CALL NO. 403

CONTRACT ID. 112605

BRACKEN - CAMPBELL - OWEN COUNTIES

FED/STATE PROJECT NUMBER 121GR11M117-FE02

DESCRIPTION VARIOUS LOCATIONS IN DISTRICT 6

WORK TYPE BRIDGE DECK RESTORATION & WATERPROOFING

PRIMARY COMPLETION DATE 11/15/2012

LETTING DATE: December 9, 2011

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN STANDARD TIME December 9, 2011. Bids will be publicly announced at 10:00 AM EASTERN STANDARD TIME.

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

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PART I

SCOPE OF WORK

CONTRACT ID - 112605 ADMINISTRATIVE DISTRICT - 06

PROJECT(S) IDENTIFICATION AND DESCRIPTION:

COUNTY - BRACKEN, CAMPBELL, OWEN
121GR11M117-FE02 VARIOUS LOCATIONS IN DISTRICT 6

COUNTY - BRACKEN PES - MB01200081101
FE02 012 0008 B00008N
KY 8 (MP 13.960) BRIDGE OVER BIG BRACKEN CREEK EAST AT JCT WITH KY 435. BRIDGE DECK RESTORATION & WATERPROOFING.
GEOGRAPHIC COORDINATES LATITUDE 38^46'16" LONGITUDE 83^59'32"

COUNTY - CAMPBELL PES - MB01970841101
FE02 019 7084 B00032N
CS 7084 (MP 0.710) BRIDGE OVER KY 1988 0.7 MILE EAST OF JCT US 27. BRIDGE DECK RESTORATION & WATERPROOFING.
GEOGRAPHIC COORDINATES LATITUDE 39^01'55" LONGITUDE 84^26'19"

COUNTY - OWEN PES - MB09403301101
FE02 094 0330 B00003N
KY 330 (MP 5.405) BRIDGE OVER EAGLE CREEK AT LUSBYS MILL 0.05 MILE EAST OF JCT KY 845. BRIDGE DECK RESTORATION & WATERPROOFING.
GEOGRAPHIC COORDINATES LATITUDE 38^31'52" LONGITUDE 84^43'09"

COUNTY - OWEN PES - MB09417611101
FE02 094 1761 B00026N
KY 1761 (MP 4.526) BRIDGE OVER BIG TWIN CREEK 4.4 MILE NORTHWEST OF JCT KY 22. BRIDGE DECK RESTORATION & WATERPROOFING.
GEOGRAPHIC COORDINATES LATITUDE 38^34'19" LONGITUDE 84^54'13"

COMPLETION DATE(S):

COMPLETION DATE - November 15, 2012
APPLIES TO ENTIRE CONTRACT

30 CALENDAR DAYS
APPLIES TO B00008N

30 CALENDAR DAYS
APPLIES TO B00032N

30 CALENDAR DAYS
APPLIES TO B00003N

30 CALENDAR DAYS
APPLIES TO B00026N

CONTRACT NOTES

PROPOSAL ADDENDA

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

BID SUBMITTAL

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

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

JOINT VENTURE BIDDING

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

UNDERGROUND FACILITY DAMAGE PROTECTION

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

REGISTRATION WITH THE SECRETARY OF STATE BY A FOREIGN ENTITY

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

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

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

SPECIAL NOTE FOR PROJECT QUESTIONS DURING ADVERTISEMENT

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

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

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

ACCESS TO RECORDS

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

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

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

10/18/2011

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

Steven L. Beshear
Governor

Lori H. Flanery
Secretary

SECRETARY'S ORDER 11-004

FINANCE AND ADMINISTRATION CABINET

Vendor Document Disclosure

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

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

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

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

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

II. Upon the request of an Executive Branch agency, the FAC shall formally review any situation where the agency has requested documents that the agency deems necessary to

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

III. Upon receipt of a request by a state agency pursuant to Sections I & II, the FAC shall consider the request from the Executive Branch agency and the position of the vendor or party opposing the disclosure of the documents, applying any and all relevant law to the facts and circumstances of the matter in controversy. After FAC's review is complete, FAC shall issue a Determination which sets out FAC's position as to what documents and/or records, if any, should be disclosed to the requesting agency. The Determination shall be issued within 30 days of receipt of the request from the agency. This time period may be extended for good cause.

IV. If the Determination concludes that documents are being wrongfully withheld by the private vendor or other party opposing the disclosure from the state agency, the private vendor shall immediately comply with the FAC's Determination. Should the private vendor or other party refuse to comply with FAC's Determination, then the FAC, in concert with the requesting agency, shall effectuate any and all options that it possesses to obtain the documents in question, including, but not limited to, jointly initiating an action in the appropriate court for relief.

V. Any provisions of any prior Order that conflicts with the provisions of this Order shall be deemed null and void.

SPECIAL NOTE FOR RECIPROCAL PREFERENCE

Reciprocal preference to be given by public agencies to resident bidders

By reference, KRS 45A.490 to 45A.494 are incorporated herein and in compliance regarding the bidders residency. Bidders who want to claim resident bidder status should complete the Affidavit for Claiming Resident Bidder Status along with their bid in the Expedite Bidding Program. Submittal of the Affidavit should be done along with the bid in Bid Express.

SPECIAL NOTE FOR BRIDGE RESTORATION AND WATERPROOFING WITH CONCRETE OVERLAYS

I. DESCRIPTION. Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2008 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, 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; (7) Maintain and control traffic; and (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. Bituminous Asphalt. Use Class 4 Asphalt Surface 0.50A PG76-22.

D. Epoxy-Sand Slurry. See Section 606.03.10.

III. CONSTRUCTION.

A. Machine prep of existing slab. For 019B00032N, remove concrete from existing slab to a depth of at least ¼" below the existing surface, and remove all patches completely, in accordance with the requirements of Section 606.03.03. See Special Note for Use of Hydrodemolition Method.

B. Remove Existing Overlay. In addition to Section 606.03.03, totally remove the existing concrete overlay for 012B00008N, 094B00003N and 094B00026N by milling. See Special Note for Use of Hydrodemolition Method.

C. 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. No wrecking balls, drop hammers, or rig-mounted breakers are allowed. 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.

D. Asphalt Approach Pavement. Mill each existing asphalt approach for a distance of 50' for 012B00008N, 094B00003N and 094B00026N, and 100' for 019B00032N, from the bridge ends. Remove the bituminous material uniformly by making an edge key, so as to provide a smooth transition to the finished bridge when a new bituminous overlay of compacted depth of approximately 1½" is added to the approaches. The

grinding depth may vary depending of the condition of the existing approach and final elevation of bridge end. Dispose of all removed material away from the site.

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 (1 1/2 inches thick). The Department will measure the quantity in cubic yards using the theoretical volume as follows for each bridge:

012B00008N	**(159'x26'x1.50")**	**=**	**19.1 cuyd**
019B00032N	**(171'x30'x1.50")**	**=**	**23.8 cuyd**
094B00003N	**(279'x20'x1.50")**	**=**	**25.8 cuyd**
094B00026N	**(144'x24'x2")**	**=**	**21.3 cuyd**

B. Latex Modified Concrete for Partial Depth Patching and 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. Machine Prep of Slab. The Department will measure the machine preparation of the existing bridge deck for 019B00032N in square yards, which shall include all labor, equipment, and material needed to complete this work.

D. Remove Existing Overlay. The Department will measure the removal of the existing overlay for 012B00008N, 094B00003N and 094B00026N in square yards, which shall include all labor, equipment, and material needed to complete this work.

E. Steel Reinforcement. The Department will measure any 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.

F. Asphalt Approach Pavement. The Department will measure the quantity in square yards, 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 (1 1/2 inches thick). 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. 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. Machine Prep of Slab. The Department will make payment for the machine prep of existing slab for 019B00032N, under bid item #08510 "MACHINE PREP OF SLAB". Payment will be for the square yard complete.

D. Remove Existing Overlay. The Department will make payment for the removal of the existing overlay for 012B00008N, 094B00003N and 094B00026N under the bid item #08510 "REM EPOXY BIT FOREIGN OVERLAY". Payment will be for the square yard complete.

E. Steel Reinforcement. The Department will make payment for steel reinforcement, if necessary, under bid item #08150 “STEEL REINFORCEMENT”. Payment will be at the unit price per pound.

F. Asphalt Approach Pavement. The Department will make payment for the completed and accepted quantity of this work under the bid item #03304 “BRIDGE OVERLAY APPROACH PAVEMENT”.

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

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

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

2. MATERIALS.

- **A. Class "M" Concrete.** Use either "M1" or "M2". See Section 601.
- **B. Structural Steel.** Use new, commercial grade steel suitable for welding. The Engineer will base acceptance on visual inspection. See Standard Drawing BJE-001, current edition.
- **C. Stud Anchors.** The armored edge stud anchors are ¾" x 6" embedded stud shear connectors conforming to ASTM A108, Grade 1015 (Nelson Studs or equal).
- **D. Steel Reinforcement.** Use Grade 60. See Section 602.
- **E. Epoxy Bond Coat.** See Section 511.
- **F. Neoprene Joint Sealers (Compression Seals).** See Section 807.

3. EQUIPMENT.

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

4. CONSTRUCTION.

- **A. Remove Existing Materials.** Remove existing Expansion Dam, Bridge End, Armored Edges and specified areas of concrete as shown on the attached sketches. Remove debris and/or expansion joint filler as directed by the Engineer. . Clean and leave all existing steel reinforcement encountered in place. Damaged steel reinforcement will be repaired/replaced as directed by the Engineer at no additional cost to the Department.
  Dispose of all removed material entirely away from the job site. This work is incidental to the contract unit price for "Expansion Joint Replacement" or "Armored Edge for Concrete".
- **B. Place New Concrete and Armored Edges.** After all specified existing materials have been removed; place new armored edges to match the grade of the proposed overlay or to match the original grade (See attached detail drawings). Place the new Class "M" concrete to the scarified grade and finish to receive the new overlay or

place the new Class “M” concrete to the original grade and finish with broom strokes drawn transversely from curb to curb.

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

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

C. Additional Steel Reinforcement. Furnish for replacement, as directed by the Engineer, 5600 linear feet of #4 steel reinforcing bars in 20’ lengths. Place these bars in areas deemed by the Engineer to require additional reinforcement. Field cutting and bending is permitted. Do not place any additional steel reinforcement above the height of the top row of Nelson Studs on the armored edges. Ensure that all exposed steel reinforcement is tied in accordance with Section 602.03.04 prior to pouring the new Class “M” concrete. Deliver unused bars to the Local County Maintenance Barn. Payment will be made in accordance with Section 602.

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

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

F. Shop Plans. Shop plans will <u>not</u> 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 – 1½”, 2”. The Department will measure the quantity in linear feet from gutterline to gutterline along the centerline of the joint.

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

C. Steel Reinforcement. See Section 602.

V. PAYMENT.

A. Expansion Joint Replacement – 1½", 2". Payment at the contract unit price per linear foot is full compensation for removing specified existing materials, furnishing and installing the new armored edges, concrete, neoprene joint seal, and all incidental items necessary to complete the work (except the overlay material) within the specified pay limits as specified by this note and as shown on the attached detail drawings.

B. Armored Edge for Concrete. Payment at the contract unit price per linear foot is full compensation for removing specified existing materials, furnishing and installing

the new armored edges, concrete and all incidental items necessary to complete the work (except the overlay material) within the specified pay limits as specified by this note and as shown on the attached detail drawings.

C. Steel Reinforcement. See Section 602.

SPECIAL NOTE FOR ELIMINATING TRANSVERSE JOINTS ON BRIDGES

This Special Note will apply where indicated on the plans or in the proposal. Section references herein are to the Department's 2008 Standard Specifications for Road and Bridge Construction.

1.0. DESCRIPTION. Remove existing concrete and existing joint material to eliminate the transverse joint. Install additional reinforcing steel and place concrete.

2.0 MATERIALS.

- **A. Class "M" Concrete.** Use either "M1" or "M2". See Section 601.
- **B. Steel Reinforcement.** Use Grade 60. See Section 602.
- **C. Epoxy Bond Coat.** See Section 511.

3.0 EQUIPMENT.

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

4.0 CONSTRUCTION.

- **A. Remove Existing Materials.** Remove the existing transverse joints, joint filler, and specified areas of concrete as shown on the plans or as directed by the Engineer. Clean and leave all existing steel reinforcement encountered in place. Damaged steel reinforcement will be repaired/replaced as directed by the Engineer at no additional cost to the Department.
  Dispose of all removed material entirely away from the job site. This work is incidental to the contract unit price for "Eliminate Transverse Joint".
- **B. Additional Steel Reinforcement.** Furnish for this work steel reinforcing bars as shown on the plans. Splice these bars to the existing longitudinal reinforcement in the deck and curb/sidewalk in the areas of removed concrete to tie the slabs together as shown on the plans. Ensure that all exposed steel reinforcement is tied in accordance with Section 602.03.04 prior to pouring the new Class "M" concrete.
- **C. Place New Concrete.** 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.
  Place new Class "M" Concrete to the specified grade and finish to receive the new overlay or as shown on the plans. On the sidewalk and curb, place the new concrete to original grade and finish to match the existing curb/sidewalk.

5.0 MEASUREMENT.

A. Eliminate Transverse Joint. The Department will measure the quantity in linear feet from plinth to plinth perpendicular to the centerline of the bridge.

B. Steel Reinforcement. See Section 602.

6.0 PAYMENT.

A. Eliminate Transverse Joint. Payment at the contract unit price per linear foot is full compensation for furnishing equipment, labor, tools and materials needed to complete removal and disposal of the specified existing materials, cleaning and straighting of existing steel reinforcement, furnishing and installing the concrete, and all incidental items necessary to complete the work (except the overlay material if specified elsewhere in the contract) within the specified pay limits as indicated on the drawings.

B. Steel Reinforcement. See Section 602.

SPECIAL NOTE FOR BRIDGE PIER PATCHING

These Notes or designated portions thereof, apply where so indicated on the plans, proposals or bidding instruction.

I. DESCRIPTION. Perform all work in accordance with the Department's 2008 Standard Specifications, and applicable Supplemental Specifications, the attached sketches, and these Notes. Section references are to the Standard Specifications.

This work consists of: (1) Furnish all labor, materials, tools, and equipment; (2) Remove existing spalled/delaminated concrete; (3) Prepare the existing surface for concrete patching; (4) Place hook fasteners and welded wire fabric over surfaces to be repaired (where applicable); (5) Apply concrete patching as specified by this note and as shown on the attached detail drawings; (6) Finish and cure the new Concrete Patches; (7) Maintain & control traffic; and, (8) Any other work specified as part of this contract.

II. MATERIALS.

A. Concrete. Approved Concrete Product for Vertical and Overhead Repair Patch.

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

C. Welded Steel Wire Fabric (WWF). Conform to Section 811

D. Hook Fasteners. Use commercial grade galvanized hook fasteners. Minimum 3/16” diameter.

III. CONSTRUCTION.

A. Concrete Removal and Preparation. The Contractor, as directed by the Engineer shall locate and remove all loose, spalled, deteriorated and delaminated concrete. Sounding shall be used to locate delaminated areas. Care shall be exercised not to damage areas of sound concrete or reinforcing steel during concrete removal operations. Unless specifically *directed by the Engineer*, depth of removal shall not exceed 6 inches. Concrete removal shall be in accordance with a sequence approved by the Engineer.

Concrete removal shall be accomplished by chipping with hand picks, chisels or light duty pneumatic or electric chipping hammers (not to exceed 15 lbs.). If sound concrete is encountered before existing reinforcing steel is exposed, the surface shall be prepared and repaired without further removal of the concrete. When corroded reinforcing steel is exposed, concrete removal shall continue until there is a minimum ¾ inch clearance around the exposed, corroded reinforcing bar. Care shall be taken to not damage bond to adjacent non-exposed reinforcing steel during concrete removal processes.

The perimeter of all areas where concrete is removed shall be tapered at an approximately 45° angle, except that the outer edges of all chipped areas shall be saw cut to minimum depth of ¾ inch to prevent featheredging unless otherwise approved by the Engineer.

After all deteriorated concrete has been removed; the repair surface to receive concrete patching shall be prepared by abrasive blast cleaning. Abrasive blast cleaning shall remove all fractured surface concrete and all traces of any

unsound material or contaminants such as oil, grease, dirt, slurry, or any materials which could interfere with the bond of freshly placed concrete.

The Contractor shall dispose all removed material off State Right Of Way in an approved site.

B. **Steel Reinforcement.** All corroded reinforcing steel exposed during concrete removal shall have corrosion products removed by abrasive grit blasting or wire brush whichever is more appropriate. Furnish for replacement steel reinforcing bars ½" diameter by 20-foot lengths. Place these bars in areas deemed by the Engineer to require additional reinforcement. Field cutting and bending is permitted. Deliver unused bars to the nearest County Maintenance Barn. Payment will be made in accordance with Section 602.

Reinforcing steel displaying deep pitting or loss of more than 20 percent of cross-sectional area shall be removed and replaced. Such bars shall be placed in accordance with the recommendations of ACI 506R, Sections 5.4 and 5.5. In particular, bars shall not be bundled in lapped splices, but shall be placed such that the minimum spacing around each bar is three times the maximum aggregate size to allow for proper encapsulation with concrete patching.

Intersecting reinforcing bars shall be tightly secured to each other using tie wire and adequately supported to minimize movement during concrete placement. Welded wire fabric (WWF) shall be provided as shown on the attached sketches and at each repair area larger than 1 square foot if the depth of the repair exceeds 3 inches from the original dimension of the repaired member. Sheets of adjoining WWF shall be lapped by at least one and one-half spaces at all intersections, in both directions, and be securely fastened. WWF fabric shall be supported no closer than ½ inch to the prepared concrete surface and shall have a minimum concrete cover of 1.5 inches. Large knots of tie wire which could result in sand pockets and voids during patching shall be avoided.

C. **Hook Fasteners.** Hook fasteners shall be positioned at the spacing as stated above or as directed by the Engineer. Any given area shall have a minimum of four anchors. The WWF shall not move or deform excessively during concrete patching. Maximum hook fastener spacing shall not exceed 2 feet on a grid pattern over the entire repair area.

Hook fasteners shall be of commercial grade galvanized steel with a minimum diameter of 3/16". They may be mechanically set or grouted, as approved by the Engineer.

The Department will randomly select hook fasteners to be tested to verify pullout force is sufficient. If any anchors fail to meet the minimum acceptable pullout value, corrective measures shall be taken by the Contractor and further testing will be conducted.

D. **Concrete Patching.** Place and finish the new concrete for the patching area in accordance with the manufacturer's recommendations, as shown on the attached detail drawings, or as directed by the Engineer. The Engineer shall approve the

Contractor's method of placing and consolidating the concrete prior to the beginning of this operation.

E. **Curing.** On completion of finishing operation, patching concrete shall immediately be prevented from drying out and cracking by fogging, wetting, and/or any appropriate method approved by the Engineer. Curing shall continue for duration recommended by the product manufacturer.

Each Contractor submitting a bid for this work shall make a thorough inspection of the site prior to submitting his bid and shall thoroughly familiarize 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.

Quantities given are approximate. The quantity for "Concrete Patching Repair" shall be bid with the contingency that quantities may be increased, decreased, or eliminated by the Engineer. Dispose of all removed material entirely away from the job site as approved by the Engineer. This work is incidental to the contract unit price for "Concrete Patching Repair".

IV. MEASUREMENT

A. Concrete Patching. The Department will measure the quantity per square feet or per cubic foot (see bid item supplemental description) of each area restored.

B. Steel Reinforcement. See Section 602.

C. Welded Wire Fabric & Hook Fasteners. Welded Wire Fabric and Hook Fasteners will not be measured for payment, but shall be considered incidental to "Concrete Patching Repair".

V. PAYMENT

A. Concrete Patching Repair. Payment at the contract unit price per square feet or per cubic foot (see bid item supplemental description) is full compensation for the following: (1) Furnish all labor, materials, tools, equipment; (2) preparation of specified bents including removing and disposing of specified existing materials; (3) place, finish and cure new concrete patches; and (4) all incidentals necessary to complete the work as specified by this note and as shown on the attached detail drawings.

B. Steel Reinforcement. See Section 602.

The Department will consider payment as full compensation for all work required by these notes and detail drawings.

SPECIAL NOTE FOR USE OF HYDRODEMOLITION METHOD

To be used if the Contractor chooses to use Hydrodemolition method to complete partial and full depth removal. Also see Section 606.03.03.

Description

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

Equipment

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

Mechanical Scarifying Equipment. The scarifying equipment shall be a power operated mechanical scarifier capable of uniformly scarifying or removing the old concrete 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.

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

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

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

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

Construction Methods

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

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

Preparation of Existing Deck

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

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

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

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

Removal of Existing 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.

Removal of Existing Modified Concrete Overlays

If an existing modified concrete overlay is present upon the original bridge deck surface to be prepared by Hydrodemolition, the overlay 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 concrete overlay from the original bridge deck. Acceptable depth of scarification shall be the overlay 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.

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.

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.

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

Concrete Removal by Hydro-Demolition

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

With the use of Hydrodemolition surface preparation, the requirement to provide a minimum ¼" clearance around all reinforcing bars that are more than ½" diameter exposed is waived, providing that the existing concrete is sound. The amount of steel exposed shall be kept to a minimum.

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

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

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

The Engineer shall verify the following settings:

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

During the Hydrodemolition operations of any or all of the above settings may be modified in order to achieve removal of all unsound concrete and to provide a highly bondable surface. The settings may be changed by the Contractor to achieve total removal of unsound concrete, but the Engineer must be notified of all changes. The Engineer may change any or all of the settings in order to achieve the desired results with Hydrodemolition. The removals and depth shall be verified, as necessary, and at least every

30 feet along the cutting path. The readings shall be documented and, if necessary, the equipment re-calibrated to insure the Hydrodemolition process achieves the desired results and removal of unsound concrete.

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

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

Cleaning

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

Resounding

After the Hydrodemolition operation has completed the removal, and the deck is cleaned and allowed to dry, the deck shall be resounded to assure that the all unsound concrete deck material has been removed. The final sounding of the deck shall be done by the Engineer and shall be performed only when the entire deck is completely dry. In no case shall the final sounding be made unless the deck is 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.

Full Depth Repair

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

Preparation Prior to Overlay Placement

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

Method of Measurement

Wearing Course Removed Asphalt shall be measured as the actual square yards of the existing asphalt wearing course and waterproofing material removed and shall include all labor, materials and equipment required to complete the work.

Existing Modified Concrete Overlay Removed shall be measured as the actual square yards of the existing concrete overlay removed and shall include all labor, materials and equipment required to complete the work.

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, ¼" (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 shall be paid for per Cubic Yard of Class M Concrete used.

Basis of Payment

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

Item	Unit	Description
24094EC	Cubic Yard	Partial Depth Patching
08551	Square yard	Machine Prep of Slab
08510	Square yard	Rem Epoxy Bit Foreign Overlay

Removal of existing flexible (asphalt) concrete overlays and rigid modified concrete overlays are included as parts of this work if the above bid items are part of the project plans.

SPECIAL NOTE FOR DRY-MIX SHOTCRETE BRIDGE REPAIR

Note: *These notes apply if the contractor chooses to use Shotcrete Bridge Repair method.*

I. DESCRIPTION

Perform all work in accordance with the Department's current Standard Specifications, and applicable Supplemental Specifications, the attached detail drawings, and this Note. Section references are to the Standard Specifications.

Use shotcrete complying with the requirements of ACI 506.2, "Specifications for Materials, Proportioning and Application of Shotcrete", unless otherwise specified. Shotcreting consists of applying concrete conveyed through a hose pneumatically projected at a high velocity against a prepared surface.

Use the dry-mix process consisting of shotcrete without mixing water that is conveyed through the hose pneumatically with the mixing water introduced at the nozzle. For additional descriptive information, refer to the American Concrete Institute ACI 506R "Guide to Shotcrete."

This work consists of: (1) Furnish all labor, materials, tools, and equipment; (2) Remove existing spalled/delaminated concrete; (3) Prepare the existing surface for shotcrete application; (4) Place hook fasteners and welded wire fabric over surfaces to be repaired (where applicable); (5) Apply the shotcrete repair; (6) Finish and cure the fresh shotcrete; (7) Maintain & control traffic; and, (5) Any other work specified as part of this contract

II. CONSTRUCTION SUBMITALS

At least 14 calendar days before the planned start of shotcrete placement, submit two (2) copies the following information, in writing, one to the Engineer and one to the Division of Materials for review:

A. **Contractor Personnel.** Ensure any individual applying shotcrete is a certified ACI Shotcrete Nozzelman, for dry-mix vertical and overhead application, by the American Concrete Institute as outlined in ACI Certification publication CP-60.

B. **Scaffolding/Temporary Support.** Provide details of the proposed scaffolding or other temporary supports for workers and inspectors. Fall protection should meet all local, state, and OSHA requirements. Provide access for the Contractor's sequence of construction to include preparation, placement, finishing, and curing. Access method must also be provided for sounding and inspection of finished work, up to 28 days after completion if required by the Engineer. No holes shall be drilled into the superstructure to accommodate the support system unless approved in writing by the Engineer. Any anchorage placed in the substructure shall be removed when the platform is removed and the substructure repaired as directed by the Engineer at no additional cost to the Department.

C. **Shotcrete Mix Design.** Provide shotcrete mix design performed by a competent technician. Include the following:

1) Type of Portland cement.

2) Aggregate source and gradation.

3) Proportions of mix by weight and water-cement ratio.

4) Proposed admixtures, manufacturer, dosage, technical literature.

5) Proposed lab to conduct tests.

6) Previous strength test results for the proposed shotcrete mix completed by the Contractor within one year of the start of shotcreting may be submitted for initial verification of the required compressive strengths at start of production work. Otherwise, strength testing of the mix will be completed during the preconstruction trials. When strength testing is conducted during the preconstruction trial, production work cannot start until 5,000 psi strengths are verified.

D. **Shotcrete Placement.** Provide details of the proposed equipment and methods for placing of shotcrete, controlling and maintaining facing alignment and location, and controlling shotcrete thickness.

E. **Shotcrete Finishing and Curing.** Furnish details of the proposed curing and protection procedures to be provided for the freshly placed shotcrete. Include details of the proposed methods for placing of shotcrete during periods of extreme heat or cold if applicable.

The Engineer will accept or reject the Contractor's submittals within 15 calendar days after receipt of a complete submission. Do not begin construction or incorporate materials into the work until the submittal requirements are satisfied and accepted by the Engineer. Re-submit any changes or deviations from the accepted submittals. No adjustments in contract time will be allowed due to incomplete submittals.

III. MATERIALS

A. **Cement.** Conform to Section 801. Use Type I, II, or III Portland cement.

B. **Water.** Conform to Section 803.

C. **Admixtures.** Conform to Section 802.

D. **Fine Aggregate.** Conform to Section 804.

E. **Coarse Aggregate.** Conform to Section 805. Up to a maximum of 15 percent of the fine aggregate may be substituted by a coarse aggregate (Gradation Size No. 10 or No. 11 ONLY).

F. **Welded Steel Wire Fabric (WWF1.** Conform to Section 811.
Use 2 X 2 - Wl X Wl fabric or other wire reinforcement as approved by the Engineer.

G. **Prepackaged Shotcrete.** Conform to ASTM C928 with a chloride content less than 0.10%. Obtain Division of Materials approval prior to use.

H. **Hook Fasteners.** Use commercial grade galvanized hook fasteners. Minimum 3/16" diameter. Approval shall be by visual inspection of the Engineer and adequate performance during pullout load testing.

Deliver, store and handle all materials to prevent contamination, segregation, corrosion or damage in accordance with the manufacturers' recommendations.

IV. EQUIPMENT

A. **Air Compressors.** Use a properly operating air compressor of sufficient capacity to satisfactorily complete the shotcreting operation. The compressor shall maintain a supply of clean, dry, oil-free air adequately for maintaining required nozzle velocities while simultaneously supplying air needed for other air-driven equipment. Follow the gun or pump manufacturer's recommendations for the required compressor capacity.

B. **Batching. Mixing, and Supply Equipment.** Shotcrete batching, mixing, and supply equipment shall be capable of combining the dry mix shotcrete materials into a uniform mixture and discharging it without segregation. The delivery equipment (gun) shall be capable of discharging a continuous, smooth stream of uniformly mixed material into the delivery hose. The discharge nozzle shall be equipped with a manually operated water injection system (water ring) for directing an even distribution of water through the mixture. The water valve shall be capable of ready adjustment to vary the quantity of water and shall be convenient to the nozzleman. The water pressure at the discharge nozzle shall be sufficiently greater than the operating air pressure so that the water is intimately mixed with the predampened shotcrete materials. If the line water pressure is inadequate, a water booster pump shall be introduced into the water line to provide a steady, non-pulsating water pressure. Water heaters shall be provided during cold weather if required to produce shotcrete at a suitable temperature.

C. **Dry-Mix Shotcrete Gun.** Use either (a) a single- or double chamber gun or (b) a continuous feed rotary gun.

D. **Hoses and Nozzles.** Use hoses of the proper size, type, and strength for the shotcreting operation. Hose couplings should not obstruct or restrict air or shotcrete flow and must have safety restraints at all joints. The internal diameter of the material hose shall be at least three times the size of the largest aggregate. Use nozzles attached at the exit end of the material hose to produce the type of spray pattern the nozzleman is trying to achieve.

E. **Scaffolding.** Provide scaffolding that is stable, meets OSHA standards, and does not interfere with the application of the shotcrete. The Contractor shall submit to the Engineer his scaffold plans or an alternative access method for review and/or approval prior to beginning this work.

F. **Miscellaneous Tools.** Use air-lances/blow pipes, hand tools, and other equipment as necessary to complete the construction in accordance with this Note.

G. **Testing Lab.** Use an independent AASHTO accredited testing lab.

V. SHOTCRETE MIX DESIGN

The Contractor must receive notification from the Engineer that the proposed mix design and method of placement are acceptable before shotcrete placement can begin.

A. **Proportioning and Use of Admixtures.** Proportion the shotcrete to be pumpable with the concrete pump furnished for the work. The mix design shall provide a cement to aggregate ratio, based on dry loose volumes, of not less than 1:3.5 for this construction. The water content shall be as low as practical and shall be adjusted so that the mix is sufficiently wet to adhere properly and sufficiently dry so that it will not sag or fall from vertical, inclined, or overhead surfaces.

Use an air-entraining admixture in accordance with Section 802. Do not use other admixtures unless approved by the Engineer. Thoroughly mix admixtures into the shotcrete at the rate and method specified by the manufacturer. Use only accelerators compatible with the cement used, non-corrosive to steel, and not promoting other detrimental effects such as cracking or excessive shrinkage. The maximum allowable chloride ion content of all ingredients is 0.10% when tested to AASHTO T260.

B. **Mixing and Batching.** Site batch aggregate and cement by weight or by volume in accordance with the requirements of ASTM C94 or AASHTO M241/ASTM C685. Use mixing equipment that thoroughly blends the materials in sufficient quantity to maintain placing continuity. Batch and place shotcrete within 45 minutes of the time of moisture (either from damp sand or the premoisturizer) coming into contact with the cementitious materials. The use of retarding admixtures may extend application time if approved by the Engineer.

Premixed and packaged shotcrete mix may be provided for on-site mixing. Use packages containing materials conforming to the Materials section of this Note. Placing time limit after mixing shall be as per the manufacturers' recommendations. Dry-bagged premixed shotcrete materials shall be protected from moisture during handling, transport and storage. Any bags that display lumps of pre-hydrated shotcrete shall not be used on the project. Dry-bagged premixed shotcrete materials shall be maintained in a temperature range of 40 to 85 degrees F during storage and application. Frozen material shall not be used.

C. **Strength Requirements.** Provide shotcrete with a compressive strength of 4,000 psi at 7 days and 5,000 psi at 28 days. The average compressive strength of each set of three test cores extracted must equal or exceed 100 percent of the specified compressive strength for strength testing conducted during the preconstruction trials. The average compressive strength of each set of three test cores extracted from production test panels must equal or exceed 85 percent of the specified compressive strength, with no individual core less than 75 percent of the specified compressive strength, in accordance with ACI 506.2.

VI . QUALITY ASSURANCE AND QUALITY CONTROL TESTING

A. **Quality Assurance.** The Department will implement a quality assurance program for the work. This program will include:

(a) Review and/or approve all required Contractor Submittals and grade cores for the Preconstruction trials;

(b) Inspect and approve all areas prepared for shotcreting, including installation of hook fasteners, reinforcement, and devices to control line and grade, prior to application of any shotcrete;

(c) The project inspectors) will monitor all shotcrete installation, with the authority to require removal and replacement of defective shotcrete;

(d) Monitor the results of the Contractor's quality control testing;

(e) Implement a program for in-place evaluation and acceptance or rejection, where test results indicate shotcrete does not conform to the project specifications;

B. **Quality Control.** The Contractor shall establish and maintain a quality control program for the shotcrete work to assure compliance with the contract requirements. Such a program shall include, but not be limited to:

(a) Maintenance of test records for all quality control operations;

(b) For site-batched materials, regular monitoring of aggregate gradation and moisture content; one moisture content check shall be made at the start-up of each shotcreting operation and with any changes in aggregate moisture content.

(c) For dry-bagged premix materials; manufacturer's certifications, proper storage and handling techniques, and visual inspection to insure no lumping of the material will normally be adequate. The Engineer may periodically require "wash-out testing" of the material to check cementitious content and aggregate gradation if the material or final product becomes suspect.

(d) Physical testing for the hardened shotcrete test panels for strength as specified in the contract.

(e) Pull out testing of hook fasteners, witnessed by the Department.

C. **Physical Testing.** Both preconstruction test panels and production test panels are required for testing the strength of the shotcrete. Perform shotcreting, coring, and testing of test panels using qualified personnel in the presence of the Engineer. Provide equipment, materials, and personnel as necessary to obtain shotcrete cores for testing including construction of test panel boxes, field curing requirements and coring. Final acceptance of all in-place shotcrete will be based on the 28-day strength test results.

Begin shotcrete production work only upon initial approval of the design mix and nozzlemen and continue if the specified strengths are obtained. When strength testing is required to be conducted during the preconstruction trial, production work cannot start until 5,000 psi strengths are verified. The shotcrete work by a crew will be suspended if the test results for their work do not satisfy the strength requirements. In the event of failing work, change all or some of the following: the mix, the crew, the equipment, or the procedures. Before resuming work, the crew must shoot additional test panels and demonstrate that the shotcrete in the panels satisfies the specified strength requirements. Provide all work required to obtain satisfactory strength test results at no additional cost to the Department.

D. **Test Panel Curing. Test Specimen Extraction and Testing.** Immediately after shooting, field moist cure the test panels by covering and tightly wrapping with plastic until they are delivered to the testing lab or test specimens are extracted. Do not immerse the test panels in water. Do not further disturb test panels for the first 24 hours after shooting.

Provide at least six (6) three inch (3") diameter core samples cut from each preconstruction test panel and production test panel. The Contractor has the option of extracting test specimens from test

panels in the field or transporting to another location for extraction. Keep panels in their forms when transported. Regardless of extraction location, the Department shall witness the coring and inspect the cores prior to testing. For preconstruction test panels, a minimum of four (4) cores shall include steel.

Do not take cores from the outer 6 inches of test panels measured in from the outside edges of the panel form. Trim the ends of the cores to provide test cylinders at least 3 inches long. Clearly mark the cores and container to identify the core locations and whether they are for preconstruction or production testing.

If for production testing, mark the section of the repair represented by the cores on the cores and container. Immediately wrap cores in wet burlap or material meeting requirements of ASTM C171 and seal in a plastic bag. Deliver cores to the testing lab within 48 hours of shooting the panels.

Upon delivery to the testing lab, place the samples in the moist room until the time of test. When the test length of a core is less than twice the diameter, apply the correction factors given in AASHTO T24/ASTM C42 to obtain the compressive strength of individual cores. Test three cores at 7 days and three cores at 28 days in accordance with AASHTO T24/ASTM C42.

E. **Preconstruction Trials.** The Contractor shall implement a preconstruction trial to enable the Engineer to evaluate conformance of the proposed materials, shotcrete mixture, equipment and crew to the project specifications. **Acceptance of the preconstruction trial results by the Engineer is required prior to the start of any work on the project**

The preconstruction trial shall be used to prequalify the nozzlemen proposed for use on the project and to test the strength of the shotcrete. Only ACI Certified nozzlemen who have been prequalified shall be allowed to apply shotcrete on the project.

The preconstruction trial shall consist of shooting at least one (1) vertical and one (1) overhead preconstruction test panels simulating actual working conditions, configuration, steel reinforcement, and shooting position as nearly as possible. The preconstruction test panels shall have minimum dimensions of 24" x 24" x 4" deep.

If no previous strength test results for the proposed shotcrete mix design are submitted and approved by the Engineer, an additional vertical and overhead test panel (with no steel reinforcement) shall be shot for strength testing. Three (3) core samples shall be extracted at 7 days and three (3) core samples shall be extracted at 28 days from each of these non-reinforced shotcrete panels for the testing of strength requirements specified (4,000 psi @ 7 days and 5,000 psi @ 28 days).

The trial shall involve a workmanship demonstration in accordance with Section 2.5 of ACI 506.3R, "Guide to Certification of Shotcrete Nozzlemen". The trial shall be evaluated by core grading in accordance with ACI 506.2. Cores for grading shall be taken at locations as directed by the Engineer and shall contain steel reinforcement. Cores from any one panel shall have a mean grade of 1.4 or less as graded by the Engineer. Panels are unacceptable if any of the cores have a grade of 4 or 5 as described below.

F. **Core Grading.** The Engineer will use the following grading system to evaluate core samples from the nozzleman's performance of the Preconstruction trials.

Grade 1: Shotcrete specimens are solid; there are no laminations, sandy areas or voids. Small air voids with a maximum diameter of 1/8 inch and maximum length of 1/2 inch are normal and acceptable. Sand

pockets or voids behind continuous reinforcing steel are unacceptable. The surface against the form or bond plane shall be sound, without a sandy texture or voids.

Grade 2: Shotcrete specimens shall have no more than two laminations or sandy areas with dimensions not to exceed 1/8 inch thick by 1 inch long. The height, width and depth of voids shall not exceed 3/8 inch. Porous areas behind reinforcing steel shall not exceed 1/2 inch in any direction except along the length of reinforcing steel. The surface against the form or bond plane shall be sound with full paste, without a sandy texture or voids.

Grade 3: Shotcrete specimens shall have no more than two laminations or sandy areas with dimensions exceeding 1/4 inch thick by 1 1/4 inch long, or one major void, sand pocket, or lamination containing loosely bonded sand not to exceed 5/8 inch thick and 1 1/4 inch in width. The surface against the form or bond plane may be sandy with voids containing overspray to a depth of 1/16 inch.

Grade 4 core: The core shall meet in general the requirements of Grade 3 cores, but may have two major flaws such as described for Grade 3 or may have one flaw with a maximum dimension of 1 inch perpendicular to the face of the core with a maximum width of 1 ½ inch. The end of the core that was shot against the form may be sandy with voids containing overspray to a depth of 1/16 inch.

Grade 5 core: A core that does not meet the criteria of core grade 1 through 4, by being of poorer quality, shall be classified as Grade 5.

Preconstruction test panels shall be prepared, cured, and tested in accordance with ACI 506.3R.

The Engineer shall evaluate the quality of the extracted cores and test panel. When a prequalification test panel is rejected, the nozzleman shall be permitted to shoot two (2) additional test panels. If either of the additional test panels is also rejected, the nozzleman shall not be permitted to shoot on the project until he has successfully completed an appropriate training program and then passed an additional preconstruction trial.

If the preconstruction test specimens fail to meet the project performance requirements, then the Contractor shall make the necessary adjustments in shotcrete materials, mixture design, or application procedures and re-shoot test panels. No work shall commence on the project until the preconstruction performance testing requirements have been met and approved by the Engineer.

G. **Production Test Panels.** One production test panel shall be shot by each nozzleman for each day of shotcrete production. The panel shall be shot as closely as possible to the same distance and position, vertical or overhead, as the repair work being done.

Production test panels shall be produced in accordance with the requirements of ASTM C 1140, but shall have minimum dimensions of 24" x 24" x 4" deep. Larger test panels are acceptable if approved by the Engineer. They shall be constructed of wood and sealed plywood, with 45 degree sloped edge forms, to permit escape of rebound. Production test panels shall contain no reinforcement. The panels shall be cored or cut to provide three compression test specimens as described below.

Production test panels shall be stored, handled and cured in the same manner prescribed for preconstruction test panels. Similarly, test specimens shall be prepared in the same manner prescribed for preconstruction test specimens.

Compressive strength test specimens shall be either:

(a) 3 inch diameter cores with length/diameter not less than 1:1, or

(b) 3 inch cubes.

Compressive strength tests shall be conducted in accordance with ASTM C42 at a laboratory approved by the Engineer. Measured compressive strengths shall be corrected to equivalent 2:1 (length: diameter) cores, using the core correction factors given in ASTM C42.

The mean compressive strength for a set of three cores shall equal or exceed f_c (where f_c = specified strength). The mean of a set of three cubes shall equal or exceed 1.15 f_c.

All material testing shall be the responsibility of the Contractor as reviewed and approved by the Engineer. Throughout the life of the project, inform the Engineer of when and where core testing is to be completed and provide access so that testing can be monitored. Provide the Engineer a copy of all test results immediately after testing is completed. The Engineer may stop work if test results indicate low strengths or if test results are not provided in a timely manner.

VII. PREPARATION FOR SHOTCRETING

A. **Concrete Removal and Preparation.** Water wash, at pressure approved by the Engineer, all areas of the structure to remove the smoke/soot from the bridge prior to beginning the repair. The Contractor as directed by the Engineer shall locate and remove all loose, spalled, deteriorated and delarninated concrete. Sounding shall be used to locate delaminated areas. Care shall be exercised not to damage areas of sound concrete or reinforcing steel during concrete removal operations. *Unless specifically directed by the Engineer*, depth of removal shall not exceed 6.0 inches. Concrete removal shall be in accordance with a sequence approved by the Engineer prior to beginning the removal process.

Concrete removal shall be accomplished by chipping with hand picks, chisels or light duty pneumatic or electric chipping hammers not to exceed 15 lbs. If sound concrete is encountered before existing reinforcing steel is exposed, the surface shall be prepared and repaired without further removal of the concrete. When corroded reinforcing steel is exposed, concrete removal shall continue until there is a minimum 1.0 inch clearance around the exposed, corroded reinforcing bar. Care shall be taken to not damage bond to adjacent non-exposed reinforcing steel during concrete removal processes.

The perimeter of all areas where concrete is removed shall be tapered at an approximately 45° angle, except that the outer edges of all chipped areas shall be saw cut to minimum depth of 3/4 inch to prevent featheredging unless otherwise approved by the Engineer.

After all deteriorated concrete has been removed; the repair surface to receive shotcrete shall be prepared by abrasive blast cleaning. Abrasive blast cleaning shall remove all fractured surface concrete and all traces of any unsound material or contaminants such as oil, grease, dirt, slurry, or any materials which could interfere with the bond of freshly placed shotcrete. Cleaned areas shall have shotcrete applied within 24 hours, or shall be reblasted.

All material removed shall become the property of the Contractor and shall be disposed of as approved by the Engineer.

B. **Steel Reinforcement.** All corroded reinforcing steel exposed during concrete removal shall have corrosion removed by abrasive blasting. The exposed reinforcing steel surface that is facing away from the sandblast nozzle shall be cleaned to remove all dust and loose particles.

Reinforcing steel displaying deep pitting or loss of more than 20 percent of cross-sectional area shall be removed and replaced The minimum lap splice length of all replacement and new reinforcing steel shall be 30 inches. Such bars shall be placed in accordance with the recommendations of ACI 506R, Sections 5.4 and 5.5. In particular, bars shall not be bundled in lapped splices, but shall be placed such that the minimum spacing around each bar is three times the maximum aggregate size to allow for proper encapsulation with shotcrete.

Intersecting reinforcing bars shall be tightly secured to each other using tie wire and adequately supported to minimize vibration during shotcrete placement.

Welded wire fabric (WWF) shall be provided as shown on the attached detail drawings and at each repair area larger than 1 square foot if the depth of the repair exceeds 2 inches from the original dimension of the repaired member. Sheets of adjoining WWF shall be lapped by at least one and one-half spaces at all intersections, in both directions, and be securely fastened. WWF fabric shall be supported no closer than ½ inch to the prepared concrete surface and shall have a minimum shotcrete cover of 1 1/2 inches.

WWF shall be fastened to preset hook fasteners on a grid not more than 12 inches square. Large knots of tie wire which could result in sand pockets and voids during shotcreting shall be avoided.

C. **Hook Fasteners.** Hook fasteners shall be positioned at the spacing as shown on the attached detail drawing or as directed by the Engineer. Any given area shall have a minimum of four (4) hook fasteners. The WWF shall not vibrate or deform excessively during shotcreting. If excessive vibration occurs, apply more hook fasteners or modify shotcrete application procedures as necessary. Maximum hook fastener spacing shall not exceed two (2) feet on a grid pattern over the entire repair area.

Hook fasteners shall be of commercial grade galvanized steel with a minimum diameter of 3/16". They may be mechanically set or grouted, as approved by the Engineer.

Hook fasteners shall develop the minimum pullout force 2,000 lbs. prior to the shotcrete application. The Department will randomly select hook fasteners for the Contractor to test and verify pullout force is sufficient. If any hook fasteners fail to meet the minimum acceptable pullout value, corrective measures shall be taken by the Contractor at no additional cost to the Department and further testing shall be required.

D. **Alignment Control and Cover.** Alignment control shall be implemented to establish control over line and grade and ensure that the minimum specified shotcrete thickness and cover to reinforcing steel are maintained. Alignment control shall be accomplished by means of shooting wires, guide strips, depth gauges or forms.

When shooting wires (also called ground wires) are used, they shall consist of a high strength steel wire (piano wire) kept tight at all times when shotcreting. Shooting wires shall be removed after completion of shotcreting and screeding operations.

Guide strips and forms shall be of such dimensions and installation configuration that they do not impede the ability of the nozzleman to produce uniform, dense, properly consolidated shotcrete.

When depth gauges are used for alignment control, they shall be installed at a spacing not exceeding four (4) feet on a grid pattern. Metal depth gauges shall be cut back to a minimum of 1/4 inch below the finished surface, to prevent corrosion staining on the surface.

All repaired members shall be restored as close as practicable to their original dimensions, including chamfered, if detailed. Shotcrete cover shall be provided over reinforcing steel exposed during repair to the same depth as the original cover.

VIII. SHOTCRETE APPLICATION

All areas prepared for shotcrete repair shall be reviewed and approved by the Engineer prior to application of any shotcrete. Shotcrete shall be applied in accordance with good practice as detailed in Chapter 8 of ACI 506R. Application requirements of Section 8.5 of ACI 506R apply. Wherever possible, and not contrary to the manufacturer's recommended installation procedures, shotcrete shall be applied to the full thickness in a single layer.

The concrete substrate shall be saturated with water of drinking quality standard for 24 hours prior to shotcreting. Wetted surfaces shall be allowed to dry back to a saturated-surface-dry condition prior to application of shotcrete. If necessary, a blowpipe shall be used to facilitate removal of surface water. Only oil-free compressed air shall be used in the blowpipe. In the event a work stoppage longer than two hours takes place on any shotcrete layer prior to the time it has been built up to required thickness, the surface shall be re-wetted prior to continuing. No shotcrete shall be applied to a dry surface or to a surface with free surface water.

The minimum number of layers required to build up the full thickness of shotcrete without sagging, separation, sloughing, or exceeding the manufactures recommended thickness shall be used.

When using multiple layer shotcrete construction due to an extended stoppage, the first layer shall be prepared before application of a subsequent layer, by either:

(a) Brooming the stiffening layer with a stiff bristle broom to remove all loose material, rebound, overspray, or glaze prior to the shotcrete attaining initial set: or

(b) If the shotcrete has set, surface preparation shall be delayed at least 24 hours, at which time the surface shall be prepared by sandblasting to remove all loose material, rebound, hardened overspray, glaze, or other material that may prevent adequate bonding.

When successive layers of shotcrete are required to build up the full shotcrete thickness, the first layer shall be prevented from drying out by fogging or wetting. The first layer of shotcrete shall be free of surface water and in a saturated-surface-dry condition at the time of application of the next shotcrete layer.

Care shall be exercised to protect adjacent surfaces from build-up of rebound and overspray. **Rebound shall not be permitted in the completed work.** Hardened rebound and hardened overspray shall be removed prior to application of additional shotcrete, using abrasive blast cleaning, chipping hammers, or other suitable techniques approved by the Engineer.

Sufficient lighting and ventilation shall be installed to provide the nozzleman and helpers with a clear, unhindered, view of the shooting area. Work shall be terminated and corrective measures adopted if, in the opinion of the Engineer, visibility is unsuitable for the safe and effective application of quality shotcrete.

Shotcrete nozzling shall follow acceptable shooting practice, as detailed in ACI 506R. In particular;

(a) The nozzle shall be generally operated at a distance of 2 to 4 feet from the receiving surface and shall be oriented at right angles to the receiving surface, except as required to fill corners, cove edges and encase large diameter reinforcing steel;

(b) The combination of air pressure at the nozzle, moisture content of the shotcrete and distance of the nozzle from the receiving surface shall be optimized to achieve maximum compaction of the shotcrete;

(c) Care shall be taken while encasing reinforcing steel and mesh to keep the front face of the reinforcement clean during shooting operations, so that shotcrete builds up from behind, to encase the reinforcement and voids and sand pockets are prevented from forming;

(d) Accumulations of rebound and overspray shall be continuously removed by the blowpipe operator in advance of the deposition of new shotcrete. Rebound material shall not be reused.

Shotcrete shall not be applied during periods of rain, or high wind that could interfere with the shotcrete stream, unless suitable protective covers, enclosures or windbreaks are installed.

Shotcrete shall be applied to the required line and grade and tolerance as shown on the attached detail drawings, using shooting wires, depth gauges, guide strips, forms or other suitable devices that do not entrap rebound. Shotcrete shall be applied to provide the minimum cover to reinforcing steel as shown on the attached detail drawings. A positive means of checking the total thickness of the applied shotcrete shall be provided by the use of shooting wires, which shall be removed prior to the final finish coat.

The application of a 1/4 inch to 1 inch thick final layer of an approved fine size aggregate flash coat of shotcrete will be allowed over the top of a mix design including coarse aggregate in order to finish more easily.

IX. SHOTCRETE FINISHING

Shotcrete shall be cut back to line and grade using trowels cutting rods, screeds or other suitable devices. The shotcrete shall be allowed to stiffen sufficiently, before cutting and trimming, so as to prevent the formation of tears, cracks and delaminations. Shooting wires shall be removed on completion of cutting and trimming.

One or more of the following optional finishes may be applied to finish the shotcrete as closely as possible to match the portions of the structure not being repaired:

(a) Wood float finish; either as a preliminary finish for other surface treatments, or as a granular texture finish;

(b) Rubber float finish; applied to either a flash coat, or wood float finish, to produce a finer textured granular finish;

(c) Brush finish; a fine hairbrush float finish, leaving a finely textured, sandy finish.

The Engineer shall be the final authority on the acceptance of the final shotcrete finish.

All shotcrete and overspray shall be trimmed back from adjacent non-prepared concrete surfaces. The edges of all shotcrete repairs shall have a minimum square saw-cut edge 3/4 inch deep and shotcrete shall be finished up to this edge. Featheredging of shotcrete (including flash coats) shall be prohibited.

X. CURING AND PROTECTION

A. **Curing.** Once shotcrete has been finished to the satisfaction of the Engineer and has attained final set, it shall be kept continuously moist for a minimum period of seven (7) days. Moist curing shall be accomplished using one or more of the following procedures:

(a) Wrapping the elements in wet burlap which has been presoaked in water for 24 hours prior to installation; wrapping the wet burlap in plastic sheet may be useful for retarding the rate of drying of the burlap. Keep the burlap wet continuously for the entire curing period.

(b) Installation of sprinklers, soaker hoses or other devices that keep the shotcrete repairs continuously wet. The use of intermittent wetting procedures, which allow the shotcrete to undergo wetting and drying during the curing period, shall be prohibited.

B. **Hot and Cold Weather Protection.** The general requirements for hot and cold weather concreting detailed in ACI 305R and ACI 306R, shall also apply to shotcrete remedial work except the maximum temperature of the shotcrete shall not exceed 90 degrees F.

If the Engineer or Contractor determines that prevailing ambient conditions (relative humidity, wind speed, air temperature and direct exposure to sunlight) are such that the shotcrete may develop plastic shrinkage and/or early drying shrinkage cracking, shotcrete application shall be terminated. The Contractor shall then:

(a) Reschedule the work to a time when more favorable ambient conditions prevail; and/or

(b) Adopt corrective measures, such as installation of sun-screens, wind breaks, surface evaporation retardants or fogging devices, to protect the work as approved by the Engineer.

Shotcrete application shall be terminated if the ambient temperature rises above 85 degrees F, unless the Contractor adopts special hot-weather shotcreting procedures, which are approved by the Engineer and satisfactory results are obtained.

During periods of cold weather, shotcreting may only proceed if the concrete substrate to which the shotcrete is applied is free of frost and the air temperature in contact with the repair surfaces is above 40 degrees F and rising.

The air temperature in contact with repaired surfaces shall be maintained at 45 degrees F or greater for at least three (3) days after application of shotcrete and a minimum of 40 degrees F for an additional four (4) calendar days after that. The means of maintaining the air temperature shall be approved by the Engineer. The Department reserves the right to discontinue shotcrete placement when the means of protection or method of placement does not produce satisfactory results.

The temperature of applied shotcrete shall be preferably in the range of 50 to 70 degrees F but not outside the range of 40 to 90 degrees F. Cooler mix temperatures are preferred during hot weather shotcreting operations and warmer mix temperatures during cold weather shotcreting.

XI. SHOTCRETE ACCEPTANCE

The Engineer shall have final authority to accept or reject the shotcrete work. Shotcrete that does not conform to the project specifications may be rejected either during the shotcrete application process, on the basis of tests on the test panels, or from sounding after the completed work.

Deficiencies observed during the shotcrete application process, such as, but not limited to:

(a) Failure to properly control and remove build-up of overspray and rebound;
(b) Incomplete encasement of or incomplete consolidation around reinforcing steel, welded wire fabric, or hook fasteners;
(c) Incorporation of sand lenses, excessive voids, delaminations, sags, rebound, and sloughing; or
(d) Failure to apply shotcrete to the required line and grade and tolerance;

shall constitute cause for rejection of the plastic shotcrete. If plastic shotcrete is rejected the contractor shall stop the work and take all measures necessary to correct deficiencies.

The Contractor shall, whenever possible, perform remedial work to correct deficiencies while the shotcrete is still plastic.

The Engineer shall examine the completed shotcrete work. The hardened shotcrete shall be examined for any evidence of cracking, tears, featheredging, sloughs or other deficiencies. Sounding or other non-destructive evaluation (NDE) methods shall be used to check for delaminations at 28 days, or less when approved by the Engineer. Non-conforming shotcrete is any that lacks uniformity; exhibits segregation, honeycombing, or delaminations; has suffered excessive cracking; was not prepared or applied in compliance with these specifications; fails to meet the specified strength requirements; or fails to meet the core grading requirements.

If the results of compliance tests from shotcrete construction test panels, or assessment of the plastic and hardened shotcrete indicate non-conformance of the shotcrete to the project specifications, the Contractor shall drill a minimum of three (3) cores from that repair area. This core drilling shall be at no additional cost to the Department. The cores shall penetrate into the existing concrete a minimum of two (2) inches. The number and location of the cores shall be at the discretion of the Engineer. These cores shall be core graded in accordance with ACI 506.2 and tested for compressive strength after removing the existing concrete.

The shotcrete shall be accepted if the mean core grade is 2.0 or less and the test results meet the following compressive strength criteria. The mean compressive strength of a set of three cores shall equal or exceed 0.85 f_c with no individual core less than 0.75 f_c. The mean of a set of three cubes shall equal or exceed f_c with no individual cube less than 0.88 f_c. All core holes shall be patched with non-shrink grout as directed by the Engineer.

Shotcrete which is determined by the Engineer to be defective or non-conforming to the project specifications based on evaluation of cores from the finished shotcrete shall be removed and replaced by the Contractor at no additional cost to the Department. Repairs of non-conforming shotcrete are subject to the same testing, evaluation, and acceptance criteria as the original repair shotcrete.

XII. SHOTCRETE REPAIR

Shotcrete, which is identified as being non-conforming while still plastic, shall be removed using spades, scrapers or other suitable mechanical devices. High pressure water jetting may be used, subject to acceptable disposal of the removed shotcrete and slurry.

Hardened shotcrete that is identified as being non-conforming shall be removed using the same basic procedures used for removal of deteriorated concrete. Care shall be taken to avoid damage to reinforcing steel, mesh or anchors. Any embedment damaged during the shotcrete removal process shall be replaced at no additional cost to the Department.

All prepared repair areas shall be inspected and approved by the Engineer prior to the placement of any repair shotcrete. Repair shotcrete shall be placed, finished, cured and protected in the same manner specified for the original shotcrete work.

The contractor shall bear the costs for all repairs and tests for non-conforming shotcrete.

XIII. MEASUREMENT

Shotcrete shall be measured by the in-place area in square feet of applied shotcrete. The depth or thickness of shotcrete will not be measured. The total volume will not be calculated.

XIV. PAYMENT

Payment shall be full compensation for furnishing materials, equipment, labor, tools and incidentals required to accomplish temporary work access, preparation of surfaces, application of shotcrete, waste shotcrete and rebound, coring of test samples, testing, replacement of defective shotcrete as specified, clean-up of the area and disposal of waste water, wasted shotcrete and rebound, and all other work and overhead costs necessary to complete the work in accordance with this Note.

Pay Item	Unit of Measurement
Concrete Patching Repair	Square Feet

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

SPECIAL NOTE FOR CONTRACT COMPLETION DATE AND LIQUIDATED DAMAGES ON BRIDGE REPAIR CONTRACTS

I. COMPLETION DATE. The Contractor has the option of selecting the starting date for this Contract. Once selected, notify the Department in writing of the date selected at least two weeks prior to beginning work. All work is to be completed by November 15, 2012. An allotted number of Calendar days are assigned to each structure in this contract as shown below.

STRUCTURE	NO. OF CALENDAR DAYS	COMPLETION DATE
012B00008N	30	November 15, 2012
019B00032N	30	November 15, 2012
094B00003N	30	November 15, 2012
094B00026N	30	November 15, 2012

Contrary to Section 108.07.02, the Engineer will begin charging calendar days for a structure on the day the Contractor starts work or sets up traffic control on that particular structure.

II. LIQUIDATED DAMAGES. Liquidated damages will be assessed the Contractor in accordance with the Transportation Cabinet, Department of Highway's 2008 Standard Specifications for Road and Bridge Construction, Section 108.09, when either the allotted number of calendar days or the November 15, 2012 date is exceeded.

Contrary to the Standard Specifications, liquidated damages will be assessed the Contractor during the months of December, January, February and March when the contract time has expired on any individual bridge or bridges. Contract time will be charged during these months.

All construction must be completed in accordance with the weather limitations specified in Section 606 and/or Section 601 as applicable. No extension of Contract time will be granted due to inclement weather or temperature limitations that occur due to starting work on the Contract or a structure late in the construction season.

SPECIAL NOTE FOR TRAFFIC CONTROL ON BRIDGE REPAIR CONTRACTS

I. TRAFFIC CONTROL GENERAL

Except as provided herein, traffic shall be maintained in accordance with the 2008 Standard Specifications, Section 112. 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".

Contrary to Section 106.01, traffic control devices used on this project may be new or used in new condition, at the beginning of the work and maintained in like new condition until completion of the work.

II. TRAFFIC COORDINATOR

Furnish a Traffic Coordinator as per Section 112. The Traffic Coordinator shall inspect the project maintenance of traffic, at least three times daily, or as directed by the Engineer, during the Contractor's operations and at any time a lane closure is in place. The personnel shall have access on the project to a radio or telephone to be used in case of emergencies or accidents.

The Traffic Coordinator shall report all incidents throughout the work zone to the Engineer on the project. The Contractor shall furnish the name and telephone number where the Traffic Coordinator can be contacted at all times.

III. SIGNS

Contrary to Section 112.04.02, only long term signs (sign intended to be continuously in place for more than 3 days) will be measured for payment; short term signs (signs intended to be left in place for 3 days or less) will not be measured for payment but will be incidental to Maintain and Control Traffic.

The contractor is to install warning signs for wide loads in advance of the bridge under the direction of the Engineer. The Department will not measure installation, maintenance, or removal for payment, and will consider these incidentals to Maintain and Control Traffic.

IV. TEMPORARY PAVEMENT STRIPING

Skip lines and/or solid lines through the length of the tapers for lane closures and other striping as directed by the Engineer shall be temporarily covered with 6" black removable tape. Permanent removal of all other pavement striping for traffic control shall be considered incidental to Maintain and Control Traffic. Temporary pavement striping shall be paid only once per course in accordance with Section 112.04.07. The Contractor shall replace any temporary striping that becomes damaged or fails to adhere to the pavement before dark on the day of the notification. Liquidated damages shall be assessed to the Contractor at a rate of $500 per day for failing to replace temporary striping within this time limit.

V. PROJECT PHASING & CONSTRUCTION PROCEDURES

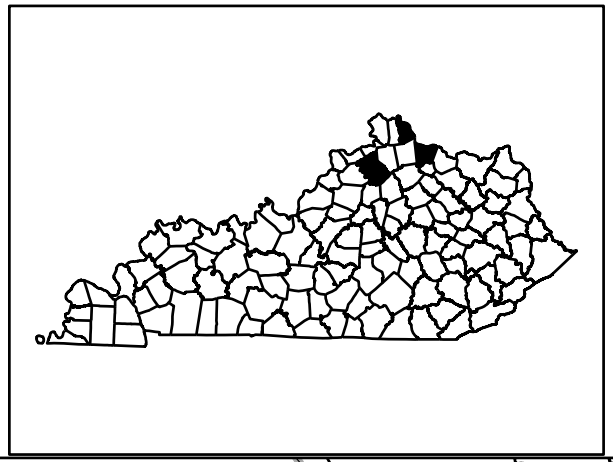
Maintain one lane of traffic during construction in accordance with Standard Drawing No. TTC-110 for lane closures, and the attached detail drawing. The minimum clear lane width required for each bridge is as follows:

012B00008N	12’-0”
019B00032N	13’-0”
094B00003N	9’-6”
094B00026N	11’-0”

VI. TEMPORARY SIGNAL

Provide, install, and maintain a temporary 2 phase traffic signal. The Contractor must provide a 24-hour contact person and number available to maintain the temporary signals as needed.

BRACKEN, CAMPBELL, & OWEN COUNTIES



BRIDGE 012B00008N
KY 8 (MP 13.96)
OVER BIG BRACKEN CREEK
LonDD=-83.9921, LatDD=38.7712

BRIDGE 094B00026N
KY 1761 (MP 4.52)
OVER BIG TWIN CREEK
LonDD=-84.9035, LatDD=38.5718

BRIDGE 094B00003N
KY 330 (MP 5.40)
OVER EAGLE CREEK AT LUSBYS MILL
LonDD=-84.7193, LatDD=38.5312

BRIDGE 012B00008N
KY 8 (MP 13.96)
OVER BIG BRACKEN CREEK
LonDD=-83.9921, LatDD=38.7712

MATERIAL SUMMARY CONTRACT ID: 112605

FE02 012 0008 B00008N PES NO: MB01200081101
KY 8 (MP 13.960) BRIDGE OVER BIG BRACKEN CREEK EAST AT JCT WITH KY 435

LINE NO	BID CODE	DESCRIPTION	QUANTITY	UNIT
0040	02562	SIGNS	149.00	SQFT
0010	02650	MAINTAIN & CONTROL TRAFFIC	1.00	LS
		APPLIES TO 012B00008N		
0020	02653	LANE CLOSURE	2.00	EACH
0140	03294	EXPAN JOINT REPLACE 1 1/2 IN	60.00	LF
0130	03299	ARMORED EDGE FOR CONCRETE	60.00	LF
0145	03300	ELIMINATE TRANSVERSE JOINT	75.00	LF
0172	03301	REPAIR CONCRETE HANDRAIL	4.00	LF
		012B00008N PLINTH WALL REPAIR		
0160	03304	BRIDGE OVERLAY APPROACH PAVEMENT	289.00	SQYD
0030	04933	TEMP SIGNAL 2 PHASE	1.00	EACH
0050	06549	PAVE STRIPING-TEMP REM TAPE-B	500.00	LF
0060	06550	PAVE STRIPING-TEMP REM TAPE-W	1,000.00	LF
0070	06551	PAVE STRIPING-TEMP REM TAPE-Y	2,000.00	LF
0170	06556	PAVE STRIPING-DUR TY 1-6 IN W	518.00	LF
0171	06557	PAVE STRIPING-DUR TY 1-6 IN Y	518.00	LF
0120	08150	STEEL REINFORCEMENT	868.00	LB
0150	08504	EPOXY SAND SLURRY	178.00	SQYD
0080	08510	REM EPOXY BIT FOREIGN OVERLAY	459.00	SQYD
0115	08526	CONC CLASS M FULL DEPTH PATCH	5.40	CUYD
0100	08534	CONCRETE OVERLAY-LATEX	19.10	CUYD
0090	08549	BLAST CLEANING	637.00	SQYD
0173	22146EN	CONCRETE PATCHING REPAIR	250.00	SQFT
		012B00008N PIER CAP PATCHING		
0110	24094EC	PARTIAL DEPTH PATCHING	20.70	CUYD
0200	02569	DEMOBILIZATION	1.00	LS

FE02 019 7084 B00032N PES NO: MB01970841101
CS 7084 (MP 0.710) BRIDGE OVER KY 1988 0.7 MILE EAST OF JCT US 27

LINE NO	BID CODE	DESCRIPTION	QUANTITY	UNIT
0040	02562	SIGNS	149.00	SQFT
0010	02650	MAINTAIN & CONTROL TRAFFIC	1.00	LS
		APPLIES TO 019B00032N		
0020	02653	LANE CLOSURE	2.00	EACH
0141	03294	EXPAN JOINT REPLACE 1 1/2 IN	60.50	LF
0130	03299	ARMORED EDGE FOR CONCRETE	60.50	LF
0160	03304	BRIDGE OVERLAY APPROACH PAVEMENT	667.00	SQYD
0030	04933	TEMP SIGNAL 2 PHASE	1.00	EACH
0050	06549	PAVE STRIPING-TEMP REM TAPE-B	500.00	LF
0060	06550	PAVE STRIPING-TEMP REM TAPE-W	1,000.00	LF
0070	06551	PAVE STRIPING-TEMP REM TAPE-Y	2,000.00	LF
0120	08150	STEEL REINFORCEMENT	267.00	LB
0150	08504	EPOXY SAND SLURRY	182.00	SQYD
0100	08534	CONCRETE OVERLAY-LATEX	23.80	CUYD
0090	08549	BLAST CLEANING	752.00	SQYD
0081	08551	MACHINE PREP OF SLAB	570.00	SQYD
0110	24094EC	PARTIAL DEPTH PATCHING	15.80	CUYD
0200	02569	DEMOBILIZATION	1.00	LS

MATERIAL SUMMARY CONTRACT ID: 112605

FE02 094 0330 B00003N PES NO: MB09403301101
KY 330 (MP 5.405) BRIDGE OVER EAGLE CREEK AT LUSBYS MILL 0.05 MILE EAST OF JCT KY 845

LINE NO	BID CODE	DESCRIPTION	QUANTITY	UNIT
0040	02562	SIGNS	149.00	SQFT
0010	02650	MAINTAIN & CONTROL TRAFFIC APPLIES TO 094B00003N	1.00	LS
0020	02653	LANE CLOSURE	2.00	EACH
0142	03295	EXPAN JOINT REPLACE 2 IN	40.00	LF
0130	03299	ARMORED EDGE FOR CONCRETE	40.00	LF
0145	03300	ELIMINATE TRANSVERSE JOINT	144.00	LF
0160	03304	BRIDGE OVERLAY APPROACH PAVEMENT	222.00	SQYD
0030	04933	TEMP SIGNAL 2 PHASE	1.00	EACH
0050	06549	PAVE STRIPING-TEMP REM TAPE-B	500.00	LF
0060	06550	PAVE STRIPING-TEMP REM TAPE-W	1,000.00	LF
0070	06551	PAVE STRIPING-TEMP REM TAPE-Y	2,000.00	LF
0171	06557	PAVE STRIPING-DUR TY 1-6 IN Y	758.00	LF
0120	08150	STEEL REINFORCEMENT	1,737.00	LB
0150	08504	EPOXY SAND SLURRY	279.00	SQYD
0080	08510	REM EPOXY BIT FOREIGN OVERLAY	620.00	SQYD
0115	08526	CONC CLASS M FULL DEPTH PATCH	5.00	CUYD
0100	08534	CONCRETE OVERLAY-LATEX	25.80	CUYD
0090	08549	BLAST CLEANING	899.00	SQYD
0190	23428EC	CONCRETE PATCHING REPAIR 094B00003N PIER CAP ENDS	40.00	CUFT
0110	24094EC	PARTIAL DEPTH PATCHING	21.50	CUYD
0200	02569	DEMOBILIZATION	1.00	LS

MATERIAL SUMMARY CONTRACT ID: 112605

FE02 094 1761 B00026N PES NO: MB09417611101
KY 1761 (MP 4.526) BRIDGE OVER BIG TWIN CREEK 4.4 MILE NORTHWEST OF JCT KY 22

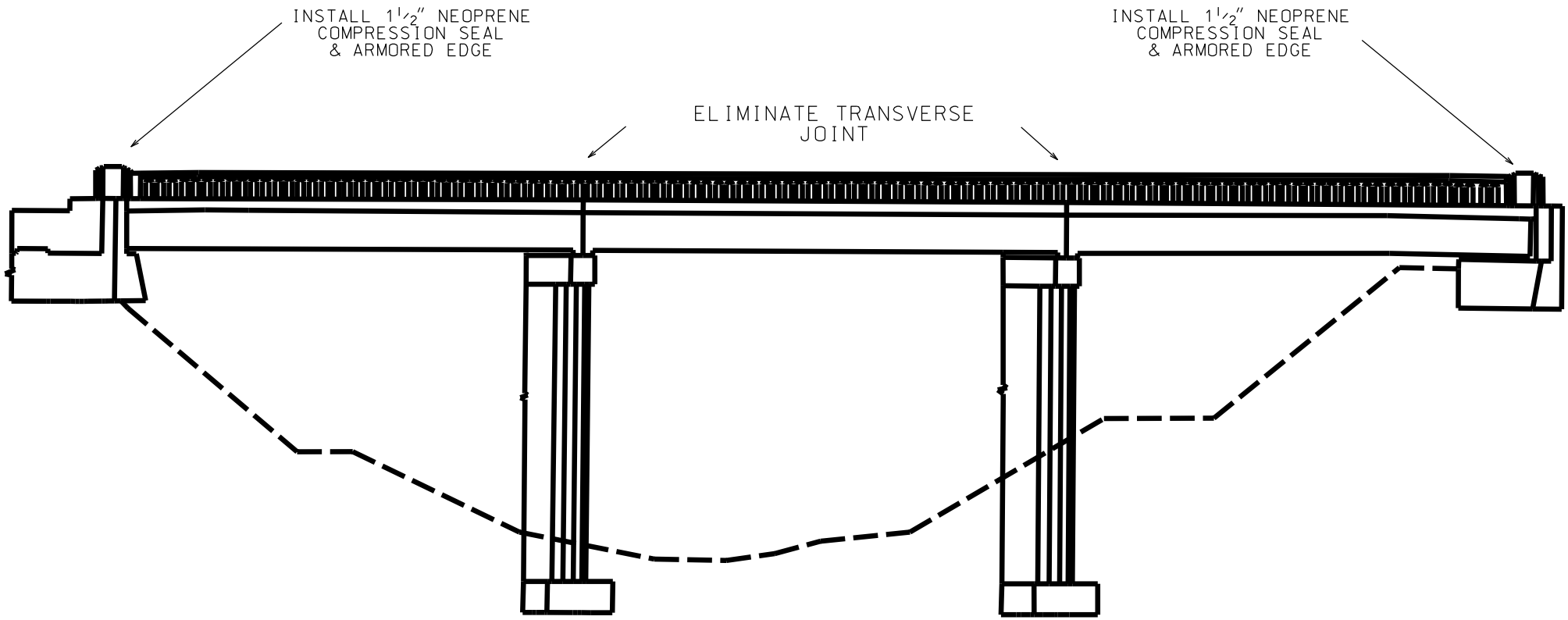
LINE NO	BID CODE	DESCRIPTION	QUANTITY	UNIT
0040	02562	SIGNS	149.00	SQFT
0010	02650	MAINTAIN & CONTROL TRAFFIC APPLIES TO 094B00026N	1.00	LS
0020	02653	LANE CLOSURE	2.00	EACH
0130	03299	ARMORED EDGE FOR CONCRETE	67.90	LF
0145	03300	ELIMINATE TRANSVERSE JOINT	79.20	LF
0160	03304	BRIDGE OVERLAY APPROACH PAVEMENT	267.00	SQYD
0030	04933	TEMP SIGNAL 2 PHASE	1.00	EACH
0050	06549	PAVE STRIPING-TEMP REM TAPE-B	500.00	LF
0060	06550	PAVE STRIPING-TEMP REM TAPE-W	1,000.00	LF
0070	06551	PAVE STRIPING-TEMP REM TAPE-Y	2,000.00	LF
0171	06557	PAVE STRIPING-DUR TY 1-6 IN Y	488.00	LF
0120	08150	STEEL REINFORCEMENT	868.00	LB
0150	08504	EPOXY SAND SLURRY	120.00	SQYD
0080	08510	REM EPOXY BIT FOREIGN OVERLAY	384.00	SQYD
0115	08526	CONC CLASS M FULL DEPTH PATCH	4.00	CUYD
0100	08534	CONCRETE OVERLAY-LATEX	21.30	CUYD
0090	08549	BLAST CLEANING	504.00	SQYD
0190	22146EN	CONCRETE PATCHING REPAIR 094B00026N PIER CAPS & PLINTH ENDS	326.00	SQFT
0180	23879EC	ACRYLIC GLASS APPLIES TO 094B00026N	100.00	SQFT
0110	24094EC	PARTIAL DEPTH PATCHING	12.00	CUYD
0200	02569	DEMOBILIZATION	1.00	LS

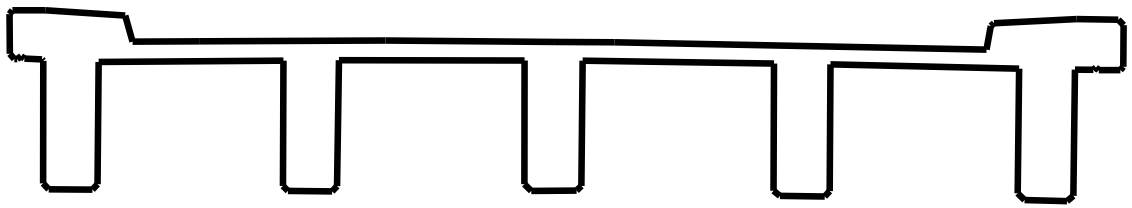
012B00008N

3 - 50' RCDG SPANS
159 TOTAL LENGTH - 30 DEGREE SKEW

TO NEWPORT

TO MAYSVILLE



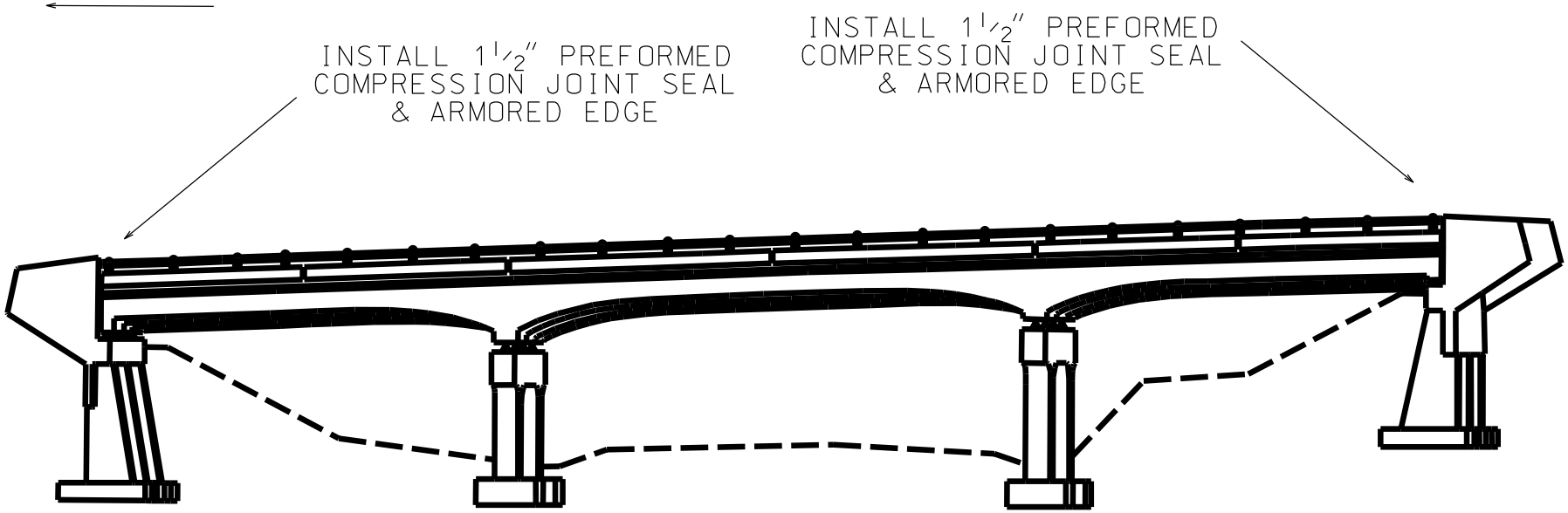


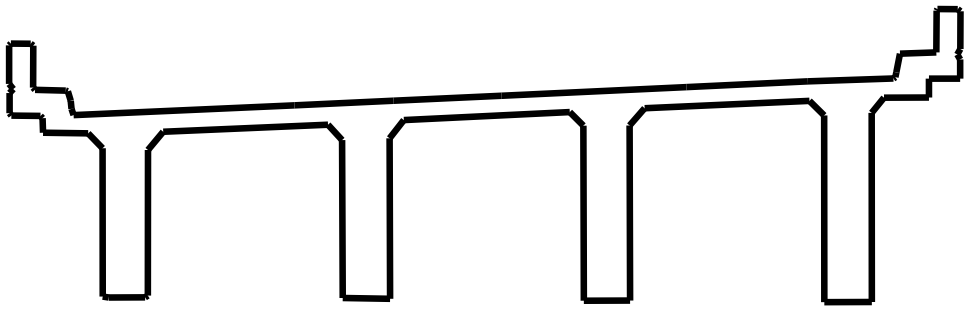
26' CURB TO CURB

019B00032N

50', 66', 50' CONTINUOUS RCDG SPANS
171 TOTAL LENGTH - 7 DEGREE SKEW

TO KY 8

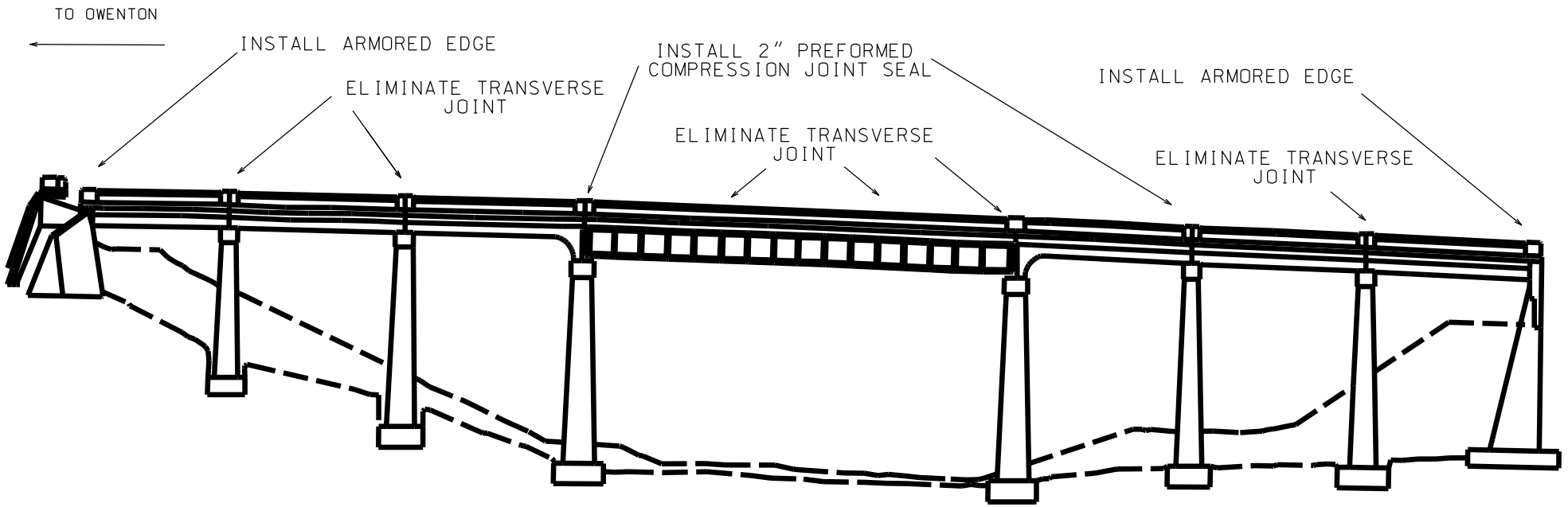


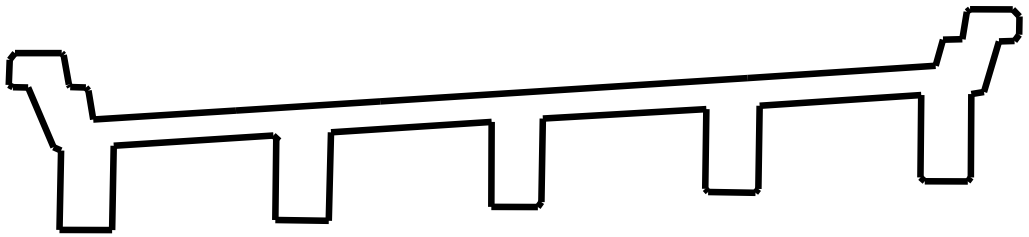


30' CURB TO CURB

094B00003N

1 - 80' STEEL GIRDER & 6 - 30' RCDG SPANS
279 TOTAL LENGTH - NO SKEW





20' CURB TO CURB

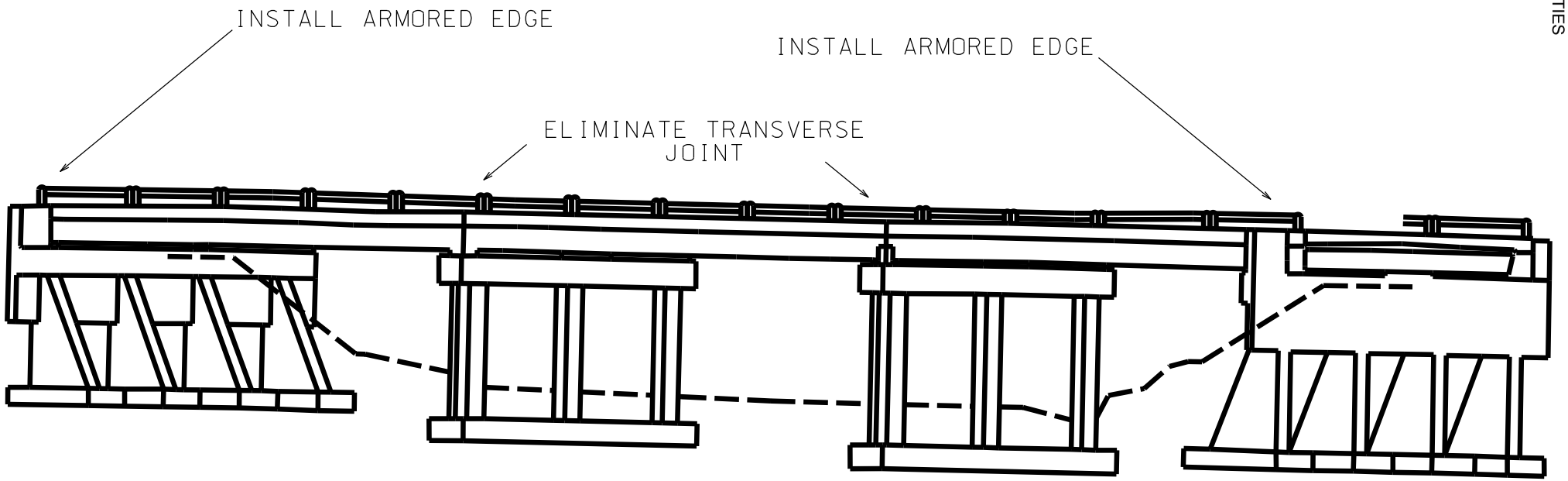
094B00026N

3 - 45' RCDG SPANS

144' TOTAL LENGTH - 45 DEGREE SKEW

TO OWENTON

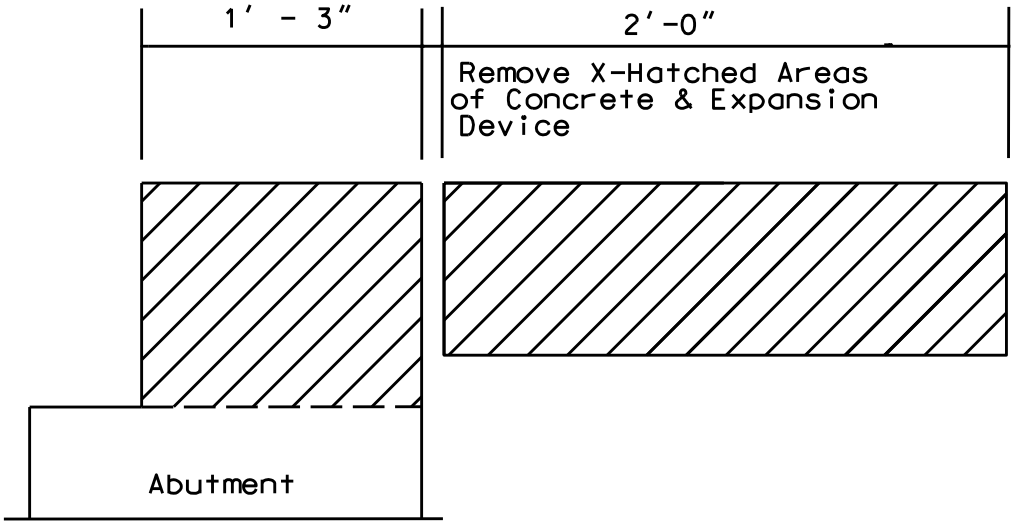
TO CULL



24' CURB TO CURB

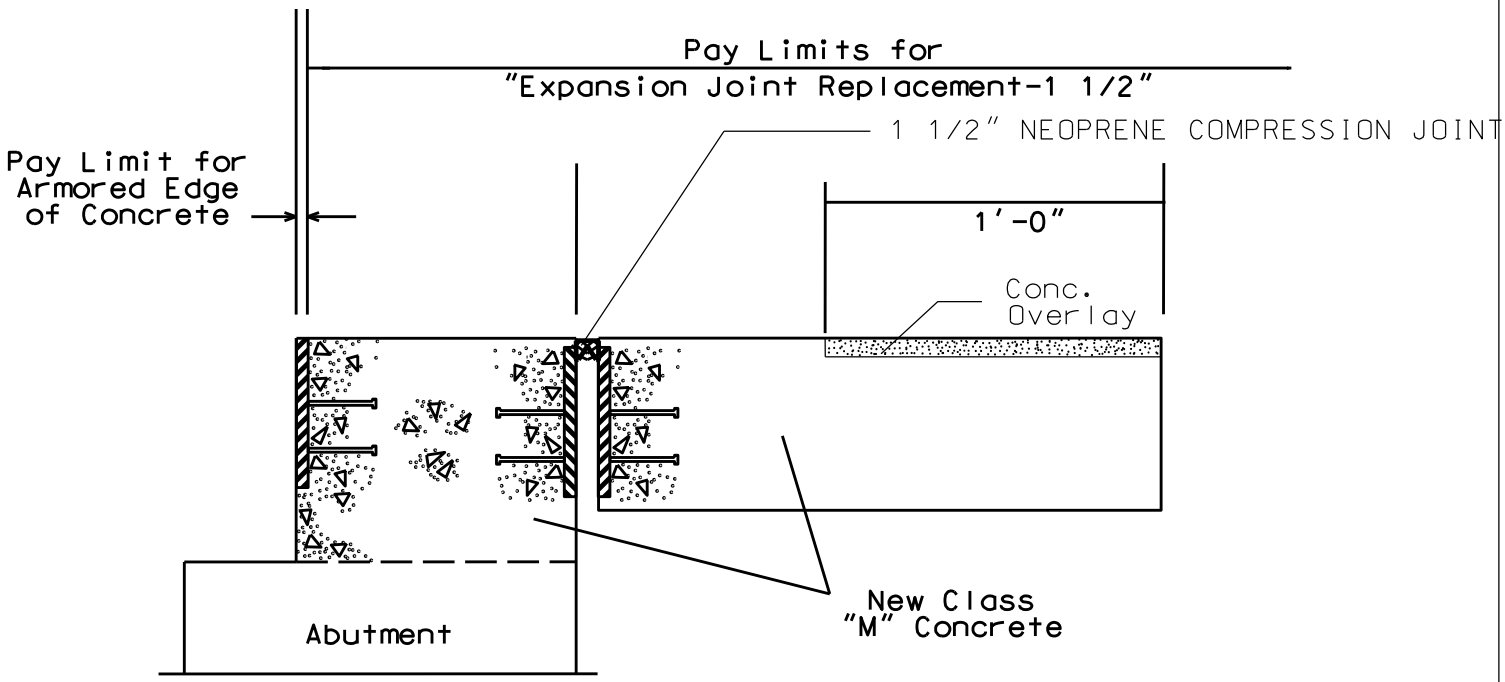
EXPANSION DAM DETAIL

012B00008N
019B00032N



EXISTING SECTION

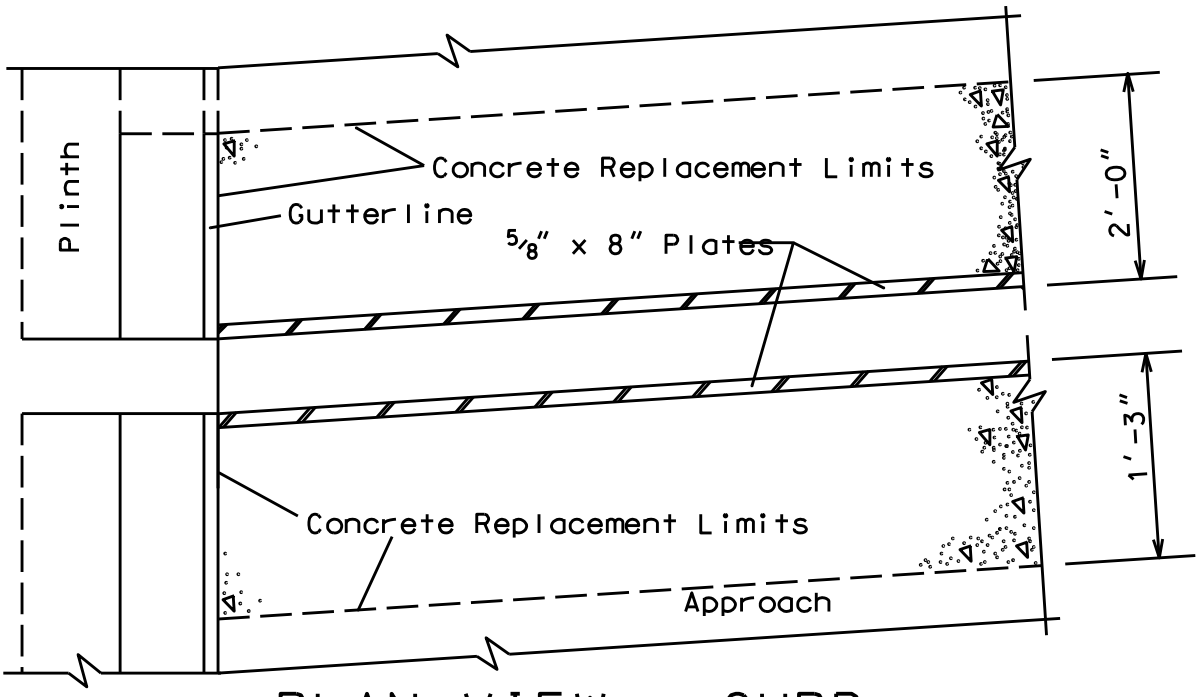
Clean & Leave Steel Reinf. in place.



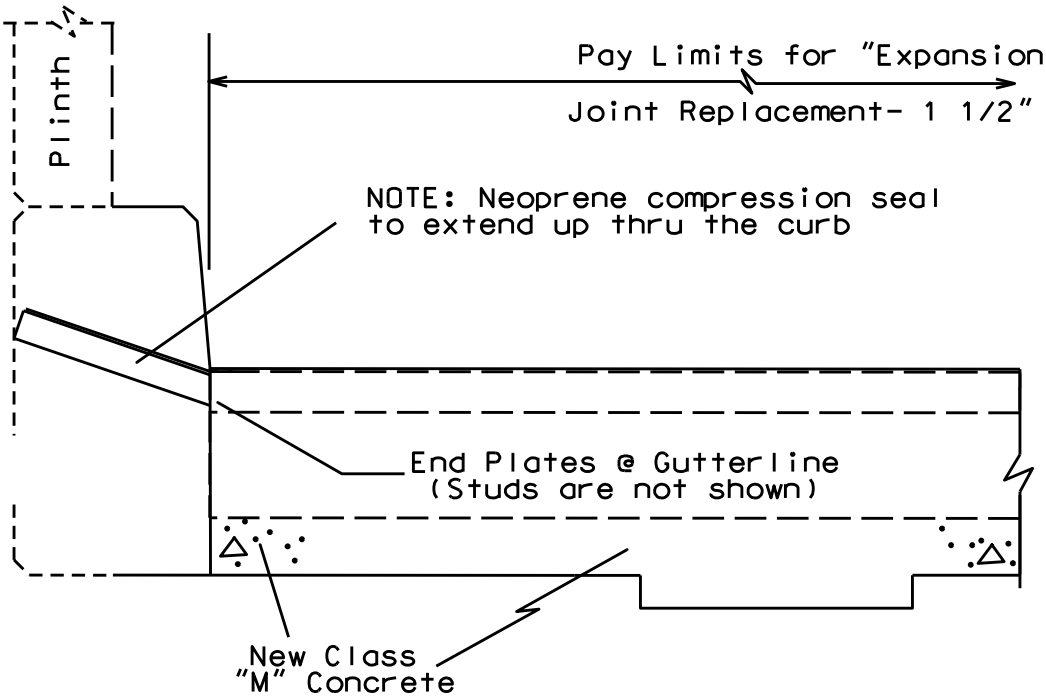
PROPOSED SECTION

CURB SECTION

012B00008N
019B00032N



PLAN VIEW @ CURB

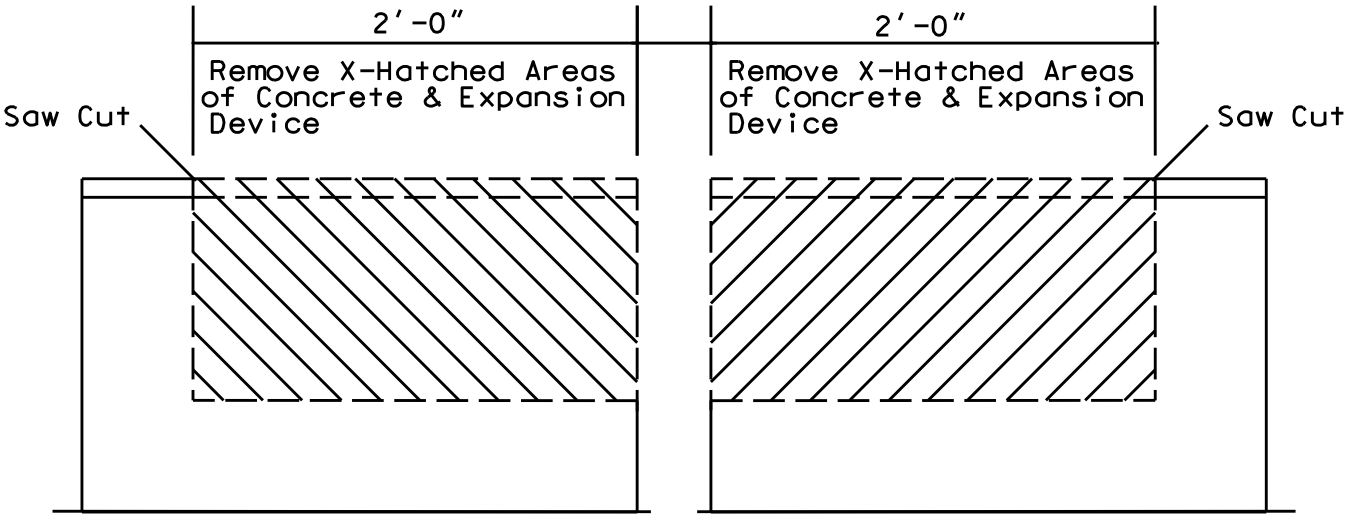


PROPOSED SECTION @ CURB

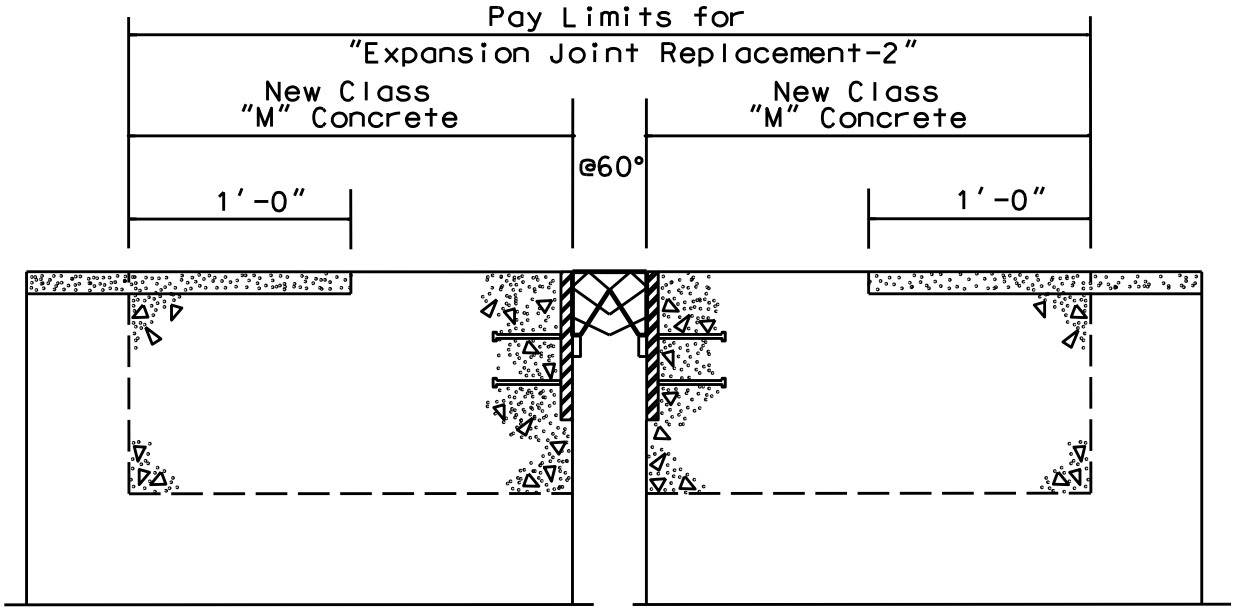
EXPANSION DAM DETAIL

Expansion Joint Replacement-2"

094B00003N

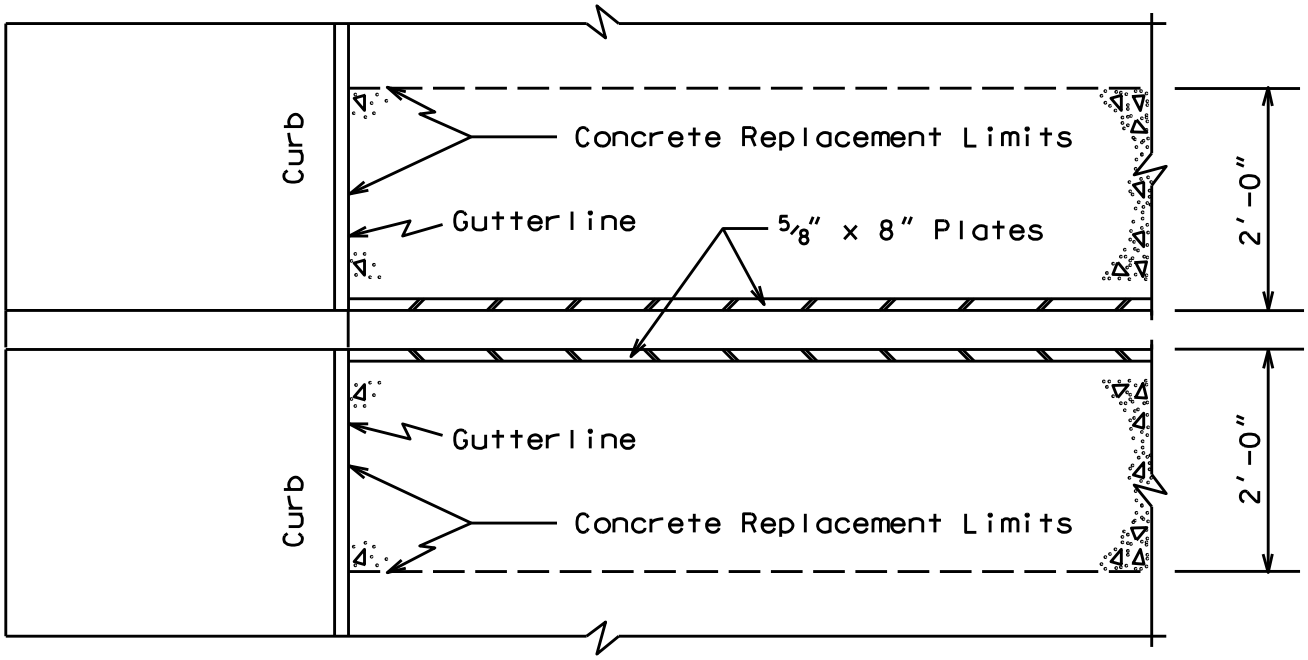


EXISTING SECTION

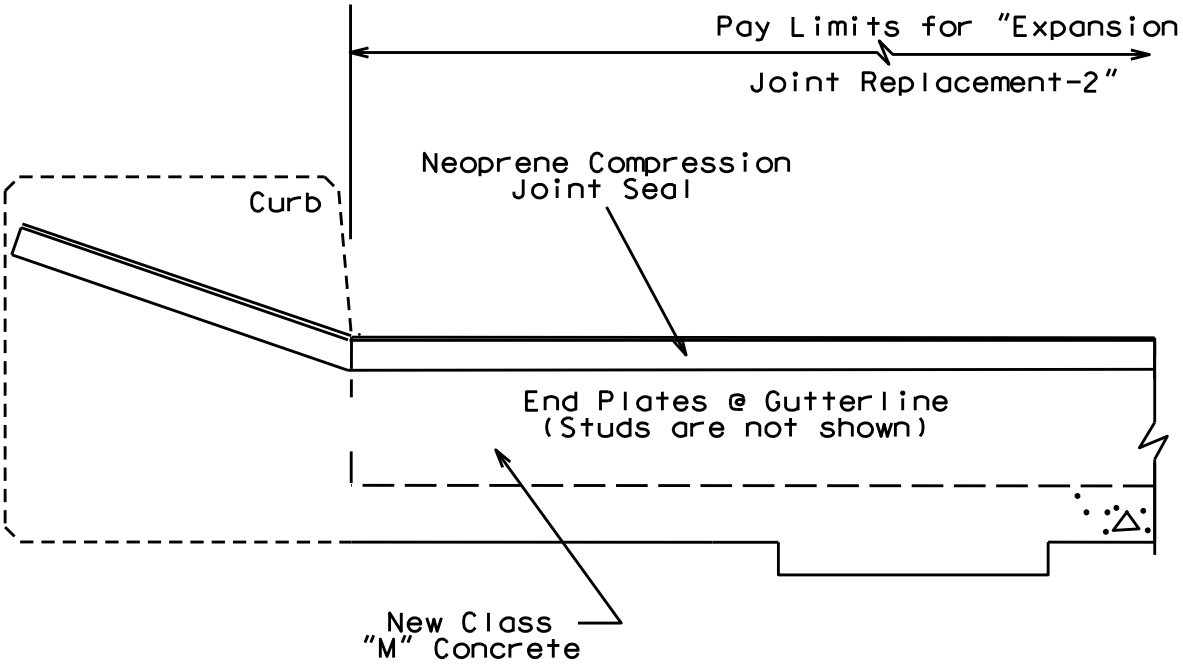


PROPOSED SECTION

CURB SECTION



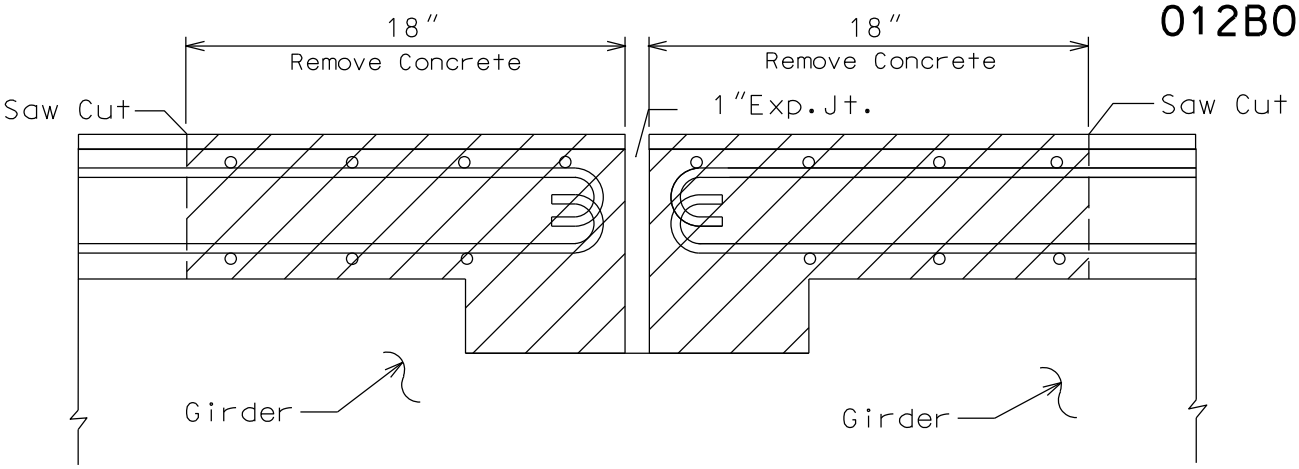
PLAN VIEW @ CURB



PROPOSED SECTION @ CURB

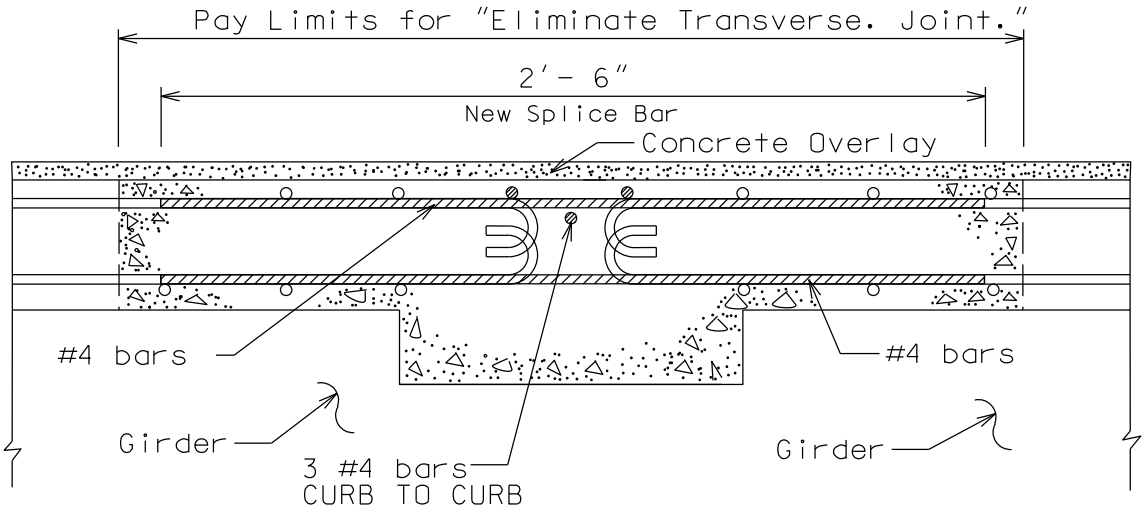
ELIMINATE TRANSVERSE JOINT DETAIL

094B00003N
094B00026N
012B00008N



NOTE: Do not disturb existing Steel Reinforcement

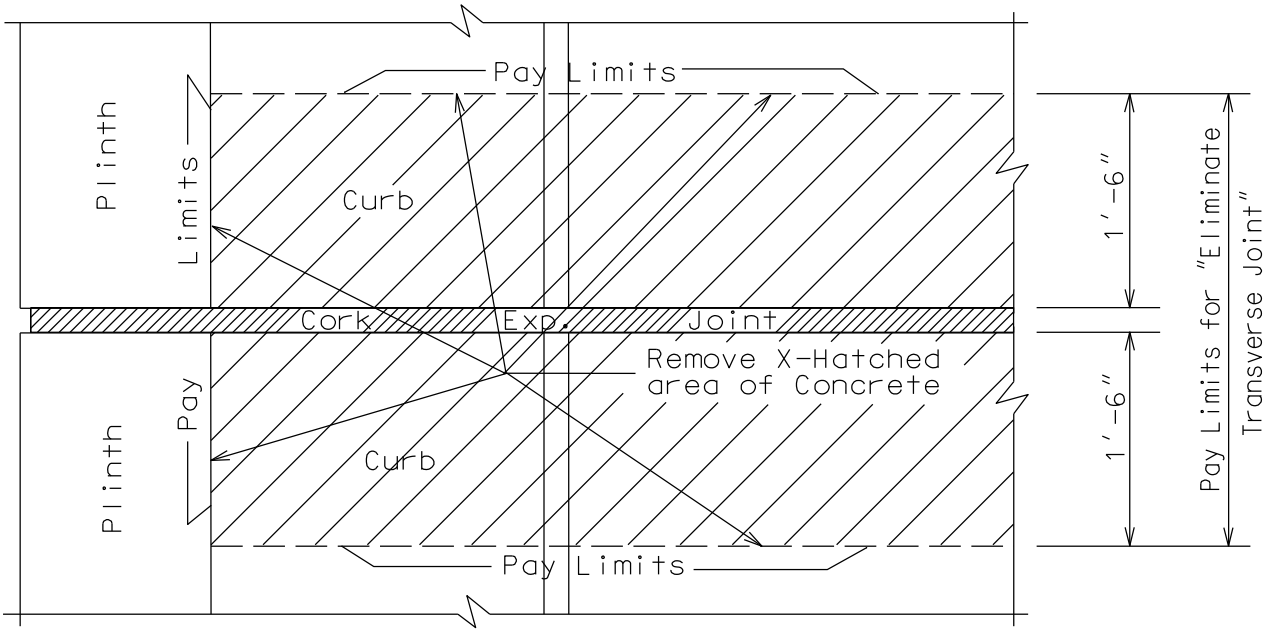
EXISTING SECTION @ Transverse Joint



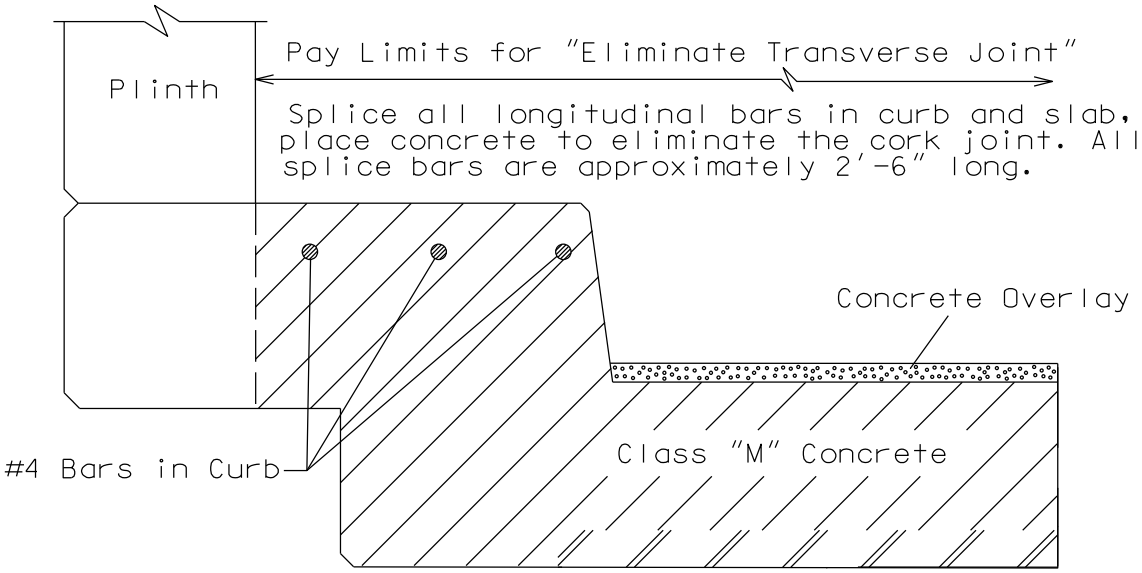
PROPOSED SECTION @ Transverse Joint

ELIMINATE TRANSVERSE JOINT DETAIL

094B00003N
094B00026N
012B00008N



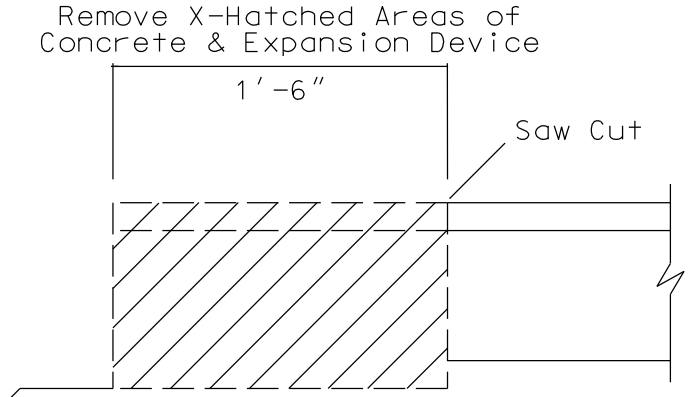
EXISTING PLAN VIEW @ CURB



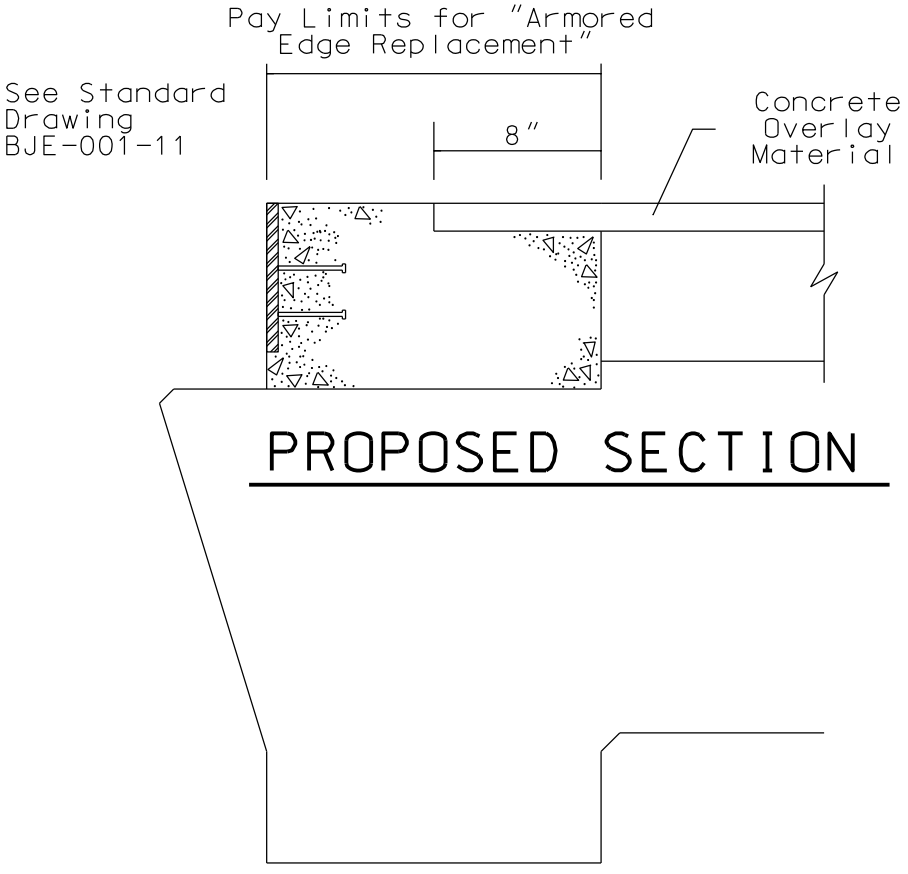
PROPOSED SECTION @ CURB

094B00003N
094B00026N

ARMORED EDGE DETAIL

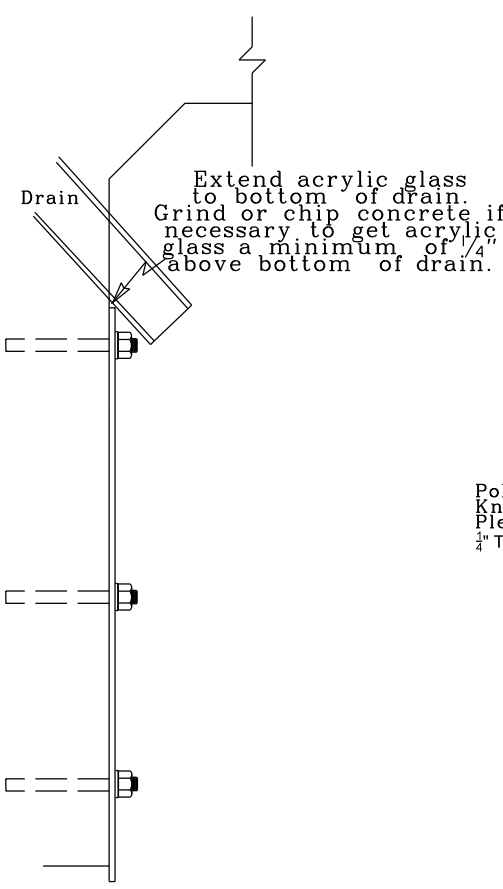


EXISTING SECTION

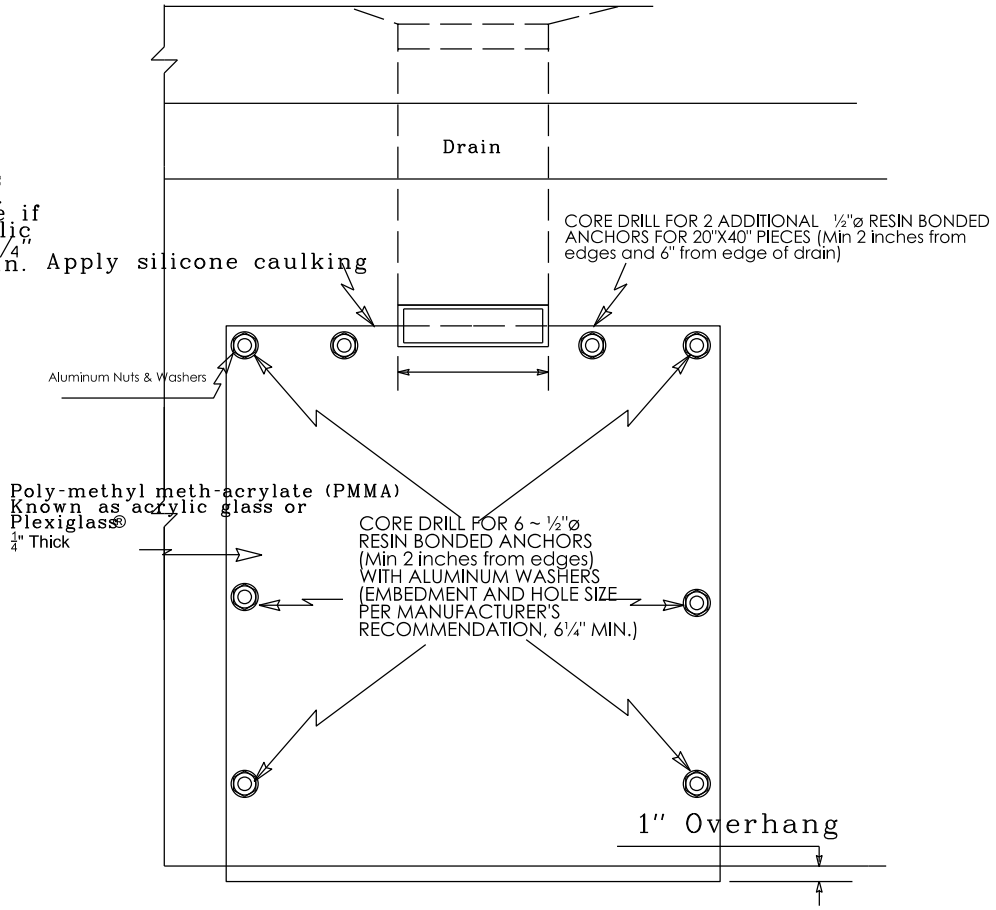


PROPOSED SECTION

ACRYLIC GLASS DETAIL



SECTION
NOT TO SCALE

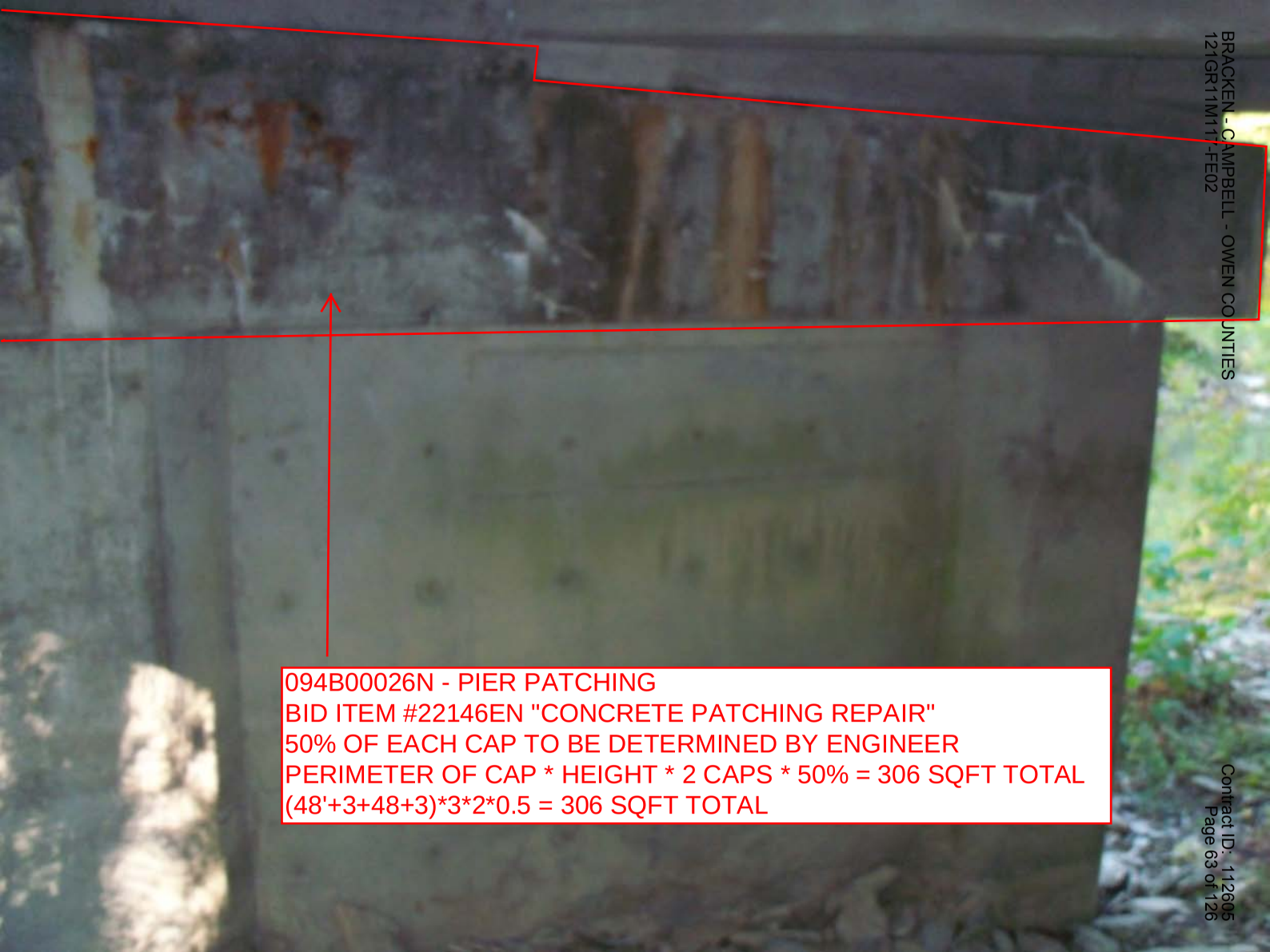


PLAN
NOT TO SCALE

094B00026N 18 drains, 20"x40" pieces = 100 sqft


012B00008N - PIER PATCHING
BID ITEM #22146EN "CONCRETE PATCHING REPAIR"
50% OF EACH PIER CAP TO BE DETERMINED BY ENGINEER
PERIMETER OF CAP * HEIGHT * 2 CAPS * 50% = 250 SQFT TOTAL
(38.5'+3'+38.5'+3')*3*2*0.5 = 250 SQFT TOTAL


012B00008N - PLINTH WALL REPAIR
COMPLETELY REMOVE EXISTING, FORM & POUR NEW PLINTH WALL
BID ITEM #03301 "REPAIR CONCRETE HANDRAIL"
4 LF TOTAL


094B00026N - PIER PATCHING
BID ITEM #22146EN "CONCRETE PATCHING REPAIR"
50% OF EACH CAP TO BE DETERMINED BY ENGINEER
PERIMETER OF CAP * HEIGHT * 2 CAPS * 50% = 306 SQFT TOTAL
(48'+3+48+3)*3*2*0.5 = 306 SQFT TOTAL

094B00026N - PLINTH WALL END REPAIRS
REPAIR ALL FOUR PLINTH WALL ENDS
BID ITEM #22146EN "CONCRETE PATCHING REPAIR"
5 SQFT EACH * 4 = 20 SQFT

SPECIAL NOTE FOR PRE-BID CONFERENCE
BRACKEN, CAMPBELL, & OWEN COUNTIES
DISTRICT 6 BRIDGES
CID 112605

The Department will conduct a **Non-mandatory** Pre-Bid Conference for the subject project December 5, 2011 at 9:00 AM. at;

Transportation Cabinet Building
200 Mero Street
Frankfort, Ky 40622

Any company that is interested in bidding on the subject project or being part of a joint venture is encouraged to attend.

Meeting minutes will be provided on the Department's website for those unable to attend.

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

Department of Highways officials present at the conference will answer questions concerning the projects.

PART II

SPECIFICATIONS AND STANDARD DRAWINGS

SPECIFICATIONS REFERENCE

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

Supplemental Specifications to The Standard Specifications for Road and Bridge Construction, 2008 Edition

(Effective with the July15, 2011 Letting)

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

Supplemental Specifications to The Standard Specifications for Road and Bridge Construction, 2008 Edition

(Effective with the July15, 2011 Letting)

SUBSECTION: **REVISION:**	102.07.02 Computer Bidding. Replace the first paragraph with the following: Subsequent to registering for a specific project, use the Department's Expedite Bidding Program on the internet website of the Department of Highways, Division of Construction Procurement (http://transportation.ky.gov/contract/). Download the bid file from the Bid Express Bidding Service Website to prepare a Bid Proposal for submission to the Department. Submit Bid Proposal electronically through Bid Express Bidding Service. Delete the second and third paragraph.
SUBSECTION: **REVISION:**	102.08 Irregular Bid Proposals. Delete the following from the first paragraph: 4) fails to submit a disk created from the Highway Bid Program. Replace the second paragraph with the following: The Department will consider Bid Proposals irregular and may reject them for the following reasons: 1) when there are unauthorized additions, conditional or alternate bids, or irregularities of any kind which may tend to make the Bid Proposal incomplete, indefinite, or ambiguous as to its meaning; or 2) when the bidder adds any provisions reserving the right to accept or reject an award, or to enter into a Contract pursuant to an award; or 3) any failure to comply with the provisions of Subsection 102.07; or 4) Bid Proposals in which the Department determines that the prices are unbalanced; or when the sum of the total amount of the Bid Proposal under consideration exceeds the bidder's Current Capacity Rating.
SUBSECTION: **REVISION:**	102.09 Bid Proposal Guaranty. Insert the following after the first sentence: Bid Proposals must have a bid proposal guaranty in the amount indicated in the bid proposal form accompany the submittal. A guaranty in the form of a paper bid bond, cashier's check, or certified check in an amount no less than the amount indicated on the submitted electronic bid is required when the electronic bid bond was not utilized with the Bid Express Bidding Service. Paper bid bonds must be delivered to the Division of Construction Procurement prior to the time of the letting.
SUBSECTION: **REVISION:**	102.10 Delivery of Bid Proposals. Replace paragraph with the following: Submit all Bid Proposals prior to the time specified in the Notice to Contractors. All bids shall be submitted electronically using Bid Express Bidding Services. Electronically submitted bids must be done in accordance with the requirements of the Bid Express Bidding Service.
SUBSECTION: **REVISION:**	102.11 Withdrawal or Revision of Bid Proposals. Replace the paragraph with the following: Bid Proposals can be withdrawn in accordance the requirements of the Bid Express Bidding Service prior to the time of the Letting.

Supplemental Specifications to The Standard Specifications for Road and Bridge Construction, 2008 Edition

(Effective with the July15, 2011 Letting)

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

Supplemental Specifications to The Standard Specifications for Road and Bridge Construction, 2008 Edition

(Effective with the July15, 2011 Letting)

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

Supplemental Specifications to The Standard Specifications for Road and Bridge Construction, 2008 Edition

(Effective with the July15, 2011 Letting)

SUBSECTION: **REVISION:**	106.04 Buy America Requirement. Replace the section with the following: **106.04 Buy America Requirement.** Follow the "Buy America" provisions as required by Title 23 Code of Federal Regulations § 635.410. Except as expressly provided herein all manufacturing processes of steel or iron materials including but not limited to structural steel, guardrail materials, corrugated steel, culvert pipe, structural plate, prestressing strands, and steel reinforcing bars shall occur in the United States of America, including the application of: • Coating, • Galvanizing, • Painting, and • Other coating that protects or enhances the value of steel or iron products. The following are exempt, unless processed or refined to include substantial amounts of steel or iron material, and may be used regardless of source in the domestic manufacturing process for steel or iron material: • Pig iron, • Processed, pelletized, and reduced iron ore material, or • Processed alloys. The Contractor shall submit a certification stating that all manufacturing processes involved with the production of steel or iron materials occurred in the United States. Produce, mill, fabricate, and manufacture in the United States of America all aluminum components of bridges, tunnels, and large sign support systems, for which either shop fabrication, shop inspection, or certified mill test reports are required as the basis of acceptance by the Department. Use foreign materials only under the following conditions: 1) When the materials are not permanently incorporated into the project; or 2) When the delivered cost of such materials used does not exceed 0.1 percent of the total Contract amount or $2,500.00, whichever is greater. The Contractor shall submit to the Engineer the origin and value of any foreign material used.
SUBSECTION: **REVISION:**	106.10 Field Welder Certification Requirements. Insert the following sentence before the first sentence of the first paragraph: All field welding must be performed by a certified welder unless otherwise noted.
SUBSECTION: **REVISION:**	108.02 Progress Schedule. Insert the following prior to the first paragraph: Specification 108.02 applies to all Cabinet projects except the following project types: • Right of Way Mowing and/or Litter Removal • Waterborne Paint Striping • Projects that contain Special Provision 82 • Projects that contain the Special Note for CPM Scheduling Insert the following paragraph after paragraph two: Working without the submittal of a Written Narrative is violation of this specification and additionally voids the Contractor's right to delay claims. Insert the following paragraph after paragraph six: The submittal of bar chart or Critical Path Method schedule does not relieve the Contractor's requirement to submit a Written Narrative schedule.

Supplemental Specifications to The Standard Specifications for Road and Bridge Construction, 2008 Edition

(Effective with the July15, 2011 Letting)

	Insert the following at the beginning of the first paragraph of A) Written Narrative.: Submit the Written Narrative Schedule using form TC 63-50 available at the Division of Construction's website (http://www.transportation.ky.gov/construction/ResCenter/ResCenter.htm). Replace Part A) Written Narrative 1. And 2. with the following: 1. Provide a description that includes how the Contractor will sequence and stage the work, how the Contractor plans to maintain and control traffic being specific and detailed, and what equipment and crew sizes are planned to execute the work. 2. Provide a list of project milestones including, if applicable, winter shut-downs, holidays, or special events. The Contractor shall describe how these milestones and other dates effect the prosecution of the work. Also, include start date and completion date milestones for the contract, each project if the contract entails multiple projects, each phase of work, site of work, or segment of work as divided in the project plans, proposal, or as subdivided by the Contractor.
SUBSECTION: **REVISION:**	109.07.01 Liquid Asphalt. Add the following to the Adjustable Contract Items: • Stone Matrix Asphalt for Base • Stone Matrix Asphalt for Surface
SUBSECTION: **REVISION:**	110.01 Mobilization. Replace paragraph three with the following: Do not bid an amount for Mobilization that exceeds 5 percent of the sum of the total amounts bid for all items in the Bid Proposal, excluding Mobilization, Demobilization, and contingent amounts established for adjustments and incentives. The Department will automatically adjust any Bid Proposals that are in excess of this amount down to 5 percent to compare Bid Proposals and award the Contract. The Department will award a Contract for the actual amount bid when the amount bid for Mobilization is less than 5 percent, or the Department will award the Contract for the adjusted bid amount of 5 percent when the amount bid for Mobilization is greater than 5 percent. If any errors in unit bid prices for other Contract items in a Contractor's Bid Proposal are discovered after bid opening and such errors reduce the total amount bid for all other items, excluding Mobilization, Demobilization, and contingent amounts established for adjustments and incentives, so that the percent bid for Mobilization is larger than 5 percent, the Department will adjust the amount bid for Mobilization to 5 percent of the sum of the corrected total bid amounts.
SUBSECTION: **REVISION:**	110.02 Demobilization. Replace the third paragraph with the following: Bid an amount for Demobilization that is a minimum of $1,000 or 1.5 percent of the sum of the total amounts bid for all other items in the Bid Proposal, excluding Mobilization, Demobilization, and contingent amounts established for adjustments and incentives. The Department will automatically adjust any Bid Proposal that is less than this amount up to $1,000 or 1.5 percent to compare Bid Proposals and award the Contract. The Department will award a Contract for the actual amount bid when the amount bid for demobilization exceeds 1.5 percent, or the Department will award the Contract for the adjusted bid amount when the amount bid for demobilization is less than the minimum of $1,000 or less than 1.5 percent of the sum of the total amounts bid for all other items in the Bid Proposal, excluding Mobilization, Demobilization, and contingent amounts established for adjustments and incentives.
SUBSECTION: **REVISION:**	110.04 Payment. Insert the following paragraph following the demobilization payment schedule (4th paragraph): The Department will withhold an amount equal to $1,000 for demobilization, regardless of the schedule listed above. The $1,000 withheld for demobilization will be paid when the final estimate is paid.

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

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

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SUBSECTION: **PART:** **REVISION:**	213.03.05 Temporary Control Measures. E) Temporary Seeding and Protection. Replace the first paragraph with the following: Apply an Annual Rye seed mix at a rate of 100 pounds per acre during the months of March through August. In addition to the Annual Rye, add 10 pounds of German Foxtail-Millet (Setaria italica), when performing temporary seeding during the months of June through August. During the months of September through February, apply Winter Wheat or Rye Grain at a rate of 100 pounds per acre. Obtain the Engineer's approval prior to the application of the seed mixture.
SUBSECTION: **PART:** **REVISION:**	213.03.05 Temporary Control Measures. F) Temporary Mulch. Replace the last sentence with the following: Place temporary mulch to an approximate 2-inch loose depth (2 tons per acre) and anchor it into the soil by mechanically crimping it into the soil surface or applying tackifier to provide a protective cover. Regardless of the anchoring method used, ensure the protective cover holds until disturbance is required or permanent controls are in installed.
SUBSECTION: **REVISION:**	303.05 Payment. Replace the second paragraph of the section with the following: The Department will make payment for Drainage Blanket-Type II (ATDB) according to the Lot Pay Adjustment Schedule for Specialty Mixtures in Section 402.
SUBSECTION: **PART:** **REVISION:**	401.02.04 Special Requirements for Dryer Drum Plants. F) Production Quality Control. Replace the first sentence with the following: Stop mixing operations immediately if, at any time, a failure of the automatic electronic weighing system of the aggregate feed, asphalt binder feed, or water injection system control occurs.
SUBSECTION: **REVISION:**	401.02.04 Special Requirements for Dryer Drum Plants. Add the following: Part G) **Water Injection System.** Provided each system has prior approval as specified in Subsection 402.01.01, the Department will allow the use of water injection systems for purposes of foaming the asphalt binder and lowering the mixture temperature for production of Warm Mix Asphalt (WMA). Ensure the equipment for water injection meets the following requirements: 1) Injection equipment computer controls are automatically coupled to the plants controls (manual operation is not permitted); 2) Injection equipment has variable controls that introduce water ratios based on production rates of mixtures; 3) Injects water into the flow of asphalt binder prior to contacting the aggregate; 4) Provides alarms on the water injection system that operate when the flow of water is interrupted or deviates from the prescribed water rate.
SUBSECTION: **REVISION:**	401.03.01 Preparation of Mixtures. Replace the last sentence of the second paragraph with the following: Do not use asphalt binder while it is foaming in a storage tank.

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SUBSECTION: 401.03.01 Preparation of Mixtures.
REVISION: Replace the third paragraph and Mixing and Laying Temperature table with the following:

Maintain the temperature of the component materials and asphalt mixture within the ranges listed in the following table:

MIXING AND LAYING TEMPERATURES (ºF)

Material		Minimum	Maximum
Aggregates		240	330
Aggregates used with Recycled Asphalt Pavement (RAP)		240	—
Asphalt Binders	PG 64-22	230	330
	PG 76-22	285	350
Asphalt Mixtures at Plant (Measured in Truck)	PG 64-22 HMA	250	330
	PG 76-22 HMA	310	350
	PG 64-22 WMA	230	275
	PG 76-22 WMA	250	300
Asphalt Mixtures at Project (Measured in Truck When Discharging)	PG 64-22 HMA	230	330
	PG 76-22 HMA	300	350
	PG 64-22 WMA	210	275
	PG 76-22 WMA	240	300

SUBSECTION: 402.01 Description.
REVISION: Replace the paragraph with the following:

Provide the process control and acceptance testing of all classes and types of asphalt mixtures which may be furnished either as hot mix asphalt (HMA) or warm mix asphalt (WMA) produced with water injection systems.

SUBSECTION 402.01.01 Warm Mix Asphalt (WMA) Evaluation and Approval.
REVISION: Add the following subsection:

402.01.01 Warm Mix Asphalt (WMA) Evaluation and Approval.
The Department will evaluate trial production of WMA by use of a water injection system provided the system is installed according to the manufacturer's requirements and satisfies the requirements of Section 401. Evaluation will include production and placement of WMA to demonstrate adequate mixture quality including volumetric properties and density by Option A as specified in Subsection 402.03.02 D). Do not place WMA for evaluation on Department projects. Provided production and placement operations satisfy the applicable quality levels, the Department will approve WMA production on Department projects using the water injection system as installed on the specific asphalt mixing plant evaluated.

SUBSECTION: 402.05.02 Asphalt Mixtures and Mixtures With RAP.
REVISION: Replace Subsection Title as below:

402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP.

SUBSECTION: 402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP.
REVISION: Replace the paragraph with the following:

The Department will pay for the mixture at the Contract unit bid price and apply a Lot Pay Adjustment for each lot placed based on the degree of compliance with the specified tolerances. Using the appropriate Lot Pay Adjustment Schedule, the Department will assign a pay value for the applicable properties within each sublot and average the sublot pay values to determine the pay value for a given property for each lot. The Department will apply the Lot Pay Adjustment for each lot to a defined unit price of $50.00 per ton. The Department will calculate the Lot Pay Adjustment using all possible incentives and disincentives but will not allow the overall pay value for a lot to exceed 1.00.

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SUBSECTION: 402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP.
PART: C) Conventional and RAP Mixtures Placed on Shoulders.
REVISION: Replace Title and Text with the following:

C) HMA, WMA and RAP Mixtures Placed on Shoulders or Placed as Asphalt Pavement Wedge.

1) Placed monolithically with the Mainline – Width of 4 feet or less. The Department will pay as mainline mixture.
2) Placed monolithically with the Mainline – Width of greater than 4 feet. The Department will pay as mainline mixture but use 1.00 for the Lane and Joint Density Pay Value for shoulder or Asphalt Pavement Wedge quantities.
3) Placed Separately. The Department will use 1.00 for the Lane and Joint Density Pay Value.

SUBSECTION: 402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP.
PART: D) Conventional and RAP Mixtures Placed Monolithically as Asphalt Pavement Wedge.
REVISION: Replace the title with the following:
D) HMA, WMA, and RAP Mixtures Placed Monolithically as Asphalt Pavement Wedge.

Delete the following:
D) HMA, WMA, and RAP Mixtures Placed Monolithically as Asphalt Pavement Wedge. The Department will pay as mainline mixture but use a 1.00 pay value for all properties.

SUBSECTION: 402.05.02 Asphalt Mixtures for Temporary Pavement.
PART: E) Asphalt Mixtures for Temporary Pavement.
REVISION: Replace E) Asphalt Mixtures for Temporary Pavement with the following:

D) Asphalt Mixtures for Temporary Pavement.

SUBSECTION: 402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP.
PART: Lot Pay Adjustment Schedule, Compaction Option A, Base and Binder Mixtures
TABLES: VMA
REVISION: Replace the VMA table with the following:

VMA	
Pay Value	Deviation From Minimum
1.00	≥ min. VMA
0.95	0.1-0.5 below min.
0.90	0.6-1 0 below min.
(1)	> 1.0 below min.

SUBSECTION: 402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP.
PART: Lot Pay Adjustment Schedule, Compaction Option A, Surface Mixtures
TABLES: VMA
REVISION: Replace the VMA table with the following:

VMA	
Pay Value	Deviation From Minimum
1.00	≥ min. VMA
0.95	0.1-0.5 below min.
0.90	0.6-1.0 below min.
(1)	> 1.0 below min.

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SUBSECTION: 402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP.
PART: Lot Pay Adjustment Schedule, Compaction Option B Mixtures
TABLE: VMA
REVISION: Replace the VMA table with the following:

VMA	
Pay Value	Deviation From Minimum
1.00	≥min. VMA
0.95	0 1-0.5 bel w min.
0.9	0.6-1.0 below min.
(2)	> 1.0 below min.

SUBSECTION: 403.03.03 Preparation of Mixture.
PART: C) Mix Design Criteria.
NUMBER: 1) Preliminary Mix Design.
REVISION: Replace the last two sentences of the paragraph and table with the following:

Complete the volumetric mix design at the appropriate number of gyrations as given in the table below for the number of 20-year ESAL's. The Department will define the relationship between ESAL classes, as given in the bid items for Superpave mixtures, and 20-year ESAL ranges as follows:

		Number of Gyrations		
Class	**ESAL's (millions)**	$N_{initial}$	N_{design}	N_{max}
2	< 3.0	6	50	75
3	3.0 to < 30.0	7	75	115
4	≥ 30.0	8	100	160

SUBSECTION: 403.03.09 Leveling and Wedging, and Scratch Course.
PART: A) Leveling and Wedging.
REVISION: Replace the first sentence of the first paragraph with the following:

Conform to the gradation requirements (control points) of AASHTO M 323 for base, binder, or surface as the Engineer directs.

SUBSECTION: 403.03.09 Leveling and Wedging, and Scratch Course.
PART: B) Scratch Course.
REVISION: Replace the second sentence of the first paragraph with the following:

Conform to the gradation requirements (control points) of AASHTO M 323 for base, binder, or surface as the Engineer directs.

SUBSECTION: 407.01 DESCRIPTION.
REVISION: Replace the first sentence of the paragraph with the following:

Construct a pavement wedge composed of a hot-mixed or warm-mixed asphalt mixture.

SUBSECTION: 409.01 DESCRIPTION.
REVISION: Replace the first sentence of the paragraph with the following:

Use reclaimed asphalt pavement (RAP) from Department projects or other approved sources in hot mix asphalt (HMA) or warm mix asphalt (WMA) provided mixture requirements are satisfied.

SUBSECTION: 410.01 DESCRIPTION.
REVISION: Delete the second sentence of the paragraph.

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SUBSECTION: 410.03.01 Corrective Work.
REVISION: Replace the last sentence of the paragraph with the following:

Provide a final surface comparable to the adjacent pavement that does not require corrective work in respect to texture, appearance, and skid resistance.

SUBSECTION: 410.03.02 Ride Quality.
PART: B) Requirements.
NUMBER: 1) Category A.
REVISION: Replace the last sentence of the first paragraph with the following:

At the Department's discretion, a pay deduction of $1200 per 0.1-lane-mile section may be applied in lieu of corrective work.

SUBSECTION: 410.03.02 Ride Quality.
PART: B) Requirements.
NUMBER: 2) Category B.
REVISION: Replace the second and third sentence of the first paragraph with the following:

When the IRI is greater than 90 for a 0.1-mile section, perform corrective work, or remove and replace the pavement to achieve the specified IRI. At the Department's discretion, a pay deduction of $750 per 0.1-lane-mile section may be applied in lieu of corrective work.

SUBSECTION: 410.05 PAYMENT.
REVISION: Add the following sentence to the end of the first paragraph:

The sum of the pay value adjustments for ride quality shall not exceed $0 for the project as a whole.

SUBSECTION: 413.05.02 CL3 SMA BASE 1.00D PG76-22.
REVISION: Insert the following sentence between the first and second sentence of the first paragraph:

The Department will calculate the Lot Pay Adjustment using all possible incentives and disincentives but will not allow the overall pay value for a lot to exceed 1.00.

SUBSECTION: 413.05.02 CL3 SMA BASE 1.00D PG 76-22.
TABLE: JOINT DENSITY TABLE
REVISION: Replace the joint density table with the following:

LANE DENSITY	
Pay Value	Test Result (%)
1.05	95.0-96.5
1.00	93.0-94.9
0.95	92.0-92.9 or 96.6-97.0
0.90	91.0-91.9 or 97.1-97.5
(1)	< 91.0 or > 97.5

SUBSECTION: 413.05.03 CL3 SMA SURF 0.50A PG76-22 and CL3 SMA SURF 0.38A PG76-22.
REVISION: Insert the following sentence between the first and second sentence of the first paragraph:

The Department will calculate the Lot Pay Adjustment using all possible incentives and disincentives but will not allow the overall pay value for a lot to exceed 1.00.

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SUBSECTION: 413.05.03 CL3 SMA SURF 0.50A PG76-22 and CL3 SMA SURF 0.38A PG76-22.
TABLE: JOINT DENSITY TABLE
REVISION: Replace the joint density table with the following:

DENSITY		
Pay Value	Lane Density Test Result (%)	Joint Density Test Result (%)
1.05	95.0-96.5	92.0-96.0
1.00	93.0-94.9	90.0-91.9
0.95	92.0-92.9 or 96.6-97.0	89.0-89.9 or 96.1-96.5
0.90	91.0-91.9 or 97.1-97.5	88.0-88.9 or 96.6-97.0
0.75	----	< 88.0 or > 97.0
(1)	< 91.0 or > 97.5	----

SUBSECTION: 501.05.02 Ride Quality.
REVISION: Add the following sentence to the end of the first paragraph:

The sum of the pay value adjustments for the ride quality shall not exceed $0 for the project as a whole.

SUBSECTION: 505.03.04 Detectable Warnings.
REVISION: Replace the first sentence with the following:

Install detectable warning pavers at all sidewalk ramps and on all commercial entrances according to the Standard Drawings.

SUBSECTION: 505.04.04 Detectable Warnings.
REVISION: Replace the paragraph with the following:

The Department will measure the quantity in square feet. All retrofit applications for maintenance projects will require the removal of existing sidewalks to meet the requirements of the standard drawings applicable to the project. The cost associated with the removal of the existing sidewalk will be incidental to the detectable warnings bid item or incidental to the bid item for the construction of the concrete sidewalk unless otherwise noted.

SUBSECTION: 505.05 PAYMENT.
REVISION: Add the following to the bid item table:

Code	Pay Item	Pay Unit
23158ES505	Detectable Warnings	Square Foot

SUBSECTION: 509.01 DESCRIPTION.
REVISION: Replace the second paragraph with the following:

The Department may allow the use of similar units that conform to the National Cooperative Highway Research Program (NCHRP) 350 Test Level 3 (TL-3) requirements and the typical features depicted by the Standard Drawings. Obtain the Engineers approval prior to use. Ensure the barrier wall shape, length, material, drain slot dimensions and locations typical features are met and the reported maximum deflection is 3 feet or less from the NCHRP 350 TL-3 for Test 3 – 11 (pickup truck impacting at 60 mph at a 25-degree angle.)

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

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

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

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SUBSECTION:
REVISION:

701.05 PAYMENT.

Add the following pay item to the list of pay items:

Code	Pay Item	Pay Unit
23131ER701	Pipeline Video Inspection	Linear Foot

SUBSECTION:
TABLE:
REVISION:

701.05 PAYMENT

PIPE DEFLECTION DETERMINED BY CAMERA TESTING

Replace this table with the following table and note:

PIPE DEFLECTION	
Amount of Deflection (%)	Payment
0.0 to 5.0	100% of the Unit Bid Price
5.1 to 9.9	50% of the Unit Bid Price (1)
10 or greater	Remove and Replace

(1) Provide Structural Analysis as indicated above. Based on the structural analysis, pipe may be allowed to remain in place at the reduced unit price.

SUBSECTION:
TABLE:
REVISION:

701.05 PAYMENT

PIPE DEFLECTION DETERMINED BY MANDREL TESTING

Delete this table.

SUBSECTION:
REVISION:

713.02.01 Paint.

Replace with the following:

Conform to Section 842 and Section 846.

SUBSECTION:
REVISION:

713.03 CONSTRUCTION.

Replace the first sentence of the second paragraph with the following:

On interstates and parkways, and other routes approved by the State Highway Engineer, install pavement striping that is 6 inches in width.

SUBSECTION:
REVISION:

713.03.03 Paint Application.

Replace the second paragraph with the following table:

Material	**Paint Application Rate**	**Glass Beads Application Rate**
4 inch waterborne paint	Min. of 16.5 gallons/mile	Min. of 6 pounds/gallon
6 inch waterborne paint	Min. of 24.8 gallons/mile	Min. of 6 pounds/gallon
6 inch durable waterborne paint	Min. of 36 gallons/mile	Min. of 6 pounds/gallon

SUBSECTION:
REVISION:

713.03.04 Marking Removal.

Replace the last sentence of the paragraph with the following:

Vacuum all marking material and removal debris concurrently with the marking removal operation.

SUBSECTION:
REVISION:

713.05 PAYMENT.

Insert the following codes and pay items below the Pavement Striping – Permanent Paint:

Code	Pay Item	Pay Unit
24189ER	Durable Waterborne Marking – 6 IN W	Linear Foot
24190ER	Durable Waterborne Marking – 6 IN Y	Linear Foot
24191ER	Durable Waterborne Marking – 12 IN W	Linear Foot

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

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SUBSECTION: 717.03.05 Proving Period.
PART: A) Requirements.
REVISION: Insert the following to this section:

2) Type I Tape. During the proving period, ensure that the pavement marking material shows no signs of failure due to blistering, excessive cracking, bleeding, staining, discoloration, oil content of the pavement materials, drippings, chipping, spalling, poor adhesion to the pavement, loss of retroreflectivity, vehicular damage, and normal wear. Type I Tape is manufactured off site and warranted by the manufacturer to meet certain retroreflective requirements. As long as the material is adequately bonded to the surface and shows no signs of failure due to the other items listed in Subsection 714.03.06 A) 1), retroreflectivity readings will not be required. In the absence of readings, the Department will accept tape based on a nighttime visual observation.

SUBSECTION: 717.03.06 Marking Removal.
REVISION: Replace the third sentence of the paragraph with the following:

Vacuum all marking material and removal debris concurrently with the marking removal operation.

SUBSECTION: 717.05 PAYMENT.
REVISION: Insert the following bid item codes:

Code	Pay Unit	Pay Item
06563	Pave Marking – R/R X Bucks 16 IN	Linear Foot
20782NS714	Pave Marking Thermo – Bike	Each
23251ES717, 23264ES717	Pave Mark TY I Tape X-Walk, Size	Linear Foot
23252ES717, 23265ES717	Pave Mark TY I Tape Stop Bar, Size	Linear Foot
23253ES717	Pave Mark TY I Tape Cross Hatch	Square Foot
23254ES717	Pave Mark TY I Tape Dotted Lane Extension	Linear Foot
23255ES717	Pave Mark TY I Tape Arrow, Type	Each
23268ES717-23270ES717		
23256ES717	Pave Mark TY I Tape- ONLY	Each
23257ES717	Pave Mark TY I Tape- SCHOOL	Each
23266ES717	Pave Mark TY 1 Tape R/R X Bucks-16 IN	Linear Foot
23267ES717	Pave Mark TY 1 Tape-Bike	Each

SUBSECTION: 725.02.02 Type VI Class C & CT.
REVISION: Replace bullet 2) with the following:

2) The SCI100GM System as developed by SCI Products, Inc. of St. Charles, Illinois. For all miscellaneous metal work conform to ASTM A 36 and galvanize according to ASTM A 123. For the SCI100GM fender panels conform to AASHTO 180. Galvanize the SCI100GM fender panels and SCI100GM -beam connectors after fabrication according to ASTM A 123.

SUBSECTION: 725.02.04 Type VII Class C.
REVISION: Replace bullet 2) with the following:

2) The SCI100GM System as developed by SCI Products, Inc. of St. Charles, Illinois. For all miscellaneous metal work conform to ASTM A 36 and galvanize according to ASTM A 123. For the SCI100GM fender panels conform to AASHTO 180. Galvanize the SCI100GM fender panels and SCI100GM-beam connectors after fabrication according to ASTM A 123.

SUBSECTION: 801.01 REQUIREMENTS.
REVISION: Delete the fourth sentence of the first paragraph and add the following to the second paragraph.

When supplying cement with a SO_3 content above the value in table I of ASTM C 150, include supportive ASTM C 1038 14-day expansion test data for the supplied SO_3 content on the certification.

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

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

SIZES OF COARSE AGGREGATES

	Sieve	AMOUNTS FINER THAN EACH LABORATORY SIEVE (SQUARE OPENINGS) PERCENTAGE BY WEIGHT															
Aggregate Size	Nominal [3] Maximum Aggregate Size	4 inch	3 1/2 inch	3 inch	2 1/2 inch	2 inch	1 1/2 inch	1 inch	3/4 inch	1/2 inch	3/8 inch	No. 4	No. 8	No. 16	No. 30	No. 100	No. 200
1	3 ½ inch	100	90-100		25-60		0-15		0-5								
2	2 ½ inch			100	90-100	35-70	0-15		0-5								
23	2 inch			100		40-90		0-15		0-5							
3	2 inch				100	90-100	35-70	0-15		0-5							
357	2 inch				100	95-100		35-70		10-30		0-5					
4	1 ½ inch					100	90-100	20-55	0-15		0-5						
467	1 ½ inch					100	95-100		35-70		10-30	0-5					
5	1 inch						100	90-100	20-55	0-10	0-5						
57	1 inch						100	95-100		25-60		0-10	0-5				
610	1 inch						100	85-100		40-75		15-40					
67	3/4 inch							100	90-100		20-55	0-10	0-5				
68	3/4 inch							100	90-100		30-65	5-25	0-10	0-5			
710	3/4 inch							100	80-100		30-75	0-30					
78	1/2 inch								100	90-100	40-75	5-25	0-10	0-5			
8	3/8 inch									100	85-100	10-30	0-10	0-5			
9-M	3/8 inch									100	75-100	0-25	0-5				
10[2]	No. 4										100	85-100				10-30	
11[2]	No. 4										100	40-90	10-40			0-5	
DENSE GRADED AGGREGATE [1]	3/4 inch							100	70-100		50-80	30-65			10-40		4-13
CRUSHED STONE BASE [1]	1 ½ inch				100		90-100		60-95		30-70	15-55			5-20		0-8

(1) *Gradation performed by wet sieve KM 64-620 or AASHTO T 11/T 27.*
(2) *Sizes shown for convenience and are not to be considered as coarse aggregates.*
(3) *Nominal Maximum Size is the largest sieve on the gradation table for an aggregate size on which any material may be retained.*

Note: The Department will allow blending of same source/same type aggregate when precise procedures are used such as cold feed, belt, or equivalent and combining of sizes or types of aggregate using the weigh hopper at concrete plants or controlled feed belts at the pugmill to obtain designated sizes.

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SUBSECTION: 805.16 SAMPLING AND TESTING.
REVISION: Replace the "AASHTO T 160" method with the "KM 64-629" method for the Concrete Beam Expansion Test.

Replace the "ASTM D 3042" method with the "KM 64-625" method for Insoluble Residue.

SUBSECTION: 810.04.01 Coating Requirements.
REVISION: Replace the "Subsection 806.07" references with "Subsection 806.06"

SUBSECTION: 810.06.01 Polyvinyl Chloride (PVC) Pipe.
PART: B) Culvert and Entrance Pipe.
REVISION: Replace the title with the following:

B) Culvert Pipe, Storm Sewer, and Entrance Pipe.

SUBSECTION: 823.02 LIQUID MEMBRANE FORMING COMPOUNDS.
REVISION: Add the following:

Effective July 1, 2011, to remain on or be added to the Department's approved list, products must have completed testing or been submitted for testing through the National Transportation Product Evaluation Program (NTPEP) for Concrete Curing Compounds.

SUBSECTION: 837.03 APPROVAL.
REVISION: Replace the last sentence with the following:

The Department will sample and evaluate for approval each lot of thermoplastic material delivered for use per contract prior to installation of the thermoplastic material. Do not allow the installation of thermoplastic material until it has been approved by the Division of Materials. Allow the Department a minimum of 10 working days to evaluate and approve thermoplastic material.

SUBSECTION: 837.03.01 Composition.
REVISION: COMPOSITION Table:

Replace

Lead Chromate	0.0 max.	4.0 min.

with

Heavy Metals Content	Comply with 40 CFR 261

SUBSECTION: 842.02 APPROVAL.
TABLE: PAINT COMPOSITION
REVISION: Revise the following in the table:

Replace the 2.0ΔE* values in the table with 4.0ΔE* for both Yellow and White Paint on both the Daytime and Nighttime Color Spectrophotometer.

SECTION: DIVISION 800 MATERIAL DETAILS
REVISION: Add the following section in Division 800

SECTION 846 – DURABLE WATERBORNE PAINT

846.01 DESCRIPTION. This section covers quick-drying durable waterborne pavement striping paint for permanent applications. The paint shall be ready-mixed, one-component, 100% acrylic waterborne striping paint suitable for application on such traffic-bearing surfaces as Portland cement concrete, bituminous cement concrete, asphalt, tar, and previously painted areas of these surfaces.

846.02 Approval. Select materials that conform to the composition requirements below. Provide independent analysis data and certification for each formulation stating the total concentration of each heavy metal present, the test method used for each determination, and compliance to 40 CFR 261 for leachable heavy metals content. Submit initial samples for approval before beginning striping

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

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

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

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

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

DURABLE WATERBORNE PAVEMENT STRIPING PAINT REDUCTION SCHEDULE						
Non-conforming Property	Resin	Color	Contrast	TiO_2	VOC	Heavy Metals Content
Reduction Rate	60%	10%	10%	10%	60%	60%

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

STANDARD DRAWINGS THAT APPLY

TRAFFIC

~ *TEMPORARY* ~

TRAFFIC CONTROL

LANE CLOSURE MULTI-LANE HIGHWAY CASE II	TTC-120
MISCELLANEOUS TRAFFIC CONTROL DEVICES	TTD-100
MISCELLANEOUS TRAFFIC CONTROL DEVICES	TTD-105

DEVICES

POST SPLICING DETAIL	TTD-110
ARROW PANEL	TTD-115

BRIDGES

MISCELLANEOUS STANDARDS

BRIDGE RESTORATION AND WATERPROOFING WITH CONCRETE OVERLAYS	BGX-009-04

JOINTS

NEOPRENE EXPANSION DAMS AND ARMORED EDGES	BJE-001-11

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

LABOR AND WAGE REQUIREMENTS
APPLICABLE TO OTHER THAN FEDERAL-AID SYSTEM PROJECTS

I. APPLICATION

1. These contract provisions shall apply to all work performed on the contract by the contractor with his own organization and with the assistance of workmen under his immediate superintendence and to all work performed on the contract by piecework, station work or by subcontract. The contractor's organization shall be construed to include only workmen employed and paid directly by the contractor and equipment owned or rented by him, with or without operators.

2. The contractor shall insert in each of his subcontracts all of the stipulations contained in these Required Provisions and such other stipulations as may be required.

3. A breach of any of the stipulations contained in these Required Provisions may be grounds for termination of the contract.

II. NONDISCRIMINATION OF EMPLOYEES

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 administrating agency may direct as a means of enforcing such provisions, including sanctions for non-compliance.

III. PAYMENT OF PREDETERMINED MINIMUM WAGES

1. These special provisions are supplemented elsewhere in the contract by special provisions which set forth certain predetermined minimum wage rates. The contractor shall pay not less than those rates.

2. The minimum wage determination schedule shall be posted by the contractor, in a manner prescribed by the Department of Highways, at the site of the work in prominent places where it can be easily seen by the workers.

IV. STATEMENTS AND PAYROLLS

1. All contractors and subcontractors affected by the terms of KRS 337.505 to 337.550 shall keep full and accurate payroll records covering all disbursements of wages to their employees to whom they are required to pay not less than the prevailing rate of wages. Payrolls and basic records relating thereto will be maintained during the course of the work and preserved for a period of one (1) year from the date of completion of this contract.

2. The payroll records shall contain the name, address and social security number of each employee, his correct classification, rate of pay, daily and weekly number of hours worked, itemized deductions made and actual wages paid.

3. The contractor shall make his daily records available at the project site for inspection by the State Department of Highways contracting office or his authorized representative.

Periodic investigations shall be conducted as required to assure compliance with the labor provisions of the contract. Interrogation of employees and officials of the contractor shall be permitted during working hours.

Aggrieved workers, Highway Managers, Assistant District Engineers, Resident Engineers and Project Engineers shall report all complaints and violations to the Division of Contract Procurement.

The contractor shall be notified in writing of apparent violations. The contractor may correct the reported violations and notify the Department of Highways of the action taken or may request an informal hearing. The request for hearing shall be in writing within ten (10) days after receipt of the notice of the reported violation. The contractor may submit

records and information which will aid in determining the true facts relating to the reported violations.

Any person or organization aggrieved by the action taken or the findings established as a result of an informal hearing by the Division of Contract Procurement may request a formal hearing.

4. The wages of labor shall be paid in legal tender of the United States, except that this condition will be considered satisfied if payment is made by a negotiable check, on a solvent bank, which may be cashed readily by the employee in the local community for the full amount, without discount or collection charges of any kind. Where checks are used for payments, the contractor shall make all necessary arrangements for them to be cashed and shall give information regarding such arrangements.

5. No fee of any kind shall be asked or accepted by the contractor or any of his agents from any person as a condition of employment on the project.

6. No laborers shall be charged for any tools used in performing their respective duties except for reasonably avoidable loss or damage thereto.

7. Every employee on the work covered by this contract shall be permitted to lodge, board, and trade where and with whom he elects and neither the contractor nor his agents, nor his employees shall directly or indirectly require as a condition of employment that an employee shall lodge, board or trade at a particular place or with a particular person.

8. Every employee on the project covered by this contract shall be an employee of either the prime contractor or an approved subcontractor.

9. No charge shall be made for any transportation furnished by the contractor or his agents to any person employed on the work.

10. No individual shall be employed as a laborer or mechanic on this contract except on a wage basis, but this shall not be construed to prohibit the rental of teams, trucks or other equipment from individuals.

No Covered employee may be employed on the work except in accordance with the classification set forth in the schedule mentioned above; provided, however, that in the event additional classifications are required, application shall be made by the contractor to the Department of Highways and (1) the Department shall request appropriate classifications and rates from the proper agency, or (2) if there is urgent need for additional classification to avoid undue delay in the work, the contractor may employ such workmen at rates deemed comparable to rates established for similar classifications provided he has made written application through the Department of Highways, addressed to the proper agency, for the supplemental rates. The contractor shall retroactively adjust, upon receipt of the supplemental rates schedule, the wages of any employee paid less than the established rate and may adjust the wages of any employee overpaid.

11. 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 laborer or mechanic in any work-week in which he is employed on such work, to work in excess of eight hours in any calendar day or in excess of forty hours in such work-week unless such laborer or mechanic receives compensation at a rate not less than one and one half times his basic rate of pay for all hours worked in excess of eight hours in any calendar day or in excess of forty hours in such work-week. 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. This agreement shall be in writing and shall be executed prior to the employee working in excess of eight (8) hours, but not more than ten (10) hours, in any one (1) calendar day.

12. Payments to the contractor may be suspended or withheld due to failure of the contractor to pay any laborer or mechanic employed or working on the site of the work, all or part of the wages required under the terms of the contract. The Department may suspend or withhold payments only after the contractor has been given written notice of the alleged violation and the contractor has failed to comply with the wage determination of the Department of Highways.

13. Contractors and subcontractors shall comply with the sections of Kentucky Revised Statutes, Chapter 337 relating to contracts for Public Works.

Revised 2-16-95

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.

Kentucky Equal Employment Opportunity Act of 1978

The requirements of the Kentucky Equal Employment Opportunity Act of 1978 (KRS 45.560-45.640) shall apply to this Contract. The apparent low Bidder will be required to submit EEO forms to the Division of Construction Procurement, which will then forward to the Finance and Administration Cabinet for review and approval. No award will become effective until all forms are submitted and EEO/CC has certified compliance. The required EEO forms are as follows:

- EEO-1: Employer Information Report
- Affidavit of Intent to Comply
- Employee Data Sheet
- Subcontractor Report

These forms are available on the Finance and Administration's web page under ***Vendor Information, Standard Attachments and General Terms*** at the following address: **https://www.eProcurement.ky.gov**.

Bidders currently certified as being in compliance by the Finance and Administration Cabinet may submit a copy of their approval letter in lieu of the referenced EEO forms.

For questions or assistance please contact the Finance and Administration Cabinet by email at **finance.contractcompliance@ky.gov** or by phone at 502-564-2874.

General Decision Number: KY100211 11/04/2011 KY211

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).

Modification Number	Publication Date
0	10/22/2010
1	11/05/2010
2	12/03/2010
3	12/17/2010
4	12/31/2010
5	01/28/2011
6	03/25/2011
7	05/06/2011
8	06/03/2011
9	07/01/2011
10	07/22/2011
11	07/29/2011
12	08/12/2011
13	08/26/2011
14	09/16/2011
15	09/23/2011
16	10/07/2011
17	11/04/2011

BRIN0004-003 06/01/2011

BRECKENRIDGE COUNTY

	Rates	Fringes
BRICKLAYER	$ 24.11	10.07

BRKY0001-005 06/01/2011

BULLITT, CARROLL, GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, & TRIMBLE COUNTIES:

	Rates	Fringes
BRICKLAYER	$ 24.11	10.07

BRKY0002-006 06/01/2011

BRACKEN, GALLATIN, GRANT, MASON & ROBERTSON COUNTIES:

	Rates	Fringes
BRICKLAYER	$ 26.57	10.26

BRKY0007-004 06/01/2011

BOYD, CARTER, ELLIOT, FLEMING, GREENUP, LEWIS & ROWAN COUNTIES:

	Rates	Fringes
BRICKLAYER	$ 28.29	16.80

BRKY0017-004 06/01/2009

ANDERSON, BATH, BOURBON, BOYLE, CLARK, FAYETTE, FRANKLIN, HARRISON, JESSAMINE, MADISON, MERCER, MONTGOMERY, NICHOLAS, OWEN, SCOTT, WASHINGTON & WOODFORD COUNTIES:

	Rates	Fringes
BRICKLAYER	$ 24.11	9.97

CARP0064-001 07/01/2011

	Rates	Fringes
CARPENTER	$ 25.95	13.26
Diver	$ 39.30	13.26
PILEDRIVERMAN	$ 26.20	13.26

ELEC0212-008 05/31/2011

BRACKEN, GALLATIN and GRANT COUNTIES

	Rates	Fringes
ELECTRICIAN	$ 26.11	14.94

ELEC0212-014 06/27/2011

BRACKEN, GALLATIN & GRANT COUNTIES:

	Rates	Fringes
Sound & Communication Technician	$ 21.55	8.46

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* ELEC0317-012 06/01/2011

BOYD, CARTER, ELLIOT & ROWAN COUNTIES:

	Rates	Fringes
Electricians:		

Cable Splicer	$ 32.68	18.13
Electrician	$ 31.87	19.96

ELEC0369-007 05/26/2010

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	$ 29.27	13.08

ELEC0575-002 05/31/2010

FLEMING, GREENUP, LEWIS & MASON COUNTIES:

	Rates	Fringes
ELECTRICIAN	$ 30.69	12.48

ENGI0181-018 07/01/2011

	Rates	Fringes
Operating Engineer:		
GROUP 1	$ 26.50	13.00
GROUP 2	$ 24.08	13.00
GROUP 3	$ 24.46	13.00
GROUP 4	$ 23.82	13.00

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; Gurries; 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 Conrete 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 06/01/2011

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	$ 22.92	17.20
Structural	$ 25.50	17.20

IRON0070-006 06/01/2011

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	$ 25.77	18.28

IRON0372-006 06/26/2011

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

Beyond 30-mile radius of Hamilton County, Ohio Courthouse	$ 26.75	17.40
Up to & including 30-mile radius of Hamilton County, Ohio Courthouse	$ 26.50	17.40

IRON0769-007 06/01/2011

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	$ 30.96	18.07
ZONE 1	$ 29.59	18.07
ZONE 2	$ 31.36	18.07
ZONE 3	$ 32.96	18.07

ZONE 1 - Up to 10 mi. radius of union hall, Ashland, Ky., 1643 Greenup Avenue
ZONE 2 - 10 to 50 mi. radius of union hall;
ZONE 3 - 50 mi. radius and beyond

LABO0189-003 07/01/2011

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	$ 20.81	10.85
GROUP 2	$ 21.06	10.85
GROUP 3	$ 21.11	10.85
GROUP 4	$ 21.71	10.85

LABORERS CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level D; Flagperson;

Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushammer; 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

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LABO0189-008 07/01/2011

ANDERSON, BULLITT, CARROLL, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE & WASHINGTON COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 21.26	10.40
GROUP 2	$ 21.51	10.40
GROUP 3	$ 21.56	10.40
GROUP 4	$ 22.16	10.40

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; Bushammer; 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

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LABO0189-009 07/01/2011

BRECKINRIDGE & GRAYSON COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 21.51	10.15
GROUP 2	$ 21.76	10.15
GROUP 3	$ 21.81	10.15
GROUP 4	$ 22.41	10.15

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; Bushammer; 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

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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 05/02/2011

BRACKEN, GALLATIN, GRANT, MASON & OWEN COUNTIES:

	Rates	Fringes
PAINTER (Heavy & Highway Bridges - Guardrails - Lightpoles - Striping)		
Bridge Equipment Tender and Containment Builder	$ 20.27	8.10
Brush & Roller	$ 23.85	8.10
Elevated Tanks; Steeplejack Work; Bridge & Lead Abatement	$ 23.85	8.10
Sandblasting & Water Blasting	$ 24.60	8.10
Spray	$ 24.35	8.10

PAIN0118-004 05/01/2010

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	10.30
Spray, Sandblast, Power Tools, Waterblast & Steam Cleaning	$ 19.50	10.30

PAIN1072-003 12/01/2010

BOYD, CARTER, ELLIOTT, GREENUP, LEWIS and ROWAN COUNTIES

	Rates	Fringes
Painters:		
Bridges; Locks; Dams; Tension Towers & Energized Substations	$ 29.03	11.90
Power Generating Facilities	$ 25.79	11.90

PLUM0248-003 06/01/2011

BOYD, CARTER, ELLIOTT, GREENUP, LEWIS & ROWAN COUNTIES:

	Rates	Fringes
Plumber and Steamfitter	$ 32.00	16.24

PLUM0392-007 09/01/2011

BRACKEN, CARROLL (Eastern Half), GALLATIN, GRANT, MASON, OWEN & ROBERTSON COUNTIES:

	Rates	Fringes
Plumbers and Pipefitters	$ 29.30	15.74

PLUM0502-003 08/01/2011

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	$ 31.00	16.13

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

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(ii)).

In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

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-11-III- HWY dated August 04, 2011

No laborer, workman or mechanic shall be paid at a rate less than that of a Journeyman except those classified as bona fide apprentices.

Apprentices or trainees shall be permitted to work as such subject to Administrative Regulations adopted by the Commissioner of Workplace Standards. Copies of these regulations will be furnished upon request from any interested person.

Before using apprentices on the job the contractor shall present to the Contracting Officer written evidence of registration of such employees in a program of a State apprenticeship and training agency approved and recognized by the U. S. Bureau of Apprenticeship and Training. In the absence of such a State agency, the contractor shall submit evidence of approval and registration by the U. S. Bureau of Apprenticeship and Training.

The contractor shall submit to the Contracting Officer, written evidence of the established apprenticeship-journeyman ratios and wage rates in the project area, which will be the basis for establishing such ratios and rates for the project under the applicable contract provisions.

TO: EMPLOYERS/EMPLOYEES

PREVAILING WAGE SCHEDULE:

The wages indicated on this wage schedule are the least permitted to be paid for the occupations indicated. When an employee works in more than one classification, the employer must record the number of hours worked in each classification at the prescribed hourly base rate.

OVERTIME:

Overtime is to be paid after an employee works eight (8) hours a day or forty (40) hours a week, whichever gives the employee the greater wages. At least time and one-half the base rate is required for all overtime. A laborer, workman or mechanic and an employer may enter into a written agreement or a collective bargaining agreement to work more than eight (8) hours a calendar day but not more than ten (10) hours a calendar day for the straight time hourly rate. Wage violations or questions should be directed to the designated Engineer or the undersigned.

Ryan Griffith, Director
Division of Construction Procurement
Frankfort, Kentucky 40622

General Decision Number: KY100212 10/07/2011 KY212

State: Kentucky

Construction Type: Highway

Counties: Boone, Campbell, Kenton and Pendleton 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).

Modification Number	Publication Date
0	10/22/2010
1	11/05/2010
2	12/03/2010
3	12/31/2010
4	01/28/2011
5	03/25/2011
6	04/29/2011
7	05/06/2011
8	07/22/2011
9	07/29/2011
10	08/26/2011
11	09/16/2011
12	09/23/2011
13	10/07/2011

BRKY0002-005 06/01/2009

	Rates	Fringes
BRICKLAYER	$ 26.12	9.73

BROH0001-005 06/01/2008

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 25.75	8.60

CARP0698-001 05/01/2009

BOONE, CAMPBELL, KENTON & PENDLETON COUNTIES:

	Rates	Fringes
Carpenter & Piledrivermen	$ 27.05	9.69
Diver	$ 40.58	9.69

ELEC0212-007 05/31/2011

	Rates	Fringes
ELECTRICIAN	$ 26.11	14.94

ELEC0212-013 06/27/2011

	Rates	Fringes
Sound & Communication Technician	$ 21.55	8.46

ENGI0018-013 05/01/2009

	Rates	Fringes
OPERATOR: Power Equipment		
GROUP 1	$ 29.49	12.25
GROUP 2	$ 29.37	12.25
GROUP 3	$ 28.33	12.25
GROUP 4	$ 27.15	12.25
GROUP 5	$ 21.69	12.25
GROUP 6	$ 29.74	12.25
GROUP 7	$ 30.00	12.25

OPERATING ENGINEER CLASSIFICATIONS

GROUP 1 - Air Compressor on Steel Erection; Barrier Moving Machine; Boiler Operator on Compressor or Generator when mounted on a Rig; Cableway; Combination Concrete Mixer & Tower; Concrete Plant (over 4 yd. Capacity); Concrete Pump; Crane (All Types, Including Boom Truck, Cherry Picker); Crane-Compact, Track or Rubber over 4,000 lbs. capacity; Cranes-Self Erecting, Stationary, Track or Truck (All Configurations); Derrick; Dragline; Dredge (Dipper, Clam or Suction); Elevating Grader or Euclid Loader; Floating Equipment (All Types); Gradall; Helicopter Crew (Operator-Hoist or Winch); Hoe (all types); Hoisting Engine on Shaft or Tunnel Work; Hydraulic Gantry (Lifting System); Industrial-Type Tractor; Jet Engine Dryer (D8 or D9) Diesel Tractor; Locomotive (Standard Gauge); Maintenance Operator Class A; Mixer, Paving (Single or Double Drum); Mucking Machine; Multiple Scraper; Piledriving Machine (All Types); Power Shovel; Prentice Loader; Quad 9 (Double Pusher); Rail Tamper (with auto lifting & aligning device); Refrigerating Machine (Freezer Operation); Rotary Drill, on Caisson work; Rough Terrain Fork Lift with Winch/Hoist; Side-Boom; Slip-Form Paver; Tower Derrick; Tree Shredder; Trench Machine (Over 24" wide); Truck Mounted Concrete Pump; Tug Boat; Tunnel Machine and/or Mining Machine; & Wheel Excavator

GROUP 2 - Asphalt Paver; Automatic Subgrader Machine, Self-Propelled (CMI Type); Bobcat Type and/or Skid Steer Loader with Hoe Attachment Greater than 7,000 lbs.; Boring Machine More than 48"; Bulldozer; Endloader; Hydro Milling Machine; Horizontal Directional Drill (over 500,000 ft. lbs. thrust); Kolman-type Loader (production type-Dirt); Lead Greaseman; Lighting & Traffic Signal Installation Equipment (includes all groups or classifications); Material Transfer Equipment (Shuttle Buggy) Asphalt; Pettibone-Rail Equipment; Power Grader; Power Scraper; Push Cat; Rotomill (all), Grinders & Planers of All types; Trench Machine (24" wide & under); & Vermeer type Concrete Saw

GROUP 3 - A-Frame; Air Compressor on Tunnel Work (low pressure); Asphalt Plant Engineer; Bobcat-type and/or Skid Steer Loader with or without Attachments; Highway Drills (all types); Locomotive (narrow gauge); Material Hoist/Elevator; Mixer, Concrete (more than one bag capacity); Mixer, one bag capacity (Side Loader); Power Boiler (Over 15 lbs. Pressure) Pump Operator installing & operating Well Points; Pump (4" & over discharge); Roller, Asphalt; Rotovator (lime soil stabilizer); Switch & Tie Tampers (without lifting & aligning device); Utility Operator (Small equipment); & Welding Machines

GROUP 4 - Backfiller; Ballast Re-locator; Bars, Joint & Mesh Installing Machine; Batch Plant; Boring Machine Operator (48" or less); Bull Floats; Burlap & Curing Machine; Concrete Plant (capacity 4 yd. & under); Concrete Saw (Multiple); Conveyor (Highway); Crusher; Deckhand; Farm-type Tractor with attachments (highway) except Masonry); Finishing Machine; Fireperson, Floating Equipment (all types); Fork Lift (highway); Form Trencher; Hydro Hammer; Hydro Seeder; Pavement Breaker; Plant Mixer; Post Driver; Post Hole Digger (Power Auger); Power Brush Burner; Power Form Handling Equipment; Road Widening Trencher; Roller (Brick, Grade & Macadam); Self-Propelled Power Spreader; Self-Propelled Power Subgrader; Steam Fireperson; Tractor (Pulling Sheepfoot, Roller or Grader); & Vibratory Compactor with Integral Power

GROUP 5 - Compressor (Portable, Sewer, Heavy & Highway); Drum Fireperson (Asphalt); Generator; Masonry Fork Lift; Inboard-Outboard Motor Boat Launch; Masonry Fork Lift; Oil Heater (asphalt plant); Oiler; Power Driven Heater; Power Sweeper & Scrubber; Pump (under 4" discharge); Signalperson; Tire Repairperson; & VAC/ALLS

GROUP 6 - Master Mechanic & Boom from 150 to 180

GROUP 7 - Boom from 180 and over

IRON0044-008 06/01/2011

	Rates	Fringes
Ironworkers:		
Fence Erector	$ 22.92	17.20
Structural	$ 25.50	17.20

IRON0372-004 06/26/2011

	Rates	Fringes
IRONWORKER, REINFORCING		
Beyond 30-mile radius of Hamilton County, Ohio Courthouse	$ 26.75	17.40
Up to & including 30-mile radius of Hamilton County, Ohio Courthouse	$ 26.50	17.40

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* LABO0189-004 07/01/2011

PENDLETON COUNTY:

	Rates	Fringes
LABORER		
GROUP 1	$ 20.81	10.85
GROUP 2	$ 21.06	10.85
GROUP 3	$ 21.11	10.85
GROUP 4	$ 21.71	10.85

LABORERS CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger; Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Side Rail Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free Air); Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Driller (All Types); Powderman & Blaster; Troxler & Concrete Tester if Laborer is Utilized

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LABO0265-009 05/01/2011

BOONE, CAMPBELL & KENTON COUNTIES:

	Rates	Fringes
LABORER		
GROUP 1	$ 26.37	8.20

GROUP 2	$ 26.54	8.20
GROUP 3	$ 26.87	8.20
GROUP 4	$ 27.32	8.20

LABORER CLASSIFICATIONS

GROUP 1 - Asphalt Laborer; Carpenter Tender; Concrete Curing Applicator; Dump Man (Batch Truck); Guardrail and Fence Installer; Joint Setter; Laborer (Construction); Landscape Laborer; Highway Lighting Worker; Signalization Worker; Mesh Handlers & Placer; Right-of-way Laborer; Riprap Laborer & Grouter; Scaffold Erector; Seal Coating; Surface Treatment or Road Mix Laborer; Sign Installer; Slurry Seal; Utility Man; Bridge Man; Handyman; Waterproofing Laborer; Flagperson; Hazardous Waste (level D); Diver Tender; Zone Person & Traffic Control

GROUP 2 - Skid Steer; Asphalt Raker; Concrete Puddler; Kettle Man (Pipeline); Machine Driven Tools (Gas, Electric, Air); Mason Tender; Brick Paver; Mortar Mixer; Power Buggy or Power Wheelbarrow; Sheeting & Shoring Man; Surface Grinder Man; Plastic Fusing Machine Operator; Pug Mill Operator; & Vacuum Devices (wet or dry); Rodding Machine Operator; Diver; Screwman or Paver; Screed Person; Water Blast, Hand Held Wand; Pumps 4" & Under (Gas, Air or Electric) & Hazardous Waste (level C); Air Track and Wagon Drill; Bottom Person; Cofferdam (below 25 ft. deep); Concrete Saw Person; Cutting with Burning Torch; Form Setter; Hand Spiker (Railroad); Pipelayer; Tunnel Laborer (without air) & Caisson; Underground Person (working in Sewer and Waterline, Cleaning, Repairing & Reconditioning); Sandblaster Nozzle Person; & Hazardous Waste (level B)

GROUP 3 - Blaster; Mucker; Powder Person; Top Lander; Wrencher (Mechanical Joints & Utility Pipeline); Yarner; Hazardous Waste (level A); Concrete Specialist; Concrete Crew in Tunnels (With Air-pressurized - $1.00 premium); Curb Setter & Cutter; Grade Checker; Utility Pipeline Tapper; Waterline; and Caulker

GROUP 4 - Miner; & Gunite Nozzle Person

TUNNEL LABORER WITH AIR-PRESSURIZED ADD $1.00 TO BASE RATE

SIGNAL PERSON WILL RECEIVE THE RATE EQUAL TO THE RATE PAID THE LABORER CLASSIFICATION FOR WHICH HE OR SHE IS SIGNALING.

PAIN0012-016 05/02/2011

	Rates	Fringes
Painters:		
Bridge	$ 23.85	8.10
Bridge Equipment Tender and Containment Builder	$ 20.27	8.10
Brush & Roller	$ 22.85	8.10
Sandblasting & Water Blasting	$ 23.60	8.10
Spray	$ 23.35	8.10

PLUM0392-008 09/01/2011

	Rates	Fringes
PLUMBER	$ 29.30	15.74

SUKY2010-161 02/05/1996

	Rates	Fringes
Truck drivers:		
GROUP 1	$ 15.85	4.60
GROUP 2	$ 16.29	4.60

TRUCK DRIVER CLASSIFICATIONS

GROUP 1 - Driver

GROUP 2 - Euclid Wagon; End Dump; Lowboy; Heavy Duty Equipment; Tractor-Trailer Combination; & Drag

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(ii)).

In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

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-11-IV-HWY dated August 04, 2011

No laborer, workman or mechanic shall be paid at a rate less than that of a Journeyman except those classified as bona fide apprentices.

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Before using apprentices on the job the contractor shall present to the Contracting Officer written evidence of registration of such employees in a program of a State apprenticeship and training agency approved and recognized by the U. S. Bureau of Apprenticeship and Training. In the absence of such a State agency, the contractor shall submit evidence of approval and registration by the U. S. Bureau of Apprenticeship and Training.

The contractor shall submit to the Contracting Officer, written evidence of the established apprenticeship-journeyman ratios and wage rates in the project area, which will be the basis for establishing such ratios and rates for the project under the applicable contract provisions.

TO: EMPLOYERS/EMPLOYEES

PREVAILING WAGE SCHEDULE:

The wages indicated on this wage schedule are the least permitted to be paid for the occupations indicated. When an employee works in more than one classification, the employer must record the number of hours worked in each classification at the prescribed hourly base rate.

OVERTIME:

Overtime is to be paid after an employee works eight (8) hours a day or forty (40) hours a week, whichever gives the employee the greater wages. At least time and one-half the base rate is required for all overtime. A laborer, workman or mechanic and an employer may enter into a written agreement or a collective bargaining agreement to work more than eight (8) hours a calendar day but not more than ten (10) hours a calendar day for the straight time hourly rate. Wage violations or questions should be directed to the designated Engineer or the undersigned.

Ryan Griffith, Director
Division of Construction Procurement
Frankfort, Kentucky 40622

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

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
FRANKFORT, KY 40622

CONTRACT ID: 112605 PAGE: 1
COUNTY: BRACKEN, CAMPBELL, OWEN LETTING: 12/09/11
PROPOSAL: 121GR11M117-FE02 CALL NO: 403

LINE NO	ITEM	DESCRIPTION	APPROXIMATE UNIT QUANTITY	UNIT PRICE	AMOUNT
	SECTION 0001	BRIDGE			
0010	02562	SIGNS	596.000 SQFT		
0020	02650	MAINTAIN & CONTROL TRAFFIC APPLIES TO 012B00008N	(1.00) LS		
0030	02650	MAINTAIN & CONTROL TRAFFIC APPLIES TO 019B00032N	(1.00) LS		
0040	02650	MAINTAIN & CONTROL TRAFFIC APPLIES TO 094B00003N	(1.00) LS		
0050	02650	MAINTAIN & CONTROL TRAFFIC APPLIES TO 094B00026N	(1.00) LS		
0060	02653	LANE CLOSURE	8.000 EACH		
0070	03294	EXPAN JOINT REPLACE 1 1/2 IN	120.500 LF		
0080	03295	EXPAN JOINT REPLACE 2 IN	40.000 LF		
0090	03299	ARMORED EDGE FOR CONCRETE	228.400 LF		
0100	03300	ELIMINATE TRANSVERSE JOINT	298.200 LF		
0110	03301	REPAIR CONCRETE HANDRAIL 012B00008N PLINTH WALL REPAIR	4.000 LF		
0120	03304	BRIDGE OVERLAY APPROACH PAVEMENT	1,445.000 SQYD		
0130	04933	TEMP SIGNAL 2 PHASE	4.000 EACH		
0140	06549	PAVE STRIPING-TEMP REM TAPE-B	2,000.000 LF		
0150	06550	PAVE STRIPING-TEMP REM TAPE-W	4,000.000 LF		
0160	06551	PAVE STRIPING-TEMP REM TAPE-Y	8,000.000 LF		
0170	06556	PAVE STRIPING-DUR TY 1-6 IN W	518.000 LF		
0180	06557	PAVE STRIPING-DUR TY 1-6 IN Y	1,764.000 LF		
0190	08150	STEEL REINFORCEMENT	3,740.000 LB		
0200	08504	EPOXY SAND SLURRY	759.000 SQYD		

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
FRANKFORT, KY 40622

CONTRACT ID: 112605 PAGE: 2
COUNTY: BRACKEN, CAMPBELL, OWEN LETTING: 12/09/11
PROPOSAL: 121GR11M117-FE02 CALL NO: 403

LINE NO	ITEM	DESCRIPTION	APPROXIMATE UNIT QUANTITY	UNIT PRICE	AMOUNT
0210	08510	REM EPOXY BIT FOREIGN OVERLAY	1,463.000 SQYD		
0220	08526	CONC CLASS M FULL DEPTH PATCH	14.400 CUYD		
0230	08534	CONCRETE OVERLAY-LATEX	90.000 CUYD		
0240	08549	BLAST CLEANING	2,792.000 SQYD		
0250	08551	MACHINE PREP OF SLAB	570.000 SQYD		
0260	22146EN	CONCRETE PATCHING REPAIR 012B00008N PIER CAP PATCHING	250.000 SQFT		
0270	22146EN	CONCRETE PATCHING REPAIR 094B00026N PIER CAPS & PLINTH END	326.000 SQFT		
0280	23428EC	CONCRETE PATCHING REPAIR 094B00003N PIER CAP ENDS	40.000 CUFT		
0290	23879EC	ACRYLIC GLASS APPLIES TO 094B00026N	100.000 SQFT		
0300	24094EC	PARTIAL DEPTH PATCHING	70.000 CUYD		
	SECTION 0002	DEMOBILIZATION			
0310	02569	DEMOBILIZATION (AT LEAST 1.5%)	LUMP		
		TOTAL BID			