CALL NO. 200

CONTRACT ID. 244500

HENDERSON COUNTY

FED/STATE PROJECT NUMBER 056GR24T013-HSIP & FD05

DESCRIPTION US HIGHWAY 41 (US 41)

WORK TYPE ASPHALT SURFACE WITH GRADE & DRAIN

PRIMARY COMPLETION DATE 10/15/2025

LETTING DATE: December 12,2024

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN STANDARD TIME December 12,2024. Bids will be publicly announced at 10:00 AM EASTERN STANDARD TIME.

NO PLANS ASSOCIATED WITH THIS PROJECT.

DBE CERTIFICATION REQUIRED - 7%

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

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SCOPE OF WORK

ADMINISTRATIVE DISTRICT - 02

CONTRACT ID - 244500

056GR24T013-HSIP & FD05

COUNTY - HENDERSON

PCN - 0205100412401
HSIP 0411(038)

US HIGHWAY 41 (US 41) (MP 18.325) CONVERT INTERSECTIONS AT US 41 AT WOLF HILLS ROAD AND STRATMAN ROAD TO AN RCUT (MP 18.655), A DISTANCE OF 0.33 MILES.ASPHALT SURFACE WITH GRADE & DRAIN SYP NO. 02-00935.

GEOGRAPHIC COORDINATES LATITUDE 37:53:22.00 LONGITUDE 87:33:25.00

ADT 42,687

PCN - MP05100412401
FD05 051 0041 016-021

HENDERSON TO EVANSVILLE ROAD (US 41) (MP 16.220) BEGIN 0.18 MILES SOUTH OF CINEMA DRIVE EXTENDING NORTH TO 0.458 (OMIT OHIO RIVER BRIDGE) NORTH OF KY 3522 (MP 20.877), A DISTANCE OF 04.65 MILES.ASPHALT RESURFACING

GEOGRAPHIC COORDINATES LATITUDE 37:53:24.78 LONGITUDE 87:33:22.07

ADT 42,687

COMPLETION DATE(S):

COMPLETED BY 10/15/2025	APPLIES TO ENTIRE PROJECT
COMPLETED BY 08/31/2025	MILESTONE DATE (SEE SN FOR COMPLETION DATE)

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 electronic bidding software. 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.

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 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/construction-procurement). 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 state agency certifies that it is in compliance with the provisions of KRS 45A.150, "Access to contractor's books, documents, papers, records, or other evidence directly pertinent to the contract." The Contractor, as defined in KRS 45A.030, 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 agreement for

the purpose of financial audit or program review. 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. Records and other prequalification information confidentially disclosed as part of the bid process shall not be deemed as directly pertinent to the agreement and shall be exempt from disclosure as provided in KRS 61.878(1)(c).

BOYCOTT PROVISIONS

If applicable, the contractor represents that, pursuant to KRS 45A.607, they are not currently engaged in, and will not for the duration of the contract engage in, the boycott of a person or an entity based in or doing business with a jurisdiction with which Kentucky can enjoy open trade. **Note:** The term Boycott does not include actions taken for bona fide business or economic reasons, or actions specifically required by federal or state law.

If applicable, the contractor verifies that, pursuant to KRS 41.480, they do not engage in, and will not for the duration of the contract engage in, in energy company boycotts as defined by KRS 41.472.

LOBBYING PROHIBITIONS

The contractor represents that they, and any subcontractor performing work under the contract, have not violated the agency restrictions contained in KRS 11A.236 during the previous ten (10) years, and pledges to abide by the restrictions set forth in such statute for the duration of the contract awarded.

The contractor further represents that, pursuant to KRS 45A.328, they have not procured an original, subsequent, or similar contract while employing an executive agency lobbyist who was convicted of a crime related to the original, subsequent, or similar contract within five (5) years of the conviction of the lobbyist.

SPECIAL NOTE – BUY AMERICA REQUIREMENTS AND BUILD AMERICA, BUY AMERICA (BABA) ACT 10/26/2023

1.0 BUY AMERICA REQUIREMENT.

Follow the "Buy America" provisions as required by 23 U.S.C. § 313 and 23 C.F.R. § 635.410. Except as expressly provided herein all manufacturing processes of steel or iron materials including but not limited to structural steel, guardrail materials, corrugated steel, culvert pipe, structural plate, prestressing strands, and steel reinforcing bars shall occur in the United States of America, including the application of:

- Coating,
- Galvanizing,
- Painting, and
- Other coating that protects or enhances the value of steel or iron products.

The following are exempt, unless processed or refined to include substantial amounts of steel or iron material, and may be used regardless of source in the domestic manufacturing process for steel or iron material:

- Pig iron,
- Processed, pelletized, and reduced iron ore material, or
- Processed alloys.

The Contractor shall submit a certification stating that all manufacturing processes involved with the production of steel or iron materials occurred in the United States.

Produce, mill, fabricate, and manufacture in the United States of America all aluminum components of bridges, tunnels, and large sign support systems, for which either shop fabrication, shop inspection, or certified mill test reports are required as the basis of acceptance by the Department.

Use foreign materials only under the following conditions:

1) When the materials are not permanently incorporated into the project; or
2) When the delivered cost of such materials used does not exceed 0.1 percent of the total Contract amount or $2,500.00, whichever is greater.

The Contractor shall submit to the Engineer the origin and value of any foreign material used.

2.0 – BUILD AMERICA, BUY AMERICA (BABA)

Contractor shall comply with the Federal Highway Administration (FHWA) Buy America Requirement in 23 C.F.R. § 635.410 and all relevant provisions of the Build America, Buy America Act (BABA), contained within the Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, §§ 70901-52 enacted November 15, 2021. The BABA requires iron, steel, manufactured products, and construction materials used in infrastructure projects funded by federal financial assistance to be produced in the United States. Comply with 2 C.F.R § 184.

BABA permits FHWA participation in the Contract only if domestic steel and iron will be used on the Project. To be considered domestic, all steel and iron used, and all products manufactured from steel and iron must be produced in the United States and all manufacturing processes, including application of a coating, for these materials must occur in the United States. Coating includes all processes that protect or enhance the value of the material to which the coating is applied. This requirement does not preclude a minimal use of foreign steel and iron materials, provided the cost of such materials does not exceed 0.1% of the total contract amount under the Contract or $2,500.00 whichever is greater.

BABA permits FHWA participation in the Contract only if all "construction materials" as defined in the Act are made in the United States. The Buy America preference applies to the following construction materials

incorporated into infrastructure projects: non-ferrous metals; plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables); glass (including optic glass); Fiber optic cable; optical fiber; lumber; engineered wood; and drywall. Contractor will be required to use construction materials produced in the United States on this Project. The Contractor shall submit a certification stating that all construction materials are certified to be BABA compliant.

Finally, BABA permits the continuation of FHWA's current general applicability waivers for manufactured products, raw materials, and ferryboat parts, but these waivers are subject to reevaluation, specifically the general applicability waiver for manufactured products.

The Contractor has completed and submitted, or shall complete and submit, to the Cabinet a Buy America/ Build America, Buy America Certificate prior to the Cabinet issuing the notice to proceed, in the format below. After submittal, the Contractor is bound by its original certification.

A false certification is a criminal act in violation of 18 U.S.C. § 1001. The Contractor has the burden of proof to establish that it is in compliance.

At the Contractor's request, the Cabinet may, but is not obligated to, seek a waiver of Buy America requirements if grounds for the waiver exist under 23 C.F.R. § 635.410(c) or will comply with the applicable Buy America requirements if a waiver of those requirements is not available or not pursued by the Cabinet.

Please refer to the Federal Highway Administration's Buy America webpage for more information.

Buy America - Construction Program Guide - Contract Administration - Construction - Federal Highway Administration (dot.gov)

BUY AMERICA / BUILD AMERICA, BUY AMERICA (ACT) MATERIALS CERTIFICATE OF COMPLIANCE

The Contractor hereby certifies that it will comply with all relevant provisions of the Build America, Buy America Act, contained within the Infrastructure Investment and Jobs Act, Pub. L. NO. 117-58, §§ 70901-52, the requirements of 23 U.S.C. § 313, 23 C.F.R. § 635.410 and 2 C.F.R § 184.

Date Submitted:_____

Contractor:_____

Signature:_____

Printed Name:_____

Title:_____

NOTE: THIS CERTIFICATION IS IN ADDITION TO ANY AND ALL REQUIREMENTS OUTLINED IN THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND/OR SPECIAL NOTES CONTAINED IN THE PROJECT PROPOSAL.

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 Rating
102.13 Irregular Bid Proposals
102.09 Proposal Guaranty
102.08 Preparation and Delivery of Proposals
102.14 Disqualification of Bidders

CIVIL RIGHTS ACT OF 1964

The Kentucky Transportation Cabinet, Department of Highways, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin, sex, age (over 40), religion, sexual orientation, gender identity, veteran status, disability, income- level, or Limited English Proficiency (LEP)in consideration for an award.

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 are acceptable per Section 108.01 of the Standard Specifications for Road and Bridge Construction. S u b - Contractors fulfilling a disadvantaged business enterprise goal on a project may enter into a 2nd tier subcontract with a Non-DBE Subcontractor. However, in this instance, none of the work subcontracted to the Non-DBE Contractor will count toward fulfilling the established Disadvantaged Goal for the project.

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 Proposal Line Number, 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.

AFTER PROJECT AWARD AND BEFORE NOTICE TO PROCEED/WORK ORDER IS ISSUED (SEE SECTION 103.06, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION

Prime Contractors awarded a federally funded project with a DBE Goal greater than zero will be required to submit a fully executed DBE Subcontract, along with the attached FHWA 1273 and Certificate of Liability Insurance for each DBE Firm submitted as part of the previously approved DBE Utilization Plan (TC 14-35). A signed quote or purchase order shall be attached when the DBE subcontractor is a material supplier or broker.

The Certificate of Liability Insurance submitted must meet the requirements outlined in Section 107.18 of the Standard Specifications for Road and Bridge Construction.

Changes to ***APPROVED*** DBE Participation Plans must be approved by the Office for Civil Rights & Small Business Development. 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 (hard copy along with an electronic copy) of this information must be received in 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 certainly 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 Disadvantaged Enterprise Business Liaison Officer (DEBLO) in the Office for Civil Rights and Small Business Development 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:

- Suspension of Prequalification;
- 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 and Non-DBE Subcontractors 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 of Subcontractor Payment (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 completed and signed within 7 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.

******* IMPORTANT *******

Please mail the original, signed and completed TC (18-7) Affidavit of Subcontractor Payment form and all copies of checks for payments listed above to the following address:

Office for Civil Rights and Small Business Development
6th Floor West 200 Mero Street
Frankfort, KY 40622

The prime contractor should notify the KYTC Office for Civil Rights and Small Business Development seven (7) days prior to DBE contractors commencing work on the project. The contact in this office is Mr. Tony Youssefi. Mr. Youssefi's current contact information is email address – tyousseffi@ky.gov and the telephone number is (502) 564-3601.

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.

PROHIBITION ON TELECOMMUNICATIONS EQUIPMENT OR SERVICES

In accordance with the FY 2019 National Defense Authorization Act (NDAA), 2 CFR 200.216, and 2 CFR 200.471, Federal agencies are prohibited, after August 13, 2020, from obligating or expending financial assistance to obtain certain telecommunications and video surveillance services and equipment from specific producers. As a result of these regulations, contractors and subcontractors are prohibited, on projects with federal funding participation, from providing telecommunication or video surveillance equipment, services, or systems produced by:

- Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities)
- Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities)

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.

NATIONAL HIGHWAY

Be advised this project is on the NATIONAL HIGHWAY SYSTEM.

ASPHALT MIXTURE

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

DGA BASE

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

INCIDENTAL SURFACING

The Department has included in the quantities of asphalt mixtures established in the proposal estimated quantities required for resurfacing or surfacing mailbox turnouts, farm field entrances, residential and commercial entrances, curve widening, ramp gores and tapers, and road and street approaches, as applicable. Pave these areas to the limits as shown on Standard Drawing RPM-110-06 or as directed by the Engineer. In the event signal detectors are present in the intersecting streets or roads, pave the crossroads to the right of way limit or back of the signal detector, whichever is the farthest back of the mainline. Surface or resurface these areas as directed by the Engineer. The Department will not measure placing and compacting for separate payment but shall be incidental to the Contract unit price for the asphalt mixtures.

FUEL AND ASPHALT PAY ADJUSTMENT

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

OPTION A

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

MATERIAL TRANSFER VEHICLE (MTV)

Provide and use a MTV in accordance with Sections 403.02.10 and 403.03.05.

Special Notes Applicable to Project
General Notes & Description of Work

CAUTION

The information in this proposal and the type of work listed herein are approximate only and are not to be taken as an exact evaluation of the materials and conditions to be encountered during construction; the bidder must draw his/her own conclusions when developing the Unit Bid Prices for each bid item. As such, if the conditions encountered are not in accordance with the information shown, the Department does not guarantee any changes to the Unit Bid Prices nor extension of the contract will be considered. The Department will pay for bid item quantity overruns, but only if pre-approved by the Engineer.

STATIONING

The contractor is advised that the planned locations of work were established from a beginning station number, which is STA 100+00 and corresponds to Milepoint 18.300 along US 41. **NOTE**: The existing mile marker signs may not correspond to the proposed work locations.

ON-SITE INSPECTION

Before submitting a bid for the work, make a thorough inspection of the site and determine existing conditions so that the work can be expeditiously performed after a contract is awarded. The Department will consider submission of a bid to be evidence of this inspection having been made. The Department will not honor any claims for money or time extension resulting from site conditions.

RIGHT OF WAY LIMITS

The Department has not established the exact limits of the Right-of-Way. Unless a consent and release form is obtained from the adjoining property owner, limit work activities to the obvious Right-of-Way and staging areas secured and environmentally cleared by the Contractor at no additional cost to the Department. In the event that private improvements (i.e., fences, buildings, etc.) encroach upon the Right-of-Way, the contractor shall notify the Engineer and limit work activities in order to NOT disturb the improvements. If they become necessary, the Department will secure consent and releases from property owners through the Engineer. Be responsible for all encroachments onto private lands.

CONTROL

Perform all work under the absolute control of the Department of Highways. Obtain the Engineer's approval of all designs required to be furnished by the Contractor prior to incorporation into the work. The Department reserves the right to have other work performed by other contractors and its own forces and to permit public utility companies and others to do work during the construction within the limits of, or adjacent to, the project. Conduct operations and cooperate with such other parties so that interference with such other work will be reduced to a minimum. The Department will not honor any claims for money or time extension created by the operations of such other parties. Should a difference of opinion arise as to the rights of the Contractor and others working within the limits of, or adjacent to, the project, the Engineer will decide as to the respective rights of the various parties involved in order to assure the completion of the Department's work in general harmony and in a satisfactory manner, and his/her decision shall be final and binding upon the Contractor.

DESCRIPTION OF WORK

Except as specified herein, perform all work in accordance with the Department's Standard Specifications, Supplemental Specifications, applicable Special Notes and Special Provisions, and applicable Standard and Sepia Drawings, current editions. Furnish all materials, labor, equipment, and incidentals for the following work:

General Notes & Description of Work
Page 2 of 2

Pavement Resurfacing (for FD05 resurfacing funds). The existing roadway between Milepoint 16.220 and Milepoint 20.877 is set up to be resurfaced using FD05 resurfacing funds. Other items be associated with the pavement resurfacing include: removal of 1.5 inches of existing pavement by milling and texturing, leveling & wedging, application of tack coat, and installation of edgeline rumble strips. Refer to the rumble strip Standard Drawings for recommended placement of rumble strips.

Pipe Replacements & Extensions. There are locations throughout the project where culvert pipes are being extended or replaced. Locations and estimated quantities are noted on the pipe drainage Summary. For pipe extensions where the existing pipe is RCP, remove the existing headwall and first section of existing RCP attached to the headwall (approx. 3 to 4 ft of existing pipe). Other items that may be included with the pipe extensions/replacements include culvert headwalls, sloped & mitered concrete headwalls, intermediate anchor/collar, roadside regrading, ditching, channel lining, erosion control blanket, asphalt pavement quantities, etc. Refer to the Special Note for Pipe Replacements/Extensions for more information on this item of work.

Erosion Control Blanket. A quantity of 75 square yards of Erosion Control Blanket has been included in the contract for potential use along areas of regraded shoulders, ditch lines, fills slopes and/or back slopes, inlets and outlets of pipes, and any other areas as directed by the Engineer. The Contractor and Engineer should work together to determine the location and best use of Erosion Control Blanket throughout this project. The Engineer will make the final determination as to the quantities and placement of Erosion Control Blanket.

Guardrail. Several locations within the project are set up for guardrail replacement. The approximate locations and estimated quantities are noted on the plan sheets. Refer to the Special Note for Guardrail, Typical Sections, and Plan Sheets for more detail and information on this item of work.
NOTE: When the plans call for a Type 1 or Type 4A End Treatment, a MASH eligibility letter from FHWA is required for these end terminals. When a MASH tested eligibility letter is not available for the end terminal being utilized, the most recent NCHRP 350 eligibility letter from FHWA for that terminal will apply. Acceptance of the terminal will be at the discretion of the Engineer.

Temporary Striping. A quantity of 9060 linear feet of Pave Striping – Temp Paint – 4 in has been included in the contract for potential use in the area of the Curve Correction between MP 21.440 – 21.599, the Superelevation Improvement areas, and any other areas as directed by the Engineer. The Contractor and Engineer should work together to determine any locations throughout the project requiring temporary pavement striping. The Engineer will make the final determination as to the quantities and placement of temporary pavement striping.

Permanent 6” Striping. A quantity of Pave Striping – Perm Paint – 6 in has been included in the contract to restripe the entire corridor with 6” permanent paint.

Special Note for Staking

Perform Contractor Staking according to Section 201; except, in addition to the requirements of Section 201, perform the following:

1. Contrary to Section 201.03.01, perform items 1 & 2 usually performed by the Engineer.
2. Using the proposed pavement superelevation rates, runout lengths, and runoff lengths, determine the necessary elevation changes along the edges of pavement for each proposed curve and the transitions leading into and out of each curve to achieve the proposed superelevation improvements. The intent is to provide a consistent superelevation throughout each proposed curve and smooth transitions into and out of each curve. Once the elevation changes along the edges of pavement for each proposed curve are determined and prior to starting paving operations, verify the proposed roadside re-grading corresponding to each curve can be constructed so that the new roadside will be flush with the new edges of pavement and the new toe of slope, or top of cut, will remain within the Right-of-Way, or within the general area noted on any applicable Consent & Releases, and/or not impact a sensitive obstruction. If necessary, and with the approval of the Engineer, reduce the proposed superelevation rate of a curve if the new elevations of the edges of pavement will cause the proposed roadside grading to extend beyond the Right-of-Way, or extend outside of the general area described on any applicable Consent & Releases, and/or impact a sensitive obstruction. Alternatively, with the approval of the Engineer and to the extent allowable by the "Roadside Regrading and Embankment Benching Details" and/or the Special Note for Roadside Regrading, the Contractor may be allowed to adjust the proposed dimensions of the roadside grading so the new toe of slope or top of cut will remain within the Right-of-Way, or within the general area noted on any applicable Consent & Releases, and/or not impact a sensitive obstruction. After the final proposed elevation changes along the edges of pavement for each curve are determined and before paving operations begin, submit to the Engineer and obtain approval for the number of asphalt lifts, each asphalt lift's thickness, and the mix design of each lift of Leveling & Wedging the contractor plans to use to achieve the proposed superelevation improvement. Ensure positive drainage upon completion of the work.
3. Verify the dimensions, type, and quantities of the culvert pipes, entrance pipes, and/or box culverts as listed and detailed in the proposal, and determine flow line elevations and slopes necessary to provide positive drainage. Revise as necessary to accommodate the existing site conditions; to provide proper alignment of the drainage structures with existing and/or proposed ditches, stream channels, swales, and the roadway lines and grades; and to ensure positive drainage upon completion of the work.
4. Using stakes, paint marks on the pavement, mag nails, and/or any other means approved by the Engineer, the Contractor shall mark and/or stake the proposed sign locations in the field. NOTE: The proposed signs are listed in the proposal by approximate location and are NOT to be taken as the exact location for the signs. During staking operations the Contractor shall review the signing layout and existing field conditions and look for potential conflicts, including but not limited to utilities, driveways, visual obstructions, etc. When conflicts are found, adjust the staked location of signs to mitigate conflicts. Because the sign locations in the proposal are approximate and the location of some signs may need to be adjusted due to conflicts, during staking operations the Contractor shall refer to and utilize the information in the Manual on Uniform on Traffic Control Devices (MUTCD), current edition. The MUTCD cover items such as: appropriate sign location, advance placement distances, and spacing requirements for signing. The intent is for the proposed signs to be consistent with, and meet the requirements of, the MUTCD. Once the proposed sign locations have been staked, notify and coordinate with the District Traffic Engineer, and perform a review of the staked locations. Adjust the staked

locations, as directed by the District Traffic Engineer and obtain approval of the final staked locations. This review will also be used to determine if there are any existing signs that require removal and/or relocation. Provide the District Traffic Engineer with 2 weeks of notice when a route will be ready for a review of the staked locations. NOTE: The District Traffic Engineer may determine that the proposed signing, including sign types and messages, needs to be adjusted and/or modified from what is shown in the proposal. Therefore, the Contractor shall not order any sign material for a route until the route has been staked and final sign location approval has been given by the District Traffic Engineer.

5. Produce and furnish to the Engineer "As Built" information for the drainage improvements. For the drainage improvements, as built information will consist of a final record of the actual types, sizes, and locations of the drainage structures (i.e. box inlets, headwalls, junction boxes, etc.), culvert pipes, and/or box culverts constructed. Final elevation data of the drainage improvements is not necessary.
6. Using paint marks on the pavement, and/or any other means approved by the Engineer, the Contractor shall layout and pre-mark the proposed striping, pavement markings, etc. Adjust as necessary to accommodate the existing site conditions and to provide proper alignment of the proposed thru and turning lanes. Obtain approval of the pre-marked layout from the Engineer and/or District Traffic Engineer prior to installing the striping and/or pavement markings.
7. Prior to incorporating into the work, obtain the Engineers approval of all revisions determined by the Contractor.
8. Perform any and all other staking operations required to control and construct the work.

Special Note for Erosion Control

I. DESCRIPTION

Perform all erosion and water pollution control work in accordance with any other notes in the Proposal, the Department's Standard and Interim Supplemental Specifications, the Special Provisions and Special Notes, and the Standard and Sepia Drawings, current editions, or as directed by the Engineer. Section references are to the Standard Specifications. This work shall consist of:

(1) Developing and preparing a Best Management Practices Plan (BMP) tailored to suit the specific construction phasing for each site within the project; (2) Preparing the project site for construction, including locating, furnishing, installing, and maintaining temporary and/or permanent erosion and water pollution control measures as required by the BMP prior to beginning any earth disturbing activity on the project site; (3) Clearing and grubbing and removal of all obstructions as required for construction; (4) Removing all erosion control devices when no longer needed; (5) Restoring all disturbed areas as nearly as possible to their original condition; (6) Preparing seedbeds and permanently seeding all disturbed areas; (7) Providing a Kentucky Erosion Prevention and Sediment Control Program (KEPSC) qualified inspector; and (8) Performing any other work to prevent erosion and/or water pollution as specified by this contract, required by the BMP, or as directed by the Engineer.

II. MATERIALS

Furnish materials in accordance with these notes, the Standard Specifications and Interim Supplemental Specifications, applicable Special Provisions and Special Notes, and the Standard and Sepia Drawings, current editions. Provide for all materials to be sampled and tested in accordance with the Department's Sampling Manual. Unless directed otherwise by the Engineer, make the materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing.

III. CONSTRUCTION

Be advised, these Erosion Control Notes do not constitute a BMP plan for the project. Jointly with the Engineer, prepare a site-specific BMP plan for each drainage area within the project in accordance with Section 213. Provide a unique BMP at each project site using good engineering practices taking into account existing site conditions, the type of work to be performed, the construction phasing, methods, and the techniques to be utilized to complete the work. Be responsible for all erosion prevention, sediment control, and water pollution prevention measures required by the BMP for each site. Represent and warrant compliance with the Clean Water Act (33 USC Section 1251 et seq.), the 404 Permit, the 401 Water Quality Certification, and applicable state and local government agency laws, regulations, rules, specifications, and permits. Contrary to Section 105.05, in case of discrepancy between these notes, the Standard Specifications, Interim Supplemental Specifications, Special Provisions and Special Notes, Standard and Sepia Drawings, and such state and local government agency requirements, adhere to the most restrictive requirement.
Conduct operations in such a manner as to minimize the amount of disturbed ground during each phase of the construction and limit the haul roads to the minimum required to perform the work. Preserve existing

vegetation not required to be removed by the work or the contract. Seed and/or mulch disturbed areas at the earliest opportunity. Use silt fence, silt traps, temporary ditches, brush barriers, erosion control blankets, sodding, channel lining, and other erosion control measures in a timely manner as required by the BMP and as directed or approved by the Engineer. Prevent sediment laden water from leaving the project, entering an existing drainage structure, or entering a steam.

Provide for erosion control measures to be in place and functioning prior to any earth disturbance within a drainage area. Compute the volume and size of silt control devices necessary to control sediment during each phase of construction. All silt control devices shall be sized to retain a volume of 3,600 cubic feet per disturbed contributing acre. Remove sediment from silt traps before they become a maximum of ½ full. Maintain silt fence by removing accumulated trappings and/or replacing the geotextile fabric when it becomes clogged, damaged, or deteriorated, or when directed by the Engineer. Properly dispose of all materials trapped by erosion control devices at approved sites off the right of way obtained by the Contractor at no additional cost to the Department. See the Special Provision for Waste and Borrow Sites.

As work progresses, add or remove erosion control measures as required by the BMP, applicable to the Contractor's project phasing, construction methods, and techniques. Update the volume calculations and modify the BMP as necessary throughout the duration of the project. Ensure that an updated BMP is kept on site and available for public inspection throughout the life of the project.

The required volume at each Silt Trap shall be computed based on the Up Gradient Contributing Areas that are disturbed and/or stabilized to the satisfaction of the Engineer. The required volume calculation for each Silt Trap shall be determined by the Contractor and verified by the Engineer. The required volume at each Silt Trap may be reduced by the following amounts:

- Up Gradient Areas not disturbed (acres)
- Up Gradient Areas that have been reclaimed and protected by Erosion Control Blanket or other ground protection material such as Temporary Mulch (acres)
- Up Gradient Areas that have been protected by Silt Fence (acres) – Areas protected by Silt Fence shall be computed at a maximum rate of 100 square feet per linear foot of Silt Fence
- Up Gradient Areas that have been protected by Silt Traps (acres)

The use of Temporary Mulch is encouraged.

Silt Trap Type B shall always be placed at the collection point prior to discharging into a Blue Line Stream or onto an adjacent Property Owner. Where overland flow exists, a Silt Fence or other filter devices may be used.

After all construction is complete, restore all disturbed areas in accordance with Section 212. Completely remove all temporary erosion control devices not required as part of the permanent erosion control from the construction site. Prior to removal, obtain the Engineer's concurrence of items to be removed. Grade the remaining exposed earth (both on and off the Right of-Way) as nearly as possible to its original condition, or as directed by the Engineer. Prepare the seed bed areas and sow all exposed earthen areas with the applicable seed mixture(s) according to Section 212.03.03.

IV. MEASUREMENT

The Department will measure the various erosion control items according to Section 212.04 and Section 213.04, as applicable.

V. Basis of Payment

The Department will make payment for the various erosion control items according to Section 212.04 and Section 213.04, as applicable.

SPECIAL NOTE

For Tree Removal

Henderson County
CONVERT INTERSECTIONS AT US 41 AT WOLF HILLS ROAD AND STRATMAN ROAD TO AN RCUT
Item No. 2-935

NO CLEARING OF TREES 5 INCHES OR GREATER (DIAMETER BREAST HEIGHT) FROM JUNE 1- JULY 31

If there are any questions regarding this note, please contact Danny Peake, Director, Division of Environmental Analysis, 200 Mero Street, Frankfort, KY 40601, Phone: (502) 564-7250.

Special Note for Pipe Replacements and Extensions

I. DESCRIPTION

Except as provided herein, perform all work in accordance with the Department's Standard Specifications, interim Supplemental Specifications, Standard and Sepia Drawings, and Special Notes and Special Provisions, current editions. Article references are to the Standard Specifications. This project shall consist of furnishing all labor, equipment, materials, and incidentals for the following:

(1) Maintaining and Controlling Traffic; (2) Constructing pipe replacements and/or pipe extensions; (3) Embankment and/or Excavation; (4) Erosion Control; and (6) Any other work as specified by this contract.

II. MATERIALS

Provide for sampling and testing of all materials in accordance with the Department's Sampling Manual. Make materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing unless otherwise specified in these notes.

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

B. Culvert Pipe. Furnish pipe meeting the requirements of Section 810. Select pipe for pH range Medium and minimum fill cover height according to the applicable Standard or Sepia Drawings, current editions. Verify maximum and minimum fill cover height required for new pipe prior to construction and obtain the Engineer’s approval of the class or gauge of pipe and type of coating prior to delivering pipe to project. Furnish approved connecting bands or pipe anchors and toe walls.

C. Flowable Fill. Furnish Flowable Fill for Pipe Backfill per Section 601.03.03(B).

D. Erosion Control. See Special Note for Erosion Control.

III. CONSTRUCTION METHODS

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

B. Erosion Control. See Special Note for Erosion Control.

C. Site Preparation. Be responsible for all site preparation including, but not limited to, saw cutting and removing existing pavement; clearing and grubbing; staking; incidental excavation and backfilling; common and solid rock excavation; embankment in place; removal of obstructions, or any other items; restoration of pavements, slopes, and all disturbed areas; final dressing and cleanup; and disposal of materials. Limit clearing and grubbing to the absolute minimum required to construct the drainage features. Perform all site preparation only as approved or directed by the Engineer.

D. Removing Headwalls, Pipe, and Excavation. Remove existing headwalls and lengths of culvert

and/or entrance pipes at the approximate locations noted on the summary. The Engineer will determine the exact locations and lengths of pipe to be removed at the time of construction. When any portion of pipe under the roadway, saw cut the existing asphalt pavement and base to a neat edge prior to excavation and removal of the existing pipe. NOTE: Saw cutting the pavement shall be incidental. Obtain the Engineer's approval of trench width and/or saw cutting limits prior to saw cutting the pavement. Excavate the trench and remove the pipe as directed, or approved, by the Engineer without disturbing existing underground utilities.

E. Constructing Pipe, Headwalls, and Drainage Boxes. Construct culvert and/or entrance pipes, pipe extensions, headwalls, drainage boxes, and other drainage structures at the locations shown in the proposal or as designated by the Engineer. The Contractor will establish, with the approval of the Engineer, the final centerlines, flow lines, and skews to obtain the best fit with the existing and/or proposed ditches and other proposed improvements. (See the Special Note for Staking.) Construct pipe bedding according to Section 701 and the applicable Standard or Sepia Drawings, current editions. Use approved connecting bands or concrete anchors as required. Prior to backfilling pipe, obtain the Engineer's approval of the pipe installation. Provide positive drainage upon completion of pipe installation.

F. Pipe Backfill. Backfill entrance pipes according to Section 701.03.06. Contrary to Section 701.03.06, regardless of cover height, backfill culvert pipes with flowable fill as shown on the Culvert Pipe Replacement Detail from the outside edge of shoulder or back of curb to outside edge of shoulder or back of curb. Steel plates will likely be required to maintain traffic while the flowable fill cures. Once the flowable fill has sufficiently cured, place the Asphalt Base in lifts with thicknesses of 3-4 inches, up to the surface of the existing pavement. Seal with Leveling & Wedging. Allow the asphalt base and leveling & wedging to be exposed to traffic for a minimum of 14 days to allow for settlement. During the waiting period, level & wedge any settlement as directed by the Engineer. After the waiting period has been met for the last pipe replacement constructed, the final milling and/or surfacing operations can begin, unless directed otherwise by the Engineer. For culvert pipe beyond the outside edge of shoulder or back of curb, backfill according to Section 701.03.06.

G. Embankments. Backfill pipe and culvert extensions, and construct shoulder embankments as directed by the Engineer. The Contractor shall bench into the existing slope and apply proper compaction according to Section 206. For more information and details on benching, refer to Note 2 on the detail sheet titled: ROADSIDE REGRADING AND EMBANKMENT BENCHING DETAILS, found elsewhere in the Proposal. Provide positive drainage of ditches, shoulders, and slopes at all times during and upon completion of construction.

H. Property Damage. Be responsible for all damage to public and/or private property resulting from the work. Repair or replace damaged roadway features in like kind materials and design, as directed by the Engineer at no additional cost to the Department. Repair or replace damaged private property in like kind materials and design to the satisfaction of the owner and the Engineer at no additional cost to the Department.

I. Coordination with Utility Companies. Locate all underground, above ground, and overhead utilities prior to beginning construction. Be responsible for contacting and maintaining liaison with all utility companies that have utilities located within the project limits. Do not disturb existing overhead or

underground utilities. It is not anticipated that any utility facilities will need to be relocated and/or adjusted; however, in the event that it is discovered that the work does require that utilities be relocated and/or adjusted, the utility companies will work concurrently with the Contractor while relocating their facilities. Be responsible for repairing all utility damage that occurs as a result of pipe replacement and pipe extension operations at no additional cost to the Department. NOTIFY THE ENGINEER AND THE UTILITY OWNER(S) IMMEDIATELY WHEN IT IS DISCOVERED OR ANTICIPATED THAT ANY UTILITY CONFLICT COULD DELAY THE CONTRACTOR'S OPERATIONS. If the total delay exceeds ten working days, an extension of the specified completion date will be negotiated with the Contractor for delay to the Contractor's work; however, no extension will be granted for any delay caused by the Contractor's failure to notify the Engineer and/or the utility company as specified above when a conflict is discovered or anticipated as specified.

J. Right-of-Way Limits. The Department has not established exact limits of the Right-of-Way. Unless a consent and release form is obtained from the adjoining property owner, limit work activities to the obvious Right-of-Way and staging areas secured by the Contractor at no additional cost to the Department. In the event that private improvements (i.e. fences, buildings, etc.) encroach upon the Right-of-Way, the Contractor shall notify the Engineer and limit work activities in order to NOT disturb the improvements. If they become necessary, the Department will secure consent and releases from property owners through the Engineer. Be responsible for all encroachments onto private lands.

K. Clean Up, Disposal of Waste. Clean up the project area as work progresses. Dispose of all removed concrete, pipe, pavement, debris, excess and unsuitable excavation, and all other waste at approved sites off the Right of Way obtained by the Contractor at no additional cost to the Department. See the Special Provision for Waste and Borrow Sites.

L. Final Dressing, Seeding and Protection. Grade all disturbed areas to blend with the adjacent roadways features and to provide a suitable seed bed. Apply Class A Final Dressing to all disturbed areas, both on and off the Right-of-Way. Sow all disturbed earthen areas with the applicable seed mixture(s) according to Section 212.03.03.

M. Erosion Control. See the Special Note for Erosion Control.

IV. METHOD OF MEASUREMENT

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

B. Site Preparation. Other than the bid items listed, site preparation will NOT be measured for payment, but shall be incidental to culvert and/or entrance pipe bid items, as applicable.

C. Remove Headwall. The Department will measure the removal of existing headwalls as Each. Any excavation, including rock excavation, necessary to remove existing headwalls will NOT be measured for payment, but shall be incidental to the bid item "Remove Headwall".

D. Remove Pipe. Removal of existing culvert and entrance pipe shall be measured according to Section

701.04.14. Any excavation, including rock excavation, necessary to remove existing pipe will NOT be measured for payment, but shall be incidental to the bid item “Remove Pipe”.

E. Culvert and Entrance Pipe. The Department will measure the quantities according to Section 701.04. Any excavation, including rock excavation, necessary to install culvert or entrance pipe shall be incidental to the corresponding pipe bid items.

F. Headwalls, Drainage Boxes. The Department will measure according to Section 710. Any excavation, including rock excavation, necessary to construct headwalls and/or drainage boxes will NOT be measured for payment, but shall be incidental to the applicable bid item.

G. Excavation, Pipe Backfill, Embankments. The Department will NOT measure for payment the following items: any excavation, including rock excavation, necessary to remove the existing pipe and/or install the proposed culvert or entrance pipe, pipe backfill material, geotextile fabric, flowable fill, and re-constructing shoulder embankments, but shall considered these items incidental to the bid items for culvert and entrance pipe.

H. Clean Up, Disposal of Waste, Final Dressing, Seeding and Protection. The Department will NOT measure for payment the following activities: Clean Up, Disposal of Waste, and Final Dressing. These activities shall be incidental to the project bid items. Seeding and Protection shall be measured according to Section 212.

I. Erosion Control. See the Special Note for Erosion Control.

V. BASIS OF PAYMENT

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

B. Remove Headwall. The Department will make payment for the completed and accepted quantities of Each headwall removed. Payment at the Contract unit price per Each shall be full compensation for furnishing all labor, materials, equipment, and incidentals for removing the existing headwall.

C. Remove Pipe. The Department will make payment according to Section 701.05. Payment at the Contract unit price per linear foot shall be full compensation for furnishing all labor, materials, equipment, and incidentals for removing the existing pipe.

D. Culvert and Entrance Pipe. The Department will make payment according to Section 701.05. Payment at the Contract unit price per linear foot shall be full compensation for furnishing all labor, materials, equipment, and incidentals necessary for installing and backfilling new culvert and entrance pipe.

E. Headwalls, Drainage Boxes. The Department will make payment according to Section 710.

F. Erosion Control. See the Special Note for Erosion Control.

Special Note for Signage

All sign sheeting shall be from the Cabinet's List of Approved Materials.

All permanent signs and sign components shall be fabricated using Type XI sheeting.

The following signs and sign components shall be fabricated using Type XI fluorescent yellow sheeting:

- Horizontal Alignment Signs and Plaques, including signs shown in Figure 2C-1 of the MUTCD
- All Advisory Speed (W13-1P) plaques

The following signs shall be fabricated using Type XI fluorescent yellow-green sheeting:

- School and school bus warning signs, including the fluorescent yellow-green signs shown in Figures 7B-1 and 7B-6 of the MUTCD and other school-related warning signs that are not included in the MUTCD.
- Bicycle Warning (W11-1) signs and SHARE THE ROAD (W16-1P) plaques or diagonal downward pointing arrow (W16-7P) plaques that supplement Bicycle Warning signs.
- Pedestrian Warning signs and diagonal downward pointing arrow plaques that supplement Pedestrian Warning signs.
- In-Street Pedestrian Crossing (R1-6) signs and Overhead pedestrian Crossing (R1-9) signs
- Supplemental plaques to any of the previously listed signs

Special Note for Signing

I. DESCRIPTION

Except as provided herein, this work shall be performed in accordance with the current edition of the Manual on Uniform Traffic Control Devices (MUTCD), the Department's current Standard Specifications and Interim Supplemental Specifications, applicable Standard and Sepia Drawings, and applicable Special Provisions. Article references are to the Standard Specifications. This project shall consist of furnishing all labor, equipment, materials, and incidentals for the following:

(1) Maintaining and Controlling Traffic; (2) Furnish, Fabricate, and Erect Signs; and (3) All other work specified in the Contract.

II. MATERIALS

All materials shall be sampled and tested in accordance with the Department's Sampling Manual and the materials shall be available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing unless otherwise specified in these Notes.

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

B. Erosion Control. See Special Note for Erosion Control.

III. CONSTRUCTION METHODS

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

B. Site Preparation. Be responsible for all site preparation including, but not limited to: clearing and grubbing, staking, excavation, backfill, and removal of obstructions or any other material not covered by other items. Perform all site preparation only as approved or directed by the Engineer.

C. Staking. See Special Note for Staking.

D. Signs and Posts. Before beginning installation, the Contractor shall furnish to the Engineer drawings, descriptions, manufacturer’s cuts, etc. describing and/or detailing all material to be used. Mill test reports for beams, steel panels, and each different gauge of aluminum or steel sheeting used must be submitted to the Division of Construction and approved prior to erection.

Fabricate sheet signs from .080 or .125 gauge aluminum alloy 5052-H38 or 6061-T6, in accordance with ASTM B-209, and to the size and shape specified. Prepare the side of the aluminum sheet to receive the retroreflective background material according to the recommendations of the sheeting and retroreflective material manufacturer(s). Sheeting used as background material for sign faces is to be the color specified and visually in accordance with the standard requirements of ASTM D-4956 and meet the requirements of Section 830 of the Standard Specifications. Contrary to Section 830.02.06, only the types and colors of sheeting as specified in the proposal will be accepted. All

retroreflective material shall be fabricated and assembled in accordance with the specifications and/or recommendations of the manufacturer(s).

All hardware for the erection of sheeting signs shall be rust resistant: stainless steel, zinc coated, aluminum, or an Engineer approved material. All beams and sign posts shall be of sufficient lengths so that a single, continuous length of sign post extends from the top of the sign to the required embedment in the anchor. Splicing of the sign post shall NOT be allowed. For installations in soil, Type I steel posts shall be mounted on either a standard anchor, with soil stabilizer plate, or on a Type D breakaway sign support. Refer to Sheeting Sign Detail Sheet 1 of 2 for installation details for a standard anchor with soil stabilizer plate. When installing a standard anchor with soil stabilizer plate, if solid rock is encountered, the Contractor shall drill a hole to the required depth into the rock, install the anchor into the hole, and backfill the anchor post with concrete, or other method approved by the Engineer. The cost shall be incidental to Type I steel post, and a soil stabilizer plate will not be required. Refer to Standard Drawing RGX-065, current edition, for installation details of Type D breakaway sign supports. Approved manufacturers for Type D breakaway sign supports have been placed on the list of approved materials. For installations to be installed on sufficiently cured existing concrete, such as a sidewalk, concrete median, etc., Type I steel posts shall be mounted on a Type D Surface Mount. For Type D Surface Mounts use only Redi-Torque Model 280 Surface Mount Slip Base Assembly (part number SMSB) by Xcessories Squared of Auburn, IL. Prior to installation, the Contractor shall submit to the Engineer shop drawings of the Type D Surface Mount. Install the Type D Surface Mount according to all the applicable requirements of the manufacturer (see shop drawings). During installation of the Type D Surface Mount, if the existing concrete surface is not flat (i.e. has a slope), galvanized metal shims may be required to ensure the surface mount base is level and plumb. If a Type D breakaway sign support is specified for a location that has an asphalt surface, the Contractor shall install the Type D breakaway sign support detailed on Standard Drawing RGX-065, current edition. All steel post shall meet the requirements of Section 832. All hardware including, but not limited to, sign post anchors, soil stabilizer plates, nuts, bolts, washers, fasteners, fittings, shims, and bracing, or any other incidentals necessary to erect the signs shall be furnished by the Contractor and will be incidental to the work.

New concrete bases, posts, support anchors, signs, etc. are to be installed prior to dismantling any existing sign(s). The removal of existing signs, posts, and support anchors is to be performed concurrently with the installation of new signs, posts, and support anchors, under the same lane closure during the same work shift. Completely remove existing sign support anchors or remove them to a minimum depth of six (6) inches below existing ground line and backfill the disturbed area to the existing ground line.

When listed on the plans and/or summaries, fabricate Reflective Sign Post Panels from .080 gauge aluminum alloy 5052-H38 or 6061-T6, in accordance with ASTM B-209 and to the size(s) specified. Prepare the side of the aluminum sheet to receive the retroreflective background material according to the recommendations of the sheeting and retroreflective material manufacturer(s). Sheeting for the Reflective Sign Post Panels shall be the same Type and color as the sign installed on the post. Examples include:

- Red, fluorescent yellow, and fluorescent yellow-green (Type XI Sheeting)
- White and yellow (Type XI Sheeting)

Reflective Sign Post Panels shall be 2 inches wide and will typically have a height of 60 inches for rural installations and typically have a height of 84 inches for urban installations. There will be certain instances where a proposed Reflective Sign Post Panel will have a height dimension less than 60 inches; typically, this will be when the bottom of the bottom-most sign is mounted lower than the standard 5 ft minimum mounting height (e.g. 3 ft or 4 ft mount heights). In those cases, the height of the Reflective Sign Post Panel is expected to closely match (within 1-2 inches) the distance between the top of the anchor or support to the bottom edge of the bottom-most sign. Reflective Sign Post Panels shall have three 3/8" holes (one hole in the top 3", one hole near the center, and one hole in the bottom 3") that align with the holes on the Type I steel post.

All manufactured sheeting signs shall be free of visual defects including, but not limited to: cracks, tears, ridges, humps, discoloration, etc., and defective signs shall be replaced at no additional cost to the Department.

All sign blanks shall be hole punched by the manufacturer for either horizontal or vertical installation. Attach all aluminum sheeting signs to square post with 3/8" all steel rivets and nylon washers. Use bracing as indicated on the plans, summaries, and/or standard signing detail sheets, and/or when directed by the Engineer and/or District Traffic Engineer.

All sign posts shall be attached to anchors with 5/16" corner bolts and 5/16" flanged nuts, and all post and anchor cuts shall be treated with a Cold Galvanizing Compound spray.

Sign posts shall be erected vertically by using a bubble level. The tolerance shall be a two (2) degree angle in any direction. For locations where more than one sign is mounted beside each other, the posts shall be spaced to provide approximately six inches (6") of spacing between signs.

E. Remove & Relocate Sheet Signs. When listed on the plans and/or summaries, and/or as directed by the Engineer and/or District Traffic Engineer, remove the specified existing sheet sign(s) from the existing post(s) and reinstall on a new sign post. Once the specified existing sheet sign(s) have been removed and relocated, and if the existing sign post(s) are no longer needed to support other existing signs, removal of the existing sign post(s) will be paid under the bid item REMOVE SIGN. If any of the existing hardware components (bracing, brackets, bolts, rivets, etc.) are found to have pre-existing damage or are damaged during the Contractor's removal and reinstallation efforts, the Contractor shall provide the necessary replacement hardware for proper re-installation of the sheet sign. These components shall be incidental to the bid item REMOVE AND RELOCATE SHEET SIGNS.

Prior to removing and reinstalling a sheet sign, the Contractor shall first review the existing sheet sign for damage. It is the Contractor's responsibility to notify the Engineer of any existing sheet sign damage prior to removal and relocation of the sheet sign, so that it can be documented that the existing sheet sign had pre-existing damage. If the Contractor does not make the Engineer aware of pre-existing damage prior to detaching the sheet sign from its existing post, the Department will assume the damage was the result of the Contractor's removal and reinstallation efforts. The Contractor shall replace any sheet signs that are damaged during the removal and reinstallation efforts. Replacement of sheet signs damaged by the Contractor shall be incidental to the bid item REMOVE AND RELOCATE SHEET SIGNS.

If the existing sheet sign is found to have pre-existing damage, the Department will provide the Contractor with a new sheet sign to replace the sheet sign with pre-existing damage. Detaching the existing, damaged sheet sign from the existing post and attaching the new, Department-provided sheet sign to the new sign post shall be incidental the bid item REMOVE AND RELOCATE SHEET SIGNS.

F. Remove & Relocate Sign Assemblies. When listed on the plans and/or summaries, and/or as directed by the Engineer and/or District Traffic Engineer, remove the specified existing sign assemblies from the existing location and reinstall in a new location. The Department will consider all signs attached to one or more connected posts as a single sign assembly, no matter how many signs are attached to the existing sign assembly. If any of the existing hardware components (bracing, brackets, bolts, rivets, etc.) are found to have pre-existing damage or are damaged during the Contractor's removal and reinstallation efforts, the Contractor shall provide the necessary replacement hardware for proper re-installation of the sign assembly. These components shall be incidental to the bid item REMOVE AND RELOCATE SIGN ASSEMBLY.

Prior to removing and relocating a sign assembly, the Contractor shall review the existing sign(s) and sign post(s) for damage. It is the Contractor's responsibility to notify the Engineer of any sign or sign post damage prior to removal and relocation of the sign assembly, so that it can be documented that the existing sign and/or sign post had pre-existing damage. If the Contractor does not make the Department aware of pre-existing damage prior to removing a sign assembly from its existing location, the Department will assume the damage was the result of the Contractor's removal and reinstallation efforts. The Contractor shall replace any components of a sign assembly that are damaged during removal and relocation. Replacement of any components damaged by the Contractor shall be incidental to the bid item REMOVE AND RELOCATE SIGN ASSEMBLY.

If an existing sign that is part of a sign assembly to be removed and relocated is found to have pre-existing damage, the Department will provide the Contractor with a new sign to replace the sign with pre-existing damage. Detaching the existing, damaged sign from the existing post and attaching the new, Department-provided sign to the relocated existing post shall be incidental to the bid item REMOVE AND RELOCATE SIGN ASSEMBLY.

If an existing sign assembly that is to be removed and relocated is found to not have an existing soil stabilizer plate, or if the soil stabilizer plate and/or anchor is damaged during removal, then a new soil stabilizer plate and/or anchor shall be provided by the Contractor and shall be incidental to the bid item REMOVE AND RELOCATE SIGN ASSEMBLY.

If an existing sign assembly that is being relocated is not currently mounted on a Type D breakaway sign support, but the plans and/or summaries indicate, or wind load standards dictate, a Type D breakaway sign support or a Type D Surface Mount is required, provide and install the specified Type D support as part of the removal and reinstallation efforts. Type D breakaway sign supports shall be paid under the bid item GMSS TYPE D and Type D Surface Mount supports shall be paid under the bid item GMSS TYPE D (SURFACE MOUNT).

If an existing sign that is being relocated is found to have pre-existing damage to one or more of the sign post, the Department will NOT utilize the bid item REMOVE AND RELOCATE SIGN ASSEMBLY for removing and relocating such a sign assembly. Instead, the Department will require the Contractor

to install a new sign post(s) at the new location, and pay for the new post(s) under the bid item STEEL POST TYPE I. Detaching the existing sign(s) from the existing, damaged post(s) and attaching the existing sign(s) to the new sign post(s) shall be incidental to the bid item STEEL POST TYPE I. Any hardware that is needed to complete the installation shall also be incidental to the bid item STEEL POST TYPE I. Removal of the existing damaged post(s) and any other sign components not needed will be paid under the bid item REMOVE SIGN.

G. Property Damage. The Contractor shall be responsible for all damage to public and/or private property resulting from the Contractor's activities. Repair or replace damaged roadway features in like kind materials and design as directed by the Engineer at no additional cost to the Department. Repair or replace damaged private property in like kind materials and design to the satisfaction of the owner and the Engineer at no additional cost to the Department.

H. Coordination with Utility Companies. Locate all underground, above ground, and overhead utilities prior to beginning construction. Be responsible for contacting and maintaining liaison with all utility companies that have utilities located within the project limits. Do not disturb existing overhead or underground utilities. It is not anticipated that any utility facilities will need to be relocated and/or adjusted; however, in the event that it is discovered that the work does require that utilities be relocated and/or adjusted, the utility companies will work concurrently with the Contractor while relocating their facilities. Be responsible for repairing all utility damage that occurs due to the Contractor's operations at no additional cost to the Department. NOTIFY THE ENGINEER AND THE UTILITY OWNER(S) IMMEDIATELY WHEN IT IS DISCOVERED OR ANTICIPATED THAT ANY UTILITY CONFLICT COULD DELAY THE CONTRACTOR'S OPERATIONS. If the total delay exceeds ten working days, an extension of the specified completion date will be negotiated with the Contractor for delay to the Contractor's work; however, no extension will be granted for any delay caused by the Contractor's failure to notify the Engineer and/or the utility company as specified above when a conflict is discovered or anticipated as specified.

I. Caution. The information in this proposal and the type of work listed herein are approximate only and are not to be taken as an exact evaluation of the materials and conditions to be encountered during construction; the bidder must draw his/her own conclusions when developing the Unit Bid Prices for each bid item. As such, if the conditions encountered are not in accordance with the information shown, the Department does not guarantee any changes to the Unit Bid Prices nor extension of the contract will be considered. The Department will pay for bid item quantity overruns, but only if pre-approved by the Engineer.

J. Control. Perform all work under the absolute control of the Department. Obtain the Engineer's approval of all designs required to be furnished by the Contractor prior to incorporation into the work. The Department reserves the right to have other work performed by other contractors and its own forces, and to permit public utility companies and others to do work during the construction within the limits of, or adjacent to, the project. Conduct operations and cooperate with such other parties so that interference with such other work will be reduced to a minimum. The Department will not honor any claims for money or time extension created by the operations of such other parties.

Should a difference of opinion arise as to the rights of the Contractor and others working within the limits of, or adjacent to, the project, the Engineer will decide as to the respective rights of the various parties involved in order to assure the completion of the Department's work in general harmony and in a satisfactory manner, and the Engineer's decision shall be final and binding upon the Contractor.

K. Clean Up, Disposal of Waste. Clean up the project area as work progresses. Dispose of all removed concrete, debris, and other waste as per Section 204.03.08. The Department will incur no cost to obtain the disposal sites. The Department will NOT make direct payment for disposal of waste and debris from the project. Existing anchors, signs, posts, and any other hardware or material removed from the site are to become the property of the Contractor. See Special Provision for Waste and Borrow Sites.

L. Final Dressing, Seeding and Protection. Grade all disturbed areas to blend with the adjacent roadways features and to provide a suitable seed bed. Apply Class A Final Dressing to all disturbed areas, both on and off the Right-of-Way. Sow all disturbed earthen areas with the applicable seed mixture(s) according to Section 212.03.03.

M. Erosion Control. See Special Note for Erosion Control.

IV. METHOD OF MEASUREMENT

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

B. Site Preparation. Other than the bid items listed, the Department will NOT measure Site Preparation for payment, but shall be incidental to the project bid items.

C. Signs and Reflective Sign Post Panels. The Department will measure the finished in-place area of signs in Square Feet.

D. Sign Posts. The Department will measure the finished in-place length of sign posts in Linear Feet, from the top of the anchor, or top of the sign support, to the top of the sign post. Laps, cutoffs, excess, and waste will NOT be measured for payment.

E. Type D Breakaway Sign Supports. The Department will measure Type D breakaway sign supports as Each support installed.

F. Type D Surface Mounts. The Department will measure Type D Surface Mounts as Each surface mount installed.

G. Class A Concrete for Signs. The Department will measure the Class A Concrete used in conjunction with Type D breakaway sign support installations in Cubic Yards. Any concrete that is required as backfill due to hitting rock during a standard installation shall be incidental to the bid item STEEL POST TYPE I, and soil stabilizers will not be required.

H. Clean Up, Disposal of Waste, Final Dressing, Seeding and Protection. The Department will NOT measure for payment the following activities: Clean Up, Disposal of Waste, and Final Dressing. These activities shall be incidental. Seeding and Protection shall be measured according to Section 212.

I. Erosion Control. See Special Note for Erosion Control.

J. Remove Sign. The Department will consider all signs attached to one or more connected posts as a single sign. The Department will measure as Each sign assembly removed and NOT each individual sign removed.

K. Remove & Relocate Sheet Signs. The Department will measure sheet signs removed from an existing sign post and reinstalled on a new sign post as Each sheet sign removed and reinstalled. as indicated in the contract documents, or as directed by the Engineer. The new sign post shall be measured as indicated in paragraph D. of this section.

L. Remove & Relocate Sign Assemblies. The Department will consider all signs attached to one or more connected posts as a single sign assembly. When the contract documents indicate that an existing sign assembly is to be removed from its existing location and reinstalled in a new location, the Department will measure and pay for "Remove and Relocate Sign Assembly" as each sign assembly removed and relocated; NOT each individual sign removed and relocated.

M. Items Provided by KYTC. The Department will NOT measure for payment the installation of signs and/or surface mounts provided by KYTC. These activities shall be incidental to the bid item STEEL POST TYPE I.

V. BASIS OF PAYMENT

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

B. Signs and Reflective Sign Post Panels. The Department will make payment for the completed and accepted quantities under the bid item SBM ALUM SHEET SIGNS .125 IN or .080 IN. The Department will consider payment full compensation for all work and incidentals necessary to install the signs, as required by these notes and the details found elsewhere in the plans/proposal, at the locations indicated on the summary sheets, plans, and/or as directed by the Engineer.

C. Sign Posts. The Department will make payment for the completed and accepted quantities under the bid item STEEL POST TYPE I. The Department will consider payment full compensation for all work and incidentals necessary to install the sign posts as required by these notes and the details found elsewhere in the plans/proposal.

D. Type D Breakaway Sign Supports. The Department will make payment for the completed and accepted quantities under the bid item GMSS TYPE D. The Department will consider payment full compensation for all work and incidentals necessary to install the Type D breakaway sign supports as required by Standard Drawing RGX-065, current edition.

E. Type D Surface Mounts. The Department will make payment for the completed and accepted quantities under the bid item GMSS TYPE D (SURFACE MOUNT). The Department will consider payment full compensation for all work and incidentals necessary to install the Type D surface mounts according to all applicable manufacturer requirements.
NOTE: The permissible Type D Surface Mount alternative is: Redi-Torque Model 280 Surface Mount Slip Base Assembly (part number SMSB) by Xcessories Squared of Auburn, IL.

F. Class A Concrete for Signs. The Department will make payment for the completed and accepted quantities, used in conjunction with Type D breakaway sign support installations, under the bid item CLASS A CONCRETE FOR SIGNS. The Department will consider payment full compensation for all work and incidentals necessary to install the concrete as required by Standard Drawing RGX-065, current edition.

G. Remove Sign. The Department will make payment for the completed and accepted quantities under the bid item REMOVE SIGN. The Department will consider payment full compensation for all work and incidentals necessary to remove the existing signs, posts, anchors, and any other sign material or hardware, from the locations indicated on the summary sheets, plans, and/or as directed by the Engineer.

H. Remove & Relocate Sheet Signs. The Department will make payment for the completed and accepted quantities under the bid item REMOVE AND RELOCATE SHEET SIGNS. Any hardware that is needed to complete the removal and reinstallation shall be incidental. The Department will consider payment full compensation for all work and incidentals necessary to remove and reinstall the existing sheet signs as indicated on the plans, summaries, and/or as directed by the Engineer.

I. Remove & Relocate Sign Assemblies. The Department will make payment for the completed and accepted quantities under the bid item REMOVE AND RELOCATE SIGN ASSEMBLY. Any hardware that is needed to complete the removal and reinstallation shall be incidental. The Department will consider payment full compensation for all work and incidentals necessary to remove and reinstall the existing sign assembly as indicated on the plans, summaries, and/or as directed by the Engineer.

J. Erosion Control. See Special Note for Erosion Control.

Special Note for Tubular Markers – Pexco City Post (Embedded Anchor Cup)

I. DESCRIPTION

Except as provided herein, perform all work in accordance with the Department's Standard Specifications, interim Supplemental Specifications, Standard and Sepia Drawings, and Special Notes and Special Provisions, current editions. Article references are to the Standard Specifications. This project shall consist of furnishing all labor, equipment, materials, and incidentals for the following:

(1) Maintaining and Controlling Traffic; (2) Installing Pexco City Post (Embedded Anchor Cup); and
(3) All other work specified in the Contract.

II. MATERIALS

All materials shall be sampled and tested in accordance with the Department's Sampling Manual and the materials shall be available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing unless otherwise specified in these Notes.

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

B. Tubular Markers. Furnish Pexco City Post Embedded Anchor Cup Tubular Marker which includes delineator posts/panels, adhesive shield, rubber gasket, and anchor cup. The complete system shall be compliant with NCHRP 350 or MASH. Manufacturer's documentation validating this compliance shall be provided to the Engineer prior to installation. System color shall match the adjacent pavement marking color. The upright delineator posts shall be 18 inches in height and 3 inches in diameter. The upright delineator posts are to be uniformly spaced according the Detail Sheets found elsewhere in the Proposal. Post color shall match the adjacent pavement marking color. Each post shall have a "double wrap" of retroreflective sheeting of color matching the post and adjacent pavement marking. Upright posts should be easily replaceable under traffic conditions and shall be fabricated to withstand repeated impacts and return to a complete upright position with minimal maintenance to the unit.

III. CONSTRUCTION METHODS

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

B. Staking. See the Special Note for Staking.

C. Site Preparation. Be responsible for all site preparation recommended by the manufacturer or as directed by the Engineer.

D. Pexco City Post Embedded Anchor Cup. Install the tubular markerd according to the manufacturer's recommendations at the location(s) and spacing indicated on the Detail Sheets found elsewhere in the Proposal.

E. Property Damage. The Contractor shall be responsible for all damage to public and/or private property resulting from the Contractor's activities. Repair or replace damaged roadway features in like kind materials and design as directed by the Engineer at no additional cost to the Department. Repair or replace damaged private property in like kind materials and design to the satisfaction of the owner and the Engineer at no additional cost to the Department.

F. Caution. The information in this proposal and the type of work listed herein are approximate only and are not to be taken as an exact evaluation of the materials and conditions to be encountered during construction; the bidder must draw his/her own conclusions when developing the Unit Bid Prices for each bid item. As such, if the conditions encountered are not in accordance with the information shown, the Department does not guarantee any changes to the Unit Bid Prices nor extension of the contract will be considered. The Department will pay for bid item quantity overruns, but only if pre-approved by the Engineer.

IV. METHOD OF MEASUREMENT

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

B. Staking. See the Special Note for Staking.

C. Site Preparation. Other than the bid items listed, the Department will NOT measure Site Preparation for payment, but shall be incidental to the project bid items.

D. Tubular Markers. The Department will measure Pexco City Post Embedded Anchor Cup as EACH.

V. BASIS OF PAYMENT

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

B. Staking. See the Special Note for Staking.

C. Tubular Markers. The Department will make payment for the completed and accepted quantities under the bid item TUBULAR MARKERS (PEXCO CITY POST EMBEDDED ANCHOR CUP). Payment at the Contract unit price of EACH shall be full compensation for furnishing all materials, equipment, tools, hardware, labor, and incidentals necessary to properly install the Pexco City Post Embedded Anchor Cup according to the manufacturer's installation instructions, these notes, and/or as directed by the Engineer.

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SPECIAL NOTE FOR FIBER REINFORCEMENT OF ASPHALT

PART 1 – GENERAL

1.1 DESCRIPTION

This Section includes specifications for furnishing all materials, equipment, labor, and incidentals for mixing aramid fiber reinforcements to hot mix asphalt.

1.2 DEFINITIONS

A. HMA - hot mix asphalt, without aramid fiber.
B. WMA - warm mix asphalt, without aramid fiber.
C. Reinforced MA - hot mix asphalt including aramid fibers properly proportioned, uniformly mixed and coated with asphalt.
D. Aramid fiber - pure aramid fiber meeting the material properties of this specification, without additive materials.
E. Delivery material(s) - the material(s) combined with the pure aramid fiber to facilitate Aramid fiber and HMA/WMA proportioning, uniform mixing with the HMA/WMA, and asphalt coating of the aramid fibers.
F. Aramid product - the aramid supplier's mixture of pure aramid fiber and delivery material(s).
G. Manufacturer - the company that produces the aramid fiber from raw materials.
H. Supplier - the company that offers an aramid product.

PART 2 – PRODUCT

2.1 MATERIALS

Meet the following aramid fiber properties.

Property	Measure	Standard
Material	Aramid	ASTM D276
Form	Monofilament fibers	Manufacturer Certification
Length	0.75-1.50 inches (+/- 10%)	Manufacturer Cert.
Specific Gravity	1.44	ASTM D276
Minimum Tensile Strength	400,000 psi	ASTM D3379
Maximum Tensile Elongation	1.8 %	ASTM D3379
Degradation Temperature	800 degrees F	ASTM D276
Acid and Alkali Resistance	Inert	Manufacturer Cert.

2.2 SUBMITTALS

Submit the following.

A. Identify the mixing plant.
B. Provide a specification sheet from the aramid fiber manufacturer.
C. Provide the following from the aramid product supplier at least three weeks prior to HMA/WMA production.
    1. The supplier's specified mix rate for the aramid product.
    2. Certification that the amount of aramid fiber in the aramid product will be between 2.1and4.0

ounces of pure aramid fiber foreach ton of hot mix asphalt.

3. Evidence showing how many times, if any, the supplier's fiber product has been successfully produced at the asphalt plant to be used for the project.
4. Proven method of introducing the aramid fibers into the hot mix asphalt which will not cause the aramid fibers to become airborne.

2.3 JOB MIX FORMULA

When aramid fiber is required as a mixture ingredient, modification to the job mix formula is not required.

PART 3 – EXECUTION

3.1 CONSTRUCTION REQUIREMENTS

Store aramid product in a dry environment and do not allow them to be in contact with moisture.

Mix 3.0 ounces (+/- 1.0 ounces) of aramid fibers per ton of asphalt, unless otherwise noted in the plans. The weight applied is for pure aramid fibers only, weight of any delivery materials is not considered.

Have a fiber supplier's representative on site during the first day of production mixing. This requirement can be waived if fiber supplier and HMA/WMA producer can supply evidence of supplier's brand of fiber product being successfully produced by the HMA/WMA producer. The fiber supplier's representative may be on site for additional days as requested by the Engineer.

Introduce the aramid product as follows:

1. Batch Plant

   When a batch type plant is used, add the aramid product dosage to the aggregate in the weigh hopper. This may be done with loose fibers and a fiber metering device or may be done by using manual dosing equipment. If necessary, increase the batch dry mixing time to ensure the aramid fibers are uniformly distributed prior to the injection of asphalt cement into the mixer.

2. Drum Plant

   When a continuous or drier-drum type plant is used, add the aramid product to the RAP material to uniformly disperse with the aggregate and injected asphalt. Use a separate aramid product metering device feed system to proportion by weight of total mix, the required percentage of fiber reinforcement into the mixture. Control the aramid product metering system with a proportioning device to meet the dosing requirements.

   When a continuous or drier-drum type plant is used for limited production volumes, the addition of the aramid product may be done by using manual measuring tools or equipment and adding them directly onto the RAP belt or into the RAP opening on the plant. Because this is not an automated process, a written protocol must be supplied by the producer to demonstrate how they will attain the dosage requirement, and documentation must be supplied by the

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material manufacturer assuring this method will produce the desired uniform aramid fiber distribution.

Mix the aramid fiber with the aggregate longer, if needed, to allow thorough distribution of aramid fibers at the end of the mixing process and to promote asphalt coating of individual strands of aramid fiber. At the start of any fiber mixing, visually observe the reinforced HMA/WMA at the plant and in first three trucks at the point of discharge and prior to delivery to the job site. Observation shall include using a shovel or other device. Look for proper distribution of aramid fibers and make mixing adjustments if needed.

WMA: Use of a feeder system will be required for both Drum and Batch plants when producing Warm Mix Asphalt to ensure correct distribution and coating of the aramid fibers. This requirement maybe waved if the asphalt producer can demonstrate complete melting of the delivery material and proper incorporation of the aramid fibers into the WMA.

3.2 ACCEPTANCE

Acceptance of the reinforced HMA/WMA will include the following factors:

1. Aramid fiber is properly proportioned based on documentation comparing fiber feed to HMA/WMA mix production. A log of the total amount of aramid fibers applied certified by fiber manufacturer/supplier shall be required daily.
2. By visual inspection at the end of the mixing process, there is no clumping of aramid fiber or aramid delivery product and the aramid fibers are uniformly distributed.
3. All other mixture and density requirement of the asphalt as detailed in the Standard Specifications, current edition, shall apply.

PART 4 - MEASUREMENT AND PAYMENT

The Department will measure the quantity of Fiber Reinforcement for HMA/WMA as ton of asphalt placed with fibers. Each ton of asphalt placed with the aramid fibers according to this special note will be measured and paid for at the contract unit bid price per ton, and shall include full compensation for furnishing all labor, tools, equipment, and incidentals for doing all the work involved in adding the fibers to HMA/WMA.

Code	Pay Item	Pay Unit
24785EC	Fiber Reinforcement for HMA	Tons

Special Note for Thermo Striping Application

Contrary to Section 714.02.05 of the Standard Specifications for Road and Bridge Construction, thermoplastic application will be required to be by ribbon gun at all locations that are to be applied over milled rumble strips in lieu of an extrusion application.

Special Note for Completion Date & Liquidated Damages

I. COMPLETION DATE

There is a fixed milestone completion date of ***August 31, 2025***, in which all work except permanent signing and permanent pavement markings must be complete. The ultimate fixed completion date to have all work completed, including permanent signing and permanent pavement markings shall be ***October 15, 2025***. Liquidated Damages for failure to complete the project on time will be assessed following Section 108.09.

II. LIQUIDATED DAMAGES

In addition to the requirements of Section 108.09, the Department will assess Liquidated Damages in the amount of **$5,000** per hour for each hour, or fraction of an hour, for any and all lane closures that are in place beyond the time frame(s) noted in the Traffic Control Plan and approved by the Engineer.

Contrary to Section 108.09, Liquidated Damages will be assessed regardless of whether seasonal limitations prohibit the Contractor from performing work on the controlling operation.

NOTE: At the sole discretion of the Engineer, all, or part, of these Liquidated Damages may be waived due to unforeseen circumstances, such as unexpected weather.

Trees and/or bushes that are 5 inches or greater (diameter at breast height) shall not be cut or trimmed between June 1st and July 31st. Any trees and/or bushes that are cut or trimmed between June 1st and July 31st will NOT receive payment at the contract unit price. Furthermore, failure to adhere to these restrictions shall result in Liquidated Damages in the amount of **$477** per affected tree. Activities that are a part of this contract that do not involve the initial trimming and/or cutting of trees and/or bushes will be permitted under the ultimate fixed completion date.

Contrary to Section 108.09, Liquidated Damages will be assessed for the months of December through March.

All liquidated damages will be applied accumulatively.

All other applicable portions of Section 108 apply.

SPECIAL PROVISION FOR WASTE AND BORROW SITES

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

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

SPECIAL NOTE FOR ELECTRONIC DELIVERY MANAGEMENT SYSTEM (e-Ticketing)

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

1.0 DESCRIPTION. Incorporate an e-Ticketing Delivery Software for weighed asphalt material delivered to the project to report loads and provide daily running totals of weighed asphalt material for pay items and incidental work during the construction processes from the point of measurement and loading to the point of incorporation to the project.

2.0 MATERIALS AND EQUIPMENT. Contractor shall supply material data in JavaScript Object Notation (JSON) documents to the KYTC e-Ticketing Delivery Software (KYTC e-Ticketing Portal) via Application Programming Interface (API) or direct connection. Test and verify that ticket data can be shared from the original source no fewer than 30 days prior to material placement activities. An e-Ticketing Delivery Software supplier can provide a qualified representative for on-site technical assistance during the initial setup, pre-construction verifications, and data management and processing as needed during the Project to maintain material data delivery capabilities. Virtual meetings may be hosted in lieu of on-site meetings when deemed appropriate by the Engineer.

Provide e-Ticketing Delivery Software that will meet the following:

1. The e-Ticketing Delivery Software shall be fully integrated with the Contractor's Load Read-Out scale system at the material source location.

2. The e-Ticketing Delivery Software shall provide real-time delivery to KYTC e-Ticketing Portal.

3. Transmit any updates to the ticket data within 5 minutes of a change.

3.0 CONSTRUCTION. Provide the Engineer with the manufacturer's specifications and all required documentation for data access at the pre-construction conference.

A. Construction Requirements

1. Install and operate software in accordance with the manufacturer's specifications.

2. Verify that all pertinent information is provided by the software within the requirements of this Special Note.

B. Data Deliverables

Provide to the Engineer a means in which to gather report summaries by way of iOS apps, web pages, or any other method at the disposal of the Engineer. The Engineer may request data at any time during the project.

1. Asphalt Material

a. **Real-time Continuous Data Items**

Provide the Engineer access to JSON documents capable of being transmitted through the KYTC's e-Ticketing Portal that displays the following information in real-time with a web-based system compatible with iOS and Windows environments.

- Each Truck
  - Supplier Name
  - Supplier Address
  - Supplier Phone
  - Plant location
  - Date
  - Time at source
  - Project Location

- Contract ID#
- Carrier Name
- Unique Truck ID
- Description of Material
- Mix Design Number
- Gross, Tare and Net Weight
- Weighmaster

4.0 MEASUREMENT. The Department will measure the electronic delivery management system as a lump sum item.

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

1. Payment is full compensation for all work associated with providing all required equipment, training, and documentation.

2. Payment will be full compensation for costs related to providing the e-Ticketing Delivery Software, including integration with plant load-out systems, and report viewing/exporting process. All quality control procedures including the software representative's technical support and on-site training shall be included in the Contract lump sum price.

Code	Pay Item	Pay Unit
26228EC	ELECTRONIC DELIVERY MGMT SYSTEM	LS

January 2024

SPECIAL NOTE FOR EXPERIMENTAL KYCT AND HAMBURG TESTING

1.0 General

1.1 Description. The KYCT (Kentucky Method for Cracking Test) and the Hamburg test results will help determine if the mixture is susceptible to cracking and rutting. During the experimental phase, data will be gathered and analyzed by the Department to determine the durability of the bituminous mixes. Additionally, the data will help the Department to create future performance-based specifications which will include the KYCT and Hamburg test methods.

2.0 Equipment

2.1 KYCT Testing Equipment. The Department will require a Marshall Test Press with digital recordation capabilities. Other CT testing equipment may be used for testing with prior approval by the Department.

2.2 Water Baths. One or more water baths will be required that can maintain a temperature of 77^{o} +/- 1.8^{o} F with a digital thermometer showing the water bath temperature. Also, one water bath shall have the ability to suspend gyratory specimen fully submerged in water in accordance with AASHTO T-166, current edition.

2.3 Hamburg Wheel Track Testing. The department encourages the use of the PTI APA/Hamburg Jr. test equipment to perform the loaded wheel testing. The Department will allow different equipment for the Hamburg testing, but the testing device must be approved by the Department prior to testing.

2.4 Gyratory Molds. Gyratory molds will be required to assist in the production of gyratory specimens in accordance with AASHTO T-312, current edition.

2.5 Ovens. Adequate (minimum of two ovens) will be required to accommodate the additional molds and asphalt mixture necessary to perform the acceptance testing as outlined in Section 402 of the Kentucky Standard Specifications for Road and Bridge Construction, current edition.

2.6 Department Equipment. The Department will provide gyratory molds, PINE 850 Test Press with digital recordation, and CT testing equipment to assist during this experimental phase so data can be gathered. Hamburg test specimens will be submitted to the Division of Materials for testing on the PTI APA/Hamburg Jr if the asphalt contractor or district materials office does not have an approved Hamburg testing device.

3.0 Testing Requirements

3.1 Acceptance Testing. Perform all acceptance testing and aggregate gradation as according with Section 402 and Section 403 of the Kentucky Standard Specifications for Road and Bridge Construction, current edition.

3.2 KYCT Testing. Perform crack resistance analysis (KYCT) in accordance with the current Kentucky Method for KYCT Index Testing during the mix design phase and during the plant production of all surface mixtures. For mix design approvals, submit KYCT results on the Department MixPack. For Class 4 mixtures, submit ingredient materials to the Division of Materials for verification.

3.2.1 KYCT Frequency. Obtain an adequate sample of hot mix asphalt to ensure the acceptance testing, gradation, and KYCT gyratory samples can be fabricated and is representative of the bituminous mixture. Acceptance specimens shall be fabricated first, then immediately after, fabricate the KYCT samples with the gyratory compactor in accordance with Section 2.4 of this Special Note. Analysis of the KYCT specimens and gradation will be required one per sublot produced from the same asphalt material and at the same time as the acceptance specimen is sampled and tested.

3.2.2 Number of Specimens and Conditioning. Fabricate specimens in accordance with the Kentucky Method for KYCT Index Testing. Contrary to the method, for field specimens, fabricate a minimum of 3 and up to 6 test specimens. The specimens shall be compacted at the temperature in accordance with KM 64-411. KYCT mix design specimens shall be short-term conditioned uncovered for four hours at compaction temperature in accordance with KM 64-411. Contrary to the Kentucky Method, plant produced bituminous material shall be short-term conditioned immediately after sampling for two hours uncovered in the oven at compaction temperature in accordance with KM 64-411. Additionally, fabricated specimens shall be allowed to cool in air (fan is permissible) for 30 minutes +/- 5 minutes and conditioned in a 77 °F water bath for 30 minutes +/- 5 minutes. To ensure confidence and reliability of the test results provided by KYCT testing and Hamburg testing, reheating of the asphalt mixture is prohibited.

3.2.3 Record Times. For each sublot, record the time required between drying aggregates in the plant to KYCT specimen fabrication. The production time may vary due to the time that the bituminous material is held in the silo. Record the preconditioning time when the time exceeds the one-hour specimen cool down time as required in accordance with The Kentucky Method for KYCT Index Testing. The preconditioning time may exceed an hour if the technician is unable to complete the test on the same day or within the specified times as outlined in The Kentucky Method for KYCT Index Testing. The production time and the preconditioning time shall be recorded on the AMAW.

3.2.4 File Name. As according to section 7.12 of The Kentucky Method for KYCT Index Testing, save the filename with the following format: “CID_Approved Mix Number_Lot Number_Sublot Number_ Date”

3.3 Hamburg Testing. Perform the rut resistance analysis (Hamburg) in accordance with AASTHO T-324, not to exceed 20,000 passes for all bituminous mixtures during the mix design phase and production. For mix design approvals, submit Hamburg results on the Department MixPack. For Class 4 mixtures, submit ingredient materials to the Division of Materials for informational verification.

3.3.1 Hamburg Testing Frequency. Perform testing and analysis per lot of material. The plant produced bituminous material sampled for the Hamburg test does not have to be obtained at the same time as the acceptance and KYCT sample. If the Hamburg test sample is not obtained at the same time as the KYCT sample, determine the Maximum Specific Gravity of the KYCT sample in accordance with AASHTO T-209 coinciding with the Hamburg specimens.

3.3.2 Record Times. Record the production time as according to section 3.2.3 in this special note. Also record the time that the specimens were fabricated and the time the Hamburg testing was started. All times shall be recorded on the AMAW.

3.3.3 File Name. Save the Excel spreadsheet with the following file name; "Hamburg_CID_Approved Mix Number_Lot Number_Sublot Number_Date" and upload the file into the AMAW.

4.0 Data

Submit the AMAW and all test data that was obtained for acceptance, gradation, KYCT, and Hamburg testing within five working days once all testing has been completed for a lot to Central Materials Lab and the District Materials Engineer. Also, any data and or comments that the asphalt contractor or district personnel deem informational during this experimental phase, shall also be submitted to the Central Materials Lab and the District Materials Engineer. Any questions or comments regarding any item in this Special Note can be directed to the Central Office, Division of Materials, Asphalt Branch.

5.0 Payment

Any additional labor and testing equipment that is required to fabricate and test the KYCT and Hamburg specimens shall be considered incidental to the asphalt surface line item. The Department will perform the testing for the KYCT and Hamburg specimens if a producer does not possess the proper equipment.

June 15th, 2022

SPECIAL NOTE FOR DOLOMITIC POLISH-RESISTANT AGGREGATE IN CLASS A 0.38-IN. AND 0.50-IN. NOMINAL ASPHALT MIXTURES

Contrary to Subsection 403.03.03, when utilizing a dolomitic polish-resistant aggregate as the coarse portion of the Class A 0.38-in. or 0.50-in.-nominal asphalt surface mixture, provide an asphalt mixture conforming to the following requirements:

- 70 percent of total combined aggregate is Class A polish-resistant aggregate.
- Any coarse aggregate utilized in the mixture shall be classified as Class A polish-resistant.
- Non-dolomitic substitutes from other Class A sources may be used as direct substitutes
- All mixes must have DFT testing/results submitted to Division of Materials with any supporting documentation prior to completion of the project.

Dynamic Friction Testing Procedure. Prepare samples for DFT analysis in accordance with PP 104. Friction testing shall be conducted by an AASHTO-accredited facility and data shall be provided in accordance with ASTM E1911 conforming to the following three-wheel polishing schedule. Variations to the testing frequency or methodology shall be coordinated with Division of Materials prior to testing.

Polishing Cycles
5,000
25,000
75,000
150,000

COORDINATION OF WORK WITH OTHER CONTRACTS

Be advised, there may be an active project(s) adjacent to or within this project. The Engineer will coordinate the work of the Contractors. See Section 105.06.

1-3193 Coordination Contracts
01/02/2012

SPECIAL NOTE FOR PAVEMENT WEDGE AND SHOULDER MONOLITHIC OPERATION

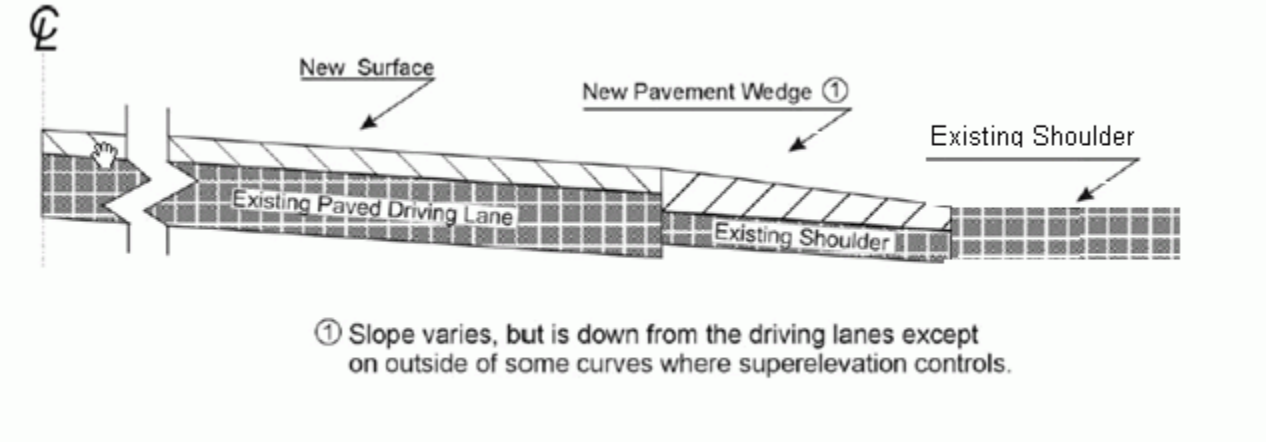
1.0 MATERIALS. Provide an Asphalt Surface Mixture conforming to Section 403 of the Standard Specifications, as applicable to the project, for the pavement wedge.

2.0 CONSTRUCTION. Place the specified Asphalt Surface Mixture on shoulders monolithically with the driving lane. Prime the existing shoulder with tack material as the Engineer directs before placing the wedge. Construct according to Section 403.03 of the Standard Specifications.

Equip the paver with a modified screed that extends the full width of the wedge being placed and is tapered to produce a wedge. Obtain the Engineer's approval of the modified screed before placing shoulder wedge monolithically with the driving lane.

The wedge may vary in thickness at the edge of the milled area in the shoulder. If the area to receive the shoulder wedge is milled prior to placement, during rolling operations pinch the outside edge of the new inlay wedge to match the existing shoulder elevation not being resurfaced. Unless required otherwise by the Contract, construct rolled or sawed rumble strips according to Section 403.03.08, as applicable.

The following sketch is primarily for the computation of quantities; however, the wedge will result in a similar cross-section where sufficient width exists. Do not construct a shoulder for placing the wedge unless specified elsewhere in the Contract.



3.0 MEASUREMENT. The Department will measure Asphalt Surface Mixture placed as the pavement wedge according to Section 403.

4.0 PAYMENT. The Department will make payment for the completed and accepted quantities of Asphalt Surface Mixtures on pavement wedges according to Section 403.

Special Note for Guardrail

I. DESCRIPTION

Except as specified herein, perform all work in accordance with the Department's Standard and Supplemental Specifications, Special Notes and Special Provisions, and the Standard and Sepia Drawings, current editions. Article references are to the Standard Specifications. Furnish all equipment, labor, materials, and incidentals for the following work items:

(1) Site preparation; (2) Remove existing guardrail systems; (3) Construct Guardrail, End Treatments, Bridge End Connectors, and Terminal Sections, as applicable; (4) Delineators for guardrail; (5) Maintain and Control Traffic; and (6) all other work specified as part of this contract.

II. MATERIALS

Except as specified herein, provide for all materials to be sampled and tested in accordance with the Department's Sampling Manual and make the materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing.

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

B. Guardrail. Furnish guardrail system components according to Section 814 and the Standard and Sepia Drawings; except use steel posts only, no alternates.

C. Delineators for Guardrail. Furnish white and/or yellow Delineators for Guardrail according to Standard Drawing RBR-055 – Delineators for Guardrail, current edition.

D. Erosion Control. See the Special Note for Erosion Control.

III. CONSTRUCTION METHODS

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

B. Site Preparation. Remove existing guardrail system, including the guardrail end treatments, Bridge End connectors and all other elements of the existing guardrail system as per Section 719, except that the Contractor will take possession of all concrete posts and all concrete associated with the existing bridge and/or guardrail end treatments. Locate all disposal areas off the Right of Way. Be responsible for all site preparation, including but not limited to, clearing and grubbing, excavation, embankment, and removal of all obstructions or any other items; regrading, reshaping, adding and compacting of suitable materials on the existing shoulders to provide proper template or foundation for the guardrail; filling voids left as the result of removing existing guardrail and guard posts with dry sand; temporary pollution and erosion control; disposal of excess, waste materials, and debris; and final dressing, cleanup, and seeding and protection. Perform all site preparation as

approved or directed by the engineer.

C. Guardrail. Except as specified herein, construct guardrail system according to Section 719 and the Standard and Sepia Drawings, current editions. Locations listed on the summary and/or shown on the drawings are approximate only. The Engineer will determine the exact termini for individual guardrail installations at the time of construction. Unless directed otherwise by the Engineer, provide a minimum two (2) foot shoulder width. Construct radii at entrances and road intersections as directed by the Engineer.

Erect guardrail to the lines and grades shown on the current Standard and Sepia Drawings, or as directed by the Engineer by any method approved by the Engineer which allows construction of the guardrail to the true grade without apparent sags.

When removing existing guardrail and installing new guardrail, do not leave the blunt end exposed where it would be hazardous to the public. When it is not practical to complete the construction of the guardrail and the permanent end treatments and terminal sections first, provide a temporary end by connecting at least 25 feet of rail to the last post, and by slightly flaring, and burying the end of the rail completely into the existing shoulder. If left overnight, place a drum with bridge panel in advance of the guardrail end and maintain during use.

D. Delineators for Guardrail. Construct Delineators for Guardrail according to Standard Drawing RBR-055 – Delineators for Guardrail, current edition.

E. Property Damage. Be responsible for all damage to public and/or private property resulting from the work. Restore damaged roadway features and private property at no additional cost to the Department.

F. Coordination with Utility Companies. Locate all underground, above ground, and overhead utilities prior to beginning construction. Be responsible for contacting and maintaining liaison with all utility companies that have utilities located within the project limits. Do not disturb existing overhead or underground utilities. It is not anticipated that any utility facilities will need to be relocated and/or adjusted; however, in the event that it is discovered that the work does require utilities to be relocated and/or adjusted, the utility companies will work concurrently with the Contractor while relocating their facilities. Be responsible for repairing all utility damage that occurs as a result of guardrail operations at no additional cost to the Department.

G. Right of Way Limits. The Department has not established the exact limits of the Right-of-Way. Limit work activities to obvious Right-of-Way, permanent or temporary easements, and work areas secured by the Department through consent and release of the adjacent property owners. Be responsible for all encroachments onto private lands.

H. Clean Up, Disposal of Waste. Dispose of all removed concrete, debris, and other waste and debris off the Right-of-Way at sites obtained by the Contractor at no additional cost to the Department. See the Special Provision for Waste and Borrow Sites.

I. **Final Dressing, Seeding and Protection.** Apply Class A Final Dressing to all disturbed areas, both on and off the Right-of-Way. Sow all disturbed earthen areas with the applicable seed mixture(s) according to Section 212.03.03.

J. **Erosion Control.** See the Special Note for Erosion Control.

IV. METHOD OF MEASUREMENT

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

B. **Site preparation.** Other than the bid items listed, the Department will not measure Site Preparation for separate payment but shall be incidental to the Guardrail, End Treatments, Bridge End Connectors, and Terminal Sections, as applicable.

C. **Guardrail, End Treatments, Bridge End Connectors, Terminal Sections, and Remove Guardrail.** The Department will measure according to Section 719.04.

D. **Delineators for Guardrail.** See Standard Drawing RBR-055 – Delineators for Guardrail.

E. **Clean Up, Disposal of Waste, Final Dressing, and Seeding and Protection.** The Department will NOT measure for payment the operations of: Clean Up, Disposal of Waste, and Final Dressing. These activities shall be incidental. Seeding and Protection will be measured according to Section 212.

F. **Erosion Control.** See the Special Note for Erosion Control.

V. BASIS OF PAYMENT

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

B. **Guardrail, End Treatments, Bridge End Connectors, Terminal Sections, and Remove Guardrail.** The Department will make payment according to Section 719.05.

C. **Delineators for Guardrail.** See Standard Drawing RBR-055 – Delineators for Guardrail.

D. **Erosion Control.** See the Special Note for Erosion Control.

SPECIAL NOTE FOR
ASPHALT MILLING AND TEXTURING

Begin paving operations within **48 hours** of commencement of the milling operation. Continue paving operations continuously until completed. If paving operations are not begun within this time period, the Department will assess liquidated damages at the rate prescribed by Section 108.09 until such time as paving operations are begun.

Contrary to Section 408, the Department will retain possession of a portion of the material obtained from the milling operations. Deliver 3,000 Tons of this material to the State Maintenance facility in Henderson County. Contractor to retain the remaining 12,300 Tons.

NOTICE TO CONTRACTOR: The Department considers transfer of millings to the state maintenance facility to be a part of the construction project.

1-3530 48 hours State keeps millings
01/2/2012

SPECIAL NOTE FOR TRAFFIC ISLAND REMOVAL

Remove existing traffic islands as shown on the drawings, listed in the summary, or as directed by the Engineer. Saw cut the existing pavement, asphalt surface, base, CSB and PCC pavement (if present). Excavate to an approximate depth of 6 inches below the bottom of the existing adjacent pavement level. Remove and dispose of all materials off the Right-of Way at sites obtained by the Contractor at no additional cost to the Department. See the Special Provision for Waste and Borrow Sites. Do not damage existing culvert pipes and any existing underground utilities. Repair or restore any damaged items at no additional cost to the Department.

Backfill the excavated area with Class 4 Asphalt Base 1.00D PG74-22, in 3.5 inch maximum courses, up to the existing pavement surface. Compact the asphalt base to the compaction required in Section 403. Seal the asphalt base with leveling and wedging. Perform all traffic island removal operations in such a manner that removal and replacement are completed on the same day. Do this work as one of the Contractor's first operations in order to allow further compaction by traffic. Do not mill or place new asphalt surface over the repaired areas until a minimum of 14 calendar days have elapsed after placement of the final course of asphalt base. After the 14 calendar day waiting period, and/or when the Engineer determines the repair areas have sufficiently stabilized, begin milling and/or resurfacing operations. Prior to milling and/or constructing the new asphalt surface, level and wedge any settlement of the repair areas.

The bidder must draw his or her own conclusions as to the conditions to be encountered. The Department does not give any guarantee as to the accuracy of the data and no claim will be considered for additional compensation of the materials encountered that are not in accord with the classification shown.

Accept payment at the Contract unit price per square yard for Remove Traffic Island as full compensation for all labor, materials, equipment, and incidentals for removing traffic island and disposing of the materials, furnishing and placing asphalt base, leveling and wedging, and all other items necessary to complete the work according to these notes to the satisfaction of the Engineer.

SPECIAL NOTE FOR TYPICAL SECTION DIMENSIONS

Consider the dimensions shown on the typical sections for pavement and shoulder widths and thickness' to be nominal or typical dimensions. The Engineer may direct or approve varying the actual dimensions to be constructed to fit existing conditions. Do not widen existing pavement or shoulders unless specified elsewhere in this proposal or directed by the engineer.

1-3725 Typical Section Dimensions
01/02/2012

SPECIAL NOTE FOR SIDEWALK RAMPS & DETECTABLE WARNINGS

GENERAL

Unless otherwise stated in the contract, or as directed by or with prior approval from the Engineer, construct Sidewalk Ramps and Detectable Warnings in accordance with Sections 505 and 720; Supplemental Specifications; Standard Drawings RGX-040-03, RPM-150-08, RPM-152-08, RPM-170-09, and RPM-172-07; current editions, as applicable. In lieu of the Detectable Warnings shown on Standard Drawing RGX-040-03, the Department will also allow the use of any Detectable Warnings listed as Phase XI on the Kentucky Product Evaluation List (http://www.ktc.uky.edu/kytc/kypel/allevaluations.php). For Detectable Warnings as shown on Standard Drawing RGX-040-03, saw cut existing sidewalks, curb and gutter, and pavement, if present, as shown on the detail and reconstruct sidewalk ramps with detectable warnings as directed or approved by the Engineer. For Detectable Warnings from the Kentucky Product Evaluation List, install according to the manufacturer's recommendations. Unless specified otherwise in the Contract, construct sidewalk with 4" nominal minimum required thickness; however, if the existing sidewalk thickness is found to be greater or less than the thickness specified, transition the thickness as directed by the Engineer.

Except as required by the work, do not disturb drainage pipe, catch basins, and other roadway features, appurtenances and installations. Restore any roadway features, appurtenances, and installations damaged by the work in like kind materials and design at no additional cost to the Department. Dispose of all waste off the right of way at sites obtained by the Contractor at no additional cost to the Department (see Special Note for Waste and Borrow).

MEASUREMENT & PAYMENT

SIDEWALK RAMPS – The Department will measure Sidewalk Ramps in accordance with Section 505.04.01 and Standard Drawing RPM-170-09, current editions; however, contrary to Sections 505.04.05 and 505.04.06, the Department will not measure Roadway Excavation or Embankment in Place, but shall be incidental to the Sidewalk. Accept payment at the Contract unit price per square yard as full compensation for all labor, materials, equipment, and incidentals required for removal and disposal of existing sidewalk and curb and gutter, excavation and embankment, construction of the sidewalk ramps, reconstruction of the adjacent curb and/or sidewalk as necessary to install the sidewalk ramps, and restoration of disturbed features in accordance with these notes or as directed by the Engineer.

DETECTABLE WARNINGS – The Department will measure Detectable Warnings in accordance with Section 505.04.04 and Standard Drawings RGX-040-03 and RPM-170-09, current editions. The Department will make payment according to Section 505.05.

HANDRAIL – The Department will measure and make payment for Handrail in accordance with Section 720.05 and Standard Drawing RPM-172-07, current editions.

TRAFFIC CONTROL PLAN

TRAFFIC CONTROL GENERAL

Except as provided herein, traffic shall be maintained in accordance with the current editions of the Manual on Uniform Traffic Control Devices (MUTCD), Standard Specifications, Supplemental Specifications, and the Standard and Sepia Drawings. Except for the roadway and traffic control bid items listed, all items of work necessary to maintain and control traffic shall be paid at the lump sum bid price to "Maintain and Control Traffic".

Contrary to Section 106.01, traffic control devices used on this project may be new, or used in like new condition, at the beginning of the work and maintained in like new condition until completion of the work. Any temporary traffic control items, devices, materials, and incidentals shall remain the property of the contractor unless otherwise addressed, when no longer needed.

PROJECT PHASING & CONSTRUCTION PROCEDURES

For RCUT construction between MP 18.300 – 18.700: Maintain two lanes of traffic in each direction at all times during construction. At locations with two lanes, maintain alternating one-way traffic during construction and provide a minimum clear lane width of 11 feet. NOTE: During any lane closure make provisions for the passage of vehicles of up to 16 feet in width. If traffic should be stopped due to construction operations, and a school bus or emergency vehicle on an official run arrives on the scene, make provisions for the passage of the school bus or emergency vehicle as quickly as possible.

FD05 Resurfacing construction: At locations with three or more lanes, maintain one lane of traffic in each direction at all times during construction. At locations with two lanes, maintain alternating one-way traffic during construction. Provide a minimum clear lane width of 12 Feet; however, provide for passage of vehicles of up to 16 feet in width. If traffic should be stopped due to construction operations, and a school bus on an official run arrives on the scene, make provisions for the passage of the bus as quickly as possible.

The Department will allow night work on this project. Obtain the Engineer's approval of the method of lighting prior to performing night work.

Take these restrictions into account in submitting bid. The Department will not consider any claims for money or grant contract time extensions for any delays to the Contractor as a result of these restrictions.

Construction Phasing for RCUT construction between MP 18.300 – 18.700:

1. Construct the proposed NB loon up to the final base course.
2. Construct Wolf Hills Road full depth construction on the right side of the road up to the final base course. Maintain traffic on existing pavement with narrowed lanes.
3. Construct Wolf Hills Road full depth construction on the left side of the road up to the final base course. Maintain traffic on existing and newly constructed pavement with narrowed lanes.
4. Construct the proposed U-turn lanes and northern median u-turn up to the final base course.
5. Mill existing travel lanes and pave all surface asphalt using lane closures.

For all other construction activities, utilize a lane shifts and shoulder closures. This may require part-width construction of certain elements. Provide a minimum clear lane width of 11 feet; however, provide for

passage of vehicles of up to 16 feet in width. If traffic should be stopped due to construction operations, and a school bus or emergency vehicle on an official run arrives on the scene, make provisions for the passage of the school bus or emergency vehicle as quickly as possible.

Unless otherwise approved by the Engineer, no lane closures will be allowed during the following times:

Christmas Holiday	7 am Tuesday, December 24, 2024 – 8 pm Wednesday, December 25, 2024
New Year's Day Holiday	7 am Tuesday, December 31, 2024 – 8 pm Wednesday, January 1, 2025
Easter Weekend	3 pm Friday, April 18, 2025 – 8 pm Sunday, April 20, 2025
Memorial Day Weekend	3 pm Friday, May 23, 2025 – 8 pm Monday, May 26, 2025
Independence Day	7 am Friday, July 4, 2025 – 8 pm Sunday, July 6, 2025
Labor Day Weekend	3 pm Friday, August 29, 2025 – 8 pm Monday, September 1, 2025
Thanksgiving Holiday	3 pm Wednesday, November 26, 2025 – 8 pm Sunday, November 30, 2025
Henderson Breakfast Lions Tri-Fest	mid-April 2025
The W.C. Handy Blues and Barbecue Festival	mid-June 2025
Lions Club Arts & Crafts Festival	early October 2025
Evansville Fall Festival	early October 2025

FD05 Instructions: Maintain all lanes open to traffic between 7:00 AM to 6:00 PM, Monday through Sunday, unless approved by the engineer.

FD05 instructions: The Engineer may permit minor operations that do not require a lane closure and cause little disruption to traffic between the hours of 7:00 AM and 6:00 PM.

At the discretion of the Engineer, additional days and hours may be specified when lane closures will not be allowed.

The Department will provide public notification regarding lane closures. The Contractor shall submit proposed lane closure days and times to the Engineer at least 14 calendar days in advance for approval. Liquidated Damages will be assessed for each hour or fraction of an hour that a lane closure is in place outside of an approved time period. See the Special Notes for Completion Dates & Liquidated Damages for details on the Liquidated Damages amount.

LANE CLOSURES

Long term lane closures shall not be allowed; therefore, lane closures will not be measured for payment. Do not leave lane closures in place during non-working hours and prohibited periods.

TRUCK MOUNTED ATTENUATORS

If traffic lanes are closed without the use of temporary barrier wall, use Truck Mounted Attenuators. Furnish and install Truck Mounted Attenuators in advance of work areas when workers will be within 20 feet from traffic. If there is less than 500 feet between work sites, only a single TMA will be required. The TMAs shall be located at the individual work sites and shall be moved as the work zone moves within the project limits.

All details of the TMA installations are to follow manufacture recommendations and approved by the Engineer. Truck Mounted Attenuators shall be incidental to Maintain and Control Traffic.

TEMPORARY SIGNS

Temporary signposts and splices shall be compliant with NCHRP 350 or MASH. Manufacturer's documentation validating this compliance shall be provided to the Engineer prior to installation. Temporary signs, including any splices, shall be installed according to manufacturer's specifications and installation recommendations. Contrary to section 112.04.02, only long-term temporary signs (temporary signs intended to be continuously in place for more than 3 days) will be measured for payment. Short-term temporary signs (temporary signs intended to be left in place for 3 days or less) will not be measured for payment but will be incidental to Maintain and Control Traffic.

CHANGEABLE MESSAGE SIGNS

Provide changeable message signs in advance of and within the project at locations determined by the Engineer. If work is in progress concurrently in both directions or if more than one lane closure is in place in the same direction of travel, provide additional changeable message signs as directed by the Engineer. Place changeable message signs approximately one mile in advance of the anticipated queue at each lane closure. As the actual queue lengthens and/or shortens, relocate or provide additional changeable message signs so that traffic has warning of slowed or stopped traffic at least one mile but not more than two miles before reaching the end of the actual queue. The Engineer may vary the designated locations as the work progresses. The Engineer will determine the messages to be displayed. In the event of damage or mechanical/electrical failure, repair or replace the Changeable Message Sign. If the damage or mechanical/electrical failure is identified during active work operations, repair or replace the Changeable Message Sign within 6 hours. If the damage or mechanical/electrical failure is identified when there are no active work operations on the project, repair or replace the Changeable Message Sign within 12 hours. The Department will measure for payment the maximum number of Changeable Message Signs in concurrent use at the same time on a single day on all sections of the contract. The Department will measure individual Changeable Message Signs only once for payment, regardless of how many times they are set, reset, removed, and/or relocated during the duration of the project. The Department will not measure for payment any replacements for damaged Changeable Message Signs or any changeable message signs the Engineer directs to be replaced due to poor condition or readability. Retain possession of the Changeable Message Signs upon completion of the work.

ARROW PANELS

Use arrow panels as shown on the Standard Drawings or as directed by the Engineer. The Department will measure for payment the maximum number of arrow panels in concurrent use at the same time on a single day on all sections of the contract. The Department will measure individual Arrow Panels only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. The Department will not measure replacements for damaged Arrow Panels or for panels signs the Engineer directs be replaced due to poor condition or readability for payment. Retain possession of the Arrow Panels upon completion of the work.

BARRICADES

The Department will not measure barricades used in lieu of barrels and cones for channelization or delineation but shall be incidental to Maintain and Control Traffic according to Section 112.04.01.

TEMPORARY ENTRANCES

The Engineer will not require the Contractor to provide continuous access to farms, single family, duplex, or triplex residential properties during working hours; however, provide reasonable egress and ingress to each such property when actual operations are not in progress at that location. Limit the time during which a farm or residential entrance is blocked to the minimum length of time required for actual operations, not extended for the Contractor's convenience, and in no case exceeding six (6) hours. Notify all residents twenty-four hours in advance of any driveway or entrance closings and make any accommodations necessary to meet the access needs of disabled residents.

Except as allowed by the Phasing as specified above, maintain direct access to all side streets and roads, schools, churches, commercial properties and apartments or apartment complexes of four or more units at all times.

The Department will measure asphalt materials required to construct and maintain any temporary entrances which may be necessary to provide temporary access; however, the Department will not measure aggregates, excavation, and/or embankment, but shall be incidental to Maintain and Control Traffic. The Engineer will determine the type of surfacing material, asphalt or aggregate, to be used at each entrance.

THERMOPLASTIC INTERSECTION MARKINGS

Consider the locations listed on the summary and/or shown on the plan sheets as approximate only. Prior to milling and/or resurfacing, locate and document the locations of the existing markings. After final surfacing operations, replace the markings at their approximate existing locations, as shown on the plan sheets, or as directed by the Engineer. Place markings not existing prior to resurfacing as shown on the plan sheets or as directed by the Engineer.

BARRICADES

The Department will not measure barricades used in lieu of barrels and cones for channelization or delineation, but shall be incidental to Maintain and Control Traffic according to Section 112.04.01.

PAVEMENT MARKINGS

If there is to be a deviation from the existing striping plan, the Engineer will furnish the Contractor a striping plan prior to placement of the final surface course. Install Temporary Striping according to Section 112 with the following exception:

> If the Contractor's operations or phasing requires temporary markings that must subsequently be removed from the final surface course, use an approved removable lane tape; however, the Department will not measure removable lane tape for separate payment, but will measure and pay for removable lane tape as temporary striping.

PAVEMENT EDGE DROP-OFFS

Do not allow a pavement edge between opposing directions of traffic or lanes that traffic is expected to cross in a lane change situation with an elevation difference greater than 1½". Place Warning signs (MUTCD W8-11 or W8-9A) in advance of and at 1500' intervals throughout the drop-off area. Dual post the signs on both sides of the traveled way. Wedge all transverse transitions between resurfaced and un-resurfaced areas which traffic may cross with asphalt mixture for leveling and wedging. Remove the wedges prior to placement of the final surface course.

Protect pavement edges that traffic is not expected to cross, except accidentally, as follows:

> Less than 2" - No protection required.
>
> 2" to 4" - Place plastic drums, vertical panels, or barricades every 50 feet. During daylight working hours only, the Engineer will allow the Contractor to use cones in lieu of plastic drums, panels, and barricades. Wedge the drop-off with CSB or asphalt mixture for leveling and wedging with a 1:1 or flatter slope in daylight hours, or 3:1 or flatter slope during nighttime hours, when work is not active in the drop-off area.
>
> Greater than 4" - Protect drop-offs greater than 4 inches within 10 feet of traffic by placing drums, vertical panels, or barricades every 25 feet. The Engineer will not allow the use of cones in lieu of drums, vertical panels, or barricades for drop-offs greater than 4". Place Type III Barricades directly in front of the drop-off facing oncoming traffic in both directions of travel. Provide warning signs as shown on the Standard Drawings or as directed by the Engineer
>
> Pedestrians & Bicycles - Protect pedestrian and bicycle traffic as directed by the Engineer.

USE AND PLACEMENT OF CHANGEABLE MESSAGE SIGNS

The following policy is based upon current Changeable Message Signs (CMS) standards and practice from many sources, including the Federal Highway Administration (FHWA), other State Departments of Transportation, and Traffic Safety Associations. It is understood that each CMS installation or use requires individual consideration due to the specific location or purpose. However, there will be elements that are constant in nearly all applications. Accordingly, these recommended guidelines bring a level of uniformity, while still being open to regional experience and engineering judgment.

Application

The primary purpose of CMS is to advise the driver of unexpected traffic and routing situations. Examples of applications where CMS can be effective include:

- Closures (road, lane, bridge, ramp, shoulder, interstate)
- Changes in alignment or surface conditions
- Significant delays, congestion
- Construction/maintenance activities (delays, future activities)
- Detours/alternative routes
- Special events with traffic and safety implications
- Crash/incidents
- Vehicle restrictions (width, height, weight, flammable)
- Advance notice of new traffic control devices
- Real-time traffic conditions (must be kept up to date)
- Weather /driving conditions, environmental conditions, Roadway Weather Information Systems
- Emergency Situations
- Referral to Highway Advisory Radio (if available)
- Messages as approved by the County Engineer's Office

CMS should not be used for:

- Replacement of static signs (e.g. ROAD WORK AHEAD), regulatory signage (e.g. speed limits), pavement markings, standard traffic control devices, conventional warning or guide signs.
- Replacement of lighted arrow board
- Advertising (Don't advertise the event unless clarifying "action" to be taken by driver – e.g. Speedway traffic next exit)
- Generic messages
- Test messages (portable signs only)
- Describe recurrent congestion (e.g. rush hour)
- Public service announcements (not traffic related)

Messages

Basic principles that are important to providing proper messages and ensuring the proper operation of a CMS are:

- Visible for at least ½ mile under ideal daytime and nighttime conditions
- Legible from all lanes a minimum of 650 feet
- Entire message readable twice while traveling at the posted speed
- No more than two message panels should be used (three panels may be used on roadways where vehicles are traveling less than 45 mph). A panel is the message that fits on the face of the sign without flipping or scrolling.
- Each panel should convey a single thought; short and concise
- Do not use two unrelated panels on a sign
- Do not use the sign for two unrelated messages
- Should not scroll text horizontally or vertically
- Should not contain both the words left and right
- Use standardized abbreviations and messages
- Should be accurate and timely
- Avoid filler/unnecessary words and periods (hazardous, a, an, the)
- Avoid use of speed limits
- Use words (not numbers) for dates

Placement

Placement of the CMS is important to ensure that the sign is visible to the driver and provides ample time to take any necessary action. Some of the following principles may only be applicable to controlled access roadways. The basic principles of placement for a CMS are:

- When 2 signs are needed, place on same side of roadway and at least 1,000 feet apart
- Place behind semi-rigid/rigid protection (guardrail, barrier) or outside of the clear zone
- Place 1,000 feet in advance of work zone; at least one mile ahead of decision point
- Normally place on right side of roadway; but should be placed closest to the affected lane so that either side is acceptable
- Signs should not be dual mounted (one on each side of roadway facing same direction)
- Point trailer hitch downstream
- Secure to immovable object to prevent theft (if necessary)
- Do not place in sags or just beyond crest
- Check for reflection of sun to prevent the blinding of motorist
- Should be turned ~3 degrees outward from perpendicular to the edge of pavement
- Bottom of sign should be 7 feet above the elevation of edge of roadway
- Should be removed when not in use

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Standard Abbreviations

The following is a list of standard abbreviations to be used on CMS:

Word	Abbrev	Example
Access	ACCS	CRASH AHEAD/ USE ACCS RD NEXT RIGHT
Alternate	ALT	CRASH AHEAD/ USE ALT RTE NEXT RIGHT
Avenue	AVE	FIFTH AVE CLOSED/ DETOUR NEXT LEFT
Blocked	BLKD	FIFTH AVE BLKD/ MERGE LEFT
Boulevard	BLVD	MAIN BLVD CLOSED/ USE ALT RTE
Bridge	BRDG	SMITH BRDG CLOSED/ USE ALT RTE
Cardinal Directions	N, S, E, W	N I75 CLOSED/ DETOUR EXIT 30
Center	CNTR	CNTR LANE CLOSED/ MERGE LEFT
Commercial	COMM	OVRSZ COMM VEH/ USE I275
Condition	COND	ICY COND POSSIBLE
Congested	CONG	HVY CONG NEXT 3 MI
Construction	CONST	CONST WORK AHEAD/ EXPECT DELAYS
Downtown	DWNTN	DWNTN TRAF USE EX 40
Eastbound	E-BND	E-BND I64 CLOSED/ DETOUR EXIT 20
Emergency	EMER	EMER VEH AHEAD/ PREPARE TO STOP
Entrance, Enter	EX, EXT	DWNTN TRAF USE EX 40
Expressway	EXPWY	WTRSN EXPWY CLOSED/ DETOUR EXIT 10
Freeway	FRWY, FWY	GN SYNDR FWY CLOSED/ DETOUR EXIT 15
Hazardous Materials	HAZMAT	HAZMAT IN ROADWAY/ ALL TRAF EXIT 25
Highway	HWY	CRASH ON AA HWY/ EXPECT DELAYS
Hour	HR	CRASH ON AA HWY/ 2 HR DELAY
Information	INFO	TRAF INFO TUNE TO 1240 AM
Interstate	I	E-BND I64 CLOSED/ DETOUR EXIT 20
Lane	LN	LN CLOSED MERGE LEFT
Left	LFT	LANE CLOSED MERGE LFT
Local	LOC	LOC TRAF USE ALT RTE
Maintenance	MAINT	MAINT WRK ON BRDG/ SLOW
Major	MAJ	MAJ DELAYS I75/ USE ALT RTE
Mile	MI	CRASH 3 MI AHEAD/ USE ALT RTE
Minor	MNR	CRASH 3 MI MNR DELAY
Minutes	MIN	CRASH 3 MI/ 30 MIN DELAY
Northbound	N-BND	N-BND I75 CLOSED/ DETOUR EXIT 50
Oversized	OVRSZ	OVRSZ COMM VEH/ USE I275 NEXT RIGHT
Parking	PKING	EVENT PKING NEXT RGT
Parkway	PKWY	CUM PKWAY TRAF/ DETOUR EXIT 60
Prepare	PREP	CRASH 3 MI/ PREP TO STOP
Right	RGT	EVENT PKING NEXT RGT
Road	RD	HAZMAT IN RD/ ALL TRAF EXIT 25
Roadwork	RDWK	RDWK NEXT 4 MI/ POSSIBLE DELAYS
Route	RTE	MAJ DELAYS I75/ USE ALT RTE
Shoulder	SHLDR	SHLDR CLOSED NEXT 5 MI
Slippery	SLIP	SLIP COND POSSIBLE/ SLOW SPD
Southbound	S-BND	S-BND I75 CLOSED/ DETOUR EXIT 50
Speed	SPD	SLIP COND POSSIBLE/ SLOW SPD

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Standard Abbreviations (cont.)

Word	Abbrev	Example
Street	ST	MAIN ST CLOSED/ USE ALT RTE
Traffic	TRAF	CUM PKWAY TRAF/ DETOUR EXIT 60
Vehicle	VEH	OVRSZ COMM VEH/ USE I275 NEXT RIGHT
Westbound	W-BND	W-BND I64 CLOSED/ DETOUR EXIT 50
Work	WRK	CONST WRK 2MI/ POSSIBLE DELAYS

Certain abbreviations are prone to inviting confusion because another word is abbreviated or could be abbreviated in the same way. DO NOT USE THESE ABBREVIATIONS:

Abbrev	Intended Word	Word Erroneously Given
ACC	Accident	Access (Road)
CLRS	Clears	Colors
DLY	Delay	Daily
FDR	Feeder	Federal
L	Left	Lane (merge)
LOC	Local	Location
LT	Light (traffic)	Left
PARK	Parking	Park
POLL	Pollution (index)	Poll
RED	Reduce	Red
STAD	Stadium	Standard
TEMP	Temporary	Temperature
WRNG	Warning	Wrong

Typical Messages

The following is a list of typical messages used on CMS. The list consists of the reason or problem that you want the driver to be aware of and the action that you want the driver to take.

Reason/Problem	Action
CRASH AHEAD	ALL TRAFFIC EXIT RT
CRASH/XX MILES	AVOID DELAY USE XX
XX ROAD CLOSED	CONSIDER ALT ROUTE
XX EXIT CLOSED	DETOUR
BRIDGE CLOSED	DETOUR XX MILES
BRIDGE/(SLIPPERY, ICE, ETC.)	DO NOT PASS
CENTER/LANE/CLOSED	EXPECT DELAYS
DELAY(S), MAJOR/DELAYS	FOLLOW ALT ROUTE
DEBRIS AHEAD	KEEP LEFT
DENSE FOG	KEEP RIGHT
DISABLED/VEHICLE	MERGE XX MILES
EMER/VEHICLES/ONLY	MERGE LEFT
EVENT PARKING	MERGE RIGHT
EXIT XX CLOSED	ONE-WAY TRAFFIC
FLAGGER XX MILES	PASS TO LEFT

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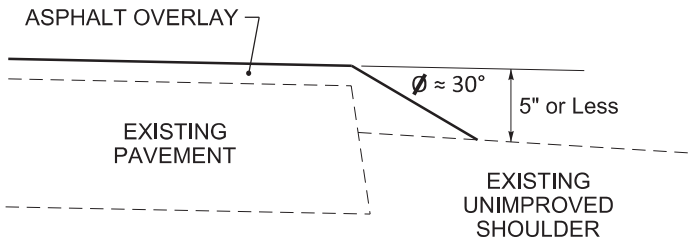
Typical Messages (cont.)

Reason/Problem	Action
FOG XX MILES	PASS TO RIGHT
FREEWAY CLOSED	PREPARE TO STOP
FRESH OIL	REDUCE SPEED
HAZMAT SPILL	SLOW
ICE	SLOW DOWN
INCIDENT AHEAD	STAY IN LANE
LANES (NARROW, SHIFT, MERGE, ETC.)	STOP AHEAD
LEFT LANE CLOSED	STOP XX MILES
LEFT LANE NARROWS	TUNE RADIO 1610 AM
LEFT 2 LANES CLOSED	USE NN ROAD
LEFT SHOULDER CLOSED	USE CENTER LANE
LOOSE GRAVEL	USE DETOUR ROUTE
MEDIAN WORK XX MILES	USE LEFT TURN LANE
MOVING WORK ZONE, WORKERS IN ROADWAY	USE NEXT EXIT
NEXT EXIT CLOSED	USE RIGHT LANE
NO OVERSIZED LOADS	WATCH FOR FLAGGER
NO PASSING	
NO SHOULDER	
ONE LANE BRIDGE	
PEOPLE CROSSING	
RAMP CLOSED	
RAMP (SLIPPERY, ICE, ETC.)	
RIGHT LANE CLOSED	
RIGHT LANE NARROWS	
RIGHT SHOULDER CLOSED	
ROAD CLOSED	
ROAD CLOSED XX MILES	
ROAD (SLIPPERY, ICE, ETC.)	
ROAD WORK	
ROAD WORK (OR CONSTRUCTION) (TONIGHT, TODAY, TOMORROW, DATE)	
ROAD WORK XX MILES	
SHOULDER (SLIPPERY, ICE, SOFT, BLOCKED, ETC.)	
NEW SIGNAL XX MILES	
SLOW 1 (OR 2) - WAY TRAFFIC	
SOFT SHOULDER	
STALLED VEHICLES AHEAD	
TRAFFIC BACKUP	
TRAFFIC SLOWS	
TRUCK CROSSING	
TRUCKS ENTERING	
TOW TRUCK AHEAD	
UNEVEN LANES	
WATER ON ROAD	
WET PAINT	
WORK ZONE XX MILES	
WORKERS AHEAD	

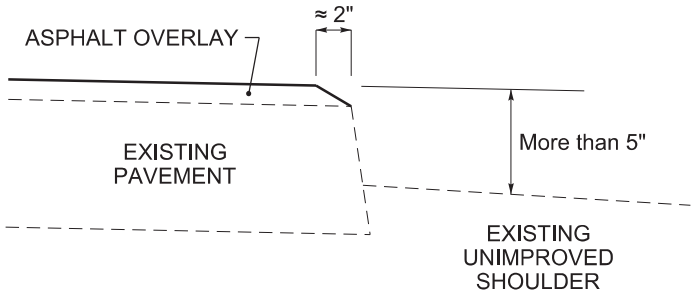
DURABLE PAVEMENT EDGE DETAIL

(Resurfacing adjacent to low shoulder with dropoff of 5 inches or less)



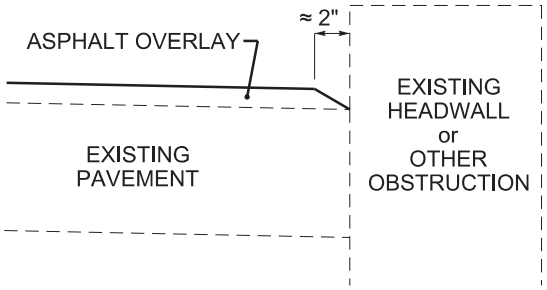
DURABLE PAVEMENT EDGE DETAIL

(Resurfacing adjacent to low shoulder with dropoff of more than 5 inches)



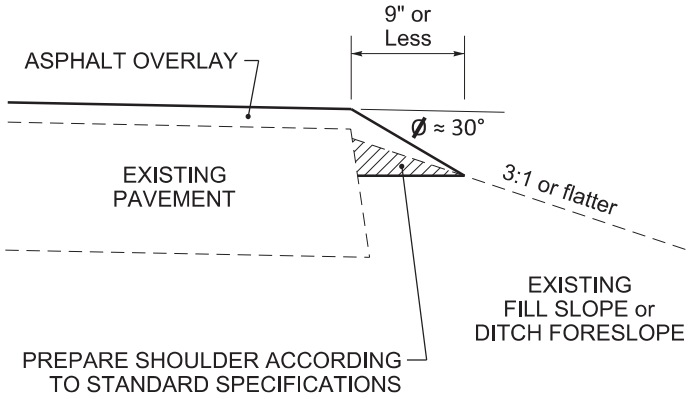
DURABLE PAVEMENT EDGE DETAIL

(Resurfacing adjacent to an obstruction, such as an existing headwall)



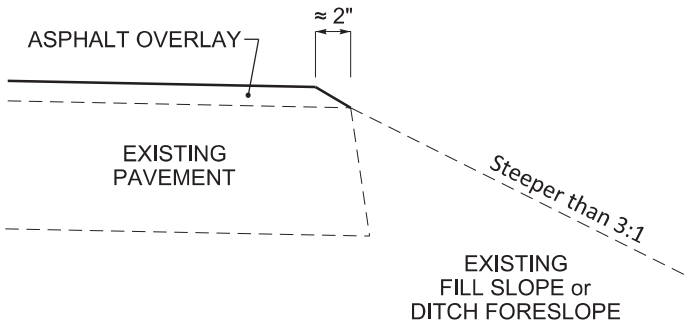
DURABLE PAVEMENT EDGE DETAIL

(Resurfacing adjacent to fill slope or ditch foreslope that is 3:1 or less)



DURABLE PAVEMENT EDGE DETAIL

(Resurfacing adjacent to fill slope or ditch foreslope that is steeper than 3:1)



NOTES

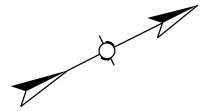
1. DETAILS DO NOT APPLY TO OVERLAYS LESS THAN 1 INCH THICK.
2. THE DURABLE PAVEMENT EDGE DEVICE MAY BE DISENGAGED AT DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT, AS APROVED BY THE ENGINEER.

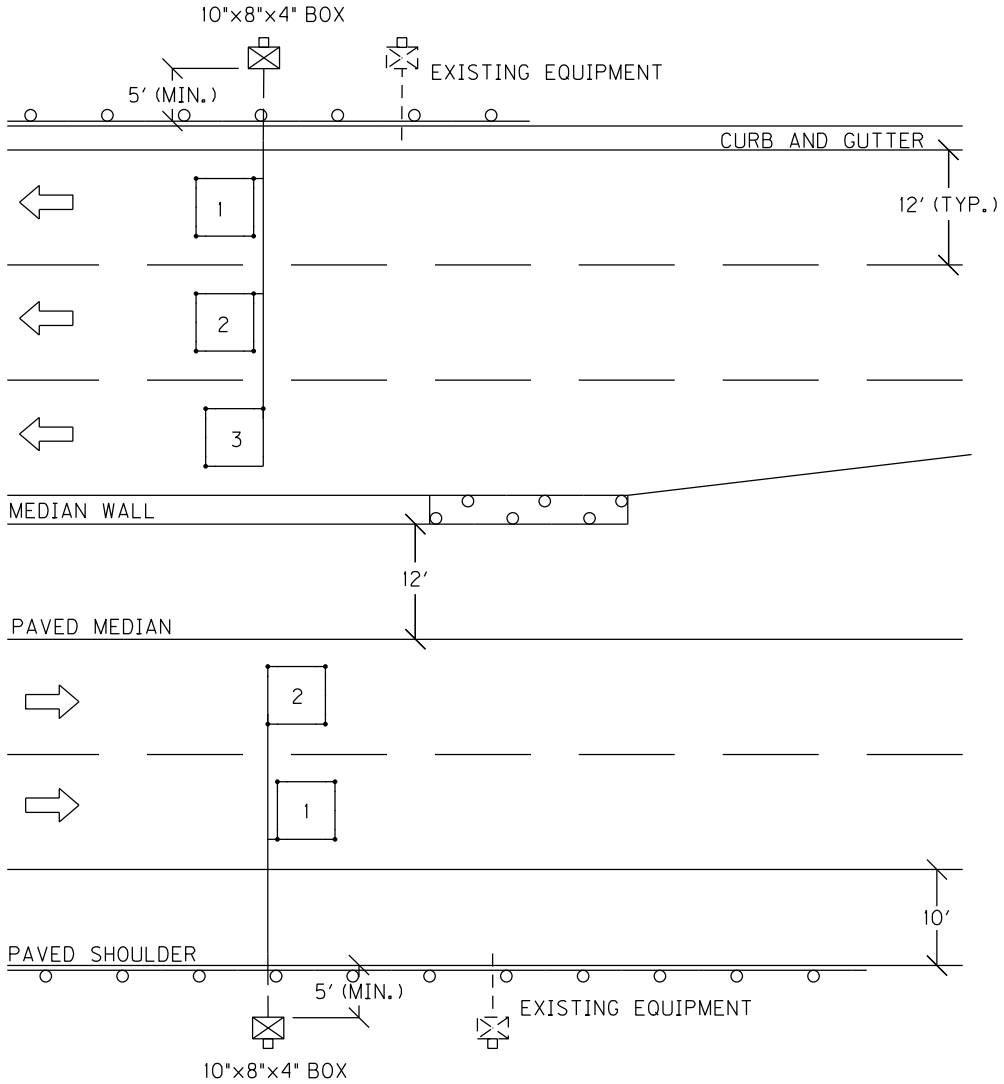
DRAWING NOT TO SCALE

DURABLE PAVEMENT EDGE DETAILS

HENDERSON CO. US 41 ~m.p. 16.07 (SB), 16.37 (NB)
~LAT/LONG N 37.861574, W 87.575374
STATION B22

(Paid by FD05)





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

FOR EACH SIDE OF THE ROAD, INSTALL ONE (1) 10"x8"x4" BOX ON ONE (1) WOOD POST. INSTALL ONE (1) 1 1/4" CONDUIT FROM SAW SLOT
TO BOX.

ALL LOOPS SHALL BE 6'X6' SQUARE AND INSTALLED SPLICE-FREE TO THE 10"x8"x4" BOX. A MINIMUM OF 2' OF WIRE FOR EACH SENSOR SHALL BE COILED INSIDE THE BOX. ALL LOOPS SHALL BE LABELED IN THE BOX. DIVISION OF PLANNING PERSONNEL WILL CONNECT THE LOOPS INSIDE THE BOX.

REMOVE OLD EXISTING CABINETS, POSTS, WIRE AND CONDUIT AND DISPOSE OF OFF THE PROJECT.

SCALE 1"=50'

HENDERSON CO. US 41 ~m.p. 16.78
~LAT/LONG N 37.86801, W 87.57191
STATION B73

(Paid by FD05)

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

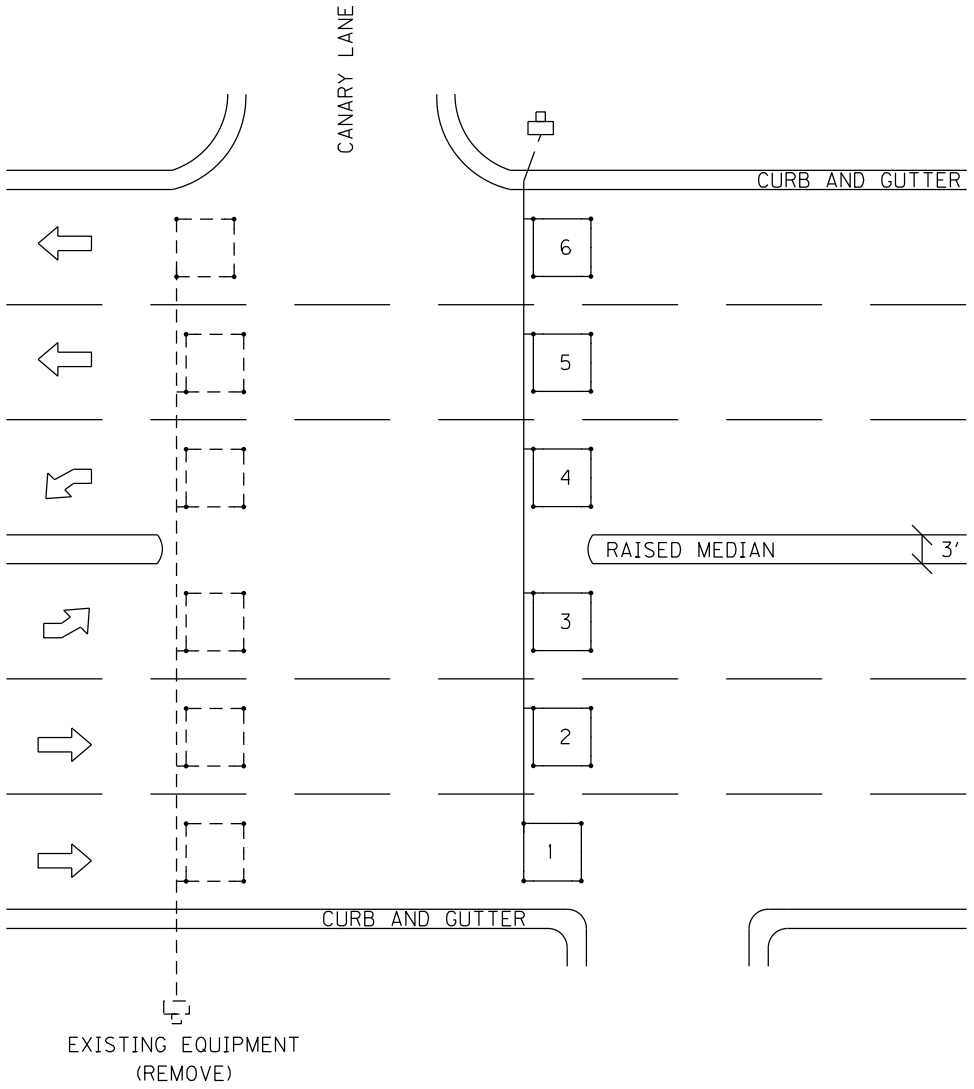
INSTALL ONE (1) 10"x8"x4" CABINET ON ONE (1) WOOD POST.

INSTALL ONE (1) 1 1/4" CONDUIT FROM SAW SLOT TO CABINET.

ALL LOOPS SHALL BE 6'X6' SQUARE AND INSTALLED SPLICE-FREE TO THE 10"x8"x4" CABINET. A MINIMUM OF 2' OF WIRE FOR EACH SENSOR SHALL BE COILED INSIDE THE CABINET. ALL LOOPS SHALL BE LABELED IN THE CABINET. DIVISION OF PLANNING PERSONNEL WILL CONNECT THE LOOPS INSIDE THE CABINET.

DASHED LINE LOOPS DESIGNATE OLD LOOPS FOR REFERENCE.

REMOVE OLD EXISTING CABINET, POST, WIRE AND CONDUIT AND DISPOSE OF OFF THE PROJECT.



SCALE 1"=20'

HENDERSON CO. US 41 ~m.p. 18.33
~LAT/LONG N 37.88804, W 87.55780
STATION P58

(Paid by HSIP)

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

ALL LOOPS SHALL BE 6'X6' SQUARE AND SHALL BE INSTALLED 16' FROM LEADING EDGE TO LEADING EDGE AS SHOWN. PIEZOELECTRIC SENSORS (PIEZOS) SHALL BE INSTALLED 5' FROM THE EDGE OF LOOPS WITH THE EDGE OF EACH PIEZO FLUSH WITH THE EDGE OF THE CORRESPONDING DRIVING LANE. LOOPS AND PIEZOS SHALL BE INSTALLED SPLICE-FREE TO THE CABINET AND A MINIMUM OF 2' OF WIRE FOR EACH SENSOR SHALL BE COILED AND LABELED INSIDE EACH JUNCTION BOX AND A MINIMUM OF 6' OF WIRE IN THE CABINET. DIVISION OF PLANNING PERSONNEL WILL CONNECT THE LOOPS AND PIEZOS INSIDE THE CABINET.

INSTALL ONE (1) 1¼" CONDUIT FROM EACH SAW SLOT TO EACH RESPECTIVE JUNCTION BOX AS SHOWN.

INSTALL SIX (6) TYPE A JUNCTION BOXES (JB A1, JB A2, JB A3, JB A4, JB A5 AND JB A6).

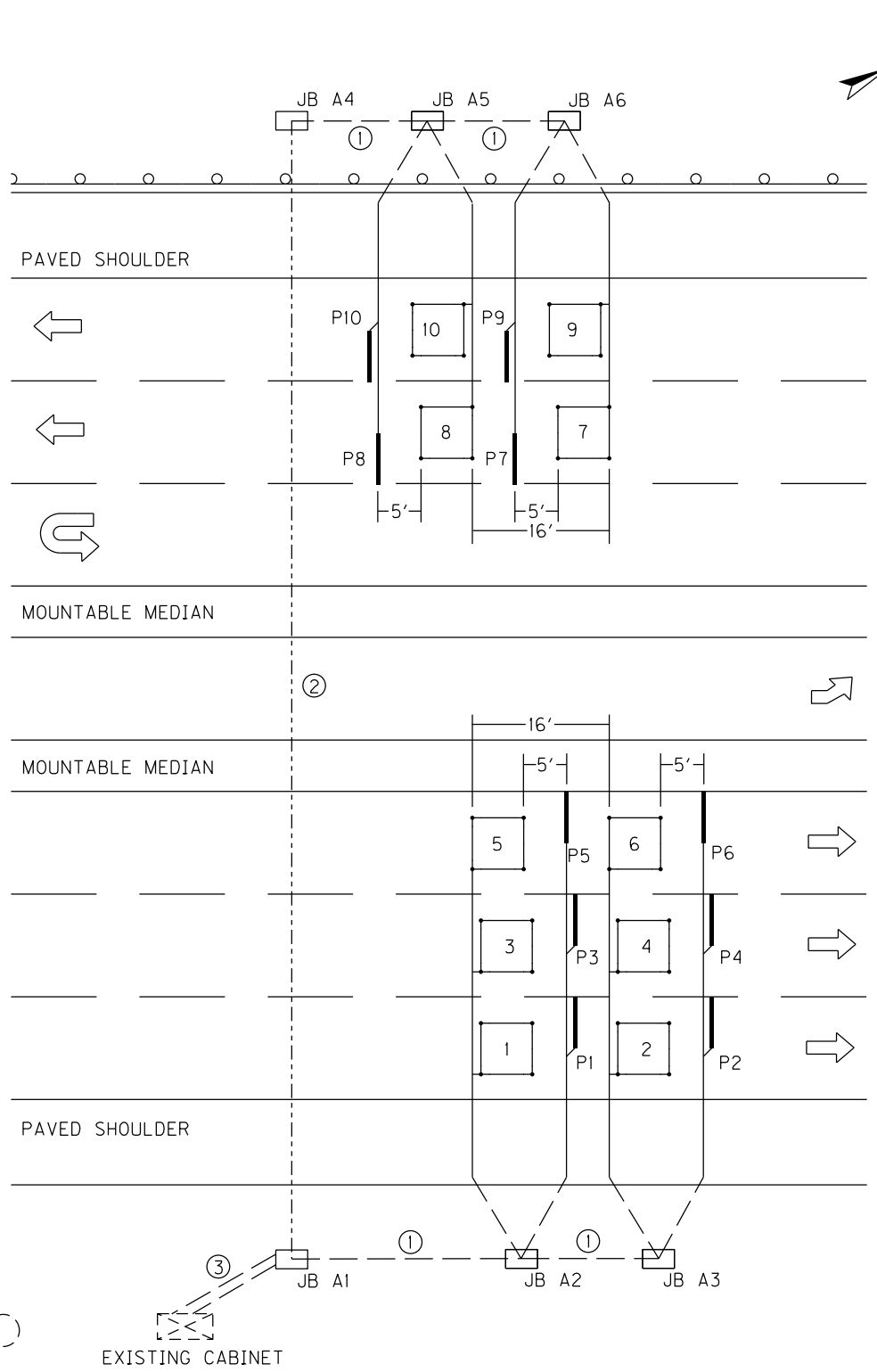
REMOVE EXISTING WIRE BETWEEN EXISTING TRAFFIC CABINET AND OLD EXISTING CONDUITS GOING OUT THE BACK OF THE CABINET.

CODED NOTE:

① INSTALL ONE (1) 2" RIGID CONDUIT.

② BORE ONE (1) 2" RIGID CONDUIT UNDER US 41 FROM JB A4 TO JB A1.

③ INSTALL TWO (2) 2" RIGID CONDUITS AND LB INTO THE BACK OF THE EXISTING CABINET.



EXISTING UTILITY POLE WITH ELECTRICAL SERVICE (DO NOT DISTURB)

SCALE 1"=20'

Permanent Traffic Data Acquisition Station
Estimate Of Quantities

Revised January 2023

PERMANENT TRAFFIC DATA ACQUISITION STATIONS
ESTIMATE OF QUANTITIES

			Paid by FD05		Paid by HSIP
			B22	B73	P58
Bid Item	Item Description	Unit	Quantity	Quantity	Quantity
4793	CONDUIT 1 1/4 INCH	LIN FT	20	10	80
4795	CONDUIT 2 INCH	LIN FT			300
4820	TRENCHING AND BACKFILLING	LIN FT	15	5	240
4829	PIEZOELECTRIC SENSOR	EACH			10
4830	LOOP WIRE	LIN FT	1,000	1,300	3,600
4895	LOOP SAW SLOT AND FILL	LIN FT	200	240	540
20360ES818	WOOD POST	EACH	2	1	
20391NS835	ELECTRICAL JUNCTION BOX TYPE A	EACH			6
20468EC	ELECTRICAL JUNCTION BOX 10x8x4	EACH	2	1	
21543EN	BORE AND JACK CONDUIT - 2 INCH	LIN FT			140

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

1. DESCRIPTION

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

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

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

The Contractor shall contact all utility companies and the district utility agent prior to beginning construction to insure proper clearance and shielding from existing and proposed utilities. The Contractor shall use all possible care in excavating on this project so as not to disturb any existing utilities whether shown on the plans or not shown on the plans. Any utilities disturbed or damaged by the Contractor during construction shall be replaced or repaired to original condition by the Contractor at no cost to the department. If necessary, to avoid existing utilities, the Contractor shall hand dig areas where poles or conduit cross utilities.

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

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

2. MATERIALS

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

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

2.1. Anchoring

2.1.1. Anchor and Anchor Rod

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

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

Rock anchor shall be galvanized steel, triple-eye, expanding type, with a minimum diameter of ¾ inch, a minimum 53 inches long, and a minimum tensile strength of 23,000 lb.

2.1.2. Guy Wire and Guy Guard

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

2.1.3. Strandvise for Guy Wire

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

2.2. Asphalt

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

2.3. Backer Rod

Backer rod shall be ½ inch diameter, closed cell polyethylene foam and shall meet or exceed the following physical properties:

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

2.4. Cabinets

2.4.1. Galvanized Steel Cabinet

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

The cabinet shall be equipped with the following:

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

2.4.2. Anchor Bolt for Pad Mounted Cabinet

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

2.5. Concrete

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

2.6. Conduit and Conduit Fittings

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

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

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

2.7. Conduit sealant

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

- Cure Time — 20 minutes max.
- Density — 64.4 kg/m3; 6 lbs/ft3
- Compressive Strength (ASTM 1691) — 13.8 MPa; 330 or 300 psi

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

2.8. Electrical Service Meter Base

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

2.9. Electrical Service Disconnect

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

2.10. Flashing Arrow

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

2.11. Ground Fault Circuit Interrupter (GFCI) Receptacle

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

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

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

2.12. Grounding

2.12.1. Ground Rod

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

2.12.2. Ground Rod Clamp

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

2.13. Grout

2.13.1. Grout for Inductive Loop Installation

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

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

2.13.2. Grout for Piezoelectric Sensor Installation

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

2.14. Hardware

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

2.14.1. Conduit Strap

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

2.14.2. Mounting Strap for Pole Mount Cabinet

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

2.14.3. Metal Framing Channel and Fittings

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

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

2.15. Junction Box

2.15.1. Junction Box Type A, B, or C

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

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

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

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

2.15.3. Junction Box 10x8x4

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

2.16. Maintain and Control Traffic

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

2.17. Piezoelectric Sensor

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

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

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

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

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

2.18. Saw Slot Sealant

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

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

The cured encapsulant shall meet or exceed the following:

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

2.19. Seeding and Protection

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

2.20. Signs

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

2.21. Splicing Materials

2.21.1. Electrical Tape

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

2.21.2. Splice Kit

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

2.22. Steel Reinforcing Bar

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

2.23. Terminal Block

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

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

2.24. Warning Tape

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

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

2.25. Wire and Cable

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

2.25.1. Loop Wire

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

2.25.2. Cable No. 14/1 Pair

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

2.25.3. Grounding conductor

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

2.25.4. Service Entrance Conductor

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

2.25.5. Terminal for electrical wire or cable

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

2.26. Wood Post

Wood post shall be Southern Pine pretreated to conform to the American Wood Preservers' Association (AWPA) C-14 or UC4B and shall have minimum dimensions of 4 inches by 4 inches by 8 feet long (for Galvanized Steel Cabinet) or 4 feet long (for Junction Box 10x8x4), sawed on all four sides with both ends square.

2.27. Wooden Pole

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

3. CONSTRUCTION METHODS

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

After the project has been let and awarded, the Division of Construction shall notify the Division of Planning of the scheduled date for a Pre-Construction meeting so that prior arrangements can be made to attend. This will allow the Division of Planning an opportunity to address any concerns and answer any questions that the Contractor may have before beginning the work.

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

Unless otherwise specified, installed materials shall be new.

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

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

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

3.1. Anchoring

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

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

3.2. Bore and Jack Pipe – 2"

Furnish: Steel Encasement Pipe, 2"

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

3.3. Cleanup and Restoration

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

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

3.4. Conduit

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

Conduit that may be subject to regular pressure from traffic shall be laid to a minimum depth of 24 inches below grade. Conduit that will not be subject to regular pressure from traffic shall be laid to a minimum depth of 18 inches below grade.

Conduit ends shall be reamed to remove burrs and sharp edges. Cuts shall be square and true so that the ends will butt together for the full circumference of the conduit. Tighten couplings until the ends of the conduit are brought together. Do not leave exposed threads. Damaged portions of the galvanized surfaces and untreated threads resulting from field cuts shall be painted with an Engineer-approved, rust inhibitive paint. Conduit bends shall have a radius of no less than 12 times the nominal diameter of the conduit, unless otherwise shown on the plans.

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

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

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

3.5. Electrical Service

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

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

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

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

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

Install a rigid ¾ inch conduit with three 8 AWG service conductors from the cabinet, through the service disconnect to the meter base and a 1¼" conduit with three 8 AWG service conductors from the meter base to a weatherhead two feet from the top of the electrical service pole. Install conduit straps 30 inches on center and provide a drip loop where the wire enters the weatherhead. Splice electric drop with service entrance conductors at the top of the pole.

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

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

Install a ground rod with clamp. Install a grounding conductor wire from the meter base, through the disconnect panel, to the ground rod clamp. Install grounding conductor in 1-¾" conduit from service disconnect to ground rod.

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

3.6. Flashing Arrow

Furnish: Arrow Panel

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

3.7. Galvanized Steel Cabinet

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

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

cabinet faces the roadway.

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

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

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

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

3.8. Grounding

Furnish: Ground rod with clamp; grounding conductor.

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

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

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

3.9. Install Pad Mount Enclosure

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

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

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

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

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

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

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

If electrical service is not provided as a bid item in the contract, plug conduit on both ends with a cap, conduit sealant, or electrical tape. Mark the location of the buried conduit end with a wooden stake labeled "3/4 in. conduit."

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

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

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

3.10. Install Controller Cabinet

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

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

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

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

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

If electrical service is not provided as a bid item in the contract, plug conduit on both ends with cap, plumbers putty, conduit sealant, or electrical tape. Mark the location of the buried conduit end with a wooden stake labeled "3/4 in. conduit".

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

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

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

3.11. Junction Box Type 10x8x4

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

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

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

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

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

3.12. Junction Box Type A, B, or C

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

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

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

3.13. Loops - Proposed

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

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

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

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

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

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

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

The Prime Contractor shall coordinate the installation of loops with the electrical sub-Contractor and the Engineer to ensure correct operation of the completed installation.

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

- Carefully mark the slot to be cut, perpendicular to the flow of traffic and centered in the lane.
- Make each saw-cut 3/8-inch wide and at a depth such that the top of the backer rod is a minimum of 2 inches below the surface of rigid (PCC/Concrete) pavement or 4 inches below the surface of asphalt pavement.
- Drill a 1½ inch core hole at each corner and use a chisel to smooth corners to prevent sharp bends in the wire.
- Clean ALL foreign and loose matter out of the slots and drilled cores and within 1 foot on all sides of the slots using a high-pressure washer.
- Completely dry the slots and drilled cores and within 1 foot on all sides of the slots using oil-free forced air, torpedo heaters, electric heaters, or natural evaporation, depending on weather conditions. Be very careful not to burn the asphalt if heat is used.
- Measure 9-12 inches from the edge of the paved surface (shoulder break or face of curb) and drill a 1½ inch hole on a 45º angle to the conduit adjacent to the roadway.
- Closely inspect all cuts, cores, and slots for jagged edges or protrusions prior to the placement of the wire. All jagged edges and protrusions shall be ground or re-cut and cleaned again.

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

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

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

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

3.14. Loop Test

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

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

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

3.15. Maintain and Control Traffic

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

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

3.16. Open Cut Roadway

Furnish: Concrete, reinforcing bars.

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

3.17. Piezoelectric Sensor

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

The plans and notes specify the approximate location for piezoelectric sensor (piezo) installations. Prior to sawing slots or drilling cores, the Contractor shall meet with a representative of the Division of Planning to verify the final layout on site. Avoid expansion joints and pavement sections where potholes, cracks, or other roadway flaws exist. Roadway ruts at the proposed piezo location shall not be in excess of ½ inch under a 4-foot straight edge.

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

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

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

- It is strongly recommended that a ¾ inch wide diamond blade be used for cutting the slot, or that blades be ganged together to provide a single ¾ inch wide cut. The slot shall be wet cut to minimize damage to the pavement.
- Cut a slot ¾ inch wide (±1/16 inch) by 1 inch minimum deep. The slot should be a minimum of 2 inches longer than the sensor (including the lead attachment). Drop the saw blade an extra ½ inch down on both ends of the sensor. The lead out of the passive cable should be centered on the slot.
- Cut the slot for the passive cable ¼ inch wide and at a depth so that the top of the backer rod is a minimum of 2 inches below the road surface.
- Clean ALL foreign and loose matter out of the slot and within 1 foot on all sides of the slot using a high-pressure washer.
- Completely dry the slot and within 1 foot on all sides of the slot using oil-free forced air, torpedo heaters, electric heaters, or natural evaporation, depending on weather conditions. Be very careful not to burn the asphalt if heat is used.
- Measure 9-12 inches from the edge of the paved surface (shoulder break or face of curb) and drill a 1½ inch hole on a 45º angle to the conduit adjacent to the roadway.
- Place strips of 2-4-inch-wide tape strips on the pavement along the lengths of both sides of the sensor slot, 1/8 inch away from the slot.
- Wear clean, protective latex (or equivalent) gloves at all times when handling sensors. Visually inspect sensor to ensure it is straight. Check lead attachment and passive cable for cuts, gaps, cracks and/or bare wire. Verify that the correct sensor type and length is being installed by checking the data sheet. Verify there is sufficient cable to reach the cabinet. Piezo lead-in cable shall not be spliced.
- Test the sensor for capacitance, dissipation factor and resistance, according to the directions enclosed with the sensor. Capacitance and dissipation should be within ±20% of the piezo data sheet. Resistance (using the 20M setting) should be infinite. Record the sensor serial number and the test results and label “pre-installation.” This information should be stored in the counter cabinet and/or returned to Department Planning personnel.
- Lay the sensor next to the slot and ensure that it is straight and flat.
- Clean the sensor with steel wool or an emery pad and wipe with alcohol and a clean, lint-free cloth.
- Place the installation bracket clips every 6 inches along the length of the sensor.
- Bend the tip of the sensor downward at a 30° angle. Bend the lead attachment end down at a 15° angle and then 15° back up until level (forming a lazy Z).
- Place the sensor in the slot, with the brass element 3/8 inch below the road surface along the entire length. The tip of the sensor should be a minimum of 2 inches from the end of the slot and should not touch the bottom of the slot. The top of the plastic installation bracket clips should be 1/8 inch below the surface of the road. The lead attachment should not touch the bottom or sides of the slot. Ensure the sensor ends are pushed down per the manufacturer’s instructions.
- Visually inspect the length of the sensor to ensure it is at uniform depth along its length and it is level (not twisted, canted or bent).

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

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

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

3.18. Pole – Wooden

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

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

3.19. Removal of Existing Equipment

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

3.20. Signs

Furnish: Signs; sign standards; hardware.

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

3.21. Splicing

Furnish: Splice kit; solder.

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

All splices shall conform to the provisions of the NEC.

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

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

3.22. Trenching and Backfilling

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

Excavate trench and provide required cover as shown on the standard detail sheets. After placing conduit, backfill material shall be placed and compacted in lifts of 9 inches or less. Install warning tape as shown on the detail sheet. Provide temporary erosion control, seeding, protection and restoration of disturbed areas to the satisfaction of the Engineer.

3.23. Wiring

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

Installation of all wiring shall conform to the NEC. Permanent identification numbers

shall be affixed to all wires in all junction boxes and cabinets (see Layout(s) for loop and piezo numbers).

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

Enclosure Type	Additional length of each wire
Galvanized Steel Cabinet	2’ – 3’
Pad Mount Cabinet (332)	6’ - 8’
Pole Mount Cabinet (336)	3’ - 4’
Junction Box Type 10x8x4	2’ – 3’
Junction Box Type A, B, or C	2’ – 3’

3.24. Wood Post

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

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

3.25. Remove and Replace Sidewalk

Furnish: Lumber, stakes, nails or screws, and concrete.

Remove existing sidewalk to install rigid conduit from edge of roadway to nearest junction box or cabinet. Form, pour and finish concrete in place of old existing sidewalk making sure to replace the expansion joints in their respective locations. Concrete shall conform to the *Kentucky Standard Specifications for Road and Bridge Construction* for sidewalks.

4. BID ITEM NOTES AND METHOD OF MEASUREMENT FOR PAYMENT

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

4.1. Bore and Jack Pipe – 2”

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

4.2. Conduit

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

4.3. Electrical Service

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

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

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

Electrical service will be measured in individual units each.

4.4. Flashing Arrow

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

4.5. Galvanized Steel Cabinet

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

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

4.6. Install Pad Mount Enclosure

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

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

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

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

4.7. Install Controller Cabinet

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

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

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

Install Controller Cabinet will be measured in individual units each.

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

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

4.9. Junction Box Type A, B, or C

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

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

4.10. Loop Saw Slot and Fill

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

4.11. Maintain and Control Traffic

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

4.12. Open Cut Roadway

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

4.13. Piezoelectric Sensor

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

4.14. Pole – 35’ Wooden

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

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

4.15. Signs

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

4.16. Trenching and Backfilling

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

4.17. Wire or Cable

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

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

4.18. Wood Post

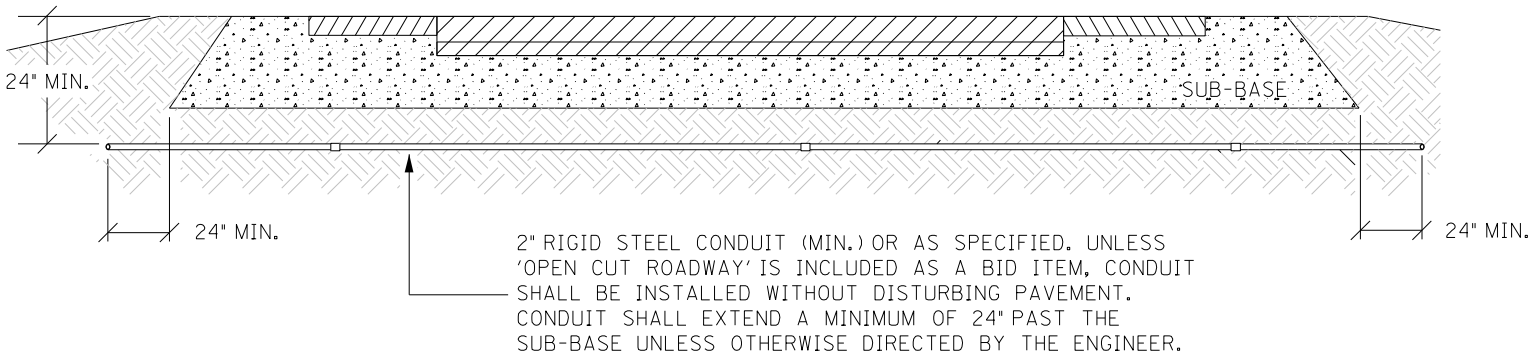
Wood Post shall include furnishing and installing wood post as specified. This item shall include excavation, furnishing and placing concrete (if required), backfilling around the post, and restoration of disturbed areas to the satisfaction of the engineer. Wood Post will be measured in individual units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

4.19. Remove and Replace Sidewalk

Remove and Replace Sidewalk shall include removing existing sidewalk to install conduit and/or junction box (if required) and replacing old existing sidewalk with new sidewalk after installation of required items. This item includes removing old sidewalk and disposing of off the project and forming, pouring and finishing the new sidewalk after installation of required items.

4.20. Loop Test

Loop Test includes conducting an operating test on the existing inductance loops at the control cabinet in the presence of the Engineer to determine if the inductance loop conductors have an insulating resistance of a minimum of 100 megohms when tested with a 500-volt direct current potential in a reasonably dry atmosphere between conductors and ground.

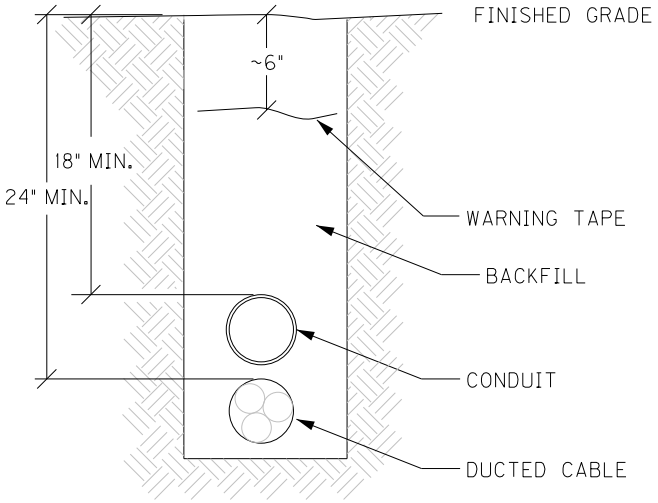


CONDUIT UNDER PAVEMENT

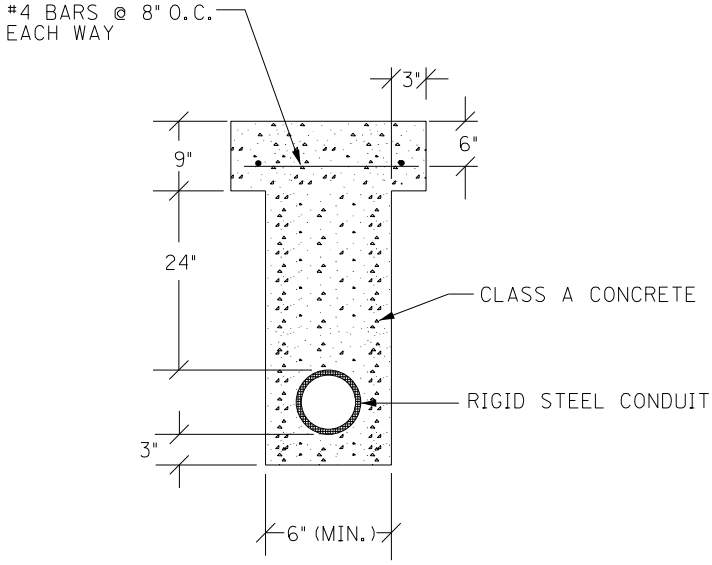
TOTAL TRENCH WIDTH SHALL BE 3" (NOM.) WIDER THAN THE SUM OF THE OUTSIDE DIAMETER(S) OF THE CONDUIT(S) INSTALLED. CONDUIT(S) SHALL BE CENTERED IN TRENCH.

CONTRACTOR SHALL PLACE BACKFILL IN LIFTS (9" MAX.) COMPACT BACKFILL, AND RESTORE DISTURBED AREA TO THE SATISFACTION OF THE ENGINEER

CONTRACTOR SHALL INSTALL UNDERGROUND UTILITY WARNING TAPE ABOVE CONDUIT AS SHOWN.



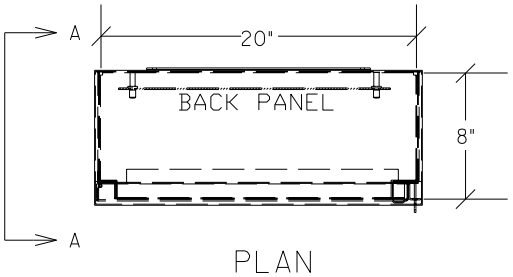
CONDUIT TRENCH



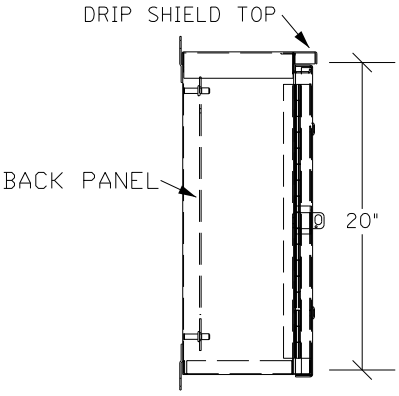
OPEN CUT PAVEMENT DETAIL

CONDUIT INSTALLATION

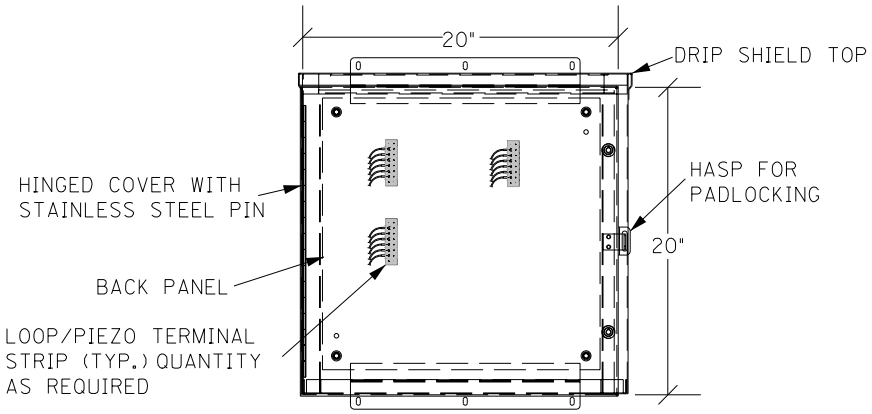
NOT TO SCALE



PLAN

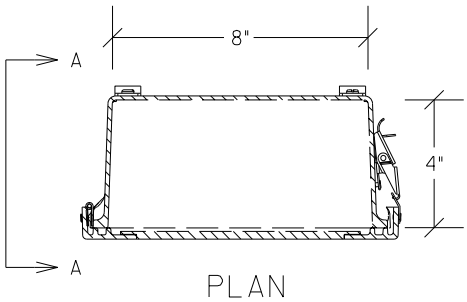


SECTION A-A

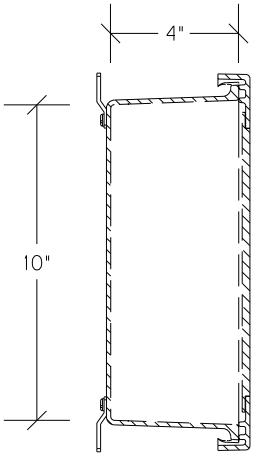


ELEVATION

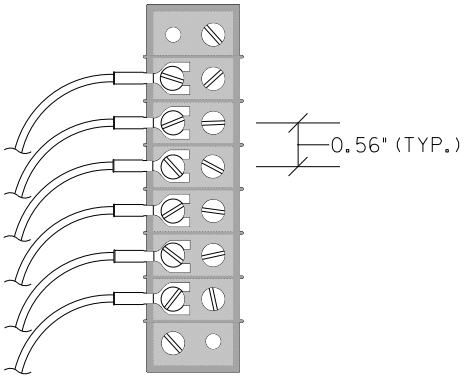
GALVANIZED STEEL CABINET



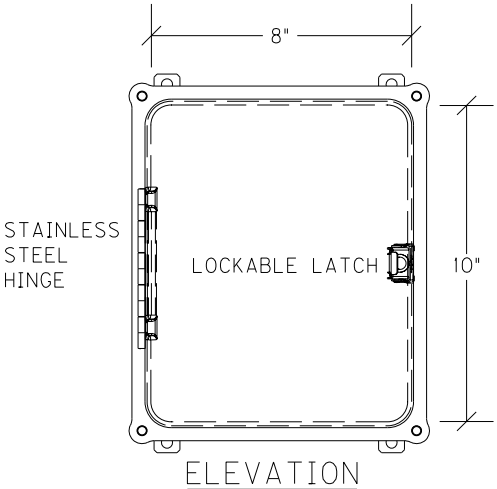
PLAN



SECTION A-A



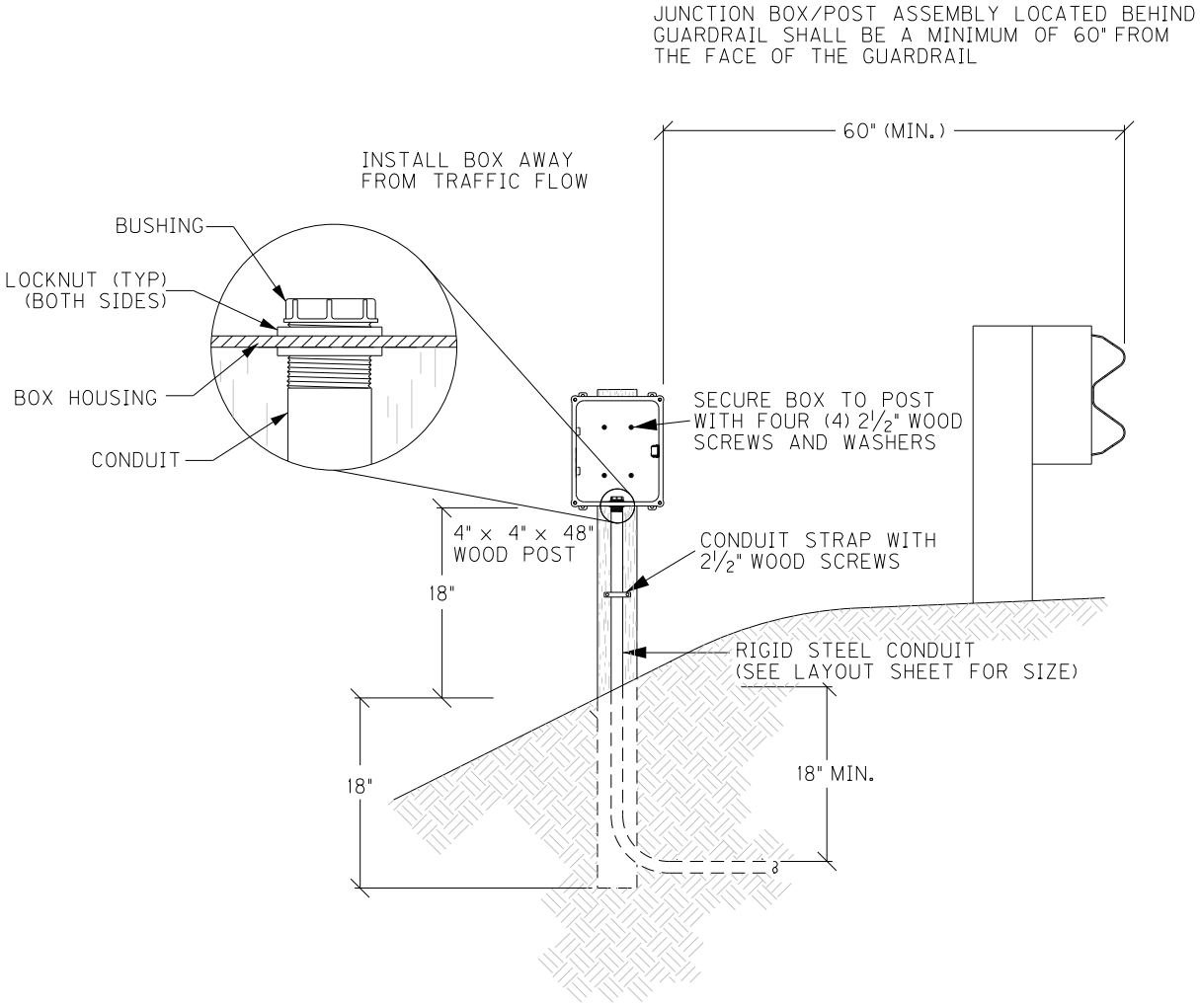
TERMINAL STRIP (TYP.)



ELEVATION

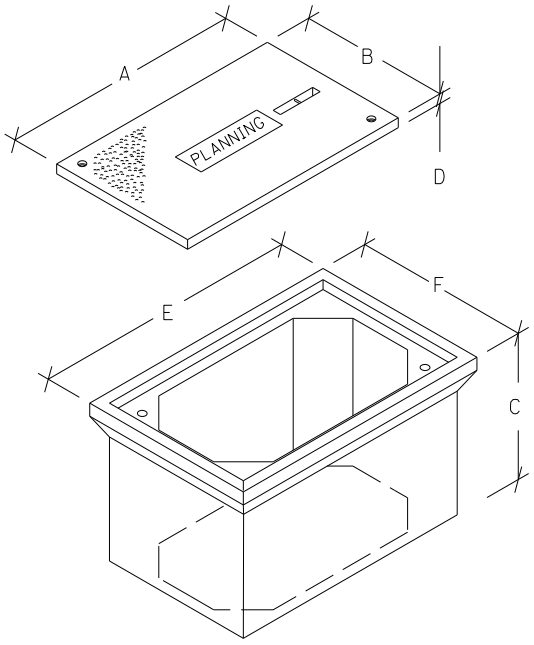
JUNCTION BOX 10"x8"X4"

NOT TO SCALE



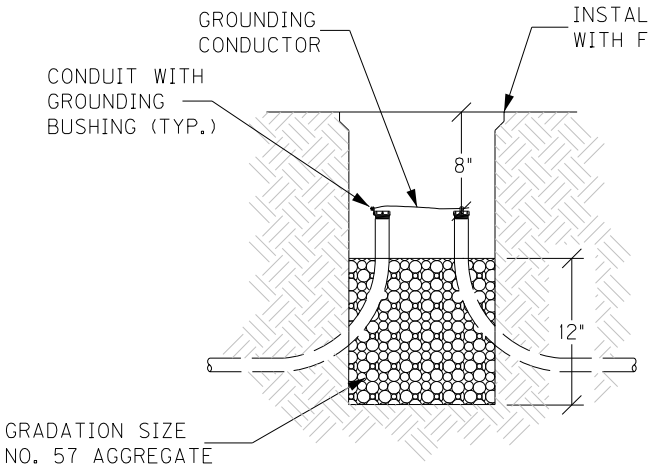
JUNCTION BOX 10"x8"x4" AND POST ASSEMBLY

NOT TO SCALE



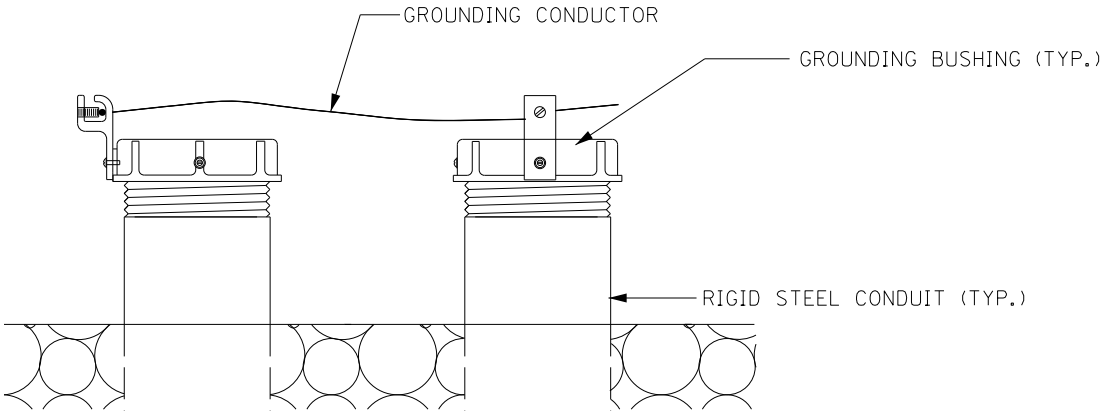
JUNCTION BOX DIMENSIONS (NOMINAL)						
	A	B	C	D*	E	F
TYPE A	23"	14"	18"	2"	25"	16"
TYPE B	18"	11"	12"	1¾"	20"	13"
TYPE C	36"	24"	30"	3"	38"	26"

* MINIMUM
STACKABLE BOXES ARE PERMITTED



WHERE REQUIRED, JUNCTION BOX SHALL BE ORIENTED SUCH THAT THE DIMENSIONS COMPLY WITH THE NATIONAL ELECTRICAL CODE.

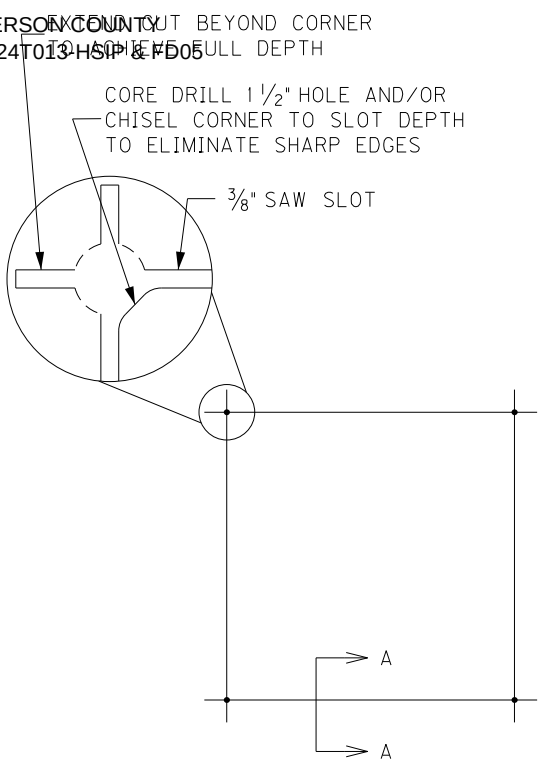
ELEVATION



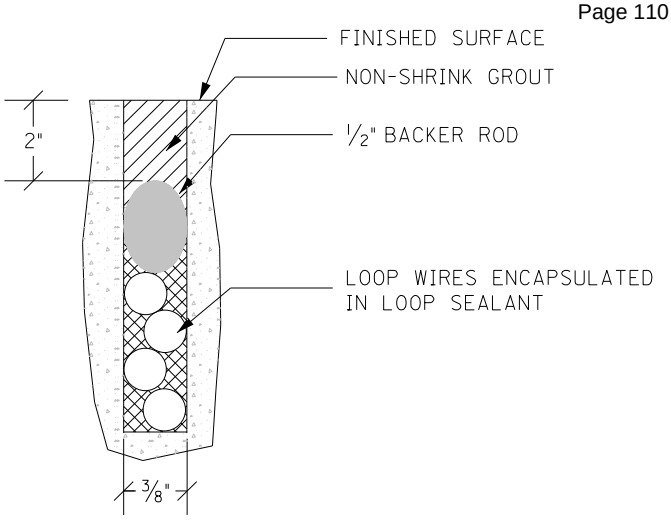
GROUNDING DETAIL

JUNCTION BOX - TYPE A, TYPE B, TYPE C

NOT TO SCALE



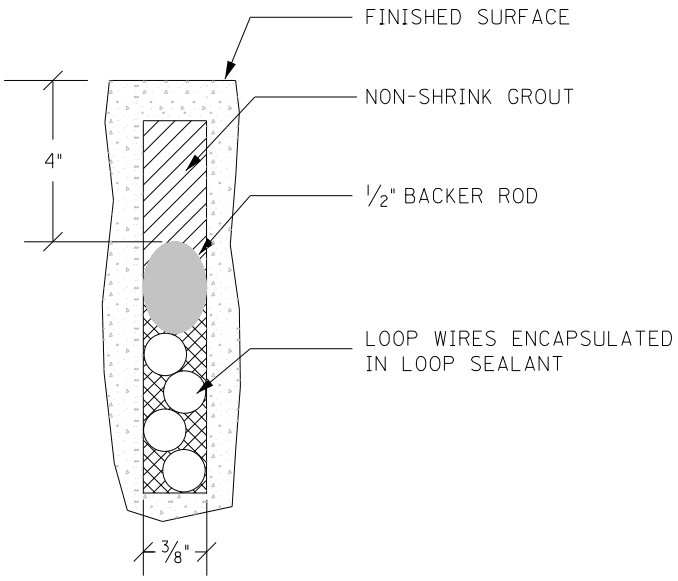
SAW CUT PLAN



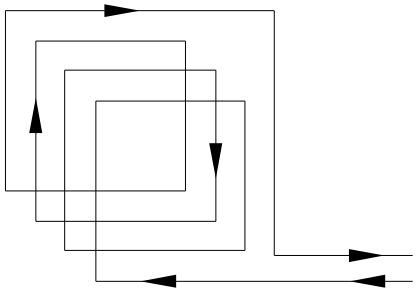
SECTION A-A (CONCRETE)

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

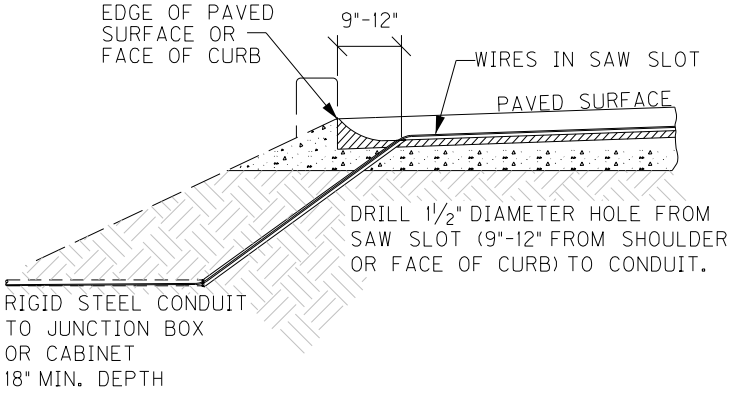
ADJACENT SAW SLOTS SHALL BE A MINIMUM OF 12" APART.



SECTION A-A (ASPHALT)



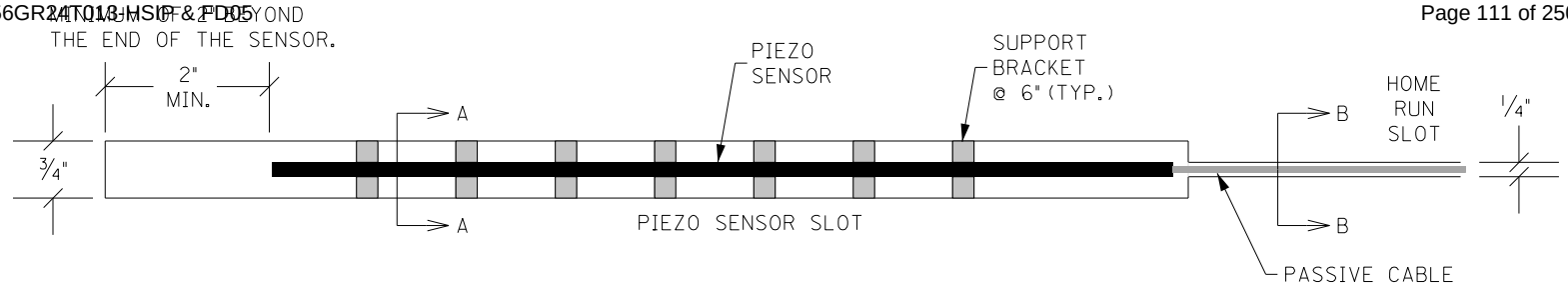
WIRING PLAN



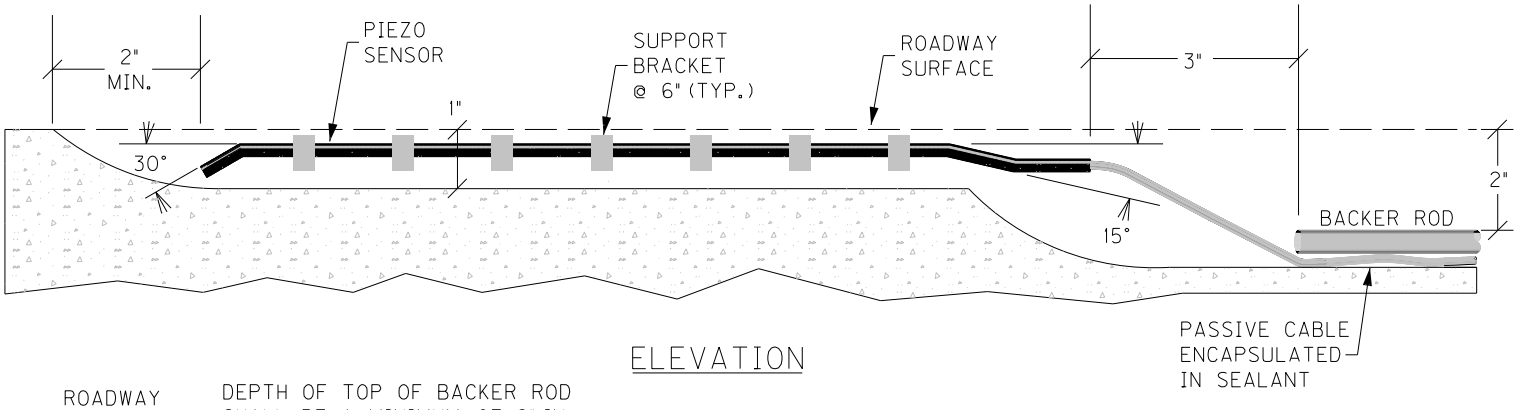
SAW SLOT EDGE OF PAVEMENT TRANSITION

INDUCTIVE LOOP DETECTOR

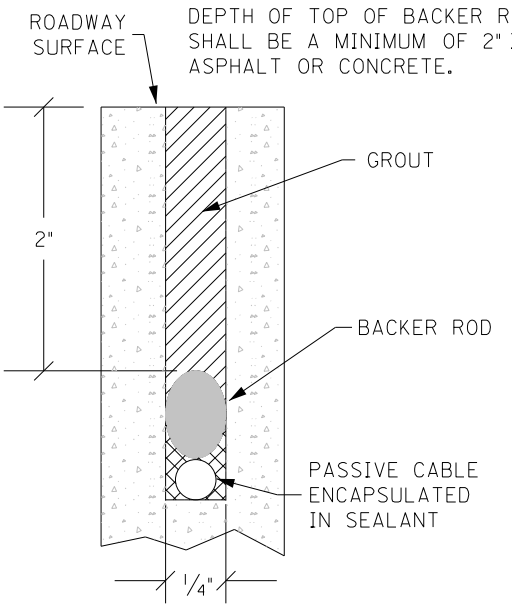
NOT TO SCALE



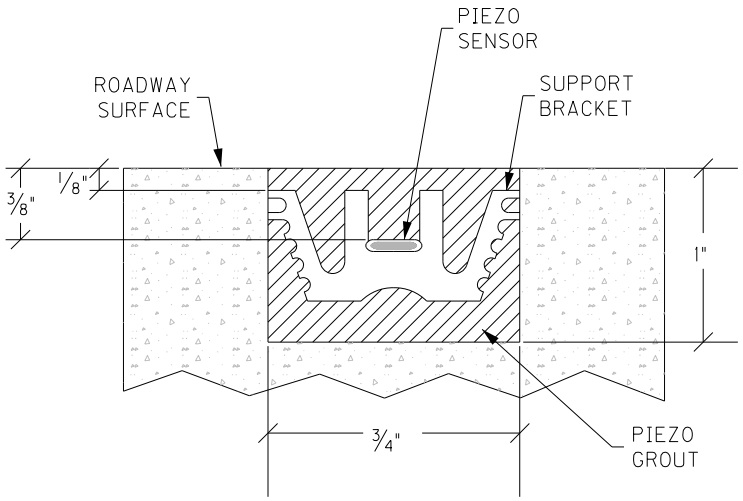
PLAN



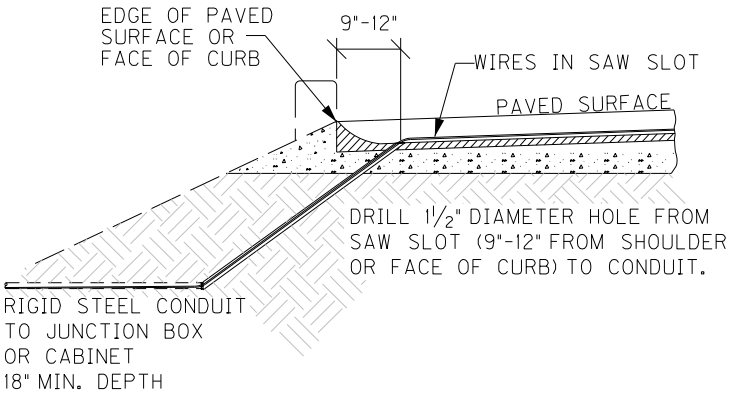
ELEVATION



SECTION B-B



SECTION A-A



SAW SLOT EDGE OF PAVEMENT TRANSITION

PIEZOELECTRIC SENSOR INSTALLATION

NOT TO SCALE

INSTALL RADAR PRESENCE DETECTOR TYPE A

Install Radar Presence Detector Type A shall consist of installation of a pole mounted radar presence sensor, sensor mounting bracket, sensor cables, interface boxes, lead-in cable, connectors (furnished by contractor), and controller interface assembly. Radar Presence Detector Type A bid item shall include all labor required to provide a functional detection system. Radar Presence Detector Type A shall be installed and wired in accordance with the manufacturer's instructions. After the detector is installed and before the detector is powered on, the contractor shall coordinate with District Traffic Division's representatives to schedule a time to perform the detector setup. The contractor shall double check to verify that all wiring is correctly installed and connected before scheduling the setup work. Representatives from KYTC and/or the manufacturer or salesrepresentative will assist with setup and calibration. The contractor shall provide a bucket truck and operators at this time for final aiming of the sensors. The contractor shall provide individuals capable of operating the setup software and learning the setup process so that future installations may be completed without assistance from others.

October 12, 2023

INSTALL RADAR ADVANCE DETECTOR TYPE B

Install Radar Advance Detector Type B shall consist of installation of a pole mounted radar presence sensor, sensor mounting bracket, sensor cables, interface boxes, lead-in cable, connectors (furnished by contractor), and controller interface assembly. Radar Advance Detector Type B bid item shall include all labor required to provide a functional detection system. Radar Advance Detector Type B shall be installed and wired in accordance with the manufacturer's instructions. After the detector is installed and before the detector is powered on, the contractor shall coordinate with District Traffic Division's representatives to schedule a time to perform the detector setup. The contractor shall double check to verify that all wiring is correctly installed and connected before scheduling the setup work. Representatives from KYTC and/or the manufacturer or salesrepresentative will assist with setup and calibration. The contractor shall provide a bucket truck and operators at this time for final aiming of the sensors. The contractor shall provide individuals capable of operating the setup software and learning the setup process so that future installations may be completed without assistance from others.

October 12, 2023

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)**
2-935.00	Henderson	FD52 051 0041 018-019	HSIP 0411(038)

PROJECT DESCRIPTION

Intersection improvement at US 41 and Wolf Hills Road from MP 18.300 to MP 18.700.

☒ **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			
Condemnation			
Signed ROE			

Notes/ Comments (Use Additional Sheet if necessary)

LPA RW Project Manager		Right of Way Supervisor	
Printed Name		Printed Name	
Signature		Signature	Digitally signed by Jennifer K. Cox Date: 2024.08.19 12:16:51 -05'00'
Date		Date	

Right of Way Director		FHWA	
Printed Name		Printed Name	
Signature	Digitally signed by Kelly Divine Date: 2024.08.19 15:00:21 -05'00'	Signature	No Signature Required as per FHWA-KYTC Current Stewardship Agreement
Date		Date	

UTILITIES AND RAIL CERTIFICATION NOTE

Henderson County - HSIP 0411(038)
FD52 051 0041 018-019
Intersection Improvement at US 41 and Wolf Hills Road from MP 18.300 to MP 18.700)
Item No. 2-935.00

GENERAL PROJECT NOTES ON UTILITIES

For all projects over 2000 linear feet, which are defined as a "Large Project" in KRS 367.4903(18), the awarded contractor shall initially mark the first 2000 linear feet minimally of proposed excavation or construction boundaries of the project to be worked using the procedure set forth in KRS 367.4909(9)(k). This temporary field locating of the project excavation boundary shall take place prior to submitting an excavation location request to the underground utility protection Kentucky Contact Center. For large projects, the awarded contractor shall work with the impacted utilities to determine when additional white lining of the remainder of the project site will take place. This provision shall not alter or relieve the awarded contractor from complying with requirements of KRS 367.4905 to 367.4917 in their entirety.

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

The contractor will be responsible for contacting all utility facility owners on the subject project to coordinate his/her activities. The contractor will coordinate his/her 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.

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

Henderson County - HSIP 0411(038)
FD52 051 0041 018-019
Intersection Improvement at US 41 and Wolf Hills Road from MP 18.300 to MP 18.700)
Item No. 2-935.00

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

List all applicable utilities whose facilities are present and are not to be disturbed during construction activities. List utility type, utility size, and general utility location for each utility.

If an unknown utility is encountered, the contractor will be responsible for arranging an on-site meeting with utility representatives and the Engineer to discuss possible impacts and solutions to either avoid the utility or relocate the utility.

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

THE FOLLOWING COMPANIES ARE RELOCATING/ADJUSTING THEIR UTILITIES WITHIN THE PROJECT LIMITS AND WILL BE COMPLETE PRIOR TO CONSTRUCTION

List all applicable utilities whose facilities are being relocated at the time this note is written. List utility type, utility size, and general utility location for each utility. If the utility's relocation work has not been completed at the writing of this note, a completion date should be provided. If the work will not be completed by the letting date or it is uncertain whether the relocation work will be completed list the utility in the next block.

(List N/A or None when applicable)

THE FOLLOWING COMPANIES HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE COMPANY OR THE COMPANY'S SUBCONTRACTOR AND IS TO BE COORDINATED WITH THE ROAD CONTRACT

List all applicable utilities whose facilities will not be relocated prior to the letting date of the road construction or whose facility relocations will begin and be completed by the utility company after the road contract letting date. List Owner, utility type, utility size, both the current and proposed utility location, and a firm completion date for each utility. A completion date MUST be provided for any such utility work.

(List N/A or None when applicable)

(Use the following text Only If Applicable and delete this RED text): The Department will consider submission of a bid as the Contractor's agreement to not make any claims for additional compensation due to delays or other conditions created by the operations of (Utility Company(s) Name). Working days will not be charged for those days on which work on (Utility Company(s) Name) facilities is delayed, as provided in the current edition of the KY Standard Specifications for Road and Bridge Construction. Should a difference of opinion arise as to the rights of the Contractor and others working within the limits of, or adjacent to the project, the KYTC Engineer will decide as to the respective rights of the various parties involved in order to assure the completion of the Department's work in general harmony and in a satisfactory manner, and his/her decision shall be final and binding upon the Contractor.

THE FOLLOWING COMPANIES HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE ROAD

UTILITIES AND RAIL CERTIFICATION NOTE

Henderson County - HSIP 0411(038)
FD52 051 0041 018-019
Intersection Improvement at US 41 and Wolf Hills Road from MP 18.300 to MP 18.700)
Item No. 2-935.00

CONTRACTOR AS INCLUDED IN THIS CONTRACT

List all applicable utilities whose facilities are to be relocated by the Cabinet's contractor as part of the road construction project. List Utility Type, Utility Size, and both current and proposed Utility Location for each. (List N/A or None when applicable).

RAIL COMPANIES HAVE FACILITIES IN CONJUNCTION WITH THIS PROJECT AS NOTED

☒ **No Rail Involvement** ☐ **Rail Involved** ☐ **Rail Adjacent**

UTILITIES AND RAIL CERTIFICATION NOTE

Henderson County - HSIP 0411(038)
FD52 051 0041 018-019
Intersection Improvement at US 41 and Wolf Hills Road from MP 18.300 to MP 18.700)
Item No. 2-935.00

AREA UTILITIES CONTACT LIST

Utility Company/Agency	Contact Name	Contact Information
1. Henderson Water Utility	Matt Calvert	1383 Commonwealth Drive Henderson, KY 42420 Office: 270-826-2824 Mobile: 270-993-2863 matt.calvert@hkywater.org
2. AT&T Bellsouth Telecommunications	Glenn Shane	3021 Old Hartford Road Owensboro, KY 42303 Office: 270-993-8074 glenn.shane@att.com
3. Henderson Municipal Power & Light	Chad Kietzman	100 5th Street Henderson, KY 4240 Office: 270-631-0644 Mobile: 270-860-1122 chad@gmpl.net
4. Charter Communications	John Wade	1900 Fares Avenue Evansville, IN 47711 Office: 812-253-2710
5. LG&E and KU	Caroline Justice	10300 Ballardsville Road Louisville, KY 40241 Office: 502-627-3708
6. Henderson Municipal Gas	Tim Clayton	222 First Street Henderson, KY 42420 Office: 270-831-1200

NOTE: The Utilities Contact List is provided as informational only and may not be a complete list of all Utility Companies with facilities in the project area.

MATERIAL SUMMARY

CONTRACT ID: 244500 **056GR24T013-HSIP & FD05** **0205100412401**

US HIGHWAY 41 (US 41) CONVERT INTERSECTIONS AT US 41 AT WOLF HILLS ROAD AND STRATMAN ROAD TO AN RCUT ASPHALT SURFACE WITH GRADE & DRAIN, A DISTANCE OF .33 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0005	00003	CRUSHED STONE BASE	1,752.00	TON
0010	00078	CRUSHED AGGREGATE SIZE NO 2	2,391.00	TON
0015	00100	ASPHALT SEAL AGGREGATE	8.00	TON
0020	00103	ASPHALT SEAL COAT	2.00	TON
0025	00217	CL4 ASPH BASE 1.00D PG64-22	2,355.00	TON
0030	02602	FABRIC-GEOTEXTILE CLASS 1	4,166.00	SQYD
0035	02604	FABRIC-GEOTEXTILE CLASS 1A	4,224.00	SQYD
0040	01310	REMOVE PIPE	34.00	LF
0045	01705	REMOVE CURB & GUTTER BOX INLET	2.00	EACH
0050	01921	STANDARD BARRIER MEDIAN TYPE 4	143.00	SQYD
0055	01939	MOUNTABLE MEDIAN TYPE 3	544.00	SQYD
0060	01982	DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE	8.00	EACH
0065	01983	DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL YELLOW	16.00	EACH
0070	02091	REMOVE PAVEMENT	124.00	SQYD
0075	02200	ROADWAY EXCAVATION	1,581.00	CUYD
0080	02351	GUARDRAIL-STEEL W BEAM-S FACE	737.50	LF
0085	02367	GUARDRAIL END TREATMENT TYPE 1	1.00	EACH
0090	02369	GUARDRAIL END TREATMENT TYPE 2A	1.00	EACH
0095	02381	REMOVE GUARDRAIL	381.00	LF
0100	02562	TEMPORARY SIGNS	480.00	SQFT
0105	02625	REMOVE HEADWALL	2.00	EACH
0110	02650	MAINTAIN & CONTROL TRAFFIC - HENDERSON US 41 HSIP	1.00	LS
0115	02671	PORTABLE CHANGEABLE MESSAGE SIGN	6.00	EACH
0120	02701	TEMP SILT FENCE	2,500.00	LF
0125	02703	SILT TRAP TYPE A	5.00	EACH
0130	02704	SILT TRAP TYPE B	5.00	EACH
0135	02705	SILT TRAP TYPE C	5.00	EACH
0140	02706	CLEAN SILT TRAP TYPE A	5.00	EACH
0145	02707	CLEAN SILT TRAP TYPE B	5.00	EACH
0150	02708	CLEAN SILT TRAP TYPE C	5.00	EACH
0155	02726	STAKING - HENDERSON US 41 HSIP	1.00	LS
0160	02775	ARROW PANEL	2.00	EACH
0165	03225	TUBULAR MARKERS - (PEXCO CITY POST EMBEDDED ANCHOR CUP)	45.00	EACH
0170	05950	EROSION CONTROL BLANKET	75.00	SQYD
0175	05952	TEMP MULCH	1,850.00	SQYD
0180	05953	TEMP SEEDING AND PROTECTION	1,850.00	SQYD
0185	05963	INITIAL FERTILIZER	1.00	TON
0190	05964	MAINTENANCE FERTILIZER	1.00	TON
0195	05985	SEEDING AND PROTECTION	1,850.00	SQYD
0200	05992	AGRICULTURAL LIMESTONE	1.00	TON

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0205	06568	PAVE MARKING-THERMO STOP BAR-24IN	46.00	LF
0210	06569	PAVE MARKING-THERMO CROSS-HATCH	6,737.00	SQFT
0215	06574	PAVE MARKING-THERMO CURV ARROW	17.00	EACH
0220	06576	PAVE MARKING-THERMO ONLY	3.00	EACH
0225	06610	INLAID PAVEMENT MARKER-MW	59.00	EACH
0230	06612	INLAID PAVEMENT MARKER-BY	46.00	EACH
0235	20191ED	OBJECT MARKER TY 3	1.00	EACH
0240	21289ED	LONGITUDINAL EDGE KEY	1,939.00	LF
0245	23839EC	REMOVE CONCRETE MEDIAN	81.30	SQYD
0250	24679ED	PAVE MARK THERMO CHEVRON	1,226.00	SQFT
0255	24889EC	PAVE MARKING-THERMO U-TURN	9.00	EACH
0260	24969ED	LONGITUDINAL SAW CUT	1,939.00	LF
0265	00461	CULVERT PIPE-15 IN	88.00	LF
0270	00462	CULVERT PIPE-18 IN	36.00	LF
0275	00464	CULVERT PIPE-24 IN	75.00	LF
0280	01480	CURB BOX INLET TYPE B	2.00	EACH
0285	26130ED	SLOPED AND MITERED HEADWALL-15 IN	1.00	EACH
0290	26131ED	SLOPED AND MITERED HEADWALL-18 IN	1.00	EACH
0295	26132ED	SLOPED AND MITERED HEADWALL-24 IN	2.00	EACH
0300	06406	SBM ALUM SHEET SIGNS .080 IN	344.00	SQFT
0305	06407	SBM ALUM SHEET SIGNS .125 IN	175.00	SQFT
0310	06410	STEEL POST TYPE 1	823.00	LF
0315	06490	CLASS A CONCRETE FOR SIGNS	2.00	CUYD
0320	21596ND	GMSS TYPE D	6.00	EACH
0325	24631EC	BARCODE SIGN INVENTORY	91.00	EACH
0330	04701	POLE 40 FT MTG HT	5.00	EACH
0335	04725	BRACKET 15 FT	5.00	EACH
0340	04740	POLE BASE	5.00	EACH
0345	04750	TRANSFORMER BASE	5.00	EACH
0350	04761	LIGHTING CONTROL EQUIPMENT	1.00	EACH
0355	04780	FUSED CONNECTOR KIT	10.00	EACH
0360	04797	CONDUIT-3 IN	1,120.00	LF
0365	04820	TRENCHING AND BACKFILLING	4,145.00	LF
0370	04832	WIRE-NO. 12	825.00	LF
0375	04860	CABLE-NO. 8/3C DUCTED	3,025.00	LF
0380	20391NS835	ELECTRICAL JUNCTION BOX TYPE A	8.00	EACH
0385	24589ED	LED LUMINAIRE	5.00	EACH
0390	04793	CONDUIT-1 1/4 IN	80.00	LF
0395	04795	CONDUIT-2 IN	300.00	LF
0400	04820	TRENCHING AND BACKFILLING	240.00	LF
0405	04829	PIEZOELECTRIC SENSOR	10.00	EACH
0410	04830	LOOP WIRE	3,600.00	LF
0415	04895	LOOP SAW SLOT AND FILL	540.00	LF
0420	20391NS835	ELECTRICAL JUNCTION BOX TYPE A	6.00	EACH
0425	21543EN	BORE AND JACK CONDUIT - - 2 INCH	140.00	LF
0430	02569	DEMOBILIZATION	1.00	LS

MATERIAL SUMMARY

CONTRACT ID: 244500 **056GR24T013-HSIP & FD05** **MP05100412401**

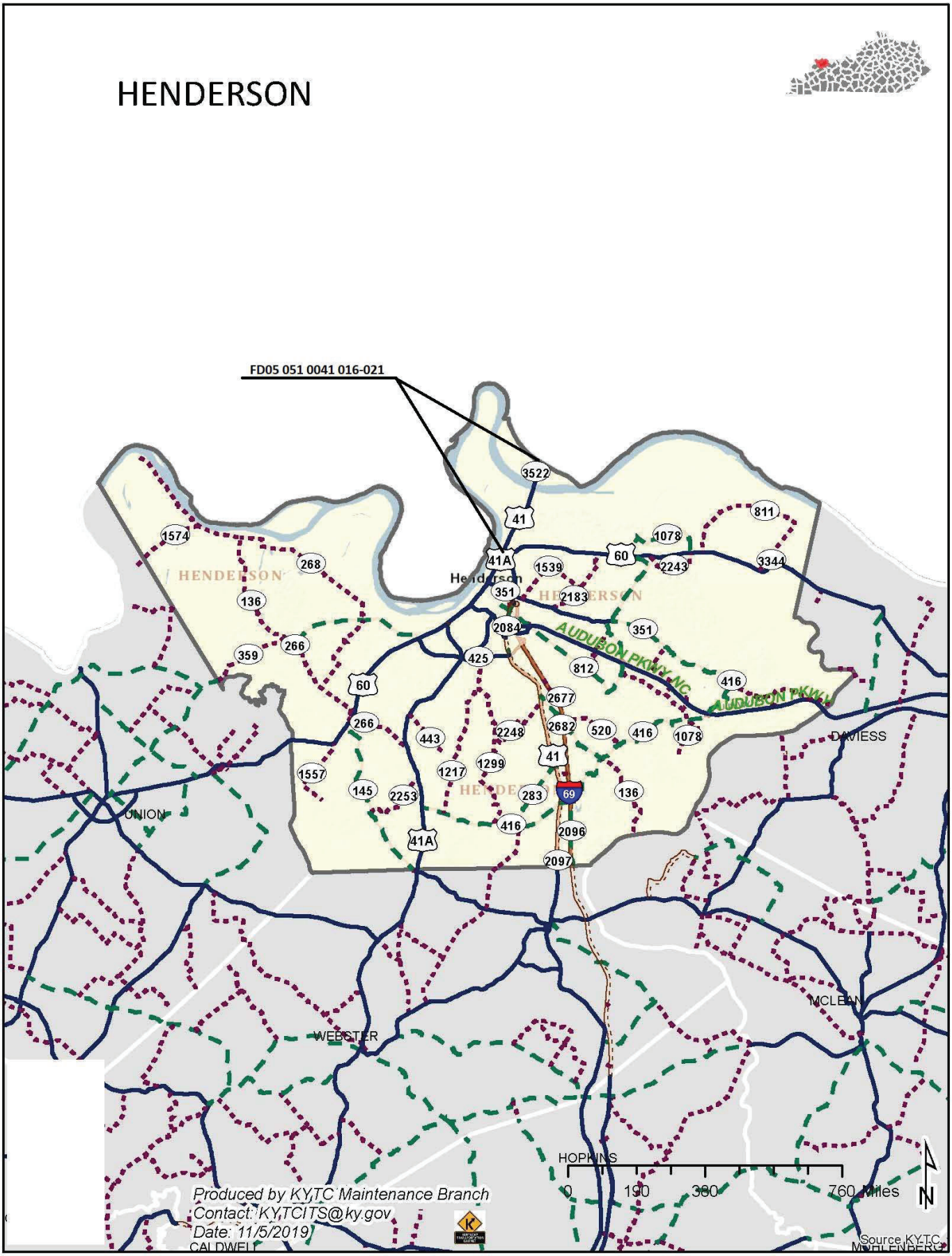
HENDERSON TO EVANSVILLE ROAD (US 41) BEGIN 0.18 MILES SOUTH OF CINEMA DRIVE EXTENDING NORTH TO 0.458 (OMIT OHIO RIVER BRIDGE) NORTH OF KY 3522 ASPHALT RESURFACING, A DISTANCE OF 4.65 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0435	00190	LEVELING & WEDGING PG64-22	1,505.00	TON
0440	00333	CL4 ASPH SURF 0.50A PG64-22	15,410.00	TON
0445	00356	ASPHALT MATERIAL FOR TACK	87.00	TON
0450	02562	TEMPORARY SIGNS	1,000.00	SQFT
0455	02650	MAINTAIN & CONTROL TRAFFIC	1.00	LS
0460	02671	PORTABLE CHANGEABLE MESSAGE SIGN	2.00	EACH
0465	02676	MOBILIZATION FOR MILL & TEXT	1.00	LS
0470	02677	ASPHALT PAVE MILLING & TEXTURING	15,300.00	TON
0475	02697	EDGELINE RUMBLE STRIPS	19,800.00	LF
0480	02720	SIDEWALK-4 IN CONCRETE	53.00	SQYD
0485	02775	ARROW PANEL	2.00	EACH
0490	04793	CONDUIT-1 1/4 IN	30.00	LF
0495	04820	TRENCHING AND BACKFILLING	20.00	LF
0500	04830	LOOP WIRE	2,300.00	LF
0505	04895	LOOP SAW SLOT AND FILL	440.00	LF
0510	06510	PAVE STRIPING-TEMP PAINT-4 IN	136,000.00	LF
0515	06542	PAVE STRIPING-THERMO-6 IN W	70,000.00	LF
0520	06543	PAVE STRIPING-THERMO-6 IN Y	70,000.00	LF
0525	06547	PAVE STRIPING-THERMO-12 IN Y	510.00	LF
0530	06566	PAVE MARKING-THERMO X-WALK-12 IN	320.00	LF
0535	06568	PAVE MARKING-THERMO STOP BAR-24IN	595.00	LF
0540	06574	PAVE MARKING-THERMO CURV ARROW	60.00	EACH
0545	10020NS	FUEL ADJUSTMENT	24,769.00	DOLL
0550	10030NS	ASPHALT ADJUSTMENT	64,723.00	DOLL
0555	20071EC	JOINT ADHESIVE	79,454.00	LF
0560	20360ES818	WOOD POST	3.00	EACH
0565	20411ED	LAW ENFORCEMENT OFFICER	200.00	HOUR
0570	20468EC	ELECTRICAL JUNCTION BOX-10 X 8 X 4	3.00	EACH
0575	23158ES505	DETECTABLE WARNINGS - (NEW)	140.00	SQFT
0580	24785EC	FIBER REINFORCEMENT FOR HMA	15,410.00	TON
0585	24880EC	REMOVE PAVEMENT MARKER	1,000.00	EACH
0590	26119EC	INSTALL RADAR PRESENCE DETECTOR TYPE A	11.00	EACH
0595	26120EC	INSTALL RADAR ADVANCE DETECTOR TYPE B	6.00	EACH
0600	26228EC	ELECTRONIC DELIVERY MGMT SYSTEM	1.00	LS
0605	02569	DEMOBILIZATION	1.00	LS

Earthwork Summary Sheet - HSIP

Note: All units in this report are in feet, square feet, or cubic yards unless specified otherwise.

Baseline Station	Station Quantities					
	Cut			Fill		
		Area	Volume		Area	Volume
100+00.0000		0.00	0.00		0.00	0.00
100+50.0000		0.00	0.00		0.00	0.00
101+00.0000		18.08	16.74		0.00	0.00
101+50.0000		33.07	47.36		0.00	0.00
102+00.0000		44.75	72.06		0.00	0.00
102+50.0000		44.51	82.65		0.00	0.00
103+00.0000		48.23	85.87		0.00	0.00
103+50.0000		53.02	93.75		0.00	0.00
104+00.0000		49.08	94.54		0.00	0.00
104+50.0000		24.84	68.44		0.00	0.00
105+00.0000		25.65	46.74		0.00	0.00
105+50.0000		52.43	72.30		0.00	0.00
106+00.0000		0.00	48.55		0.00	0.00
106+50.0000		0.00	0.00		0.00	0.00
107+00.0000		0.00	0.00		0.00	0.00
107+50.0000		0.00	0.00		0.00	0.00
108+00.0000		0.00	0.00		0.00	0.00
108+50.0000		0.00	0.00		0.00	0.00
109+00.0000		94.00	87.04		0.00	0.00
109+50.0000		82.87	163.78		83.28	77.11
110+00.0000		46.32	119.62		43.68	117.56
110+50.0000		47.36	86.73		25.52	64.08
111+00.0000		22.12	64.33		0.03	23.66
111+50.0000		21.49	40.38		0.13	0.14
112+00.0000		21.60	39.90		0.35	0.44
112+50.0000		22.97	41.27		0.00	0.32
113+00.0000		16.64	36.67		0.41	0.38
113+50.0000		18.54	32.57		0.00	0.38
114+00.0000		49.00	62.53		263.70	244.16
114+50.0000		17.26	61.35		423.39	636.19
115+00.0000		0.00	15.98		7.44	398.92
115+50.0000		0.00	0.00		0.00	6.89
116+00.0000		0.00	0.00		0.00	0.00
Totals		**853.81**	**1581.14**		**847.93**	**1570.24**


HENDERSON
FD05 051 0041 016-021
3522
41
1574
268
HENDERSON
41A
Henderson
1539
60
1078
811
2243
3344
136
351
2183
HENDERSON
2084
351
AUDUBON PKWY NIC
266
359
425
812
416
AUDUBON PKWY
60
2677
266
2248
2682
520
416
1078
DAVIESS
443
41
1557
1217
1299
145
2253
HENDERSON
283
69
136
UNION
416
2096
41A
2097
MCLEAN
WEBSTER
HOPKINS
0
190
380
760 Miles
N
Produced by KYTC Maintenance Branch
Contact: KYTCITS@ky.gov
Date: 11/5/2019
CALDWELL
Source KYTC
MUHLENBERG

Henderson County
THERMOPLASTIC INTERSECTION PAVEMENT MARKINGS SUMMARY
FD05 051 0041 016-021

MPT.	INTERSECTION	X-WALKS 12 INCH LF	STP BARS 24 INCH LF	ARROWS CURVE EA	ARROWS STR EA	ARROWS COMB EA	X-Hatch - Y 12 INCH LF	"STOP" EA	CATRAXX 6 INCH LF	NOTES
16.4	Cinema Dr.		150							
16.481	Park Way									
16.518	Barret BLVD									
16.743	Marywood/Rettig		120	4			255			
16.784	Canary Ln.		15							
16.835	Robin Rd.		15							
16.88	Harmony Ln.		15							
16.928	Walker Dr.									
17.059	Mall entrance	320		4						
17.108	Barker Rd.		15							
17.261	Paul Dr.									
17.343	Watson Ln.		120	6			255			
17.498	Audubon MHP Dr									
17.682	Walnut Ln.		15							
17.759	Audubon State Park		30							
17.906	Race Track Rd.		15							
18.407	Stratman Rd.									
18.474	Wolf Hills Rd.		30	3						
20.419	KY 3522		55	9						
Various	Center Turn Lanes			34						
TOTAL		320	595	60	0	0	510	0	0	

Henderson County
RADAR PRESENCE DETECTOR SUMMARY
FD05 051 0041 061-021

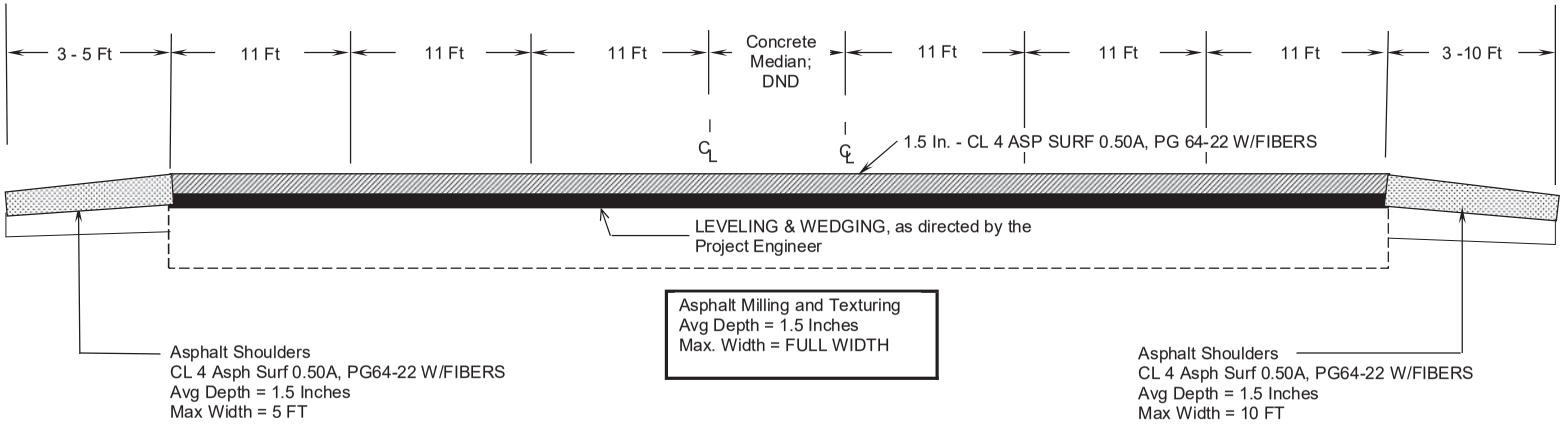
MPT.	INTERSECTION	RADAR PRESENCE DETECTOR TYPE A EA	RADAR PRESENCE DETECTOR TYPE B EA	NOTES
16.743	Marywood/Rettig	4	2	
17.059	Mall Entrance	3	2	
17.343	Watson Lane	4	2	
TOTAL		11	6	

NOTES:

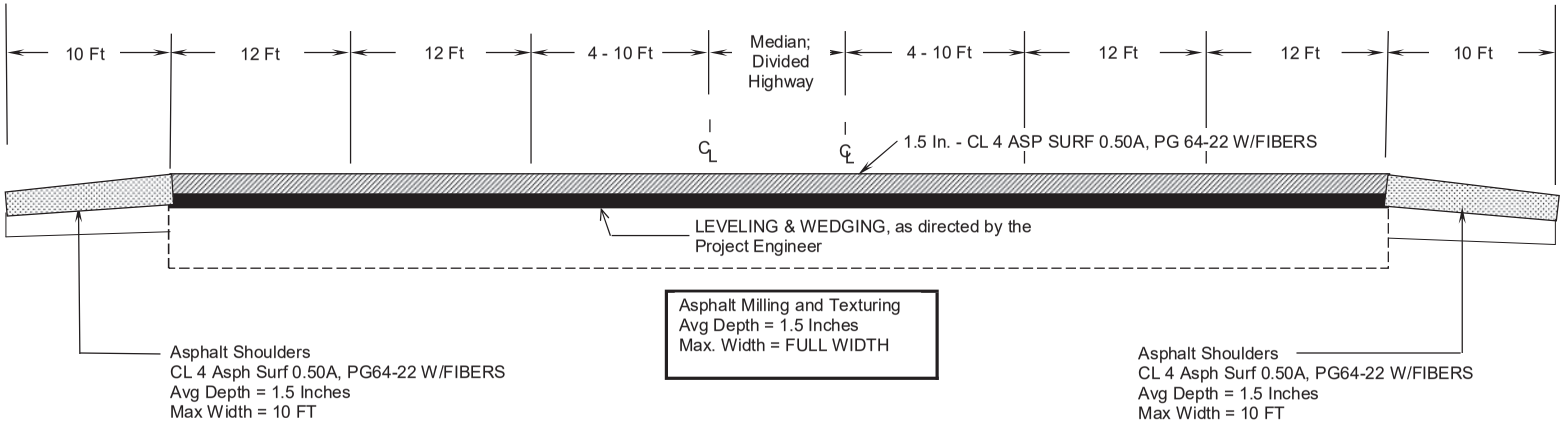
Henderson County
SIDEWALK RAMP AND DETECTABLE WARNING SUMMARY
FD05 051 0041 016-021

MP	INTERSECTION	RAMP TYPE	RAMP SY	DETECTABLE WARNING QUANTITY	DETECTABLE WARNING NEW SF	DETECTABLE WARNING RETROFIT SF	NOTES
17.059	Mall Entrance	3	35		120		
17.059	Mall Entrance	1	18		20		
TOTAL		4	53	0	140	0	

Henderson County
TYPICAL SECTION
FD05 051 0041 016-021
MP's 16.220 to 18.100



Henderson County
TYPICAL SECTION
FD05 051 0041 016-021
MP's 18.100 to 20.877 (OMIT OHIO RIVER BRIDGE)



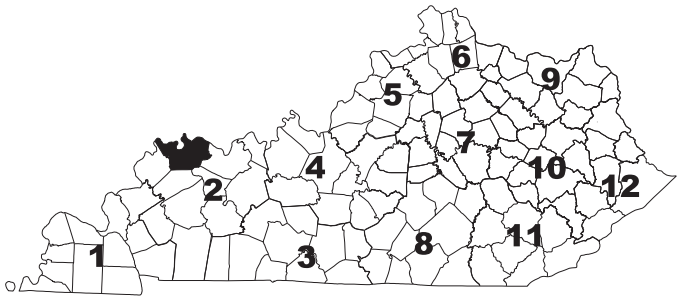
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

PLANS OF
PROPOSED PROJECT

TEAM KENTUCKY
TRANSPORTATION CABINET

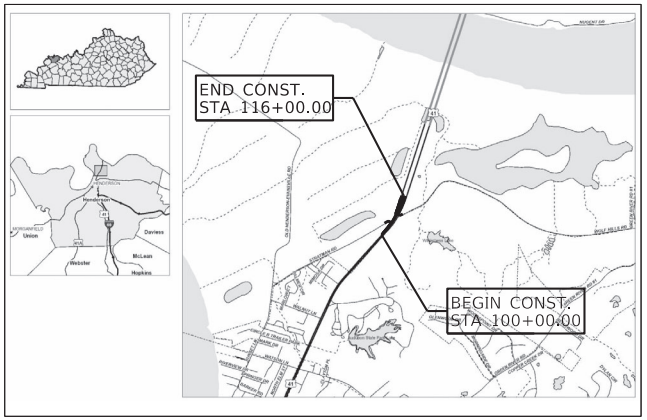
HENDERSON COUNTY
US 41

PRELIMINARY
NOT FOR CONSTRUCTION



BEFORE YOU DIG

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



LAYOUT MAP

DESIGN CRITERIA

CLASS OF HIGHWAY	STATE PRIMARY
TYPE OF TERRAIN	LEVEL
DESIGN SPEED	55 MPH
REQUIRED NPSD	N/A
REQUIRED PSD	X
LEVEL OF SERVICE	X
ADT PRESENT ( )	41,375
ADT FUTURE (X)	X
DHV	X
D %	X
T %	X

GEOGRAPHIC COORDINATES

LATITUDE 37 DEGREES 53 MINUTES 23 SECONDS NORTH
LONGITUDE 87 DEGREES 33 MINUTES 25 SECONDS WEST

DESIGNED

% RESTRICTED SD	X
LEVEL OF SERVICE	X
MAX. DISTANCE W/O PASSING	X

INDEX OF SHEETS

R001	LAYOUT SHEET
R002-R003	TYPICALS SECTIONS
R004-R007	SUMMARIES
R008-R010	PLAN SHEETS
R011	GEOMETRIC DATA SHEET
R012-R017	DETAIL SHEETS
R018-R024	SHEETING SIGNS DETAIL SHEETS
R025-R027	SIGNING PLAN SHEETS
R028-R030	STRIPING SHEETS
X0031-X040	CROSS SECTIONS

STANDARD DRAWINGS

RBI-001-12	RDB-100-05	RPM-001-04	RGX-005-06
RBI-002-07	RDB-101-05	RPM-010-06	RGX-065-03
RBI-004-06	RDB-110-08	RPM-100-11	
RBI-006-07	RDB-280-06	RPM-115-05	
RBR-001-13	RDB-281-03		
RBR-005-11	RDB-282-04		
RBR-015-06	RDB-283-04		
RBR-020-07	RDI-001-10		
RBR-055-01			

LENGTH 1600.00 LIN. FT. 0.30 MILES	LENGTH LIN. FT. MILES	LENGTH LIN. FT. MILES	LENGTH LIN. FT. MILES
ADDED / DEDUCTED FOR EQUALITIES LIN. FT.	ADDED / DEDUCTED FOR EQUALITIES LIN. FT.	ADDED / DEDUCTED FOR EQUALITIES LIN. FT.	ADDED / DEDUCTED FOR EQUALITIES LIN. FT.
NOT INCLUDED	NOT INCLUDED	NOT INCLUDED	NOT INCLUDED
RAILROAD CROSSINGS NO. 0 LIN. FT.	RAILROAD CROSSINGS NO. LIN. FT.	RAILROAD CROSSINGS NO. LIN. FT.	RAILROAD CROSSINGS NO. LIN. FT.
BRIDGES 0 LIN. FT.	BRIDGES LIN. FT.	BRIDGES LIN. FT.	BRIDGES LIN. FT.

PROJECT NUMBER: FD52 051 0041 018-019

PROJECT DESCRIPTION: US 41 - WOLF HILLS ROAD INTERSECTION

RECOMMENDED BY: _____ PROJECT MANAGER DATE:

PLAN APPROVED BY: _____ STATE HIGHWAY ENGINEER DATE:

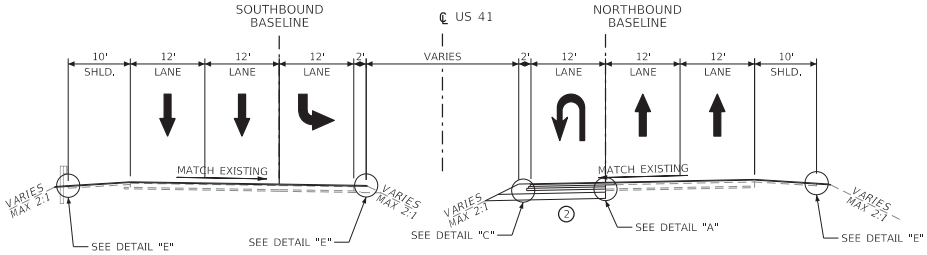
WSP USA Inc.
1792 ALYSHEBA WAY
SUITE 230
LEXINGTON, KY 40509
+1 859.272.5400

LETTING DATE: X

ITEM NO. 02-0935.00 COUNTY OF HENDERSON

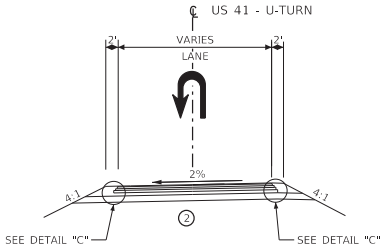
SHEET NO. R1

TYPICAL SECTIONS



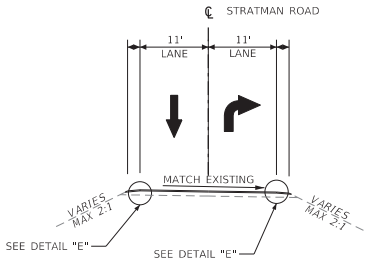
US 41

STA 110+92 TO STA 115+03
SUPERELEVATED SECTION



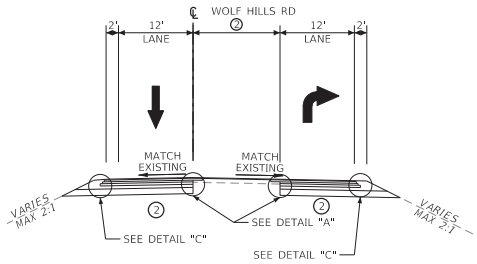
US 41 - U-TURN

STA 113+70 TO STA 114+50



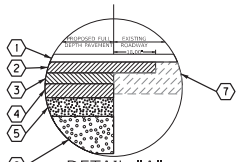
STRATMAN ROAD

STA 201+39 TO STA 202+84



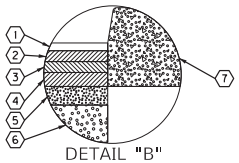
WOLF HILLS ROAD

STA 300+60 TO STA 301+80



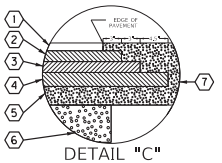
DETAIL "A"
NOT TO SCALE

1. 1.50" CL4 ASPH SURF 0.50A PG64-22 W/ FIBERS (PAID FOR BY FD05)
2. 3.50" CL4 ASPH BASE 1.00D PG64-22
3. 3.50" CL4 ASPH BASE 1.00D PG64-22
4. 4.50" CL4 ASPH BASE 1.00D PG64-22
5. 6.00" CRUSHED STONE BASE
2 6. 12.00" CRUSHED AGGREGATE NO. 2
7. EXISTING PAVEMENT



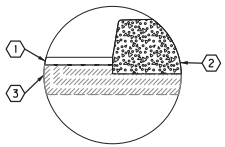
DETAIL "B"
NOT TO SCALE

1. 1.50" CL4 ASPH SURF 0.50A PG64-22 W/ FIBERS (PAID FOR BY FD05)
2. 3.50" CL4 ASPH BASE 1.00D PG64-22
3. 3.50" CL4 ASPH BASE 1.00D PG64-22
4. 4.50" CL4 ASPH BASE 1.00D PG64-22
5. 6.00" CRUSHED STONE BASE
2 6. 12.00" CRUSHED AGGREGATE NO. 2
7. STANDARD BARRIER MEDIAN TYPE 4 OR MOUNTABLE MEDIAN TYPE 4



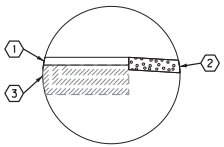
DETAIL "C"
NOT TO SCALE

1. 1.50" CL4 ASPH SURF 0.50A PG64-22 W/ FIBERS (PAID FOR BY FD05)
2. 3.50" CL4 ASPH BASE 1.00D PG64-22
3. 3.50" CL4 ASPH BASE 1.00D PG64-22
4. 4.50" CL4 ASPH BASE 1.00D PG64-22
5. 6.00" CRUSHED STONE BASE
2 6. 12.00" CRUSHED AGGREGATE NO. 2
7. CRUSHED STONE BASE SHOULDER



DETAIL "D"
NOT TO SCALE

1. 1.50" CL4 ASPH SURF 0.50A PG64-22 W/ FIBERS (PAID FOR BY FD05)
2. STANDARD BARRIER MEDIAN TYPE 4 OR MOUNTABLE MEDIAN TYPE 4
3. EXISTING PAVEMENT



DETAIL "E"
NOT TO SCALE

1. 1.50" CL4 ASPH SURF 0.50A PG64-22 W/ FIBERS (PAID FOR BY FD05)
2. 2.00" CRUSHED STONE BASE
3. EXISTING PAVEMENT

NOTES

1. FOR FULL DEPTH PAVEMENT LONGITUDINAL JOINTS, PERFORM ASPHALT PAVE MILLING & TEXTURING A TOTAL DEPTH OF 5.00 INCHES (AN ADDITIONAL 3.5" REQUIRED FOR MILL AND OVERLAY) AND A WIDTH OF 18.00 INCHES FROM EXISTING EDGE OF PAVEMENT FOR PAVEMENT TIE IN. SEE DETAIL "A". WILL BE PAID BY MILLING AND PAVING BID ITEMS.
2. FULL DEPTH PAVEMENT SHALL HAVE A ROADBED OF 12.00" CRUSHED AGGREGATE SIZE NO 2 UNDERLAIN WITH FABRIC - GEOTEXTILE CLASS 1A AND OVERLAIN WITH FABRIC - GEOTEXTILE CLASS 1.
3. GORE AREA - WIDTH VARIES
4. MOUNTABLE MEDIAN TYPE 3 OR STANDARD BARRIER MEDIAN TYPE 4 - SEE PLANS FOR LOCATIONS
5. CONTRACTOR SHALL DAYLIGHT CRUSHED STONE BASE SHOULDERS TO MEET EXISTING SLOPES.
6. AT LOCATIONS WHERE A RAISED CONCRETE MEDIAN IS TO BE INSTALLED WITH MILLING AND OVERLAY OF EXISTING PAVEMENT, EXISTING PAVEMENT SHALL BE SAWCUT TO A DEPTH OF 8.00 INCHES, OR THE FULL DEPTH OF EXISTING PAVEMENT, WHICHEVER IS LESS.
7. ASPHALT SEAL REQUIRED FROM OUTSIDE EDGE OF PAVED SHOULDER TO A POINT 2 FEET DOWN THE DITCH LINE OR FILL SLOPE. TWO APPLICATIONS OF THE FOLLOWING:
   ASPHALT SEAL COAT @ 2.40 LBS./SQ. YD.
   ASPHALT SEAL AGGREGATE @ 20 LBS/SQ. YD.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: STRATMAN ROAD AND WOLF HILLS ROAD TYPICAL SECTIONS

ITEM NO.	COUNTY OF
02-0935.00	HENDERSON
SHEET NO.	
R3	

OpenRoads Designer v10.16.2.267 USER: usj725830 FILE NAME: C:\BMS\WSP-US-PW-02\D0833597\R2-3 - TYPICAL SECTIONS.DGN

ITEM	DESCRIPTION	NOTE(S)	UNIT	US 41	STRATMAN ROAD	WOLF HILLS ROAD	TOTAL PROJECT
00003	CRUSHED STONE BASE	1	TON	1491	5	256	1752
00078	CRUSHED AGGREGATE SIZE NO 2	1	TON	2015		376	2391
00100	ASPHALT SEAL AGGREGATE	1	TON	7		1	8
00103	ASPHALT SEAL COAT	1	TON	1		1	2
00217	CL4 ASPH BASE 1.00D PG64-22	1	TON	1972	383		2355
00461	CULVERT PIPE-15 IN	2	LF	88			88
00462	CULVERT PIPE-18 IN	2	LF	12		24	36
00464	CULVERT PIPE-24 IN	2	LF	75			75
01310	REMOVE PIPE		LF	30		4	34
01480	CURB BOX INLET TYPE B	2	EACH	2			2
01705	REMOVE CURB & GUTTER BOX INLET		EACH	2			2
01921	STANDARD BARRIER MEDIAN TYPE 4		SQYD	143			143
01939	MOUNTABLE MEDIAN TYPE 3		SQYD	544			544
01982	DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE		EACH	4		4	8
01983	DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL YELLOW		EACH	16			16
02091	REMOVE PAVEMENT		SQYD			124	124
02200	ROADWAY EXCAVATION		CUYD	1482		99	1581
02351	GUARDRAIL-STEEL W BEAM-S FACE		LF	587.5		150	737.5
02367	GUARDRAIL END TREATMENT TYPE 1		EACH	1			1
02369	GUARDRAIL END TREATMENT TYPE 2A		EACH	1			1
02381	REMOVE GUARDRAIL		LF	218		163	381
02562	TEMPORARY SIGNS		SQFT	384	48	48	480
02569	DEMOBILIZATION		LS	1			1
02602	FABRIC-GEOTEXTILE CLASS 1	1	SQYD	3533		633	4166
02604	FABRIC-GEOTEXTILE CLASS 1A	1	SQYD	3848		376	4224
02625	REMOVE HEADWALL		EACH	1		1	2
02650	MAINTAIN & CONTROL TRAFFIC		LS	1			1
02671	PORTABLE CHANGEABLE MESSAGE SIGN		EACH	6			6
02701	TEMP SILT FENCE		LF	2500			2500
02703	SILT TRAP TYPE A		EACH	5			5
02704	SILT TRAP TYPE B		EACH	5			5
02705	SILT TRAP TYPE C		EACH	5			5
02706	CLEAN SILT TRAP TYPE A		EACH	5			5
02707	CLEAN SILT TRAP TYPE B		EACH	5			5
02708	CLEAN SILT TRAP TYPE C		EACH	5			5
02726	STAKING		LS	1			1
02775	ARROW PANEL		EACH	2			2
03225	TUBULAR MARKERS		EACH	45			45
04701	POLE 40 FT MTG HT	5	EACH	5			5
04725	BRACKET 15 FT	5	EACH	5			5
04740	POLE BASE	5	EACH	5			5
04750	TRANSFORMER BASE	5	EACH	5			5
04761	LIGHTING CONTROL EQUIPMENT	5	EACH	1			1
04780	FUSED CONNECTOR KIT	5	EACH	10			10
04797	CONDUIT-3 IN	5	LF	1120			1120
04820	TRENCHING AND BACKFILLING	5	LF	4145			4145
04832	WIRE-NO. 12	5	LF	825			825
04860	CABLE-NO. 8/3C DUCTED	5	LF	3025			3025
05950	EROSION CONTROL BLANKET		SQYD	75			75
05952	TEMP MULCH		SQYD	1850			1850
05953	TEMP SEEDING AND PROTECTION		SQYD	1850			1850
05963	INITIAL FERTILIZER		TON	1			1
05964	MAINTENANCE FERTILIZER		TON	1			1
05985	SEEDING AND PROTECTION		SQYD	1850			1850

ITEM	DESCRIPTION	NOTE(S)	UNIT	US 41	STRATMAN ROAD	WOLF HILLS ROAD	TOTAL PROJECT
05992	AGRICULTURAL LIMESTONE		TON	1			1
06406	SBM ALUM SHEET SIGNS .080 IN	3	SQFT	344			344
06407	SBM ALUM SHEET SIGNS .125 IN	3	SQFT	175			175
06410	STEEL POST TYPE 1	3	LF	823			823
06490	CLASS A CONCRETE FOR SIGNS	3	CUYD	2			2
06568	PAVE MARKING-THERMO STOP BAR-24IN	4	LF		20	26	46
06569	PAVE MARKING-THERMO CROSS-HATCH	4	SQFT	3306	1129	2302	6737
06574	PAVE MARKING-THERMO CURV ARROW	4	EACH	13	2	2	17
06576	PAVE MARKING-THERMO ONLY	4	EACH	1	1	1	3
20191ED	OBJECT MARKER TY 3		EACH	1			1
20391NS835	ELECTRICAL JUNCTION BOX TYPE A	5	EACH	8			8
21289ED	LONGITUDINAL EDGE KEY		LF	1786		153	1939
21596ND	GMSS TYPE D	3	EACH	6			6
23839EC	REMOVE CONCRETE MEDIAN		SQYD	58.1		23.2	81.3
24589ED	LED LUMINAIRE	5	EACH	5			5
24631EC	BARCODE SIGN INVENTORY	3	EACH	91			91
24679ED	PAVE MARK THERMO CHEVRON	4	SQFT	745	157	324	1226
24969ED	LONGITUDINAL SAW CUT		LF	1786		153	1939
24889EC	PAVE MARKING-THERMO U-TURN	4	EACH	9			9
26130ED	SLOPED AND MITERED HEADWALL-15 IN	2	EACH	1			1
26131ED	SLOPED AND MITERED HEADWALL-18 IN	2	EACH			1	1
26132ED	SLOPED AND MITERED HEADWALL-24 IN	2	EACH	2			2

NOTES

1 CARRIED OVER FROM PAVING SUMMARY

2 CARRIED OVER FROM PIPE DRAINAGE SUMMARY

3 CARRIED OVER FROM SIGNAGE SUMMARY

4 CARRIED OVER FROM STRIPING SUMMARY

5 CARRIED OVER FROM LIGHTING PLANS

6 ITEMS TO BE PAID FOR BY FD05 ARE SHOWN IN TABLE BELOW

ITEM	DESCRIPTION	NOTE(S)	UNIT	US 41	STRATMAN ROAD	WOLF HILLS ROAD	TOTAL PROJECT
00190	LEVELING & WEDGING PG64-22	6	TON	131	4	8	143
00333	CL4 ASPH SURF 0.50A PG64-22	6	TON	1307	35	75	1417
00356	ASPHALT MATERIAL FOR TACK	6	TON	6	1	1	8
02676	MOBILIZATION FOR MILL & TEXT	6	LS	1			1
02677	ASPHALT PAVE MILLING & TEXTURING	6	TON	1056	35	26	1117
02696	SHOULDER RUMBLE STRIPS	6	LF	2600			2600
06542	PAVE STRIPING-THERMO-6 IN W	6	LF	7719	235	225	8179
06543	PAVE STRIPING-THERMO-6 IN Y	6	LF	2586	294	268	3148
20071EC	JOINT ADHESIVE	6	LF	1984	154	167	2305
24785EC	FIBER REINFORCEMENT FOR HMA	6	TON	1307	35	75	1417

PAVING AREAS

ITEM	NOTES	US 41	WOLF HILLS ROAD	STRATMAN ROAD	TOTAL PROJECT
		SQUARE YARDS			
3.5" CL4 ASPH BASE 1.00D PG64-22		3067	599		3666
3.5" CL4 ASPH BASE 1.00D PG64-22		3113	604		3717
4.5" CL4 ASPH BASE 1.00D PG64-22		3159	609		3768
6" CRUSHED STONE BASE		3218	616		3834
FABRIC-GEOTEXTILE CLASS 1		3533	633		4166
12" CRUSHED AGGREGATE SIZE NO 2		3533	623		4156
FABRIC-GEOTEXTILE CLASS 1A		3848	669		4517
CRUSHED STONE SHOULDERS		315	36		351
CRUSHED STONE BASE WEDGES (CY)	1	17	1	2	20
ASPHALT SEAL COAT		315	36		351
ASPHALT SEAL AGGREGATE		315	36		351
QUANTITY TO BE PAID FOR BY FD05					
1.5" CL4 ASPH SURF 0.50A PG64-22		15837	907	423	17167
FIBER REINFORCEMENT FOR HMA		15837	907	423	17167

1. DEPTH IS AVERAGE ACROSS WEDGE

**ALL QUANTITIES CARRIED TO GENERAL SUMMARY*

PAVING SUMMARY

ITEM CODE	ITEM	NOTES	UNIT	US 41	STRATMAN ROAD	WOLF HILLS ROAD	TOTAL PROJECT
00003	CRUSHED STONE BASE	1	TON	1491	5	256	1752
00078	CRUSHED AGGREGATE SIZE NO 2	2	TON	2015		376	2391
00100	ASPHALT SEAL AGGREGATE	4	TON	7		1	8
00103	ASPHALT SEAL COAT	5	TON	1		1	2
00217	CL4 ASPH BASE 1.00D PG64-22	3	TON	1972	383		2355
02602	FABRIC-GEOTEXTILE CLASS 1		SQYD	3533		633	4166
02604	FABRIC-GEOTEXTILE CLASS 1A		SQYD	3848		376	4224

**ALL QUANTITIES CARRIED TO GENERAL SUMMARY*

1. ESTIMATED AT 115 LBS PER SQYD PER INCH OF DEPTH
2. ESTIMATED AT 95 LBS PER SQYD PER INCH OF DEPTH
3. ESTIMATED AT 110 LBS PER SQYD PER INCH OF DEPTH
4. ESTIMATED AT 20 LBS PER SQYD (2 APPLICATIONS)
5. ESTIMATED AT 0.4 LBS PER SQYD (2 APPLICATIONS)

PAVING SUMMARY

ITEM CODE	ITEM	NOTES	UNIT	US 41	STRATMAN ROAD	WOLF HILLS ROAD	TOTAL PROJECT
00190	LEVELING & WEDGING PG64-22	7	TON	131	4	8	143
00333	CL4 ASPH SURF 0.50A PG64-22	7	TON	1382	35	75	1492
00356	ASPHALT MATERIAL FOR TACK	6,7	TON	6	1.0	1	8
02677	ASPHALT PAVE MILLING & TEXTURING	7	TON	1056	35	26	1117
20071EC	JOINT ADHESIVE	7	LF	1984	154	167	2305
24785EC	FIBER REINFORCEMENT FOR HMA	7	TON	1382	35	75	1492

6. ESTIMATED AT 0.84 LBS PER SQYD
7. ITEMS TO BE PAID FOR BY FD05 ARE SHOWN IN TABLE BELOW

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

DRAWING TITLE: PAVING SUMMARY SHEET

ITEM NO. 02-0935.00
SHEET NO. R5
COUNTY OF HENDERSON

OpenRoads Designer v10.16.2.267
USER: rsb73680
FILE NAME: C:\USERS\UST72680\DOCUMENTS\HSIP\HENDERSON RD\TDOT\SHEETS\R5 - PAVING SUMMARY.DGN

PIPE DRAINAGE SUMMARY											
	SKEW	COVER HEIGHT	DESIGN pH LEVEL	CULVERT PIPE - 15 IN	CULVERT PIPE- 18 IN	CULVERT PIPE- 24 IN	CURB BOX INLET TY: B	SLOPED AND MITERED HEADWALL- 15IN	SLOPED AND MITERED HEADWALL- 18IN	SLOPED AND MITERED HEADWALL- 24IN	REMARKS
ITEM CODE				00461	00462	00464	01480	26130ED	26131ED	26132ED	
UNIT TO BID		FT		LF	LF	LF	EACH	EACH	EACH	EACH	
US 41											
101+79	00°49'41"	6.4			12		1				
105+04	03°07'28"	4.6		4		75	1				
109+44	86°27'42"	3.8		10				1			
114+30	90°00'00"	6.0		74						2	
WOLF HILLS ROAD											
301+08	14°02'32"	3.7			24				1		
TOTALS				**88**	**36**	**75**	**2**	**1**	**1**	**2**	

**ALL QUANTITIES CARRIED TO GENERAL SUMMARY*

STRIPING TABLE							
ALIGNMENT	BEGIN STATION	BEGIN OFFSET	END STATION	END OFFSET	DESCRIPTION	UNIT	QUANTITY
US 41	100+40.00	14.42' RT	100+72.42	14.30	6" SOLID YELLOW	LF	32
US 41	101+01.41	14.20' RT	105+17.43	0.00	6" SOLID YELLOW	LF	434
US 41	105+02.23	18.56' RT	108+83.74	28.85	6" SOLID YELLOW	LF	385
US 41	109+06.71	0.00'	114+17.30	0.00	6" SOLID YELLOW	LF	576
US 41	114+05.75	61.09' RT	115+50	65.00	6" SOLID YELLOW	LF	239
US 41	100+40	14.71' LT	101+04	-15.53	6" SOLID YELLOW	LF	64
US 41	101+08.66	0.00'	105+42.72	-19.24	6" SOLID YELLOW	LF	467
US 41	105+59.91	19.78' LT	109+52.27	-44.25	6" SOLID YELLOW	LF	389
US 41	109+06.71	0.00'	114+17.54	0.00	6" SOLID YELLOW	LF	561
US 41	114+45.05	61.80' LT	115+50.00	-61.41	6" SOLID YELLOW	LF	105
							TOTAL
							2586
US 41	100+40.00	39.40' RT	108+72.59	69.87	6" SOLID WHITE	LF	852
US 41	103+04.44	15.09' RT	105+49.95	0.00	6" SOLID WHITE	LF	458
US 41	109+35.85	53.32' RT	115+50.00	88.00	6" SOLID WHITE	LF	678
US 41	108+83.32	0.00'	108+83.32	28.85	6" SOLID WHITE	LF	29
US 41	109+56.91	30.76' RT	114+05.75	61.09	6" SOLID WHITE	LF	456
US 41	100+40.00	37.71' LT	105+26.17	-60.00	6" SOLID WHITE	LF	487
US 41	100+76.91	0.00'	103+92.70	-17.40	6" SOLID WHITE	LF	320
US 41	105+76.86	73.11' LT	115+50.00	-84.10	6" SOLID WHITE	LF	976
US 41	108+83.08	0.00'	112+52.28	-61.77	6" SOLID WHITE	LF	383
US 41	114+42.85	1.65' LT	114+45.05	-61.80	6" SOLID WHITE	LF	60
WOLF HILLS RD	300+70.00	13.11' RT	301+78.45	40.25	6" SOLID WHITE	LF	116
WOLF HILLS RD	300+70.00	12.25' LT	301+64.71	-25.00	6" SOLID WHITE	LF	109
STRATMAN RD	201+39.10	12.00' RT	202+23.14	22.55	6" SOLID WHITE	LF	75
STRATMAN RD	201+39.10	12.00' LT	202+28.87	-24.31	6" SOLID WHITE	LF	160
							TOTAL
							4924
STRATMAN RD	201+39.10	0.00	202+35.18	0.00	6" DOUBLE SOLID YELLOW	LF	147
WOLF HILLS RD	300+70.00	0.00	301+80.83	0.00	6" DOUBLE SOLID YELLOW	LF	134
							TOTAL
							281
US 41	100+40.00	26.16' RT	115+50.00	77.00	6" DASHED WHITE 10X30	LF	1528
US 41	100+40.00	26.10' LT	115+50.00	-72.60	6" DASHED WHITE 10X30	LF	1491
							TOTAL
							3020

STRIPING SUMMARY				
ITEM CODE	DESCRIPTION	UNIT	QUANTITY	NOTES
06511	PAVE STRIPING-TEMP PAINT-6 IN	LF	10210	
06542	PAVE STRIPING-THERMO-6 IN W	LF	8179	PAID FOR BY FD05
06543	PAVE STRIPING-THERMO-6 IN Y	LF	3148	PAID FOR BY FD05
06568	PAVE MARKING-THERMO STOP BAR-24 IN	LF	46	
06569	PAVE MARKING-THERMO CROSS-HATCH	SQFT	6737	
06574	PAVE MARKING-THERMO CURV ARROW	EACH	23	
06576	PAVE MARKING-THERMO ONLY	EACH	3	
24889EC	PAVE MARKING-THERMO U-TURN	EACH	9	

ASPHALT PAVE MILLING & OVERLAY (PAID FOR BY FD05)

FULL DEPTH PAVEMENT

FLEXIBLE DELINEATORS

MOUNTABLE MEDIAN TYPE 3

RT. STA. 101+04 TO RT. STA. 104+40
CONSTRUCT 255 SQYD MOUNTABLE MEDIAN TYPE 3.

LT. STA. 101+13 TO RT. STA. 104+40
CONSTRUCT 165 SQYD MOUNTABLE MEDIAN TYPE 3.

RT. STA. 105+03 TO RT. STA. 105+79
CONSTRUCT 69 SQYD MOUNTABLE MEDIAN TYPE 3.

LT. STA. 105+64 TO LT. STA. 105+79
CONSTRUCT 20 SQYD MOUNTABLE MEDIAN TYPE 3.

STANDARD BARRIER MEDIAN TYPE 4

RT. STA. 104+40 TO RT. STA. 105+11
CONSTRUCT 2 SQYD STANDARD BARRIER MEDIAN TYPE 4.

LT. STA. 104+40 TO LT. STA. 105+16
CONSTRUCT 53 SQYD STANDARD BARRIER MEDIAN TYPE 4.

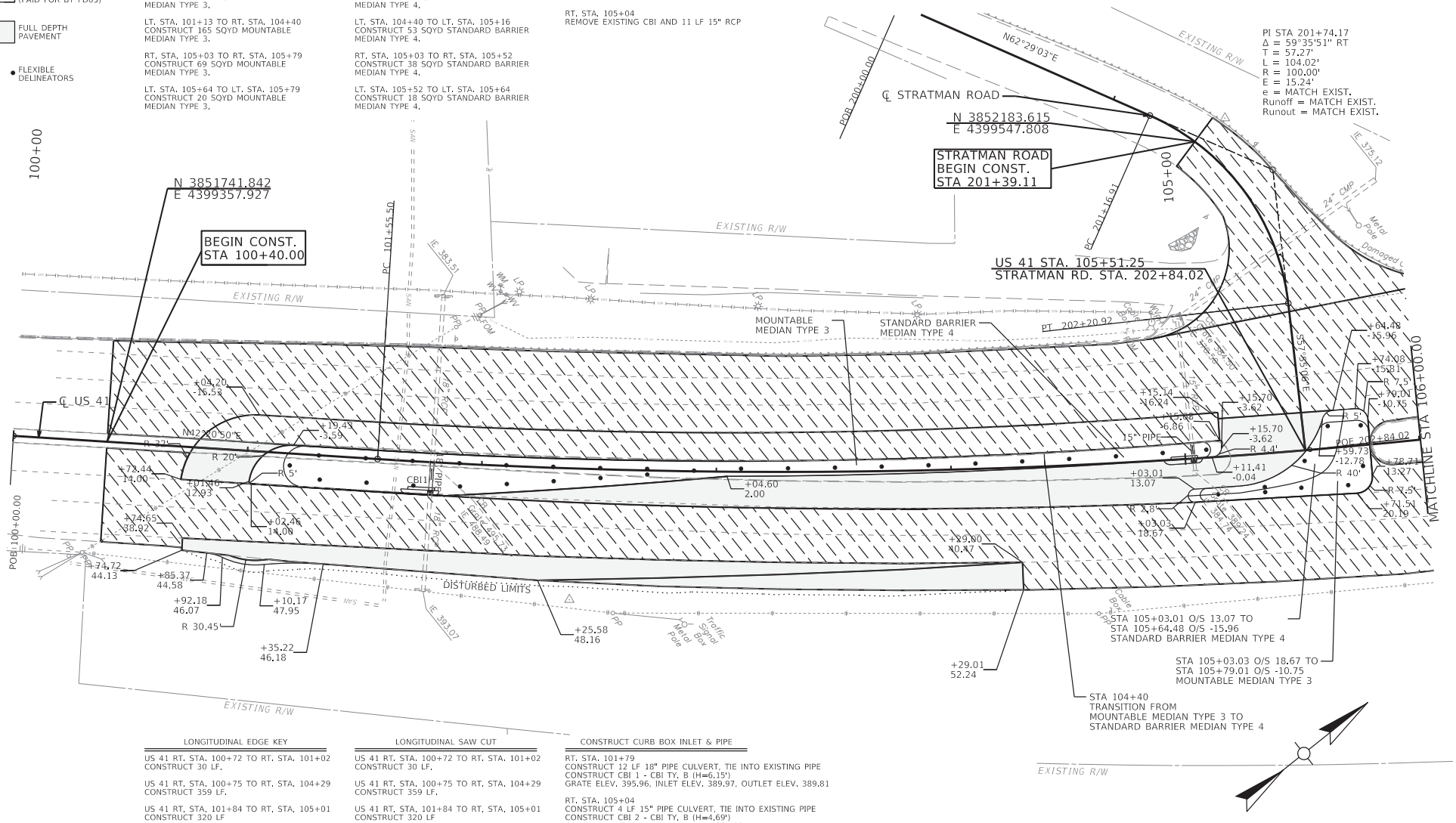
RT. STA. 105+03 TO RT. STA. 105+52
CONSTRUCT 38 SQYD STANDARD BARRIER MEDIAN TYPE 4.

LT. STA. 105+52 TO LT. STA. 105+64
CONSTRUCT 18 SQYD STANDARD BARRIER MEDIAN TYPE 4.

REMOVE CURB BOX INLET & PIPE

RT. STA. 101+79
REMOVE EXISTING CBI AND 15 LF 18" RCP

RT. STA. 105+04
REMOVE EXISTING CBI AND 11 LF 15" RCP



LONGITUDINAL EDGE KEY

US 41 RT. STA. 100+72 TO RT. STA. 101+02
CONSTRUCT 30 LF.

US 41 RT. STA. 100+75 TO RT. STA. 104+29
CONSTRUCT 359 LF.

US 41 RT. STA. 101+84 TO RT. STA. 105+01
CONSTRUCT 320 LF

US 41 LT. STA. 105+13 TO RT. STA. 105+66
CONSTRUCT 52 LF

LONGITUDINAL SAW CUT

US 41 RT. STA. 100+72 TO RT. STA. 101+02
CONSTRUCT 30 LF.

US 41 RT. STA. 100+75 TO RT. STA. 104+29
CONSTRUCT 359 LF.

US 41 RT. STA. 101+84 TO RT. STA. 105+01
CONSTRUCT 320 LF

US 41 LT. STA. 105+13 TO RT. STA. 105+66
CONSTRUCT 52 LF

CONSTRUCT CURB BOX INLET & PIPE

RT. STA. 101+79
CONSTRUCT 12 LF 18" PIPE CULVERT, TIE INTO EXISTING PIPE
CONSTRUCT CBI 1 - CBI TY, B (H=6.15')
GRATE ELEV. 395.96, INLET ELEV. 389.97, OUTLET ELEV. 389.81

RT. STA. 105+04
CONSTRUCT 4 LF 15" PIPE CULVERT, TIE INTO EXISTING PIPE
CONSTRUCT CBI 2 - CBI TY, B (H=4.69')
GRATE ELEV. 389.04, OUTLET ELEV. 384.23

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: PLAN SHEET

HORIZONTAL SCALE
SCALE: 1"=20'

0' 20' 40' 80'

STA 100+00 TO 106+00

ITEM NO. 02-0935.00
COUNTY OF HENDERSON
SHEET NO. R8

OpenRoads Designer v10.16.2.267
USER: usj725830
FILE NAME: C:\BMS\WSP-US-PW-02\D0833597\R8 - PLAN SHEETS.DGN

ASPHALT PAVE MILLING & OVERLAY (PAID FOR BY FD05)

FULL DEPTH PAVEMENT

REMOVE PAVEMENT

REMOVE GUARDRAIL

WOLF HILLS ROAD RT. STA. 300+41 TO US 41 RT. STA. 109+89 REMOVE 163 LF.

US 41 RT. STA. 109+85 TO STA. 112+00 REMOVE 218 LF.

GUARDRAIL

US 41 RT. STA. 109+28 CONSTRUCT 264 LF GUARDRAIL - STEEL W BEAM - S FACE WITH 1-GUARDRAIL END TREATMENT TYPE 1.

WOLF HILLS ROAD RT. STA. 300+28 TO US 41 RT. STA. 109+89 CONSTRUCT 150 LF GUARDRAIL - STEEL W BEAM. TIE INTO EXISTING GUARDRAIL.

REMOVE CONCRETE MEDIAN

US 41 RT. STA. 108+43 TO RT. STA. 108+78 REMOVE CONCRETE MEDIAN APPROX. 58.1 SY.

WOLF HILLS ROAD LT. STA. 301+22 TO LT. STA. 301+77 REMOVE CONCRETE MEDIAN. APPROX. 23.2 SY.

MOUNTABLE MEDIAN TYPE 3

US 41 LT. STA. 108+71 TO LT. STA. 109+50. CONSTRUCT 31 SQYD MOUNTABLE MEDIAN TYPE 3.

US 41 RT. STA. 108+71 TO RT. STA. 108+81. CONSTRUCT 4 SQYD MOUNTABLE MEDIAN TYPE 3.

STANDARD BARRIER MEDIAN TYPE 4

US 41 LT. STA. 108+69 TO LT. STA. 109+50. CONSTRUCT 28 SQYD STANDARD BARRIER MEDIAN TYPE 4.

US 41 RT. STA. 108+69 TO RT. STA. 108+69. CONSTRUCT 4 SQYD STANDARD BARRIER MEDIAN TYPE 4.

REMOVE HEADWALL AND PIPE

US 41 LT. STA. 109+44. REMOVE EXISTING 15" HEADWALL AND 4 LF OF EXISTING PIPE.

WOLF HILLS ROAD RT. STA. 301+08. REMOVE EXISTING 18" HEADWALL AND 4 LF OF EXISTING PIPE.

LONGITUDINAL EDGE KEY

US 41 RT. STA. 107+46 TO RT. STA. 108+96 CONSTRUCT 154 LF.

US 41 RT. STA. 107+73 TO RT. STA. 112+00 CONSTRUCT 285 LF.

US 41 RT. STA. 108+96 TO RT. STA. 109+91 CONSTRUCT 68 LF.

US 41 RT. STA. 109+50 TO RT. STA. 110+91 CONSTRUCT 140 LF.

WOLF HILLS ROAD RT. STA. 300+69 TO RT. STA. 301+81 CONSTRUCT 93 LF.

WOLF HILLS ROAD RT. STA. 301+22 TO RT. STA. 301+79 CONSTRUCT 60 LF.

LONGITUDINAL SAW CUT

US 41 RT. STA. 107+46 TO RT. STA. 108+96 CONSTRUCT 154 LF.

US 41 RT. STA. 107+73 TO RT. STA. 112+00 CONSTRUCT 285 LF.

US 41 RT. STA. 108+96 TO RT. STA. 109+91 CONSTRUCT 68 LF.

US 41 RT. STA. 109+50 TO RT. STA. 110+91 CONSTRUCT 140 LF.

WOLF HILLS ROAD RT. STA. 300+69 TO RT. STA. 301+81 CONSTRUCT 93 LF.

WOLF HILLS ROAD RT. STA. 301+22 TO RT. STA. 301+79 CONSTRUCT 60 LF.

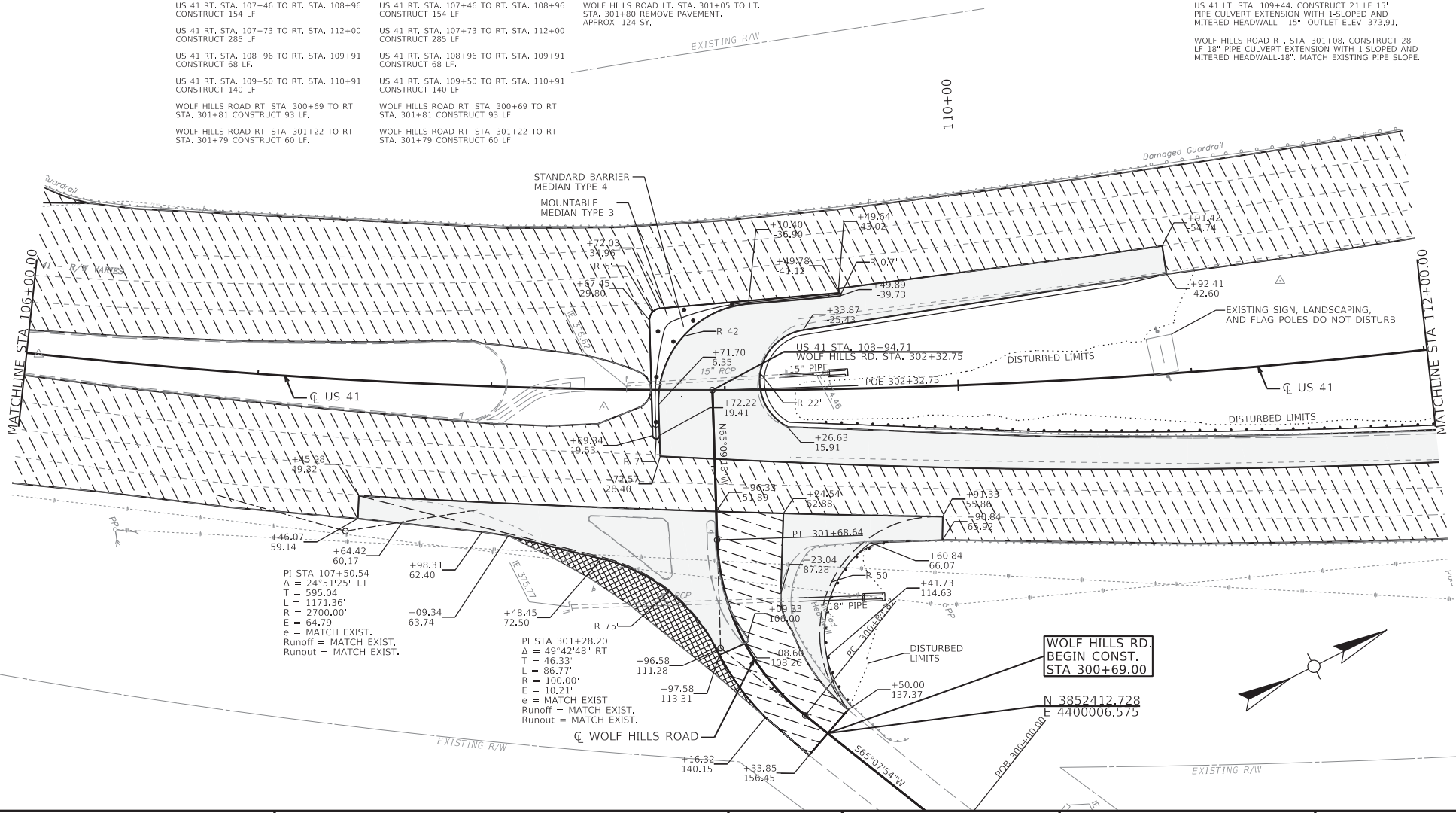
REMOVE PAVEMENT

WOLF HILLS ROAD LT. STA. 301+05 TO LT. STA. 301+80 REMOVE PAVEMENT. APPROX. 124 SY.

CONSTRUCT HEADWALL AND PIPE CULVERT

US 41 LT. STA. 109+44. CONSTRUCT 21 LF 15" PIPE CULVERT EXTENSION WITH 1-SLOPED AND MITERED HEADWALL - 15". OUTLET ELEV. 373.91.

WOLF HILLS ROAD RT. STA. 301+08. CONSTRUCT 28 LF 18" PIPE CULVERT EXTENSION WITH 1-SLOPED AND MITERED HEADWALL-18". MATCH EXISTING PIPE SLOPE.



COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS TEAM KENTUCKY	DRAWING TITLE: PLAN SHEET	HORIZONTAL SCALE SCALE: 1"=20'	0' 20' 40' 80'	STA 106+00 TO 112+00	ITEM NO. 02-0935.00 COUNTY OF HENDERSON SHEET NO. R9

OpenRoads Designer v10.16.2.267 USER: usj725830 FILE NAME: C:\BMS\WSP-US-PW-02\D0833597\R8 - PLAN SHEETS.DGN

ASPHALT PAVE MILLING & OVERLAY (PAID FOR BY FD05)

FULL DEPTH PAVEMENT

GUARDRAIL

US 41 RT. STA. 112+00 CONSTRUCT 173.5 LF GUARDRAIL - STEEL W BEAM - S FACE WITH 1-GUARDRAIL END TREATMENT TYPE 1.

US 41 RT. STA. 114+45 CONSTRUCT 150 LF GUARDRAIL - STEEL W BEAM - S FACE WITH 1-GUARDRAIL END TREATMENT TYPE 2A, TIE INTO EXISTING GUARDRAIL.

REMOVE GUARDRAIL

US 41 RT. STA. 112+00 TO STA. 115+50 REMOVE 358 LF.

CONSTRUCT HEADWALL AND PIPE

US 41 RT. STA. 114+32. CONSTRUCT 74 LF 24" PIPE CULVERT AND 2 EA SLOPED AND MITERED HEADWALL - 24IN

LONGITUDINAL EDGE KEY

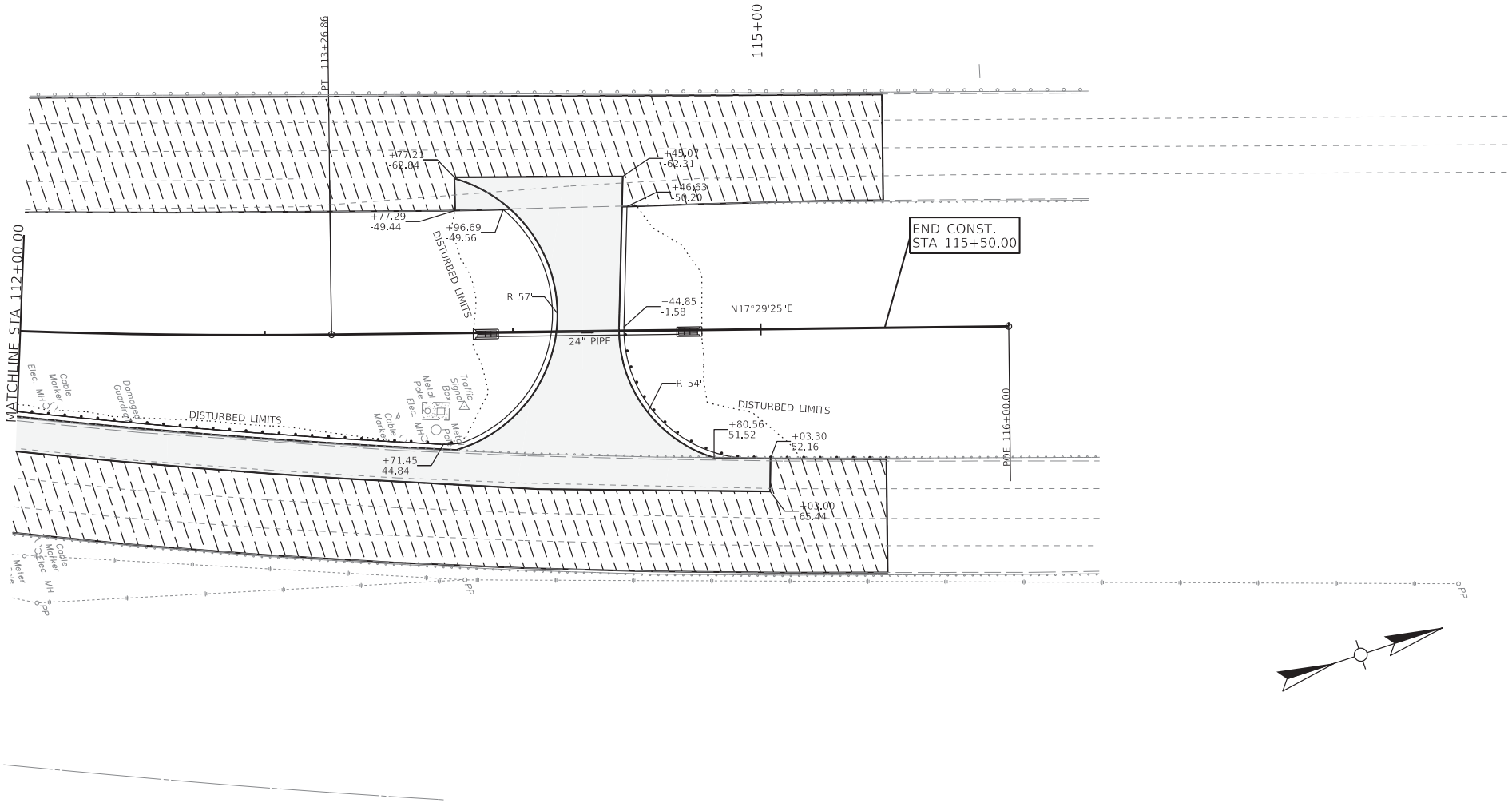
US 41 RT. STA. 112+00 TO RT. STA. 115+03. CONSTRUCT 310 LF .

US 41 LT. STA. 112+77 TO RT. STA. 114+45. CONSTRUCT 68 LF .

LONGITUDINAL SAW CUT

US 41 RT. STA. 112+00 TO RT. STA. 115+03. CONSTRUCT 310 LF .

US 41 LT. STA. 112+77 TO RT. STA. 114+45. CONSTRUCT 68 LF .



COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS TEAM KENTUCKY	DRAWING TITLE: PLAN SHEET	HORIZONTAL SCALE SCALE: 1"=20'	0' 20' 40' 80'	STA 112+00 TO 115+50	ITEM NO. 02-0935.00 COUNTY OF HENDERSON SHEET NO. R10

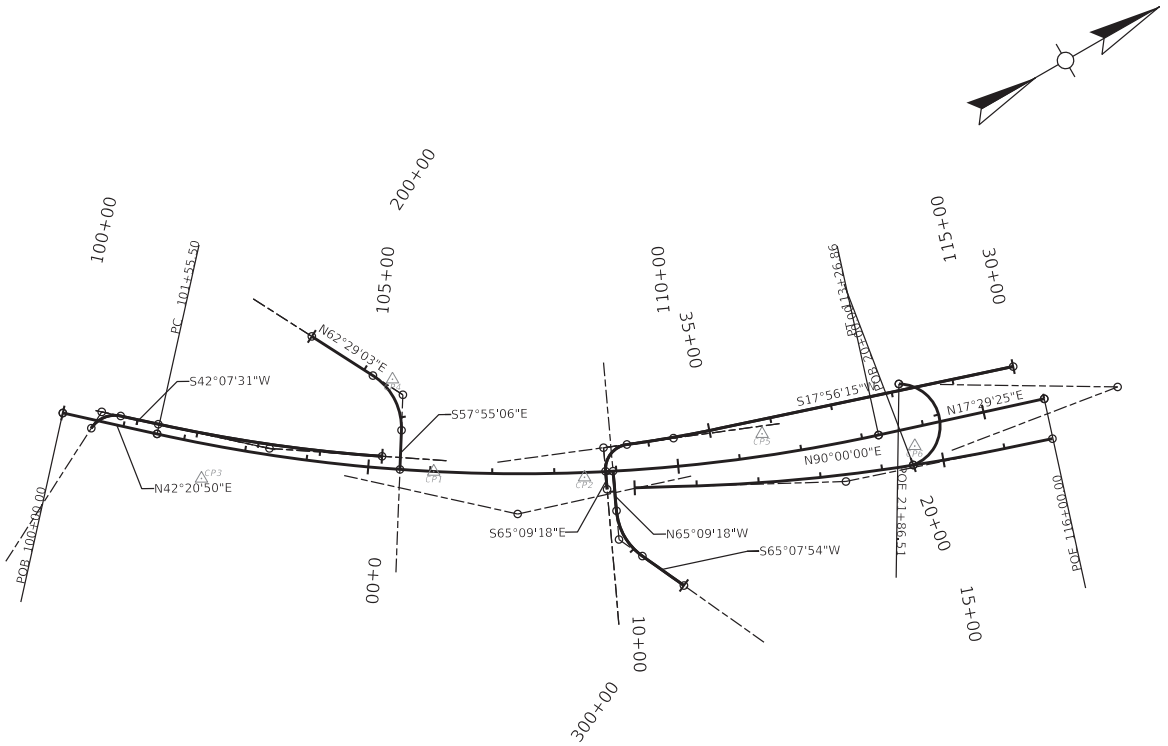
OpenRoads Designer v10.16.2.267 USER: usj725830 FILE NAME: C:\BMS\WSP-US-PW-02\D0833597\R8 - PLAN SHEETS.DGN

COORDINATE CONTROL POINTS						
		STATE PLANE COORDINATES				
POINT	DESCRIPTION	NORTH (Y)	EAST (X)	ELEV. (Z)	STATION	OFFSET
CP1	CONTROL POINT 1	3852183.62	4399709.97	387.77	106+05.73	0.05 RT
CP2	CONTROL POINT 2	3852389.73	4399838.84	381.03	108+48.42	7.68 RT
CP3	CONTROL POINT 3	3851853.50	4399533.62	396.45	102+39.16	55.96 RT
CP4	CONTROL POINT 4	3852199.94	4399548.05	379.78	105+27.58	143.83 LT
CP6	CONTROL POINT 6	3852672.71	4399920.30	376.14	111+41.35	35.79 LT
CP7	CONTROL POINT 7	3852876.36	4400059.72	377.51	113+80.09	29.69 RT

GEOMETRIC DATA - US 41			
NAME	Station	Northing (Y)	EASTING (X)
POB	100+00.00	3851712.28	4399330.98
PC	101+55.50	3851827.21	4399435.73
PI	107+50.54	3852299.30	4399780.41
PT	113+26.86	3852834.52	4400015.40
POE	116+00.00	3853095.03	4400097.49

GEOMETRIC DATA - STRATMAN ROAD			
NAME	Station	Northing (Y)	EASTING (X)
POB	200+00.00	3852121.61	4399423.51
PC	201+16.91	3852175.62	4399527.20
PI	201+74.17	3852186.85	4399577.38
PT	202+20.92	3852171.66	4399626.51
POE	202+84.02	3852138.15	4399679.97

GEOMETRIC DATA - WOLF HILLS ROAD			
NAME	Station	Northing (Y)	EASTING (X)
POB	300+00.00	3852441.98	4400069.69
PC	300+81.87	3852407.56	4399995.42
PI	301+28.20	3852398.28	4399953.38
PT	301+68.64	3852407.54	4399911.35
POE	302+32.75	3852434.48	4399853.16



US 41
PI STA 107+50.54
Δ = 24°51'25" LT
T = 595.04'
L = 1171.36'
R = 2700.00'
E = 64.79'
PC = 101+55.50
PT = 113+26.86

US 41 TO LOON
TURN LANE
PI STA 1+82.56
Δ = 08°21'11" RT
T = 182.56'
L = 364.47'
R = 2500.00'
E = 6.66'
PC/POB = 0+00
PT = 3+64.47

US 41 TO LOON
TURN LANE
PI STA 4+59.13
Δ = 69°36'22" LT
T = 31.28'
L = 54.67'
R = 45.00'
E = 9.80'
PC = 4+27.85
PT/POE = 4+82.52

STRATMAN ROAD
PI STA 201+74.17
Δ = 59°35'51" RT
T = 57.27'
L = 104.02'
R = 100.00'
E = 15.24'
PC = 201+16.91
PT = 202+20.92

WOLF HILLS ROAD
PI STA 301+28.20
Δ = 49°42'48" RT
T = 46.33'
L = 86.77'
R = 100.00'
E = 10.21'
PC = 300+81.87
PT = 301+68.64

US 41 TURN LANE
TO WOLF HILLS ROAD
PI STA 36+72.87
Δ = 87°10'51" LT
T = 38.08'
L = 60.86'
R = 40.00'
E = 15.23'
PC = 36+34.79
PT = 36+95.66

US 41 U-TURN
PI STA 23+52.45
Δ = 158°18'59" LT
T = 352.45'
L = 186.51'
R = 67.50'
E = 291.36'
PC/POB = 20+00
PT/POE = 21+86.51

US 41 NB U-TURN
TURN LANE
PI STA 13+40.95
Δ = 12°40'11" LT
T = 340.95'
L = 679.11'
R = 3071.16'
E = 18.87'
PC/POB = 10+00.00
PT/POE = 16+78.99

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: GEOMETRIC DATA

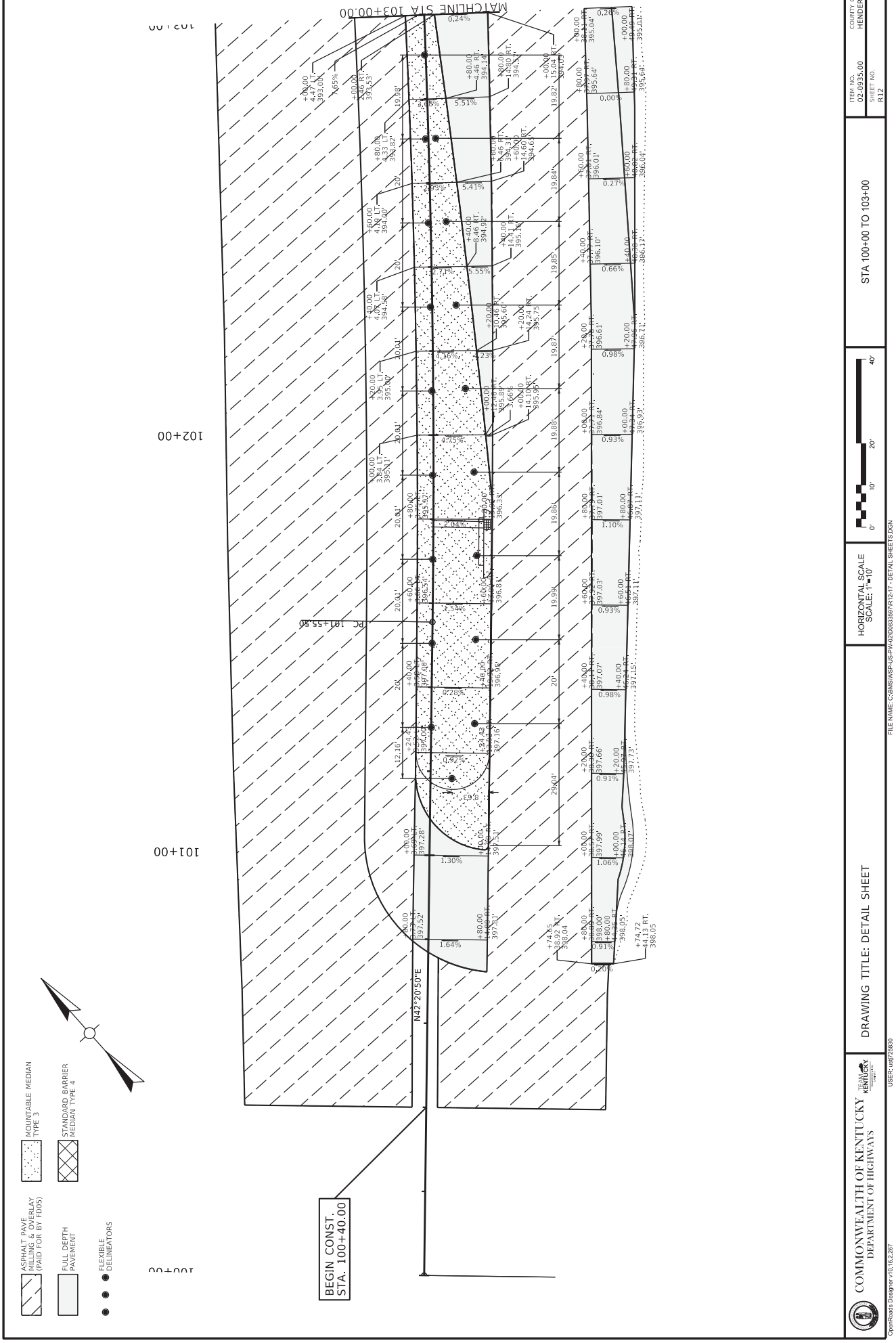
HORIZONTAL SCALE
SCALE: 1"=100'

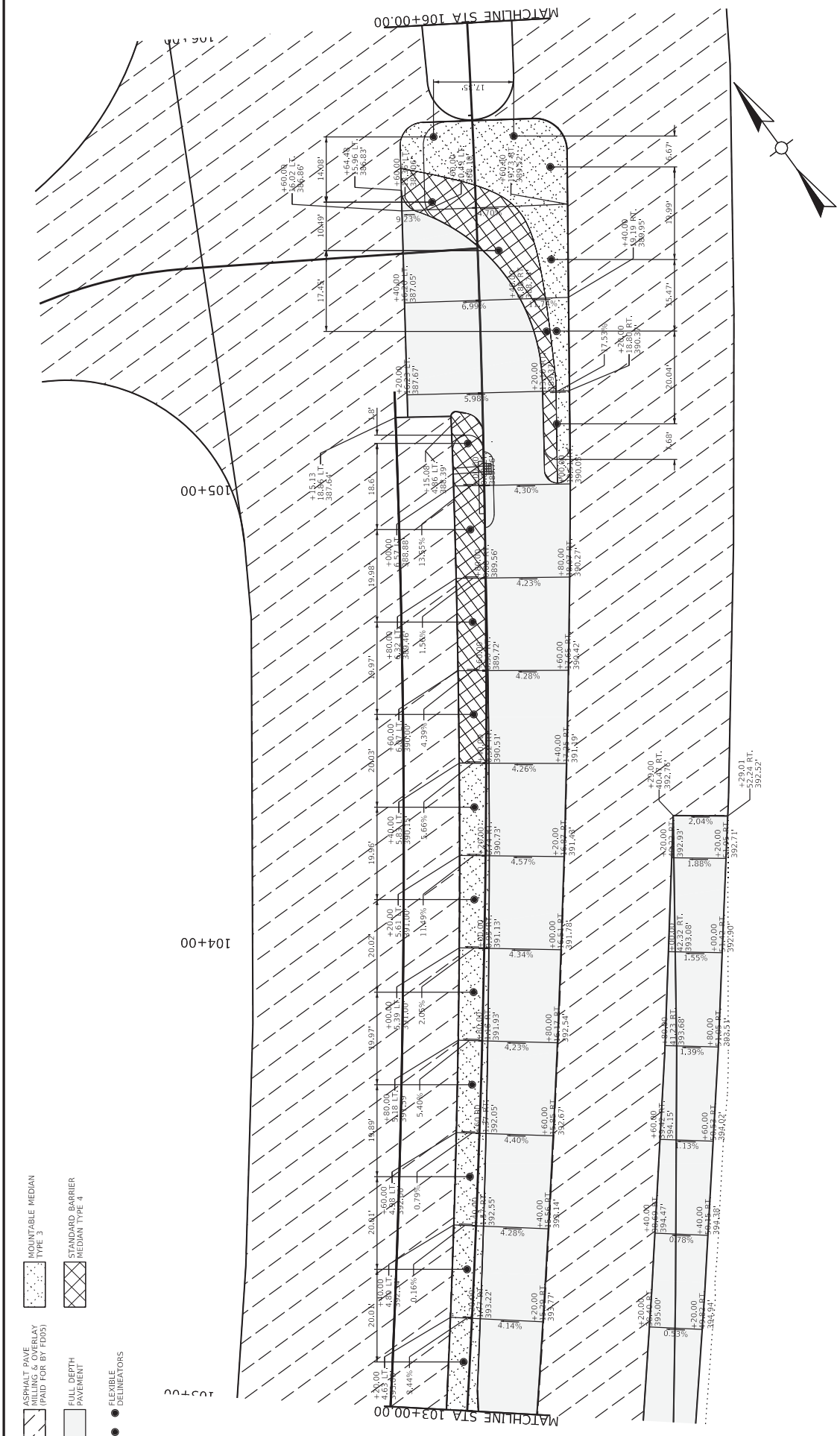
0' 100' 200' 400'

STA 100+00 TO 116+00

ITEM NO. 02-0935.00
COUNTY OF HENDERSON
SHEET NO. R11

OpenRoads Designer v10.16.2.267
USER: usj725830
FILE NAME: C:\BMS\WSP-US-PW-02\D0833597\R11 - GEOMETRIC DATA.DGN


MATCHLINE STA 103+00.00
102+00
101+00
100+00
PC 101+55.50
BEGIN CONST.
STA. 100+40.00
N42°20'50"E
ASPHALT PAVE MILLING & OVERLAY (PAID FOR BY FD05)
FULL DEPTH PAVEMENT
FLEXIBLE DELINEATORS
MOUNTABLE MEDIAN TYPE 3
STANDARD BARRIER MEDIAN TYPE 4
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
DRAWING TITLE: DETAIL SHEET
HORIZONTAL SCALE
SCALE: 1"=10'
0'
10'
20'
40'
STA 100+00 TO 103+00
ITEM NO. 02-0935.00
SHEET NO. R12
COUNTY OF HENDERSON
FILE NAME: C:\BMS\WSP-US-PW-02\D0833597\R12-17 - DETAIL SHEETS.DGN
USER: us97259830
OpenRoads Designer v10.16.2.267



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

DRAWING TITLE: DETAIL SHEET

HORIZONTAL SCALE
SCALE: 1"=10'

STA 103+00 TO 106+00

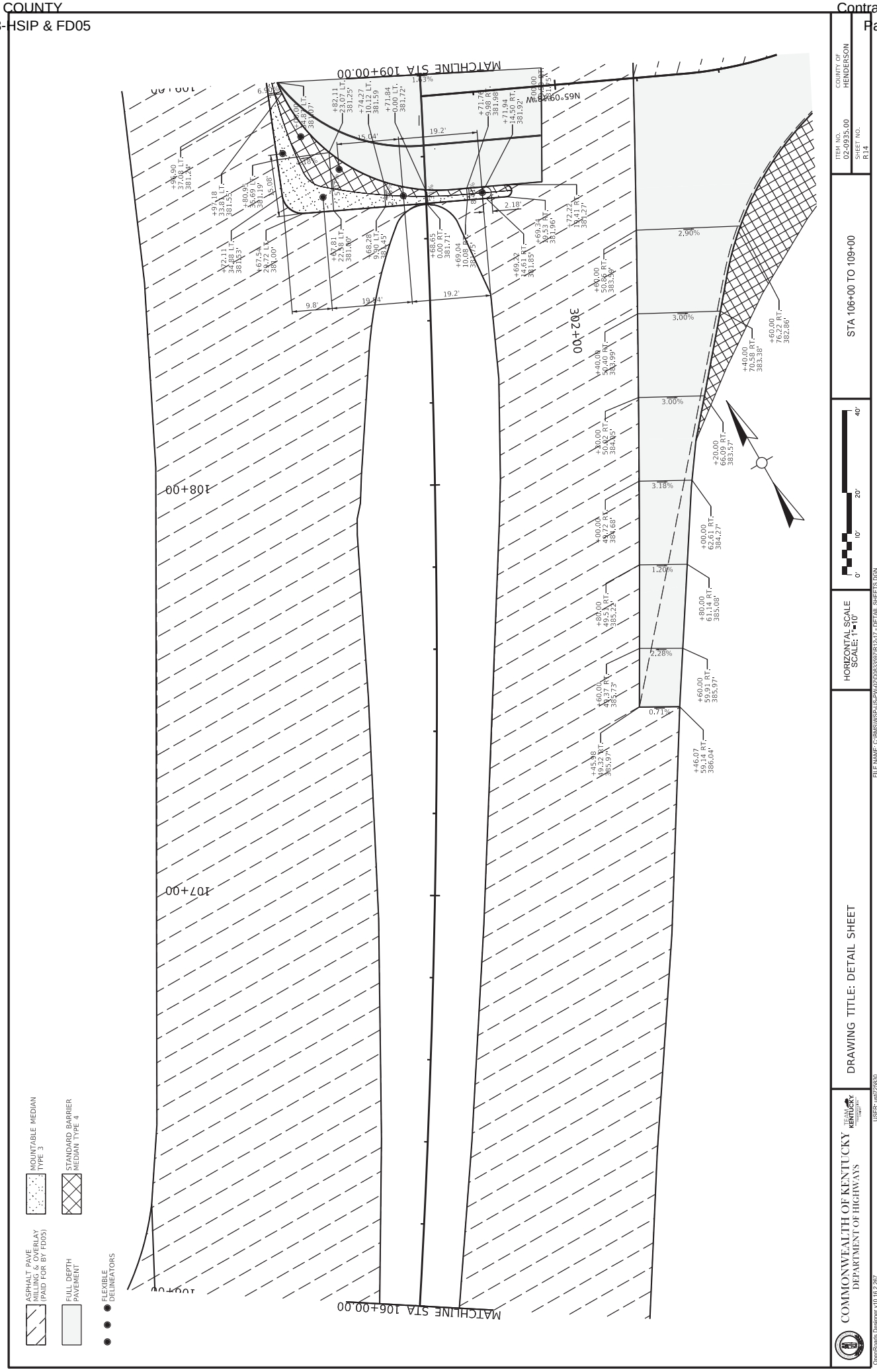
ITEM NO. 02-0935.00
SHEET NO. R13

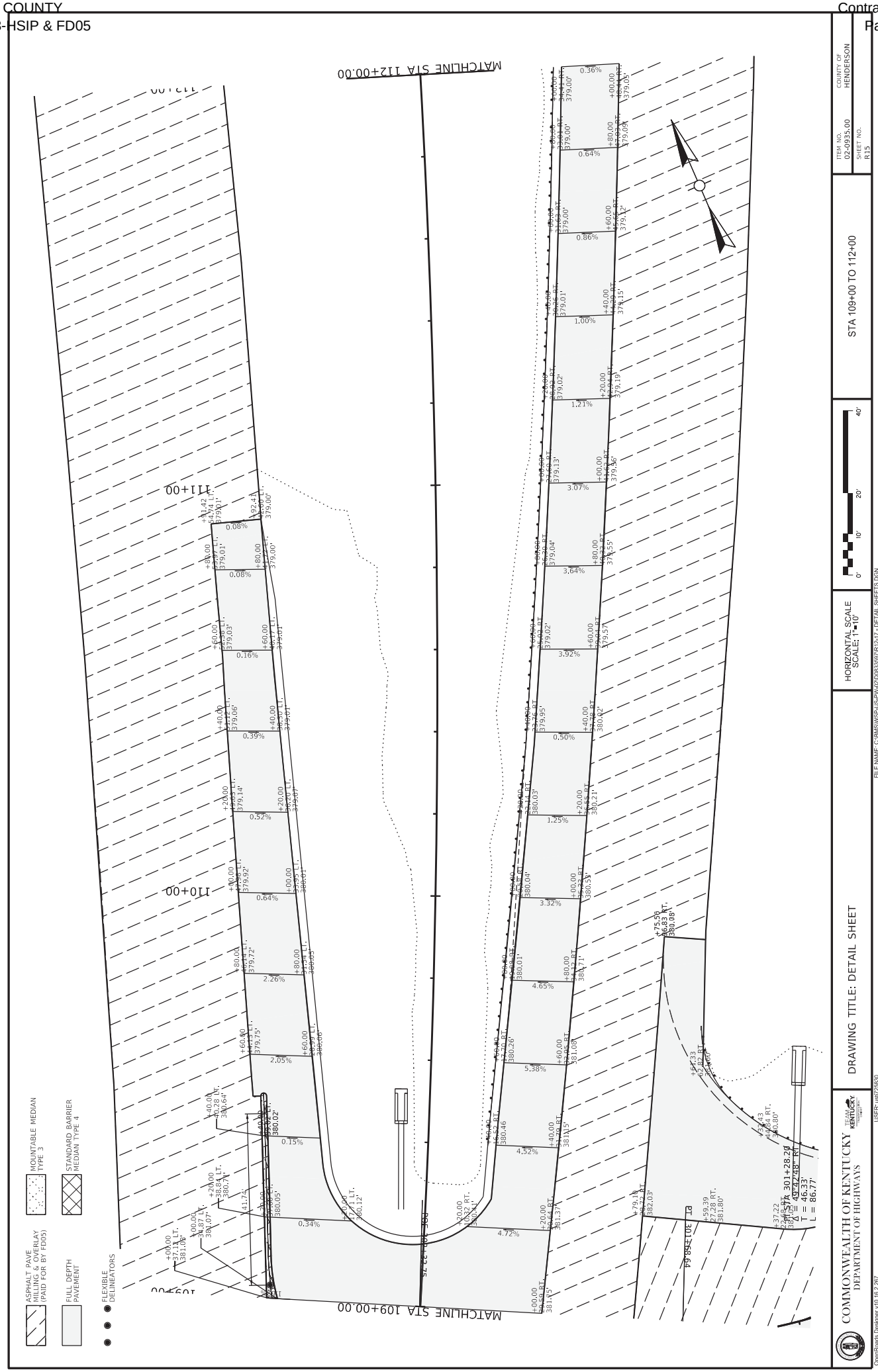
COUNTY OF HENDERSON

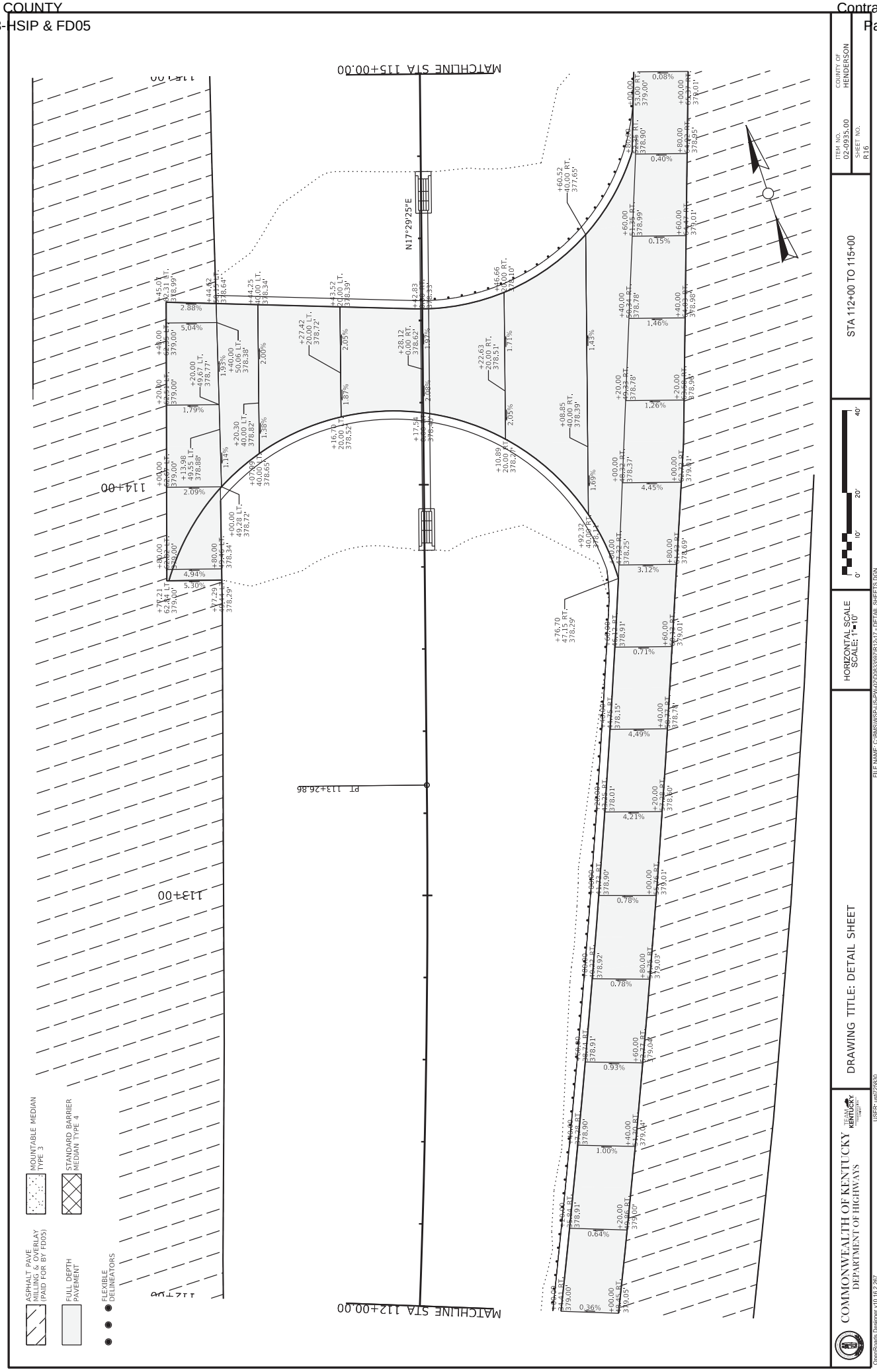
FILE NAME: C:\BMS\WSP-US-PW-02\D0833597\R10 - DETAIL SHEETS.DGN

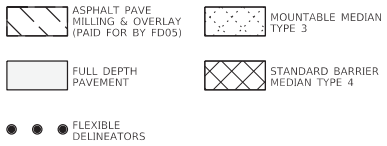
USER: usd725830

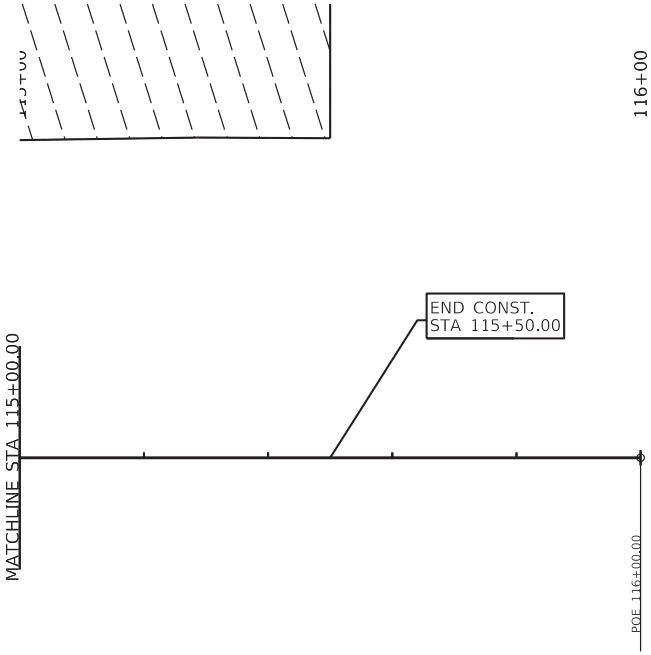
OpenRoads Designer v10.16.2.267


MATCHLINE STA 109+00.00
MATCHLINE STA 106+00.00
109+00
108+00
107+00
106+00
302+00
N65°09'59"W
ASPHALT PAVE MILLING & OVERLAY (PAID FOR BY FD05)
FULL DEPTH PAVEMENT
FLEXIBLE DELINEATORS
MOUNTABLE MEDIAN TYPE 3
STANDARD BARRIER MEDIAN TYPE 4
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
DRAWING TITLE: DETAIL SHEET
HORIZONTAL SCALE
SCALE: 1"=10'
STA 106+00 TO 109+00
ITEM NO. 02-0935.00
SHEET NO. R14
COUNTY OF HENDERSON
FILE NAME: C:\BMS\WSP-US-PW-02\D0833597\R12-17 - DETAIL SHEETS.DGN
USER: us97250830
OpenRoads Designer v10.16.2.267


MATCHLINE STA 112+00.00
MATCHLINE STA 109+00.00
111+00
110+00
109+00
ASPHALT PAVE MILLING & OVERLAY (PAID FOR BY FD05)
FULL DEPTH PAVEMENT
FLEXIBLE DELINEATORS
MOUNTABLE MEDIAN TYPE 3
STANDARD BARRIER MEDIAN TYPE 4
PI STA 301+28.20
Δ = 49°42'48" RT.
T = 46.33'
L = 86.77'
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
DRAWING TITLE: DETAIL SHEET
HORIZONTAL SCALE
SCALE: 1"=10'
0'
10'
20'
40'
STA 109+00 TO 112+00
ITEM NO. 02-0935.00
SHEET NO. R15
COUNTY OF HENDERSON
FILE NAME: C:\BMSWSP-US-PW-02\D0833597\R12-17 - DETAIL SHEETS.DGN
USER: usdj726830
OpenRoads Designer v10.16.2.267


MATCHLINE STA 115+00.00
MATCHLINE STA 112+00.00
N17°29'25"E
114+00
113+00
PT 113+26.86
MOUNTABLE MEDIAN TYPE 3
STANDARD BARRIER MEDIAN TYPE 4
ASPHALT PAVE MILLING & OVERLAY (PAID FOR BY FD05)
FULL DEPTH PAVEMENT
FLEXIBLE DELINEATORS
COUNTY OF HENDERSON
ITEM NO. 02-0935.00
SHEET NO. R16
STA 112+00 TO 115+00
HORIZONTAL SCALE SCALE; 1"=10'
0' 10' 20' 40'
DRAWING TITLE: DETAIL SHEET
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FILE NAME: C:\BMS\WSP-US-RW-02\D0833597\R12-17 - DETAIL SHEETS.DGN
USER: us972583O
OpenRoads Designer v10.16.2.267





COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: DETAIL SHEET

HORIZONTAL SCALE
SCALE: 1"=10'

0' 10' 20' 40'

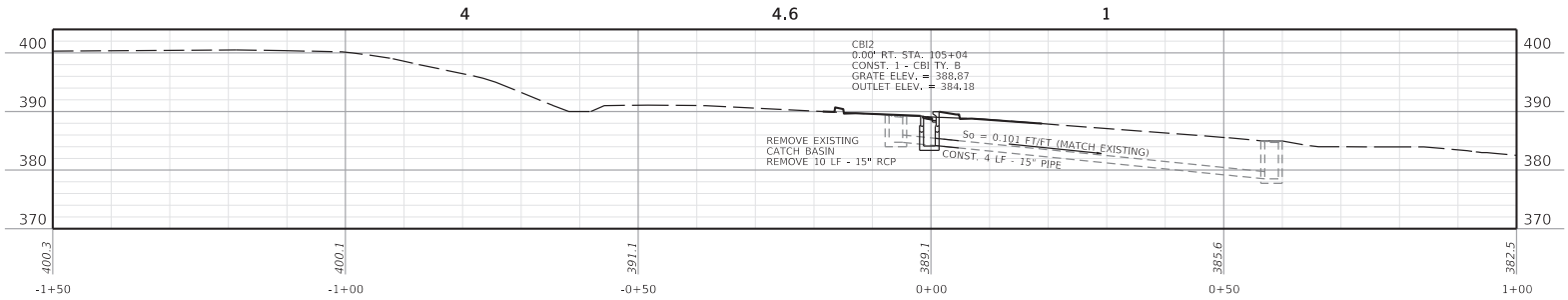
STA 115+00 TO 115+50

ITEM NO. 02-0935.00
COUNTY OF HENDERSON
SHEET NO. R17

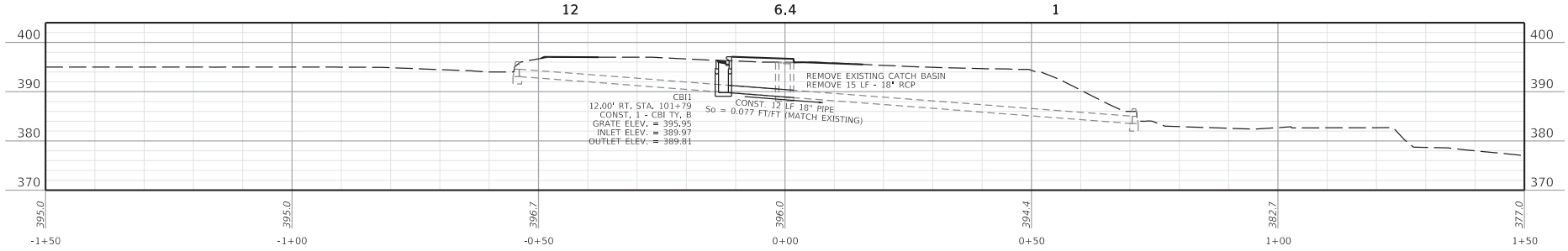
OpenRoads Designer v10.16.2.267
USER: usj725830
FILE NAME: C:\BMS\WSP-US-PW-02\D0833597\R12-17 - DETAIL SHEETS.DGN

PIPE DRAINAGE SHEET 1 of 3

CULVERT PIPE					MAX. COVER HEIGHT	DESIGN PH LEVEL	SLOPED AND MITERED HEADWALL 15 IN	SLOPED AND MITERED HEADWALL 18 IN	SLOPED AND MITERED HEADWALL 24 IN	CURB BOX INLET TY. B	
	15"	18"	24"								
LINEAR FEET					FT		EACH	EACH	EACH	EACH	



STA 105+04
@ 03°07'28" SKEW LT.



STA 101+79
@ 0°49'41" SKEW RT.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: US 41 PIPE PROFILE SHEET

HORIZONTAL SCALE: 1"=10' (0' 10' 20' 40')

VERTICAL SCALE: 1"=1' (0' 1' 2' 4')

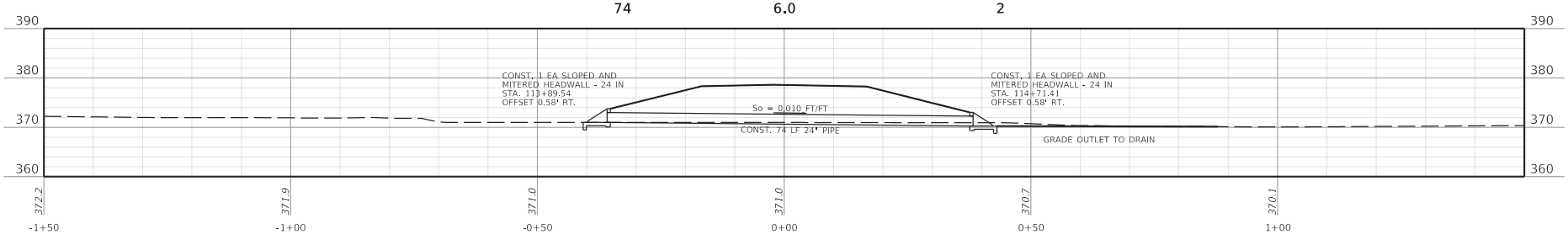
STA 101+79 TO 105+04

ITEM NO. 02-0935.00
COUNTY OF HENDERSON
SHEET NO. R18

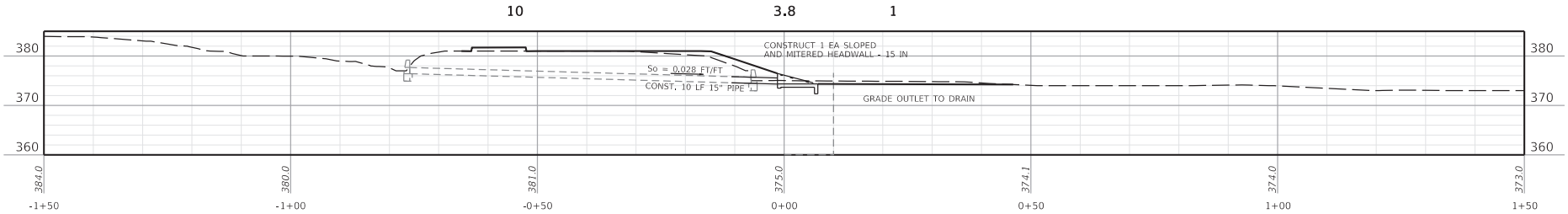
OpenRoads Designer v10.16.2.267
USER: usltj725830
FILE NAME: C:\BMS\WSP-US-PW-02\D0833597\R18 - R20 PIPE SHEETS.DGN

PIPE DRAINAGE SHEET 2 of 3

CULVERT PIPE					MAX. COVER HEIGHT	DESIGN PH LEVEL	SLOPED AND MITERED HEADWALL 15 IN	SLOPED AND MITERED HEADWALL 18 IN	SLOPED AND MITERED HEADWALL 24 IN	CURB BOX INLET TY. B	
	15"	18"	24"								
LINEAR FEET					FT		EACH	EACH	EACH	EACH	



STA 114+30
@ 90°00'00" SKEW LT.



STA 109+44
@ 86°27'42" SKEW RT.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

DRAWING TITLE: US 41 PIPE PROFILE SHEET

HORIZONTAL SCALE: 1"=10' (0' 10' 20' 40')

VERTICAL SCALE: 1"=1' (0' 1' 2' 4')

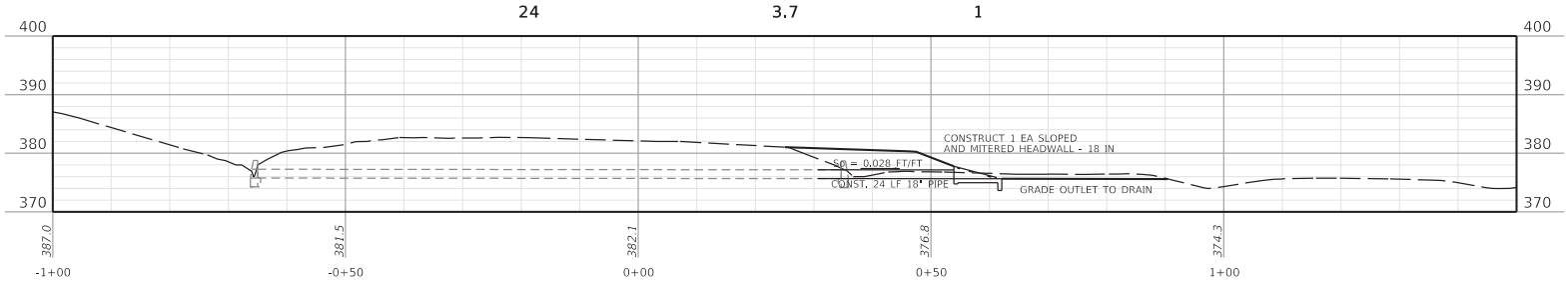
STA 109+44 TO 114+30

ITEM NO. 02-0935.00
COUNTY OF HENDERSON
SHEET NO. R19

OpenRoads Designer v10.16.2.267
USER: usl725830
FILE NAME: C:\BMS\WSP-US-PW-02\D0833597\R18 - R20 PIPE SHEETS.DGN

PIPE DRAINAGE SHEET 3 of 3

CULVERT PIPE					MAX. COVER HEIGHT	DESIGN PH LEVEL	SLOPED AND MITERED HEADWALL 15 IN	SLOPED AND MITERED HEADWALL 18 IN	SLOPED AND MITERED HEADWALL 24 IN	CURB BOX INLET TY. B	
	15"	18"	24"								
LINEAR FEET					FT		EACH	EACH	EACH	EACH	



STA 301+08
@ 13°58'43" SKEW RT.

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: WOLF HILLS ROAD PIPE PROFILE

HORIZONTAL SCALE: 1"=10' (0' 10' 20' 40')

VERTICAL SCALE: 1"=1' (0' 1' 2' 4')

STA 301+08

ITEM NO. 02-0935.00
COUNTY OF HENDERSON
SHEET NO. R20

OpenRoads Designer v10.16.2.267
USER: usjl725830
FILE NAME: C:\BMS\WSP-US-PW-02\D0833597\R18 - R20 PIPE SHEETS.DGN

Sign Summary — Henderson County — Route US-41

SIGN LOCATION						MUTCD Code	Sign Description	Sign Text / Remarks	Sign Dimensions (in x in)	SHEETING			SBM Alum Sheet Signs ① 0.080 IN (SQ FT)	SBM Alum Sheet Signs ① 0.125 IN (SQ FT)	Installation Type	Bracing Req'd ③	# of Sign Posts	Estimated Length of 2" Post ② (ft)	Estimated Length of 2-1/2" Post ② (ft)	2-1/4" Stiffener Req'd (incdntl to post)	TOTAL Estimated Sign Post Length (LF)	Barcode Sign Inv. (EACH)
Assembly ID	Side of Road	Approx Offset (ft)	Approx Station	Approx. Mile Point	Facing Traffic Traveling					Text/ Symbol Color	Background Color	Sheeting Type										
S-1		0	100+13	18.300	SOUTH	R5-1a	Wrong Way		42 x 30	White	Red	XI		8.75	Stnd w/ Soil Plate		1	13			13	1
S-2	RT	46	100+13	18.300	SOUTH	R5-1a	Wrong Way		42 x 30	White	Red	XI		8.75	Stnd w/ Soil Plate		1	13			13	1
S-3		0	100+38	18.305	NORTH	R3-4	No U-Turn		36 x 36	Red & Black	White	XI	9.00		Stnd w/ Soil Plate		1	15			15	1
					SOUTH	R5-1	Do Not Enter		36 x 36	White	Red	XI	9.00		Stnd w/ Soil Plate							1
S-4	RT	46	100+38	18.305	SOUTH	R5-1	Do Not Enter		36 x 36	White	Red	XI	9.00		Stnd w/ Soil Plate		1	13			13	1
S-5	RT	61	101+00	18.316	SOUTH	R6-1L	One Way		48 x 18	Black	White	XI		6.00	Stnd w/ Soil Plate	Yes	2	12			24	1
S-6	RT	6	101+21	18.320	SOUTH	M3-1	North		24 x 12	Black	White	XI	2.00		Stnd w/ Soil Plate		1	15			15	1
					SOUTH	M1-4	US Route Sign (1 or 2 digit)	41	24 x 24	Black	White	XI	4.00		Stnd w/ Soil Plate							1
					SOUTH	X	U-Turn Arrow	U-Turn Arrow	21 x 15	Black	White	XI	2.19		Stnd w/ Soil Plate							1
S-7	RT	6	101+86	18.333	NORTH	D1-1d	Circular Intersection Destination (1 line)	Stratman Rd	72 x 18	White	Green	XI		9.00	Stnd w/ Soil Plate	Yes	2	15			30	1
S-8	RT	59	101+86	18.333	NORTH	D1-1d	Circular Intersection Destination (1 line)	Stratman Rd	72 x 18	White	Green	XI		9.00	Stnd w/ Soil Plate	Yes	2	15			30	1
S-9	LT	2	104+06	18.374	SOUTH	M3-1	North		24 x 12	Black	White	XI	2.00		Stnd w/ Soil Plate		1	15			15	1
					SOUTH	M1-4	US Route Sign (1 or 2 digit)	41	24 x 24	Black	White	XI	4.00		Stnd w/ Soil Plate							1
					SOUTH	M6-2L	Upward Left Diagonal Arrow		21 x 15	Black	White	XI	2.19		Stnd w/ Soil Plate							1
					SOUTH	R3-XX	U-Turn Arrow/ Cars Only	U-Turn Arrow/ Cars Only	24 x 36	Black	White	XI	6.00		Stnd w/ Soil Plate							1
S-10	LT	2	104+56	18.384	SOUTH	R5-1	Do Not Enter		36 x 36	White	Red	XI	9.00		Stnd w/ Soil Plate		1	13			13	1
					NORTH	R3-4	No U-Turn		36 x 36	Red & Black	White	XI	9.00		Stnd w/ Soil Plate							1
S-11	RT	**	**	**	EAST	M2-1	Junction		21 x 15	Black	White	XI	2.19		Stnd w/ Soil Plate		1	14			14	1
					EAST	M1-4	US Route Sign (1 or 2 digit)	41	24 x 24	Black	White	XI	4.00		Stnd w/ Soil Plate							1
S-12	RT	**	**	**	EAST	M3-3	South		24 x 12	Black	White	XI	2.00		Stnd w/ Soil Plate	Yes	1	18			18	1
					EAST	M1-4	US Route Sign (1 or 2 digit)	41	24 x 24	Black	White	XI	4.00		Stnd w/ Soil Plate	Yes						1
					EAST	M5-1R	Advance Right Turn Arrow		21 x 15	Black	White	XI	2.19		Stnd w/ Soil Plate	Yes						1
					EAST	M4-5	To		24 x 12	Black	White	XI	2.00		Stnd w/ Soil Plate	Yes						1
					EAST	M3-1	North		24 x 12	Black	White	XI	2.00		Stnd w/ Soil Plate	Yes						1
					EAST	M1-4	US Route Sign (1 or 2 digit)	41	24 x 24	Black	White	XI	4.00		Stnd w/ Soil Plate	Yes						1
					EAST	M5-1R	Advance Right Turn Arrow		21 x 15	Black	White	XI	2.19		Stnd w/ Soil Plate	Yes						1
S-13	RT	**	**	**	EAST	W3-1	Stop Ahead		36 x 36	Red & Black	Yellow	XI	6.25		Stnd w/ Soil Plate		1	13			13	1

** SEE PLANS/DETAILS FOR LOCATION

Summary of Items (Sheet 1 of 3)		
SBM Alum Sheet Signs 0.080 INCH	98.19	SQ FT
SBM Alum Sheet Signs 0.125 INCH	41.50	SQ FT
Barcode Sign Inventory	27	EACH
Remove & Relocate Sheet Signs		EACH
Remove & Relocate Sign Assemblies		EACH

Summary of Items (Sheet 1 of 3)		
Steel Post - Type 1	226	LF
GMSS Type D	0	EACH
GMSS Type D (Surface Mount)	0	EACH
Class A Concrete for Signs	0	CU YD

NOTES:

① WITH PERMISSION OF THE ENGINEER, SHEETING SIGNS ON THE RAMPS AND SIDE ROADS MAY BE MOVED TO BE COMPATIBLE WITH THE EXISTING SIGNS.

② QUANTITY IS ESTIMATED. THE EXACT LENGTH SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.

③ WHERE REQUIRED, BRACING FOR SHEETING SIGNS SHALL BE INCIDENTAL TO STEEL POST. SEE SHEETING SIGN DETAIL SHEET.

Sign Summary — Henderson County — Route US-41

SIGN LOCATION						MUTCD Code	Sign Description	Sign Text / Remarks	Sign Dimensions (in x in)	SHEETING			SBM Alum Sheet Signs ① 0.080 IN (SQ FT)	SBM Alum Sheet Signs ① 0.125 IN (SQ FT)	Installation Type	Bracing Req'd ③	# of Sign Posts	Estimated Length of 2" Post ② (ft)	Estimated Length of 2-1/2" Post ② (ft)	2-1/4" Stiffener Req'd (incdntl to post)	TOTAL Estimated Sign Post Length (LF)	Barcode Sign Inv. (EACH)
Assembly ID	Side of Road	Approx Offset (ft)	Approx Station	Approx. Mile Point	Facing Traffic Traveling					Text/ Symbol Color	Background Color	Sheeting Type										
S-14	RT	**	**	**	EAST	R3-5R	Right Turn ONLY		30 x 36	Black	White	XI	7.50		Stnd w/ Soil Plate		1	13			13	1
P-1	RT	**	**	**	EAST		R Cut	R Cut	72 x 36	Blk/White	Green	XI		18.00	Type D ④	Yes	3		15		45	1
S-15	LT	70	105+05	18.393	EAST	R6-1R	One Way		36 x 12	Black	White	XI	3.00		Stnd w/ Soil Plate		1	14			14	1
					EAST	R1-1	Stop		36 x 36	White	Red	XI	9.00		Stnd w/ Soil Plate							1
S-16	LT	3	104+96	18.391	EAST	M3-3	South		24 x 12	Black	White	XI	2.00		Stnd w/ Soil Plate	Yes	1	17			17	1
					EAST	M1-4	US Route Sign (1 or 2 digit)	41	24 x 24	Black	White	XI	4.00		Stnd w/ Soil Plate	Yes						1
					EAST	M6-1R	Right Arrow		21 x 15	Black	White	XI	2.19		Stnd w/ Soil Plate	Yes						1
					EAST	M4-5	To		24 x 12	Black	White	XI	2.00		Stnd w/ Soil Plate	Yes						1
					EAST	M3-1	North		24 x 12	Black	White	XI	2.00		Stnd w/ Soil Plate	Yes						1
					EAST	M1-4	US Route Sign (1 or 2 digit)	41	24 x 24	Black	White	XI	4.00		Stnd w/ Soil Plate	Yes						1
					EAST	M6-1R	Right Arrow		21 x 15	Black	White	XI	2.19		Stnd w/ Soil Plate	Yes						1
					EAST	R6-1R	One Way		36 x 12	Black	White	XI	3.00		Stnd w/ Soil Plate	Yes						1
S-17	LT	7	105+68	18.405	SOUTH	R3-2	No Left Turn		36 x 36	Red & Black	White	XI	9.00		Stnd w/ Soil Plate		1	13			13	1
S-18	LT	7	106+45	18.420	NORTH	R5-1	Do Not Enter		36 x 36	White	Red	XI	9.00		Stnd w/ Soil Plate		1	13			13	1
S-19	LT	76	106+45	18.420	NORTH	R5-1	Do Not Enter		36 x 36	White	Red	XI	9.00		Stnd w/ Soil Plate		1	13			13	1
S-20	LT	73	107+45	18.439	NORTH	R5-1a	Wrong Way		42 x 30	White	Red	XI		8.75	Stnd w/ Soil Plate		1	13			13	1
S-21	LT	11	107+45	18.439	NORTH	R5-1a	Wrong Way		42 x 30	White	Red	XI		8.75	Stnd w/ Soil Plate		1	13			13	1
S-22	RT	9	107+45	18.439	SOUTH	R5-1a	Wrong Way		42 x 30	White	Red	XI		8.75	Stnd w/ Soil Plate		1	13			13	1
S-23	RT	70	107+45	18.439	SOUTH	R5-1a	Wrong Way		42 x 30	White	Red	XI		8.75	Stnd w/ Soil Plate		1	13			13	1
S-24	RT	11	108+44	18.457	SOUTH	R5-1	Do Not Enter		36 x 36	White	Red	XI	9.00		Stnd w/ Soil Plate		1	13			13	1
S-25	RT	82	108+44	18.457	SOUTH	R5-1	Do Not Enter		36 x 36	White	Red	XI	9.00		Stnd w/ Soil Plate		1	13			13	1
S-26	RT	16	108+65	18.461	NORTH	R3-2	No Left Turn		36 x 36	Red & Black	White	XI	9.00		Stnd w/ Soil Plate		1	13			13	1
S-27	LT	19	109+30	18.474	SOUTH	R3-4	No U-Turn		36 x 36	Red & Black	White	XI	9.00		Stnd w/ Soil Plate		1	16			16	1
					NORTH	R5-1	Do Not Enter		36 x 36	White	Red	XI	9.00		Stnd w/ Soil Plate							1
S-28	RT	9	109+38	18.475	WEST	M3-1	North		24 x 12	Black	White	XI	2.00		Stnd w/ Soil Plate	Yes	1	17			17	1
					WEST	M1-4	US Route Sign (1 or 2 digit)	41	24 x 24	Black	White	XI	4.00		Stnd w/ Soil Plate	Yes						1
					WEST	M6-1R	Right Arrow		21 x 15	Black	White	XI	2.19		Stnd w/ Soil Plate	Yes						1
					WEST	M4-5	To		24 x 12	Black	White	XI	2.00		Stnd w/ Soil Plate	Yes						1
					WEST	M3-3	South		24 x 12	Black	White	XI	2.00		Stnd w/ Soil Plate	Yes						1
					WEST	M1-4	US Route Sign (1 or 2 digit)	41	24 x 24	Black	White	XI	4.00		Stnd w/ Soil Plate	Yes						1
					WEST	M6-1R	Right Arrow		21 x 15	Black	White	XI	2.19		Stnd w/ Soil Plate	Yes						1
					WEST	R6-1R	One Way		36 x 12	Black	White	XI	3.00		Stnd w/ Soil Plate	Yes						1
S-29	RT	72	109+60	18.479	WEST	R6-1R	One Way		36 x 12	Black	White	XI	3.00		Stnd w/ Soil Plate		1	14			14	1
					WEST	R1-1	Stop		36 x 36	White	Red	XI	9.00		Stnd w/ Soil Plate							1
P-2	RT	**	**	**	WEST		R Cut	R Cut	72 x 36	Blk/White	Green	XI		18.00	Type D ④	Yes	3		15		45	1
S-30	RT	**	**	**	WEST	R3-5R	Right Turn ONLY		30 x 36	Black	White	XI	7.50		Stnd w/ Soil Plate		1	13			13	1
S-31	RT	**	**	**	WEST	W3-1	Stop Ahead		36 x 36	Red & Black	Yellow	XI	9.00		Stnd w/ Soil Plate		1	13			13	1
S-32	RT	**	**	**	WEST	M3-1	North		24 x 12	Black	White	XI	2.00		Stnd w/ Soil Plate	Yes	1	18			18	1
					WEST	M1-4	US Route Sign (1 or 2 digit)	41	24 x 24	Black	White	XI	4.00		Stnd w/ Soil Plate	Yes						1
					WEST	M5-1R	Advance Right Turn Arrow		21 x 15	Black	White	XI	2.19		Stnd w/ Soil Plate	Yes						1

** SEE PLANS/DETAILS FOR LOCATION

Summary of Items (Sheet 2 of 3)		
SBM Alum Sheet Signs 0.080 INCH	170.94	SQ FT
SBM Alum Sheet Signs 0.125 INCH	71.00	SQ FT
Barcode Sign Inventory	40	EACH
Remove & Relocate Sheet Signs		EACH
Remove & Relocate Sign Assemblies		EACH

Summary of Items (Sheet 2 of 3)		
Steel Post - Type 1	355	LF
GMSS Type D	6	EACH
GMSS Type D (Surface Mount)	0	EACH
Class A Concrete for Signs	1.5	CU YD

NOTES:

① WITH PERMISSION OF THE ENGINEER, SHEETING SIGNS ON THE RAMPS AND SIDE ROADS MAY BE MOVED TO BE COMPATIBLE WITH THE EXISTING SIGNS.

② QUANTITY IS ESTIMATED. THE EXACT LENGTH SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.

③ WHERE REQUIRED, BRACING FOR SHEETING SIGNS SHALL BE INCIDENTAL TO STEEL POST. SEE SHEETING SIGN DETAIL SHEET.

④ QUANTITY SHALL INCLUDE ALL MATERIAL NECESSARY TO FORM A COMPLETE BREAK-AWAY ASSEMBLY. TYPE 1 POSTS AND CONCRETE SHALL BE PAID SEPARATELY. SEE SIGN DETAIL SHEET.

Sign Summary — Henderson County — Route US-41

SIGN LOCATION										SHEETING											
Assembly ID	Side of Road	Approx Offset (ft)	Approx Station	Approx. Mile Point	Facing Traffic Traveling	MUTCD Code	Sign Description	Sign Text / Remarks	Sign Dimensions (in x in)	Text/ Symbol Color	Background Color	Sheeting Type	SBM Alum Sheet Signs ① 0.080 IN (SQ FT)	SBM Alum Sheet Signs ① 0.125 IN (SQ FT)	Installation Type	Bracing Req'd ③	# of Sign Posts	Estimated Length of 2" Post ② (ft)	Estimated Length of 2-1/2" Post ② (ft)	2-1/4" Stiffener Req'd (incdntl to post)	TOTAL Estimated Sign Post Length (LF)	Barcode Sign Inv. (EACH)
S-32 (CONT.)					WEST	M4-5	To		24 X 12	Black	White	XI	2.00		Stnd w/ Soil Plate	Yes						1
					WEST	M3-3	South		24 X 12	Black	White	XI	2.00		Stnd w/ Soil Plate	Yes						1
					WEST	M1-4	US Route Sign (1 or 2 digit)	41	24 X 24	Black	White	XI	4.00		Stnd w/ Soil Plate	Yes						1
					WEST	M5-1R	Advance Right Turn Arrow		21 X 15	Black	White	XI	2.19		Stnd w/ Soil Plate	Yes						1
S-33	RT	**	**	**	WEST	M2-1	Junction		21 X 15	Black	White	XI	2.19		Stnd w/ Soil Plate		1	14			14	1
					WEST	M1-4	US Route Sign (1 or 2 digit)	41	24 X 24	Black	White	XI	4.00		Stnd w/ Soil Plate							1
S-34	RT	18	110+80	18.502	NORTH	M3-3	South		24 X 12	Black	White	XI	2.00		Stnd w/ Soil Plate		1	15			15	1
					NORTH	M1-4	US Route Sign (1 or 2 digit)	41	24 X 24	Black	White	XI	4.00		Stnd w/ Soil Plate							1
					NORTH	M6-2L	Upward Left Diagonal Arrow		21 X 15	Black	White	XI	2.19		Stnd w/ Soil Plate							1
S-35	LT	42	112+89	18.542	SOUTH	D1-1d	Circular Intersection Destination (1 line)	Wolf Hills Rd	75 X 18	White	Green	XI		9.38	Stnd w/ Soil Plate	Yes	2	12			24	1
S-36	LT	105	112+89	18.542	SOUTH	D1-1d	Circular Intersection Destination (1 line)	Wolf Hills Rd	75 X 18	White	Green	XI		9.38	Stnd w/ Soil Plate	Yes	2	12			24	1
S-37	RT	37	113+59	18.555	NORTH	M3-3	South		24 X 12	Black	White	XI	2.00		Stnd w/ Soil Plate		1	15			15	1
					NORTH	M1-4	US Route Sign (1 or 2 digit)	41	24 X 24	Black	White	XI	4.00		Stnd w/ Soil Plate							1
					NORTH	X	U-Turn Arrow	U-Turn Arrow	21 X 15	Black	White	XI	2.19		Stnd w/ Soil Plate							1
S-38	LT	101	114+36	18.569	NORTH	R6-1L	One Way		48 X 18	Black	White	XI		6.00	Stnd w/ Soil Plate	Yes	2	12			24	1
S-39	LT	101	114+62	18.574	NORTH	R5-1	Do Not Enter		36 X 36	White	Red	XI	9.00		Stnd w/ Soil Plate		1	13			13	1
S-40	LT	47	114+70	18.576	SOUTH	R3-4	No U-Turn		36 X 36	Red & Black	White	XI	9.00		Stnd w/ Soil Plate		1	13			13	1
					NORTH	R5-1	Do Not Enter		36 X 36	White	Red	XI	9.00		Stnd w/ Soil Plate							1
S-41	LT	76	106+62	18.423	SOUTH	D1-1	Destination (1 line)	Stratman Rd	74 X 18	White	Green	XI		9.25	Stnd w/ Soil Plate	Yes	2	12			24	1
S-42	RT	80	108+25	18.454	NORTH	D1-1	Destination (1 line)	Wolf Hills Rd	77 X 18	White	Green	XI		9.63	Stnd w/ Soil Plate	Yes	2	12			24	1
S-43	RT	3	102+21	18.339	SOUTH	R3-XX	U-Turn Arrow/ Cars Only	U-Turn Arrow/ Cars Only	24 X 36	Black	White	XI	6.00		Stnd w/ Soil Plate		1	13			13	1
S-44	RT	11	108+65	18.461	SOUTH	R3-1	No Right Turn		36 x 36	Red & Black	White	XI	9.00		Stnd w/ Soil Plate		1	13			13	1
S-45	LT	47	115+70	18.595	NORTH	R5-1a	Wrong Way		42 x 30	White	Red	XI		8.75	Stnd w/ Soil Plate		1	13			13	1
S-46	LT	100	115+70	18.595	NORTH	R5-1a	Wrong Way		42 x 30	White	Red	XI		8.75	Stnd w/ Soil Plate		1	13			13	1

** SEE PLANS/DETAILS FOR LOCATION

Summary of Items (Sheet 3 of 3)		
SBM Alum Sheet Signs 0.080 INCH	74.75	SQ FT
SBM Alum Sheet Signs 0.125 INCH	61.13	SQ FT
Barcode Sign Inventory	24	EACH
Remove & Relocate Sheet Signs		EACH
Remove & Relocate Sign Assemblies		EACH

Summary of Items (Sheet 3 of 3)		
Steel Post - Type 1	242	LF
GMSS Type D	0	EACH
GMSS Type D (Surface Mount)	0	EACH
Class A Concrete for Signs	0	CU YD

Total Summary of Items		
SBM Alum Sheet Signs 0.080 INCH	343.88	SQ FT
SBM Alum Sheet Signs 0.125 INCH	173.63	SQ FT
Barcode Sign Inventory	91	EACH
Remove & Relocate Sheet Signs		EACH
Remove & Relocate Sign Assemblies		EACH

Total Summary of Items		
Steel Post - Type 1	823	LF
GMSS Type D	6	EACH
GMSS Type D (Surface Mount)	0	EACH
Class A Concrete for Signs	1.5	CU YD

NOTES:

① WITH PERMISSION OF THE ENGINEER, SHEETING SIGNS ON THE RAMPS AND SIDE ROADS MAY BE MOVED TO BE COMPATIBLE WITH THE EXISTING SIGNS.

② QUANTITY IS ESTIMATED. THE EXACT LENGTH SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.

③ WHERE REQUIRED, BRACING FOR SHEETING SIGNS SHALL BE INCIDENTAL TO STEEL POST. SEE SHEETING SIGN DETAIL SHEET.

SIGNING SPECIFICATION NOTES

THE FOLLOWING PUBLICATIONS ARE APPLICABLE TO THE WORK DESCRIBED HEREIN:

KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (CURRENT EDITION)
STANDARD HIGHWAY SIGNS AND MARKINGS (CURRENT EDITION) - FEDERAL HIGHWAY ADMINISTRATION
MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CURRENT EDITION) - FEDERAL HIGHWAY ADMINISTRATION

SCOPE OF WORK

TO FURNISH, FABRICATE AND ERECT IN PLACE ALL MATERIALS NECESSARY TO FORM COMPLETED SIGNS AS INDICATED AT LOCATIONS DESCRIBED ELSEWHERE IN THESE PLANS. NEW SIGNS ARE TO BE INSTALLED AT EXISTING LOCATIONS UNLESS OTHERWISE NOTED ON THE PLANS.

SIGN SUBSTRATES

SIGN SUBSTRATES SHALL CONFORM TO SECTION 833 OF KENTUCKY'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (CURRENT EDITION) AND THESE PLANS. PANEL SIGNS SHALL BE LABELED AS P-#. SHEETING SIGNS SHALL BE LABELED AS S-#.

SIGN MATERIALS

SIGN SHEETING:

SIGN SHEETING SHALL CONFORM TO SECTION 830 OF KENTUCKY'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (CURRENT EDITION) AND THESE PLANS. ONLY SHEETING ON THE DEPARTMENT'S LIST OF APPROVED MATERIALS SHALL BE USED.

ALL RETROREFLECTIVE MATERIALS SHALL BE FABRICATED AND ASSEMBLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND/OR RECOMMENDATIONS.

PERMANENT SIGNS AND SIGN COMPONENTS SHALL BE FABRICATED USING TYPE XI SHEETING:

THE FOLLOWING SIGNS SHALL BE FABRICATED USING TYPE XI FLUORESCENT YELLOW SHEETING:
- HORIZONTAL ALIGNMENT SIGNS AND PLAQUES
- ALL ADVISORY SPEED PLAQUES
- WARNING MESSAGES ON PANEL SIGNS

THE FOLLOWING SIGNS SHALL BE FABRICATED USING TYPE XI FLUORESCENT YELLOW-GREEN SHEETING:
- ALL SCHOOL AND SCHOOL BUS WARNING SIGNS.
- BICYCLE WARNING SIGNS AND 'SHARE THE ROAD' PLAQUES OR DIAGONAL DOWNWARD POINTING ARROW PLAQUES THAT SUPPLEMENT BICYCLE WARNING SIGNS.
- PEDESTRIAN WARNING SIGNS AND DIAGONAL DOWNWARD POINTING ARROW PLAQUES THAT SUPPLEMENT PEDESTRIAN WARNING SIGNS
- IN-STREET PEDESTRIAN CROSSING (R1-6) SIGNS AND OVERHEAD PEDESTRIAN CROSSING (R1-9) SIGNS
- SUPPLEMENTAL PLAQUES TO ANY OF THE PREVIOUSLY LISTED FLUORESCENT YELLOW-GREEN SIGNS LISTED ABOVE

ALL OTHER PERMANENT SIGNS (INCLUDING THE BACKGROUNDS OF PANEL SIGNS) SHALL BE FABRICATED USING TYPE XI SHEETING.

LETTERS, SYMBOLS, AND BORDERS:

LETTERS, SYMBOLS AND BORDERS ARE TO BE APPLIED TO THE SIGN FACE USING THE "DIRECT APPLIED" METHOD.

PANEL OVERLAY SECTIONS SHALL BE AFFIXED WITH A 'POP' RIVET WITH A MINIMUM DIAMETER OF 3/16 INCH, AND THE LENGTH SHALL BE AS NECESSARY TO PROPERLY APPLY COPY IN A WORKMANLIKE MANNER.

HARDWARE:

ALL HARDWARE FOR THE ASSEMBLY OF PANEL SIGNS AND THE ATTACHMENT OF THESE SIGNS TO THEIR SUPPORTS SHALL BE AS RECOMMENDED BY THE PANEL MANUFACTURER. PLACEMENT OF POST CLIP SHALL BE AS SHOWN ON THE SIGNING MISCELLANEOUS DETAIL SHEET.

ALL HARDWARE FOR THE ERECTION OF SHEETING SIGNS SHALL BE CADMIUM PLATED STEEL IN ACCORDANCE WITH ASTM B-776 AND ASTM A-307.

FONTS:

CLEARVIEW 5-W SHALL BE USED FOR PLACE NAMES AND DESTINATIONS COMPRISED OF A MIX OF UPPER AND LOWER CASE LETTERS. STANDARD ALPHABETS SHALL BE USED FOR ALL OTHER TEXT ON PANEL GUIDE SIGNS.

GROUND-MOUNTED SIGN SUPPORTS

GENERAL:

ALL SIGNS SHALL BE POSITIONED AS SHOWN ON THE POSITIONING DETAIL SHEET. ALL BEAMS AND POSTS SHALL BE OF SUFFICIENT LENGTHS TO EXTEND FROM THE TOP OF THE SIGN TO THE REQUIRED BASE EMBEDMENT. EXISTING I-BEAMS ON WHICH SHEETING SIGNS ARE ATTACHED SHALL BE REMOVED AND REPLACED WITH TYPE I OR TYPE II POSTS, UNLESS THEY ARE LOCATED BEHIND GUARDRAIL.

BEAMS:

ALL BEAMS SHALL BE EITHER TYPE "A" (STANDARD BEAM INSTALLATION) OR TYPE "C" (BREAKAWAY SIGN POST SUPPORT SYSTEM INSTALLATION). TYPE "A" BEAMS ARE SHOWN ON THE PANEL SIGN DETAIL SHEET, AND THE TYPE "C" BEAMS ARE SHOWN ON THE BREAKAWAY SIGN SUPPORT SYSTEM FOR "C" BEAM SHEET. ONLY BREAKAWY (TYPE 'C') BEAM SUPPORT SYSTEMS ON THE DEPARTMENT'S LIST OF APPROVED MATERIALS SHALL BE USED. THE TYPE AND SIZE OF BEAM TO BE USED SHALL BE INDICATED FOR EACH PANEL SIGN ON THE SIGN DETAIL SHEETS. BEAM LENGTHS INCLUDED IN THESE PLANS ARE FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL TAKE FIELD MEASUREMENTS AT EACH SIGN LOCATION AND CROSS SECTIONS SHALL BE DEVELOPED TO VERIFY BEAM LENGTHS, WITH ANY DISCREPANCIES BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.

STEEL POSTS:

TYPE I STEEL POSTS SHALL BE EITHER STANDARD INSTALLATION IN SOIL, WITH SOIL STABILIZER, OR TYPE "D" (BREAKAWAY SIGN POST SUPPORT SYSTEM INSTALLATION). ONLY BREAKAWAY TYPE "D" POST SYSTEMS ON THE DEPARTMENT'S LIST OF APPROVED MATERIALS SHALL BE USED. BRACING, IF REQUIRED, SHALL BE INCIDENTAL TO TYPE I POST.

TYPE II POST SHALL BE STANDARD INSTALLATION IN SOIL WITH A SOIL STABILIZER. INSTALLATION PROCEDURES AND BRACING REQUIREMENTS ARE DETAILED ON THE SHEETING SIGN DETAIL SHEET.

ALL STEEL POSTS SHALL MEET THE REQUIREMENTS OF SECTION 832 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

MILEPOST MARKERS AND ENHANCED REFERENCE MARKERS

MILEPOST MARKERS AND ENHANCED REFERENCE LOCATION SIGNS SHALL CONFORM TO THE GENERAL REQUIREMENTS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CURRENT EDITION). ADDTIONAL REQUIREMENTS ARE GIVEN ON THE SIGNING POSITIONING DETAIL SHEET AND ENHANCED REFERENCE LOCATION SIGNS DETAIL SHEET.

FOR THE LOUISVILLE AREA, FINAL LOCATION OF ENHANCED REFERENCE LOCATION SIGNS SHALL BE VERIFIED BY TRIMARC. NOTIFY A REPRESENTATIVE OF TRIMARC AT LEAST TWO WEEKS IN ADVANCE OF BEGINNING WORK ON THIS ITEM:

901 WEST MAIN STREET
LOUISVILLE, KY 40202
502-587-6624
270-307-7456

MEDIAN CROSSOVER SIGNS

THE CONTRACTOR SHALL INSTALL 48" X 48", "NO U TURN" SIGNS (R3-4) AT EACH MEDIAN CROSSOVER. THIS IS TO BE DONE WHETHER ALL NEEDED INSTALLATIONS ARE MENTIONED IN THE FOLLOWING SHEETS OR NOT. AT CROSSOVERS ON MEDIANS SIXTY FEET (60') WIDE OR LESS, THE SIGNS SHALL BE MOUNTED PERPENDICULAR TO THE ROADWAY ON THE SAME POSTS IN THE CENTER OF THE MEDIAN, ONE FACING TRAFFIC IN EACH DIRECTION. AT CROSSOVERS ON MEDIANS OVER SIXTY FEET (60') WIDE, THE SIGNS SHALL BE MOUNTED PERPENDICULAR TO THE ROADWAY ON SEPARATE POSTS AT THE MEDIAN SHOULDER ON THE FAR SIDE OF THE CROSSOVER, ONE FACING TRAFFIC IN EACH DIRECTION. FOR ADDITIONAL GUIDANCE, SEE SEPIA DRAWING FOR FLEXIBLE DELINEATOR POST ARRANGEMENT FOR INTERCHANGE RAMPS AND CROSSOVERS.

CONCRETE BASES

ALL CONCRETE BASES SHALL BE OF CLASS "A" CONCRETE FOR SIGNS AND SHALL BE AS SHOWN ELSEWHERE IN THESE PLANS.
EXCAVATION NECESSARY TO CONSTRUCT BASES AND FOOTINGS IS INCIDENTAL TO THE COST OF CLASS "A" CONCRETE FOR SIGNS.

CONCRETE BASES (CONTINUED)

WHERE THE REMOVAL OF OVERHEAD STRUCTURE CONCRETE BASE IS CALLED FOR, THE BASE IS TO BE REMOVED TO A MINIMUM OF ONE FOOT (1') BELOW THE GROUND LINE, BACKFILLED TO EXISTING GROUND LINE, AND THE DISTURBED AREAS RESEEDED.

WHERE THE REMOVAL OF BEAM SIGN SUPPORTS IS CALLED FOR, THE BEAM AND ANY CONCRETE PROJECTING ABOVE THE GROUND LINE ARE TO BE CUT OFF A MINIMUM OF ONE FOOT (1') BELOW EXISTING GROUND LINE OR THE ENTIRE BEAM AND CONCRETE BASE ARE TO BE REMOVED COMPLETELY AND BACKFILLED TO EXISTING GROUND LINE.

SAMPLES, TESTING, ETC.

BEFORE BEGINNING INSTALLATION, THE CONTRACTOR SHALL FURNISH TO THE PROJECT ENGINEER DRAWINGS, DESCRIPTIONS, MANUFACTURER'S CUTS ETC. FOR WRITTEN APPROVAL OF ALL MATERIALS TO BE USED. MILL TEST REPORTS FOR BEAMS, STEEL PANELS, AND EACH DIFFERENT GAUGE OF ALUMINUM OR STEEL SHEETING USED MUST BE SUBMITTED TO THE DIVISION OF CONSTRUCTION AND APPROVED PRIOR TO ERECTION.

MISCELLANEOUS

THE COST FOR REMOVING EXISTING PANEL SIGNS SHALL BE INCIDENTAL TO THE COST OF THE PROJECT.

ON SHEETING SIGNS WHERE THERE ARE MORE THAN ONE SIGN ASSEMBLY MOUNTED BESIDE EACH OTHER, THE POSTS SHALL BE SPACED TO PROVIDE APPROXIMATELY SIX INCHES (6") OF SPACING BETWEEN SIGNS.

CLEARING AND GRUBBING, AND TREE TRIMMING, WHEN REQUIRED FOR CONSTRUCTION OR VISIBILITY OF SIGNS, SHALL BE INCIDENTAL TO THE CONTRACT.

SIGN COVERING IS NOT RECOMMENDED. HOWEVER, IF IT IS ABSOLUTELY NECESSARY TO COVER THE SIGN FACE TEMPORARILY FOLLOWING ERECTION, USE CAUTION SINCE SOME COVERINGS MAY CAUSE PERMANENT DAMAGE TO THE SIGN FACE FOLLOWING EXPOSURE TO MOISTURE, SUNLIGHT, ETC. POROUS CLOTH OR GEOTEXTILE FABRIC COVERS WHICH ARE FOLDED OVER THE SIGN EDGES AND SECURED AT THE BACK OF THE SIGN HAVE BEEN USED SUCCESSFULLY FOR LIMITED PERIODS. DO NOT USE TAPE, PAPER, PLASTIC, OR SHEET METAL COVERS. ANY SIGNS THAT ARE DAMAGED AS A RESULT OF COVERING SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE DEPARTMENT.

TYPE I AND II STEEL POSTS IN SOIL SHALL BE DRIVEN 32" TO 34" BELOW THE GROUND LINE AS SHOWN. HOWEVER, IF SOLID ROCK IS ENCOUNTERED, THE CONTRACTOR SHALL DRILL HOLES OF THE REQUIRED DEPTH INTO THE ROCK AND BACKFILL WITH CONCRETE. THE COST SHALL BE INCIDENTAL TO STEEL POST, AND SOIL STABILIZERS WILL NOT BE REQUIRED.

ANY AREA DISTURBED SHALL BE SIDE GRADED TO THE EXISTING SLOPES AND RESEEDED AS DIRECTED BY THE ENGINEER, AT NO ADDITIONAL COST TO THE DEPARTMENT.

REMOVE AND DO NOT REPLACE THE WHITE ON BLUE GENERAL SERVICES SIGNS AT THE EXIT RAMP TERMINALS, "EMERGENCY STOPPING ONLY" SIGNS, AND THE ROUTE MARKER THAT IS LOCATED INSIDE THE INTERCHANGE PAST THE EXIT GORE AREA.

INSTALLATION OF ADVISORY EXIT AND RAMP SPEED SIGNS (W13-2 AND W13-3) SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

ALL EXISTING SHEETING SIGNS WITHIN THE LIMITS OF THIS PROJECT ARE TO BE REMOVED AND REPLACED WITH NEW SIGNS AND POSTS. SIGNS AND POSTS SHALL CONFORM TO CURRENT STANDARDS/SPECIFICATIONS. THE COST FOR REMOVING EXISTING SHEETING SIGNS AND POSTS, RELOCATING EXISTING SIGNS AND POSTS TO CONFORM TO THE SIGNING PLANS AND SPECIFICATIONS, AND ALL HARDWARE REQUIRED, SHALL BE INCIDENTAL TO THE PROJECT. IN ADDITION TO REPLACING ALL EXISTING SIGNS, ALL SIGNS SHOWN ON THE SIGNING PLANS MUST BE INSTALLED. FOR SIGN SIZES AND SPECIFICATIONS, SEE THE CURRENT PROJECT SIGNING PLAN DETAIL SHEETS.

THE COST FOR SIGN BRACKETS AND ANY OTHER HARDWARE REQUIRED TO ATTACH NEW SIGNS ON EXISTING TRUSSES AND CANTILEVERS SHALL BE INCLUDED IN THE UNIT PRICE OF SIGN BASE MATERIAL FOR PANEL SIGNS.

DUPLICATE SIGNS SHALL NOT BE DISPLAYED DURING THE CONSTRUCTION OF THIS PROJECT.

SHEETING SIGNS (D1-1, D1-2, D1-3) EQUAL TO OR LESS THAN 72" X 42" REQUIRE TWO TYPE I OR TYPE II POSTS.

THE HORIZONTAL CLEARANCE "X" ON ALL THE SHEETING SIGNS SHOULD BE A MINIMUM OF 6' FROM THE EDGE OF THE SHOULDER TO THE EDGE OF THE SIGN OR A MINIMUM OF 12' FROM THE EDGE OF THE SIGN TO THE EDGE OF THE TRAVELLED WAY AS SHOWN IN THE SIGNING POSITIONING DETAIL SHEET.

IF ANY SIGN IS LOCATED NEAR A LUMINAIRE OR ANOTHER POLE, IT SHALL BE INSTALLED IN ADVANCE OF THE POLE SO THAT THE MOTORISTS VIEW OF THE SIGN WILL NOT BE OBSTRUCTED.

SIGNS THAT DO NOT COMPLY WITH THE MUTCD SHALL BE REMOVED BY THE CONTRACTOR AS APPROVED AND DIRECTED BY THE ENGINEER.

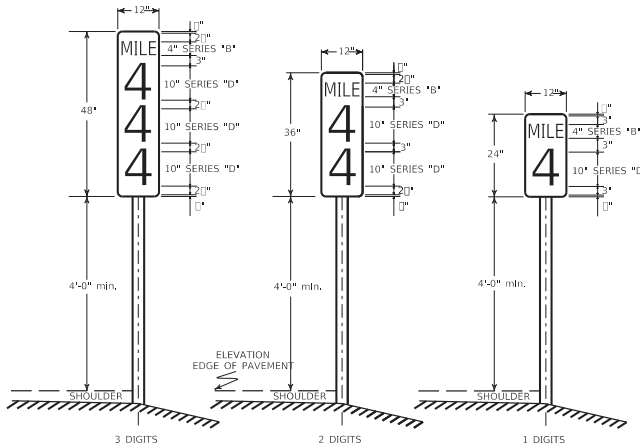
6-24-2020

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

DRAWING TITLE: SIGNING SPECIFICATION SHEET

ITEM NO. 02-0935.00
COUNTY OF HENDERSON
SHEET NO. R24

MILEPOST MARKERS



TYPICAL SIGN PANEL DIMENSIONS AND MILEPOST LOCATIONS

MILE POST NUMBER	STATION NUMBER * _____ BOUND LANE (S)

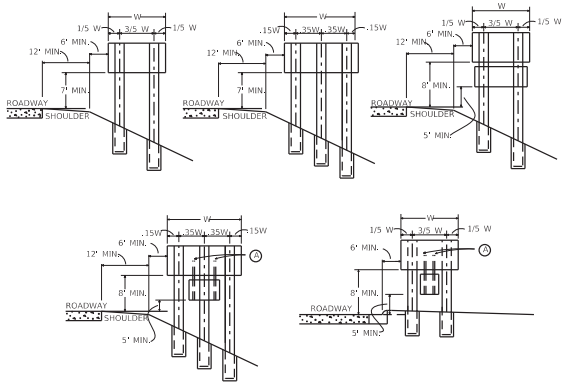
MILE POST NUMBER	STATION NUMBER * _____ BOUND LANE (S)

NOTE: STATION NUMBERS ARE GIVEN FOR NOTED DIRECTION OF TRAVEL ONLY. CORRESPONDING MILEPOST MARKERS FOR OTHER DIRECTION SHOULD BE PLACED DIRECTLY OPPOSITE THOSE FOR WHICH STATION NUMBERS ARE GIVEN.

IN JEFFERSON COUNTY, FINAL LOCATION OF MILEPOST MARKERS SHALL BE VERIFIED BY TRIMARC. NOTIFY TRIMARC AT LEAST TWO WEEKS PRIOR TO BEGINNING WORK ON THIS ITEM:

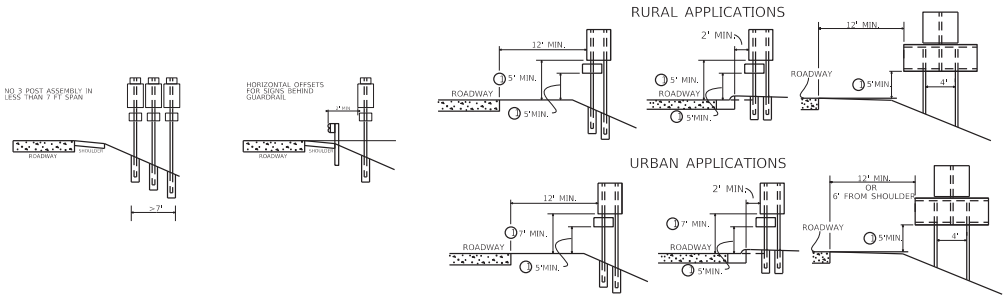
901 WEST MAIN STREET
LOUISVILLE, KY 40202
502-587-6624
270-307-7456

PANEL SIGNS



(A) ATTACHMENT OF SECONDARY SIGN TO MAJOR SIGN IS TO BE MADE WITH TWO (2) 3" X 3" X 3/16" ANGLES OF SUFFICIENT LENGTH TO EXTEND FROM THE LOWER EDGE OF THE SECONDARY SIGN TO AT LEAST THREE FEET UP THE BACK OF THE MAJOR SIGN. A MINIMUM OF ONE POST CLIP PER FOOT SHALL BE USED IN ATTACHING EXTRUSIONS TO EACH ANGLE.

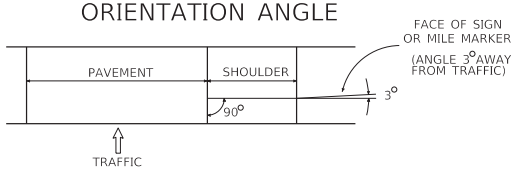
SHEETING SIGNS



NOTE: SHOULD A SIGN BE LOCATED AT A POINT WHERE GUARDRAIL IS CALLED FOR OR EXISTING, ALL SIGN SUPPORTS SHALL BE PLACED BEHIND THE GUARDRAIL AND LATERAL OFFSET SHALL BE MEASURED FROM THE GUARDRAIL.

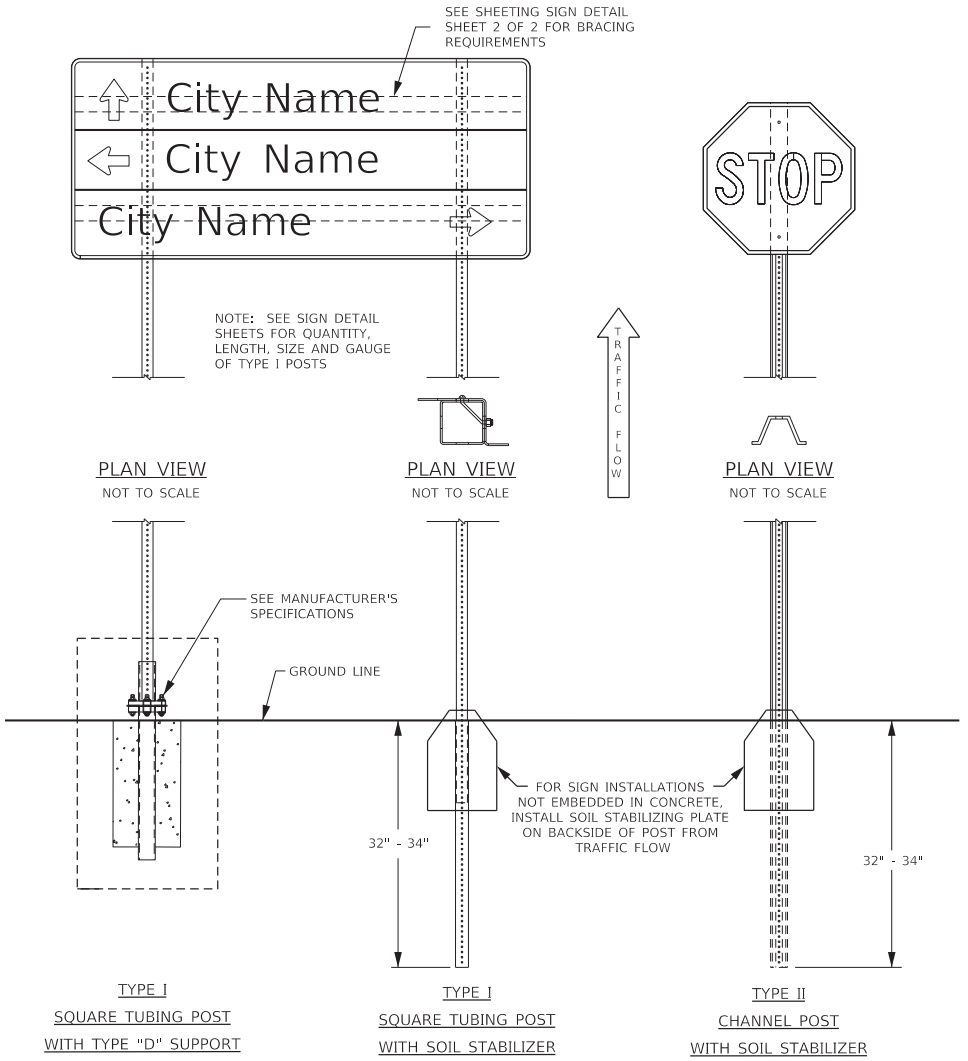
(J) NOT TO EXCEED 8' IN URBAN AREAS AND 6' IN RURAL AREAS UNLESS SPECIFIED BY THE ENGINEER

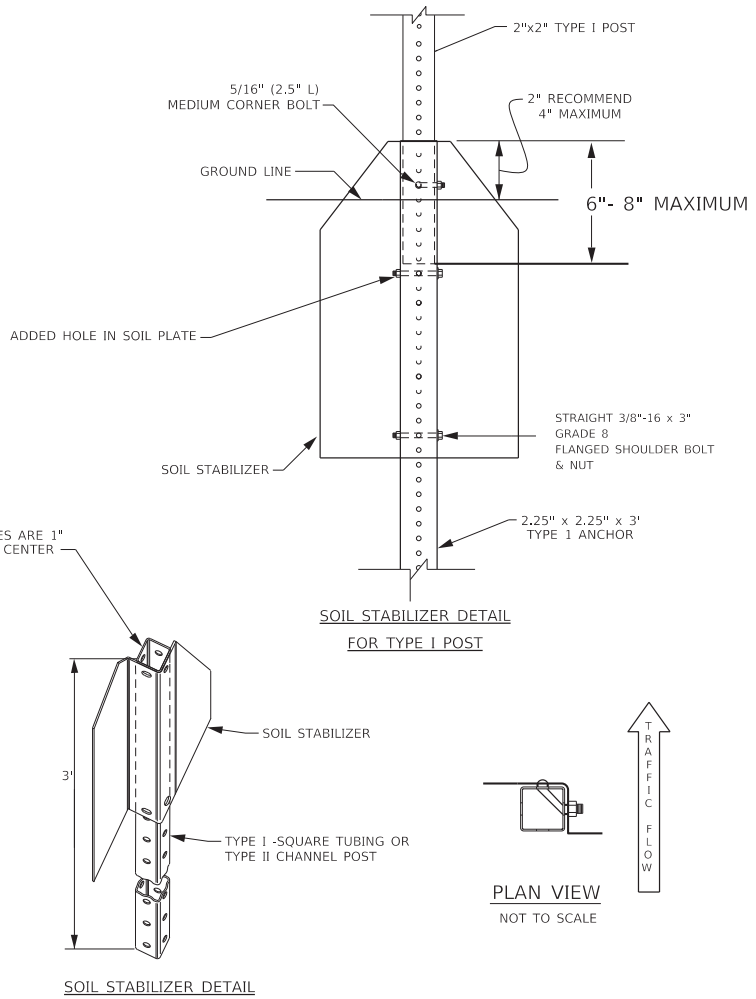
ORIENTATION ANGLE



NOT TO SCALE

COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS	DRAWING TITLE: SIGNING POSITIONING DETAIL SHEET	ITEM NO. 02-0935.00 COUNTY OF HENDERSON SHEET NO. R25

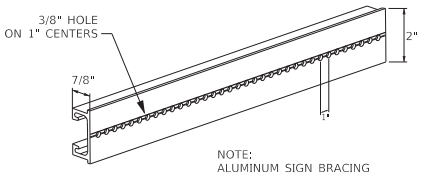




NOT TO SCALE

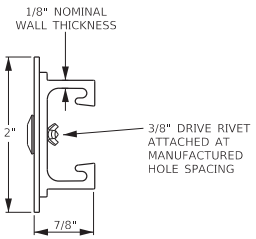
COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS	DRAWING TITLE: SHEETING SIGN DETAIL SHEET 1 OF 2	ITEM NO. 02-0935.00 COUNTY OF HENDERSON SHEET NO. R26

FOR ATTACHMENT OF SIGNS LESS THAN 72" IN WIDTH USING MANUFACTURED 3/8" HOLES ACCORDING TO 2004 STANDARD HIGHWAY SIGNS BLANK STANDARDS PGS 7-1 THRU 7-6

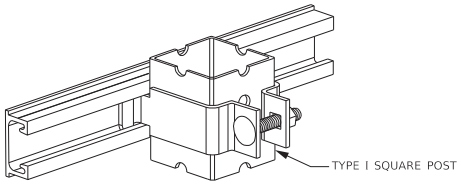


NOTE:
ALUMINUM SIGN BRACING
2" MOUNTING SURFACE x 7/8" DEPTH x 1/8"
NOMINAL WALL THICKNESS

6061-T6 ALUMINUM ALLOY, PUNCHED WITH 3/8" DIAMETER HOLES ON 1" CENTERS FOR ATTACHMENT OF SIGN SUBSTRATE USING 3/8" DRIVE RIVETS



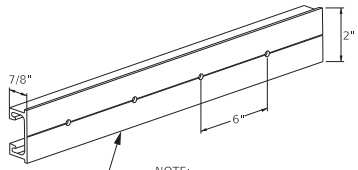
SIGN BRACE



SQUARE POST CLAMP & BRACE

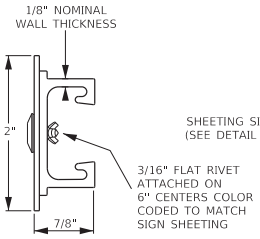
FOR ATTACHMENT OF SIGNS GREATER THAN, OR EQUAL TO, 72" IN WIDTH.

RIVETS SHALL BE COLOR CODED TO MATCH SHEETING IN ORDER TO MINIMIZE GLARE FROM RIVETS



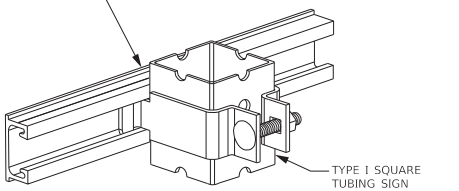
NOTE:
ALUMINUM SIGN BRACING
2" MOUNTING SURFACE x 7/8" DEPTH x 1/8"
NOMINAL WALL THICKNESS

6061-T6 ALUMINUM ALLOY, PUNCHED WITH 3/16" DIAMETER HOLES ON 6" CENTERS FOR ATTACHMENT OF SIGN SUBSTRATE USING RIVETS

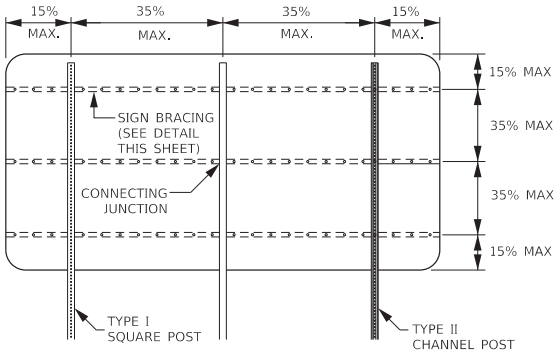


SHEETING SIGN BRACING (SEE DETAIL THIS SHEET)

SIGN BRACE



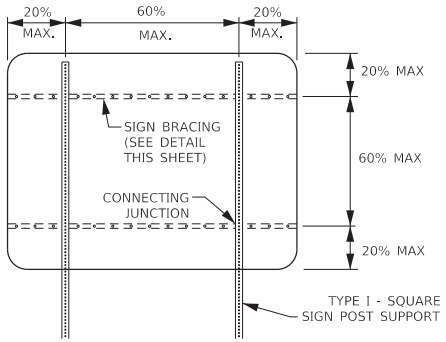
SQUARE POST CLAMP & BRACE



NOTE:
1. MAXIMUM AREA PER CONNECTING JUNCTION = 16 SQ. FT.

2. BRACING SHOULD NOT BE SPLICED WITHIN 6" OF A BRACE TO POST JUNCTION.

3 POST - BRACING DIAGRAM



2 POST - BRACING DIAGRAM

NOTE:
USE OF SIGN BRACING NOT SHOWN ON THIS SHEET MAY BE PERMITTED BY PROJECT ENGINEER AND/OR DISTRICT TRAFFIC ENGINEER.

NOT TO SCALE

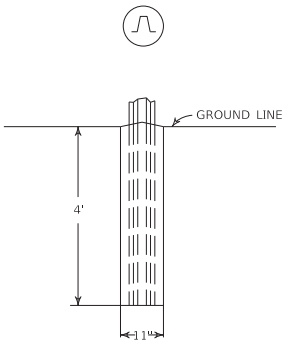
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

DRAWING TITLE: SHEETING SIGN DETAIL SHEET 2 OF 2

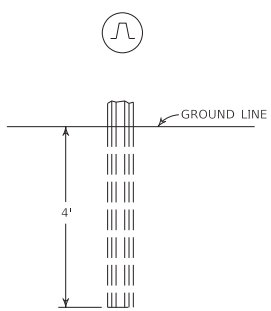
ITEM NO. 02-0935.00
COUNTY OF HENDERSON
SHEET NO. R27

CHANNEL POST DETAILS

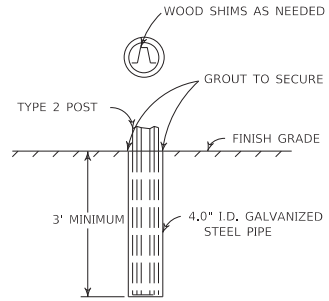
TYPE "B" CONCRETE BASE



TYPE "C" DRIVEN BASE



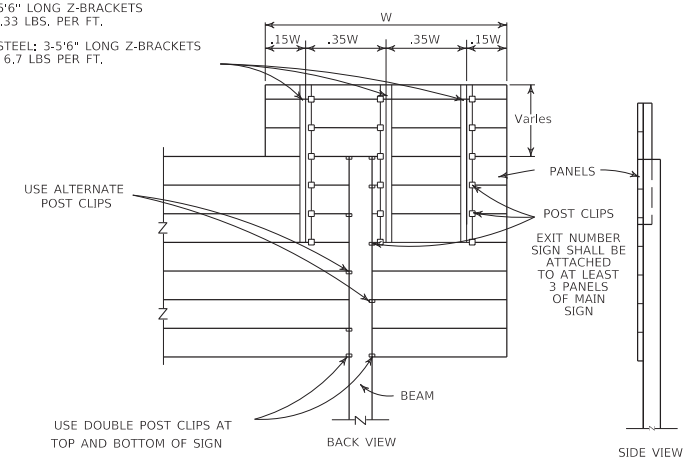
TYPE "D" PIPE BASE



THE COST FOR 4.0" I.D. GALVANIZED STEEL PIPE FOR TYPE "D" BASE AND THE WORK FOR THE INSTALLATION SHALL BE INCLUDED IN THE BID ITEM FOR STEEL POST TYPE 2.

DETAIL FOR EXIT NUMBER SIGN ATTACHMENT AND TYPICAL POST CLIP ARRANGEMENT

ALUMINUM: 3-5'6" LONG Z-BRACKETS
3" X 2□" @ 2.33 LBS. PER FT.
OR
GALVANIZED STEEL: 3-5'6" LONG Z-BRACKETS
3" X 2 7/32" @ 6.7 LBS PER FT.

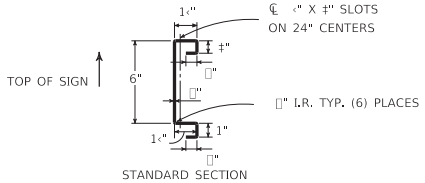


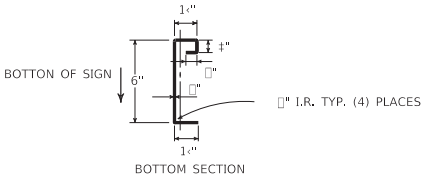
NOTE: THE COST FOR ATTACHING AN EXIT NUMBER SIGN SHALL BE INCLUDED IN THE BID ITEM FOR SIGN BASE MATERIAL FOR PANEL SIGNS AND SHALL INCLUDE ALL Z-BRACKETS AND HARDWARE.
THE EXIT NUMBER SIGN SHALL BE INSTALLED OVER THE LEFT OR RIGHT SIDE OF THE SIGN AS SHOWN ON THE PLANS.

PANEL DETAILS

MINIMUM WEIGHT PER LINEAR FOOT
6" PANEL - 1.115 LBS.
12" PANEL - 2.485 LBS.

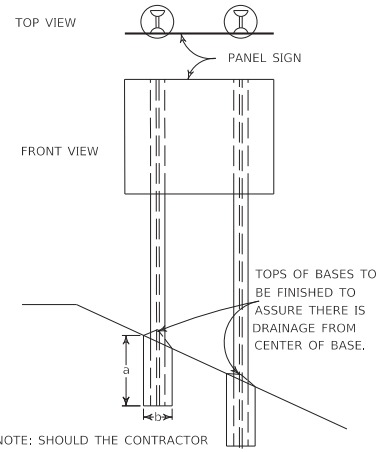
TYPICAL SECTIONS
ALUMINUM SIGN PANEL EXTRUSIONS



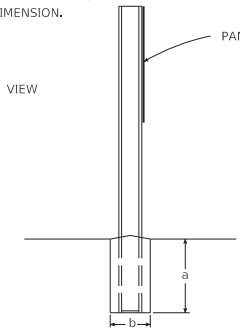


TYPICAL SECTIONS
STEEL SIGN PANEL EXTRUSIONS

TYPICAL BEAM WITH TYPE "A" CONCRETE BASE DETAIL



NOTE: SHOULD THE CONTRACTOR OVERDRILL THE HOLE, EXTRA CONCRETE WILL BE AT THE CONTRACTOR'S EXPENSE. PAYMENT WILL BE DETERMINED BY THE "a" DIMENSION.



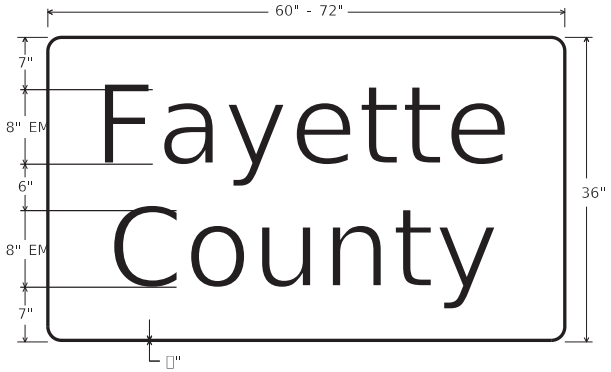
NOT TO SCALE

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

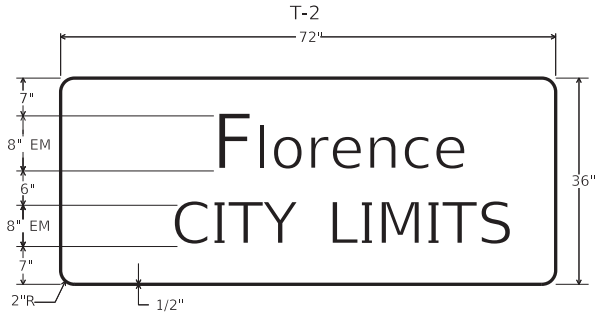
DRAWING TITLE: SIGNING MISCELLANEOUS DETAIL SHEET

ITEM NO. 02-0935.00
COUNTY OF HENDERSON
SHEET NO. R28

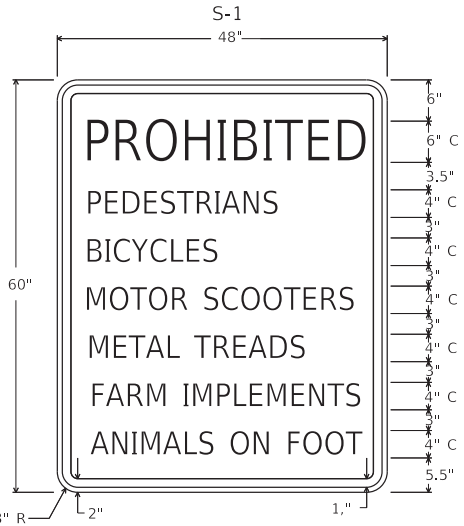
T-1

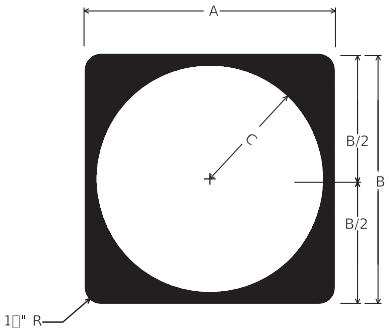


T-2

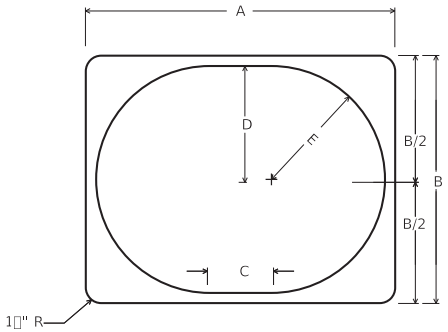


S-1





M1-5 (1 OR 2 DIGIT)



M1-5 (3 OR 4 DIGIT)

	A	B	C	FONT
CONVENTIONAL	24"	24"	11"	12D
EXPRESSWAY/ FREEWAY	36"	36"	17"	18D

	A	B	C	D	E	FONT	
						3 DIGIT	4 DIGIT
CONVENTIONAL	30"	24"	6"	11"	11"	12D	12B
EXPRESSWAY/ FREEWAY	45"	36"	9"	16.5"	16.5"	18D	18B

NOTE: FOR ROUTE MARKERS, IF NECESSARY, ADJUSTMENTS TO THE DIGIT LAYOUT AND/OR FONT TYPE MAY BE MADE TO ENSURE VISUAL ACUITY

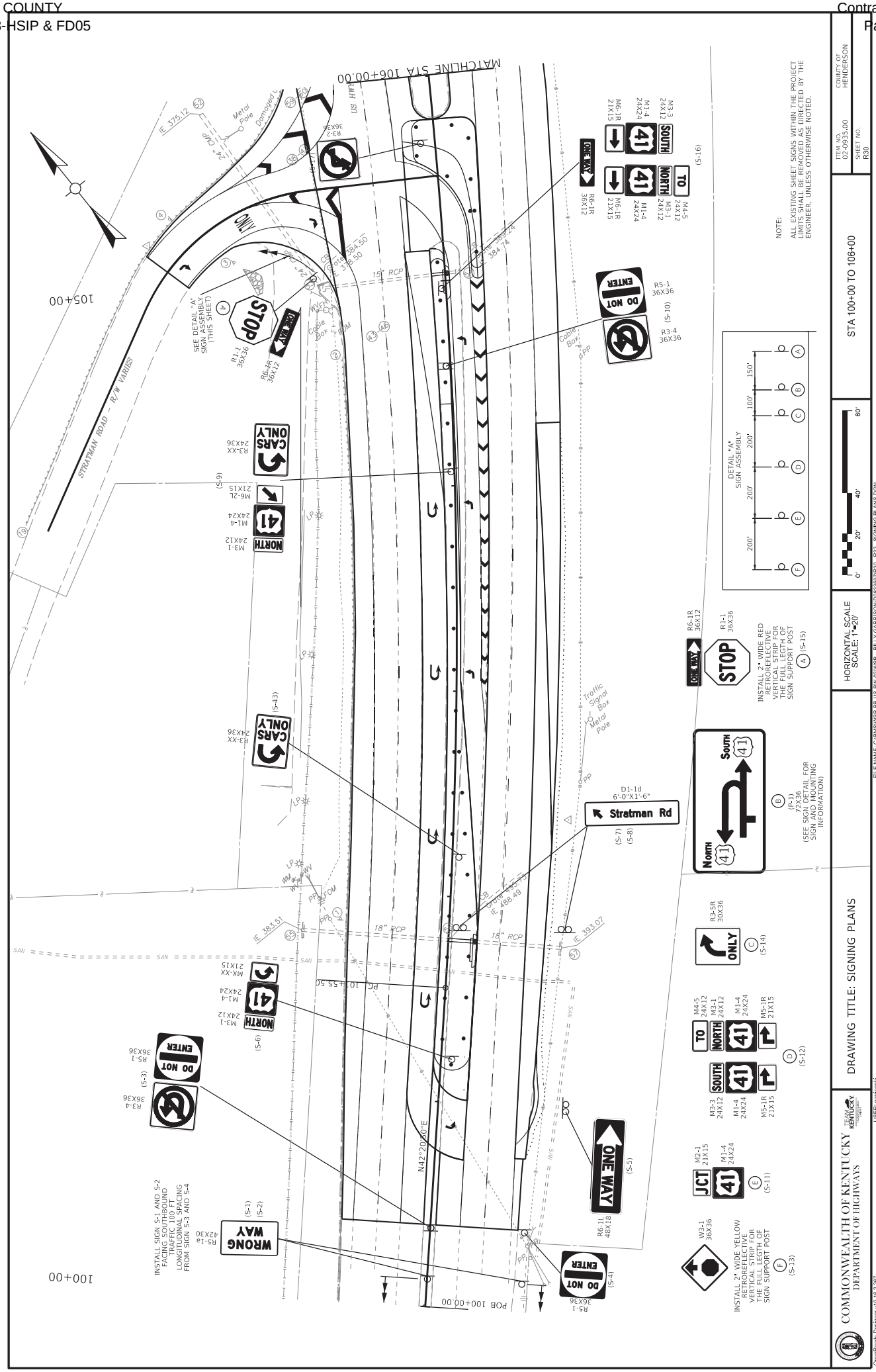
NOTE: EXPRESSWAY/FREEWAY DEFINED AS A DIVIDED HIGHWAY WITH PARTIAL OR FULL CONTROL OF ACCESS

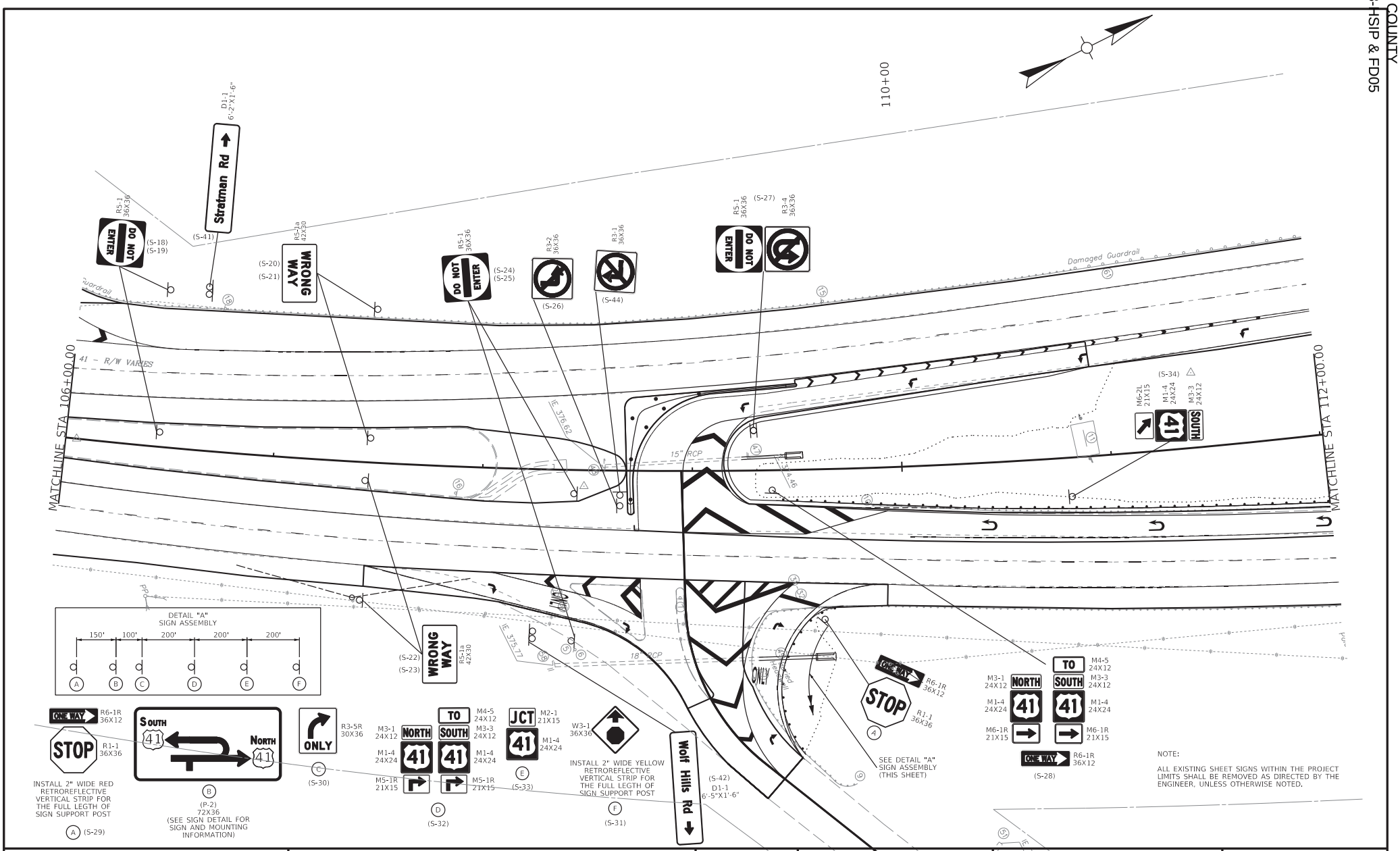
NOT TO SCALE

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

DRAWING TITLE: TYPICAL SIGNS

ITEM NO. 02-0935.00
COUNTY OF HENDERSON
SHEET NO. R29


MATCHLINE STA 106+00.00
105+00
100+00
STRATMAN ROAD - R/W VARIES
CMP
PC 101+55.50
PT 102+55.50
PI 102+05.50
PC 103+55.50
PT 104+55.50
PI 104+05.50
PC 105+55.50
PT 106+55.50
PI 106+05.50
PC 107+55.50
PT 108+55.50
PI 108+05.50
POB 100+00.00
N42°20'20"E
384.74
384.50
18.50
15" RCP
18" RCP
IE 375.12
IE 383.51
IE 393.07
IE 488.49
Metal Pole
Damaged
Traffic Signal Box
Metal Pole
Cable Box
Stratman Rd
SEE DETAIL "A" SIGN ASSEMBLY (THIS SHEET)
INSTALL SIGN S-1 AND S-2 FACING SOUTHBOUND TRAFFIC 100 FT LONGITUDINAL SPACING FROM SIGN S-3 AND S-4
INSTALL 2" WIDE YELLOW RETROREFLECTIVE VERTICAL STRIP FOR THE FULL LEGTH OF SIGN SUPPORT POST
INSTALL 2" WIDE RED RETROREFLECTIVE VERTICAL STRIP FOR THE FULL LEGTH OF SIGN SUPPORT POST
(SEE SIGN DETAIL FOR SIGN AND MOUNTING INFORMATION)
DETAIL "A" SIGN ASSEMBLY
NOTE:
ALL EXISTING SHEET SIGNS WITHIN THE PROJECT LIMITS SHALL BE REMOVED AS DIRECTED BY THE ENGINEER, UNLESS OTHERWISE NOTED.
HORIZONTAL SCALE SCALE: 1"=20'
STA 100+00 TO 106+00
COUNTY OF HENDERSON
ITEM NO. 02-4935.00
SHEET NO. R30
DRAWING TITLE: SIGNING PLANS
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FILE NAME: C:\BMSWSP-PIB-US-PW-02\WSP__BILLY.GARRISON\D0833597\R30 - R32 - SIGNING PLANS.DGN
USER: garrisonbj
OpenRoads Designer v10.16.2.267



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

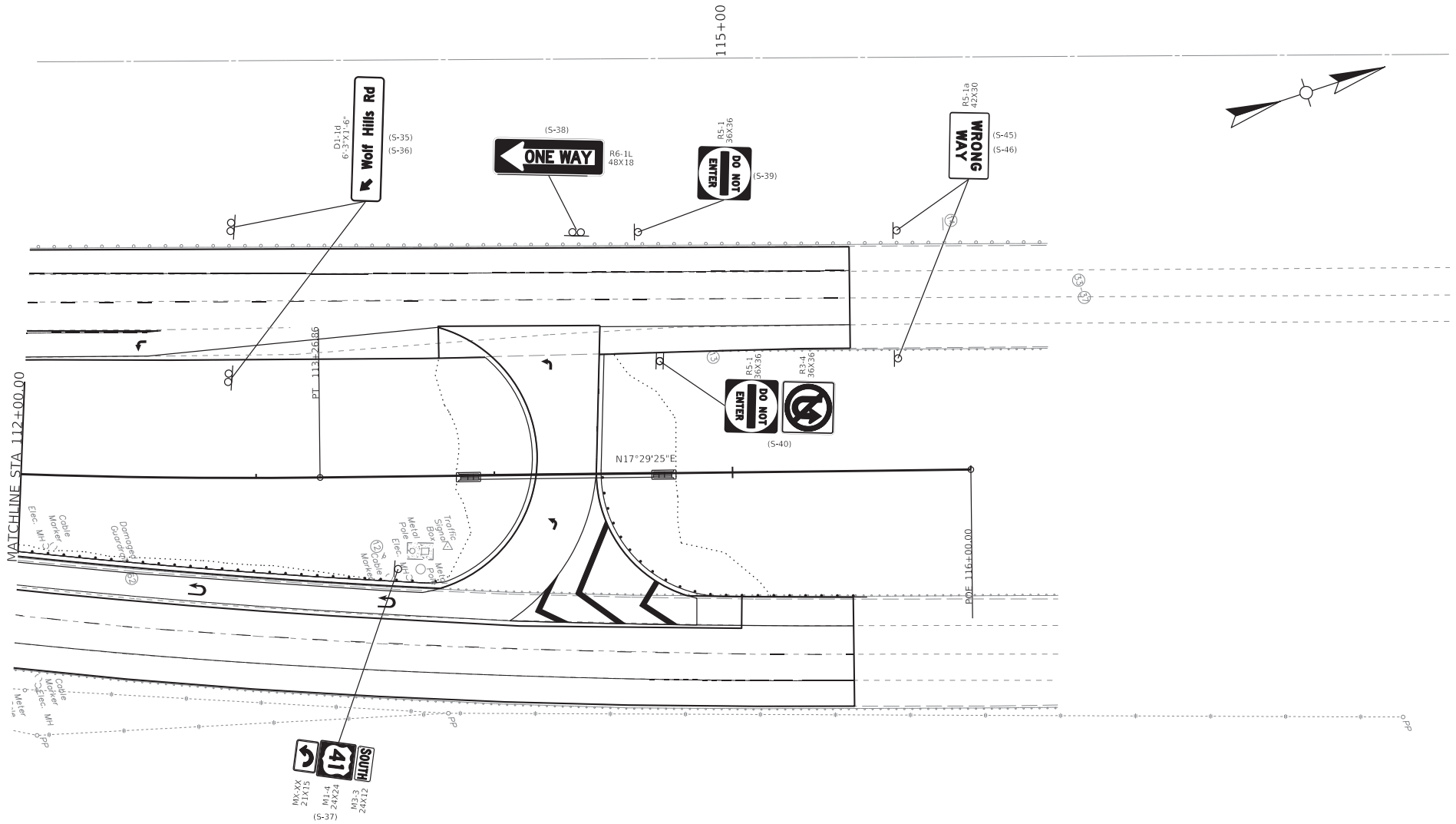
DRAWING TITLE: SIGNING PLANS

HORIZONTAL SCALE
SCALE: 1"=20'
0' 20' 40' 80'

STA 106+00 TO 112+00

ITEM NO. 02-0935.00
COUNTY OF HENDERSON
SHEET NO. R31

OpenRoads Designer v10.16.2.267
USER: garrisonbj
FILE NAME: C:\BMS\WSP-PB-US-PW-02\WSP__BILLY.GARRISON\D0833597\R30 - R32 - SIGNING PLANS.DGN



NOTE:

ALL EXISTING SHEET SIGNS WITHIN THE PROJECT LIMITS SHALL BE REMOVED AS DIRECTED BY THE ENGINEER, UNLESS OTHERWISE NOTED.

COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS TEAM KENTUCKY	DRAWING TITLE: SIGNING PLANS	HORIZONTAL SCALE SCALE: 1"=20'	0' 20' 40' 80'	STA 112+00 TO 115+00	ITEM NO. 02-0935.00 COUNTY OF HENDERSON SHEET NO. R32

SHEETING SIGNS DETAIL SHEET

COUNTY OF	ITEM NO.	SHEET NO.
HENDERSON	02-0935.00	R34

SIGN/SIGN ASSEMBLY NUMBER	*SIZES IN INCHES HORIZ.	VERT.	MESSAGES ①	SPECIFICATION	SIGN LOCATION SIDE OF ROAD	FACING TRAFFIC TRAVELING	ON ROAD	AT STATION (APPROXIMATE)
S-13	36	36		W3-1	RIGHT	EASTBOUND	STRATMAN RD	SEE SIGNING PLANS FOR LOCATION
S-14	30	36		R3-5R	RIGHT	EASTBOUND	STRATMAN RD	SEE SIGNING PLANS FOR LOCATION
S-15	36	12		R6-1R	RIGHT	EASTBOUND	STRATMAN RD	105+05.00
	36	36		R1-1	RIGHT	EASTBOUND	STRATMAN RD	
S-16	24	12		M3-3	US 41 MEDIAN	EASTBOUND	STRATMAN RD	104+96.00
	24	24		M1-4				
	21	15		M6-1R				
	24	12		M4-5				
	24	12		M3-1				
	24	24		M1-4				
	21	15		M6-1R				
	36	12		R6-1R				
S-17	36	36		R3-2	MEDIAN	SOUTHBOUND	US 41 SOUTH	105+68.00
S-18	36	36		R5-1	MEDIAN	-NB/TURN LEFT -EASTBOUND	-US 41 NORTH -STRATMAN RD	106+45.00

SIGN/SIGN ASSEMBLY NUMBER	SIZES IN INCHES HORIZ.	VERT.	MESSAGES ①	SPECIFICATION	SIGN LOCATION SIDE OF ROAD	FACING TRAFFIC TRAVELING	ON ROAD	AT STATION (APPROXIMATE)
S-19	36	36		R5-1	LEFT	-NB/TURN LEFT -EASTBOUND	-US 41 NORTH -STRATMAN RD	106+45.00
S-20	42	30		R5-1a	LEFT	-NB/TURN LEFT -EASTBOUND	-US 41 NORTH -STRATMAN RD	107+45.00
S-21	42	30		R5-1a	MEDAIN	-NB/TURN LEFT -EASTBOUND	-US 41 NORTH -STRATMAN RD	107+45.00
S-22	42	30		R5-1a	MEDIAN	-SB/TURN LEFT -WESTBOUND	-US 41 SOUTH -WOLF HILLS RD	107+45.00
S-23	42	30		R5-1a	RIGHT	-SB/TURN LEFT -WESTBOUND	-US 41 SOUTH -WOLF HILLS RD	107+45.00
S-24	36	36		R5-1	MEDIAN	-SB/TURN LEFT -WESTBOUND	-US 41 SOUTH -WOLF HILLS RD	108+44.00

SPECIAL NOTES:
1. COLORS FOR SIGN ASSEMBLIES ARE DESIGNATED IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND "STANDARD HIGHWAY SIGNS"
2. SHEETING SIGNS SHALL BE FABRICATED FROM 0.125 GUAGE MATERIAL IF ANY DIMENSION IS GREATER THAN 36" (THIRTY-SIX INCHES), OTHERWISE 0.080 GUAGE MATERIAL SHALL BE USED.

* D1-1 AND D1-1d SIGN SIZES SHOWN IN FEET AND INCHES.

SHEETING SIGNS DETAIL SHEET

FILE NAME: C:\BMSWSP\PB-USPW-I2\WSP_MAC.RICE\D0833597\R33 - R38 - SIGNING DETAILS.DGN
USER: RKeM
DATE PLOTTED: September 7, 2005
OpenRoads Designer v10.16.2.267

SHEETING SIGNS DETAIL SHEET

COUNTY OF	ITEM NO.	SHEET NO.
HENDERSON	02-0935.00	R35

SIGN/SIGN ASSEMBLY NUMBER	*SIZES IN INCHES HORIZ.	VERT.	MESSAGES ①	SPECIFICATION	SIGN LOCATION SIDE OF ROAD	FACING TRAFFIC TRAVELING	ON ROAD	AT STATION (APPROXIMATE)
S-25	36	36		R5-1	RIGHT	-SB/TURN LEFT -WESTBOUND	-US 41 SOUTH -WOLF HILLS RD	108+44.00
S-26	36	36		R3-2	MEDIAN	NORTHBOUND	US 41 NORTH	108+65.00
S-27	36	36		R3-4	MEDIAN	SOUTHBOUND	US 41 SOUTH	109+30.00
	36	36		R5-1	MEDIAN	NORTHBOUND	US 41 NORTH	
S-28	24	12		M3-1	US 41 MEDIAN	WESTBOUND	WOLF HILLS RD	109+38.00
	24	24		M1-4				
	21	15		M6-1R				
	24	12		M4-5				
	24	12		M3-3				
	24	24		M1-4				
	21	15		M6-1R				
	36	12		R6-1R				
S-29	36	12		R6-1R	RIGHT	WESTBOUND	WOLF HILLS RD	109+60.00
	36	36		R1-1	RIGHT	WESTBOUND	WOLF HILLS RD	
S-30	30	36		R3-5R	RIGHT	WESTBOUND	WOLF HILLS RD	SEE SIGNING PLANS FOR LOCATION

SIGN/SIGN ASSEMBLY NUMBER	SIZES IN INCHES HORIZ.	VERT.	MESSAGES ①	SPECIFICATION	SIGN LOCATION SIDE OF ROAD	FACING TRAFFIC TRAVELING	ON ROAD	AT STATION (APPROXIMATE)
S-31	36	36		W3-1	RIGHT	WESTBOUND	WOLF HILLS RD	SEE SIGNING PLANS FOR LOCATION
S-32	24	12		M3-1	RIGHT	WESTBOUND	WOLF HILLS RD	SEE SIGNING PLANS FOR LOCATION
	24	24		M1-4	RIGHT	WESTBOUND	WOLF HILLS RD	
	21	15		M5-1R	RIGHT	WESTBOUND	WOLF HILLS RD	
	24	12		M4-5	RIGHT	WESTBOUND	WOLF HILLS RD	
	24	12		M3-3	RIGHT	WESTBOUND	WOLF HILLS RD	
	24	24		M1-4	RIGHT	WESTBOUND	WOLF HILLS RD	
	21	15		M5-1R	RIGHT	WESTBOUND	WOLF HILLS RD	
S-33	21	15		M2-1	RIGHT	WESTBOUND	WOLF HILLS RD	
	24	24		M1-4	RIGHT	WESTBOUND	WOLF HILLS RD	SEE SIGNING PLANS FOR LOCATION
S-34	24	12		M3-3	MEDIAN	NORTHBOUND	US 41 NORTH	110+80.00
	24	24		M1-4	MEDIAN	NORTHBOUND	US 41 NORTH	
	21	15		M6-2L	MEDIAN	NORTHBOUND	US 41 NORTH	
S-35	6'-3"	1'-6"		D1-1d	MEDIAN	SOUTHBOUND	US 41 SOUTH	112+89.00
S-36	6'-3"	1'-6"		D1-1d	LEFT	SOUTHBOUND	US 41 SOUTH	112+89.00

SPECIAL NOTES:
1. COLORS FOR SIGN ASSEMBLIES ARE DESIGNATED IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND "STANDARD HIGHWAY SIGNS"
2. SHEETING SIGNS SHALL BE FABRICATED FROM 0.125 GUAGE MATERIAL IF ANY DIMENSION IS GREATER THAN 36" (THIRTY-SIX INCHES), OTHERWISE 0.080 GUAGE MATERIAL SHALL BE USED.

* D1-1 AND D1-1d SIGN SIZES SHOWN IN FEET AND INCHES.

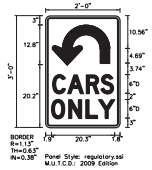
SHEETING SIGNS DETAIL SHEET

FILE NAME: C:\BMSWSP\BPB-USPW-02\WSP_MAC.RICE\D0833597\R33 - R38 - SIGNING DETAILS.DGN
USER: RKeM
DATE PLOTTED: September 7, 2005
OpenRoads Designer v10.16.2.267

SHEETING SIGNS DETAIL SHEET

COUNTY OF	ITEM NO.	SHEET NO.
HENDERSON	02-0935.00	R36

SIGN/SIGN ASSEMBLY NUMBER	SIZES IN INCHES* HORIZ.	SIZES IN INCHES* VERT.	MESSAGES ①	SPECIFICATION	SIGN LOCATION SIDE OF ROAD	SIGN LOCATION FACING TRAFFIC TRAVELING	SIGN LOCATION ON ROAD	SIGN LOCATION AT STATION (APPROXIMATE)
S-37	24	12		M3-3	MEDIAN	NORTHBOUND	US 41 NORTH	113+59.00
	24	24		M1-4	MEDIAN	NORTHBOUND	US 41 NORTH	
	21	15		MX-XX	MEDIAN	NORTHBOUND	US 41 NORTH	
S-38	48	18		R6-1L	LEFT	NORTHBOUND TURNING ONTO SOUTHBOUND	US 41 NORTH	114+36.00
S-39	36	36		R5-1	LEFT	NORTHBOUND TURNING ONTO SOUTHBOUND	US 41 NORTH	114+62.00
S-40	36	36		R3-4	MEDIAN	SOUTHBOUND	US 41 SOUTH	114+70.00
	36	36		R5-1	MEDIAN	NORTHBOUND TURNING ONTO SOUTHBOUND	US 41 NORTH	
S-41	6'-2"	1'-6"		D1-1	LEFT	SOUTHBOUND	US 41 SOUTH	106+62.00
S-42	6'-5"	1'-6"		D1-1	RIGHT	NORTHBOUND	US 41 NORTH	108+25.00

SIGN/SIGN ASSEMBLY NUMBER	SIZES IN INCHES HORIZ.	SIZES IN INCHES VERT.	MESSAGES ①	SPECIFICATION	SIGN LOCATION SIDE OF ROAD	SIGN LOCATION FACING TRAFFIC TRAVELING	SIGN LOCATION ON ROAD	SIGN LOCATION AT STATION (APPROXIMATE)
S-43	24	36		R3-XX	MEDIAN	SOUTHBOUND	US 41 SOUTH	102+21.00
S-44	36	36		R3-1	MEDIAN	SOUTHBOUND TURNING ONTO EASTBOUND	US 41 SOUTH	108+65.00
S-45	42	30		R5-1a	LEFT	NORTHBOUND TURNING ONTO SOUTHBOUND	US 41 NORTH	115+70.00
S-46	42	30		R5-1a	MEDAIN	NORTHBOUND TURNING ONTO SOUTHBOUND	US 41 NORTH	115+70.00
S-X								
S-X								

SPECIAL NOTES:
1. COLORS FOR SIGN ASSEMBLIES ARE DESIGNATED IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND "STANDARD HIGHWAY SIGNS".
2. SHEETING SIGNS SHALL BE FABRICATED FROM 0.125 GUAGE MATERIAL IF ANY DIMENSION IS GREATER THAN 36" (THIRTY-SIX INCHES), OTHERWISE 0.080 GUAGE MATERIAL SHALL BE USED.

* D1-1 AND D1-1d SIGN SIZES SHOWN IN FEET AND INCHES.

SHEETING SIGNS DETAIL SHEET

FILE NAME: C:\BMSWSP\BPB-USPW42WSP_MAC.RICE\D0833597\R33 - R38 - SIGNING DETAILS.DGN
USER: RKeM
DATE PLOTTED: September 7, 2005
OpenRoads Designer v10.16.2.267

SHEETING SIGNS DETAIL SHEET

COUNTY OF	ITEM NO.	SHEET NO.
HENDERSON	02-0935.00	R33

SIGN/SIGN ASSEMBLY NUMBER	✳SIZES IN INCHES HORIZ.	VERT.	MESSAGES ①	SPECIFICATION	SIGN LOCATION SIDE OF ROAD	FACING TRAFFIC TRAVELING	ON ROAD	AT STATION (APPROXIMATE)
S-1	42	30	WRONG WAY	R5-1a	MEDIAN	SOUTHBOUND TURNING ONTO NORTHBOUND	US 41 NORTH	100+13.00
S-2	42	30	WRONG WAY	R5-1a	RIGHT	SOUTHBOUND TURNING ONTO NORTHBOUND	US 41 NORTH	100+13.00
S-3	36	36	DO NOT ENTER	R3-4	MEDIAN	NORTHBOUND	US 41 NORTH	100+38.00
	36	36		R5-1	MEDIAN	SOUTHBOUND TURNING ONTO NORTHBOUND	US 41 SOUTH	
S-4	36	36	DO NOT ENTER	R5-1	RIGHT	SOUTHBOUND TURNING ONTO NORTHBOUND	US 41 SOUTH	100+38.00
S-5	48	18	ONE WAY	R6-1L	RIGHT	SOUTHBOUND TURNING ONTO NORTHBOUND	US 41 SOUTH	101+00.00
S-6	24	12	NORTH 41	M3-1	MEDIAN	SOUTHBOUND	US 41 SOUTH	101+21.00
	24	24		M1-4	MEDIAN	SOUTHBOUND	US 41 SOUTH	
	21	15		MX-XX	MEDIAN	SOUTHBOUND	US 41 SOUTH	

SIGN/SIGN ASSEMBLY NUMBER	SIZES IN INCHES HORIZ.	VERT.	MESSAGES ①	SPECIFICATION	SIGN LOCATION SIDE OF ROAD	FACING TRAFFIC TRAVELING	ON ROAD	AT STATION (APPROXIMATE)
S-7	6'-0"	1'-6"	Stratman Rd	D1-1d	MEDIAN	NORTHBOUND	US 41 NORTH	101+86.00
S-8	6'-0"	1'-6"	Stratman Rd	D1-1d	RIGHT	NORTHBOUND	US 41 NORTH	101+86.00
S-9	24	12	NORTH 41 CARS ONLY	M3-1	MEDIAN	SOUTHBOUND	US 41 SOUTH	104+06.00
	24	24		M1-4	MEDIAN	SOUTHBOUND	US 41 SOUTH	
	21	15		M6-2L	MEDIAN	SOUTHBOUND	US 41 SOUTH	
	24	36		R3-XX	MEDIAN	SOUTHBOUND	US 41 SOUTH	
S-10	36	36	DO NOT ENTER	R5-1	MEDIAN	SOUTHBOUND	US 41 SOUTH	104+56.00
	36	36		R3-4	MEDIAN	NORTHBOUND	US 41 NORTH	
S-11	21	15	JCT 41	M2-1	RIGHT	EASTBOUND	STRATMAN RD	SEE SIGNING PLANS FOR LOCATION
	24	24		M1-4	RIGHT	EASTBOUND	STRATMAN RD	
S-12	24	12	TO SOUTH 41 TO NORTH 41	M3-3	RIGHT	EASTBOUND	STRATMAN RD	SEE SIGNING PLANS FOR LOCATION
	24	24		M1-4	RIGHT	EASTBOUND	STRATMAN RD	
	21	15		M5-1R	RIGHT	EASTBOUND	STRATMAN RD	
	24	12		M4-5	RIGHT	EASTBOUND	STRATMAN RD	
	24	12		M3-1	RIGHT	EASTBOUND	STRATMAN RD	
	24	24		M1-4	RIGHT	EASTBOUND	STRATMAN RD	
	21	15		M5-1R	RIGHT	EASTBOUND	STRATMAN RD	

SPECIAL NOTES:
1. COLORS FOR SIGN ASSEMBLIES ARE DESIGNATED IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND "STANDARD HIGHWAY SIGNS"
2. SHEETING SIGNS SHALL BE FABRICATED FROM 0.125 GUAGE MATERIAL IF ANY DIMENSION IS GREATER THAN 36" (THIRTY-SIX INCHES), OTHERWISE 0.080 GUAGE MATERIAL SHALL BE USED.

✳ D1-1 AND D1-1d SIGN SIZES SHOWN IN FEET AND INCHES.

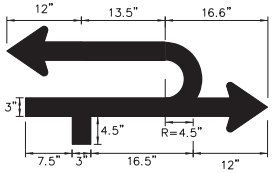
SHEETING SIGNS DETAIL SHEET

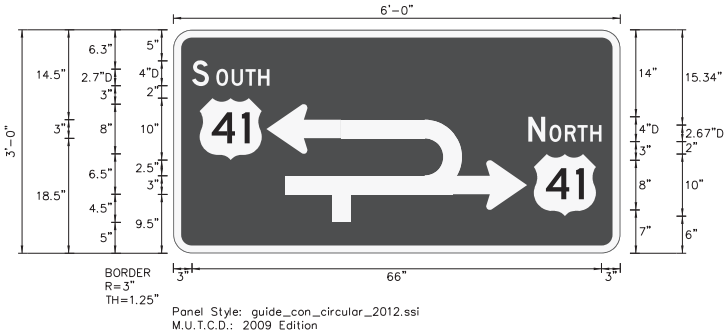
FILE NAME: C:\BMSWSP#B-US#PW-02\WSP_MAC.RICE\D0833597\R33 - R38 - SIGNING DETAILS.DGN
USER: RKeM
DATE PLOTTED: September 7, 2005
OpenRoads Designer v10.16.2.267

COUNTY OF	ITEM NO.	SHEET NO.
HENDERSON	02-0935.00	R38

SIGN DETAIL

N.T.S.





Panel Style: guide_con_circular_2012.ssi
M.U.T.C.D.: 2009 Edition

SIGN LOCATION & MOUNTING INFORMATION			
SIDE OF ROAD	TRAFFIC DIRECTION	ON ROAD	MILE POINT
RIGHT	WESTBOUND	WOLF HILLS DRIVE	**

MOUNTING STYLE	GROUND		
POST TYPE	TYPE 1 POST		
POST 1 LENGTH =	15'	HORIZONTAL CLEARANCE	
POST 2 LENGTH =	15'	' LT.	12' RT.
POST 3 LENGTH =	15'		
TYPE "D" BREAKAWAY SIGN SUPPORT		3 EACH	

CONCRETE BASE DIMENSIONS		
a = 1'-6" DIA.	b = 3'-6"	0.25 Cu. Yds./Post

**NOTE: SEE SIGNING PLANS FOR LOCATION

SIGN NUMBER	P-2
WIDTH x HGHT.	6'-0" x 3'-0"
BORDER WIDTH	1.25"
CORNER RADIUS	3"
MOUNTING	GROUND
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT
AR_Type D	90	15	16	8	12
M1_4	0	4.2	15	10	10
AR_Type D	270	45	7	8	12
M1_4	0	58.1	6	10	10

Panel Style: guide_con_circular_2012.ssi
Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)

																											LENGTH	SERIES/SIZE
S	O	U	T	H																								D 2000
3	6.9	9.4	11.6	13.7																							12.5	4.2.7
N	O	R	T	H																								D 2000
57.2	60.6	63.1	65.1	67.2																							11.8	4.2.7

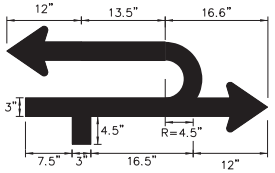
SIGN DETAIL SHEET

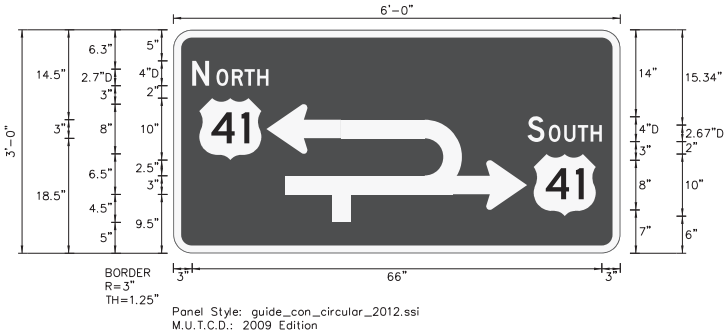
FILE NAME: C:\BMSIWSP\RB-US-PW-I2\WSP_MAC.RICE\D0833597\R33 - R38 - SIGNING DETAILS.DGN
USER: RKeM
DATE PLOTTED: September 7, 2005
OpenRoads Designer v10.16.2.267

COUNTY OF	ITEM NO.	SHEET NO.
HENDERSON	02-0935.00	R37

SIGN DETAIL

N.T.S.





Panel Style: guide_con_circular_2012.ssi
M.U.T.C.D.: 2009 Edition

SIGN LOCATION & MOUNTING INFORMATION			
SIDE OF ROAD	TRAFFIC DIRECTION	ON ROAD	MILE POINT
RIGHT	EASTBOUND	STRATMAN ROAD	**

MOUNTING STYLE	GROUND		
POST SIZE	TYPE 1 POST		
POST 1 LENGTH =	15'	HORIZONTAL CLEARANCE	
POST 2 LENGTH =	15'	' LT.	12' RT.
POST 3 LENGTH =	15'		
TYPE "D" BREAKAWAY SIGN SUPPORT		3 EACH	

CONCRETE BASE DIMENSIONS		
a = 1'-6" DIA.	b = 3'-6"	0.25 Cu. Yds./Post

**NOTE: SEE SIGNING PLANS FOR LOCATION

SIGN NUMBER	P-1
WIDTH x HGHT.	6'-0" x 3'-0"
BORDER WIDTH	1.25"
CORNER RADIUS	3"
MOUNTING	GROUND
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT
AR_Type D	90	15	16	8	12
M1_4	0	4.2	15	10	10
AR_Type D	270	45	7	8	12
M1_4	0	58	6	10	10

Panel Style: guide_con_circular_2012.ssi
Dimensions are in inches.tenths

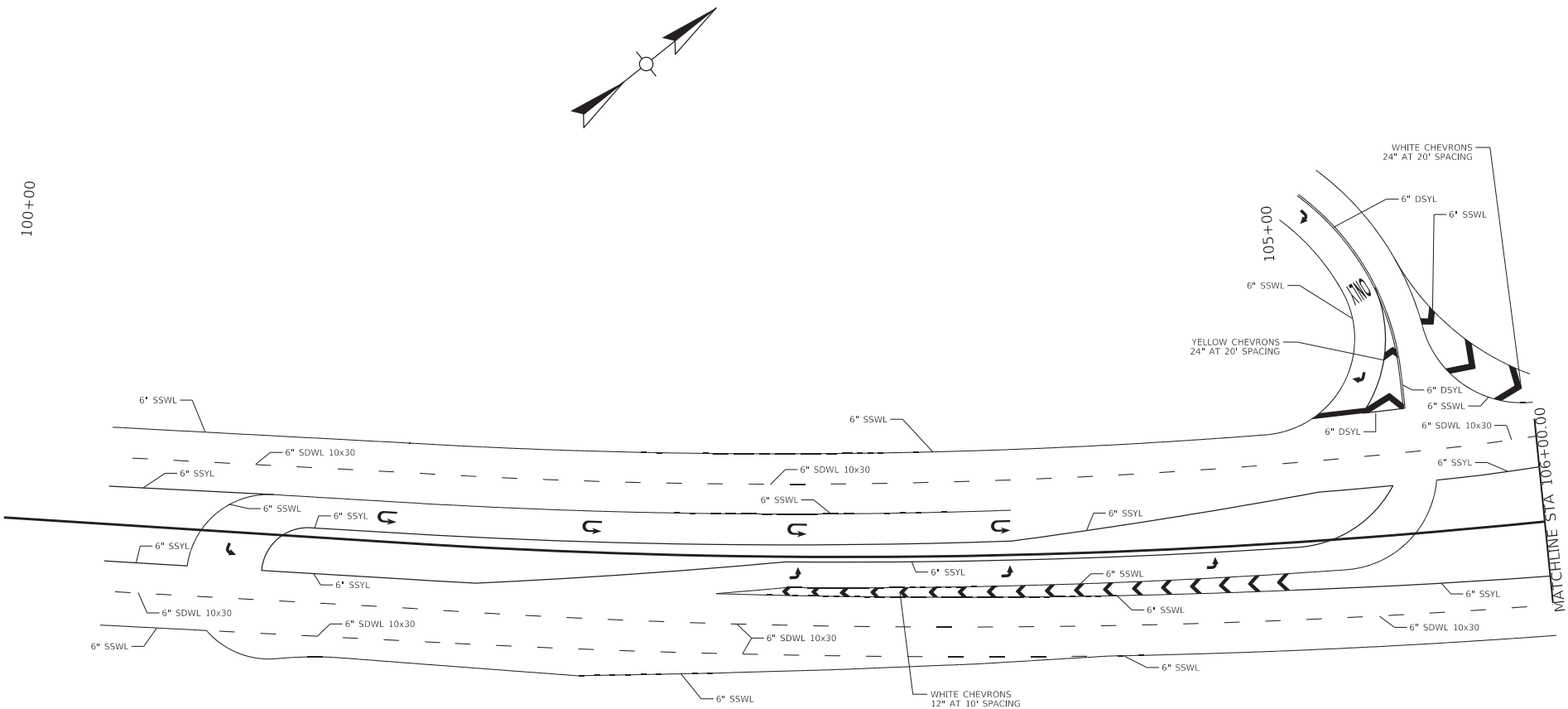
Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)

																											LENGTH	SERIES/SIZE
N	O	R	T	H																								D 2000
3	7	9.4	11.5	13.5																							12.3	4.2.7
S	O	U	T	H																								D 2000
57.1	60.5	63	65.2	67.2																							12	4.2.7

SIGN DETAIL SHEET

FILE NAME: C:\BMS\WSP+PB-US+PW-I2\WSP_MAC.RICE\D0833597\R33 - R38 - SIGNING DETAILS.DGN
USER: RiceM
DATE PLOTTED: September 7, 2005
OpenRoads Designer v10.16.2.267



THERMOPLASTIC MARKINGS			
ALIGNMENT	STATION	OFFSET	DESCRIPTION
US 41	100+88.18	6.56'RT	LEFT TURN ARROW
US 41	103+11.91	8.06' RT	LEFT TURN ARROW
US 41	103+91.67	7.23' RT	LEFT TURN ARROW
US 41	104+71.47	6.65' RT	LEFT TURN ARROW
US 41	101+53.02	9.72' LT	U-TURN ARROW
US 41	102+33.12	10.11' LT	U-TURN ARROW
US 41	103+13.23	10.67' LT	U-TURN ARROW
US 41	103+92.77	11.40' LT	U-TURN ARROW
STRATMAN RD	201+47.21	5.35' RT	LEFT TURN ARROW
STRATMAN RD	201+80.55	6.67' RT	"ONLY"
STRATMAN RD	202+22.10	16.05' RT	LEFT TURN ARROW
STRATMAN RD	202+34.19	15.42' RT	24" STOP BAR - 19 LF

6" SSWL — 6" SINGLE SOLID WHITE LINE (PAID FOR BY FD05)
6" SSYL — 6" SINGLE SOLID YELLOW LINE (PAID FOR BY FD05)
6" SDWL 10x30 — 6" SINGLE DASHED WHITE LINE 10x30 SPACING (PAID FOR BY FD05)
6" DSYL — 6" DOUBLE SOLID YELLOW LINE (PAID FOR BY FD05)

THERMOPLASTIC CHEVRONS			
ALIGNMENT	STATION	OFFSET	DESCRIPTION
US 41	104+04	13' RT	WHITE CHEVRONS - 118 SQFT
STRATMAN RD	202+12	5' RT	YELLOW CHEVRONS - 49 SQFT
STRATMAN RD	202+23	31' LT	WHITE CHEVRONS - 108 SQFT

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: STRIPING PLANS

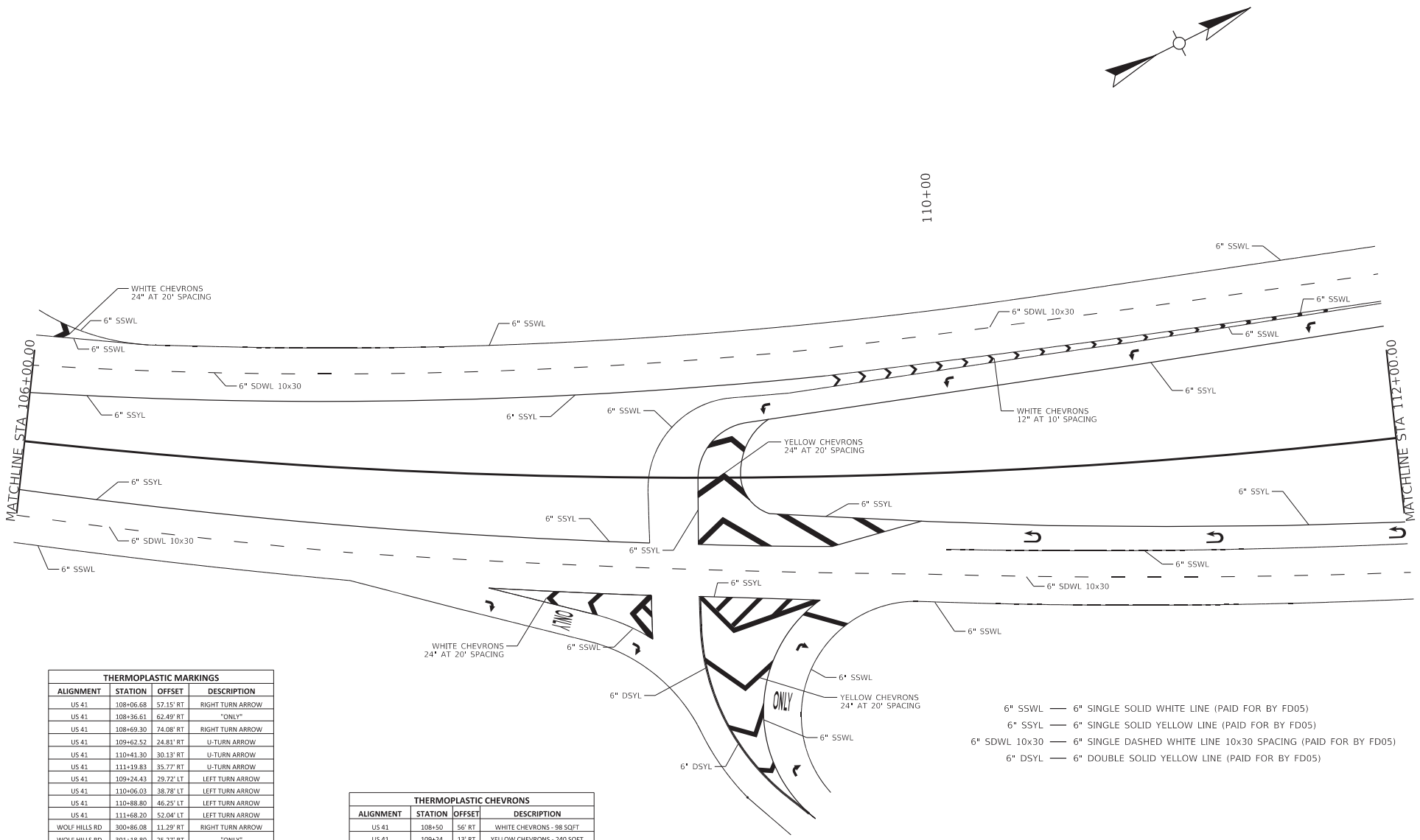
HORIZONTAL SCALE
SCALE: 1"=20'

0' 20' 40' 80'

STA 100+00 TO 106+00

ITEM NO. 02-0935.00
COUNTY OF HENDERSON
SHEET NO. R39

OpenRoads Designer v10.16.2.267
USER: usj725830
FILE NAME: C:\BMS\WSP-US-PW-02\D0833597\R39 - R41 - STRIPING PLANS.DGN



THERMOPLASTIC MARKINGS			
ALIGNMENT	STATION	OFFSET	DESCRIPTION
US 41	108+06.68	57.15' RT	RIGHT TURN ARROW
US 41	108+36.61	62.49' RT	"ONLY"
US 41	108+69.30	74.08' RT	RIGHT TURN ARROW
US 41	109+62.52	24.81' RT	U-TURN ARROW
US 41	110+41.30	30.13' RT	U-TURN ARROW
US 41	111+19.83	35.77' RT	U-TURN ARROW
US 41	109+24.43	29.72' LT	LEFT TURN ARROW
US 41	110+06.03	38.78' LT	LEFT TURN ARROW
US 41	110+88.80	46.25' LT	LEFT TURN ARROW
US 41	111+68.20	52.04' LT	LEFT TURN ARROW
WOLF HILLS RD	300+86.08	11.29' RT	RIGHT TURN ARROW
WOLF HILLS RD	301+18.80	25.27' RT	"ONLY"
WOLF HILLS RD	301+48.43	42.57' RT	RIGHT TURN ARROW
WOLF HILLS RD	301+69.89	55.35' RT	24" STOP BAR - 19 LF

THERMOPLASTIC CHEVRONS			
ALIGNMENT	STATION	OFFSET	DESCRIPTION
US 41	108+50	56' RT	WHITE CHEVRONS - 98 SQFT
US 41	109+24	13' RT	YELLOW CHEVRONS - 240 SQFT
US 41	110+97	53' LT	WHITE CHEVRONS - 80 SQFT
WOLF HILLS RD	301+29.56	43.05' RT	YELLOW CHEVRONS - 324 SQFT

6" SSWL — 6" SINGLE SOLID WHITE LINE (PAID FOR BY FD05)
6" SSYL — 6" SINGLE SOLID YELLOW LINE (PAID FOR BY FD05)
6" SDWL 10x30 — 6" SINGLE DASHED WHITE LINE 10x30 SPACING (PAID FOR BY FD05)
6" DSYL — 6" DOUBLE SOLID YELLOW LINE (PAID FOR BY FD05)

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: STRIPING PLANS

HORIZONTAL SCALE
SCALE: 1"=20'

0' 20' 40' 80'

STA 106+00 TO 112+00

ITEM NO. 02-0935.00
COUNTY OF HENDERSON
SHEET NO. R40

OpenRoads Designer v10.16.2.267
USER: us\j725830
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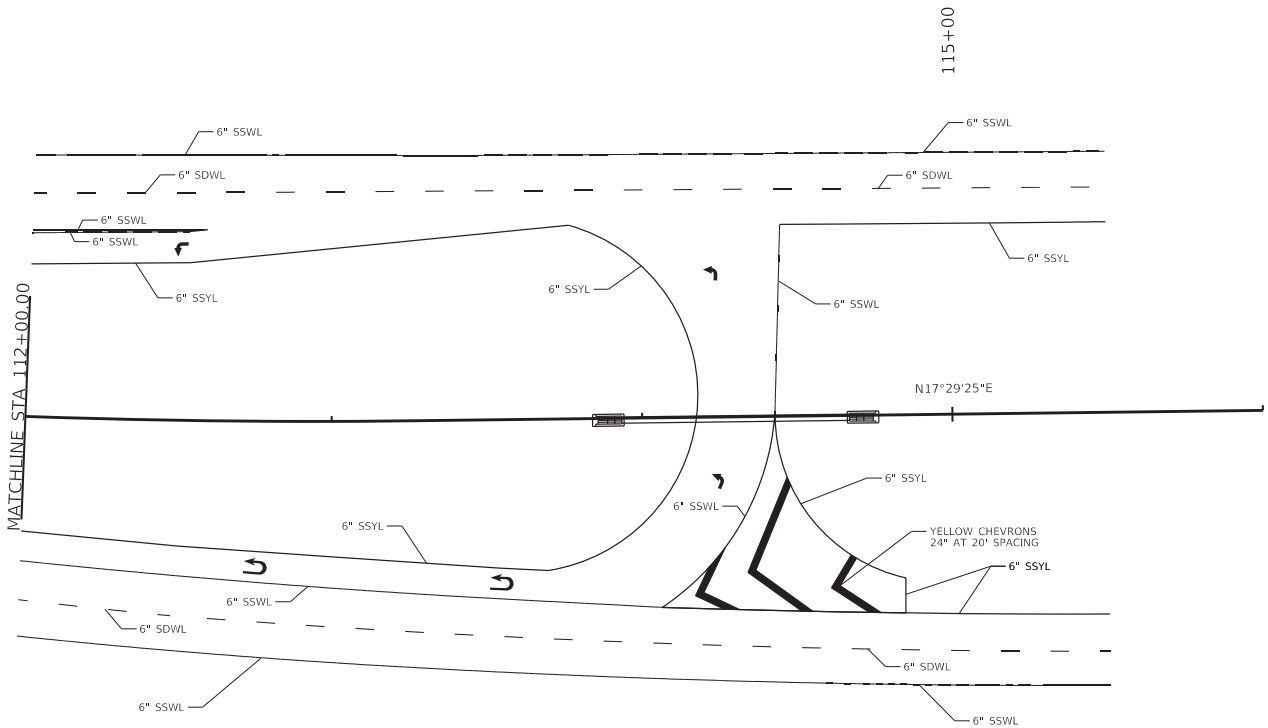


6" SSWL — 6" SINGLE SOLID WHITE LINE (PAID FOR BY FD05)
6" SSYL — 6" SINGLE SOLID YELLOW LINE (PAID FOR BY FD05)
6" SDWL 10x30 — 6" SINGLE DASHED WHITE LINE 10x30 SPACING (PAID FOR BY FD05)
6" DSYL — 6" DOUBLE SOLID YELLOW LINE (PAID FOR BY FD05)

THERMOPLASTIC MARKINGS			
ALIGNMENT	STATION	OFFSET	DESCRIPTION
US 41	112+76.64	47.21' RT	U-TURN ARROW
US 41	113+55.28	52.82' RT	U-TURN ARROW
US 41	114+24.35	20.61' RT	LEFT TURN ARROW

THERMOPLASTIC CHEVRONS			
ALIGNMENT	STATION	OFFSET	DESCRIPTION
US 41	114+42	46' RT	YELLOW CHEVRONS - 209 SQFT

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: STRIPING PLANS

HORIZONTAL SCALE
SCALE: 1"=20'

0' 20' 40' 80'

STA 112+00 TO 115+00

ITEM NO. 02-0935.00
COUNTY OF HENDERSON
SHEET NO. R41

OpenRoads Designer v10.16.2.267
USER: usj725830
FILE NAME: C:\BMS\WSP-US-PW-02\D0833597\R39 - R41 - STRIPING PLANS.DGN

ROADWAY LIGHTING ESTIMATE OF QUANTITIES

TOTAL	UNITS	CODE	ITEM DESCRIPTION
5	EACH	4701	POLE 40' MTG HT
5	EACH	4725	BRACKET 15'
5	EACH	4740	POLE BASE
5	EACH	4750	TRANSFORMER BASE
1	EACH	4761	LIGHTING CONTROL EQUIPMENT
10	EACH	4780	FUSED CONNECTOR KIT
1120	LIN FT	4797	CONDUIT 3 INCH
2	EACH	4800	MARKER
4145	LIN FT	4820	TRENCHING AND BACKFILLING
825	LIN FT	4832	WIRE - NO. 12
3025	LIN FT	4860	CABLE - NO. 8/3C DUCTED
8	EACH	20391NS835	ELECTRICAL JUNCTION BOX TYPE A
5	EACH	24589ED	LED LUMINAIRE

7-25-2022

THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION, AND OTHER SPECIAL NOTES AND SPECIFICATIONS WILL APPLY ON THIS PROJECT. SEE SECTION 716 FOR MEASUREMENT AND OTHER DETAILS. SEE SECTION 602 FOR SPIRAL REINFORCEMENT SPLICING

THE CONTRACTOR SHALL MAKE AN INSPECTION OF THE PROJECT SITE PRIOR TO SUBMITTING A BID AND SHALL BE THOROUGHLY FAMILIARIZED WITH EXISTING CONDITIONS. SUBMISSIONS OF A BID WILL BE CONSIDERED AN AFFIRMATION OF THIS INSPECTION HAVING BEEN COMPLETED.

ADD SENTENCE TO SECTION 834.06: ALL WIRE SHALL HAVE WORDING ADDED TO THE OUTER JACKET THAT STATES : " PROPERTY OF KENTUCKY TRANSPORTATION CABINET 502 564 0501".

ADD SENTENCE TO SECTION 834.09: ALL WIRE SHALL HAVE WORDING ADDED TO THE OUTER JACKET THAT STATES: " PROPERTY OF KENTUCKY TRANSPORTATION CABINET 502 564 0501".

CONSTRUCTION AND MEASUREMENT NOTES THAT ARE CONTRARY TO SECTION 716 AND 834

SUBSECTION: 716.03.03 TRENCHING.
REMOVE: REMOVE SENTENCE UNDER B): NO PAYMENT FOR ADDITIONAL JUNCTION BOXES FOR GREATER DEPTHS WILL BE ALLOWED.

SUBSECTION: 716.03.04 CONDUIT INSTALLATION
REVISION: ADD TO SECOND SENTENCE WITH THE FOLLOWING: BASES WITH BREAKWAY DEVICES INSTALLED.

SUBSECTION: 716.03.04 (K) BORE AND JACK.
REVISION: REPLACE TITLE WITH THE FOLLOWING: BORE AND JACK/OPEN CUT ROADWAY
ADD SENTENCES AFTER LAST SENTENCE: WITH PERMISSION OF THE ENGINEER, ROADWAY MAY BE OPEN CUT IF CONDUIT IS UNDER PAVEMENT. THE CONDUIT IN OPEN CUT CAN BE EITHER 2" RIDID STEEL OR SCHEDULE 80 PVC UNDER ALL PAVEMENTS AREAS. IF IT IS THE LOOP TRANSITION FROM THE SAW SLOT, IT SHALL BE RIGID STEEL.

SUBSECTION: 834.15.03 TRANSFORMER BASES.
REMOVE: REMOVE SENTENCE: CONSTRUCT THE DOOR OF A HIGH DENSITY POLYETHYLENE MATERIAL IN COLOR THAT MATCHES THE BASE.
REVISION: REPLACE THE FOLLOWING SENTENCE WITH THE FOLLOWING:
CONSTRUCT THE DOOR OF AN ALUMINUM MATERIAL IN A COLOR THAT MATCHES THE BASE. THE DOOR SHOULD HAVE A THEFT DETERRENT DEVICE THAT IS EQUAL TO THE LOCKDOWN LIGHTLOCK DOOR ASSEMBLY. THE DOOR LOCK WILL HAVE A LOCKING DEVICE WITH A KYTC CUSTOM KEY THAT WILL BE SEND TO CENTRAL OFFICE TRAFFIC OPERATIONS FROM THE MANUFACTURER AND BE ISSUED TO THE CONTRACTOR FOR THE INSTALLATION OF THE FINAL DOOR DEVICE. THE KEY FOR THE DOOR SHALL BE RETURNED TO CENTRAL OFFICE TRAFFIC OPERATIONS AFTER THE CLOSURE OF THE CONTRACT. THERE SHALL BE A 4" BY 6" ARC FLASH WARNING STICKER INSTALLED CENTER TOP OF EACH DOOR. THE STICKER SHALL BE METALCRAFT PLY695 PREM STYLEMARK LABEL WITH .007 THICKNESS, WITH UV WHITE POLYCARBINATE MATERIAL, AND WITH MC53FL PRESSURE SENSITIVE ADHESIVE.
THE STICKER SHALL HAVE TWO COLORS OF BLACK AND CUSTOM COLOR ORANGE. THE WORDING FOR THE ARC FLASH STICKER SHALL BE THE FOLLOWING: "WARNING ARC FLASH HAZARD. APPROPRIATE PPE REQUIRED. FAILURE TO COMPLY CAN RESULT IN DEATH OR INJURY. REFER TO NFPA 70E."

SECTION: 834.15 LIGHTING POLES.

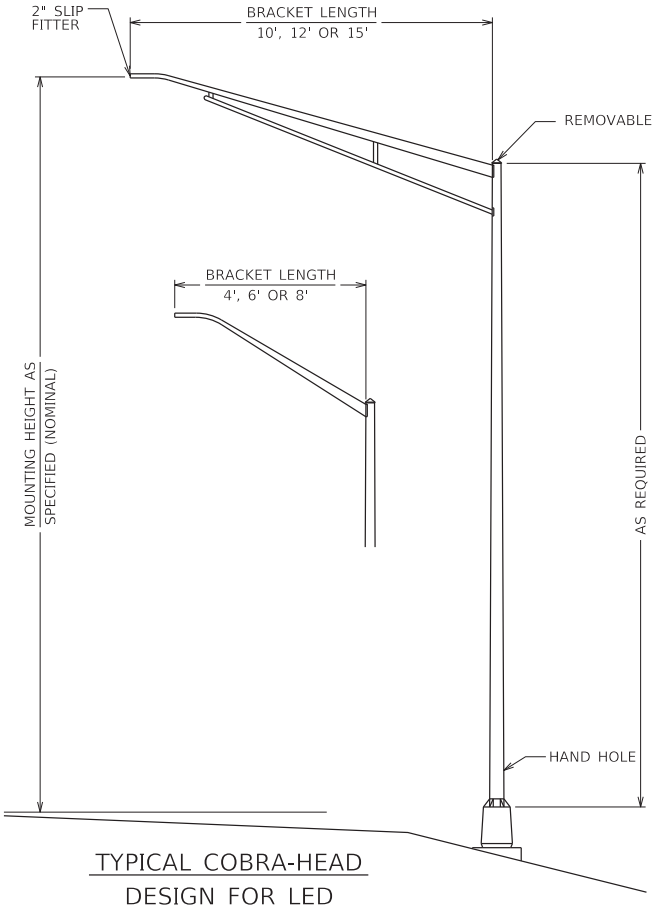
REVISION: ADD THE FOLLOWING TO THE FIRST PARAGRAGH:
THE CABINET WILL WAIVE THE REQUIREMENT STATED IN THE FIRST SENTENCE OF SECTION 5.14.6.2 - REINFORCED HOLES AND CUTOUT FOR HIGH MAST POLES (ONLY).

SECTION: 834.33 WARNING TAPE.

REVISION: REPLACE FIRST SENTENCE WITH THE FOLLOWING:
PROVIDE DETECTABLE TYPE TAPE THAT IS 6 INCHES WIDE AND 7.0 MILS (NOMINAL)THICK.

MEASUREMENT NOTE THAT ARE IN ADDITION TO SECTION 716:

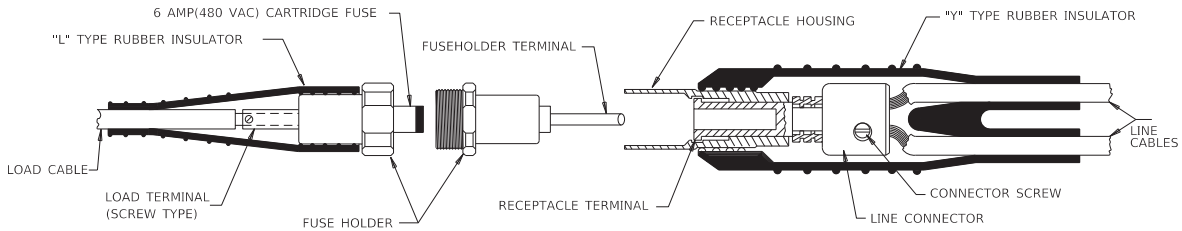
WIRE OR CABLE SHALL INCLUDE INSTALLING SPECIFIED WIRE OR CABLE WITHIN CONDUIT AS INDICATED ON THE PLAN SHEETS. INCIDENTAL TO THIS ITEM SHALL BE THE FURNISHING AND INSTALLING OF SPLICE BOOTS OR ANY OTHER HARDWARE REQUIRED FOR INSTALLING CABLE. THE CONTRACTOR SHALL INSTALL ALL CABLE OR WIRE RUNS SPLICE-FREE FROM THE CONTROLLER TO EACH POLE THE CABLE OR WIRE IS FEEDING. EXCEPTIONS TO THIS MUST BE APPROVED BY THE ENGINEER OR AS SPECIFIED ON THE PLANS.



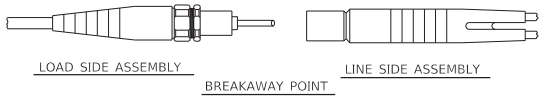
TYPICAL COBRA-HEAD DESIGN FOR LED LUMINAIRES

SPECIAL NOTE:
ALL LUMINAIRES SHALL HAVE THE NEMA LABEL INSTALL ON THE BOTTOM OF THE FIXTURE TO VERIFY THE WATTAGE.

BREAKAWAY FUSE CONNECTOR KIT



DETAILS OF TYPE HEB-JW-RYC CONNECTOR



TYPE HEB-JW-RYC CONNECTOR SHOWN

LUMINAIRE DESIGNATION EXAMPLE

2 - 7 - C3 - 15

- 15 — MAST ARM LENGTH
- C3 — LUMINAIRE WATTAGE & DISTRIBUTION
- 7 — LUMINAIRE NUMBER IN CIRCUIT
- 2 — CIRCUIT NUMBER

NOTE: IF NO SETBACK DIMENSION IS INDICATED, THE MAST ARM LENGTH DENOTES THE DISTANCE FROM THE RIGHT EDGE OF PAVEMENT TO CENTER OF POLE BASE.

NOTE:

ALL TYPE C LUMINAIRES ARE MOUNTED AT 40' (NOMINAL) LED EQUIVALENT TO 250 WATTS HPS.
ALL TYPE C LUMINAIRES HAVE A ROADWAY TYPE 3 LIGHT DISTRIBUTION.

4-24-2017

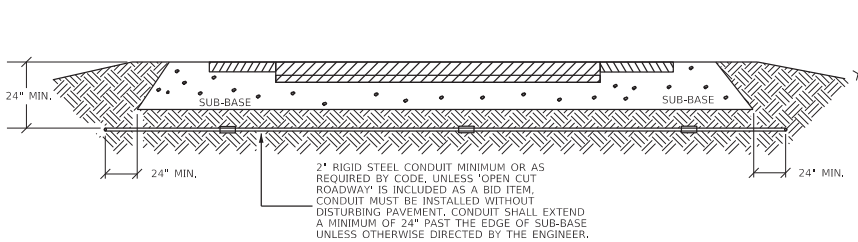
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: COBRAHEAD MOUNTING AND FUSE CONNECTOR DETAILS

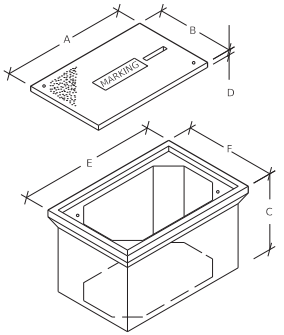
HORIZONTAL SCALE
SCALE: N/A

ITEM NO. 02-0935.00
COUNTY OF HENDERSON
SHEET NO. T2

OpenRoads Designer v10.16.2.267
USER: USNB706409
FILE NAME: C:\BMS\WSP-US-PW-02\D0923365\ORD LIGHTING STANDARDS.DGN

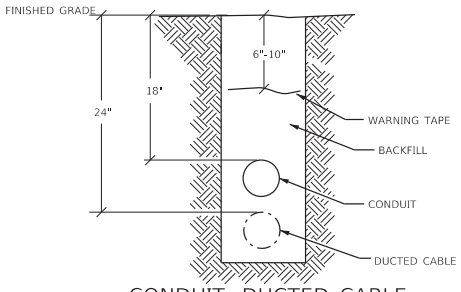


CONDUIT INSTALLATION UNDER EXISTING PAVEMENT DETAIL



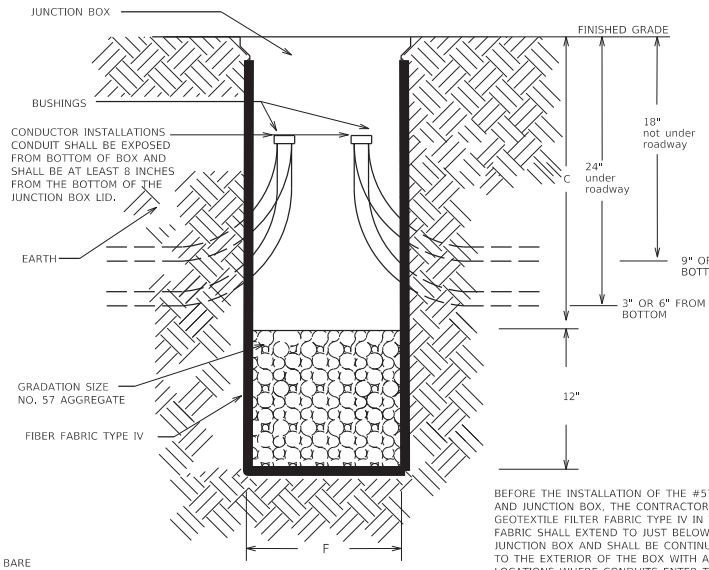
JUNCTION BOX DIMENSIONS (NOMINAL)						
	A	B	C	D	E	F
TYPE A	23"	14"	27"	2"	25"	15"
TYPE B	18"	11"	12"	$1\frac{7}{32}$" *	20"	13"
TYPE C	36"	24"	30"	3"	38"	26"

* MINIMUM
NOTE: STACKABLE BOXES ARE PERMITTED

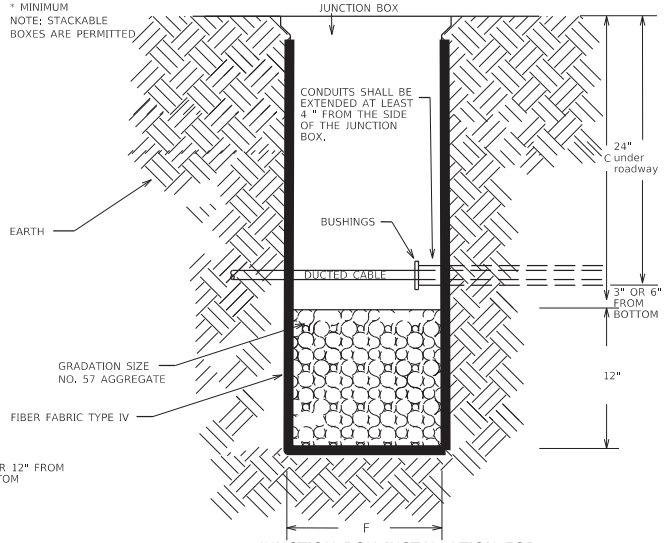


CONDUIT, DUCTED CABLE, AND WARNING TAPE TRENCH

DEPTHS SHOWN FOR CONDUIT AND DUCTED CABLE ARE MINIMUMS. CONTRACTOR SHALL PLACE AND COMPACT BACKFILL IN 9" MAXIMUM LIFTS AND RETORE DISTURBED AREA TO THE SATISFACTION OF THE ENGINEER.

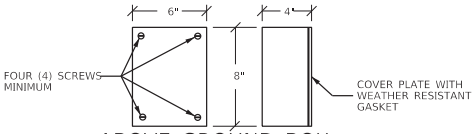


JUNCTION BOX INSTALLATION FOR CONVENTIONAL LIGHTING



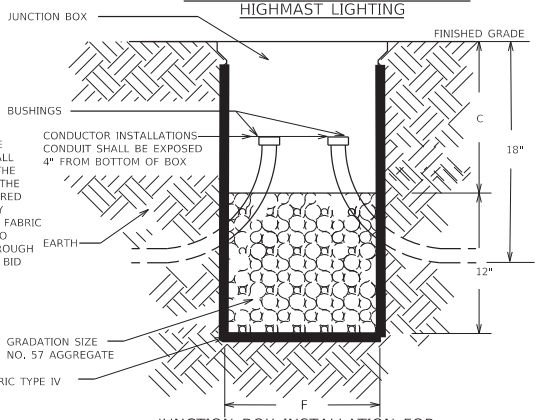
JUNCTION BOX INSTALLATION FOR HIGHMAST LIGHTING

ABOVE GROUND BOX SHALL BE FABRICATED FROM MINIMUM 12 GAUGE STEEL AND GALVANIZED AFTER FABRICATION. BOXES SHALL HAVE NO KNOCKOUTSAND SHALL BE PROVIDED WITH A PLATE COVER WITH A WEATHER RESISTANT GASKET AND A MINIMUM OF FOUR SCREWS FOR ATTACHING THE PLATE COVER TO THE BOX. CABLE CLAMPS SHALL BE PROVIDED FOR CABLES ENTERING AND EXITING THE BOX.

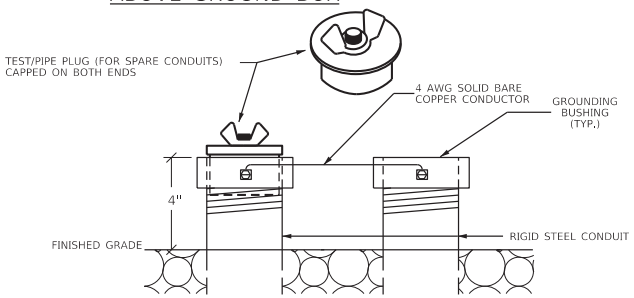


ABOVE GROUND BOX

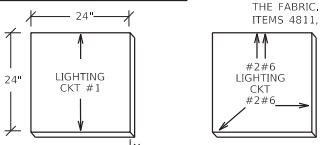
BEFORE THE INSTALLATION OF THE #57 AGGREGATE AND JUNCTION BOX, THE CONTRACTOR SHALL INSTALL GEOTEXTILE FILTER FABRIC TYPE IV IN THE HOLE. THE FABRIC SHALL EXTEND TO JUST BELOW THE LIP OF THE JUNCTION BOX AND SHALL BE CONTINUOUSLY ADHERED TO THE EXTERIOR OF THE BOX WITH ADHESIVE. ANY LOCATIONS WHERE CONDUITS ENTER THE BOX, THE FABRIC SHALL BE "X CUT" ONLY AS MUCH AS NECESSARY TO ALLOW PASSAGE OF EACH INDIVIDUAL CONDUIT THROUGH THE FABRIC. THE FABRIC SHALL BE INCIDENTAL TO BID ITEMS 4811, 20391NS835, OR 20392NS835.



JUNCTION BOX INSTALLATION FOR TRAFFIC SIGNALS



TEST/PIPE PLUG(FOR SPARE CONDUITS) AND GROUNDING DETAIL



CONCRETE CABLE MARKERS

3/13/2017

COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS TEAM KENTUCKY	DRAWING TITLE: JUNCTION BOX AND CONDUIT DETAILS	HORIZONTAL SCALE SCALE: N/A		ITEM NO. 02-0935.00 COUNTY OF HENDERSON SHEET NO. T3

OpenRoads Designer v10.16.2.267 USER: USNB706409 FILE NAME: C:\BMS\WSP-US-PW-02\D0923365\ORD LIGHTING STANDARDS.DGN

DESIGN CRITERIA FOR LED MONGOOSE STYLE LUMINAIRE

LIGHTING CRITERIA FOR SOUTHERN U-TURN
CONFLICT AREA
ILLUMINANCE:
AVERAGE: NOT LESS THAN .57 FOOTCANDLES
AND MORE THAN .85 FOOTCANDLES
MINIMUM: NOT LESS THAN .20 FOOTCANDLES
AVERAGE/MINIMUM: NOT MORE THAN 3.5:1

ALL POLE LOCATIONS, ARM LENGTHS, AND ORIENTATION OF LUMINAIRE (TO CURVE/ROAD) SHOULD BE MAINTAINED DUE TO UTILITIES/DRAINAGE/RIGHT-OF-WAY.

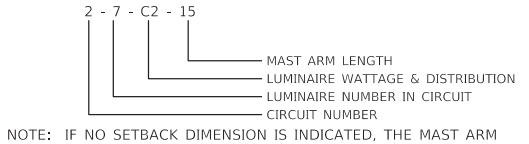
LIGHTING CRITERIA FOR SOUTHERN U-TURN
CONFLICT AREA
ILLUMINANCE:
AVERAGE: NOT LESS THAN .57 FOOTCANDLES
AND MORE THAN .85 FOOTCANDLES
MINIMUM: NOT LESS THAN .20 FOOTCANDLES
AVERAGE/MINIMUM: NOT MORE THAN 3.5:1

ALL POLE LOCATIONS, ARM LENGTHS, AND ORIENTATION OF LUMINAIRE (TO CURVE/ROAD) SHOULD BE MAINTAINED DUE TO UTILITIES/DRAINAGE/RIGHT-OF-WAY.

LUMINAIRE DESIGN:

MONGOOSE LUMINAIRES	COBRAHEAD LUMINAIRES
DRIVER: NOT TO EXCEED 700 mA	DRIVER: NOT TO EXCEED 700 mA
DISTRIBUTION: MEDIUM ROADWAY	DISTRIBUTION: ROADWAY TYPE 2
LAMP WATTAGE: CAN NOT EXCEED 120 WATTS	LAMP WATTAGE: CAN NOT EXCEED 120 WATTS

LUMINAIRE DESIGNATION EXAMPLE



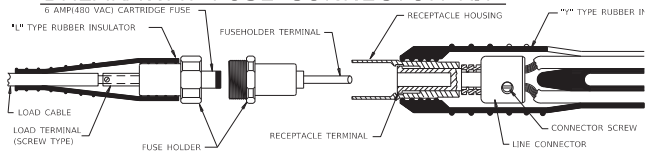
NOTE: IF NO SETBACK DIMENSION IS INDICATED, THE MAST ARM LENGTH DENOTES THE DISTANCE FROM THE RIGHT EDGE OF PAVEMENT TO CENTER OF POLE BASE.

NOTE:

ALL MONGOOSE LUMINAIRES ARE MOUNTED AT 40' (NOMINAL)
LED EQUIVALENT TO 250 WATTS HPS.
ALL MONGOOSE LUMINAIRES HAVE A MEDIUM ROADWAY (TYPE 2) LIGHT DISTRIBUTION.

The following are the required Specifications for the LED Fixture:
1. The Luminaire shall be listed by a National Recognized Testing Laboratory (NRTL) as defined by the U.S. Department of Labor. The testing laboratory must be listed by OSHA in its scope of recognition for the applicable tests being conducted as required by this specification. A list of recognized testing labs for products sold in the United States may be found on the U.S. Department of Labor's web site: http://www.osha.gov/
2. The Luminaire shall be listed and labeled by a NRTL or CSA as being in compliance with UL 1598 and suitable for use in wet locations.
3. Key components including LED drivers, LED light sources, and surge protection devices shall be RoHS compliant.
4. The housing shall have an International Electrotechnical Commission (IEC) 529 Ingress Protection (IP) rating of IP 65 or greater.
5. Shall be in compliance with Electro Magnetic Interference (EMI) requirements as defined by FCC 47 Sub Part 15; CISPR15, CISPR22 Class A (120Vmin), EN61000-3-2, -3-3, -4-4, -4-5.
6. Shall be tested according to the most current version of Illuminating Engineering Society of North America (IESNA) LM-79.
7. Shall have lumen maintenance measured in accordance the most current version of Illuminating Engineering Society of North America (IESNA) LM-80.
8. Shall have long term lumen maintenance documented according to the most current version of Illuminating Engineering Society of North America (IESNA) TM-21.
9. The fixture shall have a diecast aluminum housing.
10. The luminaire finish shall be corrosion resistant with a polyester powdercoat of 2.5 mil nominal thickness. Finish shall pass per ASTM D1654 after 3000 hours of testing per ASTM B117.
11. All hardware on the exterior of the housing including cover and latch shall be stainless steel, zinc or steel with zinc alloy electroplate and chromate top coat .
12. The luminaire shall be easy to open when properly mounted and shall have readily accessible internal parts. Access to all internal parts requiring replacement shall not require tools (i.e. "tool-less entry").
13. The luminaire shall have a vibration rating of 3G per the American National Standard (ANSI) IEEE C136.31, Table 2 Roadway Lighting Equipment -Luminaire Vibration for both normal applications and bridge and overpass applications.
14. The luminaire shall be designed to allow water shedding.
15. The luminaire shall have a passive cooling method shall be employed to manage thermal output of LED light engine and power supply.
16. The luminaire shall have a label per ANSI C136.22 that states operating voltage and current range. The label must be clearly visible on the inside of the housing.
17. The luminaire shall fully operate in a temperature range of -40 degrees C up to 40 degrees C (-40 degrees F to 104 degrees F).
18. In retrofit applications, the LED luminaire shall not be more wattage than the original HPS fixture If you are replacing one for one. For the optimized proposal, we will allow the wattage to be greater than the original proposed luminaire.
19. The luminaire shall have an integral power supply (electronic driver). The power supply shall not have a manual, field-adjustable setting for current output.
20. The luminaire shall have a power supply (electronic driver) that will operate on a 480 volt single phase at 60 hertz.
21. The luminaire shall have a power supply (electronic driver) that has a power factor of .90 or greater at full load.
22. The luminaire shall have a power supply (electronic driver) that has total harmonic distortion of 20% or less at full load.
23. The luminaire shall have power supply (electronic driver) output ripple of less than 15%.
24. The luminaire shall have power supply (electronic driver) with a rated life of 100,000 hours with a luminaire operated at an ambient temperature of 25^C (77^F).
25. The luminaire shall have an isolated power supply (electronic driver) output.
26. The luminaire shall have a power supply (electronic driver) that has thermal overload protection.
27. The luminaire shall have a power supply (electronic driver) that is self-limited short circuit protected and over load protected.
28. The luminaire shall not use any active thermal cutback, such as in order to achieve a higher thermal performance.
29. The luminaire shall have a power supply (electronic driver) that is terminated with quick disconnect wire harnesses for easy maintenance. Wire nut termination is not acceptable.
30. The luminaire shall have a terminal block for terminating wiring to the luminaire. The terminal block shall be a 3 station, tunnel lug terminal board that will accommodate #6 thru #18 AWG pole wire.
31. Fixture shall have a surge protection that meets 10KV/5KA per ANSI/IEEEC62.41.
32. The luminaire shall have life rating on all electrical components of 100,000 hours or greater when operated at full lumen output at 25 degrees C.
33. All LED components shall be L70 rated when operated in a luminaire at 25 degrees C (77 degrees F) at 100,000 hours.
37. The LED shall have a rated life of 100,000 hours when operated at 40 ^C.
38. The LED shall have a minimum Luminaire efficacy of 120 lumens/watt.
39. The Correlated Color Temperature (CCT) shall be 4000K with a variance of 250K, white, that conforms to LM-79. The Correlated Color Temperature (CCT) shall be 5000K with a variance of 250K, white, that conforms to LM-79 (HIGH MAST ONLY).
40. The minimum color rendering index (CRI) shall not be less than 70.
41. The optics shall have a completely sealed optical system.
42. The optical system shall have a (IEC) (IP) rating of 66 or greater.
43. The optics shall have an Illuminating Engineering Society of North America (IESNA) Backlight, Uplight and Glare (BUG) rating as follows:
a. Backlight rating shall not exceed 3;(highmast fixture backlight rating shall not exceed 5)
b. Uplight rating shall not exceed 0;
c. Glare rating shall not exceed 3/4
44. The Light Loss Factor (LLF) shall be calculated for each fixture as follows:
LLF = LLD X LDD
Lamp Lumen Depreciation Factor (LLD) shall be the specified percentage of LED lumen maintenance at 70,000 hours at 25^C (77^F) from the TM-21 report. This LLD should be according to LM -80 and TM -21 reports. This report shall be submitted for verification.
Luminaire Dirt Depreciation (LDD)= .9
45. The TM-21 Report must show the drive current used for the submitted luminaire. The report can show a larger drive current to represent a worst case scenario.
46. The Lumen Maintenance Life L80 from the TM-21 Report must not be below 80% at 70,000 hours at 25^C (77^F).
47. The manufacturer shall provide certified test laboratories IES photometrics which verify light levels. Product submittal shall be accompanied by IES TM-21 compliant test reports from a CALiPER qualified or NVLAP accredited testing laboratory for the specific model being submitted.
48. The luminaire shall be equipped with a shorting cap and a 7-pin photocontrol receptacle that meets ANSI 2013 standard C136.41
49. The luminaire shall have an exterior label the identifies the fixture type (A,B,C,D) and the distribution type. This label shall be submitted and approved by the project engineer.
50. The luminaire shall have a QR code label that can be scanned and identify the model number and serial number for each individual fixture. This label shall be submitted and approved by the project engineer.
51. WARRANTY: The Manufacturer shall ensure that the LED Luminaires have a minimum standard warranty of 10 years for all parts, materials, paint finish, and shipping (both ways) required to repair or replace the luminaire. The warranty shall begin upon the date the luminaire is received. The warranty shall be transferable. Technical Support. During the warranty period, technical support shall be available from the manufacturer via telephone within 24 hours of the time the call is made from KYTC, and this support shall be made available from factory certified personnel or factory certified installers at no additional charge to the Department.
52. MINIMUM REQUIRED SUBMITTALS:
Luminaire specification sheet.
LED driver specification sheet.
LM-79 Luminaire photometric report.
The vendor must submit LM-79 in-situ test data to confirm thermal operating temperatures of the luminaire.
LM-80 Lumen maintenance report.
TM-21 calculations as defined .
Backlight, Uplight, Glare (BUG) rating of the luminaire.
Written product warranty.
Certified test lab IES photometric reports.
Including IES electronic file.
Including intensity and chromaticity data.
Instructions for installation and maintenance.

BREAKAWAY FUSE CONNECTOR KIT



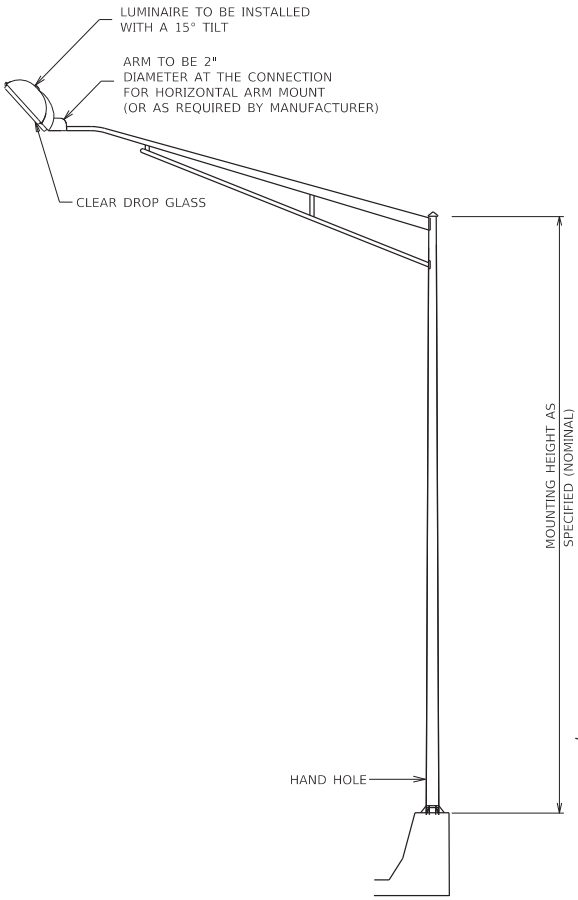
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: HIGH MAST LUMINAIRE DETAILS

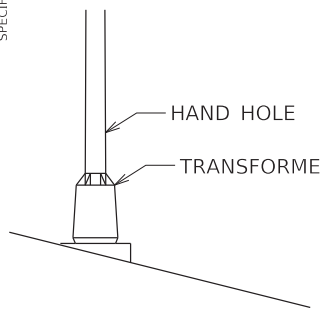
HORIZONTAL SCALE
SCALE: N/A

ITEM NO. 02-0935.00
COUNTY OF HENDERSON
SHEET NO. T4

OpenRoads Designer v10.16.2.267
USER: USNB706409
FILE NAME: C:\BMS\WSP-US-PW-02\D0923365\ORD LIGHTING STANDARDS.DGN



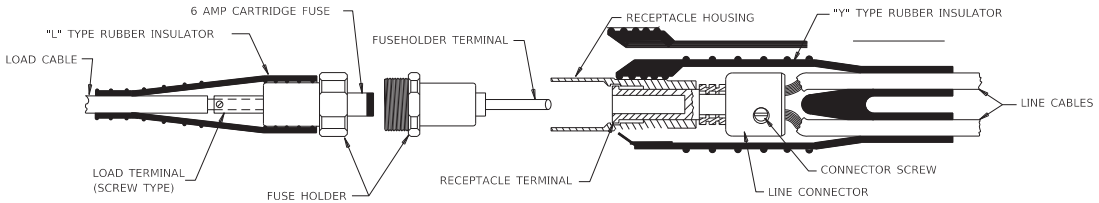
TYPICAL BARRIER WALL



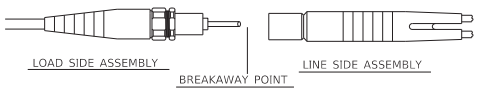
SIDE OF ROAD DETAIL

DESIGN FOR LED MONGOOSE LUMINAIRES

BREAKAWAY FUSE CONNECTOR KIT



DETAILS OF TYPE HEB-JW-RYC CONNECTOR



TYPE HEB-JW-RYC CONNECTOR SHOWN

LUMINAIRE DESIGNATION EXAMPLE

2 - 7 - C2 - 15

- 15 — MAST ARM LENGTH
- C2 — LUMINAIRE WATTAGE & DISTRIBUTION
- 7 — LUMINAIRE NUMBER IN CIRCUIT
- 2 — CIRCUIT NUMBER

NOTE: IF NO SETBACK DIMENSION IS INDICATED, THE MAST ARM LENGTH DENOTES THE DISTANCE FROM THE RIGHT EDGE OF PAVEMENT TO CENTER OF POLE BASE.

NOTE:

ALL MONGOOSE LUMINAIRES ARE MOUNTED AT 40' (NOMINAL) LED EQUIVALENT TO 250 WATTS HPS.
ALL MONGOOSE LUMINAIRES HAVE A MEDIUM ROADWAY (TYPE 2) LIGHT DISTRIBUTION.

11/7/2012

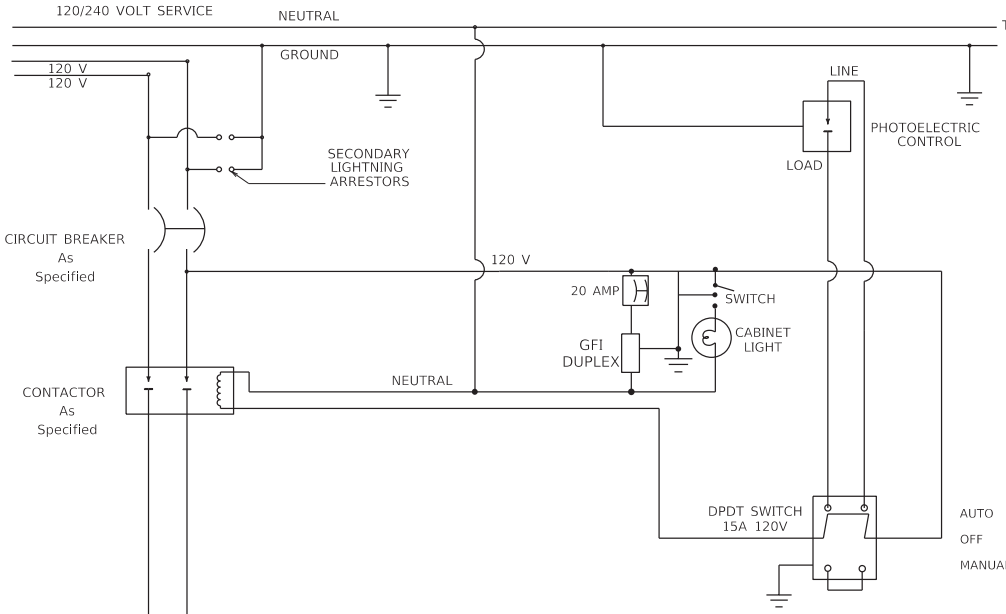
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: CONVENTIONAL POLE WITH MONGOOSE STYLE LUMINAIRE DETAILS

HORIZONTAL SCALE
SCALE: N/A

ITEM NO. 02-0935.00
COUNTY OF HENDERSON
SHEET NO. T5

OpenRoads Designer v10.16.2.267
USER: USNB706409
FILE NAME: C:\BMS\WSP-US-PW-02\D0923365\ORD LIGHTING STANDARDS.DGN

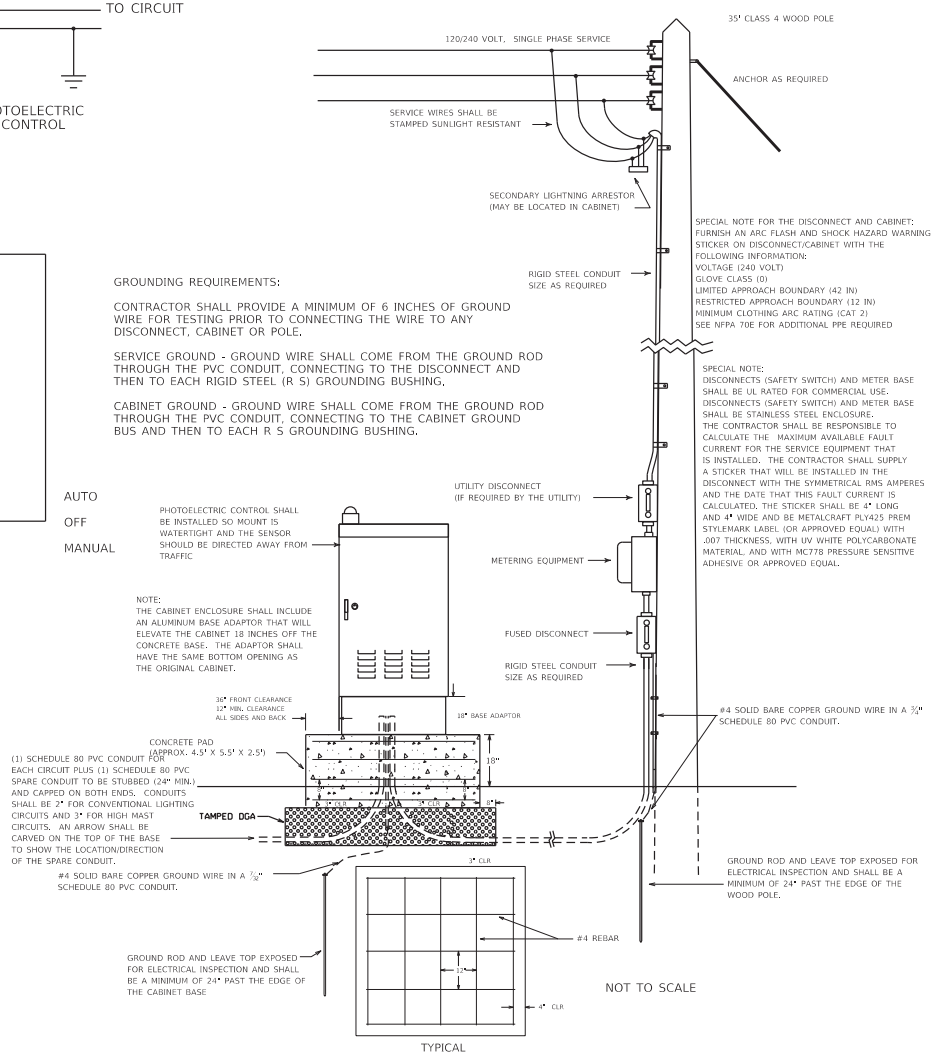


GROUNDING REQUIREMENTS:

CONTRACTOR SHALL PROVIDE A MINIMUM OF 6 INCHES OF GROUND WIRE FOR TESTING PRIOR TO CONNECTING THE WIRE TO ANY DISCONNECT, CABINET OR POLE.

SERVICE GROUND - GROUND WIRE SHALL COME FROM THE GROUND ROD THROUGH THE PVC CONDUIT, CONNECTING TO THE DISCONNECT AND THEN TO EACH RIGID STEEL (R S) GROUNDING BUSHING.

CABINET GROUND - GROUND WIRE SHALL COME FROM THE GROUND ROD THROUGH THE PVC CONDUIT, CONNECTING TO THE CABINET GROUND BUS AND THEN TO EACH R S GROUNDING BUSHING.



NOTES:

CONTRACTOR SHALL INSTALL ALL LIGHTING CONTROL EQUIPMENT AS INDICATED.

CONCRETE SHALL BE CLASS A. CONCRETE SHALL BE POURED ON 12" OF POWER TAMPED DENSE GRADE ROCK. PAD SHALL BE 30" THICK WITH 18" ABOVE GRADE.

PAD SHALL BE OF SUFFICIENT SIZE TO ALLOW A MINIMUM 36" IN FRONT OF THE CABINET AND 12" MINIMUM CLEARANCE AROUND THE SIDES AND BACK OF THE CABINET.

CONCRETE SHALL BE SLOPED 1/8" PER FOOT TO PREVENT STANDING WATER. OUTSIDE EDGE SHALL HAVE A ONE INCH CHAMFER.

#4 REBAR SHALL BE COMPRISED OF RUNS AS SHOWN AND TIED AT EACH JOINT.

ALL CONSTRUCTION (TO INCLUDE EXCAVATION WORK) AND MATERIALS (CONCRETE , STEEL REINFORCEMENT, ETC.) FOR THE CONCRETE PAD SHALL BE INCIDENTAL TO THE POLE FOR THE LIGHTING CONTROL EQUIPMENT BID ITEM.

ALL CONDUITS USED FOR GROUNDING, SPARE, AND SERVICE THAT ARE INSTALLED ON THE POLE AND/OR IN/TO THE CABINET ARE INCIDENTAL TO BID ITEM "4761". THIS INCLUDES PROVIDING A MINIMUM OF 24 INCHES OF CONDUIT PAST THE EDGE OF THE CABINET BASE FOR THE SPARE.

1/24/2020

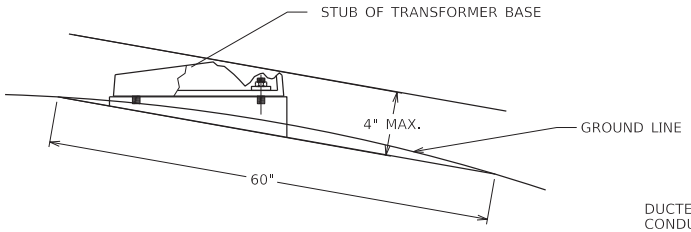
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: BASE MOUNTED LIGHTING CONTROL CABINET DETAILS, 120V/240V

HORIZONTAL SCALE
SCALE: N/A

ITEM NO. 02-0935.00
COUNTY OF HENDERSON
SHEET NO. T6

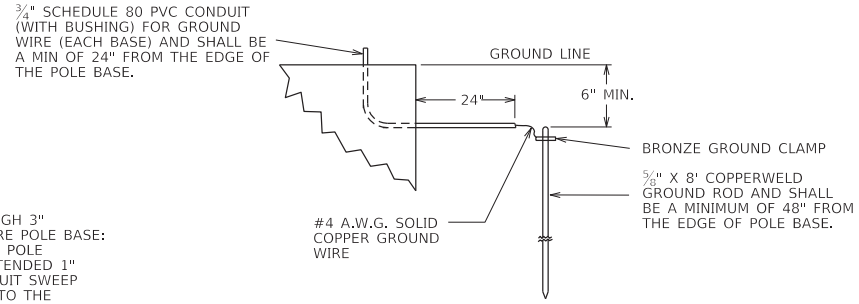
OpenRoads Designer v10.16.2.267
USER: gulickcr
FILE NAME: C:\BMS\WSP-PB-US-PW-02\WSP__CORRIN.GULICK\D0923365\ORD LIGHTING STANDARDS.DGN



THE ANCHOR BOLTS AND CONDUITS SHALL NOT BE PROJECTED MORE 4 INCHES ABOVE A GROUND LINE BETWEEN THE STRADDLING WHEELS OF A VEHICLE.

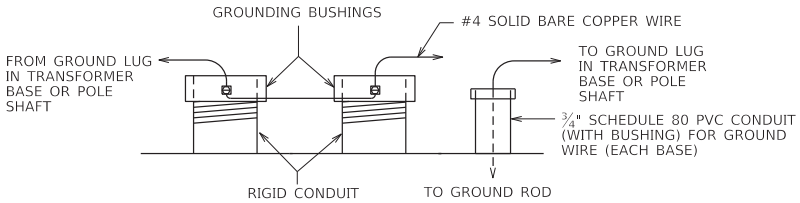
BREAKAWAY SUPPORT STUB HEIGHT MEASUREMENT

DUCTED CABLE INSTALLED THROUGH 3" CONDUIT CROSSINGS TO LUMINAIRE POLE BASE: INSTALL DUCTED CABLE INTO THE POLE BASE. THE DUCT SHOULD BE EXTENDED 1" ABOVE THE CONDUIT. THE CONDUIT SWEEP SHOULD BE INSTALL ACCORDING TO THE MANUFACTURER OF THE DUCTED CABLE TO PREVENT THE DUCTED CABLE FROM CRIMPING.

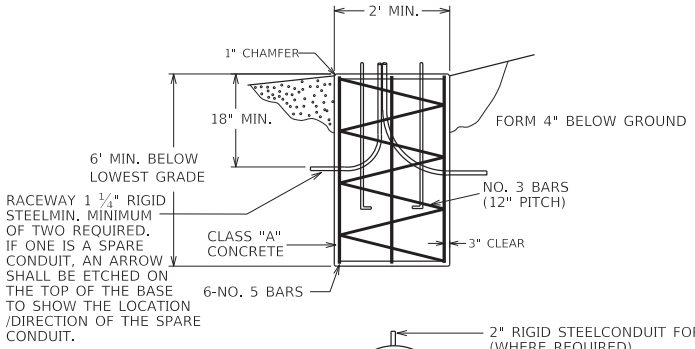


GROUNDING DETAIL

IF DUCTED CABLE INSTALLED BETWEEN POLE BASES:
INSTALL RIGID STEEL/DUCTED CABLE COUPLING. USE BONDUIT CONDUIT ADHESIVE OR APPROVED EQUAL TO CONNECT THE RIGID STEEL TO DUCTED CABLE. RACEWAYS SHALL BE THE SAME SIZE AS THE DUCTED CABLE WHICH ATTACHS TO THE RIGID STEEL CONDUIT. ALTERNATELY IF DUCTED CABLE IS USED, THE CONTRACTOR CAN INSTALL RIGID STEEL CONDUIT TWO TIMES THE SIZE OF THE DUCT AND RUN THE DUCT INSIDE THIS CONDUIT. THE SWEEP FOR THE CONDUIT SHALL BE INCREASED TO ADHERE TO THE BENDING RADIUS RECOMMENDED BY THE MANUFACTURER OF THE DUCT.



TYPICAL GROUNDING DETAIL



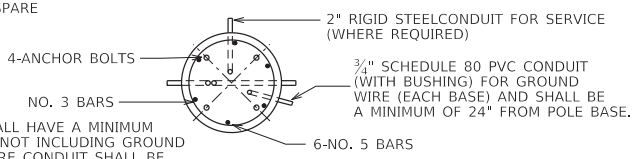
GROUNDING REQUIREMENTS:

CONTRACTOR SHALL PROVIDE A MINIMUM OF 6 INCHES OF GROUND WIRE FOR TESTING PRIOR TO CONNECTING THE WIRE TO TRANSFORMER BASE.

POLE/TRANSFORMER BASE GROUND - GROUND WIRE SHALL COME FROM THE GROUND ROD THROUGH THE PVC CONDUIT, CONNECTING TO THE TRANSFORMER BASE/POLE AND THEN TO EACH RIGID STEEL GROUNDING BUSHING.

NOTES:

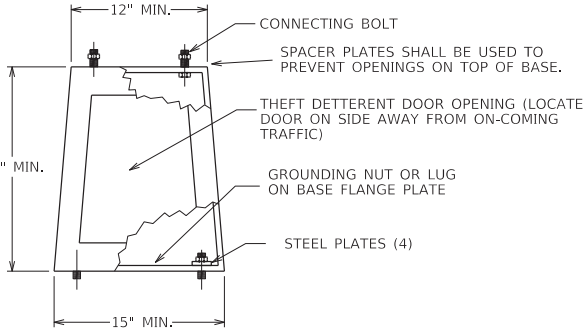
ALL CONDUITS USED FOR THE GROUNDING, SPARES AND CONDUCTORS THAT ARE INSTALLED IN THE POLE BASE ARE INCIDENTAL TO BID ITEM "4740". THIS INCLUDES PROVIDING A MINIMUM OF 24 INCHES OF CONDUIT PAST THE EDGE OF THE POLE BASE.



ALL POLE BASES SHALL HAVE A MINIMUM OF TWO CONDUITS (NOT INCLUDING GROUND CONDUIT). THE SPARE CONDUIT SHALL BE 180 DEGREE FROM THE CONDUIT FOR THE CONDUCTORS.

NOTE: PRECAST CONCRETE BASES ARE NOT ACCEPTABLE

FOUNDATION DETAIL



CONCRETE BASES SHALL BE POURED LEVEL. NO MORE THAN A .375" GAP SHALL EXIST BETWEEN CONCRETE BASE AND TRANSFORMER BASE WHEN THE POLE IS PLUMBED.

TYPICAL CAST ALUMINUM TRANSFORMER BASE

NOTE:
THE TRANSFORMER BASE DOOR SHALL HAVE A 4" BY 6" ARC FLASH WARNING STICKER INSTALL 3" FROM THE TOP OF THE DOOR. THE STICKER SHALL BE METALCRAFT PLY695 PREM STYLEMARK LABEL WITH .007 THICKNESS, WITH UV WHITE POLYCARBINATE MATERIAL, AND WITH MC53FL PRESSURE SENSTIVE ADHESIVE OR APPROVAL EQUAL. THIS SHALL BE INCIDENTAL TO PROJECT.

SPECIAL NOTE FOR TRANSFORMER BASES:
FURNISH AN ARC FLASH AND SHOCK HAZARD WARNING STICKER ON TRANSFORMER BASE WITH
THE FOLLOWING INFORMATION:
VOLTAGE (480 VOLT)
GLOVE CLASS (0)
LIMITED APPROACH BOUNDARY (42 IN)
RESTRICTED APPROACH BOUNDARY (12 IN)
MINIMUM CLOTHING ARC RATING (CAT 2)
SEE NFPA 70E FOR ADDITIONAL PPE REQUIRED

1/30/2020

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: TRANSFORMER BASE DETAILS

HORIZONTAL SCALE
SCALE: N/A

ITEM NO. 02-0935.00
COUNTY OF HENDERSON
SHEET NO. T7

OpenRoads Designer v10.16.2.267
USER: USNB706409
FILE NAME: C:\BMS\WSP-US-PW-02\D0923365\ORD LIGHTING STANDARDS.DGN

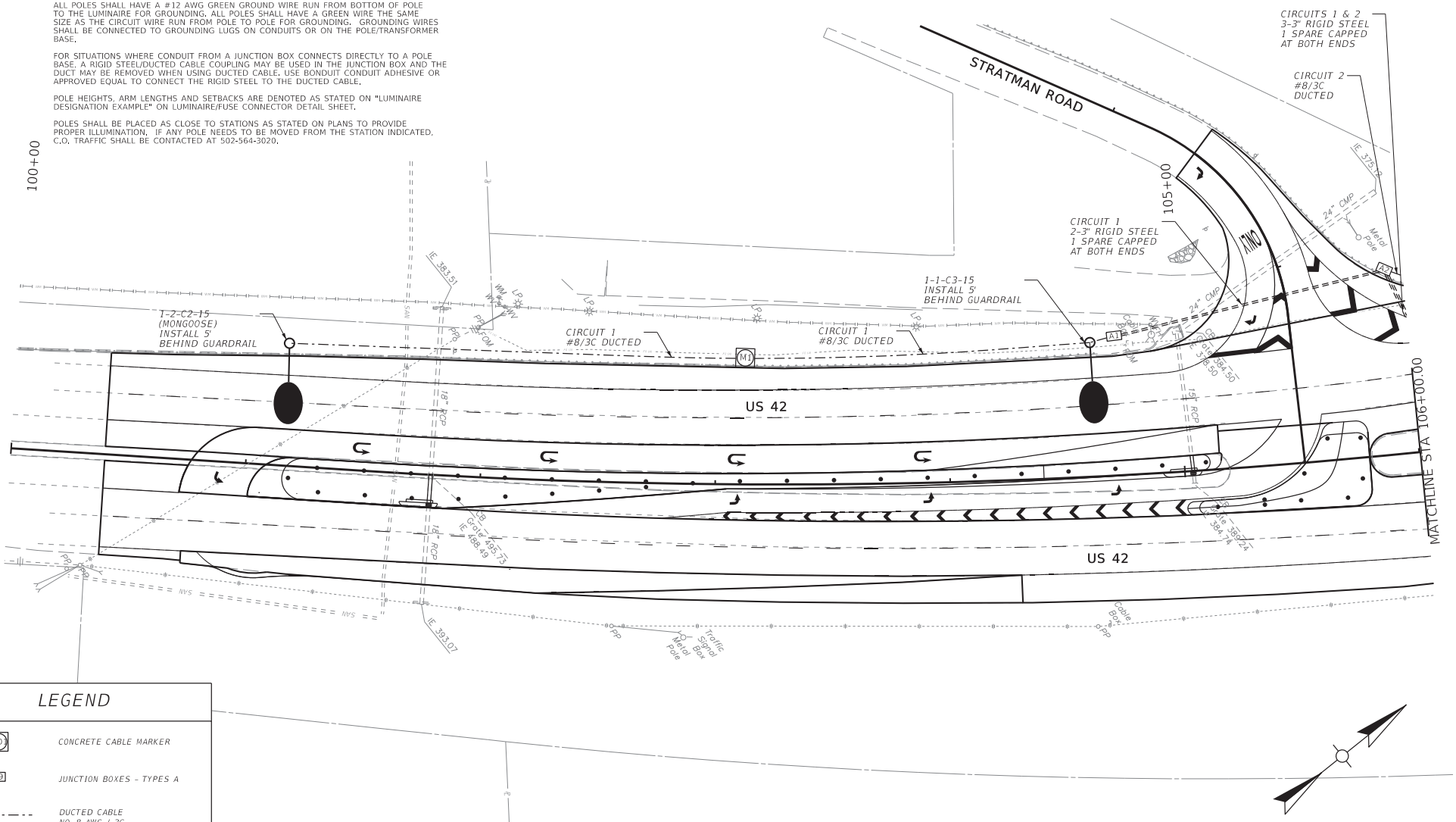
CONVENTIONAL LIGHTING:

ALL POLES SHALL HAVE A #12 AWG GREEN GROUND WIRE RUN FROM BOTTOM OF POLE TO THE LUMINAIRE FOR GROUNDING. ALL POLES SHALL HAVE A GREEN WIRE THE SAME SIZE AS THE CIRCUIT WIRE RUN FROM POLE TO POLE FOR GROUNDING. GROUNDING WIRES SHALL BE CONNECTED TO GROUNDING LUGS ON CONDUITS OR ON THE POLE/TRANSFORMER BASE.

FOR SITUATIONS WHERE CONDUIT FROM A JUNCTION BOX CONNECTS DIRECTLY TO A POLE BASE, A RIGID STEEL/DUCTED CABLE COUPLING MAY BE USED IN THE JUNCTION BOX AND THE DUCT MAY BE REMOVED WHEN USING DUCTED CABLE. USE BONDUIT CONDUIT ADHESIVE OR APPROVED EQUAL TO CONNECT THE RIGID STEEL TO THE DUCTED CABLE.

POLE HEIGHTS, ARM LENGTHS AND SETBACKS ARE DENOTED AS STATED ON "LUMINAIRE DESIGNATION EXAMPLE" ON LUMINAIRE/FUSE CONNECTOR DETAIL SHEET.

POLES SHALL BE PLACED AS CLOSE TO STATIONS AS STATED ON PLANS TO PROVIDE PROPER ILLUMINATION. IF ANY POLE NEEDS TO BE MOVED FROM THE STATION INDICATED, C.O. TRAFFIC SHALL BE CONTACTED AT 502-564-3020.



LEGEND

- M01 — CONCRETE CABLE MARKER
- A9 — JUNCTION BOXES - TYPES A
- DUCTED CABLE NO. 8 AWG / 3C
- 2 INCH RIGID STEEL CONDUIT (UNLESS OTHERWISE NOTED)
- LUMINAIRE POLE

LUMINAIRES	STATIONS/ COORDINATES	ALIGNMENT
1-1-C3-15	Sta 101+15.4, 52' LT	US 41
1-2-C2-15	Sta 104+62.3, 58' LT	US 41

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: US 41 - LIGHTING LAYOUT

HORIZONTAL SCALE
SCALE: 1"=20'

0' 20' 40' 80'

STA 100+00 TO 106+00

ITEM NO. 02-0935.00
COUNTY OF HENDERSON
SHEET NO. T8

OpenRoads Designer v10.16.2.267
USER: usj725830
FILE NAME: C:\BMS\WSP-US-PW-02\D0833597\LIGHTING PLAN SHEETS.DGN

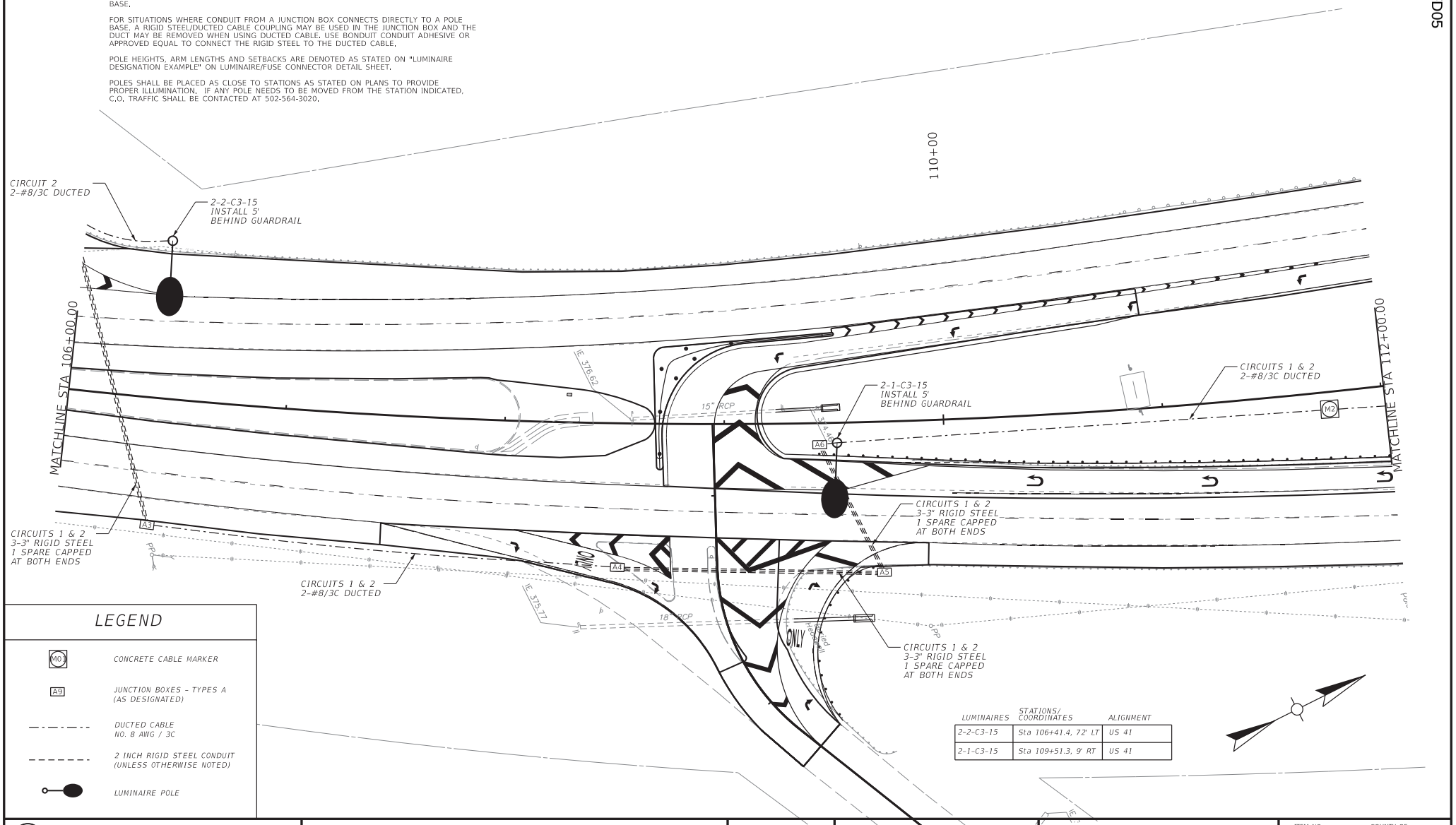
CONVENTIONAL LIGHTING:

ALL POLES SHALL HAVE A #12 AWG GREEN GROUND WIRE RUN FROM BOTTOM OF POLE TO THE LUMINAIRE FOR GROUNDING. ALL POLES SHALL HAVE A GREEN WIRE THE SAME SIZE AS THE CIRCUIT WIRE RUN FROM POLE TO POLE FOR GROUNDING. GROUNDING WIRES SHALL BE CONNECTED TO GROUNDING LUGS ON CONDUITS OR ON THE POLE/TRANSFORMER BASE.

FOR SITUATIONS WHERE CONDUIT FROM A JUNCTION BOX CONNECTS DIRECTLY TO A POLE BASE, A RIGID STEEL/DUCTED CABLE COUPLING MAY BE USED IN THE JUNCTION BOX AND THE DUCT MAY BE REMOVED WHEN USING DUCTED CABLE. USE BONDUIT CONDUIT ADHESIVE OR APPROVED EQUAL TO CONNECT THE RIGID STEEL TO THE DUCTED CABLE.

POLE HEIGHTS, ARM LENGTHS AND SETBACKS ARE DENOTED AS STATED ON "LUMINAIRE DESIGNATION EXAMPLE" ON LUMINAIRE/FUSE CONNECTOR DETAIL SHEET.

POLES SHALL BE PLACED AS CLOSE TO STATIONS AS STATED ON PLANS TO PROVIDE PROPER ILLUMINATION. IF ANY POLE NEEDS TO BE MOVED FROM THE STATION INDICATED, C.O. TRAFFIC SHALL BE CONTACTED AT 502-564-3020.



LUMINAIRES	STATIONS/ COORDINATES	ALIGNMENT
2-2-C3-15	Sta 106+41.4, 72' LT	US 41
2-1-C3-15	Sta 109+51.3, 9' RT	US 41

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: US 41 - LIGHTING LAYOUT

HORIZONTAL SCALE
SCALE: 1"=20'

0' 20' 40' 80'

STA 106+00 TO 112+00

ITEM NO. 02-0935.00
COUNTY OF HENDERSON
SHEET NO. T9

OpenRoads Designer v10.16.2.267
USER: us\725830
FILE NAME: C:\BMS\WSP-US-PW-02\D0833597\LIGHTING PLAN SHEETS.DGN

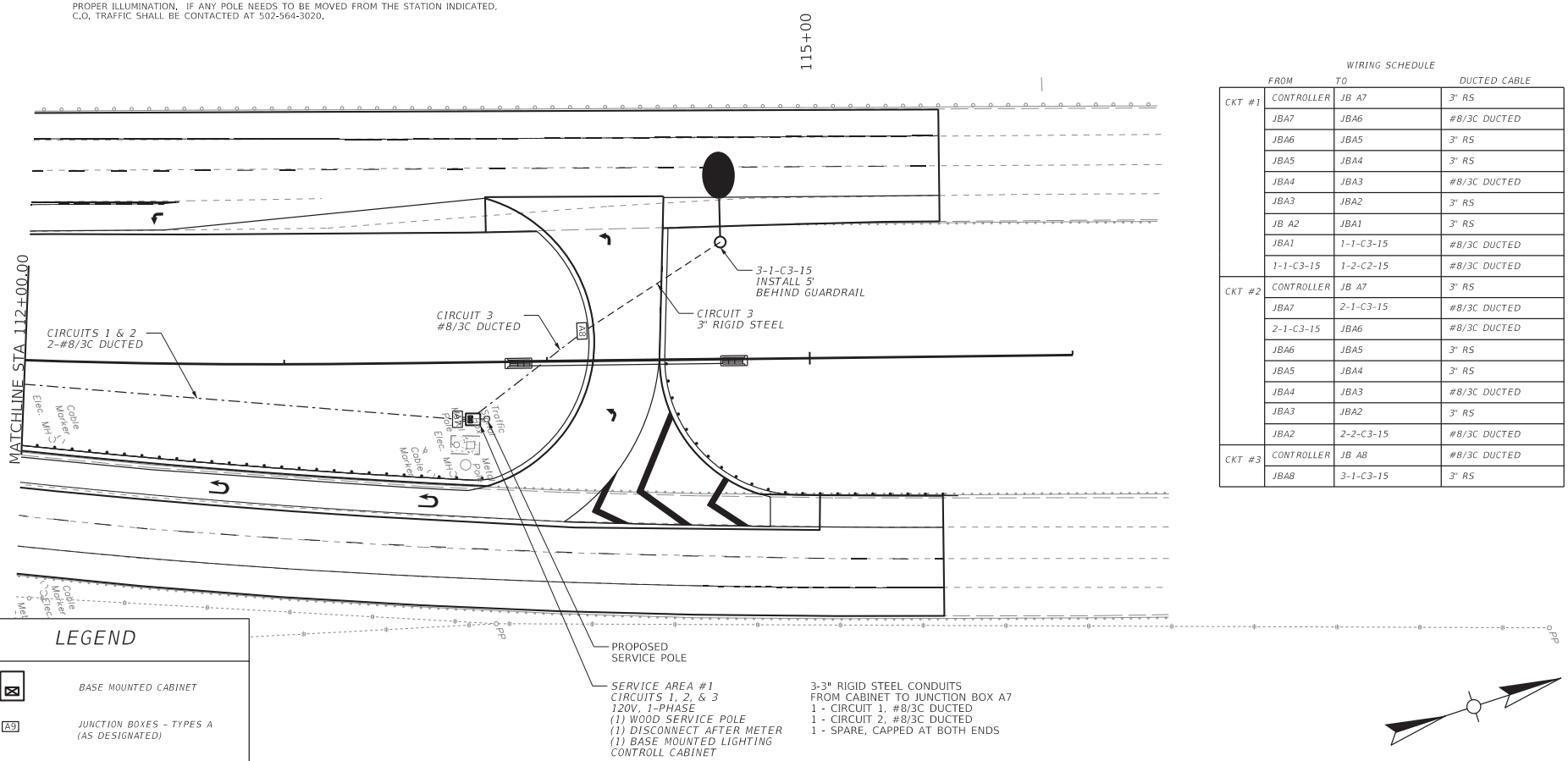
CONVENTIONAL LIGHTING:

ALL POLES SHALL HAVE A #12 AWG GREEN GROUND WIRE RUN FROM BOTTOM OF POLE TO THE LUMINAIRE FOR GROUNDING . ALL POLES SHALL HAVE A GREEN WIRE THE SAME SIZE AS THE CIRCUIT WIRE RUN FROM POLE TO POLE FOR GROUNDING. GROUNDING WIRES SHALL BE CONNECTED TO GROUNDING LUGS ON CONDUITS OR ON THE POLE/TRANSFORMER BASE.

FOR SITUATIONS WHERE CONDUIT FROM A JUNCTION BOX CONNECTS DIRECTY TO A POLE BASE, A RIGID STEEL/DUCTED CABLE COUPLING MAY BE USED IN THE JUNCTION BOX AND THE DUCT MAY BE REMOVED WHEN USING DUCTED CABLE. USE BONDUIT CONDUIT ADHESIVE OR APPROVED EQUAL TO CONNECT THE RIGID STEEL TO DUCTED CABLE.

POLE HEIGHTS, ARM LENGTHS AND SETBACKS ARE DENOTED AS STATED ON "LUMINAIRE DESIGNATION EXAMPLE" ON LUMINAIRE/FUSE CONNECTOR DETAIL SHEET.

POLES SHALL BE PLACED AS CLOSE TO STATIONS AS STATED ON PLANS TO PROVIDE PROPER ILLUMINATION. IF ANY POLE NEEDS TO BE MOVED FROM THE STATION INDICATED, C.O. TRAFFIC SHALL BE CONTACTED AT 502-564-3020.



WIRING SCHEDULE

	FROM	TO	DUCTED CABLE
CKT #1	CONTROLLER	JB A7	3" RS
	JBA7	JBA6	#8/3C DUCTED
	JBA6	JBA5	3" RS
	JBA5	JBA4	3" RS
	JBA4	JBA3	#8/3C DUCTED
	JBA3	JBA2	3" RS
	JB A2	JBA1	3" RS
	JBA1	1-1-C3-15	#8/3C DUCTED
	1-1-C3-15	1-2-C2-15	#8/3C DUCTED
CKT #2	CONTROLLER	JB A7	3" RS
	JBA7	2-1-C3-15	#8/3C DUCTED
	2-1-C3-15	JBA6	#8/3C DUCTED
	JBA6	JBA5	3" RS
	JBA5	JBA4	3" RS
	JBA4	JBA3	#8/3C DUCTED
	JBA3	JBA2	3" RS
	JBA2	2-2-C3-15	#8/3C DUCTED
CKT #3	CONTROLLER	JB A8	#8/3C DUCTED
	JBA8	3-1-C3-15	3" RS

LEGEND

- BASE MOUNTED CABINET
- A9 — JUNCTION BOXES - TYPES A (AS DESIGNATED)
- DUCTED CABLE NO. 8 AWG / 3C
- 2 INCH RIGID STEEL CONDUIT (UNLESS OTHERWISE NOTED)
- LUMINAIRE POLE

NOTES:

GRADE AROUND PROPOSED CABINET BASE AS NEEDED TO PROVIDE A LEVEL GROUND 12" AROUND THE SIDES AND BACK OF THE CABINET AND 36" IN FRONT OF THE CABINET BASE. MATERIALS AND LABOR FOR GRADING IS INCIDENTAL TO BID ITEM, "LIGHTING CONTROL EQUIPMENT."

LUMINAIRES	STATIONS/ COORDINATES	ALIGNMENT
3-1-C3-15	Sta 114+66.5, 45' LT	US 41

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: US 41 - LIGHTING LAYOUT

HORIZONTAL SCALE
SCALE: 1"=20'
0' 20' 40' 80'

STA 112+00 TO 115+50

ITEM NO. 02-0935.00
COUNTY OF HENDERSON
SHEET NO. T10

OpenRoads Designer v10.16.2.267
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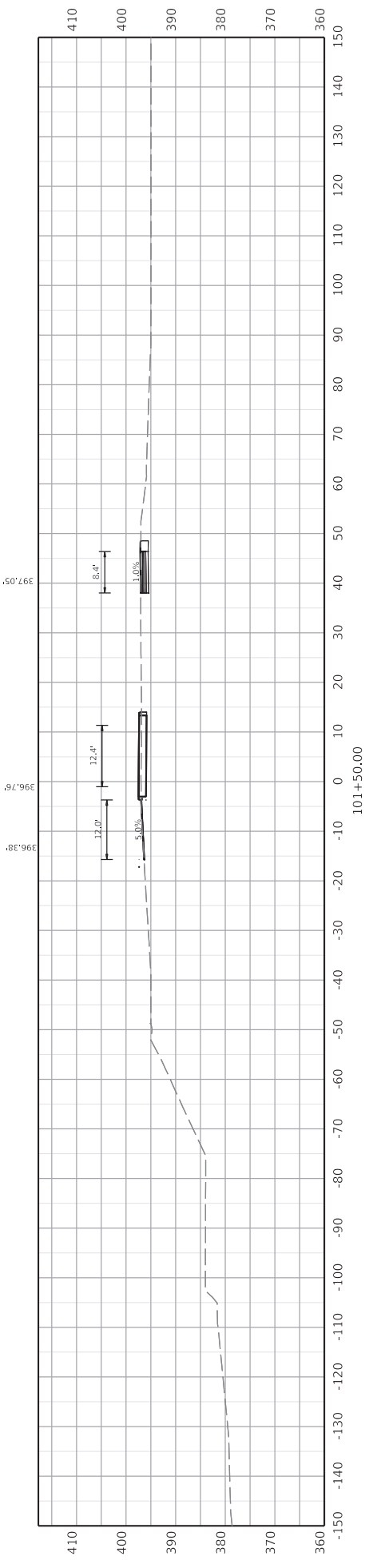
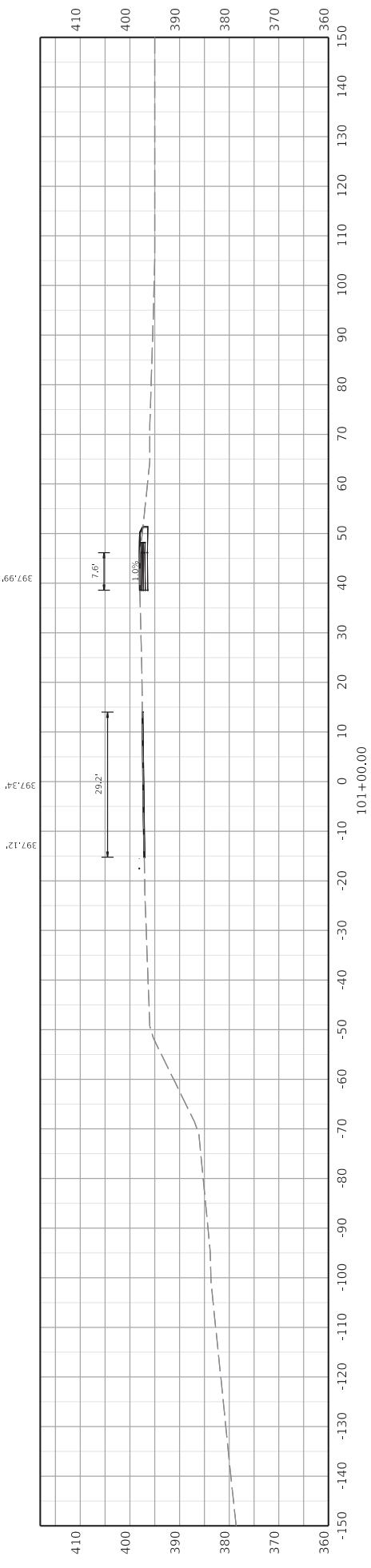
FILE NAME: C:\BMS\WSP-PB-US-PW-02\WSP__CORRIN.GULICK\D0833597\LIGHTING PLAN SHEETS.DGN





COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

DRAWING TITLE: US 41 CROSS SECTIONS

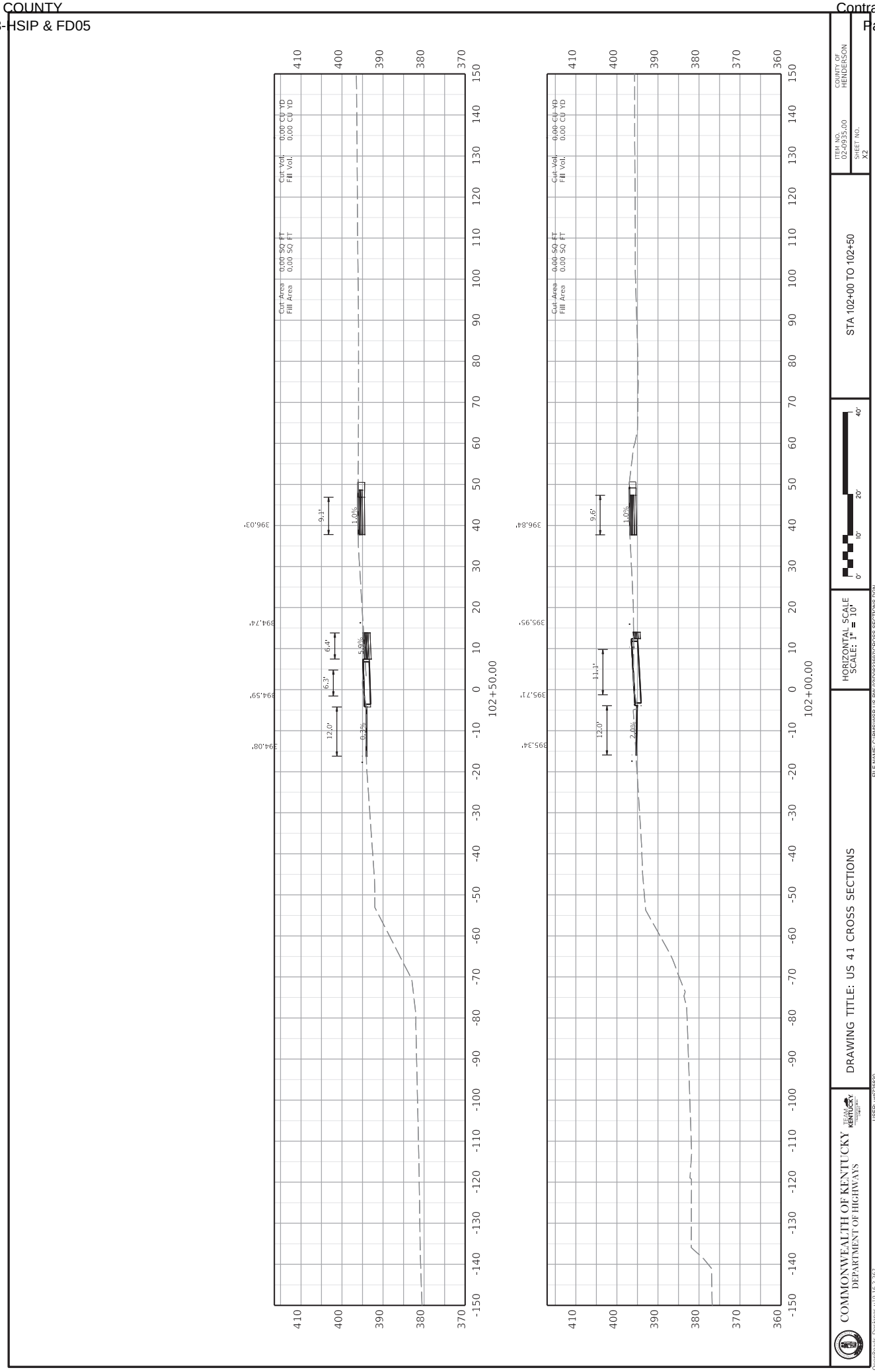
HORIZONTAL SCALE
SCALE: 1" = 10'

0' 10' 20' 40'

STA 101+00 TO 101+50

ITEM NO. 02-4935.00
COUNTY OF HENDERSON
SHEET NO. X1

FILE NAME: C:\BMSW\SP-US-PW-42\D0833597\CROSS SECTIONS.DGN
USER: uaq725830
OpenRoads Designer v10.16.2.267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Fill Area 0.00 SQ FT
Cut Vol. 0.00 CU YD
Fill Vol. 0.00 CU YD
102+50.00
102+00.00
12.0'
6.3'
6.4'
9.1'
9.6'
11.1'
5.0%
1.0%
0.4%
2.4%
396.03'
394.74'
394.59'
394.08'
396.84'
395.95'
395.71'
395.34'
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
DRAWING TITLE: US 41 CROSS SECTIONS
HORIZONTAL SCALE
SCALE: 1" = 10'
0' 10' 20' 40'
STA 102+00 TO 102+50
ITEM NO. 02-4935.00
COUNTY OF HENDERSON
SHEET NO. X2
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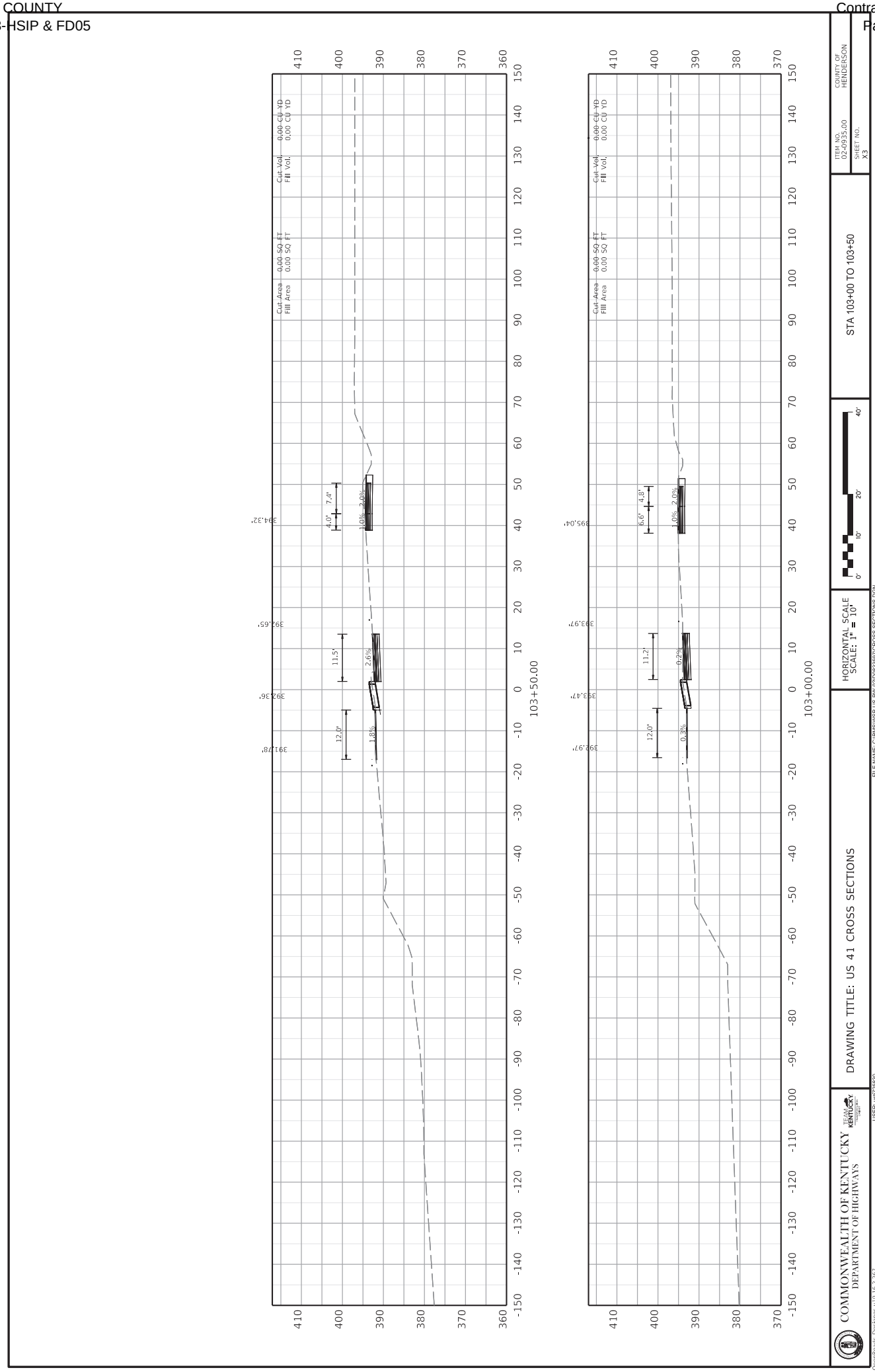
USER: uas972583O
OpenRoads Designer v10.16.2.267



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

DRAWING TITLE: US 41 CROSS SECTIONS

HORIZONTAL SCALE
SCALE: 1" = 10'

0' 10' 20' 40'

STA 103+00 TO 103+50

ITEM NO. 02-4935.00
COUNTY OF HENDERSON
SHEET NO. X3

FILE NAME: C:\BMSWSP-US-PW-02\D0833597\CROSS SECTIONS.DGN
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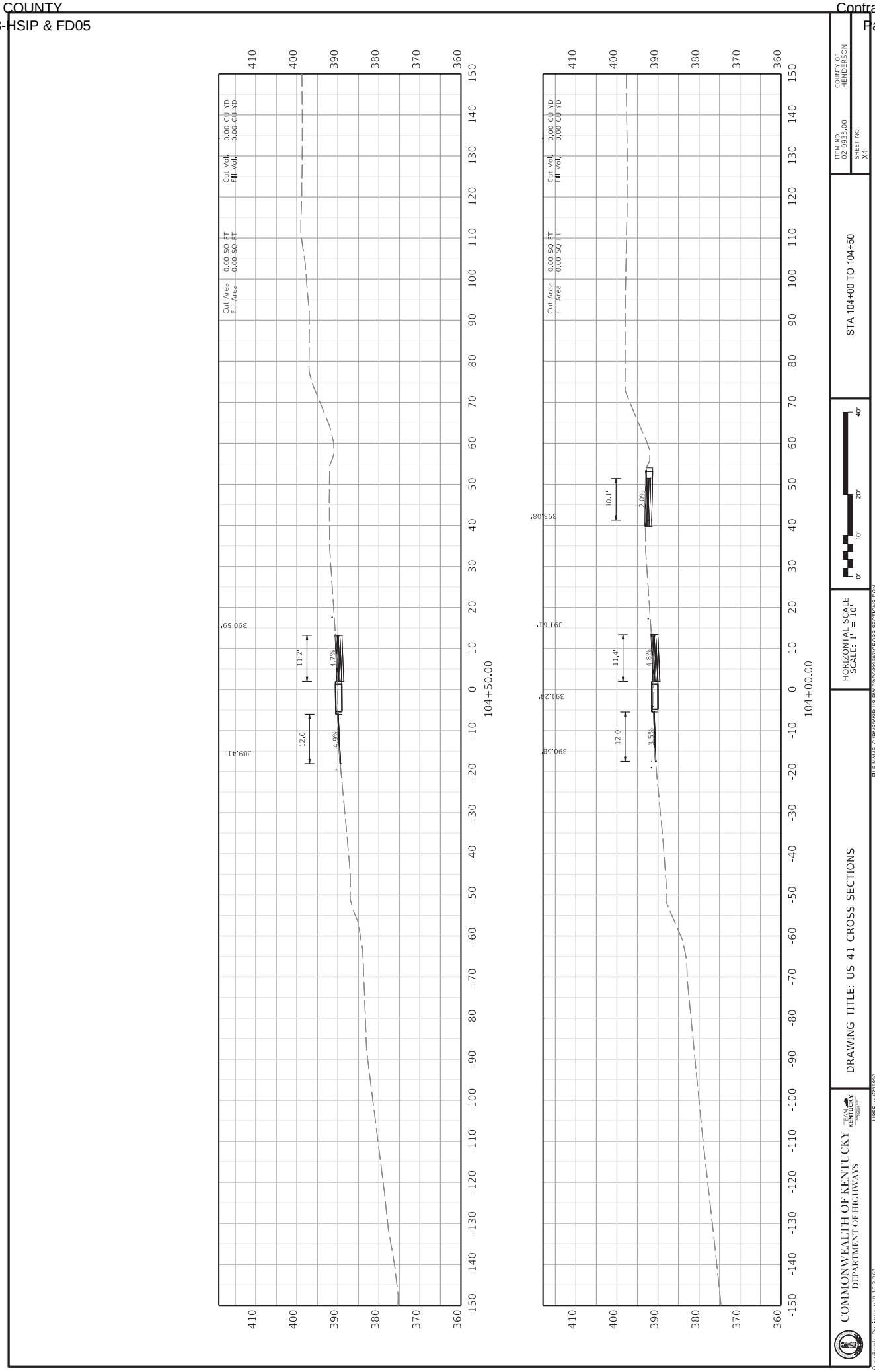
OpenRoads Designer v10.16.2.267



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

DRAWING TITLE: US 41 CROSS SECTIONS

HORIZONTAL SCALE
SCALE: 1" = 10'

0' 10' 20' 40'

STA 104+00 TO 104+50

ITEM NO. 02-4935.00
COUNTY OF HENDERSON
SHEET NO. X4

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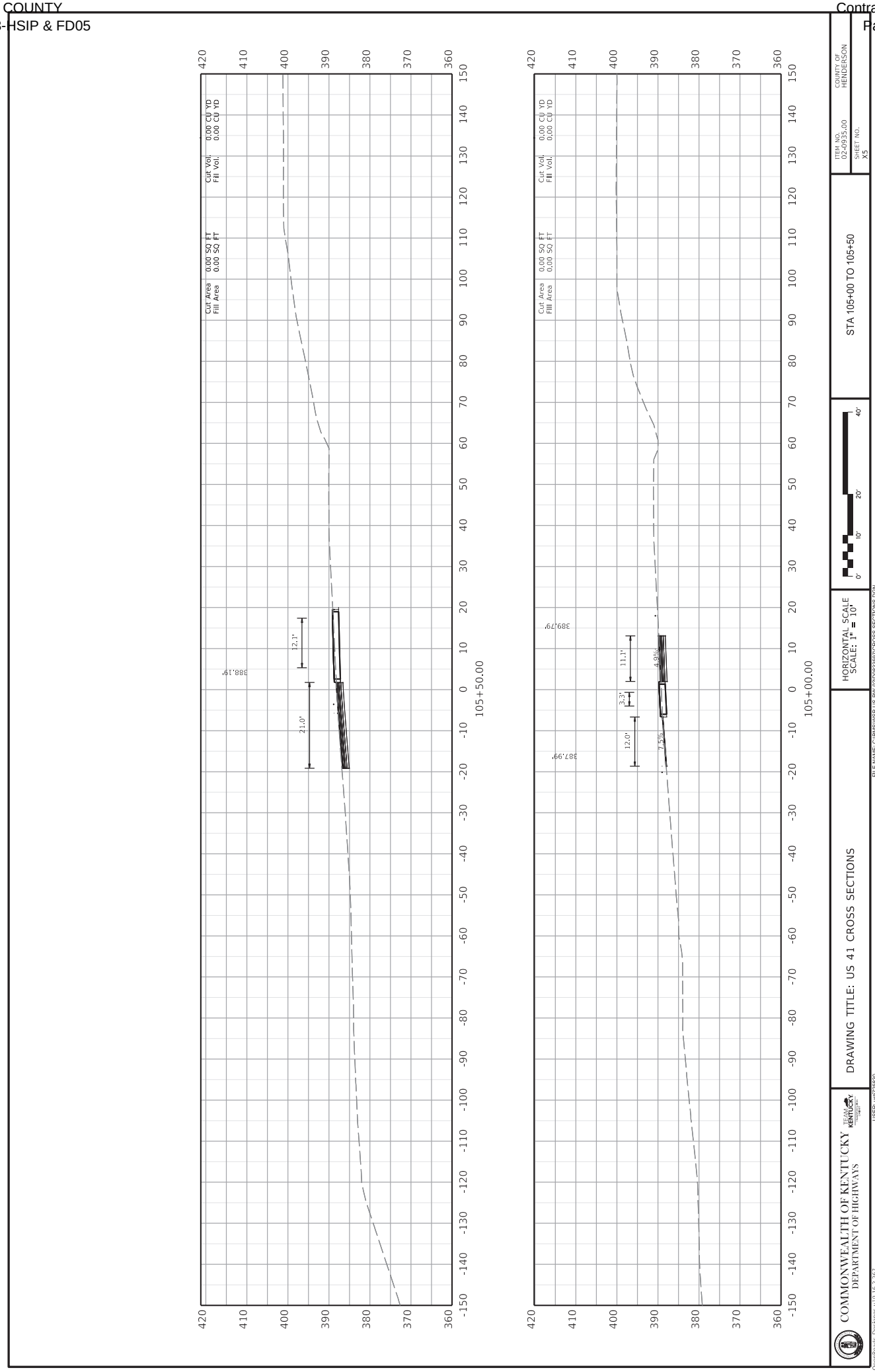
USER: us972583D

OpenRoads Designer v10.16.2.267



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

DRAWING TITLE: US 41 CROSS SECTIONS

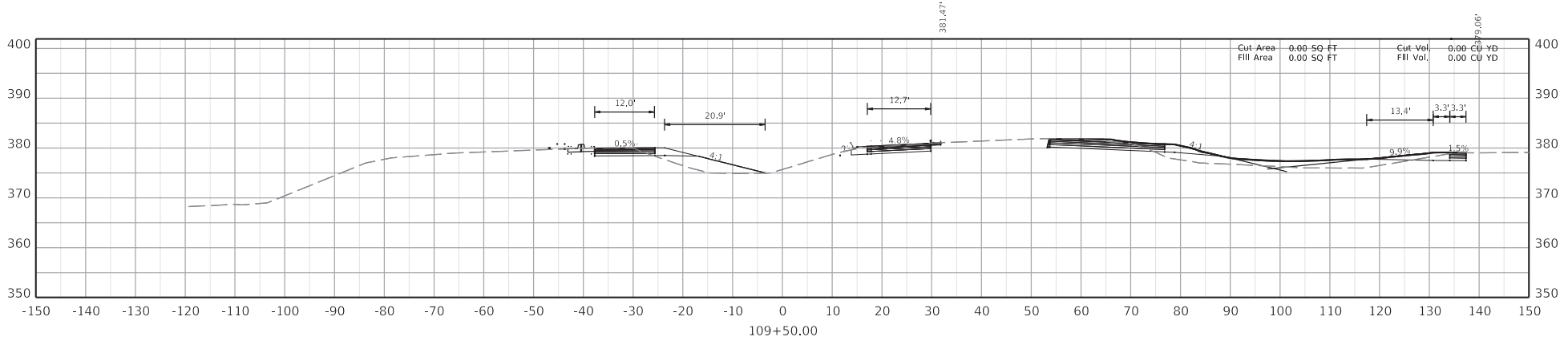
HORIZONTAL SCALE
SCALE: 1" = 10'

0' 10' 20' 40'

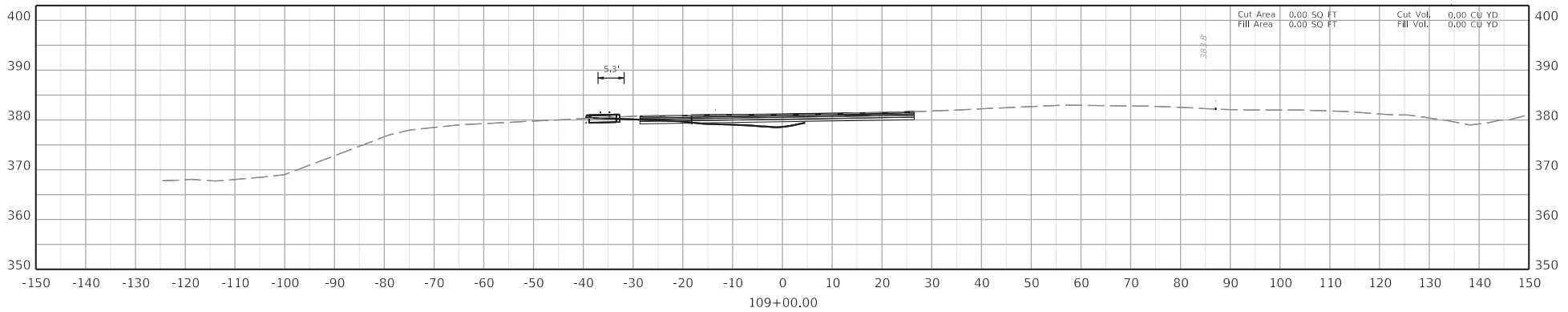
STA 105+00 TO 105+50

ITEM NO. 02-4935.00
COUNTY OF HENDERSON
SHEET NO. X5

FILE NAME: C:\BMSW\SP-US-PW-02\D0833597\CROSS SECTIONS.DGN
USER: uas972583O
OpenRoads Designer v10.16.2.267



109+50.00



109+00.00

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: US 41 CROSS SECTIONS

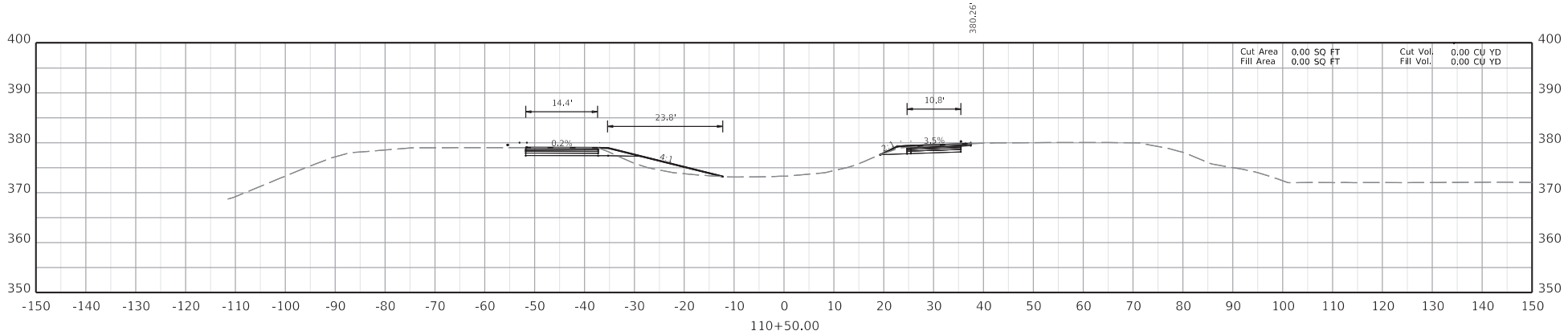
HORIZONTAL SCALE
SCALE: 1" = 10'

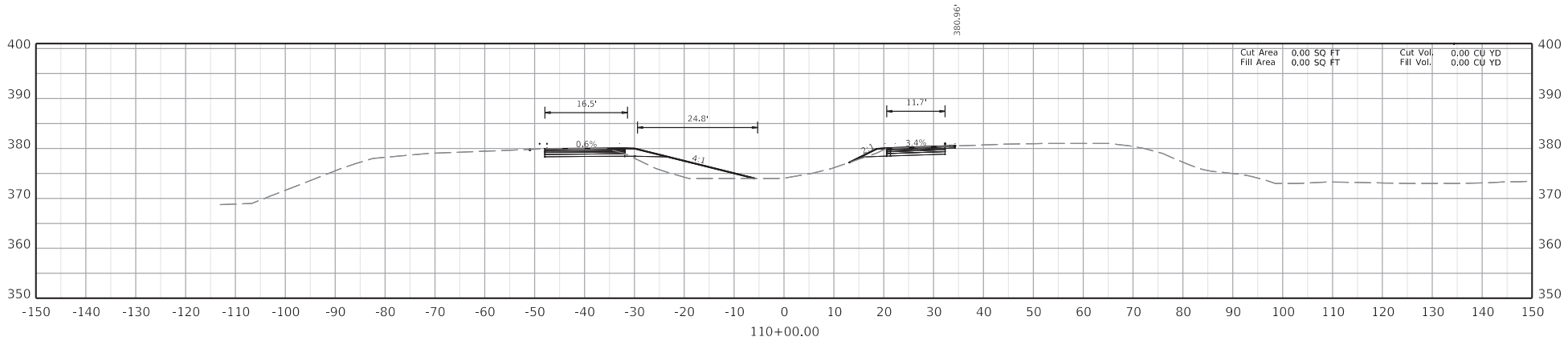
0' 10' 20' 40'

STA 109+00 TO 109+50

ITEM NO. 02-0935.00
COUNTY OF HENDERSON
SHEET NO. X6

OpenRoads Designer v10.16.2.267
USER: us|725830
FILE NAME: C:\BMS\WSP-US-PW-02\D0833597\CROSS SECTIONS.DGN





COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: US 41 CROSS SECTIONS

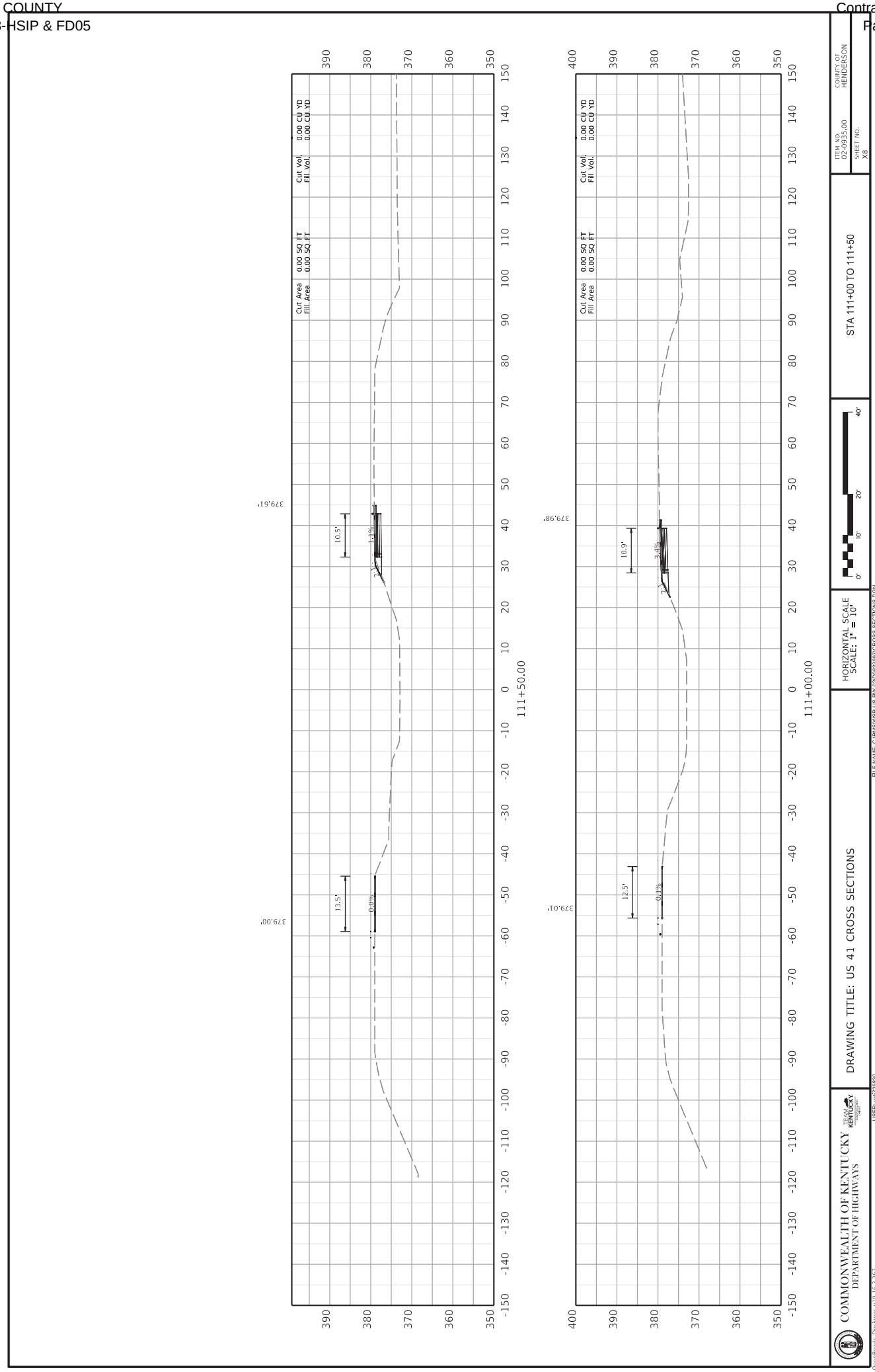
HORIZONTAL SCALE
SCALE: 1" = 10'

0' 10' 20' 40'

STA 110+00 TO 110+50

ITEM NO. 02-0935.00
COUNTY OF HENDERSON
SHEET NO. X7

OpenRoads Designer v10.16.2.267
USER: us|725830
FILE NAME: C:\BMS\WSP-US-PW-02\D0833597\CROSS SECTIONS.DGN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111+00.00
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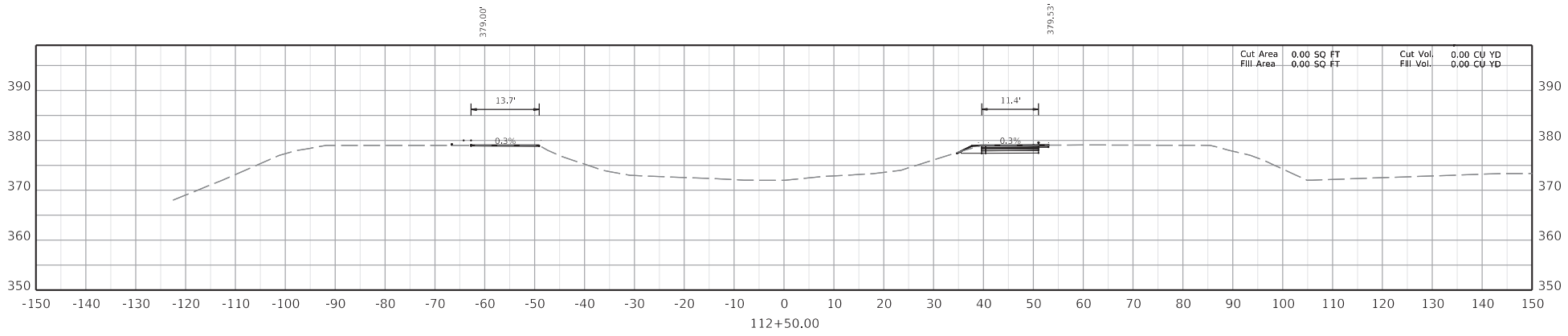
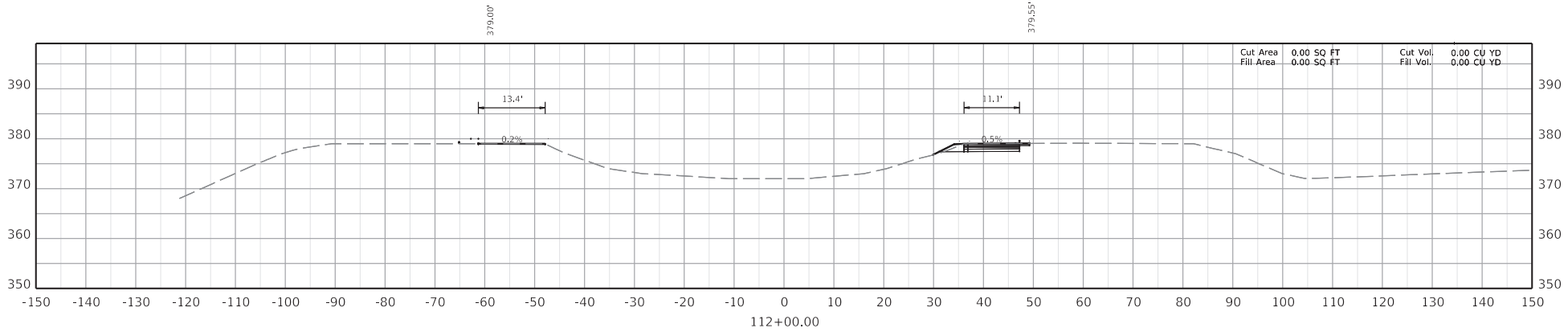
Fill Area 0.00 SQ FT
Cut Vol. 0.00 CU YD
Fill Vol. 0.00 CU YD
13.5'
10.5'
12.5'
10.9'
0.0%
1.1%
0.1%
3.4%
379.00'
379.61'
379.01'
379.98'
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
DRAWING TITLE: US 41 CROSS SECTIONS
HORIZONTAL SCALE
SCALE: 1" = 10'
STA 111+00 TO 111+50
ITEM NO. 02-4935.00
COUNTY OF HENDERSON
SHEET NO. X8
FILE NAME: C:\BMS\WSP-US-PW-02\D0833597\CROSS SECTIONS.DGN
USER: us972583O
OpenRoads Designer v10.16.2.267





COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: US 41 CROSS SECTIONS

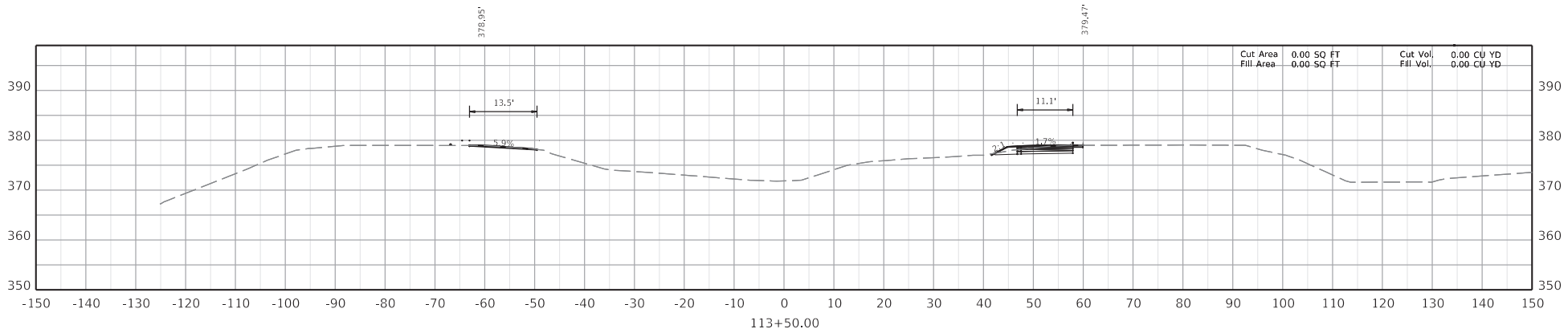
HORIZONTAL SCALE
SCALE: 1" = 10'

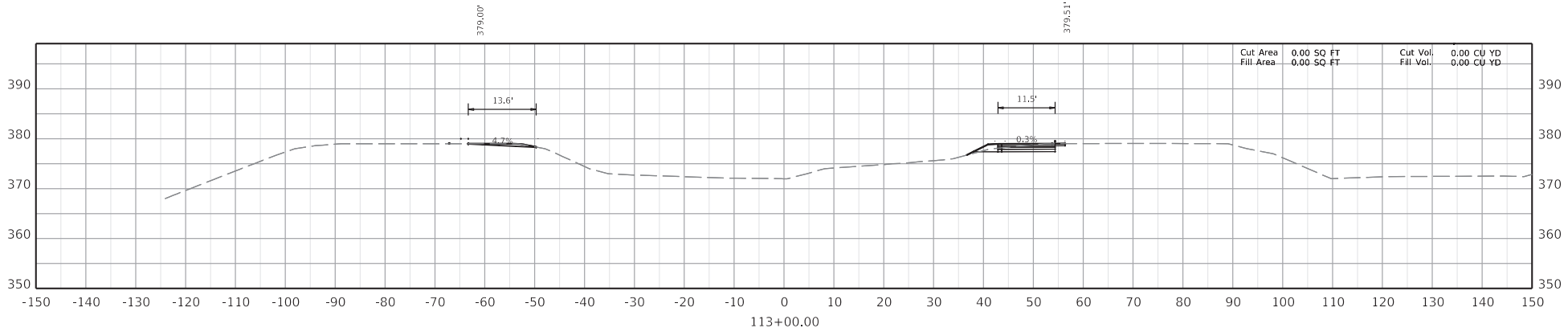
0' 10' 20' 40'

STA 112+00 TO 112+50

ITEM NO. 02-0935.00
COUNTY OF HENDERSON
SHEET NO. X9

OpenRoads Designer v10.16.2.267
USER: us|725830
FILE NAME: C:\BMS\WSP-US-PW-02\D0833597\CROSS SECTIONS.DGN





COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
TEAM KENTUCKY

DRAWING TITLE: US 41 CROSS SECTIONS

HORIZONTAL SCALE
SCALE: 1" = 10'

0' 10' 20' 40'

STA 113+00 TO 113+50

ITEM NO. 02-0935.00
COUNTY OF HENDERSON
SHEET NO. X10

OpenRoads Designer v10.16.2.267
USER: us\j725830
FILE NAME: C:\BMS\WSP-US-PW-02\D0833597\CROSS SECTIONS.DGN

GUARDRAIL DELIVERY VERIFICATION SHEET

Contract Id: _____ **Contractor: _____**

Section Engineer: _____ **District & County: _____**

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

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

Printed Section Engineer's Representative_____ & Date_____

Signature Section Engineer's Representative_____& Date_____

Printed Contractor's Representative_____& Date_____

Signature Contractor's Representative_____& Date_____

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

Printed Bailey Bridge Yard Representative_____ & Date_____

Signature Bailey Bridge Yard Representative_____& Date_____

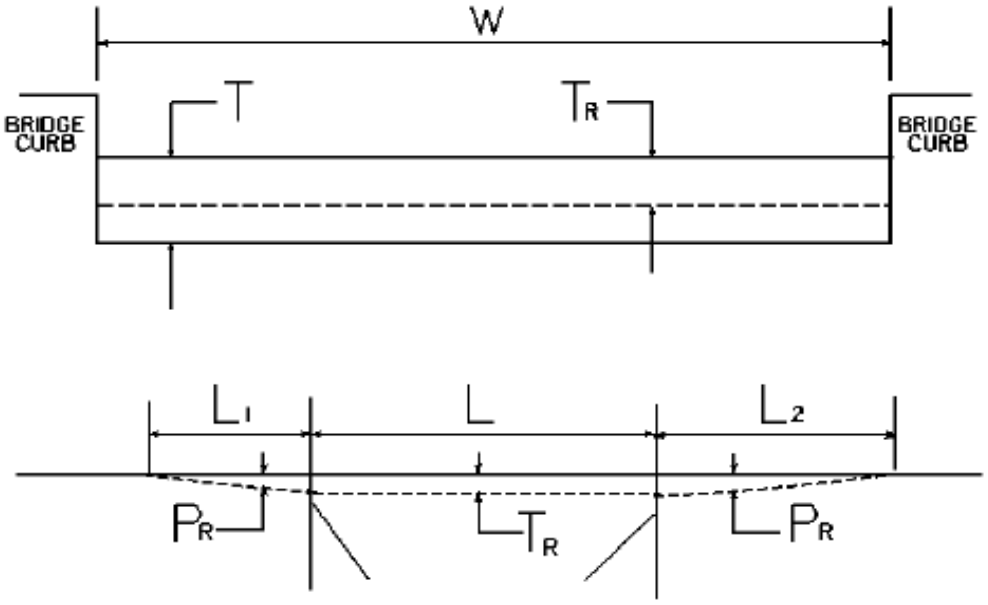
Printed Contractor's Representative_____& Date_____

Signature Contractor's Representative_____& Date_____

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

Completed Form Submitted to Section Engineer Date: _____ By: _____

BRIDGE DETAIL FOR PAVING PROJECT



W = bridge width curb to curb
T = thickness of existing asphalt overlay
L = length of bridge
L_1 & L_2 = length of approach pavement to be removed
T_R = thickness to be removed and replaced on bridge
P_R = thickness to be removed and replaced on pavement
Note: L_1 & L_2 lengths shall be determined by using a transition rate of 100 ft/in of thickness

Route	Bridge No.	MP	W (ft)	T (in)	L_1 (ft)	L_2 (ft)	T_R (in)	L (ft)	P_R (in)
US 41	B00002R	19.581	48.00		0.00	0.00	0.00	5427.00	1.50
US 41	B00002L	19.581	48.00		0.00	0.00	0.00	5427.00	1.50

Project is a complete mill and fill.

PART II

SPECIFICATIONS AND STANDARD DRAWINGS

STANDARD SPECIFICATIONS

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 2019* and *Standard Drawings, Edition of 2020.*

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

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

Code	Pay Item	Pay Unit
02671	Portable Changeable Message Sign	Each

Effective June 15, 2012

SPECIAL NOTE FOR BARCODE LABEL ON PERMANENT SIGNS

1.0 DESCRIPTION. Install barcode label on sheeting signs. Section references herein are to the Department's Standard Specifications for Road and Bridge Construction, current edition.

2.0 MATERIALS. The Department will provide the Contractor with a 2 inch x 1 inch foil barcode label for each permanent sheeting sign. A unique number will be assigned to each barcode label.

The Contractor shall contact the Operations and Pavement Management Branch in the Division of Maintenance at (502) 564-4556 to obtain the barcode labels.

3.0 CONSTRUCTION. Apply foil barcode label in the lower right quadrant of the sign back. Signs where the bottom edge is not parallel to the ground, the lowest corner of the sign shall serve as the location to place the barcode label. The barcode label shall be placed no less than one-inch and no more than three inches from any edge of the sign. The barcode must be placed so that the sign post does not cover the barcode label.

Barcodes shall be applied in an indoor setting with a minimum air temperature of 50°F or higher. Prior to application of the barcode label, the back of the sign must be clean and free of dust, oil, etc. If the sign is not clean, an alcohol swab shall be used to clean the area. The area must be allowed to dry prior to placement of the barcode label.

Data for each sign shall include the barcode number, MUTCD reference number, sheeting manufacturer, sheeting type, manufacture date, color of primary reflective surface, installation date, latitude and longitude using the North American Datum of 1983 (NAD83) or the State Plane Coordinates using an x and y ordinate of the installed location.

Data should be provided electronically on the TC 71-229 Sign Details Information and TC 71-230 Sign Assembly Information forms. The Contractor may choose to present the data in a different format provided that the information submitted to the Department is equivalent to the information required on the Department TC forms. The forms must be submitted in electronic format regardless of which type of form is used. The Department will not accept PDF or handwritten forms. These completed forms must be submitted to the Department prior to final inspection of the signs. The Department will not issue formal acceptance for the project until the TC 71-229 and TC-230 electronic forms are completed for all signs and sign assemblies on the project.

4.0 MEASUREMENT. The Department will measure all work required for the installation of the barcode label and all work associated with completion and submission of the sign inventory data (TC 71-229 and TC 71-230).

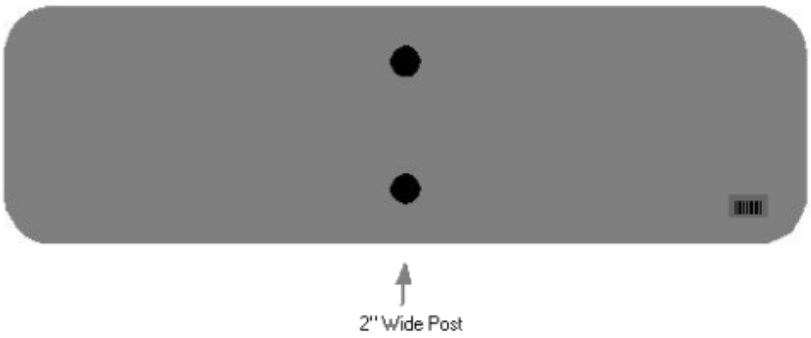
The installation of the permanent sign will be measured in accordance to Section 715.

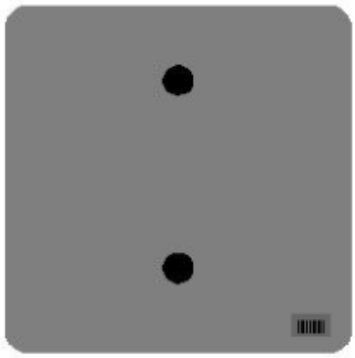
5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

Code	Pay Item	Pay Unit
24631EC	Barcode Sign Inventory	Each

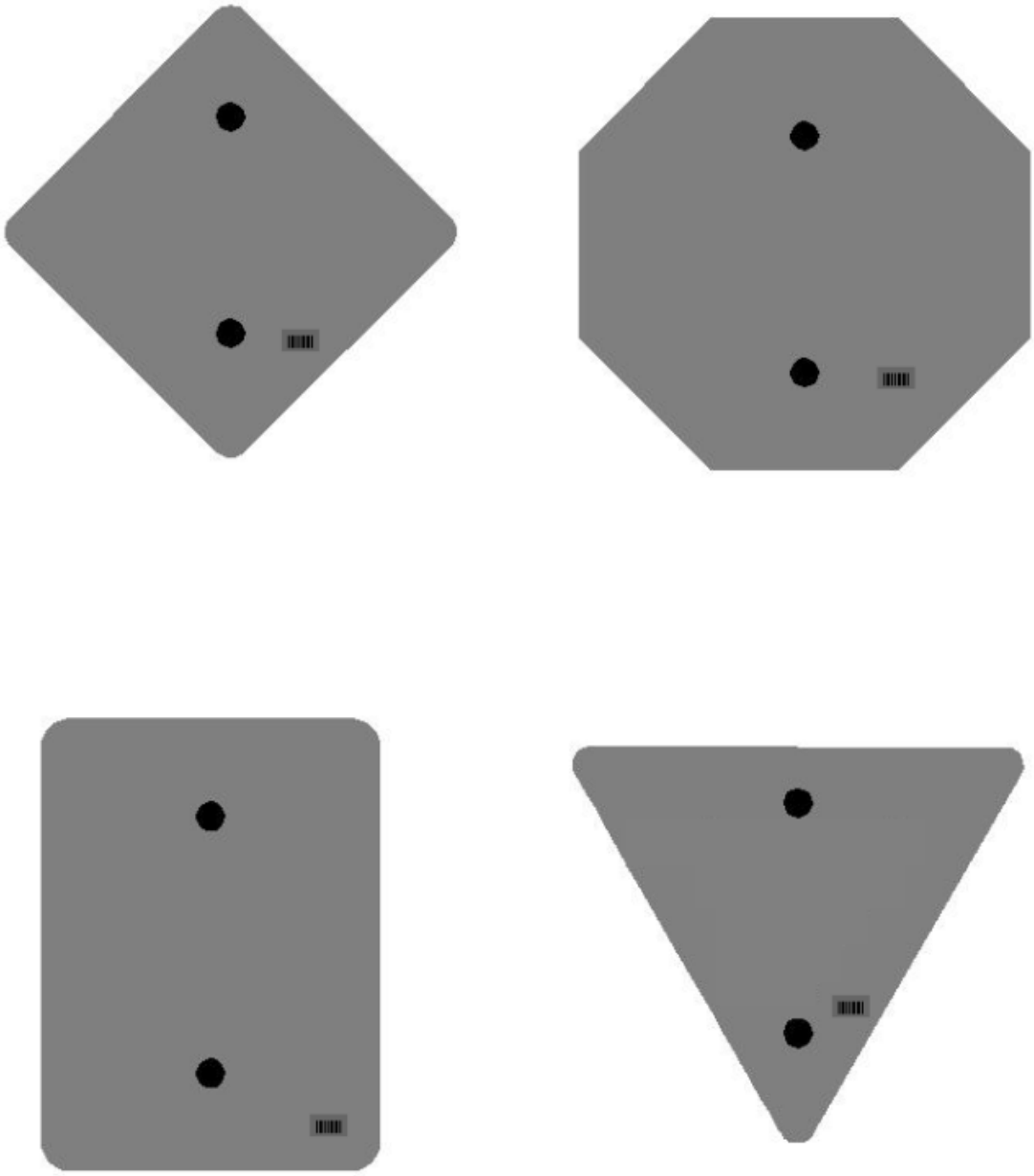
The Department will not make payment for this item until all barcodes are installed and sign inventory is complete on every permanent sign installed on the project. The Department will make payment for installation of the permanent sign in accordance to Section 715. The Department will consider payment as full compensation for all work required under this special note.

One Sign Post

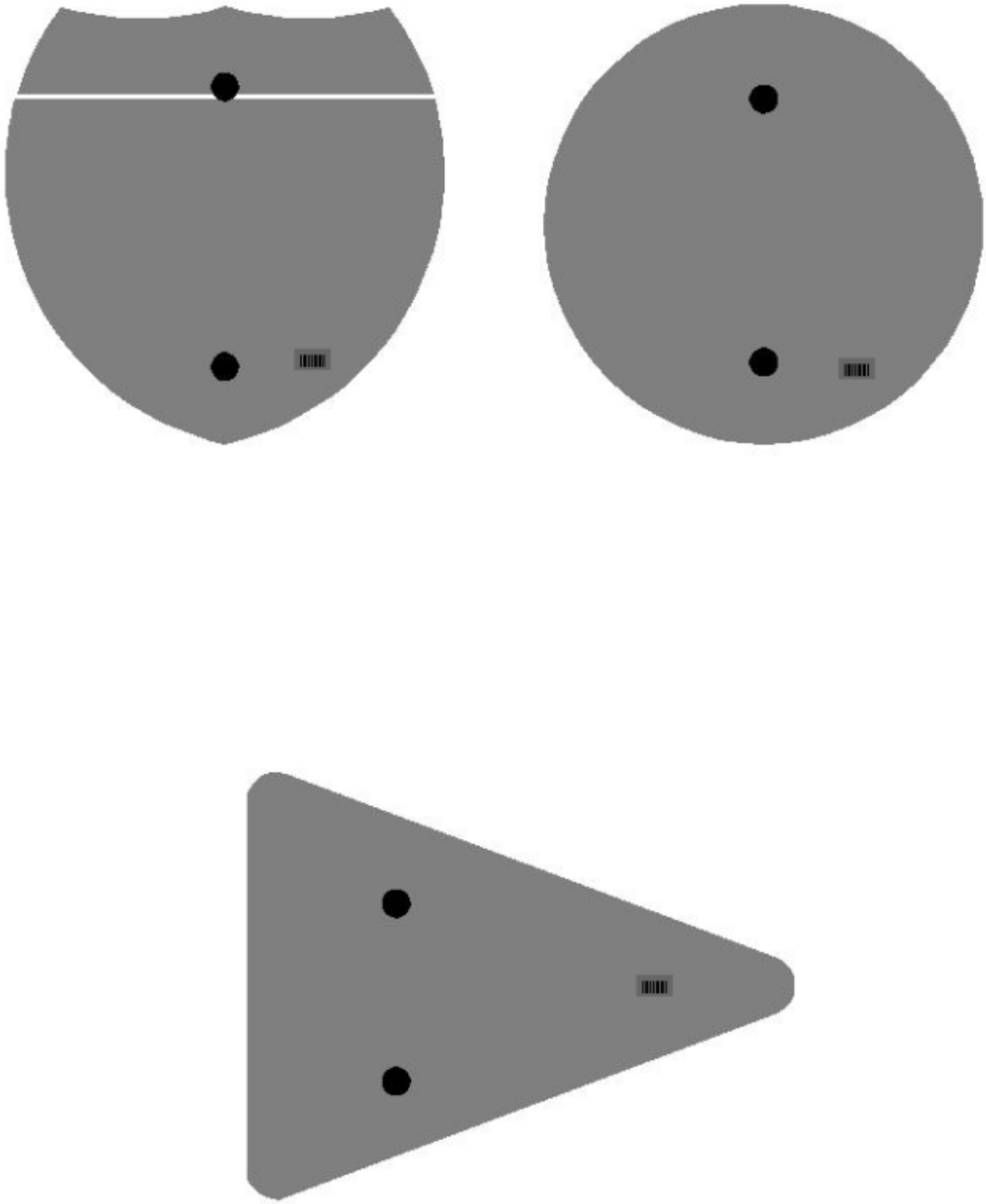




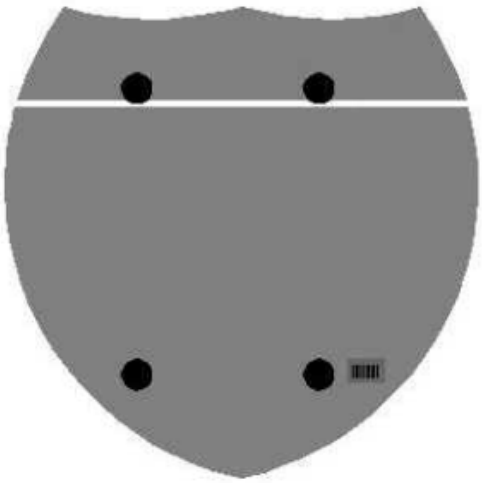
One Sign Post



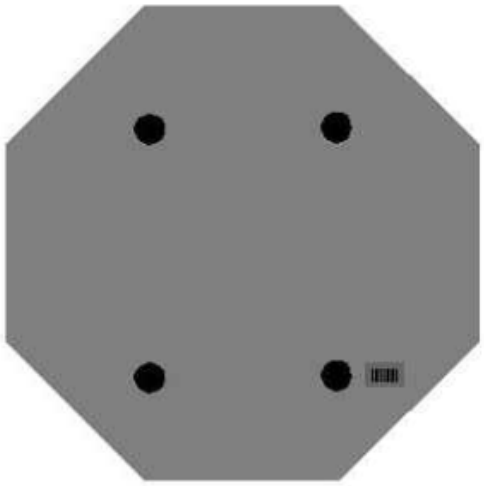
One Sign Post



Double Sign Post

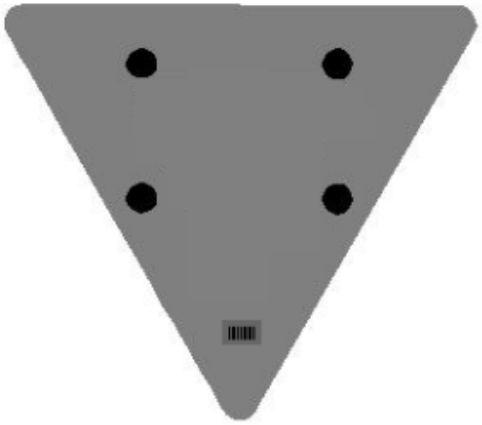


Interstate
Shield



48" Stop

2 Post Signs



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SPECIAL NOTE FOR LONGITUDINAL PAVEMENT JOINT ADHESIVE

1. DESCRIPTION. This specification covers the requirements and practices for applying an asphalt adhesive material to the longitudinal joint of the surface course of an asphalt pavement. Apply the adhesive to the face of longitudinal joint between driving lanes for the first lane paved. Then, place and compact the adjacent lane against the treated face to produce a strong, durable, waterproof longitudinal joint.

2. MATERIALS, EQUIPMENT, AND PERSONNEL.

2.1 Joint Adhesive. Provide material conforming to Subsection 2.1.1.

2.1.1 Provide an adhesive conforming to the following requirements:

Property	Specification	Test Procedure
Viscosity, 400 ° F (Pa·s)	4.0 – 10.0	ASTM D 4402
Cone Penetration, 77 ° F	60 – 100	ASTM D 5329
Flow, 140 ° F (mm)	5.0 max.	ASTM D 5329
Resilience, 77 ° F (%)	30 min.	ASTM D 5329
Ductility, 77 ° F (cm)	30.0 min.	ASTM D 113
Ductility, 39 ° F (cm)	30.0 min.	ASTM D 113
Tensile Adhesion, 77 ° F (%)	500 min.	ASTM D 5329, Type II
Softening Point, ° F	171 min.	AASHTO T 53
Asphalt Compatibility	Pass	ASTM D 5329

Ensure the temperature of the pavement joint adhesive is between 380 and 410 °F when the material is extruded in a 0.125-inch-thick band over the entire face of the longitudinal joint.

2.2. Equipment.

2.2.1 Melter Kettle. Provide an oil-jacketed, double-boiler, melter kettle equipped with any needed agitation and recirculating systems.

2.2.2 Applicator System. Provide a pressure-feed-wand applicator system with an applicator shoe attached.

2.3 Personnel. Ensure a technical representative from the manufacturer of the pavement joint adhesive is present during the initial construction activities and available upon the request of the Engineer.

3. CONSTRUCTION.

3.1 Surface Preparation. Prior to the application of the pavement joint adhesive, ensure the face of the longitudinal joint is thoroughly dry and free from dust or any other debris that would inhibit adhesion. Clean the joint face by the use of compressed air.

11N

Ensure this preparation process occurs shortly before application to prevent the return of debris on the joint face.

3.2 Pavement Joint Adhesive Application. Ensure the ambient temperature is a minimum of 40 ^{o} F during the application of the pavement joint adhesive. Prior to applying the adhesive, demonstrate competence in applying the adhesive according to this note to the satisfaction of the Engineer. Heat the adhesive in the melter kettle to the specified temperature range. Pump the adhesive from the melter kettle through the wand onto the vertical face of the cold joint. Apply the adhesive in a continuous band over the entire face of the longitudinal joint. Do not use excessive material in either thickness or location. Ensure the edge of the extruded adhesive material is flush with the surface of the pavement. Then, place and compact the adjacent lane against the joint face. Remove any excessive material extruded from the joint after compaction (a small line of material may remain).

3.3 Pavement Joint Adhesive Certification. Furnish the joint adhesive's certification to the Engineer stating the material conforms to all requirements herein prior to use.

3.4 Sampling and Testing. The Department will require a random sample of pavement joint adhesive from each manufacturer's lot of material. Extrude two 5 lb. samples of the heated material and forward the sample to the Division of Materials for testing. Reynolds oven bags, turkey size, placed inside small cardboard boxes or cement cylinder molds have been found suitable. Ensure the product temperature is 400°F or below at the time of sampling.

4. MEASUREMENT. The Department will measure the quantity of Pavement Joint Adhesive in linear feet. The Department will not measure for payment any extra materials, labor, methods, equipment, or construction techniques used to satisfy the requirements of this note. The Department will not measure for payment any trial applications of Pavement Joint Adhesive, the cleaning of the joint face, or furnishing and placing the adhesive. The Department will consider all such items incidental to the Pavement Joint Adhesive.

5. PAYMENT. The Department will pay for the Pavement Joint Adhesive at the Contract unit bid price and apply an adjustment for each manufacturer's lot of material based on the degree of compliance as defined in the following schedule. When a sample fails on two or more tests, the Department may add the deductions, but the total deduction will not exceed 100 percent.

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Pavement Joint Adhesive Price Adjustment Schedule						
Test	Specification	100% Pay	90% Pay	80% Pay	50% Pay	0% Pay
Joint Adhesive Referenced in Subsection 2.1.1						
Viscosity, 400 º F (Pa•s)			3.0-3.4	2.5-2.9	2.0-2.4	≤1.9
ASTM D 3236	4.0-10.0	3.5-10.5	10.6-11.0	11.1-11.5	11.6-12.0	≥ 12.1
Cone Penetration, 77 º F			54-56	51-53	48-50	≤ 47
ASTM D 5329	60-100	57-103	104-106	107-109	110-112	≥ 113
Flow, 140 º F (mm) ASTM D 5329	≤ 5.0	≤ 5.5	5.6-6.0	6.1-6.5	6.6-7.0	≥ 7.1
Resilience, 77 º F (%) ASTM D 5329	≥ 30	≥ 28	26-27	24-25	22-23	≤ 21
Tensile Adhesion, 77 º F (%) ASTM D 5329	≥ 500	≥ 490	480-489	470-479	460-469	≤ 459
Softening Point, º F AASHTO T 53	≥ 171	≥ 169	166-168	163-165	160-162	≤ 159
Ductility, 77 º F (cm) ASTM D 113	≥ 30.0	≥ 29.0	28.0-28.9	27.0-27.9	26.0-26.9	≤ 25.9
Ductility, 39 º F (cm) ASTM D 113	≥ 30.0	≥ 29.0	28.0-28.9	27.0-27.9	26.0-26.9	≤ 25.9

Code	Pay Item	Pay Unit
20071EC	Joint Adhesive	Linear Foot

May 7, 2014

2020 STANDARD DRAWINGS THAT APPLY

ROADWAY

~ BARRIERS ~

TYPICAL BARRIER INSTALLATIONS

TYPICAL GUARDRAIL INSTALLATIONS RBI-001-12
TYPICAL GUARDRAIL INSTALLATIONS RBI-002-07
TYPICAL INSTALLATION FOR GUARDRAIL END TREATMENT TYPE 2A RBI-003-09
INSTALLATION OF GUARDRAIL END TREATMENT TYPE 1 ..... Sepia 034

GUARDRAIL HARDWARE

STEEL BEAM GUARDRAIL (W-BEAM) RBR-001-13
GUARDRAIL COMPONENTS RBR-005-11
GUARDRAIL TERMINAL SECTIONS RBR-010-06
STEEL GUARDRAIL POSTS RBR-015-06
TIMBER GUARDRAIL POSTS RBR-016-05
GUARDRAIL SYSTEM TRANSITION RBR-018
GUARDRAIL END TREATMENT TYPE 1 ..... RBR-020-07
GUARDRAIL END TREATMENT TYPE 2A RBR-025-06
DELINEATORS FOR GUARDRAIL RBR-005-01
STEEL BEAM GUARDRAIL (THRIE BEAM) RBR-100-07

~ DRAINAGE ~

BOX INLETS AND OUTLETS

SLOPED BOXES

SLOPED BOX OUTLET TYPE 1 ..... RDB-100-05
GRATES FOR SLOPED BOX OUTLET TYPE 1 ..... RDB-101-05
SLOPED AND FLARED BOX INLET-OUTLET 18”-24”-30”-36” ALL SKEWS RDB-105-06
GRATES FOR SLOPED AND FLARED BOX INLET-OUTLET RDB-106-05
SLOPED BOX INLET OR OUTLET TYPE 1 ..... RDB-110-08
SLOPED BOX INLET OR OUTLET TYPE 2 ..... RDB-111-08

CURB BOXES

CONCRETE MEDIAN BARRIER BOX INLET (CAST-IN-PLACE) RDB-230-09
CONCRETE MEDIAN BARRIER BOX INLET (SLIP-FORM) RDB-231-11
CONCRETE MEDIAN BARRIER BOX INLET (50” TALL WALL CAST-IN-PLACE) RDB-240-02
CONCRETE MEDIAN BARRIER BOX INLET (50” TALL WALL SLIP-FORM) RDB-241-02
CURB BOX INLET TYPE B (DETAIL DRAWING) RDB-280-06
CURB BOX INLET TYPE B (STEEL DRAWING) RDB-281-03
CURB BOX INLET TYPE B (TOP PHASE TABLES) RDB-282-04
CURB BOX INLET TYPE B (DETAIL & BAR CHART FOR 8” LID) RDB-283-04
BOX INLET RISER RDB-400-05
BOX INLET PIPE CHAMBER RDB-410-06
BOX INLET PIPE CHAMBER (ADDITIONAL STEEL) RDB-420-05

Standard Drawings That Apply
Page 2 of 3

PIPE AND BOX CULVERT HEADWALLS

Concrete Headwalls for 12"-27" Circular Pipe Culverts RDH-050-02
Sloped and Flared Headwalls for 12"-27" Pipe RDH-020-03
Pipe Culvert Headwalls, 0° Skew (Layout and Steel Pattern) RDH-110-02
Sloped and Flared Headwalls for 12"-27" Pipe RDH-020-03

TYPICAL DRAINAGE INSTALLATIONS

CULVERT, ENTRANCE & STORM SEWER PIPE TYPES & COVER HEIGHTS (12" – 24" PIPE) RDI-001-10
CULVERT, ENTRANCE & STORM SEWER PIPE TYPES & COVER HEIGHTS (27" – 42" PIPE) RDI-002-05
PIPE BEDDING FOR CULVERTS, ENTRANCE, AND STORM SEWER PIPE RDI-020-10
PIPE BEDDING FOR CULVERTS, ENTRANCE, AND STORM SEWER, REINFORCED CONC. PIPE RDI-021-01
PIPE BEDDING, TRENCH CONDITION RDI-025-06
PIPE BEDDING, TRENCH CONDITION, REINFORCED CONC. PIPE RDI-026-01
COATINGS, LININGS AND PAVINGS FOR NON-STRUCTURAL PLATE PIPE RDI-035-02
EROSION CONTROL BLANKET SLOPE INSTALLATION RDI-040-01
EROSION CONTROL BLANKET CHANNEL INSTALLATION RDI-041-01
TYPICAL MEDIAN DRAIN INSTALLATIONS RDI-045-02

MISCELLANEOUS DRAINAGE

TRAP FOR BOX INLETS RDX-020-05
SECURITY DEVICES FOR FRAMES, GRATES AND LIDS RDX-160-06
SECURITY PLATE ASSEMBLY ..... Sepia 020
TEMPORARY SILT FENCE RDX-210-03
TEMPORARY SILT FENCE WITH WOVEN WIRE FENCE FABRIC RDX-215-01
SILT TRAP - TYPE A RDX-220-05
SILT TRAP - TYPE B RDX-225-01
SILT TRAP - TYPE C ..... Sepia 025

~ GENERAL ~

CURVE WIDENING AND SUPERELEVATION

CURVE WIDENING AND SUPERELEVATION TRANSITIONS RGS-001-07
SUPERELEVATION FOR MULTILANE PAVEMENTS RGS-002-06

MISCELLANEOUS STANDARDS

MISCELLANEOUS STANDARDS RGX-001-06
DETECTABLE WARNINGS RGX-040-03
TYPE D BREAKAWAY SIGN SUPPORT RGX-065-02

~ PAVEMENT ~

MEDIANS, CURBS, APPROACHES, ENTRANCES, ETC.

PERMANENT U-TURN MEDIAN OPENING RPM-001-04
STANDARD BARRIER MEDIAN RPM-010-06
MOUNTABLE MEDIAN RPM-011-06
CURB AND GUTTER, CURBS AND VALLEY GUTTER RPM-100-11
APPROACHES, ENTRANCES, AND MAIL BOX TURNOUT RPM-110-07

Standard Drawings That Apply
Page 3 of 3

SIDEWALK RAMPS RPM-170-09

NON-REINFORCED CONCRETE PAVEMENT

NON-REINFORCED CONCRETE PAVEMENT FOR SHOULDERS AND MEDIANS RPN-001-07
NON-REINFORCED CONCRETE PAVEMENT RPN-015-05
CONCRETE PAVEMENT JOINTS - TYPES & SPACING RPN-020-04

TRAFFIC

~ PERMANENT ~

TYPICAL MARKINGS FOR ISLANDS AND MEDIANS TPM-205
TYPICAL MARKINGS FOR TURN LANES PAGE 1 ..... TPM-206
TYPICAL MARKINGS FOR TURN LANES PAGE 2 ..... TPM-207

RUMBLE STRIPS

SHOULDER & EDGELINE RUMBLE STRIPS PLACEMENT DETAILS TPR-115
EDGELINE RUMBLE STRIP DETAILS TWO LANE ROADWAYS TPR-120
RUMBLE STRIP DETAILS MULTI-LANE ROADWAYS AND RAMPS TPR-130

~ TEMPORARY ~

TRAFFIC CONTROL

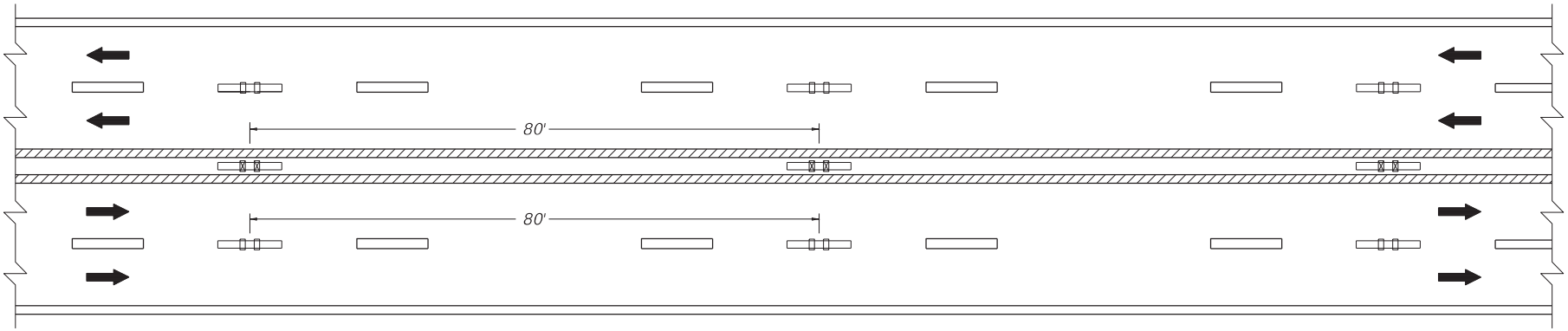
LANE CLOSURE MULTI-LANE HIGHWAY CASE I TTC-115-04
LANE CLOSURE MULTI-LANE HIGHWAY CASE II TTC-120-04
SHOULDER CLOSURE TTC-135-03
TEMPORARY PAVEMENT MARKER ARRANGEMENTS FOR CONSTRUCTION ZONES TTC-155-02
TEMPORARY PAVEMENT MARKER ARRANGEMENTS FOR LANE CLOSURES TTC-160-02

DEVICES

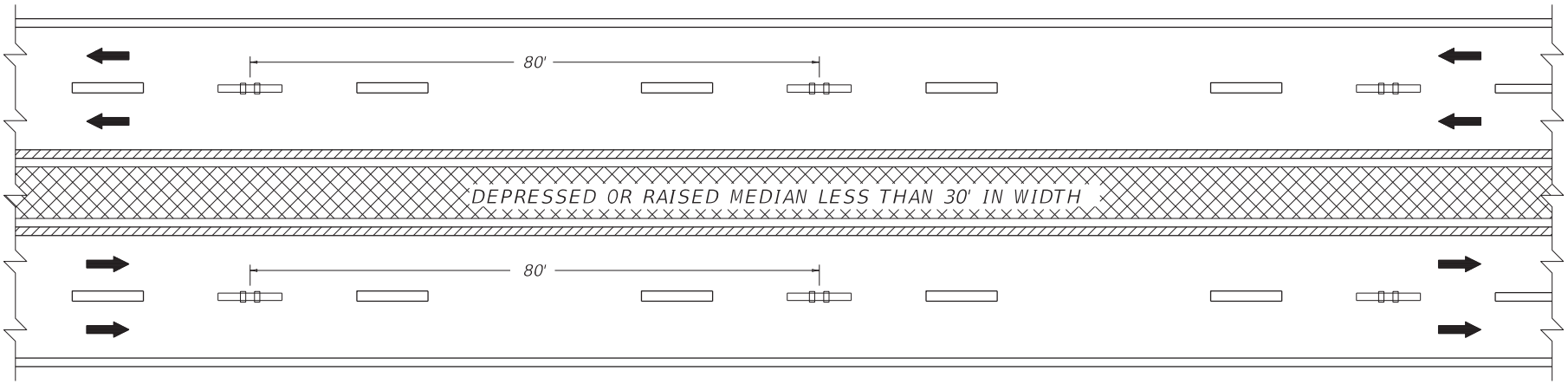
DOUBLE FINES ZONE SIGNS TTD-120-03
PAVEMENT CONDITION WARNING SIGNS TTD-125-03
SPEED ZONE SIGNING FOR WORK ZONES TTD-130

STRIPING OPERATIONS

MOBILE OPERATION FOR PAINT STRIPING CASE III TTS-110-02
MOBILE OPERATION FOR PAINT STRIPING CASE IV TTS-115-02
MOBILE OPERATION FOR PAINT STRIPING CASE IV TTS-115-02



ARRANGEMENT "A" (UNDIVIDED HIGHWAY)



ARRANGEMENT "B" (DIVIDED HIGHWAY WITH DEPRESSED OR RAISED MEDIAN LESS THAN 30' IN WIDTH)

~ NOTES ~

1. MARKERS INSTALLED WITH DOUBLE YELLOW CENTERLINES SHOULD BE PLACED BETWEEN THE TWO LINES.
2. MARKERS INSTALLED ALONG LANE LINES SHOULD BE PLACED BETWEEN AND IN LINE WITH THE SKIPS.
3. MARKERS SHALL NOT BE INSTALLED ON TOP OF THE PAVEMENT JOINT. OFFSET MARKERS A MINIMUM OF 2" FROM THE PAVEMENT JOINT. ENSURE THAT THE FINISHED LINE OF MARKERS IS STRAIGHT WITH MINIMAL LATERAL DEVIATION. MARKERS MAY BE ELIMINATED OR PLACEMENT ADJUSTED AT THE DISCRETION OF THE ENGINEER.
4. MARKERS SHALL BE INSTALLED AT 40' SPACING ALONG SOLID WHITE AUXILIARY LANES. MARKER COLOR SHALL MATCH THE MARKERS INSTALLED ALONG THE WHITE LANE LINES.

BID ITEMS	UNIT TO BID
06610 - INLAID PAVEMENT MARKER - MW	EACH
06612 - INLAID PAVEMENT MARKER - BY	EACH

LEGEND

- BI-DIRECTIONAL PAVEMENT MARKER (YELLOW)
- MONO-DIRECTIONAL PAVEMENT MARKER (WHITE)
- MARKINGS (YELLOW)
- MARKINGS (WHITE)
- DEPRESSED OR RAISED MEDIAN

DRAWING NOT TO SCALE

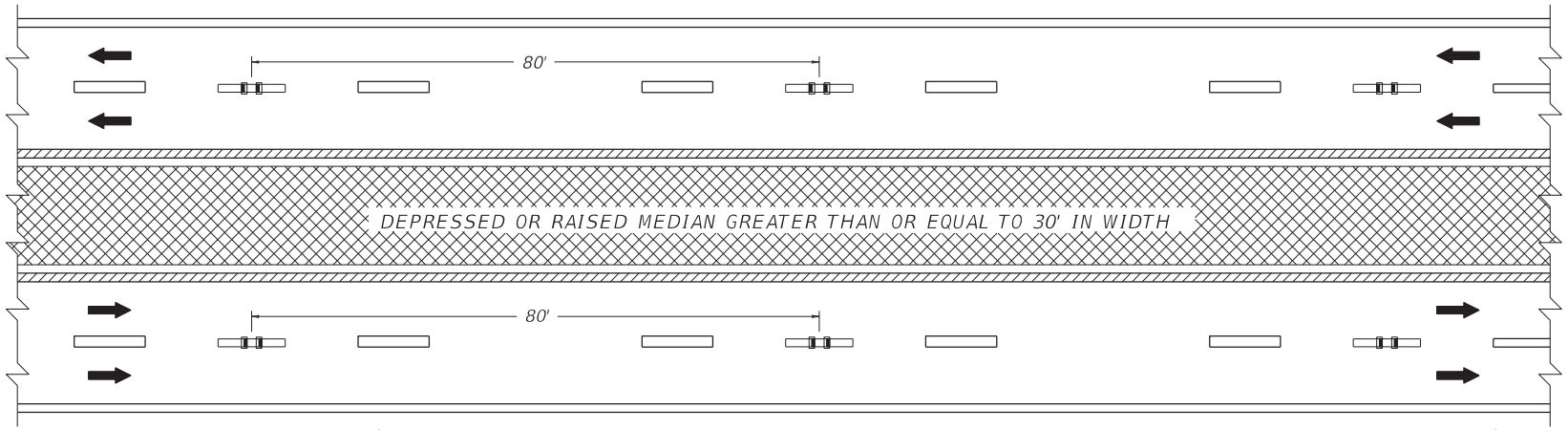
KENTUCKY
DEPARTMENT OF HIGHWAYS

INLAID PAVEMENT MARKER
ARRANGEMENTS
MULTI-LANE ROADWAYS

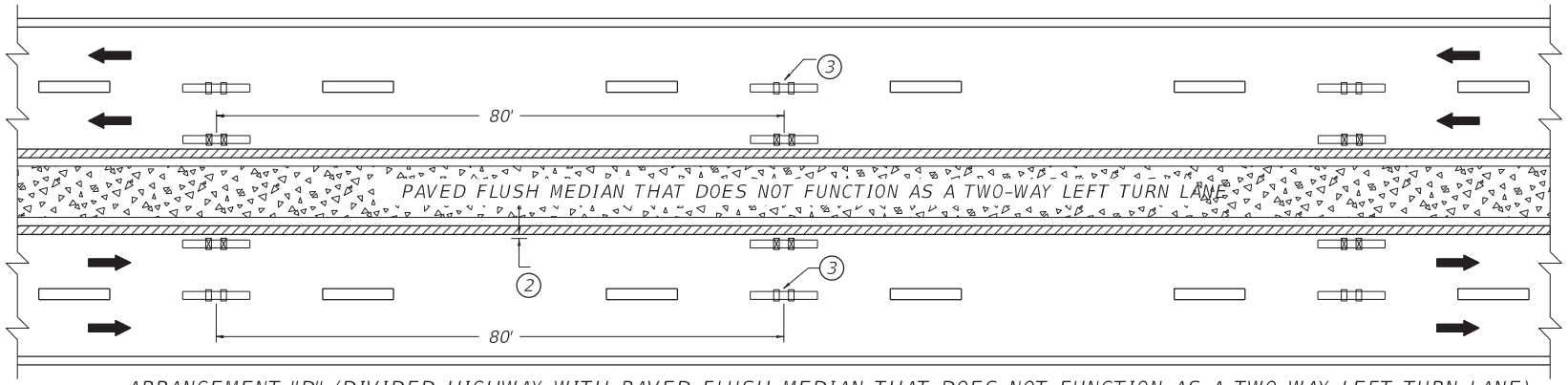
SUBMITTED _____ DIVISION DIRECTOR

06-09-21 DATE

006



ARRANGEMENT "C" (DIVIDED HIGHWAY WITH DEPRESSED OR RAISED MEDIAN GREATER THAN OR EQUAL TO 30' IN WIDTH)



ARRANGEMENT "D" (DIVIDED HIGHWAY WITH PAVED FLUSH MEDIAN THAT DOES NOT FUNCTION AS A TWO-WAY LEFT TURN LANE)

~ NOTES ~

1. MARKERS INSTALLED ALONG LANE LINES SHOULD BE PLACED BETWEEN AND IN LINE WITH THE SKIPS.
2. MARKERS INSTALLED ALONG EDGE LINES SHOULD BE PLACED SO THAT THE NEAR EDGE OF THE GROOVE IS NO MORE THAN 1" FROM THE NEAR EDGE OF THE LINE.
3. IF WIDTH OF PAVED FLUSH MEDIAN IS GREATER THAN OR EQUAL TO 30', BI-DIRECTIONAL (WHITE-RED) MARKERS SHALL BE USED ALONG THE LANE LINES IN LIEU OF MONO-DIRECTIONAL (WHITE) MARKERS.
4. MARKERS SHALL NOT BE INSTALLED ON TOP OF THE PAVEMENT JOINT. OFFSET MARKERS A MINIMUM OF 2" FROM THE PAVEMENT JOINT. ENSURE THAT THE FINISHED LINE OF MARKERS IS STRAIGHT WITH MINIMAL LATERAL DEVIATION. MARKERS MAY BE ELIMINATED OR PLACEMENT ADJUSTED AT THE DISCRETION OF THE ENGINEER.
5. MARKERS SHALL BE INSTALLED AT 40' SPACING ALONG SOLID WHITE AUXILIARY LANES. MARKER COLOR SHALL MATCH THE MARKERS INSTALLED ALONG THE WHITE LANE LINES.

BID ITEMS	UNIT TO BID
06610 - INLAID PAVEMENT MARKER - MW	EACH
06612 - INLAID PAVEMENT MARKER - BY	EACH
06613 - INLAID PAVEMENT MARKER - B W/R	EACH

LEGEND

- BI-DIRECTIONAL PAVEMENT MARKER (YELLOW)
- BI-DIRECTIONAL PAVEMENT MARKER (WHITE-RED)
- MONO-DIRECTIONAL PAVEMENT MARKER (WHITE)
- MARKINGS (YELLOW)
- MARKINGS (WHITE)
- FLUSH MEDIAN
- DEPRESSED OR RAISED MEDIAN

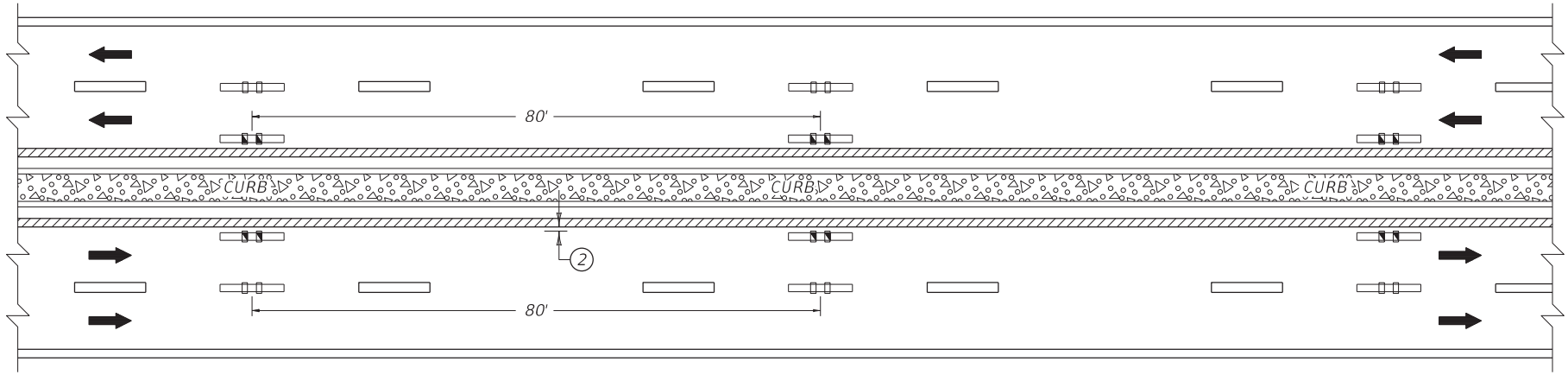
DRAWING NOT TO SCALE

KENTUCKY
DEPARTMENT OF HIGHWAYS

INLAID PAVEMENT MARKER
ARRANGEMENTS
MULTI-LANE ROADWAYS

SUBMITTED _____ DIVISION DIRECTOR 06-09-21 DATE

007



ARRANGEMENT "E" (DIVIDED HIGHWAY WITH CURB WITHIN 8' OF DRIVING LANE)

~ NOTES ~

1. MARKERS INSTALLED ALONG LANE LINES SHALL BE PLACED BETWEEN AND IN LINE WITH THE SKIPS.
2. MARKERS INSTALLED ALONG EDGE LINES SHALL BE PLACED SO THAT THE NEAR EDGE OF THE GROOVE IS NO MORE THAN 1" FROM THE NEAR EDGE OF THE LINE.
3. MARKERS SHALL NOT BE INSTALLED ON TOP OF THE PAVEMENT JOINT. OFFSET MARKERS A MINIMUM OF 2" FROM THE PAVEMENT JOINT. ENSURE THAT THE FINISHED LINE OF MARKERS IS STRAIGHT WITH MINIMAL LATERAL DEVIATION. MARKERS MAY BE ELIMINATED OR PLACEMENT ADJUSTED AT THE DISCRETION OF THE ENGINEER.
4. MARKERS SHALL BE INSTALLED AT 40' SPACING ALONG SOLID WHITE AUXILIARY LANES. MARKER COLOR SHALL MATCH THE MARKERS INSTALLED ALONG THE WHITE LANE LINES.

BID ITEMS	UNIT TO BID
06610 - INLAID PAVEMENT MARKER - MW	EACH
06611 - INLAID PAVEMENT MARKER - MY	EACH

LEGEND

- MONO-DIRECTIONAL PAVEMENT MARKER (YELLOW)
- MONO-DIRECTIONAL PAVEMENT MARKER (WHITE)
- MARKINGS (YELLOW)
- MARKINGS (WHITE)

DRAWING NOT TO SCALE

KENTUCKY
DEPARTMENT OF HIGHWAYS

INLAID PAVEMENT MARKER
ARRANGEMENTS
MULTI-LANE ROADWAYS

SUBMITTED _____ DIVISION DIRECTOR 06-09-21 DATE

008

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

FHWA-1273 – Revised October 23, 2023

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. General
II. Nondiscrimination
III. Non-segregated 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. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
XI. Certification Regarding Use of Contract Funds for Lobbying
XII. Use of United States-Flag Vessels:

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, United States Code, as required in 23 CFR 633.102(b) (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). 23 CFR 633.102(e).

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. 23 CFR 633.102(e).

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) in accordance with 23 CFR 633.102. 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 solicitation-for-bids or request-for-proposals 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). 23 CFR 633.102(b).

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. 23 CFR 633.102(d).

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. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A 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 Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), 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 Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), 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 Part 230, Subpart A, 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 (*see* 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 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 Part 35 and 29 CFR Part 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. 23 CFR 230.409 (g)(4) & (5).

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, sexual orientation, gender identity, 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 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 or other knowledgeable company official.

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, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure 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. 23 CFR 230.409. 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, sexual orientation, gender identity, 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, sexual orientation, gender identity, 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 thereunder. 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, sexual orientation, gender identity, 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, 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. Assurances Required:

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient 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 recipient deems appropriate, which may include, but is not limited to:
(1) Withholding monthly progress payments;
(2) Assessing sanctions;
(3) Liquidated damages; and/or
(4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

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 more than $10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, 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, sexual orientation, gender identity, 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), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

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 (29 CFR 5.5)

a. *Wage rates and fringe benefits.* All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), 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 basic hourly 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. As provided in paragraphs (d) and (e) of 29 CFR 5.5, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act (40 U.S.C. 3141(2)(B)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.e. 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 must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in paragraph 4. of this section. 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 classifications and wage rates conformed under paragraph 1.c. of this section) and the Davis-Bacon poster (WH–1321) must 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. *Frequently recurring classifications.* (1) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in 29 CFR part 1, a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph 1.c. of this section, provided that:

(i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

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

(iii) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

(2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

c. *Conformance.* (1) The contracting officer must 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 be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate 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 used 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) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

(3) 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 will be sent by the contracting officer by email to *DBAconformance@dol.gov*. 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.

(4) 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 will, by email to *DBAconformance@dol.gov*, refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The 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.

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must 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.

d. *Fringe benefits not expressed as an hourly rate.* 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 may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

e. *Unfunded plans.* 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, in accordance with the criteria set forth in § 5.28, 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.

f. *Interest.* In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. Withholding (29 CFR 5.5)

a. *Withholding requirements.* The contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph 3.d. of this section, the contracting agency may on its own initiative and 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.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with paragraph

2.a. of this section or Section V, paragraph 3.a., or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its reprocurement costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901–3907.

3. Records and certified payrolls (29 CFR 5.5)

a. *Basic record requirements* (1) *Length of record retention.* All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

(2) *Information required.* Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; 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 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

(3) *Additional records relating to fringe benefits.* Whenever the Secretary of Labor has found under paragraph 1.e. of this section 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 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act, the contractor must 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.

(4) *Additional records relating to apprenticeship.* Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

b. *Certified payroll requirements* (1) *Frequency and method of submission.* The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the contracting agency. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

(2) *Information required.* The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (*e.g.,* the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH–347 or in any other format desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division website at *https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/wh347/.pdf* or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the contracting agency.

(3) *Statement of Compliance.* Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

(ii) That each laborer or mechanic (including each helper and apprentice) working 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 29 CFR part 3; and

(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(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

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

(5) *Signature.* The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(6) *Falsification.* The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 3729.

(7) *Length of certified payroll retention.* The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

c. *Contracts, subcontracts, and related documents.* The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

d. *Required disclosures and access* (1) *Required record disclosures and access to workers.* The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *Sanctions for non-compliance with records and worker access requirements.* If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, 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, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under 29 CFR part 6 any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(3) *Required information disclosures.* Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address of each covered worker, and must provide them upon request to the contracting agency, the State DOT, the FHWA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

4. Apprentices and equal employment opportunity (29 CFR 5.5)

a. *Apprentices* (1) *Rate of pay.* Apprentices will be permitted to work at less than the predetermined rate for the work they perform 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 (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) *Fringe benefits.* Apprentices must 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, fringe benefits must be paid in accordance with that determination.

(3) *Apprenticeship ratio.* The allowable ratio of apprentices to journeyworkers on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph 4.a.(4) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph 4.a.(1) of this section, must 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 this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) *Reciprocity of ratios and wage rates.* Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

b. *Equal employment opportunity.* The use of apprentices and journeyworkers under this part must be in conformity with

the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

c. 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. 23 CFR 230.111(e)(2). 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 journeyworkers 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 as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor must insert FHWA-1273 in any subcontracts, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting agency may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate. 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 as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, 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 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 40 U.S.C. 3144(b) or § 5.12(a).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of 40 U.S.C. 3144(b) or § 5.12(a).

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

11. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or 29 CFR part 1 or 3;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or 29 CFR part 1 or 3;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or 29 CFR part 1 or 3; or

d. Informing any other person about their rights under the DBA, Related Acts, this part, or 29 CFR part 1 or 3.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), 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 watchpersons 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. 29 CFR 5.5.

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 and interest from the date of the underpayment. 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 watchpersons and guards, employed in violation of the clause set forth in paragraph 1. of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* 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.

* $31 as of January 15, 2023 (See 88 FR 88 FR 2210) as may be adjusted annually by the Department of Labor, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990.

3. Withholding for unpaid wages and liquidated damages

a. *Withholding process.* The FHWA or the contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section on this contract, 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 that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with Section IV paragraph 2.a. or paragraph 3.a. of this section, or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its reprocurement costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901–3907.

4. Subcontracts. The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1. through 5. of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1. through 5. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or

d. Informing any other person about their rights under CWHSSA or this part.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

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” in paragraph 1 of Section VI 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: (based on longstanding interpretation)

(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. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), 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. Pursuant to 23 CFR 635.116(c), 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. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

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 Part 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. 23 CFR 635.108.

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 Part 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). 29 CFR 1926.10.

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 Part 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 11, 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 (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of $150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

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. 2 CFR 180.220 and 1200.220.

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. 2 CFR 180.320.

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. 2 CFR 180.325.

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. 2 CFR 180.345 and 180.350.

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, Subpart I, 180.900-180.1020, and 1200. “First Tier Covered Transactions” refers to any covered transaction between a recipient or subrecipient 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 recipient or subrecipient 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. 2 CFR 180.330.

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. 2 CFR 180.220 and 180.300.

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. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. 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 System for Award Management website (https://www.sam.gov/). 2 CFR 180.300, 180.320, and 180.325.

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 CFR 180.325.

* * * * *

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 CFR 180.335;.

(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, 2 CFR 180.800;

(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, 2 CFR 180.700 and 180.800; 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. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

* * * * *

3. **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). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant 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. 2 CFR 180.365.

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, Subpart I, 180.900 – 180.1020, 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 recipient or subrecipient 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 recipient or subrecipient 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. 2 CFR 1200.220 and 1200.332.

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. 2 CFR 180.220 and 1200.220.

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 System for Award Management website (https://www.sam.gov/), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

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. 2 CFR 180.325.

* * * * *

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

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(3) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should 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 Part 20, App. A.

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.

XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. 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. 46 CFR 381.7.

2. 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 (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B)
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 administrating agency may direct as a means of enforcing such provisions, including sanctions for non-compliance.

Revised: January 25, 2017

Standard Title VI/Non-Discrimination Assurances

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

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

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

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

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

5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the **Federal Highway Administration** may determine to be appropriate, including, but not limited to:

    a. withholding payments to the contractor under the contract until the contractor complies; and/or
    b. cancelling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the **Federal Highway Administration** may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

Standard Title VI/Non-Discrimination Statutes and Authorities

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21;
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 *et seq.*), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.*), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.*), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 -- 12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

EXECUTIVE BRANCH CODE OF ETHICS

In the 1992 regular legislative session, the General Assembly passed and Governor Brereton Jones signed Senate Bill 63 (codified as KRS 11A), the Executive Branch Code of Ethics, which states, in part:

KRS 11A.040 (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, 1025 Capital Center Drive, Suite 104, Frankfort, Kentucky 40601; telephone (502) 564-7954.

Revised: May 23, 2022

"General Decision Number: KY20240040 11/15/2024

Superseded General Decision Number: KY20230040

State: Kentucky

Construction Type: Highway

Counties: Allen, Ballard, Butler, Caldwell, Calloway, Carlisle, Christian, Crittenden, Daviess, Edmonson, Fulton, Graves, Hancock, Henderson, Hickman, Hopkins, Livingston, Logan, Lyon, Marshall, McCracken, McLean, Muhlenberg, Ohio, Simpson, Todd, Trigg, Union, Warren and Webster 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: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least $17.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2024.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least $12.90 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2024.

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

Additional information on contractor requirements and worker protections under the Executive Orders is available at http://www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/05/2024
1	02/09/2024
2	03/15/2024
3	05/31/2024
4	07/05/2024
5	09/06/2024
6	09/13/2024
7	09/20/2024
8	10/11/2024
9	11/08/2024
10	11/15/2024

BRIN0004-002 06/01/2023

BALLARD, BUTLER, CALDWELL, CARLISLE, CRITTENDEN, DAVIESS, EDMONSON, FULTON, GRAVES, HANCOCK, HENDERSON, HICKMAN, HOPKINS, LIVINGSTON, LYON, MARSHALL, MCCRACKEN, MCLEAN, MUHLENBERG, OHIO, UNION, and WEBSTER COUNTIES

	Rates	Fringes
BRICKLAYER		
Ballard, Caldwell, Carlisle, Crittenden, Fulton, Graves, Hickman, Livingston, Lyon, Marshall, and McCracken Counties	$ 34.17	19.60
Butler, Edmonson, Hopkins, Muhlenberg, and Ohio Counties	$ 32.28	15.95
Daviess, Hancock, Henderson, McLean, Union, and Webster Counties	$ 34.17	19.60

BRTN0004-005 06/01/2023

ALLEN, CALLOWAY, CHRISTIAN, LOGAN, SIMPSON, TODD, TRIGG, and WARREN COUNTIES

	Rates	Fringes
BRICKLAYER	$ 32.28	15.95

CARP0357-002 06/01/2024

	Rates	Fringes
CARPENTER	$ 30.16	20.87
DIVER	$ 49.73	23.37
PILEDRIVERMAN	$ 30.16	20.87

ELEC0369-006 05/29/2024

BUTLER, EDMONSON, LOGAN, TODD & WARREN COUNTIES:

	Rates	Fringes
ELECTRICIAN	$ 37.88	21.38

ELEC0429-001 06/01/2024

ALLEN & SIMPSON COUNTIES:

	Rates	Fringes
ELECTRICIAN	$ 34.92	14.75

ELEC0816-002 06/01/2024

BALLARD, CALDWELL, CALLOWAY, CARLISLE, CHRISTIAN, CRITTENDEN, FULTON (Except a 5 mile radius of City Hall in Fulton), GRAVES, HICKMAN, LIVINGSTON, LYON, MARSHALL, MCCRACKEN & TRIGG COUNTIES:

	Rates	Fringes
ELECTRICIAN	$ 35.67	28%+8.60

Cable spicers receive $.25 per hour additional.

ELEC1701-003 07/01/2024

DAVIESS, HANCOCK, HENDERSON, HOPKINS, MCLEAN, MUHLENBERG, OHIO, UNION & WEBSTER COUNTIES:

	Rates	Fringes
ELECTRICIAN	$ 37.10	8.60+30.8%

Cable spicers receive $.25 per hour additional.

ELEC1925-002 01/01/2024

FULTON COUNTY (Up to a 5 mile radius of City Hall in Fulton):

	Rates	Fringes
CABLE SPLICER	$ 28.20	15.27
ELECTRICIAN	$ 27.95	15.26

ENGI0181-017 07/01/2024

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1	$ 40.05	19.10
GROUP 2	$ 37.19	19.10
GROUP 3	$ 37.64	19.10
GROUP 4	$ 36.87	19.10

OPERATING ENGINEER CLASSIFICATIONS

GROUP 1 - A-Frame Winch Truck; Auto Patrol; Backfiller; Batcher Plant; Bituminous Paver; Bituminous Transfer Machine; Boom Cat; Bulldozer; Mechanic; Cableway; Carry-All Scoop; Carry Deck Crane; Central Compressor Plant; Cherry Picker; Clamshell; Concrete Mixer (21 cu. ft. or Over); Concrete Paver; Truck-Mounted Concrete Pump; Core Drill; Crane; Crusher Plant; Derrick; Derrick Boat; Ditching &

Trenching Machine; Dragline; Dredge Operator; Dredge Engineer; Elevating Grader & Loaders; Grade-All; Gurries; Heavy Equipment Robotics Operator/Mechanic; High Lift; Hoe-Type Machine; Hoist (Two or More Drums); Hoisting Engine (Two or More Drums); Horizontal Directional Drill Operator; Hydrocrane; Hyster; KeCal Loader; LeTourneau; Locomotive; Mechanic; Mechanically Operated Laser Screed; Mechanic Welder; Mucking Machine; Motor Scraper; Orangepeel Bucket; Overhead Crane; Piledriver; Power Blade; Pumpcrete; Push Dozer; Rock Spreader, attached to equipment; Rotary Drill; Roller (Bituminous); Rough Terrain Crane; Scarifier; Scoopmobile; Shovel; Side Boom; Subgrader; Tailboom; Telescoping Type Forklift; Tow or Push Boat; Tower Crane (French, German & other types); Tractor Shovel; Truck Crane; Tunnel Mining Machines, including Moles, Shields or similar types of Tunnel Mining Equipment

GROUP 2 - Air Compressor (Over 900 cu. ft. per min.); Bituminous Mixer; Boom Type Tamping Machine; Bull Float; Concrete Mixer (Under 21 cu. ft.); Dredge Engineer; Electric Vibrator; Compactor/Self-Propelled Compactor; Elevator (One Drum or Buck Hoist); Elevator (When used to Hoist Building Material); Finish Machine; Firemen & Hoist (One Drum); Flexplane; Forklift (Regardless of Lift Height); Form Grader; Joint Sealing Machine; Outboard Motor Boat; Power Sweeper (Riding Type); Roller (Rock); Ross Carrier; Skid Mounted or Trailer Mounted Conrete Pump; Skid Steer Machine with all Attachments; Switchman or Brakeman; Throttle Valve Person; Tractair & Road Widening Trencher; Tractor (50 H.P. or Over); Truck Crane Oiler; Tugger; Welding Machine; Well Points;& Whirley Oiler

GROUP 3 -All Off Road Material Handling Equipment, including Articulating Dump Trucks; Greaser on Grease Facilities servicing Heavy Equipment

GROUP 4 - Bituminous Distributor; Burlap & Curing Machine; Cement Gun; Concrete Saw; Conveyor; Deckhand Oiler; Grout Pump; Hydraulic Post Driver; Hydro Seeder; Mud Jack; Oiler; Paving Joint Machine; Power Form Handling Equipment; Pump; Roller (Earth); Steerman; Tamping Machine; Tractor (Under 50 H.P.); & Vibrator

CRANES - with booms 150 ft. & Over (Including JIB), and where the length of the boom in combination with the length of the piling equals or exceeds 150 ft. - $1.00 above Group 1 rate

EMPLOYEES ASSIGNED TO WORK BELOW GROUND LEVEL ARE TO BE PAID 10% ABOVE BASIC WAGE RATE. THIS DOES NOT APPLY TO OPEN CUT WORK.

IRON0070-005 06/01/2024

BUTLER COUNTY (Eastern eighth, including the Townships of Decker, Lee & Tilford);
EDMONSON COUNTY (Northern three-fourths, including the Townships of Asphalt, Bee Spring, Brownsville, Grassland, Huff, Kyrock, Lindseyville, Mammoth Cave, Ollie, Prosperity, Rhoda, Sunfish & Sweden)

	Rates	Fringes

IRONWORKER
Structural; Ornamental;
Reinforcing; Precast
Concrete Erectors.....$ 34.59 25.00

IRON0103-004 08/01/2024

DAVIESS, HANCOCK, HENDERSON, HOPKINS, MCLEAN, OHIO, UNION & WEBSTER COUNTIES
BUTLER COUNTY (Townships of Aberdeen, Bancock, Casey, Dexterville, Dunbar, Elfie, Gilstrap, Huntsville, Logansport, Monford, Morgantown, Provo, Rochester, South Hill & Welchs Creek);
CALDWELL COUNTY (Northeastern third, including the Township of Creswell);
CHRISTIAN COUNTY (Northern third, including the Townships of Apex, Crofton, Kelly, Mannington & Wynns);
CRITTENDEN COUNTY (Northeastern half, including the Townships of Grove, Mattoon, Repton, Shady Grove & Tribune);
MUHLENBERG COUNTY (Townships of Bavier, Beech Creek Junction, Benton, Brennen, Browder, Central City, Cleaton, Depoy, Drakesboro, Eunis, Graham, Hillside, Luzerne, Lynn City, Martwick, McNary, Millport, Moorman, Nelson, Paradise, Powderly, South Carrollton, Tarina & Weir)

	Rates	Fringes
Ironworkers:.....	$ 35.34	26.4

IRON0492-003 05/01/2024

ALLEN, LOGAN, SIMPSON, TODD & WARREN COUNTIES
BUTLER COUNTY (Southern third, including the Townships of Boston, Berrys Lick, Dimple, Jetson, Quality, Sharer, Sugar Grove & Woodbury);
CHRISTIAN COUNTY (Eastern two-thirds, including the Townships of Bennettstown, Casky, Herndon, Hopkinsville, Howell, Masonville, Pembroke & Thompsonville);
EDMONSON COUNTY (Southern fourth, including the Townships of Chalybeate & Rocky Hill);
MUHLENBERG COUNTY (Southern eighth, including the Townships of Dunnior, Penrod & Rosewood)

	Rates	Fringes
Ironworkers:.....	$ 33.73	16.38

IRON0782-006 08/01/2024

BALLARD, CALLOWAY, CARLISLE, FULTON, GRAVES, HICKMAN, LIVINGSTON, LYON, MARSHALL, MCCRACKEN & TRIGG COUNTIES
CALDWELL COUNTY (Southwestern two-thirds, including the Townships of Cedar Bluff, Cider, Claxton, Cobb, Crowtown, Dulaney, Farmersville, Fredonia, McGowan, Otter Pond & Princeton);
CHRISTIAN COUNTY (Western third, Excluding the Townships of Apex, Crofton, Kelly, Mannington, Wynns, Bennettstown, Casky, Herndon, Hopkinsville, Howell, Masonville, Pembroke & Thompsonville);
CRITTENDEN COUNTY (Southwestern half, including the Townships of Crayne, Dycusburg, Frances, Marion, Mexico, Midway, Sheridan & Told)

	Rates	Fringes
Ironworkers:		
Projects with a total contract cost of $20,000,000.00 or above	$ 35.75	26.34
All Other Work	$ 34.01	24.83

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* LABO0189-005 07/01/2024

BALLARD, CALLOWAY, CARLISLE, FULTON, GRAVES, HICKMAN, LIVINGSTON, LYON, MARSHALL & MCCRACKEN COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 23.96	18.58
GROUP 2	$ 24.21	18.58
GROUP 3	$ 24.26	18.58
GROUP 4	$ 24.86	18.58

LABORER CLASSIFICATIONS

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

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

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

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

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* LABO0189-006 07/01/2024

ALLEN, BUTLER, CALDWELL, CHRISTIAN, DAVIESS, EDMONSON, HANCOCK, HOPKINS, LOGAN, MCLEAN, MUHLENBERG, OHIO, SIMPSON, TODD, TRIGG & WARREN COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 23.96	18.58
GROUP 2	$ 24.26	18.58
GROUP 3	$ 24.21	18.58
GROUP 4	$ 24.86	18.58

LABORER CLASSIFICATIONS

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

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

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

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

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* LABO0561-001 07/01/2024

CRITTENDEN, HENDERSON, UNION & WEBSTER COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 25.22	18.10
GROUP 2	$ 25.47	18.10
GROUP 3	$ 25.52	18.10

GROUP 4.....$ 26.12 18.10

LABORER CLASSIFICATIONS

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

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

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

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

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PAIN0032-002 09/01/2024

BALLARD COUNTY

	Rates	Fringes
Painters:		
Bridges	$ 36.77	21.77
All Other Work	$ 34.47	21.77

Spray, Blast, Steam, High & Hazardous (Including Lead Abatement) and All Epoxy - $1.00 Premium

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PAIN0118-003 06/01/2014

EDMONSON COUNTY:

	Rates	Fringes
Painters:		
Brush & Roller	$ 18.50	11.97

Spray, Sandblast, Power Tools, Waterblast & Steam Cleaning.....$ 19.50 11.97

PAIN0156-006 04/01/2024

DAVIESS, HANCOCK, HENDERSON, MCLEAN, OHIO, UNION & WEBSTER COUNTIES

	Rates	Fringes
Painters:		
BRIDGES		
GROUP 1	$ 30.77	20.30
GROUP 3	$ 31.77	20.30
GROUP 4	$ 35.00	20.30
ALL OTHER WORK:		
GROUP 1	$ 29.62	20.30
GROUP 2	$ 30.37	20.30
GROUP 3	$ 30.62	20.30
GROUP 4	$ 31.77	20.30

PAINTER CLASSIFICATIONS

GROUP 1 - Brush & Roller

GROUP 2 - Plasterers

GROUP 3 - Spray; Sandblast; Power Tools; Waterblast; Steamcleaning; Brush & Roller of Mastics, Creosotes, Kwinch Koate & Coal Tar Epoxy

GROUP 4 - Spray of Mastics, Creosotes, Kwinch Koate & Coal Tar Epoxy

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PAIN0500-002 06/01/2024

CALDWELL, CALLOWAY, CARLISLE, CHRISTIAN, CRITTENDEN, FULTON, GRAVES, HICKMAN, HOPKINS, LIVINGSTON, LYON, MARSHALL, MCCRACKEN & TRIGG COUNTIES:

	Rates	Fringes
Painters:		
Bridges	$ 30.75	15.50
All Other Work	$ 24.50	15.50

Waterblasting units with 3500 PSI and above - $.50 premium
Spraypainting and all abrasive blasting - $1.00 premium
Work 40 ft. and above ground level - $1.00 premium

PLUM0184-002 07/01/2024

BALLARD, CALDWELL, CALLOWAY, CARLISLE, CHRISTIAN, CRITTENDEN, FULTON, GRAVES, HICKMAN, LIVINGSTON, LYON, MARSHALL, MCCRACKEN and TRIGG COUNTIES

	Rates	Fringes
Plumber; Steamfitter	$ 41.01	20.28

PLUM0502-004 08/01/2024

ALLEN, BUTLER, EDMONSON, SIMPSON & WARREN

	Rates	Fringes
Plumber; Steamfitter	$ 41.90	24.89

PLUM0633-002 07/01/2022

DAVIESS, HANCOCK, HENDERSON, HOPKINS, LOGAN, MCLEAN, MUHLENBERG, OHIO, TODD, UNION & WEBSTER COUNTIES:

	Rates	Fringes
PLUMBER/PIPEFITTER	$ 33.97	19.30

TEAM0089-003 03/31/2024

ALLEN, BUTLER, EDMONSON, LOGAN, SIMPSON & WARREN COUNTIES

	Rates	Fringes
Truck drivers:		
Zone 1:		
Group 1	$ 23.53	27.39
Group 2	$ 23.70	27.39
Group 3	$ 23.78	27.39
Group 4	$ 23.80	27.39

GROUP 1 - Greaser; Tire Changer

GROUP 2 - Truck Mechanic; Single Axle Dump; Flat Bed; All Terrain Vehicles when used to haul materials; Semi Trailer or Pole Trailer when used to pull building materials and equipment; Tandem Axle Dump; Driver of Distributors

GROUP 3 - Mixer All Types

GROUP 4 - Winch and A-Frame when used in transporting materials; Ross Carrier; Fork Lift when used to transport building materials; Driver on Pavement Breaker; Euclid and Other Heavy Earth Moving Equipment; Low Boy; Articulator Cat; Five Axle Vehicle

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TEAM0215-003 03/31/2024

DAVIESS, HANCOCK, HENDERSON, HOPKINS, MCLEAN, MUHLENBERG, OHIO & WEBSTER COUNTIES

	Rates	Fringes
TRUCK DRIVER		
Group 1	$ 25.15	27.39
Group 2	$ 25.38	27.39
Group 3	$ 25.45	27.39
Group 4	$ 25.46	27.39

GROUP 1: Greaser, Tire Changer

GROUP 2: Truck Mechanic

GROUP 3: Single Axle Dump; Flat Bed; All Terrain Vehicle when used to haul materials; Semi Trailer or Pole Trailer when used to pull building materials and equipment; Tandem Axle Dump; Driver of Distributors; Mixer All Types

GROUP 4: Euclid and other heavy earth moving equipment; Low Boy; Articulator Cat; 5 Axle Vehicle; Winch and A- Frame when used in transporting materials; Ross Carrier; Fork Lift when used to transport building materials; Driver on Pavement Breaker

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TEAM0236-001 03/31/2024

BALLARD, CALDWELL, CALLOWAY, CARLISLE, CHRISTIAN, CRITTENDEN, FULTON, GRAVES, HICKMAN, LIVINGSTON, LYON, MARSHALL, MCCRACKEN,TODD & TRIGG COUNTIES

	Rates	Fringes
TRUCK DRIVER		
Group 1	$ 23.52	27.39
Group 2	$ 23.70	27.39
Group 3	$ 23.70	27.39
Group 4	$ 23.78	27.39
Group 5	$ 23.80	27.39

GROUP 1: Greaser, Tire Changer

GROUP 2: Truck Mechanic

GROUP 3: Single Axle Dump; Flat Bed; All Terrain Vehicle when used to haul materials; Semi Trailer or Pole Trailer when used to pull building materials and equipment; Tandem Axle Dump; Drivers of Distributors

GROUP 4: Euclid and other heavy earth moving equipment; Low Boy; Articulator Cat; Five Axle Vehicle; Winch and A-Frame when used in transporting materials; Ross Carrier

GROUP 5: Mixer All Types

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 https://www.dol.gov/agencies/whd/government-contracts.

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

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.

State Adopted Rate Identifiers

Classifications listed under the ""SA"" identifier indicate that the prevailing wage rate set by a state (or local) government was adopted under 29 C.F.R ◆1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 01/03/2024 reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

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

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

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

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

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

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

Wage and Hour Administrator

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

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

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

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 to an employee at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty (40) hours in such workweek. 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
4.8%	6.9%

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

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

3. The Notification of Construction Contract Award Portal (NCAP) is OFCCP's preferred method for receiving construction contract award notifications. The NCAP can be found on OFCCP's website at https://www.dol.gov/agencies/ofccp/ncap. Users who prefer not to use the portal maintain the option to send their notifications via mail, email and facsimile to the OFCCP Regional office in which the work will be performed. 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 must include: Prime Contract Number (issued by the federal agency or applicant); Name of Awarding Federal Agency, Applicant or Contractor; Contracting Officer, Applicant Representative or Contractor Representative Submitting Notification with name, phone number, email address; Contractor Awarded Contract or Subcontract with name, address, phone number, email address, EIN, dollar amount of the contract, estimated start date of the contract, estimated completion date of the contract, geographical area in which the contract is to be performed (state, county's city (if applicable)).
The notification shall be mailed to:

Regional Director
Office of Federal Contract Compliance Programs
61 Forsyth Street, SW, Suite 7B75
Atlanta, Georgia 30303-8931
Main Number: 404-893-4545 Fax: 404-893-4546
Regional Director Contact: OFCCP-SE@dol.gov
Construction Award Email: OFCCP-SE-ConstructionAward@dol.gov

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

(Revised: 1/1/2023)

PART IV

INSURANCE

Refer to
Kentucky Standard Specifications for Road and Bridge Construction,
current edition

PART V

BID ITEMS

PROPOSAL BID ITEMS

244500

Report Date 10/16/24

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00003		CRUSHED STONE BASE	1,752.00	TON		$	
0020	00078		CRUSHED AGGREGATE SIZE NO 2	2,391.00	TON		$	
0030	00100		ASPHALT SEAL AGGREGATE	8.00	TON		$	
0040	00103		ASPHALT SEAL COAT	2.00	TON		$	
0050	00190		LEVELING & WEDGING PG64-22	143.00	TON		$	
0060	00217		CL4 ASPH BASE 1.00D PG64-22	1,648.00	TON		$	
0070	00219		CL4 ASPH BASE 1.00D PG76-22	707.00	TON		$	
0080	00335		CL4 ASPH SURF 0.50A PG76-22	1,417.00	TON		$	
0090	00356		ASPHALT MATERIAL FOR TACK	8.00	TON		$	
0280	02602		FABRIC-GEOTEXTILE CLASS 1	4,166.00	SQYD		$	
0290	02604		FABRIC-GEOTEXTILE CLASS 1A	4,224.00	SQYD		$	
0330	02676		MOBILIZATION FOR MILL & TEXT HENDERSON US 41 HSIP	1.00	LS		$	
0340	02677		ASPHALT PAVE MILLING & TEXTURING	1,117.00	TON		$	
0760	20071EC		JOINT ADHESIVE	2,305.00	LF		$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0130	01310		REMOVE PIPE	34.00	LF		$	
0150	01705		REMOVE CURB & GUTTER BOX INLET	2.00	EACH		$	
0160	01921		STANDARD BARRIER MEDIAN TYPE 4	143.00	SQYD		$	
0170	01939		MOUNTABLE MEDIAN TYPE 3	544.00	SQYD		$	
0180	01982		DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE	8.00	EACH		$	
0190	01983		DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL YELLOW	16.00	EACH		$	
0200	02091		REMOVE PAVEMENT	124.00	SQYD		$	
0210	02200		ROADWAY EXCAVATION	1,581.00	CUYD		$	
0220	02351		GUARDRAIL-STEEL W BEAM-S FACE	737.50	LF		$	
0230	02367		GUARDRAIL END TREATMENT TYPE 1	1.00	EACH		$	
0240	02369		GUARDRAIL END TREATMENT TYPE 2A	1.00	EACH		$	
0250	02381		REMOVE GUARDRAIL	381.00	LF		$	
0260	02562		TEMPORARY SIGNS	480.00	SQFT		$	
0300	02625		REMOVE HEADWALL	2.00	EACH		$	
0310	02650		MAINTAIN & CONTROL TRAFFIC HENDERSON US 41 HSIP	1.00	LS		$	
0320	02671		PORTABLE CHANGEABLE MESSAGE SIGN	6.00	EACH		$	
0350	02696		SHOULDER RUMBLE STRIPS	2,600.00	LF		$	
0360	02701		TEMP SILT FENCE	2,500.00	LF		$	
0370	02703		SILT TRAP TYPE A	5.00	EACH		$	
0380	02704		SILT TRAP TYPE B	5.00	EACH		$	
0390	02705		SILT TRAP TYPE C	5.00	EACH		$	
0400	02706		CLEAN SILT TRAP TYPE A	5.00	EACH		$	
0410	02707		CLEAN SILT TRAP TYPE B	5.00	EACH		$	
0420	02708		CLEAN SILT TRAP TYPE C	5.00	EACH		$	

PROPOSAL BID ITEMS

244500

Report Date 10/16/24

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0430	02726		STAKING HENDERSON US 41 HSIP	1.00	LS		$	
0440	02775		ARROW PANEL	2.00	EACH		$	
0450	03225		TUBULAR MARKERS (PEXCO CITY POST EMBEDDED ANCHOR CUP)	45.00	EACH		$	
0560	05950		EROSION CONTROL BLANKET	75.00	SQYD		$	
0570	05952		TEMP MULCH	1,850.00	SQYD		$	
0580	05953		TEMP SEEDING AND PROTECTION	1,850.00	SQYD		$	
0590	05963		INITIAL FERTILIZER	1.00	TON		$	
0600	05964		MAINTENANCE FERTILIZER	1.00	TON		$	
0610	05985		SEEDING AND PROTECTION	1,850.00	SQYD		$	
0620	05992		AGRICULTURAL LIMESTONE	1.20	TON		$	
0670	06511		PAVE STRIPING-TEMP PAINT-6 IN	10,210.00	LF		$	
0680	06542		PAVE STRIPING-THERMO-6 IN W	8,179.00	LF		$	
0690	06543		PAVE STRIPING-THERMO-6 IN Y	3,148.00	LF		$	
0700	06568		PAVE MARKING-THERMO STOP BAR-24IN	46.00	LF		$	
0710	06569		PAVE MARKING-THERMO CROSS-HATCH	6,737.00	SQFT		$	
0720	06574		PAVE MARKING-THERMO CURV ARROW	17.00	EACH		$	
0730	06576		PAVE MARKING-THERMO ONLY	3.00	EACH		$	
0740	06610		INLAID PAVEMENT MARKER-MW	59.00	EACH		$	
0750	06612		INLAID PAVEMENT MARKER-BY	46.00	EACH		$	
0770	20191ED		OBJECT MARKER TY 3	1.00	EACH		$	
0790	21289ED		LONGITUDINAL EDGE KEY	1,939.00	LF		$	
0810	23839EC		REMOVE CONCRETE MEDIAN	81.30	SQYD		$	
0840	24679ED		PAVE MARK THERMO CHEVRON	1,226.00	SQFT		$	
0850	24889EC		PAVE MARKING-THERMO U-TURN	9.00	EACH		$	
0860	24969ED		LONGITUDINAL SAW CUT	1,939.00	LF		$	

Section: 0003 - DRAINAGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0100	00461		CULVERT PIPE-15 IN	88.00	LF		$	
0110	00462		CULVERT PIPE-18 IN	36.00	LF		$	
0120	00464		CULVERT PIPE-24 IN	75.00	LF		$	
0140	01480		CURB BOX INLET TYPE B	2.00	EACH		$	
0870	26130ED		SLOPED AND MITERED HEADWALL-15 IN	1.00	EACH		$	
0880	26131ED		SLOPED AND MITERED HEADWALL-18 IN	1.00	EACH		$	
0890	26132ED		SLOPED AND MITERED HEADWALL-24 IN	2.00	EACH		$	

Section: 0004 - SIGNING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0630	06406		SBM ALUM SHEET SIGNS .080 IN	344.00	SQFT		$	
0640	06407		SBM ALUM SHEET SIGNS .125 IN	175.00	SQFT		$	
0650	06410		STEEL POST TYPE 1	823.00	LF		$	
0660	06490		CLASS A CONCRETE FOR SIGNS	2.00	CUYD		$	
0800	21596ND		GMSS TYPE D	6.00	EACH		$	

PROPOSAL BID ITEMS

244500

Report Date 10/16/24

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0830	24631EC		BARCODE SIGN INVENTORY	91.00	EACH		$	

Section: 0005 - LIGHTING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0460	04701		POLE 40 FT MTG HT	5.00	EACH		$	
0470	04725		BRACKET 15 FT	5.00	EACH		$	
0480	04740		POLE BASE	5.00	EACH		$	
0490	04750		TRANSFORMER BASE	5.00	EACH		$	
0500	04761		LIGHTING CONTROL EQUIPMENT	1.00	EACH		$	
0510	04780		FUSED CONNECTOR KIT	10.00	EACH		$	
0520	04797		CONDUIT-3 IN	1,120.00	LF		$	
0530	04820		TRENCHING AND BACKFILLING	4,145.00	LF		$	
0540	04832		WIRE-NO. 12	825.00	LF		$	
0550	04860		CABLE-NO. 8/3C DUCTED	3,025.00	LF		$	
0780	20391NS835		ELECTRICAL JUNCTION BOX TYPE A	8.00	EACH		$	
0820	24589ED		LED LUMINAIRE	5.00	EACH		$	

Section: 0006 - DEMOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0270	02569		DEMOBILIZATION	1.00	LS		$	