
BRIDGE MAINTENANCE NUMBER 019B00056L

B8

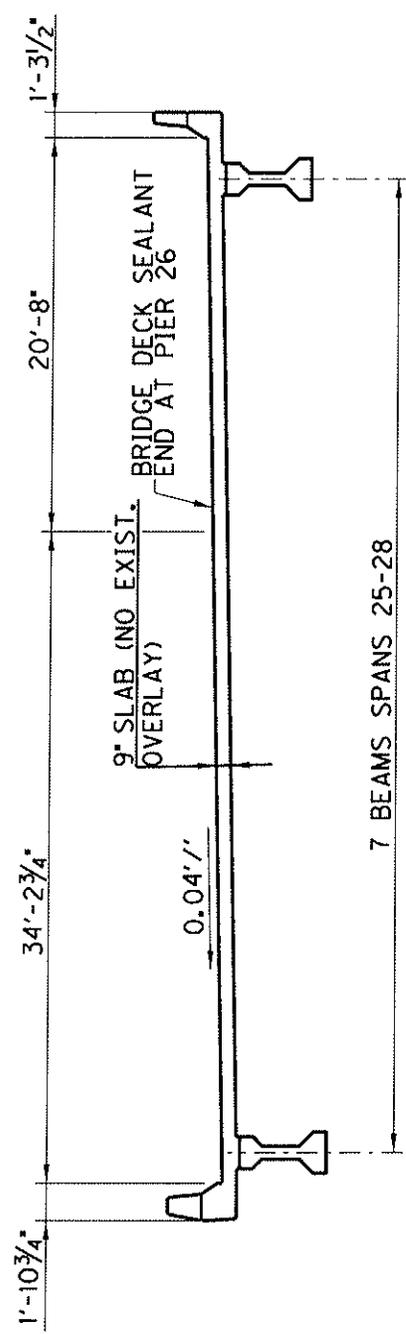


ELEVATION-UNIT 5

0° SKEW
NOT TO SCALE

NOTE:
CONTRACTOR RESPONSIBLE FOR VERIFYING SIZE OF SEAL.

*SEE STD. DRWG. BJE-001-11



TYPICAL SECTION

BRIDGE #9 (019B00056R) SUMMARY OF QUANTITIES

1. DISTRICT: 6
2. COUNTY: CAMPBELL
3. ROUTE: I-471
4. PROJECT NO.: IMNH 4714(034)
5. ROAD NAME: I-471
6. DESCRIPTION: I-471 NORTHBOUND OVER SIXTH STREET
JOINT SEAL REPLACEMENT AND SEAL BRIDGE DECK
8. LENGTH (FT.): 2164 BRIDGE WIDTH (FT.): SURFACE AREA (SQ. YD.): 16300
SKEW (DEGREES): VARIES DECK THICKNESS (INCHES): 9.0

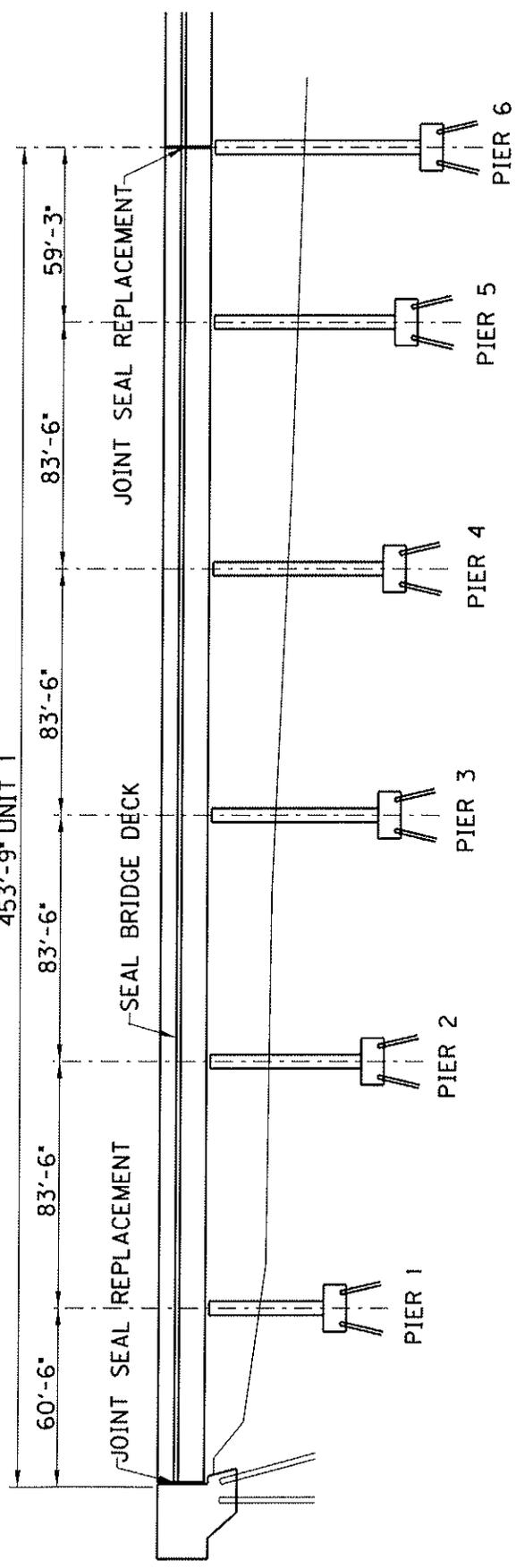
ESTIMATED QUANTITIES REQUIRED

ITEM CODE	DESCRIPTION	QUANTITY	UNIT
23386EC	JOINT SEAL REPLACEMENT	432.0	LIN FT
24438EC	SEAL CRACKS BRIDGE DECK	1	LS
24439EC	SEAL BRIDGE DECK	1	LS

B9

I-471 NORTHBOUND OVER SIXTH STREET
BRIDGE MAINTENANCE NUMBER 019B00056R

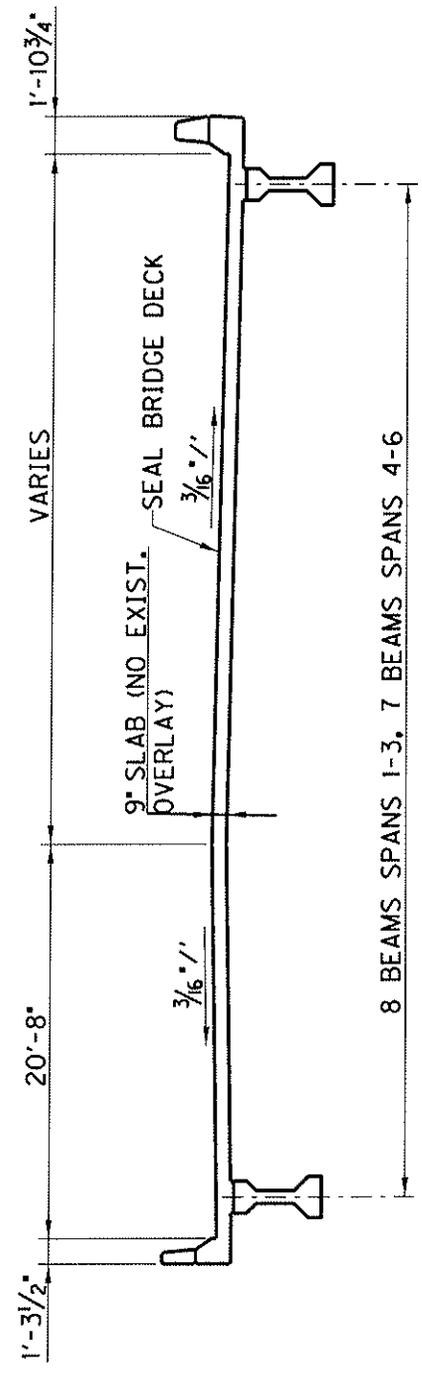
453'-9" UNIT 1



ELEVATION-UNIT 1

0° SKEW
NOT TO SCALE

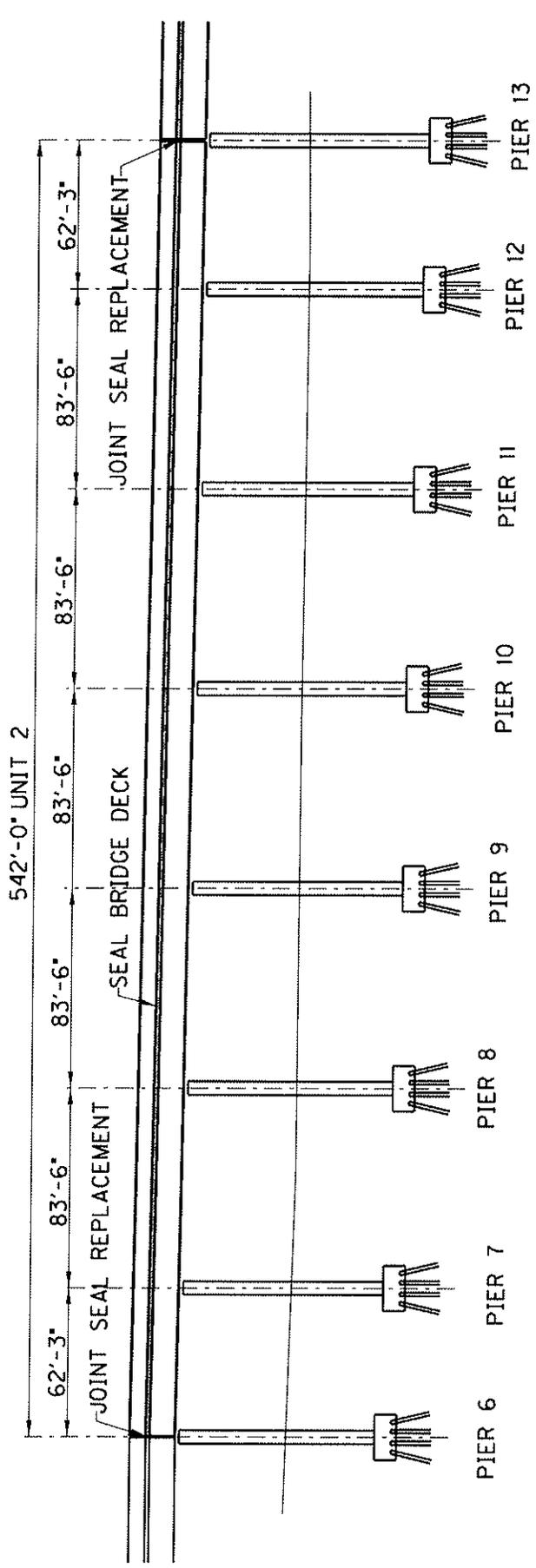
NOTE:
CONTRACTOR RESPONSIBLE FOR VERIFYING SIZE OF SEAL.
*SEE STD. DRWG. BJE-001-IT



TYPICAL SECTION

I-471 NORTHBOUND OVER SIXTH STREET
BRIDGE MAINTENANCE NUMBER 019B00056R

B9

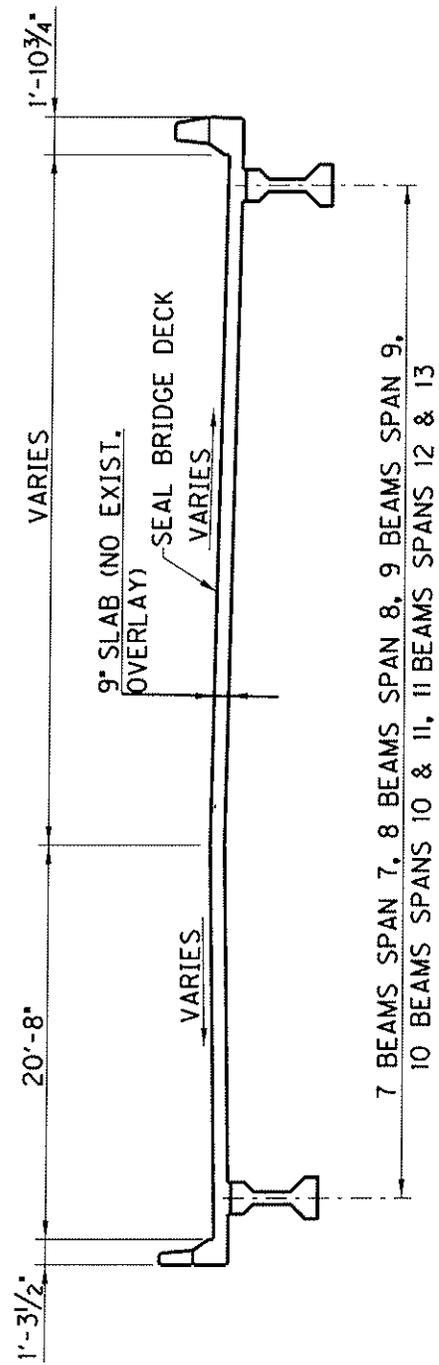


ELEVATION-UNIT 2

0° SKEW
NOT TO SCALE

*SEE STD. DRWG. BJE-001-11

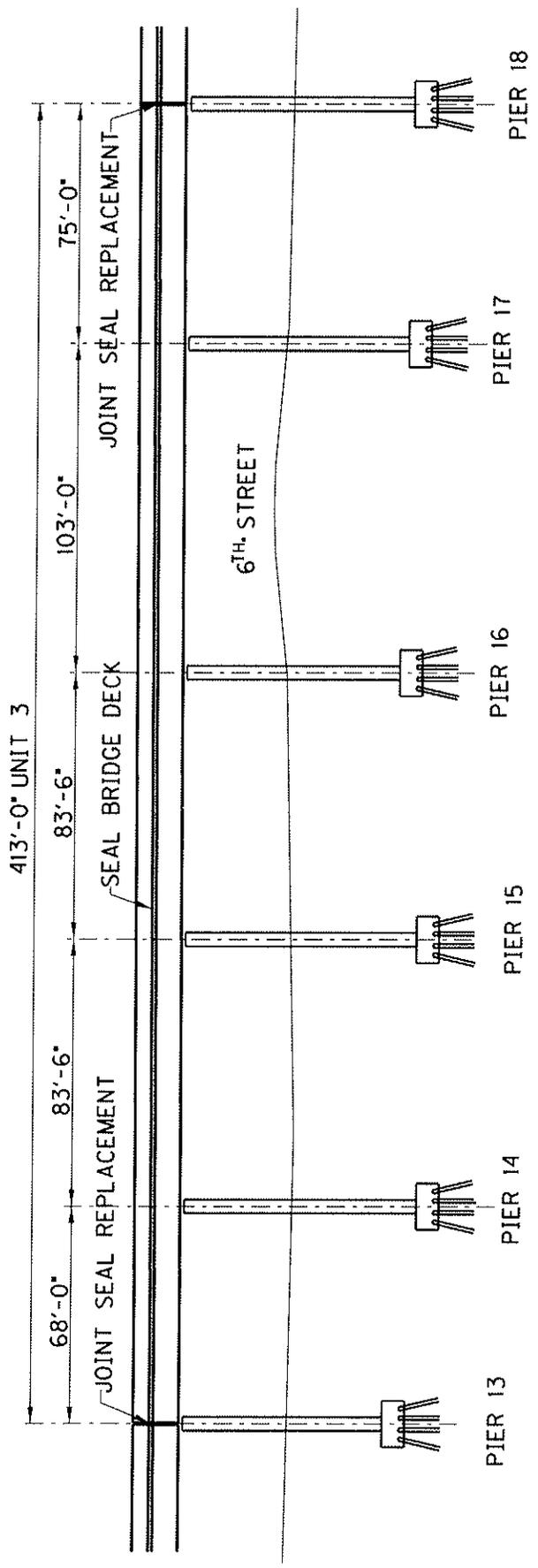
NOTE:
CONTRACTOR RESPONSIBLE FOR VERIFYING SIZE OF SEAL.



TYPICAL SECTION

I-471 NORTHBOUND OVER SIXTH STREET
BRIDGE MAINTENANCE NUMBER 019B00056R

B9

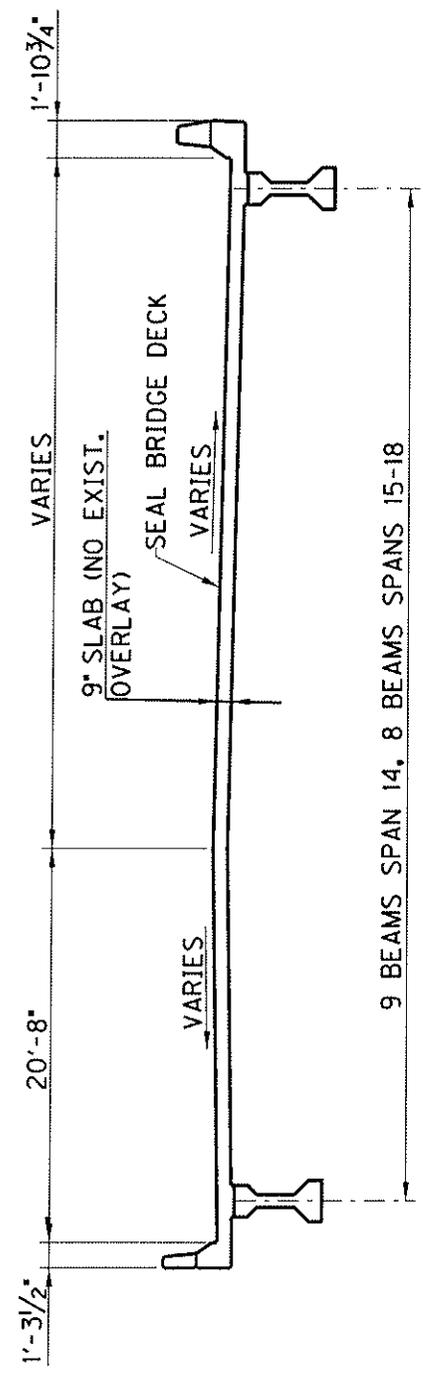


ELEVATION-UNIT 3

0° & 15° SKEW RT.
NOT TO SCALE

*SEE STD. DRWG. BJE-001-11

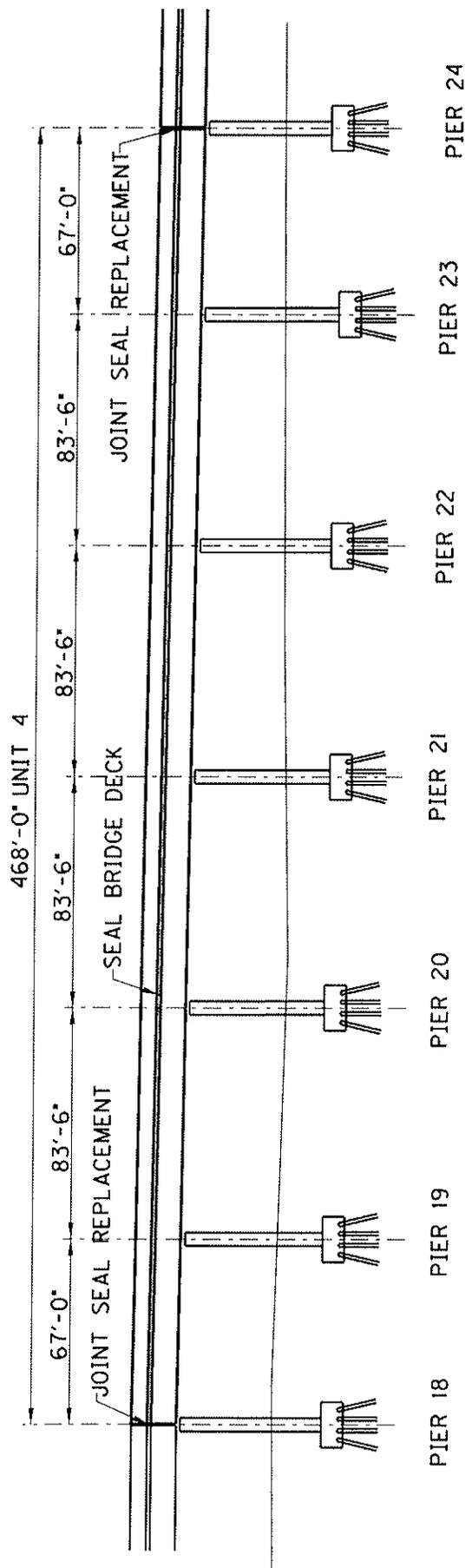
NOTE:
CONTRACTOR RESPONSIBLE FOR VERIFYING SIZE OF SEAL.



TYPICAL SECTION

I-471 NORTHBOUND OVER SIXTH STREET
BRIDGE MAINTENANCE NUMBER 019B00056R

B9

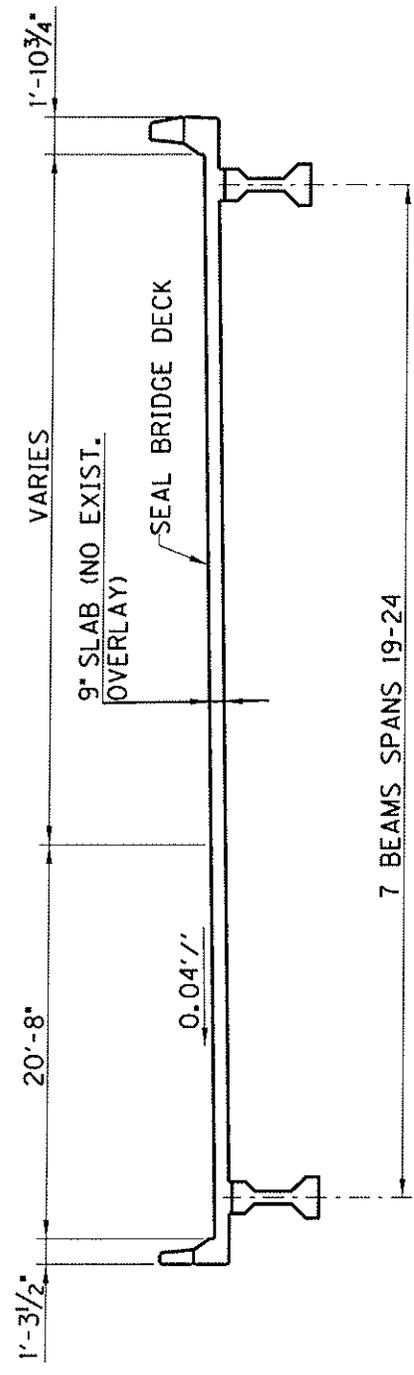


ELEVATION-UNIT 4

0° SKEW
NOT TO SCALE

NOTE:
CONTRACTOR RESPONSIBLE FOR VERIFYING SIZE OF SEAL.

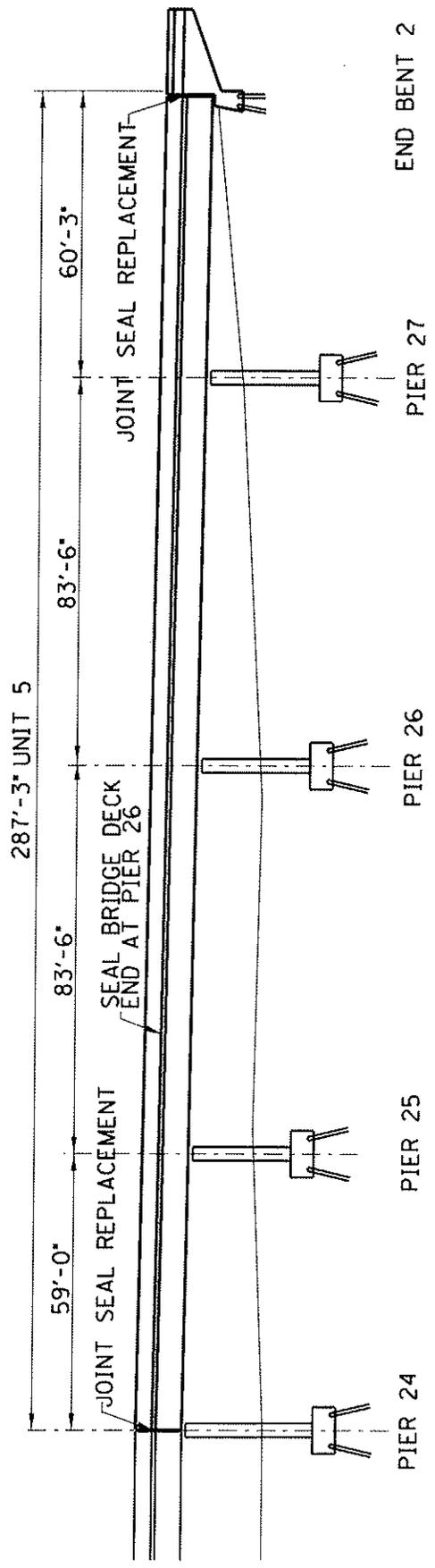
*SEE STD. DRWG. BJE-001-II



TYPICAL SECTION

I-471 NORTHBOUND OVER STREET STREET
BRIDGE MAINTENANCE NUMBER 019B00056R

B9

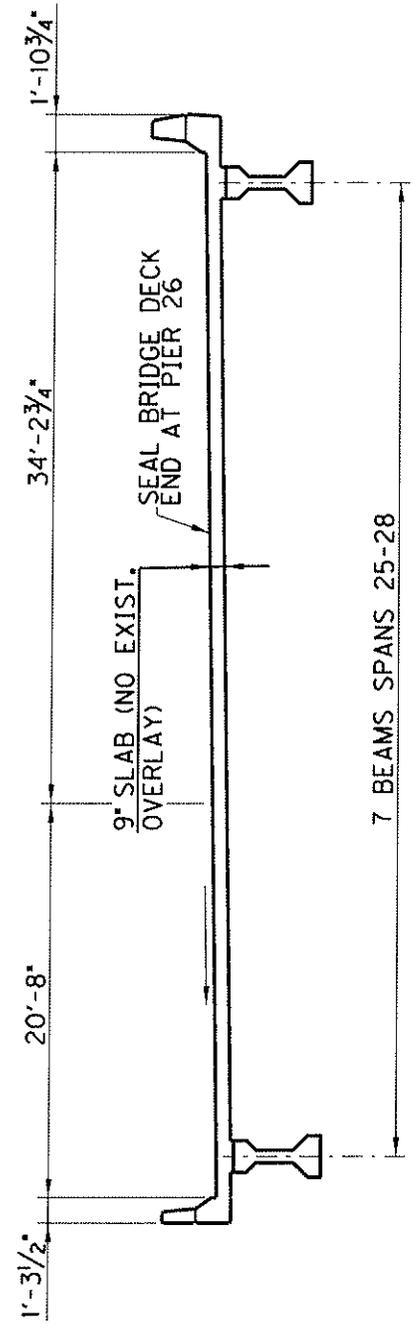


ELEVATION-UNIT 5

0° SKEW
NOT TO SCALE

*SEE STD. DRWG. BJE-001-11

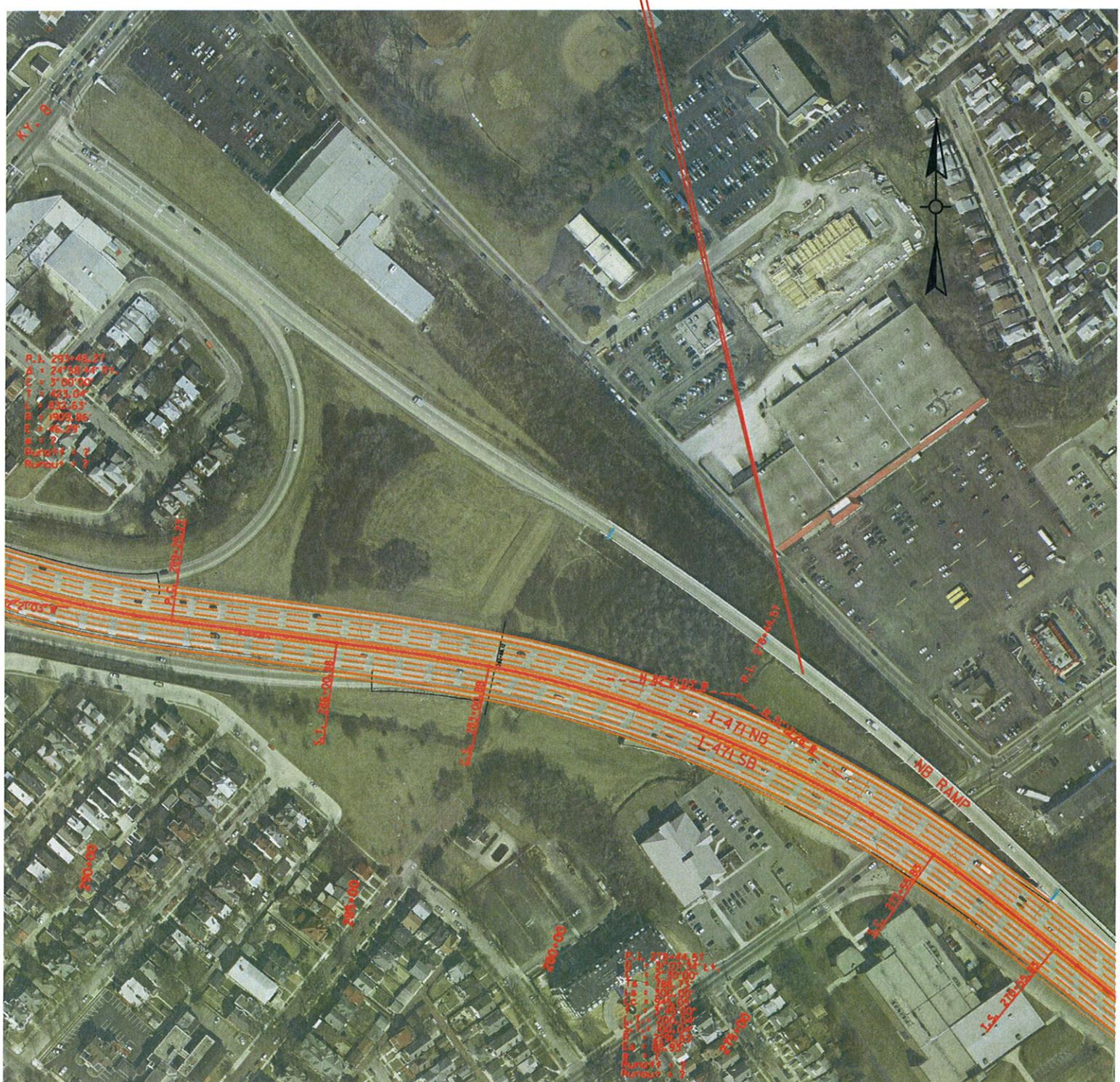
NOTE:
CONTRACTOR RESPONSIBLE FOR VERIFYING SIZE OF SEAL.



TYPICAL SECTION

CAMPBELL COUNTY

019B00065N
I-471 NORTHBOUND RAMP TO KY. 8



Approximate Location Information
Latitude: 39° 5' 52"
Longitude: 84° 29' 5"

BRIDGE #10 (019B00065N) SUMMARY OF QUANTITIES

1. DISTRICT: 6
2. COUNTY: CAMPBELL
3. ROUTE: I-471
4. PROJECT NO.: IMNH 4174(034)
5. ROAD NAME: I-471
6. DESCRIPTION: I-471 NORTHBOUND RAMP TO KY 8
JOINT SEAL REPLACEMENT AND EXPANSION JOINT REPLACEMENT

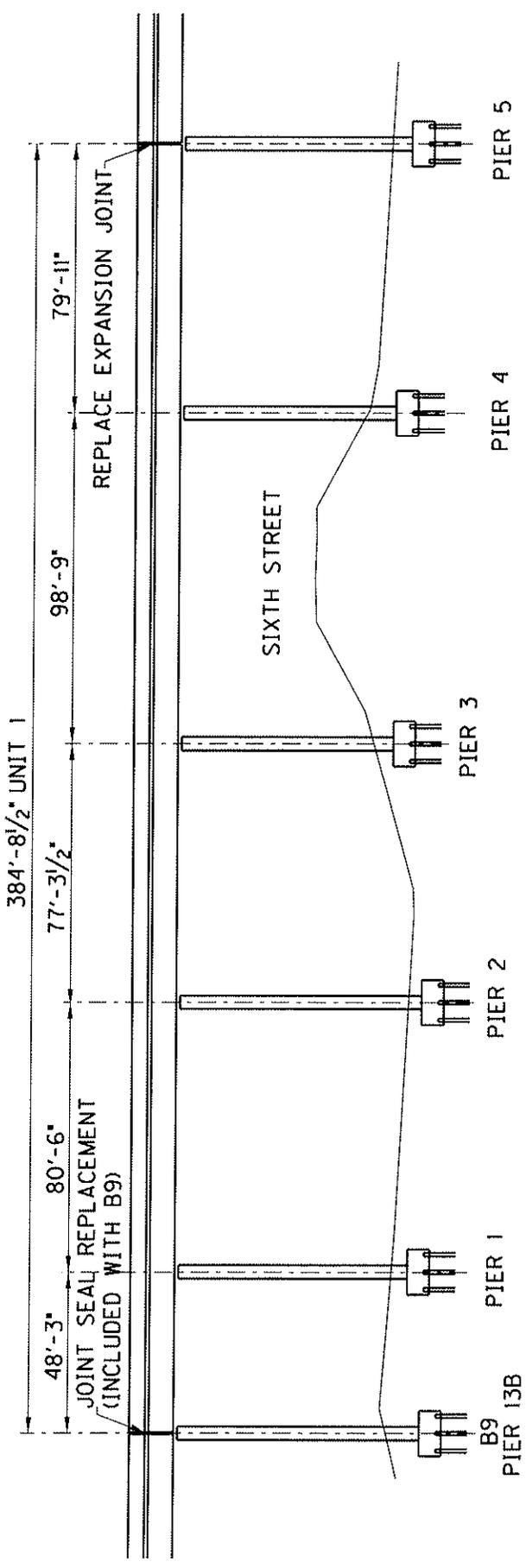
8. LENGTH (FT.): 752.71 BRIDGE WIDTH (FT.): 24.0 SURFACE AREA (SQ. YD.): 2005
SKEW (DEGREES): VARIES DECK THICKNESS (INCHES): 9

ESTIMATED QUANTITIES REQUIRED

ITEM CODE	DESCRIPTION	QUANTITY	UNIT
3294	EXPANSION JT. REPLACEMENT 11/2 IN	24.0	LIN FT
3298	EXPANSION JOINT REPLACEMENT 4 IN	48.0	LIN FT

BIO

I-471 NORTHBOUND RAMP TO KY. 8
BRIDGE MAINTENANCE NUMBER 019B00065N

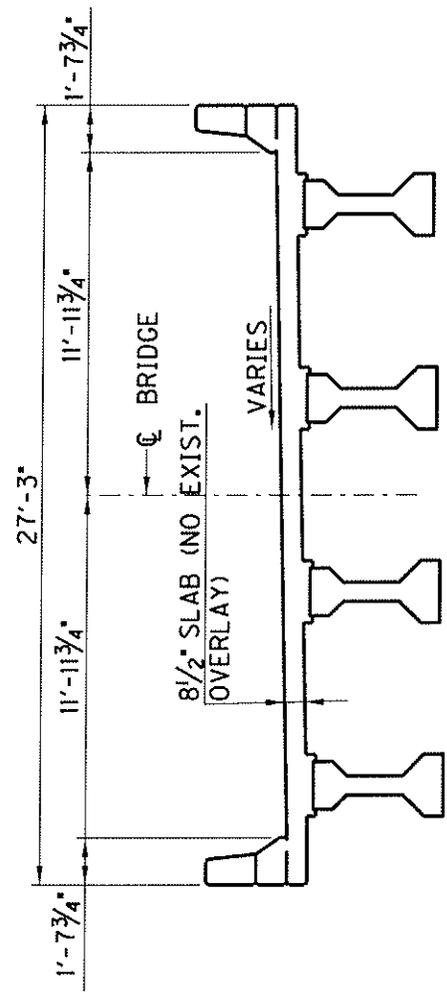


ELEVATION-UNIT 1

SKEW VARIES
NOT TO SCALE

NOTE:
CONTRACTOR RESPONSIBLE FOR VERIFYING SIZE OF SEAL.

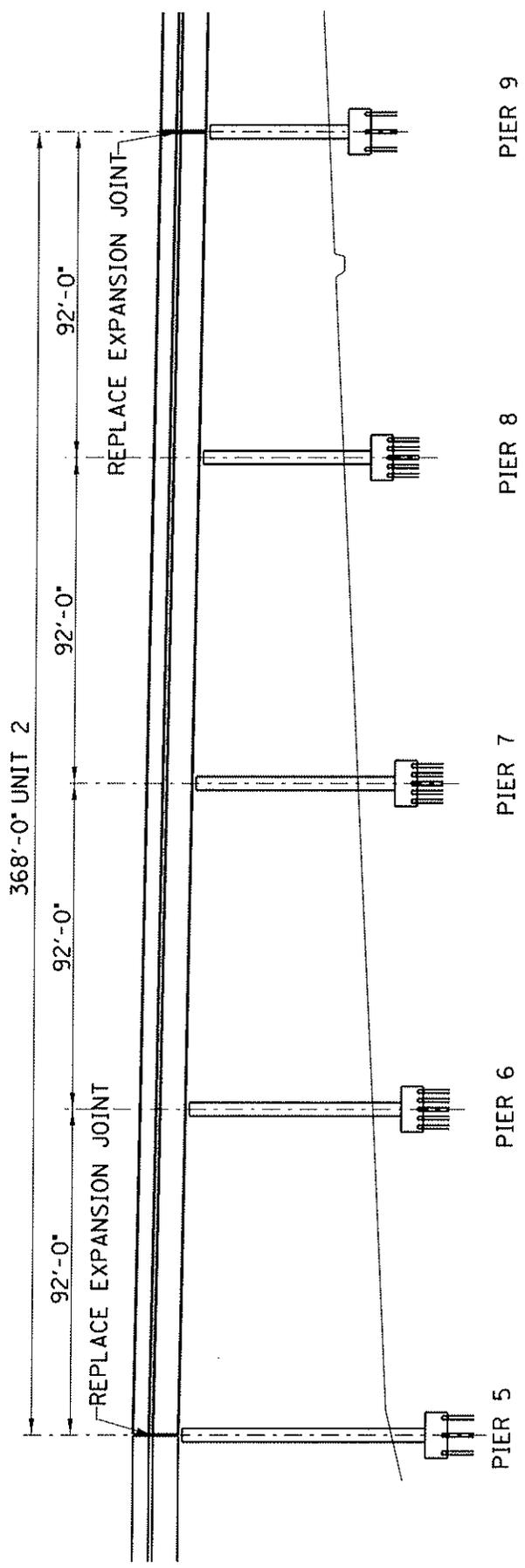
*SEE STD. DRWG. BJE-001-11



TYPICAL SECTION

I-471 NORTHBOUND RAMP TO KY. 8
BRIDGE MAINTENANCE NUMBER 019B00065N

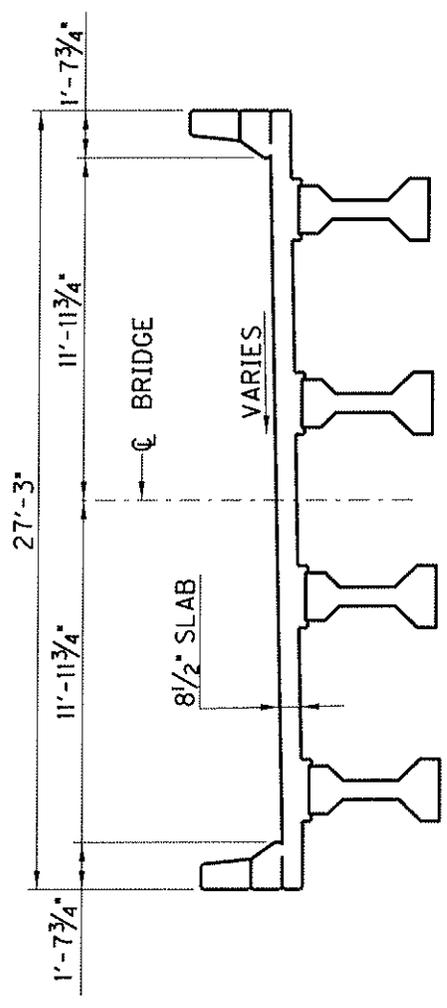
B10



ELEVATION-UNIT 2

0° SKEW
NOT TO SCALE

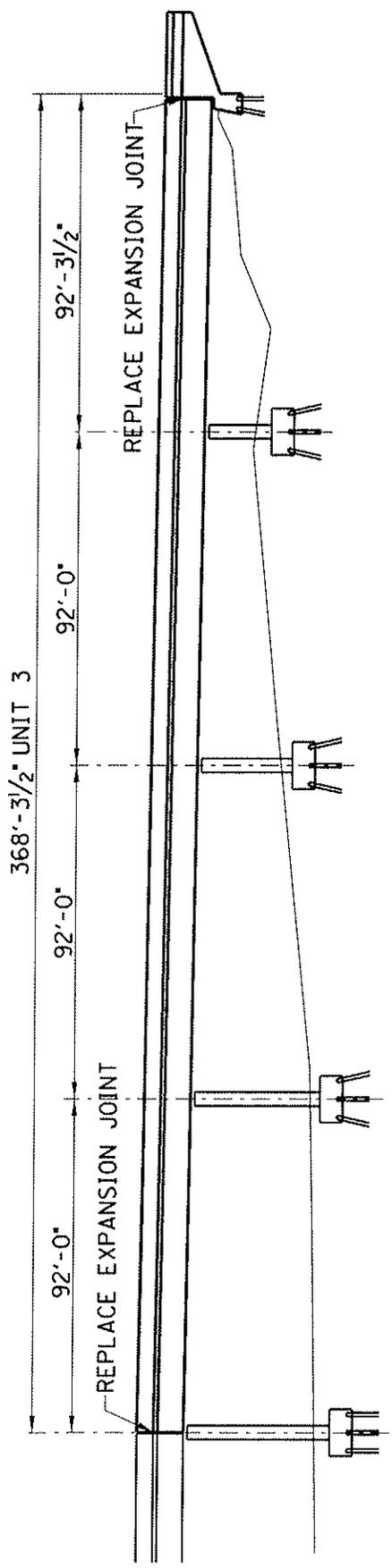
NOTE:
CONTRACTOR RESPONSIBLE FOR VERIFYING SIZE OF SEAL.
*SEE STD. DRWG. BJE-001-11



TYPICAL SECTION

I-471 NORTHBOUND RAMP TO KY. 8
BRIDGE MAINTENANCE NUMBER 019B000065N

B10

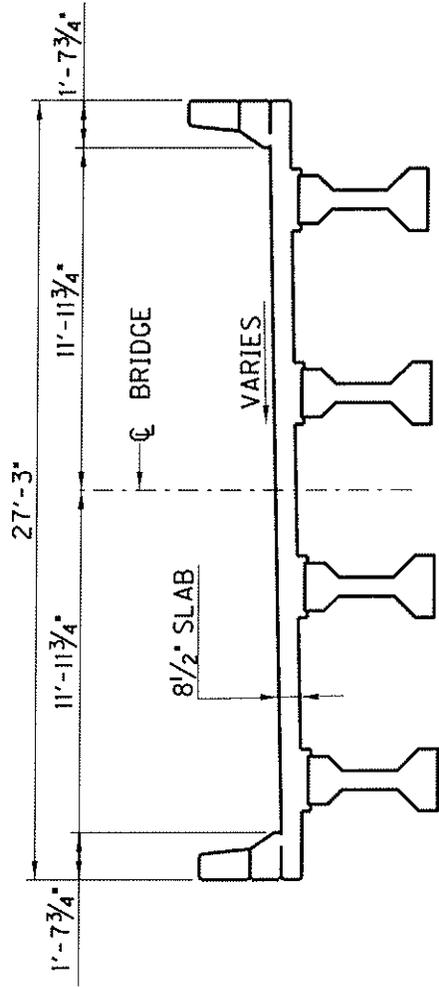


PIER 9 PIER 10 PIER 11 PIER 12 END BENT 2

ELEVATION-UNIT 3
0° SKEW
NOT TO SCALE

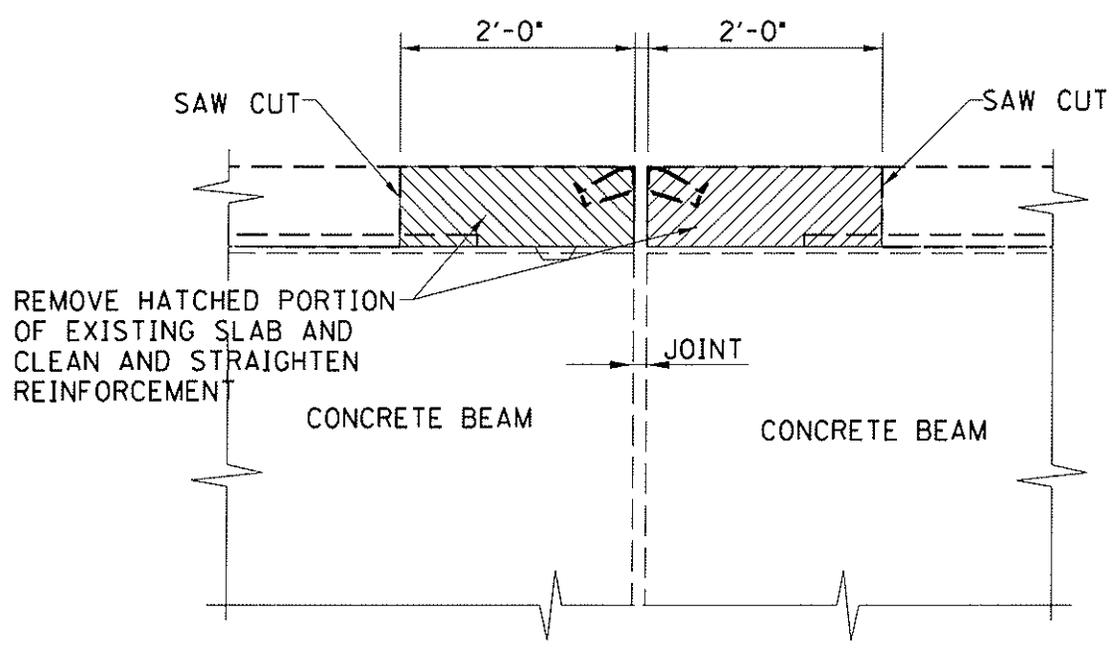
NOTE:
CONTRACTOR RESPONSIBLE FOR VERIFYING SIZE OF SEAL.

*SEE STD. DRWG. BJE-001-II

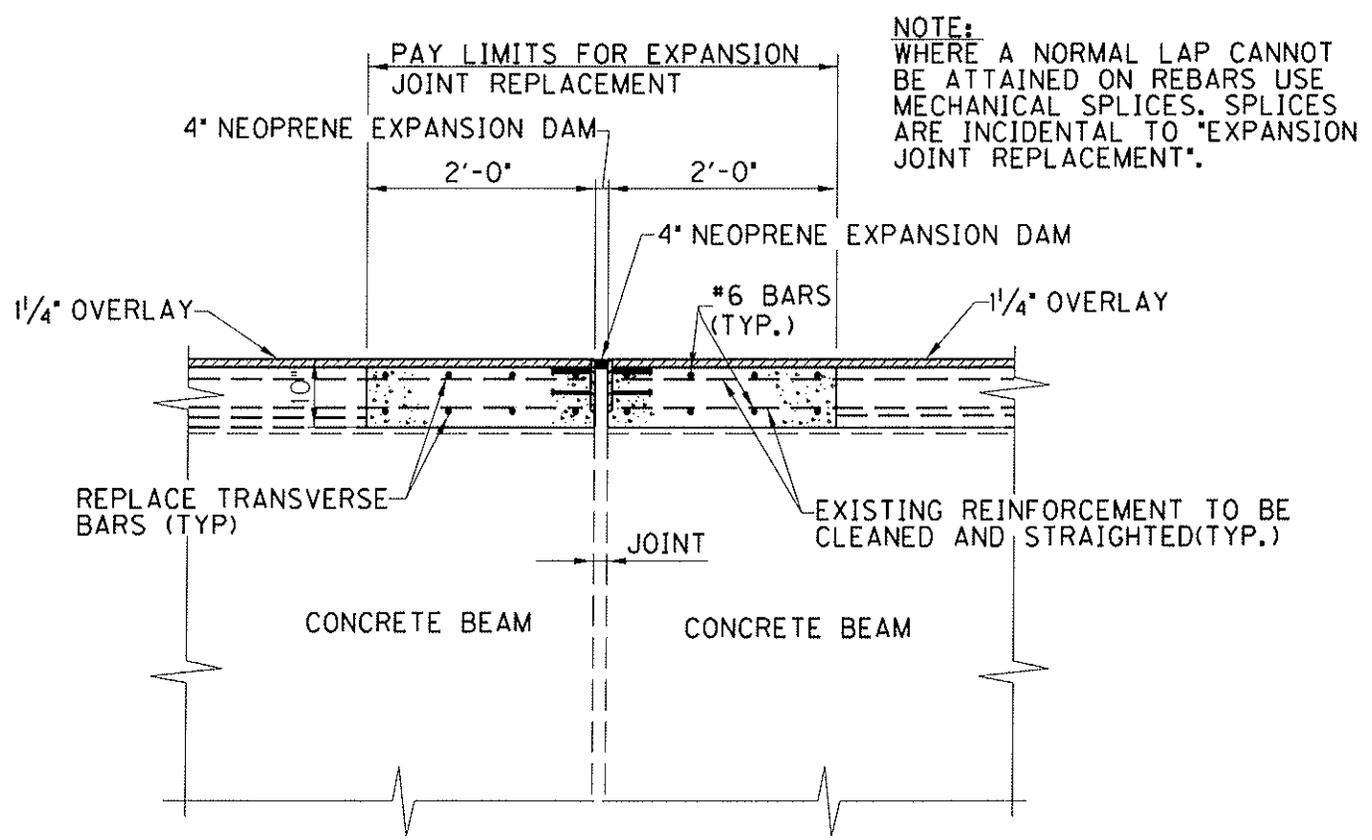


TYPICAL SECTION

REPLACE JOINT @ PIER 5 & 9

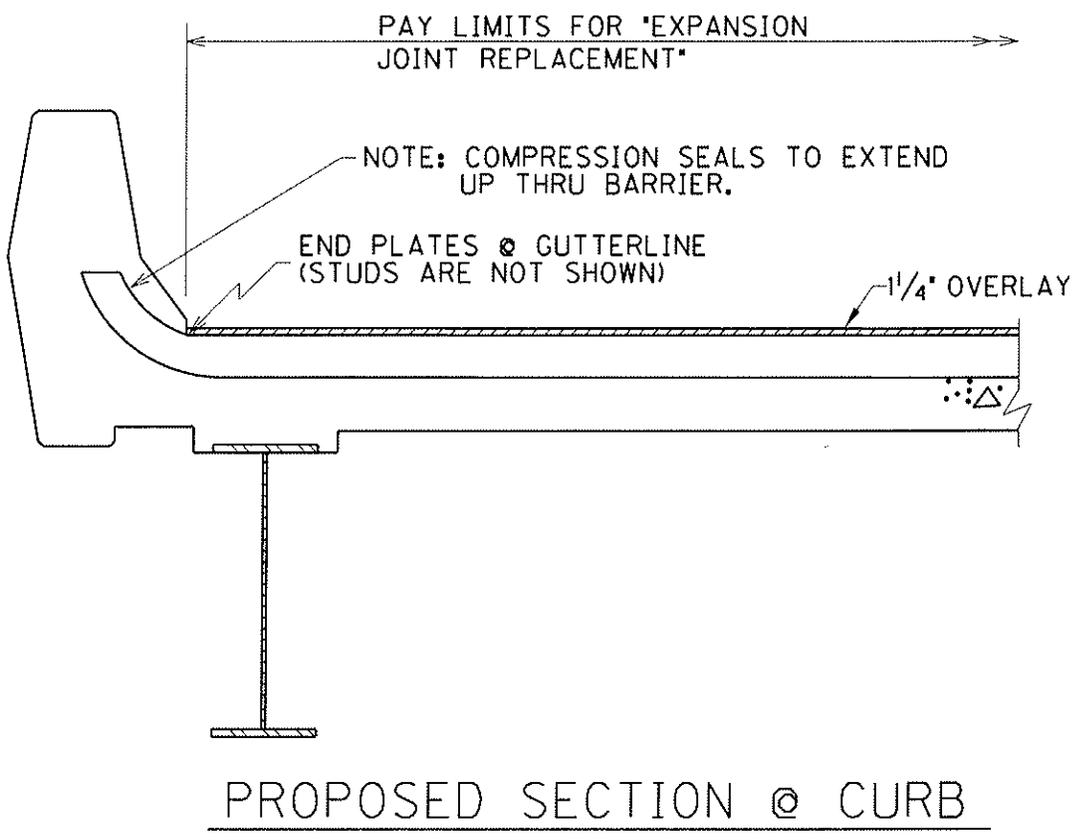
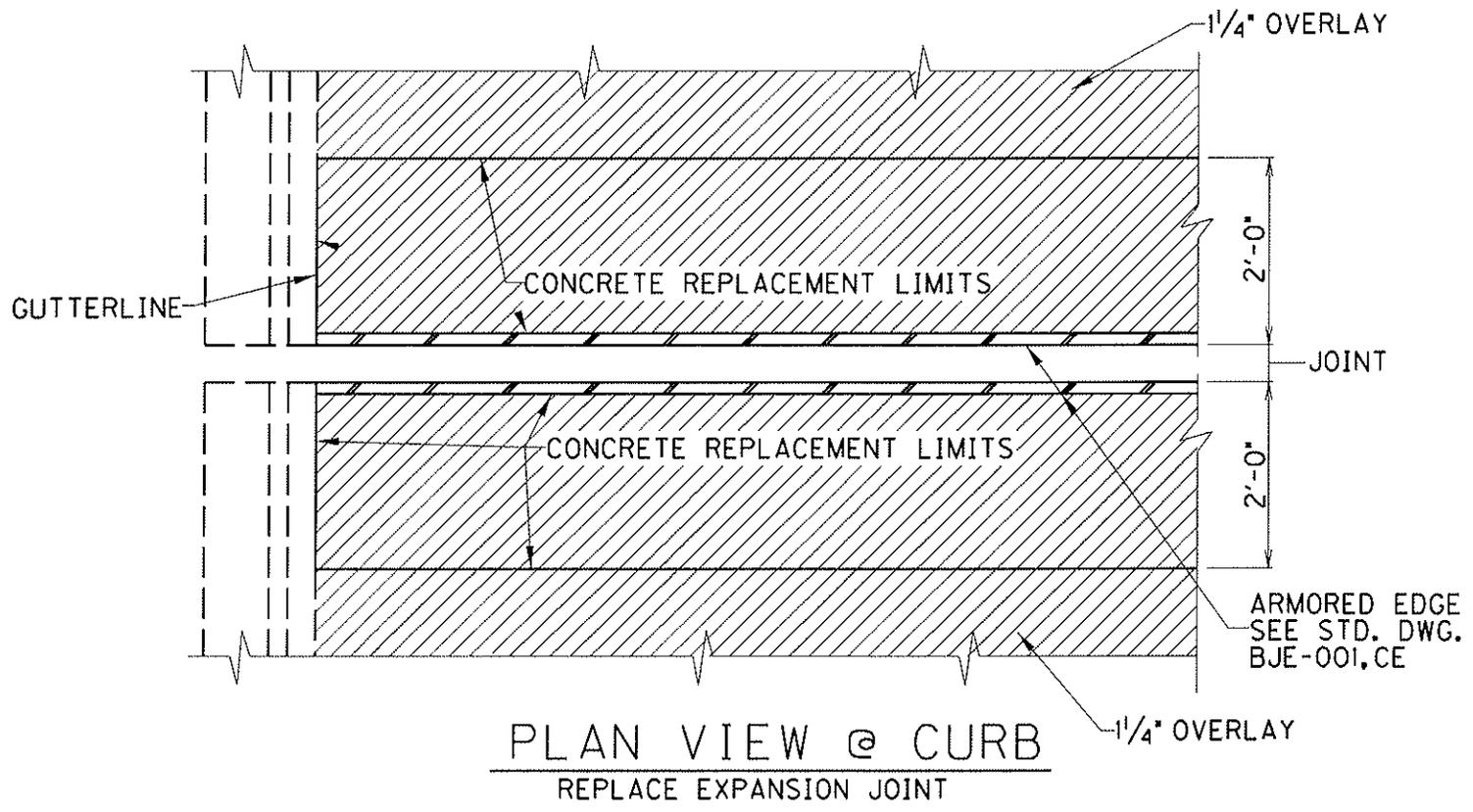


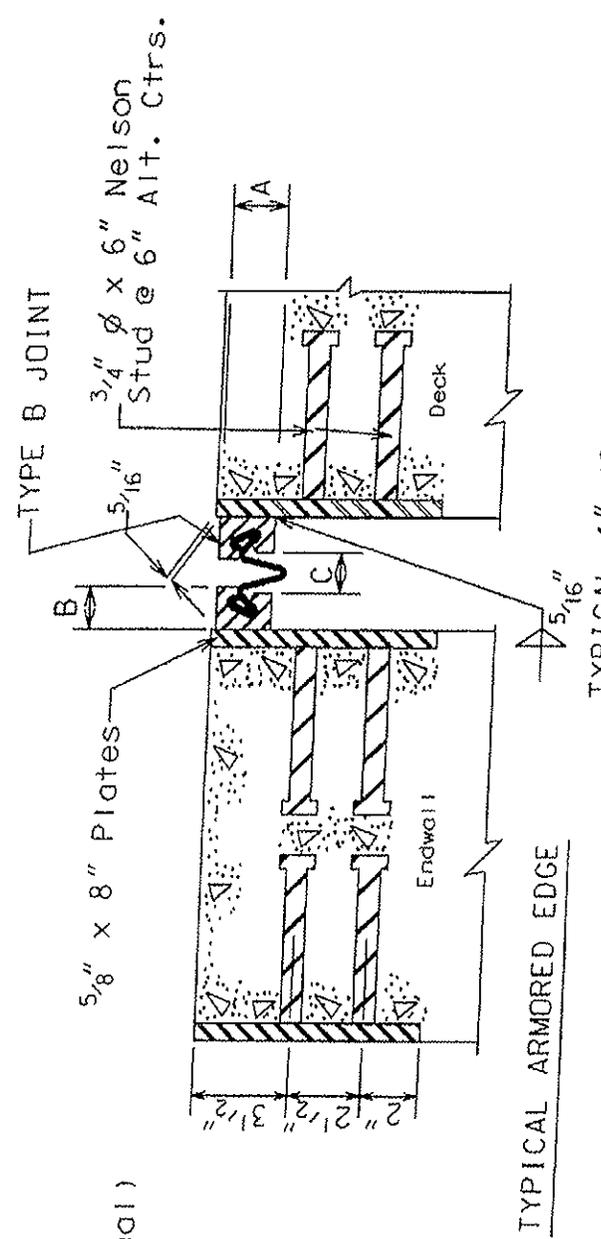
EXISTING SECTION @ PIER



PROPOSED SECTION @ PIER

REPLACE EXPANSION JOINT PIER 5 & 9 CURB SECTION





(Strip Seal)

NOTE: Joint openings shall be adjusted for each 10 above or below 60° f. Decrease or increase respectively by increment shown.

4" - Joint Opening @ 60 F.

INCREMENT FOR 10° TEMPERATURE CHANGE					
- STEEL SPAN -					
THRU 60'	61' - 100'	101' - 140'	141' - 180'	181' - 240'	241' - 320'
1/32"	1/16"	3/32"	1/8"	3/16"	1/4"
					5/16"

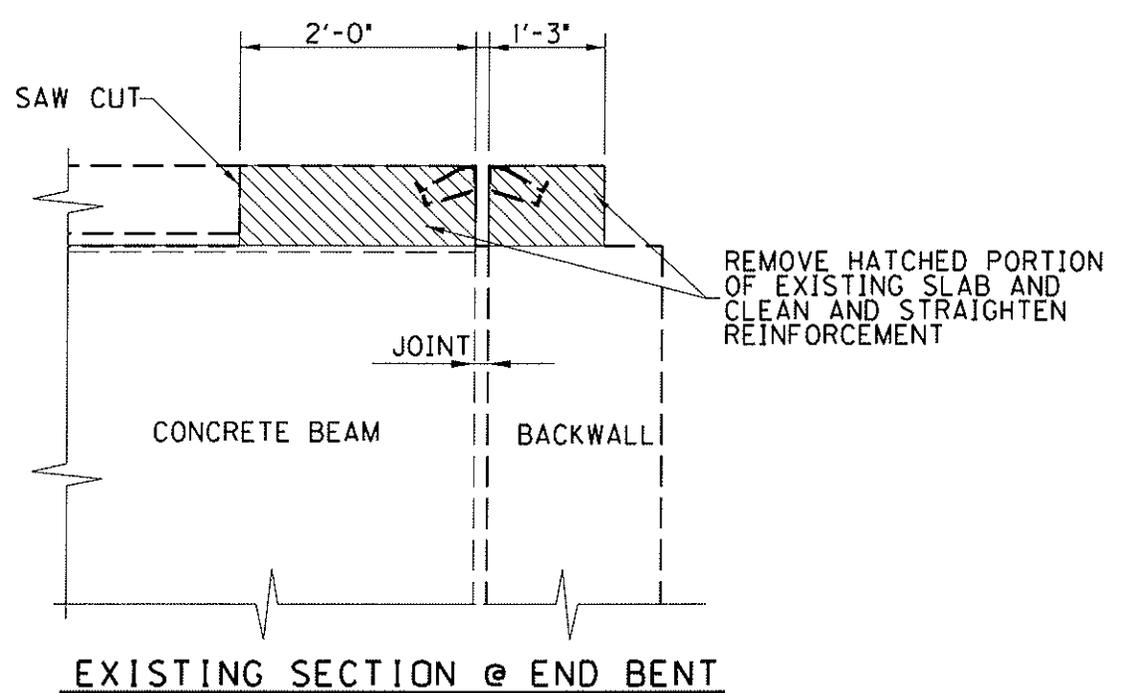
Not to Scale

ALTERNATE NEOPRENE EXPANSION DAMS - 4"					
		A	B	C	
B	WABO STRIP SEAL		2"	1 1/2"	2"
	Type A Extrusion with S-400 Seal				
B	STEEL FLEX		2"	1 1/2"	2 1/2"
	Type SSA with 400 Seal				
B	GENERAL STRIP CD		2"	1 3/8"	2 1/4"
	Profile A Steel Extrusion with Gen Strip CD Seal				
B	DNFLEX		2"	1 1/4"	2"
	Type AM2 Extrusion with 40SE0 Sai				

Not to Scale

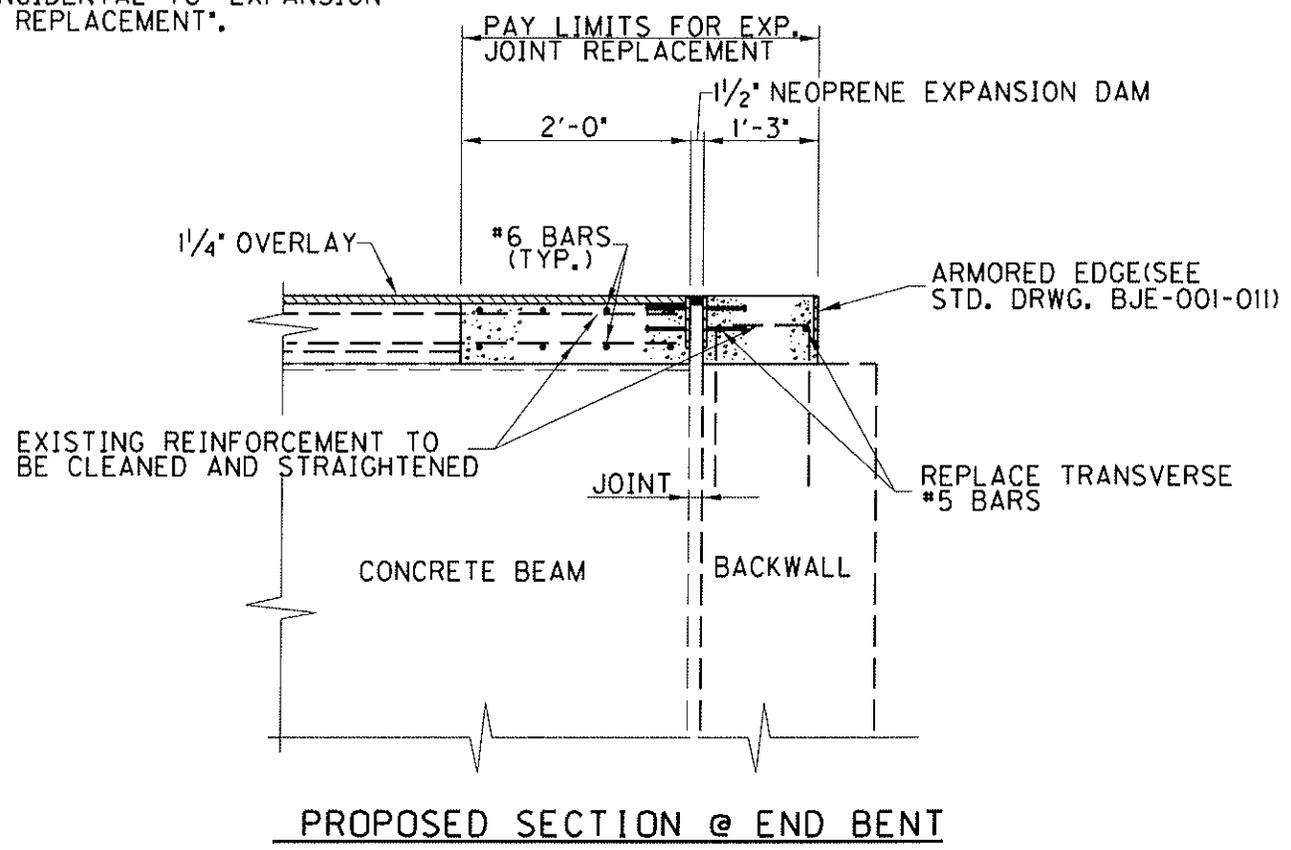
Watson Bowman Associates Inc.
D. S. Brown Co.
General Tire Co.
Structural Accessories Inc.

REPLACE JOINT @ END BENT 2

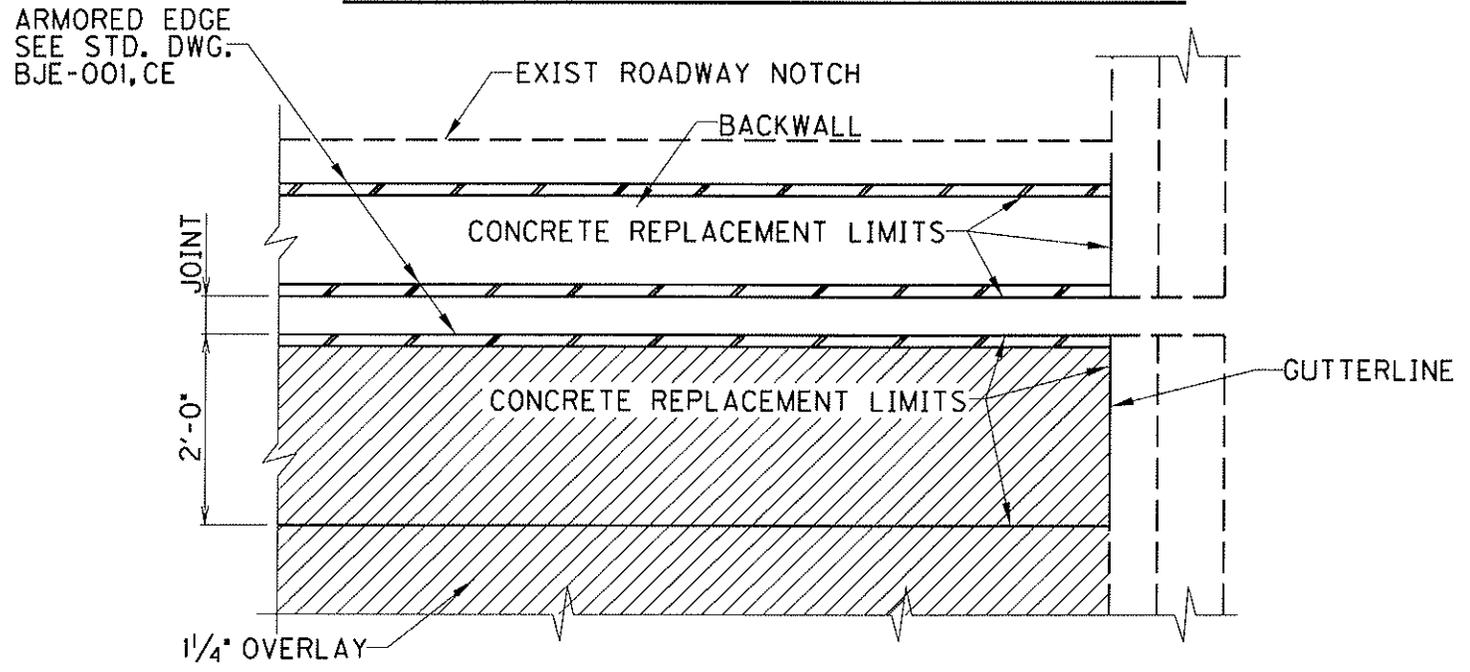


NOTE:
WHERE A NORMAL LAP CANNOT BE ATTAINED ON REBARS USE MECHANICAL SPLICES. SPLICES ARE INCIDENTAL TO "EXPANSION JOINT REPLACEMENT".

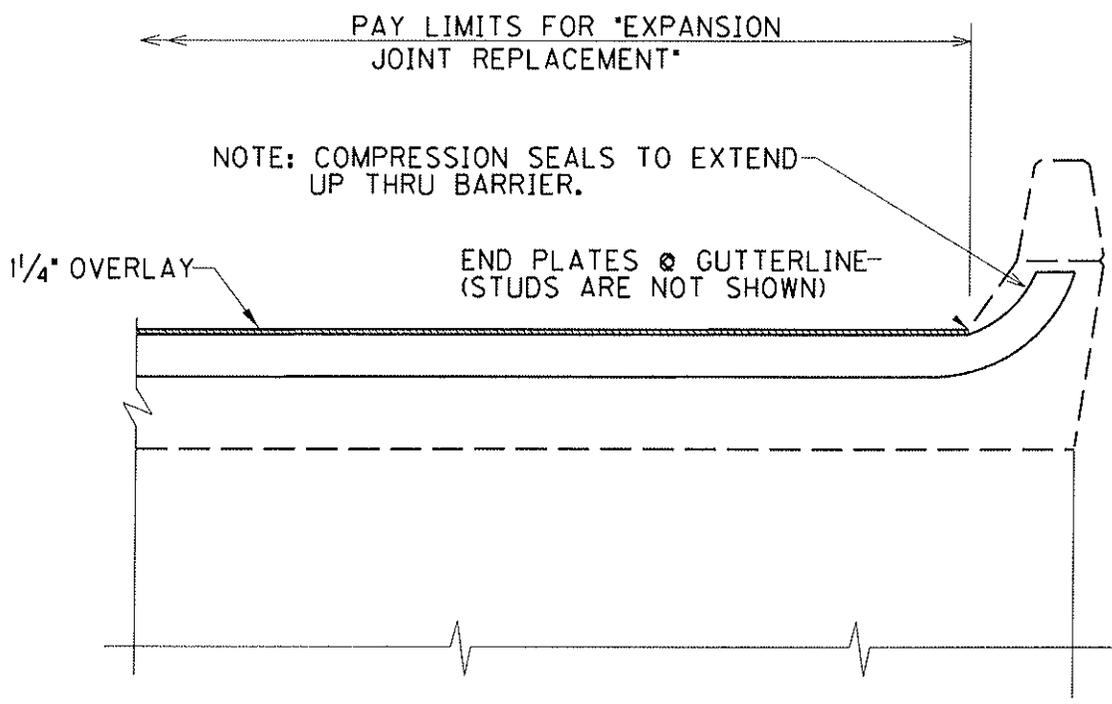
NOTE:
REMOVE 6' OF ROADWAY PAVEMENT. PLACE 1/2" PREMOLDED EXPANSION JOINT MATERIAL AGAINST ARMORED EDGE. (SEE ROADWAY PLANS)



REPLACE EXPANSION JOINT END BENT 2 CURB SECTION

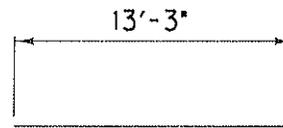
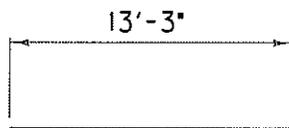


PLAN VIEW @ CURB REPLACE EXPANSION JOINT



PROPOSED SECTION @ END BENT

REINFORCEMENT



#5 STRAIGHT BAR
4 REQ'D END BENT 2

#6 STRAIGHT BAR
16 REQ'D END BENT 2

374 LBS END BENT 2

END BENT REINFORCEMENT



#6 STRAIGHT BAR
16 REQ'D PIER 5
16 REQ'D PIER 9

637 LBS. PIER 5
637 LBS. PIER 9

PIER REINFORCEMENT

300 LIN. FT. #4 BARS IN 20'-0" LENGTHS
200 LBS. END BENT 2, PIERS 5 & 9

MISCELLANEOUS REINFORCEMENT

TOTAL REINFORCEMENT 2,248 LBS.

CAMPBELL COUNTY

019B00082L
I-471 SB OVER KY 8



Approximate Location Information
Latitude: 39° 5' 57"
Longitude: 84° 29' 32"

BRIDGE #11 (019B00082L) SUMMARY OF QUANTITIES

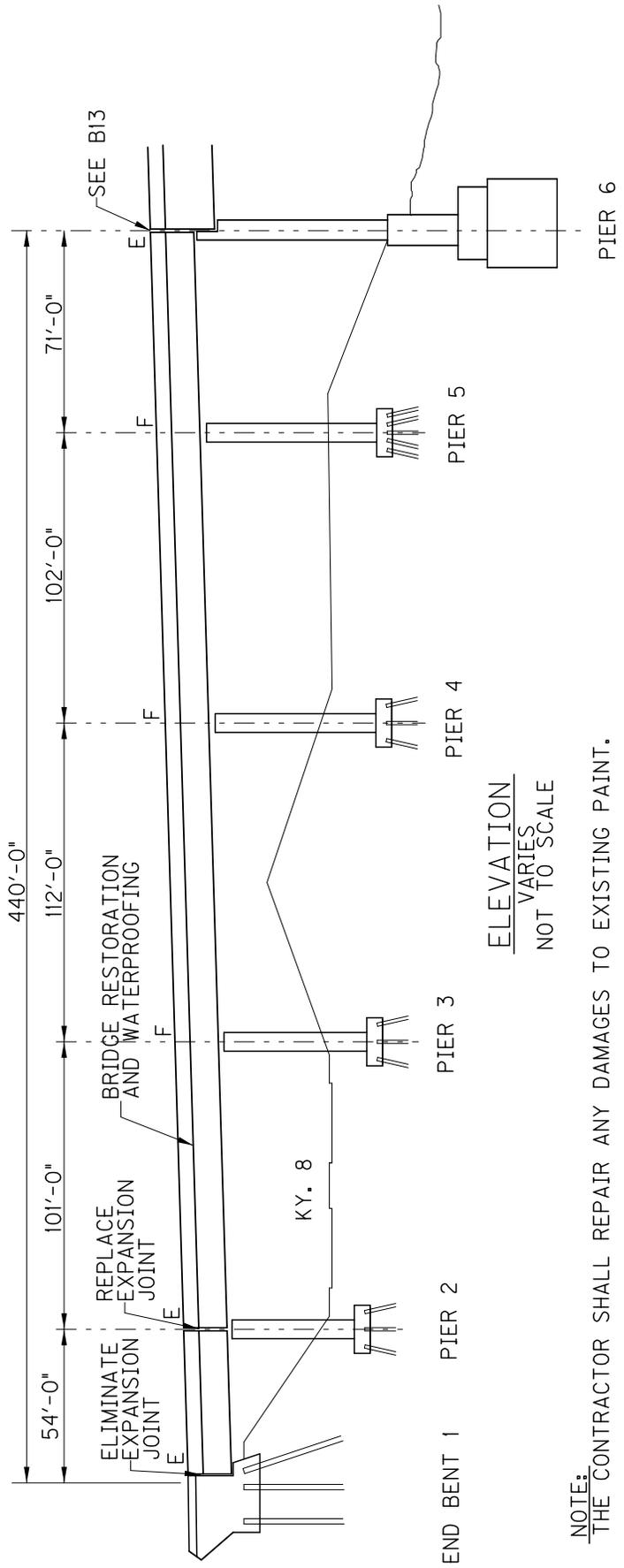
1. DISTRICT: 6
 2. COUNTY: CAMPBELL
 3. ROUTE: I-471
 4. PROJECT NO.: IMNH 4714(034)
 5. ROAD NAME: I-471
 6. DESCRIPTION: I-471 SOUTHBOUND OVER KY 8
 BRIDGE DECK RESTORATION AND WATERPROOFING, EXPANSION JOINT REPLACEMENT
 AND ELIMINATE EXPANSION JOINT
 8. LENGTH (FT.): 440 BRIDGE WIDTH (FT.): 66.3 AVG. SURFACE AREA (SQ. YD.): 3244
 SKEW (DEGREES): VARIES DECK THICKNESS (INCHES): 9.0

ESTIMATED QUANTITIES REQUIRED

ITEM CODE	DESCRIPTION	QUANTITY	UNIT
3298	EXPANSION JT REPLACEMENT 4 IN	53.0	LIN FT
3300	ELIMINATE TRANSVERSE JOINT	76.0	LIN FT
8504	EPOXY SAND SLURRY	440.0	SQ YD
8526	CONC CLASS M FULL DEPTH PATCH	18.0	CU YD
8534	CONCRETE OVERLAY-LATEX	248.0	CU YD
8549	BLAST CLEANING	3609	SQ YD
8550	HYDRODEMOLITION	3244	SQ YD
24094EC	PARTIAL DEPTH PATCHING	49.6	CU YD

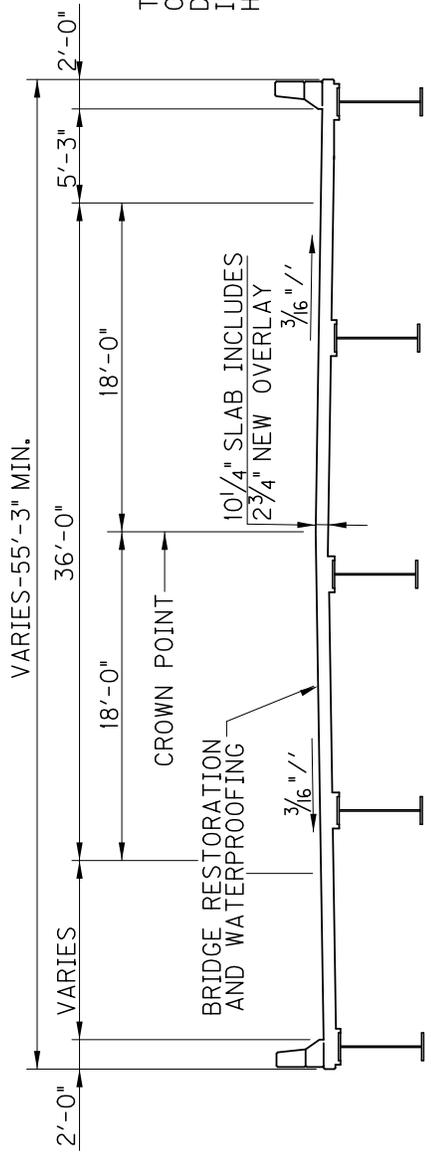
B11

I-471 SOUTHBOUND OVER KY. 8
BRIDGE MAINTENANCE NUMBER 019B00082L



ELEVATION
VARIES
NOT TO SCALE

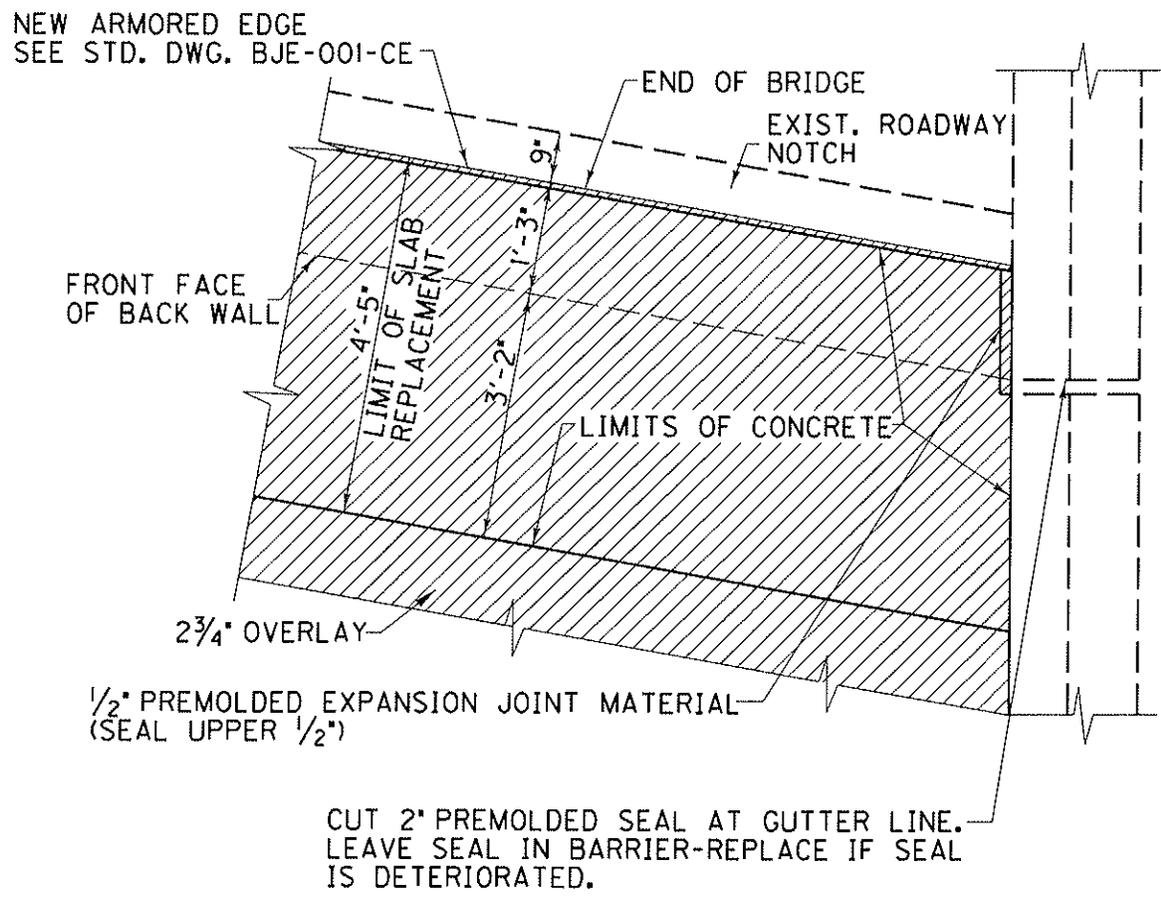
NOTE:
THE CONTRACTOR SHALL REPAIR ANY DAMAGES TO EXISTING PAINT.



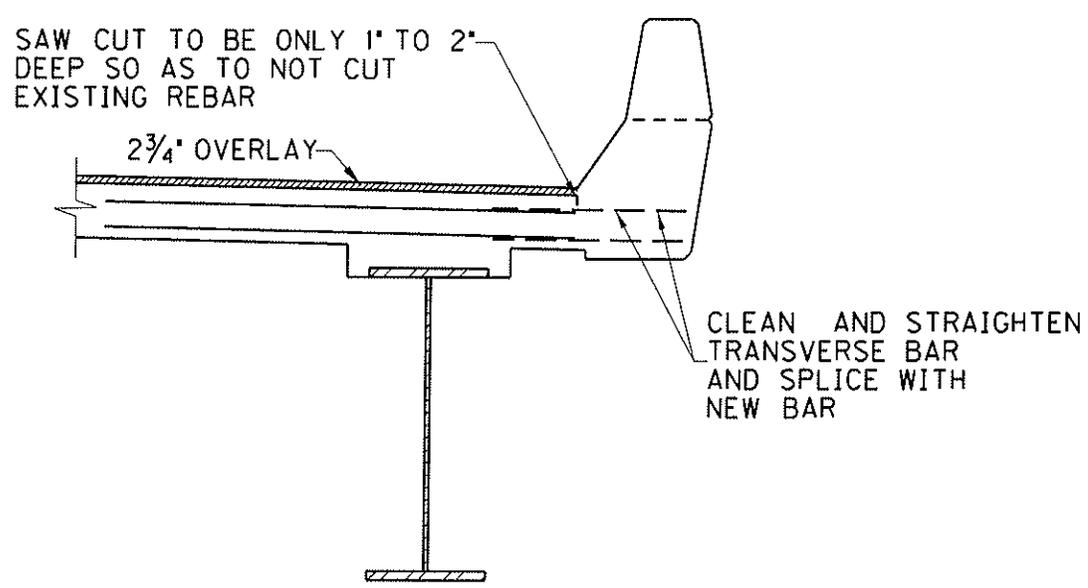
THIS DECK HAS AN EXISTING OVERLAY WITH AN AVERAGE DEPTH OF 2 1/4 INCHES WHICH IS TO BE REMOVED PER THE HYDRODEMOLITION SPECIAL NOTE.

TYPICAL SECTION

CURB SECTION @ END BENT 1

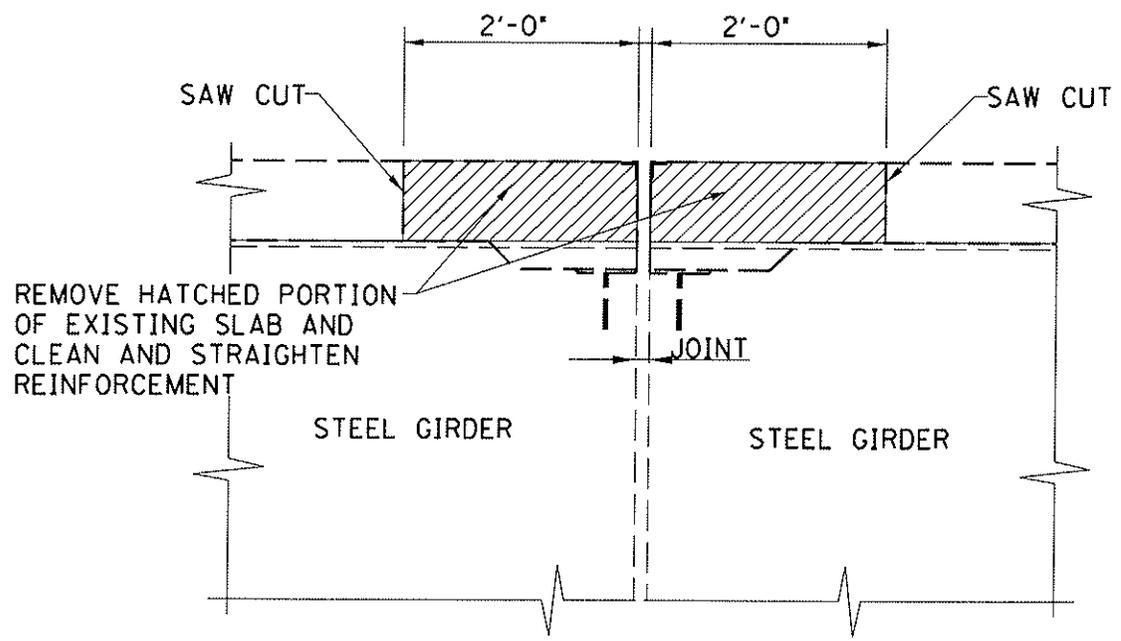


PROPOSED PLAN @ END BENT



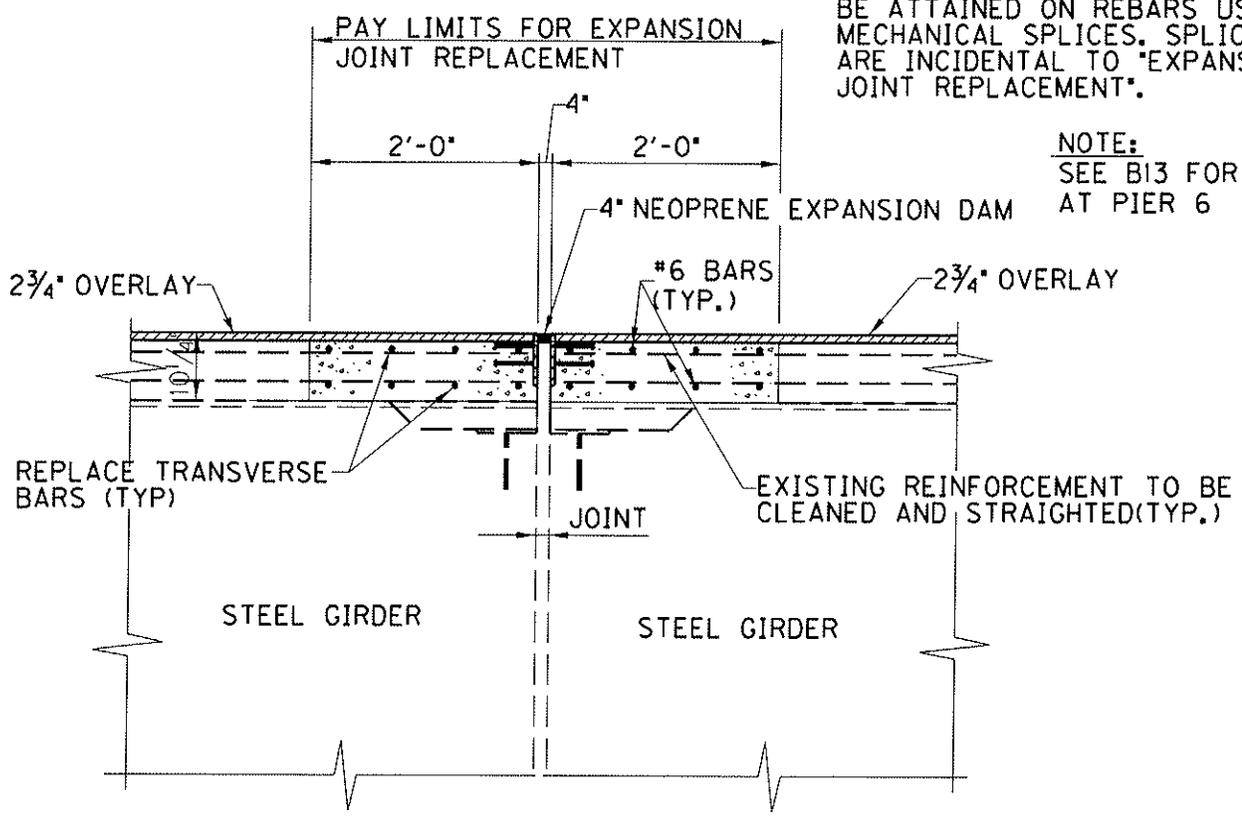
PROPOSED SECTION @ END BENT

REPLACE JOINT @ PIER 2



EXISTING SECTION

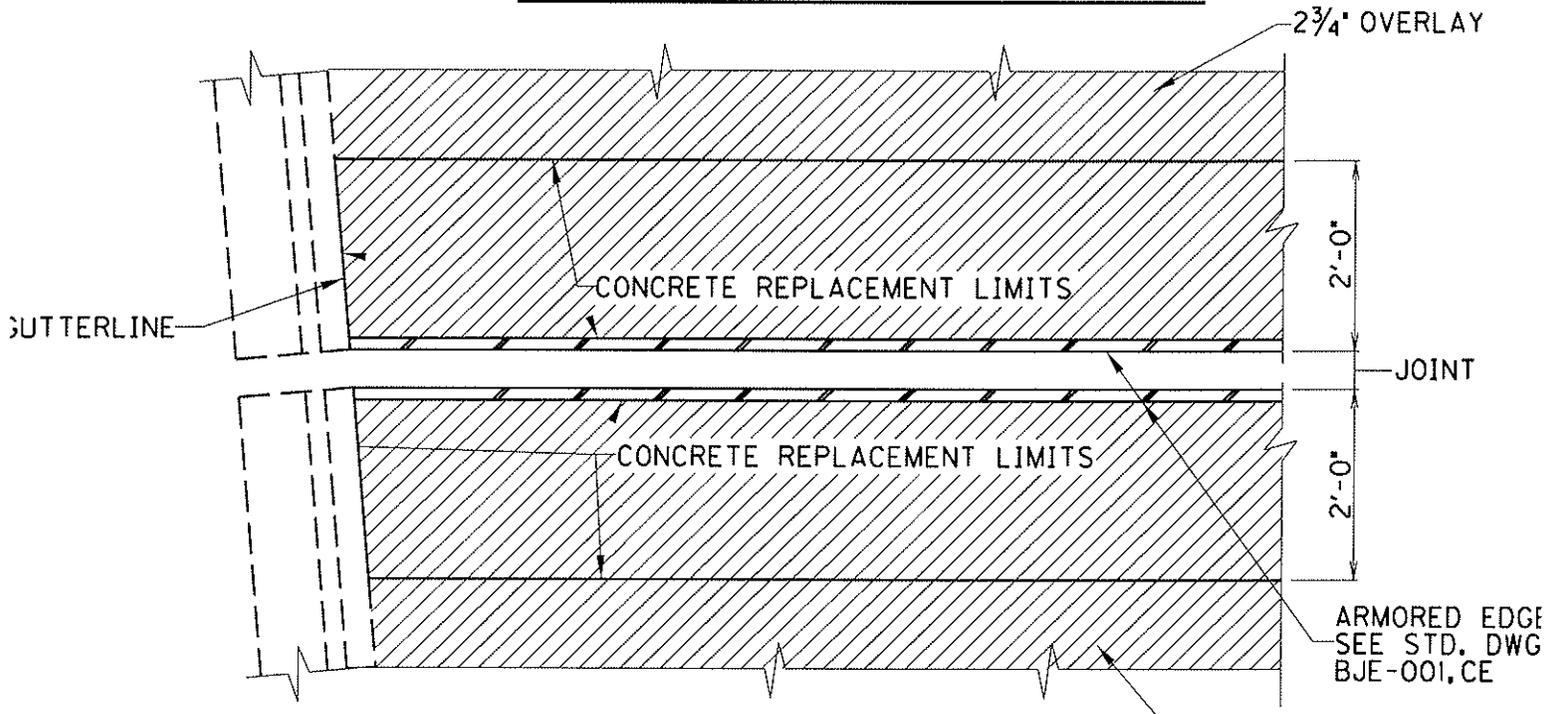
NOTE:
WHERE A NORMAL LAP CANNOT BE ATTAINED ON REBARS USE MECHANICAL SPLICES. SPLICES ARE INCIDENTAL TO "EXPANSION JOINT REPLACEMENT".



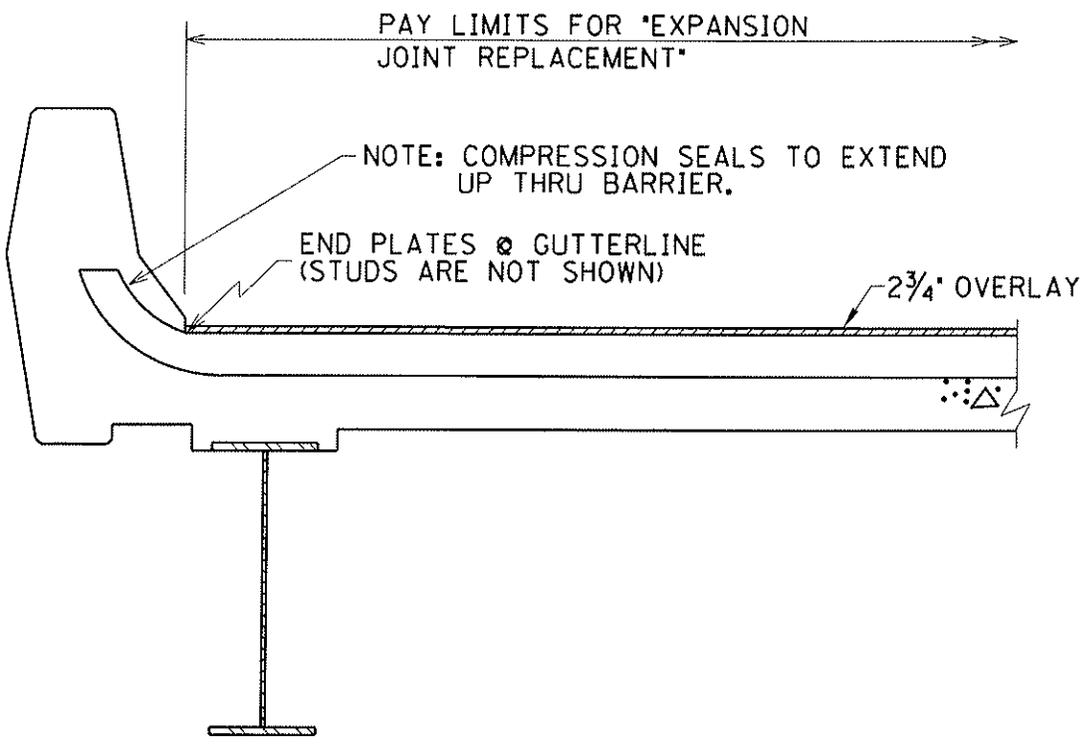
NOTE:
SEE B13 FOR JOINT AT PIER 6

PROPOSED SECTION

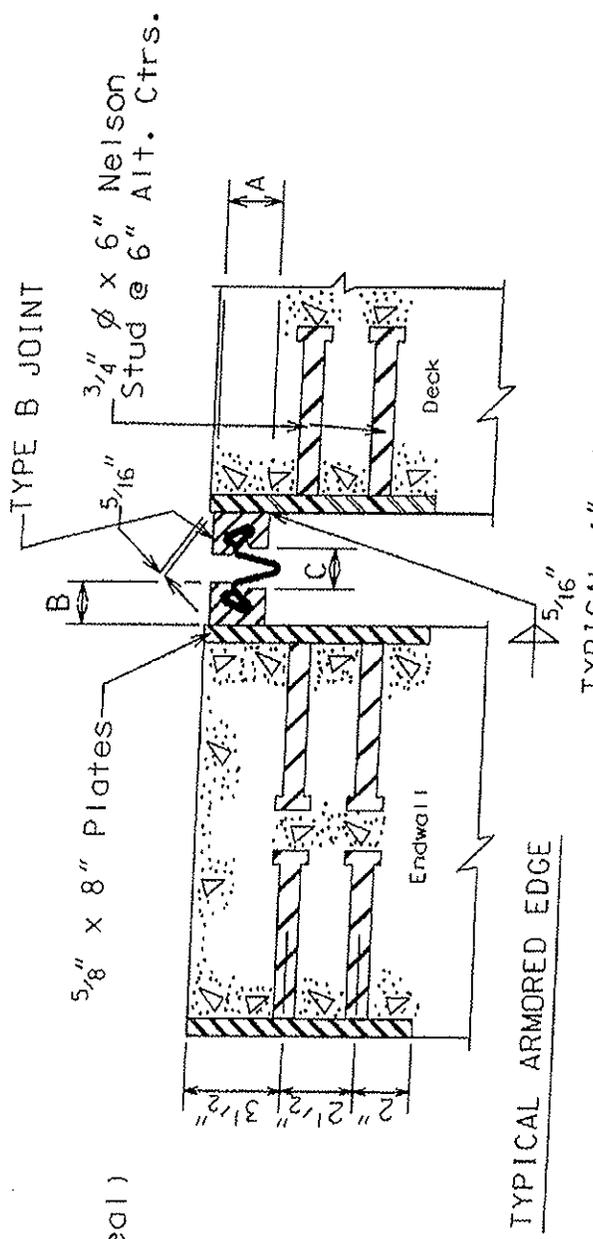
REPLACE EXPANSION JOINT PIER CURB 2 SECTION



PLAN VIEW @ CURB
REPLACE EXPANSION JOINT



PROPOSED SECTION @ CURB



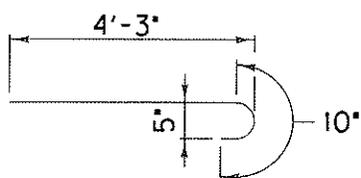
NOTE: Joint openings shall be adjusted for each 10 above or below 60° f. Decrease or increase respectively by increment shown.

ALTERNATE NEOPRENE EXPANSION DAMS - 4"

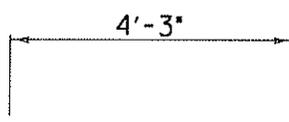
	A B C		
	A	B	C
B	WABO STRIP SEAL		
	Type A Extrusion with S-400 Seal	Watson Bowman Associates Inc.	2" 1 1/2" 2"
B	STEEL FLEX		
	Type SSA with 400 Seal	D. S. Brown Co.	2" 1 1/2" 2 1/2"
B	GENERAL STRIP CD		
	Profile A Steel Extrusion with Gen Strip CD Seal	General Tire Co.	2" 1 3/8" 2 1/4"
B	ONFLEX		
	Type AM2 Extrusion with 40SE0 Seal	Structural Accessories Inc.	2" 1 1/4" 2"

Not to Scale

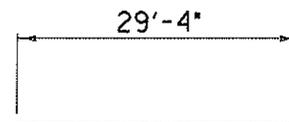
REINFORCEMENT



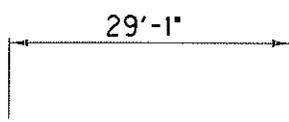
#5 BENT BAR
165 REQ'D END BENT 1



#5 STRAIGHT BAR
165 REQ'D END BENT 1



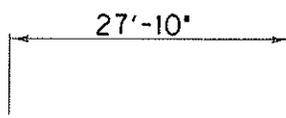
#6 STRAIGHT BAR
30 REQ'D EACH END BENT 1



#5 STRAIGHT BAR
9 REQ'D END BENT 1

3,165 LBS END BENT 1

END BENT 1 REINFORCEMENT



#6 STRAIGHT BAR
48 REQ'D PIER 2

2,007 LBS. PIER 2

PIER 2 REINFORCEMENT

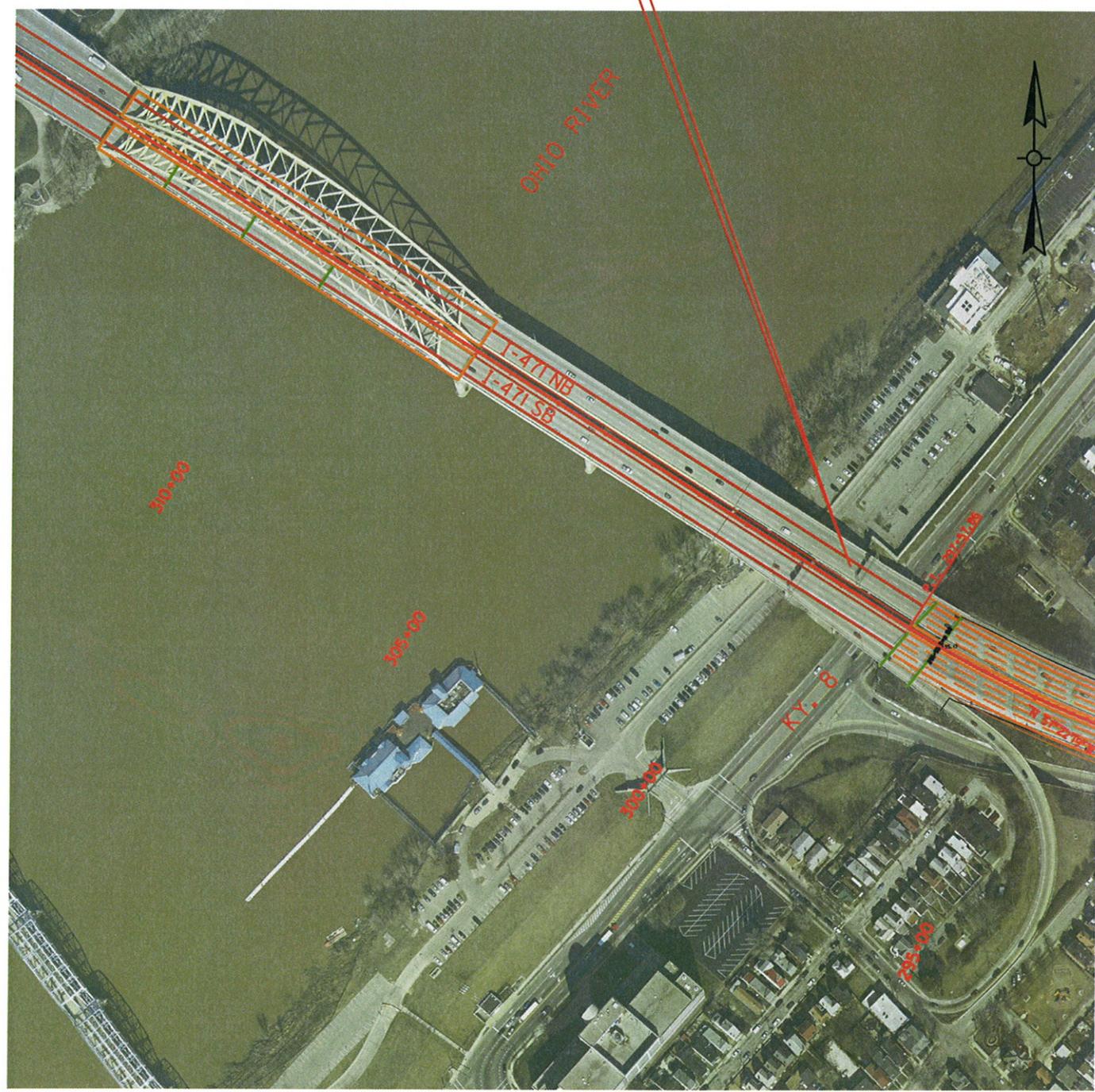
300 LIN. FT. #4 BARS IN 20'-0" LENGTHS
200 LBS. EACH END BENT 1 & PIER 2

MISCELLANEOUS REINFORCEMENT

TOTAL REINFORCEMENT 5,572 LBS.

CAMPBELL COUNTY

019B00082R
I-471 NB OVER KY 8



Approximate Location Information
Latitude: 39° 5' 57"
Longitude: 84° 29' 31"

BRIDGE #12 (019B00082R) SUMMARY OF QUANTITIES

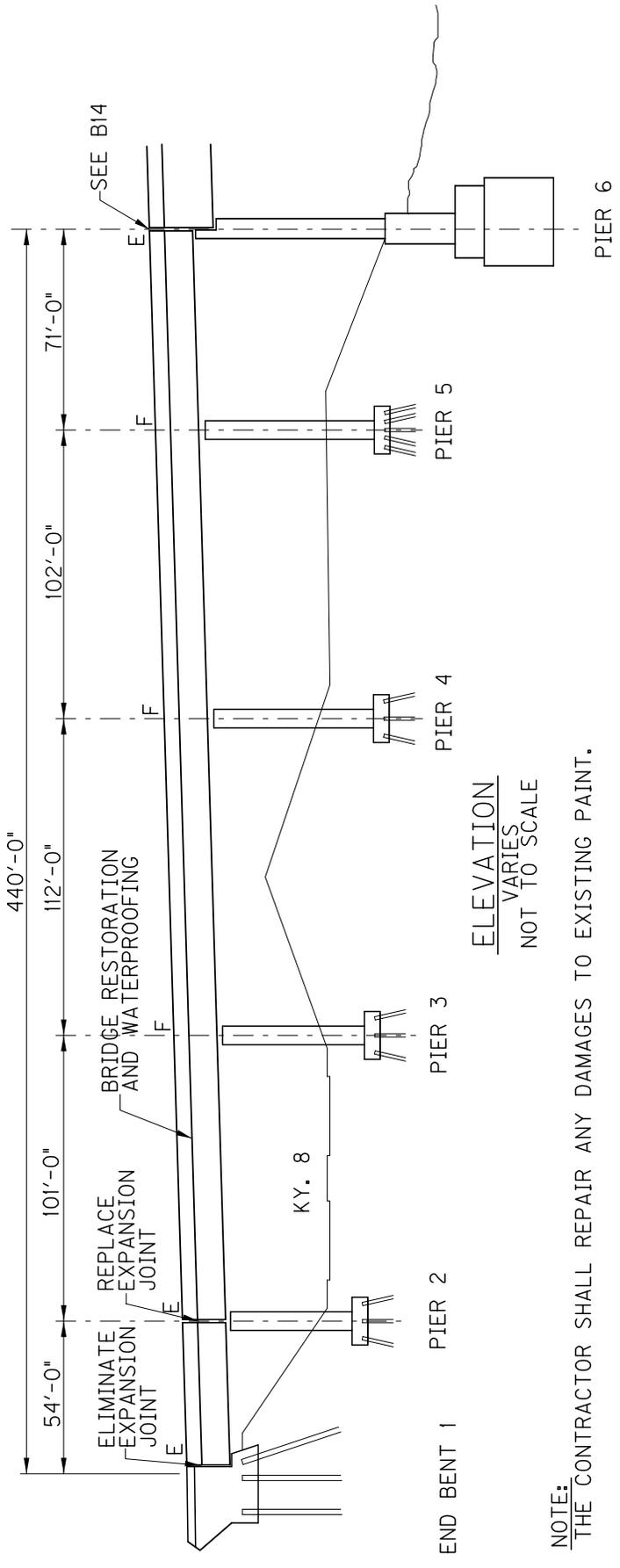
1. DISTRICT: 6
2. COUNTY: CAMPBELL
3. ROUTE: I-471
4. PROJECT NO.: IMNH 4714(034)
5. ROAD NAME: I-471
6. DESCRIPTION: I-471 NORTHBOUND OVER KY 8
BRIDGE DECK RESTORATION AND WATERPROOFING, EXPANSION JOINT REPLACEMENT
AND ELIMINATE EXPANSION JOINT
8. LENGTH (FT.): 440 BRIDGE WIDTH (FT.): 53.3 AVG. SURFACE AREA (SQ. YD.): 2607
SKEW (DEGREES): VARIES DECK THICKNESS (INCHES): 9.0

ESTIMATED QUANTITIES REQUIRED

ITEM CODE	DESCRIPTION	QUANTITY	UNIT
3298	EXPANSION JT REPLACEMENT 4 IN	56.0	LIN FT
3300	ELIMINATE TRANSVERSE JOINT	55.0	LIN FT
8504	EPOXY SAND SLURRY	440.0	SQ YD
8526	CONC CLASS M FULL DEPTH PATCH	14.0	CU YD
8534	CONCRETE OVERLAY-LATEX	199.0	CU YD
8549	BLAST CLEANING	2972	SQ YD
8550	HYDRODEMOLITION	2607	SQ YD
24094EC	PARTIAL DEPTH PATCHING	39.8	CU YD

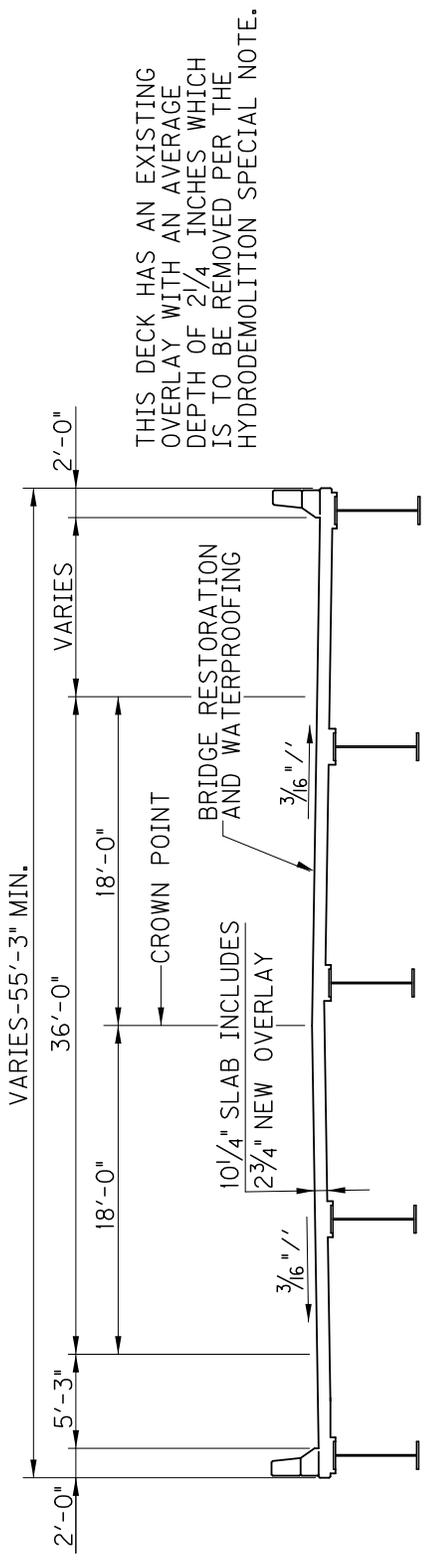
B12

I-471 NORTHBOUND OVER KY. 8
BRIDGE MAINTENANCE NUMBER 019B00082R



ELEVATION
VARIES
NOT TO SCALE

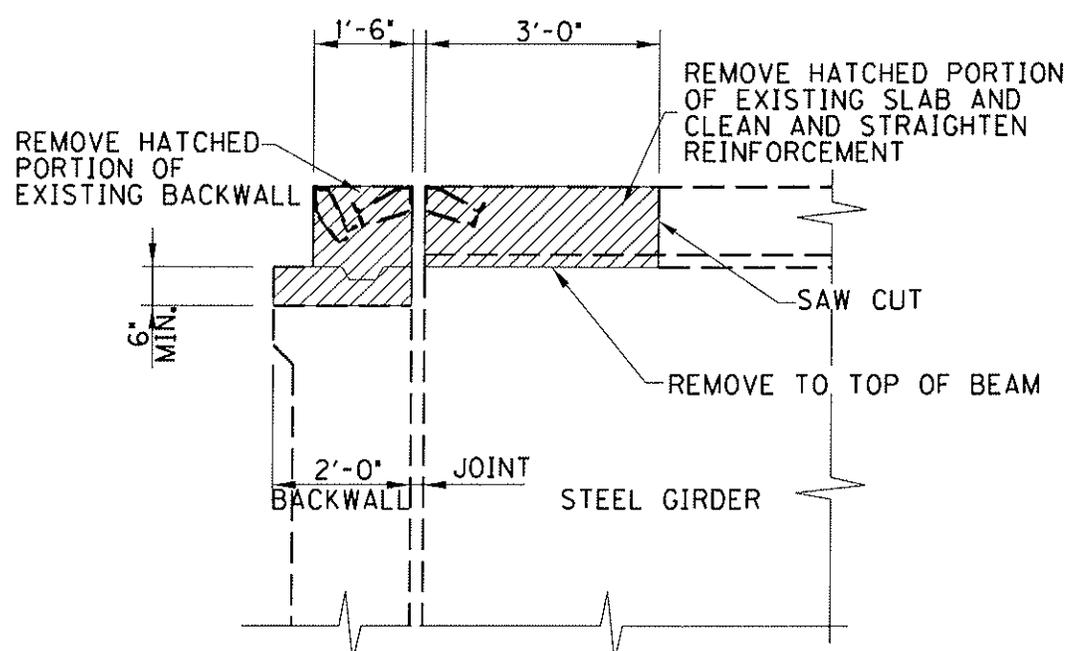
NOTE:
THE CONTRACTOR SHALL REPAIR ANY DAMAGES TO EXISTING PAINT.



THIS DECK HAS AN EXISTING OVERLAY WITH AN AVERAGE DEPTH OF 2 1/4 INCHES WHICH IS TO BE REMOVED PER THE HYDRODEMOLITION SPECIAL NOTE.

TYPICAL SECTION

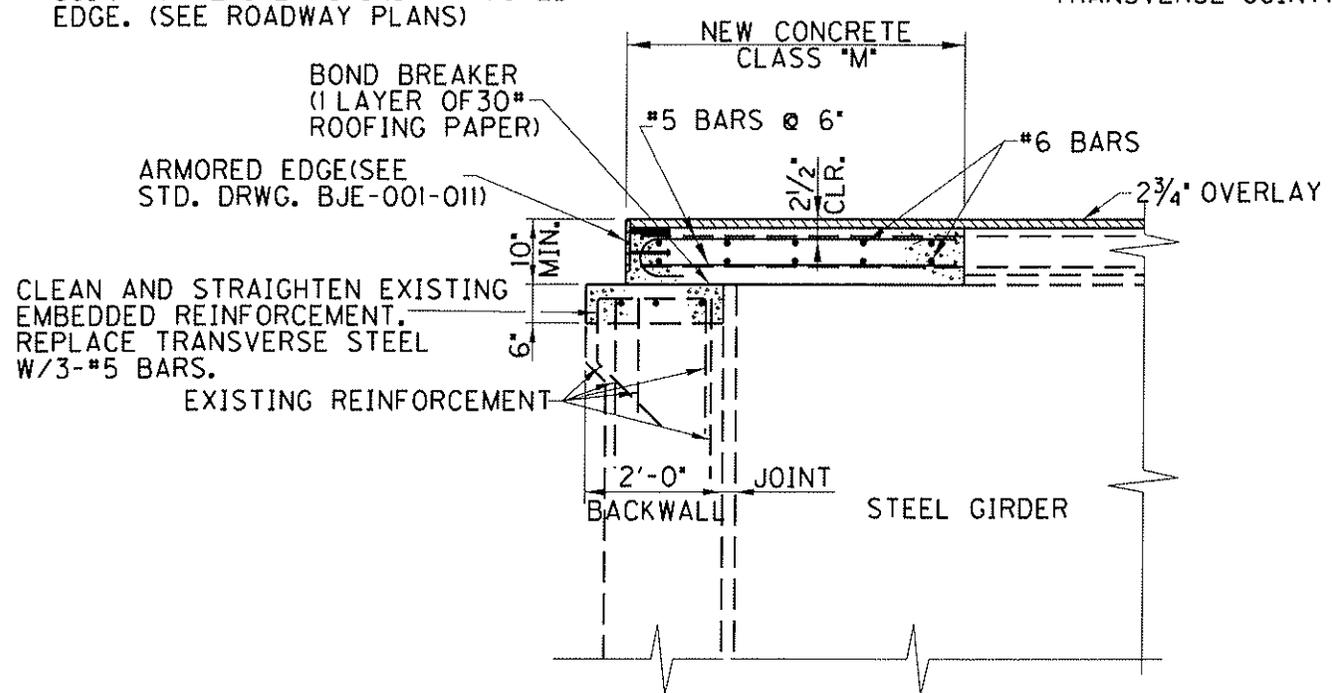
ELIMINATE JOINT @ END BENT 1



EXISTING SECTION @ END BENT

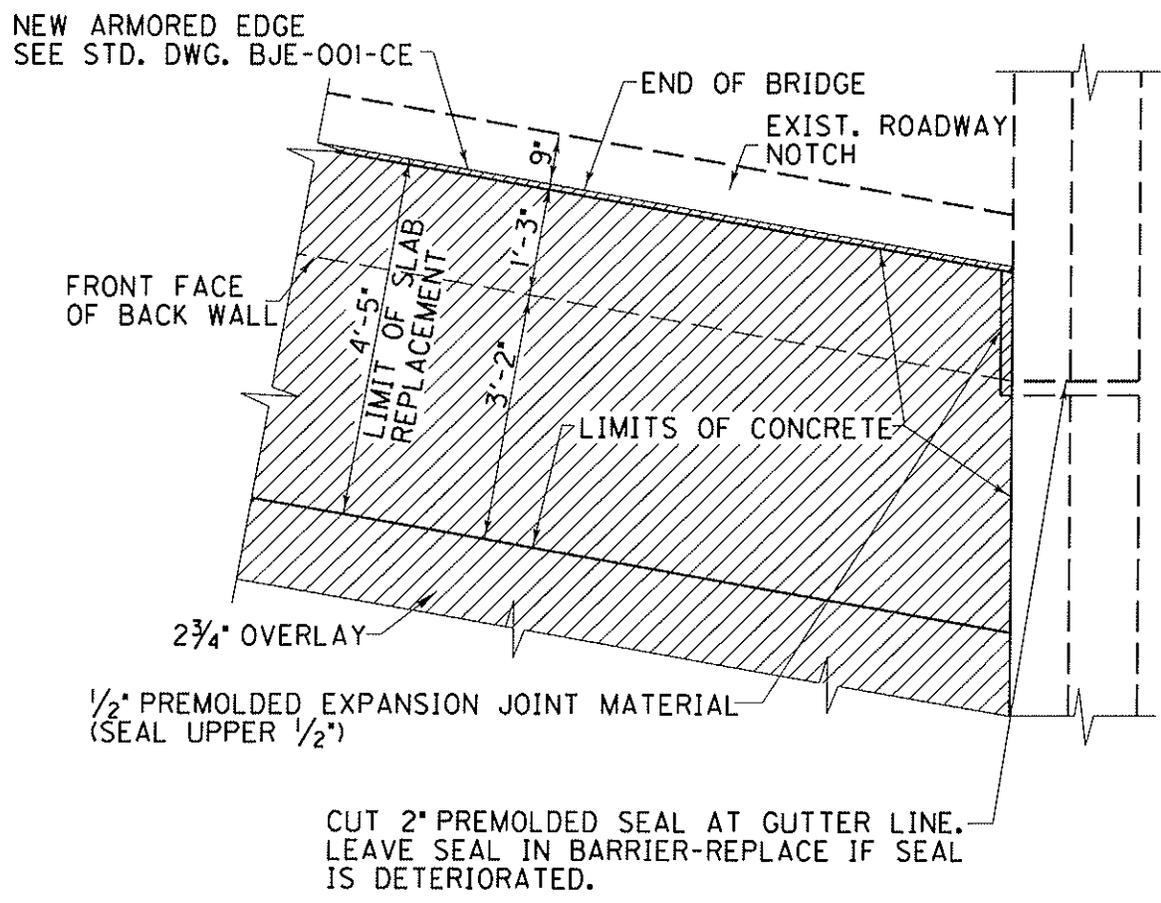
NOTE:
REMOVE 6' OF ROADWAY PAVEMENT, PLACE 1/2" PREMOLDED EXPANSION JOINT MATERIAL AGAINST ARMORED EDGE. (SEE ROADWAY PLANS)

NOTE:
WHERE A NORMAL LAP CANNOT BE ATTAINED ON REBARS USE MECHANICAL SPLICES. SPLICES ARE INCIDENTAL TO "ELIMINATE TRANSVERSE JOINT(METHOD 1)".

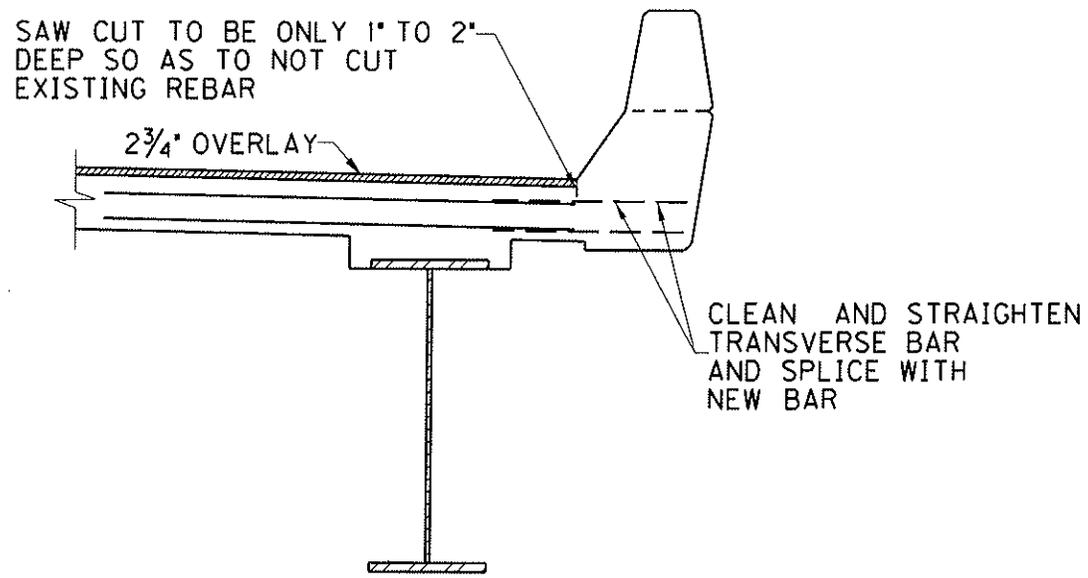


PROPOSED SECTION @ END BENT

CURB SECTION @ END BENT 1

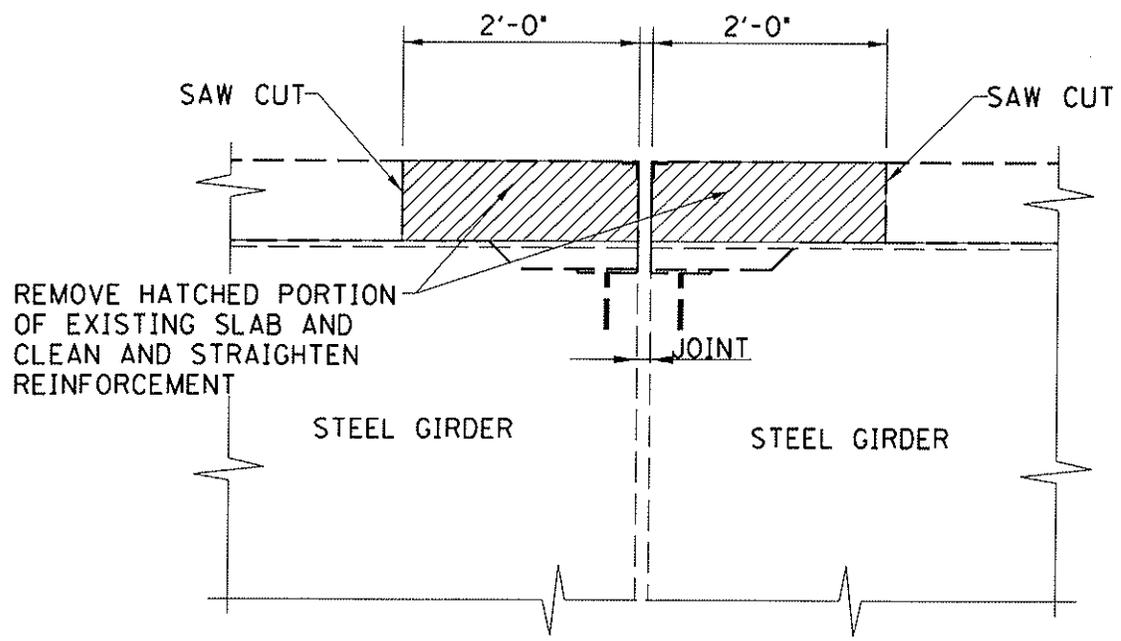


PROPOSED PLAN @ END BENT

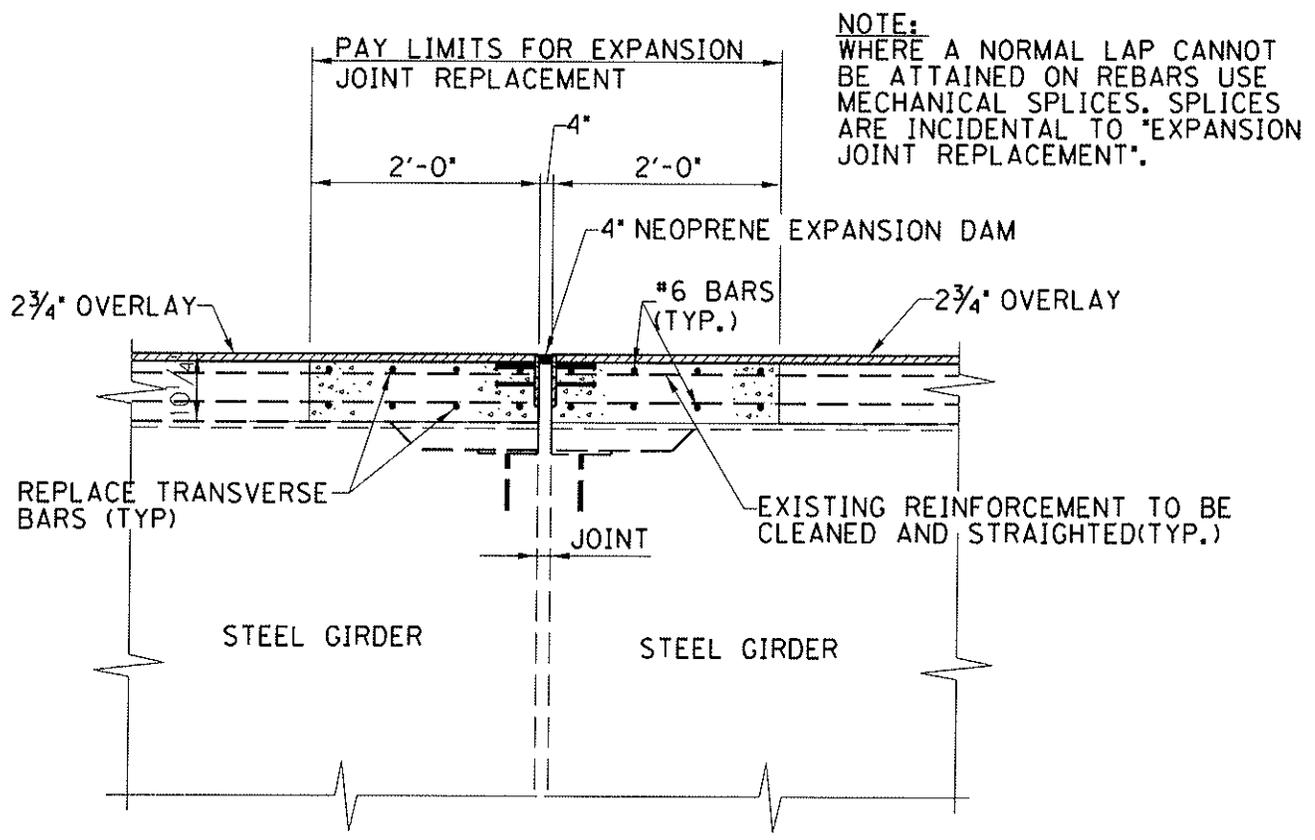


PROPOSED SECTION @ END BENT

REPLACE JOINT @ PIER 2



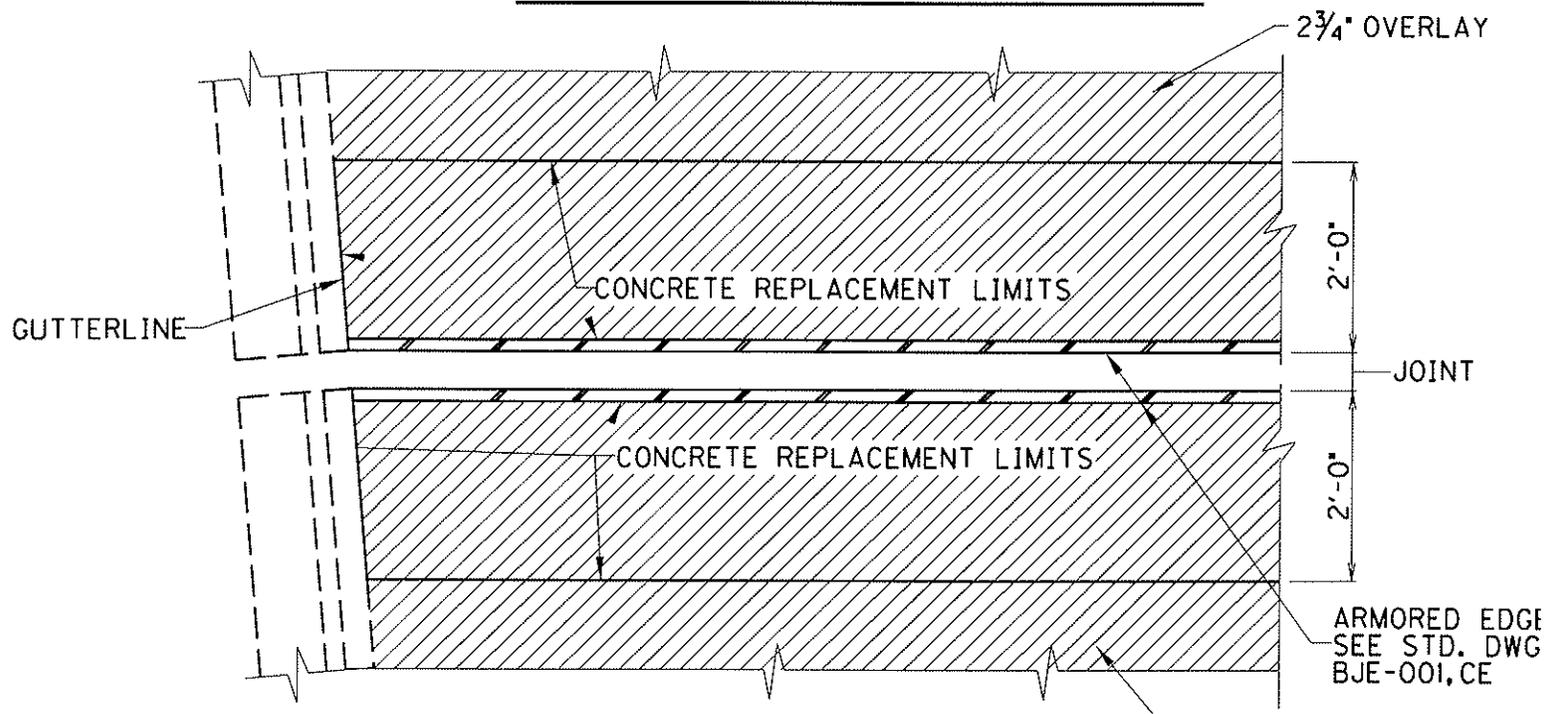
EXISTING SECTION



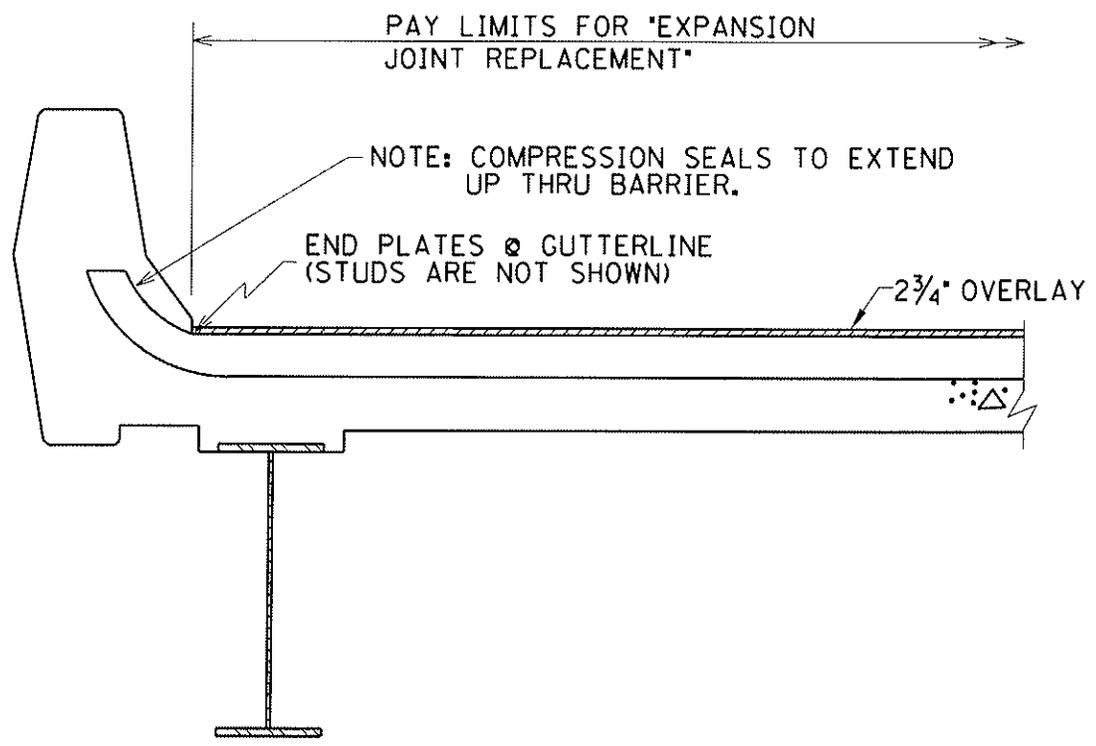
NOTE:
WHERE A NORMAL LAP CANNOT BE ATTAINED ON REBARS USE MECHANICAL SPLICES. SPLICES ARE INCIDENTAL TO "EXPANSION JOINT REPLACEMENT".

PROPOSED SECTION

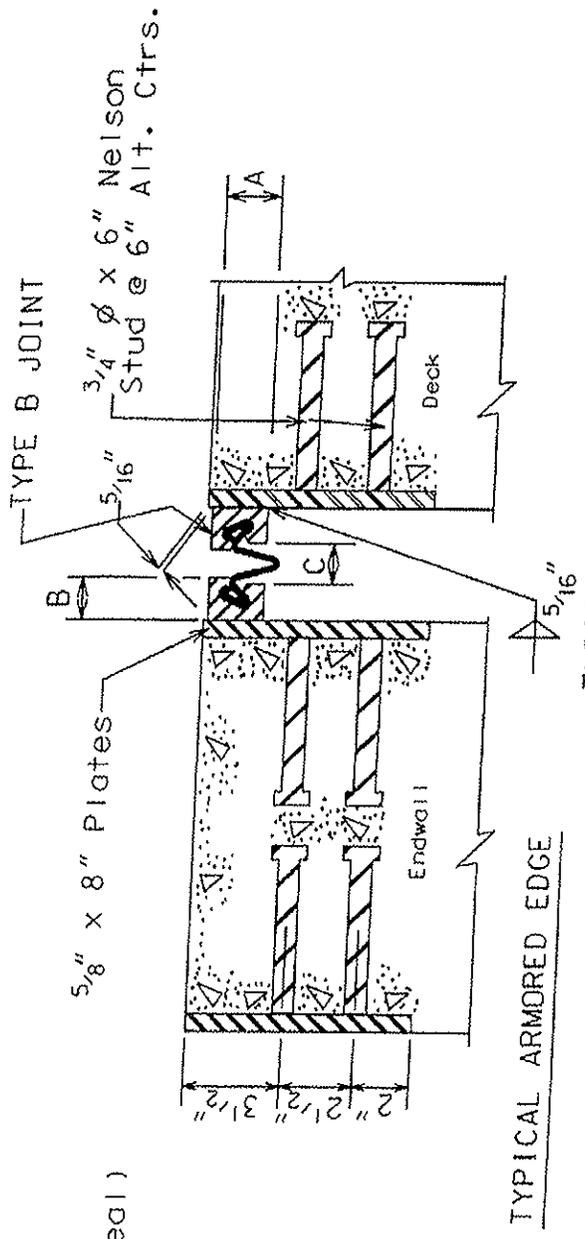
REPLACE EXPANSION JOINT PIER CURB 2 SECTION



PLAN VIEW @ CURB
REPLACE EXPANSION JOINT



PROPOSED SECTION @ CURB



(Strip Seal)

NOTE: Joint openings shall be adjusted for each 10 above or below 60° f. Decrease or increase respectively by increment shown.

INCREMENT FOR 10° TEMPERATURE CHANGE

- STEEL SPAN -

THRU 60'	61' - 100'	101' - 140'	141' - 180'	181' - 240'	241' - 320'	321' - 365'
1/32"	1/16"	3/32"	1/8"	3/16"	1/4"	5/16"

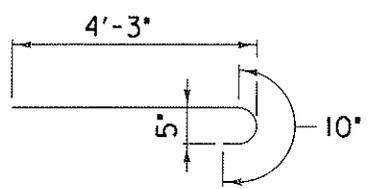
Not to Scale

ALTERNATE NEOPRENE EXPANSION DAMS - 4"

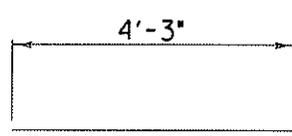
	A			B			C		
B	WABO STRIP SEAL								
	Type A Extrusion with S-400 Seal						2"	1 1/2"	2"
B	STEEL FLEX								
	Type SSA with 400 Seal						2"	1 1/2"	2 1/2"
B	GENERAL STRIP CD								
	Profile A Steel Extrusion with Gen Strip CD Seal						2"	1 3/8"	2 1/4"
B	DNFLEX								
	Type AM2 Extrusion with 40SE0 Sai						2"	1 1/4"	2"

Not to Scale

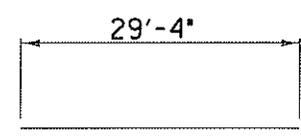
REINFORCEMENT



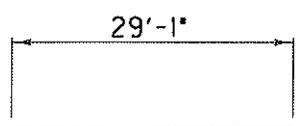
#5 BENT BAR
112 REQ'D END BENT 1



#5 STRAIGHT BAR
112 REQ'D END BENT 1



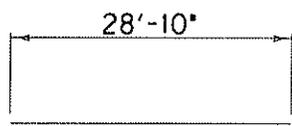
#6 STRAIGHT BAR
20 REQ'D EACH END BENT 1



#5 STRAIGHT BAR
6 REQ'D END BENT 1

2,129 LBS END BENT 1

END BENT 1 REINFORCEMENT



#6 STRAIGHT BAR
32 REQ'D PIER 2

1386 LBS. PIER 2

PIER 2 REINFORCEMENT

300 LIN. FT. #4 BARS IN 20'-0" LENGTHS
200 LBS. EACH END BENT 1 & PIER 2

MISCELLANEOUS REINFORCEMENT

TOTAL REINFORCEMENT 3,915 LBS.

CAMPBELL COUNTY

019B00039L
I-471 SB OVER
OHIO RIVER



Approximate Location Information
Latitude: 39° 6' 1"
Longitude: 84° 29' 39"

BRIDGE #13 (019B00039L) SUMMARY OF QUANTITIES

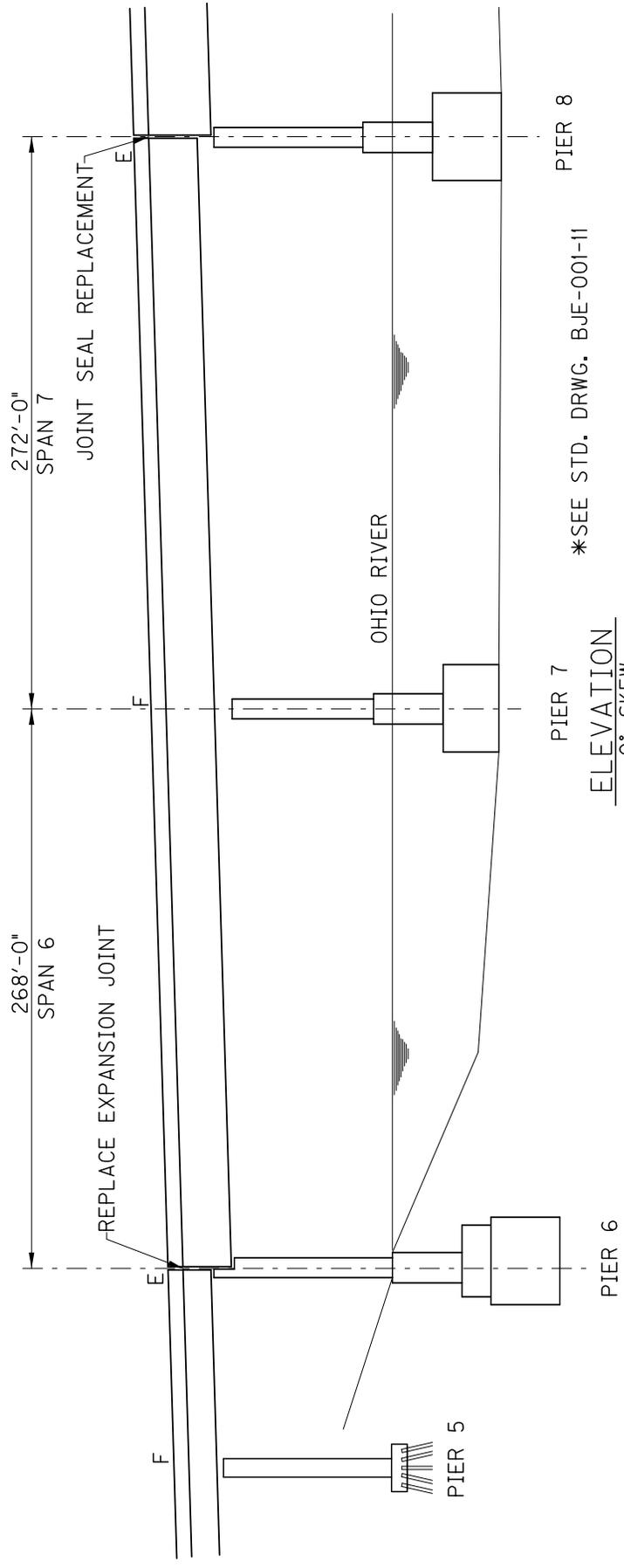
1. DISTRICT: 6
 2. COUNTY: CAMPBELL
 3. ROUTE: I-471
 4. PROJECT NO.: IMNH 4714(034)
 5. ROAD NAME: I-471
 6. DESCRIPTION: I-471 SOUTHBOUND OVER OHIO RIVER
 BRIDGE DECK RESTORATION AND WATERPROOFING, REPLACE EXPANSION JOINTS
 AND JOINT SEAL REPLACEMENT
 8. LENGTH (FT.): 1300.0 BRIDGE WIDTH (FT.): 51.25 SURFACE AREA (SQ. YD.): 7403
 SKEW (DEGREES): 0 DECK THICKNESS (INCHES): 9

ESTIMATED QUANTITIES REQUIRED

ITEM CODE	DESCRIPTION	QUANTITY
3294	EXPANSION JT REPLACEMENT 1 1/2 IN	204.0
8504	EPOXY SAND SLURRY	1300.0
8526	CONC CLASS M FULL DEPTH PATCH	41.0
8534	CONCRETE OVERLAY-LATEX	411.0
8549	BLAST CLEANING	8483
8550	HYDRODEMOLITION	7403
23386EC	JOINT SEAL REPLACEMENT	51.0
23622EC	CLEAN DEBRIS FROM LOWER CHORD	1
24094EC	PARTIAL DEPTH PATCHING	82.0
24456EC	EXPANSION JT REPLACEMENT 5 1/2 IN	51.0

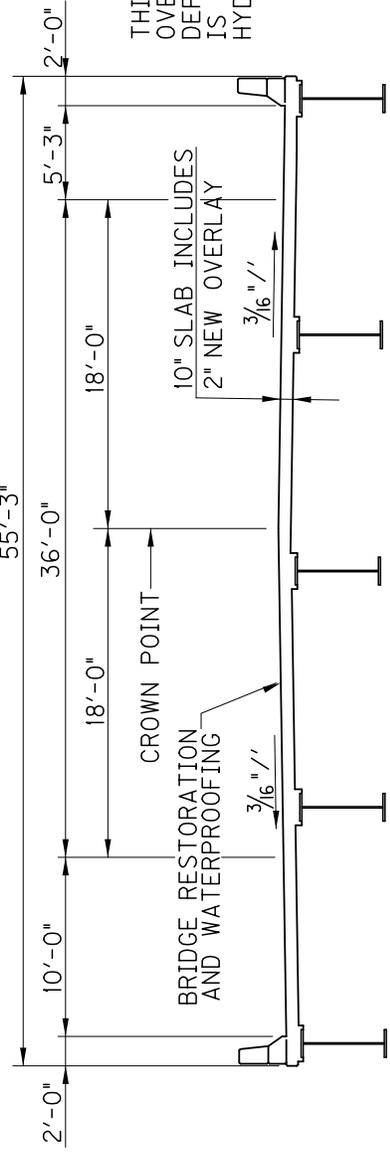
I-471 SOUTHBOUND OVER OHIO RIVER
BRIDGE MAINTENANCE NUMBER 019B00039L

B13



ELEVATION
0° SKEW
NOT TO SCALE

NOTE:
THE CONTRACTOR SHALL REPAIR ANY DAMAGES TO EXISTING PAINT.

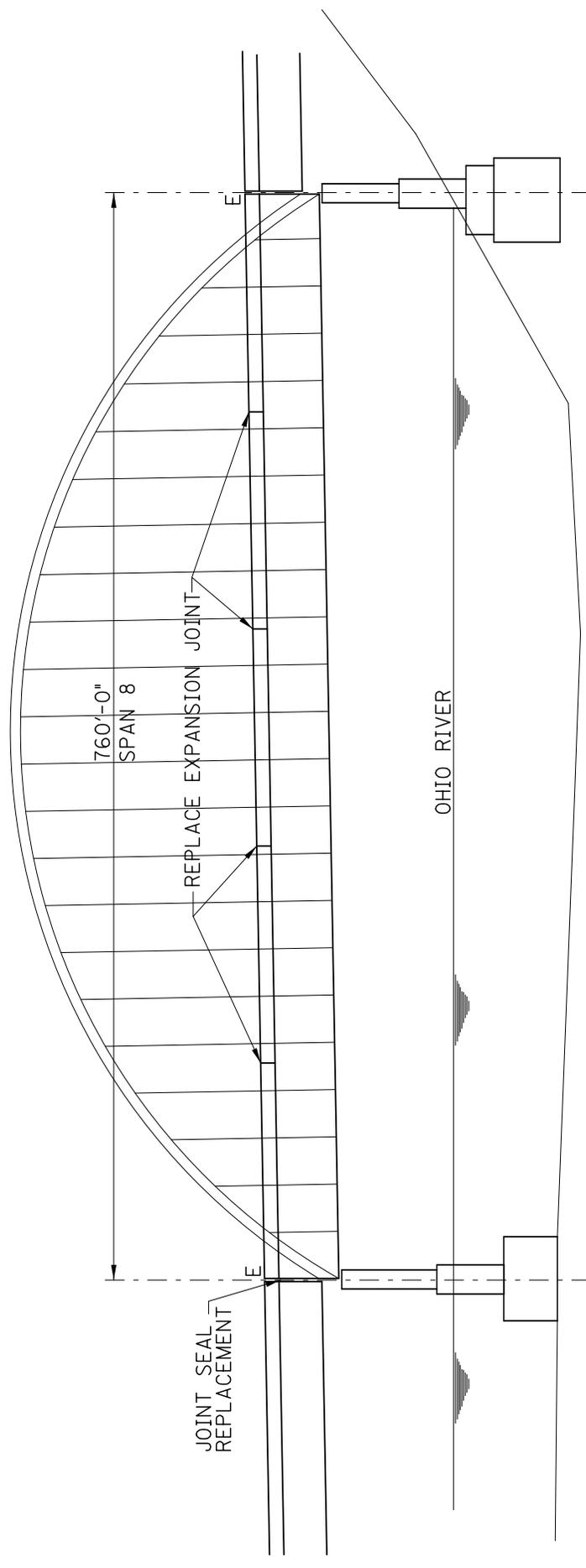


THIS DECK HAS AN EXISTING OVERLAY WITH AN AVERAGE DEPTH OF 1.5 INCHES WHICH IS TO BE REMOVED PER THE HYDRODEMOLITION SPECIAL NOTE.

TYPICAL SECTION

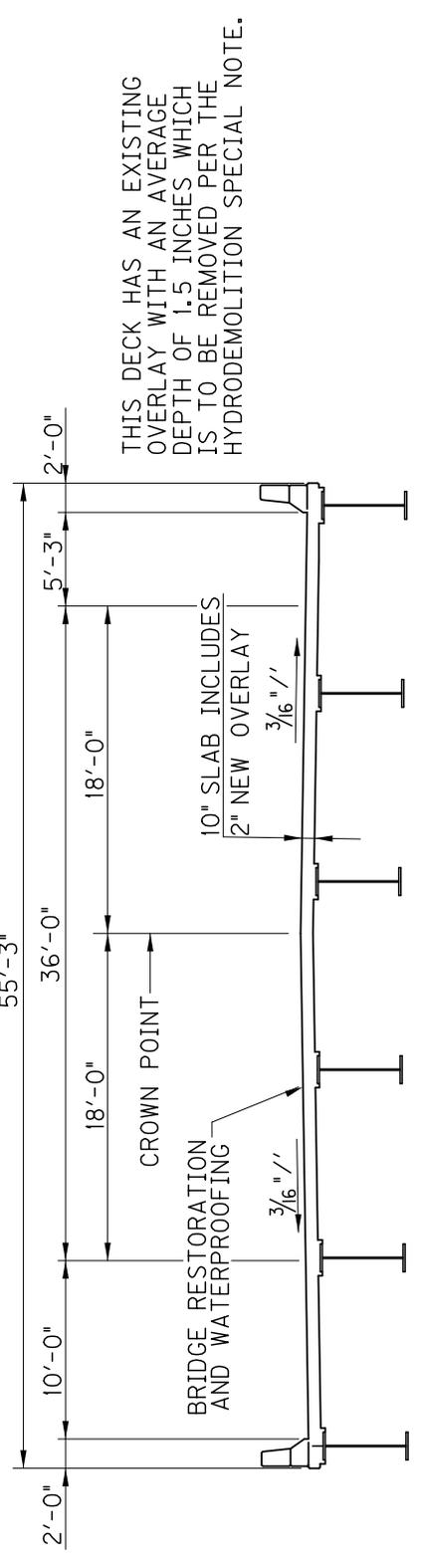
B13

I-471 SOUTHBOUND OVER OHIO RIVER
BRIDGE MAINTENANCE NUMBER 019B00039L



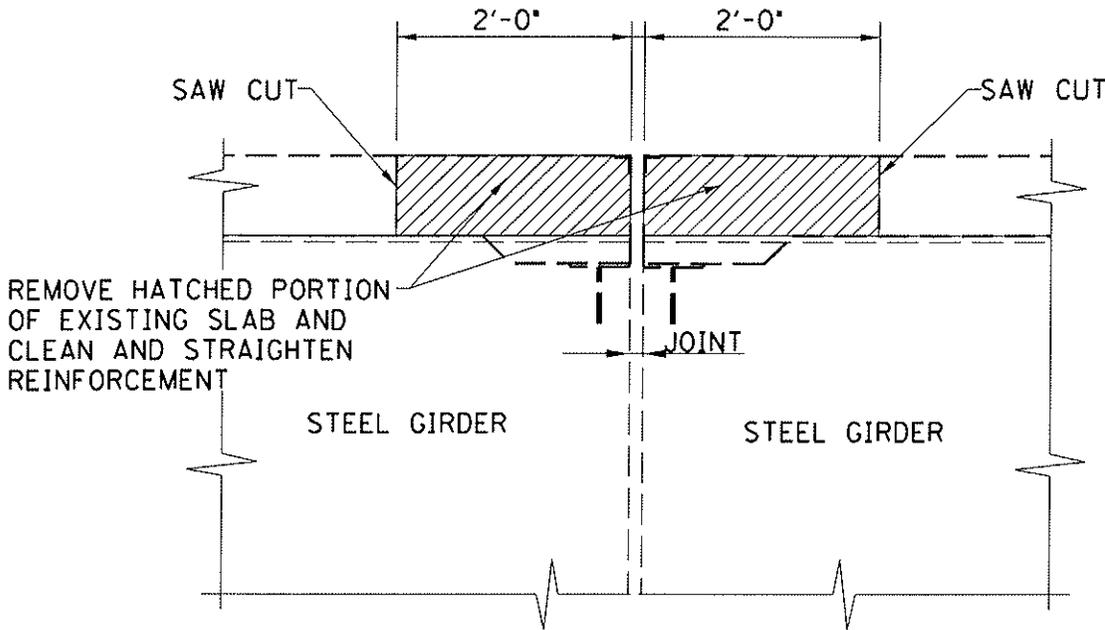
ELEVATION
0° SKEW
NOT TO SCALE
*SEE STD. DRWG. BJE-001-11

NOTE:
THE CONTRACTOR SHALL REPAIR ANY DAMAGES TO EXISTING PAINT.



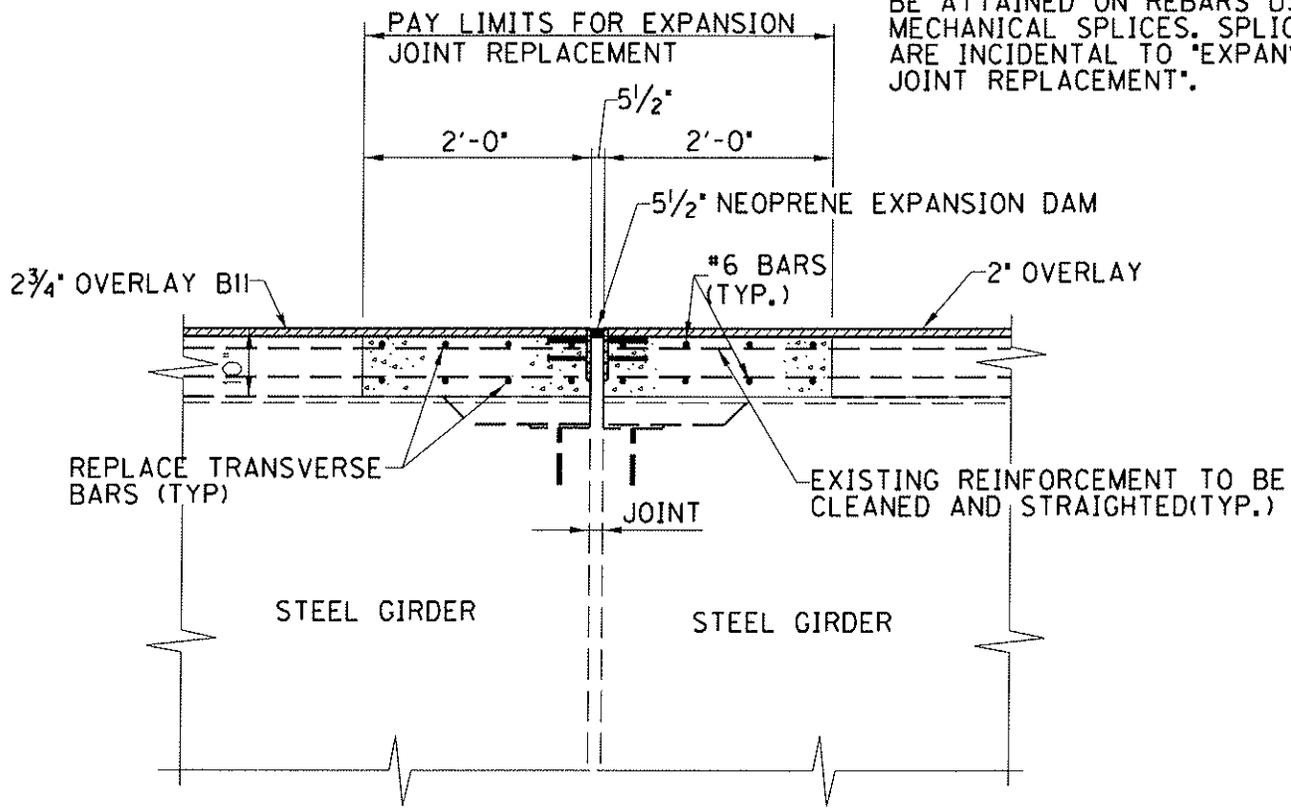
TYPICAL SECTION

REPLACE JOINT @ PIER 6



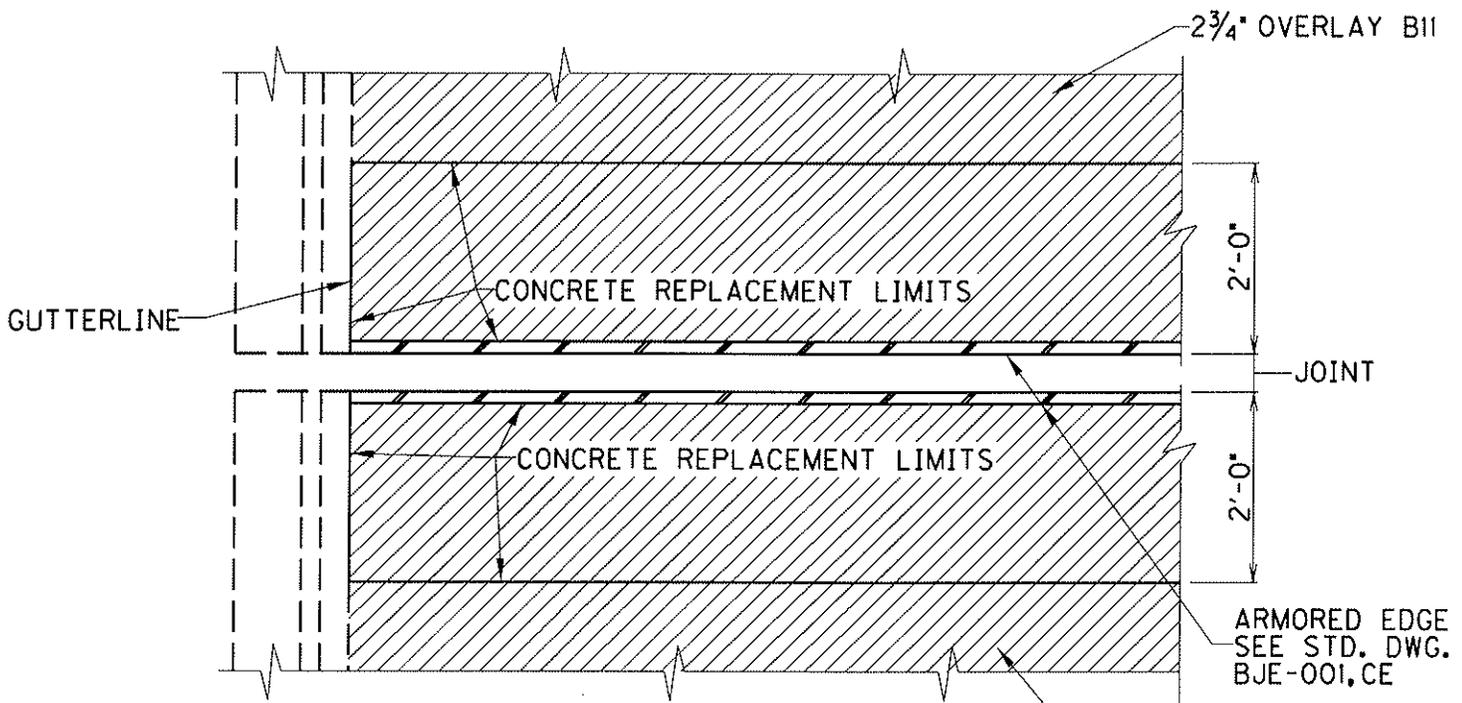
EXISTING SECTION

NOTE:
WHERE A NORMAL LAP CANNOT BE ATTAINED ON REBARS USE MECHANICAL SPLICES. SPLICES ARE INCIDENTAL TO 'EXPANSION JOINT REPLACEMENT'.

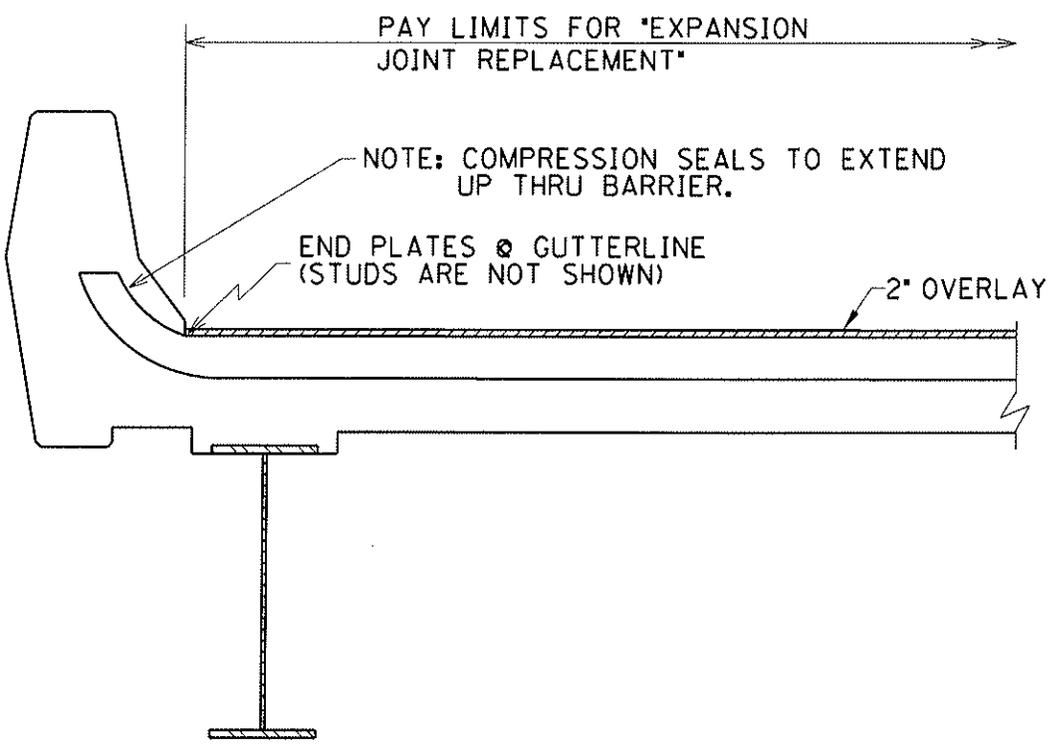


PROPOSED SECTION

REPLACE EXPANSION JOINT PIER 6 CURB SECTION

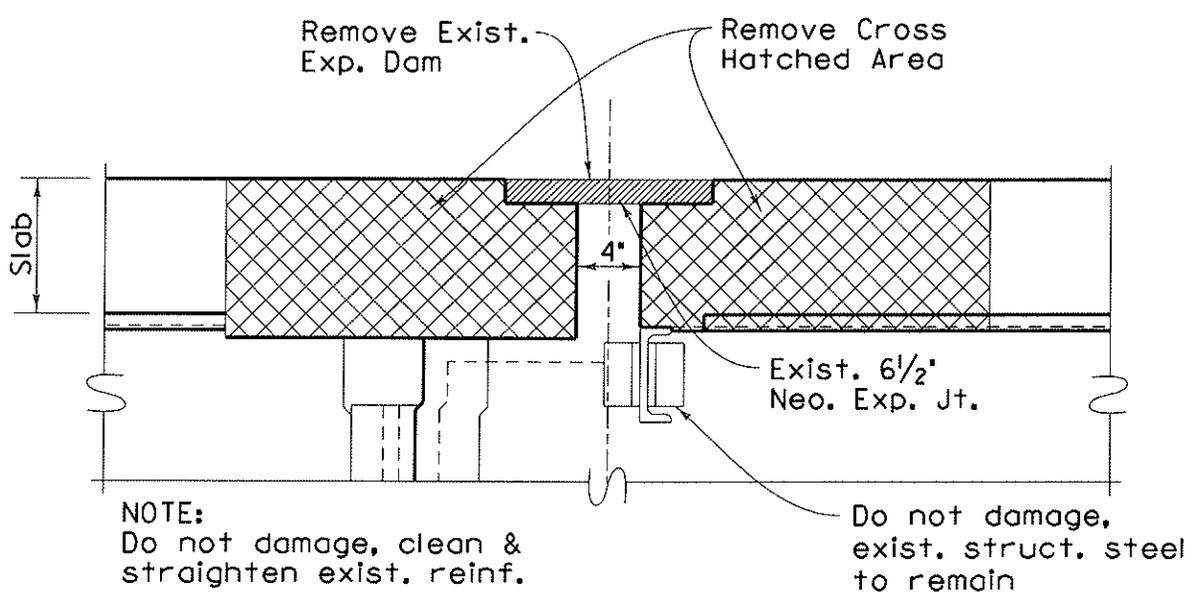


PLAN VIEW @ CURB
REPLACE EXPANSION JOINT

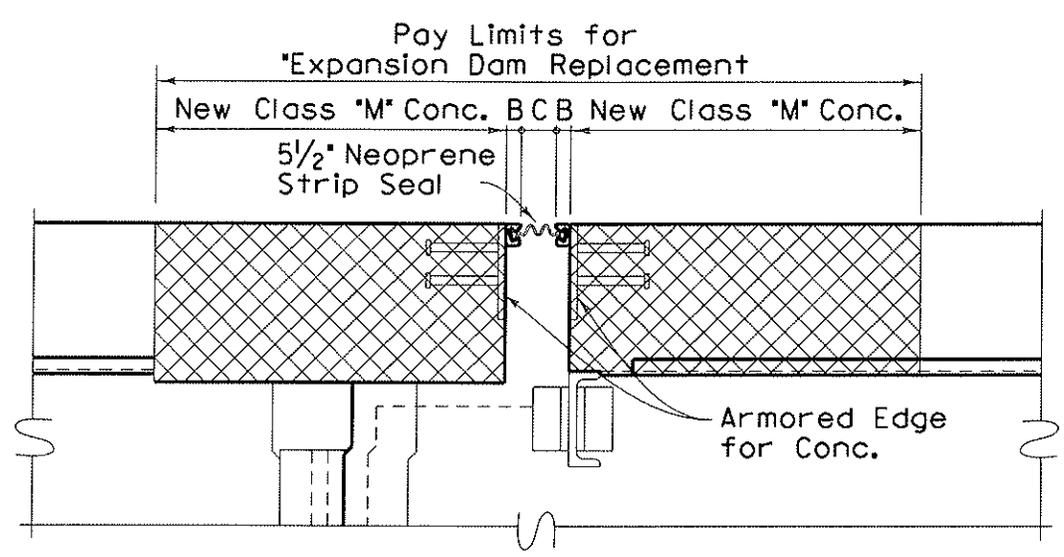


PROPOSED SECTION @ CURB

5 1/2" EXPANSION DAM DETAIL



EXISTING SECTION



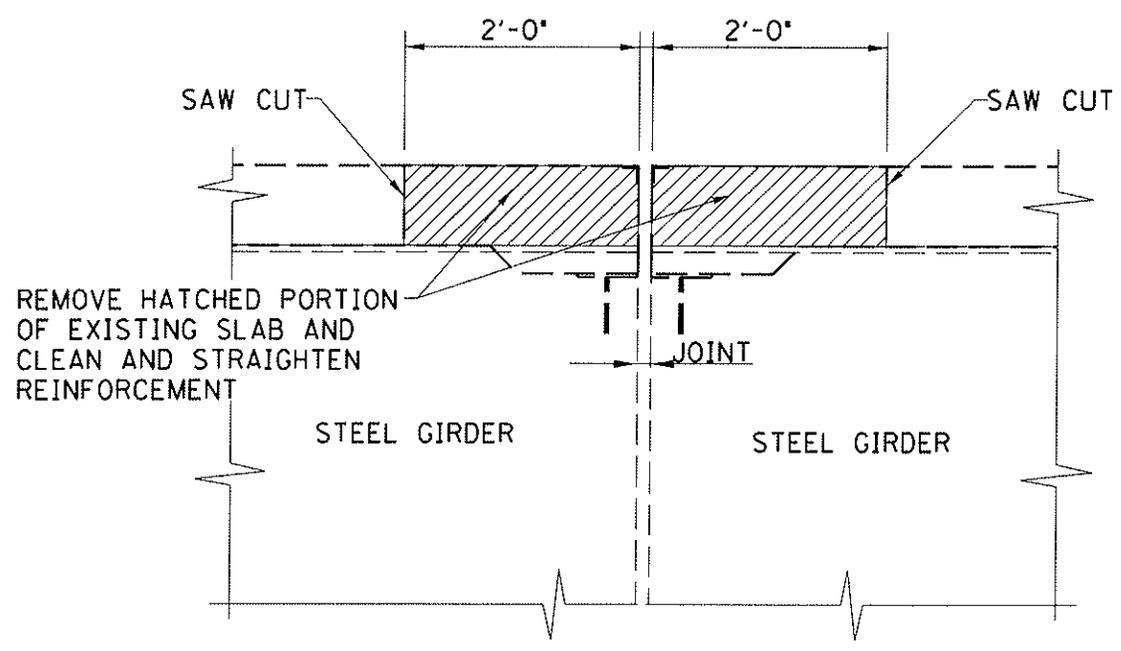
ALTERNATE NEOPRENE EXPANSION DAMS				
MODEL	SUPPLIER	A	B	C*
WABO STRIP SEAL PS-175	Watson Bowman Associates Inc.	2"	1 1/4"	2 1/2"
STEEL FLEX Type SSA2 With A2R XTRA Seal	D. S. Brown Co.	2"	1 1/4"	2 1/2"

Note: Temperature Change
Increment per 10°F = 5/16"

*Joint Opening At 60 °F

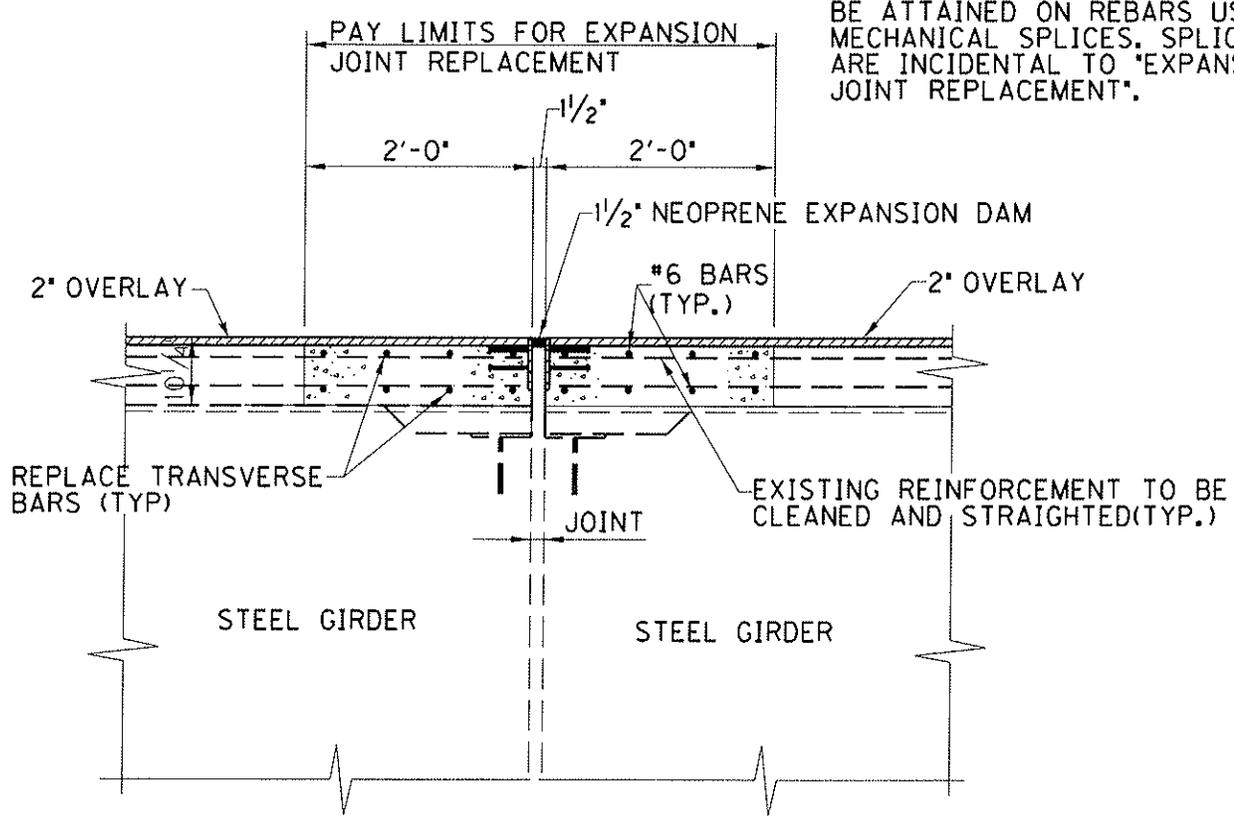
PROPOSED SECTION

REPLACE JOINTS IN SPAN 8



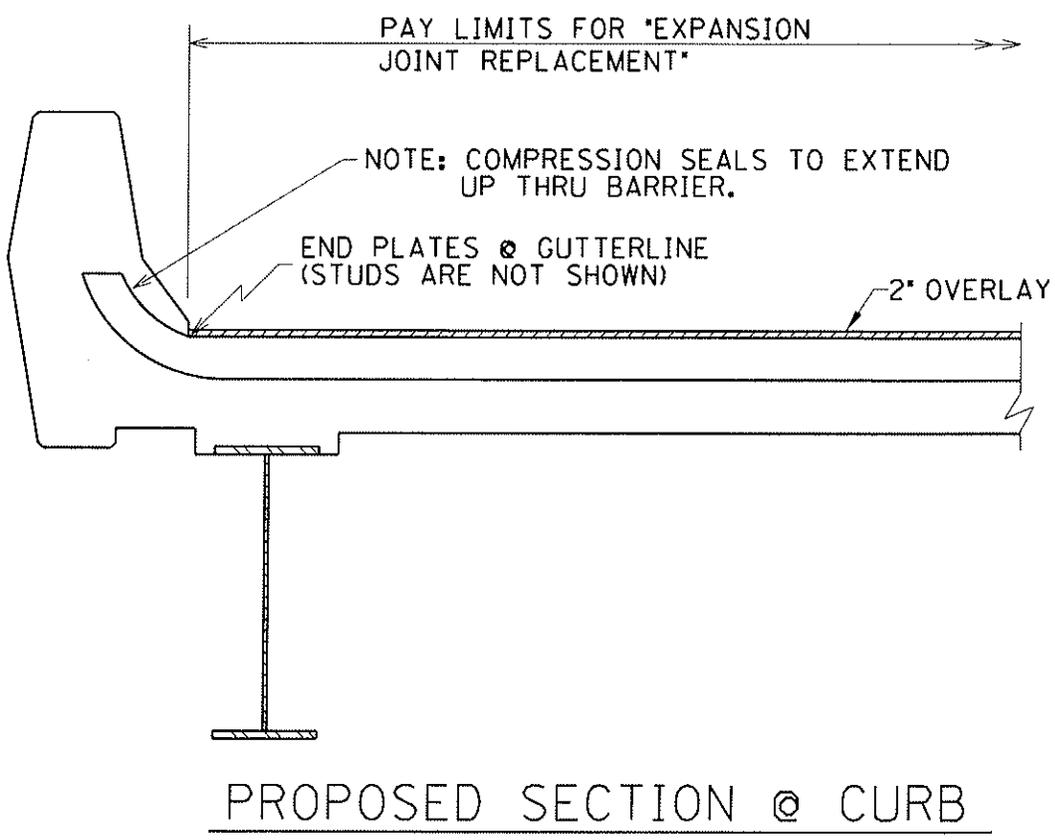
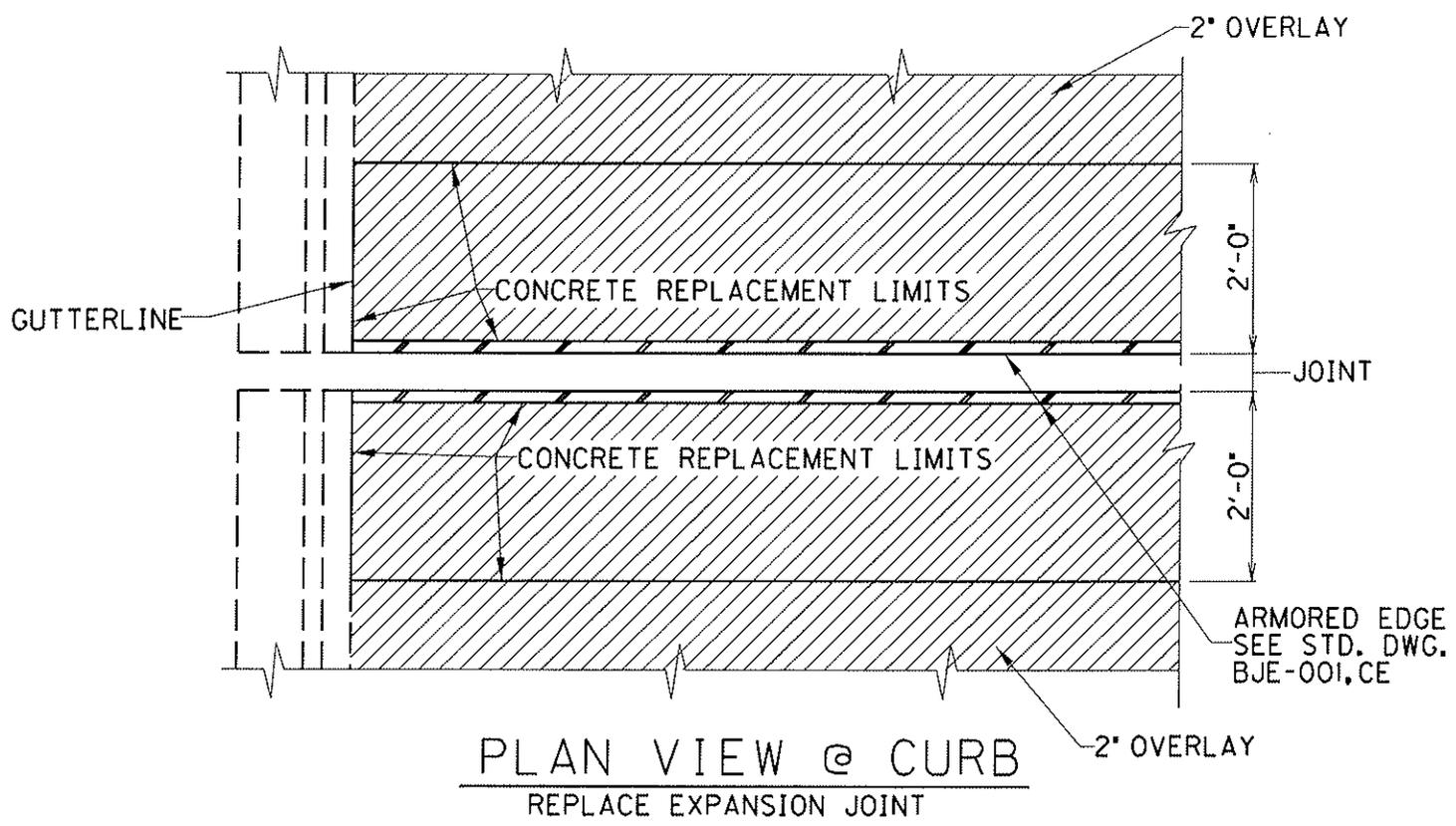
EXISTING SECTION

NOTE:
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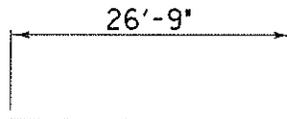


PROPOSED SECTION

REPLACE EXPANSION JOINT RIVER SPAN CURB SECTION



REINFORCEMENT



#6 STRAIGHT BAR
32 REQ'D PIER 6
32 REQ'D EACH JOINT IN SPAN 8

1286 LBS. PIER 6
1286 LBS. AT EACH OF 4 JOINTS IN SPAN 8

PIER REINFORCEMENT

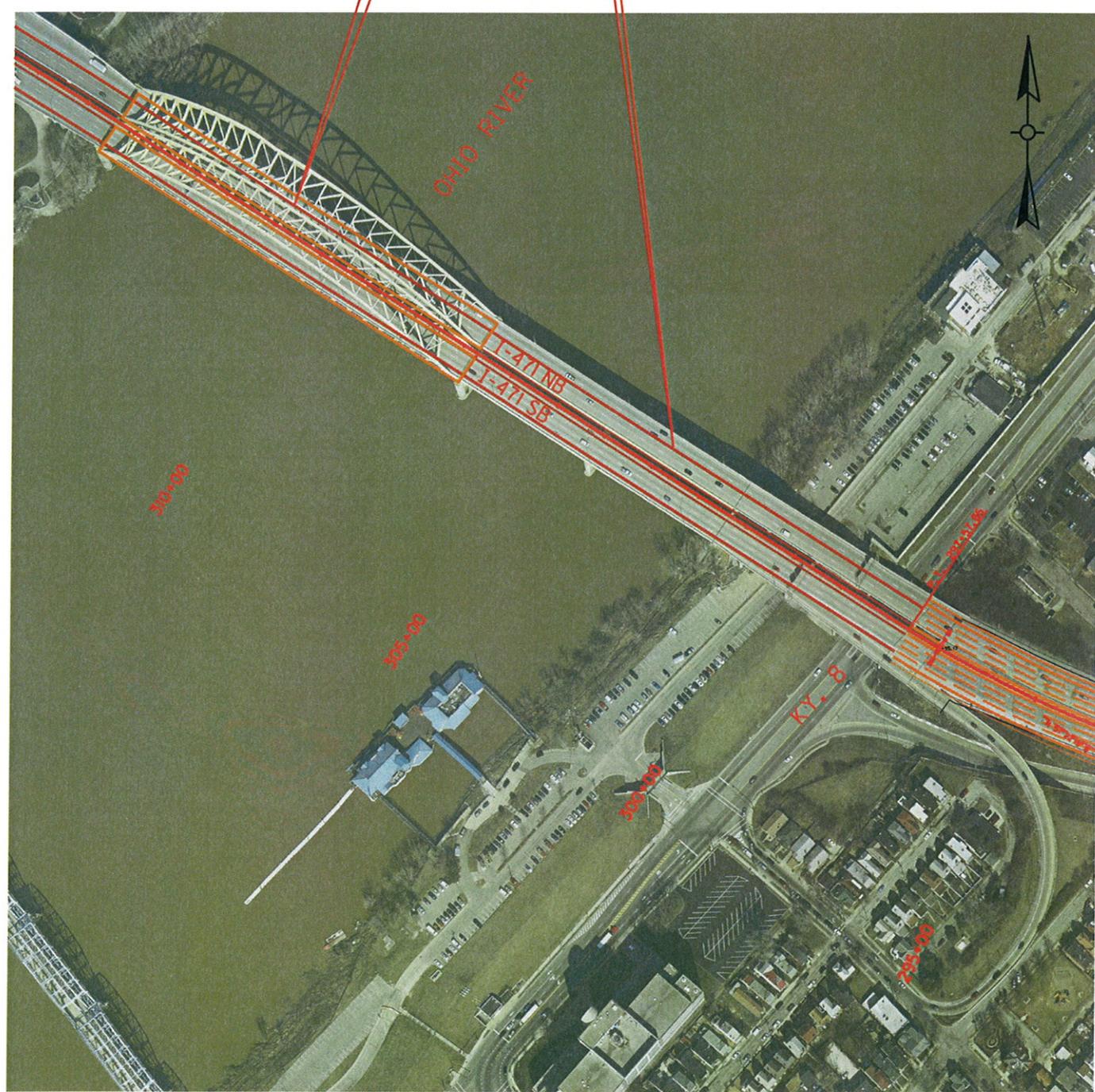
300 LIN. FT. #4 BARS IN 20'-0" LENGTHS
200 LBS. PIER 6 & AT EACH OF 4 JOINTS IN SPAN 8

MISCELLANEOUS REINFORCEMENT

TOTAL REINFORCEMENT 7,430 LBS.

CAMPBELL COUNTY

019B00039R
I-471 NB OVER
OHIO RIVER



Approximate Location Information
Latitude: 39° 6' 1"
Longitude: 84° 29' 39"

BRIDGE #14 (019B00039R) SUMMARY OF QUANTITIES

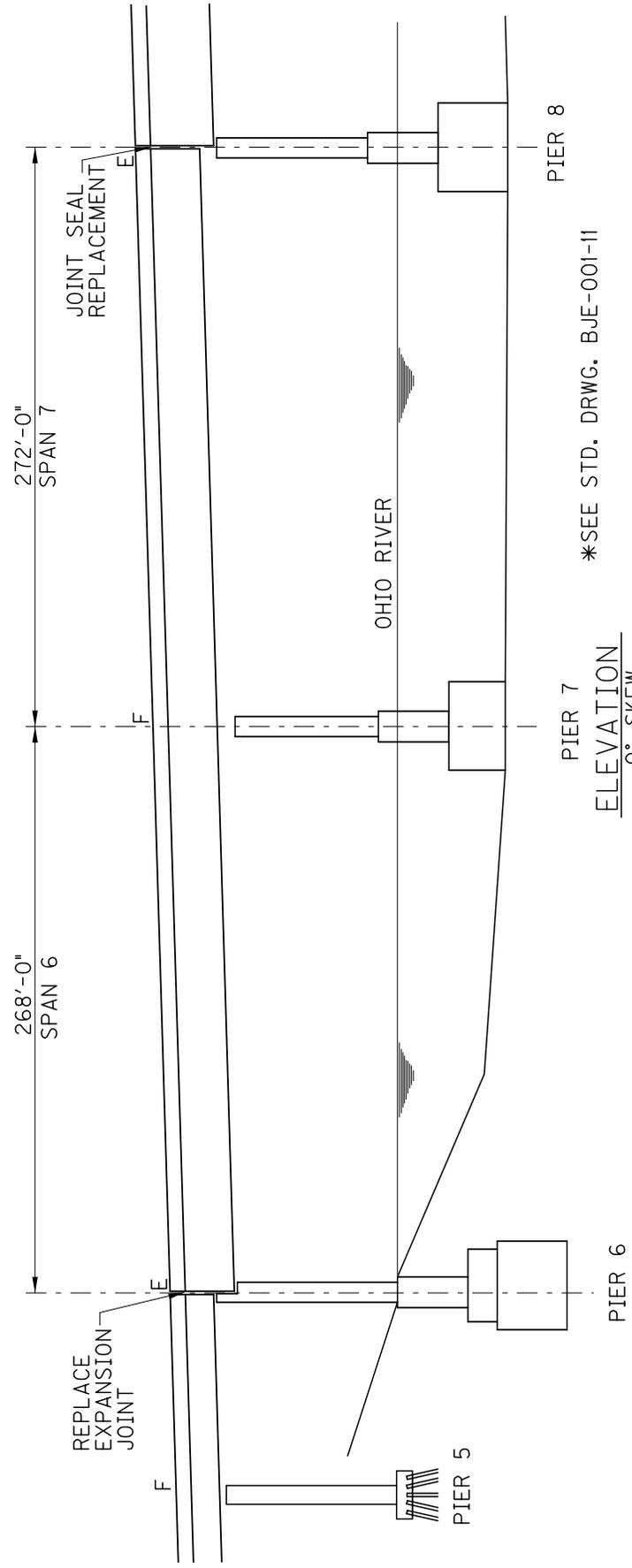
1. DISTRICT: 6
 2. COUNTY: CAMPBELL
 3. ROUTE: I-471
 4. PROJECT NO.: IMNH 4714(034)
 5. ROAD NAME: I-471
 6. DESCRIPTION: I-471 NORTHBOUND OVER OHIO RIVER
 BRIDGE DECK RESTORATION AND WATERPROOFING, REPLACE EXPANSION JOINTS
 AND JOINT SEAL REPLACEMENT
 8. LENGTH (FT.): 1300.0 BRIDGE WIDTH (FT.): 51.25 SURFACE AREA (SQ. YD.): 7403
 SKEW (DEGREES): 0 DECK THICKNESS (INCHES): 9

ESTIMATED QUANTITIES REQUIRED

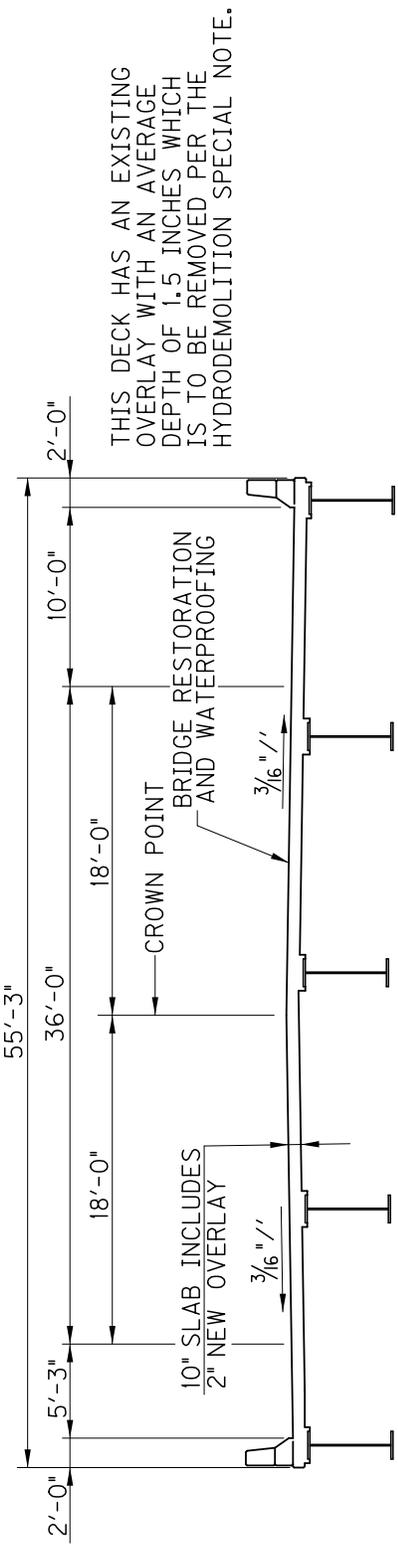
ITEM CODE	DESCRIPTION	QUANTITY	UNIT
3294	EXPANSION JT REPLACEMENT 1 1/2 IN	204.0	LIN FT
8504	EPOXY SAND SLURRY	1300.0	SQ YD
8526	CONC CLASS M FULL DEPTH PATCH	41.0	CU YD
8534	CONCRETE OVERLAY-LATEX	411.0	CU YD
8549	BLAST CLEANING	8483	SQ YD
8550	HYDRODEMOLITION	7403	SQ YD
23386EC	JOINT SEAL REPLACEMENT	51.0	LIN FT
23622EC	CLEAN DEBRIS FROM LOWER CHORD	1	LS
24094EC	PARTIAL DEPTH PATCHING	82.0	CU YD
24456EC	EXPANSION JT REPLACEMENT 5 1/2 IN	51.0	LIN FT

B14

I-471 NORTHBOUND OVER OHIO RIVER
BRIDGE MAINTENANCE NUMBER 019B00039R



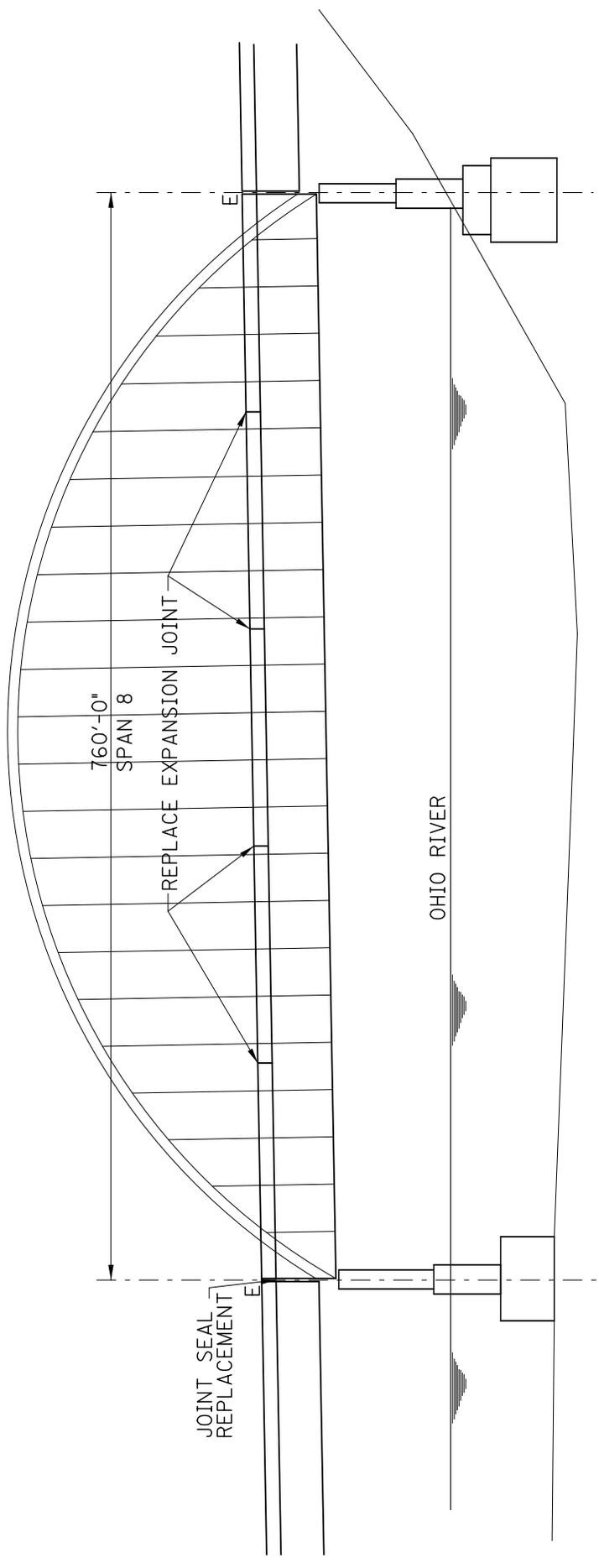
NOTE:
THE CONTRACTOR SHALL REPAIR ANY DAMAGES TO EXISTING PAINT.



TYPICAL SECTION

I-471 NORTHBOUND OVER OHIO RIVER
BRIDGE MAINTENANCE NUMBER 019B00039R

B14



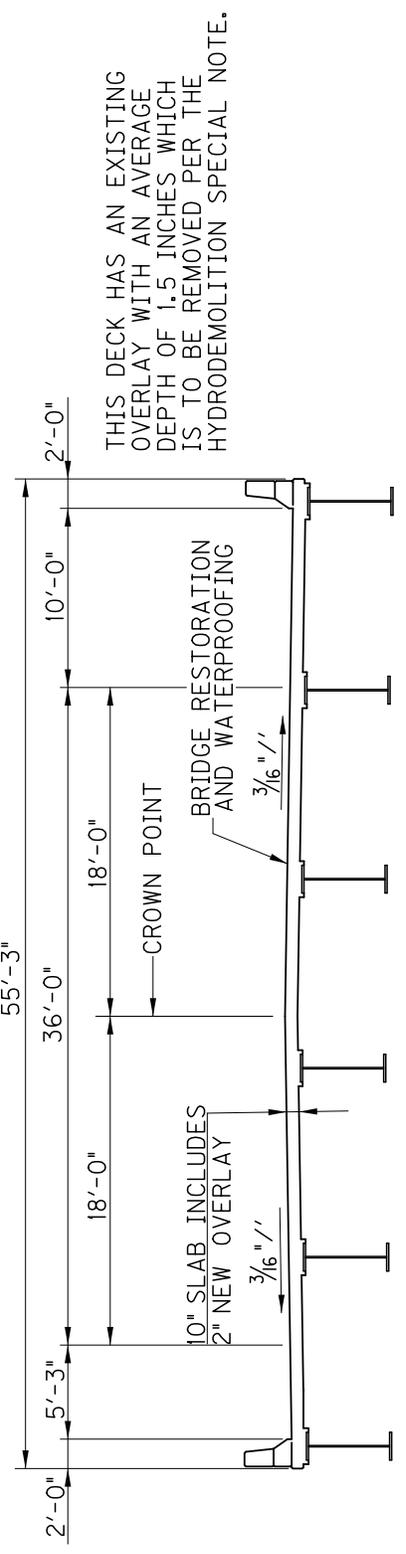
PIER 9

*SEE STD. DRWG. BJE-001-11

ELEVATION
0° SKEW
NOT TO SCALE

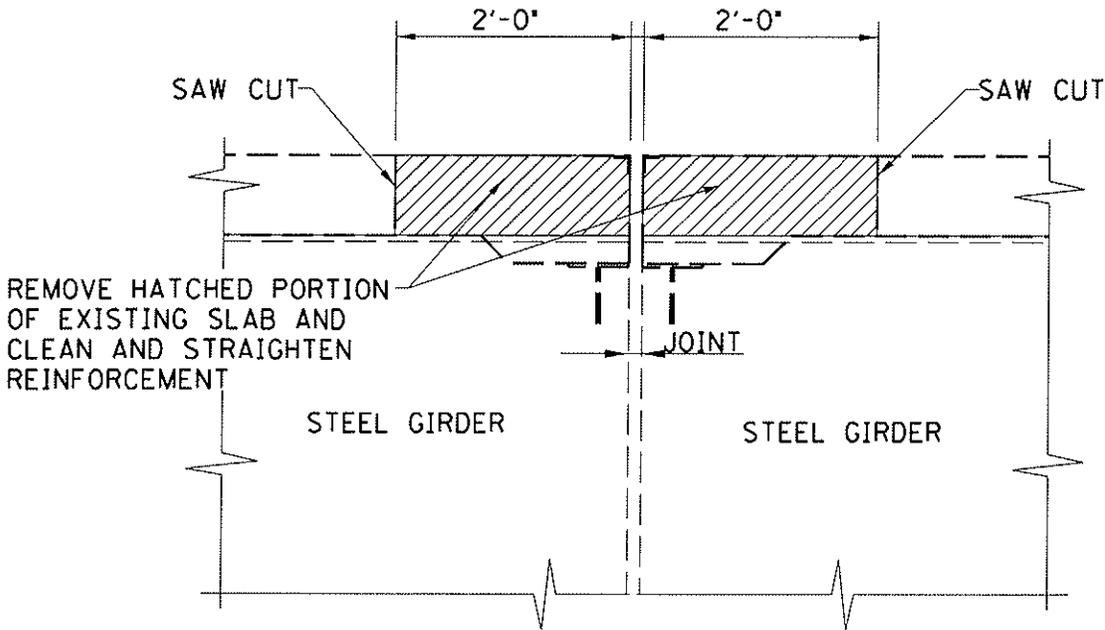
PIER 8

NOTE:
THE CONTRACTOR SHALL REPAIR ANY DAMAGES TO EXISTING PAINT.



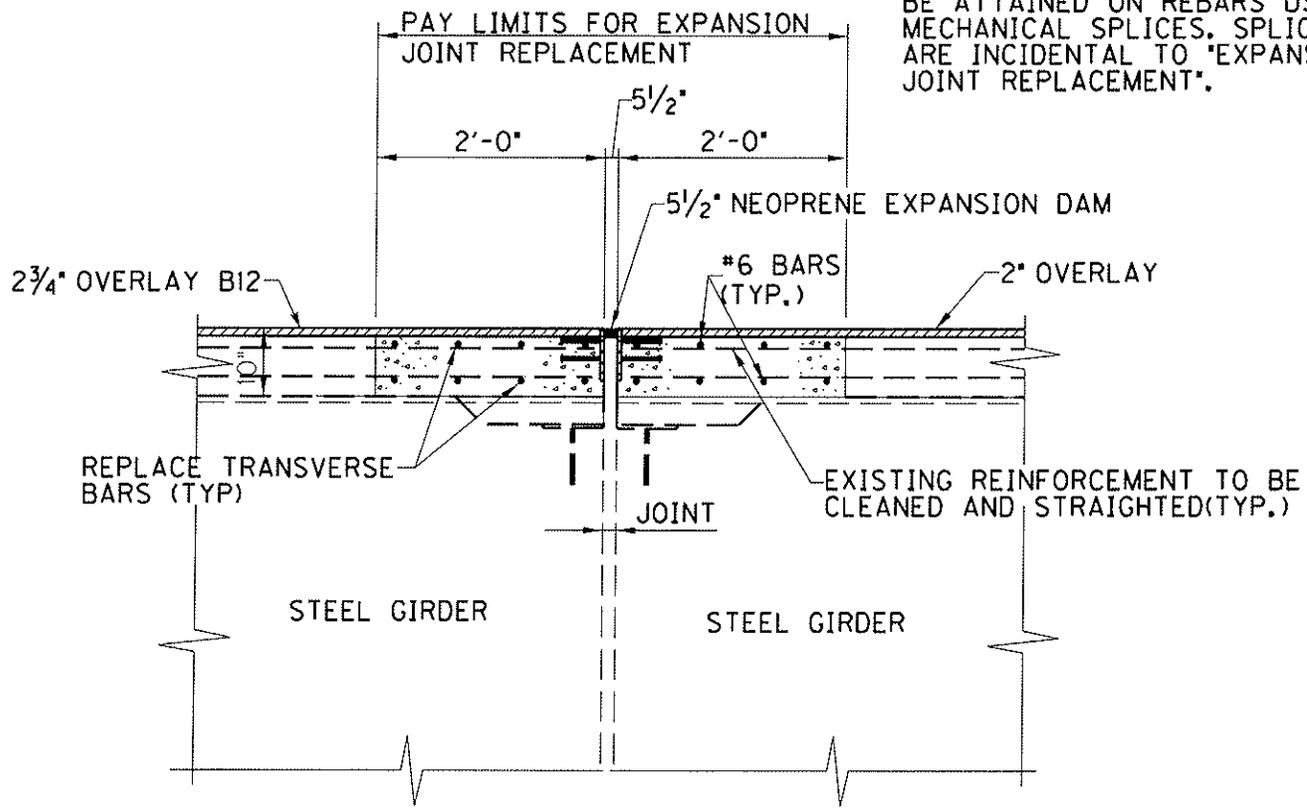
TYPICAL SECTION

REPLACE JOINT @ PIER 6



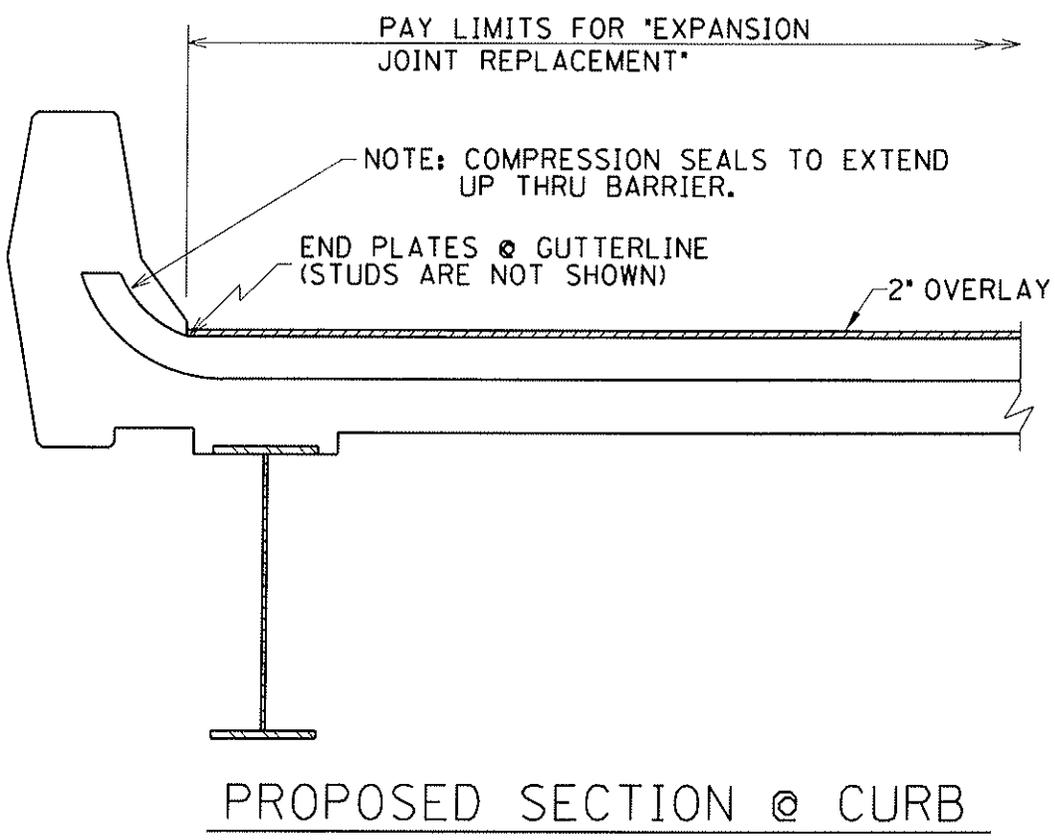
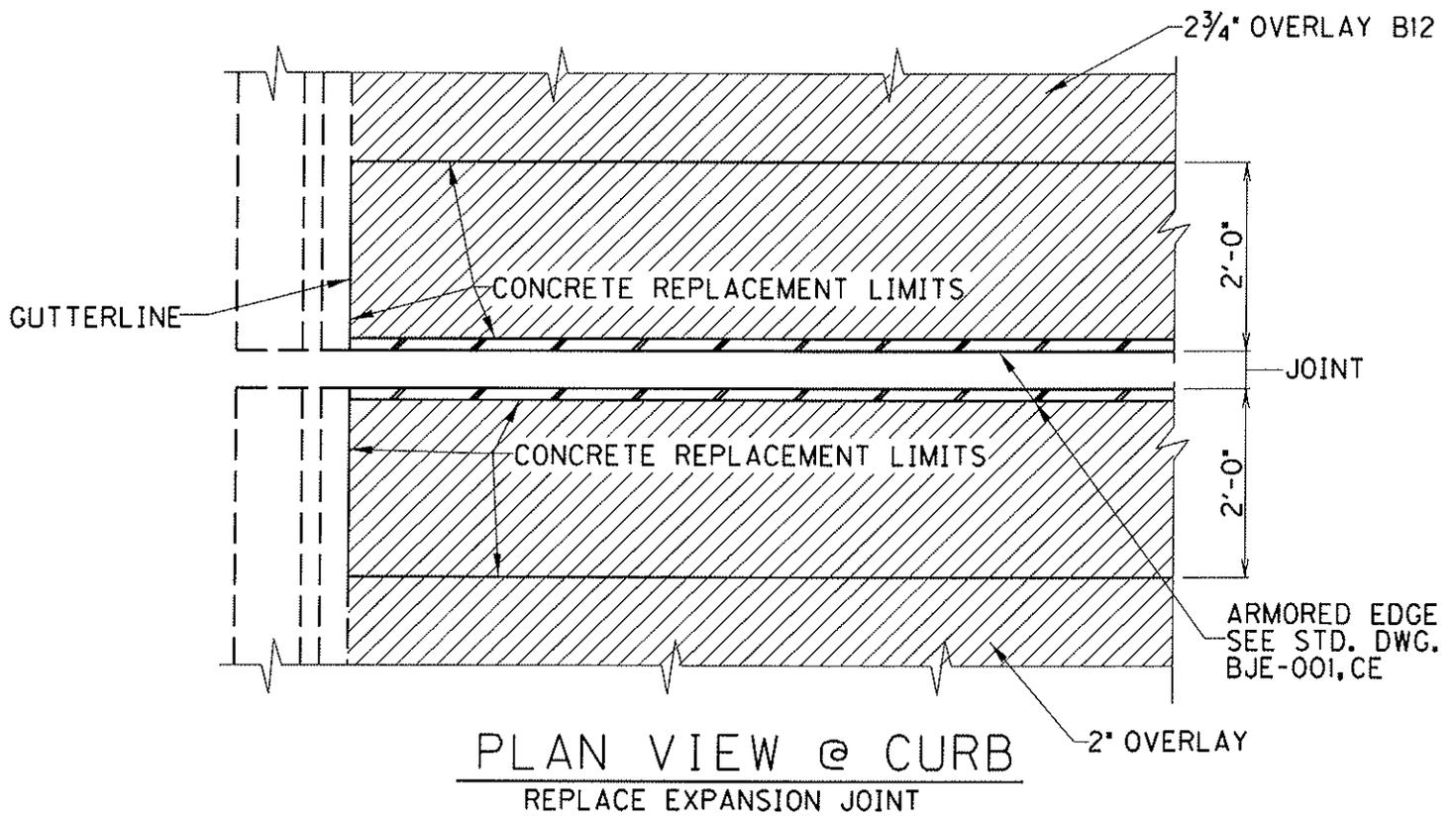
EXISTING SECTION

NOTE:
WHERE A NORMAL LAP CANNOT BE ATTAINED ON REBARS USE MECHANICAL SPLICES. SPLICES ARE INCIDENTAL TO 'EXPANSION JOINT REPLACEMENT'.

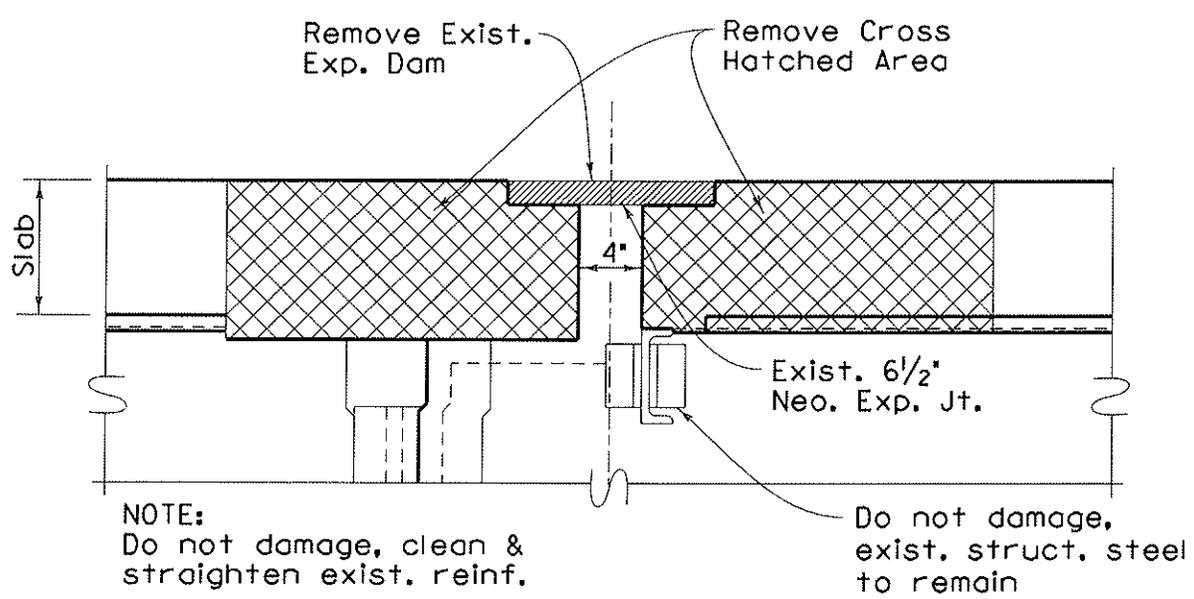


PROPOSED SECTION

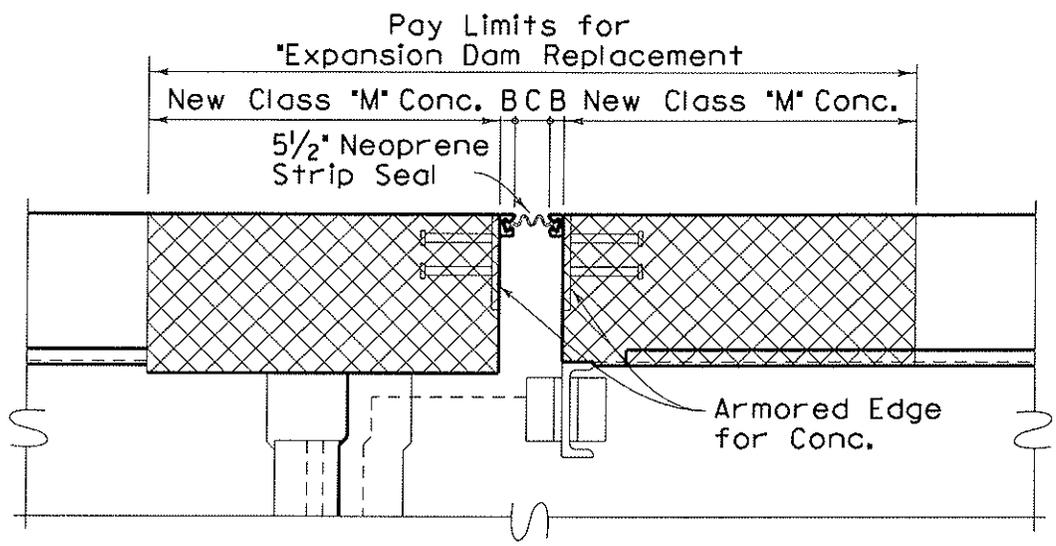
REPLACE EXPANSION JOINT PIER 6 CURB SECTION



5 1/2" EXPANSION DAM DETAIL



EXISTING SECTION



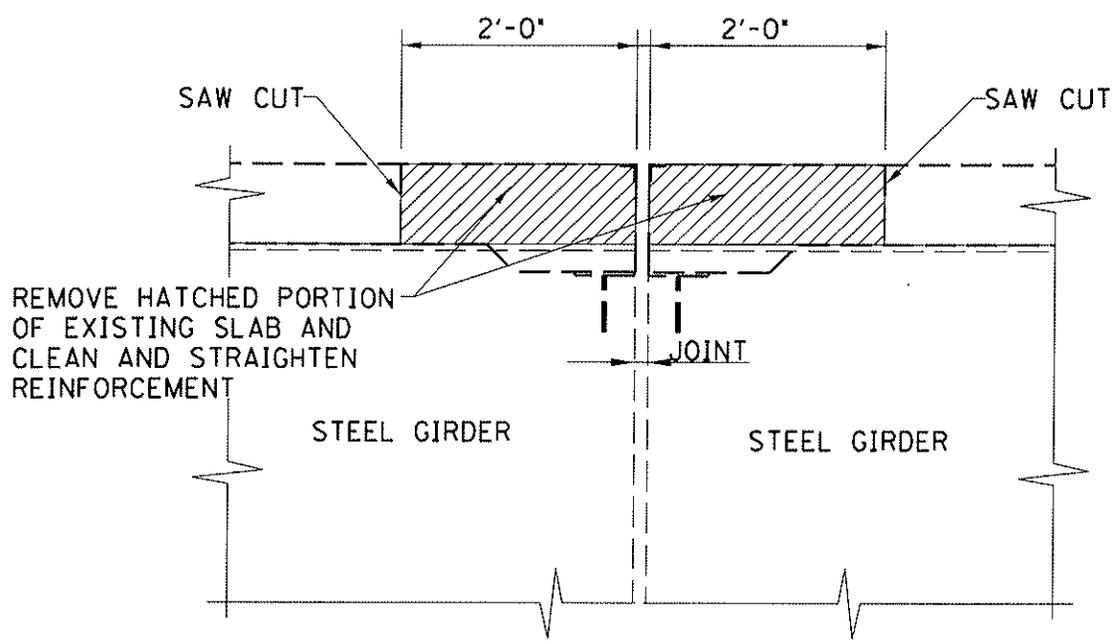
ALTERNATE NEOPRENE EXPANSION DAMS				
MODEL	SUPPLIER	A	B	C*
WABO STRIP SEAL PS-175	Watson Bowman Associates Inc.	2"	1 1/4"	2 1/2"
STEEL FLEX Type SSA2 With A2R XTRA Seal	D. S. Brown Co.	2"	1 1/4"	2 1/2"

Note: Temperature Change Increment per 10°F = 5/16"

*Joint Opening At 60 °F

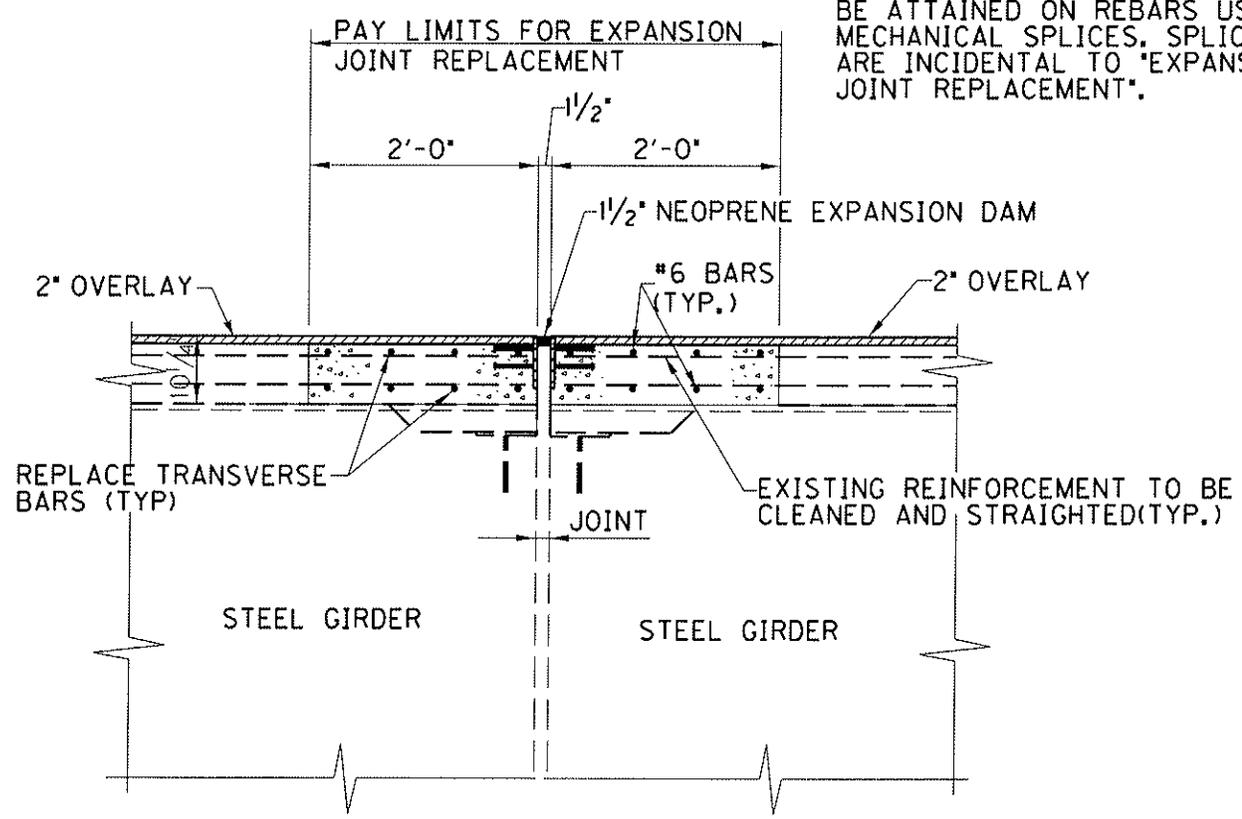
PROPOSED SECTION

REPLACE JOINTS IN SPAN 8



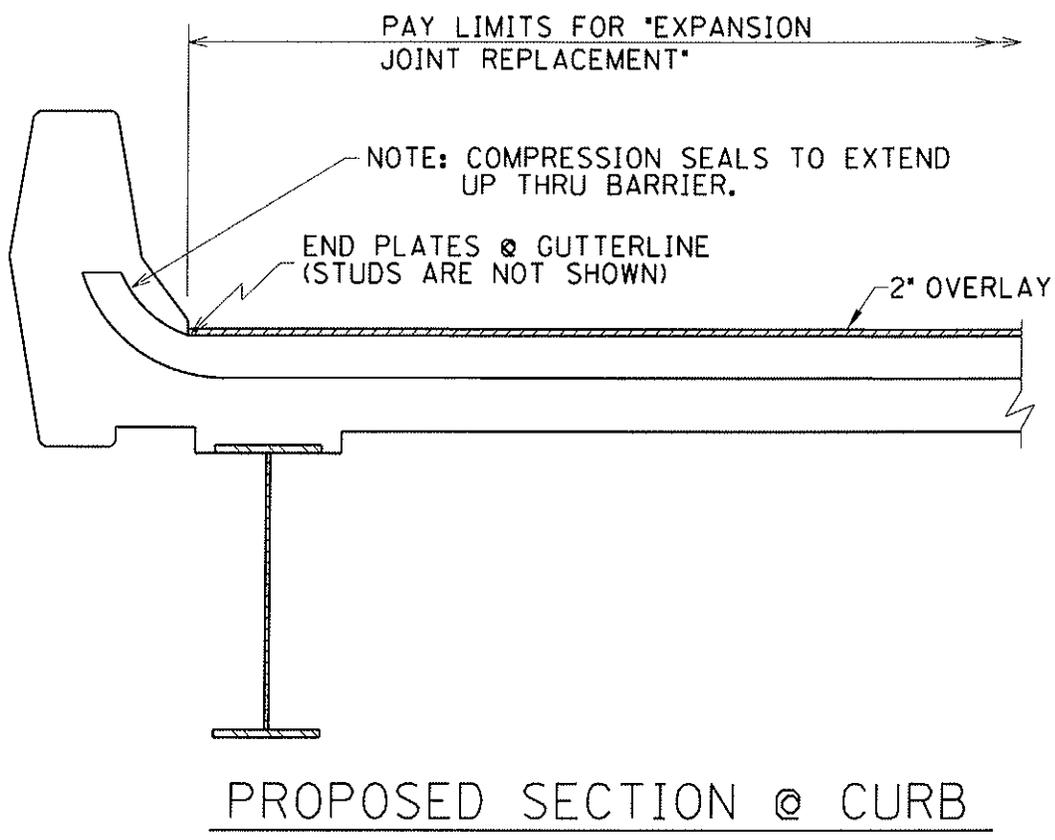
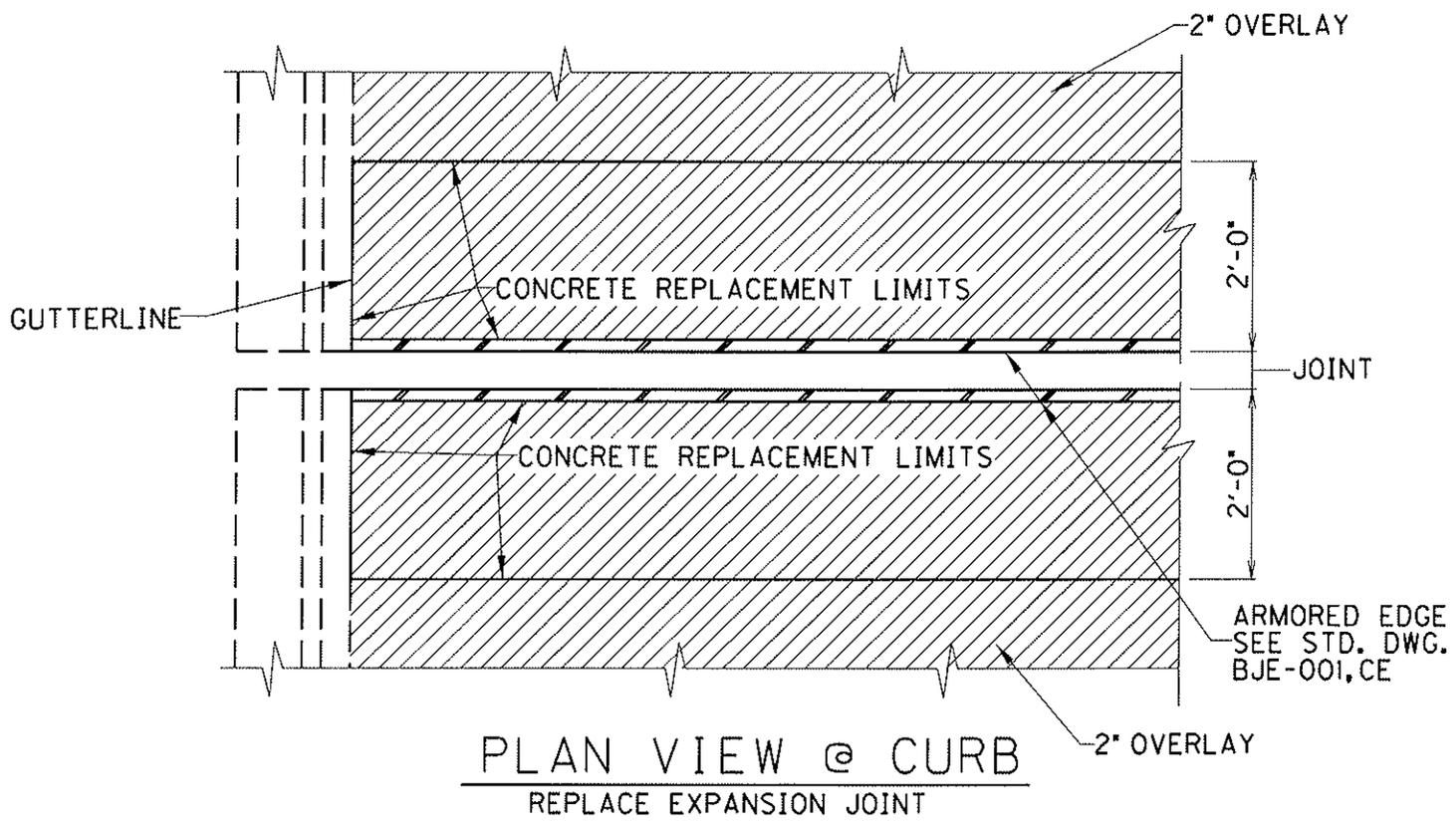
EXISTING SECTION

NOTE:
WHERE A NORMAL LAP CANNOT BE ATTAINED ON REBARS USE MECHANICAL SPLICES. SPLICES ARE INCIDENTAL TO "EXPANSION JOINT REPLACEMENT".

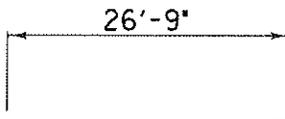


PROPOSED SECTION

REPLACE EXPANSION JOINT RIVER SPAN CURB SECTION



REINFORCEMENT



#6 STRAIGHT BAR
32 REQ'D PIER 6
32 REQ'D EACH JOINT IN SPAN 8

1286 LBS. PIER 6
1286 LBS. AT EACH OF 4 JOINTS IN SPAN 8

PIER REINFORCEMENT

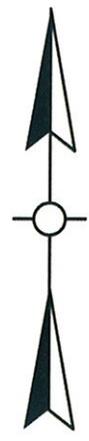
300 LIN. FT. #4 BARS IN 20'-0" LENGTHS
200 LBS. PIER 6 & AT EACH OF 4 JOINTS IN SPAN 8

MISCELLANEOUS REINFORCEMENT

TOTAL REINFORCEMENT 7,430 LBS.

CAMPBELL COUNTY

019B00044R
I-275 EASTBOUND OVER
I-471 SOUTHBOUND



Approximate Location Information
Latitude: 39° 02' 45"
Longitude: 84° 27' 39"

BRIDGE #15 (019B00044R) SUMMARY OF QUANTITIES

1. DISTRICT: 6
2. COUNTY: CAMPBELL
3. ROUTE: I-275
4. PROJECT NO.: IMNH 4714(034)
5. ROAD NAME: I-275
6. DESCRIPTION: I-275 EASTBOUND OVER I-471 SOUTHBOUND
REPLACE EXISTING SLOPEWALL AND EXTEND TO DITCH LINE

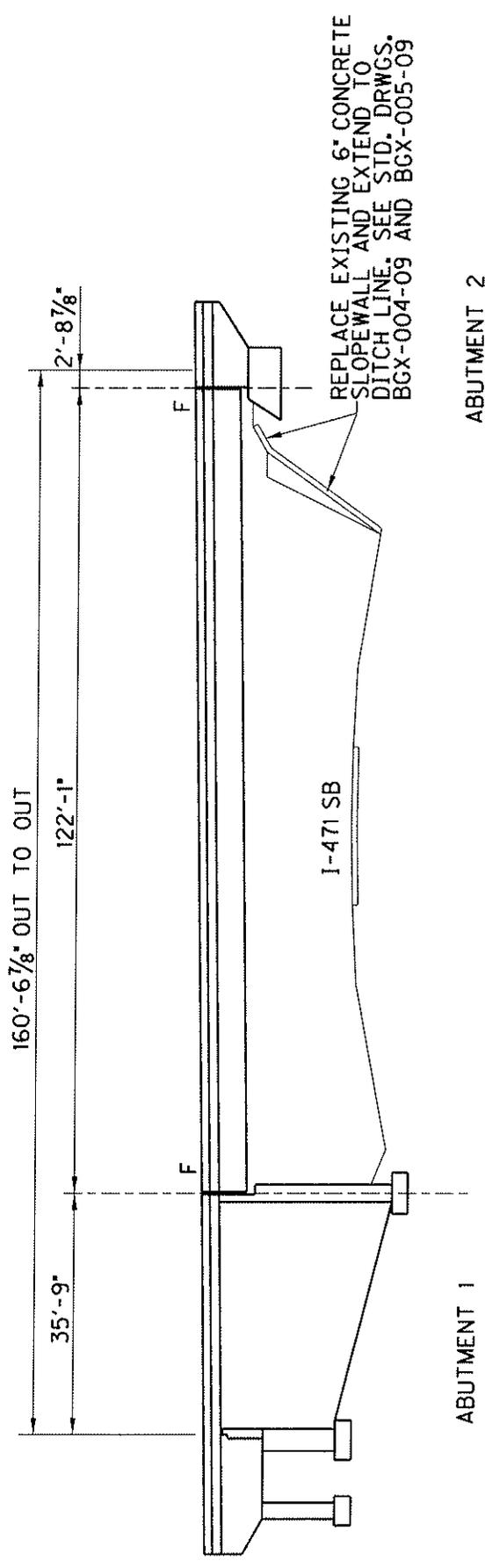
8. LENGTH (FT.): 160.57 BRIDGE WIDTH (FT.): 56.0 SURFACE AREA (SQ. YD.): 999
SKEW (DEGREES): 24.0 DECK THICKNESS (INCHES): 8.75

ESTIMATED QUANTITIES REQUIRED

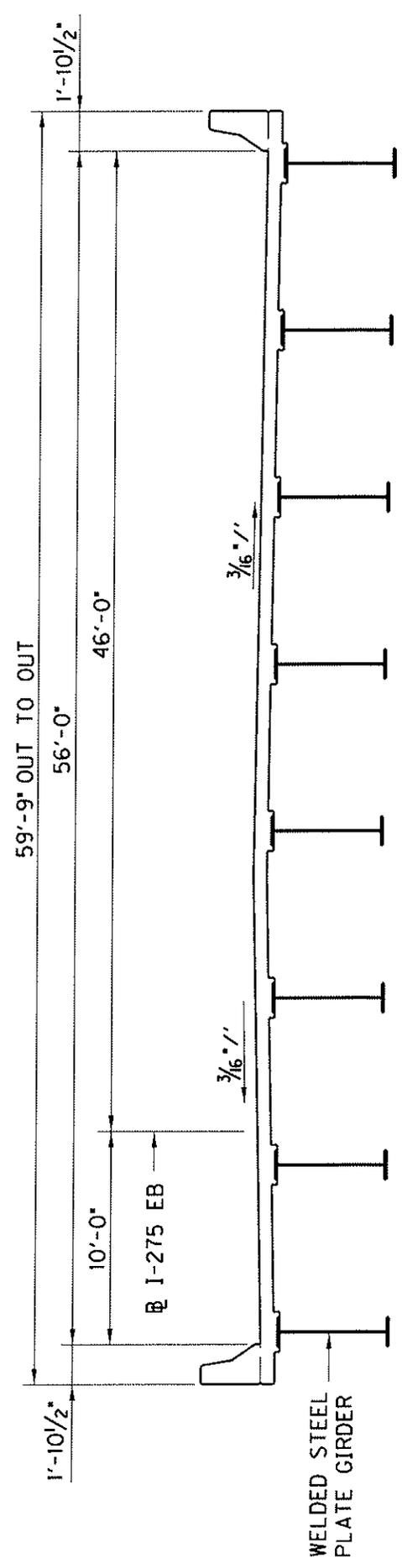
ITEM CODE	DESCRIPTION	QUANTITY	UNIT
8016	REINF CONC SLOPE WALL-6 IN	283.0	SQ YD

I-275 EASTBOUND OVER I-471 SOUTHBOUND
BRIDGE MAINTENANCE NUMBER 019B000044R

B15



ELEVATION
24° 01' 00" SKEW L.T.
NOT TO SCALE



TYPICAL SECTION

6-2021.00
I-471
Campbell County

Special Note for Subgrade Stabilization

DESCRIPTION

The subgrade of this project is to be cement stabilized. Contrary to Section 208 of the Standard Specifications, the curing time and testing of the subgrade may be constructed with an expedited schedule. The subgrade is to be prepared and mixed per the Standard Specifications. The curing time is allowed to be lowered to 48 hours per the following items in this note.

- A. The Subgrade is to be tested with a nuclear density meter to ensure that the required maximum dry density and optimum moisture content have been achieved.
- B. The subgrade is to be coated with an asphalt curing seal within 12 hours of final mixing. This is to ensure that the proper moisture content is maintained during the shortened curing period.
- C. After the 48 hour curing period the contractor can begin constructing the aggregate base layer. If any rutting of the treated subgrade layer is detected, it must be repaired immediately. Rutting is to be checked by driving a grader over the subgrade 5 times. If the depth of the ruts is three eighths (3/8) of an inch or greater, construction of the aggregate layer is to be halted for an additional 24 hour curing period. Repair of the subgrade is defined as refilling any ruts and cutting any bulges to ensure the depth of stabilized material is 12 inches and the subgrade is at proper grade. The asphalt curing seal must be replied over disturbed areas so that it completely covers the stabilized area.
- D. If after 4 days of curing the subgrade is continuing to rut in excess of 1/2 inch it can be tested using a Dynamic Cone Penetrometer (DCP) by an approved tester. If the DCP tests result show that the subgrade has achieved 80 psi of bearing strength, or have increased in strength by at least 15 psi the contractor will be allowed to continue aggregate layer construction. The Geotechnical branch will conduct DCP readings at the start of construction to determine a baseline bearing strength to compare DCP readings to.
- E. If DCP results do not show the required strength the contractor can attempt checking the rutting depth or wait the full 7 day curing period.
- F. The Geotechnical Branch will coordinate with the district construction personnel to ensure that core samples of the subgrade are taken. The rate of the core sampling will be determined during subgrade construction to ensure enough are taken to be representative of the entire subgrade. These cores will be tested for verification of the subgrade strength.

December 2, 2011

SPECIAL NOTE FOR FULL DEPTH CONCRETE PAVEMENT REPAIR

This Special Note applies to full depth repairs of concrete pavement. This note supersedes Special Provision 76 in the 2008 Standard Specifications. Section references herein are to the Department's 2008 Standard Specifications for Road and Bridge Construction.

1.0 DESCRIPTION. Remove and replace concrete pavement. Comply with the applicable Standard Drawings and the Standard Specifications except as specifically superseded herein.

2.0 MATERIALS AND EQUIPMENT.

2.1 JPC Pavement. Test concrete materials according to section 601.03.03. Conform to 501, 502, and 601 except that the concrete must achieve 3000 psi in accordance with Section 4.4 of this note. The Engineer may allow pavement to be opened to traffic at less than 3,000 psi subject to the deductions described in Section 4.4 of this note.

2.2 Dowel Bars and Sleeves. Conform to 811

2.3 Tie Bars. Conform to Section 811. Use epoxy coated tie bars in longitudinal and transverse joints.

2.4 Joint Sealants. Conform to Subsection 807.03.01 or 807.03.05.

2.5 Grout Adhesives and Epoxy Resin Systems. Conform to Section 826.

2.6 Dense Graded Aggregate (DGA) and Crushed Stone Base (CSB). Conform to Section 805.

2.7 Geotextile Fabric. Conform to Section 843.

2.8 Drills. Drill holes using a gang drill, capable of drilling a minimum of four simultaneously. Misalignment of holes shall not exceed 1/4 inch in the vertical or oblique plane.

2.9 Hammers. Only use chisel point hammers weighing less than 40 pounds to remove deteriorated concrete.

3.0 CONSTRUCTION.

3.1 Removal of Existing Pavement. Remove existing pavement to the extent the Contract specifies or as the Engineer directs. The minimum length of patches measured along centerline is 3 feet on each side of an existing joint.

When working with pavements with non-skewed transverse joints, if it is necessary to remove existing pavement closer than 6 feet to a transverse joint, remove the pavement 3 feet beyond that joint .

When working with pavements with skewed transverse joints, if it is necessary to remove existing pavement closer than 3 feet to a transverse joint, remove the

pavement 3 feet beyond that joint.

Details of configurations of pavement and joints for various situations are depicted in the drawings herein.

When small areas of removal and replacement are performed at bridge ends, maintain or reconstruct existing expansion joints at their existing location. When the Engineer determines extensive full width removal and replacement is required, construct new expansion joints at the locations shown on Standard Drawing No. RPN-010.

In the removal operation, make a full depth saw cut longitudinally along the centerline joint and shoulder joint and transversely along the area marked for removal. To prevent damage to the subbase, do not allow the saw to penetrate more than 1/2" into the subbase. The Engineer may direct or approve additional cuts within the removal area for ease of removal of the damaged slab and to prevent damage to adjacent pavement to remain in place. Do not overcut beyond the limits of the removal area. Prevent saw slurry from entering existing joints and cracks. To avoid pumping and erosion beneath the slab, do not allow traffic on sawed pavement for more than 48 hours before beginning removal procedures, unless directed by the Engineer.

Lift out the deteriorated concrete vertically with lift pins. If approved by the Engineer, use other methods that do not damage the base, shoulder, or sides of pavement that is to be left in place. If any damage does occur, repair as the Engineer directs and use an acceptable alternative method for the removal process. Do not damage the pavement base during these operations.

3.2 Pavement Replacement. Do not damage the pavement base during these operations.

3.2.1 Preparation of Base. Compact the new and existing aggregate base to the Engineer's satisfaction. The Engineer will accept compaction by either visual inspection or by nuclear gauge. When the Engineer deems it necessary to stabilize the existing base or replace unsuitable materials, excluding bridge ends, use 12 inches of geotextile fabric wrapped No. 2 aggregate topped with 4 inches of DGA or CSB. Use either Type III or Type IV geotextile fabric. Flowable fill and cement stabilization may be used as an alternative to stabilize the existing base or to replace unsuitable materials when a plan for such is presented to and approved by the Engineer. The Engineer may also direct using only DGA or CSB to correct base deficiencies. At bridge ends, treat existing base and subgrade as the Contract specifies. During compaction, wet the base as the Engineer directs. Compact areas not accessible to compaction equipment by hand tamping.

3.2.2 Underdrains. Construct, or repair damage to, pavement edge drains according to Section 704. If underdrains are placed omitting areas to be patched, construct additional lateral drains as necessary to provide outlets for the installed underdrain until performing the pavement replacement and completing the underdrain system. Provide drainage for any undercut or base repair areas.

3.2.3 Pavement Replacement. Using load transfer assemblies for dowel joints drill into the existing slab according to the details shown herein and on the Standard Drawings.

Use plain epoxy coated dowels of the size specified on the standard

drawings based on the pavement thickness for contraction and expansion joints.

Drill holes for dowel bars and tie bars into the face of the existing slab, at a diameter as specified in the following. Drill the dowel bar holes and tie bar holes to a depth equal to 1/2 the length of the bars. Anchor tie bars into the existing pavement using an epoxy resin. Anchor dowel bars into the existing pavement using either an epoxy resin or an adhesive grout. For tie bars and dowel bars where an epoxy resin is to be used drill the holes 1/8 inch larger than the bar diameter. For dowel bars where an adhesive grout product is to be used, drill holes 1/4 inch larger than the bar diameter. Use a clear or opaque grout retention disk in both grout and epoxy applications. Operate the equipment to prevent damage to the pavement being drilled. Obtain the Engineer's approval of the drilling procedure. Install load transfer assemblies according to the Standard Drawings and Standard Specifications.

When indicated herein or in the Standard Drawings, use 1 inch deformed tie bars, 18 inches long on 30-inch centers and starting and ending 20 inches inside the edges of the repair area in the longitudinal joint. Use 1 inch deformed tie bars, or plain epoxy coated dowel bars sized in accordance with the Standard Drawings, 18 inches long beginning 12 inches inside of each edge and on 12-inch centers in transverse construction joints.

Install the dowels and tie bars according to Section 511 unless contradicted here. Ensure the holes are dry and free of dust and debris. Use a nozzle to insert the grout or epoxy starting at the back of the drilled hole to allow for full coating of the dowel or tie bar. After placement, use a bond breaker on the section of the dowel bar that is protruding from the hole.

Mix, place, finish, and cure concrete according to Section 501 with the exception that the Department will allow truck mixing, 2-bag mixers, and hand finishing.

When required, use a form on the side of the slab at longitudinal joints. When the adjacent traffic lane is not closed to traffic or the drop-off is not protected, temporarily fill the space between the form and the adjacent pavement with DGA. After placing the slab, remove the DGA and form. Fill the hole with concrete and thoroughly consolidate by rodding, spading, and sufficient vibration to form a dense homogeneous mass. Use a form on the side of the slab adjacent to shoulders. Excavate and backfill as shown on Section F'-F'.

For patches less than 25 feet in length, use a bond breaker and do not install tie bars at the longitudinal joint. Bond breakers should not exceed 1/8 inch in thickness, e.g. tar paper.

When resurfacing is required, a float finish is satisfactory. Otherwise, broom finish or, when the adjacent surface has a grooved finish, texture the surface according to Subsection 501.03.13 H). Finish the surface, including joints, to meet a surface tolerance of 1/8 inch in 10 feet that will be verified by straightedge. Cure the pavement and apply curing membranes according to 501.03.15.

Keep all pavement surfaces adjacent to this operation reasonably clean of excess grout and other materials at all times. Maintain all original longitudinal joints. Place transverse joints according to the details shown herein and on the Standard Drawings.

3.3 Joint Sealing. Seal all new or partially new joints with silicone rubber sealant or hot-poured elastic joint sealant according to Subsection 501.03.18.

4.0 MEASUREMENT.

4.1 Remove JPC Pavement. The Department will measure the quantity in square yards of surface area. The Department will not measure removal of underlying base material for payment and will consider it incidental to Remove JPC Pavement.

4.2 DGA or CSB. The Department will measure the quantity used to stabilize the existing base or to replace unsuitable material in tons. The Department will not measure removal of existing base material or underlying material for payment and will consider incidental to DGA or CSB. The quantity of DGA used for the drop-off protection shall be incidental to this work and will not be measured for payment.

4.3 JPC Pavement Non-Reinforced. The Department will measure according to 501.04.01. The Department will not measure dowels, tie bars, , or joint sealing for payment and will consider it incidental to Non-Reinforced JPC Pavement.

JPC Pavement will be paid according to section 5.0 below and according to the following payment schedule based on the compressive strength. The cylinders for payment will be tested two hours prior the scheduled opening of traffic.

3000 psi and up	100% payment
2750 to 3000 psi	75% payment and approval from the Engineer to open to traffic*
2500 to 2750 psi	50% payment and approval from the Engineer to open to traffic*
2250 to 2500 psi	25% payment and approval from the Engineer to open to traffic*
Below 2250 psi	10% payment and no potential to open to traffic. Maintain traffic closure until concrete reaches a minimum of 2250 psi.

*If the Engineer approves opening to traffic, the Engineer will evaluate the concrete at 28 days (or sooner) to determine if the removal and replacement of the concrete is necessary due to pavement distress induced by the early opening (i.e. noticeable cracking). If required by the Engineer, remove and replace those slabs showing distress at no cost to the Department.

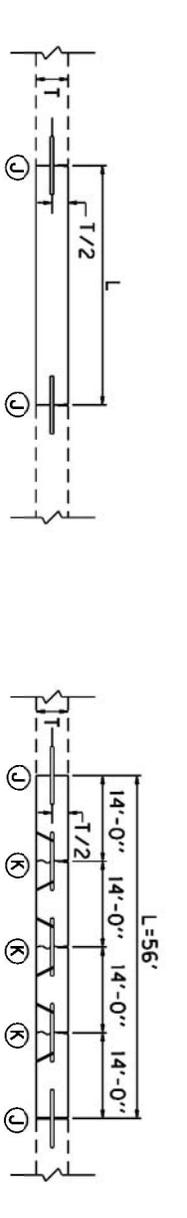
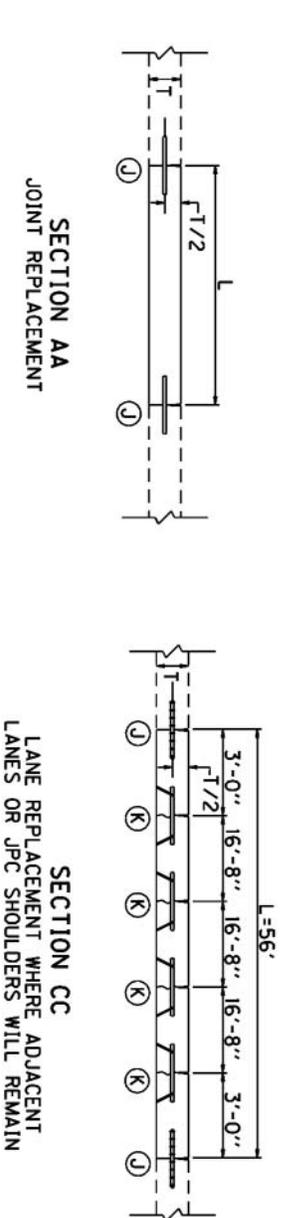
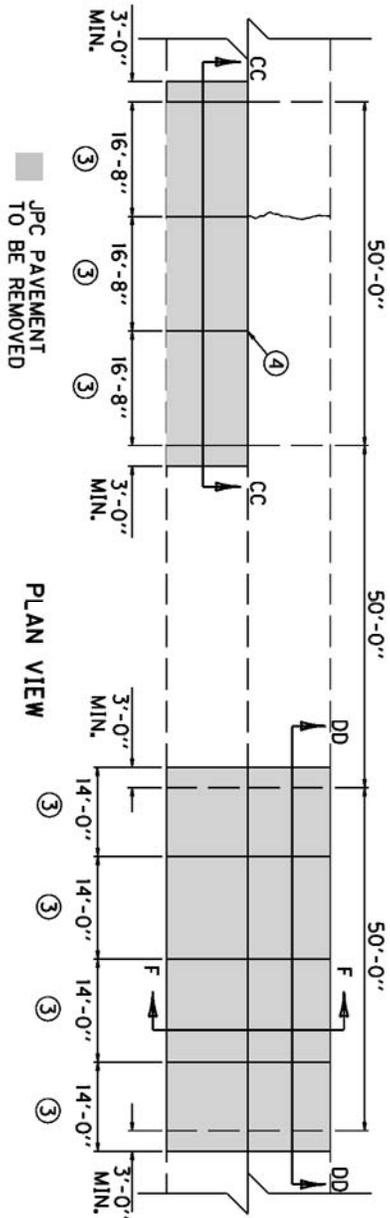
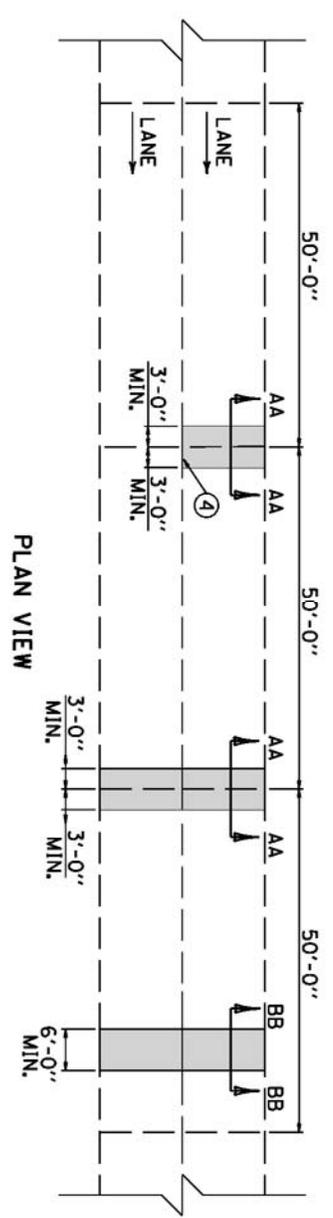
4.5 Underdrains. The Department will measure the quantity according to Subsection 704.04. The Department will not measure lateral drains for payment and will consider them incidental to the Underdrains.

5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
----	Remove JPC Pavement	Square Yard
00001	DGA Base	Ton
00003	Crushed Stone Base	Ton
02069-02071, 02073, 02075, 02084, 02086, 02088	JPC Pavement Non-Reinforced, thickness	See Subsection 501.05
01000	Perforated Pipe, 4-inch	Linear Foot
02598, 02599	Fabric-Geotextile, Type	Square Yard

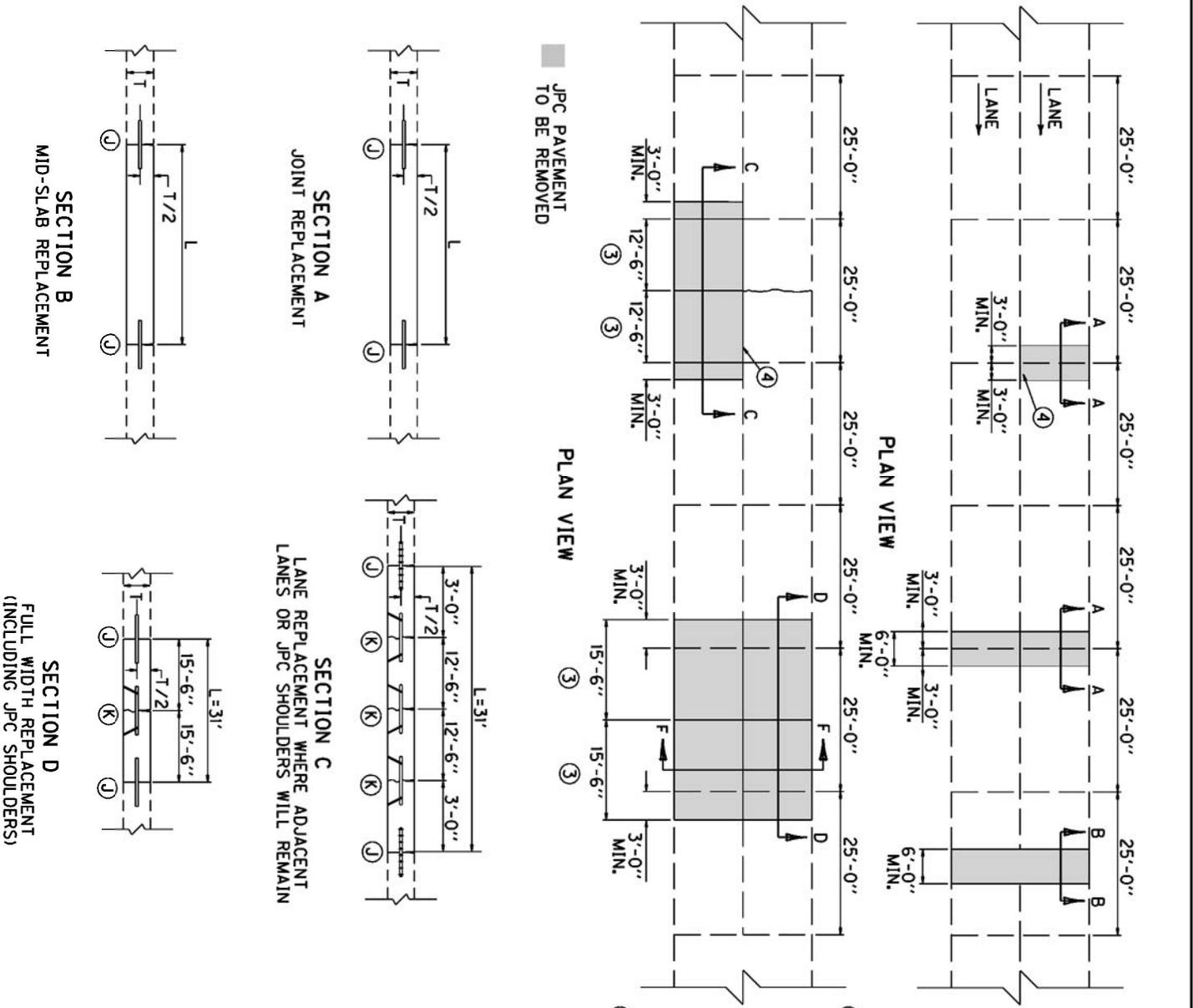
The Department will consider payment as full compensation for all work required in this provision.

September 9, 2010



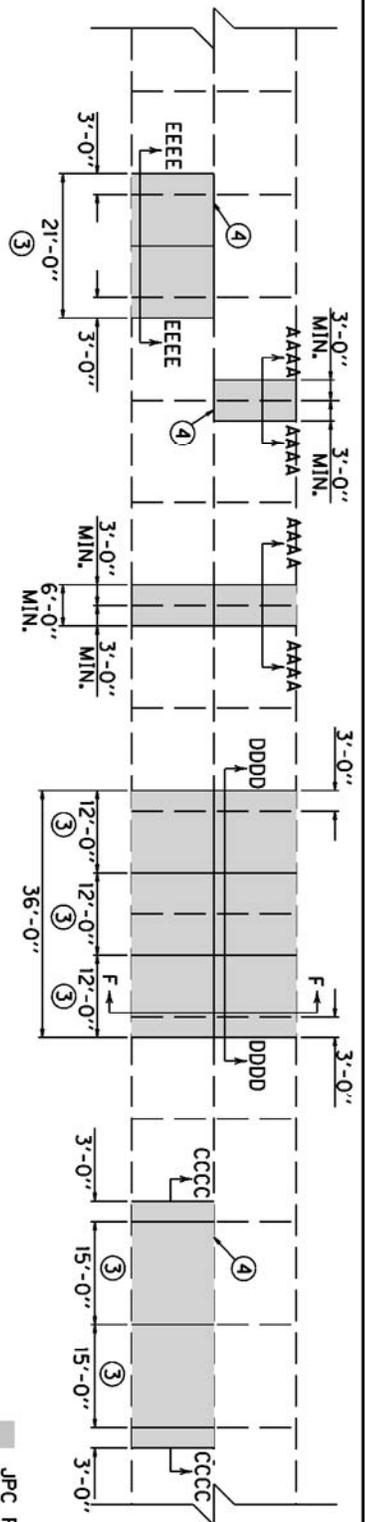
1. SAW AT LOCATIONS "J" AND ALONG LONGITUDINAL JOINT (IF ONLY ONE LANE IS REMOVED) FULL DEPTH WITHOUT DAMAGE TO EXISTING CONCRETE. SAW RELIEF JOINTS AS THE ENGINEER DIRECTS OR APPROVES. REMOVE THE EXISTING JPC PAVEMENT TO THE LENGTH AND AT THE LOCATIONS NOTED ELSEWHERE IN THE CONTRACT. L=6 FEET MINIMUM AND LOCATIONS "J" SHALL NOT BE CLOSER THAN 6 FEET TO ANY TRANSVERSE JOINT BEYOND THE REPAIR.
2. INSTALL SMOOTH, LOAD TRANSFER DOWELS (EXCEPT USE THE BARS FOR SECTION CC), 18 INCHES LONG (SEE STANDARD DRAWING NO. RPS-020 FOR DOWEL SIZE) AT LOCATIONS "J". INSTALL DOWELS (OR THE BARS FOR SECTION CC) IN THE EXISTING CONCRETE USING EPOXY TYPE IV. INSTALL DOWELS (OR THE BARS FOR SECTION CC) ON 12 INCH CENTERS BEGINNING 12 INCHES FROM THE EDGE OF THE SLAB.
3. IF L IS GREATER THAN 20 FEET, INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND CONSTRUCT CONTRACTION JOINTS SUCH THAT THE DISTANCE BETWEEN JOINTS IN THE REPLACED SECTION IS NO LESS THAN 10 FEET OR MORE THAN 20 FEET. TRANSVERSE JOINTS SHALL BE SPACED APPROXIMATELY 15'-EQUIDISTANT, BUT NOT LESS THAN 10 FEET OR NO MORE THAN 20 FEET. ADJUST JOINTS TO PROVIDE THE MINIMUM NUMBER OF JOINTS WITHOUT EXCEEDING THE 10-20 FOOT RANGE. INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND ALIGN LOAD TRANSFER ASSEMBLY(S) WITH AN EXISTING JOINT OR CRACK IN THE ADJACENT SLAB IF ONLY ONE LANE IS BEING REPLACED.
4. IF ONLY ONE LANE IS REMOVED, AND L > 25', INSTALL NEW 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS IN THE LONGITUDINAL JOINT USING EPOXY TYPE IV. IF 2 OR MORE LANES ARE REMOVED, CONSTRUCT LONGITUDINAL JOINT(S) ACCORDING TO THE STANDARD DRAWING EXCEPT USE 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS. IF L < 25', DO NOT TIE THE LONGITUDINAL JOINT TO THE EXISTING LANE; USE A BOND BREAKER MATERIAL APPROVED BY THE ENGINEER THAT WILL ASSURE NO INTERACTION WITH THE ADJACENT LANE.
5. REPLACE WITH NON-REINFORCED JPC PAVEMENT AND INSTALL CONTRACTION JOINTS AT LOCATIONS "K" AND CONTRACTION JOINTS (OR A CONSTRUCTION JOINT FOR LOCATION CC) AT LOCATIONS "J", SAW AND SEAL ALL JOINTS.
6. SEE "CROSS SECTION" FOR SECTION F.

KENTUCKY DEPARTMENT OF HIGHWAYS
50' JOINT SPACING
SUBMITTED _____ TEAM DIVISION OF DESIGN _____ DATE _____



1. SAW AT LOCATIONS "J" AND ALONG LONGITUDINAL JOINT (IF ONLY ONE LANE IS REMOVED) FULL DEPTH WITHOUT DAMAGE TO EXISTING CONCRETE. SAW RELIEF JOINTS AS THE ENGINEER DIRECTS OR APPROVES. REMOVE THE EXISTING JPC PAVEMENT TO THE LENGTH AND AT THE LOCATIONS NOTED ELSEWHERE IN THE CONTRACT. L=6 FEET MINIMUM AND LOCATIONS "J" SHALL NOT BE CLOSER THAN 6 FEET TO ANY TRANSVERSE JOINT BEYOND THE REPAIR.
2. INSTALL SMOOTH, LOAD TRANSFER DOWELS (EXCEPT USE THE BARS FOR SECTION C). 18 INCHES LONG (SEE STANDARD DRAWING NO. RPS-020 FOR DOWEL SIZE) AT LOCATIONS "J". INSTALL DOWELS (OR THE BARS FOR SECTION C) IN THE EXISTING CONCRETE USING EPOXY TYPE IV. INSTALL DOWELS (OR THE BARS FOR SECTION C) ON 12 INCH CENTERS BEGINNING 12 INCHES FROM THE EDGE OF THE SLAB.
3. IF L IS GREATER THAN 20 FEET, INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND CONSTRUCT CONTRACTION JOINTS SUCH THAT THE DISTANCE BETWEEN JOINTS IN THE REPLACED SECTION IS NO LESS THAN 10 FEET OR MORE THAN 20 FEET. TRANSVERSE JOINTS SHALL BE SPACED APPROXIMATELY 15' EQUIDISTANT, BUT NOT LESS THAN 10 FEET OR NO MORE THAN 20 FEET. ADJUST JOINTS TO PROVIDE THE MINIMUM NUMBER OF JOINTS WITHOUT EXCEEDING THE 10-20 FOOT RANGE. INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND ALIGN LOAD TRANSFER ASSEMBLY(S) WITH AN EXISTING JOINT OR CRACK IN THE ADJACENT SLAB IF ONLY ONE LANE IS BEING REPLACED.
4. IF ONLY ONE LANE IS REMOVED, AND L ≥ 25', INSTALL NEW 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS IN THE LONGITUDINAL JOINT USING EPOXY TYPE IV. IF 2 OR MORE LANES ARE REMOVED, CONSTRUCT LONGITUDINAL JOINTS ACCORDING TO THE STANDARD DRAWING EXCEPT USE 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS. IF L ≥ 25', DO NOT TIE THE LONGITUDINAL JOINT TO THE EXISTING LANE. USE A BOND BREAKER MATERIAL APPROVED BY THE ENGINEER THAT WILL ASSURE NO INTERACTION WITH THE ADJACENT LANE.
5. REPLACE WITH NON-REINFORCED JPC PAVEMENT AND INSTALL CONTRACTION JOINTS AT LOCATIONS "K" AND CONTRACTION JOINTS (OR A CONSTRUCTION JOINT FOR LOCATION C) AT LOCATIONS "J". SAW AND SEAL ALL JOINTS.
6. SEE "CROSS SECTION" FOR SECTION F.

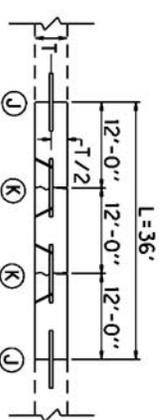
KENTUCKY DEPARTMENT OF HIGHWAYS
25' JOINT SPACING
APPROVED _____ DATE _____ TEAM DIVISION OF DESIGN



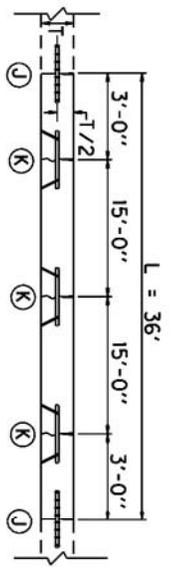
PLAN VIEW



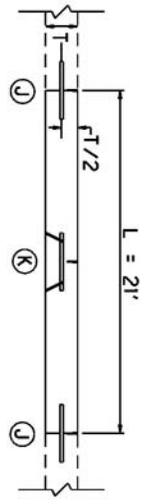
SECTION AAAA
JOINT REPLACEMENT



SECTION DDDD
FULL WIDTH REPLACEMENT
(INCLUDING JPC SHOULDERS)



SECTION CCCC
LANE REPLACEMENT WHERE ADJACENT
LANES OR JPC SHOULDERS WILL REMAIN



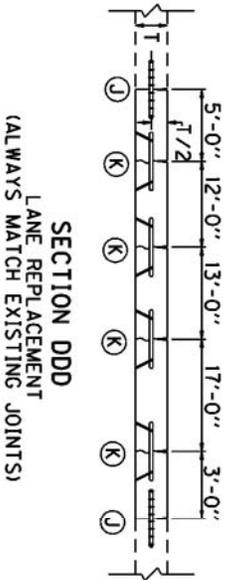
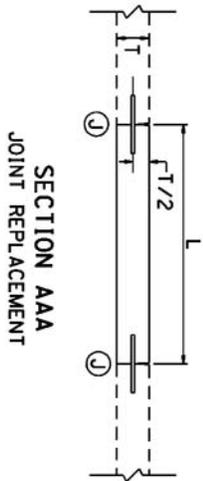
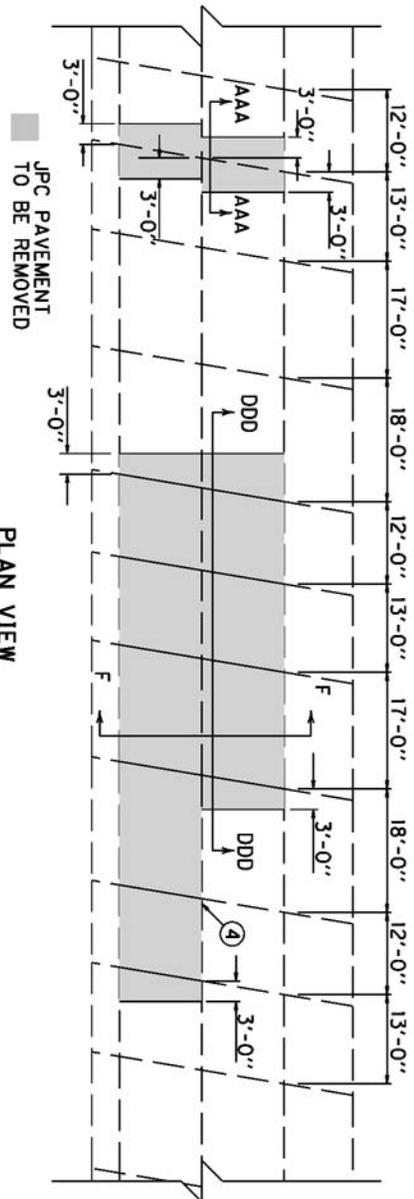
SECTION EEEE
LANE REPLACEMENT L&25'

1. SAW AT LOCATIONS "J" AND ALONG LONGITUDINAL JOINT IF ONLY ONE LANE IS REMOVED. FULL DEPTH WITHOUT DAMAGE TO EXISTING CONCRETE. SAW RELIEF JOINTS AS THE ENGINEER DIRECTS OR APPROVES. REMOVE THE EXISTING JPC PAVEMENT TO THE LENGTH AND AT THE LOCATIONS NOTED ELSEWHERE IN THE CONTRACT. L=6 FEET MINIMUM AND LOCATIONS "J" SHALL NOT BE CLOSER THAN 6 FEET TO ANY TRANSVERSE JOINT BEYOND THE REPAIR.
2. INSTALL SMOOTH, LOAD TRANSFER DOWELS (EXCEPT USE TIE BARS FOR SECTION CCCC), 18 INCHES LONG (SEE STANDARD DRAWING NO. RPS-020 FOR DOWEL SIZE) AT LOCATIONS "J". INSTALL DOWELS (OR TIE BARS FOR SECTION CCCC) IN THE EXISTING CONCRETE USING EPOXY TYPE IV. INSTALL DOWELS (OR TIE BARS FOR SECTION CCCC) ON 12 INCH CENTERS BEGINNING 12 INCHES FROM THE EDGE OF THE SLAB.
3. IF L IS GREATER THAN 20 FEET, INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND CONSTRUCT CONTRACTION JOINTS SUCH THAT THE DISTANCE BETWEEN JOINTS IN THE REPLACED SECTION IS NO LESS THAN 10 FEET OR MORE THAN 20 FEET. TRANSVERSE JOINTS SHALL BE SPACED APPROXIMATELY 15' EQUIDISTANT, BUT NOT LESS THAN 10 FEET OR NO MORE THAN 20 FEET. ADJUST JOINTS TO PROVIDE THE MINIMUM NUMBER OF JOINTS WITHOUT EXCEEDING THE 10-20 FOOT RANGE. INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND ALIGN LOAD TRANSFER ASSEMBLY(S) WITH AN EXISTING JOINT OR CRACK IN THE ADJACENT SLAB IF ONLY ONE LANE IS BEING REPLACED.
4. IF ONLY ONE LANE IS REMOVED, AND L > 25', INSTALL NEW 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS IN THE LONGITUDINAL JOINT USING EPOXY TYPE IV. IF 2 OR MORE LANES ARE REMOVED, CONSTRUCT LONGITUDINAL JOINT(S) ACCORDING TO THE STANDARD DRAWING EXCEPT USE 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS. IF L < 25', DO NOT TIE THE LONGITUDINAL JOINT TO THE EXISTING LANE. USE A BOND BREAKER MATERIAL APPROVED BY THE ENGINEER THAT WILL ASSURE NO INTERACTION WITH THE ADJACENT LANE.
5. REPLACE WITH NON-REINFORCED JPC PAVEMENT AND INSTALL CONTRACTION JOINTS AT LOCATIONS "K" AND CONTRACTION JOINTS (OR A CONSTRUCTION JOINT FOR LOCATION CCCC) AT LOCATIONS "J".
6. SEE "CROSS SECTION" FOR SECTION F.

KENTUCKY
DEPARTMENT OF HIGHWAYS

15' JOINT SPACING

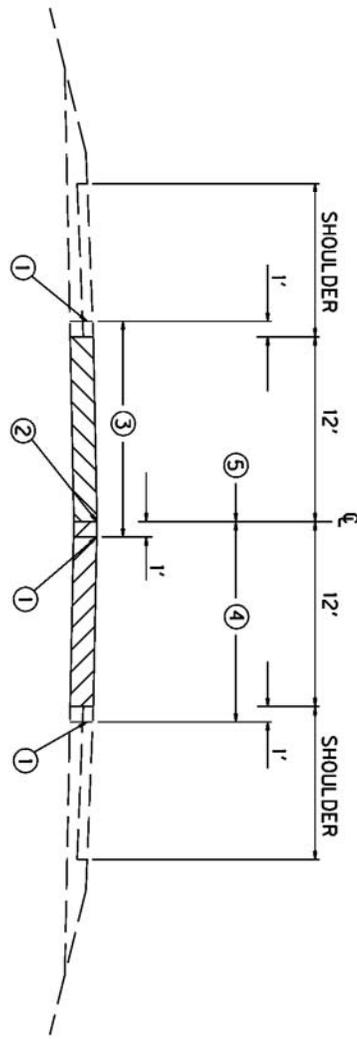
APPROVED _____ DATE _____
18th DIVISION OF DESIGN



1. SAW AT LOCATIONS "J" AND ALONG LONGITUDINAL JOINT (IF ONLY ONE LANE IS REMOVED) FULL DEPTH WITHOUT DAMAGE TO EXISTING CONCRETE. SAW RELIEF JOINTS AS THE ENGINEER DIRECTS OR APPROVES. REMOVE THE EXISTING JPC PAVEMENT TO THE LENGTH AND AT THE LOCATIONS NOTED ELSEWHERE IN THE CONTRACT. L=6 FEET MINIMUM AND LOCATIONS "J" SHALL NOT BE CLOSER THAN 6 FEET TO ANY TRANSVERSE JOINT BEYOND THE REPAIR.
2. INSTALL SMOOTH, LOAD TRANSFER DOWELS (EXCEPT USE TIE BARS FOR SECTION DDD), 18 INCHES LONG (SEE STANDARD DRAWING NO. RPS-020 FOR DOWEL SIZE) AT LOCATIONS "J". INSTALL DOWELS (OR TIE BARS FOR SECTION DDD) IN THE EXISTING CONCRETE USING EPOXY TYPE IV. INSTALL DOWELS (OR TIE BARS FOR SECTION DDD) ON 12 INCH CENTERS BEGINNING 12 INCHES FROM THE EDGE OF THE SLAB.
3. IF L IS GREATER THAN 20 FEET, INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND MATCH EXISTING JOINTS. INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND ALIGN LOAD TRANSFER ASSEMBLY(S) WITH EXISTING JOINTS IN ADJACENT SLABS.
4. IF ONLY ONE LANE IS REMOVED, AND L > 25', INSTALL NEW 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS IN THE LONGITUDINAL JOINT USING EPOXY TYPE IV. IF 2 OR MORE LANES ARE REMOVED, CONSTRUCT LONGITUDINAL JOINT(S) ACCORDING TO THE STANDARD DRAWING EXCEPT USE 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS. IF L < 25', DO NOT TIE THE LONGITUDINAL JOINT TO THE EXISTING LANE; USE A BOND BREAKER MATERIAL APPROVED BY THE ENGINEER THAT WILL ASSURE NO INTERACTION WITH THE ADJACENT LANE.
5. REPLACE WITH NON-REINFORCED JPC PAVEMENT AND INSTALL CONTRACTION JOINTS AT LOCATIONS "K" AND CONTRACTION JOINTS (OR A CONSTRUCTION JOINT FOR LOCATION DDD) AT LOCATIONS "J". SAW AND SEAL ALL JOINTS.
6. SEE "CROSS SECTION" FOR SECTION F.

KENTUCKY
DEPARTMENT OF HIGHWAYS
RANDOM SKEWED

APPROVED _____ TEAM DIVISION OF DESIGN _____ DATE _____



SECTION F

- ① SAW-CUT LINE. THIS ONE FOOT IS TO ALLOW FOR A FORM AND THE REMOVAL AND REPLACEMENT SHALL BE INCIDENTAL TO THE WORK, EXCEPT NEW ASPHALT MIXTURE SHALL BE PAID DIRECT ON A TONNAGE BASIS, AND NEW JPC PAVEMENT WILL BE PAID BY THE SQUARE YARD. COMPACT THE DGA BASE BY MECHANICAL TAMPERS TO THE ENGINEER'S SATISFACTION.
- ② EXISTING LONGITUDINAL JOINT.
- ③ FIRST SLAB REMOVAL LIMITS AND REPLACE 12-FOOT LANE.
- ④ SECOND SLAB REMOVAL LIMITS AND REPLACE 12-FOOT LANE.
- ⑤ THIS ONE FOOT IS TO ALLOW FOR A FORM ON THE FIRST POUR, AND A TEMPORARY PAVEMENT IS REQUIRED. THE DEPARTMENT WILL NOT REQUIRE REMOVAL OF THIS ONE FOOT IF THE GRADE OF THE EXISTING PAVEMENT IS ADEQUATE TO ENSURE THE NEW CONCRETE CAN BE PLACED AND FINISHED TO THE SATISFACTION OF THE ENGINEER. ANY TEMPORARY PAVEMENT IS INCIDENTAL TO JPC PAVEMENT.
6. THE ABOVE DRAWING DEPICTS THE ORDER OF SLAB REMOVAL WHEN BOTH ARE TO BE REMOVED AT THE SAME LOCATION, WHEN ONLY ONE SLAB OR LANE IS TO BE REMOVED, REMOVE AND REPLACE ACCORDING TO SECTION C, CC, OR CCCC. TRAFFIC CONTROL WILL SPECIFY WHICH LANE TO REMOVE FIRST.

KENTUCKY
DEPARTMENT OF HIGHWAYS

CROSS SECTION

APPROVED _____
TECH. DIVISION OR DESIG. _____ DATE _____

SPECIAL NOTE FOR REFERENCES TO SPECIAL PROVISION 76

Special Provision 76 has been superseded by the Special Note for Full Depth Concrete Pavement Repair and the Special Note for Partial Depth Concrete Pavement Repair. Apply these notes for any references to Special Provision 76.

1/5/12

**I-471, Campbell County
Item Number: 6-2021.00**

**SPECIAL NOTE
ALTERNATE PAVEMENT BID ADJUSTMENT**

This project includes alternate bidding for asphalt or concrete pavement. There are specific items listed for each pavement type to be bid with the alternate selected by the Contractor. There is also a line item in the alternate categories for each alternate to adjust for the projected out-year life-cycle costs to the Cabinet. These line item adjustments are as follows:

Asphalt Pavement Adjustment= **\$2,084,493**

Concrete Pavement Adjustment= **\$1,437,067**

NOTE: The Concrete Pavement Adjustment will be the same regardless of the shoulder alternate chosen.

The amount reflective of the pavement type selected by each contractor will be added to their respective bid for comparison of the low bid. The adjustment *shall be used only for determination of the lowest bidder and shall not be used to determine the final payment* to the contractor when the project is completed.

Please note that these adjustments should not be used for the calculation of the maximum Mobilization amount and are not required to be included in the minimum Demobilization amount.

Proposal Guaranty

As a supplement to Section 102 of the 2008 Standard Specifications, it will not be necessary for the Proposal Guaranty to include an amount necessary to cover the amount of the bid adjustment.

I-471
Campbell County
IM NH 471-7 (034)
Item Number 6-2021.00

January 12, 2012

**SPECIAL NOTE
FOR
FIXED COMPLETION DATES AND DISINCENTIVE FEES
“A+B”**

Fixed Completion Dates and “A+B” Bidding

The procedure for evaluation of bids on this project involves an “A+B” concept.

The “A” component of the bid involves the dollar amount for all work to be performed under the contract.

The “B” component(s) involves the number of directional days that **mainline I-471 from Station 85+00 to the Ohio River Bridge** is restricted to two (2) lanes of traffic Monday through Friday (6am-10am Northbound and 2pm-7pm Southbound).

This project will have an interim fixed completion date of **December 1, 2012** for completion of all work Northbound and a fixed completion date of **December 1, 2013** for completion of all work Southbound.

A disincentive fee of **\$10,000 per day** will be charged for each calendar day that all Northbound work is not completed after **December 1, 2012**. A disincentive fee of **\$10,000 per day** will be charged for each calendar day that all Southbound work is not complete after **December 1, 2013**. These fees are in addition to contract liquidated damages per the Standard Specifications.

Contrary to Section 108.09 of the Standard Specifications, **the \$10,000 per day disincentive and/or contract liquidated damages will be charged during the months of December through March if all required work is not complete.**

Preparation of Bid Proposal

The work is to be performed in a high traffic area. There are phases identified in the project that will require the contractor to reduce mainline I-471 to two (2) through lanes in either direction. The weekday peak hour traffic is such that having only two through lanes open may create significant traffic delays. To reduce the disruption to the travelling public the contractor(s) will bid the number of weekdays of 2-lane restriction (Monday through Friday, 6am-10am NB or 2pm-7pm SB) that will be required to construct the typical section proposed.

In addition to the requirements of Section 102 of the Standard Specifications, the bidder shall establish the total number of days Northbound and Southbound that I-471 will be restricted to two (2) lanes of traffic between Station 85+00 and the Ohio River necessary to complete the work in accordance with the plans and specifications and show these numbers in the bid proposal. For the purposes of bidding this contract all bidders will bid the number of days northbound (B_N) and southbound (B_S) necessary to complete all work requiring mainline I-471 to be restricted to two lanes. The B components will have a daily dollar amount that will be used to calculate the total “B”

component for bid comparison purposes. The value of each directional day of work will be the following:

$$B_N = \$25,000$$

$$B_S = \$50,000$$

A maximum of 150 days in each direction will be allowed to be bid for this project.

Proposal Guaranty

As a supplement to Section 102 of the 2008 Standard Specifications, it will not be necessary for the Proposal Guaranty to include an amount necessary to cover the product of days bid times the daily cost.

Consideration of Bids

Each bid submitted shall consist of three parts:

- A The dollar amount for all work to be performed under the contract.
- B_N The number of affected weekdays of I-471 2-lane restriction Northbound
- B_S The number of affected weekdays of I-471 2-lane restriction Southbound

The lowest and best bid will be determined by the Department as the lowest combination of the three parts according to the following formula:

$$BID = A + [B_N]25,000 + [B_S]50,000$$

Disincentive Fees for Work Beyond the Days Bid

Upon the beginning of weekday peak-hour 2-lane restriction to either NB or SB I-471, time will be charged against the respective B component. A day will be charged for any day that a 2-lane restriction exists for any amount of time between 6am and 10am Northbound or 2pm-7pm Southbound. After the number of days bid in a direction is reached any subsequent restriction to 2-lanes in that direction of travel during the specified peak hours will result in a disincentive charge to the contractor. The following disincentive schedule will be applied for each hour or fraction of an hour if any lane closures are in place beyond the period(s) bid:

Table 1. Disincentive Schedule for All Mainline I-471 Reconstruction work

Time of Closure	Disincentive Fee (\$/hr)	
	Northbound	Southbound
6:00AM-10:00AM	\$6,250	N/A
2:00PM-7:00PM	N/A	\$10,000

The disincentive fees for work beyond the number of days bid per direction will be charged in addition to any other disincentive fees or liquidated damages if the work continues beyond the fixed completion dates listed above.

Contrary to Section 108.09 of the Standard Specifications, **the \$6,250 or \$10,000 per hour disincentives will be charged during the months of December through March if I-471 is restricted to 2 lanes NB or SB, respectively, during the weekday peak times listed above.**

THERE IS NO MAXIMUM OR CAP TO DISINCENTIVE FEES FOR THIS PROJECT.

Ramp Closures

There are ramps identified in the plans that will be allowed to be closed to facilitate work on the project. The allowable closures are listed in the plans. Any ramp that remains closed beyond 6:00AM on the Monday morning it is be opened or that is closed prior to 8:00PM on Friday will be charged disincentive fees based on the schedule below:

Table 2. Disincentive Schedule for Ramp Closures

Time of Lane Closure	Disincentive Fee (\$/hr)
First Hour	\$4,000
Successive Hours	\$8,000

Special Note for Erosion Prevention and Sediment Control _Campbell_ County / Item No 6-2021.00

The Contractor shall be responsible for filing the Kentucky Pollution Discharge Elimination System (KPDES) KYR10 permit Notice of Intent (NOI) with the Kentucky Division of Water (DOW) and any KPDES local Municipal Separate Storm Sewer System (MS4) program that has jurisdiction. The NOI shall name the contractor as the Facility Operator and include the KYTC Contract ID Number (CID) for reference.

The Contractor shall perform all temporary erosion/sediment control functions including: providing a Best Management Practice (BMP) Plan, conducting required inspections, modifying the BMP plan documents as construction progresses and documenting the installation and maintenance of BMPs in conformance with the KPDES KYR10 permit dated September 30, 2003 or a permit re-issued to replace the KYR10 permit. This work shall be conducted in conformance with the requirements of Section 213 of KYTC 2008 Department of Highways, Standard Specifications for Road and Bridge Construction.

Contrary to Section 213.03.03, paragraph 2, the Engineer shall conduct inspections as needed to verify compliance with Section 213 of KYTC 2008 Department of Highways, Standard Specifications for Road and Bridge Construction. The Engineer's inspections shall be performed a minimum of once per month and within seven days after a storm of ½ inch or greater. Copies of the Engineer's inspections shall not be provided to the contractor unless improvements to the BMP's are required. The contractor shall initiate corrective action within 24 hours of any reported deficiency and complete the work within 5 days. The Engineer shall use Form TC 63-61 A for this report. Inspections performed by the Engineer do not relieve the Contractor of any responsibility for compliance with the KPDES permit.

Contrary to Section 213.05, bid items for temporary BMPs will not be listed and will be replaced with one lump sum item for the services. Payment will be pro-rated based on the Project Schedule as submitted by the Contractor and as agreed to by the Engineer.

The contractor shall be responsible for applying "good engineering practices" as required by the KPDES permit. The contractor may use any temporary BMPs with the approval of the KYTC Engineer.

The contractor shall provide the Engineer copies of all documents required by the KPDES permit at the time they are prepared.

The contractor shall be responsible for the examination of the soils to be encountered and make his own independent determination of the temporary BMPs that will be required to accomplish effective erosion prevention and sediment control.

The Contractor shall be responsible for filing the KPDES permit Notice of Termination (NOT) with the Kentucky DOW and any local MS4 program that has jurisdiction. The NOT shall be filed after the Engineer agrees that the project is stabilized or the project has been formally accepted.

SPECIAL PROVISION FOR WASTE AND BORROW SITES

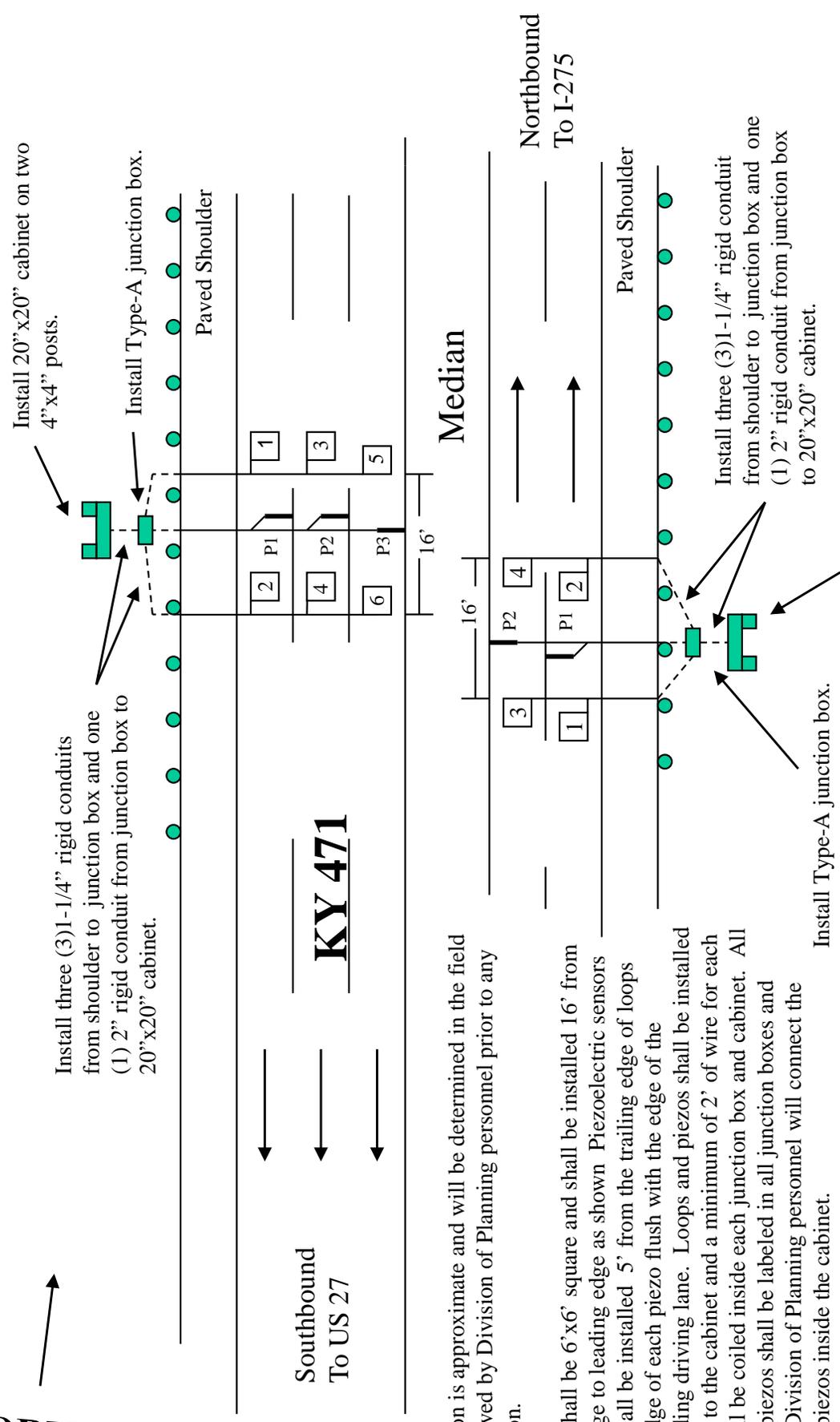
Obtain U.S. Army Corps of Engineer's approval before utilizing a waste or borrow site that involves "Waters of the United States". The Corps of Engineers defines "Waters of the United States" as perennial or intermittent streams, ponds or wetlands. The Corps of Engineers also considers ephemeral streams, typically dry except during rainfall but having a defined drainage channel, to be jurisdictional waters. Direct questions concerning any potential impacts to "Waters of the United States" to the attention of the appropriate District Office for the Corps of Engineers for a determination prior to disturbance. Be responsible for any fees associated with obtaining approval for waste and borrow sites from the U.S. Army Corps of Engineer or other appropriate regulatory agencies.

1-296 Waste & Borrow Sites
01/02/2012

Site Drawing Campbell Co., KY 471, STA. 812, MP~0.18

Figure 1

NORTH



Site location is approximate and will be determined in the field and approved by Division of Planning personnel prior to any construction.

All loops shall be 6'x6' square and shall be installed 16' from leading edge to leading edge as shown. Piezoelectric sensors (piezos) shall be installed 5' from the trailing edge of loops with the edge of each piezo flush with the edge of the corresponding driving lane. Loops and piezos shall be installed splice-free to the cabinet and a minimum of 2' of wire for each sensor shall be coiled inside each junction box and cabinet. All loops and piezos shall be labeled in all junction boxes and cabinets. Division of Planning personnel will connect the loops and piezos inside the cabinet.

DRAWING NOT TO SCALE

9/6/2011

Site Drawing

Campbell Co., I-471, Station P96, MP~1.4

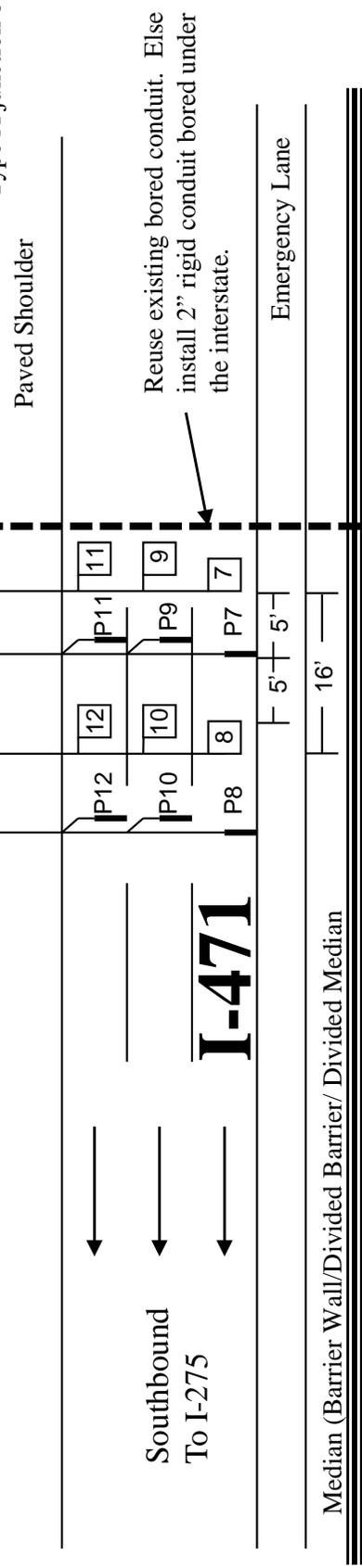


Figure 2

Install two (2) Type A Junction boxes with four (4) 2" rigid conduits from shoulder and one (1) 2" rigid conduit between them.

Reuse existing conduit. Else, install two (2) 2" rigid conduits from Type C junction box to existing cabinet.

Reuse existing ARTIMIS box. Else, install one (1) Type C Junction box with one (1) 2" rigid conduit from Type A junction box.



Reuse existing bored conduit. Else install 2" rigid conduit bored under the interstate.

Site location is approximate. Site location will be determined in the field and approved by Division of Planning personnel prior to any construction.

All loops shall be 6'x6' square and shall be installed 16' from leading edge to leading edge as shown. Piezoelectric sensors (piezos) shall be installed 5' from the trailing edge of loops with the edge of each piezo flush with the edge of the corresponding driving lane. Loops and piezos shall be installed splice-free to the cabinet and a minimum of 2' of wire for each sensor shall be coiled inside each junction box and cabinet. All loops and piezos shall be labeled in all junction boxes and cabinets. Division of Planning personnel will connect the loops and piezos inside the cabinet.

Reuse existing ARTIMIS box. Else, install one (1) Type C Junction box with one (1) 2" rigid conduit from Type A junction box leading to 2" rigid conduit bored under the interstate..

Install two (2) Type A Junction boxes with four (4) 2" rigid conduits from shoulder and one (1) 2" rigid conduit between them.

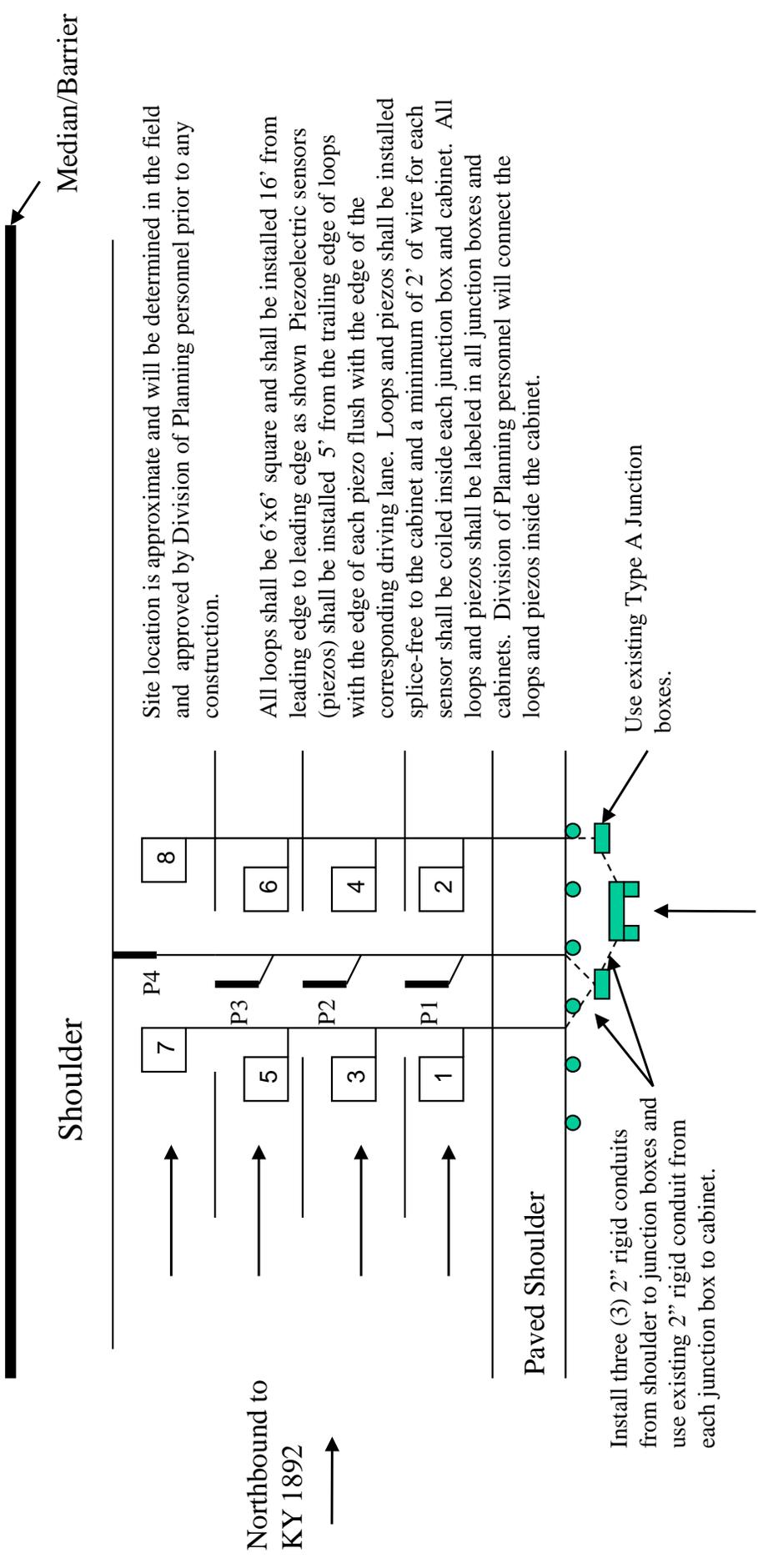
9/6/2011

DRAWING NOT TO SCALE

Site Drawing Campbell Co., I-471, Station 814, MP~2.3 NB Direction



Figure 3a



Site location is approximate and will be determined in the field and approved by Division of Planning personnel prior to any construction.

All loops shall be 6'x6' square and shall be installed 16' from leading edge to leading edge as shown. Piezoelectric sensors (piezos) shall be installed 5' from the trailing edge of loops with the edge of each piezo flush with the edge of the corresponding driving lane. Loops and piezos shall be installed splice-free to the cabinet and a minimum of 2' of wire for each sensor shall be coiled inside each junction box and cabinet. All loops and piezos shall be labeled in all junction boxes and cabinets. Division of Planning personnel will connect the loops and piezos inside the cabinet.

Install three (3) 2" rigid conduits from shoulder to junction boxes and use existing 2" rigid conduit from each junction box to cabinet.

Use existing Type A Junction boxes.

Use existing 20"x20" galvanized steel cabinet.

9/6/2011

DRAWING NOT TO SCALE

Site Drawing Campbell Co., I-471, Station 814, MP~2.3 SB Direction

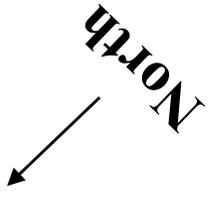
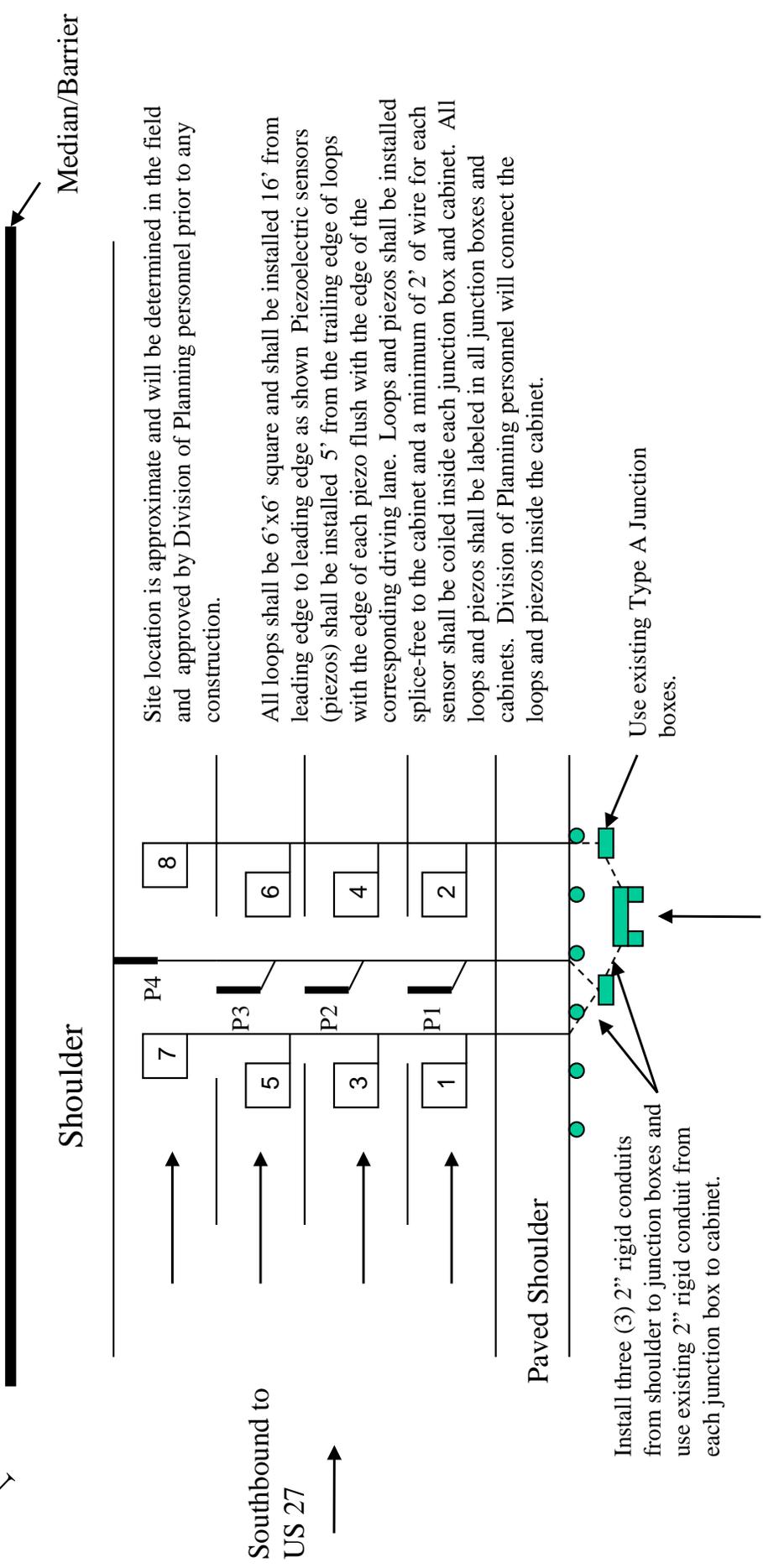


Figure 3b



Site location is approximate and will be determined in the field and approved by Division of Planning personnel prior to any construction.

All loops shall be 6'x6' square and shall be installed 16' from leading edge to leading edge as shown. Piezoelectric sensors (piezos) shall be installed 5' from the trailing edge of loops with the edge of each piezo flush with the edge of the corresponding driving lane. Loops and piezos shall be installed splice-free to the cabinet and a minimum of 2' of wire for each sensor shall be coiled inside each junction box and cabinet. All loops and piezos shall be labeled in all junction boxes and cabinets. Division of Planning personnel will connect the loops and piezos inside the cabinet.

Use existing Type A Junction boxes.

Install three (3) 2" rigid conduits from shoulder to junction boxes and use existing 2" rigid conduit from each junction box to cabinet.

Use existing 20"x20" galvanized steel cabinet.

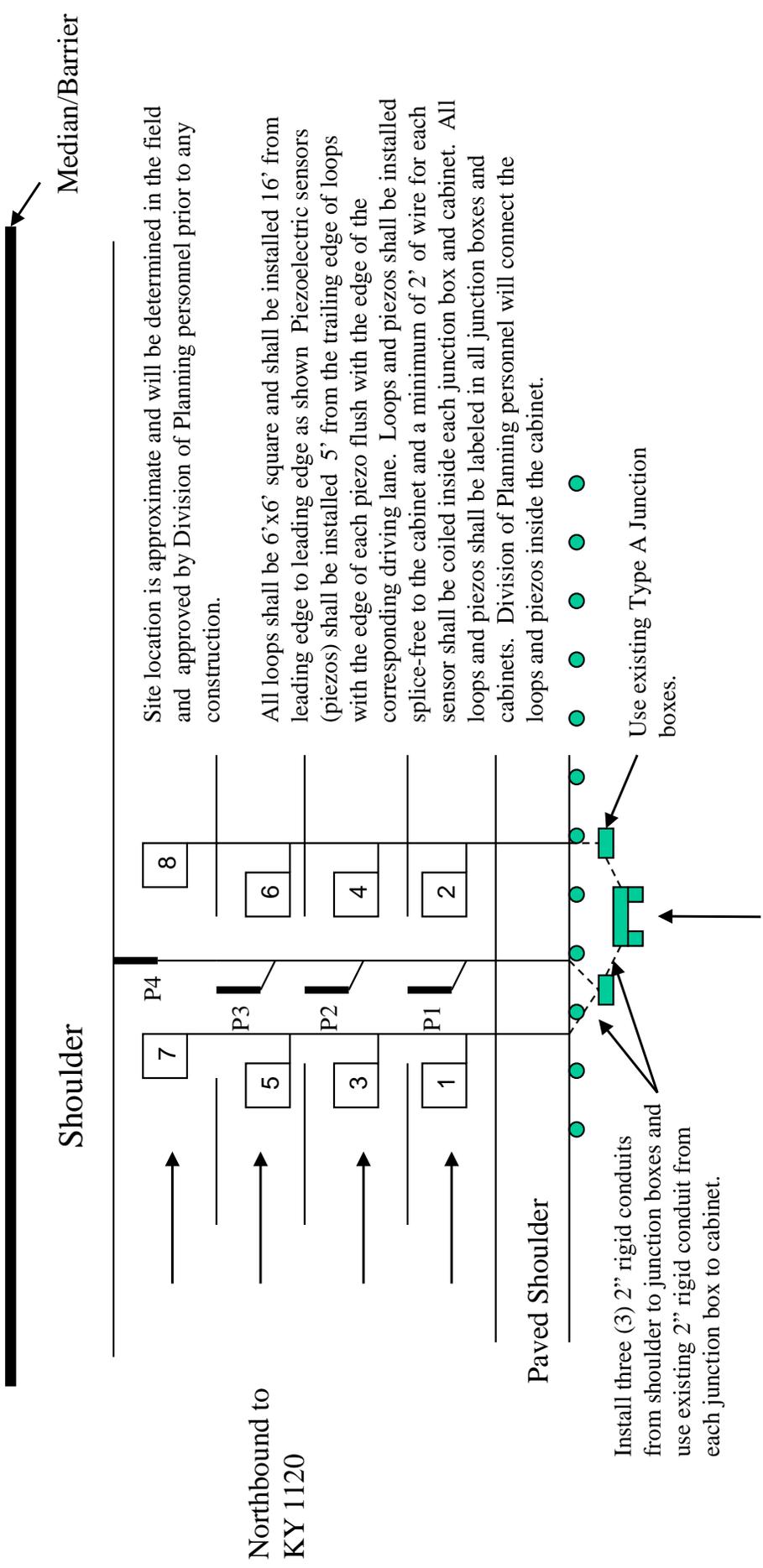
9/6/2011

DRAWING NOT TO SCALE

Site Drawing Campbell Co., I-471, Station 815, MP~3.4 NB Direction



Figure 4a



Site location is approximate and will be determined in the field and approved by Division of Planning personnel prior to any construction.

All loops shall be 6'x6' square and shall be installed 16' from leading edge to leading edge as shown. Piezoelectric sensors (piezos) shall be installed 5' from the trailing edge of loops with the edge of each piezo flush with the edge of the corresponding driving lane. Loops and piezos shall be installed splice-free to the cabinet and a minimum of 2' of wire for each sensor shall be coiled inside each junction box and cabinet. All loops and piezos shall be labeled in all junction boxes and cabinets. Division of Planning personnel will connect the loops and piezos inside the cabinet.

Use existing Type A Junction boxes.

Install three (3) 2" rigid conduits from shoulder to junction boxes and use existing 2" rigid conduit from each junction box to cabinet.

Use existing 20"x20" galvanized steel cabinet.

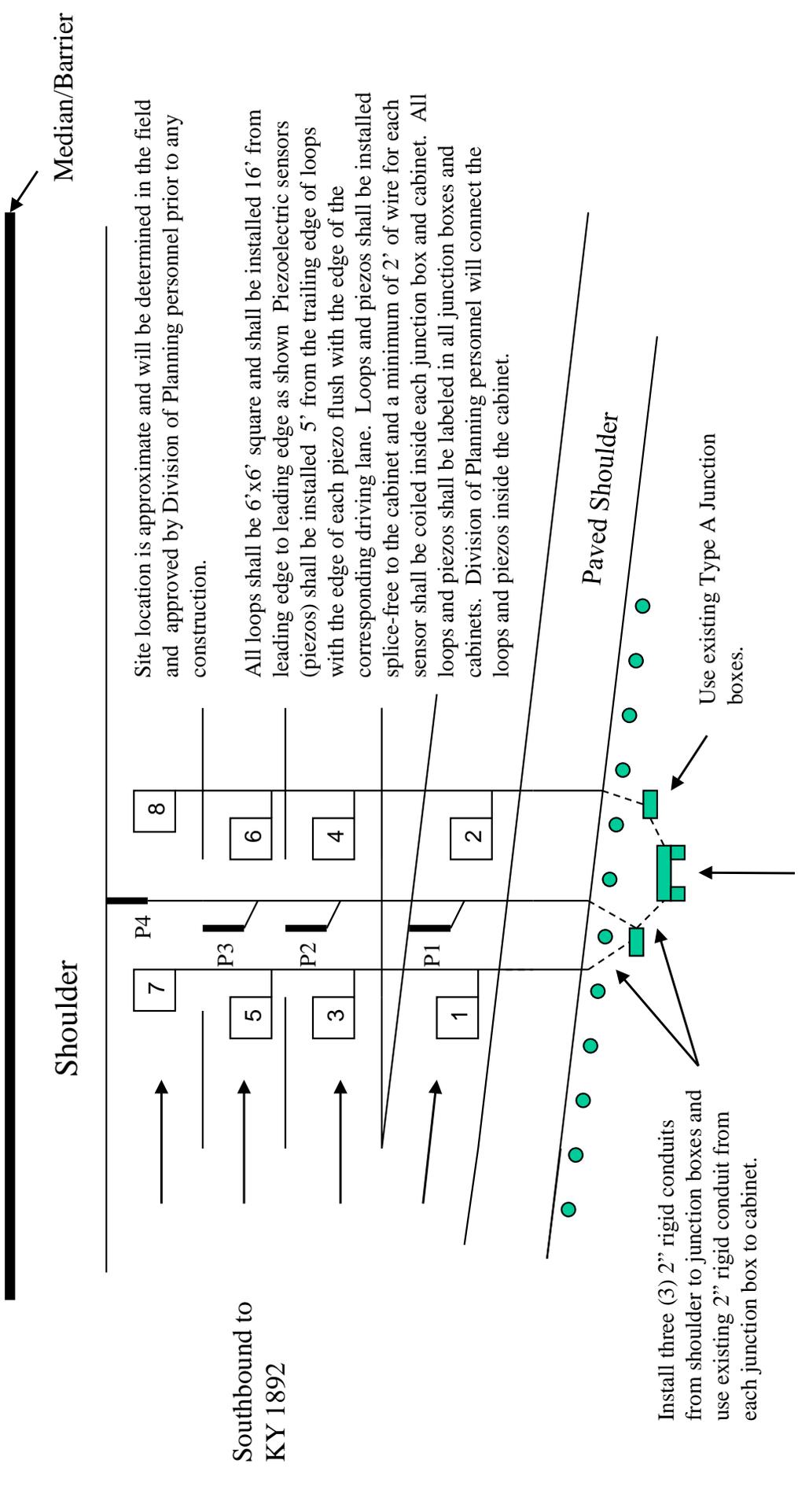
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Site Drawing Campbell Co., I-471, Station 815, MP~3.4 SB Direction

North
↓

Figure 4b



DRAWING NOT TO SCALE

Use existing 20" x 20" galvanized steel cabinet.

Install three (3) 2" rigid conduits from shoulder to junction boxes and use existing 2" rigid conduit from each junction box to cabinet.

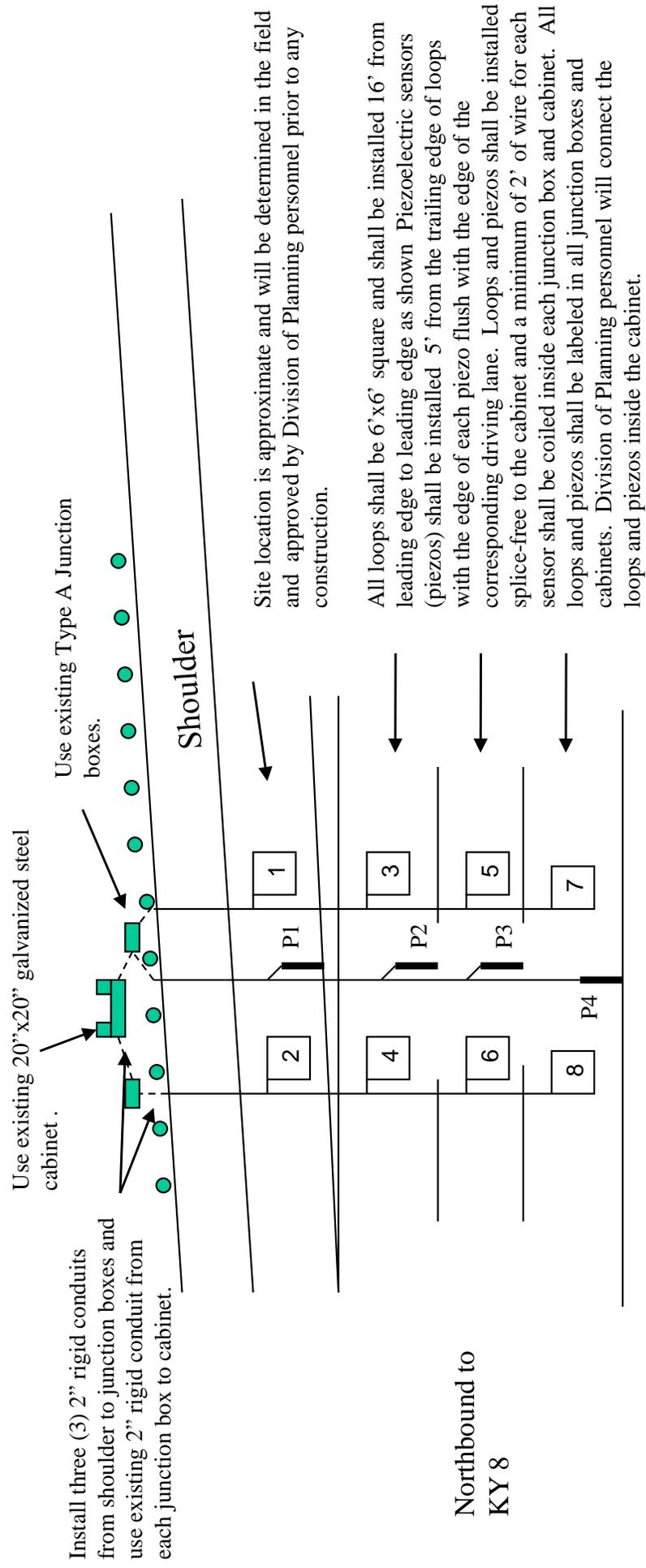
Use existing Type A Junction boxes.

9/6/2011

Site Drawing Campbell Co., I-471, Station 816, MP~4.0 NB Direction



Figure 5a



Site location is approximate and will be determined in the field and approved by Division of Planning personnel prior to any construction.

All loops shall be 6'x6' square and shall be installed 16' from leading edge to leading edge as shown. Piezoelectric sensors (piezos) shall be installed 5' from the trailing edge of loops with the edge of each piezo flush with the edge of the corresponding driving lane. Loops and piezos shall be installed splice-free to the cabinet and a minimum of 2' of wire for each sensor shall be coiled inside each junction box and cabinet. All loops and piezos shall be labeled in all junction boxes and cabinets. Division of Planning personnel will connect the loops and piezos inside the cabinet.

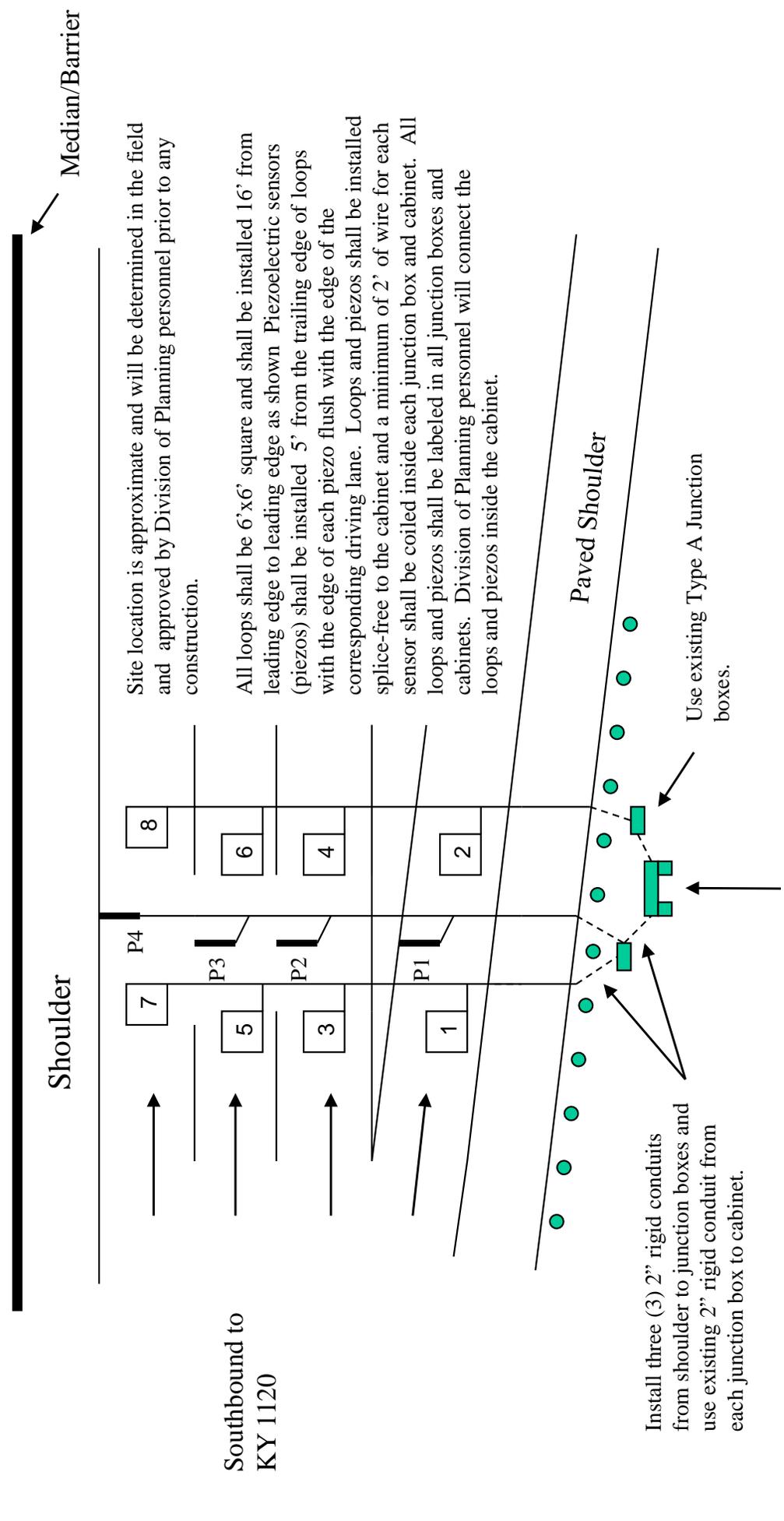
DRAWING NOT TO SCALE

9/6/2011

Site Drawing Campbell Co., I 471, Station 816, MP~4.0 SB Direction



Figure 5b



Site location is approximate and will be determined in the field and approved by Division of Planning personnel prior to any construction.

All loops shall be 6'x6' square and shall be installed 16' from leading edge to leading edge as shown. Piezoelectric sensors (piezos) shall be installed 5' from the trailing edge of loops with the edge of each piezo flush with the edge of the corresponding driving lane. Loops and piezos shall be installed splice-free to the cabinet and a minimum of 2' of wire for each sensor shall be coiled inside each junction box and cabinet. All loops and piezos shall be labeled in all junction boxes and cabinets. Division of Planning personnel will connect the loops and piezos inside the cabinet.

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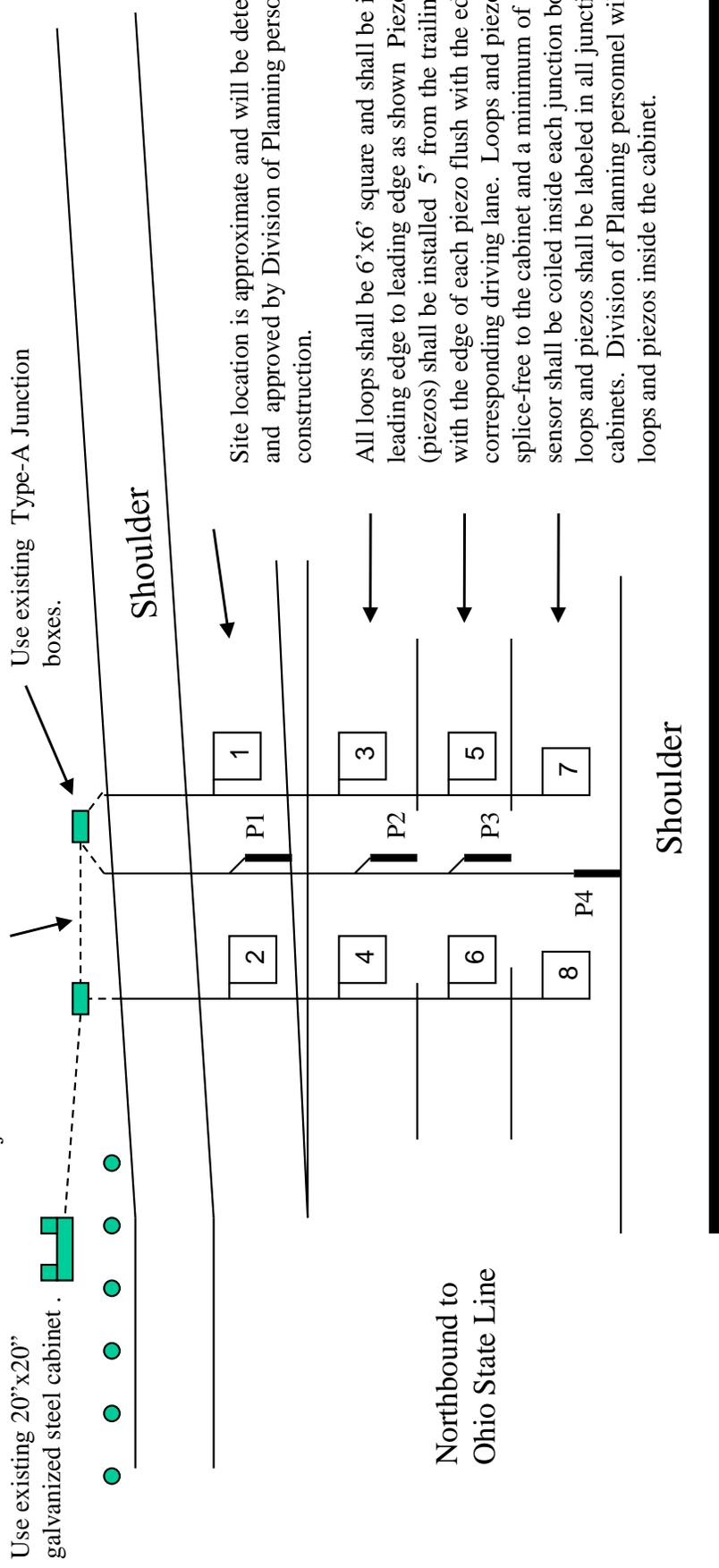
DRAWING NOT TO SCALE

Site Drawing Campbell Co., I 471, Station 806, MP~4.62 NB Direction

North
←

Figure 6a

Install three (3) 2" rigid conduits from shoulder to junction boxes and use existing 2" rigid conduit from junction box to cabinet.



Use existing 20"x20" galvanized steel cabinet .

Site location is approximate and will be determined in the field and approved by Division of Planning personnel prior to any construction.

All loops shall be 6'x6' square and shall be installed 16' from leading edge to leading edge as shown. Piezoelectric sensors (piezos) shall be installed 5' from the trailing edge of loops with the edge of each piezo flush with the edge of the corresponding driving lane. Loops and piezos shall be installed splice-free to the cabinet and a minimum of 2' of wire for each sensor shall be coiled inside each junction box and cabinet. All loops and piezos shall be labeled in all junction boxes and cabinets. Division of Planning personnel will connect the loops and piezos inside the cabinet.

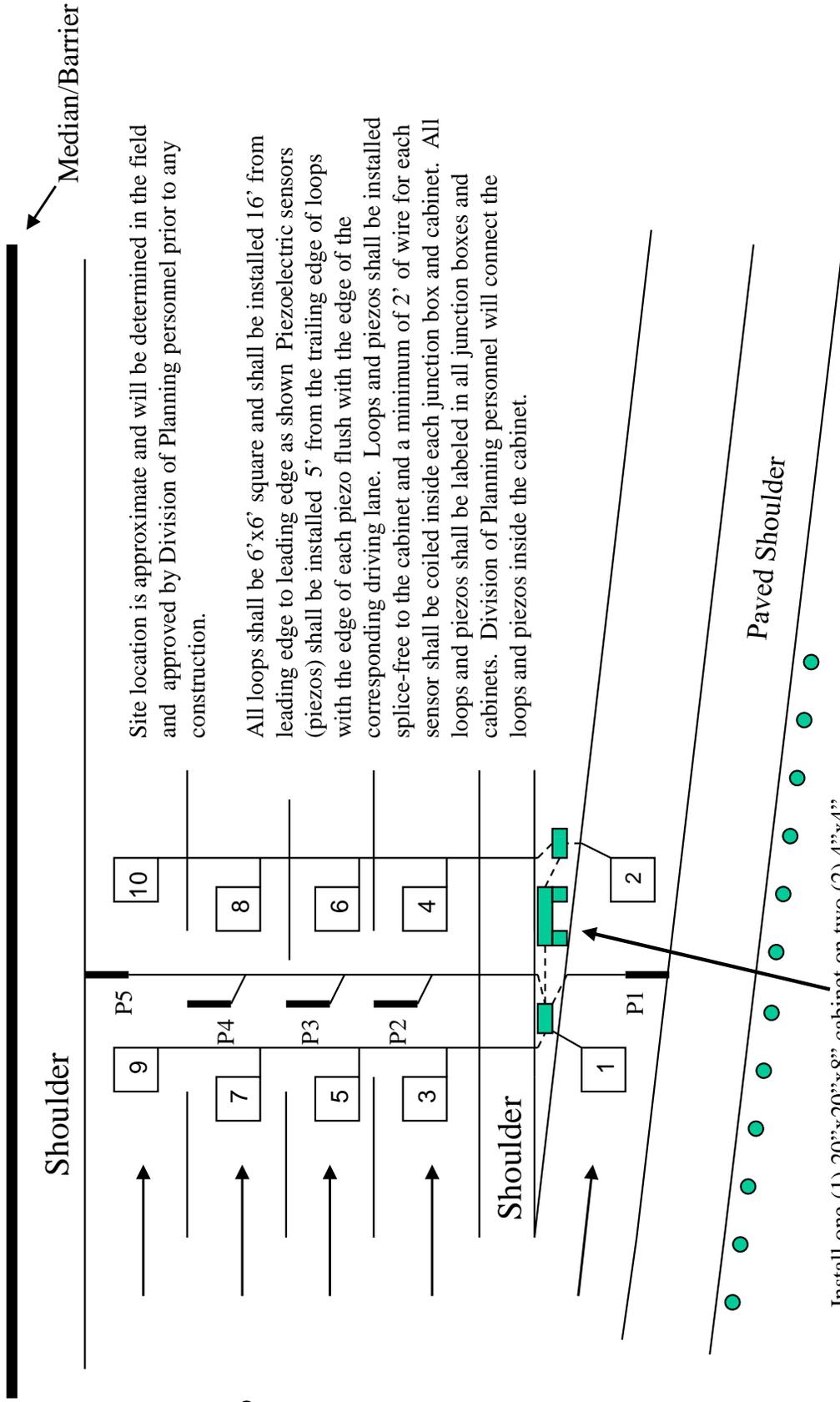
DRAWING NOT TO SCALE

9/6/2011

Site Drawing Campbell Co., I 471, Station 806, MP~4.69 SB Direction



Figure 6b



Install one (1) 20"x20"x8" cabinet on two (2) 4"x4" posts and two (2) Type-A junction boxes. Install eight (8) rigid steel conduits from shoulders to junction boxes and from junction boxes to cabinet as shown.

DRAWING NOT TO SCALE

9/6/2011

GENERAL NOTES
CAMPBELL COUNTY – I 471
TRAFFIC DATA COLLECTION STATIONS
STA. 812 (MP 0.18)
STA. P96 (MP 1.4)
STA. 814 (MP 2.3)
STA. 815 (MP 3.4)
STA. 816 (MP 4.0)
STA. 806 (MPs 4.62 NB & 4.69 SB)

GENERAL NOTES:

The Division of Planning needs to re-establish traffic data collection stations within the rehabilitation project in Campbell Co. on I 471. The Division of Planning traffic data collection stations are to be installed at the following sites:

1. STA. 812 at mile point (MP) 0.18
2. STA. P96 at mile point (MP) 1.4
3. STA. 814 at mile point (MP) 2.3
4. STA. 815 at mile point (MP) 3.4
5. STA. 816 at mile point (MP) 4.0
6. STA. 806 at mile points (MPs) 4.62 NB & 4.69 SB

Contractor shall proceed with the installation of traffic loop sensors and piezoelectric sensors once the concrete surface has been completed. Exact site location will be determined in the field. Contractor shall install two (2) loop sensors and one (1) piezoelectric sensor in each lane as shown in Figures 1-6b except for STA. P96 (Figure 2) for which contractor shall install two (2) loop sensors and two (2) piezoelectric sensors in each lane.

The loop lead-in and piezoelectric wires shall be run splice-free through Type-A junction boxes to cabinets off the shoulder as indicated in the attached drawings. The contractor shall provide and use all new materials for this reconstruction unless otherwise noted.

Installation shall be coordinated with and approved by appropriate Division of Planning staff. Reference, "Special Notes for Installation of Traffic Counting Inductance Loops", for materials, construction and installation details and standard details for installation of Traffic Counting Inductive Loops and Axle Sensors. Also see the Standard Details for Installation of Traffic Counting Inductance Loops and Axle Sensors, Location Drawings, Location Table and Estimate of Quantities, in regard to this specific project.

Note:

The Special Notes for Installation of Traffic Counting Inductance Loops and Axle Sensors are generic. Only the sections that pertain to the specified location and the bid items listed in this summary are applicable.

SPECIAL NOTES:

Most piezoelectric sensors used will be Class I 6' long with 100' lead-ins. Lead-in length will change in certain locations. See piezo tail lengths in each station breakdown.

The mile points listed in the proposal are approximate only. The Engineer, in coordination with the Central Office Division of Planning, will designate the exact location at the time of construction. See Site Drawing sheets for more detail as to where each site is to be located.

Notify the Central Office Division of Planning (502-564-7183, Equipment Management Team) a minimum of 14 days prior to beginning work in order for them to have the option to be present during sensor installation. The Engineer will contact and maintain liaison with the District Planning Engineer and the Central Office Division of Planning in order to coordinate the work.

**LOCATION TABLE
CAMPBELL COUNTY – I 471
TRAFFIC DATA COLLECTION STATIONS
STA. 812 (MP 0.18)
STA. P96 (MP 1.4)
STA. 814 (MP 2.3)
STA. 815 (MP 3.4)
STA. 816 (MP 4.0)
STA. 806 (MPs 4.62 NB & 4.69 SB)**

LOCATION TABLE:

STATION	DESCRIPTION	LOOP STATION LIMITS	STATION LOCATION	LOOPS	PIEZOS	PROJECT MP LIMITS
812	2 Loops/ 1 Piezo per Lane	0.000-0.698	0.18	10	5	0.000-5.72
P96	2 Loops/ 2 Piezos per Lane	0.000-1.745	1.4	12	12	0.000-5.72
814	2 Loops/ 1 Piezo per Lane	1.745-3.202	2.3	16	8	0.000-5.72
815	2 Loops/1 Piezo per Lane	3.202-3.858	3.4	16	8	0.000-5.72
816	2 Loops/1 Piezo per Lane	3.858-4.400	4.0	16	8	0.000-5.72
806	2 Loops/1 Piezo per Lane	4.400-5.016	4.62NB, 4.69SB	18	9	0.000-5.72

LOOP STATION 812 is located on KY 471 at MP 0.18. This station has five (5) lanes of traffic. Each lane will have a loop-piezo-loop configuration of sensors installed as depicted in Figure 1. The contractor shall install the sensors in each lane and run the loop and piezo lead-in wires splice-free through new Type-A junction boxes into new 20"x20" cabinets as depicted in Figure 1. All new materials shall be utilized for this reconstruction. **All piezos shall be Class I 6' long with 100' lead-ins.**

ESTIMATE OF QUANTITIES:

CODE	DESCRIPTION	UNIT	QUANTITY
4793	CONDUIT 1 ¼ INCH	LIN FT	60
4795	CONDUIT 2 INCH	LIN FT	20
4820	TRENCHING AND BACKFILLING	LIN FT	70
4829	PIEZOELECTRIC SENSOR	EACH	5
4830	LOOP WIRE	LIN FT	1990
4895	LOOP SAW SLOT AND FILL	LIN FT	465
20359NN	20'x20" GALV. STEEL CABINET	EACH	2
20360ES818	WOOD POST	EACH	4
20391NS835	JUNCTION BOX TYPE A	EACH	2

LOOP STATION P96 is located on I 471 at MP 1.4. This station has six (6) lanes of traffic. Each lane will have a loop-piezo-loop-piezo configuration of sensors installed as depicted in Figure 2. The intent of these plans is to reuse two existing ARTIMIS junction boxes, the existing conduit between them under I-471, and existing conduit from the ARTIMIS junction box to an existing cabinet on the west side of I-471 at this location. If the Contractor deems any of these existing materials unusable and proposes to install new junction boxes and/or conduit, he shall receive prior permission from the Engineer. The estimate of quantities below includes quantities for new conduit, trenching and backfilling, junction boxes, and boring and jacking pipe should they be required. **Piezos shall be Class I 6’ long. Six (6) piezos shall have 300’ lead-ins and six (6) piezos shall have 200’ lead-ins.**

ESTIMATE OF QUANTITIES:

CODE	DESCRIPTION	UNIT	QUANTITY
4795	CONDUIT 2 INCH	LIN FT	320*
4820	TRENCHING AND BACKFILLING	LIN FT	320*
4829	PIEZOELECTRIC SENSOR	EACH	12
4830	LOOP WIRE	LIN FT	6000
4895	LOOP SAW SLOT AND FILL	LIN FT	600
20391NS835	JUNCTION BOX TYPE A	EACH	4
20392NS835	JUNCTION BOX TYPE C	EACH	2*
21543EN	BORE AND JACK PIPE-2 IN	LIN FT	120*

** Quantities are subject to change dependent upon the potential reuse of existing junction boxes and conduits.*

LOOP STATION 814 is located on I 471 at MP 2.3. This station has eight (8) lanes of traffic. Each lane will have a loop-piezo-loop configuration of sensors installed as depicted in Figures 3a and 3b. The contractor shall install the sensors in each lane and run the loop lead-in wires splice-free through the existing conduit, Type-A junction boxes and into the existing 20”x20” cabinets. **All piezos shall be Class I 6’ long with 100’ lead-ins.**

ESTIMATE OF QUANTITIES:

CODE	DESCRIPTION	UNIT	QUANTITY
4795	CONDUIT 2 INCH	LIN FT	30
4820	TRENCHING AND BACKFILLING	LIN FT	30
4829	PIEZOELECTRIC SENSOR	EACH	8
4830	LOOP WIRE	LIN FT	3500
4895	LOOP SAW SLOT AND FILL	LIN FT	750

LOOP STATION 815 is located on I 471 at MP 3.4. This station has eight (8) lanes of traffic. Each lane will have a loop-piezo-loop configuration of sensors installed as depicted in Figures 4a and 4b. The contractor shall install the sensors in each lane and run the loop lead-in wires splice-free through the existing conduit, Type-A junction boxes and into the existing 20"x20" cabinets. **Piezos shall be Class I 6' long. Six (6) piezos shall have 100' lead-ins and two (2) piezos shall have 150' lead-ins.**

ESTIMATE OF QUANTITIES:

CODE	DESCRIPTION	UNIT	QUANTITY
4795	CONDUIT 2 INCH	LIN FT	30
4820	TRENCHING AND BACKFILLING	LIN FT	30
4829	PIEZOELECTRIC SENSOR	EACH	8
4830	LOOP WIRE	LIN FT	3980
4895	LOOP SAW SLOT AND FILL	LIN FT	810

LOOP STATION 816 is located on I 471 at MP 4.0. This station has eight (8) lanes of traffic. Each lane will have a loop-piezo-loop configuration of sensors installed as depicted in Figures 5a and 5b. The contractor shall install the sensors in each lane and run the loop lead-in wires splice-free through the existing conduit, Type-A junction boxes and into the existing 20"x20" cabinets. **Piezos shall be Class I 6' long. Five (5) piezos shall have 100' lead-ins and three (3) piezos shall have 150' lead-ins.**

ESTIMATE OF QUANTITIES:

CODE	DESCRIPTION	UNIT	QUANTITY
4795	CONDUIT 2 INCH	LIN FT	30
4820	TRENCHING AND BACKFILLING	LIN FT	30
4829	PIEZOELECTRIC SENSOR	EACH	8
4830	LOOP WIRE	LIN FT	4340
4895	LOOP SAW SLOT AND FILL	LIN FT	840

LOOP STATION 806 is located on I 471 at MP 4.62 (NB) and 4.69 (SB). This station has nine (9) lanes of traffic. Each lane will have a loop-piezo-loop configuration of sensors installed as depicted in Figures 6a and 6b. The contractor shall install the sensors in each lane and run the loop and piezo lead-in wires splice-free through new Type-A junction boxes into a new 20"x20" cabinet as depicted in Figure 6b. The existing conduit, Type-A junction boxes and 20"x20" cabinet shall be reused as shown in Figure 6a. **Piezos shall be Class I 6' long. Two (2) piezos shall have 200' lead-ins, three (3) piezos shall have 150' lead-ins and four (4) shall have 100' lead-ins.**

ESTIMATE OF QUANTITIES:

CODE	DESCRIPTION	UNIT	QUANTITY
4795	CONDUIT 2 INCH	LIN FT	110
4820	TRENCHING AND BACKFILLING	LIN FT	100
4829	PIEZOELECTRIC SENSOR	EACH	9
4830	LOOP WIRE	LIN FT	5500
4895	LOOP SAW SLOT AND FILL	LIN FT	905
20359NN	20'x20" GALV. STEEL CABINET	EACH	1
20360ES818	WOOD POST	EACH	2
20391NS835	JUNCTION BOX TYPE A	EACH	2

DIVISION OF PLANNING

**STANDARD DETAILS FOR INSTALLATION
OF TRAFFIC COUNTING INDUCTANCE
LOOPS AND AXLE SENSORS**

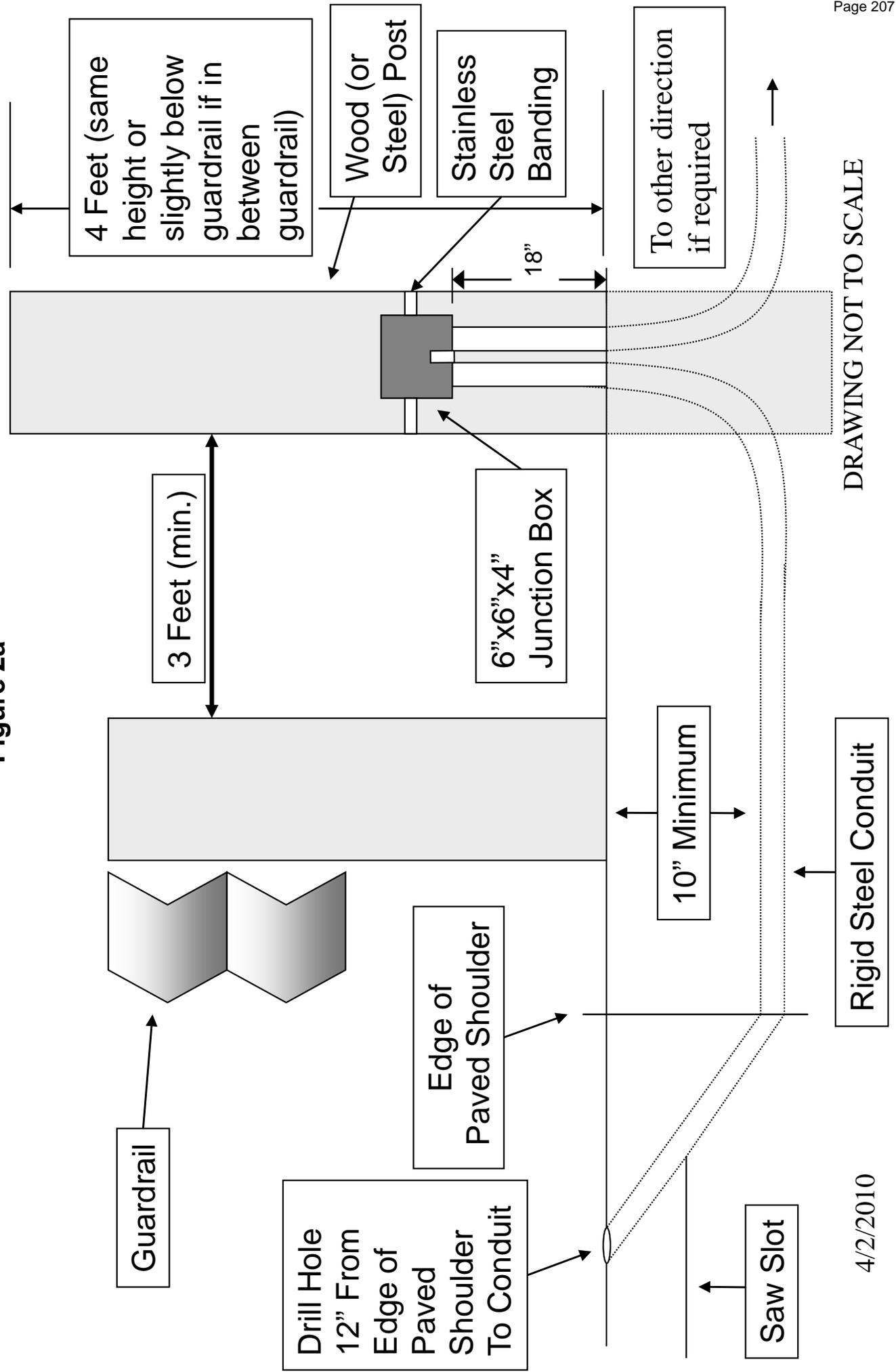
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4/2/2010

Rev. 3/10

Junction Box Type 6" x 6" x 4" Detail

Figure 2a

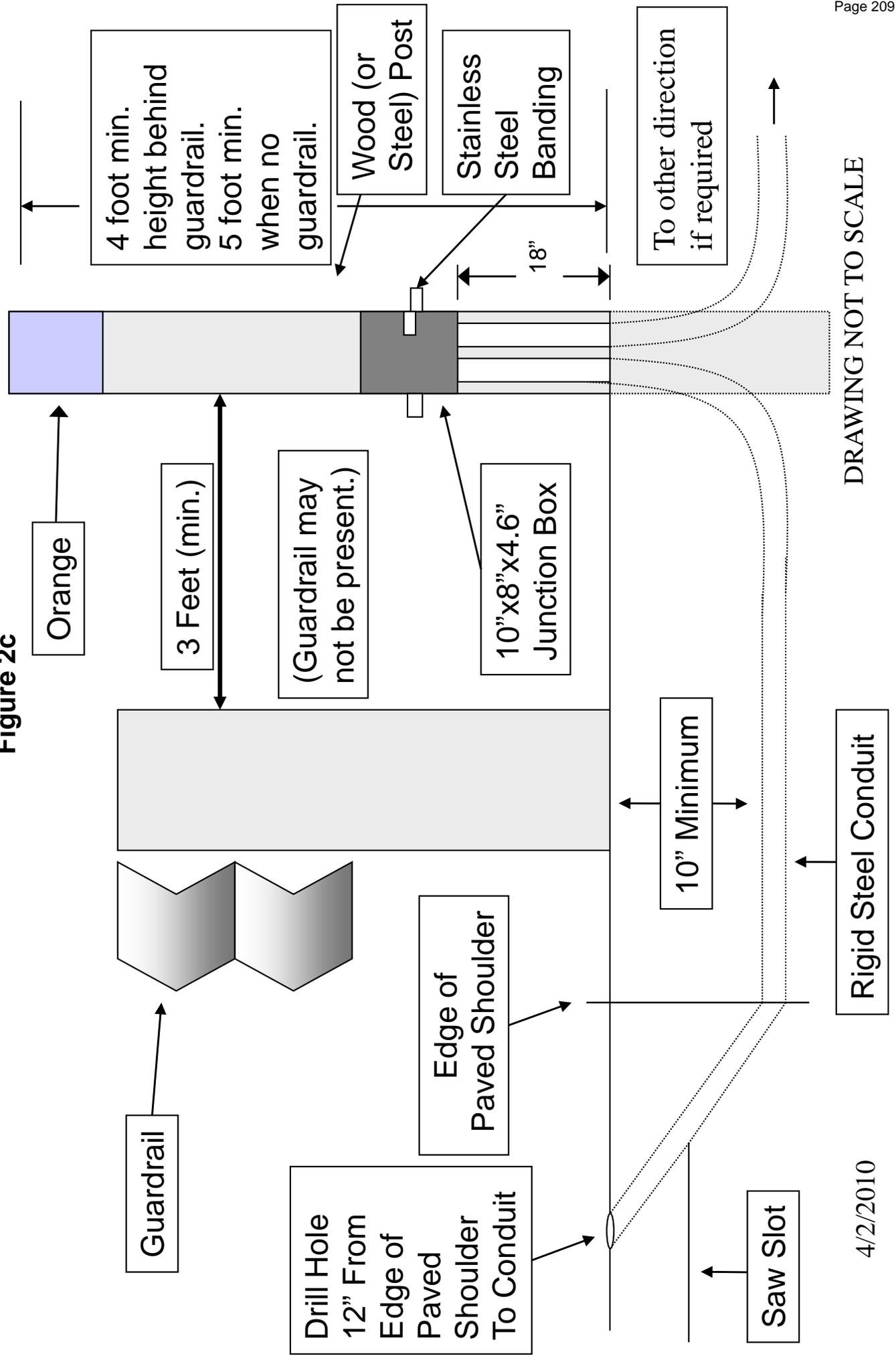


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4/2/2010

Junction Box Type 10" x 8" x 4" Detail

Figure 2c



Orange

3 Feet (min.)

(Guardrail may not be present.)

10" x 8" x 4.6" Junction Box

Guardrail

Drill Hole 12" From Edge of Paved Shoulder To Conduit

Edge of Paved Shoulder

10" Minimum

Rigid Steel Conduit

Saw Slot

4 foot min. height behind guardrail. 5 foot min. when no guardrail.

Wood (or Steel) Post

Stainless Steel Banding

18"

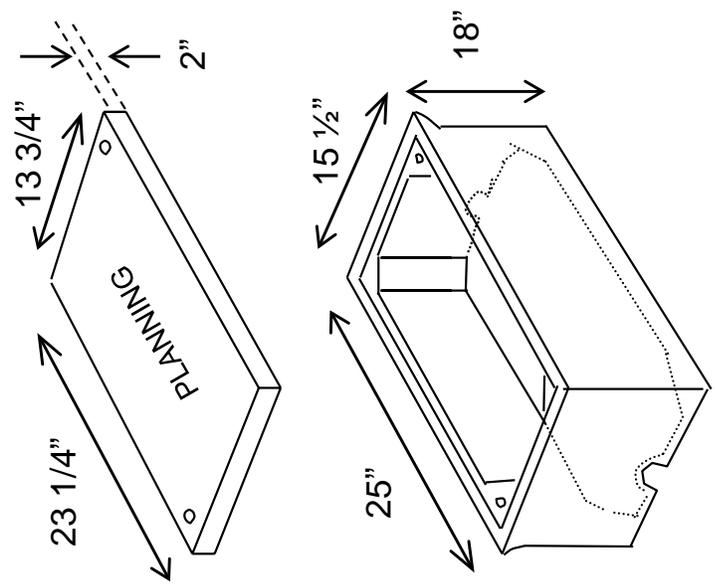
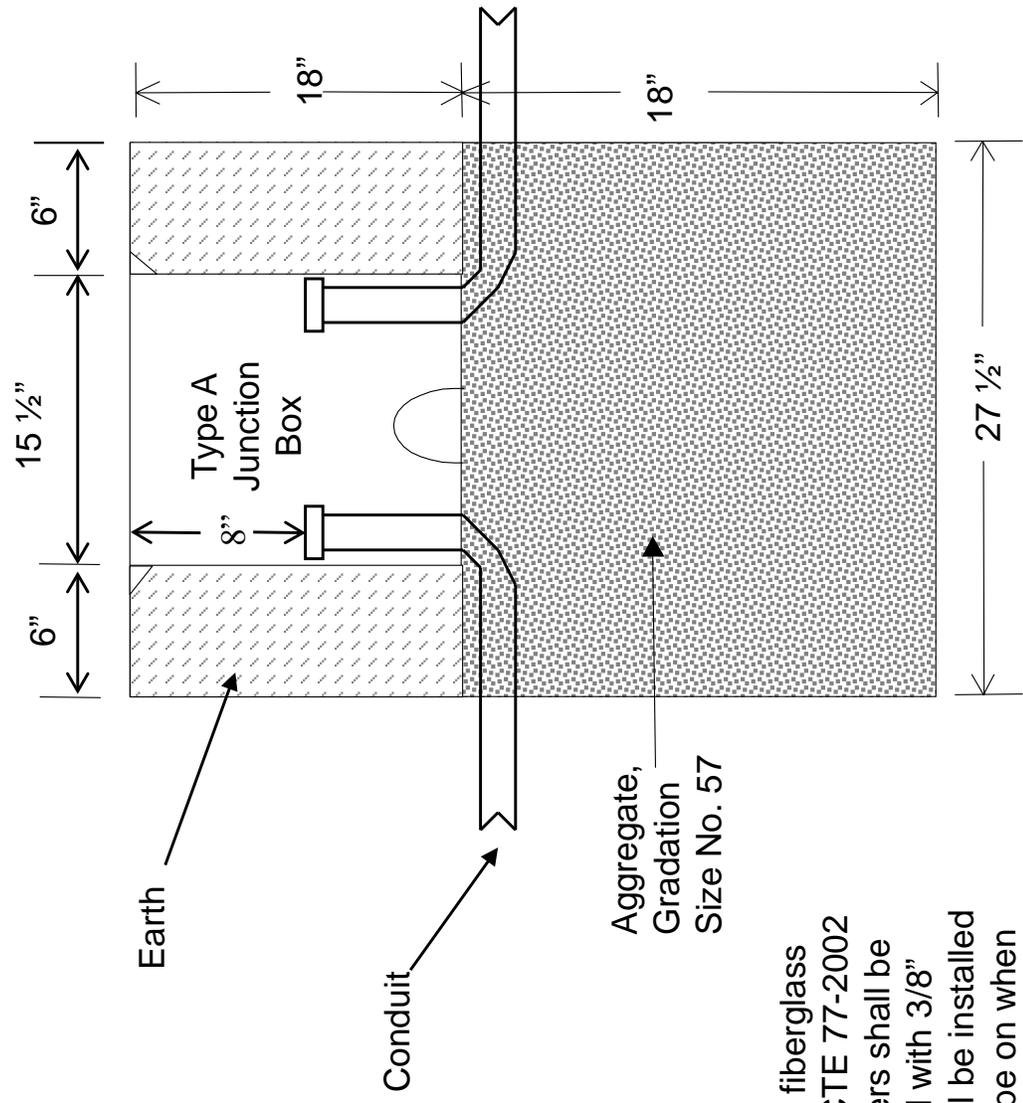
To other direction if required

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Junction Box Type A Installation

Figure 3a



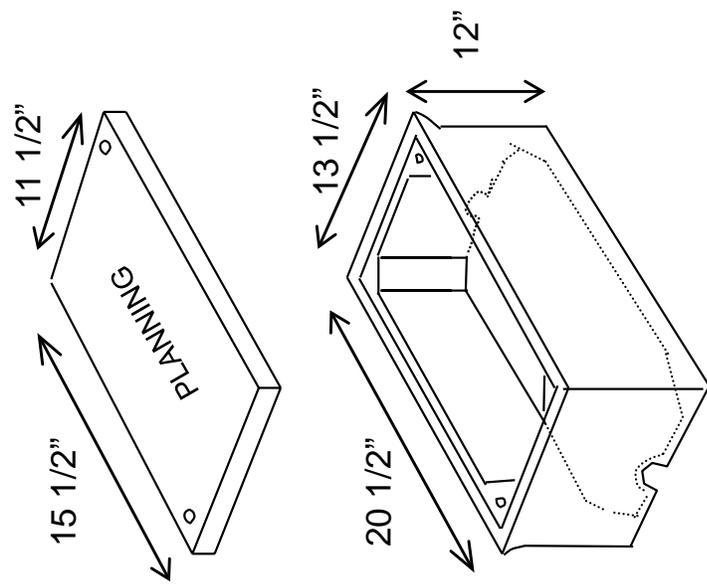
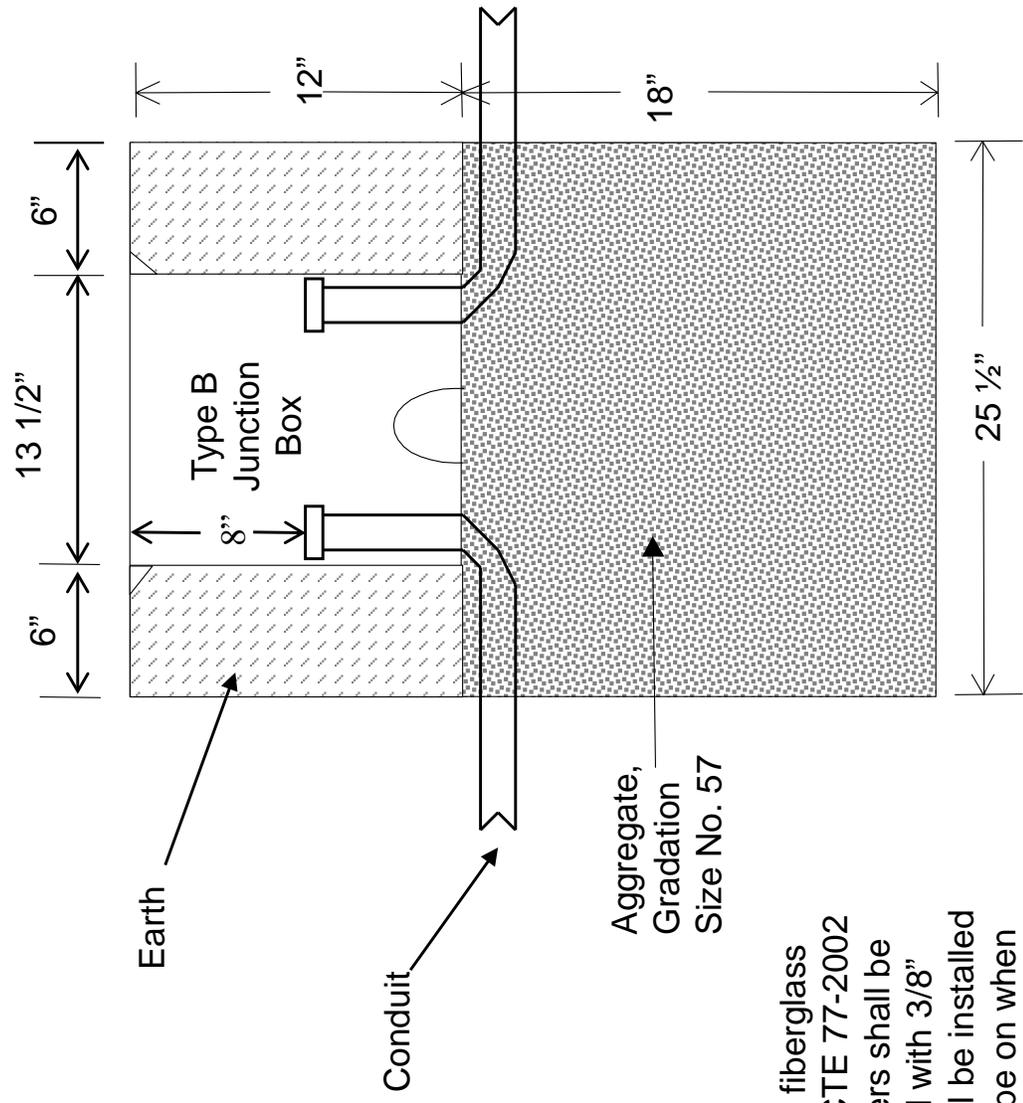
Junction box shall be constructed of a fiberglass reinforced polymer concrete, ANSI/SCTE 77-2002 Tier 15 style or approved equal. Covers shall be marked "PLANNING" and be attached with 3/8" stainless hex bolts. Junction box shall be installed flush with ground line. Covers should be on when filling in around the box.

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Junction Box Type B Installation

Figure 3b



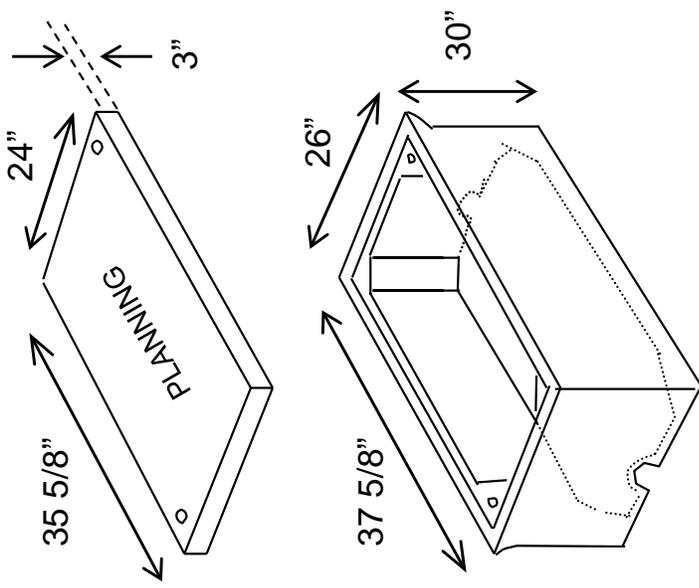
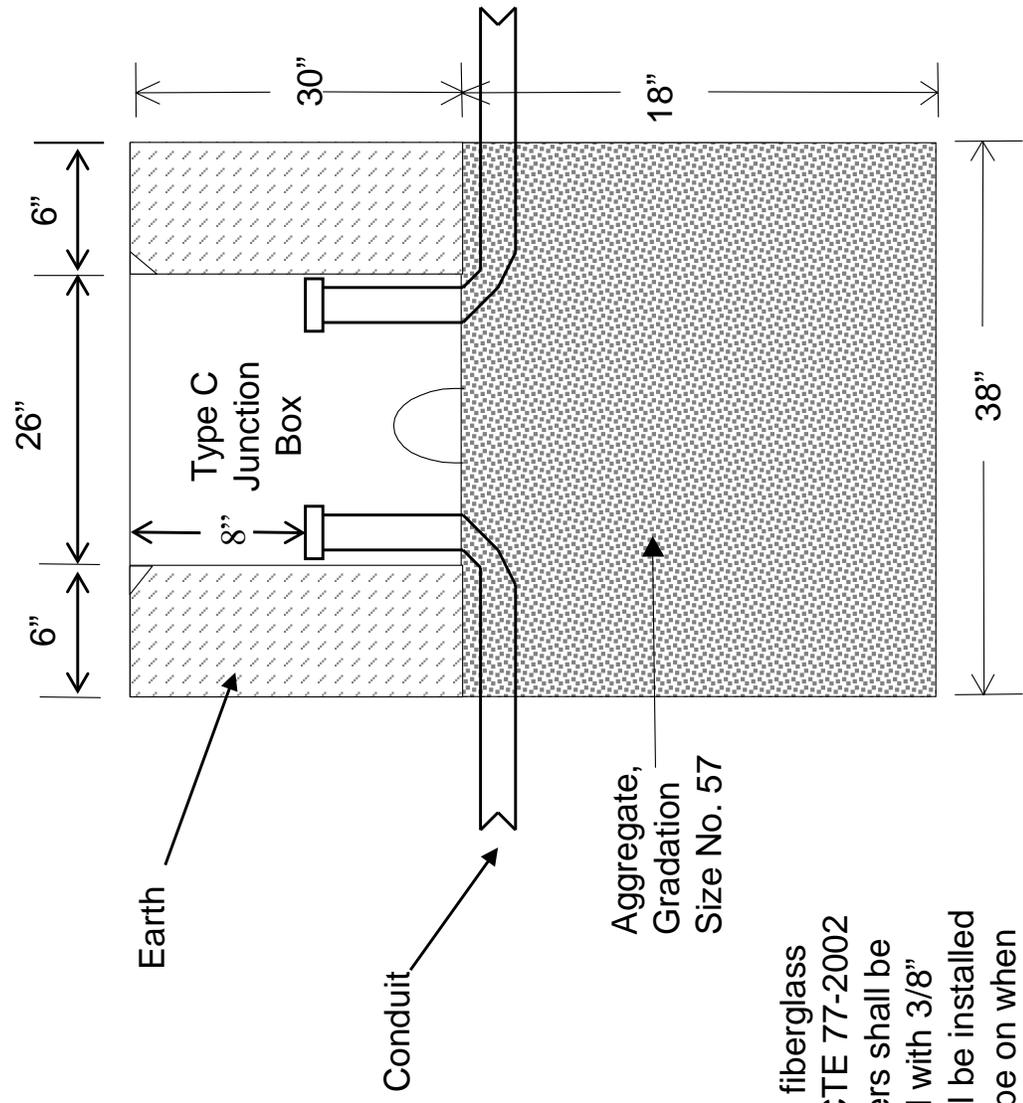
Junction box shall be constructed of a fiberglass reinforced polymer concrete, ANSI/SCTE 77-2002 Tier 15 style or approved equal. Covers shall be marked "PLANNING" and be attached with 3/8" stainless hex bolts. Junction box shall be installed flush with ground line. Covers should be on when filling in around the box.

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4/2/2010

Junction Box Type C Installation

Figure 3c



Junction box shall be constructed of a fiberglass reinforced polymer concrete, ANSI/SCTE 77-2002 Tier 15 style or approved equal. Covers shall be marked "PLANNING" and be attached with 3/8" stainless hex bolts. Junction box shall be installed flush with ground line. Covers should be on when filling in around the box.

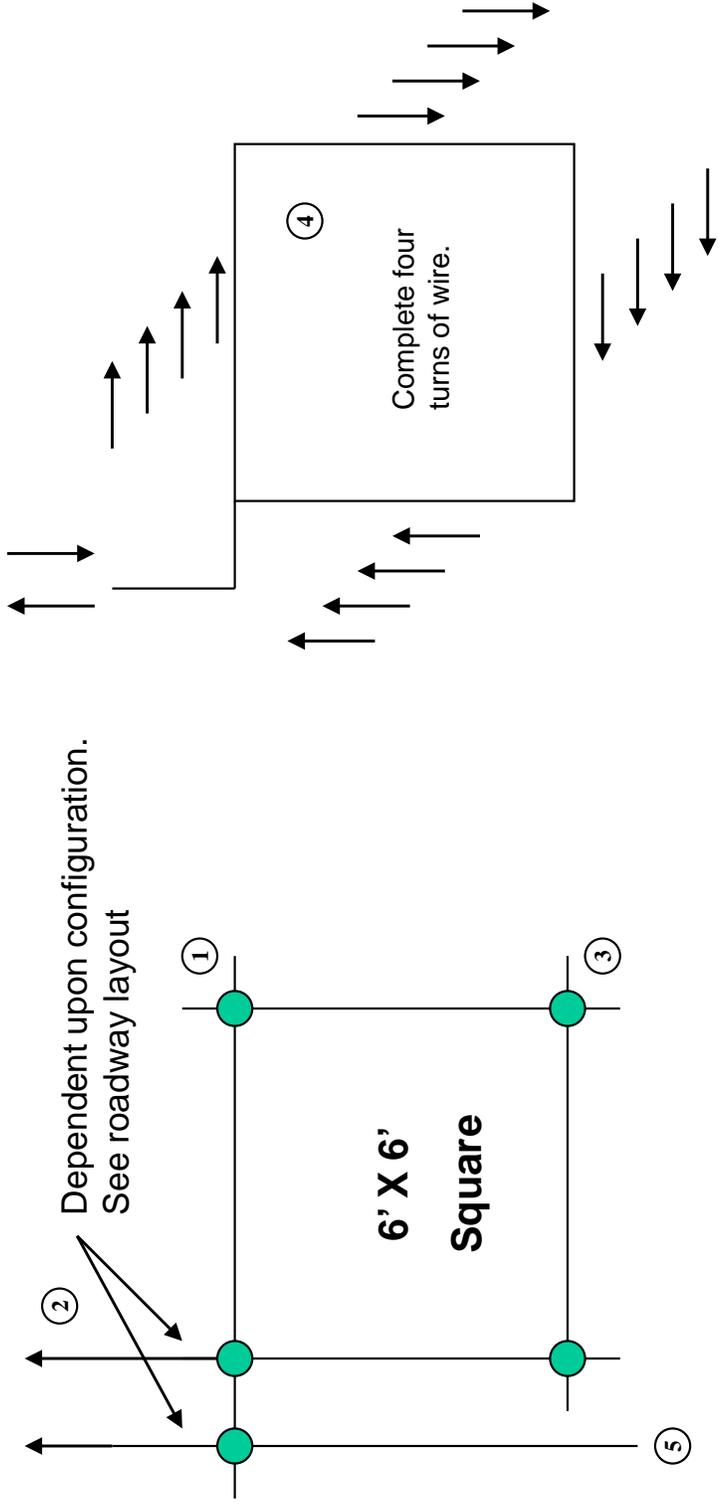
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4/2/2010

Loop Installation Instructions

Loop Installation in Existing Roadways

Figure 4



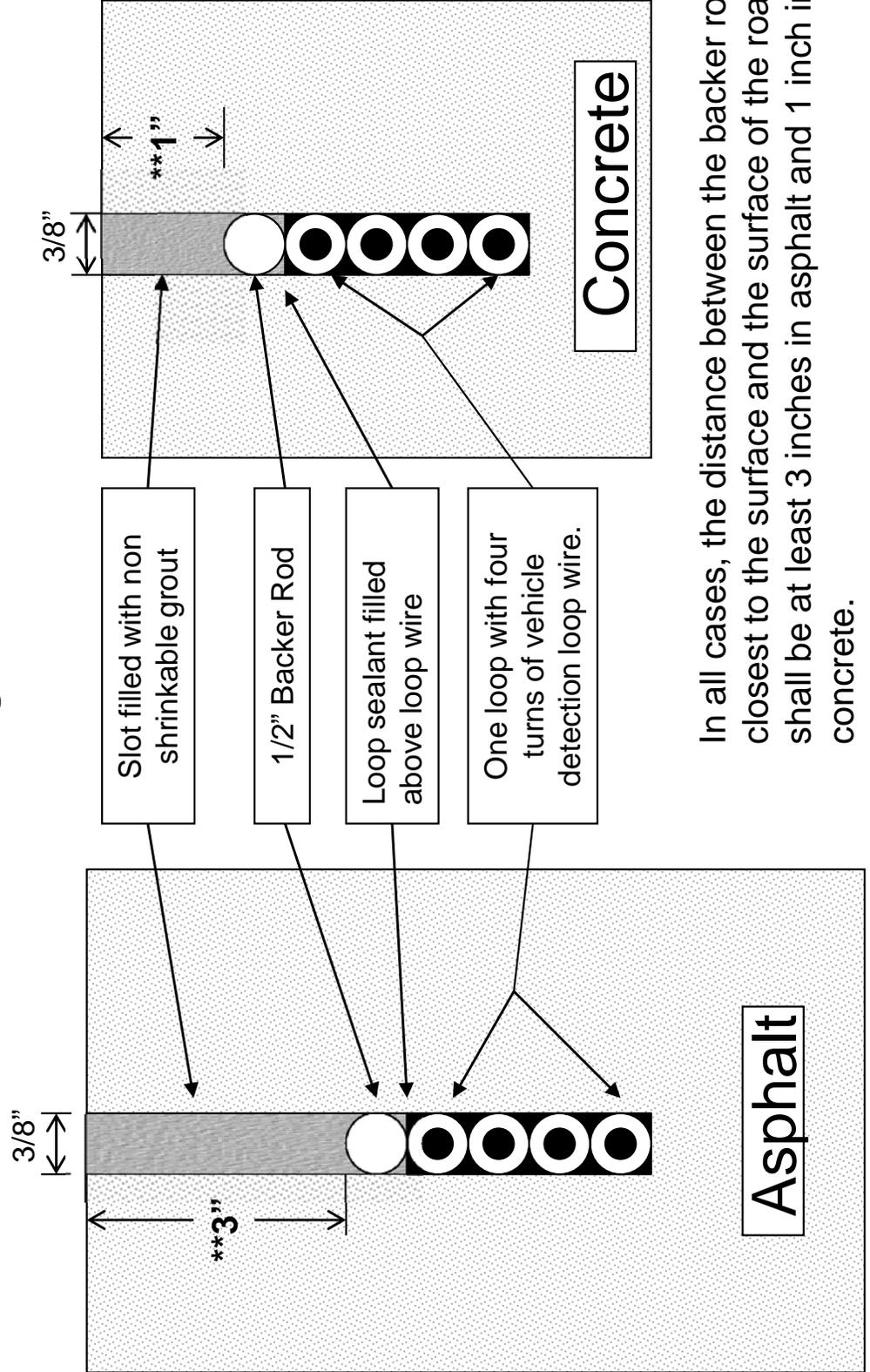
Loop Wiring Plan

Saw Slot Plan

- Notes:**
- ① Overlap cuts so that slots are full depth at corners.
 - ② Configuration is dependent upon loop layout.
 - ③ Drill 1.5" hole in each corner to prevent sharp bends in the wire.
 - ④ Unless denoted otherwise, all loops are 6' x 6' square, positioned in center of lane with 4 turns of 14 AWG loop wire.
 - ⑤ The distance between adjacent loops is 6' for 12' lanes, 5.5' for 11' lanes, etc. It cannot be less than the loop is wide.

Loop Installation in Roadway

Figure 5



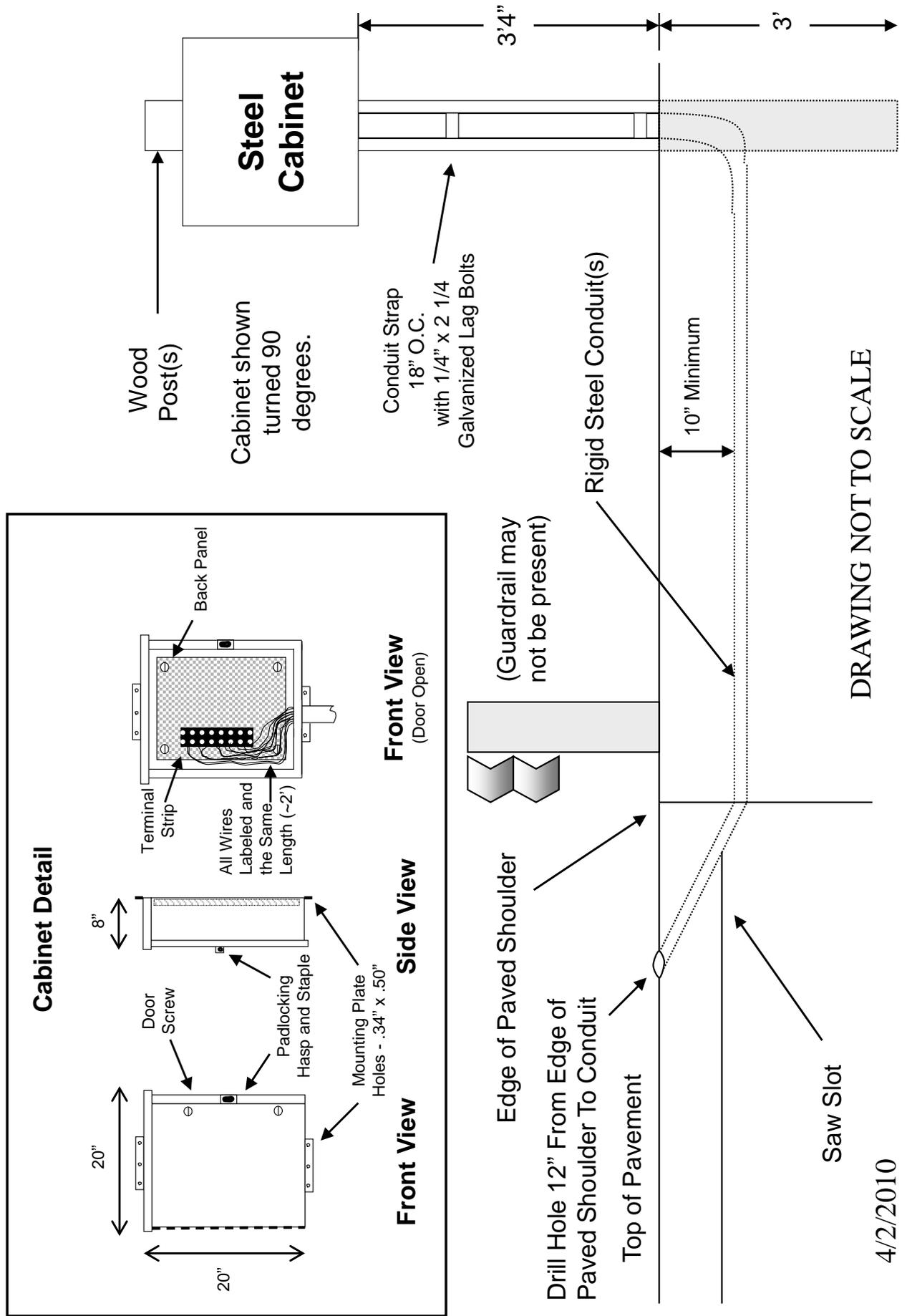
In all cases, the distance between the backer rod closest to the surface and the surface of the roadway shall be at least 3 inches in asphalt and 1 inch in concrete.

**Saw slot level shall be lowered at edge of roadway to meet the conduit level.

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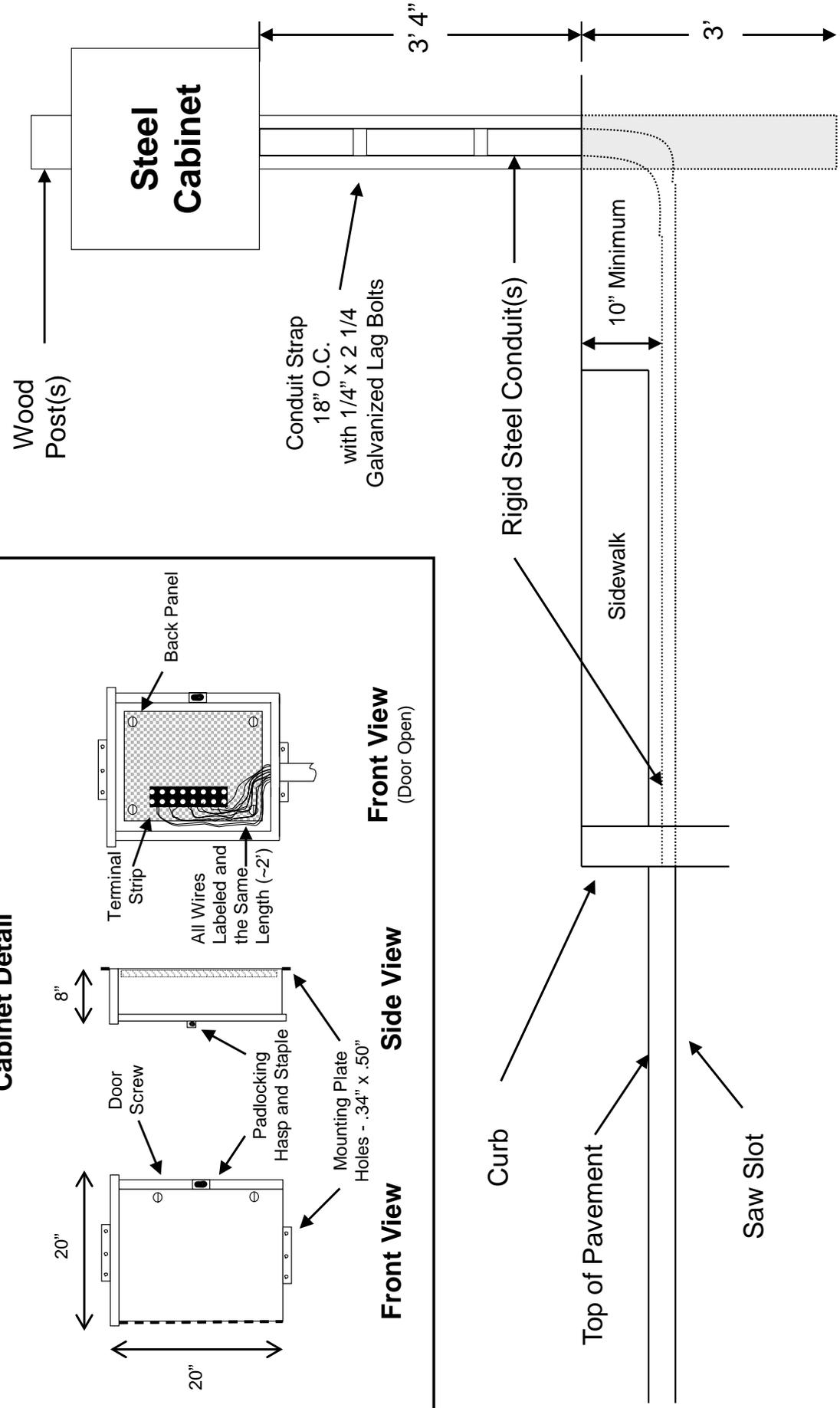
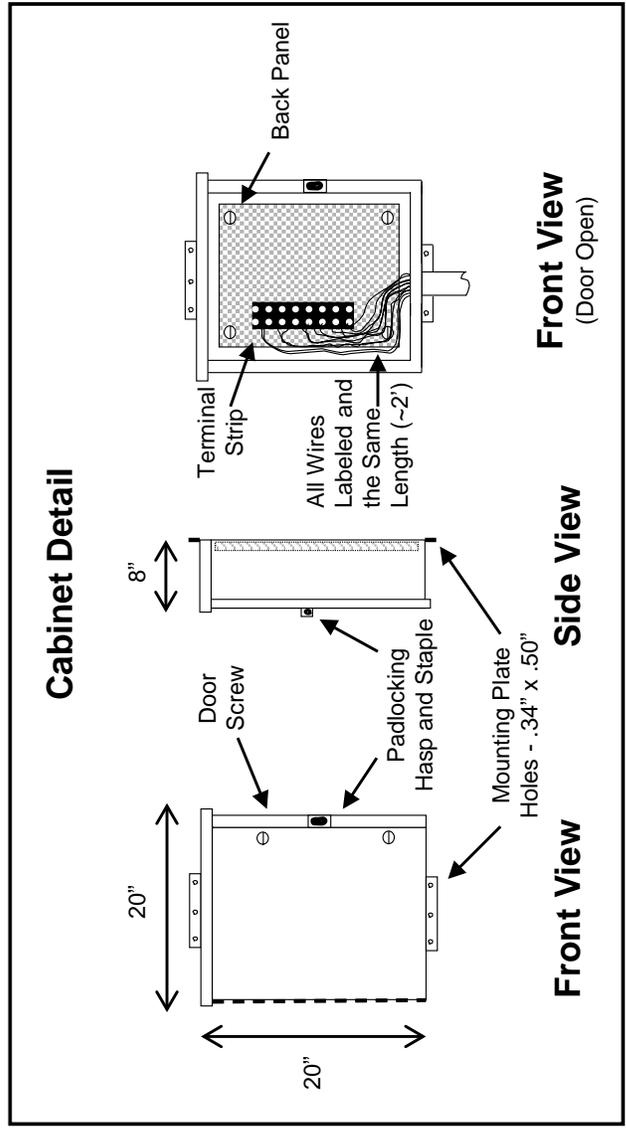
Galvanized Steel Cabinet and Post Installation Figure 7a



4/2/2010

Galvanized Steel Cabinet and Post Installation

Figure 7b

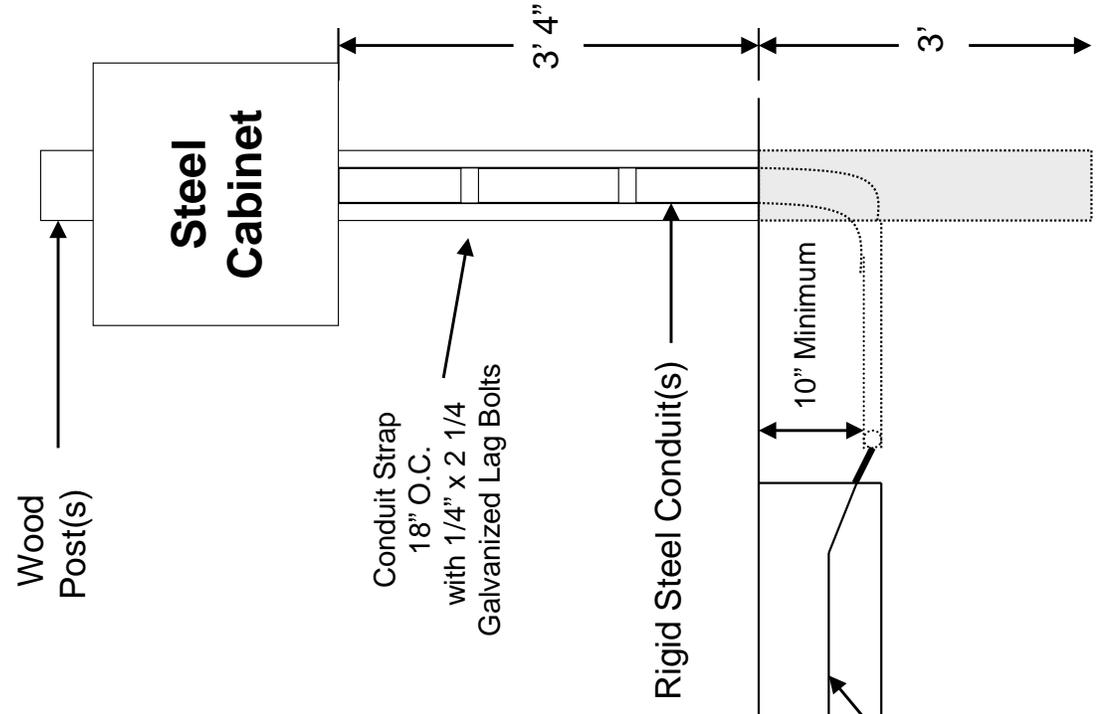
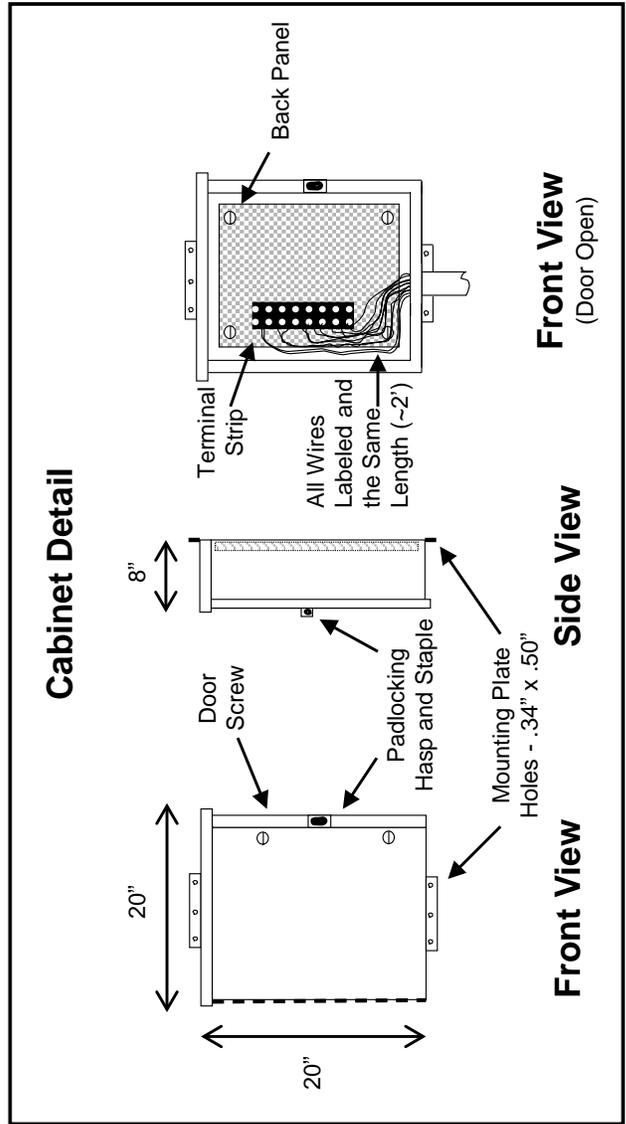


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Galvanized Steel Cabinet and Post Installation

Figure 7c

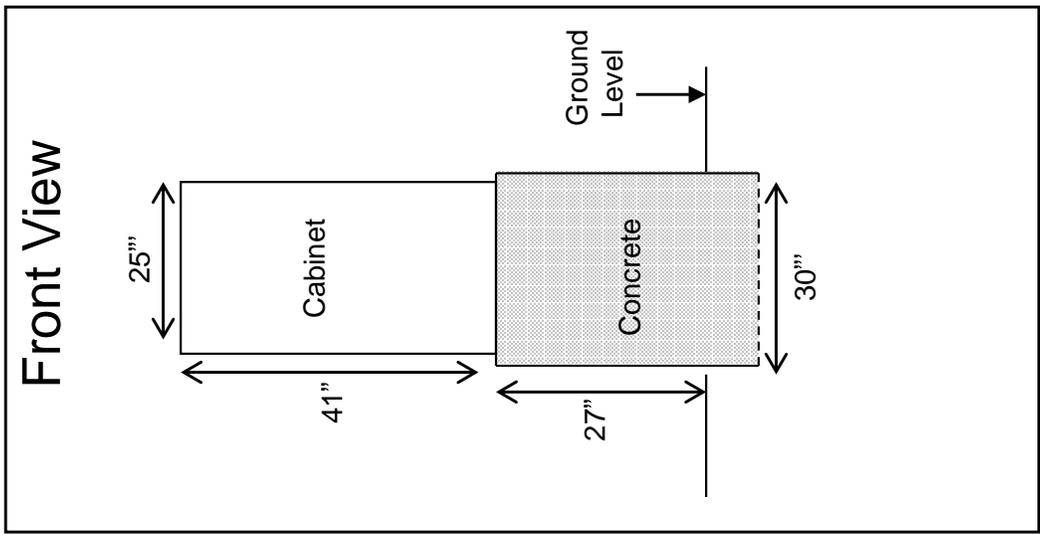
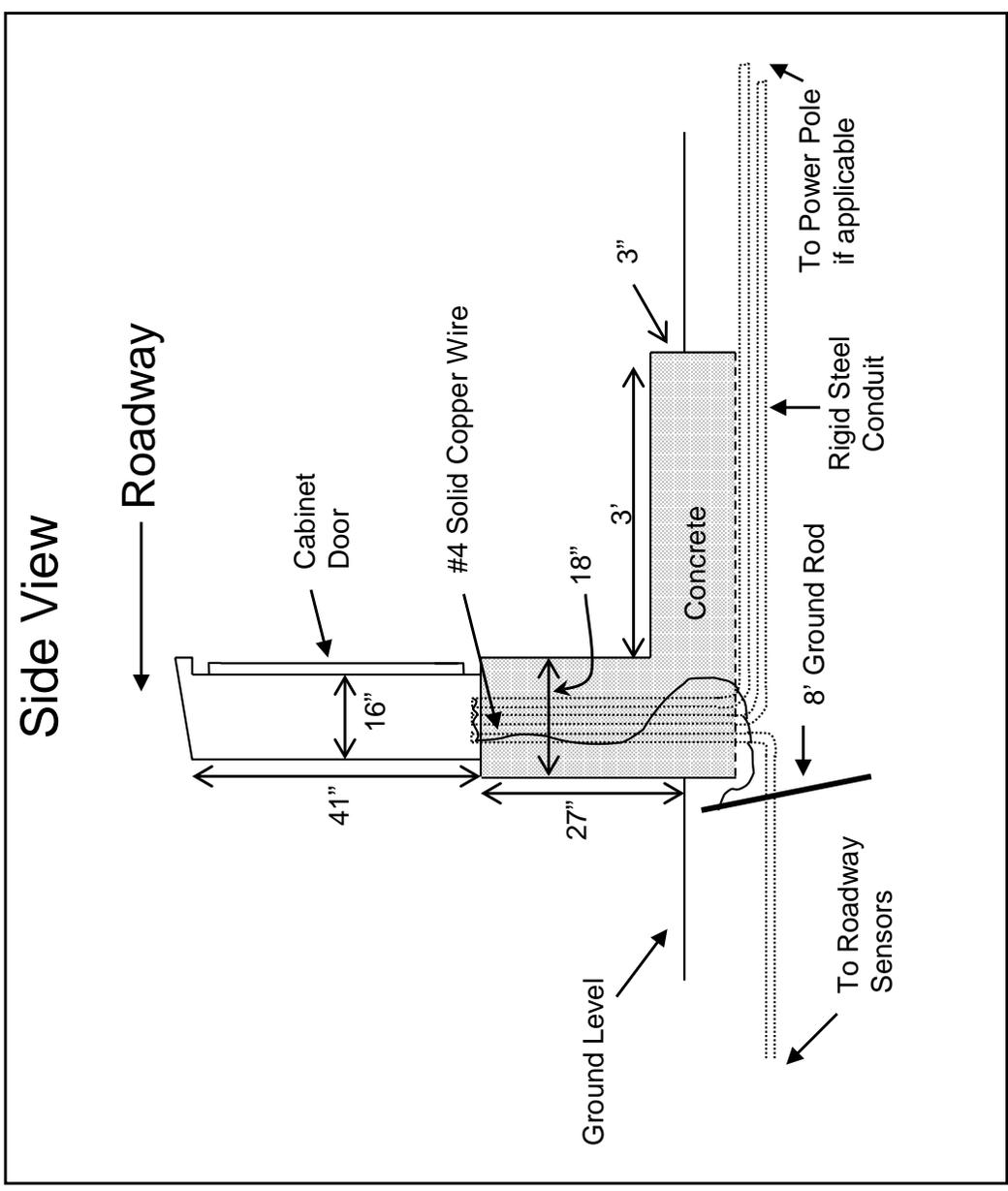


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Cabinet Type G

Figure 8



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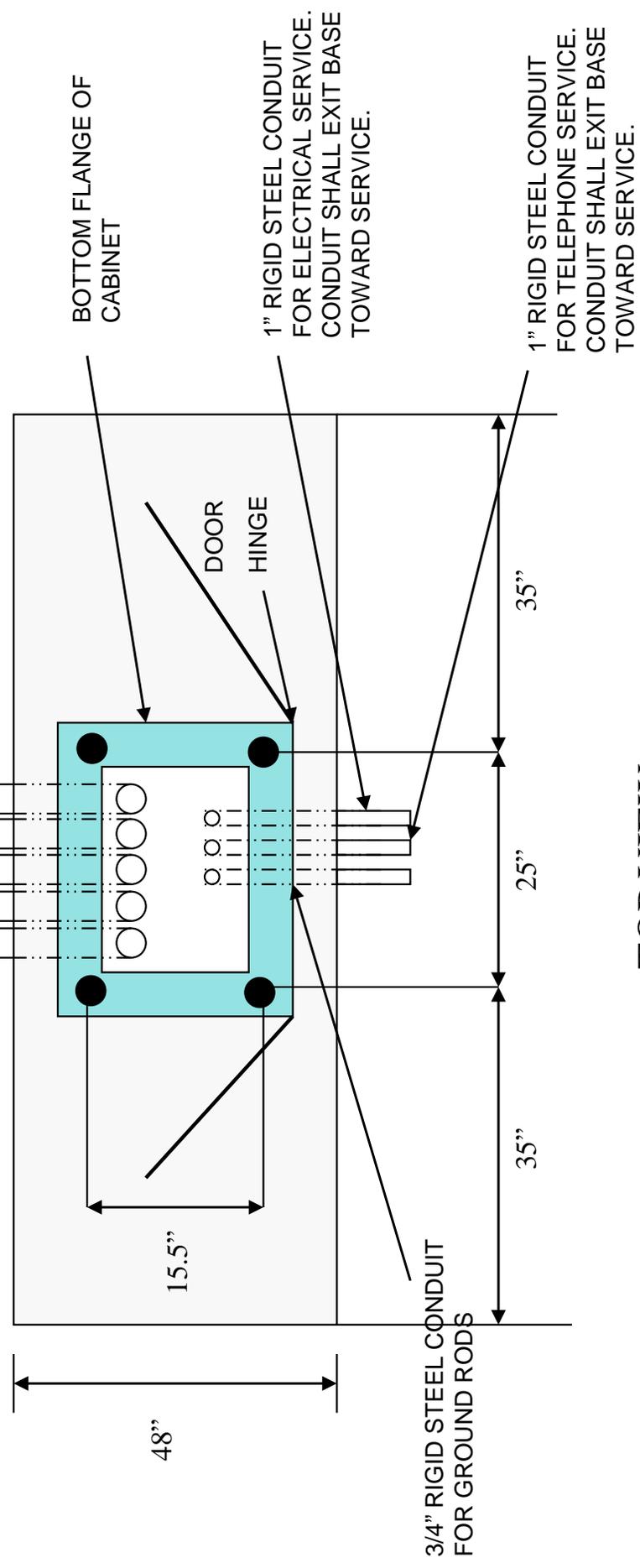
4/2/2010

Base Mounted 170 Cabinet Detail

Figure 9a

SPARE 1 1/4" RIGID STEEL CONDUIT
STUBBED, THREADED AND CAPPED AT
BOTH ENDS.
ALL CONDUIT SHALL BE EXTENDED A
MIN. OF 24" PAST THE SIDE OF THE
CONCRETE BASE.

MIN. 4 - 2" RIGID STEEL CONDUITS TO
JUNCTION BOXES (2 EA.). TWO WILL BE
USED FOR WIRING AND THE OTHER
TWO WILL BE SPARE CONDUITS (EMPTY)
FOR FUTURE USE.



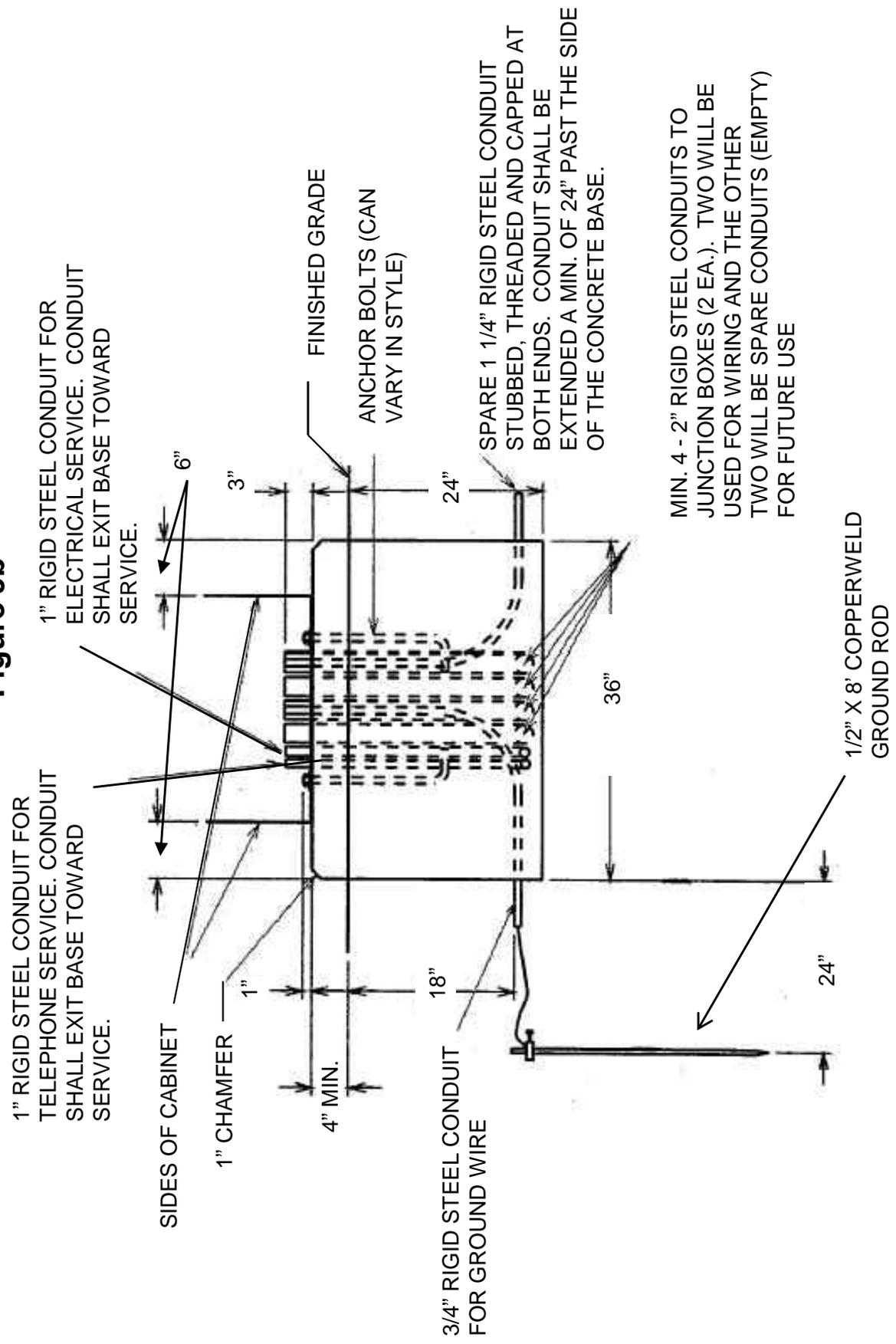
TOP VIEW

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4/2/2010

Base Mounted 170 Cabinet Detail

Figure 9b



SIDE VIEW

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4/2/2010

Rev.03/10

DIVISION OF PLANNING

SPECIAL NOTES FOR INSTALLATION OF TRAFFIC COUNTING INDUCTANCE LOOPS AND AXLE SENSORS

I. DESCRIPTION

Except as specified in these notes, perform all work according to the Department's Current Edition Standard Specifications, applicable Special Provisions and Special Notes, Sepia and Standard Drawings, and the drawings elsewhere in this proposal. Article references are to the Standard Specifications.

Furnish all materials, labor, equipment, and incidentals for the following work: (1) Maintain and control traffic; (2) install inductive loops; and (3) all other work required by the Specifications, Standard Drawings, Special Notes and the drawings in the proposal. The details of the project will be supplied in addition to these Special Notes.

II. MATERIALS

The Department will sample and test all materials according to Department's Sampling Manual. Have all materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing, unless otherwise specified in these notes. All materials shall be approved prior to being utilized. The Contractor shall submit for approval five (5) copies of descriptive literature, drawings, and any requested design data for the materials he proposes to use. No substitutions for approved materials will be made without the written approval of the Engineer.

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Junction Box Type 6 in. x 6 in. x 4 in. The junction box shall have minimum inside dimensions of at least 6 inches high by 6 inches wide by 4 inches deep, made of a UV stabilized nonmetallic material (plastic) or non-rusting metal, and be weatherproof (NEMA 4X enclosure). It shall have a removable replaceable door with a continuous durable weatherproof gasket between the body and overhanging door to ensure a watertight seal. The door shall be hinged with stainless steel screws, hinge(s) and pin(s). The door shall also have a stainless steel padlockable latch on the side opposite the hinge(s). An approved enclosure is the Hubbell-Wiegmann model VJ606HWPL1.

C. Junction Box Type 10 in. x 8 in. x 4 in. The junction box shall have minimum inside dimensions of at least 10 inches high by 8 inches wide by 4.6 inches deep, made of a UV stabilized nonmetallic material (plastic) or non-rusting metal, and be weatherproof (NEMA 4X enclosure). It shall have a removable replaceable door with a continuous durable weatherproof gasket between the body and overhanging door to ensure a watertight seal. The door shall be hinged with stainless steel screws, hinge(s) and pin(s). The door shall also

Inductance Loop and Piezoelectric Axle Sensor Installation Page 2 of 17

have a stainless steel padlockable latch on the side opposite the hinge(s). An approved enclosure is the Hubbell-Wiegmann model VJ1008HWPL1.

D. Junction Box Type A. The junction box Type A shall be constructed of a fiberglass reinforced polymer concrete, ANSI/SCTE 77-2002 Tier 15 Style, or approved equal. It shall have nominal inside dimensions of 13 inches wide by 24 inches long by 18 inches deep with an open bottom. The removable cover shall be attached with a minimum of two 3/8-inch stainless steel hex bolts and washers.

E. Junction Box Type B. The junction box Type B shall be constructed of a fiberglass reinforced polymer concrete, ANSI/SCTE 77-2002 Tier 15 Style, or approved equal. It shall have nominal inside dimensions of 11 inches wide by 18 inches long by 12 inches deep with an open bottom. The removable cover shall be attached with a minimum of two 3/8-inch stainless steel hex bolts and washers.

F. Junction Box Type C. The junction box Type C shall be constructed of a fiberglass reinforced polymer concrete, ANSI/SCTE 77-2002 Tier 15 Style, or approved equal. It shall have nominal inside dimensions of 24 inches wide by 36 inches long by 30 inches deep with an open bottom. The removable cover shall be attached with a minimum of two 3/8-inch stainless steel hex bolts and washers.

G. Cabinet Type G. A controller cabinet Type G shall be constructed of type 5052-H32 sheet aluminum with a minimum thickness of 0.125 inches. The cabinet shall meet or exceed the industry standards set forth by the UL 50 and the National Electrical Manufacturer's Association (NEMA) 3R. The cabinet shall have a dimension of 41 inches high by 25 inches wide by 16 inches deep. The cabinet shall include kits for a back panel and two shelves. The cabinet shall be designed with a sloped top to prevent the accumulation of water on its top surface. The single door opening shall be double flanged on all four sides, hinged on the right side, equipped with a three-point latching mechanism, and include a door restraint. The door shall be equipped with a Corbin tumbler #2 lock. The cabinet shall be equipped with two adjustable "C" mounting channels on both side and back walls to allow for versatile positioning of shelves. Manufacturer's shop drawings shall be submitted demonstrating details of equipment housing and installation. If electrical service is specified, a 120-volt GFCI AC duplex receptacle shall be provided in the cabinet.

An approved source is provided below. Other approved equal cabinets may be furnished if approved by a representative of the Central Office, Division of Planning. To be considered approved equal, the cabinet shall meet the above requirements and match the specified detailed dimensions.

Econolite Control Products.
P.O. Box 6150
3360 E. La Palma
Anaheim, California 92806-2856

Inductance Loop and Piezoelectric Axle Sensor Installation

Page 3 of 17

H. Galvanized Steel Cabinet. The cabinet shall be a hinged cover NEMA Type 3R medium enclosure, constructed of 16 or 14 gauge galvanized steel, and have inside dimensions of 20 inches high by 20 inches wide by 8 inches deep. This shall be the standard size that contractors shall place their bids on. The cabinet shall meet the industry standards set forth by the Underwriters Laboratories Inc. (UL) 50 and the National Electrical Manufacturers Association (NEMA). The finish shall consist of an American National Standards Institute (ANSI) 61 gray polyester powder finish inside and out over the galvanized steel. The cabinet shall have the following features:

- Drip shield top and seam-free sides, front, and back, to provide protection in outdoor installations against rain, sleet, and snow.
- 16 gauge galvanized steel continuous stainless steel pin.
- Cover fastened securely with captive plated steel screws.
- Hasp and staple provided for padlocking.
- No gaskets or knockouts.
- Back plate mounted inside the cabinet for terminal strip installation.

An approved source is provided below. Other approved equal cabinets may be furnished if approved by a representative of the Central Office, Division of Planning. To be considered approved equal, the cabinet shall meet the above requirements and match the specified detailed dimensions.

Hoffman Engineering Co.
World Headquarters
900 Ehlen Drive
Anoka, Minnesota 55303-7504

I. Wood Post. The wood post shall be 4 inches by 4 inches by 8 feet long, and is pretreated to conform to the American Wood Preservers' Association (AWPA) C-14. All wood posts shall be sawed on all four sides, having both ends square, and conform to the dimensions specified. The wood post is described in detail in Section 820.01 of the Kentucky Transportation Cabinet, Department of Highways, Standard Specifications for Road and Bridge Construction, Current Edition.

J. Conduit. Conduit shall be rigid steel waterproofed conduit unless otherwise specified. All conduits shall be galvanized inside and out and shall conform to the Underwriters' Laboratories (UL) requirements for rigid metallic conduit. IMC will not be accepted. Furnish all conduit fittings, bodies, boxes, joints, couplings and mounting hardware.

K. Loop Wire. All loop wire shall be plainly marked in accordance with the provisions of the current editions of the National Electric Code (NEC). The wire shall be 14-gauge single conductor, insulated in polyethylene (PE) with a 0.004-inch thick nylon coating, and enclosed in a 0.030-inch thick PE tube jacket. The wire shall meet the requirements of the International Municipal Signal Association (IMSA) Specification No. 51-7- latest edition. Any other wire shall be of appropriate size and type per the NEC and Section

Inductance Loop and Piezoelectric Axle Sensor Installation
Page 4 of 17

834.01 Wiring of the Kentucky Transportation Cabinet, Department of Highways, Standard Specifications for Road and Bridge Construction, Current Edition.

L. Cable No. 14/1 Pair. Cable No. 14/1 pair or loop lead-in cable shall be 14 AWG, stranded, paired conductors, electrically shielded and shall conform to IMSA 19-2. All cable shall be plainly marked in accordance with the provisions of the National Electric Code.

M. Traffic Loop Encapsulant. The traffic loop encapsulant shall consist of a one-part polyurethane as described in Section 835.06 of the Kentucky Transportation Cabinet, Department of Highways Standard Specifications for Road and Bridge Construction, Current Edition.

N. Non-Shrinkable Grout. The grout used shall be non-shrinkable and meet the Department of Highways Standard Specifications for Road and Bridge Construction, Current Edition.

O. Backer Rod. Use backer rod of 1/2" diameter that meets the Department of Highways Standard Specifications for Road and Bridge Construction, Current Edition.

P. Seeding and Protection. Use seed mixture No. I per Section 212-Erosion Control of the Department's Current Edition Standard Specifications for Road and Bridge Construction book.

Q. Electrical Service. The contractor shall initiate a work order for the installation of electrical service to the power site. A representative from the Division of Planning and the local utility company shall be consulted prior to choosing an exact location for the pole. The contractor shall be responsible for clearing the right-of-way for the electrical service drop. The electrical service shall be a minimum 60-ampere, which is capable of supplying 120 volts or 240 volts to the electronics. The installation and materials specified in the construction notes below, shall be made incidental to the bid item established for electrical service. A 120-volt GFCI AC duplex receptacle shall be provided in the cabinet. Contractor is responsible for correct size and type of wire. Contractor is responsible for obtaining any and all electrical inspections, memberships, meter base and any other requirements by the utilities serving the installation and pays all fees required.

R. Piezoelectric Sensors. The sensor shall consist of a metal strip 0.260" wide x 0.063" thick; ± 0.005 " and be furnished in the specified lengths. The sensor shall include a 100-foot electrical coax-cable connected to one end. The coax-cable shall be RG 58 type with an underground/direct burial rated outer jacket. The OD of the cable is 0.187". The nominal capacitance of the cable is 27 pF/ft. Piezo lead-in cables are to be run splice free to their cabinets. Many installations exceed the 100-foot length so the piezo should be ordered with a lead-in of appropriate length. Standard lead-ins can be ordered from 100 to 500 feet in 50-foot increments. The manufacturer should be contacted regarding longer distances.

Inductance Loop and Piezoelectric Axle Sensor Installation
Page 5 of 17

- 1. Piezoelectric Sensor: Roadtrax BL Class I or Approved Equal.** Furnish Class I Piezoelectric Sensor to be used to collect truck weigh-in-motion data. Class I sensors are typically furnished in 6- or 11-foot lengths. See Notes and Estimate of Quantities for sensor type and length. One installation bracket for every 6 inches of sensor length shall also be supplied.

The vendors listed below are known distributors of the Roadtrax BL Class I sensors. Other approved equal sensors may be furnished if approved by a representative of the Central Office, Division of Planning. To be considered approved equal, the sensors shall meet the above requirements and match the specified detailed dimensions.

DIA-L Associates
P. 3302 Aquia Drive
Stafford, VA 22554

Measurement Specialties, Inc.
80 Little Falls Road
Fairfield, NJ 07004

International Road Dynamics, Inc.
702 43rd Street East
Saskatoon, Saskatchewan
Canada, S7K3T9

Grout material shall display fast cure times; tack free in 10 minutes and open to traffic in 40 minutes with full cure within an hour. Material shall have excellent adhesion to concrete and asphalt. It should display excellent chemical resistance, water insensitivity, and thermal stability at high and low temperatures. Ample encapsulation material shall be supplied for each sensor for its proper installation. Approved encapsulation material by the piezo manufacturer includes AS475 Axle Sensor Grout or approved equal. This is a durable two-part resin-based grout suitable for asphalt and concrete applications having the following typical physical properties:

Compressive Strength (psi)	ASTM D638	5000 min.
Water Absorbtion	ASTM D570	0.3% max
Wear Resistance	ASTM D4060	CS10 wheel, 1000 gm load 1000 cycles, 186 mg loss

The vendors listed below are known distributors of the approved grout.

DIA-L Associates
P. 3302 Aquia Drive
Stafford, VA 22554
(540) 659-2264

Measurement Specialties, Inc.
80 Little Falls Road
Fairfield, NJ 07004

PAT Traffic Control Corporation
1665 Orchard Drive
Chambersburg, PA 17201

International Road Dynamics, Inc.
702 43rd Street East
Saskatoon, Saskatchewan
Canada, S7K3T9

Inductance Loop and Piezoelectric Axle Sensor Installation
Page 6 of 17

III. CONSTRUCTION METHODS

The plans indicate the extent and general arrangement of the installation and are for general guidance. When the contractor deems any modifications of the plans or specifications necessary, details of such changes and the reasons shall be submitted in writing to the Resident Engineer for written approval prior to begin the modified work.

Once the project has been let and awarded, the Division of Construction shall notify the Division of Planning of the scheduled date for a Pre-Construction meeting so that prior arrangements can be made to attend. This will allow the Division of Planning an opportunity to address their concerns and answer any questions that the contractor may have before beginning the work. Planning shall also be notified two weeks before work pertaining to these specifications begins to ensure their personnel are present during sensor installation and once the work has been completed so that their representative can perform a final inspection. The Division of Construction then reviews Planning's final inspection report and determine whether the work is in compliance with the specifications before awarding payment to the contractor.

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Junction Box Type 6" x 6" x 4" or 10" x 8" x 4" (as noted). The contractor shall stub the rigid steel conduit to the junction box so the bottom of the box is approximately 18" above the ground. The junction box shall be located at or beyond the shoulder and mounted on the side of a post approximately 3 feet beyond the guardrail post using banding material or other appropriate mounting hardware with the hinge side up. See Figures 2a and 2b for additional details. Leave approximately 18" of slack lead-in wire coiled inside the junction box. Permanent identification numbers shall be affixed to all wires in each junction box and cabinet in order to distinguish between the loops and/or sensors. See Location Drawing for sensor numbers to be placed on all lead-ins.

C. Junction Box Type A (or B or C). Install the Junction Box Type A near the edge of pavement and flush with the ground level (see Figure 3). Place roughly 18 inches of No. 57 aggregate underneath the junction box Type B to allow drainage. Extend the loop lead-in wires splice-free to the cabinet. Run the wire from the junction box Type A through the conduit at a minimum depth of 6 inches. Stub the conduit up into the junction box Type A from its base to accommodate the lead-in wires. Leave at least 2 feet of slack lead-in wire coiled inside the junction box Type A. The conduit fittings, backfilling, and aggregate shall be incidental to the junction box Type A. Permanent identification numbers shall be affixed to all wires in each junction box and cabinet in order to distinguish between the loops and/or sensors. See Location Drawing for sensor numbers to be placed on all lead-ins.

D. Cabinet Type G. Locate the cabinet sufficiently beyond the roadside by determining the minimum clear zones in accordance with the "Roadside Design Guide". Place a concrete foundation of appropriate size for mounting the cabinet. The cabinet shall be mounted on the concrete base such that the bottom of the cabinet is 27" above the ground. The door of the cabinet shall open away from traffic. Fasten the cabinet to the foundation

Inductance Loop and Piezoelectric Axle Sensor Installation

Page 7 of 17

using anchor rods and caulk the gap between the cabinet and the base. Stub rigid conduit up into the cabinet from its base. Install an extra 1 ¼" conduit to be stubbed out in the bottom of the cabinet and run out 2 feet from the concrete base and plugged with duct seal or taped shut with electrical tape toward the roadway for future use. An 8' copper clad ground rod shall be driven into the soil and bonded to the rigid conduit via #4 solid copper wire and ran through the concrete and up into the cabinet. A ¾" rigid steel conduit shall be stubbed up into the cabinet and run 2 feet up the electrical service pole and terminated to a ¾" weatherhead. This conduit shall be run in the same ditch as the electrical service. If electrical service is not provided as an item in the contract, the ¾" rigid steel conduit shall be run out 2 feet from the concrete base and plugged with plumbers putty or taped shut with electrical tape. The location of the plugged end shall be marked with a wooden stake and labeled "¾ in. conduit end" (see Figure 8). A 120-volt, 20-amp GFCI AC duplex receptacle shall be provided in the cabinet.

Leave at least 5 feet of slack lead-in wire in the cabinet. Include the following major items as incidental to the cost of the cabinet: concrete foundation, anchor rods, ground rod, #4 solid copper wire, bonding clamps, and caulking. The Division of Planning will supply additional harnesses and do final connections inside the cabinet. Permanent identification numbers shall be affixed to all wires in each junction box and cabinet in order to distinguish between the loops and/or sensors. See Location Drawing for sensor numbers to be placed on all lead-ins.

E. Install Base Mount Enclosure. Locate the cabinet sufficiently beyond the roadside by determining the minimum clear zones in accordance with the "Roadside Design Guide". For this project, a base mount Model 170 Controller Cabinet, without anchor bolts, will be State-furnished. The contractor shall construct each cabinet foundation as shown on the plans per the attached Figures 9a and 9b, "Base Mounted 170 Cabinet Detail", (including furnishing and installing anchor bolts). Contractor shall install the cabinet on the concrete base such that the doors of the cabinet open away from traffic (hinges are away from traffic), and shall make all field wiring connections to the sensors, electrical and telephone services (as applicable). Fasten the cabinet to the foundation using anchor rods and caulk the gap between the cabinet and the base. Stub rigid conduit up into the cabinet from its base. Install an extra 1 ¼" conduit to be stubbed out in the bottom of the cabinet and run out 2 feet from the concrete base and plugged with duct seal or taped shut with electrical tape toward the roadway for future use. An 8' copper clad ground rod shall be driven into the soil and bonded to the rigid conduit via #4 solid copper wire and ran through the concrete and up into the cabinet. Two 1" rigid steel conduits shall be stubbed up into the cabinet, one for electrical service and one for telephone service (whether installed at this time or in the future). They shall be run a minimum of 2 feet up the electrical service pole and/or telephone source and terminated to 1" weatherheads. These conduits shall be run in the same ditch if possible. If electrical service is not provided as an item in the contract, the 1" rigid steel conduit shall be run out 2 feet from the concrete base and plugged with plumbers putty or taped shut with electrical tape. The location of the plugged end shall be marked with a wooden stake and labeled "1 in. conduit end". A 120-volt, 20-amp GFCI AC duplex receptacle shall be provided in the cabinet.

Inductance Loop and Piezoelectric Axle Sensor Installation Page 8 of 17

Leave at least 6 feet of slack sensor lead-in wire in the cabinet. Include the following major items as incidental to the cost of this bid item: concrete foundation, anchor rods and associated hardware, ground rod, #4 solid copper wire, bonding clamps, caulking, electrical material and connections (if applicable). The Division of Planning will supply the cabinet, additional harnesses and do final sensor connections inside the cabinet. Permanent identification numbers shall be affixed to all wires in each junction box and cabinet in order to distinguish between the loops and/or other sensors. See Location Drawing for sensor numbers to be placed on all lead-ins.

F. Galvanized Steel Cabinet. The contractor shall determine the amount of clearance required from the road to the cabinet for each specific station location. The "Roadside Design Guide", developed by the American Association of State Highway Officials (AASHTO), shall be used as a tool to determine roadside safety based on design and speed limit. The contractor and Planning shall discuss and resolve any conflicts in the Pre-Construction meeting that might arise from following the station descriptions of the Location Table.

Use terminal strips on the back plate with a minimum of eight terminals each and 7/16-inch spacing (center to center) to mount inside the cabinet in order to connect the lead-in wires to the cable assemblies. Use screw type terminal strips to accommodate wire with spade-tongue ends. Allow for at least 20 inches of slack lead-in wire in the cabinet before connecting them to the terminal strip. Wires connected to the terminal strips shall have insulated, solderless, spade tongue terminals of correct wire and stud size. Wires shall be labeled correctly. See Location Drawing and Wiring Table.

Permanent identification numbers shall be affixed to all wires in each junction box and cabinet in order to distinguish between the loops and/or sensors. See Location Drawing for sensor numbers to be placed on all lead-ins.

G. Wood Post. Set the treated-wood post 3 feet below the ground and place the backfill material in the hole, compacting until flush with the existing earth. Mount the cabinet to the post using 1/4" x 2 1/2" galvanized lag bolts at the top and bottom of the cabinet. The base of the cabinet shall be 4 feet above ground level. Stub the rigid steel conduit up into the base of the cabinet. Affix the conduit to the post using two conduit straps, a maximum of 18" on-center, and 1/4" x 2 1/2" galvanized lag bolts. Cabinet door shall open facing away from traffic (see Figure 7).

H. Conduit. Rigid steel waterproofed conduit encasement shall be provided for all conductors where conductors run to a junction box or cabinet. All conduit installations shall conform to the provisions of the NEC, except where directed otherwise. Bonded slip joints will be permitted for joining rigid conduit to the junction box or cabinet. Where a standard coupling cannot be used, an approved threaded union coupling shall be used.

Inductance Loop and Piezoelectric Axle Sensor Installation

Page 9 of 17

All conduit ends shall be reamed to remove burrs and sharp edges. Damaged portions of the galvanized surfaces and untreated threads resulting from field cuts shall be painted with a rust inhibitive paint. Conduit bends shall have a radius of no less than 12 times the nominal diameter of the conduit, unless otherwise shown on the plans.

Conduit that will be subject to regular pressure from traffic shall be laid to a minimum depth of 24 inches below grade. Conduit that will not be subject to regular pressure from traffic shall be laid to a minimum depth of 6 inches below grade. All conduit openings shall be waterproofed with a flexible, removable sealant, including those ending in junction boxes and cabinets. This shall be accomplished using duct seal, or plumber's putty, by working it around the wires and then extending it 1 inch into the end of the conduit. After the conduit has been installed and before the backfilling is started, the conduit installation shall be inspected and approved by the Engineer. In backfilling trenches, the backfill material shall be placed and compacted in lifts of 9 inches or less. Any area disturbed as a result of the contractor's operations shall be restored to the satisfaction of the Engineer.

I. Wiring. All wiring shall conform to the provisions of the NEC unless otherwise shown on the plans. Permanent identification numbers shall be affixed to all wires in each junction box and cabinet in order to distinguish between the loops and/or sensors. See Location Drawing Figure 1 for sensor numbers to be placed on all lead-ins. All wiring shall be taken to a cabinet or junction box. Leave at least 2 feet of "slack" lead-in wire inside each Type B junction box and steel cabinet, a minimum of 4 feet of wire inside the Type G cabinet and a minimum of 6 feet of wire inside the base mounted Type 170 cabinet.

J. Splicing. Sensor lead-in cable lengths for each sensor shall allow sufficient but not excessive slack for splicing connections. All splices shall conform to the provisions of the NEC unless otherwise shown on the plans. Loop lead-in wire splices to shielded pair cables shall be twisted and soldered. Other splices shall be twisted and soldered or made with mechanical connectors of a type approved by the Engineer. Splices for loop wire shall be protected by either heat shrink tubing or a double spiral wrapping of vinyl electrical tape. For splicing home-run coax cable to the sensor's lead-in cable, the same coax cable, supplied by the manufacturer, shall be used. For coax-cable splices, the contractor shall provide kits (3M Scotchcast 3832 Buried Service Wire Encapsulation Kit or equal) to protect them. All splices are to be made in junction boxes unless approved by a representative of the Division of Planning.

K. Loops. A location table is furnished in the Supplemental Notes, along with an estimate of quantities, to display the approximate location for loop installation in the existing pavement. The contractor and a representative of Planning will verify the precise location on site. The contractor shall be careful to avoid expansion joints and pavement sections where potholes, cracks, or any other roadway flaws exist. This will not only facilitate installation of the equipment, but also will increase the accuracy and service life span of the sensors.

Inductance Loop and Piezoelectric Axle Sensor Installation

Page 10 of 17

There shall be a minimum of 6 feet between loops in adjacent lanes for 12-foot wide lanes. Unless indicated otherwise, loops in the same lane shall be spaced 16 feet from leading edge to leading edge (see Figure 6). All loop dimensions shall be 6 feet by 6 feet square unless otherwise indicated by the Location Drawing. Center and mark each loop in the lane such that its sides are parallel and perpendicular to the direction of traffic. Make the saw-cut for the loop 3/8-inch wide and at a depth such that the top of the backer rod is a minimum of 1 inch below the surface of rigid (PCC/Concrete) pavement or 3 inches below the surface of asphalt pavement (see Figure 5). Drill a 1.5" hole at all four corners of the loop to prevent sharp bends in the wire (see Figure 4).

Make the saw-cut for the home run slot 3/8 inch wide. Since it may contain several lead-in wires, the depth should be such that the top of the backer rod is a minimum of 1 inch below the surface of rigid (concrete) pavement or 3 inches below the surface of bituminous (asphalt) pavement. Depending on the number of road sensors at a particular site, the home run slot will gradually need to be cut deeper as you approach the shoulder in order to maintain the minimum depth for the top lead-in wire and directly enter the buried conduit (10 inch depth).

Clean the mud, debris, water, and loose particles from the slot, roadway and surrounding areas. A high-pressure washer shall be used to wash the area followed by clean (oil free) compressed air.

Measure out the appropriate length of loop lead-in wire to allow slack in the final cabinet or junction box. Insert the loop wire into the loop slot for four rotations (see Figure 5). Push the wire in with a wooden stick, such as a paint stir stick or other blunt wooden object. If the wire insulation is broken, apply heat shrink tubing or a double wrapping of vinyl electrical tape to protect from corrosion. Extend the loop lead-in wire splice-free to the junction box or cabinet. Exceptions to this shall be considered on a case-by-case basis and must be approved by the Engineer. If splices cannot be avoided, every effort shall be made to locate them in a junction box. If loop lead-in cable (Cable No. 14/1 Pair) is specified, loop wires shall be twisted and run to the nearest type Junction Box and the wires twisted and soldered to the lead-in cable. The lead-in cable shall then be run splice free to the cabinet ensuring that extra cable is left in each subsequent junction box that it may be run through as well as the cabinet. All wires and cables shall be labeled in each junction box and cabinet.

Twist each pair of loop lead-in wires, exclusive of shielded coax-cable, with three to five turns per foot before placement into the conduit, junction box, and cabinet. Do not twist different pairs of loop wire together. Once the loop wire is installed in the roadway, apply enough loop encapsulant to just cover the loop wires in the saw slot. Once this is done, cover the encapsulated loop wire with backer rod throughout the entire loop and tail saw slots. Finish filling the saw cut with a mixture of non-shrinkable grout and water. Every attempt should be made to alleviate air pockets and low spaces should be refilled. Any excess grout shall be cleaned from the roadway via squeegee, etc. to help alleviate tracking. The loop encapsulant, backer rod and non-shrinkable grout shall be

Inductance Loop and Piezoelectric Axle Sensor Installation Page 11 of 17

incidental to the bid item "Loop Saw Slot and Fill".

On resurfacing, rehabilitation, and new construction projects that include new asphalt pavement, the Contractor shall install loops prior to laying the final surface course. On projects with milling and texturing, the Contractor may install the loops prior to or after the milling operation; however, if installed prior to milling, the Contractor shall be responsible for ensuring that the loops are installed at a depth such that the milling operation will not disturb the newly installed loops. The Contractor shall correct damage caused by the milling operations to newly installed loops prior to placement of the final surface course at no additional cost to the Cabinet.

For projects that include the installation of new asphalt and piezoelectric sensors, the Contractor shall mark or otherwise reference all loops installed prior to the final surface course such that the loops can be accurately located when the piezoelectric sensors are installed after placement of the final surface course.

For projects that do not have asphalt surfacing, the Contractor shall install the loops in the surface of the pavement.

The Prime Contractor shall coordinate the installation of loops with the electrical sub-Contractor and the Engineer and shall be responsible for correct operation of the completed installation.

All loop inductance readings shall be between 100 and 300 microhenries. The loop inductance between two loops in the same lane shall be within 20 microhenries of each other. Inductance loop conductors shall test free of shorts and unauthorized grounds. Upon completion of the project, all loops must pass an insulation resistance test of at least 100 million ohms to ground when tested with a 500 Volt direct current potential in a reasonably dry atmosphere between conductors and ground.

L. Electrical Service. A treated-wood service pole, per Section 820 of the Department's Current Edition Standard Specifications, with a 20-foot minimum length and a 6- to 12-inch diameter, or approved equal, is to be furnished by the Contractor. Install the electrical service pole adjacent to the cabinet at a depth of at least 4 feet while maintaining a 12-foot minimum clearance for the electrical service drop. Compact the backfill material to support the electrical service drop without leaning. Install an appropriate pole support guy wire and anchor if necessary. Install rigid conduit up the length of the pole with three separate insulated conductors (No. 4 copper wire) in the conduit and a weatherhead at the top.

Space the conduit straps 30 inches apart and leave 24 inches of cable for the drip loop. Install a meter-base and a disconnect panel with a 20-ampere circuit breaker inside. A 120-volt, 20-amp GFCI AC duplex receptacle shall be provided in the cabinet. A manufactured weatherproof hub connector is required to connect the meter-base to the disconnect panel. Do not use service entrance cable inside the conduit. The conduit from the disconnect panel is required to be at a depth of 6 inches below grade. Install a 5/8-

Inductance Loop and Piezoelectric Axle Sensor Installation

Page 12 of 17

inch by 8-foot ground rod below the finished grade. Extend the ground wire through a separate hole in the disconnect panel and clamp to the ground rod. Install a 1" rigid conduit to 2 feet above ground level and install a weatherhead at the top opening. This conduit shall be run to and stubbed up into the Cabinet. The conduit shall be attached to the pole at a minimum of 2" from ground level and 2" from the weatherhead.

M. Piezoelectric Sensor, Roadtrax BL Class I or Approved Equal. Determine where on the roadway the piezoelectric sensor will be installed. Roadway ruts shall not be in excess of 1/2 inch under a 4-foot straight edge. Install the piezoelectric sensor perpendicular to traffic. Locate the sensor in the lane as shown on the site detail sheet. Eleven-foot length sensors should be centered in the lane. The following is a typical step by step procedure for the installation of a piezoelectric sensor. Refer specifically to the manufacturer's current instructions provided with the sensor prior to installation. Piezoelectric sensors are always installed at the final surface of the pavement.

1. Carefully mark the slot to be cut, perpendicular to the flow of traffic. Ensure that the sensors are properly positioned in the lane.
2. It is strongly recommended that a 3/4" wide diamond blade be used for cutting the slot, or that blades be ganged together to get a single 3/4 inch wide cut. The slot shall be wet cut to minimize damage to the road.
3. Cut a slot 3/4 inch wide ($\pm 1/16"$) by 1" minimum deep. The slot should be 8" longer than the sensor (including the lead attachment). Drop the saw blade an extra 1/2" down on both ends of the sensor. The lead out should be centered on the slot.
4. Cut the home-run slot for the coax-cable 1/4-inch wide and at a depth so that the cable is a minimum of 1 inch below the road surface in rigid pavement (concrete) or 3 inches below the road surface in bituminous (asphalt) pavement.
5. Sweep and wash out all debris left in the slot and ensure it is clean and dry.
6. Use high pressure water, or water and oil-free compressed air to clean ALL foreign and loose matter out of the slot and within 1 foot on all sides of the slot.
7. Totally remove excess water and debris from roadway and shoulder area. Debris should be disposed of properly.
8. Carefully dry the slot, and within 1 foot on all sides of the slot, using oil-free forced air, torpedo heaters, electric heaters, or natural evaporation, depending on weather conditions. Be very careful not to burn the asphalt if heat is used.
9. Place a strip of duct tape on the pavement along the length of both sides of the sensor slot. Place the 2-4" wide duct tape 1/8" away from the slot.
10. Remove BL sensor from the box. Visually inspect each sensor to ensure it is straight without any twists or curls. Check lead attachment and passive cable for cuts, gaps, cracks and/or bare wire. Verify the correct sensor (type and length) is being installed by checking the data sheet. Verify there is sufficient cable to reach the cabinet.
11. Test the sensor for Capacitance, Dissipation Factor and Resistance, according to the directions enclosed with the sensor. Capacitance and dissipation should be within $\pm 20\%$ of the enclosed data sheet. Resistance (using the 20M setting) should be infinite. Record the sensor serial number and the test results. This information should be stored in the counter cabinet and/or returned to KYTC Planning personnel.

Inductance Loop and Piezoelectric Axle Sensor Installation

Page 13 of 17

12. Lay the sensor on the tape next to the slot. Ensure that the sensor is straight and flat. Ensure that you are wearing clean protective latex (or equivalent) gloves at all times when handling sensors.
13. Clean sensor with steel wool or emery pad. Wipe down with alcohol and clean lint-free cloth.
14. Place the installation bracket clips on the sensor, about every 6" for the length of the sensor.
15. Bend the end of the sensor downward at a 30° angle. Bend the lead attachment end down at a 15° angle and then 15° back up until level (forming a lazy Z)
16. Place the sensor in the slot, with the brass element 3/8" below the road surface along the entire length. The end of the sensor should be at least 2" from the end of the slot and the tip should not touch the bottom of the slot. The top of the plastic installation bracket clips should be 1/8" below the surface of the road. The lead attachment should also not touch the bottom or sides of the slot. Ensure the ends of the sensors are pushed down sufficiently per the manufacturer's instructions.
17. Visually inspect the length of the sensor to ensure it is at uniform depth along its length and it is level (not twisted, canted or bent).
18. Block off the ends of the slot using plumbers putty. Ensure that there are adequate "dams" at both ends so that the encapsulation material does not flow out. On the passive cable end, the dam should be about 3-5" past the end of the lead attachment area.
19. The encapsulation material should be placed full depth, overfilled, and allowed to cure 10 minutes before shaving level with the surface. Ensure it fills around and underneath the sensor completely and there is not a trough on top.
20. Remove the tape on the sides of the sensor as soon as the adhesive starts to cure.
21. Carefully remove all the plumbers putty from ends of the sensor.
22. Route the lead in cable through the slot cut for it, and cover with approved loop sealant.
23. After the encapsulant has hardened, grind the top of the installation using an angle grinder. The profile should be flush with the road surface or with a slight, 1/16" mound. There shall be no concave portion to the mound.
24. Clean up the site. Sealant curing time varies with temperature and humidity. Contractor shall ensure that the complete curing of the encapsulation material has taken place prior to subjecting the sensors to traffic.

After the installation is complete, the minimum output voltages of each piezoelectric sensor shall meet the following: 1.5 Volts (peak) for a 10,000 pound axle and 200 millivolts (peak) for a car axle. The piezoelectric sensor lead-in cable is part of the sensor and can be ordered in different lengths (100' standard). Piezoelectric sensor lead-in cable shall not be spliced.

N. Cleanup and Restoration. The contractor will be responsible for all damage to public and/or private property resulting from his work. Upon completion of the work, restore all disturbed highway features in like kind design and materials. This includes any filling of ruts and leveling ground appropriately. Clean the site and dispose of all waste and debris off the right-of-way at sites obtained by the contractor at no additional cost to the

Inductance Loop and Piezoelectric Axle Sensor Installation

Page 14 of 17

Department. Sow all disturbed earthen areas with Seed Mixture No. I per Section 212.03.03 Permanent Seeding and Protection of the Kentucky Transportation Cabinet, Department of Highways, Standard Specifications for Road and Bridge Construction, Current Edition. Seeding, silt fence and other erosion control items will be considered incidental to other bid items.

O. On-Site Inspection. Each contractor submitting a bid for this work shall make a thorough inspection of the site prior to submitting his bid and shall thoroughly familiarize themselves with existing conditions so that the work can be expeditiously performed after a contract is awarded. Submission of a bid will be considered evidence of this inspection having been made. The Department will not honor any claims resulting from site conditions.

P. Property Damage. The contractor will be responsible for all damage to public and/or private property resulting from his work.

Q. Caution. Information shown on the plans and in this proposal and the types and quantities of work listed are not to be taken as an accurate or complete evaluation of the material and conditions to be encountered during construction. The bidder must draw his own conclusion as to the conditions encountered. The Department does not give any guarantee as to the accuracy of the data and no claim will be considered for additional compensation if the conditions encountered are not in accordance with the information shown.

R. Utility Clearance. It is not anticipated that utility facilities will need to be relocated and/or adjusted; however, in the event that it is discovered that the work does require that utilities be relocated and/or adjusted, the utility companies will work concurrently with the contractor while relocating their facilities.

S. Site Inspections. All sensors are to be tested by a member of the Central Office Division of Planning equipment staff after the installation is complete to verify that the station is operating properly. Tests shall demonstrate that the system operates in accordance with the plans and specifications. Inductance loop conductors shall test free of shorts and unauthorized grounds and shall have an insulating resistance of at least 100 megaohms when tested with a 500 volt direct current potential in a reasonably dry atmosphere between conductors and ground. If the sensors do not meet the specifications and/or KYTC's traffic recording equipment does not perform properly because of an improperly functioning sensor, the contractor shall be responsible for the replacement of the faulty sensor(s), as soon as practicable at their total cost.

Inductance Loop and Piezoelectric Axle Sensor Installation
Page 15 of 17

IV. BID NOTES AND METHOD OF MEASUREMENT FOR PAYMENT

Only the bid items listed will be measured for payment. All other items required to complete the vehicle detection installation shall be incidental to the other items of work. Payment at the contract unit price shall be full compensation for all materials, labor, equipment and incidentals to furnish and install these items.

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Junction Box Type 6" x 6" x 4" (or Type 10" x 8" x 4" if noted). Each type junction box shall include furnishing and installing specified junction box in accordance with the specifications. This item includes connectors, splice sleeves, conduit fittings, mounting materials and any other items required to complete this part of the installation. Incidental to this item is furnishing and installing any specified post (wood, channel, metal, etc.) as required for the installation.

C. Junction Box Type A (B or C). Each type junction box shall include furnishing and installing specified junction box in accordance with the specifications. This item includes concrete (if required), #57 aggregate, conduit fittings and backfilling around the unit.

D. Cabinet Type G (NEMA-3R). Cabinet (each) shall include furnishing and installing a Type G cabinet as specified. This item shall include constructing the concrete base or mounting cabinet to pole, installation of duplex receptacle and connection of all detectors (where applicable). Incidental to this item shall be furnishing, installing electrical service conductors, conduits, fused cutout, ground rods, all internal shelving, brackets, any necessary pole mounting hardware and electrical inspection fees.

E. Install Base Mount Enclosure. Install base mount enclosure (each) shall include installing a State-furnished cabinet or enclosure as specified. This item shall include all materials and labor for constructing the concrete base (or, if specified, mounting cabinet to pole), installation of the cabinet, duplex receptacle and connection of all detectors (where applicable). Incidental to this item shall be furnishing, installing electrical service conductors, conduits, fused cutout, ground rods, telephone service conduits from the cabinet to the telephone company disconnect box, all internal shelving, brackets, anchor bolts, any necessary pole mounting hardware and electrical inspection fees if applicable.

F. Galvanized Steel Cabinet. Cabinet (each) shall include furnishing and installing a galvanized steel cabinet and post(s) as specified on the drawing. This item shall include mounting the cabinet to post and the connection of all detectors. Incidental to this item shall be furnishing and installing conductors, conduit, ground rods, any necessary pole mounting hardware and any electrical inspection fees.

G. Wood Post. Wood post (each) shall include furnishing and installing a wood post as specified. This item includes excavation, concrete (if required), and backfilling around the unit.

Inductance Loop and Piezoelectric Axle Sensor Installation

Page 16 of 17

H. Conduit. Conduit shall include furnishing and installing specified conduit in accordance with specifications. This item includes conduit fittings, bodies, boxes, expansion joints, couplings, duct seal, bonding straps and any other necessary hardware. Conduit will be measured in linear feet.

I. Wire (or Cable). Wire or cable shall include furnishing and installing specified wire or cable within conduit, saw slot, or overhead as indicated on the detail sheets. This can include, but is not limited to: loop wire, Cable No. 14/1 Pair, etc. Incidental to this item shall be the labeling of all wires and cables in each junction box, cabinet and splice box; furnishing and installing of splice boots, cable rings or other hardware required for installing cable. Loop wire and cable will be measured in linear feet.

J. Loop Saw Slot and Fill. Loop saw slot and fill shall include sawing, cleaning and filling saw slots for induction loops, lead-in wires, etc. with loop sealant or specified approved material. Sawing and filling slot for wire will be measured in linear feet.

K. Trenching and Backfilling. Trenching and backfilling shall include excavation, backfilling, temporary erosion control, seeding, protection and restoration of disturbed areas to original condition. This item includes concrete, asphalt or approved replacement material for sidewalks, curbs, roadways, etc. (if required). Trenching and backfilling will be measured in linear feet.

L. Electrical Service. Electrical services shall include all related work, labor, materials (e.g. meter, straps, conduit, fittings, wire, etc.) and fees towards furnishing and installing an electrical service, which has passed all required inspections. This will be measured in individual units each.

M. Telephone Service. Telephone services shall include all related work, labor, materials (e.g. meter, straps, conduit, fittings, wire, etc.) and fees towards furnishing and installing a telephone service, which has passed all required inspections. This will be measured in individual units each.

N. Piezoelectric Sensor or Approved Equal. Piezoelectric sensor (each) shall include furnishing and installing a Class I Piezoelectric Sensor in accordance with the specifications. Lead-in wire, splice kits, encapsulation material, grout, testing, and accessories shall be incidental to this bid item.

REFERENCES

1. Kentucky Transportation Cabinet, Department of Highways Standard Specifications for Road and Bridge Construction, Current Edition, and Supplemental Specifications.
2. National Electrical Code (NEC), latest edition.
3. International Municipal Signal Association (IMSA) Specification No. 51-7- latest edition.
4. FHWA Manual of Uniform Traffic Control Devices, latest edition.
5. "Roadside Design Guide", developed in 1996 by the American Association of State Highway and Transportation Officials (AASHTO).
6. Kentucky Department of Highways Standard Drawings, current editions, as applicable:

TTC-115	Lane Closure Case I
TTC-135	Shoulder Closure
TTD-110	Post Splicing Detail

Updated: March 31, 2010

Right-of-Way Certification Form

Revised 2/22/11

Federal Funded

Original

State Funded

Re-Certification

This form must be completed and submitted to FHWA with the PS&E package for federal-aid funded Interstate, Appalachia, and Major projects. This form shall also be submitted to FHWA for all federal-aid projects that fall under Conditions No. 2 or 3 outlined elsewhere in this form. When Condition No. 2 or 3 apply, KYTC shall resubmit this ROW Certification prior to construction contract Award. For all other federal-aid projects, this form shall be completed and retained in the KYTC project file.

Date: September 23, 2011

Project Name: I-471

Letting Date: _____

Project #: _____

County: Campbell

Item #: 6-2021.00

Federal #: NHMD4714 (033)

Description of Project: Pavement rehabilitation on I-471 from MP0.0 (US 27) to MP 5.72

Projects that require NO new or additional right-of-way acquisitions and/or relocations

- The proposed transportation improvement will be built within the existing rights-of-way and there are no properties to be acquired, individuals, families, and businesses ("relocatees") to be relocated, or improvements to be removed as a part of this project.

Projects that require new or additional right-of-way acquisitions and/or relocations

- Per 23 CFR 635.309, the KYTC hereby certify that all relocatees have been relocated to decent, safe, and sanitary housing or that KYTC has made available to relocatees adequate replacement housing in accordance with the provisions of the current FHWA directive(s) covering the administration of the Highway Relocation Assistance Program and that at least one of the following three conditions has been met. (Check those that apply.)

- Condition 1.** All necessary rights-of-way, including control of access rights when applicable, have been acquired including legal and physical possession. Trial or appeal of cases may be pending in court but legal possession has been obtained. There may be some improvements remaining on the right-of-way, but all occupants have vacated the lands and improvements, and KYTC has physical possession and the rights to remove, salvage, or demolish all improvements and enter on all land. Fair market value has been paid or deposited with the court.

- Condition 2.** Although all necessary rights-of-way have not been fully acquired, the right to occupy and to use all rights-of-way required for the proper execution of the project has been acquired. Trial or appeal of some parcels may be pending in court and on other parcels full legal possession has not been obtained, but right of entry has been obtained, the occupants of all lands and improvements have vacated, and KYTC has physical possession and right to remove, salvage, or demolish all improvements. Fair market value has been paid or deposited with the court for most parcels. Fair market value for all pending parcels will be paid or deposited with the court prior to AWARD of construction contract. (See note 1 below.)

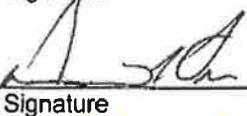
Note 1: The KYTC shall re-submit a right-of-way certification form for this project prior to AWARD of all Federal-Aid construction contracts. Award must not to be made until after KYTC has obtained full legal possession and fair market value for all parcels has been paid or deposited with the court and FHWA has concurred in the re-submitted right-of-way certification.

Right-of-Way Certification Form

Revised 2/22/11

Condition 3. The acquisition or right of occupancy and use of a few remaining parcels are not complete and/or some parcels still have occupants. However, all remaining occupants have had replacement housing made available to them in accordance with 49 CFR 24.204. The KYTC is hereby requesting authorization to advertise this project for bids and to proceed with bid letting even though the necessary rights-of-way will not be fully acquired, and/or some occupants will not be relocated, and/or the fair market value will not be paid or deposited with the court for some parcels until after bid letting. KYTC will fully meet all the requirements outlined in 23 CFR 635.309(c)(3) and 49 CFR 24.102(j) and will expedite completion of all acquisitions, relocations, and full payments after bid letting and prior to AWARD of the construction contract or force account construction. A full explanation and reason for this request, including identification of each such parcel and dates on which acquisitions, payments, and relocations will be completed, is attached to this certification form for FHWA concurrence. (See note 2.)

Note 2: The KYTC may request authorization on this basis only in unique and unusual circumstances. Proceeding to bid letting shall be the exception and never become the rule. In all cases, the KYTC shall make extraordinary efforts to expedite completion of the acquisition, payment for all affected parcels, and the relocation of all relocatees prior to AWARD of all Federal-Aid construction contracts or force account construction.

Approved:	<u>DANIEL P. WHITE</u> Printed Name	 Signature	Right-of-Way Supervisor
Approved:	<u>DAVID L. JRE</u> Printed Name	 9/26/11 Signature	KYTC, Director of ROW & Utilities
Approved:	<u>David Whitworth</u> Printed Name	 9/27/11 Signature	FHWA, ROW Officer (when applicable)

Right-of-Way Certification Form

Revised 2/22/11

Date: September 23, 2011

Project Name: _____

Project #: _____

Item #: 6-2021.00

Letting Date: _____

County: Campbell

Federal #: _____

This project has 0 total number of parcels to be acquired, and 0 total number of individuals or families to be relocated, as well as 0 total number of businesses to be relocated.

0 Parcels where acquired by a signed fee simple deed and fair market value has been paid

0 Parcels have been acquired by IOJ through condemnation and fair market value has been deposited with the court

0 Parcels have not been acquired at this time (*explain below for each parcel*)

0 Parcels have been acquired or have a "right of entry" but fair market value has not been paid or has not been deposited with the court (*explain below for each parcel*)

0 Relocates have not been relocated from parcels _____, _____, _____, _____, _____, _____, and _____ (*explain below for each parcel*)

Parcel #	Name/Station	Explanation for delayed acquisition, delayed relocation, or delayed payment of fair market value	Proposed date of payment or of relocation

There are 0 billboards and/or 0 cemeteries involved on this project.

There are 0 water or monitoring wells on parcels _____, _____, _____, _____, and _____. All have been acquired and are the responsibility of the project contractor to close/cap.

Form Effective Date: April 1, 2006
Last Revised: February 22, 2011

SPECIAL NOTES FOR UTILITY CLEARANCE IMPACT ON CONSTRUCTION

Campbell County
IM 99 019 83735 01C
Pavement Rehabilitation & Auxiliary Lane on I-471
From US 27 to MP 5.72 (Ohio State Line)
Item No 06-2021.00

GENERAL NOTES AND NOTICES RELATIVE TO ALL EXISTING UTILITIES

The utility information provided in the plans and in these Special Notes for Utility Clearance Impact on Construction may not be exact nor complete. The information provided is for the contractor's use in planning the execution of the work. It shall be the road contractor's responsibility to verify the completeness and/or accuracy of all such information being furnished.

Upon arrival on the project, it shall be the priority of the road contractor to verify the existence, location and ownership of any overhead or underground facility.

Utility coordination efforts determined that there are utility facilities within the project limits. Any work pertaining to these utility facilities are defined in the bid package and are to be carried out as instructed by the Kentucky Transportation Cabinet. The contractor will be responsible for any coordination or adjustments that are discussed or quantified in the proposal.

CINCINNATI BELL & ZAYO BANDWIDTH has overhead cables within the project limits that will be affected by bridge construction at Three Mile Road. These facilities are located along Three Mile Road, left of Three Mile Road from Sta. 47+00 to Sta. 52+00 and under the 1-275 twin bridges over Three Mile Road. These cables are hanging in close proximity to the existing easternmost pier. To protect the utilities and allow for pier widening, these cables will be temporarily relocated from the existing poles and attached to the Utility Line Hanger for Bridges to be installed by the road contractor near the centerline of Three Mile Road and detailed in the project proposal.

Before these cables can be temporarily relocated, the contractor will be required to relocate the electric service drop for the interstate lighting from overhead to underground at the service drop pole located left of Three Mile Road at approximately Sta. 48+00 left. This work is included in the road contract.

Once the new underground duct and associated bid items have been installed, Duke Energy Electric will need two (2) weeks advanced notice to re-connect the meter and service.

SPECIAL NOTES FOR UTILITY CLEARANCE, IMPACT ON CONSTRUCTION (CONTINUED)

Cincinnati Bell & Zayo Bandwidth will need four (4) week's advance notice to schedule relocating their cables from the existing poles to the temporary Utility Line Hangers.

When the road contractor is ready for the temporarily relocated cables to be moved back to their original location, Cincinnati Bell and Zayo Bandwidth will need four (4) week's advance notice.

ARTIMIS has facilities within the project limits. These facilities consist of both underground conductor and overhead message boards. The underground conductor is approximately located just outside the edge of pavement. The contractor must call Artimis for locates before beginning any construction work.

KYTC has underground electric service for lighting along the edge of roadway. No impact or adjustments are expected. These poles and associated electric services are to be protected by the contractor during construction.

SPECIAL CAUTION NOTE – PROTECTION OF UTILITIES

The contractor will be responsible for contacting all utility facility owners on the subject project to coordinate his activities. The contractor will coordinate his activities to minimize and, where possible, avoid conflicts with utility facilities. Due to the nature of the work proposed, it is unlikely to conflict with the existing utilities beyond minor facility adjustments. Where conflicts with utility facilities are unavoidable, the contractor will coordinate any necessary relocation work with the facility owner and Resident Engineer. The Kentucky Transportation Cabinet maintains the right to remove or alter portions of this contract if a utility conflict occurs.

The Kentucky Transportation Cabinet makes no guarantees regarding the existence of utilities, the location of utilities, the utility companies in the project scope, or the potential for conflicts encountered during construction. Any location of utilities provided herein has been furnished by the facility owners, field inspection, and/or reviewing record drawings. The accuracy of the information provided is undetermined. It will be the contractor's responsibility to locate utilities before excavating. If necessary, the roadway contractor shall determine the exact location and elevation of utilities by hand digging to expose utilities before excavating in the area of a utility.

BEFORE YOU DIG

The contractor is instructed to call 1-800-752-6007 to reach KY 811, the one-call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that owners of underground facilities are not required to be members of the KY 811 one-call Before-U-Dig (BUD) service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area.

Please Note: The information presented in this Utility Note is informational in nature and the information contained herein is not guaranteed.

THE INSTALLATION OF THE NEW UNDERGROUND SERVICE FOR SERVICE D (I-275 @ THREE MILE ROAD) SHALL BE BEFORE THE IMPACT OF THE COMMUNICATION LINES THAT THE EXISTING SERVICE GOES OVER.

THE INSTALLATION OF THE DUCTED CABLE FOR EX HMC5/EX HMC8 SHALL CORRESPOND TO THE CLOSING OF RAMP A AT THE I-275/I-471 INTERCHANGE SHOWN IN THE MOT.

THE INSTALLATION OF HM1/HM4/HM5/HM6 (SERVICE 1), HM11/HM12 (SERVICE C), HM5/HM6/HM7/CIRCUIT 8 (SERVICE 2), CIRCUIT 1/CIRCUIT 2 (SERVICE 3), CIRCUIT 1/CIRCUIT 3/CIRCUIT 4 (SERVICE 4), AND CIRCUIT 2/CIRCUIT 6 (SERVICE 5) SHOULD BE INSTALLED WHEN WORK ON NB I-471 IS BEING DONE.

THE INSTALLATION OF HM2/HM3/HM7/CIRCUIT 9 (SERVICE 1), HM1/HM2/HM3/HM4 (SERVICE 2), CIRCUIT 3/CIRCUIT 4/HM5 (SERVICE 3), AND CIRCUIT 5/CIRCUIT 7/CIRCUIT 8 (SERVICE 5) SHOULD BE INSTALLED WHEN WORK ON SB I-471 IS BEING DONE.

DURING THE RAMP CLOSURES IN THE MOT, THE CONTRACTOR SHALL INSTALL ALL CROSSINGS, CONDUITS, POLE BASES FOR THE CONVENTIONAL/HIGHMAST LIGHTING.

Special Note for Utility Line Hanger for Bridges

This work consists of designing, installing and removing, when no longer needed, utility line hangers to be attached to the I-275 twin bridges over Three Mile Road. These hangers will be used to temporarily relocate two overhead fiber optic lines and one telephone line while the piers for the I-275 westbound bridge, which is being widened to the outside as shown in the bridge plans, are constructed. The design, installation and removal methods must be approved by the Engineer prior to any work at the site being done. After the hangers are installed and at least seven (7) work days prior to the date the Contractor desires the lines to be moved, the Engineer is to be notified of the Contractor's desire to have the lines moved. The Engineer will then notify the utility companies involved, Cincinnati Bell and Zayo Bandwidth, and they will be responsible for moving the lines to the hangers at no cost to the Contractor. Once the hangers are no longer needed and the Contractor gives the Engineer seven (7) days notice he wants the lines moved back to their original locations, the utility companies will be responsible for moving the lines back to the original poles on which they were located at no cost to the Contractor.

The following criteria are to be used for the design of the utility line hangers for bridges:

1. Each hanger must be capable of supporting at least 7600 pounds loading.
2. The hanger must be designed so the utility companies can attach a cable by threading through a device such as the eye of a bolt at the outside of the bridge barrier.
3. The utility line hangers must be able to be reached from below the bridge from a bucket truck.
4. No drilling into the bridge beams will be allowed.
5. An attachment to the bridge beam or bridge barrier by a clamping device would be considered but would require additional review.
6. Any attachment through the parapet wall should have minimal protrusion on the I-275 roadway side of the bridge.
7. Any holes drilled in the I-275 eastbound bridge parapet wall are to be restored (patched) to their original shape using non-shrink, non-metallic grout approved by the Engineer.
8. The hangers will be located approximately over the center of Three Mile Road but their exact locations will be determined by the Contractor with the Engineer's approval.

All lane or shoulders closures or other traffic control measures required for installing or removing the hangers must meet all requirements of the 2009 Manual on Uniform Traffic Control Devices (MUTCD). All maintenance of traffic costs for this work will be included in the project Maintain and Control Traffic bid item.

Payment for all labor, materials or incidental costs associated with this work will be paid for by bid item number 24458EC Utility Line Hanger for Bridges. The units for this item will be Each.

**SPECIAL NOTE
FOR
MANDATORY PRE-BID MEETING**

**Campbell County
I-471 Pavement Rehabilitation
Item No. 6-2021.00
Contract ID 121002**

The Department of Highways will conduct a Mandatory Pre-Bid Meeting for the subject project. The Pre-Bid Meeting is scheduled for Wednesday, January 25, 2012 at 10:00 a.m. eastern in the auditorium of the Transportation Cabinet Office Building located at 200 Mero Street in Frankfort, Kentucky.

Any prime contractor that is interested in bidding on the subject project or being part of a joint venture must be represented at the Pre-Bid Meeting by at least one person of sufficient authority to bind the company. No individual can represent more than one company. At the meeting a roster will be taken of the representatives present. Only companies represented at the meeting will be eligible to have their bids opened at the date of the letting.

The purpose of the meeting is to familiarize all prospective bidders with the contract requirements.

Department of Highways officials will be present at the meeting to answer questions concerning the project.

PART II
SPECIFICATIONS AND STANDARD DRAWINGS

SPECIFICATIONS REFERENCE

Any reference in the plans or proposal to the *Standard Specifications for Road and Bridge Construction, Edition of 2004*, and *Standard Drawings, Edition of 2000* are superseded by *Standard Specifications for Road and Bridge Construction, Edition of 2008* and *Standard Drawings, Edition of 2003 with the 2008 Revision*.

**Supplemental Specifications to The Standard Specifications
for Road and Bridge Construction, 2008 Edition**
(Effective with the July 15, 2011 Letting)

SUBSECTION: REVISION:	101.02 Abbreviations. Insert the following abbreviation and text into the section: KEPSC Kentucky Erosion Prevention and Sediment Control
SUBSECTION: REVISION:	101.03 Definitions. Replace the definition for Specifications – <i>Special Provisions</i> with the following: Additions and revisions to the Standard and Supplemental Specifications covering conditions peculiar to an individual project.
SUBSECTION: REVISION:	102.03 Contents of the Bid Proposal Form. Replace the first sentence of the first paragraph with the following: The Bid Proposal form will be available on the Department internet website (http://transportation.ky.gov/contract/). Delete the second paragraph. Delete the last paragraph.
SUBSECTION: REVISION:	102.04 Issuance of Bid Proposal Form. Replace Heading with the following: 102.04 Bidder Registration. Replace the first sentence of the first paragraph with the following: The Department reserves the right to disqualify or refuse to place a bidder on the eligible bidder's list for a project for any of the following reasons: Replace the last sentence of the subsection with the following: The Department will resume placing the bidder on the eligible bidder's list for projects after the bidder improves his operations to the satisfaction of the State Highway Engineer.
SUBSECTION: REVISION:	102.06 Examination of Plans, Specifications, Special Provisions, Special Notes, and Site of Work. Replace the first paragraph with the following: Examine the site of the proposed work, the Bid Proposal, Plans, specifications, contract forms, and bulletins and addendums posted to the Department's website and the Bid Express Bidding Service Website before submitting the Bid Proposal. The Department considers the submission of a Bid Proposal prima facie evidence that the bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the Contract.
SUBSECTION: REVISION:	102.07.01 General. Replace the first sentence with the following: Submit the Bid Proposal on forms furnished on the Bid Express Bidding Service website (www.bidx.com). Replace the first sentence of the third paragraph with the following: Bid proposals submitted shall use an eligible Digital ID issued by Bid Express.

**Supplemental Specifications to The Standard Specifications
for Road and Bridge Construction, 2008 Edition**
(Effective with the July 15, 2011 Letting)

SUBSECTION: REVISION:	<p>102.07.02 Computer Bidding. Replace the first paragraph with the following:</p> <p>Subsequent to registering for a specific project, use the Department's Expedite Bidding Program on the internet website of the Department of Highways, Division of Construction Procurement (http://transportation.ky.gov/contract/). Download the bid file from the Bid Express Bidding Service Website to prepare a Bid Proposal for submission to the Department. Submit Bid Proposal electronically through Bid Express Bidding Service.</p> <p>Delete the second and third paragraph.</p>
SUBSECTION: REVISION:	<p>102.08 Irregular Bid Proposals. Delete the following from the first paragraph: 4) fails to submit a disk created from the Highway Bid Program.</p> <p>Replace the second paragraph with the following: The Department will consider Bid Proposals irregular and may reject them for the following reasons:</p> <ol style="list-style-type: none">1) when there are unauthorized additions, conditional or alternate bids, or irregularities of any kind which may tend to make the Bid Proposal incomplete, indefinite, or ambiguous as to its meaning; or2) when the bidder adds any provisions reserving the right to accept or reject an award, or to enter into a Contract pursuant to an award; or3) any failure to comply with the provisions of Subsection 102.07; or4) Bid Proposals in which the Department determines that the prices are unbalanced; or when the sum of the total amount of the Bid Proposal under consideration exceeds the bidder's Current Capacity Rating.
SUBSECTION: REVISION:	<p>102.09 Bid Proposal Guaranty. Insert the following after the first sentence:</p> <p>Bid Proposals must have a bid proposal guaranty in the amount indicated in the bid proposal form accompany the submittal. A guaranty in the form of a paper bid bond, cashier's check, or certified check in an amount no less than the amount indicated on the submitted electronic bid is required when the electronic bid bond was not utilized with the Bid Express Bidding Service. Paper bid bonds must be delivered to the Division of Construction Procurement prior to the time of the letting.</p>
SUBSECTION: REVISION:	<p>102.10 Delivery of Bid Proposals. Replace paragraph with the following:</p> <p>Submit all Bid Proposals prior to the time specified in the Notice to Contractors. All bids shall be submitted electronically using Bid Express Bidding Services. Electronically submitted bids must be done in accordance with the requirements of the Bid Express Bidding Service.</p>
SUBSECTION: REVISION:	<p>102.11 Withdrawal or Revision of Bid Proposals. Replace the paragraph with the following:</p> <p>Bid Proposals can be withdrawn in accordance the requirements of the Bid Express Bidding Service prior to the time of the Letting.</p>

**Supplemental Specifications to The Standard Specifications
for Road and Bridge Construction, 2008 Edition**
(Effective with the July 15, 2011 Letting)

SUBSECTION: REVISION:	<p>102.13 Public Opening of Bid Proposals. Replace Heading with the following: 102.13 Public Announcement of Bid Proposals.</p> <p>Replace the paragraph with the following: The Department will publicly announce all Bid Proposals at the time indicated in the Notice to Contractors.</p>
SUBSECTION: REVISION:	<p>103.02 Award of Contract. Replace the first sentence of the third paragraph with the following:</p> <p>The Department will normally award the Contract within 10 working days after the date of receiving Bid Proposals unless the Department deems it best to hold the Bid Proposals of any or all bidders for a period not to exceed 60 calendar days for final disposition of award.</p>
SUBSECTION: REVISION:	<p>105.02 Plans and Working Drawings. Insert the following after the fourth paragraph:</p> <p>Submit electrical shop drawings, design data, and descriptive literature for materials in electronic format to the Division of Traffic Operations for approval. Drawings and literature shall be submitted for lighting and signal components. Notify the Engineer when submitting information to the Division of Traffic Operations. Do not begin work until shop drawings are approved.</p> <p>Submit shop drawings for traffic counting equipment and materials in electronic format to the Engineer or the Division of Planning. Notify the Engineer when submitting information directly to the Division of Planning. Do not begin work until shop drawings are reviewed and approved.</p>
SUBSECTION: REVISION:	<p>105.03 Record Plans. Replace the section with the following:</p> <p>Record Plans are those reproductions of the original Plans on which the accepted Bid Proposal was based and, and signed by a duly authorized representative of the Department. The Department will make these plans available for inspection in the Central Office at least 24 hours prior to the time of opening bids and up to the time of letting of a project or projects. The quantities appearing on the Record Plans are the same as those on which Bid Proposals are received. The Department will use these Record Plans as the controlling plans in the prosecution of the Contract. The Department will not make any changes on Record Plans subsequent to their issue unless done so by an approved contract modification. The Department will make 2 sets of Record Plans for each project, and will maintain one on file in the Central Office and one on file in the District Office. The Department will furnish the Contractor with the following: 1 full size, 2 half size and an electronic file copy of the Record Plans at the Pre-Construction conference.</p>

**Supplemental Specifications to The Standard Specifications
for Road and Bridge Construction, 2008 Edition**
(Effective with the July 15, 2011 Letting)

<p>SUBSECTION: REVISION:</p>	<p>105.12 Final Inspection and Acceptance of Work. Insert the following paragraphs after the first paragraph:</p> <p>Notify the Engineer when all electrical items are complete. A notice of the electrical work completion shall be made in writing to the Contractor. Electrical items will be inspected when the electrical work is complete and are not subject to waiting until the project as a whole has been completed. The Engineer will notify the Division of Traffic Operations within 3 days that all electrical items are complete and ready for a final inspection. A final inspection will be completed within 90 days after the Engineer notifies the Division of Traffic Operations of the electrical work completion.</p> <p>Energize all electrical items prior to notifying the Engineer that all electrical items are complete. Electrical items must remain operational until the Division of Traffic Operations has inspected and accepted the electrical portion of the project. Payment for the electrical service is the responsibility of the Contractor from the time the electrical items are energized until the Division of Traffic Operations has accepted the work.</p> <p>Complete all corrective work within 90 calendar days of receiving the original electrical inspection report. Notify the Engineer when all corrective work is complete. The Engineer will notify the Division of Traffic Operations that the corrective work has been completed and the project is ready for a follow-up inspection. Upon re-inspection, if additional corrective work is required, complete within the same 90 calendar day allowance. The Department will not include time between completion of the corrective work and the follow up electrical inspection(s). The 90 calendar day allowance is cumulative regardless of the number of follow-up electrical inspections required.</p> <p>The Department will assume responsibility for the electrical service on a project once the Division of Traffic Operations gives final acceptance of the electrical items on the project. The Department will also assume routine maintenance of those items. Any damage done to accepted electrical work items by other Contractors shall be the responsibility of the Prime Contractor. The Department will not be responsible for repairing damage done by other contractors during the construction of the remaining project.</p> <p>Failure to complete the electrical corrective work within the 90 calendar day allowance will result in penalties assessed to the project. Penalties will be assessed at ½ the rate of liquidated damages established for the contract.</p> <p>Replace the following in the second sentence of the second paragraph:</p> <p>Replace Section 213 with Section 212.</p> <p>Delete the fifth paragraph from the section.</p>
<p>SUBSECTION: REVISION:</p>	<p>105.13 Claim Resolution Process. Replace the last sentence of the 3. Bullet with the following:</p> <p>If the Contractor did not submit an as-bid schedule at the Pre-Construction Meeting or a written narrative in accordance with Subsection 108.02, the Cabinet will not consider the claim for delay.</p> <p>Delete the last paragraph from the section.</p>

**Supplemental Specifications to The Standard Specifications
for Road and Bridge Construction, 2008 Edition**
(Effective with the July 15, 2011 Letting)

SUBSECTION: REVISION:	<p>106.04 Buy America Requirement. Replace the section with the following:</p> <p>106.04 Buy America Requirement. Follow the “Buy America” provisions as required by Title 23 Code of Federal Regulations § 635.410. Except as expressly provided herein all manufacturing processes of steel or iron materials including but not limited to structural steel, guardrail materials, corrugated steel, culvert pipe, structural plate, prestressing strands, and steel reinforcing bars shall occur in the United States of America, including the application of:</p> <ul style="list-style-type: none">• Coating,• Galvanizing,• Painting, and• Other coating that protects or enhances the value of steel or iron products. <p>The following are exempt, unless processed or refined to include substantial amounts of steel or iron material, and may be used regardless of source in the domestic manufacturing process for steel or iron material:</p> <ul style="list-style-type: none">• Pig iron,• Processed, pelletized, and reduced iron ore material, or• Processed alloys. <p>The Contractor shall submit a certification stating that all manufacturing processes involved with the production of steel or iron materials occurred in the United States.</p> <p>Produce, mill, fabricate, and manufacture in the United States of America all aluminum components of bridges, tunnels, and large sign support systems, for which either shop fabrication, shop inspection, or certified mill test reports are required as the basis of acceptance by the Department.</p> <p>Use foreign materials only under the following conditions:</p> <ol style="list-style-type: none">1) When the materials are not permanently incorporated into the project; or2) When the delivered cost of such materials used does not exceed 0.1 percent of the total Contract amount or \$2,500.00, whichever is greater. <p>The Contractor shall submit to the Engineer the origin and value of any foreign material used.</p>
SUBSECTION: REVISION:	<p>106.10 Field Welder Certification Requirements. Insert the following sentence before the first sentence of the first paragraph:</p> <p>All field welding must be performed by a certified welder unless otherwise noted.</p>
SUBSECTION: REVISION:	<p>108.02 Progress Schedule. Insert the following prior to the first paragraph:</p> <p>Specification 108.02 applies to all Cabinet projects except the following project types:</p> <ul style="list-style-type: none">• Right of Way Mowing and/or Litter Removal• Waterborne Paint Striping• Projects that contain Special Provision 82• Projects that contain the Special Note for CPM Scheduling <p>Insert the following paragraph after paragraph two:</p> <p>Working without the submittal of a Written Narrative is violation of this specification and additionally voids the Contractor’s right to delay claims.</p> <p>Insert the following paragraph after paragraph six:</p> <p>The submittal of bar chart or Critical Path Method schedule does not relieve the Contractor’s requirement to submit a Written Narrative schedule.</p>

**Supplemental Specifications to The Standard Specifications
for Road and Bridge Construction, 2008 Edition**
(Effective with the July 15, 2011 Letting)

	<p>Insert the following at the beginning of the first paragraph of A) Written Narrative.:</p> <p>Submit the Written Narrative Schedule using form TC 63-50 available at the Division of Construction's website (http://www.transportation.ky.gov/construction/ResCenter/ResCenter.htm).</p> <p>Replace Part A) Written Narrative 1. And 2. with the following:</p> <ol style="list-style-type: none"> 1. Provide a description that includes how the Contractor will sequence and stage the work, how the Contractor plans to maintain and control traffic being specific and detailed, and what equipment and crew sizes are planned to execute the work. 2. Provide a list of project milestones including, if applicable, winter shut-downs, holidays, or special events. The Contractor shall describe how these milestones and other dates effect the prosecution of the work. Also, include start date and completion date milestones for the contract, each project if the contract entails multiple projects, each phase of work, site of work, or segment of work as divided in the project plans, proposal, or as subdivided by the Contractor.
<p>SUBSECTION: REVISION:</p>	<p>109.07.01 Liquid Asphalt. Add the following to the Adjustable Contract Items:</p> <ul style="list-style-type: none"> • Stone Matrix Asphalt for Base • Stone Matrix Asphalt for Surface
<p>SUBSECTION: REVISION:</p>	<p>110.01 Mobilization. Replace paragraph three with the following:</p> <p>Do not bid an amount for Mobilization that exceeds 5 percent of the sum of the total amounts bid for all items in the Bid Proposal, excluding Mobilization, Demobilization, and contingent amounts established for adjustments and incentives. The Department will automatically adjust any Bid Proposals that are in excess of this amount down to 5 percent to compare Bid Proposals and award the Contract. The Department will award a Contract for the actual amount bid when the amount bid for Mobilization is less than 5 percent, or the Department will award the Contract for the adjusted bid amount of 5 percent when the amount bid for Mobilization is greater than 5 percent. If any errors in unit bid prices for other Contract items in a Contractor's Bid Proposal are discovered after bid opening and such errors reduce the total amount bid for all other items, excluding Mobilization, Demobilization, and contingent amounts established for adjustments and incentives, so that the percent bid for Mobilization is larger than 5 percent, the Department will adjust the amount bid for Mobilization to 5 percent of the sum of the corrected total bid amounts.</p>
<p>SUBSECTION: REVISION:</p>	<p>110.02 Demobilization. Replace the third paragraph with the following:</p> <p>Bid an amount for Demobilization that is a minimum of \$1,000 or 1.5 percent of the sum of the total amounts bid for all other items in the Bid Proposal, excluding Mobilization, Demobilization, and contingent amounts established for adjustments and incentives. The Department will automatically adjust any Bid Proposal that is less than this amount up to \$1,000 or 1.5 percent to compare Bid Proposals and award the Contract. The Department will award a Contract for the actual amount bid when the amount bid for demobilization exceeds 1.5 percent, or the Department will award the Contract for the adjusted bid amount when the amount bid for demobilization is less than the minimum of \$1,000 or less than 1.5 percent of the sum of the total amounts bid for all other items in the Bid Proposal, excluding Mobilization, Demobilization, and contingent amounts established for adjustments and incentives.</p>
<p>SUBSECTION: REVISION:</p>	<p>110.04 Payment. Insert the following paragraph following the demobilization payment schedule (4th paragraph):</p> <p>The Department will withhold an amount equal to \$1,000 for demobilization, regardless of the schedule listed above. The \$1,000 withheld for demobilization will be paid when the final estimate is paid.</p>

**Supplemental Specifications to The Standard Specifications
 for Road and Bridge Construction, 2008 Edition**
 (Effective with the July 15, 2011 Letting)

<p>SUBSECTION: REVISION:</p>	<p>112.03.01 General Traffic Control. Replace paragraph three with the following:</p> <p>All flaggers shall be trained in current MUTCD flagging procedures. Proof of training must be available for review at the Department's request. Flagging credentials must be current within the last 5 years.</p>
<p>SUBSECTION: PART: REVISION:</p>	<p>112.03.11 Temporary Pavement Markings. B) Placement and Removal of Temporary Striping. Replace the 2nd sentence of the first paragraph with the following:</p> <p>On interstates and parkways, and other roadways approved by the State Highway Engineer, install pavement striping that is 6 inches in width.</p>
<p>SUBSECTION: REVISION:</p>	<p>112.03.12 Project Traffic Coordinator (PTC). Add the following at the end of the subsection:</p> <p>After October 1, 2008 the Department will require the PTC to have successfully completed the applicable qualification courses. Personnel that have not successfully completed the applicable courses by that date will not be considered qualified. Prior to October 1, 2008, conform to Subsection 108.06 A) and ensure the designated PTC has sufficient skill and experience to properly perform the task.</p>
<p>SUBSECTION: REVISION:</p>	<p>112.03.15 Non-Compliance of Maintain and Control of Traffic. Add the following section:</p> <p>112.03.15 Non-Compliance of Maintain and Control of Traffic. It is the Contractor's responsibility to conform to the traffic control requirements in the TCP, Proposal, plan sheets, specifications, and the Manual on Uniform Traffic Control Devices.</p> <p>Unless specified elsewhere in the contract, a penalty will be assessed in the event of non-compliance with Maintain and Control of Traffic requirements. These penalties will be assessed when the Contractor fails to correct a situation or condition of non-compliance with the contract traffic control requirements after being notified by the Engineer. The calculation of accrued penalties for non-compliance will be based upon the date/time of notification by the Engineer.</p> <p>The amount of the penalty assessed for non-compliance will be determined based upon the work zone duration, as defined by the MUTCD, and will be the greatest of the different calculation methods indicated below:</p> <p style="padding-left: 40px;">A) Long-term stationary work that occupies a location more than 3 days.</p> <p style="padding-left: 40px;">Correct the non-compliant issue within 24 hours from initial notification by the Engineer. If the issue is not corrected within 24 hours from the initial notification, a penalty for non-compliance will be assessed on a daily basis beginning from the initial notification of non-compliance. The Contractor will be assessed a \$1,000 daily penalty or the amount equal to the contract liquidated damages in Section 108.09, whichever of the 2 is greater. The penalty for non-compliance will escalate as follows for continued non-compliance after the initial notification.</p> <p style="padding-left: 40px;">3 Days after Notification \$1,500 daily penalty or 1.5 times the contract liquidated damages daily charge rate in Section 108.09, whichever is greater.</p> <p style="padding-left: 40px;">7 Days after Notification \$2,000 daily penalty or double the contract liquidated damages daily charge rate in Section 108.09, whichever is greater.</p>

**Supplemental Specifications to The Standard Specifications
for Road and Bridge Construction, 2008 Edition**
(Effective with the July 15, 2011 Letting)

	<p>B) Intermediate-term stationary work that occupies a location more than one daylight period up to 3 days, or nighttime work lasting more than 1 hour.</p> <p>Correct the non-compliant issue within 4 hours from initial notification by the Engineer. If the issue is not corrected within 4 hours from notification, a penalty for non-compliance will be assessed on an hourly basis beginning from the initial notification of non-compliance. The penalty for non-compliance will be assessed at \$200 per hour.</p> <p>C) Short-term stationary is work that occupies a location for more than 1 hour within a single 24-hour period.</p> <p>Correct the non-compliant issue within 1 hour from initial notification by the Engineer. If the issue is not corrected within 1 hour from notification, a penalty for non-compliance will be assessed on an hourly basis beginning from the initial notification of non-compliance. The penalty for non-compliance will be assessed at \$200 per hour.</p> <p>If the Contractor remains in violation of the Maintain and Control of Traffic requirements, or if the Department determines it to be in the public's interest, work will be suspended in accordance with Section 108.08 until the deficiencies are corrected. The Department reserves the right to correct deficiencies by any means available and charge the Contractor for labor, equipment, and material costs incurred in emergency situations.</p>
<p>SUBSECTION: REVISION:</p>	<p>206.03.02 Embankment Replace the last paragraph with the following:</p> <p>When rock roadbed is specified, construct the upper 2 feet of the embankment according to Subsection 204.03.09 A).</p>
<p>SUBSECTION: REVISION:</p>	<p>213.03.03 Inspection and Maintenance. Replace the last sentence of the second paragraph with the following:</p> <p>Initiate corrective action within 24 hours of any noted deficiency and complete the work within 7 calendar days of receipt of the report. The Contractor shall make a concentrated effort to complete any corrective action required prior to the next predicted rainfall event.</p> <p>Insert the following paragraph after the second paragraph:</p> <p>When the Contractor is required to obtain the KPDES permit, it is their responsibility to ensure compliance with the inspection and maintenance requirements of the permit. The Engineer will perform verification inspections a minimum of once per month and within 7 days of a ½ inch or greater rainfall event. The Engineer will document these inspections using Form TC 63-61 A. The Engineer will provide copies of the inspection only when improvements to the BMP's are required. Verification inspections performed by the Engineer do not relieve the Contractor of any responsibility for compliance with the KPDES permit. Initiate corrective action within 24 hours of any noted deficiency and complete the work within 7calendar days of receipt of the report. The Contractor shall make a concentrated effort to complete any corrective action required prior to the next predicted rainfall event.</p>

**Supplemental Specifications to The Standard Specifications
for Road and Bridge Construction, 2008 Edition**
(Effective with the July 15, 2011 Letting)

<p>SUBSECTION: PART: REVISION:</p>	<p>213.03.05 Temporary Control Measures. E) Temporary Seeding and Protection. Replace the first paragraph with the following:</p> <p>Apply an Annual Rye seed mix at a rate of 100 pounds per acre during the months of March through August. In addition to the Annual Rye, add 10 pounds of German Foxtail-Millet (<i>Setaria italica</i>), when performing temporary seeding during the months of June through August. During the months of September through February, apply Winter Wheat or Rye Grain at a rate of 100 pounds per acre. Obtain the Engineer's approval prior to the application of the seed mixture.</p>
<p>SUBSECTION: PART: REVISION:</p>	<p>213.03.05 Temporary Control Measures. F) Temporary Mulch. Replace the last sentence with the following:</p> <p>Place temporary mulch to an approximate 2-inch loose depth (2 tons per acre) and anchor it into the soil by mechanically crimping it into the soil surface or applying tackifier to provide a protective cover. Regardless of the anchoring method used, ensure the protective cover holds until disturbance is required or permanent controls are in installed.</p>
<p>SUBSECTION: REVISION:</p>	<p>303.05 Payment. Replace the second paragraph of the section with the following:</p> <p>The Department will make payment for Drainage Blanket-Type II (ATDB) according to the Lot Pay Adjustment Schedule for Specialty Mixtures in Section 402.</p>
<p>SUBSECTION: PART: REVISION:</p>	<p>401.02.04 Special Requirements for Dryer Drum Plants. F) Production Quality Control. Replace the first sentence with the following:</p> <p>Stop mixing operations immediately if, at any time, a failure of the automatic electronic weighing system of the aggregate feed, asphalt binder feed, or water injection system control occurs.</p>
<p>SUBSECTION: REVISION:</p>	<p>401.02.04 Special Requirements for Dryer Drum Plants. Add the following:</p> <p>Part G) Water Injection System. Provided each system has prior approval as specified in Subsection 402.01.01, the Department will allow the use of water injection systems for purposes of foaming the asphalt binder and lowering the mixture temperature for production of Warm Mix Asphalt (WMA).</p> <p>Ensure the equipment for water injection meets the following requirements:</p> <ol style="list-style-type: none"> 1) Injection equipment computer controls are automatically coupled to the plants controls (manual operation is not permitted); 2) Injection equipment has variable controls that introduce water ratios based on production rates of mixtures; 3) Injects water into the flow of asphalt binder prior to contacting the aggregate; 4) Provides alarms on the water injection system that operate when the flow of water is interrupted or deviates from the prescribed water rate.
<p>SUBSECTION: REVISION:</p>	<p>401.03.01 Preparation of Mixtures. Replace the last sentence of the second paragraph with the following:</p> <p>Do not use asphalt binder while it is foaming in a storage tank.</p>

**Supplemental Specifications to The Standard Specifications
for Road and Bridge Construction, 2008 Edition**
(Effective with the July 15, 2011 Letting)

<p>SUBSECTION: REVISION:</p>	<p>401.03.01 Preparation of Mixtures. Replace the third paragraph and Mixing and Laying Temperature table with the following:</p> <p>Maintain the temperature of the component materials and asphalt mixture within the ranges listed in the following table:</p> <table border="1"> <thead> <tr> <th colspan="4">MIXING AND LAYING TEMPERATURES (°F)</th> </tr> <tr> <th colspan="2">Material</th> <th>Minimum</th> <th>Maximum</th> </tr> </thead> <tbody> <tr> <td colspan="2">Aggregates</td> <td>240</td> <td>330</td> </tr> <tr> <td colspan="2">Aggregates used with Recycled Asphalt Pavement (RAP)</td> <td>240</td> <td>—</td> </tr> <tr> <td rowspan="2">Asphalt Binders</td> <td>PG 64-22</td> <td>230</td> <td>330</td> </tr> <tr> <td>PG 76-22</td> <td>285</td> <td>350</td> </tr> <tr> <td rowspan="4">Asphalt Mixtures at Plant (Measured in Truck)</td> <td>PG 64-22 HMA</td> <td>250</td> <td>330</td> </tr> <tr> <td>PG 76-22 HMA</td> <td>310</td> <td>350</td> </tr> <tr> <td>PG 64-22 WMA</td> <td>230</td> <td>275</td> </tr> <tr> <td>PG 76-22 WMA</td> <td>250</td> <td>300</td> </tr> <tr> <td rowspan="4">Asphalt Mixtures at Project (Measured in Truck When Discharging)</td> <td>PG 64-22 HMA</td> <td>230</td> <td>330</td> </tr> <tr> <td>PG 76-22 HMA</td> <td>300</td> <td>350</td> </tr> <tr> <td>PG 64-22 WMA</td> <td>210</td> <td>275</td> </tr> <tr> <td>PG 76-22 WMA</td> <td>240</td> <td>300</td> </tr> </tbody> </table>	MIXING AND LAYING TEMPERATURES (°F)				Material		Minimum	Maximum	Aggregates		240	330	Aggregates used with Recycled Asphalt Pavement (RAP)		240	—	Asphalt Binders	PG 64-22	230	330	PG 76-22	285	350	Asphalt Mixtures at Plant (Measured in Truck)	PG 64-22 HMA	250	330	PG 76-22 HMA	310	350	PG 64-22 WMA	230	275	PG 76-22 WMA	250	300	Asphalt Mixtures at Project (Measured in Truck When Discharging)	PG 64-22 HMA	230	330	PG 76-22 HMA	300	350	PG 64-22 WMA	210	275	PG 76-22 WMA	240	300
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<p>SUBSECTION: REVISION:</p>	<p>402.01 Description. Replace the paragraph with the following:</p> <p>Provide the process control and acceptance testing of all classes and types of asphalt mixtures which may be furnished either as hot mix asphalt (HMA) or warm mix asphalt (WMA) produced with water injection systems.</p>																																																	
<p>SUBSECTION REVISION:</p>	<p>402.01.01 Warm Mix Asphalt (WMA) Evaluation and Approval. Add the following subsection:</p> <p>402.01.01 Warm Mix Asphalt (WMA) Evaluation and Approval. The Department will evaluate trial production of WMA by use of a water injection system provided the system is installed according to the manufacturer's requirements and satisfies the requirements of Section 401. Evaluation will include production and placement of WMA to demonstrate adequate mixture quality including volumetric properties and density by Option A as specified in Subsection 402.03.02 D). Do not place WMA for evaluation on Department projects. Provided production and placement operations satisfy the applicable quality levels, the Department will approve WMA production on Department projects using the water injection system as installed on the specific asphalt mixing plant evaluated.</p>																																																	
<p>SUBSECTION: REVISION:</p>	<p>402.05.02 Asphalt Mixtures and Mixtures With RAP. Replace Subsection Title as below:</p> <p>402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP.</p>																																																	
<p>SUBSECTION: REVISION:</p>	<p>402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP. Replace the paragraph with the following:</p> <p>The Department will pay for the mixture at the Contract unit bid price and apply a Lot Pay Adjustment for each lot placed based on the degree of compliance with the specified tolerances. Using the appropriate Lot Pay Adjustment Schedule, the Department will assign a pay value for the applicable properties within each subplot and average the subplot pay values to determine the pay value for a given property for each lot. The Department will apply the Lot Pay Adjustment for each lot to a defined unit price of \$50.00 per ton. The Department will calculate the Lot Pay Adjustment using all possible incentives and disincentives but will not allow the overall pay value for a lot to exceed 1.00.</p>																																																	

**Supplemental Specifications to The Standard Specifications
for Road and Bridge Construction, 2008 Edition**
(Effective with the July 15, 2011 Letting)

<p>SUBSECTION: PART: REVISION:</p>	<p>402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP. C) Conventional and RAP Mixtures Placed on Shoulders. Replace Title and Text with the following:</p> <p>C) HMA, WMA and RAP Mixtures Placed on Shoulders or Placed as Asphalt Pavement Wedge.</p> <ol style="list-style-type: none"> 1) Placed monolithically with the Mainline – Width of 4 feet or less. The Department will pay as mainline mixture. 2) Placed monolithically with the Mainline – Width of greater than 4 feet. The Department will pay as mainline mixture but use 1.00 for the Lane and Joint Density Pay Value for shoulder or Asphalt Pavement Wedge quantities. 3) Placed Separately. The Department will use 1.00 for the Lane and Joint Density Pay Value. 												
<p>SUBSECTION: PART: REVISION:</p>	<p>402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP. D) Conventional and RAP Mixtures Placed Monolithically as Asphalt Pavement Wedge. Replace the title with the following: D) HMA, WMA, and RAP Mixtures Placed Monolithically as Asphalt Pavement Wedge.</p> <p>Delete the following: D) HMA, WMA, and RAP Mixtures Placed Monolithically as Asphalt Pavement Wedge. The Department will pay as mainline mixture but use a 1.00 pay value for all properties.</p>												
<p>SUBSECTION: PART: REVISION:</p>	<p>402.05.02 Asphalt Mixtures for Temporary Pavement. E) Asphalt Mixtures for Temporary Pavement. Replace E) Asphalt Mixtures for Temporary Pavement with the following:</p> <p>D) Asphalt Mixtures for Temporary Pavement.</p>												
<p>SUBSECTION: PART: TABLES: REVISION:</p>	<p>402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP. Lot Pay Adjustment Schedule, Compaction Option A, Base and Binder Mixtures VMA Replace the VMA table with the following:</p> <table border="1"> <thead> <tr> <th colspan="2">VMA</th> </tr> <tr> <th>Pay Value</th> <th>Deviation From Minimum</th> </tr> </thead> <tbody> <tr> <td>1.00</td> <td>≥ min. VMA</td> </tr> <tr> <td>0.95</td> <td>0.1-0.5 below min.</td> </tr> <tr> <td>0.90</td> <td>0.6-1.0 below min.</td> </tr> <tr> <td>(1)</td> <td>> 1.0 below min.</td> </tr> </tbody> </table>	VMA		Pay Value	Deviation From Minimum	1.00	≥ min. VMA	0.95	0.1-0.5 below min.	0.90	0.6-1.0 below min.	(1)	> 1.0 below min.
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**Supplemental Specifications to The Standard Specifications
for Road and Bridge Construction, 2008 Edition**
(Effective with the July 15, 2011 Letting)

<p>SUBSECTION: PART: TABLE: REVISION:</p>	<p>402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP. Lot Pay Adjustment Schedule, Compaction Option B Mixtures VMA Replace the VMA table with the following:</p> <table border="1"> <thead> <tr> <th colspan="2">VMA</th> </tr> <tr> <th>Pay Value</th> <th>Deviation From Minimum</th> </tr> </thead> <tbody> <tr> <td>1.00</td> <td>≥min. VMA</td> </tr> <tr> <td>0.95</td> <td>0 1-0.5 bel w min.</td> </tr> <tr> <td>0.9</td> <td>0.6-1.0 below min.</td> </tr> <tr> <td>⁽²⁾</td> <td>> 1.0 below min.</td> </tr> </tbody> </table>	VMA		Pay Value	Deviation From Minimum	1.00	≥min. VMA	0.95	0 1-0.5 bel w min.	0.9	0.6-1.0 below min.	⁽²⁾	> 1.0 below min.											
VMA																								
Pay Value	Deviation From Minimum																							
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⁽²⁾	> 1.0 below min.																							
<p>SUBSECTION: PART: NUMBER: REVISION:</p>	<p>403.03.03 Preparation of Mixture. C) Mix Design Criteria. 1) Preliminary Mix Design. Replace the last two sentences of the paragraph and table with the following:</p> <p>Complete the volumetric mix design at the appropriate number of gyrations as given in the table below for the number of 20-year ESAL's. The Department will define the relationship between ESAL classes, as given in the bid items for Superpave mixtures, and 20-year ESAL ranges as follows:</p> <table border="1"> <thead> <tr> <th rowspan="2">Class</th> <th rowspan="2">ESAL's (millions)</th> <th colspan="3">Number of Gyration</th> </tr> <tr> <th><i>N</i>_{initial}</th> <th><i>N</i>_{design}</th> <th><i>N</i>_{max}</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>< 3.0</td> <td>6</td> <td>50</td> <td>75</td> </tr> <tr> <td>3</td> <td>3.0 to < 30.0</td> <td>7</td> <td>75</td> <td>115</td> </tr> <tr> <td>4</td> <td>≥ 30.0</td> <td>8</td> <td>100</td> <td>160</td> </tr> </tbody> </table>	Class	ESAL's (millions)	Number of Gyration			<i>N</i> _{initial}	<i>N</i> _{design}	<i>N</i> _{max}	2	< 3.0	6	50	75	3	3.0 to < 30.0	7	75	115	4	≥ 30.0	8	100	160
Class	ESAL's (millions)			Number of Gyration																				
		<i>N</i> _{initial}	<i>N</i> _{design}	<i>N</i> _{max}																				
2	< 3.0	6	50	75																				
3	3.0 to < 30.0	7	75	115																				
4	≥ 30.0	8	100	160																				
<p>SUBSECTION: PART: REVISION:</p>	<p>403.03.09 Leveling and Wedging, and Scratch Course. A) Leveling and Wedging. Replace the first sentence of the first paragraph with the following:</p> <p>Conform to the gradation requirements (control points) of AASHTO M 323 for base, binder, or surface as the Engineer directs.</p>																							
<p>SUBSECTION: PART: REVISION:</p>	<p>403.03.09 Leveling and Wedging, and Scratch Course. B) Scratch Course. Replace the second sentence of the first paragraph with the following:</p> <p>Conform to the gradation requirements (control points) of AASHTO M 323 for base, binder, or surface as the Engineer directs.</p>																							
<p>SUBSECTION: REVISION:</p>	<p>407.01 DESCRIPTION. Replace the first sentence of the paragraph with the following:</p> <p>Construct a pavement wedge composed of a hot-mixed or warm-mixed asphalt mixture.</p>																							
<p>SUBSECTION: REVISION:</p>	<p>409.01 DESCRIPTION. Replace the first sentence of the paragraph with the following:</p> <p>Use reclaimed asphalt pavement (RAP) from Department projects or other approved sources in hot mix asphalt (HMA) or warm mix asphalt (WMA) provided mixture requirements are satisfied.</p>																							
<p>SUBSECTION: REVISION:</p>	<p>410.01 DESCRIPTION. Delete the second sentence of the paragraph.</p>																							

**Supplemental Specifications to The Standard Specifications
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(Effective with the July 15, 2011 Letting)

<p>SUBSECTION: REVISION:</p>	<p>410.03.01 Corrective Work. Replace the last sentence of the paragraph with the following: Provide a final surface comparable to the adjacent pavement that does not require corrective work in respect to texture, appearance, and skid resistance.</p>														
<p>SUBSECTION: PART: NUMBER: REVISION:</p>	<p>410.03.02 Ride Quality. B) Requirements. 1) Category A. Replace the last sentence of the first paragraph with the following: At the Department's discretion, a pay deduction of \$1200 per 0.1-lane-mile section may be applied in lieu of corrective work.</p>														
<p>SUBSECTION: PART: NUMBER: REVISION:</p>	<p>410.03.02 Ride Quality. B) Requirements. 2) Category B. Replace the second and third sentence of the first paragraph with the following: When the IRI is greater than 90 for a 0.1-mile section, perform corrective work, or remove and replace the pavement to achieve the specified IRI. At the Department's discretion, a pay deduction of \$750 per 0.1-lane-mile section may be applied in lieu of corrective work.</p>														
<p>SUBSECTION: REVISION:</p>	<p>410.05 PAYMENT. Add the following sentence to the end of the first paragraph: The sum of the pay value adjustments for ride quality shall not exceed \$0 for the project as a whole.</p>														
<p>SUBSECTION: REVISION:</p>	<p>413.05.02 CL3 SMA BASE 1.00D PG76-22. Insert the following sentence between the first and second sentence of the first paragraph: The Department will calculate the Lot Pay Adjustment using all possible incentives and disincentives but will not allow the overall pay value for a lot to exceed 1.00.</p>														
<p>SUBSECTION: TABLE: REVISION:</p>	<p>413.05.02 CL3 SMA BASE 1.00D PG 76-22. JOINT DENSITY TABLE Replace the joint density table with the following:</p> <table border="1"> <thead> <tr> <th colspan="2">LANE DENSITY</th> </tr> <tr> <th>Pay Value</th> <th>Test Result (%)</th> </tr> </thead> <tbody> <tr> <td>1.05</td> <td>95.0-96.5</td> </tr> <tr> <td>1.00</td> <td>93.0-94.9</td> </tr> <tr> <td>0.95</td> <td>92.0-92.9 or 96.6-97.0</td> </tr> <tr> <td>0.90</td> <td>91.0-91.9 or 97.1-97.5</td> </tr> <tr> <td>(1)</td> <td>< 91.0 or > 97.5</td> </tr> </tbody> </table>	LANE DENSITY		Pay Value	Test Result (%)	1.05	95.0-96.5	1.00	93.0-94.9	0.95	92.0-92.9 or 96.6-97.0	0.90	91.0-91.9 or 97.1-97.5	(1)	< 91.0 or > 97.5
LANE DENSITY															
Pay Value	Test Result (%)														
1.05	95.0-96.5														
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(1)	< 91.0 or > 97.5														
<p>SUBSECTION: REVISION:</p>	<p>413.05.03 CL3 SMA SURF 0.50A PG76-22 and CL3 SMA SURF 0.38A PG76-22. Insert the following sentence between the first and second sentence of the first paragraph: The Department will calculate the Lot Pay Adjustment using all possible incentives and disincentives but will not allow the overall pay value for a lot to exceed 1.00.</p>														

**Supplemental Specifications to The Standard Specifications
for Road and Bridge Construction, 2008 Edition**
(Effective with the July 15, 2011 Letting)

<p>SUBSECTION: 413.05.03 CL3 SMA SURF 0.50A PG76-22 and CL3 SMA SURF 0.38A PG76-22. TABLE: JOINT DENSITY TABLE REVISION: Replace the joint density table with the following:</p>	<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="3" style="text-align: center;">DENSITY</th> </tr> <tr> <th style="text-align: center;">Pay Value</th> <th style="text-align: center;">Lane Density Test Result (%)</th> <th style="text-align: center;">Joint Density Test Result (%)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1.05</td> <td style="text-align: center;">95.0-96.5</td> <td style="text-align: center;">92.0-96.0</td> </tr> <tr> <td style="text-align: center;">1.00</td> <td style="text-align: center;">93.0-94.9</td> <td style="text-align: center;">90.0-91.9</td> </tr> <tr> <td style="text-align: center;">0.95</td> <td style="text-align: center;">92.0-92.9 or 96.6-97.0</td> <td style="text-align: center;">89.0-89.9 or 96.1-96.5</td> </tr> <tr> <td style="text-align: center;">0.90</td> <td style="text-align: center;">91.0-91.9 or 97.1-97.5</td> <td style="text-align: center;">88.0-88.9 or 96.6-97.0</td> </tr> <tr> <td style="text-align: center;">0.75</td> <td style="text-align: center;">----</td> <td style="text-align: center;">< 88.0 or > 97.0</td> </tr> <tr> <td style="text-align: center;">⁽¹⁾</td> <td style="text-align: center;">< 91.0 or > 97.5</td> <td style="text-align: center;">----</td> </tr> </tbody> </table>	DENSITY			Pay Value	Lane Density Test Result (%)	Joint Density Test Result (%)	1.05	95.0-96.5	92.0-96.0	1.00	93.0-94.9	90.0-91.9	0.95	92.0-92.9 or 96.6-97.0	89.0-89.9 or 96.1-96.5	0.90	91.0-91.9 or 97.1-97.5	88.0-88.9 or 96.6-97.0	0.75	----	< 88.0 or > 97.0	⁽¹⁾	< 91.0 or > 97.5	----
DENSITY																									
Pay Value	Lane Density Test Result (%)	Joint Density Test Result (%)																							
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0.75	----	< 88.0 or > 97.0																							
⁽¹⁾	< 91.0 or > 97.5	----																							
<p>SUBSECTION: 501.05.02 Ride Quality. REVISION: Add the following sentence to the end of the first paragraph:</p>	<p>The sum of the pay value adjustments for the ride quality shall not exceed \$0 for the project as a whole.</p>																								
<p>SUBSECTION: 505.03.04 Detectable Warnings. REVISION: Replace the first sentence with the following:</p>	<p>Install detectable warning pavers at all sidewalk ramps and on all commercial entrances according to the Standard Drawings.</p>																								
<p>SUBSECTION: 505.04.04 Detectable Warnings. REVISION: Replace the paragraph with the following:</p>	<p>The Department will measure the quantity in square feet. All retrofit applications for maintenance projects will require the removal of existing sidewalks to meet the requirements of the standard drawings applicable to the project. The cost associated with the removal of the existing sidewalk will be incidental to the detectable warnings bid item or incidental to the bid item for the construction of the concrete sidewalk unless otherwise noted.</p>																								
<p>SUBSECTION: 505.05 PAYMENT. REVISION: Add the following to the bid item table:</p>	<table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: left;"><u>Code</u></th> <th style="text-align: left;"><u>Pay Item</u></th> <th style="text-align: left;"><u>Pay Unit</u></th> </tr> </thead> <tbody> <tr> <td>23158ES505</td> <td>Detectable Warnings</td> <td>Square Foot</td> </tr> </tbody> </table>	<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>	23158ES505	Detectable Warnings	Square Foot																		
<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>																							
23158ES505	Detectable Warnings	Square Foot																							
<p>SUBSECTION: 509.01 DESCRIPTION. REVISION: Replace the second paragraph with the following:</p>	<p>The Department may allow the use of similar units that conform to the National Cooperative Highway Research Program (NCHRP) 350 Test Level 3 (TL-3) requirements and the typical features depicted by the Standard Drawings. Obtain the Engineers approval prior to use. Ensure the barrier wall shape, length, material, drain slot dimensions and locations typical features are met and the reported maximum deflection is 3 feet or less from the NCHRP 350 TL-3 for Test 3 – 11 (pickup truck impacting at 60 mph at a 25-degree angle.)</p>																								

**Supplemental Specifications to The Standard Specifications
for Road and Bridge Construction, 2008 Edition**
(Effective with the July 15, 2011 Letting)

<p>SUBSECTION: REVISION:</p>	<p>601.03.02 Concrete Producer Responsibilities. Replace the first sentence with the following:</p> <p>Obtain the concrete from producers that are in compliance with KM 64-323 and on the Department's List of Approved Materials.</p> <p>Add the following to the first paragraph:</p> <p>If a concrete plant becomes unqualified during a project and there are no other qualified plants in the region, the Department will provide qualified personnel to witness and ensure the producer follows the required specifications. The Department will assess the Contractor a \$100 per hour charge for this service.</p>
<p>SUBSECTION: PART: REVISION:</p>	<p>601.03.02 Concrete Producer Responsibilities. B) Certified Personnel. Replace the second sentence with the following:</p> <p>Ensure that the concrete technicians are certified as ACI Level I (Level I) and KRMCA Level II (Level II).</p>
<p>SUBSECTION: PART: REVISION:</p>	<p>601.03.02 Concrete Producer Responsibilities. C) Quality Control. Replace the second sentence with the following:</p> <p>Ensure that the Level II concrete technician is present when work is in progress and is responsible for inspecting trucks, batch weight calculations, monitoring batching, making mixture adjustments, reviewing the slump, air content, unit weight, temperature, and aggregate tests, all to provide conforming concrete to the project.</p>
<p>SUBSECTION: PART: REVISION:</p>	<p>601.03.02 Concrete Producer Responsibilities. D) Producer Testing. Replace with the following:</p> <p>When producing for state work, have a Qualified Concrete Aggregate Technician or KYTC Qualified Aggregate Technician perform, at a minimum, weekly gradations and minus 200 wash tests and daily moisture contents of coarse and fine aggregate (Fine aggregates will not require a minus 200 wash test). Using the daily moisture contents, adjust the approved mix design accordingly prior to production. Ensure that the Level II concrete technician is present when work is in progress and is responsible for inspecting trucks, batch weight calculations, monitoring batching, making mixture adjustments, reviewing the slump, air content, unit weight, temperature, and aggregate tests, all to provide conforming concrete to the project.</p>
<p>SUBSECTION: PART: REVISION:</p>	<p>601.03.02 Concrete Producer Responsibilities. E) Trip Tickets. Replace the second sentence with the following:</p> <p>Include on the trip ticket the Sample ID for the approved mix design and a statement certifying that the data on the ticket is correct and that the mixture conforms to the mix design.</p>
<p>SUBSECTION: PART: NUMBER: REVISION:</p>	<p>601.03.03 Proportioning and Requirements. C) Mixtures Using Type IP, IS, and I(SM) Cement or Mineral Admixtures 2) Mineral Admixtures. Replace the second sentence with the following:</p> <p>Reduction of the total cement content by a combination of mineral admixtures will be allowed, up to a maximum of 40 percent.</p>

**Supplemental Specifications to The Standard Specifications
for Road and Bridge Construction, 2008 Edition**
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SUBSECTION: PART: NUMBER: LETTER: REVISION:	601.03.03 Proportioning and Requirements. C) Mixtures Using Type IP, IS, and I(SM) Cement or Mineral Admixtures 2) Mineral Admixtures. a) Fly Ash. Delete the last sentence of the third paragraph.
SUBSECTION: PART: NUMBER: LETTER: REVISION:	601.03.03 Proportioning and Requirements. C) Mixtures Using Type IP, IS, and I(SM) Cement or Mineral Admixtures 2) Mineral Admixtures. b) Ground Granulated Blast Furnace Slag (GGBF Slag). Delete the second sentence of the third paragraph.
SUBSECTION: PART: REVISION:	601.03.03 Proportioning and Requirements. E) Measuring. Add the following sentence: Conform to the individual ingredient material batching tolerances in Appendix A.
SUBSECTION: PART: REVISION:	601.03.09 Placing Concrete. A) General. Replace the last sentence of the fourth paragraph with the following: Do not use aluminum or aluminum alloy troughs, pipes, or chutes that have surface damage or for lengths greater than 20 feet. Replace the second sentence of the fifth paragraph with the following: When pumping, equip the delivery pipe with a nozzle, having a minimum of 2 right angles, at the discharge end. Alternate nozzles or restriction devices may be allowed with prior approval by the Engineer.
SUBSECTION: REVISION:	605.02.05 Forms. Delete the last sentence.
SUBSECTION: REVISION:	605.03.04 Tack Welding. Replace with the following: The Department does not allow tack welding.
SUBSECTION: REVISION:	606.02.11 Coarse Aggregate. Replace with the following: Conform to Section 805, size No. 8 or 9-M.
SUBSECTION: PART: REVISION:	609.03.04 Expansion and Fixed Joints. D) Preformed Neoprene Joint Seals. Replace the last sentence of paragraph seven with the following: Field splices will not be allowed during partial width construction. It is Contractor's responsibility to determine and install the length of seal required for the joint to barrier wall as per the standard drawing.
SUBSECTION: REVISION:	609.03.09 Finish with Burlap Drag. Delete the entire section.
SUBSECTION: REVISION:	609.04.06 Joint Sealing. Replace Subsection 601.04 with the following: Subsection 606.04.08.

**Supplemental Specifications to The Standard Specifications
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(Effective with the July 15, 2011 Letting)

<p>SUBSECTION: REVISION:</p>	<p>609.05 Payment. Replace the Pay Unit for Joint Sealing with the following: See Subsection 606.05.</p>
<p>SUBSECTION: REVISION:</p>	<p>701.03.06 Initial Backfill. Replace the first sentence of the last paragraph with the following: When the Contract specifies, perform quality control testing to verify compaction according to KM 64-512.</p>
<p>SUBSECTION: REVISION:</p>	<p>701.03.08 Testing of Pipe. Replace and rename the subsection with the following: <p align="center">701.03.08 Inspection of Pipe. The engineer will visually inspect all pipe. The Department will require camera/video inspection on a minimum of 50 percent of the linear feet of all installed pipe structures. Conduct camera/video inspection according to KM 64-114. The pipe to be installed under pavement will be selected first. If the total linear feet of pipe under pavement is less than 50 percent of the linear feet of all pipe installed, the Engineer will randomly select installations from the remaining pipe structures on the project to provide for the minimum inspection requirement. The pipe will be selected in complete runs (junction-junction or headwall-headwall) until the total linear feet of pipe to be inspected is at least 50 percent of the total linear feet of all installed pipe on the project.</p> <p>Unless the Engineer directs otherwise, schedule the inspections no sooner than 30 days after completing the installation and completion of earthwork to within 1 foot of the finished subgrade. When final surfacing conflicts with the 30-day minimum, conduct the inspections prior to placement of the final surface. The contractor must ensure that all pipe are free and clear of any debris so that a complete inspection is possible.</p> <p>Notify the Engineer immediately if distresses or locations of improper installation are discovered. When camera testing shows distresses or improper installation in the installed pipe, the Engineer may require additional sections to be tested. Provide the video and report to the Engineer when testing is complete in accordance with KM 64-114.</p> <p>Pipes that exhibit distress or signs of improper installation may necessitate repair or removal as the Engineer directs. These signs include, but are not limited to: deflection, cracking, joint separation, sagging or other interior damage. If corrugated metal or thermoplastic pipes exceed the deflection and installation thresholds indicated in the table below, provide the Department with an evaluation of each location conducted by a Professional Engineer addressing the severity of the deflection, structural integrity, environmental conditions, design service life, and an evaluation of the factor of safety using Section 12, "Buried Structures and Tunnel Liners," of the AASHTO LRFD Bridge Design Specifications. Based on the evaluation, the Department may allow the pipe to remain in place at a reduced unit price as shown in the table below. Provide 5 business days for the Department to review the evaluation. When the pipe shows deflection of 10 percent or greater, remove and replace the pipe. When the camera/video or laser inspection results are called into question, the Department may require direct measurements or mandrel testing.</p> <p>The Cabinet may elect to conduct Quality Assurance verifications of any pipe inspections.</p> </p>
<p>SUBSECTION: REVISION:</p>	<p>701.04.07 Testing. Replace and rename the subsection with the following: <p align="center">701.04.07 Pipeline Video Inspection. The Department will measure the quantity in linear feet along the pipe invert of the structure inspected. When inspection above the specified 50 percent is performed due to a disagreement or suspicion of additional distresses and the Department is found in error, the Department will measure the quantity as Extra Work according to Subsection 104.03. However, if additional distresses or non-conformance is found, the Department will not measure the additional inspection for payment.</p> </p>

**Supplemental Specifications to The Standard Specifications
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SUBSECTION: REVISION:	701.05 PAYMENT. Add the following pay item to the list of pay items: <table border="0"> <tr> <td><u>Code</u></td> <td><u>Pay Item</u></td> <td><u>Pay Unit</u></td> </tr> <tr> <td>23131ER701</td> <td>Pipeline Video Inspection</td> <td>Linear Foot</td> </tr> </table>	<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>	23131ER701	Pipeline Video Inspection	Linear Foot						
<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>											
23131ER701	Pipeline Video Inspection	Linear Foot											
SUBSECTION: TABLE: REVISION:	701.05 PAYMENT PIPE DEFLECTION DETERMINED BY CAMERA TESTING Replace this table with the following table and note: <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2">PIPE DEFLECTION</th> </tr> <tr> <th>Amount of Deflection (%)</th> <th>Payment</th> </tr> </thead> <tbody> <tr> <td>0.0 to 5.0</td> <td>100% of the Unit Bid Price</td> </tr> <tr> <td>5.1 to 9.9</td> <td>50% of the Unit Bid Price ⁽¹⁾</td> </tr> <tr> <td>10 or greater</td> <td>Remove and Replace</td> </tr> </tbody> </table> <p>(1) Provide Structural Analysis as indicated above. Based on the structural analysis, pipe may be allowed to remain in place at the reduced unit price.</p>	PIPE DEFLECTION		Amount of Deflection (%)	Payment	0.0 to 5.0	100% of the Unit Bid Price	5.1 to 9.9	50% of the Unit Bid Price ⁽¹⁾	10 or greater	Remove and Replace		
PIPE DEFLECTION													
Amount of Deflection (%)	Payment												
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10 or greater	Remove and Replace												
SUBSECTION: TABLE: REVISION:	701.05 PAYMENT PIPE DEFLECTION DETERMINED BY MANDREL TESTING Delete this table.												
SUBSECTION: REVISION:	713.02.01 Paint. Replace with the following: Conform to Section 842 and Section 846.												
SUBSECTION: REVISION:	713.03 CONSTRUCTION. Replace the first sentence of the second paragraph with the following: On interstates and parkways, and other routes approved by the State Highway Engineer, install pavement striping that is 6 inches in width.												
SUBSECTION: REVISION:	713.03.03 Paint Application. Replace the second paragraph with the following table: <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Material</th> <th>Paint Application Rate</th> <th>Glass Beads Application Rate</th> </tr> </thead> <tbody> <tr> <td>4 inch waterborne paint</td> <td>Min. of 16.5 gallons/mile</td> <td>Min. of 6 pounds/gallon</td> </tr> <tr> <td>6 inch waterborne paint</td> <td>Min. of 24.8 gallons/mile</td> <td>Min. of 6 pounds/gallon</td> </tr> <tr> <td>6 inch durable waterborne paint</td> <td>Min. of 36 gallons/mile</td> <td>Min. of 6 pounds/gallon</td> </tr> </tbody> </table>	Material	Paint Application Rate	Glass Beads Application Rate	4 inch waterborne paint	Min. of 16.5 gallons/mile	Min. of 6 pounds/gallon	6 inch waterborne paint	Min. of 24.8 gallons/mile	Min. of 6 pounds/gallon	6 inch durable waterborne paint	Min. of 36 gallons/mile	Min. of 6 pounds/gallon
Material	Paint Application Rate	Glass Beads Application Rate											
4 inch waterborne paint	Min. of 16.5 gallons/mile	Min. of 6 pounds/gallon											
6 inch waterborne paint	Min. of 24.8 gallons/mile	Min. of 6 pounds/gallon											
6 inch durable waterborne paint	Min. of 36 gallons/mile	Min. of 6 pounds/gallon											
SUBSECTION: REVISION:	713.03.04 Marking Removal. Replace the last sentence of the paragraph with the following: Vacuum all marking material and removal debris concurrently with the marking removal operation.												
SUBSECTION: REVISION:	713.05 PAYMENT. Insert the following codes and pay items below the Pavement Striping – Permanent Paint: <table border="0"> <tr> <td><u>Code</u></td> <td><u>Pay Item</u></td> <td><u>Pay Unit</u></td> </tr> <tr> <td>24189ER</td> <td>Durable Waterborne Marking – 6 IN W</td> <td>Linear Foot</td> </tr> <tr> <td>24190ER</td> <td>Durable Waterborne Marking – 6 IN Y</td> <td>Linear Foot</td> </tr> <tr> <td>24191ER</td> <td>Durable Waterborne Marking – 12 IN W</td> <td>Linear Foot</td> </tr> </table>	<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>	24189ER	Durable Waterborne Marking – 6 IN W	Linear Foot	24190ER	Durable Waterborne Marking – 6 IN Y	Linear Foot	24191ER	Durable Waterborne Marking – 12 IN W	Linear Foot
<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>											
24189ER	Durable Waterborne Marking – 6 IN W	Linear Foot											
24190ER	Durable Waterborne Marking – 6 IN Y	Linear Foot											
24191ER	Durable Waterborne Marking – 12 IN W	Linear Foot											

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(Effective with the July 15, 2011 Letting)

SUBSECTION: REVISION:	714.03 CONSTRUCTION. Insert the following paragraph at the end of the third paragraph: Use Type I Tape for markings on bridge decks, JPC pavement and JPC intersections. Thermoplastic should only be used for markings on asphalt pavement.
SUBSECTION: REVISION:	714.03.07 Marking Removal. Replace the third sentence of the paragraph with the following: Vacuum all marking material and removal debris concurrently with the marking removal operation.
SUBSECTION: REVISION:	716.01 DESCRIPTION. Insert the following after the first sentence: Energize lighting as soon as it is fully functional and ready for inspection. Ensure that lighting remains operational until the Division of Traffic Operations has provided written acceptance of the electrical work.
SUBSECTION: REVISION:	716.02.01 Roadway Lighting Materials. Replace the last two sentences of the paragraph with the following: Submit for material approval an electronic file of descriptive literature, drawings, and any requested design data to the Division of Traffic Operations. Do not begin work until shop drawings are approved. Notify the Engineer when submitting any information to the Division of Traffic Operations. Do not make substitutions for approved materials without written permission as described above.
SECTION: REVISION:	717 – THERMOPLASTIC INTERSECTION MARKINGS. Replace the section name with the following: INTERSECTION MARKINGS.
SUBSECTION: REVISION:	717.01 DESCRIPTION: Replace the paragraph with the following: Furnish and install thermoplastic or Type I tape intersection markings (Stop Bars, Crosswalks, Turn Arrows, etc.) Thermoplastic markings may be installed by either a machine applied, screed extrusion process or by applying preformed thermoplastic intersection marking material.
SUBSECTION: REVISION:	717.02 MATERIALS AND EQUIPMENT. Insert the following subsection: 717.02.06 Type I Tape. Conform to Section 836.
SUBSECTION: REVISION:	717.03.03 Application. Insert the following part to the subsection: B) Type I Tape Intersection Markings. Apply according to the manufacturer's recommendations. Cut all tape at pavement joints when applied to concrete surfaces.

**Supplemental Specifications to The Standard Specifications
for Road and Bridge Construction, 2008 Edition**
(Effective with the July 15, 2011 Letting)

<p>SUBSECTION: PART: REVISION:</p>	<p>717.03.05 Proving Period. A) Requirements. Insert the following to this section:</p> <p>2) Type I Tape. During the proving period, ensure that the pavement marking material shows no signs of failure due to blistering, excessive cracking, bleeding, staining, discoloration, oil content of the pavement materials, drippings, chipping, spalling, poor adhesion to the pavement, loss of retroreflectivity, vehicular damage, and normal wear. Type I Tape is manufactured off site and warranted by the manufacturer to meet certain retroreflective requirements. As long as the material is adequately bonded to the surface and shows no signs of failure due to the other items listed in Subsection 714.03.06 A) 1), retroreflectivity readings will not be required. In the absence of readings, the Department will accept tape based on a nighttime visual observation.</p>																																							
<p>SUBSECTION: REVISION:</p>	<p>717.03.06 Marking Removal. Replace the third sentence of the paragraph with the following:</p> <p>Vacuum all marking material and removal debris concurrently with the marking removal operation.</p>																																							
<p>SUBSECTION: REVISION:</p>	<p>717.05 PAYMENT. Insert the following bid item codes:</p> <table border="0"> <thead> <tr> <th><u>Code</u></th> <th><u>Pay Unit</u></th> <th><u>Pay Item</u></th> </tr> </thead> <tbody> <tr> <td>06563</td> <td>Pave Marking – R/R X Bucks 16 IN</td> <td>Linear Foot</td> </tr> <tr> <td>20782NS714</td> <td>Pave Marking Thermo – Bike</td> <td>Each</td> </tr> <tr> <td>23251ES717, 23264ES717</td> <td>Pave Mark TY I Tape X-Walk, Size</td> <td>Linear Foot</td> </tr> <tr> <td>23252ES717, 23265ES717</td> <td>Pave Mark TY I Tape Stop Bar, Size</td> <td>Linear Foot</td> </tr> <tr> <td>23253ES717</td> <td>Pave Mark TY I Tape Cross Hatch</td> <td>Square Foot</td> </tr> <tr> <td>23254ES717</td> <td>Pave Mark TY I Tape Dotted Lane Extension</td> <td>Linear Foot</td> </tr> <tr> <td>23255ES717</td> <td>Pave Mark TY I Tape Arrow, Type</td> <td>Each</td> </tr> <tr> <td>23268ES717-23270ES717</td> <td></td> <td></td> </tr> <tr> <td>23256ES717</td> <td>Pave Mark TY I Tape- ONLY</td> <td>Each</td> </tr> <tr> <td>23257ES717</td> <td>Pave Mark TY I Tape- SCHOOL</td> <td>Each</td> </tr> <tr> <td>23266ES717</td> <td>Pave Mark TY 1 Tape R/R X Bucks-16 IN</td> <td>Linear Foot</td> </tr> <tr> <td>23267ES717</td> <td>Pave Mark TY 1 Tape-Bike</td> <td>Each</td> </tr> </tbody> </table>	<u>Code</u>	<u>Pay Unit</u>	<u>Pay Item</u>	06563	Pave Marking – R/R X Bucks 16 IN	Linear Foot	20782NS714	Pave Marking Thermo – Bike	Each	23251ES717, 23264ES717	Pave Mark TY I Tape X-Walk, Size	Linear Foot	23252ES717, 23265ES717	Pave Mark TY I Tape Stop Bar, Size	Linear Foot	23253ES717	Pave Mark TY I Tape Cross Hatch	Square Foot	23254ES717	Pave Mark TY I Tape Dotted Lane Extension	Linear Foot	23255ES717	Pave Mark TY I Tape Arrow, Type	Each	23268ES717-23270ES717			23256ES717	Pave Mark TY I Tape- ONLY	Each	23257ES717	Pave Mark TY I Tape- SCHOOL	Each	23266ES717	Pave Mark TY 1 Tape R/R X Bucks-16 IN	Linear Foot	23267ES717	Pave Mark TY 1 Tape-Bike	Each
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<p>SUBSECTION: REVISION:</p>	<p>725.02.02 Type VI Class C & CT. Replace bullet 2) with the following:</p> <p>2) The SCI100GM System as developed by SCI Products, Inc. of St. Charles, Illinois. For all miscellaneous metal work conform to ASTM A 36 and galvanize according to ASTM A 123. For the SCI100GM fender panels conform to AASHTO 180. Galvanize the SCI100GM fender panels and SCI100GM -beam connectors after fabrication according to ASTM A 123.</p>																																							
<p>SUBSECTION: REVISION:</p>	<p>725.02.04 Type VII Class C. Replace bullet 2) with the following:</p> <p>2) The SCI100GM System as developed by SCI Products, Inc. of St. Charles, Illinois. For all miscellaneous metal work conform to ASTM A 36 and galvanize according to ASTM A 123. For the SCI100GM fender panels conform to AASHTO 180. Galvanize the SCI100GM fender panels and SCI100GM-beam connectors after fabrication according to ASTM A 123.</p>																																							
<p>SUBSECTION: REVISION:</p>	<p>801.01 REQUIREMENTS. Delete the fourth sentence of the first paragraph and add the following to the second paragraph.</p> <p>When supplying cement with a SO₃ content above the value in table I of ASTM C 150, include supportive ASTM C 1038 14-day expansion test data for the supplied SO₃ content on the certification.</p>																																							

**Supplemental Specifications to The Standard Specifications
for Road and Bridge Construction, 2008 Edition**
(Effective with the July 15, 2011 Letting)

SUBSECTION: REVISION:	805.01 GENERAL. Replace the second paragraph with the following: The Department's List of Approved Materials includes the Aggregate Source List, the list of Class A and Class B Polish-Resistant Aggregate Sources, and the Concrete Restriction List.
SUBSECTION: REVISION:	805.04 CONCRETE. Delete footnote (1) The permissible lightweight particle content of gravel coarse aggregate for reinforced concrete box culvert sections, concrete pipe, pipe arches, or for use only in concrete that will be permanently protected from freezing by 2 feet or more of cover is 10.0 percent.
SUBSECTION: REVISION:	805.04 CONCRETE. Replace the "AASHTO T 160" reference in first sentence of the third paragraph with "KM 64-629"
SUBSECTION: TABLE: PART: REVISION:	805.15 GRADATION ACCEPTANCE OF NON-SPECIFICATION COARSE AGGREGATE. AGGREGATE SIZE USE Cement Concrete Structures and Incidental Construction Replace "9-M for Waterproofing Overlays" with "8 or 9-M for Waterproofing Overlays"

**Supplemental Specifications to The Standard Specifications
for Road and Bridge Construction, 2008 Edition
(Effective with the July 15, 2011 Letting)**

SUBSECTION: 805.15 GRADATION ACCEPTANCE OF NON-SPECIFICATION COARSE AGGREGATE.
REVISION: Replace the "SIZES OF COARSE AGGREGATES" table in with the following:

SIZES OF COARSE AGGREGATES																	
AMOUNTS FINER THAN EACH LABORATORY SIEVE (SQUARE OPENINGS) PERCENTAGE BY WEIGHT																	
Aggregate Size	Sieve	4 inch	3 1/2 inch	3 inch	2 1/2 inch	2 inch	1 1/2 inch	1 inch	3/4 inch	1/2 inch	3/8 inch	No. 4	No. 8	No. 16	No. 30	No. 100	No. 200
Aggregate Size	Nominal ⁽¹⁾ Maximum Aggregate Size																
1	3 1/2 inch	100	90-100		25-60		0-15		0-5								
2	2 1/2 inch			100	90-100	35-70	0-15		0-5								
23	2 inch			100		40-90		0-15		0-5							
3	2 inch				100	90-100	35-70	0-15		0-5							
357	2 inch				100	95-100		35-70		10-30		0-5					
4	1 1/2 inch				100	90-100	20-55	0-15		0-5							
467	1 1/2 inch				100	95-100		35-70		10-30		0-5					
5	1 inch				100	90-100	20-55	0-10	0-5								
57	1 inch				100	95-100		25-60				0-10	0-5				
610	1 inch				100	85-100		40-75				15-40					
67	3/4 inch				100	90-100		20-55		0-10	0-5						
68	3/4 inch				100	90-100		30-65		5-25	0-10	0-5					
710	3/4 inch				100	80-100		30-75		0-30							
78	1/2 inch				100	90-100		40-75		5-25	0-10	0-5					
8	3/8 inch				100	85-100		10-30		0-10	0-5						
9-M	3/8 inch				100	75-100		0-25	0-5								
10 ⁽²⁾	No. 4				100	85-100		100		40-90		10-40					
11 ⁽²⁾	No. 4				100	70-100		50-80		30-65							
DENSE GRADED AGGREGATE ⁽¹⁾	3/4 inch				100										10-40		4-13
CRUSHED STONE BASE ⁽¹⁾	1 1/2 inch				100										5-20		0-8

⁽¹⁾ Gradation performed by wet sieve KM 64-620 or AASHTO T 117 T 27.
⁽²⁾ Sizes shown for convenience and are not to be considered as coarse aggregates.
⁽³⁾ Nominal Maximum Size is the largest sieve on the gradation table for an aggregate size on which any material may be retained.
 Note: The Department will allow blending of same source/same type aggregate when precise procedures are used such as cold feed, belt, or equivalent and combining of sizes or types of aggregate using the weigh hopper at concrete plants or controlled feed belts at the pugmill to obtain designated sizes.

**Supplemental Specifications to The Standard Specifications
for Road and Bridge Construction, 2008 Edition**
(Effective with the July 15, 2011 Letting)

<p>SUBSECTION: REVISION:</p>	<p>805.16 SAMPLING AND TESTING. Replace the "AASHTO T 160" method with the "KM 64-629" method for the Concrete Beam Expansion Test. Replace the "ASTM D 3042" method with the "KM 64-625" method for Insoluble Residue.</p>						
<p>SUBSECTION: REVISION:</p>	<p>810.04.01 Coating Requirements. Replace the "Subsection 806.07" references with "Subsection 806.06"</p>						
<p>SUBSECTION: PART: REVISION:</p>	<p>810.06.01 Polyvinyl Chloride (PVC) Pipe. B) Culvert and Entrance Pipe. Replace the title with the following: B) Culvert Pipe, Storm Sewer, and Entrance Pipe.</p>						
<p>SUBSECTION: REVISION:</p>	<p>823.02 LIQUID MEMBRANE FORMING COMPOUNDS. Add the following: Effective July 1, 2011, to remain on or be added to the Department's approved list, products must have completed testing or been submitted for testing through the National Transportation Product Evaluation Program (NTPEP) for Concrete Curing Compounds.</p>						
<p>SUBSECTION: REVISION:</p>	<p>837.03 APPROVAL. Replace the last sentence with the following: The Department will sample and evaluate for approval each lot of thermoplastic material delivered for use per contract prior to installation of the thermoplastic material. Do not allow the installation of thermoplastic material until it has been approved by the Division of Materials. Allow the Department a minimum of 10 working days to evaluate and approve thermoplastic material.</p>						
<p>SUBSECTION: REVISION:</p>	<p>837.03.01 Composition. COMPOSITION Table: Replace <table border="1"> <tr> <td>Lead Chromate</td> <td>0.0 max.</td> <td>4.0 min.</td> </tr> </table> with <table border="1"> <tr> <td>Heavy Metals Content</td> <td colspan="2">Comply with 40 CFR 261</td> </tr> </table> </p>	Lead Chromate	0.0 max.	4.0 min.	Heavy Metals Content	Comply with 40 CFR 261	
Lead Chromate	0.0 max.	4.0 min.					
Heavy Metals Content	Comply with 40 CFR 261						
<p>SUBSECTION: TABLE: REVISION:</p>	<p>842.02 APPROVAL. PAINT COMPOSITION Revise the following in the table: Replace the 2.0ΔE* values in the table with 4.0ΔE* for both Yellow and White Paint on both the Daytime and Nighttime Color Spectrophotometer.</p>						
<p>SECTION: REVISION:</p>	<p>DIVISION 800 MATERIAL DETAILS Add the following section in Division 800 SECTION 846 – DURABLE WATERBORNE PAINT 846.01 DESCRIPTION. This section covers quick-drying durable waterborne pavement striping paint for permanent applications. The paint shall be ready-mixed, one-component, 100% acrylic waterborne striping paint suitable for application on such traffic-bearing surfaces as Portland cement concrete, bituminous cement concrete, asphalt, tar, and previously painted areas of these surfaces. 846.02 Approval. Select materials that conform to the composition requirements below. Provide independent analysis data and certification for each formulation stating the total concentration of each heavy metal present, the test method used for each determination, and compliance to 40 CFR 261 for leachable heavy metals content. Submit initial samples for approval before beginning striping</p>						

**Supplemental Specifications to The Standard Specifications
for Road and Bridge Construction, 2008 Edition
(Effective with the July 15, 2011 Letting)**

operations. The initial sample may be sent from the manufacture of the paint. The Department will randomly sample and evaluate the paint each week that the striping operations are in progress.

The non-volatile portion of the vehicle shall be composed of a 100% acrylic polymer as determined by infrared spectral analysis. The acrylic resin used shall be a 100% cross-linking acrylic as evidenced by infrared peaks at wavelengths 1568, 1624, and 1672 cm⁻¹ with intensities equal to those produced by an acrylic resin known to be 100% cross-linking.

PAINT COMPOSITION		
Property and Test Method	Yellow	White
Daytime Color (CIELAB) Spectrophotometer using illuminant D65 at 45° illumination and 0° viewing with a 2° observer	L* 81.76 a* 19.79 b* 89.89 Maximum allowable variation 4.0ΔE*	L* 93.51 a* -1.01 b* 0.70 Maximum allowable variation 4.0ΔE*
Nighttime Color (CIELAB) Spectrophotometer using illuminant A at 45° illumination and 0° viewing with a 2° observer	L* 86.90 a* 24.80 b* 95.45 Maximum allowable variation 4.0ΔE*	L* 93.45 a* -0.79 b* 0.43 Maximum allowable variation 4.0ΔE*
Heavy Metals Content	Comply with 40 CFR 261	Comply with 40 CFR 261
Titanium Dioxide ASTM D 4764	NA	10% by weight of pigment min.
VOC ASTM D 2369 and D 4017	1.25 lb/gal max.	1.25 l /gal max.
Contrast Ratio (at 15 mils wft)	0.97	0.99

846.02.01 Manufacturers Certification. Provide a certification of analysis for each lot of traffic paint produced stating conformance to the requirements of this section. Report the formulation identification, traffic paint trade name, color, date of manufacturer, total quantity of lot produced, actual quantity of traffic paint represented, sampling method utilized to obtain the samples, and data for each sample tested to represent each lot produced.

846.03 ACCEPTANCE PROCEDURES FOR NON-SPECIFICATION DURABLE WATERBORNE PAVEMENT STRIPING PAINT. When non-specification paint is inadvertently incorporated into the work the Department will accept the material with a reduction in pay. The percentage deduction is cumulative based on its compositional properties, but will not exceed 60 percent. The Department will calculate the payment reduction on the unit bid price for the routes where the non-specification paint was used.

DURABLE WATERBORNE PAVEMENT STRIPING PAINT REDUCTION SCHEDULE						
Non-conforming Property	Resin	Color	Contrast	TiO ₂	VOC	Heavy Metals Content
Reduction Rate	60%	10%	10%	10%	60%	60%

**Supplemental Specifications to The Standard Specifications
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<p>APPENDIX A: PART: REVISION:</p>	<p>TABLUTION OF CONSTRUCTION TOLERANCES. 601.03.03 Replace with the following:</p> <p>Concrete accuracy of individual ingredient material for each batch. ± 2.0% for aggregates ± 1.0% for water ± 1.0% for cement in batches of 4 cubic yards or greater ± 1.0% for total cementitious materials in batches of 4 cubic yards or greater 0.0% to + 4.0% for cement in batches less than 4 cubic yards 0.0% to + 4.0% for total cementitious materials in batches less than 4 cubic yards ± 3.0% for admixtures</p>
<p>APPENDIX A: PART: REVISION:</p>	<p>TABLUTION OF CONSTRUCTION TOLERANCES. 601.03.03 C) 2) Delete</p>

SPECIAL NOTE FOR PORTABLE CHANGEABLE MESSAGE SIGNS

This Special Note will apply when indicated on the plans or in the proposal.

1.0 DESCRIPTION. Furnish, install, operate, and maintain variable message signs at the locations shown on the plans or designated by the Engineer. Remove and retain possession of variable message signs when they are no longer needed on the project.

2.0 MATERIALS.

2.1 General. Use LED or flip disk/LED Variable Message Signs Class I, II, or III, as appropriate, from the Department's List of Approved Materials.

Unclassified signs may be submitted for approval by the Engineer. The Engineer may require a daytime and nighttime demonstration. The Engineer will make a final decision within 30 days after all required information is received.

2.2 Sign and Controls. All signs must:

- 1) Provide 3-line messages with each line being 8 characters long and at least 18 inches tall. Each character comprises 35 pixels.
- 2) Provide at least 40 preprogrammed messages available for use at any time. Provide for quick and easy change of the displayed message; editing of the message; and additions of new messages.
- 3) Provide a controller consisting of:
 - a) Keyboard or keypad.
 - b) Readout that mimics the actual sign display. (When LCD or LCD type readout is used, include backlighting and heating or otherwise arrange for viewing in cold temperatures.)
 - c) Non-volatile memory or suitable memory with battery backup for storing pre-programmed messages.
 - d) Logic circuitry to control the sequence of messages and flash rate.
- 4) Provide a serial interface that is capable of supporting complete remote control ability through land line and cellular telephone operation. Include communication software capable of immediately updating the message, providing complete sign status, and allowing message library queries and updates.
- 5) Allow a single person easily to raise the sign to a satisfactory height above the pavement during use, and lower the sign during travel.
- 6) Allow direct wiring for operation of the sign or arrow board from an external power source when desired.
- 7) Be Highway Orange on all exterior surfaces of the trailer, supports, and controller cabinet.
- 8) Provide operation in ambient temperatures from -30 to + 120 degrees Fahrenheit during snow, rain and other inclement weather.
- 9) Provide the driver board as part of a module. All modules are interchangeable, and have plug and socket arrangements for disconnection and reconnection. Printed circuit boards associated with driver boards have a conformable coating to protect against moisture.
- 10) Provide a sign case sealed against rain, snow, dust, insects, etc. The lens is UV stabilized clear plastic (polycarbonate, acrylic, or other approved material) angled to prevent glare.

- 11) Provide a flat black UV protected coating on the sign hardware, character PCB, and appropriate lens areas.
- 12) Provide a photocell control to provide automatic dimming.
- 13) Allow an on-off flashing sequence at an adjustable rate.
- 14) Provide a sight to aim the message.
- 15) Provide a LED display color of approximately 590 nm amber.
- 16) Provide a controller that is password protected.
- 17) Provide a security device that prevents unauthorized individuals from accessing the controller.
- 18) Provide the following 3-line messages preprogrammed and available for use when the sign unit begins operation:

/KEEP/RIGHT/⇒⇒⇒/	/MIN/SPEED/**MPH/
/KEEP/LEFT/⇐⇐⇐/	/ICY/BRIDGE/AHEAD/ /ONE
/LOOSE/GRAVEL/AHEAD/	LANE/BRIDGE/AHEAD/
/RD WORK/NEXT/**MILES/	/ROUGH/ROAD/AHEAD/
/TWO WAY/TRAFFIC/AHEAD/	/MERGING/TRAFFIC/AHEAD/
/PAINT/CREW/AHEAD/	/NEXT/***/MILES/
/REDUCE/SPEED/**MPH/	/HEAVY/TRAFFIC/AHEAD/
/BRIDGE/WORK/**0 FT/	/SPEED/LIMIT/**MPH/
/MAX/SPEED/**MPH/	/BUMP/AHEAD/
/SURVEY/PARTY/AHEAD/	/TWO/WAY/TRAFFIC/

*Insert numerals as directed by the Engineer.
Add other messages during the project when required by the Engineer.

2.3 Requirements for Flip-Disc Type Signs. Flip-disc type signs will have the following additional requirements:

- 1) Disc faces are fluorescent yellow on one side, and flat black on the reverse.
- 2) Discs are at least 3.5 square inches with a minimum character size of 5 discs horizontally by 7 discs vertically.
- 3) Discs are designed to operate without lubrication for at least 200 million operations.
- 4) Line change speed of 600 milliseconds or less.
- 5) When power is lost, the sign automatically becomes blank or displays a preprogrammed default message.

2.4 Power.

- 1) Design solar panels to yield 10 percent or greater additional charge than sign consumption. Provide energy backup for 21 days without sunlight and an on-board system charger with the ability to recharge completely discharged batteries in 24 hours.
- 2) Diesel Power Source. Ensure the following is provided for:
 - a) At least 24 spare bulbs available on the project for quick replacement of burned out bulbs.
 - b) Black light at both top and bottom of each line to illuminate discs for visibility at night or under adverse weather conditions, for flip disk signs.

11

- c) Diesel generator and electric start assembly, including batteries and a fuel capacity adequate to provide at least 72 hours continuous operation without refueling.
- d) Fuel gage.
- e) Provide all other specific features, such as bulb size, protection from sun glare, and shock protection for electronics and bulbs, to the satisfaction of the Engineer.

3.0 CONSTRUCTION. Furnish and operate the variable message signs as designated on the plans or by the Engineer. Ensure the bottom of the message panel is a minimum of 7 feet above the roadway in urban areas and 5 feet above in rural areas when operating. Use Class I, II, or III signs on roads with a speed limit less than 55 mph. Use Class I or II signs on roads with speed limits 55 mph or greater. Unless the Contract specifies flip-disk signs, use Class I signs on interstates and parkways.

Maintain the sign in proper working order, including repair of any damage done by others, until completion of the project. When the sign becomes inoperative, immediately repair or replace the sign. Repetitive problems with the same unit will be cause for rejection and replacement.

Use only project related messages and messages directed by the Engineer, unnecessary messages lessen the impact of the sign. Ensure the message is displayed in either one or 2 phases with each phase having no more than 3 lines of text. When no message is needed, but it is necessary to know if the sign is operable, flash only a pixel or disk.

When the sign is not needed, move it outside the clear zone or where the Engineer directs. Variable Message Signs are the property of the Contractor and shall be removed from the project when no longer needed. The Department will not assume ownership of these signs.

4.0 MEASUREMENT. The final quantity of Variable Message Sign will be the actual number of individual signs acceptably furnished and operated during the project. The Department will not measure signs replaced due to damage or rejection.

5.0 PAYMENT. The Department will pay for the Variable Message Signs at the unit price each. The Department will not pay for signs replaced due to damage or rejection. Payment is full compensation for furnishing all materials, labor, equipment, and service necessary to, operate, move, repair, and maintain or replace the variable message signs. The Department will make payment for the completed and accepted quantities under the following:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
02671	Portable Changeable Message Sign	Each

January 5, 2010

2E

SPECIAL NOTE FOR ROADBED STABILIZATION AT BRIDGE ENDS

This Special Note will apply where indicated on the plans or in the proposal. Section references herein are to the Department's 2008 Standard Specifications for Road and Bridge Construction.

1.0 DESCRIPTION. Due to the wet and yielding embankments commonly encountered at bridge ends, undercut the existing roadbed within the limits the Contract specifies and backfill.

2.0 MATERIALS.

2.1 Geotextile Fabric. Furnish Type III fabric conforming to Section 843.

3.0 CONSTRUCTION. After removing the existing pavement and base, undercut the existing roadbed under the traffic lanes and shoulders as the Engineer directs. The minimum undercut shall be one foot, except undercut depth may be reduced where rock embankment constructed principally of limestone is encountered. Place geotextile fabric in the bottom and against the sides and ends of the undercut. The Department will not require a minimum lap between adjacent sheets of geotextile fabric for the longitudinal joint under the pavement centerline. Backfill the undercut with one or more of the following materials;

- 1) Crushed limestone size No. 1, 2, 23, or 57; or
- 2) Layered composition of several limestone sizes, with larger sizes on the bottom.

Use Dense Graded Aggregate (DGA), Crushed Stone Base (CSB), or Stabilized Aggregate Base (SAB) in the top 4 inches, and only in the top 4 inches, of the backfill.

Place geotextile fabric between the coarse backfill material and the 4-inch upper layer.

Compact the backfill material by "walking down" with equipment, or other methods the Engineer approves. See attached drawing for details of backfill placement and drainage.

Waste all removed materials, not used for purposes the Contract or Engineer specifies or permits, off the right-of-way at no expense to the Department.

4.0 MEASUREMENT.

4.1 Removing Pavement. The Department will measure the quantity in square yards. The Department will consider the pavement to include existing pavement, existing asphalt patching, and existing DGA base.

2E

4.2 Roadway Excavation. The Department will measure the quantity in cubic yards.

4.3 Backfilling Undercut. The Department will measure the quantity in cubic yards. The Department will not measure coarse aggregate for payment and will consider it incidental to this item of work.

4.4 Perforated Pipe. The Department will measure the quantity in linear feet.

4.5 Non-Perforated Pipe. The Department will measure the quantity in linear feet.

4.6 Geotextile Fabric, Type III. The Department will measure the quantity in square yards.

5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

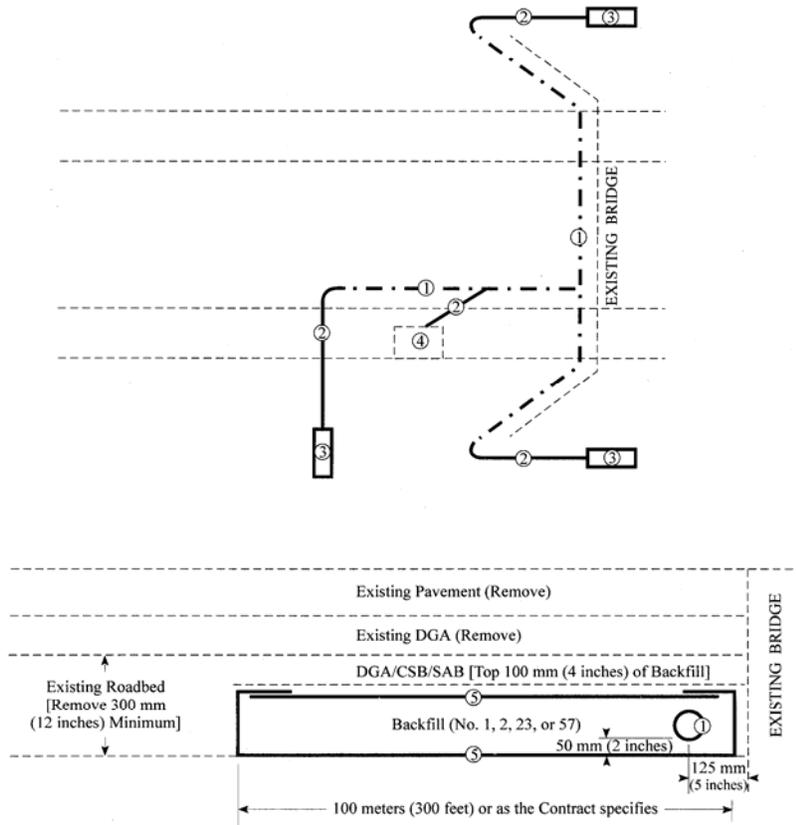
<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
02091	Removing Pavement	Square Yard
01000	Perforated Pipe - 4 inches	Linear Foot
01010	Non-Perforated Pipe, 4 inches	Linear Foot
02235	Backfilling Undercut	Cubic Yard
02598	Fabric - Geotextile Type III	Square Yard

The Department will consider payment as full compensation for all work required in this note.

January 1, 2008

2E

**BRIDGE END DRAINAGE AND STABILIZATION
(DETAILS)**



NOTES

Contrary to Section 705 of the Standard Specifications, use only coarse aggregate for trench backfill.

Slope all pipe to drain to the outside. Provide a 1:24 (1/2":1') or greater slope for the outlet pipe.

The Department may require additional transverse drains within the stabilization area.

LEGEND

- ① 100-mm (4-inch) Perforated Pipe
- ② 100-mm (4-inch) Non-perforated Pipe
- ③ Perforated Pipe Headwall
- ④ Existing Box Inlet
- ⑤ Geotextile Fabric, Type III

9Y

SPECIAL NOTE FOR MATERIAL TRANSFER VEHICLE

This Special Note will apply when indicated on the plans or in the proposal. Section references herein are to the Department's 2008 Standard Specifications for Road and Bridge Construction.

1.0 DESCRIPTION. Provide and use a Material Transfer Vehicle (MTV) to place asphalt mixtures.

2.0 MATERIALS AND EQUIPMENT. In addition to the equipment specified in Subsection 403.02, provide a MTV with the following minimum characteristics:

- 1) A system to independently deliver asphalt mixtures from the hauling equipment to the paving equipment;
- 2) A high capacity truck unloading system, capable of 600 tons per hour, that will receive asphalt mixtures from the hauling equipment;
- 3) A minimum combined capacity, including the MTV storage bin and paver hopper, of 25 tons of asphalt mixture;
- 4) An auger system in the storage bin to continuously blend the asphalt mixture prior to discharge to the conveyor system; and
- 5) A discharge conveyor, with the ability to swivel, to deliver the mixture to the paving spreader while allowing the MTV to operate from an adjacent lane.

3.0 CONSTRUCTION. When constructing driving lanes, use a MTV to place asphalt mixtures. When the Engineer determines the use of the MTV is not practical for a portion of the project he may waive its requirement for that portion.

4.0 MEASUREMENT.

4.1 Asphalt Placement with MTV. The Department will not measure the MTV for payment and will consider its use incidental to the asphalt mixture.

4.2 Asphalt Mixture. The Department will measure the quantity according to Section 402.

5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
----	Asphalt Mixture, Type	Ton

March 12, 2008

10W

SPECIAL NOTE FOR WATERBLASTING STRIPING REMOVAL

This Special Note will apply where indicated on the plans or in the proposal. Section references herein are to the Department’s 2008 Standard Specifications for Road and Bridge Construction.

1.0 DESCRIPTION. Remove pavement striping, temporary or permanent, from asphalt or concrete pavement using ultra-high pressure water.

2.0 MATERIALS AND EQUIPMENT.

2.1 Truck Mounted Ultra-high Pressure Pump and Water Tank. Use a truck having a separate hydrostatic transmission capable of speed increments of ±1 foot per minute at operator’s discretion. Use a pump capable of delivering a minimum of 30,000 psi to a bumper mounted deck containing an operator controlled rotating manifold that is speed variable up to at least 3,000 rpm and accepts interchangeable waterjet nozzles. Provide all necessary waterjet nozzle setups and patterns to ensure clean sufficient removal. Ensure the deck’s discharge directs the water and removal material in a manner that is not hazardous to vehicles or pedestrians.

2.2 Water. Conform to Section 803.

3.0 CONSTRUCTION. Before starting work, provide the Engineer with a contractor work history of 2 projects where striping removal was completed acceptably for a similar type of pavement. If no history is available, complete 1,000 linear feet of striping removal and obtain the Engineer’s approval before continuing.

Conduct striping removal under lane closures meeting the conditions of the MUTCD and Kentucky Standard Drawings and Specifications. Waterblast to remove temporary or permanent striping completely as the Engineer directs. Do not damage the pavement in any way and protect all joint seals. If damage is observed, stop the removal process until the operator can make changes and demonstrate acceptable striping removal. Repair any damage to the pavement. Vacuum all marking material and removal debris concurrently with the blasting operation.

4.0 MEASUREMENT. The Department will measure the quantity in linear feet. When the removal area’s width exceeds 8 inches and a second pass is required, the Department will measure the length of the additional pass for Payment. The Department will not measure for payment additional passes for widths of 8 inches or less or passes to further eradicate markings. The Department will not measure repair of damaged pavement for payment and will consider it incidental to this item of work.

5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
---	Waterblast Stripe Removal	Linear Foot

The Department will consider payment as full compensation for all work required under this note.

January 1, 2008

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

	Page
I. General-----	1
II. Nondiscrimination-----	1
III. Nonsegregated Facilities-----	3
IV. Payment of Predetermined Minimum Wage-----	3
V. Statements and Payrolls-----	6
VI. Record of Materials, Supplies, and Labor-----	6
VII. Subletting or Assigning the Contract-----	7
VIII. Safety: Accident Prevention-----	7
IX. False Statements Concerning Highway Projects-----	7
X. Implementation of Clean Air Act and Federal Water Pollution Control Act-----	8
XI. Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion-----	8
XII. Certification Regarding Use of Contract Funds for Lobbying-----	9

ATTACHMENTS

- A. Employment Preference for Appalachian Contracts
(included in Appalachian contracts only)

I. GENERAL

1. These contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.

3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.

4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

- Section I, paragraph 2;
- Section IV, paragraphs 1, 2, 3, 4, and 7;
- Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the DOL, or the contractor's employees or their representatives.

6. **Selection of Labor:** During the performance of this contract, the contractor shall not:

a. discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or

b. employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

II. NONDISCRIMINATION

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

1. **Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 *et seq.*) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.

b. The contractor will accept as his operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job training."

2. **EEO Officer:** The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of EEO and who must be assigned adequate authority and responsibility to do so.

3. **Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minority group employees.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. **Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group applicants will be discussed with employees.

5. **Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.

6. **Training and Promotion:**

a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

7. **Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:

a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

b. The contractor will use best efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the SHA and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin,

age or disability; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.

8. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.

b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.

c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

9. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women;

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and

(4) The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. The contractors will submit an annual report to the SHA each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data.

III. NONSEGREGATED FACILITIES

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of \$10,000 or more and that it will retain such certifications in its files.

IV. PAYMENT OF PREDETERMINED MINIMUM WAGE

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. General:

a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account [except such payroll deductions as are permitted by regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics

shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.

b. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. Classification:

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

(1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;

(2) the additional classification is utilized in the area by the construction industry;

(3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) with respect to helpers, when such a classification prevails in the area in which the work is performed.

c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

3. Payment of Fringe Benefits:

a. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor or subcontractors, as appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.

b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided, that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

4. Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:

a. Apprentices:

(1) Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.

(2) The allowable ratio of apprentices to journeyman-level employees on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate listed in the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor or subcontractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

(3) Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable

classification. If the Administrator for the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

(4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

b. Trainees:

(1) Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the DOL, Employment and Training Administration.

(2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which case such trainees shall receive the same fringe benefits as apprentices.

(4) In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Helpers:

Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV.2. Any worker listed on a payroll at a helper wage rate, who is not a helper under an approved definition, shall be paid not less than the applicable wage rate on the wagedetermination for the classification of work actually performed.

5. Apprentices and Trainees (Programs of the U.S. DOT):

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of

Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

6. Withholding:

The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the SHA contracting officer may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

7. Overtime Requirements:

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

8. Violation:

Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of \$10 for each calendar day on which such employee was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

9. Withholding for Unpaid Wages and Liquidated Damages:

The SHA shall upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any

liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 8 above.

V. STATEMENTS AND PAYROLLS

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

1. Compliance with Copeland Regulations (29 CFR 3):

The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

2. Payrolls and Payroll Records:

a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.

b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis Bacon Act, the contractor and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.

c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices, trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period). The payroll submitted required to be maintained under paragraph 2b of this Section V. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

d. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his/her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;

(2) that such laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR 3;

(3) that each laborer or mechanic has been paid not less than the applicable wage rate and fringe benefits or cash equivalent for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.

f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

1. On all Federal-aid contracts on the National Highway System, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than \$1,000,000 (23 CFR 635) the contractor shall:

a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.

b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.

c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.

2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

VII. SUBLETTING OR ASSIGNING THE CONTRACT

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the State. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635).

a. "Its own organization" shall be construed to include only workers employed and paid directly by the prime contractor and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor, assignee, or agent of the prime contractor.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph 1 of Section VII is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the SHA contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the SHA contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

VIII. SAFETY: ACCIDENT PREVENTION

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, the following notice shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined not more than \$10,000 or imprisoned not more than 5 years or both."

X. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$100,000 or more.)

By submission of this bid or the execution of this contract, or subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Pub.L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.

2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.

3. That the firm shall promptly notify the SHA of the receipt of any communication from the Director, Office of Federal Activities, EPA, indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

XI. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

1. Instructions for Certification - Primary Covered Transactions:

(Applicable to all Federal-aid contracts - 49 CFR 29)

a. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which

this proposal is submitted for assistance in obtaining a copy of those regulations.

f. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded From Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph f of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Primary Covered Transactions

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1b of this certification; and

d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Covered Transactions:

(Applicable to all subcontracts, purchase orders and other lower tier transactions of \$25,000 or more - 49 CFR 29)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Covered Transactions:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

(Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 - 49 CFR 20)

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and

submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS**

**EMPLOYMENT REQUIREMENTS
RELATING TO
NONDISCRIMINATION OF EMPLOYEES
(APPLICABLE TO FEDERAL-AID SYSTEM CONTRACTS)**

**AN ACT OF THE KENTUCKY GENERAL ASSEMBLY
TO PREVENT DISCRIMINATION IN EMPLOYMENT**

**KRS CHAPTER 344
EFFECTIVE JUNE 16, 1972**

The contract on this project, in accordance with KRS Chapter 344, provides that during the performance of this contract, the contractor agrees as follows:

1. The contractor shall not fail or refuse to hire, or shall not discharge any individual, or otherwise discriminate against an individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, national origin, sex, disability or age (between forty and seventy); or limit, segregate, or classify his employees in any way which would deprive or tend to deprive an individual of employment opportunities or otherwise adversely affect his status as an employee, because of such individual's race, color, religion, national origin, sex, disability or age (between forty and seventy). The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2. The contractor shall not print or publish or cause to be printed or published a notice or advertisement relating to employment by such an employer or membership in or any classification or referral for employment by the employment agency, indicating any preference, limitation, specification, or discrimination, based on race, color, religion, national origin, sex, disability or age (between forty and seventy), except that such notice or advertisement may indicate a preference, limitation, or specification based on religion, or national origin when religion, or national origin is a bona fide occupational qualification for employment.

3. If the contractor is in control of apprenticeship or other training or retraining, including on-the-job training programs, he shall not discriminate against an individual because of his race, color, religion, national origin, sex, disability or age (between forty and seventy), in admission to, or employment in any program established to

provide apprenticeship or other training.

4. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representative of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for non-compliance.

REVISED: 12-3-92

EXECUTIVE BRANCH CODE OF ETHICS

In the 1992 regular legislative session, the General Assembly passed and Governor Brereton Jones signed Senate Bill 63 (codified as KRS 11A), the Executive Branch Code of Ethics, which states, in part:

KRS 11A.040 (6) provides:

No present or former public servant shall, within six (6) months of following termination of his office or employment, accept employment, compensation or other economic benefit from any person or business that contracts or does business with the state in matters in which he was directly involved during his tenure. This provision shall not prohibit an individual from returning to the same business, firm, occupation, or profession in which he was involved prior to taking office or beginning his term of employment, provided that, for a period of six (6) months, he personally refrains from working on any matter in which he was directly involved in state government. This subsection shall not prohibit the performance of ministerial functions, including, but not limited to, filing tax returns, filing applications for permits or licenses, or filing incorporation papers.

KRS 11A.040 (8) states:

A former public servant shall not represent a person in a matter before a state agency in which the former public servant was directly involved, for a period of one (1) year after the latter of:

- a) The date of leaving office or termination of employment; or
- b) The date the term of office expires to which the public servant was elected.

This law is intended to promote public confidence in the integrity of state government and to declare as public policy the idea that state employees should view their work as a public trust and not as a way to obtain private benefits.

If you have worked for the executive branch of state government within the past six months, you may be subject to the law's prohibitions. The law's applicability may be different if you hold elected office or are contemplating representation of another before a state agency.

Also, if you are affiliated with a firm which does business with the state and which employs former state executive-branch employees, you should be aware that the law may apply to them.

In case of doubt, the law permits you to request an advisory opinion from the Executive Branch Ethics Commission, Room 136, Capitol Building, 700 Capitol Avenue, Frankfort, Kentucky 40601; telephone (502) 564-7954.

OPERATOR: Power Equipment

GROUP 1.....	\$ 29.49	12.25
GROUP 2.....	\$ 29.37	12.25
GROUP 3.....	\$ 28.33	12.25
GROUP 4.....	\$ 27.15	12.25
GROUP 5.....	\$ 21.69	12.25
GROUP 6.....	\$ 29.74	12.25
GROUP 7.....	\$ 30.00	12.25

OPERATING ENGINEER CLASSIFICATIONS

GROUP 1 - Air Compressor on Steel Erection; Barrier Moving Machine; Boiler Operator on Compressor or Generator when mounted on a Rig; Cableway; Combination Concrete Mixer & Tower; Concrete Plant (over 4 yd. Capacity); Concrete Pump; Crane (All Types, Including Boom Truck, Cherry Picker); Crane-Compact, Track or Rubber over 4,000 lbs. capacity; Cranes-Self Erecting, Stationary, Track or Truck (All Configurations); Derrick; Dragline; Dredge (Dipper, Clam or Suction); Elevating Grader or Euclid Loader; Floating Equipment (All Types); Gradall; Helicopter Crew (Operator-Hoist or Winch); Hoe (all types); Hoisting Engine on Shaft or Tunnel Work; Hydraulic Gantry (Lifting System); Industrial-Type Tractor; Jet Engine Dryer (D8 or D9) Diesel Tractor; Locomotive (Standard Gauge); Maintenance Operator Class A; Mixer, Paving (Single or Double Drum); Mucking Machine; Multiple Scraper; Piledriving Machine (All Types); Power Shovel; Prentice Loader; Quad 9 (Double Pusher); Rail Tamper (with auto lifting & aligning device); Refrigerating Machine (Freezer Operation); Rotary Drill, on Caisson work; Rough Terrain Fork Lift with Winch/Hoist; Side-Boom; Slip-Form Paver; Tower Derrick; Tree Shredder; Trench Machine (Over 24" wide); Truck Mounted Concrete Pump; Tug Boat; Tunnel Machine and/or Mining Machine; & Wheel Excavator

GROUP 2 - Asphalt Paver; Automatic Subgrader Machine, Self-Propelled (CMI Type); Bobcat Type and/or Skid Steer Loader with Hoe Attachment Greater than 7,000 lbs.; Boring Machine More than 48"; Bulldozer; Endloader; Hydro Milling Machine; Horizontal Directional Drill (over 500,000 ft. lbs. thrust); Kolman-type Loader (production type-Dirt); Lead Greaseman; Lighting & Traffic Signal Installation Equipment (includes all groups or classifications); Material Transfer Equipment (Shuttle Buggy) Asphalt; Pettibone-Rail Equipment; Power Grader; Power Scraper; Push Cat; Rotomill (all), Grinders & Planers of All types; Trench Machine (24" wide & under); & Vermeer type Concrete Saw

GROUP 3 - A-Frame; Air Compressor on Tunnel Work (low pressure); Asphalt Plant Engineer; Bobcat-type and/or Skid Steer Loader with or without Attachments; Highway Drills (all types); Locomotive (narrow gauge); Material Hoist/Elevator; Mixer, Concrete (more than one bag capacity); Mixer, one bag capacity (Side Loader); Power Boiler (Over 15 lbs. Pressure) Pump Operator installing & operating Well Points; Pump (4" & over discharge); Roller, Asphalt; Rotovator (lime soil stabilizer); Switch & Tie Tampers (without lifting & aligning device); Utility

Operator (Small equipment); & Welding Machines

GROUP 4 - Backfiller; Ballast Re-locator; Bars, Joint & Mesh
 Installing Machine; Batch Plant; Boring Machine Operator
 (48" or less); Bull Floats; Burlap & Curing Machine;
 Concrete Plant (capacity 4 yd. & under); Concrete Saw
 (Multiple); Conveyor (Highway); Crusher; Deckhand;
 Farm-type Tractor with attachments (highway) except
 Masonry); Finishing Machine; Fireperson, Floating Equipment
 (all types); Fork Lift (highway); Form Trencher; Hydro
 Hammer; Hydro Seeder; Pavement Breaker; Plant Mixer; Post
 Driver; Post Hole Digger (Power Auger); Power Brush Burner;
 Power Form Handling Equipment; Road Widening Trencher;
 Roller (Brick, Grade & Macadam); Self-Propelled Power
 Spreader; Self-Propelled Power Subgrader; Steam Fireperson;
 Tractor (Pulling Sheepfoot, Roller or Grader); & Vibratory
 Compactor with Integral Power

GROUP 5 - Compressor (Portable, Sewer, Heavy & Highway); Drum
 Fireperson (Asphalt); Generator; Masonry Fork Lift;
 Inboard-Outboard Motor Boat Launch; Masonry Fork Lift; Oil
 Heater (asphalt plant); Oiler; Power Driven Heater; Power
 Sweeper & Scrubber; Pump (under 4" discharge);
 Signalperson; Tire Repairperson; & VAC/ALLS

GROUP 6 - Master Mechanic & Boom from 150 to 180

GROUP 7 - Boom from 180 and over

 IRON0044-008 06/01/2011

	Rates	Fringes
Ironworkers:		
Fence Erector.....	\$ 22.92	17.20
Structural.....	\$ 25.50	17.20

 IRON0372-004 06/26/2011

	Rates	Fringes
IRONWORKER, REINFORCING		
Beyond 30-mile radius of Hamilton County, Ohio		
Courthouse.....	\$ 26.75	17.40
Up to & including 30-mile radius of Hamilton County, Ohio Courthouse.....	\$ 26.50	17.40

 * LABO0189-004 07/01/2011

PENDLETON COUNTY:

	Rates	Fringes
LABORER		
GROUP 1.....	\$ 20.81	10.85
GROUP 2.....	\$ 21.06	10.85
GROUP 3.....	\$ 21.11	10.85
GROUP 4.....	\$ 21.71	10.85

LABORERS CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushhammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger; Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Side Rail Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free Air); Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Driller (All Types); Powderman & Blaster; Troxler & Concrete Tester if Laborer is Utilized

 LABO0265-009 05/01/2011

BOONE, CAMPBELL & KENTON COUNTIES:

	Rates	Fringes
LABORER		
GROUP 1.....	\$ 26.37	8.20
GROUP 2.....	\$ 26.54	8.20
GROUP 3.....	\$ 26.87	8.20
GROUP 4.....	\$ 27.32	8.20

LABORER CLASSIFICATIONS

GROUP 1 - Asphalt Laborer; Carpenter Tender; Concrete Curing Applicator; Dump Man (Batch Truck); Guardrail and Fence Installer; Joint Setter; Laborer (Construction); Landscape Laborer; Highway Lighting Worker; Signalization Worker; Mesh Handlers & Placer; Right-of-way Laborer; Riprap

Laborer & Grouter; Scaffold Erector; Seal Coating; Surface Treatment or Road Mix Laborer; Sign Installer; Slurry Seal; Utility Man; Bridge Man; Handyman; Waterproofing Laborer; Flagperson; Hazardous Waste (level D); Diver Tender; Zone Person & Traffic Control

GROUP 2 - Skid Steer; Asphalt Raker; Concrete Puddler; Kettle Man (Pipeline); Machine Driven Tools (Gas, Electric, Air); Mason Tender; Brick Paver; Mortar Mixer; Power Buggy or Power Wheelbarrow; Sheeting & Shoring Man; Surface Grinder Man; Plastic Fusing Machine Operator; Pug Mill Operator; & Vacuum Devices (wet or dry); Rodding Machine Operator; Diver; Screwman or Paver; Screed Person; Water Blast, Hand Held Wand; Pumps 4" & Under (Gas, Air or Electric) & Hazardous Waste (level C); Air Track and Wagon Drill; Bottom Person; Cofferdam (below 25 ft. deep); Concrete Saw Person; Cutting with Burning Torch; Form Setter; Hand Spiker (Railroad); Pipelayer; Tunnel Laborer (without air) & Caisson; Underground Person (working in Sewer and Waterline, Cleaning, Repairing & Reconditioning); Sandblaster Nozzle Person; & Hazardous Waste (level B)

GROUP 3 - Blaster; Mucker; Powder Person; Top Lander; Wrencher (Mechanical Joints & Utility Pipeline); Yarner; Hazardous Waste (level A); Concrete Specialist; Concrete Crew in Tunnels (With Air-pressurized - \$1.00 premium); Curb Setter & Cutter; Grade Checker; Utility Pipeline Tapper; Waterline; and Caulker

GROUP 4 - Miner; & Guniting Nozzle Person

TUNNEL LABORER WITH AIR-PRESSURIZED ADD \$1.00 TO BASE RATE

SIGNAL PERSON WILL RECEIVE THE RATE EQUAL TO THE RATE PAID THE LABORER CLASSIFICATION FOR WHICH HE OR SHE IS SIGNALING.

 PAIN0012-016 05/02/2011

	Rates	Fringes
Painters:		
Bridge.....	\$ 23.85	8.10
Bridge Equipment Tender and Containment Builder.....	\$ 20.27	8.10
Brush & Roller.....	\$ 22.85	8.10
Sandblasting & Water Blasting.....	\$ 23.60	8.10
Spray.....	\$ 23.35	8.10

 PLUM0392-008 09/01/2011

	Rates	Fringes
PLUMBER.....	\$ 29.30	15.74

 SUKY2010-161 02/05/1996

	Rates	Fringes
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Truck drivers:

GROUP 1.....	\$ 15.85	4.60
GROUP 2.....	\$ 16.29	4.60

TRUCK DRIVER CLASSIFICATIONS

GROUP 1 - Driver

GROUP 2 - Euclid Wagon; End Dump; Lowboy; Heavy Duty
Equipment; Tractor-Trailer Combination; & Drag

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

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Unlisted classifications needed for work not included within
the scope of the classifications listed may be added after
award only as provided in the labor standards contract clauses
(29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification
and wage rates that have been found to be prevailing for the
cited type(s) of construction in the area covered by the wage
determination. The classifications are listed in alphabetical
order of "identifiers" that indicate whether the particular
rate is union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with
characters other than "SU" denotes that the union
classification and rate have found to be prevailing for that
classification. Example: PLUM0198-005 07/01/2011. The
first four letters , PLUM, indicate the international union and
the four-digit number, 0198, that follows indicates the local
union number or district council number where applicable ,
i.e., Plumbers Local 0198. The next number, 005 in the
example, is an internal number used in processing the wage
determination. The date, 07/01/2011, following these
characters is the effective date of the most current
negotiated rate/collective bargaining agreement which would be
July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any
changes in the collective bargaining agreements governing the
rate.

Non-Union Identifiers

Classifications listed under an "SU" identifier were derived
from survey data by computing average rates and are not union
rates; however, the data used in computing these rates may
include both union and non-union data. Example: SULA2004-007

5/13/2010. SU indicates the rates are not union rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

Fringe benefit amounts are applicable for all hours worked except when otherwise noted.

These rates are listed pursuant to the Kentucky Determination No. CR-11-IV-HWY dated August 04, 2011

No laborer, workman or mechanic shall be paid at a rate less than that of a Journeyman except those classified as bona fide apprentices.

Apprentices or trainees shall be permitted to work as such subject to Administrative Regulations adopted by the Commissioner of Workplace Standards. Copies of these regulations will be furnished upon request from any interested person.

Before using apprentices on the job the contractor shall present to the Contracting Officer written evidence of registration of such employees in a program of a State apprenticeship and training agency approved and recognized by the U. S. Bureau of Apprenticeship and Training. In the absence of such a State agency, the contractor shall submit evidence of approval and registration by the U. S. Bureau of Apprenticeship and Training.

The contractor shall submit to the Contracting Officer, written evidence of the established apprenticeship-journeyman ratios and wage rates in the project area, which will be the basis for establishing such ratios and rates for the project under the applicable contract provisions.

TO: EMPLOYERS/EMPLOYEES

PREVAILING WAGE SCHEDULE:

The wages indicated on this wage schedule are the least permitted to be paid for the occupations indicated. When an employee works in more than one classification, the employer must record the number of hours worked in each classification at the prescribed hourly base rate.

OVERTIME:

Overtime is to be paid after an employee works eight (8) hours a day or forty (40) hours a week, whichever gives the employee the greater wages. At least time and one-half the base rate is required for all overtime. A laborer, workman or mechanic and an employer may enter into a written agreement or a collective bargaining agreement to work more than eight (8) hours a calendar day but not more than ten (10) hours a calendar day for the straight time hourly rate. Wage violations or questions should be directed to the designated Engineer or the undersigned.

Ryan Griffith, Director
Division of Construction Procurement
Frankfort, Kentucky 40622

**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION
TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY
(Executive Order 11246)**

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

GOALS FOR MINORITY PARTICIPATION IN EACH TRADE	GOALS FOR FEMALE PARTICIPATION IN EACH TRADE
11.0%	6.9%

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally-assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4, 3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of \$10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed. The notification shall be mailed to:

**Evelyn Teague, Regional Director
Office of Federal Contract Compliance Programs
61 Forsyth Street, SW, Suite 7B75
Atlanta, Georgia 30303-8609**

4. As used in this Notice, and in the contract resulting from this solicitation, the "**covered area**" is Campbell County.

PART IV
INSURANCE

INSURANCE

The Contractor shall procure and maintain the following insurance in addition to the insurance required by law:

- 1) Commercial General Liability-Occurrence form – not less than \$2,000,000 General aggregate, \$2,000,000 Products & Completed Aggregate, \$1,000,000 Personal & Advertising, \$1,000,000 each occurrence.
- 2) Automobile Liability- \$1,000,000 per accident
- 3) Employers Liability:
 - a) \$100,000 Each Accident Bodily Injury
 - b) \$500,000 Policy limit Bodily Injury by Disease
 - c) \$100,000 Each Employee Bodily Injury by Disease
- 4) The insurance required above must be evidenced by a Certificate of Insurance and this Certificate of Insurance must contain one of the following statements:
 - a) "policy contains no deductible clauses."
 - b) "policy contains _____ (amount) deductible property damage clause but company will pay claim and collect the deductible from the insured."
- 5) **KENTUCKY WORKMEN'S COMPENSATION INSURANCE.** The contractor shall furnish evidence of coverage of all his employees or give evidence of self-insurance by submitting a copy of a certificate issued by the Workmen's Compensation Board.

The cost of insurance is incidental to all contract items. All subcontractors must meet the same minimum insurance requirements.

PART V
BID ITEMS

CONTRACT ID: 121002
 COUNTY: CAMPBELL
 PROPOSAL: IM NH 4714(034)

PAGE: 1
 LETTING: 02/24/12
 CALL NO: 100

LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT PRICE	AMOUNT
SECTION 0001 PAVING-ASPHALT ONLY						
0010	00001	DGA BASE	8,265.000	TON		
0020	00008	CEMENT STABILIZED ROADBED	30,990.000	SQYD		
0030	00018	DRAINAGE BLANKET-TYPE II-ASPH	4,890.000	TON		
0040	00022	JPC PAVEMENT DRAINAGE BLANKET	1,267.000	TON		
0050	00100	ASPHALT SEAL AGGREGATE	65.100	TON		
0060	00103	ASPHALT SEAL COAT	7.900	TON		
0070	00214	CL3 ASPH BASE 1.00D PG64-22	121.000	TON		
0080	00217	CL4 ASPH BASE 1.00D PG64-22	15,225.000	TON		
0090	00219	CL4 ASPH BASE 1.00D PG76-22	3,911.000	TON		
0100	00342	CL4 ASPH SURF 0.38A PG76-22	1,671.000	TON		
0110	00358	ASPHALT CURING SEAL	50.500	TON		
0120	02058	REMOVE PCC PAVEMENT	24,384.000	SQYD		
0130	02071	JPC PAVEMENT-11 IN	205.000	SQYD		
0140	02086	JPC PAVEMENT-13 IN	3,906.000	SQYD		
0150	02087	JPC PAVEMENT-13 IN SHLD	2,431.000	SQYD		
0160	02091	REMOVE PAVEMENT	2,065.000	SQYD		
0170	02115	SAW-CLEAN-RESEAL TVERSE JOINT	6,145.000	LF		
0180	02116	SAW-CLEAN-RESEAL LONGIT JOINT	5,924.000	LF		
0190	02200	ROADWAY EXCAVATION	60,453.000	CUYD		
0200	02235	BACKFILLING UNDERCUT	450.000	CUYD		

CONTRACT ID: 121002
 COUNTY: CAMPBELL
 PROPOSAL: IM NH 4714(034)

PAGE: 2
 LETTING: 02/24/12
 CALL NO: 100

LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT PRICE	AMOUNT
0210	02542	CEMENT	724.000	TON		
0220	02598	FABRIC-GEOTEXTILE TYPE III	1,418.000	SQYD		
0230	02696	SHOULDER RUMBLE STRIPS-SAWED	4,328.000	LF		
0240	02702	SAND FOR BLOTTER	140.000	TON		
0250	03302	REPAIR CONCRETE CURB	93.000	LF		
0260	21173EC	SAW-CLEAN-RESEAL RANDOM CRACKS	133.000	LF		
ALT GROUPIAA10002		PAVING-ASPH ALT				
0270	00001	DGA BASE	109,179.000	TON		
0280	00003	CRUSHED STONE BASE	999.000	TON		
0290	00008	CEMENT STABILIZED ROADBED	399,027.000	SQYD		
0300	00018	DRAINAGE BLANKET-TYPE II-ASPH	87,917.000	TON		
0310	00100	ASPHALT SEAL AGGREGATE	764.600	TON		
0320	00103	ASPHALT SEAL COAT	91.800	TON		
0330	00214	CL3 ASPH BASE 1.00D PG64-22	81,302.000	TON		
0340	00217	CL4 ASPH BASE 1.00D PG64-22	163,912.000	TON		
0350	00219	CL4 ASPH BASE 1.00D PG76-22	43,964.000	TON		
0360	00339	CL3 ASPH SURF 0.38D PG64-22	8,346.000	TON		
0370	00342	CL4 ASPH SURF 0.38A PG76-22	20,338.000	TON		
0380	00358	ASPHALT CURING SEAL	713.000	TON		
0390	01825	ISLAND CURB AND GUTTER	261.000	LF		
0400	01845	ISLAND INTEGRAL CURB	25.000	LF		
0410	01891	ISLAND HEADER CURB TYPE 2	6,777.000	LF		

CONTRACT ID: 121002
COUNTY: CAMPBELL
PROPOSAL: IM NH 4714(034)

PAGE: 3
LETTING: 02/24/12
CALL NO: 100

LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT PRICE	AMOUNT
0420	02058	REMOVE PCC PAVEMENT	375,000.000	SQYD		
0430	02091	REMOVE PAVEMENT	5,244.000	SQYD		
0440	02200	ROADWAY EXCAVATION	96,143.000	CUYD		
0450	02235	BACKFILLING UNDERCUT	2,085.000	CUYD		
0460	02542	CEMENT	11,710.000	TON		
0470	02598	FABRIC-GEOTEXTILE TYPE III	6,568.000	SQYD		
0480	02599	FABRIC-GEOTEXTILE TYPE IV	4,349.000	SQYD		
0490	02696	SHOULDER RUMBLE STRIPS-SAWED	72,851.000	LF		
0500	02702	SAND FOR BLOTTER	1,980.000	TON		
0510	10203ND	PAVEMENT ADJUSTMENT ASPHALT	(1.00)	LS	2,084,493.00	2,084,493.00
0520	20997ED	REMOVE TRAFFIC ISLAND	65.000	SQYD		
0530	24459EC	CONCRETE MEDIAN BARRIER TYPE 9E2	1,493.000	EACH		
ALT GROUPIAA20003		PAVING-CONC ALT				
0540	00001	DGA BASE	16,141.000	TON		
0550	00003	CRUSHED STONE BASE	71,158.000	TON		
0560	00008	CEMENT STABILIZED ROADBED	381,895.000	SQYD		
0570	00022	JPC PAVEMENT DRAINAGE BLANKET	16,481.000	TON		
0580	00100	ASPHALT SEAL AGGREGATE	764.600	TON		
0590	00103	ASPHALT SEAL COAT	91.800	TON		
0600	00214	CL3 ASPH BASE 1.00D PG64-22	2,225.000	TON		
0610	00339	CL3 ASPH SURF 0.38D PG64-22	325.000	TON		
0620	00358	ASPHALT CURING SEAL	381.900	TON		

CONTRACT ID: 121002
COUNTY: CAMPBELL
PROPOSAL: IM NH 4714(034)

PAGE: 4
LETTING: 02/24/12
CALL NO: 100

LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT PRICE	AMOUNT
0630	01825	ISLAND CURB AND GUTTER	47.000	LF		
0640	01845	ISLAND INTEGRAL CURB	6,767.000	LF		
0650	01891	ISLAND HEADER CURB TYPE 2	249.000	LF		
0660	02058	REMOVE PCC PAVEMENT	375,000.000	SQYD		
0670	02071	JPC PAVEMENT-11 IN	40,990.000	SQYD		
0680	02072	JPC PAVEMENT-11 IN SHLD	19,977.000	SQYD		
0690	02086	JPC PAVEMENT-13 IN	223,629.000	SQYD		
0700	02087	JPC PAVEMENT-13 IN SHLD	96,863.000	SQYD		
0710	02091	REMOVE PAVEMENT	5,244.000	SQYD		
0720	02200	ROADWAY EXCAVATION	23,306.000	CUYD		
0730	02235	BACKFILLING UNDERCUT	2,004.000	CUYD		
0740	02542	CEMENT	11,208.000	TON		
0750	02598	FABRIC-GEOTEXTILE TYPE III	6,312.000	SQYD		
0760	02599	FABRIC-GEOTEXTILE TYPE IV	3,778.000	SQYD		
0770	02695	RUMBLE STRIPS TYPE 3	8,710.000	LF		
0780	02702	SAND FOR BLOTTER	955.000	TON		
0790	10203ND	PAVEMENT ADJUSTMENT CONC	(1.00)	LS	1,437,067.00	1,437,067.00
0800	20997ED	REMOVE TRAFFIC ISLAND	65.000	SQYD		
0810	23335EC	CONCRETE MEDIAN BARRIER TY 9B2	1,493.000	LF		
SECTION 0004 ROADWAY						
0820	00071	CRUSHED AGGREGATE SIZE NO 57	1,541.000	TON		

CONTRACT ID: 121002
COUNTY: CAMPBELL
PROPOSAL: IM NH 4714(034)

PAGE: 5
LETTING: 02/24/12
CALL NO: 100

LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT PRICE	AMOUNT
0830	00078	CRUSHED AGGREGATE SIZE NO 2	72.000	TON		
0840	00461	CULVERT PIPE-15 IN	129.000	LF		
0850	00462	CULVERT PIPE-18 IN	70.000	LF		
0860	00464	CULVERT PIPE-24 IN	30.000	LF		
0870	01001	PERFORATED PIPE-6 IN	95,384.000	LF		
0880	01002	PERFORATED PIPE-8 IN	7,594.000	LF		
0890	01011	NON-PERFORATED PIPE-6 IN	2,052.000	LF		
0900	01012	NON-PERFORATED PIPE-8 IN	44.000	LF		
0910	01015	INSPECT & CERTIFY EDGE DRAIN SYSTEM	(1.00)	LS		
0920	01021	PERF PIPE HEADWALL TY 1-6 IN	25.000	EACH		
0930	01022	PERF PIPE HEADWALL TY 1-8 IN	1.000	EACH		
0940	01025	PERF PIPE HEADWALL TY 2-6 IN	1.000	EACH		
0950	01029	PERF PIPE HEADWALL TY 3-6 IN	24.000	EACH		
0960	01033	PERF PIPE HEADWALL TY 4-6 IN	21.000	EACH		
0970	01456	CURB BOX INLET TYPE A	1.000	EACH		
0980	01490	DROP BOX INLET TYPE 1	1.000	EACH		
0990	01502	DROP BOX INLET TYPE 5A	1.000	EACH		
1000	01511	DROP BOX INLET TYPE 5D	1.000	EACH		
1010	01584	CAP DROP BOX INLET	2.000	EACH		
1020	01585	REMOVE DROP BOX INLET	1.000	EACH		
1030	01621	CONC MED BARR BOX INLET TY 9B1	2.000	EACH		

CONTRACT ID: 121002
 COUNTY: CAMPBELL
 PROPOSAL: IM NH 4714(034)

PAGE: 6
 LETTING: 02/24/12
 CALL NO: 100

LINE NO	ITEM	DESCRIPTION	APPROXIMATE UNIT QUANTITY	UNIT PRICE	AMOUNT
1040	01690	FLUME INLET TYPE 1	2.000 EACH		
1050	01691	FLUME INLET TYPE 2	12.000 EACH		
1060	01719	ADJUST INLET	1.000 EACH		
1070	01741	CORED HOLE DRAINAGE BOX CON-6 IN	93.000 EACH		
1080	01742	CORED HOLE DRAINAGE BOX CON-8 IN	4.000 EACH		
1090	01789	RECONSTRUCT MANHOLE	1.000 EACH		
1100	01982	DELINEATOR FOR GUARDRAIL-WHITE	632.000 EACH		
1110	01983	DELINEATOR FOR GUARDRAIL-YELLOW	41.000 EACH		
1120	01984	DELINEATOR FOR BARRIER - WHITE	3,448.000 EACH		
1130	01985	DELINEATOR FOR BARRIER - YELLOW	4,218.000 EACH		
1140	02003	RELOCATE TEMP CONC BARRIER	93,240.000 LF		
1150	02014	BARRICADE-TYPE III	25.000 EACH		
1160	02237	DITCHING	20,000.000 LF		
1170	02265	REMOVE FENCE	166.000 LF		
1180	02274	FENCE-6 FT CHAIN LINK	166.000 LF		
1190	02363	GUARDRAIL CONNECTOR TO BRIDGE END TY A	13.000 EACH		
1200	02369	GUARDRAIL END TREATMENT TYPE 2A	30.000 EACH		
1210	02373	GUARDRAIL END TREATMENT TYPE 3	7.000 EACH		
1220	02381	REMOVE GUARDRAIL	34,551.300 LF		
1230	02387	GUARDRAIL CONNECTOR TO BRIDGE END TY A-1	13.000 EACH		
1240	02391	GUARDRAIL END TREATMENT TYPE 4A	23.000 EACH		

KENTUCKY TRANSPORTATION CABINET
 DEPARTMENT OF HIGHWAYS
 FRANKFORT, KY 40622

CONTRACT ID: 121002
 COUNTY: CAMPBELL
 PROPOSAL: IM NH 4714(034)

PAGE: 7
 LETTING: 02/24/12
 CALL NO: 100

LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT PRICE	AMOUNT
1250	02397	TEMP GUARDRAIL	550.000	LF		
1260	02483	CHANNEL LINING CLASS II	1,041.000	TON		
1270	02484	CHANNEL LINING CLASS III	120.000	TON		
1280	02555	CONCRETE-CLASS B	183.000	CUYD		
1290	02562	SIGNS	4,400.000	SQFT		
1300	02600	FABRIC GEOTEXTILE TY IV FOR PIPE	306.000	SQYD	2.00	612.00
1310	02650	MAINTAIN & CONTROL TRAFFIC	(1.00)	LS		
1320	02653	LANE CLOSURE	26.000	EACH		
1330	02671	PORTABLE CHANGEABLE MESSAGE SIGN	25.000	EACH		
1340	02690	SAFELOADING	4.000	CUYD		
1350	02720	SIDEWALK-4 IN CONCRETE	40.000	SQYD		
1360	02726	STAKING	(1.00)	LS		
1370	02775	ARROW PANEL	26.000	EACH		
1380	02894	CRASH CUSHION TYPE VI-T	29.000	EACH		
1390	02898	RELOCATE CRASH CUSHION	28.000	EACH		
1400	03148	CONC MEDIAN BARRIER TYPE 9E	910.000	LF		
1410	03171	CONCRETE BARRIER WALL TYPE 9T	64,100.000	LF		
1420	05950	EROSION CONTROL BLANKET	127,552.000	SQYD		
1430	05966	TOPDRESSING FERTILIZER	8.000	TON		
1440	05985	SEEDING AND PROTECTION	116,000.000	SQYD		
1450	05989	SPECIAL SEEDING CROWN VETCH	14,340.000	SQYD		

CONTRACT ID: 121002
COUNTY: CAMPBELL
PROPOSAL: IM NH 4714(034)

PAGE: 8
LETTING: 02/24/12
CALL NO: 100

LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT PRICE	AMOUNT
1460	06417	FLEXIBLE DELINEATOR POST-W	480.000	EACH		
1470	06418	FLEXIBLE DELINEATOR POST-Y	238.000	EACH		
1480	06511	PAVE STRIPING-TEMP PAINT-6 IN	380,000.000	LF		
1490	06513	PAVE STRIPING-TEMP PAINT-12 IN	16,400.000	LF		
1500	06549	PAVE STRIPING-TEMP REM TAPE-B	25,000.000	LF		
1510	06550	PAVE STRIPING-TEMP REM TAPE-W	25,000.000	LF		
1520	06551	PAVE STRIPING-TEMP REM TAPE-Y	25,000.000	LF		
1530	06568	PAVE MARKING-THERMO STOP BAR-24IN	191.000	LF		
1540	06573	PAVE MARKING-THERMO STR ARROW	2.000	EACH		
1550	06574	PAVE MARKING-THERMO CURV ARROW	20.000	EACH		
1560	06576	PAVE MARKING-THERMO ONLY	7.000	EACH		
1570	06585	PAVEMENT MARKER TY IVA-MW TEMP	4,352.000	EACH		
1580	06586	PAVEMENT MARKER TY IVA-MY TEMP	8,632.000	EACH		
1590	06592	PAVEMENT MARKER TYPE V-B W/R	1,879.000	EACH		
1600	06593	PAVEMENT MARKER TYPE V-B Y/R	651.000	EACH		
1610	08001	STRUCTURE EXCAVATION-COMMON	318.000	CUYD		
1620	08100	CONCRETE-CLASS A	4.660	CUYD		
1630	08150	STEEL REINFORCEMENT	178.000	LB		
1640	08904	CRASH CUSHION TY VI CLASS C TL3	1.000	EACH		
1650	10212ND	TIME COMPONENT NORTHBOUND	25,000.000	DOLL	150.00	3,750,000.00
1660	10222ND	TIME COMPONENT SOUTHBOUND	50,000.000	DOLL	150.00	7,500,000.00

CONTRACT ID: 121002
 COUNTY: CAMPBELL
 PROPOSAL: IM NH 4714(034)

PAGE: 9
 LETTING: 02/24/12
 CALL NO: 100

LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT PRICE	AMOUNT
1670	20410ED	MAINTAIN LIGHTING	(1.00)	LS		
1680	21802EN	G/R STEEL W BEAM-S FACE (7 FT POST)	33,687.500	LF		
1690	21935EN	REMOVE CONC MEDIAN BARRIER	2,516.000	LF		
1700	23131ER701	PIPELINE VIDEO INSPECTION	65.000	LF		
1710	23143ED	KPDES PERMIT AND TEMP EROSION CONTROL	(1.00)	LS		
1720	23158ES505	DETECTABLE WARNINGS	115.000	SQFT		
1730	23237EN10W	WATERBLAST STRIPE REMOVAL	385,000.000	LF		
1740	23864EC	CHANNEL LINING CLASS III-MOD	365.000	TON		
1750	24189ER	DURABLE WATERBORNE MARKING-6 IN W	132,027.000	LF		
1760	24190ER	DURABLE WATERBORNE MARKING-6 IN Y	86,110.000	LF		
1770	24191ER	DURABLE WATERBORNE MARKING-12 IN W	23,795.000	LF		
1780	24458EC	UTILITY LINE HANGER FOR BRIDGES	2.000	EACH		
SECTION 0005 BRIDGE						
1790	02231	STRUCTURE GRANULAR BACKFILL	105.000	CUYD		
1800	02403	REMOVE CONCRETE MASONRY	40.800	CUYD		
1810	02555	CONCRETE-CLASS B	5.400	CUYD		
1820	02599	FABRIC-GEOTEXTILE TYPE IV	105.000	SQYD		
1830	02998	MASONRY COATING	500.000	SQYD		
1840	03294	EXPAN JOINT REPLACE 1 1/2 IN	432.000	LF		
1850	03295	EXPAN JOINT REPLACE 2 IN	124.000	LF		
1860	03298	EXPAN JOINT REPLACE 4 IN	475.000	LF		

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
FRANKFORT, KY 40622

CONTRACT ID: 121002
COUNTY: CAMPBELL
PROPOSAL: IM NH 4714(034)

PAGE: 10
LETTING: 02/24/12
CALL NO: 100

LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT PRICE	AMOUNT
1870	03299	ARMORED EDGE FOR CONCRETE	37.000	LF		
1880	03300	ELIMINATE TRANSVERSE JOINT	415.000	LF		
1890	08001	STRUCTURE EXCAVATION-COMMON	230.000	CUYD		
1900	08016	REINF CONC SLOPE WALL-6 IN	283.000	SQYD		
1910	08020	CRUSHED AGGREGATE SLOPE PROT	135.000	TON		
1920	08033	TEST PILES	140.000	LF		
1930	08046	PILES-STEEL HP12X53	1,140.000	LF		
1940	08094	PILE POINTS-12 IN	44.000	EACH		
1950	08100	CONCRETE-CLASS A	144.200	CUYD		
1960	08104	CONCRETE-CLASS AA	125.800	CUYD		
1970	08150	STEEL REINFORCEMENT	18,074.000	LB		
1980	08151	STEEL REINFORCEMENT-EPOXY COATED	37,534.000	LB		
1990	08504	EPOXY SAND SLURRY	5,530.000	SQYD		
2000	08526	CONC CLASS M FULL DEPTH PATCH	156.000	CUYD		
2010	08534	CONCRETE OVERLAY-LATEX	1,695.000	CUYD		
2020	08549	BLAST CLEANING	37,482.000	SQYD		
2030	08550	HYDRODEMOLITION	32,515.000	SQYD		
2040	08551	MACHINE PREP OF SLAB	345.000	SQYD		
2050	08671	PRECAST PC BOX BEAM SB33	315.800	LF		
2060	21532ED	RAIL SYSTEM TYPE III	160.500	LF		
2070	23386EC	JOINT SEAL REPLACEMENT	1,031.000	LF		

CONTRACT ID: 121002
 COUNTY: CAMPBELL
 PROPOSAL: IM NH 4714(034)

PAGE: 11
 LETTING: 02/24/12
 CALL NO: 100

LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT PRICE	AMOUNT
2080	23622EC	CLEAN DEBRIS FROM LOWER CHORD B00039L	(1.00)	LS		
2090	23622EC	CLEAN DEBRIS FROM LOWER CHORD B00039R	(1.00)	LS		
2100	24094EC	PARTIAL DEPTH PATCHING	336.200	CUYD		
2110	24424EC	REM AND REPLACE BRIDGE CHAIN LINK FENCE	604.000	LF		
2120	24438EC	SEAL CRACKS BRIDGE DECK B00056L	(1.00)	LS		
2130	24438EC	SEAL CRACKS BRIDGE DECK B00056R	(1.00)	LS		
2140	24439EC	SEAL BRIDGE DECK B00056L	(1.00)	LS		
2150	24439EC	SEAL BRIDGE DECK B00056R	(1.00)	LS		
2160	24456EC	EXPAN JOINT REPLACE 5 1/2 IN 5 1/2	102.000	LF		
SECTION 0006 SIGNING						
2170	04904	BARRIER MOUNTING BRACKET	2.000	EACH		
2180	06405	SBM ALUMINUM PANEL SIGNS	3,771.500	SQFT		
2190	06406	SBM ALUM SHEET SIGNS .080 IN	9.000	SQFT		
2200	06407	SBM ALUM SHEET SIGNS .125 IN	64.000	SQFT		
2210	06411	STEEL POST TYPE 2	90.000	LF		
2220	06441	GMSS GALV STEEL TYPE C	577.000	LB		
2230	06449	REM OVERHEAD SIGN SUPPORT STR	1.000	EACH		
2240	06450	REM OVERHEAD STRUC CONC BASE	1.000	EACH		
2250	06490	CLASS A CONCRETE FOR SIGNS	1.300	CUYD		
2260	06491	STEEL REINFORCEMENT FOR SIGNS	88.000	LB		
2270	20418ED	REMOVE & RELOCATE SIGNS	1.000	EACH		

CONTRACT ID: 121002
 COUNTY: CAMPBELL
 PROPOSAL: IM NH 4714(034)

PAGE: 12
 LETTING: 02/24/12
 CALL NO: 100

LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT PRICE	AMOUNT
2280	20419ND	ROADWAY CROSS SECTION	1.000	EACH		
2290	20912ND	BARRIER WALL POST	2.000	EACH		
2300	21373ND	REMOVE SIGN PANEL	16.000	EACH		
SECTION 0007 SIGNALIZATION						
2310	04811	JUNCTION BOX TYPE B	7.000	EACH		
2320	04830	LOOP WIRE	3,575.000	LF		
2330	04850	CABLE-NO. 14/1 PAIR	2,100.000	LF		
2340	04895	LOOP SAW SLOT AND FILL	1,375.000	LF		
SECTION 0008 LIGHTING						
2350	04700	POLE 30 FT MTG HT	39.000	EACH		
2360	04701	POLE 40 FT MTG HT	98.000	EACH		
2370	04714	POLE 120 FT MTG HT HIGH MAST	18.000	EACH		
2380	04720	BRACKET 4 FT	18.000	EACH		
2390	04722	BRACKET 8 FT	18.000	EACH		
2400	04723	BRACKET 10 FT	30.000	EACH		
2410	04724	BRACKET 12 FT	47.000	EACH		
2420	04725	BRACKET 15 FT	14.000	EACH		
2430	04730	BRACKET C	12.000	EACH		
2440	04740	POLE BASE	98.000	EACH		
2450	04750	TRANSFORMER BASE	125.000	EACH		
2460	04760	POLE W/SECONDARY CONTROL EQUIP	1.000	EACH		

KENTUCKY TRANSPORTATION CABINET
 DEPARTMENT OF HIGHWAYS
 FRANKFORT, KY 40622

CONTRACT ID: 121002
 COUNTY: CAMPBELL
 PROPOSAL: IM NH 4714(034)

PAGE: 13
 LETTING: 02/24/12
 CALL NO: 100

LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT PRICE	AMOUNT
2470	04761	LIGHTING CONTROL EQUIPMENT	4.000	EACH		
2480	04770	HPS LUMINAIRE	127.000	EACH		
2490	04771	HPS LUMINAIRE WALL PACK	3.000	EACH		
2500	04773	HPS LUMINAIRE HIGH MAST	107.000	EACH		
2510	04780	FUSED CONNECTOR KIT	284.000	EACH		
2520	04793	CONDUIT-1 1/4 IN	15,895.000	LF		
2530	04795	CONDUIT-2 IN	4,420.000	LF		
2540	04797	CONDUIT-3 IN	3,384.000	LF		
2550	04800	MARKER	58.000	EACH		
2560	04820	TRENCHING AND BACKFILLING	38,420.000	LF		
2570	04832	WIRE-NO. 12	21,399.000	LF		
2580	04833	WIRE-NO. 8	57,597.000	LF		
2590	04834	WIRE-NO. 6	20,910.000	LF		
2600	04835	WIRE-NO. 4	6,300.000	LF		
2610	04860	CABLE-NO. 8/3C DUCTED	2,120.000	LF		
2620	04861	CABLE-NO. 6/3C DUCTED	3,570.000	LF		
2630	04862	CABLE-NO. 4/3C DUCTED	17,466.000	LF		
2640	04863	CABLE-NO. 2/3C DUCTED	15,137.000	LF		
2650	04940	REMOVE LIGHTING	(1.00)	LS		
2660	20391NS835	JUNCTION BOX TYPE A	44.000	EACH		
2670	20392NS835	JUNCTION BOX TYPE C	9.000	EACH		

CONTRACT ID: 121002
 COUNTY: CAMPBELL
 PROPOSAL: IM NH 4714(034)

PAGE: 14
 LETTING: 02/24/12
 CALL NO: 100

LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT PRICE	AMOUNT
2680	20993ND	HPS LUMINAIRE 400 WATT	12.000	EACH		
2690	21543EN	BORE AND JACK CONDUIT	4,104.000	LF		
2700	21563NN	SPLICE BOX 8 X 6 X 4 IN	10.000	EACH		
2710	22928EN	CABLE-NO. 1/3C DUCTED	3,612.000	LF		
2720	23161EN	POLE BASE-HIGH MAST	164.830	CUYD		
SECTION 0009 TRAFFIC LOOPS						
2730	04793	CONDUIT-1 1/4 IN	60.000	LF		
2740	04795	CONDUIT-2 IN	540.000	LF		
2750	04820	TRENCHING AND BACKFILLING	580.000	LF		
2760	04829	PIEZOELECTRIC SENSOR	50.000	EACH		
2770	04830	LOOP WIRE	25,310.000	LF		
2780	04895	LOOP SAW SLOT AND FILL	4,370.000	LF		
2790	20359NN	GALVANIZED STEEL CABINET	3.000	EACH		
2800	20360ES818	WOOD POST	6.000	EACH		
2810	20391NS835	JUNCTION BOX TYPE A	8.000	EACH		
2820	20392NS835	JUNCTION BOX TYPE C	2.000	EACH		
2830	21543EN	BORE AND JACK CONDUIT	120.000	LF		
SECTION 0010 DEMOB AND MOB						
2840	02568	MOBILIZATION (NO MORE THAN 5%)		LUMP		
2850	02569	DEMOBILIZATION (AT LEAST 1.5%)		LUMP		
TOTAL BID						