



**CALL NO. 101**

**CONTRACT ID. 161060**

**CLARK COUNTY**

**FED/STATE PROJECT NUMBER NHPP 0061(063)**

**DESCRIPTION MOUNTAIN PARKWAY(PW-9000)**

**WORK TYPE ASPHALT REHAB INTERSTATE/PARKWAY**

**PRIMARY COMPLETION DATE 9/15/2017**

**LETTING DATE: December 09,2016**

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN STANDARD TIME December 09,2016. Bids will be publicly announced at 10:00 AM EASTERN STANDARD TIME.

**NO PLANS ASSOCIATED WITH THIS PROJECT.**

**DBE CERTIFICATION REQUIRED - 8.50%**

**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"><li>• PROJECT(S), COMPLETION DATE(S), &amp; LIQUIDATED DAMAGES</li><li>• CONTRACT NOTES</li><li>• FEDERAL CONTRACT NOTES</li><li>• ASPHALT MIXTURE</li><li>• DGA BASE</li><li>• DGA BASE FOR SHOULDERS</li><li>• INCIDENTAL SURFACING</li><li>• FUEL AND ASPHALT PAY ADJUSTMENT</li><li>• ASPHALT PAVEMENT RIDE QUALITY CAT A</li><li>• COMPACTION OPTION A</li><li>• SPECIAL NOTE(S) APPLICABLE TO PROJECT</li><li>• BRIDGE DEMOLITION, RENOVATION</li><li>• ASBESTOS ABATEMENT REPORT</li><li>• RIGHT OF WAY NOTES</li><li>• UTILITY IMPACT &amp; RAIL CERTIFICATION NOTES</li></ul>
PART II	SPECIFICATIONS AND STANDARD DRAWINGS
	<ul style="list-style-type: none"><li>• SPECIFICATIONS REFERENCE</li><li>• SUPPLEMENTAL SPECIFICATION</li><li>• PORTABLE CHANGEABLE SIGNS</li></ul>
PART III	EMPLOYMENT, WAGE AND RECORD REQUIREMENTS
	<ul style="list-style-type: none"><li>• FEDERAL-AID CONSTRUCTION CONTRACTS - FHWA 1273</li><li>• NONDISCRIMINATION OF EMPLOYEES</li><li>• EXECUTIVE BRANCH CODE OF ETHICS</li><li>• PROJECT WAGE RATES LOCALITY 3 / FEDERAL &amp; STATE</li><li>• NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EEO CLARK</li></ul>
PART IV	INSURANCE
PART V	BID ITEMS

**PART I**  
**SCOPE OF WORK**

## ADMINISTRATIVE DISTRICT - 07

**CONTRACT ID - 161060**

**NHPP 0061(063)**

**COUNTY - CLARK**

**PCN - DE02590001660**

**NHPP 0061(063)**

MOUNTAIN PARKWAY(PW-9000) MILL AND INTERMEDIATE ASPHALT OVERLAY ON MTN. PARKWAY(9000) FROM I-64 MP 0.00 TO STONER EPHEBUS ROAD OVERPASS AT MP 5.311 IN CLARK COUNTY.ASPHALT REHAB INTERSTATE/PARKWAY SYP NO. 07-02056.00.

GEOGRAPHIC COORDINATES LATITUDE 37:59:42.00 LONGITUDE 84:07:01.00

**COMPLETION DATE(S):**

COMPLETED BY 09/15/2017

APPLIES TO ENTIRE CONTRACT

## **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/construction-procurement](http://www.transportation.ky.gov/construction-procurement))

The Bidder must download the bid file located on the Bid Express website ([www.bidx.com](http://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 shall make every effort to protect underground facilities from damage as prescribed in the Underground Facility Damage Protection Act of 1994, Kentucky Revised Statute KRS 367.4901 to 367.4917. It is the contractor's responsibility to determine and take steps necessary to be in compliance with federal and state damage prevention directives. When prescribed in said directives, the contractor shall submit Excavation Locate Requests to the Kentucky Contact Center (KY811) via web ticket entry. The submission of this request does not relieve the contractor from the responsibility of contacting non-member facility owners, whom shall be contacted through their individual Protection Notification Center. Non-compliance with these directives can result in the enforcement of penalties.

### **SPECIAL NOTE FOR COMPOSITE OFFSET BLOCKS**

Contrary to the Standard Drawings (2016 edition) the Cabinet will allow 6" composite offset blocks in lieu of wooden offset blocks, except as specified on proprietary end treatments and crash cushions. The composite blocks shall be selected from the Cabinet's List of Approved Materials.

### **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](mailto: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](http://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.

### **HARDWOOD REMOVAL RESTRICTIONS**

The US Department of Agriculture has imposed a quarantine in Kentucky and several surrounding states, to prevent the spread of an invasive insect, the emerald ash borer. Hardwood cut in conjunction with the project may not be removed from the state. Chipping or burning on site is the preferred method of disposal.

### **INSTRUCTIONS FOR EXCESS MATERIAL SITES AND BORROW SITES**

Identification of excess material sites and borrow sites shall be the responsibility of the Contractor. The Contractor shall be responsible for compliance with all applicable state and federal laws and may wish to consult with the US Fish and Wildlife Service to seek protection under Section 10 of the Endangered Species Act for these activities.

### **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.

06/01/16

### **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  
102.8 Irregular Proposals 102.14 Disqualification of Bidders  
102.9 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.

### **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 14-35 DBE, within **7** 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 WILL 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 complete and submit a signed and notarized affidavit (TC 18-7) and copies of checks for any monies paid to each DBE subcontractor or supplier utilized to meet a DBE goal. **These documents must be submitted within 10 days of being paid by the Cabinet.**

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>

**The prime contractor should notify the KYTC Office of Civil Rights and Small Business Development seven (7) days prior to DBE contractors commencing work on the project. The contact is Melvin Bynes and the telephone number is (502) 564-3601.**

Photocopied payments and completed, signed and notarized affidavit must be submitted by the Prime Contractor to:

- Office of Civil Rights and Small Business Development
- 6<sup>th</sup> 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.

3/24/2016

**LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC – CARGO PREFERENCE ACT (CPA).**

**(REV 12-17-15) (1-16)**

SECTION 7 is expanded by the following new Article:

102.10 **Cargo Preference Act – Use of United States-flag vessels.**

Pursuant to Title 46CFR Part 381, the Contractor agrees

- To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

- To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph 1 of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

- To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

### **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-110-06 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.

### **FUEL AND ASPHALT PAY ADJUSTMENT**

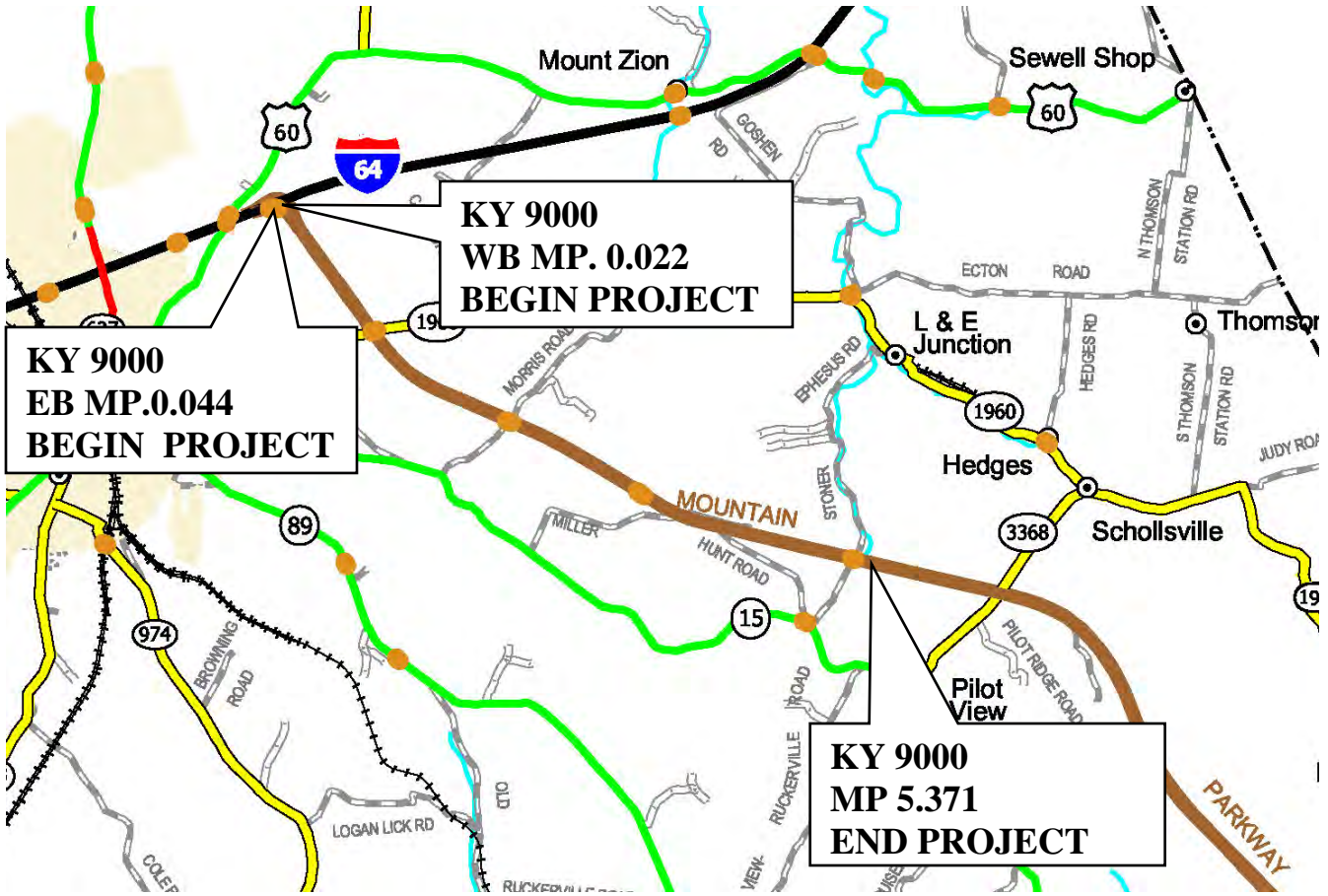
The Department has included the Contract items Asphalt Adjustment and Fuel Adjustment for possible future payments at an established Contract unit price of \$1.00. The Department will calculate actual adjustment quantities after work is completed. If existing Contract amount is insufficient to pay all items on the contract with the adjustments, the Department will establish additional monies with a change order.

### **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.



COUNTY: CLARK

ITEM NUMBERS: 7-2056.00

PROJECT NUMBER: FD52 025 9000 000-006

CONSTRUCTION NUMBER: NHPP 0061 (063)

LETTING DATE: December 9, 2016

RECOMMENDED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Project Manager

PLAN APPROVED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
State Highway Engineer

FHWA APPROVED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

COUNTY OF	ITEM NO.
CLARK	7-2056.00



MATCHLINE  
(SEE SHEET 2)

SCALE: 1"=200'

**KY 9000-MT. PARKWAY  
STATIONING INFORMATION SHEETS  
(1 OF 14)**

I-64 WB  
I-64 EB

MATCHLINE  
(SEE SHEET 3)

COUNTY OF	ITEM NO.
CLARK	7-2056.00



MATCHLINE (SEE SHEET 1)

SCALE: 1"=200'

**KY 9000-MT. PARKWAY  
STATIONING INFORMATION SHEETS  
(2 OF 14)**

MATCHLINE (SEE SHEET 4)

COUNTY OF	ITEM NO.
CLARK	7-2056.00



RUMBLE STRIP  
(DO NOT DISTURB)

RUMBLE STRIP  
(DO NOT DISTURB)

RUMBLE STRIP  
(DO NOT DISTURB)

MILE  
1

SCALE: 1"=200'

**KY 9000-MT. PARKWAY  
STATIONING INFORMATION SHEETS  
(3 OF 14)**

MATCHLINE (SEE SHEET 2)

MATCHLINE (SEE SHEET 5)

COUNTY OF	ITEM NO.
CLARK	7-2056.00



95+00

90+00

PC 87+67.05

WB KY 9000

EB KY 9000

85+00

ECTON RD.  
M.P. 1.33

80+00

75+00

SCALE: 1"=200'

MATCHLINE (SEE SHEET 3)

**KY 9000-MT. PARKWAY  
STATIONING INFORMATION SHEETS  
(4 OF 14)**

MATCHLINE (SEE SHEET 6)

COUNTY OF	ITEM NO.
CLARK	7-2056.00



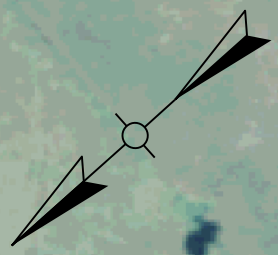
MATCHLINE (SEE SHEET 4)

SCALE: 1"=200'

**KY 9000-MT. PARKWAY  
STATIONING INFORMATION SHEETS  
(5 OF 14)**

MATCHLINE (SEE SHEET 7)

COUNTY OF	ITEM NO.
CLARK	7-2056.00



SCALE: 1"=200'

**KY 9000-MT. PARKWAY**  
**STATIONING INFORMATION SHEETS**  
**(6 OF 14)**

MATCHLINE (SEE SHEET 5)

MATCHLINE (SEE SHEET 8)

COUNTY OF	ITEM NO.
CLARK	7-2056.00



MATCHLINE  
(SEE SHEET 6)

SCALE: 1"=200'  
**KY 9000-MT. PARKWAY  
STATIONING INFORMATION SHEETS  
(7 OF 14)**

MATCHLINE (SEE SHEET 9)

COUNTY OF	ITEM NO.
CLARK	7-2056.00



SCALE: 1"=200'

**KY 9000-MT. PARKWAY  
STATIONING INFORMATION SHEETS  
(8 OF 14)**

MATCHLINE (SEE SHEET 7)

MATCHLINE (SEE SHEET 10)

COUNTY OF	ITEM NO.
CLARK	7-2056.00

OLD RAILROAD BED  
M.P. 3.67



SCALE: 1"=200'

**KY 9000-MT. PARKWAY  
STATIONING INFORMATION SHEETS  
(9 OF 14)**

MATCHLINE (SEE SHEET 8)

MATCHLINE (SEE SHEET 11)

COUNTY OF	ITEM NO.
CLARK	7-2056.00



SCALE: 1"=200'

**KY 9000-MT. PARKWAY  
STATIONING INFORMATION SHEETS  
(10 OF 14)**

MATCHLINE (SEE SHEET 9)

COUNTY OF	ITEM NO.
CLARK	7-2056.00

MATCHLINE (SEE SHEET 12)



OVERHEAD UTILITIES

WB KY 9000  
EB KY 9000

245+00

240+00

235+00

PT 230+93.24

230+00

SCALE: 1"=200'

**KY 9000-MT. PARKWAY  
STATIONING INFORMATION SHEETS  
(11 OF 14)**

MATCHLINE (SEE SHEET 10)

MATCHLINE (SEE SHEET 13)

COUNTY OF	ITEM NO.
CLARK	7-2056.00



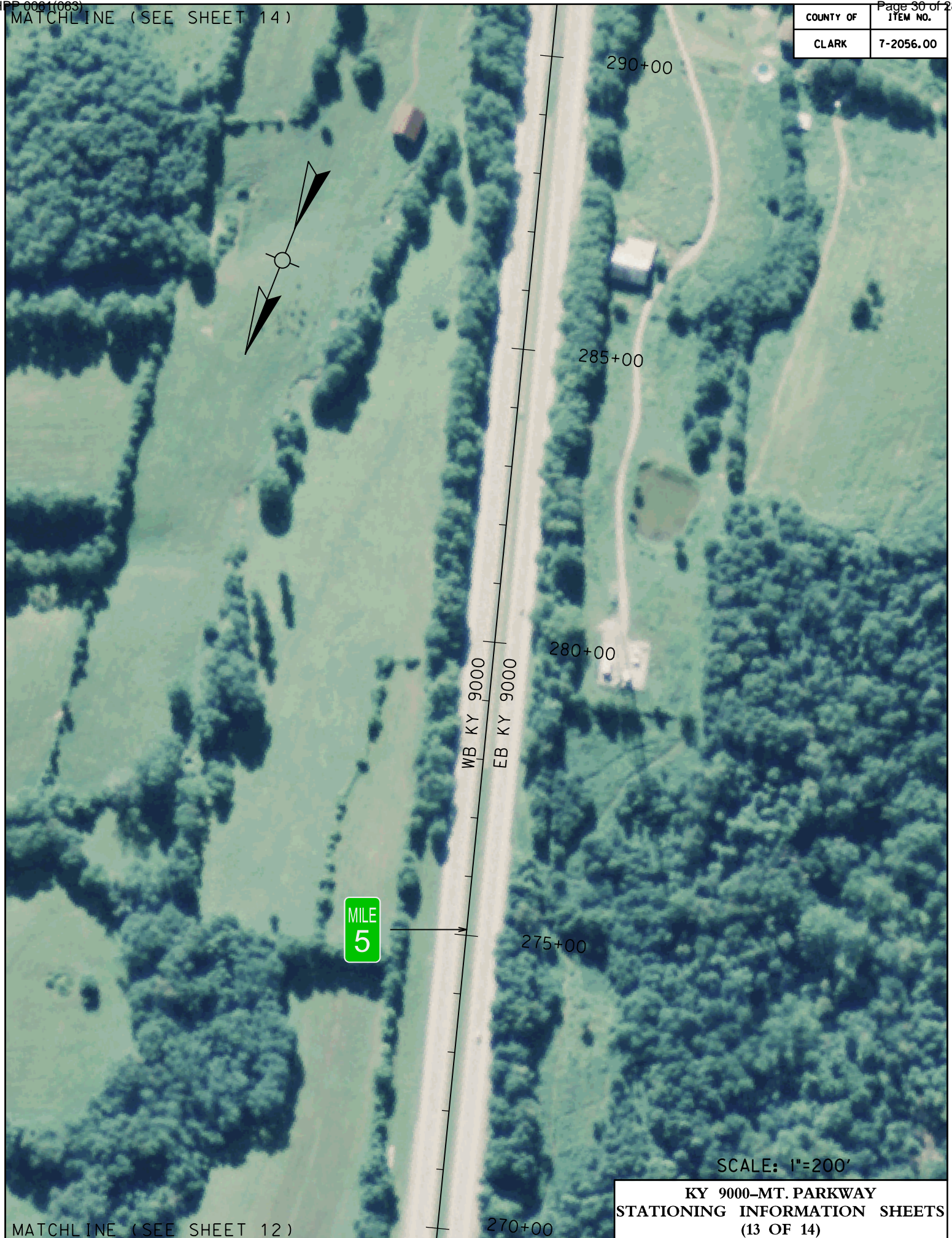
MATCHLINE  
(SEE SHEET 11)

SCALE: 1"=200'

**KY 9000-MT. PARKWAY  
STATIONING INFORMATION SHEETS  
(12 OF 14)**

MATCHLINE (SEE SHEET 14)

COUNTY OF	ITEM NO.
CLARK	7-2056.00



MATCHLINE (SEE SHEET 12)

SCALE: 1"=200'

**KY 9000-MT. PARKWAY  
STATIONING INFORMATION SHEETS  
(13 OF 14)**

COUNTY OF	ITEM NO.
CLARK	7-2056.00

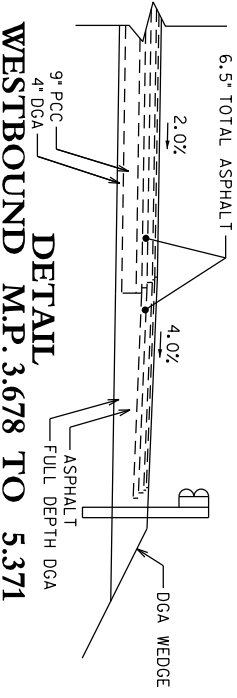
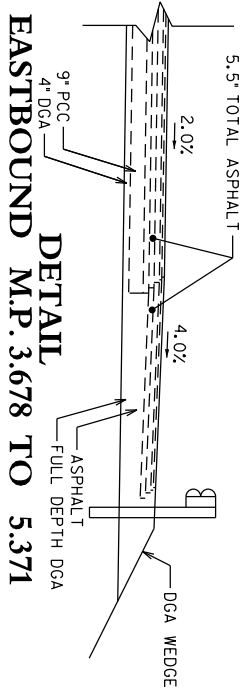
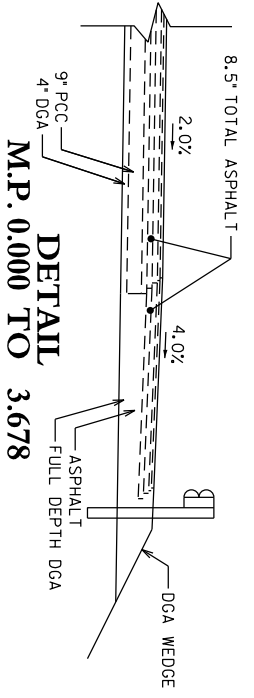
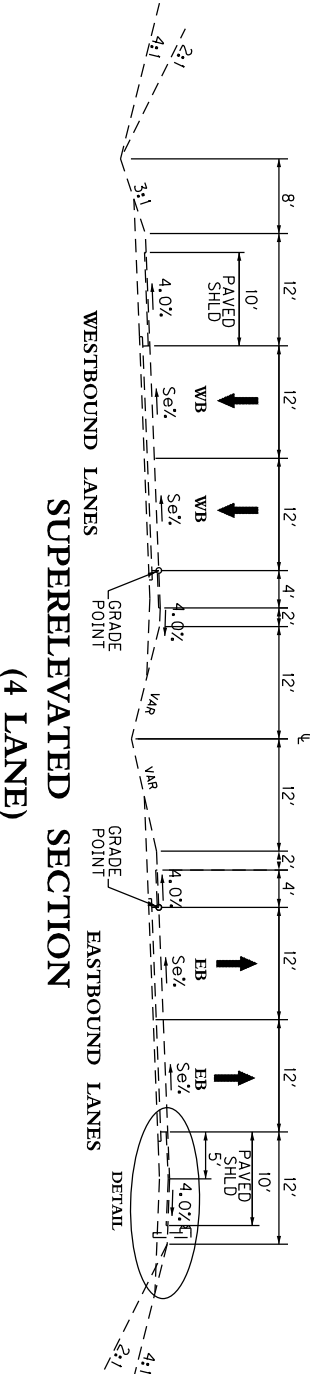
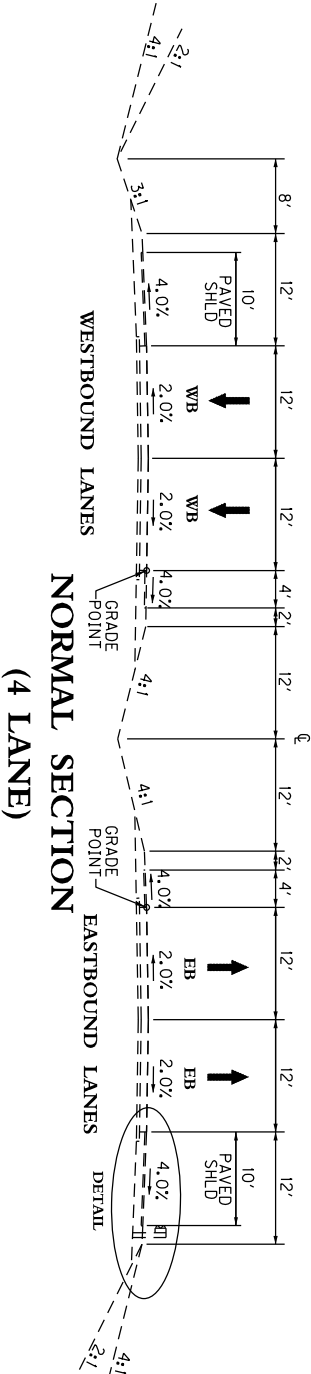


MATCHLINE (SEE SHEET 13)

SCALE: 1"=200'  
**KY 9000-MT. PARKWAY  
STATIONING INFORMATION SHEETS  
(14 OF 14)**

# EXISTING TYPICAL SECTIONS KY 9000 MOUNTAIN PARKWAY

COUNTY OF	ITEM NO.
CLARK	7-2056.00

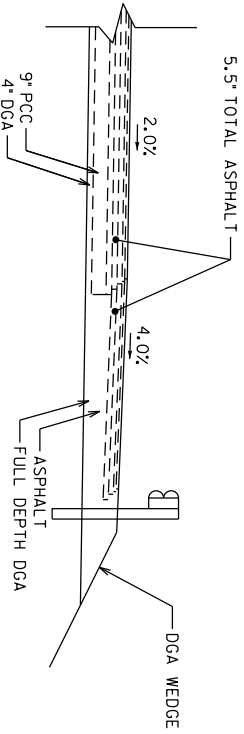
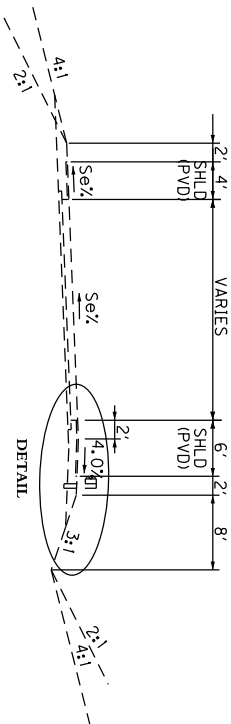
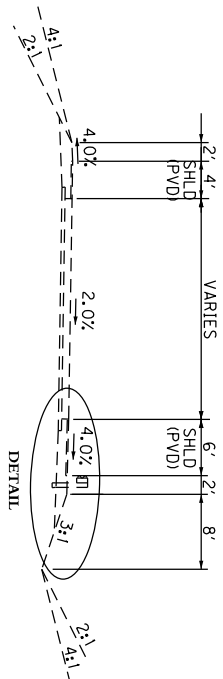


NOT TO SCALE

KY 9000  
MOUNTAIN PARKWAY  
EXISTING TYPICAL SECTIONS

# EXISTING TYPICAL SECTIONS RAMPS KY 9000 MOUNTAIN PARKWAY

COUNTY OF	ITEM NO.
CLARK	7-2056.00

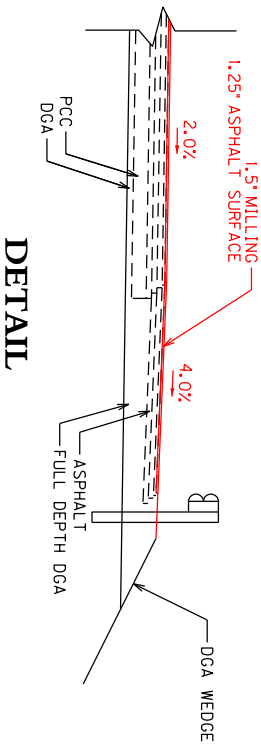
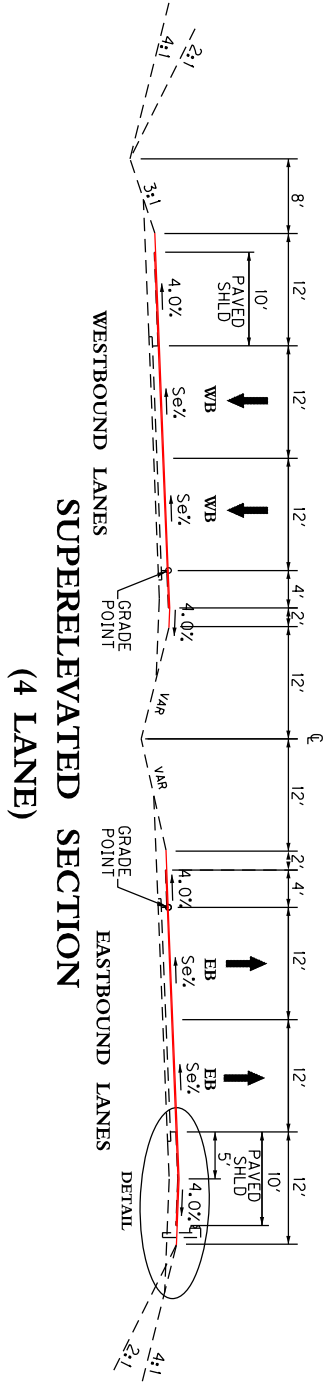
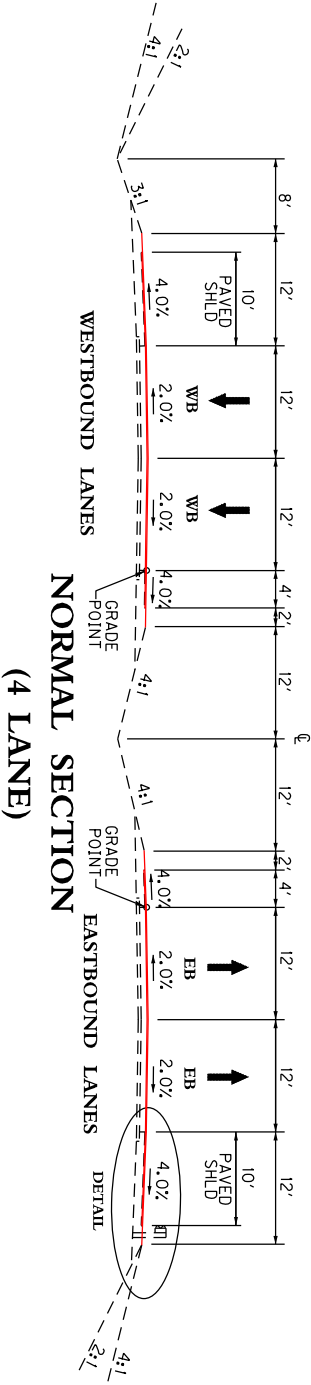


NOT TO SCALE

KY 9000  
MOUNTAIN PARKWAY  
EXISTING TYPICAL SECTIONS

# PROPOSED TYPICAL SECTIONS KY 9000 MOUNTAIN PARKWAY

COUNTY OF	ITEM NO.
CLARK	7-2056.00



PAVEMENT REHABILITATION

DRIVING LANES  
1.5" ASPHALT MILLING  
SURFACE --- 1.25" CL3 ASPHALT SURFACE 0.38A PG6-22

INSIDE & OUTSIDE SHOULDER  
1.5" ASPHALT MILLING  
SURFACE --- 1.25" CL2 ASPHALT SURFACE 0.38D PG6-22

ASPHALT SEAL  
2 APPLICATIONS:  
ASPHALT SEAL AGGREGATE - 20 LB/SY  
ASPHALT SEAL COAT - 2.4 LB/SY

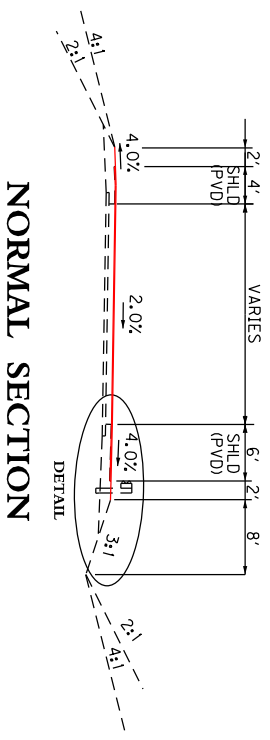
MILLINGS SHALL BE USED FOR THE SHOULDERING AND RESHAPING OF SHOULDERS

NOT TO SCALE

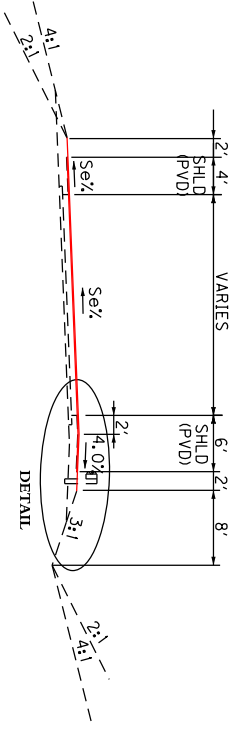
KY 9000  
MOUNTAIN PARKWAY  
PROPOSED TYPICAL SECTIONS

# PROPOSED TYPICAL SECTIONS RAMPS KY 9000 MOUNTAIN PARKWAY

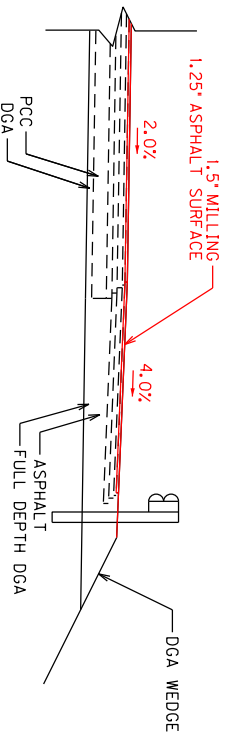
COUNTY OF	ITEM NO.
CLARK	7-2056.00



NORMAL SECTION



SUPERELEVATED SECTION



DETAIL

PAVEMENT REHABILITATION  
 DRIVING LANES & INSIDE SHOULDER  
 1.5" ASPHALT MILLING SURFACE --- 1.25" CL3 ASPHALT SURFACE 0.384 PG76-22  
 OUTSIDE SHOULDER  
 1.5" ASPHALT MILLING SURFACE --- 1.25" CL2 ASPHALT SURFACE 0.380 PG64-22

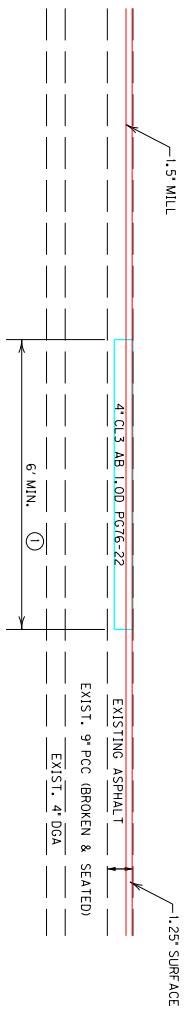
ASPHALT SEAL  
 2 APPLICATIONS:  
 ASPHALT SEAL AGGREGATE - 20 LB/SY  
 ASPHALT SEAL COAT - 2.4 LB/SY

MILLINGS SHALL BE USED FOR THE  
 SHOULDERING AND RESHAPING OF  
 SHOULDERS

NOT TO SCALE

KY 9000  
 MOUNTAIN PARKWAY  
 PROPOSED TYPICAL SECTIONS

# PAVEMENT REPAIR DETAIL KY 9000 MOUNTAIN PARKWAY



① APPROXIMATE LOCATIONS ARE NOTED IN THE PROPOSAL. SPECIFIC LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD. BEFORE REMOVAL OF THE EXISTING MATERIAL, SAW CUTS SHALL BE MADE ON EACH SIDE OF THE AREA TO BE REMOVED. THIS OPERATION SHALL BE PERFORMED ON THE SHOULDER AND DRIVING LANES WHERE DIRECTED.

AFTER ALL EXISTING MATERIAL HAS BEEN REMOVED THEN EACH COURSE OF BACKFILL MATERIAL SHALL BE COMPACTED TO THE PROPER DENSITY FOR THE MATERIAL BEING PLACED AS REQUIRED IN THE STANDARD SPECIFICATIONS.

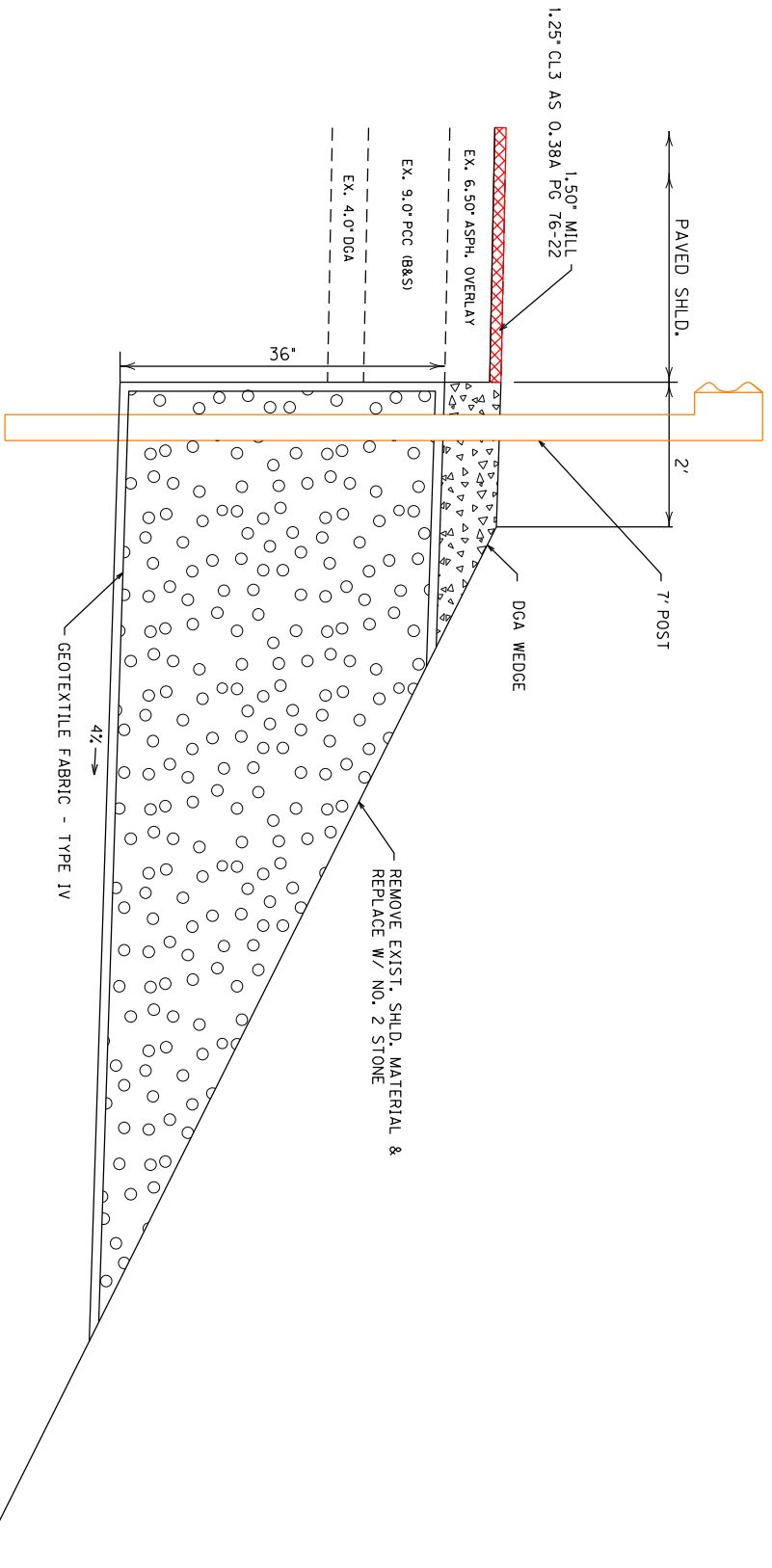
TRAFFIC SHALL BE ALLOWED TO TRAVEL ON REPAIRS FOR A MINIMUM OF 7 DAYS PRIOR TO MILLING AND RESURFACING.

THE CONTRACT UNIT BID PRICE PER SQ YD FOR PAVEMENT REPAIR SHALL INCLUDE ROADWAY EXCAVATION, REMOVING PAVEMENT, SAW CUTTING, ASPHALT BASE AND ALL INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION AS DETAILED.

COUNTY OF	ITEM NO.
CLARK	7-2056.00

KY 9000  
MOUNTAIN PARKWAY  
PAVEMENT REPAIR DETAIL

# SLOPE REPAIR DETAIL KY 9000 MOUNTAIN PARKWAY



SLOPE REPAIR NOTE :

SLOPE REPAIR INCLUDES REMOVING THE EXISTING SLOPE TO THE DEPTH SPECIFIED OR AS DIRECTED BY THE ENGINEER AND BACKFILLING WITH NO. 2 STONE. EXCAVATED MATERIAL MAY BE WASTED WITHIN THE RIGHT OF WAY IN AREAS DESIGNATED BY THE ENGINEER.

THE SLOPE REPAIR CONSTRUCTION IS TO BE DONE DURING PHASE I WHILE TRAFFIC IS SHIFTED TO THE INSIDE LANES.

EXCAVATION SHALL BE PAID FOR PER CU YD\*  
 \*CRUSHED AGGREGATE SIZE NO 2\* SHALL BE PAID PER \*TON\* AND ESTIMATED AT 100 LBS./SQ.YD./IN. OF DEPTH  
 \*DGA BASE\* SHALL BE PAID PER \*TON\*  
 \*GUARDRAIL\* SHALL BE PAID \*REMOVE GUARDRAIL\* PER LF AND \*GUARDRAIL-STEEL W BEAM-S FACE (7 FT POST)\* PER LF  
 \*GUARDRAIL-STEEL W BEAM-S FACE (7 FT POST)\* PER LF  
 \*GEOTEXTILE FABRIC - TYPE IV\* SHALL BE PAID FOR PER \*SOYD\*

## SLOPE REPAIR AREAS

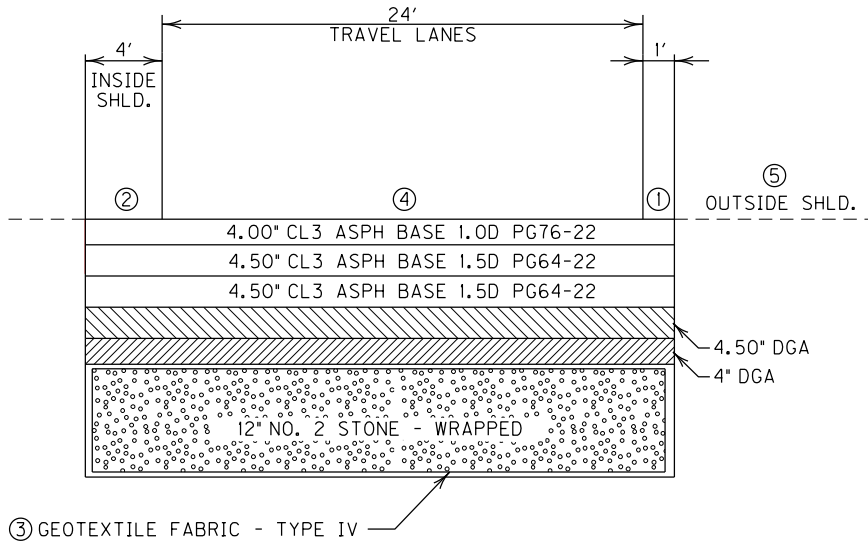
LOCATION	DGA BASE (TON)	CRUSHED AGGREGATE SIZE NO 2 (TON)	GEOTEXTILE FABRIC TYPE IV (SOYD)	REMOVE GUARDRAIL (LF)*	GUARDRAIL-STEEL W BEAM-S FACE (7 FT POST) (LF)*	ROADWAY EXCAVATION (CUYD)
WESTBOUND	4434	16339	2018	112.5	112.5	11697
TOTAL	4434	16339	2018	112.5	112.5	11697

\* (CARRIED OVER TO GUARDRAIL SUMMARY)  
 (ALL ITEMS SHOWN IN TABLE ABOVE HAVE BEEN CARRIED OVER TO GENERAL SUMMARY)

KY 9000  
MOUNTAIN PARKWAY  
SLOPE REPAIR DETAIL

COUNTY OF	ITEM NO.
CLARK	7-2056.00

COUNTY OF	ITEM NO.
CLARK	7-2056.00

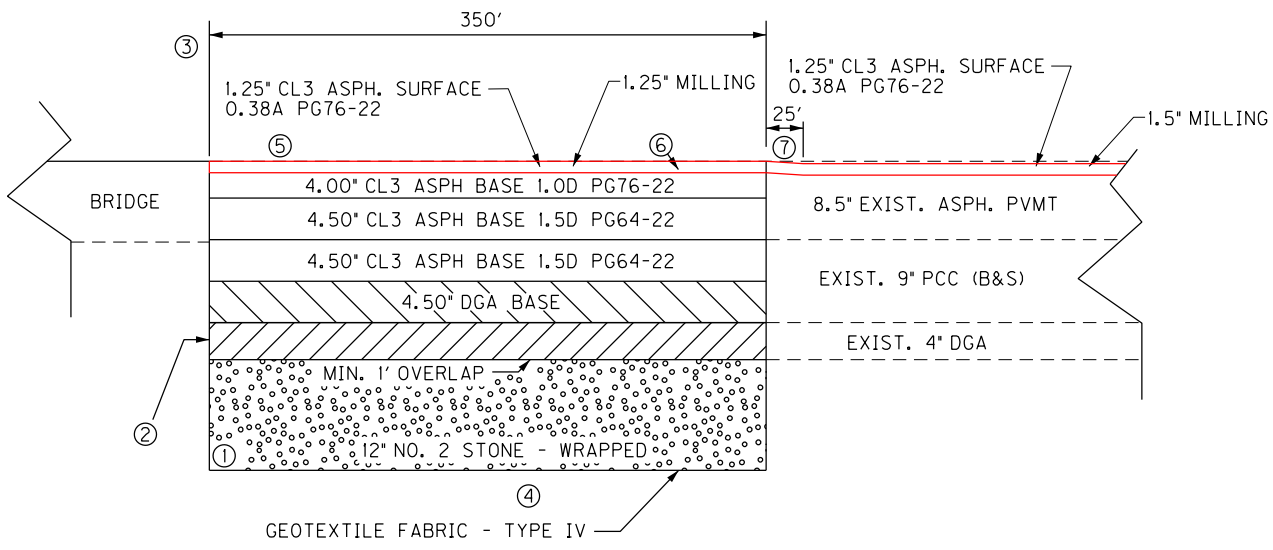


- ① CARRY THE MAINLINE BASE COURSES INTO THE OUTSIDE SHOULDER 1 FOOT.
- ② CARRY THE MAINLINE BASE COURSES THROUGH THE INSIDE SHOULDER.
- ③ GEOTEXTILE FABRIC TO BE WRAPPED ON ALL SIDES OF NO. 2 STONE.
- ④ TOP BASE COURSE WILL MATCH EXISTING SURFACE ELEVATION OF THE BRIDGE.
- ⑤ OUTSIDE SHOULDER TO RECEIVE 1.25" CL2 ASPH SURF. 0.38D PG64-22 OVERLAY.

**BRIDGE END DIGOUT TYPICAL SECTION  
MORRIS ROAD BRIDGE**

KY 9000  
MOUNTAIN PARKWAY  
BRIDGE END DIGOUT DETAIL

COUNTY OF	ITEM NO.
CLARK	7-2056.00

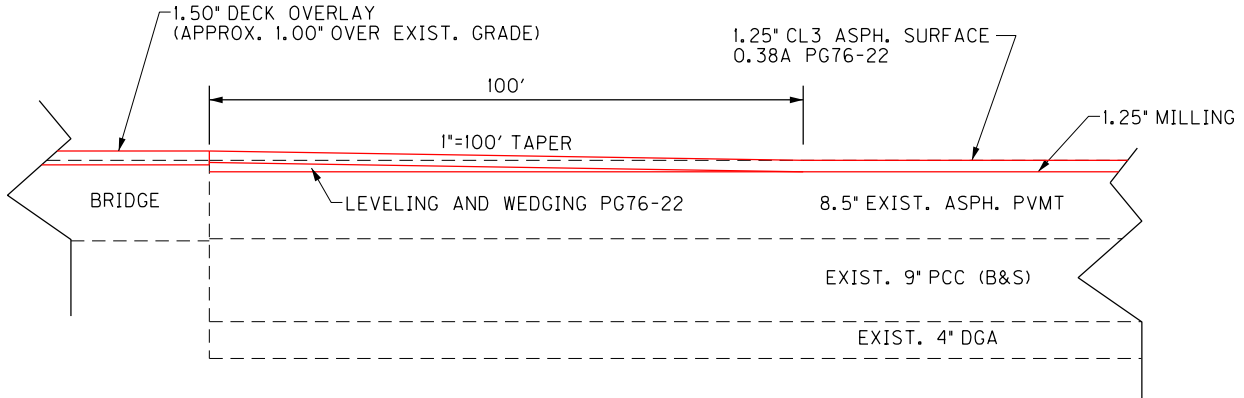


- ① INSTALL 6" PERFORATED PIPE AT LOW END OF DIGOUT.
- ② 4" DGA BASE FOR PAVING PLATFORM
- ③ DIGOUT WIDTH WILL BE MAINLINE PLUS 4' ON THE INSIDE SHOULDER AND 1' ON THE OUTSIDE SHOULDER. TOTAL WIDTH = 29' (SEE DETAIL)
- ④ ANY ADDITIONAL EXCAVATION FOR UNDERCUT WILL BE INCIDENTAL TO THE UNIT BID PRICE "CRUSHED AGGREGATE NO. 2"
- ⑤ TOP BASE COURSE WILL MATCH END OF EXISTING BRIDGE DECK INITIALLY. FINAL SURFACE COURSE TO MATCH EXISTING BRIDGE DECK.
- ⑥ MILL THE TOP LIFT OF ASPHALT BASE FOR A LENGTH OF 350' TO RECEIVE FINAL SURFACE COURSE.
- ⑦ TAPER FROM 1.5" MILLING DEPTH TO 1.25" MILLING DEPTH 350' FROM THE ENDS OF ALL MAINLINE BRIDGES.

**BRIDGE END DIGOUT WITH PAVEMENT TAPER  
MORRIS ROAD BRIDGE**

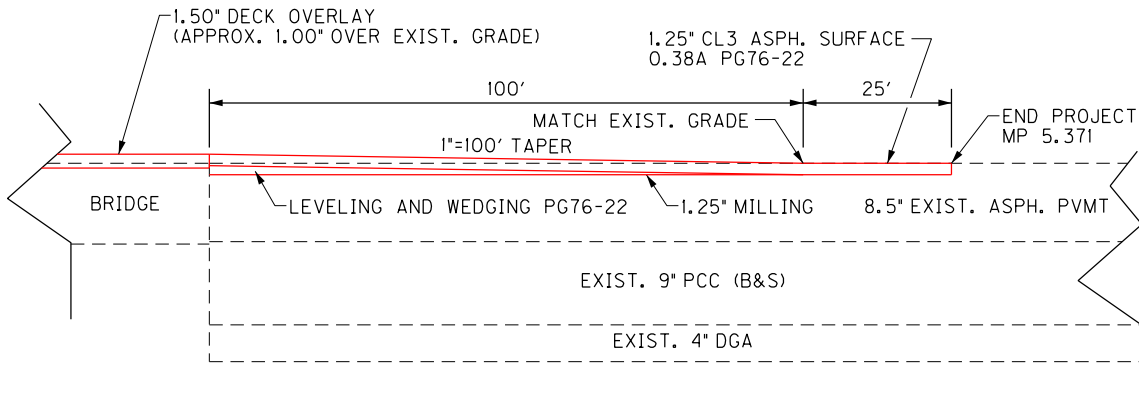
KY 9000  
MOUNTAIN PARKWAY  
BRIDGE END DIGOUT DETAIL

COUNTY OF	ITEM NO.
CLARK	7-2056.00



**TAPERING AT PROPOSED BRIDGE OVERLAYS**

- BOTH BRIDGES OVER OLD R.R. BED
- WEST END OF BOTH BRIDGES OVER STONER-EPHESUS RD.



**TAPERING OF OVERLAY AT PROJECT END**

- AT EAST END OF BOTH BRIDGES OVER STONER-EPHESUS RD.

**PAVEMENT REHABILITATION SUMMARY**  
**KY 9000 CLARK COUNTY**  
**MILEPOST EASTBOUND 0.044 TO 5.371**  
**MILEPOST WESTBOUND 0.022 TO 5.371**  
**ITEM NUMBER 7-2056.00**

ITEM NUMBER	ITEM	QUANTITY	UNIT
1	DGA BASE (1)	6699	TON
78	CRUSHED AGGREGATE SIZE NO 2 (2)	18911	TON
100	ASPHALT SEAL AGGREGATE	464	TON
103	ASPHALT SEAL COAT	57	TON
194	LEVELING AND WEDGING PG76-22 (3)	1000	TON
205	CL3 ASPH BASE 1.50D PG64-22	2233	TON
216	CL3 ASPH BASE 1.00D PG76-22	1592	TON
301	CL2 ASPH SURF 0.38D PG64-22	4063	TON
336	CL3 ASPH SURF 0.38A PG76-22	11581	TON
461	CULVERT PIPE- 15 IN	4	LF
462	CULVERT PIPE- 18 IN	62	LF
1001	PERFORATED PIPE - 6 IN	120	LF
1011	NON-PERFORATED PIPE - 6 IN	80	LF
1021	PERF PIPE HEADWALL TY 1-6 IN	8	EACH
1202	PIPE CULVERT HEADWALL-15 IN	1	EACH
1204	PIPE CULVERT HEADWALL-18 IN	2	EACH
1371	METAL END SECTION TYPE 1-18 IN	2	EACH
1456	CURB BOX INLET TYPE A	3	EACH
1480	CURB BOX INLET TYPE B	1	EACH
1982	DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL- WHITE	25	EACH
1983	DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL- YELLOW	15	EACH
1984	DELINEATOR FOR BARRIER - WHITE	15	EACH
1985	DELINEATOR FOR BARRIER - YELLOW	15	EACH
2003	RELOCATE TEMP CONC BARRIER	3080	LF
2200	ROADWAY EXCAVATION (4)	14400	CUYD
2220	FLOWABLE FILL	11	CUYD
2223	GRANULAR EMBANKMENT	10	CUYD
2237	DITCHING (5)	25951	LF
2262	FENCE - WOVEN WIRE TYPE 1	54634	LF
2265	REMOVE FENCE	54634	LF
2352	GUARDRAIL STEELW BEAM-D FACE	275.0	LF
2360	TERMINAL SECTION NO. 1	2	EACH
2363	GUARDRAIL CONNECTOR TO BRIDGE END TYPE A	4	EACH
2365	CRASH CUSHION TYPE IX-A	3	EACH
2367	GUARDRAIL END TREATMENT TYPE 1	1	EACH
2369	GUARDRAIL END TREATMENT TYPE 2A	5	EACH
2373	GUARDRAIL END TREATMENT TYPE 3	1	EACH
2381	REMOVE GUARDRAIL	487.5	LF
2383	REMOVE & RESET GUARDRAIL	2400.0	LF
2387	GUARDRAIL CONNECTOR TO BRIDGE END TYPE A-1	4	EACH
2483	CHANNEL LINING CLASS II (6)	80	TON
2484	CHANNEL LINING CLASS III (6)	25	TON
2562	TEMPORARY SIGNS (7)	1000	SQFT
2568	MOBILIZATION	1	LS
2569	DEMobilIZATION	1	LS
2599	FABRIC-GEOTEXTILE TYPE IV (15)	2029	SQYD
2650	MAINTAIN AND CONTROL TRAFFIC	1	LS
2671	PORTABLE CHANGEABLE MESSAGE SIGN (8)	4	EACH
2676	MOBILIZATION FOR MILLING & TEXTURING	1	LS
2677	ASPHALT PAVE MILLING & TEXTURING	18426	TON
2696	SHOULDER RUMBLE STRIPS-SAWED	109769	LF
2714	SHOULDERING	16366	LF
2775	ARROW PANEL (8)	4	EACH
3262	CLEAN PIPE STRUCTURE	2	EACH
5950	EROSION CONTROL BLANKET (9)	1735	SQYD
6401	FLEXIBLE DELINEATOR POST-M/W	295	EACH
6404	FLEXIBLE DELINEATOR POST-M/Y	129	EACH
6412	STEEL POST MILE MARKERS (10)	10	EACH
6511	PAVEMENT STRIPING-TEMP PAINT -6 IN	108204	LF
6549	PAVE STRIPING-TEMP REM TAPE-B	5000	LF
6551	PAVE STRIPING-TEMP REM TAPE-Y	5000	LF
6556	PAVE STRIPING-DUR TY 1-6 IN W	1477	LF
6557	PAVE STRIPING-DUR TY 1-6 IN Y	1251	LF
6569	PAVE MARKING-THERMO CROSS-HATCH	2488	SQFT
8100	CLASS A CONCRETE (11)	10	CUYD
8903	CRASH CUSHION TY VI CLASS BT TL3 (8)	6	EACH
10020NS	FUEL ADJUSTMENT	31861	DOLL
10030NS	ASPHALT ADJUSTMENT	80025	DOLL
20071EC	JOINT ADHESIVE	107506	LF
20366NN	REPLACE GRATE	5	EACH
20432ES112	REMOVE CRASH CUSHION	3	EACH
20471ES509	TEMP CONC MED BARRIER (14)	3080	LF

**PAVEMENT REHABILITATION SUMMARY**  
**KY 9000 CLARK COUNTY**  
**MILEPOST EASTBOUND 0.044 TO 5.371**  
**MILEPOST WESTBOUND 0.022 TO 5.371**  
**ITEM NUMBER 7-2056.00**

ITEM NUMBER	ITEM	QUANTITY	UNIT
20757ED	PAVEMENT REPAIR (12)	421	SQYD
21533EN	EMBANKMENT (13)	25	CUYD
21802EN	GUARDRAIL-STEEL W BEAM-S FACE (7 FT POST)	862.5	LF
23143ED	K.P.D.E.S. PERMIT AND TEMP EROSION CONTROL	1	LS
24189ER	DURABLE WATERBORNE MARKING-6 IN W	66330	LF
24190ER	DURABLE WATERBORNE MARKING-6 IN Y	53732	LF
24781EC	INTELLIGENT COMPACTION FOR ASPHALT	20469	TON
24489EC	INLAID PAVEMENT MARKER	624	EACH

- (1) 10 tons carried over from the pipe summary and 50 tons for guardrail end treatment replacement, 4434 tons for slope repair, and 2205 for bridge end digouts and to be directed by the Engineer.
- (2) Includes 2572 tons for bridge end digouts and 16,339 tons for slope repair.
- (3) To be used as directed by the Engineer.
- (4) Estimated at 2700 cubic yards for bridge end digout and 11,700 cubic yards for slope repair.
- (5) Ditching is intended for repair of the eroded areas in the median, pipe outlet ditches, and cleaning of drainage structures. Any embankment required is incidental to ditching.
- (6) Geotextile Fabric Type 1 to be placed under Aggregate Channel Lining is considered incidental to the lining
- (7) Intended for temporary traffic control signs and includes initial placement only. Any relocation of these temporary signs required will not be paid for directly but will be considered incidental.
- (8) The quantity for these items includes the maximum in place at any one time. Any relocation required will not be paid for directly but will be considered incidental.
- (9) To be used as directed by the Engineer and 1235 sqyd for slope repair.
- (10) Replace mile post markers at M.P. 1, 2, 3, 4 and 5 in both directions.
- (11) To be used as directed by the Engineer for drainage structure repair.
- (12) To be used as directed by the Engineer for pavement repair (see detail)
- (13) Quantity to be used as directed by the Engineer. Contrary to the Standard Specifications, payment will be based on measured quantity **NOT** plan quantity.
- (14) Temporary barrier wall to be used for mainline bridge deck work and bridge end digouts at Morris Road. Temporary barrier shall be concrete. **NO ALTERNATES**
- (15) Includes 11 square yards carried over from the pipe drainage summary and 2018 square yards for slope repair.

NOTE: Quantities from all roadway summary sheets have been carried over and included in this General Summary

**PAVEMENT SUMMARY  
KY 9000 CLARK COUNTY  
MILEPOST EASTBOUND 0.044 TO 5.371  
MILEPOST WESTBOUND 0.022 TO MP 5.371  
ITEM NUMBER 7-2056.00  
PAVING AREAS**

ITEM	TOTAL
<b>MAINLINE</b>	SQYD
SURFACE DRIVING LANES AND INSIDE SHOULDERS 1.25" CL3 ASPH SURF 0.38A PG76-22	159761
SURFACE OUTSIDE SHOULDERS 1.25" CL2 ASPH SURF 0.38D PG64-22	57057
<b>RAMPS</b>	SQYD
<b>I-64 - RAMP A (WB EXIT)</b>	
SURFACE DRIVING LANES AND INSIDE SHOULDERS 1.25" CL3 ASPH SURF 0.38A PG76-22	4901
SURFACE OUTSIDE SHOULDERS 1.25" CL2 ASPH SURF 0.38D PG64-22	1426
<b>I-64 - RAMP B (EB ENTRANCE)</b>	SQYD
SURFACE DRIVING LANES AND INSIDE SHOULDERS 1.25" CL3 ASPH SURF 0.38A PG76-22	2231
SURFACE OUTSIDE SHOULDERS 1.25" CL2 ASPH SURF 0.38D PG64-22	614
<b>BRIDGE END DIGOUT AT MORRIS ROAD BRIDGE</b>	SQYD
12.0" CRUSHED AGGREGATE SIZE NO 2	4512
8.5" DGA BASE	4512
4.50" CL3 ASPH BASE 1.50D PG64-22	4512
4.50" CL3 ASPH BASE 1.50D PG64-22	4512
4.00" CL3 ASPH BASE 1.00D PG76-22	4512
<b>TEMP PVMT (INSIDE SHOULDERS AT MAINLINE BRIDGE ENDS, EXCEPT MORRIS RD)</b>	SQYD
1.25" CL3 ASPH SURF 0.38A PG76-22	1556
3.50" CL3 ASPH BASE 1.00D PG76-22	1556
3.50" CL3 ASPH BASE 1.00D PG76-22	1556
<b>ASPHALT PAVE MILLING &amp; TEXTURING</b>	SQYD
MAINLINE TOTAL AT BRIDGE ENDS (1.25")	15833
MAINLINE TOTAL (1.5")	200985
RAMP TOTAL (1.5")	9172
PROJECT TOTAL (1.5")	210157

**PAVING SUMMARY**

CODE	ITEM	UNITS	TOTAL
1	DGA BASE	TON	2205
78	CRUSHED AGGREGATE SIZE NO 2	TON	2572
100	ASPHALT SEAL AGGREGATE	(1) TON	464
103	ASPHALT SEAL COAT	(2) TON	57
205	CL3 ASPH BASE 1.50D PG64-22	TON	2233
216	CL3 ASPH BASE 1.00D PG76-22	TON	1592
301	CL2 ASPH SURF 0.38D PG 64-22	TON	4063
336	CL3 ASPH SURF 0.38A PG76-22	TON	11581
2677	ASPHALT PAVE MILLING & TEXTURING	TON	18426

**NOTES**

ALL ASPHALT MIXTURES ESTIMATED AT 110 LBS. PER SQ. YD. PER INCH OF DEPTH

(1) TWO APPLICATIONS AT 20 LB/SY

(2) TWO APPLICATIONS AT 2.4 LB/SY

QUANTITIES HAVE BEEN CARRIED OVER AND INCLUDED IN THE GENERAL SUMMARY

LOCATION	SIDE	BEGIN MILE POST	END MILE POST	EXISTING TYPE (1)	CLEAN INLET/OUTLET (2)	GROFF HEADWALL (2)	DGA	CULVERT PIPE-15 IN (3)	CULVERT PIPE-18 IN (3)	CULVERT PIPE-18 IN (3)	PIPE CLEARHT HEADWALL-15 IN (3)	PIPE CLEARHT HEADWALL-18 IN (3)	METAL END SECTIONTY 1-18 IN (3)	CURB BOX INLET TYPE A (3)	CURB BOX INLET TYPE B (3)	FLOWABLE FILL (4)	EMBANKMENT (5)	CHANNEL LINING CL II (3)	FABRIC - GEOTEXTILE TYPE IV (5)	CLEAN PIPE STRUCTURE	REPLACE GRATE	COMMENTS
Item Number																						
EASTBOUND																						
KY 9000	RT	1.02	1.02	HEADWALL		1																
KY 9000	RT	2.54	2.54	HEADWALL																		
KY 9000	RT	2.58	2.58	CURB BOX																		
KY 9000	RT	2.58	2.58	CURB BOX																		
KY 9000	RT	2.60	2.60	HEADWALL																		
KY 9000	MED	2.98	2.98	DBI																		
KY 9000	RT	3.04	3.04	HEADWALL																		
KY 9000	RT	3.29	3.29	PAVED DITCH																		
KY 9000	RT	3.78	3.78	WASHOUT																		
KY 9000	MED	4.30	4.30	DBI																		
KY 9000	MED	4.43	4.43	DBI																		
KY 9000	MED	4.54	4.54	DBI																		
KY 9000	MED	4.83	4.83	PIPE																		
KY 9000	RT	5.02	5.02	HEADWALL																		
KY 9000	MED	5.02	5.02	DBI																		
KY 9000	RT	5.27	5.27	HEADWALL																		
EASTBOUND TOTAL					0	1	0	0	12	0	1	1	2	2	0	9	0	15	0	2	0	
WESTBOUND																						
KY 9000	LT	0.39	0.39	HEADWALL																		
KY 9000	LT	0.39	0.39	HEADWALL																		
KY 9000	LT	0.51	0.51	HEADWALL																		
KY 9000	LT	1.76	1.76	SINKHOLE																		
KY 9000	LT	1.79	1.79	HEADWALL																		
KY 9000	LT	1.89	1.89	SINKHOLE																		
KY 9000	LT	1.99	1.99	WASHOUT																		
KY 9000	LT	2.28	2.28	PIPE																		
KY 9000	LT	2.39	2.39	HEADWALL																		
KY 9000	LT	2.45	2.45	WASHOUT																		
KY 9000	MED	2.58	2.58	CURB BOX																		
KY 9000	LT	3.86	3.86	EROSION																		
KY 9000	LT	4.75	4.75	HEADWALL																		
KY 9000	LT	4.88	4.88	PAVED DITCH																		
KY 9000	LT	5.08	5.08	PAVED DITCH																		
WESTBOUND TOTAL					2	0	10	4	0	1	0	0	0	1	0	2	10	14	11	0	5	
RAMPS																						
RAMP A	LT	17.58	17.58	DITCH																		
RAMP A	LT	17.61	17.61	HEADWALL																		
RAMP B	LT	8.74	9.28	PAVED DITCH																		
RAMPS TOTAL					0	0	0	0	0	1	0	1	0	0	1	0	0	51	0	0	0	
PROJECT TOTAL					2	1	10	4	12	1	2	2	2	3	1	11	10	80	11	2	5	

(1) - EXISTING STRUCTURES NEED TO BE VERIFIED IN THE FIELD.  
 (2) - INCIDENTAL TO BID ITEM "DITCHING".  
 (3) - REMOVAL OF PIPE, STRUCTURE, PAVED DITCH AND/OR CURB IS CONSIDERED INCIDENTAL TO CONSTRUCTION OF NEW BID ITEM  
 (4) - TO BE USED TO FILL EROSION AROUND DRAINAGE STRUCTURE  
 (5) - QUANTITIES TO BE USED FOR TREATMENT OF SINKHOLE AS FIELD VERIFIED AND DIRECTED BY THE ENGINEER.  
 Note: Quantities have been carried over and included in the general summary.

**KY 9000 MOUNTAIN PARKWAY  
PAVEMENT REHABILITATION  
MILEPOST EASTBOUND 0.044 TO 5.371  
MILEPOST WESTBOUND 0.022 TO 5.371  
ITEM NO. 7-2056.00  
PAVEMENT REPAIR LOCATIONS**

BEGIN MILEPOST	END MILEPOST	LANE	WIDTH OF REPLACEMENT (FT)	LENGTH OF REPLACEMENT (FT)	MINOR REPAIR (SQ YD)	
<b>WESTBOUND LANES</b>						
0.91	0.91	INSIDE	12	10	13	
1.06	1.06	OUTSIDE	12	10	13	
1.07	1.07	INSIDE	12	10	13	
1.23	1.23	INSIDE	12	10	13	
1.24	1.24	OUTSIDE	12	10	13	
1.36	1.36	OUTSIDE	12	10	13	
1.37	1.37	INSIDE	12	10	13	
1.44	1.44	INSIDE	12	10	13	
1.67	1.67	BOTH	24	10	27	
1.68	1.68	OUTSIDE	12	10	13	
2.10	2.10	INSIDE	12	10	13	
2.28	2.28	INSIDE	12	10	13	
2.29	2.29	OUTSIDE	12	10	13	
3.29	3.29	INSIDE	12	10	13	
<b>EASTBOUND LANES</b>						
0.60	0.60	BOTH	24	10	27	
0.86	0.60	BOTH	24	10	27	
1.04	1.04	INSIDE	12	10	13	
1.64	1.64	INSIDE	12	10	13	
1.66	1.66	INSIDE	12	10	13	
1.88	1.88	BOTH	24	10	27	
2.29	2.29	INSIDE	12	10	13	
2.42	2.42	INSIDE	12	10	13	
2.75	2.75	INSIDE	12	10	13	
2.94	2.94	OUTSIDE	12	10	13	
2.96	2.96	INSIDE	12	10	13	
3.14	3.14	BOTH	24	10	27	
3.30	3.30	INSIDE	12	10	13	
<b>TOTAL WESTBOUND MINOR REPAIR (SQ. YD.)</b>					<b>196</b>	
<b>TOTAL EASTBOUND MINOR REPAIR (SQ. YD.)</b>					<b>225</b>	
<b>TOTAL MINOR REPAIR (SQ. YD.)</b>					<b>421</b>	

QUANTITIES HAVE BEEN CARRIED OVER AND INCLUDED IN GENERAL SUMMARY

GUARDRAIL SUMMARY																	
KY 9000 - MOUNTAIN PARKWAY - CLARK COUNTY																	
MILEPOST EASTBOUND 0.044 TO MP 5.371																	
MILEPOST WESTBOUND 0.022 TO MP 5.371																	
ITEM NUMBER 7-2056.00																	
LOCATION	SIDE	BEGIN MP	END MP	GUARDRAIL STEEL W BEAM-S FACE (7 FT POST)	GUARDRAIL STEEL W BEAM-D FACE	TERMINAL SECTION NO. 1	EACH			LF			COMMENTS				
							CRASH CUSHION TYPE IX-A	GUARDRAIL END TREATMENT TYPE 1	GUARDRAIL END TREATMENT TYPE 2A	GUARDRAIL END TREATMENT TYPE 3	REMOVE GUARDRAIL	REMOVE & RESET GUARDRAIL		GUARDRAIL CONNECTOR TO BRIDGE END TYPE A	GUARDRAIL CONNECTOR TO BRIDGE END TYPE A-1	REMOVE CRASH CUSHION	
Units				LF		EACH		LF		EACH							
Item Number				2180ZEN		2460		2467		2469		2473		2487		20432E5112	
Eastbound																	
KY 9000	RT	2.43	2.55														
KY 9000	MED	2.50	2.55	100.0	137.5	1											Reset guardrail for bridge end digout
KY 9000	RT	2.52	2.63														Reset guardrail for bridge end digout
KY 9000	MED	2.58	2.59	50.0													Add guardrail
KY 9000	MED	3.70	3.71	50.0													Add guardrail
KY 9000	RT	4.01	4.04	162.5													Replace with Type 3
KY 9000	RT	5.23	5.26	137.5													Replace existing Type 3 with Type 1
KY 9000	MED	5.32	5.32														1
Westbound																	
KY 9000	LT	1.32	1.33	75.0													Extend 75 feet
KY 9000	LT	2.50	2.61														Reset guardrail for bridge end digout
KY 9000	LT	2.58	2.69														Reset guardrail for bridge end digout
KY 9000	MED	2.58	2.63	100.0	137.5	1											1
KY 9000	LT	4.39	4.41	112.5													For slope repair location
KY 9000	LT	4.84	4.93														Replace damaged end treatment
Ramps																	
RAMP A	RT	19+23	20+23	75.0													Reduce length to 100 ft past bridge
				862.5	275.0	2	1	5	1	487.5	2400.0	4.0	4.0	3.0	<b>PROJECT TOTAL</b>		

Quantities have been carried over and included in the general summary.

**KY 9000 MOUNTAIN PARKWAY, CLARK COUNTY  
MILEPOST EASTBOUND 0.044 TO 5.371  
MILEPOST WESTBOUND 0.022 TO 5.371  
NHPP 0061 (063)  
FD52 025 9000 000-006  
Item No. 7-2056.00**

**THIS PROJECT IS A FULLY  
CONTROLLED ACCESS HIGHWAY**

**I. DESCRIPTION**

Perform all work in accordance with the *Kentucky Transportation Cabinet, Department of Highways, Standard Specifications for Road and Bridge Construction, Edition of 2012*, Supplemental Specifications, any applicable Special Provisions, and applicable Standard and Sepia Drawings, except as hereafter specified. Article references are to the Standard Specifications. Furnish all materials, labor, equipment, and incidentals for the following work:

(1) Maintain and Control Traffic; (2) Remove and reset or replace Guardrail and Guardrail End treatments at the locations listed and/or as directed by the Engineer; (3) Inlaid Pavement Markers; (4) Asphalt Pavement Milling and Texturing; (5) Asphalt Surface and Asphalt Base at locations listed and/or as directed by the Engineer; and (6) All other work specified as part of this contract.

**II. MATERIALS**

Except as specified in these notes or on the drawings, all materials will be according to the Standard Specifications and applicable Special Provisions and Special Notes. The Department will sample and test all materials according to Department's Sampling Manual and the Contractor will have the 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.

- A. **Maintain and Control Traffic.** See Traffic Control Plan.
- B. **Dense Graded Aggregate.** Crushed Stone Base may not be furnished in lieu of DGA.
- C. **Pavement Markings -6 inch Paint.** Use Durable Waterborne Marking 6-inch
- D. **Channel Lining Class II & III.** Channel lining will be limestone and is to be placed at pipe outlets with significant erosion and in ditch repair locations as

directed by the Engineer.

- E. **Erosion Control Blanket.** Erosion control blanket is to be placed in all ditching areas when ditching is complete, on slope stabilization areas, or as directed by the Engineer. Use Seed Mixture No. 1

### III. CONSTRUCTION METHODS

- A. **Maintain and Control Traffic.** See Traffic Control Plan.
- B. **Site Preparation.** Be responsible for all site preparation. Do not disturb existing signs. This item will include, but is not limited to, incidental excavation and backfilling; removal of all obstructions or any other items; disposal of materials; sweeping and removal of debris; shoulder preparation and restoration, temporary and permanent erosion and pollution control; and all incidentals. Site preparation will be only as approved or directed by the Engineer. Other than the bid items listed, no direct payment will be made for site preparation, but will be incidental to the other items of work.
- C. **Disposal of Waste.** Dispose of all cuttings, debris, and other waste off the right-of-way at approved sites obtained by the Contractor at no additional cost to the Department. The contractor will be responsible for obtaining any necessary permits for this work. Temporary openings in the right of way fence for direct access to waste sites off the right of way or for access to other public roads will not be allowed. No separate payment will be made for the disposal of waste and debris from the project or obtaining the necessary permits, but will be incidental to the other items of the work.
- D. **Final Dressing, Clean Up, and Seeding and Protection.** After all work is completed, completely remove all debris from the job site. Perform Class A Final Dressing on all disturbed areas. Sow disturbed earthen areas with Seed Mixture No. 1. These items are incidental to other items in the contract.
- E. **Guardrail.** Remove and replace guardrail and guardrail End Treatments listed in the Guardrail Summary or as directed by the Engineer. Guardrail, End Treatments and Terminal Sections are listed by mile points and quantities are approximate only. Actual locations will be determined by the Engineer at the time of construction. Grade and reshape shoulders to proper template for new End Treatment. Utilize DGA for embankment when required for new end treatments. Remove any existing guardrail with a lane closure in place.

Do not leave the area unprotected. After the guardrail is removed, a shoulder closure shall remain in place until the guardrail is replaced in that area. To minimize safety hazards, guardrail removal is to be performed at the latest practical time prior to initiating the paving operation in an area and re-installation is to begin within 5 calendar days from the time that the final base course is completed and shall be pursued until completion. If guardrail installation is not started within 5 calendar days after paving operations ends, Liquidated Damages will be charged as outlined in Section

108 of the 2012 Standard Specifications.

The Contractor shall deliver existing salvaged guardrail system materials to the Central Sign Shop and Recycle Center in Frankfort, KY (502-564-8187) between the hours of 8:00AM and 3:00PM, Monday through Friday and shall be neatly stacked in accordance with section 719.03.07 of the standard specifications. There is a guardrail delivery verification sheet which must be completed. The Contractor, engineer, and Central Sign/Guardrail Center representative must all sign off on this sheet before payment may be made.

- F. **Pavement Striping and Pavement Markers.** Permanent striping will be in accordance with Section 112 and Section 713, except that:
- (1). Striping will be 6" in width,
  - (2). Permanent striping will be in place before a lane is opened to traffic; and
  - (3). Permanent striping will be 6" Durable Waterborne Marking Permanent Paint.
- G. **On-Site Inspection.** Each Contractor submitting a bid for this work will make a thorough inspection of the site prior to submitting a bid and will thoroughly familiarize himself 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. Any claims resulting from site conditions will not be honored by the Department.
- H. **Caution:** Information shown on the drawings 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 conclusions 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 above.
- I. **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.

#### IV. METHOD OF MEASUREMENT

- A. **Maintain and Control Traffic.** See Traffic Control Plan.
- B. **Site Preparation.** Other than the bid items listed, site preparation will not be measured for payment, but will be incidental to the other items of work.
- C. **Dense Graded Aggregate.** DGA will be used for guardrail end treatments and slope repair.

- D. **Inlaid Pavement Markers and Permanent Striping.** Permanent striping Durable Waterborne Marking (6") is measured per linear foot. See Traffic Control Plan. Inlaid Pavement Markers are measured as each.
- E. **Erosion Control.** Erosion control items not listed as bid items will not be measured for payment, but will be considered incidental to the "lump sum" price for the bid item "KPDES Permit and Temporary Erosion Control".
- F. **Erosion Control Blanket.** Erosion Control Blanket is measured by square yard and is to be used in ditching areas and slope stabilization areas as directed by the Engineer.
- G. **Embankment.** Embankment is measured by cubic yard and is to be placed in pipe repair/extension locations and as directed by the Engineer. Contrary to the Standard Specifications, payment will be based on measured quantity **NOT** plan quantity.

## V. BASIS OF PAYMENT

No direct payment will be made other than for the bid items listed. All other items required to complete the construction will be incidental to the bid items listed. Existing signs damaged by the Contractor will be replaced by the Contractor at his expense.

- A. **Maintain and Control Traffic.** See Traffic Control Plan.
- B. **Site Preparation.** Other than the bid items listed, no direct payment will be allowed for site preparation, but will be incidental to the other items of work.
- C. **Dense Grade Aggregate.** See Section 302 of the Standard Specifications.
- D. **Inlaid Pavement Markers and Permanent Striping.** See Special Notes and Traffic Control Plan.

**NOTES APPLICABLE TO PROJECT  
PAVEMENT REHABILITATION  
KY 9000 MOUNTAIN PARKWAY, CLARK COUNTY  
MILEPOST EASTBOUND 0.044 TO 5.371  
MILEPOST WESTBOUND 0.022 TO 5.371  
NHPP 0061 (063)  
FD52 025 9000 000-006  
Item No. 7-2056.00**

---

1. The dimensions shown on the typical section for pavement and shoulder widths and thickness are nominal or typical dimensions. The actual dimensions to be constructed may be varied to fit existing conditions as directed or approved by the Engineer. It is not intended that existing pavement or shoulders be widened unless specified in the Proposal.
2. The contractor is to be advised locations of low wires may exist. The following locations are approximate:

KY 9000 M.P. 2.41	(Sta. 138+57)
KY 9000 M.P. 2.45	(Sta. 141+00)
KY 9000 M.P. 3.80	(Sta. 212+07)
KY 9000 M.P. 3.82	(Sta. 212+84)
KY 9000 M.P. 3.98	(Sta. 221+67)
KY 9000 M.P. 4.32	(Sta. 239+14)

**CAUTION:** Other Locations may exist. These and all other utilities should be avoided on this project. If any utility is impacted, it will be the contractor's responsibility to contact the affected utility and cover any costs associated with the impact.

3. Guardrail, End Treatments, and Terminal Sections to be replaced are listed by mileposts. Exact placement to be approved by the Engineer on construction.
4. Remove any existing guardrail with a lane closure in place. Do not leave the area unprotected. After the guardrail is removed, a shoulder closure shall remain in place until the guardrail is replaced in that area. The Contractor shall deliver existing salvaged guardrail system materials to the Central Sign Shop and Recycle Center in Frankfort, KY (502-564-8187) between the hours of 8:00AM and 3:00PM, Monday through Friday and shall be neatly stacked in accordance with section 719.03.07 of the standard specifications. A "Guardrail Delivery Verification Sheet" has been included in this proposal and must be completed prior to delivery for verification of the components delivered. The Contractor, Engineer, and Central Sign Shop and Recycle Center representative must all sign off on this sheet before payment may be made.
5. A quantity of Channel Lining Class II & III has been included to be applied to eroded areas around drainage outlets and for some of the areas that are to be ditched. The actual limits of ditching and/or channel lining shall be as directed and/or approved by the Engineer. Geotextile

Fabric Type I will not be measured for payment and will be considered incidental to channel lining.

6. All “green” milepost signs shall be replaced with this project. Payment for these signs will be made by “each” for the bid item “Steel Post Mile Markers”. Any damage will be replaced at the contractor’s expense.
7. Any roadway signs that are damaged during construction are to be replaced at the contractor's expense.
8. Any light poles that are damaged during construction are to be replaced at the contractor's expense.
9. The existing edge drain system is to be preserved. Care should be taken when the asphalt is removed and replaced, any edge drains damaged during these activities will be replaced at the contractor’s expense.
10. Several areas throughout the project have fill slopes that are beginning to fail or slip due to poor drainage. These areas shall be ditched as directed by the Engineer. The degrading slopes shall be regraded and dressed as directed by the Engineer. Payment for this work will be measured by linear foot of “ditching”, cubic yard of “DGA” and square yard of “erosion control blanket”.
11. Millings, in lieu of DGA will be used to construct/reshape the outside shoulder wedges throughout the project as directed by the Engineer. Compact and shape the asphalt millings as directed by the Engineer. All shoulders are to receive two applications of asphalt seal coat. The width of the asphalt seal may vary throughout the project. The actual width shall be as directed by the Engineer. Quantities of asphalt seal coat and asphalt seal aggregate are included in the General Summary for the project wide shoulder wedging/reshaping. The contractor will retain all surplus millings.
12. Ditching is included with this project. The contractor shall remove all debris from ditches, including boulders and brush. The contractor shall remove all loose rock and brush up to and including the first bench cut in the existing rock cuts or as directed by the engineer.
13. A quantity of “flowable fill” is provided to fill locations on the project that have erosion under the existing pavement or other structures. These and any other areas with similar erosion issues shall be filled with “flowable fill” as directed by the Engineer. Payment for this work shall be per cubic yard of “flowable fill” and will be based on quantities measured by the field Engineer. Any form work required to contain the “flowable fill” will be considered incidental to this item of work.
14. The drainage summary lists locations where the existing grates have been dislodged from their proper position. The contractor will be required to "re-set" the existing grates. “Resetting Grates” will be considered incidental to the bid item “Ditching”. Grates that have been damaged and will need to be replaced and will be paid for under the bid item "Replace Grate" and will be paid for by “each”. The “Replace Grate” bid item will be paid

one each per headwall but may include multiple grate segments.

15. The cleaning of existing pipe culvert inlets and outlets 36 inches or less in diameter and perforated pipe headwalls are incidental to the bid item for "Ditching" in accordance with Section 209.03.01 of the 2012 Edition of the Standard Specifications for Road and Bridge Construction. There is a list of locations that have been identified to be cleaned. This list may not be complete and therefore there may be additional outlets which require cleaning. The Engineer will determine any additional outlets to be cleaned.
16. Delineators shall meet the requirements of Section 830 and 838 of the Standard Specifications. Delineators shall be placed in accordance with Section 3F of the M.U.T.C.D.
17. Quantities have been included in the General Summary for minor pavement repair.
18. Pavement rideability requirements in accordance with section 410 category A of the standard specifications shall apply on this project.
19. There is a summary of pavement repair locations. The Engineer will determine the ultimate locations that will be repaired based upon the condition of the pavement at the time the repairs are accomplished. The repair locations listed may be lengthened, shortened, or eliminated completely if the conditions are such that modification of the locations would be deemed desirable by the Department.
20. The Department will accept the compaction of asphalt mixtures furnished for the driving lanes at one inch or greater on this project by Option A according to subsections 402 and 403 of the Standard Specifications, Current Edition. Use joint cores as described in subsection 402.03.02 for surface mixtures only. The Department will accept the compaction of all other mixtures by option B.
21. Do not disturb sawed rumble strips on Westbound driving lanes at M.P. 0.43, 0.48, 0.54, 0.78, 0.91, 1.05 unless directed by The Engineer. The Contractor is responsible for any unauthorized damage and will cover any cost associated with repairing the sawed rumble strips.

**TRAFFIC CONTROL PLAN**  
**KY 9000 MOUNTAIN PARKWAY, CLARK COUNTY**  
**MILEPOST EASTBOUND 0.044 TO 5.371**  
**MILEPOST WESTBOUND 0.022 TO 5.371**  
**NHPP 0061 (063)**  
**FD52 025 9000 000-006**  
**Item No. 7-2056.00**

---

<p><b>THIS PROJECT IS A FULLY CONTROLLED ACCESS HIGHWAY</b></p>
---

**TRAFFIC CONTROL GENERAL**

Except as provided herein, maintain and control traffic in accordance with the 2012 Standard Specifications and the Standard Drawings, current editions. Except for the roadway and traffic control bid items listed, all items of work necessary to maintain and control traffic will be paid at the lump sum bid price to "Maintain and Control Traffic". All lane closures used on the Project will be in compliance with the appropriate Standard Drawings. Traffic Barrels will be used in the lane closure tapers only. Utilize Grabber Delineator Traffic Cones throughout the remainder of the lane or shoulder closure areas as directed by the Engineer. Do NOT use any other cones for lane closures or shoulder closures unless otherwise directed by the Engineer.

Contrary to Section 106.01, traffic control devices used on this project may be new, or used in like-new condition at the beginning of the work and maintained in like-new condition until completion of the work. Traffic Control Devices will conform to current MUTCD.

Reduce the speed limit in work areas to 55 miles per hour and establish double fines for work zone speeding violations. The extent of these areas within the project limits will be restricted to the proximity of actual work areas as determined by the Engineer. Notify the Engineer a minimum of 12 hours prior to using the double fine signs. At the beginning of the work zone, the "WARNING FINE DOUBLED IN WORK ZONE" signs will be dual mounted. At the end of the work zone, the "END DOUBLE FINE" signs will be dual mounted as well. Remove or cover the signs when the highway work zone does not have workers present for more than a two-hour period of time. Payment for the signs will be at the unit bid price for signs erected. Any relocation or covering of signs will be incidental to Maintain and Control Traffic.

Traffic Control Plan  
Clark County  
KY 9000  
Page 2 of 7

## PROJECT PHASING & CONSTRUCTION PROCEDURES

The contractor **shall maintain a minimum of one lane** in each direction during all days and hours unless otherwise stated in this proposal or approved by the Engineer.

All work done on the westbound exit ramp and bridge from milepost 0.022 to milepost 0.300 shall be completed during **one weekend** starting on Friday at 7:00 PM and being finished by Monday at 6:00 AM. No work on the westbound exit ramp will be permitted on the following dates unless otherwise approved by the Engineer:

December 24, 2016 – January 1, 2017	Christmas & New Year's Day
April 14, 2017 – April 16, 2017	Easter Weekend
May 27, 2017 – May 31, 2017	Memorial Day Weekend
July 1, 2017-July 4, 2017	Independence Day Weekend
September 1, 2017 – September 4, 2017	Labor Day Weekend

All traffic heading to the Mountain Parkway project area during ramp repairs during the one chosen weekend is to be rerouted along a detour using I-64 and KY 15 Ironworks Road. Details about this detour route and signage to use are given on the maintenance of traffic detour route map. Payment for the detour is included in the bid item "Maintain and Control Traffic," lump sum. It is not anticipated that traffic control will be required on I-64, but if traffic control is necessary due to full depth bridge deck repairs or some other unforeseeable event, Interstate traffic control will be considered incidental to the bid item "Maintain and Control Traffic."

The minimum clear lane width will be 11 feet. Use a lane closure all times when work is performed in the lane or adjacent shoulder. Shoulders used as temporary roadways will be inspected by the Engineer and if deemed necessary by the Engineer, repaired with Asphalt Mixture for Level & Wedging as directed prior to opening to traffic. Perform any maintenance of the shoulder as deemed necessary by the Engineer in order to maintain traffic. All removal of existing striping shall be by water blasting, unless otherwise directed by the Engineer, and this work shall be considered incidental to "Maintain and Control Traffic." Remove edge lines as necessary and approved by the Engineer throughout the project. Paint temporary edge lines through the lane closure.

All pavement edge transitions must be smooth and level before opening both lanes up to traffic. A lane closure must be in place during all times that pavement edge drop-offs are present (see Pavement Edge Drop-off note).

The Engineer will determine exact locations of pavement repair, if any, at the time of construction. Once removal of pavement at a particular repair location has begun, work continuously within the parameters outlined above to complete the work and eliminate the "hole". Place Type III Barricades immediately in front of pavement removal areas. Once pavement removal at a site has begun, full depth replacement must be completed within the time a lane closure is allowed.

Access to all ramps at all interchanges on the project shall be maintained at all times unless otherwise directed by the Engineer. All diversions to access ramps in areas of lane closures shall be approved by the Engineer prior to implementing the particular lane closure.

Note that lane shifts are required throughout the project. See the Exhibits for lane locations and widths.

Traffic Control Plan  
Clark County  
KY 9000  
Page 3 of 7

Stripe according to the MUTCD.

During the days and hours when a lane closure is allowed, implement the following procedures: Maintain traffic as specified in the phasing notes. Any other work not requiring traffic lane widths to be restricted due to barrels or equipment encroaching into the interior lanes can be done during the remaining hours when two lanes of traffic must be maintained. Please refer to the "Special Note for Fixed Completion Date and Liquidated Damages" for damage rates per hour associated with failure to maintain the required number of lanes during the specified time period. Once pavement removal at a site has begun, full depth replacement must be completed within the time a lane closure is allowed. Liquidated Damages, at the rate specified per hour in the "Special Note for Fixed Completion Date and Liquidated Damages", will be assessed for each hour the existing number of lanes is not maintained.

The contractor must notify the Engineer at least fourteen (14) days prior to beginning construction in either direction.

### **SHOULDER PREPARATION AND RESTORATION**

Prior to placing any lane closure that requires shifting traffic onto existing shoulders, patch and remove any foreign debris on the shoulders as directed by the Engineer. Remove failed materials and perform additional patching as directed by the Engineer during the time the shoulder is used as a travel lane. All work required for shoulder preparation and restoration is incidental to Maintenance of Traffic, with the exception of the asphalt patching, which will be paid at the contract unit bid price for "LEVELING AND WEDGING PG76-22".

#### **PHASE I BRIDGE INSIDE LANES AND INSIDE SHOULDERS AT BRIDGE ENDS - BRIDGE DECK OVERLAY**

Close the inside lanes of the bridges to traffic. The Inside Shoulders and 1' of the inside driving lane shall be inlaid with temporary pavement as noted on the Bridge M.O.T. Phasing plan. Perform the Bridge Deck Overlay on the inside driving lanes of the bridges. Perform bridge end dig out repairs on the inside lanes and shoulders at the bridge over Morris Rd. Once the pavement has been removed, the Contractor must work continuously until the pavement has been replaced. The Engineer may restrict the number of locations being repaired at the same time.

#### **PHASE II BRIDGE OUTSIDE LANES - BRIDGE DECK OVERLAY**

Close the outside lanes of the bridges to traffic. Perform the Bridge Deck Overlay on the outside driving lanes of the bridges. Perform bridge end dig out repairs on the outside driving lanes and shoulders at the bridge over Morris Rd. The Engineer may restrict the number of locations being repaired at the same time.

#### **PHASE III INSIDE LANE, INSIDE SHOULDER AND RAMPS - PAVEMENT REPAIRS**

Close the inside lanes to traffic. Repair pavement failures in the inside lanes and shoulders as determined by the Engineer. Once the pavement has been removed, the Contractor must work continuously until the pavement has been replaced. The Engineer may restrict the number of locations being repaired at the same time.

Traffic Control Plan  
Clark County  
KY 9000  
Page 4 of 7

#### **PHASE IV OUTSIDE LANE, OUTSIDE SHOULDER AND RAMPS - PAVEMENT REPAIRS**

Close the outside lanes to traffic. Repair pavement failures in the outside lanes and shoulders as determined by the Engineer. Once the pavement has been removed, the Contractor must work continuously until the pavement has been replaced. The Engineer may restrict the number of locations being repaired at the same time.

#### **PHASE V INSIDE LANE, INSIDE SHOULDER AND RAMPS - MILL AND SURFACE**

Shift traffic to the outside lanes and close the inside lanes to traffic. Mill roadway 1.5 inches on the inside lanes and shoulders. Complete any roadside work including guardrail installation and drainage structure repair and installation. Place the 1.25 inch final surface.

#### **PHASE VI OUTSIDE LANE, OUTSIDE SHOULDER AND RAMPS - MILL AND SURFACE**

Shift traffic to the inside lanes and close the outside lanes to traffic. Mill roadway 1.5 inches on the outside lanes and shoulders. Complete any roadside work including guardrail installation and drainage structure repair and installation. Place the 1.25 inch final surface.

#### **LANE CLOSURES**

Limit the lengths of lane closures to only that needed for actual operations in accordance with the phasing specified herein, or as directed by the Engineer. Limit lane closures to allow one lane open per direction at any given time. Contrary to section 112, lane closures will **NOT** be measured for payment, but are considered incidental to Maintain and Control Traffic.

#### **SIGNS**

Additional traffic control signs in addition to normal lane closure signing detailed on the Standard Drawings may be required by the Engineer. Additional signs needed for lane closures may include, but are not limited to, dual mounted TRUCKS USE LEFT/RIGHT LANE, LEFT/RIGHT LANE CLOSED 1 MILE, LEFT/RIGHT LANE CLOSED 2 MILE, LEFT/RIGHT LANE CLOSED 3 MILE, SLOWED/STOPPED TRAFFIC AHEAD. Signage for reduced speed limits and double fine work zones will be furnished, relocated, and maintained by the Contractor.

Contrary to section 112, individual signs will be measured only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. Replacements for damaged signs or signs directed to be replaced by the Engineer due to poor legibility or reflectivity will not be measured for payment.

A quantity of signs has been included for lane shifts, "Roadwork Ahead" signs on entrance ramps, and extra Double Fine signs and Speed Limit signs between interchanges to be paid only once no matter how many times they are moved or relocated.

Traffic Control Plan  
Clark County  
KY 9000  
Page 5 of 7

## **FLASHING ARROWS**

Flashing arrows will be paid for once, no matter how many times they are moved or relocated. The Department **WILL NOT** take possession of the flashing arrows upon completion of the work.

## **PORTABLE CHANGEABLE MESSAGE SIGNS**

Provide portable changeable message signs in advance of and within the project at locations to be determined by the Engineer. If work is in progress concurrently in both directions, or if more than one lane closure is in place in the same direction of travel, provide additional portable changeable message signs. Place portable changeable message signs one mile in advance of the anticipated queue at each lane closure. As the actual queue lengthens and/or shortens relocate or provide additional portable changeable message signs so that traffic has warning of slowed or stopped traffic at least one mile but not more than two miles before reaching the end of the actual queue. The locations designated may vary as the work progresses. The messages required to be provided will be designated by the Engineer. The portable changeable message signs will be in operation at all times. In the event of damage or mechanical/electrical failure, the Contractor will repair or replace the Portable Changeable Message Sign immediately. Portable Changeable Message Signs will be paid for once, no matter how many times they are moved or relocated. The Department **WILL NOT** take possession of the signs upon completion of the work.

## **TRUCK MOUNTED ATTENUATORS**

Furnish and install MUTCD approved Truck Mounted Attenuators in advance of work areas when workers are present less than 12 feet from traffic. If there is less than 500 feet between work sites, only a single TMA will be required at a location directed by the Engineer. Locate the TMAs at the individual work sites and move them as the work zone moves within the project limits. All details of the TMA installations shall be approved by the Engineer. Truck Mounted Attenuators will not be measured for payment, but are incidental to Maintain and Control Traffic. The Department **WILL NOT** take possession of the TMAs upon completion of the work.

## **PAVEMENT MARKINGS**

If lane closures are in place during nighttime hours, remove or cover the lenses of raised pavement markers that do not conform to the traffic control scheme in use, or as directed by the Engineer. Replace or uncover lenses before a closed lane is reopened to traffic. No direct payment will be made for removing and replacing or covering and uncovering the lenses, but will be incidental to "Maintain and Control Traffic".

Place temporary and permanent striping in accordance with Section 112 and Section 71, except that:

1. Temporary and permanent striping will be 6" in width; and
2. If the contractor's operations or phasing requires temporary markings which must be subsequently removed from the ultimate pavement, an approved removable lane tape will be used; however removable tape will be measured and paid as Pavement Striping-Temporary Paint 6"; and
3. Edge lines will be required for temporary striping; and

Traffic Control Plan  
Clark County  
KY 9000  
Page 6 of 7

4. Existing, temporary, or permanent striping will be in place before a lane is opened to Traffic.
5. Place permanent striping on pavement within the project limits.
6. Permanent striping will be Permanent Paint.

Should the Contractor change the existing striping pattern, the Contractor is to restripe the roadway back to its original configuration after a certain period of time especially if no work is anticipated for a period of time (i.e. winter shutdown).

### **PAVEMENT EDGE DROP-OFFS**

Pavement edge drop-offs will be protected by a lane or shoulder closure. Lane closures will be protected with grabber delineator cones, vertical panels, or barricades as shown on the Standard Drawings.

A pavement edge between opposing directions of traffic or lanes that traffic is expected to cross in a lane change situation shall not have an elevation difference greater than 1 ½". Place warning signs (MUTCD W8-11 or W8-9A) in advance of and at 1500' intervals throughout the drop-off area. Dual posting on both sides of the traveled way shall be required. Wedge all transverse transitions between resurfaced and unresurfaced areas which traffic may cross with asphalt mixture for leveling and wedging. Remove the wedges prior to placement of the final surface course. Pavement edges that traffic is not expected to cross, except accidentally, shall be treated as follows:

Less than 2" – Protect with a lane closure.

2" to 4" – Protect with a lane closure. Place grabber delineator cones, vertical panels, or barricades every 50 feet. Traffic cones may not be used in place of grabber cones, panels, and barricades at any time. Construct a wedge with compacted cuttings from milling, trenching, or asphalt mixtures with a 3:1 or flatter slope, when work is not active in the drop-off area. Place Type III Barricades at the beginning of the lane closures, and place additional Type III Barricades spaced at 2,500 feet during the time the lane closure is in place.

Greater than 4" – Pavement Repair areas – In areas where pavement is to be removed, work should proceed continuously so that traffic is exposed to a drop-off for the minimum amount of time necessary to bring the pavement back up to existing grade. Barrel spacing should be 20 feet and appropriate lighting should be utilized to illuminate the area during nighttime operations.

Guardrail Installation – Guardrail will be removed at the last practical moment and replaced as soon as the placement of all base courses in an area requiring guardrail is complete. All areas from which guardrail is removed shall be protected by a shoulder closure or other method approved by the Engineer until the new guardrail is installed.

Traffic Control Plan  
Clark County  
KY 9000  
Page 7 of 7

### **TRAFFIC COORDINATOR**

Designate an employee to be Traffic Coordinator. The designated Traffic Coordinator must be certified by an agency qualified for training in this area. The Traffic Coordinator will inspect the project maintenance of traffic once every two hours during the Contractor's operations and at any time a lane closure is in place. The Traffic Coordinator will report all incidents throughout the work zone to the Engineer on the project. The Contractor will furnish the name and telephone number where the Traffic Coordinator can be contacted at all times.

During any period when a lane closure is in place, the Traffic Coordinator will arrange for personnel to be present on the project at all times to inspect the traffic control, maintain the signing and devices, and relocate portable changeable message boards as queue lengths change. The personnel will have access on the project to a radio or telephone to be used in case of emergencies or accidents.

### **COORDINATION OF WORK**

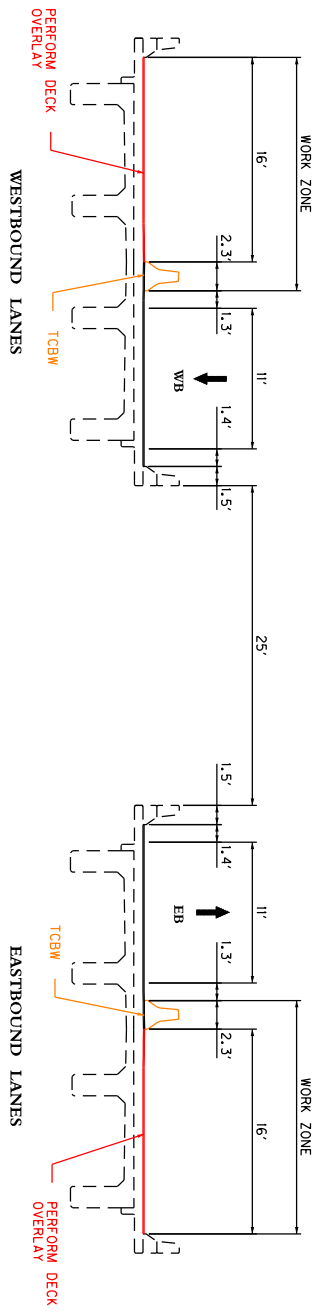
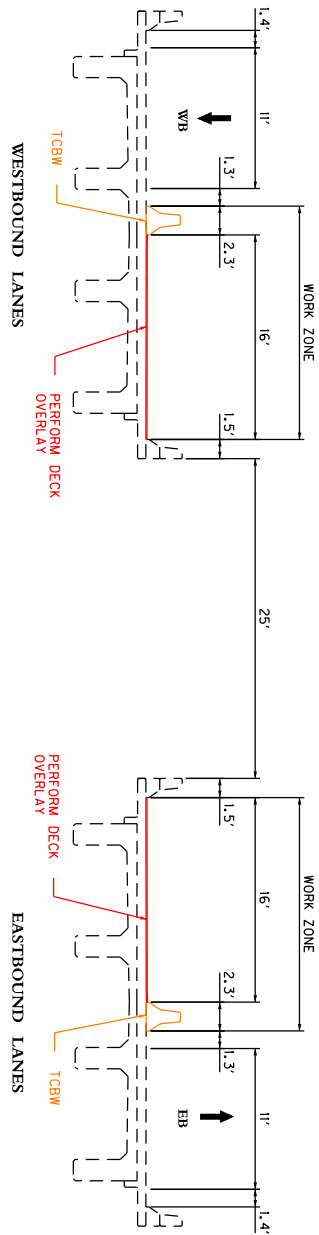
The Contractor is advised that other projects may be in progress within or in the near vicinity of this project. The traffic control of those projects may affect this project and the traffic control of this project may affect those projects. The Contractor will coordinate the work on this project with the work of the other contractors. In case of conflict, the Engineer will determine the relative priority to give to work phasing on the various projects.

### **CONTRACTOR'S AND CONTRACTOR'S EMPLOYEES' VEHICLES**

Do not use or allow employees to use median crossovers at any time except when inside lanes are closed for construction. In all other phases of construction, change vehicular direction of travel only at interchanges.

# KY 9000 MOUNTAIN PARKWAY MAINTENANCE OF TRAFFIC BRIDGE TYPICAL SECTIONS

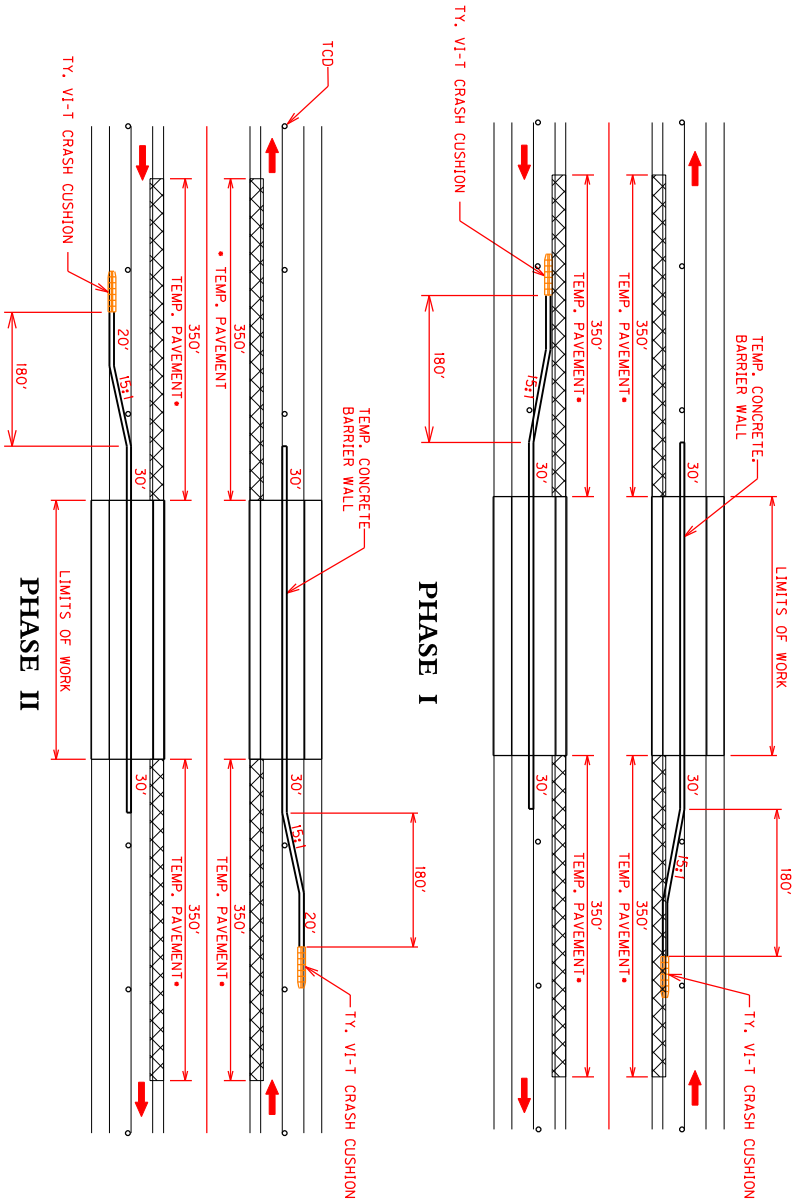
COUNTY OF	ITEM NO.
CLARK	7-2056.00



NOT TO SCALE

KY 9000  
MAINTENANCE OF TRAFFIC  
TYPICAL SECTIONS

# BRIDGES M.O.T. PHASING (DIMENSIONS SHOWN ARE MINIMUMS)



• PRIOR TO SHIFTING TRAFFIC ONTO ANY EXISTING SHOULDERS, THE INSIDE SHOULDER AND 1' OF THE INSIDE DRIVING LANE SHALL BE INLAID WITH 2 - 3.5 INCH LIFTS OF CLASS 3 ASPHALT BASE AND 1 OF 1.25 INCH LIFT OF CLASS 2 ASPHALT SURFACE AT 4 FEET SPACING AND 18 INCH WIDTH. THE ENDS OF THE BRIDGE ENDS OF THE BRIDGE ENDS DIRECTED BY THE ENGINEER. DUE TO THE BRIDGE END DIG OUT REPAIRS, TEMPORARY PAVEMENT WILL NOT BE REQUIRED ON THE SHOULDER AT THE BRIDGE OVER MORRIS RD UNLESS DIRECTED OTHERWISE BY THE ENGINEER.

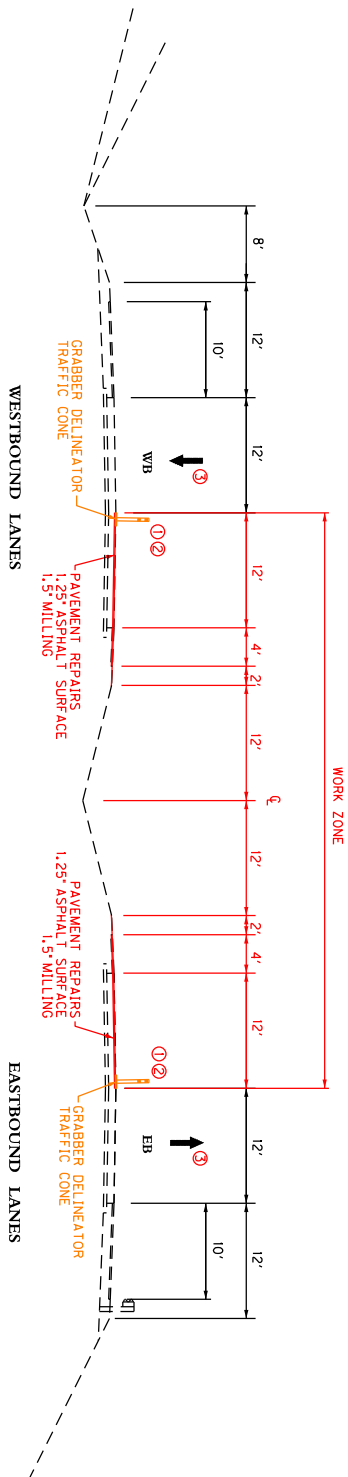
NOT TO SCALE

KY 9000  
MAINTENANCE OF TRAFFIC  
TYPICAL SECTIONS

COUNTY OF	ITEM NO.
CLARK	7-2056.00

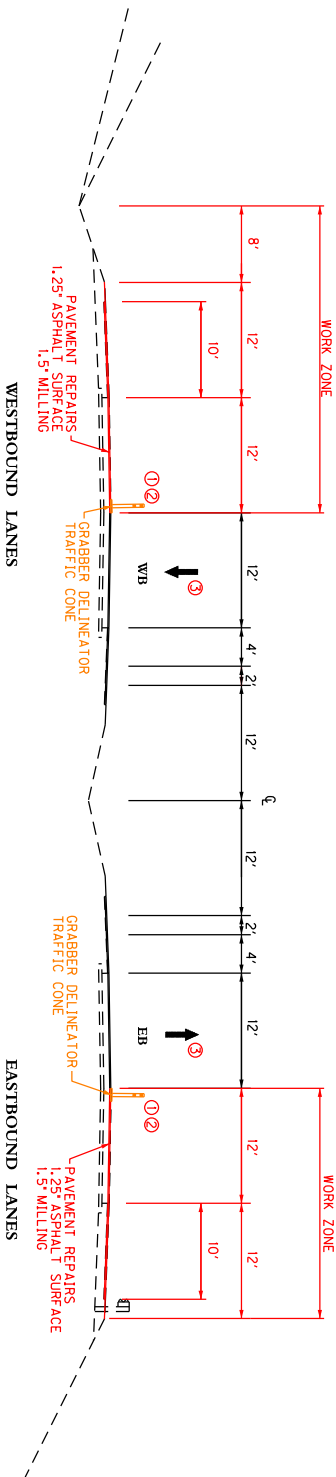
# KY 9000 MOUNTAIN PARKWAY MAINTENANCE OF TRAFFIC TYPICAL SECTIONS

COUNTY OF	ITEM NO.
CLARK	7-2056.00



- PERFORM PAVEMENT REPAIRS WHERE NECESSARY ON LANES AND SHOULDER
- CONSTRUCT MILLING ON LANES AND SHOULDERS
- CONSTRUCT SURFACE PAVEMENT ON LANES AND SHOULDERS

### PHASE III AND PHASE V



- PERFORM PAVEMENT REPAIRS WHERE NECESSARY ON LANES AND SHOULDER
- CONSTRUCT MILLING ON LANES AND SHOULDERS
- CONSTRUCT SURFACE PAVEMENT ON LANES AND SHOULDERS

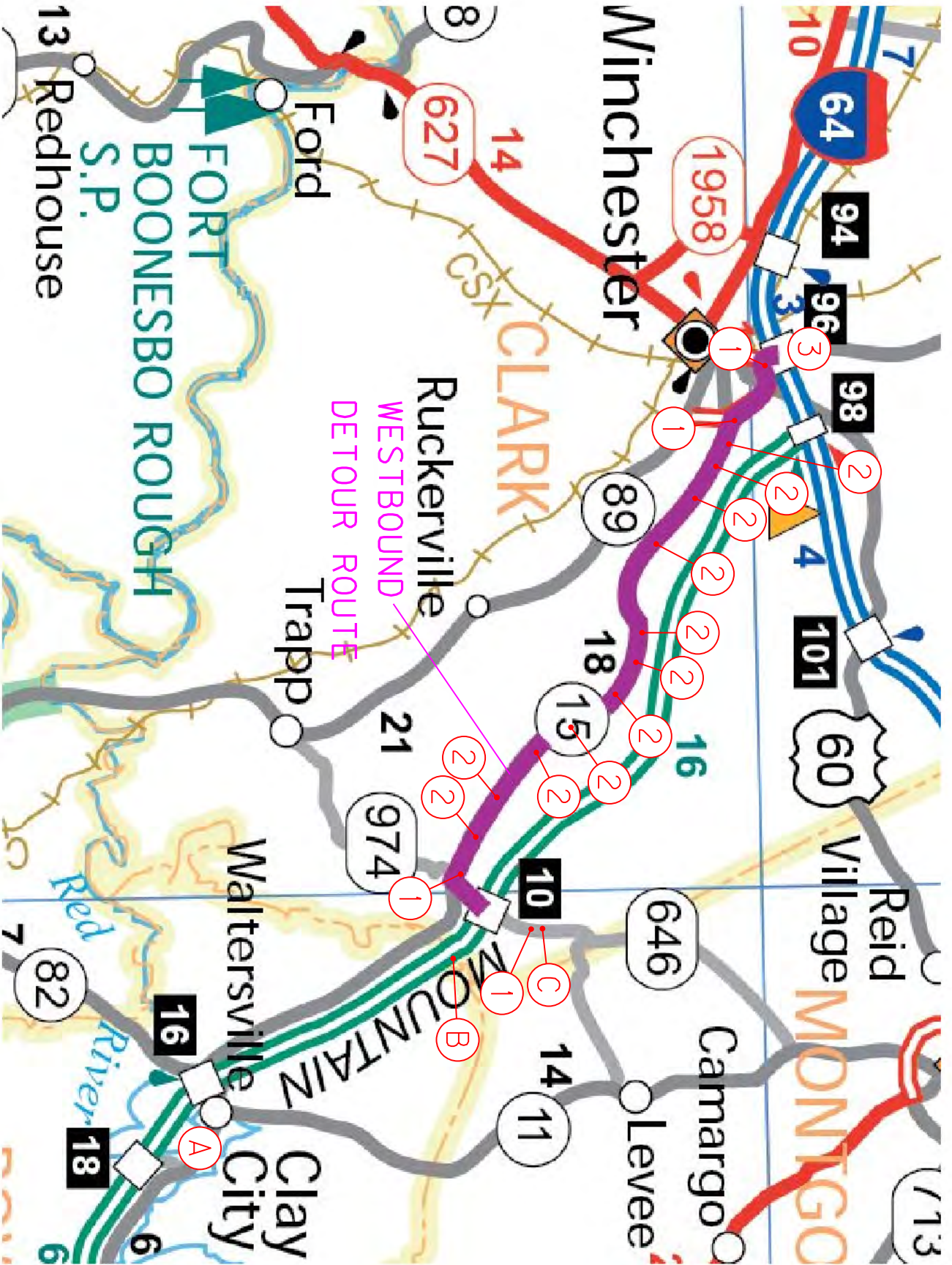
### PHASE IV AND PHASE VI

- ① TRAFFIC BARRELS WILL BE USED IN THE LANE CLOSURE TAPERS.
- ② GRABBER DELINEATOR TRAFFIC CONES SHALL BE SHIFTED TO ALLOW ADEQUATE SPACE TO PERFORM PAVEMENT REPAIRS AND PAVING OPERATIONS.
- ③ RAMP MUST REMAIN OPEN DURING LANE CLOSURE.

NOT TO SCALE

KY 9000  
MAINTENANCE OF TRAFFIC  
TYPICAL SECTIONS

SEE NEXT PAGE FOR  
DETOUR SIGNS KEY



COUNTY OF	ITEM NO.
CLARK	7-2056.00

NOT TO SCALE

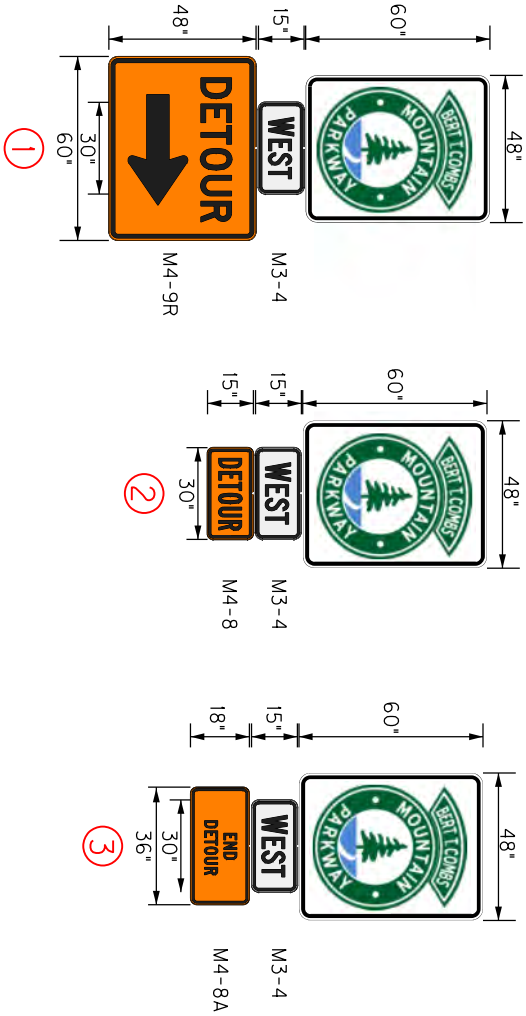
KY 9000  
MAINTENANCE OF TRAFFIC  
DETOUR MAP

COUNTY OF	ITEM NO.
CLARK	7-2056.00

### DETOUR NOTES

THE HIGHLIGHTED ROUTE IS TO BE SIGNED AS A DETOUR TO BE USED AS AN ALTERNATIVE ROUTE FOR TRAFFIC DURING WORK ON THE KY 9000 MOUNTAIN PARKWAY/I-64 INTERCHANGE RAMP. PORTABLE CHANGEABLE MESSAGE SIGNS ARE TO BE PLACED IN ADVANCE OF THE MOUNTAIN PARKWAY/KY 974 (KIDVILLE ROAD) INTERCHANGE FOR WESTBOUND TRAFFIC. DETOUR SHEET SIGNS ARE TO BE PLACED IN ADVANCE OF ALL INTERCHANGE RAMPS.

### DETOUR SIGNS KEY



### PORTABLE CHANGEABLE MESSAGE SIGNS

- (A) MOUNTAIN PKWY WB TO I-64 CLOSED AT EXIT TO FOLLOW DETOUR
- (B) MOUNTAIN PKWY WB TO I-64 CLOSED ALL TRAFFIC MUST EXIT
- (C) RAMP TO WB I-64 CLOSED FOLLOW DETOUR

ALL SIGNS SHALL BE PLACED IN LOCATIONS NOTED OR AS DIRECTED AND/OR APPROVED BY THE ENGINEER

NOT TO SCALE

KY 9000  
MAINTENANCE OF TRAFFIC  
DETOUR DETAILS

## REFERENCES

1. *Kentucky Transportation Cabinet, Department of Highways, Standard Specifications for Road and Bridge Construction, Edition of 2012.*
2. FHWA Manual on Uniform Traffic Control Devices.
3. Active Sepia List

<u>Drawing No.</u>	<u>Drawing Name</u>
003	Treatment of Open Sinkholes

4. Kentucky Department of Highways Standard Drawings, current editions, as applicable:

RBC-003	Guardrail Connector to Bridge end Type A and A-1 Components
RBC-005	Guardrail Connector to Bridge End Type A
RBC-006	Guardrail Connector to Bridge End Type A-1
RBI-001	Typical Guardrail Installations
RBI-002	Typical Guardrail Installations
RBI-003	Installation of Guardrail End Treatment Type 2A
RBI-004	Installation of Guardrail End Treatment Type 1
RBM-020	Delineators for Concrete Barriers
RBR-001	Steel Beam Guardrail (“W” Beam)
RBR-005	Guardrail Components
RBR-015	Guardrail Posts
RBR-016	Guardrail Posts
RBR-020	Guardrail End Treatment Type 1
RBR-025	Guardrail End Treatment Type 2A
RBR-030	Guardrail End Treatment Type 3
RBR-031	Guardrail End Treatment Type 3 Pipe Drainage Detail
RBR-032	Guardrail End Treatment Type 3 Alternate Anchor
RBR-055	Delineators for Guardrail
RDB-001	Drop Box Inlet Type 1
RDB-002	Drop Box Inlet Type 2
RDB-100	Sloped Box Outlet Type 1
RDB-101	Grates for Sloped Box Outlet Type 1
RDB-105	Sloped And Flared Box Inlet-Outlet
RDB-106	Grates for Sloped And Flared Box Inlet-Outlet
RDB-155	Metal End Section Type 3 And 4 (Cross Structures)
RDB-160	Dimensions for Metal End Sections
RDB-270	Curb Box Inlet Type A (Detail Drawing)
RDB-271	Curb Box Inlet Type A (Detail Drawing)
RDB-272	Curb Box Inlet Type A (Top Phase Tables)
RDB-280	Curb Box Inlet Type B (Detail Drawing)
RDB-281	Curb Box Inlet Type B (Detail Drawing)
RDB-282	Curb Box Inlet Type B (Top Phase Tables)
RDB-400	Box Inlet Riser
RDB-410	Box Inlet Pipe Chamber
RDB-420	Box Inlet Pipe Chamber (Additional Steel)
RDD-040	Channel Lining Class II and III

RDH-110	Pipe Culvert Headwalls 0° Skew
RDH-210	Dimensions & Quantities 30" – 108" Headwalls Circular Pipe 0° Skew
RDH-312	Bill of Reinforcement 96" to 108" Diameter Circular Pipe Headwalls 0° Skew
RDI-001	Culvert, Entrance & Storm Sewer Pipe Types and Cover Heights (12" – 24" Pipe)
RDI-002	Culvert, Entrance & Storm Sewer Pipe Types and Cover Heights (27" – 42" Pipe)
RDI-003	Culvert, Entrance & Storm Sewer Pipe Types and Cover Heights (48" – 54" Pipe)
RDI-004	Culvert, Entrance & Storm Sewer Pipe Types and Cover Heights (60" – 66" Pipe)
RDI-020	Pipe Bedding for Culverts, Entrance and Storm Sewer Pipe
RDI-021	Pipe Bedding for Culverts, Entrance, and Storm Sewer Reinforced Conc. Pipe
RDI-025	Pipe Bedding Trench Condition
RDI-026	Pipe Bedding Trench Condition Reinforced Conc. Pipe
RDP-001	Perforated Pipe Types and Cover Heights
RDP-010	Perforated Pipe Headwalls
RDX-160	Security Devices for Frames, Grates and Lids
RDX-210	Temporary Silt Fence
RDX-230	Silt Trap Type C
RGS-002	Superelevation for Multilane Pavement
RGX-001	Miscellaneous Standards Part I
TPM-105	Pavement Marker Arrangements Multi-Lane Roadways
TPM-110	Pavement Marker Arrangements Multi-Lane Roadways
TPM-165	Shoulder & Edge Line Rumble Strip Details
TPM-170	Flexible Delineator Post Arrangements for Horizontal Curves
TPM-171	Flexible Delineator Post Arrangements for Interchange Ramps and Crossovers
TTC-115	Lane Closure Multi-Lane Highway Case I
TTC-120	Lane Closure Multi-Lane Highway Case II
TTC-125	Double Lane Closure
TTC-135	Shoulder Closure
TTC-155	Temporary Pavement Marker Arrangements for Construction Zones
TTC-160	Temporary Pavement Marker Arrangements for Lane Closures
TTD-110	Post Splicing Detail
TTD-120	Work Zone Speed Limit and Double Fine Signs
TTD-125	Pavement Condition Warning Signs
TTS-110	Mobile Operation for Paint Striping Case III
TTS-115	Mobile Operation for Paint Striping Case IV
TTS-120	Mobile Operation for Durable Striping Case I

5. *Kentucky Transportation Cabinet, Department of Highways, Standard Specifications for Road and Bridge Construction, Edition of 2012, Appendix B - Supplemental Specifications, as applicable:*

Special Note	11 Portable Changeable Message Signs (6/15/2012)
Special Note	Asphalt Milling and Texturing <i>attached</i>
Special Note	Typical Section Dimensions <i>attached</i>
Special Note	Before You Dig <i>attached</i>
Special Note	Guardrail Delivery Verification Sheet <i>attached</i>
Special Note	Fixed Completion Date and Liquidated Damages <i>attached</i>
Special Note	Erosion Prevention and Sediment Control <i>attached</i>
Special Note	Inlaid Pavement Markers <i>attached</i>
Special Note	Intelligent Compaction of Asphalt Mixtures <i>attached</i>
Special Note	Shoulder Preparation and Restoration <i>attached</i> (See MOT Notes)
Special Note	Public Information Plan <i>attached</i>
Special Note	Bridge repair items <i>attached</i>

**SPECIAL NOTE FOR  
ASPHALT MILLING AND TEXTURING  
KY 9000 MOUNTAIN PARKWAY, CLARK COUNTY  
ITEM NO. 7-2056.00**

Begin paving operations within 48 hours after the commencement of the asphalt milling operations. Continue paving operations continuously until completed. Do not allow public traffic to drive on the milled surface. If paving operations are not begun within this time period, liquidated damages will be assessed at the rate prescribed by Section 108.09 of the current Standard Specifications until such time as paving operations are begun.

After utilizing the asphalt millings in areas adjacent to the outside shoulder as directed by the Engineer, the Contractor will take possession of the remainder of the millings and recycle the millings or dispose of the millings off the Right-of-Way at sites obtained by the Contractor at no additional cost to the Department.

Removal of the existing pavement markers prior to the milling operation is considered incidental to the bid item "Asphalt Pavement Milling and Texturing".

**SPECIAL NOTE FOR TYPICAL SECTION DIMENSIONS  
KY 9000 MOUNTAIN PARKWAY, CLARK COUNTY  
ITEM NO. 7-2056.00**

The dimensions shown on the typical sections for pavement and shoulder widths are nominal or typical dimensions. The actual dimensions to be constructed may be varied to fit existing conditions as directed or approved by the Engineer. It is not intended that existing pavement or shoulders be widened unless specified elsewhere in the Proposal.

### **SPECIAL NOTE FOR 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.

### GUARDRAIL DELIVERY VERIFICATION SHEET

Contract Id: \_\_\_\_\_

Contractor: \_\_\_\_\_

Section Engineer: \_\_\_\_\_

District & County: \_\_\_\_\_

<u>DESCRIPTION</u>	<u>UNIT</u>	<u>QTY LEAVING PROJECT</u>	<u>QTY RECEIVED@BB YARD</u>
GUARDRAIL (Includes End treatments & crash cushions)	LF	_____	_____
STEEL POSTS	EACH	_____	_____
STEEL BLOCKS	EACH	_____	_____
WOOD OFFSET BLOCKS	EACH	_____	_____
BACK UP PLATES	EACH	_____	_____
CRASH CUSHION	EACH	_____	_____
NUTS, BOLTS, WASHERS	BAG/BCKT	_____	_____
DAMAGED RAIL TO MAINT. FACILITY	LF	_____	_____
DAMAGED POSTS TO MAINT. FACILITY	EACH	_____	_____

**\*Required Signatures before Leaving Project Site**

Printed Section Engineer's Representative \_\_\_\_\_ & Date \_\_\_\_\_

Signature Section Engineer's Representative \_\_\_\_\_ & Date \_\_\_\_\_

Printed Contractor's Representative \_\_\_\_\_ & Date \_\_\_\_\_

Signature Contractor's Representative \_\_\_\_\_ & Date \_\_\_\_\_

**\*Required Signatures after Arrival at Bailey Bridge Yard (All material on truck must be counted & the quantity received column completed before signatures)**

Printed Bailey Bridge Yard Representative \_\_\_\_\_ & Date \_\_\_\_\_

Signature Bailey Bridge Yard Representative \_\_\_\_\_ & Date \_\_\_\_\_

Printed Contractor's Representative \_\_\_\_\_ & Date \_\_\_\_\_

Signature Contractor's Representative \_\_\_\_\_ & Date \_\_\_\_\_

\*\*Payment for the bid item remove guardrail will be based upon the quantities shown in the Bailey Bridge Yard received column. Payment will not be made for guardrail removal until the guardrail verification sheets are electronically submitted to the Section Engineer by the Bailey Bridge Yard Representative.

Completed Form Submitted to Section Engineer Date: \_\_\_\_\_ By: \_\_\_\_\_

**Special Note for Fixed Completion Date and  
Liquidated Damages  
KY 9000 Mountain Parkway, Clark County  
Item No. 7-2056.00**

Contrary to Section 108.09, Liquidated Damages of \$5,000 per calendar day will be assessed for each day or fraction thereof work remains uncompleted beyond the Specified Completion Date. This project has a Fixed Completion Date of September 15, 2017

In addition to the Liquidated Damages specified above, Liquidated Damages in the following amounts will be charged when a lane/road closure remains in place during the prohibited period outlined in the Traffic Control Plan:

Ramps:                   \$1,000 for the first hour or fraction thereof  
                              \$3,000 any additional hour or fraction thereof

**Note: No additional time will be permitted due to quantity overruns.**

These hourly disincentives will still be in effect after the Fixed Completion Date and will be charged in addition to the \$5,000 per calendar day if warranted. The contractor is expected to make every effort to complete the work in order to open the ramp or mainline lane closure within a specified timeframe.

Contrary to Section 108.09 of the Standard Specifications, **the disincentive fee will be charged during those periods when seasonal limitations of the Contract prohibit the Contractor from working on a controlling item or operation. This includes the months from December through March.**

All liquidated damages will be applied cumulatively.

All other applicable portions of Section 108 apply.

**Special Note For:**  
**Erosion Prevention and Sediment Control**  
**KY 9000 MOUNTAIN PARKWAY, CLARK COUNTY**  
**Item No. 7-2056.00**

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 effective on August 1, 2009 or a permit re-issued to replace that KYR10 permit. This work shall be conducted in conformance with the requirements of Section 213 of KYTC 2012 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 2012 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.

**Payment:** Payment will be by lump sum under the bid item "K.P.D.E.S. Permit & Temporary Erosion Control".

**SPECIAL NOTE FOR INLAID PAVEMENT MARKERS**

---

**I. DESCRIPTION**

Except as provided herein, perform all work in accordance with the Department's Standard and Supplemental Specifications and applicable Standard and Sepia Drawings, current editions. Article references are to the Standard Specifications. This work shall consist of:

- (1) Maintain and Control Traffic; and (2) Furnish and install Inlaid Pavement Markers (IPMs) in recessed grooves; and (3) Any other work as specified by these notes and the Contract.

**II. MATERIALS**

The Department will sample all materials in accordance with the Department's Sampling Manual. Make the 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.

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

**B. Markers.** Provide reflective lenses with depth control breakaway positioning tabs. Before furnishing the markers, provide to the Engineer the manufacturer's current recommendations for adhesives and installation procedures. Use one brand and design throughout the project. Use markers meeting the specifications in the table below

<b>SPECIFICATIONS FOR HOUSING AND REFLECTOR</b>	
Material:	Polycarbonate Plastic
Weight:	Housing 2.00 oz.
	Reflector 2.00oz.
Housing Size:	5.00" x 3.00" x 0.70" high
Specific Intensity of Reflectivity at 0.2° Observation Angle	
White:	3.0 at 0°entrance angle
	1.2 at 20°entrance angle
Yellow:	60% of white values
Red:	25% of white values

**C. Adhesives.** Use adhesives that conform to the manufacturer's recommendations.

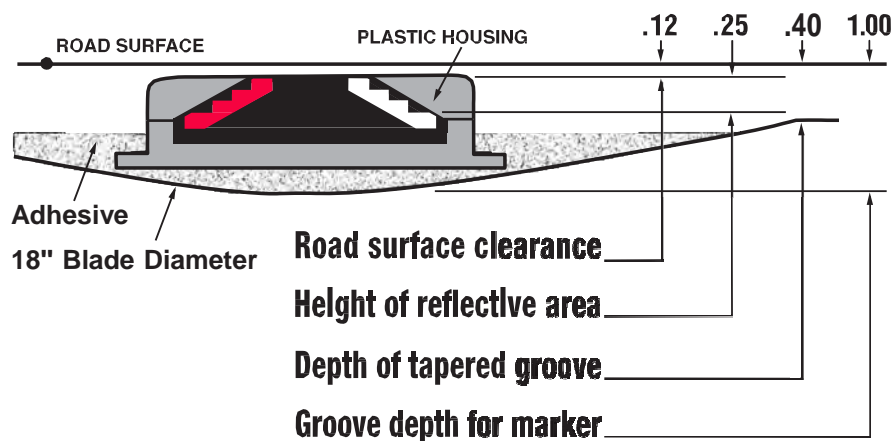
### III. CONSTRUCTION

**A. Experimental Evaluation.** The University of Kentucky Transportation Center will be evaluating this installation of IPMs. Notify the Engineer a minimum of 14 calendar days prior to beginning work. The Engineer will coordinate the University’s activities with the Contractor’s work.

**B. Maintain and Control Traffic.** See Traffic Control Plan.

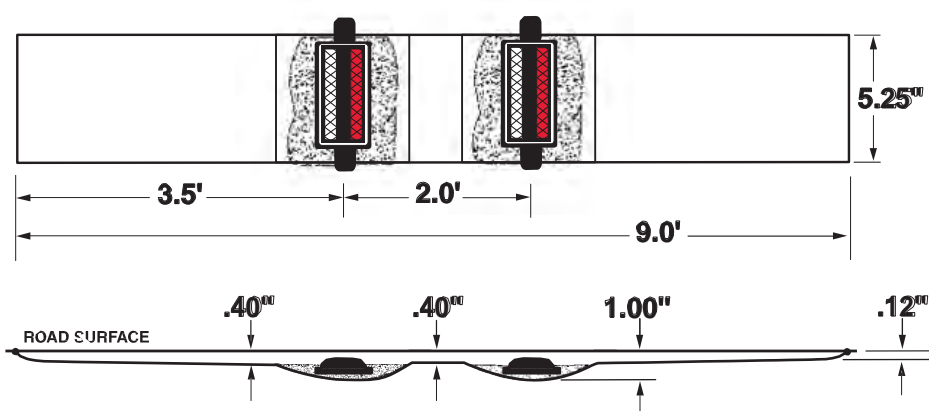
**C. Installation.** Install IPMs in recessed grooves cut into the final course of asphalt pavement according to the manufacturer’s recommendations. Do not cut the grooves until the pavement has cured sufficiently to prevent tearing or raveling. Cut installation grooves using diamond blades on saws that accurately control groove dimensions. Remove all dirt, grease, oil, loose or unsound layers, and any other material from the marker area which would reduce the bond of the adhesive. Maintain pavement surfaces in a clean condition until placing markers.

Prepare the pavement surfaces, and install the markers in the recessed groove according to the drawing below. Use an approved snowplowable epoxy adhesive. Ensure that the adhesive bed area is equal to the bottom area of the marker, and apply adhesive in sufficient quantity to force excess out around the entire perimeter of the marker. Use materials, equipment, and construction procedures that ensure proper adhesion of the markers to the pavement surface according to the manufacturer’s recommendations. Remove all excess adhesive from in front of the reflective faces. If any adhesive or foreign matter cannot be removed from the reflective faces, or if any marker fails to properly adhere to the pavement surface, remove and replace the marker at no additional cost to the Department.



**D. Location and Spacing.** Install the markers in the pattern for high reflectivity with two (2) IPMs per groove. Locate and space markers as shown in the current standard drawings or sepias (note: use Inlaid Pavement Markers wherever Type V Pavement Markers are called for). Do not install markers on bridge decks. Do not install a marker on top of a pavement joint or crack. Offset the recessed groove a minimum of 2 inches from any longitudinal pavement joint or crack and at least one inch from the

painted stripe, ensuring that the finished line of markers is straight with minimal lateral deviation. Give preference to maintaining the 2-inch offset between recessed groove and joint as opposed to keeping the line of markers straight.



Place inlaid markers as much in line with existing pavement striping as possible. Place markers installed along an edge line or channelizing line so that the near edge of the plastic housing is no more than one inch from the near edge of the line. Place markers installed along a lane line between and in line with the dashes. Do not place markers over the lines except where the lines deviate visibly from their correct alignment, and then only after obtaining the Engineer's prior approval of the location.

If conflicts between recessed groove placement in relation to pavement joint and striping cannot be resolved, obtain the Engineer's approval to eliminate the marker or revise the alignment.

**E. Disposal of Waste.** Dispose of all removed asphalt pavement, debris, and other waste at sites off the right of way obtained by the Contractor at no additional cost to the Department. See Special Note for waste and Borrow.

**F. Restoration.** Be responsible for all damage to public and/or private property resulting from the work. Restore all damaged features in like kind materials and design at no additional cost to the Department.

**G. On-Site Inspection.** Make a thorough inspection of the site prior to submitting a bid and be thoroughly familiar with existing conditions so that the work can be expeditiously performed after a contract is awarded. The Department will consider submission of a bid as evidence of this inspection having been made and will not honor any claims for money or grant Contract time extensions resulting from site conditions.

**H. Caution.** Do not take information shown on the drawings and in this proposal and the types and quantities of work listed as an accurate or complete evaluation of the material and conditions to be encountered during construction, but consider the types and quantities of work listed as approximate only. 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 or extension of Contract time if the conditions encountered are not in accordance with the information shown.

#### **IV. MEASUREMENT**

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

**B. “INLAID PAYMENT MARKER”** shall be measured as each. One (1) installation of “INLAID PAVEMENT MARKER” will consist of grooving the pavement, removing asphalt cuttings and debris, preheating pavement to remove moisture, adhesives, and installation of two (2) markers with all lenses in accordance with this note.

**Note: Each pay item of Inlaid Pavement Marker will require two markers.**

#### **V. PAYMENT**

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

**B. Inlaid Pavement Markers.** The Department will make payment for the completed and accepted quantity of completely installed “INLAID PAVEMENT MARKERS” at the Contract unit price, each. Accept payment as full compensation for all labor, equipment, materials, and incidentals to accomplish this work to the satisfaction of the Engineer. A system of one (1) groove and two (2) markers shall be paid as one “INLAID PAVEMENT MARKER”. The bid item “INLAID PAVEMENT MARKER” shall be used regardless of the color and type of lenses required.

## SPECIAL NOTE FOR INTELLIGENT COMPACTION OF ASPHALT MIXTURES

This Special Note will apply when indicated on the plans or in the proposal. Section references herein are to the Department's Standard Specifications for Road and Bridge Construction current edition.

- 1.0 DESCRIPTION.** Provide and use Intelligent Compaction (IC) Rollers for compaction of all asphalt mixtures.
- 2.0 MATERIALS AND EQUIPMENT.** In addition to the equipment specified in Subsection 403.02, a minimum of one (1) IC roller is to be used on the project at all times. The Contractor may elect to only use one (1) IC roller for compaction as the breakdown or intermediate roller. All IC rollers will meet the following minimum characteristics:
- 1) Are self propelled double-drum vibratory rollers equipped with accelerometers mounted in or about the drum to measure the interactions between the rollers and compacted materials in order to evaluate the applied compactive effort. The IC rollers must have the approval of the Engineer prior to use. Examples of rollers equipped with IC technology can be found at [www.IntelligentCompaction.com](http://www.IntelligentCompaction.com).
  - 2) Are equipped with non-contact temperature sensors for measuring pavement surface temperatures.
  - 3) The output from the roller is designated as the IC-MV which represents the stiffness of the materials based on the vibration of the roller drums and the resulting response from the underlying materials.
  - 4) Are equipped with integrated on-board documentation systems that are capable of displaying real-time color-coded maps of IC measurement values including the stiffness response values, location of the roller, number of roller passes, machine settings, together with the material temperature, speed and the frequency and amplitude of roller drums. Ensure the display unit is capable of transferring the data by means of a USB port.
  - 5) Are equipped with a mounted Global Positioning System GPS radio and receiver either a Real Time Kinematic (RTK-GPS) or Global Navigational Satellite System (GNSS) units that monitor the location and track the number of passes of the rollers. Accuracy of the positioning system is to be a minimum of 12 inches.
- 3.0 WORK PLAN.** Submit to the Engineer an IC Work Plan at the Preconstruction Conference and at least 2 weeks prior to the beginning construction. Describe in the work plan the following:
1. Compaction equipment to be used including:
    - Vendor(s)
    - Roller model(s),
    - Roller dimensions and weights,
    - Description of IC measurement system,
    - GPS capabilities,
    - Documentation system,
    - Temperature measurement system, and
    - Software.
  2. Roller data collection methods including sampling rates and intervals and data file types.
  3. Transfer of data to the Engineer including method, timing, and personnel responsible. Data transfer shall occur at minimum twice per day or as directed by the Engineer, and is to be either electronic or digital. If the contractor elects to use a proprietary real time cloud data collecting and distribution system (ex. Visionlink) the Cabinet requests an the ability to access the data through this service.
  4. Provide the Engineer with a new laptop computer with the following minimum requirements: Windows 7 Pro 64bit, 2.0GHz processor, 32GB RAM, 500GB hard drive, DVD drive (reads and writes DVD/CD), and 14 inch display. **The Cabinet retains possession of the equipment upon completion of the project.**
  5. Provide the Section Engineer the following new GPS survey equipment; this is a sole source item to ensure compatibility with the Cabinet's existing equipment, **The Cabinet retains possession of the equipment upon completion of the project:**

Item	Part No.	Description	Quantity
1	R10-001-60	Trimble R10, internal 410-470 MHz radio	2
2	TSC3-01-1120	Trimble TSC3, w/Trimble Access, with internal radio QWERTY Keypad	1
3	SA-ROADS-P	Trimble Access – Roads Perpetual License	1
4	43169-00	Rod - 2.0m Carbon Fiber Range Pole with Bipod	1
5	82758-00	Trimble TSC3 Accessory - Range Pole Bracket	1
6	74450-14	TDL 450H Field Battery Charger Kit	1
7	74450-96	TDL 450H – 35W Radio System Kit; 450-470 MHz	1
8	12178	Tripod - Wooden Medium Duty	1
9	74450-50-70	Antenna kit with 1.8m mast	1
10	28959-00	Tripod-Adjustable height 2M for GPS base	1

6. Training plan and schedule for roller operators, project foreman, project surveyors, and Cabinet personnel; including both classroom and field training. Training should be conducted at least 1 week before beginning IC construction. The training is to be performed by a qualified representative(s) from the IC Roller manufacture(s) to be used on the project.

**4.0 CONSTRUCTION.** Do not begin work until the Engineer has approved the IC submittals and the IC equipment.

Follow requirements established in Section 400 for production and placement, materials, equipment, acceptance plans and adjustments except as noted or modified in this Specification. Provide the Engineer at least one day’s notice prior to beginning construction or prior to resuming production if operations have been temporarily suspended. Ensure paving equipment complies with all requirements specified in Section 400. The IC roller temperatures will be evaluated by the Department with the data from a Paver Mounted Infrared Temperature Gauge.

**A. Pre-Construction Test Section(s) Requirements**

1. Prior to the start of production, ensure the proper setup of the GPS, IC roller(s) and the rover(s) by conducting joint GPS correlation and verification testing between the Contractor, GPS representative and IC roller manufacturer using the same datum.

1. Ensure GPS correlation and verification testing includes the following minimum processes:

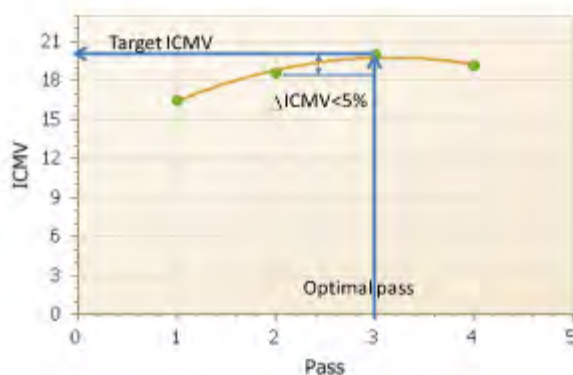
- a. Establish the GPS system to be used either one with a base station or one with mobile receivers only. Ensure all components in the system are set to the correct coordinate system; then,
- b. Verify that the roller and rover are working properly and that there is a connection with the base station; then,
- c. Record the coordinates of the two edges where the front drum of the roller is in contact with the ground from the on-board, color-coded display; then,
- d. Mark the locations of the roller drum edges and move the roller, and place the mobile receiver at each mark and record the readings; then,

2. Compare coordinates between the roller and rover receivers. If the coordinates are within 12.0 in. of each other, the comparison is acceptable. If the coordinates are not within 12.0 in., diagnose and perform necessary corrections and repeat the above steps until verification is acceptable.
3. Do not begin work until acceptable GPS correlation and verification has been obtained.
4. The Contractor and the Department should conduct random GPS verification testing during production to ensure data locations are accurate. The recommended rate is once per day with a requirement of at least once per week.
5. All acceptance testing shall be as outlined in Standard Specifications section 400.

**B. Construction Test Section(s) Requirements**

Construct test section(s) at location(s) agreed on by the Contractor and the Engineer within the project limits. The test section is required to determine a compaction curve of the asphalt mixtures in relationship to number of roller passes and to the stiffness of mixture while meeting the Department in-place compaction requirements. All rollers and the respective number of passes for each is to be determined via control strip each time a material change, equipment change or when the Engineer deems necessary.

Conduct test section(s) on every lift and every asphalt mixture. Ensure test section quantities of 500 to 1,000 tons of mainline mixtures. Operate IC rollers in the low to medium amplitude range and at the same settings (speed, frequency) throughout the section while minimizing overlapping of the roller, **the settings are to be used throughout the project with no changes**. After each roller pass, the qualified technician from the contractor observed by the Department will use a nondestructive nuclear gauge that has been calibrated to the mixture to estimate the density of the asphalt at 10 locations uniformly spaced throughout the test section within the width of a single roller pass. The density readings and the number of roller passes needed to achieve the specified compaction will be recorded. The estimated target density will be the peak of the average of the nondestructive readings within the desired compaction temperature range for the mixture. The IC roller data in conjunction with the Veda software will create an IC compaction curve for the mixture. The target IC-MV is the point when the increase in the IC-MV of the material between passes is less than 5 percent on the compaction curve. The IC compaction curve is defined as the relationship between the IC-MV and the roller passes. A compaction curve example is as follows:



Subsequent to the determination of the target IC-MV, compact an adjoining > 250 < 500 tons section using same roller settings and the number of estimated roller passes and allow the Department to verify the compaction with the same calibrated nondestructive nuclear gauge following the final roller pass. **The Department will obtain cores at 10 locations (No cores for calibration are to be taken in the surface layer, use non-destructive density results only!!)** uniformly spaced throughout the test section within the width of the single roller. Obtain GPS measurement of the core locations with a GPS rover. Use the Veda software to perform least square linear regression between the core data and IC-MV in order to correlate the production IC-MV values to the Department specified in-place air voids. A sample linear regression curve example is as follows.



**C. Construction Requirements**

Use the IC roller on all lifts and types of asphalt within the limits of the project.

Ensure the optimal number of roller passes determined from the test sections has been applied to a minimum coverage of 80% of the individual IC Construction area. Ensure a minimum of 75% of the individual IC Construction area meets the target IC-MV values determined from the test sections.

Do not continue paving operations if IC Construction areas not meeting the IC criteria are produced until they have been investigated by the Department. Obtain the Engineer’s approval to resume paving operations. Non-IC rollers are allowed to be used as the third roller on the project; one of the breakdown or the finish rollers is to be equipped with IC technology.

IC Construction areas are defined as subsections of the project being worked continuously by the Contractor. The magnitude of the IC Construction areas may vary with production but must be at least 750 tons per mixture for evaluation. Partial IC Construction areas of < 750 tons will be included in the previous area evaluation. IC Construction areas may extend over multiple days depending on the operations.

The IC Construction Operations Criteria does not affect the Department’s acceptance processes for the materials or construction operations

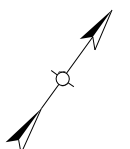
**5.0 MEASUREMENT.** The Department will measure the total tons of asphalt mixtures compacted using the IC roller(s). Compaction is to be performed by a minimum of one IC roller, material compacted by rollers not equipped with properly functioning IC equipment will not be accepted for payment of the bid item asphalt mixtures IC rolled. Use of non-IC rollers can be accepted on small areas due to equipment malfunctions at the written approval of the Engineer. Paving operations should be suspended for equipment malfunctions that will extend over three days of operation.

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

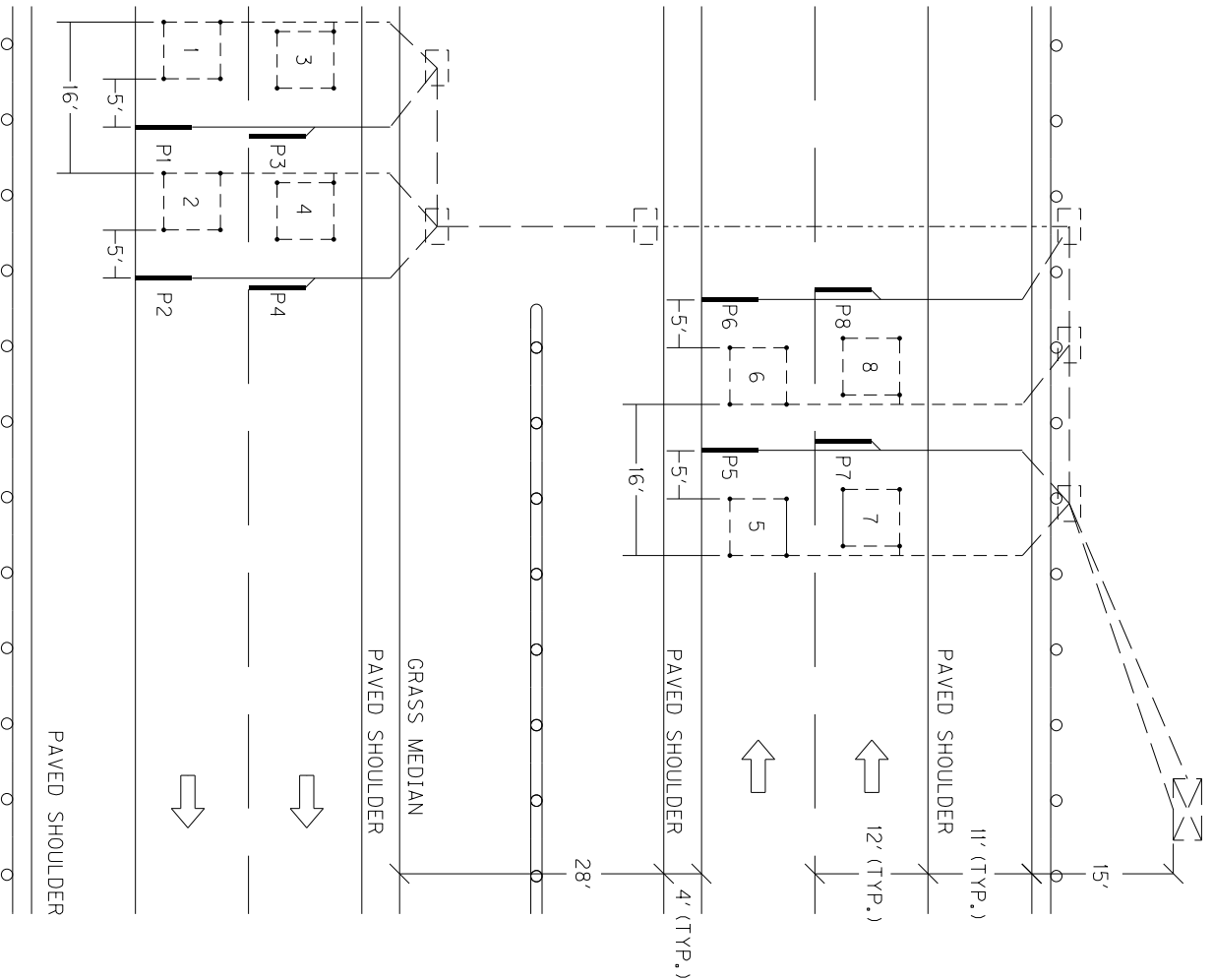
1. Payment is full compensation for all work associated with providing IC equipped rollers, all required survey equipment and computer, transmission of electronic data files, two copies of IC roller manufacturer software, and training.
2. Delays due to GPS satellite reception of signals to operate the IC equipment or IC roller breakdowns will not be considered justification for contract modifications or contract extensions.

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
24781EC	Intelligent Compaction for Asphalt	TON

CLARK CO. TR 9000 m.p. 1.33  
LAT/LONG N 38.005503, W 84.137311  
STATION P20



EX. CABINET  
(DO NOT DISTURB)



THE SITE LOCATION IS APPROXIMATE AND WILL BE DETERMINED IN THE FIELD AND APPROVED BY DIVISION OF PLANNING PERSONNEL PRIOR TO ANY CONSTRUCTION.

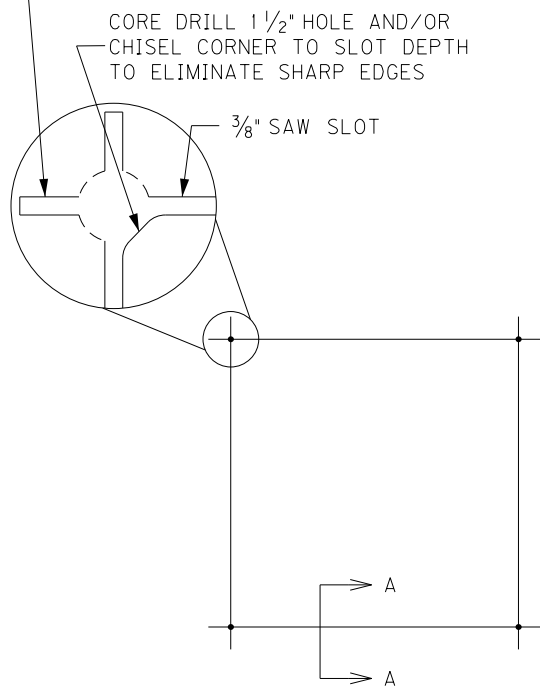
DO NOT DISTURB EX. CABINET, CONDUIT, OR JUNCTION BOXES.

REMOVE EXISTING PIEZOELECTRIC SENSOR (PIEZO) CABLES FROM CONDUIT, JUNCTION BOXES AND CABINET.

PIEZOS SHALL BE INSTALLED 5' FROM THE EDGE OF EXISTING LOOPS WITH THE EDGE OF EACH PIEZO FLUSH WITH THE EDGE OF THE CORRESPONDING DRIVING LANE. REUSE EX. CONDUITS AND JUNCTION BOXES TO INSTALL PIEZOS SPlice FREE TO THE CABINET. A MINIMUM OF 2' OF WIRE FOR EACH SENSOR SHALL BE COILED INSIDE EACH JUNCTION BOX AND A MINIMUM OF 4' OF WIRE FOR EACH SENSOR SHALL BE COILED INSIDE THE CABINET. ALL PIEZOS SHALL BE LABELED IN ALL JUNCTION BOXES AND CABINET. DIVISION OF PLANNING PERSONNEL WILL CONNECT THE PIEZOS INSIDE THE CABINET.

\* REFER TO SECTION 3.14 (LOOPS - EXISTING) IN THE MATERIAL, INSTALLATION, AND BID ITEM NOTES FOR PERMANENT TRAFFIC DATA ACQUISITION STATIONS IN THIS PROPOSAL REGARDING TREATMENT OF EXISTING LOOPS. BID ITEMS FOR ADDITIONAL LOOP SAW SLOT AND FILL AND LOOP WIRE HAVE BEEN INCLUDED IN THIS CONTRACT FOR USE ON AN AS-NEEDED BASIS.

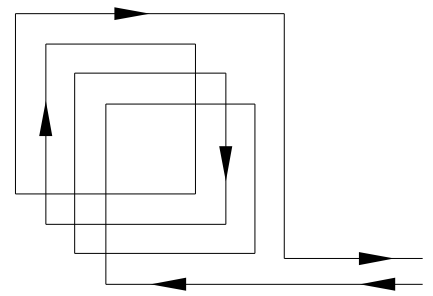
IF REQUIRED, ALL LOOPS SHALL BE 6'x6' SQUARE AND SHALL BE INSTALLED 16' FROM LEADING EDGE TO LEADING EDGE, 5' FROM EACH PIEZO AS SHOWN. LOOPS SHALL BE INSTALLED SPlice-FREE TO THE CABINET AND A MINIMUM OF 2' OF WIRE FOR EACH LOOP SHALL BE COILED AND LABELED INSIDE EACH JUNCTION BOX AND CABINET. DIVISION OF PLANNING PERSONNEL WILL CONNECT THE LOOPS INSIDE THE CABINETS.



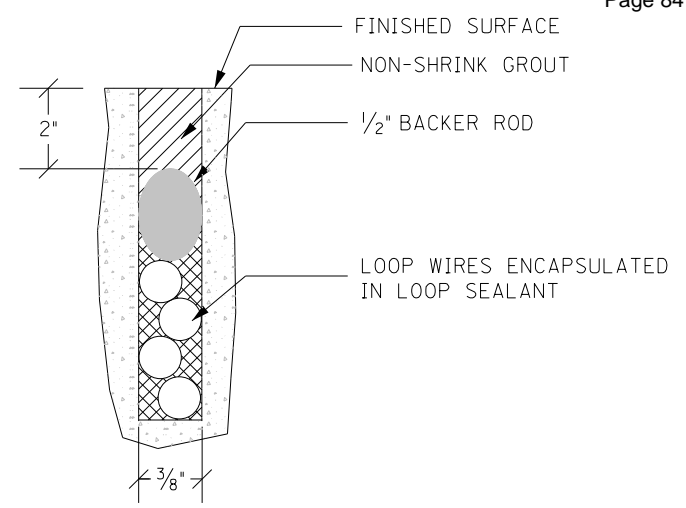
SAW CUT PLAN

UNLESS SPECIFIED OTHERWISE, ALL LOOPS SHALL BE 6' x 6' SQUARE, CENTERED IN EACH LANE, WITH FOUR TURNS OF 14 AWG LOOP WIRE.

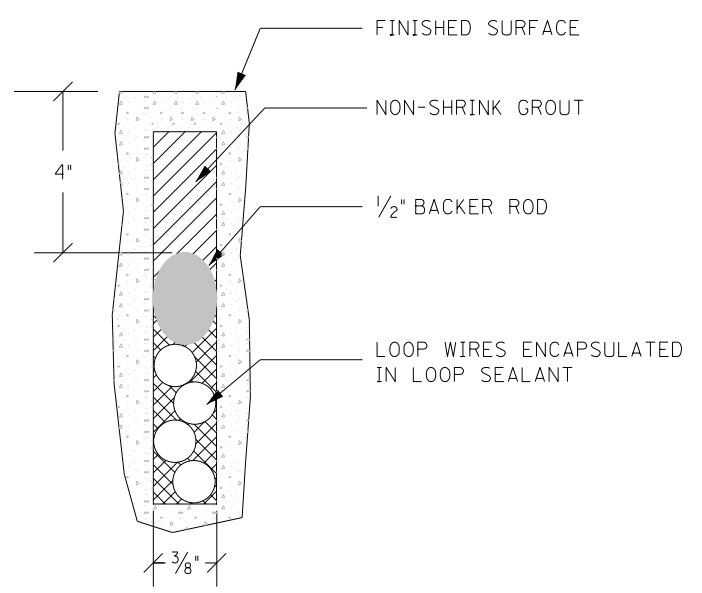
ADJACENT SAW SLOTS SHALL BE A MINIMUM OF 12" APART.



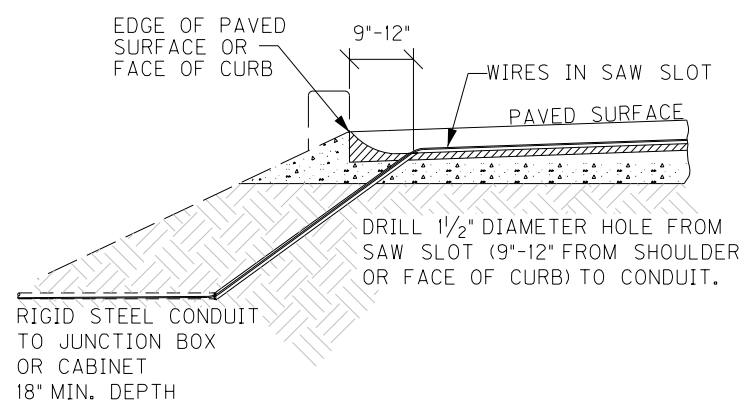
WIRING PLAN



SECTION A-A (CONCRETE)

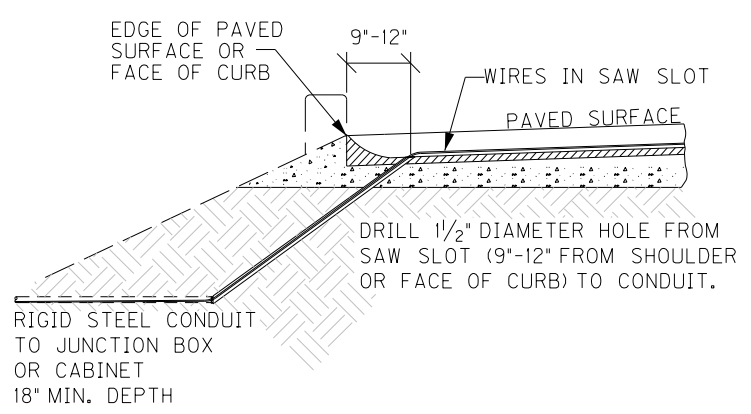
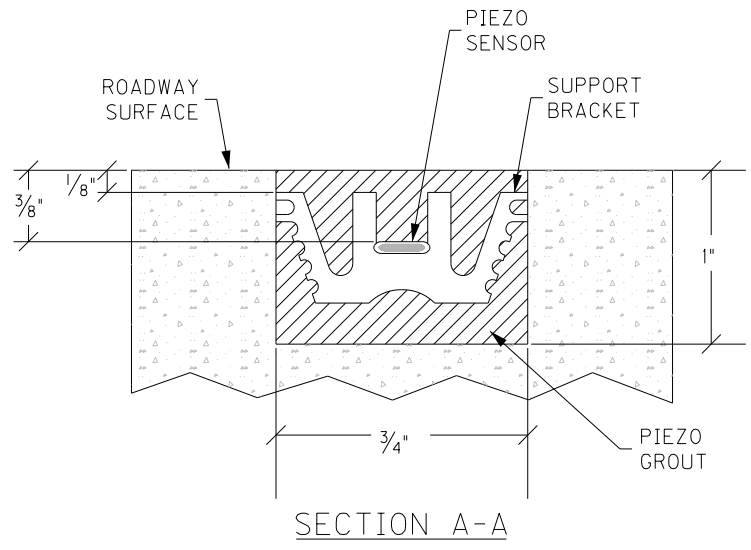
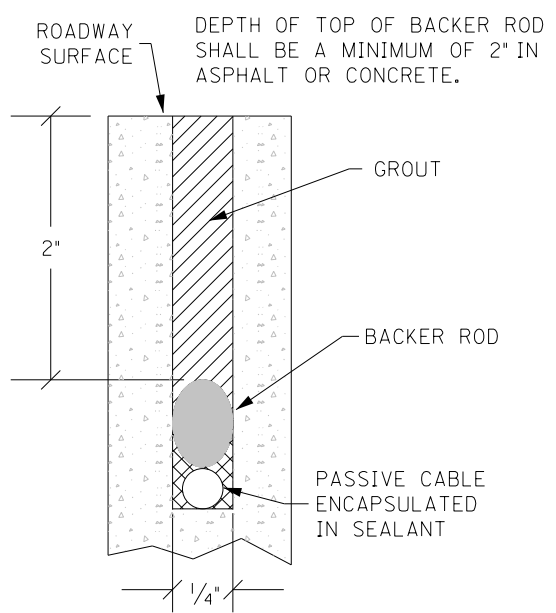
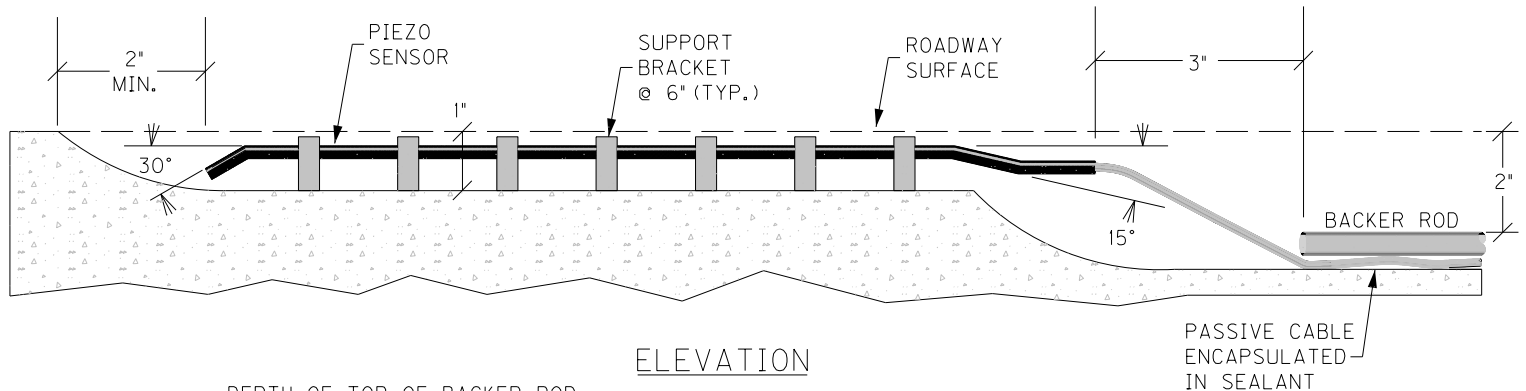
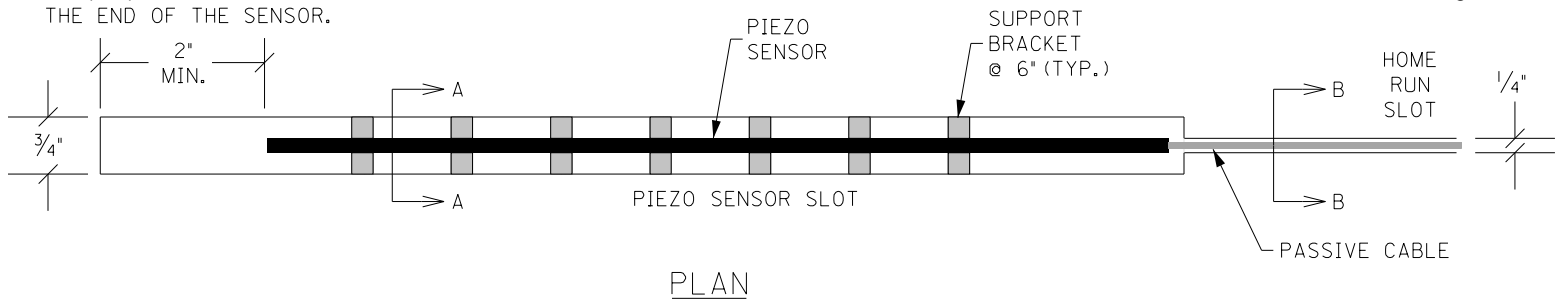


SECTION A-A (ASPHALT)



SAW SLOT EDGE OF PAVEMENT TRANSITION

INDUCTIVE LOOP DETECTOR



PIEZOELECTRIC SENSOR INSTALLATION

Permanent Traffic Data Acquisition Station  
Estimate Of Quantities

Revised November, 2012

**PERMANENT TRAFFIC DATA ACQUISITION STATIONS  
ESTIMATE OF QUANTITIES**

Bid Item Code	Description	Unit	Quantity
2562	SIGNS	SQ FT	
2650	MAINTAIN AND CONTROL TRAFFIC	LP SUM	
2775	FLASHING ARROW	EACH	
4791	CONDUIT ¾ INCH	LIN FT	
4793	CONDUIT 1 ¼ INCH	LIN FT	
4795	CONDUIT 2 INCH	LIN FT	
4810	JUNCTION BOX	EACH	
4811	JUNCTION BOX TYPE B	EACH	
4820	TRENCHING AND BACKFILLING	LIN FT	
4821	OPEN CUT ROADWAY	LIN FT	
4829	PIEZOELECTRIC SENSOR	EACH	8
4830	LOOP WIRE	LIN FT	2900*
4850	CABLE NO. 14/1 PAIR	LIN FT	
4871	POLE – 35’ WOODEN	EACH	
4895	LOOP SAW SLOT AND FILL	LIN FT	400*
4899	ELECTRICAL SERVICE	EACH	
20213EC	INSTALL PAD MOUNT ENCLOSURE	EACH	
20359EC	GALV STEEL CABINET	EACH	
20360ES818	WOOD POST	EACH	
20391ES835	JUNCTION BOX TYPE A	EACH	
20392ES835	JUNCTION BOX TYPE C	EACH	
20468EC	JUNCTION BOX 10x8x4	EACH	
21543EN	BORE AND JACK PIPE – 2 IN	LIN FT	
23206EC	INSTALL CONTROLLER CABINET	EACH	

**\* REFER TO SECTION 3.14 (LOOPS - EXISTING) IN THE MATERIAL INSTALLATION, AND BID ITEM NOTES FOR PERMANENT TRAFFIC DATA ACQUISITION STATIONS REGARDING TREATMENT OF EXISTING LOOPS. BID ITEMS FOR (EXTRA) LOOP SAW SLOT AND FILL AND LOOP WIRE HAVE BEEN INCLUDED IN THIS CONTRACT FOR USE ON AN AS-NEEDED BASIS.**

## **MATERIAL, INSTALLATION, AND BID ITEM NOTES FOR PERMANENT TRAFFIC DATA ACQUISITION STATIONS**

---

### **1. DESCRIPTION**

Except as specified in these notes, all work shall consist of furnishing and installing all materials necessary for permanent data acquisition station equipment installation(s) and shall be performed in accordance with the current editions of:

- The Contract
- Division of Planning Standard Detail Sheets
- Kentucky Transportation Cabinet, Department of Highways, *Standard Specifications for Road and Bridge Construction*
- Kentucky Transportation Cabinet, Department of Highways, Standard Drawings
- National Fire Protection Association (NFPA) 70: *National Electrical Code*
- Institute of Electrical and Electronic Engineers (IEEE), *National Electrical Safety Code*
- Federal Highway Administration, *Manual on Uniform Traffic Control Devices*
- American Association of State Highway and Transportation Officials (AASHTO), *Roadside Design Guide*.
- Standards of the utility company serving the installation, if applicable

The permanent traffic data acquisition station layout(s) indicate the extent and general arrangement of the proposed installation and are for general guidance. Any omission or commission shown or implied shall not be cause for deviation from the intent of the plans and specifications. 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 of Highways (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. If any modifications of the plans or specifications are considered necessary by the Contractor, details of such modifications and the reasons, therefore, shall be submitted in writing to the Engineer for written approval prior to beginning such modified work.

The Contractor shall contact all utility companies and the district utility agent prior to beginning construction to insure proper clearance and shielding from existing and proposed utilities. The Contractor shall use all possible care in excavating on this project so as not to disturb any existing utilities whether shown on the plans or not shown on the plans. Any utilities disturbed or damaged by the Contractor during construction shall be replaced or

Material, Installation, and Bid Item Notes for  
Permanent Traffic Data Acquisition Stations

Revised November, 2012

repaired to original condition by the Contractor at no cost to the department. If necessary, to avoid existing utilities, the Contractor shall hand dig areas where poles or conduit cross utilities.

The Contractor shall be responsible for all damage to public and/or private property resulting from his work.

The Contractor shall inspect the project site prior to submitting a bid and shall be thoroughly familiarized with existing conditions. Submission of a bid will be considered an affirmation of this inspection having been completed. The Department will not honor any claims resulting from site conditions.

## 2. MATERIALS

All proposed materials shall be approved prior to being utilized. The Contractor shall submit for material approval an electronic file of descriptive literature, drawings and any requested design data for the proposed materials. After approval, no substitutions of any approved materials may be made without the written approval of the Engineer.

Materials requiring sampling shall be made available a sufficient time in advance of their use to allow for necessary testing.

### 2.1. Anchoring

#### 2.1.1. Anchor and Anchor Rod

Anchor, except rock anchor, shall be expanding type, with a minimum area of 135 square inches.

Anchor rod shall be galvanized steel, double-eye, have a minimum diameter of 5/8 inches, and a minimum length of 84 inches. Minimum holding capacity shall be 15,400 lbs.

Rock anchor shall be galvanized steel, triple-eye, expanding type, with a minimum diameter of 3/4 inch, a minimum 53 inches long, and a minimum tensile strength of 23,000 lb.

#### 2.1.2. Guy Wire and Guy Guard

Guy wire shall be Class A, Zinc-coated, 3/8 inch diameter, high strength grade steel (minimum 10,800 lb.) and galvanized per ASTM A475. Guy guard shall be 8' long, fully-rounded, yellow, and able to be securely attached to the guy wire.

#### 2.1.3. Strandwise for Guy Wire

Strandwise for guy wire shall be 3/8 inch and rated to hold a minimum of 90% of the rated breaking strength (RBS) of the strand used.

### 2.2. Asphalt

Asphalt shall be a minimum CL2 Asph Surf 0.38C PG64-22 and conform to the *Standard Specifications for Road and Bridge Construction*.

### 2.3. Backer Rod

Backer rod shall be 1/2 inch diameter, closed cell polyethylene foam and shall meet or exceed the following physical properties:

- Density (average): 2.0 lbs/cu.ft. (minimum): ASTM D 1622 test method
- Tensile Strength: 50 PSI (minimum): ASTM D 1623 test method
- Compression Recovery: 90% (minimum): ASTM D 5249 test method
- Water Absorption: 0.03 gm/cc (maximum): ASTM C 1016 test method

## **2.4. Cabinets**

### **2.4.1. Galvanized Steel Cabinet**

Galvanized Steel Cabinet shall be constructed of 16 or 14 gauge galvanized steel and shall meet or exceed the industry standards set forth by UL 50 and NEMA 3R. The finish shall be an ANSI 61 gray polyester powder finish inside and out over the galvanized steel. Cabinet shall have minimum inside dimensions of 20 inches high by 20 inches wide by 8 inches deep.

The cabinet shall be equipped with the following:

- Drip shield top
- Seam-free sides, front, and back, to provide protection in outdoor installations against rain, sleet, and snow
- Hinged cover with 16 gauge galvanized steel continuous stainless steel pin.
- Cover fastened with captive plated steel screws, knob or latch
- Hasp and staple for padlocking
- No gaskets or knockouts
- Back panel for terminal block installation
- Post mounting hardware
- Terminal Blocks

### **2.4.2. Anchor Bolt for Pad Mounted Cabinet**

Anchor bolt for pad mounted cabinet shall be galvanized steel with minimum dimensions of 3/8 inch by 6 inches.

## **2.5. Concrete**

Concrete shall be Class A and conform to the *Standard Specifications for Road and Bridge Construction*.

## **2.6. Conduit and Conduit Fittings**

Conduit and conduit fittings shall be rigid steel unless otherwise specified.

Conduit shall be zinc galvanized inside and out and conform to the NEC, UL Standard 6, and ANSI C-80.1.

Rigid Steel Conduit Fittings shall be galvanized inside and out and conform to the NEC, UL Standard 514B, and ANSI C-80.4. Intermediate Metal Conduit (IMC) will not be approved as an acceptable alternative to rigid steel conduit.

## **2.7. Conduit sealant**

Conduit sealant shall be weather-, mold-, and mildew-resistant and chemically resistant to gasoline, oil, dilute acids and bases. Conduit sealant shall be closed cell type and shall meet or exceed the following properties:

- Cure Time 20 minutes max.
- Density 64.4 kg/m<sup>3</sup>; 6 lbs/ft<sup>3</sup>
- Compressive Strength (ASTM 1691) 13.8 MPa; 330 or 300 psi

- Tensile Strength (ASTM 1623) 15.9 MPa; 270 or 250 psi
- Flexural Strength (ASTM D790) 14.5 MPa; 460 or 450 psi
- Service Temperature -20 to 200 F

## **2.8. Electrical Service Meter Base**

Electrical service meter base shall meet or exceed all requirements of the National Electrical Code and the local utility providing the electrical service.

## **2.9. Electrical Service Disconnect**

Electrical service disconnect shall meet or exceed all requirements of the National Electrical Code and the local utility providing the electrical service.

## **2.10. Flashing Arrow**

Flashing Arrow shall conform to the *Standard Specifications for Road and Bridge Construction*.

## **2.11. Ground Fault Circuit Interrupter (GFCI) Receptacle**

Ground Fault Circuit Interrupter Receptacle shall be 2-pole, 3-wire, 20 Amp, 125 Volt, 60 Hz, NEMA 5-20R configuration and meet or exceed the following standards and certifications:

- NEMA WD-1 and WD-6
- UL 498 and 943
- NOM 057
- ANSI C-73

This item shall include a UL listed, 4 inch x4 inch x 2<sup>1</sup>/<sub>8</sub> inch box with ¾ inch side and end knockouts and a 1½ inches deep, single-receptacle cover to house the GFCI receptacle. Box and cover shall be hot rolled, galvanized steel with a minimum thickness of 0.62 inches.

## **2.12. Grounding**

### **2.12.1. Ground Rod**

Ground Rod shall be composite shaft consisting of a pure copper exterior (5 mil minimum) that has been inseparably molten welded to a steel core. Ground Rod shall have a minimum diameter of 5/8 inch, a minimum length of 8 feet and shall be manufactured for the sole purpose of providing electrical grounding.

### **2.12.2. Ground Rod Clamp**

Ground rod shall be equipped with a one piece cast copper or bronze body with a non-ferrous hexagonal head set screw and designed to accommodate a 10 AWG solid through 2 AWG stranded grounding conductor.

## **2.13. Grout**

### **2.13.1. Grout for Inductive Loop Installation**

Grout for inductive loop installation shall be non-shrink, shall meet the requirements of the *Standard Specifications for Road and Bridge Construction*,

and shall be included on the KYTC Division of Materials, *List of Approved Materials*.

### **2.13.2. Grout for Piezoelectric Sensor Installation**

Grout for piezoelectric sensor installation shall be per the piezoelectric sensor manufacturer's recommendation. Grout shall be suitable for installation in both asphalt and Portland cement pavements. Grout shall have a short curing time (tack free in ten minutes; open to traffic in forty minutes; and fully cured within sixty minutes) to prevent unnecessary lane closure time and should be of sufficient consistency to prevent running when applied on road surfaces with a drainage cross slope. Particulate matter within the grout shall not separate or settle and the grout shall not shrink during the curing process.

## **2.14. Hardware**

Except where specified otherwise, all hardware such as nuts, bolts, washers, threaded ends of fastening devices, etc. with a diameter less than 5/8 inch shall be passivated stainless steel, alloy type 316 or type 304. Stainless steel hardware shall meet ASTM F593 and F594 for corrosion resistance. All other nuts and bolts shall meet ASTM A307 and shall be galvanized.

### **2.14.1. Conduit Strap**

Conduit strap shall be double-hole, stainless steel, and sized to support specified conduit. Conduit strap shall attach to wood pole or post with two 2 ¼ inch wood screws.

### **2.14.2. Mounting Strap for Pole Mount Cabinet**

Mounting strap for pole mount cabinet shall be ¾ inch x 0.03 inch stainless steel; equipped with clips or buckles to securely hold strap.

### **2.14.3. Metal Framing Channel and Fittings**

Metal framing channel shall be 1 5/8 inches wide galvanized steel that conforms to ASTM A1011 and ASTM A653. One side of the channel shall have a continuous slot with in-turned edges to accommodate toothed fittings.

Fittings shall be punch pressed from steel plates and conform to ASTM A575 and the physical requirements of ASTM A1011.

## **2.15. Junction Box**

### **2.15.1. Junction Box Type A, B, or C**

Junction Box Type A, B, or C shall meet or exceed ANSI/SCTE 77-2007, Tier 15. Box shall have an open bottom. A removable, non-slip cover marked "PLANNING" shall be equipped with a lifting slot and attached with a minimum of two 3/8 inch stainless steel hex bolts and washers. Type A Box shall have nominal inside dimensions of 13 inches wide by 24 inches long by 18 inches deep. Type B Box shall have nominal inside dimensions of 11 inches wide by 18 inches long by 12

inches deep. Type C Box shall have nominal inside dimensions of 24 inches wide by 36 inches long by 30 inches deep.

### **2.15.2. Aggregate for Junction Box Type A, B, or C**

Aggregate for junction box type A, B, or C shall be gradation size no. 57 and conform to the *Standard Specifications for Road and Bridge Construction*.

### **2.15.3. Junction Box 10x8x4**

Junction Box Type 10x8x4 shall be constructed of a UV-stabilized, nonmetallic material or non-rusting metal and be weatherproof in accordance with NEMA 4X. Box shall be equipped with an overhanging door with a continuous durable weatherproof gasket between the body and door. Door shall be hinged with stainless steel screws, hinge(s) and pin(s) and shall be equipped with a stainless steel padlockable latch on the side opposite the hinge(s). Junction Box 10x8x4 shall have minimum inside dimensions of 10 inches high by 8 inches wide by 4 inches deep.

### **2.16. Maintain and Control Traffic**

Materials for the bid item Maintain and Control Traffic shall conform to the *Standard Specifications for Road and Bridge Construction*, and the KYTC Department of Highways *Standard Drawings*.

### **2.17. Piezoelectric Sensor**

Piezoelectric sensor (piezo) shall provide a consistent level voltage output signal when a vehicle axle passes over it, shall have a shielded transmission cable attached, and shall meet the following requirements:

- Dimensions: such that sensor will fit in a ¾ inch wide by 1 inch deep saw cut. Total length shall be 6 feet unless specified otherwise.
- Output uniformity: ± 7% (maximum)
- Typical output level range: 250mV (minimum) from a wheel load of 400 lbs.
- Working temperature range: -40° to 160° F.
- Sensor life: 30 million Equivalent Single Axle Loadings (minimum)

Shielded transmission cable shall be coaxial and shall meet the following requirements:

- RG 58C/U with a high density polyethylene outer jacket rated for direct burial
- Length shall be a minimum of 100 feet. Installations may exceed 100 feet so the piezo shall be supplied with a lead-in of appropriate length so that the cable can be installed splice-free from the piezo to the cabinet.
- Soldered, water resistant connection to the sensor.

One installation bracket for every 6 inches of sensor length shall also be supplied. Piezo shall be a RoadTrax BL Class I or approved equal.

### **2.18. Saw Slot Sealant**

Saw Slot Sealant shall be non-shrink, non-stringing, moisture cure, polyurethane

encapsulant suitable for use in both asphalt and concrete pavements. It shall provide a void-free encapsulation for detector loop cables and adequate compressive yield strength and flexibility to withstand heavy vehicular traffic and normal pavement movement.

The cured encapsulant shall meet or exceed the following:

- Hardness (Indentation): 35-65 Shore A, ASTM D2240
- Tensile Strength: 150 psi minimum, ASTM D412
- Elongation: 125% minimum 2 inch/minute pull, ASTM D412
- Tack-free Drying Time: 24 hours maximum, ASTM C679
- Complete Drying Time: 30 hours maximum, KM 64-447
- Chemical Interactions (seven day cure at room temperature, 24-hour immersion, KM 64-446):
  - Motor Oil: No effect
  - Deicing Chemicals: No effect
  - Gasoline: Slight swell
  - Hydraulic Brake Fluid: No effect
  - Calcium Chloride (5%): No effect

## **2.19. Seeding and Protection**

Material for Seeding and Protection shall be Seed Mixture Type I and conform to the *Standard Specifications for Road and Bridge Construction*.

## **2.20. Signs**

Materials for signs shall conform to the *Standard Specifications for Road and Bridge Construction*.

## **2.21. Splicing Materials**

### **2.21.1. Electrical Tape**

Electrical tape shall be a premium grade, UL-listed, all-weather, vinyl-insulating tape with a minimum thickness of 7 mil. Tape shall be flame retardant and resistant to abrasion, moisture, alkalis, acids, corrosion, and weather (including ultraviolet exposure).

### **2.21.2. Splice Kit**

Splice kit shall be inline resin-type and rated for a minimum of 600V. Resin shall be electrical insulating-type and shall provide complete moisture and insulation resistance.

## **2.22. Steel Reinforcing Bar**

Steel reinforcing bar shall be #5 and shall conform to the *Standard Specifications for Road and Bridge Construction*.

## **2.23. Terminal Block**

Terminal block shall be rated for a minimum of 300 V and have a minimum of six

terminal pairs with 9/16-inch nominal spacing (center to center) for connecting loop and piezoelectric sensor wires to cable assemblies. Terminal block shall have screw type terminal strips to accommodate wire with spade-tongue ends.

#### **2.24. Warning Tape**

Warning tape shall be acid and alkali resistant formulated for direct burial. Tape shall be a minimum of 3 inches wide by 4.0 mils (nominal) thick, and shall be permanently imprinted with a minimum 1 inch black legend on a red background warning of an electric line. Tape shall meet or exceed the following industry specifications:

- American Gas Association (AGA) 72-D-56
- American Petroleum Institute (API) RP 1109
- American Public Works Association (APWA) Uniform Color Code
- Department of Transportation (DOT) Office of Pipeline Safety USAS B31.8
- Federal Gas Safety Regulations S 192-321 (e)
- General Services Administration (GSA) Public Buildings Service Guide: PBS 4-1501, Amendment 2
- National Transportation Safety Board (NTSB) PSS 73-1
- Occupational Safety and Health Administration (OSHA) 1926.956 (c) (1)

#### **2.25. Wire and Cable**

All cable and wire shall be plainly marked in accordance with the National Electrical Code (NEC).

##### **2.25.1. Loop Wire**

Loop wire shall be 14 AWG, stranded, copper, single conductor, and shall conform to the International Municipal Signal Association (IMSA) Specification No. 51-7.

##### **2.25.2. Cable No. 14/1 Pair**

Cable No. 14/1 pair loop lead-in cable shall be 14 AWG, stranded, copper paired, electrically shielded conductors, and shall conform to IMSA 19-2.

##### **2.25.3. Grounding conductor**

Grounding conductor and bonding jumper shall be solid or stranded, 4 AWG bare copper.

##### **2.25.4. Service Entrance Conductor**

Service entrance conductor shall be stranded, copper, Type USE-2, sized as required to comply with the NEC.

##### **2.25.5. Terminal for electrical wire or cable**

Terminal for electrical wires or cables shall be insulated, solderless, spade tongue terminals of correct wire and stud size. Terminal for electrical wires or cables shall be incidental to the wire or cable (including piezoelectric sensor transmission cable) to be connected to terminal strips.

**2.26. Wood Post**

Wood post shall be Southern Pine pretreated to conform to the American Wood Preservers' Association (AWPA) C-14 and shall have minimum dimensions of 4 inches by 4 inches by 8 feet long (for Galvanized Steel Cabinet) or 4 feet long (for Junction Box 10x8x4), sawed on all four sides with both ends square.

**2.27. Wooden Pole**

Wooden pole shall be a Class IV wood pole of the length specified and shall conform to the *Standard Specifications for Road and Bridge Construction* except the pole shall be treated in accordance with AWPA P9 Type A.

### 3. CONSTRUCTION METHODS

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

After 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 any concerns and answer any questions that the Contractor may have before beginning the work.

The Division of Planning Equipment Management Team (502-564-7183) shall be notified a minimum of seven days before any work pertaining to these specifications begins to allow their personnel the option to be present during installation.

Unless otherwise specified, installed materials shall be new.

Construction involving the installation of loops or piezoelectric sensors shall not be performed when the temperature of the pavement is less than 38°F.

A final inspection will be performed by a member of the Central Office Division of Planning equipment staff after the installation is complete to verify that the installation is in compliance with the plans and specifications.

Any required corrective work shall be performed per the *Standard Specifications for Road and Bridge Construction*.

#### 3.1. Anchoring

Furnish: Anchor, anchor rod, guy wire, strand vise, guy guard.

Anchor shall be installed in relatively dry and solid soil. Rock anchor shall be installed in solid rock. Excavate the hole at a 45° to 60° angle in line with the guy (hole size shall be slightly larger than the expanded anchor – see manufacturer's recommendation). Attach rod to anchor, install assembly into hole, and expand anchor. Backfill and tamp entire disturbed area. The effectiveness of the anchor is dependent upon the thoroughness of backfill tamping. Attach guy to strand vise on pole and anchor rod and tighten to required tension. Install guy guard on guy.

#### 3.2. Bore and Jack Pipe – 2”

Furnish: Steel Encasement Pipe, 2”

Bore and jack pipe – 2” shall conform to the Section 706 of the *Standard Specifications for Road and Bridge Construction*.

### **3.3. Cleanup and Restoration**

Furnish: Seed Mix Type 1 (as required); fertilizer (as required); agricultural limestone (as required); mulch or hydromulch (as required); tackifier (as required).

The Contractor shall be responsible for repairing any 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 shall include filling any ruts and leveling ground appropriately. Contractor shall dispose of all waste and debris off the project. Sow all disturbed earthen areas with Seed Mix Type 1 per Section 212 of the *Standard Specifications for Road and Bridge Construction*. All materials and labor necessary for cleanup and restoration shall be considered incidental to other bid items.

### **3.4. Conduit**

Furnish: Conduit; conduit fittings; bushings (grounding where required); LB condulets (as required); weatherheads (as required); conduit straps; hardware; conduit sealant.

Conduit that may 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 18 inches below grade.

Conduit ends shall be reamed to remove burrs and sharp edges. Cuts shall be square and true so that the ends will butt together for the full circumference of the conduit. Tighten couplings until the ends of the conduit are brought together. Do not leave exposed threads. Damaged portions of the galvanized surfaces and untreated threads resulting from field cuts shall be painted with an Engineer-approved, 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.

Contractor shall install a bushing (grounding bushing where required) on both ends of all conduits. Cap spare conduits on both ends with caps or conduit sealant.

Conduit openings in junction boxes and cabinets shall be waterproofed with a flexible, removable conduit sealant, working it around the wires, and extending it a minimum 1 inch into the end of the conduit.

After the conduit has been installed and prior to backfilling, the conduit installation shall be inspected and approved by the Engineer.

### **3.5. Electrical Service**

Furnish: Meter base, service disconnect, wire, GFCI AC duplex receptacle with box and cover; conduit, conduit fittings, bushings (grounding where required); LB condulets (as required); weatherhead; conduit straps; hardware; conduit sealant; ground rod with clamp; grounding conductor.

Prior to any construction, the Contractor shall initiate a work order with the local power

company for the installation of electrical service to the site. A representative from the Division of Planning and the local power company shall be consulted prior to choosing an exact location for the pole. The Contractor shall clear the right-of-way for the electrical service drop.

Contractor shall obtain electrical inspections, memberships, meter base, service disconnect and any other requirements by the utility serving the installation and pay all fees as required.

Install meter-base and disconnect panel with a 30-ampere, fused, circuit breaker inside. Install a manufactured weatherproof hub connectors to connect the conduit to the top of the meter base and service disconnect.

Install a rigid  $\frac{3}{4}$  inch conduit with three 8 AWG service conductors from the cabinet, through the service disconnect to the meter base and a 1 $\frac{1}{4}$ " conduit with three 8 AWG service conductors from the meter base to a weatherhead two feet from the top of the electrical service pole. Install conduit straps 30 inches on center and provide a drip loop where the wire enters the weatherhead. Splice electric drop with service entrance conductors at the top of the pole.

The limit of conduit incidental to "Install Electrical Service" for a pad mounted cabinet is 24 inches beyond face of service pole.

Install a 120-volt, 20-amp GFCI AC duplex receptacle with box and cover in the automatic data recorder (ADR) cabinet.

Install a ground rod with clamp. Install a grounding conductor wire from the meter base, through the disconnect panel, to the ground rod clamp. Install grounding conductor in 1- $\frac{3}{4}$ " conduit from service disconnect to ground rod.

After completing the installation and before the electrical service is connected, obtain a certificate of compliance from the Kentucky Department of Housing, Buildings and Construction, Electrical Inspection Division.

### **3.6. Flashing Arrow**

Furnish: Arrow Panel

Construction of Flashing Arrow shall conform to the *Standard Specifications for Road and Bridge Construction*.

### **3.7. Galvanized Steel Cabinet**

Furnish: Cabinet; wood posts; concrete; conduit fittings; metal framing channel; pipe clamp; terminal block(s); spade tongue wire terminals; wire labels; hardware.

Where right-of-way allows, locate the cabinet such that it is outside the clear zone in accordance with the *Roadside Design Guide*. Install Cabinet such that the door of the

cabinet faces the roadway.

Excavate as required and install wood posts to a depth of 36 inches and place concrete around posts as shown on the standard detail sheets. Install metal framing channel with pipe clamp between posts.

Install Cabinet on wood posts 38 inches above the finished grade as shown on the standard detail sheets. Install a unistrut between posts when two posts are specified.

Install the required number of terminal blocks on the cabinet back plate. Install a spade tongue terminal on each loop and piezo sensor wire entering the cabinet and connect wires to terminal block(s). Wiring shall be neat and orderly. Label all wires and cables inside cabinet.

Install conduit from ground to cabinet and attach to pipe clamp. Install locknuts to attach conduit to cabinet and install a conduit bushing as shown on the standard detail sheets.

### **3.8. Grounding**

Furnish: Ground rod with clamp; grounding conductor.

At sites with electrical or solar service, all conduits, poles, and cabinets shall be bonded to ground rods and the electrical system ground to form a complete grounded system.

Install such that top of ground rod is a minimum of 3 inches below finished grade.

Grounding systems shall have a maximum 25 ohms resistance to ground. If the resistance to ground is greater than 25 ohms, two or more ground rods connected in parallel shall be installed. Adjacent ground rods shall be separated by a minimum of 6 feet.

### **3.9. Install Pad Mount Enclosure**

Furnish: Concrete; anchor bolts with washers and nuts; conduit; conduit fittings; conduit grounding bushings; ground rod with clamp; grounding conductor; conduit sealant; wooden stakes (where required); wire labels; hardware.

The Contractor shall be responsible for securing the enclosure from the Central Office Division of Planning Warehouse in Frankfort and transporting it to the installation site.

Where right-of-way allows, locate the enclosure such that it is outside the clear zone in accordance with the *Roadside Design Guide*.

Excavate as required, and place concrete to construct the enclosure foundation as specified on the standard detail sheets. Install enclosure on the concrete base such that the door(s) of the enclosure opens away from traffic (hinges away from traffic). Install anchor bolts, washers, and nuts to secure the enclosure to the foundation.

Install ground rod with clamp and install one ¾ inch rigid conduit from enclosure base to

ground rod. Install a grounding conductor from ground rod to enclosure base and bond to each conduit bushing in the base.

Install one ¾ inch rigid steel conduit for electrical service from the base of the enclosure to 24 inches beyond the concrete base. Make all field wiring connections to the electrical service, as applicable.

If electrical service is not provided as a bid item in the contract, plug conduit on both ends with a cap, conduit sealant, or electrical tape. Mark the location of the buried conduit end with a wooden stake labeled “¾ in. conduit.”

Install specified rigid steel conduit(s) into the base of the enclosure for sensor wire entry. Install one spare 2 inch conduit from the enclosure base to 2 feet beyond the concrete base. Plug spare conduit on both ends with a cap, conduit sealant or electrical tape.

The limit of all conduits incidental to “Install Pad Mount Enclosure” is 24 inches beyond the edge of the concrete base.

Wiring in enclosure shall be neat and orderly. Label all wires and cables inside enclosure. KYTC personnel will furnish and install terminal blocks and connect sensors to terminal blocks.

### **3.10. Install Controller Cabinet**

Furnish: Mounting brackets; mounting straps; conduit; LB condulets; conduit fittings; conduit grounding bushings; ground rod with clamp; grounding conductor; cable staples; conduit sealant; wooden stakes (where required); wire labels; hardware.

The Contractor shall be responsible for securing the cabinet from the Central Office Division of Planning Warehouse in Frankfort and transporting it to the installation site. Any existing holes in the cabinet not to be reused shall be covered or plugged to meet NEC requirements.

Install mounting brackets and secure cabinet to pole with mounting straps.

Install a ground rod with clamp. Install grounding conductor in 1-¾” conduit from cabinet to ground rod.

Install one ¾ inch rigid steel conduit with two lb condulets from cabinet to electrical service disconnect box. Make all field wiring connections to the electrical service, as applicable.

If electrical service is not provided as a bid item in the contract, plug conduit on both ends with cap, plumbers putty, conduit sealant, or electrical tape. Mark the location of the buried conduit end with a wooden stake labeled “¾ in. conduit”.

Install specified rigid steel conduit(s) and type LB condulet(s) into the bottom of the

cabinet for sensor wire entry. The limit of conduits incidental to "Install Controller Cabinet" is 24 inches beyond the face of the pole.

Wiring in cabinet shall be neat and orderly. Label all wires and cables inside cabinet. KYTC personnel will furnish and install terminal blocks and connect sensors to terminal blocks.

### **3.11. Junction Box Type 10x8x4**

Furnish: Junction box; wood post; conduit fittings; wire labels; hardware.

Where right-of-way allows, locate the junction box such that it is outside the clear zone in accordance with the Roadside Design Guide.

Excavate as required and install wood post(s) to a depth of 18 inches. Install junction box on wood post such that the bottom of the box is 18 inches above the finished grade as shown on the standard detail sheets. Box shall be installed with four (4) 2½ inch wood screws and washers.

Install locknuts to attach conduit to junction box and install a conduit bushing as shown on the standard detail sheets.

Wiring inside box shall be neat and orderly. Label all wires and cables inside box.

### **3.12. Junction Box Type A, B, or C**

Furnish: Junction box, No. 57 aggregate; grounding conductor

Excavate as required and place approximately 12 inches of No. 57 aggregate beneath the proposed junction box to allow for drainage. Install specified junction box type A, B, or C near the edge of pavement, flush with finished grade per the detail sheets. Where required, orient the box so that the dimensions comply with the National Electrical Code. Stub conduits with grounding bushings into junction box at its base to accommodate wires and connect grounding conductor to all grounding bushings. Backfill to existing grade, and restore disturbed area to the satisfaction of the Engineer.

Wiring inside box shall be neat and orderly. Label all wires and cables inside box.

### **3.13. Loops - Proposed**

Furnish: Wire; saw slot sealant; backer rod; grout; conduit sealant.

The plans and notes specify the approximate location for loop installations. Prior to sawing slots or drilling cores, the Contractor shall meet with a representative of the Division of Planning to verify the precise layout locations on site. Avoid expansion joints and pavement sections where potholes, cracks, or other roadway flaws exist.

Upon completion of this meeting, the Contractor shall measure out and mark the proposed loop locations with spray paint or chalk such that the saw slots will be parallel

and perpendicular to the direction of traffic. Marked lines shall be straight and exact to the locations determined and sized as shown on the plans. Unless indicated otherwise, loops shall be 6 feet by 6 feet square and loops in the same lane shall be spaced 16 feet from leading edge to leading edge.

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 to ensure correct operation of the completed installation.

The following is a typical step by step procedure for the installation of a loop.

- Carefully mark the slot to be cut, perpendicular to the flow of traffic and centered in the lane.
- Make each saw-cut 3/8-inch wide and at a depth such that the top of the backer rod is a minimum of 2 inches below the surface of rigid (PCC/Concrete) pavement or 4 inches below the surface of asphalt pavement.
- Drill a 1½ inch core hole at each corner and use a chisel to smooth corners to prevent sharp bends in the wire.
- Clean ALL foreign and loose matter out of the slots and drilled cores and within 1 foot on all sides of the slots using a high pressure washer.
- Completely dry the slots and drilled cores and within 1 foot on all sides of the slots 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.
- Measure 9-12 inches from the edge of the paved surface (shoulder break or face of curb) and drill a 1½ inch hole on a 45° angle to the conduit adjacent to the roadway.
- Closely inspect all cuts, cores, and slots for jagged edges or protrusions prior to the placement of the wire. All jagged edges and protrusions shall be ground or re-cut and cleaned again.

- Place the loop wire splice-free from the termination point (cabinet or junction box) to the loop, continue around the loop for four turns, and return to the termination point.
- Push the wire into the saw slot with a blunt object such as a wooden stick. Make sure that the loop wire is pushed fully to the bottom of the saw slot.
- Install conduit sealant to a minimum of 1" deep into the cored 1½ inch hole.
- Apply loop sealant from the bottom up and fully encapsulate the loop wires in the saw slot. The wire should not be able to move when the sealant has set.
- Cover the encapsulated loop wire with a continuous layer of backer rod along the entire loop and home run saw slots such that no voids are present between the loop sealant and backer rod.
- Finish filling the saw cut with non-shrinkable grout per manufacturer's instructions. Alleviate all air pockets and refill low spaces. There shall be no concave portion to the grout in the saw slot. Any excess grout shall be cleaned from the roadway to alleviate tracking.
- Clean up the site and dispose of all waste off the project.
- Ensure that the grout has completely cured prior to subjecting the loop to traffic. Curing time varies with temperature and humidity.

Exceptions to installing loop wire splice-free to the junction box or cabinet may be considered on a case-by-case basis and must be pre-approved by the Engineer. If splices are allowed, they shall be located in a junction box and shall conform to the construction note for Splicing.

If loop lead-in cable (Cable No. 14/1 Pair) is specified, cable shall be installed splice free to the cabinet ensuring that extra cable is left in each junction box or cabinet. All wires and cables shall be labeled in each junction box and cabinet.

Loop inductance readings shall be between 100 and 300 microhenries. The difference of the loop inductance between two loops in the same lane shall be  $\pm 20$  microhenries. Inductance loop conductors shall test free of shorts and 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.

### **3.14. Loops – Existing**

When noted on a data collection station layout sheet that there are existing inductive loops within the limits of the project, notify the Engineer in writing, a minimum of 14 calendar days prior to beginning milling operations. After milling and prior to placing asphalt inlay, conduct an operating test on the existing inductance loops at the control cabinet in the presence of the Engineer to determine if the inductance loop conductors have an insulating resistance of a minimum of 100 megohms when tested with a 500 volt direct current potential in a reasonably dry atmosphere between conductors and ground. The Department may also conduct its own tests with its own equipment.

If the tests indicate the loop resistances are above the specified limit and the Engineer determines the system is operable, proceed with the asphalt inlay. If the test indicates the loop resistance is not within the specified limits or if the Engineer determines the system is otherwise not operable, prior to placing the asphalt inlay install and test new loop detectors according to the station layout, notes, and Detail Drawings.

The Engineer will contact and maintain liaison with the District Planning Engineer and the Division of Planning in order to coordinate any necessary work.

### **3.15. Maintain and Control Traffic**

Furnish (all as required): Drums, traffic cones, barricades used for channelization purposes, delineators, and object markers.

Maintain and Control Traffic shall conform to the plans, the Standard Specifications for Road and Bridge Construction, and the KYTC Department of Highways Standard Drawings.

### **3.16. Open Cut Roadway**

Furnish: Concrete, reinforcing bars.

Excavate trench by sawing and chipping away roadway to dimensions as indicated on the detail sheets. After placing conduit, install concrete and steel reinforcing bars per the *Standard Specifications for Road and Bridge Construction*. Restore any disturbed sidewalk to its original condition.

### **3.17. Piezoelectric Sensor**

Furnish: Piezoelectric sensor and cable; sensor support brackets; saw slot sealant; backer rod; grout; conduit sealant.

The plans and notes specify the approximate location for piezoelectric sensor (piezo) installations. Prior to sawing slots or drilling cores, the Contractor shall meet with a representative of the Division of Planning to verify the final layout on site. Avoid expansion joints and pavement sections where potholes, cracks, or other roadway flaws exist. Roadway ruts at the proposed piezo location shall not be in excess of 1/2 inch under a 4-foot straight edge.

Install the piezo perpendicular to traffic in the final surface course of the pavement. Locate the sensor in the lane as shown on the site layout drawing. Eleven-foot length sensors shall be centered in the lane.

The following is a typical step by step procedure for the installation of a piezo. Refer specifically to the manufacturer's instructions provided with the sensor prior to installation.

- Carefully mark the slot to be cut, perpendicular to the flow of traffic and properly positioned in the lane.

- It is strongly recommended that a ¾ inch wide diamond blade be used for cutting the slot, or that blades be ganged together to provide a single ¾ inch wide cut. The slot shall be wet cut to minimize damage to the pavement.
- Cut a slot ¾ inch wide ( $\pm 1/16$  inch) by 1 inch minimum deep. The slot should be a minimum of 2 inches longer than the sensor (including the lead attachment). Drop the saw blade an extra ½ inch down on both ends of the sensor. The lead out of the passive cable should be centered on the slot.
- Cut the slot for the passive cable ¼ inch wide and at a depth so that the top of the backer rod is a minimum of 2 inches below the road surface.
- Clean ALL foreign and loose matter out of the slot and within 1 foot on all sides of the slot using a high pressure washer.
- Completely 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.
- Measure 9-12 inches from the edge of the paved surface (shoulder break or face of curb) and drill a 1½ inch hole on a 45° angle to the conduit adjacent to the roadway.
- Place strips of 2-4 inch wide tape strips on the pavement along the lengths of both sides of the sensor slot, 1/8 inch away from the slot.
- Wear clean, protective latex (or equivalent) gloves at all times when handling sensors. Visually inspect sensor to ensure it is straight. Check lead attachment and passive cable for cuts, gaps, cracks and/or bare wire. Verify that the correct sensor type and length is being installed by checking the data sheet. Verify there is sufficient cable to reach the cabinet. Piezo lead-in cable shall not be spliced.
- 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 piezo data sheet. Resistance (using the 20M setting) should be infinite. Record the sensor serial number and the test results and label “pre-installation.” This information should be stored in the counter cabinet and/or returned to Department Planning personnel.
- Lay the sensor next to the slot and ensure that it is straight and flat.
- Clean the sensor with steel wool or an emery pad and wipe with alcohol and a clean, lint-free cloth.
- Place the installation bracket clips every 6 inches along the length of the sensor.
- Bend the tip 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).
- Place the sensor in the slot, with the brass element 3/8 inch below the road surface along the entire length. The tip of the sensor should be a minimum of 2 inches from the end of the slot and should not touch the bottom of the slot. The top of the plastic installation bracket clips should be 1/8 inch below the surface of the road. The lead attachment should not touch the bottom or sides of the slot. Ensure the sensor ends are pushed down per the manufacturer’s instructions.
- 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).

- On the passive cable end, block the end of the slot approximately 3-5 inches beyond the end of the lead attachment area creating an adequate “dam” so that the sensor grout does not flow out.
- Use one bucket of sensor grout per piezo installation. Overfill the slot with sensor grout and allow to cure for a minimum of 10 minutes before continuing with the installation. Ensure that sensor grout fills around and beneath the sensor completely and that there is not a trough on top.
- Remove the tape along the sides of the saw slot when the adhesive starts to cure.
- Carefully remove the dam from the end of the sensor.
- Route the lead-in cable through the saw slot
- Install conduit sealant to a minimum of 1” deep into the cored 1½ inch hole.
- Cover the lead-in cable with encapsulant, backer rod, and grout.
- If necessary, after the grout has hardened, grind with an angle grinder until the profile is a 1/16 inch mound. There shall be no concave portion to the mound.
- Clean up the site and dispose of all waste off the project.
- Ensure that the sensor grout has completely cured prior to subjecting the sensor to traffic. Curing time will vary with temperature and humidity.

Upon installation, test the sensor for capacitance, dissipation factor and resistance, according to the directions enclosed with the sensor. Capacitance and dissipation should be within +20% of the piezo data sheet. Resistance (using the 20M setting) should be infinite. Perform a functional test of the piezo with an oscilloscope to ensure that the sensor is generating a proper response to the passage of vehicles.

Record the sensor serial number and the test results and label “post-installation.” This information should be stored in the counter cabinet and/or returned to Department Planning personnel.

### **3.18. Pole – Wooden**

Furnish: Pole; anchoring equipment (as required); hardware (as required).

Excavate and install wood pole to a minimum depth of one-sixth the total pole height. Place backfill material in hole and compact until flush with existing grade. Install guy wire, guy guard, anchor, anchor rod, and strand vise, if necessary. Anchor shall be a minimum of one-third the pole height from the face of the pole. Provide temporary erosion control, seeding, protection and restoration of disturbed areas to the satisfaction of the Engineer.

### **3.19. Removal of Existing Equipment**

The Contractor shall remove existing materials (including but not limited to: poles, anchors, cabinets, junction boxes, conduit and wire) not to be reused. Contractor shall dispose of all removed materials off the project. All materials and labor necessary for the removal of existing equipment shall be considered incidental to other bid items.

### **3.20. Signs**

Furnish: Signs; sign standards; hardware.

Construction of signs shall conform to the *Standard Specifications for Road and Bridge Construction*.

### **3.21. Splicing**

Furnish: Splice kit; solder.

These notes describe the splicing process (if permitted) and are not intended to grant permission to splice. Permission to splice shall be determined by the Division of Planning and the locations shall be shown on the layout sheet. If splicing is needed but not shown on the layout sheet, the Contractor shall receive prior written approval from the Division of Planning.

All splices shall conform to the provisions of the NEC.

Splices for loop and loop lead-in wire shall be twisted and soldered. Abrade the outer jacket of both wires to promote good adhesion and prevent capillary leak paths. Seal the splice with an electrical sealing resin. Spliced loop conductors shall test free of shorts and unauthorized grounds and shall have an insulating resistance of at least 100 megohms when tested with a 500 volt direct current potential in a reasonably dry atmosphere between conductors and ground.

For piezos, the same type coax cable, supplied by the manufacturer, shall be used to splice to the sensor's lead-in cable. Cables shall be soldered. Abrade the outer jacket of both cables to promote good adhesion and prevent capillary leak paths. Seal the splice with an electrical sealing resin. Spliced piezo cables shall be tested and have a minimum resistance of 20 megohms, a maximum dissipation factor of 0.03, a capacitance within the manufacturer's recommended range based upon the length of additional cable. A functional test of the piezo shall be performed to ensure that the sensor is generating a proper response to the passage of vehicles.

### **3.22. Trenching and Backfilling**

Furnish: Warning tape; seed mix type I; cereal rye or German foxtail-millet; mulch; concrete (as required); asphalt (as required).

Excavate trench and provide required cover as shown on the standard detail sheets. After placing conduit, backfill material shall be placed and compacted in lifts of 9 inches or less. Install warning tape as shown on the detail sheet. Provide temporary erosion control, seeding, protection and restoration of disturbed areas to the satisfaction of the Engineer. This item shall include concrete, asphalt or approved replacement material for sidewalks, curbs, roadways, etc. (if required).

### **3.23. Wiring**

Furnish: Wire; wire labels; spade tongue wire terminals (as required).

Installation of all wiring shall conform to the NEC. Permanent identification numbers shall be affixed to all wires in all junction boxes and cabinets (see Layout(s) for loop and piezo numbers).

Additional lengths of each loop and piezo sensor wire shall be neatly coiled in all cabinets and junction boxes as follows:

<u>Enclosure Type</u>	<u>Additional length of each wire</u>
Galvanized Steel Cabinet	2'
Pad Mount Cabinet (332)	8'
Pole Mount Cabinet (336)	4'
Junction Box Type 10x8x4	2'
Junction Box Type A, B, or C	2'

**3.24. Wood Post**

Furnish: Wood post; concrete (as required); seed mix type I; cereal rye or German foxtail-millet; mulch.

Excavate hole to specified depth and place concrete, if required. Install post, backfill to existing grade, and tamp backfill. Provide temporary erosion control, seeding, protection and restoration of disturbed areas to the satisfaction of the Engineer.

#### **4. BID ITEM 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 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.

##### **4.1. Bore and Jack Pipe – 2”**

Bore and jack pipe – 2” shall be furnished, installed, and measured for payment per the *Standard Specifications for Road and Bridge Construction*.

##### **4.2. Conduit**

Conduit shall include furnishing and installing specified conduit in accordance with the specifications. This item shall include conduit fittings, bodies, boxes, weatherheads, expansion joints, couplings, caps, conduit sealant, electrical tape, clamps, bonding straps and any other necessary hardware. Conduit will be measured in linear feet.

##### **4.3. Electrical Service**

Electrical Service shall include furnishing and installing all necessary materials and payment of all fees toward the complete installation of an electrical service which has passed all required inspections. Incidental to this item shall be furnishing and installing:

- Meter-base per utility company’s specifications
- Service disconnect panel per utility company’s specifications
- Meter base and service disconnect entrance hubs, waterproof
- Service entrance conductors
- Rigid steel conduit
- Rigid steel conduit fittings
- Conduit straps
- Weatherhead
- Duplex GFCI receptacle, 120-volt, 20-amp
- Ground rod with clamp
- Grounding conductor

Also incidental to this item shall be any necessary clearing of right of way for the electrical service drop.

Electrical service will be measured in individual units each.

##### **4.4. Flashing Arrow**

Flashing Arrow shall be furnished, installed, and measured for payment per the *Standard Specifications for Road and Bridge Construction*.

##### **4.5. Galvanized Steel Cabinet**

Galvanized Steel Cabinet shall include furnishing and installing galvanized steel cabinet on post as specified. Incidental to this item shall be furnishing and installing grounding hardware, and any necessary post/pole mounting hardware. Also incidental to this item shall be furnishing and installing the required number of terminal blocks and connection of all

sensors to the terminal blocks. Galvanized Steel Cabinet will be measured in individual units each.

#### **4.6. Install Pad Mount Enclosure**

Install Pad Mount Enclosure shall include installing a Department-furnished enclosure as specified on the detail sheets.

This item shall include obtaining the enclosure from KYTC and transporting it to the installation site and furnishing and installing the following:

- Concrete foundation (including any excavation necessary)
- Anchor bolts, lock washers, and nuts
- Conduit
- Conduit fittings (including grounding bushings)
- Weatherhead
- Terminal Strip(s)
- Ground rod with clamp
- Grounding conductor

Install Pad Mount Enclosure will be measured in individual units each.

#### **4.7. Install Controller Cabinet**

Install Controller Cabinet shall include installing a Department-furnished cabinet as specified on the detail sheets.

This item shall include obtaining the cabinet from KYTC and transporting it to the installation site and furnishing and installing the following:

- Conduit
- Conduit Fittings
- Terminal Strip(s)
- Ground rod with clamp
- Grounding conductor

Install Controller Cabinet will be measured in individual units each.

#### **4.8. Junction Box Type 10" x 8" x 4"**

Junction Box Type 10"x8"x4" shall include furnishing and installing specified junction box in accordance with the specifications. This item shall include connectors, splice sleeves, conduit fittings, mounting materials and any other items required to complete the installation. Incidental to this item shall be furnishing and installing specified post (wood, channel, metal, etc.) as required for the installation. Junction Box Type 10"x8"x4" will be measured in individual units each.

#### **4.9. Junction Box Type A, B, or C**

Junction Box Type A, B, or C shall include furnishing and installing specified junction box in accordance with the specifications. This item shall include excavation, furnishing and installing #57 aggregate, backfilling around the box, and restoration of disturbed areas to the satisfaction of the Engineer. Incidental to this item shall be furnishing and installing a

grounding conductor bonding all conduit grounding bushings in the box. Junction Box Type A, B, or C will be measured in individual units each.

#### **4.10. Loop Saw Slot and Fill**

Loop Saw Slot and Fill shall include sawing and cleaning saw slots and furnishing and installing conduit sealant, loop sealant, backer rod, grout, or other specified material. Loop Saw Slot and Fill will be measured in linear feet of sawed slot.

#### **4.11. Maintain and Control Traffic**

Maintain and Control Traffic shall be measured for payment per the *Standard Specifications for Road and Bridge Construction*.

#### **4.12. Open Cut Roadway**

Open Cut Roadway shall include excavating trench (sawing and chipping roadway) to dimensions as indicated on the detail sheets and furnishing and placing concrete, steel reinforcing bars, and asphalt. This item also includes restoring any disturbed sidewalk to its original condition. Open Cut Roadway will be measured in linear feet.

#### **4.13. Piezoelectric Sensor**

Piezoelectric sensor (piezo) shall include sawing and cleaning saw slots and furnishing and installing piezo in accordance with the specifications. This item shall include furnishing and installing lead-in wire, conduit sealant, encapsulation material, backer rod, grout, testing, and accessories. Piezo will be measured in individual units each.

#### **4.14. Pole – 35' Wooden**

Pole – 35' Wooden shall include excavation, furnishing and installing specified wood pole, backfilling and restoring disturbed areas to the satisfaction of the Engineer. Incidental to this item shall be furnishing and installing guy wire, anchor and anchor rod, strand vise, and guy guard, if specified.

Pole – 35' Wooden will be measured in individual units each.

#### **4.15. Signs**

Signs shall be furnished, installed, and measured for payment per the *Standard Specifications for Road and Bridge Construction*.

#### **4.16. Trenching and Backfilling**

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

#### **4.17. Wire or Cable**

Wire or cable shall include furnishing and installing specified wire or cable within saw slot, conduit, junction box, cabinet, or overhead as indicated on the detail sheets. Incidental to this item shall be the labeling of all wires and cables in each junction box, cabinet and splice

box, and furnishing and installing other hardware required for installing cable. Wire or Cable will be measured in linear feet.

**4.18. Wood Post**

Wood Post shall include furnishing and installing wood post as specified. This item shall include excavation, furnishing and placing concrete (if required), backfilling around the post, and restoration of disturbed areas to the satisfaction of the engineer. Wood Post will be measured in individual units each.

## CLARK COUNTY, MOUNTAIN PARKWAY

ITEM NO. 7-2056.00

### BRIDGE REHABILITATION (SIX LOCATIONS)

MILE POINT 0.16 TO 5.343

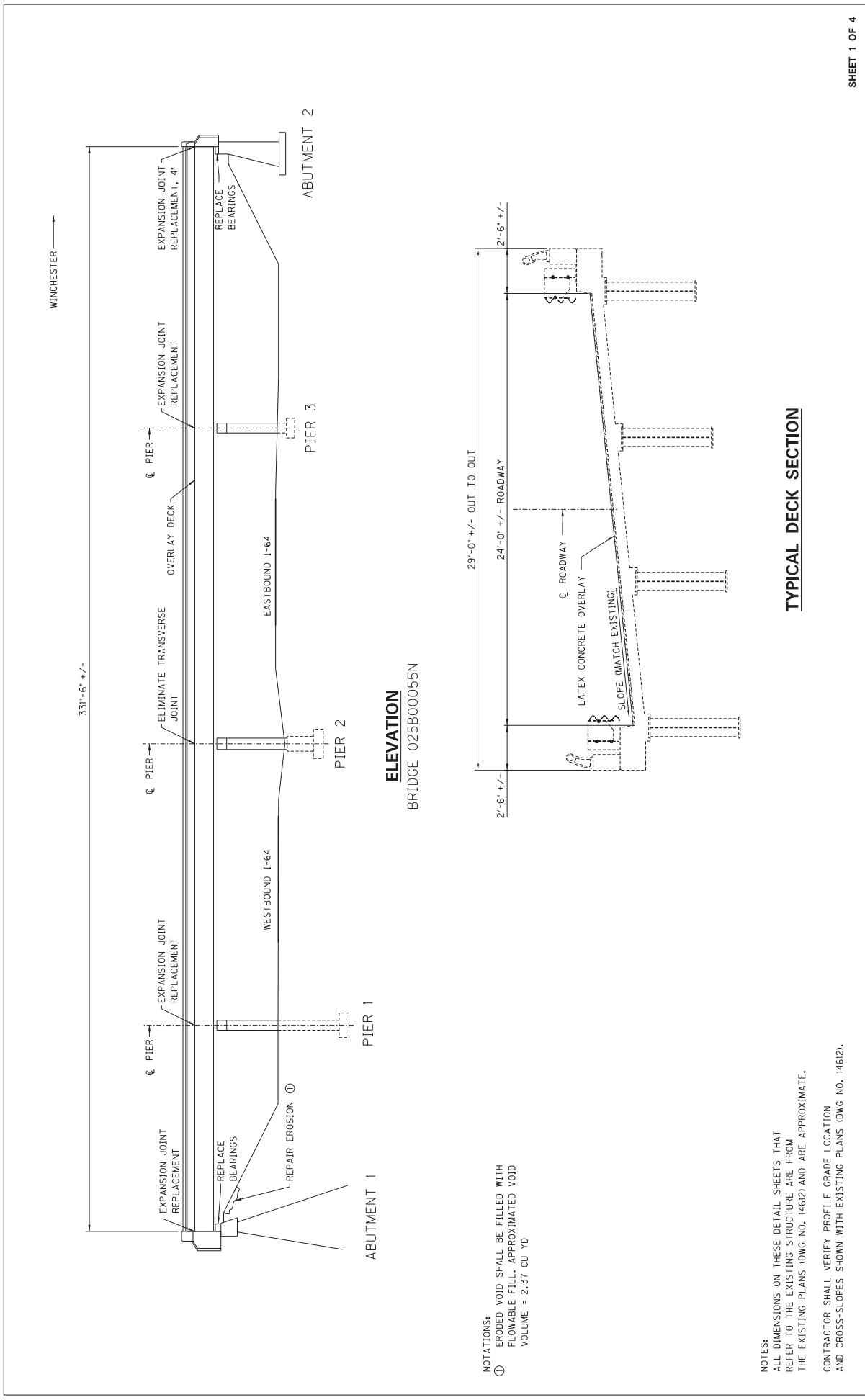
#### INDEX

- SPECIAL NOTE FOR BEARING REPLACEMENT
  - SPECIAL NOTE FOR BRIDGE RESTORATION AND WATERPROOFING WITH CONCRETE OVERLAYS
  - SPECIAL NOTE FOR HYDRODEMOLITION
  - SPECIAL NOTE FOR REPLACING EXPANSION DAMS AND/OR INSTALLING ARMORED EDGES FOR CONCRETE BRIDGES
  - SPECIAL NOTE FOR ELIMINATING TRANSVERSE JOINTS ON BRIDGES
  - SPECIAL NOTE FOR CONCRETE PATCHING REPAIR AND BEAM REPAIR
  - SPECIAL NOTE FOR JACKING AND SUPPORTING BRIDGE SPAN
- 
- Mtn. Parkway over I-64 (025B00055N)
  - Mtn. Parkway over Morris Road (025B00056L)
  - Mtn. Parkway over Morris Road (025B00056R)
  - Mtn. Parkway over Old RR Bed (025B00057L)
  - Mtn. Parkway over Old RR Bed (025B00057R)
  - Mtn. Parkway over Stoner-Ephesus Road (025B00058L)
  - Mtn. Parkway over Stoner-Ephesus Road (025B00058R)

**MTN. PARKWAY OVER I-64 (025B00055N)**  
(MP 0.16)



SUMMARY OF QUANTITIES			
ITEM CODE	DESCRIPTION	QUANTITY	UNIT
2220	FLOWABLE FILL	3	CY
3298	EXPANSION JOINT REPLACEMENT 4IN	72	LF
3299	ARMORED EDGE FOR CONCRETE	72	LF
3300	ELIMINATE TRANSVERSE JOINT	24	LF
8504	EPOXY SAND SLURRY	96	SY
8550	HYDRODEMOLITION	904	SY
8534	CONCRETE OVERLAY-LATEX	38	CY
24094EC	PARTIAL DEPTH PATCHING	6	CY
02383	REMOVE AND RESET GUARDRAIL	688	LF
21969NN	BEARING REPLACEMENT	8	EA

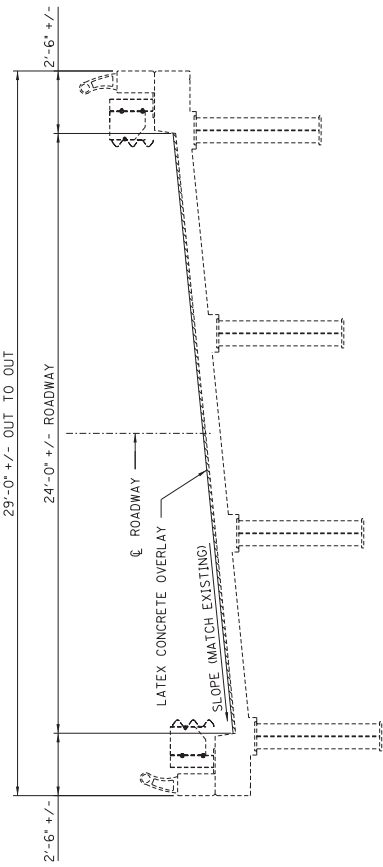


**ELEVATION**  
BRIDGE 025B00055N

NOTATIONS:  
 ① ERODED VOID SHALL BE FILLED WITH FLOWABLE FILL. APPROXIMATED VOID VOLUME = 2.37 CU YD

NOTES:  
 ALL DIMENSIONS ON THESE DETAIL SHEETS THAT REFER TO THE EXISTING STRUCTURE ARE FROM THE EXISTING PLANS (DWG NO. 14612) AND ARE APPROXIMATE.  
 CONTRACTOR SHALL VERIFY PROFILE GRADE LOCATION AND CROSS-SLOPES SHOWN WITH EXISTING PLANS (DWG NO. 14612).

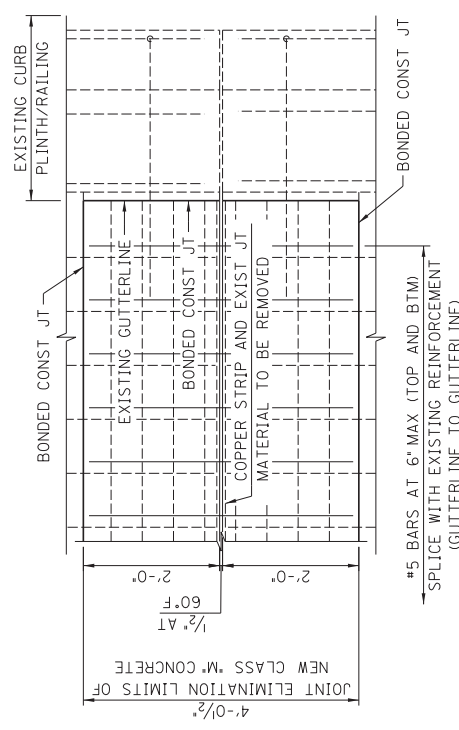
**TYPICAL DECK SECTION**



**ELEVATION AND TYPICAL DECK SECTION**

SHEET 1 OF 4

BRIDGE: 025B00055N  
 COUNTY: CLARK  
 ROUTE: MOUNTAIN PARKWAY  
 CROSSING: I-64



**PLAN AT PIERS**

**NOTES:**

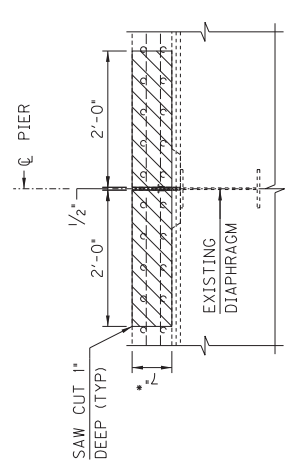
CONCRETE REMOVAL  
REMOVE HATCHED AREAS OF CONCRETE AND EXPANSION DEVICE. STRAIGHTEN, SAND-BLAST CLEAN AND INCORPORATE EXISTING SLAB REINFORCEMENT INTO NEW CONSTRUCTION.

BONDING NEW CONCRETE TO EXISTING SLAB CONCRETE  
NEW CONCRETE SHALL BE BONDED TO EXISTING SLAB CONCRETE WITH A TWO-COMPONENT EPOXY RESIN SYSTEM CONFORMING TO SECTIONS 511 AND 826 OF THE SPECIFICATIONS. THIS WORK, INCLUDING ALL LABOR, TOOLS, AND MATERIALS IS TO BE INCIDENTAL TO THE UNIT PRICE BID FOR ELIMINATE TRANSVERSE JOINT.

ROUGHEN EXISTING CONCRETE WHEN IN CONTACT WITH NEW CONCRETE.

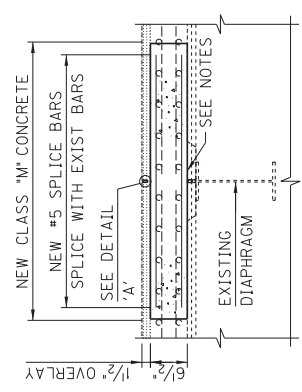
**NOTATIONS:**

- FIELD VERIFY



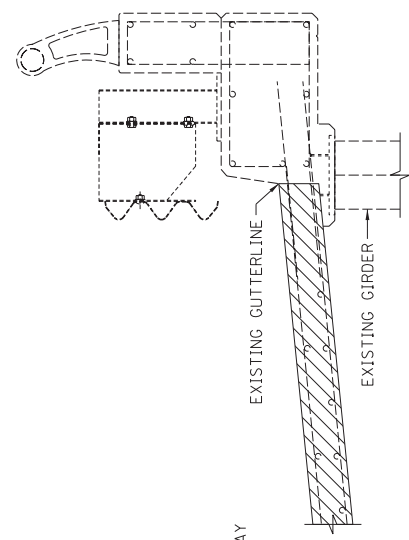
**EXISTING SECTION AT PIERS**

SHOWING LIMITS OF DECK REMOVAL



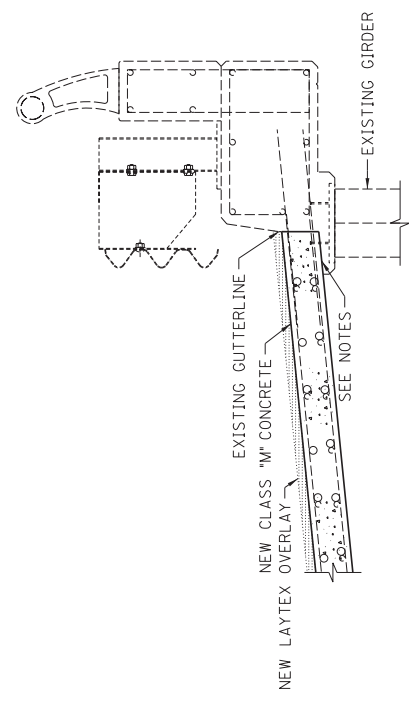
**ELIMINATED JOINT SECTION**

SHOWING PROPOSED



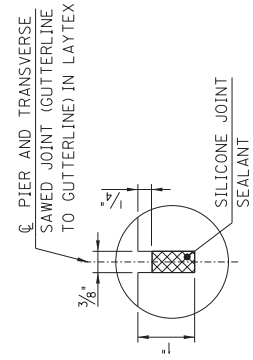
**SECTION AT BARRIERS**

SHOWING EXISTING & LIMITS OF REMOVAL



**SECTION AT BARRIERS**

SHOWING PROPOSED



**DETAIL 'A'**



**ELIMINATE TRANSVERSE JOINT (AT PIERS)**

COUNTY: CLARK		BRIDGE: 02580055A
ROUTE: MOUNTAIN PARKWAY		
CROSSING: I-64		

**NOTES:**

CONCRETE REMOVAL  
 REMOVE HATCHED AREAS OF CONCRETE, EXPANSION DEVICE & ARMORED EDGE. SAND-BLASTED  
 CLEAN, STRAIGHTEN & REUSE EXISTING REINFORCEMENT. THE CONTRACTOR HAS THE OPTION TO  
 REPLACE EXISTING TRANSVERSE REINFORCEMENT. FIELD VERIFY REMOVAL TO TOP OF GIRDER.

**PERFORMED EXPANSION JOINT**

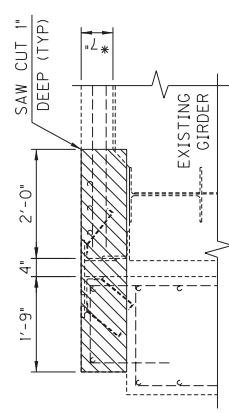
STRIP SEAL SHALL BE EITHER ONE OF THE FOLLOWING OR AN APPROVED EQUIVALENT:  
 D.S. BROWN COMPANY L2-400 W/ SPA STEELFLEX RAIL  
 WATSON BOWMAN ACME SE-400 W/ TYPE "P" RAIL

FOR TEMPERATURE CHANGE INCREMENTS SEE STD DWG BJE-001-CE

**BONDING NEW CONCRETE TO EXISTING CONCRETE**

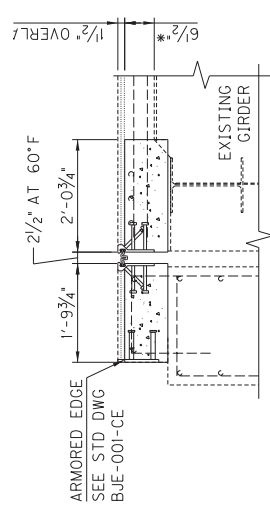
WHERE REPAIR IS CALLED FOR IN PLANS, NEW CONCRETE SHALL BE BONDED TO  
 EXISTING CONCRETE WITH A TWO-COMPONENT EPOXY RESIN SYSTEM CONFORMING  
 TO SECTION 511 AND 826 OF THE SPECIFICATIONS. THIS WORK, INCLUDING ALL  
 LABOR, TOOLS AND MATERIALS IS TO BE INCIDENTAL TO THE UNIT PRICE BID  
 FOR EXPANSION JOINT REPLACEMENT 4". ROUGHEN EXISTING CONCRETE  
 WHEN IN CONTACT WITH NEW CONCRETE.

\* FIELD VERIFY



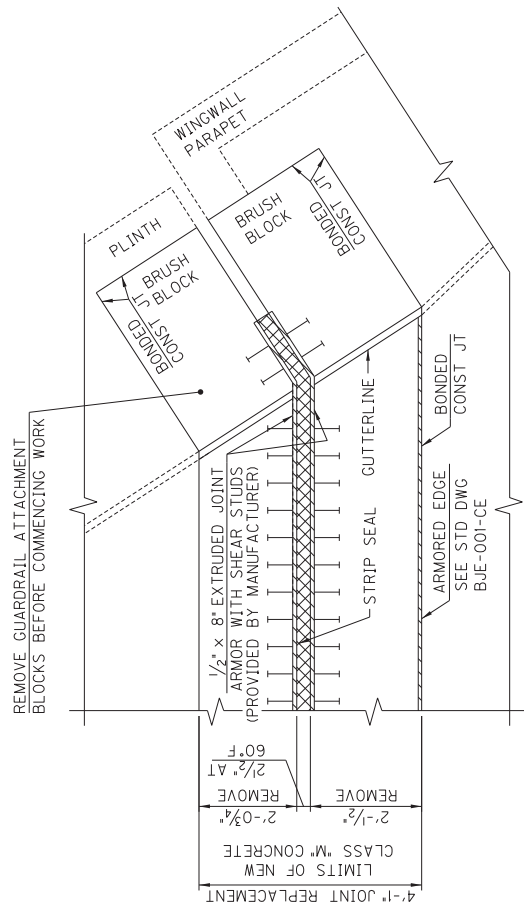
**SECTION AT ABUTMENTS**

SHOWING EXISTING & LIMITS OF REMOVAL



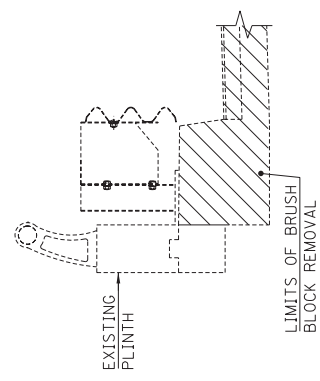
**SECTION AT ABUTMENTS**

SHOWING PROPOSED CONSTRUCTION



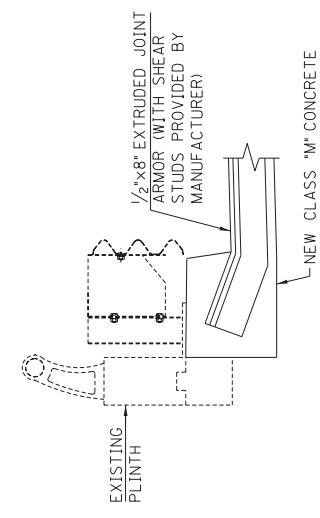
**PLAN AT ABUTMENT 1**

ABUTMENT 2 SIMILAR



**SECTION AT BARRIER**

SHOWING EXISTING & LIMITS OF REMOVAL

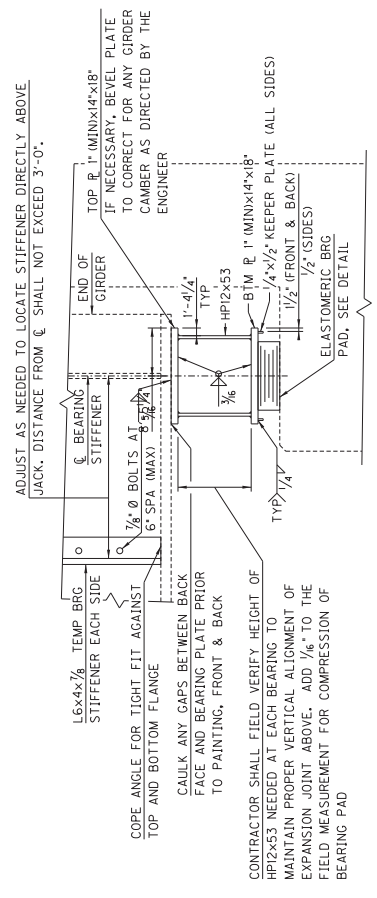


**SECTION AT BARRIER**

SHOWING PROPOSED CONSTRUCTION



**EXPANSION JOINT REPLACEMENT 4"**



ADJUST AS NEEDED TO LOCATE STIFFENER DIRECTLY ABOVE JACK. DISTANCE FROM  $\phi$  SHALL NOT EXCEED 3'-0\".

TOP  $\phi$  1" (MIN) x 14" x 18" IF NECESSARY, BEVEL PLATE TO CORNER FOR ANY GIRDER CAMBER AS DIRECTED BY THE ENGINEER

END OF GIRDER

BEARING STIFFENER

L6x4x7/8 TEMP BRG STIFFENER EACH SIDE

7/8"  $\phi$  BOLTS AT 6" SPA (MAX)

COPE ANGLE FOR TIGHT FIT AGAINST TOP AND BOTTOM FLANGE

CAULK ANY GAPS BETWEEN BACK FACE AND BEARING PLATE PRIOR TO PAINTING, FRONT & BACK

CONTRACTOR SHALL VERIFY HEIGHT OF HP12x53 NEEDED AT EACH BEARING TO MAINTAIN PROPER VERTICAL ALIGNMENT OF EXPANSION JOINT ABOVE. ADD 1/4" TO THE FIELD MEASUREMENT FOR COMPRESSION OF BEARING PAD

HP12x53

1'-4 1/4" TYP

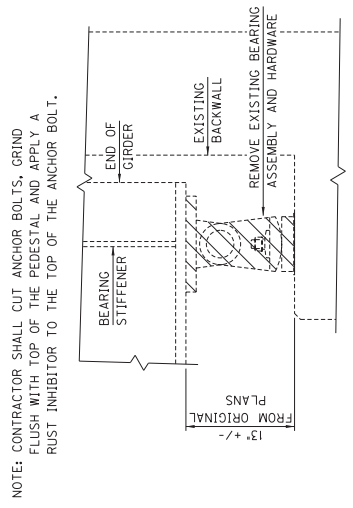
HP12x53

1/4" x 1/2" KEEPER PLATE (ALL SIDES)

1/2" (SIDES)

ELASTOMERIC BRG PAD, SEE DETAIL

**REPLACEMENT BEARING**



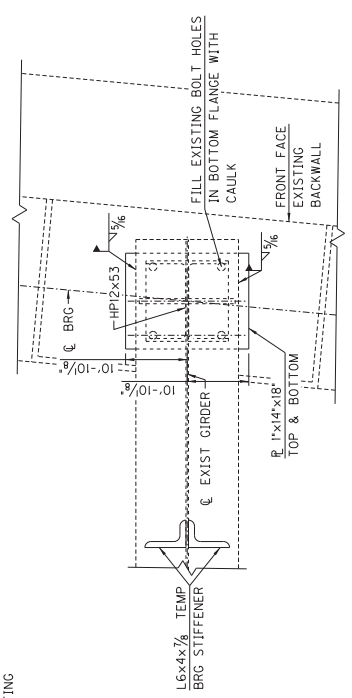
NOTE: CONTRACTOR SHALL CUT ANCHOR BOLTS, GRIND FLUSH WITH TOP OF THE PEDESTAL AND APPLY A RUST INHIBITOR TO THE TOP OF THE ANCHOR BOLT.

**EXISTING BEARING**

SHOWING REMOVAL

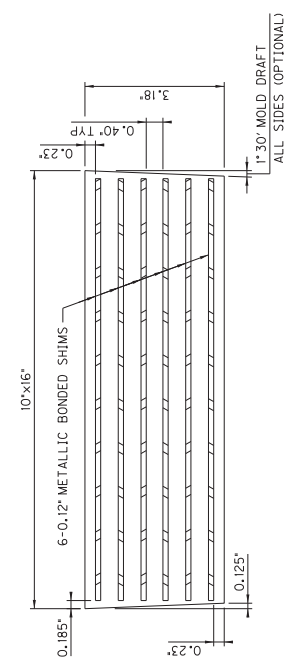
**NOTES:**

- CONTRACTOR SHALL REMOVE ANY DEBRIS AND LOOSE CONCRETE, PATCH ALL CRACKS AND DELAMINATED CONCRETE PRIOR TO REPLACING BEARING. COST IS INCIDENTAL TO "CONCRETE PATCHING REPAIR."
- TEMPORARY BEARING STIFFENERS SHALL BE FULL HEIGHT OF WEB, EXCEPT UNDER LONGITUDINAL STIFFENERS USE 12" HEIGHT FLUSH AGAINST BOTTOM FLANGE.
- SEE SPECIAL NOTE FOR JACKING AND SUPPORTING BRIDGE SPAN FOR BEARING REPLACEMENT.



**PLAN**

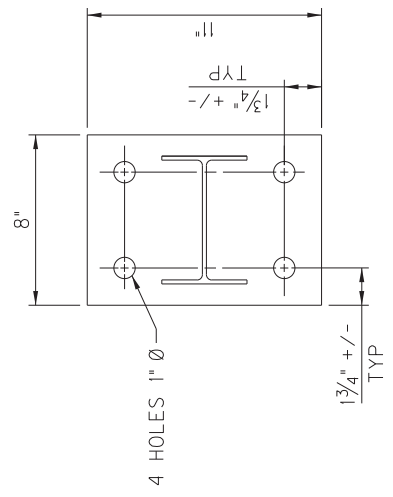
SHOWING REPLACEMENT BEARING



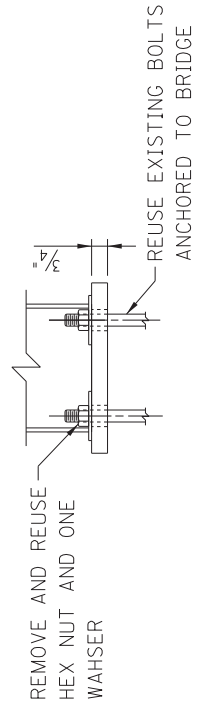
**ELASTOMERIC BEARING PAD**



**BEARING REPLACEMENT DETAILS**

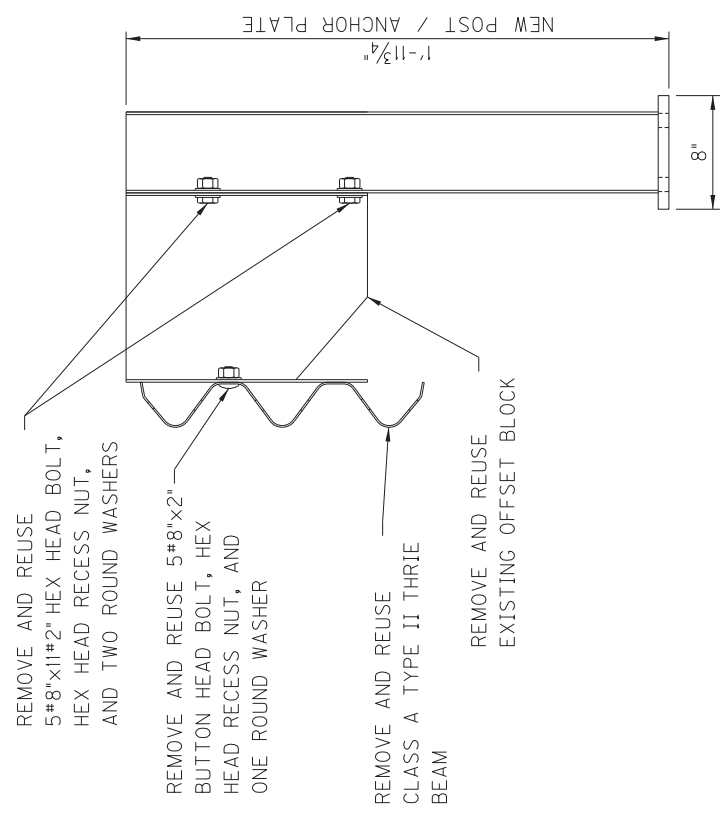


**ANCHOR PLATE PLAN VIEW**



**ANCHOR PLATE ELEVATION VIEW**

**POST ELEVATION**



**NOTE:**  
NEW POSTS ARE TO BE LOCATED AT EXISTING BOLTS ANCHORED TO BRIDGE. SPACING OF ANCHOR BOLTS SHALL BE VERIFIED BY CONTRACTOR. ALL HARDWARE, OFFSET BLOCKS, AND THRIE BEAM RAILING IS TO BE REMOVED AND REPLACED WITH NEW POST/ANCHOR PLATES. THE NEW POST/ANCHOR PLATES SHALL BE INCIDENTAL TO REMOVE AND RESET GUARDRAIL BID ITEM.



**GUARDRAIL POST**

COUNTY:	CLARK	BRIDGE:	025B00055N
ROUTE:	MOUNTAIN PARKWAY		
CROSSING:	1-64		

**MTN. PARKWAY OVER MORRIS RD (025B00056L)**

(MP 2.690)



SUMMARY OF QUANTITIES			
ITEM CODE	DESCRIPTION	QUANTITY	UNIT
24093EC	BEAM REPAIR	7	EA
8020	CRUSHED AGGREGATE SLOPE PROTECTION	6	TON

NOTE: FILL EMBANKMENT EROSION AT ABUTMENT 2. ERODED VOID SHALL BE FILLED WITH CRUSHED AGGREGATE. THE DEPARTMENT WILL MEASURE THE QUANTITY IN TONS ACTUALLY PLACED, NOT TO EXCEED THE ESTIMATED QUANTITY BY MORE THAN 10% WITHOUT APPROVAL FROM THE ENGINEER. PAYMENT AT THE CONTRACT UNIT PRICE IS FULL COMPENSATION FOR FURNISHING AND PLACING CRUSHED AGGREGATE SLOPE PROTECTION AS SPECIFIED IN THIS NOTE.

NOTE: BEAM REPAIR QUANTITY BASED ON VISUAL INSPECTION.

**MTN. PARKWAY OVER MORRIS RD (025B00056R)**

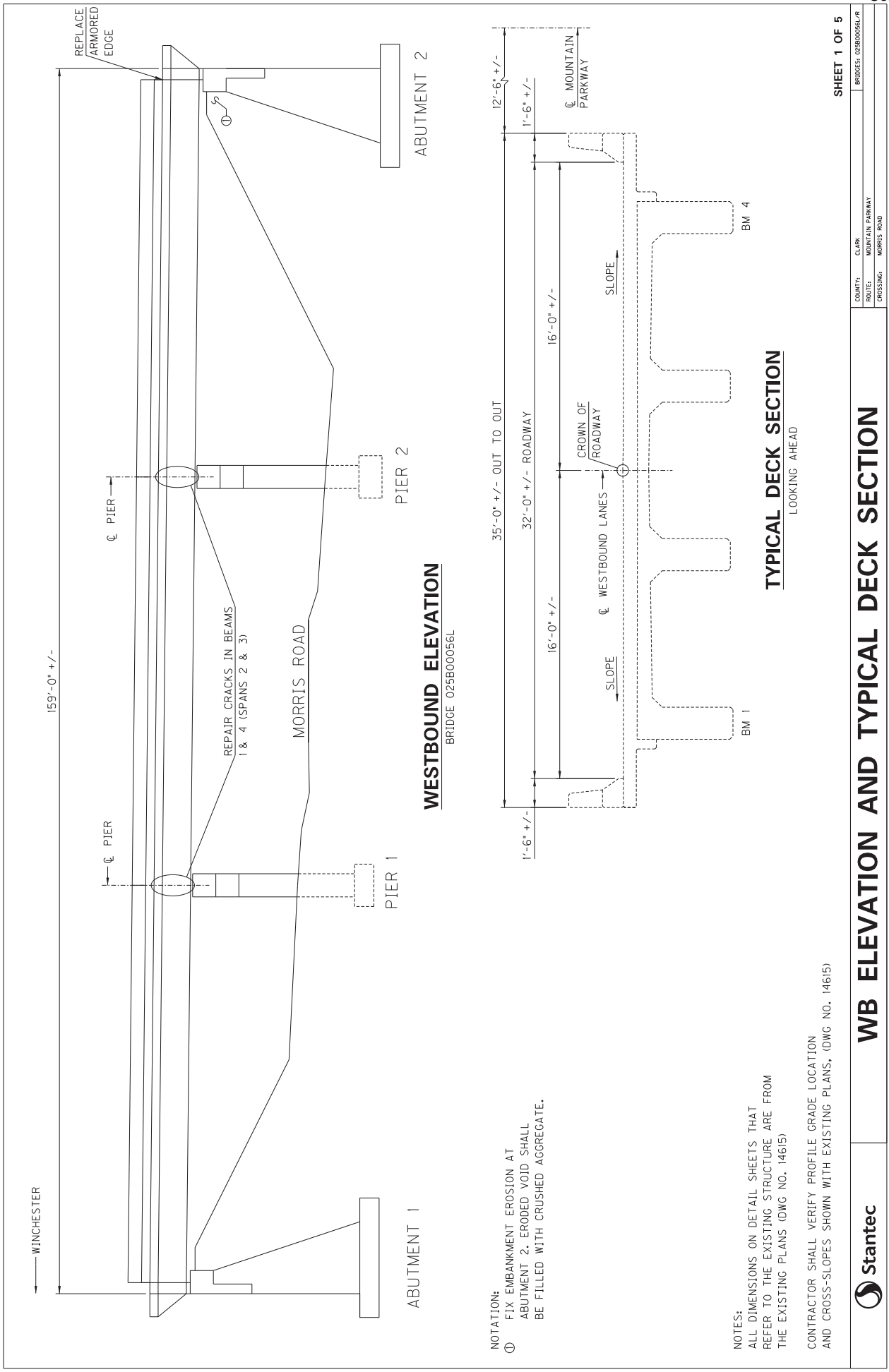
(MP 2.560)



SUMMARY OF QUANTITIES			
ITEM CODE	DESCRIPTION	QUANTITY	UNIT
24093EC	BEAM REPAIR	6	EA
8020	CRUSHED AGGREGATE SLOPE PROTECTION	4	TON

NOTE: FILL EMBANKMENT EROSION AT ABUTMENTS 1 AND 2. ERODED VOID SHALL BE FILLED WITH CRUSHED AGGREGATE. THE DEPARTMENT WILL MEASURE THE QUANTITY IN TONS ACTUALLY PLACED, NOT TO EXCEED THE ESTIMATED QUANTITY BY MORE THAN 10% WITHOUT APPROVAL FROM THE ENGINEER. PAYMENT AT THE CONTRACT UNIT PRICE IS FULL COMPENSATION FOR FURNISHING AND PLACING CRUSHED AGGREGATE SLOPE PROTECTION AS SPECIFIED IN THIS NOTE.

NOTE: BEAM REPAIR QUANTITY BASED ON VISUAL INSPECTION.



WINCHESTER

159'-0" +/-

REPLACE ARMORED EDGE

CL PIER

CL PIER

REPAIR CRACKS IN BEAMS 1 & 4 (SPANS 2 & 3)

MORRIS ROAD

ABUTMENT 1

PIER 1

PIER 2

ABUTMENT 2

**WESTBOUND ELEVATION**

BRIDGE 025B00056L

**NOTATION:**

- ① FIX EMBANKMENT EROSION AT ABUTMENT 2. ERODED VOID SHALL BE FILLED WITH CRUSHED AGGREGATE.

35'-0" +/- OUT TO OUT

32'-0" +/- ROADWAY

16'-0" +/-

CROWN OF ROADWAY

CL WESTBOUND LANES

SLOPE

SLOPE

12'-6" +/-

1'-6" +/-

CL MOUNTAIN PARKWAY

**NOTES:**

ALL DIMENSIONS ON DETAIL SHEETS THAT REFER TO THE EXISTING STRUCTURE ARE FROM THE EXISTING PLANS (DWG NO. 14615)

CONTRACTOR SHALL VERIFY PROFILE GRADE LOCATION AND CROSS-SLOPES SHOWN WITH EXISTING PLANS. (DWG NO. 14615)

**TYPICAL DECK SECTION**

LOOKING AHEAD

BM 4

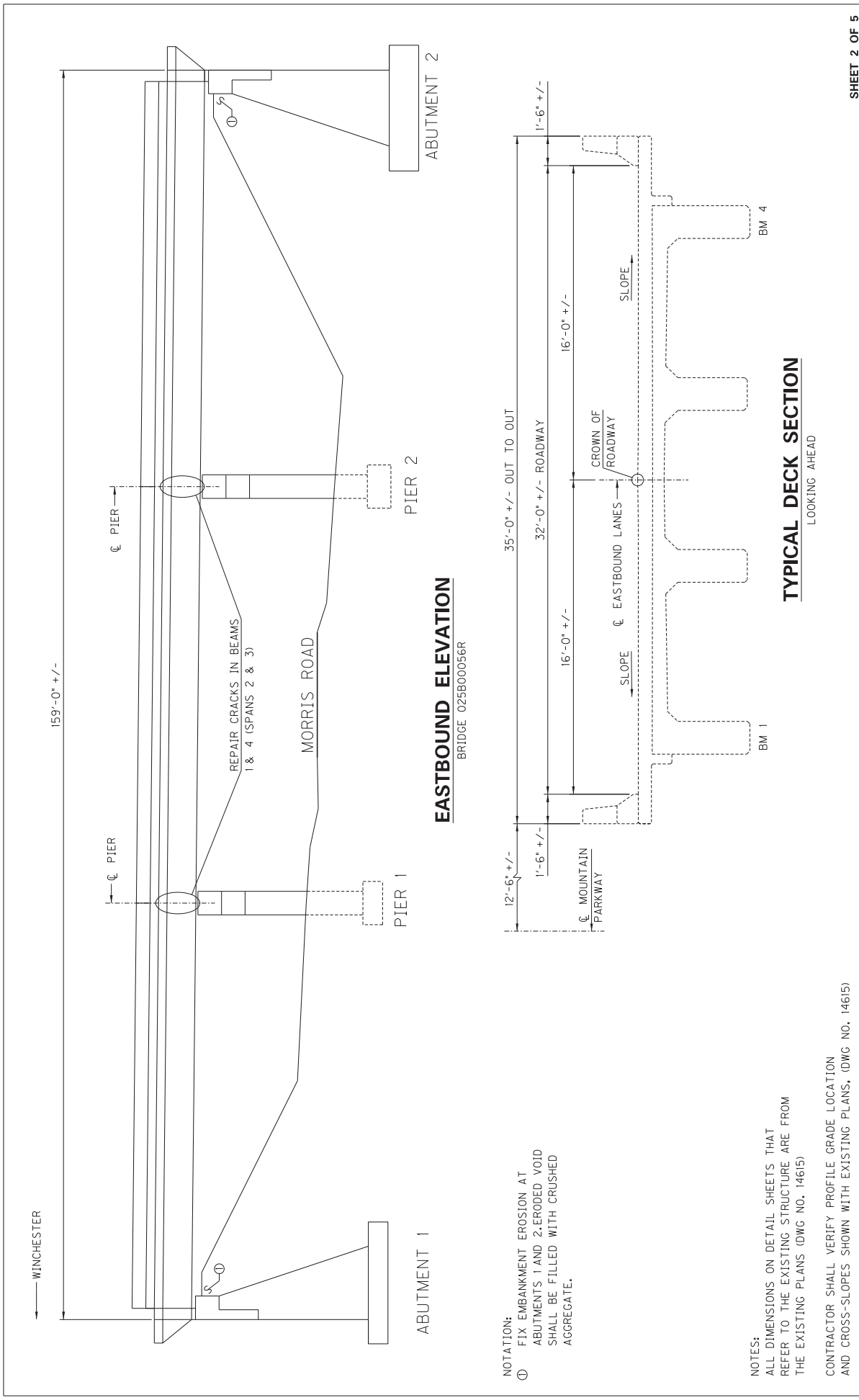
BM 1

SHEET 1 OF 5

BRIDGES: 025B00056L/R
CLARK COUNTY: CLARK COUNTY
ROUTE: MOUNTAIN PARKWAY
CROSSING: MORRIS ROAD



**WB ELEVATION AND TYPICAL DECK SECTION**



NOTATION:  
 ① FIX EMBANKMENT EROSION AT ABUTMENTS 1 AND 2. ERODED VOID SHALL BE FILLED WITH CRUSHED AGGREGATE.

NOTES:  
 ALL DIMENSIONS ON DETAIL SHEETS THAT REFER TO THE EXISTING STRUCTURE ARE FROM THE EXISTING PLANS (DWG NO. 14615)

CONTRACTOR SHALL VERIFY PROFILE GRADE LOCATION AND CROSS-SLOPES SHOWN WITH EXISTING PLANS, (DWG NO. 14615)



**EB ELEVATION AND TYPICAL DECK SECTION**

SHEET 2 OF 5

COUNTY:	CLARK	BRIDGES:	025B00056R
ROUTE:	MOUNTAIN PARKWAY	CROSSING:	MORRIS ROAD

**NOTES:**  
WHERE REPAIR TO BEAM IS SHOWN IN THE DETAILS, NEW CONCRETE SHALL BE BONDED TO EXISTING BEAM CONCRETE WITH A TWO-COMPONENT EPOXY RESIN SYSTEM CONFORMING TO SECTION 511 AND 826 OF THE SPECIFICATIONS. THE COST OF THIS WORK, INCLUDING ALL LABOR, TOOLS AND MATERIALS IS TO BE INCIDENTAL TO THE UNIT PRICE BID FOR CONCRETE BEAM REPAIRS.  
THE DETAILS REPRESENT A COMPILATION OF THE PRIMARY DEFICIENCIES AND CONCRETE PATCHING REPAIRS REQUIRED AT THE BEAMS. EXISTING CONDITIONS VARY ALONG THE BEAMS.

ANY DIMENSIONS SHOWN ON THESE DETAILS ARE APPROXIMATE AND ARE BASED ON THE EXISTING PLANS (DWG NO'S 14615 & 24688).  
SEE SPECIAL NOTE FOR CONCRETE BEAM REPAIR.  
ADDITIONAL NOTES NOT INCLUDED IN THE SPECIAL NOTE:

- A. ALL EXPOSED REINFORCING STEEL SHALL REMAIN IN PLACE AND RECEIVE A COMPLETE SAND-BLASTED CLEANING TO REMOVE ALL RUST. IF CORROSION OF THE EXISTING REINFORCING BAR HAS REDUCED THE BAR SECTIONAL AREA BY MORE THAN 75%, THEN SUPPLEMENTAL REINFORCEMENT IS REQUIRED IN THE FORM OF STITCHING A 'L'-SHAPED REBAR INTO DOWELED HOLES AND ANCHORING WITH A POLYESTER RESIN ADHESIVE FROM THE KYTC APPROVED LIST FOR REINFORCING BAR GROUT ADHESIVE (NON-EPOXY).
- B. WHEN REQUIRED, THE DRILLING OF DOWEL HOLES SHALL BE BY PNEUMATIC DRILLING WITH SINKER BITS. AFTER REMOVAL OF UNSOUND CONCRETE, THE AREA SHOULD BE FLUSHED WITH HIGH PRESSURE WATER OR VACUUM CLEANED TO REMOVE LOOSE PARTICLES AND DUST.

FOLLOW THE MANUFACTURER'S GUIDELINES AND LIMITATIONS FOR PROPER INSTALLATION OF PATCHING MATERIALS.

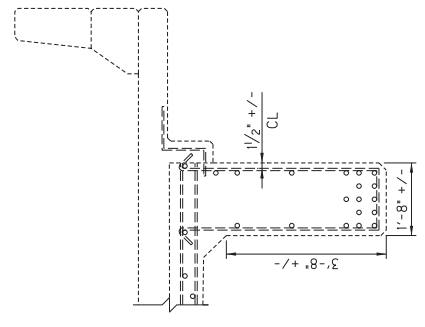
LIVE LOADS ARE NOT PERMITTED IN LANE ABOVE BEAM BEING REPAIRED.

STAGING AND OR MAINTENANCE OF TRAFFIC FOR THE CONCRETE BEAM PATCHING REPAIRS SHALL BE AS PER THE SPECIAL NOTES.

LEGEND:

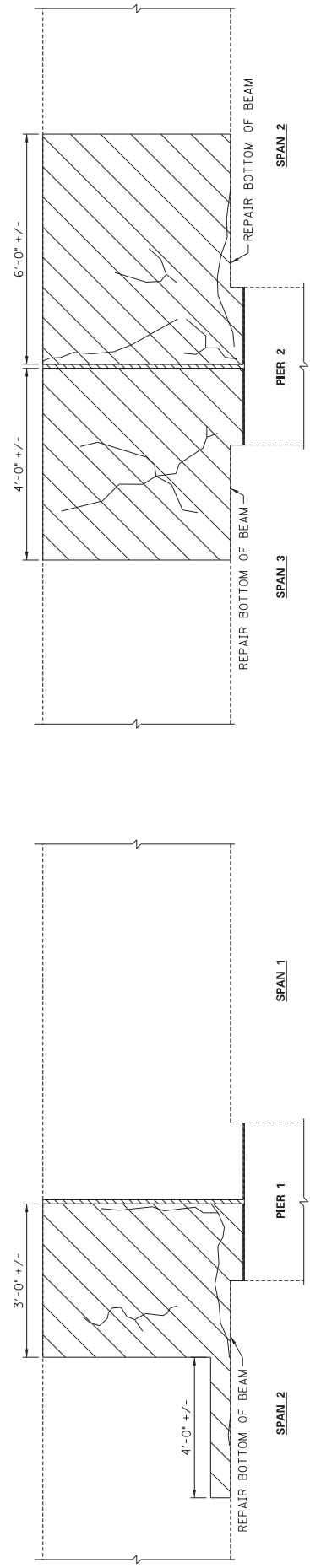


INDICATES TO REMOVE EXISTING CONCRETE TO 3/4" BEYOND EXIST REBAR, SAND-BLAST CLEAN EXPOSED CONCRETE AND REBAR AND INCORPORATE INTO REPAIR.



**SECTION THRU  
BEAM**

**EXISTING BEAM**



**BEAM 1 (PIER 1)**

**BEAM 1 (PIER 2)**

**BEAM REPAIR DETAILS**  
WESTBOUND BRIDGE



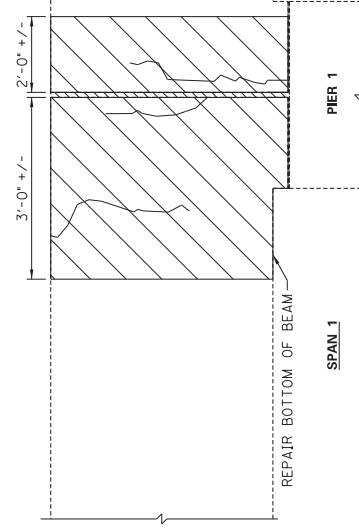
**BEAM REPAIR (025B00056L)**

NOTE:  
FOR NOTES, SEE SHEET 3 OF 5 (BRIDGES 025B00056L/R)

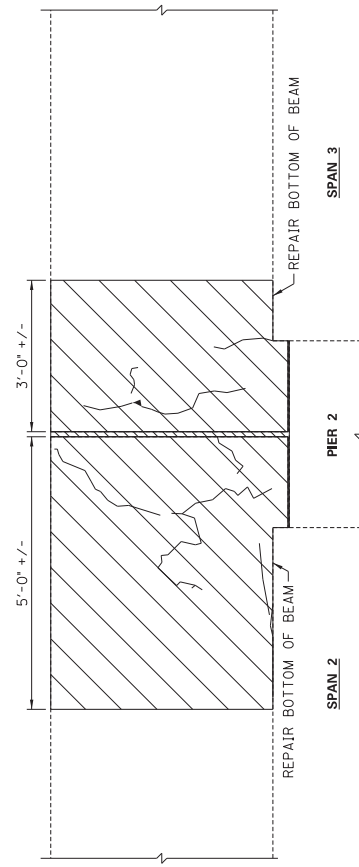
LEGEND:



INDICATES TO REMOVE EXISTING CONCRETE TO 3/4" BEYOND EXIST REBAR, SAND-BLAST  
CLEAN EXPOSED CONCRETE AND REBAR, AND INCORPORATE INTO REPAIR.



BEAM 4 (PIER 1)



BEAM 4 (PIER 2)

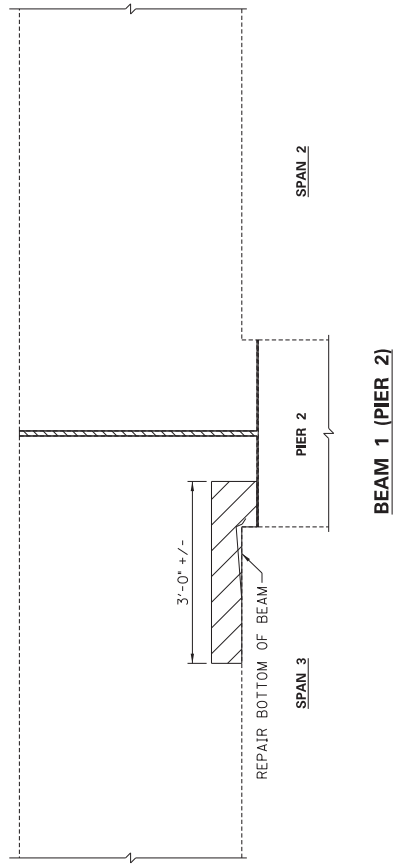
**BEAM REPAIR DETAILS**  
WESTBOUND BRIDGE



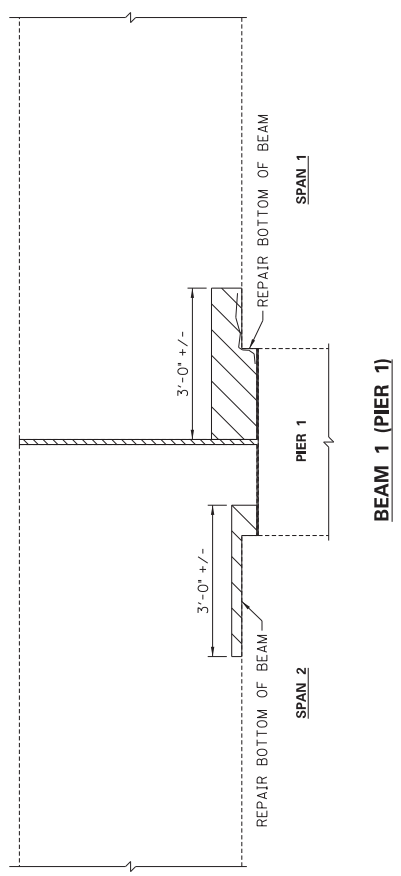
**BEAM REPAIR (025B00056L)**

SHEET 4 OF 5

CLARK	CLARK
MOUNTAIN PARKWAY	BRIDGES: 025B00056L/R
MORRIS ROAD	CROSSING:



**BEAM 1 (PIER 2)**

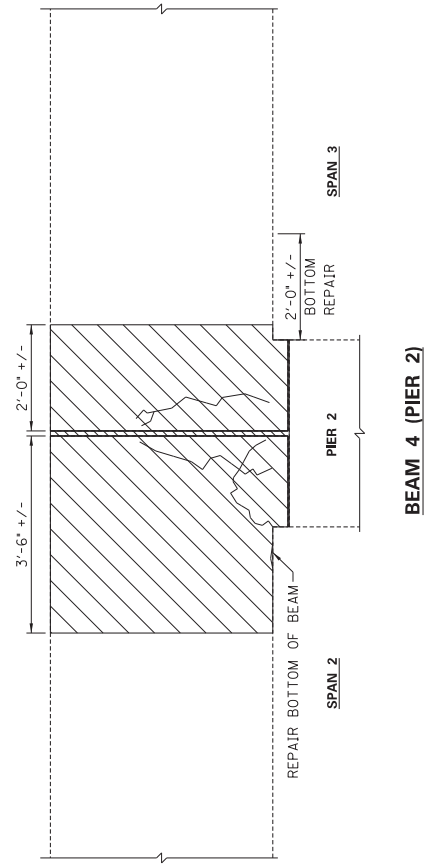


**BEAM 1 (PIER 1)**

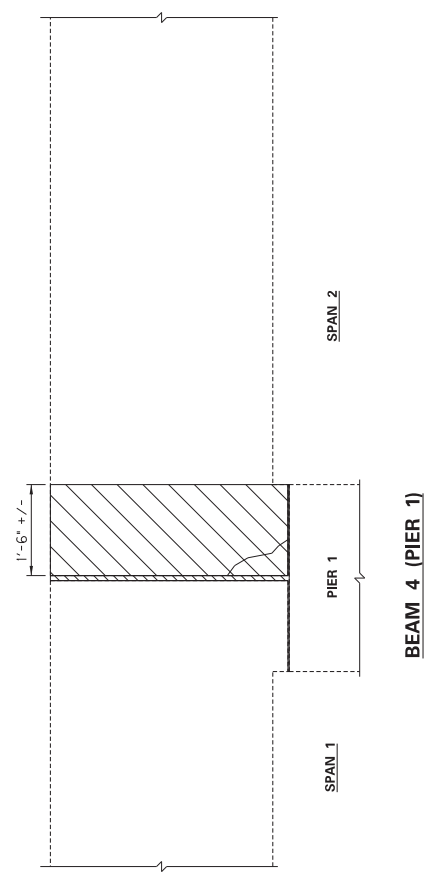
**LEGEND:**



INDICATES TO REMOVE EXISTING CONCRETE TO 3/4" BEYOND EXIST REBAR, SAND-BLAST CLEAN EXPOSED CONCRETE AND REBAR AND INCORPORATE INTO REPAIR.



**BEAM 4 (PIER 2)**



**BEAM 4 (PIER 1)**

**EASTBOUND BRIDGE**

NOTES:  
SEE SHEET 3 OF 5 (BRIDGES 025B00056L/R)

SHEET 5 OF 5

BRIDGES: 025B00056L/R
CLARK COUNTY: CLARK
ROUTE: MOUNTAIN PARKWAY BRIDGES 025B00056L/R
CROSSING: MORRIS ROAD



**BEAM REPAIR (025B00056R)**

**MTN. PARKWAY OVER OLD RR BED (025B00057L)**

(MP 3.790)



SUMMARY OF QUANTITIES			
ITEM CODE	DESCRIPTION	QUANTITY	UNIT
3298	EXPANSION JOINT REPLACEMENT 4IN	41	LF
3300	ELIMINATE TRANSVERSE JOINT	175	LF
22146EN	CONCRETE PATCHING REPAIR	306	SF
24093EC	BEAM REPAIR	15	EA
8019	CYCLOPEAN STONE RIPRAP	7	TON

NOTE: REPAIR EMBANKMENT EROSION AT END BENTS 1 AND 2. EROSION SHALL BE REPAIRED WITH CYCLOPEAN STONE RIPRAP. THE DEPARTMENT WILL MEASURE THE QUANTITY IN TONS ACTUALLY PLACED, NOT TO EXCEED THE ESTIMATED QUANTITY BY MORE THAN 10% WITHOUT APPROVAL FROM THE ENGINEER. PAYMENT AT THE CONTRACT UNIT PRICE IS FULL COMPENSATION FOR FURNISHING AND PLACING CYCLOPEAN STONE RIPRAP AS SPECIFIED IN THIS NOTE.

NOTE: CONCRETE PATCHING BASED ON VISUAL INSPECTION + 35%. BEAM REPAIR QUANTITY BASED ON VISUAL INSPECTION.

**MTN. PARKWAY OVER OLD RR BED (025B00057R)**

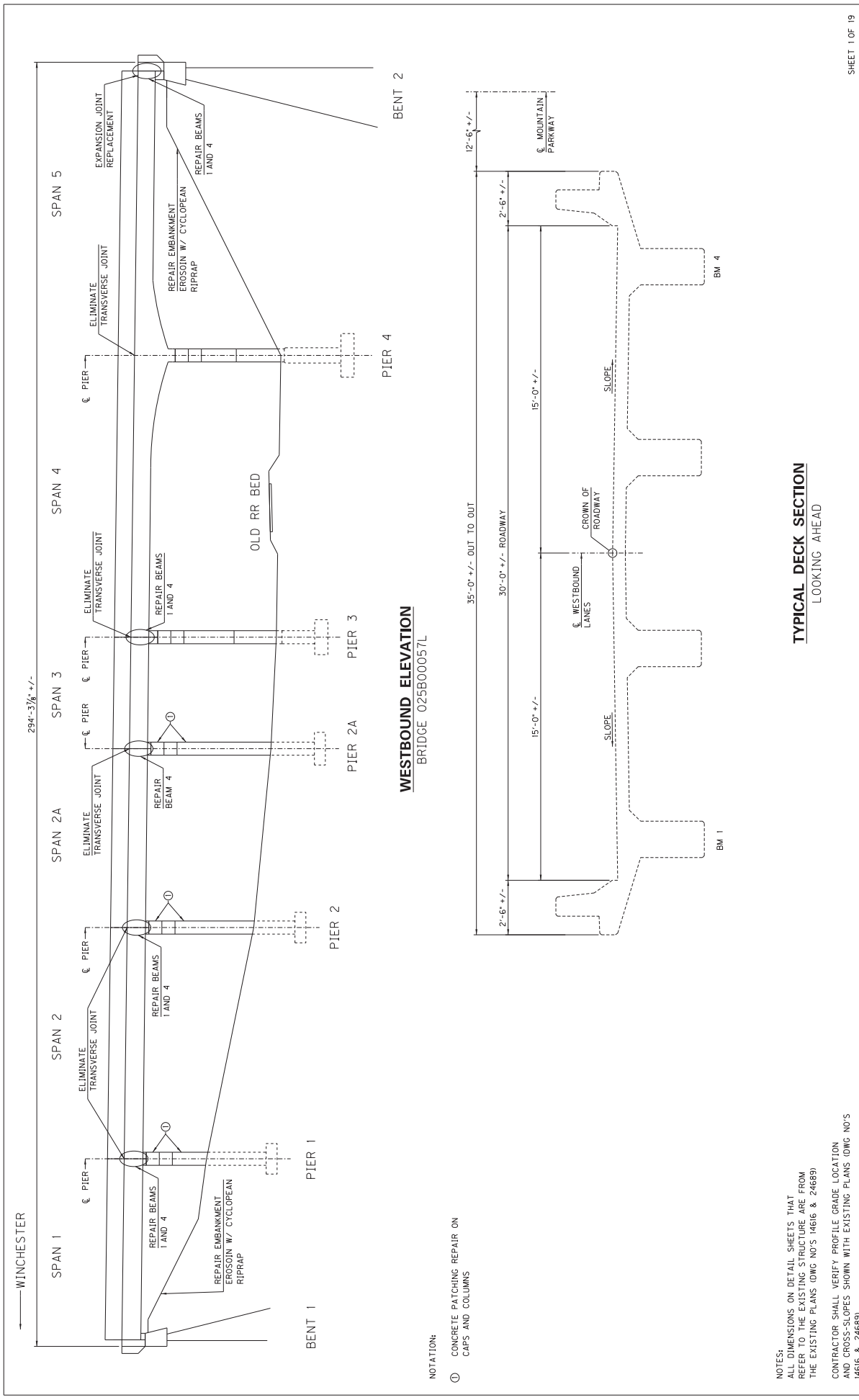
(MP 3.670)



SUMMARY OF QUANTITIES			
ITEM CODE	DESCRIPTION	QUANTITY	UNIT
3298	EXPANSION JOINT REPLACEMENT 4IN	41	LF
3300	ELIMINATE TRANSVERSE JOINT	144	LF
22146EN	CONCRETE PATCHING REPAIR	115	SF
24093EC	BEAM REPAIR	12	EA
8019	CYCLOPEAN STONE RIPRAP	9	TON

NOTE: REPAIR EMBANKMENT EROSION AT END BENTS 1 AND 2. EROSION SHALL BE REPAIRED WITH CYCLOPEAN STONE RIPRAP. THE DEPARTMENT WILL MEASURE THE QUANTITY IN TONS ACTUALLY PLACED, NOT TO EXCEED THE ESTIMATED QUANTITY BY MORE THAN 10% WITHOUT APPROVAL FROM THE ENGINEER. PAYMENT AT THE CONTRACT UNIT PRICE IS FULL COMPENSATION FOR FURNISHING AND PLACING CYCLOPEAN STONE RIPRAP AS SPECIFIED IN THIS NOTE.

NOTE: CONCRETE PATCHING BASED ON VISUAL INSPECTION + 35%. BEAM REPAIR QUANTITY BASED ON VISUAL INSPECTION.



**WESTBOUND ELEVATION**  
BRIDGE 025B00057L

**TYPICAL DECK SECTION**  
LOOKING AHEAD

NOTATION:  
① CONCRETE PATCHING REPAIR ON CAPS AND COLUMNS

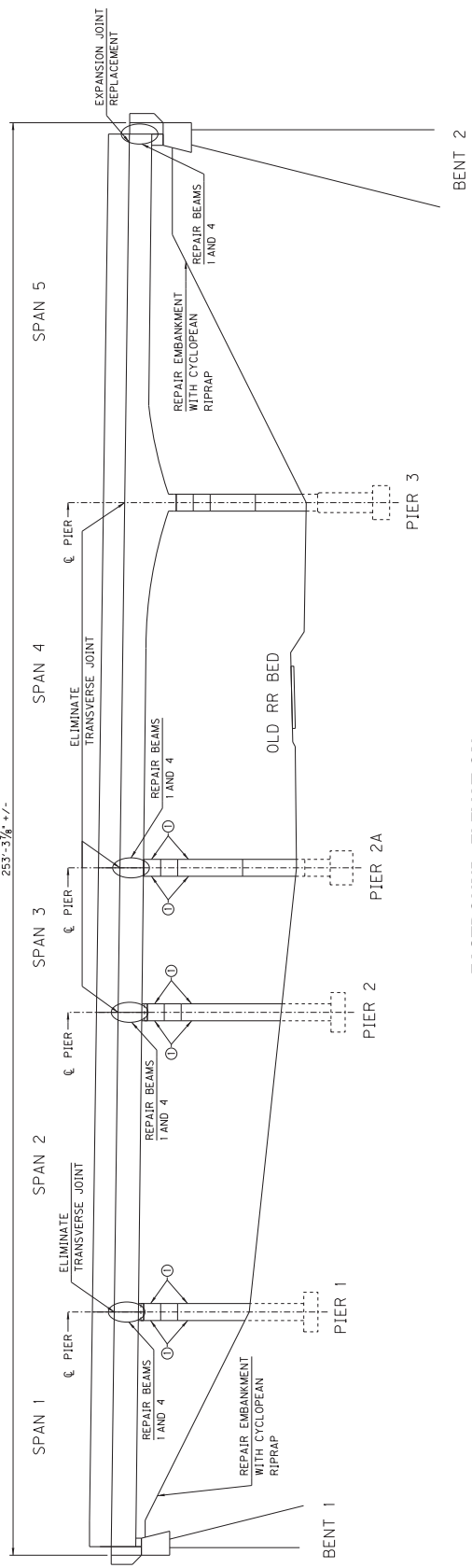
NOTES:  
ALL DIMENSIONS ON DETAIL SHEETS THAT REFER TO THE EXISTING STRUCTURE ARE FROM THE EXISTING PLANS (DWG NO'S 14616 & 24689)  
CONTRACTOR SHALL VERIFY PROFILE GRADE LOCATION AND CROSS-SLOPES SHOWN WITH EXISTING PLANS (DWG NO'S 14616 & 24689)



**WB ELEVATION AND TYPICAL DECK SECTION**

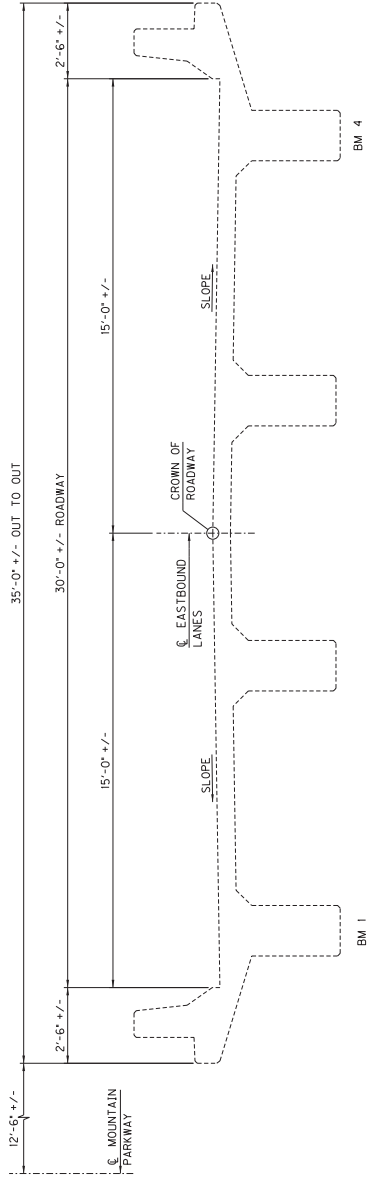
SHEET 1 OF 19

COUNTY:	CLARK	BRIDGES:	025B00057L/R
ROUTE:	MOUNTAIN PARKWAY		
CROSSING:	OLD RR BED		



**EASTBOUND ELEVATION**  
BRIDGE 025B00057R

NOTATION:  
 ○ CONCRETE PATCHING REPAIR ON CAPS AND COLUMNS



**TYPICAL DECK SECTION**  
LOOKING AHEAD

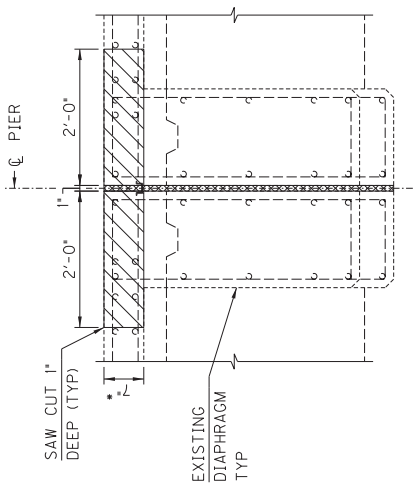
NOTES:  
 ALL DIMENSIONS ON DETAIL SHEETS THAT REFER TO THE EXISTING STRUCTURE ARE FROM THE EXISTING PLANS (DMG NO'S 14616 & 24689).  
 CONTRACTOR SHALL VERIFY PROFILE GRADE LOCATION AND CROSS-SLOPES SHOWN WITH EXISTING PLANS (DMG NO S. 14616 & 24689).

SHEET 2 OF 19

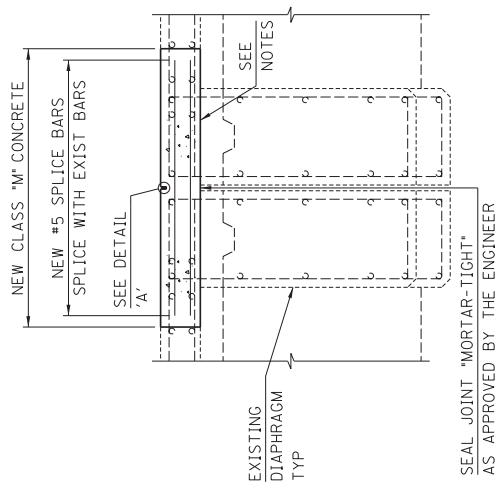
COUNTY:	CLARK	BRIDGES:	025B00057L/R
ROUTE:	MOUNTAIN PARKWAY		
CROSSING:	OLD RR BED		

**EB ELEVATION AND TYPICAL DECK SECTION**





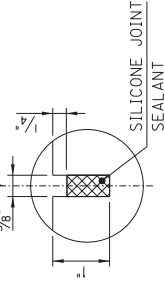
**EXISTING SECTION AT PIERS**  
SHOWING LIMITS OF DECK REMOVAL



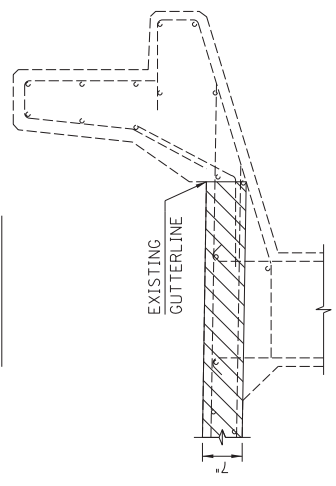
**ELIMINATED JOINT SECTION**  
SHOWING PROPOSED

**NOTES:**  
 CONCRETE REMOVAL  
 REMOVE HATCHED AREAS OF CONCRETE AND EXPANSION DEVICE. STRAIGHTEN, SAND-BLAST CLEAN AND INCORPORATE EXISTING SLAB REINFORCEMENT INTO NEW CONSTRUCTION  
 BONDING NEW CONCRETE TO EXISTING CONCRETE  
 NEW CONCRETE SHALL BE BONDED TO EXISTING SLAB CONCRETE WITH A TWO-COMPONENT EPOXY RESIN SYSTEM CONFORMING TO SECTIONS 511 AND 826 OF THE SPECIFICATIONS. THIS WORK, INCLUDING ALL LABOR, TOOLS, AND MATERIALS IS TO BE INCIDENTAL TO THE UNIT PRICE BID FOR ELIMINATE TRANSVERSE JOINT.  
 ROUGHEN EXISTING CONCRETE WHEN IN CONTACT WITH NEW CONCRETE.  
 DO NOT DISTURB TOP OF BEAMS

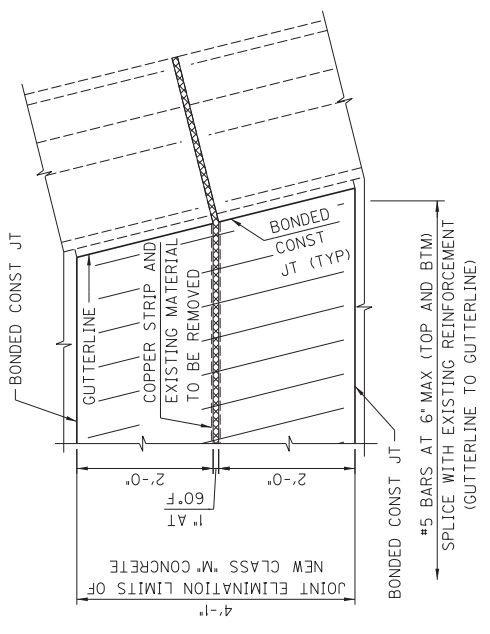
**NOTATIONS:**  
 \* FIELD VERIFY  
 ○ PIER AND TRANSVERSE  
 SAWS JOINT (GUTTERLINE TO GUTTERLINE)



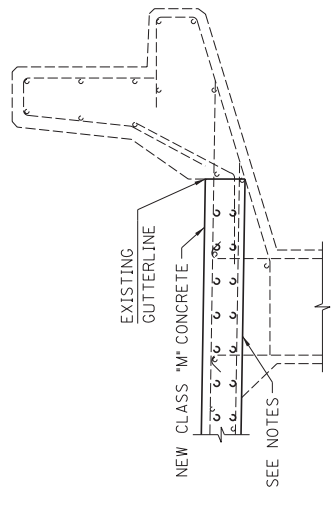
**DETAIL 'A'**



**SECTION AT BARRIERS**  
SHOWING EXISTING & LIMITS OF REMOVAL



**PLAN AT PIERS**



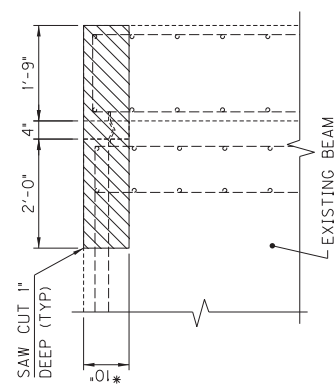
**SECTION AT BARRIERS**



**ELIMINATE TRANSVERSE JOINT (AT PIERS)**

SHEET 3 OF 19

COUNTY: CLARK  
 ROUTE: MOUNTAIN PARKWAY  
 CROSSING: OLD RR BED  
 BRIDGE: 025B00511/R



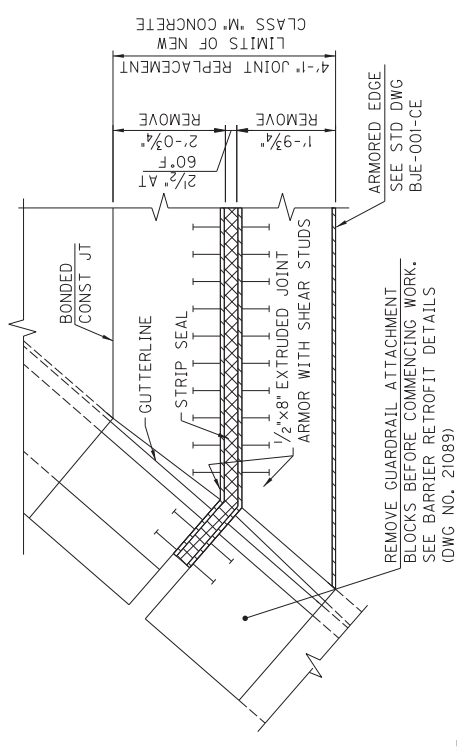
**SECTION AT BENT 2**  
SHOWING EXISTING & LIMITS OF REMOVAL

NOTATION:

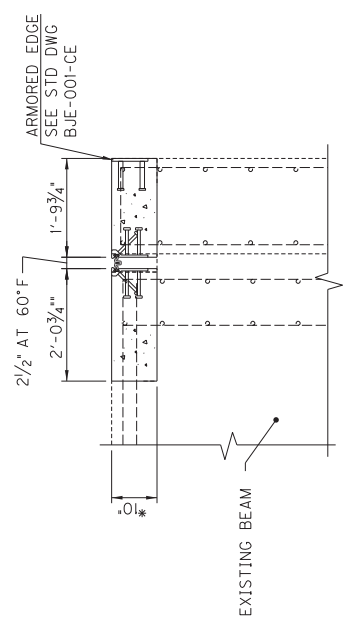
\* FIELD VERIFY, REMOVE TO TOP OF BEAM

NOTES:  
CONCRETE REMOVAL  
REMOVE HATCHED AREAS OF CONCRETE. EXPANSION DEVICE & ARMORED EDGE. SAND-BLASTED, CLEAN, STRAIGHTEN, & REUSE EXISTING REINFORCEMENT. THE CONTRACTOR HAS THE OPTION TO REPLACE EXISTING TRANSVERSE REINFORCEMENT.  
PERFORMED EXPANSION JOINT STRIP SEAL SHALL BE EITHER ONE OF THE FOLLOWING OR AN APPROVED EQUIVALENT:  
D.S. BROWN COMPANY  
L2-400 W/SPA STEELFLEX RAIL  
WATSON BOWMAN ACME  
SE-400 W/TYPE "P" RAIL  
FOR TEMPERATURE CHANGE INCREMENTS, SEE STD DWG BJE-001-CE

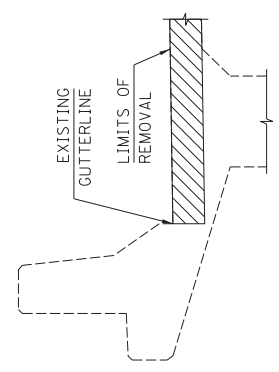
BONDING NEW CONCRETE TO EXISTING CONCRETE WHERE REPAIR TO BEAM/SLAB IS CALLED FOR IN THE PLANS, NEW CONCRETE SHALL BE BONDED TO EXISTING BEAM/SLAB CONCRETE WITH A TWO-COMPONENT EPOXY RESIN SYSTEM CONFORMING TO SECTIONS 511 AND 826 OF THE SPECIFICATIONS. THIS WORK, INCLUDING ALL LABOR, TOOLS, AND MATERIALS IS TO BE INCIDENTAL TO THE UNIT PRICE BID FOR EXPANSION JOINT REPLACEMENT.  
ROUGHEN EXISTING CONCRETE WHEN IN CONTACT WITH NEW CONCRETE.



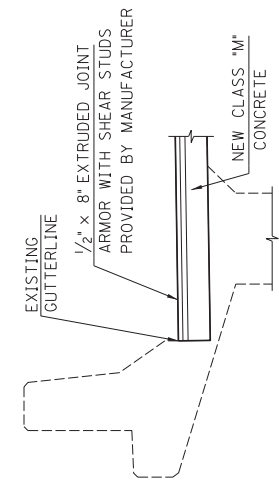
**PLAN AT BENT 2**



**SECTION AT BENT 2**  
SHOWING PROPOSED



**SECTION AT BARRIER**  
SHOWING EXISTING & LIMITS OF REMOVAL



**SECTION AT BARRIER**  
SHOWING PROPOSED



**EXPANSION JOINT REPLACEMENT 4"**

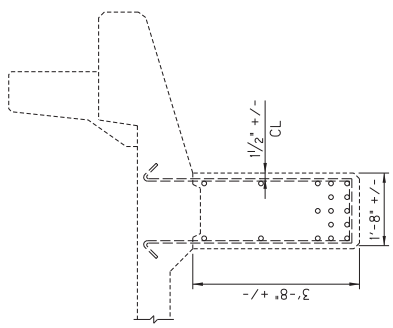
SHEET 4 OF 19  
COUNTY: CLARK  
ROUTE: MOUNTAIN PARKWAY  
CROSSING: OLD RR BED  
BRIDGE: 025B0095L/R

NOTES:  
WHERE REPAIR TO BEAM IS SHOWN IN THE DETAILS, NEW CONCRETE SHALL BE BONDED TO EXISTING BEAM CONCRETE WITH A TWO-COMPONENT EPOXY RESIN SYSTEM CONFORMING TO SECTION 511 AND 826 OF THE SPECIFICATIONS. THE COST OF THIS WORK, INCLUDING ALL LABOR, TOOLS AND MATERIALS IS TO BE INCIDENTAL TO THE UNIT PRICE BID FOR CONCRETE BEAM REPAIRS.  
THE DETAILS REPRESENT A COMPILATION OF THE PRIMARY DEFICIENCIES AND CONCRETE PATCHING REPAIRS REQUIRED AT THE BEAMS. EXISTING CONDITIONS VARY ALONG THE BEAMS.

ANY DIMENSIONS SHOWN ON THESE DETAILS ARE APPROXIMATE AND ARE BASED ON THE EXISTING PLANS (DWG NO'S 14616 & 24689).  
SEE SPECIAL NOTE FOR CONCRETE PATCHING REPAIR AS SUBMITTED WITH CONSTRUCTION PROPOSAL.  
ADDITIONAL NOTES NOT INCLUDED IN THE SPECIAL NOTE:

- A. ALL EXPOSED REINFORCING STEEL SHALL REMAIN IN PLACE AND RECEIVE A COMPLETE SAND-BLASTED CLEANING TO REMOVE ALL RUST. IF CORROSION OF THE EXISTING REINFORCING BAR HAS REDUCED THE BAR SECTIONAL AREA BY MORE THAN 75%, THEN SUPPLEMENTAL REINFORCEMENT IS REQUIRED IN THE FORM OF STITCHING A 'L'-SHAPED REBAR INTO DOWELED HOLES AND ANCHORING WITH A POLYESTER RESIN ADHESIVE FROM THE KYTC APPROVED LIST FOR REINFORCING BAR GROUT ADHESIVE (NON-EPOXY).
- B. WHEN REQUIRED, THE DRILLING OF DOWEL HOLES SHALL BE BY PNEUMATIC DRILLING WITH SINKER BITS. AFTER REMOVAL OF UNSOUND CONCRETE, THE AREA SHOULD BE FLUSHED WITH HIGH PRESSURE WATER OR VACUUM CLEANED TO REMOVE LOOSE PARTICLES AND DUST.

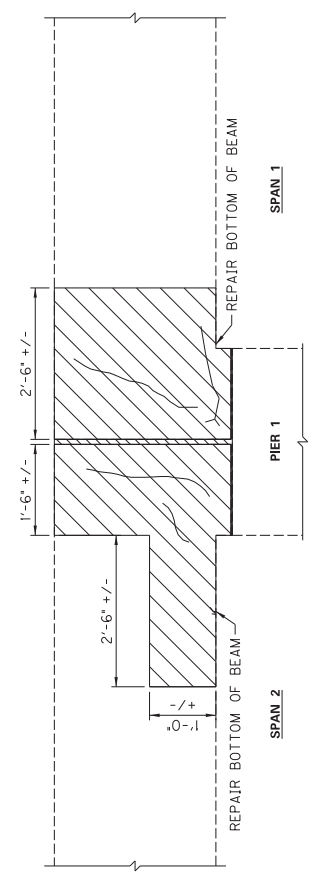
FOLLOW THE MANUFACTURER'S GUIDELINES AND LIMITATIONS FOR PROPER INSTALLATION OF PATCHING MATERIALS.  
LIVE LOADS ARE NOT PERMITTED IN LANE ABOVE BEAM BEING REPAIRED.  
STAGING AND OR MAINTENANCE OF TRAFFIC FOR THE CONCRETE PATCHING REPAIRS SHALL BE AS PER THE SPECIAL NOTES.



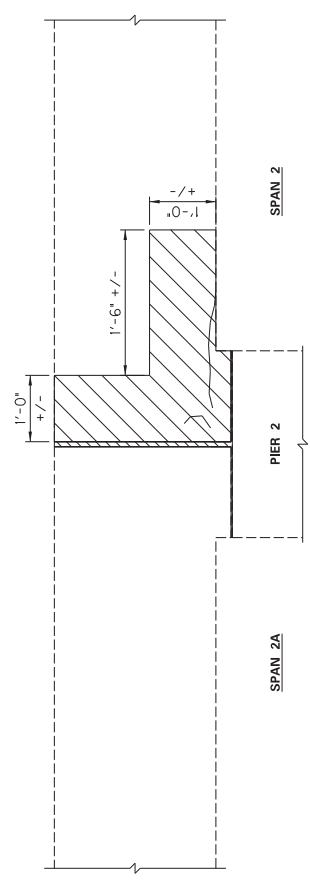
**SECTION THRU  
BEAM**  
**EXISTING BEAM**

**LEGEND:**

- INDICATES TO REMOVE EXISTING CONCRETE TO 3/4" BEYOND EXIST REBAR,
- SAND-BLAST CLEAN EXPOSED CONCRETE AND REBAR AND INCORPORATE INTO REPAIR



**BEAM 1 (PIER 1)**

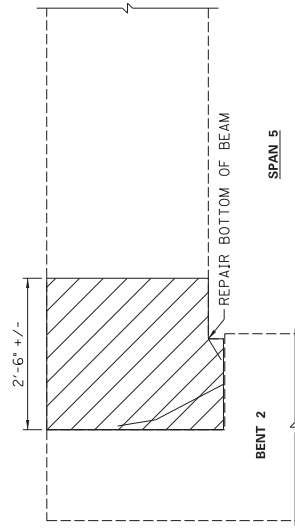
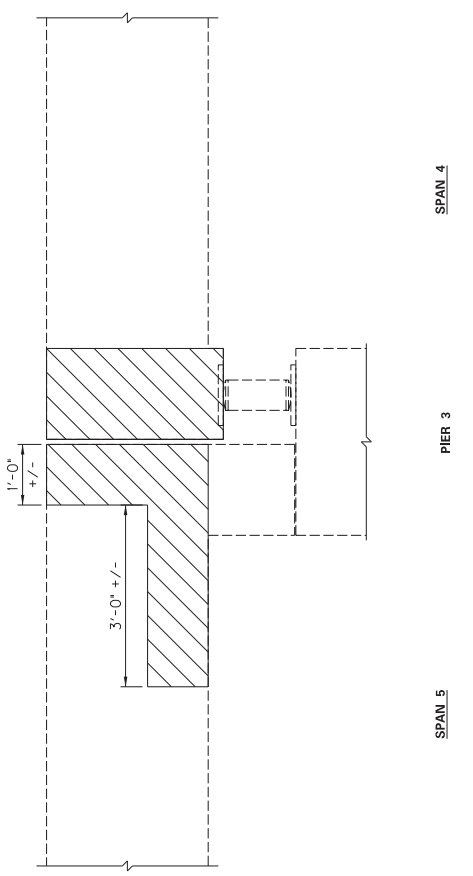


**BEAM 1 (PIER 2)**

**BEAM REPAIR DETAILS**  
WESTBOUND BRIDGE



**BEAM REPAIR (025B00057L)**



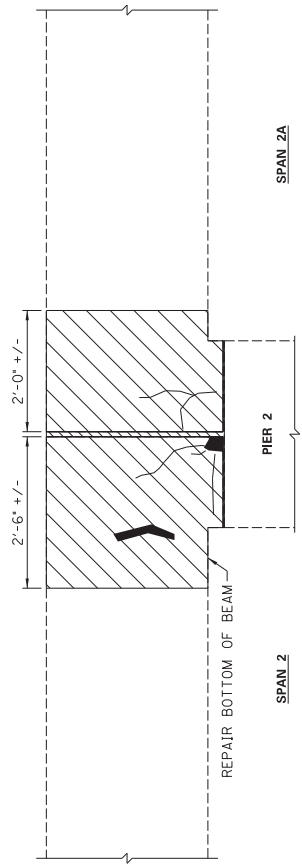
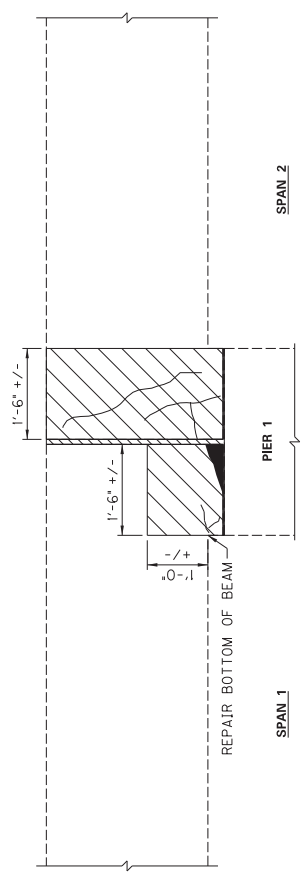
NOTE:  
FOR NOTES, SEE SHEET 5 OF 19 (BRIDGES 025B00057L/R)

**BEAM 1 (BENT 2)**

**BEAM 1 (PIER 4)**

LEGEND:

- INDICATES TO REMOVE EXISTING CONCRETE TO 3/4" BEYOND EXIST. REBAR, SAND-BLAST CLEAN EXPOSED CONCRETE AND REBAR, AND INCORPORATE INTO REPAIR
- INDICATES AREA OF SPALLING.



**BEAM 4 (PIER 1)**

**BEAM 4 (PIER 2)**

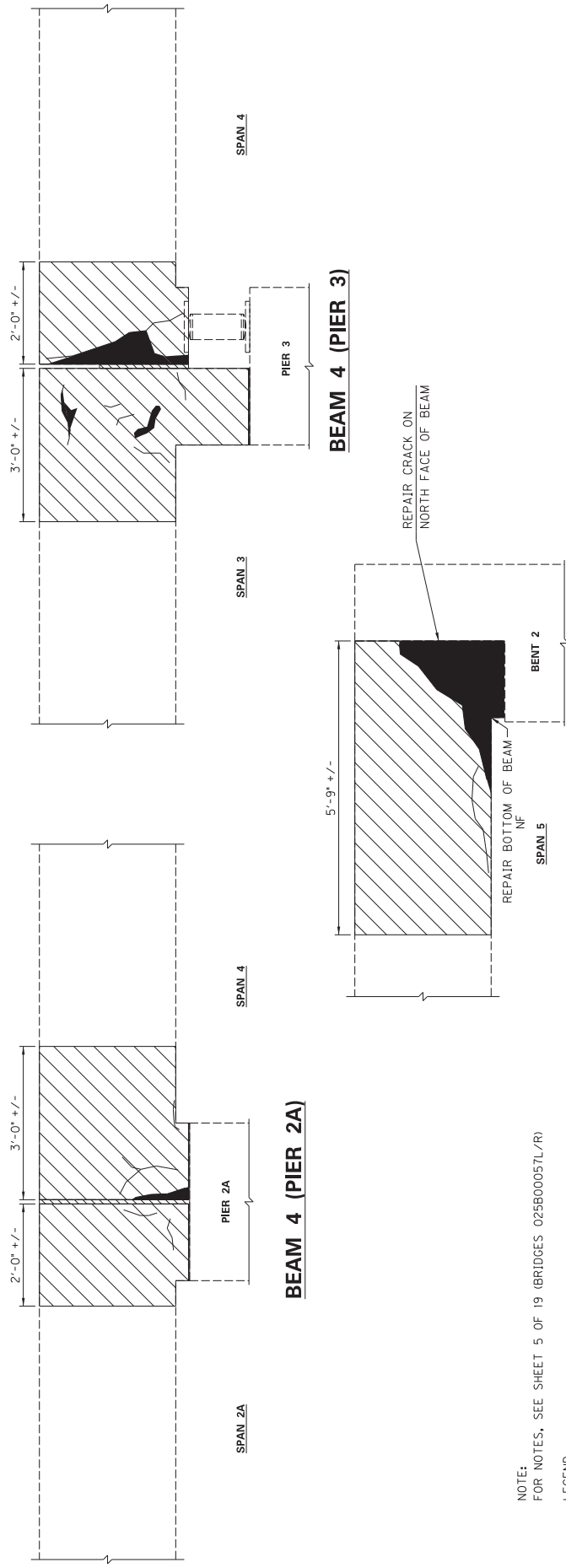
**BEAM REPAIR DETAILS**  
WESTBOUND BRIDGE



**BEAM REPAIR (025B00057L)**

SHEET 6 OF 19

COUNTY: CLARK	BRIDGES: 025B00057L/R
ROUTE: MOUNTAIN PARKWAY	
CROSSING: OLD RR BED	



NOTE:  
FOR NOTES, SEE SHEET 5 OF 19 (BRIDGES 025B00057L/R)

LEGEND:



INDICATES TO REMOVE EXISTING CONCRETE TO 3/4" BEYOND EXIST REBAR,  
SAND-BLAST CLEAN EXPOSED CONCRETE AND REBAR, AND INCORPORATE INTO REPAIR

INDICATES AREA OF SPALLING.

**BEAM 4 (BENT 2)**

**BEAM REPAIR DETAILS**

WESTBOUND BRIDGE

**BEAM REPAIR (025B00057L)**

SHEET 7 OF 19

COUNTY: CLARK	BRIDGES: 025B00057L/R
ROUTE: MOUNTAIN PARKWAY	
CROSSING: OLD RR BED	

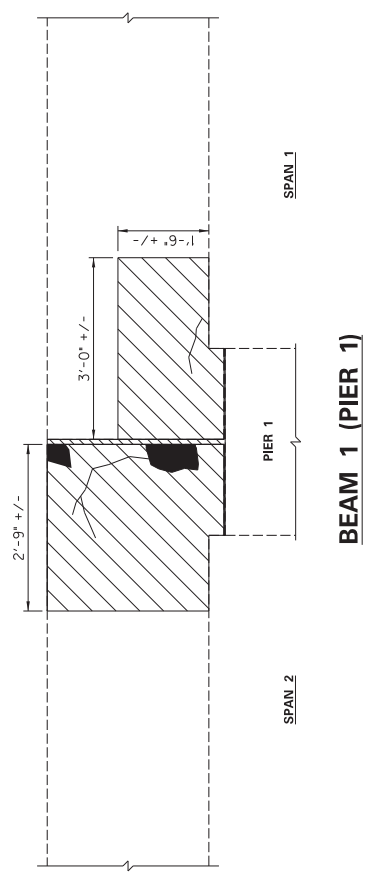


NOTE:  
FOR NOTES SEE SHEET 5 OF 19 (BRIDGES 025B00057L/R)

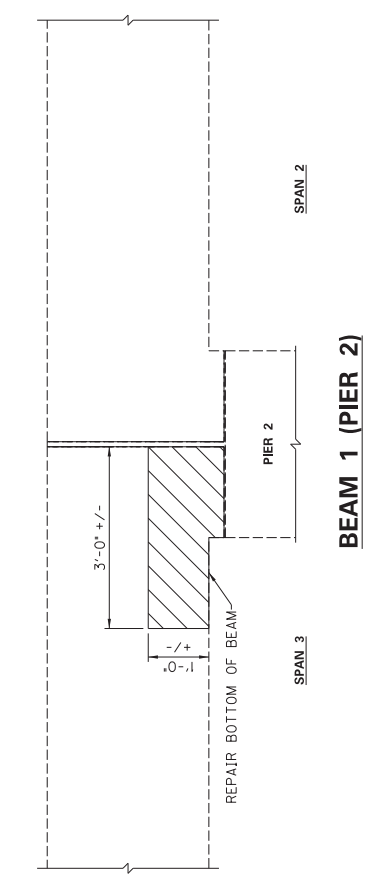
LEGEND:



INDICATES TO REMOVE EXISTING CONCRETE TO 3/4' BEYOND EXIST REBAR.  
SAND-BLAST CLEAN EXPOSED CONCRETE AND REBAR AND INCORPORATE INTO REPAIR  
INDICATES AREA OF SPALLING



**BEAM 1 (PIER 1)**



**BEAM 1 (PIER 2)**

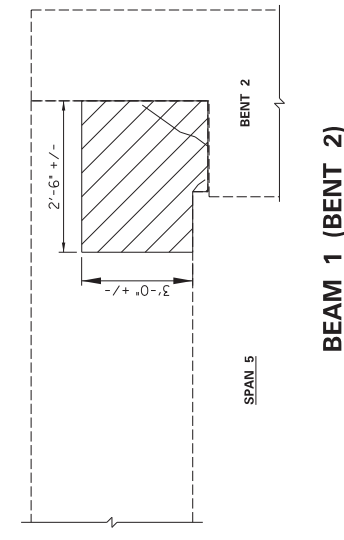
**BEAM REPAIR DETAILS**  
EASTBOUND BRIDGE

SHEET 8 OF 19

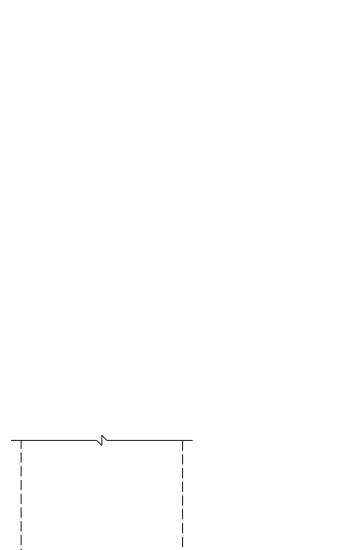
COUNTY: CLARK	BRIDGES: 025B00057L/R
ROUTE: MOUNTAIN PARKWAY	
CROSSING: OLD RR BED	



**BEAM REPAIR (025B00057R)**



**BEAM 1 (PIER 3)**



**BEAM 1 (BENT 2)**

NOTE:  
FOR NOTES SEE SHEET 5 OF 19 (BRIDGES 025B00057L/R)

LEGEND:



INDICATES TO REMOVE EXISTING CONCRETE TO  $\frac{3}{4}$ " BEYOND EXIST REBAR,  
SAND-BLAST CLEAN EXPOSED CONCRETE AND REBAR AND INCORPORATE INTO REPAIR

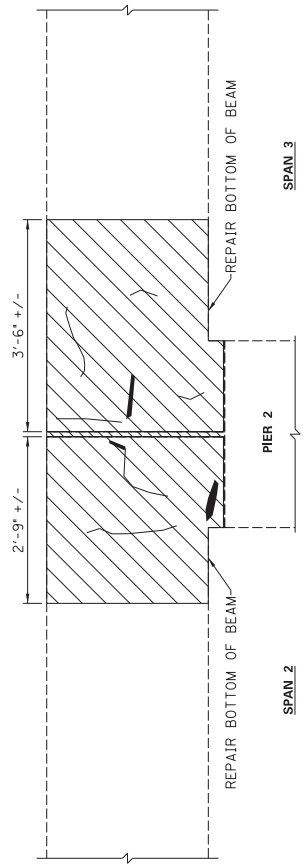
**BEAM REPAIR DETAILS**  
EASTBOUND BRIDGE



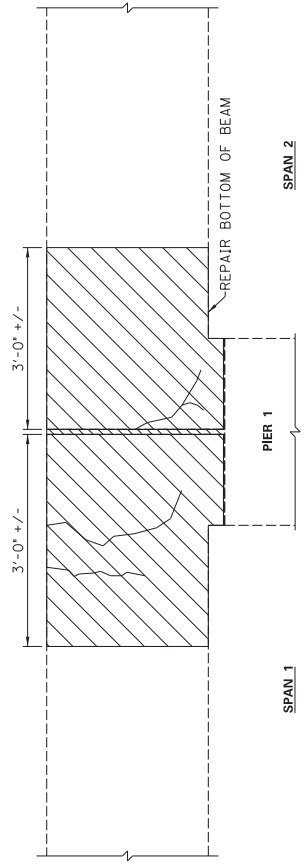
**BEAM REPAIR (025B00057R)**

SHEET 9 OF 19

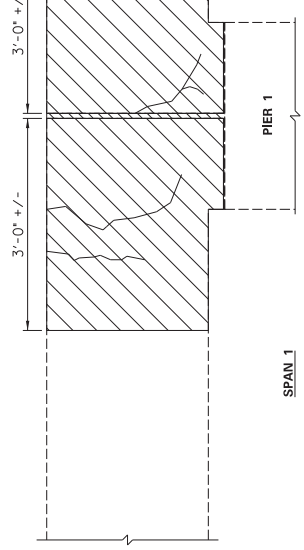
COUNTY: CLARK	BRIDGES: 025B00057L/R
ROUTE: MOUNTAIN PARKWAY	
CROSSING: OLD RR BED	



**BEAM 4 (PIER 1)**





**BEAM 4 (PIER 2)**

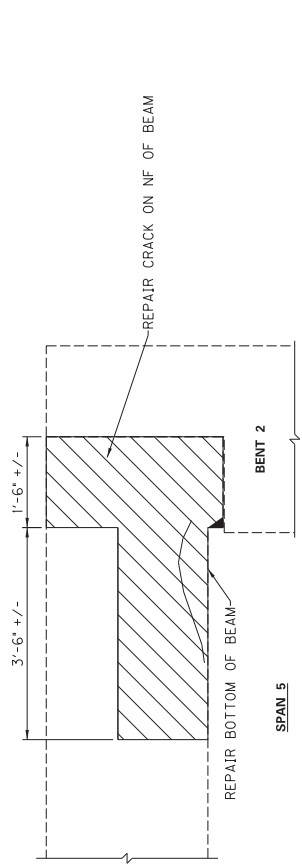


**BEAM 4 (PIER 3)**

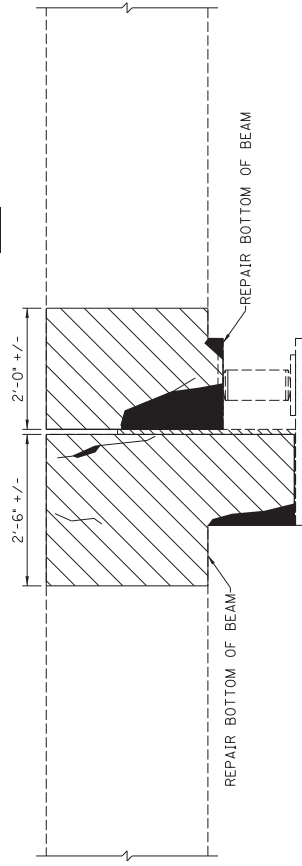
**BEAM 4 (BENT 2)**

NOTE:  
FOR NOTES SEE SHEET 5 OF 19 (BRIDGES 025B00057L/R)

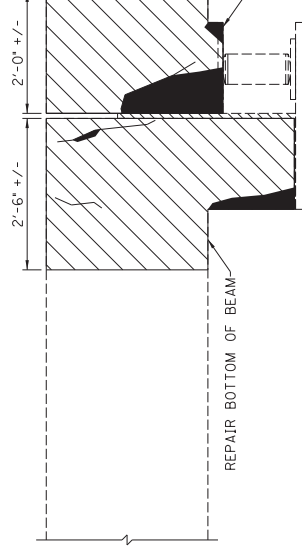
- LEGEND:
-  INDICATES TO REMOVE EXISTING CONCRETE TO 3/4" BEYOND EXIST REBAR, SAND-BLAST CLEAN EXPOSED CONCRETE AND REBAR, AND INCORPORATE INTO REPAIR
  -  INDICATES AREA OF SPALLING



**BEAM 4 (PIER 1)**



**BEAM 4 (PIER 2)**



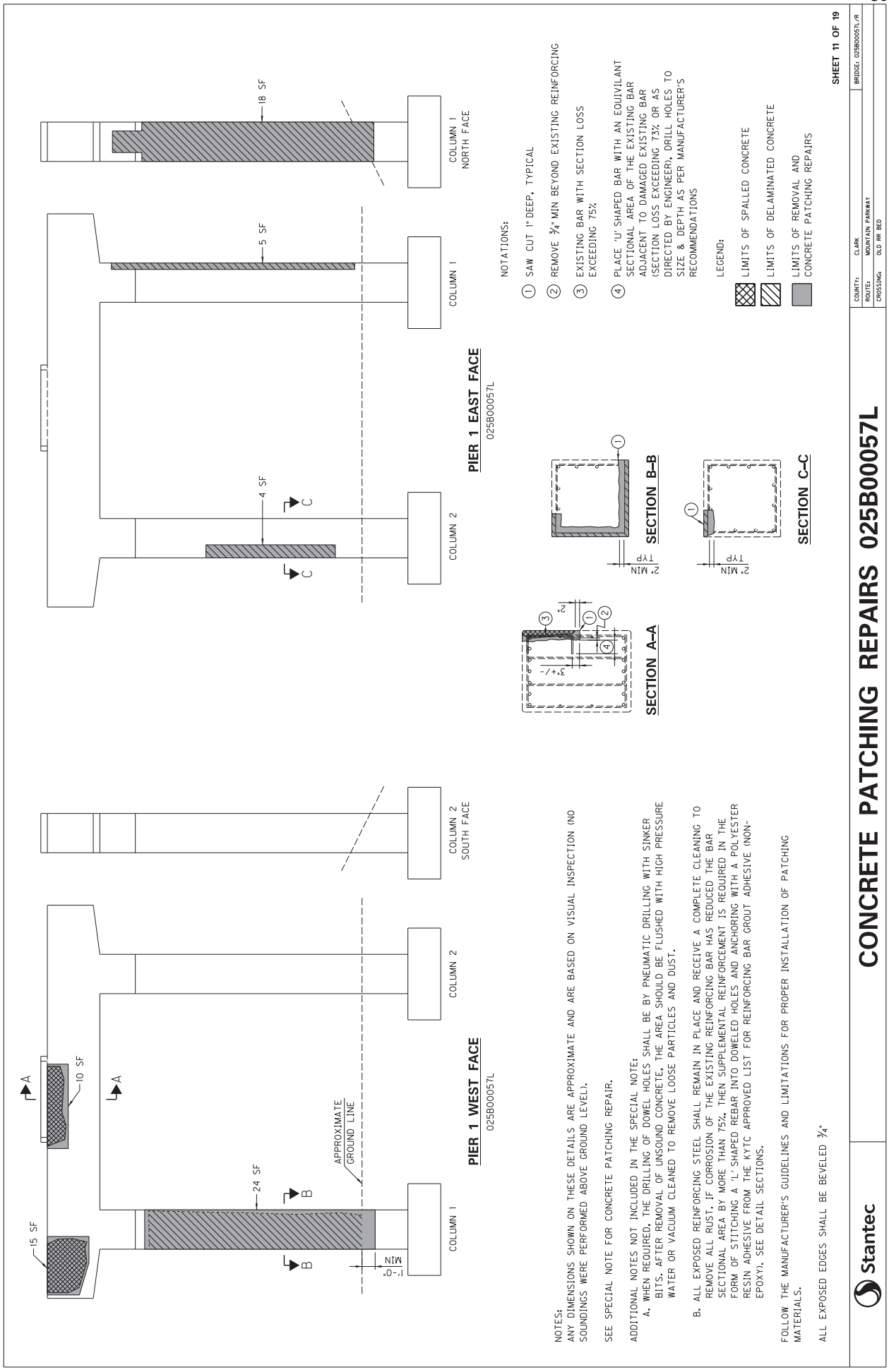
**BEAM 4 (PIER 3)**

**BEAM 4 (BENT 2)**

**BEAM REPAIR DETAILS**  
EASTBOUND BRIDGE



**BEAM REPAIR (025B00057R)**



**PIER 1 WEST FACE**  
025B00057L

**PIER 1 EAST FACE**  
025B00057L

- NOTATIONS:
- ① SAW CUT 1" DEEP, TYPICAL
  - ② REMOVE 3/4" MIN BEYOND EXISTING REINFORCING
  - ③ EXISTING BAR WITH SECTION LOSS EXCEEDING 75%
  - ④ PLACE 'U' SHAPED BAR WITH AN EQUIVARIANT SECTIONAL AREA OF THE EXISTING BAR ADJACENT TO DAMAGED EXISTING BAR (SECTION LOSS EXCEEDING 75% OR AS DIRECTED BY ENGINEER), DRILL HOLES TO SIZE & DEPTH AS PER MANUFACTURER'S RECOMMENDATIONS

ADDITIONAL NOTES NOT INCLUDED IN THE SPECIAL NOTE:  
 A. WHEN REQUIRED, THE DRILLING OF DOWEL HOLES SHALL BE BY PNEUMATIC DRILLING WITH SINKER BITS. AFTER REMOVAL OF UNSOUND CONCRETE, THE AREA SHOULD BE FLUSHED WITH HIGH PRESSURE WATER OR VACUUM CLEANED TO REMOVE LOOSE PARTICLES AND DUST.  
 B. ALL EXPOSED REINFORCING STEEL SHALL REMAIN IN PLACE AND RECEIVE A COMPLETE CLEANING TO REMOVE ALL RUST. IF CORROSION OF THE EXISTING REINFORCING BAR HAS REDUCED THE BAR SECTIONAL AREA BY MORE THAN 75%, THEN SUPPLEMENTAL REINFORCEMENT IS REQUIRED IN THE FORM OF STITCHING A 'L' SHAPED REBAR INTO DOWELED HOLES AND ANCHORING WITH A POLYESTER RESIN ADHESIVE FROM THE KYTC APPROVED LIST FOR REINFORCING BAR GROUT ADHESIVE (NON-EPOXY). SEE DETAIL SECTIONS.

LEGEND:  
 LIMITS OF SPALLED CONCRETE  
 LIMITS OF DELAMINATED CONCRETE  
 LIMITS OF REMOVAL AND CONCRETE PATCHING REPAIRS

FOLLOW THE MANUFACTURER'S GUIDELINES AND LIMITATIONS FOR PROPER INSTALLATION OF PATCHING MATERIALS.  
 ALL EXPOSED EDGES SHALL BE BEVELED 3/4"

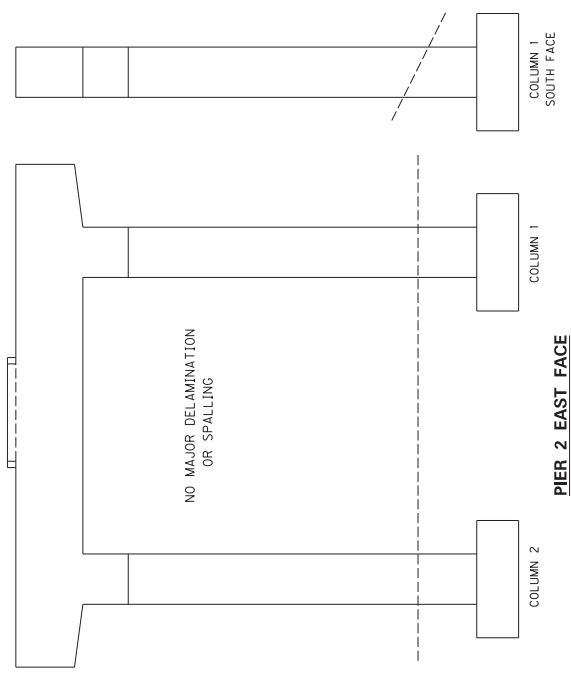
SEE SPECIAL NOTE FOR CONCRETE PATCHING REPAIR.

STANTEC

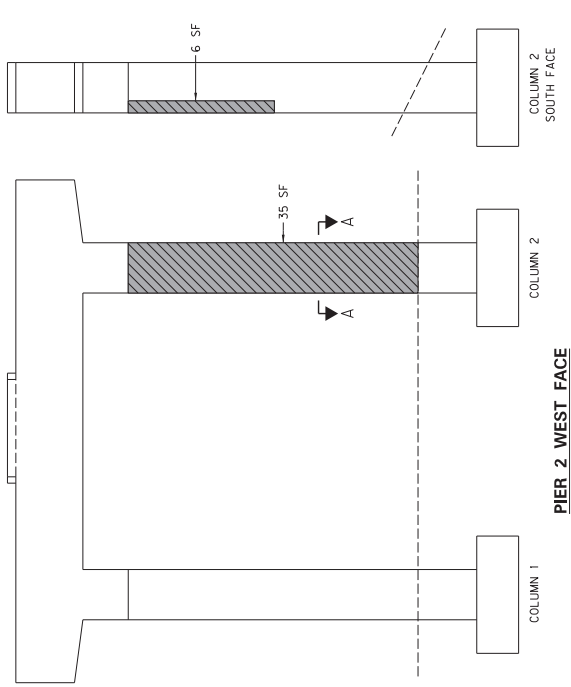
**CONCRETE PATCHING REPAIRS 025B00057L**



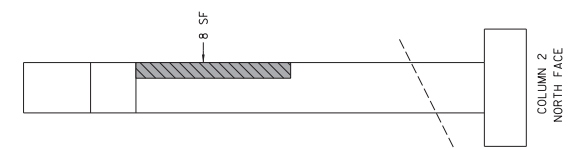
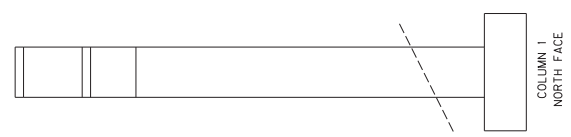
SHEET 11 OF 19  
 BRIDGE: 025B00057L/R  
 COUNTY: CLARK  
 ROUTE: MOUNTAIN PARKWAY  
 CROSSING: OLD RR BED



**PIER 2 EAST FACE**  
025B00057L

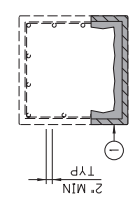


**PIER 2 WEST FACE**  
025B00057L



NOTE:  
FOR NOTES SEE SHEET 11 OF 19 (BRIDGE 025B00057L/R)

- LEGEND:
- LIMITS OF SPALLED CONCRETE
  - LIMITS OF DELAMINATED CONCRETE
  - LIMITS OF REMOVAL AND CONCRETE PATCHING REPAIRS

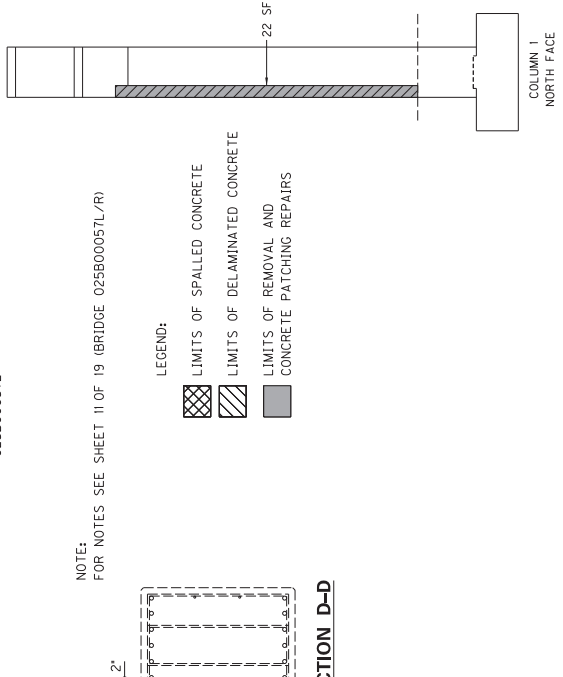
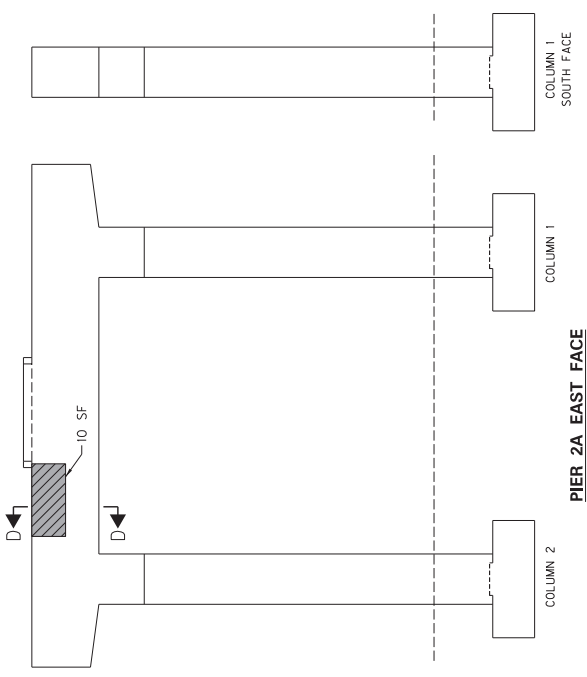


COUNTY: CLARK	
ROUTE: MOUNTAIN PARKWAY	
CROSSING: OLD RR BED	
BRIDGE: 025B00057L/R	

**CONCRETE PATCHING REPAIRS 025B00057L**

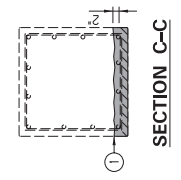
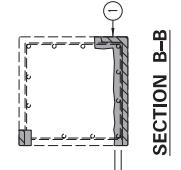
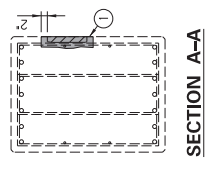
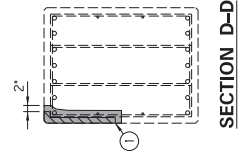
SHEET 12 OF 19





NOTE:  
FOR NOTES SEE SHEET 11 OF 19 (BRIDGE 025B00057L/R)

- LEGEND:
- LIMITS OF SPALLED CONCRETE
  - LIMITS OF DELAMINATED CONCRETE
  - LIMITS OF REMOVAL AND CONCRETE PATCHING REPAIRS

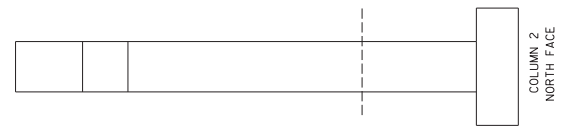
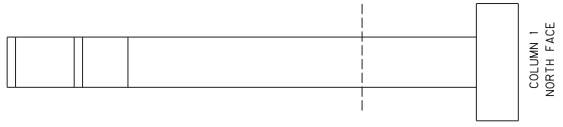
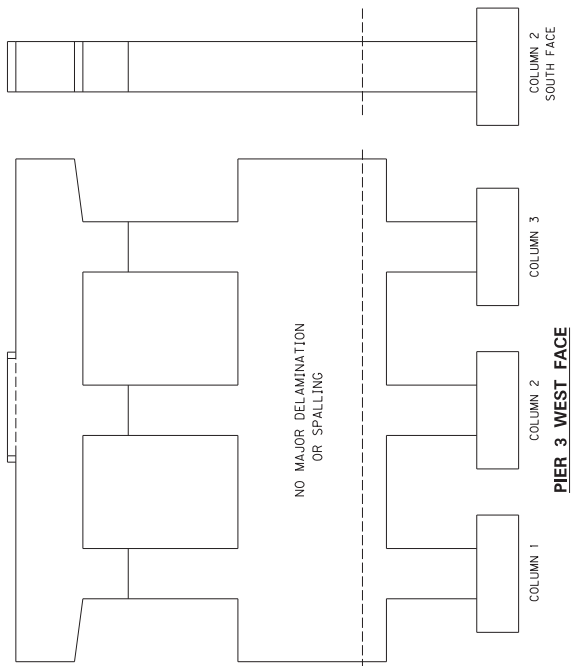
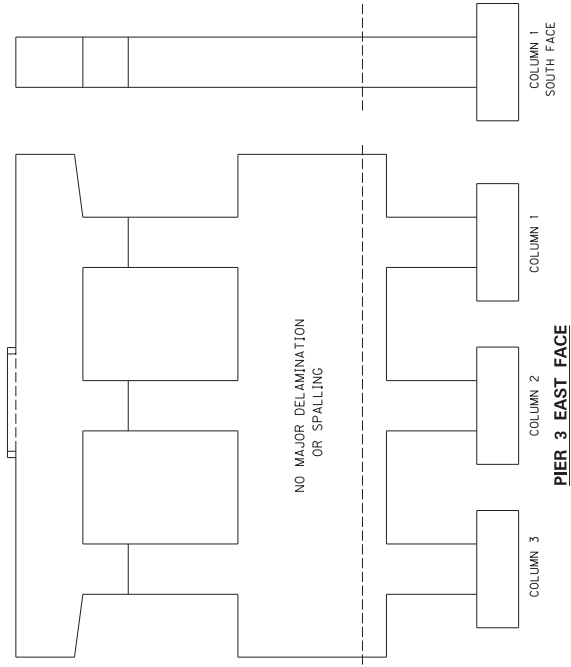


SHEET 13 OF 19

CLARK COUNTY: CLARK COUNTY  
ROUTE: MOUNTAIN PARKWAY  
CROSSING: OLD RR BED

CONCRETE PATCHING REPAIRS 025B00057L

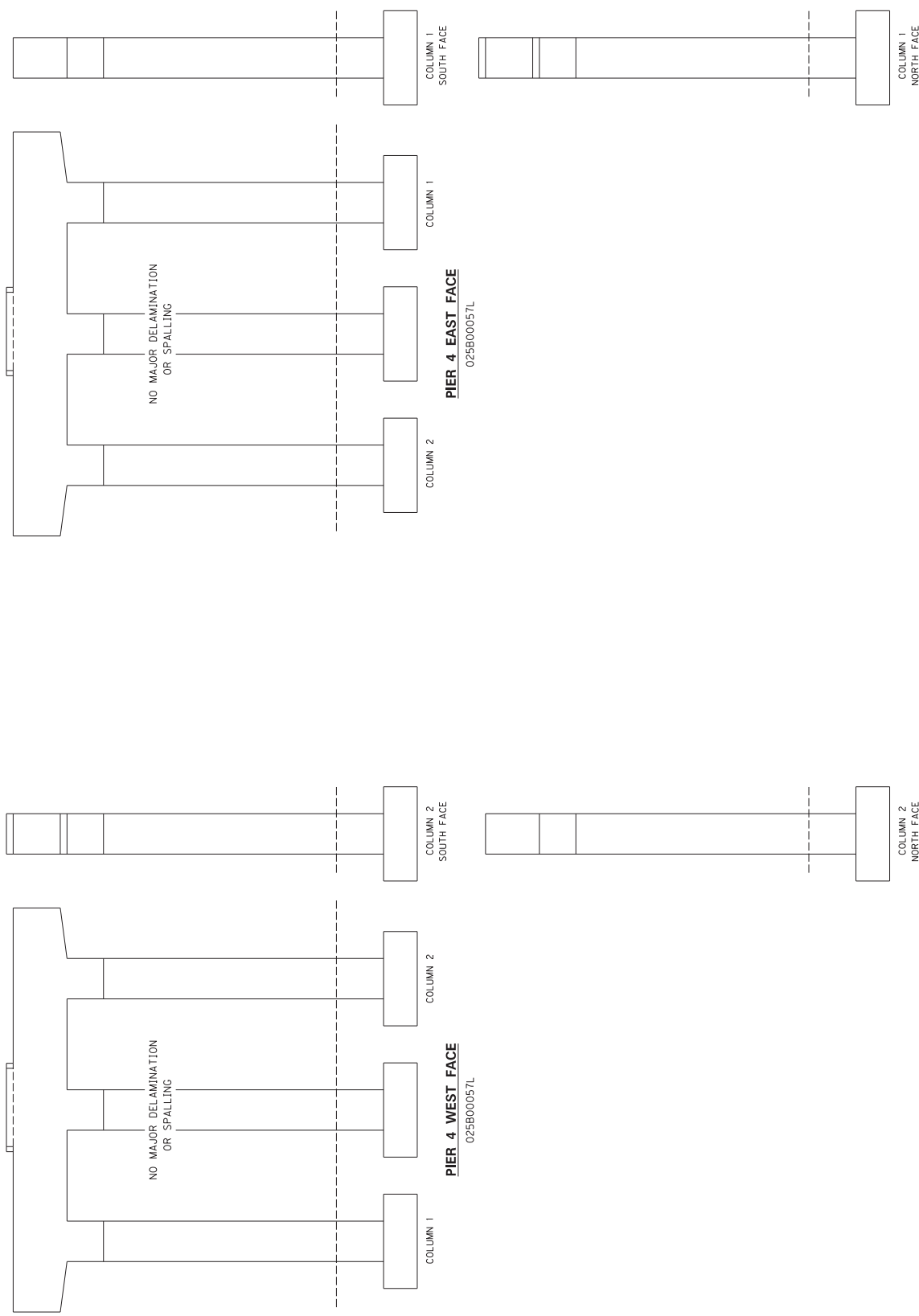




**SHEET 14 OF 19**  
BRIDGE: 025B00057L/R  
COUNTY: CLARK  
ROUTE: MOUNTAIN PARWAY  
CROSSING: OLD RR BED

**CONCRETE PATCHING REPAIRS 025B00057L**



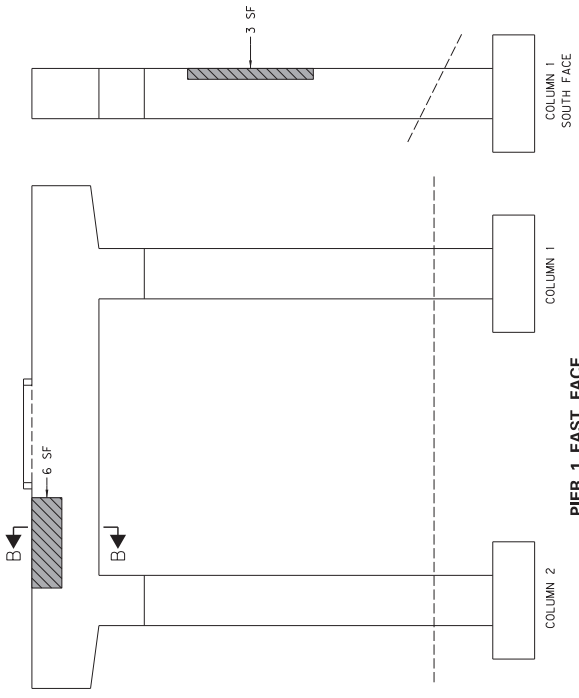


SHEET 15 OF 19

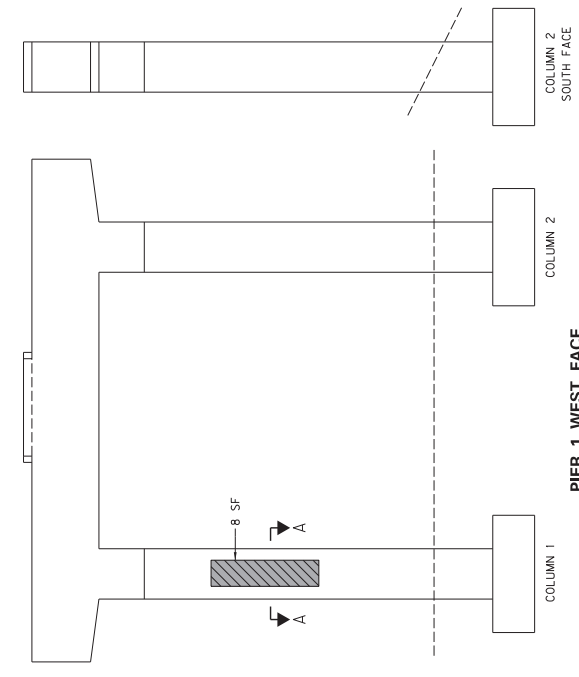
COUNTY:	CLARK
ROUTE:	MOUNTAIN PARKWAY
CROSSING:	OLD RR BED
BRIDGE:	025B00057L/R

# CONCRETE PATCHING REPAIRS 025B00057L

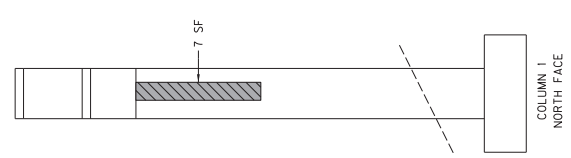




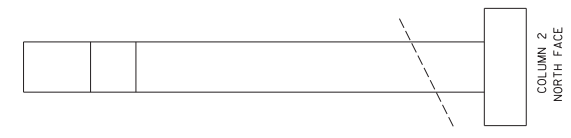
**PIER 1 EAST FACE**  
025B00057R



**PIER 1 WEST FACE**  
025B00057R

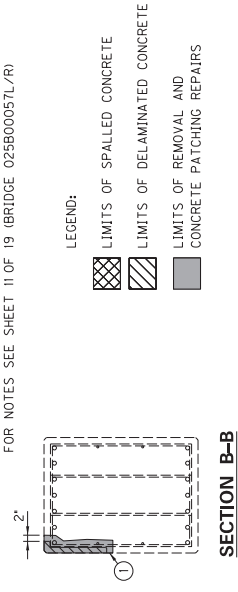


COLUMN 1  
NORTH FACE



COLUMN 2  
NORTH FACE

NOTE:  
FOR NOTES SEE SHEET 11 OF 19 (BRIDGE 025B00057L/R)



**SECTION B-B**

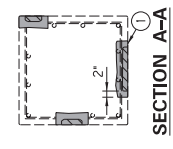
LEGEND:

- LIMITS OF SPALLED CONCRETE
- LIMITS OF DELAMINATED CONCRETE
- LIMITS OF REMOVAL AND CONCRETE PATCHING REPAIRS

SHEET 16 OF 19

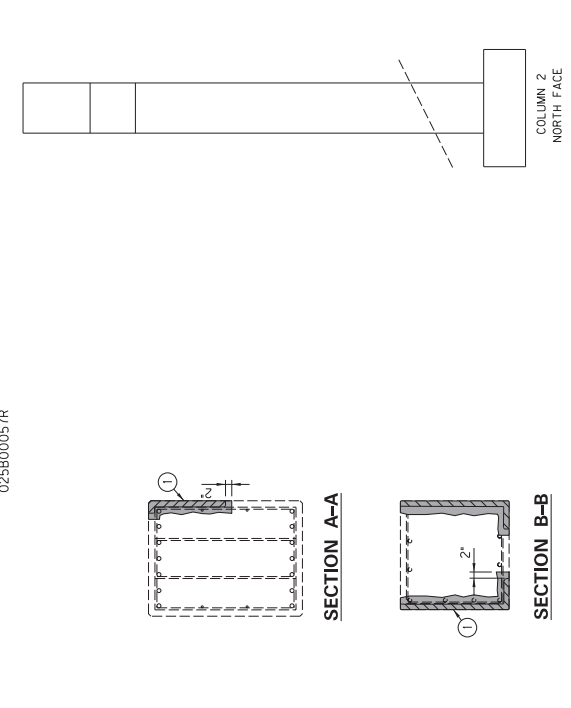
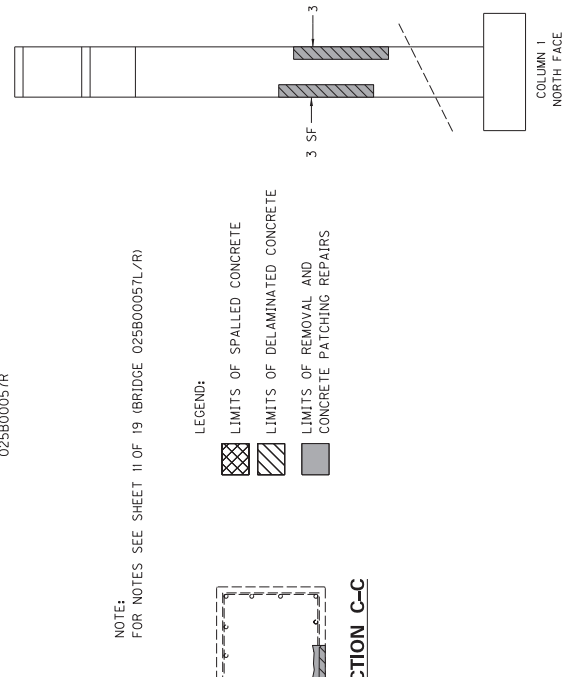
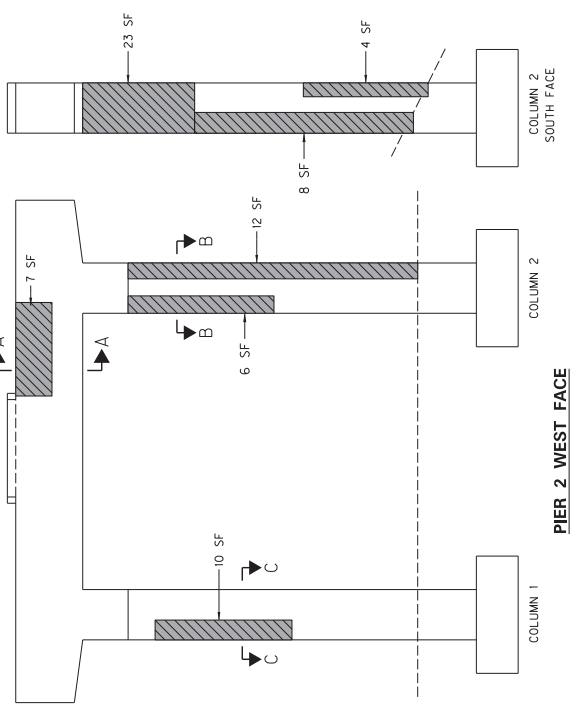
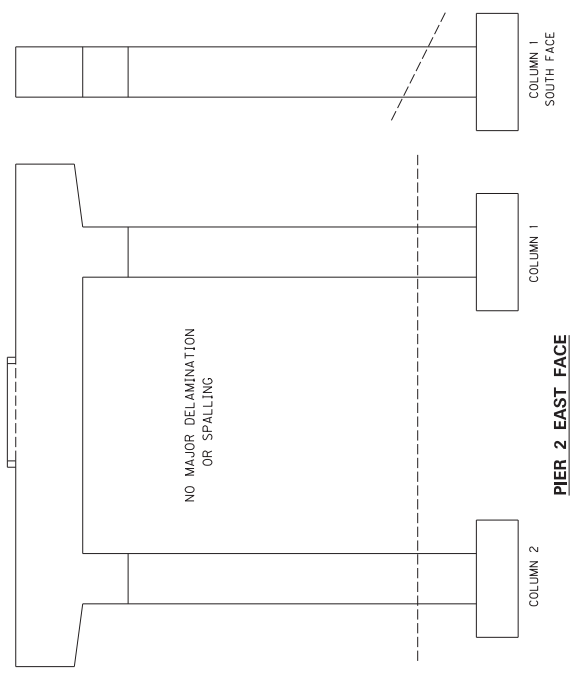
BRIDGE: 025B00057L/R  
COUNTY: CLARK  
ROUTE: MOUNTAIN PARKWAY  
CROSSING: OLD RR BED

**CONCRETE PATCHING REPAIRS 025B00057L**



**SECTION A-A**





NOTE:  
FOR NOTES SEE SHEET 11 OF 19 (BRIDGE 025B00057L/R)

- LEGEND:
- LIMITS OF SPALLED CONCRETE
  - LIMITS OF DELAMINATED CONCRETE
  - LIMITS OF REMOVAL AND CONCRETE PATCHING REPAIRS

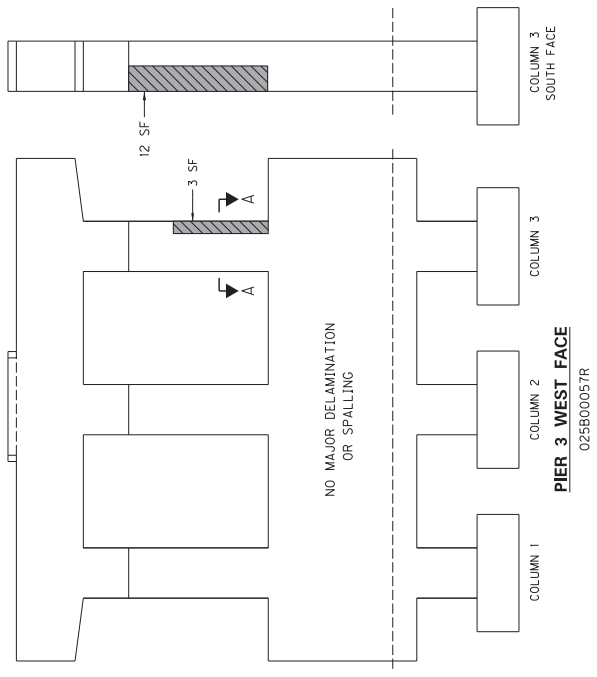
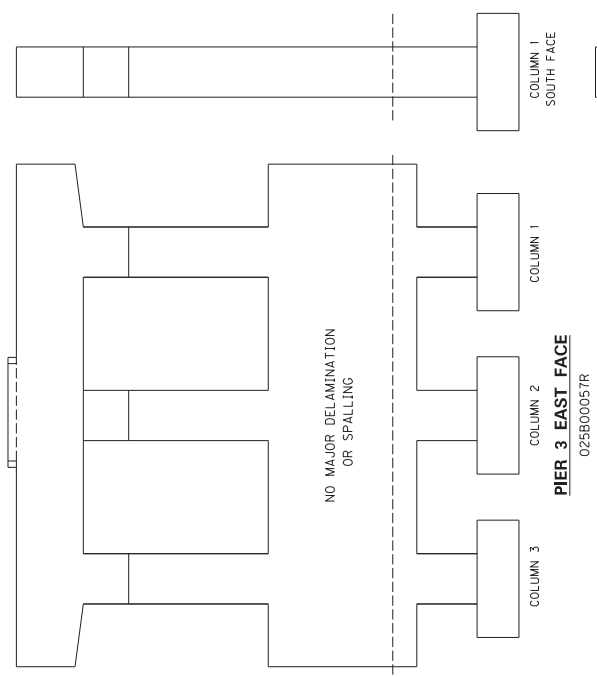
COUNTY: CLARK  
ROUTE: MOUNTAIN PARKWAY  
CROSSING: OLD RR BED

BRIDGE: 025B00057L/R

SHEET 17 OF 19

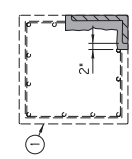
**CONCRETE PATCHING REPAIRS 025B00057L**





NOTE:  
FOR NOTES SEE SHEET 11 OF 19 (BRIDGE 025B00057L/R)

- LEGEND:
- LIMITS OF SPALLED CONCRETE
  - LIMITS OF DELAMINATED CONCRETE
  - LIMITS OF REMOVAL AND CONCRETE PATCHING REPAIRS

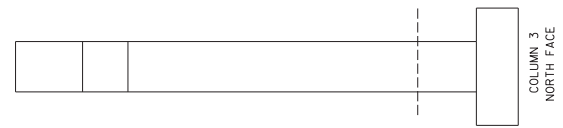
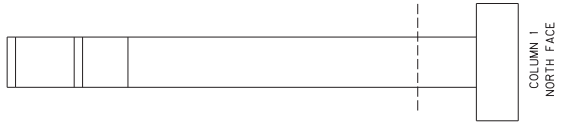
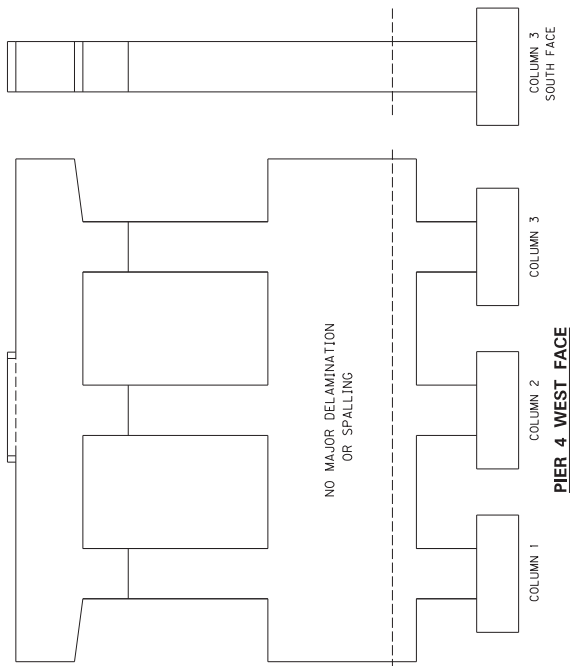
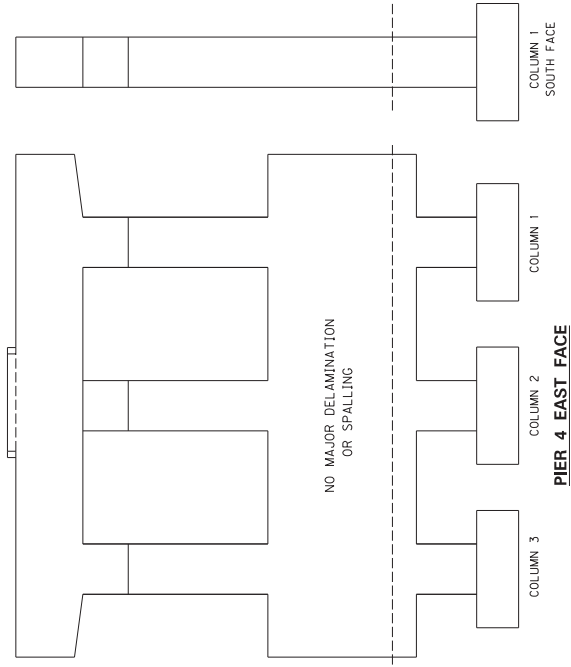


SECTION A-A



**CONCRETE PATCHING REPAIRS 025B00057L**

COUNTY:	CLARK
ROUTE:	MOUNTAIN PARKWAY
CROSSING:	OLD RR BED
BRIDGE: 025B00057L/R	



SHEET 19 OF 19  
BRIDGE: 025B00057L/R  
COUNTY: CLARK  
ROUTE: MOUNTAIN PARWAY  
CROSSING: OLD RR BED

**CONCRETE PATCHING REPAIRS 025B00057L**



**MTN. PARKWAY OVER STONER-EPHESUS RD (025B00058L)**

(MP 5.313)



SUMMARY OF QUANTITIES			
ITEM CODE	DESCRIPTION	QUANTITY	UNIT
3299	ARMORED EDGE FOR CONCRETE	60	LF
3300	ELIMINATE TRANSVERSE JOINT	60	LF
8504	EPOXY SAND SLURRY	45	SY
8550	HYDRODEMOLITION	517	SY
8534	CONCRETE OVERLAY-LATEX	22	CY
22146EN	CONCRETE PATCHING REPAIR	327	SF
24094EC	PARTIAL DEPTH PATCHING	4	CY
24093EC	BEAM REPAIR	7	EA

NOTE: CONCRETE PATCHING BASED ON VISUAL INSPECTION + 35%. BEAM REPAIR QUANTITY BASED ON VISUAL INSPECTION.

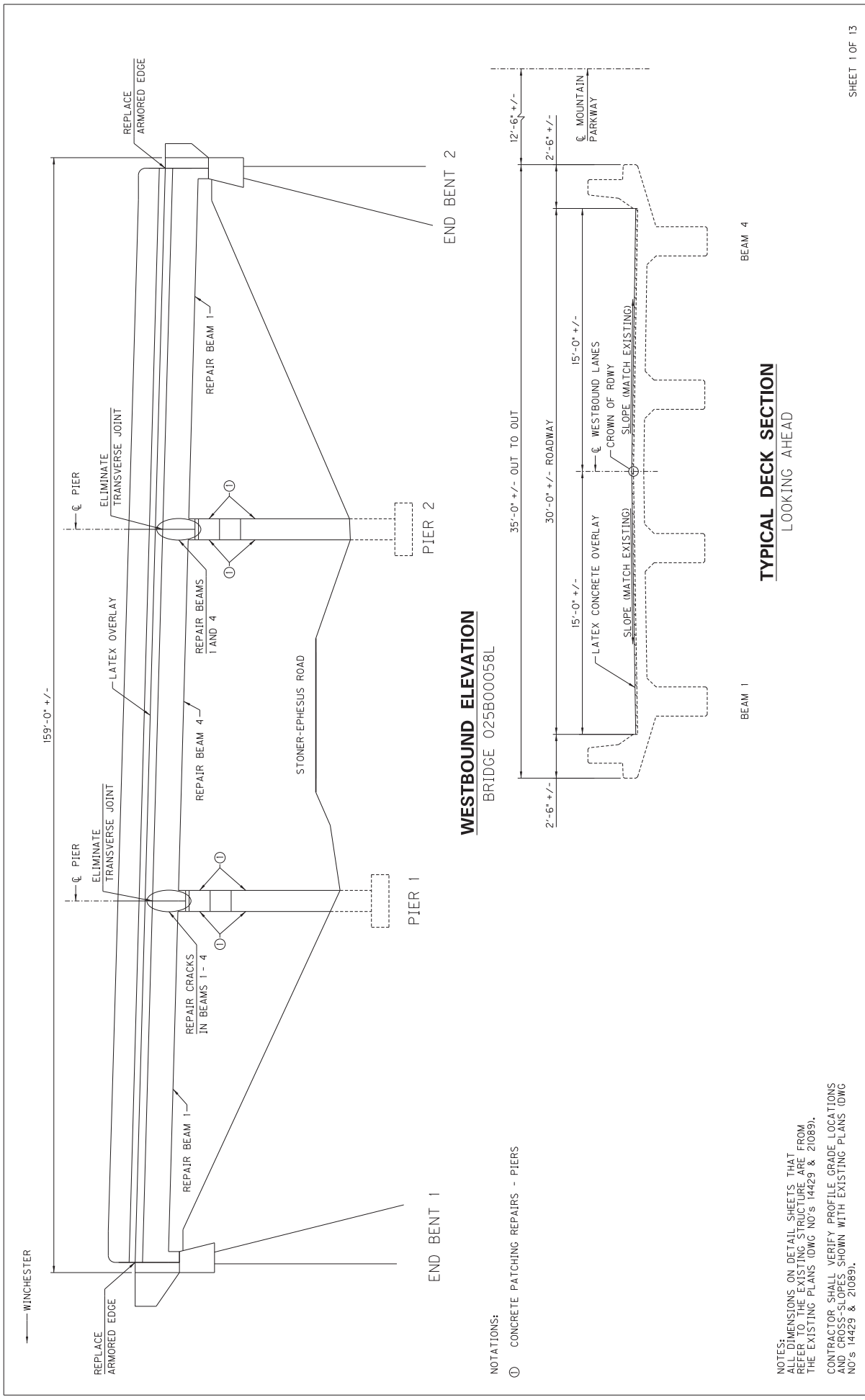
**MTN. PARKWAY OVER STONER-EPHESUS RD (025B00058R)**

(MP 5.150)



SUMMARY OF QUANTITIES			
ITEM CODE	DESCRIPTION	QUANTITY	UNIT
3299	ARMORED EDGE FOR CONCRETE	30	LF
3300	ELIMINATE TRANSVERSE JOINT	60	LF
8504	EPOXY SAND SLURRY	45	SY
8550	HYDRODEMOLITION	500	SY
8534	CONCRETE OVERLAY-LATEX	21	CY
22146EN	CONCRETE PATCHING REPAIR	221	SF
24094EC	PARTIAL DEPTH PATCHING	4	CY
24093EC	BEAM REPAIR	9	EA

NOTE: CONCRETE PATCHING BASED ON VISUAL INSPECTION + 35%. BEAM REPAIR QUANTITY BASED ON VISUAL INSPECTION.



**WESTBOUND ELEVATION**

BRIDGE 025B00058L

NOTATIONS:

- ① CONCRETE PATCHING REPAIRS - PIERS

**TYPICAL DECK SECTION**  
LOOKING AHEAD

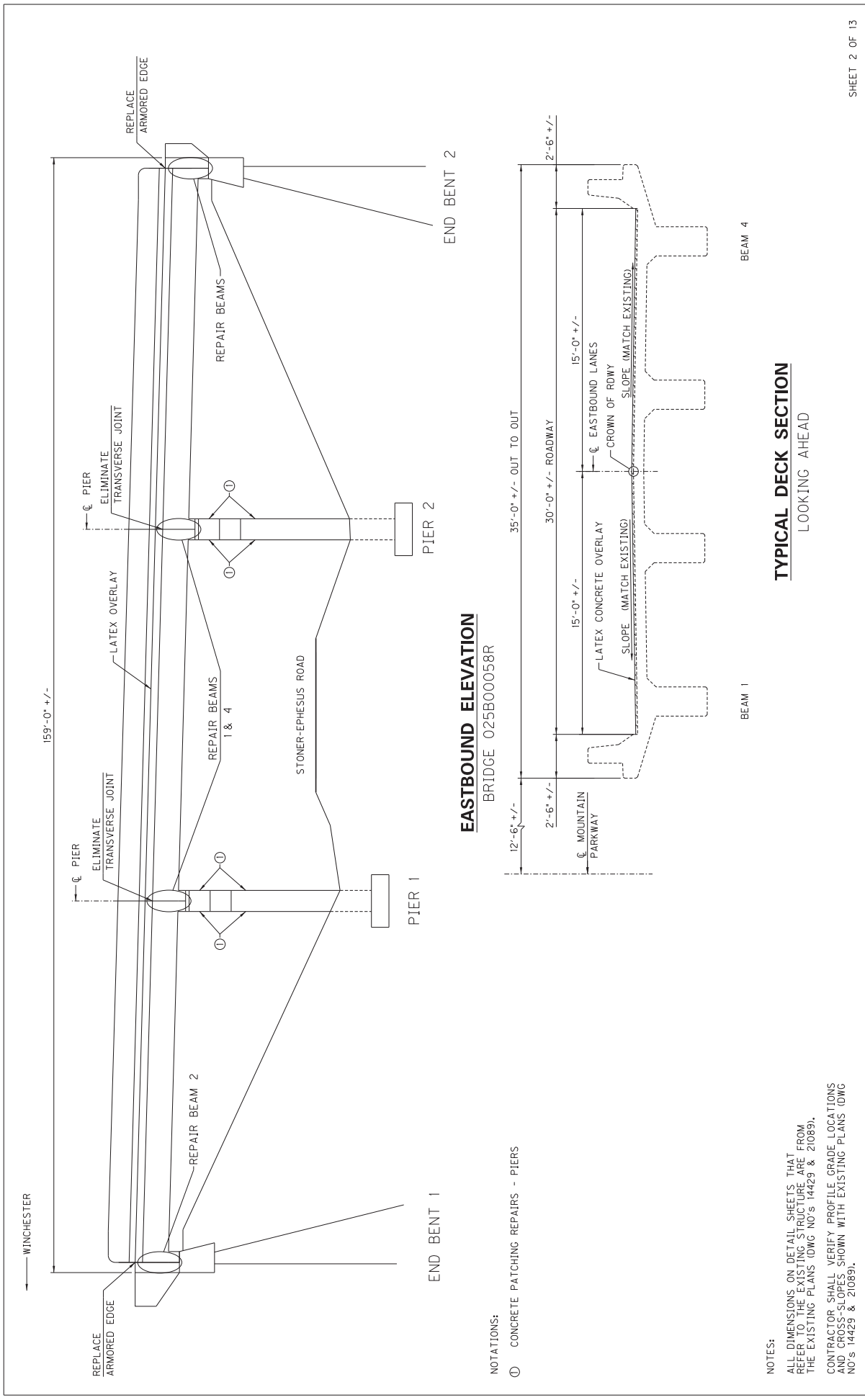
NOTES:  
ALL DIMENSIONS ON DETAIL SHEETS THAT REFER TO THE EXISTING STRUCTURE ARE FROM THE EXISTING PLANS (DWG NO'S 14429 & 21089). CONTRACTOR SHALL VERIFY PROFILE GRADE LOCATIONS AND CROSS-SLOPES SHOWN WITH EXISTING PLANS (DWG NO'S 14429 & 21089).



**WB ELEVATION AND TYPICAL DECK SECTION**

SHEET 1 OF 13

BRIDGE:	025B00058L/R
COUNTY:	CLARK
ROUTE:	MOUNTAIN PARKWAY
CROSSING:	STONER-EPHESUS ROAD



SHEET 2 OF 13

BRIDGE: 025B00058R	CLARK
COUNTY: CLARK	ROUTE: MOUNTAIN PARKWAY
CROSSING: STONER-EPHESUS ROAD	

**EASTBOUND ELEVATION**  
BRIDGE 025B00058R

**TYPICAL DECK SECTION**  
LOOKING AHEAD

- NOTES:
- ① CONCRETE PATCHING REPAIRS - PIERS

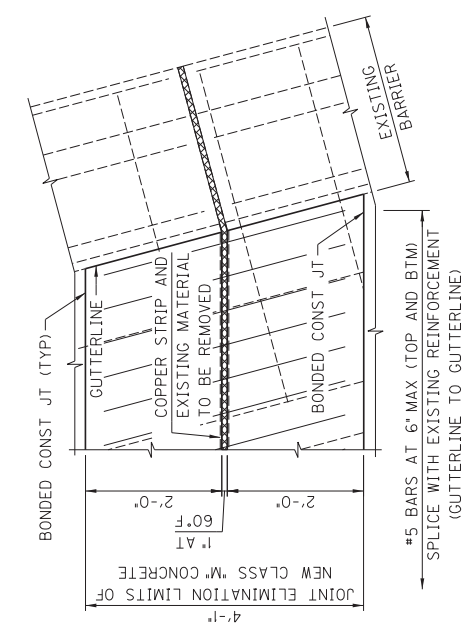
NOTES:  
ALL DIMENSIONS ON DETAIL SHEETS THAT REFER TO THE EXISTING STRUCTURE ARE FROM THE EXISTING PLANS (DWG NO'S 14429 & 21089). CONTRACTOR SHALL VERIFY PROFILE GRADE LOCATIONS AND CROSS-SLOPES SHOWN WITH EXISTING PLANS (DWG NO'S 14429 & 21089).



**EB ELEVATION AND TYPICAL DECK SECTION**

BRIDGE: 025B00058R

COUNTY: CLARK  
ROUTE: MOUNTAIN PARKWAY  
CROSSING: STONER-EPHESUS ROAD

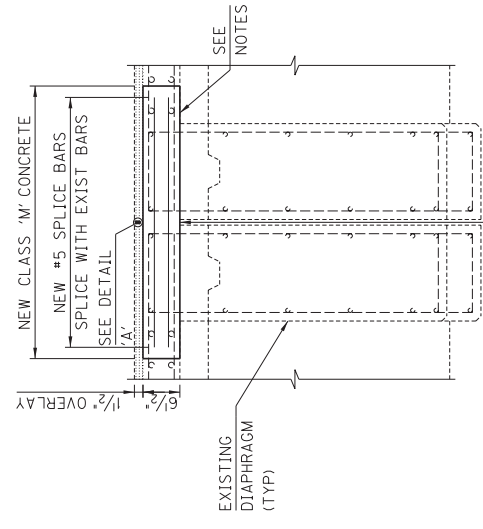


**PLAN AT PIERS**

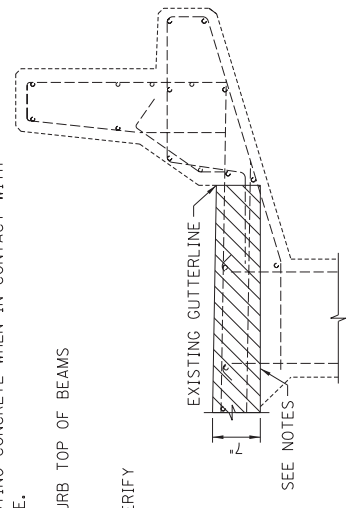
**NOTES:**  
 CONCRETE REMOVAL REMOVE HATCHED AREAS OF CONCRETE AND EXPANSION DEVICE. STRAIGHTEN, SAND-BLAST CLEAN AND INCORPORATE EXISTING SLAB REINFORCEMENT INTO NEW CONSTRUCTION.  
 BONDING NEW CONCRETE TO EXISTING SLAB CONCRETE NEW CONCRETE SHALL BE BONDED TO EXISTING SLAB CONCRETE WITH A TWO-COMPONENT EPOXY RESIN SYSTEM CONFORMING TO SECTIONS 511 AND 826 OF THE SPECIFICATIONS. THIS WORK, INCLUDING ALL LABOR, TOOLS, AND MATERIALS IS TO BE INCIDENTAL TO THE UNIT PRICE BID FOR ELIMINATE TRANSVERSE JOINT.  
 ROUGHEN EXISTING CONCRETE WHEN IN CONTACT WITH NEW CONCRETE.  
 DO NOT DISTURB TOP OF BEAMS

**NOTATIONS:**  
 \* FIELD VERIFY

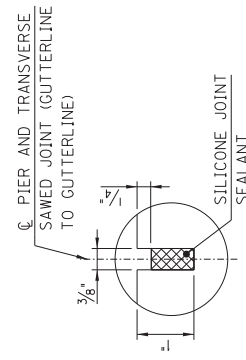
**EXISTING SECTION AT PIERS**  
 SHOWING LIMITS OF DECK REMOVAL



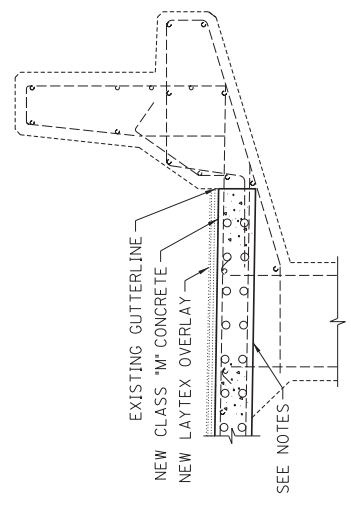
**ELIMINATED JOINT SECTION**  
 SHOWING PROPOSED



**SECTION AT BARRIERS**  
 SHOWING EXISTING & LIMITS OF REMOVAL



**DETAIL 'A'**



**SECTION AT BARRIERS**  
 SHOWING PROPOSED

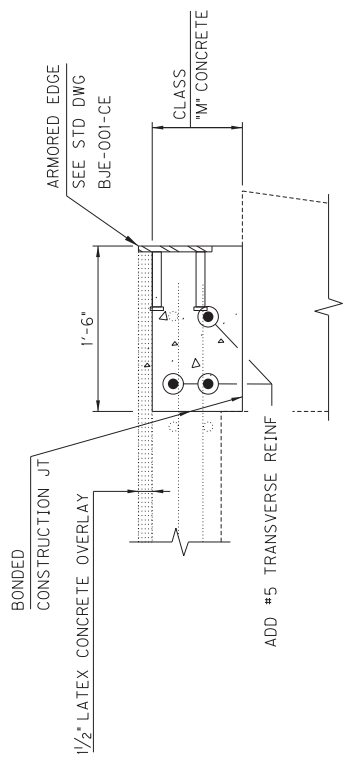
SHEET 3 OF 13

COUNTY:	CLARK
BRIDGES:	02B00006R, /R
ROUTE:	MOUNTAIN PARKWAY
CROSSING:	STONER-EPHEBUS ROAD

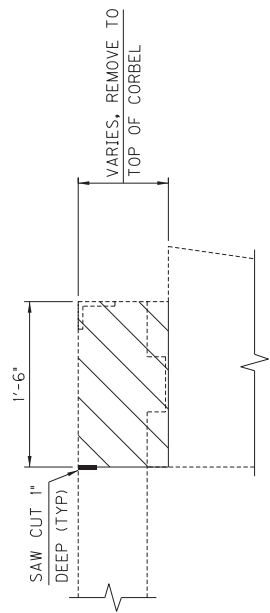
**ELIMINATE TRANSVERSE JOINT (AT PIERS)**



Stantec



**END OF SLAB**  
SHOWING PROPOSED CONSTRUCTION



**END OF SLAB**  
SHOWING EXISTING & LIMITS OF REMOVAL

**NOTES:**

- REMOVE EXISTING HATCHED AREA OF CONCRETE & ARMORED EDGE BETWEEN GUTTERLINES. SAND-BLAST CLEAN & INCORPORATE EXISTING REINFORCEMENT INTO NEW CONSTRUCTION. THE CONTRACTOR HAS THE OPTION TO REPLACE EXISTING TRANSVERSE REINFORCEMENT.
- DO NOT DISTURB TOP OF BEAMS.
- WHERE A BONDED CONSTRUCTION JOINT IS CALLED FOR, NEW CONCRETE SHALL BE BONDED TO EXISTING CONCRETE SURFACE WITH A TWO-COMPONENT EPOXY RESIN SYSTEM CONFORMING TO SECTIONS 511 AND 826 OF THE SPECIFICATIONS (SEE SPECIAL NOTE FOR STRUCTURAL ADHESIVES WITH EXTENDED CONTACT TIME). THE COST FOR THIS WORK, INCLUDING ALL LABOR, TOOLS AND MATERIAL SHALL BE INCIDENTAL TO THE UNIT BID PRICE FOR ARMORED EDGE REPLACEMENT.

ALL REPLACED CONCRETE SHALL BE CLASS "M".



**ARMORED EDGE REPLACEMENT**

SHEET 4 OF 13

COUNTY:	CLARK
ROUTE:	MOUNTAIN PARKWAY
CROSSING:	STONER-EPHEBUS ROAD
BRIDGE:	025B00056L/R

**NOTES:**

WHERE REPAIR TO BEAM IS SHOWN IN THE DETAILS, NEW CONCRETE SHALL BE BONDED TO EXISTING BEAM CONCRETE WITH A TWO-COMPONENT EPOXY RESIN SYSTEM CONFORMING TO SECTION 511 AND 826 OF THE SPECIFICATIONS. THE COST OF THIS WORK, INCLUDING ALL LABOR, TOOLS AND MATERIALS IS TO BE INCIDENTAL TO THE UNIT PRICE BID FOR CONCRETE BEAM REPAIRS.

THE DETAILS REPRESENT A COMPILATION OF THE PRIMARY DEFICIENCIES AND CONCRETE PATCHING REPAIRS REQUIRED AT THE BEAMS. EXISTING CONDITIONS VARY ALONG THE BEAMS.

ANY DIMENSIONS SHOWN ON THESE DETAILS ARE APPROXIMATE AND ARE BASED ON THE EXISTING PLANS (DWG NO'S 14429 & 21089).

SEE SPECIAL NOTE FOR CONCRETE BEAM REPAIR.

ADDITIONAL NOTES NOT INCLUDED IN THE SPECIAL NOTE:

A. ALL EXPOSED REINFORCING STEEL SHALL REMAIN IN PLACE AND RECEIVE A COMPLETE SAND-BLASTED CLEANING TO REMOVE ALL RUST. IF CORROSION OF THE EXISTING REINFORCING BAR HAS REDUCED THE BAR SECTIONAL AREA BY MORE THAN 75%, THEN SUPPLEMENTAL REINFORCEMENT IS REQUIRED IN THE FORM OF STITCHING A 'L'-SHAPED REBAR INTO DOWELED HOLES AND ANCHORING WITH A POLYESTER RESIN ADHESIVE FROM THE KYTC APPROVED LIST FOR REINFORCING BAR GROUT ADHESIVE (NON-EPOXY).

B. WHEN REQUIRED, THE DRILLING OF DOWEL HOLES SHALL BE BY PNEUMATIC DRILLING WITH SINKER BITS. AFTER REMOVAL OF UNSOUND CONCRETE, THE AREA SHOULD BE FLUSHED WITH HIGH PRESSURE WATER OR VACUUM CLEANED TO REMOVE LOOSE PARTICLES AND DUST.

FOLLOW THE MANUFACTURER'S GUIDELINES AND LIMITATIONS FOR PROPER INSTALLATION OF PATCHING MATERIALS.

LIVE LOADS ARE NOT PERMITTED IN LANE ABOVE BEAM BEING REPAIRED.

STAGING AND OR MAINTENANCE OF TRAFFIC FOR THE CONCRETE PATCHING REPAIRS SHALL BE AS PER THE SPECIAL NOTES.

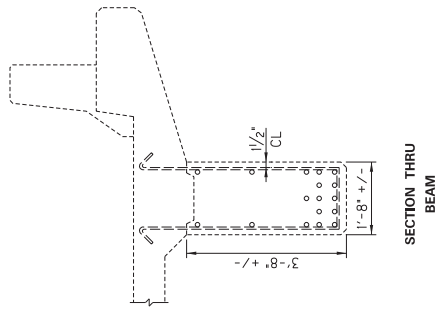
**LEGEND:**



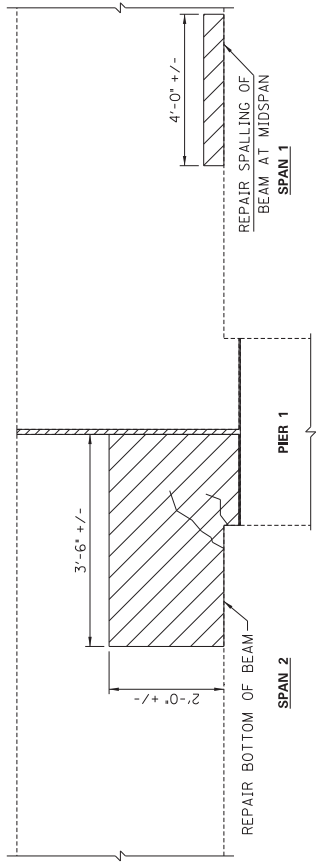
INDICATES TO REMOVE EXISTING CONCRETE TO 3/4" BEYOND EXIST REBAR, SAND-BLAST CLEAN EXPOSED CONCRETE AND REBAR AND INCORPORATE INTO REPAIR.



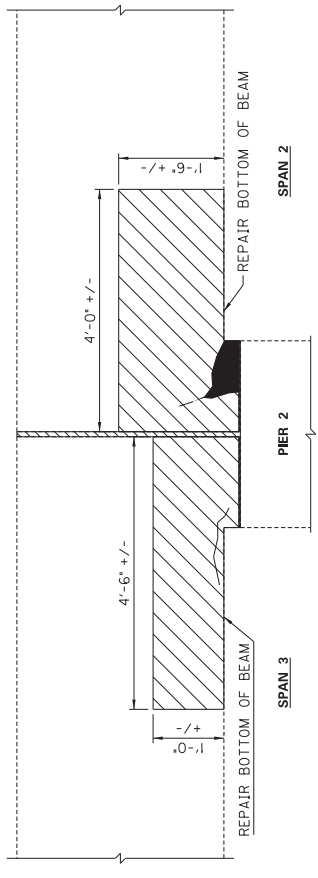
INDICATES AREA OF SPALLING. CONTRACTOR SHALL USE PROCESS DESCRIBED ABOVE FOR HATCHED AREAS.



**EXISTING BEAM**



**BEAM 1 (PIER 1)**



**BEAM 1 (PIER 2)**

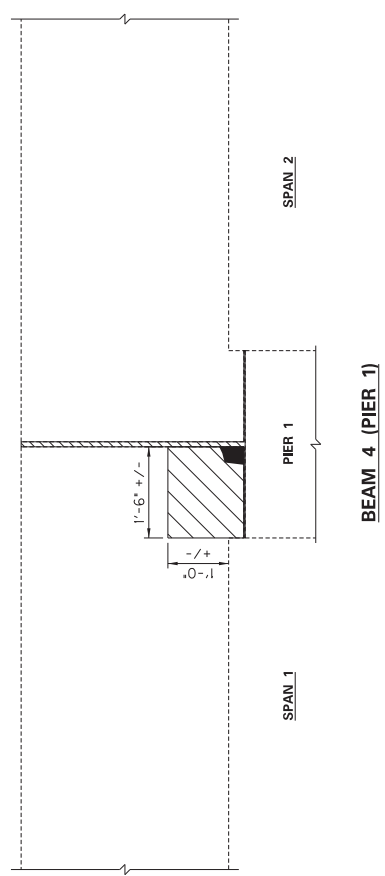
**BEAM REPAIR DETAILS**

WESTBOUND BRIDGE



**BEAM REPAIR 025B00058L**

CLARK COUNTY	BRIDGES: 025B00058L.R
ROUTE: MOUNTAIN PARKWAY	
CROSSING: STONER-EPICUS ROAD	

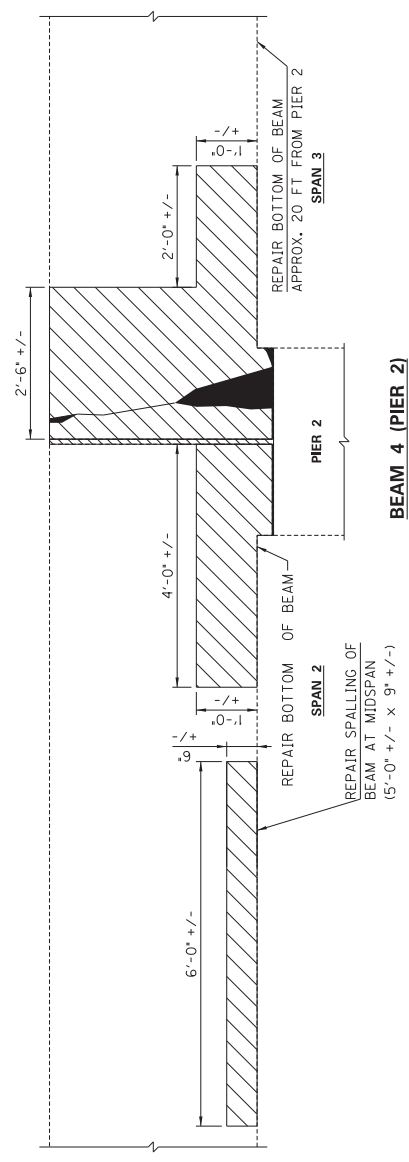


NOTE:  
FOR NOTES, SEE SHEET OF (BRIDGE 025B00058L/R)

LEGEND:



INDICATES TO REMOVE EXISTING CONCRETE TO JUST BEYOND EXIST REBAR,  
SAND-BLAST CLEAN EXPOSED CONCRETE AND REBAR AND INCORPORATE INTO REPAIR.  
INDICATES AREA OF SPALLING.



**BEAM REPAIR DETAILS**

WESTBOUND BRIDGE

**BEAM REPAIR 025B00058L**

SHEET 6 OF 13

BRIDGES: 025B00058L/R
COUNTY: CLARK
ROUTE: MOUNTAIN PARKWAY
CROSSING: STONER-EPHESUS ROAD

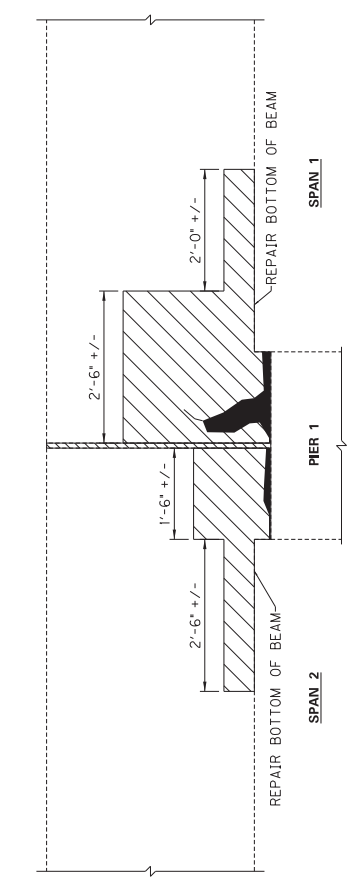


NOTE:  
FOR NOTES SEE SHEET OF (025B00058L/R)

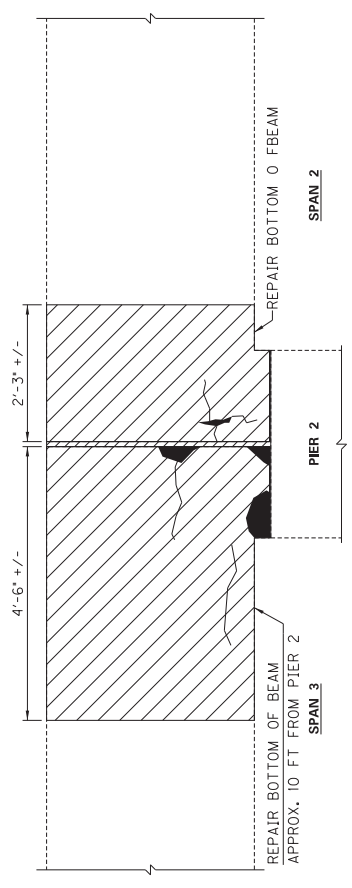
LEGEND:



INDICATES TO REMOVE EXISTING CONCRETE TO JUST BEYOND EXIST REBAR.  
SAND-BLAST CLEAN EXPOSED CONCRETE AND REBAR AND INCORPORATE INTO REPAIR.  
INDICATES AREA OF SPALLING.



BEAM 1 (PIER 1)



BEAM 1 (PIER 2)

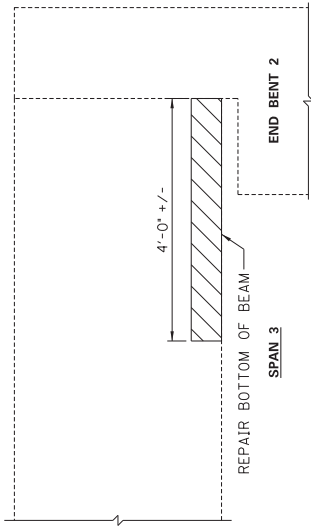
**BEAM REPAIR DETAILS**  
EASTBOUND BRIDGE

SHEET 7 OF 13

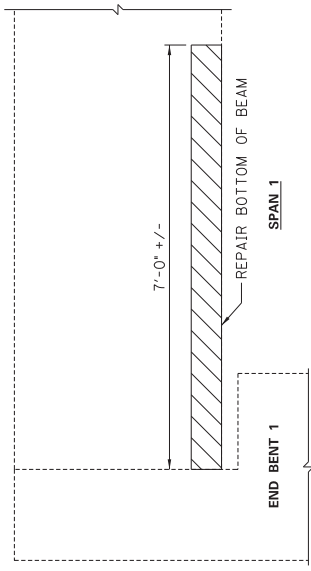


**BEAM REPAIR 025B00058R**

CLARK COUNTY: CLARK COUNTY  
ROUTE: MOUNTAIN PARKWAY  
CROSSING: STONER-EPHESUS ROAD  
BRIDGES: 025B00058L/R



**BEAM 2 (END BENT 1)**

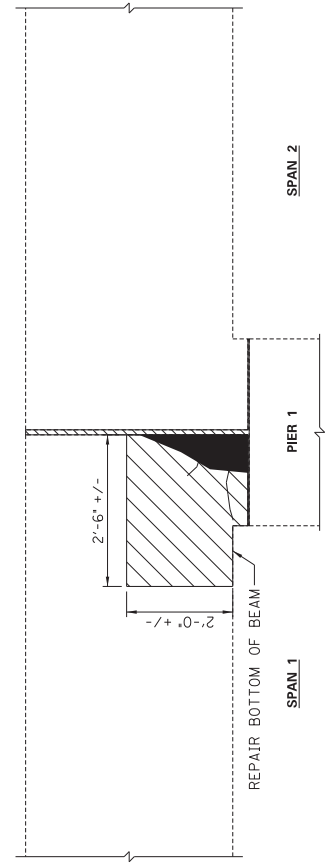


**BEAM 2 (END BENT 2)**

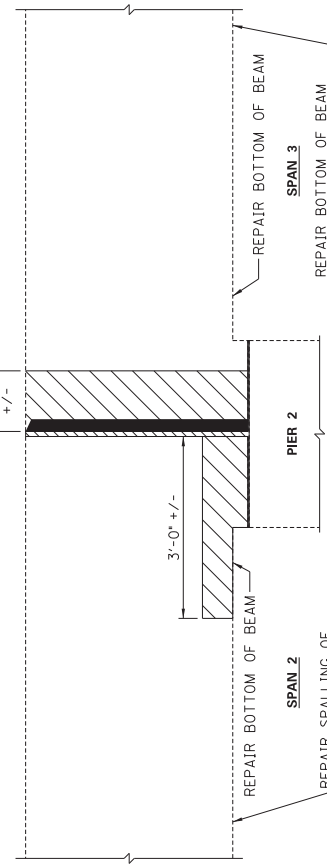
NOTE:  
FOR NOTES, SEE SHEET OF 1025B00058L/R)

LEGEND:

- INDICATES TO REMOVE EXISTING CONCRETE TO JUST BEYOND EXIST REBAR, SAND-BLAST CLEAN EXPOSED CONCRETE AND REBAR AND INCORPORATE INTO REPAIR.
- INDICATES AREA OF SPALLING. CONTRACTOR SHALL USE PROCESS DESCRIBED ABOVE FOR HATCHED AREAS.



**BEAM 4 (PIER 1)**



**BEAM 4 (PIER 2)**

**BEAM REPAIR DETAILS**  
EASTBOUND BRIDGE

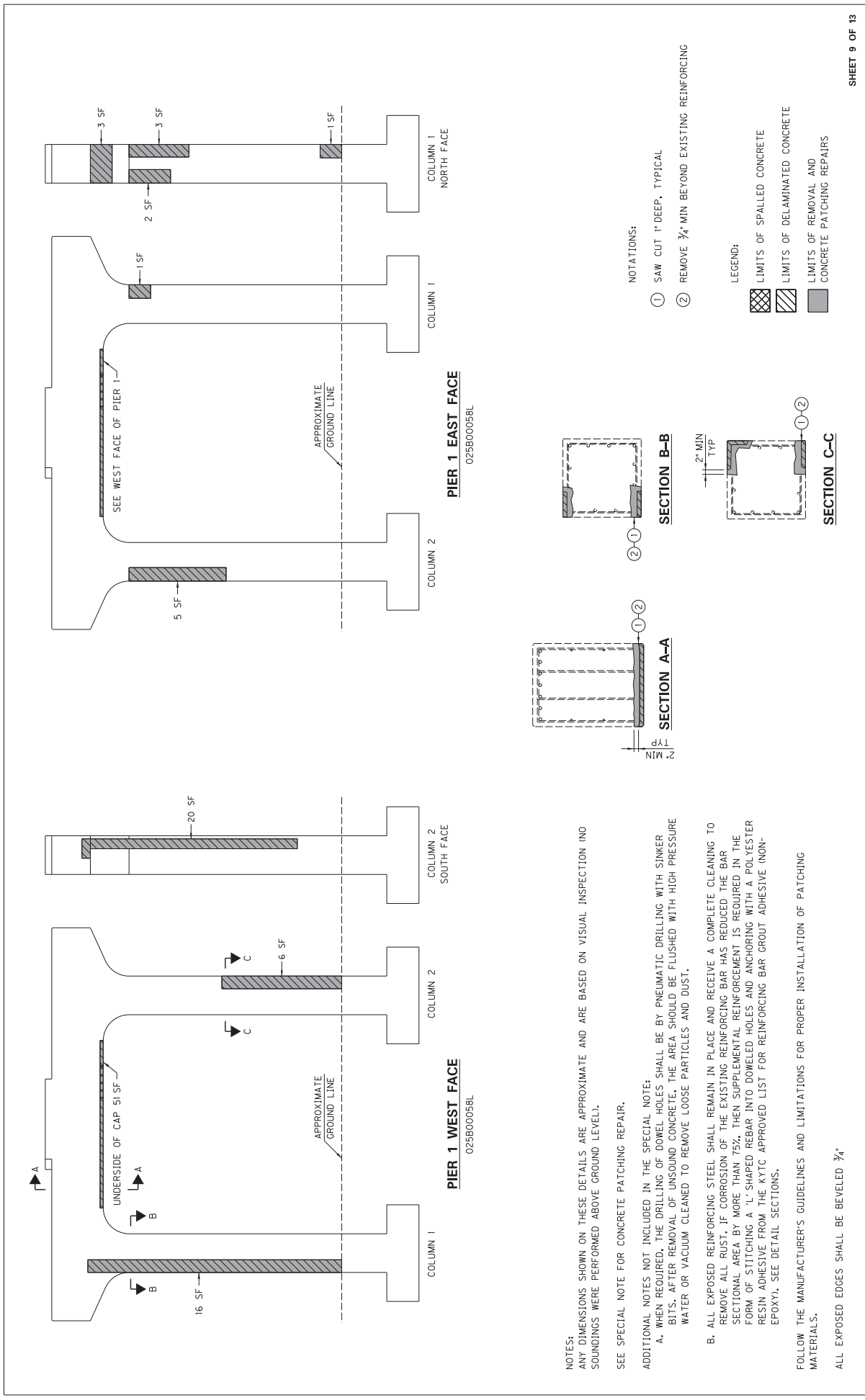
SHEET 8 OF 13



**BEAM REPAIR 025B00058R**

CLARK COUNTY: MOUNTAIN PARKWAY  
ROUTE: STONER-EPHESUS ROAD  
CROSSING: STONER-EPHESUS ROAD

BRIDGES: 025B00058L/R



**PIER 1 WEST FACE**  
025B00058L

**PIER 1 EAST FACE**  
025B00058L

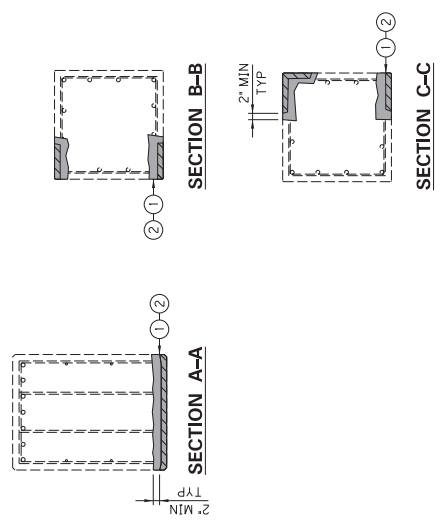
NOTES:  
ANY DIMENSIONS SHOWN ON THESE DETAILS ARE APPROXIMATE AND ARE BASED ON VISUAL INSPECTION (NO SOUNDINGS WERE PERFORMED ABOVE GROUND LEVEL).  
SEE SPECIAL NOTE FOR CONCRETE PATCHING REPAIR.

ADDITIONAL NOTES NOT INCLUDED IN THE SPECIAL NOTE:  
A. WHEN REQUIRED, THE DRILLING OF DOWEL HOLES SHALL BE BY PNEUMATIC DRILLING WITH SINKER BITS. AFTER REMOVAL OF UNSOUND CONCRETE, THE AREA SHOULD BE FLUSHED WITH HIGH PRESSURE WATER OR VACUUM CLEANED TO REMOVE LOOSE PARTICLES AND DUST.  
B. ALL EXPOSED REINFORCING STEEL SHALL REMAIN IN PLACE AND RECEIVE A COMPLETE CLEANING TO REMOVE ALL RUST. IF CORROSION OF THE EXISTING REINFORCING BAR HAS REDUCED THE BAR SECTIONAL AREA BY MORE THAN 75%, THEN SUPPLEMENTAL REINFORCEMENT IS REQUIRED IN THE FORM OF STITCHING A 'L' SHAPED REBAR INTO DOWELED HOLES AND ANCHORING WITH A POLYESTER RESIN ADHESIVE FROM THE KYTC APPROVED LIST FOR REINFORCING BAR GROUT ADHESIVE (NON-EPOXY). SEE DETAIL SECTIONS.

FOLLOW THE MANUFACTURER'S GUIDELINES AND LIMITATIONS FOR PROPER INSTALLATION OF PATCHING MATERIALS.  
ALL EXPOSED EDGES SHALL BE BEVELED 3/4".

- NOTATIONS:
- ① SAW CUT 1" DEEP, TYPICAL
  - ② REMOVE 3/4" MIN BEYOND EXISTING REINFORCING

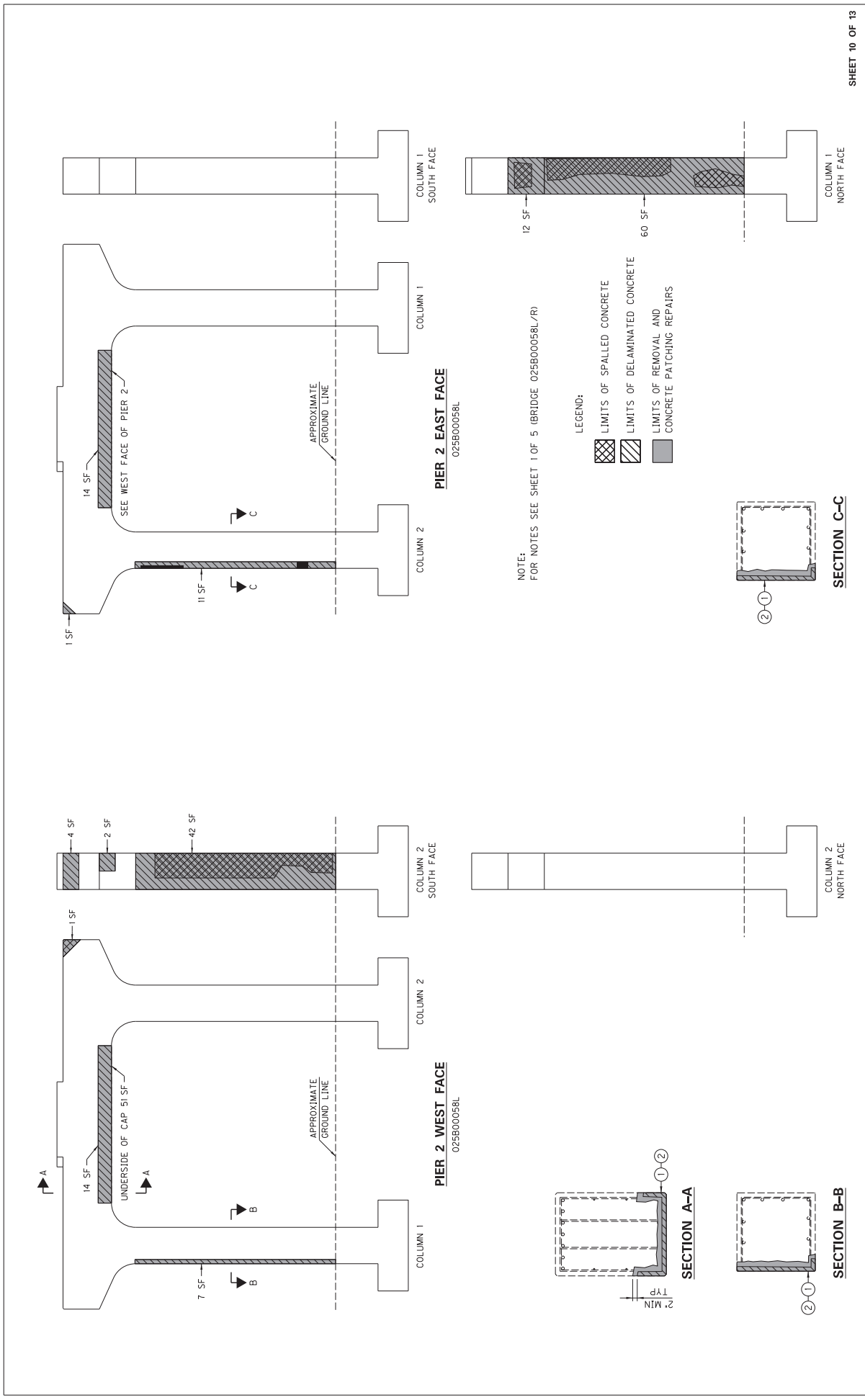
- LEGEND:
- LIMITS OF SPALLED CONCRETE
  - LIMITS OF DELAMINATED CONCRETE
  - LIMITS OF REMOVAL AND CONCRETE PATCHING REPAIRS



**CONCRETE PATCHING REPAIRS 025B00058L**

SHEET 9 OF 13

COUNTY: CLARK  
ROUTE: MOUNTAIN PARKWAY  
CROSSING: STONER-EPHESUS ROAD  
BRIDGE: 025B00058L/R



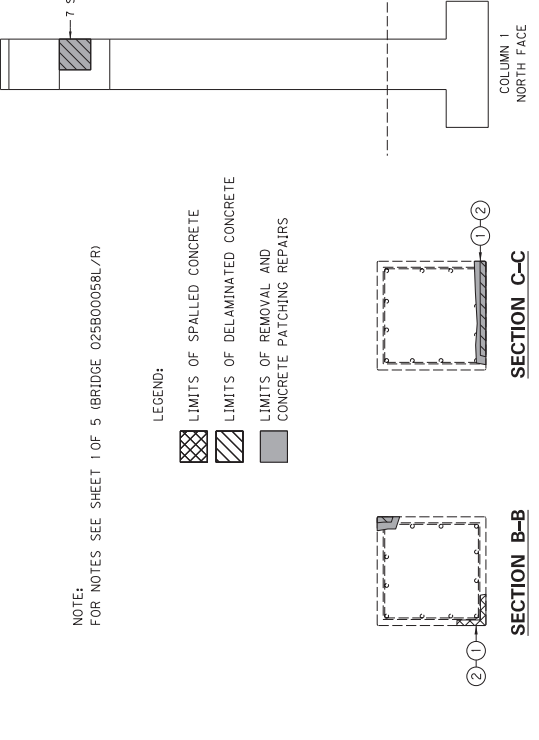
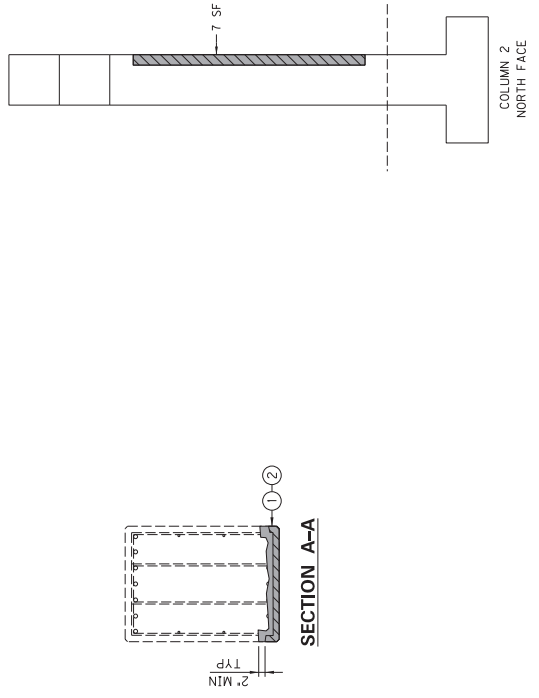
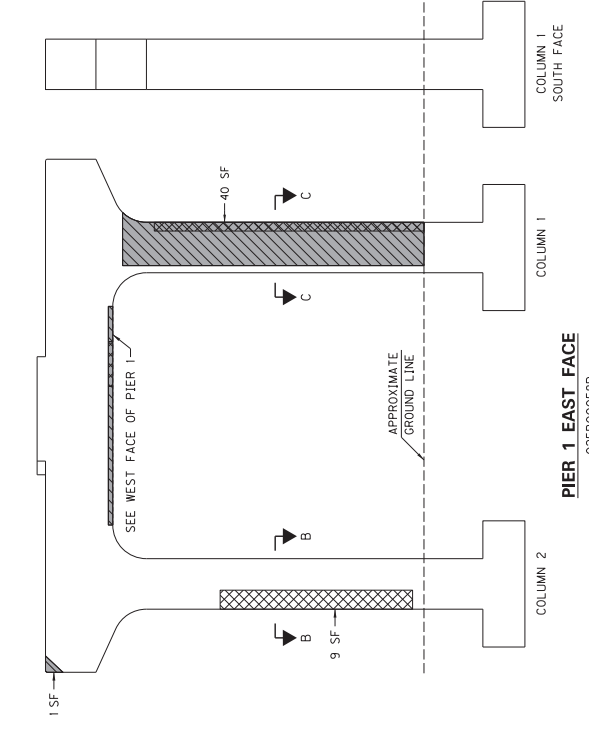
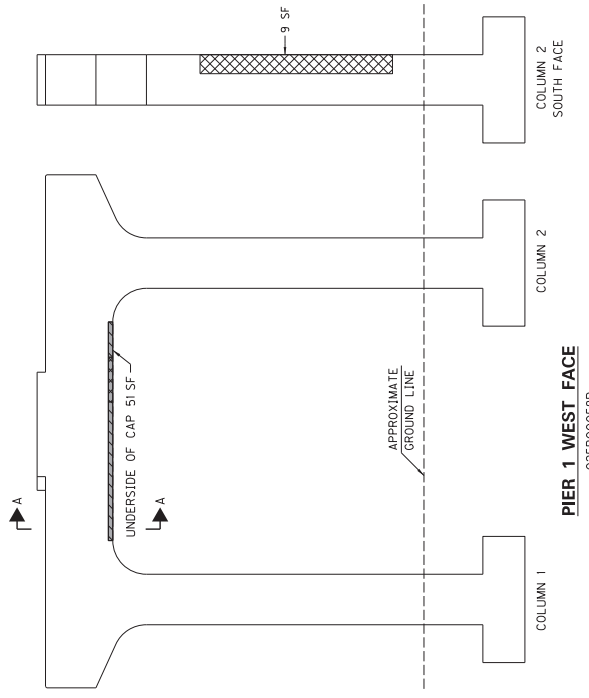
**Stantec**

**CONCRETE PATCHING REPAIRS 025B00058L**

COUNTY: CLARK  
ROUTE: MOUNTAIN PARKWAY  
CROSSING: STONER-EPHESUS ROAD

BRIDGE: 025B00058L/R

SHEET 10 OF 13



NOTE:  
FOR NOTES SEE SHEET 1 OF 5 (BRIDGE 025B00058L/R)

- LEGEND:
- LIMITS OF SPALLED CONCRETE
  - LIMITS OF DELAMINATED CONCRETE
  - LIMITS OF REMOVAL AND CONCRETE PATCHING REPAIRS

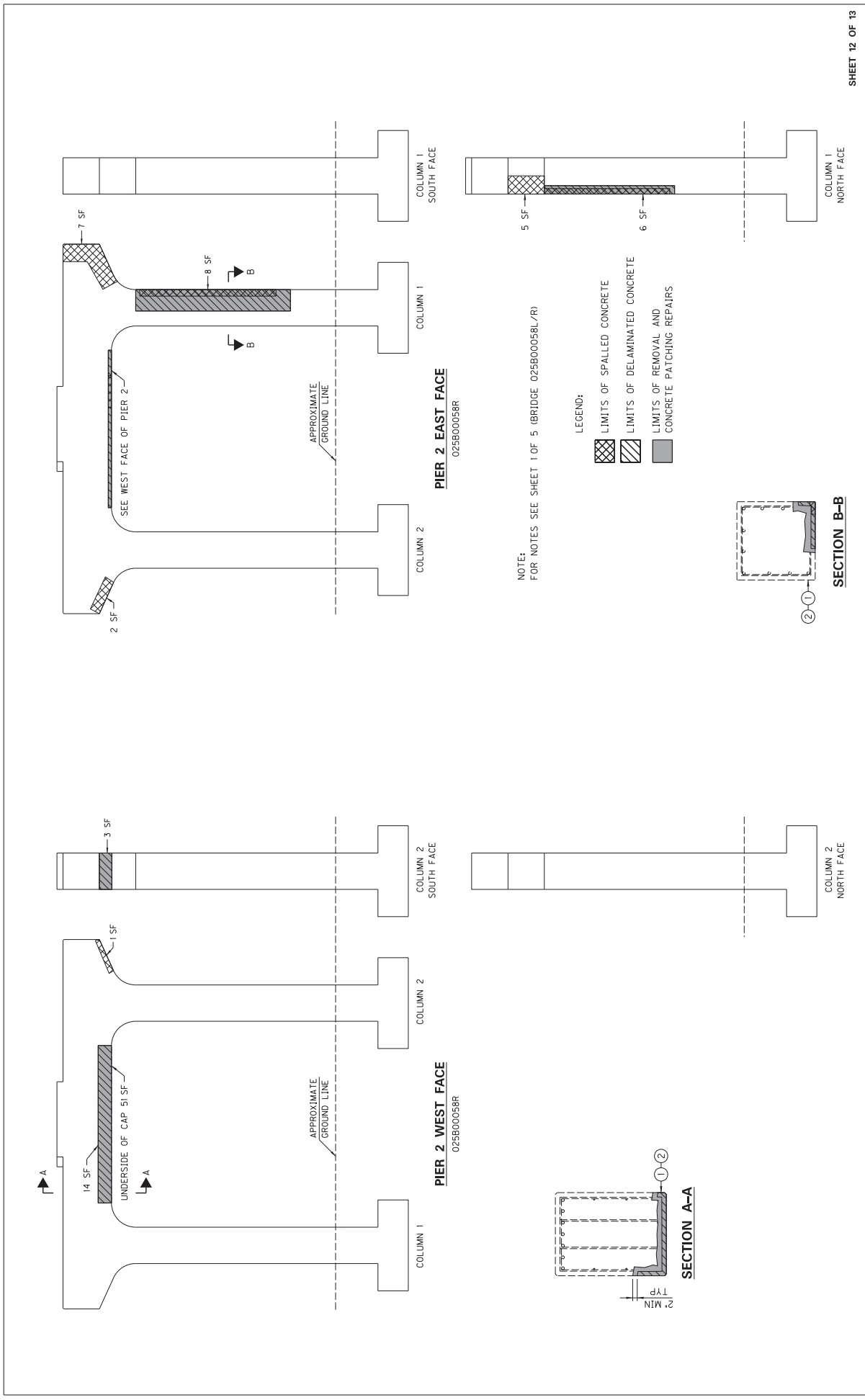


**CONCRETE PATCHING REPAIRS 025B00058R**

COUNTY: CLARK  
ROUTE: MOUNTAIN PARKWAY  
CROSSING: STONER-EPHESUS ROAD

BRIDGE: 025B00058L/R

SHEET 11 OF 13

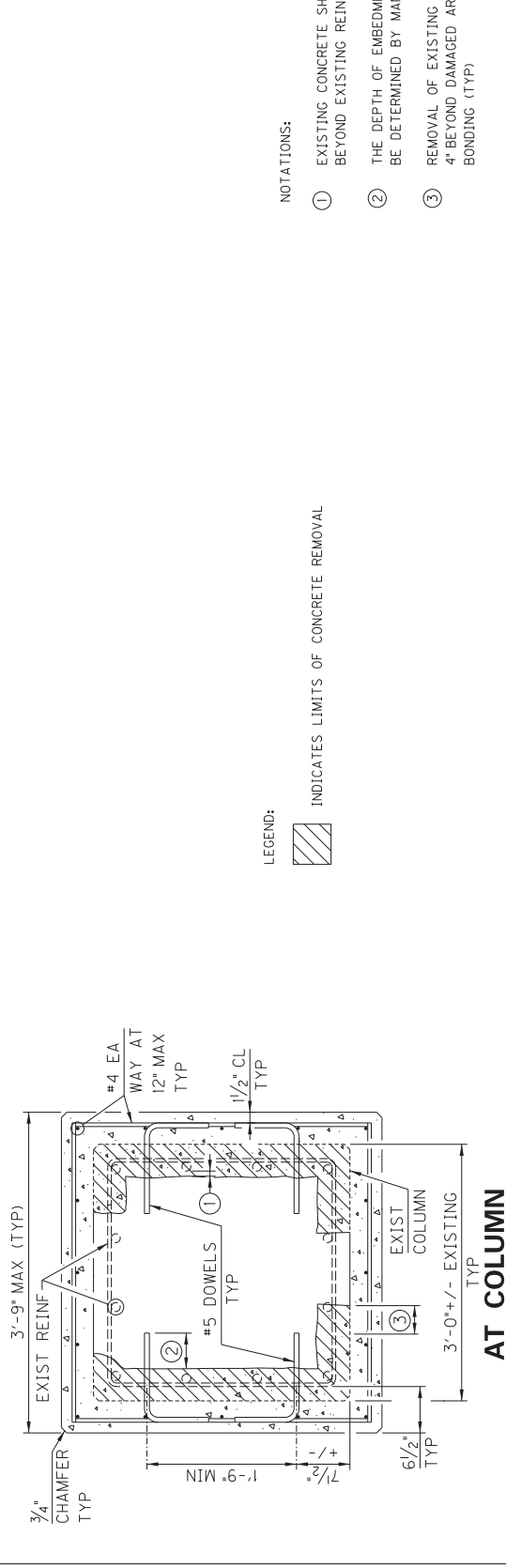
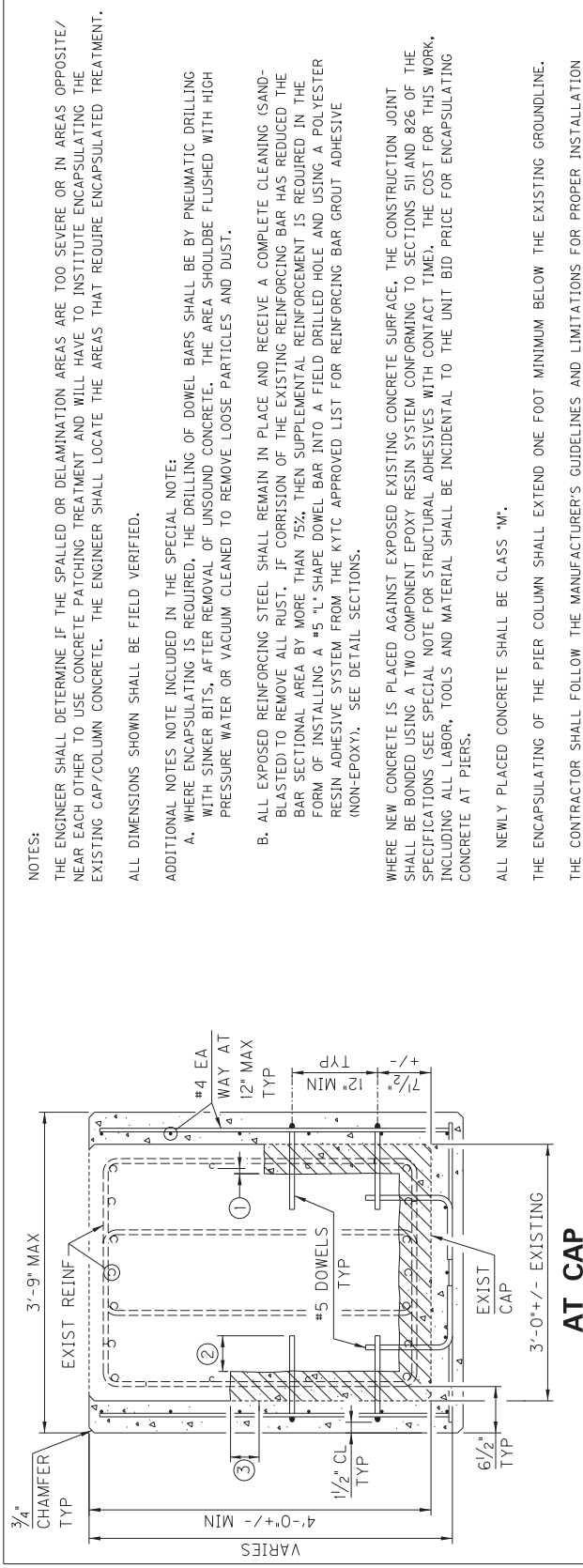


**Stantec**

**CONCRETE PATCHING REPAIRS 025B00058R**

**SHEET 12 OF 13**

COUNTY: CLARK  
BRIDGE: 025B00058L/R  
ROUTE: MOUNTAIN PARKWAY  
CROSSING: STONER-EPHESUS ROAD



**NOTES:**  
 THE ENGINEER SHALL DETERMINE IF THE SPALLED OR DELAMINATION AREAS ARE TOO SEVERE OR IN AREAS OPPOSITE/ NEAR EACH OTHER TO USE CONCRETE PATCHING TREATMENT AND WILL HAVE TO INSTITUTE ENCAPSULATING THE EXISTING CAP/COLUMN CONCRETE. THE ENGINEER SHALL LOCATE THE AREAS THAT REQUIRE ENCAPSULATED TREATMENT. ALL DIMENSIONS SHOWN SHALL BE FIELD VERIFIED.

**ADDITIONAL NOTES NOTE INCLUDED IN THE SPECIAL NOTE:**  
 A. WHERE ENCAPSULATING IS REQUIRED, THE DRILLING OF DOWEL BARS SHALL BE BY PNEUMATIC DRILLING WITH SINKER BITS, AFTER REMOVAL OF UNSOUND CONCRETE. THE AREA SHOULD BE FLUSHED WITH HIGH PRESSURE WATER OR VACUUM CLEANED TO REMOVE LOOSE PARTICLES AND DUST.  
 B. ALL EXPOSED REINFORCING STEEL SHALL REMAIN IN PLACE AND RECEIVE A COMPLETE CLEANING (SAND-BLASTED) TO REMOVE ALL RUST. IF CORROSION OF THE EXISTING REINFORCING BAR HAS REDUCED THE BAR SECTIONAL AREA BY MORE THAN 75%, THEN SUPPLEMENTAL REINFORCEMENT IS REQUIRED IN THE FORM OF INSTALLING A #5 L-SHAPE DOWEL BAR INTO A FIELD DRILLED HOLE AND USING A POLYESTER RESIN ADHESIVE SYSTEM FROM THE KYTC APPROVED LIST FOR REINFORCING BAR GROUT ADHESIVE (NON-EPOXY). SEE DETAIL SECTIONS.

WHERE NEW CONCRETE IS PLACED AGAINST EXPOSED EXISTING CONCRETE SURFACE, THE CONSTRUCTION JOINT SHALL BE BONDED USING A TWO COMPONENT EPOXY RESIN SYSTEM CONFORMING TO SECTIONS 511 AND 826 OF THE SPECIFICATIONS (SEE SPECIAL NOTE FOR STRUCTURAL ADHESIVES WITH CONTACT TIME). THE COST FOR THIS WORK, INCLUDING ALL LABOR, TOOLS AND MATERIAL SHALL BE INCIDENTAL TO THE UNIT BID PRICE FOR ENCAPSULATING CONCRETE AT PIERS.

ALL NEWLY PLACED CONCRETE SHALL BE CLASS 'M'.

THE ENCAPSULATING OF THE PIER COLUMN SHALL EXTEND ONE FOOT MINIMUM BELOW THE EXISTING GROUNDLINE. THE CONTRACTOR SHALL FOLLOW THE MANUFACTURER'S GUIDELINES AND LIMITATIONS FOR PROPER INSTALLATION OF PATCHING MATERIAL AND DOWEL BARS.

- LEGEND:**
- INDICATES LIMITS OF CONCRETE REMOVAL
- NOTATIONS:**
- ① EXISTING CONCRETE SHALL BE REMOVED 3/4" BEYOND EXISTING REINFORCEMENT
  - ② THE DEPTH OF EMBEDMENT FOR DOWELS SHALL BE DETERMINED BY MANUFACTURE'S SPECIFICATIONS.
  - ③ REMOVAL OF EXISTING CONCRETE SHALL EXTEND 4" BEYOND DAMAGED AREA TO INSURE ADEQUATE BONDING (TYP)

**SHEET 13 OF 13**

COUNTY: CLARK  
 ROUTE: MOUNTAIN PARKWAY  
 CROSSING: STONER-EPHESUS  
 BRIDGES: 02B000584/R

**ENCAPSULATING CONCRETE AT PIERS**



## SPECIAL NOTE FOR BEARING REPLACEMENT

### I. DESCRIPTION

Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2012 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and Plans. Section references are to the Standard Specifications.

This work consists of the following:

- (1) Furnish all labor, materials, tools, and equipment.
- (2) Jack and temporarily support the stringers at the specified finger joints.
- (3) Remove existing bearing assembly and portions of the girder intermediate stiffeners as specified in this note and in accordance with the plans.
- (4) Install new bearing assembly and repair girder as specified in this note and in accordance with the plans.
- (5) Maintain and control traffic and post bridge for reduced live load during girder jacking operations.
- (6) Any other work specified as part of this contract.

### II. MATERIALS

- A. Structural Steel.** Use AASHTO M270 (ASTM A709) Grade 50 steel, which meets the Charpy V-notch toughness requirements specified in the plans.
- B. Weld Material.** See Section 813.10. All welds shall be E70XX.
- C. Elastomeric Bearing Pad.** See Section 822. Pads shall be low temperature Grade 3 with durometer hardness of 50 or 60 and shall be subjected to the load testing requirements corresponding to Design Method B.
- D. Paint.** Match the color of the existing paint. All paint supplied must be contained in the current List of Approved Materials. See Section 821.

### III. CONSTRUCTION

- A. Existing Dimensions.** The Contractor shall verify all dimensions, including thickness of parts, with field measurements prior to ordering materials or fabricating steel.
- B. Shop Plans.** Shop plans will only be required for the temporary support system. The Contractor is responsible for obtaining field measurements and supplying the properly sized materials to complete the work.
- C. Jacking Plan.** The Contractor must submit a jacking plan, temporary support system calculations, and shop drawings for approval prior to starting work. The design must be stamped by a professional engineer licensed in the State of Kentucky. The girders shall be lifted a distance no more than that required to snugly fit the new bearing assembly in place plus  $\frac{1}{4}$ ". To prevent deck cracking, jack all girders concurrently and limit differential movement between stringer lines to  $\frac{1}{8}$ ". For each girder the total estimated design loads to be supported are:

Dead Load	50 kip
<u>Live Load</u>	<u>90 kip</u>
Total	140 kip

The Contractor's jacking system shall be designed to support a minimum of 200% of these loads. Before jacking operations begin, temporary stiffener angles for the stringer webs must be installed above the jack locations, as shown in the plans. No holes shall be drilled in the flanges of the stringers or floorbeams for installation of the jacking frame. Any holes drilled in the webs of the girders for temporary bracing connections shall have bolts installed in the holes after the connection is removed. Jacking and supporting the steel stringer ends is incidental to the contract unit price for "Bearing Replacement".

- D. Jacking Details.** The schematic of the temporary support system shown in the plans is one feasible alternative for jacking the girders. Final design is the responsibility of the Contractor. Alternative methods may require additional analysis of existing members by the Contractor as deemed necessary by the Engineer during review of the jacking plan.
- E. Maintenance of Traffic.** Maintain and control traffic in accordance with the Standard Specifications and the Special Note for Traffic Control.
- F. Work Sequence.** All work to complete the bearing replacement and girder repair shall be performed prior to the joint replacement and overlay replacement in construction.
- G. Remove Existing Material.** Remove the existing bearing assembly and portions of the steel girder intermediate stiffener to the limits shown on the drawings for the bearing removal. Remove existing steel by grinding, cutting or other methods approved by the Engineer that do not damage the adjacent structural steel. Use of cutting torches will not be permitted. All cut edges of the stringers to which new steel plates will be welded must be reasonable smooth and true to provide uniform bearing between the welded plates. If the Contractor removes portions of the girder outside the limits shown on the plans, the Contractor will make necessary repairs as approved by the Engineer and at no additional cost to the Department. Dispose of all removed material complete away from the job site. This work is incidental to the contract unit price for "Remove and Replace Girder Bearings".
- H. Field Prepare Existing Surfaces.** Existing areas of the bridge to be welded to or in contact with new steel shall be cleaned of all dirt, rust and foreign matter using hand cleaning methods before installing the new steel. Hand methods for field cleaning shall consist of scraping and wire brushing. No blast cleaning will be allowed on the bridge.
- I. Install Bearing Assembly and Girder Repairs.** Install girder bearing assemblies and girder repairs as shown on the plans and as directed by the Engineer. Protect the elastomeric pad and vulcanized bonds on the cover plates from heat. The bearing assembly must meet the fabrication, testing, and installation requirements of the AASHTO Standard Specification, Division II, Section 18.

- J. Welding Specifications.** All welding and welding materials shall conform to Joint Specifications ANSI/AASHTO/AWS D1.5M-D1.5-2008 Bridge Welding Code". Modifications and additions as stated on the plans or special note for welding steel bridges shall supersede the ANSI/AASHTO/AWS specification. Nondestructive testing by the contractor (QC) will not be required. Welding procedures shall be submitted to the Engineer and approved prior to the start of fabrication and retrofit. The cost of welding, welding materials, straightening, altering, and burning new or existing steel shall be included in the contract unit price for "Remove and Replace Girder Bearings".
- K. Prohibited Field Welding.** Except as shown on the plans, no welding of any nature shall be performed on the bridge without written consent of the Director, Division of Structural Design, or an authorized representative, and then only in the manner and at the locations designated in the authorization.
- L. Mill Test Reports.** Notarized test reports shall be furnished in triplicate to the Department showing that all the materials used for these repairs conform to the requirements of the Specifications.
- M. Painting.** Clean and paint new and existing steel surfaces in accordance with Section 607.03.23, Section 614, and the Special Notes for "Surface Preparation and Paint Application", "Paint", and "Waste Management". Components to be cleaned and painted include all new structural steel surfaces, including bolts, and all existing steel stringer surfaces within 12" of the work limits for the bearing replacement. All areas of new or existing structural steel on which the paint has been damaged by the Contractor with weld burns or by other means during construction or after final painting shall be wire brushed cleaned and spot painted as directed by the Engineer. Cleaning and painting of all new and existing structural steel will be considered incidental to the contract unit price for "Remove and Replace Girder Bearings".
- N. Damage to the Structure.** The Contractor shall bearing full responsibility and expense for any and all damage to the structure, including truss members, during the repair and retrofit work; even to the removal and replacement of truss members and fallen spans, should the damage result from the Contractor's actions.

#### **IV. MEASUREMENT**

- A. BEARING REPLACEMENT.** Measurement will be for each girder bearing that is removed and replaced.

#### **V. PAYMENT**

- A. BEARING REPLACEMENT.** Payment at the contract unit price is full compensation for (1) jacking and temporarily supporting the ends of the steel girders, (2) removing and disposing of the existing girder bearings and specified portions of the steel girders, (3) preparing the interface surfaces for welding and painting, (4) furnishing and installing new bearing assemblies and girder repairs, (5) painting the

steel surfaces as specified in this note, and (6) all other materials, labor, equipment, tools, and incidentals necessary to complete the work as specified by this note.

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

## **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 2012 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 the existing overlay or machine prep the existing slab
- (3) Complete full-depth and partial depth repairs as directed by the Engineer
- (4) Repair/replace damaged and corroded reinforcing bars
- (5) Place new concrete overlay and epoxy-sand slurry in accordance with Section 606
- (6) Complete asphalt approach pavement if required
- (7) Maintain and control traffic
- (8) 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. Steel Reinforced – Epoxy Coated.** Use Grade 60. See Section 602.

**III. CONSTRUCTION.**

- A. Remove Existing Overlay.** In addition to Section 606.03.03, see Special Note for Use of Hydrodemolition Method.  
**B. Machine prep of existing slab.** In addition to Section 606.03.03, see Special Note for Hydrodemolition.  
**C. Full Depth Slab Repair.** See Section 606 and Special Note for Hydrodemolition.  
**D. Partial Depth Slab Repair and Latex Overlay.** Remove areas determined to be unsound by the Engineer via hydrodemolition or via hand held jackhammers weighing less than 45lbs in accordance with Section 606.02.10 D. Repair/Replace all damaged or severely corroded reinforcing bars prior to partial depth repair operation. The Department will not measure material removal and will consider this work incidental to the bid item "PARTIAL DEPTH PATCHING". Mix and place Latex Modified Concrete Overlay in accordance with Sections 606.03.08 and 606.03.17.  
**E. Surface Texturing.** Texture the concrete surface of the overlay in accordance with Section 609.03.10.

**IV. MEASUREMENT.** See Section 606 and the following:

- A. Latex Modified Concrete for Overlay.** The Department will measure the quantity in cubic yards using the theoretical volume as follows:

025B00055N (1.5" thick overlay) = 35 cu yd  
025B00058L (1.5" thick overlay) = 21 cu yd  
025B00058R (1.5" thick overlay) = 21 cu yd

- B. Latex Modified Concrete for Partial Depth Patching and variable thickness of Overlay.** 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. Steel Reinforcement – Epoxy Coated.** The Department will measure any epoxy reinforcing steel necessary for the partial or full depth patch in pounds, which shall include all labor, equipment, and material needed to complete this work.
- V. PAYMENT.** See Section 606 and the following:
- A. Latex Modified Concrete for Overlay.** The Department will make payment for the Latex Modified Concrete under bid item #08534 “CONCRETE OVERLAY – LATEX” for the quantity in cubic yards complete in place.
- B. Latex Modified Concrete for Partial Depth Patching and variable thickness of Overlay.** The Department will make payment for the Partial Depth Patching under bid item #24094EC “PARTIAL DEPTH PATCHING”. Payment will be for the quantity per cubic yard complete in place.
- C. Steel Reinforcement.** The Department will make payment for steel reinforcement, if necessary, under bid item #08151 “STEEL REINFORCEMENT – EPOXY COATED”. Payment will be at the unit price per pound.

## SPECIAL NOTE FOR USE OF HYDRODEMOLITION METHOD

### I. 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.

### II. EQUIPMENT

- A. Sawing Equipment.** Sawing equipment shall be a concrete saw capable of sawing concrete to the specified depth.
- B. Mechanical Scarifying Equipment.** The scarifying equipment shall be a power operated mechanical scarifier capable of uniformly scarifying or removing the old concrete or asphalt 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.
- C. 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.
- D. 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.

- E. 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.
- F. Power Driven Hand Tools.** Power driven hand tools and jackhammers will be permitted, but shall not be heavier than the nominal 45 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.

### III. CONSTRUCTION

- A. 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.
- B. 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.
- C. Preparation of Existing Deck:** No operations without reasonably available engineering controls that limit fugitive dust will be acceptable. The Contractor shall comply with all 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.

**D. Removal of Existing Asphaltic Concrete Overlays:** If an existing asphaltic concrete overlay is present upon the original bridge deck surface to be prepared by Hydrodemolition, the overlay and any waterproofing material that was part of the deck must be removed, and the bridge deck cleaned, prior to commencement of the Hydrodemolition operation. The Contractor may utilize conventional scarifying equipment conforming to these specifications to remove the existing bituminous overlay and waterproofing material from the original bridge deck. Acceptable depth of scarification shall be the overlay and waterproofing material thickness plus ¼" below the original bridge deck surface. Additional removal depth of existing deck concrete is permitted by mechanical scarification provided. Total surface Hydrodemolition is used to provide a highly bondable surface and to remove partial depth deteriorated concrete.

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.

**E. 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 ¼" below the original deck elevation. If Hydrodemolition does not leave a bondable surface resident can require mechanical scarification to his satisfaction at no additional cost to the Cabinet.

Existing overlay material which is sound and bonded may be left in patch areas with approval of the Project Engineer. If determined the existing patches are to be removed, jackhammers, not to be heavier than the nominal 45 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.

- F. Bridge Decks with No Existing Concrete Overlay:** If Hydrodemolition is to be performed on an original bridge deck surface without a bituminous or concrete bridge deck 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 ¼". Total surface Hydrodemolition is used to provide a highly bondable surface and to remove partial depth deteriorated concrete. 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.

#### **IV. Concrete Removal by Hydro-Demolition**

- A. 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 ¾" 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.

- B. 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.

- C. 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 required.

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.

1. **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.
2. **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 45 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.

- 3. **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.
- 4. **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.

### V. Measurement

Surface preparation using Hydrodemolition shall be measured as the actual deck area in square yards overlaid and shall include the costs of surface preparation, Hydrodemolition, 1/4" (min.) milling into the original concrete bridge deck surface, removal of the surface preparation debris, cleaning, any incidental materials, and all labor and equipment as necessary to complete the work as described in this specification, but not specifically included in other items for payment.

Full Depth Repair when encountered on a bridge deck and marked in the field by the Engineer, full depth repair shall be paid for per Cubic Yard of Class "M" Concrete used.

### VI. 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
08526	Cubic Yard	Conc Class "M" Full Depth Patch

Removal of existing flexible (asphalt) concrete patches and rigid modified concrete overlays are included as parts of this work.

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

### **I. DESCRIPTION**

Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2012 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 devices 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
- (6) Any other work specified as part of this contract.

### **II. 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, for Armored Edges. See manufacturer's specifications for Armored Edges on Strip Seal Expansion Dams.
- C. Stud Anchors.** The armored edge stud anchors are  $\frac{3}{4}$ " x 6" embedded stud shear connectors conforming to ASTM A108, Grade 1015 (Nelson Studs or equal).
- D. Steel Reinforcement - Epoxy Coated.** Use Grade 60. See Section 602.
- E. Epoxy Bond Coat.** See Section 511.
- F. Neoprene Joint Seals (Compression Seal or Strip Seal).** See Section 807.

### **III. CONSTRUCTION**

- A. Remove Existing Materials.** Remove the existing expansion dam/bridge end and specified areas of concrete as shown on the attached sketches. Remove debris and/or expansion joint filler as directed by the Engineer. When deteriorated concrete adjacent to the limits of removal is encountered, extend the removal area as directed by the Engineer. Dispose of all removed material entirely away from the job site. 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. 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 (See attached detail drawings).

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 this work, as directed by the Engineer, steel reinforcement as shown in the attached detail drawings. Splice these bars to the existing reinforcement in the deck in the areas of removed concrete as shown in the attached detail drawings or as 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. 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.

Reinforcement, bar splices, and mechanical connectors are incidental to the contract unit price for “Expansion Joint Replacement” or “Replace Armored Edge”.

- D. Stage Construction.** Install concrete and armored edges in two (or more if specified) stages as necessary. Join the armored edges at or near the centerline of the roadway or lane line, field weld, and grind smooth.
- E. Neoprene Joint Seals.** 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. 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” and 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.

#### V. PAYMENT

- A. **Expansion Joint Replacement – 1 ” and 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, reinforcement, neoprene joint seal, and all incidental items necessary to complete the work 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, reinforcement, and all incidental items necessary to complete work 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 ELIMINATING TRANSVERSE JOINTS ON BRIDGES

### I. DESCRIPTION

Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2012 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
- (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. Class "AA" Concrete.** See Section 601.
- C. Steel Reinforcement - Epoxy Coated.** Use Grade 60. See Section 602.
- D. 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. When deteriorated concrete adjacent to the limits of removal is encountered, extend the removal area 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 or proposed grade (See attached detail drawings). Place the new Class "M" concrete to the original or proposed grade and finish with broom strokes drawn transversely from gutterline to gutterline. For eliminating joints over piers on bridges that are to receive a latex concrete overlay, place the new Class "M" Concrete to the scarified grade and finish it to receive the new overlay. When the bridge is being rehabilitated with a full depth overlay ("Reinforced Concrete Slab") place Class "AA" concrete monolithically with

the new slab. On the curb and/or brush block, place the new concrete to the original grade shown on the detail drawings and finish to match the existing surface.

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 new concrete. The surface areas of existing concrete to come in contact with the new 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 attached detail drawings. 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 concrete. Reinforcement, bar splices and mechanical connectors are incidental to the contract unit price for “Eliminate Transverse Joint”.

**D. 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. Eliminate Transverse Joint.** The Department will measure the quantity in linear feet from gutterline to gutterline along the centerline of the joint. All work shown on the “Elimination Transverse Joint” detail drawings that is outside of the pay limits shall be incidental to the bid item.

#### **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 and 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 CONCRETE PATCHING REPAIR AND BEAM REPAIR**

### **I. DESCRIPTION**

Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2012 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) Provide safe access to the bridge substructure (piers) and or superstructure (beams), in accordance with Section 107.01.01, for the Engineer to sound possible repair areas and for workers to complete the construction
- (3) Remove the deteriorated concrete
- (4) Blast clean and prepare the surfaces for patching
- (5) Prime the areas immediately prior to patching
- (6) Apply the Vertical and Overhead Patch or Class M Concrete
- (7) Finish the patched surface
- (8) Maintain and control traffic
- (9) Any other work specified as part of this contract

### **II. MATERIALS**

- A. Vertical and Overhead Patching Material.** Conform to Manufacturer's Technical Guidance.
- B. Class "M" Concrete.** Use either "M1" or "M2". See Section 601.

### **III. CONSTRUCTION**

- A. Remove Deteriorated Concrete.** Prior to beginning the concrete repairs, provide safe access to the substructure, in accordance with Section 107.01.01, for the Engineer to sound possible repair areas. The Engineer will sound the concrete with a hammer and mark the areas of concrete to be removed and patched. All areas of deteriorated concrete found should be repaired as part of this work. Final payment for "Concrete Patching Repair" will be the field measured quantity of patching completed in accordance with this Note and as designated by the Engineer.

Remove specified areas of deteriorated concrete as directed by the Engineer. The removal of unsound material shall be accomplished with hand tools or pneumatic hammers that do not exceed twenty (20) pounds. Precautions shall be exercised to protect the underlying sound material. Saw, route, or otherwise manipulate the sides of the patch so that the interface between the old concrete and patch area are perpendicular. Remove all deteriorated loose concrete to a minimum depth of 2" for repairs using vertical and overhead patching material and 4" for repairs using Class M Concrete. Also ensure concrete removal in the patch area extends at least three-quarters (3/4) inch beyond any steel reinforcement more than 50

percent exposed. Dispose of all removed material entirely away from the job site or as directed by the Engineer.

Extreme care shall be taken when removing the existing spalled or delaminated concrete so as not to damage the existing reinforcing steel. Completely clean all existing steel reinforcement encountered free of rust and leave in place. Wire brushing may be required to thoroughly clean exposed steel reinforcement. Repair or replace any damaged steel reinforcement as directed by the Engineer at no additional cost to the Department. Ensure that all exposed steel reinforcement is tied in accordance with Section 602.03.04. The Contractor must consult the Engineer before removing any concrete that is directly below the beam bearings.

- B. Prepare Concrete Surfaces for Patching.** Prepare concrete surfaces to be patched in accordance with Section 510.03.01. Final blast cleaning shall be completed within twelve (12) hours prior to placement of the epoxy mortar patch. Concrete must be sound, dry, and clean prior to placement of epoxy resin prime coat.
- C. Apply Vertical and Overhead Patching Material or Class M Concrete.** The Engineer shall have the option of designating a spalled or delaminated area to be repaired using Class M high early strength concrete or a Vertical and Overhead Patching Material. Any material used must be approved by the Engineer. Refer to the Transportation Cabinet, Division of Materials' List of Approved Materials for currently approved materials for vertical and overhead patching. Place either the class M Concrete or Vertical and Overhead Patching Material as approved by the Engineer. Place the epoxy resin primer in accordance with the standard specifications and manufacturer's recommendations. Place the Vertical and Overhead Patching Material in accordance with the manufacturer's specifications to restore the deteriorated areas to their original dimensions as directed by the Engineer. Place Class M Concrete according to the Standard Specifications.

#### IV. MEASUREMENT

- A. Concrete Patching Repair.** The Department will measure the quantity in square feet.
- B. Beam Repair.** The Department will measure the quantity as each location of beam repairs as shown in the plans.

#### V. PAYMENT

- A. Concrete Patching Repair.** Payment at the contract unit price per square foot is full compensation for removal of deteriorated concrete, preparation of the concrete surface, application of the Vertical and Overhead Patching Material or Class M Concrete, application of the epoxy resin seal coat, and all incidental items necessary to complete the work in accordance with this Note.

**B. Beam Repair.** Payment at the contract unit price per each is full compensation for removal of deteriorated concrete, preparation of the concrete surface, application of the Vertical and Overhead Patching Material or Class M Concrete, application of the epoxy resin seal coat, and all incidental items necessary to complete the work in accordance with this Note.

The Department will consider payment as full compensation for all work required by this note.

## **SPECIAL NOTE FOR JACKING AND SUPPORTING BRIDGE SPAN**

- I. DESCRIPTION.** Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2012 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and the attached detail drawing(s). Section references are to the Standard Specifications.

This work consists of the following: (1) Furnish all labor, materials, tools, and equipment; (2) Submit for approval jacking plans, procedures, drawings, and details prepared by a Professional Engineer licensed to practice in the Commonwealth of Kentucky; (3) Jack the entire structure or portions thereof and as required to complete the work as shown on the drawings and Special Notes and provide temporary supports as needed for the duration of the work; (4) Remove and reposition jacks and supports as required to complete the contract work; (5) Remove jacking and temporary supports when no longer required; (5) Maintain and control traffic; and (6) Any other work specified as part of this contract.

## **II. CONSTRUCTION.**

- A. Working Drawings.** Prior to preparation of jacking plans and working drawings, the Contractor shall verify in the field, conditions and dimensions as necessary to perform the work. The Contractor shall submit to the Engineer for approval, jacking plans, working drawings and design calculations for the jacking and temporary supports. Such plans, drawings, and design calculations shall be prepared, sealed, and signed by an engineer who is licensed to practice in the Commonwealth of Kentucky. The content and number of sets of drawings and design calculations and times for review for temporary supports shall be the same as shown in the Standard Specifications for falsework working drawings. The jacking plan is to provide for a jacking scheme that will limit the load in the jacks to specified loads plus or minus 5%. Jacks are to be sized to provide a minimum factor of safety of 2 (two) when compared to the required working or jacking load. In addition to a minimum horizontal force of 2% of the dead load reaction of the structure, the Contractor's jacking plan is to include provisions for resisting horizontal loads that may occur as a result of the jacking operations and clearly show methods to resist those loads. The jacking plan is to take into consideration the longitudinal movement of the centerline of bearings as the superstructure is raised. The jacking locations and loads, if shown on the detail drawings, may be revised by the contractor. If not shown on the detail drawings, the contractor shall select jacking locations and/or loads consistent with his proposed jacking plans and procedures. Jacking loads and jack locations required by the Contractor's jacking method shall be shown on the jacking and supporting plan submitted for approval. The contractor is permitted to temporarily remove existing bracing as necessary and to replace said bracing with contractor provided jacking frames, to install contractor provided jacking stiffeners, or otherwise modify the structure, as necessary to implement his jacking plan, with the written approval of the Engineer. If loads are transferred to or if the spans are supported at locations other

than those already having appropriate stiffeners or as shown in the detail drawings, the contractor shall, unless otherwise noted or shown in the detail drawings, provide steel plate or angle jacking stiffeners designed by a Professional Engineer which meet current AASHTO requirements for bearing stiffeners and which may remain in place at the conclusion of the construction. Jacking stiffeners may be welded or bolted to the beam webs, but must be milled to bear on the top flange at the piers and may be close fit and welded to the flange at other locations. Jacking schemes which require modifications to the structure shall be considered permanent and shall remain in the structure unless otherwise shown in the contract documents or directed by the Engineer. All steel which will remain in the finished structure shall be painted in accordance with the Specifications and notes excepting that paint coats may be shop applied.

- B. Jacking and Temporary Support.** The jacking operation is to be performed in such a manner that the vertical position of the members supported by the bearings will remain in approximately the same relative position throughout the jacking operation. A maximum of  $v.$ " relative difference in position is allowed in a lift between any of the jacks and between jacked and unjacked girders. Traffic shall remain on the portion of the structure to be jacked at all times unless otherwise approved by the Engineer. A redundant system of supports shall be provided during the entire jacking operation for backup should any of the jacks fail. The redundant system shall include stacks of steel plates or other steel sections added as necessary to maintain the redundant supports at each jack location within  $v.$ " of the jacking sill or corbels.

Each jack shall be equipped with either a pressure gage or a load cell for determining the jacking force. Pressure gages shall have an accurately reading dial at least 6" in diameter. Each jack shall be calibrated by a private laboratory within 6 months prior to use. Each jack and its gage shall be calibrated as a unit with the cylinder extension in the approximate position that it will be in at final jacking force and shall be accompanied by a certified calibration chart. Load cells shall be calibrated and provided with an indicator by which the jacking force is determined.

Vandal-resistant displacement monitoring equipment shall be provided and maintained. Vertical and horizontal displacements of the temporary supports and the existing structure shall be monitored continuously during jacking operations and shall be accurately measured and recorded at least weekly during removal and reconstruction work. As a minimum, elevations shall be taken prior to the start of jacking operations, immediately after jacking is complete, before permanently re-connecting the superstructure to the substructure, and after the temporary supports have been removed. As a minimum, the existing structure shall be monitored at the abutments, piers, and at mid-point of spans. Control points at each location shall be located near the center and the superstructure gutterlines. The records of vertical and horizontal displacement shall be delivered to the Engineer at the completion of the work described herein.

A force equal to the initial jacking load or the dead load shown on the plans shall be applied to the structure by the temporary support system and the force held until all initial compression and settlement of the system is complete. The structure shall then be lifted by the jacks to the final position and the force held until the temporary support system is installed and the system is stable, before remaining work at the location being supported is begun.

Jacking operations shall be carefully controlled and monitored to ensure that the jacking loads are applied in a manner to prevent distortion and excessive stresses that would damage the structure. The superstructure shall be jacked as necessary to maintain the total vertical displacements at control points to less than  $v$ " from the elevations recorded prior to jacking plus the desired jacking height as shown on the plans or as modified by the Engineer. For bearing replacements and when no other desired jacking height is shown in the plans, detail drawings, or notes, the superstructure shall be jacked only as necessary to facilitate removal and replacement of the bearings and in no case more than 114" if traffic is to remain on the structure during the work.

Should unanticipated displacements, cracking or other damage occur, the construction shall be discontinued until corrective measures satisfactory to the Engineer are performed. Damage to the structure as a result of the Contractor's operations shall be repaired by the Contractor at no expense to the Department.

Following completion of the reconstruction, the monitored control points shall not deviate from the vertical position by more than  $v$ " from the initial survey elevations or the elevations as modified by the Engineer or detail drawing(s).

#### **IV MEASUREMENT.**

**A. Jacking and Supporting Bridge Span.** The Department will not measure the quantity.

#### **V. PAYMENT.**

**A. Jack and Support Bridge Span.** Payment at the contract lump sum price is for all labor, materials, manufactured assemblies, furnishing and operating jacks, plates, jacking stiffeners, jacking beams, painting, etc. and all incidental items necessary to perform any jacking and supporting operations required to complete the work in accordance with this Note, the Standard Specifications, or as shown on the attached detail drawing(s), or as noted elsewhere in the contract, or as directed by the Engineer.

### **Special Note for Bridge Demolition, Renovation and Asbestos Abatement**

**If the project includes any bridge demolition or renovation, the successful bidder is required to notify Kentucky Division for Air Quality (KDAQ) via filing of form (DEP 7036) a minimum of 10 days prior to commencement of any bridge demolition or renovation work.**

**Any available information regarding possible asbestos containing materials (ACM) on or within bridges to be affected by the project has been included in the bid documents. These are to be included with the Contractor's notification filed with the KDAQ. If not included in the bid documents, the Department will provide that information to the successful bidder for inclusion in the KDAQ notice as soon as possible. If there are no documents stating otherwise, the bidders should assume there are no asbestos containing materials that will in any way affect the work.**



**TRANSPORTATION CABINET**  
Frankfort, Kentucky 40622  
www.transportation.ky.gov/

**Steven L. Beshear**  
Governor

**Michael W. Hancock, P.E.**  
Secretary

## Memorandum

**To:** Dan Hite  
**CC:**  
**From:** O'Dail Lawson  
Environmental Scientist IV  
Division of Environmental Analysis  
**Date:** 9/28/2015  
**Re:** Asbestos Inspection Report for Clark 07-2056

---

**This report is prepared to accompany the 10-Day NOI for Demolition to the Division of Air Quality. Please include all pages with submittal.**

### **Project and Structure Information**

**Project #** Clark 07-2056

**Bridge #** 025B00055N

**Location:** Mountain Parkway over I-64

**Description:** The samples collected were point counted below 1%. No abatement necessary.

**Inspection Date:** September 1, 2015

### **Results**

The results revealed that there is no ACM abatement required at this time.






<b><i>MRS, INC.</i></b>	<i>MRS, Inc. Analytical Laboratory Division</i>
-------------------------	---

332 West Broadway, Suite 613  
Louisville, Kentucky 40202

(502) 495-1212  
Fax: (502) 491-7111

<b>Client:</b> <u>KY Transportation Cabinet</u>	<b>Project No:</b> <u>259213 B</u>
<b>Address:</b> <u>200 Mero Street</u>	<b>Sample ID:</b> <u># 55 - 1</u>
<u>Frankfort, KY</u>	<b>Sampled:</b> <u>1-Sep-15</u>
<u>40601</u>	<b>Received:</b> <u>1-Sep-15</u>
<u>Attention O'Dail Lawson</u>	<b>Analyzed:</b> <u>21-Sep-15 - Point Count -</u>

**Bulk Sample Analysis**

<b>Sampled by:</b>	<u>O'Dail Lawson</u>		
<b>Facility/Location:</b>	<u>Item # 025B00055N</u>		
<b>Field Description:</b>	<u>Guard Rail Mastic</u>		
<b>Laboratory Description:</b>	<u>Gray Material</u>		
<b>Asbestos Materials:</b>	<u>Chrysotile = 2/400 = 0.50 % ( &lt; 1 % ) Sample Is Negative</u>		
<b>Non-asbestos Fibrous Materials &amp; Matrix Materials:</b>	<u>Cellulose</u>	<u>0.25 %</u>	
	<u>Binders</u>	<u>99.25 %</u>	
<b>Remarks:</b> The sample was analyzed for asbestos content following the EPA Methodology (600/R-93/116). The test relates only to the items tested. This report does not represent endorsement by NVLAP or any agency of the U.S. Government.			
<b>Analyst:</b>	<u>Winterford Mensah</u>	<b>Reviewed By:</b>	<u></u> <small>Signature</small>



**ENVIRONMENTAL TRAINING CONCEPTS, INC**  
P.O Box 99608 Louisville, KY 40269  
(502)640-2951

Certification Number: ETC-AIR-071415-00276

# O'Dail Lawson

has on 07-14-2015, attended and successfully completed the requirements and passed the examination with a score of 70% of better on the entitled course.

## ASBESTOS INSPECTOR REFRESHER

Training was in accordance with 40 CFR Part 763 (AHERA) approved by the Commonwealth of Kentucky, the Indiana Department of Environmental Management and Tennessee Department of Environment & Conservation The above student received requisite training for Asbestos Accreditation under Title II of the Toxic Substance Act (TSCA).

Conducted at: 1220 Kentucky Mills Drive, Louisville, KY

  
Name - Training Manager

Expiration Date: 07-14-2016

  
Name - Instructor



**TRANSPORTATION CABINET**  
Frankfort, Kentucky 40622  
www.transportation.ky.gov

**Steven L. Beshear**  
Governor

**Michael W. Hancock, P.E.**  
Secretary

## Memorandum

**To:** Dan Hite

**CC:**

**From:** O'Dail Lawson

Environmental Scientist IV

Division of Environmental Analysis

**Date:** 9/28/2015

**Re:** Asbestos Inspection Report for Clark 07-2056

---

**This report is prepared to accompany the 10-Day NOI for Demolition to the Division of Air Quality. Please include all pages with submittal.**

### **Project and Structure Information**

**Project #** Clark 07-2056

**Bridge #** 025B00057L

**Location:** Mountain Parkway over old railroad bed

**Description:** The samples collected were below 1%. No abatement necessary.

**Inspection Date:** September 1, 2015

### **Results**

The results revealed that there is no ACM abatement required at this time.



An Equal Opportunity Employer M/F/D





**ENVIRONMENTAL TRAINING CONCEPTS, INC**  
P.O Box 99603 Louisville, KY 40269  
(502)640-2951

Certification Number: ETC-AIR-071415-00276

# O'Dail Lawson

has on 07-14-2015, attended and successfully completed the requirements and passed the examination with a score of 70% of better on the entitled course.

## ASBESTOS INSPECTOR REFRESHER

Training was in accordance with 40 CFR Part 763 (AHERA) approved by the Commonwealth of Kentucky, the Indiana Department of Environmental Management and Tennessee Department of Environment & Conservation The above student received requisite training for Asbestos Accreditation under Title II of the Toxic Substance Act (TSCA).

Conducted at: 1220 Kentucky Mills Drive, Louisville, KY

  
Name - Training Manager

Expiration Date: 07-14-2016

  
Name - Instructor



**TRANSPORTATION CABINET**  
Frankfort, Kentucky 40622  
[www.transportation.ky.gov/](http://www.transportation.ky.gov/)

**Steven L. Beshear**  
Governor

**Michael W. Hancock, P.E.**  
Secretary

## Memorandum

**To:** Dan Hite  
**CC:**  
**From:** O'Dail Lawson  
Environmental Scientist IV  
Division of Environmental Analysis  
**Date:** 9/28/2015  
**Re:** Asbestos Inspection Report for Clark 07-2056

---

**This report is prepared to accompany the 10-Day NOI for Demolition to the Division of Air Quality. Please include all pages with submittal.**

### **Project and Structure Information**

**Project #** Clark 07-2056

**Bridge #** 025B00058L

**Location:** Mountain Parkway over Stoner Road

**Description:** The samples collected were below 1%. No abatement necessary.

**Inspection Date:** September 1, 2015

### **Results**

The results revealed that there is no ACM abatement required at this time.



An Equal Opportunity Employer M/F/D





**ENVIRONMENTAL TRAINING CONCEPTS, INC**

P.O Box 99603 Louisville, KY 40269  
(502)640-2951

Certification Number: ETC-AIR-071415-00276


**O'Dail Lawson**

has on 07-14-2015, attended and successfully completed the requirements and passed the examination with a score of 70% of better on the entitled course.

**ASBESTOS INSPECTOR REFRESHER**

Training was in accordance with 40 CFR Part 763 (AHERA) approved by the Commonwealth of Kentucky, the Indiana Department of Environmental Management and Tennessee Department of Environment & Conservation The above student received requisite training for Asbestos Accreditation under Title II of the Toxic Substance Act (TSCA).

Conducted at: 1220 Kentucky Mills Drive, Louisville, KY

  
Name - Training Manager

Expiration Date: 07-14-2016

  
Name - Instructor



**TRANSPORTATION CABINET**  
Frankfort, Kentucky 40622  
[www.transportation.ky.gov/](http://www.transportation.ky.gov/)

**Steven L. Beshear**  
Governor

**Michael W. Hancock, P.E.**  
Secretary

## Memorandum

**To:** Dan Hite  
**CC:**  
**From:** O'Dail Lawson  
Environmental Scientist IV  
Division of Environmental Analysis  
**Date:** 9/28/2015  
**Re:** Asbestos Inspection Report for Clark 07-2056

---

**This report is prepared to accompany the 10-Day NOI for Demolition to the Division of Air Quality. Please include all pages with submittal.**

### **Project and Structure Information**

**Project #** Clark 07-2056

**Bridge #** 025B00056L

**Location:** Mountain Parkway over Morris Road

**Description:** There are no suspect materials on this structure.

### **Results**

The inspection revealed that there is no suspect ACM materials; no abatement necessary





KENTUCKY TRANSPORTATION CABINET  
Department of Highways  
DIVISION OF RIGHT OF WAY & UTILITIES

TC 62-226  
Rev. 01/2016  
Page 1 of 1

RIGHT OF WAY CERTIFICATION

<input checked="" type="checkbox"/> Original	<input type="checkbox"/> Re-Certification	RIGHT OF WAY CERTIFICATION	
ITEM #	COUNTY	PROJECT # (STATE)	PROJECT # (FEDERAL)
7-2056.00	Clark	FD52 025 9000 000-006	NHPP 0061 (071)
<b>PROJECT DESCRIPTION</b>			
Mill And Intermediate Asphalt Overlay On Mountain Parkway From I-64 MP 0.000 to Stoner Ephesus Road Overpass at MP 5.311 In Clark County Kentucky			
<input checked="" type="checkbox"/> <b>No Additional Right of Way Required</b>			
Construction will be within the limits of the existing right of way. The right of way was acquired in accordance to FHWA regulations under the Uniform Relocation Assistance and Real Property Acquisitions Policy Act of 1970, as amended. No additional right of way or relocation assistance were required for this project.			
<input type="checkbox"/> <b>Condition # 1 (Additional Right of Way Required and Cleared)</b>			
All necessary right 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. Just Compensation has been paid or deposited with the court. All relocations have been relocated to decent, safe, and sanitary housing or that KYTC has made available to displaced persons adequate replacement housing in accordance with the provisions of the current FHWA directive.			
<input type="checkbox"/> <b>Condition # 2 (Additional Right of Way Required with Exception)</b>			
The right of way has 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. 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. Just Compensation has been paid or deposited with the court for most parcels. Just Compensation for all pending parcels will be paid or deposited with the court prior to AWARD of construction contract			
<input type="checkbox"/> <b>Condition # 3 (Additional Right of Way Required with Exception)</b>			
The acquisition or right of occupancy and use of a few remaining parcels are not complete and/or some parcels still have occupants. All remaining occupants have had replacement housing made available to them in accordance with 49 CFR 24.204. KYTC is hereby requesting authorization to advertise this project for bids and to proceed with bid letting even though the necessary right of way will not be fully acquired, and/or some occupants will not be relocated, and/or the just compensation 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.			
Total Number of Parcels on Project	0	EXCEPTION (S) Parcel #	ANTICIPATED DATE OF POSSESSION WITH EXPLANATION
Number of Parcels That Have Been Acquired			
Signed Deed			
Condemnation			
Signed ROE			
Notes/ Comments (Use Additional Sheet if necessary)			
LPA RW Project Manager		Right of Way Supervisor	
Printed Name		Printed Name	Robin L. Sprague
Signature		Signature	<i>[Signature]</i>
Date		Date	10/20/16
Right of Way Director		FHWA	
Printed Name	DEAN Loy	Printed Name	No Signature Required
Signature	<i>[Signature]</i>	Signature	as per FHWA - KYTC
Date	10/20/16	Date	2013 Stewardship Agreement

## UTILITIES AND RAIL CERTIFICATION NOTE

**Clack County, NHPP 0061 (071)  
FD52 025 9000 000-006  
MNT Parkway (9000)  
Item No. 7-2056**

*Utility coordination efforts conducted by the project sponsor have determined that no significant utility relocation work is required to complete the project. Any work pertaining to these utility facilities is defined in the bid package and is 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.*

### THE FOLLOWING RAIL COMPANIES HAVE FACILITIES IN CONJUNCTION WITH THIS PROJECT AS NOTED

No Rail Involved     Minimal Rail Involved (See Below)     Rail Involved (See Below)

### UNDERGROUND FACILITY DAMAGE PROTECTION – BEFORE YOU DIG

The contractor shall make every effort to protect underground facilities from damage as prescribed in the Underground Facility Damage Protection Act of 1994, Kentucky Revised Statute KRS 367.4901 to 367.4917. It is the contractor's responsibility to determine and take steps necessary to be in compliance with federal and state damage prevention directives. The contractor is instructed to contact KY 811 for the location of existing underground utilities. Contact shall be made a minimum of two (2) and no more than ten (10) business days prior to excavation.

The contractor shall submit Excavation Locate Requests to the Kentucky Contact Center (KY 811) via web ticket entry. The submission of this request does not relieve the contractor from the responsibility of contacting non-member facility owners, whom are to be contacted through their individual Protection Notification Center. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area. Non-compliance with these directives can result in the enforcement of penalties.

### 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.

## UTILITIES AND RAIL CERTIFICATION NOTE

**Clack County, NHPP 0061 (071)**  
**FD52 025 9000 000-006**  
**MNT Parkway (9000)**  
**Item No. 7-2056**

The utility facilities as noted in the previous section(s) have been determined using data garnered by varied means and with varying degrees of accuracy: from the facility owners, a result of S.U.E., field inspections, and/or reviews of record drawings. The facilities defined may not be inclusive of all utilities in the project scope and are not Level A quality, unless specified as such. It is the contractor's responsibility to verify all utilities and their respective locations before excavating.

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

### **AREA UTILITIES CONTACT LIST AS PROVIDED BY KY 811**

<u>Utility Company/Agency</u>	<u>Contact Name</u>	<u>Contact Information</u>
-------------------------------	---------------------	----------------------------

**PART II**  
**SPECIFICATIONS AND STANDARD DRAWINGS**

### **SPECIFICATIONS REFERENCE**

Any reference in the plans or proposal to previous editions of the *Standard Specifications for Road and Bridge Construction* and *Standard Drawings* are superseded by *Standard Specifications for Road and Bridge Construction, Edition of 2012* and *Standard Drawings, Edition of 2016*.

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

<p><b>Subsection:</b> <b>Revision:</b></p>	<p>101.03 DEFINITIONS</p> <p>Add the following Definitions to this section:</p> <p><b>Superpave Mix Design Technologist (SMDT)</b> - An inspector qualified by the KYTC to submit, adjust, or approve asphalt mix designs.</p> <p><b>Superpave Plant Technologist (SPT)</b> - An inspector qualified by the KYTC to perform routine inspection and process control, acceptance, or verification testing on asphalt mixtures.</p>
<p><b>Subsection:</b> <b>Revision:</b></p>	<p>102.15 Process Agent.</p> <p>Replace the 1st paragraph with the following: Every corporation doing business with the Department shall submit evidence of compliance with KRS Sections 14A.4-010, 271B.11-010, 271B.11-070, 271B.11-080, 271B.5-010 and 271B.16-220, and file with the Department the name and address of the process agent upon whom process may be served.</p>
<p><b>Subsection:</b> <b>Revision:</b></p>	<p>105.13 Claims Resolution Process.</p> <p>Delete all references to TC 63-34 and TC 63-44 from the subsection as these forms are no longer available through the forms library and are forms generated within the AASHTO SiteManager software.</p>
<p><b>Subsection:</b> <b>Revision:</b></p>	<p>108.01 Subcontracting of Contract.</p> <p>Replace the section with the following: Do not subcontract, sell, transfer, assign, or otherwise dispose of the Contract or any portion of the Contract or Contracts, or of the right, title, or interest therein, without the Engineer's written consent. If the Contractor chooses to subcontract any portion of the Contract, a written request to sublet work must be submitted on the Subcontract Request (TC 63-35) form for the Engineer's approval. When directed by the Engineer, submit a certified copy of the actual subcontract agreement executed between the parties.</p> <p>The Engineer will allow the Contractor to subcontract a portion, but the Contractor must perform with his own organization work amounting to no less than 30 percent of the total Contract cost. The Engineer will not allow any subcontractor to exceed the percentage to be performed by the Contractor and will require the Contractor to maintain a supervisory role over the entire project.</p> <p>Do not allow any subcontractor to further subcontract any portion of the work without obtaining written consent from the Engineer. When the Engineer gives such consent, the first tier subcontractor may further subcontract a portion of his work not to exceed 50 percent of the work originally subcontracted to him by the Contractor. Do not allow any second tier subcontractor to subcontract any portion of the work.</p> <p>Extra work performed by subcontractors in accordance with Section 109 will not be utilized in the computation of total dollar amount subcontracted. Subcontract percentages are based upon the original contract amount.</p> <p>Payment to subcontractors for satisfactory performance of their work or materials supplied must be made within 7 calendar days from receipt of payment from the Engineer. Upon request by the Engineer, provide proof that payment has been made to the subcontractor within the 7 calendar days. Progress payments may be withheld for failure to comply with this request</p>

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

	<p>The Engineer’s written consent to subcontract, assign, or otherwise dispose of any portion of the Contract does not, under any circumstances, relieve the Contractor or the surety of their respective liabilities and obligations under the Contract. The Engineer will make transactions only with the Contractor. The Engineer will recognize subcontractors only in the similar capacity of employees or workers of the Contractor who are subject to the same requirements as to character and competence as specified in Subsection 108.06.</p> <p>Lease agreements are acceptable on Department projects. No additional paperwork is needed when equipment is rented from a commercial rental company unless the leased equipment comes with an operator. In these circumstances, payroll records for the operator of the leased equipment must be maintained and submitted by the contractor in accordance with Department policy.</p> <p>Lease agreements between contractors that involve equipment only will require the submittal of a TC 63-71 Department Equipment Rental Form. If a Contractor is found to be in violation of these requirements, the Engineer reserves the right to withhold payment for the work which was performed in violation of these requirements. This provision does not include the lease or use of equipment from a corporation or company wholly owned by the Contractor. The Contractor shall not use equipment in the performance of the Contract to which title is not held by the Contractor or an approved subcontractor without a submitted lease agreement.</p> <p>If a public official has provided a documented Declaration of Emergency, then the Engineer may verbally waive the requirement of submitting a TC 63-71 Department Equipment Rental Form until the situation has ended. After the emergency situation ends, immediately remove the equipment from the project or submit a completed TC 63-71 Department Equipment Rental Form to the Engineer.</p>
<b>Subsection:</b>	108.03 Preconstruction Conference.
<b>Revision:</b>	Replace 8) Staking with the following: 8) Staking (designated by a Professional Engineer or Land Surveyor licensed in the Commonwealth of Kentucky.
<b>Subsection:</b>	109.07.02 Fuel.
<b>Revision:</b>	Revise item Crushed Aggregate Used for Embankment Stabilization to the following: Crushed Aggregate Used for Stabilization of Unsuitable Materials Used for Embankment Stabilization
	Delete the following item from the table. <del>Crushed Sandstone Base (Cement Treated)</del>
<b>Subsection:</b>	110.02 Demobilization.
<b>Revision:</b>	Replace the first part of the first sentence of the second paragraph with the following: Perform all work and operations necessary to accomplish final clean-up as specified in the first paragraph of Subsection 105.12;
<b>Subsection:</b>	112.03.12 Project Traffic Coordinator (PTC).
<b>Revision:</b>	Replace the last paragraph of this subsection with the following: Ensure the designated PTC has sufficient skill and experience to properly perform the task assigned and has successfully completed the qualification courses.

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

<b>Subsection:</b>	112.04.18 Diversions (By-Pass Detours).
<b>Revision:</b>	Insert the following sentence after the 2nd sentence of this subsection. The Department will not measure temporary drainage structures for payment when the contract documents provide the required drainage opening that must be maintained with the diversion. The temporary drainage structures shall be incidental to the construction of the diversion. If the contract documents fail to provide the required drainage opening needed for the diversion, the cost of the temporary drainage structure will be handled as extra work in accordance with section 109.04.
<b>Subsection:</b>	201.03.01 Contractor Staking.
<b>Revision:</b>	Replace the first paragraph with the following: Perform all necessary surveying under the general supervision of a Professional Engineer or Land Surveyor licensed in the Commonwealth of Kentucky.
<b>Subsection:</b>	201.04.01 Contractor Staking.
<b>Revision:</b>	Replace the last sentence of the paragraph with the following: Complete the general layout of the project under the supervision of a Professional Engineer or Land Surveyor licensed in the Commonwealth of Kentucky.
<b>Subsection:</b>	206.04.01 Embankment-in-Place.
<b>Revision:</b>	Replace the fourth paragraph with the following: The Department will not measure <b>suitable</b> excavation included in the original plans that is disposed of for payment and will consider it incidental to Embankment-in-Place.
<b>Subsection:</b>	208.02.01 Cement.
<b>Revision:</b>	Replace paragraph with the following: Select Type I or Type II cement conforming to Section 801. Use the same type cement throughout the work.
<b>Subsection:</b>	208.03.06 Curing and Protection.
<b>Revision:</b>	Replace the fourth paragraph with the following: Do not allow traffic or equipment on the finished surface until the stabilized subgrade has cured for a total of 7-days with an ambient air temperature above 40 degrees Fahrenheit. A curing day consists of a continuous 24-hour period in which the ambient air temperature does not fall below 40 degrees Fahrenheit. Curing days will not be calculated consecutively, but must total seven (7) , 24-hour days with the ambient air temperature remaining at or above 40 degrees Fahrenheit before traffic or equipment will be allowed to traverse the stabilized subgrade. The Department may allow a shortened curing period when the Contractor requests. The Contractor shall give the Department at least 3 day notice of the request for a shortened curing period. The Department will require a minimum of 3 curing days after final compaction. The Contractor shall furnish cores to the treated depth of the roadbed at 500 feet intervals for each lane when a shortened curing time is requested. The Department will test cores using an unconfined compression test. Roadbed cores must achieve a minimum strength requirement of 80 psi.
<b>Subsection:</b>	208.03.06 Curing and Protection.
<b>Revision:</b>	Replace paragraph eight with the following: At no expense to the Department, repair any damage to the subgrade caused by freezing.

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

<b>Subsection:</b>	212.03.03 Permanent Seeding and Protection.
<b>Part:</b>	A) Seed Mixtures for Permanent Seeding.
<b>Revision:</b>	Revise <b>Seed Mix Type I</b> to the mixture shown below: 50% Kentucky 31 Tall Fescue ( <i>Festuca arundinacea</i> ) 35% Hard Fescue ( <i>Festuca (Festuca longifolia)</i> ) 10% Ryegrass, Perennial ( <i>Lolium perenne</i> ) 5% White Dutch Clover ( <i>Trifolium repens</i> )
<b>Subsection:</b>	212.03.03 Permanent Seeding and Protection.
<b>Part:</b>	A) Seed Mixtures for Permanent Seeding.
<b>Number:</b>	2)
<b>Revision:</b>	Replace the paragraph with the following: Permanent Seeding on Slopes Greater than 3:1 in Highway Districts 4, 5, 6, and 7. Apply seed mix Type II at a minimum application rate of 100 pounds per acre. If adjacent to a golf course replace the crown vetch with Kentucky 31 Tall Fescue.
<b>Subsection:</b>	212.03.03 Permanent Seeding and Protection.
<b>Part:</b>	A) Seed Mixtures for Permanent Seeding.
<b>Number:</b>	3)
<b>Revision:</b>	Replace the paragraph with the following: Permanent Seeding on Slopes Greater than 3:1 in Highway Districts 1, 2, 3, 8, 9, 10, 11, and 12. Apply seed mix Type III at a minimum application rate of 100 pounds per acre. If adjacent to crop land or golf course, replace the <i>Sericea Lespedeza</i> with Kentucky 31 Fescue.
<b>Subsection:</b>	212.03.03 Permanent Seeding and Protection.
<b>Part:</b>	B) Procedures for Permanent Seeding.
<b>Revision:</b>	Delete the first sentence of the section.
<b>Subsection:</b>	212.03.03 Permanent Seeding and Protection.
<b>Part:</b>	B) Procedures for Permanent Seeding.
<b>Revision:</b>	Replace the second and third sentence of the section with the following: Prepare a seedbed and apply an initial fertilizer that contains a minimum of 100 pounds of nitrogen, 100 pounds of phosphate, and 100 pounds of potash per acre. Apply agricultural limestone to the seedbed when the Engineer determines it is needed. When required, place agricultural limestone at a rate of 3 tons per acre.
<b>Subsection:</b>	212.03.03 Permanent Seeding and Protection.
<b>Part:</b>	D) Top Dressing.
<b>Revision:</b>	Change the title of part to D) Fertilizer.
<b>Subsection:</b>	212.03.03 Permanent Seeding and Protection.
<b>Part:</b>	D) Fertilizer.
<b>Revision:</b>	Replace the first paragraph with the following: Apply fertilizer at the beginning of the seeding operation and after vegetation is established. Use fertilizer delivered to the project in bags or bulk. Apply initial fertilizer to all areas prior to the seeding or sodding operation at the application rate specified in 212.03.03 B). Apply 20-10-10 fertilizer to the areas after vegetation has been established at a rate of 11.5 pounds per 1,000 square feet. Obtain approval from the Engineer prior to the 2nd fertilizer application. Reapply fertilizer to any area that has a streaked appearance. The reapplication shall be at no additional cost to the Department. Re-establish any vegetation severely damaged or destroyed because of an excessive application of fertilizer at no cost to the Department.
<b>Subsection:</b>	212.03.03 Permanent Seeding and Protection.
<b>Part:</b>	D) Fertilizer.
<b>Revision:</b>	Delete the second paragraph.

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

<b>Subsection:</b>	212.04.04 Agricultural Limestone.												
<b>Revision:</b>	Replace the entire section with the following: The Department will measure the quantity of agricultural limestone in tons.												
<b>Subsection:</b>	212.04.05 Fertilizer.												
<b>Revision:</b>	Replace the entire section with the following: The Department will measure fertilizer used in the seeding or sodding operations for payment. The Department will measure the quantity by tons.												
<b>Subsection:</b>	212.05 PAYMENT.												
<b>Revision:</b>	Delete the following item code:												
	<table border="1"> <thead> <tr> <th><u>Code</u></th> <th><u>Pay Item</u></th> <th><u>Pay Unit</u></th> </tr> </thead> <tbody> <tr> <td>05966</td> <td>Topdressing Fertilizer</td> <td>Ton</td> </tr> </tbody> </table>	<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>	05966	Topdressing Fertilizer	Ton						
<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>											
05966	Topdressing Fertilizer	Ton											
<b>Subsection:</b>	212.05 PAYMENT.												
<b>Revision:</b>	Add the following pay items:												
	<table border="1"> <thead> <tr> <th><u>Code</u></th> <th><u>Pay Item</u></th> <th><u>Pay Unit</u></th> </tr> </thead> <tbody> <tr> <td>05963</td> <td>Initial Fertilizer</td> <td>Ton</td> </tr> <tr> <td>05964</td> <td>20-10-10 Fertilizer</td> <td>Ton</td> </tr> <tr> <td>05992</td> <td>Agricultural Limestone</td> <td>Ton</td> </tr> </tbody> </table>	<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>	05963	Initial Fertilizer	Ton	05964	20-10-10 Fertilizer	Ton	05992	Agricultural Limestone	Ton
<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>											
05963	Initial Fertilizer	Ton											
05964	20-10-10 Fertilizer	Ton											
05992	Agricultural Limestone	Ton											
<b>Subsection:</b>	213.03.02 Progress Requirements.												
<b>Revision:</b>	<p>Replace the third paragraph with the following: After exposing areas of erodible material, make every effort to stabilize and protect the areas as quickly as possible. Permanently seed and mulch all areas at final grade within 14 days. Temporary stabilization practices on those portions of the project where construction activities have temporarily ceased shall be initiated within 14 days of the date of activity cessation. The Engineer will suspend grading operations for instances where the Contractor fails to sustain erosion control measures to effectively control erosion and to prevent water pollution in accordance with the KPDES Permit. In addition, the Engineer will withhold monies due on current estimates until corrective work has been initiated and is continuously progressing to remediate noted deficiencies. Additionally, should noted deficiencies not be adequately addressed to the satisfaction of the Engineer within 7 calendar days of receipt of written notification of deficiencies, the Department will apply a penalty equal to the daily liquidated damages rate until all aspects of the work have been completed.</p>												
<b>Subsection:</b>	213.03.05 Temporary Control Measures.												
<b>Part:</b>	E) Temporary Seeding and Protection.												
<b>Revision:</b>	Delete the second sentence of the first paragraph.												
<b>Subsection:</b>	304.02.01 Physical Properties.												
<b>Table:</b>	Required Geogrid Properties												
<b>Revision:</b>	Replace all references to Test Method "GRI-GG2-87" with ASTM D 7737.												
<b>Subsection:</b>	402.03.02 Contractor Quality Control and Department Acceptance.												
<b>Part:</b>	B) Sampling.												
<b>Revision:</b>	Replace the second sentence with the following: The Department will determine when to obtain the quality control samples using the random-number feature of the mix design submittal and approval spreadsheet. The Department will randomly determine when to obtain the verification samples required in Subsections 402.03.03 and 402.03.04 using the Asphalt Mixture Sample Random Tonnage Generator.												

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

<b>Subsection:</b>	402.03.02 Contractor Quality Control and Department Acceptance.
<b>Part:</b>	D) Testing Responsibilities.
<b>Number:</b>	3) VMA.
<b>Revision:</b>	Add the following paragraph below Number 3) VMA: Retain the AV/VMA specimens and one additional corresponding $G_{mm}$ sample for 5 working days for mixture verification testing by the Department. For Specialty Mixtures, retain a mixture sample for 5 working days for mixture verification testing by the Department. When the Department's test results do not verify that the Contractor's quality control test results are within the acceptable tolerances according to Subsection 402.03.03, retain the samples and specimens from the affected subplot(s) for the duration of the project.
<b>Subsection:</b>	402.03.02 Contractor Quality Control and Department Acceptance.
<b>Part:</b>	D) Testing Responsibilities.
<b>Number:</b>	4) Density.
<b>Revision:</b>	Replace the second sentence of the Option A paragraph with the following: Perform coring by the end of the following work day.
<b>Subsection:</b>	402.03.02 Contractor Quality Control and Department Acceptance.
<b>Part:</b>	D) Testing Responsibilities.
<b>Number:</b>	5) Gradation.
<b>Revision:</b>	Delete the second paragraph.
<b>Subsection:</b>	402.03.02 Contractor Quality Control and Department Acceptance.
<b>Part:</b>	H) Unsatisfactory Work.
<b>Number:</b>	1) Based on Lab Data.
<b>Revision:</b>	Replace the second paragraph with the following: When the Engineer determines that safety concerns or other considerations prohibit an immediate shutdown, continue work and the Department will make an evaluation of acceptability according to Subsection 402.03.05.
<b>Subsection:</b>	402.03.03 Verification.
<b>Revision:</b>	Replace the first paragraph with the following: <b>402.03.03 Mixture Verification.</b> For volumetric properties, the Department will perform a minimum of one verification test for AC, AV, and VMA according to the corresponding procedures as given in Subsection 402.03.02. The Department will randomly determine when to obtain the verification sample using the Asphalt Mixture Sample Random Tonnage Generator. For specialty mixtures, the Department will perform one AC and one gradation determination per lot according to the corresponding procedures as given in Subsection 402.03.02. However, Department personnel will not perform AC determinations according to KM 64-405. The Contractor will obtain a quality control sample at the same time the Department obtains the mixture verification sample and perform testing according to the procedures given in Subsection 402.03.02. If the Contractor's quality control sample is verified by the Department's test results within the tolerances provided below, the Contractor's sample will serve as the quality control sample for the affected subplot. The Department may perform the mixture verification test on the Contractor's equipment or on the Department's equipment.
<b>Subsection:</b>	402.03.03 Verification.
<b>Part:</b>	A) Evaluation of Subplot(s) Verified by Department.
<b>Revision:</b>	Replace the third sentence of the second paragraph with the following: When the paired $t$ -test indicates that the Contractor's data and Department's data are possibly not from the same population, the Department will investigate the cause for the difference according to Subsection 402.03.05 and implement corrective measures as the Engineer deems appropriate.

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

<b>Subsection:</b>	402.03.03 Verification.
<b>Part:</b>	B) Evaluation of Sublots Not Verified by Department.
<b>Revision:</b>	Replace the third sentence of the first paragraph with the following: When differences between test results are not within the tolerances listed below, the Department will resolve the discrepancy according to Subsection 402.03.05.
<b>Subsection:</b>	402.03.03 Verification.
<b>Part:</b>	B) Evaluation of Sublots Not Verified by Department.
<b>Revision:</b>	Replace the third sentence of the second paragraph with the following: When the <i>F</i> -test or <i>t</i> -test indicates that the Contractor's data and Department's data are possibly not from the same population, the Department will investigate the cause for the difference according to Subsection 402.03.05 and implement corrective measures as the Engineer deems appropriate.
<b>Subsection:</b>	402.03.03 Verification.
<b>Part:</b>	C) Test Data Patterns.
<b>Revision:</b>	Replace the second sentence with the following: When patterns indicate substantial differences between the verified and non-verified sublots, the Department will perform further comparative testing according to subsection 402.03.05.
<b>Subsection:</b>	402.03 CONSTRUCTION.
<b>Revision:</b>	Add the following subsection: <b>402.03.04 Testing Equipment and Technician Verification.</b> For mixtures with a minimum quantity of 20,000 tons and for every 20,000 tons thereafter, the Department will obtain an additional verification sample at random using the Asphalt Mixture Sample Random Tonnage Generator in order to verify the integrity of the Contractor's and Department's laboratory testing equipment and technicians. The Department will obtain a mixture sample of at least 150 lb at the asphalt mixing plant according to KM 64-425 and split it according to AASHTO R 47. The Department will retain one split portion of the sample and provide the other portion to the Contractor. At a later time convenient to both parties, the Department and Contractor will simultaneously reheat the sample to the specified compaction temperature and test the mixture for AV and VMA using separate laboratory equipment according to the corresponding procedures given in Subsection 402.03.02. The Department will evaluate the differences in test results between the two laboratories. When the difference between the results for AV or VMA is not within $\pm 2.0$ percent, the Department will investigate and resolve the discrepancy according to Subsection 402.03.05.
<b>Subsection:</b>	402.03.04 Dispute Resolution.
<b>Revision:</b>	Change the subsection number to 402.03.05.
<b>Subsection:</b>	402.05 PAYMENT.
<b>Part:</b>	Lot Pay Adjustment Schedule Compaction Option A Base and Binder Mixtures
<b>Table:</b>	AC
<b>Revision:</b>	Replace the Deviation from JMF(%) that corresponds to a Pay Value of 0.95 to $\pm 0.6$ .
<b>Subsection:</b>	403.01 Description.
<b>Revision:</b>	Replace the sentence three and four of the first paragraph with the following: Provide a Superpave Plant Technologist (SPT) or Superpave Mix Design Technician (SMDT) qualified by the Laboratories' Quality Acceptance program. Be available to address all Quality Control concerns arising during work performed under section 403.
<b>Subsection:</b>	403.02.10 Material Transfer Vehicle (MTV).
<b>Revision:</b>	Replace the first sentence with the following: In addition to the equipment specified above, provide a MTV with the following minimum characteristics:

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

<b>Subsection:</b>	403.03.03 Preparation of Mixture
<b>Part:</b>	C) Mix Design Criteria
<b>Number:</b>	2)
<b>Revision:</b>	Revise part 2) to read as follows: Selection of Optimum AC. Normally, the Department will approve the AC at an air-void content of 4.0 percent. The Engineer may assign an AC corresponding to other air-void levels as deemed appropriate. Ensure the optimum AC is a minimum of 5.2 percent by weight of the total mixture for all 0.5-inch nominal surface mixtures and 5.5 percent by weight of the total mixture for all 0.38-inch nominal surface mixtures.
<b>Subsection:</b>	412.02.09 Material Transfer Vehicle (MTV).
<b>Revision:</b>	Replace the paragraph with the following: Provide and utilize a MTV with the minimum characteristics outlined in section 403.02.10.
<b>Subsection:</b>	412.03.07 Placement and Compaction.
<b>Revision:</b>	Replace the first paragraph with the following: Use a MTV when placing SMA mixture in the driving lanes. The MTV is not required on ramps and/or shoulders unless specified in the contract. When the Engineer determines the use of the MTV is not practical for a portion of the project, the Engineer may waive its requirement for that portion of pavement by a letter documenting the waiver.
<b>Subsection:</b>	412.04 MEASUREMENT.
<b>Revision:</b>	Add the following subsection: 412.04.03. Material Transfer Vehicle (MTV). The Department will not measure the MTV for payment and will consider its use incidental to the asphalt mixture.
<b>Subsection:</b>	501.03.19 Surface Tolerances and Testing Surface.
<b>Part:</b>	B) Ride Quality.
<b>Revision:</b>	Add the following to the end of the first paragraph: The Department will specify if the ride quality requirements are Category A or Category B when ride quality is specified in the Contract. Category B ride quality requirements shall apply when the Department fails to classify which ride quality requirement will apply to the Contract.
<b>Subsection:</b>	501.03.05 Weather Limitations and Protection.
<b>Revision:</b>	Replace the reference to Subsection 501.03.19 in Paragraph 5, with Subsection 501.03.20.
<b>Subsection:</b>	601.02.02 Cement
<b>Revision:</b>	Replace the third sentence with the following: The Department will allow the use of Type IP( $\leq$ 20), Type IS( $\leq$ 30), Type IL, Type II, and Type III when the Engineer approves.
<b>Subsection:</b>	601.02.02 Cement
<b>Revision:</b>	Replace the fifth sentence with the following: If unsatisfactory test results are obtained using Type IP( $\leq$ 20), Type IS( $\leq$ 30), Type IL, Type II, or Type III cement complete the work using Type I cement.

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

**Subsection:** 601.03.02 Concrete Producer Responsibilities.  
**Part:** E) Trip Tickets.  
**Revision:** Replace the section with the following:  
 Furnish a trip ticket containing the minimum information shown in the table below. Certify that the data on the ticket is correct and that the mixture conforms to the approved mix design. Ensure that the plant manager or a Level II concrete technician signs the ticket. The Department's jobsite inspector will complete all other necessary information on the back of the trip ticket.

Contract Id:	Proj. Number:	Date:	County:	
Truck No:	Producer Name:	SiteManager Sample Id:		
Qty(Yds <sup>3</sup> ):	Time Loaded (Non Agitated Concrete Only):			
Begin Mixing Time: _____ AM ____ PM ____ REV _____				
Set Retarder Used		Yes ___	Type ___	No ___
Water Reducer Used		Yes ___	Type ___	No ___
Water Underrun _____ Gal/Yd <sup>3</sup>		Total Gallons _____		
Design W/C:	Actual W/C:	Slump (inches)		
<b>Batch Weight Information:</b>				
<u>Material:</u>	<u>Description:</u>	<u>Design Qty:</u>	<u>Required:</u>	<u>Batched:</u>
			<u>%Var:</u>	<u>%Moisture:</u>
			<u>Actual:</u>	
Remarks:				
*The data on this ticket is correct for the approved concrete mix design.*				
Signature: _____		Date: _____		
KRMCA Level II Technician or Plant Manager				

**Subsection:** 601.03.03 Proportioning and Requirements  
**Part:** A) Concrete  
**Revision:** Revise Table for INGREDIENT PROPORTIONS AND REQUIREMENTS FOR VARIOUS CLASSES OF CONCRETE as follows: Replace "M1 w/ Type 1 cement" with "M1 w/ Type 1 or blended hydraulic cement"

**Subsection:** 601.03.03 Proportioning and Requirements  
**Part:** C) Mixtures Using Type IP, IS, and I(SM) Cement or Mineral Admixtures  
**Revision:** Revise part C) header to read as follows: Mixtures Using Type IP(≤20), IS(≤30), and IL Cement and Mineral Admixtures.

**Subsection:** 601.03.03 Proportioning and Requirements  
**Part:** C) Mixtures Using Type IP, IS, and I(SM) Cement or Mineral Admixtures  
**Number:** 1)  
**Revision:** Revise first sentence to read as follows: Type IP(≤20), IS(≤30), IL Cement.

**Subsection:** 601.03.03 Proportioning and Requirements  
**Part:** C) Mixtures Using Type IP, IS, and I(SM) Cement or Mineral Admixtures  
**Number:** 2)  
**Revision:** Revise second sentence to read as follows: The use of fly ash, blast furnace slag cement, or micosilica in concrete is the Contractor's option.

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

<b>Subsection:</b>	601.03.03 Proportioning and Requirements
<b>Part:</b>	C) Mixtures Using Type IP, IS, and I(SM) Cement or Mineral Admixtures
<b>Number:</b>	2)
<b>Revision:</b>	Revise the first sentence in the second paragraph to read as follows: When the ability to use blast furnace slag cement or microsilica has not been demonstrated have the concrete producer provide trial batches in accordance with Subsection 601.03.02 G) 1).
<b>Subsection:</b>	601.03.03 Proportioning and Requirements
<b>Part:</b>	C) Mixtures Using Type IP, IS, and I(SM) Cement or Mineral Admixtures
<b>Number:</b>	2)
<b>Part:</b>	b)
<b>Revision:</b>	Revise first sentence to read as follows: Blast Furnace Slag Cement
<b>Subsection:</b>	601.03.03 Proportioning and Requirements
<b>Part:</b>	C) Mixtures Using Type IP, IS, and I(SM) Cement or Mineral Admixtures
<b>Number:</b>	2)
<b>Part:</b>	b)
<b>Revision:</b>	Revise second sentence to read as follows: When added as a separate ingredient, use Grade 120 or Grade 100 slag to reduce the quantity of cement, except do not use blast furnace slag cement to reduce the quantity of Type IS( $\leq$ 30) cement.
<b>Subsection:</b>	601.03.03 Proportioning and Requirements
<b>Part:</b>	C) Mixtures Using Type IP, IS, and I(SM) Cement or Mineral Admixtures
<b>Number:</b>	2)
<b>Part:</b>	b)
<b>Revision:</b>	In part b), replace all references to "GGBF slag" with "blast furnace slag cement".
<b>Subsection:</b>	601.03.04 Classes and Primary Uses
<b>Part:</b>	H) Class M1
<b>Revision:</b>	Revise part H) to read as follows: High early strength for bridge joint repair and full or partial depth bridge deck patching. (Type 1 cement or blended hydraulic cement)
<b>Subsection:</b>	603.03.06 Cofferdams.
<b>Revision:</b>	Replace the seventh sentence of paragraph one with the following: Submit drawings that are stamped by a Professional Engineer licensed in the Commonwealth of Kentucky.
<b>Subsection:</b>	605.03.04 Tack Welding.
<b>Revision:</b>	Insert the subsection and the following: 605.03.04 Tack Welding. The Department does not allow tack welding.
<b>Subsection:</b>	606.03.17 Special Requirements for Latex Concrete Overlays.
<b>Part:</b>	A) Existing Bridges and New Structures.
<b>Number:</b>	1) Prewetting and Grout-Bond Coat.
<b>Revision:</b>	Add the following sentence to the last paragraph: Do not apply a grout-bond coat on bridge decks prepared by hydrodemolition.
<b>Subsection:</b>	609.03 Construction.
<b>Revision:</b>	Replace Subsection 609.03.01 with the following: 609.03.01 A) Swinging the Spans. Before placing concrete slabs on steel spans or precast concrete release the temporary erection supports under the bridge and swing the span free on its supports. 609.03.01 B) Lift Loops. Cut all lift loops flush with the top of the precast beam once the beam is placed in the final location and prior to placing steel reinforcement. At locations where lift loops are cut, paint the top of the beam with galvanized or epoxy paint.

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

<b>Subsection:</b>	611.03.02 Precast Unit Construction.
<b>Revision:</b>	Replace the first sentence of the subsection with the following: Construct units according to ASTM C1577, <b>replacing Table 1 (Design Requirements for Precast Concrete Box Sections Under Earth, Dead and HL-93 Live Load Conditions) with KY Table 1 (Precast Culvert KYHL-93 Design Table)</b> , and Section 605 with the following exceptions and additions:
<b>Subsection:</b>	613.03.01 Design.
<b>Number:</b>	2)
<b>Revision:</b>	Replace "AASHTO Standard Specifications for Highway Bridges" with "AASHTO LRFD Bridge Design Specifications"
<b>Subsection:</b>	615.06.02
<b>Revision:</b>	Add the following sentence to the end of the subsection. The ends of units shall be normal to walls and centerline except exposed edges shall be beveled $\frac{3}{4}$ inch.
<b>Subsection:</b>	615.06.03 Placement of Reinforcement in Precast 3-Sided Units.
<b>Revision:</b>	Replace the reference of 6.6 in the section to 615.06.06.
<b>Subsection:</b>	615.06.04 Placement of Reinforcement for Precast Endwalls.
<b>Revision:</b>	Replace the reference of 6.7 in the section to 615.06.07.
<b>Subsection:</b>	615.06.06 Laps, Welds, and Spacing for Precast 3-Sided Units.
<b>Revision:</b>	Replace the subsection with the following: Tension splices in the circumferential reinforcement shall be made by lapping. Laps may not be tack welded together for assembly purposes. For smooth welded wire fabric, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.5.2 and AASHTO 2012 Bridge Design Guide Section 5.11.6.3. For deformed welded wire fabric, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.5.1 and AASHTO 2012 Bridge Design Guide Section 5.11.6.2. The overlap of welded wire fabric shall be measured between the outer most longitudinal wires of each fabric sheet. For deformed billet-steel bars, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.1. For splices other than tension splices, the overlap shall be a minimum of 12" for welded wire fabric or deformed billet-steel bars. The spacing center to center of the circumferential wires in a wire fabric sheet shall be no less than 2 inches and no more than 4 inches. The spacing center to center of the longitudinal wires shall not be more than 8 inches. The spacing center to center of the longitudinal distribution steel for either line of reinforcing in the top slab shall be not more than 16 inches.
<b>Subsection:</b>	615.06.07 Laps, Welds, and Spacing for Precast Endwalls.
<b>Revision:</b>	Replace the subsection with the following: Splices in the reinforcement shall be made by lapping. Laps may not be tack welded together for assembly purposes. For smooth welded wire fabric, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.5.2 and AASHTO 2012 Bridge Design Guide Section 5.11.6.3. For deformed welded wire fabric, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.5.1 and AASHTO 2012 Bridge Design Guide Section 5.11.6.2. For deformed billet-steel bars, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.1. The spacing center-to-center of the wire fabric sheet shall not be less than 2 inches or more than 8 inches.

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

<b>Subsection:</b>	615.08.01 Type of Test Specimen.
<b>Revision:</b>	Replace the subsection with the following: Start-up slump, air content, unit weight, and temperature tests will be performed each day on the first batch of concrete. Acceptable start-up results are required for production of the first unit. After the first unit has been established, random acceptance testing is performed daily for each 50 yd <sup>3</sup> (or fraction thereof). In addition to the slump, air content, unit weight, and temperature tests, a minimum of one set of cylinders shall be required each time plastic property testing is performed.
<b>Subsection:</b>	615.08.02 Compression Testing.
<b>Revision:</b>	Delete the second sentence.
<b>Subsection:</b>	615.08.04 Acceptability of Core Tests.
<b>Revision:</b>	Delete the entire subsection.
<b>Subsection:</b>	615.12 Inspection.
<b>Revision:</b>	Add the following sentences to the end of the subsection: Units will arrive at jobsite with the "Kentucky Oval" stamped on the unit which is an indication of acceptable inspection at the production facility. Units shall be inspected upon arrival for any evidence of damage resulting from transport to the jobsite.
<b>Subsection:</b>	701.04.16 Deduction for Pipe Deflection.
<b>Revision:</b>	Insert the following at the end of the paragraph: The section length is determined by the length of the pipe between joints where the failure occurred.
<b>Subsection:</b>	716.02.02 Paint.
<b>Revision:</b>	Replace sentence with the following: Conform to Section 821.
<b>Subsection:</b>	716.03 CONSTRUCTION.
<b>Revision:</b>	Replace bullet 5) with the following: 5) AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims,
<b>Subsection:</b>	716.03.02 Lighting Standard Installation.
<b>Revision:</b>	Replace the paragraph with the following: Locate poles to avoid trees, drainage, structures, etc. Regardless of the station & offset noted, locate all poles/bases behind guardrail a minimum of 4 feet behind the face of the guardrail. All poles shall be placed as close to stations and offsets as stated on Plans to provide proper illumination. If any pole needs to be relocated from stations indicated, the Division of Traffic Operations shall be contacted. When submitting brochures for suggested luminaires include iso lux curves, IES type distribution, lamp lumens, and typical ballast factor used for each type of luminaire. Submit the photometric data in a digital IES format to the Division of Traffic Operations. Include with the submittal a point of contact and phone number to answer technical questions about the luminaire.
<b>Subsection:</b>	716.03.02 Lighting Standard Installation.
<b>Part:</b>	A) Conventional Installation.
<b>Revision:</b>	Replace the third sentence with the following: Orient the transformer base so the door is positioned on the side away from on-coming traffic.
<b>Subsection:</b>	716.03.02 Lighting Standard Installation.
<b>Part:</b>	A) Conventional Installation.
<b>Number:</b>	1) Breakaway Installation and Requirements.
<b>Revision:</b>	Replace the first sentence with the following: For breakaway supports, conform to Section 12 of the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims.

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

**Subsection:** 716.03.02 Lighting Standard Installation.  
**Part:** B) High Mast Installation  
**Revision:** Replace the first three sentences of the first paragraph with the following: Install each high mast pole as noted on Plans. Install each high mast pole on a separate circuit and use luminaires with light patterns as indicated. Orient luminaires as shown in Plans.

**Subsection:** 716.03.02 Lighting Standard Installation.  
**Part:** B) High Mast Installation  
**Number:** 2) Concrete Base Installation  
**Revision:** Modification of Chart and succeeding paragraphs within this section:

Drilled Shaft Depth Data							
Level Ground		3:1 Ground Slope		2:1 Ground Slope		1.5:1 Ground Slope <sup>(2)</sup>	
Soil	Rock	Soil	Rock	Soil	Rock	Soil	Rock
17 ft	7 ft	19 ft	7 ft	20 ft	7 ft	(1)	7 ft
Steel Requirements							
Vertical Bars		Ties or Spiral					
Size	Total	Size	Spacing or Pitch				
#10	16	#4	12 inch				

Note 1: Shaft length is 22 feet for cohesive soil only. For cohesionless soil, contact Geotechnical Branch for design.

Note 2: Do not construct high mast drilled shafts on ground slopes steeper than 1.5:1 without the approval of the Division of Traffic Operations.

If rock is encountered during drilling operations and confirmed by the Engineer to be of sound quality, the shaft is only required to be further advanced into the rock by the length of rock socket shown in the design table. The total length of the shaft need not be longer than that of soil alone. Both longitudinal rebar length and number of ties or spiral length shall be adjusted

If a shorter depth is desired for the drilled shaft, the Contractor shall provide, for the state's review and approval, a detailed column design with individual site specific soil and rock analysis performed and approved by a Professional Engineer licensed in the Commonwealth of Kentucky.

Spiral reinforcement may be substituted for ties. If spiral reinforcement is used, one and one-half closed coils shall be provided at the ends of each spiral unit. Subsurface conditions consisting of very soft clay or very loose saturated sand could result in soil parameters weaker than those assumed. Engineer shall consult with the Geotechnical Branch if such conditions

The bottom of the drilled hole shall be firm and thoroughly cleaned so no loose or compressible materials are present at the time of the concrete placement. If the drilled hole contains standing water, the concrete shall be placed using a tremie to displace water. Continuous concrete flow will be required to insure full displacement of any water.

The reinforcement and anchor bolts shall be adequately supported in the proper positions so no movement occurs during concrete placement. Welding of anchor bolts to the reinforcing cage is unacceptable, templates shall be used. Exposed portions of the foundation shall be formed to create a smooth finished surface. All forming shall be removed upon completion of foundation construction.

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

<b>Subsection:</b>	716.03.03 Trenching.
<b>Part:</b>	A) Trenching of Conduit for Highmast Ducted Cables.
<b>Revision:</b>	Add the following after the first sentence: If depths greater than 24 inches are necessary, obtain the Engineer's approval and maintain the required conduit depths coming into the junction boxes. No payment for additional junction boxes for greater depths will be allowed.
<b>Subsection:</b>	716.03.03 Trenching.
<b>Part:</b>	B) Trenching of Conduit for Non-Highmast Cables.
<b>Revision:</b>	Add the following after the second sentence: If depths greater than 24 inches are necessary for either situation listed previously, obtain the Engineer's approval and maintain the required conduit depths coming into the junction boxes.
<b>Subsection:</b>	716.03.04 Conduit Installation.
<b>Revision:</b>	Replace the first two sentences of the paragraph with the following: Provide rigid steel conduit encasement for all conductors except as specified in the Contract. Provide conduit that is listed on the Department's List of Approved Materials.
<b>Subsection:</b>	716.03.04 Conduit Installation.
<b>Part:</b>	A) Conduit Requirements in Junction Boxes.
<b>Number:</b>	1) Highmast Ducted Cable.
<b>Revision:</b>	Replace the first two sentences with the following: Install conduit horizontally through the junction box. Conduit shall be 4 inches from the bottom and 4 inches from the side of the junction box.
<b>Subsection:</b>	716.03.04 Conduit Installation.
<b>Revision:</b>	Add the following to the Part to the Subsection: <b>G) Bore and Jack.</b> Construction methods shall be in accordance with Subsections 706.03.02, paragraphs 1, 2 and 4.
<b>Subsection:</b>	716.03.08 Splicing.
<b>Revision:</b>	Replace the last sentence of the paragraph with the following: Ensure the splices are of the correct size for the wire being used.
<b>Subsection:</b>	716.03.10 Junction Boxes.
<b>Revision:</b>	Replace subsection title with the following: Electrical Junction Box and replace the last sentence of the paragraph with the following: Any additional junction boxes shall be approved by the Engineer.
<b>Subsection:</b>	716.03.13 Temporary Lighting.
<b>Revision:</b>	Change subsection heading to the following: <b>716.03.13 Temporary/Maintain Lighting.</b>
<b>Subsection:</b>	716.03.13 Temporary /Maintain Lighting.
<b>Revision:</b>	Replace the entire section with the following: The Contractor shall furnish and install all materials necessary to temporarily light the proposed roadway to design standards in Subsection 716.03. The Contractor shall submit his proposed design of temporary lighting to the Division of Traffic Operations for approval at least 30 days before installation.  Maintain all lighting elements impacted within or outside the project limits until new lighting elements are installed and a functional inspection has been performed on the new lighting elements. The Contractor shall submit a proposed design for maintaining lighting to the Division of Traffic Operations for approval at least 30 days before installation.

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

<b>Subsection:</b> <b>Revision:</b>	716.03.14 Remove Lighting.  Replace the section with the following: Remove all lighting equipment that is identified by the Engineer as no longer necessary including, but not limited to, the following: pole bases, poles, junction boxes, cabinets, and wood poles. Pole bases shall be removed a minimum of one foot below finished grade by chipping off or other method that is approved by the Engineer. Dispose of all removed concrete off right-of-way. Wood poles shall be removed a minimum of one foot below finished grade. Backfill holes with material approved by the Engineer. Conduit may be abandoned in the ground. All materials shall be removed from the project as directed by the Engineer. Transformers not owned by a utility shall be tested for PCB's and disposed of in accordance with state regulations.
<b>Subsection:</b> <b>Revision:</b>	716.03.15 Painting.  Replace the first sentence with the following: Clean non-galvanized or damaged surfaces of exposed junction boxes, pull boxes, control panels, poles, and similar equipment, and apply one coat of an inhibiting paint and two coats of aluminum paint.
<b>Subsection:</b> <b>Revision:</b>	716.04.01. Poles. Change the subsection heading to 716.04.01 Pole and replace the last sentence of the subsection with the following: The Department will not measure anchor bolts, washers, nuts, anchor bolt covers, ground lugs, and any associated hardware for payment and will consider them incidental to this item of work.
<b>Subsection:</b> <b>Revision:</b>	716.04.02 High Mast Pole.  Replace the second sentence with the following: The Department will not measure the lowering device, anchor bolts, head frame assembly, cables, winch unit, power cables, wiring, connectors, circuit breakers, grounding lugs, ground wire, ground rods, conduits, test plugs,, adjustment and calibration of the unit to provide the desired operation, and any associated hardware for payment and will consider them incidental to this item of work.
<b>Subsection:</b> <b>Revision:</b>	716.04.03 Bracket. Replace the second sentence with the following: The Department will not measure any associated hardware needed for attaching the bracket to the pole for payment and will consider them incidental to this item of work.
<b>Subsection:</b> <b>Revision:</b>	716.04.04 Pole Base. Change the subsection heading to 716.04.04 Pole Bases and delete the paragraph.
<b>Subsection:</b> <b>Revision:</b>	716.04.04 Pole Bases. Insert the following: <b>A. Pole Base.</b> The Department will measure the quantity as each individual unit furnished and installed. The Department will not measure excavation, concrete, conduits, fittings, ground rods, ground wires, ground lugs, reinforcing steel, restoring disturbed areas to the satisfaction of the Engineer, and any associated hardware for payment and will consider them incidental to this item of work. <b>B. Pole Base High Mast.</b> The Department will measure the quantity in cubic yards furnished and installed. The Department will not measure excavation, concrete, conduits, fittings, ground rods, ground wires, ground lugs, reinforcing steel, restoring disturbed areas to the satisfaction of the Engineer, and any associated hardware for payment and will consider them incidental to this item of work.

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

<b>Subsection:</b>	716.04.05 Pole Base in Median Wall.
<b>Revision:</b>	Replace the last sentence with the following: The Department will not measure conduits, fittings, junction boxes, additional reinforcing steel, ground rods, ground wire, ground lugs, and aluminum cover plates (if specified) for payment, and will consider them incidental to this item of work.
<b>Subsection:</b>	716.04.06 Transformer Base.
<b>Revision:</b>	Replace the last sentence with the following: The Department will not measure transformer door, ground lug, anchoring bolts, nuts, washers, and any associated hardware for payment and will consider them incidental to this item of work. The filling of any unused holes will also be considered incidental to this item of work.
<b>Subsection:</b>	716.04.07 Pole with Secondary Equipment.
<b>Revision:</b>	Replace the heading with the following: 716.04.07 Pole with Secondary Control Equipment.
<b>Subsection:</b>	716.04.07 Pole with Secondary Control Equipment.
<b>Revision:</b>	Replace the second and third sentence with the following: The Department will not measure mounting the cabinet to the pole, backfilling, restoration, any necessary hardware to anchor pole, electrical inspection fees, and required building fees involving utility secondary, and primary service for payment and will consider them incidental to this item of work. The Department will also not measure furnishing and installing electrical service conductors, specified conduits, meter base, transformer, service panel, fused cutout, fuses, lighting arrestors, photoelectrical control, circuit breaker, contactor, manual switch, ground rods, ground lugs, and ground wires for payment and will consider them incidental to this item of work. The filling of unused holes will also be considered incidental to this item of work.
<b>Subsection:</b>	716.04.08 Lighting Control Equipment.
<b>Revision:</b>	Replace the paragraph with the following: The Department will measure the quantity as each individual unit furnished and installed. The Department will not measure the concrete base, excavation, backfilling, restoration, any necessary anchors, electrical inspection fees, and required building fees involving utility secondary/primary service for payment and will consider them incidental to this item of work. The Department will also not measure furnishing and installing electrical service conductors, specified conduits, meter base, transformer, service panel, fused cutout, fuses, lighting arrestors, photoelectrical control, circuit breakers, contactor, manual switch, ground rods, ground lugs, and ground wires for payment and will consider them incidental to this item of work. The Department will not measure the filling of any unused holes with and will consider them incidental to this item of work.
<b>Subsection:</b>	716.04.09 Luminaire.
<b>Revision:</b>	Replace the paragraph with the following: The Department will measure the quantity as each individual unit furnished and installed. The Department will not measure lamps, starters, ballasts, drivers, surge protection, dimming modules, photo-control receptacle, specified shielding (if required), and any adjustments necessary to provide the desired lighting pattern for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	716.04.10 Fused Connector Kits.
<b>Revision:</b>	Replace the heading with the following: 716.04.10 Fuse Connector Kits.

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

<b>Subsection:</b>	716.04.10 Fuse Connector Kits.
<b>Revision:</b>	Replace the paragraph with the following: The Department will measure the quantity as each individual unit furnished and installed. The Department will not measure fuses/lugs for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	716.04.11 Conduit.
<b>Revision:</b>	Replace the second sentence with the following: The Department will not measure installation in ground or on structures, conduit fittings, test plugs, expansion joints with bonding straps, grounding lugs, drill anchors, clamps, and any additional hardware required for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	716.04.12 Markers.
<b>Revision:</b>	Replace the section with the following: The Department will measure the quantity as each individual unit furnished and installed.
<b>Subsection:</b>	716.04.13 Junction Box.
<b>Revision:</b>	Replace the subsection title with the following: Electrical Junction Box Type Various.
<b>Subsection:</b>	716.04.13 Electrical Junction Box Type Various.
<b>Revision:</b>	Replace the section with the following: The Department will measure the quantity as each individual unit furnished and installed. The Department will not measure additional junction boxes for greater depths than those identified in Plans, #57 aggregate, backfilling, restoration of disturbed areas to the satisfaction of the Engineer, geotextile filter fabric, concrete, hot dipped galvanized cover, stainless steel screws, rubber gasket, and any associated hardware for payment , and will consider them incidental to this item of work.
<b>Subsection:</b>	716.04.13 Junction Box.
<b>Part:</b>	A) Junction Electrical.
<b>Revision:</b>	Delete Part A.
<b>Subsection:</b>	716.04.14 Trenching and Backfilling.
<b>Revision:</b>	Replace the section with the following: The Department will measure the quantity in linear feet. The Department will not measure excavation, backfilling, underground utility warning tape (if required), and the restoration of disturbed areas to original condition for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	716.04.15 Wire or Cable.
<b>Revision:</b>	Replace the section with the following: The Department will measure the quantity in linear feet furnished and installed. The Department will not measure installation within conduit, splice boots, and any other hardware required for installing cable for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	716.04.16 Ducted Cable.
<b>Revision:</b>	Replace the second sentence of the paragraph with the following: The Department will not measure installation within trench or conduit and any other necessary hardware for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	716.04.17 Temporary Lighting
<b>Revision:</b>	Rename the subsection as follows: 716.04.17 Temporary Lighting/Maintain Lighting.

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

<b>Subsection:</b>	716.04.17 Temporary Lighting/Maintain Lighting.																														
<b>Revision:</b>	Delete the paragraph and add the following parts: A) Temporary Lighting. The Department will measure the quantity by lump sum. The Department will not measure poles, luminaires, wire, conduit, trenching and backfilling, control equipment, all relocations and removal, design (if required), and any other necessary hardware to make a complete installation for payment and will consider them incidental to this item of work. B) Maintain Lighting. The Department will measure the quantity by lump sum. The Department will not measure maintenance of lighting elements and design (if required) for payment and will consider them incidental to this item of work.																														
<b>Subsection:</b>	716.04.18 Remove Lighting.																														
<b>Revision:</b>	Replace the paragraph with the following: The Department will measure the quantity by lump sum. The Department will not measure backfilling and the disposal or transportation of equipment and materials associated with any structural or electrical component of the lighting system including, but not limited to pole bases, poles, junction boxes, cabinets, and wood poles for payment and will consider them incidental to this item of work.																														
<b>Subsection:</b>	716.04.19 Remove Pole Base.																														
<b>Revision:</b>	Delete Subsection.																														
<b>Subsection:</b>	716.04.20 Bore and Jack Conduit.																														
<b>Revision:</b>	Renumber Subsection to 716.04.19 Bore and Jack Conduit.																														
<b>Subsection:</b>	716.04.19 Bore and Jack Conduit.																														
<b>Revision:</b>	Replace the paragraph with the following: The Department will measure the quantity in linear feet. This item shall include all work necessary for boring and installing conduit under an existing roadway.																														
<b>Subsection:</b>	716.05 PAYMENT.																														
<b>Revision:</b>	Revise the following under <u>Code</u> , <u>Pay Item</u> , and <u>Pay Unit</u> with the following:																														
	<table border="0"> <thead> <tr> <th><u>Code</u></th> <th><u>Pay Item</u></th> <th><u>Pay Unit</u></th> </tr> </thead> <tbody> <tr> <td>04700-04701</td> <td>Pole(Various)Mtg Ht</td> <td>Each</td> </tr> <tr> <td>04710-04714</td> <td>Pole(Various)Mtg Ht High Mast</td> <td>Each</td> </tr> <tr> <td>04810-04811</td> <td>Electrical Junction Box (Various)</td> <td>Each</td> </tr> <tr> <td>20391NS835</td> <td>Electrical Junction Box Type A</td> <td>Each</td> </tr> <tr> <td>20392NS835</td> <td>Electrical Junction Box Type C</td> <td>Each</td> </tr> <tr> <td>04770-04773</td> <td>Luminaire (Various)</td> <td>Each</td> </tr> <tr> <td>04780</td> <td>Fuse Connector Kit</td> <td>Each</td> </tr> <tr> <td>20410ED</td> <td>Maintain Lighting</td> <td>Lump Sum</td> </tr> <tr> <td><del>04941</del></td> <td><del>Remove Pole Base</del></td> <td><del>Each</del></td> </tr> </tbody> </table>	<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>	04700-04701	Pole(Various)Mtg Ht	Each	04710-04714	Pole(Various)Mtg Ht High Mast	Each	04810-04811	Electrical Junction Box (Various)	Each	20391NS835	Electrical Junction Box Type A	Each	20392NS835	Electrical Junction Box Type C	Each	04770-04773	Luminaire (Various)	Each	04780	Fuse Connector Kit	Each	20410ED	Maintain Lighting	Lump Sum	<del>04941</del>	<del>Remove Pole Base</del>	<del>Each</del>
<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>																													
04700-04701	Pole(Various)Mtg Ht	Each																													
04710-04714	Pole(Various)Mtg Ht High Mast	Each																													
04810-04811	Electrical Junction Box (Various)	Each																													
20391NS835	Electrical Junction Box Type A	Each																													
20392NS835	Electrical Junction Box Type C	Each																													
04770-04773	Luminaire (Various)	Each																													
04780	Fuse Connector Kit	Each																													
20410ED	Maintain Lighting	Lump Sum																													
<del>04941</del>	<del>Remove Pole Base</del>	<del>Each</del>																													
<b>Subsection:</b>	723.02.02 Paint.																														
<b>Revision:</b>	Replace sentence with the following: Conform to Section 821.																														
<b>Subsection:</b>	723.03 CONSTRUCTION.																														
<b>Revision:</b>	Replace bullet 5) with the following: 5) AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims,																														
<b>Subsection:</b>	723.03.02 Poles and Bases Installation.																														
<b>Revision:</b>	Replace the title with the following: 723.03.02 Pole and Base Installation.																														

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

<b>Subsection:</b>	723.03.02 Pole and Base Installation.
<b>Revision:</b>	Replace the first paragraph with the following: Regardless of the station and offset noted, locate all poles/bases behind the guardrail a minimum of four feet from the front face of the guardrail to the front face of the pole base. Orient the handhole door away from traffic travel path. If pole base is installed within a sidewalk the top of the pole base shall be the same grade as the sidewalk.
<b>Subsection:</b>	723.03.02 Poles and Bases Installation.
<b>Part:</b>	A) Steel Strain and Mastarm Poles Installation
<b>Revision:</b>	Replace the title of Part A) Steel Strain and Mast Arm Pole Installation.
<b>Subsection:</b>	723.03.02 Pole and Base Installation.
<b>Part:</b>	A) Steel Strain and Mast Arm Pole Installation.
<b>Revision:</b>	Insert the following sentence at the beginning of the first paragraph: Install pole bases 4 to 6 inches above grade.
<b>Subsection:</b>	723.03.02 Pole and Base Installation.
<b>Part:</b>	A) Steel Strain and Mast Arm Pole Installation.
<b>Revision:</b>	Replace the second paragraph with the following: For concrete base installation, see Subsection 716.03.02 B), 2), Paragraphs 2-6. Drilled shaft depth shall be based on the soil conditions encountered during drilling and slope condition at the site. Refer to the design chart below:
<b>Subsection:</b>	723.03.02 Pole and Base Installation.
<b>Part:</b>	B) Pedestal or Pedestal Post Installation.
<b>Revision:</b>	Replace the second sentence with the following: If over 12 feet high the base shall have the minimum depth and diameter as Subsection 716.03.02 (A), paragraph 2.
<b>Subsection:</b>	723.03.02 Poles and Bases Installation.
<b>Part:</b>	B) Pedestal or Pedestal Post Installation.
<b>Revision:</b>	Replace the fourth sentence of the paragraph with the following: For breakaway supports, conform to Section 12 of the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims.
<b>Subsection:</b>	723.03.03 Trenching.
<b>Revision:</b>	Replace the first sentence with the following: See Subsection 716.03.03 (B).
<b>Subsection:</b>	723.03.03 Trenching.
<b>Part:</b>	A) Under Roadway.
<b>Revision:</b>	Delete Part A) Under Roadway.
<b>Subsection:</b>	723.03.05 Conduit Requirements in Junction Boxes.
<b>Revision:</b>	Delete the Subsection and replace with the following: 723.03.05 Fuse Connector Kits. See Subsection 716.03.09.
<b>Subsection:</b>	723.03.06 Coupling Installation.
<b>Revision:</b>	Delete the Subsection and replace with the following: 723.03.06 Painting. See Subsection 716.03.15.
<b>Subsection:</b>	723.03.07 Bonding Requirements.
<b>Revision:</b>	Delete the Subsection and replace with the following: 723.03.07 Electrical Junction Boxes. See Subsection 716.03.10.

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

<b>Subsection:</b>	723.03.08 Painting.
<b>Revision:</b>	Replace with 723.03.06 Painting. See Subsection 716.03.15.
<b>Subsection:</b>	723.03.09 Underground Warning Tape.
<b>Revision:</b>	Renumber Subsection to 723.03.08 Underground Warning Tape.
<b>Subsection:</b>	723.03.10 Backfilling and Disturbed Areas.
<b>Revision:</b>	Renumber Subsection to 723.03.09 Backfilling and Disturbed Areas.
<b>Subsection:</b>	723.03.11 Wiring Installation.
<b>Revision:</b>	Renumber Subsection to 723.03.10 Wiring Installation.
<b>Subsection:</b>	723.03.10 Wiring Installation.
<b>Revision:</b>	Add the following sentence between the fifth and sixth sentences: Provide an extra two feet of loop wire and lead-in past the installed conduit in poles, pedestals, and junction boxes.
<b>Subsection:</b>	723.03.12 Loop Installation.
<b>Revision:</b>	Renumber Subsection to 723.03.11 Loop Installation.
<b>Subsection:</b>	723.03.11 Loop Installation.
<b>Revision:</b>	Replace the fourth sentence of the 2nd paragraph with the following: Provide an extra two feet of loop wire and lead-in past the installed conduit in poles, pedestals, and junction boxes.
<b>Subsection:</b>	723.03.13 Grounding Installation.
<b>Revision:</b>	Renumber Subsection to 723.03.12 Grounding Installation.
<b>Subsection:</b>	723.03.12 Grounding Installation.
<b>Revision:</b>	Replace the reference to "Standard Detail Sheets" in the first sentence with "Plans".
<b>Subsection:</b>	723.03.14 Splicing.
<b>Revision:</b>	Renumber Subsection to 723.03.13 Splicing.
<b>Subsection:</b>	723.03.13 Splicing.
<b>Revision:</b>	Delete the reference to (IMSA 19-2) from the 5th sentence of the paragraph.
<b>Subsection:</b>	723.03.15 Painting.
<b>Revision:</b>	Delete Subsection.
<b>Subsection:</b>	723.03.14 Splicing.
<b>Revision:</b>	Replace with new Subsection 723.03.14 Remove Signal Equipment.
<b>Subsection:</b>	723.03.14 Remove Signal Equipment.
<b>Revision:</b>	Insert the following for the new subsection: Remove all traffic signal equipment that is identified by the Engineer as no longer necessary including, but not limited to, the following: pole bases, poles, junction boxes, cabinets, wood poles, and advance warning flashers. Pole bases shall be removed a minimum of one foot below finished grade by chipping off or other method that is approved by the Engineer. Dispose of all removed concrete off right-of-way. Wood poles shall be removed a minimum of one foot below finished grade. Backfill holes with material approved by the Engineer. Conduit may be abandoned in the ground. Contact the district traffic Engineer to determine if any removed signal equipment needs to be returned to the district and to determine the location/time for such deliveries.
<b>Subsection:</b>	723.05.16 Drawings.
<b>Revision:</b>	Renumber the Subsection to 723.03.15 Drawings.

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

<b>Subsection:</b>	723.03.15 Drawings.
<b>Revision:</b>	Replace Subsection with the following: Before final inspection of the traffic control device, provide a complete set of reproducible as-built drawings that show the arrangement and locations of all equipment including: junction boxes, conduits, spare conduits, etc. Keep a daily record of all conduits placed in trenches, showing the distance from the pavement edge, the depth, and the length of runs, and indicate this information on the as-built drawings.
<b>Subsection:</b>	723.03.17 Acceptance and Inspection Requirements.
<b>Revision:</b>	Renumber Subsection to 723.03.16 Acceptance and Inspection Requirements.
<b>Subsection:</b>	723.03.16 Acceptance and Inspection Requirements.
<b>Revision:</b>	Replace the first paragraph of the section with the following: See Subsection 105.12. In coordination with the District Traffic Engineer, energize traffic control device as soon as it is fully functional and ready for inspection. After the work has been completed, conduct an operational test demonstrating that the system operates in accordance with the Plans in the presence of the Engineer. The Department will also conduct its own tests with its own equipment before final acceptance. Ensure that the traffic control device remains operational until the Division of Traffic Operations has provided written acceptance of the electrical work.
<b>Subsection:</b>	723.04.01 Conduit.
<b>Revision:</b>	Replace the second sentence of the subsection with the following: The Department will not measure conduit fittings, ground lugs, test plugs, expansion joints, and clamps for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.02 Junction Box.
<b>Revision:</b>	Replace subsection title with the following: Electrical Junction Box Type Various.
<b>Subsection:</b>	723.04.02 Electrical Junction Box Type Various.
<b>Revision:</b>	Replace the subsection with the following: The Department will measure the quantity as each individual unit furnished and installed. The Department will not measure additional junction boxes for greater depths than those identified in Plans, Aggregate (#57), backfilling, restoration of disturbed areas to the satisfaction of the Engineer, geotextile fabric, concrete, hot dipped galvanized cover, stainless steel screws, rubber gasket, and any associated hardware for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.03 Trenching and Backfilling.
<b>Revision:</b>	Replace the second sentence with the following: The Department will not measure excavation, backfilling, underground utility warning tape, and the restoration of disturbed areas to original condition for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.04 Open Cut Roadway.
<b>Revision:</b>	Replace the second sentence of the subsection with the following: The Department will not measure concrete, reinforcing steel, and asphalt for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.05 Loop Wire.
<b>Revision:</b>	Replace the second sentence of the subsection with the following: The Department will not measure splice boots, cable rings, and any other necessary hardware for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.06 Cable.
<b>Revision:</b>	Replace the second sentence of the subsection with the following: The Department will not measure splice boots, cable rings, and any other hardware for payment and will consider them incidental to this item of work.

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

<b>Subsection:</b>	723.04.07 Pole-Wooden.
<b>Revision:</b>	Replace the second sentence of the subsection with the following: The Department will not measure excavation, backfilling, and restoring disturbed areas for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.08 Steel Strain Pole.
<b>Revision:</b>	Replace the second sentence of the subsection with the following: The Department will not measure excavation, backfilling, and restoring disturbed areas for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.09 Mast Arm Pole.
<b>Revision:</b>	Replace the second sentence of the subsection with the following: The Department will not measure anchor bolts, arms, mounting brackets, and any other necessary hardware for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.10 Signal Pedestal.
<b>Revision:</b>	Replace the second sentence of the subsection with the following: The Department will not measure excavation, concrete, reinforcing steel, conduits, fittings, ground rods, ground wire, ground lugs, backfilling, restoring disturbed areas, and other necessary hardware for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.11 Post.
<b>Revision:</b>	Replace the second sentence of the subsection with the following: The Department will not measure excavation, backfilling, and restoring disturbed areas for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.12 Anchor.
<b>Revision:</b>	Replace the second sentence of the subsection with the following: . The Department will not measure down-guy, messenger, clamps, guy guard, or insulators, and possible installation in various soil conditions for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.13 Messenger.
<b>Revision:</b>	Replace the second sentence of the subsection with the following: The Department will not measure strand vises, bolts, washers, and other necessary hardware for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.14 Install Signal LED.
<b>Revision:</b>	Revise subsection title to 723.04.14 Install Beacon Controller - 2 Circuit.
<b>Subsection:</b>	723.04.14 Install Beacon Controller - 2 Circuit.
<b>Revision:</b>	Replace the subsection with the following: The Department will measure the quantity as each individual unit furnished and installed. The Department will not measure the controller housing, mounting equipment, S5-1 school zone sign, time clock, nema flasher, ground rods, ground wires, ground lugs, metering disconnect hardware, electrical inspection fees, and required building fees involving utility secondary/primary service for payment and will consider them incidental to this item of work.

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

<b>Subsection:</b>	723.04.15 Loop Saw Slot and Fill.
<b>Revision:</b>	Replace the second sentence of the subsection with the following: The Department will not measure sawing, cleaning, filling induction loop saw slot, loop sealant, backer rod, drilling hole for conduit, and grout for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.16 Pedestrian Detector.
<b>Revision:</b>	Replace the subsection with the following: The Department will measure the quantity as each individual unit furnished, installed and connected to pole/pedestal. The Department will not measure installing R10-3e signs, detector housing, and installing mounting hardware for sign for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.17 Signal.
<b>Revision:</b>	Replace the second sentence of the subsection with the following: The Department will not measure furnishing and installing LED modules, retroreflective tape, back plates, and any other hardware for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.18 Signal Controller- Type 170.
<b>Revision:</b>	Replace the second sentence of the subsection with the following: The Department will not measure the concrete base, mounting the cabinet, connecting the signal and detectors, excavation, backfilling, restoration, any necessary pole mounting hardware, electric service, electrical inspection fees, and building fees involving secondary/primary service for payment and will consider them incidental to this item of work. The Department will also not measure furnishing and connecting the induction of loop amplifiers, pedestrian isolators, load switches, model 400 modem card, electrical service conductors, conduits, anchors, meter base, fused cutout, fuses, ground rods, ground wires, and ground lugs for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.19 Beacon Controller - 2 Circuit.
<b>Revision:</b>	Replace the second sentence of the subsection with the following: The Department will not measure the controller housing, mounting equipment, S5-1 school zone sign, time clock, nema flasher, ground rods, ground wires, ground lugs, metering disconnect hardware, electrical inspection fees, and required building fees involving utility secondary/primary service for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.20 Install Signal Controller - Type 170.
<b>Revision:</b>	Replace the paragraph with the following: The Department will measure the quantity as each individual unit installed. The Department will not measure the concrete base, mounting the cabinet, connecting the signal and detectors, excavation, backfilling, restoration, any necessary pole mounting hardware, electric service, electrical inspection fees, and required building fees involving utility secondary/primary service for payment and will consider them incidental to this item of work. The Department will also not measure connecting the induction loop amplifiers, pedestrian isolators, load switches, model 400 modem card for payment and will consider them incidental to this item of work. The Department will also not measure furnishing and installing electrical service conductors, conduits, anchors, meter base, fused cutout, fuses, ground rods, ground lugs, and ground wires for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.21 Install Steel Strain Pole.
<b>Revision:</b>	Replace the second sentence of the subsection with the following: The Department will not measure any necessary clamp assemblies for payment and will consider them incidental to this item of work.

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

<b>Subsection:</b>	723.04.22 Remove Signal Equipment.
<b>Revision:</b>	Replace the paragraph with the following: The Department will measure the quantity by lump sum. The Department will not measure backfilling and the disposal or transportation of equipment and materials associated with any structural or electrical component of the signal system including, but not limited to pole bases, poles, junction boxes, cabinets, and wood poles for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.23 Install Span/Pole Mounted Sign.
<b>Revision:</b>	Replace the second sentence of the subsection with the following: The Department will not measure the hanger or any other hardware necessary to install the sign for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.24 Install Pedestrian Head LED.
<b>Revision:</b>	Insert the following sentence at the end of the paragraph: The Department will not measure the installation of LED modules and any other necessary hardware for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.25 Install Signal LED.
<b>Revision:</b>	Insert the following sentence at the end of the paragraph: The Department will not measure the installation of LED modules, retroreflective tape, back plates, and any other necessary hardware for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.26 Install Coordinating Unit.
<b>Revision:</b>	Replace the subsection with the following: The Department will measure the quantity as each individual unit installed. The Department will not measure radio, modem, cable(s), antenna(s), router, repeater, and any other necessary hardware for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.27 Video Camera.
<b>Revision:</b>	Replace the second sentence of the subsection with the following: The Department will not measure video modules, mounting bracket, truss type arm, power cable, coaxial cable, and any other necessary hardware for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.28 Install Pedestrian Detector Audible.
<b>Revision:</b>	Replace the second sentence with the following: The Department will not measure installing R10-3e sign, detector housing, and installing mounting hardware for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.29 Audible Pedestrian Detector.
<b>Revision:</b>	Replace the second sentence with the following: The Department will not measure furnishing and installing the R10-3e sign, detector housing, and installing mounting hardware for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.30 Bore and Jack Conduit.
<b>Revision:</b>	Replace the paragraph with the following: The Department will measure the quantity in linear feet. This item shall include all work necessary for boring and installing conduit under an existing roadway.

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

<b>Subsection:</b>	723.04.31 Install Pedestrian Detector.
<b>Revision:</b>	Replace the paragraph with the following: The Department will measure the quantity as each individual unit installed and connected to pole/pedestal. The Department will not measure installing R 10-3e sign, detector housing, and installing mounting hardware for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.32 Install Mast Arm Pole.
<b>Revision:</b>	Replace the second sentence with the following: The Department will not measure installation of arms, signal mounting brackets, anchor bolts, and any other necessary hardware for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.33 Pedestal Post.
<b>Revision:</b>	Replace the second sentence with the following: The Department will not measure excavation, backfilling, restoration, furnishing and installing concrete, reinforcing steel, anchor bolts, conduit, fittings, ground rod, ground wire, ground lugs, or any other necessary hardware for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.34 Span Mounted Sign.
<b>Revision:</b>	Revise subsection title to 723.04.34 Span/Pole-Mounted Sign.
<b>Subsection:</b>	723.04.34 Span/Pole-Mounted Sign.
<b>Revision:</b>	Replace the second sentence of the subsection with the following: The Department will not measure the hanger, sign, and any other necessary hardware for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.35 Remove and Reinstall Coordinating Unit.
<b>Revision:</b>	Add the following sentence to the end of the subsection: The Department will not measure removing, storage, reinstalling, and connecting radio, modem, cable(s), antenna(s), router, repeater, and any other necessary hardware for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.36 Traffic Signal Pole Base.
<b>Revision:</b>	Replace the second sentence of the subsection with the following: The Department will not measure excavation, backfilling, restoration, furnishing and installing reinforcing steel, anchor bolts, conduits, ground rods, ground wires, and ground lugs for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.37 Install Signal Pedestal.
<b>Revision:</b>	Replace the second sentence of the subsection with the following: . The Department will not measure excavation, backfilling, restoration, furnishing and installing concrete, reinforcing steel, conduits, fittings, ground rod, ground wire, ground lugs, and any other necessary hardware for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.38 Install Pedestal Post.
<b>Revision:</b>	Replace the second sentence of the subsection with the following: The Department will not measure excavation, backfilling, restoration, furnishing and installing concrete, reinforcing steel, conduit, fittings, ground rod, ground wire, ground lugs, and any other necessary hardware for payment and will consider them incidental to this item of work.
<b>Subsection:</b>	723.04.39 Install Antenna.
<b>Revision:</b>	Replace the second sentence of the subsection with the following: The Department will not measure any other materials necessary to complete the installation for payment and will consider them incidental to this item of work.

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

<b>Subsection:</b>	723.05 PAYMENT.																					
<b>Revision:</b>	Replace items 04810-04811, 20391NS835, 20392NS835,23052NN and add item number 24526ED under <u>Code</u> , <u>Pay Item</u> , and <u>Pay Unit</u> with the following:																					
	<table border="1"> <thead> <tr> <th><u>Code</u></th> <th><u>Pay Item</u></th> <th><u>Pay Unit</u></th> </tr> </thead> <tbody> <tr> <td>04810</td> <td>Electrical Junction Box</td> <td>Each</td> </tr> <tr> <td>04811</td> <td>Electrical Junction Box Type B</td> <td>Each</td> </tr> <tr> <td>20391NS835</td> <td>Electrical Junction Box Type A</td> <td>Each</td> </tr> <tr> <td>20392NS835</td> <td>Electrical Junction Box Type C</td> <td>Each</td> </tr> <tr> <td>23052NN</td> <td>Span/Pole-Mounted Sign</td> <td>Each</td> </tr> <tr> <td>24526ED</td> <td>Install Beacon Controller 2 Cir</td> <td>Each</td> </tr> </tbody> </table>	<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>	04810	Electrical Junction Box	Each	04811	Electrical Junction Box Type B	Each	20391NS835	Electrical Junction Box Type A	Each	20392NS835	Electrical Junction Box Type C	Each	23052NN	Span/Pole-Mounted Sign	Each	24526ED	Install Beacon Controller 2 Cir	Each
<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>																				
04810	Electrical Junction Box	Each																				
04811	Electrical Junction Box Type B	Each																				
20391NS835	Electrical Junction Box Type A	Each																				
20392NS835	Electrical Junction Box Type C	Each																				
23052NN	Span/Pole-Mounted Sign	Each																				
24526ED	Install Beacon Controller 2 Cir	Each																				
<b>Subsection:</b>	801.01 REQUIREMENTS																					
<b>Revision:</b>	Replace first sentence in paragraph one with the following: Provide Portland cement <i>or blended hydraulic cement</i> from approved mills listed in the Department's List of Approved Materials.																					
<b>Subsection:</b>	801.01 REQUIREMENTS																					
<b>Number:</b>	1)																					
<b>Revision:</b>	Replace first sentence with the following: Type I, II, III, and IV <i>Portland cement</i> conforms to ASTM C 150.																					
<b>Subsection:</b>	801.01 REQUIREMENTS																					
<b>Number:</b>	3)																					
<b>Revision:</b>	Replace the first sentence with the following: Type IP ( $\leq 20$ ), Portland-pozzolan cement, conforms to ASTM C595, and the following additional requirements to Type IP ( $\leq 20$ ).																					
<b>Subsection:</b>	801.01 REQUIREMENTS																					
<b>Number:</b>	3)																					
<b>Part:</b>	b)																					
<b>Revision:</b>	Delete part b)																					
<b>Subsection:</b>	801.01 REQUIREMENTS																					
<b>Number:</b>	3)																					
<b>Part:</b>	c)																					
<b>Revision:</b>	Rename Part c) to Part b) and replace the text with the following: The cement manufacturer shall furnish to the Engineer reports showing the results of tests performed on the fly ash used in the manufacture of the Type IP( $\leq 20$ ) cement shipped to the project.																					
<b>Subsection:</b>	801.01 REQUIREMENTS																					
<b>Number:</b>	3)																					
<b>Part:</b>	d)																					
<b>Revision:</b>	Rename Part d) to Part c)																					
<b>Subsection:</b>	801.01 REQUIREMENTS																					
<b>Number:</b>	3)																					
<b>Part:</b>	e)																					
<b>Revision:</b>	Rename Part e) to Part d) and replace the text with the following: Use only one brand of Type IP( $\leq 20$ ) cement throughout the project, unless the Engineer approved a change in brand in writing.																					
<b>Subsection:</b>	801.01 REQUIREMENTS																					
<b>Number:</b>	4)																					
<b>Revision:</b>	Replace first sentence with the following: Type IS( $\leq 30$ ), Portland blast furnace slag cement, conforms to ASTM C 595 and the following requirements:																					

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

<b>Subsection:</b>	801.01 REQUIREMENTS
<b>Number:</b>	4)
<b>Part:</b>	a)
<b>Revision:</b>	Replace part a) with the following: Use Grade 100 or 120 blast furnace slag cement conforming to the requirements of ASTM C 989.
<b>Subsection:</b>	801.01 REQUIREMENTS
<b>Number:</b>	4)
<b>Part:</b>	b)
<b>Revision:</b>	Delete part b)
<b>Subsection:</b>	801.01 REQUIREMENTS
<b>Number:</b>	4)
<b>Part:</b>	c)
<b>Revision:</b>	Rename Part c) to Part b) and replace the text with the following: The cement manufacturer shall furnish to the Engineer reports showing the results of the tests performed on the blast furnace slag cement used in the manufacturing of the Type IS( $\leq$ 30) shipped to the project.
<b>Subsection:</b>	801.01 REQUIREMENTS
<b>Number:</b>	4)
<b>Part:</b>	d)
<b>Revision:</b>	Rename Part d) to Part c)
<b>Subsection:</b>	801.01 REQUIREMENTS
<b>Number:</b>	4)
<b>Part:</b>	e)
<b>Revision:</b>	Rename Part e) to Part d) and replace the text with the following: Use only one brand of Type IS( $\leq$ 30) cement throughout the project, unless the Engineer approves otherwise.
<b>Subsection:</b>	801.01 REQUIREMENTS
<b>Number:</b>	5)
<b>Revision:</b>	Insert part 5) as the following: Type IL(5-15), Portland-limestone cement, conforms to ASTM C 595 and the following additional requirements:
<b>Subsection:</b>	801.01 REQUIREMENTS
<b>Number:</b>	5)
<b>Part:</b>	a)
<b>Revision:</b>	Insert part a) as the following: The cement manufacturer shall furnish to the Engineer reports showing the results of test performed on the limestone used in the manufacture of the Type IL cement shipped to the project.
<b>Subsection:</b>	801.01 REQUIREMENTS
<b>Number:</b>	5)
<b>Part:</b>	b)
<b>Revision:</b>	Insert part b) as the following: Use only one brand of Type IL cement throughout the project, unless the Engineer approves a brand change in writing.
<b>Subsection:</b>	801.01 REQUIREMENTS
<b>Number:</b>	5)
<b>Part:</b>	c)
<b>Revision:</b>	Insert part c) as the following: The Type IL blended cement shall be an intimate and uniform blend produced by intergrinding of the Portland cement and limestone.
<b>Subsection:</b>	804.01.02 Crushed Sand.
<b>Revision:</b>	Delete last sentence of the section.

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

<b>Subsection:</b>	804.01.06 Slag.														
<b>Revision:</b>	Add subsection and following sentence. Provide blast furnace slag sand where permitted. The Department will allow steel slag sand only in asphalt surface applications.														
<b>Subsection:</b>	804.04 Asphalt Mixtures.														
<b>Revision:</b>	Replace the subsection with the following: Provide natural, crushed, conglomerate, or blast furnace slag sand, with the addition of filler as necessary, to meet gradation requirements. The Department will allow any combination of natural, crushed, conglomerate or blast furnace slag sand when the combination is achieved using cold feeds at the plant. The Engineer may allow other fine aggregates.														
<b>Subsection:</b>	806.03.01 General Requirements.														
<b>Revision:</b>	Replace the second sentence of the paragraph with the following: Additionally, the material must have a minimum solubility of 99.0 percent when tested according to AASHTO T 44 and PG 76-22 must exhibit a minimum recovery of 60 percent, with a J <sub>NR</sub> (non-recoverable creep compliance) between 0.1 and 0.5, when tested according to AASHTO TP 70.														
<b>Subsection:</b>	806.03.01 General Requirements.														
<b>Table:</b>	PG Binder Requirements and Price Adjustment Schedule														
<b>Revision:</b>	Replace the Elastic Recovery, % <sup>(3)</sup> (AASHTO T301) and all corresponding values in the table with the following:														
	<table border="1"> <thead> <tr> <th>Test</th> <th>Specification</th> <th>100% Pay</th> <th>90% Pay</th> <th>80% Pay</th> <th>70% Pay</th> <th>50%Pay<sup>(1)</sup></th> </tr> </thead> <tbody> <tr> <td>MSCR recovery, %<sup>(3)</sup> (AASHTO TP 70)</td> <td>60 Min.</td> <td>≥58</td> <td>56</td> <td>55</td> <td>54</td> <td>&lt;53</td> </tr> </tbody> </table>	Test	Specification	100% Pay	90% Pay	80% Pay	70% Pay	50%Pay <sup>(1)</sup>	MSCR recovery, % <sup>(3)</sup> (AASHTO TP 70)	60 Min.	≥58	56	55	54	<53
Test	Specification	100% Pay	90% Pay	80% Pay	70% Pay	50%Pay <sup>(1)</sup>									
MSCR recovery, % <sup>(3)</sup> (AASHTO TP 70)	60 Min.	≥58	56	55	54	<53									
<b>Subsection:</b>	806.03.01 General Requirements.														
<b>Table:</b>	PG Binder Requirements and Price Adjustment Schedule														
<b>Superscript:</b>	(3)														
<b>Revision:</b>	Replace (3) with the following: Perform testing at 64°C.														
<b>Subsection:</b>	808.07 Polypropylene Waterproofing Membrane.														
<b>Revision:</b>	Replace the paragraph and table with the following: Furnish a layered waterproofing membrane. The layers will consist of an internal puncture resistant woven polypropylene fabric sandwiched between two rubberized mastic layers. The mastic will have a heavy polyethylene membrane attached on the top and the bottom mastic layer will be covered by a protective release film.														
<b>Subsection:</b>	808.09 Acceptance.														
<b>Revision:</b>	Replace the reference to "KMIMS" in the second paragraph with SiteManager.														
<b>Subsection:</b>	811.10.04 Properties of the Coated Bar.														
<b>Part:</b>	B) Flexibility of Coating.														
<b>Revision:</b>	Replace the second sentence of the paragraph with the following: Ensure that the coated bars are capable of being bent to 180 degrees (after rebound) over a mandrel, without any visible evidence of cracking the coating.														
<b>Subsection:</b>	813.04 Gray Iron Castings.														
<b>Revision:</b>	Replace the reference to "AASHTO M105" with "ASTM A48".														
<b>Subsection:</b>	813.09.02 High Strength Steel Bolts, Nuts, and Washers.														
<b>Number:</b>	A) Bolts.														
<b>Revision:</b>	Delete first paragraph and "Hardness Number" Table. Replace with the following: A) Bolts. Conform to ASTM A325 (AASHTO M164) or ASTM A490 (AASHTO 253) as applicable.														

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

<b>Subsection:</b>	814.04.02 Timber Guardrail Posts.
<b>Revision:</b>	Third paragraph, replace the reference to "AWPA C14" with "AWPA U1, Section B, Paragraph 4.1".
<b>Subsection:</b>	814.04.02 Timber Guardrail Posts.
<b>Revision:</b>	Replace the first sentence of the fourth paragraph with the following: Use any of the species of wood for round or square posts covered under AWPA U1.
<b>Subsection:</b>	814.04.02 Timber Guardrail Posts.
<b>Revision:</b>	Fourth paragraph, replace the reference to "AWPA C2" with "AWPA U1, Section B, Paragraph 4.1".
<b>Subsection:</b>	814.04.02 Timber Guardrail Posts.
<b>Revision:</b>	Delete the second sentence of the fourth paragraph.
<b>Subsection:</b>	814.05.02 Composite Plastic.
<b>Revision:</b>	1) Add the following to the beginning of the first paragraph: Select composite offset blocks conforming to this section and assure blocks are from a manufacturer included on the Department's List of Approved Materials. 2) Delete the last paragraph of the subsection.
<b>Subsection:</b>	816.07.02 Wood Posts and Braces.
<b>Revision:</b>	First paragraph, replace the reference to "AWPA C5" with "AWPA U1, Section B, Paragraph 4.1".
<b>Subsection:</b>	816.07.02 Wood Posts and Braces.
<b>Revision:</b>	Delete the second sentence of the first paragraph.
<b>Subsection:</b>	818.07 Preservative Treatment.
<b>Revision:</b>	First paragraph, replace all references to "AWPA C14" with "AWPA U1, Section A".
<b>Subsection:</b>	833.01.02 Sheeting Signs.
<b>Revision:</b>	Replace the second sentence with the following: Provide a thickness of 125 mils if any single edge dimension of the sign exceeds 3 feet.
<b>Subsection:</b>	834.14 Lighting Poles.
<b>Revision:</b>	Replace the first sentence with the following: Lighting pole design shall be in accordance with loading and allowable stress requirements of the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims, with the exception of the following: The Cabinet will waive the requirement stated in the first sentence of Section 5.14.6.2 – Reinforced Holes and Cutouts for high mast poles (only). The minimum diameter at the base of the pole shall be 22 inches for high mast poles (only).
<b>Subsection:</b>	834.14.03 High Mast Poles.
<b>Revision:</b>	Remove the second and fourth sentence from the first paragraph.
<b>Subsection:</b>	834.14.03 High Mast Poles.
<b>Revision:</b>	Replace the third paragraph with the following: Provide calculations and drawings that are stamped by a Professional Engineer licensed in the Commonwealth of Kentucky.

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

<p><b>Subsection:</b> 834.14.03 High Mast Poles. <b>Revision:</b></p>	<p>Replace paragraph six with the following: Provide a pole section that conforms to ASTM A 595 grade A with a minimum yield strength of 55 KSI or ASTM A 572 with a minimum yield strength of 55 KSI. Use tubes that are round or 16 sided with a four inch corner radius, have a constant linear taper of .144 in/ft and contain only one longitudinal seam weld. Circumferential welded tube butt splices and laminated tubes are not permitted. Provide pole sections that are telescopically slip fit assembled in the field to facilitate inspection of interior surface welds and the protective coating. The minimum length of the telescopic slip splices shall be 1.5 times the inside diameter of the exposed end of the female section. Use longitudinal seam welds as commended in Section 5.15 of the AASHTO 2013 Specifications. The thickness of the transverse base shall not be less than 2 inches. Plates shall be integrally welded to the tubes with a telescopic welded joint or a full penetration groove weld with backup bar.</p> <p>The handhole cover shall be removable from the handhole frame. One the frame side opposite the hinge, provide a mechanism on the handhole cover/frame to place the Department's standard padlock as specified in Section 834.25. The handhole frame shall have two stainless studs installed opposite the hinge to secure the handhole cover to the frame which includes providing stainless steel wing nuts and washers. The handhole cover shall be manufactured from 0.25 inch thick galvanized steel (ASTM A 153) and have a neoprene rubber gasket that is permanently secured to the handhole frame to insure weather-tight protection. The hinge shall be manufactured from 7-gauge stainless steel to provide adjustability to insure weather-tight fit for the cover. The minimum clear distance between the transverse plate and the bottom opening of the handhole shall not be less than the diameter of the bottom tube of the pole but needs to be at least 15 inches. Provide products that are hot-dip galvanized to the requirements of either ASTM A123 (fabricated products) or ASTM A 153 (hardware items).</p>
<p><b>Subsection:</b> 834.16 ANCHOR BOLTS. <b>Revision:</b></p>	<p>Insert the following sentence at the beginning of the paragraph: The anchor bolt design shall follow the NCHRP Report 494 Section 2.4 and NCHRP 469 Appendix A Specifications.</p>
<p><b>Subsection:</b> 834.17.01 Conventional. <b>Revision:</b></p>	<p>Add the following sentence after the second sentence: Provide a waterproof sticker mounted on the bottom of the housing that is legible from the ground and indicates the wattage of the fixture by providing the first two numbers of the wattage.</p>
<p><b>Subsection:</b> 834.21.01 Waterproof Enclosures. <b>Revision:</b></p>	<p>Replace the last five sentences in the second paragraph with the following sentences: Provide a cabinet door with a louvered air vent, filter-retaining brackets and an easy to clean metal filter. Provide a cabinet door that is keyed with a factory installed standard no. 2 corbin traffic control key. Provide a light fixture with switch and bulb. Use a 120-volt fixture and utilize a L.E.D. bulb (equivalent to 60 watts minimum). Fixture shall be situated at or near the top of the cabinet and illuminate the contents of the cabinet. Provide a 120 VAC GFI duplex receptacle in the enclosure with a separate 20 amp breaker.</p>

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

<b>Subsection:</b>	835.07 Traffic Poles.
<b>Revision:</b>	Replace the first sentence of the first paragraph with the following: Pole diameter and wall thickness shall be calculated in accordance with the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims.
<b>Subsection:</b>	835.07 Traffic Poles.
<b>Revision:</b>	*Replace the first sentence of the fourth paragraph with the following: Ensure transverse plates have a thickness $\geq 2$ inches. *Add the following sentence to the end of the fourth paragraph: The bottom pole diameter shall not be less than 16.25 inches.
<b>Subsection:</b>	835.07 Traffic Poles.
<b>Revision:</b>	Replace the third sentence of the fifth paragraph with the following: For anchor bolt design, pole forces shall be positioned in such a manner to maximize the force on any individual anchor bolt regardless of the actual anchor bolt orientation with the pole.
<b>Subsection:</b>	835.07 Traffic Poles.
<b>Revision:</b>	Replace the first and second sentence of the sixth paragraph with the following: The pole handhole shall be 25 inches by 6.5 inches. The handhole cover shall be removable from the handhole frame. On the frame side opposite the hinge, provide a mechanism on the handhole cover/frame to place the Department's standard padlock as specified in Section 834.25. The handhole frame shall have two stainless studs installed opposite the hinge to secure the handhole cover to the frame which includes providing stainless steel wing nuts and washers. The handhole cover shall be manufactured from 0.25 inch thick galvanized steel (ASTM 153) and have a neoprene rubber gasket that is permanently secured to the handhole frame to insure weather-tight protection. The hinge shall be manufactured from 7 gauge stainless steel to provide adjustability to insure a weather-tight fit for the cover. The minimum clear distance between the transverse plate and the bottom opening of the handhole shall not be less than the diameter of the bottom tube but needs to be at least 12 inches.
<b>Subsection:</b>	835.07 Traffic Poles.
<b>Revision:</b>	*Replace the first sentence of the last paragraph with the following: Provide calculations and drawings that are stamped by a Professional Engineer licensed in the Commonwealth of Kentucky. *Replace the third sentence of the last paragraph with the following: All tables referenced in 835.07 are found in the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims.
<b>Subsection:</b>	835.07.01 Steel Strain Poles.
<b>Revision:</b>	Replace the second sentence of the second paragraph with the following: The detailed analysis shall be certified by a Professional Engineer licensed in the Commonwealth of Kentucky.
<b>Subsection:</b>	835.07.01 Steel Strain Poles.
<b>Revision:</b>	Replace number 7. after the second paragraph with the following: 7. Fatigue calculations should be shown for all fatigue related connections. Provide the corresponding detail, stress category and example from table 11.9.3.1-1.
<b>Subsection:</b>	835.07.02 Mast Arm Poles.
<b>Revision:</b>	Replace the second sentence of the fourth paragraph with the following: The detailed analysis shall be certified by a Professional Engineer licensed in the Commonwealth of Kentucky.

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

<b>Subsection:</b>	835.07.02 Mast Arm Poles.		
<b>Revision:</b>	Replace number 7) after the fourth paragraph with the following: 7) Fatigue calculations should be shown for all fatigue related connections. Provide the corresponding detail, stress category and example from table 11.9.3.1-1.		
<b>Subsection:</b>	835.07.03 Anchor Bolts.		
<b>Revision:</b>	Add the following to the end of the paragraph: There shall be two steel templates (one can be used for the headed part of the anchor bolt when designed in this manner) provided per pole. Templates shall be contained within a 26.5 inch diameter. All templates shall be fully galvanized (ASTM A 153).		
<b>Subsection:</b>	835.16.05 Optical Units.		
<b>Revision:</b>	Replace the 3rd paragraph with the following: The list of certified products can be found on the following website: <a href="http://www.intertek.com">http://www.intertek.com</a> .		
<b>Subsection:</b>	835.19.01 Pedestrian Detector Body.		
<b>Revision:</b>	Replace the first sentence with the following: Provide a four holed pole mounted aluminum rectangular housing that is compatible with the pedestrian detector.		
<b>Subsection:</b>	843.01.01 Geotextile Fabric.		
<b>Table:</b>	TYPE I FABRIC GEOTEXTILES FOR SLOPE PROTECTION AND CHANNEL LINING		
<b>Revision:</b>	Add the following to the chart:		
	<u>Property</u>	<u>Minimum Value<sup>(1)</sup></u>	<u>Test Method</u>
	CBR Puncture (lbs)	494	ASTM D6241
	Permittivity (1/s)	0.7	ASTM D4491
<b>Subsection:</b>	843.01.01 Geotextile Fabric.		
<b>Table:</b>	TYPE II FABRIC GEOTEXTILES FOR UNDERDRAINS		
<b>Revision:</b>	Add the following to the chart:		
	<u>Property</u>	<u>Minimum Value<sup>(1)</sup></u>	<u>Test Method</u>
	CBR Puncture (lbs)	210	ASTM D6241
	Permittivity (1/s)	0.5	ASTM D4491
<b>Subsection:</b>	843.01.01 Geotextile Fabric.		
<b>Table:</b>	TYPE III FABRIC GEOTEXTILES FOR SUBGRADE OR EMBANKMENT STABILIZATION		
<b>Revision:</b>	Add the following to the chart:		
	<u>Property</u>	<u>Minimum Value<sup>(1)</sup></u>	<u>Test Method</u>
	CBR Puncture (lbs)	370	ASTM D6241
	Permittivity (1/s)	0.05	ASTM D4491
<b>Subsection:</b>	843.01.01 Geotextile Fabric.		
<b>Table:</b>	TYPE IV FABRIC GEOTEXTILES FOR EMBANKMENT DRAINAGE BLANKETS AND PAVEMENT EDGE DRAINS		
<b>Revision:</b>	Add the following to the chart:		
	<u>Property</u>	<u>Minimum Value<sup>(1)</sup></u>	<u>Test Method</u>
	CBR Puncture (lbs)	309	ASTM D6241
	Permittivity (1/s)	0.5	ASTM D4491

**Supplemental Specifications to the  
Standard Specifications for Road and Bridge Construction, 2012 Edition  
Effective with the April 29, 2016 Letting**

<b>Subsection:</b>	843.01.01 Geotextile Fabric.		
<b>Table:</b>	TYPE V HIGH STRENGTH GEOTEXTILE FABRIC		
<b>Revision:</b>	Make the following changes to the chart:		
	<u>Property</u>	<u>Minimum Value<sup>(1)</sup></u>	<u>Test Method</u>
	CBR Puncture (lbs)	618	ASTM D6241
	Apparent Opening Size	U.S. #40 <sup>(3)</sup>	ASTM D4751
	<sup>(3)</sup> Maximum average roll value.		

### **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 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) Be Highway Orange on all exterior surfaces of the trailer, supports, and controller cabinet.
- 7) Provide operation in ambient temperatures from -30 to + 120 degrees Fahrenheit during snow, rain and other inclement weather.
- 8) 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.
- 9) 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.
- 10) Provide a flat black UV protected coating on the sign hardware, character PCB, and appropriate lens areas.
- 11) Provide a photocell control to provide automatic dimming.

- 12) Allow an on-off flashing sequence at an adjustable rate.
- 13) Provide a sight to aim the message.
- 14) Provide a LED display color of approximately 590 nm amber.
- 15) Provide a controller that is password protected.
- 16) Provide a security device that prevents unauthorized individuals from accessing the controller.
- 17) 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 Power.**

- 1) Design solar panels to yield 10 percent or greater additional charge than sign consumption. Provide direct wiring for operation of the sign or arrow board from an external power source to 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.

**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.

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.

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

11

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

Effective June 15, 2012

## **PART III**

### **EMPLOYMENT, WAGE AND RECORD REQUIREMENTS**

FHWA-1273 -- Revised May 1, 2012

**REQUIRED CONTRACT PROVISIONS  
FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

**ATTACHMENTS**

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

**II. NONDISCRIMINATION**

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

**I. GENERAL**

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

2. Subject to the applicability criteria noted in the following sections, 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.

**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, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) 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 provisions of the Americans with 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 contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its 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, pre-apprenticeship, and/or on-the-job training."

**2. EEO Officer:** The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program 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 minorities and women.

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 minorities and women 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 minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women 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, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such 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 its 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 their avenues of appeal.

**6. Training and Promotion:**

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

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. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

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 employees who are minorities and women 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 good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 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 good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith 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 contracting agency 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 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 minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. 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 contracting agency.

**8. Reasonable Accommodation for Applicants / Employees with Disabilities:** The contractor must be familiar

with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

**9. 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. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

**10. Assurance Required by 49 CFR 26.13(b):**

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

**11. 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 the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours 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; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency 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](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

**III. NONSEGREGATED FACILITIES**

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

**IV. DAVIS-BACON AND RELATED ACT PROVISIONS**

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

**1. Minimum wages**

a. All laborers and mechanics 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 issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions

of paragraph 1.d. of this section; also, 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 29 CFR 5.5(a)(4). 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. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) 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.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

- (i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
- (ii) The classification is utilized in the area by the construction industry; and
- (iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), 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 Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The 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.

(3) In the event the contractor, the laborers or mechanics to be employed in the 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. The Wage and Hour 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.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. 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 shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as 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.

## 2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor 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, so 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 contracting agency 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.

## 3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of 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. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) 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 shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each 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 Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) 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 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, 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 FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action 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.

**4. Apprentices and trainees**

a. Apprentices (programs of the USDOL).

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 U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or 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 Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen 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 worker 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 on 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 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's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

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 journeymen 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 determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

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 U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman 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 wage rate on the wage determination which provides for less than full fringe benefits for apprentices. 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.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor 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. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. 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.

**5. Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

**6. Subcontracts.** The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

**7. Contract termination: debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

**8. Compliance with Davis-Bacon and Related Act requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

**9. Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 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 U.S. Department of Labor, or the employees or their representatives.

**10. Certification of eligibility.**

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

**V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT**

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

**1. Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

**2. Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the 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 or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

**3. Withholding for unpaid wages and liquidated damages.** The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys 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 (2.) of this section.

**4. Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

**VI. SUBLETTING OR ASSIGNING THE CONTRACT**

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

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 contracting agency. 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 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased 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 or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;
- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

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 or propose 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 VI 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 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 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 contracting agency has assured that each subcontract is

evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

**VII. SAFETY: ACCIDENT PREVENTION**

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

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 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. 3704).

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.3704).

**VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS**

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

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, Form FHWA-1022 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:

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 under this title or imprisoned not more than 5 years or both."

**IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT**

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

**X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION**

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

**1. Instructions for Certification – First Tier Participants:**

- a. By signing and submitting this proposal, the prospective first tier 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 first tier 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 first tier 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 contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier 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," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first 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 entering into this transaction.

g. The prospective first tier 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 Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

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 is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective 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.

\*\*\*\*\*

**2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:**

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

- (1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;
- (2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment 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;
- (3) 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 (a)(2) of this certification; and
- (4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective 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 Participants:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

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," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

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 exceeding the \$25,000 threshold.

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 is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

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 Participants:**

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 participating in covered transactions 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.

\* \* \* \* \*

**XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING**

This provision is 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 its bid or proposal that the participant 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.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS  
PREFERENCE FOR APPALACHIAN DEVELOPMENT  
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS  
ROAD CONTRACTS**

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

**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

### **Standard Title VI/Non-Discrimination Assurances**

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “contractor”) agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, **Federal Highway Administration**, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.
3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor’s obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.
4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the **Federal Highway Administration** to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the **Federal Highway Administration**, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a contractor’s noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the **Federal Highway Administration** may determine to be appropriate, including, but not limited to:
  - a. withholding payments to the contractor under the contract until the contractor complies; and/or
  - b. cancelling, terminating, or suspending a contract, in whole or in part.
6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the **Federal Highway Administration** may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

### **Standard Title VI/Non-Discrimination Statutes and Authorities**

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “contractor”) agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21;
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 *et seq.*), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.*), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.*), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 -- 12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration’s Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 *et seq.*).

## 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.

General Decision Number: KY160100 11/11/2016 KY100

Superseded General Decision Number: KY20150100

State: Kentucky

Construction Type: Highway

Counties: Anderson, Bath, Bourbon, Boyd, Boyle, Bracken, Breckinridge, Bullitt, Carroll, Carter, Clark, Elliott, Fayette, Fleming, Franklin, Gallatin, Grant, Grayson, Greenup, Hardin, Harrison, Henry, Jefferson, Jessamine, Larue, Lewis, Madison, Marion, Mason, Meade, Mercer, Montgomery, Nelson, Nicholas, Oldham, Owen, Robertson, Rowan, Scott, Shelby, Spencer, Trimble, Washington and Woodford Counties in Kentucky.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.15 for calendar year 2016 applies to all contracts subject to the Davis-Bacon Act for which the solicitation was issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.15 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2016. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Modification Number	Publication Date
0	01/08/2016
1	02/19/2016
2	03/25/2016
3	06/03/2016
4	06/24/2016
5	07/01/2016
6	07/08/2016
7	07/22/2016
8	08/26/2016
9	10/14/2016
10	11/04/2016
11	11/11/2016

BRIN0004-003 06/01/2016

BRECKENRIDGE COUNTY

	Rates	Fringes
BRICKLAYER.....	\$ 25.96	11.38
-----		

BRKY0001-005 06/01/2015

BULLITT, CARROLL, GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE,  
MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, & TRIMBLE  
COUNTIES:

	Rates	Fringes
BRICKLAYER.....	\$ 25.96	10.64

-----  
BRKY0002-006 06/01/2011

BRACKEN, GALLATIN, GRANT, MASON & ROBERTSON COUNTIES:

	Rates	Fringes
BRICKLAYER.....	\$ 26.57	10.26

-----  
BRKY0007-004 06/01/2016

BOYD, CARTER, ELLIOT, FLEMING, GREENUP, LEWIS & ROWAN COUNTIES:

	Rates	Fringes
BRICKLAYER.....	\$ 32.20	18.78

-----  
BRKY0017-004 06/01/2015

ANDERSON, BATH, BOURBON, BOYLE, CLARK, FAYETTE, FRANKLIN,  
HARRISON, JESSAMINE, MADISON, MERCER, MONTGOMERY, NICHOLAS,  
OWEN, SCOTT, WASHINGTON & WOODFORD COUNTIES:

	Rates	Fringes
BRICKLAYER.....	\$ 24.79	11.72

-----  
CARP0064-001 05/01/2015

	Rates	Fringes
CARPENTER.....	\$ 27.50	16.06
Diver.....	\$ 41.63	16.06
PILEDRIVERMAN.....	\$ 27.75	16.06

-----  
ELEC0212-008 06/06/2016

BRACKEN, GALLATIN and GRANT COUNTIES

	Rates	Fringes
ELECTRICIAN.....	\$ 27.47	17.13

-----  
ELEC0212-014 12/01/2014

BRACKEN, GALLATIN & GRANT COUNTIES:

	Rates	Fringes
--	-------	---------

Sound & Communication  
Technician.....\$ 22.75                      10.08

-----  
\* ELEC0317-012 06/01/2016

BOYD, CARTER, ELLIOT & ROWAN COUNTIES:

	Rates	Fringes
ELECTRICIAN (Wiremen)		
Cable Splicer.....	\$ 32.68	18.13
Electrician.....	\$ 33.31	22.98

-----  
ELEC0369-007 06/01/2016

ANDERSON, BATH, BOURBON, BOYLE, BRECKINRIDGE, BULLITT, CARROLL,  
CLARK, FAYETTE, FRAONKLIN, GRAYSON, HARDIN, HARRISON, HENRY,  
JEFFERSON, JESSAMINE, LARUE, MADISON, MARION, MEADE, MERCER,  
MONTGOMERY, NELSON, NICHOLAS, OLDHAM, OWEN, ROBERTSON, SCOTT,  
SHELBY, SPENCER, TRIMBLE, WASHINGTON, & WOODFORD COUNTIES:

	Rates	Fringes
ELECTRICIAN.....	\$ 30.56	16.10

-----  
ELEC0575-002 06/02/2014

FLEMING, GREENUP, LEWIS & MASON COUNTIES:

	Rates	Fringes
ELECTRICIAN.....	\$ 31.70	14.21

-----  
ENGI0181-018 07/01/2016

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1.....	\$ 31.05	14.65
GROUP 2.....	\$ 28.28	14.65
GROUP 3.....	\$ 28.71	14.65
GROUP 4.....	\$ 27.97	14.65

OPERATING ENGINEER CLASSIFICATIONS

GROUP 1 - A-Frame Winch Truck; Auto Patrol; Backfiller;  
Batcher Plant; Bituminous Paver; Bituminous Transfer  
Machine; Boom Cat; Bulldozer; Mechanic; Cableway; Carry-All  
Scoop; Carry Deck Crane; Central Compressor Plant; Cherry  
Picker; Clamshell; Concrete Mixer (21 cu. ft. or Over);  
Concrete Paver; Truck-Mounted Concrete Pump; Core Drill;  
Crane; Crusher Plant; Derrick; Derrick Boat; Ditching &  
Trenching Machine; Dragline; Dredge Operator; Dredge  
Engineer; Elevating Grader & Loaders; Grade-All; Gurrries;  
Heavy Equipment Robotics Operator/Mechanic; High Lift;  
Hoe-Type Machine; Hoist (Two or More Drums); Hoisting  
Engine (Two or More Drums); Horizontal Directional Drill  
Operator; Hydrocrane; Hyster; KeCal Loader; LeTourneau;  
Locomotive; Mechanic; Mechanically Operated Laser Screed;

Mechanic Welder; Mucking Machine; Motor Scraper; Orangepeel Bucket; Overhead Crane; Piledriver; Power Blade; Pumpcrete; Push Dozer; Rock Spreader, attached to equipment; Rotary Drill; Roller (Bituminous); Rough Terrain Crane; Scarifier; Scoopmobile; Shovel; Side Boom; Subgrader; Tailboom; Telescoping Type Forklift; Tow or Push Boat; Tower Crane (French, German & other types); Tractor Shovel; Truck Crane; Tunnel Mining Machines, including Moles, Shields or similar types of Tunnel Mining Equipment

GROUP 2 - Air Compressor (Over 900 cu. ft. per min.); Bituminous Mixer; Boom Type Tamping Machine; Bull Float; Concrete Mixer (Under 21 cu. ft.); Dredge Engineer; Electric Vibrator; Compactor/Self-Propelled Compactor; Elevator (One Drum or Buck Hoist); Elevator (When used to Hoist Building Material); Finish Machine; Firemen & Hoist (One Drum); Flexplane; Forklift (Regardless of Lift Height); Form Grader; Joint Sealing Machine; Outboard Motor Boat; Power Sweeper (Riding Type); Roller (Rock); Ross Carrier; Skid Mounted or Trailer Mounted Concrete Pump; Skid Steer Machine with all Attachments; Switchman or Brakeman; Throttle Valve Person; Tractair & Road Widening Trencher; Tractor (50 H.P. or Over); Truck Crane Oiler; Tugger; Welding Machine; Well Points; & Whirley Oiler

GROUP 3 - All Off Road Material Handling Equipment, including Articulating Dump Trucks; Greaser on Grease Facilities servicing Heavy Equipment

GROUP 4 - Bituminous Distributor; Burlap & Curing Machine; Cement Gun; Concrete Saw; Conveyor; Deckhand Oiler; Grout Pump; Hydraulic Post Driver; Hydro Seeder; Mud Jack; Oiler; Paving Joint Machine; Power Form Handling Equipment; Pump; Roller (Earth); Steerman; Tamping Machine; Tractor (Under 50 H.P.); & Vibrator

CRANES - with booms 150 ft. & Over (Including JIB), and where the length of the boom in combination with the length of the piling leads equals or exceeds 150 ft. - \$1.00 over Group 1 rate

EMPLOYEES ASSIGNED TO WORK BELOW GROUND LEVEL ARE TO BE PAID 10% ABOVE BASIC WAGE RATE. THIS DOES NOT APPLY TO OPEN CUT WORK.

-----  
IRON0044-009 06/01/2015

BRACKEN, GALLATIN, GRANT, HARRISON, ROBERTSON,  
BOURBON (Northern third, including Townships of Jackson, Millersburg, Ruddel Mills & Shawhan);  
CARROLL (Eastern third, including the Township of Ghent);  
FLEMING (Western part, excluding Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton, Pecksridge, Plummers Landing, Plummers Mill, Poplar Plains, Ringos Mills, Tilton & Wallingford);  
MASON (Western two-thirds, including Townships of Dover, Lewisburg, Mays Lick, Maysville, Minerva, Moranburg, Murphysville, Ripley, Sardis, Shannon, South Ripley &

Washington);  
 NICHOLAS (Townships of Barefoot, Barterville, Carlisle, Ellisville, Headquarters, Henryville, Morningglory, Myers & Oakland Mills);  
 OWEN (Townships of Beechwood, Bromley, Fairbanks, Holbrook, Jonesville, Long Ridge, Lusby's Mill, New, New Columbus, New Liberty, Owenton, Poplar Grove, Rockdale, Sanders, Teresita & Wheatley);  
 SCOTT (Northern two-thirds, including Townships of Biddle, Davis, Delaplain, Elmville, Longlick, Muddy Ford, Oxford, Rogers Gap, Sadieville, Skinnersburg & Stonewall)

	Rates	Fringes
IRONWORKER		
Fence Erector.....	\$ 23.76	19.15
Structural.....	\$ 26.40	19.15

-----  
 IRON0070-006 06/01/2016

ANDERSON, BOYLE, BRECKINRIDGE, BULLITT, FAYETTE, FRANKLIN, GRAYSON, HARDIN, HENRY, JEFFERSON, JESSAMINE, LARUE, MADISON, MARION, MEADE, MERCER, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE, WASHINGTON & WOODFORD  
 BOURBON (Southern two-thirds, including Townships of Austerlity, Centerville, Clintonville, Elizabeth, Hutchison, Littlerock, North Middletown & Paris);  
 CARROLL (Western two-thirds, including Townships of Carrollton, Easterday, English, Locust, Louis, Prestonville & Worthville);  
 CLARK (Western two-thirds, including Townships of Becknerville, Flanagan, Ford, Pine Grove, Winchester & Wyandotte);  
 OWEN (Eastern eighth, including Townships of Glenmary, Gratz, Monterey, Perry Park & Tacketts Mill);  
 SCOTT (Southern third, including Townships of Georgetown, Great Crossing, Newtown, Stampling Ground & Woodlake);

	Rates	Fringes
IRONWORKER.....	\$ 27.91	21.11

-----  
 IRON0372-006 06/15/2015

BRACKEN, GALLATIN, GRANT, HARRISON and ROBERTSON  
 BOURBON (Northern third, including Townships of Jackson, Millersburg, Ruddel Mills & Shawhan);  
 CARROLL (Eastern third, including the Township of Ghent);  
 FLEMING (Western part, Excluding Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton, Pecksridge, Plummers Landing, Plummers Mill, Poplar Plains, Ringos Mills, Tilton & Wallingford);  
 MASON (Western two-thirds, including Townships of Dover, Lewisburg, Mays Lick, Maysville, Minerva, Moranburg, Murphysville, Ripley, Sardis, Shannon, South Ripley & Washington);  
 NICHOLAS (Townships of Barefoot, Barterville, Carlisle, Ellisville, Headquarters, Henryville, Morningglory, Myers &

Oakland Mills);

OWEN (Townships of Beechwood, Bromley, Fairbanks, Holbrook, Jonesville, Long Ridge, Lusby's Mill, New, New Columbus, New Liberty, Owenton, Poplar Grove, Rockdale, Sanders, Teresita & Wheatley);

SCOTT (Northern two-thirds, including Townships of Biddle, Davis, Delaplain, Elmville, Longlick, Muddy Ford, Oxford, Rogers Gap, Sadieville, Skinnersburg & Stonewall) COUNTIES

	Rates	Fringes
IRONWORKER, REINFORCING.....	\$ 27.00	19.00

-----  
IRON0769-007 06/01/2016

BATH, BOYD, CARTER, ELLIOTT, GREENUP, LEWIS, MONTGOMERY & ROWAN CLARK (Eastern third, including townships of Bloomingdale, Hunt, Indian Fields, Kiddville, Loglick, Rightangele & Thomson); FLEMING (Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton, Pecksridge, Plummers Landing, Plummers Mill, Poplar Plains, Ringos Mills, Tilton & Wallingford); MASON (Eastern third, including Townships of Helena, Marshall, Orangeburg, Plumville & Springdale); NICHOLAS (Eastern eighth, including the Township of Moorefield Sprout)

	Rates	Fringes
IRONWORKER		
ZONE 1.....	\$ 31.33	23.47
ZONE 2.....	\$ 31.73	23.47
ZONE 3.....	\$ 33.33	23.47

ZONE 1 - Up to 10 mile radius of Union Hall, Ashland, Ky.,  
1643 Greenup Ave.

ZONE 2 - 10 to 50 mile radius of Union Hall, Ashland, Ky.,  
1643 Greenup Ave.

ZONE 3 - 50 mile radius & over of Union Hall, Ashland, Ky.,  
1643 Greenup Ave.

-----  
LABO0189-003 07/01/2016

BATH, BOURBON, BOYD, BOYLE, BRACKEN, CARTER, CLARK, ELLIOTT, FAYETTE, FLEMING, FRANKLIN, GALLATIN, GRANT, GREENUP, HARRISON, JESSAMINE, LEWIS, MADISON, MASON, MERCER, MONTGOMERY, NICHOLAS, OWEN, ROBERTSON, ROWAN, SCOTT, & WOOLFORD COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1.....	\$ 22.75	12.84
GROUP 2.....	\$ 23.00	12.84

GROUP 3.....	\$ 23.05	12.84
GROUP 4.....	\$ 23.65	12.84

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 Drillers (All Types); Powdermen & Blasters; Troxler & Concrete Tester if Laborer is Utilized

-----  
LABO0189-008 07/01/2014

ANDERSON, BULLITT, CARROLL, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE & WASHINGTON COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1.....	\$ 22.71	11.05
GROUP 2.....	\$ 22.96	11.05
GROUP 3.....	\$ 23.01	11.05
GROUP 4.....	\$ 23.61	11.05

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 Drillers (All Types); Powdermen & Blasters; Troxler & Concrete Tester if Laborer is Utilized

-----  
LABO0189-009 07/01/2014

BRECKINRIDGE & GRAYSON COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1.....	\$ 22.66	11.10
GROUP 2.....	\$ 22.91	11.10
GROUP 3.....	\$ 22.96	11.10
GROUP 4.....	\$ 23.56	11.10

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 Drillers (All Types); Powdermen &  
Blasters; Troxler & Concrete Tester if Laborer is Utilized

-----  
PAIN0012-005 06/11/2005

BATH, BOURBON, BOYLE, CLARK, FAYETTE, FLEMING, FRANKLIN,  
HARRISON, JESSAMINE, MADISON, MERCER, MONTGOMERY, NICHOLAS,  
ROBERTSON, SCOTT & WOODFORD COUNTIES:

	Rates	Fringes
PAINTER		
Bridge/Equipment Tender and/or Containment Builder..	\$ 18.90	5.90
Brush & Roller.....	\$ 21.30	5.90
Elevated Tanks; Steeplejack Work; Bridge & Lead Abatement.....	\$ 22.30	5.90
Sandblasting & Waterblasting.....	\$ 22.05	5.90
Spray.....	\$ 21.80	5.90

-----  
PAIN0012-017 05/01/2015

BRACKEN, GALLATIN, GRANT, MASON & OWEN COUNTIES:

	Rates	Fringes
PAINTER (Heavy & Highway		

Bridges - Guardrails -  
Lightpoles - Striping)

Bridge Equipment Tender and Containment Builder.....	\$ 20.73	9.06
Brush & Roller.....	\$ 23.39	9.06
Elevated Tanks; Steeplejack Work; Bridge & Lead Abatement.....	\$ 24.39	9.06
Sandblasting & Water Blasting.....	\$ 24.14	9.06
Spray.....	\$ 23.89	9.06

-----  
PAIN0118-004 06/01/2014

ANDERSON, BRECKINRIDGE, BULLITT, CARROLL, GRAYSON, HARDIN,  
HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY,  
SPENCER, TRIMBLE & WASHINGTON COUNTIES:

	Rates	Fringes
PAINTER		
Brush & Roller.....	\$ 18.50	11.97
Spray, Sandblast, Power Tools, Waterblast & Steam Cleaning.....	\$ 19.50	11.97

-----  
PAIN1072-003 12/01/2015

BOYD, CARTER, ELLIOTT, GREENUP, LEWIS and ROWAN COUNTIES

	Rates	Fringes
Painters:.....	\$ 29.39	14.27
Bridges; Locks; Dams; Tension Towers & Energized Substations.....	\$ 31.83	15.30
Power Generating Facilities.....	\$ 28.59	15.30

-----  
PLUM0248-003 06/01/2016

BOYD, CARTER, ELLIOTT, GREENUP, LEWIS & ROWAN COUNTIES:

	Rates	Fringes
Plumber and Steamfitter.....	\$ 30.00	24.05

-----  
PLUM0392-007 06/01/2014

BRACKEN, CARROLL (Eastern Half), GALLATIN, GRANT, MASON, OWEN &  
ROBERTSON COUNTIES:

	Rates	Fringes
Plumbers and Pipefitters.....	\$ 29.80	17.79

-----  
PLUM0502-003 08/01/2016

BRECKINRIDGE, BULLITT, CARROLL (Western Half), FRANKLIN

(Western three-fourths), GRAYSON, HARDIN, HENRY, JEFFERSON,  
LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE &  
WASHINGTON COUNTIES

	Rates	Fringes
PLUMBER.....	\$ 32.00	20.13
-----		
SUKY2010-160 10/08/2001		

	Rates	Fringes
Truck drivers:		
GROUP 1.....	\$ 16.57	7.34
GROUP 2.....	\$ 16.68	7.34
GROUP 3.....	\$ 16.86	7.34
GROUP 4.....	\$ 16.96	7.34

TRUCK DRIVER CLASSIFICATIONS

GROUP 1 - Mobile Batch Truck Tender

GROUP 2 - Greaser; Tire Changer; & Mechanic Tender

GROUP 3 - Single Axle Dump; Flatbed; Semi-trailer or Pole  
Trailer when used to pull building materials and equipment;  
Tandem Axle Dump; Distributor; Mixer; & Truck Mechanic

GROUP 4 - Euclid & Other Heavy Earthmoving Equipment &  
Lowboy; Articulator Cat; 5-Axle Vehicle; Winch & A-Frame  
when used in transporting materials; Ross Carrier; Forklift  
when used to transport building materials; & Pavement  
Breaker

-----  
WELDERS - Receive rate prescribed for craft performing  
operation to which welding is incidental.

=====  
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 a union rate (current union negotiated rate for local),  
a survey rate (weighted average rate) or a union average rate  
(weighted union average rate).

#### Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 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. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

#### Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

#### Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

-----  
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.  
=====

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-16-III- HWY dated July 1, 2016.

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.**

Director  
Division of Construction Procurement  
Frankfort, Kentucky 40622  
502-564-3500

**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:

<b>GOALS FOR MINORITY PARTICIPATION IN EACH TRADE</b>	<b>GOALS FOR FEMALE PARTICIPATION IN EACH TRADE</b>
10.8%	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 Clark 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**

### PROPOSAL BID ITEMS

161060

Page 1 of 4

Report Date 11/16/16

#### Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00001		DGA BASE	6,699.00	TON		\$	
0020	00100		ASPHALT SEAL AGGREGATE	464.00	TON		\$	
0030	00103		ASPHALT SEAL COAT	57.00	TON		\$	
0040	00194		LEVELING & WEDGING PG76-22	1,000.00	TON		\$	
0050	00205		CL3 ASPH BASE 1.50D PG64-22	2,233.00	TON		\$	
0060	00216		CL3 ASPH BASE 1.00D PG76-22	1,592.00	TON		\$	
0070	00301		CL2 ASPH SURF 0.38D PG64-22	4,063.00	TON		\$	
0080	00336		CL3 ASPH SURF 0.38A PG76-22	11,581.00	TON		\$	
0090	02676		MOBILIZATION FOR MILL & TEXT	1.00	LS		\$	
0100	02677		ASPHALT PAVE MILLING & TEXTURING	18,426.00	TON		\$	
0110	02696		SHOULDER RUMBLE STRIPS-SAWED	109,769.00	LF		\$	
0120	20757ED		PAVEMENT REPAIR	421.00	SQYD		\$	
0130	24781EC		INTELLIGENT COMPACTION FOR ASPHALT	20,469.00	TON		\$	

#### Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0270	00078		CRUSHED AGGREGATE SIZE NO 2	18,911.00	TON		\$	
0280	01982		DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE	25.00	EACH		\$	
0290	01983		DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL YELLOW	15.00	EACH		\$	
0300	01984		DELINEATOR FOR BARRIER - WHITE	15.00	EACH		\$	
0310	01985		DELINEATOR FOR BARRIER - YELLOW	15.00	EACH		\$	
0320	02003		RELOCATE TEMP CONC BARRIER	3,080.00	LF		\$	
0330	02200		ROADWAY EXCAVATION	14,400.00	CUYD		\$	
0340	02262		FENCE-WOVEN WIRE TYPE 1	54,634.00	LF		\$	
0350	02265		REMOVE FENCE	54,634.00	LF		\$	
0360	02352		GUARDRAIL-STEEL W BEAM-D FACE	275.00	LF		\$	
0370	02360		GUARDRAIL TERMINAL SECTION NO 1	2.00	EACH		\$	
0380	02363		GUARDRAIL CONNECTOR TO BRIDGE END TY A	4.00	EACH		\$	
0390	02365		CRASH CUSHION TYPE IX-A	3.00	EACH		\$	
0400	02367		GUARDRAIL END TREATMENT TYPE 1	1.00	EACH		\$	
0410	02369		GUARDRAIL END TREATMENT TYPE 2A	5.00	EACH		\$	
0420	02373		GUARDRAIL END TREATMENT TYPE 3	1.00	EACH		\$	
0430	02381		REMOVE GUARDRAIL	487.50	LF		\$	
0440	02383		REMOVE & RESET GUARDRAIL	2,400.00	LF		\$	
0450	02387		GUARDRAIL CONNECTOR TO BRIDGE END TY A-1	4.00	EACH		\$	
0460	02562		TEMPORARY SIGNS	1,000.00	SQFT		\$	
0470	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		\$	
0480	02671		PORTABLE CHANGEABLE MESSAGE SIGN	4.00	EACH		\$	
0490	02714		SHOULDERING	16,366.00	LF		\$	
0500	02775		ARROW PANEL	4.00	EACH		\$	
0510	06401		FLEXIBLE DELINEATOR POST-M/W	295.00	EACH		\$	
0520	06404		FLEXIBLE DELINEATOR POST-M/Y	129.00	EACH		\$	

**PROPOSAL BID ITEMS**

161060

Page 2 of 4

Report Date 11/16/16

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0530	06412		STEEL POST MILE MARKERS	10.00	EACH		\$	
0540	06511		PAVE STRIPING-TEMP PAINT-6 IN	108,204.00	LF		\$	
0550	06549		PAVE STRIPING-TEMP REM TAPE-B	5,000.00	LF		\$	
0560	06551		PAVE STRIPING-TEMP REM TAPE-Y	5,000.00	LF		\$	
0570	06556		PAVE STRIPING-DUR TY 1-6 IN W	1,477.00	LF		\$	
0580	06557		PAVE STRIPING-DUR TY 1-6 IN Y	1,251.00	LF		\$	
0590	06569		PAVE MARKING-THERMO CROSS-HATCH	2,488.00	SQFT		\$	
0600	08903		CRASH CUSHION TY VI CLASS BT TL3	6.00	EACH		\$	
0610	10020NS		FUEL ADJUSTMENT	31,861.00	DOLL	\$1.00	\$	\$31,861.00
0620	10030NS		ASPHALT ADJUSTMENT	80,025.00	DOLL	\$1.00	\$	\$80,025.00
0630	20071EC		JOINT ADHESIVE	107,506.00	LF		\$	
0640	20432ES112		REMOVE CRASH CUSHION	3.00	EACH		\$	
0650	20471ES509		TEMP CONC MED BARRIER	3,080.00	LF		\$	
0660	21533EN		EMBANKMENT	25.00	CUYD		\$	
0670	21802EN		G/R STEEL W BEAM-S FACE (7 FT POST)	862.50	LF		\$	
0680	23143ED		KPDES PERMIT AND TEMP EROSION CONTROL	1.00	LS		\$	
0690	24189ER		DURABLE WATERBORNE MARKING-6 IN W	66,330.00	LF		\$	
0700	24190ER		DURABLE WATERBORNE MARKING-6 IN Y	53,732.00	LF		\$	
0710	24489EC		INLAID PAVEMENT MARKER	624.00	EACH		\$	

**Section: 0003 - DRAINAGE**

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0720	00461		CULVERT PIPE-15 IN	4.00	LF		\$	
0730	00462		CULVERT PIPE-18 IN	62.00	LF		\$	
0740	01001		PERFORATED PIPE-6 IN	120.00	LF		\$	
0750	01011		NON-PERFORATED PIPE-6 IN	80.00	LF		\$	
0760	01021		PERF PIPE HEADWALL TY 1-6 IN	8.00	EACH		\$	
0770	01202		PIPE CULVERT HEADWALL-15 IN	1.00	EACH		\$	
0780	01204		PIPE CULVERT HEADWALL-18 IN	2.00	EACH		\$	
0790	01371		METAL END SECTION TY 1-18 IN	2.00	EACH		\$	
0800	01456		CURB BOX INLET TYPE A	3.00	EACH		\$	
0810	01480		CURB BOX INLET TYPE B	1.00	EACH		\$	
0820	02220		FLOWABLE FILL	11.00	CUYD		\$	
0830	02223		GRANULAR EMBANKMENT	10.00	CUYD		\$	
0840	02237		DITCHING	25,951.00	LF		\$	
0850	02483		CHANNEL LINING CLASS II	80.00	TON		\$	
0860	02484		CHANNEL LINING CLASS III	25.00	TON		\$	
0870	02599		FABRIC-GEOTEXTILE TYPE IV	2,029.00	SQYD		\$	
0880	03262		CLEAN PIPE STRUCTURE	2.00	EACH		\$	
0890	05950		EROSION CONTROL BLANKET	1,735.00	SQYD		\$	
0900	08100		CONCRETE-CLASS A	10.00	CUYD		\$	
0910	20366NN		REPLACE GRATE	5.00	EACH		\$	

**Section: 0004 - BRIDGE-MT. PARKWAY OVER I-64**

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
------	----------	-----	-------------	----------	------	-----------	----	--------

### PROPOSAL BID ITEMS

161060

Page 3 of 4

Report Date 11/16/16

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0920	02220		FLOWABLE FILL	3.00	CUYD		\$	
0930	02383		REMOVE & RESET GUARDRAIL	688.00	LF		\$	
0940	03298		EXPAN JOINT REPLACE 4 IN	143.00	LF		\$	
0950	03299		ARMORED EDGE FOR CONCRETE	72.00	LF		\$	
0960	03300		ELIMINATE TRANSVERSE JOINT	24.00	LF		\$	
0970	08504		EPOXY SAND SLURRY	96.00	SQYD		\$	
0980	08534		CONCRETE OVERLAY-LATEX	38.00	CUYD		\$	
0990	08550		HYDRODEMOLITION	904.00	SQYD		\$	
1000	21969NN		BEARING REPLACEMENT	8.00	EACH		\$	
1010	24094EC		PARTIAL DEPTH PATCHING	6.00	CUYD		\$	

#### Section: 0005 - BRIDGE-MT. PARKWAY OVER MORRIS RD.(L)

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1020	08020		CRUSHED AGGREGATE SLOPE PROT	6.00	TON		\$	
1030	24093EC		BEAM REPAIR	7.00	EACH		\$	

#### Section: 0006 - BRIDGE-MT. PARKWAY OVER MORRIS RD.(R)

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1040	08020		CRUSHED AGGREGATE SLOPE PROT	4.00	TON		\$	
1050	24093EC		BEAM REPAIR	6.00	EACH		\$	

#### Section: 0007 - BRIDGE-MT. PARKWAY OVER OLD RR BED (L)

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1060	03298		EXPAN JOINT REPLACE 4 IN	41.00	LF		\$	
1070	03300		ELIMINATE TRANSVERSE JOINT	175.00	LF		\$	
1080	08019		CYCLOPEAN STONE RIP RAP	7.00	TON		\$	
1090	22146EN		CONCRETE PATCHING REPAIR	306.00	SQFT		\$	
1100	24093EC		BEAM REPAIR	15.00	EACH		\$	

#### Section: 0008 - BRIDGE-MT. PARKWAY OVER OLD RR BED (R)

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1110	03298		EXPAN JOINT REPLACE 4 IN	41.00	LF		\$	
1120	03300		ELIMINATE TRANSVERSE JOINT	144.00	LF		\$	
1130	08019		CYCLOPEAN STONE RIP RAP	9.00	TON		\$	
1140	22146EN		CONCRETE PATCHING REPAIR	115.00	SQFT		\$	
1150	24093EC		BEAM REPAIR	12.00	EACH		\$	

#### Section: 0009 - BRIDGE-MT. PARKWAY OVER STONER-EPHESUS RD. (L)

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
------	----------	-----	-------------	----------	------	-----------	----	--------

**PROPOSAL BID ITEMS**

161060

Page 4 of 4

Report Date 11/16/16

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1160	03299		ARMORED EDGE FOR CONCRETE	60.00	LF		\$	
1170	03300		ELIMINATE TRANSVERSE JOINT	60.00	LF		\$	
1180	08504		EPOXY SAND SLURRY	45.00	SQYD		\$	
1190	08534		CONCRETE OVERLAY-LATEX	22.00	CUYD		\$	
1200	08550		HYDRODEMOLITION	517.00	SQYD		\$	
1210	22146EN		CONCRETE PATCHING REPAIR	327.00	SQFT		\$	
1220	24093EC		BEAM REPAIR	7.00	EACH		\$	
1230	24094EC		PARTIAL DEPTH PATCHING	4.00	CUYD		\$	

**Section: 0010 - BRIDGE-MT. PARKWAY OVER STONER-EPHESUS RD. (R)**

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0140	03299		ARMORED EDGE FOR CONCRETE	60.00	LF		\$	
0150	03300		ELIMINATE TRANSVERSE JOINT	60.00	LF		\$	
0160	08504		EPOXY SAND SLURRY	45.00	SQYD		\$	
0170	08534		CONCRETE OVERLAY-LATEX	22.00	CUYD		\$	
0180	08550		HYDRODEMOLITION	517.00	SQYD		\$	
0190	22146EN		CONCRETE PATCHING REPAIR	221.00	SQFT		\$	
0200	24093EC		BEAM REPAIR	9.00	EACH		\$	
0210	24094EC		PARTIAL DEPTH PATCHING	4.00	CUYD		\$	

**Section: 0011 - TRAFFIC LOOPS**

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0220	04829		PIEZOELECTRIC SENSOR	8.00	EACH		\$	
0230	04830		LOOP WIRE	2,900.00	LF		\$	
0240	04895		LOOP SAW SLOT AND FILL	400.00	LF		\$	

**Section: 0012 - DEMOBILIZATION &/OR MOBILIZATION**

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0250	02568		MOBILIZATION	1.00	LS		\$	
0260	02569		DEMOBILIZATION	1.00	LS		\$	