



CALL NO. 103

CONTRACT ID. 171214

VARIOUS COUNTIES

FED/STATE PROJECT NUMBER STPM 3002 (313)

DESCRIPTION RADAR TRAFFIC COUNTERS (I-75, I-275, I-471 & OTHERS)

WORK TYPE INTELLIGENT TRANSPORTATION SYSTEMS

PRIMARY COMPLETION DATE 11/15/2017

LETTING DATE: April 28, 2017

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN DAYLIGHT TIME April 28, 2017. Bids will be publicly announced at 10:00 AM EASTERN DAYLIGHT TIME.

NO PLANS ASSOCIATED WITH THIS PROJECT.

DBE CERTIFICATION REQUIRED - 0%

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

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PART I
SCOPE OF WORK

ADMINISTRATIVE DISTRICT - 06

CONTRACT ID - 171214
STPM 3002 (313)
COUNTY - VARIOUS
PCN - DE00800751714
STPM 3002 (313)

RADAR TRAFFIC COUNTERS (I-75, I-275, I-471 & OTHERS) INSTALL PERMANENT RADAR TRAFFIC COUNTERS
ON 7 OHIO RIVER BRIDGES IN THE OKI REGIONINTELLIGENT TRANSPORTATION SYSTEMS SYP NO.
06-00436.00.
GEOGRAPHIC COORDINATES LATITUDE 38:58:00.00 LONGITUDE 84:45:00.00

COMPLETION DATE(S):
COMPLETED BY 11/15/2017 APPLIES TO ENTIRE CONTRACT

CONTRACT NOTES

PROPOSAL ADDENDA

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

BID SUBMITTAL

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

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

JOINT VENTURE BIDDING

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

UNDERGROUND FACILITY DAMAGE PROTECTION

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

SPECIAL NOTE FOR COMPOSITE OFFSET BLOCKS

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

REGISTRATION WITH THE SECRETARY OF STATE BY A FOREIGN ENTITY

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

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

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

SPECIAL NOTE FOR PROJECT QUESTIONS DURING ADVERTISEMENT

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

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

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

HARDWOOD REMOVAL RESTRICTIONS

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

INSTRUCTIONS FOR EXCESS MATERIAL SITES AND BORROW SITES

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

ACCESS TO RECORDS

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

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

06/01/16

FEDERAL CONTRACT NOTES

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

102.02 Current Capacity Rating 102.10 Delivery of Proposals
102.8 Irregular Proposals 102.14 Disqualification of Bidders
102.9 Proposal Guaranty

CIVIL RIGHTS ACT OF 1964

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

NOTICE TO ALL BIDDERS

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

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

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

SECOND TIER SUBCONTRACTS

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

DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

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

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

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

DBE GOAL

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

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

OBLIGATION OF CONTRACTORS

Each contractor prequalified to perform work on Cabinet projects shall designate and make known to the Cabinet a liaison officer who is assigned the responsibility of effectively administering and promoting an active program for utilization of DBEs.

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

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

CERTIFICATION OF CONTRACT GOAL

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

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

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

DBE PARTICIPATION PLAN

Lowest responsive bidders must submit the *DBE Plan/ Subcontractor Request*, form TC 14-35 DBE, within **5** days of the letting. This is necessary before the Awards Committee will review and make a recommendation. **The project will not be considered for award prior to submission and approval of the apparent low bidder’s DBE Plan/Subcontractor Request.**

The DBE Participation Plan shall include the following:

- 1 Name and address of DBE Subcontractor(s) and/or supplier(s) intended to be used in the proposed project;
- 2 Description of the work each is to perform including the work item , unit, quantity, unit price and total amount of the work to be performed by the individual DBE. The Project Code Number (PCN), Category Number, and the Project Line Number can be found in the “material listing” on the Construction Procurement website under the specific letting;
- 3 The dollar value of each proposed DBE subcontract and the percentage of total project contract value this represents. DBE participation may be counted as follows; a) If DBE suppliers and manufactures assume actual and contractual responsibility, the dollar value of materials to be furnished will be counted toward the goal as follows:
 - The entire expenditure paid to a DBE manufacturer;
 - 60 percent of expenditures to DBE suppliers that are not manufacturers provided the supplier is a regular dealer in the product involved. A regular dealer must be engaged in, as its principal business and in its own name, the sale of products to the public, maintain an inventory and own and operate distribution equipment; and
 - The amount of fees or commissions charged by the DBE firms for a bona fide service, such as professional, technical, consultant, or managerial services and assistance in the procurement of essential personnel, facilities, equipment, materials, supplies, delivery of materials and supplies or for furnishing bonds, or insurance, providing such fees or commissions are determined to be reasonable and customary.

- b) The dollar value of services provided by DBEs such as quality control testing, equipment repair and maintenance, engineering, staking, etc.;
 - c) The dollar value of joint ventures. DBE credit for joint ventures will be limited to the dollar amount of the work actually performed by the DBE in the joint venture;
- 4 Written and signed documentation of the bidder's commitment to use a DBE contractor whose participation is being utilized to meet the DBE goal; and
- 5 Written and signed confirmation from the DBE that it is participating in the contract as provided in the prime contractor's commitment.

UPON AWARD AND BEFORE A WORK ORDER WILL BE ISSUED

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

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

CONSIDERATION OF GOOD FAITH EFFORTS REQUESTS

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

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

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

- 1 Whether the bidder attended any pre-bid meetings that were scheduled by the Cabinet to inform DBEs of subcontracting opportunities;
- 2 Whether the bidder provided solicitations through all reasonable and available means;
- 3 Whether the bidder provided written notice to all DBEs listed in the DBE directory at the time of the letting who are prequalified in the areas of work that the bidder will be subcontracting;
- 4 Whether the bidder followed up initial solicitations of interest by contacting DBEs to determine with certainty whether they were interested. If a reasonable amount of DBEs within the targeted districts do not provide an intent to quote or no DBEs are prequalified in the subcontracted areas, the bidder must notify the DBE Liaison in the Office of Minority Affairs to give notification of the bidder's inability to get DBE quotes;
- 5 Whether the bidder selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the contract goals. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise perform these work items with its own forces;
- 6 Whether the bidder provided interested DBEs with adequate and timely information about the plans, specifications, and requirements of the contract;
- 7 Whether the bidder negotiated in good faith with interested DBEs not rejecting them as unqualified without sound reasons based on a thorough investigation of their capabilities. Any rejection should be so noted in writing with a description as to why an agreement could not be reached;
- 8 Whether quotations were received from interested DBE firms but were rejected as unacceptable without sound reasons why the quotations were considered unacceptable. The fact that the DBE firm's quotation for the work is not the lowest quotation received will not in itself be considered as a sound reason for rejecting the quotation as unacceptable. The fact that the bidder has the ability and/or desire to perform the contract work with its own forces will not be considered a sound reason for rejecting a DBE quote. Nothing in this provision shall be construed to require the bidder to accept unreasonable quotes in order to satisfy DBE goals;
- 9 Whether the bidder specifically negotiated with subcontractors to assume part of the responsibility to meet the contract DBE goal when the work to be subcontracted includes potential DBE participation;
- 10 Whether the bidder made any efforts and/or offered assistance to interested DBEs in obtaining the necessary equipment, supplies, materials, insurance and/or bonding to satisfy the work requirements of the bid proposal; and
- 11 Any other evidence that the bidder submits which may show that the bidder has made reasonable good faith efforts to include DBE participation.

FAILURE TO MEET GOOD FAITH REQUIREMENT

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

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

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

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

SANCTIONS FOR FAILURE TO MEET DBE REQUIREMENTS OF THE PROJECT

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

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

PROMPT PAYMENT

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

CONTRACTOR REPORTING

All contractors must keep detailed records and provide reports to the Cabinet on their progress in meeting the DBE requirement on any highway contract. These records may include, but shall not be limited to payroll, lease agreements, cancelled payroll checks, executed subcontracting agreements, etc. Prime contractors will be required to complete and submit a signed and notarized affidavit (TC 18-7) and copies of checks for any monies paid to each DBE subcontractor or supplier utilized to meet a DBE goal. **These documents must be submitted within 10 days of being paid by the Cabinet.**

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

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

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

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

Photocopied payments and completed, signed and notarized affidavit must be submitted by the Prime Contractor to: Office of Civil Rights and Small Business Development
6th Floor West 200 Mero Street
Frankfort, KY 40622

DEFAULT OR DECERTIFICATION OF THE DBE

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

1/27/2017

**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.

Permanent Traffic Data
Acquisition Station Locations

April, 2017

PERMANENT TRAFFIC DATA ACQUISITION STATION LOCATIONS

ID	Location	Latitude	Longitude
1*	I-275 Carroll Cropper Bridge WB	39°05'51.83"N	84°49'12.10"W
2*	I-275 Carroll Cropper Bridge EB	39°05'54.11"N	84°49'16.41"W
3^	I-75 Brent Spence Bridge SB 5 th Street Exit Ramp	39°05'12.34"N	84°31'22.87"W
4^	I-75 Brent Spence Bridge SB Right Shoulder	39°05'02.98"N	84°31'22.80"W
5^	I-75 Brent Spence Bridge SB Median	39°05'03.04"N	84°31'21.72"W
6^	I-75 Brent Spence Bridge NB Right Shoulder	39°05'05.31"N	84°31'20.92"W
7^	I-75 Brent Spence Bridge NB Median	39°05'05.24"N	84°31'21.78"W
8^	I-75 Brent Spence Bridge NB 4 th Street Ramp	39°05'11.82"N	84°31'15.22"W
9*	US 25 Clay Wade Bailey Bridge	39°05'13.72"N	84°31'04.33"W
10+	KY 17 John A. Roebling Bridge	39°05'23.90"N	84°30'33.43"W
11+	US 27 Taylor-Southgate Bridge	39°05'36.52"N	84°29'53.68"W
12^	I-471 Daniel Carter Beard Bridge SB Right Side	39°05'56.65"N	84°29'32.40"W
13^	I-471 Daniel Carter Beard Bridge SB Left Side	39°05'57.16"N	84°29'31.96"W
14*	I-471 Daniel Carter Beard Bridge NB Right Side	39°05'54.83"N	84°29'24.12"W
15^	I-275 Combs Hehl Bridge EB	39°02'58.77"N	84°26'49.17"W
16^	I-275 Combs Hehl Bridge WB	39°03'15.20"N	84°26'16.89"W

Note: Latitude and Longitude are based on Google Earth geographic coordinates.

*At these locations, the radar vehicle detectors, solar power assemblies, and cabinets will be installed on proposed steel strain poles.

^ At these locations the radar vehicle detectors, solar panel assemblies, and cabinets will be installed on existing overhead sign trusses and supports.

+ The John Roebling Suspension Bridge and Taylor Southgate Bridge locations are included for information only.

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

Bid Item Code	Description	Unit	Quantity
2562	TEMPORARY SIGNS	SQ FT	224
2650	MAINTAIN AND CONTROL TRAFFIC	LP SUM	1
2775	ARROW PANEL	EACH	7
4880	STEEL STRAIN POLE	EACH	4
24893EC	RADAR VEHICLE DETECTOR	EACH	14
24892EC	SOLAR POWER ASSEMBLY	EACH	11
24079EC	WIRELESS MODEM	EACH	11

Alternate 1 includes the following locations: Carroll Cropper Bridge (I-275 Indiana), Brent Spence Bridge (I-75/71), Clay Wade Bailey (US 25), Daniel Carter Beard Bridge (I-471) and Combs Hehl Bridge (I-275 Ohio).

Material, Installation, and Bid Item Notes
For Traffic Data Acquisition Stations

April, 2017

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

1. DESCRIPTION

The purpose of this construction is to install permanent, solar-powered, microwave radar units for continuous traffic data collection on the approaches to the seven major Ohio River bridge crossings in Boone, Kenton and Campbell Counties. These installations shall consist of all components necessary for construction of complete, 12-volt, solar-powered, microwave radar data acquisition systems. The systems shall be designed to utilize solar electric modules with storage batteries as the power sources to provide continuous power for all equipment (radar vehicle detector, solar controller, and wireless modem) at the specified locations. The systems shall be designed to operate 24 hours per day with a minimum operating reserve of seven (7) days at an average monthly insolation on a horizontal surface, insolation at tilt, and average monthly temperatures at each specific site location shown in this document.

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

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

The permanent traffic data acquisition station standard detail sheets indicate the extent and general arrangement of the proposed installations and are for general guidance. Any omission or commission shown or implied shall not be cause for deviation from the intent of the standard detail sheets and specifications. Information shown on the standard detail sheets and in this proposal and the types and quantities of work listed are not to be taken as an accurate or complete evaluation of the material and conditions to be encountered during construction. The bidder must draw his own conclusion as to the conditions encountered. The Department of Highways (Department) does not give any guarantee as to the accuracy of the data and no claim will be considered for additional compensation if the conditions encountered are not in accordance with the information shown. If any modifications of the plans or specifications are considered necessary by the Contractor, details of such modifications and the reasons, therefore, shall be submitted in writing to the Engineer for written approval prior to beginning such modified work.

The Contractor shall contact all utility companies and the district utility agent prior to beginning construction to insure proper clearance and shielding from existing and proposed utilities. The Contractor shall use all possible care in excavating on this project so as not to disturb any existing

Material, Installation, and Bid Item Notes
For Traffic Data Acquisition Stations

April, 2017

utilities. Any utilities disturbed or damaged by the Contractor during construction shall be replaced or repaired to original condition by the Contractor at no cost to the Department. If necessary, to avoid existing utilities, the Contractor shall hand dig areas where poles cross utilities.

The Contractor shall be responsible for all damage to public and/or private property resulting from his work and any property disturbed or damaged by the Contractor during construction shall be replaced or repaired to original condition by the Contractor at no cost to the Department.

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

Material, Installation, and Bid Item Notes
For Traffic Data Acquisition Stations

April, 2017

2. MATERIALS

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

2.1. Conduit and Conduit Fittings

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

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

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

Flexible conduit shall be $\frac{3}{4}$ " liquid-tight flexible metallic conduit (LFMC).

Conduit on sign structures shall be secured a minimum of every four (4) feet with stainless steel banding.

2.2. Conduit sealant

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

- | | |
|------------------------------------|---|
| • Cure Time | 20 minutes max. |
| • Density | 64.4 kg/m ³ ; 6 lbs./ft ³ |
| • Compressive Strength (ASTM 1691) | 13.8 MPa; 330 or 300 psi |
| • Tensile Strength (ASTM 1623) | 15.9 MPa; 270 or 250 psi |
| • Flexural Strength (ASTM D790) | 14.5 MPa; 460 or 450 psi |
| • Service Temperature | -20° to 200° F |

2.3. Arrow Panel

Materials for Arrow Panel shall conform to the *Standard Specifications for Road and Bridge Construction* Section 112.02.04.

2.4. Grounding

2.4.1. Ground Rod

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

2.4.2. Ground Rod Clamp

Ground rod clamp shall be equipped with a one-piece cast copper or bronze body

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with a non-ferrous hexagonal head set screw and designed to accommodate one (1) 10 AWG solid through 2 AWG stranded grounding conductor.

2.5. Hardware

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

Mounting straps for pole mount cabinet shall be 3/4 inch x 0.03 inch stainless steel; equipped with clips or buckles to securely hold strap.

2.6. Maintain and Control Traffic

Materials for Maintain and Control Traffic shall conform to the *Standard Specifications for Road and Bridge Construction* Section 112, and the KYTC Department of Highways Standard Drawings.

Temporary lane closures will not be permitted during peak traffic hours at any of the locations between 6:00 AM to 9:00 AM and 3:00 PM to 6:00 PM Monday through Friday. Shoulder closures will not have any time restrictions at any of the locations. Contractor shall coordinate Traffic Control on the Brent Spence Bridge (I-75/71) at the same time that the rehabilitation project is on-going. All MOT and work done on the Brent Spence Bridge must be coordinated with the contractor selected for that project.

2.7. Wireless Modem and Antenna

2.7.1. Wireless Modem

Cellular, Wireless Modem shall meet or exceed the following requirements:

- Nominal voltage: 12V
- Low Power Consumption: LTE Idle Power <1W
- Temperature Operation: -40°F to +158°F
- Hazardous Environment Certification: NEC Class 1, Division 2
- Military Spec MIL-STD-810G conformance to shock, vibration, thermal shock, and humidity
- Ingress Protection: IP64
- Dimensions (max.): 5.0" x 1.5" x 4.0"
- Integrated mounting brackets for fastening directly to an enclosure
- Be equipped with a minimum of one 10/100/1000 Ethernet Port
- Be equipped with a minimum of one RS-232 Serial Port
- Packet Assembler/Disassembler (PAD) Mode: TCP/UDP
- SMA antenna connectors: Primary, diversity, and GPS
- Support cellular custom APN, access control list (ACL), configuration web UI
- Support remote configuration via on-premises WebUI and cloud-based management
- Support over-the-air configuration and software updates

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- Compatible with ALMS cloud gateway management
- Commercial Carrier Support: Verizon & AT&T
- 4G LTE Frequency Bands: 1900(B2), AWS(B4), 850(B5), 700(B13), 700(B17), 1900(B25)
- 3G HSPA/HSPA+ Frequency Bands: 2100(B1), 1900(B2), AWS(B4), 850(B5), 900(B8)

Wireless Modem shall be Sierra Wireless Airlink RV50 or approved equal.

2.7.2. Modem Splitter

Modem splitter shall be an RS232 splitter to connect two radar vehicle detectors (9-pin DTE ports) to one modem (9-pin DCE port) without switching. Each detector will be connected to a separate host port on the splitter. One splitter shall be required at each location where two detectors are installed on the same truss (I-75 Brent Spence Bridge NB, I-75 Brent Spence Bridge SB, and I-471 Daniel Carter Beard Bridge SB). An RS232 cable shall be supplied to connect the modem port of the splitter to the communications port of the modem.

2.7.3. Modem Antenna

Modem antenna shall be a multiband 4G/LTE multiple input, multiple output (MIMO) antenna with dual LTE and GPS that meets or exceeds the following:

- Frequency and Gain:
 - Cable 1 (4G/LTE): 694-960 MHz, 3 dBi
 - Cable 2 (4G/LTE): 1,710-2,700 MHz, 4 dBi
 - Cable 3 (GPS): 1,575 MHz
- Operating Temperature: -40° to +80° C
- Shock & Vibration: EN 300 019-2-4, IEC 60068, SAE J1455
- Ingress Protection: IP67
- Mounting (threaded bolt): 5/8" dia. feed through 1" long thread for up to 3/4" thick surface (electrical cabinet)
- Impedance: 50 Ω Nominal
- Maximum Power: 10 W
- Cable 1 & 2 Length (LTE): 60"
- Cable 3 Length (GPS): 60"

Modem antenna shall be Mobile Mark, multi-band diversity/MIMO, LTE and GPS or approved equal.

2.8. Steel Strain Pole

Steel Strain Pole shall conform to the *Standard Specifications for Road and Bridge Construction* Section 835.07 except for the following:

- The Contractor does not have to provide two (2) pole clamp assemblies suitable for attaching messenger cable with each pole.

Contractor shall submit proposed steel strain pole design and analysis to the Engineer for

review and approval prior to ordering the poles.

2.9. Radar Vehicle Detector (RVD)

The Radar Vehicle Detector (RVD) shall be a side-fire, pole-mounted radar operating in the microwave band. The manufacturer of the RVD shall be ISO 9001:2008 certified.

Environmental

Except as stated otherwise herein, the equipment shall meet all its specified requirements during and after subjecting to any combination of the following:

- Temperature and humidity limits per NEMA TS2-2003 requirements
- Vibration at 0.5g RMS up to 30 Hz in accordance with IEC 68-2-30 (test Fc), NEMA TS-1 (Section 2.1.12), or approved equivalent
- Shock at 10g 11mSec half sine wave in accordance with IEC 68-2-27 (test a), NEMA TS-1 (Section 2.1.13), or approved equivalent.
- Winds up to 120 mph
- Rain and other precipitation up to 4.0 in/hr.
- Power surge of ± 1 kV surge (rise time = 1.2 μ sec, hold = 50 μ sec) applied in differential mode to all lines, power and output, as defined by IEC 1000-4-5 and EN 61000-4-5 standards.

The design shall be inherently temperature compensated to prevent abnormal operation. The circuit design shall include such compensation as is necessary to overcome adverse effects due to temperature in the specified environmental range. Printed circuit boards shall be uniformly coated for protection against humidity and corrosion.

The RVD shall not require cleaning or adjustment to maintain performance. Once the RVD is calibrated, it shall not require recalibration to maintain performance unless the roadway configuration changes.

The RVD mounting bracket shall be attached to the pole with stainless steel bands able to support the RVD while experiencing the environmental conditions listed above.

Mechanical

The RVD shall be enclosed in a rugged, UV-stabilized, weatherproof enclosure that complies with NEMA 4X standards and any active electronics, including the detector, shall comply with ingress protection IP67.

Volume of the enclosure shall be a maximum of 0.30 cubic feet and weight shall be a maximum of 5 pounds.

Microwave Transmission

The RVD shall transmit on a frequency band of 24.125 GHz $\pm$ 50 MHz or another approved spectral band. It shall comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules.

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It shall have separate transmit and receive antennas. All transmit antennas shall be energized and transmitting at the same time; the use of RF switching circuitry to emulate multiple radar beams shall not be employed.

It shall require a maximum of 100MHz of bandwidth to maintain detection accuracy.

It shall not interfere with any known equipment. It shall not require RF communication channel configuration to prevent interference with other equipment, including any other RVD.

Electrical

The RVD unit shall be operable from 12 - 24 VDC and shall consume a maximum of 9W of power. Power shall be obtained from the solar power assembly within the cabinet. The RVD unit shall include power management features, allowing remote shutdown or cyclical shutdown of the unit.

Area of Coverage

The RVD's field of view shall cover an area defined by an oval shaped beam and its effective detection range shall be as follows:

- Elevation Beam Width: 50 degrees
- Azimuth Beam Width: 12 degrees
- Range: 0 to 250 feet

The RVD shall not require any aiming or alignment software.

The minimum number of definable detection zones shall be twelve (12). The RVD shall be able to collect and transmit all statistical measures for all configured zones.

Functional Characteristics and Capabilities

When mounted on roadside poles, the RVD shall be capable of providing the following in each of a minimum of twelve (12) detection zones:

- Presence
- Volume
- Lane Occupancy
- Average Speed
- Vehicle Classification by length in a minimum of six (6) user defined classes
- Average, per-vehicle data including Lane, Speed, Classification, and Length.
- 85th Percentile
- Headway or Gap
- Data, accumulated over user defined time intervals in a 5 to 3600 second range.

The RVD shall allow the user to define the contents of transmitted data.

The RVD shall include a built-in, non-volatile flash memory of a minimum of 8 MB for storing collected, time-stamped data and a mechanism for remote data retrieval.

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The RVD shall be capable of providing a time stamp with each message.

The RVD shall be capable of providing remote indication of input (battery) voltage within the periodic traffic data message to monitor the health of the batteries in the solar system without adding additional monitoring equipment.

The RVD shall be capable of providing local or remote upgrade of its internal firmware.

Measurement Accuracy

The following error levels shall be achievable, depending on mounting configurations.

Parameter	Max allowable error
Presence	5%
Volume	5%
Lane Occupancy	10%
Average Speed	10%
Length Classification	10%

Data Interface

Data communications shall be full-duplex, asynchronous, with one opto-isolated RS-232 port for rates from 2,400 to 115,200 bits per second. Serial data format shall be standard binary NRZ 8 bits data, 1 stop bit, no parity.

Cable

The RVD shall utilize a MIL-DTL-26482 Series II MS interface connector that provides power to the unit and serial data interface with hardware flow control for operations, programming, testing, and modem interface. The MS connector pins shall be crimped to the cable conductors and assembled and tested prior to installation and pulling of cable on site. The cable shall be UV-resistant and provide multiple twisted pairs (identified by different insulation colors) of stranded AWG #20 or #22 wire with a common shield rated at a minimum of 300V and a minimum temperature rating of 105°C. Communications pairs shall be individually or commonly shielded and terminated with a DB9 connector. Low voltage power conductors shall not be shielded in common with the communications pairs.

No splices are permitted in the cable.

Protections

All power lines, contact closures, and serial ports shall be isolated. Power lines and serial ports shall be surge protected within the RVD.

The RVD shall contain over-, under-, and wrong-polarity protection to reduce installation complexity and to protect the unit from having the power leads connected incorrectly and damaging the equipment.

The design shall be inherently temperature compensated to prevent abnormal operation and detection accuracy. The circuit design shall include such compensation as is necessary to overcome adverse effects due to temperature in the specified environmental range.

Mounting Assembly

The RVD mounting assembly shall be of all-coated steel, stainless steel, or aluminum construction, and shall support the RVD while experiencing wind loads of 120 mph and vibrations in accordance with NEMA TS2-2003 requirements.

The mounting assembly shall be mountable to any pole and shall incorporate a mechanism that can be adjusted on three axes and locked into place. The Contractor should be aware that some locations may have different diameter poles and that each location should be inspected to ensure the correct mounting assembly is used.

Software

The RVD shall include computer software for the user to program, calibrate, operate and view current status of all system features using a laptop computer or network-connected workstation. The software shall be Windows-based and able to connect to the RVD through either the main serial port, Bluetooth, or the Ethernet connection. The software shall allow both manual and automatic lane configuration and verification of correct setup, and diagnostics. It shall include facilities for saving verification data and collected data and saving and retrieving sensor setup from a file.

The software shall be capable of communicating concurrently between multiple users and multiple RVDs on the same network without any interruption or conflict with the normal polling cycle.

Warranty

The RVD shall be free from defects in material or workmanship and to be of the kind and quality specified in the manufacturer's warranty contract for a minimum of five years from the date of shipment. The designed Mean Times Between Failure (MTBF) of the RVD, operating continuously in its application, shall be a minimum of 10 years.

RVD shall be Image Sensing Systems RTMS SX-300 or approved equal.

2.10. Seeding and Protection

Materials for Seeding and Protection shall be Seed Mixture Type I and conform to the *Standard Specifications for Road and Bridge Construction* Section 212.03.03.

2.11. Temporary Signs

Materials for Temporary Signs shall conform to the *Standard Specifications for Road and Bridge Construction* Section 112.

2.12. Solar Power Assembly

Solar Power Assembly shall utilize solar electric modules with storage batteries as the power source to provide continuous power for all equipment (radar vehicle detector, solar controller, and wireless modem) at the specified locations. The system shall be designed

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to operate 24 hours per day at a winter, worst-case insolation of 2.6 hours and average monthly temperature. Contractor shall ensure a minimum of seven (7) days of autonomy between charge cycles due to inclement weather.

The solar power assembly shall generally consist of the following:

1. Batteries.
2. Solar panel with mounting bracket to affix the panel to the side of a pole as indicated in the standard detail sheets.
3. Solar controller.
4. Cabinet to house the batteries, solar controller, etc.
5. External conduit, wiring cable, and conductors between the following:
 - a. Solar panel to solar controller.
 - b. Batteries to solar controller.
 - c. Wiring between components in the cabinet.

The Contractor shall provide a fully operational assembly with all cabling and terminations matched to support the selected components.

Battery

A battery bank consisting of one or two batteries (as specified) shall provide adequate power to operate the system 24 hours per day for a minimum of seven (7) continuous days without the assistance of the solar panel. Batteries shall be gelled electrolyte, deep-cycle, marine, maintenance-free, and non-spillable. Batteries shall meet or exceed the following specifications:

- Nominal Voltage: 12V
- Operating Temperature Range: -76°F – 140°F
- Charge Voltage @ 68°F
 - Cycle: 2.30 - 2.35 v.p.c.
 - Float: 2.25 - 2.30 v.p.c.
- Depth of Discharge (DOD): 80% at 77°F
- Vent: Self-sealing
- Electrolyte: Sulfuric acid thixotropic gel
- Capacity (C20):
 - Sites 5 and 11: minimum 80Ah
 - All other sites: minimum 90Ah
- Maximum Dimensions
 - Length: 13.0"
 - Width: 7.0"
 - Height: 10.0"
- Maximum Weight: 75 Lbs.

Battery cables shall be insulated, THHN, 4 AWG, stranded copper.

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Locations at I-75 Brent Spence Bridge NB, I-75 Brent Spence Bridge SB and I-471 Daniel Carter Beard Bridge SB will each have two batteries (one for each radar unit). All other locations will have one battery.

Cabinet

Cabinet and door shall be constructed from a minimum 0.125" thick, natural-finished aluminum and shall meet or exceed the industry standards set forth by NEMA 3R.

Cabinet shall be of sufficient size to house one (1) or two (2) batteries (as specified), solar controller, and wireless modem, accommodate necessary conduits, and offer easy access to each component. Minimum, nominal, inside cabinet dimensions shall be:

Cabinet for:*	Height	Width	Depth
One Battery	16"	16"	11"
Two Batteries	18"	19"	19"

* Locations at the I-75 Brent Spence Bridge NB, I-75 Brent Spence Bridge SB and I-471 Daniel Carter Beard Bridge SB will each have a cabinet for two batteries. All other locations will have a cabinet for one battery.

The cabinet shall be equipped with the following:

- Drip shield top
- Exterior seams that are neatly formed, continuously welded and ground smooth, and free of cracks, burrs, blowholes, and other irregularities
- Pole mounting hardware
- Terminal Strip(s)
- Back panel in the upper portion of the cabinet for installation of solar controller, wireless modem, and terminal strip
- Stainless steel hardware

Cabinet shall be capable of supporting a minimum of 225 lbs. of equipment. If needed, the cabinet shall have welded stiffener plates to reinforce the walls. The integrity of the cabinet walls shall not be compromised except for where the conduit enters the bottom and the modem antenna cables enter the top.

At a minimum, cabinet shall be ventilated on each side by weatherproof louvers.

Cabinet door shall be of sufficient size to provide easy access to each component. The cabinet door frame shall be double flanged out on all four sides. Door shall be equipped with a restraint to prevent door movement in windy conditions, a closed cell neoprene gasket which forms a weather tight seal between the cabinet and door, and a stainless steel continuous hinge.

Door shall be equipped with a handle and keyed with a factory installed No. 2 Corbin lock and key or approved equal.

Solar Panel

Batteries shall be recharged with a solar panel producing 150 watts of power, capable of generating one (1) day’s system power requirement plus seven (7) days of operating reserve in 2.6 hours of solar insolation per day.

Solar Panel shall meet or exceed the following specifications:

Electrical Characteristics

- Hazardous Location Classification: NEC Class 1 Div. 2, Groups C and D
- Maximum Power (Pmax): 150W
- Voltage at Pmax (Vmp): 18.1V
- Current at Pmax (Imp): 8.3A
- Short circuit current (Isc): 8.5A
- Open circuit voltage (Voc): 22.2V
- Temperature coefficient of Isc: (0.085±0.015)%/°C
- Temperature coefficient of Voc: -0.36%/°C
- Temperature coefficient of Pmax: -(0.5±0.05)%/°C
- NOCT (Air 20 degrees Celsius; Sun 0.8KW/m2; wind speed 1m/s): 47±2°C
- Maximum series fuse rating: 20A
- Maximum system voltage: 1000V

Mechanical Characteristics

- Dimensions: L:1,510mm, W: 674mm, D: 50mm
- Weight: 12.0 kg
- Solar Cells: 36 cells (157mm x 157mm) in a 4x9 matrix connected in series
- Diodes: Bypass diodes shall be integrated into the printed circuit board bus.
- Front: High-transmission 3mm tempered glass
- Back: Polyester
- Encapsulant: EVA
- Frame: Anodized aluminum alloy type 6063T6
- Junction Box:
 - Ingress protection: IP65
 - minimum 4 terminal screw connection block
 - accepts PG 13.5, M20 13mm conduit, or cable fittings accepting 6mm to 12mm diameter cable
- Junction Box Terminals: Accept 8-14 AWG wire

The electrical and mechanical characteristics can have a variation of ±5% unless otherwise stated.

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Solar Module Output Cable shall be sunlight resistant, 10 AWG stranded, double insulated, 600V 90C.

Solar Panel Mount

The solar panels shall be designed to be securely attached to the side of a pole and of adequate design to support the weight of the panel at a 45° angle. Provide adjustable tilt mounts that can be repositioned to an appropriate angle to maximize seasonal solar radiation. Provide a mounting assembly capable of adjustable tilt and 360° horizontal orientation with a means of locking at any desired position. Ensure the mounting assembly is designed and installed to prevent module re-positioning during 80 mph wind conditions. The solar panel mounting assembly shall be constructed of stainless steel, galvanized steel (ASTM A-153 Class A), or aluminum. Label all solar panels with open-circuit voltage, operating (maximum power) voltage, maximum permissible voltage, operating (maximum power) current, short-circuit current, and maximum power. Mark each PV system disconnect as such. The solar panels shall fold down or retract/compact and lock for transport. All mounting hardware shall be stainless steel.

The Contractor should be aware that some locations may have different diameter poles and that each location should be inspected to ensure the correct pole mount is used.

Solar Controller

Solar controller shall utilize a solid-state, integrated control unit mounted to the backplate of the cabinet and capable of managing battery charging and power output control. The controller shall have visual indicators that show the current state of the battery and allow for charging/recovery of a dead battery.

The controller shall meet or exceed the following requirements:

- Nominal System Voltage: 12V
- Load Current Rating: 10A
- Charging Stages: Bulk, Absorption, Float, Equalize
- Marine rated terminals/anodized case including protective terminal cover
- Temperature compensated charging
- Sealed/Flooded battery select
- Temperature rating: -40°F to +140°F
- Fully Epoxy encapsulated for protection against humidity and dust ingress

The charge control portion of the solar controller shall be designed such that it draws its power from the solar array only when power is available so as to reduce parasitic load on the system. Controller shall use an ambient temperature sensor to adjust the charge termination point (temperature compensated charging) to prolong the battery life. The charge circuit shall employ a pulse-width modulation algorithm for charging the batteries and shall be of solid state series switch type configuration.

On-board, short-circuit protection shall be provided. The controller shall have the ability to detect day and night through a photovoltaic (PV) array (dusk till dawn activator). The load control function shall incorporate a low voltage disconnect (LVD) circuit to

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disconnect power to the control circuit if the battery voltage falls to a low state of charge (typically 20%).

Solar controller Hazardous Area Classification shall be Class I, Division 2, Groups C and D.

Solar controller shall be Morningstar Sun saver SS-10L or approved equal.

2.13. Concrete

Concrete shall conform to the *Standard Specifications for Road and Bridge Construction*, Section 601.

2.14. Steel Reinforcement

Steel reinforcement shall conform to the *Standard Specifications for Road and Bridge Construction*, Section 811.

2.15. Wire and Cable

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

Grounding conductor

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

2.16. Terminal for electrical wire or cable

Terminal for electrical wires or cables shall be insulated, solderless, spade tongue terminals of correct wire and stud size. Terminal for electrical wires or cables shall be incidental to the component to be connected to terminal strips.

3. CONSTRUCTION METHODS

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

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

3.1. Cleanup and Restoration

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

The Contractor shall be responsible for repairing any damage to public and/or private property resulting from his work. Upon completion of the work, restore all disturbed highway features in like kind design and materials. This shall include filling any ruts and leveling ground appropriately. Contractor shall dispose of all waste and debris off the project. Sow all disturbed earthen areas with Seed Mix Type 1 per Section 212 of the *Standard Specifications for Road and Bridge Construction* Section 212.03. All materials and labor necessary for cleanup and restoration shall be considered incidental to other bid items.

3.2. Arrow Panel

Furnish: Arrow Panel

Construction of Arrow Panel shall conform to the *Standard Specifications for Road and Bridge Construction* Section 112.03.

3.3. Maintain and Control Traffic

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

Maintain and Control Traffic shall conform to the plans, the *Standard Specifications for Road and Bridge Construction* Section 112.03, and the KYTC Department of Highways Standard Drawings.

3.4. Wireless Modem

Furnish: Wireless modem; antenna and antenna mount; modem splitter (where specified); cabling.

Contractor shall install the wireless modem in the cabinet and power it from the load side of the Solar Controller. Contractor shall affix the modem antenna to the top of the cabinet (using a manufacturer's recommended base if required) and install wires from the antenna to the modem inside the cabinet. Contractor shall ensure that the hole in the cabinet for the antenna wires is treated to prevent moisture from entering the cabinet. Install modem splitter at I-75 Brent Spence Bridge NB, I-75 Brent Spence Bridge SB, and I-471 Daniel Carter Beard Bridge SB.

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3.5. Steel Strain Pole and Pole Base

Furnish: Pole; anchor bolts; conduit; conduit fittings; ground rod with clamp; grounding conductor; conduit sealant; hardware, concrete, and reinforcing steel.

Installation of Steel Strain Pole and Pole Base shall conform to the *Standard Specifications for Road and Bridge Construction*, Section 723.03.

The location of each proposed pole foundation shall be marked in the field and approved by the Engineer prior to beginning any construction.

All conduits, poles, and cabinets shall be bonded to ground rods and the electrical system ground to form a complete grounded system. Install a ground rod with clamp such that top of ground rod is a minimum of 3 inches below finished grade. Install grounding conductor in 1- $\frac{3}{4}$ " conduit from cabinet to ground rod. Grounding systems shall have a maximum 25 ohms resistance to ground. If the resistance to ground is greater than 25 ohms, two or more ground rods connected in parallel shall be installed. Adjacent ground rods shall be separated by a minimum of 6 feet.

Restore disturbed areas per Note 3.1 Cleanup and Restoration above.

3.6. Radar Vehicle Detector

Furnish: Radar vehicle detector; radar vehicle detector mounting assembly; conduit; conduit fittings; conduit straps; power and data cables; and hardware.

The Contractor shall install the Radar Vehicle Detector (RVD), mounted in side-fired configuration on poles or existing sign structures at locations specified below.

ID	Location	Mount on	Radar Setback*	Radar Mounting Height*
1	I-275 Carroll Cropper Bridge WB	Prop. Steel Strain Pole	18'	17'
2	I-275 Carroll Cropper Bridge EB	Prop. Steel Strain Pole	15'	17'
3	I-75 Brent Spence Bridge SB 5 th St. Exit Ramp	Ex. Sign Structure	2'	15'
4	I-75 Brent Spence Bridge SB Right Shoulder	Ex. Sign Structure	14'	17'
5	I-75 Brent Spence Bridge SB Median		14'	17'
6	I-75 Brent Spence Bridge NB Right Shoulder	Ex. Sign Structure	14'	17'
7	I-75 Brent Spence Bridge NB Median		14'	17'
8	I-75 Brent Spence Bridge NB 4 th Street Ramp	Ex. Sign Structure	22'	18'
9	US 25 Clay Wade Bailey Bridge	Prop. Steel Strain Pole	10'	17'
10	KY 17 John A. Roebling Bridge	Prop. Steel Strain Pole	18'	17'
11	US 27 Taylor Southgate Bridge	Prop. Steel Strain Pole	18'	17'
12	I-471 Daniel Carter Beard Bridge SB Right Side	Ex. Sign Structure	6'	17'
13	I-471 Daniel Carter Beard Bridge SB Left Side		0'	14'

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14	I-471 Daniel Carter Beard Bridge NB Right Side	Prop. Steel Strain Pole	14'	17'
15	I-275 Combs Hehl Bridge EB	Ex. Sign Structure	22'	18'
16	I-275 Combs Hehl Bridge WB	Ex. Sign Structure	14'	17'

* Radar setback is measured from the edge of the driving lane. Radar mounting height is height above roadway. Radar setbacks and mounting heights are approximate and will be determined in the field and approved by the Engineer prior to any construction.

The Contractor shall install the RVD at the height above the road surface specified so that the occlusion of vehicles is minimized and that all detection zones are contained within the specified elevation angle suggested by the manufacturer.

At locations where equipment is installed on existing sign structures:

- Where the RVD is installed on the same column as the cabinet: the Contractor shall install conduit, sized in accordance with the National Electrical Code (NEC), from the cabinet to a weatherhead near the detector as shown on the Standard Detail Sheets to route the RVD cable.
- Where the RVD is installed on the same structure but opposite column from the cabinet (I-75 Brent Spence Bridge NB, I-75 Brent Spence Bridge SB, and I-471 Daniel Carter Beard Bridge SB), the Contractor shall install conduit, sized in accordance with the NEC, from the cabinet, up the column on which the cabinet is installed, across the existing sign structure truss to the RVD mounted on the column on the opposite side of the sign structure.

The Contractor shall install all cabling in accordance with the detector manufacturer recommendations between the RVD and the cabinet.

The RVD enclosure shall be electrically grounded using a minimum 6 AWG bonding conductor.

Configuration Programming and Backup

The RVD mode of operation, detection zones, and other calibration and set up parameters shall be performed using Windows-based software and a laptop or desktop PC connected to the RVD through either the main serial port, Bluetooth, or the Ethernet connection. The Contractor shall use the software to fine tune the detection zones. The Contractor shall supply to the Engineer three copies of the software with full documentation for use by OKI personnel.

RVD Local and Remote Site Verification Testing

Upon installation of the RVD equipment, the Contractor shall test the equipment locally using Contractor supplied configuration/monitoring software running on a portable computer. The Contractor shall verify the volume counts and speed measurements made by the RVD. To verify volumes, the vehicles in each lane shall be manually counted by the Contractor and compared to the data accumulated by the sensor. A minimum of 15 minutes of vehicle volume data shall be compared for each lane detection zone. Upon successfully verifying the accuracy requirements of this specification ($\pm 5\%$ error), a second 15 minute count period shall be performed per lane to rule out coincidental acceptance. To verify the speed measurements, a

Material, Installation, and Bid Item Notes
For Traffic Data Acquisition Stations

April, 2017

radar or laser gun shall be used. A minimum of fifty measurements shall be taken for each lane of traffic and compared to sensor generated speed data. Upon successfully verifying the accuracy requirements of this specification ($\pm 10\%$ error), a second minimum of fifty measurements shall be taken for each lane of traffic and compared to sensor generated speed data to rule out coincidental acceptance. All testing and manual count analysis shall be performed in the presence of the Engineer. After successful completion of the local testing, the Contractor shall perform testing remotely with the sensors connected locally to their assigned controller and detector data being obtained and observed at OKI (720 E. Pete Rose Way, Cincinnati, OH, 45202). The remote tests shall verify, to the satisfaction of the Engineer, that the sensor data for each lane is properly routed from each location to OKI.

Thirty Day Operational Testing

After the equipment is installed, all required corrective work is performed, and the system checkout is complete:

1. The Engineer will perform a final inspection and develop a punch list of items that the Contractor shall correct.
2. Upon completion of corrective items, the Engineer will begin an operational test period of a minimum of thirty (30) days to demonstrate that every part of the system functions as specified and operates satisfactorily.
3. If a component or system fails or shows unsatisfactory performance, the condition shall be corrected by the Contractor and the test repeated until thirty (30) days of continuous satisfactory operation is obtained.
4. Costs incurred during operational tests shall be at the Contractor's expense.

Payment for the Radar Vehicle Detector will be issued after the successful completion of the test period.

3.7. Temporary Signs

Furnish: Signs; sign standards and hardware.

Installation of temporary signs shall conform to the *Standard Specifications for Road and Bridge Construction* Section 112.03.

3.8. Solar Power Assembly

Furnish: Cabinet; mounting brackets; mounting straps; conduit; LB condulets; conduit fittings; conduit straps; conduit grounding bushings; terminal strip(s); cable staples; conduit sealant; hardware; ground rod with clamp; grounding conductor; solar panel; solar panel mounting assembly; solar controller; batteries; wire and cable; wire labels; and spade tongue wire terminals (as required).

The Contractor shall, in accordance with the manufacturer's recommendations, install the solar assembly at the locations specified below.

Material, Installation, and Bid Item Notes
For Traffic Data Acquisition Stations

April, 2017

ID	Location	Mount on	Number of Batteries	Type of Cabinet
1	I-275 Carroll Cropper Bridge WB	Prop. Steel Strain Pole	1	One Battery
2	I-275 Carroll Cropper Bridge EB	Prop. Steel Strain Pole	1	One Battery
3	I-75 Brent Spence Bridge SB 5 th St. Exit Ramp	Ex. Sign Structure	1	One Battery
4	I-75 Brent Spence Bridge SB Right Shoulder	Ex. Sign Structure	2	Two Batteries
5	I-75 Brent Spence Bridge SB Median			
6	I-75 Brent Spence Bridge NB Right Shoulder	Ex. Sign Structure	2	Two Batteries
7	I-75 Brent Spence Bridge NB Median			
8	I-75 Brent Spence Bridge NB 4 th Street Ramp	Ex. Sign Structure	1	One Battery
9	US 25 Clay Wade Bailey Bridge	Prop. Steel Strain Pole	1	One Battery
10	KY 17 John A. Roebling Bridge	Prop. Steel Strain Pole	4	One Battery
11	US 27 Taylor Southgate Bridge	Prop. Steel Strain Pole	4	One Battery
12	I-471 Daniel Carter Beard Bridge SB Right Side	Ex. Sign Structure	2	Two Batteries
13	I-471 Daniel Carter Beard Bridge SB Left Side			
14	I-471 Daniel Carter Beard Bridge NB Right Side	Prop. Steel Strain Pole	1	One Battery
15	I-275 Combs Hehl Bridge EB	Ex. Sign Structure	1	One Battery
16	I-275 Combs Hehl Bridge WB	Ex. Sign Structure	1	One Battery

The power output of the solar panel shall feed to the specified field equipment. Any modifications necessary for a cabinet to accept the equipment and/or cabling included in this specification shall be incidental to this bid item.

Cabinet

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

Install specified rigid steel conduit(s) and type LB conduit(s) into the bottom of the cabinet for wire and cable entry. Conduit ends shall be reamed to remove burrs and sharp edges. Damaged portions of the galvanized surfaces and untreated threads resulting from field cuts shall be painted with an Engineer-approved, rust inhibitive paint. Conduit bends shall have a radius of no less than 12 times the nominal diameter of the conduit, unless otherwise shown on the standard detail sheets. Install a bushing (grounding bushing where required) on both ends of all conduits. Conduit openings in cabinets shall be waterproofed with a flexible, removable conduit sealant, working it around the wires, and extending it a minimum 1 inch into the end of the conduit.

All conduits, poles, and cabinets shall be bonded to ground rods and the electrical system ground to form a complete grounded system. Install a ground rod with clamp such that top of ground rod is a minimum of 3 inches below finished grade. Install grounding conductor in 1-³/₄" conduit from cabinet to ground rod. Grounding systems shall have a maximum 25 ohms resistance to ground. If the resistance to ground is greater than 25 ohms, two or more ground rods connected in parallel shall be installed. Adjacent ground rods shall be separated by a

Material, Installation, and Bid Item Notes
For Traffic Data Acquisition Stations

April, 2017

minimum of 6 feet.

Batteries

Install and wire batteries in cabinet. Batteries shall be accessible for maintenance in both transport and fully deployed positions. Battery bank shall be labeled with UV resistant labels indicating maximum operating voltage, equalization voltage, and polarity.

Solar Panel

Install solar panel per the contract documents and manufacturer's recommendations. The Contractor shall orient the solar array so that the maximum amount of energy is captured over the entire year. Documentation specifying the correct tilt angle and orientation shall be given to the Engineer for inspection and verification prior to any installation. The Contractor shall have the appropriate tools, such as a compass and protractor, to verify that the panels have been correctly installed per manufacturer's recommendation for a given location. Any natural vegetation such as trees, bushes, or brush that may block the solar array shall be cleared and paid for under other contract items.

Wiring

Wire the solar power assembly per the system schematic shown in contract documents. Installation of all wiring shall be neat and orderly and conform to the NEC. Permanent identification labels shall be affixed to all wires in the cabinet.

At locations where equipment is installed on existing sign structures, the Contractor may use the conduit installed with the RVD as a raceway for the solar panel wiring provided the conduit is sized in accordance with the NEC for all wires in the conduit.

Solar Power Assembly Operational Testing

A Solar Power Assembly Operational Test shall be performed for each Solar Power Assembly. This test shall be performed for a minimum of fourteen (14) days. The testing period shall include a minimum of three (3) days with the solar panel disconnected from the controller panel. The Solar Power Assembly Operational Test shall verify the Solar Power Assembly is fully operational and can supply specified power without misrepresentation. The Contractor shall provide a Solar Power Assembly Operational Test schedule to the Engineer for review and approval prior to the test and detailed results of the test upon completion.

4. BID ITEM NOTES AND METHOD OF MEASUREMENT FOR PAYMENT

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

4.1. Arrow Panel

The Department will measure the quantity for Arrow Panel per the *Standard Specifications for Road and Bridge Construction*, Section 112.04.05.

4.2. Maintain and Control Traffic

The Department will measure the quantity for Maintain and Control Traffic per the *Standard Specifications for Road and Bridge Construction*, Section 112.04.01.

4.3. Wireless Modem

The Department will measure the quantity for Wireless Modem as each individual unit furnished and installed. The Department will not measure separately furnishing and installing modem antenna, mounting equipment, splitter (where specified), cable, and any necessary hardware and will consider them incidental to this item of work.

Locations at I-75 Brent Spence Bridge (NB & SB mainline) and at I-471 Daniel Carter Beard Bridge (SB mainline only) will each have a modem splitter.

4.4. Steel Strain Pole

The Department will measure the quantity for Steel Strain Pole as each individual unit furnished and installed. This includes excavation, concrete, reinforcing steel, ground rods with clamps, ground wires, backfilling, anchor bolts, conduit, and all necessary hardware which will not be measured and will be considered incidental to this item of work.

4.5. Radar Vehicle Detector

The Department will measure the quantity for Radar Vehicle Detector as each individual unit furnished and installed. The Department will not measure separately furnishing and installing mounting assembly, conduit, conduit fittings, conduit straps, cable, software, and any necessary hardware and will consider them incidental to this item of work.

I-75 Brent Spence Bridge (NB & SB mainline) and I-471 Daniel Carter Beard Bridge (SB mainline only) will each have two RVDs. All other locations will have one RVD.

4.6. Solar Power Assembly

The Department will measure the quantity for Solar Power Assembly as each individual unit furnished and installed. The Department will not measure separately furnishing and installing cabinet, backplate, terminal strip(s), conduit, conduit fittings, mounting hardware, solar panels and mounting equipment, solar controller, batteries, cable, any necessary hardware, and all other necessary equipment to complete a fully functioning solar powered assembly.

Material, Installation, and Bid Item Notes
For Traffic Data Acquisition Stations

April, 2017

I-75 Brent Spence Bridge (NB & SB mainline) and I-471 Daniel Carter Beard Bridge (NB & SB mainline) will each have two batteries. All other locations will have one battery.

4.7. Temporary Signs

The Department will measure the quantity for Temporary Signs per the *Standard Specifications for Road and Bridge Construction*, Section 112.04.02.



5th Street SB Exit Ramp
2' setback
15' mounting height

4th Street NB
Entrance Ramp
22' setback
18' mounting height

I-75/71 NB Mainline
(For left lane only)
14' setback
17' mounting height

I-75/71 NB Mainline
14' setback
17' mounting height

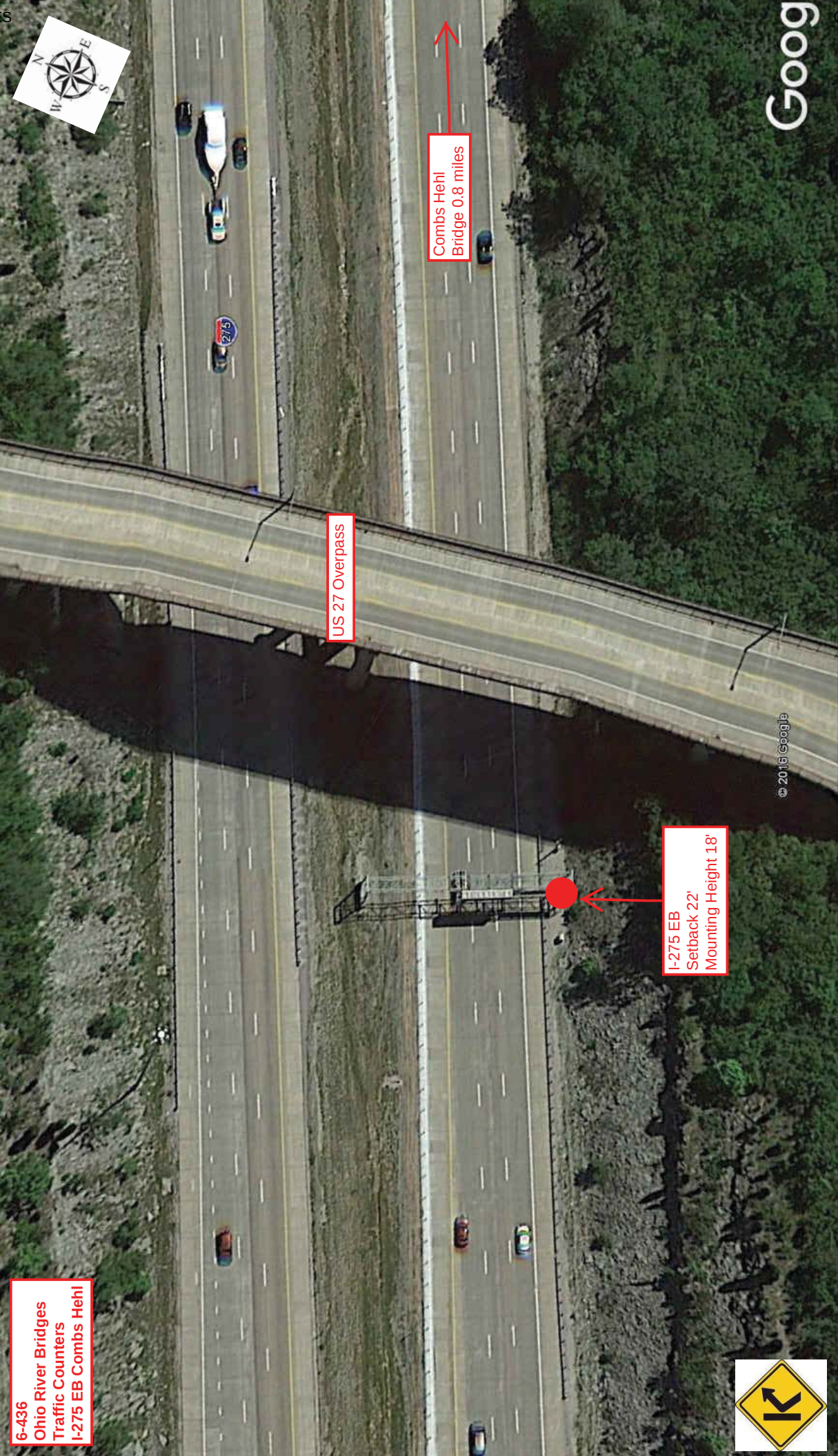
I-75/71 SB Mainline
14' setback
17' mounting height

I-75/71 SB Mainline
(For left lane only)
14' setback
17' mounting height

6-436 Brent
Spence Bridge
Radar Traffic
Counter Locations

Setbacks and
mounting heights
are approximate
and can be
adjusted in the field.





6-436
Ohio River Bridges
Traffic Counters
I-275 EB Combs Hehl

US 27 Overpass

Combs Hehl
Bridge 0.8 miles

I-275 EB
Setback 22'
Mounting Height 18'

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Goog



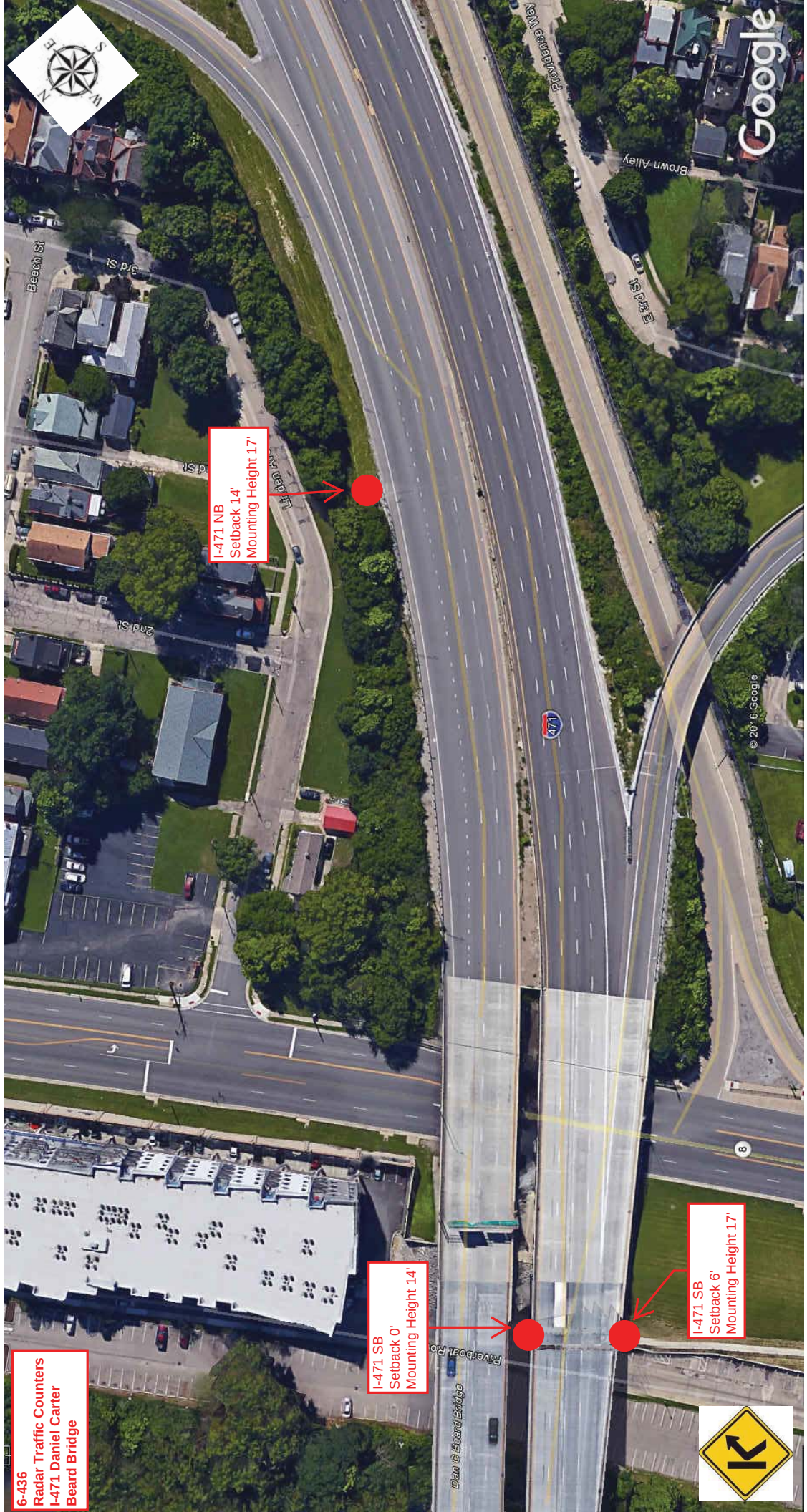
6-436
Radar Traffic Counters
I-275 WB Combs Hehl Bridge

I-275 WB
Setback 14'
Mounting Height 17'



© 2016 Google

Google Earth



6-436
Radar Traffic Counters
I-471 Daniel Carter
Beard Bridge

I-471 NB
Setback 14'
Mounting Height 17'

I-471 SB
Setback 0'
Mounting Height 14'

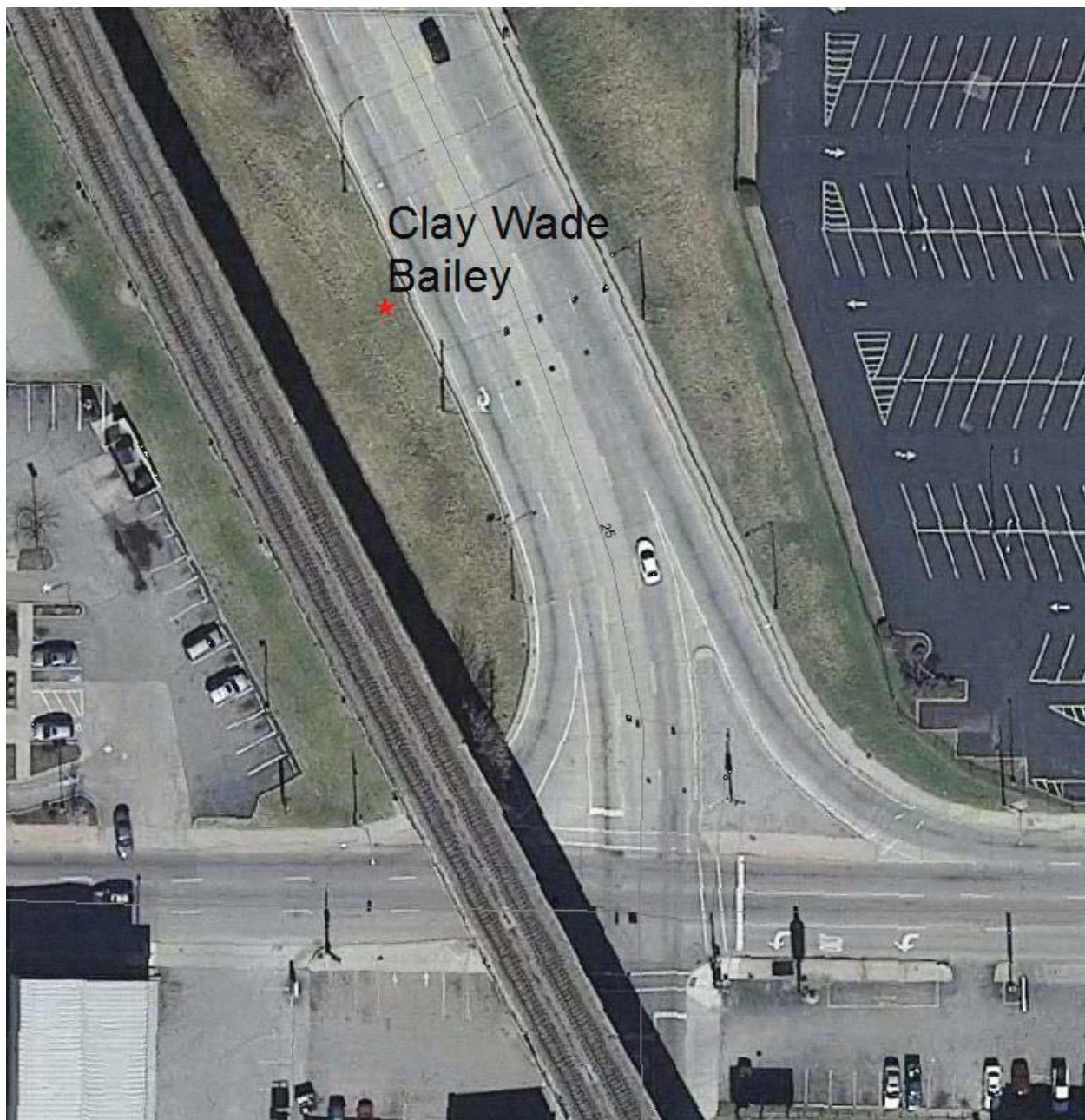
I-471 SB
Setback 6'
Mounting Height 17'



Carroll Cropper Bridge

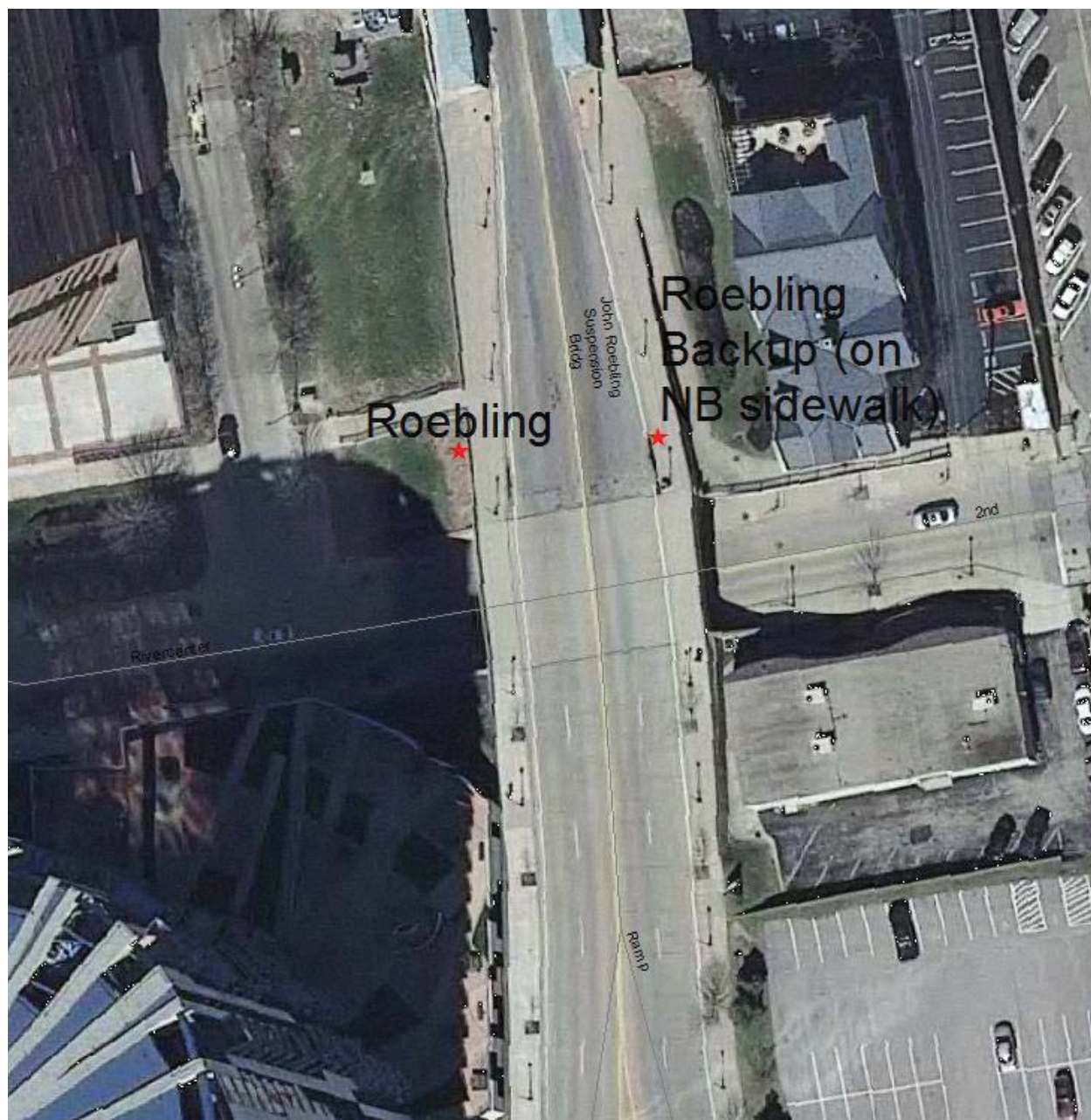


Clay Wade Bailey Bridge



Roebling Bridge

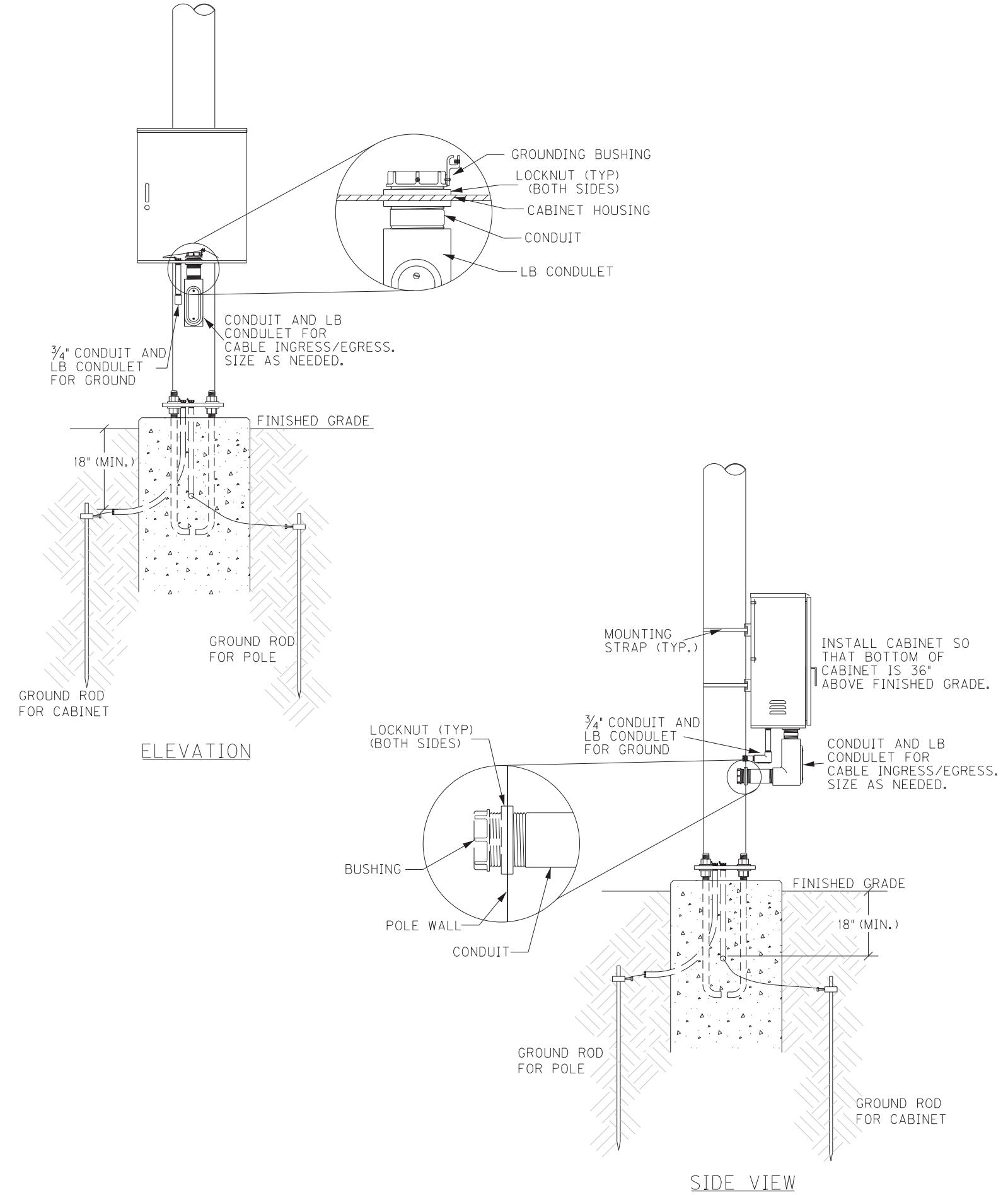
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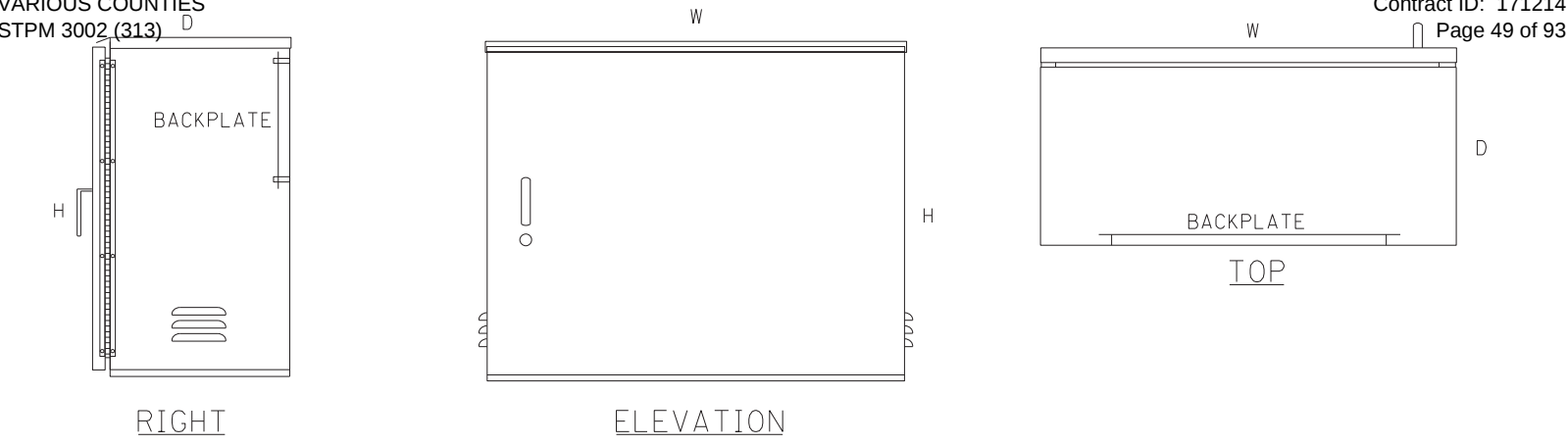


Taylor-Southgate Bridge

For Information Only

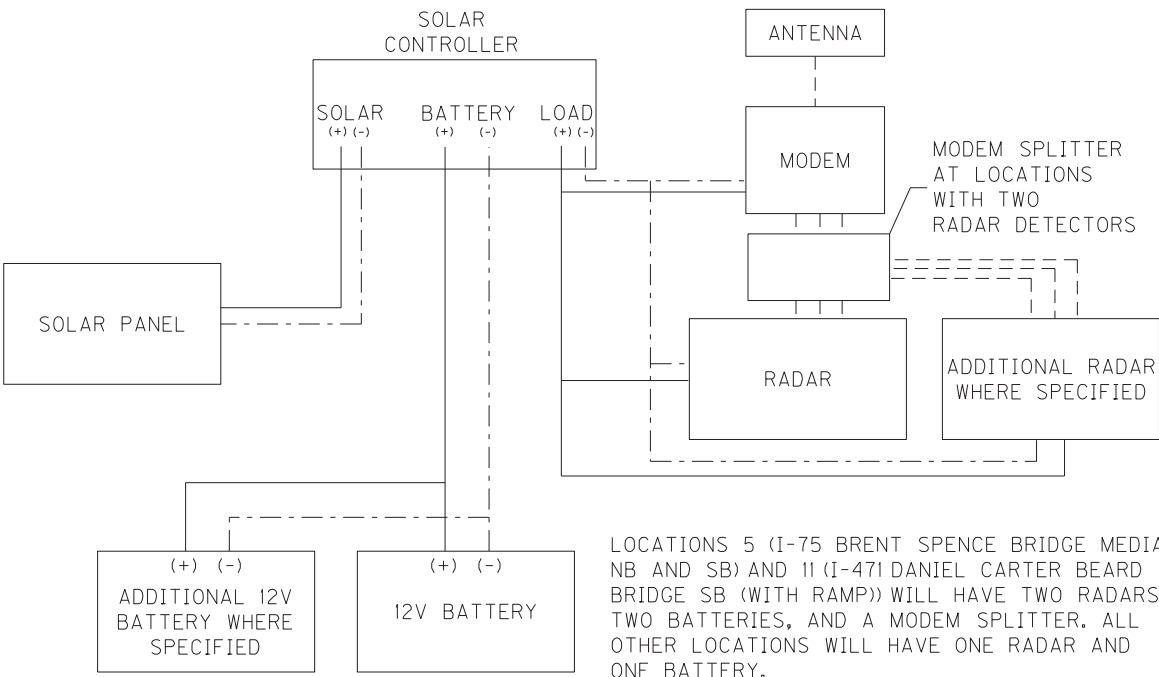
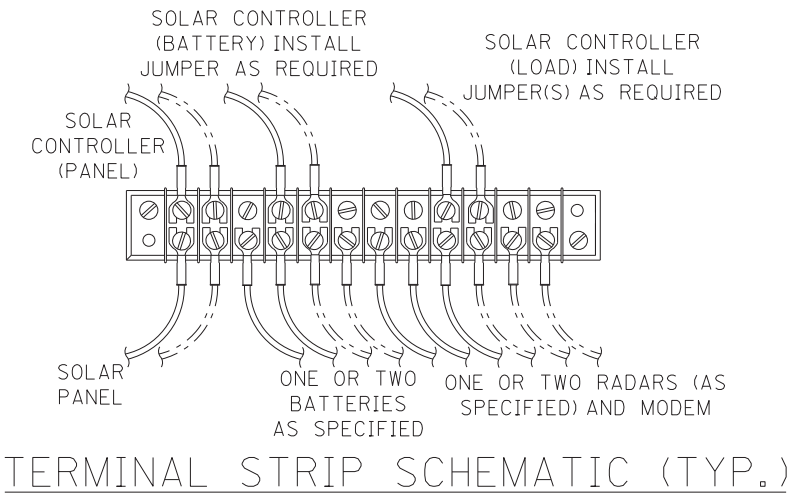




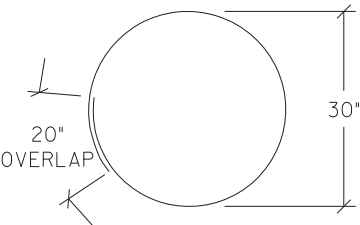


	MINIMUM NOMINAL INTERNAL DIMENSIONS		
CABINET FOR	HEIGHT (H)	WIDTH (W)	DEPTH (D)
ONE BATTERY	16"	16"	11"
TWO BATTERIES	18"	19"	19"

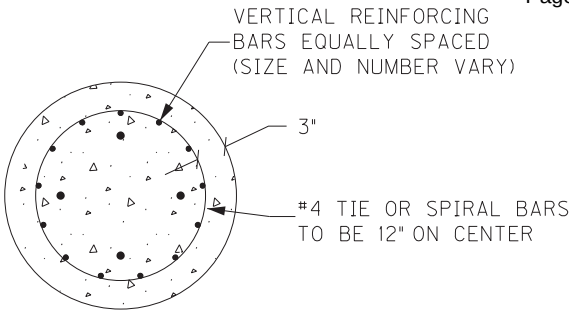
CABINET



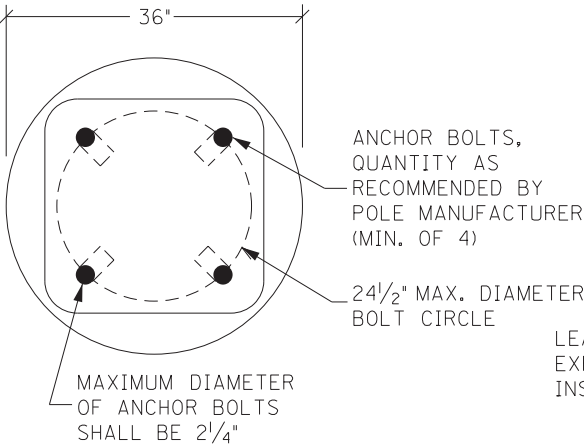
LOCATIONS 5 (I-75 BRENT SPENCE BRIDGE MEDIAN NB AND SB) AND 11 (I-471 DANIEL CARTER BEARD BRIDGE SB (WITH RAMP)) WILL HAVE TWO RADARS, TWO BATTERIES, AND A MODEM SPLITTER. ALL OTHER LOCATIONS WILL HAVE ONE RADAR AND ONE BATTERY.



BENDING DETAIL
FOR TIE BARS

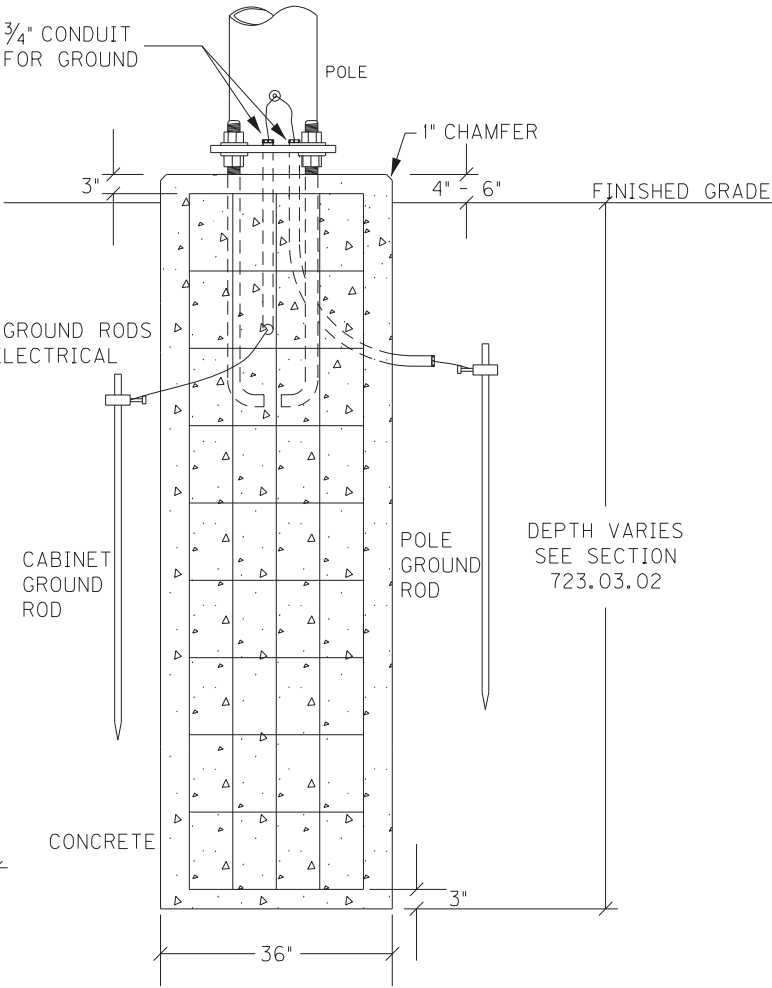


REINFORCING BARS

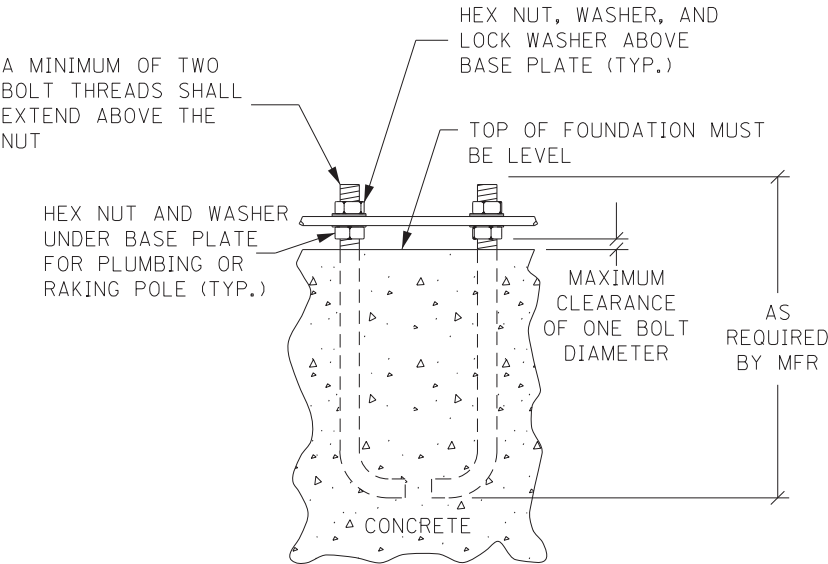


BASE AND ANCHOR
BOLTS PLAN VIEW

LEAVE TOP OF GROUND RODS
EXPOSED FOR ELECTRICAL
INSPECTION.

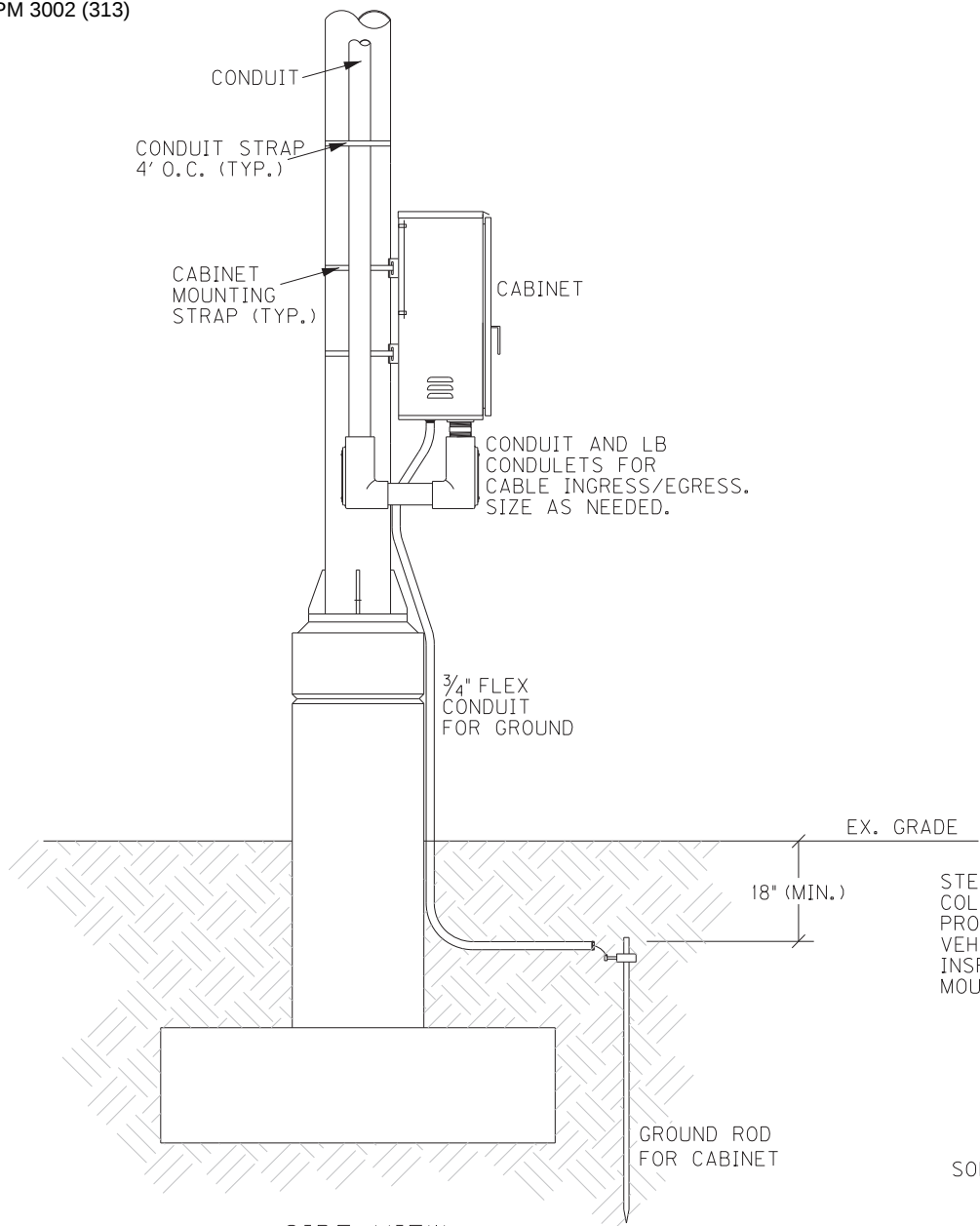


ELEVATION



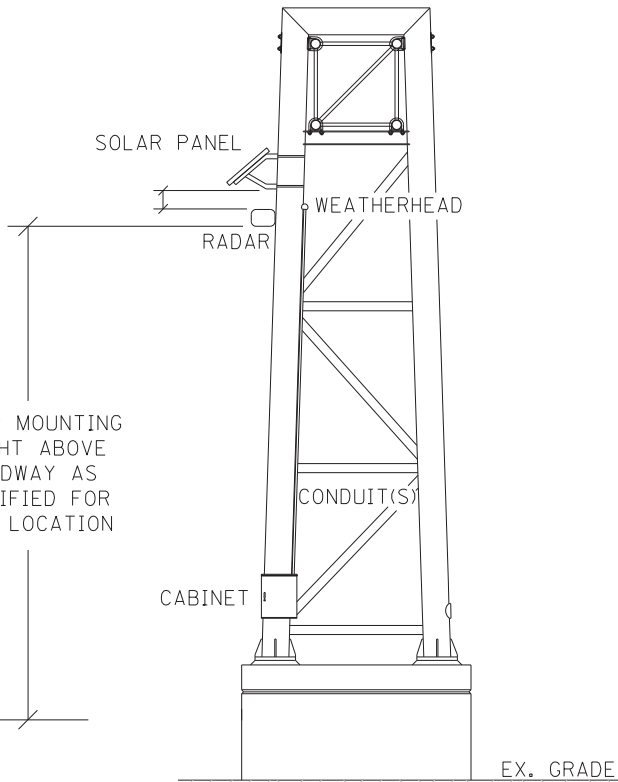
BASE AND ANCHOR
BOLTS (ELEVATION)

STEEL STRAIN POLE BASE



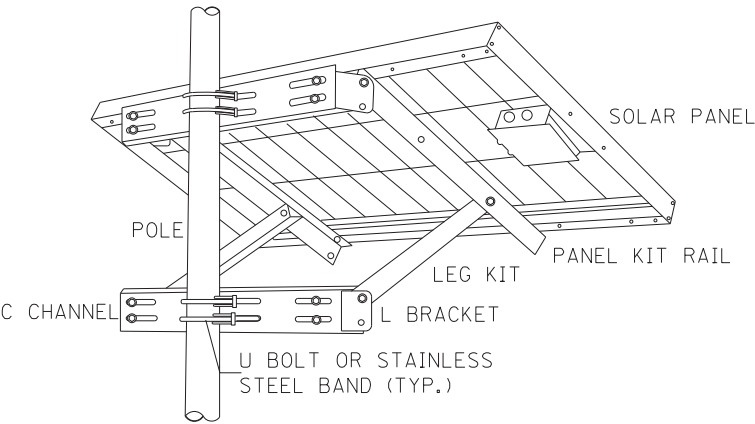
SIDE VIEW

STEEL STRAIN POLES AND EX. SIGN STRUCTURE COLUMNS MAY HAVE DIFFERENT DIAMETERS. EACH PROPOSED CABINET, SOLAR PANEL, AND RADAR VEHICLE DETECTOR LOCATION SHOULD BE INSPECTED TO ENSURE THAT THE CORRECT MOUNTING ASSEMBLIES ARE USED.



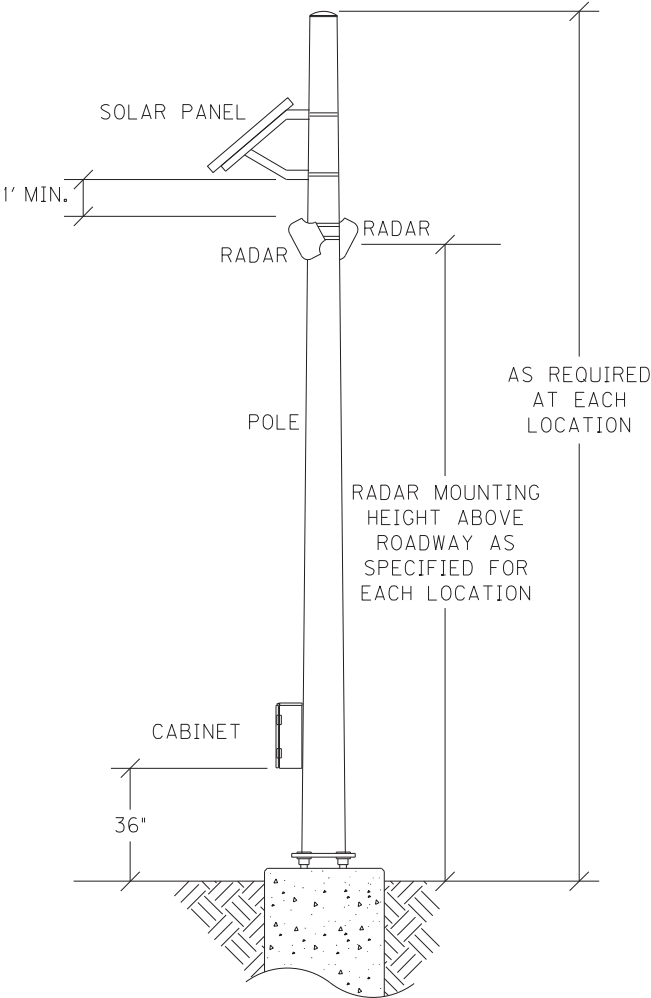
ELEVATION

EX. SIGN STRUCTURE
MOUNT SOLAR PANEL,
RADAR, AND CABINET

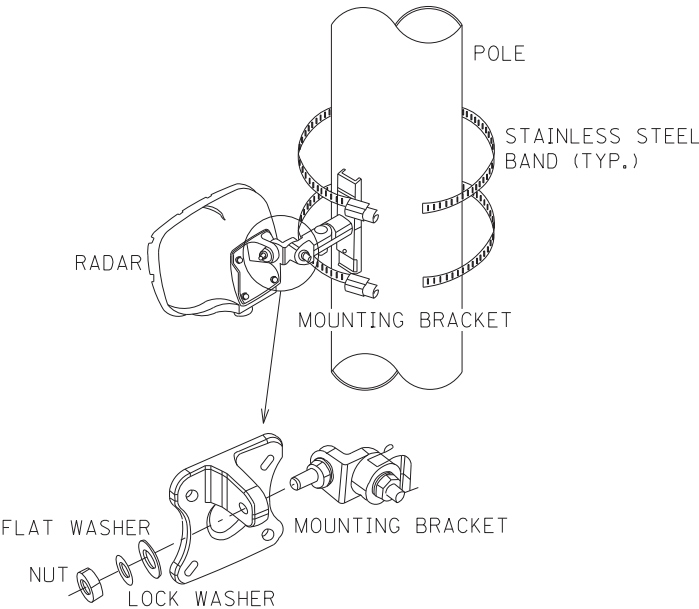


SOLAR PANEL MOUNT

STEEL STRAIN POLES AND EX. SIGN STRUCTURE COLUMNS MAY HAVE DIFFERENT DIAMETERS. EACH PROPOSED CABINET, SOLAR PANEL, AND RADAR VEHICLE DETECTOR LOCATION SHOULD BE INSPECTED TO ENSURE THAT THE CORRECT MOUNTING ASSEMBLIES ARE USED.

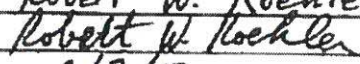
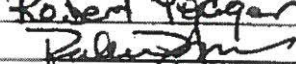
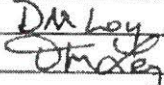
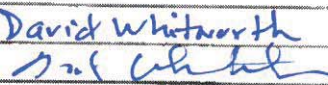


STEEL STRAIN POLE
MOUNT SOLAR PANEL,
RADAR, AND CABINET



RADAR MOUNT

	KENTUCKY TRANSPORTATION CABINET Department of Highways DIVISION OF RIGHT OF WAY & UTILITIES	TC 62-226 Rev. 01/2016 Page 1 of 1
RIGHT OF WAY CERTIFICATION		

☒	Original	☐	Re-Certification	RIGHT OF WAY CERTIFICATION	
ITEM #	COUNTY	PROJECT # (STATE)	PROJECT # (FEDERAL)		
6-436.00	Boone/Kenton/Campbell	Auth# 92413	STPM 3002 299		
PROJECT DESCRIPTION					
Install permanent radar traffic counters on 7 Ohio River bridges in the OKI region. (Northern Kentucky)					
☒ 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		0	EXCEPTION (S) Parcel #		ANTICIPATED DATE OF POSSESSION WITH EXPLANATION
Number of Parcels That Have Been Acquired					
Signed Deed		0			
Condemnation		0			
Signed ROE		0			
Notes/ Comments (Use Additional Sheet if necessary)					
No R/W needed. All poles located on KYTC R/W.					
LPA RW Project Manager			Right of Way Supervisor		
Printed Name	Robert W. Koehler		Printed Name	Robert Pagar	
Signature			Signature		
Date	2/7/17		Date	2/8/17	
Right of Way Director			FHWA		
Printed Name	DM Loy		Printed Name	David Whitworth	
Signature			Signature		
Date	2/13/2017		Date	2-14-17	

UTILITIES AND RAIL CERTIFICATION NOTE

BOONE COUNTY, STPM 3002 (299)
FD52 1200 008 92413 01D
Install Permanent Radar Traffic Counters on 7 Ohio River Bridges in the OKI
Region
SIX YEAR PLAN ITEM NUMBER 6-436.00

Utility coordination efforts determined that no significant utility relocation work is required to complete the project. Any work pertaining to these utility facilities is defined in the bid package and is to be carried out as instructed by the Kentucky Transportation Cabinet. The contractor will be responsible for any coordination or adjustments that are discussed or quantified in the proposal.

NOTE: DO NOT DISTURB THE FOLLOWING UTILITIES LOCATED WITHIN THE PROJECT DISTURB LIMITS

Sanitation District No. 1 has sewer facilities within the project limits and is not to be disturbed. The contractor is to have SD1’s facilities located and place the traffic counters in a location that will avoid the existing facilities. There may be additional facilities in the project area that the contractor must work around. It is the contractor’s responsibility to have all utility facilities marked.

The Contractor is fully responsible for protection of all utilities listed above

THE FOLLOWING RAIL COMPANIES HAVE FACILITIES IN CONJUNCTION WITH THIS PROJECT AS NOTED

☒ No Rail Involved ☐ Minimal Rail Involved (See Below) ☐ Rail Involved (See Below)

UNDERGROUND FACILITY DAMAGE PROTECTION – BEFORE YOU DIG

The contractor shall make every effort to protect underground facilities from damage as prescribed in the Underground Facility Damage Protection Act of 1994, Kentucky Revised Statute KRS 367.4901 to 367.4917. It is the contractor’s responsibility to determine and take steps necessary to be in compliance with federal and state damage prevention directives. The contractor is instructed to contact KY 811 for the location of existing underground utilities. Contact shall be made a minimum of two (2) and no more than ten (10) business days prior to excavation.

The contractor shall submit Excavation Locate Requests to the Kentucky Contact Center (KY 811) via web ticket entry. The submission of this request does not relieve the contractor from the responsibility of contacting non-member facility owners, whom are to be contacted through their individual Protection Notification Center. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area. Non-compliance with these directives can result in the enforcement of penalties.

UTILITIES AND RAIL CERTIFICATION NOTE

BOONE COUNTY, STPM 3002 (299)
FD52 1200 008 92413 01D
Install Permanent Radar Traffic Counters on 7 Ohio River Bridges in the OKI
Region
SIX YEAR PLAN ITEM NUMBER 6-436.00

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.

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

AREA UTILITIES CONTACT LIST AS PROVIDED BY KY 811

<u>Utility Company/Agency</u>	<u>Contact Name</u>	<u>Contact Information</u>
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CONTACT INFORMATION WILL BE PROVIDED AT THE PRECON MEETING

PART II

SPECIFICATIONS AND STANDARD DRAWINGS

SPECIFICATIONS REFERENCE

Any reference in the plans or proposal to previous editions of the *Standard Specifications for Road and Bridge Construction* and *Standard Drawings* are superseded by *Standard Specifications for Road and Bridge Construction, Edition of 2012* and *Standard Drawings, Edition of 2016*.

SUPPLEMENTAL SPECIFICATIONS

The contractor shall use the Supplemental Specifications that are effective at the time of letting.
The Supplemental Specifications can be found at the following link:

<http://transportation.ky.gov/Construction/Pages/Kentucky-Standard-Specifications.aspx>

SPECIAL NOTE FOR PORTABLE CHANGEABLE MESSAGE SIGNS

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

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

2.0 MATERIALS.

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

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

2.2 Sign and Controls. All signs must:

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

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- 12) Allow an on-off flashing sequence at an adjustable rate.
- 13) Provide a sight to aim the message.
- 14) Provide a LED display color of approximately 590 nm amber.
- 15) Provide a controller that is password protected.
- 16) Provide a security device that prevents unauthorized individuals from accessing the controller.
- 17) Provide the following 3-line messages preprogrammed and available for use when the sign unit begins operation:

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

*Insert numerals as directed by the Engineer.

Add other messages during the project when required by the Engineer.

2.3 Power.

- 1) Design solar panels to yield 10 percent or greater additional charge than sign consumption. Provide direct wiring for operation of the sign or arrow board from an external power source to provide energy backup for 21 days without sunlight and an on-board system charger with the ability to recharge completely discharged batteries in 24 hours.

3.0 CONSTRUCTION. Furnish and operate the variable message signs as designated on the plans or by the Engineer. Ensure the bottom of the message panel is a minimum of 7 feet above the roadway in urban areas and 5 feet above in rural areas when operating. Use Class I, II, or III signs on roads with a speed limit less than 55 mph. Use Class I or II signs on roads with speed limits 55 mph or greater.

Maintain the sign in proper working order, including repair of any damage done by others, until completion of the project. When the sign becomes inoperative, immediately repair or replace the sign. Repetitive problems with the same unit will be cause for rejection and replacement.

Use only project related messages and messages directed by the Engineer, unnecessary messages lessen the impact of the sign. Ensure the message is displayed in either one or 2 phases with each phase having no more than 3 lines of text. When no message is needed, but it is necessary to know if the sign is operable, flash only a pixel.

When the sign is not needed, move it outside the clear zone or where the Engineer directs. Variable Message Signs are the property of the Contractor and shall be removed from the project when no longer needed. The Department will not assume ownership of these signs.

4.0 MEASUREMENT. The final quantity of Variable Message Sign will be

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the actual number of individual signs acceptably furnished and operated during the project. The Department will not measure signs replaced due to damage or rejection.

5.0 PAYMENT. The Department will pay for the Variable Message Signs at the unit price each. The Department will not pay for signs replaced due to damage or rejection. Payment is full compensation for furnishing all materials, labor, equipment, and service necessary to, operate, move, repair, and maintain or replace the variable message signs. The Department will make payment for the completed and accepted quantities under the following:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
02671	Portable Changeable Message Sign	Each

Effective June 15, 2012

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

FHWA-1273 -- Revised May 1, 2012

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

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

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 633.

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 633.

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

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

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

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

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

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

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

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

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

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

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar

with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

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

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

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

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

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

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

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

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

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

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

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

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

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

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

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

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

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

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

1. Minimum wages

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

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions

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

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

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

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

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

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

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

will notify the contracting officer within the 30-day period that additional time is necessary.

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

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

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

2. Withholding

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

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-

Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

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

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

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

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

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

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

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

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

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

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

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly

rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

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

b. Trainees (programs of the USDOL).

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

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

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

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

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

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

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

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

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

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

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

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

10. Certification of eligibility.

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

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

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

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

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

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

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

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

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

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

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

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

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

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

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

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

evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

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

VII. SAFETY: ACCIDENT PREVENTION

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

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

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

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

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

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

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

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

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

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

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

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

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

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

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

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

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

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

1. Instructions for Certification – First Tier Participants:

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

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

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

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

this transaction originated may pursue available remedies, including suspension and/or debarment.

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

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

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

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

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

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

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

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

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

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

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

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

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

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

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

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

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

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS
PREFERENCE FOR APPALACHIAN DEVELOPMENT
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS
ROAD CONTRACTS**

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

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

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

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

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

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

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

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

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

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

**KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS**

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

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

**KRS CHAPTER 344
EFFECTIVE JUNE 16, 1972**

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

1. The contractor shall not fail or refuse to hire, or shall not discharge any individual, or otherwise discriminate against an individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, national origin, sex, disability or age (forty and above); 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 forty (40) and over. 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, or age forty (40) and over, or because the person is a qualified individual with a disability, except that such a notice or advertisement may indicate a preference, limitation, or specification based on religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, when religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, 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 forty (40) and over, 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: January 25, 2017

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 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.

Revised: January 27, 2017

General Decision Number: KY170101 03/10/2017 KY101

Superseded General Decision Number: KY20160101

State: Kentucky

Construction Type: Highway

Counties: Boone, Campbell, Kenton and Pendleton Counties in Kentucky.

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

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.20 for calendar year 2017 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, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.20 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2017. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/06/2017
1	02/03/2017
2	03/10/2017

* BRKY0002-005 06/01/2016

	Rates	Fringes
BRICKLAYER.....	\$ 27.01	11.38

BROH0001-005 06/01/2008

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 25.75	8.60

CARP0698-001 05/01/2014

BOONE, CAMPBELL, KENTON & PENDLETON COUNTIES:

	Rates	Fringes
Carpenter & Piledrivermen.....	\$ 27.27	14.59
Diver.....	\$ 40.58	9.69

ELEC0212-007 06/06/2016

	Rates	Fringes
ELECTRICIAN.....	\$ 27.47	17.13

ELEC0212-013 12/01/2014		

	Rates	Fringes
Sound & Communication Technician.....	\$ 22.75	10.08

ENGI0018-013 05/01/2015		

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1.....	\$ 33.34	14.25
GROUP 2.....	\$ 33.22	14.25
GROUP 3.....	\$ 32.18	14.25
GROUP 4.....	\$ 31.00	14.24
GROUP 5.....	\$ 25.54	14.25
GROUP 6.....	\$ 33.59	14.25
GROUP 7.....	\$ 33.84	14.25

OPERATING ENGINEER CLASSIFICATIONS

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

GROUP 2 - Asphalt Paver; Automatic Subgrader Machine, Self-Propelled (CMI Type); Bobcat Type and/or Skid Steer Loader with Hoe Attachment Greater than 7,000 lbs.; Boring Machine More than 48"; Bulldozer; Endloader; Hydro Milling Machine; Horizontal Directional Drill (over 500,000 ft. lbs. thrust); Kolman-type Loader (production type-Dirt); Lead Greaseman; Lighting & Traffic Signal Installation Equipment (includes all groups or classifications);

Material Transfer Equipment (Shuttle Buggy) Asphalt;
Pettibone-Rail Equipment; Power Grader; Power Scraper; Push
Cat; Rotomill (all), Grinders & Planers of All types;
Trench Machine (24" wide & under); & Vermeer type Concrete
Saw

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

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

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

GROUP 6 - Master Mechanic & Boom from 150 to 180

GROUP 7 - Boom from 180 and over

IRON0044-008 06/01/2016		
	Rates	Fringes
Ironworkers:		
Fence Erector.....	\$ 23.76	19.15
Structural.....	\$ 26.47	19.15

IRON0372-004 07/15/2016		
	Rates	Fringes
IRONWORKER, REINFORCING.....	\$ 27.15	20.33

LABO0189-004 07/01/2016

PENDLETON COUNTY:

	Rates	Fringes
LABORER		
GROUP 1.....	\$ 22.75	12.84
GROUP 2.....	\$ 23.00	12.84
GROUP 3.....	\$ 23.05	12.84
GROUP 4.....	\$ 23.65	12.84

LABORERS CLASSIFICATIONS

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

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

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

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

LABO0265-009 05/01/2016

BOONE, CAMPBELL & KENTON COUNTIES:

	Rates	Fringes
LABORER		

GROUP 1.....	\$ 29.22	10.35
GROUP 2.....	\$ 29.39	10.35
GROUP 3.....	\$ 29.72	10.35
GROUP 4.....	\$ 30.17	10.35

LABORER CLASSIFICATIONS

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

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

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

GROUP 4 - Miner; & Gunite Nozzle Person

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

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

PAIN0012-016 05/01/2015

	Rates	Fringes
PAINTER		
Bridge.....	\$ 24.39	9.06
Bridge Equipment Tender and Containment Builder.....	\$ 20.73	9.06
Brush & Roller.....	\$ 23.39	9.06
Sandblasting & Water		

Blasting.....	\$ 24.14	9.06
Spray.....	\$ 23.89	9.06

PLUM0392-008 06/01/2014

	Rates	Fringes
PLUMBER.....	\$ 29.80	17.79

SUKY2010-161 02/05/1996

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

TRUCK DRIVER CLASSIFICATIONS

GROUP 1 - Driver

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

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

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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 www.dol.gov/whd/govcontracts.

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

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the

cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of

each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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

Director
Division of Construction Procurement
Frankfort, Kentucky 40622
502-564-3500

**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION
TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY
(Executive Order 11246)**

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

GOALS FOR MINORITY PARTICIPATION IN EACH TRADE	GOALS FOR FEMALE PARTICIPATION IN EACH TRADE
11.0%	6.9%

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

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

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

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

4. As used in this Notice, and in the contract resulting from this solicitation, the "**covered area**" is Boone County.

**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION
TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY
(Executive Order 11246)**

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

GOALS FOR MINORITY PARTICIPATION IN EACH TRADE	GOALS FOR FEMALE PARTICIPATION IN EACH TRADE
11.0%	6.9%

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

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

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

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

4. As used in this Notice, and in the contract resulting from this solicitation, the "**covered area**" is Campbell County.

**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION
TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY
(Executive Order 11246)**

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

GOALS FOR MINORITY PARTICIPATION IN EACH TRADE	GOALS FOR FEMALE PARTICIPATION IN EACH TRADE
11.0%	6.9%

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

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

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

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

4. As used in this Notice, and in the contract resulting from this solicitation, the "**covered area**" is Kenton County.

PART IV

INSURANCE

INSURANCE

The Contractor shall procure and maintain the following insurance in addition to the insurance required by law:

- 1) Commercial General Liability-Occurrence form – not less than \$2,000,000 General aggregate, \$2,000,000 Products & Completed Aggregate, \$1,000,000 Personal & Advertising, \$1,000,000 each occurrence.
- 2) Automobile Liability- \$1,000,000 per accident
- 3) Employers Liability:
 - a) \$100,000 Each Accident Bodily Injury
 - b) \$500,000 Policy limit Bodily Injury by Disease
 - c) \$100,000 Each Employee Bodily Injury by Disease
- 4) The insurance required above must be evidenced by a Certificate of Insurance and this Certificate of Insurance must contain one of the following statements:
 - a) "policy contains no deductible clauses."
 - b) "policy contains _____ (amount) deductible property damage clause but company will pay claim and collect the deductible from the insured."
- 5) KENTUCKY WORKMEN'S COMPENSATION INSURANCE. The contractor shall furnish evidence of coverage of all his employees or give evidence of self-insurance by submitting a copy of a certificate issued by the Workmen's Compensation Board.

The cost of insurance is incidental to all contract items. All subcontractors must meet the same minimum insurance requirements.

PART V

BID ITEMS

Section: 0001 - INTELLIGENT TRANSPORTATION SYSTEMS

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	02562		TEMPORARY SIGNS	224.00	SQFT		\$	
0020	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		\$	
0030	02775		ARROW PANEL	7.00	EACH		\$	
0040	04880		STEEL STRAIN POLE	4.00	EACH		\$	
0050	24079EC		WIRELESS MODEM	11.00	EACH		\$	
0060	24892EC		SOLAR POWER ASSEMBLY	11.00	EACH		\$	
0070	24893EC		RADAR VEHICLE DETECTOR	14.00	EACH		\$	

Section: 0002 - DEMOBILIZATION &/OR MOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0080	02569		DEMOBILIZATION	1.00	LS		\$	