MEADE COUNTY

FED/STATE PROJECT NUMBER: TAP 4000 073

KYTC ITEM NUMBER: FD52 082 2204 000-001

DESCRIPTION/PROJECT NAME: City of Brandenburg – Downtown Sidewalk Connections

WORK TYPE: Grade, Concrete, Retaining Walls, Pedestrian Rails, and Asphalt

START OF CONSTRUCTION: July 26, 2022

ESTIMATED COMPLETION OF UTILITY WORK (BY OTHERS): August 1, 2021

PROJECT COMPLETION: May 15, 2023

LETTING DATE: July 12, 2022

The City of Brandenburg offers this Federal-aid Transportation Project for sealed bids labeled “City of Brandenburg – Downtown Sidewalk Connections”. Bids will be received until 2:00 pm (local time), on July 12, 2022. Bids received after 2:00 pm will not be accepted. Bids shall be delivered to Brandenburg City Hall, Attn: Mayor Ronnie Joyner, 737 High Street, Brandenburg, KY 40108. bids will be thereafter publicly opened and read aloud, July 12, 2022 at 2:00 pm EST via Zoom Virtual online meeting.

Join Zoom Meeting

https://us02web.zoom.us/j/82688951956?pwd=M3ZkbC9KQiZUdFJqNkNiVCtRZXVmUT09

Meeting ID: 826 8895 1956

Passcode: 437728

Dial by your location

+1 646 876 9923 US (Eastern Time)

+1 312 626 6799 US (Central Time)
All Bidders must comply with the following:

1. All contractors and DBE subcontractors must be pre-qualified with the Kentucky Transportation Cabinet and possess a Certificate of Eligibility at the time of the bid opening. All other subcontractors must be prequalified when accepting subcontracts.

2. Due to the Federal Funding Source, this project is subject to the Federal Davis-Bacon Act wage rate requirements and Buy America restrictions.

3. Bids shall include a Bid Bond, payable to LPA, in amount not less than 5% of bid.
4. The bidder shall certify that it has secured participation by Disadvantaged Business Enterprises ("DBE") in the amount of no less than THREE (3%) percent of the total value of this contract and that the DBE participation is in compliance with the requirements of 49 CFR 26 and the policies of the Kentucky Transportation Cabinet pertaining to the DBE Program. The contractor must properly fill out the "Certification of Bid Proposal / DBE" form (included in this proposal) and return with the proposal as part of the bid.

5. Bids not completely or correctly filled out will not be considered. No proposal shall be withdrawn for a period of ninety (90) days after the date of bid opening.

6. The successful bidder will be required to provide a Performance and Payment Bond, written on AIA Document A312, in the amount of 100% of the contract sum.

7. A Lump sum bid with unit prices is desired for General Construction. Copies of the Bidding Documents may be obtained at:
   a. Lynn Imaging: www.lynnimaging.com, 859-255-1021 (Non-refundable fee of $90 for hard copied, pdf sets are free)

8. All work must comply with the LPA Guide, Federal Highway Rules, guidelines, local, state and federal laws.

9. All bids must be made on the required Bid Form and shall not be altered in any way. The complete bid document must be returned, not just the bid form pages. Failure to return all pages may result in a bid not being eligible for award.

10. The LPA reserves the right to waive any informalities or to reject any or all bids.

A Pre-Bid meeting (Meeting is not mandatory) will be held on June 28, 2022, 2:00 PM (Eastern time. Interested parties may access the online meeting to join remotely. At the pre-bid meeting specific expectations, procedures, schedules, and requirements may be discussed.

https://us02web.zoom.us/j/85767041523?pwd=aE12cUtXVW5VdW5MbkdQN2YwY1pUQT09
Meeting ID: 857 6704 1523
Passcode: 061202

Dial by your location

+1 301 715 8592 US (Eastern Time)
+1 312 626 6799 US (Central Time)

**PLANS AVAILABLE FOR THIS PROJECT AT THE FOLLOWING LOCATIONS:**

A Lump sum bid with unit prices is desired for General Construction.

Lynn Imaging: [www.lynnimaging.com](http://www.lynnimaging.com)

**DBE CERTIFICATION REQUIRED:** 3%

**REQUIRED BID PROPOSAL GUARANTY:** Not less than 5% of the total bid.
TABLE OF CONTENTS

PART I SCOPE OF WORK
1) Project(s) & Completion Date(s)
2) List of Drawing Sheets
3) Form of Proposal
4) Applications for Payment
5) Contract Notes
6) Geotechnical
7) Vendor Document Disclosure
8) Form of Agreement Between Owner and Contractor
9) Bid Security Forms
10) Project Management and Coordination
11) Request for Information ("RFI") FORM
12) Execution
13) Closeout Procedures
14) Project Record Drawings

PART II FEDERAL CONTRACT NOTES
15) Civil Right Act of 1964
16) Notice to All Bidders (Report Bid Rigging)
17) Second Tier Subcontracts
18) DBE Program
   a) Contract Goal
   b) Obligation of Contractors
   c) Certifications of Contract Goal
   d) DBE Participation Plan
   e) Upon Award and Before a Work Order Will be Issued
   f) Consideration of Good Faith Efforts Requests
   g) Failure to Meet Good Faith Requirement
   h) Sanction for Failure to Meet DBE Requirements
   i) Prompt Payment to DBEs
   j) Contractor Reporting
   k) Default or Decertification of the DBE
19) Federal-Aid Construction Contracts – FHWA 1273 (Revised 5/1/12)
20) Legal Requirements and Responsibility to the Public – Cargo Preference Act (CPA)

PART III EMPLOYMENT, WAGE AND RECORD REQUIREMENTS
21) Employment Requirements (KRS 344)
22) Notice of Requirement for Affirmative Action to Ensure EEO
23) Labor Final Rule on Federal Executive Order 11246
24) Standard Title VI/Non-Discrimination Assurances
25) Project Wage Rates

PART IV CERTIFICATIONS
26) Executive Branch Code of Ethics
27) Certification Regarding KRS 45A.485
28) Non-Collusion Certification
29) Certification of Organization(s)
30) Certification of Performance
31) Certification for Federal-Aid Contract
32) Certification of Bid Proposal/DBE
33) DBE Subcontractor Bidder List
34) DBE Plan/Subcontract Request (TC 14 – 35)
35) Required Affidavit for Bidders

PART V SPECIFICATIONS AND STANDARD DRAWINGS
36) Asphalt Mixture
37) DGA Base
38) DBA Base for Shoulders
39) Incidental Surfacing
40) Compaction Option B
41) Special Note(s) Applicable to Project
   a) Tree Removal
42) Right of Way Certification
43) Utility Clearance Impact & Railroad Impact Note
44) KPDES Storm Water Permit, BMP and NOI
45) KYTC LPA Change Order Form
46) 23 CFR 635.109 Standardized Changed Conditions Clauses
47) 23 CFR 635.410 Buy America Requirements
48) Specifications Reference
49) Supplemental Specification
50) “Decorative Metal Railings” Specification
51) “Powder Coating for Handrails” Specification
52) “Precast Architectural Concrete” Specification
53) “Manufactured Stone Masonry” Specification
54) “Sheet Metal Flashing and Trim” Specification
55) “Joint Sealants” Specification
56) “Water Repellents” Specification
57) “Bituminous Dampproofing” Specification
PART VI INSURANCE AND HOLD HARMLESS CLAUSE

PART VII BID ITEMS

58) Unit Prices
PART I

SCOPE OF WORK
KYTC HIGHWAY DISTRICT 04

FED/STATE PROJECT NUMBER: TAP 4000 073
ADMINISTERING OFFICE: OLP/DISTRICT 04
COUNTY - MEADE
ITEM NO: 04-03203

PROJECT DESCRIPTION:
Project consists of adding new sidewalks on the East side of Main St., replacing existing walks along portions of both sides of Main St., and constructing retaining walls, steps, and vehicular entrances to accommodate new sidewalks.

GEOGRAPHIC COORDINATES LATITUDE 38.00070198749 LONGITUDE -86.1709384078469

START OF CONSTRUCTION: July 26, 2022
PROJECT COMPLETION DATE(S): May 15, 2023
APPLIES TO ENTIRE CONTRACT
List of Drawing Sheets

PART 1 - List of Drawing Sheets

1.1 LIST OF DRAWINGS

A. Drawings: Drawings consist of the Contract Drawings and other drawings listed on the Table of Contents page of the separately bound drawing set titled City of Brandenburg Downtown Sidewalk Connections dated 05/2/2022 as modified by subsequent Addenda and Contract modifications.

B. List of Drawings: Drawings consist of the following Contract Drawings and other drawings of type indicated:

SITE

<table>
<thead>
<tr>
<th>COVER SHEET</th>
<th>COVER SHEET</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHT 1 of 3</td>
<td>EXISTING TOPO</td>
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<tr>
<td>SHT 2 of 3</td>
<td>EXISTING TOPO</td>
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<tr>
<td>SHT 3 of 3</td>
<td>EXISTING TOPO</td>
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<tr>
<td>DS1.1</td>
<td>OVERALL SITE DEMOLITION PLAN</td>
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<td>DS1.2</td>
<td>SITE DEMOLITION PLANS</td>
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<tr>
<td>SD1.1</td>
<td>OVERALL SITE DEVELOPMENT PLAN &amp; GENERAL NOTES</td>
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<td>SD1.2</td>
<td>SITE DEVELOPMENT PLANS</td>
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<tr>
<td>SD1.3</td>
<td>SITE DEVELOPMENT CONDUIT PLANS</td>
</tr>
<tr>
<td>SD2.1</td>
<td>MAIN STREET GRADING AND DRAINAGE PLAN</td>
</tr>
<tr>
<td>SD2.2</td>
<td>CROSS SECTIONS STA. 5+40 TO STA. 6+80</td>
</tr>
<tr>
<td>SD2.3</td>
<td>CROSS SECTIONS STA. 7+00 TO STA. 8+00</td>
</tr>
<tr>
<td>SD3.1</td>
<td>SITE DETAILS</td>
</tr>
<tr>
<td>SD3.2</td>
<td>SITE DETAILS</td>
</tr>
<tr>
<td>SD4.0</td>
<td>SITE DETAILS</td>
</tr>
<tr>
<td>EC1.1</td>
<td>SITE ELECTRIC PLAN (FOR REFERENCE ONLY – N.I.C.)</td>
</tr>
<tr>
<td>EC1.2</td>
<td>SITE ELECTRIC PLAN (FOR REFERENCE ONLY – N.I.C.)</td>
</tr>
</tbody>
</table>

END OF SECTION
Date: _____________________________ To: City of Brandenburg

Project Title: Downtown Sidewalk Connections

City, County: Brandenburg, Meade County

Name of Contractor/Supplier: ___________________________________________________________________________

Mailing Address: ______________________________________________________________________________________

Business Address: ___________________________________________________ Telephone:_________________________

Having carefully examined the Instructions to Bidders, Contract Agreement, General Conditions, Supplemental Conditions, Specifications, and Drawings, on the above referenced project, the undersigned bidder proposes to furnish all labor, materials, equipment, tools, supplies, and temporary devices required to complete the work in accordance with the contract documents and any addenda listed below for the price stated herein.

Addendum ________________________ (Insert the addendum numbers received or the word "none" if no addendum received.)

BASE BID
For the construction required to complete the work, in accordance with the contract documents, I/We submit the following lump sum price of:

____________________________________ Use Figures

_________________________________________ Dollars & __________________________________ Cents

______________________________________________________________________________ Use Words

______________________________________________________________________________ Use Words

ALTERNATE BIDS

There are no alternates on this project.

(1 of 3)
TIME LIMIT FOR EXECUTION OF CONTRACT DOCUMENTS

In the event that a bidder’s proposal is accepted by the Owner and such bidder should fail to execute the contract within ten (10) consecutive days from the date of notification of the awarding of the contract, the Owner, at his option, may determine that the awardee has abandoned the contract. The bidder’s proposal shall then become null and void, and the bid bond or certified check which accompanied it shall be forfeited to and become the property of the Owner as liquidated damages for failure to execute the contract.

The bidder hereby agrees that failure to submit herein above all required information and/or prices can cause disqualification of this proposal.

Submitted by:

NAME OF CONTRACTOR: __________________________________________________________

AUTHORIZED REPRESENTATIVE: ____________________________________________________________

NAME (typed): __________________________________________________________________________

TITLE: _________________________________________________________________________________

This form shall not be modified.

PROPOSAL SUBMITTAL:

The following items are herewith enclosed as required to be submitted with the Form of Proposal at the time of bid:

1. List of Proposed Subcontractors.

2. Bid bond guaranty in the amount of no less than 5 percent (5%) of the Lump Sum Base Bid.

LIST OF PROPOSED SUBCONTRACTORS:

All subcontractors are subject to the approval of Sherman-Carter-Barnhart, P.S.C.

If certain branches of the work are to be done by the General Contractor, so state.

The following list of branches of work must be filled in and submitted with the Bidder’s Proposal:

<table>
<thead>
<tr>
<th>BRANCH OF WORK</th>
<th>SUBCONTRACTOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Earthwork</td>
<td>__________________________</td>
</tr>
<tr>
<td>2. Metal Fencing / Railings</td>
<td>__________________________</td>
</tr>
<tr>
<td>3. Paving (concrete)</td>
<td>__________________________</td>
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<tr>
<td>4. Paving (asphalt)</td>
<td>__________________________</td>
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(2 of 3)
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<tr>
<td>5.</td>
<td>Concrete</td>
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<td>6.</td>
<td>Masonry</td>
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<td>7.</td>
<td>Segmental Wall System</td>
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<td>8.</td>
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Bidders shall submit the following portions of the Form of Proposal Attachment within 1 hour of bid:

Form of Proposal Attachment: Unit Prices

END OF FORM OF PROPOSAL
FORM OF PROPOSAL ATTACHMENT - UNIT PRICES:

Indicate on the lines below those unit prices to determine any adjustment to the contract price due to changes in work or extra work performed under this contract. The unit prices shall include the furnishing of all labor and materials, cost of all items, and overhead and profit for the Contractor, as well as any subcontractor involved. These unit prices shall be listed in units of work.

The bidder shall submit the list of unit prices within one (1) hour of the bid.

<table>
<thead>
<tr>
<th>WORK</th>
<th>PRICE / UNIT</th>
<th>UNIT</th>
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<tbody>
<tr>
<td>DGA (per ton)</td>
<td></td>
<td>TON</td>
</tr>
<tr>
<td>Asphalt Seal Aggregate</td>
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<td>TON</td>
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<tr>
<td>Asphalt Seal Coat</td>
<td></td>
<td>TON</td>
</tr>
<tr>
<td>CL2 ASPH Base 0.75D PG64-22</td>
<td></td>
<td>TON</td>
</tr>
<tr>
<td>CL2 ASPH SURF 0.38D PG64-22</td>
<td></td>
<td>TON</td>
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<tr>
<td>Mass Earth (per c.y.)</td>
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<td>CY</td>
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<tr>
<td>Haul-off Soil (per c.y.)</td>
<td></td>
<td>CY</td>
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<tr>
<td>Class II Channel Lining (per ton)</td>
<td></td>
<td>TON</td>
</tr>
<tr>
<td>Remove and haul off-site unsuitable soils and replace with compacted stone (per c.y.)</td>
<td></td>
<td>CY</td>
</tr>
<tr>
<td>6 oz. Non-Woven Filter Fabric (per s.f.)</td>
<td></td>
<td>SF</td>
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<tr>
<td>#57 Stone (per ton)</td>
<td></td>
<td>TON</td>
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<tr>
<td>4&quot; Concrete Walk Including Stone Base (per s.f.)</td>
<td></td>
<td>SF</td>
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<tr>
<td>Import, Place and Compact Suitable Fill Material (per c.y.)</td>
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<td>CY</td>
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<tr>
<td>#2 Stone (per ton)</td>
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<td>TON</td>
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<tr>
<td>4&quot; Underdrain (per l.f.)</td>
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<td>LF</td>
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<tr>
<td>Edge Key</td>
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<td>LF</td>
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<tr>
<td>Fescue Sod (per s.y.)</td>
<td></td>
<td>SY</td>
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<tr>
<td>8&quot; thick Concrete Pavement</td>
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<td>Turned Down Concrete Walk</td>
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<td>WORK</td>
<td>PRICE / UNIT (to be filled out by the Contractor)</td>
<td>UNIT (to be filled out by the Contractor)</td>
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<td>20. Permanent Seeding</td>
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<td>21. Drop Inlet</td>
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<td>22. Asphalt Pavement Demolition and Haul Off</td>
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<td>23. Concrete Pavement Demolition and Haul Off</td>
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<tr>
<td>24. Concrete Sidewalk Demolition and Haul Off</td>
<td></td>
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<tr>
<td>25. Mobilization (not more than 5.0% of total bid)</td>
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<td>LS</td>
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<td>26. Demobilization (not less than 1.5% of total bid)</td>
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SUMMARY

This Section specifies administrative and procedural requirements governing the Contractor’s Applications for Payment.

A. This Section specifies administrative and procedural requirements governing each prime contractor’s Applications for Payment.

1. Coordinate the Schedule of Values and Applications for Payment with the Contractor’s Construction Schedule, Submittal Schedule, and List of Subcontracts.

SCHEDULE OF VALUES

A. Coordination: Coordinate preparation of the Schedule of Values with preparation of the Contractor’s Construction Schedule.

1. Correlate line items in the Schedule of Values with other required administrative schedules and forms, including:
   a. Contractor’s Construction Schedule.
   b. Application for Payment forms, including Continuation Sheets.
   c. List of subcontractors.
   d. Schedule of allowances.
   e. Schedule of alternates.
   f. List of products.
   g. List of principal suppliers and fabricators.
   h. Schedule of submittals.

2. Submit the Schedule of Values to the Architect at the earliest possible date but no later than 7 days before the date scheduled for submittal of the initial Applications for Payment.

B. Format and Content:

1. Identification: Include the following Project identification on the Schedule of Values:
   a. Project name and location.
   b. Name of the Architect.
c. Project number.
d. Contractor's name and address.
e. Date of submittal.

2. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:
   a. Related Specification Section or Division.
   b. Description of Work.
   c. Name of subcontractor.
   d. Name of manufacturer or fabricator.
   e. Name of supplier.
   f. Change Orders (numbers) that affect value.
   g. Dollar value.

      1) Percentage of Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.

3. Provide a breakdown of the Contract Sum in sufficient detail to facilitate continued evaluation of Applications for Payment and progress reports. Break principal subcontract amounts down into several line items.

4. Round amounts to nearest whole dollar; the total shall equal the Contract Sum.

5. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment, purchased or fabricated and stored, but not yet installed.

   a. Differentiate between items stored on-site and items stored off-site. Include requirements for insurance and bonded warehousing, if required.

6. Provide separate line items on the Schedule of Values for initial cost of the materials, for each subsequent stage of completion, and for total installed value of that part of the Work.

7. Unit-Cost Allowances: Show the line-item value of unit-cost allowances, as a product of the unit cost, multiplied by the measured quantity. Estimate quantities from the best indication in the Contract Documents.

8. Margins of Cost: Show line items for indirect costs and margins on actual costs only when such items are listed individually in Applications for Payment. Each
item in the Schedule of Values and Applications for Payment shall be complete. Include the total cost and proportionate share of general overhead and profit margin for each item.

a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at the Contractor's option.

9. Schedule Updating: Update and resubmit the Schedule of Values prior to the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

APPLICATIONS FOR PAYMENT

A. Each Application for Payment shall be consistent with previous applications and payments as certified by the Architect and paid for by the Owner.

1. The initial Application for Payment, the Application for Payment at time of Substantial Completion, and the final Application for Payment involve additional requirements.

B. Payment-Application Times: Each progress-payment date is indicated in the Agreement. The period of construction Work covered by each Application for Payment is the period indicated in the Agreement.

C. Payment-Application Times: The date for each progress payment is to be determined. The period covered by each Application for Payment starts on the day following the end of the preceding period and ends 15 days prior to the date for each progress payment.

D. Payment-Application Forms: Use AIA Document G702 and Continuation Sheets G703 as the form for Applications for Payment.

E. Application Preparation: Complete every entry on the form. Include notarization and execution by a person authorized to sign legal documents on behalf of the Contractor. The Architect will return incomplete applications without action.

1. Entries shall match data on the Schedule of Values and the Contractor's Construction Schedule. Use updated schedules if revisions were made.

2. Include amounts of Change Orders and Construction Change Directives issued prior to the last day of the construction period covered by the application.

F. Transmittal: Submit one (1) signed and notarized original copies of each Application for Payment to the Architect by a method ensuring receipt within 24 hours. Application
shall be complete, including waivers of lien and similar attachments, when required.

1. Transmit each copy with a transmittal form listing attachments and recording appropriate information related to the application, in a manner acceptable to the Architect.

G. Waivers of Mechanics Lien: With each Application for Payment, submit waivers of mechanics lien from every entity who is lawfully entitled to file a mechanics lien arising out of the Contract and related to the Work covered by the payment.

H. Waivers of Mechanics Lien: With each Application for Payment, submit waivers of mechanics liens from subcontractors, sub-subcontractors and suppliers for the construction period covered by the previous application.

1. Submit partial waivers on each item for the amount requested on each item.
2. When an application shows completion of an item, submit final or full waivers.
3. The Owner reserves the right to designate which entities involved in the Work must submit waivers.
4. Waiver Delays: Submit each Application for Payment with the Contractor’s waiver of mechanics lien for the period of construction covered by the application.
   a. Submit final Applications for Payment with or preceded by final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
5. Waiver Forms: Submit waivers of lien on forms, and executed in a manner, acceptable to the Owner.

I. Initial Application for Payment: Administrative actions and submittals, that must precede or coincide with submittal of the first Application for Payment, include the following:

1. List of subcontractors.
2. List of principal suppliers and fabricators.
3. Schedule of Values.
4. Contractor’s Construction Schedule (preliminary if not final).
5. Schedule of principal products.
6. Schedule of unit prices.
7. Submittal Schedule (preliminary if not final).
8. List of Contractor's staff assignments.


12. Initial progress report.


14. Certificates of insurance and insurance policies.

15. Performance and payment bonds.

16. Data needed to acquire the Owner's insurance.

17. Initial settlement survey and damage report, if required.

J. Application for Payment at Substantial Completion: Following issuance of the Certificate of Substantial Completion, submit an Application for Payment.

1. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

2. Administrative actions and submittals that shall precede or coincide with this application include:
   a. Occupancy permits and similar approvals.
   b. Warranties (guarantees) and maintenance agreements.
   c. Test/adjust/balance records.
   d. Maintenance instructions.
   e. Meter readings.
   f. Startup performance reports.
   g. Changeover information related to Owner's occupancy, use, operation, and maintenance.
   h. Final cleaning.
   i. Advice on shifting insurance coverages.
   j. Final progress photographs.
I. List of incomplete Work, recognized as exceptions to Architect’s Certificate of Substantial Completion.

K. Final Payment Application: Administrative actions and submittals that must precede or coincide with submittal of the final Application for Payment include the following:

1. Completion of Project closeout requirements.
2. Completion of items specified for completion after Substantial Completion.
3. Ensure that unsettled claims will be settled.
4. Ensure that incomplete Work is not accepted and will be completed without undue delay.
5. Transmittal of required Project construction records to the Owner.
6. Proof that taxes, fees, and similar obligations were paid.
7. Removal of temporary facilities and services.
8. Removal of surplus materials, rubbish, and similar elements.
9. Change of door locks to Owner's access.
CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract. (Column G on G703) .... $ 0.00

6. TOTAL EARNED LESS RETAINAGE .......................................................... $ 0.00

(Line 4 Less Line 5 Total)

7. LESS PREVIOUS CERTIFICATES FOR PAYMENT .................................. $ 0.00

(Line 6 from prior Certificate)

8. CURRENT PAYMENT DUE ........................................................................ $ 0.00

9. BALANCE TO FINISH, INCLUDING RETAINAGE ................................. $ 0.00

(Line 3 less Line 6)

CHANGE ORDER SUMMARY

<table>
<thead>
<tr>
<th>ADDITIONS</th>
<th>DEDUCTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 0.00</td>
<td>$ 0.00</td>
</tr>
</tbody>
</table>

TOTAL changes approved in previous months by Owner $ 0.00 $ 0.00

Total approved this Month $ 0.00 $ 0.00

TOTALS $ 0.00 $ 0.00

NET CHANGES by Change Order $ 0.00 $ 0.00

The undersigned Contractor certifies that to the best of the Contractor’s knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

CONTRACTOR:
By: ___________________________ Date: ________
State of:
County of:
Subscribed and sworn to before me this ______ day of ______ 20____
Notary Public:
My Commission expires:

ARCHITECT'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising this application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED .......................................................... $ 0.00

(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)

ARCHITECT:
By: ___________________________ Date: ________

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.
Continuation Sheet

AIA Document G703, APPLICATION AND CERTIFICATION FOR PAYMENT, containing Contractor’s signed certification is attached.
In tabulations below, amounts are stated to the nearest dollar.
Use Column I on Contracts where variable retaingage for line items may apply.

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>DESCRIPTION OF WORK</th>
<th>SCHEDULED VALUE</th>
<th>D</th>
<th>WORK COMPLETED FROM PREVIOUS APPLICATION (D + E)</th>
<th>E</th>
<th>THIS PERIOD</th>
<th>F</th>
<th>MATERIALS PRESENTLY STORED (NOT IN D OR E)</th>
<th>G</th>
<th>TOTAL COMPLETED AND STORED TO DATE (D+E+F)</th>
<th>% (G ÷ C)</th>
<th>H</th>
<th>BALANCE TO FINISH (C - G)</th>
<th>I</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>GRAND TOTAL</td>
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<td>$ 0.00</td>
<td>$ 0.00</td>
<td>$ 0.00</td>
<td>$ 0.00</td>
<td>0.00 %</td>
<td>$ 0.00</td>
<td>$ 0.00</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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CONTRACT NOTES

PROPOSAL ADDENDA
All addenda to this proposal must be applied when calculating bid and certified in the bid packet submitted to the CITY OF BRANDENBURG, Mayor Ronnie Joyner. Failure to use the correct and most recent addenda may result in the bid being rejected.

STANDARD SPECIFICATION PROVISIONS
The project will follow the Kentucky Standard Specifications for Road and Bridge Construction (current edition). For their bids to be accepted, bidders and Disadvantaged Business Enterprises ("DBE") subcontractors must be prequalified with the Kentucky Transportation Cabinet and possess a Certificate of Eligibility at the time of the bid opening. All other subcontractors must be prequalified when accepting subcontracts. All bids exceeding $40,000 must be accompanied with a Bid Bond of not less than 5% of the total construction bid. Project will be awarded to the lowest responsive and responsible bidder and determined by the LPA and the Kentucky Transportation Cabinet. The awarded bidder will be responsible for providing a Performance Bond of 100% and a Payment Bond of 100% of the awarded bid amount payable to the LPA.

KYTC Standard Drawings applicable to the project are available at:


Please see the plans for additional information.

In the event of any conflict between this proposal and the Kentucky Standard Specifications for Road and Bridge Construction (current edition), the provisions of this proposal shall prevail.

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. 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.

SPECIAL NOTE FOR COMPOSITE OFFSET BLOCKS
Contrary to the Standard Drawings (2012 edition) the Cabinet will allow 6" composite offset blocks in lieu of wooden offset blocks, except as specified on proprietary end treatments and
crash cushions. The composite blocks shall be selected from the Cabinet’s List of Approved Materials.

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

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

Businesses can register with the Secretary of State at [https://secure.kentucky.gov/sos/ftbr/welcome.aspx](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 LPA. The LPA will attempt to answer all submitted questions. The LPA reserves the right not to answer if the question is not pertinent or does not aid in clarifying the project intent.

The deadline for questions will be 12:00 pm Eastern Daylight Time, July 6, 2022. 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 answers provided shall be considered part of this Special Note and, in case of a discrepancy, will govern over all other bidding documents.

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

INSTRUCTIONS FOR EXCESS MATERIAL SITES AND BORROW SITES
Identification of excess material sites and borrow sites shall be the responsibility of the Contractor. The Contractor shall be responsible for compliance with all applicable state and federal laws and may wish to consult with the US Fish and Wildlife Service to seek protection under Section 10 of the Endangered Species Act for these activities.
ACCESS TO RECORDS
The contractor, as defined in KRS 45A.030 (9) agrees that the contracting agency, the Finance and Administration Cabinet, the Auditor of Public Accounts, and the Legislative Research Commission, or their duly authorized representatives, shall have access to any books, documents, papers, records, or other evidence, which are directly pertinent to this contract for the purpose of financial audit or program review. Records and other prequalification information confidentially disclosed as part of the bid process shall not be deemed as directly pertinent to the contract and shall be exempt from disclosure as provided in KRS 61.878(1)(c). The contractor also recognizes that any books, documents, papers, records, or other evidence, received during a financial audit or program review shall be subject to the Kentucky Open Records Act, KRS 61.870 to 61.884.

In the event of a dispute between the contractor and the contracting agency, Attorney General, or the Auditor of Public Accounts over documents that are eligible for production and review, the Finance and Administration Cabinet shall review the dispute and issue a determination, in accordance with Secretary's Order 11-004. (See attachment)

Bidder Check
The LPA will check if the lowest responsive and responsible bidder is not on the federal excluded party list.

Traffic Control Coordinator
The owner will be responsible for the Traffic Control for the project.

FHWA Requirement
Prime contractors must submit their entire proposal (all pages).

Liquidated Damages
In accordance with Subsection 108.09 of the Standard Specifications, the City of Brandenburg will assess liquidated damages in the amount of $1000/day for failure to complete the required work items within the specified completion date of May 15, 2023 for the base bid and any alternate accepted before the start of construction.

Fuel and Asphalt Adjustments
Fuel and asphalt price adjustments will not be applicable to this project.

Kentucky Division of Water Permits
The contractor shall be responsible for obtaining all KPDES permits with the KY Division of Water. This includes but is not limited to the filing of the Notice of Intent prior to beginning construction and the Notice of Termination upon completion and formal acceptance of the project. Copies of the NOI to be provided to the City prior to beginning work. See Special Note
For Erosion Prevention and Sediment Control

Buy America (23CFR635.410)

As detailed in 23CFR635.410, BUY AMERICA requirements are applicable to this project. Please see Section 106.04 of the KYTC Standard Specifications for Road and Bridge Construction, 2019 edition for additional information

Drawings and Specifications

The drawing dimensions shall have precedence over scaled measurements and details over general drawings. In case of conflicts between Drawings and Specifications, the more stringent shall apply. Figured dimensions on the drawings are reasonably accurate and should govern in setting out the work. However, should the Contractor discover discrepancies or inaccuracies, it shall be the Contractor’s responsibility to bring them to the attention of the Architect before making any changes. Changes shall be made only with the approval of the Architect.

Pre-Construction Meeting

The contractor shall schedule a preconstruction conference before starting construction, at a time convenient to the Owner and the Architect, but no later than 15 days after execution of the Agreement. Hold the conference online and send out a meeting invitation with instructions on how to join the meeting virtually. Conduct the meeting to review responsibilities and personnel assignments.

Authorized representatives of the Owner, Architect, and their consultants; the Contractor and its superintendent; major subcontractors; manufacturers; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the Work.

Agenda: Discuss items of significance that could affect progress, including the following:

1. Tentative construction schedule.
2. Critical work sequencing.
3. Designation of responsible personnel.
4. Procedures for processing field decisions and Change Orders.
5. Procedures for processing Applications for Payment.
7. Submittal of Shop Drawings, Product Data, and Samples.
8. Preparation of record documents.
9. Use of the premises.
11. Office, work, and storage areas.
12. Equipment deliveries and priorities.
13. Safety procedures.
14. First aid.
17. Working hours.
7. Submittal of Shop Drawings, Product Data, and Samples.
8. Preparation of record documents.
9. Use of the premises.
11. Office, work, and storage areas.
12. Equipment deliveries and priorities.
13. Safety procedures.
14. First aid.
17. Working hours.
The Geotechnical report with its referenced attachments is part of the Procurement and Contracting Requirements for Project. They provide Owner's information for Bidders' convenience and are intended to supplement rather than serve in lieu of Bidders' own investigations. They are made available for Bidders' convenience and information, but are not a warranty of existing conditions. Geotechnical Report and its attachments are not part of the Contract Documents.
TO: Kim Tompkins  
Transportation Alternatives Programs (TAP) Coordinator  
Office of Local Programs  
FROM: Michael Carpenter, P.E.  
TEBM  
Geotechnical Branch  
BY: Clayton S. Cook, P.E.  
Geotechnical Branch  
DATE: November 6, 2019  
SUBJECT: Meade County  
Item No. 4-3214.00  
FD52 082 2204 0-0.2850; Fed No. 00TAP4000140  
MARS No. 1070102D  
Construct Sidewalk Along Main Street From Broadway to the Ohio River in  
Downtown Brandenburg, KY Retaining Wall Main St. Right  
Sta. 0+37 to Sta. 1+47  
Geotechnical Engineering Structure Foundation Report  
cc: T. Thompson  
B. Bottoms  
C. Allen  
C. Hutchins  
M. Bashikhes  
A. Ross  
E. Scott  
J. Hager

1. **LOCATION AND DESCRIPTION**

The geotechnical investigation for this structure location has been completed. The DGN file for the subsurface data sheet has been made available on ProjectWise and through email for the use in development of structure plans.

The proposed retaining wall is part of improvement being done to Main St. in downtown Brandenburg, Ky. The proposed structure runs right of station 0+37 to 1+47.

The structure is located in the New Amsterdam-Maukport Quadrangle (GQ-990). The geologic mapping indicates that the bedrock in the area is part of the St. Louis Limestone which has primary lithology’s composed of limestone, chert and shale.

2. **FIELD INVESTIGATION**

The drilling for this structure was performed by a KYTC drill crew. A total of one sample and core and three mechanical soundings were drilled. The KYTC drill crew delivered soil samples and rock cores to the KYTC Geotechnical Branch in Frankfort, where soil testing was conducted and a geologist logged the rock cores.
3. **SUBSURFACE CONDITIONS**

The single soil sample was designated as CL-ML by the USCS classification system. Depth to refusal varied from 5.5 to 15.7 ft. Refusal elevations ranged from 505.3 to 495.8 ft. Hole 1001 showed greater depth to refusal than the other three locations drilled. The bedrock layers at the structure location consist of gray, fine grained, pitted limestone with minor weathered shale partings. The KY RQD values for the rock cores were 16 to 54 and core recoveries ranged from 72 to 88%.

4. **ENGINEERING ANALYSIS AND FOUNDATION RECOMMENDATIONS**

**Retaining Wall Type Selection**

From the cross sections the max height of the proposed wall is 5.8 ft. tall at station 1+20. Based on the height and the configuration of the slope it is recommended to use a cast-in-place non-reinforced concrete gravity wall (Case III) with a height of 6 ft., base width of 3.0 ft and batter of 6:1. See standard drawing RGX-002-09 for additional details.

A large block retaining wall without geogrid or geotextile reinforcement may be suitable at the location. If this alternate selected, the wall shall be design with the following design information.

<table>
<thead>
<tr>
<th>Wall Design Parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base of footing must be a minimum of 2 feet below final grade or minimum required by Standard Drawing RGX-002-09 Case III</td>
</tr>
<tr>
<td>Backfill Slope: 26.6° (2H:1V)</td>
</tr>
<tr>
<td>Unit weight of insitu soil backfill: 120 pcf</td>
</tr>
<tr>
<td>Friction angle of insitu soil backfill: 28°</td>
</tr>
<tr>
<td>Unit weight of existing foundation soils: 120 pcf</td>
</tr>
<tr>
<td>Cohesion (total stress) of existing foundation soils: 1200 psf</td>
</tr>
</tbody>
</table>

Slope stability for the wall was evaluated at Station 1+20. This analysis indicated adequate factors of safety.

5. **PLAN NOTES**

The Geotechnical Notes sheet for the Cast-In-Place Concrete Non-reinforced Gravity Wall is attached.

The designer shall feel free to contact the Geotechnical Branch at 502-564-2374 for further recommendations or if any questions arise pertaining to the project.
Meade County
Retaining Wall Main St. Right Sta. 0+37 to Sta. 1+47
Item No. 4-3214.00

Attachments:
- Project Location
- Subsurface Data Sheet
- Geotechnical Notes Sheets
- Assumed Wall Location and Estimated Excavation Limits
- Coordinate Data Sheets
- Proposed Wall Location Cross Sections
Meade County
Retaining Wall Main St. Right Sta. 0+37 to Sta. 1+47
Item No. 4-3214.00

Project Location Map
SUBSURFACE DATA

Datum (NAVD 88)

Profile Scale:
Vertical 1" = 10'
Horizontal not to scale

Plan Scale 1" = 10'

Subsurface Data

Limestone: gray, fine grained, pitted zones.
Limestone: brown and brownish gray, fine grained, extremely pitted and solutioned.
Limestone: gray, fine grained, pitted zones.
Limestone: brownish gray and gray, fine grained to sublithographic, few weathered shale partings.

No Weathered Rock

Top of Rock elev. = 505.33

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

MEADE

S-099-19

Retaining Wall Rt. Sta. 0+37 to 1+47
GEOTECHNICAL NOTES
for Cast-In-Place Concrete Non-Reinforced Gravity Walls

Notes shall be designed in accordance with AASHTO LRFD Bridge Design Specifications, current edition.

The minimum embedment shall be 2 ft from finished grade in front of the wall and bottom of wall.

Use wall dimensions in accordance with Case III of the Standard Drawing RGX-002-09, 6 ft from face to be used.

Use the following soil strength parameters for design:

<table>
<thead>
<tr>
<th>Bearing Surface</th>
<th>Factor</th>
<th>Nominal Bearing Resistance at Service Limit State</th>
<th>Nominal Bearing Resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soil</td>
<td></td>
<td>6.29 ksf</td>
<td>6.29 ksf</td>
</tr>
</tbody>
</table>

Use the following soil strength parameters for design:

<table>
<thead>
<tr>
<th>External Backfill</th>
<th>Cohesion (psf)</th>
<th>Friction Angle (degrees)</th>
<th>Unit Weight (pcf)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gravel</td>
<td>0</td>
<td>28</td>
<td>120</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Foundation Soils</th>
<th>Cohesion (psf)</th>
<th>Friction Angle (degrees)</th>
<th>Unit Weight (pcf)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing</td>
<td>1200</td>
<td>0</td>
<td>120</td>
</tr>
</tbody>
</table>

Drainage systems behind the wall will be necessary. Provide weep holes at specified intervals.

Temporary shoring, sheeting, cofferdams, and/or dewatering methods may be required to facilitate wall construction.

For checking bearing resistance at the strength, service, and extreme limit states use resistance factors of 0.55, 0.33, and 1.0 respectively.

**EXCAVATION AND BACKFILL REPLACEMENT**

Cast-In-Place Retaining Wall

Pipe for Rainwater
Soil: 6:1 batter to be used.

Temporary shoring, sheeting, cofferdams, and/or dewatering methods may be required to facilitate wall construction.

For checking bearing resistance at the strength, service, and extreme limit states use resistance factors of 0.55, 0.33, and 1.0 respectively.
Top of Rock elev. = 505.33
No Weathered Rock
### COORDINATE DATA SUBMISSION FORM

KYTC DIVISION OF STRUCTURAL DESIGN -- GEOTECHNICAL BRANCH

<table>
<thead>
<tr>
<th>County</th>
<th>Meade</th>
</tr>
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<tbody>
<tr>
<td>Road Number</td>
<td>Main St. (KY 2204)</td>
</tr>
<tr>
<td>Survey Crew / Consultant</td>
<td>D4</td>
</tr>
<tr>
<td>Item #</td>
<td>4-3214.00</td>
</tr>
<tr>
<td>Mars #</td>
<td>9347701D</td>
</tr>
<tr>
<td>Project #</td>
<td>S-099-2019</td>
</tr>
</tbody>
</table>

Notes:

Elevation Datum (circle one) [NAVD88] [Assumed]

<table>
<thead>
<tr>
<th>HOLE NUMBER</th>
<th>LATITUDE (Decimal Degrees)</th>
<th>LONGITUDE (Decimal Degrees)</th>
<th>HOLE NUMBER</th>
<th>STATION</th>
<th>OFFSET</th>
<th>ELEVATION (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retaining Wall Right Sta. 0+37 to 1+47; S-099-2019</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1001</td>
<td>38.000826</td>
<td>-86.170798</td>
<td>1001</td>
<td>0+62.13</td>
<td>6.61 Rt.</td>
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<tr>
<td>1002</td>
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<td>-86.170636</td>
<td>1002</td>
<td>1+10.59</td>
<td>29.59 Rt.</td>
<td>513.8</td>
</tr>
<tr>
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<td>-86.170646</td>
<td>1003</td>
<td>1+38.05</td>
<td>6.8 Rt.</td>
<td>502.5</td>
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<tr>
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<td>-86.170726</td>
<td>1008</td>
<td>1+00.12</td>
<td>5.5 Rt.</td>
<td>507.0</td>
</tr>
</tbody>
</table>
MEMORANDUM

TO: Kim Tompkins
Transportation Alternatives Programs (TAP) Coordinator
Office of Local Programs

FROM: Michael Carpenter, P.E.
TEBM
Geotechnical Branch

BY: Clayton S. Cook, P.E.
Geotechnical Branch

DATE: November 6, 2019

SUBJECT: Meade County
Item No. 4-3214.00
FD52 082 2204 0-0.2850; Fed No. 00TAP4000140
MARS No. 1070102D
Construct Sidewalk Along Main Street From Broadway to the Ohio River in
Downtown Brandenburg, KY
Retaining Wall Main St., Sta. 5+90 to Sta. 8+40
Geotechnical Engineering Structure Foundation Report

1. LOCATION AND DESCRIPTION

The geotechnical investigation for this structure location has been completed. The DGN file for
the subsurface data sheet has been made available on ProjectWise and through email for the use
in development of structure plans.

The proposed retaining wall is part of improvement being done to Main St in downtown
Brandenburg, Ky. The proposed structure runs left of station 5+90 to 8+40 and is approximately
206 feet long. The Geotechnical Branch was also requested to provide recommendations on if the
structure could be replaced with a rock cut.

The structure is located in the New Amsterdam-Maukport Quadrangle (GQ-990). The geologic
mapping indicates that the bedrock in the area is part of the St. Louis Limestone which has a
primary lithology composed of limestone, chert and shale.

2. FIELD INVESTIGATION

The drilling for this structure was performed by a KYTC drill crew. A total of two mechanical
soundings and two core holes were drilled. Drilling was conducted in order to present information
for both retaining wall and rock cut options. The KYTC drill crew delivered rock cores to the
KYTC Geotechnical Branch in Frankfort, where a geologist logged the rock cores.
3. **SUBSURFACE CONDITIONS**

Two soundings (Holes 1005 and 1007) in the roadway showed refusal elevations at depths of 5.7 ft. and 6.7 ft. The noted pavement and DGA thickness are noted in Table 1. The rock core holes consisted of fine grained, brownish gray and gray limestone with clay shale partings. Top of rock was encountered at elevations 480.8 ft. and 483.1 ft. in holes 1004 and 1006 respectively with no weathered zone. The Kentucky Rock Quality Designation Values (KY RQD) ranged between 0 and 86 with the average being at 26, indicating poor rock quality. In Hole 1004 a one-foot void was noted at elevation 478.6 ft. and low recovery encountered between elevation 472.3 ft. and 456.7 ft.

**Table 1. Pavement and DGA Thickness**

<table>
<thead>
<tr>
<th>Hole #</th>
<th>Pavement Thickness (feet)</th>
<th>DGA Thickness (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1005</td>
<td>0.8</td>
<td>None</td>
</tr>
<tr>
<td>1007</td>
<td>0.8</td>
<td>1.8</td>
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<tr>
<td>1001</td>
<td>0.8</td>
<td>2.0</td>
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<tr>
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<td>0.8</td>
<td>None</td>
</tr>
<tr>
<td>1008</td>
<td>0.8</td>
<td>None</td>
</tr>
</tbody>
</table>

Note: Included holes from S-099-2019 pavement borings

4. **ENGINEERING ANALYSIS AND FOUNDATION RECOMMENDATIONS**

Two options were analyzed for the proposed location. A cast-in-place reinforced concrete cantilever wall and a rock cut at a 1.5H:1H slope from the edge of pavement. The rock cut at a 1.5H:1V slope was deemed unworkable due to the presence of the house at the top of the hill. The proposed cut slope would end within ten feet of the upslope house’s porch at Station 6+60. A slope no steeper than 1.5H:1V was deemed safe due to the low RQD values, poor recovery, and voids encountered during drilling. The design values needed to design the cast-in-place reinforced concrete cantilever wall are given below.

**Cast-in-place Reinforced Concrete Cantilever Wall**

A cast-in-place reinforced concrete cantilever was evaluated. The wall analysis was based on a critical section on Main St., Station 7+00, left of centerline. This section had an exposed wall height of 14.6 feet. Based on the preliminary plans and the boring information, it appears bedrock will be at the proposed base of the wall. LRFD limit state checks were made for bearing capacity, sliding, and eccentricity (overturning). Recommendations for design of a cast-in-place reinforced concrete cantilever wall are provided in the following sections.

A large block retaining wall without geogrid or geotextile reinforcement may be suitable at the location. The attached Geotechnical Note Sheets contain sufficient design information if this type of wall is submitted as an alternative.
Global slope stability for the wall was not deemed a concern since the wall will be bearing on bed rock.

It is possible that some type of dewatering method maybe needed to construct the wall foundation.

5. **FOUNDATION RECOMMENDATIONS**

5.1 Walls shall be designed in accordance with the AASHTO LRFD Bridge Design Specifications, current edition.

5.2 Temporary shoring, sheeting, cofferdams, and/or dewatering methods may be required to facilitate foundation construction.

5.3 The following parameters shall be utilized for the design of the wall at critical section 7+00 Lt.:
   - Use a reinforced concrete cantilever retaining wall with footing widths equivalent to no less than 2/3 of the total wall height including embedment.
   - Base of footing must be a minimum of 2 feet below final grade
   - Granular replacement will be used for replacement of native materials as shown in the attached plan sheet “Geotechnical Notes for Reinforced Concrete Retaining Walls”
   - Backfill slope: 26.6º (2H:1V)
   - Size the wall footings at the Factored Nominal Bearing Resistance given below. For checking bearing resistance at Service and Extreme Limit States, use Resistance Factors of 0.45 and 1.0, respectively, applied to the Nominal Resistances.

<table>
<thead>
<tr>
<th>Bearing Surface</th>
<th>Factored Nominal Bearing Resistance at Strength Limit State</th>
<th>Nominal Bearing Resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Bedrock</td>
<td>16 ksf</td>
<td>48 ksf</td>
</tr>
</tbody>
</table>

   - Drainage system behind the wall will be necessary. Provide weep holes at specified intervals.
   - Refer to the attached plan sheet “Geotechnical Notes for Reinforced Concrete Cantilever Retaining Walls” for more details.

6. **PLAN NOTES**

The attached “Geotechnical Notes” plan sheets included the required information needed to design the recommended wall type.

The designer shall feel free to contact the Geotechnical Branch at 502-564-2374 for further recommendations or if any questions arise pertaining to the project.
Meade County
Retaining Wall Lt. Main St., Sta. 5+90 to Sta. 8+40
Item No. 4-3214.00

Attachments:

- Project Location
- Subsurface Data Sheet
- Geotechnical Notes Sheets
- Assumed Wall Location and Estimated Excavation Limits
- Coordinate Data Sheets
- Retaining Wall Plan Sheet
Meade County
Retaining Wall Lt. Main St., Sta. 5+90 to Sta. 8+40
Item No. 4-3214.00

Project Location Map
**SUBSURFACE DATA**

- **Datum**
  - NAVD 88

- **Elev.**
  - 460
  - 490
  - 480
  - 470
  - 460
  - 450
  - 440

- **Offset Station**
  - Hole #1004

- **Hole No.**
  - 6+35.93
  - 7+39.23
  - 8+00

- **Profile Scale**
  - Vertical: 1" = 10'
  - Horizontal: not to scale

- **Subsurface Data**
  - Limestone: gray, fine grained, few fossils, several red clay filled solution cavities throughout.
  - Limestone: gray, fine grained to oolitic.
  - Limestone: brownish gray and gray, fine grained to sublithographic, clay shale partings, slightly weathered.
  - Shale: brown, clayey, weathered.
  - Limestone: brownish gray and gray, fine grained to sublithographic, clay shale partings, slightly weathered.

- **Top of Rock elev.**
  - 480.82
  - 483.13

- **Base of weathered rock elev.**
  - 480.82
  - 483.13

- **Void**
  - From 478.6 to 477.5
Use the following soil strength parameters for design:

<table>
<thead>
<tr>
<th>Bearing Surface</th>
<th>Factored Nominal Bearing Resistance</th>
<th>Nominal Bearing Resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bedrock</td>
<td>16 ksf</td>
<td>48 ksf</td>
</tr>
</tbody>
</table>

Drainage System behind the wall will be necessary. Provide Weep Holes at specified intervals.

Temporary shoring, sheeting, cofferdams, and/or dewatering methods may be required to facilitate foundation construction.

Granular Embankment

Of Fabric Over Bedrock

Minimum 2 Foot Overlap

Fabric - Geotextile Class 1

Where granular replacement of existing materials is required, excavate the existing soil and rock and replace with granular material as shown below. Use granular material that is classified as non-erodible as defined in Section 805 of the Standard Specifications, current edition.

The wall designer shall verify wall stability based on final wall design dimensions.

Granular replacement should follow a 1/2H:1V back slope for excavation in bedrock and 1H:1V below. Any outdated reference to fabric “Type” in Section 214 shall be ignored. Granular replacement should follow a 1/2H:1V back slope for excavation in sand and 1H:1V back slope in in-situ soil.

For checking the Strength and Extreme Limit States, use Resistance Factors of 0.45 and 1.0, respectively.

Footing widths shall be no less than 66% of the total wall height including embedment in areas of 2H:1V backfill slopes.

Footing widths shall be no less than 66% of the total wall height including embedment in areas of 2H:1V backfill slopes.

The wall designer shall verify wall stability based on final wall design dimensions.

For checking the Strength and Extreme Limit States, use Resistance Factors of 0.45 and 1.0, respectively.

Footing widths shall be no less than 66% of the total wall height including embedment in areas of 2H:1V backfill slopes.

The wall designer shall verify wall stability based on final wall design dimensions.

For checking the Strength and Extreme Limit States, use Resistance Factors of 0.45 and 1.0, respectively.

Footing widths shall be no less than 66% of the total wall height including embedment in areas of 2H:1V backfill slopes.
1004
6 + 35.93
46.6' Lt.
483.32
House Porch
(66.4' From CL)
<table>
<thead>
<tr>
<th>HOLE NUMBER</th>
<th>LATITUDE (Decimal Degrees)</th>
<th>LONGITUDE (Decimal Degrees)</th>
<th>HOLE NUMBER</th>
<th>STATION</th>
<th>OFFSET</th>
<th>ELEVATION (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1004</td>
<td>38.002213</td>
<td>-86.169886</td>
<td>1004</td>
<td>6+35.93</td>
<td>46.56 Li</td>
<td>483.3</td>
</tr>
<tr>
<td>1005</td>
<td>38.002306</td>
<td>-86.169642</td>
<td>1005</td>
<td>6+95.47</td>
<td>6.12 Ri</td>
<td>460.1</td>
</tr>
<tr>
<td>1006</td>
<td>38.002467</td>
<td>-86.169866</td>
<td>1006</td>
<td>7+39.23</td>
<td>71.08 Li</td>
<td>484.6</td>
</tr>
<tr>
<td>1007</td>
<td>38.002555</td>
<td>-86.169573</td>
<td>1007</td>
<td>7+87.5</td>
<td>6.89 Ri</td>
<td>454.5</td>
</tr>
</tbody>
</table>
At the request of the designer this report addendum serves to provide additional design recommendations with regards to a segmental block wall being used for the retaining wall. The recommendations from the original report (S-100-2019) shall still apply except that the attached updated geotechnical notes will supersede the original geotechnical notes.

1. FOUNDATION RECOMMENDATIONS

The base of the segmental block wall shall bear on granular replacement material that is extended to bedrock. The depth of granular material will varying across the length of the wall section but it is interpreted from site visits and subsurface data collected that bedrock should be within three feet of existing ground line along the proposed wall face.

1.1 The segmental block wall shall be founded on granular replacement materials extend to solid bedrock. Size the footing at service limit state using a factored bearing resistance of 8 ksf. For checking the strength and extreme limit states, the nominal bearing resistance has been determined to be 24 ksf. Use a resistance factor of 0.45 for strength limit state analysis and a resistance factor of 1.0 for extreme limit state analysis.
The designer should feel free to contact the Geotechnical Branch at 502-564-2374 for further recommendations or if any questions arise pertaining to this project.

Attachment:
- Geotechnical Notes Sheets
GEOTECHNICAL NOTES
for Reinforced Concrete Cantilever Retaining Walls

The minimum embedment shall be 2 ft below final grade or any adjacent differential elevation to the bottom of footing for cast-in-place walls.

Walls shall be designed in accordance with the AASHTO LRFD Bridge Design Specifications, current edition.

Size the wall footings at Service Limit State using a Factor of Safety and Resistance factors given below. For checking the Strength and Extreme Limit States, use Resistance Factors of 0.45 and 0.65, respectively.

<table>
<thead>
<tr>
<th>Bearing Surface</th>
<th>Factor</th>
<th>Service Limit State</th>
<th>Factored Nominal Bearing Resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bedrock</td>
<td>16 ksf</td>
<td>48 ksf</td>
<td></td>
</tr>
<tr>
<td>Granular Material Extended to Bedrock</td>
<td>8 ksf</td>
<td>24 ksf</td>
<td></td>
</tr>
</tbody>
</table>

External Backfill
Granular Embankment

Use the following soil strength parameters for design:

- Cohesion (psf)
- Friction Angle (degrees)
- Unit Weight (pcf)

Use granular material extended to bedrock. The granular material shall meet the requirements of "Granular Embankment" in Section 805 of the Standard Specifications for Road and Bridge Construction, current edition, except that the maximum size is 4 inches. Use material that is classified as non-erodible as defined in Section 805 of the Standard Specifications, current edition. Place Fabric - Geotextile Class I, in accordance with Section 214 & 843 of the Standard Specifications for Road and Bridge Construction, current edition, as shown below. Any outdated reference to fabric "Type" in Section 214 shall be ignored. Granular material extended to bedrock should follow a 1/2H:1V back slope for excavation in bedrock and 1H:1V back slope in incised soil.

In lieu of a bedrock bearing surface, the wall may alternately be founded on granular material extended to bedrock. The granular material shall meet the above requirements.

Temporary shoring, sheeting, cofferdams, and/or dewatering methods may be required to facilitate foundation construction.

Footing widths shall be no less than 66% of the total wall height including embedment in areas of 3H:1V backfill slopes.

The wall designer shall verify wall stability based on final wall design dimensions.

Where granular replacement of existing materials is required, excavate the existing soil and rock and replace with granular material as shown below. Use granular material meeting the requirements of "Granular Embankment" in Section 805 of the Standard Specifications, current edition, except that the maximum size is 4 inches. Use material that is classified as non-erodible as defined in Section 805 of the Standard Specifications, current edition. Place Fabric - Geotextile Class I, in accordance with Section 214 & 843 of the Standard Specifications for Road and Bridge Construction, current edition, as shown below. Any outdated reference to fabric "Type" in Section 214 shall be ignored. Granular material extended to bedrock should follow a 1/2H:1V back slope for excavation in bedrock and 1H:1V back slope in incised soil.

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In lieu of a bedrock bearing surface, the wall may alternately be founded on granular material extended to bedrock. The granular material shall meet the above requirements.

Temporary shoring, sheeting, cofferdams, and/or dewatering methods may be required to facilitate foundation construction.
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 formal review process should be created whereby the Finance and Administration Cabinet would provide oversight and direction to an agency of the Commonwealth that is in a dispute with a vendor regarding documents that it believes are being improperly withheld by the vendor and are necessary to conduct a thorough review of the vendor’s activities pursuant to said contract; 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, 45A.230, and 200 KAR 5:314, I, Lori H. Flanery, Secretary of the Finance and Administration Cabinet, do hereby order and direct the following:

I. Upon the filing of a Petition for Determination with the Finance and Administration Cabinet by an agency of the Commonwealth, the Finance and Administration Cabinet (“FAC”) shall formally review any dispute arising where the agency has requested documents from a 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 filing of a Petition for Determination from an agency of the Commonwealth, 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 and a dispute has arisen as to what documents are necessary to conclude the inquiry.

III. Upon the filing of a Petition for Determination by an agency of the Commonwealth pursuant to Section I or Section 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 vendor or other party opposing the disclosure from the state agency, the private vendor shall immediately comply with the FAC’s Determination. Should the vendor or other party refuse to comply with FAC’s Determination, then the FAC, in concert with the requesting agency, shall pursue any and all options that it possesses to obtain the documents in question, including, but not limited to the following:

a. Initiating discussions with the vendor to obtain the documents determined to be necessary for the inquiry;
b. Terminating the vendor’s contract; or
c. Filing an action jointly or singularly against the vendor in a court of appropriate jurisdiction to obtain a court order mandating the disclosure of the documents determined to be necessary for the inquiry.

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

THIS ORDER SHALL BECOME EFFECTIVE UPON EXECUTION.

[Signature]
Lori H. Flanery
Lorp H. Flanery, Secretary
Finance and Administration Cabinet
Dated: August 25, 2011

APPROVED FOR FORM AND LEGALITY:

[Signature]
Jeffrey H. Hailey
General Counsel
Finance and Administration Cabinet
Form of Agreement Between Owner and Contractor

The Agreement for the Work shall be written on AIA Document A101-2007, Standard Form of Agreement Between Owner and Contractor where the basis of Payment is a stipulated sum. The Form of Contract Agreement will be bound within the bidding documents and executed in the number of copies to be specified by the Owner. Samples of AIA Documents required are attached to this proposal.
AGREEMENT made as of the                  day of                  in the year
(In words, indicate day, month and year)

BETWEEN the Owner:
(Name, address and other information)

and the Contractor:
(Name, address and other information)

for the following Project:
(Name, location and detailed description)

The Architect:
(Name, address and other information)

The Owner and Contractor agree as follows.
TABLE OF ARTICLES
1 THE CONTRACT DOCUMENTS
2 THE WORK OF THIS CONTRACT
3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
4 CONTRACT SUM
5 PAYMENTS
6 DISPUTE RESOLUTION
7 TERMINATION OR SUSPENSION
8 MISCELLANEOUS PROVISIONS
9 ENUMERATION OF CONTRACT DOCUMENTS
10 INSURANCE AND BONDS

ARTICLE 1 THE CONTRACT DOCUMENTS
The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

ARTICLE 2 THE WORK OF THIS CONTRACT
The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
§ 3.1 The date of commencement of the Work shall be the date of this Agreement unless a different date is stated below or provision is made for the date to be fixed in a notice to proceed issued by the Owner.
(Insert the date of commencement if it differs from the date of this Agreement or, if applicable, state that the date will be fixed in a notice to proceed.)

If, prior to the commencement of the Work, the Owner requires time to file mortgages and other security interests, the Owner’s time requirement shall be as follows:

§ 3.2 The Contract Time shall be measured from the date of commencement.

§ 3.3 The Contractor shall achieve Substantial Completion of the entire Work not later than ( ) days from the date of commencement, or as follows:
(Insert number of calendar days. Alternatively, a calendar date may be used when coordinated with the date of commencement. If appropriate, insert requirements for earlier Substantial Completion of certain portions of the Work.)
Portion of Work | Substantial Completion Date
--- | ---

, subject to adjustments of this Contract Time as provided in the Contract Documents.

(Insert provisions, if any, for liquidated damages relating to failure to achieve Substantial Completion on time or for bonus payments for early completion of the Work.)

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor’s performance of the Contract. The Contract Sum shall be ($ ), subject to additions and deductions as provided in the Contract Documents.

§ 4.2 The Contract Sum is based upon the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:

(State the numbers or other identification of accepted alternates. If the bidding or proposal documents permit the Owner to accept other alternates subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires.)

§ 4.3 Unit prices, if any:

(Identify and state the unit price; state quantity limitations, if any, to which the unit price will be applicable.)

<table>
<thead>
<tr>
<th>Item</th>
<th>Units and Limitations</th>
<th>Price Per Unit</th>
</tr>
</thead>
</table>

§ 4.4 Allowances included in the Contract Sum, if any:

(Identify allowance and state exclusions, if any, from the allowance price.)

| Item | Price |

ARTICLE 5 PAYMENTS

§ 5.1 PROGRESS PAYMENTS

§ 5.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

§ 5.1.3 Provided that an Application for Payment is received by the Architect not later than the day of a month, the Owner shall make payment of the certified amount to the Contractor not later than the day of the same month. If an Application for Payment is received by the Architect after the application date fixed above, payment shall be made by the Owner not later than ( ) days after the Architect receives the Application for Payment.

(Federal, state or local laws may require payment within a certain period of time.)

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form and supported...
§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.6 Subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

.1 Take that portion of the Contract Sum properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the Contract Sum allocated to that portion of the Work in the schedule of values, Pending final determination of cost to the Owner of changes in the Work, amounts not in dispute shall be included as provided in Section 7.3.9 of AIA Document A201™–2007, General Conditions of the Contract for Construction;

.2 Add that portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing);

.3 Subtract the aggregate of previous payments made by the Owner; and

.4 Subtract amounts, if any, for which the Architect has withheld or nullified a Certificate for Payment as provided in Section 9.5 of AIA Document A201–2007.

§ 5.1.7 The progress payment amount determined in accordance with Section 5.1.6 shall be further modified under the following circumstances:

.1 Add, upon Substantial Completion of the Work, a sum sufficient to increase the total payments to the full amount of the Contract Sum, less such amounts as the Architect shall determine for incomplete Work,

.2 Add, if final completion of the Work is thereafter materially delayed through no fault of the Contractor, any additional amounts payable in accordance with Section 9.10.3 of AIA Document A201–2007.

§ 5.1.8 NA

§ 5.1.9 Except with the Owner’s prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.2 FINAL PAYMENT

§ 5.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

.1 the Contractor has fully performed the Contract except for the Contractor’s responsibility to correct Work as provided in Section 12.2.2 of AIA Document A201–2007, and to satisfy other requirements, if any, which extend beyond final payment; and

.2 a final Certificate for Payment has been issued by the Architect.

§ 5.2.2 The Owner’s final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect’s final Certificate for Payment, or as follows:
ARTICLE 6  DISPUTE RESOLUTION
§ 6.1 INITIAL DECISION MAKER
The Architect will serve as Initial Decision Maker pursuant to Section 15.2 of AIA Document A201–2007, unless the parties appoint below another individual, not a party to this Agreement, to serve as Initial Decision Maker. (If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)

§ 6.2 BINDING DISPUTE RESOLUTION
For any Claim subject to, but not resolved by, mediation pursuant to Section 15.3 of AIA Document A201–2007, the method of binding dispute resolution shall be as follows: (Check the appropriate box. If the Owner and Contractor do not select a method of binding dispute resolution below, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.)

[   ] Arbitration pursuant to Section 15.4 of AIA Document A201–2007
[   ] Litigation in a court of competent jurisdiction
[   ] Other (Specify)

ARTICLE 7  TERMINATION OR SUSPENSION
§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201–2007.

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2007.

ARTICLE 8  MISCELLANEOUS PROVISIONS
§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2007 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

(Insert rate of interest agreed upon, if any.)

| per annum |

§ 8.3 The Owner’s representative: (Name, address and other information)

§ 8.4 The Contractor’s representative: (Name, address and other information)
§ 8.5 Neither the Owner’s nor the Contractor’s representative shall be changed without ten days written notice to the other party.

§ 8.6 Other provisions:

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS
§ 9.1 The Contract Documents, except for Modifications issued after execution of this Agreement, are enumerated in the sections below.

§ 9.1.1 The Agreement is this executed AIA Document A101–2007, Standard Form of Agreement Between Owner and Contractor.

§ 9.1.2 The General Conditions are AIA Document A201–2007, General Conditions of the Contract for Construction.

§ 9.1.3 The Supplementary and other Conditions of the Contract:

<table>
<thead>
<tr>
<th>Document</th>
<th>Title</th>
<th>Date</th>
<th>Pages</th>
</tr>
</thead>
</table>

§ 9.1.4 The Specifications:
(Either list the Specifications here or refer to an exhibit attached to this Agreement.)
Title of Specifications exhibit:
(Table deleted)

§ 9.1.5 The Drawings:
(Either list the Drawings here or refer to an exhibit attached to this Agreement.)
Title of Drawings exhibit:
(Table deleted)

§ 9.1.6 The Addenda, if any:

<table>
<thead>
<tr>
<th>Number</th>
<th>Date</th>
<th>Pages</th>
</tr>
</thead>
</table>

Portions of Addenda relating to bidding requirements are not part of the Contract Documents unless the bidding requirements are also enumerated in this Article 9.

§ 9.1.7 Additional documents, if any, forming part of the Contract Documents:

.1 AIA Document E201™–2007, Digital Data Protocol Exhibit, if completed by the parties, or the following:

.2 Other documents, if any, listed below:
(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201–2007 provides that bidding requirements such as advertisement or invitation to bid, Instructions to Bidders, sample forms and the Contractor’s bid are not part of the Contract Documents unless enumerated in this Agreement. They should be listed here only if intended to be part of the Contract Documents.)

ARTICLE 10 INSURANCE AND BONDS
The Contractor shall purchase and maintain insurance and provide bonds as set forth in Article 11 of AIA Document A201–2007.
(State bonding requirements, if any, and limits of liability for insurance required in Article 11 of AIA Document A201–2007.)

<table>
<thead>
<tr>
<th>Type of insurance or bond</th>
<th>Limit of liability or bond amount ($ 0.00)</th>
</tr>
</thead>
</table>

This Agreement entered into as of the day and year first written above.

<table>
<thead>
<tr>
<th>OWNER (Signature)</th>
<th>CONTRACTOR (Signature)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Printed name and title)</td>
<td>(Printed name and title)</td>
</tr>
</tbody>
</table>
Bid Security Forms

Completed Bid bonds, Performance bonds, and Payment Bonds shall be completed on the following attached AIA forms A310 and A312.
Bid Bond

CONTRACTOR:
(Name, legal status and address)

SURETY:
(Name, legal status and principal place of business)

OWNER:
(Name, legal status and address)

BOND AMOUNT: $

PROJECT:
(Name, location or address, and Project number, if any)

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety’s consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor’s bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
Signed and sealed this day of ,

(Contractor as Principal) (Seal)

(Witness)

(Title)

(Surety) (Seal)

(Witness)

(Title)
Performance Bond

CONTRACTOR:
(Name, legal status and address)

SURETY:
(Name, legal status and principal place of business)

OWNER:
(Name, legal status and address)

CONSTRUCTION CONTRACT
Date:
Amount: $
Description: (Name and location)

BOND
Date: (Not earlier than Construction Contract Date)
Amount: $
Modifications to this Bond: None See Section 16

CONTRACTOR AS PRINCIPAL
Company: (Corporate Seal)
Signature:
Name and Title:

SURETY
Company: (Corporate Seal)
Signature:
Name and Title:

ADDITIONS AND DELETIONS:
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An Additions and Deletions Report that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR:
(Signature)
Name and Title:

SURETY:
(Signature)
Name and Title:

AGENT or BROKER:
(FOR INFORMATION ONLY — Name, address and telephone)

OWNER'S REPRESENTATIVE:
(Architect, Engineer or other party:)

(Any additional signatures appear on the last page of this Performance Bond.)
§ 1 The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

§ 2 If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Section 3.

§ 3 If there is no Owner Default under the Construction Contract, the Surety’s obligation under this Bond shall arise after

.1 the Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor and Surety to discuss the Contractor’s performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner’s notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Section 3.1 shall be held within ten (10) business days of the Surety’s receipt of the Owner’s notice. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner’s right, if any, subsequently to declare a Contractor Default;

.2 the Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

.3 the Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

§ 4 Failure on the part of the Owner to comply with the notice requirement in Section 3.1 shall not constitute a failure to comply with a condition precedent to the Surety’s obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

§ 5 When the Owner has satisfied the conditions of Section 3, the Surety shall promptly and at the Surety’s expense take one of the following actions:

§ 5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

§ 5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

§ 5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owner’s concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Section 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

§ 5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:

.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

§ 6 If the Surety does not proceed as provided in Section 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Section 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.
§ 7 If the Surety elects to act under Section 5.1, 5.2 or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication, for
   .1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
   .2 additional legal, design professional and delay costs resulting from the Contractor’s Default, and resulting from the actions or failure to act of the Surety under Section 5; and
   .3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

§ 8 If the Surety elects to act under Section 5.1, 5.3 or 5.4, the Surety’s liability is limited to the amount of this Bond.

§ 9 The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors and assigns.

§ 10 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

§ 11 Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

§ 12 Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

§ 13 When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

§ 14 Definitions
§ 14.1 Balance of the Contract Price. The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

§ 14.2 Construction Contract. The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

§ 14.3 Contractor Default. Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

§ 14.4 Owner Default. Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

§ 14.5 Contract Documents. All the documents that comprise the agreement between the Owner and Contractor.
§ 15 If this Bond is issued for an agreement between a Contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

§ 16 Modifications to this bond are as follows:

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

<table>
<thead>
<tr>
<th>CONTRACTOR AS PRINCIPAL</th>
<th>SURETY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company:</td>
<td>Company:</td>
</tr>
<tr>
<td>(Corporate Seal)</td>
<td>(Corporate Seal)</td>
</tr>
<tr>
<td>Signature:</td>
<td>Signature:</td>
</tr>
<tr>
<td>Name and Title:</td>
<td>Name and Title:</td>
</tr>
<tr>
<td>Address:</td>
<td>Address:</td>
</tr>
</tbody>
</table>
CONTRACTOR:
(Name, legal status and address)

SURETY:
(Name, legal status and principal place of business)

OWNER:
(Name, legal status and address)

CONSTRUCTION CONTRACT
Date:
Amount: $
Description:
(Name and location)

BOND
Date:
(Not earlier than Construction Contract Date)
Amount: $
Modifications to this Bond:   None   See Section 18

CONTRACTOR AS PRINCIPAL
Company:   (Corporate Seal)
Signature:               Name and Title:

SURETY
Company:   (Corporate Seal)
Signature:               Name and Title:

(Any additional signatures appear on the last page of this Payment Bond.)

ADDITIONS AND DELETIONS:
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An Additions and Deletions Report that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.
§ 1 The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.

§ 2 If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies and holds harmless the Owner from claims, demands, liens or suits by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.

§ 3 If there is no Owner Default under the Construction Contract, the Surety’s obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Section 13) of claims, demands, liens or suits against the Owner or the Owner’s property by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety.

§ 4 When the Owner has satisfied the conditions in Section 3, the Surety shall promptly and at the Surety’s expense defend, indemnify and hold harmless the Owner against a duly tendered claim, demand, lien or suit.

§ 5 The Surety’s obligations to a Claimant under this Bond shall arise after the following:

§ 5.1 Claimants, who do not have a direct contract with the Contractor,
   .1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
   .2 have sent a Claim to the Surety (at the address described in Section 13).

§ 5.2 Claimants, who are employed by or have a direct contract with the Contractor, have sent a Claim to the Surety (at the address described in Section 13).

§ 6 If a notice of non-payment required by Section 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant’s obligation to furnish a written notice of non-payment under Section 5.1.1.

§ 7 When a Claimant has satisfied the conditions of Sections 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety’s expense take the following actions:

§ 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and

§ 7.2 Pay or arrange for payment of any undisputed amounts.

§ 7.3 The Surety’s failure to discharge its obligations under Section 7.1 or Section 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Section 7.1 or Section 7.2, the Surety shall indemnify the Claimant for the reasonable attorney’s fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

§ 8 The Surety’s total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney’s fees provided under Section 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

§ 9 Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner’s priority to use the funds for the completion of the work.
§ 10 The Surety shall not be liable to the Owner, Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to, or give notice on behalf of, Claimants or otherwise have any obligations to Claimants under this Bond.

§ 11 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

§ 12 No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Section 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

§ 13 Notice and Claims to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.

§ 14 When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

§ 15 Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

§ 16 Definitions

§ 16.1 Claim. A written statement by the Claimant including at a minimum:
1. the name of the Claimant;
2. the name of the person for whom the labor was done, or materials or equipment furnished;
3. a copy of the agreement or purchase order pursuant to which labor, materials or equipment was furnished for use in the performance of the Construction Contract;
4. a brief description of the labor, materials or equipment furnished;
5. the date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
6. the total amount earned by the Claimant for labor, materials or equipment furnished as of the date of the Claim;
7. the total amount of previous payments received by the Claimant; and
8. the total amount due and unpaid to the Claimant for labor, materials or equipment furnished as of the date of the Claim.

§ 16.2 Claimant. An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic’s lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms “labor, materials or equipment” that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor’s subcontractors, and all other items for which a mechanic’s lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

§ 16.3 Construction Contract. The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.
§ 16.4 Owner Default. Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

§ 16.5 Contract Documents. All the documents that comprise the agreement between the Owner and Contractor.

§ 17 If this Bond is issued for an agreement between a Contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

§ 18 Modifications to this bond are as follows:

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL

Company: 

(Signature)

Name and Title: 

Address: 

(Surety)

Company: 

(Signature)

Name and Title: 

Address:
2.1 SUMMARY

A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:

1. General coordination procedures.
2. Requests for Information (RFIs).
3. Project meetings.

B. Each contractor shall participate in coordination requirements. Certain areas of responsibility are assigned to a specific contractor.

2.2 DEFINITIONS

A. RFI: Request from Owner, Architect, or Contractor seeking information required by or clarifications of the Contract Documents.

2.3 INFORMATIONAL SUBMITTALS

A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:

1. Name, address, and telephone number of entity performing subcontract or supplying products.
2. Number and title of related Specification Section(s) covered by subcontract.
3. Drawing number and detail references, as appropriate, covered by subcontract.

B. Key Personnel Names: Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, and cellular telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.

2.4 GENERAL COORDINATION PROCEDURES

A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different sections that depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
3. Make adequate provisions to accommodate items scheduled for later installation.

B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor’s construction schedule.
2. Preparation of the schedule of values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Progress meetings.
6. Pre-installation conferences.
7. Project closeout activities.
8. Startup and adjustment of systems.

D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.

1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner’s property.

2.5 REQUESTS FOR INFORMATION (RFIs)

A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.

1. Architect will return RFIs submitted to Architect by other entities controlled by Contractor with no response.
2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor’s work or work of subcontractors.

B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:

1. Project name.
2. Project number.
3. Date.
4. Name of Contractor.
5. Name of Architect.
6. RFI number, numbered sequentially.
7. RFI subject.
8. Specification Section number and title and related paragraphs, as appropriate.
9. Drawing number and detail references, as appropriate.
10. Field dimensions and conditions, as appropriate.
11. Contractor’s suggested resolution. If Contractor’s suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.

12. Contractor’s signature.

13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
   a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.

   1. Attachments shall be electronic files in Adobe Acrobat PDF format.

D. Architect’s Action: Architect will review each RFI, determine action required, and respond. Allow seven working days for Architect’s response for each RFI. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day.
   1. The following Contractor-generated RFIs will be returned without action:
      a. Requests for approval of submittals.
      b. Requests for approval of substitutions.
      c. Requests for approval of Contractor’s means and methods.
      d. Requests for coordination information already indicated in the Contract Documents.
      e. Requests for adjustments in the Contract Time or the Contract Sum.
      f. Requests for interpretation of Architect’s actions on submittals.
      g. Incomplete RFIs or inaccurately prepared RFIs.
   2. Architect’s action may include a request for additional information, in which case Architect’s time for response will date from time of receipt of additional information.
   3. Architect’s action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal.
      a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 10 days of receipt of the RFI response.

E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log monthly. Include the following:
   1. Project name.
   2. Name and address of Contractor.
   3. Name and address of Architect.
   4. RFI number including RFIs that were returned without action or withdrawn.
   5. RFI description.
   6. Date the RFI was submitted.
   7. Date Architect’s response was received.

F. On receipt of Architect’s action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.
   1. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
2. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

2.6 PROJECT MEETINGS

A. General: Schedule and conduct meetings and conferences at Project site unless otherwise indicated.

1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
3. Minutes: Entity responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.

B. Preconstruction Conference: Schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement.

1. Conduct the conference to review responsibilities and personnel assignments.
2. Attendees: Authorized representatives of Owner, Owner’s Commissioning Authority, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
3. Agenda: Discuss items of significance that could affect progress, including the following:
   a. Tentative construction schedule.
   b. Critical work sequencing and long-lead items.
   c. Designation of key personnel and their duties.
   d. Lines of communications.
   e. Procedures for processing field decisions and Change Orders.
   f. Procedures for RFIs.
   g. Procedures for testing and inspecting.
   h. Procedures for processing Applications for Payment.
   i. Submittal procedures.
   j. Preparation of record documents.
   k. Use of the premises.
   l. Owner’s occupancy requirements.
   m. Security.
   n. Progress cleaning.

4. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.

C. Pre-installation Conferences: Conduct a pre-installation conference at Project site before each construction activity that requires coordination with other construction.

1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect, and Owner’s Commissioning Authority of scheduled meeting dates.
2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
   a. Submittals.
   b. Possible conflicts.
   c. Compatibility requirements.
   d. Time schedules.
   e. Manufacturer's written instructions.
   f. Acceptability of substrates.

3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.

4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.

5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
Request for Information ("RFI")

TO: 
FROM: 

PROJECT: 
ISSUE DATE: 
RFI No. 

PROJECT NUMBERS: / 
REQUESTED REPLY DATE: 
COPIES TO: 

RFI DESCRIPTION: (Fully describe the question or type of information requested.)

REFERENCES/ATTACHMENTS: (List specific documents researched when seeking the information requested.) 
SPECIFICATIONS: 
DRAWINGS: 
OTHER: 

SENDER’S RECOMMENDATION: (If RFI concerns a site or construction condition, the sender may provide a recommended solution, including cost and/or schedule considerations.)

RECEIVER’S REPLY: (Provide answer to RFI, including cost and/or schedule considerations.)

BY 
DATE 
COPIES TO 

Note: This reply is not an authorization to proceed with work involving additional cost, time or both. If any reply requires a change to the Contract Documents, a Change Order, Construction Change Directive or a Minor Change in the work must be executed in accordance with the Contract Documents.
PART 3 - GENERAL

3.1 SUMMARY

A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:

2. Field engineering and surveying.
3. Installation of the Work.
4. Cutting and patching.
5. Coordination of Owner-installed products.
6. Progress cleaning.
7. Starting and adjusting.
8. Protection of installed construction.

3.2 DEFINITIONS

A. Cutting: Removal of in-place construction necessary to permit installation or performance of other work.

B. Patching: Fitting and repair work required to restore construction to original conditions after installation of other work.

3.3 INFORMATIONAL SUBMITTALS

A. Qualification Data: For land surveyor.

B. Certificates: Submit certificate signed by land surveyor certifying that location and elevation of improvements comply with requirements.

C. Cutting and Patching Plan: Submit plan describing procedures at least 10 days prior to the time cutting and patching will be performed. Include the following information:

1. Extent: Describe reason for and extent of each occurrence of cutting and patching.
2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building appearance and other significant visual elements.
3. Products: List products to be used for patching and firms or entities that will perform patching work.
4. Dates: Indicate when cutting and patching will be performed.
5. Utilities and Mechanical and Electrical Systems: List services and systems that cutting and patching procedures will disturb or affect. List services and systems that will be relocated and those that will be temporarily out of service. Indicate length of time permanent services and systems will be disrupted.

a. Include description of provisions for temporary services and systems during interruption of permanent services and systems.
D. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.

E. Certified Surveys: Submit two copies signed by land surveyor.

F. Final Property Survey: Submit 10 copies showing the Work performed and record survey data.

3.4 QUALITY ASSURANCE

A. Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing land-surveying services of the kind indicated.

B. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.

1. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operational elements include the following:

   a. Primary operational systems and equipment.
   b. Fire-suppression systems.
   c. Mechanical systems piping and ducts.
   d. Control systems.
   e. Communication systems.
   f. Fire-detection and -alarm systems.
   g. Conveying systems.
   h. Electrical wiring systems.
   i. Operating systems of special construction.

2. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Other construction elements include but are not limited to the following:

   a. Water, moisture, or vapor barriers.
   b. Membranes and flashings.
   c. Sprayed fire-resistive material.
   d. Equipment supports.
   e. Piping, ductwork, vessels, and equipment.

3. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

C. Cutting and Patching Conference: Before proceeding, meet at Project site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.
D. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

PART 4 - PRODUCTS

4.1 MATERIALS

A. General: Comply with requirements specified in other Sections.

B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.

1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to Architect for the visual and functional performance of in-place materials.

PART 5 - EXECUTION

5.1 EXAMINATION

A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.

1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services, and other utilities.

2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.

B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

1. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.

2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.

3. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.

C. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:

1. Description of the Work.

2. List of detrimental conditions, including substrates.

3. List of unacceptable installation tolerances.

4. Recommended corrections.

D. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.
5.2 PREPARATION

A. Existing Utility Information: Furnish information to Owner that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.

B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, submit a request for information to Architect according to requirements in section "Project Management and Coordination."

5.3 CONSTRUCTION LAYOUT

A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect promptly.

B. General: Engage a land surveyor to lay out the Work using accepted surveying practices.
   1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
   2. Establish limits on use of Project site.
   3. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
   4. Inform installers of lines and levels to which they must comply.
   5. Check the location, level and plumb, of every major element as the Work progresses.
   6. Notify Architect when deviations from required lines and levels exceed allowable tolerances.
   7. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.

C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.

D. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.

E. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect.
5.4 FIELD ENGINEERING

A. Identification: Owner will identify existing benchmarks, control points, and property corners.

B. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
   1. Do not change or relocate existing benchmarks or control points without prior written approval of Architect. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Architect before proceeding.
   2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.

C. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.
   1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
   2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
   3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.

D. Certified Survey: On completion of foundation walls, major site improvements, and other work requiring field-engineering services, prepare a certified survey showing dimensions, locations, angles, and elevations of construction and sitework.

E. Final Property Survey: Engage a land surveyor to prepare a final property survey showing significant features (real property) for Project. Include on the survey a certification, signed by land surveyor, that principal metes, bounds, lines, and levels of Project are accurately positioned as shown on the survey.
   1. Show boundary lines, monuments, streets, site improvements and utilities, existing improvements and significant vegetation, adjoining properties, acreage, grade contours, and the distance and bearing from a site corner to a legal point.
   2. Recording: At Substantial Completion, have the final property survey recorded by or with authorities having jurisdiction as the official "property survey."

5.5 INSTALLATION

A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
   1. Make vertical work plumb and make horizontal work level.
   2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
   3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
   4. Maintain minimum headroom clearance of 96 inches (2440 mm) in occupied spaces and 90 inches (2300 mm) in unoccupied spaces.
B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.

C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.

F. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.

G. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.

H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.

1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
2. Allow for building movement, including thermal expansion and contraction.
3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

I. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.

J. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

5.6 **CUTTING AND PATCHING**

A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.

1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.

B. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.

C. Temporary Support: Provide temporary support of work to be cut.
D. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

E. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize interruption to occupied areas.

F. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.

   1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
   2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
   3. Concrete: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
   4. Excavating and Backfilling: Comply with requirements in applicable Sections where required by cutting and patching operations.
   5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
   6. Proceed with patching after construction operations requiring cutting are complete.

G. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.

   1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
   2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.
      a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
      b. Restore damaged pipe covering to its original condition.
   3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
      a. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
   4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
   5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition and ensures thermal and moisture integrity of building enclosure.
H. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

5.7 NA

5.8 PROGRESS CLEANING

A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.

2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F (27 deg C).
3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
   a. Use containers intended for holding waste materials of type to be stored.
4. Coordinate progress cleaning for joint-use areas where Contractor and other contractors are working concurrently.

B. Site: Maintain Project site free of waste materials and debris.

C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.

1. Remove liquid spills promptly.
2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.

D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways.

H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

5.9 STARTING AND ADJUSTING

A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.

B. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.

C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

5.10 PROTECTION OF INSTALLED CONSTRUCTION

A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

B. Comply with manufacturer's written instructions for temperature and relative humidity.
CLOSEOUT PROCEDURES

PART 6 - GENERAL

6.1 SUMMARY

A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:

1. Substantial Completion procedures.
2. Final completion procedures.
3. Warranties.
4. Final cleaning.

6.2 ACTION SUBMITTALS

A. Product Data: For cleaning agents.
B. Contractor’s List of Incomplete Items: Initial submittal at Substantial Completion.
C. Certified List of Incomplete Items: Final submittal at Final Completion.

6.3 CLOSEOUT SUBMITTALS

A. Certificates of Release: From authorities having jurisdiction.
B. Certificate of Insurance: For continuing coverage.

6.4 MAINTENANCE MATERIAL SUBMITTALS

A. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

6.5 SUBSTANTIAL COMPLETION PROCEDURES

A. Contractor’s List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor’s punch list), indicating the value of each item on the list and reasons why the Work is incomplete.
B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.

1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
2. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, final completion construction
photographic documentation, damage or settlement surveys, property surveys, and similar
final record information.
3. Submit closeout submittals specified in individual Sections, including specific warranties,
workmanship bonds, maintenance service agreements, final certifications, and similar
documents.
4. Submit test/adjust/balance records.
5. Submit changeover information related to Owner's occupancy, use, operation, and
maintenance.

C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 days prior
to requesting inspection for determining date of Substantial Completion. List items below that are
incomplete at time of request.
1. Advise Owner of pending insurance changeover requirements.
2. Perform preventive maintenance on equipment used prior to Substantial Completion.
3. Participate with Owner in conducting inspection and walkthrough with local emergency
responders.
4. Terminate and remove temporary facilities from Project site, along with mockups,
construction tools, and similar elements.
5. Complete final cleaning requirements, including touchup painting.
6. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual
defects.

6.6 FINAL COMPLETION PROCEDURES
A. Submittals Prior to Final Completion: Before requesting final inspection for determining final
completion, complete the following:
1. Submit a final Application for Payment according to Payment Procedures.
2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial
Completion inspection list of items to be completed or corrected (punch list), endorsed and
dated by Architect. Certified copy of the list shall state that each item has been completed
or otherwise resolved for acceptance.
3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage
complying with insurance requirements.

6.7 LIST OF INCOMPLETE ITEMS (PUNCH LIST)
A. Organization of List: Include name and identification of each space and area affected by
construction operations for incomplete items and items needing correction including, if necessary,
areas disturbed by Contractor that are outside the limits of construction.

1. Include the following information at the top of each page:
   a. Project name.
   b. Date.
   c. Name of Architect.
   d. Name of Contractor.
   e. Page number.
6.8 SUBMITTAL OF PROJECT WARRANTIES

A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated, or when delay in submittal of warranties might limit Owner's rights under warranty.

B. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.

C. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.
   1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch (215-by-280-mm) paper.
   2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
   3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
   4. Warranty Electronic File: Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide bookmarked table of contents at beginning of document.

D. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 7 - PRODUCTS

7.1 MATERIALS

A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 8 - EXECUTION

8.1 FINAL CLEANING

A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

   1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
b. Remove tools, construction equipment, machinery, and surplus material from Project site.
c. Clean exposed exterior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
d. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
e. Remove labels that are not permanent.
f. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
g. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
h. Clean ducts, blowers, and coils if units were operated without filters during construction or that display contamination with particulate matter on inspection.
i. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
j. Leave Project clean and ready for occupancy.
PART 9 - GENERAL

9.1 SUMMARY

A. Section includes administrative and procedural requirements for project record documents, including the following:

1. Record Drawings.
2. Record Product Data.

9.2 CLOSEOUT SUBMITTALS

A. Record Drawings: Comply with the following:

1. Number of Copies: Submit one set(s) of marked-up record prints.
2. Number of Copies: Submit copies of record Drawings as follows:
   a. Initial Submittal:
      1) Submit one paper-copy set(s) of marked-up record prints.
      2) Architect will indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.
   b. Final Submittal:
      1) Submit one paper-copy set(s) of marked-up record prints.

B. Record Specifications: Submit one paper copy of Project’s Specifications, including addenda and contract modifications.

C. Record Product Data: Submit one paper copy of each submittal.

1. Where record Product Data are required as part of operation and maintenance manuals, submit duplicate marked-up Product Data as a component of manual.

D. Miscellaneous Record Submittals: See other Specification Sections for miscellaneous record-keeping requirements and submittals in connection with various construction activities. Submit one paper copy of each submittal.

E. Reports: Submit written report indicating items incorporated into project record documents concurrent with progress of the Work, including revisions, concealed conditions, field changes, product selections, and other notations incorporated.

PART 10 - PRODUCTS

10.1 RECORD DRAWINGS

A. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.
1. Preparation: Mark record prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.
   
a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
   
b. Accurately record information in an acceptable drawing technique.
   
c. Record data as soon as possible after obtaining it.
   
d. Record and check the markup before enclosing concealed installations.
   
e. Cross-reference record prints to corresponding archive photographic documentation.

2. Content: Types of items requiring marking include, but are not limited to, the following:
   
a. Dimensional changes to Drawings.
   
b. Revisions to details shown on Drawings.
   
c. Depths of foundations below first floor.
   
d. Locations and depths of underground utilities.
   
e. Revisions to routing of piping and conduits.
   
f. Revisions to electrical circuitry.
   
g. Actual equipment locations.
   
h. Changes made by Change Order or Construction Change Directive.
   
i. Changes made following Architect's written orders.
   
j. Details not on the original Contract Drawings.
   
k. Field records for variable and concealed conditions.

3. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.

4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.

5. Mark important additional information that was either shown schematically or omitted from original Drawings.

6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.

B. Format: Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.

1. Record Prints: Organize record prints and newly prepared record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.

2. Identification: As follows:
   
a. Project name.
   
b. Date.
   
c. Designation "PROJECT RECORD DRAWINGS."
   
d. Name of Architect.
   
e. Name of Contractor.

10.2 RECORD PRODUCT DATA

A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
3. Note related Change Orders, record Specifications, and record Drawings where applicable.

B. Format: Submit record Product Data as paper copy.

1. Include record Product Data directory organized by Specification Section number and title, electronically linked to each item of record Product Data.

PART 11 - EXECUTION

11.1 RECORDING AND MAINTENANCE

A. Recording: Maintain one copy of each submittal during the construction period for project record document purposes. Post changes and revisions to project record documents as they occur; do not wait until end of Project.

B. Maintenance of Record Documents and Samples: Store record documents and Samples in the field office apart from the Contract Documents used for construction. Do not use project record documents for construction purposes. Maintain record documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to project record documents for Architect's reference during normal working hours.
PART II

FEDERAL CONTRACT NOTES
FEDERAL CONTRACT NOTES

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

- 102.13 Irregular Bid Proposals
- 102.09 Bid Proposal Guaranty
- See Proposal Delivery of Bid Proposals
- 102.14 Disqualification of Bidders

CIVIL RIGHTS ACT OF 1964

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

NOTICE TO ALL BIDDERS

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

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

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

SECOND TIER SUBCONTRACTS

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

DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

It is the policy of the Kentucky Transportation Cabinet (“the Cabinet”) that Disadvantaged Business Enterprises (“DBE”) shall have the opportunity to participate in the performance of construction projects financed in whole or in part by Federal Funds in order to create a level playing field for all businesses who wish to contract with the Cabinet. For this proposal, the LPA will adopt that same policy and comply with the regulations found in 49 CFR Part 26, and the definitions and requirements contained therein shall be adopted as if set out verbatim herein.
The LPA, contractors, subcontractors, and sub-recipients shall not discriminate on the basis of race, color, national origin, or sex in the performance of work performed pursuant to LPA’s contracts. The contractor shall carry out applicable requirements of 49 CFR 26 in the award and administration of federally assisted construction projects. The contractor will include this provision in all its subcontracts and supply agreements pertaining to contracts with the LPA.

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

DBE GOAL
The Disadvantaged Business Enterprise (DBE) goal established for this contract, as listed in the proposal, is the percentage of the total value of the contract. The contractor shall exercise all necessary and reasonable steps to ensure that Disadvantaged Business Enterprises participate in at least the percent of the contract as set forth above as goals for this contract.

OBLIGATION OF CONTRACTORS
Each contractor prequalified to perform work on Cabinet projects shall designate and make known to the LPA a liaison officer who is assigned the responsibility of effectively administering and promoting an active program for utilization of DBEs. If a formal goal has not been designated for the contract, all contractors are encouraged to consider DBEs for subcontract work as well as for the supply of material and services needed to perform this work. Contractors are encouraged to use the services of banks owned and controlled by minorities and women.

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

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

All contractors must certify their DBE participation on the DBE certification statement in this document. DBEs utilized in achieving the DBE goal must be certified and prequalified for the work items at the time the bid is submitted.

DBE PARTICIPATION PLAN
Lowest responsive and responsible bidders must submit the DBE Plan/ Subcontractor Request, KYTC form TC 14-35 DBE, within 5 days of the letting.

http://transportation.ky.gov/Organizational-Resources/Forms/TC_14-35.xlsx
This is necessary before the Awards Committee will review and make a recommendation. **The project will not be considered for award prior to submission and approval of the apparent low bidder’s DBE Plan/Subcontractor Request.**

The DBE Participation Plan shall include the following:

1. Name and address of DBE Subcontractor(s) and/or supplier(s) intended to be used in the proposed project;
2. Description of the work each is to perform including the work item, unit, quantity, unit price and total amount of the work to be performed by the individual DBE;
3. The dollar value of each proposed DBE subcontract and the percentage of total project contract value this represents. DBE participation may be counted as follows;
   a) If DBE suppliers and manufactures assume actual and contractual responsibility, the dollar value of materials to be furnished will be counted toward the goal as follows:
      • The entire expenditure paid to a DBE manufacturer;
      • 60 percent of expenditures to DBE suppliers that are not manufacturers provided the supplier is a regular dealer in the product involved. A regular dealer must be engaged in, as its principal business and in its own name, the sale of products to the public, maintain an inventory and own and operate distribution equipment; and
      • The amount of fees or commissions charged by the DBE firms for a bona fide service, such as professional, technical, consultant, or managerial services and assistance in the procurement of essential personnel, facilities, equipment, materials, supplies, delivery of materials and supplies or for furnishing bonds, or insurance, providing such fees or commissions are determined to be reasonable and customary.
   b) The dollar value of services provided by DBEs such as quality control testing, equipment repair and maintenance, engineering, staking, etc.;
   c) The dollar value of joint ventures. DBE credit for joint ventures will be limited to the dollar amount of the work actually performed by the DBE in the joint venture;
4. Written and signed documentation of the bidder’s commitment to use a DBE contractor whose participation is being utilized to meet the DBE goal; and
5. Written and signed confirmation from the DBE that it is participating in the contract as provided in the prime contractor’s commitment.

**UPON AWARD AND BEFORE A WORK ORDER WILL BE ISSUED**
Contractors must submit the signed subcontract between the contractor and the DBE contractor, the DBE’s certificate of insurance, and an affidavit for bidders, offerors, and contractors from the DBE to the LPA. An affidavit can be found on the KYTC Construction Procurement website. If the DBE is a supplier of materials for the project, a signed purchase order and an affidavit for bidders, offerors, and contractors must be submitted to the LPA.
Changes to DBE Participation Plans must be approved by the LPA. The LPA may consider extenuating circumstances including, but not limited to, changes in the nature or scope of the project, the inability or unwillingness of a DBE to perform the work in accordance with the bid, and/or other circumstances beyond the control of the prime contractor.

**CONSIDERATION OF GOOD FAITH EFFORTS REQUESTS**

If the DBE participation submitted in the bid by the apparent lowest responsive and responsible bidder does not meet or exceed the DBE contract goal, the apparent lowest responsive and responsible bidder must submit a Good Faith Effort Package to satisfy the LPA that sufficient good faith efforts were made to meet the contract goals prior to submission of the bid. Efforts to increase the goal after bid submission will not be considered in justifying the good faith effort, unless the contractor can show that the proposed DBE was solicited prior to the letting date. DBEs utilized in achieving the DBE goal must be certified and prequalified for the work items at the time the bid is submitted. One complete set and three (3) copies of this information must be received by the LPA no later than 3:00 PM of the tenth calendar day after receipt of notification that they are the apparent low bidder.

Where the information submitted includes repetitious solicitation letters it will be acceptable to submit a sample representative letter along with a distribution list of the firms solicited. Documentation of DBE quotations shall be a part of the good faith effort submittal as necessary to demonstrate compliance with the factors listed below which the LPA considers in judging good faith efforts. This documentation may include written subcontractors’ quotations, telephone log notations of verbal quotations, or other types of quotation documentation. The Good Faith Effort Package shall include, but may not be limited to information showing evidence of the following:

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

8. Whether quotations were received from interested DBE firms but were rejected as unacceptable without sound reasons why the quotations were considered unacceptable. The fact that the DBE firm’s quotation for the work is not the lowest quotation received will not in itself be considered as a sound reason for rejecting the quotation as unacceptable. The fact that the bidder has the ability and/or desire to perform the contract work with its own forces will not be considered a sound reason for rejecting a DBE quote. Nothing in this provision shall be construed to require the bidder to accept unreasonable quotes in order to satisfy DBE goals;

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

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

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

**FAILURE TO MEET GOOD FAITH REQUIREMENT**

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

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

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

The LPA reserves the right to award the contract to the next lowest responsive and responsible bidder or to rebid the contract in the event that the contract is not awarded to the low bidder as the result of a failure to meet the good faith requirement.
SANCTIONS FOR FAILURE TO MEET DBE REQUIREMENTS OF THE PROJECT

Failure by the prime contractor to fulfill the DBE requirements of a project under contract or to demonstrate good faith efforts to meet the goal constitutes a breach of contract. When this occurs, the LPA will hold the prime contractor accountable, as would be the case with all other contract provisions. Therefore, the contractor’s failure to carry out the DBE contract requirements shall constitute a breach of contract and as such the LPA reserves the right to exercise all administrative remedies at its disposal including, but not limited to the following:

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

PROMPT PAYMENT

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

CONTRACTOR REPORTING

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

http://transportation.ky.gov/Organizational-Resources/Forms/TC 18-7.docx

These reports must be submitted within 14 days of payment made to the DBE contractor.

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

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

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

The prime contractor should notify the KYTC Administering Office seven (7) days prior to DBE contractors commencing work on the project.

Photocopied payments and completed form to be submitted to: Office of Civil Rights and Small Business Development 6th Floor West 200 Mero Street Frankfort, KY 40622
DEFAULT OR DECERTIFICATION OF THE DBE
If the DBE subcontractor or supplier is decertified or defaults in the performance of its work, and the overall goal cannot be credited for the uncompleted work, the prime contractor may utilize a substitute DBE or elect to fulfill the DBE goal with another DBE on a different work item. If after exerting good faith effort in accordance with the LPA’s Good Faith Effort policies and procedures, the prime contractor is unable to replace the DBE, then the unmet portion of the goal may be waived at the discretion of the LPA.

RETAINAGE
There is no retainage permitted on this project.
REQUIRED CONTRACT PROVISIONS
FEDERAL AID CONSTRUCTION CONTRACTS

I. General
II. Nondiscrimination
III. Nonsegregated Facilities
IV. Davis-Bacon and Related Act Provisions
V. Contract Work Hours and Safety Standards Act Provisions
VI. Subletting or Assigning the Contract
VII. Safety: Accident Prevention
VIII. False Statements Concerning Highway Projects
IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
X. Compliance with Governmentwide Suspension and Debarment Requirements
XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements, and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement, or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA 1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements, and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor’s own organization and with the assistance of workers under the contractor’s immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways.
functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27, and 23 CFR Parts 200, 230, and 533.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60.4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27, and 23 CFR Parts 200, 230, and 533.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate provisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

   a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

   b. The contractor will accept as its operating policy the following statement:

      "It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade
and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its
obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor’s work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor’s association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment
activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

   a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

   b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

   a. The requirements of 49 CFR Part 26 and the State DOT’s U.S. DOT approved DBE program are incorporated by reference.

   b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

   a. The records kept by the contractor shall document the following:

      (1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

      (2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

      (3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

   b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor’s obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor’s control, where the facilities are segregated. The term “facilities” includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking
lows, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

   a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

   Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein. Provided, the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

   b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

      (i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

      (ii) The classification is utilized in the area by the construction industry; and

      (iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

   (2) If the contractor and the laborers and mechanics to be employed in the
classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program. Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or
cash equivalents thereof of the types described in section 1(b)(2)(E) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(E) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payroll records to the contracting agency. The payroll records shall be reported accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payroll shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee’s social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esd/whd/forms/w347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency.

(2) Each payroll submitted shall be accompanied by a “Statement of Compliance,” signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5(a)(3)(i) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5(a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the “Statement of Compliance” required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.
c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman’s hourly rate) specified in the contractor’s or subcontractor’s registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice’s level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under
the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee’s level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.
a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).


V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1) through (4) of this section and also a clause requiring the subcontractors to include those clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.
1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

   (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
   (2) the prime contractor remains responsible for the quality of the work of the leased employees;
   (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
   (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VI. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect
property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-sponsored construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-sponsored highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-sponsored highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project.

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-sponsored construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-sponsored construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:
1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 506 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more— as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

   a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

   b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

   c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

   d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.


   "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

   f. The prospective first tier participant agrees by submitting this proposal that should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

   g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions.
transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epis.gov/), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 190 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated
may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers to any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epsl.gov), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

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Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions exceeding the $25,000 threshold.
transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

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XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

   a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

   b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.
ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

   a. To the extent that qualified persons regularly residing in the area are not available.

   b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

   c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.
LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC – CARGO PREFERENCE ACT (CPA).

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

SECTION 7 is expanded by the following new Article:

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

Pursuant to Title 46CFR Part 381, the Contractor agrees

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

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

- To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.
KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

EMPLOYMENT REQUIREMENTS
RELATING TO
NONDISCRIMINATION OF EMPLOYEES
(APPLICABLE TO FEDERAL-AID SYSTEM CONTRACTS)

AN ACT OF THE KENTUCKY GENERAL ASSEMBLY
TO PREVENT DISCRIMINATION IN EMPLOYMENT

KRS CHAPTER 344
EFFECTIVE JUNE 16, 1972

The contract on this project, in accordance with KRS Chapter 344, provides that during the performance of this contract, the contractor agrees as follows:

1. The contractor shall not fail or refuse to hire, or shall not discharge any individual, or otherwise discriminate against an individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, national origin, sex, disability or age (between forty and seventy); or limit, segregate, or classify his employees in any way which would deprive or tend to deprive an individual of employment opportunities or otherwise adversely affect his status as an employee, because of such individual's race, color, religion, national origin, sex, disability or age (between forty and seventy). The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2. The contractor shall not print or publish or cause to be printed or published a notice or advertisement relating to employment by such an employer or membership in or any classification or referral for employment by the employment agency, indicating any preference, limitation, specification, or discrimination, based on race, color, religion, national origin, sex, disability or age (between forty and seventy), except that such notice or advertisement may indicate a preference, limitation, or specification based on religion, or national origin when religion, or national origin is a bona fide occupational qualification for employment.

3. If the contractor is in control of apprenticeship or other training or retraining, including on-the-job training programs, he shall not discriminate against an individual because of his race, color, religion, national origin, sex, disability or age (between forty and seventy), in admission to, or employment in any program established to provide apprenticeship or other training.

4. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representative of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for non-compliance.

REVISED: 12-3-92
NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION
TO ENSURE EMPLOYMENT OPPORTUNITY
(Executive Order 11246)

1. The Offeror’s or Bidder’s attention is called to the “Equal Opportunity Clause” and the “Standard Federal Equal Employment Specifications” set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor’s aggregate work force in each trade on all construction work in the covered area, are as follows:

<table>
<thead>
<tr>
<th>GOALS FOR MINORITY PARTICIPATION IN EACH TRADE</th>
<th>GOALS FOR FEMALE PARTICIPATION EACH TRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.6%</td>
<td>6.9%</td>
</tr>
</tbody>
</table>

These goals are applicable to all Contractor’s construction work (whether or not it is Federal or federally-assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor’s compliance with the Executive Order and the regulations in CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4, 3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor’s goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of $10,000.00 at any tier for construction work under the contract resulting from the solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed. The notification shall be mailed to:

Evelyn Teague, Regional Director
Office of Federal Contract Compliance Programs
61 Forsyth Street, SW, Suite 7B75
Atlanta, Georgia 30303-8609

4. As used in this Notice, and in the contract resulting from this solicitation, the “covered area” is Meade County.
### District/Locality/Minority Percentage Required by County

<table>
<thead>
<tr>
<th>District</th>
<th>Locality</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ADAMS</td>
<td>7.0%</td>
</tr>
<tr>
<td>2</td>
<td>ALLEN</td>
<td>12.0%</td>
</tr>
<tr>
<td>3</td>
<td>ANDERSON</td>
<td>7.0%</td>
</tr>
<tr>
<td>4</td>
<td>BALLARD</td>
<td>5.25%</td>
</tr>
<tr>
<td>5</td>
<td>BARTON</td>
<td>7.0%</td>
</tr>
<tr>
<td>6</td>
<td>BARRY</td>
<td>12.0%</td>
</tr>
<tr>
<td>7</td>
<td>BOONE</td>
<td>11.5%</td>
</tr>
<tr>
<td>8</td>
<td>BOYD</td>
<td>7.0%</td>
</tr>
<tr>
<td>9</td>
<td>BROWN</td>
<td>3.9%</td>
</tr>
<tr>
<td>10</td>
<td>BUCHANAN</td>
<td>7.0%</td>
</tr>
<tr>
<td>11</td>
<td>BUCKNER</td>
<td>9.5%</td>
</tr>
<tr>
<td>12</td>
<td>BUTLER</td>
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</tr>
<tr>
<td>13</td>
<td>CALLON</td>
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</tr>
<tr>
<td>14</td>
<td>CLARK</td>
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<tr>
<td>15</td>
<td>CAMERON</td>
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<tr>
<td>16</td>
<td>CAMPBELL</td>
<td>11.5%</td>
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<tr>
<td>17</td>
<td>CARLISLE</td>
<td>5.2%</td>
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<tr>
<td>18</td>
<td>CARROLL</td>
<td>9.2%</td>
</tr>
<tr>
<td>19</td>
<td>CARTER</td>
<td>2.5%</td>
</tr>
<tr>
<td>20</td>
<td>CASEY</td>
<td>7.0%</td>
</tr>
<tr>
<td>21</td>
<td>CHRISTIAN</td>
<td>18.2%</td>
</tr>
<tr>
<td>22</td>
<td>CLAY</td>
<td>10.8%</td>
</tr>
<tr>
<td>23</td>
<td>CLINTON</td>
<td>7.0%</td>
</tr>
<tr>
<td>24</td>
<td>CRITTENDEN</td>
<td>12.0%</td>
</tr>
<tr>
<td>25</td>
<td>DAWSON</td>
<td>12.0%</td>
</tr>
<tr>
<td>26</td>
<td>DAVIES</td>
<td>8.7%</td>
</tr>
<tr>
<td>27</td>
<td>EDISON</td>
<td>12.0%</td>
</tr>
<tr>
<td>28</td>
<td>ELLIOTT</td>
<td>2.5%</td>
</tr>
<tr>
<td>29</td>
<td>ESTILL</td>
<td>7.0%</td>
</tr>
<tr>
<td>30</td>
<td>FAIRFAX</td>
<td>10.8%</td>
</tr>
<tr>
<td>31</td>
<td>FELDKER</td>
<td>9.2%</td>
</tr>
<tr>
<td>32</td>
<td>FLOYD</td>
<td>2.5%</td>
</tr>
<tr>
<td>33</td>
<td>FRANKLIN</td>
<td>5.3%</td>
</tr>
<tr>
<td>34</td>
<td>FULTON</td>
<td>5.3%</td>
</tr>
<tr>
<td>35</td>
<td>GALLATIN</td>
<td>9.2%</td>
</tr>
<tr>
<td>36</td>
<td>GARRARD</td>
<td>7.0%</td>
</tr>
</tbody>
</table>

### Locality I (Federal)


### Locality II (Federal)


### Locality III (Federal)


### Locality IV (Federal)

Discrimination:

Discrimination (because of race, religion, color, national origin, sex, sexual orientation, gender identity, age, or disability) is prohibited. This section applies only to contracts utilizing federal funds, in whole or in part. During the performance of this contract, the contractor agrees as follows:

1. The contractor will not discriminate against any employee or applicant for employment because of race, religion, color, national origin, sex, sexual orientation, gender identity, or age. The contractor further agrees to comply with the provisions of the Americans with Disabilities Act (ADA), Public Law 101-336, and applicable federal regulations relating thereto prohibiting discrimination against otherwise qualified disabled individuals under any program or activity. The contractor agrees to provide, upon request, needed reasonable accommodations. The contractor will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, religion, color, national origin, sex, sexual orientation, gender identity, age or disability. Such action shall include, but not be limited to the following; employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensations; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this non-discrimination clause.

2. The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor; state that all qualified applicants will receive consideration for employment without regard to race, religion, color, national origin, sex, sexual orientation, gender identity, age or disability.

3. 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 advising the said labor union or workers’ representative of the contractor’s commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance.

4. The contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965 as amended, and of the rules, regulations and relevant orders of the Secretary of Labor.
5. The contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, as amended, and by the rules, regulations and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.

6. In the event of the contractor’s noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations or orders, this contract may be cancelled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further government contracts or federally-assisted construction contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, as amended, and such other sanctions may be imposed and remedies invoked as provided in or as otherwise provided by law.

7. The contractor will include the provisions of paragraphs (1) through (7) of section 202 of Executive Order 11246 in every subcontract or purchase order unless exempted by rules, regulations or orders of the Secretary of Labor, issued pursuant to section 204 of Executive Order No. 11246 of September 24, 1965, as amended, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions including sanctions for noncompliance; provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.
TO: All Agency Purchasing Contacts  
FROM: Donald R. Speer, Executive Director
Office of Procurement Services  
DATE: April 7, 2015  
SUBJECT: US Department of Labor Final Rule on Federal Executive Order 11246

On April 8, 2015, a new federal rule takes effect amending federal Executive Order 11246. This Executive Order, originally signed in 1965, concerns the prohibition of discrimination by contractors and subcontractors where the contract utilizes federal funds. In July, 2014, a new Executive Order was issued to amend EO 11246 by adding sexual orientation and gender identity to the existing categories protected from discrimination in hiring and employment.

For all solicitations issued by a state agency and for all contracts executed or amended on or after April 8, 2015, that utilize federal funds, the following standard boilerplate provisions with new language shall be included:

Discrimination:

Discrimination (because of race, religion, color, national origin, sex, sexual orientation, gender identity, age, or disability) is prohibited. This section applies only to contracts utilizing federal funds, in whole or in part. During the performance of this contract, the contractor agrees as follows:

1. The contractor will not discriminate against any employee or applicant for employment because of race, religion, color, national origin, sex, sexual orientation, gender identity, or age. The contractor further agrees to comply with the provisions of the Americans with Disabilities Act (ADA), Public Law 101-336, and applicable federal regulations relating thereto prohibiting discrimination against otherwise qualified disabled individuals under any program or activity. The contractor agrees to provide, upon request, needed reasonable accommodations. The contractor will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, religion, color, national origin, sex, sexual...
orientation, gender identity, age or disability. Such action shall include, but not be
limited to the following; employment, upgrading, demotion or transfer; recruitment or
recruitment advertising; layoff or termination; rates of pay or other forms of
compensations; and selection for training, including apprenticeship. The contractor
agrees to post in conspicuous places, available to employees and applicants for
employment, notices setting forth the provisions of this non-discrimination clause.

2. The contractor will, in all solicitations or advertisements for employees placed by or
on behalf of the contractor, state that all qualified applicants will receive consideration
for employment without regard to race, religion, color, national origin, sex, sexual
orientation, gender identity, age or disability.

3. 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 advising the said labor union or workers’ representative of the contractor’s
commitments under this section, and shall post copies of the notice in conspicuous
places available to employees and applicants for employment. The contractor will take
such action with respect to any subcontract or purchase order as the administering
agency may direct as a means of enforcing such provisions, including sanctions for
noncompliance.

4. The contractor will comply with all provisions of Executive Order No. 11246 of
September 24, 1965 as amended, and of the rules, regulations and relevant orders of the
Secretary of Labor.

5. The contractor will furnish all information and reports required by Executive Order
No. 11246 of September 24, 1965, as amended, and by the rules, regulations and orders
of the Secretary of Labor, or pursuant thereto, and will permit access to his books,
records and accounts by the administering agency and the Secretary of Labor for
purposes of investigation to ascertain compliance with such rules, regulations and
orders.

6. In the event of the contractor’s noncompliance with the nondiscrimination clauses of
this contract or with any of the said rules, regulations or orders, this contract may be
cancelled, terminated or suspended in whole or in part and the contractor may be
declared ineligible for further government contracts or federally-assisted construction
contracts in accordance with procedures authorized in Executive Order No. 11246 of
September 24, 1965, as amended, and such other sanctions may be imposed and
remedies invoked as provided in or as otherwise provided by law.

7. The contractor will include the provisions of paragraphs (1) through (7) of section
202 of Executive Order 11246 in every subcontract or purchase order unless exempted
by rules, regulations or orders of the Secretary of Labor, issued pursuant to section 204
of Executive Order No. 11246 of September 24, 1965, as amended, so that such
provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions including sanctions for noncompliance; provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

Please contact the Office of Procurement Services at 564-4510, if you have any questions.
Standard Title VI/Non-Discrimination Assurances

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.

4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the Federal Highway Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the Federal Highway Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:
   a. withholding payments to the contractor under the contract until the contractor complies; and/or
   b. cancelling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.
During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “contractor”) agrees to comply with the following nondiscrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21;
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 -- 12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration’s Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
• Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).
State: Kentucky

Construction Type: Highway


HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:

- Executive Order 14026 generally applies to the contract.
- The contractor must pay all covered workers at least $15.00 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2022.

If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:

- Executive Order 13658 generally applies to the contract.
- The contractor must pay all covered workers at least $11.25 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a
conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at https://www.dol.gov/agencies/whd/government-contracts.

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<th>Publication Date</th>
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<tr>
<td>2</td>
<td>02/18/2022</td>
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<tr>
<td>3</td>
<td>02/25/2022</td>
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BRIN0004-003 06/01/2021

BRECKENRIDGE COUNTY

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<tr>
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BRKY0001-005 06/01/2021

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

<table>
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<tr>
<th>Rates</th>
<th>Fringes</th>
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<tr>
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BRKY0002-006 06/01/2021

BRACKEN, GALLATIN, GRANT, MASON & ROBERTSON COUNTIES:

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<tbody>
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BRKY0007-004 06/01/2021

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

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BRKY0017-004 06/01/2021

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

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<tr>
<th>Rates</th>
<th>Fringes</th>
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<tbody>
<tr>
<td>BRICKLAYER.........</td>
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CARP0064-001 04/01/2022
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<td>Piledriverman</td>
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***ELEC0212-008 06/07/2021***

**BRACKEN, GALLATIN and GRANT COUNTIES**

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***ELEC0212-014 11/25/2019***

**BRACKEN, GALLATIN & GRANT COUNTIES:**

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***ELEC0317-012 06/01/2021***

**BOYD, CARTER, ELLIOT & ROWAN COUNTIES:**

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<td>Electrician (Wiremen)</td>
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***ELEC0369-007 05/31/2021***

**ANDERSON, BATH, BOURBON, BOYLE, BRECKINRIDGE, BULLITT, CARROLL, CLARK, FAYETTE, FRAKNKLIN, GRAYSON, HARDIN, HARRISON, HENRY, JEFFERSON, JESSAMINE, LARUE, MADISON, MARION, MEADE, MERCER, MONTGOMERY, NELSON, NICHOLAS, OLDHAM, OWEN, ROBERTSON, SCOTT, SHELBY, SPENCER, TRIMBLE, WASHINGTON, & WOODFORD COUNTIES:**

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<tr>
<th>Occupation</th>
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<tbody>
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<td>18.72</td>
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***ELEC0575-002 11/29/2021***

**FLEMING, GREENUP, LEWIS & MASON COUNTIES:**

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***ENGI0181-018 07/01/2021***

**POWER EQUIPMENT OPERATOR**

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<td>17.85</td>
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<tr>
<td>Group 2</td>
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<td>Group 3</td>
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<td>17.85</td>
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<tr>
<td>Group 4</td>
<td>$31.62</td>
<td>17.85</td>
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**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 Concrete Pump; Skid Steer Machine with all Attachments; Switchman or Brakeman; Throttle Valve Person; Tractair & Road Widening Trencher; Tractor (50 H.P. or Over); Truck Crane Oiler; Tugger; Welding Machine; Well Points; & Whirley Oiler

GROUP 3 - All Off Road Material Handling Equipment, including Articulating Dump Trucks; Greaser on Grease Facilities servicing Heavy Equipment

GROUP 4 - Bituminous Distributor; Burlap & Curing Machine; Cement Gun; Concrete Saw; Conveyor; Deckhand Oiler; Grout Pump; Hydraulic Post Driver; Hydro Seeder; Mud Jack; Oiler; Paving Joint Machine; Power Form Handling Equipment; Pump; Roller (Earth); Steerman; Tamping Machine; Tractor (Under 50 H.P.); & Vibrator

CRANES - with booms 150 ft. & Over (Including JIB), and where the length of the boom in combination with the length of the piling leads equals or exceeds 150 ft. - $1.00 over Group 1 rate

EMPLOYEES ASSIGNED TO WORK BELOW GROUND LEVEL ARE TO BE PAID 10% ABOVE BASIC WAGE RATE. THIS DOES NOT APPLY TO OPEN CUT WORK.

----------------------------------------------------------------

* IRON0044-009 06/01/2022

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, Pecksville, 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 & Oakwood 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)

<table>
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<th>Rates</th>
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<tr>
<td>IRONWORKER</td>
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<tr>
<td>Fence Erector</td>
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<td>Structural</td>
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* IRON0070-006 06/01/2022

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 Beckerciver, 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, Stamping Ground & Woodlake)

<table>
<thead>
<tr>
<th>Rates</th>
<th>Fringes</th>
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<tr>
<td>IRONWORKER</td>
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<tr>
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* IRON0769-007 06/01/2021

BATH, BOYD, CARTER, ELLIOTT, GREENUP, LEWIS, MONTGOMERY & ROWAN

CLARK (Eastern third, including townships of Bloomingdale, Hunt, Indian Fields, Kiddville, Loglick, Rightangel & Thomson);

FLEMING (Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton, Pecksville, 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)

<table>
<thead>
<tr>
<th>Rates</th>
<th>Fringes</th>
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<td>IRONWORKER</td>
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<td>$31.79</td>
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* IRON0769-007 06/01/2021
IRONWORKER

ZONE 1 ..................$ 33.00  27.29
ZONE 2 ..................$ 33.40  27.29
ZONE 3 ..................$ 35.00  27.29

ZONE 1 - (no base rate increase) Up to 10 mile radius of Union Hall, 1643 Greenup Ave, Ashland, KY.

ZONE 2 - (add $0.40 per hour to base rate) 10 to 50 mile radius of Union Hall, 1643 Greenup Ave, Ashland, KY.

ZONE 3 - (add $2.00 per hour to base rate) 50 mile radius & over of Union Hall, 1643 Greenup Ave, Ashland, KY.

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LAB08189-003 07/01/2021

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

<table>
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<th>Rates</th>
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<tr>
<td>GROUP 2 ....</td>
<td>$ 23.76</td>
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<tr>
<td>GROUP 3 ....</td>
<td>$ 23.81</td>
</tr>
<tr>
<td>GROUP 4 ....</td>
<td>$ 24.41</td>
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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; Flagger; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

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

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Side Rail Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free Air); Water Blaster
GROUP 4 - Caisson Worker (Free Air); Cement Finisher;
Environmental - Nuclear, Radiation, Toxic & Hazardous Waste
- Levels A & B; Miner & Driller (Free Air); Tunnel Blaster;
& Tunnel Mucker (Free Air); Directional & Horizontal
Boring; Air Track Drillers (All Types); Powdermen &
Blasters; Troxler & Concrete Tester if Laborer is Utilized

LAB00189-008 07/01/2021

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

Rates          Fringes
Laborers:
GROUP 1.................$ 23.51            16.22
GROUP 2.................$ 23.76            16.22
GROUP 3...................$ 23.81            16.22
GROUP 4...................$ 24.41            16.22

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; Flagger;
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; Swapper; Truck Spotter & Dumper;
Wrecking of Concrete Forms; General Cleanup

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

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

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

LAB00189-009 07/01/2021
### BRECKINRIDGE & GRAYSON COUNTIES

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<th>Group</th>
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<tr>
<td>GROUP 1</td>
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<tr>
<td>GROUP 2</td>
<td>$23.76</td>
<td>16.22</td>
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<tr>
<td>GROUP 3</td>
<td>$23.81</td>
<td>16.22</td>
</tr>
<tr>
<td>GROUP 4</td>
<td>$24.41</td>
<td>16.22</td>
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**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; Flagger; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

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

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

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

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**PAINT0012-005 06/11/2005**

**BATH, BOURBON, BOYLE, CLARK, FAYETTE, FLEMING, FRANKLIN, HARRISON, JESSAMINE, MADISON, MERCER, MONTGOMERY, NICHOLAS, ROBERTSON, SCOTT & WOODFORD COUNTIES:**

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<th>Painters</th>
<th>Rates</th>
<th>Fringes</th>
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<tbody>
<tr>
<td>Bridge/Equipment Tender and/or Containment Builder</td>
<td>$18.90</td>
<td>5.90</td>
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<tr>
<td>Brush &amp; Roller</td>
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<tr>
<td>Service Description</td>
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<tr>
<td>---------------------------------------------</td>
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<tr>
<td>Elevated Tanks; Steeplejack Work; Bridge &amp;</td>
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<td>5.90</td>
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<tr>
<td>Lead Abatement</td>
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<td>Sandblasting &amp; Waterblasting</td>
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<td>Spray</td>
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PAIN0012-017 05/01/2015

BRACKEN, GALLATIN, GRANT, MASON & OWEN COUNTIES:

<table>
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<tr>
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<tbody>
<tr>
<td>Painter (Heavy &amp; Highway Bridges - Guardrails - Lightpoles - Striping)</td>
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<tr>
<td>Bridge Equipment Tender</td>
<td>$20.73</td>
<td>9.06</td>
</tr>
<tr>
<td>and Containment Builder</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brush &amp; Roller</td>
<td>$23.39</td>
<td>9.06</td>
</tr>
<tr>
<td>Elevated Tanks; Steeplejack Work; Bridge &amp;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lead Abatement</td>
<td>$24.39</td>
<td>9.06</td>
</tr>
<tr>
<td>Sandblasting &amp; Waterblasting</td>
<td>$24.14</td>
<td>9.06</td>
</tr>
<tr>
<td>Spray</td>
<td>$23.89</td>
<td>9.06</td>
</tr>
</tbody>
</table>

PAIN0118-004 06/01/2018

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

<table>
<thead>
<tr>
<th>Rate Description</th>
<th>Rates</th>
<th>Fringes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Painter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brush &amp; Roller</td>
<td>$22.00</td>
<td>12.52</td>
</tr>
<tr>
<td>Spray, Sandblast, Power Tools, Waterblast &amp; Steam Cleaning</td>
<td>$23.00</td>
<td>12.52</td>
</tr>
</tbody>
</table>

PAIN1072-003 12/01/2021

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

<table>
<thead>
<tr>
<th>Rate Description</th>
<th>Rates</th>
<th>Fringes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Painters: Bridges; Locks; Dams; Tension Towers &amp; Energized Substations</td>
<td>$35.06</td>
<td>21.15</td>
</tr>
<tr>
<td>Power Generating Facilities</td>
<td>$31.82</td>
<td>21.15</td>
</tr>
</tbody>
</table>

* PLUM0248-003 06/01/2022

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

<table>
<thead>
<tr>
<th>Rate Description</th>
<th>Rates</th>
<th>Fringes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plumber and Steamfitter</td>
<td>$38.50</td>
<td>22.40</td>
</tr>
</tbody>
</table>

PLUM0392-007 06/01/2018

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

<table>
<thead>
<tr>
<th>Rates</th>
<th>Fringes</th>
</tr>
</thead>
<tbody>
<tr>
<td>$32.01</td>
<td>19.67</td>
</tr>
</tbody>
</table>

PLUR0502-003 08/01/2021

BRECKINRIDGE, BULLIT, CARROLL (Western Half), FRANKLIN (Western three-fourths), GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELB, SPENCER, TRIMBLE & WASHINGTON COUNTIES

Plumber

<table>
<thead>
<tr>
<th>Rates</th>
<th>Fringes</th>
</tr>
</thead>
<tbody>
<tr>
<td>$38.07</td>
<td>20.78</td>
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</tbody>
</table>

SUKY2010-160 10/08/2001

Truck drivers:

GROUP 1

<table>
<thead>
<tr>
<th>Rates</th>
<th>Fringes</th>
</tr>
</thead>
<tbody>
<tr>
<td>$16.57</td>
<td>7.34</td>
</tr>
</tbody>
</table>

GROUP 2

<table>
<thead>
<tr>
<th>Rates</th>
<th>Fringes</th>
</tr>
</thead>
<tbody>
<tr>
<td>$16.68</td>
<td>7.34</td>
</tr>
</tbody>
</table>

GROUP 3

<table>
<thead>
<tr>
<th>Rates</th>
<th>Fringes</th>
</tr>
</thead>
<tbody>
<tr>
<td>$16.86</td>
<td>7.34</td>
</tr>
</tbody>
</table>

GROUP 4

<table>
<thead>
<tr>
<th>Rates</th>
<th>Fringes</th>
</tr>
</thead>
<tbody>
<tr>
<td>$16.96</td>
<td>7.34</td>
</tr>
</tbody>
</table>

TRUCK DRIVER CLASSIFICATIONS

GROUP 1 - Mobile Batch Truck Tender

GROUP 2 - Greaser; Tire Changer; & Mechanic Tender

GROUP 3 - Single Axle Dump; Flatbed; Semi-trailer or Pole Trailer when used to pull building materials and equipment; Tandem Axle Dump; Distributor; Mixer; & Truck Mechanic

GROUP 4 - Euclid & Other Heavy Earthmoving Equipment & Lowboy; Articulator Cat; 5-Axle Vehicle; Winch & A-Frame when used in transporting materials; Ross Carrier; Forklift when used to transport building materials; & Pavement Breaker

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

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic
violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

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

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers
Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

---------------------------------------------------------------

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has 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:
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.

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 to an employee at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty (40) hours in such work week. Wage violations or questions should be directed to the designated engineer or the undersigned.

Director
Division of Construction Procurement
Frankfort, Kentucky 40622
502-564-3500
PART IV

CERTIFICATIONS

(All forms shall be properly filled out and submitted with the bid unless stated otherwise.)
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 (7) 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, or is regulated by, the state in matters in which he was directly involved during the last thirty-six (36) months of 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, or for which he received, prior to his state employment, a professional degree or license, provided that, for a period of six (6) months, he personally refrains from working on any matter in which he was directly involved during the last thirty-six (36) months of his tenure 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, nor shall it prohibit the former officer or public servant from receiving public funds disbursed through entitlement programs.

KRS 11A.040 (9) states:

A former public servant shall not represent a person or business before a state agency in a matter in which the former public servant was directly involved during the last thirty-six (36) months of his tenure, 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, 3 Fountain Place, Frankfort, Kentucky 40601; telephone (502) 564-7954.
CERTIFICATION REGARDING
KRS 45A.485

Pursuant to 1994’s Senate Bill 258, the bidder/offeror shall reveal to the Commonwealth, prior to the award of a contract, any final determination of a violation by the contractor within the previous five (5) year period of the provisions of KRS Chapter 136, 139, 141, 337, 338, 341 and 342.

For the purpose of complying with the provisions of Senate Bill 258, please list any final determination(s) of violations(s) of KRS Chapters 136, 139, 141, 337, 338, 341, and 342, which have been rendered against the bidder or offeror within the five (5) years preceding the award of this contact. Please include, the date of the determination the state agency issuing the determination. (Please use extra sheets if necessary.)

<table>
<thead>
<tr>
<th>KRS VIOLATION</th>
<th>DATE</th>
<th>STATE AGENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The contractor is further notified that 1994’s Senate Bill 258 requires that for the duration of this contract, the contractor shall be in continuous compliance with the provisions of KRS Chapters 136, 139, 141, 337, 338, 341 and 342, which apply to the contractor’s operations. Senate Bill 258, further provides that the contractor’s failure to reveal a final determination of a violation of KRS Chapters 136, 139, 141, 337, 338, 341 and 342, or failure to comply with the above-cited statues for the duration of the contact, shall be grounds for the Commonwealth’s cancellation of the contract, and the contractor’s disqualification from eligibility to bid or submit proposals to the Commonwealth for a period of two (2) years.
NON-COLLUSION CERTIFICATION

COMMONWEALTH OF KENTUCKY

COUNTY: _______________

PROJECT NO. _______________

I, ___________________________________________ ________________________under penalty of
(Printed Name of officer signing certification)             (Title)
perjury under the laws of the United States, do hereby certify that

__________________________________________________________________________________________
(Name of Individual, Co-Partnership, or Corporation submitting bid)
its agent, officers or employees have not directly or indirectly entered into any agreement, participated in any
collusion, or otherwise taken action in restraint of free competitive bidding in connection with this proposal.

__________________________________________________________________________________________
(Signature) (Title) (Date)

---------------------------------------------------------------------------------------------------------------------------------------------------

NON-COLLUSION CERTIFICATION

COMMONWEALTH OF KENTUCKY

COUNTY: _______________

PROJECT NO. _______________

I, ___________________________________________ ________________________under penalty of
(Printed Name of officer signing certification)             (Title)
perjury under the laws of the United States, do hereby certify that

__________________________________________________________________________________________
(Name of Individual, Co-Partnership, or Corporation submitting bid)
its agent, officers or employees have not directly or indirectly entered into any agreement, participated in any
collusion, or otherwise taken action in restraint of free competitive bidding in connection with this proposal.

__________________________________________________________________________________________
(Signature) (Title) (Date)

---------------------------------------------------------------------------------------------------------------------------------------------------
CERTIFICATION OF ORGANIZATION(S)

COMMONWEALTH OF KENTUCKY

COUNTY: ___________________

PROJECT NO.________________

I, _____________________________________ _______________________,under penalty of

(Printed Name of officer signing certification)            (Title)

perjury under the laws of the United States, do hereby certify that, except as noted below,

____________________________________________________________________________________________

(Name of Individual, Co-Partnership, or Corporation submitting bid)

any person associated therewith in the capacity of (owner, partner, director, officer, principal investigator, project
director, manager, auditor, or any position involving the Administration of Federal Funds): is not currently under
suspension, debarment, voluntary exclusion, or determination of ineligibility by any federal agency; has not been
suspended, debarred, voluntarily excluded or determined ineligible by any federal agency within the past 3 years;
does not have a proposed debarment pending; and has not been indicted, convicted or had a civil judgment
rendered against (it) by a court of competent jurisdiction in any matter involving fraud or official misconduct
within the past 3 years.

Please list below any exceptions to the foregoing, to whom it applies, initiating agency and dates of action.

Exceptions:

____________________________________________________________________________________________

(Signature)  (Title)
CERTIFICATION OF PERFORMANCE

Certification with regard to the Performance of Previous Contracts or Subcontracts subject to the Equal Opportunity Clause and the filing of Required Reports.

The ______________________________________________, hereby certifies that it __________________ ,
(Name of Individual, Co-Partnership, or Corporation submitting bid)
participated in previous contract or subcontract subject to the equal opportunity clause, as required by Executive Orders 10925, 11114, or 11246, and that he, filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the Former President’s Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

__________________________________________________________________
(Name of Individual, Co-Partnership, or Corporation submitting bid)

_________________________________________       _______________________
(Printed Name of officer signing certification)    (Title)

_________________________________________ ______________________
(Signature)    (Date)

NOTE: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7(b)(1)), and must be submitted by bidders and proposed subcontractors only in connection with the contracts and subcontracts which are subject to the equal opportunity clause. Contracts and subcontracts which are exempt from the equal opportunity clause are set forth in 41 CFR 60- 1.5. (Generally only contracts or subcontracts of $10,000 or under are exempt.) Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders of their implementing regulation. Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed reports should note that 41 CFR 60-1.7(b) (1) prevents the award of contracts and subcontracts unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.
CERTIFICATION FOR FEDERAL-AID CONTRACT

The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agent.

2. If any funds other than the Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

This certification is a material representation of fact which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The prospective participation also agrees by submitting his or her bid proposal that he or she shall require the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such subrecipients shall certify and disclose accordingly.

__________________________________________________________________
(Name of Individual, Co-Partnership, or Corporation submitting bid)

_________________________________________     _______________________
(Printed Name of officer signing certification) (Title)

_________________________________________      ______________________
(Signature)  (Date)
CERTIFICATION OF BID PROPOSAL/ DBE

We (I) proposed to furnish all labor, equipment and materials necessary to construct and/or improve the subject project in accordance with the plans, the Transportation Cabinet’s Standard Specifications for Road and Bridge Construction 2012 special provisions, notes applicable to the project as indicated herein and all addenda issued on this project subsequent to purchase of proposal.

We (I) attach a bid guaranty as provided in the special provisions in an amount not less than 5% of the total bid. We agree to execute a contract in accordance with this proposal within 15 calendar days after the receipt of the notice of award for the project.

We (I) have examined the site of proposed work, project plans, specifications, special provisions, and notes applicable to the project referred to herein. We understand that the quantities shown herein are estimated quantities subject to increase or decrease as provided in the specifications.

We (I) acknowledge receipt of all addendum(s) (if applicable) and have made necessary revisions to the bid proposal. We have considered all addendum(s) in calculation of the submitted bid and applied the updated bid items, which are included.

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

______________________________________
(Name of Individual, Co-Partnership, or Corporation submitting bid)

______________________________________
(Printed Name of Officer or Authorized Agent and Title)

______________________________________
(Signature of Officer or Authorized Agent) (Date)

When two or more organizations bid as a joint venture, enter names of each organization and an authorized agent for each organization must sign above.
**DBE SUB-CONTRACTOR BIDDER LIST**

The Department of Transportation Federal Regulations require that the Kentucky Transportation Cabinet provide a bidder list to be maintained in the Office of Personnel Management, Small Business Development Branch (49 CFR 26:11) for each federally funded project awarded.

Project No.__________________

List all quotes/bids received on this project.

DBE (Disadvantaged Business Enterprise) Contractors, Consultants, and Suppliers submitting quotes/bids for this projects:

1. 
2. 
3. 
4. 
5. 
6. 
7. 
8.

DBE (Disadvantaged Business Enterprise) Contractors, Consultants, and Suppliers contacted who did NOT submit quotes/bids for this project:

1. 
2. 
3. 
4. 
5. 
6. 
7. 
8.

Non-DBE (Disadvantaged Business Enterprise) Contractors, Consultants, and Suppliers submitting quotes/bids for this projects:

1. 
2. 
3. 
4. 
5. 
6. 
7. 
8.

If you need additional space, please attach a separate page. If you need assistance regarding this form, please contact Melvin Bynes at (502) 564-3601.
TO: Rachel Mills, Director  
Division of Construction Procurement

FROM: Prime Contractor (if applicable)

SUBJECT: County Project Number

I hereby request to utilize for DBE participation a portion of the subject project to:

<table>
<thead>
<tr>
<th>DBE Employer Identification Numbers:</th>
<th>Federal</th>
<th>KY</th>
</tr>
</thead>
<tbody>
<tr>
<td>The amount to be subcontracted by this request is</td>
<td>DBE</td>
<td>or</td>
</tr>
<tr>
<td>(original contract) or a subcontract amount of</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I have previously requested approval for subcontracts or agreements with other DBE as follows:

<table>
<thead>
<tr>
<th>Name of DBE firm</th>
<th>DBE Amount</th>
<th>DBE %</th>
<th>Contract &quot;Worth&quot; Amount</th>
<th>Contract %</th>
</tr>
</thead>
</table>

Totals based on original contract Amounts

This section applicable if DBE firm is also a Subcontractor of work on Project:

This subcontractor has been furnished a copy of Appendix B of 49 CFR Part 29 and advised to include the Certification in all lower tier covered transactions and in all solicitations for lower tier transactions (Federal Aid Contracts only).

______________________________
Prime Contractor's Signature Date

______________________________
1st Tier Subcontractor's Signature(if applicable) Date

______________________________
DBE Participant Signature Date
(*)& When description is limited by such as "Laying Only" "Erection Only" "Manipulation Only" etc. it should be so indicated and explained.

(**) When the quantity is not the entire amount of (Contract) or (Sub-Contract) estimate, limitations by stations must be shown or definitely designated in some suitable, positive manner.

Unit prices using Contract Unit Price should be for Bid Unit Price for work to be performed by Sub Contractor. DBE Unit price should be for the agreed upon price for item or portion of item of contract work.

<table>
<thead>
<tr>
<th>Description</th>
<th>Total Contract Quantity</th>
<th>Unit</th>
<th>DBE Unit Price</th>
<th>Dollar Amount based on DBE Price</th>
<th>Comments</th>
</tr>
</thead>
</table>

Page Total
The Items to be subcontracted are as follows:

<table>
<thead>
<tr>
<th>Supplier 60% Y/N</th>
<th>Project Control (PCN) Number</th>
<th>Category Number</th>
<th>Project Line Number</th>
<th>Description</th>
<th>Unit</th>
<th>Contract &quot;Worth&quot; Unit Price</th>
<th>Dollar Amount based on Contract Price</th>
<th>DBE Quantity</th>
<th>DBE Unit Price</th>
<th>Dollar Amount based on DBE Price</th>
</tr>
</thead>
<tbody>
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(*) When description is limited by such as "Laying Only" "Erection Only" "Manipulation Only" etc. it should be so indicated and explained.

(**) When the quantity is not the entire amount of (Contract) or (Sub-Contract) estimate, limitations by stations must be shown or definitely designated in some suitable, positive manner.

Unit prices using Contract "worth" Unit Price should be for Bid Unit Price for work to be performed by Sub Contractor. If partial work item ie "laying only" then use agreed to price for Contract "worth" Unit Price. DBE Unit price should be for the agreed upon price for item or portion of item of contract work.

Comments:
ANNUAL AFFIDAVIT FOR BIDDERS, OFFERORS AND CONTRACTORS

Affidavit Effective Date: ____________________________
Affidavit Expiration Date: ____________________________
Maximum Length One-Year

REQUIRED AFFIDAVIT FOR BIDDERS, OFFERORS AND CONTRACTORS

FOR BIDS AND CONTRACTS IN GENERAL:

I. Each bidder or offeror swears and affirms under penalty of perjury, that to the best of their knowledge:

a. In accordance with KRS 45A.110 and KRS 45A.115, neither the bidder or offeror as defined in KRS 45A.070(6), nor the entity which he/she represents, has knowingly violated any provisions of the campaign finance laws of the Commonwealth of Kentucky; and the award of a contract to the bidder or offeror or the entity which he/she represents will not violate any provisions of the campaign finance laws of the Commonwealth.

b. The bidder or offeror swears and affirms under penalty of perjury that, to the extent required by Kentucky law, the entity bidding, and all subcontractors therein, are aware of the requirements and penalties outlined in KRS 45A.485; have properly disclosed all information required by this statute; and will continue to comply with such requirements for the duration of any contract awarded.

c. The bidder or offeror swears and affirms under penalty of perjury that, to the extent required by Kentucky law, the entity bidding, and its affiliates, are duly registered with the Kentucky Department of Revenue to collect and remit the sales and use tax imposed by KRS Chapter 139, and will remain registered for the duration of any contract awarded.

d. The bidder or offeror swears and affirms under penalty of perjury that the entity bidding is not delinquent on any state taxes or fees owed to the Commonwealth of Kentucky and will remain in good standing for the duration of any contract awarded.

e. The bidder or offeror swears and affirms under penalty of perjury that the entity bidding, is not currently engaged in, and will not for the duration of the contract engage in, the boycott of a person or an entity based in or doing business with a jurisdiction with which Kentucky can enjoy open trade, as defined in KRS 45A.607.

f. The bidder or offeror swears and affirms that the entity bidding, and all subcontractors therein, have not violated any of the prohibitions set forth in KRS 11A.236 during the previous ten (10) years, and further pledge to abide by the restrictions set forth in such statute for the duration of the contract awarded.

FOR “NON-BID” CONTRACTS (I.E. SOLE-SOURCE; NOT-PRACTICAL OR FEASIBLE TO BID; OR EMERGENCY CONTRACTS, ETC):

II. Each contractor further swears and affirms under penalty of perjury, that to the best of their knowledge:

a. In accordance with KRS 121.056, and if this is a non-bid contract, neither the contractor, nor any member of his/her immediate family having an interest of 10% or more in any business entity involved in the performance of any contract awarded, have contributed more than the amount specified in KRS 121.150 to the campaign of the gubernatorial slate elected in the election last preceding the date of contract award.
b. In accordance with KRS 121.330(1) and (2), and if this is a non-bid contract, neither the contractor, nor officers or employees of the contractor or any entity affiliated with the contractor, nor the spouses of officers or employees of the contractor or any entity affiliated with the contractor, have knowingly contributed more than $5,000 in aggregate to the campaign of a candidate elected in the election last preceding the date of contract award that has jurisdiction over this contract award.

c. In accordance with KRS 121.330(3) and (4), and if this is a non-bid contract, to the best of his/her knowledge, neither the contractor, nor any member of his/her immediate family, his/her employer, or his/her employees, or any entity affiliated with any of these entities or individuals, have directly solicited contributions in excess of $30,000 in the aggregate for the campaign of a candidate elected in the election last preceding the date of contract award that has jurisdiction over this contract.

As a duly authorized representative for the bidder, offeror, or contractor, I have fully informed myself regarding the accuracy of all statements made in this affidavit, and acknowledge that the Commonwealth is reasonably relying upon these statements, in making a decision for contract award and any failure to accurately disclose such information may result in contract termination, repayment of funds and other available remedies under law. If the bidder, offeror, or contractor becomes non-compliant with any statements during the affidavit effective period, I will notify the Finance and Administration Cabinet, Office of Procurement Services immediately. I understand that the Commonwealth retains the right to request an updated affidavit at any time.

________________________________________________________________________
Signature                                           Printed Name
________________________________________________________________________
Title                                               Date
________________________________________________________________________
Company Name
________________________________________________________________________
Address
________________________________________________________________________
Commonwealth of Kentucky Vendor Code (if known)
________________________________________________________________________
Subscribed and sworn to before me by
________________________________________________________________________
(Affiant) (Title)
of                                      this    ___day of    __________,20__.
                                       (Company Name)
________________________________________________________________________
Notary Public
[seal of notary]                                                                         My commission expires:     ________
PART V

SPECIFICATIONS AND STANDARD DRAWINGS
The project will follow the Kentucky Standard Specifications for Road and Bridge Construction 2019.

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

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

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

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

**INCIDENTAL SURFACING**
Include in the quantities of asphalt mixtures quantities required for resurfacing or surfacing mailbox turnouts, farm field entrances, residential and commercial entrances, curve widening, ramp gores and tapers, and road and street approaches, as applicable. Pave these areas to the limits as shown on Standard Drawing RPM-110-06 or as directed by the Engineer. In the event signal detectors are present in the intersecting streets or roads, pave the crossroads to the right of way limit or back of the signal detector, whichever is the farthest back of the mainline. Surface or resurface these areas as directed by the Engineer. The LPA will not measure placing and compacting for separate payment but shall be incidental to the Contract unit price for the asphalt mixtures.

**OPTION B**
Be advised that the Department will control and accept compaction of asphalt mixtures furnished on this project under OPTION B in accordance with Sections 402 and 403.

**PROTECTION OF EXISTING PAVEMENT AND SUBGRADE DURING CONSTRUCTION**
The purpose of this requirement is to protect the sub grade from damage due to heavy trucks. All materials, such as DGA, Asphalt, or Concrete shall be placed from the roadway via a lane closure. The USE OF A MATERIAL TRANSFER VEHICLE TO PLACE ASPHALT SURFACE FOR THE PATH SHALL BE REQUIRED. The cost of the use of the Material Transfer Vehicle is incidental to cost of the Asphalt Surface for the Path.
TRAFFIC CONTROL PLAN

Except as provided herein, traffic will be maintained in accordance with the current Standard Specifications and the Standard Drawings, current editions. All items of work necessary to maintain and control vehicular and pedestrian traffic shall be provided by the owner (N.I.C.). The contractor shall coordinate construction activities closely with the owner. As per Section 108 of the KYTC Standard Specifications, the contractor will be required to submit a project schedule, including a written narrative and activity bar chart, as part of a Detailed Schedule of Operations for the project. The Detailed Schedule of Operations will clearly present when and where work is to be performed and shall be updated as changes occur, as approved by the City’s Representative.

General Project Phasing & Construction Procedures:

No lane closures shall be allowed on Main Street without approval from the City Engineer and KYTC. In general, lane closures may be allowed, however the contractor shall plan work as to maintain vehicular and pedestrian access to all residents and businesses at all times. For work that would require access to a residential home or business to be temporarily denied access, the contractor shall request this at least 2 weeks in advance of the desired dates for starting the work for the City’s consideration.

In general, it is anticipated that most of the work will be done utilizing a lane closure to access the work zone and provide a buffer between the traveling public and the work taking place. Due to the work zone being in close proximity to the travel lanes, the City reserves the right to require the contractor to establish a lane closure to protect the traveling public and the workers, depending on the nature of the work taking place.

Contractor shall work with the City and property owners to expedite construction of entrances to minimize access restrictions for the property owner. This may involve but not limited to requirement that entrances be constructed part width such that access is maintained at all times. Closure of any entrances for construction shall only be allowed with approval from the City and the property owner.

No lane closures or work will be allowed during the following days without approval from the City Engineer:

Nov. 21 to 25, 2021: Thanksgiving
Dec. 24-25, 2020: Christmas

At discretion of the City Engineer, additional days and hours may be specified when lane closures or working hours may not be allowed. See Maintenance of Traffic Notes and PROTECTION OF SUB GRADE DURING CONSTRUCTION for specific instruction regarding lane closures and traffic control.
SPECIAL NOTE

For Tree Removal

Meade County
LPA Project
Item No. 04-3203

NO CLEARING OF TREES 3 INCHES OR GREATER (DIAMETER BREAST HEIGHT) FROM JUNE 1- JULY 31

If there are any questions regarding this note, please contact David Waldner, Director, Division of Environmental Analysis, 200 Mero Street, Frankfort, KY 40601, Phone: (502) 564-7250, for District administered projects; or Mike Jones, (502) 564-2060, for Office of Local Programming administered projects.
RIGHT OF WAY CERTIFICATION

ITEM # | COUNTY | PROJECT # (STATE) | PROJECT # (FEDERAL)
04-3203 | Meade | FD52 082 2204 000-001 | TAP 4000 073

PROJECT DESCRIPTION
Remove and replace existing walks along portions of Main St. Add new sidewalks along the East side of Main and construct retaining walls and entrances to accommodate new sidewalks.

No Additional Right of Way Required

Construction will be within the limits of the existing right of way. The right of way was acquired in accordance to FHWA regulations under the Uniform Relocation Assistance and Real Property Acquisitions Policy Act of 1970, as amended. No additional right of way or relocation assistance were required for this project.

Condition # 1 (Additional Right of Way Required and Cleared)
All necessary right of way, including control of access rights when applicable, have been acquired including legal and physical possession. Trial or appeal of cases may be pending in court but legal possession has been obtained. There may be some improvements remaining on the right-of-way, but all occupants have vacated the lands and improvements, and KYTC has physical possession and the rights to remove, salvage, or demolish all improvements and enter on all land. Just Compensation has been paid or deposited with the court. All relocations have been relocated to decent, safe, and sanitary housing or that KYTC has made available to displaced persons adequate replacement housing in accordance with the provisions of the current FHWA directive.

Condition # 2 (Additional Right of Way Required with Exception)
The right of way has not been fully acquired, the right to occupy and to use all rights-of-way required for the proper execution of the project has been acquired. Some parcels may be pending in court and on other parcels full legal possession has not been obtained, but right of entry has been obtained, the occupants of all lands and improvements have vacated, and KYTC has physical possession and right to remove, salvage, or demolish all improvements. Just Compensation has been paid or deposited with the court for most parcels. Just Compensation for all pending parcels will be paid or deposited with the court prior to AWARD of construction contract.

Condition # 3 (Additional Right of Way Required with Exception)
The acquisition or right of occupancy and use of a few remaining parcels are not complete and/or some parcels still have occupants. All remaining occupants have had replacement housing made available to them in accordance with 49 CFR 24.204. KYTC is hereby requesting authorization to advertise this project for bids and to proceed with bid letting even though the necessary right of way will not be fully acquired, and/or some occupants will not be relocated, and/or the just compensation will not be paid or deposited with the court for some parcels until after bid letting. KYTC will fully meet all the requirements outlined in 23 CFR 635.309(c)(3) and 49 CFR 24.102(j) and will expedite completion of all acquisitions, relocations, and full payments after bid letting and prior to AWARD of the construction contract or force account construction.

Total Number of Parcels on Project

Number of Parcels That Have Been Acquired
Signed Deed
Condemnation
Signed ROE

Notes/ Comments (Use Additional Sheet if necessary)

LPA RW Project Manager
Printed Name: Charles A. Allen
Signature: Charles A. Allen
Date: 4-16-2019

Right of Way Director
Printed Name: 2019.04.19
Signature: 06:40:22 05'00'
Date: 06:40:22 05'00'

Right of Way Supervisor
Printed Name: Michael H. Price
Signature: Michael H. Price
Date: 4/18/2019

Right of Way Director
Printed Name: No Signature Required as per FHWA-KYTC
Signature: Current Stewardship Agreement
Date: 4/18/2019
UTILITIES & RAIL CERTIFICATION NOTE

COUNTY: Meade

FEDERAL PROJECT# (Constr Phase if applicable): TAP 4000 073

UNIFIED PROJECT # (Fund Program, County #, eMARS#): FD52 082 2204 000-001

ROAD NAME(#) / PROJECT DESCRIPTION: KY 2204/Brandenburg LPA Sidewalk Project

SIX YEAR PLAN ITEM # (if applicable): 4-3203.00

DISTRICT APPROVAL: 8/12/2020

GENERAL PROJECT NOTE ON UTILITY PROTECTION

Any work pertaining to these utility facilities is defined in the bid package and is to be carried out as instructed by the Kentucky Transportation Cabinet. The contractor will be responsible for any coordination or adjustments that are discussed or quantified in the proposal. All stations listed in this note are approximate. The Contractor is fully responsible for KY 811 location of the Utilities prior to construction activities. The Contractor is fully responsible for protection of all utilities listed in this note as well as any other utilities located in the field.

NOTE: DO NOT DISTURB THE FOLLOWING UTILITIES LOCATED WITHIN THE PROJECT DISTURB LIMITS

List all applicable utilities whose facilities are present and are not to be disturbed during construction activities. List Utility Type, Utility Size, Utility Location for each.

City of Brandenburg: Sanitary sewer and water is located within Main Street for the entire length of the project. These utilities should largely be left undisturbed except where the contractor is to adjust water valve lids to meet new grades.

*The Contractor is fully responsible for protection of all utilities listed above*

THE FOLLOWING COMPANIES ARE RELOCATING/ADJUSTING THEIR UTILITIES WITHIN THE PROJECT LIMITS AND WILL BE COMPLETE PRIOR TO CONSTRUCTION

List all applicable utilities whose facilities are being relocated at the time this note is written. List the Utility Type, Utility Size and Utility Location for each. If the utility’s relocation work has not been completed at the writing of this note a completion date should be provided. If the work will not be completed by the letting date or it is uncertain whether the relocation work will be completed list the utility in the next block.

NONE
List all applicable utilities whose facilities relocation either will not be completed prior to the letting date of the road construction or that will begin and be completed by the utility after the road contract letting date. During construction these areas are not to be disturbed by or conflict with road construction activities. List Owner, Utility Type, Utility Size, both current and proposed utility location and a firm completion date for each.

A completion date MUST be provided for any such utility work.

LG&E, Brandenburg Telephone, and Spectrum Cable: Overhead facilities, including poles between STA-3+40 and STA-8+50.

(Relocations of the above facilities are anticipated to be completed no later than 01/01/2021)

NONE
THE FOLLOWING RAIL COMPANIES HAVE FACILITIES IN CONJUNCTION WITH THIS PROJECT AS NOTED

- X No Rail Involved
- Minimal Rail Involved (See Below)
- Rail Involved (See Below)

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

The utility facilities as noted in the previous section(s) have been determined using data garnered by varied means and with varying degrees of accuracy: from the facility owners, a result of S.U.E., field inspections, and/or reviews of record drawings. The facilities defined may not be inclusive of all utilities in the project scope and are not Level A quality, unless specified as such. It is the contractor’s responsibility to verify all utilities and their respective locations before excavating.

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

Please Note: The information presented in this Utility Note is informational in nature and the information contained herein is not guaranteed.
<table>
<thead>
<tr>
<th>Utility Company/Agency</th>
<th>Contact Name</th>
<th>Contact Information</th>
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<tbody>
<tr>
<td>CITY OF BRANDENBURG</td>
<td>T.J. HUGHES</td>
<td>270-422-4981</td>
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<tr>
<td>LG&amp;E</td>
<td>CAROLINE JUSTICE</td>
<td>502-627-7418</td>
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<tr>
<td>SPECTRUM CABLE</td>
<td>KEVIN MERCER</td>
<td>502-410-7192</td>
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<tr>
<td>BRANDENBURG TELEPHONE</td>
<td>BREN'T GERKINS</td>
<td>270-351-4466</td>
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</table>
Erosion Prevention and Sediment Control

Item 04-03203 City of Brandenburg Downtown Sidewalk Connections

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

The Contractor shall perform all temporary erosion/sediment control functions including: providing a Best Management Practice (BMP) Plan, conducting required inspections, modifying the BMP plan documents as construction progresses and documenting the installation and maintenance of BMPs in conformance with the KPDES KYR10 permit effective on August 1, 2009 or a permit re-issued to replace that KYR10 permit. This work shall be conducted in conformance with the requirements of Section 213 of KYTC 2019 Department of Highways, Standard Specifications for Road and Bridge Construction.

Contrary to Section 213.03.03, paragraph 2, the Engineer shall conduct inspections as needed to verify compliance with Section 213 of KYTC 2012 Department of Highways, Standard Specifications for Road and Bridge Construction. The Engineer's inspections shall be performed a minimum of once per month and within seven days after a storm of ½ inch or greater. Copies of the Engineer's inspections shall not be provided to the contractor unless improvements to the BMP's are required. The contractor shall initiate corrective action within 24 hours of any reported deficiency and complete the work within 5 days. The Engineer shall use Form TC 63-61 A for this report. Inspections performed by the Engineer do not relieve the Contractor of any responsibility for compliance with the KPDES permit.

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

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

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

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

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

Please note that change orders are required for any item that deviates from the original approved scope of your Office of Local Programs (OLP) project. This includes field orders and minor changes. The approved scope of the project can be found in Attachment A of your contract with the OLP for this project.

When a change order becomes necessary the project sponsor shall e-mail the OLP Project Manager, OLP Historic Preservation Coordinator, and the District LPA Coordinator at the same time. This e-mail should include all proposed changes. The OLP Project Manager will then notify the project sponsor as to whether or not the change order would be minor or major.

If the change order is minimal, (meaning it will have no adverse affect and requires no additional documentation) the OLP Project Manager may provide an e-mail approval so work on the project may continue without interruption. However, the Change Order must still be submitted and formally approved.

If a major change is required, work on that particular item must cease until the Change Order has been approved by the Transportation Cabinet.

When completing the Change Order form, please make sure to identify the purpose of the change order, and include detailed explanations for the changes, including time extensions. A cost analysis must be included when appropriate.

A copy of the signed LPA Change Order must be sent to the OLP Project Manager for approval by KYTC Central Office. It is the responsibility of the LPA to secure the signature of the project engineer, the LPA signature authority, and the district LPA Coordinator. A copy of the approved Change Order will be forwarded to the LPA.

Keep in mind that the OLP does not increase funding for a project after it has been awarded. Project sponsors will be responsible for all additional costs if this change order will result in a cost increase that exceeds the budget for this project.
When a reimbursement request is submitted to the OLP for costs associated with the change order the LPA must attach a copy of the approved Change Order with the reimbursement request and documentation.

If you have any questions regarding the Change Order process, please contact your OLP Project Manager.
# LOCAL PUBLIC AGENCY CHANGE ORDER

## Proposed Changes in Connection with Contract Items:

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<tr>
<th>Item No.</th>
<th>Description</th>
<th>Quantity</th>
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Total for this Page
Total for Continuation Page(s)
Total Contract Items

## Proposed Items of Supplemental Agreement:

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Total for this Page
Total for Continuation Page(s)
Total Supplemental Agreement

## Time Extension/Explanation:


## Reasons for Proposed Changes and Cost Analysis:


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If approved by Transportation Cabinet, the undersigned contractor agrees to do the work outlined herein and to accept as payment in full the basis of payment as set forth herein.

---

Requested by:

Date: ____

Recommended by:

Date: ____

Approved by:

Date: ____

By:

Date: ____

Secretary of Transportation Cabinet

Date: ____
## LOCAL PUBLIC AGENCY CHANGE ORDER

### Table

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<th>No.</th>
<th>Description</th>
<th>Quantity</th>
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**Total for this Page**

### Reasons for Proposed Changes and Cost analysis:

[Blank space for text]
§ 635.109 Standardized changed condition clauses.

(a) Except as provided in paragraph (b) of this section, the following changed conditions contract clauses shall be made part of, and incorporated in, each highway construction project approved under 23 U.S.C. 106:

(1) Differing site conditions.

(i) During the progress of the work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the contract or if unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the contract, are encountered at the site, the party discovering such conditions shall promptly notify the other party in writing of the specific differing conditions before the site is disturbed and before the affected work is performed.

(ii) Upon written notification, the engineer will investigate the conditions, and if it is determined that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of any work under the contract, an adjustment, excluding anticipated profits, will be made and the contract modified in writing accordingly. The engineer will notify the contractor of the determination whether or not an adjustment of the contract is warranted.

(iii) No contract adjustment which results in a benefit to the contractor will be allowed unless the contractor has provided the required written notice.

(iv) No contract adjustment will be allowed under this clause for any effects caused on unchanged work. (This provision may be omitted by the STD's at their option.)

(2) Suspensions of work ordered by the engineer.

(i) If the performance of all or any portion of the work is suspended or delayed by the engineer in writing for an unreasonable period of time (not originally anticipated, customary, or inherent to the construction industry) and the contractor believes that additional compensation and/or contract time is due as a result of such suspension or delay, the contractor shall submit to the engineer in writing a request for adjustment within 7 calendar days of receipt of the notice to resume work. The request shall set forth the reasons and support for such adjustment.

(ii) Upon receipt, the engineer will evaluate the contractor's request. If the engineer agrees that the cost and/or time required for the performance of the contract has increased as a result of such suspension and the suspension was caused by conditions beyond the control of and not the fault of the contractor, its suppliers, or subcontractors at any approved tier, and not caused by weather, the engineer will make an adjustment (excluding profit) and modify the contract in writing accordingly. The contractor will be notified of the engineer's determination whether or not an adjustment of the contract is warranted.
(iii) No contract adjustment will be allowed unless the contractor has submitted the request for adjustment within the time prescribed.

(iv) No contract adjustment will be allowed under this clause to the extent that performance would have been suspended or delayed by any other cause, or for which an adjustment is provided or excluded under any other term or condition of this contract.

(3) Significant changes in the character of work.

(i) The engineer reserves the right to make, in writing, at any time during the work, such changes in quantities and such alterations in the work as are necessary to satisfactorily complete the project. Such changes in quantities and alterations shall not invalidate the contract nor release the surety, and the contractor agrees to perform the work as altered.

(ii) If the alterations or changes in quantities significantly change the character of the work under the contract, whether such alterations or changes are in themselves significant changes to the character of the work or by affecting other work cause such other work to become significantly different in character, an adjustment, excluding anticipated profit, will be made to the contract. The basis for the adjustment shall be agreed upon prior to the performance of the work. If a basis cannot be agreed upon, then an adjustment will be made either for or against the contractor in such amount as the engineer may determine to be fair and equitable.

(iii) If the alterations or changes in quantities do not significantly change the character of the work to be performed under the contract, the altered work will be paid for as provided elsewhere in the contract.

(iv) The term “significant change” shall be construed to apply only to the following circumstances:

(A) When the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction; or
(B) When a major item of work, as defined elsewhere in the contract, is increased in excess of 125 percent or decreased below 75 percent of the original contract quantity. Any allowance for an increase in quantity shall apply only to that portion in excess of 125 percent of original contract item quantity, or in case of a decrease below 75 percent, to the actual amount of work performed.

(b) The provisions of this section shall be governed by the following:

(1) Where State statute does not permit one or more of the contract clauses included in paragraph (a) of this section, the State statute shall prevail and such clause or clauses need not be made applicable to Federal-aid highway contracts.

(2) Where the State transportation department has developed and implemented one or more of the contract clauses included in paragraph (a) of this section, such clause or clauses, as developed by the State transportation department may be included in Federal-aid highway contracts in lieu of the corresponding clause or clauses in paragraph (a) of this section. The State's action must be pursuant to a specific State statute requiring differing contract conditions clauses. Such State developed clause or clauses, however, must be in conformance with 23 U.S.C., 23 CFR and other applicable Federal statutes and regulations as appropriate and shall be subject to the Division Administrator's approval as part of the PS&E.

(c) In the case of a design-build project, STDs are strongly encouraged to use “suspensions of work ordered by the engineer” clauses, and may consider “differing site condition” clauses and “significant changes in the character of work” clauses which are appropriate for the risk and responsibilities that are shared with the design-builder.

§ 635.410 Buy America requirements.

(a) The provisions of this section shall prevail and be given precedence over any requirements of this subpart which are contrary to this section. However, nothing in this section shall be construed to be contrary to the requirements of § 635.409(a) of this subpart.

(b) No Federal-aid highway construction project is to be authorized for advertisement or otherwise authorized to proceed unless at least one of the following requirements is met:

(1) The project either:

   (i) Includes no permanently incorporated steel or iron materials, or
   (ii) if steel or iron materials are to be used, all manufacturing processes, including application of a coating, for these materials must occur in the United States. Coating includes all processes which protect or enhance the value of the material to which the coating is applied.

(2) The State has standard contract provisions that require the use of domestic materials and products, including steel and iron materials, to the same or greater extent as the provisions set forth in this section.

(3) The State elects to include alternate bid provisions for foreign and domestic steel and iron materials which comply with the following requirements. Any procedure for obtaining alternate bids based on furnishing foreign steel and iron materials which is acceptable to the Division Administrator may be used. The contract provisions must (i) require all bidders to submit a bid based on furnishing domestic steel and iron materials, and (ii) clearly state that the contract will be awarded to the bidder who submits the lowest total bid based on furnishing domestic steel and iron materials unless such total bid exceeds the lowest total bid based on furnishing foreign steel and iron materials by more than 25 percent.

(4) When steel and iron materials are used in a project, the requirements of this section do not prevent a minimal use of foreign steel and iron materials, if the cost of such materials used does not exceed one-tenth of one percent (0.1 percent) of the total contract cost or $2,500, whichever is greater. For purposes of this paragraph, the cost is that shown to be the value of the steel and iron products as they are delivered to the project.

(c)(1) A State may request a waiver of the provisions of this section if;

   (i) The application of those provisions would be inconsistent with the public interest; or
   (ii) Steel and iron materials/products are not produced in the United States in sufficient and reasonably available quantities which are of a satisfactory quality.
(2) A request for waiver, accompanied by supporting information, must be submitted in writing to the Regional Federal Highway Administrator (RFHWA) through the FHWA Division Administrator. A request must be submitted sufficiently in advance of the need for the waiver in order to allow time for proper review and action on the request. The RFHWA will have approval authority on the request.

(3) Requests for waivers may be made for specific projects, or for certain materials or products in specific geographic areas, or for combinations of both, depending on the circumstances.

(4) The denial of the request by the RFHWA may be appealed by the State to the Federal Highway Administrator (Administrator), whose action on the request shall be considered administratively final.

(5) A request for a waiver which involves nationwide public interest or availability issues or more than one FHWA region may be submitted by the RFHWA to the Administrator for action.

(6) A request for waiver and an appeal from a denial of a request must include facts and justification to support the granting of the waiver. The FHWA response to a request or appeal will be in writing and made available to the public upon request. Any request for a nationwide waiver and FHWA’s action on such a request may be published in the Federal Register for public comment.

(7) In determining whether the waivers described in paragraph (c)(1) of this section will be granted, the FHWA will consider all appropriate factors including, but not limited to, cost, administrative burden, and delay that would be imposed if the provision were not waived.

(d) Standard State and Federal-aid contract procedures may be used to assure compliance with the requirements of this section.


SPECIFICATIONS REFERENCE

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<thead>
<tr>
<th>Section:</th>
<th>103.06.01 (incorrect in book) Commercial General Liability</th>
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<tbody>
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<td>Page:</td>
<td>107-9</td>
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<tr>
<td>Revision:</td>
<td>Renumber section as 107.18.01</td>
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<th>Section:</th>
<th>103.06.02 (incorrect in book) Business Automobile Liability</th>
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<tr>
<th>Section:</th>
<th>214.03 CONSTRUCTION</th>
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</thead>
<tbody>
<tr>
<td>Revision:</td>
<td>Add the following as the final paragraph in the section: Demonstrate to the Engineer that the placement technique prevents damage to the fabric.</td>
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<table>
<thead>
<tr>
<th>Section:</th>
<th>214.03 CONSTRUCTION</th>
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<tbody>
<tr>
<td>Subsection:</td>
<td>214.03.03 Slope Protection and Channel Lining</td>
</tr>
<tr>
<td>Revision:</td>
<td>Replace the first paragraph with the following: Place geotextile fabric for slope protection / geotextile fabric for channel lining with the long dimension parallel to the channel or toe of slope.</td>
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<tr>
<th>Section:</th>
<th>214.03 CONSTRUCTION</th>
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<tbody>
<tr>
<td>Subsection:</td>
<td>214.03.04 Underdrains</td>
</tr>
<tr>
<td>Revision:</td>
<td>Replace the first sentence in the subsection with the following: Place and shape geotextile fabric for subsurface drainage to the sides and bottom of the trench without stretching the fabric.</td>
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<tr>
<th>Section:</th>
<th>214.03 CONSTRUCTION</th>
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<tr>
<td>Subsection:</td>
<td>214.03.05 Subgrade or Embankment Foundation Stabilization</td>
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<tr>
<td>Revision:</td>
<td>Rename the subsection as follows: Subgrade Stabilization / Rock Roadbed</td>
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<th>Section:</th>
<th>214.03 CONSTRUCTION</th>
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<tr>
<td>Subsection:</td>
<td>214.03.05 Subgrade Stabilization / Rock Roadbed</td>
</tr>
<tr>
<td>Revision:</td>
<td>Replace the first (1st) paragraph of the subsection with the following: Place geotextile fabric for stabilization, unless otherwise noted. Install with the long dimension parallel to the long dimension of the area to be covered.</td>
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<tr>
<th>Section:</th>
<th>214.03 CONSTRUCTION</th>
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<tbody>
<tr>
<td>Subsection:</td>
<td>214.03.05 Subgrade Stabilization / Rock Roadbed</td>
</tr>
<tr>
<td>Revision:</td>
<td>Add the following as the final paragraph in the section: Place, spread, and compact rock or backfill in such a manner that minimizes the development of wrinkles and movement in the fabric. In curves and intersections, cut the fabric and overlay appropriately. Keep the turning of tracked vehicles to a minimum to prevent displacement of the fill and damage to the fabric. Repair any damage caused during placement or by vehicles.</td>
</tr>
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</table>
| Section: | 214.03 CONSTRUCTION  
| Subsection: | 214.03.06 Drainage Blanket  
| Revision: | Replace the first sentence in the subsection with the following:  
| | Place geotextile fabric for subsurface drainage with the long dimension parallel to the long dimension of the area to be covered.  

| Section: | 214.03 CONSTRUCTION  
| Subsection: | 214.03.07 Embankment Foundation Working Platform  
| Revision: | Add the following as new subsection 214.03.07:  
| | **214.03.07 Embankment Foundation Working Platform.** To facilitate embankment construction over soft ground, place geotextile fabric for separation unless otherwise specified. Place as directed in the plans or by the Engineer. Install with the long dimension parallel to the long dimension of the area to be covered. Leave surface vegetation in place.  
| | During back dumping and spreading, do not allow the wheels of trucks, dozer blades, and other equipment to come into direct contact with the fabric. Spread the material in the direction of the fabric overlap. To avoid damage to the geotextile fabric, dump rock fill behind the leading edge of the rock layer, then blade into place. Repair any damage caused during placement or by vehicles. If large fabric wrinkles develop during spreading operations, fold and flatten the wrinkles in the direction of spreading. Avoid large folds which reduce the fabric overlap width.  

| Section: | 214.05 PAYMENT  
| Revision: | Remove the following from list of pay items:  
| | 02596-02599   Fabric-Geotextile, Type   Square Yard  

| Section: | 214.05 PAYMENT  
| Revision: | Add the following to the list of pay items:  
| | 02602   Fabric-Geotextile Class 1   Square Yard  
| | 02603   Fabric-Geotextile Class 2   Square Yard  

| Section: | 215.02 MATERIALS  
| Subsection: | 215.02.01 Geotextile Fabric  
| Revision: | Replace the text in this subsection with the following:  
| | Conform to Section 843.  

| Section: | 215.03 CONSTRUCTION  
| Revision: | Replace the second sentence in the final paragraph with the following:  
| | Place a protective ring using geotextile fabric for subsurface drainage and separation; clean No. 2 aggregate or shot rock of similar size, quality, and gradation approved by the Engineer; and crushed aggregate.  

| Section: | 215.05 PAYMENT  
| Revision: | Remove the following from list of pay items:  
| | 02596-02599   Fabric-Geotextile, Type   Square Yard  

2
Supplemental Specifications to the Standard Specifications for Road and Bridge Construction, 2019 Edition Effective with the July 24, 2020 Letting

Section: 215.05 PAYMENT
Revision: Add the following to the list of pay items:
02602 Fabric-Geotextile Class 1 Square Yard
02603 Fabric-Geotextile Class 2 Square Yard

Section: 402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures with Reclaimed Material
Revision: Replace the last sentence in this section with the following:
Each lot pay value will be averaged to determine the final overall bid item pay.

Section: 402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures with Reclaimed Material
Part: LOT PAY ADJUSTMENT SCHEDULE COMPACITION OPTION A BASE AND BINDER MIXES
Table: AV
Revision: Replace the table with the following:

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<th>AV</th>
<th>Pay Value</th>
<th>Test Result (%)</th>
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<tr>
<td></td>
<td>AADTT Class 2</td>
<td>AADTT Class 3</td>
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<tr>
<td></td>
<td></td>
<td>or 4</td>
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<tr>
<td>1.05</td>
<td>3.2-3.8</td>
<td>3.2-3.8</td>
</tr>
<tr>
<td>1.00 + 0.1 (AV-3.0)</td>
<td>1.5-3.1</td>
<td>2.0-3.1</td>
</tr>
<tr>
<td>1.00 + 0.1 (4.5-AV)</td>
<td>3.9-6.0</td>
<td>3.9-6.0</td>
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<tr>
<td>0.75</td>
<td>6.1-6.5</td>
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(1) < 1.5 or > 6.5 < 2.0 or > 6.0
402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures with Reclaimed Material

LOT PAY ADJUSTMENT SCHEDULE COMPACTION OPTION A SURFACE MIXES AV

Replace the table with the following:

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<td>3.2-3.8</td>
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<td>1.00 + 01 (AV-3.0)</td>
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<tr>
<td>1.00 + 01 (4.5-AV)</td>
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<td>0.75</td>
<td>6.1-6.5</td>
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<tr>
<td>(1)</td>
<td>&lt; 1.5 or 6.5</td>
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501.03.19 Surface Tolerances and Testing Surface

B) Ride Quality

2) Category A Requirements

Replace the last sentence in 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.

501.03.19

B)

3) Category B Requirements

Replace the last sentence in the first paragraph with the following:
At the Department's discretion, a pay deduction of $750 per 0.1-lane-mile section may be applied in lieu of corrective work.

603.03.05 Drainage

In the eighth (8th) paragraph, remove "type IV" from the fabric references in the first (1st) and third (3rd) sentences.

607.03.02

(a) Prequalification

Remove the following item to the list entitled "Fabricators having SBR, IBR, ABR, or CPT certification may fabricate the following":

 Armored Edges
### Supplemental Specifications to the
**Standard Specifications for Road and Bridge Construction, 2019 Edition**
**Effective with the July 24, 2020 Letting**

<table>
<thead>
<tr>
<th>Section:</th>
<th>607.03.02</th>
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<tbody>
<tr>
<td>Part:</td>
<td>(a) Prequalification</td>
</tr>
<tr>
<td>Revision:</td>
<td>add the following items to the list entitled &quot;AISC certification not required for the following&quot;:</td>
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<tr>
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<td>· Armored Edges or joints with a nominal width of 4 inches or less</td>
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<td>· Railing System Type II</td>
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<tr>
<th>Section:</th>
<th>609.05 PAYMENT</th>
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<tr>
<td>Revision:</td>
<td>add the following line to the table &quot;Schedule for Adjusted Quantity for Depth of Cover Deficiency&quot;</td>
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<tr>
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<td>Depth of Cover Deficiency (inches)</td>
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<td>Quantity Adjustment Factor</td>
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<th>609.05 PAYMENT</th>
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<tr>
<td>Part:</td>
<td>Note (4) under &quot;Schedule for Adjusted Quantity for Depth of Cover Deficiency&quot;</td>
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<tr>
<td>Revision:</td>
<td>Replace note (4) with the following:</td>
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<tr>
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<td>Quantity Adjustment Factor only applies if the Contractor elects to have the bridge deck cored as per KM 64-313. If the Contractor accepts adjustment based on the pachometer readings, this Quantity Adjustment Factor is 0.00.</td>
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<tr>
<th>Section:</th>
<th>615 PRECAST THREE SIDED STRUCTURES</th>
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<td>Revision:</td>
<td>Insert complete Section 615</td>
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<tr>
<th>Section:</th>
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<tr>
<td>Revision:</td>
<td>Remove the following from the list of pay items:</td>
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<td>02600 Fabric-Geotextile Type IV for Pipe Square Yard(2)</td>
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<td>Revision:</td>
<td>Add the following to the list of pay items:</td>
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<td>02600 Fabric-Geotextile Class 2 for Pipe Square Yard(2)</td>
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<th>701.05 PAYMENT</th>
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<tr>
<td>Revision:</td>
<td>Replace &quot;Type IV&quot; in the item name in note(2) with &quot;Class 2&quot;</td>
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<tr>
<th>Section:</th>
<th>715.02.07 &quot;Pop&quot; Fasteners</th>
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<tr>
<td>Revision:</td>
<td>Remove this section in its entirety.</td>
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<tr>
<th>Section:</th>
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<tr>
<td>Revision:</td>
<td>Replace the second sentence with the following:</td>
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<tr>
<td></td>
<td>Panel Signs may be ground mounted, overhead structure mounted, or bridge mounted signs.</td>
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<tr>
<th>Section:</th>
<th>715.02.03 Steel Reinforcement</th>
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<tr>
<td>Revision:</td>
<td>Change section reference from 602 to 811.</td>
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<tr>
<th>Section:</th>
<th>715.03 CONSTRUCTION</th>
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<tbody>
<tr>
<td>Revision:</td>
<td>Remove all but the first paragraph from this Section. 715.03 will now read as follows:</td>
</tr>
<tr>
<td></td>
<td>The Department may inspect fabrication and erection work. The Department will perform a day and night inspection after the installation is complete.</td>
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<tr>
<td>Section:</td>
<td>Revision:</td>
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<td>715.03.01 Location</td>
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<td>715.03.09 Sign Beams and Supports</td>
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<td></td>
</tr>
<tr>
<td>715.03.07 Sign Beams and Supports</td>
<td>Part: B)</td>
</tr>
</tbody>
</table>
### Section: 715.03.07 Sign Beams and Supports
**Part:** C) Type C Beam
**Revision:**
Change part number as follows:
- B) Type C Beam

### Section: 715.03.07 Sign Beams and Supports
**Part:** C) Type D Breakaway Supports
**Revision:**
New part C) after removal of Type B Beam from list with text as follows:
Specifications for Type D breakaway supports are listed on the details sheet for Type "D" supports.

### Section: 715.03.10 Bridge Mounting for Signs
**Revision:**
Renumber section as 715.03.08 Bridge Mounting for Signs

### Section: 715.03.11 Mounting Signs
**Revision:**
Renumber section as 715.03.09 Bridge Mounting for Signs

### Section: 715.03.10 Logo Signs
**Revision:**
Insert new section 715.03.10 Logo Signs, with text as follows:
Unless directed in the project plans, existing logo panel signs are to be kept in service during construction. Contact the logo contractor if signs are to be out of service for more than one day. Temporary installations shall be on square wood posts (with the holes drilled in the bottom, per the detail sheet, for locations not protected by guardrail, barrier wall, etc.).

### Section: 715.04.03 Sign Supports
**Revision:**
Replace the second paragraph with the following:
The Department will not measure clearing and grubbing or excavation for payment and will consider them incidental to this item of work.

### Section: 715.04.06 Sign Panels
**Revision:**
Add the following as the second paragraph in this section:
The Department will not measure temporary panel signing for payment and will consider them incidental to this item of work.

### Subsection: 716.03.10 Electrical Junction Box
**Part:** B) Filter Fabric
**Revision:**
Rename part B) to the following: Geotextile Fabric

### Subsection: 716.03.10 Electrical Junction Box
**Part:** B) Geotextile Fabric
**Revision:**
Replace the first sentence of the part with the following:
Before the installation of the #57 aggregate and junction box, the contractor shall install geotextile fabric for subsurface drainage and separation in the bottom of hole.

### Subsection: 725.04.06 Concrete, Class AA (for pads)
**Revision:**
Replace this subsection with the following:
The Department will not measure the quantities of Concrete Class AA, excavation, or steel reinforcement for payment, and will consider them incidental to Crash Cushion Type VII, Type VI, or Type VI-T.
Supplemental Specifications to the Standard Specifications for Road and Bridge Construction, 2019 Edition Effective with the July 24, 2020 Letting

Subsection: 725.05 PAYMENT
Revision: Remove the following from the list of pay items:
08104 Concrete, Class AA Cubic Yard

Section: 804.04.04 Requirements for Combined Aggregates
Revision: Replace the table with the following:

<table>
<thead>
<tr>
<th>FINE AGGREGATE CONSSENSUS PROPERTY REQUIREMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>AADTT Class</td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
</tbody>
</table>

Section: 804.01 GENERAL.
Revision: Replace the second paragraph with the following:
The Department’s List of Approved Materials includes the Aggregate Source List and the list of Class A and Class B Polish-Resistant Aggregate Sources, the Concrete Aggregate Restriction List, Lightweight Aggregate Source List, and Microsurface Aggregate Source List.

Section: 804.04.05 Microsurface.
Revision: Modify the Table as follows:

<table>
<thead>
<tr>
<th>Type II</th>
<th>Type III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sieve Size</td>
<td>% Passing</td>
</tr>
<tr>
<td>3/8 inch</td>
<td>100</td>
</tr>
<tr>
<td>No. 4</td>
<td>90-100</td>
</tr>
<tr>
<td>No. 8</td>
<td>65-90</td>
</tr>
<tr>
<td>No. 16</td>
<td>45-70</td>
</tr>
<tr>
<td>No. 30</td>
<td>30-50</td>
</tr>
<tr>
<td>No. 50</td>
<td>18-30</td>
</tr>
<tr>
<td>No. 100</td>
<td>10-21</td>
</tr>
<tr>
<td>No. 200</td>
<td>5-15</td>
</tr>
</tbody>
</table>

Section: 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, the Concrete Aggregate Restriction List, Lightweight Aggregate Source List, and Microsurface Aggregate Source List.
ASPHALT MIXTURES AND SEALS

Section: 806.03.01 General Requirements.
Revision: Revise the Table with the following corrected values:

<table>
<thead>
<tr>
<th>RTFO Residue</th>
<th>1.00 Max.</th>
<th>1.01-1.10</th>
<th>1.11-1.20</th>
<th>1.21-1.30</th>
<th>1.31-1.40</th>
<th>&gt; 1.40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mass Loss, %</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSCR</td>
<td></td>
<td>&lt; 470.7</td>
<td>471-475</td>
<td>476-480</td>
<td>481-485</td>
<td>≥ 486</td>
</tr>
<tr>
<td>$J_{pr12},$ Max</td>
<td>0.5 kPa$^{-1}$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$J_{ext-din}$ Max</td>
<td>75 %</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A) Anchorage Systems

Revise the minimum breaking strength to be 42,800, and replace reference to AASHTO M 30, Class C with AASHTO M 30, Class A.

Section: 814.06 MATERIALS FOR END TREATMENTS
Part: A) Anchorage Systems
Revision: Use retroreflective sheeting conforming to ASTM D 4956, Type XI, Class 1.

Section: 830.02.01 Delineator Sheeting
Part: A) Barrier Wall Delineator
Revision: Replace text with the following:
Use retroreflective sheeting conforming to ASTM D 4956, Type XI, Class 1.

Section: 830.02.01 Delineator Sheeting
Part: B) Guardrail Delineator
Revision: Replace text with the following:
Use retroreflective sheeting conforming to ASTM D 4956, Type XI, Class 1.
| Section: | 830.02.01 Delineator Sheeting |
| Part: | C) Delineator Post |
| Revision: | Replace text with the following: Use retroreflective sheeting conforming to ASTM D 4956, Type XI, Class 1. |

| Section: | 830.02.03 Drum Sheeting |
| Revision: | Replace text with the following: Use retroreflective sheeting conforming to ASTM D 4956. Use approved types for necessary colors on the Department's List of Approved Materials. |

| Section: | 830.02.04 Cone and Tubular Marker Sheeting |
| Revision: | Replace text with the following: Use retroreflective sheeting conforming to ASTM D 4956. Use approved types for necessary colors on the Department's List of Approved Materials. |

| Section: | 830.02.06 Permanent Sign Sheeting |
| Revision: | Replace text with the following: Use retroreflective sheeting conforming to ASTM D 4956, Type XI, Class 1. |

| Subsection: | 834.07.05 Geotextile Filter Fabric Type IV |
| Revision: | Change the subsection title to the following: Geotextile Fabric |

| Section: | 837.03 APPROVAL |
| Revision: | In the first sentence, replace 'AASHTO T-250' with 'KM 64-268' |

| Section: | 837.03 APPROVAL |
| Revision: | Replace the second sentence with the following: The Department will sample and evaluate for approval each shipment of each lot of thermoplastic material delivered for use per contract prior to installation of the thermoplastic material. |

| Section: | 837.03.01 Composition |
| Revision: | Add the following sentence to the end of the paragraph: Manufacturers are to produce extruded thermoplastic in compliance with the values listed in Table 1. |

| Section: | 837.03.01 Composition |
| Revision: | Label Composition table as new subsection '837.03.02 Table 1'. |

| Section: | 837.03.02 Physical Characteristics |
| Revision: | Renumber subsection as 837.03.03 |

| Section: | 837.06 MANUFACTURER'S TESTING |
| Revision: | In the first sentence, replace 'AASHTO T-250' with 'KM 64-268' |
Section: 837.09 ACCEPTANCE OF NON-SPECIFICATION COMPLIANT THERMOPLASTIC

Add new subsection with the following text:

The Department may accept thermoplastic found to be in non-conformance to the Specification Acceptance Range at a reduction in pay, see Table 2. Thermoplastic with analytical test results not conforming to the Specification Acceptance Range but within the Acceptance Range with Deduction may be accepted for incorporation into the project with applicable reductions in pay. Deductions are cumulative to a maximum of 60% reduction in pay applied to the contract unit bid price for the thermoplastic. Thermoplastic with three (3) or more analytical tests resulting in non-conformance to the Specification Acceptance Range or any analytical test result exceeding the Acceptance Range with Deduction will be rejected and removed from the project. Do not allow transfer of thermoplastic materials between projects that have analytical test results in the Acceptance Range with Deduction.

Section: 837.10 Table 2

Add new subsection titled 'Table 2' with the following table:

<table>
<thead>
<tr>
<th>Analytical Test</th>
<th>Specification Acceptance Range</th>
<th>Acceptance Range with Deduction</th>
<th>Deduction Applied to Unit Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Binder, %</td>
<td>18.0 min.</td>
<td>16.0 -17.9</td>
<td>50%</td>
</tr>
<tr>
<td>Glass Beads %</td>
<td>30-40</td>
<td>28-30</td>
<td>20%</td>
</tr>
<tr>
<td>(Premixed)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Titanium Dioxide, % for white</td>
<td>10.0 min.</td>
<td>9.0 -9.9</td>
<td>20%</td>
</tr>
<tr>
<td>Calcium Carbonate and Inert Fillers for white</td>
<td>42.0 max.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calcium Carbonate and Inert Fillers for Yellow</td>
<td>50.0 max.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heavy Metals Content</td>
<td>Comply with 40 CFR 261</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>6.0 ΔE*</td>
<td>6.0 ΔE*- 8.0 ΔE*</td>
<td>10%</td>
</tr>
</tbody>
</table>
SECTION 615 PRECAST THREE SIDED STRUCTURES

615.01 DESCRIPTION. This work shall consist of constructing precast concrete three sided units for culverts, storm sewers, tunnels, arch bridges, etc. in accordance with these specifications and in reasonably close conformity with the lines, grades, design and dimensions shown on the plans or as established by the Engineer. In situations where two or more specifications apply to this work, the most stringent requirements shall govern.

615.02 TYPES. Precast reinforced concrete units manufactured in accordance with this specification shall be designated by span and rise. Precast reinforced concrete endwalls manufactured in accordance with this specification shall be designated by length and height.

615.03 MATERIALS – CONCRETE. The concrete for the structures shall be air-entrained when installed in areas subject to freeze-thaw conditions, composed of Portland cement, fine and coarse aggregates, admixtures and water. Air-entrained concrete shall contain 6 ± 2 percent air. The air entraining admixture shall conform to AASHTO M154.

615.03.01 Portland Cement. Shall conform to the requirements of ASTM Specifications C150-Type I, Type II, or Type III cement.

615.03.02 Coarse Aggregate. Shall consist of stone having a maximum size of 1 inch. Aggregate shall meet requirements for ASTM C33.

615.03.03 Water Reducing Admixture. The manufacturer may submit for approval by the Engineer, a water-reducing admixture for the purpose of increasing workability and reducing the water requirement for the concrete.

615.03.04 Calcium Chloride. The addition to the mix of calcium chloride or admixtures containing calcium chloride will not be permitted.

615.04 MATERIALS – STEEL REINFORCEMENT AND HARDWARE. All reinforcing steel for the structures shall be fabricated and placed in accordance with the detailed shop drawings submitted by the manufacturer.

615.04.01 Steel Reinforcement. Reinforcement shall consist of welded wire fabric conforming to ASTM Specification A 185 or A 497, or deformed billet steel bars conforming to ASTM Specification A 615, Grade 60. Longitudinal distribution reinforcement may consist of welded wire fabric or deformed billet-steel bars.

615.04.02 Hardware. Inserts for endwall connections shall be AISI Type 304 stainless steel, F-58 Expanded Coil inserts. Coil rods and nuts used in endwall connections shall be AISI Type 304 stainless steel. Washers used in endwall connections shall be AISI Type 304 stainless steel plate washers. Or Equals Reinforcing bar splices shall be made using the Dowel Bar Splicer System, and shall consist of the Dowel Bar Splicer (DB- SAE) and Dowell-In(DI) or equal system. Hook Bolts used in endwall connections shall be ASTM A 307.

615.05 MANUFACTURE.

615.05.01 Mixture. The aggregates, cement and water shall be proportioned and mixed in a batch mixer to produce a homogeneous concrete meeting the strength requirements of this specification. The proportion of Portland cement in the mixture shall not be less than 564 pounds (6 sacks) per cubic yard of concrete.
615.05.02 Curing. The precast concrete units shall be cured for a sufficient length of time so that the concrete will develop the specified compressive strength in 28 days or less. Any one of the following methods of curing or combinations thereof shall be used:

A) Steam Curing. The units may be low pressure, steam cured by a system that will maintain a moist atmosphere.

B) Water Curing. The units may be water cured by any method that will keep the sections moist.

C) Membrane Curing. A sealing membrane conforming to the requirements of ASTM Specification C 309 may be applied and shall be left intact until the required concrete compressive strength is attained. The concrete temperature at the time of application shall be within ± 10 degrees F of the atmospheric temperature. All surfaces shall be kept moist prior to the application of the compounds and shall be damp when the compound is applied.

615.05.03 Forms. The forms used in manufacturing shall be manufactured steel forms and accurate to maintain the structure dimensions within the permissible variations given in Section 7 of these specifications. All casting surfaces shall be of a smooth material.

615.05.04 Handling. Handling devices or holes shall be permitted in each unit for the purpose of handling and setting.

615.05.05 Storage. The precast elements shall be stored in such a manner to prevent cracking or damage. The units shall not be moved until the concrete compressive strength has reached a minimum of 2500 psi, and they shall not be stored in an upright position until the concrete compressive strength is a minimum of 4,000 psi.

615.05.06 Weep holes. Place weep holes consisting of 4-inch pipe or formed to 4 inches in diameter in each precast unit. Fabric wrapped perforated pipe drains may be used in retaining walls in place of weep holes. Place the outlet invert elevation of weep holes in box culverts 4 inches above the flowline of the structure. Raise weep holes to accommodate significant silting when the Engineer directs. Make adequate provisions for thorough drainage of backfill and embankment according to Subsection 603.03.

615.06 DESIGN.

615.06.01. Obtain the precast concrete 3-sided structure and endwalls from a pre-approved manufacturer list maintained by the Division of Highway Design. The precast element dimension and reinforcement details shall be as prescribed in the plan and the shop drawings provided by the manufacturer, subject to the provisions of Section 7, below. The minimum concrete compressive strength shall be as shown on the shop drawings. The minimum steel yield strength shall be 60,000 psi, unless otherwise noted on the shop drawings.

The manufacturer shall submit a pdf copy of the Working Drawings, Shop Drawings, and Structural Design Calculations to the Department for review and approval prior to manufacturing the precast 3-Sided units or endwalls.

615.06.02. The precast elements shall be designed in accordance with KYHL-93. A minimum of one foot of cover is required. “Cover” is defined as the area from the top of structure to the top of finished roadway, along the entire length of structure over the driving lanes and shoulder. (Unless noted otherwise on the shop drawings, designed accordingly, and approved by this Department). The ends of units shall be normal to walls and centerline except exposed edges shall be beveled ¾ inch.

615.06.03 Placement of Reinforcement in Precast 3-Sided Units. The cover of concrete over the outside circumferential reinforcement shall be 2 inches minimum. The
Cover of concrete over the inside circumferential reinforcement shall be 1 1/2 inches minimum, unless otherwise noted on the shop drawings. The clear distance of the end circumferential wires shall not be less than one inch nor more than two inches from the ends of each section. Reinforcement shall be assembled utilizing single or multiple layers of welded wire fabric (not to exceed 3 layers), supplemented with a single layer of deformed billet-steel bars, when necessary. Welded wire fabric shall be composed of circumferential and longitudinal wires meeting the spacing requirements of 615.06.06, below, and shall contain sufficient longitudinal wires extending through the vault unit to maintain the shape and position of the reinforcement. Longitudinal distribution reinforcement may be welded wire fabric or deformed billet-steel bars and shall meet the spacing requirements of 615.06.06, below. The ends of the longitudinal distribution reinforcement shall be not more than 3 inches and not less than 1 1/2 inches from the ends of the unit.

615.06.04 Placement of Reinforcement for Precast Endwalls. The cover of concrete over the longitudinal and transverse reinforcement shall be 2 inches minimum. The clear distance from the end of each precast element to the end transverse reinforcing steel shall not be less than one inch nor more than two inches. Reinforcement shall be assembled utilizing a single layer of welded wire fabric, or a single layer of deformed billet-steel bars. Welded wire fabric shall be composed of transverse and longitudinal wires meeting the spacing requirements of 615.06.07, below, and shall contain sufficient longitudinal wires extending through the element to maintain the shape and position of the reinforcement. Longitudinal reinforcement may be welded wire fabric or deformed billet-steel bars and shall meet the spacing requirements of 615.06.07, below. The ends of the longitudinal reinforcement shall be not more than 3 inches and not less than 1 1/2 inches from the ends of the walls.

615.06.05 Bending of Reinforcement for Precast 3-Sided Units. The outside and inside circumferential reinforcing steel for the corners of the structure shall be bent to such an angle that is approximately equal to the configuration of the structures outside corner.

615.06.06 Laps, Welds, and Spacing for Precast 3-Sided Units. Tension splices in the circumferential reinforcement shall be made by lapping. Laps may not be tack welded together for assembly purposes. For smooth welded wire fabric, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.5.2 and AASHTO 2012 Bridge Design Guide Section 5.11.6.3. For deformed welded wire fabric, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.5.1 and AASHTO 2012 Bridge Design Guide Section 5.11.6.2. The overlap of welded wire fabric shall be measured between the outermost longitudinal wires of each fabric sheet. For deformed billet-steel bars, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.1. For splices other than tension splices, the overlap shall be a minimum of 12" for welded wire fabric or deformed billet-steel bars. The spacing center to center of the circumferential wires in a wire fabric sheet shall be no less than 2 inches and no more than 4 inches. The spacing center to center of the longitudinal wires shall not be more than 8 inches. The spacing center to center of the longitudinal distribution steel for either line of reinforcing in the top slab shall be not more than 16 inches.

615.06.07 Laps, Welds, and Spacing for Precast Endwalls. Splices in the reinforcement shall be made by lapping. Laps may not be tack welded together for assembly purposes. For smooth welded wire fabric, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.5.2 and AASHTO 2012 Bridge Design Guide Section 5.11.6.3. For deformed welded wire fabric, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.5.1 and AASHTO 2012 Bridge Design Guide Section 5.11.6.2. For deformed billet-steel bars, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.1. The
spacing center-to-center of the wire fabric sheet shall not be less than 2 inches or more than 8 inches.

615.07 PERMISSIBLE VARIATIONS.

615.07.01 Precast 3-Sided Units.

A) Internal Dimensions. The internal dimension shall vary not more than 1% from the design dimensions nor more than 1-1/2 inches whichever is less. The haunch dimensions shall vary not more than 3/4 inch from the design dimension.

B) Slab and Wall Thickness. The slab and wall thickness shall not be less than that shown in the design by more than 1/4 inch. A thickness more than that required in the design shall not be cause for rejection.

C) Length of Opposite Surfaces. Variations in laying lengths of two opposite surfaces of the vault unit shall not be more than 1/2 inch in any section, except where beveled ends for laying of curves are specified by the purchaser.

D) Length of Section. The underrun in length of a section shall not be more than 1/2 inch in any vault unit.

E) Position of Reinforcement. The maximum variation in position of the reinforcement shall be ± 1/2 inch. In no case shall the cover over the reinforcement be less than 1 1/2 inches for the outside circumferential steel or be less than 1 inch for the inside circumferential steel as measured to the external or internal surface of the vault. These tolerances or cover requirements do not apply to mating surfaces of the joints.

F) Area of Reinforcement. The areas of steel reinforcement shall be the design steel areas as shown in the manufacturer's shop drawings. Steel areas greater than those required shall not be cause for rejection. The permissible variation in diameter of any reinforcement shall conform to the tolerances prescribed in the ASTM Specification for that type of reinforcement.

615.07.02 Endwalls.

A) Wall Thickness. The wall thickness shall not vary from that shown in the design by more than 1/2 inch.

B) Length/Height of Wall sections. The length and height of the wall shall not vary from that shown in the design by more than 1/2 inch.

C) Position of Reinforcement. The maximum variation in the position of the reinforcement shall be ± 1/2 inch. In no case shall the cover over the reinforcement be less than 1 1/2 inches.

D) Size of Reinforcement. The permissible variation in diameter of any reinforcing shall conform to the tolerances prescribed in the ASTM Specification for that type of reinforcing. Steel area greater than that required shall not be cause for rejection.

615.08 TESTING AND INSPECTION.
Type of Test Specimen. Start-up slump, air content, unit weight, and temperature tests will be performed each day on the first batch of concrete. Acceptable start-up results are required for production of the first unit. After the first unit has been established, random acceptance testing is performed daily for each 50 yd3 (or fraction thereof). In addition to the slump, air content, unit weight, and temperature tests, a minimum of one set of cylinders shall be required each time plastic property testing is performed.

Compression Testing. Cylinders shall be made and tested as prescribed by the ASTM C 39 Specification.

Acceptability of Cylinder Tests. When the average compressive strength of all cylinders tested is equal to or greater than the design compressive strength, and not more than 10% of the cylinders tested have a compressive strength less than the design concrete strength, and no cylinder tested has a compressive strength less than 80% of the design compressive strength, then the lot shall be accepted. When the compressive strength of the cylinders tested does not conform to this acceptance criteria, the acceptability of the lot may be determined as described in section 8.4, below.

JOINTS. Precast 3-sided units shall be produced with flat butt ends. The ends of the units shall be such that when the sections are laid together they will make a continuous line with a smooth interior free of appreciable irregularities, all compatible with the permissible variations in Section 7, above. The joint width shall not exceed 3/4 inches. Flat-top units with less than 2 ft. of cover shall be produced with a minimum 4” deep by 1.5” wide key way joint. Mortar in accordance with section 15.2 shall be placed in the keyway.

When the installed height of cover measures 2.0-feet or less, the precast 3-sided end units shall be connected by tie plates to the adjacent interior unit.

WORKMANSHIP AND FINISH. The precast units and endwalls shall be substantially free of fractures. The ends of the units shall be normal to the walls and centerline of the section, within the limits of the variations given in section 7, above, except where beveled ends are specified. The faces of the endwalls and units shall be parallel to each other, within the limits of variations given in section 7, above. The surface of the precast elements shall be a smooth steel form or troweled surface. Provide an ordinary surface finish.

REPAIRS. Precast elements may be repaired, if necessary, because of imperfections in manufacture or handling damage and will be acceptable if, in the opinion of the purchaser, the repairs are sound, properly finished and cured, and the repaired section conforms to the requirements of this specification.

INSPECTION. The quality of materials, the process of manufacture, and the finished structures shall be subject to Department guidelines, specifications, manuals, and other contract documents. Units will arrive at jobsite with the "Kentucky Oval" stamped on the unit which is an indication of acceptable inspection at the production facility. Units shall be inspected upon arrival for any evidence of damage resulting from transport to the jobsite.

REJECTION. The precast elements shall be subject to rejection on account of any of the specification requirements. Individual precast elements may be rejected because of any failure to meet specification and contract document requirements.

MARKING. Each unit shall be clearly marked by waterproof paint. The following shall be shown on the inside of the vertical leg of the section: Unit Span, Unit Rise, Date of Manufacture, and Name or trademark of the manufacturer. Units must also be stenciled as outlined in Standard Drawing BGX-006, current revision.
615.15. CONSTRUCTION REQUIREMENTS. Perform structure excavation in accordance with Section 603 except as noted in this Section.

615.15.01 Site Preparation. Perform Structure Excavation according to Section 603. The foundation design must be in accordance with the appropriate Geotechnical Notes in the project bid documents. Construct foundations in accordance with the foundation design as determined by the Engineer.

615.15.02 Footings. The precast 3-Sided units and endwalls shall be installed on either precast or cast-in-place concrete footings. The design size and elevation of the footings shall be as determined by the Engineer based on KYHL-93, the applicable Geotechnical Notes in the project bid documents such as bearing capacity requirements, specified scour countermeasures, and minimum differential settlement tolerance. In cases where a minimum differential settlement tolerance is not specified in the bid contract documents, the minimum differential settlement tolerance for the precast 3-sided structure shall be 1-inch. A minimum three inch deep keyway shall be formed in the top surface of the precast 3-sided unit footing at least three inches clear of the inside and outside faces of the bridge units, unless specified otherwise on the plans. The completed footing surface shall be constructed in accordance with grades shown on the plans. When tested with a 10 foot straight edge, the keyway surface shall not vary more than 1/4 inch in 10 feet. If a precast concrete footing is used, the contractor shall prepare a 4 inch thick base layer of compacted granular material the full width of the footing prior to placing the precast footing. The foundations for precast concrete 3-sided units and endwalls must be connected by reinforcement to form one monolithic body. Expansion joints shall not be used in lieu of a continuous foundation. Compressive cylinders must reach 2,000psi before precast units shall be set on the foundation. Compressive cylinder strength must reach 80% design strength before backfill operations shall begin.

615.15.03 Placement of the Units and Endwalls. The manufacturer shall provide a Technical Representative. The Technical Representative shall be available onsite while the contractor is setting the precast 3-sided structure and thereafter as determined necessary by the Engineer.

The units and endwalls shall be placed as shown on the Engineer's plan drawings. Special care shall be taken in setting the elements to the true line and grade. The units and endwalls shall be set on 6" x 6" masonite or steel shims. A minimum gap of 1/2 inch shall be provided between the footing and the bottom of the unit's vertical legs or the endwall. The gap shall be filled with non-shrink cement grout (Portland cement and water or cement mortar composed of Portland cement, sand and water). If units have been set with temporary ties (cables, bars, etc.) all pieces in the current phase must be completely grouted before ties may be removed.

615.15.04 External Protection of Joints. The butt-joint made by two adjoining units shall be covered with a 7/8" x 1 3/8" preformed bituminous joint sealant and a minimum of a 9 inch wide joint wrap. The surface shall be free of dirt before applying the joint material. A primer compatible with the joint wrap to be used shall be applied for a minimum width of nine inches on each side of the joint. The external wrap material shall meet AASHTO M198. The joint shall be covered continuously from the bottom of one unit section leg, across the top of the and to the opposite unit section leg. Any laps that result in the joint wrap shall be a minimum of six inches long with the overlap running downhill.

In addition to the joints between unit units, the joint between the end unit and the endwall shall also be sealed as described above. Also, if lift holes or lift inserts are formed in the units, they shall be plugged and grouted. During the backfilling operation, care shall be taken to keep the joint wrap in its proper location over the joint.

615-6
Internal Protection of Joints – In applications where the traveling public will be expected to cross under the structure (roadways, mixed use paths, sidewalks, etc.), or where specified in the contract documents, provide additional joint protection to ensure that the structure is water-tight. Various joint sealing details including elastomeric, urethane, or liquid sealing may be shown on the plans. Any internal joint sealing shall be performed as indicated on the shop drawings.

615.15.05 Backfill. Critical Backfill shall be clean, durable stone backfill that conform to the Structural Granular backfill requirements Section 805. Critical Backfill shall be paid as Structural Granular Backfill. The limits of Critical Backfill shall be 2 feet to the outside of each structure and from the top of the footing to 2 feet over the top of the structure for spans up to 24 feet. For spans greater than 24 feet, the limits of Critical Backfill shall be 4 feet to the outside of each structure and from the top of the footing to 2 feet over the top of the structure. Backfill shall be considered as all other replaced excavation and new embankment adjacent to the precast units and endwalls. The project construction and material specifications which include the specifications for excavation for structures and roadway excavation and embankment construction, shall apply except as modified in this section. Any backfill requirements of the manufacturer that are beyond the limits of the Department-specified critical backfill requirements shall be binding upon the Contractor but will not be measured for payment as they shall be considered incidental to the critical backfill quantity.

No backfill shall be placed against any structural elements until they have been approved by the Engineer. Backfill against external joint material or waterproofed surface shall be placed carefully to avoid damage to the waterproofing material. Mechanical tampers or approved compacting equipment shall be used to compact all backfill and embankment immediately adjacent to each side and over the top of each precast 3-sided unit until it is covered to a minimum depth of one foot, unless the design fill height is less than 1'-0". The backfill within the Critical Backfill Zone, as defined above, shall be placed in lifts of six inches or less (loose depth). Heavy compaction equipment shall not be operated in this area or over the bridge until it is covered to a depth of one foot, unless the design fill height is less than 1'-0".

Lightweight dozers and graders may be operated over precast units having one foot of compacted cover, but heavy earth moving equipment (larger than a D-4 Dozer weighing in excess of 12 tons and having track pressures of eight psi or greater) shall require two feet of cover unless the design cover is less than two feet. In no case shall equipment operating in excess of the design live load (KYHL-93) be permitted over the precast 3-sided units unless approved by the producer. Any additional fill and subsequent excavation required to provide this minimum cover shall be made at no additional cost to the project. As a precaution against introducing unbalanced stresses on the precast 3-sided units, when placing backfill at no time shall the difference between the heights of fill on opposite sides of the vault exceed 24". Once fill heights reach two feet over the top of structure, backfill as specified in Kentucky Standard Specifications Division 200.

615.16 QUALITY ASSURANCE. The Precast Supplier shall conform to the requirements for precast structures in Section 605 and the KYTC Division of Materials Precast & Prestress Concrete Manual.

The Precast Supplier shall be listed on the KYTC Division of Materials list of Approved Precast Concrete Producers.

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>21804EN</td>
<td>3-Sided Culvert Linear Foot</td>
<td>Linear Foot</td>
</tr>
<tr>
<td>02231</td>
<td>Structure Granular Backfill</td>
<td>Cubic Yard</td>
</tr>
<tr>
<td>08100</td>
<td>Concrete-Class A</td>
<td>Cubic Yard</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
<td>Unit</td>
</tr>
<tr>
<td>-------</td>
<td>---------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>08150</td>
<td>Steel Reinforcement</td>
<td>Pound</td>
</tr>
<tr>
<td>08003</td>
<td>Foundation Preparation</td>
<td></td>
</tr>
<tr>
<td>08002</td>
<td>Structure Excavation Solid Rock</td>
<td></td>
</tr>
<tr>
<td>08001</td>
<td>Structure Excavation Common</td>
<td></td>
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<tr>
<td>02203</td>
<td>Structure Excavation Unclassified</td>
<td></td>
</tr>
<tr>
<td>02200</td>
<td>Roadway Excavation</td>
<td></td>
</tr>
<tr>
<td>02230</td>
<td>Embankment in Place</td>
<td></td>
</tr>
</tbody>
</table>

The Department will consider payment as full compensation for all work required under this section.
DECORATIVE METAL RAILINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

B. 23CFR635.410, Buy America requirements are applicable to this Section.

1.2 SUMMARY

A. This Section includes the following:

   1. Fabricated steel ornamental railings.

B. Related Sections: Requirements relating to this Section are contained in the following Sections:


1.3 DEFINITIONS

A. Definitions in ASTM E 985 for railing-related terms apply to this Section.

1.4 PERFORMANCE REQUIREMENTS

A. General: In engineering handrail and railing systems to withstand structural loads indicated, determine allowable design working stresses of materials based on the following:

   1. Cold-Formed Structural Steel: AISI "Specification for the Design of Cold-Formed Steel Structural Members."

B. Structural Performance of Handrails and Railing Systems: Engineer, fabricate, and install handrails and railing systems to comply with requirements of ASTM E 985 for structural performance based on the following:

   1. Testing performed according to ASTM E 894 and E 935.
   2. Structural computations.

C. Structural Performance of Handrails and Railing Systems: Engineer, fabricate, and install handrails and railing systems to withstand the following structural loads without
exceeding the allowable design working stress of the materials for handrails, railing systems, anchors, and connections. Apply each load to produce the maximum stress in each of the respective components comprising handrails and railing systems.

1. Handrails Not Serving as Top Rails: Capable of withstanding the following loads applied as indicated:
   a. Concentrated load of 200 lbf (890 N) applied at any point and in any direction.
   b. Uniform load of 50 lbf per linear foot (730 N/m) applied in any direction.
   c. Concentrated and uniform loads above need not be assumed to act concurrently.

2. Infill Area of Guardrail Systems: Capable of withstanding a horizontal concentrated load of 200 lbf (890 N) applied to 1 sq. ft. (0.09 sq. m) at any point in the system including panels, intermediate rails, balusters, or other elements composing the infill area.
   a. Above load need not be assumed to act concurrently with loads on top rails of railing systems in determining stress on guard.

D. Thermal Movements: Allow for thermal movement resulting from the following maximum change (range) in ambient temperature in engineering, fabricating, and installing handrails and railing systems to prevent buckling, opening of joints, overstressing of components and connections, and other detrimental effects. Base engineering calculation on actual surface temperatures of materials due to both solar heat gain and nighttime sky heat loss.

1. Temperature Change (Range): 120 deg F (67 deg C) ambient 180 deg F (100 deg C) material surfaces.

E. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

1.5 SUBMITTALS

A. General: Submit each item in this Article according to the Conditions of the Contract and Division 1 Specification Sections.

B. Shop drawings showing fabrication and installation of handrails and railing systems including plans, elevations, sections, details of components, and attachments to other units of Work. For installed products indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

C. Mockup: Build mockup to verify selections made and to demonstrate aesthetic effects and
set quality standards for fabrication and installation.

1.6 QUALITY ASSURANCE

A. Single-Source Responsibility: Obtain handrails and railing systems of each type and material from a single manufacturer.

1.7 STORAGE

A. Store handrails and railing systems inside a well-ventilated area, away from uncured concrete and masonry and protected from weather, moisture, soiling, abrasion, extreme temperatures, and humidity.

1.8 PROJECT CONDITIONS

A. Field Measurements: Where handrails and railing systems are indicated to fit to other construction including radiused monumental stair and lobby balcony, check actual dimensions of other construction by accurate field measurements before fabrication; show recorded measurements on final shop drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1. Where field measurements cannot be made without delaying the Work, guarantee dimensions and proceed with fabricating handrails and railing systems without field measurements. Coordinate other construction to ensure that actual dimensions correspond to guaranteed dimensions.

1.9 SEQUENCING AND SCHEDULING

A. NA

PART 2 - PRODUCTS

2.1 METALS

A. General: Provide metals free from surface blemishes where exposed to view in the finished unit. Exposed-to-view surfaces exhibiting pitting, seam marks, roller marks, stains, discolorations, or other imperfections on finished units are not acceptable.

B. Steel and Iron: Provide steel and iron in the form indicated, complying with the following requirements:

1. Steel Pipe: ASTM A 53; finish, type, and weight class as follows:
a. Black finish, unless otherwise indicated.
b. Type F, or Type S, Grade A, standard weight (schedule 40), unless otherwise indicated, or another weight, type, and grade required by structural loads.


C. Brackets, Flanges, and Anchors: Cast or formed metal of the same material and finish as supported rails, unless otherwise indicated.

D. Handrail Wall Brackets: Provide factory manufactured wall brackets to comply with specifications, loading requirements, and details.

E. All exterior railing components shall be hot-dipped galvanized and powdercoated.

2.2 WELDING MATERIALS, FASTENERS, AND ANCHORS

A. Welding Electrodes and Filler Metal: Provide type and alloy of filler metal and electrodes as recommended by producer of metal to be welded and as required for color match, strength, and compatibility in fabricated items.

B. Fasteners for Anchoring Railings to Other Construction: Select fasteners of the type, grade, and class required to produce connections that are suitable for anchoring railings to other types of construction indicated and capable of withstanding design loadings.

1. For steel railings and fittings, use plated fasteners complying with ASTM B 633, Class Fe/Zn 25 for electrodeposited zinc coating.

C. Cast-in-Place and Postinstalled Anchors: Anchors of type indicated below, fabricated from corrosion-resistant materials, capable of sustaining, without failure, a load equal to 6 times the load imposed when installed in unit masonry and equal to 4 times the load imposed when installed in concrete, as determined by testing per ASTM E 488, conducted by a qualified, independent testing agency.

2. Expansion anchors.

2.3 COATING

A. Powder coat rails as indicated on drawings. See “POWDER COATING FOR EXTERIOR HANDRAILS” specification.

2.4 GROUT AND ANCHORING CEMENT
A. Nonshrink, Nonmetallic Grout: Premixed, factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout specifically recommended by manufacturer for interior and exterior applications.

2.5 FABRICATION

A. General: Fabricate handrails and railing systems to comply with requirements indicated for design, dimensions, details, finish, and member sizes, including wall thickness of hollow members, post spacings, and anchorage, but not less than those required to support structural loads.

B. Assemble handrails and railing systems in the shop to the greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.

C. Form changes in direction of members as follows:

1. By radius bends of radius indicated as required to achieve true, consistent radii.
2. By insertion of prefabricated flush elbow fittings welded and ground smooth.
3. By any method indicated above, applicable to change of direction involved. No miters will be accepted

D. Form simple and compound curves by bending pipe in jigs to produce uniform curvature for each repetitive configuration required; maintain cylindrical cross section of pipe throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of pipe.

E. Welded Connections: Fabricate handrails and railing systems for connection of members by welding. For connections made during fabrication, weld corners and seams continuously to comply with the following:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove welding flux immediately.
4. At tee and cross intersections, cope ends of intersecting members to fit contour of pipe or tube to which end is joined, and weld all around.
5. At exposed connections, finish exposed welds and surfaces smooth and blended so that no roughness shows after finishing and welded surface matches contours of adjoining surfaces.
F. Brackets, Flanges, Fittings, and Anchors: Provide manufacturer's standard wall brackets, flanges, miscellaneous fittings, and anchors to interconnect handrail and railing system members to other construction as indicated to produce aesthetic effects detailed.

G. Shear and punch metals cleanly and accurately. Remove burrs from exposed cut edges.

H. Ease exposed edges to a radius of approximately 1/32 inch (1 mm), unless otherwise indicated. Form bent-metal corners to the smallest radius possible without causing grain separation or otherwise impairing work.

I. Cut, reinforce, drill, and tap components, as indicated, to receive finish hardware, screws, and similar items.

J. Provide weep holes, or another means to evacuate entrapped water, in hollow sections of railing members that are exposed to moisture from condensation or other sources.

2.6 FINISHES, GENERAL

A. Provide all components with finish matching appearance of handrails and railing systems.

2.7 STEEL FINISHES

A. Fill vent and drain holes that will be exposed in the finished Work, unless indicated to remain as weep holes, by plugging with zinc solder and filing off smooth.

B. All exterior railings shall be powder coated over hot dipped galvanized steel. See “Powder Coating for Exterior Handrails” specification.

PART 3 - EXECUTION

3.1 PREPARATION

A. Coordinate setting drawings, diagrams, templates, instructions, and directions for installing anchorages, such as sleeves, concrete inserts, anchor bolts, and miscellaneous items having integral anchors, that are to be embedded in concrete as masonry construction. Coordinate delivery of such items to Project site.

3.2 INSTALLATION, GENERAL

A. Fit exposed connections accurately together to form tight, hairline joints.

B. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing handrails and railing systems. Set handrails and railing systems accurately in location, alignment, and elevation, measured from established lines and levels and free
from rack.

1. Do not weld, cut, or abrade surfaces of handrails and railing components that have been coated or finished after fabrication and are intended for field connection by mechanical or other means without further cutting or fitting.
2. Set posts plumb within a tolerance of 1/4 inch in 12 feet (2 mm in 1 m).
3. Align rails so that variations from level for horizontal members and from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet (2 mm in 1 m).

C. Field Welding: Comply with the following requirements:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove welding flux immediately.
4. At exposed connections, finish exposed welds and surfaces smooth and blended so that no roughness shows after finishing, and welded surface matches contours of adjoining surfaces.

D. Adjust handrails and railing systems prior to anchoring to ensure matching alignment at abutting joints. Space posts at interval indicated but not less than that required by design loadings.

E. Fastening to In-Place Construction: Provide anchorage devices and fasteners where necessary for securing handrails and railing systems and for properly transferring loads to in-place construction.

3.3 RAILING CONNECTIONS

A. Welded Connections: Use fully welded joints for permanently connecting railing components by welding. Cope or butt components to provide 100 percent contact, or use fittings designed for this purpose.

B. Expansion Joints: Install expansion joints at locations indicated but not further apart than required to accommodate thermal movement. Provide slip-joint internal sleeve extending 2 inches (50 mm) beyond joint on either side; fasten internal sleeve securely to one side; locate joint within 6 inches (150 mm) of post.

3.4 TERMINATING RAIL ENDS

A. Anchor rail ends into railing posts as shown on drawings.

3.5 ADJUSTING AND CLEANING
A. Clean by washing thoroughly with clean water and soap, followed by rinsing with clean water.

B. Touchup Coating / Painting: Immediately after erection, clean field welds, bolted connections, and repair exposed area per “Powder Coating for Exterior Handrails” specification.

3.6 PROTECTION

A. Protect finishes of handrails and railing systems from damage during construction period with temporary protective coverings approved by railing manufacturer. Remove protective coverings at time of Substantial Completion.

B. Restore finishes damaged during installation and construction period so that no evidence remains of correction work. Return items that cannot be refinished in the field to the shop; make required alterations and refinish entire unit, or provide new units.

END OF SECTION
POWDER COATING FOR EXTERIOR HANDRAILS

1. SCOPE:
   A. This specification covers the surface preparation, application and repair of powder coating material over hot dipped galvanized steel surfaces.

2. MATERIALS:
   A. Galvanizing:
      All materials to be powder coated shall be galvanized in accordance with ASTM A 123. Only the dry-kettle (pre-fluxing) process shall be used. The material shall not be water or chromate quenched. Galvanized materials to be powder coated shall be air cooled only. An American Galvanizers Association trained Master Galvanizer shall be on the premises during the hot dipped galvanizing process.

   B. Powder:
      Powder coating material shall be a thermosetting, durable, TGIC polyester powder of a degassing grade. Such coating powder must be recommended by its manufacturer for use over hot dipped galvanizing. The coating powder's particle size distribution shall be recommended by its manufacturer to produce the best results for powder coating components under this specification.

   C. Powder Coat Color:
      Powder Coat Color to be custom color blend to match pre-finished aluminum canopy. Custom color shall be included in bid – final color selection will be by Owner and shall be at no additional cost.

3. SURFACE PREPARATION
   A. The zinc surface shall be prepared for powder coat application using a multistage system employing appropriate cleaners and imparting a phosphate conversion coat to provide an appropriate substrate for the powder coat material. During the cleaning process, water rinses shall be used as appropriate between stages to clean the items and prepare them for the subsequent stages. Water for the rinses, unless specified elsewhere shall be potable with a hardness not to be more than 250 ppm as CaCO3 and a combined chloride and sulfate level less than 100 ppm.

   B. Surface Defects:
      All drainage spikes, tears, high spots, protrusions or other surface defects shall be removed using hand or power tools. The zinc shall be removed until it is level with the surrounding area. Such operations shall not remove the galvanized coating below the thickness allowed by ASTM A 123. Thickness of the galvanizing shall be verified using a properly calibrated magnetic thickness gauge as per ASTM E 376. Any item falling below the required zinc thickness, before or after removal of any high spots, shall be repaired in accordance with Practice A 780.

   C. Surface Cleaning:
      The galvanized surface shall be clean and free of oils and grease before they are powder coated. These shall be removed by use of an aqueous alkaline solution and/or hand or power tool cleaning. Subsequent to alkaline/power cleaning, trace zinc oxide will be removed by a mild acidic solution.
      - An alkaline solution, pH in the range of 11 to 12 may be used to remove traces of oil, grease, or dirt. The alkaline solution shall not have a pH exceeding 13. After cleaning the piece shall be rinsed thoroughly in water under pressure.
· Hand or power tool cleaning may be used to clean light deposits of zinc reaction products such as wet storage stain, as specified to SSPC Surface Preparation Specification 2 or 3 as appropriate.
· An acidic solution with a pH of 3.5 to 4.5 shall be sprayed onto the item to remove residual zinc oxide.

D. Surface Profiling:
The galvanized surface shall be profiled to promote proper powder coating adhesion. This shall be accomplished by applying a phosphate treatment to create a protective crystalline phosphate conversion coating on the zinc surface. The coating shall have a coating weight between 20 to 70 mg/ft².

E. Final Rinse:
To ensure the most optimum performance possible, a final rinse of de-mineralized water shall be applied as a final rinse prior to sealing. This stage will remove any un-reacted phosphate and other contaminants.

F. Sealing:
After the final rinse, a sealer shall be applied to improve the corrosion performance of the system. The sealer shall be of a non-chrome formulation. The sealer shall passivate the phosphate conversion coating of the substrate to improve powder coating adhesion characteristics.

4. POWDER COAT APPLICATION

A. Pre-baking:
Following phosphating all items to be powder coated shall be placed in an oven capable of maintaining a temperature of 500°F. Specimens shall be baked at a temperature 25°F above the normal cure temperature for the powder that will be employed. The specimens shall remain in the oven for a minimum of 20 minutes after having equalized to the temperature of the oven to remove any residual moisture from the preparation phase, and insure expulsion of any entrapped gases or moisture. Typically, specimens are pre-baked for one hour.

B. Powder Coat Application:
Polyester powder shall be applied through electrostatic/tribomatic application guns. The powder shall be applied in multiple coats. The first coat shall have a thickness of 1.5 to 3 mils. Each intermediate coat shall be partially cured at a temperature of 350°F to insure adhesion. Subsequent coats shall be then applied in 1.5 to 3 mil increments to bring the specimen to its final (cured) thickness as required by the customer specification. In no case will the final (cured) thickness be less than 5 mils.

C. Cure:
The powder coating shall be cured by heating the coated specimens to a temperature and duration specified by the powder coat material manufacturer to insure sufficient curing of the powder coating material. The resulting coating shall be uniform in color and free of pinholes, blisters, and other surface defects. Correct cure shall be checked by a solvent rub test.

4. PROPERTIES OF CURED COATING

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<thead>
<tr>
<th>Property</th>
<th>Specification</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Minimum film thickness (TGIC)</td>
<td></td>
<td>5.0 mils (120 microns)</td>
</tr>
<tr>
<td>Direct impact</td>
<td>ASTM D 2794</td>
<td>160 in./lb (9.0 m/kg)</td>
</tr>
<tr>
<td>Reverse impact</td>
<td>ASTM D 2794</td>
<td>160 in./lb (9.0 m/kg)</td>
</tr>
<tr>
<td>Pencil hardness (scratch/gouge)</td>
<td>ASTM D 383</td>
<td>2H</td>
</tr>
</tbody>
</table>
5. REPAIR OF POWDER COATED MATERIAL

A. Damage shall be defined as exposed galvanized coating.

B. Damaged coatings less than 1/2 of 1% of the surface area shall be acceptable for repair. Damage greater than that amount shall be recoated. Final finish shall be damage free FOB the plant.

C. Coatings to be repaired shall be touched up as recommended by the galvanizer and the powder coating supplier. Touch up and/or field repair can be accomplished using either powder coating material or paint. Typically acrylic based paint as recommended by the powder coating material manufacturer, applied either by spray or brushed on liquid is used for touch up and repair of the powder coating.

END OF SECTION
PART 1 - GENERAL

1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract apply to this Section.
B. Related Sections include the following:
   1. Section for Water Repellents
   2. Section for Flashing
   3. Section for Joint Sealant

1.2 SUMMARY
A. This Section includes the following:
   1. Architectural precast concrete trim, sills, caps, and load-bearing lintel units. Finish shall be smooth and color to be selected by owner from manufacturer’s full color selection.

1.3 DEFINITION
A. Design Reference Sample: Sample of approved architectural precast concrete color, finish and texture, preapproved by Architect.

1.4 PERFORMANCE REQUIREMENTS
A. Structural Performance: Provide architectural precast concrete units and connections capable of withstanding the following design loads within limits and under conditions indicated:
   1. Loads: As indicated on drawings.
   2. Design framing system and connections to maintain clearances at openings, to allow for fabrication and construction tolerances, to accommodate live-load deflection, shrinkage and creep of primary building structure, and other building movements.
   3. Thermal Movements: Provide for in-plane thermal movements resulting from annual ambient temperature changes of 80 deg F (26 deg C).

1.5 SUBMITTALS
A. Product Data: For each type of product indicated.
B. Design Mixtures: For each precast concrete mixture. Include compressive strength and water-absorption tests.

C. Shop Drawings: Detail fabrication and installation of architectural precast concrete units. Indicate locations, plans, elevations, dimensions, shapes, and cross sections of each unit. Indicate joints, reveals, and extent and location of each surface finish.

1. Indicate separate face and backup mixture locations and thicknesses.
2. Indicate welded connections by AWS standard symbols. Detail loose and cast-in hardware and connections.
3. Indicate locations, tolerances, and details of anchorage devices to be embedded in or attached to structure or other construction.
4. Indicate locations, extent, and treatment of dry joints if two-stage casting is proposed.
5. Indicate location of each architectural precast concrete unit by same identification mark placed on unit.
6. Indicate relationship of architectural precast concrete units to adjacent materials.
7. Design Modifications: If design modifications are proposed to meet performance requirements and field conditions, submit design calculations and Shop Drawings. Do not adversely affect the appearance, durability, or strength of units when modifying details or materials and maintain the general design concept.
8. Comprehensive engineering analysis signed and sealed by the qualified professional engineer responsible for its preparation. Show governing panel types, connections, and types of reinforcement, including special reinforcement. Indicate location, type, magnitude, and direction of loads imposed on the building structural frame from architectural precast concrete.

D. Samples: For each type of finish indicated on exposed surfaces of architectural precast concrete units, in sets of 3, illustrating full range of finish, color, and texture variations expected; approximately 12 by 12 by 2 inches (300 by 300 by 50 mm).

1. When other faces of precast concrete unit are exposed, include Samples illustrating workmanship, color, and texture of backup concrete as well as facing concrete.
2. Samples for each brick unit required, showing full range of color and texture expected. Include Sample showing color and texture of joint treatment.
   a. Grout Samples for Initial Selection: Color charts consisting of actual sections of grout showing manufacturer's full range of colors.

E. Welding certificates.

F. Qualification Data: For fabricator.

G. Material Test Reports: For aggregates.

H. Material Certificates: For the following items, signed by manufacturers:

1. Cementitious materials.
2. Reinforcing materials.
3. Admixtures.
1.6 QUALITY ASSURANCE

A. Fabricator Qualifications: A firm that assumes responsibility for engineering architectural precast concrete units to comply with performance requirements. This responsibility includes preparation of Shop Drawings and comprehensive engineering analysis by a qualified professional engineer.

B. Design Standards: Comply with ACI 318 (ACI 318M) and design recommendations of PCI MNL 120, "PCI Design Handbook - Precast and Prestressed Concrete," or Architectural Precast Association (APA) Plant Certification Program equivalent applicable to types of architectural precast concrete units indicated.

C. Quality-Control Standard: For manufacturing procedures and testing requirements, quality-control recommendations, and dimensional tolerances for types of units required, comply with PCI MNL 117, "Manual for Quality Control for Plants and Production of Architectural Precast Concrete Products or Architectural Precast Association (APA) Plant Certification Program."


E. Sample Units: After sample approval and before fabricating architectural precast concrete units, produce a minimum of 2 sample units approximately 12” long for each sill and lintel in area for review by Architect. Incorporate full-scale details of architectural features, finishes, textures, and transitions in sample panels.

F. Preconstruction Mockup: Provide trim piece of architectural precast in unit masonry mockup.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver architectural precast concrete units in such quantities and at such times to limit unloading units temporarily on the ground.

B. Support units during shipment on nonstaining shock-absorbing material.

C. Store units with adequate dunnage and bracing and protect units to prevent contact with soil, to prevent staining, and to prevent cracking, distortion, warping or other physical damage.

D. Place stored units so identification marks are clearly visible, and units can be inspected.

E. Handle and transport units in a position consistent with their shape and design in order to avoid excessive stresses which would cause cracking or damage.

F. Lift and support units only at designated points shown on Shop Drawings.

1.8 SEQUENCING

A. Furnish loose connection hardware and anchorage items to be embedded in or attached to other construction without delaying the Work. Provide locations, setting diagrams, templates, instructions, and directions, as required, for installation.
PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Available Fabricators: Subject to compliance with requirements, fabricators offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Baxter Precast Concrete.
2. Reading Rock
3. Edwards Cast Stone Company

or approved equal.

2.2 REINFORCING MATERIALS

A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (Grade 420), deformed.

B. Low-Alloy-Steel Reinforcing Bars: ASTM A 706/A 706M, deformed.

C. Galvanized Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (Grade 420), deformed bars, ASTM A 767/A 767M, Class II zinc coated, hot-dip galvanized.

D. Steel Bar Mats: ASTM A 184/A 184M, fabricated from ASTM A 615/A 615M, Grade 60 (Grade 420), deformed bars, assembled with clips.

E. Plain-Steel Welded Wire Reinforcement: ASTM A 185, fabricated from galvanized steel wire into flat sheets.

F. Supports: Suspend reinforcement from back of mold or use bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place according to PCI MNL 117.

2.3 CONCRETE MATERIALS

A. Portland Cement: ASTM C 150, Type I or Type III, gray, unless otherwise indicated.

1. For surfaces exposed to view in finished structure, mix gray with white cement and required pigments to match the owner’s color selection.

B. Normal-Weight Aggregates: Except as modified by PCI MNL 117, ASTM C 33, with coarse aggregates complying with Class 5S. Stockpile fine and coarse aggregates for each type of exposed finish from a single source (pit or quarry) for Project.

1. Face-Mixture-Coarse Aggregates: Selected, hard, and durable; free of material that reacts with cement or causes staining; to match selected finish sample.
2. Face-Mixture-Fine Aggregates: Selected, natural or manufactured sand of same material as coarse aggregate, unless otherwise approved by Architect.

C. Lightweight Aggregates: Except as modified by PCI MNL 117, ASTM C 330, with absorption less than 11 percent.

D. Coloring Admixture: ASTM C 979, synthetic or natural mineral-oxide pigments or colored water-reducing admixtures, temperature stable, and nonfading.

E. Water: Potable; free from deleterious material that may affect color stability, setting, or strength of concrete and complying with chemical limits of PCI MNL 117.

F. Air-Entraining Admixture: ASTM C 260, certified by manufacturer to be compatible with other required admixtures.

G. Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures and to not contain calcium chloride, or more than 0.15 percent chloride ions or other salts by weight of admixture.

1. Water-Reducing Admixtures: ASTM C 494/C 494M, Type A.
2. Retarding Admixture: ASTM C 494/C 494M, Type B.
3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
4. Water-Reducing and Accelerating Admixture: ASTM C 494/C 494M, Type E.
5. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
6. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
7. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017 M.

2.4 STAINLESS-STEEL CONNECTION MATERIALS

A. Stainless-Steel Plate: ASTM A 666, Type 304, of grade suitable for application.

B. Stainless-Steel Bolts and Studs: ASTM F 593, Alloy 304 or 316, hex-head bolts and studs; stainless-steel nuts; and flat, stainless-steel washers.

1. Lubricate threaded parts of stainless-steel bolts with an antiseize thread lubricant during assembly.

C. Stainless-Steel-Headed Studs: ASTM A 276, with minimum mechanical properties of PCI MNL 117, Table 3.2.3.

2.5 ACCESSORIES

A. Reglets: Stainless steel, Type 302 or 304, felt or fiber filled, or with face opening of slots covered.

B. Precast Accessories: Provide clips, hangers, plastic or steel shims, and other accessories required to install architectural precast concrete units.

C. Reinforcement per fabricator as required for structural loading.
2.6 GROUT MATERIALS

A. Sand-Cement Grout: Portland cement, ASTM C 150, Type I, and clean, natural sand, ASTM C 144 or ASTM C 404. Mix at ratio of 1 part cement to 2-1/2 parts sand, by volume, with minimum water required for placement and hydration.

B. Nonmetallic, Nonshrink Grout: Premixed, nonmetallic, noncorrosive, nonstaining grout containing selected silica sands, portland cement, shrinkage-compensating agents, plasticizing and water-reducing agents, complying with ASTM C 1107, Grade A for drypack and Grades B and C for flowable grout and of consistency suitable for application within a 30-minute working time.

C. Epoxy-Resin Grout: Two-component, mineral-filled epoxy resin; ASTM C 881/C 881M, of type, grade, and class to suit requirements.

2.7 CONCRETE MIXTURES

A. Prepare design mixtures for each type of precast concrete required.

1. Limit use of fly ash and silica fume to 20 percent of portland cement by weight; limit metakaolin and silica fume to 10 percent of portland cement by weight.

B. Design mixtures may be prepared by a qualified independent testing agency or by qualified precast plant personnel at architectural precast concrete fabricator's option.

C. Limit water-soluble chloride ions to maximum percentage by weight of cement permitted by ACI 318 (ACI 318M) or PCI MNL 117 when tested according to ASTM C 1218/C 1218M.

D. Normal-Weight Concrete Mixtures: Proportion by either laboratory trial batch or field test data methods according to ACI 211.1, with materials to be used on Project, to provide normal-weight concrete with the following properties:

1. Compressive Strength (28 Days): 5000 psi (34.5 MPa) minimum.
2. Maximum Water-Cementitious Materials Ratio: 0.45.

E. Water Absorption: 6 percent by weight or 14 percent by volume, tested according to PCI MNL 117.

F. Lightweight Concrete Backup Mixtures: Proportion mixtures by either laboratory trial batch or field test data methods according to ACI 211.2, with materials to be used on Project, to provide lightweight concrete with the following properties:

1. Compressive Strength (28 Days): 5000 psi (34.5 MPa).
2. Unit Weight: Calculated equilibrium unit weight of 115 lb/cu. ft. (1842 kg/cu. m), plus or minus 3 lb/cu. ft. (48 kg/cu. m), according to ASTM C 567.

G. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having an air content complying with PCI MNL 117.

H. When included in design mixtures, add other admixtures to concrete mixtures according to manufacturer's written instructions.
2.8 MOLD FABRICATION

A. Molds: Accurately construct molds, mortar tight, of sufficient strength to withstand pressures due to concrete-placement operations and temperature changes and for prestressing and detensioning operations. Coat contact surfaces of molds with release agent before reinforcement is placed. Avoid contamination of reinforcement and prestressing tendons by release agent.

B. Maintain molds to provide completed architectural precast concrete units of shapes, lines, and dimensions indicated, within fabrication tolerances specified.

2.9 FABRICATION

A. Cast-in Anchors, Inserts, Plates, Angles, and Other Anchorage Hardware: Fabricate anchorage hardware with sufficient anchorage and embedment to comply with design requirements. Accurately position for attachment of loose hardware, and secure in place during precasting operations. Locate anchorage hardware where it does not affect position of main reinforcement or concrete placement.

1. Weld-headed studs and deformed bar anchors used for anchorage according to AWS D1.1/D1.1M and AWS C5.4, "Recommended Practices for Stud Welding."

B. Furnish loose hardware items including steel plates, clip angles, seat angles, anchors, dowels, cramps, hangers, and other hardware shapes for securing architectural precast concrete units to supporting and adjacent construction.

C. Cast-in reglets, slots, holes, and other accessories in architectural precast concrete units as indicated on the Contract Drawings.

D. Cast-in openings larger than 10 inches (250 mm) in any dimension. Do not drill or cut openings or prestressing strand without Architect's approval.

E. Reinforcement: Comply with recommendations in PCI MNL 117 for fabricating, placing, and supporting reinforcement.

1. Clean reinforcement of loose rust and mill scale, earth, and other materials that reduce or destroy the bond with concrete. When damage to epoxy-coated reinforcing exceeds limits specified in ASTM A 775/A 775M, repair with patching material compatible with coating material and epoxy coat bar ends after cutting.

2. Accurately position, support, and secure reinforcement against displacement during concrete-placement and consolidation operations. Completely conceal support devices to prevent exposure on finished surfaces.

3. Place reinforcement to maintain at least 3/4-inch (19-mm) minimum coverage. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position while placing concrete. Direct wire tie ends away from finished, exposed concrete surfaces.

4. Place reinforcing steel and prestressing strand to maintain at least 3/4-inch (19-mm) minimum concrete cover. Increase cover requirements for reinforcing steel to 1-1/2 inches (38 mm) when units are exposed to corrosive environment or severe exposure conditions. Arrange, space, and securely tie bars and bar supports to hold reinforcement.
in position while placing concrete. Direct wire tie ends away from finished, exposed concrete surfaces.

5. Install welded wire fabric in lengths as long as practicable. Lap adjoining pieces at least one full mesh spacing and wire tie laps, where required by design. Offset laps of adjoining widths to prevent continuous laps in either direction.

F. Reinforce architectural precast concrete units to resist handling, transportation, and erection stresses.

G. Comply with requirements in PCI MNL 117 and requirements in this Section for measuring, mixing, transporting, and placing concrete. After concrete batching, no additional water may be added.

H. Place face mixture to a minimum thickness after consolidation of the greater of 1 inch (25 mm) or 1.5 times the maximum aggregate size, but not less than the minimum reinforcing cover specified.

I. Place concrete in a continuous operation to prevent seams or planes of weakness from forming in precast concrete units.
   1. Place backup concrete mixture to ensure bond with face-mixture concrete.

J. Thoroughly consolidate placed concrete by internal and external vibration without dislocating or damaging reinforcement and built-in items, and minimize pour lines, honeycombing, or entrapped air on surfaces. Use equipment and procedures complying with PCI MNL 117.
   1. Place self-consolidating concrete without vibration according to PCI TR-6, "Interim Guidelines for the Use of Self-Consolidating Concrete in Precast/Prestressed Concrete Institute Member Plants."

K. Comply with PCI MNL 117 for hot- and cold-weather concrete placement.

L. Identify pickup points of architectural precast concrete units and orientation in structure with permanent markings, complying with markings indicated on Shop Drawings. Imprint or permanently mark casting date on each architectural precast concrete unit on a surface that will not show in finished structure.

M. Cure concrete, according to requirements in PCI MNL 117, by moisture retention without heat or by accelerated heat curing using low-pressure live steam or radiant heat and moisture. Cure units until compressive strength is high enough to ensure that stripping does not have an effect on performance or appearance of final product.

N. Discard and replace architectural precast concrete units that do not comply with requirements, including structural, manufacturing tolerance, and appearance, unless repairs meet requirements in PCI MNL 117 and Architect's approval.
2.10 FINISHES

A. Unit faces shall be free of joint marks, grain, and other obvious defects. Corners, including false joints shall be uniform, straight, and sharp. Finish exposed-face surfaces of architectural precast concrete units per owner’s color selection.

2.11 SOURCE QUALITY CONTROL

A. Quality-Control Testing: Test and inspect precast concrete according to PCI MNL 117 requirements. If using self-consolidating concrete, also test and inspect according to PCI TR-6, "Interim Guidelines for the Use of Self-Consolidating Concrete in Precast/Prestressed Concrete Institute Member Plants."

B. Strength of precast concrete units will be considered deficient if units fail to comply with ACI 318 (ACI 318M) requirements for concrete strength.

C. Testing: If there is evidence that strength of precast concrete units may be deficient or may not comply with ACI 318 (ACI 318M) requirements, precaster will employ an independent testing agency to obtain, prepare, and test cores drilled from hardened concrete to determine compressive strength according to ASTM C 42/C 42M.

1. A minimum of three representative cores will be taken from units of suspect strength, from locations directed by Architect.
2. Cores will be tested in an air-dry condition.
3. Strength of concrete for each series of 3 cores will be considered satisfactory if average compressive strength is equal to at least 85 percent of 28-day design compressive strength and no single core is less than 75 percent of 28-day design compressive strength.
4. Test results will be made in writing on same day that tests are performed, with copies to Architect, Contractor, and precast concrete fabricator. Test reports will include the following:
   a. Project identification name and number.
   b. Date when tests were performed.
   c. Name of precast concrete fabricator.
   d. Name of concrete testing agency.
   e. Identification letter, name, and type of precast concrete unit(s) represented by core tests; design compressive strength; type of break; compressive strength at breaks, corrected for length-diameter ratio; and direction of applied load to core in relation to horizontal plane of concrete as placed.

D. Patching: If core test results are satisfactory and precast concrete units comply with requirements, clean and dampen core holes and solidly fill with precast concrete mixture that has no coarse aggregate, and finish to match adjacent precast concrete surfaces on concealed face.
PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine supporting structural frame or foundation and conditions for compliance with requirements for installation tolerances, true and level bearing surfaces, and other conditions affecting performance.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

C. Do not install precast concrete units until supporting cast-in-place building structural framing has attained minimum allowable design compressive strength or supporting steel or other structure is complete.

3.2 INSTALLATION

A. Install clips, hangers, bearing pads, and other accessories required for connecting architectural precast concrete units to supporting members and backup materials.

B. Refer to section 3.5 for installation tolerances and procedures.

C. Connect architectural precast concrete units in position by bolting, welding, grouting, or as otherwise indicated on Shop Drawings. Remove temporary shims, wedges, and spacers as soon as practical after connecting and grouting are completed.

   1. Do not permit connections to disrupt continuity of roof flashing.

D. Welding: Comply with applicable AWS D1.1/D1.1M and AWS D1.4 for welding, welding electrodes, appearance, quality of welds, and methods used in correcting welding work.

E. At bolted connections, use lock washers, tack welding, or other approved means to prevent loosening of nuts after final adjustment.

   1. Where slotted connections are used, verify bolt position and tightness. For sliding connections, properly secure bolt but allow bolt to move within connection slot. For friction connections, apply specified bolt torque and check 25 percent of bolts at random by calibrated torque wrench.

F. Grouting Connections: Grout connections where required or indicated. Retain grout in place until hard enough to support itself. Pack spaces with stiff grout material, tamping until voids are completely filled. Place grout to finish smooth, level, and plumb with adjacent concrete surfaces. Keep grouted joints damp for not less than 24 hours after initial set. Promptly remove grout material from exposed surfaces before it affects finishes or hardens.

3.3 REPAIRS

A. Repair architectural precast concrete units if permitted by Architect. The Architect reserves the right to reject repaired units that do not comply with requirements.
B. Mix patching materials and repair units so cured patches blend with color, texture, and uniformity of adjacent exposed surfaces and show no apparent line of demarcation between original and repaired work, when viewed in typical daylight illumination from a distance of 20 feet (6 m).

C. Prepare and repair damaged galvanized coatings with galvanizing repair paint according to ASTM A 780.

D. Wire brush, clean, and paint damaged prime-painted components with same type of shop primer.

E. Remove and replace damaged architectural precast concrete units when repairs do not comply with requirements.

3.4 CLEANING

A. Clean surfaces of precast concrete units exposed to view.

B. Clean mortar, plaster, fireproofing, weld slag, and other deleterious material from concrete surfaces and adjacent materials immediately.

C. Clean exposed surfaces of precast concrete units after erection and completion of joint treatment to remove weld marks, other markings, dirt, and stains.

1. Perform cleaning procedures, if necessary, according to precast concrete fabricator's recommendations. Clean soiled precast concrete surfaces with detergent and water, using stiff fiber brushes and sponges, and rinse with clean water. Protect other work from staining or damage due to cleaning operations.

2. Do not use cleaning materials or processes that could change the appearance of exposed concrete finishes or damage adjacent materials.

3.5 TOLERANCES

A. Dimensions and Locations of Elements:

1. For dimensions in cross section or elevation do not vary by more than plus 1/2 inch (12 mm) or minus 1/4 inch (6 mm).

2. For location of elements in plan do not vary from that indicated by more than plus or minus 1/2 inch (12 mm).

3. For location of elements in elevation do not vary from that indicated by more than plus or minus 1/4 inch (6 mm) in a story height or 1/2 inch (12 mm) total.

B. Lines and Levels:

1. For bed joints and top surfaces of bearing walls do not vary from level by more than 1/4 inch in 10 feet (6 mm in 3 m), or 1/2 inch (12 mm) maximum.

2. For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by more than 1/8 inch in 10 feet (3 mm in 3 m), 1/4 inch in 20 feet (6 mm in 6 m), or 1/2 inch (12 mm) maximum.
3. For vertical lines and surfaces do not vary from plumb by more than 1/4 inch in 10 feet (6 mm in 3 m), 3/8 inch in 20 feet (9 mm in 6 m), or 1/2 inch (12 mm) maximum.
4. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/8 inch in 10 feet (3 mm in 3 m), 1/4 inch in 20 feet (6 mm in 6 m), or 1/2 inch (12 mm) maximum.
5. For lines and surfaces do not vary from straight by more than 1/4 inch in 10 feet (6 mm in 3 m), 3/8 inch in 20 feet (9 mm in 6 m), or 1/2 inch (12 mm) maximum.
6. For vertical alignment of exposed head joints, do not vary from plumb by more than 1/4 inch in 10 feet (6 mm in 3 m), or 1/2 inch (12 mm) maximum.
7. For faces of adjacent exposed masonry units, do not vary from flush alignment by more than 1/16 inch (1.5 mm) except due to warpage of masonry units within tolerances specified for warpage of units.

C. Joints:

1. For bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch (3 mm), with a maximum thickness limited to 1/2 inch (12 mm).
2. For exposed bed joints, do not vary from bed-joint thickness of adjacent courses by more than 1/8 inch (3 mm).
3. For head and collar joints, do not vary from thickness indicated by more than plus 3/8 inch (9 mm) or minus 1/4 inch (6 mm).
4. For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch (3 mm). Do not vary from adjacent bed-joint and head-joint thicknesses by more than 1/8 inch (3 mm).
5. For exposed bed joints and head joints of stacked bond, do not vary from a straight line by more than 1/16 inch (1.5 mm) from one masonry unit to the next.

3.6 WATER REPELLENT

A. Treat all precast concrete with a water repellent per the “Water Repellents” specification.
MANUFACTURED STONE MASONRY

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Manufactured stone veneer, manufactured stone trim, and application materials.

1.02 REFERENCES

A. American Concrete Institute (ACI).

B. American Society for Testing and Materials (ASTM):
   4. ASTM C 192, Standard Practice for Making and Curing Concrete Test Specimens in the Laboratory.

C. Building Materials Evaluation Commission

D. International Code Council (ICC):
   1. ES Report.
   2. UBC Standard No. 14-1, Kraft Waterproof Building Paper.

E. Masonry Standards Joint Committee (MSJC) of The Masonry Society.

F. Underwriters Laboratories (UL):
   1. Listing in Material Approval Guide.

1.03 SUBMITTALS

A. submit following items:
   1. Product Data: Manufactured masonry and application materials including mortar color charts, and weather resistant barrier.
   2. Samples: Panel containing full-size samples of specified manufactured masonry showing full range of colors and textures complete with specified mortar.
a. Actual size of masonry sample approximately 12 by 12 inches (300 by 300 mm).

3. Quality Assurance/Control Submittals:
   a. Qualifications:
      1) Proof of manufacturer qualifications.
      2) Proof of installer qualifications.
   c. Test Reports for physical properties.
   d. Manufacturer’s installation instructions.

B. Closeout Submittals: submit following items:
   1. Maintenance Instructions.
   2. Special Warranties.

1.04 QUALITY ASSURANCE

A. Qualifications:
   1. Manufacturer Qualifications:
      a. Minimum five years experience in producing manufactured masonry.
      b. Member of following organizations:
         1) MSJC.
         2) ACI.
         3) ASTM.
   2. Installer Qualifications: Company with documented experience in installation of manufactured masonry including minimum 5 projects within 400 mile radius of this Project.

B. Certifications:
   2. UL: Listing in Material Approval Guide.

C. Field Samples: Provide in a location selected by Architect showing representative sample of installed product including penetration and termination details, corner detail, control joint, and mortar color and tooling.
   1. Minimum Size: 4 by 4 feet (1200 by 1200 mm)
   2. Approved field samples may remain as part of completed Work.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Follow manufacturer’s instructions.

B. Store moisture-sensitive materials in weather protected enclosures.

1.06 PROJECT/SITE CONDITIONS

A. Environmental Requirements: Maintain materials and ambient temperature in area of installation at minimum 40 degrees F (4 degrees C) prior to, during, and for 48 hours following installation.
1.07 WARRANTY
   A. Special Warranty: Provide manufacturer's standard limited warranty against defects in manufacturing for a period of 50 years following date of Substantial Completion.

1.08 MAINTENANCE
   A. Extra Materials: Furnish extra manufactured stone material in a variety of shapes and sizes in quantity equal to three percent of the installed stone.

PART 2 - PRODUCTS

2.01 MANUFACTURERS
   Basis of Design Product: Match Existing walls along river walk, located on the north side of the site, adjacent to the Ohio river in color, patter, and texture.

   A. Mountain Stone Products
      4301 Industrial Drive
      Bowling Green, KY 42101
      Tel: (800) 781-0277
      Fax: (270) 796-6131
      Website: www.mtstone.com

   B. Owens Corning
      One Owens Corning Parkway
      Toledo, OH 43659
      Tel: (800) 255-1727
      Fax: (866) 213-3037
      Website: www.culturedstone.com

   C. Coronado Stone Products
      2806 Grandview Dr.
      Simpsonville, SC 29680
      Tel: (864) 962-1221
      Fax: (864) 962-1873
      Website: www.coronado.com

   D. Eldorado Stone
      1370 Grand Avenue, Building B
      San Marcos, CA 92078
      Tel: (800) 925-1491
      Website: www.eldoradostone.com

or approved equal.

2.02 MANUFACTURED MASONRY MATERIALS
   A. Manufactured Stone Texture:
      1. Single texture from manufacturer's full range of textures and colors.

   B. Manufactured Masonry Physical Properties:
      1. Compressive Strength: ASTM C 192 and ASTM C39, 1800 psi (12.4 MPa), 5 specimen average, 1500 psi (10.3 MPa) minimum for individual unit.
      2. Bond Between Stone Unit, Type S Mortar, and Backing: ASTM C 482, 50 psi (345 kPa).
      3. Thermal Resistance: ASTM C 177, R-factor, 0.355 per inch (25.4 mm) of thickness.
      4. Freeze/Thaw: ASTM C 67, no disintegration and less than 3 percent weight loss.
      5. Fire Hazard Test, UL 723:
         a. Flame spread: 0.
b. Smoke Development: 0.
6. Maximum Veneer Unit Weight: 15 psf (73 kg/m$^2$).

2.03 RELATED MATERIALS

A. Weather Resistant Barrier: DuPont Tyvek Commercial Wrap D or approved equal.

B. Metal Lath: 2.5 lb (1.4 kg/m$^2$) galvanized expanded metal lath.

C. Fasteners:
   1. Minimum 7/16 inch (11.1 mm) head diameter, corrosion-resistant, self-drilling, self tapping, pancake head screws of sufficient length to penetrate 3/8 inch (10 mm) minimum into the concrete wall.

D. Mortar: Premixed Type N or mortar mixed using components and proportions following manufactured masonry manufacturer's installation instructions. Comply with ASTM C 270.
   1. Mortar Color: match existing.

E. Water repellent: Refer to specification.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine substrates upon which manufactured masonry will be installed.

B. Coordinate with responsible entity to correct unsatisfactory conditions.

C. Commencement of work by installer is acceptance of substrate conditions.

3.02 PREPARATION

A. Protection: Prevent work from occurring on the opposite of walls to which manufactured masonry is applied during and for 48 hours following installation of the manufactured masonry.

B. Surface Preparation: Follow manufacturer's instructions designated below for the appropriate type of manufactured masonry and substrate.

3.03 INSTALLATION

A. Install manufactured stone in accordance with manufacturer's installation instructions using mortarless joints.

B. Install architectural trim products in accordance with manufacturer's installation instructions.

C. Install/Apply Related Materials specified above in accordance with type of substrate and manufactured masonry manufacturer's installation instructions.
3.04 CLEANING
   A. Clean manufactured masonry in accordance with manufacturer's installation instructions.

3.05 PROTECTION
   A. Protect finished work from rain during and for 48 hours following installation.
   B. Protect finished work from damage during remainder of construction period.

END OF SECTION
PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary
Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes sheet metal flashing and trim in the following categories:

   1. Metal flashing.
   2. Reglets.
   3. Copings.

B. Related Sections: The following Sections contain requirements that relate to this
Section:

   1. Sections for “Precast Concrete”
   2. Section "Joint Sealants" for elastomeric sealants.
   3. Section “Manufactured Stone Masonry”

1.3 PERFORMANCE REQUIREMENTS

A. General: Install sheet metal flashing and trim to withstand wind loads, structural
movement, thermally induced movement, and exposure to weather without failing.

1.4 SUBMITTALS

A. General: Submit each item in this Article according to the Conditions of the Contract
and Division 1 Specification Sections.

B. Shop Drawings of each item specified showing layout, profiles, methods of joining, and
anchorage details.

C. Samples of sheet metal flashing, trim, and accessory items, in the specified finish.
Where finish involves normal color and texture variations, include Sample sets
composed of 2 or more units showing the full range of variations expected.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Engage an experience Installer who has completed sheet metal
flashings and trim work similar in material, design, and extent to that indicated for this
Project and with a record of successful in-service performance.

1.6 PROJECT CONDITIONS
A. Coordinate Work of this Section with interfacing and adjoining Work for proper sequencing of each installation. Ensure best possible weather resistance, durability of Work, and protection of materials and finishes.

1.7 WARRANTY

A. Project Installation Guarantee: Submit written agreement, signed by the Installer and Contractor, guaranteeing to correct failures in product, workmanship and watertightness for a 2 year period from date of Substantial Completion without reducing or otherwise limiting other rights to correction which the Owner may have under the Contract Documents. Failure is defined to include faulty workmanship or product failure which leads to interruption of a watertight installation. The total system, no dollar limit guarantee, shall cover work of this section, including:

1. Metal flashings.
2. Reglets.

PART 2 - PRODUCTS

2.1 METALS

A. Aluminum: Alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated and with not less than the strength and durability of alloy and temper designated below:

1. Mill-Finish Aluminum Sheet: ASTM B 209 (ASTM B 209M), 3003-H14, with a minimum thickness of 0.032 inch (20 ga.), unless otherwise indicated.
2. Anodized Aluminum Sheet: ASTM B 209 (ASTM B 209M), 5005-H14, with a minimum thickness of 0.050 inch, 16 gage.
B. Galvanized Steel Sheet: ASTM A 526, G 90 (ASTM A 526M, Z 275), commercial quality, or ASTM A 527, G 90 (ASTM A 527M, Z 275), lock-forming quality, hot-dip galvanized steel sheet with 0.20 percent copper, mill phosphatized where indicated for field painting; not less than thickness specified.

C. Coil-Coated Galvanized Steel Sheet: Zinc-coated, commercial-quality steel sheet conforming to ASTM A 755, G 90 (ASTM A 755M, Z 275) coating designation, coil coated with high-performance fluoropolymer coating as specified in "Coil-Coated Galvanized Steel Sheet Finish" Article; not less than thickness specified. Provide strippable plastic protective film on prefinished surface.

2.2 REGLETS

A. General: Units of type, material, and profile indicated, formed to provide secure interlocking of separate reglet and counterflashing pieces and compatible with flashing indicated. Provide noncorrosive material.

B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Fry Reglet Corporation.
2. Hickman: W.P. Hickman Co.

or approved equal.

2.3 MISCELLANEOUS MATERIALS AND ACCESSORIES

A. Solder: ASTM B 32, Grade Sn50, used with rosin flux.

B. Fasteners: Same metal as sheet metal flashing or other noncorrosive metal as recommended by sheet metal manufacturer. Match finish of exposed heads with material being fastened.

C. Asphalt Mastic: SSPC-Paint 12, solvent-type asphalt mastic, nominally free of sulfur and containing no asbestos fibers, compounded for 15-mil (0.4-mm) dry film thickness per coat.

D. Mastic Sealant: Polyisobutylene; nonhardening, nonskinning, nondrying, nonmigrating sealant.

E. Elastomeric Sealant: Generic type recommended by sheet metal manufacturer and fabricator of components being sealed and complying with requirements for joint sealants as specified in Division 7 Section "Joint Sealants."

F. Epoxy Seam Sealer: 2-part, noncorrosive, aluminum seam-cementing compound, recommended by aluminum manufacturer for exterior and interior nonmoving joints, including riveted joints.
G. Adhesives: Type recommended by flashing sheet metal manufacturer for waterproof and weather-resistant seaming and adhesive application of flashing sheet metal.

H. Paper Slip Sheet: 5-lb/square (0.244 kg/sq. m) red rosin, sized building paper conforming to FS UU-B-790, Type I, Style 1b.

I. Polyethylene Underlayment: ASTM D 4397, minimum 6-mil- (0.15-mm-) thick black polyethylene film, resistant to decay when tested according to ASTM E 154.

J. Metal Accessories: Provide sheet metal clips, straps, anchoring devices, and similar accessory units as required for installation of Work, matching or compatible with material being installed; noncorrosive; size and thickness required for performance.

K. Roofing Cement: ASTM D 4586, Type I, asbestos free, asphalt based.

2.4 FABRICATION, GENERAL

A. Sheet Metal Fabrication Standard: Fabricate sheet metal flashing and trim to comply with recommendations of SMACNA's "Architectural Sheet Metal Manual" that apply to the design, dimensions, metal, and other characteristics of the item indicated.

B. Comply with details shown to fabricate sheet metal flashing and trim that fit substrates and result in waterproof and weather-resistant performance once installed. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.

C. Form exposed sheet metal Work that is without excessive oil canning, buckling, and tool marks and that is true to line and levels indicated, with exposed edges folded back to form hems.

D. Seams: Fabricate nonmoving seams in sheet metal with flat-lock seams. Tin edges to be seamed, form seams, and solder.

E. Seams: Fabricate nonmoving seams in aluminum with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints for additional strength.

F. Expansion Provisions: Space movement joints at maximum of 10 feet (3 m) with no joints allowed within 24 inches (610 mm) of corner or intersection. Where lapped or bayonet-type expansion provisions in Work cannot be used or would not be sufficiently weatherproof and waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with mastic sealant (concealed within joints).

G. Sealed Joints: Form nonexpansion, but movable, joints in metal to accommodate elastomeric sealant to comply with SMACNA standards.
H. Separate metal from noncompatible metal or corrosive substrates by coating concealed surfaces at locations of contact with asphalt mastic or other permanent separation as recommended by manufacturer.

I. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces of sheet metal exposed to public view.

J. Fabricate cleats and attachment devices from same material as sheet metal component being anchored or from compatible, noncorrosive metal recommended by sheet metal manufacturer.

1. Size: As recommended by SMACNA manual or sheet metal manufacturer for application but never less than thickness of metal being secured.

2.5 SHEET METAL FABRICATIONS

A. General: Fabricate sheet metal items in thickness or weight needed to comply with performance requirements but not less than that listed below or as indicated in detail, whichever is greater, for each application and metal. Material shall be prefinished in accordance with finish requirements indicated later in this section.

B. H. Base Flashing: Fabricate from the following material:
   1. Galvanized Steel: 0.0276 inch (24 ga.) (0.7 mm) thick.

I. Counterflashing: Fabricate from the following material:
   1. Galvanized Steel: 0.0217 inch (26 ga.) (0.55 mm) thick.

J. Flashing Receivers: Fabricate from the following material:
   1. Galvanized Steel: 0.0217 inch (26 ga.) (0.55 mm) thick.

K. Drip Edges: Fabricate from the following material:
   1. Galvanized Steel: 0.0217 inch (26 ga.) (0.55 mm) thick.

L. Copings: Fabricate from the following material:
   1. Galvanized Steel: 0.0276 inch (24 ga.) (0.7 mm) thick.

2.6 ALUMINUM FINISHES

A. General: Comply with Aluminum Association's (AA) "Designation System for Aluminum Finishes" for finish designations and application recommendations.

PART 3 - EXECUTION
3.1 EXAMINATION

A. Examine substrates and conditions under which sheet metal flashing and trim are to be installed and verify that Work may properly commence. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. General: Unless otherwise indicated, install sheet metal flashing and trim to comply with performance requirements, manufacturer's installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Anchor units of Work securely in place by methods indicated, providing for thermal expansion of metal units; conceal fasteners where possible, and set units true to line and level as indicated. Install Work with laps, joints, and seams that will be permanently watertight and weatherproof.

B. Install exposed sheet metal Work that is without excessive oil canning, buckling, and tool marks and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and to result in waterproof and weather-resistant performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.

C. Expansion Provisions: Provide for thermal expansion of exposed sheet metal Work. Space movement joints at maximum of 10 feet (3 m) with no joints allowed within 24 inches (610 mm) of corner or intersection. Where lapped or bayonet-type expansion provisions in Work cannot be used or would not be sufficiently weatherproof and waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with mastic sealant (concealed within joints).

D. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Pretin edges of sheets to be soldered to a width of 1-1/2 inches (38 mm), except where pretinned surface would show in finished Work.

1. Do not solder the following metals:
   a. Aluminum.
   b. Coil-coated galvanized steel sheet.

2. Do not use torches for soldering. Heat surfaces to receive solder and flow solder into joint. Fill joint completely. Completely remove flux and spatter from exposed surfaces.

E. Sealed Joints: Form nonexpansion, but movable, joints in metal to accommodate elastomeric sealant to comply with SMACNA standards. Fill joint with sealant and form metal to completely conceal sealant.

1. Use joint adhesive for nonmoving joints specified not to be soldered.

F. Seams: Fabricate nonmoving seams in sheet metal with flat-lock seams. Tin edges to
be seamed, form seams, and solder.

G. Seams: Fabricate nonmoving seams in aluminum with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints for additional strength.

H. Separations: Separate metal from noncompatible metal or corrosive substrates by coating concealed surfaces, at locations of contact, with asphalt mastic or other permanent separation as recommended by manufacturer.

1. Underlayment: Where installing stainless steel or aluminum directly on cementitious or wood substrates, install a slip sheet of red-rosin paper and a course of polyethylene underlayment.

I. Install reglets to receive counterflushing according to the following requirements:

1. Where reglets are shown in concrete, furnish reglets for installation under Division 3 Section "Cast-in-Place Concrete."
2. Where reglets are shown in masonry, furnish reglets for installation under Division 4 Section "Unit Masonry."

J. Counterflushings: Coordinate installation of counterflushings with installation of assemblies to be protected by counterflushing. Install counterflushings in reglets or receivers. Secure in a waterproof manner by means of snap-in installation and sealant, lead wedges and sealant, interlocking folded seam, or blind rivets and sealant. Lap counterflushing joints a minimum of 2 inches (50 mm) and bed with sealant.

K. Roof-Drainage System: Install drainage items fabricated from sheet metal, with straps, adhesives, and anchors recommended by SMACNA's Manual or the item manufacturer, to drain roof in the most efficient manner. Coordinate roof-drain flashing installation with roof-drainage system installation. Coordinate flashing and sheet metal items for steep-sloped roofs with roofing installation.

L. Equipment Support Flashing: Coordinate equipment support flashing installation with roofing and equipment installation. Weld or seal flashing to equipment support member.

M. Roof-Penetration Flashing: Coordinate roof-penetration flashing installation with roofing and installation of items penetrating roof. Install flashing as follows:

1. Install per roof manufacturer's recommendations, being careful not to block vent piping with flashing.

N. Remove strippable plastic protective film from surface of prefinished sheet metal.

3.3 CLEANING AND PROTECTION

A. Clean exposed metal surfaces, removing substances that might cause corrosion of metal
or deterioration of finishes.

B. Provide final protection and maintain conditions that ensure sheet metal flashing and trim Work during construction is without damage or deterioration other than natural weathering at the time of Substantial Completion.

END OF SECTION
JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes joint sealants for the following locations:

1. Exterior joints in vertical surfaces and nontraffic horizontal surfaces as indicated below:
   a. Control and expansion joints in unit masonry.
   b. Joints between different materials.
   c. Perimeter joints between materials and frames of doors and windows.

2. Exterior joints in horizontal traffic surfaces as indicated below:
   a. Control and expansion joints in brick pavers.
   b. Control, expansion, and isolation joints in cast-in-place concrete slabs.
   c. Joints between different materials.

3. Interior joints in vertical surfaces and horizontal nontraffic surfaces as indicated below:
   a. Control and expansion joints on exposed interior surfaces of exterior walls.
   b. Perimeter joints of exterior openings where indicated.
   c. Vertical control joints on exposed surfaces of interior unit masonry and concrete walls and partitions.
   d. Perimeter joints between interior wall surfaces and frames of interior doors, windows.
   e. Perimeter joints of toilet fixtures.
   f. Perimeter joints of plastic laminate countertops and backsplashes.

4. Interior joints in horizontal traffic surfaces as indicated below:
   a. Control and expansion joints in cast-in-place concrete slabs.

B. Related Sections: The following Sections contain requirements that relate to this Section:

   1. Section “Cement Concrete Pavement”.
   2. Section “Precast Concrete”
1.3 SYSTEM PERFORMANCE REQUIREMENTS

A. Provide elastomeric joint sealants that have been produced and installed to establish and to maintain watertight and airtight continuous seals without causing staining or deterioration of joint substrates.

B. Provide joint sealants for interior applications that have been produced and installed to establish and maintain airtight continuous seals that are water resistant and cause no staining or deterioration of joint substrates.

1.4 SUBMITTALS

A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.

B. Samples for initial selection purposes in form of manufacturer's standard bead samples, consisting of strips of actual products showing full range of colors available, for each product exposed to view.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Engage an experienced Installer who has completed joint sealant applications similar in material, design, and extent to that indicated for Project that have resulted in construction with a record of successful in-service performance.

B. Single Source Responsibility for Joint Sealant Materials: Obtain joint sealant materials from a single manufacturer for each different product required.

C. Preconstruction Compatibility and Adhesion Testing: Submit to joint sealant manufacturers samples of materials that will contact or affect joint sealants for compatibility and adhesion testing as indicated below:

1. Use test methods standard with manufacturer to determine if priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.
   a. Perform tests under normal environmental conditions that will exist during actual installation.

2. Submit not less than 9 pieces of each type of material, including joint substrates, shims, joint sealant backings, secondary seals, and miscellaneous materials.
3. Schedule sufficient time for testing and analysis of results to prevent delay in the progress of the Work.
4. Investigate materials failing compatibility or adhesion tests and obtain joint sealant manufacturer's written recommendations for corrective measures, including use of specially formulated primers.
5. Testing will not be required when joint sealant manufacturer is able to submit joint preparation data required above that are acceptable to Architect and are
based on previous testing of current sealant products for adhesion to, and compatibility with, joint substrates and other materials matching those submitted.

D. Product Testing: Provide comprehensive test data for each type of joint sealant based on tests conducted by a qualified independent testing laboratory on current product formulations within a 24-month period preceding date of Contractor's submittal of test results to Architect.

1. Test elastomeric sealants for compliance with requirements specified by reference to ASTM C 920. Include test results for hardness, stain resistance, adhesion and cohesion under cyclic movement (per ASTM C 719), low-temperature flexibility, modulus of elasticity at 100 percent strain, effects of heat aging, and effects of accelerated weathering.

2. Include test results performed on joint sealants after they have cured for 1 year.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Project site in original unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration period for use, pot life, curing time, and mixing instructions for multicomponent materials.

B. Store and handle materials in compliance with manufacturer's recommendations to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

1.7 PROJECT CONDITIONS

A. Environmental Conditions: Do not proceed with installation of joint sealants under the following conditions:

1. When ambient and substrate temperature conditions are outside the limits permitted by joint sealant manufacturer or below 40 deg F (4 deg C).

2. When joint substrates are wet.

B. Joint Width Conditions: Do not proceed with installation of joint sealants where joint widths are less than allowed by joint sealant manufacturer for application indicated.

C. Joint Substrate Conditions: Do not proceed with installation of joint sealants until contaminants capable of interfering with their adhesion are removed from joint substrates.

1.8 SEQUENCING AND SCHEDULING

A. Sequence installation of joint sealants to occur not less than 21 nor more than 30 days after completion of waterproofing, unless otherwise indicated.
A. Compatibility: Provide joint sealants, joint fillers, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.

B. Colors: Provide color of exposed joint sealants to comply with the following:
   1. Provide selections made by Architect from manufacturer's full range of standard colors for products of type indicated.

2.2 ELASTOMERIC JOINT SEALANTS

A. Elastomeric Sealant Standard: Provide manufacturer's standard chemically curing elastomeric sealants that comply with ASTM C 920 and other requirements indicated on each Elastomeric Joint Sealant Data Sheet at end of this Section, including those requirements referencing ASTM C 920 classifications for Type, Grade, Class, and Uses.

B. Products: Subject to compliance with requirements, provide one of the products specified in each Elastomeric Joint Sealant Data Sheet.

C. Installation Locations: Refer to sealant data sheet for applicable substrates. Sealant to be installed at all applicable exterior joints, interior control joints, interior face of joints in exterior walls and other interior working joints.

2.3 LATEX JOINT SEALANTS

A. General: Provide manufacturer's standard one-part, nonsag, mildew-resistant, paintable latex sealant of formulation indicated that is recommended for exposed applications on interior and protected exterior locations and that accommodates indicated percentage change in joint width existing at time of installation without failing either adhesively or cohesively.

B. Acrylic-Emulsion Sealant: Provide product complying with ASTM C 834 that accommodates joint movement of not more than 5 percent in both extension and compression for a total of 10 percent.

C. Silicone Emulsion Sealant: Provide product complying with ASTM C 834 and, except for weight loss measured per ASTM C 792, with ASTM C 920 that accommodates joint movement of not more than 25 percent in both extension and compression for a total of 50 percent.

D. Products: Subject to compliance with requirements, provide one of the following:
   1. Acrylic-Emulsion Sealant:
      c. "Tremco Acrylic Latex 834," Tremco, Inc.
2. Silicone-Emulsion Sealant:

E. Installation Locations: Sealant to be installed at interior non-working joints, for example, joint between door frame and wall, interior wood trim joints, other joints requiring sealant prior to application of finishes.

2.4 JOINT SEALANT BACKING

A. General: Provide sealant backings of material and type that are nonstaining; are compatible with joint substrates, sealants, primers and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

B. Plastic Foam Joint Fillers: Preformed, compressible, resilient, nonstaining, nonwaxing, nonextruding strips of flexible plastic foam of material indicated below and of size, shape, and density to control sealant depth and otherwise contribute to producing optimum sealant performance:

   1. Closed-cell polyethylene foam, nonabsorbent to liquid water and gas, nonoutgassing in unruptured state.

C. Elastomeric Tubing Joint Fillers: Neoprene, butyl, EPDM, or silicone tubing complying with ASTM D 1056, nonabsorbent to water and gas, capable of remaining resilient at temperatures down to -26 deg F (-32 deg C). Provide products with low compression set and of size and shape to provide a secondary seal, to control sealant depth, and otherwise contribute to optimum sealant performance.

D. Bond-Breaker Tape: Polyethylene tape or other plastic tape as recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

2.5 MISCELLANEOUS MATERIALS

A. Primer: Material recommended by joint sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint sealant-substrate tests and field tests.

B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming in any way joint substrates and adjacent nonporous surfaces, and formulated to promote optimum adhesion of sealants with joint substrates.

C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.
PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint sealant performance. Do not proceed with installation of joint sealants until unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with recommendations of joint sealant manufacturer and the following requirements:

1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.

2. Clean concrete, masonry, unglazed surfaces of ceramic tile, and similar porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air.

3. Remove laitance and form release agents from concrete.

4. Clean metal, glass, porcelain enamel, glazed surfaces of ceramic tile, and other nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.

B. Joint Priming: Where indicated or where recommended by joint sealant manufacturer based on preconstruction joint sealant-substrate tests or prior experience. Apply primer to comply with joint sealant manufacturer's recommendations. Confine primers to areas of joint sealant bond; do not allow spillage or migration onto adjoining surfaces.

C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

A. General: Comply with joint sealant manufacturer's printed installation instructions applicable to products and applications indicated, except where more stringent requirements apply.
B. Sealant Installation Standard: Comply with recommendations of ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

C. Acoustical Sealant Application Standard: Comply with recommendations of ASTM C 919 for use of joint sealants in acoustical applications as applicable to materials, applications, and conditions indicated.

D. Installation of Sealant Backings: Install sealant backings to comply with the following requirements:

1. Install joint fillers of type indicated to provide support of sealants during application and at position required to produce the cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
   a. Do not leave gaps between ends of joint fillers.
   b. Do not stretch, twist, puncture, or tear joint fillers.
   c. Remove absorbent joint fillers that have become wet prior to sealant application and replace with dry material.

2. Install bond breaker tape between sealants where backer rods are not used between sealants and joint fillers or back of joints.

E. Installation of Sealants: Install sealants by proven techniques that result in sealants directly contacting and fully wetting joint substrates, completely filling recesses provided for each joint configuration, and providing uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability. Install sealants at the same time sealant backings are installed.

F. Tooling of Nonsag Sealants: Immediately after sealant application and prior to time skinning or curing begins, tool sealants to form smooth, uniform beads of configuration indicated, to eliminate air pockets, and to ensure contact and adhesion of sealant with sides of joint. Remove excess sealants from surfaces adjacent to joint. Do not use tooling agents that discolor sealants or adjacent surfaces or are not approved by sealant manufacturer.

1. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.

2. Provide flush joint configuration, per Figure 5B in ASTM C 1193, where indicated.
   a. Use masking tape to protect adjacent surfaces of recessed tooled joints.

3. Provide recessed joint configuration, per Figure 5C in ASTM C 1193, of recess depth and at locations indicated.

3.4 CLEANING
A. Clean off excess sealants or sealant smears adjacent to joints as work progresses by methods and with cleaning materials approved by manufacturers of joint sealants and of products in which joints occur.

3.5 PROTECTION

A. Protect joint sealants during and after curing period from contact with contaminating substances or from damage resulting from construction operations or other causes so that they are without deterioration, dirt stains discoloration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so that and installations with repaired areas are indistinguishable from original work.

PRODUCT DATA SHEET 1 - ELASTOMERIC JOINT SEALANT

A. Elastomeric Joint Sealant Designation: ES1

B. Base Polymer: Urethane.

C. Type: S (single component).

D. Grade: NS (nonsag).

E. Class: 25.

F. Use[s] Related to Exposure: T (traffic) and NT (nontraffic).

G. Uses Related to Joint Substrates: M, G, A and, as applicable to joint substrates indicated, O.

1. Use M Substrate: Mortar joints.
2. Use G Substrate: Glass joints.
3. Use A Substrate: Aluminum joints.

H. Available Products:

1. Bostik Inc.
3. Pecoraa Corporation.
5. Sika Corporation.
6. Sonneborn Building Products Division ChemRex, Inc.
7. Tremco, Inc.

or approved equal.

END OF SECTION
PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes clear water-repellent coatings for the following vertical and nontraffic horizontal surfaces:

1. Brick masonry.
2. Precast concrete.
3. Manufactured stone masonry

B. Related Sections include the following:

1. Sections for “Precast Architectural Concrete”.
2. Section “Manufactured Stone Masonry”.
3. Section "Joint Sealants" for joint sealants.
4. Sections for fluid-applied waterproofing and dampproofing.

1.3 PERFORMANCE REQUIREMENTS

A. Provide water repellents with the following properties based on testing manufacturer's standard products, according to test methods indicated, applied to substrates simulating Project conditions using same materials and application methods to be used for Project.

1. Absorption: Minimum 90 percent reduction of absorption after 24 hours in comparison of treated and untreated specimens.
   b. Precast Concrete: ASTM C642.

2. Water-Vapor Transmission: Maximum 1 percent reduction in rate of vapor transmission after 24 hours in comparison of treated and untreated specimens, per ASTM D 1653

3. Water Penetration and Leakage through Masonry: 100 percent reduction in leakage rate in comparison of treated and untreated specimens, per ASTM E 514.

4. Accelerated Weathering: Maximum 5 percent loss of water repellency after 2000 hours of weathering in comparison to specimens before weathering, per ASTM G 53.

5. Permeability: Minimum 80 percent breathable in comparison of treated and untreated specimens, per ASTM D 1653.

6. Chloride-Ion Intrusion in Concrete: Transportation Research Board, National Research Council's NCHRP Report 244, Series II tests.
a. Reduction of Water Absorption: 86 percent.
b. Reduction in Chloride Content: 87 percent.

1.4 QUALITY ASSURANCE

A. Applicator Qualifications: Engage an experienced applicator who employs only persons trained and approved by water repellent manufacturer for application of manufacturer's products.

B. Regulatory Requirements: Comply with applicable rules of pollution-control regulatory agency having jurisdiction in Project locale regarding VOCs and use of hydrocarbon solvents.

C. Project Mockup: Apply water repellent to mockup, with either partial or full coverage as directed. Comply with application requirements of this Section.

1. Obtain Architect's approval of field samples before applying water repellents.
2. Maintain field samples during construction in an undisturbed condition as a standard for judging the completed Work.

1.5 PROJECT CONDITIONS

A. Weather and Substrate Conditions: Do not proceed with application of water repellent under any of the following conditions, except with written instruction of manufacturer:

1. Ambient temperature is less than 40 deg F (4.4 deg C).
2. Concrete surfaces and mortar have cured for less than 28 days.
3. Rain or temperatures below 40 deg F (4.4 deg C) are predicted within 24 hours.
4. Application is earlier than 24 hours after surfaces have been wet.
5. Substrate is frozen or surface temperature is less than 40 deg F (4.4 deg C).
6. Windy condition exists that may cause water repellent to be blown onto vegetation or surfaces not intended to be coated.

1.6 WARRANTY

A. General Warranty: The special warranty specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents.

B. Special Warranty: Submit a written warranty, executed by the applicator and water repellent manufacturer, covering materials and labor, agreeing to repair or replace materials that fail to provide water repellency within the specified warranty period. Warranty does not include deterioration or failure of coating due to unusual weather phenomena, failure of prepared and treated substrate, formation of new joints and cracks in excess of 1/16 inch (1.5 mm) wide, fire, vandalism, or abuse by maintenance equipment.
1. Warranty Period: 5 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:

1. Silane for application on Brick Masonry and Precast concrete:
   a. EVONIK Protectosil CHEM-TRETE BSM 40 VOC - (Jack Schwein-513-289-4867 cell) Follow all manufacturer’s recommendations for preparation and installation of this product.
   b. BASF MaterProtect H 440VT
   c. Prosoco SL100

or approved equal.

2.2 WATER REPELLENTS

A. Silane penetrating water repellent. Greater than 40% Isobutyltrialkoxysilane or Alkylalkoxysiloxane in a sloution with alcohol, ethanol, mineral spirits, water or other proprietary solvent carrier.

PART 3 - EXECUTION

3.1 PREPARATION

A. Clean substrate of substances that might interfere with penetration or performance of water repellents. Test for moisture content, according to repellent manufacturer's written instructions, to ensure surface is sufficiently dry.


B. Test for pH level, according to water repellent manufacturer's written instructions, to ensure chemical bond to silicate minerals.

C. Protect adjoining work, including sealant bond surfaces, from spillage or blow-over of water repellent. Cover adjoining and nearby surfaces of aluminum and glass if there is the possibility of water repellent being deposited on surfaces. Cover live plants and grass.

D. Coordination with Sealants: Do not apply water repellent until sealants for joints adjacent to surfaces receiving water-repellent treatment have been installed and cured.

1. Water-repellent work may precede sealant application only if sealant adhesion and compatibility have been tested and verified using substrate, water repellent, and sealant materials identical to those used in the work.
3.2 APPLICATION

A. Apply a heavy-saturation spray coating of water repellent on surfaces indicated for treatment using low-pressure spray equipment. Comply with manufacturer's written instructions for using airless spraying procedure, unless otherwise indicated.

B. Apply a second saturation spray coating, repeating first application. Comply with manufacturer's written instructions for limitations on drying time between coats and after rainstorm wetting of surfaces between coats. Consult manufacturer's technical representative if written instructions are not applicable to Project conditions.

3.3 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Provide services of a factory-authorized technical service representative to inspect and approve the substrate before application and to instruct the applicator on the product and application method to be used.

3.4 CLEANING

A. Protective Coverings: Remove protective coverings from adjacent surfaces and other protected areas.

B. Immediately clean water repellent from adjoining surfaces and surfaces soiled or damaged by water-repellent application as work progresses. Repair damage caused by water-repellent application. Comply with manufacturer's written cleaning instructions.

END OF SECTION
BITUMINOUS DAMPPROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Cold-applied, asphalt emulsion dampproofing.

13 QUALITY ASSURANCE

A. Installer Qualifications: Engage an experienced Installer who has completed bituminous dampproofing similar in material, design, and extent to that indicated for this Project and with a record of successful in-service performance.

B. Single-Source Responsibility: Obtain primary dampproofing materials and primers from one source and by a single manufacturer. Provide secondary materials only as recommended by manufacturer of primary materials.

1.4 PROJECT CONDITIONS

A. Substrate: Proceed with dampproofing only after substrate construction and penetrating work have been completed.

B. Weather Limitations: Proceed with dampproofing only when existing and forecasted weather conditions will permit work to be performed according to manufacturer's recommendations and warranty requirements.

C. Ventilation: Provide adequate ventilation during application of dampproofing in enclosed spaces. Maintain ventilation until dampproofing has thoroughly cured.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Cold-Applied, Asphalt Emulsion Dampproofing:

   b. Euclid Chemical Co.
   c. Karnak Chemical Corporation.
e. Tremco Company

or approved equal.

2.2 BITUMINOUS DAMPPROOFING

A. General: Provide products recommended by manufacturer for designated application.

1. Odor Elimination: For interior and concealed-in-wall uses, provide type of bituminous dampproofing material warranted by manufacturer to be substantially odor free after drying for 24 hours under normal conditions.

B. Cold-Applied, Asphalt Emulsion Dampproofing: Asphalt-based emulsions recommended by the manufacturer for dampproofing use when applied according to the manufacturer's instructions.

1. Spray Grade: Emulsified asphalt, prepared with mineral-colloid emulsifying agents without fibrous reinforcement, complying with ASTM D 1227, Type III.

2.3 MISCELLANEOUS MATERIALS

A. Primer: Asphalt primer complying with ASTM D 41, for asphalt-based dampproofing.

B. Glass Fabric: Woven glass fabric, treated with asphalt, complying with ASTM D 1668, Type I.

PART 3 - EXECUTION

3.1 PREPARATION

A. Clean substrate of projections and substances detrimental to work; comply with recommendations of prime materials manufacturer.

B. Install accessories as recommended or required by prime materials manufacturer even though not shown.

C. Fill voids, seal joints, and apply bond breakers, if any, as recommended by prime materials manufacturer, with particular attention at construction joints.

D. Install separate flashings and corner protection stripping, as recommended by prime materials manufacturer, where indicated to precede application of dampproofing. Comply with details shown and with manufacturer's recommendations. Pay particular attention to requirements at building expansion joints, if any.

E. Prime substrate as recommended by prime materials manufacturer.

F. Protection of Other Work: Do not allow liquid and mastic compounds to enter and clog drains and conductors. Prevent spillage and migration onto other surfaces of work by masking or otherwise protecting adjoining work.
3.2 INSTALLATION, GENERAL

A. Comply with manufacturer's recommendations except where more stringent requirements are indicated and where Project conditions require extra precautions to ensure satisfactory performance of work.

B. Application: Apply dampproofing to the following surfaces.
   1. Exterior surface of inside wythe of double-wythe, exterior masonry walls above grade, to prevent water-vapor penetration through the wall.

C. Cold-Applied Asphalt Dampproofing: Provide only emulsified asphalt materials.

D. Reinforcement: At changes in plane or where otherwise shown as "reinforced," install lapped course of glass fabric in first coat of dampproofing compound before it thickens.

3.3 COLD-APPLIED, ASPHALT EMULSION DAMPPROOFING

A. Spray Grade: Brush or spray apply a coat of asphalt emulsion dampproofing at a rate of 1.5 to 2.5 gal./100 sq. ft. (0.6 to 1 L/sq. m), depending on substrate texture, to produce a uniform, dry-film thickness of not less than 15 mils (0.4 mm). Apply in 2 coats, if necessary, to obtain required thickness, allowing time for complete drying between coats.

3.4 PROTECTION AND CLEANING

A. Protect dampproofing membrane from damage. Remove overspray and spilled materials from surfaces not intended to receive dampproofing.

3.5 PROJECT WARRANTY

A. Submit a written warranty, executed by manufacturer agreeing to replace dampproofing that fails in materials or workmanship within the specified warranty period. This warranty shall be in addition to, and not a limitation of other rights the Owner may have against the Contract Documents.
   1. Warranty Period: 5 years after date of substantial completion.

END OF SECTION
PART VI

INSURANCE AND HOLD HARMLESS CLAUSE
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.

Hold Harmless or Indemnification Agreement

Contractor agrees to indemnify and hold Company, its agents and employees, harmless from and against any and all losses liabilities, demands, patents, actions, legal proceedings, recoveries, settlements, judgments, costs, expenses, attorney fees, orders and decrees of every nature and description brought or recovered against or incurred by Contractor, whether groundless or not, for injuries to or death of any person including, but not limited to, the agents or employees of Contractor or subcontractor, or damage to any property regardless of ownership, including the loss of use of such property solely, jointly or otherwise caused by or arising of acts or omissions to act or alleged to be caused by or arising out of acts or omissions to act of Contractor, its subcontractor or subcontractors, agents or employees in performance of their duties under this contract.

Contractor shall and will at its own cost and expense defend any such suit, action or proceeding, whether groundless or not, which may be commenced against Company, its agents or employees, and Contractor shall pay any and all judgments or costs, which may be recovered in any such action, claim, suit or proceeding, and pay all expenses including, but not limited to, attorneys fees,
investigative costs, and court costs, which may be incurred if or by any reason of such action, claim, proceeding or suit.

Contractor further agrees that it shall indemnify and hold harmless Company from and against any and all loss, damage and liability and from any and all claims for damages on account of or by reason of bodily injury, including death, which may be sustained or claimed to be sustained by any person, including the employees of Contractor and any subcontractor of Contractor, and from and against any and all damages to property, including loss of use, and including property of Company, caused by or arising out of or claimed to have been caused by or to have arisen out of an act of omission of Contractor its agents, employees or subcontractors in connection with the performance of this contract, or caused by or arising out of or claimed to have been caused by or to have arisen out of the concurrent negligence of Company, its agents and employees; in connection with the performance of this contract; provided, however, that the foregoing indemnification shall not cover loss, damage or liability arising from the sole negligence of Company, its agents and employees; and Contractor shall at its own cost and expense defend any such claim, suit, action or proceeding, whether groundless or not, which may be commenced against Company by reason thereof or in connection therewith, and Contractor shall pay any and all judgments which may be recovered in any such action, claim, proceeding, or suit, and defray any and all expenses, including costs and attorneys’ fees, which may be incurred in or by reason of such action, claims, proceedings or suits; and to the extent permitted by law, contractor expressly waives the benefit for itself and all sub-contractors insofar as the indemnification of Company is concerned, of the provisions of any applicable workers’ compensation law limiting the tort or other liability of an employer on account of injuries to the employer's employees.

All provisions of this Section B are severable, and the unenforceability or invalidity of any one or more of such provisions shall not affect the enforceability or validity of the remaining provisions hereof.
PART VII

BID ITEMS
Unit Prices

Unit price is an amount incorporated in the Agreement, applicable during the duration of the Work as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.


3. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.

4. List of Unit Prices: A schedule of unit prices is included in Form of Proposal. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.
1. This survey is subject to any and all legal easements and right of ways recorded or unre¬corded, including but not limited to those shown hereon.

2. This survey is subject to any and all facts that may be disclosed by a full and accurate title search.

3. The location of the underground and above ground utilities shown hereon are based on the field location of found visible structures or as flagged and/or painted by their respective utility companies. Other utilities may exist, no guarantee is expressed or implied as to the actual location and/or existence of said underground utilities on this site.

4. The property shown hereon is subject to the rules, regulations, setbacks and ordinances set forth by the local planning commission.

5. GPS Note:

50% of survey was performed using Trimble - R8 - Dual Frequency GPS units utilizing real time kinematic surveying techniques. With an unadjusted precision to control points being less than 0.05' or being 1:10,000.

6. Flood Zone Note:

A portion of this property is located in special flood zone "AE" as indicated by flood insurance rate maps Community Panel No. 21163C0120C, effective date of July 18, 2011. Base flood elevation: 436.50.'

7. This is not a boundary survey. Not to be recorded or used for the transfer of real property. Lot lines are shown for indexing purposes only and should not be construed to be true and accurate.

8. Right of Way Note:

All right of ways shown hereon were derived from plat cabinet A page 95. No record of closure was found for any streets or alleys shown on original town plat, despite any evidence of abandonment observed in the field.

TOPOGRAPHIC SURVEY CERTIFICATION

This is to certify, to the best of my knowledge, information and belief, all information shown hereon is true and accurately shown.

SIGNED:

DATE:

EXISTING TOPO

SHT 1 OF 3
1. THIS SURVEY IS SUBJECT TO ANY AND ALL LEGAL EASEMENTS AND RIGHT OF WAYS RECORDED OR UNRECORDED, INCLUDING BUT NOT LIMITED TO THOSE SHOWN HEREON.
2. THIS SURVEY IS SUBJECT TO ANY AND ALL FACTS THAT MAY BE DISCLOSED BY A FULL AND ACCURATE TITLE SEARCH.
3. THE LOCATION OF THE UNDERGROUND AND ABOVE GROUND UTILITIES SHOWN HEREON ARE BASED ON THE FIELD LOCATION OF FOUND VISIBLE STRUCTURES OR AS FLAGGED AND/OR PAINTED BY THEIR RESPECTIVE UTILITY COMPANIES. OTHER UTILITIES MAY EXIST, NO GUARANTEE IS EXPRESSED OR IMPLIED AS TO THE ACTUAL LOCATION AND/OR EXISTENCE OF SAID UNDERGROUND UTILITIES ON THIS SITE.
4. THE PROPERTY SHOWN HEREON IS SUBJECT TO THE RULES, REGULATIONS, SETBACKS AND ORDINANCES SET FORTH BY THE LOCAL PLANNING COMMISSION.
5. GPS NOTE: 50% OF SURVEY WAS PERFORMED USING TRIMBLE - R8 - DUAL FREQUENCY GPS UNITS UTILIZING REAL TIME KINEMATIC SURVEYING TECHNIQUES. WITH AN UNADJUSTED PRECISION TO CONTROL POINTS BEING LESS THAN 0.05' OR BEING 1:10,000.
6. FLOOD ZONE NOTE: A PORTION OF THIS PROPERTY IS LOCATED IN SPECIAL FLOOD ZONE "AE" AS INDICATED BY FLOOD INSURANCE RATE MAPS COMMUNITY PANEL NO. 21163C0120C, EFFECTIVE DATE OF JULY 18, 2011. BASE FLOOD ELEVATION: 436.50'.
7. THIS IS NOT A BOUNDARY SURVEY. NOT TO BE RECORDED OR USED FOR THE TRANSFER OF REAL PROPERTY. LOT LINES ARE SHOWN FOR INDEXING PURPOSES ONLY AND SHOULD NOT BE CONSTRUED TO BE TRUE AND ACCURATE.
8. RIGHT OF WAY NOTE: ALL RIGHT OF WAYS SHOWN HEREON WERE DERIVED FROM PLAT CABINET A PAGE 95. NO RECORD OF CLOSURE WAS FOUND FOR ANY STREETS OR ALLEYS SHOWN ON ORIGINAL TOWN PLAT, DESPITE ANY EVIDENCE OF ABANDONMENT OBSERVED IN THE FIELD.
1. THIS SURVEY IS SUBJECT TO ANY AND ALL LEGAL EASEMENTS AND RIGHT OF WAYS RECORDED OR UNRECORDED, INCLUDING BUT NOT LIMITED TO THOSE SHOWN HEREON.

2. THIS SURVEY IS SUBJECT TO ANY AND ALL FACTS THAT MAY BE DISCLOSED BY A FULL AND ACCURATE TITLE SEARCH.

3. THE LOCATION OF THE UNDERGROUND AND ABOVE GROUND UTILITIES SHOWN HEREON ARE BASED ON THE FIELD LOCATION OF FOUND VISIBLE STRUCTURES OR AS FLAGGED AND/OR PAINTED BY THEIR RESPECTIVE UTILITY COMPANIES. OTHER UTILITIES MAY EXIST, NO GUARANTEE IS EXPRESSED OR IMPLIED AS TO THE ACTUAL LOCATION AND/OR EXISTENCE OF SAID UNDERGROUND UTILITIES ON THIS SITE.

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1. Any tree damage or loss due to the operations of the contractor shall be charged at a rate of $48 per square inch of trunk measured four feet above the ground.

2. The tree protection fences shall be constructed prior to any earthwork on the site. See Tree Protection Notes and Temporary Tree Protection Fence locations.

3. Tree protection notes shall be maintained and the area within the boundary shall be mowed throughout the construction period.

4. No equipment or traffic shall be allowed within the tree protection fences at any time.

5. Tree protection fences shall be removed upon completion of the entire project.

6. Tree protection fences shall be placed 2' outside of the dripline of the tree unless otherwise specified.

7. All existing site furnishings and trash receptacles shall be salvaged and returned to the owner.

8. Where new work occurs in existing pavement, contractor shall cut and patch and return to owner.

9. Contractor shall match existing pavement section for asphalt pavement type. See specific details for new pavement sections if specific detail is required to complete new work and restore pavement. Match pavement as required to complete new work.

10. All tree protection fences shall be placed outside of the dripline of the tree unless otherwise specified.

11. Any tree damaged by the contractor or his subcontractors will be charged at a rate of $48 per square inch of trunk measured four feet above the ground.

12. Job site safety:
   - The contractor shall assume the responsibility for safety during construction. Such safety shall be coordinated with the architect. Their locations are not guaranteed. It is the contractor's responsibility to verify all utility locations, sizes, types, etc. needed to complete the work of the contract.
   - Prior to construction, the contractor is to field verify all utility locations, sizes, types, etc. needed to complete the work of the contract.
   - Their professional activities or the presence of SCB employees or subcontractors at the job site shall relieve the contractor or any other entity of their obligation, duties, and responsibilities included, but not limited to, construction means, methods, techniques, procedures necessary for performing superintending or supervising duties, and responsibilities included. Neither SCB nor its agents shall be responsible for loss of work or injury to anyone using information from these plans.
   - Job site safety is outside the scope of work of Sherman Carter Barnhart Architects (SCB). Neither SCB nor its agents shall be responsible for loss of work or injury to anyone using information from these plans.
   - Job site safety is outside the scope of work of SCB. NEITHER SCB NOR ITS AGENTS SHALL BE RESPONSIBLE FOR LOSS OF WORK OR INJURY TO ANYONE USING INFORMATION FROM THESE PLANS.

13. General demolition notes:
   - The architect shall assume the responsibility for coordinating with all drawings including all site utility drawings and associated
   - Coordinating all portions of the work of construction in accordance with the contract.
   - The contractor shall review all documents and any health and safety precautions required by good construction practices.
   - The contractor shall notify the architect if a conflict could exist. If the contractor proceeds without contacting the utility companies and does not notify the architect of potential conflicts he does so at his own risk.

14. Tree protection notes:
   - Tree protection fences shall be placed 2' outside of the dripline of the tree unless otherwise specified.
   - Tree protection fences shall be maintained and the area within the boundary shall be mowed throughout the construction period.
   - Tree protection fences shall be removed upon completion of the entire project.
   - All existing site furnishings and trash receptacles shall be salvaged and returned to the owner.
   - Any tree damaged by the contractor or his subcontractors will be charged at a rate of $48 per square inch of trunk measured four feet above the ground.
   - Tree protection fences shall be placed 2' outside of the dripline of the tree unless otherwise specified.
   - Tree protection fences shall be maintained and the area within the boundary shall be mowed throughout the construction period.
   - Tree protection fences shall be removed upon completion of the entire project.

15. Temporary tree protection fences:
   - Temporary tree protection fences are to be installed at the locations indicated on the plan. They shall be placed outside of the dripline of the tree.
   - Temporary tree protection fences shall be maintained and the area within the boundary shall be mowed throughout the construction period.
   - Temporary tree protection fences shall be removed upon completion of the entire project.

16. Utility trenching:
   - Utility trenching is to be coordinated with all drawings including all site utility drawings and associated.
   - All work necessary to accomplish the new work, whether or not shown on these drawings, shall be included in the contractor's bid. The contractor shall review all documents and any health and safety precautions required by good construction practices.
   - The contractor shall notify the architect if a conflict could exist. If the contractor proceeds without contacting the utility companies and does not notify the architect of potential conflicts he does so at his own risk.

17. Construction safety fence:
   - The construction safety fence shall be placed outside of the dripline of the tree unless otherwise specified.
   - The construction safety fence shall be maintained and the area within the boundary shall be mowed throughout the construction period.
   - The construction safety fence shall be removed upon completion of the entire project.

18. Property line:
   - Property line notes shall be maintained and the area within the boundary shall be mowed throughout the construction period.
   - Property line notes shall be removed upon completion of the entire project.

19. City of Brandenburg:
   - City of Brandenburg sidewalk connections and associated.

20. Brandenburg, Kentucky:
   - Brandenburg, Kentucky sidewalk connections and associated.
1. Junction boxes shall be installed at all ends of conduit flush with adjacent concrete walk. The cover shall be marked "Street Lights".

2. All conduits shall be electrical grade schedule 40 rigid PVC. All joints shall be glued. All factory or field cuts shall be chamfered to prevent damage to wires.

3. All conduits shall contain a poly pull line (500 lbs. rated) with 6' of line extending from each end.

4. Where new work occurs in existing pavement, contractor shall cut and patch pavement as required to complete new work and restore pavement. Match pavement type. See specific details for new pavement sections. If specific detail is not included contractor shall match existing pavement section. For asphalt patching see detail EK/SD3.1 for edge key. Contractor shall be responsible for coordinating with all drawings and associated conduit trenching.
ROAD WAY WIDENING
WIDTH VARIES
5FT SIDEWALK
EXIST. GRADE
SLOPE 2:1
SEGMENTAL BLOCK RETAINING WALL
BY BLOCK MANUFACTURE

CROSS SECTIONS
STA. 6+20 TO STA. 8+00

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Day & Time:    May 16,  2022 - 11:36am
Login Name:    mbashikhes
Sheet Layout:

SD2.3

JOB NO.
DATE
DRAWN
CHECKED
No.
Description
Date

05/2/2022
1867

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SHERMAN CARTER BARNHART
ARCHITECTS, PLLC

CITY OF BRANDENBURG DOWNTOWN
SIDEWALK CONNECTIONS
BRANDENBURG, KENTUCKY

BKL

NIC

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NIC

NIC
CONTRACTOR SHALL SUBMIT SEGMENTAL BLOCK RETAINING WALL SHOP DRAWINGS PRIOR TO CONSTRUCTION. DRAWINGS SHALL BE PROVIDED BY THE WALL MANUFACTURER AND APPROVED, SIGNED, AND STAMPED BY A LICENSED ENGINEER IN THE STATE OF KENTUCKY. WALL DESIGN SHALL INCLUDE ALL COMPONENTS FOR A COMPLETE AND FUNCTIONING WALL SYSTEM. THIS INCLUDES, BUT NOT LIMITED TO, EXCAVATION, HAUL OFF, SUBGRADE MODIFICATIONS AND ADDITIONAL STONE BASE TO ACHIEVE PROPER BEARING CAPACITY, OVER EXCAVATION, ALL FOUNDATION AND BACKFILL STONE, GEOGRID IF REQUIRED, FLOWABLE FILL, GEOTEXTILE FABRIC, UNDERDRAINS, AND WALL CAPS. ALL WALL REQUIREMENT SHALL BE INCLUDED IN BID.