



**CALL NO. 105**

**CONTRACT ID. 224104**

**CASEY COUNTY**

**FED/STATE PROJECT NUMBER HSIP 5105(047)**

**DESCRIPTION KY HIGHWAY 70 (KY 70)**

**WORK TYPE ASPHALT SURFACE WITH GRADE & DRAIN**

**PRIMARY COMPLETION DATE 10/31/2022**

**LETTING DATE: February 24,2022**

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 am EASTERN STANDARD TIME February 24,2022. Bids will be publicly announced at 10:00 am EASTERN STANDARD TIME.

**NO PLANS ASSOCIATED WITH THIS PROJECT.**

**DBE CERTIFICATION REQUIRED - 16%**

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

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**SCOPE OF WORK**

## ADMINISTRATIVE DISTRICT - 08

**CONTRACT ID - 224104**

**HSIP 5105(047)**

**COUNTY - CASEY**

**PCN - 0802300702001**

**HSIP 5105 (047)**

KY HIGHWAY 70 (KY 70) (MP 4.000) FROM 0.093 MILES WEST OF WOLFORD-MURPHY RD EXTENDING EAST TO LOWER BRUSH CREEK RD (MP 12.868), A DISTANCE OF 08.68 MILES.ASPHALT PAVEMENT & ROADWAY REHAB SYP NO. 08-09011.00.

GEOGRAPHIC COORDINATES LATITUDE 37:16:20.00 LONGITUDE 85:02:04.00

**COMPLETION DATE(S):**

COMPLETED BY 10/31/2022

APPLIES TO ENTIRE PROJECT

## **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](http://www.bidx.com)) to prepare a bid packet for submission to the Department. The bidder must submit electronically using Bid Express.

### **JOINT VENTURE BIDDING**

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

### **UNDERGROUND FACILITY DAMAGE PROTECTION**

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

### **REGISTRATION WITH THE SECRETARY OF STATE BY A FOREIGN ENTITY**

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

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

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

### **SPECIAL NOTE FOR PROJECT QUESTIONS DURING ADVERTISEMENT**

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

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

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

### **HARDWOOD REMOVAL RESTRICTIONS**

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

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

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

### **ACCESS TO RECORDS**

The contractor, as defined in KRS 45A.030 (9) agrees that the contracting agency, the Finance and Administration Cabinet, the Auditor of Public Accounts, and the Legislative Research Commission, or their duly authorized representatives, shall have access to any books, documents, papers, records, or other evidence, which are directly pertinent to this contract for the purpose of financial audit or program review. Records and other prequalification information confidentially

disclosed as part of the bid process shall not be deemed as directly pertinent to the contract and shall be exempt from disclosure as provided in KRS 61.878(1)(c). The contractor also recognizes that any books, documents, papers, records, or other evidence, received during a financial audit or program review shall be subject to the Kentucky Open Records Act, KRS 61.870 to 61.884.

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

April 30, 2018

### **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          | 102.08 Preparation and Delivery of Proposals |
| 102.13 Irregular Bid Proposals | 102.14 Disqualification of Bidders           |
| 102.09 Proposal Guaranty       |                                              |

### **CIVIL RIGHTS ACT OF 1964**

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

### **NOTICE TO ALL BIDDERS**

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

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

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

### **SECOND TIER SUBCONTRACTS**

Second tier subcontracts are acceptable per Section 108.01 of the Standard Specifications for Road and Bridge Construction. There are special rules to DBE subcontractors satisfying DBE goals on federal-aid projects. 1<sup>st</sup>-Tier DBE Subcontractors may only enter into a 2<sup>nd</sup>-Tier subcontract with another DBE contractor.

### **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.

#### **UPON AWARD AND BEFORE A WORK ORDER WILL BE ISSUED**

Contractors must submit the signed subcontract between the contractor and the DBE contractor, along with the DBE's certificate of insurance. If the DBE is a supplier of materials for the project, a signed purchase order must be submitted to the Division of Construction Procurement.

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

#### **CONSIDERATION OF GOOD FAITH EFFORTS REQUESTS**

If the DBE participation submitted in the bid by the apparent lowest responsive bidder does not meet or exceed the DBE contract goal, the apparent lowest responsive bidder must submit a Good Faith Effort Package to satisfy the Cabinet that sufficient good faith efforts were made to meet the contract goals prior to submission of the bid. Efforts to increase the goal after bid submission will not be considered in justifying the good faith effort, unless the contractor can show that the proposed DBE was solicited prior to the letting date. DBEs utilized in achieving the DBE goal must be certified and prequalified for the work items at the time the bid is submitted. One complete set (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 certainty whether they were interested. If a reasonable amount of DBEs within the targeted districts do not provide an intent to quote or no DBEs are prequalified in the subcontracted areas, the bidder must notify the Disadvantaged Enterprise Business Liaison Officer (DEBLO) in the Office of 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 of Civil Rights and Small Business Development  
6<sup>th</sup> Floor West 200 Mero Street  
Frankfort, KY 40622

The prime contractor should notify the KYTC Office of Civil Rights and Small Business Development seven (7) days prior to DBE contractors commencing work on the project. The contact in this office is Mr. Melvin Bynes. Mr. Bynes' current contact information is email address – [melvin.bynes2@ky.gov](mailto:melvin.bynes2@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.

### **SURFACING AREAS**

The Department estimates the mainline surfacing width to be 20 feet.

The Department estimates the total mainline area to be surfaced to be 98,934 square yards.

The Department estimates the shoulder width to be 0.5 feet on each side.

The Department estimates the total shoulder area to be surfaced to be 4,947 square yards.

### **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 B**

Be advised that the Department will control and accept compaction of asphalt mixtures furnished on this project under OPTION B in accordance with Sections 402 and 403.

## **Special Notes Applicable to Project – General Notes & Description of Work**

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### **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 211+20 at Milepoint 4.000 on KY 70 (approximately 485 ft west along KY 70 from the intersection with Woolford-Murphy Rd. or nearly 3,210 ft west along KY 70 from the intersection with KY 551). The existing mile marker signs may not correspond to the proposed work locations.

### **LIDAR**

All survey information was obtained from available KYTC Aerial LIDAR data and should be field verified as appropriate during construction and prior to incorporating the various project work items. Refer to the Special Note for Staking concerning staking operations required to control and construct the work.

### **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 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.

## General Notes &amp; Description of Work

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**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:

**Superelevation Improvements.** There are 2 curves where Superelevation Improvements are being proposed. The intent of this work is to bring a consistent pavement cross slope through the identified curves. Refer to the Superelevation Improvement Summary for locations and approximate quantities. The Contractor will utilize Leveling & Wedging to achieve the desired superelevation improvements at the identified location(s). The Leveling & Wedging mix design will be based on the lift thickness being constructed in each curve. The Superelevation Improvement Summary lists the estimated quantities of Leveling & Wedging for each curve; however, the Engineer will make the final determination as to which bid items will be required at each superelevation improvement area, as well as the appropriate lift thicknesses and number of lifts based on the existing conditions encountered at the time of construction. After placement of the Leveling & Wedging, the identified curves will be overlaid with a surface course. As a result of the superelevation improvements, the roadside shoulders, fill slopes, and/or ditches will have to be modified to match the final pavement elevations and tie in with the existing ground lines. The bid item 'Ditching & Shouldering' has been included for these roadside modifications. Refer to the detail sheet titled: DITCHING & SHOULDERING AND EMBANKMENT BENCHING DETAILS for more information.

NOTE: Some field adjustments of the proposed shoulder width, fill slope, ditch, and/or superelevation improvement may be required. The proposed shoulder and fill slope grading is intended to occur within Right-of-Way and NOT disturb any sensitive obstructions (i.e. fences, buildings, utility poles, etc.). Superelevation improvements with sensitive obstructions along the roadside shall still require the roadside shoulder and fill slope to be modified, but the slope may have to be constructed steeper than what is shown on the Superelevation Improvement Detail. The desire of the Department is to construct the new fill slopes at 3:1 or flatter. When a fill slope needs to be constructed steeper than 3:1 to remain within Right-of-Way or not impact a sensitive obstruction, and the existing fill slope is steeper than 3:1, then the new fill slope can be constructed steeper than 3:1, but the new fill slope shall not be constructed steeper than the existing fill slope. If a desired superelevation improvement will result in the new fill slope having to be graded steeper than the existing fill slope in order to remain within Right-of-Way or not impact a sensitive obstruction, then the superelevation rate should be modified (reduced) in order to reduce the final change in pavement edge elevation, thereby reducing the height of the new fill slope grading, and allowing for a flatter fill slope.

**Pavement Repair.** To improve the pavement surface condition, work will include milling 1.25" of existing pavement within the identified travel lane and constructing Leveling & Wedging flush with the existing surface. Refer to the Resurfacing Summary for location and quantity information.

**Realignment of KY 206.** The approach of KY 206 into the intersection with KY 70 is to be realigned to remove the skew. This effort will involve shoulder excavation, construction of DGA and Asphalt Base to flush with the existing pavement, embankment, and temporary striping. This work should take place shortly before the corridor is overlaid to minimize the length of time the newly paved area is without a surface course. Refer to the Resurfacing Summary and Realignment Detail Sheet for layout information and design specifics.

## General Notes & Description of Work

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**Resurfacing.** Between MP 4.000 (the pavement joint from the recently completed resurfacing project) and MP 12.500 (the pavement joint from the widened section), a 0.5" layer of Leveling & Wedging is to be constructed. This layer will not be constructed in the Eastbound lane within the Superelevation Improvement areas. Atop the Leveling & Wedging layer (including within the Superelevation Improvement areas), a 1.25" layer of Asphalt Surface is to be constructed. Refer to the Resurfacing Summary for location information and application details.

**High-Friction Surface Treatment.** Two segments of the corridor have been identified to receive an application of High-Friction Surface Treatment. Construction of this treatment shall take place following the construction of the Asphalt Surface. Refer to the Resurfacing Summary and Special Note for Polymer Concrete Overlay Systems for location information and application details.

**Ditching and Shouldering.** Several areas throughout the project are set up for Ditching & Shouldering. Perform Ditching & Shouldering at the locations identified in the Proposal, or the locations as directed by the Engineer. The proposed shoulder, ditch, and/or roadside dimensions are detailed on the Superelevation Improvement Detail and the Ditching & Shouldering Summary. Perform Ditching & Shouldering according to the Special Note for Ditching & Shouldering. For details of the conditions and situations commonly encountered when performing Ditching & Shouldering, refer to the detail sheets titled: DITCHING & SHOULDERING AND EMBANKMENT BENCHING DETAILS.

**Pipe Replacements & Extensions.** There are locations throughout the project where culvert pipes are being extended. Extensions are proposed to include different methods of extension. Refer to the Culvert Pipe Extension Detail and the Pipe Extension Dual Wall Adapter Fitting Detail for more information on the extensions. Locations are noted on the Pipe Replacement & Extension Summary. Other items that may be associated with the pipe extensions and headwall replacements include: Safety Box Inlets, Sloped Box Outlets, a Concrete Headwall, PVC Fold and Form Pipe Liner, Intermediate Anchor/Collar, Fittings, Erosion Control Blanket, Pipe Cleaning, etc. Refer to the Special Note for Pipe Cleaning, the Special Note for Pipe Replacements/Extensions, and the Special Note for PVC Fold and Form Pipe Liner for more information on these items of work.

**Intermediate Anchor/Collar.** A quantity of Class A Concrete has been included in the contract to construct an intermediate anchor, or collar, around the pipes at certain pipe extension locations. This is so the new pipe can be securely connected to the existing pipe. The intermediate anchors shall be constructed as shown on Standard Drawing RDX-060, current edition.

**Erosion Control Blanket.** A quantity 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 Replacement.** All of the existing guardrail within the project will be replaced as it will not be in compliance with height requirements after resurfacing. Refer to the Guardrail Summary for quantities. The work will include removal of the existing guardrail and the installation of the new guardrail and end treatments/terminal sections. See the Special Note for Guardrail, the Guardrail on Bridge-Case I detail and

## General Notes & Description of Work

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note, and the referenced Standard Drawings and Sepias for more information on this work.

**Temporary Striping.** A quantity of Pave Striping – Temp Paint – 4 IN has been included in the contract for potential use in the Superelevation Improvement area, on the Leveling & Wedging overlay, on the Asphalt Surface overlay and at any other point 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.

**Edgeline Rumble Strips and Permanent Striping/Markings.** Work involves constructing Edgeline Rumble Strips along with edgeline and various configurations of centerline striping throughout the resurfacing limits. All striping is to be 6" thermoplastic. All centerline striping is to match the existing configurations. A quantity of 6" Thermoplastic Cat Traxx striping is also included and is to be applied along the edgeline of curves through intersections. The Engineer will make the final determination as to the quantities and placement of Edgeline Rumble Strips and Permanent Pavement Striping/Markings. Refer to the Rumble Strip Standard Drawings for specification details.

**Removal of Existing Signage and Installation of Proposed Signage.** A quantity of Remove Sign has been included in the Remove Sign Summary for removal of various signing along the corridor. An estimated quantity of new signing and sign post is included on the Signing Summary. Once final surfacing operations are complete, the District Traffic Section will perform ball bank readings along the route to determine the curves requiring curve signing and the appropriate advisory speeds of those curves. Refer to the Special Note for Signing, Special Note for Staking, and Special Note for Signage for more details.

## SPECIAL NOTE FOR STAKING

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

1. Contrary to Section 201, perform items 1-3 usually performed by the Engineer.
2. Using the proposed pavement superelevation rates, runout, and runoff lengths, determine the necessary changes in pavement edge elevation along the curves and the transitions leading into and out of the curve to achieve the proposed superelevation improvements. The intent is to provide a consistent superelevation throughout the curves and smooth transitions into and out of the curves. Once the proposed changes in pavement edge elevations are determined and prior to starting paving operations, verify the proposed roadside re-grading along the curve can be constructed so that the new roadside is flush with the new pavement edge elevation and the new toe of slope, or top of cut, will remain within the existing Right-of-Way 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 edge of pavement elevation will cause the new roadside grading to extend beyond the Right-of-Way and/or impact a sensitive obstruction. Alternatively, with the approval of the Engineer and to the extent allowable by the "Ditching & Shouldering and Embankment Benching Details" and/or the Special Note for Ditching & Shouldering, the Contractor may be allowed to make adjustments to the roadside grading so the proposed roadside re-grading will remain within the existing Right-of-Way and/or not impact a sensitive obstruction. After the final proposed changes in pavement edge elevations 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 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

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(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 superelevation improvements and the drainage improvements. For superelevation improvements, as built information will consist of a record of the final pavement cross slopes every 50 feet, for each lane of travel along the curves and the transitions into and out of the curves. Elevation data of the curve improvements is not necessary; simply the cross slope percentage every 50 feet. 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 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**

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### **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.

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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 stream.

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

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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 DITCHING & SHOULDERING

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### I. DESCRIPTION

Except as provided herein, all work shall be performed in accordance with Department's Standard Specifications, Interim Supplemental Specifications, applicable Standard and Sepia Drawings, applicable Special Provisions and Special Notes, 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) Site Preparation; (3) Ditching; (4) Shouldering; (5) Constructing Embankments, Embankment Benching, and/or Excavation; (6) Erosion Control; and (7) Any other work as specified in this 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.
- C. Channel Lining, Class II.** When listed as a bid item, furnish Channel Lining, Class II as per Section 805.
- D. Geotextile Fabric Class 1.** When listed as a bid item, furnish Geotextile Fabric Class 1 as per Section 843.

### 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: staking; clearing, grubbing, and removal of all obstructions or any other items; excavation, embankment benching, compacting embankment in place; temporary pollution and erosion control; disposal of excess, waste, and debris; and final dressing, cleanup, and seeding and protection. Perform all site preparation as approved or directed by the Engineer.
- D. Staking.** See Special Note for Staking.

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**E. Ditching & Shouldering.** Perform Ditching & Shouldering at the approximate locations listed on the Summary Sheets and/or Plan Sheets, or at locations as directed by the Engineer. All work shall be completed according to Section 209, or as specified in the DITCHING & SHOULDERING AND EMBANKMENT BENCHING DETAILS, the Typical Sections, the Plan Sheets, or as directed by the Engineer. Ditching & Shouldering shall consist of any necessary clearing, grubbing, grading, and/or reshaping of the existing shoulder, ditch, and/or roadside to achieve the proposed shoulder, ditch, and/or roadside dimensions detailed on the Typical Sections. Depending on the existing conditions encountered and to achieve the dimensions as detailed in the Typical Sections, Ditching & Shouldering may also include, but is not limited to: embankment benching, excavating and removing excess material, excavation of rock, providing additional earth material suitable for vegetation growth and grading, shaping, and compacting the earth material.

Provide positive drainage of ditches and slopes at all times during and upon completion of construction. When asphalt surfacing or resurfacing is included in the contract, perform all ditching and as much of the shouldering operations as is practical before beginning final surfacing operations.

**F. Embankment Benching.** Embankment Benching shall be required when the existing groundline has an incline greater than 15%. Any and all required embankment benching shall be incidental to the bid item DITCHING & SHOULDERING. For more information refer to the DITCHING & SHOULDERING AND EMBANKMENT BENCHING DETAILS.

**G. Channel Lining.** Install Class II Channel Lining along any sections of ditches, fill slopes, or ditch backslopes identified in the Proposal, or any other locations the Engineer directs for slope protection or erosion control. When Channel Lining is proposed to be installed along a steep fill slope in order to establish a width of shoulder (as shown in Figure 5 of the DITCHING & SHOULDERING AND EMBANKMENT BENCHING DETAILS), the Channel Lining is to be capped with Geotextile Fabric Class 1 and 4" of Crushed Stone Base. In lieu of 4" of Crushed Stone Base, 4" of DGA and a Double Asphalt Seal Coat may be specified in the Proposal. Install whichever aggregate capping material the Proposal specifies, or as directed by the Engineer.

**H. 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.

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- I. 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.
- J. 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.
- K. 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.
- L. 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

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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.

**M. Clean Up, Disposal of Waste.** Clean up the project area as work progresses. Dispose of all removed excess material, debris, and 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.

**N. 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.

#### IV. METHOD OF MEASUREMENT

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

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

**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. Staking.** See Special Note for Staking.

**E. Ditching & Shouldering.** Contrary to Section 209.04 the Department will measure the bid item DITCHING & SHOULERING in linear feet along the centerline of the roadway as the length of the actual ditching and/or shouldering work performed. Further, this measurement will only include one side of the roadway. Therefore, for areas where ditching and shouldering occurs on both sides of the road, the Department will measure each side independently. The Department will not measure cleaning pipe structures 36 inches or less in diameter or reshaping any deformed ends on metal entrance pipes that are to remain in place, as these operations are considered incidental to the bid item DITCHING & SHOULERING.

**F. Embankment Benching.** The Department will not measure Embankment Benching for payment. Any and all required embankment benching shall be incidental to the bid item DITCHING & SHOULERING.

**G. Channel Lining, Class II.** When listed as a bid item, Class II Channel Lining shall be measured according to Section 703.04.

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- H. Geotextile Fabric, Class 1.** When listed as a bid item, Geotextile Fabric, Class 1 shall be measured according to Section 214.04.
- I. 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.

**V. BASIS OF PAYMENT**

- A. Maintain and Control Traffic.** See Traffic Control Plan.
- B. Erosion Control.** See Special Note for Erosion Control.
- C. Staking.** See Special Note for Staking.
- D. Ditching & Shouldering.** The Department will make payment for the completed and accepted quantities under the bid item DITCHING & SHOULERING. The Department will consider payment full compensation for furnishing all labor, materials, equipment, and incidentals necessary to preform Ditching & Shouldering as required by these notes, at the locations indicated on the summary sheets, plans, and/or as directed by the Engineer.
- E. Channel Lining, Class II.** When listed as a bid item, the Department will make payment for Class II Channel Lining according to Section 703.05.
- F. Geotextile Fabric, Class 1.** When listed as a bid item, the Department will make payment for Geotextile Fabric, Class 1 according to Section 214.05.

## SPECIAL NOTES FOR PIPE REPLACEMENTS / EXTENSIONS

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### 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 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.

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- 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 removing pipe, or 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, backfill culvert pipes with flowable fill for the width of the roadway and as shown on the Pipe Replacement Detail. 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.
- 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: DITCHING & SHOULDERING 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.

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- 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.

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- 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, 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

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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 PIPE CLEANING

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### PART 1 -- GENERAL

#### 1.01 SCOPE OF WORK

- A. Furnish all labor, materials, equipment and incidentals required to clean all pipes, as specified herein.
- B. Cleaning shall include the proper high pressure water jetting, rodding, snaking, bucketing, brushing and flushing of pipes prior to inspection by closed circuit television, pipeline rehabilitation, and testing operations.
- C. Cleaning shall dislodge, transport and remove all sludge, mud, sand, gravel, rocks, bricks, grease, roots, sticks, and all other debris from the interior of the sewer pipe and structures as required for pipeline rehabilitation.

### PART 2 -- PRODUCTS

#### 2.01 MATERIALS

- A. Hydraulically propelled Sewer Cleaning Equipment
  - 1. Hydraulically propelled sewer cleaning equipment shall be the movable dam type constructed such that a portion of the dam may be collapsed during cleaning to prevent flooding of the sewer.
  - 2. The movable dam shall be the same diameter as the pipe being cleaned and shall provide a flexible scraper around the outer periphery to ensure total removal of grease.
  - 3. Contractor shall take precautions against flooding prior to using sewer cleaning balls or other such equipment that cannot be collapsed instantly.
- B. High Velocity Hydro-Cleaning Equipment shall have the following:
  - 1. A minimum of 500-ft of high pressure hose.
  - 2. Two or more high velocity nozzles capable of producing a scouring action from 15 to 45 degrees in all size lines to be cleaned.
  - 3. A high velocity gun for washing and scouring manhole walls and floor.
  - 4. Capability of producing flows from a fine spray to a long distance solid stream.
  - 5. A water tank, auxiliary engines and pumps and a hydraulically driven hose reel.
  - 6. Equipment operating controls located above ground.
- C. Mechanical cleaning equipment for sewer mains shall be either power buckets or power rodders.
  - 1. Bucket machines
    - a. Be furnished with buckets in pairs
    - b. Use V-belts for power transmission or have an overload device. No direct drive machines will be permitted.
    - c. Be equipped with a take up drum and a minimum of 500-ft of cable.
    - d. Have sufficient dragging power to perform the work efficiently.

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2. Power rodding machine
  - a. Either sectional or continuous.
  - b. Hold a minimum of 750-ft of rod.
  - c. The machine shall have a positive rod drive to produce 2000 pounds of rod pull.

**PART 3 -- EXECUTION**

**3.01 PERFORMANCE**

- A. Selection of cleaning equipment shall be based on the conditions of the structures and lines at the time the work commences based on the pre-construction CCTV inspection to be conducted by the Contractor under this Contract.
- B. Use properly selected equipment to remove all dirt, grease, rock and other deleterious materials, and obstructions.
- C. Protect existing lines from damage caused by improper use of cleaning equipment.
- D. Take precautions to avoid damage or flooding to public or private property being served by the line being cleaned.
- F. Removal of Materials
  1. Remove all solids and semi-solids at the downstream opening of the section being cleaned.
  2. Passing material from one section of a line to another will not be permitted; unless access to any one section of line cannot be achieved.
- G. Remove from the site and properly dispose of all solids or semi-solids recovered during the cleaning operation.
- H. No cleaning shall take place in a particular segment until all upstream pipe segments have been cleaned. If cleaning is done in a downstream pipe segment in order to facilitate overall cleaning operations, the segment shall be re-cleaned at no additional cost, after all pipes upstream of that segment have been cleaned.

**3.02 FIELD QUALITY CONTROL**

- A. Acceptance of this portion of the work shall be dependent upon the results of the television inspection. Lines not acceptably clean as to permit television inspection and rehabilitation shall be re-cleaned and re-inspected at no additional cost to the Owner
- B. Following cleaning, the Contractor shall inspect each section in accordance with the Special Note for Pipe Liner Acceptance Testing.
- C. Upon the Engineer's final structure to structure inspection of the system, if any foreign matter is still present in the system, clean the sections and portions of the lines as required.

**PART 4 – PAYMENT**

Payment for cleaning of the pipes as detailed in the Pipe Drainage Summary will be made per linear foot as the price bid for CLEAN PIPE. The CLEAN PIPE bid item will be paid for the cleaning of all pipe sizes. Payment for CLEAN PIPE shall be considered full compensation for all work, equipment, and incidentals necessary to clean the pipe in accordance with this note.

## SPECIAL NOTE FOR PVC FOLD-AND-FORM PIPE LINER

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### I. GENERAL

#### A. SUMMARY

1. Section Includes: Definition of the approved methods and materials to rehabilitate gravity pipelines by the insertion of a continuously extruded, folded, PVC Fold-and-Form Pipe Liner into a conduit (host pipe), and the "blow-molding" (thermoforming) of the pipe liner to conform to the shape of the existing pipe. The pipe liner shall:
  - a) Extend continuously from one access point to the next access point with no joints.
  - b) Provide a tightly conforming fit against the inner wall of the host pipe.
  - c) Definitions:
    - (1) PVC Fold-and-Form Pipe Liner: A continuously extruded (joint-less), polyvinyl chloride (PVC) Pipe Liner that is shaped into a reduced form to facilitate insertion into existing pipelines or conduits. The Pipe Liner shall return to its extruded, round memory upon application of heat and pressure and form tightly against the host pipe by "blow molding" (thermoforming) techniques.
    - (2) Host Pipe: An existing gravity pipeline or conduit to be internally rehabilitated by installation of the PVC Fold-and-Form Pipe Liner.

#### B. REFERENCES

1. Codes and standards referred to in this Special Note are:
  - a) ASTM D 256: Standard Test Methods for Determining the Pendulum Impact Resistance of Notched Specimens of Plastics.
  - b) ASTM D 638: Standard Test Method for Tensile Properties of Plastics
  - c) ASTM D 790: Standard Test Method for Flexural Properties of Unreinforced and Reinforced Plastics
  - d) ASTM D 1784: Standard Specification for Rigid Polyvinyl Chloride (PVC) Compounds and Chlorinated Polyvinyl Chloride (CPVC) Compounds
  - e) ASTM D 2122: Standard Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings
  - f) ASTM D 2152: Standard Test Method for Extrusion Quality using Acetone Immersion
  - g) ASTM D 2444: Standard Test Method for Impact Strength
  - h) ASTM F 1057: Standard Test Method for Extrusion Quality using Heat Reversion
  - i) ASTM F 1504: Standard Specification for Folded/Formed Poly (Vinyl Chloride) Pipe for Existing Sewer and Conduit rehabilitation

#### C. PIPE DESIGN AND DIMENSION

1. Submittals: The Contractor shall furnish engineering data covering materials and installation procedures.
2. Unless otherwise specified, the Contractor shall determine the minimum and maximum length of liner to effectively span the distance from the inlet to the outlet of the respective pipelines.

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3. The pipe liner shall have a nominal outside diameter and minimum wall thickness based upon project parameters and the condition of the host pipe.

**D. SAFETY**

1. The CONTRACTOR shall conform to all safety requirements of pertinent regulatory agencies, and shall secure the site for the working conditions in compliance with the same. The CONTRACTOR shall erect signs and devices as are necessary for the safety of the work site.
2. The CONTRACTOR shall also provide all of the WORK in accordance with applicable OSHA standards. Emphasis shall be placed upon the requirements for entering confined spaces and working with steam.

**II. PRODUCTS**

**A. MATERIAL SPECIFICATIONS:**

1. The PVC Fold-and-Form Pipe Liner will be manufactured from virgin PVC Fold-and-Form Pipe Liner compound, containing no fillers, and meet or exceed the following minimum physical properties:
  - a) COMBUSTIBILITY: Self-Extinguishing
  - b) FLEXURAL MODULUS: ASTM D 790 280,000 PSI @73F
  - c) FLEXURAL STRENGTH: ASTM D 790 5,000 PSI @73F
  - d) IZOD IMPACT: ASTM D 256 1.5 FT-LB/IN
  - e) CHEMICAL RESISTANCE: suitable under general sanitary sewer conditions
2. CHARACTERISTICS: The PVC Fold-and-Form Pipe Liner shall be designed to meet the following installation performance requirements:
  - a) The Pipe Liner shall be capable of expanding a full pipe size larger than the nominal diameter (ex: 8" to 10") without splitting, or rupturing with the understanding that the pipe liner dimension ratio will increase when so expanded.
  - b) After being expanded by "blow-molding", the installed Pipe Liner will match the configuration of the host pipe.
  - c) The Pipe Liner shall be capable of negotiating pipe line bends in the host pipe without splitting, rupturing, or wrinkling of the pipe liner material.
  - d) The pipe liner shall be dimensionally stable after cool-down.
  - e) Processing of the pipe liner shall cause no degradation of the pipe liner physical properties.
3. MARKINGS: The pipe liner shall be marked at maximum five (5) foot intervals indicating ASTM D 1784 cell classification, manufacturer, and size (diameter and SDR). Each production lot will be uniquely coded.

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4. DIMENSIONS:

- a) The Pipe Liner outside diameter will be manufactured substantially smaller than the inside diameter of the host pipe. The pipe liner shall be manufactured with sufficient excess wall thickness to allow the pipe liner to meet or exceed the DR requirements after being expanded by "blow-molding" within the host pipe.
- b) Unless otherwise specified, the Standard Dimension Ration (SDR) of 4" to 15" diameter Pipe Liner will be SDR 35. 18" to 36" Pipe Liner will be specified by wall thickness. The Pipe Liner will be continuously extruded (no joints) at the factory to the minimum length required to effectively span the distance between access points, in accordance with actual distances which shall be field verified by the Contractor prior to manufacturing.

B. MATERIAL TESTING: Each production lot of Pipe Liner will be inspected and tested at the time of manufacture for defects in accordance with ASTM D 2444, and ASTM D 2152. All pipe liners shall conform to the specified dimensions. Material design properties shall be confirmed in accordance with ASTM D 790.

III. EXECUTION

A. HOST PIPE PREPARATION

1. The existing pipeline shall be cleaned of any obstructions and televised using CCTV immediately prior to installation of the pipe liner. The host pipe condition shall be acceptable to the ENGINEER as appropriate for lining prior to the insertion of the pipe Liner.
2. Prior to beginning the insertion of the pipe liner, the CONTRACTOR shall confirm that the host pipe is adequately cleaned.

B. INSTALLATION PROCEDURES:

1. The pipe liner manufacturer's installation instructions and procedures shall be followed during installation.
2. Point Repairs
  - a) Point repairs and obstruction removals shall be completed, as necessary, in order to enable lining.
3. Liner Insertion
  - a) The entrance to the host pipe shall be covered so as to provide a smooth surface to prevent damage to the Pipe Liner.
  - b) The Pipe Liner shall be positioned to enable it to naturally curve into the access point and the host pipe.
  - c) The insertion end of the Pipe Liner shall be sealed to inhibit fluids and solids from entering the lumen of the Pipe Liner.

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- d) Insert the Pipe Liner into the entry access point. Slowly feed the Pipe Liner from the supply reel, while simultaneously pulling the Pipe Liner at the exit access point, to minimize tension on the Pipe Liner. Maintain two-way communication between personnel at entry and exit access points to coordinate the rate of Pipe Liner supply and pulling operations.
  - e) Use a power winch and a steel cable connected to the pulling head as recommended by the manufacturer to advance the Pipe Liner.
4. Pipe Liner Processing and "Blow-Molding":
- a) Process and "blow-mold" the PVC Fold and-Form Pipe Liner in accordance with the manufacturer's instructions for heating and expanding the Pipe Liner. Upon completion of processing and "blow-molding", the Pipe Liner shall fit tightly against the inside wall of the host pipe and be locked into the joints of the host pipe, if possible.
  - b) Temperature and pressure gauges shall be used at the insertion and termination access points to monitor internal conditions during Pipe Liner processing and "blow-molding".
  - c) Introduce pressurized steam to heat and relax the Pipe Liner in strict accordance with the recommendations of the Pipe Liner manufacturer.
  - d) Continue the application of steam while introducing compressed air to increase internal pressure on the Pipe Liner as recommended by the manufacturer. **DO NOT ALLOW PRESSURE TO EXCEED 12 PSI, AS DAMAGE MAY OCCUR TO HOST PIPE.**
  - e) Discontinue the use of steam while continuing the use of compressed air to maintain the internal pressure. Allow the Pipe Liner to cool below 100 F before releasing pressure.
5. Liner Termination:
- a) During the pulling in place and "blow-molding" process, the PVC liner shall form a bell shape at each end effectively locking the liner in place.

**IV. PAYMENT**

A. Payment for PVC Fold and Form Pipe Liners will be made per linear foot as:

- 1. PVC FOLD AND FORM PIPE LINER – 12 IN - ITEM 24860EC
- 2. PVC FOLD AND FORM PIPE LINER – 15 IN - ITEM 24861EC
- 3. PVC FOLD AND FORM PIPE LINER – 18 IN - ITEM 24862EC
- 4. PVC FOLD AND FORM PIPE LINER – 24 IN - ITEM 24863EC
- 5. PVC FOLD AND FORM PIPE LINER – 30 IN - ITEM 24864EC
- 6. PVC FOLD AND FORM PIPE LINER – 36 IN - ITEM 24865EC

B. Payment will be considered full compensation for all work, equipment, and incidentals necessary to install the pipe liners in accordance with this note.

## **SPECIAL NOTE FOR PIPE LINER ACCEPTANCE TESTING**

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### **PART 1 -- GENERAL**

#### **1.01 SCOPE OF WORK**

- A. Furnish all necessary labor, materials, equipment, services and incidentals required to visually inspect by means of closed-circuit television (CCTV) designated pipe sections including, but not limited to, recording and playback equipment, materials and supplies.
- B. The inspection shall be performed on one section (i.e. curb box inlet to curb box inlet) at a time. The section being inspected shall be suitably isolated from the remainder of the system.
- C. Video recordings shall be made of the television inspections and copies of both the recordings and printed inspection logs shall be supplied to the Engineer.
- D. Contractor may have to perform point repairs, remove obstructions or remove protruding service connections to complete pre-rehabilitation TV inspection.

### **PART 2 -- PRODUCTS**

#### **2.01 EQUIPMENT**

- A. The television camera used for inspection shall be one specifically designed and constructed for such inspection. Lighting for the camera shall be suitable to allow a clear picture for the entire periphery of the pipe. The camera shall be operative in 100 percent humidity conditions. The camera, television monitor and other components of the video system shall be capable of producing a minimum 500-line resolution color video picture. Picture quality and definition shall be to the satisfaction of the Engineer and if unsatisfactory, inspection shall be performed again with the appropriate changes made as designated by the Engineer at no additional cost to the Engineer. The television inspection equipment shall have an accurate footage counter that shall display on the monitor, the exact distance of the camera from the centerline of the starting manhole.

### **PART 3 -- EXECUTION**

#### **3.01 PROCEDURE**

- A. The camera shall be moved through the pipe in either direction at a uniform rate, stopping when necessary to ensure proper documentation of the pipe's condition but in no case will the television camera be pulled at a speed greater than 30 fpm. Manual winches, power winches, TV cable and powered rewinds or other devices that do not obstruct the camera view or interfere with proper documentation of the pipe conditions shall be used to move the camera through the line. If, during the inspection operation, the television camera will not pass through the entire section, the equipment shall be removed and repositioned in a manner so that the inspection can be performed from the opposite opening. All set-up costs for the inspection shall be included in the unit prices bid. If the camera fails to pass through the entire section, the Contractor shall perform point repairs as required or approved by the Engineer. Point repairs will be paid as each at the bid price for "PIPE REPAIR". The Contractor shall re-clean or further remove blockage after the point repairs at no additional cost to the Engineer.
- B. Whenever non-remote powered and controlled winches are used to pull the television camera through the line, telephones, radios, or other suitable means of communication shall be set up between the two openings of the line being inspected to ensure that good communications exist

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between members of the crew.

The camera height shall be adjusted such that the camera lens is always centered in the pipe being televised. Flow shall be controlled such that depth of flow shall not exceed 20% of pipe's diameter.

Lighting system shall be adequate for quality pictures.

### 3.02 RECORDING OF FIELD OBSERVATIONS

#### A. Television Inspection logs

1. Printed location records shall be kept which shall clearly show the location. In addition, other data of significance including joints, unusual conditions, roots, collapsed sections, or presence of scale and corrosion that the camera failed to pass through and reasons for the failure and other discernible features shall be recorded and annotated using the PACP system and a copy of such records shall be supplied to the Engineer.

#### B. Digital Recordings

1. The purpose of digital recording shall be to supply a visual and audio record of areas of interests of the pipe segments that may be replayed by the Engineer. Digital recording playback shall be at the same speed that it was recorded and shall be made in color. The Contractor shall be required to have all digital media and necessary playback equipment readily accessible for review by the Engineer during the project.
2. The Contractor shall perform CCTV inspection of each newly installed or rehabilitated pipe segment after testing and before re-introducing any flow into the pipe. Each test shall be witnessed by the Engineer.
3. The Contractor shall record each CCTV inspection on a DVD and submit such recordings to the Engineer as a prerequisite for Partial Utilization/Substantial Completion.
4. CCTV inspections shall be performed by a PACP certified and trained person.
5. Inspections shall include narration that notes the location and type of defects, if any.
6. At the completion of the project, the Contractor shall furnish all of the original digital recordings to the Engineer. Each disc shall be labeled as to its contents. Labels shall include the disc number, date televised, sewer segment reach designation, street location, and structure numbers on the disc. The Contractor shall keep a copy of the discs for 30 days after the final payment for the project, at which time the discs may be erased at the Contractor's option.

### PART 4 – PAYMENT

Payment for both the video inspection prior to and after the Pipe Liners have been installed will be made as one lump sum payment as PIPE LINER ACCEPTANCE TESTING. Payment for PIPE LINER ACCEPTANCE TESTING will be considered full compensation for all work, equipment, and incidentals necessary to perform the video inspection in accordance with this note.

Payment for pipe point repairs will be made as each at the bid price for PIPE REPAIR. Payment for PIPE REPAIR will be considered full compensation for all work, equipment, and incidentals necessary to make point repairs as required and approved by the Engineer.

## SPECIAL NOTE FOR SIGNAGE

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The final advisory speeds and some sign types will have to be determined after the curve superelevation improvements and final surfacing operations have been completed. The Contractor shall notify the Engineer and District Traffic Engineer when all of the superelevation improvements and surfacing operations have been completed. Once notified, the District Traffic Engineer will ball-bank the newly surfaced route to determine the appropriate advisory speeds and work with the Contractor to determine the final Signing Plan. The Engineer and/or District Traffic Engineer will provide the Contractor with the final advisory speeds, any changes to proposed sign types, and the final quantities within three (3) weeks of being notified by the Contractor that final surfacing operations are complete. After the Contractor has received this information from the Engineer and/or the District Traffic Engineer, the Contractor shall then proceed to layout and stake the signing according to the Special Note for Staking, included elsewhere in this proposal.

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

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### 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. covering 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 sheet to be used as the sign face to receive the retroreflective background material

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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 posts shall be of sufficient lengths to extend 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 on 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 Kleen Break Model 425 for Surface Mount Concrete Installations by Xcessories Squared of Auburn, IL. Prior to installation, the Contractor shall submit to the Engineer shop drawings of the Type D surface mount(s). Install the Type D surface mount(s) according to all the applicable requirements of the manufacturer (see shop drawings). 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, 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 in the summaries, Reflective Sign Post Panels shall be 2" wide x 60" tall (or 84" tall for urban installations) and 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. Sheeting for the Reflective Sign Post Panels shall be the same Type and color as the sign installed on the post. Examples include:

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

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.

Post will be attached to the anchor 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 there are 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. 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. 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.

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**G. 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.

**H. 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.

**I. 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.

**J. 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.

**K. Erosion Control.** See Special Note for Erosion Control.

#### IV. METHOD OF MEASUREMENT

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

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- 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.** 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 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. 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.** 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

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signs, as required by these notes and the details found elsewhere in the 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 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: There are two permissible Type D Surface Mount alternatives: Kleen Break Model 425 for Surface Mount Concrete Installations 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. Erosion Control.** See Special Note for Erosion Control.

**SPECIAL NOTE FOR POLYMER CONCRETE OVERLAY SYSTEMS**

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**I. DESCRIPTION**

This work shall be performed in accordance with the current edition of the Department’s Standard Specifications, and applicable Standard or Sepia Drawings, except as hereafter specified. Article references are to the Standard Specifications.

The Contractor shall furnish all materials, labor, and equipment for the following work:

- (1) Maintaining and Controlling Traffic; (2) Cleaning and preparing the existing surface; (3) Installing a high friction surface treatment in accordance with the contract documents; and (4) All other work as specified as part of this contract.

**II. MATERIALS**

Provide for sampling and testing of all materials in accordance with the Department's Materials Field Sampling and Testing Manual. Make materials available, within the State of Kentucky, for sampling a sufficient time in advance of the use of the materials. Allow a minimum of 15 working days for testing. The Contractor shall use materials listed on the Department’s List of Approved Materials for Polymer Concrete Overlay Systems (High Friction Surface and Bridge Deck Overlays).

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

**B. High Friction Surface Treatment.** The high friction surface treatment shall consist of a polymer resin binder and aggregate system chosen from the Department’s List of Approved Materials. The Department will obtain samples of each binder component and aggregate at a frequency of one sample per lot per contract. The Department will obtain one, one-quart (32 ounce) sample of each binder component for testing. The Department will obtain one 60 to 70 pound composite sample of aggregate for testing. Reclaimed aggregate shall not be allowed for use.

- a) **Binder.** The polymer resin binder shall hold the aggregate firmly in position and meet the following requirements:

<b>TWO-PART MODIFIED BINDER REQUIREMENTS</b>		
<b>Property</b>	<b>Specification Limits</b>	<b>Test Method</b>
Ultimate Tensile Strength	17.0 – 25.0 MPa (19.65 MPa)	ASTM D638
Compressive Strength	5mm min.; > 13 MPa	ASTM D695
Gel Time	50 ml; 10 minutes min. (16 minutes)	ASTM D2471
Elongation at break	30% minimum (54.0%)	ASTM D638
Peak Exothermic Temperature	150°F min.	ASTM D2471
Water Absorption	Less than 0.25%	ASTM D570
Shore Hardness	70 min.	ASTM D2240, Shore D
Cure Rate	3 hours max	ASTM D1640 @ 75°F
Mixing Ratio	Per Manufacturer’s Recommendation	n/a

- b) **Aggregate.** Ensure that the aggregate is clean, dry and free from foreign matter and meets the following requirements:

<b>AGGREGATE REQUIREMENTS</b>		
<b>Property</b>	<b>Specification Limits</b>	<b>Test Method</b>
SFC – Side Force Coefficient	0.70 min.	ASTM E670
SN – Skid Number	75 min SN40R	ASTM E274
PSV – Polished Stone Value	75.0 mm max. (70 mm)	ASTM E660
Texture Depth – Sand Patch Method	1 mm min. (1.2 mm)	ASTM E965
AAV – Aggregate Abrasion Value	20 max	AASHTO T96
Aggregate Gradation	95.0 – 100.0% Passing No. 6 0.0 – 5.0% Passing No. 16	AASHTO T27
Aluminum Oxide (Al <sub>2</sub> O <sub>3</sub> )	87 min	ASTM C114

### III. CONSTRUCTION METHODS

Prior to beginning work, provide the Engineer with a certification from the manufacturer of the binder stating that all material used in the work will meet the requirements of Section II B. a. in this Special Note. Also provide the Engineer with a certification stating that all aggregates used in the work will meet the requirements of Section II B. b. of this Special Note.

- A. **Maintain and Control Traffic.** See Traffic Control Plan.
- B. **Site Preparation.** Be responsible for all site preparation, including but not limited to the following:
  - a) **Preparation and Restoration.** Ensure that a manufacturer’s representative is on site to provide technical assistance during the start up operations and as necessary during the surface preparation, material placement, and during any necessary remedial work.
  - b) **Protective Coverings.** Utilities, drainage structures, curbs, bridge joints, and any other structure within or adjacent to the high friction surface treatment location shall be protected from surface preparation activities and application of the surface treatment materials. Cover and protect all existing pavement markings that are adjacent to the surface treatment location. Pavement markings that conflict with the surface application shall be removed prior to performing the required surface preparation.
  - c) **Surface Preparation.** Prepare all surfaces in accordance with the following requirements. Ensure surfaces are dry and meet the requirements of the section immediately prior to installation of the high friction surface treatment. Surfaces contaminated with oils, greases, or other deleterious materials not removed by the required surface preparation shall be washed with a mild detergent solution, rinsed with clean potable water, and dried using a hot compressed air lance.
  - d) **Asphalt Pavement.** Clean asphalt pavement surfaces using mechanical sweepers and high pressure air wash. Mechanically sweep all surfaces to remove dirt, loose aggregate, debris, and deleterious material. Air wash all surfaces using a minimum of 180 CFM clean and dry compressed air. Maintain

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the air lance perpendicular to the surface and the tip of air lance within 12 inches of the surface. For applications on new asphalt pavement, ensure the surface has cured a minimum of 30 days prior to performing surface preparation and installation of the high friction surface treatment.

- e) **Concrete Pavement.** Clean concrete pavement surfaces by shot blasting and vacuum sweeping. Shot blast all surfaces to remove all curing compound, loosely bonded mortar, surface carbonation, and deleterious material. The prepared surface shall comply with the International Concrete Repair Institute (ICRI) standard for surface roughness CSP 5. After shot blasting, vacuum sweep all surfaces to remove all dust, debris, and deleterious material.
- f) **Concrete Bridge Deck.** Clean the entire area of the deck surface and vertical faces of curbs, barrier walls and plinths up to a height of one inch above the top elevation of the overlay, and areas to receive epoxy-sand slurry, by shot blasting and vacuum sweeping. Shot blast all surfaces to remove all curing compound, loosely bonded mortar, surface carbonation, and deleterious material. Areas to receive epoxy-sand slurry shall be cleaned to a bright, clean appearance. The prepared bridge deck surface to receive high friction surface treatment shall comply with the International Concrete Repair Institute (ICRI) standard for surface roughness CSP 5. After shot blasting, vacuum sweep all surfaces to remove all dust, debris, and deleterious material.
- g) **Pre-Treating.** Pre-treat joints and cracks greater than 1/4 inch in width and depth with properly proportioned and mixed polymer resin binder. Once the binder in the pre-treated areas has gelled, the installation of the high friction surface treatment may proceed.

- C. **Mechanized Application.** Do not apply surface treatment on a wet surface, when the ambient air or surface temperature is below 50°F or above 110°F, or when the anticipated weather conditions or surface temperature would prevent the proper application of the surface treatment as determined by the manufacturer.

Apply the polymer resin binder by a truck or trailer mounted application machine that must be capable of continually mixing and delivering the binder components on demand within the temperature range specified in varying widths of up to 12 feet wide at a uniform application thickness. Ensure that the mechanically applied distributing equipment includes accurate measuring devices and/or calibrated containers and thermometers for measuring the binder temperature prior to placement should heating be required. Operations will proceed in such a manner that will not allow the binder material to separate in the mixing lines, cure, dry, or otherwise impair retention bonding of the high friction surfacing aggregate. The application machine shall be equipped with flushing systems such that blockages of lines will not occur, and installation operations are not delayed, stopped, or otherwise compromised. Ensure that mechanical applications are capable of applying binder uniformly at a minimum rate of 10 gallons per minute. The mixed components are mechanically applied onto a prepared surface with a minimum coverage rate of 3.5 square yards per gallon at a minimum uniform thickness of 50 mils onto the surface. In addition, ensure that the application machine complies with the requirements of the binder manufacturer.

The aggregate shall be applied within 120 seconds of the binder application onto the surface. Uniformly spread aggregate immediately without causing excessive overlap of aggregate outside of coverage area. Ensure that the mechanical aggregate spreader is capable of applying a continuous application of varying widths up to 12 feet wide, in a manner to not violently disturb the wet binder film, at a rate of approximately 13-15 lbs per square yard. Complete coverage of the "wet" binder with aggregate is necessary to achieve a uniform surface. No exposed wet spots of the binder shall be visible once the aggregate is installed. The operations should proceed in such a manner that will not allow the mixed binder material to separate, cure, dry, be exposed, or otherwise harden in such a way as to impair retention and bonding of the high friction surfacing aggregate. Do not use reclaimed aggregate. Do not use vibratory or impact type compaction on the aggregate after placement.

- D. **Hand Application.** At the Engineers discretion, corrective work and application to areas such as intersections or areas less than 300 square yards, or where truck mounted application machines are not

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applicable to the specified locations because of logistical restrictions, may be performed by hand application of the high friction surface treatment.

Do not apply surface treatment on a wet surface, when the ambient air or surface temperature is below 50°F or above 110°F, or when the anticipated weather conditions or surface temperature would prevent the proper application of the surface treatment as determined by the manufacturer.

The polymer resin binder components Part (A) and Part (B) shall be proportioned to the correct ratio (+/- 2% by volume), mixed using a low speed high torque drill fitted with a helical stirrer.

The mixed components shall be hand applied onto a prepared surface at a minimum coverage rate of 3.5 square yards per gallon at a minimum uniform thickness of 50 mils onto the surface. Hand applied binder will be uniformly spread onto the prepared surface by the use of a continuous V notch serrated edged squeegee.

Immediately after placing the binder, apply the aggregate, in a manner to not violently disturb the wet binder film, at a rate of approximately 13-15 lbs per square yard. Do not use reclaimed aggregate. Do not use vibratory or impact type compaction on the aggregate after placement.

- E. Curing of Installed High Friction Surface Treatment.** Allow the installed high friction surface treatment to cure in accordance with manufacturer recommendations (approximately 3 hours at an ambient air temperature of at least 50 degrees Fahrenheit). Protect treated surfaces from traffic and environmental effects until the area has cured.
- F. Removal of Excess Aggregate.** Remove the excess aggregate from the treatment area and all adjacent surfaces by mechanical sweeping or vacuum sweeping the surfaces a minimum of 3 times before applying additional application and/or opening to traffic. In addition, re-sweep the treatment area and adjacent surfaces using mechanical sweeping or vacuum sweeping 48 hours after opening to traffic to remove all additional loose aggregate and aggregate shed by the action of traffic.
- G. Disposal of Waste.** All debris, excess aggregate, materials containers, and other waste shall be disposed of off the Right-of-Way at approved sites obtained by the Contractor at no cost to the Department. No separate payment will be made for the disposal of waste and debris from the project, but shall be incidental to the other items of the work.
- H. Restoration.** Any roadway features disturbed by the work or the Contractor's operations shall be restored in like kind materials and design as directed by the Engineer at no additional cost to the Department.
- I. 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.
- J. 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.
- K. Right-of-Way Limits.** All work is located within the existing right of way. Limit work activities to the Right-of-Way, and work and staging areas secured by the Contractor, at no additional cost to the Department. Be responsible for all encroachments onto private lands.
- L. 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

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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.

- M. 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.

#### IV. FIELD EVALUATION

High friction surface treatment locations that can be safely tested at 40 mph shall be evaluated by locked wheel skid test as per ASTM E274 between 60 and 90 days after installation. A minimum skid number of 75 SN40R is required. Installations that are not conducive to skid testing due to roadway geometrics or speed limitations shall be accepted based upon visual determination of acceptable bond and aggregate exposure.

Surface treatment applications not meeting average minimum skid test results of 75 SN **shall be removed and replaced** at no cost to the Department.

#### V. METHOD OF MEASUREMENT

- A. Maintain and Control Traffic.** See Traffic Control Plan.
- B. Site Preparation.** Other than the bid items listed, site preparation will not be measured for payment, but shall be incidental to high friction surface treatment.
- C. High Friction Surface Treatment.** The Department will measure the surface area coverage of High Friction Surface Treatment in Square Yards.

#### VI. BASIS OF PAYMENT

- A. Maintain and Control Traffic.** See Traffic Control Plan.
- B. High Friction Surface Treatment.** Payment for the accepted quantity at the Contract unit price per Square Yard shall be full compensation for furnishing all labor, materials, equipment, and incidentals for furnishing and installing High Friction Surface Treatment. Payment shall not be made prior to the final and accepted sweeping, 48 hours after installation.

## SPECIAL NOTE FOR STRIPING ON HIGH FRICTION SURFACE TREATMENTS

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### I. DESCRIPTION

Installation of pavement striping, temporary, durable waterborne markings, and/or thermoplastic markings on High Friction Surface (HFS) Treatments.

### II. CONSTRUCTION

Conduct striping under lane closures meeting the conditions of the MUTCD and Kentucky Standard Drawings and Specifications, current editions. Upon initial completion of the HFS installation, install temporary striping as the Engineer directs. Upon completion of the 48 hour vacuum sweeping, install either durable waterborne markings or thermoplastic markings, whichever the Contract specifies or as directed by the Engineer. Temporary Pavement Striping will comply with all applicable requirements within Section 112. Thermoplastic markings shall comply with all applicable requirements within Section 714. Durable waterborne markings shall comply with all applicable requirements within Section 713.

### III. MEASUREMENT

The Department will measure striping quantities in linear feet. NOTE: On HFS installations, the Contractor is advised that it may be necessary to install multiple passes of striping in order to achieve the required specifications. Final payment will be based on the actual length of the final striping regardless of the number passes required to meet specifications.

### IV. PAYMENT

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

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
----	Pavement Striping - Temporary	Linear Foot
----	Durable Waterborne Marking, width, color	Linear Foot
----	Pavement Striping - Thermoplastic, width, color	Linear Foot

The Department will consider payment as full compensation for all work required under this note, Section 112, Section 713, and Section 714.

### **SPECIAL NOTE FOR FINAL PAVEMENT STRIPING**

On resurfacing projects involving 2-lane roads, locate by measurement the true geometric center of the road and mark the true center prior to placing final permanent striping. Place the permanent centerline marking at this true center and not necessarily at the pavement joint. Measure for edgelines outward from the true centerline according to the dimensions shown on the typical sections and place the edgelines accordingly.

Where curve widening exists, the Engineer will determine the location of the centerline and edgeline striping at the time of construction. Mark the locations as determined by the Engineer prior to placing permanent striping.

## **SPECIAL NOTES FOR COMPLETION DATES & LIQUIDATED DAMAGES**

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The ultimate fixed completion date for this project will be **October 31, 2022**. Liquidated Damages for failure to complete the project on time will be assessed following Section 108.09.

In addition to the requirements of Section 108.09, the Department will assess Liquidated Damages in the amount of **\$1,000** per hour for each hour, or fraction of an hour, for any and all road 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 for the months of December through March.

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.

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.

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**SPECIAL NOTE FOR NON-TRACKING TACK COAT**

1. DESCRIPTION AND USEAGE. This specification covers the requirements and practices for applying a non-tracking tack asphalt coating. Place this material on the existing pavement course, prior to placement of a new asphalt pavement layer. Use when expedited paving is necessary or when asphalt tracking would negatively impact the surrounding area. This material is not suitable for other uses. Ensure material can “break” within 15 minutes under conditions listed in 3.2.

2. MATERIALS, EQUIPMENT, AND PERSONNEL.

2.1 Non-Tracking Tack. Provide material conforming to Subsection 2.1.1.

2.1.1 Provide a tack conforming to the following material requirements:

Property	Specification	Test Procedure
Viscosity, SFS, 77 ° F	20 – 100	AASHTO T 72
Sieve, %	0.3 max.	AASHTO T 59
Asphalt Residue <sup>1</sup> , %	50 min.	AASHTO T 59
Oil Distillate, %	1.0 max.	AASHTO T 59
Residue Penetration, 77 ° F	20 max.	AASHTO T 49
Original Dynamic Shear (G*/sin δ), 82 ° C	1.0 min.	AASHTO T 315
Softening Point, ° F	149 min.	AASHTO T 53
Solubility, %	97.5 min.	AASHTO T 44

<sup>1</sup> Bring sample to 212 °F over a 10-15 minute period. Maintain 212 °F for 15-20 minutes or until 30-40 mL of water has distilled. Continue distillation as specified in T59.

2.2. Equipment. Provide a distributor truck capable of heating, circulating, and spraying the tack between 170 °F and 180 °F. Do not exceed 180 °F. Circulate the material while heating. Provide the correct nozzles that is recommend by the producer to ensure proper coverage of tack is obtained. Ensure the bar can be raised to between 14” and 18” from the roadway.

2.3. Personnel. Ensure the tack supplier has provided training to the contractor on the installation procedures for this product. Make a technical representative from the supplier available at the request of the Engineer.

3. CONSTRUCTION.

3.1 Surface Preparation. Prior to the application of the non-tracking tack, ensure the pavement surface is thoroughly dry and free from dust or any other debris that would inhibit adhesion. Clean the surface by scraping, sweeping, and the use of compressed air. Ensure this preparation process occurs shortly before application to prevent the return of debris on to the pavement. If rain is expected within one hour after application, do not apply material. Apply material only when the surface is dry, and no precipitation is expected.

October 2021

- 3.2 Non-tracking Tack Application. Placement of non-tracking tack is not permitted from October 1<sup>st</sup> to May 15<sup>th</sup>. When applying material, ensure the roadway temperature is a minimum of 40°F and rising. Prior to application, demonstrate competence in applying the tack according to this note to the satisfaction of the Engineer. Heat the tack in the distributor to between 170 – 180 °F. After the initial heating, between 170 – 180 °F, the material may be sprayed between 165 °F and 180 °F. Do not apply outside this temperature range. Apply material at a minimum rate of 0.70 pounds (0.08 gallons) per square yard. Ensure full coverage of the material on the pavement surface. Full coverage of this material is critical. Increase material application rate if needed to achieve full coverage. Schedule the work so that, at the end of the day's production, all non-tracking tack is covered with the asphalt mixture. If for some reason the non-tracking tack cannot be covered by an asphalt mixture, ensure the non-tracking tack material is clean and reapply the non-tracking tack prior to placing the asphalt mixture. Do not heat material more than twice in one day.
- 3.3 Non-tracking Tack Certification. Furnish the tack 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 sample of non-tracking tack be taken from the distributor at a rate of one sample per 15,000 tons of mix. Take two 1 gallon samples of the heated material and forward the sample to the Division of Materials for testing within 7 days. Ensure the product temperature is between 170 and 180 °F at the time of sampling.
4. MEASUREMENT. The Department will measure the quantity of non-tracking tack in tons. 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 non-tracking tack, the cleaning of the pavement surface, or furnishing and placing the non-tracking tack. The Department will consider all such items incidental to the non-tracking tack.
5. PAYMENT. The Department will pay for the non-tracking tack 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. Non-tracking tack will not be permitted for use from October 1<sup>st</sup> to May 15<sup>th</sup>. From September 1<sup>st</sup> to June 1<sup>st</sup>, the department will allow the use of an approved asphalt emulsion in lieu of a non-tracking tack product but will not adjust the unit bid price of the material. When a sample fails on two or more tests, the Department may add the deductions, but the total deduction will not exceed 100 percent.

October 2021

Non-Tracking Tack Price Adjustment Schedule						
Test	Specification	100% Pay	90% Pay	80% Pay	50% Pay	0% Pay
Viscosity, SFS, 77 ° F	20 – 100	19 - 102	17 - 18	15 - 16	14	≤13
			103 - 105	106 - 107	108 - 109	≥ 110
Sieve, %	0.30 max.	≤ 0.40	0.41 - 0.50	0.51 - 0.60	0.61 - 0.70	≥ 0.71
Asphalt Residue, %	50 min.	≥49.0	48.5 – 48.9	48.0 – 48.4	47.5-47.9	≤ 47.4
Oil Distillate, %	1.0 max.	≤1.0	1.1-1.5	1.6 - 1.7	1.8-1.9	>2.0
Residue Penetration, 77 ° F	20 max.	≤ 21	22 - 23	24 - 25	26 - 27	≥ 28
Original Dynamic Shear (G*/sin δ), 82 ° C	1.0 min.	≥0.95	0.92 – 0.94	0.90 – 0.91	0.85 - 0.89	≤ 0.84
Softening Point, ° F	149 min.	≥145	142 - 144	140 - 141	138 - 139	≤ 137
Solubility, %	97.5 min.	≥ 97.0	96.8 – 96.9	96.6 – 96.7	96.4 – 96.5	≤ 96.3

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
24970EC	Asphalt Material for Tack Non-Tracking	Ton

## **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 DOUBLE ASPHALT SEAL COAT**

Use RS-2 or RS-2C asphalt material that is compatible with the seal aggregate. Apply the first course of asphalt seal coat at the rate of 3.2 lbs/sy of asphalt and 30 lbs/sy of size #78 seal coat aggregate. Apply the second course at 2.8 lbs/sy of asphalt and 20 lbs/sy of size #9M seal coat aggregate. The Engineer may adjust the rate of application as conditions warrant. Use caution in applying liquid asphalt material to avoid over spray getting on curbs, gutter, barrier walls, bridges, guardrail, and other roadway appurtenances.

The Department will not measure any surface preparation required prior to applying the asphalt seal coat, but shall be incidental to “Asphalt Material for Asphalt Seal Coat”.

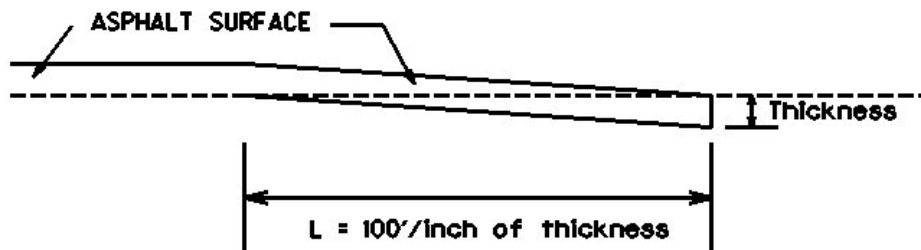
1-3215 Double Asphalt Seal Coat  
01/02/2012

### SPECIAL NOTE FOR EDGE KEY

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Construct Edge Keys at the beginning of project, end of project, at railroad crossings, and at ramps, as applicable. Unless specified in the Contract or directed by the Engineer, do not construct edge keys at intersecting streets, roads, alleys, or entrances. Cut out the existing asphalt surface to the required depth and width shown on the drawing and heel the new surface into the existing surface. The Department will make payment for this work at the Contract unit price per ton for Asphalt Pavement Milling and Texturing, which shall be full compensation for all labor, materials, equipment, and incidentals for removal and disposal of the existing asphalt surface required to construct the edge key.

### EDGE KEY



**Thickness = 1.25 Inches**

**L = 125 LF**

**L = Length of Edge Key**

## SPECIAL NOTES FOR GUARDRAIL

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### 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, Guardrail with Extra Length Post, 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. Furnish Bridge Guardrail (Case I, I-A, I-B, or II, as applicable) according to the detail drawings included elsewhere in the proposal. Furnish Guardrail – Steel W Beam – Single Face A according to Standard Drawing BHS-007, current edition, except use steel posts only, no alternates.

**C. Precast Concrete Bridge Rail Block.** Furnish precast concrete bridge rail blocks, manufactured with Class A Concrete and Steel Reinforcement (grade #40, #50, or #60), according to the Precast Concrete Bridge Rail Block detail drawing, when required.

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

**E. DGA.** Furnish Dense Graded Aggregate as per Section 805.

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

### III. CONSTRUCTION METHODS

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

Guardrail  
Page 2 of 5

**B. Site Preparation.** Remove existing guardrail system, including the guardrail end treatments; bridge end connectors; bridge handrail and/or existing bridge guardrail, when specified in the summary; 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.

Erect the Bridge Guardrail according to the detail drawings. Erect Guardrail – Single Face A on all four corners of the bridge(s) according to Standard Drawing BHS-007, current edition.

**D. Precast Concrete Bridge Rail Block.** Excavate, fill and compact as needed to set the block according to the detail sheets. Unless otherwise directed by the Engineer, set the blocks on all four corners of the bridge.

**E. DGA.** Place and compact DGA along and under the guardrail as shown on the Typical Section(s) or as directed by the Engineer. Place a Double Asphalt Seal Coat over the entire width of the DGA along and under the guardrail. See the Special Note for Double Asphalt Seal Coat.

Guardrail  
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- F. Delineators for Guardrail.** Construct Delineators for Guardrail according to Standard Drawing RBR-055 – Delineators for Guardrail, current edition.
- G. 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.
- 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 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.
- I. 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.
- J. 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.
- K. 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.
- L. 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.

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- D. Remove Concrete Masonry.** When specified in the proposal, the Department will measure the removal of the existing concrete bridge parapet wall in cubic yards.
- E. Remove Bridge Handrail.** When specified in the proposal, the Department will measure the removal of the existing aluminum bridge handrail in linear feet.
- F. Remove Bridge Guardrail.** When specified in the proposal, the Department will measure the quantity of bridge guardrail removed in linear feet, along the face of the rail.
- G. Bridge Guardrail Case I, I-A, I-B, II.** The Department will measure Bridge Guardrail of each type in linear feet along the face of the rail and between the limits of the Guardrail – Single Face A.
- H. Guardrail – Steel W Beam – Single Face A.** See Standard Drawing BHS-007, current edition.
- I. Precast Concrete Bridge Rail Block.** The Department will measure the Precast Concrete Bridge Rail Block quantity in individual units, Each.
- J. DGA.** The Department will measure according to Section 302.04.
- K. Delineators for Guardrail.** See Standard Drawing RBR-055 – Delineators for Guardrail.
- L. 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.
- M. 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. Remove Concrete Masonry.** Payment at the Contract unit price per cubic yard shall be full compensation for all labor, equipment, materials, and incidentals necessary to remove the existing concrete bridge parapet wall.
- D. Remove Bridge Handrail.** Payment at the Contract unit price per linear foot shall be full compensation for all labor, equipment, materials, and incidentals necessary to remove the

Guardrail  
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existing aluminum bridge handrail.

- E. Remove Bridge Guardrail.** Payment at the Contract unit price per linear foot shall be full compensation for all labor, equipment, materials, and incidentals necessary to remove the existing bridge guardrail.
- F. Bridge Guardrail Case I, I-A, I-B, II.** Payment at the Contract unit price per linear foot shall be full compensation for all labor, equipment, materials, and incidentals necessary to construct the applicable Case(s) of Bridge Guardrail according to the detail drawings and these notes.
- G. Guardrail – Steel W Beam – Single Face A.** Payment at the Contract unit price per linear foot shall be full compensation for all labor, equipment, materials, and incidentals necessary to construct the Guardrail – Single Face A according to Standard Drawing BHS-007, current edition, and these notes.
- H. Precast Concrete Bridge Rail Block.** Payment at the Contract unit price per Each shall be full compensation for all labor, equipment, materials, and incidentals necessary to install the Precast Concrete Bridge Rail Block(s) according to the detail drawings and these notes.
- I. DGA.** The Department will make payment according to Section 302.05.
- J. Delineators for Guardrail.** See Standard Drawing RBR-055 – Delineators for Guardrail.
- K. 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.

Take possession of the millings and recycle the millings or dispose of the millings off the Right-of-Way at sites obtained by the Contractor at no additional cost to the Department.

1-3520 48 hours Contractor keeps millings  
01/2/2012

### **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

## **TRAFFIC CONTROL PLAN ITEM NO. 8-9011.00**

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### **TRAFFIC CONTROL GENERAL**

Except for the roadway and traffic control bid items listed, all items of work necessary to maintain and control traffic will be paid at the lump sum bid price to “Maintain and Control Traffic” in accordance with the current editions of the Manual on Uniform Traffic Control Devices (MUTCD), Standard and Supplemental Specifications, and Standard and Sepia Drawings. The lump sum bid price to “Maintain and Control Traffic” shall include, but is not limited to, the following items and operations:

- A. All labor and materials necessary for construction and maintenance of traffic control devices and markings.
- B. All flag persons and traffic control devices such as, but not limited to, flashers, signs, barricades and vertical panes, plastic drums (steel drums will not be permitted), and cones, necessary for the control and protection of vehicular and pedestrian traffic as specified in these notes, the proposal, the MUTCD current condition, or the Engineer.

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

Maintain access to all entrances, side streets and roads, churches and commercial properties at all times during construction. Access to fire hydrants must also be maintained at all times. The Contractor will be responsible to notify adjacent property owners when work affecting the entrances will be performed.

### **PROJECT PHASING & CONSTRUCTION PROCEDURES**

Construction of the Superelevation Improvements and the Realignment of KY 206 into an intersection with KY 70 shall be completed while maintaining alternating one-way traffic. Contractor to coordinate with the Engineer to best manage construction activities with traffic control.

Construction associated with the Realignment of KY 206 into an intersection with KY 70 shall be completed over a single weekend period defined as Friday (6 pm) – Monday (5 am) while the activities related to the culvert pipes shall only occur between 9 am and 2 pm.

At all times, provide a minimum clear lane width of 10 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.

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The Contractor shall submit proposed days of lane closures to the Engineer at least 14 calendar days in advance for approval.

Unless otherwise approved by the Engineer, no lane closures will be allowed on the following dates:

Easter Weekend	Friday, April 15, 2022 – Sunday, April 17, 2022
Memorial Day Weekend	Friday, May 27, 2022 – Monday, May 30, 2022
Independence Day Weekend	Friday, July 1, 2022 – Monday, July 4, 2022
Labor Day Weekend	Friday, September 2, 2022 – Monday, September 5, 2022

The Engineer may specify additional days and/or hours when lane closures will not be allowed due to unforeseen events.

Liquidated Damages will be assessed for any and all lane closures that exceed the approval time limits in accordance with the Special Note for Completion Dates & Liquidated Damages.

In general, all traffic control devices shall be placed starting and proceeding in the direction of the flow of traffic, and removed starting and proceeding in the direction opposite the flow of traffic. The Contractor shall completely cover any signs, existing, permanent, or temporary, which do not properly apply to the current traffic phasing, and shall maintain the covering until signs are applicable or are removed.

## **LANE AND SHOULDER CLOSURES**

Do not leave lane closures in place during prohibited periods. Except for the Superelevation Improvement areas do not leave lane closures in place during non-working hours, unless otherwise approved by the Engineer.

## **TEMPORARY SIGNS**

The Engineer and the Contractor, or their authorized representative, shall review the signing before traffic is allowed to use any lane closures, crossovers, or detours. All signing shall be approved by the Engineer before work can be started by the Contractor. Temporary sign posts 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. Individual temporary signs will be measured only once for payment, regardless of how many times they are set, reset, relocated, and removed during the duration of the project. Replacements for damaged temporary signs directed by the Engineer to be replaced due to poor condition or reflectivity will not be measured for payment.

## **CHANGEABLE MESSAGE SIGNS**

Provide Portable Changeable Message Sign (PCMS) at least two weeks prior to construction at the locations approved by the Engineer. The messages required to be provided will be designated by the Engineer. The PCMS will be in operation at all times. In the event of damage or mechanical/ electrical failure, the contractor will repair or replace the PCMS immediately. The Department will not take possession of the signs upon completion of the work. The Department will measure for payment the maximum number of PCMS in concurrent use at the same time on a single day on all sections of the contract. PCMS will be paid for once, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. The Department will not measure for payment replacements for damaged PCMS or for signs the Engineer directs be replaced due to poor condition or readability.

## **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**

Removal of pavement markings will be by water blasting process to the satisfaction of the Engineer. Pavement markings proposed in the Plan, Detail, and Summary sheets shall be placed as proposed and located as specified in those sheets.

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.

## **THERMOPLASTIC MARKINGS AND TAPE ON TWO-LANE, TWO-WAY ROADWAYS:**

Place durable markings and thermoplastic striping according to the Standard Drawings TTS-130-01 and TTS-135-01. Accomplish the work in only one lane and affect the adjacent lane as little as possible. Provide egress and ingress to all ramps, side roads, and entrances at all times. Sign approaches to the immediate work area in accordance with Standard Drawings TTC-100-03 and TTC-105-02. Install the signs on approved temporary mountings.

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## **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 DGA 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.

## **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. Access to fire hydrants must also be maintained at all times

Traffic Control Plan  
Page 5 of 9**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)

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### Messages

Basic principles that are important to providing proper messages and insuring 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 insure 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

Traffic Control Plan  
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**Standard Abbreviations**

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

<b><u>Word</u></b>	<b><u>Abbrev</u></b>	<b><u>Example</u></b>
Access	ACCS	ACCIDENT AHEAD/ USE ACCS RD NEXT RIGHT
Alternate	ALT	ACCIDENT 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	ACCIDENT ON AA HWY/ EXPECT DELAYS
Hour	HR	ACCIDENT 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	ACCIDENT 3 MI AHEAD/ USE ALT RTE
Minor	MNR	ACCIDENT 3 MI MNR DELAY
Minutes	MIN	ACCIDENT 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	ACCIDENT 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)

<b><u>Word</u></b>	<b><u>Abbrev</u></b>	<b><u>Example</u></b>
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 NO USE THESE ABBREVIATIONS:

<b><u>Abbrev</u></b>	<b><u>Intended Word</u></b>	<b><u>Word Erroneously Given</u></b>
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.

<b><u>Reason/Problem</u></b>	<b><u>Action</u></b>
ACCIDENT	ALL TRAFFIC EXIT RT
ACCIDENT/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)

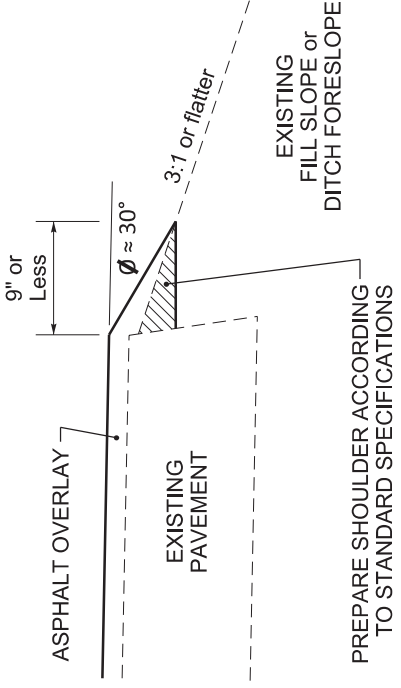
**Reason/Problem**

FOG XX MILES  
FREEWAY CLOSED  
FRESH OIL  
HAZMAT SPILL  
ICE  
INCIDENT AHEAD  
LANES (NARROW, SHIFT, MERGE, ETC.)  
LEFT LANE CLOSED  
LEFT LANE NARROWS  
LEFT 2 LANES CLOSED  
LEFT SHOULDER CLOSED  
LOOSE GRAVEL  
MEDIAN WORK XX MILES  
MOVING WORK ZONE, WORKERS IN ROADWAY  
NEXT EXIT CLOSED  
NO OVERSIZED LOADS  
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

**Action**

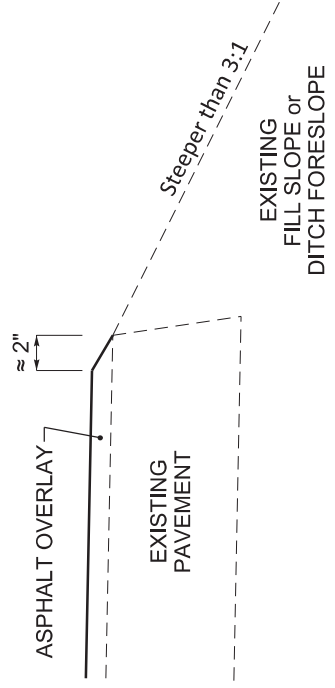
PASS TO RIGHT  
PREPARE TO STOP  
REDUCE SPEED  
SLOW  
SLOW DOWN  
STAY IN LANE  
STOP AHEAD  
STOP XX MILES  
TUNE RADIO 1610 AM  
USE NN ROAD  
USE CENTER LANE  
USE DETOUR ROUTE  
USE LEFT TURN LANE  
USE NEXT EXIT  
USE RIGHT LANE  
WATCH FOR FLAGGER

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

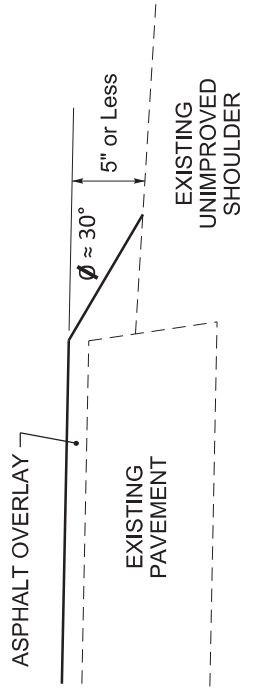


PREPARE SHOULDER ACCORDING TO STANDARD SPECIFICATIONS

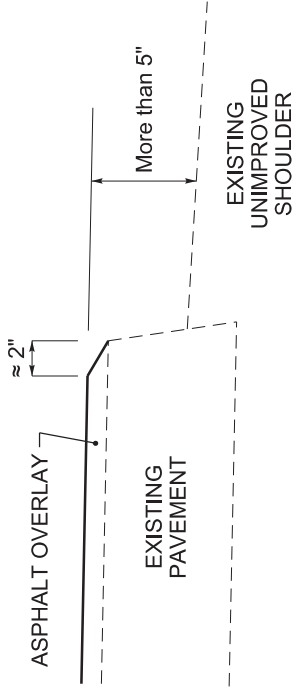
DURABLE PAVEMENT EDGE DETAIL  
 (Resurfacing adjacent to fill slope or ditch foreslope that is steeper than 3:1)



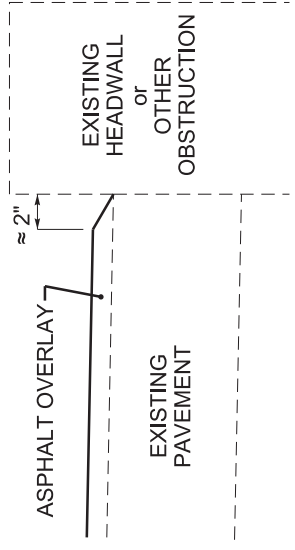
DURABLE PAVEMENT EDGE DETAIL  
 (Resurfacing adjacent to low shoulder with dropoff of 5 inches or less)



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)



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 APPROVED BY THE ENGINEER.

DURABLE PAVEMENT EDGE DETAILS

DRAWING NOT TO SCALE

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

<input checked="" type="checkbox"/> Original	<input type="checkbox"/> Re-Certification	<b>RIGHT OF WAY CERTIFICATION</b>	
ITEM #	COUNTY	PROJECT # (STATE)	PROJECT # (FEDERAL)
08-9011.00	Casey	023 0070 004-013	HSIP 5105047

**PROJECT DESCRIPTION**

Perform Low Cost Safety Improvements on KY 70 from MP 4.700 to MP 12.868 in Casey County

**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
<b>Number of Parcels That Have Been Acquired</b>			
Signed Deed			
Condemnation			
Signed ROE			

**Notes/ Comments (Use Additional Sheet if necessary)**

<b>LPA RW Project Manager</b>		<b>Right of Way Supervisor</b>	
Printed Name		Printed Name	Charles Hale
Signature		Signature	 2020.03.04
Date		Date	10:15:17 -05'00'
<b>Right of Way Director</b>		<b>FHWA</b>	
Printed Name		Printed Name	No Signature Required
Signature	 Digitally signed by DM Loy Date: 2020.03.04 13:21:11 -05'00'	Signature	as per FHWA-KYTC
Date		Date	Current Stewardship Agreement

## UTILITIES AND RAIL CERTIFICATION NOTE

**Casey County - HSIP (5105) 047**  
**023 0070 004-013**  
**KY 70 HSIP**  
**Item No. 8-9011.00**

**GENERAL PROJECT NOTE ON UTILITY PROTECTION**

*Utility coordination efforts determined that utility relocation work is NOT required to complete the project. The contractor is to avoid existing utility facilities while completing roadway work. The contractor will notify the utility companies at least 2 weeks prior to starting work.*

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

Water Mains

**East Casey County Water District** has 6" and 8" PVC water mains running parallel to KY 70 that are mostly on private property outside public Right of Way. There are 3" and 4" crossings at each of the sideroads along the entire project length. All work is to be performed without impacting existing water facilities.

Electric Poles

**Taylor County RECC** has overhead electric and communication lines on poles along both sides of KY 70 throughout the project limits. There is an electric substation near Sta. 430+00 left. All work is to be performed without impacting existing facilities.

Fiber Facilities

**Windstream** has underground fiber facilities located on the left side of KY 70 adjacent to the Clementsville Fire House. Proposed roadway improvement work will not impact these existing facilities and the contractor is to avoid these facilities.

**\*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**

N/A

**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**

N/A

**THE FOLLOWING COMPANIES HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE ROAD CONTRACTOR AS INCLUDED IN THIS CONTRACT**

N/A

## UTILITIES AND RAIL CERTIFICATION NOTE

**Casey County - HSIP (5105) 047  
023 0070 004-013  
KY 70 HSIP  
Item No. 8-9011.00**

### **UNDERGROUND FACILITY DAMAGE PROTECTION – BEFORE YOU DIG**

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

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

### **SPECIAL CAUTION NOTE – PROTECTION OF UTILITIES**

The contractor will be responsible for contacting all utility facility owners on the subject project to coordinate his activities. The contractor will coordinate his activities to minimize and, where possible, avoid conflicts with utility facilities. Due to the nature of the work proposed, it is unlikely to conflict with the existing utilities beyond minor facility adjustments. Where conflicts with utility facilities are unavoidable, the contractor will coordinate any necessary relocation work with the facility owner and Resident Engineer. The Kentucky Transportation Cabinet maintains the right to remove or alter portions of this contract if a utility conflict occurs.

The utility facilities as noted in the previous section(s) have been determined using data garnered by varied means and with varying degrees of accuracy: from the facility owners, a result of S.U.E., field inspections, and/or reviews of record drawings. The facilities defined may not be inclusive of all utilities in the project scope and are not Level A quality, unless specified as such. It is the contractor's responsibility to verify all utilities and their respective locations before excavating.

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

## UTILITIES AND RAIL CERTIFICATION NOTE

**Casey County - HSIP (5105) 047  
023 0070 004-013  
KY 70 HSIP  
Item No. 8-9011.00**

### AREA UTILITIES CONTACT LIST

<u>Utility Company/Agency</u>	<u>Contact Name</u>	<u>Contact Information</u>
1. East Casey County Water District	Eddie Wesley	(606) 788-9961 P O Box 56 Liberty, KY 42539
2. Windstream KY East	Ashley Sanders	(859) 357-6206 130 W. New Circle Rd Lexington, KY 40505
3. Taylor County RECC	Mike Skaggs	(270) 403-1297 625 West Main St. Campbellsville, KY 42719

***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.***

KYTC BMP Plan for Project CID **22-4104**



**Kentucky Transportation Cabinet**

**Highway District 8**

**And**

\_\_\_\_\_ **(2), Construction**

**Kentucky Pollutant Discharge Elimination System  
Permit KYR10  
Best Management Practices (BMP) plan**

**Groundwater protection plan**

**For Highway Construction Activities**

**For**

**Highway Safety Improvement Project on KY 70 in  
Casey County (1)**

**Project: CID 22-4104**

## KYTC BMP Plan for Project CID **22-4104**

### **Project information**

Note – (1) = Design (2) = Construction (3) = Contractor

1. Owner – Kentucky Transportation Cabinet, District 8
2. Resident Engineer: (2)
3. Contractor name: (2)  
Address: (2)  
  
Phone number: (2)  
Contact: (2)  
Contractors agent responsible for compliance with the KPDES permit requirements (3):
4. Project Control Number: (2)
5. Route (Address): 7796 KY-70, Liberty, KY 42539
6. Latitude/Longitude (project mid-point): 37° 16' 20", -85° 02' 04"
7. County (project mid-point): Casey
8. Project start date (date work will begin): (2)
9. Projected completion date: (2)

## KYTC BMP Plan for Project CID **22-4104**

### **A. Site description:**

1. Nature of Construction Activity (from letting project description): Asphalt Surface with Grade & Drain
2. Order of major soil disturbing activities: (2) and (3)
3. Projected volume of material to be moved: 3,545 CY (Cut) & 3,589 CY (Fill)
4. Estimate of total project area (acres): 37.6
5. Estimate of area to be disturbed (acres): 17.4
6. Post construction runoff coefficient will be included in the project drainage folder. Persons needing information pertaining to the runoff coefficient will contact the resident engineer to request this information.
7. Data describing existing soil condition: (1) & (2)
8. Data describing existing discharge water quality (if any): (1) & (2)
9. Receiving water name: Woods Creek, Locust Creek, and Kettle Creek
10. TMDLs and Pollutants of Concern in Receiving Waters: *No TDML's were involved on this project.*
11. Site map – Project layout sheet plus the erosion control sheets in the project plans that depict Disturbed Drainage Areas (DDAs) and related information. These sheets depict the existing project conditions with areas delineated by DDA (drainage area bounded by watershed breaks and right of way limits), the storm water discharge locations (either as a point discharge or as overland flow) and the areas that drain to each discharge point. These plans define the limits of areas to be disturbed and the location of control measures. Controls will be either site specific as designated by the designer or will be annotated by the contractor and resident engineer before disturbance commences. The project layout sheet shows the surface waters and wetlands.
12. Potential sources of pollutants:  
  
The primary source of pollutants is solids that are mobilized during storm events. Other sources of pollutants include oil/fuel/grease from servicing and operating construction equipment, concrete washout water, sanitary wastes and trash/debris. (3)

## KYTC BMP Plan for Project CID 22-4104

### **B. Sediment and Erosion Control Measures:**

1. Plans for highway construction projects will include erosion control sheets that depict Disturbed Drainage Areas (DDAs) and related information. These plan sheets will show the existing project conditions with areas delineated by DDA within the right of way limits, the discharge points and the areas that drain to each discharge point. Project managers and designers will analyze the DDAs and identify Best Management Practices (BMPs) that are site specific. The balance of the BMPs for the project will be listed in the bid documents for selection and use by the contractor on the project with approval by the resident engineer.

Projects that do not have DDAs annotated on the erosion control sheets will employ the same concepts for development and managing BMP plans.

2. Following award of the contract, the contractor and resident engineer will annotate the erosion control sheets showing location and type of BMPs for each of the DDAs that will be disturbed at the outset of the project. This annotation will be accompanied by an order of work that reflects the order or sequence of major soil moving activities. The remaining DDAs are to be designated as "Do Not Disturb" until the contractor and resident engineer prepare the plan for BMPs to be employed. The initial BMP's shall be for the first phase (generally Clearing and Grubbing) and shall be modified as needed as the project changes phases. The BMP Plan will be modified to reflect disturbance in additional DDA's as the work progresses. All DDA's will have adequate BMP's in place before being disturbed.
3. As DDAs are prepared for construction, the following will be addressed for the project as a whole or for each DDA as appropriate:
  - Construction Access – This is the first land-disturbing activity. As soon as construction begins, bare areas will be stabilized with gravel and temporary mulch and/or vegetation.
  - At the beginning of the project, all DDAs for the project will be inspected for areas that are a source of storm water pollutants. Areas that are a source of pollutants will receive appropriate cover or BMPs to arrest the introduction of pollutants into storm water. Areas that have not been opened by the contractor will be inspected periodically (once per month) to determine if there is a need to employ BMPs to keep pollutants from entering storm water.
  - Clearing and Grubbing – The following BMP's will be considered and used where appropriate.

## KYTC BMP Plan for Project CID **22-4104**

- Leaving areas undisturbed when possible.
- Silt basins to provide silt volume for large areas.
- Silt Traps Type A for small areas.
- Silt Traps Type C in front of existing pipes and drop inlets which are to be saved
- Diversion ditches to catch sheet runoff and carry it to basins or traps or to divert it around areas to be disturbed.
- Brush and/or other barriers to slow and/or divert runoff.
- Silt fences to catch sheet runoff on short slopes. For longer slopes, multiple rows of silt fence may be considered.
- Temporary Mulch for areas which are not feasible for the fore mentioned types of protections.
- Non-standard or innovative methods.
- Cut & Fill and placement of drainage structures - The BMP Plan will be modified to show additional BMP's such as:
  - Silt Traps Type B in ditches and/or drainways as they are completed
  - Silt Traps Type C in front of pipes and drop inlets after they are placed
  - Channel Lining
  - Erosion Control Blanket
  - Temporary mulch and/or seeding for areas where construction activities will be ceased for 21 days or more.
  - Non-standard or innovative methods
- Profile and X-Section in place – The BMP Plan will be modified to show elimination of BMP's which had to be removed and the addition of new BMP's as the roadway was shaped. Probably changes include:
  - Silt Trap Type A, Brush and/or other barriers, Temporary Mulch, and any other BMP which had to be removed for final grading to take place.
  - Additional Silt Traps Type B and Type C to be placed as final drainage patterns are put in place.
  - Additional Channel Lining and/or Erosion Control Blanket.
  - Temporary Mulch for areas where Permanent Seeding and Protection cannot be done within 21 days.
  - Special BMP's such as Karst Policy
- Finish Work (Paving, Seeding, Protect, etc.) – A final BMP Plan will result from modifications during this phase of construction. Probable changes include:
  - Removal of Silt Traps Type B from ditches and drainways if they are protected with other BMP's which are sufficient to control erosion, i.e. Erosion Control Blanket or Permanent Seeding and Protection on moderate grades.
  - Permanent Seeding and Protection

## KYTC BMP Plan for Project CID **22-4104**

- Placing Sod
- Planting trees and/or shrubs where they are included in the project
- BMP's including Storm Water Management Devices such as velocity dissipation devices and Karst policy BMP's to be installed during construction to control the pollutants in storm water discharges that will occur after construction has been completed are: *This project does not include storm water BMPs or flow controls for post-construction use.*

### **C. Other Control Measures**

1. No solid materials, including building materials, shall be discharged to waters of the commonwealth, except as authorized by a Section 404 permit.
2. Waste Materials

All waste materials that may leach pollutants (paint and paint containers, caulk tubes, oil/grease containers, liquids of any kind, soluble materials, etc.) will be collected and stored in appropriate covered waste containers. Waste containers shall be removed from the project site on a sufficiently frequent basis as to not allow wastes to become a source of pollution. All personnel will be instructed regarding the correct procedure for waste disposal. Wastes will be disposed in accordance with appropriate regulations. Notices stating these practices will be posted in the office.

3. Hazardous Waste

All hazardous waste materials will be managed and disposed of in the manner specified by local or state regulation. The contractor shall notify the Section Engineer if there any hazardous wastes being generated at the project site and how these wastes are being managed. Site personnel will be instructed with regard to proper storage and handling of hazardous wastes when required. The Transportation Cabinet will file for generator, registration when appropriate, with the Division of Waste Management and advise the contractor regarding waste management requirements.

4. Spill Prevention

The following material management practices will be used to reduce the risk of spills or other exposure of materials and substances to the weather and/or runoff.

- **Good Housekeeping:**

## KYTC BMP Plan for Project CID **22-4104**

The following good housekeeping practices will be followed onsite during the construction project.

- An effort will be made to store only enough product required to do the job
- All materials stored onsite will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure
- Products will be kept in their original containers with the original manufacturer's label
- Substances will not be mixed with one another unless recommended by the manufacturer
- Whenever possible, all of the product will be used up before disposing of the container
- Manufacturers' recommendations for proper use and disposal will be followed
- The site contractor will inspect daily to ensure proper use and disposal of materials onsite

### ➤ **Hazardous Products:**

These practices will be used to reduce the risks associated with any and all hazardous materials.

- Products will be kept in original containers unless they are not resealable
- Original labels and material safety data sheets (MSDS) will be reviewed and retained
- Contractor will follow procedures recommended by the manufacturer when handling hazardous materials
- If surplus product must be disposed of, manufacturers' or state/local recommended methods for proper disposal will be followed

### **The following product-specific practices will be followed onsite:**

#### ➤ **Petroleum Products:**

Vehicles and equipment that are fueled and maintained on site will be monitored for leaks, and receive regular preventative maintenance to reduce the chance of leakage. Petroleum products onsite will be stored in tightly sealed containers, which are clearly labeled and will be protected from exposure to weather.

The contractor shall prepare an Oil Pollution Spill Prevention Control and Countermeasure plan when the project that involves the storage of petroleum products in 55 gallon or larger containers with a total combined storage capacity of 1,320 gallons. This is a requirement of 40 CFR 112.

## KYTC BMP Plan for Project CID **22-4104**

This project (will / will not) **(3)** have over 1,320 gallons of petroleum products with a total capacity, sum of all containers 55 gallon capacity and larger.

### ➤ **Fertilizers:**

Fertilizers will be applied at rates prescribed by the contract, standard specifications or as directed by the resident engineer. Once applied, fertilizer will be covered with mulch or blankets or worked into the soil to limit exposure to storm water. Storage will be in a covered shed. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

### ➤ **Paints:**

All containers will be tightly sealed and stored indoors or under roof when not being used. Excess paint or paint wash water will not be discharged to the drainage or storm sewer system but will be properly disposed of according to manufacturers' instructions or state and local regulations.

### ➤ **Concrete Truck Washout:**

Concrete truck mixers and chutes will not be washed on pavement, near storm drain inlets, or within 75 feet of any ditch, stream, wetland, lake, or sinkhole. Where possible, excess concrete and wash water will be discharged to areas prepared for pouring new concrete, flat areas to be paved that are away from ditches or drainage system features, or other locations that will not drain off site. Where this approach is not possible, a shallow earthen wash basin will be excavated away from ditches to receive the wash water

### ➤ **Spill Control Practices**

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup:

- Manufacturers' recommended methods for spill cleanup will be clearly posted. All personnel will be made aware of procedures and the location of the information and cleanup supplies.
- Materials and equipment necessary for spill cleanup will be kept in the material storage area. Equipment and materials will include as appropriate, brooms, dust pans, mops, rags, gloves, oil absorbents, sand, sawdust, and plastic and metal trash containers.
- All spills will be cleaned up immediately after discovery.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.

## KYTC BMP Plan for Project CID **22-4104**

- Spills of toxic or hazardous material will be reported to the appropriate state/local agency as required by KRS 224 and applicable federal law.
- The spill prevention plan will be adjusted as needed to prevent spills from reoccurring and improve spill response and cleanup.
- Spills of products will be cleaned up promptly. Wastes from spill clean up will be disposed in accordance with appropriate regulations.

### **D. Other State and Local Plans**

This BMP plan shall include any requirements specified in sediment and erosion control plans, storm water management plans or permits that have been approved by other state or local officials. Upon submittal of the NOI, other requirements for surface water protection are incorporated by reference into and are enforceable under this permit (even if they are not specifically included in this BMP plan). This provision does not apply to master or comprehensive plans, non-enforceable guidelines or technical guidance documents that are not identified in a specific plan or permit issued for the construction site by state or local officials. *There are no other local (MS4) requirements that are expected to be necessary for this project.*

### **E. Maintenance**

1. The BMP plan shall include a clear description of the maintenance procedures necessary to keep the control measures in good and effective operating condition.
- Maintenance of BMPs during construction shall be a result of weekly and post rain event inspections with action being taken by the contractor to correct deficiencies.
  - Post Construction maintenance will be a function of normal highway maintenance operations. Following final project acceptance by the cabinet, district highway crews will be responsible for identification and correction of deficiencies regarding ground cover and cleaning of storm water BMPs. The project manager shall identify any BMPs that will be for the purpose of post construction storm water management with specific guidance for any non-routine maintenance. *There are no such BMP's for this project.*

### **F. Inspections**

Inspection and maintenance practices that will be used to maintain erosion and sediment controls:

## KYTC BMP Plan for Project CID **22-4104**

- All erosion prevention and sediment control measures will be inspected at least once each week and following any rain of one-half inch or more.
- Inspections will be conducted by individuals that have successfully completed the KEPSC-RI course as required by Section 213.02.02 of the Standard Specifications for Road and Bridge Construction, current edition.
- Inspection reports will be written, signed, dated, and kept on file.
- Areas at final grade will be seeded and mulched within 14 days.
- Areas that are not at final grade where construction has ceased for a period of 21 days or longer and soil stock piles shall receive temporary mulch no later than 14 days from the last construction activity in that area.
- All measures will be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours of being reported.
- Built-up sediment will be removed from behind the silt fence before it has reached halfway up the height of the fence.
- Silt fences will be inspected for bypassing, overtopping, undercutting, depth of sediment, tears, and to ensure attachment to secure posts.
- Sediment basins will be inspected for depth of sediment, and built-up sediment will be removed when it reaches 50 percent of the design capacity and at the end of the job.
- Diversion dikes and berms will be inspected and any breaches promptly repaired. Areas that are eroding or scouring will be repaired and re-seeded / mulched as needed.
- Temporary and permanent seeding and mulching will be inspected for bare spots, washouts, and healthy growth. Bare or eroded areas will be repaired as needed.
- All material storage and equipment servicing areas that involve the management of bulk liquids, fuels, and bulk solids will be inspected weekly for conditions that represent a release or possible release of pollutants to the environment.

## **G. Non – Storm Water discharges**

It is expected that non-storm water discharges may occur from the site during the construction period. Examples of non-storm water discharges include:

- Water from water line flushings.
- Water from cleaning concrete trucks and equipment.
- Pavement wash waters (where no spills or leaks of toxic or hazardous materials have occurred).

### KYTC BMP Plan for Project CID **22-4104**

- Uncontaminated groundwater and rain water (from dewatering during excavation).

All non-storm water discharges will be directed to the sediment basin or to a filter fence enclosure in a flat vegetated infiltration area or be filtered via another approved commercial product.

## **H. Groundwater Protection Plan (3)**

This plan serves as the groundwater protection plan as required by 401 KAR 5:037.

- Contractors statement: (3)

The following activities, as enumerated by 401 KAR 5:037 Section 2 that require the preparation and implementation of a groundwater protection plan, will or may be conducted as part of this construction project:

\_\_\_\_\_ 2. (e) land treatment or land disposal of a pollutant;

\_\_\_\_\_ 2. (f) Storing, ..., or related handling of hazardous waste, solid waste or special waste, ..., in tanks, drums, or other containers, or in piles, (This does not include wastes managed in a container placed for collection and removal of municipal solid waste for disposal off site);

\_\_\_\_\_ 2. (g) .... Handling of materials in bulk quantities (equal or greater than 55 gallons or 100 pounds net dry weight transported held in an individual container) that, if released to the environment, would be a pollutant;

\_\_\_\_\_ 2. (j) Storing or related handling of road oils, dust suppressants, ....., at a central location;

\_\_\_\_\_ 2. (k) Application or related handling of road oils, dust suppressants or deicing materials, (does not include use of chloride-based deicing materials applied to roads or parking lots);

\_\_\_\_\_ 2. (m) Installation, construction, operation, or abandonment of wells, bore holes, or core holes, (this does not include bore holes for the purpose of explosive demolition);

Or, check the following only if there are no qualifying activities

\_\_\_\_\_ There are no activities for this project as listed in 401 KAR 5:037 Section 2 that require the preparation and implementation of a groundwater protection plan.

## KYTC BMP Plan for Project CID **22-4104**

The contractor is responsible for the preparation of a plan that addresses the

401 KAR 5:037 Section 3. (3) Elements of site specific groundwater protection plan:

- (a) General information about this project is covered in the Project information;
- (b) Activities that require a groundwater protection plan have been identified above;
- (c) Practices that will protect groundwater from pollution are addressed in section C. Other control measures.
- (d) Implementation schedule – all practices required to prevent pollution of groundwater are to be in place prior to conducting the activity;
- (e) Training is required as a part of the ground water protection plan. All employees of the contractor, sub-contractor and resident engineer personnel will be trained to understand the nature and requirements of this plan as they pertain to their job function(s). Training will be accomplished within one week of employment and annually thereafter. A record of training will be maintained by the contractor with a copy provide to the resident engineer.
- (f) Areas of the project and groundwater plan activities will be inspected as part of the weekly sediment and erosion control inspections
- (g) Certification (see signature page.)



KYTC BMP Plan for Project CID **22-4104**

**Sub-Contractor Certification**

The following sub-contractor shall be made aware of the BMP plan and responsible for implementation of BMPs identified in this plan as follows:

Subcontractor

Name:  
Address:  
Address:

Phone:

The part of BMP plan this subcontractor is responsible to implement is:

I certify under penalty of law that I understand the terms and conditions of the general Kentucky Pollutant Discharge Elimination System permit that authorizes the storm water discharges, the BMP plan that has been developed to manage the quality of water to be discharged as a result of storm events associated with the construction site activity and management of non-storm water pollutant sources identified as part of this certification.

Signed \_\_\_\_\_ title \_\_\_\_\_, \_\_\_\_\_  
Typed or printed name<sup>1</sup> signature

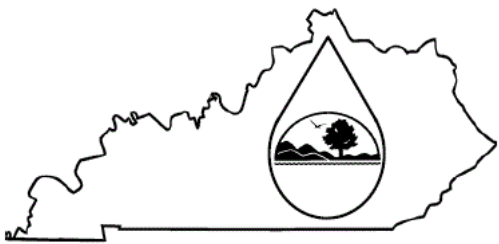
1. Sub Contractor Note: to be signed by a person who is the owner, a responsible corporate officer, a general partner or the proprietor or a person designated to have the authority to sign reports by such a person in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager, KPDES Branch, Division of Water, 14 Reilly Road, Frankfort Kentucky 40601. Reference the Project Control Number (PCN) and KPDES number when one has been issued.

**CID 22-4104**  
**Casey County**  
**Highway Safety Improvement Project along KY-70**  
**from MP 4.700 – 12.868**  
**Item No.: 8-9011**

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An electronic Notice of Intent (eNOI) for obtaining coverage under the Kentucky Pollutant Discharge Elimination System (KPDES) General Permit for Stormwater Discharges Associated with Construction Activities (KYR10) has been drafted, a copy of which is attached. Upon award, the Contractor will be identified in Section III of the form as the “Building Contractor” and the eNOI will be submitted for approval to the Kentucky Division of Water. The Contractor shall be responsible for advancing the work within this contract in a manner that is compliant with all applicable and appropriate KYTC specifications for sediment and erosion control, as well as meeting the requirements of the KYR10 permit and the KDOW.

**eForm Submittal ID: 205436**

	<h2 style="margin: 0;">KENTUCKY POLLUTION DISCHARGE                  ELIMINATION SYSTEM (KPDES)</h2> <p style="margin: 5px 0;">Notice of Intent (NOI) for coverage of Storm Water Discharge                  Associated with Construction Activities Under the KPDES Storm                  Water General Permit KYR100000</p> <p style="margin: 5px 0;"><a href="#">Click here for Instructions                  (Controls/KPDES_FormKYR10_Instructions.htm)</a></p> <p style="margin: 5px 0;"><a href="http://dep.ky.gov/formslibrary/Documents/KYR10PermitPage.pdf">Click here to obtain information and a copy of the KPDES General Permit.                  (http://dep.ky.gov/formslibrary/Documents/KYR10PermitPage.pdf)</a></p> <p style="margin: 5px 0;">(*) indicates a required field; (✓) indicates a field may be required based on user input or is an                  optionally required field</p>
-----------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Reason for Submittal:(*) <input type="text" value="Application for New Permit Coverage"/>	Agency Interest ID: <input type="text" value="Agency Interest ID"/>	Permit Number:(✓) <input type="text" value="KPDES Permit Number"/>
----------------------------------------------------------------------------------------------	------------------------------------------------------------------------	-----------------------------------------------------------------------

If change to existing permit coverage is requested, describe the changes for which modification of coverage is being sought:(✓)

**ELIGIBILITY:**  
 Stormwater discharges associated with construction activities disturbing individually one (1) acre or more, including, in the case of a common plan of development, contiguous construction activities that cumulatively equal one (1) acre or more of disturbance.

**EXCLUSIONS:**  
 The following are excluded from coverage under this general permit:  
 1) Are conducted at or on properties that have obtained an individual KPDES permit for the discharge of other wastewaters which requires the development and implementation of a Best Management Practices (BMP) plan;  
 2) Any operation that the DOW determines an individual permit would better address the discharges from that operation;  
 3) Any project that discharges to an Impaired Water listed in the most recent Integrated Report, §305(b) as impaired for sediment and for which an approved TMDL has been developed.

**SECTION I -- FACILITY OPERATOR INFORMATION (PERMITTEE)**

Company Name:(✓) <input type="text" value="Kentucky Transportation Cabinet, District 8"/>	First Name:(✓) <input type="text" value="Tamara"/>	M.I.: <input type="text" value="MI"/>	Last Name:(✓) <input type="text" value="Wilson"/>
Mailing Address:(*) <input type="text" value="1660 South US 27"/>	City:(*) <input type="text" value="Somerset"/>	State:(*) <input type="text" value="Kentucky"/>	Zip:(*) <input type="text" value="42502"/>
eMail Address:(*) <input type="text" value="Tamara.Wilson@ky.gov"/>	Business Phone:(*) <input type="text" value="606-677-4017"/>	Alternate Phone: <input type="text" value="Phone"/>	

**SECTION II -- GENERAL SITE LOCATION INFORMATION**

Project Name:(*) <input type="text" value="KYTC Project: 214104"/>	Status of Owner/Operator(*) <input type="text" value="State Government"/>	SIC Code(*) <input type="text" value="1611 Highway and Street Const"/>
Company Name:(✓) <input type="text" value="Company Name"/>	First Name:(✓) <input type="text" value="First Name"/>	M.I.: <input type="text" value="MI"/>
Site Physical Address:(*) <input type="text" value="KY-70"/>		
City:(*) <input type="text" value="Liberty"/>	State:(*) <input type="text" value="Kentucky"/>	Zip:(*) <input type="text" value="42539"/>
County:(*) <input type="text" value="Casey"/>	Latitude(decimal degrees)(*)DMS to DD Converter (https://www.fcc.gov/media/radio/dms-decimal) <input type="text" value="37.272089"/>	Longitude(decimal degrees)(*) <input type="text" value="-85.034402"/>

**SECTION III -- SPECIFIC SITE ACTIVITY INFORMATION ?**

Project Description:(\*)

a. For single projects provide the following information

Total Number of Acres in Project:(√) <input style="width:95%;" type="text" value="37.6"/>	Total Number of Acres Disturbed:(√) <input style="width:95%;" type="text" value="17.4"/>
Anticipated Start Date:(√) <input style="width:95%;" type="text"/>	Anticipated Completion Date:(√) <input style="width:95%;" type="text"/>

b. For common plans of development provide the following information

Total Number of Acres in Project:(√) <input style="width:95%;" type="text" value="# Acre(s)"/>	Total Number of Acres Disturbed:(√) <input style="width:95%;" type="text" value="# Acre(s)"/>
Number of individual lots in development, if applicable:(√) <input style="width:95%;" type="text" value="# lot(s)"/>	Number of lots in development:(√) <input style="width:95%;" type="text" value="# lot(s)"/>
Total acreage of lots intended to be developed:(√) <input style="width:95%;" type="text" value="Project Acres"/>	Number of acres intended to be disturbed at any one time:(√) <input style="width:95%;" type="text" value="Disturbed Acres"/>
Anticipated Start Date:(√) <input style="width:95%;" type="text"/>	Anticipated Completion Date:(√) <input style="width:95%;" type="text"/>

List Building Contractor(s) at the time of Application:(\*)

	Company Name			
+	<input style="width:95%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>

SECTION IV -- IF THE PERMITTED SITE DISCHARGES TO A WATER BODY THE FOLLOWING INFORMATION IS REQUIRED

Discharge Point(s):

	Unnamed Tributary?	Latitude	Longitude	Receiving Water Name	
1	Yes	37.286592	-85.004304	Kettle Creek	Delete
2	Yes	37.288072	-85.001566	Kettle Creek	Delete
3	Yes	37.289947	-84.993157	Kettle Creek	Delete
4	Yes	37.290936	-84.991463	Kettle Creek	Delete
5	Yes	37.267266	-85.046036	Locust Creek	Delete
6	Yes	37.267480	-85.044889	Locust Creek	Delete
7	Yes	37.268657	-85.039599	Locust Creek	Delete
8	Yes	37.271863	-85.034665	Locust Creek	Delete
9	Yes	37.272518	-85.032265	Locust Creek	Delete
10	Yes	37.273055	-85.032850	Locust Creek	Delete

SECTION V -- IF THE PERMITTED SITE DISCHARGES TO A MS4 THE FOLLOWING INFORMATION IS REQUIRED

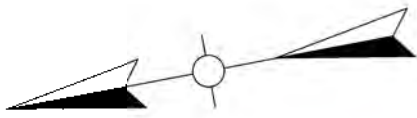
Name of MS4: <input style="width:95%;" type="text"/>											
Date of application/notification to the MS4 for construction site permit coverage: <input style="width:95%;" type="text" value="Date"/>	Discharge Point(s):(*) <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:5%;"></th> <th style="width:15%;">Latitude</th> <th style="width:15%;">Longitude</th> <th style="width:10%;"></th> <th style="width:10%;"></th> </tr> </thead> <tbody> <tr> <td style="text-align:center;">+</td> <td><input style="width:95%;" type="text"/></td> <td><input style="width:50%;" type="text"/></td> <td><input style="width:50%;" type="text"/></td> <td><input style="width:50%;" type="text"/></td> </tr> </tbody> </table>		Latitude	Longitude			+	<input style="width:95%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>
	Latitude	Longitude									
+	<input style="width:95%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>	<input style="width:50%;" type="text"/>							

SECTION VI -- WILL THE PROJECT REQUIRE CONSTRUCTION ACTIVITIES IN A WATER BODY OR THE RIPARIAN ZONE?

Will the project require construction activities in a water body or the riparian zone?: (*)	<input style="width:95%;" type="text" value="No"/>
If Yes, describe scope of activity: (√)	<input style="width:95%;" type="text" value="describe scope of activity"/>
Is a Clean Water Act 404 permit required?:(*)	<input style="width:95%;" type="text" value="No"/>

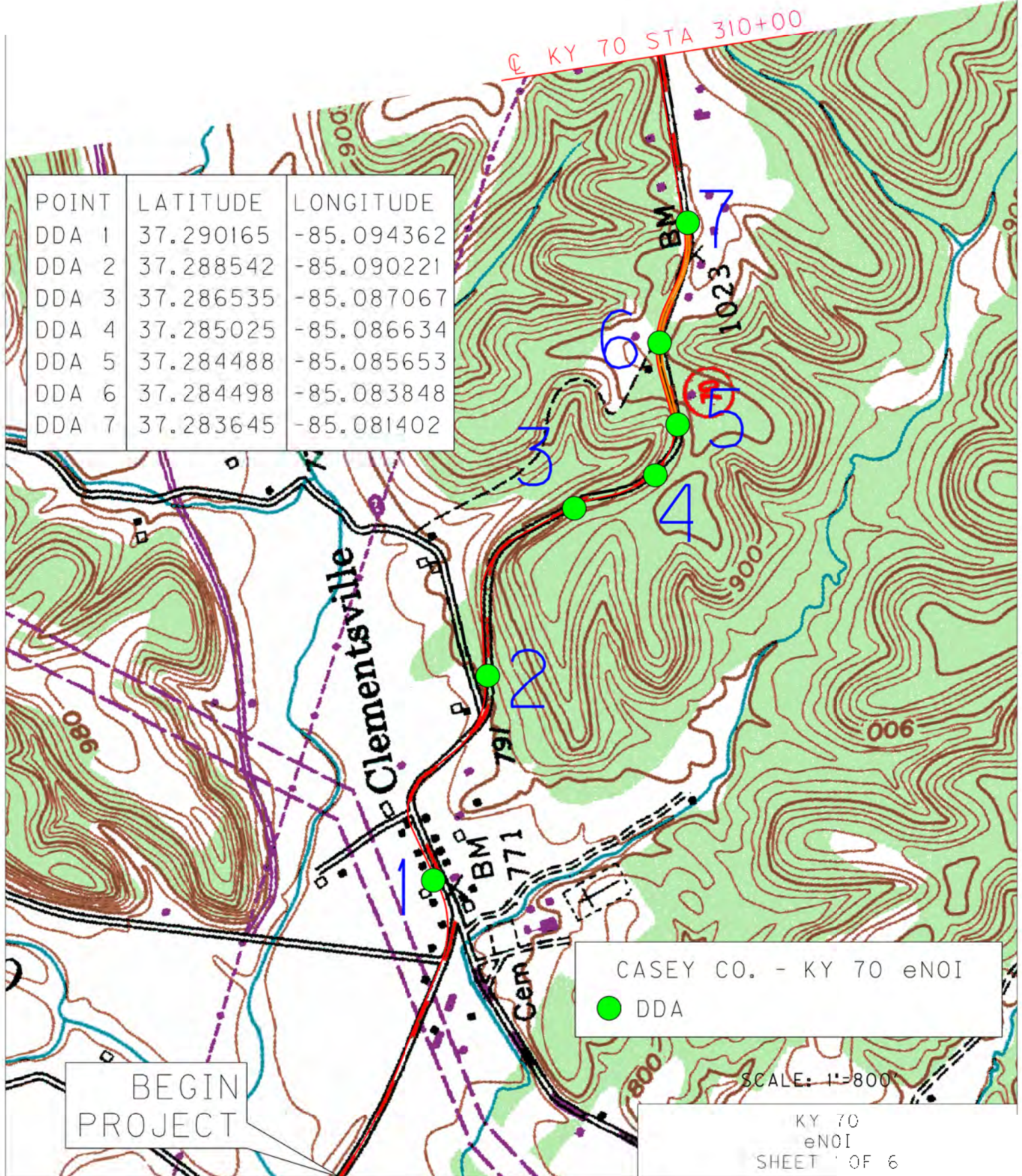
Is a Clean Water Act 401 Water Quality Certification required?:(*)		No	
<b>SECTION VII -- NOI PREPARER INFORMATION</b>			
First Name:(*) First Name	M.I.: MI	Last Name:(*) Last Name	Company Name:(*) Company Name
Mailing Address:(*) Mailing Address	City:(*) City	State:(*)	Zip:(*) Zip
eMail Address:(*) eMail Address	Business Phone:(*) Phone	Alternate Phone: Phone	
<b>SECTION VIII -- ATTACHMENTS</b>			
Facility Location Map:(*)	Upload file		
Supplemental Information:	Upload file		
<b>SECTION IX -- CERTIFICATION</b>			
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.			
Signature:(*) Signature		Title:(*) Title	
First Name:(*) First Name	M.I.: MI	Last Name:(*) Last Name	
eMail Address:(*) eMail Address	Business Phone:(*) Phone	Alternate Phone: Phone	Signature Date:(*) Date
<div style="display: flex; justify-content: space-around; margin-top: 20px;"> <span>Click to Save Values for Future Retrieval</span> <span>Click to Submit to EEC</span> </div>			

COUNTY OF	ITEM NO.
CASEY	8-9011



Ⓢ KY 70 STA 310+00

POINT	LATITUDE	LONGITUDE
DDA 1	37.290165	-85.094362
DDA 2	37.288542	-85.090221
DDA 3	37.286535	-85.087067
DDA 4	37.285025	-85.086634
DDA 5	37.284488	-85.085653
DDA 6	37.284498	-85.083848
DDA 7	37.283645	-85.081402

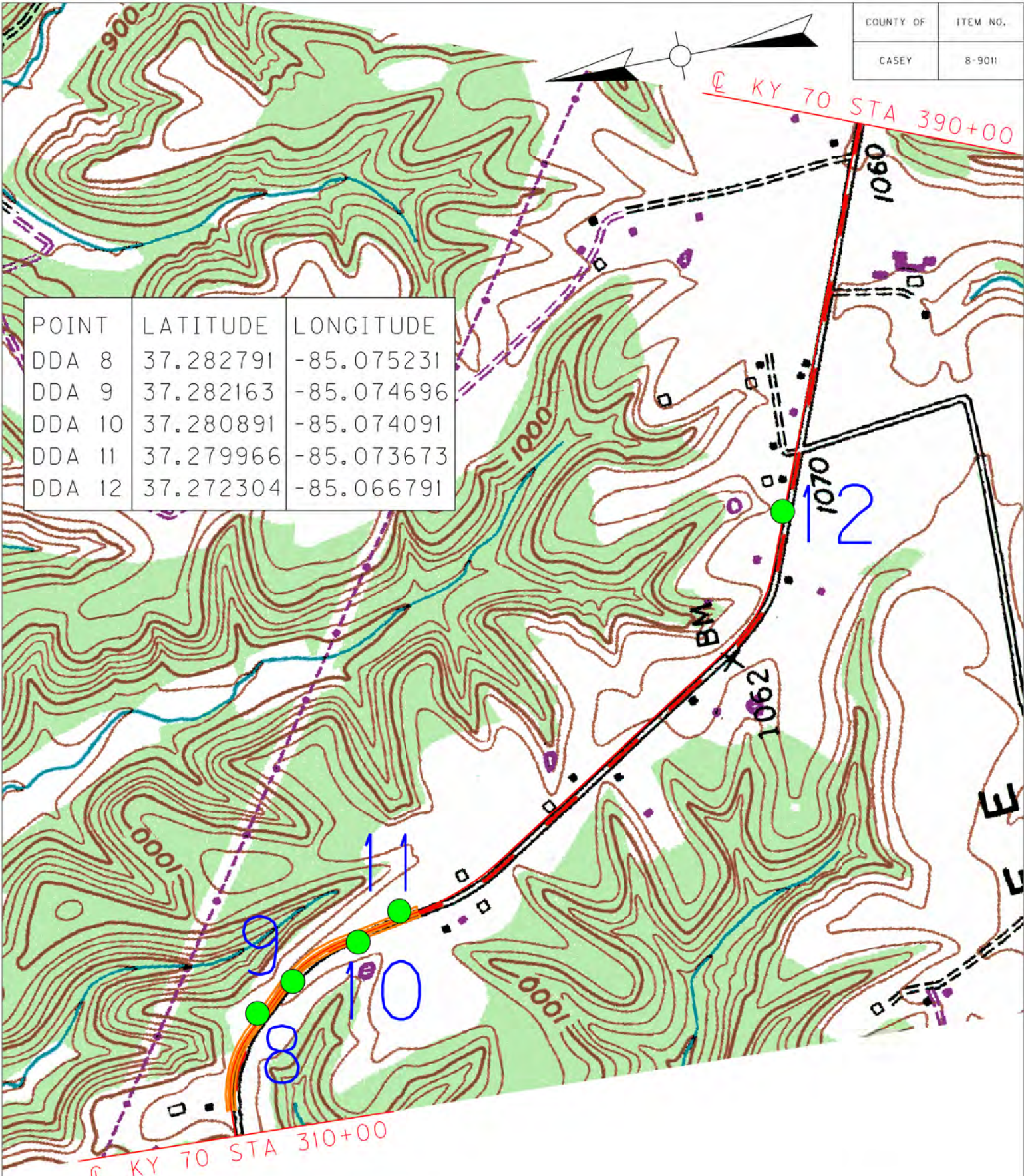


CASEY CO. - KY 70 eNOI  
 ● DDA

BEGIN  
 PROJECT

SCALE: 1"=800'  
 KY 70  
 eNOI  
 SHEET 6 OF 6

COUNTY OF	ITEM NO.
CASEY	8-9011



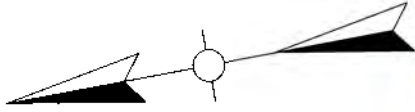
POINT	LATITUDE	LONGITUDE
DDA 8	37.282791	-85.075231
DDA 9	37.282163	-85.074696
DDA 10	37.280891	-85.074091
DDA 11	37.279966	-85.073673
DDA 12	37.272304	-85.066791

CASEY CO. - KY 70 eNOI  
● DDA

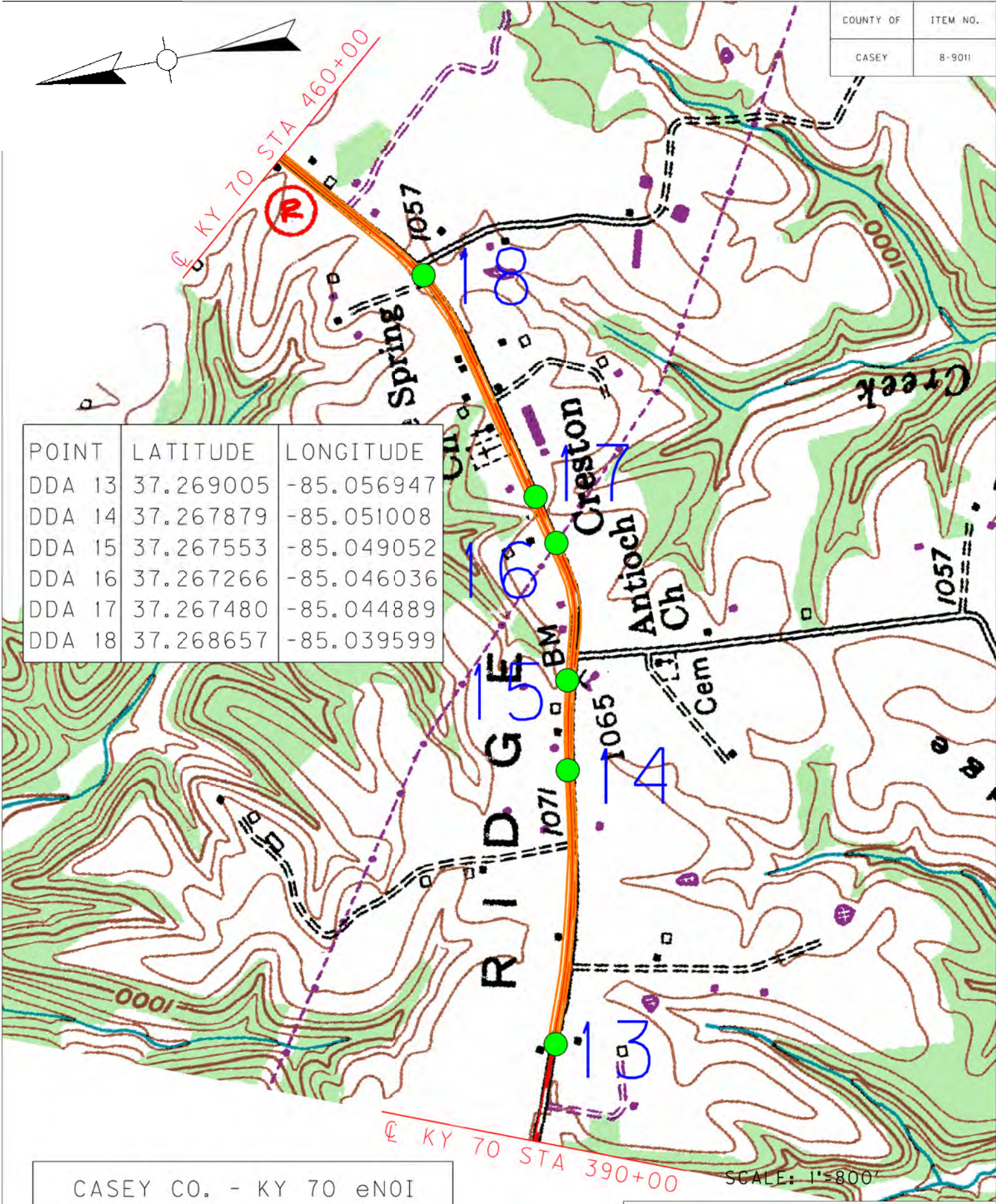
SCALE: 1"=800'

KY 70  
eNOI  
SHEET 2 OF 6

COUNTY OF	ITEM NO.
CASEY	8-9011



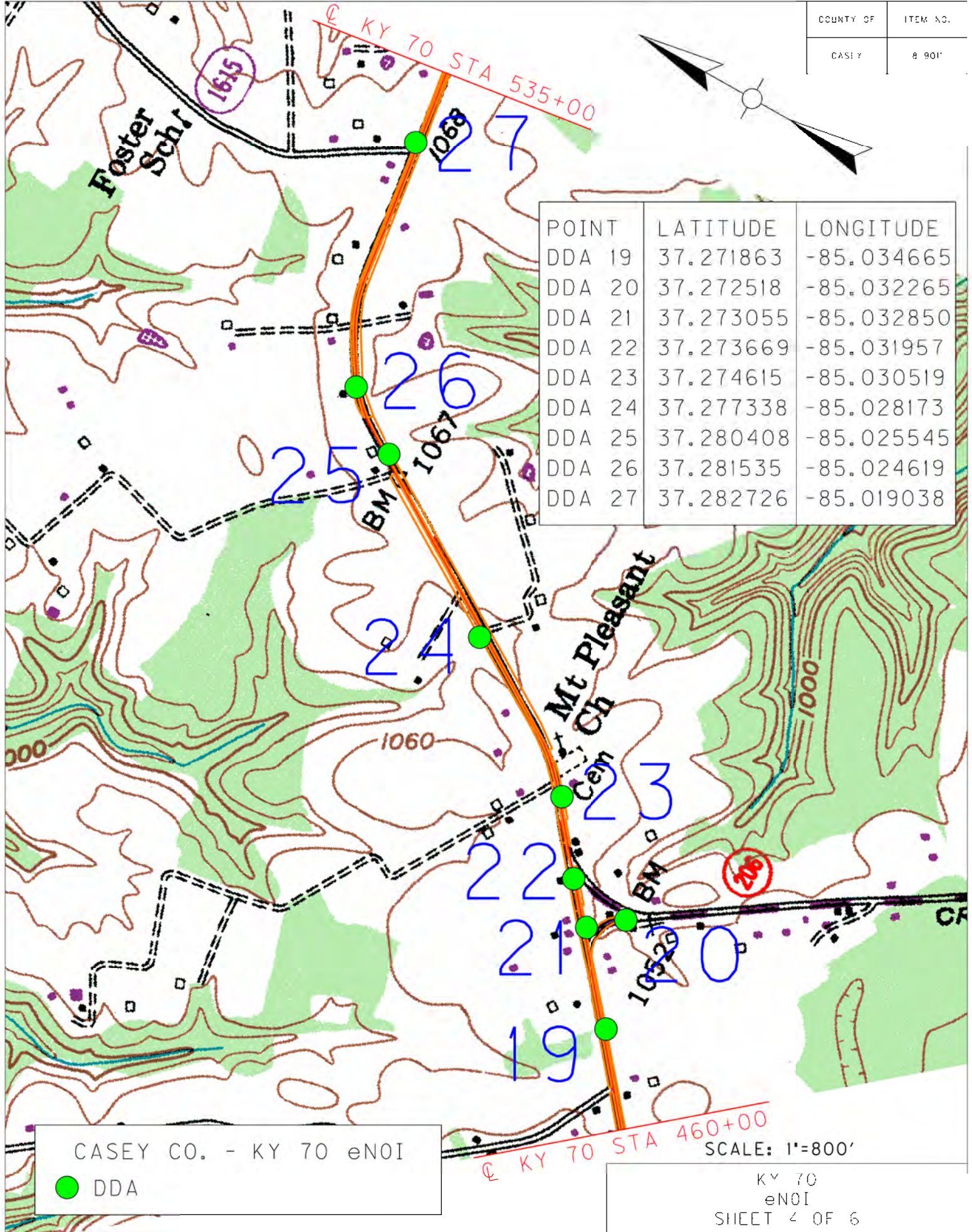
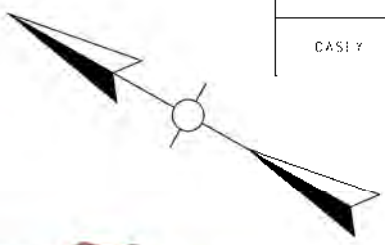
POINT	LATITUDE	LONGITUDE
DDA 13	37.269005	-85.056947
DDA 14	37.267879	-85.051008
DDA 15	37.267553	-85.049052
DDA 16	37.267266	-85.046036
DDA 17	37.267480	-85.044889
DDA 18	37.268657	-85.039599



CASEY CO. - KY 70 eNOI  
● DDA

SCALE: 1"=800'  
KY 70  
eNOI  
SHEET 3 OF 6

COUNTY OF	ITEM NO.
CASEY	8 901'

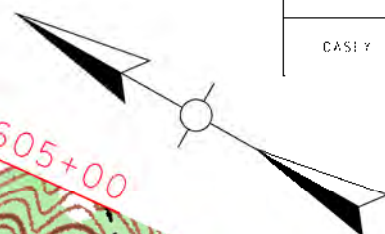


POINT	LATITUDE	LONGITUDE
DDA 19	37.271863	-85.034665
DDA 20	37.272518	-85.032265
DDA 21	37.273055	-85.032850
DDA 22	37.273669	-85.031957
DDA 23	37.274615	-85.030519
DDA 24	37.277338	-85.028173
DDA 25	37.280408	-85.025545
DDA 26	37.281535	-85.024619
DDA 27	37.282726	-85.019038

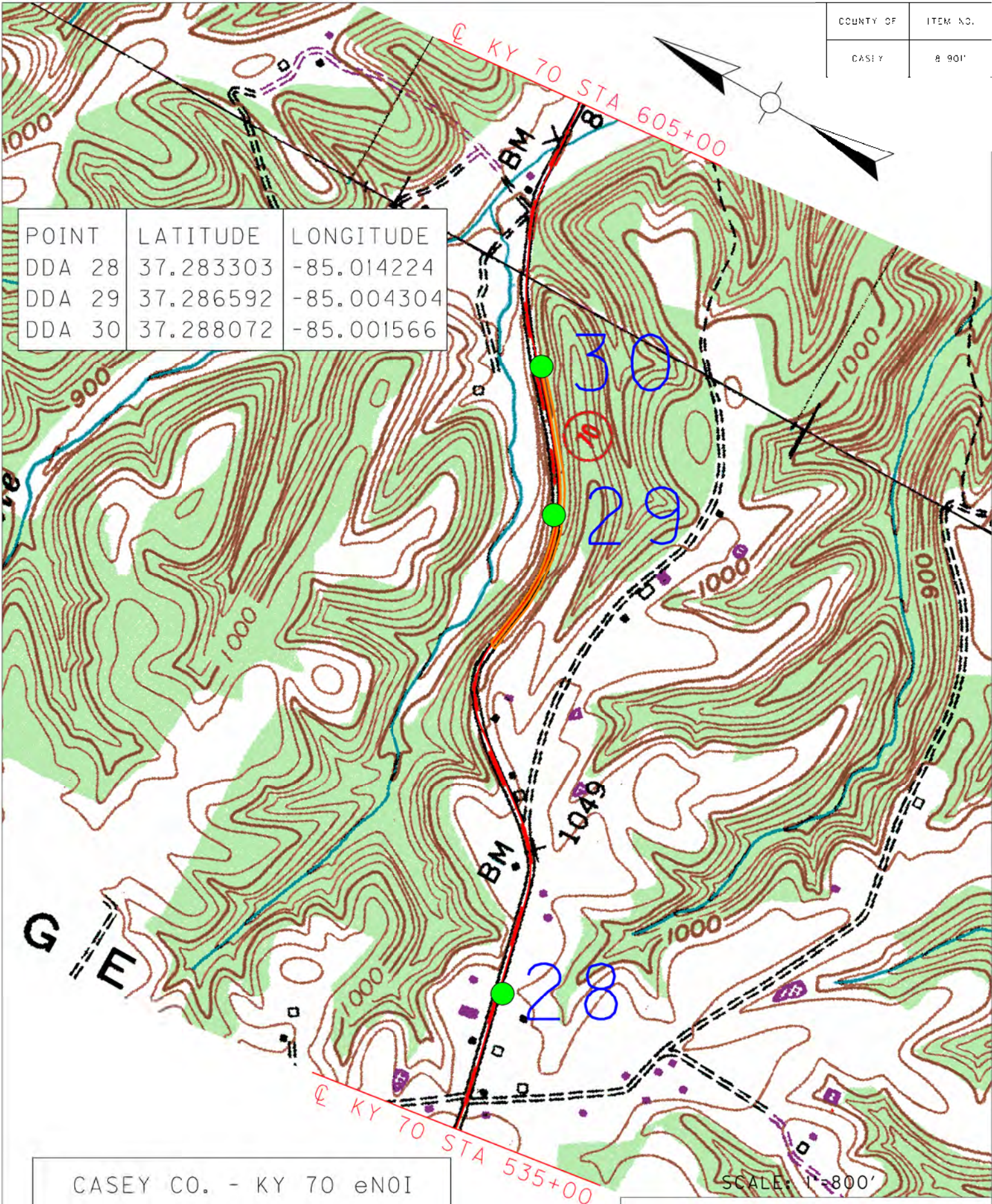
CASEY CO. - KY 70 eNOI  
 ● DDA

SCALE: 1"=800'  
 KY 70  
 eNOI  
 SHEET 4 OF 6

COUNTY OF	ITEM NO.
CASEY	8 901'



POINT	LATITUDE	LONGITUDE
DDA 28	37.283303	-85.014224
DDA 29	37.286592	-85.004304
DDA 30	37.288072	-85.001566



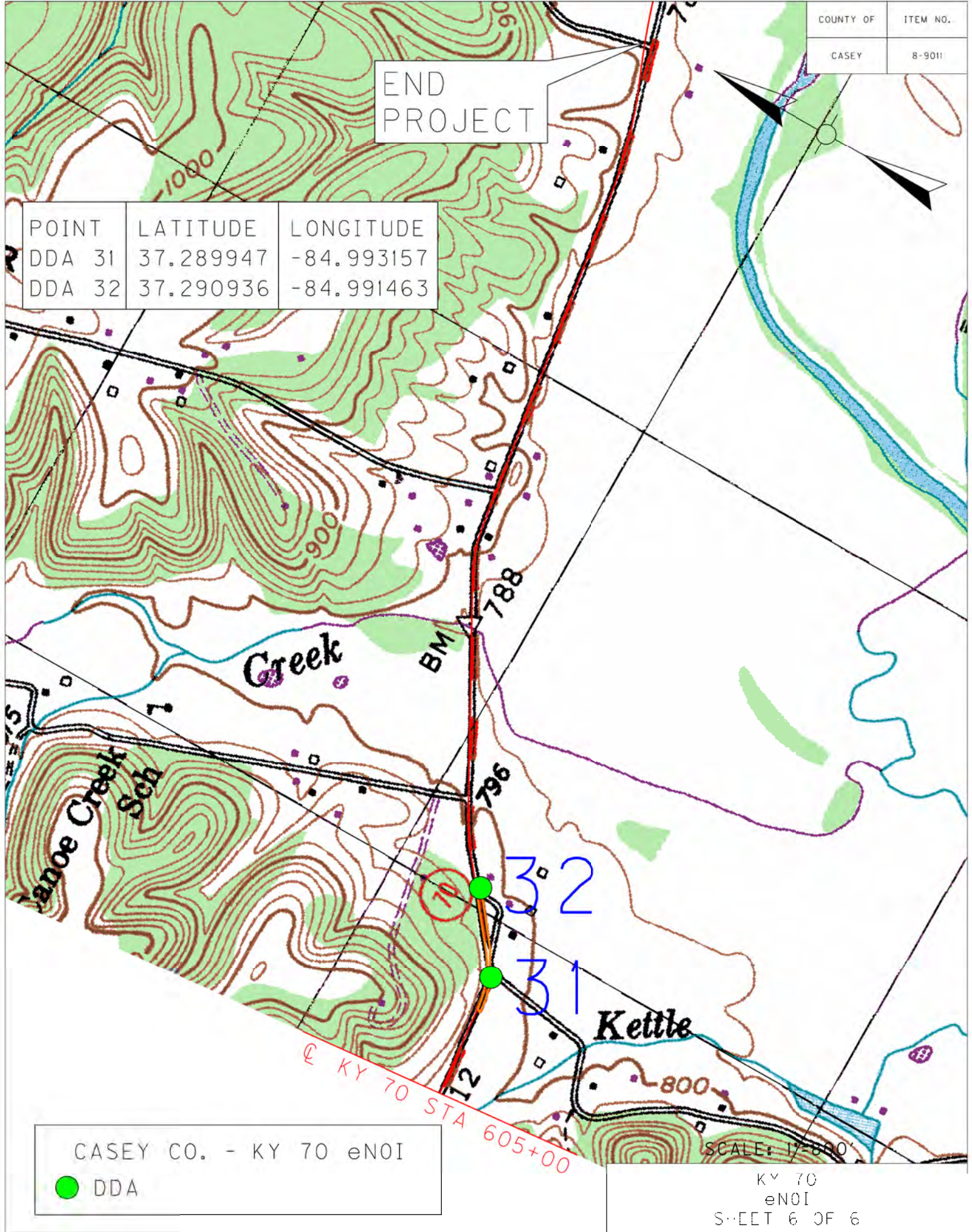
CASEY CO. - KY 70 eNOI  
● DDA

SCALE: 1"=800'  
KY 70  
eNOI  
SHEET 5 OF 6

COUNTY OF	ITEM NO.
CASEY	8-9011

END  
PROJECT

POINT	LATITUDE	LONGITUDE
DDA 31	37.289947	-84.993157
DDA 32	37.290936	-84.991463



CASEY CO. - KY 70 eNOI  
● DDA

SCALE: 1"=800'

KY 70  
eNOI  
SHEET 6 OF 6

12  
KY 70 STA 605+00

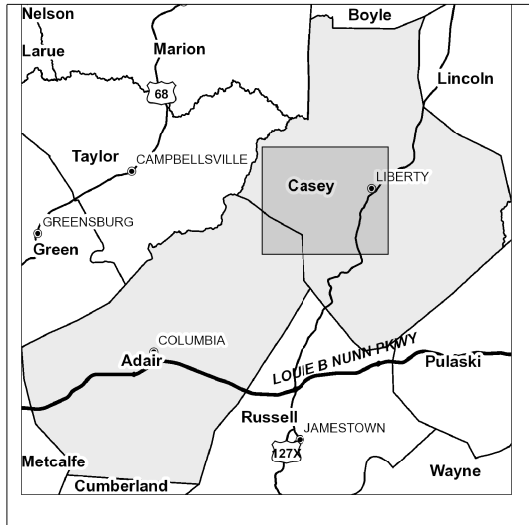
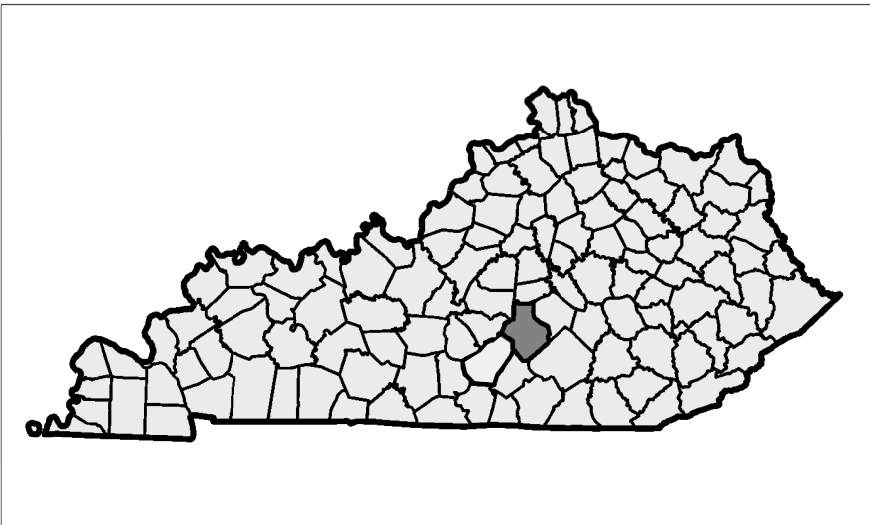
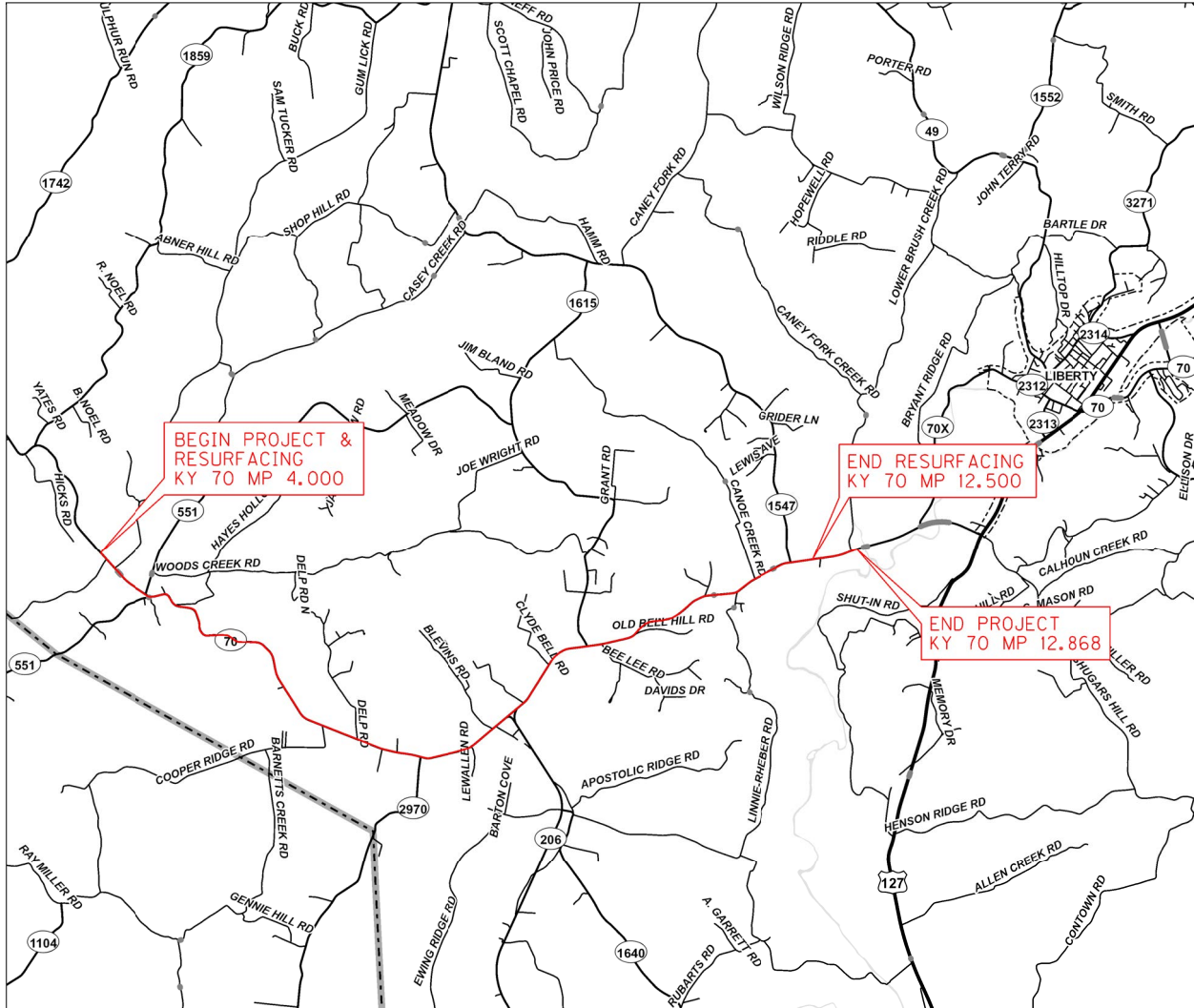


**Commonwealth of Kentucky**  
**DEPARTMENT OF HIGHWAYS**

PLANS OF  
 PROPOSED PROJECT

**CORRIDOR IMPROVEMENTS**  
**CASEY COUNTY**  
**KY 70**

COUNTY OF	ITEM NO.
CASEY	8-9011





KY 70  
GENERAL SUMMARY

COUNTY OF	ITEM NO.	FEDERAL NO.
CASEY	8-9011.00	5105 (047)

ITEM	DESCRIPTION	UNIT	TOTAL PROJECT
① 1	DGA BASE	TON	652
100	ASPHALT SEAL AGGREGATE	TON	69.1
103	ASPHALT SEAL COAT	TON	8.3
② 190	LEVELING & WEDGING PG64-22	TON	4,037
③ 212	CL2 ASPH BASE 1.00D PG64-22	TON	40
301	CL2 ASPH SURF 0.38D PG64-22	TON	7,856
④ 461	CULVERT PIPE-15 IN	LF	15
④ 462	CULVERT PIPE-18 IN	LF	76
④ 464	CULVERT PIPE-24 IN	LF	6
1310	REMOVE PIPE	LF	28
1432	SLOPED BOX OUTLET TYPE 1-15 IN	EACH	1
1433	SLOPED BOX OUTLET TYPE 1-18 IN	EACH	6
1726	SAFETY BOX INLET-18 IN SDB-1	EACH	6
1727	SAFETY BOX INLET-24 IN SDB-1	EACH	1
1728	SAFETY BOX INLET-18 IN DBL SDB-5	EACH	1
1987	DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	EACH	160
⑤ 2230	EMBANKMENT IN PLACE	CUYD	24
2355	GUARDRAIL-STEEL W BEAM-S FACE A	LF	115.00
2360	GUARDRAIL TERMINAL SECTION NO 1	EACH	3
2363	GUARDRAIL CONNECTOR TO BRIDGE END TY A	EACH	7
2367	GUARDRAIL END TREATMENT TYPE 1	EACH	11
2381	REMOVE GUARDRAIL	LF	7,537.50
2391	GUARDRAIL END TREATMENT TYPE 4A	EACH	1
2483	CHANNEL LINING CLASS II	TON	6
2562	TEMPORARY SIGNS	SQFT	282.00
2569	DEMOBILIZATION (CASEY KY 70 HSIP)	LS	1
⑥ 2575	DITCHING AND SHOULDERING	LF	27,922
2607	FABRIC-GEOTEXTILE CLASS 2 FOR PIPE	SQYD	152
2625	REMOVE HEADWALL	EACH	7
2650	MAINTAIN & CONTROL TRAFFIC (CASEY KY 70 HSIP)	LS	1
2671	PORTABLE CHANGEABLE MESSAGE SIGN	EACH	2
2676	MOBILIZATION FOR MILL & TEXT (CASEY KY 70 HSIP)	LS	1

- ① 11 TONS FOR THE REALIGNMENT OF KY 206 AT THE INTERSECTION WITH KY 70 AND 641 TONS FOR GUARDRAIL INSTALLATION.
- ② 746 TONS FOR THE SUPERELEVATION IMPROVEMENTS, 267 TONS FOR PAVEMENT REPAIR, AND 3024 TONS FOR THE OVERLAY.
- ③ 30 TONS FOR THE REALIGNMENT OF KY 206 AT THE INTERSECTION WITH KY 70 AND 10 TONS FOR THE PIPE EXTENSIONS. REFER TO THE CULVERT PIPE EXTENSION DETAIL FOR SPECIFICATIONS.
- ④ PIPE EXTENSION SHALL BE OF IN-KIND MATERIAL.
- ⑤ FOR THE SIDESLOPE GRADING DUE TO THE REALIGNMENT OF KY 206 AT THE INTERSECTION WITH KY 70.
- ⑥ 27,172 LF FOR CORRIDOR ROADSIDE IMPROVEMENTS AND 750 LF FOR GRADING SLOPES AROUND THE PROPOSED DRAINAGE STRUCTURES.



KY 70  
GENERAL SUMMARY

COUNTY OF	ITEM NO.	FEDERAL NO.
CASEY	8-9011.00	5105 (047)

ITEM	DESCRIPTION	UNIT	TOTAL PROJECT
⑦ 2677	ASPHALT PAVE MILLING & TEXTURING	TON	603
2697	EDGE LINE RUMBLE STRIPS	LF	84,588
2701	TEMP SILT FENCE	LF	21,564
2703	SILT TRAP TYPE A	EACH	18
2704	SILT TRAP TYPE B	EACH	18
2705	SILT TRAP TYPE C	EACH	18
2706	CLEAN SILT TRAP TYPE A	EACH	18
2707	CLEAN SILT TRAP TYPE B	EACH	18
2708	CLEAN SILT TRAP TYPE C	EACH	18
2726	STAKING (CASEY KY 70 HSIP)	LS	1
3262	CLEAN PIPE STRUCTURE	EACH	2
5950	EROSION CONTROL BLANKET	SQYD	18,207
5952	TEMP MULCH	SQYD	56,144
5953	TEMP SEEDING AND PROTECTION	SQYD	42,108
5963	INITIAL FERTILIZER	TON	1.0
5964	MAINTENANCE FERTILIZER	TON	0.6
5985	SEEDING AND PROTECTION	SQYD	18,207
5992	AGRICULTURAL LIMESTONE	TON	12
6406	SBM ALUM SHEET SIGNS .080 IN	SQFT	493.63
6407	SBM ALUM SHEET SIGNS .125 IN	SQFT	159.88
6410	STEEL POST TYPE 1	LF	1,141
⑧ 6510	PAVE STRIPING-TEMP PAINT-4 IN	LF	341,000
⑨ 6514	PAVE STRIPING-PERM PAINT-4 IN	LF	300
6542	PAVE STRIPING-THERMO-6 IN W	LF	84,480
6543	PAVE STRIPING-THERMO-6 IN Y	LF	55,380
6556	PAVE STRIPING-DUR TY 1-6 IN W	LF	720
6557	PAVE STRIPING-DUR TY 1-6 IN Y	LF	720
⑨ 6568	PAVE MARKING-THERMO STOP BAR-24 IN	LF	100
⑩ 6569	PAVE MARKING-THERMO CROSS-HATCH	SQFT	227
8100	CONCRETE-CLASS A	CUYD	9.59
8805	GUARDRAIL-BRIDGE CASE I	LF	50
21373ND	REMOVE SIGN	EACH	86
21802EN	G/R STEEL W BEAM-S FACE (7 FT POST)	LF	7,532.50

⑦ 211 TONS FOR THE SUPERELEVATION IMPROVEMENTS, 267 TONS FOR PAVEMENT REPAIR, 3 TONS FOR THE LONG. EDGE KEY OF THE TOP ASPH. BASE LAYER INTO THE EXISTING PAVEMENT FOR THE REALIGNMENT OF KY 206 AT THE INTERSECTION WITH KY 70, 12 TONS (TOTAL) FOR THE SIX EDGE KEYS REQUIRED FOR THE LEVELING & WEDGING OVERLAY, 60 TONS (TOTAL) FOR THE SIX EDGE KEYS REQUIRED FOR THE ASPHALT SURFACE OVERLAY, AND 50 TONS FOR THE RESURFACING ON AND ADJACENT TO BRIDGE 023B00027N.

⑧ FOR PROVIDING TEMPORARY CENTERLINE AND EDGE LINE STRIPING ON THE LEVELING & WEDGING USED FOR THE SUPERELEVATION IMPROVEMENTS AND THE OVERLAY AS WELL AS ON THE ASPHALT SURFACE.

⑨ FOR APPLICATION ON THE INTERSECTING ROADWAYS WITH EXISTING STRIPING/MARKINGS FOLLOWING THE CONSTRUCTION OF THE FINAL SURFACE COURSE.

⑩ WIDTH (X) TO BE 12 IN AND SPACING (Y) TO BE 10 FT.



KY 70  
GENERAL SUMMARY

COUNTY OF	ITEM NO.	FEDERAL NO.
CASEY	8-9011.00	5105 (047)

ITEM	DESCRIPTION	UNIT	TOTAL PROJECT
21819NN	FITTINGS	EACH	11
23229EC	HIGH FRICTION SURFACE TREATMENT	SQYD	16,585
23625EC	PAVE MARK THERMO-6 IN W CAT TRAXX	LF	55
24395EC	SAFETY BOX INLET-15 IN SDB-1	EACH	1
24575ES610	HEADWALL (RAISED CONCRETE HEADWALL)	EACH	1
26130ED	SLOPED AND MITERED HEADWALL-15 IN	EACH	1
26131ED	SLOPED AND MITERED HEADWALL-18 IN	EACH	1
24631EC	BARCODE SIGN INVENTORY	EACH	171
24861EC	PVC FOLD AND FORM PIPE LINER-15 IN	LF	64
24862EC	PVC FOLD AND FORM PIPE LINER-18 IN	LF	346
24863EC	PVC FOLD AND FORM PIPE LINER-24 IN	LF	32
⑪ 24970EC	ASPHALT MATERIAL FOR TACK NON-TRACKING	TON	60.2
10020NS	FUEL ADJUSTMENT	DOLL	18,681
10030NS	ASPHALT ADJUSTMENT	DOLL	46,921

⑪ 0.7 TONS FOR THE REALIGNMENT OF KY 206 AT THE INTERSECTION WITH KY 70, 1.5 TONS FOR THE SUPERELEVATION IMPROVEMENTS, 2.0 TONS FOR PAVEMENT REPAIR, 27.4 TONS FOR THE LEVELING & WEDGING OVERLAY, AND 28.6 TONS FOR THE ASPHALT SURFACE OVERLAY.

**SUPERELEVATION IMPROVEMENT SUMMARY**

Station		Width of Section (FT)	Length of Section (FT)	Runoff Length (FT)	Runout Length (FT)	Existing Superelevation	Proposed Superelevation	Asph. Pave. Mill & Text (Tons)	Asph. Material for Track Non-Tracking (Tons)	Leveling & Wedging (Tons)	Comments
Begin	End										
569+60	581+91	21	1231	169	N/A	1.4% LT	7.6% LT	116	1.1	426	Refer to the Superelevation Detail for a Transition Table.
581+91	587+95	21	604	51	51	4.6% RT	2.0% LT	95	0.4	320	Refer to the Superelevation Detail for a Transition Table.
<b>TOTALS</b>								<b>211 TONS</b>	<b>1.5 TONS</b>	<b>746 TONS</b>	

NOTES: These numbers are for estimate purposes only. Final locations and quantities will be determined by the Engineer in the field.

RESURFACING SUMMARY															
Begin		End		Width (FT)	Depth (IN)	Length (LF)	Asph. Pave. Mill & Text (Tons)	DGA Base (Tons)	Asph. Base (Tons)	Leveling & Wedging (Tons)	Asph. Surface (Tons)	Asph. Material for Tack Non-Tracking (Tons)	High-Friction Surface Treatment (SQYD)	Edgeline Rumble Strips (LF)	Comments
Mile Point	Station	Mile Point	Station												
4.00	211+20	4.23	223+55	21	1.25	1235	20				217.8	0.8		2347	
4.02	212+45	4.21	222+30	21	0.50	985	4			69	7228.1	26.3		77824	
4.28	226+15	12.04	635+75	21	1.25	40960	70								
4.31	227+40	12.02	634+50	21	0.50	40710	4			2808		25.5			Excludes the EB lane within the Superlevation Correction area
4.77	251+95	5.43	286+63	21	N/A	3468							8092		
8.96	472+87	8.96	473+22	Refer to Realignment Detail			3	11	30			0.7			KY 206 Realignment
10.65	562+30	11.34	598+70	21	N/A	3640					410	1.5	8493		
12.06	636+75	12.50	660+00	21	1.25	2325	20							4418	
12.08	638+00	12.48	658+75	21	0.50	2075	4			146		1.3			
<b>TOTALS</b>							<b>125 TONS</b>	<b>11 TONS</b>	<b>30 TONS</b>	<b>3024 TONS</b>	<b>7856 TONS</b>	<b>56.7 TONS</b>	<b>16585 SQYD</b>	<b>84588 LF</b>	

PAVEMENT REPAIR SUMMARY															
Begin		End		Width (FT)	Depth (IN)	Length (LF)	Asph. Pave. Mill & Text (Tons)	DGA Base (Tons)	Asph. Base (Tons)	Leveling & Wedging (Tons)	Asph. Surface (Tons)	Asph. Material for Tack Non-Tracking (Tons)	High-Friction Surface Treatment (SQYD)	Edgeline Rumble Strips (LF)	Comments
Mile Point	Station	Mile Point	Station												
4.80	253+30	4.81	253+80	10.5	1.25	50	4			4		0.1			Westbound Lane
5.83	307+82	5.88	310+36	10.5	1.25	254	20			20		0.1			Eastbound Lane
6.33	334+01	6.34	334+59	10.5	1.25	58	5			5		0.1			Westbound Lane
6.86	362+21	6.92	365+38	10.5	1.25	317	25			25		0.2			Westbound Lane
7.09	374+09	7.10	374+83	10.5	1.25	74	6			6		0.1			Westbound Lane
7.22	381+22	7.25	382+80	10.5	1.25	158	13			13		0.1			Westbound Lane
7.45	393+62	7.52	397+22	10.5	1.25	360	29			29		0.2			Westbound Lane
8.10	427+50	8.17	431+50	10.5	1.25	400	32			32		0.2			Westbound Lane
8.19	432+43	8.21	433+33	10.5	1.25	90	7			7		0.1			Eastbound Lane
8.36	441+41	8.39	442+99	10.5	1.25	158	13			13		0.1			Eastbound Lane
8.71	460+10	8.74	461+42	10.5	1.25	132	11			11		0.1			Westbound Lane
8.80	464+64	8.90	469+92	10.5	1.25	528	42			42		0.2			Eastbound Lane
8.93	471+50	8.95	472+56	10.5	1.25	106	9			9		0.1			Eastbound Lane
9.00	475+20	9.05	477+84	10.5	1.25	264	21			21		0.1			Eastbound Lane
9.03	476+78	9.08	479+42	10.5	1.25	264	21			21		0.1			Westbound Lane
9.76	515+27	9.78	516+38	10.5	1.25	111	9			9		0.1			Eastbound Lane
<b>TOTALS</b>							<b>267 TONS</b>	<b>0 TONS</b>	<b>0 TONS</b>	<b>267 TONS</b>	<b>0 TONS</b>	<b>2.0 TONS</b>	<b>0 SQYD</b>	<b>0 LF</b>	

PIPE REPLACEMENT & EXTENSION SUMMARY

Mile Point	Station	Pipe Size, Type	Existing			Proposed													Comments							
			Left Hwll	Right Hwll	Skew	Remove Headwall (EACH)	Remove Pipe (LF)	Pipe Extension Length (LF)	Fittings (EACH) <sup>5</sup>	Class A Concrete for Intermediate Anchor/Collar (CU YD) <sup>5</sup>	Culvert Pipe 15" (LF)	Culvert Pipe 18" (LF)	Culvert Pipe 24" (LF)	Culvert Pipe 30" (LF)	Headwall or Drainage Box	Ditching & Shouldering (LF)	Channel Lining (CI II (TON))	CL2 ASPH BASE 1.00D PG64-22 (TONS)								
						Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right							
4704	248+38	18" RCP	Concrete Headwall	Concrete Headwall		1	1	4	4	4	10	1	1.13		14					Sloped Box Outlet Type I - 18 IN	Sloped & Mitered Headwall - 18 IN	50			1.5	Construct 32 LF of 18" PVC Fold and Form Pipe Liner throughout.
4990	263+46	18" CMP	N/A	ELL Concrete Headwall		1	1	4	4	6	6		1.13		6					Safety Box Inlet - 18 IN SDB-1	Safety Box Inlet - 18 IN SDB-1	50			1.5	Construct 37 LF of 18" PVC Fold and Form Pipe Liner throughout.
5247	277+05	18" CMP	Concrete Headwall	ELL Concrete Headwall		1	1	4	4	6	6		1.13		6					Safety Box Inlet - 18 IN SDB-1	Safety Box Inlet - 18 IN SDB-1	50			1.5	Construct 29 LF of 18" PVC Fold and Form Pipe Liner throughout.
5669	299+32	18" CMP	Concrete Headwall	Catch Basin		1	1	4	4	4	4		1.13		4					Concrete Headwall (Raised)	Safety Box Inlet - 18 IN DBL SDB-5	50			1.5	Construct 55 LF of 18" PVC Fold and Form Pipe Liner throughout.
5839	308+28	18" CMP	N/A	N/A		37				4			1.13		4					Sloped Box Outlet Type I - 18 IN	Sloped Box Outlet Type I - 18 IN DBL SDB-5	50 *			1.5	Construct 41 LF of 18" PVC Fold and Form Pipe Liner throughout.
6917	365+24	18" RCP	Concrete Headwall	Concrete Headwall		22				6					6					Sloped Box Outlet Type I - 18 IN	Sloped Box Outlet Type I - 18 IN	50 *				Construct 28 LF of 18" PVC Fold and Form Pipe Liner throughout.
8840	466+74	18" RCP	Concrete Headwall	Concrete Headwall		25				4					8					Sloped Box Inlet - 18 IN SDB-1	Sloped Box Outlet Type I - 18 IN	50			50 *	Construct 33 LF of 18" PVC Fold and Form Pipe Liner throughout.
8967	473+48	18" RCP	Concrete Headwall	Concrete Headwall		24				4					8					Sloped Box Inlet - 18 IN SDB-1	Sloped Box Outlet Type I - 18 IN	50				Construct 32 LF of 18" PVC Fold and Form Pipe Liner throughout.
9034	477+00	18" RCP	Concrete Headwall	Concrete Headwall		23				4					10					Sloped Box Inlet - 18 IN SDB-1	Sloped Box Outlet Type I - 18 IN	50			1.5	Construct 29 LF of 18" PVC Fold and Form Pipe Liner throughout.
9137	482+43	15" RCP	Concrete Headwall	Concrete Headwall		23				4					10					Sloped Box Inlet - 15 IN SDB-1	Sloped Box Outlet Type I - 15 IN	50				Construct 33 LF of 15" PVC Fold and Form Pipe Liner throughout.
9716	513+03	15" RCP	Concrete Headwall	Concrete Headwall		26				5					5					Sloped & Mitered Headwall - 15 IN	Sloped & Mitered Headwall - 15 IN	50				Construct 31 LF of 15" PVC Fold and Form Pipe Liner throughout.
10039	530+07	24" RCP	Concrete Headwall	Concrete Headwall		30				6					6					Sloped & Mitered Headwall - 15 IN	Sloped & Mitered Headwall - 15 IN	50			2.0	Construct 32 LF of 24" PVC Fold and Form Pipe Liner throughout.



**Ditching & Shouldering Summary**

**Casey County**

**KY 70**

Notes: \* The "Figure References" noted below refer to the Figure number within the Ditching & Shouldering Detail Sheet that is the closest representation of the intended Ditching & Shouldering.  
 \*\* The Estimated Volumes of Excavation and Embankment are provided for informational purposes ONLY. The Department gives no guarantee to the accuracy of the estimated volumes. The Bidder must draw his/her own conclusion. Payment will be based on the Linear Footage of Ditching & Shouldering performed, regardless of the accuracy of the Estimated Volumes of Excavation and Embankment.

Side of Road	LOCATION				Length (LF)	Estimated Excavation Volume** (CU YD)	Estimated Embankment Volume** (CU YD)	Ditching & Shouldering Detail Sheet Figure Ref. *	Include DGA Wedge? (Yes/No)	DGA (TONS)	Asphalt Seal Coat (TON)	Asphalt Seal Aggregate (TON)	Channel Line or Cut Slope? (Yes/No)	Channel Lining Class II (TONS)	Geotex. Fabric Type IV (SQ YD)	Remarks
	Approx. BEGIN Station	Approx. BEGIN Milepoint	Approx. END Station	Approx. END Milepoint												
RT	286+10	5.419	289+30	5.479	320	47	36	Figure 10	No				No			W = 18" Maintain flowline at existing entrance and culvert pipes.
RT	289+85	5.490	293+25	5.554	340	0	50	Figure 4	No				No			W = 18" Maintain flowline at existing entrance and culvert pipes.
RT	310+90	5.888	320+45	6.069	955	141	141	Figure 9	No				No			W = 18" Maintain flowline at existing entrance and culvert pipes.
LT	311+10	5.892	374+95	7.101	6,385	946	709	Figure 9	No				No			W = 18" Maintain flowline at existing entrance and culvert pipes.
RT	396+25	7.505	427+60	8.098	3,135	464	348	Figure 9	No				No			W = 18" Maintain flowline at existing entrance and culvert pipes.
LT	396+95	7.518	428+75	8.120	3,180	471	471	Figure 9	No				No			W = 18" Maintain flowline at existing entrance and culvert pipes.
RT	427+60	8.098	437+90	8.294	1,030	0	153	Figure 4	No				No			W = 18" Maintain flowline at existing entrance and culvert pipes.
LT	428+75	8.120	436+95	8.276	820	0	121	Figure 4	No				No			W = 18" Maintain flowline at existing entrance and culvert pipes.

**Ditching & Shouldering Summary**

**Casey County**

**KY 70**

Notes: \* The "Figure References" noted below refer to the Figure number within the Ditching & Shouldering Detail Sheet that is the closest representation of the intended Ditching & Shouldering.  
 \*\* The Estimated Volumes of Excavation and Embankment are provided for informational purposes ONLY. The Department gives no guarantee to the accuracy of the estimated volumes. The Bidder must draw his/her own conclusion. Payment will be based on the Linear Footage of Ditching & Shouldering performed, regardless of the accuracy of the Estimated Volumes of Excavation and Embankment.

Side of Road	LOCATION				Length (LF)	Estimated Excavation Volume** (CU YD)	Estimated Embankment Volume** (CU YD)	Ditching & Shouldering Detail Sheet Figure Ref. *	Include DGA Wedge? (Yes/No)	DGA (TONS)	Asphalt Seal Coat (TON)	Asphalt Seal Aggregate (TON)	Channel Line or Cut Slope? (Yes/No)	Channel Lining Class II (TONS)	Geotex. Fabric Type IV (SQ YD)	Remarks
	Approx. BEGIN Station	Approx. BEGIN Milepoint	Approx. END Station	Approx. END Milepoint												
LT	439+60	8.326	462+25	8.755	2,265	336	336	Figure 9	No				No			Maintain flowline at existing entrance and culvert pipes.
RT	440+90	8.350	467+90	8.862	2,700	400	300	Figure 9	No				No			Maintain flowline at existing entrance and culvert pipes.
RT	486+15	9.207	516+90	9.790	3,075	456	456	Figure 9	No				No			Maintain flowline at existing entrance and culvert pipes.
LT	514+65	9.747	520+95	9.866	630	0	93	Figure 4	No				No			Maintain flowline at existing entrance and culvert pipes.
LT	520+95	9.866	526+70	9.975	575	85	85	Figure 9	No				No			Maintain flowline at existing entrance and culvert pipes.
RT	563+50	10.672	567+72	10.752	422	31	0	Figure 11	No				No			Clean ditch and side bank. Grade ditch to improve hydraulics but do not cut into side bank.
LT	605+70	11.472	619+10	11.725	1,340	199	199	Figure 9	No				No			Maintain flowline at existing entrance and culvert pipes.

**Summary of Items**

Ditching & Shouldering		LF		Asphalt Seal Coat		TONS		Channel Lining Class II		TONS	
DGA	0	TONS		Asphalt Seal Aggregate	0	TONS		Geotextile Fabric Type IV	0	TONS	SQ YD

**Guardrail Summary**

**County: CASEY**

**Route: KY 70**

**Notes:** Begin/End Milepoints are estimated to include the entire length of the Rail AND the End Treatments. The Engineer may adjust the proposed guardrail termini to ensure proper installation of the guardrail system.  
Existing guardrail removed from the project shall be delivered by the Contractor to the KYTC Maintenance Facility in Frankfort.

Proposed Guardrail to be Constructed										Existing Guardrail to be Removed				
Side of Road	Proposed BEGINNING Treatment Station	Approx. BEGIN Milepoint	Approx. END Station	Approx. END Milepoint	Proposed ENDING Treatment	Proposed Length (LF)	Number of Radius Rail	Remarks	Side of Road	Approx. BEGIN Station	Approx. BEGIN Milepoint	Approx. END Station	Approx. END Milepoint	Existing Length (LF)
LT	Terminal Section 1	221+70	223+70	4.237	Connector Type A	203.75	1		LT	221+70	4.199	223+70	4.237	200.00
RT	Type 1	221+85	223+70	4.237	Connector Type A	137.50			RT	222+70	4.218	223+70	4.237	100.00
LT	Connector Type A	226+10	227+95	4.317	Type 1	137.50			LT	226+10	4.282	227+10	4.301	100.00
LT	Type 1	261+35	288+30	5.460	Type 1	2,600.00			LT	261+75	4.957	287+80	5.451	2,612.50
LT	Type 1	562+10	596+90	11.305	Type 4A	3,403.75	1	Do not disturb mailboxes near 596+90.	LT	562+90	10.661	596+90	11.305	3,400.00
LT	Type 1	599+80	602+30	11.407	Terminal Section 1	207.50	2	End Treatment Type 1   125 LF of W Beam-S Face   25 LF of W Beam-S Face A   25 LF of Guardrail on Bridge, Case   32.5 LF of W Beam-S Face A (2 Radius Rail)   Terminal Section No. 1	LT	601+45	11.391	602+25	11.406	87.50
RT	Terminal Section 1	601+80	604+25	11.444	Type 1	207.50	2	Terminal Section No. 1   32.5 LF of W Beam-S Face A (2 Radius Rail)   25 LF of Guardrail on Bridge, Case   25 LF of W Beam-S Face A   125 LF of W Beam-S Face   End Treatment Type 1	RT	601+80	11.398	603+05	11.421	125.00
RT	Type 1	633+70	635+85	12.043	Connector Type A	175.00			RT	634+40	12.015	635+85	12.043	150.00
LT	Type 1	633+85	635+95	12.045	Connector Type A	162.50			LT	634+40	12.015	635+95	12.045	162.50
RT	Connector Type A	636+60	639+40	12.110	Type 1	237.50			RT	636+60	12.057	639+55	12.113	300.00
LT	Connector Type A	636+75	639+40	12.110	Type 1	225.00			LT	636+75	12.060	639+70	12.116	300.00

**Summary of Items**

Item Description	Quantity	Unit
G/R Steel W Beam-S Face (7 FT Post)	7,532.50	LF
Remove Guardrail	7,537.50	LF
End Treatment Type 1	11	EACH
End Treatment Type 2A	0	EACH
End Treatment Type 3	0	EACH
End Treatment Type 4A	1	EACH
Remove End Treatment Type 7	0	EACH
Terminal Section No. 1	3	EACH
Guardrail-Steel W Beam-S Face A	115.00	EACH
Delineator for Guardrail B/W	160	EACH
GR Connector to Bridge End Type A	7	EACH
GR Connector to Bridge End Type A-1	0	EACH
GR Connector to Bridge End Type C	0	EACH
GR Connector to Bridge End Type D	0	EACH
DGA	641	TONS
Asphalt Seal Coat	8.3	TONS
Asphalt Seal Aggregate	69.1	TONS
Guardrail-Bridge Case I	50	LF

Assembly ID	LT / RT	Approx Offset (FT)	Approx Station	Approx. Mile Point	Facing Traffic Traveling	MUTCD Code	Sign Description	Sign Text / Remarks	Sign Dimensions (in x in)	Casey County		KY 70		TOTAL Estimated Sign Post Length (LF)	Barcode Sign Inv. (EACH)
										Text/ Symbol Color	Background Color	Sheet Signs (SQ FT)	Sheet Signs (SQ FT)		
1	RT	15	221+70	4.199	EB	OM3-R	Object Marker Type 3 Right	For Guardrail End Treatment Type 1	12 x 36	Black	Yellow	XI	3.00		1
2	LT	15	227+95	4.317	WB	OM3-R	Object Marker Type 3 Right	For Guardrail End Treatment Type 1	12 x 36	Black	Yellow	XI	3.00		1
3	LT	24	240+30	4.551	WB	M3-4	West		24 x 12	Black	White	XI	2.00		1
4	LT	24	247+10	4.680	WB	M1-5	State Route Sign (1 or 2 digit)	70	24 x 24	Black	White	XI	4.00		1
5	RT	24	247+35	4.685	EB	M3-2	East		30 x 30	Black	Yellow	XI	6.25		1
6	LT	24	248+30	4.703	WB	M1-5	State Route Sign (1 or 2 digit)	70	24 x 12	Black	White	XI	2.00		1
7	RT	24	248+10	4.699	EB	W1-10R	Right Curve & Y Intersection		24 x 24	Black	White	XI	4.00		1
8	LT	24	250+80	4.750	WB	W1-10R	XX MPH (Advisory Speed)	XX *	36 x 36	Black	FL Yellow	XI	9.00		1
9	RT	24	252+50	4.782	EB	M2-1	Intersection		18 x 18	Black	FL Yellow	XI	2.25		1
10	LT	24	252+55	4.783	EB	M1-5a	State Route Sign (3 or 4 digit)	551	21 x 15	Black	White	XI	2.19		1
11	LT	24	253+25	4.796	EB	M2-2R	Side Road Right		30 x 24	Black	White	XI	5.00		1
12	LT	24	253+95	4.810	EB	W1-8R	Right Chevron		30 x 30	Black	Yellow	XI	6.25		1
13	LT	24	254+65	4.823	EB	W1-8R	Right Chevron		18 x 24	Black	FL Yellow	XI	3.00		1
14	LT	15	261+35	4.950	EB	W1-8R	Right Chevron		18 x 24	Black	FL Yellow	XI	3.00		1
15	LT	24	262+15	4.965	WB	OM3-1	Object Marker Type 3 Left	For Guardrail End Treatment Type 1	12 x 36	Black	Yellow	XI	3.00		1
16	RT	24	264+00	5.000	WB	R2-1	Speed Limit XX	35	24 x 30	Black	White	XI	5.00		1
17	RT	24	265+25	5.024	EB	D10-1	Mile Marker (1 digit)	5	10 x 18	White	Green	XI	1.25		1
18	LT	24	275+00	5.208	WB	D10-1	Mile Marker (1 digit)	5	10 x 18	White	Green	XI	1.25		1
19	LT	28	285+75	5.412	WB	W13-1P	XX MPH (Advisory Speed)	XX *	18 x 18	Black	FL Yellow	XI	2.25		1
20	LT	15	288+30	5.460	WB	W3-5	Speed Limit XX Ahead	35	36 x 36	White &	Yellow	XI	9.00		1
21	LT	24	291+65	5.524	WB	W8-14	Fallen Rocks		36 x 36	Black	Yellow	XI	9.00		1
22	RT	24	291+80	5.527	EB	OM3-R	Object Marker Type 3 Right	For Guardrail End Treatment Type 1	12 x 36	Black	Yellow	XI	3.00		1
23	LT	24	302+50	5.729	WB	W7-1a	Hill with % Grade	8%	36 x 36	Black	Yellow	XI	9.00		1
24	LT	24	303+50	5.748	EB	W11-8	Emergency Vehicle		30 x 30	Black	Yellow	XI	6.25		1
25	RT	24	306+50	5.805	WB	W13-1P	XX MPH (Advisory Speed)	XX *	18 x 18	Black	FL Yellow	XI	2.25		1
26	LT	24	309+20	5.856	WB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI	5.56		1
27	RT	24	309+20	5.856	EB	W11-8	Emergency Vehicle		48 x 48 x 36	Black	Yellow	XI	5.56		1
28	RT	24	316+80	6.000	WB	W13-1P	XX MPH (Advisory Speed)	XX *	30 x 30	Black	FL Yellow	XI	2.25		1
29	LT	24	327+50	6.203	WB	D10-1	Mile Marker (1 digit)	6	10 x 18	White	Green	XI	1.25		1
30	RT	24	342+30	6.483	WB	D10-1	Mile Marker (1 digit)	6	10 x 18	White	Green	XI	1.25		1
31	LT	24	348+45	6.599	EB	W13-1P	XX MPH (Advisory Speed)	XX *	18 x 18	Black	FL Yellow	XI	2.25		1
32	RT	24	353+30	6.691	EB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI	5.56		1
33	LT	24	365+50	6.922	EB	W13-1P	XX MPH (Advisory Speed)	XX *	18 x 18	Black	FL Yellow	XI	2.25		1
34	RT	24	369+60	7.000	EB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI	5.56		1
35	RT	24	369+75	7.003	WB	D10-1	Mile Marker (1 digit)	7	10 x 18	White	Green	XI	1.25		1
36	LT	24	376+90	7.138	EB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI	5.56		1
37	LT	24	393+00	7.443	EB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI	5.56		1

Assembly ID	LT / RT	Approx Offset (FT)	Approx Station	Approx. Mile Point	Facing Traffic Traveling	SIGN LOCATION			Sign Summary			Casey County			KY 70		TOTAL Estimated Sign Post Length (LF)	Barcode Sign Inv. (EACH)
						MUTCD Code	Sign Description	Sign Text / Remarks	Sign Dimensions (IN x IN)	Text/ Symbol Color	Background Color	Sheeting Type	SBM Alum Sheet Signs (SQ FT)	SBM Alum Sheet Signs (SQ FT)	# of Sign Posts	Estimated Length of 2" Post (FT)		
38	RT	24	394+30	7.468	WB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	White	1	13	13	1	1	
39	RT	24	408+50	7.737	WB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	White	1	13	13	1	1	
40	RT	24	414+85	7.857	EB	M1-5a	Junction State Route Sign (3 or 4 digit)	2970	21 x 15	Black	White	White	1	11	11	1	1	
41	LT	24	419+90	7.953	WB	M3-4	West		24 x 12	Black	White	White	1	10	10	1	1	
42	RT	24	420+60	7.966	EB	M1-5	State Route Sign (1 or 2 digit)		24 x 24	Black	White	White	1	10	10	1	1	
43	RT	28	420+60	7.966	EB	M1-5a	XX MPH (Advisory Speed)	XX *	18 x 18	Black	FL Yellow	White	1	11	11	1	1	
44	LT	24	421+45	7.982	NB KY 2970	M6-1R	Right Arrow		21 x 15	Black	White	White	1	11	11	1	1	
45	LT	24	422+00	7.992	WB	M1-5a	Horizontal Double Arrow	2970	24 x 24	Black	White	White	1	11	11	1	1	
46	RT	24	422+40	8.000	WB	M6-1L	Left Arrow		21 x 15	Black	White	White	1	11	11	1	1	
47	RT	24	423+10	8.013	EB	D10-1	Mile Marker (1 digit)		10 x 18	White	Green	Green	1	11	11	1	1	
48	LT	24	426+50	8.078	WB	M3-2	Mile Marker (1 or 2 digit)	8	10 x 18	White	Green	Green	1	11	11	1	1	
49	LT	24	429+45	8.134	WB	M1-5	East		24 x 12	Black	White	White	1	10	10	1	1	
50	LT	24	434+50	8.229	WB	M1-5	State Route Sign (1 or 2 digit)		24 x 24	Black	White	White	1	10	10	1	1	
51	LT	24	436+70	8.271	EB	M2-1	No Passing Zone		21 x 15	Black	White	White	1	11	11	1	1	
52	LT	24	452+20	8.564	EB	M1-5a	No Passing Zone		30 x 24	Black	White	White	1	11	11	1	1	
53	RT	24	453+35	8.586	WB	M1-5	No Passing Zone		18 x 18	Black	FL Yellow	White	1	11	11	1	1	
54	RT	24	465+20	8.811	EB	M2-1	Junction		21 x 15	Black	White	White	1	11	11	1	1	
55	LT	24	471+30	8.926	WB	M1-5a	State Route Sign (3 or 4 digit)	206	30 x 24	Black	White	White	1	11	11	1	1	
56	RT	24	471+80	8.936	EB	M3-4	West		24 x 12	Black	White	White	1	10	10	1	1	
57	LT	24	473+20	8.962	NB KY 206	M1-5a	State Route Sign (1 or 2 digit)	70	24 x 24	Black	White	White	1	11	11	1	1	
58	RT	24	473+30	8.964	NB KY 206	M6-1R	Right Arrow		21 x 15	Black	White	White	1	11	11	1	1	
59	RT	24	475+20	9.000	WB	M1-5	Horizontal Double Arrow		24 x 24	Black	White	White	1	11	11	1	1	
60	RT	45	478+50	9.063	NB KY 206	D10-1	Mile Marker (1 digit)	9	10 x 18	White	Green	Green	1	11	11	1	1	
61	LT	24	478+70	9.066	NB KY 206	R1-1	Stop		10 x 18	White	Green	Green	1	11	11	1	1	
62	LT	24	479+05	9.073	WB	M1-5	State Route Sign (1 or 2 digit)	70	48 x 48	Black	White	Red	2	13	26	1	1	
63	RT	24	481+30	9.116	WB	M6-4	Horizontal Double Arrow		21 x 15	Black	White	White	1	11	11	1	1	
64	RT	24	482+60	9.140	EB	M1-5a	State Route Sign (3 or 4 digit)	206	30 x 24	Black	White	White	1	11	11	1	1	
65	LT	24	485+90	9.203	WB	M6-1L	Left Arrow		21 x 15	Black	White	White	1	11	11	1	1	
66	RT	24	493+73	9.351	WB	M6-1L	Left Arrow		21 x 15	Black	White	White	1	11	11	1	1	
67	LT	24	502+00	9.508	EB	M3-2	East		18 x 18	Black	FL Yellow	White	1	11	11	1	1	
68	RT	24	507+10	9.604	EB	M1-5	State Route Sign (1 or 2 digit)	70	24 x 24	Black	White	White	1	10	10	1	1	
69	LT	24	522+30	9.892	WB	M2-1	Junction		21 x 15	Black	White	White	1	11	11	1	1	
70	RT	24	523+30	9.911	EB	M1-5a	XX MPH (Advisory Speed)	XX *	18 x 18	Black	FL Yellow	White	1	11	11	1	1	

Assembly ID	LT / RT	Approx Offset (FT)	Approx Station	Approx. Mile Point	Facing Traffic Traveling	MUTCD Code	Sign Description	Sign Text / Remarks	Sign Dimensions (IN x IN)	Casey County		KY 70		TOTAL Estimated Sign Post Length (LF)	Barcode Sign Inv. (EACH)	
										Text/ Symbol Color	Background Color	Sheeting Type	SBM Alum Sheet Signs (SQ FT)			SBM Alum Sheet Signs (SQ FT)
71	LT	24	527+35	9.988	WB	R2-1	Speed Limit XX	55	24 x 30	Black	White	Xi	5.00	12	12	1
72	RT	24	527+50	9.991	EB	R2-1	Speed Limit XX	55	24 x 30	Black	White	Xi	5.00	12	12	1
73	RT	24	528+00	10.000	WB	D10-2	Mile Marker (2 digit)	10	10 x 27	White	Green	Xi	1.88	12	12	1
74	LT	24	528+50	10.009	WB	D10-2	Mile Marker (2 digit)	10	10 x 27	White	Green	Xi	1.88	12	12	1
75	RT	24	529+00	10.019	EB	M3-4	West	24 x 12	24 x 12	Black	White	Xi	2.00	10	10	1
76	RT	24	529+40	10.027	EB	M1-5	State Route Sign (1 or 2 digit)	70	24 x 24	Black	White	Xi	4.00	11	11	1
77	LT	24	529+70	10.032	WB	M1-5	State Route Sign (3 or 4 digit)	1615	30 x 24	Black	White	Xi	5.00	11	11	1
78	RT	24	531+00	10.057	EB	M6-1R	Right Arrow	21 x 15	21 x 15	Black	White	Xi	2.19	11	11	1
79	RT	24	533+45	10.103	WB	M3-2	East	24 x 12	24 x 12	Black	White	Xi	2.00	10	10	1
80	LT	24	535+20	10.136	WB	M1-5	State Route Sign (1 or 2 digit)	70	24 x 24	Black	White	Xi	4.00	11	11	1
81	LT	24	543+15	10.287	EB	M2-1	Junction	1615	21 x 15	Black	White	Xi	2.19	11	11	1
82	RT	24	544+65	10.315	WB	M1-5a	State Route Sign (3 or 4 digit)	1615	30 x 24	Black	White	Xi	5.00	11	11	1
83	RT	24	547+50	10.369	EB	M1-4-3	No Passing Zone	48 x 48 x 36	48 x 48 x 36	Black	Yellow	Xi	5.56	13	13	1
84	RT	24	557+30	10.555	EB	W1-3-1P	No Passing Zone	48 x 48 x 36	48 x 48 x 36	Black	Yellow	Xi	2.25	13	13	1
85	RT	24	558+90	10.585	EB	W8-14	Fallen Rocks	XX *	18 x 18	Black	FL Yellow	Xi	9.00	14	14	1
86	LT	15	562+10	10.646	EB	W7-1a	Hill with % Grade	6%	36 x 36	Black	Yellow	Xi	9.00	14	14	1
87	LT	24	569+80	10.792	WB	OM3-1	Object Marker Type 3 Left	For Guardrail End Treatment Type 1	12 x 36	Black	Yellow	Xi	3.00			1
88	LT	24	570+90	10.813	WB	W2-2L	Side Road Left		30 x 30	Black	Yellow	Xi	6.25	13	13	1
89	RT	24	580+80	11.000	WB	W1-3-1P	XX MPH (Advisory Speed)	XX *	18 x 18	Black	FL Yellow	Xi	2.25	13	13	1
90	RT	24	587+10	11.119	EB	D10-2	Mile Marker (2 digit)	11	10 x 27	White	Green	Xi	1.88	12	12	1
91	LT	24	590+70	11.188	EB	OM2-2	Mile Marker (2 digit)	11	10 x 27	White	Green	Xi	1.88	12	12	1
92	LT	24	591+70	11.206	EB	W1-2R	Right Curve	XX	36 x 36	Black	FL Yellow	Xi	9.00	13	13	1
93	LT	24	592+70	11.225	EB	W1-8R	Right Chevron	XX	18 x 18	Black	FL Yellow	Xi	2.25	13	13	1
94	RT	24	595+95	11.287	EB	W1-8R	Right Chevron	XX	18 x 24	Black	FL Yellow	Xi	3.00	14	14	1
95	LT	24	596+90	11.305	WB	W1-2aR	Right Curve XX	XX	36 x 36	Black	FL Yellow	Xi	9.00	14	14	1
96	LT	15	599+80	11.360	EB	OM3-R	Object Marker Type 3 Right	For Guardrail End Treatment Type 4A	12 x 36	Black	Yellow	Xi	3.00			1
97	LT	24	600+70	11.377	WB	OM3-L	Object Marker Type 3 Left	For Guardrail End Treatment Type 1	12 x 36	Black	Yellow	Xi	3.00			1
98	LT	18	601+50	11.392	EB	W13-1P	XX MPH (Advisory Speed)	XX *	18 x 18	Black	FL Yellow	Xi	2.25	10	10	1
99	RT	18	602+00	11.402	EB	OM2-2V	Object Marker Type 2	XX *	6 x 12	n/a	Yellow	Xi	0.50	10	10	1
100	LT	18	602+15	11.404	WB	OM2-2V	Object Marker Type 2		6 x 12	n/a	Yellow	Xi	0.50	10	10	1
101	RT	18	602+35	11.408	WB	OM2-2V	Object Marker Type 2		6 x 12	n/a	Yellow	Xi	0.50	10	10	1
102	LT	24	603+60	11.432	EB	OM2-2V	Object Marker Type 2		48 x 48 x 36	Black	Yellow	Xi	5.56	13	13	1
103	RT	15	604+25	11.444	WB	W14-3	No Passing Zone	For Guardrail End Treatment Type 1	12 x 36	Black	Yellow	Xi	3.00			1
104	LT	24	604+80	11.455	WB	OM3-L	Object Marker Type 3 Left	For Guardrail End Treatment Type 1	12 x 36	Black	Yellow	Xi	3.00			1

Assembly ID	LT / RT	Approx Offset (FT)	Approx Station	Approx. Mile Point	Fading Traffic Traveling	MUTCD Code	Sign Description	Sign Text / Remarks	Sign Dimensions (in x in)	Casey County			KY 70		# of Sign Posts	Estimated Length of 2" Post (FT)	TOTAL Estimated Sign Post Length (LF)	Barcode Sign Inv. (EACH)
										Text/ Symbol Color	Background Color	Sheeting Type	SBM Alum Sheet Signs 0.080 IN	SBM Alum Sheet Signs 0.125 IN				
105	RT	24	605+75	11.473	EB	W13-1P	XX MPH (Advisory Speed)	XX *	18 x 18	Black	FL Yellow	Yellow	Yellow	2.25	1	13	13	1
106	RT	24	606+10	11.479	WB	W14-3	No Passing Zone		48 x 48 x 36	Black	FL Yellow-Green	Yellow	Yellow	5.56	1	13	13	1
107	RT	24	608+00	11.515	EB	S3-1	School Bus Stop Ahead		36 x 36	Black	FL Yellow-Green	White	White	9.00	1	14	14	1
108	LT	24	617+30	11.691	WB	W13-1P	XX MPH (Advisory Speed)	XX *	18 x 18	Black	FL Yellow	White	White	2.25	1	12	12	1
109	RT	24	633+60	12.000	WB	D10-2	Mile Marker (2 digit)	12	10 x 27	White	Green	Green	Green	1.88	1	12	12	1
110	RT	15	633+70	12.002	EB	OM3-R	Object Marker Type 3 Right	For Guardrail End Treatment Type 1	12 x 36	Black	Yellow	Yellow	Yellow	3.00	1			1
111	LT	19	633+85	12.005	EB	OM3-L	Object Marker Type 3 Left	For Guardrail End Treatment Type 1	12 x 36	Black	Yellow	Yellow	Yellow	3.00	1			1
112	RT	18	635+70	12.040	EB	OM2-2V	Object Marker Type 2		6 x 12	n/a	Yellow	Yellow	Yellow	0.50	1	10	10	1
113	LT	18	635+75	12.041	EB	OM2-2V	Object Marker Type 2		6 x 12	n/a	Yellow	Yellow	Yellow	0.50	1	10	10	1
114	RT	18	636+80	12.061	WB	OM2-2V	Object Marker Type 2		6 x 12	n/a	Yellow	Yellow	Yellow	0.50	1	10	10	1
115	LT	18	636+85	12.062	WB	OM2-2V	Object Marker Type 2		6 x 12	n/a	Yellow	Yellow	Yellow	0.50	1	10	10	1
116	LT	15	639+40	12.110	WB	OM3-R	Object Marker Type 3 Right	For Guardrail End Treatment Type 1	12 x 36	Black	Yellow	Yellow	Yellow	3.00	1			1
117	RT	15	639+40	12.110	WB	OM3-L	Object Marker Type 3 Left	For Guardrail End Treatment Type 1	12 x 36	Black	Yellow	Yellow	Yellow	3.00	1			1
118	RT	24	640+10	12.123	EB	M2-1	Junction		21 x 15	Black	White	White	White	2.19	1	11	11	1
119	LT	24	644+15	12.200	WB	M3-4	State Route Sign (3 or 4 digit) West	1547	30 x 24	Black	White	White	White	5.00	1	11	11	1
120	RT	24	645+00	12.216	EB	M1-5	State Route Sign (1 or 2 digit)	70	24 x 24	Black	White	White	White	4.00	1	10	10	1
121	RT	24	645+70	12.229	SB KY 1547	M6-11	Left Arrow	1547	30 x 24	Black	White	White	White	5.00	1	11	11	1
122	LT	28	646+60	12.246	WB	M1-5a	State Route Sign (1 or 2 digit)	1547	21 x 15	Black	White	White	White	2.19	1	11	11	1
123	LT	24	646+60	12.246	WB	M6-1R	Right Arrow		21 x 15	Black	White	White	White	2.19	1	11	11	1
124	RT	24	647+50	12.263	EB	W13-1P	XX MPH (Advisory Speed)	XX *	18 x 18	Black	FL Yellow	White	White	2.25	1	11	11	1
125	LT	24	652+00	12.348	WB	M3-2	East		24 x 12	Black	White	White	White	2.00	1	10	10	1
126	LT	24	654+00	12.386	EB	M2-1	State Route Sign (1 or 2 digit)	70	24 x 24	Black	White	White	White	4.00	1	10	10	1
127	LT	24	654+40	12.394	WB	M1-5a	State Route Sign (3 or 4 digit)	1547	30 x 24	Black	White	White	White	5.00	1	11	11	1
128	LT	24	672+00	12.727	WB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	Yellow	Yellow	5.56	1	13	13	1
129	RT	24	672+25	12.732	EB	R2-1	Speed Limit XX	55	24 x 30	Black	White	White	White	5.00	1	12	12	1
130	RT	24	674+00	12.765	EB	W8-13	Bridge Ices Before Road		36 x 36	Black	Yellow	Yellow	Yellow	9.00	1	14	14	1

Summary of Items		
SBM Alum Sheet Signs 0.080 INCH	493.63	SQ FT
SBM Alum Sheet Signs 0.125 INCH	159.88	SQ FT
Barcode Sign Inventory	171	EACH
Remove Sign	86	EACH

Summary of Items		
Steel Post -Type 1	1141	LF
GMSS Type D	0	EACH
GMSS Type D (surface Mount)	0	EACH
Class A Concrete for Signs	0	CU YD

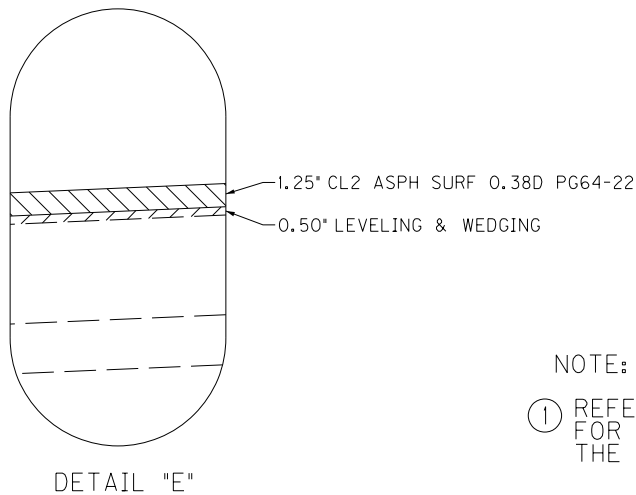
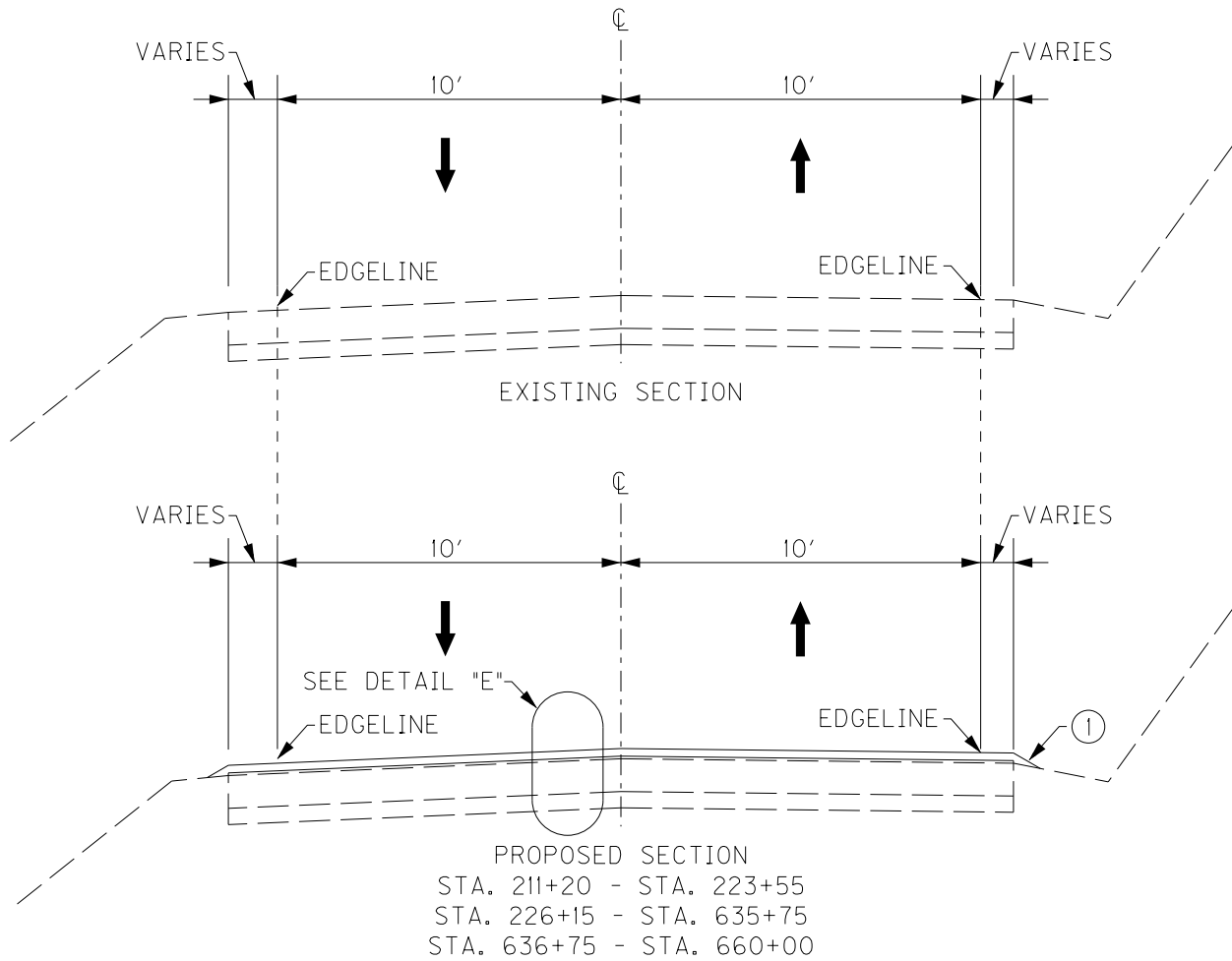
\* Necessary of revision to the Advisory Speed Plaque and resulting "XX" Advisory Speed to be determined by Engineer by Ball Banking.

Remove Sign Summary					
Approx. Location		Sign Details	Approx. Location		Sign Details
Station	LT / RT		Station	LT / RT	
247+70	LT	Speed Limit 35	482+50	RT	Adv. Speed Plaque (w/ LT Curve) *
248+10	RT	Adv. Speed Plaque (w/ RT Turn) *	482+55	RT	No Passing Zone
249+80	LT	Side Road Right	485+85	LT	JCT w/ KY 206
252+20	RT	Side Road Right	494+85	LT	Congested Area
252+65	LT	JCT w/ KY 551	503+45	LT	No Passing Zone
259+95	LT	Speed Limit 35	508+75	RT	Adv. Speed Plaque (w/ RT Curve) *
265+05	RT	Adv. Speed Plaque (w/ RT Windy Road) *	524+40	LT	Adv. Speed Plaque (w/ LT Curve) *
289+20	LT	Fallen Rocks	524+90	RT	JCT w/ KY 1615
290+95	LT	Slippery When Wet	527+35	LT	Speed Limit 55
291+70	RT	Emergency Vehicle	527+50	RT	Speed Limit 55
299+05	LT	Side Road Right	528+50	RT	Mile Marker 10
302+50	RT	Adv. Speed Plaque (w/ RT Windy Road) *	529+50	RT	KY 70 w/ Double Horizontal Arrow
303+35	LT	No Passing Zone	529+70	LT	KY 1615 w/ Right Arrow
307+05	RT	No Passing Zone	538+00	LT	JCT w/ KY 1615
309+15	RT	Adv. Speed Plaque (w/ RT Curve) *	544+35	LT	No Passing Zone
309+20	LT	Emergency Vehicle	549+50	RT	Adv. Speed Plaque (w/ LT Windy Road) *
317+85	RT	Mile Marker 6	561+20	RT	Fallen Rocks
327+60	LT	Adv. Speed Plaque (w/ LT Curve) *	566+25	LT	Side Road Left
342+30	RT	No Passing Zone	570+90	LT	Adv. Speed Plaque (w/ LT Reverse Curve) *
348+45	LT	No Passing Zone	585+40	RT	School Bus Stop Ahead
353+50	RT	Adv. Speed Plaque (w/ LT Curve) *	600+70	LT	Adv. Speed Plaque (w/ LT Curve) *
368+85	RT	No Passing Zone	604+05	LT	Object Marker Type 3
377+50	LT	No Passing Zone	604+40	RT	Object Marker Type 3
408+50	RT	No Passing Zone	605+40	RT	Object Marker Type 3
414+85	RT	JCT w/ KY 2970	605+75	LT	No Passing Zone
420+70	RT	Adv. Speed Plaque (w/ LT Curve) *	605+75	RT	Adv. Speed Plaque (w/ LT Curve @ Y) *
421+40	LT	West w/ KY 70 w/ Left Arrow	608+40	RT	No Passing Zone
421+45	LT	East w/ KY 70 w/ Right Arrow	610+05	RT	School Bus Stop Ahead
423+55	RT	Mile Marker 8	610+90	LT	Fallen Rocks
426+20	LT	JCT w/ KY 2970	619+80	LT	Adv. Speed Plaque (w/ RT Curve @ Y) *
430+10	LT	Adv. Speed Plaque (w/ RT Curve) *	629+05	LT	No Passing Zone
436+70	LT	No Passing Zone	637+30	RT	Mile Marker 12
448+80	RT	Congested Area	641+00	RT	JCT w/ KY 1547
453+35	LT	No Passing Zone	645+70	RT	KY 70 w/ Double Horizontal Arrow
454+45	RT	No Passing Zone	648+95	LT	KY 1547 w/ Right Arrow
465+10	RT	JCT w/ KY 206	649+60	LT	Adv. Speed Plaque (w/ LT Curve) *
472+10	LT	KY 70 w/ Double Horizontal Arrow	653+45	LT	Side Road Right
474+05	RT	KY 206 w/ Right Arrow	654+65	LT	JCT w/ KY 1547
474+05	RT	STOP	656+85	LT	No Passing Zone
476+35	RT	Mile Marker 9	657+00	RT	No Passing Zone
478+40	RT	STOP	672+00	LT	Speed Limit 55
478+70	LT	KY 70 w/ Double Horizontal Arrow	672+25	RT	Speed Limit 55
480+75	LT	KY 206 w/ Left Arrow	673+10	RT	Bridge Ices Before Road

\* Removal of the Advisory Speed Plaque is dependent on the results of the Ball Bank confirmation. Engineer to make final determination on removal.

COUNTY OF	ITEM NO.
CASEY	8-9011.00

# RESURFACING DETAIL

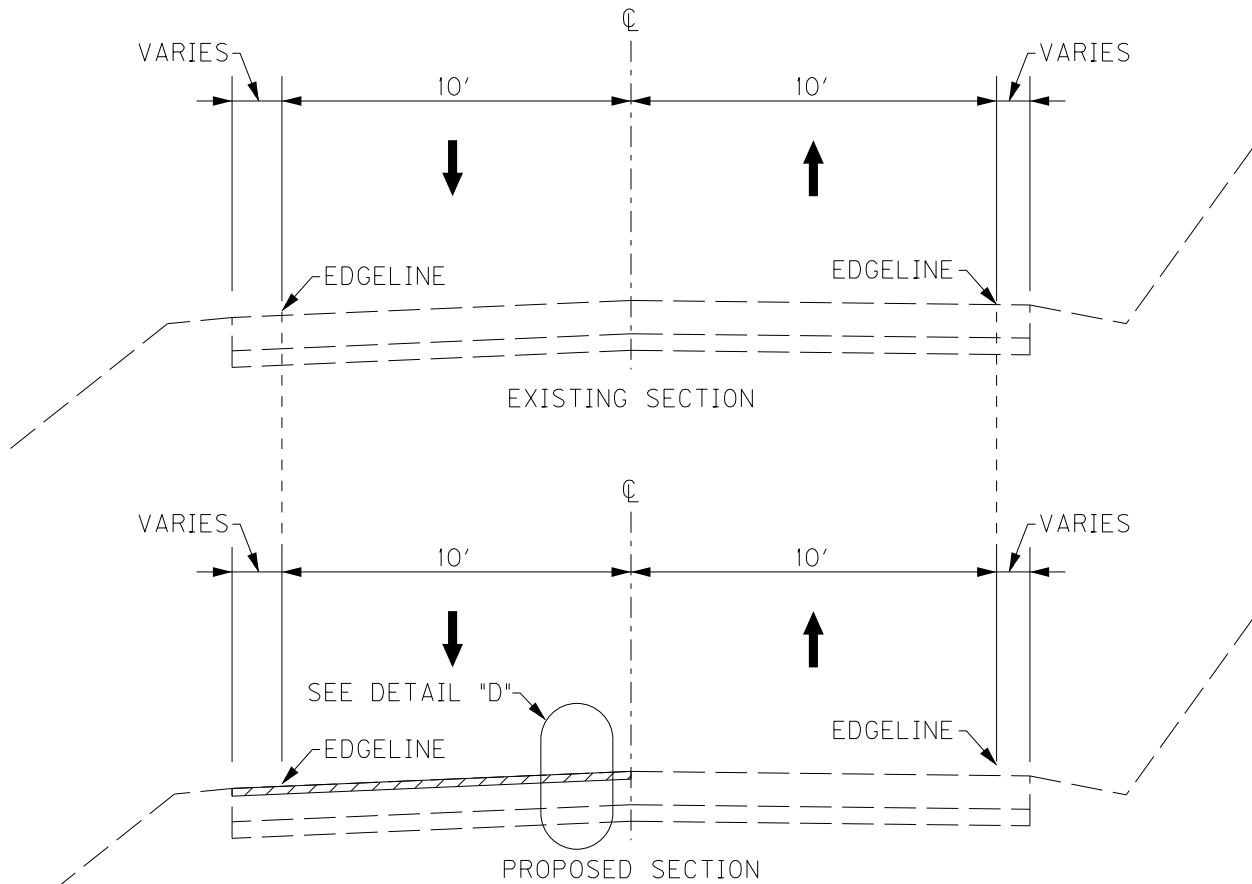


NOTE:  
 ① REFER TO THE DURABLE PAVEMENT EDGE DETAILS FOR SPECIFICATIONS ON THE EDGE GEOMETRY OF THE PROPOSED SURFACE.

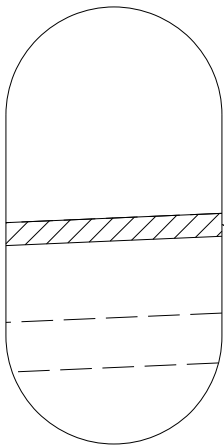
KY 70  
 RESURFACING  
 DETAIL

COUNTY OF	ITEM NO.
CASEY	8-9011.00

# PAVEMENT REPAIR DETAIL



- | LT                        | RT                        |
|---------------------------|---------------------------|
| STA. 253+30 - STA. 253+80 | STA. 307+82 - STA. 310+36 |
| STA. 334+01 - STA. 334+59 | STA. 427+50 - STA. 431+50 |
| STA. 362+21 - STA. 365+38 | STA. 441+41 - STA. 442+99 |
| STA. 374+09 - STA. 374+83 | STA. 464+64 - STA. 469+92 |
| STA. 381+22 - STA. 382+80 | STA. 471+50 - STA. 472+56 |
| STA. 393+62 - STA. 397+22 | STA. 475+20 - STA. 477+84 |
| STA. 432+43 - STA. 433+33 | STA. 515+27 - STA. 516+38 |
| STA. 460+10 - STA. 461+42 |                           |
| STA. 476+78 - STA. 479+42 |                           |

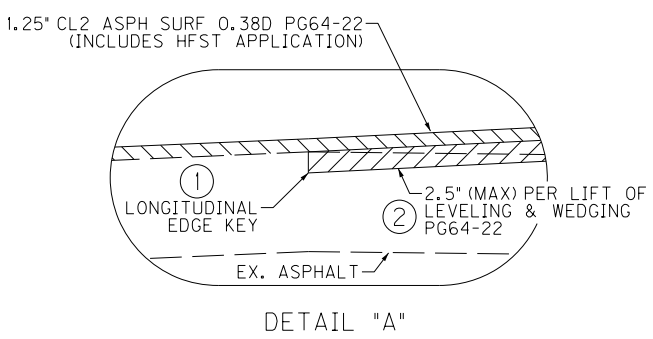
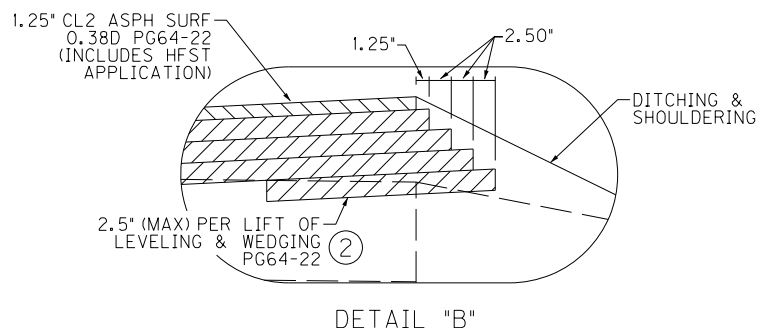
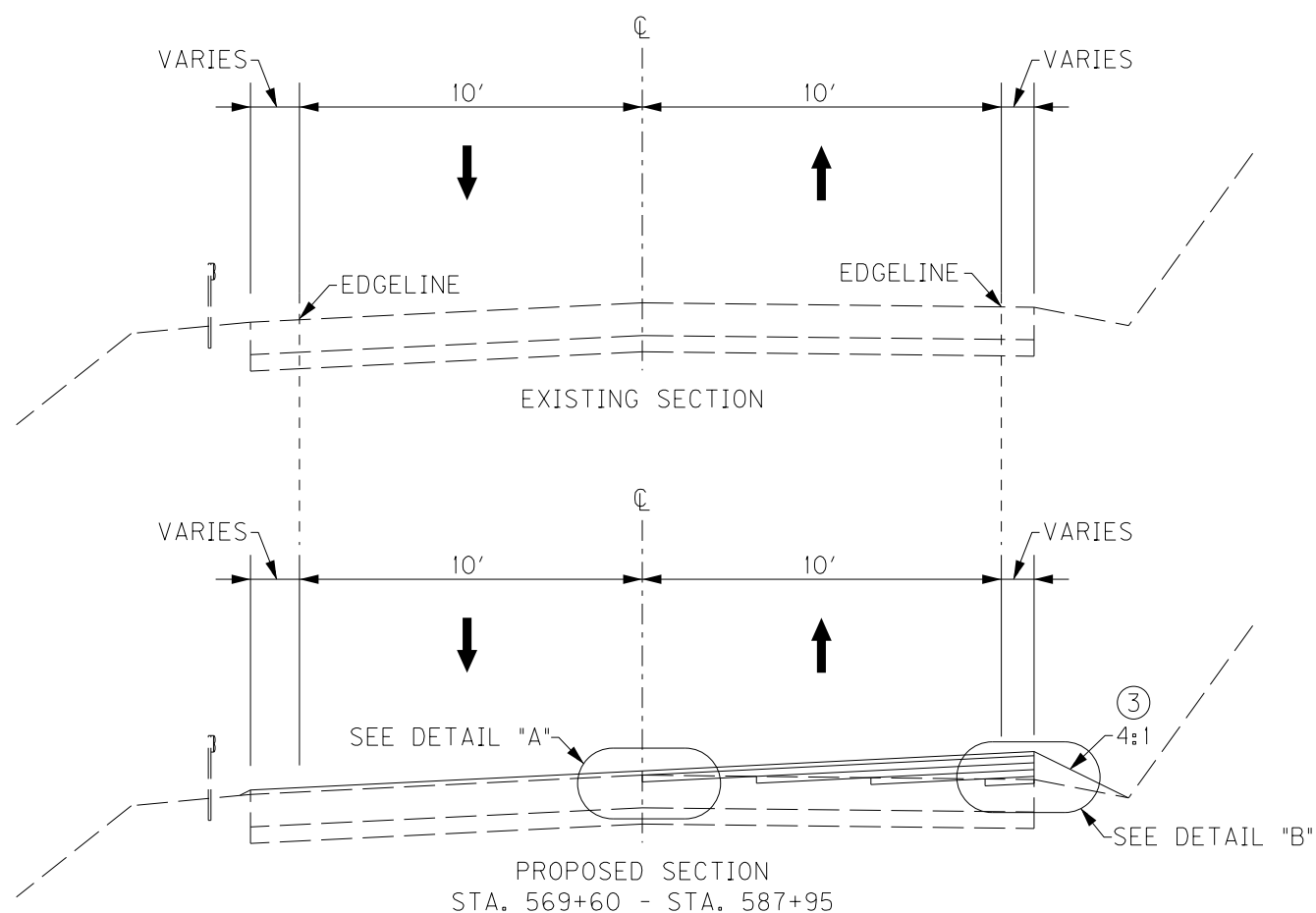


1.25" OF ASPH. PAVE. MILL & TEXT  
 REPAVING FLUSH TO EXISTING SURFACE WITH 1.25" OF LEVELING & WEDGING \*  
 \* TO BE COMPLETED BEFORE FINAL 0.50" OF LEVELING & WEDGING AND 1.25" OF RESURFACING

KY 70  
 PAVEMENT REPAIR  
 DETAIL

COUNTY OF	ITEM NO.
CASEY	8-9011.00

# SUPERELEVATION IMPROVEMENT DETAIL

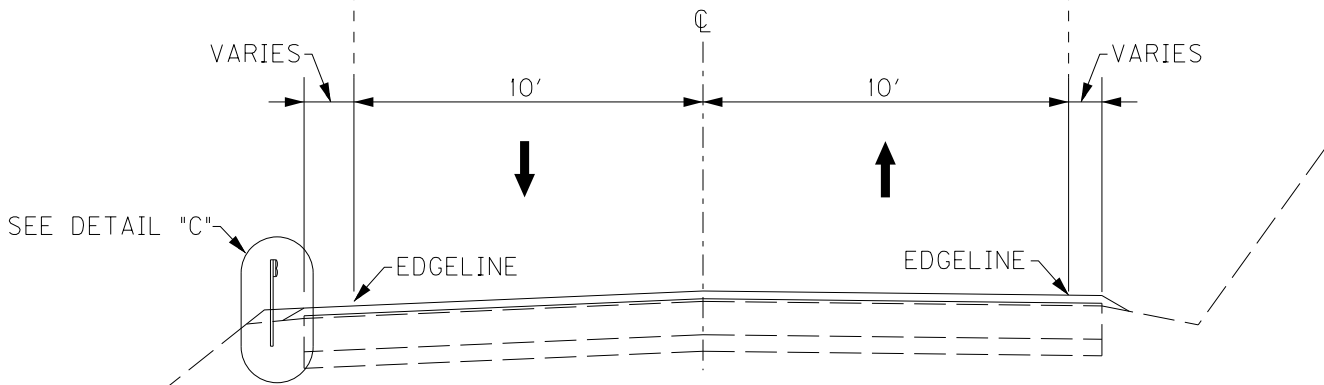
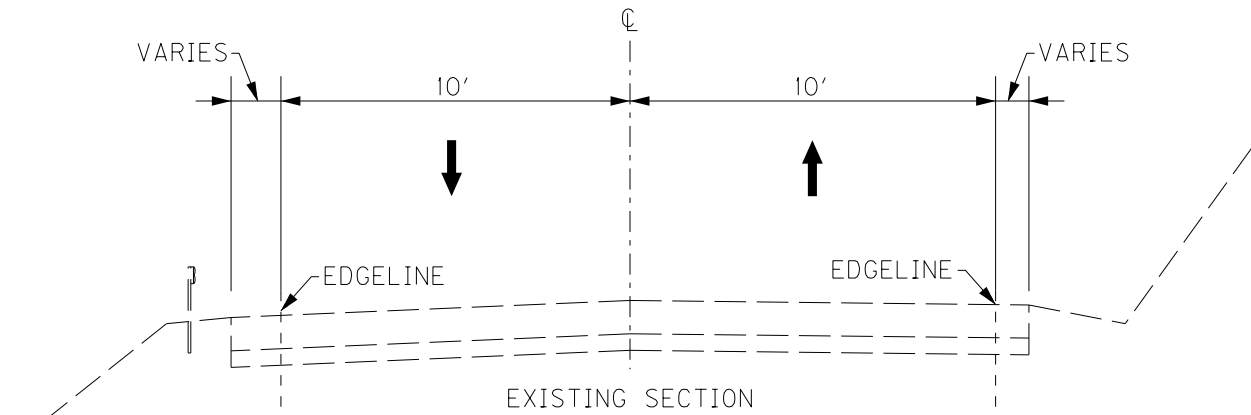


- NOTES:**
- ① SUPERELEVATION IMPROVEMENT WILL INVOLVE A LONGITUDINAL EDGE KEY FOR EACH LIFT OF LEVELING & WEDGING REQUIRED. LONGITUDINAL EDGE KEY IS TO BE PAID AS ASPHALT MILLING & TEXTURING.
  - ② LEVELING & WEDGING MIX DESIGN WILL BE BASED ON THE LIFT THICKNESS BEING PLACED FOR EACH CURVE. NUMBER AND THICKNESS OF LIFTS SHOWN IN THESE DETAILS ARE GRAPHICAL REPRESENTATIONS ONLY AND ARE NOT MEANT TO BE TAKEN AS AN INDICATION OF ACTUAL FIELD CONDITIONS.
  - ③ SLOPE MAY VARY IF DIRECTED BY THE ENGINEER.

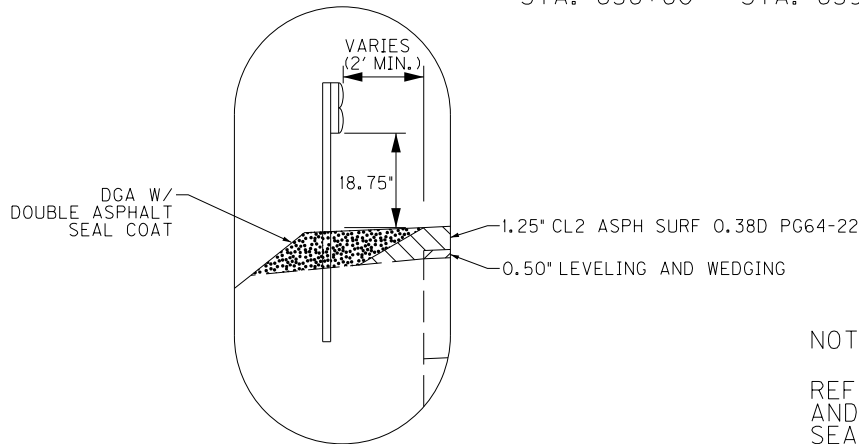
KY 70  
 SUPERELEVATION IMPROVEMENT  
 DETAIL

COUNTY OF	ITEM NO.
CASEY	8-9011.00

# GUARDRAIL REPLACEMENT DETAIL



- STA. 261+35 - STA. 287+80
- STA. 562+35 - STA. 596+90
- STA. 600+90 - STA. 603+45
- STA. 634+40 - STA. 635+95
- STA. 636+60 - STA. 639+40



**NOTE:**

REFER TO THE SPECIAL NOTE FOR GUARDRAIL AND THE SPECIAL NOTE FOR DOUBLE ASPHALT SEAL COAT FOR CONSTRUCTION INFORMATION, SPECIFICATIONS AND APPLICATION RATES.

KY 70  
 GUARDRAIL REPLACEMENT  
 DETAIL

STEEL W-BEAM GUARDRAIL (L.T.)							
BEGIN STA.	TERM. SEC.	END TRMNT.	END STA.	TERM. SEC.	END TRMNT.	LENGTH	REMOVAL LENGTH
221+70	NO. 1	--	223+70	BRIDGE	TY A	203.75	200.00



MATCHLINE STA. 224+00



COUNTY OF	ITEM NO.
CASEY	8-9011.00

LEGEND

	PAVEMENT REPAIR
	HIGH-FRICTION SURFACE TREATMENT
	GUARDRAIL REPLACEMENT
	SUPERELEVATION IMPROVEMENT
	DITCHING & SHOULDERING

STEEL W-BEAM GUARDRAIL (RT.)							
BEGIN STA.	TERM. SEC.	END TRMNT.	END STA.	TERM. SEC.	END TRMNT.	LENGTH	REMOVAL LENGTH
221+85	--	TY 1	223+70	BRIDGE	TY A	137.50	100.00

SCALE: 1"=200'

KY 70  
PLAN SHEET - 01  
STA. 211+20 TO STA. 224+00

STEEL W-BEAM GUARDRAIL (L.T.)						REMOVAL LENGTH	
BEGIN STA.	TERM. SEC.	END TRMNT.	END STA.	TERM. SEC.	END TRMNT.	LENGTH	
226+10	BRIDGE TY A	227+95	---	---	TY I	137.50	100.00

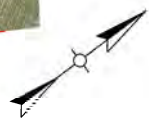


LEGEND

	PAVEMENT REPAIR
	HIGH-FRICTION SURFACE TREATMENT
	GUARDRAIL REPLACEMENT
	SUPERELEVATION IMPROVEMENT
	DITCHING & SHOULDERING

SCALE: 1"=200'  
KY 70  
PLAN SHEET - 02  
STA. 224+00 TO STA. 243+00

COUNTY OF	ITEM NO.
CASEY	B-9011.0V

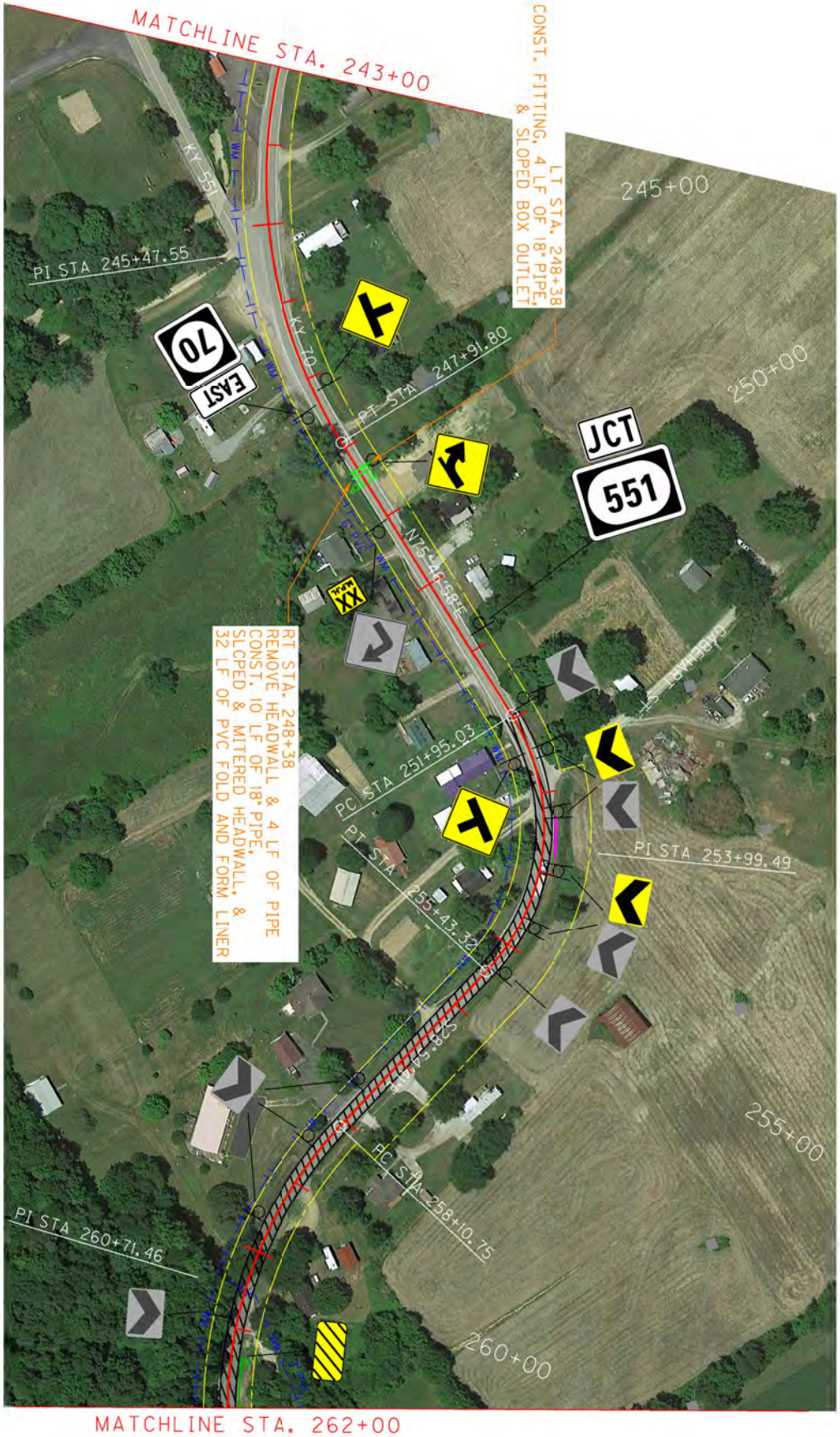


STEEL W-BEAM GUARDRAIL (L.T.)						
BEGIN STA.	TERM. STA.	END STA.	TERM. SEC.	END TRMNT.	LENGTH	REMOVAL LENGTH
261+35	--	262+00	--	--	15.00	25.00

PAVEMENT REPAIR (L.T.)					
BEGIN STA.	END STA.	DEPTH (IN)	MILLING & TEXTURING	LEVELLING & WEDGING	
253+30	253+80	1.25	4 TONS	4 TONS	

HIGH-FRICTION SURFACE TREATMENT  
(BOTH LANES) STA. 251+95 TO STA. 262+00

COUNTY OF	ITEM NO.
CASEY	8-9011.00



LT STA. 248+38  
CONST. FITTING, 4 LF OF 18" PIPE  
& SLOPED BOX OUTLET

RT STA. 248+38  
REMOVE HEADWALL & 4 LF OF PIPE  
CONST. 10 LF OF 18" PIPE,  
SLOPED & MITERED HEADWALL, &  
32 LF OF PVC FOLD AND FORM LINER

LEGEND

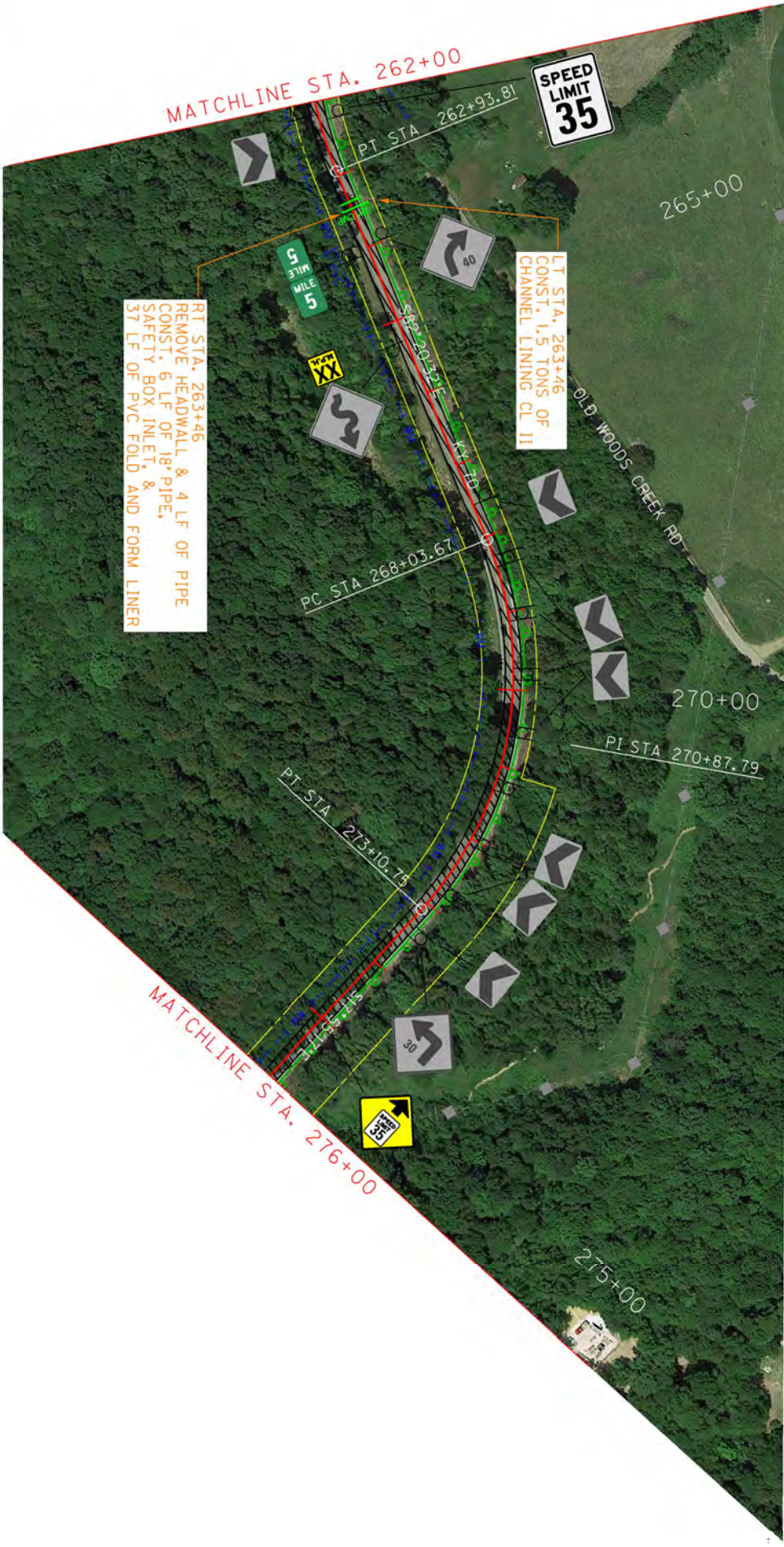
	PAVEMENT REPAIR
	HIGH-FRICTION SURFACE TREATMENT
	GUARDRAIL REPLACEMENT
	SUPERELEVATION IMPROVEMENT
	DITCHING & SHOULDERING

SCALE: 1"=200'  
PLAN SHEET - 03  
KY 70  
STA. 243+00 TO STA. 262+00

STEEL W-BEAM GUARDRAIL (L.T.)						REMOVAL LENGTH
BEGIN STA.	TERM. STA.	END TRMNT.	END STA.	TERM. SEC.	END TRMNT.	LENGTH
262+00	--	--	276+00	--	--	1400 LF

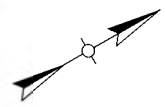
HIGH-FRICTION SURFACE TREATMENT (BOTH LANES) STA. 262+00 TO STA. 276+00	
CASEY	8-9011.00

COUNTY OF	ITEM NO.
CASEY	8-9011.00



LEGEND

	PAVEMENT REPAIR
	HIGH-FRICTION SURFACE TREATMENT
	GUARDRAIL REPLACEMENT
	SUPERELEVATION IMPROVEMENT
	DITCHING & SHOULDERING



SCALE: 1"=200'  
KY 70  
PLAN SHEET - 04  
STA. 262+00 TO STA. 276+01)



LEGEND

	PAVEMENT REPAIR
	HIGH-FRICTION SURFACE TREATMENT
	GUARDRAIL REPLACEMENT
	SUPERELEVATION IMPROVEMENT
	DITCHING & SHOULDERING

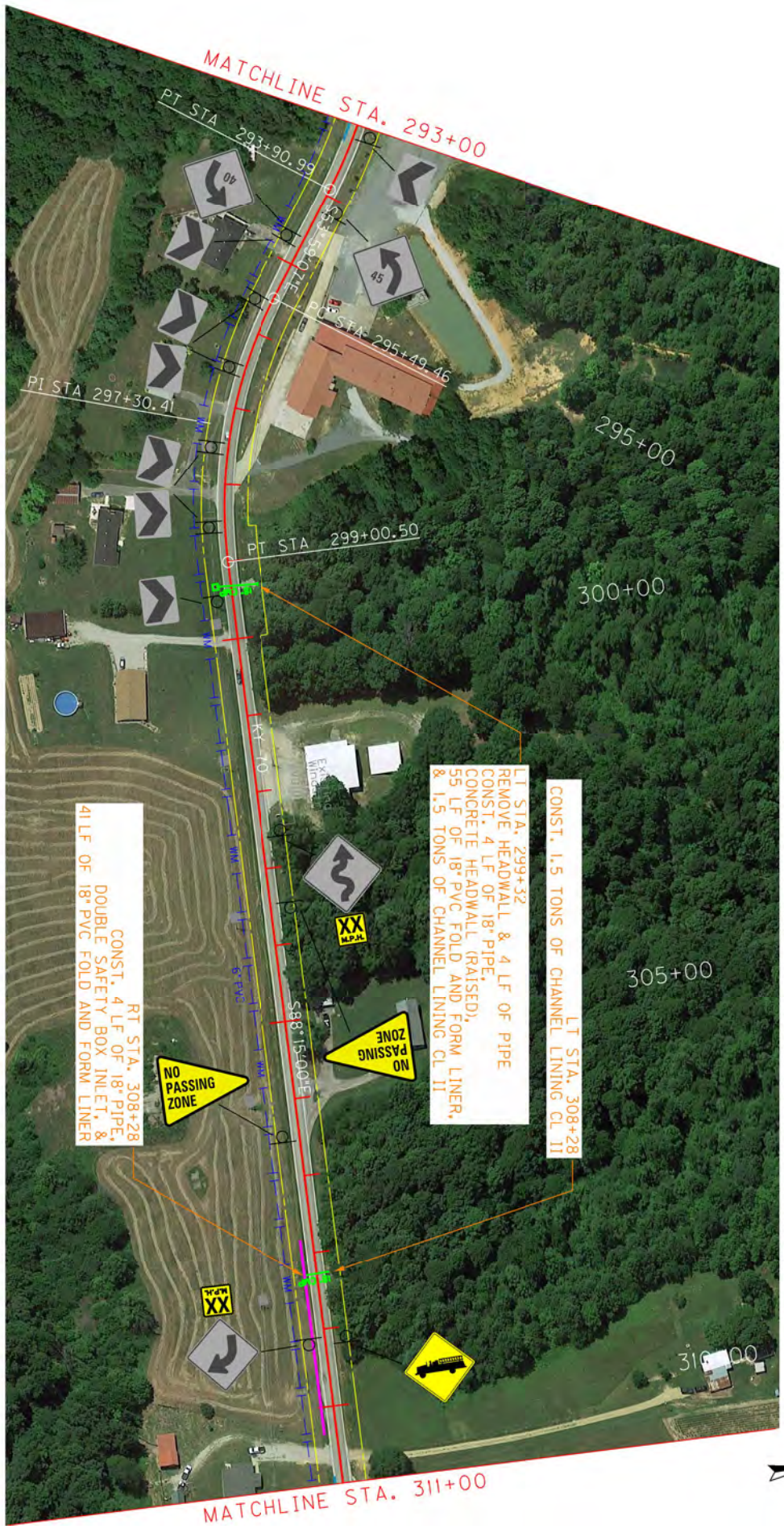
PAVEMENT REPAIR (RT.)				
BEGIN STA.	END STA.	DEPTH (IN)	MILLING & TEXTURING	LEVELING & WEDGING
307+82	310+35	1.25	20 TONS	20 TONS

DITCHING & SHOULDERING (RT.)	
STA. 293+00 TO STA. 293+25	
STA. 310+90 TO STA. 311+00	

PLAN SHEET - 06  
KY 70  
STA. 293+00 TO STA. 311+00

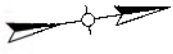
SCALE: 1"=200'



RT STA. 308+28  
CONST. 4 LF OF 18" PIPE,  
DOUBLE SAFETY BOX INLET, &  
41 LF OF 18" PVC FOLD AND FORM LINER

LT STA. 299+32  
REMOVE HEADWALL & 4 LF OF PIPE  
CONST. 4 LF OF 18" PIPE,  
CONCRETE HEADWALL (RAISED),  
55 LF OF 18" PVC FOLD AND FORM LINER,  
& 1.5 TONS OF CHANNEL LINING CL II

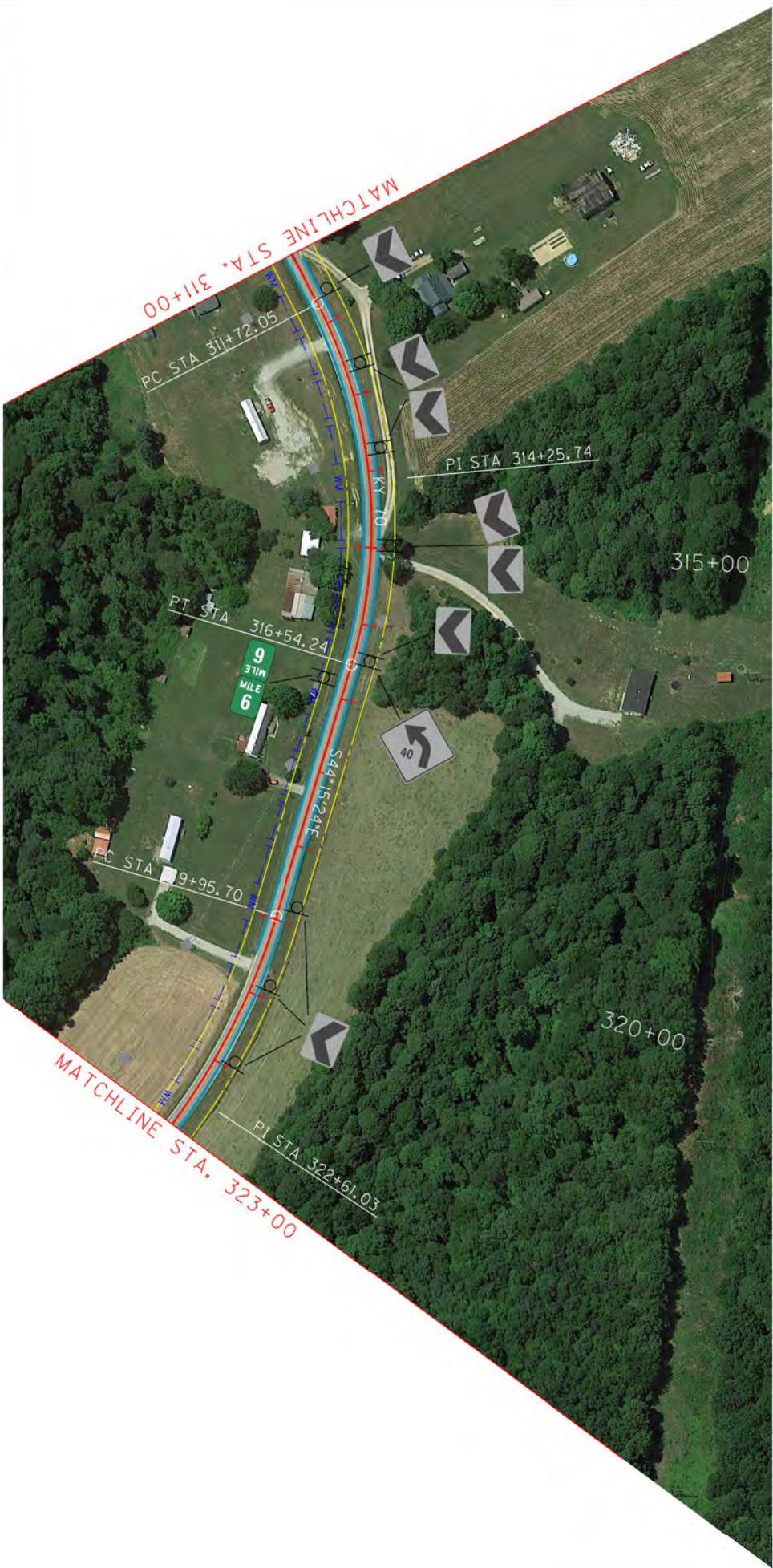
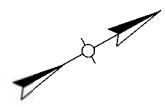
LT STA. 308+28  
CONST. 1.5 TONS OF CHANNEL LINING CL II



COUNTY OF	ITEM NO.
CASEY	8-9011.00

DITCHING & SHOULDERING (L.T.)  
STA. 311+10 TO STA. 323+00

COUNTY OF	ITEM NO.
CASEY	8-9011.00



LEGEND

	PAVEMENT REPAIR
	HIGH-FRICTION SURFACE TREATMENT
	GUARDRAIL REPLACEMENT
	SUPERELEVATION IMPROVEMENT
	DITCHING & SHOULDERING

DITCHING & SHOULDERING (RT.)  
STA. 311+00 TO STA. 320+45

SCALE: 1"=200'  
KY 70  
PLAN SHEET - 07  
STA. 311+00 TO STA. 323+00

DITCHING & SHOULDERING (L.T.)  
STA. 323+00 TO STA. 341+00

PAVEMENT REPAIR (L.T.)				
BEGIN STA.	END STA.	DEPTH (IN)	MILLING & TEXTURING	LEVELING & WEDGING
334+01	334+59	1.25	5 TONS	5 TONS

COUNTY OF	ITEM NO.
CASEY	8-9011.00



LEGEND

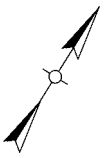
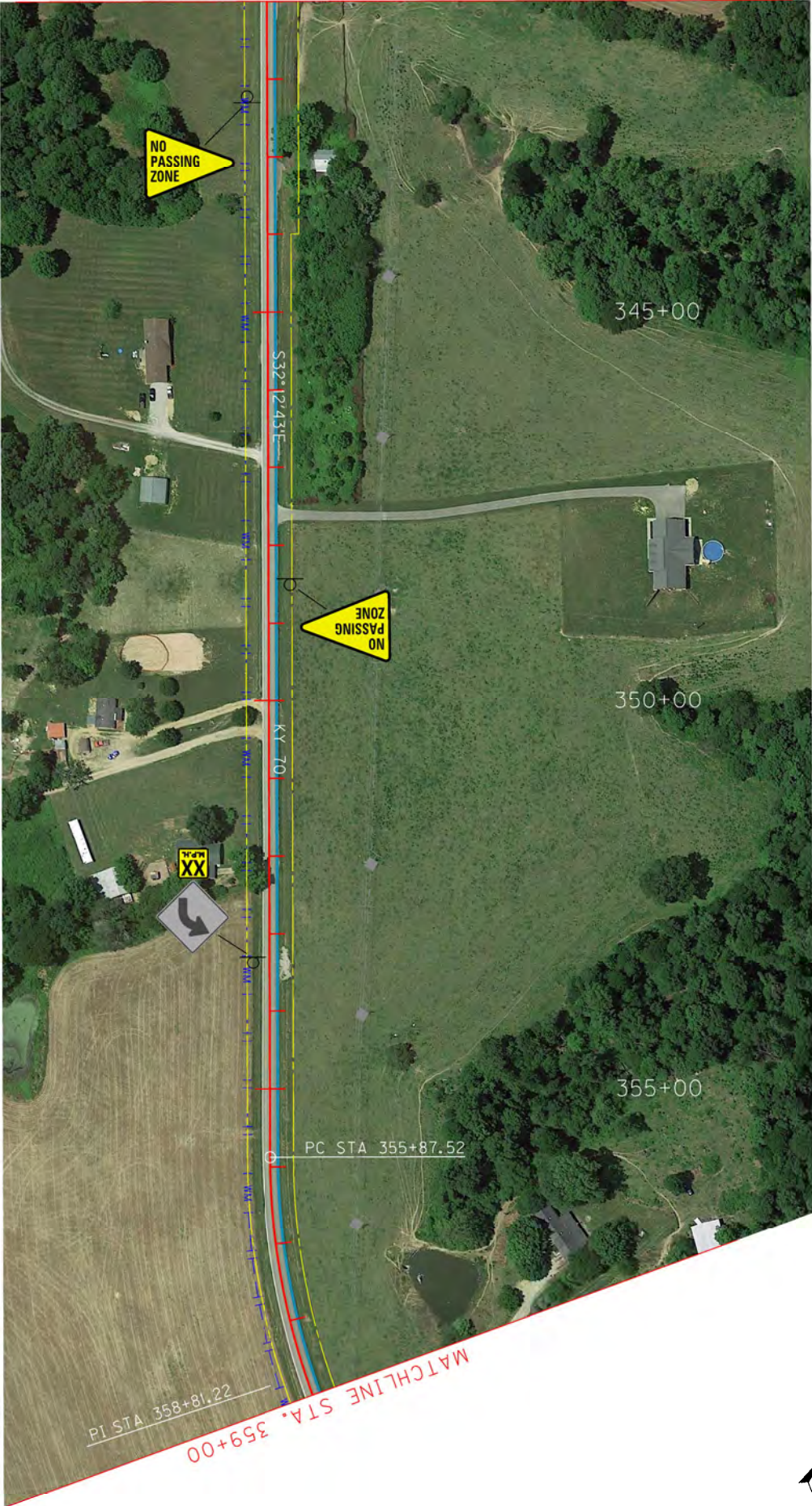
	PAVEMENT REPAIR
	HIGH-FRICTION SURFACE TREATMENT
	GUARDRAIL REPLACEMENT
	SUPERELEVATION IMPROVEMENT
	DITCHING & SHOULDERING

SCALE: 1"=200'

KY 70  
PLAN SHEET - 08  
STA. 323+00 TO STA. 341+00

DITCHING & SHOULDERING (L.T.)  
STA. 341+00 TO STA. 359+00

COUNTY OF	ITEM NO.
CASEY	8-9011.00



LEGEND

	PAVEMENT REPAIR
	HIGH-FRICTION SURFACE TREATMENT
	GUARDRAIL REPLACEMENT
	SUPERELEVATION IMPROVEMENT
	DITCHING & SHOULDERING

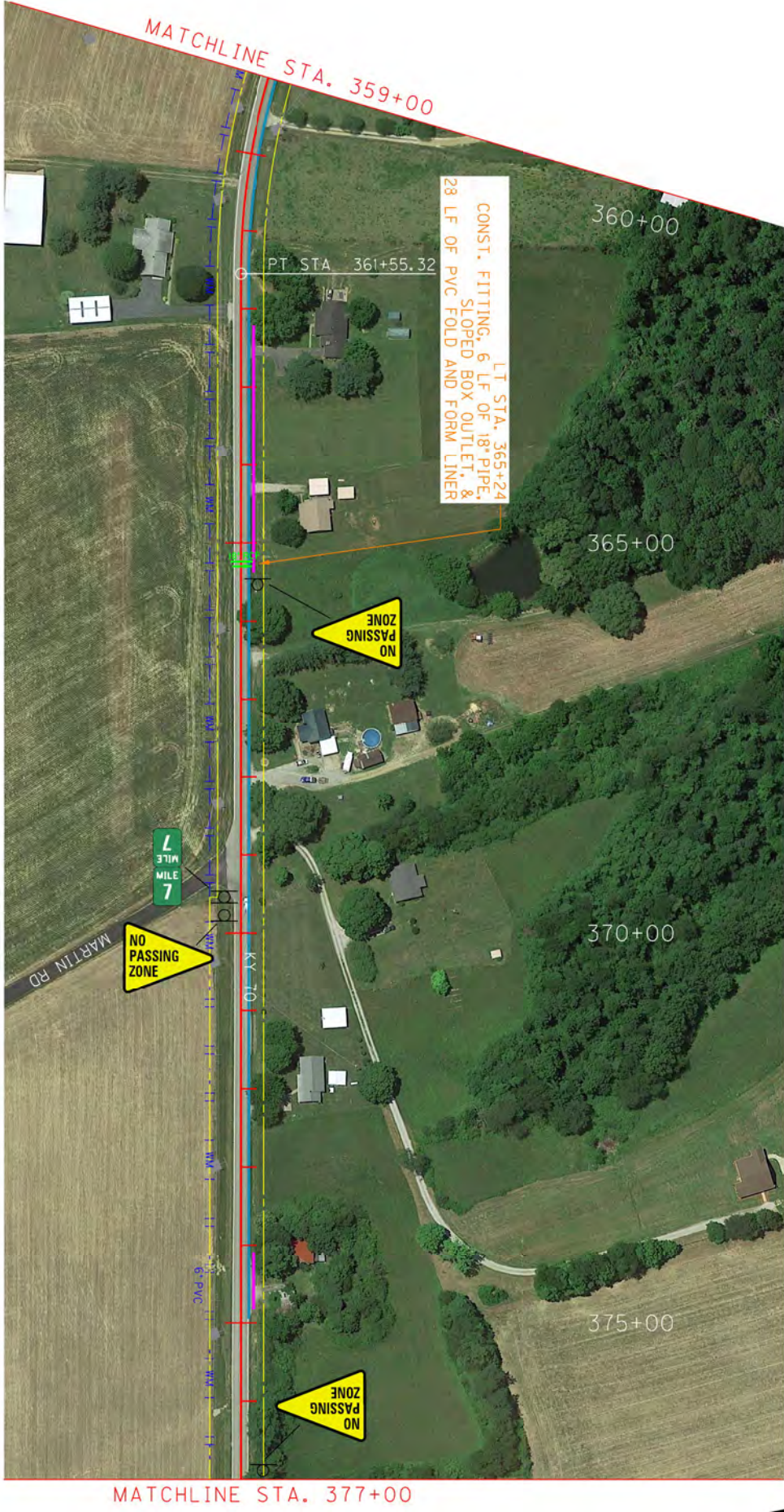
SCALE: 1"=200'

KY 70  
PLAN SHEET - 09  
STA. 341+00 TO STA. 359+00

DITCHING & SHOULDERING (L.T.)  
STA. 359+00 TO STA. 374+95

PAVEMENT REPAIR (L.T.)				
BEGIN STA.	END STA.	DEPTH (IN)	MILLING & TEXTURING	LEVELLING & WEDGING
362+21	365+38	1.25	25 TONS	25 TONS
374+09	374+83	1.25	6 TONS	5 TONS

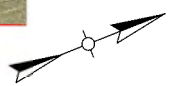
COUNTY OF	ITEM NO.
CASEY	8-9011.00



LEGEND

	PAVEMENT REPAIR
	HIGH-FRICTION SURFACE TREATMENT
	GUARDRAIL REPLACEMENT
	SUPERELEVATION IMPROVEMENT
	DITCHING & SHOULDERING

SCALE: 1"=200'  
KY 70  
PLAN SHEET - 10  
STA. 359+00 TO STA. 377+00



MATCHLINE STA. 377+00



MATCHLINE STA. 396+00

PAVEMENT REPAIR (L.T.)				
BEGIN STA.	END STA.	DEPTH (IN)	MILLING & TEXTURING	LEVELING & WEDGING
381+22	382+80	1.25	13 TONS	13 TONS
393+62	396+00	1.25	19 TONS	19 TONS

COUNTY OF	ITEM NO.
CASEY	B-9011. (0)

LEGEND

-  PAVEMENT REPAIR
-  HIGH-FRICTION SURFACE TREATMENT
-  GUARDRAIL REPLACEMENT
-  SUPERELEVATION IMPROVEMENT
-  DITCHING & SHOULDERING

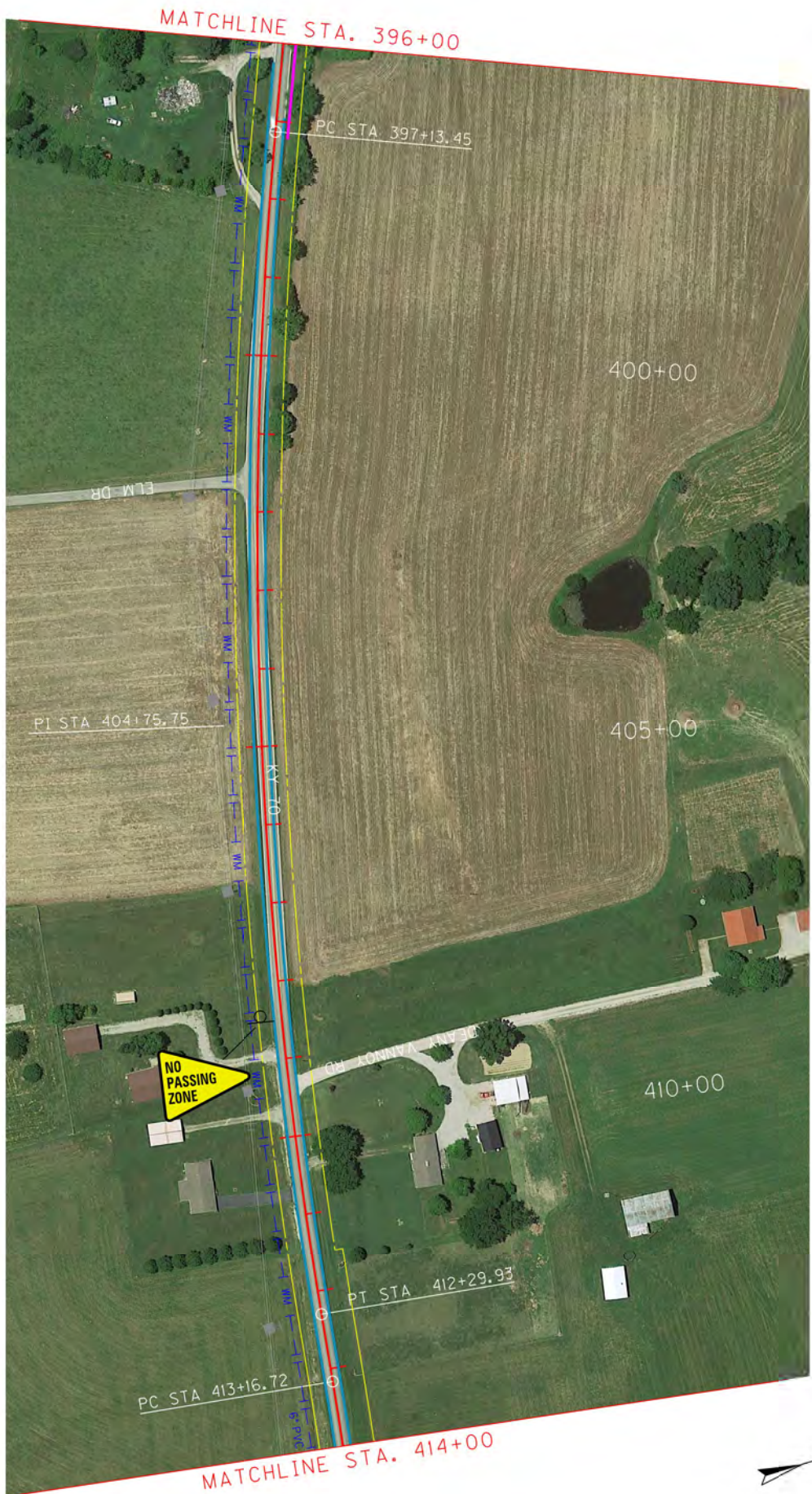
SCALE: 1"=200'

KY 70  
PLAN SHEET - 11  
STA. 377+00 TO STA. 396+00

DITCHING & SHOULDERING (L.T.) STA. 396+95 TO STA. 414+00
-------------------------------------------------------------

PAVEMENT REPAIR (L.T.)				
BEGIN STA.	END STA.	DEPTH (IN)	MILLING & TEXTURING	LEVELING & WEDGING
396+00	397+22	1.25	10 TONS	10 TONS

COUNTY OF	ITEM NO.
CASEY	8-9011.00



LEGEND

	PAVEMENT REPAIR
	HIGH-FRICTION SURFACE TREATMENT
	GUARDRAIL REPLACEMENT
	SUPERELEVATION IMPROVEMENT
	DITCHING & SHOULDERING

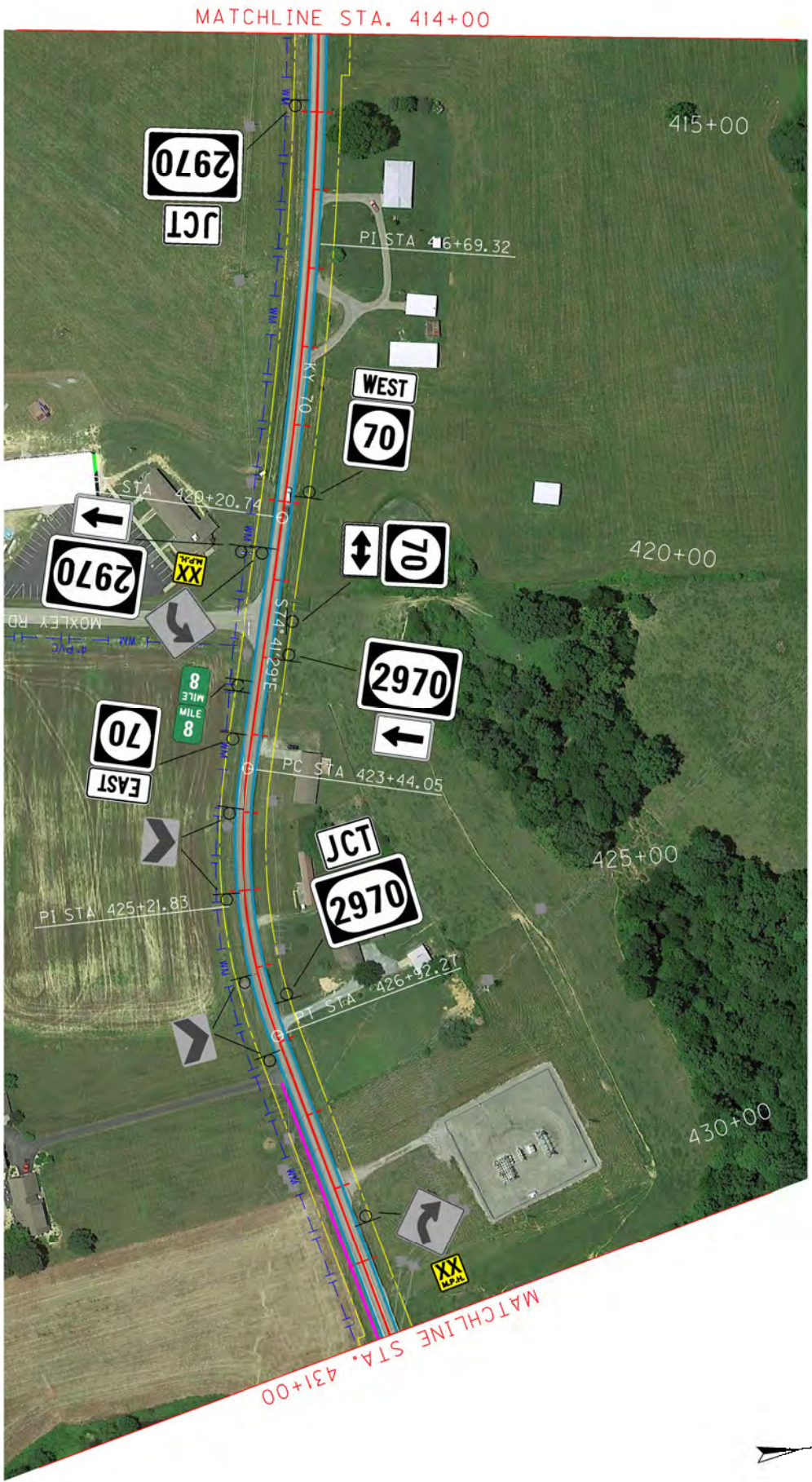
DITCHING & SHOULDERING (R.T.) STA. 396+25 TO STA. 414+00
-------------------------------------------------------------

SCALE: 1"=200'

KY 70  
PLAN SHEET - 12  
STA. 396+00 TO STA. 414+00

DITCHING & SHOULDERING (L.T.)  
STA. 414+00 TO STA. 431+00

COUNTY OF	ITEM NO.
CASEY	8-9011.00



LEGEND

	PAVEMENT REPAIR
	HIGH-FRICTION SURFACE TREATMENT
	GUARDRAIL REPLACEMENT
	SUPERELEVATION IMPROVEMENT
	DITCHING & SHOULDERING

PAVEMENT REPAIR (RT.)

BEGIN STA.	END STA.	DEPTH (IN)	MILLING & TEXTURING	LEVELING & WEDGING
427+50	431+00	1.25	28 TONS	28 TONS

DITCHING & SHOULDERING (RT.)

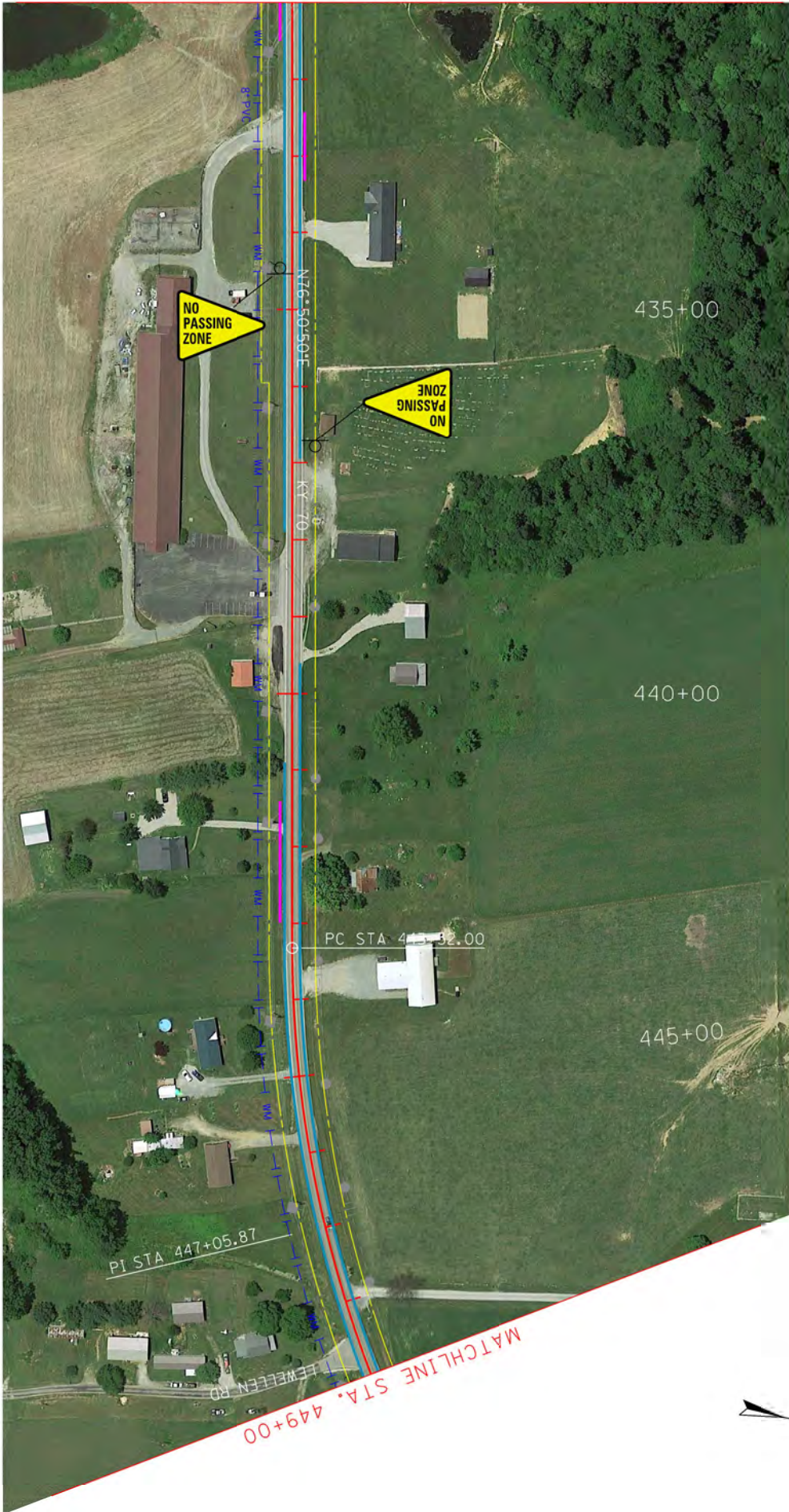
STA. 414+00 TO STA. 431+00
----------------------------

PLAN SHEET - 13  
KY 70  
STA. 414+00 TO STA. 431+00

SCALE: 1"=200'

DITCHING & SHOULDERING (LT.)
STA. 431+00 TO STA. 436+95
STA. 439+60 TO STA. 449+00

PAVEMENT REPAIR (LT.)				
BEGIN STA.	END STA.	DEPTH (IN)	MULLING & TEXTURING	LEVELING & WEDGING
432+43	433+33	1.25	7 TONS	7 TONS



COUNTY OF	ITEM NO.
CASEY	B-9011.00

LEGEND

- ▬▬▬▬▬▬ PAVEMENT REPAIR
- ▬▬▬▬▬▬ HIGH-FRICTION SURFACE TREATMENT
- ▬▬▬▬▬▬ GUARDRAIL REPLACEMENT
- ▬▬▬▬▬▬ SUPERELEVATION IMPROVEMENT
- ▬▬▬▬▬▬ DITCHING & SHOULDERING

PAVEMENT REPAIR (RT.)				
BEGIN STA.	END STA.	DEPTH (IN)	MULLING & TEXTURING	LEVELING & WEDGING
431+00	431+50	1.25	4 TONS	4 TONS
441+41	442+99	1.25	13 TONS	13 TONS

DITCHING & SHOULDERING (RT.)
STA. 431+00 TO STA. 437+90
STA. 440+90 TO STA. 449+00

SCALE: 1"=200'

KY 70  
PLAN SHEET - 14  
STA. 431+00 TO STA. 449+00

DITCHING & SHOULDERING (L.T.)  
STA. 449+00 TO STA. 462+25

PAVEMENT REPAIR (L.T.)				
BEGIN STA.	END STA.	DEPTH (IN)	MILLING & TEXTURING	LEVELLING & WEDGING
460+10	461+42	1.25	11 TONS	11 TONS

COUNTY OF	ITEM NO.
CASEY	8-9011.00



MATCHLINE STA. 449+00

MATCHLINE STA. 468+00

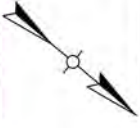
LEGEND

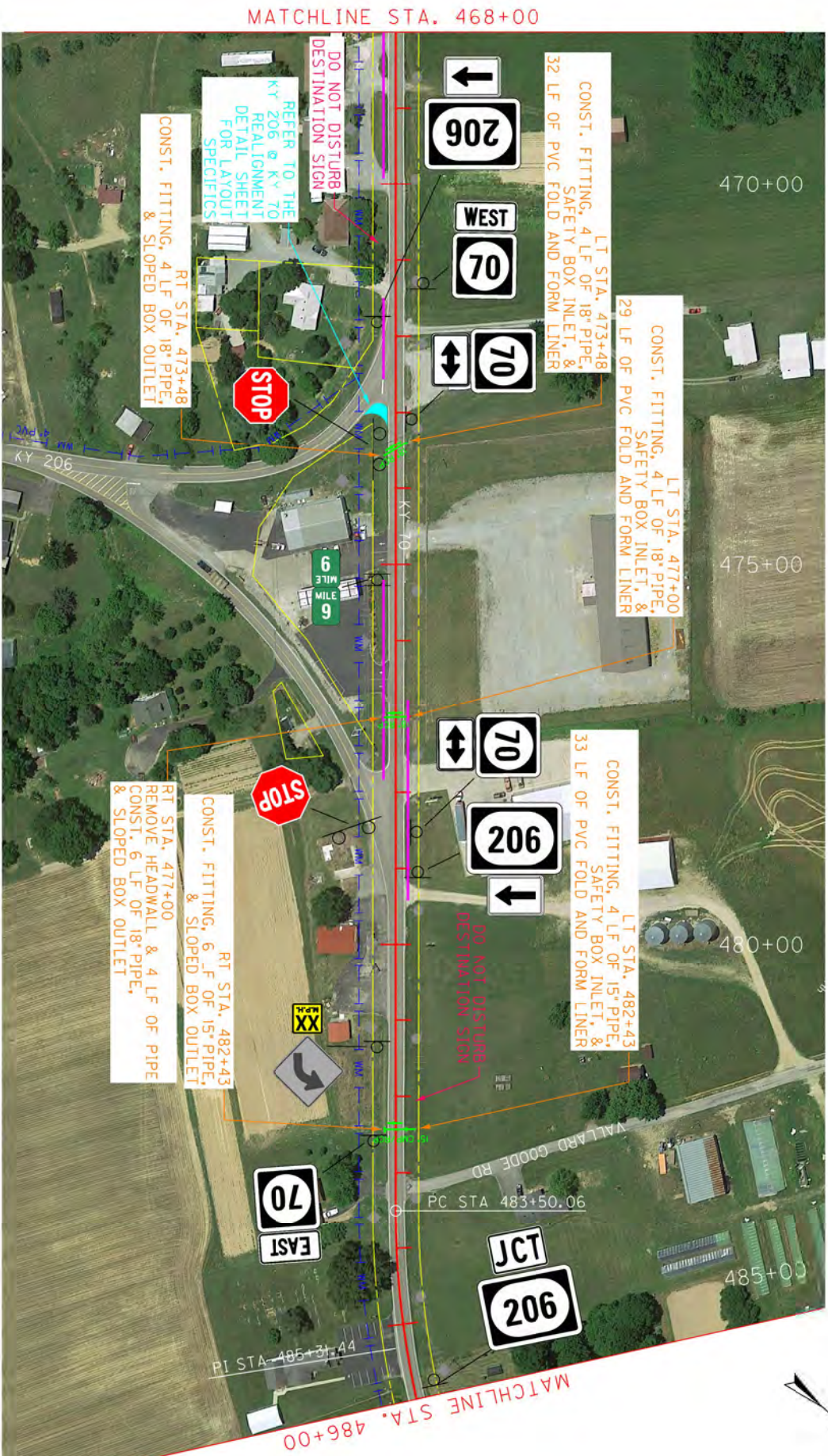
	PAVEMENT REPAIR
	HIGH-FRICTION SURFACE TREATMENT
	GUARDRAIL REPLACEMENT
	SUPERELEVATION IMPROVEMENT
	DITCHING & SHOULDERING

PAVEMENT REPAIR (RT.)				
BEGIN STA.	END STA.	DEPTH (IN)	MILLING & TEXTURING	LEVELLING & WEDGING
464+64	468+00	1.25	27 TONS	27 TONS

DITCHING & SHOULDERING (RT.)	
BEGIN STA.	END STA.
449+00	467+90

SCALE: 1"=200'  
PLAN SHEET - 15  
KY 70  
STA. 449+00 TO STA. 468+00





LEGEND

	PAVEMENT REPAIR
	HIGH-FRICTION SURFACE TREATMENT
	GUARDRAIL REPLACEMENT
	SUPERELEVATION IMPROVEMENT
	DITCHING & SHOULDERING

PAVEMENT REPAIR (L.T.)

BEGIN STA.	END STA.	DEPTH (IN)	MILLING & TEXTURING	LEVELLING & WEDGING
476+78	479+42	1.25	21 TONS	21 TONS

PAVEMENT REPAIR (R.T.)

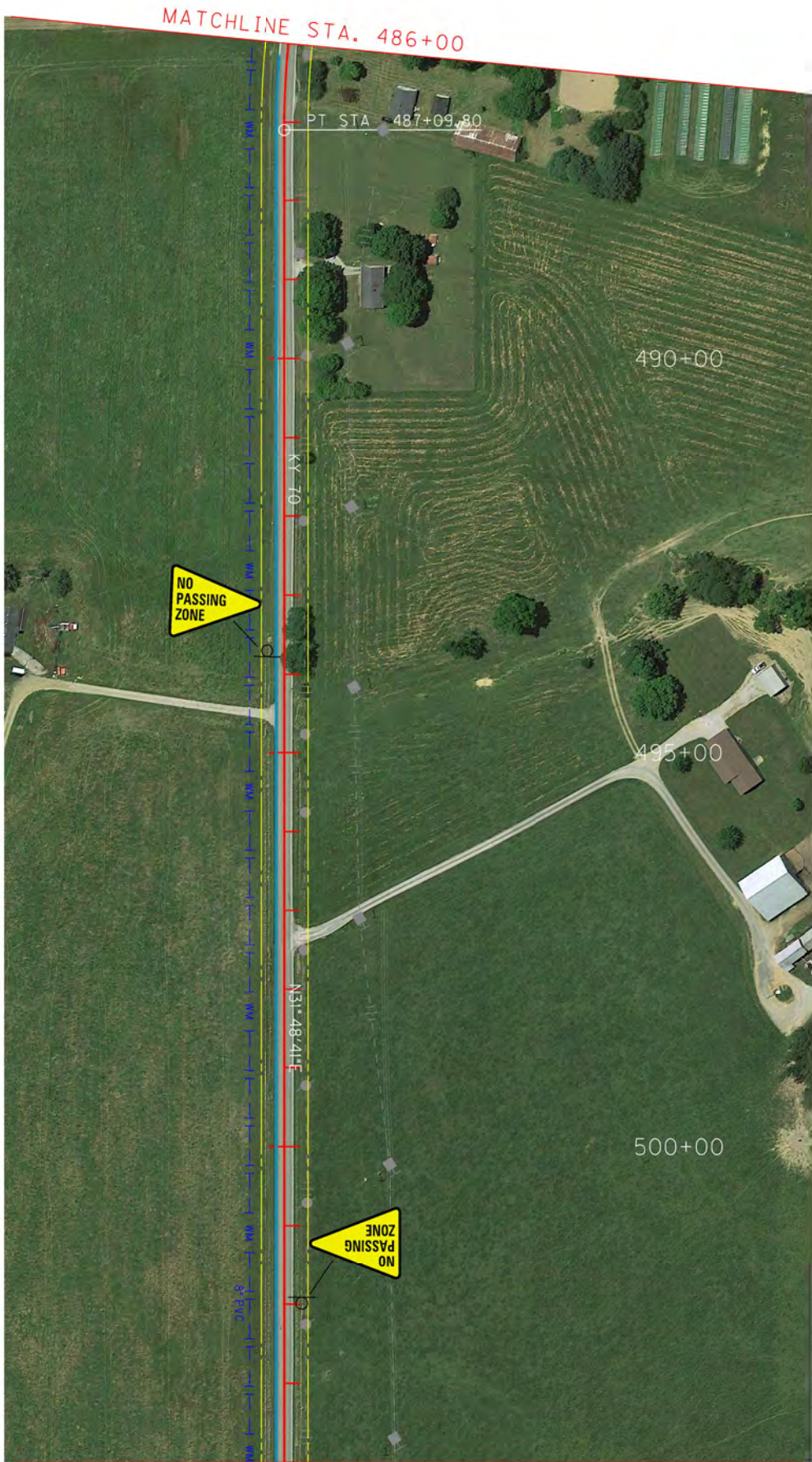
BEGIN STA.	END STA.	DEPTH (IN)	MILLING & TEXTURING	LEVELLING & WEDGING
468+00	469+92	1.25	15 TONS	15 TONS
471+50	472+56	1.25	9 TONS	9 TONS
475+20	477+84	1.25	21 TONS	21 TONS

SCALE: 1"=200'  
PLAN SHEET - 16  
KY 70  
STA. 468+00 TO STA. 486+00

COUNTY OF	ITEM NO.
CASEY	B-9011.00

LEGEND	
	PAVEMENT REPAIR
	HIGH-FRICTION SURFACE TREATMENT
	GUARDRAIL REPLACEMENT
	SUPERELEVATION IMPROVEMENT
	DITCHING & SHOULDERING

DITCHING & SHOULDERING (RT.)
STA. 486+15 TO STA. 504+00



MATCHLINE STA. 486+00

MATCHLINE STA. 504+00

COUNTY OF	ITEM NO.
CASEY	B-9011.00

SCALE: 1"=200'  
KY 70  
PLAN SHEET - 17  
STA. 486-00 TO STA. 504+00

DITCHING & SHOULDERING (L.T.)  
STA. 514+65 TO STA. 519+00



LEGEND

	PAVEMENT REPAIR
	HIGH-FRICTION SURFACE TREATMENT
	GUARDRAIL REPLACEMENT
	SUPERELEVATION IMPROVEMENT
	DITCHING & SHOULDERING

PAVEMENT REPAIR (RT.)				
BEGIN STA.	END STA.	DEPTH (IN)	MILLING & TEXTURING	LEVELING & WEDGING
515+27	516+38	1.25	9 TONS	9 TONS

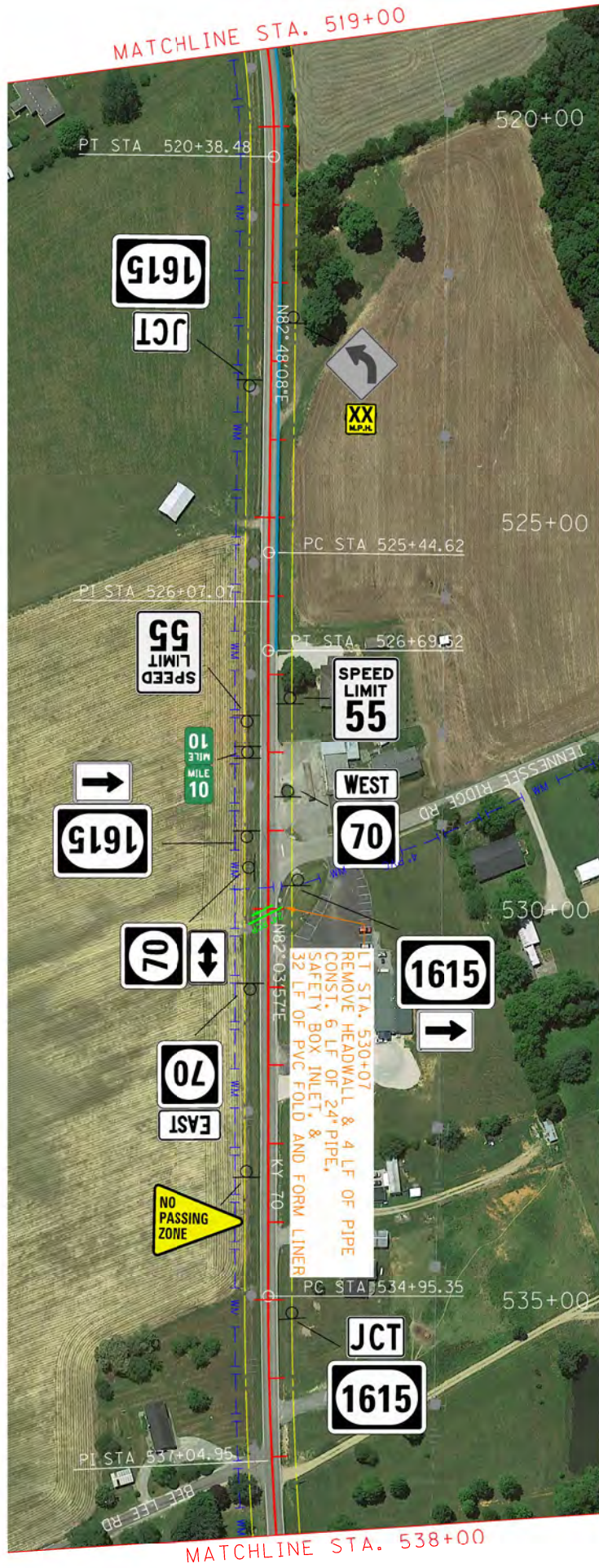
DITCHING & SHOULDERING (RT.)  
STA. 504+00 TO STA. 516+90

PLAN SHEET - 18  
KY 70  
STA. 504+00 TO STA. 519+00

SCALE: 1"=200'

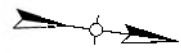
COUNTY OF	ITEM NO.
CASEY	8-9011.00

DITCHING & SHOULDERING (L.T.)  
STA. 519+00 TO STA. 526+70



LEGEND

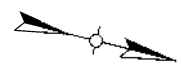
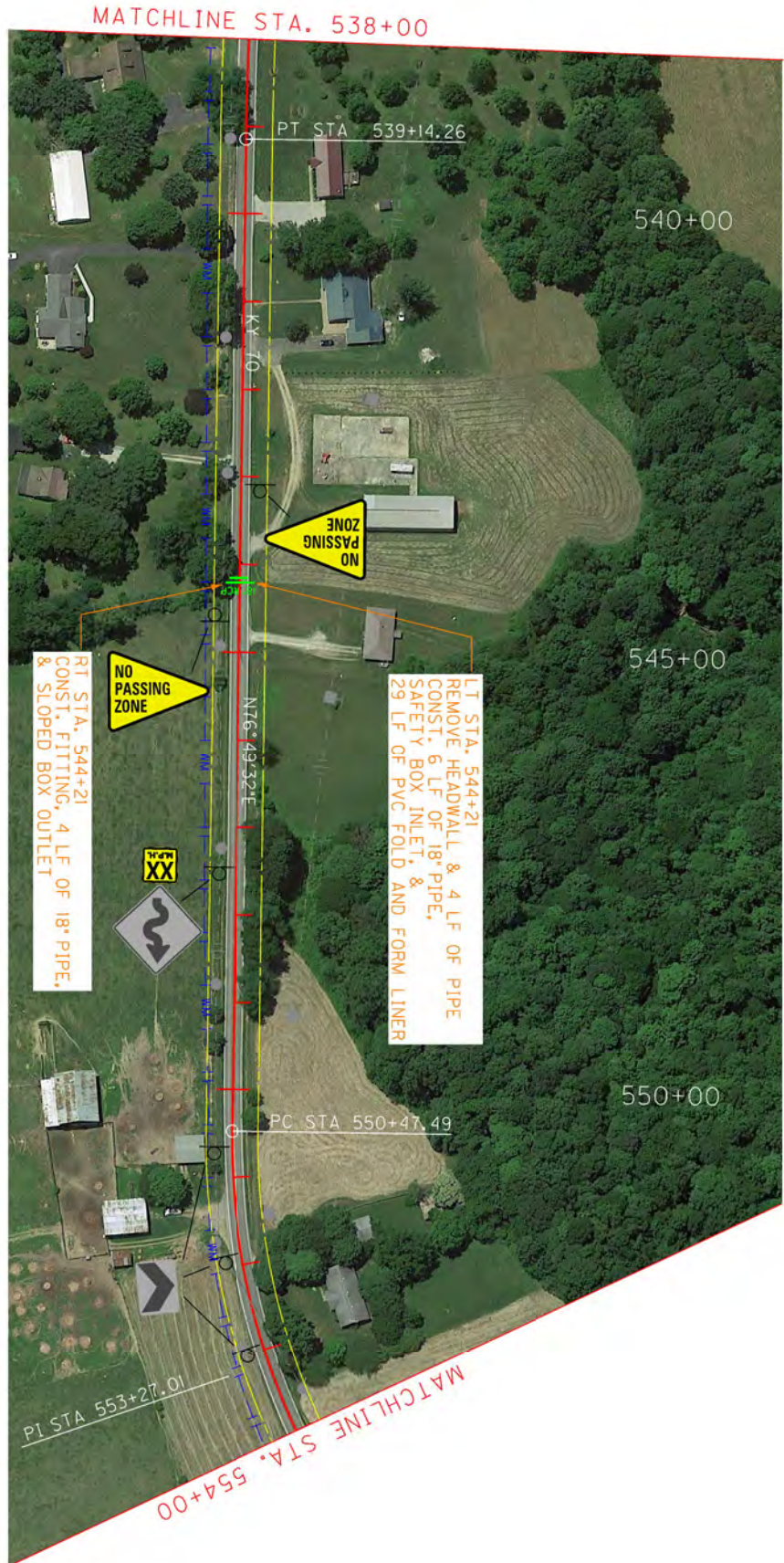
	PAVEMENT REPAIR
	HIGH-FRICTION SURFACE TREATMENT
	GUARDRAIL REPLACEMENT
	SUPERELEVATION IMPROVEMENT
	DITCHING & SHOULDERING



COUNTY OF	ITEM NO.
CASEY	8-9011.00

SCALE: 1"=200'  
KY 70  
PLAN SHEET - 19  
STA. 519+00 TO STA. 538+00

LEGEND	
	PAVEMENT REPAIR
	HIGH-FRICTION SURFACE TREATMENT
	GUARDRAIL REPLACEMENT
	SUPERELEVATION IMPROVEMENT
	DITCHING & SHOULDERING



COUNTY OF	ITEM NO.
CASEY	8-9011.00

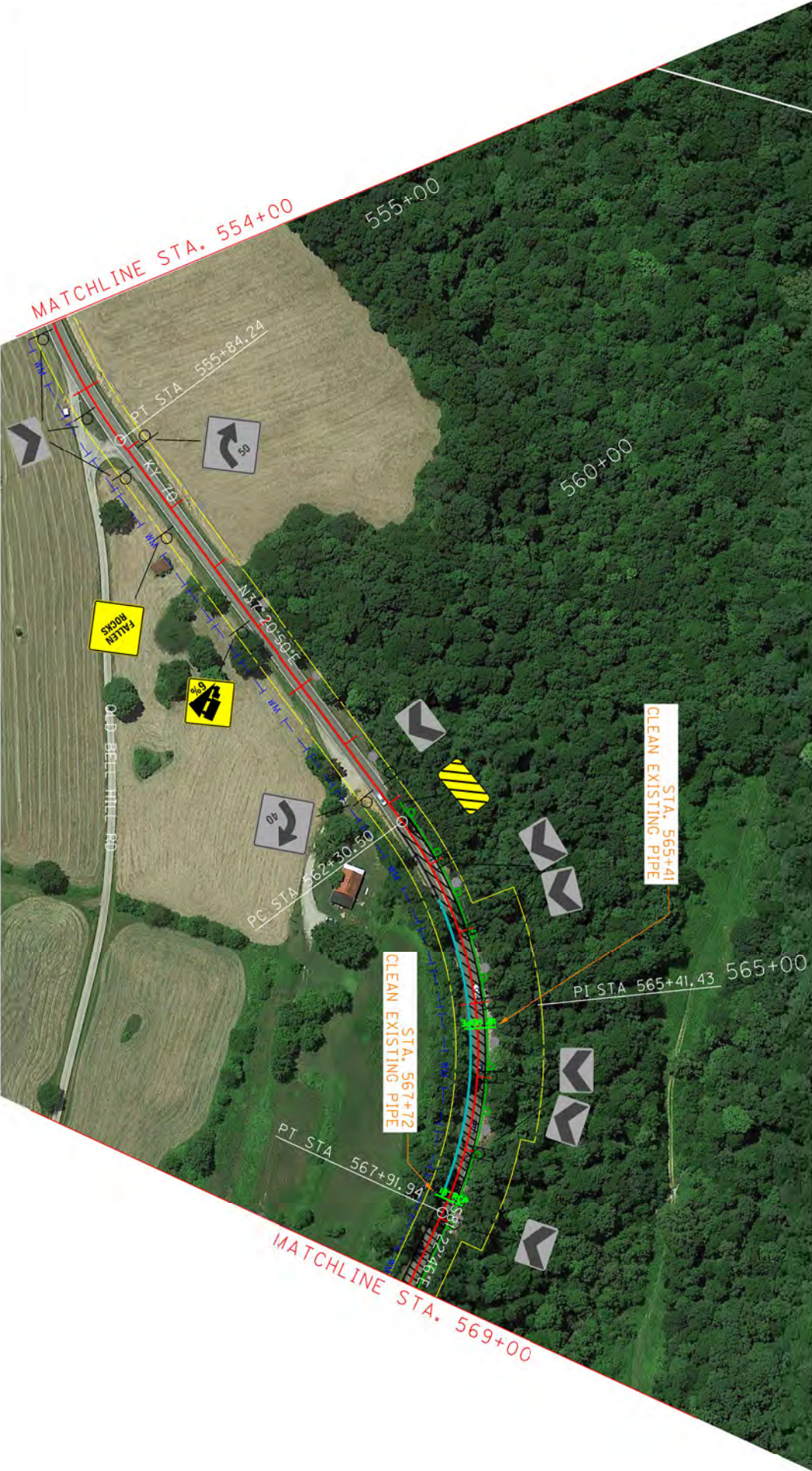
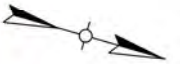
SCALE: 1"=200'

KY 70  
PLAN SHEET - 20  
STA. 538+00 TO STA. 554+01)

STEEL W-BEAM GUARDRAIL (L.T.)				REMOVAL	
BEGIN STA.	TERM. SEC.	END TRMNT.	END STA.	TERM. SEC.	END TRMNT.
562+10	--	TY I	569+00	--	--
				LENGTH	637.50
				REMOVAL LENGTH	612.50

HIGH-FRICTION SURFACE  
(BOTH LANES) STA. 562+30 TO STA. 569+00

COUNTY OF	ITEM NO.
CASEY	8-9011.00



LEGEND

	PAYEMENT REPAIR
	HIGH-FRICTION SURFACE TREATMENT
	GUARDRAIL REPLACEMENT
	SUPERELEVATION IMPROVEMENT
	DITCHING & SHOULDERING

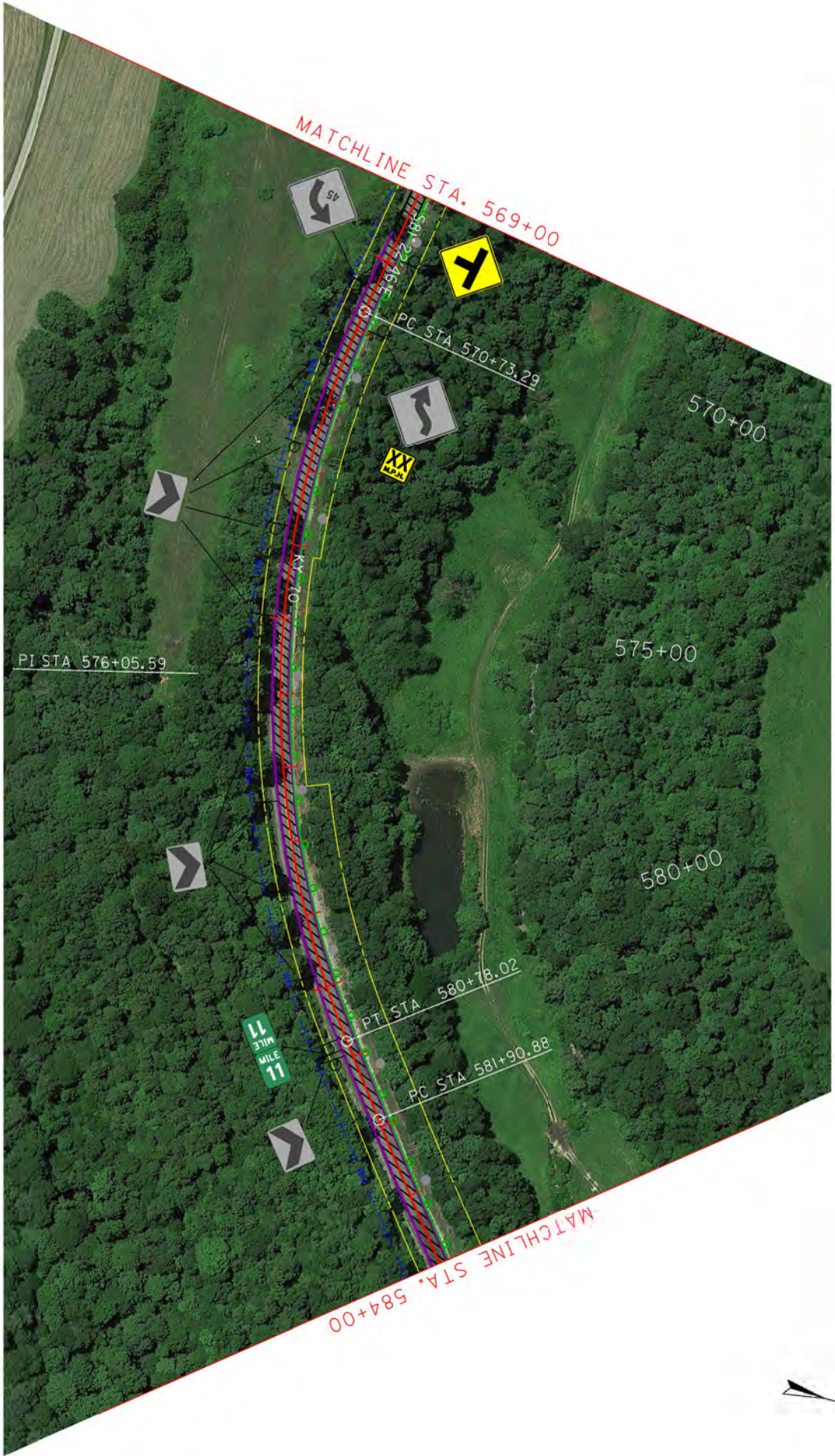
DITCHING & SHOULDERING (RT.)  
STA. 563+50 TO STA. 567+72

PLAN SHEET - 21  
KY 70  
SCALE: 1"=200'  
STA. 554+00 TO STA. 569+00

HIGH-FRICTION SURFACE TREATMENT (BOTH LANES) STA. 569+00 TO STA. 584+00
SUPERELEVATION IMPROVEMENT STA. 569+60 TO STA. 581+91
STA. 581+91 TO STA. 584+00

STEEL W-BEAM GUARDRAIL (L.T.)					REMOVAL LENGTH
BEGIN STA.	TERM. STA.	END TRMNT.	END STA.	TERM. SEC.	LENGTH
569+00	--	--	584+00	--	1500.00
					1500.00

COUNTY OF	ITEM NO.
CASEY	B-9011.00



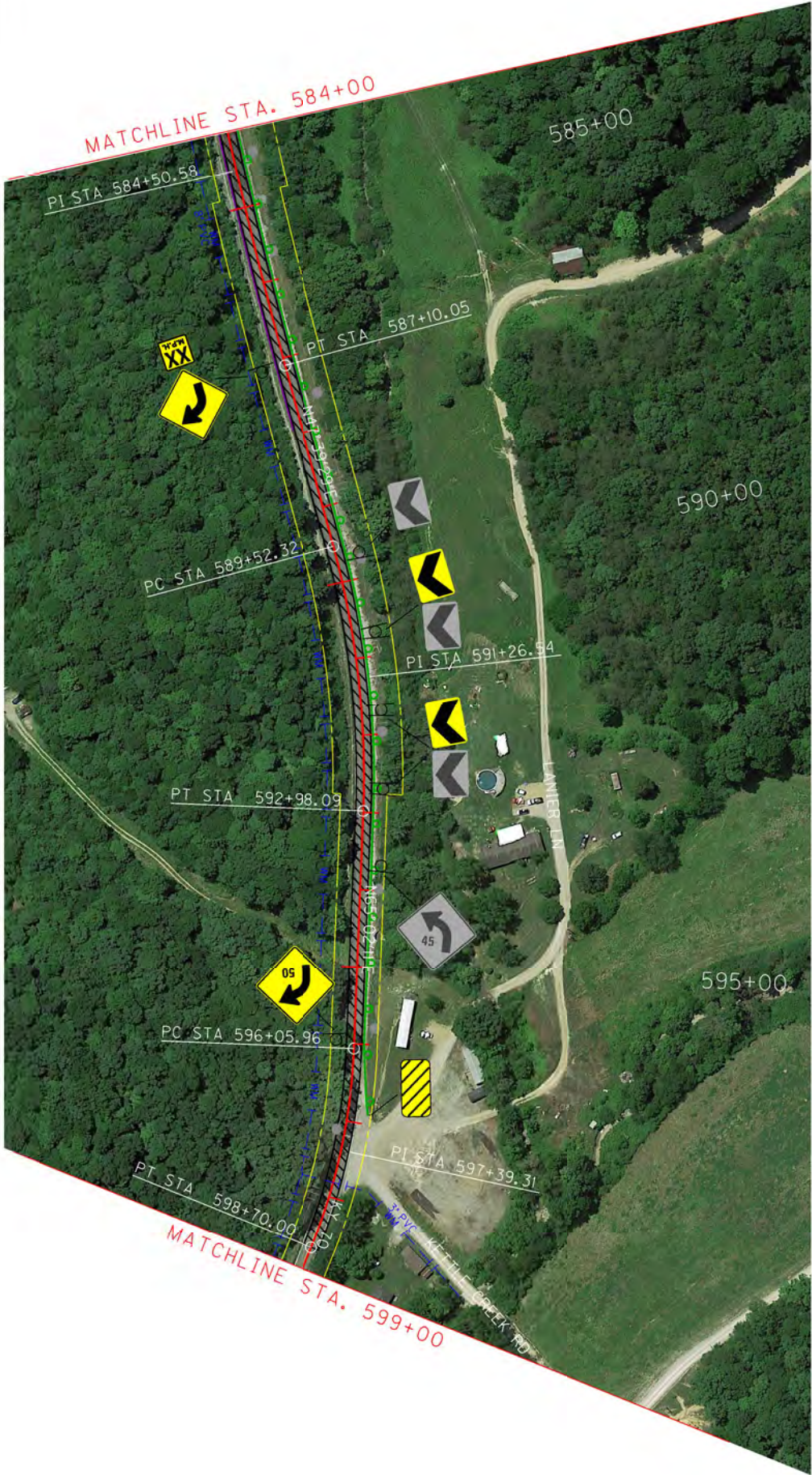
LEGEND

	PAVEMENT REPAIR
	HIGH-FRICTION SURFACE TREATMENT
	GUARDRAIL REPLACEMENT
	SUPERELEVATION IMPROVEMENT
	DITCHING & SHOULDERING

SCALE: 1"=200'  
KY 70  
PLAN SHEET - 22  
STA. 569+00 TO STA. 584+00

**LEGEND**

	PAVEMENT REPAIR
	HIGH-FRICTION SURFACE TREATMENT
	GUARDRAIL REPLACEMENT
	SUPERELEVATION IMPROVEMENT
	DITCHING & SHOULDERING



HIGH-FRICTION SURFACE TREATMENT (BOTH LANES) STA. 584+00 TO STA. 598+70
SUPERELEVATION IMPROVEMENT STA. 584+00 TO STA. 587+95

STEEL W-BEAM GUARDRAIL (L.T.)					
BEGIN STA.	TERM. SEC.	END TRMNT.	END STA.	TERM. SEC.	END TRMNT.
584+00	--	--	596+90	--	4A
					LENGTH
					1266.25
					REMOVAL LENGTH
					1287.50

COUNTY OF	ITEM NO.
CASEY	B-9011.00

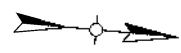
PLAN SHEET - 23  
KY 70  
STA. 584+00 TO STA. 599+01)

SCALE: 1"=200'

STEEL W-BEAM GUARDRAIL (L.T.)						REMOVAL LENGTH
BEGIN STA.	TERM. SEC.	END TRMNT.	END STA.	TERM. NO. 1	LENGTH	
599+80	--	TY 1	602+30	--	207.50	87.50
PROPOSED LENGTH INCLUDES 125 LF OF S FACE, 57.5 LF OF S FACE A (2 RADIUS RAIL), & 25 LF OF BRIDGE CASE I						

DITCHING & SHOULDERING (L.T.)	
STA.	LENGTH
605+70 TO STA. 616+00	

COUNTY OF	ITEM NO.
CASEY	8-9011.00



LEGEND	
	PAVEMENT REPAIR
	HIGH-FRICTION SURFACE TREATMENT
	GUARDRAIL REPLACEMENT
	SUPERELEVATION IMPROVEMENT
	DITCHING & SHOULDERING

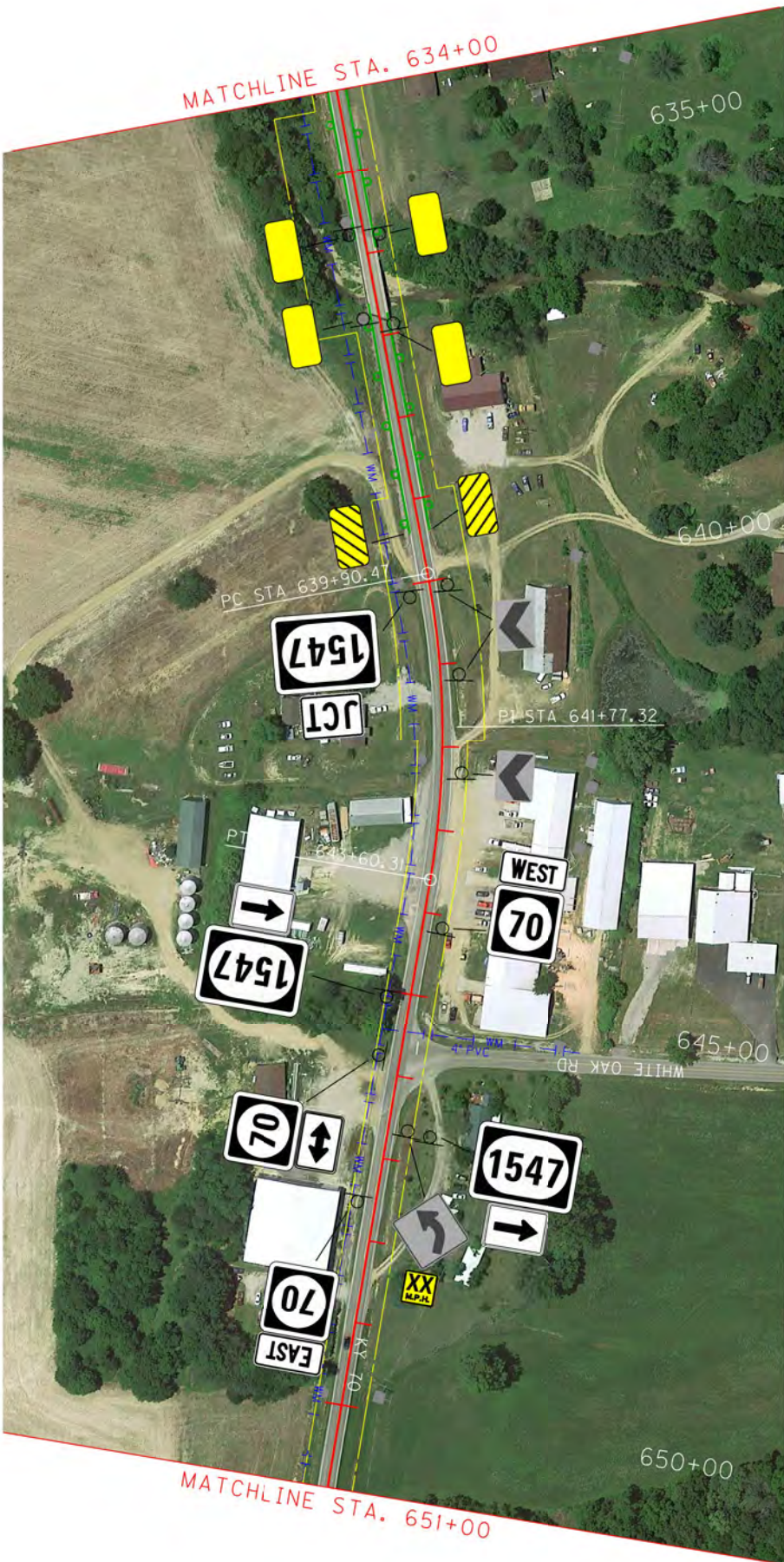
STEEL W-BEAM GUARDRAIL (RT.)						REMOVAL LENGTH
BEGIN STA.	TERM. SEC.	END TRMNT.	END STA.	TERM. TY 1	LENGTH	
601+80	NO. 1	--	604+25	--	207.50	125.00
PROPOSED LENGTH INCLUDES 125 LF OF S FACE, 57.5 LF OF S FACE A (2 RADIUS RAIL), & 25 LF OF BRIDGE CASE I						

KY 70  
PLAN SHEET - 24  
STA. 599-00 TO STA. 616+00

SCALE: 1"=200'



STEEL W-BEAM GUARDRAIL (L.T.)							
BEGIN STA.	TERM. SEC.	END TRMNT.	END STA.	TERM. SEC.	END TRMNT.	LENGTH	REMOVAL LENGTH
634+00	--	--	635+95	BRIDGE TY A		162.50	162.50
636+75	BRIDGE TY A	639+40	--	TY I		225.00	300.00



STEEL W-BEAM GUARDRAIL (R.T.)							
BEGIN STA.	TERM. SEC.	END TRMNT.	END STA.	TERM. SEC.	END TRMNT.	LENGTH	REMOVAL LENGTH
634+00	--	--	635+85	BRIDGE TY A		175.00	150.00
636+60	BRIDGE TY A	639+40	--	TY I		237.50	300.00

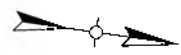
LEGEND	
	PAVEMENT REPAIR
	HIGH-FRICTION SURFACE TREATMENT
	GUARDRAIL REPLACEMENT
	SUPERELEVATION IMPROVEMENT
	DITCHING & SHOULDERING

COUNTY OF	ITEM NO.
CASEY	8-9011.00

PLAN SHEET - 26  
KY 70  
STA. 634+00 TO STA. 651+00

SCALE: 1"=200'

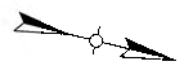
LEGEND	
	PAVEMENT REPAIR
	HIGH-FRICTION SURFACE TREATMENT
	GUARDRAIL REPLACEMENT
	SUPERELEVATION IMPROVEMENT
	DITCHING & SHOULDERING



COUNTY OF	ITEM NO.
CASEY	8-9011.00

SCALE: 1"=200'  
KY 70  
PLAN SHEET - 27  
STA. 651+00 TO STA. 669+00

LEGEND	
	PAVEMENT REPAIR
	HIGH-FRICTION SURFACE TREATMENT
	GUARDRAIL REPLACEMENT
	SUPERELEVATION IMPROVEMENT
	DITCHING & SHOULDERING

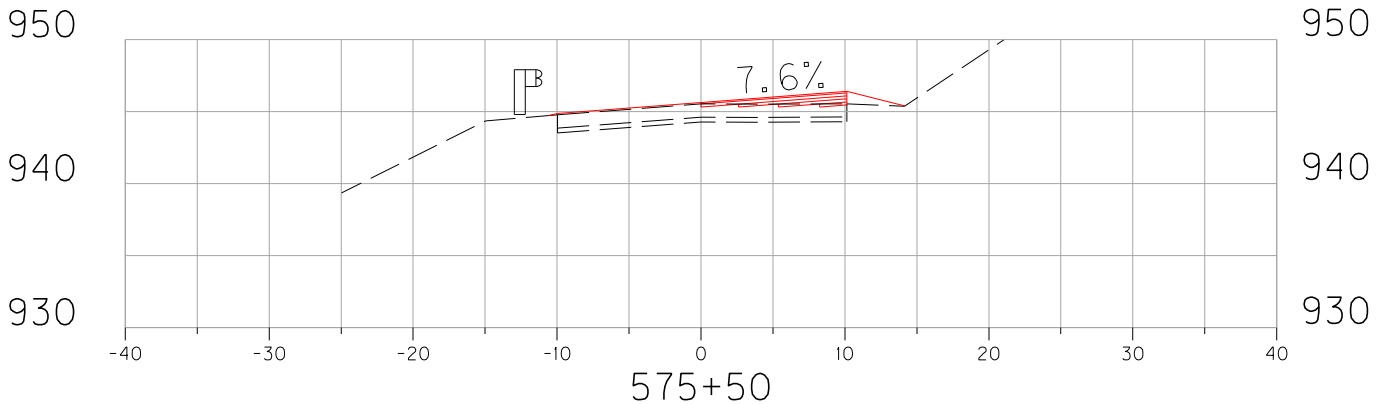
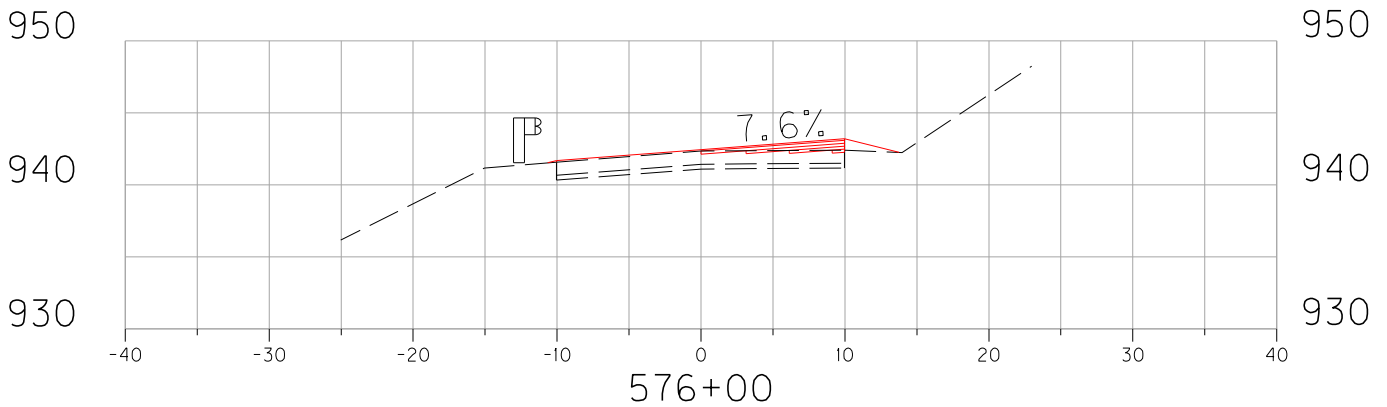
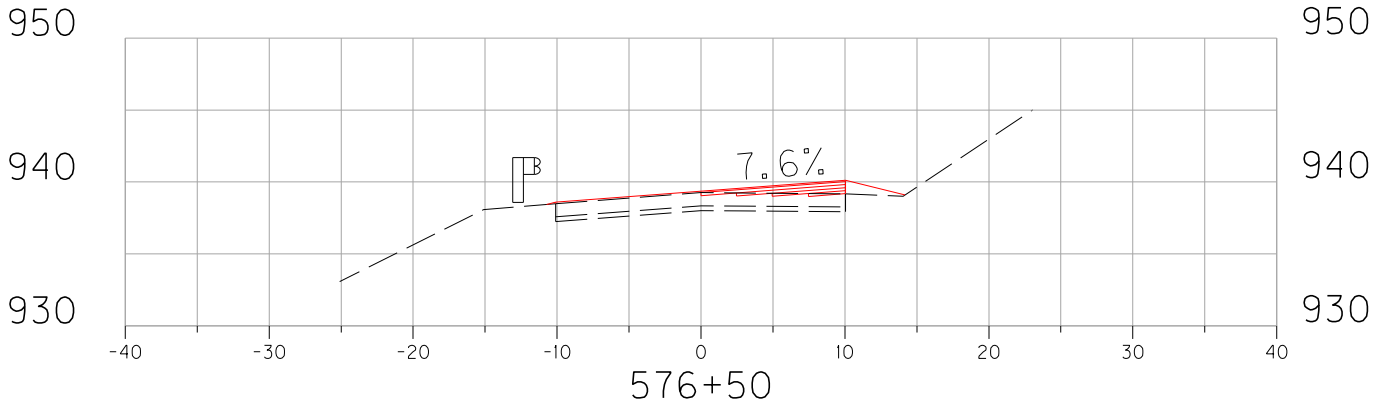


COUNTY OF	ITEM NO.
CASEY	8-9011.00

SCALE: 1"=200'  
 KY 70  
 PLAN SHEET - 28  
 STA. 669+00 TO STA. 679+43

COUNTY OF	ITEM NO.
CASEY	8-9011.00

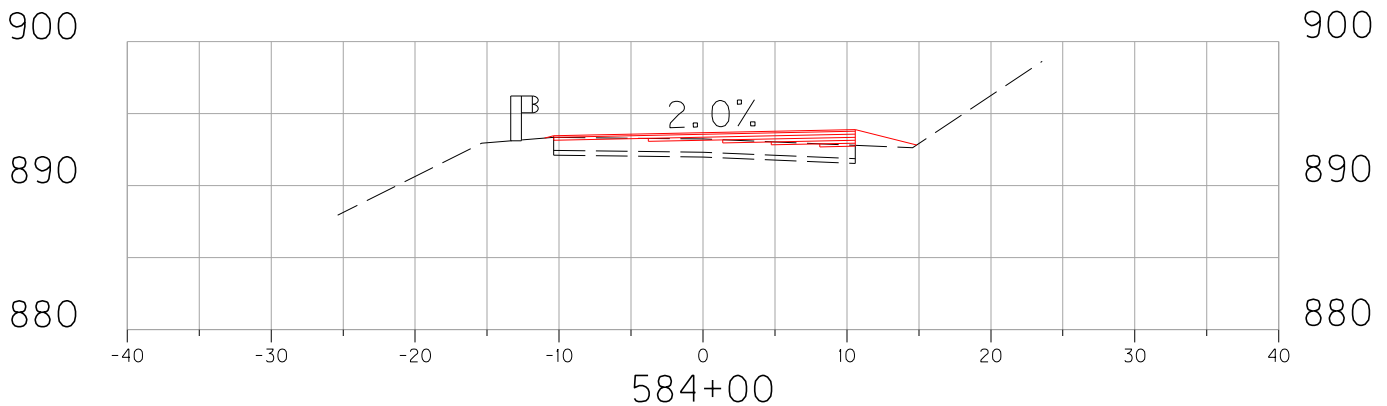
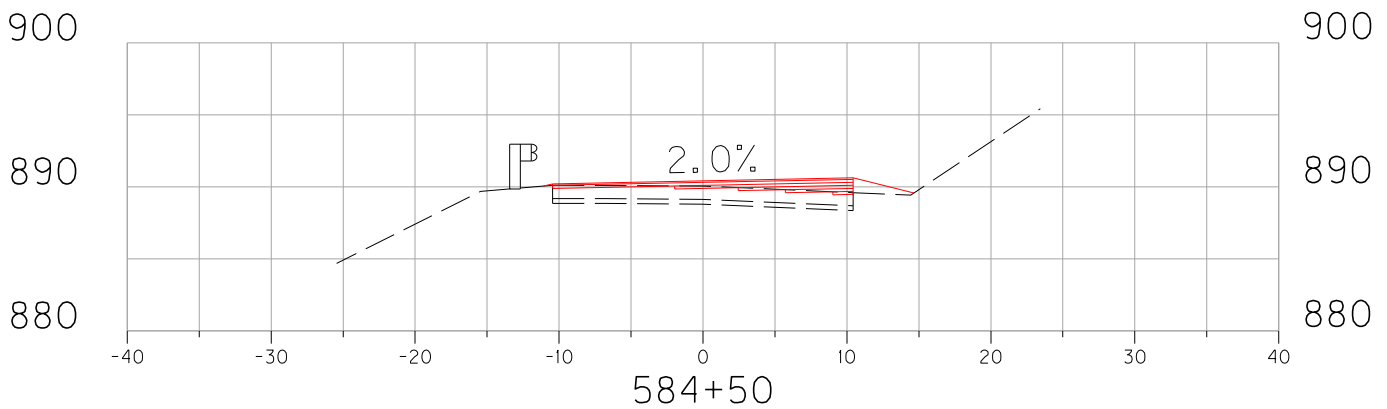
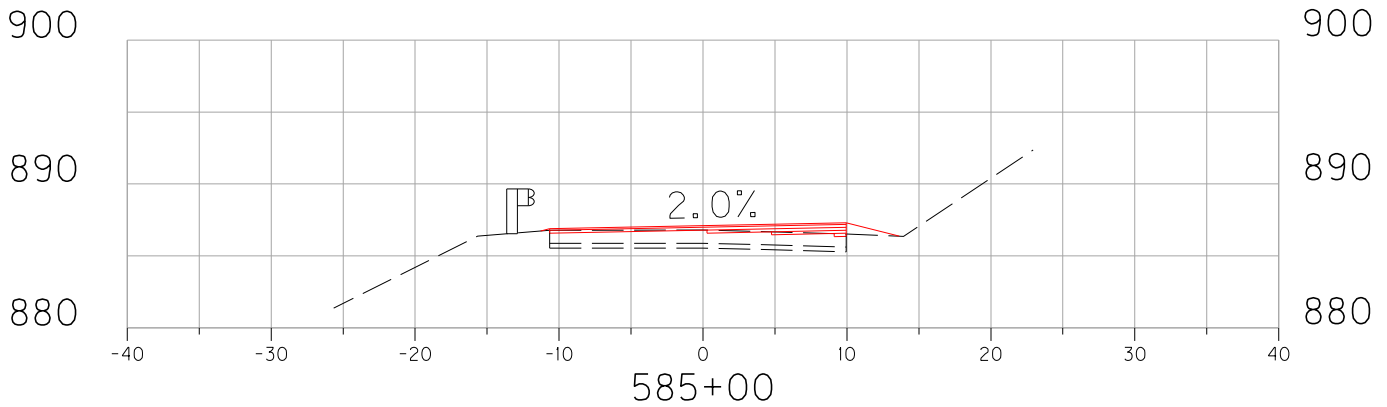
SUPERELEVATION TRANSITION		
STA.	CROSS-SLOPE	
	WB LANE	EB LANE
569+60	EXISTING	EXISTING
571+30	7.6% (←)	7.6% (←)
580+21	7.6% (←)	7.6% (←)
581+91	2.0% (←)	2.0% (←)



KY 70  
SUPERELEVATION DETAIL  
PI STA 576+05.59

COUNTY OF	ITEM NO.
CASEY	8-9011.00

SUPERELEVATION TRANSITION		
STA.	CROSS-SLOPE	
	WB LANE	EB LANE
581+91	2.0% (←)	2.0% (←)
586+93	2.0% (←)	2.0% (←)
587+44	2.0% (←)	FLAT
587+95	EXISTING	EXISTING



KY 70  
SUPERELEVATION DETAIL  
PI STA 584+50.58

COUNTY OF	ITEM NO.
CASEY	8-9011.00

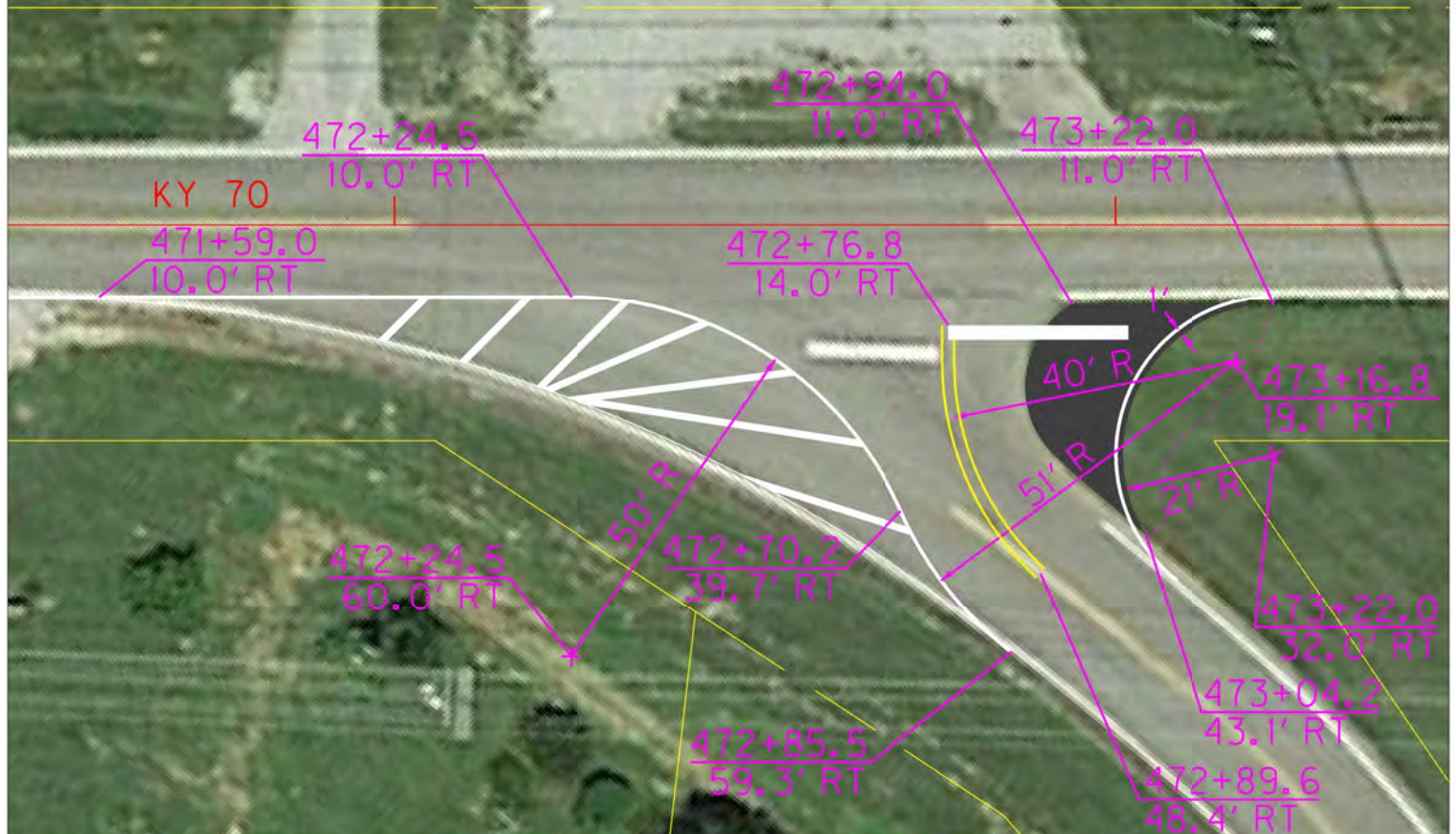
472+00

473+00

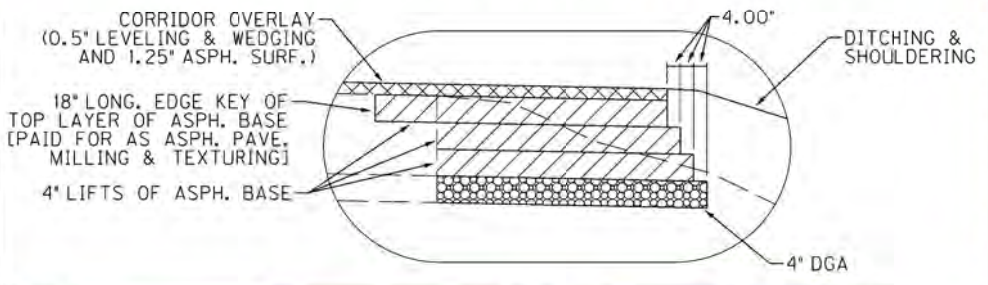
CROSS-HATCH  
 MATERIAL: THERMO  
 COLOR: WHITE  
 DIMENSIONS: X=12" & Y=10'



CONSTRUCT 4" DGA BASE &  
 12" ASPHALT BASE (3 LIFTS @ 4")  
 TO FLUSH WITH THE EXISTING SURFACE



PAVEMENT CONSTRUCTION DETAIL



SCALE: 1" = 25'

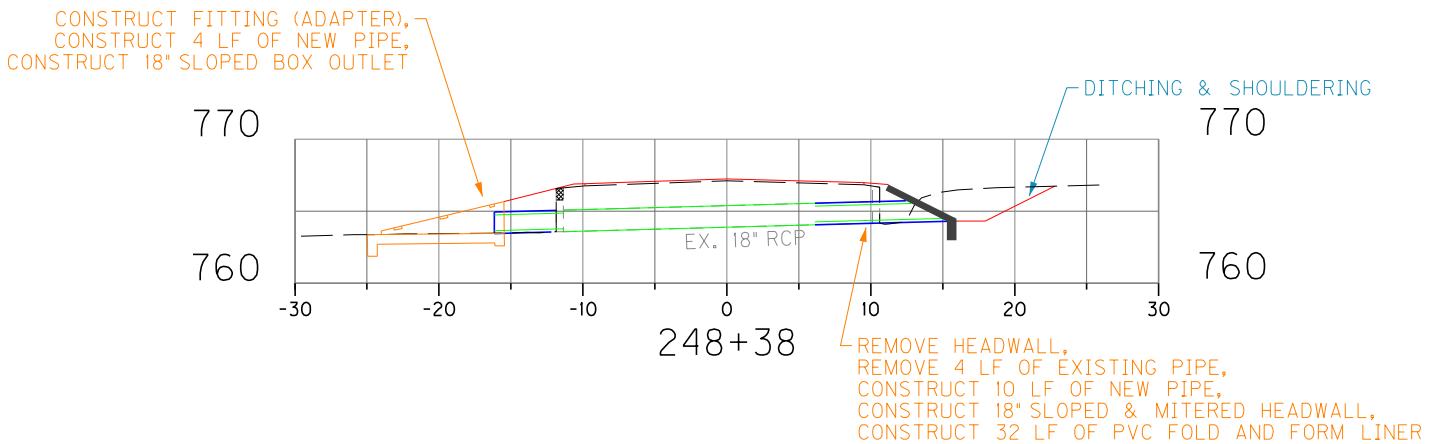
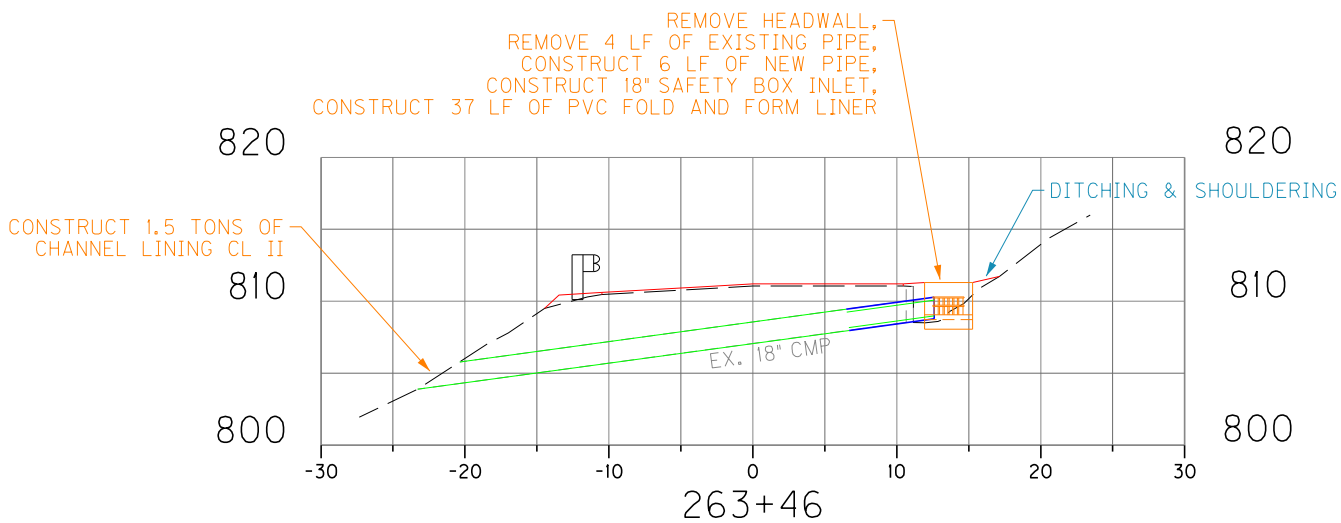
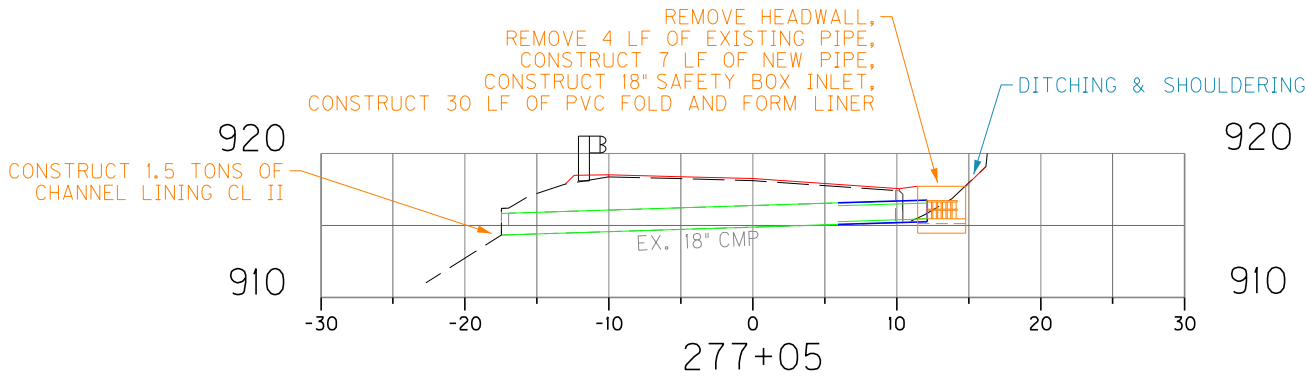
KY 206 @ KY 70  
 REALIGNMENT DETAIL SHEET

COUNTY OF	ITEM NO.
CASEY	8-9011.00

NOTES:

ALL JOINTS WHERE PROPOSED PIPE IS TO CONNECT WITH EXISTING PIPE THAT IS NOT TO BE CONNECTED WITH A FITTING SHALL BE ENCASED BY AN INTERMEDIATE ANCHOR. REFER TO THE PIPE REPLACEMENT AND EXTENSION SUMMARY FOR ESTIMATED QUANTITIES AND STANDARD DRAWING RDX-060-04 FOR DESIGN SPECIFICS.

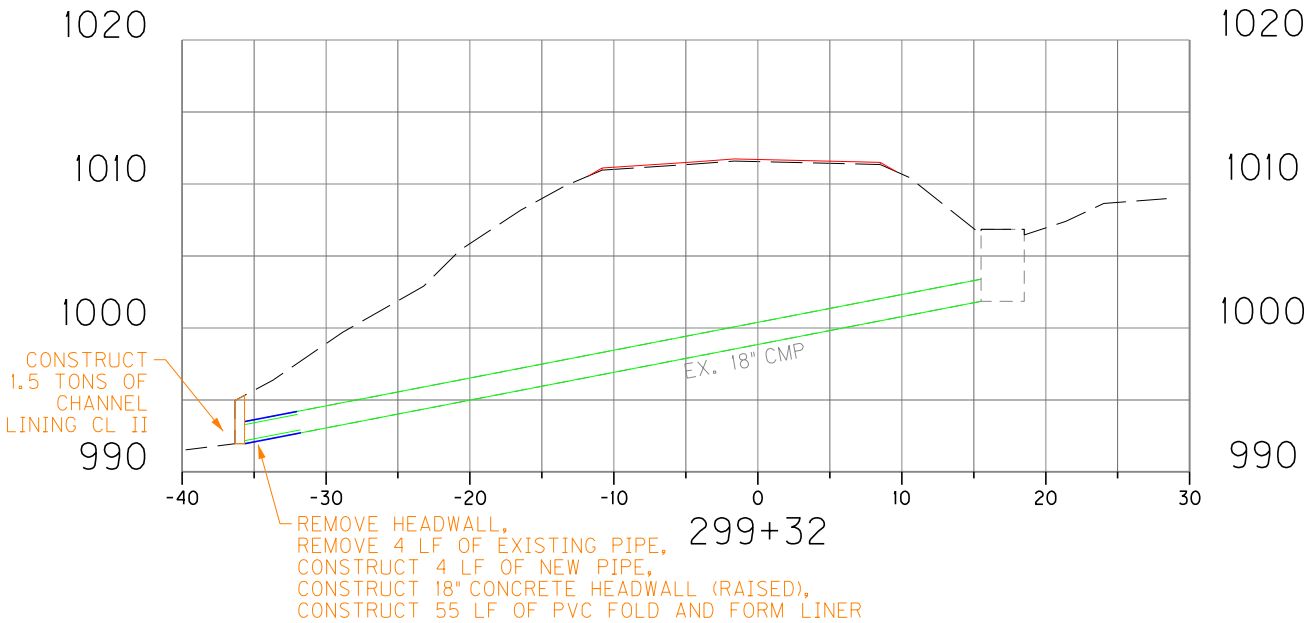
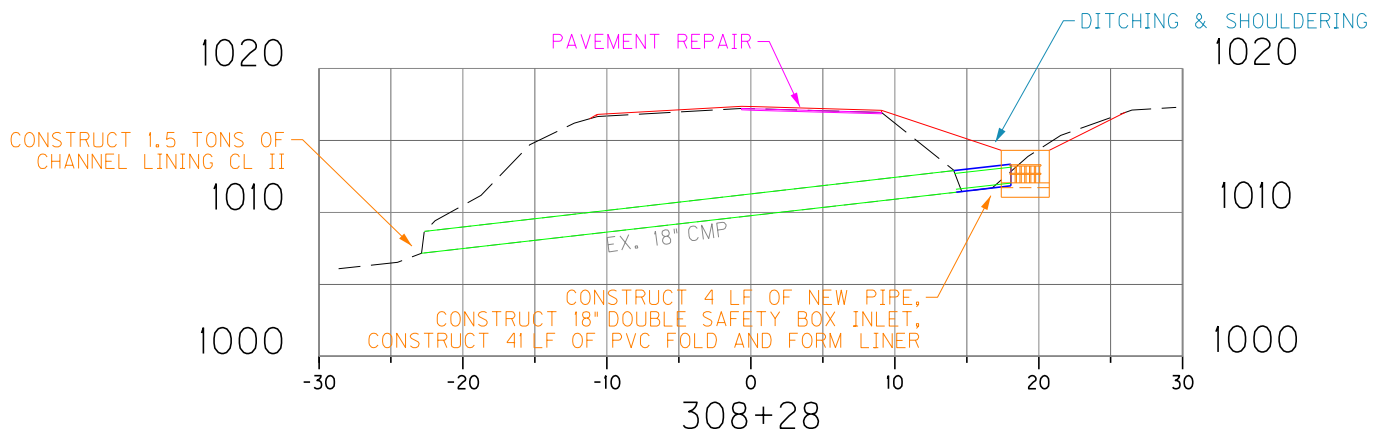
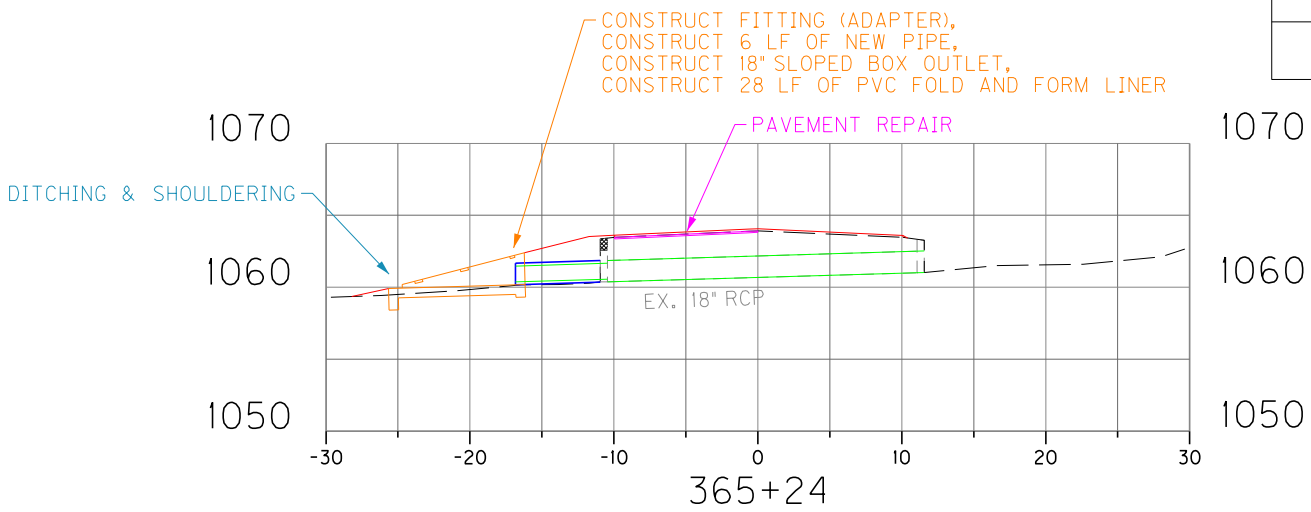
REFER TO THE PIPE EXTENSION DUAL WALL ADAPTER FITTING DETAIL FOR DESIGN SPECIFICS AND ACTIVITIES ASSOCIATED WITH THE CONSTRUCTION OF A FITTING.



LEGEND	
<span style="color: blue;">—</span>	PROPOSED PIPE
<span style="color: orange;">—</span>	PROPOSED DRAINAGE STRUCTURE
<span style="color: green;">—</span>	PROPOSED PVC FOLD AND FORM LINER
<span style="color: red;">—</span>	PROPOSED SURFACE

KY 70  
PIPE EXTENSION AND  
IMPROVEMENT DETAILS

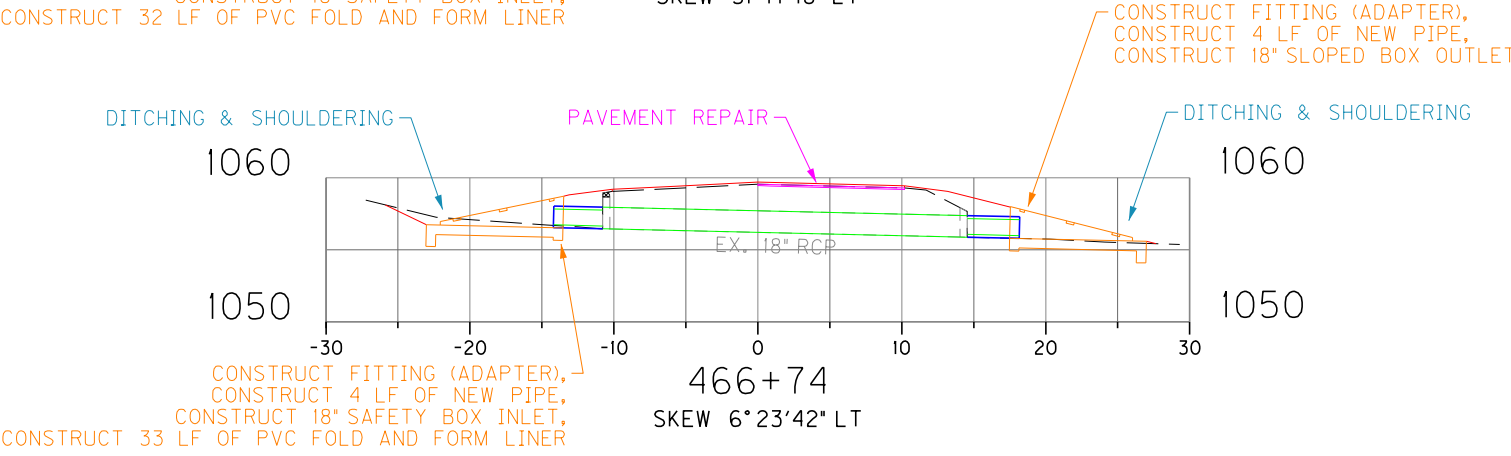
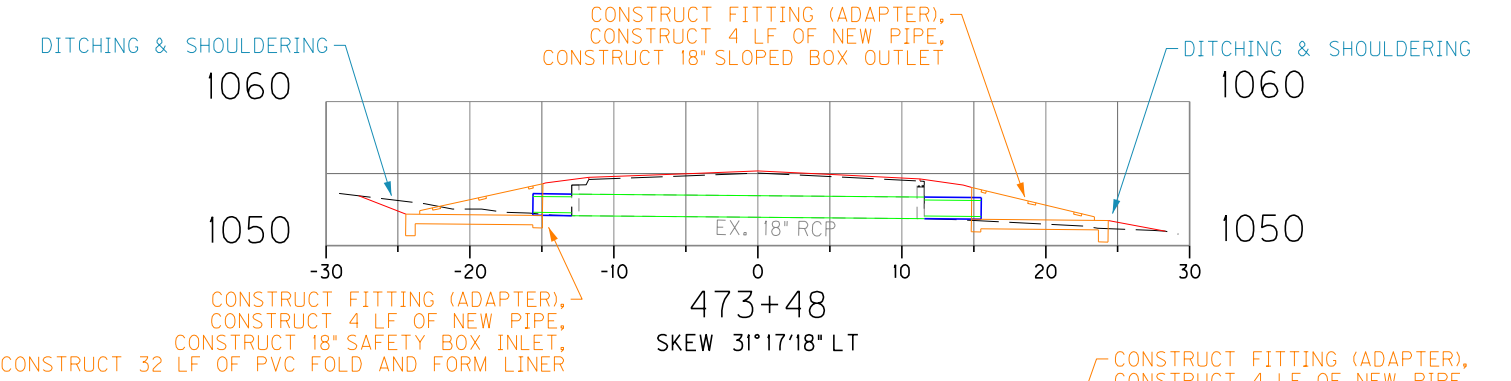
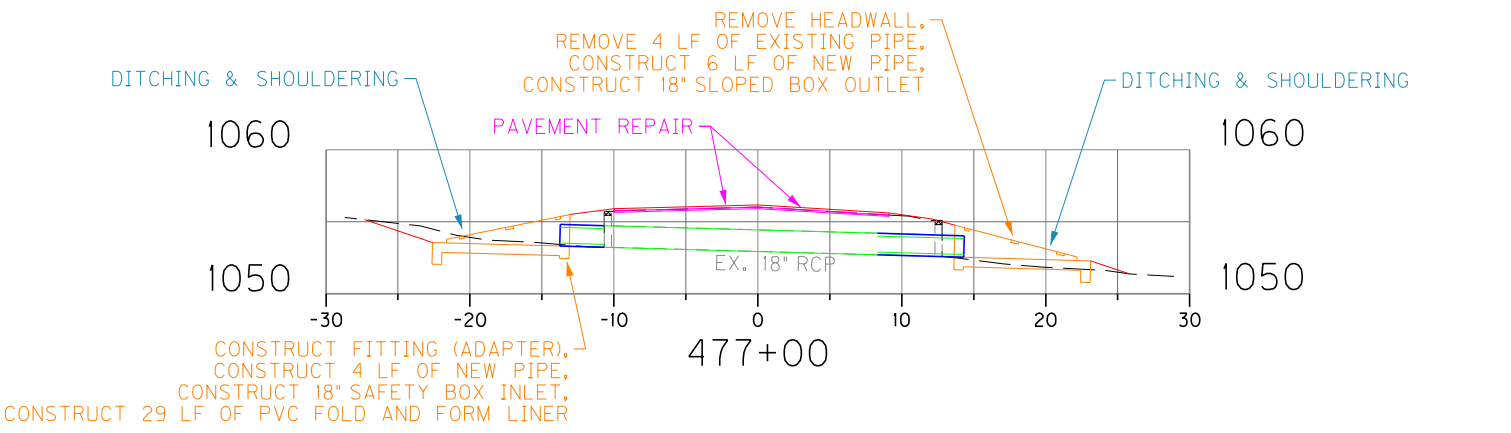
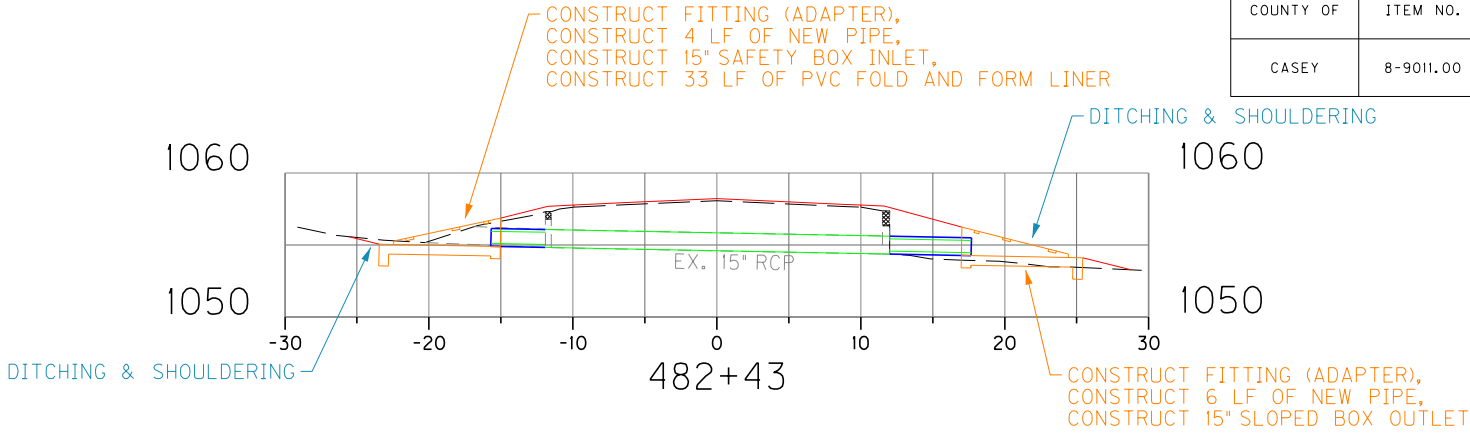
COUNTY OF	ITEM NO.
CASEY	8-9011.00



LEGEND	
<span style="color: blue;">—</span>	PROPOSED PIPE
<span style="color: orange;">—</span>	PROPOSED DRAINAGE STRUCTURE
<span style="color: green;">—</span>	PROPOSED PVC FOLD AND FORM LINER
<span style="color: red;">—</span>	PROPOSED SURFACE

KY 70  
PIPE EXTENSION AND  
IMPROVEMENT DETAILS

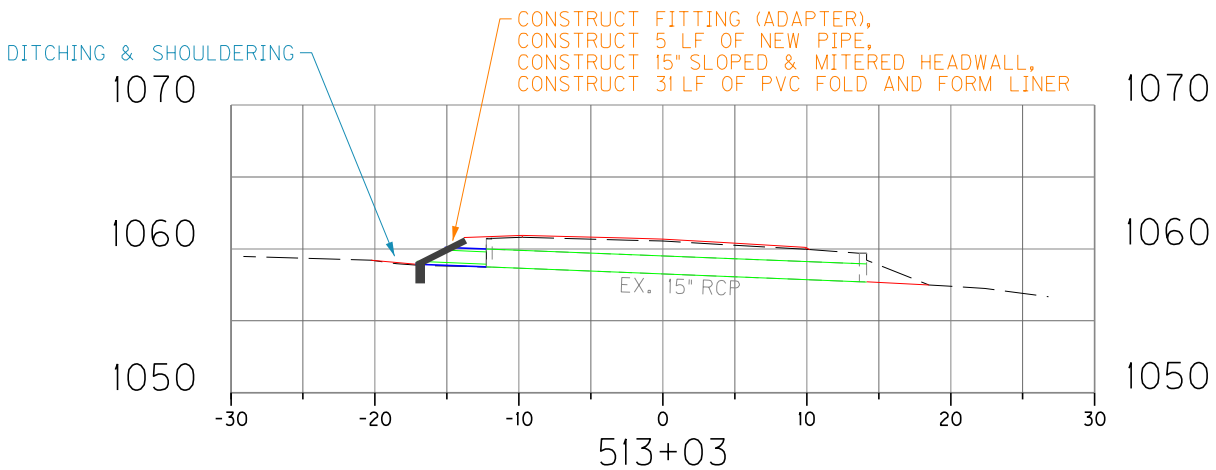
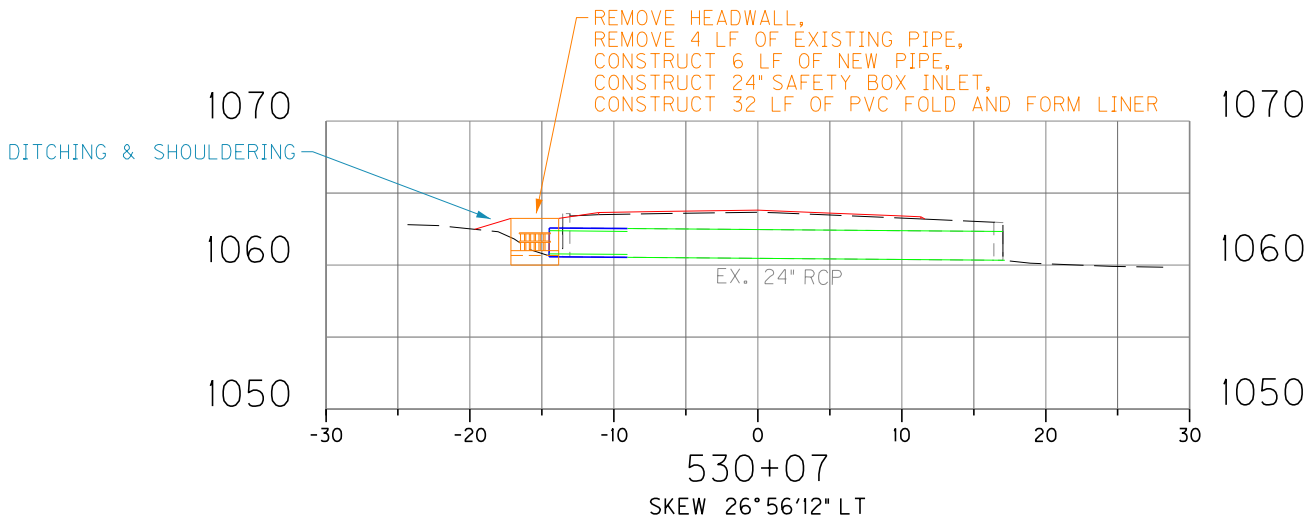
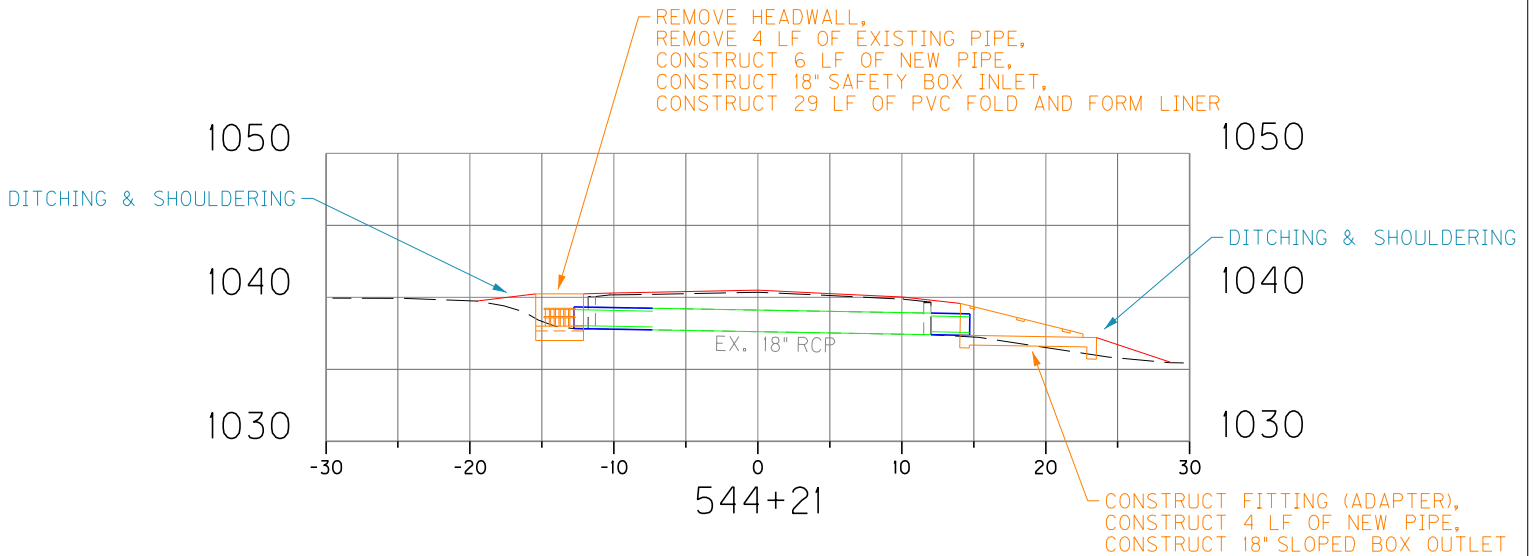
COUNTY OF	ITEM NO.
CASEY	8-9011.00



LEGEND	
<span style="color: blue;">—</span>	PROPOSED PIPE
<span style="color: orange;">—</span>	PROPOSED DRAINAGE STRUCTURE
<span style="color: green;">—</span>	PROPOSED PVC FOLD AND FORM LINER
<span style="color: red;">—</span>	PROPOSED SURFACE

KY 70  
PIPE EXTENSION AND  
IMPROVEMENT DETAILS

COUNTY OF	ITEM NO.
CASEY	8-9011.00

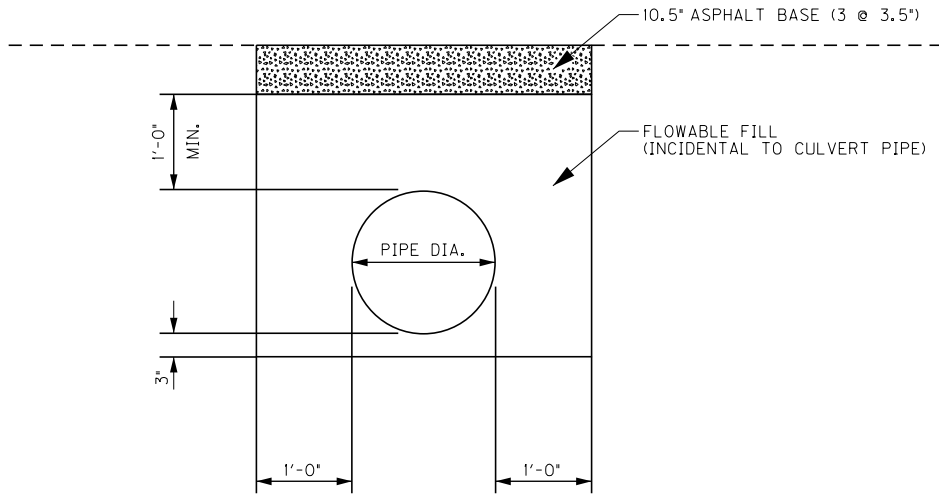


LEGEND	
<span style="color: blue;">—</span>	PROPOSED PIPE
<span style="color: orange;">—</span>	PROPOSED DRAINAGE STRUCTURE
<span style="color: green;">—</span>	PROPOSED PVC FOLD AND FORM LINER
<span style="color: red;">—</span>	PROPOSED SURFACE

KY 70  
PIPE EXTENSION AND  
IMPROVEMENT DETAILS

COUNTY OF	ITEM NO.
CASEY	8-9011.00

# CULVERT PIPE REPLACEMENT & EXTENSION DETAIL



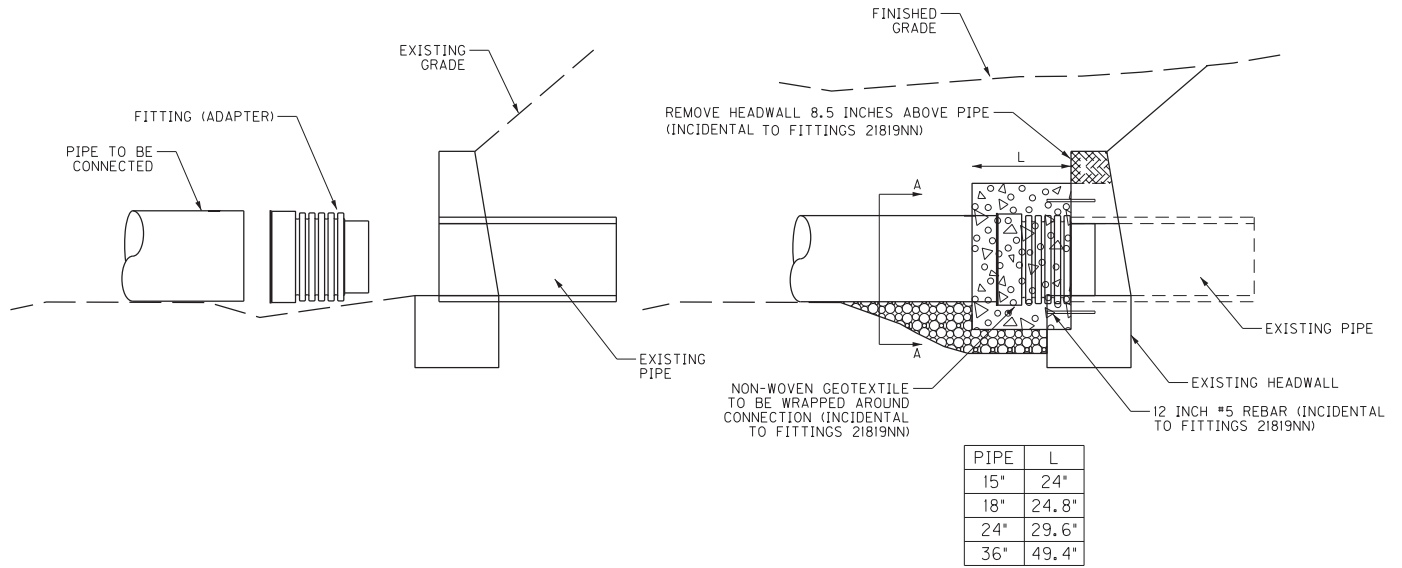
## CULVERT PIPE EXTENSIONS - INITIAL BACKFILL

LT	RT
STA. 530+07	STA. 248+38
STA. 544+21	STA. 263+46
	STA. 277+05
	STA. 477+00

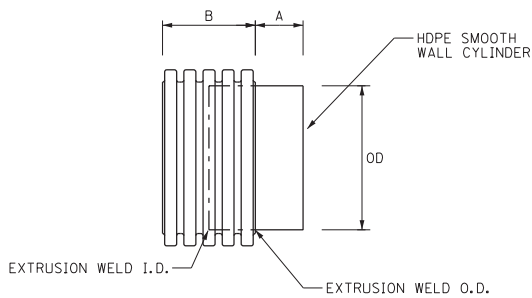
CULVERT PIPE EXTENSIONS WITH DISTURBANCE TO THE ROADWAY PAVEMENT SHALL BE CONSTRUCTED ACCORDING TO THE INITIAL BACKFILL DETAIL SHOWN ABOVE, OR AS DIRECTED BY THE ENGINEER. ALLOW THE ASPHALT BASE TO BE EXPOSED TO TRAFFIC A MINIMUM OF 14 DAYS TO ALLOW FOR SETTLEMENT.

CULVERT PIPE  
 REPLACEMENT & EXTENSION  
 DETAIL SHEET

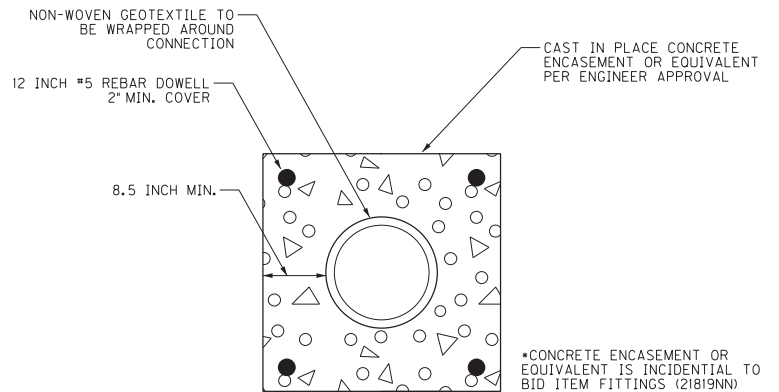
# PIPE EXTENSION DUAL WALL ADAPTER FITTING DETAILS APAPTER TO DISSIMILAR MATERIAL



## DUAL WALL ADAPTER FITTING

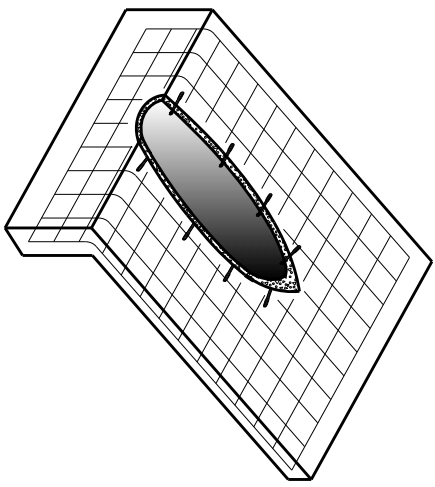
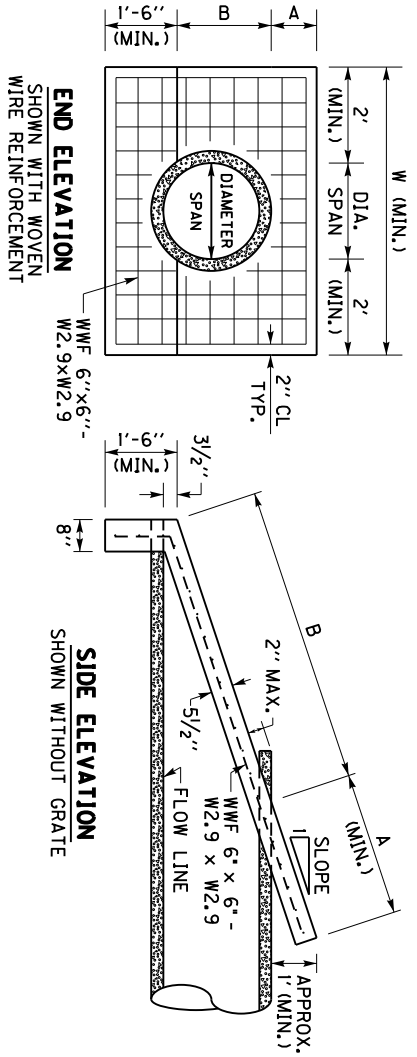


PIPE	A	B	OD
15"	6"	13"	15"
18"	6"	13.4"	18"
24"	8"	15.8"	24"
36"	10"	25.7"	36"

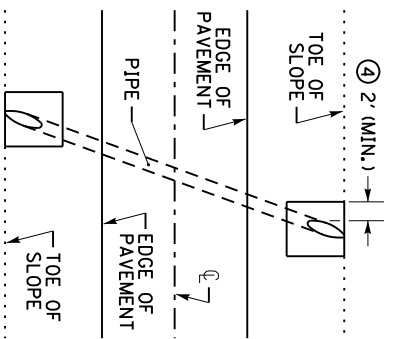


SECTION "A-A"

CAST IN PLACE CONCRETE ENCASEMENT APPROX QUANTITIES	
PIPE	CLASS "A" CONC. (CUYD)
15"	0.82
18"	0.95
24"	1.40
36"	3.29



**ISOMETRIC VIEW**  
SHOWN WITH WOVEN  
WIRE REINFORCEMENT  
AND WEDGE ANCHORS



**PLAN VIEW**  
SHOWN WHEN THE  
PIPE IS ON A SKEW

DIMENSIONS AND CONCRETE QUANTITIES (FOR PIPE WITH SKEW = 0°) ④

PIPE SIZE	3:1 SLOPE			4:1 SLOPE			6:1 SLOPE		
	A	B	W	A	B	W	A	B	W
15"	3'-7 1/2"	5'-3"	0.74	4'-8 3/4"	5'-3"	0.93	6'-11 3/4"	5'-3"	1.29
18"	4'-5 3/4"	5'-6"	0.85	5'-10"	5'-6"	1.05	8'-7 1/4"	5'-6"	1.48
24"	6'-2 1/2"	6'-0"	1.05	8'-1"	6'-0"	1.32	11'-11"	6'-0"	1.87
30"	7'-10 3/4"	6'-6"	1.43	10'-3 3/4"	6'-6"	1.80	15'-2 1/2"	6'-6"	2.28

••DIMENSIONS AND CONCRETE QUANTITIES ARE APPROXIMATE AND LISTED FOR INFORMATIONAL PURPOSES ONLY••

**BID ITEM AND UNIT TO BID: 24575ES610 HEADWALL (SLOPED & MITERED CONCRETE-FOR 1/2 INCH PIPE) - EACH**

COUNTY OF	TOWN NO.	SHEET NO.
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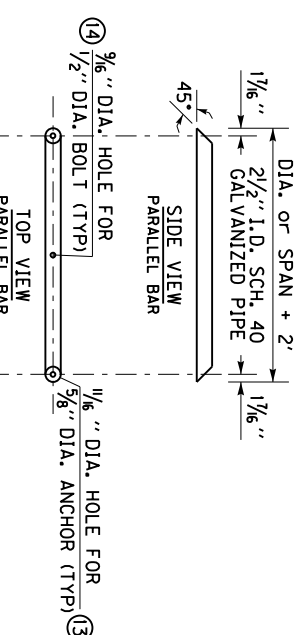
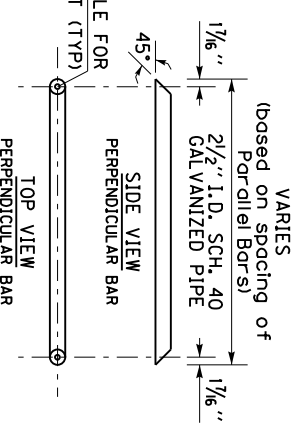
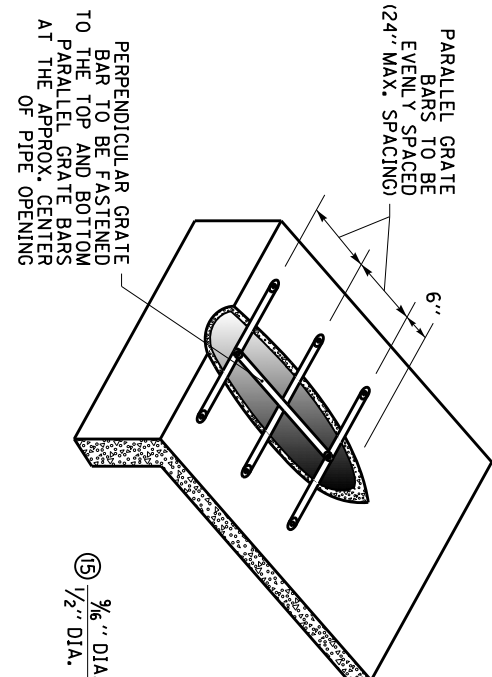
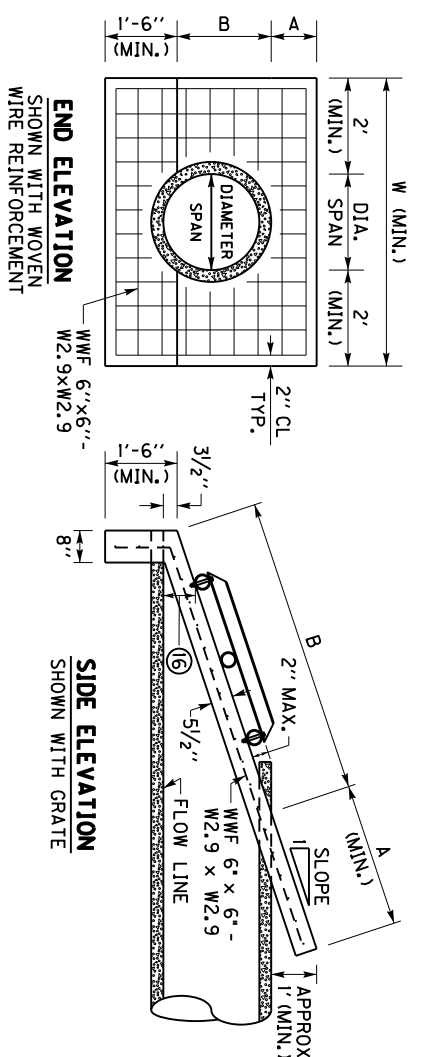
**NOTES**

- FOR PIPES THAT RECEIVE THE SLOPED & MITERED CONCRETE HEADWALL, THE PIPE LENGTH SHALL BE MEASURED TO THE FURTHEST POINT ALONG THE MITERED END OF THE PIPE.
- THE EMBANKMENT FILL MATERIAL IS TO BE PLACED, COMPACTED, AND GRADDED AROUND THE PIPE BEFORE THE CONCRETE SLOPE PAVING IS PLACED. THE INTENT IS FOR THE SLOPED & MITERED HEADWALL TO MATCH THE FINAL EMBANKMENT SLOPE.
- THE PIPE SHALL BE MITERED AFTER THE CONCRETE SLOPE PAVING HAS BEEN PLACED AND SUFFICIENTLY CURED. THE PIPE SHOULD BE MITERED AS CLOSE TO FLUSH WITH THE SLOPE PAVING AS POSSIBLE, AND NO HIGHER THAN 2" ABOVE THE SLOPE PAVING. HAND FINISHING AND/OR CUTTING MAY BE NECESSARY.
- WHEN THE PIPE IS ON A SKEW, INSTALL THE HEADWALL AND MITER THE PIPE SO THAT THE CONCRETE SLOPE PAVING IS PERPENDICULAR TO THE ROADWAY. FOR HEADWALLS ON SKEWED PIPES, THE HEADWALL WIDTH, 'W', SHALL BE WIDENED, AS NEEDED, SO THAT THE OUTSIDE EDGE OF THE CONCRETE SLOPE PAVING IS A MINIMUM OF 2" FROM THE OUTER MOST EDGE OF THE PIPE.
- THE DIMENSION 'A' IS BASED ON THE FINAL GRADED SLOPE. THE DIMENSION 'B' IS BASED ON CIRCULAR REINFORCED CONCRETE PIPE AT 0° SKEW FOR THE LISTED SLOPE. THE DIMENSION 'W' IS BASED ON THE DIAMETER, OR SPAN, OF THE PIPE. THE FINAL HEADWALL DIMENSIONS AND CONCRETE QUANTITIES MAY VARY BASED ON THE FINAL GRADED SLOPE, PIPE SKEW, AND/OR TYPE OF PIPE.
- WOVEN WIRE REINFORCEMENT (WWF 6"x6" - W2.9xW2.9) IS REQUIRED FOR THE SLOPE PAVING AND TOE WALL. UTILIZE 2" CLEARANCE FROM ALL EDGES.
- DIMENSIONS AND CONCRETE QUANTITIES SHOWN ARE FOR ONE (1) HEADWALL, INSTALLED ON A PIPE WITH SKEW = 0°.
- AFTER THE PIPE HAS BEEN MITERED, ANCHOR THE PIPE TO THE CONCRETE SLOPE PAVING BY CORE DRILLING AND INSTALLING 1/2" DIAMETER x 7' LENGTH STEEL WEDGE ANCHORS (3" MINIMUM EMBEDMENT) ON 18" CENTERS ALONG THE SIDES OF THE PIPE. HOLE SIZE & DEPTH, TORQUE, & INSTALLATION PROCEDURES PER RECOMMENDATION OF ANCHOR MANUFACTURER. NOTE: STEEL WEDGE ANCHORS ARE NOT REQUIRED FOR REINFORCED CONCRETE PIPE.
- THE FOLLOWING SITUATIONS REQUIRE A HEADWALL WITH A GRATE:
  - 24" DIAMETER PIPE ON GREATER THAN 30° SKEW
  - 30" DIAMETER PIPE ON GREATER THAN 15° SKEW
  - PIPE WITH GREATER THAN 30" DIAMETER.
  - ELLIPTICAL PIPE GREATER THAN 24" EQUIVALENT DIAMETER
 SEE SHEET 2 FOR GRATE DETAILS.
- ALL BOLTS AND HARDWARE SHALL BE RUST RESISTANT: ZINC PLATED, STAINLESS STEEL, OR STEEL THAT HAS BEEN GALVANIZED IN ACCORDANCE WITH AASHTO M 232.

NOT TO SCALE

DEPARTMENT OF HIGHWAYS
KENTUCKY
SLOPED & MITERED CONCRETE HEADWALL (SHEET 1 OF 2)

SEE SHEET 2 FOR  
DIMENSIONS OF  
HEADWALLS FOR PIPE  
OVER 30" DIAMETER



- ~ NOTES ~
- SEE SHEET 1 FOR NOTES 1 THRU 8
  - THE FOLLOWING SITUATIONS REQUIRE A HEADWALL WITH A GRATE:
    - 24\"/>
  - PIPE WITH GREATER THAN 30\"/>
  - ELLIPTICAL PIPE GREATER THAN 24\"/>
  - ALL BOLTS AND HARDWARE SHALL BE RUST RESISTANT; ZINC PLATED, STAINLESS STEEL, OR STEEL THAT HAS BEEN GALVANIZED IN ACCORDANCE WITH AASHTO M 232.
  - THE PIPE USED TO CONSTRUCT THE GRATE SHALL BE STEEL, SCHEDULE 40, CONFORMING TO ASTM A53, AND GALVANIZED IN ACCORDANCE WITH AASHTO M 111 AFTER FABRICATION.
  - ANY RAW METAL EXPOSED BY FIELD CUTTING AND/OR DRILLING SHALL BE TREATED WITH A COLD GALVANIZING COMPOUND.
  - FASTEN PARALLEL BARS TO HEADWALL WITH 5/8\"/>
  - LENGTH STEEL WEDGE ANCHORS, MINIMUM EMBEDMENT = 24\"/>
  - HOLE SIZE AND DEPTH, TORQUE, & INSTALLATION PROCEDURES PER RECOMMENDATION OF ANCHOR MANUFACTURE.
  - CENTER BOLT HOLE SHALL ONLY BE DRILLED IN THE TOP AND BOTTOM PARALLEL BARS.
  - FASTEN THE PERPENDICULAR BAR TO THE TOP AND BOTTOM PARALLEL BARS WITH 1/2\"/>
  - THE BOTTOM PARALLEL BAR IS TO BE PLACED SO THAT IT IS APPROX. 6\"/>

**ISOMETRIC VIEW**  
SHOWING HEADWALL WITH GRATE

**PIPE FOR GRATE DETAILS**  
SEE NOTE 9 TO DETERMINE IF GRATE IS REQUIRED

DIMENSIONS AND CONCRETE QUANTITIES (FOR PIPE WITH SKEW = 0°) ④

PIPE SIZE	3:1 SLOPE			4:1 SLOPE			6:1 SLOPE			GRATE REQUIRED		
	A	B	W	A	B	W	A	B	W			
36"	9'-7 1/2"	7'-0"	1.51	4'	12'-6 1/2"	7'-0"	1.91	6'	18'-6"	7'-0"	2.42	YES
42"	11'-4"	7'-6"	1.76	4'	14'-9 1/4"	7'-6"	2.23	6'	21'-9 1/2"	7'-6"	3.19	YES

••DIMENSIONS AND CONCRETE QUANTITIES ARE APPROXIMATE AND LISTED FOR INFORMATIONAL PURPOSES ONLY••

**BID ITEM AND UNIT TO BID: 24575ES610 HEADWALL (SLOPED & MITERED CONCRETE-FOR 30\"/>**

SEE SHEET 1 FOR DIMENSIONS OF HEADWALLS FOR PIPE 30\"/>

NOT TO SCALE

KENTUCKY
DEPARTMENT OF HIGHWAYS
SLOPED & MITERED CONCRETE HEADWALL (SHEET 2 OF 2)

FIGURE 1

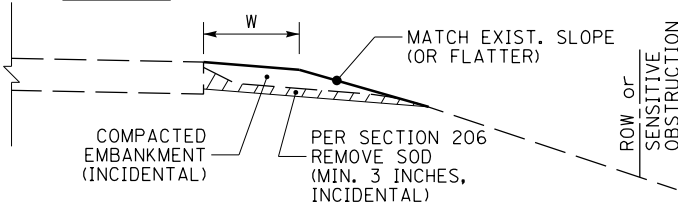


FIGURE 2

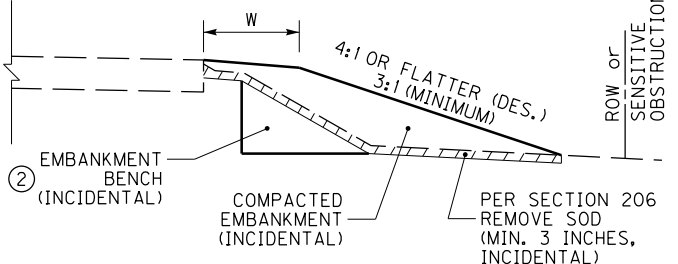


FIGURE 3

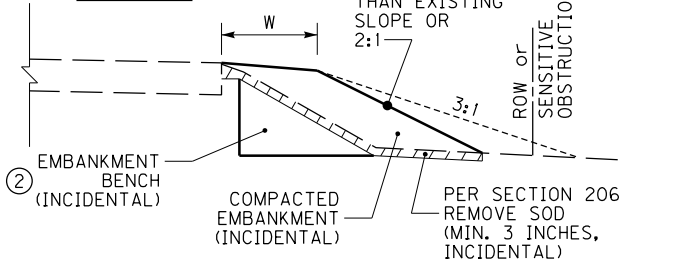


FIGURE 4

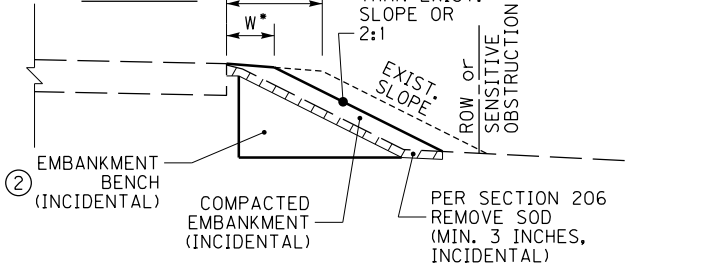


FIGURE 5

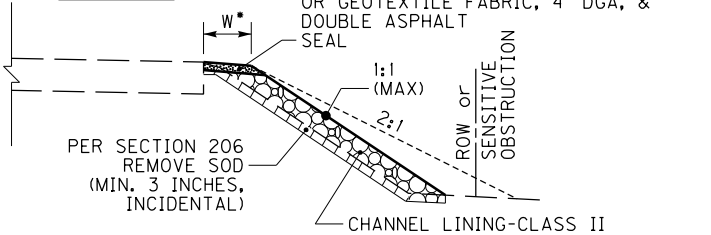
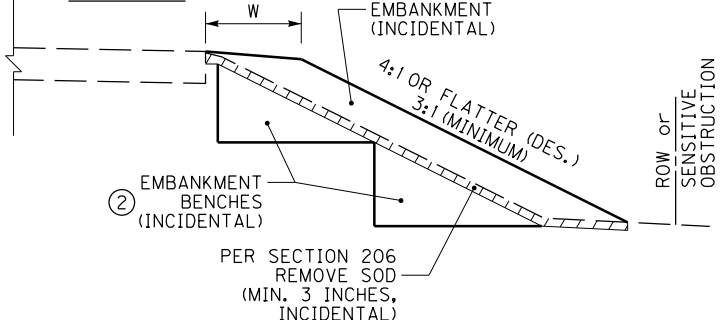


FIGURE 6



~ NOTES ~

BID ITEM AND UNIT TO BID:

2575 - DITCHING & SHOULDERING - LF

1. THE BID ITEM 'DITCHING & SHOULDERING' SHALL CONSIST OF ANY AND ALL NECESSARY CLEARING & GRUBBING, GRADING, AND/OR RESHAPING OF THE EXISTING SHOULDER, DITCH, AND/OR ROADSIDE TO ACHIEVE THE PROPOSED SHOULDER, DITCH, AND/OR ROADSIDE DIMENSIONS, AS DETAILED ON THE TYPICAL SECTIONS. FINAL PAYMENT WILL BE BASED ON THE ACTUAL LINEAR FEET OF DITCHING AND SHOULDERING PERFORMED, AND WILL INCLUDE ALL WORK AND INCIDENTALS NECESSARY TO PERFORM THE DITCHING AND SHOULDERING ACCORDING TO THESE DETAILS, NOTES, AND ANY OTHER INFORMATION FOUND ELSEWHERE IN THE PROPOSAL OR STANDARD SPECIFICATIONS. IN THE CASE OF A DISCREPANCY, REFER TO SECTION 105.05 OF THE STANDARD SPECIFICATIONS. DEPENDING ON THE EXISTING CONDITIONS ENCOUNTERED, DITCHING AND SHOULDERING MAY ALSO INCLUDE, BUT IS NOT LIMITED TO:

- PROVIDING ADDITIONAL EARTH MATERIAL AND GRADING, SHAPING, AND COMPACTING THE EARTH MATERIAL TO ACHIEVE THE DIMENSIONS SHOWN ON THE TYPICAL SECTIONS. COMPACT MATERIAL ACCORDING TO SECTION 206 OF THE STANDARD SPECIFICATIONS.
- NOTE: ADDITIONAL EARTH MATERIAL PROVIDED SHALL BE SUITABLE FOR VEGETATION GROWTH.
- EXCAVATING AND REMOVING EXCESS MATERIAL TO ACHIEVE THE DIMENSIONS SHOWN ON THE TYPICAL SECTIONS
- EMBANKMENT BENCHING

2. EMBANKMENT BENCHING WILL BE REQUIRED WHEN THE EXISTING GROUNDLINE HAS AN INCLINE GREATER THAN 15% (APPROX. 6:1). ANY AND ALL REQUIRED EMBANKMENT BENCHING SHALL BE INCIDENTAL TO THE BID ITEM 'DITCHING AND SHOULDERING'. THE FOLLOWING ARE GUIDELINES FOR EMBANKMENT BENCHING USED IN CONJUNCTION WITH THE BID ITEM 'DITCHING AND SHOULDERING':

- THE TYPICAL HEIGHT (OR RISE) IS 1' TO 6'
- THE TYPICAL WIDTH (OR RUN) WILL VARY BASED ON THE HEIGHT OF THE BENCH
- MULTIPLE SMALL BENCHES MAY BE USED, AND MAY BE MORE ADVANTAGEOUS AS THIS WILL REQUIRE PROCESSING LESS EARTHWORK.

3. AS SHOWN IN FIGURE 1, IN SOME SITUATIONS, MINOR SHOULDERING, WITH MINIMAL ADDITIONAL EARTH MATERIAL, MAY BE ALL THAT IS REQUIRED TO RESHAPE THE EARTH SHOULDER TO THE PROPOSED WIDTH AND BRING IT FLUSH WITH THE EDGE OF PAVEMENT.

4. AS SHOWN IN FIGURE 2, MOST SITUATIONS WILL REQUIRE ADDITIONAL EARTH MATERIAL TO ACHIEVE THE PROPOSED EARTH SHOULDER WIDTH. IT IS DESIRED THAT THE RESULTING FILL SLOPE BE INSTALLED AS FLAT AS POSSIBLE AND REMAIN WITHIN THE RIGHT-OF-WAY AND/OR AVOID SENSITIVE OBSTRUCTIONS.

5. AS SHOWN IN FIGURE 3, IF A 3:1 FILL SLOPE WILL RESULT IN THE TOE OF SLOPE EXTENDING BEYOND THE RIGHT-OF-WAY OR IMPACT A SENSITIVE OBSTRUCTION, THEN THE FILL SLOPE MAY BE INSTALLED STEEPER THAN 3:1, BUT NO STEEPER THAN THE EXISTING FILL SLOPE, OR A 2:1, WHICHEVER IS FLATTER.

6. AS SHOWN IN FIGURE 4, IF MATCHING THE EXISTING FILL SLOPE OR INSTALLING A 2:1 FILL SLOPE (WHICHEVER IS FLATTER) STILL RESULTS IN THE TOE OF SLOPE EXTENDING BEYOND THE RIGHT-OF-WAY OR STILL IMPACTS A SENSITIVE OBSTRUCTION, THEN THE PROPOSED EARTH SHOULDER WIDTH MAY BE REDUCED SO THAT THE RESULTING TOE OF SLOPE WILL REMAIN WITHIN THE RIGHT-OF-WAY AND/OR NOT IMPACT THE SENSITIVE OBSTRUCTION.

7. AS SHOWN IN FIGURE 5, IF THE EXISTING FILL SLOPE IS STEEPER THAN 2:1 AND THERE IS NOT ENOUGH SPACE TO INSTALL A 2:1 FILL SLOPE WITHOUT EXTENDING BEYOND THE RIGHT-OF-WAY AND/OR IMPACTING A SENSITIVE OBSTRUCTION, THEN CLASS II CHANNEL LINING MAY BE INSTALLED ALONG THE STEEP EXISTING SLOPE IN ORDER TO ESTABLISH A WIDTH OF AGGREGATE SHOULDER. THESE LOCATIONS WILL BE NOTED ELSEWHERE IN THE PROPOSAL AS SLOPE PROTECTION. THE CHANNEL LINING IS TO BE CAPPED WITH GEOTEXTILE FABRIC TYPE IV AND 4" OF CRUSHED STONE BASE, OR 4" OF DGA WITH DOUBLE ASPHALT SEAL COAT.

8. AS SHOWN IN FIGURE 6, AS THE HEIGHT OF THE FILL INCREASES, MULTIPLE EMBANKMENT BENCHES MAY BE REQUIRED.

SEE SHEET 2 FOR NOTES 9 THRU 13

**KENTUCKY  
DEPARTMENT OF HIGHWAYS**

DITCHING & SHOULDERING  
AND EMBANKMENT  
BENCHING DETAILS  
(SHEET 1 OF 2)

NOT TO SCALE

FIGURE 7

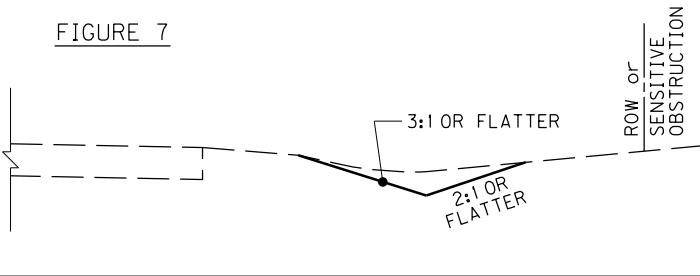


FIGURE 8

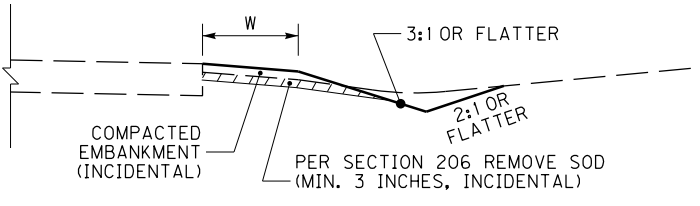


FIGURE 9

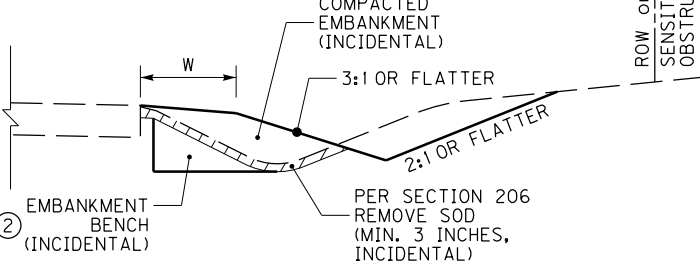


FIGURE 10

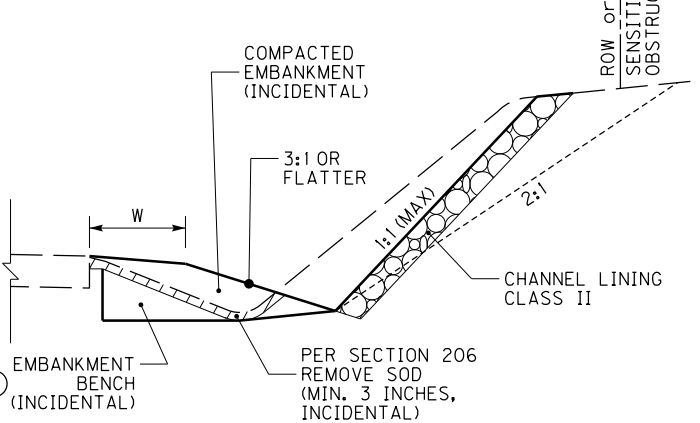
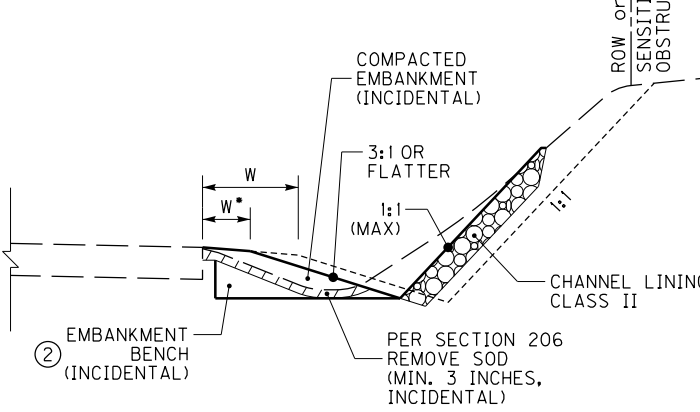


FIGURE 11



~ NOTES ~

BID ITEM AND UNIT TO BID:  
2575 - DITCHING & SHOULDERING - LF

1. THE BID ITEM 'DITCHING & SHOULDERING' SHALL CONSIST OF ANY AND ALL NECESSARY CLEARING & GRUBBING, GRADING, AND/OR RESHAPING OF THE EXISTING SHOULDER, DITCH, AND/OR ROADSIDE TO ACHIEVE THE PROPOSED SHOULDER, DITCH, AND/OR ROADSIDE DIMENSIONS, AS DETAILED ON THE TYPICAL SECTIONS. FINAL PAYMENT WILL BE BASED ON THE ACTUAL LINEAR FEET OF DITCHING AND SHOULDERING PERFORMED, AND WILL INCLUDE ALL WORK AND INCIDENTALS NECESSARY TO PERFORM THE DITCHING AND SHOULDERING ACCORDING TO THESE DETAILS, NOTES, AND ANY OTHER INFORMATION FOUND ELSEWHERE IN THE PROPOSAL OR STANDARD SPECIFICATIONS. IN THE CASE OF A DISCREPANCY, REFER TO SECTION 105.05 OF THE STANDARD SPECIFICATIONS. DEPENDING ON THE EXISTING CONDITIONS ENCOUNTERED, DITCHING AND SHOULDERING MAY ALSO INCLUDE, BUT IS NOT LIMITED TO:

- PROVIDING ADDITIONAL EARTH MATERIAL AND GRADING, SHAPING, AND COMPACTING THE EARTH MATERIAL TO ACHIEVE THE DIMENSIONS SHOWN ON THE TYPICAL SECTIONS. COMPACT MATERIAL ACCORDING TO SECTION 206 OF THE STANDARD SPECIFICATIONS.
- NOTE: ADDITIONAL EARTH MATERIAL PROVIDED SHALL BE SUITABLE FOR VEGETATION GROWTH.
- EXCAVATING AND REMOVING EXCESS MATERIAL TO ACHIEVE THE DIMENSIONS SHOWN ON THE TYPICAL SECTIONS
- EMBANKMENT BENCHING

② EMBANKMENT BENCHING WILL BE REQUIRED WHEN THE EXISTING GROUNDLINE HAS AN INCLINE GREATER THAN 15% (APPROX. 6:1). ANY AND ALL REQUIRED EMBANKMENT BENCHING SHALL BE INCIDENTAL TO THE BID ITEM 'DITCHING AND SHOULDERING'. THE FOLLOWING ARE GUIDELINES FOR EMBANKMENT BENCHING USED IN CONJUNCTION WITH THE BID ITEM 'DITCHING AND SHOULDERING':

- THE TYPICAL HEIGHT (OR RISE) IS 1' TO 6'
- THE TYPICAL WIDTH (OR RUN) WILL VARY BASED ON THE HEIGHT OF THE BENCH
- MULTIPLE SMALL BENCHES MAY BE USED, AND MAY BE MORE ADVANTAGEOUS AS THIS WILL REQUIRE PROCESSING LESS EARTHWORK.

SEE SHEET 1 FOR NOTES 3. THRU 8.

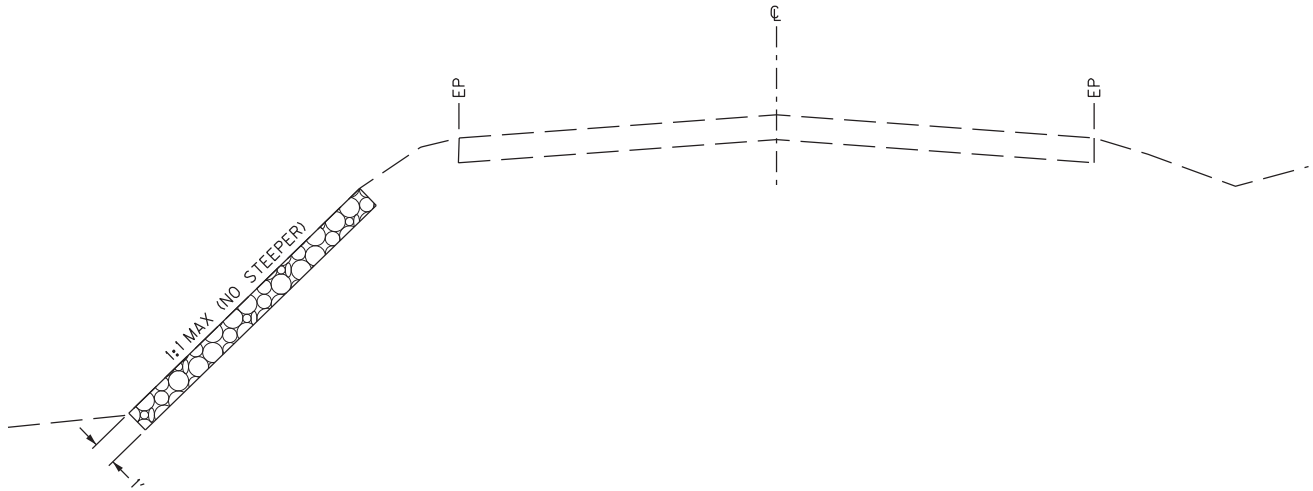
9. AS SHOWN IN FIGURE 7, IN SOME SITUATIONS, ALL THAT MAY BE REQUIRED IS TO CLEAN OUT THE EXISTING DITCH AND RESHAPE IT TO THE PROPOSED DIMENSIONS. THE MATERIAL EXCAVATED FROM THE DITCH MAY BE RE-USED ELSEWHERE ON THE PROJECT, PROVIDED THE ENGINEER DETERMINES THE MATERIAL REMOVED FROM THE DITCH IS SUITABLE FOR THE INTENDED RE-USE.
10. AS SHOWN IN FIGURE 8, IN SOME SITUATIONS, THE DITCH AND SHOULDER MAY ONLY NEED MINOR REGRADING AND/OR RESHAPING. THE MATERIAL EXCAVATED FROM THE DITCH MAY BE USED TO RESHAPE THE EARTH SHOULDER, PROVIDED THE ENGINEER DETERMINES THE MATERIAL REMOVED FROM THE DITCH IS SUITABLE FOR SHOULDERING. IF THE MATERIAL IS NOT SUITABLE, ADDITIONAL EARTH MATERIAL MAY BE REQUIRED.
11. AS SHOWN IN FIGURE 9, IN MOST SITUATIONS, REGRADING AND RESHAPING THE ROADSIDE TO ACHIEVE THE PROPOSED SHOULDER, DITCH, AND/OR ROADSIDE DIMENSIONS WILL RESULT IN MOVING THE DITCH FURTHER AWAY FROM THE ROADWAY. IT IS DESIRED THAT DITCH FORESLOPES BE 3:1 OR FLATTER AND DITCH BACKSLOPES BE 2:1 OR FLATTER.
12. AS SHOWN IN FIGURE 10, IF INSTALLING A 2:1 DITCH BACKSLOPE WILL RESULT IN THE TOP OF CUT EXTENDING BEYOND THE RIGHT-OF-WAY OR IMPACTING A SENSITIVE OBSTRUCTION, THEN THE DITCH BACK SLOPE MAY BE INSTALLED STEEPER THAN 2:1, UP TO 1:1 MAXIMUM. IN THIS SITUATION, THE DITCH BACKSLOPE SHALL HAVE CLASS II CHANNEL LINING INSTALLED FOR SLOPE PROTECTION.
13. AS SHOWN IN FIGURE 11, IF USING A 1:1 DITCH BACKSLOPE STILL RESULTS IN THE TOP OF CUT EXTENDING BEYOND THE RIGHT-OF-WAY OR STILL IMPACTS A SENSITIVE OBSTRUCTION, THEN THE PROPOSED EARTH SHOULDER WIDTH MAY BE REDUCED SO THAT THE STEEP DITCH BACKSLOPE CAN BE INSTALLED WITHIN THE RIGHT-OF-WAY AND/OR TO AVOID A SENSITIVE OBSTRUCTION.

**KENTUCKY  
DEPARTMENT OF HIGHWAYS**

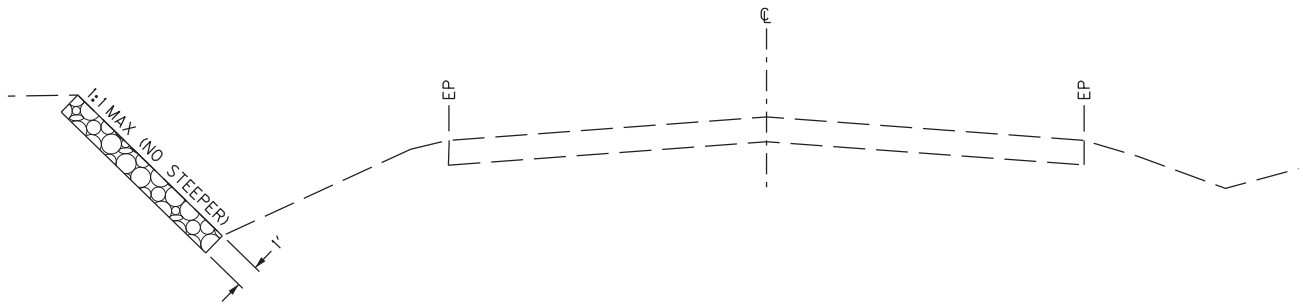
DITCHING & SHOULDERING  
AND EMBANKMENT  
BENCHING DETAILS  
(SHEET 2 OF 2)

NOT TO SCALE

COUNTY OF	ITEM NO.	SHEET NO.



**PROTECTION DETAIL FOR EMBANKMENT FILL SLOPE**



**PROTECTION DETAIL FOR DITCH BACKSLOPE**

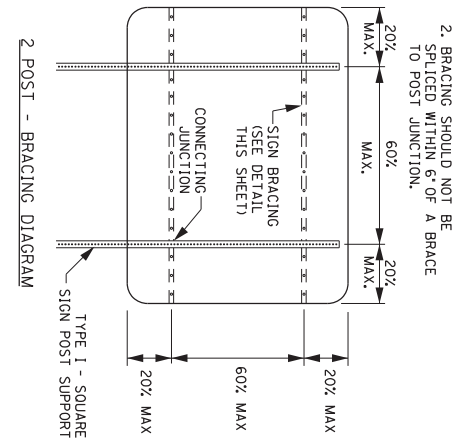
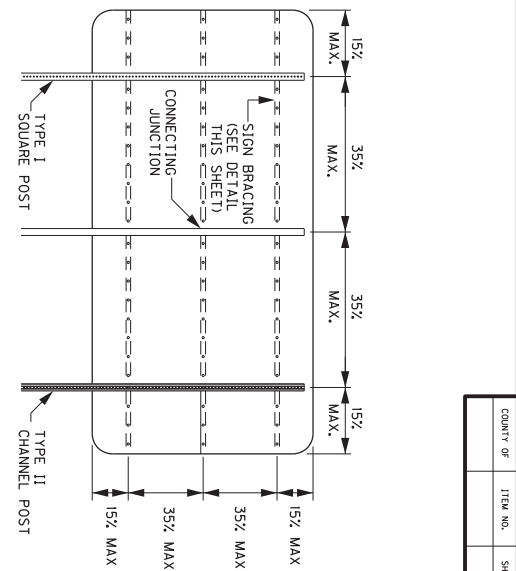
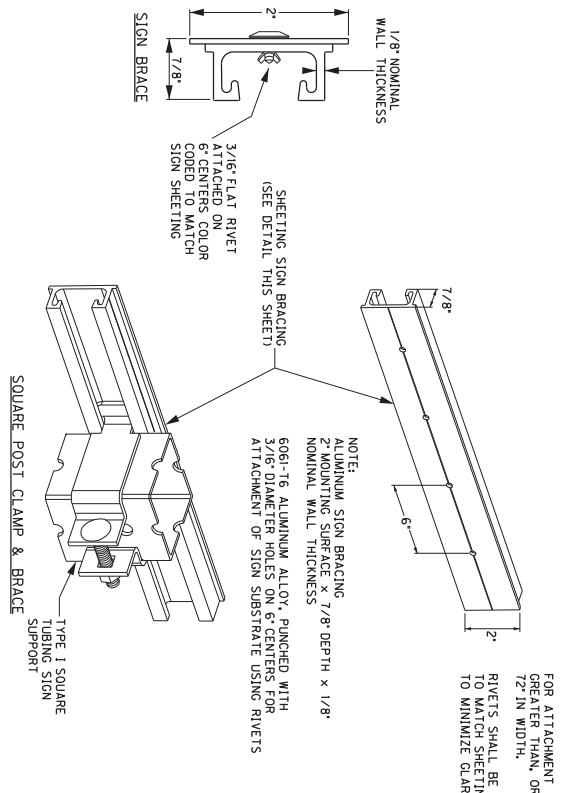
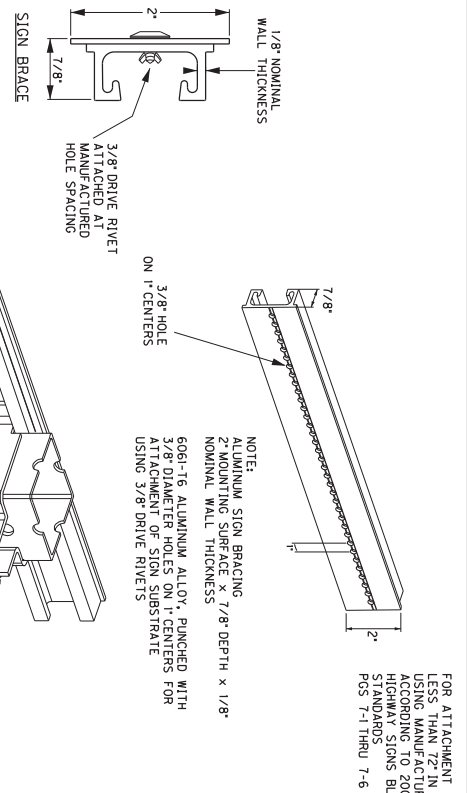
NOTES:

1. SEE CHANNEL LINING SUMMARY FOR APPROXIMATE LOCATIONS OF SLOPE PROTECTION.
2. FINAL LOCATIONS TO BE DETERMINED BY THE ENGINEER.
3. EXCAVATION IS INCIDENTAL TO THE PLACEMENT OF THE CHANNEL LINING.

SLOPE PROTECTION DETAILS







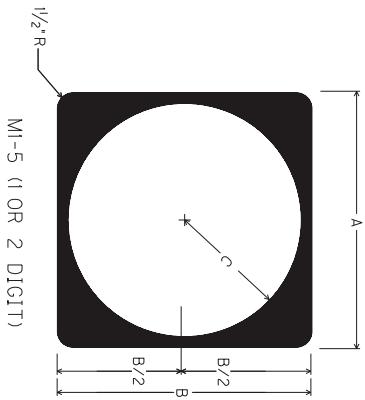
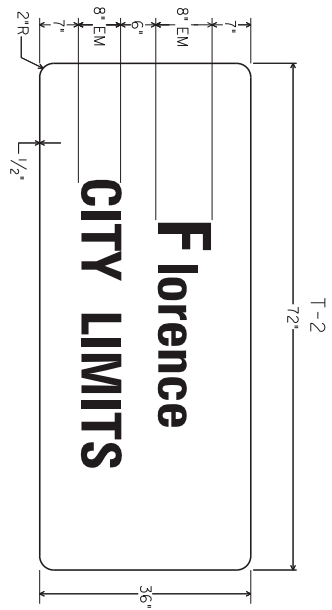
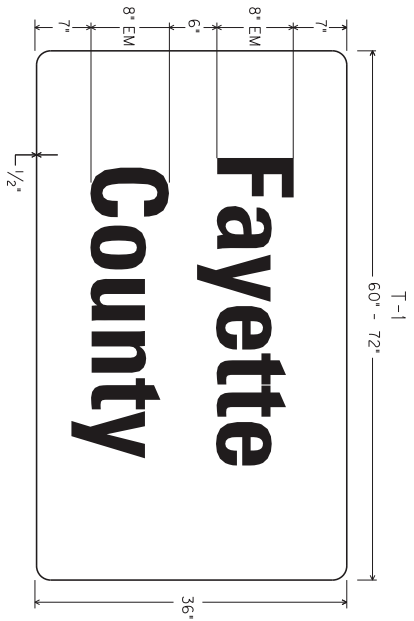
NOTE:  
USE OF SIGN BRACING NOT SHOWN ON THIS SHEET MAY BE PERMITTED BY PROJECT ENGINEER AND/OR DISTRICT TRAFFIC ENGINEER.

NOT TO SCALE

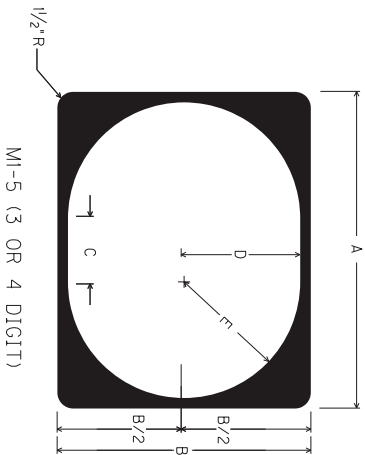
SHEETING SIGN DETAIL  
SHEET 2 OF 2

COUNTY OF	ITEM NO.	SHEET NO.

COUNTY OF	ITEM NO.	SHEET NO.



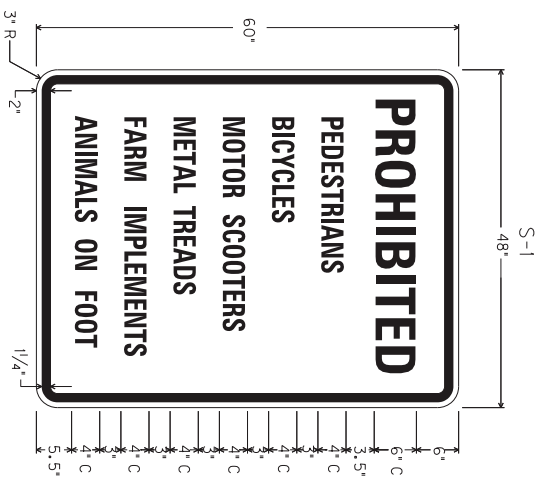
	A	B	C	FONT
CONVENTIONAL	24"	24"	11"	12D
EXPRESSWAY/ FREEWAY	36"	36"	17"	18D



	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



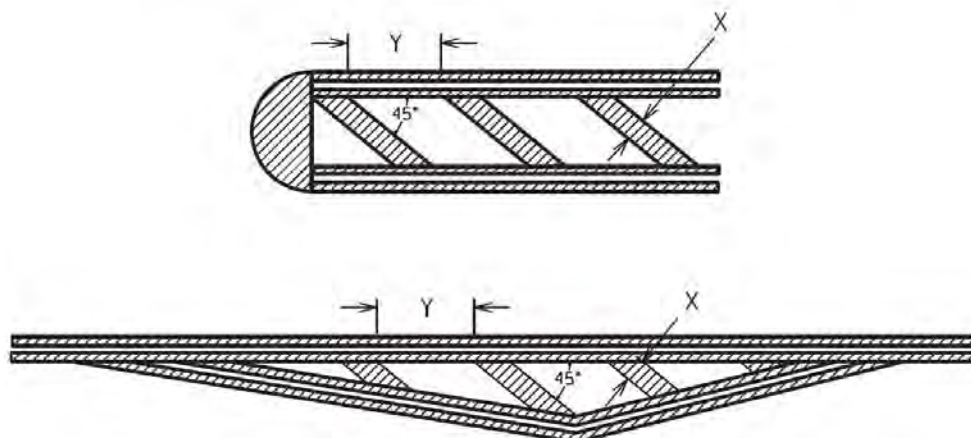
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TYPICAL SIGNS

## CROSS-HATCH PAVEMENT MARKINGS DETAIL

---

### TYPICAL CROSS-HATCH MARKINGS



The cross-hatch pavement marking width (X) and spacing (Y) will usually be specified in the plans. The width to spacing values usually have a ratio of 1:10. If the plans do not specify the width (X) and spacing (Y) the Engineer will provide the contractor with the X and Y values for each cross-hatch installation. If necessary, the Engineer may obtain guidance from the District Traffic Engineer and/or the Division of Traffic Operations.

NOTE: Adjust the width and spacing of the cross-hatch pavement markings as necessary so that a minimum of three (3) cross-hatch markings are placed within the area being marked. The 1:10 ratio between width and spacing values should be maintained as much as possible.

Refer to Section 717 of the Standard Specifications for Road and Bridge Construction, current edition, for more information concerning Material and Construction specifications.

The Department will measure the finished in-place area of Cross-Hatch Pavement Markings in Square Feet. The Department will NOT measure overlaps or the void space between cross-hatching. See Section 717.04 for additional measurement information.

When listed in the bid items, the Department will make payment for the completed and accepted quantities of Cross-Hatch Pavement Markings under the following:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
06569	Pave Marking-Thermo Cross-Hatch	Square Foot
23253ES717	Pave Mark TY 1 Tape Cross Hatch	Square Foot

# GUARDRAIL DELIVERY VERIFICATION SHEET

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

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

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

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

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

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

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

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

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

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

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

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

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

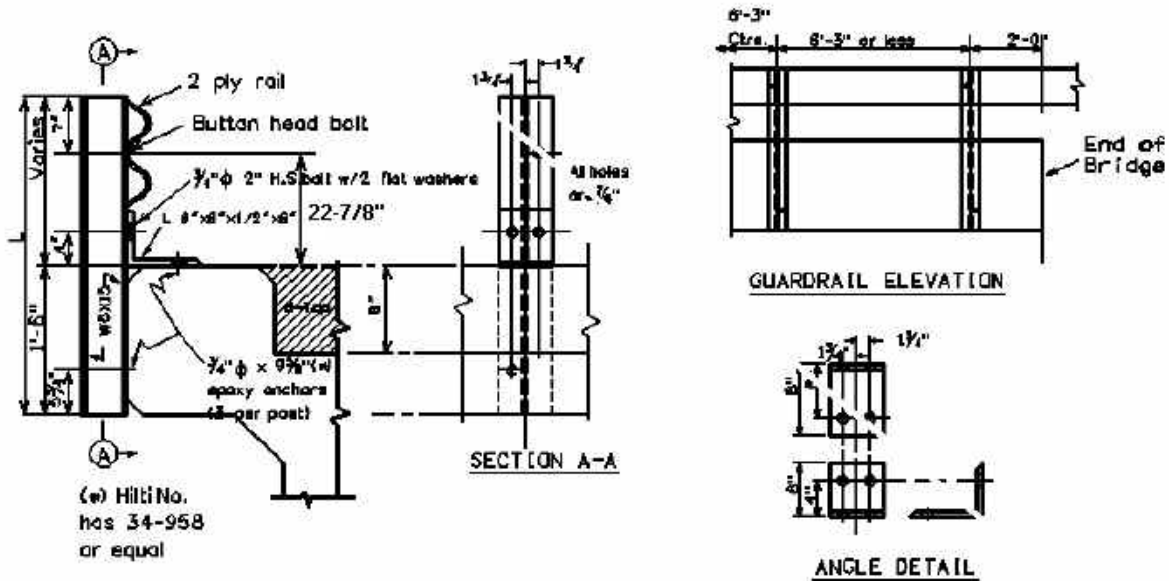
Printed Contractor's Representative \_\_\_\_\_ & Date \_\_\_\_\_

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

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

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

## GUARDRAIL ON BRIDGE, CASE I BLACKTOP FLUSH WITH CURB OR ABOVE



Bridge MP	D=	W=	L=	No. Posts	LF of 2 PLY Rail
11.43 (Left)	-4.5 in	8 in	53.5 in	6	25
11.43 (Right)	-3.5 in	8 in	52.5 in	6	25

L = Length of Guardrail Post

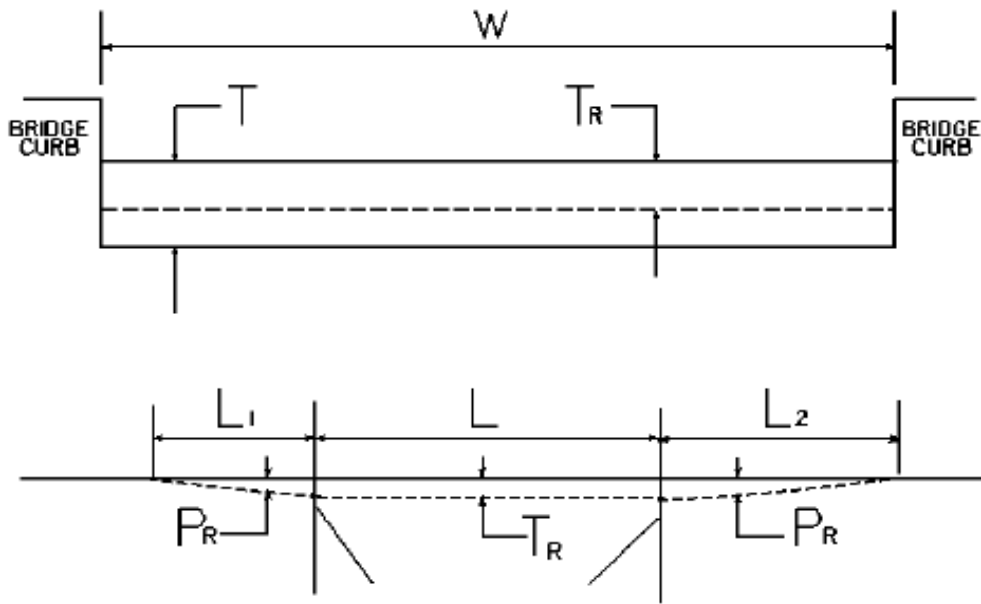
D = Curb Height

W = Width of Bridge Curb

**WARRANTS:** When guardrail can be bolted to the back of the bridge curb, and where the bridge surface is flush with the curb top, and where the clear distance between the faces of the guardrail is less than 20 Feet, remove existing concrete and/or guardrail bridge rail and use Case I Bridge Guardrail.

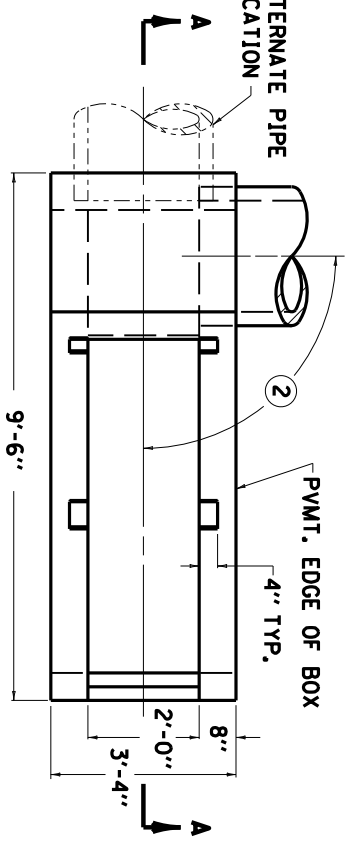
- NOTES:**
1. If asphalt paving is included in the Contract and the dimension from the top of the existing riding surface to the top of the curb is 2 inches or less, pave the surface flush to the top of the curb, and use Case I Bridge Guardrail.
  2. Do not use Case I Bridge Guardrail if existing pavement is not flush with the pavement and asphalt pavement is not included in the Contract or if the dimension from top of the existing riding surface to the top of the curb is greater than 2 inches.

### BRIDGE DETAIL FOR PAVING PROJECT

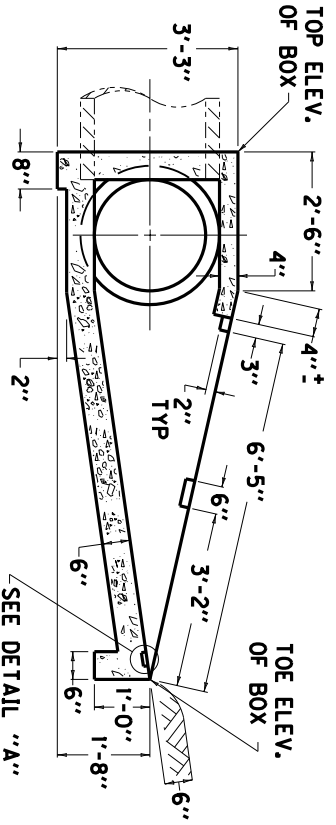


$W$  = bridge width curb to curb  
 $T$  = thickness of existing asphalt overlay  
 $L$  = length of bridge  
 $L_1$  &  $L_2$  = length of approach pavement to be removed  
 $T_R$  = thickness to be removed and replaced on bridge  
 $P_R$  = thickness to be removed and replaced on pavement  
 Note:  $L_1$  &  $L_2$  lengths shall be determined by using a transition rate of 100 ft/in of thickness

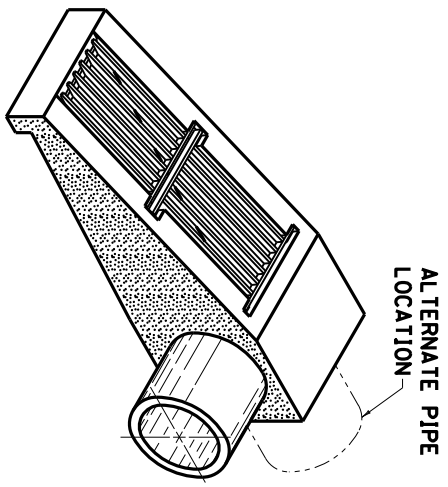
Route	Bridge No.	MP	W (ft)	T (in)	L <sub>1</sub> (ft)	L <sub>2</sub> (ft)	T <sub>R</sub> (in)	L (ft)	P <sub>R</sub> (in)
KY 70	023B00028N	4.27	21.00	0.00	125.00	125.00	0.00	258.00	1.25
KY 70	023B00027N	11.44	20.00	3.00	175.00	175.00	1.75	33.00	1.75
KY 70	023B00083N	12.09	21.50	0.00	125.00	125.00	0.00	99.00	1.25



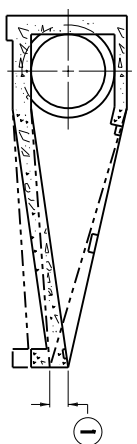
PLAN VIEW



SECTION A-A



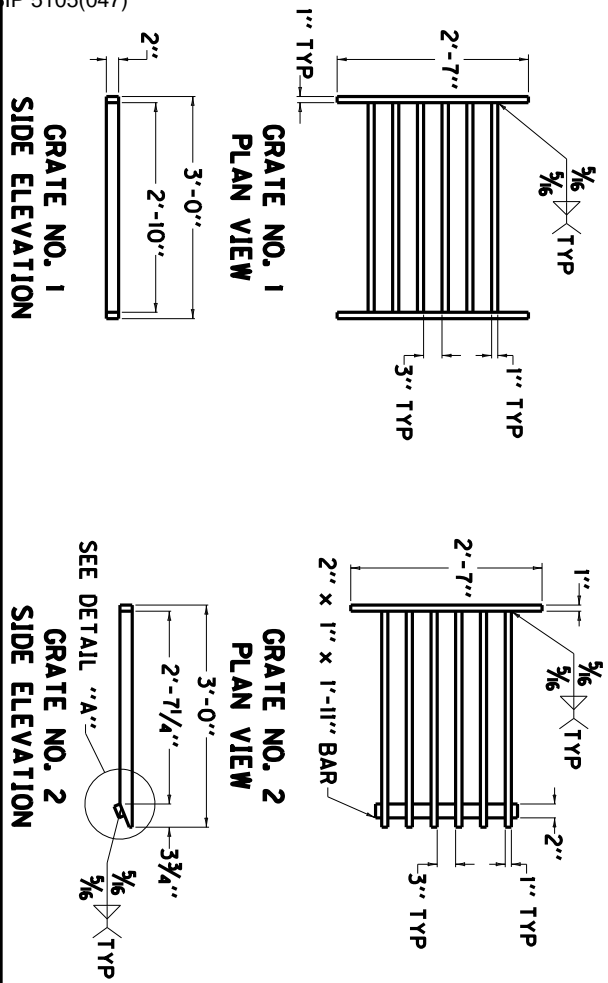
ISOMETRIC VIEW



SECTIONAL VIEW

- NOTES**
- ① THE UNIT BID FOR EACH STRUCTURE SHALL INCLUDE ALL CONCRETE, STRUCTURAL STEEL GRATING, EXCAVATION, LABOR AND INCIDENTALS NECESSARY FOR ITS CONSTRUCTION AS DETAILED ON THIS SHEET.
  - ② TOE OF BOX SHALL BE RAISED OR LOWERED TO FIT EXISTING FIELD CONDITIONS.
  - ③ SKEW OF BOX SHALL VARY TO FIT EXISTING FIELD CONDITIONS.
- | ITEM CODE | BID ITEM                       | UNIT |
|-----------|--------------------------------|------|
| 1726      | SAFETY BOX INLET-18 INCH SDB-1 | EACH |
| 1727      | SAFETY BOX INLET-24 INCH SDB-1 | EACH |

APPROXIMATE QUANTITIES			
CLASS "A"	GRATE	LBS. STRUCTURAL STEEL	
CUBIC YARDS	NUMBER	EACH GRATE	TOTAL POUNDS
1.44	1	145	298
	2	153	

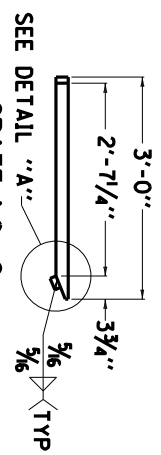


GRATE NO. 1  
PLAN VIEW

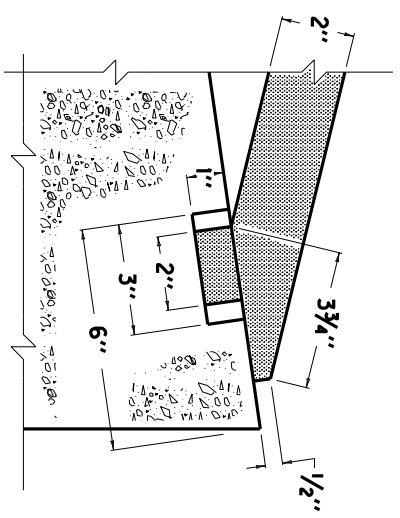
GRATE NO. 1  
SIDE ELEVATION

GRATE NO. 2  
PLAN VIEW

GRATE NO. 2  
SIDE ELEVATION



DETAIL "A"



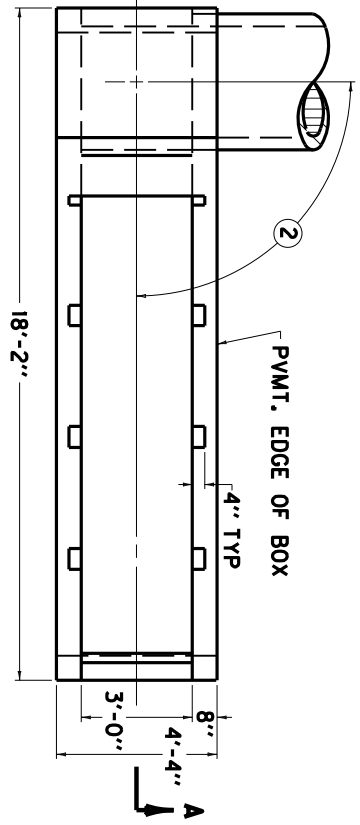
DETAIL "A"

KENTUCKY  
DEPARTMENT OF HIGHWAYS

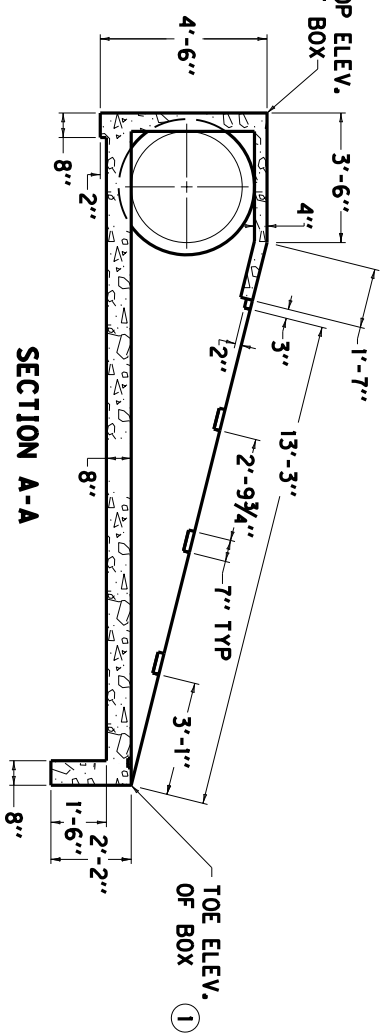
**SAFETY TYPE  
BOX INLET  
(18" OR 24")**

APPROVED \_\_\_\_\_  
DATE 06-04-2008

COUNTY OF	ITEM NO.	SHEET NO.



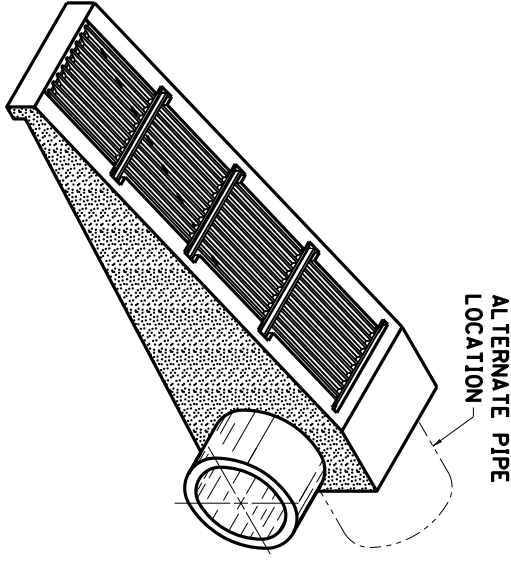
PLAN VIEW



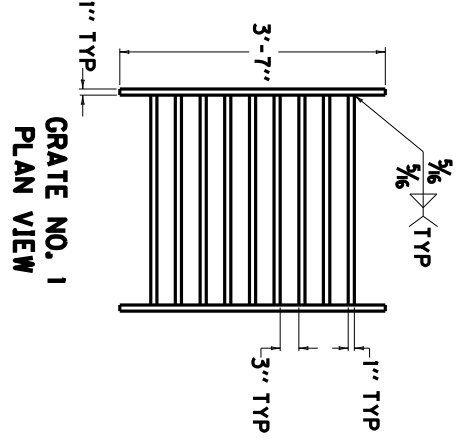
SECTION A-A

- NOTES**
- ITEM CODE BID ITEM UNIT
- 23044NST10 SAFETY BOX INLET-36 INCH SOB-1 EACH
- THE UNIT BID FOR EACH STRUCTURE SHALL INCLUDE ALL CONCRETE, STRUCTURAL STEEL GRATING, EXCAVATION, LABOR AND INCIDENTALS NECESSARY FOR ITS CONSTRUCTION AS DETAILED ON THIS SHEET.
- 1 TOE OF BOX SHALL BE RAISED OR LOWERED TO FIT EXISTING FIELD CONDITIONS.
- 2 SKEW OF BOX SHALL VARY TO FIT EXISTING FIELD CONDITIONS.
3. ALL QUANTITIES ARE FOR ONE HEADWALL.

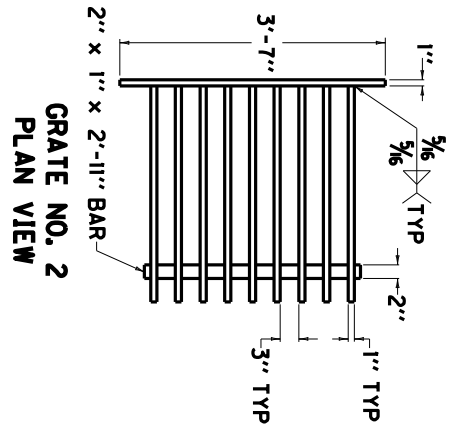
APPROXIMATE QUANTITIES				LBS.	
CLASS "A"	GRATE CONC.	GRATE NO. OF GRATES REO'D.	STRUCTURAL STEEL EACH GRATE	REINF. STEEL	
4.51		1	222	896	261
		2	230		



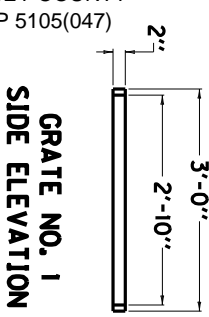
ISOMETRIC VIEW



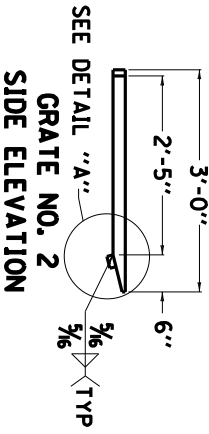
GRATE NO. 1  
PLAN VIEW



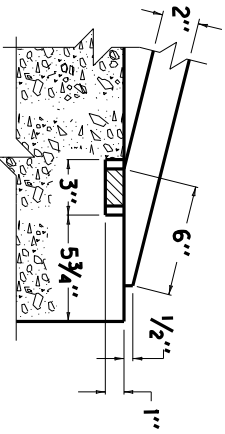
GRATE NO. 2  
PLAN VIEW



GRATE NO. 1  
SIDE ELEVATION



GRATE NO. 2  
SIDE ELEVATION



DETAIL "A"

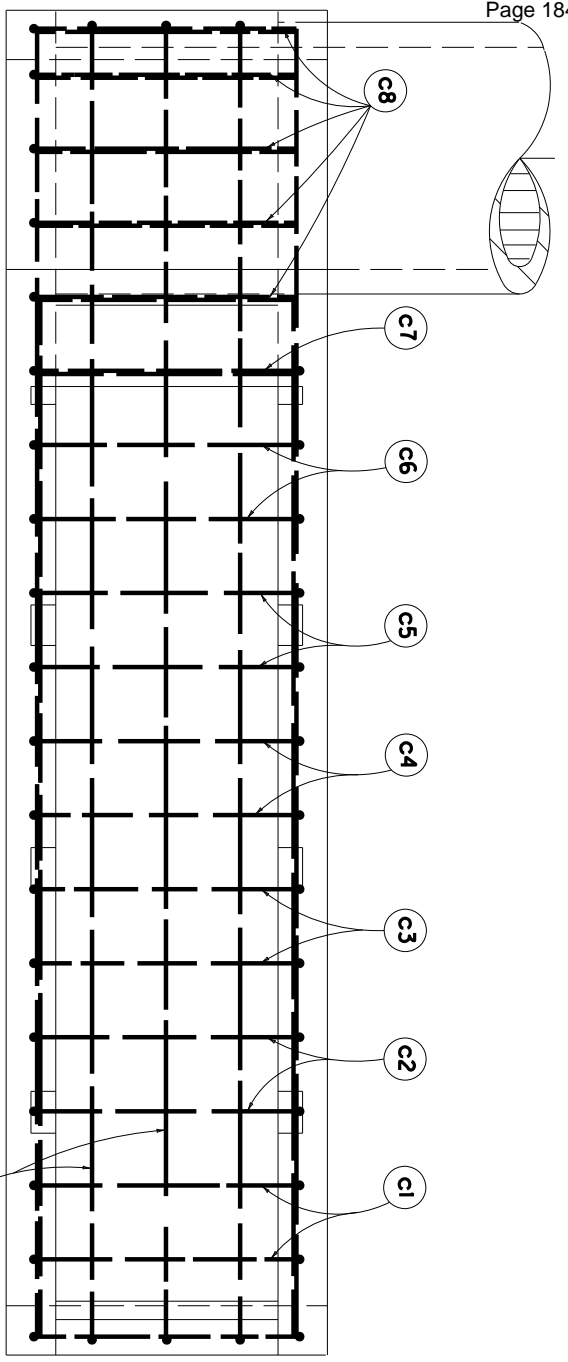
SHEET 1 OF 2

KENTUCKY  
DEPARTMENT OF HIGHWAYS

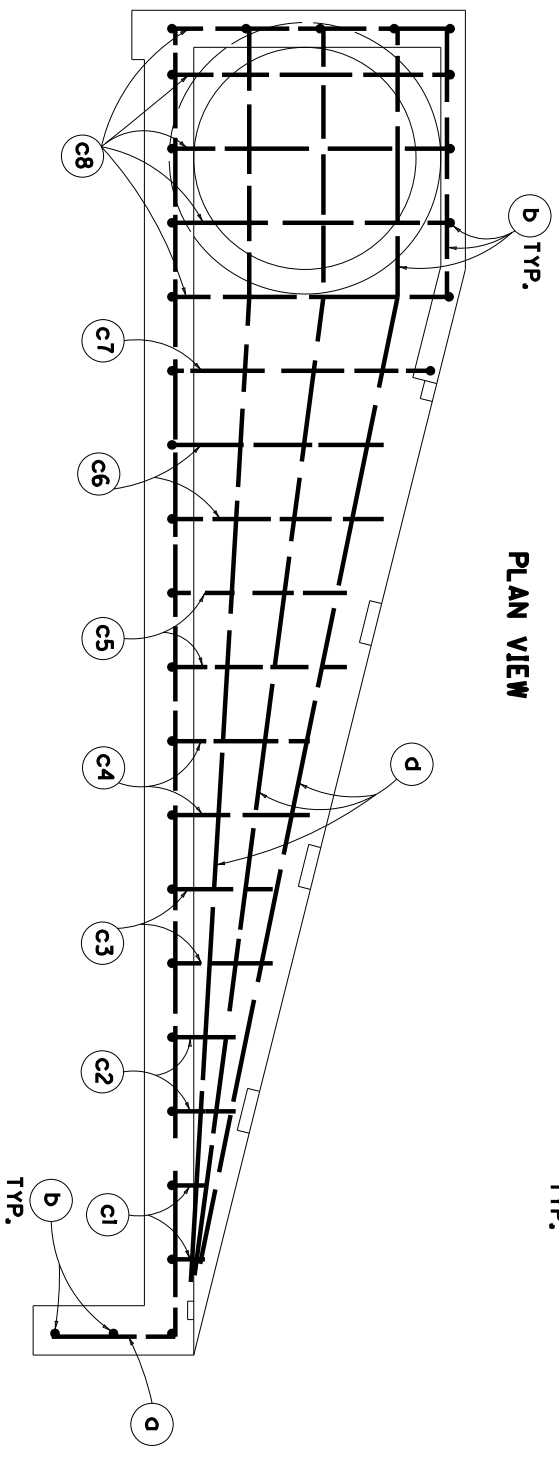
SAFETY TYPE  
BOX INLET  
(36")

APPROVED \_\_\_\_\_  
DATE 06-04-2008

COUNTY OF	ITEM NO.	SHEET NO.
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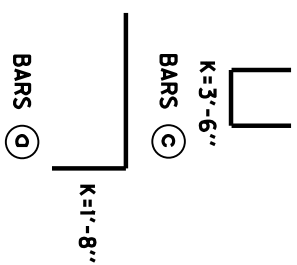
PLAN VIEW



ELEVATION VIEW

- NOTES**
1. NUMBER OF BARS IN ONE HEADWALL.
  2. DIMENSIONS ARE 0. TO 0. OF BARS.
  3. ALL BARS ARE STRAIGHT EXCEPT THOSE SHOWN BELOW.

**BENT BAR SHAPES**



MARK	NO	LGTH	K
BAR	(1)	FT IN	FT IN
36"			
D	4	5 19 6	1 8
B	4	16 3 6	
C1	4	2 5 0	3 6
C2	4	2 5 10	3 6
C3	4	2 6 10	3 6
C4	4	2 7 10	3 6
C5	4	2 8 10	3 6
C6	4	2 9 10	3 6
C7	4	1 11 0	3 6
C8	4	5 11 6	3 6
D	4	6 13 4	

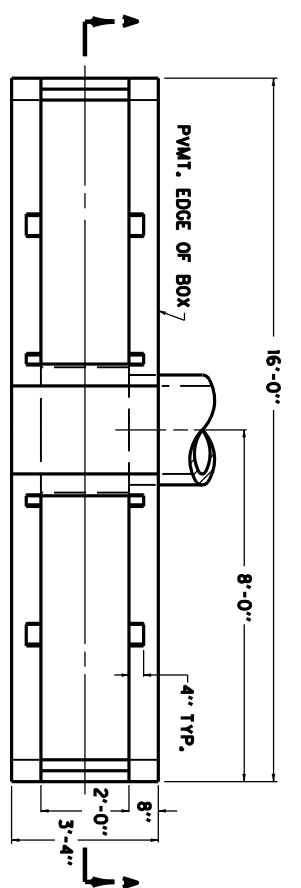
SHEET 2 OF 2

KENTUCKY  
DEPARTMENT OF HIGHWAYS

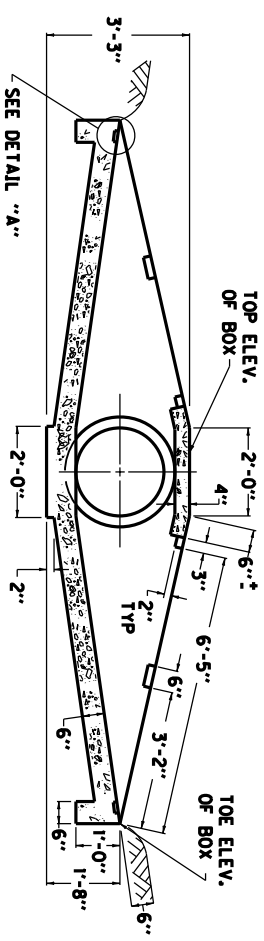
**BILL OF REINFORCEMENT  
SAFETY TYPE BOX INLET  
(36")**

APPROVED \_\_\_\_\_ 06-04-2008  
 DATE  
 \_\_\_\_\_  
 COUNTY ENGINEER

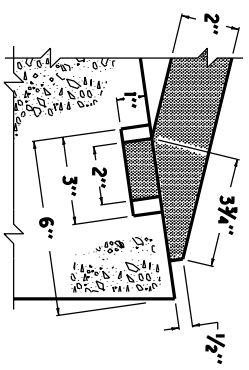
MicroStation v8.11.7.443 E-SHEET NAME: USER: Patrick.Stone DATE PLOTTED: September 24, 2013 FILE NAME: C:\USERS\PATRICK.STONE\APPDATA\LOCAL\MICROSOFT\WINDOWS\TEMPORARY INTERNET FILES\CONTENT.OUTLOOK\Y0843\NA\SAFETY\_BOX.DGN



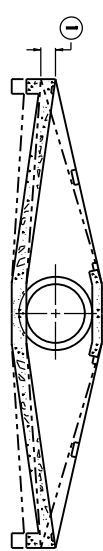
PLAN VIEW



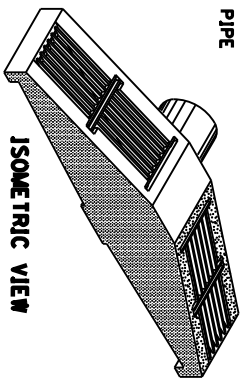
SECTION A-A



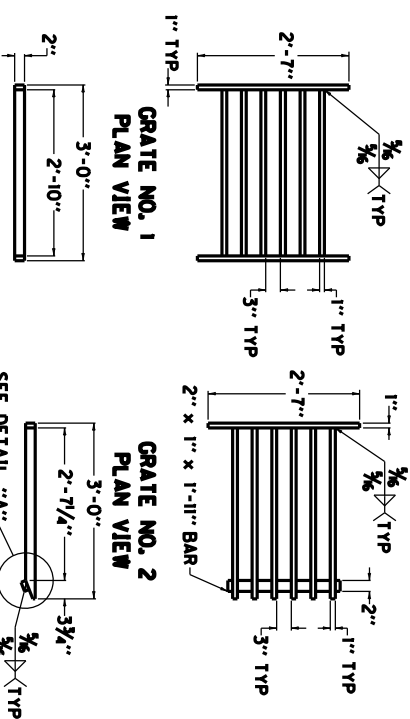
DETAIL "A-A"



SECTIONAL VIEW



ISOMETRIC VIEW



GRATE NO. 1  
PLAN VIEW

GRATE NO. 2  
PLAN VIEW

APPROXIMATE QUANTITIES			
CLASS "A"	GRATE CONC.	LBS. STRUCTURAL STEEL	TOTAL POUNDS
2.07	1	145	596
	2	153	

M/A

DBL SAFETY BOX INLET DETAIL SHEET

- NOTES**
- 1 THE UNIT BID FOR EACH STRUCTURE SHALL INCLUDE ALL CONCRETE, STRUCTURAL STEEL GRATING, EXCAVATION, LABOR AND INCIDENTALS NECESSARY FOR ITS CONSTRUCTION AS DETAILED ON THIS SHEET.
  - 2 TOE OF BOX SHALL BE RAISED OR LOWERED TO FIT EXISTING FIELD CONDITIONS.
  - 3 ANGLE BETWEEN BOX WALLS MAY VARY TO FIT EXISTING FIELD CONDITIONS.
- | ITEM CODE | BID ITEM                         | UNIT |
|-----------|----------------------------------|------|
| 1728      | SAFETY BOX INLET-18 IN DBL SDB-5 | EACH |
| 1729      | SAFETY BOX INLET-24 IN DBL SDB-5 | EACH |

QUANTITY	ITEM NO.	SHEET NO.

**PART II**  
**SPECIFICATIONS AND STANDARD DRAWINGS**

### **SPECIFICATIONS REFERENCE**

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

### 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:

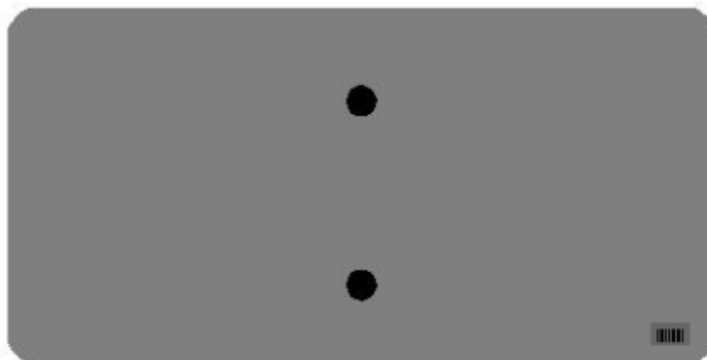
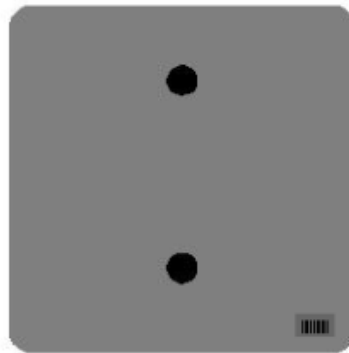
<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
24631EC	Barcode Sign Inventory	Each

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.

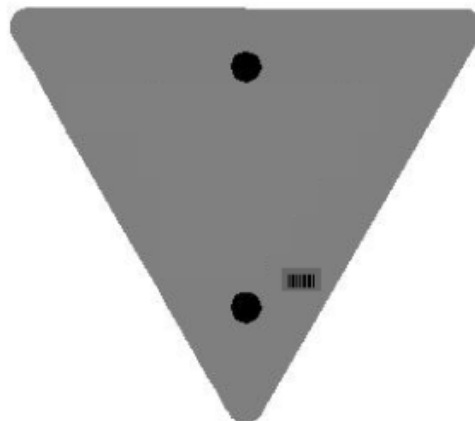
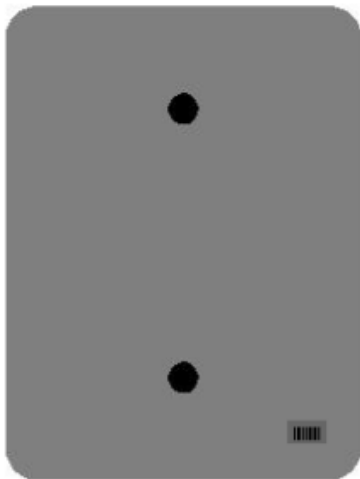
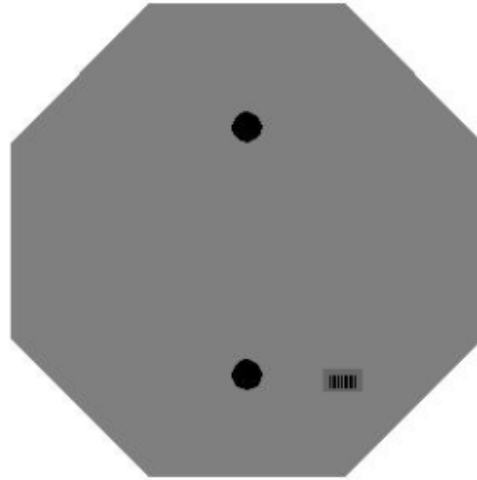
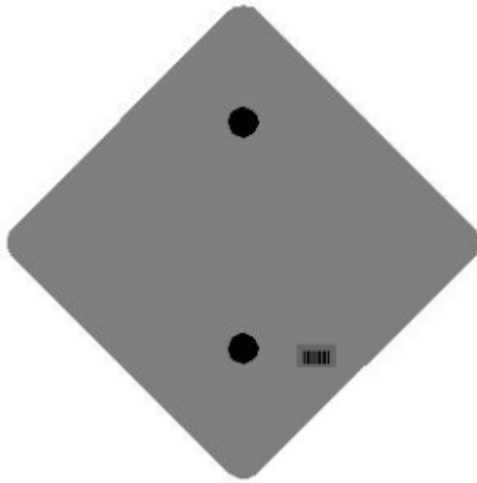
### One Sign Post



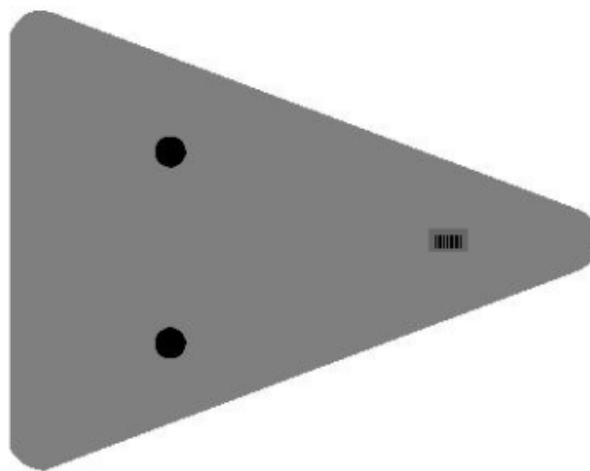
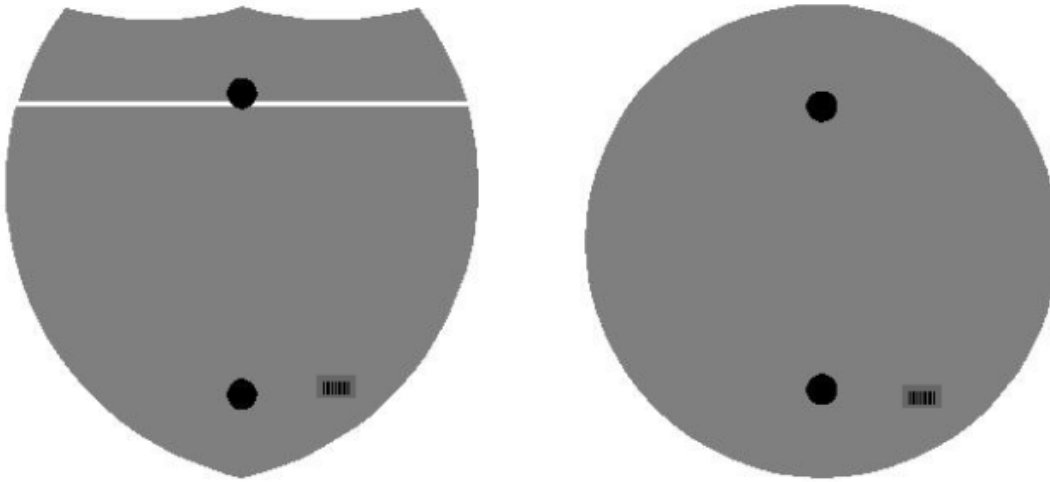
↑  
2" Wide Post



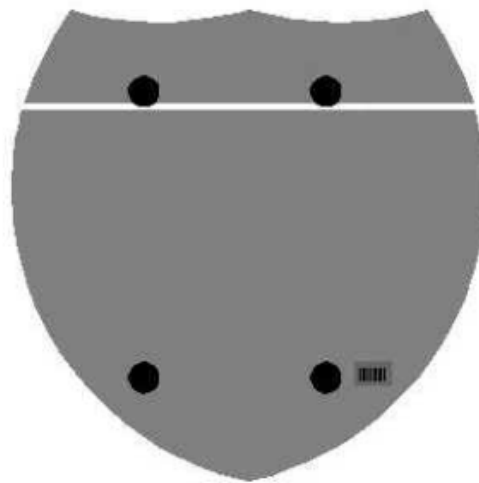
### One Sign Post



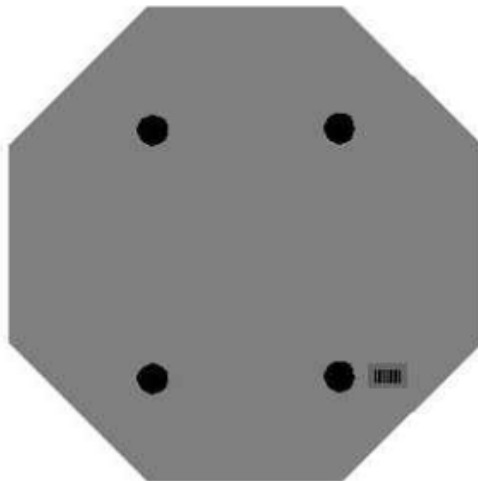
### One Sign Post



### Double Sign Post



Interstate  
Shield

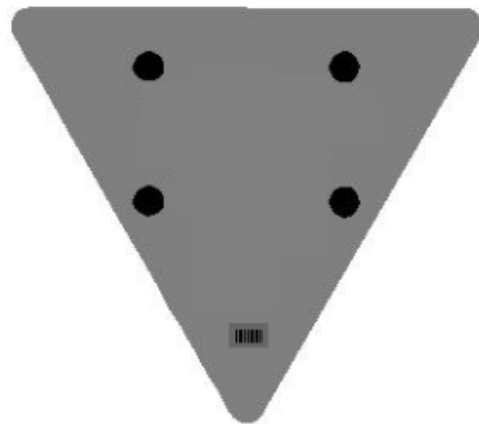


48" Stop

### 2 Post Signs



↑  
2" Wide Post



**2020 STANDARD DRAWINGS THAT APPLY**

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**ROADWAY  
~ BARRIERS ~**

**GUARDRAIL CONNECTORS TO BRIDGE ENDS**

GUARDRAIL CONNECTOR TO BRIDGE END TYPE A COMPONENTS.....	RBC-002-04
GUARDRAIL CONNECTOR TO BRIDGE END TYPE A AND A-1 COMPONENTS.....	RBC-003-09
GUARDRAIL CONNECTOR TO BRIDGE END TYPE A.....	RBC-005-01
GUARDRAIL CONNECTOR TO BRIDGE END TYPE A NOTES.....	RBC-005N

**TYPICAL BARRIER INSTALLATIONS**

TYPICAL GUARDRAIL INSTALLATIONS.....	RBI-001-12
TYPICAL GUARDRAIL INSTALLATIONS.....	RBI-002-07
INSTALLATION OF GUARDRAIL END TREATMENT TYPE 1.....	RBI-004-06

**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
GUARDRAIL END TREATMENT TYPE 1.....	RBR-020-07
GUARDRAIL END TREATMENT TYPE 4A.....	RBR-035-12
DELINEATORS FOR GUARDRAIL.....	RBR-005-01

**~ 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

**PAVED DITCHES, FLUME INLETS AND CHANNEL LININGS**

CHANNEL LINING CLASS II AND III.....	RDD-040-05
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**PIPE AND BOX CULVERT HEADWALLS**

**12" - 27" - SINGLE LINE PIPE**

CONCRETE HEADWALLS FOR 12" - 27" CIRCULAR PIPE CULVERTS.....	RDH-005-02
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**TYPICAL DRAINAGE INSTALLATIONS**

CULVERT, ENTRANCE & STORM SEWER PIPE TYPES & COVER HEIGHTS (12" - 24" PIPE).....	RDI-001-10
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
EROSION CONTROL BLANKET SLOPE INSTALLATION.....	RDI-040-01
EROSION CONTROL BLANKET CHANNEL INSTALLATION.....	RDI-041-01

Standard Drawings That Apply  
Page 2 of 2

MISCELLANEOUS DRAINAGE

INTERMEDIATE AND END ANCHORS FOR CIRCULAR PIPE .....	RDX-060-04
SECURITY DEVICES FOR FRAMES, GRATES AND LIDS.....	RDX-160-06
TEMPORARY SILT FENCE.....	RDX-210-03
SILT TRAP - TYPE A .....	RDX-220-05
SILT TRAP - TYPE B.....	RDX-225-01
SILT TRAP - TYPE C.....	RDX-230-01

*~ GENERAL ~*

CURVE WIDENING AND SUPERELEVATION

CURVE WIDENING AND SUPERELEVATION TRANSITIONS .....	RGS-001-07
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MISCELLANEOUS STANDARDS

MISCELLANEOUS STANDARDS .....	RGX-001-06
TYPE D BREAKAWAY SIGN SUPPORT .....	RGX-065-02

**TRAFFIC**

*~ PERMANENT ~*

RUMBLE STRIPS

SHOULDER & EDGELINE RUMBLE STRIPS PLACEMENT DETAILS .....	TPR-115
EDGELINE RUMBLE STRIP DETAILS TWO LANE ROADWAYS .....	TPR-120

MARKERS

TYPICAL MARKINGS FOR ISLANDS AND MEDIANS .....	TPM-205
------------------------------------------------	---------

*~ TEMPORARY ~*

TRAFFIC CONTROL

LANE CLOSURE TWO-LANE HIGHWAY .....	TTC-100-05
SHOULDER CLOSURE.....	TTC-135-03

STRIPING OPERATIONS

MOBILE OPERATION FOR PAINT STRIPING CASE II .....	TTS-105-02
MOBILE OPERATION FOR DURABLE STRIPING CASE IV.....	TTS-135-02

**BRIDGES**

*~ HANDRAIL ~*

STEEL HANDRAIL

RAILING SYSTEM, TYPE II, GUARDRAIL TREATMENT .....	SEPIA-001
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## **PART III**

### **EMPLOYMENT, WAGE AND RECORD REQUIREMENTS**

FHWA-1273 -- Revised May 1, 2012

**REQUIRED CONTRACT PROVISIONS  
FEDERAL-AID CONSTRUCTION CONTRACTS**

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

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

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

**ATTACHMENTS**

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

**II. NONDISCRIMINATION**

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

**I. GENERAL**

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

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

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

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

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

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**6. Training and Promotion:**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**III. NONSEGREGATED FACILITIES**

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

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

**IV. DAVIS-BACON AND RELATED ACT PROVISIONS**

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

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

**1. Minimum wages**

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

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

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

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

- (i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
- (ii) The classification is utilized in the area by the construction industry; and
- (iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

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

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

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

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

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

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

## 2. Withholding

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

## 3. Payrolls and basic records

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

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

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

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

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

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

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

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

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

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

**4. Apprentices and trainees**

a. Apprentices (programs of the USDOL).

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

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

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

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

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

b. Trainees (programs of the USDOL).

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

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

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

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

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

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

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

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

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

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

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

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

**10. Certification of eligibility.**

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

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

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

**V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT**

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

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

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

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

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

**VI. SUBLETTING OR ASSIGNING THE CONTRACT**

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

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

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

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

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

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

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

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

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

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

**VII. SAFETY: ACCIDENT PREVENTION**

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

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

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

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

**VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS**

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

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

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

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

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

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

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

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

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

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

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

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

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

**1. Instructions for Certification – First Tier Participants:**

- a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.
- b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**2. Instructions for Certification - Lower Tier Participants:**

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

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

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

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

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

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

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

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

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

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

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

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

\* \* \* \* \*

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

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

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

\* \* \* \* \*

**XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**KENTUCKY TRANSPORTATION CABINET  
DEPARTMENT OF HIGHWAYS**

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

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

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

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

1. The contractor shall not fail or refuse to hire, or shall not discharge any individual, or otherwise discriminate against an individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, national origin, sex, disability or age (forty and above); or limit, segregate, or classify his employees in any way which would deprive or tend to deprive an individual of employment opportunities or otherwise adversely affect his status as an employee, because of such individual's race, color, religion, national origin, sex, disability or age forty (40) and over. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2. The contractor shall not print or publish or cause to be printed or published a notice or advertisement relating to employment by such an employer or membership in or any classification or referral for employment by the employment agency, indicating any preference, limitation, specification, or discrimination, based on race, color, religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, except that such a notice or advertisement may indicate a preference, limitation, or specification based on religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, when religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, is a bona fide occupational qualification for employment.

3. If the contractor is in control of apprenticeship or other training or retraining, including on-the-job training programs, he shall not discriminate against an individual because of his race, color, religion, national origin, sex, disability or age forty (40) and over, in admission to, or employment in any program established to provide apprenticeship or other training.

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

Revised: January 25, 2017

### 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, 3 Fountain Place, Frankfort, Kentucky 40601; telephone (502) 564-7954.

**General Decision Number:** KY20220107 01/07/2022

**Superseded General Decision Number:** KY20210107

**State:** Kentucky

**Construction Type:** Highway

**Counties:** Adair, Barren, Bell, Breathitt, Casey, Clay, Clinton, Cumberland, Estill, Floyd, Garrard, Green, Harlan, Hart, Jackson, Johnson, Knott, Knox, Laurel, Lawrence, Lee, Leslie, Letcher, Lincoln, Magoffin, Martin, McCreary, Menifee, Metcalfe, Monroe, Morgan, Owsley, Perry, Pike, Powell, Pulaski, Rockcastle, Russell, Taylor, Wayne, Whitley and Wolfe Counties in Kentucky.

HIGHWAY CONSTRUCTION PROJECTS

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

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022, Executive Order 14026 generally applies to the contract. The contractor must pay all covered workers at least \$15.00 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022, Executive Order 13658 generally applies to the contract. The contractor must pay all covered workers at least \$11.25 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

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

Additional information on contractor requirements and worker protections under the Executive Orders is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

<b>Modification Number</b>	<b>Publication Date</b>
0	01/07/2022

KY20220107 Mod 0 - 01/07/2022

SUKY2015-047 10/20/2015

	Rates	Fringes
BOILERMAKER.....	\$ 24.65	12.94
BRICKLAYER		
Bricklayer.....	\$ 22.90	8.50
Stone Mason.....	\$ 21.50	8.50
CARPENTER		
Carpenter.....	\$ 24.90	14.50
Piledriver.....	\$ 24.55	14.50
CEMENT MASON.....	\$ 21.25	8.50
ELECTRICIAN		
Electrician.....	\$ 29.36	10.55
Equipment Operator.....	\$ 26.90	10.31
Groundsman.....	\$ 17.79	8.51
Lineman.....	\$ 30.09	10.94
<p>When workmen are required to work from bosum chairs, trusses, stacks, tanks, scaffolds, catwalks, radio and T.V. towers, structural steel (open, unprotected, unfloored raw steel), and bridges or similar hazardous locations where workmen are subject to fall, except where using JLG's and bucket trucks up to 75 feet: Add 25% to workman's base rate for 50 to 75 feet, and add 50% to workman's base rate for over 75 feet.</p>		
IRONWORKER.....	\$ 27.56	20.57
LABORER		
Group 1.....	\$ 21.80	12.36
Group 2.....	\$ 22.05	12.36
Group 3.....	\$ 22.10	12.36
Group 4.....	\$ 22.70	12.36

GROUP 1: Aging and Curing of Concrete (Any Mode or Method), Asbestos Abatement Worker, Asphalt Plant Laborers, Asphalt Laborers, Batch Truck Dumpers, Carpenter Tenders, Cement Mason Tenders, Cleaning of Machines, Concrete Laborers, Demolition Laborers, Dredging Laborers, Drill Tender, Environmental Laborer - Nuclear, Radiation, Toxic and Hazardous Waste - Level D, Flagmen, Grade Checkers, All Hand Digging and Hand Back Filling, Highway Marker Placers, Landscaping Laborers, Mesh Handlers and Placers, Puddler, Railroad Laborers, Rip-rap and Grouters, Right of Way Laborers, Sign, Guard Rail and Fence Installers (All Types), Signalmen, Sound Barrier Installer, Storm and Sanitary Sewer Laborers, Swampers, Truck Spotters and Dumpers, Wrecking of Concrete Forms, General Cleanup

GROUP 2: Batter Board Men (Sanitary and Storm Sewer), Brickmason Tenders, Mortar Mixer Operator, Scaffold Builders, Burner and Welder, Bushammers, Chain Saw Operator, Concrete Saw Operators, Deckhand Scow Man, Dry Cement Handlers,

Environmental Laborers - Nuclear, Radiation, Toxic and Hazardous Waste - Level C, Forklift Operators for Masonry, Form Setters, Green Concrete Cutting, Hand Operated Grouter and Grinder Machine Operator, Jack Hammers, Lead Paint Abatement, Pavement Breakers, Paving Joint Machine, Pipe Layers - Laser Operators (Non-metallic), Plastic Pipe Fusion, Power Driven Georgia Buggy and Wheel Barrow, Power Post Hole Diggers, Precast Manhole Setters, Walk-behind Tampers, Walk-behind Trenchers, Sand Blasters, Concrete Chippers, Surface Grinders, Vibrator Operators, Wagon Drillers

GROUP 3: Air Track Driller (All Types), Asphalt Luteman and Rakers, Gunnite Nozzleman, Gunnite Operators and Mixers, Grout Pump Operator, Powderman and Blaster, Side Rail Setters, Rail Paved Ditches, Screw Operators, Tunnel Laborers (Free Air), Water Blasters

GROUP 4: Caisson Workers (Free Air), Cement Finishers, Environmental Laborer - Nuclear, Radiation, Toxic and Hazardous Waste - Level A and B, miners and Drillers (Free Air), Tunnel Blasters, and Tunnel Mockers (Free Air), Directional and Horizontal Boring, Air Track Drillers (All Types), Powder Man and Blasters, Troxler and Concrete Tester if Laborer is Utilized

PAINTER

All Excluding Bridges.....\$ 19.92	9.57
Bridges.....\$ 23.92	10.07

PLUMBER.....\$ 22.52	7.80
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POWER EQUIPMENT OPERATOR:

Group 1.....\$ 29.95	14.40
Group 2.....\$ 29.95	14.40
Group 3.....\$ 27.26	14.40
Group 4.....\$ 26.96	14.40

GROUP 1: Auto Patrol, Batch Plant, Bituminous Paver, Cable-Way, Clamshell, Concrete Mixer (21 cu ft or over), Concrete Pump, Crane, Crusher Plant, Derrick, Derrick Boat, Ditching and Trenching Machine, Dragline, Dredge Engineer, Elevator (regardless of ownership when used for hoisting any building material), Elevating Grader and all types of Loaders, Hoe-type Machine, Hoisting Engine, Locomotive, LeTourneau or Carry-all Scoop, Bulldozer, Mechanic, Orangepeel Bucket, Piledriver, Power Blade, Roller (Bituminous), Roller (Earth), Roller (Rock), Scarifier, Shovel, Tractor Shovel, Truck Crane, Well Point, Winch Truck, Push Dozer, Grout Pump, High Lift, Fork Lift (regardless of lift height), all types of Boom Cats, Multiple Operator, Core Drill, Tow or Push Boat, A-Frame Winch Truck, Concrete Paver, Grade-All, Hoist, Hyster, Material Pump, Pumpcrete, Ross Carrier, Sheepfoot, Sideboom, Throttle-Valve Man, Rotary Drill, Power Generator, Mucking Machine, Rock Spreader attached to Equipment, Scoopmobile, KeCal Loader, Tower Cranes, (French, German and other types), Hydrocrane, Tugger, Backfiller Gurries, Self-propelled Compactor, Self-Contained Hydraulic Percussion Drill

GROUP 2: All Air Compressors (200 cu ft/min or greater), Bituminous Mixer, Concrete Mixer (21 cu. ft. or over), Welding Machine, Form Grader, Tractor (50 hp and over), Bull Float, Finish Machine, Outboard Motor Boat, Brakeman, Mechanic Tender, Whirly Oiler, Tract-air, Road Widening Trencher, Articulating Trucks

GROUP 3: Greaser on Grease Facilities servicing Heavy Equipment

GROUP 4: Bituminous Distributor, Cement Gun, Conveyor, Mud Jack, Paving Joint Machine, Pump, Tamping Machine, Tractor (under 50 hp), Vibrator, Oiler, Air Compressor (under 200 cu ft per minute), Concrete Saw, Burlap and Curing Machine, Hydro Seeder, Power Form Handling Equipment, Deckhand Oiler, Hydraulic Post Driver

SHEET METAL WORKER.....\$ 20.40 7.80

TRUCK DRIVER

Driver (3 Tons and Over), Driver (Truck Mounted Rotary Drill).....\$ 23.74	14.50
Driver (3 Tons and Under), Tire Changer and Truck Mechanic Tender.....\$ 23.53	14.50
Driver (Semi-Trailer or Pole Trailer), Driver (Dump Truck, Tandem Axle), Driver of Distributor.....\$ 23.40	14.50
Driver on Mixer Trucks (All Types).....\$ 23.45	14.50
Driver on Pavement Breakers.\$ 23.55	14.50
Driver, Euclid and Other Heavy Earth Moving Equipment and Low Boy.....\$ 24.31	14.50
Driver, Winch Truck and A- Frame when used in Transporting Materials.....\$ 23.30	14.50
Greaser on Greasing Facilities.....\$ 24.40	14.50
Truck Mechanic.....\$ 23.50	14.50
Truck Tender and Warehouseman.....\$ 23.20	14.50

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

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 Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this

contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

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

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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.

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#### 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 Division National Office Branch of Wage Surveys. 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:

<b>GOALS FOR MINORITY PARTICIPATION IN EACH TRADE</b>	<b>GOALS FOR FEMALE PARTICIPATION IN EACH TRADE</b>
7.0%	6.9%

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

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

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

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

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

**PART IV**  
**INSURANCE**

Refer to  
*Kentucky Standard Specifications for Road and Bridge Construction,*  
current edition

**PART V**  
**BID ITEMS**

**PROPOSAL BID ITEMS**

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Report Date 1/21/22

**Section: 0001 - PAVING**

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00001		DGA BASE	652.00	TON		\$	
0020	00100		ASPHALT SEAL AGGREGATE	69.10	TON		\$	
0030	00103		ASPHALT SEAL COAT	8.30	TON		\$	
0040	00190		LEVELING & WEDGING PG64-22	4,037.00	TON		\$	
0050	00212		CL2 ASPH BASE 1.00D PG64-22	40.00	TON		\$	
0060	00301		CL2 ASPH SURF 0.38D PG64-22	7,856.00	TON		\$	
0070	24970EC		ASPHALT MATERIAL FOR TACK NON-TRACKING	60.20	TON		\$	

**Section: 0002 - ROADWAY**

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0080	02230		EMBANKMENT IN PLACE	24.00	CUYD		\$	
0090	02483		CHANNEL LINING CLASS II	6.00	TON		\$	
0100	02562		TEMPORARY SIGNS	282.00	SQFT		\$	
0110	02575		DITCHING AND SHOULDERING	27,922.00	LF		\$	
0120	02650		MAINTAIN & CONTROL TRAFFIC (CASEY KY 70)	1.00	LS		\$	
0130	02671		PORTABLE CHANGEABLE MESSAGE SIGN	2.00	EACH		\$	
0140	02676		MOBILIZATION FOR MILL & TEXT (CASEY KY 70)	1.00	LS		\$	
0150	02677		ASPHALT PAVE MILLING & TEXTURING	603.00	TON		\$	
0160	02697		EDGE LINE RUMBLE STRIPS	84,588.00	LF		\$	
0170	02701		TEMP SILT FENCE	21,564.00	LF		\$	
0180	02703		SILT TRAP TYPE A	18.00	EACH		\$	
0190	02704		SILT TRAP TYPE B	18.00	EACH		\$	
0200	02705		SILT TRAP TYPE C	18.00	EACH		\$	
0210	02706		CLEAN SILT TRAP TYPE A	18.00	EACH		\$	
0220	02707		CLEAN SILT TRAP TYPE B	18.00	EACH		\$	
0230	02708		CLEAN SILT TRAP TYPE C	18.00	EACH		\$	
0240	02726		STAKING (CASEY KY 70)	1.00	LS		\$	
0250	05950		EROSION CONTROL BLANKET	18,207.00	SQYD		\$	
0260	05952		TEMP MULCH	56,144.00	SQYD		\$	
0270	05953		TEMP SEEDING AND PROTECTION	42,108.00	SQYD		\$	
0280	05963		INITIAL FERTILIZER	1.00	TON		\$	
0290	05964		MAINTENANCE FERTILIZER	.60	TON		\$	
0300	05985		SEEDING AND PROTECTION	18,207.00	SQYD		\$	
0310	05992		AGRICULTURAL LIMESTONE	12.00	TON		\$	
0320	06510		PAVE STRIPING-TEMP PAINT-4 IN	341,000.00	LF		\$	
0330	06514		PAVE STRIPING-PERM PAINT-4 IN	300.00	LF		\$	
0340	06542		PAVE STRIPING-THERMO-6 IN W	84,480.00	LF		\$	
0350	06543		PAVE STRIPING-THERMO-6 IN Y	55,380.00	LF		\$	
0360	06556		PAVE STRIPING-DUR TY 1-6 IN W	720.00	LF		\$	
0370	06557		PAVE STRIPING-DUR TY 1-6 IN Y	720.00	LF		\$	
0380	06568		PAVE MARKING-THERMO STOP BAR-24IN	100.00	LF		\$	
0390	06569		PAVE MARKING-THERMO CROSS-HATCH	227.00	SQFT		\$	

### PROPOSAL BID ITEMS

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LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0400	10020NS		FUEL ADJUSTMENT	18,681.00	DOLL	\$1.00	\$	\$18,681.00
0410	10030NS		ASPHALT ADJUSTMENT	46,921.00	DOLL	\$1.00	\$	\$46,921.00
0420	23229EC		HIGH FRICTION SURFACE TREATMENT	16,585.00	SQYD		\$	
0430	23625EC		PAVE MARK THERMO-6 IN W CAT TRAXX	55.00	LF		\$	

#### Section: 0003 - DRAINAGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0440	00461		CULVERT PIPE-15 IN	15.00	LF		\$	
0450	00462		CULVERT PIPE-18 IN	76.00	LF		\$	
0460	00464		CULVERT PIPE-24 IN	6.00	LF		\$	
0470	01310		REMOVE PIPE	28.00	LF		\$	
0480	01432		SLOPED BOX OUTLET TYPE 1-15 IN	1.00	EACH		\$	
0490	01433		SLOPED BOX OUTLET TYPE 1-18 IN	6.00	EACH		\$	
0500	01726		SAFETY BOX INLET-18 IN SDB-1	6.00	EACH		\$	
0510	01727		SAFETY BOX INLET-24 IN SDB-1	1.00	EACH		\$	
0520	01728		SAFETY BOX INLET-18 IN DBL SDB-5	1.00	EACH		\$	
0530	02607		FABRIC-GEOTEXTILE CLASS 2 FOR PIPE	152.00	SQYD	\$2.00	\$	\$304.00
0540	02625		REMOVE HEADWALL	7.00	EACH		\$	
0550	03262		CLEAN PIPE STRUCTURE	2.00	EACH		\$	
0560	08100		CONCRETE-CLASS A	9.59	CUYD		\$	
0570	21819NN		FITTINGS	11.00	EACH		\$	
0580	24395EC		SAFETY BOX INLET-15 IN SDB-1	1.00	EACH		\$	
0590	24575ES610		HEADWALL (RAISED CONCRETE HEADWALL)	1.00	EACH		\$	
0600	24861EC		PVC FOLD AND FORM PIPE LINER-15 IN	64.00	LF		\$	
0610	24862EC		PVC FOLD AND FORM PIPE LINER-18 IN	345.00	LF		\$	
0620	24863EC		PVC FOLD AND FORM PIPE LINER-24 IN	32.00	LF		\$	
0630	26130ED		SLOPED AND MITERED HEADWALL-15 IN	1.00	EACH		\$	
0640	26131ED		SLOPED AND MITERED HEADWALL-18 IN	1.00	EACH		\$	

#### Section: 0004 - SIGNING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0650	06406		SBM ALUM SHEET SIGNS .080 IN	493.63	SQFT		\$	
0660	06407		SBM ALUM SHEET SIGNS .125 IN	159.88	SQFT		\$	
0670	06410		STEEL POST TYPE 1	1,141.00	LF		\$	
0680	21373ND		REMOVE SIGN	86.00	EACH		\$	
0690	24631EC		BARCODE SIGN INVENTORY	171.00	EACH		\$	

#### Section: 0005 - GUARDRAIL

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0700	01987		DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	160.00	EACH		\$	
0710	02355		GUARDRAIL-STEEL W BEAM-S FACE A	115.00	LF		\$	

### PROPOSAL BID ITEMS

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Report Date 1/21/22

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0720	02360		GUARDRAIL TERMINAL SECTION NO 1	3.00	EACH		\$	
0730	02363		GUARDRAIL CONNECTOR TO BRIDGE END TY A	7.00	EACH		\$	
0740	02367		GUARDRAIL END TREATMENT TYPE 1	11.00	EACH		\$	
0750	02381		REMOVE GUARDRAIL	7,537.50	LF		\$	
0760	02391		GUARDRAIL END TREATMENT TYPE 4A	1.00	EACH		\$	
0770	08805		GUARDRAIL-BRIDGE CASE I	50.00	LF		\$	
0780	21802EN		G/R STEEL W BEAM-S FACE (7 FT POST)	7,532.50	LF		\$	

#### Section: 0006 - DEMOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0790	02569		DEMOBILIZATION	1.00	LS		\$	